



VILLAGE OF VILLA PARK PROJECT MANUAL

Project Name	<u>SOUTH MONTEREY STORMWATER QUALITY PROJECT</u>
Project Year:	<u>2018</u>
Project Month:	<u>SEPTEMBER-OCTOBER</u>
Contract #:	
Bid Letting:	<u>Tuesday, September 11, 2018</u>
Bid Advertisement:	<u>Friday, August 24, 2018</u>
Project Description:	<u>This project consists of the installation of 12 bio-retention systems, each approximately 37 feet long by 6 feet wide, within the existing drainage ditch area on South Monterey Avenue between Washington Boulevard and Madison Street.</u>

SUBSTANTIAL COMPLETION: **Wednesday, October 31, 2018**

FINAL COMPLETION DATE: **Thursday, November 15, 2018**

PRE-BID MEETING DATE & TIME: **N/A**

BIDDING DOCUMENTS FEE: **\$20.00**

NOT FOR BID

PROJECT MANUAL
FOR
2018 SOUTH MONTEREY STORMWATER
QUALITY PROJECT



VILLAGE OF VILLA PARK
VILLA PARK, ILLINOIS

ENGINEERING DIVISION
20 SOUTH ARDMORE AVENUE
VILLA PARK, ILLINOIS 60181-2696
T: 630.834.8505 F: 630.834.8509

AUGUST 2018

NOT FOR BID

PROJECT MANUAL
FOR
2018 SOUTH MONTEREY
STORMWATER QUALITY
PROJECT



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BIDDING AND CONTRACT DOCUMENTS

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VILLAGE OF VILLA PARK

AUGUST 2018

I hereby certify that these Contract Documents were prepared under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Illinois.

Signature: _____

Vydas Juskelis

Date: _____ August 24, 2018

License No.: _____ 062-045747

Expiration: _____ 11/30/2019



NOT FOR BID

GENERAL TRADING

OR

AGREEMENTS

NOT FOR BID

NOT FOR BID

PROJECT MANUAL
FOR
2018 SOUTH MONTEREY STORMWATER QUALITY PROJECT

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NOT FOR BIDD

ADVERTISING

FOR BID

NOT FOR BID

NOT FOR BID

SECTION 00030
ADVERTISEMENT FOR BIDS
VILLAGE OF VILLA PARK

PROJECT: The SOUTH MONTEREY STORMWATER QUALITY PROJECT consists of the installation of 12 bio-retention systems, each approximately 37 feet long by 6 feet wide within the existing drainage ditch area in public right-of-way on South Monterey Avenue between Washington Boulevard and Madison Street.

BID DEADLINE: Tuesday, September 11 at 10:00 A.M. LOCAL TIME

The Village reserves the right to extend the Bid Deadline from this date and time to accept Bids submitted after the Bid Deadline, as the Village, in its sole discretion, determines is in the best interest of the Village.

NOTICE: Separate, sealed proposals for the **2018 SOUTH MONTEREY STORMWATER QUALITY PROJECT** will be received by the Village of Villa Park, Illinois, at the reception desk of the Public Works Department, 11 West Home Avenue, Villa Park, Illinois, 60181, until the Bid Deadline.

Immediately thereafter, the proposals will be publicly opened and read aloud at the offices of the Public Works Department. Notwithstanding the foregoing, the Village reserves the right to defer, postpone, delay, or reschedule the Bid Opening for such time and to such date as the Village, in its sole discretion, determines is in the best interest of the Village.

Proposals shall be submitted in accordance with the Contract Documents prepared by Village of Villa Park, Public Works Department, 11 West Home Avenue, Villa Park, Illinois, 60181.

BIDDER QUALIFICATIONS: Bidders, in submitting a Bid, shall comply with all applicable Federal, State and local laws and requirements; shall provide documentation of that compliance in accordance with the requirements of the Contract Documents or as requested by the Village; and, in submitting a Bid, Bidders affirm that they are qualified under all applicable laws and requirements to do so, and agree to be bound by the determination of the Village as to Bidder's compliance and qualifications.

BID SECURITY: Bid security in the amount of not less than five percent (5%) of the Bid shall accompany each Bid in accordance with the Instructions to Bidders.

CONTRACT SECURITY: The Bidder to whom a Contract is awarded shall be required to furnish both a Performance Bond and a Payment Bond acceptable to the Village for one-hundred percent (100%) of the Contract Price, in accordance with the requirements of the Contract Documents.

ADVERTISE – August 24, 2018

RIGHTS RESERVED: The Village reserves the right to reject any and all Bids, to waive any informalities or technicalities in bidding, and to accept the Bid which best serves the interests of the Village. The Village shall, in its sole discretion, determine what does or does not constitute an informality or technicality, and, in submitting a Bid, Bidder agrees to be bound by that determination.

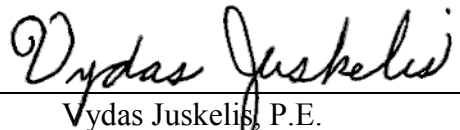
The Village may make such investigations as it deems necessary to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Village all such information and data for this purpose as the Village may request. The Village reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Village that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the Work contemplated therein.

WAGE RATES: The CONTRACTOR shall be required to pay not less than the prevailing wage rates on the project as established by the Village. Copies of these wage rates are on file in the office of the Public Works Department and incorporated in the Contract Documents.

CONTRACT DOCUMENTS: The Bidding Documents are on file for inspection at the office of the Village of Villa Park Public Works Department, 11 West Home Avenue, Villa Park, Illinois, 60181 and may be obtained from the office listed above for a non-refundable fee of twenty dollars (\$20.00). Payments shall be made in cash or by check made payable to the "Village of Villa Park"

**PUBLISHED BY AUTHORITY OF THE VILLAGE OF VILLA PARK,
DUPAGE COUNTY, ILLINOIS.**

BY:


Vydas Juskelis, P.E.
Director of Public Works

INSTRUCTIONS

TO BIDDERS

NOT FOR BID

NOT FOR BID

SECTION 00100
INSTRUCTIONS TO BIDDERS

SPECIAL NOTICE TO BIDDERS.

The **SOUTH MONTEREY STORMWATER QUALITY PROJECT** consists of, as described in **Section 01010 "Summary of Work"**, Part 1 - GENERAL, 1.01 PROJECT DESCRIPTION.

This project consists of the construction of 12 Bioretention systems, each approximately 37 feet long by 6 feet wide within the existing drainage ditch area between the 600 and 700 Block of South Monterey Avenue public right-of-way.

ARTICLE 1. Defined Terms.

- 1.01.** Terms used in these instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract EJCDC C-700 have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom OWNER (on the basis of OWNER'S evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement for Bids, Instructions to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

ARTICLE 2. Copies of Bidding Documents.

- 2.01.** Complete sets of the Bidding Documents in the number and for the nonrefundable fee stated in the Advertisement for Bids may be obtained from the Village of Villa Park Public Works Department, 11 West Home Avenue, Villa Park, Illinois, 60181, during normal working hours.
- 2.02** Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03.** OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

ARTICLE 3. Qualifications of Bidders.

- 3.01.** To demonstrate qualifications to perform the Work, each Bidder shall be prepared to submit, within five (5) calendar days of OWNER'S request,

written evidence, such as financial data, previous experience; present commitments and other such data as may be called for as follows. Each Bid shall contain evidence of Bidder's qualification to do business in the State of Illinois.

- 3.01.01.** The address and description of the Bidder's place of business.
- 3.01.02.** The number of years engaged in the contracting business under the present firm name, and the name of the state where incorporated.
- 3.01.03.** A list of the property and equipment available to the Bidder to evaluate if the Bidder can complete the Work in accordance with the Bidding Documents.
- 3.01.04.** A financial statement of the Bidder showing that the Bidder has the financial resources to meet all obligations incidental to the Work.
- 3.01.05.** The Bidder's performance record giving the description and location of all similar projects constructed in the last five years by the Bidder, as well as names and phone numbers of persons who acted as owner's representatives for those projects, and whom Bidder agrees OWNER may contact for the purpose of verifying Bidder's references and performance.
- 3.01.06.** A list of projects presently under Contract, the approximate Contract amount, and percent of completion of each.
- 3.01.07.** A list of Contracts which resulted in lawsuits.
- 3.01.08.** A list of Contracts defaulted.
- 3.01.09.** A statement of the Bidder indicating whether or not the Bidder has ever filed bankruptcy while performing Work of like nature or magnitude.
- 3.01.10.** A list of officers of the firm who, while in the employ of the firm or the employ of previous firms, were associated with Contracts which resulted in lawsuits, Contracts defaulted or filed for bankruptcy.
- 3.01.11.** The names and technical experience of personnel guaranteed to be employed in the responsible charge of the Work stating whether the personnel have or have not performed satisfactorily on other Contracts of like nature and magnitude or comparable difficulty at similar rate of progress.
- 3.01.12.** Such additional information as will assist OWNER in determining whether the Bidder is adequately prepared to fulfill the Contract.

- 3.02.** The object of the request for the qualification of Bidder is not to discourage bidding or make it difficult for qualified Bidders to file Bids, nor is it intended to discourage beginning Contractors. It is intended to make it possible for OWNER to obtain accurate information regarding Bidder's financial capability, equipment, and experience in order to reduce the risks involved in awarding a contract to parties who may not be qualified to perform the Work as specified.
- 3.03** OWNER'S decision as to qualification of the Bidder shall be final.

ARTICLE 4. Examination of Contract Documents and Site.

- 4.01.** It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work, (c) consider Federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder's observations with the Contract documents, and (e) notify ENGINEER of all conflicts, errors or discrepancies in the Contract documents. BIDDERS shall satisfy themselves of the accuracy of the estimated quantities in the BID Schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be performed.
- 4.02.** No explorations or tests of subsurface conditions of any type have been undertaken at any site where work is to take place as a part of the Project. Bidders shall be responsible for scheduling, permitting and conducting any explorations or tests of subsurface conditions they deem necessary for evaluating or completing the Work set forth herein as a part of this Contract.
- 4.03.** Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and ENGINEER by owners of such underground facilities or others, and OWNER does not assume responsibility for the accuracy of completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- 4.04.** Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.02, 4.03 and 4.04 of the General Conditions.

- 4.05.** Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 4.06.** On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations and tests, as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.
- 4.07.** The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures, if required, are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents. Temporary construction easements, if required, are to be obtained and paid for by OWNER.
- 4.08.** The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- 4.09.** The Engineer for this project is the Village of Villa Park, Public Works Department, 11 West Home Avenue, Villa Park, Illinois 60181; Phone: (630) 834-8505, Fax: (630) 834-8509, E-mail: publicworks@invillapark.com.
- 4.10.** The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

ARTICLE 5. Interpretations and Addenda.

- 5.01.** All questions about the meaning or intent of the Contract documents are to be directed in writing to ENGINEER. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than two (2) days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will not be given, except as part of any pre-bid conference, or, if given, will be without legal effect.
- 5.02.** Addenda may also be issued to modify the Bidding Documents as deemed advisable by OWNER or ENGINEER.

ARTICLE 6. Bid Bond.

- 6.01.** Each Bid shall be accompanied by a BID BOND made payable to OWNER in an amount not less than five percent (5%) of the Bidder's maximum Bid price and in the form of a certified check, bank cashier's check or a Bid Bond issued by a surety meeting the requirements of Paragraph 5.01 of the General Conditions.
- 6.02.** As soon as the BID prices have been compared, the OWNER will return the BONDS of all except the three lowest responsible BIDDERS. The Bid Bonds of the three lowest responsible BIDDERS, including the apparent Successful Bidder, will be retained until the apparent Successful Bidder has executed a Contract and furnished the required contract security, whereupon the Bid Bonds will be returned. If the apparent Successful Bidder fails to execute and deliver the Contract and furnish the required contract security within ten (10) calendar days after the Notice of Award is issued by OWNER, OWNER may annul the Notice of Award and the Bid Bond of that Bidder will be forfeited. When the Agreement is executed, the bonds of the two remaining unsuccessful BIDDERS will be returned.

ARTICLE 7. Contract Time.

- 7.01.** The number of days within which or the dates by which the Work is to meet the requirements for Final Completion and be ready for final payment in accordance with Paragraph 14.07 of the General Conditions, (the Contract Time) are set forth in the Contract. **The Work shall meet the requirements for Final Completion within thirty (30) calendar days, or by November 15, 2018, whichever is earlier.**

ARTICLE 8. Liquidated Damages.

8.01. Provisions for liquidated damages are set forth in the General or Supplementary Conditions, Bid Form and Contract.

ARTICLE 9. Substitute or “Or-Equal” Items.

9.01. The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the specifications. Neither OWNER nor CONTRACTOR shall limit materials or equipment to only brand name products. Non-brand name materials or equipment of equal specification (“or equal” items) do qualify and are acceptable. ENGINEER shall have sole discretion in determining whether a non-brand name product is of equal specification. Whenever CONTRACTOR wishes to substitute an “or-equal” item of material or equipment for a brand name item specified, CONTRACTOR shall make written application to ENGINEER requesting approval of such substitution. Such written application will not be considered by the ENGINEER until after the Effective Date of the Contract. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in Paragraphs 6.05 of the General Conditions and may be supplemented in the General Requirements and other portions of these specifications.

ARTICLE 10. Subcontractors, Suppliers, and Others.

10.01. If OWNER requests the identity of any Subcontractors, Suppliers, or other persons or organizations to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Contract, the apparent Successful Bidder, and any other Bidder so requested, shall within seven (7) calendar days after the Bid opening submit to OWNER a list of all such Subcontractors, Suppliers and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person or organization if requested by OWNER. If OWNER or ENGINEER after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, either may before the Notice of Award is given request the Apparent Successful Bidder to submit an acceptable substitute in which case the apparent Successful Bidder shall submit an acceptable substitute, that Bidder's price will be increased (or decreased) by the difference in cost occasioned by such substitution and OWNER may consider such price adjustment in evaluating Bids and making the contract award. If apparent Successful Bidder declines to make any such substitution, OWNER may award the contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers and other persons and organizations. The

declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Supplier, other person or organization listed and to whom OWNER or ENGINEER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Contract as provided in Paragraph 6.06.B of the General Conditions.

- 10.02.** No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person or organization against whom the CONTRACTOR has a reasonable objection.

ARTICLE 11. Bid Form.

- 11.01.** The Bid Form is included with the Bidding Documents. Additional copies, if needed, may be obtained from ENGINEER.
- 11.02.** All BIDS shall be submitted on the required BID form. All blank spaces for BID prices shall be filled in, in ink or typewritten, and the BID form shall be fully completed, including Alternate Bid Items, if any, and Schedule of Prices, and executed when submitted. Only one copy of the BID form is required.
- 11.03.** Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- 11.04.** Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- 11.05.** All names must be typed or printed below the signature.
- 11.06.** The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- 11.07.** The address and telephone number for communications regarding the Bid must be shown.

ARTICLE 12. Submission of Bids.

- 12.01** Bids shall be submitted at the time and place indicated in, and according to, the Advertisement or Invitation to Bid and shall be enclosed in an opaque, sealed envelope, marked with the Project name, name and address of the Bidder, and accompanied by the Bid security and other required documents.

If the Bid is sent through the mail or another delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it and addressed to the Village of Villa Park, Public Works Department, 20 South Ardmore Avenue, Villa Park, Illinois 60181.

ARTICLE 13. Modification and Withdrawal of Bids.

- 13.01.** Bids may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids any time prior to the opening of Bids. Such notice shall be in writing over the signature of the Bidder or by fax; if by fax written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids, and it shall be worded so as not to reveal the amount of the original Bid. Should there occur any reason or reasons why the contract cannot be awarded within the specified period; the time may be extended as mutually agreed upon in writing by OWNER and the BIDDER.
- 13.02.** Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders and other requirements as applicable.
- 13.03.** After the Bid opening, no Bid may be modified, withdrawn, or canceled by the Bidder during the time period noted in Article 15 without the consent of the OWNER.
- 13.04.** Bid Security shall be in an amount sufficient for the Bid as modified or resubmitted.

ARTICLE 14. Opening of Bids.

- 14.01.** Bids will be opened and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any will be made available to Bidders after the opening of Bids.

ARTICLE 15. Bids to Remain Subject to Acceptance.

- 15.01.** All bids will remain subject to acceptance for ninety (90) calendar days after the date of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date. The Acceptance period may be extended up to an additional ninety (90) calendar days upon written notice to all bidders by the OWNER.

ARTICLE 16. Award of Contract.

- 16.01.** OWNER reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the Work and to negotiate contract terms with the successful Bidder, and the right to disregard all nonconforming, non-responsive, unbalanced or conditional Bids. Also, OWNER reserves the right to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet; any other pertinent standard or criteria established by OWNER. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- 16.02.** In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such information as unit prices, total bids, alternates, and other data, as may be requested in the Bid form or prior to the Notice of Award. OWNER reserves the right to use, at its sole discretion, the Base Bid, or the Base Bid in combination with any or all Alternate Bids, to determine the lowest responsive bidder.
- 16.03.** OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.
- 16.04.** OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER'S satisfaction within the prescribed time.
- 16.05.** Award will be made to the low responsive, responsible, BIDDER, after the bid evaluation has been submitted to IEPA (Agency) and written notice of Agency approval has been received by the loan applicant.
- 16.06.** If the Contract is to be awarded, OWNER will give the Successful Bidder a Notice of Award within sixty (60) days after the day of the Bid Opening.

ARTICLE 17. Contract Security.

17.01. A Performance BOND and a Payment BOND, each in the amount of one-hundred percent (100%) of the CONTRACT PRICE, with corporate sureties approved by the OWNER, shall be required and shall be conditioned upon the proper and faithful performance by the Contractor of the work specified in accordance with the Contract. Paragraph 5.01 of the General Conditions and the Supplementary Conditions set forth OWNER'S requirements as to Performance and Payment Bonds.

When the Bidder to whom a Contract is awarded delivers the required number of executed counterparts of the Contract to OWNER, those counterparts shall each be accompanied by the required Performance and Payment Bonds.

Attorneys-in-fact who sign BID BONDS or payment BONDS and performance BONDS shall file with each BOND a certified and effective dated copy of their power of attorney.

Should any Change Orders be necessary and should the revised CONTRACT PRICE following execution of any Change Order exceed the bonded amount, the amounts of the Performance BOND and the Payment BOND shall be increased to match or exceed the revised CONTRACT PRICE. The costs of such increases shall be considered incidental to the Contract.

ARTICLE 18. Signing of Contract.

18.01. When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Contract with all other written Contract Documents attached. Within ten (10) calendar days thereafter CONTRACTOR shall sign and deliver the required number of counterparts of the Contract and attached documents to OWNER with the required Bonds. Within ten (10) calendar days thereafter OWNER shall deliver one (1) fully signed and executed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

Should the OWNER not execute the Agreement within such period, the BIDDER may by WRITTEN NOTICE withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The OWNER shall issue the NOTICE TO PROCEED within ten (10) days of the execution of the Agreement.

Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may, upon written notice, terminate the Agreement without further liability on the part of either party.

ARTICLE 19. Wage Rates.

- 19.01.** Each CONTRACTOR or Subcontractor performing Work on this Project shall comply in all respects with all laws governing the employment of labor, Social Security, and Unemployment Insurance of both the State of Illinois and Federal governments. There shall be paid each employee engaged in Work under this Contract with respect to the Project, no less than the prevailing rate of wages, which prevailing rate shall include both hourly cash wages plus fringe benefits, for the classifications of labor employed in compliance with the Illinois Prevailing Wage Act, 820 ILCS 130/01 et seq., (“the Act”) as now existing or hereafter amended. A copy of “General Prevailing Hourly Rates” is hereinafter included.
- 19.02.** CONTRACTOR shall pay prevailing wages at rates not less than those prevailing under the Employment of Illinois Workers on Public Works Act (30 ILCS 570).
- 19.03.** In accordance with 820 ILCS 130/05, CONTRACTOR and each Subcontractor shall make and keep, for a period of not less than three (3) years, records of all laborers, workers and mechanics employed by them on the Project. Such records shall include each worker’s full name, street or mailing address, telephone number when available, full social security number, classification or classifications, the hourly wages paid in each period, the number of hours worked each day, and the starting and ending times of work each day.
- 19.04.** CONTRACTOR and each Subcontractor shall submit at least monthly and in person certified payrolls to OWNER. The certified payrolls shall consist of a complete copy of the records. The certified payrolls shall be accompanied by statements signed by CONTRACTOR or Subcontractor which avers that:
- (i) such records are true and accurate;
 - (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required; and
 - (iii) CONTRACTOR or Subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor.
- 19.05.** Upon two (2) business days’ notice, CONTRACTOR and each Subcontractor shall make available for inspection the records to OWNER, its officers and

agents, and to the Director of Labor and his deputies and agents at all reasonable hours at a location within the State of Illinois. CONTRACTOR and each Subcontractor shall permit his or her employees to be interviewed on the job, during working hours, by OWNER, its agents, or agents of the Department of Labor.

ARTICLE 20. Sales and Use Taxes.

20.01. OWNER is exempt from ILLINOIS State Sales and Use Taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Contract Price.

ARTICLE 21. Equal Employment Opportunity (EEO) Requirements.

21.01. In connection with the performance of Work under this Contract, CONTRACTOR agrees, and shall require his subcontractors to agree, that employers shall not discriminate against or intimidate, directly or indirectly, any employees or applicants for employment, on the basis of race, color, religion, creed, gender, sex, sexual orientation, national origin, age, familial status, or physical or mental disability unrelated to ability.

21.02. In connection with the performance of Work under this Contract, CONTRACTOR agrees, and shall require his subcontractors to agree, to conform to the Rules and Regulations of the ILLINOIS Fair Employment Practices Commission in effect on the date of Bid submission.

ARTICLE 22. Certification.

22.01. Bidder shall, at the time of the submission of Bid, and as part of the Bid, provide the following certification(s):

22.02. Bidder shall provide certification, as required by Public Act 85-1295, of the fact that the firm is not barred from bidding on the contract as a result of a violation of Article 33-E of the Criminal Code (bid rigging and bid-rotating).

ARTICLE 23. Substance Abuse Prevention Certification.

23.01. CONTRACTOR and all Subcontractors performing work under this Contract shall provide certification that they have a Substance Abuse Prevention Program as required by Public Act 95-0635 and in accordance with the Contractor Certifications section of these Bidding Documents.

ARTICLE 24. Remedies

24.01. All claims, counter-claims, disputes and other matters in question between the recipient and the contractor arising out of, or relating to, a subagreement or its

breach shall be decided by arbitration if the parties agree, or in a court of competent jurisdiction within the State.

ARTICLE 25. Subcontracts under Construction Contracts

25.01. The award or execution of all subcontracts by a prime contractor and the procurement and negotiation procedures used by the prime contractor shall comply with the following:

- i) All applicable provisions of Federal and State law;
- ii) All provisions of Illinois Administrative Code, Title 35, Section 662.620 regarding fraud and other unlawful or corrupt practices;
- iii) All provisions of Illinois Administrative Code, Title 35, Section 662.620 with respect to access to facilities, records, and audit of records;

ARTICLE 26. Cost Plus Pricing

26.01. *Cost-plus a percentage of cost and percentage of construction cost* methods are prohibited from use on this project in any form or condition.

END OF SECTION

NOT FOR BIDDERS

NOT FOR BID

NOT FOR BID

NOT FOR BID

BIDD PAGE 4

SECTION 00300
BID FORM

PROJECT IDENTIFICATION:
SOUTH MONTEREY STORMWATER QUALITY PROJECT
THIS BID IS SUBMITTED TO:

Village of Villa Park
20 South Ardmore Avenue
Villa Park, ILLINOIS 60181

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into a Contract with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract time indicated in his Bid and in accordance with the other terms and condition of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement for Bids and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance as outlined in the Instructions to Bidders after the day of Bid opening. Bidder will sign and submit the Contract with the Bonds and other documents required by the Bidding Requirements within ten (10) days after the date of OWNER'S Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Contract, that:
 - (a) BIDDER has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

DATE	NUMBER
 - (b) BIDDER has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
 - (c) BIDDER has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions, which are identified in the Supplementary Conditions as provided in Paragraphs 4.02 and 4.03 of the General Conditions, and accepts the determination set forth in Paragraph SC-4.02.A.1 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which BIDDER is entitled to rely.

- (d) BIDDER has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in I above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the work as BIDDER considers necessary for the performance or furnishing of the work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraphs 4.02 and 4.03 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data that will be required by BIDDER for such purposes.
- (e) BIDDER has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by BIDDER in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.04 of the General Conditions.
- (f) BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- (g) BIDDER has given ENGINEER written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER.
- (h) BIDDER certifies, by submission of the bid, and in the case of a joint bid each party thereto certifies as to his own organization, that in connection with the bid:
- (i) The prices in the bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
 - (ii) Unless otherwise required by law, the prices which have been quoted in the bid have not knowingly been disclosed by the bidder, prior to opening, directly or indirectly to any other bidder or to any competitor; and
 - (iii) No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition.

- (i) Each person signing the bid shall certify that:
- (i) He is the person in the bidder's organization responsible within that organization for the decision as to the prices being bid and that he has not participated, and will not participate, in any action contrary to (h)(i) through (h)(iv) above; or
 - (ii) He is not the person in the bidder's organization responsible within that organization for the decision as to the prices being bid but that he has been authorized to act as agent for the person(s) responsible for such decision in certifying that such person(s) have not participated, and will not participate, in any action contrary to (h)(i) through (h)(iv) above, and as their agent shall so certify; and shall also certify that he has not participated, and will not participate, in any action contrary to (h)(i) through (h)(iv) above.
4. ITEM NO. 04, BID SCHEDULE, IS ON THE FOLLOWING FIVE (5) PAGES (00300-5 through 00300-7).

NOT FOR BIDDING

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NOT FOR BID

BID SCHEDULE (PAGE 1 OF 3)

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices. BIDS shall include all applicable taxes and fees. OWNER reserves the right to increase or decrease quantities without any change in unit prices.

NO.	ITEM	UNITS	QUANTITY	UNIT PRICE BID	EXTENDED PRICE BID
1	PRECONSTRUCTION VIDEO RECORDING	LUMP SUM	1		
2	CONSTRUCTION LAYOUT	LUMP SUM	1		
3	TREE REMOVAL (6-15 UNIT DIA)	UNIT	34		
4	TEMPORARY FENCE (TREE PROTECTION)	FOOT	120		
5	TRAFFIC CONTROL AND PROTECTION	LUMP SUM	1		
6	MECHANICAL STREET SWEEPING	HOURL	4		
7	EARTH EXCAVATION	CU YD	125		
8	CONSTRUCT BIORETENTION SYSTEMS	SQ YD	298		
9	BIORETENTION NATIVE PLANT SEED MIX	SQ YD	224		

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NOT FOR BID

BID SCHEDULE (CONTINUED, PAGE 2 OF 3)

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices. BIDS shall include all applicable taxes and fees. OWNER reserves the right to increase or decrease quantities without any change in unit prices.

NO.	ITEM	UNITS	QUANTITY	UNIT PRICE BID	EXTENDED PRICE BID
10	RIVER ROCK (2"-3") WITH PEA GRAVEL INFILL (6" MINIMUM)	CU YD	13		
11	PERENNIAL PLANT INSTALLATION MONARDA PUNCTATA (SPOTTED BEE BALM)	EACH	143		
12	PERENNIAL PLANT INSTALLATION SPOROBOLUS HETEROLEPIS (PRAIRIE DROPSEED)	EACH	243		
13	PERENNIAL PLANT INSTALLATION ECHINACEA PARADOXA (BUSH'S CONEFLOWER)	EACH	272		
14	PERENNIAL PLANT INSTALLATION RUDBECKIA HIRTA (BLACK-EYED SUSAN)	EACH	143		
15	PERENNIAL PLANT INSTALLATION GERANIUM MACULATUM (WILD GERANIUM)	EACH	143		
16	PERENNIAL PLANT INSTALLATION ASCLEPIAS TUBEROSA (BUTTERFLY WEED)	EACH	243		
17	PERENNIAL PLANT INSTALLATION CAREX VULPINOIDEA (BROWN FOX SEDGE)	EACH	243		
18	HIGH-MOW FESCUE BUFFER	SQ YD	249		

NOT FOR BID

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BID SCHEDULE (CONTINUED, PAGE 3 OF 3)

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices. BIDS shall include all applicable taxes and fees. OWNER reserves the right to increase or decrease quantities without any change in unit prices.

NO.	ITEM	UNITS	QUANTITY	UNIT PRICE BID	EXTENDED PRICE BID
19	MANAGEMENT AND MONITORING ACTIVITIES, YEAR 1	LUMP SUM	1		
20	MANAGEMENT AND MONITORING ACTIVITIES, YEAR 2	LUMP SUM	1		

NOT FOR BID

NOT FOR BID

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**TOTAL
OF BID**

_____ \$ _____
Written Bid Numerical Bid

The undersigned is aware that Federal Labor Standards and Prevailing Wage Rates apply to all work performed on this Contract. It is the contractor's responsibility to comply with these requirements and to assure compliance by his/her subcontractors and/or any lower tier subcontracts required by this contract.

Respectfully submitted:

Signature

Address

Title

Date

Telephone No.

E-mail Address

(SEAL – if BID is by a corporation)

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NOT FOR BID

5. BIDDER accepts the provisions of the Contract regarding Contract Time, Substantial Completion, and Final Completion as provided in Paragraph 3.1 of the Contract.

BIDDER accepts the provisions of the Contract regarding liquidated damages in the event of failure to complete the Work on time as provided in Paragraph 3.2 of the Contract.

OWNER reserves the right to reject any Bid in which all of the items in the Bid are not properly filled out or in which any requirements are not properly met.

6. The following documents are attached to and made a condition of this bid:

- (a) Required Bid Security in the form of:

(Certified Check or Bid Bond)

In the amount of:

(Dollars or Percent)

- (b) A tabulation of Subcontractors and other persons and organizations required to be identified in this Bid in accordance with State laws applicable where the Work is to be performed.

- (c) Statement of the Bidder's qualification to do business in the State of Illinois.

7. Communications concerning this Bid shall be addressed to the Bidder as indicated below:

NAME: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NO: _____

FAX NO: _____

E-MAIL: _____

8. The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

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NOT FOR BID

9. _____, having submitted a bid on a contract
(Name of Contractor)

for the **SOUTH MONTEREY STORMWATER QUALITY PROJECT**, as generally described in the Advertisement for Bids, to the Village of Villa Park, hereby certifies that said contractor is not barred from bidding on the aforementioned contract as a result of a violation of either Section 33E-3 or 33E-4 of Article 33E of Chapter 720 of the ILLINOIS Compiled Statutes (70 ILCS 5/33E-3 and 5/33E-4).

By: _____
Authorized Agent of Contractor

Subscribed and sworn to before me

This _____ day of _____, 2018

Notary Public

SUBMITTED ON _____, 2018

CONTRACTOR'S LICENSE NO. _____

I hereby certify that, as Bidder, I/We have examined and carefully prepared this Bid from the Bidding Documents and have checked the same in detail before submitting this Bid, and that all statements herein are made on behalf of:

An Individual

By: _____ (SEAL)
(Individual's Name)

doing business as: _____

Business address: _____

Telephone No.: _____

Fax No: _____

E-mail address: _____

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NOT FOR BID

A Partnership

By: _____ (SEAL)
(Firm Name)

(General Partner)

Business address: _____

Phone No.: _____

Fax No: _____

E-mail address: _____

A Corporation

By: _____ (SEAL)
(Corporation Name)

(State of Incorporation)

By: _____
(Name of Person Authorized to Sign)

Title: _____

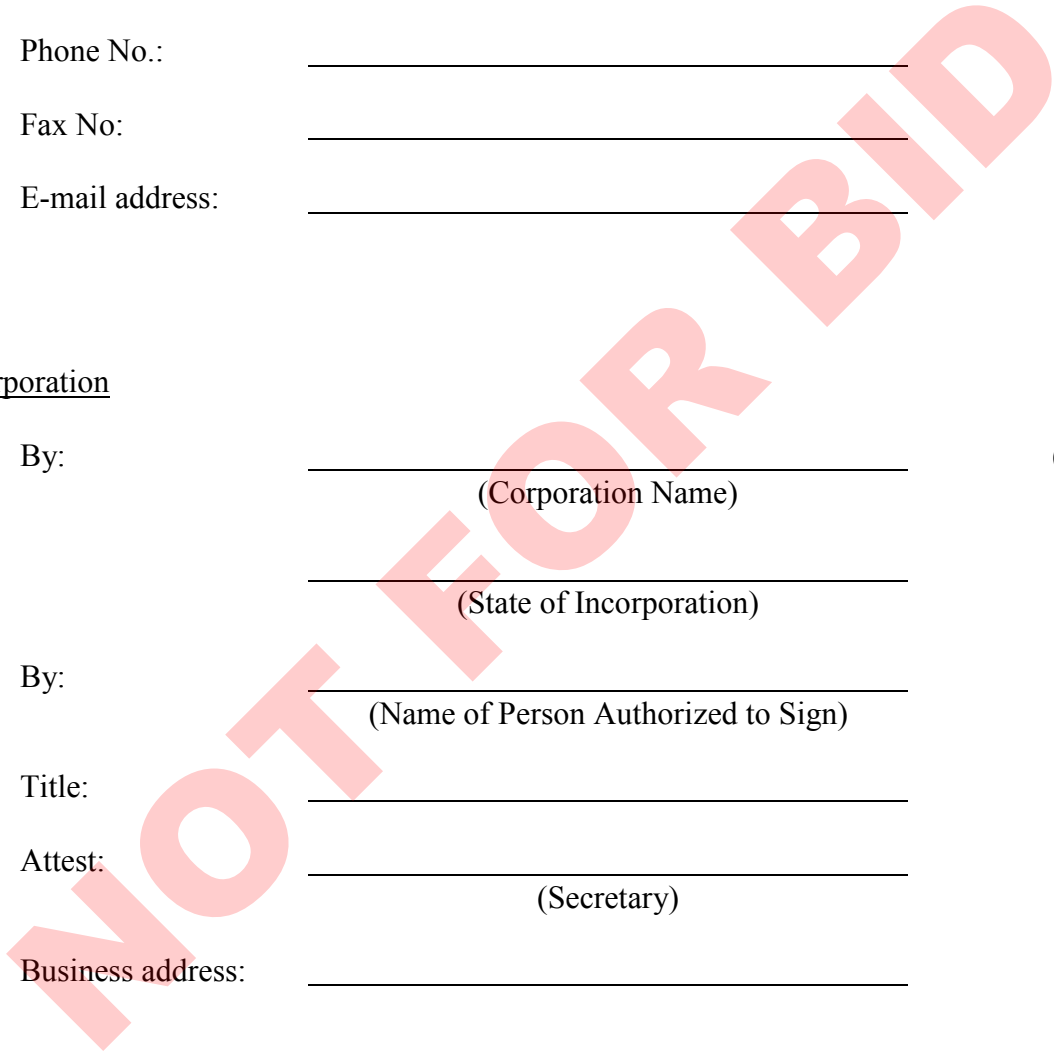
Attest: _____
(Secretary)

Business address: _____

Telephone No.: _____

Fax No.: _____

E-mail address: _____



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NOT FOR BID

A Joint Venture

By: _____
(Name)

Address: _____

Telephone No.: _____

Fax No.: _____

E-mail address: _____

By: _____
(Name)

Address: _____

Telephone No.: _____

Fax No.: _____

E-mail address: _____

(Each joint venture must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above.)

Subscribed and sworn to me this

_____ Day of _____, 2018

Notary or other officer authorized to administer oaths.

My commission expires: _____

Bidders should not add any conditions or qualifying statements to this Bid as otherwise the bid may be declared irregular as being not responsive to the advertisement. **BIDDERS SHALL USE THIS BID FORM IN SUBMITTING THEIR BIDS.**

END OF SECTION

NOT FOR BID

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NOT FOR BID

CONTRACT AGREEMENT

DOCUMENTS

NOT FOR BID

SECTION 00500
CONTRACT

THIS CONTRACT is dated as of the _____ day of _____ in the year 2018 by and between the **VILLAGE OF VILLA PARK, ILLINOIS** (hereinafter called OWNER) and _____ (hereinafter called CONTRACTOR). OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

- 1.01.** CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: **SOUTH MONTEREY STORMWATER QUALITY PROJECT.**

ARTICLE 2. ENGINEER

- 2.01.** The Project has been designed by the Village of Villa Park Public Works Department. The Village of Villa Park Village Engineer or his designee(s) are hereinafter referred to as "ENGINEER" and shall act as OWNER'S representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 3. CONTRACT TIME

- 3.01.** **The Work shall meet the Requirements for Final Completion and be ready for final payment in accordance with Paragraph 14.07 of the General Conditions within thirty (30) calendar days, including Saturdays, Sundays and holidays, from the date when the Contract Time commences to run, or by Thursday, November, 15, 2018, whichever is earlier.**
- 3.02.** Failure to Complete the Work on Time. OWNER and CONTRACTOR recognize that time is of the essence to the contract and that OWNER will suffer financial loss if the Work is not completed within the timeframe stipulated in the Contract as specified in Paragraph 3.1 above or within such extended time as may have been allowed in accordance with Article 12 of the General Conditions. Should CONTRACTOR fail to complete the Work within the timeframe stipulated in the contract or within such extended time as may have been allowed, CONTRACTOR shall be liable and shall pay

OWNER the amount shown in the following schedule of deductions, not as a penalty but as liquidated damages, for each day of overrun in the contract time or such extended time as may have been allowed. This liquidated damages provision, as an obligation to the Owner, shall further apply to the Contractor's Surety. Permitting Contractor or Surety to continue and finish the Work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of Owner of its rights under the Contract. The liquidated damages for failure to complete the contract on time are approximate, due to the impracticality of calculating and proving actual delay costs. This schedule of deductions establishes the cost of delay to account for administration, engineering, inspection, and supervision during periods of extended and delayed performance. The costs of delay represented by this schedule are understood to be a fair and reasonable estimate of the costs that will be borne by OWNER during extended and delayed performance by CONTRACTOR of the Work, remaining incidental work, correction of work improperly completed, or repair of work damaged as a result of CONTRACTOR.

Schedule of Deductions for Each
Day of Overrun in Contract Time

<u>Original Contract Amount</u>		<u>Daily Charges</u>
<u>From More Than</u>	<u>To and Including</u>	<u>Calendar Day</u>
\$ 0	\$ 100,000	\$ 1,000
100,000	500,000	2,000
500,000	1,000,000	3,000
1,000,000	3,000,000	4,000
3,000,000	6,000,000	5,000
6,000,000	12,000,000	9,000
12,000,000	And over	25,000

The liquidated damage amount specified will accrue and be assessed for each and every calendar day of overrun, including Saturdays, Sundays and holidays, beyond the number of calendar days stipulated for Substantial Completion in the Contract as specified in Paragraph 3.1 above, until the Work meets the requirements for Substantial Completion. The liquidated damage amount specified will accrue and be assessed for each and every calendar day of overrun, including Saturdays, Sundays and holidays, beyond the number of calendar days stipulated for Final Completion in the Contract as specified in Paragraph 3.1 above, until the Work meets the requirements for Final Completion. OWNER will deduct these liquidated damages from any monies due or to become due to CONTRACTOR from OWNER.

ARTICLE 4. CONTRACT PRICE

- 4.01.** OWNER shall pay CONTRACTOR for completion of the work in accordance with the Contract Documents in current funds as shown in the Bid Form as accepted by OWNER.

ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

- 5.01.** Progress Payments. OWNER will make monthly progress payments on account of the Contract Price on the basis of CONTRACTOR'S Application for Payment as recommended by ENGINEER. All progress payments will be on the basis of the progress of Work measure by the schedule of values provided for in the General Conditions and the Supplementary Conditions.
- 5.02.** Final Payment. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07B of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said Paragraph 14.07C

ARTICLE 6. CONTRACTOR'S REPRESENTATIONS

CONTRACTOR makes the following representations:

- 6.01.** CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work site locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.
- 6.02.** CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraphs 4.02 and 4.03 of the General Conditions, and accepts the determination set forth in Paragraph SC- 4.02.A.1 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which CONTRACTOR is entitled to rely.
- 6.03.** CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 6.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise

may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraphs 4.02 and 4.03 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

- 6.04.** CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, with the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.04 of the General Conditions.
- 6.05.** CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 6.06.** CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

ARTICLE 7. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire Contract between OWNER and CONTRACTOR concerning the Work consist of the following:

- 7.01.** This Contract
- 7.02.** Performance and Payment Bonds
- 7.03.** Standard General Conditions
- 7.04.** Supplementary Conditions
- 7.05.** Project Specifications
- 7.06.** Drawings
- 7.07.** Addenda

- 7.08. Instructions to Bidders
- 7.09. Advertisement for Bids
- 7.10. CONTRACTOR'S Bid and Bid Bond
- 7.11. Documentation submitted by CONTRACTOR prior to Notice of Award
- 7.12. Notice of Award
- 7.13. Notice to Proceed
- 7.14. Change Orders
- 7.15. The following which may be delivered or issued after the Effective Date of the Contract and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraphs 3.04 of the General Conditions.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in Paragraphs 3.04 of the General Conditions.

ARTICLE 8. MISCELLANEOUS

- 8.01. Terms used in this Contract which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 8.02. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 8.03. OWNER and CONTRACTOR each bind itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.
- 8.04. WAGE PROVISIONS

CONTRACTOR shall pay prevailing wages at rates not less than those prevailing under the Employment of Illinois Workers on Public Works Act (30 ILCS 570).

NOT FOR BID

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NOT FOR BID

ARTICLE 9. CERTIFICATION REGARDING DEBARMENT

9.01. _____, having executed a contract for
(Name of contractor)

the **SOUTH MONTEREY STORMWATER QUALITY PROJECT**, as generally described in the Advertisement for Bids, with the Village of Villa Park, hereby certifies that said contractor is not barred from executing said contract as a result of a violation of either Section 33E-3 or 33E-4 of Article 33E of Chapter 720 of the ILLINOIS Compiled Statutes (720 ILCS 5/33E-3 and 5/33E-4)

By: _____
Authorized Agent or Contractor

Subscribed and sworn to before me

This _____ day of _____, 2018

Notary Public

NOT FOR BID

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NOT FOR BID

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Contract in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Contract will be effective on the _____ day of _____, 2018.

OWNER: VILLAGE OF VILLA PARK CONTRACTOR: _____

SIGNED: _____ SIGNED: _____

BY: _____ BY: _____

TITLE: VILLAGE PRESIDENT TITLE: _____

Attest: _____ Attest: _____

Address for giving notices:

PUBLIC WORKS DEPARTMENT

VILLAGE OF VILLA PARK

20 SOUTH ARDMORE AVENUE

VILLA PARK, IL 60181-2696

Address for giving notices:

License No. _____
(If required by State or Municipal Law)

(CORPORATE SEAL)

(CORPORATE SEAL)

END OF SECTION

NOT FOR BID

CONTRACT A CTUOR

CHERITIFICATIIONS

NOT FOR BID

SECTION 00550
CONTRACTOR CERTIFICATIONS

1. SUBSTANCE ABUSE PREVENTION CERTIFICATION

**VILLAGE OF VILLA PARK
CONTRACTOR AND SUBCONTRACTOR
SUBSTANCE ABUSE PREVENTION POLICY**

Pursuant to P.A. 95-0635 (the “Substance Abuse Prevention on Public Works Act”), employees of the Contractor and employees of any Subcontractor are prohibited from the use of drugs or alcohol, as defined in the Act, while performing work on any public works project.

Before the Contractor or Subcontractor commences work, the Contractor and any Subcontractor shall have in place a written Substance Abuse Prevention Program for the prevention of substance abuse among its employees which meets or exceeds the requirements in P.A. 95-0635 or shall have a collective bargaining agreement in effect dealing with the subject matter of P.A. 95-0635.

The Contractor and any Subcontractor shall file with the public body engaged in the construction of the public works: a copy of the substance abuse prevention program along with a cover letter certifying that their program meets the requirements of the Act or a letter certifying that the Contractor or Subcontractor has a collective bargaining agreement in effect dealing with the subject matter of this Act. The Substance Abuse Prevention Certification Form provided in this section must be completed by the Contractor and each Subcontractor to this Contract.

SAMPLE SUBSTANCE ABUSE PREVENTION CERTIFICATION FORM IS PROVIDED ON PAGE 00550-03.

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NOT FOR BID

[ON COMPANY LETTERHEAD]

Date

Village of Villa Park
Public Works Department
20 South Ardmore Avenue
Villa Park, Illinois 60181

RE: Substance Abuse Prevention Program

[complete either A or B below]

Pursuant to Public Act 95-0635, the undersigned hereby certifies that it is in compliance with the terms and provisions of the Substance Abuse Prevention on Public Works Act. In particular, the undersigned hereby represents and warrants to the Village of Villa Park as follows:

- A. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has signed collective bargaining agreements that are in effect for all of its employees, and that deal with the subject matter of Public Act 95-0635.

Contractor/Subcontractor

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Date: _____

Signature of Authorized Representative

- B. The undersigned representative of the Contractor/Subcontractor certifies that the contracting entity has in place for all of its employees not covered by a collective bargaining agreement that deals with the subject of the Act, the attached substance abuse prevention program that meets or exceeds the requirements of Public Act 95-0635.

[attach a copy of the program]

Contractor/Subcontractor

Name of Authorized Representative (type or print)

Title of Authorized Representative (type or print)

Date: _____

Signature of Authorized Representative

NOT FOR BID

NOT FOR BID

BOND FORMS

NOT FOR BID

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place
of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-A (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR shall have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1 The Surety in accordance with the terms of the Contract;

3.3.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment Bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR's Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To the limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. DEFINITIONS.

12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY---Name, Address and Telephone)

AGENT or BROKER: OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-B (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

- 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants; and
- 2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

- 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
 - 4.2.1 Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 - 4.2.2 Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
 - 4.2.3 Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

- 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
- 6.2. Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds to the completion of the Work.

9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS.

15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY---Name, Address and Telephone)

AGENT or BROKER: OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

GENERAL

CONDITIONS

NOT FOR BID

NOT FOR BID

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



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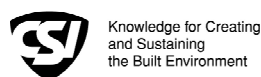
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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NOT FOR BID

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or

an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum,

fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and

easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and

furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02

Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer’s - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall

also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which

when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01

Intent

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02

Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the

Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. Contractor's Review of Contract Documents During Performance of Work: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations

in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05

Reuse of Documents

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06

Electronic Data

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day

acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDI- TIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such

condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. Engineer's Review: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys,

and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04

Underground Facilities

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

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

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

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

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05

Reference Points

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such

condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the

Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are 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 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 Contractor's Liability Insurance

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

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

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

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

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason,

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

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

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional

insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 Owner's Liability Insurance

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary

Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07

Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies

for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make

settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 Labor; Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 Services, Materials, and Equipment

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

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall

furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "Or-Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures:

If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by

Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding

Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the

property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer,, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

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

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

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any

variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20

Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to

carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01

Related Work at Site

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 Legal Relationships

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 Replacement of Engineer

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 Furnish Data

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 Pay When Due

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 Lands and Easements; Reports and Tests

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical

conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 Insurance

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 Change Orders

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 Limitations on Owner's Responsibilities

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 Evidence of Financial Arrangements

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 Visits to Site

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's

consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by

Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies

either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or
3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01

Cost of the Work

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be

acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

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

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02

Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03

Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise

impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to

enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and

equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

- a. inspections made to check the quality or the quantity of the Work as it has been performed have

been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

- b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

- a. to supervise, direct, or control the Work, or
- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
- c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
- d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
- e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04

Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05

Partial Utilization

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06

Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07

Final Payment

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the

Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 Owner May Terminate For Convenience

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an

adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
2. agrees with the other party to submit the Claim to another dispute resolution process, or
3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

NOT FOR BID

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CONDITIONS

NOT FOR BID

NOT FOR BID

SECTION 00800
SUPPLEMENTARY CONDITIONS

GENERAL

The following supplements shall modify, change, delete from, and add to the "Standard General Conditions of the Construction Contract." 2002 Edition EJCDC C-700. Where any Article, Paragraph or Subparagraph in the General Conditions is supplemented by one of the following paragraphs, the provisions of such Article, Paragraph or shall remain in effect and the supplementary provisions shall be considered as added thereto. Where any Article, Paragraph or Subparagraph in the General Conditions is amended, voided or superseded by any of the following paragraphs, the provisions of such Article, Paragraph or Subparagraph not so amended, voided or superseded shall remain in effect.

ARTICLE 1. DEFINITIONS

Amend the definition entitled "ENGINEER" to read:

"ENGINEER - the Village Engineer of Villa Park or his designee."

Amend the definition entitled "Substantial Completion" by adding the following immediately after the last sentence:

"Substantial Completion is a construction stage determined by the ENGINEER to be adequately completed in accordance with the Contract Documents so that the Owner may occupy and/or utilize the work for its intended purpose. Substantial completion for this Contract shall include all work items, excluding landscaping and punch list items."

Amend the definition entitled "OWNER" to read as follows:

"The Village of Villa Park."

ARTICLE 2. PRELIMINARY MATTERS

SC 2.01.B Delete Paragraph 2.01.B of the General Conditions in its entirety and insert the following in its place:

Evidence of Insurance:

"Before any Work at the Site is started, CONTRACTOR shall deliver to owner with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by the OWNER) which CONTRACTOR is required to purchase and maintain in accordance with ARTICLE 5."

SC 2.01.C Add a new Paragraph 2.01.C immediately after Paragraph 2.01.B of the General Conditions which is to read as follows:

"The Agreement, Bonds, Evidence of Insurance, and such other portions of the Contract Documents as may be required shall be executed and delivered by CONTRACTOR to OWNER within 10 days after receipt of the Notice of Award. OWNER shall determine the number of counterparts required. OWNER will execute the counterparts. OWNER, CONTRACTOR, and ENGINEER shall each receive an executed counterpart of the Contract Documents and additional conformed copies distributed as required."

SC 2.03 Delete Paragraph 2.03 of the General Conditions in its entirety and insert the following in its place:

"The Contract Time will commence on the date established in the Notice to Proceed issued by OWNER to CONTRACTOR, but in no event shall the Contract Time commence to run later than the 30th day after the effective date of the Contract, unless agreement in writing is provided by the OWNER. A Notice to Proceed may be given at any time within the 30 days after the effective date of the Contract."

SC 2.06 Delete Paragraph 2.06 of the General Conditions in its entirety and insert the following in its place:

A. After delivery of the executed Contract to OWNER, but before CONTRACTOR starts the Work at the Site, a conference will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A.

B. The conference will be held at a location selected by OWNER. The conference will be attended by: CONTRACTOR'S Office Representative, CONTRACTOR'S General Superintendent, Any Subcontractors' or Suppliers' representatives whom CONTRACTOR may desire to invite or ENGINEER may request. Including OWNER'S Representatives and Local Utilities Representatives. A suggested format would include, but not be limited to, the following subjects:

1. Discuss proposed construction progress schedule to be submitted by CONTRACTOR in accordance with Section 01300 of the Specifications.
2. Check of required bonds and insurance certifications prior to Notice to Proceed.

3. Liquidated damages.
4. Shop drawing submittal and approval procedure.
5. Chain of command, direction of correspondence, and coordinating responsibility between CONTRACTORS.
6. Request for a weekly job meeting for all involved.
7. Equal opportunity requirements.
8. Laboratory testing of material requirements.
9. Inventory of material stored on-site provisions.
10. Progress payment procedure and estimate.

ARTICLE 4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

SC 4.02.A.1 Amend Subparagraph 4.02.A.1 of the General Conditions to read as follows: Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; including the following:

No pavement or subsurface investigation reports or information are available for this project.

ARTICLE 5 - BONDS AND INSURANCE

SC 5.01.C Add the following language at the end of Paragraph 5.01.C of the General Conditions:

"In addition, no further progress payments under the Agreement will be made by OWNER until CONTRACTOR complies with the provisions of this Article."

SC 5.03 through 5.06 Delete Paragraphs 5.03 through 5.06 inclusive of the General Conditions and insert the following:

SC 5.03 "CONTRACTOR'S Insurance Requirements:

- A. CONTRACTOR shall not commence Work under the Contract until he has obtained all insurance required under this Article to provide protection from claims which may arise out of or result from CONTRACTOR'S performance of the Work and CONTRACTOR'S

other obligations under the Contract Documents whether such performance is by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by them or by anyone for whose acts any of them may be liable. CONTRACTOR shall procure and maintain for the duration of the Contract insurance of such types and in such amounts as may be necessary to protect himself and the interests of the OWNER 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, his agents, representatives, employees, or subcontractors. As a minimum, CONTRACTOR shall secure and maintain the types of insurance as hereinafter specified, and shall submit evidence to OWNER on an annual basis that the insurance coverage is in force. The form and limits of such insurance, together with the underwriter thereof in each case, shall be acceptable to OWNER, but regardless of such acceptance it shall be the responsibility of CONTRACTOR to maintain adequate insurance coverage until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective Work in accordance with Paragraph 13.07 Failure of CONTRACTOR to maintain adequate coverage shall not relieve him of any contractual responsibility or obligation.

All insurance policies shall name the following as additional insureds:

- a) Village of Villa Park, 20 South Ardmore Avenue, Villa Park, Illinois 60181
- b) Other parties as designated by OWNER

1. Public Liability and Property Damage Insurance

- a. For CONTRACTOR

This insurance shall protect the CONTRACTOR from claims for bodily injury, personal injury, and property damage (except automotive equipment), which may arise because of the nature of the work, or from operations under this CONTRACT.

- b. For OWNER and ENGINEER

The separate policy of insurance shall name the OWNER and its employees and officials and the ENGINEER as additional insured. The original insurance policy shall be submitted for retention by the OWNER. This separate policy shall provide coverage to said OWNER and its employees and officials with respect to said work. Both bodily injury, personal injury, and property damage insurance must be on an occurrence basis, and said policy shall provide that the

coverage afforded thereby shall be primary coverage to the full limit of liability stated in the declarations, and if said OWNER and its employees and officials have other insurance against the loss covered by said policy, that other insurance shall be excess insurance only.

c. Property Insurance

CONTRACTOR shall purchase and maintain until final payment property insurance upon the work at the site to the full insurable value thereof. This insurance shall include the interests of OWNER, CONTRACTOR, and Subcontractors, (all of whom shall be listed as insured or additional insured parties), shall insure against the perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in paragraph SC 5.3.4., and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property. If not covered under the "all-risk" insurance or otherwise provided in the Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the work stored on and off the site or in transit when such portions of the work are to be included in an Application for Payment.

d. Amount of Coverage

Each of the above public liability and property damage policies of insurance shall provide coverage in the following minimum limits of liability:

- (1) One million dollars (\$1,000,000.00) combined single limit per occurrence for bodily injury or death to each person;
- (2) One million dollars (\$1,000,000.00) for property damage resulting from any one accident;
- (3) Five million dollars (\$5,000,000.00) general aggregate limit;

e. Subcontractors

The public liability and property damage insurance shall not be deemed to require the CONTRACTOR to have his Subcontractors named as co-insured in his policy of public liability and property damage, but the policy shall protect him

from contingent liability, which may arise from the operations of his Subcontractors. Also, the CONTRACTOR, shall secure certificates of insurance as evidence that each Subcontractor carries insurance to provide coverage under this Contract to the same limits as is required by the CONTRACTOR. The CONTRACTOR shall submit copies of his Subcontractors insurance certificates to the OWNER as evidence of insurance coverage.

f. Included Coverage

The above public liability and property damage insurance shall also include the following coverage:

- (1) Comprehensive
- (2) Premises
- (3) Contractor's protective (Subcontractors to the CONTRACTOR) Liability.
- (4) Personal injury (false arrest, malicious prosecution and unlawful detention or imprisonment; libel, slander, and defamation of character; wrongful eviction, invasion of privacy and wrongful entry). Employee exclusion shall be removed.
- (5) Broad Form Property Damage.
- (6) XCU (explosion, collapse, underground damage). Exclusions deleted when applicable to operations performed by the CONTRACTOR or his Subcontractors.
- (7) Completed operation and product liability coverage for the life of the Contract and maintain such coverage for a period of three (3) years after final acceptance of the work by the OWNER.
- (8) CONTRACTOR Liability with respect to the hold harmless Agreement as herein stated.

g. Comprehensive Automobile Liability

This insurance shall cover owned, hired, and other non-owned automobiles and shall protect the CONTRACTOR from claims for bodily injury or property damage which may arise from the use of motor vehicles engaged in various operations under this Contract. The automobile insurance shall provide minimum limits of liability for bodily injury of \$500,000 for each person and \$1,000,000 for each occurrence, and \$500,000 of property damage each occurrence.

h. Umbrella Policy

At the option of the CONTRACTOR, the primary limits may be less than required, with an umbrella policy providing the additional limits needed. This form of insurance will be

acceptable provided that the primary and umbrella policies both provide the insurance coverage herein required and further provided that the umbrella policy minimum limits of coverage are \$5,000,000 per occurrence and \$5,000,000 aggregate. The umbrella coverage shall not apply to the OWNER'S protective policy.

2. Worker's Compensation Insurance

Before beginning the work, the CONTRACTOR shall furnish to the OWNER satisfactory proof that he has taken out, for the period covered by the work under this Contract, full worker's compensation insurance and, in addition, employee's liability insurance in an amount not less than \$1,000,000 for each occurrence, for all persons whom he may employ in carrying out the work contemplated under this Contract. In the event that the work of this Contract falls within the jurisdiction of the United States Longshoreman's and Harbor Workers Compensation Act and liability under Admiralty and Railroad Employees Federal Liability Act CONTRACTOR shall extend his worker's compensation insurance to provide and maintain in full force and effect during the period covered by this Contract insurance coverage under one or both of these Acts. Policies hereunder shall include an "all states" endorsement.

The insurer shall agree to waive all rights of subrogation against the OWNER, its officials, employees, and volunteers for losses arising from work performed by CONTRACTOR for the OWNER.

3. Worker's Occupational Diseases Insurance

Worker's occupational disease insurance shall be taken out covering all persons whom the CONTRACTOR may employ in carrying out the work contemplated under this Contract.

4. Builder's Risk Insurance

"All Risk" builder's risk insurance, in an amount equal to the contract price, shall cover, but shall not be limited to, fire, lightning, windstorm, hail, explosion, riot, riot attending a strike, civil commotion, smoke damage, damage by aircraft or vehicles, vandalism and malicious mischief, theft, collapse, flood, and earthquake. This insurance shall name the OWNER and the Contractor as insured and shall include coverage, but not by way of limitation, for all damage or loss to the work and to appurtenances, to materials and equipment to be used on the project while the same is in transit, or stored on or off the project site, and to construction plant and temporary structures.

SC 5.07 Delete Paragraph 5.07 of the General Conditions in its entirety and insert the following:

SC 5.07 Waiver of Rights

A. "OWNER and CONTRACTOR waive all rights against each other for all losses and damages caused by any of the perils covered by the policies of insurance provided in response to paragraphs in this document and any other property insurance applicable to the work, and also waive all such rights against the Subcontractors, and all other parties named as insured in such policies for losses and damages so caused. As required by Paragraph 6.06.G, each Subcontract between CONTRACTOR and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of Owner, CONTRACTOR, and all other parties named as insured. None of the above waivers shall extend to the rights that any of the insured parties may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued."

B. "OWNER and CONTRACTOR intend that any policies provided in response to this document shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby.

Accordingly, all such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any of the parties named as insured or additional insured, and if the insurers require separate waiver forms to be signed by any Subcontractor, CONTRACTOR will obtain the same."

SC 5.08 and 5.09 Delete Paragraphs 5.08 and 5.09 of the General Conditions in their entirety.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

SC 6.05.G Add a new Paragraph 6.05 G immediately after Paragraph 6.05.F which is to read as follows:

"When substitutes are proposed and accepted by ENGINEER, and it is found that such substitutes alter the design or space requirements indicated on Drawings, CONTRACTOR shall be responsible for the

costs involved to revise the design and construction, including the costs associated with the Work of other contractors due to such variance in design or space requirements. CONTRACTOR shall therefore thoroughly investigate the design parameters, conditions, and space requirements of potential substitutes with respect to the Contract Drawings and Specifications prior to requesting such substitutes, and shall submit evidence of such investigation to ENGINEER.”

SC 6.06.A and 6.06.B Delete Paragraphs 6.06.A and 6.06.B of the General Conditions in their entirety and insert the following:

- A. CONTRACTOR shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of material or equipment), whether initially or as a substitute, against whom OWNER may have a reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, other person or organization against whom he has a reasonable objection.
- B. Acceptance of any Subcontractor, other person or organization by OWNER shall not constitute a waiver of any right of OWNER to reject defective Work or Work not in conformance with the Contract Documents. If OWNER, after due investigation, has a reasonable objection to any Subcontractor, other person or organization proposed by the CONTRACTOR, CONTRACTOR shall submit an acceptable substitute. CONTRACTOR shall not, without the consent of OWNER, make a substitution for any Subcontractor, other person or organization who has been accepted by OWNER.

SC 6.06.G Delete Paragraph 6.06 G of the General Conditions in its entirety and insert the following:

“All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the OWNER and contains waiver provisions as required by Paragraph SC 5.07 CONTRACTOR shall pay each Subcontractor a just share of any insurance monies received by CONTRACTOR on account of losses under policies issued pursuant to Paragraph SC 5.03.A.4.”

SC 6.08 Add the following language at the end of Paragraph 6.08 of the General Conditions which is to read as follows:

“Copies of all permits and licenses prepared or obtained by CONTRACTOR shall be submitted to OWNER prior to the commencement of construction. Copies of all permits and licenses obtained by OWNER shall be made available to CONTRACTOR and maintained by CONTRACTOR at the project site.”

SC 6.20 Delete Article 6.20 of the General Conditions in its entirety and insert the following in its place:

“To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold the Village, its officials, agents, consultants, representatives and employees (the “Indemnified Village Parties”) and the Engineer harmless against all injuries, deaths, loss, damages, claims, patent claims, suits, liabilities, judgments, cost and expenses (the “Claims”), which may in anywise accrue against the Indemnified Village Parties, including attorney’s fees and court costs, arising in whole, in part, or as a consequence of the performance of the work by the Contractor, its employees or subcontractors. The Contractor shall, at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith, and, if any judgment shall be rendered against the Indemnified Village Parties, in any such action, the Contractor shall, at its own expense, satisfy and discharge the same. Without limiting the generality of the foregoing indemnity, the Contractor shall indemnify, defend and hold the Indemnified Village Parties harmless from all Claims brought pursuant to any statute, law, order, or decree, which Claim arises from or is related to the Contractor’s performance of the work. Contractor expressly understands and agrees that any performance bond or insurance policies required by this contract, or otherwise provided by the Contractor, shall in no way limit the responsibility to indemnify, keep and save harmless and defend the Indemnified Village Parties as herein provided.”

ARTICLE 8 - OWNER'S RESPONSIBILITIES

SC 8.01 Delete Paragraph 8.01 of the General Conditions in its entirety.

ARTICLE 10 - CHANGES IN THE WORK

SC 10.03 Amend the first sentence of Paragraph 10.03 of the General Conditions to read as follows:

"OWNER, after consideration and approval, may execute appropriate Change Orders (or Written Amendments) with CONTRACTOR covering."

And as so amended, Paragraph 10.03 remains in effect.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

SC 14.02.A.3 Amend Paragraph 14.02.A.3 of the General Conditions by deleting the word "Agreement" and inserting the words "Supplemental Conditions" in its place.

And as so amended, Paragraph 14.02.A.3 remains in effect.

SC 14.02.A.4 Add new Paragraphs 14.02.A.4 and 14.02.A.5 after Paragraph

SC 14.02.A.5 14.02.A.3 of the General Conditions which are to read as follows:

4. "Retainage:

After each Application for Payment has been found acceptable by OWNER, OWNER will pay an amount equal to the value of the Work completed less any previous payments to CONTRACTOR. An amount will be retained on each payment in accordance with the following schedule:

(1) Ten percent (10%) until FINAL COMPLETION.

5. Per Public Act 87-773, effective January 1, 1993, which amended the Local Government Prompt Payment Act, the following is included:

“When CONTRACTOR receives any payment, CONTRACTOR shall pay each Subcontractor and material supplier in proportion to the work completed by each Subcontractor and material supplier their application less any retention. If CONTRACTOR receives less than the full payment due under the public construction contract, CONTRACTOR shall be obligated to disburse on a pro-rata basis those funds received, with CONTRACTOR, Subcontractor, and material suppliers each receiving a prorated portion based on the amount of payment. When, however, OWNER does not release the full payment due under the contract because there are specific areas of work or materials OWNER or CONTRACTOR is rejecting or because CONTRACTOR has otherwise determined such areas are not suitable for payment, then those specific Subcontractors or material suppliers involved shall not be paid for that portion of the work rejected or deemed not suitable for payment and all

other Subcontractors and material suppliers shall be paid in full. If CONTRACTOR, without reasonable cause, fails to make any payment to his Subcontractors or material suppliers within fifteen (15) calendar days after receipt of payment under the public construction contract, CONTRACTOR shall pay to his Subcontractors and material suppliers, in addition to the payment due them, interest in the amount of not less than two percent (2%) per month, calculated from the expiration date of the fifteen (15) day period until fully paid. This subsection shall also apply to any payments made by Subcontractors and material suppliers to their subcontractors and material suppliers and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain.”

SC 14.02.B.1 Amend the first sentence of Paragraph 14.02.B.1 of the General Conditions by deleting the words "ten days" and inserting the words "30 days" in its place.

And as so amended, Paragraph 14.02.B.1 remains in effect.

SC 14.02.B.5 Add two new Paragraphs 14.02.B.5.e and 14.02.B.5.f immediately after Paragraph 14.02.B.5.d of the General Conditions which are to read as follows:

- e. the CONTRACTOR failed to supply lien waivers for materials, equipment, and Subcontract Work completed to date.
- f. Of reasonable doubt that the Work can be completed for the unpaid balance of the Contract Price.

And as so amended, Paragraph 14.02.B.5 remains in effect.

SC 14.04.B Delete Paragraph 14.04.B of the General Conditions in its entirety and replace it with the following:

- B. Within a reasonable time after Contractor’s notification, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor.

And as so amended, Paragraph 14.04.B remains in effect.

SC 14.04.D Delete Paragraph 14.04.D in its entirety.

SC 14.04.E Amend Paragraph 14.04.E of the General Conditions by deleting the following words "on the tentative list." and insert the following words "required by the Contract Documents." in their place.

And as so amended, Paragraph 14.04.E remains in effect.

SC 14.05 Delete Paragraph 14.05.A.4 of the General Conditions in its entirety. And as so amended, Paragraph 14.05 remains in effect.

SC 14.09 Delete Paragraph 14.09.A.1 of the General Conditions in its entirety.

And as so amended, Paragraph 14.09 remains in effect.

SC 14.10 Add a new paragraph immediately after Paragraph 14.09 of the General Conditions which is to read as follows:

“Liquidated Damages:

Should CONTRACTOR or Surety fail to complete the Work within the time set forth in paragraph 3.1 of the Contract Documents or within such extra time as may be allowed by extension, there shall be deducted from any monies due or that may become due CONTRACTOR or Surety the sum set forth in paragraph 3.2 of the Contract Documents for each and every calendar day, including Sundays and holidays, that the Work shall remain uncompleted. This sum shall be considered and treated not as a penalty but as fixed, agreed, and liquidated damages due to OWNER from CONTRACTOR or Surety because of OWNER'S loss of income and other costs incurred resulting from the failure to complete the Work within the time specified. Permitting CONTRACTOR or Surety to continue and finish the Work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of OWNER of its rights under the Contract.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

SC 15.01 Amend the first sentence of Paragraph 15.01 of the General Conditions by deleting the words "and Engineer".

And as so amended, Paragraph 15.01 remains in effect.

SC 15.03 Amend the first sentence of Paragraph 15.4 of the General Conditions by deleting the words "and ENGINEER".

And as so amended, Paragraph 15.03 remains in effect.

- SC 15.04** Delete Paragraph 15.04 of the General Conditions in its entirety and replace it with the following: "If through no act or fault of CONTRACTOR, the Work is suspended for a period of more than 120 consecutive days by OWNER or under an order of court, or other public authority, the CONTRACTOR may, upon seven days' written notice to OWNER, terminate the Agreement and recover from OWNER payment on the same terms as provided in Paragraph 15.03.

ARTICLE 16 – DISPUTE RESOLUTION

- SC 16.01** Delete Article 16 of the General Conditions in its entirety and insert the following in its place:

SC 16.01 Methods and Procedures

- A. The OWNER and CONTRACTOR may request mutual mediation of any Claim submitted to ENGINEER for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. OWNER and CONTRACTOR shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

ARTICLE 17 - MISCELLANEOUS

- SC 17.01** Amend Paragraph 17.01.A.2 of the General Conditions by inserting the words "(return receipt)" immediately following the words, "certified mail."

And as so amended, Paragraph 17.01 remains in effect.

- SC 17.01.B** Add a new Paragraph 17.01.B immediately after Paragraph 17.01.A of the General Conditions which is to read as follows:

“Whenever any provision of the Contract Documents requires the delivery of any Bond, Agreement, Certificate of Insurance or any other item, it shall be deemed to have been validly delivered if given in person to the individual, to a member of the firm or to an officer of

the corporation for whom it is intended, or if given at or sent by registered or certified mail (return receipt), postage prepaid, to the last business address known to him who delivers the article."

SC 17.02 Amend Paragraph 17.02 of the General Conditions by deleting the second sentence in its entirety.

And as so amended, Paragraph 17.02 remains in effect.

END OF SECTION

NOT FOR BID

NOT FOR BID

PREVAILING WAGES

NOT FOR BID

NOT FOR BID

Prevailing Wage rates for DuPage County effective Sept. 1, 2017												
Trade Title	Region	Type	Class	Base Wage	Fore-man Wage	M-F OT	OSA	OSH	H/W	Pension	Vacation	Training
ASBESTOS ABT-GEN	ALL	ALL		41.20	42.20	1.5	1.5	2	14.65	12.32	0.00	0.50
ASBESTOS ABT-MEC	ALL	BLD		37.46	39.96	1.5	1.5	2	11.62	11.06	0.00	0.72
BOILERMAKER	ALL	BLD		48.49	52.86	2	2	2	6.97	19.61	0.00	0.90
BRICK MASON	ALL	BLD		45.38	49.92	1.5	1.5	2	10.45	16.68	0.00	0.90
CARPENTER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
CEMENT MASON	ALL	ALL		44.25	46.25	2	1.5	2	14.00	17.16	0.00	0.92
CERAMIC TILE FNSHER	ALL	BLD		38.56	38.56	1.5	1.5	2	10.65	11.18	0.00	0.68
COMMUNICATION TECH	ALL	BLD		33.38	36.18	1.5	1.5	2	12.35	19.21	1.45	0.61
ELECTRIC PWR EQMT OP	ALL	ALL		37.89	51.48	1.5	1.5	2	5.00	11.75	0.00	0.38
ELECTRIC PWR EQMT OP	ALL	HWY		41.45	56.38	1.5	1.5	2	5.50	12.87	0.00	0.73
ELECTRIC PWR GRNDMAN	ALL	ALL		29.30	51.48	1.5	1.5	2	5.00	9.09	0.00	0.29
ELECTRIC PWR GRNDMAN	ALL	HWY		32.00	56.38	1.5	1.5	2	5.50	9.92	0.00	0.66
ELECTRIC PWR LINEMAN	ALL	ALL		45.36	51.48	1.5	1.5	2	5.00	14.06	0.00	0.45
ELECTRIC PWR LINEMAN	ALL	HWY		49.67	56.38	1.5	1.5	2	5.50	15.40	0.00	0.88
ELECTRIC PWR TRK DRV	ALL	ALL		30.34	51.48	1.5	1.5	2	5.00	9.40	0.00	0.30
ELECTRIC PWR TRK DRV	ALL	HWY		33.14	56.38	1.5	1.5	2	5.50	10.29	0.00	0.59
ELECTRICIAN	ALL	BLD		39.26	43.26	1.5	1.5	2	12.35	22.08	4.93	0.68
ELEVATOR CONSTRUCTOR	ALL	BLD		51.94	58.43	2	2	2	14.43	14.96	4.16	0.90
FENCE ERECTOR	NE	ALL		39.58	41.58	1.5	1.5	2	13.40	13.90	0.00	0.40
FENCE ERECTOR	W	ALL		45.06	48.66	2	2	2	10.52	20.76	0.00	0.70
GLAZIER	ALL	BLD		42.45	43.95	1.5	1.5	2	14.04	20.14	0.00	0.94
HT/FROST INSULATOR	ALL	BLD		50.50	53.00	1.5	1.5	2	12.12	12.96	0.00	0.72
IRON WORKER	E	ALL		47.33	49.33	2	2	2	14.15	22.39	0.00	0.35
IRON WORKER	W	ALL		45.61	49.25	2	2	2	11.52	22.65	0.00	0.81
LABORER	ALL	ALL		41.20	41.95	1.5	1.5	2	14.65	12.32	0.00	0.50

LATHER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
MACHINIST	ALL	BLD		47.56	50.06	1.5	1.5	2	7.05	8.95	1.85	1.47
MARBLE FINISHERS	ALL	ALL		33.95	33.95	1.5	1.5	2	10.45	15.52	0.00	0.47
MARBLE MASON	ALL	BLD		44.63	49.09	1.5	1.5	2	10.45	16.28	0.00	0.59
MATERIAL TESTER I	ALL	ALL		31.20	31.20	1.5	1.5	2	14.65	12.32	0.00	0.50
MATERIALS TESTER II	ALL	ALL		36.20	36.20	1.5	1.5	2	14.65	12.32	0.00	0.50
MILLWRIGHT	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
OPERATING ENGINEER	ALL	BLD	1	50.10	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	2	48.80	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	3	46.25	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	4	44.50	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	5	53.85	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	6	51.10	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	BLD	7	53.10	54.10	2	2	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	FLT		38.00	38.00	1.5	1.5	2	18.05	13.60	1.90	1.30
OPERATING ENGINEER	ALL	HWY	1	48.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	2	47.75	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	3	45.70	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	4	44.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	5	43.10	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	6	51.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
OPERATING ENGINEER	ALL	HWY	7	49.30	52.30	1.5	1.5	2	18.80	14.35	2.00	1.30
ORNAMNTL IRON WORKER	E	ALL		46.75	49.25	2	2	2	13.90	19.79	0.00	0.75
ORNAMNTL IRON WORKER	W	ALL		45.06	48.66	2	2	2	10.52	20.76	0.00	0.70
PAINTER	ALL	ALL		44.18	46.18	1.5	1.5	1.5	10.30	8.20	0.00	1.35
PAINTER SIGNS	ALL	BLD		37.45	42.05	1.5	1.5	2	2.60	3.18	0.00	0.00
PILEDRIVER	ALL	ALL		46.35	48.35	1.5	1.5	2	11.79	18.87	0.00	0.63
PIPEFITTER	ALL	BLD		47.50	50.50	1.5	1.5	2	10.05	17.85	0.00	2.12
PLASTERER	ALL	BLD		42.75	45.31	1.5	1.5	2	14.00	15.71	0.00	0.89
PLUMBER	ALL	BLD		49.25	52.20	1.5	1.5	2	14.34	13.35	0.00	1.28

ROOFER	ALL	BLD		42.30	45.30	1.5	1.5	2	9.08	12.14	0.00	0.58
SHEETMETAL WORKER	ALL	BLD		45.77	47.77	1.5	1.5	2	10.65	14.10	0.00	0.82
SPRINKLER FITTER	ALL	BLD		47.20	49.20	1.5	1.5	2	12.25	11.55	0.00	0.55
STEEL ERECTOR	E	ALL		42.07	44.07	2	2	2	13.45	19.59	0.00	0.35
STEEL ERECTOR	W	ALL		45.06	48.66	2	2	2	10.52	20.76	0.00	0.70
STONE MASON	ALL	BLD		45.38	49.92	1.5	1.5	2	10.45	16.68	0.00	0.90
TERRAZZO FINISHER	ALL	BLD		40.54	40.54	1.5	1.5	2	10.65	12.76	0.00	0.73
TERRAZZO MASON	ALL	BLD		44.38	47.88	1.5	1.5	2	10.65	14.15	0.00	0.82
TILE MASON	ALL	BLD		45.49	49.49	1.5	1.5	2	10.65	13.88	0.00	0.86
TRAFFIC SAFETY WRKR	ALL	HWY		33.50	35.10	1.5	1.5	2	8.10	7.62	0.00	0.25
TRUCK DRIVER	ALL	ALL	1	36.30	36.85	1.5	1.5	2	8.10	9.76	0.00	0.15
TRUCK DRIVER	ALL	ALL	2	36.45	36.85	1.5	1.5	2	8.10	9.76	0.00	0.15
TRUCK DRIVER	ALL	ALL	3	36.65	36.85	1.5	1.5	2	8.10	9.76	0.00	0.15
TRUCK DRIVER	ALL	ALL	4	36.85	36.85	1.5	1.5	2	8.10	9.76	0.00	0.15
TUCK POINTER	ALL	BLD		44.17	45.17	1.5	1.5	2	10.45	15.04	0.00	0.88

Legend

M-F OT 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.

OSA Overtime pay required for every hour worked on Saturdays

OSH Overtime pay required for every hour worked on Sundays and Holidays

H/W Health/Welfare benefit

Explanations DUPAGE COUNTY

IRON WORKERS AND FENCE ERECTOR (WEST) - West of Route 53.

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.

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.

TRAFFIC SAFETY - work associated with barricades, horses and drums used to reduce lane usage on highway work, the installation and removal of temporary lane markings, and the installation and removal of temporary road signs.

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 TECHNICIAN

Low voltage installation, maintenance and removal of telecommunication facilities (voice, sound, data and video) including telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated system digital network), pulling of wire in raceways, but not the installation of raceways.

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

Diver. Diver Wet Tender, Diver Tender, ROV Pilot, ROV Tender

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION

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.

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.

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".

NOT FOR BID

NOT FOR BID

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SPENCER ATIONS

DIVISION 1

GENERAL

REQUIREMENTS

NOT FOR BID

NOT FOR BID

SECTION 01010
SUMMARY OF WORK

PART 1 GENERAL

1.01 PROJECT DESCRIPTION

This project consists of the construction of 12 Bioretention Systems, each approximately 37 feet long by 6 feet wide within the existing drainage ditch area between the 600 and 700 Block of South Monterey Avenue public right-of-way. Work also includes the following:

- Tree removal and tree protection;
- Replacement of existing turf and soil with native plants and a permeable soil mixture;
- 2-year maintenance and monitoring of select native plants.

1.02 IDENTIFICATION OF DRAWINGS

- A. Work included is shown on drawings entitled SOUTH MONTEREY STORMWATER QUALITY PROJECT.

1.03 FORM OF SPECIFICATIONS

- A. These specifications, prepared by the Village of Villa Park Public Works Department, Villa Park, Illinois, are written in Construction Specifications Institute (CSI) three-part format (General, Products, and Execution).
- B. Items of work are specified by section. Specifications or requirements of one or more sections may apply or be referenced in other sections.
- C. CONTRACTOR shall perform or provide items of work stated and comply with requirements stated in each section unless specifically assigned to other contractors or OWNER.
- D. The term “provide” shall mean “furnished and installed by CONTRACTOR”.

1.04 CONTRACTOR’S USE OF PREMISES

- A. Coordinate use of premises under direction of ENGINEER.
- B. Assume full responsibility for protection and safekeeping of products under this Contract.
- C. Obtain and pay for use of additional storage or work areas needed for operations at no additional cost to OWNER.
- D. Conduct operations to ensure least inconvenience to general public.

1.05 STANDARD SPECIFICATIONS

- A. References are made herein to the “Standard Specifications for Road and Bridge Construction”, latest edition, as published by Illinois Department of Transportation (IDOT) and as hereby adopted, and to the “Supplemental Specifications and Recurring Special Provisions”, latest edition, as published by the Illinois Department of Transportation (IDOT) and as hereby adopted.
 - 1. Above Specifications are abbreviated IDOT SPECS herein.
 - 2. Provisions regarding basis of payment are superseded by requirements of this specification.

1.06 WORKING HOURS

- A. CONTRACTOR shall schedule normal working hours between 7:00 AM and 5:00 PM, Monday through Friday, excluding Federal holidays and any other holidays which may be designated by OWNER. Work between 8:00 AM and 5:00 PM on Saturday may be authorized by ENGINEER upon receipt of written request. Work during all other hours may only be authorized by OWNER upon receipt of written request.
- B. If CONTRACTOR submits a written request to schedule work outside the normal working hours in accordance with these specifications, and such request is approved, CONTRACTOR shall assume full responsibility for the cost of inspections or other services provided by ENGINEER. The rates at which such inspection or other services are to be compensated shall be determined by OWNER.

END OF SECTION

SECTION 01025
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. This section identifies bid items for this project and lists applicable specification sections, work included, method of measurement and method of payment.

1.02 DESCRIPTION OF BID ITEMS

- A. General:
 - 1. Provide necessary labor, materials, equipment, supervision, and other services to construct each bid item as required by Contract Documents.
- B. Bid Items (begin on following page):

NOT FOR BID

QUALIFICATIONS OF BIDDER

Description: This project includes specialty work that is deemed to require certain expertise on the part of the bidder and the bidder's project team members. In order to be considered a responsible bidder the bidder must have particular expertise in having successfully constructed projects of similar size and scope, specifically including excavation and preparation for a naturalized (planted with native selected vegetation) storm water facility.

Bidder must submit information along with the bid demonstrating that they are qualified to perform this work (if sub-contractors are proposed for either earthwork or landscaping, similar information should be provided for each entity):

- a. Similar Project Experience
 - i. Bidder must provide detailed information on past projects of a similar size and scope, performed by the submitting firm.
 - ii. Bidder must submit a list of references of previous projects identifying the location of the work, the dollar value of the work, the owner or agency responsible for the work, and the name and phone number of the contact person.
 - iii. Bidder shall sign the Certification of Qualifications form and include with the Bid.
- b. Proposed Project Team – identify a project manager and full-time onsite construction supervisor (can be the same person) with qualifications (individual resume or list of experience). The individuals proposed must be utilized for the duration of this project unless an alternative is approved in writing by the Village.

PRECONSTRUCTION VIDEO RECORDING

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 01300 – Submittal
- 2) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Videotaping all areas affected by the construction
- 2) Completing videotaping at a time after a Notice of Award has been issued and prior to the delivery of any materials or equipment to the project area.
- 3) Videotaping of all pertinent exterior features within the construction zone of influence (including temporary construction easement areas) shown in sufficient detail to document pre-construction conditions.
- 4) Showing features including, but not be limited to, roadways, pavements, curbs, gutters, driveways, driveway aprons, sidewalks, carriage walks, parkways, retaining walls, buildings, landscaping, trees, shrubbery, fences, light posts, signs, signposts, utilities, and equipment.
- 5) Maintaining viewer orientation by means of an audio commentary in the audio track of each video recording to help explain what is being viewed; and by recording landmarks

and readily identifiable objects (property addresses, street signs, etc.) at the appropriate intervals.

- 6) Providing two (2) copies of each video recording in DVD format, or another electronic format as may be determined to be acceptable by ENGINEER (videocassette format, VHS or otherwise, is not acceptable), with corresponding street logs, to OWNER prior to the start of construction operations.
- 7) Maintaining duplicate copies of all submitted materials for CONTRACTOR's own use.

This item shall NOT include the costs of:

- 1) Work in other areas not shown on the drawings or as authorized by ENGINEER.
- 2) Work included in other bid items.

Method of Measurement: There are no separate quantities measured for this item

Basis of Payment: This work shall be paid for at the contract **LUMP SUM** price for:

PRECONSTRUCTION VIDEO RECORDING,

which price shall be payment in full for all labor and materials.

CONSTRUCTION LAYOUT

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 01050 - Field Engineering
- 2) Section 02100 - Site Preparation
- 3) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Providing, installing and maintaining horizontal and vertical control necessary for completion of Work.
- 2) Providing, installing and maintaining all staking necessary for completion of Work.
- 3) Removing any remaining staking and any other construction layout materials which are not to remain after construction is completed.
- 4) Other appurtenant and incidental work.
- 5) General requirements of sections listed.

This item shall NOT include the costs of:

- 1) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- i) First payment following initial installation of construction layout = $0.25 \times$ contract lump sum price.
- ii) First payment following final removal of construction layout = $0.15 \times$ contract lump sum price.

iii) Intervening payments = $\frac{0.6 \times \text{contract lump sum price}}{(\text{number of payments expected} - 2)}$

- iv) All payments are subject to retainage in accordance with applicable sections of these specifications.
- v) If the Work meets the requirements for Substantial Completion before the contract time has expired, ENGINEER may elect, in his sole discretion, to make payment for one-hundred percent (100%) of the contract lump sum price for **CONSTRUCTION LAYOUT**, less any applicable retainage.

Basis of Payment: This work shall be paid for at the contract **LUMP SUM** price for:

CONSTRUCTION LAYOUT,

which price shall be payment in full for all labor and materials.

CLEARING, TREE AND HEDGE REMOVAL

Description: This work shall consist of the removal and disposal of all obstructions encountered during the construction of this improvement. Clearing shall consist of the removal and disposal of all obstructions such as fences, walls, foundations, buildings, accumulations of rubbish of whatever nature and all logs, shrubs, brush, grass, weeds, other vegetation and stumps of less diameter than 6 inches.

Tree removal shall consist of the cutting, grubbing, removal and disposal of all trees and stumps as hereinafter defined. Hedge removal shall consist of the pulling or grubbing, removal and disposal of all hedge trees or bushes, as hereinafter defined.

A trees shall be defined as a woody, perennial plant having a single main stem or trunk, the diameter of which is 6 inches or more at a point 4 1/2 feet (diameter breast height) above the highest ground level at the tree. Trees with a diameter less than 6 inches will be considered as shrubs. A tree stump with a diameter cut-off of 6 inches or more will be considered a tree for purposes of measurement and removal.

A hedge shall be defined as trees or bushes planted for fence or windbreak purposes in rows containing 20 or more trees or bushes per 100 linear feet.

Rows containing less than 20 trees or bushes per 100 linear feet, and scattered hedge trees or bushes will not be considered a hedge but as trees or shrubs, in accordance with the diameter measurements herein specified.

All trees, stumps, shrubs and bushes designated for removal shall be removed to a depth of not less than 12 inches below the elevation of the sub-grade, the finished earth surface or the ground line. All trees and shrubs designated to be saved shall be protected during clearing and subsequent construction operations. Overhanging limbs shall be trimmed or cut off to provide a minimum vertical clearance of 7 feet from the finished surface. This shall be considered as clearing. In the event that the Contractor damages any tree or shrub designated to be saved, such plants shall immediately be repaired or replaced as directed by the Engineer in accordance with standard horticultural practice for such work, at the Contractor's expense.

Hedge shall not be cut off at the ground level, but shall be pulled or grubbed in such a manner as to ensure complete removal. Scattered hedge trees or shrubs not classified as hedge shall be removed as specified for hedge.

Basis of Payment: Tree Removal will be paid for at the contract unit price per **UNIT DIAMETER** for:

TREE REMOVAL (6 TO 15 UNIT DIAMETER),
or
TREE REMOVAL (OVER 15 UNIT DIAMETER),

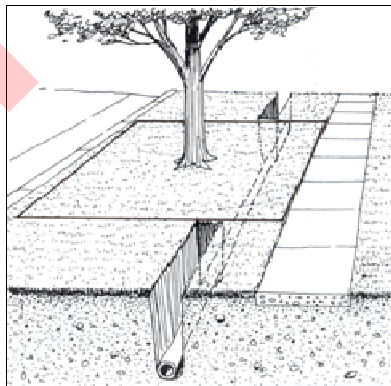
where one unit equals one inch for **TREE REMOVAL**. Clearing, hedge or shrub removal shall not be paid for, but shall be considered **INCIDENTAL** to the execution of the Contract.

TREE PROTECTION

Description: All tree protection measures and any deviations shall be noted in the contract specifications and on approved project plan sheets and permits using the guidelines listed below.

Tree protection shall include avoiding damage to the above-ground tree branches and trunk, and the below-ground root system and surrounding soil. Tree crowns and trunks shall not suffer any branch or bark loss. Roots shall be protected from compaction, storage of materials, severing, regrading of the parkway or excavation unless specifically noted on the project plan sheets.

The Critical Root Zone, or CRZ, is the area immediately surrounding a tree that must be protected from damage. In a municipal parkway setting with utilities and paved or concrete surfaces, the size of the CRZ has been adjusted to form a rectangle around the parkway tree trunk with minimum dimensions listed in the following table. The depth of the CRZ extends to 4 feet below the natural ground surface level.



<u>Parkway Tree diameter at 4.5'</u>	<u>Width street to property (min. curb to sidewalk)</u>	<u>Length along street street(minimum)</u>	<u>Depth</u>
0 – 12.0 inches	10.0 feet	10 feet	4 feet
12.1 – 24.0 inches	10.0 feet	20 feet	4 feet
24.1 or more inches	10.0 feet	30 feet	4 feet

For projects that involve excavations of less than one (1) foot in depth in the parkway or street and are replacing structures in the same location, fencing of the public parkway trees shall not be required. Example projects include, but are not limited to, street pavement resurfacing, curb removal/replacement, driveway removal/replacement, or sidewalk removal/repairs or new sidewalk installations. Contractors shall be mindful of the CRZ dimensions and potential for fines if any parkway trees suffer any unauthorized damage as determined by the Engineer.

For projects that involve excavations of more than one (1) foot in depth in the parkway or street or both, fencing of the public parkway trees shall be required. Example projects include, but are not limited to, water main replacements with new roundway keystops and domestic service box installations, sanitary line replacements and new service connections, new or replacement natural gas services, new or replacement phone or fiber optic lines, or new or replacement storm sewers, or projects that widen roads which in turn decreases the parkway soil volume around public parkway trees.

Projects that require fencing (listed above) shall fence the public parkway trees with four (4) foot high construction fence secured to six (6) foot tall galvanized steel posts driven two (2) feet in the ground with posts spaced no further than ten (10) feet apart.

The dimensions of the fence shall depend on the tree diameter size and shall follow the table listed for the CRZ above, or as large as practical dependent on driveways and other field conditions. The fenced rectangle shall have three (3) sides with the opening facing the adjacent residences for easy access for mowing or tree care. Under no circumstances shall any items be stored within the fence.

All fencing shall be maintained daily in an upright good condition. The size and location of all fencing shall be shown on the project plan sheets.

To avoid damage to the CRZ, utilities must be augered underneath the public parkway trees. Excavation pits for augering equipment are to be outside the fenced area and are to be shown on the project plan sheets. Excavation pits for roundway keystops and domestic service boxes are to be as small as practical with excavation occurring in a direction away from the adjacent public parkway tree.

In cases when severing of roots within a portion of the CRZ may be unavoidable (ex. sidewalk installation, curb replacement, ditching work, water or sanitary service replacement), subject to the approval of the Village Forester, sharp clean cuts shall be made on root ends to promote wound closure and root regeneration. Root pruning and excavation activities shall occur such that the smallest volume of soil and roots is disturbed, and the locations shall be shown on the project plan sheets.

Basis of Payment: This work shall be paid for at the contract unit price per **FOOT** for:

TEMPORARY FENCE,

which price shall be payment in full for the work as specified herein, except tree removal as defined by the standard specifications, which will be paid for separately.

TRAFFIC CONTROL AND PROTECTION

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 01500 - Construction Facilities and Temporary Controls
- 2) Section 01560 - Protection of Environment
- 3) Section 01570 - Traffic Regulation
- 4) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Furnishing traffic control materials and devices and other related items as may be necessary.
- 2) Installation of traffic control materials and devices as outlined on the plans, as prescribed in the project specifications, or as deemed necessary by ENGINEER.
- 3) Maintenance of traffic control materials and devices.
- 4) Acceptance of and compliance with the daily traffic control deduction, provided for the purpose of ensuring proper maintenance of traffic control, as prescribed in Section 01570, Traffic Regulation.
- 5) Removal of all traffic control materials and devices.
- 6) Other appurtenant and incidental work.
- 7) General requirements of sections listed.

This item shall NOT include the costs of:

- 1) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- i) First payment following initial installation of traffic control = $0.25 \times \text{contract lump sum price}$.
- ii) First payment following final removal of traffic control = $0.15 \times \text{contract lump sum price}$.
- iii) Intervening payments = $\frac{0.6 \times \text{contract lump sum price}}{(\text{number of payments expected} - 2)}$
- iv) All payments are subject to retainage in accordance with applicable sections of these specifications.
- v) If the Work meets the requirements for Substantial Completion before the contract time has expired, ENGINEER may elect, in his sole discretion, to make payment for one-hundred percent (100%) of the contract lump sum price for **TRAFFIC CONTROL AND PROTECTION**, less any applicable retainage.

Basis of Payment: This work shall be paid for at the contract **LUMP SUM** price for:

TRAFFIC CONTROL AND PROTECTION,

which price shall be payment in full for all labor and materials.

MECHANICAL STREET SWEEPING

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 01560- Protection of Environment.
- 2) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Mechanical street sweeping as directed by ENGINEER.
- 2) Removal and disposal of any materials collected as a part of the street sweeping process.

This item shall NOT include the costs of:

- 1) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- 1) **MECHANICAL STREET SWEEPING** will be measured per hour

Basis of Payment: This work shall be paid for at the contract unit price per **HOUR** for:

MECHANICAL STREET SWEEPING

which price shall be payment in full for all labor and materials.

EARTH EXCAVATION

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 01050 – Field Engineering
- 2) Section 01560 – Protection of Environment
- 3) Section 02100 - Site Preparation
- 4) Section 02210 - Grading
- 5) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Site preparation.
- 2) Protecting existing utilities, site objects, and new work which are to remain in service after completion of the work.
- 3) Excavation, removal and disposal of materials in locations shown on plans or as directed by ENGINEER, and to the depths shown on the plans or as directed by ENGINEER, including, but not limited to, existing aggregate base, sub-base, sub-grade, curb and gutter, sidewalk, driveway approaches, and alleys.
- 4) Grading and compacting the remaining subgrade as necessary, in preparation for new work which is to follow
- 5) Cleanup and restoration of adjacent areas.
- 6) Other appurtenant and incidental work.
- 7) General requirements of sections listed.

This item shall NOT include the costs of:

- 1) Earth excavation in other areas not shown on the drawings or as authorized by the ENGINEER.
- 2) Pavement removal
- 3) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- 1) Measure, to the nearest 0.01 cubic yard, actual quantity of earth excavation completed to the limits set forth on the drawings or as authorized by the ENGINEER.

Basis of Payment: This work shall be paid for at the contract unit price per **CUBIC YARD** for:

EARTH EXCAVATION

which price shall be payment in full for all labor and materials.

CONSTRUCT BIORETENTION SYSTEMS

Description: This work shall consist of the construction of 12 separate bioretention systems including the furnishing, transporting and placement of amended soil in accordance with the applicable parts of Sec. 211 of the SSRBC except as amended herein.

The Contractor shall submit material certifications for aggregate, soil media, and any geotextiles for approval to the Engineer prior to work commencing.

Construction of each bioretention area shall occur only after the entire contributing drainage areas have been stabilized.

Temporary erosion and sediment controls shall be installed before construction of bioretention areas to divert stormwater away from the bioretention area until it is complete. NOTE: Special protection measures, such as erosion control fabrics, may be required to protect vulnerable side slopes from erosion during the construction process.

All construction equipment (e.g. excavators, backhoes, etc.) shall work from the sides of each bioretention area to excavate the area to its appropriate design depth and dimensions. NOTE: Excavating equipment shall have buckets with adequate reach so they do not sit inside the footprint of the bioretention area.

An amended soil mix shall be installed in one 12-inch lift until desired finish elevation of each bioretention area is achieved. The Engineer must receive and approve the batch receipt confirming the source of the amended soil prior to installation. NOTE: Each bioretention area shall be checked for settlement 3 days after installation of the amended soil with additional amended soil installed as needed to achieve the design elevation.

The planting holes shall be prepared and plant material installed as shown on the landscaping plans. Watering of each bioretention area shall occur until all plants are determined to be established and growing.

The Engineer shall perform a final inspection of each newly constructed area with the Contractor. The Contractor shall provide record drawings of each area then log the GPS coordinates for each area and submit them for entry into a maintenance tracking database

Amended Soil

Amended soils shall not be handled wet during any construction work.

Over-excavation for amended soil shall be conducted following excavation to proposed grade. In all areas requiring amended soils, the existing soil shall be excavated and hauled off site.

The excavated material shall not be used onsite for amended soil material. All amended soil shall be imported from a suitable source offsite with the Engineer approving the material prior to placement on the project site. If requested, the Contractor shall show the Engineer the potential amended soil materials at the source location.

The Engineer shall have the amended soils tested by the Village's material testing company to ensure appropriate gradation and compaction. Samples shall be taken within 48 hours of notice from the Contractor that materials are ready for testing. Standard sieve analysis and other general accepted testing procedures may be utilized. After samples are taken, testing may take up to 5 business days per round of testing. The Contractor shall build time for testing into his schedule, as it may take multiple rounds of mixing and testing to meet the requirements, depending on the Contractor's chosen method and thoroughness of the mixing procedure prior to samples being taken.

Wheeled vehicles (e.g. scrapers, end loaders, skid steers, etc.) shall not be used for topdressing work and shall not be allowed in the amended soils after the subgrade has been achieved. Only low ground pressure wide-track equipment (quadtrac tractor and pull-type scraper assembly wide, track dozer, backhoe, and tracked bobcats) shall haul, move and spread amended soil material in the areas to be planted or where plugs are to be installed. Filter media be lightly compacted during installation to prevent migration of fine particles. A single pass with a vibrating plate can be used to compact the filter media. The Contractor shall be responsible to create a surface that has minimal compaction. NOTE: It is critical to restoration success that compaction of the surface is avoided. In areas where a stone subbase will not be installed, the existing subgrade shall be pitched in conformance with the proposed contours and shall be scarified prior to placement of pulverized topsoil.

The Contractor shall establish a smooth and level surface in the remedial area with clods no greater than 1-inch in diameter and a surface that has minimal compaction. All rocks and/or gravel greater than 3/4-inch in diameter shall be removed and disposed of. The Engineer shall inspect the surface conditions following the amended soil placement of each constructed bioretention area to determine if they are acceptable. The Contractor shall be responsible to rectify any unacceptable amended soil conditions and shall be required to re-grade and/or disk to achieve acceptance. Should the placing procedure segregate the soil mix, or otherwise cause it to no longer meet specifications, any in place remedial measures necessary will be the responsibility of the Contractor with no additional payment being made for said work.

Each constructed area shall be finished to a smooth, uniform surface plane with loose uniformly fine texture to within plus or minus 1-inch of designed finish elevation. Hand raking shall be done in order to remove ridges and fill depressions.

Amended Soil Mixture Particle Size Composition

The bioretention soil mixture shall be classified as a loamy sand on the USDA Texture Triangle, with the following materials noted in Table 1.1, Bioretention Material Specifications, included as part of this Special Provision.

Bioretention Side Slopes

Bioretention areas shall be constructed with side slopes of 3:1 or flatter.

Method of Measurement: This work shall be measured per SQUARE YARD in place per each bioretention system constructed.

Basis of Payment: This work shall be paid for at the contract unit price per SQUARE YARD for:

CONSTRUCT BIORETENTION SYSTEM,

which price shall be payment in full for all material, equipment, and labor necessary to complete the work.

NOT FOR BID

Table 1.1 Bioretention Material Specifications

Material	Specification	Notes
Filter Media (sandy loam)	Filter Media to contain: · 30% sand · 50% pulverized topsoil · 10% clay · 10% weed-free mature compost	Minimum depth = 9"
Transition Layer (coarse sand)	Sand	Minimum depth = 12"
Drainage Layer (washed gravel)		
Media	2"-3" River rock (80% material volume) with pea-gravel infill (20% material volume)	Approximate width = 18" (rock width shall cover bottom flat grade / bottom flow path of prop. Bioswale)
Top Layer		Minimum depth = 6" in all areas. Ensure finished grade of rock placement is the lowest elevation of the materials within the Bioswale. The center of the rock placement shall be typ. 2-in. lower than the sides of the rock placement, for shallow V-shape placement.
Plant Materials	See Special Provision 21, Table 1.1 (Proposed List of Plants)	Establish plant materials as specified in the landscaping plan and the recommended plant list.

BIORETENTION NATIVE PLANT SEED MIX:

1. Erosion blanket:

A. Erosion control blanket shall be North American green s 75 bn, or equal. Review installation locations w/ owner's representative. The blanket shall be a machine-produced 100% biodegradable mat with a 100% straw fiber matrix with a functional longevity of approximately 12 months. (Note: functional longevity may vary depending upon climatic conditions, soil, geographic location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a 100% biodegradable woven natural organic fiber netting. The netting shall consist of machine directional strands formed from two intertwined yarns with cross-directional strands interwoven through the twisted machine strands (commonly referred to as a leno weave) to form an approximate 0.50 x 1.00 inch (1.27 x 2.54 cm) mesh. The blanket shall be sewn together with biodegradable thread on 1.50 inch (3.81 cm) centers.

Material content

Matrix 100% straw fiber (0.50 lbs/yd²)

Netting one side only, leno woven 100% biodegradable natural

Organic fiber
(9.30 lbs/1,000 ft² approximate weight)
Thread biodegradable

Physical specifications (per roll)
Width 6.67 ft ± 5%
Length 108.00 ft ± 5%
Weight 46.40 lbs ± 10%
Area 80 yd² 66.89 m²
Stitch spacing 1.50 inches

B. Install blanket in accordance with manufacturer's recommendations

2. Tolerance for finished elevations

- A. Owner and owner's representative reserve the right to review contractor's results of contractor's survey including verification of completion of the following stages: subgrade completion, installation of filter fabric wrap around coarse aggregate, amended topsoil grade completion, spot elevations, or other items upon the request of the owner. Contractor verification of grades shall at a minimum occur after completion of mass grading and after installation of topsoil.
- B. All spot elevations for bioswales shall be constructed to within +/- 0.1 ft of the elevation indicated on the plans.

3. Tolerance for ruts and dirt clumps

- A. Bioswales shall be constructed to be free from ruts that are 0.1 ft or larger, and shall contain less than 10% dirt clumps that are 2-inch or larger.

4. Native plant seed

1. Description:

Native plant seed shall be the primary method of establishing quickly-growing ground cover vegetation. Native plant seed shall be installed at bioswale areas described on plans and specifications.

2. Materials:

- A. Seed materials shall be healthy (species specified below). With an origin as close as possible to project site. Plant materials from beyond a 150-mile radius of the project site shall be approved in writing by owner prior to use.
- B. Substitutions shall not be made without written approval of owner.

3. Quality control:

- A. Delivery: accept delivery of seed after preparations for seeding has been completed.
- B. Temporary storage: if installation is delayed more than 4 hours after delivery, make provisions for protecting seed from weather.
- C. All seed material must show appearance of normal health and vigor and shall comply with the state and federal laws with respect to inspection for plant diseases and insect infestations.
- D. All precautions that are customary in good trade practices shall be taken to insure the arrival of seed in good condition.

4. Installations

- A. Hand broadcast, raking, and/or drill seeding shall be used to install seed in all graded bioswale or restoration areas. Where erosion control blanket is installed, hand broadcast seeding may occur. All seed installation shall occur after the seedbed is properly prepared but prior to the installation of plugs, if any. Roots and small sticks (<1" diam.) shall be removed prior to seeding. Large branches (>1" diam.) shall be removed and disposed offsite. Subsoil and topsoil shall not be compacted to more than 80% proctor density.
- B. Subsoil and topsoil: see bioswale amended soil and subsoil preparation in plans, bid documents, and specifications. Soil and subsoil shall be loam soil from "a-horizon", free of sticks, roots, weeds, or brush larger than 1" in dia., or other litter and waste. At least 90% shall pass no. 10 sieve and the PH shall be between 5.5 and 8.0.
- C. Herbiciding to prepare the seedbed is not anticipated to be necessary due to grading, subgrade installation, and amended soils installation for site preparation.
- D. Following placement of amended soil, seedbed shall be prepared with a disk or chisel in all graded areas to a minimum 6-inch tillage depth. Maximum dirt clod size shall be approximately 2 inches. A rake shall be applied to remove large clods and to create a smooth and level seedbed. Seedbed preparation shall not occur during wet soil conditions. Seedbed shall have minimum (below 80%) compaction, be smooth and free of debris to promote seed-soil contact.
- E. Planting dates for native plant seed: no installation under frozen or saturated ground surface conditions. Native plant seed and wetland seed installation shall occur between April 1 and November 15 unless approved otherwise by owner.
- F. Contractor shall notify owner's representative at least 48 hours prior to planting.
- G. Lower bank - sun native plant seed mix: shall be installed in sun locations (per plans) along toe of slope of the bioswale, from 0.0 ft above the bottom, extending to 1.0 ft above the bottom. Install below erosion control blanket in bioswale or other areas.
- H. Middle/upper bank - sun native plant seed mix: shall be installed in sun locations (per plans) along toe of slope of the bioswale, from 1.0 ft above the bottom, extending to the top of bioswale (below grass buffer strip). Install below erosion control blanket in bioswale or other areas.
- I. Lower bank - shade native plant seed mix: shall be installed in shade locations (per plans) along toe of slope of the bioswale, from 0.0 ft above the bottom, extending to 1.0 ft above the bottom. Install below erosion control blanket in bioswale or other areas.
- J. Middle/upper bank - shade native plant seed mix: shall be installed in shade locations (per plans) along toe of slope of the bioswale, from 1.0 ft above the bottom, extending to the top of bioswale (below grass buffer strip). Install below erosion control blanket in bioswale or other areas.

5. Native seed mix tables:

TABLE 1:		
LOWER BANK - SUN NATIVE PLANT SEED MIX: SHALL BE INSTALLED IN SUN LOCATIONS (PER PLANS) ALONG TOE OF SLOPE OF THE BIOSWALE, FROM 0.0 FT ABOVE THE BOTTOM, EXTENDING TO 1.0 FT ABOVE THE BOTTOM.		
LOWER BANK - SUN MIX	COMMON NAME	LB/ACRE
ACORUS CALAMUS	SWEET FLAG	0.20
ASCLEPIAS INCARNATA	MARSH MILKWEED	0.20
CAREX COMOSA	BRISTLY SEDGE	0.50
CAREX CRISTATELLA	CRESTED OVAL SEDGE	0.50
CAREX EMORYII	RIVERBANK TUSSOCK SEDGE	0.50
CAREX LURIDA	BOTTLEBRUSH SEDGE	0.50
CAREX STIPATA	COMMON FOX SEDGE	0.50
CAREX VULPINODEA	FOX SEDGE	2.00
ELYMUS CANADENSIS	PRAIRIE WILD RYE	1.00
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	1.00
IRIS VIRGINICA SHREVEI	BLUE FLAG IRIS	1.00
JUNCUS TORREYI	TORREY'S RUSH	0.50
LIATRIS SPICATA	DENSE BLAZING STAR	0.20
LEESYIA ORYZOIDES	RICE CUT GRASS	0.25
SPARTINA PECTINATA	PRAIRIE CORD GRASS	1.00
		9.85
COVER CROP (20 LB/ACRE)		
AVENA SATIVA	SEED OATS	10.00
COSMOS BIPINNATUS	COSMOS	0.75
LOLIUM MULTIFLORUM	ANNUAL RYE	10.00
CHAMAECRISTA FASCICULATE	PARTRIDGE PEA	0.25
		21.00 LB/ACRE

TABLE 2:		
MIDDLE/UPPER BANK - SUN NATIVE PLANT SEED MIX: SHALL INSTALLED IN SUN LOCATIONS (PER PLANS) ALONG TOE OF SLOPE OF THE BIOSWALE, FROM 1.0 FT ABOVE THE BOTTOM, EXTENDING TO THE TOP OF BIOSWALE (BELOW GRASS BUFFER STRIP).		
MIDDLE/UPPER BANK - SUN MIX	COMMON NAME	LB/ACRE
ASCLEPIAS TUBEROSA	BUTTERFLY WEED	0.20
ASTER LAEVIS	SMOOTH BLUE ASTER	0.20
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.20
BOUTELOUA CURTIPENDULA	SIDE OATS GRAMA	0.50
CAREX EMORYII	RIVERBANK TUSsock SEDGE	0.50
CAREX STIPATA	COMMON FOX SEDGE	0.50
CAREX VULPINODEA	FOX SEDGE	1.00
ECHINACEA PURPUREA	PURPLE CONEFLOWER	0.20
ELYMUS CANADENSIS	PRAIRIE WILD RYE	1.00
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	1.00
GERANIUM MACULATUM	WILD GERANIUM	0.20
LIATRIS PYCNOSTACHYA	PRAIRIE BLAZING STAR	0.20
LIATRIS SPICATA	DENSE BLAZING STAR	0.20
MONARDA FISTULOSA	WILD BERGAMONT	0.50
PHYSOSTEGIA VIRGINIANA	OBEDIENT PLANT	0.20
RATIBIDA PINNATA	YELLOW CONEFLOWER	0.50
RUDBECKIA HIRTA	BLACK-EYED SUSAN	0.50
RUDBECKIA SUBMENTOSA	SWEET BLACK-EYED SUSAN	0.25
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1.50
SOLIDAGO FLEXICAULIS	ZIG-ZAG GOLDENROD	0.20
SPOROBOLOUS HETEOLEPSIS	PRAIRIE DROPSEED	0.25
TRADESCANTIA OHIENSIS	SPIDERWORT	0.50
ZIZIA AUREA	GOLDEN ALEXANDER	0.25
		10.55
COVER CROP (20 LB/ACRE)		
AVENA SATIVA	SEED OATS	10.00
COSMOS BIPINNATUS	COSMOS	0.75
LOLIUM MULTIFLORUM	ANNUAL RYE	10.00
CHAMAECRISTA FASCICULATE	PARTRIDGE PEA	0.25
		21.00

LB/ACRE

TABLE 3:

LOWER BANK - SHADE NATIVE PLANT SEED MIX: SHALL BE INSTALLED IN SHADE LOCATIONS (PER PLANS) ALONG TOE OF SLOPE OF THE BIOSWALE, FROM 0.0 FT ABOVE THE BOTTOM, EXTENDING TO 1.0 FT ABOVE THE BOTTOM.

LOWER BANK - SHADE MIX	COMMON NAME	LB/ACRE
AQUILEGIA CANADENSIS	COLUMBINE	0.75
ACORUS CALAMUS	SWEET FLAG	0.20
ASCLEPIAS INCARNATA	MARSH MILKWEED	0.20
CAREX COMOSA	BRISTLY SEDGE	0.50
CAREX CRISTATELLA	CRESTED OVAL SEDGE	0.50
CAREX EMORYII	RIVERBANK TUSOCK SEDGE	0.50
CAREX STIPATA	COMMON FOX SEDGE	0.50
CAREX VULPINODEA	FOX SEDGE	1.50
ELYMUS CANADENSIS	PRAIRIE WILD RYE	1.00
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	1.00
GLYCERIA STRIATA	FOWL MANNA GRASS	0.50
IRIS VIRGINICA SHREVEI	BLUE FLAG IRIS	1.00
JUNCUS TORREYI	TORREY'S RUSH	0.25
LEESYIA ORYZOIDES	RICE CUT GRASS	0.50
LIATRIS SPICATA	DENSE BLAZING STAR	0.20
PANICUM VIRGATUM	SWITCH GRASS	0.50
SOLIDAGO FLEXICAULIS	ZIG-ZAG GOLDENROD	0.50
SPARTINA PECTINATA	PRAIRIE CORD GRASS	0.50
TRADESCANTIA OHIENSIS	SPIDERWORT	0.50
		11.10
COVER CROP (20 LB/ACRE)		
AVENA SATIVA	SEED OATS	10.00
COSMOS BIPINNATUS	COSMOS	0.75
LOLIUM MULTIFLORUM	ANNUAL RYE	10.00
CHAMAECRISTA FASCICULATE	PARTRIDGE PEA	0.25
		21.00 LB/ACRE

TABLE 4:		
MIDDLE/UPPER BANK - SHADE NATIVE PLANT SEED MIX: SHALL BE INSTALLED IN SHADE LOCATIONS (PER PLANS) ALONG TOE OF SLOPE OF THE BIOSWALE, FROM 1.0 FT ABOVE THE BOTTOM, EXTENDING TO THE TOP OF BIOSWALE (BELOW GRASS BUFFER STRIP).		
MIDDLE/UPPER BANK - SHADE MIX	COMMON NAME	LB/ACRE
AQUILEGIA CANADENSIS	COLUMBINE	0.75
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.50
BOUTELOUA CURTIPENDULA	SIDE OATS GRAMA	0.50
CAREX EMORYII	RIVERBANK TUSSOCK SEDGE	0.50
CAREX STIPATA	COMMON FOX SEDGE	0.50
CAREX VULPINODEA	FOX SEDGE	1.00
ECHINACEA PURPUREA	PURPLE CONEFLOWER	0.20
ELYMUS CANADENSIS	PRAIRIE WILD RYE	1.00
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	1.00
GERANIUM MACULATUM	WILD GERANIUM	0.40
GLYCERIA STRIATA	FOWL MANNA GRASS	0.50
LIATRIS PYCNOSTACHYA	PRAIRIE BLAZING STAR	0.20
LOBELIA CARDINALIS	CARDINAL FLOWER	0.30
LOBELIA SIPHILTICA	GREAT BLUE LOBELIA	0.30
MONARDA FISTULOSA	WILD BERGAMONT	0.50
RUDBECKIA HIRTA	BLACK-EYED SUSAN	0.50
RUDBECKIA SUBMENTOSA	SWEET BLACK-EYED SUSAN	0.25
SOLIDAGO FLEXICAULIS	ZIG-ZAG GOLDENROD	0.50
SOLIDAGO RIGIDA	STIFF GOLDENROD	0.50
TRADESCANTIA OHIENSIS	SPIDERWORT	0.50
ZIZIA AUREA	GOLDEN ALEXANDER	0.25
		10.65
COVER CROP (20 LB/ACRE)		
AVENA SATIVA	SEED OATS	10.00
COSMOS BIPINNATUS	COSMOS	0.75
LOLIUM MULTIFLORUM	ANNUAL RYE	10.00
CHAMAECRISTA FASCICULATE	PARTRIDGE PEA	0.25
		21.00 LB/ACRE

6. 2-year vegetative performance standards for native plant plugs

- A. Within 24 hours after grading is completed, bioswale slopes shall be stabilized by erosion blanket as indicated on details and specifications.
- B. Within at least three (3) months of planting (within the growing season of April through October), at least 90% of the planted area soil surface will be vegetated and no area will have more than one (1) yard square devoid of vegetative cover.
- C. Within one (1) year of planting (within the growing season of April through October), at least 50% of the planted area soil surface will be vegetated with native plant species. Within two (2) years of planting (within the growing season of April through October), at least 75% of the planted area soil surface will be vegetated with native plant species. Minimum 75% native plant coverage standard shall be equal or exceeded throughout the period of native plant maintenance.

- D. Invasive plant species shall not exceed 10% of the vegetative coverage at any time [species include but not limited to Garlic Mustard (*Alliaria officinalis*), Reed Canarygrass (*Phalaris arundinacea*), Purple Loosestrife (*Lythrum salicaria*), non-native Thistle (*Cirsium* spp), Giant Ragweed (*Ambrosia trifida*), Common Ragweed (*Ambrosia artemisiifolia*), Honeysuckle (*Lonicera tatarica*), Common Buckthorn (*Rhamnus cathartica*), Yellow Clover, Purple Clover, White Clover, (*Melilotus* spp.).
- E. Coverage of the following species shall remain at 0% throughout the project duration: Cattails (*Typhus* spp.), Common Reed (*Phragmites*),
- F. Plant plug (survivorship shall remain at 80% or higher throughout the project site through the end of the vegetative performance time period. Contractor and owner's representative shall review plant survivorship between May 15 and September 15. Contractor shall install additional plants to ensure a minimum 80% survivorship at no additional cost to owner. Any irrigation or other maintenance activities performed to meet survivorship shall be performed at a cost incidental to the installation of native plant plugs.

7. Native plant species maintenance

- A. Contractor retain qualified native plant identification & maintenance personnel with State of Illinois department of agriculture pesticide applicator or operator licensure to perform native plant maintenance for duration described in contract following installation of all native plant materials. Areas to be maintained include bioswales, or other areas containing native plants or invasive species at the project site.

A minimum six (6) annual weed control applications shall occur over one year after the installation of native plant materials per the following general schedule:

- I. Application # 1 (April 20 to April 30).
- II. Application # 2 (May 15 to May 25)
- III. Application # 3 (June 5 to June 15)
- IV. Application # 4 (June 28 to July 3)
- V. Application # 5 (July 28 to Aug. 5)
- VI. Application # 6 (Aug. 25 to Sept. 5)

Additional maintenance may be needed to meet the minimum performance requirements and shall occur at contractor's discretion.

- B. Contractor shall conduct two (2) site inspections per growing season with owner and owner's representative to review weed control locations. Site inspections shall occur both before and after weed control applications for satisfactory performance.
- C. Example maintenance practices may include watering, spot-herbicide, hand removal, mowing, or other native plant management techniques. Contractor shall maintain native plant material as necessary to meet the minimum performance requirements.
- D. Watering shall occur as necessary to maintain growth and vigor of live plant materials.
- E. The cost of native plant maintenance shall be itemized for 2-year native plant maintenance.
- F. Native species maintenance: native plant maintenance shall be reimbursed per bid costs, pro-rated according to compliance with vegetative performance standards. The bid cost shall include all native plant seed, plugs, trees, shrubs, or other materials, equipment, methods, and practices deemed necessary by the contractor to accomplish the vegetative

performance standards (these items shall be incidental to the cost of the lump sum rate). Contractor retain qualified native plant identification & maintenance personnel with minimum two (2) years relevant experience and with State of Illinois Department of Agriculture pesticide applicator or operator licensure to perform native plant maintenance for duration described in contract following installation of all native plant materials. Areas to be maintained include all work limit areas containing native plants or invasive species at the project site.

This item shall NOT include the costs of:

- 1) Bioretention native plant seed mix in other areas not shown on the drawings or as authorized by the ENGINEER.
- 2) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- 1) Measure, to the nearest 0.01 square yard, actual quantity of bioretention native plant seed mix completed to the limits set forth on the drawings or as authorized by the ENGINEER.

Basis of Payment: This work shall be paid for at the contract unit price per **SQUARE YARD** for:

BIORETENTION NATIVE PLANT SEED MIX,

which price shall be payment in full for all material, equipment, and labor necessary to complete the work.

RIVER ROCK (2"-3") WITH PEA GRAVEL INFILL (6" MINIMUM)

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 01050 – Field Engineering
- 2) Section 01560 – Protection of Environment
- 3) Section 02100 - Site Preparation
- 4) Section 02210 - Grading
- 5) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Site preparation.
- 2) Protecting existing utilities, site objects, and new work which are to remain in service after completion of the work.
- 3) Grading the filter media as necessary, in preparation for new work which is to follow.
- 4) Installation of 2"-3" river rock with pea gravel infill minimum 18" wide and 6" deep.
- 5) Cleanup and restoration of adjacent areas.
- 6) Other appurtenant and incidental work.
- 7) General requirements of sections listed.

This item shall NOT include the costs of:

- 1) Installation of 2"-3" river rock with pea gravel infill in other areas not shown on the drawings or as authorized by the ENGINEER.
- 2) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- 1) Measure, to the nearest 0.01 cubic yard, actual quantity of 2"-3" river rock with pea gravel infill completed to the limits set forth on the drawings or as authorized by the ENGINEER.

Basis of Payment: This work shall be paid for at the contract unit price per **CUBIC YARD** for:

RIVER ROCK (2"-3") WITH PEA GRAVEL INFILL (6" MINIMUM)

which price shall be payment in full for all labor and materials.

PERENNIAL PLANT INSTALLATION

Description: This work shall be performed in accordance with Section 254 of the SSRBC, except as amended herein.

All perennial plants shall be container grown in open bottom pots and have minimum shoot heights of 12 inches at the time of planting. Pot dimensions shall be a minimum of 2-inches wide and 3-inches deep. Plant material shall not be provided as dormant root or bare root material. All container plant material shall be inoculated with mycorrhizal fungi.

Container plants shall exhibit root growth sufficient to hold all soil intact when removed from container.

Plant species selection and typical planting plans shall be in accordance with the Proposed List of Plants and the Individual Address Planting Schedule noted in Table 1.2 and Table 1.3 respectively included as part of these Special Provisions. Substitutions shall not be acceptable unless previously approved by the Engineer. **A final list of selections and approximate planting plan shall be submitted to the Engineer for approval at least one week prior to plant purchase. Plant species can be substituted in accordance with Species Substitution Table as approved and directed by Engineering.**

All plant material shall be grown from seed sources within a 200-mile radius of the project location with species and subspecies native to DuPage County, Illinois. Plant material shall be acquired from a reputable supplier, subject to the approval of the Engineer.

The Contractor shall provide the Engineer copies of all the plant confirmation forms from the nurseries that provide material.

All plant material shall be installed within one (1) week of reaching final grade elevations. Any potential delays caused by weather shall be approved by the Engineer. Plantings shall take place within six (6) hours of delivery to the project site. If planting is delayed more than six hours after delivery, plants shall be placed in shade and protected from weather and mechanical damage and all roots shall be kept moist.

The Contractor shall notify the Engineer 24 hours prior to planting - no plants shall be installed prior to approval of the Engineer. All plants shall be installed at 1.5-foot intervals.

Holes shall be dug large enough to allow spreading of roots. Work soil around roots to eliminate air pockets. Water plants thoroughly after planting, taking care not to cover plant crowns with wet soil. Plants shall be protected from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

“Preen” shall be applied to planted area per the manufacturer's recommended rates.

Contractor agrees to repair or replace plantings that fail in materials, workmanship, or growth within specified warranty period, which shall be one year from date of installation for all plant material. Failures include, but are not limited to, the following:

- Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect or abuse by the Village, residents, or incidents that are beyond Contractor's control.
- Structural failures including plantings falling or blowing over.

Full maintenance shall be provided by skilled employees of the Contractor for the duration of the Warranty Period. Final Acceptance shall be granted three years from the date of installation of all plant material, pending 80% survivorship.

Method of Measurement: Measurement for payment of this work will not be performed until the end of the 30 day establishment period for the replacement planting. Only plants that are in place, established and growing at the time of measurement will be measured for payment, except that if fewer than 25 percent of the plants are acceptable, NO PAYMENT WILL BE MADE AND THE WORK WILL BE REJECTED IN ITS ENTIRETY. Any/all dead plants shall be replaced as soon as is allowable depending on the planting window for the specific species.

Basis of Payment: This work shall be paid for at the contract unit price per EACH for:

PERENNIAL PLANT INSTALLATION, (TYPE),

which shall include all labor, materials and equipment necessary to do the work.

Table 1.2

Proposed List of Plants

Symbol	Latin Name	Common Name	Amount	Bloom Time	Bloom Color	Height	Spacing
Mp	* <i>Monarda punctata</i>	Spotted Bee Balm	143	July, Aug, Sept	Purple	2'	1'
Sh	* <i>Sporobolus heterolepis</i>	Prairie Dropseed	243	Aug, Sept	Green Brown	3'	2'
Ep	* <i>Echinacea paradoxa</i>	Bush's Coneflower	272	June, July, Aug	Yellow	3'	2'
Rh	* <i>Rudbeckia hirta</i>	Black-eyed Susan	143	June, July, Aug Sept, Oct	Yellow	2'	1'
Gm	* <i>Geranium maculatum</i>	Wild Geranium	143	April, May, June July	Purple	1'	1'
At	* <i>Asclepias tuberosa</i>	Butterfly Weed	243	June, July, Aug	Orange	2'	1'
Cv	* <i>Carex vulpinoidea</i>	Brown Fox Sedge	243	June, July	Green	3'	2'

*Source information from www.prairiemoon.com

Species Substitution Table

Proposed Species		Substitute Species		Notes
Latin Name	Common Name	Latin Name	Common Name	
Monarda punctata	Spotted Bee Balm	Koeleria pyramidalata Bouteloua curtipendula Liatris spicata Liatris pycnostachya Zizia aurea Aquilegia canadensis	June Grass Side Oats Grama Marsh Blazing Star Prairie Blazing Star Golden Alexander Wild Columbine	For high shade areas
Sporobolus heterolepis	Prairie Dropseed	Allium cernuum Koeleria pyramidalata Bouteloua curtipendula	Nodding Wild Onions June Grass Side Oats Grama	For high shade areas
Echinacea paradoxa	Bush's Coneflower			
Rudbeckia hirta	Black-eyed Susan	Liatris spicata Liatris pycnostachya Zizia aurea	Marsh Blazing Star Prairie Blazing Star Golden Alexander	
Geranium maculatum	Wild Geranium			
Asclepias tuberosa	Butterfly Weed		Iris Virginica	For high shade areas
Carex vulpinoidea	Brown Fox Sedge			

Table 1.3

ADDRESS	BIO-RET LENGTH (FT)	PLANTS TOTAL	MONARDA PUNCTATA 10%	SPOROBOLUS HETEROLEPIS 17%	ECHINACEA PARADOXA 19%	RUDBECKIA HIRTA 10%	GERANIUM MACULATUM 10%	ASCLEPIAS TUBEROSA 17%	CAREX VULPINOIDEA 17%
608 S. MONTEREY									
612 S. MONTEREY									
616 S. MONTEREY									
620 S. MONTEREY									
622 S. MONTEREY									
622/626 S. MONTEREY									
630 S. MONTEREY									
636 S. MONTEREY	20	64	6	11	12	6	6	11	11
640/644 S. MONTEREY	65	208	21	35	40	21	21	35	35
648 S. MONTEREY	27	86	9	15	16	9	9	15	15
700/706 S. MONTEREY	65	208	21	35	40	21	21	35	35
703/707 S. MONTEREY	75	240	24	41	46	24	24	41	41
710 S. MONTEREY	30	96	10	16	18	10	10	16	16
714 S. MONTEREY	35	112	11	19	21	11	11	19	19
718 S. MONTEREY	30	96	10	16	18	10	10	16	16
722 S. MONTEREY	30	96	10	16	18	10	10	16	16
725 S. MONTEREY	35	112	11	19	21	11	11	19	19
726 S. MONTEREY	30	96	10	16	18	10	10	16	16
730 S. MONTEREY	5	16	2	3	3	2	2	3	3

HIGH-MOW FESCUE BUFFER

Description: This item shall be done in accordance with the Materials and Installation as Described in:

- 1) Section 02100 - Site Preparation.
- 2) Section 02900 - Landscaping.
- 3) Other sections containing appurtenant and incidental work.

This item shall also include the costs of:

- 1) Site preparation.
- 2) Protecting existing utilities, site objects, and new work which are to remain in service after completion of the work.
- 3) Preparation of area where high-mow fescue buffer is to be placed.
- 4) Applying the seed mix with the ratio as shown in the table below:

Scientific Name	Common Name	lbs per acre
<i>Festuca obtusa</i>	Nodding Fescue	12.00
<i>Festuca ovina</i>	Sheep Fescue	6.00
<i>Festuca elatior</i>	Tall Fescue	6.00
<i>Festuca rubra</i>	Creeping Red Fescue	6.00
Total		30.00 lb/ac

<i>Bouteloua curtipendula</i>	Side-Oats Grama	25.0
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- 5) Cleanup and restoration of adjacent areas.
- 6) Other appurtenant and incidental work.
- 7) General requirements of sections listed.

This item shall NOT include the costs of:

- 1) Placing of high-mow fescue buffer in other areas not shown on the drawings or as authorized by the ENGINEER.
- 2) Work included in other bid items.

Method of Measurement: This item shall be measured in accordance with the following formula:

- 1) Measure, to the nearest 0.01 square yard, actual quantity of high-mow fescue buffer completed to the limits set forth on the drawings or as authorized by the ENGINEER.

Basis of Payment: This work shall be paid for at the contract unit price per **SQUARE YARD** for:

HIGH-MOW FESCUE BUFFER,

which price shall be payment in full for all material, equipment, and labor necessary to complete the work.

MANAGEMENT AND MONITORING ACTIVITIES, (YEAR)

Description: This work shall consist of all labor, material, and equipment required to complete the activities and meet the requirements as described herein.

The Contractor is required to perform one (1) year of routine ecological management and monitoring activities in all native planting areas. The one (1) year period will encompass the first complete growing season. At the beginning of the year the Contractor shall provide a management schedule to the Engineer that specifies the management activities to be conducted during the year.

The Contractor shall notify the Engineer a minimum of 24 hours prior to any onsite activities.

The official first growing season is defined as the first growing season after all native plant material has been installed. Planting must take place within the respective installation windows.

The Contractor shall irrigate all plantings for a one-year period to ensure maximum survivorship.

The Contractor shall note that due to bio-retention soil characteristics, the surface will tend to be draughty. As such, irrigation will be mandatory.

The Contractor shall high-mow the vegetation to a height of 6-9 inches in late September during the first growing season following seeding.

Fescue mowing shall include removal of clippings and/or protection of native planting installation areas to the satisfaction of the Owner and Engineer. Under no circumstances shall fescue clippings be allowed to drift during mowing or be discharged during mowing into the native plant installation at the Bioretention Areas.

The Contractor shall conduct chemical and/or mechanical weed control activities in all planting areas for a three-year period following planting. Herbicide shall be applied by State Licensed Operator or Applicator with familiarity and experience conducting weed eradication within natural areas and wetlands.

A copy of valid license (State of Illinois Department of Agriculture Pesticide Applicator or Operator) shall be provided to the Engineer prior to weed control activities. The Contractor shall perform herbicide activities necessary to achieve project performance standards (see

PERFORMANCE STANDARDS requirements below). Weed control may also require manual methods such as supplemental cutting of seed heads prior to seed set for preventing seed reproduction. The herbicide application periods are generally defined as follows:

Early Spring – March 15 to May 1
 Early Summer – May 15 to June 15
 Mid-Summer – June 25 to July 4
 Late Summer – July 15 to August 15
 Fall – September 15 to November 1

The two annual application periods shall consist of, but are not limited to, controlling the following target weed species per each period:

<u>Target Species</u>	<u>Early Spring</u>	<u>Early Summer</u>	<u>Late Summer</u>	<u>Fall</u>
Red/white clover	X			X
Reed canary grass	X			X
Field/bull thistles		X		
Cattails	X		X	
White/yellow sweet clover		X		
Teasel		X		
Common reed			X	X

<u>Target Species</u>	<u>Early Spring</u>	<u>Early Summer</u>	<u>Late Summer</u>	<u>Fall</u>
Sandbar willow	X			X
Purple Loosestrife	X			
Other	X	X	X	X

Performance Standards

Performance standards are established for native plant communities in order to evaluate overall restoration/establishment success, to comply with Village requirements, and to measure Contractor compliance with the approved plans and specifications. If performance standards are not achieved, the Contractor is responsible for rectifying any deficiencies through additional site management activities, which may include re-planting, re-seeding, and additional management and reporting at the sole expense of Contractor.

Performance Standards

- Planted plugs in each of the 12 Bioretention areas must achieve 95% survivorship within one year of plant installation.
- At the end of the first growing season, none of the three most dominant plant species in any of the bioretention areas may be non-native species, cattails (*Typha* spp.), or common reed (*Phragmites australis*).
- At the end of the first growing season, relative coverage of narrow-leaved cattail cannot exceed 5% in the bioretention plant areas.
- At the end of the first growing season, relative coverage of reed canary grass, purple loosestrife, and common reed in aggregate cannot exceed 5%.

Monitoring and Reporting

This work shall consist of conducting ecological restoration monitoring and reporting. Staff performing this ecological monitoring and reporting work must meet the minimum qualifications provided below. A combination of staff may be used on the project, as appropriate, to meet the minimum qualifications. Bidders must provide documentation of staff experience, including resumes with education, relevant project examples and experience. It is intended that these qualified individuals will serve as the main Contact between the Contractor and the Engineer.

Qualifications

The minimum qualifications for the person(s) conducting this work consist of any combination of education, training, and experience that would provide the abilities to successfully perform the work. A typical combination for the ecological portion of the work includes; a Bachelor's Degree in Biology, Ecology, Natural Resources, or closely related field with a minimum of five years of experience in wetland creation and ecological restoration design and implementation.

The ecology person(s) must possess knowledge of native wetland and prairie construction /restoration including wetland soils, wetland and prairie plant requirements and habitats, native seeding, and wetland mitigation monitoring and reporting as well as the associated relevant Federal, State, local laws, ordinances, codes and regulations. Must possess the ability to read, interpret and analyze construction plans, specifications and manuals; identify the species and condition of all installed plant material; communicate effectively in oral and written form; and maintain effective working relationships.

Resumes and relevant project experience shall be submitted for each person responsible for Wetland Restoration Monitoring and Reporting.

Requirements

Ecological monitoring and reporting shall be conducted in accordance with the following requirements for the duration of the three-year management and monitoring period:

- The Contractor shall conduct a floristic inventory of all plant communities in the restoration areas twice per year during the management and monitoring period using the meander search method over the entire site. The first floristic inventory shall be conducted during May/June and the second shall be performed in August/September.
- The Contractor shall maintain photo documentation of site conditions and activities conducted throughout the management period. In addition, the Contractor shall establish several permanent photo points on site to document changes to each area throughout the management period. These photos shall be incorporated into annual monitoring reports.
- The Contractor shall prepare and submit an annual monitoring report to the Engineer by January 31 each year, following the first growing season. The monitoring report must document the vegetation and hydrologic data collected during the years' monitoring inspections. The annual report must include a review of site progression towards meeting the performance standards and propose any necessary remedial actions. More specifically, the

monitoring report must contain the following information, which will be based on data collected during the monitoring inspections:

- A vegetation map exhibit based on as-built survey prepared following completion of planting activities shall be submitted with the first year monitoring report. The exhibit must define the limits of the various plant communities and indicate the dominant species within each community. Locations of photo stations should also be included.
- A summary of management activities conducted during each year, including a description of the activities, dates, areas treated, herbicide logs, and results.
- Representative photographs depicting general site conditions.
- Evaluate the status of the restoration area relative to the performance standards.
- Prepare a plan and schedule of management activities for the following year.

Method of Measurement: This work will not be measured for payment. Payment will be based on Contract Quantities. By submission of a bid, Contractor agrees on Contract Quantity.

Basis of Payment: This work shall be paid for at the contract unit price per **LUMP SUM** for:

MANAGEMENT AND MONITORING ACTIVITIES, (YEAR),

which shall include all labor, materials and equipment necessary to do the work described herein and as specified on the plans. For partial payment of lump sum amount during the year, the Contractor shall provide summary memo with invoice to document that management work effort performed during the invoicing period appropriately reflects invoice amount.

No final payment will be made until all performance standards are met and the Engineer has issued sign off for the project.

MAINTENANCE GUARANTEE

The Contractor shall execute and deliver to the Village of Villa Park, before final payment will be issued, a written warranty, in a form satisfactory to the Village, which guarantees that the work is in accordance with the Contract Documents and will not be defective. This warranty shall guarantee this work for a period of one (1)-year from the date of acceptance of the work and final payment by the Village of Villa Park.

If within this guarantee period, any work is found to be defective, as determined by the Village, the Contractor shall promptly and without cost to the Village of Villa Park, correct or repair such defective work, or remove and replace the defective work in accordance with the Special Provisions for the items in question.

The Contractor shall furnish a warranty bond in an amount equal to fifty percent (50%) of the contract amount by a surety satisfactory to the Village to guarantee Contractor's warranty to repair defective work.

END OF SECTION

NOT FOR BID

SECTION 01050
FIELD ENGINEERING

PART I GENERAL

1.01 PRIMARY CONTROL POINTS

- A. Benchmarks provided by ENGINEER to establish primary vertical control for work are indicated on drawings. Elevations are in reference to benchmarks indicated on the drawings.
- B. CONTRACTOR shall preserve and maintain primary control points.

1.02 PRIMARY LINE AND GRADE

- A. Primary line and grade will be provided by CONTRACTOR by means of stakes placed along route or at site of work. This involves the CONTRACTOR setting stakes:
 - 1. At changes in alignment of sewer.
 - 2. Offset in manner that will best serve CONTRACTOR'S operations whenever practical.
 - 3. Adjacent to sewer appurtenances.
 - 4. At changes in pipe size and grade.
- B. CONTRACTOR shall:
 - 1. Arrange work operations to avoid interference with establishment of primary lines and grades.
 - 2. Check accuracy of line and grade by visual inspection, checks between stakes, and periodic checks (with surveying equipment) between primary control monuments and stakes.

1.03 CONSTRUCTION LINE AND GRADE

- A. CONTRACTOR shall bear sole responsibility for correct transfer of construction lines and grades from primary line and grade points and for correct alignment and grade of completed work based upon lines and grades shown on drawings.
- B. Transfer line and grade for open cut construction of utilities from primary line and grade stakes to work by means of grade boards, laser beam or other methods which provide like accuracy.

1.04 WORKING HOURS

- A. The hours when construction shall be permitted to take place are prescribed in Section 01010. If CONTRACTOR submits a written request to schedule work outside the normal working hours in accordance with these specifications, and such request is approved, CONTRACTOR shall assume full responsibility for the cost of inspections or other services provided by ENGINEER. The rates at which such inspection or other services are to be compensated shall be determined by OWNER.

END OF SECTION

NOT FOR BID

**SECTION 01300
SUBMITTAL**

PART I GENERAL

1.01 DESCRIPTION

- A. This section contains requirements for submittals of construction progress schedules, shop drawings, pre-construction video recording, and other submittals required by Contract Documents.
- B. Submittal for Review:
 - 1. Submit required materials for ENGINEER'S review in accordance with requirements of Contract Documents.

1.02 CONSTRUCTION PROGRESS SCHEDULES

- A. Prepare and submit construction progress schedule in accordance with requirements of General Conditions.
- B. No work shall be done between 5:00 p.m. and 7:00 a.m., nor, on Sundays, or legal holidays without written permission of OWNER. However, emergency work and Saturdays may be done with permission from ENGINEER.
- C. Prepare schedules in form of a horizontal bar chart, CPM, or other approved format.
 - 1. Provide separate horizontal bar for each item.
 - 2. Show dates for beginning and completion of each item of construction.
 - 3. Allow space for notations and future revisions.

1.03 SHOP DRAWINGS, CERTIFICATIONS AND SAMPLES

- A. Submit shop drawings, certifications, and samples required in specification sections.
- B. CONTRACTOR'S responsibilities shall include:
 - 1. Review shop drawings, certifications, and samples prior to submittal.
 - 2. Determine and verify:
 - a. Field measurements.
 - b. Field construction criteria.
 - c. Catalog numbers and similar data.
 - d. Conformance with specifications.
 - 3. Coordinate each submittal with requirements of work and of Contract Documents.

4. Notify ENGINEER in writing, at time of submittal, of deviations in submittals from requirements of Contract Documents.
5. Do not begin fabrication or other work which requires submittals until return of submittals with ENGINEER approval.
6. Designate in construction progress schedule, dates for submittal and receipt of reviewed shop drawings, certifications and samples.
7. **CONTRACTOR's representative shall have a mobile phone which shall be available during the working day.**

C. Submittals shall contain:

1. Date of submittal and dates of previous submittals.
2. Project title and number.
3. Contract identification.
4. Names of:
 - a. CONTRACTOR
 - b. Supplier
 - c. Manufacturer
5. Identification of product, with identification numbers, and drawing and specification section numbers.
6. Field dimensions, clearly identified.
7. Identify details required on drawings and in specifications.
8. Show manufacturer and model number, give dimensions, and provide clearances.
9. Relation to adjacent or critical features of work or materials.
10. Applicable standards, such as ASTM or Federal Specification numbers. Identification of deviations from Contract Documents.
11. Identification of revisions on resubmittals.
12. Eight (8) inch by three (3) inch blank space for CONTRACTOR and ENGINEER stamps.
13. CONTRACTOR'S stamp, signed, certifying to review of submittal, verification of products, field measurement, field construction criteria, and coordination of information within submittal with requirements of work and Contract Documents.

D. Resubmittal requirements shall include:

1. Corrections or changes in submittals required by ENGINEER. Resubmittals are required until approved.
2. Shop drawings and product data:
 - a. Revise initial drawings or data and resubmit as specified for initial submittal.
 - b. Indicate changes which have been made other than those requested by

ENGINEER.

3. Submit new samples as required for initial submittal.
- E. Distribute reproductions of shop drawings and copies of product data which carry ENGINEER'S stamp approval to:
1. CONTRACTOR'S file.
 2. Subcontractors.
 3. Supplier or fabricator.
- F. ENGINEER'S duties include:
1. Review submittals with reasonable promptness and in accordance with schedule.
 2. Affix stamp and signature, and indicate requirements for resubmittal or approval of submittal.
 3. Return submittals to CONTRACTOR for distribution or for resubmittal.

1.04 PRE-CONSTRUCTION VIDEO RECORDING

- A. Provide color audio-video recording of construction areas prior to start of construction, as specified herein.
- B. Video recording shall be scheduled so that the project area is recorded no more than seven (7) days prior to the start of construction, yet still recorded prior to the start of construction or to the delivery of any materials or equipment to the project area.
- C. Provide coverage of entire area where construction activities are to be undertaken in relation to this project.
- D. Provide audio description simultaneously with video coverage. Coverage shall include, but shall not be limited to, all existing roadways, pavements, curbs, driveways, driveway aprons, sidewalks, carriage walks, parkways, retaining walls, buildings, landscaping, trees, shrubbery, fences, light posts, and equipment. Identify houses and buildings with their related coverage items, audibly and visually by address.
- E. Begin each recording with the current date, project name, owner and location.
- F. Record at a rate of speed not exceeding forty feet (40') per minute. Control panning rates and zoom-in and zoom-out rates to provide clarity of the viewed objects during playback.
- G. Perform all recording during times of favorable visibility.
- H. The ENGINEER shall have the authority to designate those areas which may be

omitted and also those areas which shall be added for audio-video recording coverage.

- I. Perform all videotaping during regular business hours, unless otherwise approved by the private property owner and by ENGINEER. Enter and leave private property in a professional and orderly, workmanship-like manner.
- J. The ENGINEER has the authority to reject all or any portion of the recording not conforming to these specifications. Video recordings determined by ENGINEER to be unsatisfactory shall be completed again at no cost to the OWNER until determined by ENGINEER to be satisfactory.
- K. Construction will not be allowed to commence until video recordings of the construction area(s) have been received and approved by ENGINEER.
- L. Upon acceptance of the video recordings by the ENGINEER they will become the property of the OWNER.

PART 2 PRODUCTS

2.01 PRECONSTRUCTION VIDEO RECORDING

- A. Furnish all equipment, accessories and materials necessary to perform audio-video recording of entire construction area prior to the start of construction.
- B. Provide the complete audio-video recording system and procedures as required to produce a finished product that will fulfill the technical requirements of the project. Produce the video portion of the recording with bright, sharp, clear pictures with accurate colors and free from distortion, tearing, rolls or other forms of picture imperfection. Produce the audio portion of the recording with proper volume, clarity and free from distortion.
- C. Provide two (2) copies of all recordings in DVD format. DVD discs provided shall be compatible with a standard DVD player. Videocassettes, VHS or otherwise, shall not be an acceptable format for submittal of pre-construction video recordings. Alternate formats for submittal of pre-construction video recording (computer video files, etc.) will only be permitted if approved by ENGINEER.
- D. Provide two (2) copies of a recording index correlating physical location of video recording with location of recording on provided DVD disc(s). Index shall provide, at a minimum, the date and time of recording, the physical location of recording, the number of the DVD disc the recording is provided on (if multiple discs are provided) and the time index of the recording's location on the DVD. The index shall divide physical locations of recordings into segments by street intersections when possible, and shall not include any segment which extends through an intersection.

PART 3 EXECUTION

3.01 SUBMITTAL REQUIREMENTS

- A. Provide complete copies of required submittals as follows:
 - 1. Construction progress schedule:
 - a. Two copies of initial schedule
 - b. Two copies of any revision
 - 2. Shop drawings: three copies.
 - 3. Pre-construction video recording:
 - a. Two (2) copies of preconstruction video recording in DVD format
 - b. Two (2) copies of a video recording index
 - 4. Other required submittals:
 - a. Three copies if required for review
 - b. Two copies if required for record
- B. Deliver required copies of submittals to ENGINEER.

END OF SECTION

NOT FOR BID

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**SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

PART 1 GENERAL

1.01 DESCRIPTION

- A. Furnish, install and maintain temporary facilities and controls required for construction; remove on completion of work.

PART 2 PRODUCTS

2.01 MATERIALS - GENERAL

- A. Temporary construction materials may be new or used, but must be adequate in capacity for required usage, shall not create unsafe conditions, and shall not violate requirements of applicable codes and standards.

2.02 TEMPORARY WATER

- A. Arrange with OWNER to provide water for construction purposes.
- B. Pay all costs for installation, maintenance and removal, and service charges for all water used. Service shall be metered separately to CONTRACTOR as required by municipality.
- C. Be advised that OWNER has experienced water shortages in the past and has imposed bans on use of Village water for lawn sprinkling. Such bans shall apply to CONTRACTOR. CONTRACTOR shall provide alternate supply of water for lawn sprinkling during Village sprinkling bans.

2.03 TEMPORARY SANITARY FACILITIES

- A. Provide temporary sanitary toilet facilities conforming to state and local health and sanitation regulations, in sufficient number for use by CONTRACTOR'S employees.
- B. Maintain in sanitary condition and properly supplied with toilet paper.
- C. Remove from site before final acceptance of work.

2.04 TEMPORARY FIRE PROTECTION

- A. Fire hydrants shall remain accessible at all times to the OWNER.

2.05 TEMPORARY SITE WORK

- A. Roadways shall be maintained along where construction has occurred or which are prepared for construction in a clean, drivable condition as determined by the ENGINEER. When directed by the ENGINEER, the CONTRACTOR shall immediately take corrective action to temporarily repair the roadway to the satisfaction of the ENGINEER.
- B. Provide and maintain temporary site drainage.
- C. Exercise caution to minimize increase in suspended solids and turbidity in surface waters within and adjacent to construction area. Spoils are not to be deposited in surface waters. Control and minimize sediment runoff and excavation erosion to surface waters.

2.06 DAMAGE TO EXISTING PROPERTY

- A. Be responsible for replacing or repairing damage to existing buildings, sidewalks, roads, parking lot surfacing, mail boxes, utilities, and other existing assets.
- B. CONTRACTOR shall take measures to insure that debris does not enter any of the OWNER'S facilities (including but not limited to sanitary and storm sewers, valve vaults and boxes). If debris does enter these facilities, the CONTRACTOR shall take immediate corrective action to remove all of the debris.

2.07 SECURITY

- A. Security will not be provided by OWNER.
- B. CONTRACTOR shall be held responsible for loss or injury to persons or property where his work is involved, and shall provide such security take such precautionary measures as deemed necessary to protect CONTRACTOR'S and OWNER'S interests.

2.08 TEMPORARY PARKING

- A. Make arrangements for parking area for employee's vehicles.
- B. Costs involved in obtaining this parking area shall be borne by CONTRACTOR.
- C. There shall be no parking on construction site unless designated or approved by OWNER.

2.09 TEMPORARY FENCING

- A. Provide temporary fencing sufficient to prevent trespass by public into active

construction areas as specified in Section 01570.

- B. Materials shall be sufficiently durable to be effective for the duration of the work.

2.10 PORTABLE PHONE

- A. The Superintendent of the job must have a portable phone so he may be reached at all times during the working day.**

PART 3 EXECUTION

3.01 GENERAL

- A. Provide and operate systems to ensure continuous service.
- B. Modify and extend systems as work progress requires.

3.02 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required.
- B. Clean and repair damage caused by temporary installations or use of temporary facilities.
- C. Restore existing or permanent facilities used for temporary services to specified, or to original condition.

END OF SECTION

NOT FOR BID

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**SECTION 01560
PROTECTION OF ENVIRONMENT**

PART 1 GENERAL

1.01 DESCRIPTION

- A. CONTRACTOR, in executing work, shall maintain work areas on-site and off-site free from environmental pollution that would be in violation of any federal, state or local regulations.

1.02 PROTECTION OF SEWERS

- A. Take adequate measures to prevent impairment of operation of existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering sewer or sewer structure.
- B. Divert sewage flow interfering with construction to sewers leading to wastewater treatment plant. Prior to commencing excavation and construction, submit to ENGINEER for review, detailed plans, including routing and connections, required to handle and dispose of sanitary wastes. By reviewing plan, ENGINEER neither accepts responsibility for adequacy thereof nor for damages to public or private property resulting therefrom, such responsibilities remain with CONTRACTOR.
- C. Inlet and Pipe Protection shall be provided by the use of INLET FILTERS in accordance with the IDOTSPECS Article 280.04 and Article 1081.15(h)

1.03 DISPOSAL OF EXCESS EXCAVATED AND OTHER WASTE MATERIALS

- A. Dispose of excess excavated material not required or suitable for backfill and other waste material in a lawful manner.

1.04 PROTECTION OF AIR QUALITY

- A. Minimize air pollution by wetting down bare soils during windy periods, requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by CONTRACTORS, and encouraging shutdown of motorized equipment not actually in use.
- B. Trash burning will not be permitted on construction site.
- C. If temporary heating devices are necessary for protection of work, such devices shall be of type that will not cause air pollution.

1.05 USE OF CHEMICALS

- A. Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either U.S. EPA or U.S. Department of Agriculture or any other applicable regulatory agency.
- B. Use of such chemicals and disposal of residues shall be in conformance with manufacturer's instructions.

1.06 NOISE AND DUST CONTROL

- A. Conduct operations to cause least annoyance to residents in vicinity of work, and comply with applicable local ordinances.
- B. Equip compressors, hoists, and other apparatus with such mechanical devices as may be necessary to minimize noise and dust. Equip compressors with silencers on intake lines.
- C. Equip gasoline or oil operated equipment with silencers or mufflers on intake and exhaust lines.
- D. Line storage bins and hoppers with material that will deaden sounds.
- E. Conduct operation of dumping rock and of carrying rock away in trucks so as to cause minimum of noise and dust.
- F. Allowable route for vehicles carrying excavated soil, rock, concrete, or other material will be designated by ENGINEER. Do not operate on public streets between hours of 5:00 p.m. and 7:00 a.m., or on, Sundays or legal holidays unless approved by OWNER. Saturdays can be approved by ENGINEER.
- G. Provide unpaved streets, roads, detours, or haul roads used in the construction area with an application of water to minimize dust. The ENGINEER shall direct the CONTRACTOR as to when and where the water is required and to the rate of application. Keep paved areas clean and free of materials contributing to dust. Applicable environmental regulations for dust prevention will be strictly enforced. All watering described herein shall be done with a spray application. An open-end hose will not be acceptable. The method of watering shall meet the approval of the ENGINEER.
- H. The Contractor is responsible for the maintenance of all work areas in a clean and safe condition in accordance with IDOTSPECS Article 107.15. In the event that, in the opinion of the Village, or the Engineer there is excessive dirt on the pavement the area is to be cleaned using a mechanical sweeper.

1.07 PILE AND SHEETING DRIVING NOISE

- A. If piles are required, use only pile driver hammers with mufflers capable of significantly reducing noise and use barriers and/or shielding techniques as necessary to comply with applicable federal, state and local ordinances.

END OF SECTION

NOT FOR BID

NOT FOR BID

NOT FOR BID

NOT FOR BID

**SECTION 01570
TRAFFIC REGULATION**

PART 1 GENERAL

1.01 DESCRIPTION

- A. CONTRACTOR shall be solely responsible to keep work areas open to pedestrian and vehicular traffic to maximum extent practical and to provide safe passage of such traffic and continuous access for emergency vehicles.
- B. Provide, install, and maintain items such as barricades, beacons, warning signs, temporary pavement markings, lane delineators, temporary fencing, flag persons, and other appurtenances to protect pedestrian traffic, vehicular traffic, and CONTRACTOR'S own work forces during construction operations.
- C. Remove temporary equipment and facilities when no longer required; restore area to original condition.

1.02 QUALITY ASSURANCE

- A. Requirements of regulatory agencies:
 - 1. Occupational Safety and Health Act (OSHA) applicable provisions.
- B. Reference standards:
 - 1. Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) Latest Edition.
 - 2. Illinois Department of Transportation.
 - a. Standard Specifications for Road and Bridge Construction - Latest Edition (IDOTSPECS).
 - b. Supplemental Specifications and Recurring Special Provisions- Latest Edition (IDOTSPECS).
 - 3. Illinois Department of Transportation, Bureau of Design.
 - a. Highway Standards (ILHWSTDS).
 - 4. Illinois Department of Transportation, Bureau of Local Roads.
 - a. BLR Standard 17 – Traffic Control Devices for Day Labor Construction.
 - b. BLR Standard 21-6 - Typical Applications of Traffic Control Devices for Construction on Rural Local Highways.

1.03 SUBMITTALS

- A. Traffic control schedule:
1. Submit to ENGINEER for acceptance, traffic control schedule of street and walkway closings, partial closings, and detours prior to implementation.
 2. Submit updates as necessary to keep ENGINEER fully informed of traffic routing.
 3. ENGINEER will review schedules and updates only for maintenance of adequate traffic patterns within and through construction areas.
 - a. ENGINEER's review and acceptance shall not be construed as confirming adequacy of protection measures proposed.
 - b. ENGINEER will notify residents of construction schedules and traffic plans. CONTRACTOR shall be solely responsible for full protection of public and CONTRACTOR'S own forces.
 4. Work will not be allowed until ENGINEER has reviewed and accepted traffic control schedules and updates as well as their implementation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Traffic control materials shall conform to the following:
1. IDOTSPECS Section 701.
 2. ILHYSTDS
 - 701301-03 Lane Closure, 2L, 2W, Short Time Operations
 - 701501-05 Urban Lane Closure, 2L, 2W, Undivided
 - 701801-04 Lane Closure, Multilane 1W or 2W Crosswalk or Sidewalk Closure
 - 701901-01 Traffic Control Devices
 3. OSHA applicable provisions.

PART 3 EXECUTION

3.01 GENERAL

- A. Provide traffic control as described in this section.

3.02 TRAFFIC CONTROL SCHEDULE

- A. Prepare plan for pedestrian and vehicular traffic control compatible with construction procedures employed in each construction area. Incorporate proposed construction sequencing to form continuous traffic control schedule.
- B. Include detailed descriptions of proposed procedures for pedestrian and vehicular traffic routing and protection in immediate construction area and surrounding area during both working and non-working hours.

3.03 VEHICULAR TRAFFIC CONTROL

- A. Provide traffic control for work in or adjacent to streets and alleys as described.
- B. General requirements:
 - 1. The minimum requirement for traffic control is described herein. CONTRACTOR shall institute any other measures necessary to ensure safety of vehicular and pedestrian traffic.
 - 2. For streets and alleys along or in which construction is occurring and for areas where construction vehicles are entering or leaving streets, warning signs informing traffic of construction activities ahead and restricting roadway to local traffic only shall be posted.
 - 3. When it is necessary to completely close a street, as determined by the ENGINEER, detour signs shall be posted under the supervision of the ENGINEER so that traffic can be properly rerouted around the construction site.
 - 4. For unpaved trenches (those not being used for vehicular traffic) and other disturbed areas in pavement: Provide flashing light barricades, Type I or II, to channelize traffic into undisturbed pavement.
 - 5. At cross-streets and alleys: Flashing light barricades, Type III, to screen off disturbed areas in trenches.
 - 6. Maintain and grade backfilled trenches uniformly to permit safe crossing by vehicles.
- C. During working hours:
 - 1. Driveways: Open to maximum practical extent. Maximum duration of closure - 4 hours except for replacement of driveway.
 - 2. Sidewalks and crosswalks: Open to maximum practical extent.

3. Alleys: Closed to through traffic; open to adjoining property to maximum practical extent.
 4. Two-lane streets: One lane continuously open in alternating directions controlled by flag persons.
- D. During non-working hours:
1. Driveways: Open except for replacement of driveway.
 2. Sidewalks and crosswalks: Open except for replacement of walks.
 3. Alleys: Open, one-way travel restrictions permitted.
 4. Two-lane street: Both lanes continuously open.
- E. Barricade and warning sign arrangements shall conform to the following ILHWSTDS as minimum. The specific type of arrangement to be utilized shall be determined by ENGINEER.
1. Full closure local traffic permitted BLR Standard 17-3
 2. Full closure no traffic permitted BLR Standard 17-3
 3. Full closure local traffic permitted BLR Standard 21-6
 4. Full closure no traffic permitted BLR Standard 21-6
- F. Provide more extensive warnings, markings, and controls in areas having special local conditions such as:
1. High daily or hourly traffic volumes.
 2. Unusual turning patterns.
 3. Moderate to high pedestrian traffic.
 4. School zones.
 5. Hospitals or other emergency care facilities.
 6. Police, fire, ambulance, civil defense, or other emergency services.
 7. Public Works facilities.

3.04 PEDESTRIAN TRAFFIC CONTROL

- A. The minimum requirements for pedestrian traffic control are described herein. CONTRACTOR shall institute the requirements and any other measures necessary to protect pedestrians and residents from construction operations and from vehicular traffic traveling through construction area.
- B. During working hours, provide Type I or II barricades to protect public from open excavations, wet paint, wet concrete, other construction operations, stockpiled materials, construction equipment, and vehicular traffic.

- C. Control excavation operations so size of open excavation at end of each workday is minimum as specified in Section 02220.
- D. Upon stopping construction operations for day, provide and install temporary fencing, 4 feet high minimum around open excavations and rough terrain areas. Lock and shutter construction equipment.
- E. Stockpile materials so as not to block streets, alleys, drives, sidewalks, and crosswalks. Grade backfilled trenches uniformly to permit safe crossing by pedestrians.

3.05 TRAFFIC CONTROL FOR CONTRACTOR'S EQUIPMENT

- A. Operate construction equipment in accordance with applicable traffic laws and safety regulations.
- B. Equip equipment with warning lights and audible warning devices as minimum.
- C. Where equipment enters or leaves public roadways, provide warning signs and barricades. In moderate and high vehicular traffic volume areas, provide flag persons or temporary traffic signals to control traffic and aid travel of construction equipment. In moderate or high pedestrian traffic areas, provide flag persons to control traffic.

3.06 TRAFFIC CONTROL DEFICIENCY DEDUCTION (BDE Special Provision) IDOT

- A. **To ensure a prompt response to incidents involving the integrity of the work zone traffic control devices, the CONTRACTOR shall provide a telephone number where a responsible individual can be contacted on a 24-hour-a-day basis. When the ENGINEER notified or determines a deficiency exists, (s) he shall be the sole judge to whether the deficiency is an immediate safety hazard. The CONTRACTOR shall dispatch sufficient resources within 2 hours of notification to make needed corrections of deficiencies that constitute an immediate safety hazard. Other deficiencies shall be corrected within 12 hours. If the CONTRACTOR fails to restore the required traffic control and protection within the time limits specified above, 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 Resident Engineer's acceptance of the corrections. For this project, the daily deduction will be per day. In addition, if the CONTRACTOR fails to respond, the ENGINEER may correct the deficiencies and the cost thereof will be deducted from monies due or which may become due to CONTRACTOR. This corrective action will in no way relieve the CONTRACTOR or his/her contractual requirements or responsibilities.**

The cost of the daily deduction will either be \$1,000 or 0.05 percent of the awarded contract value, whichever is greater.

END OF SECTION

NOT FOR BID

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**SECTION 01700
CONTRACT CLOSEOUT**

PART 1 GENERAL

1.01 DESCRIPTION

- A. This section provides for an orderly and efficient transfer of the completed work to the OWNER.

1.02 QUALITY ASSURANCE

- A. Prior to requesting inspection by the ENGINEER, use adequate means to assure that the work is completed in accordance with the specified requirements and is ready for the requested inspection.

1.03 PROCEDURES

- A. Substantial completion:
1. Follow the procedures outlined in Paragraph 14.04 of the Supplementary Conditions.
- B. Final completion:
1. Contractor shall prepare and submit to OWNER written notice in accordance with Paragraph 14.06 of the General Conditions.
 2. Contractor shall verify that the Work is complete, including, but not necessarily limited to, the items mentioned in Paragraph 14.07 of the General Conditions.
 3. Contractor shall certify that:
 - a. Contract Documents have been reviewed;
 - b. Work has been completed in accordance with the Contract Documents;
 - c. Work has been inspected for compliance with the Contract Documents;
 - d. Work has been tested as required;
 - e. Work is completed and ready for final inspection.

4. ENGINEER will make an inspection to verify status of completion.
 5. Should the ENGINEER determine that the Work is incomplete or defective:
 - a. ENGINEER will promptly so notify CONTRACTOR, in writing, of all particulars in which the Work is incomplete or defective; and
 - b. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies and shall notify ENGINEER that such measures are taking place so that ENGINEER may make an inspection of such measures while in progress as ENGINEER determines necessary; and
 - c. CONTRACTOR shall further notify ENGINEER when all such measures necessary to complete such Work or remedy such deficiencies have been completed and the Work is ready for re-inspection.
 6. When ENGINEER determines that the Work is acceptable under the Contract Documents, ENGINEER will request that CONTRACTOR make closeout submittals.
- C. Project Closeout and Final Submittals include, but are not necessarily limited to:
1. A final statement of accounting to be submitted by the CONTRACTOR to the ENGINEER, showing all adjustments to the Contract Sum. The ENGINEER will prepare a Final Pay Request to be submitted to the OWNER. Accompanying this Final Pay Request will be evidence of payment and final waivers of lien from the CONTRACTOR, subcontractors and material suppliers.

END OF SECTION

SPECTIFICATIONS

DIVISION 2

STAIR WORK

NOT FOR BID

NOT FOR BID

**SECTION 02100
SITE PREPARATION**

PART 1 GENERAL

1.01 DESCRIPTION

A. Description of Work:

1. Remove site objects which obstruct construction.
2. Restore site objects disturbed by construction including, but not limited to, utilities, traffic signs, street lights, traffic signals, mail boxes, fences, guard rails, right-of-way markers, survey monuments, lot pins, driveway markers, structures, items intended to inform or protect the public, and other surface objects.

1.02 QUALITY ASSURANCE

A. Conditions Survey:

1. Provide video recordings in accordance with Section 01300 and other documentation to establish condition of existing structures and surface features.
2. Survey and record condition of existing facilities to remain in place that may be affected by construction operations.

B. Preparation Work:

1. Notify owners of existing utilities a minimum of three workdays prior to beginning preparation work.
2. Remove only those site objects within construction limits, which are designated for removal on drawings or as directed by ENGINEER.
3. Do not remove site objects outside construction limits.
4. Protect existing utilities and maintain them in operation during construction except as specified elsewhere in the Contract Documents.
5. Provide traffic control in accordance with Section 01570.
6. Dispose of materials in legal manner in accordance with Section 01560.
7. Removal of trees and shrubs by CONTRACTOR is prohibited unless noted on plans. ENGINEER shall be informed by CONTRACTOR, which trees

and shrubs may have to be trimmed or removed in order for the CONTRACTOR to carry out his construction activities. ENGINEER shall make the final determination as to which trees and shrubs shall remain, be trimmed or removed.

8. Trees indicated for removal shall be removed in accordance with IDOT Section 201, except that stumps shall be removed to a depth of not less than 18” below finished grade
9. Removal and replacement of chain link fence shall be in accordance with IDOT Section 664.
10. Wooden Fence Panels and gates shall be removed with care and stored at the property location. Contractor may choose to retain or replace posts but any posts that are damaged during construction activities shall be replaced.
11. Bushes within the construction limit are to be removed as approved by the Engineer. They are to be replaced with bushes of like kind in accordance with IDOT Section 253. If the homeowner desires to maintain the plants during the construction period, they are to be removed, balled, and burlapped, and provided to the homeowner. Reinstallation shall be in accordance with IDOT Section 253
12. Individual landscape areas that are designated for removal and replacement within the temporary easement area are to be removed and replaced to their original condition.

C. Restoration Work:

1. Restore to conditions equal to or exceeding conditions existing prior to construction as determined by video recordings and survey.

D. Reference Standard:

1. a. Illinois Department of Transportation Standard Specifications for Road & Bridge Construction, Latest Edition, (IDOTSPECS).
- b. Supplemental Specifications and Recurring Special Provisions- Latest Edition
- c. Standard Specification for Water and Sewer Main Construction in Illinois

PART 2 PRODUCTS

(Not applicable)

PART 3 EXECUTION

3.01 SITE PREPARATION

A. Site Improvement Objects:

1. Carefully remove all site improvement objects such as street name signs, traffic control signs, mailboxes, and lawn ornaments which interfere with construction.
2. Store site improvement objects in a manner, which will fully protect objects or replacement after construction is completed.
3. Provide temporary traffic control signs where permanent signs are removed for construction. Temporary signs shall be worded to match permanent signs except as necessary to be compatible with construction operations.
4. Bracing of light or power poles shall be incidental to the Contract

3.02 SITE RESTORATION

A. Site Improvement Objects:

1. Reinstall site improvement objects removed for construction in their original location.
2. Repair any damage to site improvement objects, which occurred during removal, storage, and reinstallation.
3. Replace any improvement object irreparably damaged, in ENGINEER'S sole opinion. CONTRACTOR shall be responsible for making immediate arrangements to repair any damaged site objects. CONTRACTOR shall not be permitted to continue working unless the site objects have been repaired or arrangements have been made for repairs to the satisfaction of the ENGINEER.

END OF SECTION

NOT FOR BID

NOT FOR BID

NOT FOR BID

SECTION 02210
GRADING

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work under this section consists of providing the labor, equipment and materials necessary to prepare the site for acceptance of the pavement, curb and gutter, sidewalks, driveway approaches and landscaping.

1.02 QUALITY ASSURANCE

- A. Testing will be provided by OWNER.
1. One sieve analysis and plasticity index for each source of fill material.
 2. Density tests will be taken as directed by ENGINEER.
- B. Reference Standards:
1. American Society for Testing and Materials (ASTM), Latest Edition:
 2. Illinois Department of Transportation (IDOT)
 - a. Standard Specification for Road and Bridge Construction, Latest Edition (IDOTSPECS)
 - b. Supplemental Specifications and Recurring Special Provisions, Latest Edition
 3. Standard Specifications for Water and Sewer Main in Illinois

1.03 JOB CONDITIONS

- A. Notify corporations, companies, individuals, or authorities owning above or below ground conduits, wires, pipes, or other utilities encountered during construction operations. Protect, support, and maintain all conduits, wires, pipes, and other utilities that are to remain in accordance with the requirements of owners of said services.
- B. Utility Notice and Location:
1. Drawings indicate existence of some utilities and related structures situated underground and above ground. These existing utilities, structures, and their locations have been established from available records, which may or may not be accurate. Other utilities and structures may also be present.

Accordingly, CONTRACTOR is responsible for determining the exact location of existing utilities and related structures and their effect on construction operations.

2. CONTRACTOR shall give a minimum of seventy-two (72) hours notice to owners of utilities (above or below ground) prior to excavating or beginning other construction activities to locate said utilities.

NOTE: OWNER will not be responsible for locating sewer services.

3. Furnish labor, equipment, materials, services, and perform work necessary to locate existing utilities at each site, or acquire services of respective owners of existing utilities to locate existing utilities at each site at no additional cost to OWNER.
4. CONTRACTOR shall not be relieved from liability for damage to existing utilities if he chooses to have utility owners locate existing utilities except as said utilities waive liability for damages.
5. Acquire services of utility owners to relocate utilities in conflict.
6. Protect all utilities.
7. Prevent construction material, pavement, concrete, earth, or other debris from entering sewers and other utility structures.

C. Excavated Material:

1. Do not block or obstruct pavements (including driveway approaches) with excavated material, except as authorized by OWNER.
2. Transport surplus material off-site daily.

D. Debris on Road:

1. Where CONTRACTOR'S equipment is operated on traveled surface or structures used by traffic on or adjacent to section under construction, clean to the satisfaction of ENGINEER, traveled surface of dirt and debris during and at end of each day's operations.
2. Cost of this work shall be incidental to Contract and no extra compensation will be allowed.

E. Equipment on Surfaces:

1. Protect traveled surface and structures on or adjacent to work from damage by lugs or cleats of treads, tracks, or wheels of equipment.

2. Equipment used in execution of work shall comply with legal loading limits and requirements established by statutes of State in which work is performed or local regulations when moved or operated on traveled surface or structure unless permission in writing has been issued by approving authority.
 - a. Secure permit before using equipment which may exceed legal loading, allowing ample time for making an analysis of stresses to determine whether or not proposed loading would be within safe limits.
 - b. OWNER will not be responsible for delay in construction operations or for costs incurred by CONTRACTOR as result of not complying with statutes and regulations.
 3. Limit operations to use of pneumatic-tired equipment on pavement, except for equipment used for excavating.
 - a. Move metallic tracked equipment on pneumatic-tired trailer.
 - b. Do not "walk" metallic tracked equipment.
- F. Construction Noise:
1. Equip engines and engine-driven equipment used for hauling or construction with mufflers maintained to prevent excessive or unusual noise.
 2. Construction within 1,000 feet of an occupied school, residence, motel, hospital, or similar facility shall be confined to period beginning at 7:00 a.m. and ending at 5:00 p.m. This time regulation does not apply to maintenance or operation of safety and traffic control devices such as barricades, signs and lighting, or to construction of emergency nature.
 3. Any machine or device or part thereof, which is regulated by or becomes regulated by Federal or State noise standards shall conform to those standards.

PART 2 MATERIALS

2.01 GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

- A. Fabric shall be furnished and installed in accordance with IDOT SPECS Section 210.

2.02 FILL

- A. A free-draining granular material equivalent to PGE with the following gradation shall be used as fill in undercut-replacement zones where wet conditions exist at undercut sub-grade or where unstable undercut sub-grade soils prevent compaction of other fill material.

PGE SPECIFICATIONS

SIEVE NUMBER	CRUSHED CONCRETE, CRUSHED STONE, OR BLAST FURNACE SLAG % PASSING	GRAVEL-CRUSHED GRAVEL OR PIT-RUN GRAVEL % PASSING
6 INCH	90 ± 10	90 ± 10
2 INCH	40 ± 25	60 ± 25
NO. 4	-	40 ± 20
NO. 200	5 ± 5	5 ± 5

- B. The 6-inch sieve size shall be changed to 4 inch for an undercut thickness of less than 18 inches.
- C. The surface of the PGE shall be covered with a minimum 4-inch thick layer of CA-6/Grade 8 to cover protruding cobbles and boulders and to develop an adequate working platform. This minimum 4 inch thick layer of CA-6/Grade 8 shall be considered included as part of the undercut-replacement zone.

2.03 EMBANKMENT

- A. Embankment shall consist of material excavated and installed per Section 205 of the IDOT SPECS.

PART 3 EXECUTION

3.01 PREPARATION

- A. Protect site objects in accordance with Section 02100.
- B. Provide traffic control and public protection for excavation operations in accordance with Section 01570.

3.02 EXCAVATION

- A. General

1. Excavate and grade to elevations and dimensions necessary to complete construction as shown on the drawings.
 2. When excavation by machine methods cannot be made without material damage being done to existing piping and structures, employ other appropriate excavation methods as necessary to prevent damage.
 3. Keep area graded to allow safe passage of local traffic.
 4. Leave the hydrants, valve pipe covers, valve boxes or other utility controls unobstructed and accessible until work is completed.
 5. Keep inlets clear or make other satisfactory provisions for drainage.
- B. Special Excavation
1. Excavation to the required sub-grade elevations shall be performed in accordance with the applicable articles of IDOTSPECS, Section 440.
 2. All excess material excavated within the limits of the project but not incorporated into the project shall be disposed of away from the site by the CONTRACTOR in such a manner that public or private property will not be damaged or endangered.
- C. Subgrade Treatment:
1. The roadway sub-grade shall be prepared in accordance with IDOT SPECS Section 301.
- D. Granular Subgrade Stabilization:
1. Further sub-grade treatment (Granular Subgrade Stabilization) may be required at locations determined by the ENGINEER. This work will consist of the excavation, removal and satisfactory disposal of unsuitable material and the placement of granular fill material and geotechnical fabric as described in PART 2.01 of Section 02210.
 2. The Geotechnical Study performed for this project recommends that further sub-grade treatment may be required at various locations.

3.03 FIELD QUALITY CONTROL

- A. Degree of Compaction: ASTM D698 (95% of maximum density)
NOTE: All fill shall be placed in lifts not to exceed 8.0 inches when uncompacted.
- B. Moisture Content: Within 3% of optimum when placed and compacted.

C. Compaction Testing:

1. Compaction testing in accordance with best practices of the industry shall be provided by OWNER in areas determined by the ENGINEER.

END OF SECTION

NOT FOR BID

NOT FOR BID

NOT FOR BID

SECTION 02220
EXCAVATING, BACKFILLING AND COMPACTING

PART 1 GENERAL

1.01 DESCRIPTION

A. Description of System:

1. Excavating, backfilling, and compacting shall include dewatering, sheeting, shoring, bracing excavation, backfilling, compacting, disposing of surplus materials, and other work incidental to construction of trenches, including any additional excavation required for manholes or other structures forming part of the sewer system or other utilities relocated for construction of the sewers and appurtenances.

B. Definitions:

1. Influence Zone around Piping or Electrical Ducts: Area below limits bounded by a line 12 inches above pipe or duct and by one horizontal to two vertical slope extending outward from that line 1 foot beyond outer edge of pipe or duct.
2. Influence Zone Under Foundations, Pavements, or Sidewalks: Area below foundation or pavement and sidewalk base bounded by a one horizontal to two vertical slope extending outward from 1 foot beyond outer edges of foundation, pavement, or sidewalk.
3. Existing utilities: Include but not limited to piping, wiring, conduit, and related structures situated underground and above ground for conveyance or transmission of water, sewage, storm water, electricity, telephone signals, television signals, natural gas, oil, gasoline, or other substances or signals.
4. Bedding Section: That portion of backfill adjacent to pipe which is critical to structural integrity of pipe. Limits of section, and specifications for various types of sections are contained within.
5. Unsuitable Material: Topsoil, peat, organic soils, and materials containing slag, cinders, foundry sand, debris, and/or rubble, or soil with less than required bearing capacity as determined by ENGINEER.
6. Rock Excavation:
 - a. Removal of solid rock in ledges, bedded deposits, or unstratified masses which by actual demonstration cannot, in ENGINEER'S opinion, be reasonably loosened or ripped by a single-tooth, hydraulically operated ripper mounted on a Caterpillar Crawler

Tractor D-86 in good condition or similar approved equipment in good condition or similar approved equipment and, in fact, is systematically drilled and blasted for removal.

- b. Term "rock excavation" shall be understood to indicate a method of removal and not a geological formation.
- c. Boulders larger than 1/2 cubic yard will be classified as rock, if drilling and blasting are required and actually used for their removal.
- d. Demonstration may be waived if, in ENGINEER'S opinion, material is obviously unrippable rock.

1.02 QUALITY ASSURANCE

- A. Testing: Testing shall be provided by OWNER.
 - 1. One sieve analysis and plasticity index for each source of granular backfill, bedding materials, and cover material. Additional analysis as required by ENGINEER to verify gradation and plasticity index (ASTM D4318).
 - 2. Field compaction testing as specified elsewhere in this section.
- B. Trenching Tolerances:
 - 1. Excavate such that pipes, ducts, and conduits can be laid straight at a uniform grade, without sags or humps, between elevations shown on drawings.
 - 2. The trench width shall be excavated in accordance with Standard Specifications for Water and Sewer Main Construction in Illinois
- C. Reference Standards:
 - 1. American Society for Testing and Materials (ASTM), Latest Edition.
 - 2. American Institute of Steel Construction (AISC):
 - a. Manual of Steel Construction, Latest Edition
 - 3. American Institute of Timber Construction (AITC):
 - a. Timber Construction Manual, Latest Edition
 - 4. Illinois Department of Transportation (IDOT)
 - a. Standard Specifications for Road and Bridge Construction, Latest

Edition (IDOTSPECS)

b. Supplemental Specifications and Recurring Special Provisions, Latest Edition

5. Standard Specifications for Water and Sewer Main Construction in Illinois

1.03 JOB CONDITIONS

A. Notify corporations, companies, individuals, or authorities owning above or below ground conduits, wires, pipes, or other utilities encountered during construction operations. Protect, support, and maintain all conduits, wires, pipes, and other utilities that are to remain in accordance with the requirements of owners of said services.

B. Utility Notice and Location:

1. Drawings indicate existence of some utilities and related structures situated underground and above ground. These existing utilities, structures, and their locations have been established from available records, which may or may not be accurate. Other utilities and structures may also be present. Accordingly, CONTRACTOR is responsible to determine exact location of existing utilities and related structures and their effect on construction operations.

2. Give either minimum of 72 hour notice or notice in accord with state law, whichever time period is greater, to owners of utilities (above or below ground) prior to excavating to locate said utilities or beginning other construction activities. Weekends and holidays shall be excluded for purposes of commuting notice.

NOTE: OWNER will not be responsible for locating sewer services.

3. Furnish labor, equipment, materials, services, and perform work necessary to locate existing utilities at each site, or acquire services or respective owners of existing utilities to locate existing utilities at each site at no additional cost to OWNER.

4. CONTRACTOR shall not be relieved from liability for damage to existing utilities if he chooses to have utility owners locate existing utilities except as said utilities in writing waive CONTRACTOR'S liability for damages.

C. Utility Protection and Relocation:

1. Sanitary Services and Water Services:

a. It is expected that some sanitary services will have to be relocated

due to the installation of the new water main and appurtenances. Drawings do not indicate locations where these relocations will occur nor will they be located in the field by OWNER.

- b. As sanitary services are exposed, the contractor shall notify ENGINEER, which sanitary services will be in conflict. ENGINEER will make the determination on how the sanitary service shall be relocated.
- c. Protect all sanitary services not in conflict with new storm sewers and appurtenances.
- d. Water services shall be located in the field by OWNER. CONTRACTOR shall be responsible for protecting all water services.

2. Other Utilities:

- a. Locate all other utilities.
- b. Notify utility owners of conflicts with new water mains, sewers and appurtenances.
- c. Acquire services of utility owners to relocate utilities in conflict.
- d. Cost to CONTRACTOR for relocating utilities in direct conflict with new mains and appurtenances will be reimbursed by OWNER in accordance with Article II of the General Conditions. Notify ENGINEER and OWNER in writing prior to relocating any utility for which OWNER will bear responsibility for relocation cost. CONTRACTOR shall not be reimbursed for costs incurred in relocating any utility prior to notifying ENGINEER and OWNER.
- e. Cost to CONTRACTOR for relocating utilities which are not in direct conflict with new mains and appurtenances which are relocated for CONTRACTOR'S convenience shall be borne by CONTRACTOR at no additional cost to OWNER.
- f. Protect all other utilities.

D. Excavated Material:

- 1. Do not block or obstruct pavements with excavated material, except as authorized by OWNER.
- 2. Trim banks to minimize inconvenience to travel.

3. Transport surplus material and excavated material unsuitable for backfilling off-site daily.
- E. Debris on Road:
1. Where CONTRACTOR'S equipment is operated on traveled surface or structures used by traffic on or adjacent to section under construction, clean to the satisfaction of ENGINEER, traveled surface of dirt and debris during and at end of each day's operations.
 2. Cost of this work shall be incidental to Contract and no extra compensation will be allowed.
- F. Equipment on Surfaces:
1. Protect traveled surface and structures on or adjacent to work from damage by lugs or cleats of treads, tracks, or wheels of equipment.
 2. Equipment used in execution of work shall comply with legal loading limits and requirements established by statutes of State in which work is performed or local regulations when moved or operated on traveled surface or structure unless permission in writing has been issued by approving authority.
 - a. Secure permit before using equipment which may exceed legal loading, allowing ample time for making an analysis of stresses to determine whether or not proposed loading would be within safe limits.
 - b. OWNER will not be responsible for delay in construction operations or for costs incurred by CONTRACTOR as result of not complying with statutes and regulations.
 3. Limit operations to use of pneumatic-tired equipment on pavement, except for equipment used for excavating sewer trench.
 - a. Move metallic tracked equipment on pneumatic-tired trailer.
 - b. Do not "walk" metallic tracked equipment.
- G. Construction Noise:
1. Equip engines and engine-drive equipment used for hauling or construction with mufflers maintained to prevent excessive or unusual noise.
 2. Construction within 1,000 feet of an occupied school, residence, motel, hospital, or similar facility shall be confined to period beginning at 7:00 a.m. and ending at 5:00 p.m. This time regulation does not apply to maintenance

or operation of safety and traffic control devices such as barricades, signs and lighting, or to construction of emergency nature.

3. Any machine or device or part thereof, which is regulated by or becomes regulated by Federal or State noise standards shall conform to those standards.

H. Rock Excavation:

1. Adhere to Federal, State and local ordinances regulating blasting operations.

1.04 SHEETING, SHORING, AND BRACING

- A. CONTRACTOR shall bear sole responsibility for protecting adjacent areas, facilities, and structures from construction operations. Sheeting, shoring, and bracing are an integral part of CONTRACTOR'S construction methods.
1. Structural requirements, installation, and removal techniques for sheeting, shoring, and bracing are dependent upon specific construction procedures, which will be employed by CONTRACTOR.
 2. Prepare written description of proposed construction procedures and compatible detailed designs for sheeting, shoring, and bracing.
 3. Procedures and designs shall be certified by registered professional engineer, registered structural engineer, and registered soils engineer, as appropriate.

1.05 TRAFFIC CONTROL

- A. Provide traffic control and public protection for excavation and backfilling operations in accordance with Section 01570.

1.06 PROTECTION OF THE ENVIRONMENT

- A. Conduct excavation and backfilling operations in accordance with Section 01560.

PART 2 MATERIALS

2.01 GENERAL

- A. Granular materials: conform to IDOT SPECS standard coarse aggregate (CA) gradations listed.
- B. Materials shall be compatible by means, which will be employed by CONTRACTOR to densities specified.

2.02 BEDDING AND COVER

- A. See standard bedding detail.
 - 1. PVC Pipe: CA-7/11, ¾-1" Washed Gravel
 - 2. Concrete Pipe: CA-7, 1" Washed Gravel
 - 3. Ductile Iron Pipe: CA-7, 1" Washed Gravel
 - 4. Cables, Copper Water Services: CA-7, 1" Washed Gravel
 - 5. Trench bottom stabilization: CA-7, 1" Washed Gravel

3.03 BACKFILL

- A. Utility trenches beneath proposed utilities and beneath permanent streets, alley, sidewalk, or driveways: CA-6/Grade 8.
- B. Other areas: Excavated earth free from organic materials.

PART 3 EXECUTION

3.01 PREPARATION

- A. Dewatering:
 - 1. Surface Waters:
 - a. Keep construction site free draining.
 - 2. Subsurface Waters:
 - a. Keep excavations free from water.
 - b. Maintain groundwater minimum of 12 inches below excavations.
 - c. Install and operate dewatering system to lower groundwater table to required depth prior to commencement of excavation. In general, dewatering shall commence at least two days prior to excavation in given area and shall extend at least 100 feet ahead and behind pipe installation operations. Determine specific requirements and procedures for each particular segment of pipe installation.
 - d. Prevent displacement of surrounding soils.
 - e. Remove soil which has been disturbed by pressure or flow of groundwater and replace with free draining material.
 - f. Maintain dewatering systems in a manner that will prevent uplifting of structures.

- g. Protect adjacent properties from damage resulting from dewatering operations.
- h. Drill, maintain, and abandon dewatering wells in accordance with Federal, State, and local ordinances.

B. Line and Grade for Open-Cut Construction:

- 1. Install piping to line and grade shown on drawings.

3.02 SHEETING, SHORING, AND BRACING

A. Design:

- 1. Prepare designs of sheeting, shoring, and bracing in accordance with AITC Timber Construction Manual and AISC Manual of Steel Construction.

B. Sheeting, Shoring, and Bracing:

- 1. Install sheeting, shoring, and bracing as necessary in areas where CONTRACTOR'S construction procedures may cause movement in adjacent soils and where such movement could damage existing utilities, landscaping, piping, curb and gutter, or roadways.
- 2. Install in other areas for CONTRACTOR'S convenience.

3.03 EXCAVATION

A. Excavate to elevations and dimensions necessary to complete construction.

- 1. Where working space will permit, trenches may be excavated by machine provided that by so doing, existing piping and structures will not be subject to damage.
- 2. When excavation by machine methods cannot be made without material damage being done to existing piping and structures, employ other appropriate excavation methods as necessary to prevent damage.

B. Do not advance excavation of trenches more than 100 feet ahead of completed pipe installation at any time. Conduct excavation operations so that, at the end of each day's work, no more than 20 feet of trench is excavated ahead of completed pipe installation. The trench that is open shall be protected at the end of each day's work in accordance with Section 01570.

C. Do not excavate for piping, manholes and other structures until scheduled for construction except as necessary to locate existing utilities and as specified in

Paragraph 1.03 of this section.

- D. Do not excavate within influence zone of existing footings or foundations without providing shoring and bracing or other procedures to ensure against displacement of footings or foundations.
- E. Excavation in Roadways: Excavation, backfill, and surface replacement shall conform to requirements of local authority. In no case shall placement edges bear on less than 12 inches of undisturbed soil unless otherwise noted.
- F. Construction on Site:
 - 1. Place no material closer than 2 feet to edge of excavation.
 - 2. Leave fire hydrants, valve pit covers, valve boxes, or other utility control unobstructed and accessible until work is completed.
 - 3. Keep ditches and inlets clear or make other satisfactory provisions for drainage.
 - 4. Do not obstruct natural watercourse.

3.04 INSPECTION PRIOR TO BEDDING AND BACKFILLING

- A. Examine surfaces to receive bedding or backfill to determine extent of areas loosened by frost action, softened by flooding or weather, or of unsuitable materials.
- B. At a time of use, granular bedding and backfill shall be free of frozen and foreign materials that may have become mixed with it during handling.

3.05 UNSUITABLE MATERIALS

- A. Remove and replace or compact natural soils or previously compacted fills softened by frost, flooding or weather.
- B. Remove unsuitable material, in accordance with IDOTSPECS Article 202.03 from within trenches. Notify ENGINEER prior to excavating.
- C. Stabilize trench bottom by replacing unsuitable material with a coarse aggregate gradation as specified in Paragraph 2.02 of this section.

3.06 PLACING BEDDING AND COVER

- A. Rigid Pipes and Ducts:
 - 1. Use bedding material as specified in Paragraph 2.02 of this section.

2. Spread bedding material over bottom of trench so after pipe placed thereon, imbedded and aligned, there remains 6 inches minimum depth of bedding material below pipe barrel and minimum 4 inches below bell.
 3. If excavation carried deeper than 6 inches below pipe barrel, excess depth shall be filled with coarse aggregate gradations as specified.
 4. Care should be taken to ensure pipe supported on entire length, not on bell.
 5. Carefully place bedding material of required depth and bring up to level even with the middle of the pipe.
 6. After pipe is laid and jointed, place and cover material to level 12 inches above pipe barrel.
- B. Compacted Section for Flexible Pipes and Ducts:
1. Place bedding material specified in Paragraph 2.02 of this section below and around pipe up to the middle of the pipe to provide adequate side support and prevent lateral movement.
 2. Place bedding material specified in Paragraph 2.02 of this section in two stages. Extend first stage to top of pipe, and second to level from top of pipe to at least 12 inches above pipe
 3. If for any reason trench width exceeds that allowed in Paragraph 1.02B of this section, extend bedding and cover material, as required above, at least two pipe diameter from either side of pipe or to undisturbed trench walls, whichever is closer. This pipe zone shall contain only undisturbed soil and/or bedding.
 4. For PVC pipe, bedding and cover installation shall conform to requirements of ASTM D2321.

3.07 BACKFILLING

A. Backfill Material:

1. Excavated Material Backfill:
 - a. Backfill trenches with excavated material from trenches, unless granular backfill is required as specified below.
 - b. Excavated material shall consist of loam, clay or other materials, which, in judgment of ENGINEER, are suitable for backfilling. Unsuitable backfill materials are not acceptable. Extend backfill

from surface of cover material to ground surface, making allowance for surface restoration.

2. Granular Material Backfill:

- a. Place granular backfill within influence zone under new or existing roads, sidewalks, paved surface, or foundations and footings.
- b. Extend backfill from surface of cover material to top of existing pavement structure to allow backfill to function as temporary aggregate roadway. Replace backfill displaced by traffic movement as necessary until temporary pavement or permanent pavement is installed at no additional cost to OWNER.

3. Support of Underground Structures:

- a. Place granular backfill within influence zone under piping and other utilities. Compact mechanically to 95% of maximum density as determined by ASTM Test Designation D698.
- b. CONTRACTOR may submit an alternate design for support of underground facilities to ENGINEER for approval. Submittal shall contain documentation to verify adequacy of design.

B. Placing Backfill:

1. Do not use frozen material or place backfill on frozen sub-grade.
2. Exercise care not to exert undue stresses on new piping or existing utilities when dumping, spreading, and/or compacting backfill materials. Hand spreading and hand tamping may be required to adequately protect new pipe and existing utilities.
3. Where pipes leave structures, protect by backfilling pipe influence zone down to undisturbed soil as specified above for support of underground structure.
4. Do not backfill structures until new concrete has properly cured.

C. Compaction of Backfill:

1. Granular trench backfill shall be mechanically compacted in layers of 12 inches maximum, loose measure. Each layer shall be compacted to 95% of maximum density as determined by ASTM D698 by ramming or tamping with tools approved by the ENGINEER. Care shall be taken during compaction to prevent disturbance or injury of the pipe and other utilities.

2. All job excavated material used for backfill shall be mechanically compacted in layers of 18 inches maximum, loose measure, to 90% of maximum density as determined by ASTM D698 by ramming or tamping with tools approved by the ENGINEER. Care shall be taken during compaction to prevent disturbance or injury of the pipe and other utilities.
3. Start trench compaction at point of lowest elevation of trench and work along trench.
4. Backfill pipe immediately after installation unless delay is approved by ENGINEER.

3.08 FIELD QUALITY CONTROL

- A. Degree of Compaction: ASTM D698 (95% of maximum density)
- B. Moisture Content: Within 3% of optimum when placed and compacted.
- C. Compaction Testing:
 1. Compaction testing in accordance with best practices of the industry shall be provided by OWNER in areas determined by the ENGINEER.

END OF SECTION

NOT FOR BID

NOT FOR BID

**SECTION 02500
PAVING AND SURFACING**

PART 1 GENERAL

1.01 DESCRIPTION

A. Description of Work:

1. Remove site objects which obstruct construction.
2. Restore site objects disturbed by construction including, but not limited to:
 - a. Streets, driveways, sidewalks, parking lots, alleys, other improved or paved surfaces and constituent parts of the above facilities including pavement, curb and gutter, ditches, shoulders, drainage structures, base course, and sub-base.
 - b. Lawn and turf.
 - c. Landscape improvements including trees, shrubs, stairways, terraces, plantings, gardens and other improvements.
 - d. Utilities.
 - e. Miscellaneous objects including traffic signs, street lights, traffic signals, mail boxes, fences, guard rails, right-of-way markers, survey monuments, lot pins, driveway markers, structures, items intended to inform or protect the public, and other surface objects.
3. Conduct construction operations to minimize disturbance of construction site and adjacent area.

1.02 QUALITY ASSURANCE

A. Conditions Survey:

1. Provide video recording in accordance with Section 01300 and other documentation to establish condition of existing structures and surface features.
2. Survey and record condition of existing facilities to remain in place that may be affected by construction operations.

- B. Preparation of Work:
 - 1. Notify owners of existing utilities a minimum of three workdays prior to beginning preparation work.
- C. Reference Standard:
 - 1. American Society for Testing and Materials (ASTM), Latest Edition
 - 2. Illinois Department of Transportation (IDOT)
 - a. Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition. (IDOT SPECS)
 - b. Supplemental Specifications and Recurring Special Provisions, Latest Edition

PART 2 PRODUCTS

2.01 MATERIALS

- A. Coarse Aggregate for Aggregate Sub-base, IDOT SPECS, Section 311, Type B, CA-6, Grade 8, CA-1 Crushed Limestone.
- B. Aggregate (Prime Coat): IDOT SPECS, Section 406.
- C. Hot-Mix Asphalt Surface Course: IDOT SPECS, Section 406, Superpave, Mix “D” N50
- D. Hot-Mix Asphalt Base Course: IDOT SPECS, Section 406 Superpave, IL 19.0, N50
- E. Leveling Binder (Machine) Superpave N50 IDOT SPECS, Section 406
- F. Bituminous Materials (Prime Coat): IDOT SPECS, Article 406.02.
- G. Class C Patch, Type I, II, III, IV IDOT SPECS, Section 442
- H. Portland cement concrete for sidewalks, curb and gutter, paving, miscellaneous cast-in-place concrete structures: IDOT SPECS, 1020.
 - 1. Portland cement concrete: Class SI.
 - 2. Cement for sidewalks, drives, and roadways: ASTM C150, Type 3.
 - 3. Cement for curbs and miscellaneous structures: ASTM C150, Type 1.
- I. Portland cement concrete protective coating: IDOT SPECS, Article 1023.01.

- J. Dowel Bars: IDOT SPECS, Article 1006.10.
- K. Expansion Joint Material: IDOT SPECS, 1051.
- L. Detectable Warnings: IDOT SPECS, Article 424.09. Cast Iron Truncated Dome Plate 24” x 24” with black asphalt dip, as manufactured by East Jordan Iron Works, or equal.
- M. Area Reflective Crack Control Treatment: IDOT SPECS, Section 443
- N. Hot-Mix Asphalt Surface Removal, Variable Depth IDOTSPECS, Section 440

PART 3 EXECUTION

3.01 SITE PREPARATION

- A. Trees and Shrubs:
 - 1. It may be necessary to remove trees and shrubs in order to accommodate the work. Removal of trees and shrubs shall be completed in accordance with Section 02100.
 - 2. The CRITICAL ROOT ZONE of all trees shall be protected by fencing. The area to be protected shall be measured as a radius around each tree equal to one foot of root protection for each inch of trunk diameter, as measured 4.5 feet from the ground. Removal of protective fencing must be authorized by Engineer. No material or equipment storage within the Critical Root Zone will be tolerated.
 - 3. Conduct all construction operations so as to minimize disturbance to trees and shrubs. Repair any damage to trees and shrubs immediately in accordance with best horticultural practices.
 - 4. Where construction procedures may disrupt tree root systems, the ENGINEER shall be notified immediately before any work continues. The ENGINEER will make a determination on whether to remove the tree or to take other action which may save the tree. When construction must be conducted with the Critical Root Zone, mechanical root pruning shall be performed prior to excavating.
- B. Site Improvement Objects:
 - 1. Carefully remove all site improvement objects such as: street name signs, traffic control signs, mailboxes, and lawn ornaments, which interfere with construction.

2. Store site improvement objects in a manner, which will fully protect objects for replacement after construction is completed.
3. Provide temporary traffic control signs where permanent signs are removed for construction. Temporary signs shall be worded to match permanent signs except as necessary to be compatible with construction operations.

C. Pavement Removal:

1. General:

- a. Remove pavement, curb and gutter, driveway approaches, sidewalks, alleys and other materials necessary to prepare the site for the installation of the drainage facilities and construction of the new pavement, curb and gutter, driveway approaches, sidewalks, alleys and parkways, in accordance with details shown on drawings. Protect all other paving.

2. Roadway Pavement:

- a. Remove in accordance with IDOT SPECS, Article 440, except saw cut shall be full depth. Where paving abuts curbs or roadway expansion joints or construction joints, and pavement can be removed without damaging or disturbing curbs or pavement remaining, saw cut shall be eliminated. Remove to the limits shown on the drawings or as directed by ENGINEER. Protect all other pavement.

3. Curb and Gutter:

- a. Remove in accordance with IDOT SPECS, Article 440 except saw cut shall be full depth of curb and gutter. Remove at locations shown on the drawings or as directed by ENGINEER. Protect all other curb and gutter.

4. Sidewalks:

- a. Remove in accordance with IDOT SPECS, Article 440 except saw cut shall be full depth. Remove full squares only. Remove sidewalks where shown on drawings or as directed by ENGINEER. Protect all other sidewalks.

5. Driveway Approaches and Alleys:

- a. Remove in accordance with IDOT SPECS, Article 440 except saw cut shall be full depth. Remove at locations shown on the drawings or as directed by ENGINEER. Protect all other work.

6. Paver Driveway
 - a. This work shall consist of the removal of an existing brick paver driveway. Removal of existing brick pavers shall be completed in a manner that will preserve the existing pavers for later re-use. Pavers shall be stored on the job site in a location that will prevent damage and approved by the ENGINEER.

3.02 SITE RESTORATION

- A. Perform site restoration as shown on drawings in accordance with the following general requirements:
 1. Aggregate base course installation: IDOT SPECS, Section 311 for Type B sub-base course granular material
 2. Hot-mix asphalt surface course installation: IDOT SPECS, Section 406
 3. Hot-mix asphalt binder course installation: IDOT SPECS, Section 406
 4. Class C patch installation: IDOT SPECS, Section 442 modified as follows:
 - a. Reinforcing not required.
 - b. Expansion and contraction joints not required.
 - c. **Dowel bars required where new pavement will abut existing pavement. Use #5 x 18" long dowels staggerly spaced at 6 foot O.C.**
 - d. Provide rough surface finish where hot-mix asphalt surface course will overlay roadway. Provide finished surface elsewhere.
 - e. Joint seal not required.
 - f. Protective coat not required.
 - g. Bituminous prime coat required prior to the installation of the hot-mix asphalt surface course.
 - h. Aggregate Base Type B, 4" shall be placed and compacted as specified.
 5. Class D patch installation: IDOT SPECS Section 442
 - a. Patch shall be paved in two lifts

- b. Patch shall be Hot-Mix Asphalt Binder IL-19, N50
 - c. Bituminous prime coat required prior to the installation of the hot-mix asphalt surface course.
 - d. Aggregate Base Type B, 4" shall be placed and compacted as specified.
6. Install curb and gutter in accordance with IDOT SPECS, Section 606 with the following modifications:
- a. Thickness at gutter shall be a minimum of ten inches.
 - b. Contraction joints: Saw cut one-quarter depth across full profile within 24 hours of placement of concrete to minimize random cracking. Place at 15-foot intervals.
 - c. Expansion joints: At ends abutting existing curb, at points 4 feet away on either side of castings, intermediate at 60 foot intervals, at points of curvature, and at expansion joints in Portland cement concrete paving. Provide two No. 6 dowel bars three feet long with one end of each in an 18 inch grease cup at each expansion joint.
 - d. Provide protective coat in accordance with IDOT SPECS, Article 420.18
 - e. Depress curb at driveways and at intersections where new sidewalk abuts.
 - f. Aggregate base course: CA-6/Grade 8, 4-inch thickness minimum.
 - g. CONTRACTOR will provide grades for new installation.
7. Install sidewalks in accordance with IDOT SPECS, Section 424 with the following modifications:
- a. Portland cement concrete. Thickness: 6 inches minimum at driveways; 4 inches minimum elsewhere.
 - b. Aggregate base course: CA-6/Grade 8, 4 inches thickness minimum.
 - c. Width: Match existing.
 - d. Score minimum one inch deep into squares at 5-foot intervals to match existing.

- e. At intersections where both curb and sidewalk are replaced, provide depressed curb and walk in accordance with detail shown on drawings.
 - f. Provide concrete curing materials in accordance with IDOT SPECS, Article 1022.
 - g. Provide expansion joints between new sidewalks and: curbs, existing sidewalks, and Portland cement concrete driveways.
 - h. Provide protective coat in accordance with IDOT SPECS, Article 420.18 regardless of time of year when concrete is poured.
 - i. No Calcium chloride or any additive may be added to Portland Cement Concrete without written approval of ENGINEER.
 - j. Provide detectable warnings where shown on plans in accordance with IDOT SPECS, Article 424.09
8. Restore concrete driveway approaches as follows:
- a. Portland Cement Concrete: 6-inch minimum thickness.
 - b. Aggregate base course: 4-inch minimum thickness, CA-6/Grade 8.
 - c. Width: Match existing; provide 4-foot flares on both sides where the new driveway will abut the curb and gutter.
 - d. Provide expansion joints between new driveway and: curbs, sidewalks, and existing Portland cement concrete driveway paving.
 - e. Provide saw cuts one-quarter depth as contraction joints at 10-foot intervals. Place immediately after initial set of concrete to minimize random cracking.
 - f. Provide concrete curing materials in accordance with IDOT SPECS, Article 1022.
 - g. Provide protective coat in accordance with IDOT SPECS, Article 420.18 regardless of time of year when concrete is poured.
 - h. No Calcium chloride or any additive may be added to Portland Cement Concrete without written approval of ENGINEER.
9. Restore hot-mix asphalt driveway approaches as follows:

- a. Hot Mix-Asphalt Surface Course, Mix "D", N50: 2-1/2 inch minimum thickness.
- b. Aggregate base course: 4 inch minimum thickness CA-6/Grade 8 compacted to 95% of maximum density in accordance with ASTM D698.
- c. Width: Match existing; provide 4-foot flares on both sides where the new driveway will abut the curb and gutter.

10. Restore paver driveway as follows:

- a. After adjacent sidewalk and curb work is completed the driveway shall be replaced using existing stock-piled brick pavers. Brick pavers shall be installed on a 1" compacted sand bed with a compacted CA6 base course 8 inch thick. Base shall be placed over compacted sub-grade. Compacted base shall be 100% of maximum density achieved in accordance with ASTM Specification D 698 (100% Standard Proctor maximum dry density)

B. Diamond Grinding

1. This work consists of providing all labor, materials, tools, equipment and incidentals necessary to diamond grind portland cement concrete pavement at the locations shown in the plans.
2. Grinding operations will utilize diamond blades mounted on a self-propelled machine designed for grinding and texturing pavement. The equipment shall be such that it will not cause strain or damage to the underlying surface of the pavement. Grinding equipment that causes ravels, aggregate fractures, spalls, or disturbance to the transverse or longitudinal joints will not be permitted. Vacuuming equipment for removal of residue and excess water shall be used. The equipment will have a positive means of extracting the slurry material from the pavement and for preventing dust from escaping into the air.
3. Pavement surface repair (diamond grinding) shall consist of grinding and texturing the entire surface of the pavement in a longitudinal direction. The area ground shall not be left slick or polished. Substantially the entire surface area of the pavement shall be ground and textured until the pavement surface on both sides of the transverse joints and all cracks are in the same plane and meet the smoothness required. In each lane, at least 95 percent of the area in each 100 foot section shall have a newly ground surface. Except at joints and cracks, grinding shall not exceed 1/4 inch in depth. The ground surface shall be of uniform texture.

Grinding shall be discontinued when there is danger of water freezing.

For multiple passes, the equipment shall be carefully controlled to minimize the overlap. Overlaps shall not exceed approximately 1 inch.

When more than one grinding machine is used in the same travel lane, the blade segment thickness, blade spacing, and blade diameter shall be similar so that the texture of the ground surface is reasonably uniform across the lane.

Grinding shall result in a parallel corduroy type texturing consisting of grooves between 2 millimeters and 3 millimeters wide. The distance between grooves shall be between 2 millimeters and 3 millimeters. The peaks of the ridge shall average approximately 2 millimeters higher than the bottom of the grooves. The finished texture shall be uniform. The transverse slope of the pavement shall be uniform to a degree that no depressions or misalignment of slope greater than 3 millimeters in 3 meters exists when tested with a 3-meter straightedge. Straightedge requirements do not apply across longitudinal joints or outside ground areas. Adequate cross slope drainage must result after grinding so that no ponding of water exists.

Diamond Grinding Concrete Pavement will be measured by area in square yards. Pay areas will include the final textured surface area.

The work of collection, hauling and spreading of the grinding residue is included in the contract unit price for diamond grinding concrete pavement. Payment for additional passes or regrinding to meet ride quality requirements will not be paid for separately.

4. Removal of all slurry or residue resulting from the grinding operations shall be continuous and shall not be deposited on the slab or shoulder. Pavement and paved shoulders must be left in a clean condition.

Disposal of grinding residue shall meet the following requirements:

- a. At no time will the grinding residue be allowed to enter a closed drainage system. The Contractor is responsible for providing suitable means to restrict the infiltration of the grinding residue into the closed drain system at no additional cost.
- b. The Contractor will be responsible for hauling the grinding residue to a suitable location at no additional cost.
 - a. Residue will not be spread within 30 meters of any natural stream or lake.
 - b. Residue will not be spread within 1.5 meters of a water filled ditch.

- c. The spread rate will not generate surface runoff. The Contractor will haul the grinding residue into a suitable location when surface runoff occurs at the grinding location at no additional cost.
- d. Residue shall not be permitted to flow across lanes occupied by public traffic.

The Contractor shall obtain approval of the spreading/disposal method from the engineer prior to beginning the grinding operation.

C. Structures to Be Adjusted

- 1. This work shall consist of the adjustment of existing frames/structures at the location and to the proper finished grade as designated by the Engineer. All work shall be in accordance with the applicable portions of Section 602 of the Standard Specifications and as herein specified.

This work shall include the removal of all existing masonry/concrete adjusting rings, and adjustment to the proper finished grade with concrete adjusting rings.

The final adjustment shall include the use of a preformed bituminous joint sealant that shall be placed between each adjusting ring and cone section. Mortar shall be used between adjusting rings for structures located within paved surface areas. The preformed bituminous joint sealant shall be E-Z Stick or an Engineer approved equivalent. The minimum dimension of preformed material shall be one-half square inch.

Sanitary manholes shall be adjusted in accordance with Section 02751 and shall include an External chimney seal.

3.03 FIELD QUALITY CONTROL

- A. Testing in accordance with the best practices of the industry will be provided by the OWNER.

END OF SECTION

NOT FOR BID

NOT FOR BID

**SECTION 02700
SEWERAGE AND DRAINAGE**

PART I GENERAL

1.01 DESCRIPTION

A. Description of Work:

1. Provide new storm or sanitary sewers as shown on drawings. Replace existing sanitary sewer services when directed by ENGINEER.

1.02 QUALITY ASSURANCE

A. Reference Standards:

1. American Society for Testing and Materials (ASTM), Latest Edition
2. American Water Works Association (AWWA), Latest Edition
3. Illinois State Plumbing Code, Latest Edition
4. Illinois Department of Transportation (IDOT)
 - a. Illinois Department of Transportation Standard Specification for Road and Bridge Construction, Latest Edition (IDOT SPECS)
 - b. Supplemental Specifications and Recurring Special Provisions, Latest Edition
5. Standard Specifications for Sewer and Water Main Construction in Illinois Latest Edition.

PART 2 PRODUCTS

2.01 MATERIALS

A. PVC Sewer Pipe and Fittings:

1. 4 to 12 inch diameter: ASTM D 2241, SDR 26.
16 inch diameter: AWWA C905 DR 25
 - a. Fittings such as saddles, elbows, tees, and wyes shall be factory produced and have joint design compatible with adjacent pipe.
 - b. Provide approved adapters for transitions to other types of pipe materials.

2. Pipe Joints:
 - a. Rubber Gasket: ASTM F477. Bell and spigot joint conforming to ASTM D3212, sealed by rubber gasket so assembly remains watertight under conditions of service including movements resulting from expansion, contraction, settlement, and deformation of pipe.
 - b. Field applied heat fusion or solvent welded joints between pipe sections, pipe and fittings or fitting components not permitted.
 - c. Assembled joint shall pass performance tests as required in ASTM D3212.
3. Pipe Markings:
 - a. Manufacturer's name or trademark.
 - b. Nominal pipe size.
 - c. PVC cell classification
 - d. ASTM D 2241 SDR 26/ AWWA C905 DR25
 - e. Extrusion date, period of manufacture or lot number.
4. Tapping Saddles:
 - a. Equivalent to Sealtite sewer tapping saddle system or TAPRITE "MD" Cut-ins manufactured by General Engineering Company.
5. Pipe Section Length:
 - a. 12 foot minimum.
 - b. Use full sections to maximum practical extent.
 - c. No section shall be shorter than 3 feet in length.
6. Flexible Boots:
 - a. Conform to ASTM C923.
 - b. Kor-N-Tee.
 - c. PSX by Press Seal, Inc.
 - d. Or equal.

B. Ductile Iron Pipe (DIP):

1. Material:
 - a. Conform to AWWA C151.
2. Thickness:
 - a. Conform to AWWA C150, Class 52 minimum.
3. Joint:
 - a. Conform to AWWA C111.
 - b. Push on type.
 - c. Neoprene or other synthetic rubber gaskets resistant to sanitary sewage. Natural rubber gaskets not permitted.
4. Pipe Lining:
 - a. Conform to AWWA 104.
5. Coating:
 - a. Cement lining conforming to AWWA C104.
 - b. Bituminous conforming to AWWA C151.
6. Pipe Section Length:
 - a. 18 feet nominal.
 - b. Use full sections to maximum practical extent.
7. Fittings:
 - a. Conform to AWWA C110 and AWWA C151.
 - b. Push-on joints conforming to AWWA C111.
 - c. Fitting pressure rating: 250 psi.
 - d. Cement lining conforming to AWWA C104.
 - e. Bituminous coat conforming to AWWA C151 on interior and exterior.

C. Flexible Connectors:

1. Materials:

- a. Synthetic rubber base compound formulated to resist acids, alkalis, solvents, and greases encountered in sanitary or storm sewers and contain no reclaimed rubber.
- b. Test in accordance with ASTM D543 and not lose weight in 1.0 normal sulfuric acid, 1.0 normal hydrochloric acid or 1.0 normal nitric acid.
- c. Show no etching, blistering, distortion or other evidence of chemical or bacterial attack and shall show no cracking on rapid cooling.
- d. Under ASTM D412, ultimate tensile strength shall exceed 750 psi at 80 degrees F and elongation shall exceed 150%.
- e. Under ASTM D570, water absorption shall not exceed 4%.
- f. Under ASTM D2240 Type A hardness shall exceed 55 in 5 second reading.

2. Material used in fabricating compression bands shall be Type 316 stainless steel and bolts and nuts shall be Type 305 stainless steel in accordance with ASTM A167.

3. Completed Joint: Conform to material and performance standards of ASTM C425 for resilient sewer pipe joints.

4. Acceptable Manufacturers:

- a. Clow.
- b. FERNCO, Inc.
- c. Or equal.

D. Concrete for Collars:

1. Class SI in accordance with IDOT SPECS, Section 1020.

PART 3 EXECUTION

3.01 GENERAL

A. Install new sewers as shown on the drawings.

- B. Relocate sanitary sewer service pipes in conflict with the storm sewer installation as directed by ENGINEER.
- C. Locate sanitary sewer service piping in accordance with Section 02220.
- D. Pipe materials:
 - 1. Sanitary sewers and services:
 - a. PVC SDR 26 ASTM 2241
 - 2. Storm sewers:
 - a. 12" PVC SDR 26 ASTM 2241
 - b. 16" PVC AWWA C 905 DR 25
- E. When new sewer to be connected to existing sewer does not terminate at a manhole, uncover end of existing sewer to allow adjustments in line and grade, if required, before any pipes are laid.

3.02 INSTALLATION OF SEWER PIPE

- A. Install pipe and gaskets in accordance with manufacturer's recommendations.
- B. Install PVC pipe in accordance with ASTM D2321.
- C. Trenching (including sheeting, shoring, and bracing as necessary to be compatible with CONTRACTOR'S specific construction procedures), dewatering, bedding, cover, backfilling, and compaction shall be in accordance with Section 02220.
- D. Lay pipe only after trench is dewatered in accordance with Section 02220.
- E. Begin laying pipe from lowest point in proposed sewer line where possible.
- F. Lay pipe with bell end of bell and spigot pipe pointing upgrade.
- G. Lay pipe uniformly to line and grade so finished sewer will present uniform bore.
 - 1. Survey line and grade control as specified in Section 01050.
 - 2. Continuously monitor line and grade of pipe, and in event they do not meet specified limits described hereinafter, stop work immediately, notify ENGINEER, and remedy cause before proceeding with work.
- H. Retain pipe in position to maintain alignment and joint closure until backfill completed to hold pipe in place. Lay pipe to conform to prescribed line and grade shown on drawings with limits as follows:

1. Variance from established line and grade shall not be greater than 1/32 inch per inch of pipe diameter and not to exceed maximum 2 inch, provided any such variation does not result in level or reverse sloping invert; provided also, variation in invert elevation between adjoining ends of pipe, due to non-concentricity of joining surface and pipe interior surfaces, does not exceed 1/64 inch per inch of pipe diameter, or 2 inch maximum.

I. Rubber Gasket Joints:

1. Immediately before making joint, lubricate outside of gasket and inside of bell or groove of last pipe with approved vegetable lubricant.
2. Take care that gasket and pipe ends are clean and free of sand, gravel, dirt or other foreign materials.
3. Introduce spigot of pipe being laid with gasket in place, into bell of previously laid pipe.
4. Set pipe to line and grade, and then jack or push completely home. During insertion of the spigot, pipe shall be partially supported by hand or crane to minimize unequal lateral pressure on the gasket and maintain concentricity until gasket is properly positioned.
5. Employ whatever procedures necessary to seat spigots fully into bells without damaging or placing excessive stress on pipes.
6. Pipe required to be laid on curved alignment shall be jointed in straight alignment and then deflected, joint by joint. Maximum deflection shall be 80% of pipe manufacturer's allowable deflection.

J. Extrudable Preformed Plastic Gasket Joints:

1. Before placement of the extrudable preformed plastic gasket material, the tongue end of pipe shall be clean and free of sand, gravel, dirt or other foreign materials. The groove end of the previously laid pipe shall also be clean and free of any foreign materials.
2. Introduce tongue of pipe being laid with gasket material in place into the groove end of previously laid pipe.
3. Set pipe to line and grade, and then jack or push completely home. During insertion of the tongue end the pipe shall be partially supported by a crane to minimize unequal lateral pressure on the gasket material and maintain concentricity until gasket material is properly positioned.

4. Employ whatever procedures necessary to seat tongue ends fully into the groove ends without damaging or placing excessive stress on the pipes.
- K. Seal pipe branches or open ends not to be immediately connected with caps of PVC, rubber or concrete material secured in place with joint comparable to main line joint. Stoppers may be of integrally cast breakout design.
- L. Joining dissimilar pipes, joining plain ends of pipes, and connecting to existing pipes and services:
1. Flexible pipe connectors (rubber sleeves).
 2. Use wherever plain ends of two pipes, whether of same or different materials or ODs to be connected.
 3. Rubber sleeve and two metal straps designed for sizes and materials of two pipes to be connected.
 4. Concrete collars in accordance with details shown on drawings for pipe sizes for which flexible pipe connectors are not available.
- M. Connecting inlet leads to storm sewers:
1. Use factory made tee/wye, tapping saddle or flexible boot at CONTRACTOR'S option when connecting into RCP. Use factory made tee/wye when connecting into PVC pipe.
 2. Grouted in connections not permitted.
 3. Holes shall be cored into RCP. Broken out holes are not permitted.
- N. Connecting branch sewer to main storm sewer:
1. Use factory made tee/wye at CONTRACTOR'S option.
- O. Abandoning existing inlet/catch basin leads:
1. Completely remove existing pipe and replace with granular trench backfill in accordance with Section 02220.
 2. Construct concrete bulkhead at each end of section to be abandoned in accordance with Section 02721.

NOTE: ENGINEER shall designate which procedure to follow.

3.03 CROSSINGS - SEWERS AND WATER MAINS

- A. Normal Conditions: Lay water mains crossing house sewers, storm sewers or

sanitary sewers crossing water mains to provide separation of at least 18 inches between bottom of water main and top of sewer.

- B. Unusual Conditions: When local conditions prevent vertical separation as described, following construction shall be used:
1. Construct sewers passing over or under water mains with water quality PVC sewer pipe.
 2. Construct sewers crossing over water mains to ensure additional protection to water main by providing:
 - a. Vertical separation of at least 18 inches between bottom of sewer and top of water main.
 - b. Adequate structural support for sewers to prevent excessive deflection of joints and settling on and breaking of water mains.
 - c. Length of sewer pipe shall be centered at point of crossing so joints will be equidistant and as far as possible from water mains.

3.04 SANITARY SEWER SERVICES

- A. Replace existing sanitary sewer services as directed by the ENGINEER. The existing sanitary sewer services shall be replaced from the new sanitary sewer to back of curb.
- B. **Connect ends of new service piping to existing piping using non-shear rubber connectors. THE NEW SERVICE PIPE MUST BE SUPPORTED BY UNDISTURBED GROUND.**
- C. Where service is replaced all the way to the sanitary sewer, install a new tee/wye and additional piping as necessary. Connect new piping using non-shear rubber connectors as shown on drawings. Break-in connections are not permitted.
- D. Install in accordance with Illinois State Plumbing Code.

3.05 SANITARY SEWER POINT REPAIRS

- A. Clean and televise line to confirm extent of repair. Excavate and remove designated footage of damaged sanitary sewer. Neatly saw cut pipe on both ends beyond damaged pipe.
- B. Replace sanitary sewer with matching diameter PVC pipe using non-shear rubber couplings to connect to existing pipe.
- C. If necessary provide Y-T fitting for service connection and replace service piping within trench.

- D. Provide bedding and cover to 6" below pipe and 12" above the pipe (CA -7/11 ¾" stone) and backfill trench as required.

3.06 FIELD QUALITY CONTROL

- A. Pipe shall be subject to rejection for failure to conform to requirements of specifications or for one or more of the following reasons:
1. Fractures or cracks passing through pipe wall or socket, except for concrete pipe single crack not exceeding 2 inches in length at either end of pipe or single fracture in socket not exceeding 3 inches in width nor 2 inches in length shall not be considered cause for rejection unless these defects exist in more than 5% of entire shipment or delivery.
 2. For concrete pipes, chips or fractures on interior of pipe exceeding 2 inches in length, 1 inch in width, and of depth more than 1/4 barrel thickness.
 3. Cracks, sufficient to impair strength, durability or serviceability of pipe.
 4. Defects indicating improper proportioning, mixing, and molding.
 5. Variations of more than 1/8 inch/lineal foot in alignment of pipe intended to be straight.
 6. Insecure attachment of spurs.
 7. Damaged ends, where such damage would prevent making satisfactory joint.
 8. Extensive patching or painting of any surface of pipe with exception of miter pipe formed by removal of wedge shaped sections from middle of pipe.
 9. Handling holes.
 10. Failure to pass testing.
- B. Acceptance of fittings, stubs, miters, cut-off or other specially fabricated pipe sections shall be based on visual inspection at job site by ENGINEER.
- C. Sewer testing:
1. Sanitary and storm sewers shall be inspected internally by CONTRACTOR'S representative and by OWNER'S representatives utilizing the following methods:
 - a. Storm Sewer: visual inspection.
 - b. Sanitary: television inspection. (for point repairs and main line replacement only)

2. CONTRACTOR will provide television inspection.
 - a. The CONTRACTOR shall cause to be made an inspection by closed-circuit television of the **sanitary** sewer system, **excepting** sewer services. Televising shall show that the sewer system has been constructed in accordance with the approved plans and specifications, that the sewer is free and clear of all accumulations of foreign substance and debris so as to prevent clogging, and that there are no structural defects.
 - b. Prior to televising the sewer, the CONTRACTOR shall at his own expense, clean the sewer line with a jet-rodder or other equipment approved by the ENGINEER.
 - c. Upon completion of such inspection, and upon receipt of a written report of such inspection, together with a VHS format videotape of the actual inspection, and , if satisfied that such sewer is free and clear of all foreign substance, and free of all structural defects, the ENGINEER shall give approval of the sanitary\combined sewer. All inspection reports and videotapes shall remain the property of the Village.
3. Sanitary services (or portions of services) installed by open-cut means will be inspected externally by ENGINEER. Inspection shall be visual and shall be conducted prior to backfilling. Any service backfilled prior to inspection shall be re-exposed for inspection at CONTRACTOR'S expense without extra cost to OWNER.
4. Failure criteria for sewer testing:
 - a. Visible infiltration at any joint which, in ENGINEER'S opinion, exceeds one gallon per minute.
 - b. Joints not "fully home" in accordance with pipe manufacturer's recommendations.
 - c. Out-of-roundness in PVC pipes which, in ENGINEER'S opinion, exceeds 5% of the pipe diameter. CONTRACTOR shall pull a "95%" mandrel through PVC pipes after pipes are backfilled to demonstrate roundness.
 - d. Cracks or spall in pipe exceeding the requirements of Paragraph 3.05A.
 - e. Displaced gaskets.
5. Payment for testing:

- a. Cost of CONTRACTOR'S responsible portion of testing shall be paid for as Flush and Televisive Sanitary Sewer.

D. Correction of defects:

1. Repair sections failing tests or quality requirements by removal and replacement of affected sections, internal or external grouting of failed joints or other defects not permitted.
2. Correct sewers failing deflection tests by re-excavating to sewer at point of failure and 10 feet on either side, allowing sewer to return to original round cross-section, and re-backfilling according to specifications. Re-test deflection limits as described herein. Sewers failing to return to original round cross-section or failing second deflection test shall be removed and replaced at no additional cost to OWNER. Use of devices generating internal pressures or vibrations to correct sewers failing deflection testing expressly prohibited.

E. Sewer abandonment

1. Sanitary sewer abandonment shall consist of cutting and plugging existing sanitary sewer as shown on plans, removal of cone section and backfilling of existing sanitary manholes designated for abandonment with gravel or as directed by Engineer,
2. Sanitary sewer abandonment shall be considered incidental to the contract

END OF SECTION

NOT FOR BID

NOT FOR BID

NOT FOR BID

**SECTION 02900
LANDSCAPING**

PART I GENERAL

1.01 DESCRIPTION

- A. Description of work:
1. Restore site disturbed by construction activities as further described in this section.

1.02 QUALITY ASSURANCE

- A. Preparation work:
1. Remove and replace only those areas within construction limits which are designated for removal and replacement on the drawings or as directed by ENGINEER.
- B. Restoration work:
1. Complete in accordance with specifications and details shown on drawings.
 2. Restore to conditions equal or exceeding conditions existing prior to construction as determined by photographs and survey required in accordance with Section 02100.
 3. Complete to highest standard required.
- C. Reference Standard:
1. Illinois Department of Transportation (IDOT)
 - a. Standard Specifications for Road and Bridge Construction, Latest Edition (IDOT SPECS).
 - b. Supplemental Specifications and Recurring Special Provisions, Latest Edition.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Landscape materials:
1. Topsoil: IDOT SPECS Section 1081.05.

2. Sod: IDOT SPECS Section 1081.03.
3. Seed: IDOT SPECS Section 1081.04
4. Fertilizer: IDOT SPECS Section 1081.08
5. Agricultural Ground Limestone: IDOTSPECS Section 1081.07

PART 3 EXECUTION

3.01 SITE RESTORATION

- A. Perform site restoration as shown on the drawings in accordance with the following general requirements.
 1. Landscape materials installation:
 - a. Sod: IDOT SPECS Section 252
 - b. Topsoil: IDOT SPECS Section 211
 - c. Seed: IDOT SPECS Section 250
- B. Landscaping:
 1. The topsoil shall be pulverized and free from clods, stones, sticks and other debris. The topsoil used for surface restoration shall come from an approved material supplier, which is subject to the approval of the ENGINEER. The ENGINEER may reject the topsoil at his discretion
 2. Topsoil shall be provided by the CONTRACTOR to bring the area to be sodded/seeded to the proper grade. The minimum depth of topsoil shall be 4 inches. The topsoil shall be worked into the existing ground to a minimum depth of 6 in below finished grade by disking or tilling.
 3. Areas to be restored by the placement of new Sod and/or Seed shall be designated by the ENGINEER.
 4. Sod and/or Seed shall be placed when directed by ENGINEER.
 5. Water sod and/or Seed as necessary until final completion of project up to seven (7) watering per IDOT SPECS Article 252.08. Be advised that OWNER has experienced water shortages in the past and has imposed bans on use of Village water for lawn sprinkling. Such bans shall apply to CONTRACTOR. Provide alternate supplies of water for sprinkling during Village sprinkling bans.

END OF SECTION

NOT FOR BID