

# PROJECT MANUAL

BID DOCUMENTS AND SPECIFICATIONS

for

**2019 LOCAL SEWER LINING PROJECT**

**Various Locations**

VILLAGE OF BUFFALO GROVE, ILLINOIS



Owner:

Village of Buffalo Grove  
51 Raupp Boulevard  
Buffalo Grove, Illinois 60089  
(847) 459-2500

Engineer:

Gewalt Hamilton Associates, Inc.  
625 Forest Edge Drive  
Vernon Hills, Illinois 60061  
(847) 478-9700



DATED: June 2019  
Direct All Communications To: Kyle Johnson, PE  
KJohnson@vbg.org

**2019 LOCAL SEWER LINING PROJECT  
Village of Buffalo Grove, Illinois**

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**Village of Buffalo Grove  
Notice to Bidders  
Section 00030**

1. **Time and Place for Opening Bids:** Sealed proposals for the improvements described below will be received at the offices of:

Village of Buffalo Grove  
50 Raupp Boulevard  
Buffalo Grove, Illinois 60089  
(847) 459-2500

until 11:30 A.M. TUESDAY, JULY 2, 2019. All bids will be publicly opened at that time and read aloud. It is anticipated that the Village Board of Trustees will award the bid at its regularly scheduled Board meeting on Monday, July 15, 2019.

2. **Availability of Contract Documents:** The Bid Documents may be obtained from the Village website at [www.vbg.org/bids](http://www.vbg.org/bids) or by contacting the Office of the Purchasing Manager at (847) 459-2500.
3. **Prequalification:** All bidders must submit with their bid, a resume of five (5) similar projects performed; enumerated as to location, type of work, approximate completion date, and contact information for the supervising municipal employee or engineer.

All bidders are required to fully register with the Village of Buffalo Grove, including IRS Form W-9, at:

<https://vrapp.vendorregistry.com/Vendor/Register/Index/buffalo-grove-village-of-il-vendor-registration>

OR

[www.vbg.org/bids](http://www.vbg.org/bids)

Select the link 'Register My Business'

Please contact Vendor Registry at (844) 802-9202 for assistance in the registration process.

The Village of Buffalo Grove reserves the right to reject any or all proposals if the bidder does not comply with the requirements as stated herein.

4. **Subcontracting of Work:** Subcontracting portions of the work will be allowed pursuant to Section 108.01 of the "Standard Specifications for Road and Bridge Construction", Illinois Department of Transportation, latest edition. The Owner reserves the right to reject any Bidder or subcontractor who, in the opinion of the Engineer, does not have adequate experience, personnel or equipment to perform the work in a timely, efficient, and satisfactory manner.
5. **Wages of Employees:** This work is subject to the wage provisions of the Illinois Prevailing Wage Act. 820 ILCS 130/0/01 et seq. and the Employment of Illinois Workers on Public Works Act (30 ILCS 570/0.01 et seq.
6. **Rejection of Bids:** The Village reserves the right to accept or reject any bid, to award all or part of a Contract, and to make such awards as are in the best interests of the Village. Factors other than price which will be considered in awarding or rejecting bids shall include the results of reference Contracts, and the quality of the bidders' performance on prior Village projects, if any, in the judgment of the Village Board and Village staff.
7. **Location of Work:** The work is located along various routes and easements throughout the Village limits, in the Village of Buffalo Grove, Illinois, Lake and Cook County.
8. **Description of Work:** The work for which proposals are invited will consist of, in general, but shall not be limited to, the following:

This project includes, but is not limited to, the following major work items: pre-construction cleaning and televising; cured-in-place pipe lining of existing sanitary sewer; the reinstatement of service laterals; landscape restoration; and other appurtenant work at various locations throughout the Village limits.

9. **Bid Security:** Bid security in the form of a Bid Bond, Bank Cashier's Check or Certified Check in the amount of ten (10) percent of the total bid made payable to the Village of Buffalo Grove shall accompany the bid.
10. **Owner:** Village of Buffalo Grove.
11. **Construction Schedule:** The Contractor shall commence the work to be performed under this Contract not later than ten (10) days following the execution of the Contract. The work shall be prosecuted in such a manner and with such a supply of materials, equipment and labor as is considered necessary to ensure its completion according to the time specified in the Contract.

The Contractor shall complete all work in the Contract within 35 working days as described in Article 108.04 of the Standard Specifications. If Alternate 01 is awarded, an additional 20 working days shall be allowed; if Alternate 02 is awarded, an additional 10 working days shall be allowed. Charging of working days will start when the Contractor begins work and be defined as any calendar day between January 1 and December 31 inclusive, except Saturday, Sundays, or legal holidays. In case of failure to complete the work on time, the provisions of Article 108.09 of the Standard Specifications shall apply except regardless of the Contract amount, the daily charge shall be \$2,000 per calendar day overrun.

**End of Section**

Village of Buffalo Grove  
Schedule of Prices  
Section 00050

2019 LOCAL SEWER LINING PROJECT  
Village of Buffalo Grove, Illinois

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

The Bidder agrees to perform all the work described in the CONTRACT DOCUMENTS for the prices following:

**BASE BID:**

ITEM NO	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	VALUE
1	Pre-Construction Cleaning and Televising	8,641.0	FT		
2	Dye Testing of Existing Service Connections	3.0	EA		
3	Cured-In-Place Pipe Liner, 8"	7,673.0	FT		
4	Cured-In-Place Pipe Liner, 10"	968.0	FT		
5	Reinstatement of Service Lateral	236.0	EA		
6	Protruding Tap Removal	21.0	EA		
7	Traffic Control and Protection, (Special)	1.0	LS		

**TOTAL BASE BID:** \_\_\_\_\_

**Written Amount for Total Unit Price Base Bid:**

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**ALTERNATE 01:**

ITEM NO	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	VALUE
1	Pre-Construction Cleaning and Televising	4,936.0	FT		
2	Dye Testing of Existing Service Connections	3.0	EA		
3	Cured-In-Place Pipe Liner, 8"	3,899.0	FT		
4	Cured-In-Place Pipe Liner, 10"	1,037.0	FT		
5	Reinstatement of Service Lateral	91.0	EA		
6	Protruding Tap Removal	5.0	EA		
7	Traffic Control and Protection, (Special)	1.0	LS		

**TOTAL ALTERNATE 01 BID:** \_\_\_\_\_

Written Amount for Total Unit Price Alternate 01 Bid:

**ALTERNATE 02:**

ITEM NO	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	VALUE
1	Pre-Construction Cleaning and Televising	1,610.0	FT		
2	Dye Testing of Existing Service Connections	3.0	EA		
3	Cured-In-Place Pipe Liner, 8"	1,110.0	FT		
4	Cured-In-Place Pipe Liner, 12"	500.0	FT		
5	Reinstatement of Service Lateral	48.0	EA		
6	Protruding Tap Removal	5.0	EA		
7	Traffic Control and Protection, (Special)	1.0	LS		

TOTAL ALTERNATE 02 BID: \_\_\_\_\_

Written Amount for Total Unit Price Alternate 02 Bid:

Any and all exceptions to these specifications MUST be clearly and completely indicated on the bid sheet. Attach additional pages if necessary. NOTE TO BIDDERS: Please be advised that any exceptions to these specifications may cause your bid to be disqualified. Submit bids by SEALED BID ONLY. Fax and email bids are not acceptable and will not be considered.

**THE SECTION BELOW MUST BE COMPLETED IN FULL AND SIGNED**

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The undersigned hereby certifies that they have read and understand the contents of this solicitation and agree to furnish at the prices shown any or all of the items above, subject to all instructions, conditions, specifications, and attachments hereto. Failure to have read all the provisions of this solicitation shall not be cause to alter any resulting contract or to accept any request for additional compensation. By signing this bid document, the bidder hereby certifies that they are not barred from bidding on this contract as a result of a violation of either Section 33E-3 or 33#-4 of the Illinois Criminal Code of 1961, as amended.

Authorized Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Typed/Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**Village of Buffalo Grove  
General Conditions and Terms  
Section 00100**

**1. Intent**

The Village of Buffalo Grove ("Buffalo Grove"), intend to bid sanitary sewer lining and award to a primary contractor ("Contractor").

This work is subject to the wage provisions of the Illinois Prevailing Wage Act. 820 ILCS 130/0/01 et seq. and the Employment of Illinois Workers on Public Works Act (30 ILCS 570/0.01 et seq.

All bidders must submit with their bid, a resume of five (5) similar projects performed; enumerated as to location, type of work, approximate completion date, and contact information for the supervising municipal employee or engineer.

**2. Waiver of Workers Compensation/Occupational Disease Expense Reimbursement**

The Contractor agrees to waive any and all rights to reimbursement of workers' compensation expenses under Section 1(a)(4) of the Illinois Workers' Compensation Act (820 ILCS 305), and as amended; and the Contractor agrees to waive any and all rights to reimbursement of occupational disease expenses under Section 1(a)(3) of the Illinois Occupational Diseases Act (820 ILCS 310), and as amended.

**3. Unbalanced Bids**

Any bid which is materially unbalanced as to prices for the Base Bid and/or Optional Bid Items may be rejected. An unbalanced bid is one which is based on the prices significantly less than the cost for some work and/or prices which are significantly overstated for other work.

The Village will review all unit prices submitted by the apparently lowest responsible bidder and will decide whether any of the unit prices are excessively above or below a reasonable cost analysis value determined by the Engineer.

In the event any unit prices are determined to be unbalanced and contrary to the interest of the Village, the right is reserved to reject such bid at the discretion of the Village of Buffalo Grove.

**4. Discrepancies**

In all cases of discrepancies between the drawings or specifications, the Village's Purchasing Manager or designee shall be notified in the manner as identified in the General Terms and Conditions. If work proceeds without obtaining proper interpretations of the conflicting drawings and specifications from the owner or their designee, the installed work that is not in accordance with the design and best practices must be replaced at no additional cost.

**5. Omissions or Hidden Conditions**

The drawings and specifications are intended to include all work and materials necessary for completion of the work. Any incidental item of material, labor, or detail required for the proper execution and completion of the work and omitted from either the drawings or specifications or both, but obviously required by governing codes, federal or state laws, local regulations, trade practices, operational functions, and good workmanship, shall be provided as a part of the contract work at no additional cost to the owner, even though not specifically detailed or mentioned.

**6. Field Modifications**

A field modification is written by the Owner or its designee to the Contractor for purposes of clarification of the specifications or plans. A field modification is limited to items that do not change the scope of the project. Field modifications do not affect either the project cost or completion date.

Field modifications become part of the Contract Documents and become binding upon the Contractor if he fails to object within three (3) working days after receiving the modification. A field modification may be used as the basis of a project cost change or contract extension if all parties agree on the field modification form to a potential future claim of either party, or that the field modification will be compiled with, but under protest.

## 7. Bid Security

Bid security in the form of a Bid Bond, Bank Cashier's Check or Certified Check in the amount of ten (10) percent of the total bid made payable to the Village of Buffalo Grove shall accompany the bid.

## 8. Contract Bond

The successful Contractor shall furnish within ten (10) calendar days after being notified of the acceptance of bid:

- 8.1 A performance bond satisfactory to the Village, executed by a surety company authorized to do business in the State of Illinois, in an amount equal to 100 percent (100%) of the contract price as security for the faithful performance of the municipality's contract; and
- 8.2 A payment bond satisfactory to the Village, executed by a surety company authorized to do business in the State of Illinois, for the protection of all persons supplying labor and materials to the Contractor of Subcontractors for the performance of work provided for in the contract, in an amount equal to 100 percent (100%) of the contract price.
- 8.3 Documents required by this section must be received and approved by the Owner before a written contract will be issued.

All bonds must be from companies having a rating of at least A-minus and of a class size of at least X as determined by A.M. Best Ratings.

## 9. Additional Information

Should the bidder require additional information about this bid, submit questions via email to: [KJohnson@vbg.org](mailto:KJohnson@vbg.org). Questions or inquiries after 12:00 PM on June 27, 2019 will not be considered.

ANY and ALL changes to these specifications are valid only if they are included by written Addendum from the Village of Buffalo Grove to all bidders. No interpretation of the meaning of the plans, specifications or other contract documents will be made orally. Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from obligation under this bid as submitted. All addenda so issued shall become part of the bid documents. Failure to request an interpretation constitutes a waiver to later claim that ambiguities or misunderstandings caused a bidder to improperly submit a bid.

The Village of Buffalo Grove recognizes that in some cases the information conveyed in this RFB may provide an insufficient basis for performing a complete analysis of the RFB requirements. Prospective bidders are, therefore, requested to make the best possible use of the information provided, without the expectation that the Village of Buffalo Grove will be able to answer every request for further information or that the schedule for receipt and evaluation of proposals will be modified to accommodate such request.

## 10. Village Personnel

All bidders are prohibited from making any contact with the Village President, Trustees, or any other official or employee of the Village (collectively, 'Municipal Personnel') with regard to the Project, other than in the manner and to the person(s) designated herein. The Buffalo Grove Village Manger reserves the right to disqualify any bidder that is found to have contacted Municipal Personnel in any manner with regard to the Project. Additionally, if the Buffalo Grove Village Manager determines that the contact with Municipal Personnel was in violation of any provision of 720 ILCS 5/33E, the matter will be turned over to the State's Attorney for review and prosecution.

## 11. Conflict of Interest

The Village of Buffalo Grove Municipal Code requires the following verification relative to conflict of interest and compliance with general ethics requirements of the Village:

The undersigned supplier hereby represents and warrants to the Village of Buffalo Grove as a term and condition of acceptance of the this (bid or purchase order) that none of the following Village Officials are either an office or director of supplier or owns five percent (5%) or more of the Supplier: the Village President, the members of the Village Board of Trustees, the Village Clerk, the Village Treasurer, the members of the Planning & Zoning Commission, the Village Manager and his Assistant or Assistants, or the heads of the various departments of the Village of Buffalo Grove.

By submitting a bid, the Bidder acknowledges the foregoing representation and warranty is accurate as stated herein. If the Village of Buffalo Grove discovers an undisclosed potential or actual conflict of interest, the Village may disqualify the Bidder and/or refer the matter to the appropriate authorities for investigation and prosecution.

## 12. Prevailing Wage

All contracts, for work herein are subject to the provisions of the Prevailing Wage Act, 820 ILCS 130/0.01 et. seq.); providing for the payment of the prevailing rate of wage to all laborers, workmen and mechanics engaged on the work. This shall include payment of the general prevailing rate for legal holiday and overtime work. Any revisions to the enclosed prevailing wage information prior to the date of the contract shall be in force for the duration of the contact.

The Village of Buffalo Grove is located within Lake and Cook County; respectively, therefore work shall be pursuant to the applicable Prevailing Wage Schedules.

## 13. Employment of Illinois Workers on Public Works Act

Pursuant to 30 ILCS 570/0.01 et. seq., any month immediately following 2 consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded 5% as measured by the United States Department of Labor, the Contractor shall employ only Illinois laborers on this project unless Illinois laborers are not available, or are incapable of performing the particular type of work involved, which the Contractor must certify with the Village of Buffalo Grove's Village Manager or designee.

## 14. Illinois Human Rights Act (775 ILCS 5/)

In the event of the Contractor's non-compliance with the provisions of the Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Applicable Rules and Regulations of the Illinois Department of Human Rights ("Department"), the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be cancelled or voided in whole or part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

## 15. Substance Abuse Prevention on Public Works Projects Act

Contractor shall comply with the provisions of 820 ILCS 265/1, *et seq.*, which include prior to commencement of work on a municipal project, having in place a written substance abuse program for the prevention of substance abuse among its employees which meets or exceeds the program requirements identified in this Act. The substance abuse policy shall be submitted in writing to the Village and shall be made available to the general public.

## 16. Responsive Bid

A "Responsive Bid" is defined as a "bid which conforms in all material respects to the requirements set forth in the invitation for bids." Bidders are hereby notified that any exceptions to the requirements of this bid may be cause for rejection of the bid.

Bidders shall promptly notify the Village of Buffalo Grove of any ambiguity, inconsistency or error which they may discover upon examination of the bidding documents. Interpretations, corrections and changes will be made by addendum. Each bidder shall ascertain prior to submitting a bid that all addenda have been received and acknowledged in the bid.

## 17. Withdrawal of Bids

Bids may be withdrawn at any time prior to opening upon written request of the Bidder. Negligence on the part of the Bidder in preparing his bid shall not constitute a right to withdraw bid subsequent to the Bid Opening.

A party who has quoted prices to a Bidder is not hereby disqualified from quoting prices to other Bidders or from submitting a direct bid on his own behalf.

No Bidder may withdraw his bid for a period of sixty (60) days after the date set for the opening, and all bids shall be subject to agreement award by the Owner during this period.

## 18. Hold Harmless

The Contractor agrees to indemnify, save harmless and defend the Village of Buffalo Grove, and their respective elected and appointed officials, employees, agents, consultants, attorneys and representatives and each of them against and hold it and them harmless from any and all lawsuits, claims, injuries, demands, liabilities, losses, and expenses; including court costs and attorney's fees for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of, or in connection with the work covered by this project. The foregoing indemnity shall apply except if such

injury is caused directly by the willful and wanton conduct of the Village of Buffalo Grove, its agents, servants, or employees or any other person indemnified hereafter. The obligations of the Contractor under this provision shall not be limited by the limits of any applicable insurance required of the Contractor.

#### 19. Subcontractors

Subcontracting portions of the work will be allowed pursuant to Section 108.01 of the "Standard Specifications for Road and Bridge Construction", Illinois Department of Transportation, latest edition. The Owner reserves the right to reject any Bidder or subcontractor who, in the opinion of the Engineer, does not have adequate experience, personnel or equipment to perform the work in a timely, efficient, and satisfactory manner.

#### 20. Changes in Work

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

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

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

If such changes diminish the quantity of work to be done, they shall not constitute a claim for damage or anticipated profits for the work deleted. If no pay item exists for the added work, the work shall be paid for:

- 1) By agreed upon unit prices
- 2) By agreed upon lump sum
- 3) Force Account basis

#### 21. Contract Termination

The Village reserves the right to terminate the Contract, or any part thereof, upon thirty (30) days written notice. In case of such termination, the Contractor(s) shall be entitled to receive payment from the terminating Village for work completed to date in accordance with the terms and conditions of this contract. If this Contract is terminated due to Contractor's default, the Village shall be entitled to purchase substitute items and/or services elsewhere and charge the Contractor with any or all losses incurred, including attorney's fees and expenses.

#### 22. Non-Appropriations

The Village reserves the right to terminate their respective part of this contract or to reject bids, in the event that sufficient funds to complete the Contract are not appropriated by the Village Board of Trustees.

#### 23. Protest Procedure

Any bidder wishing to file a protest regarding the proposal process may do so by giving written notice to the Village of Buffalo Grove Purchasing Manager within seven calendar days of the closing time and date. This notice should include the title of the requirement, the bid number, the closing date and the nature of the protest.

Any disputes concerning a question of fact under this procurement which is not disposed of by agreement shall be decided by the Village Manager of the Village of Buffalo Grove or his/her designee. The decision of the Village of Buffalo Grove Village Manager or his/her duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessary to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the decision of the Village Manager.

#### 24. Alternate or Multiple Bids

Unless otherwise indicated in these documents, the bidder may not submit alternate or multiple bids as part of this package. The submission of more than one bid within a single package may be cause for rejection of any or all of the bids of that bidder.

## 25. Contractor's Licenses

The bidder to which the Contract is awarded (including subcontractors), prior to commencing any work, must have a valid Contractor's License or other required license on-file with the Village of Buffalo Grove.

## 26. Audit/Access to Records

- A) The Contractor shall maintain books, records, documents and other evidence directly pertinent to performance of the work under this agreement consistent with generally accepted accounting standards in accordance with the American Institute of Certified Public Accountants Professional Standards. The Contractor shall also maintain the financial information and data used by the Contractor in the preparation or support of any cost submissions required under this subsection, (Negotiation of Contract Amendments, Change Orders) and a copy of the cost summary submitted to the owner. The Auditor General, the owner, the Agency, or any of their duly authorized representatives shall have access to the books, records, documents, and other evidence for purposes of inspection, audit, and copying. The Contractor will provide facilities for such access and inspection.
- B) If this contract is a formally advertised, competitively awarded, fixed price contract, the Contractor agrees to include access to records as specified in above. This requirement is applicable to all negotiated change orders and contract amendments in excess of \$25,000, which affect the contract price. In the case of all other prime contracts, the Contractor also agrees to include access to records as specified above in all his contracts and all tier subcontracts or change orders thereto directly related to project performance, which are in excess of \$25,000.
- C) Audits conducted pursuant to this provision shall be consistent with generally accepted auditing standards in accordance with the American Institute of Public Accountants Professional Standards.
- D) The contractor agrees to the disclosure of all information and reports resulting from access to records pursuant to the subsection above. Where the audit concerns the contractor, the auditing agency will afford the contractor an opportunity for an audit exit conference and an opportunity to comment on the pertinent portions of the draft audit report. The final audit report will include the written comments, if any, of the audited parties.
- E) Records under the subsections above shall be maintained and made available during performance of the work under this agreement and until three years from the date of final audit for the project. In addition, those records which relate to any dispute or litigation or the settlement of claims arising out of such performance, costs or items to which an audit exception has been taken, shall be maintained and made available for three years after the date of resolution of such dispute, appeal, litigation, claim or exception.
- F) The right of access conferred by this clause will generally be exercised (with respect to financial records) under:
- i. negotiated prime Contractors;
  - ii. negotiated change orders or contract amendments in excess of \$25,000 affecting the price of any formally advertised, competitively awarded, fixed price contract; and
  - iii. subcontracts or purchase orders under any contract other than a formally advertised, competitively awarded, fixed price contract.
- G) This right of access will generally not be exercised with respect to a prime Contractor, subcontract, or purchase order awarded after effective price competition. In any event, the right of access shall be exercised under any type of contract or subcontract:
- i. with respect to records pertaining directly to contract performance, excluding any financial records of the Contractor; and
  - ii. if there is any indication that fraud, gross abuse, or corrupt practices may be involved.

**End of Section**

**Village of Buffalo Grove  
Supplemental General Conditions  
Section 00200**

**1. Scope of Work**

The provisions of Article 104.02 of the Standard Specifications are hereby amended as follows: "The Village of Buffalo Grove (Village) expressly reserves the right to remove from or add to the project any portions thereof included in the 2019 Local Sewer Lining Project. Such reductions, if any, shall be made in writing by the Village prior to execution of the Contract Documents. Any reduction in the scope of work required by the Village prior to the execution of the Contract Documents shall not result in an adjustment to the contract or to the price originally bid."

**2. Definition of Village of Buffalo Grove**

All references in the Contract relating to the Department, Awarding Authority, Village of Buffalo Grove, Village, etc. shall mean the Village of Buffalo Grove.

**3. Prequalification of Bidders**

All bidders must submit with their bid, a resume of five (5) similar projects performed; enumerated as to location, type of work, approximate completion date, and contact information for the supervising municipal employee or engineer.

All bidders are required to fully register with the Village of Buffalo Grove, including IRS Form W-9, at:

<https://vrapp.vendorregistry.com/Vendor/Register/Index/buffalo-grove-village-of-il-vendor-registration>

OR

[www.vbg.org/bids](http://www.vbg.org/bids)

Select the link 'Register My Business'

Please contact Vendor Registry at (844) 802-9202 for assistance in the registration process.

The Village of Buffalo Grove reserves the right to reject any or all proposals if the bidder does not comply with the requirements as stated herein.

**4. Completion Date**

The Contractor shall commence the work to be performed under this contract, 10 days following the execution of the contract. The work shall be prosecuted in such a manner and with such a supply of materials, equipment and labor as considered necessary to ensure its completion according to the time specified in the contract.

The Contractor shall complete all work in the Contract within 35 working days as described in Article 108.04 of the Standard Specifications. If Alternate 01 is awarded, an additional 20 working days shall be allowed; if Alternate 02 is awarded, an additional 10 working days shall be allowed. Charging of working days will start when the Contractor begins work and be defined as any calendar day between January 1 and December 31 inclusive, except Saturday, Sundays, or legal holidays. In case of failure to complete the work on time, the provisions of Article 108.09 of the Standard Specifications shall apply.

Following substantial completion, the Contractor shall provide the Village written notice in accordance with Article 105.13 of the Standard Specifications. The Contractor will have fourteen (14) calendar days to correct any deficiencies following the scheduled final inspection and punch list submittal by the Village.

In case of failure to complete the work on time and/or the deficient punch list items, the provisions of Article 108.09 of the Standard Specifications shall apply, except regardless of the Contract amount, the daily charge shall be \$2,000 per calendar day overrun. Landscape restoration planting times shall follow Article 250.07 of the Standard Specifications.

The estimated Village Board award date for this project is Monday, July 15, 2019.

## 5. Existing Hardscape

Any damage to existing hardscape from tracked equipment or due to the Contractor's negligence, workmanship, or neglect shall be replaced at the Contractor's expense. It is recommended rubber tired or rubber tracked equipment is used. Any unwarranted disturbance to the existing hardscape to remain will warrant repairs made joint to joint and in conformance with the bid documents with limits specified in the Maintenance Letter of Credit general condition. The Village shall determine the limit of removal and replacement operations, and all work shall be completed to the satisfaction of the Village.

## 6. Construction Work Periods

Construction operations shall be completed in accordance with Article 107.09 of the Standard Specifications. All work shall be confined to the period beginning at 7:00 AM and ending at 6:00 PM on weekdays. No work shall be done on Sundays or legal holiday periods as defined in article 107.09 of the Standard Specifications.

No work shall be permitted on Saturday's unless prior written approval is granted by the Village. All requests to work on a Saturday shall be submitted by 4:00 PM, the Wednesday prior to the date requested. If work is allowed it shall be confined to the period beginning at 8:30 AM to 6:00 PM. The completion date shall be reduced by one (1) full calendar day for each Saturday the Contractor elects to work, regardless if the Saturday worked is a full or partial working day.

Any work outside the allowed time periods in accordance with the Village Ordinance, including but not limited to material deliveries, mobilization of equipment, warming up machinery, or truck staging, shall be imposed a \$1,000 monetary penalty for each occurrence.

## 7. Pre-Construction Meeting

Prior to commencing any construction operations, there shall be a pre-construction meeting. The Village or Engineer will set the time and date of the meeting following Contract award.

The following shall be submitted by the Contractor for review at the pre-construction meeting:

A Progress Schedule in accordance with Article 108.02.

The 24-hour emergency phone number and contact information of the assigned Contractor's superintendent, or otherwise.

The name and 24-hour emergency phone number of the person in the direct employ of the Contractor who is responsible for administrating the Traffic Control and Protection on the Contract

A list of subcontractors with contact information, including but not limited to name, phone number, and email address, and include quantity and type of work to be sublet for each respective subcontractor in accordance with Article 108.01 of the Standard Specifications.

A list of proposed sources of material.

Hot-mix asphalt and concrete mix designs, and respective quality control plans. \*

Any applicable shop drawing submittals. \*

\*Shop drawings and mix designs for concrete and bituminous items to be installed on the project shall be submitted to the Village no less than ten (10) calendar days from the effective notice to proceed dated letter or the scheduled date of the pre-construction meeting, whichever occurs earlier. A monetary penalty of \$500 may be imposed for each required submittal thereafter.

## 8. Protection of Mailboxes

The Contractor shall take all necessary precautions when working near mailboxes within or adjacent to the project limits. If at the Contractors discretion, a mailbox will interfere with construction operations, a temporary mailbox shall be located per the United States Postal Service requirements and the permanent mailbox reinstalled following said operation. At no time shall a resident be without a mailbox or not receive mail due to a mailbox being removed, replaced or damaged. The Contractor shall replace, at no additional cost to the Village, any mailbox or post which has been damaged by the Contractor's operations due to neglect, misconduct or poor workmanship. The cost of all materials required and all labor necessary to comply with the above Provisions will not be paid for separately but shall be considered as included in the unit bid prices of the contract, and no additional compensation will be allowed.

The Contractor shall refer to the mailbox installation detail included in appendix A for installation requirements.

The Contractor must maintain access for both residents and mail carriers to all mailboxes throughout the duration of the project.

#### 9. Use of Fire Hydrants

The indiscriminate use of fire hydrants is strictly prohibited. The Contractor can obtain non-potable water in bulk at no charge at the Buffalo Grove Public Works Department, 51 Raupp Blvd. The Contractor shall provide a water truck or containment and driver to obtain and transport the water. All water obtained from the Village shall be used for this project only. If deemed necessary, the Village reserves the right to restrict or refuse the use of Village water. The Contractor will be responsible for executing the required paperwork and follow all requirements of the Village. If it is determined that the Contractor or its subcontractors operate or use a Village fire hydrant, a monetary penalty of \$1,000 per occurrence that will be imposed.

#### 10. Tree Protection and Preservation

This work shall consist of pruning existing trees, shrubs, or bushes in accordance with Section 201 of the Standard Specifications, except as modified herein.

Breaking off branches of plant material to remain during clearing or construction operations will not be allowed. Preceding any existing tree pruning or trimming operations, the Contractor shall demonstrate that there is no other practical method to complete the work and request permission from the Engineer. All pruning shall be done according to the current ANSI A300 (Part 1) – Pruning Standard.

All branches and foliage pruned or trimmed shall be disposed of off-site in accordance with Article 202.03 of the Standard Specifications.

All existing trees larger than 6" in diameter and not specifically designated for removal, which are removed or damaged due to the Contractor's neglect, shall be inspected by the Village Forester or his designated representative. For each infraction that causes damage to a tree, a monetary penalty of \$1,000 may be imposed and the replacement of the damaged tree required, depending on the extent of injury caused to each tree. No replacement tree shall have a diameter of less than 3" or more than 6", unless authorized by the Village of Buffalo Grove. All new plantings shall be completed in accordance with Section 253 of the Standard Specifications.

#### 11. Clean Construction and Demolition Debris (CCDD) Material Disposal

Work under this item shall be performed in compliance with the Illinois Environmental Protection Agency (IEPA) guidelines in effect at the time of construction.

The Contractor will be required to make all arrangements for coordination and submission of the necessary documents with their chosen CCDD or other suitable disposal facility. Written confirmation of preliminary approval must be provided from the disposal facility and confirmed by the Owner as acceptable.

All surplus, clean material generated from the Contractor's activities must be disposed of at an IEPA permitted CCDD or otherwise acceptable facility. The Contractor is responsible for providing documentation to the Village for each load hauled off-site showing the quantity of material and the location the material was disposed of.

Disposal of clean material not in compliance with these requirements will constitute breach of contract. If the Contractor fails to provide adequate documentation supporting the legal disposal of clean material according to this special provision, the Contractor shall be fined \$1,000 per load of material and will assume all liability associated with material disposed of not in compliance with this special provision.

No extra compensation will be allowed to the Contractor for any expenses incurred complying with these requirements including but not limited to: delays, inconvenience, or interruptions in the work resulting from compliance with these requirements. All costs associated with material disposal shall be included into the appropriate unit bid prices for the work.

#### 12. Insurance Requirements

12.04.080 - Insurance.

A. Required Coverages and Limits. Unless otherwise provided by franchise, license, or similar agreement, each Contractor occupying right-of-way or constructing any facility in the right-of-way shall secure and maintain the following liability insurance policies insuring the Contractor as named insured and naming the Village, and its elected and appointed officers, officials, agents, and employees

and Gewalt Hamilton Associates, Inc. and employees as additional insureds on the policies listed in subsection (A)(1) and (A)(2) of this section:

1. Commercial general liability insurance, including premises-operations, explosion, collapse, and underground hazard (commonly referred to as "X," "C," and "U" coverages) and products-completed operations coverage with limits not less than:
  - a. Five million dollars for bodily injury or death to each person,
  - b. Five million dollars for property damage resulting from any one accident, and
  - c. Five million dollars for all other types of liability;
2. Automobile liability for owned, non-owned and hired vehicles with a combined single limit of one million dollars for personal injury and property damage for each accident;
3. Worker's compensation with statutory limits; and
4. Employer's liability insurance with limits of not less than one million dollars per employee and per accident.

If the Contractor is not providing such insurance to protect the Contractors and subcontractors performing the work, then such Contractors and subcontractors shall comply with this section.

- B. **Excess or Umbrella Policies.** The coverages required by this section may be in any combination of primary, excess, and umbrella policies. Any excess or umbrella policy must provide excess coverage over underlying insurance on a following-form basis such that when any loss covered by the primary policy exceeds the limits under the primary policy, the excess or umbrella policy becomes effective to cover such loss.
- C. **Copies Required.** The Contractor shall provide copies of any of the policies including all endorsements or certificates required by this section to the Village within ten calendar days following receipt of a written request therefor from the Village.
- D. **Maintenance and Renewal of Required Coverages.** The insurance policies required by this section shall contain the following endorsement:
 

"It is hereby understood and agreed that this policy may not be canceled nor the intention not to renew be stated until thirty (30) calendar days after receipt by the Village, by registered mail or certified mail, return receipt requested, of a written notice addressed to the Village Manager of such intent to cancel or not to renew."

Within ten (10) calendar days after receipt by the Village of said notice, and in no event later than ten (10) calendar days prior to said cancellation, the Contractor shall obtain and furnish to the Village evidence of replacement insurance policies meeting the requirements of this section.

- E. **Self-Insurance.** A Contractor may self-insure all or a portion of the insurance coverage and limit requirements required by subsection A of this section. A Contractor that self-insures is not required, to the extent of such self-insurance, to comply with the requirement for the naming of additional insureds under subsection A of this section, or the requirements of subsections B through D of this section. A Contractor that elects to self-insure shall provide to the Village evidence sufficient to demonstrate its financial ability to self-insure the insurance coverage and limit requirements required under subsection A of this section, such as evidence that the Contractor is a "private self-insurer" under the Workers Compensation Act.
- F. **Effect of Insurance and Self-Insurance on Contractor's Liability.** The legal liability of the Contractor to the Village and any person for any of the matters that are the subject of the insurance policies or self-insurance required by this section shall not be limited by such insurance policies or self-insurance or by the recovery of any amounts thereunder.
- G. **Insurance Companies.** All insurance provided pursuant to this section shall be effected under valid and enforceable policies, issued by insurers legally able to conduct business with the licensee in the State of Illinois. All insurance carriers and surplus line carriers shall be rated "A-" or better and of a class size "X" or higher by A.M. Best Company.

Nothing contained herein is intended to constitute, nor shall it constitute a waiver of the rights, defenses and/or other immunities provided or available to the Village under law including, but not limited to, the Local Governmental and Governmental Employees Tort Immunity Act.

### 13. Certified Payroll Reports

The Village of Buffalo Grove requests that the Contractor submit all certified payroll reports, including subcontractors, and EEO reporting be sent electronically in separate files for each respective Contractor/subcontractor with the weeks ending date in the file name to [kjohnson@vbg.org](mailto:kjohnson@vbg.org) (i.e. Contractor Name\_Week Ending.pdf) as shown in the sample letter in Appendix A.

The Contractor is responsible for providing all records in accordance with the Illinois Department of Labor's (IDOL) requirements pertaining to the Prevailing Wage Act on the standard IDOL form. Only the last four (4) digits of the employee's social security number will be required; the remaining digits shall be "X" or redacted. To complete the certified payroll request for release of payment, the Contractor must supply a signed and notarized written statement that all necessary documentation has been turned over for the pay period pertaining to that payment requested.

Under P.A. 98-0328, the public body must retain copies of the certified payroll for 5 years rather than 3 years as was the case previously. The Illinois Department of Labor (IDOL) has created model certified payroll forms which can be found at the IDOL website [www.illinois.gov/idol](http://www.illinois.gov/idol). The new form consists of three pages identified as the "certified transcript of payroll affidavit" and "certified transcript of payroll instructions". The new forms on the IDOL website can be filled in online and then printed out. Under P.A. 98-0482, Contractors and subcontractors will have to provide additional information with respect to working hours, wage rates, overtime rates and fringe benefits. The IDOL's model certified payroll forms are the most current forms for compliance with P.A. 98-0482 and should be used in public works contracts.

#### 14. Monetary Penalties

All work shall be completed in accordance with the Contract Documents in a reasonable and timely manner. For each occurrence that work is not completed in a reasonable and timely manner, a monetary penalty will be deducted from the final pay application. The Contractor shall make themselves and all subcontractors aware of the following deficiency and deductions:

Description	Penalty	Per Occurrence
Failure to Sweep Roadway	\$250	Calendar Day
Failure to Maintain Trench	\$250	Calendar Day
Failure to Adhere to Period of Establishment Requirements	\$250	Calendar Day
Distributing Unapproved Resident Notices	\$100	Household
Failure to Distribute Notices in a Timely Manner	\$100	Household
Failure to Distribute Notice to Resident	\$100	Household
Failure to Provide Access in a Timely Manner	\$250	Household Per Day
Failure to Provide Weekly Update to Engineer/Maintain Schedule	\$1,000	Per Occurrence
Failure to Attend a Scheduled Weekly Meeting	\$1,000	Per Occurrence
Failure to Respond in a Timely Manner to a Resident	\$250	Calendar Day
Failure to Ramp Roadway or Driveway	\$250	Household/Roadway Per Day
Use of Fire Hydrant or Valve	\$1,000	Each
Failure to Provide Maintenance of Roadway in a Timely Manner as Determined by the Engineer	\$1,000	Calendar Day
Entering Private Property	\$500	Per Occurrence
Failure to Provide Portable Facilities	\$100	Calendar Day
Illicit Discharge of Silt or Construction Debris	\$1,000	Per Occurrence
Failure to Submit Shop Drawings on Time	\$500	Per Occurrence
Failure to Maintain Erosion and/or Sediment Control Devices	\$1,000	Per Occurrence
Working Outside Allowable Work Hours	\$1,000	Per Occurrence

At the discretion of the Engineer and without notice, the Contractor shall have deducted the monetary penalty amount as listed above for each occurrence on the final pay application.

#### 15. Public Advisory

The Contractor shall be required to provide and distribute letters to residents or business owners whose sewer services will be out of commission and to advise against water usage until the sewer service is back in service. Letters shall be typed on standard 8.5" x 11" paper and an envelope may or may not be used. All letters shall be printed on the General Contractor's letterhead and must contain specific information as to when the sewer service disruption will begin and end.

Letters shall be taped to a non-painted surface using painters' tape or approved equal and will be placed in as many locations as needed to ensure they will be visible to residents. Distributing letters via mailbox is discouraged, however, must be compliant with all United States Postal Service federal regulations.

Notification letters shall be distributed a minimum of 24 hours prior to interruption. If this requirement is not met, work shall not commence. **All letters must be approved by the Village prior to distribution.** Additional letters may be required when weather or other unforeseen circumstances change the schedule. When requested, the Contractor is required to return or provide correspondence from a resident within 24 hours.

No customer shall be deprived of sanitary sewer service for more than twelve consecutive hours unless approved by the Owner.

The Contractor shall assume responsibility for any sewer backups or other damages sustained by residents or businesses as a result of testing, cleaning, lining or any other part of the work. The Contractor shall arrange and pay for professional cleaning and/or repair services where required at no additional cost to the Owner.

The Contractor must comply with the above-mentioned statements otherwise a monetary penalty of \$100 per household, per calendar day shall be imposed.

#### **16. Maintenance Bond**

The Contractor will be required to post a Maintenance Bond for a period of One Year (1-yr) from date of final acceptance by the Village. Final acceptance will be the date the Final Payment is made to the Contractor. The bond shall be in a form acceptable to the Village in the amount of 10% (ten percent) of the awarded contract value. Unless under emergency situations, the Village will offer the Contractor the ability to fix or repair any item prior to the bond being called. If the Contractor elects to perform the repairs themselves, all work must be complete within 14 calendar days of notice from the Village or the Village reserves the right to perform the repairs themselves.

The Maintenance Bond shall cover all necessary repairs or replacements as deemed necessary by the Village due to poor workmanship, failed materials, settlement of trenches, excessively spalled, chert popped or cracked concrete, storm and water main failures, restoration establishment, and other items as completed by the Contractor.

All required pavement repairs shall be from curb line to the nearest cold joint. Pavement repairs shall have all joints routed and filled with crack seal material including along the edge of pavement 1 month after installation.

If the Contractor elects to not perform the repairs or does not perform them in the time allotted the Village will perform the work and collect from the bond any damages incurred by the Village to perform the repairs.

#### **17. Retainage and Waivers**

The Village of Buffalo Grove has the option to retain from the amount due to the Contractor a maximum of (ten) 10% from each pay request. The Contractor may request the retainage be reduced and provide reasoning for such reduction in writing to the Village. The Village has the option to accept or deny the request and shall be considered final. The retainage may be held until the Village determines the project to be final and accepted, at which time any warranty or maintenance period shall begin.

The Contractor shall submit, for each pay request submittal, original partial or final waivers from all subcontractors and material suppliers for the work payment is requested from the Village; trailing waivers will not be permitted. The Village will not remit payment to the Contractor until all waivers for the work the Contractor is requesting payment for are received and reviewed. To help expedite the process, the Village is willing to review draft waivers after the invoice has been submitted for the pay request. When the draft waivers are reviewed and found acceptable, and the check is cut according to the Village's Warrant schedule, then the check and final waivers can be exchanged.

#### **18. Site Inspection**

All phases of the improvements will be subject to inspection by representatives of the Village. After the Contractor has submitted the notice of final completion and required final submittal to the Village as stated herein, the Village will provide the Contractor a list of any deficiencies documented. The Contractor will have fourteen (14) calendar days to correct any deficiencies following the review and punch list submittal by the Village.

## 19. Permits and Licenses

The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work in accordance with Article 107.04 of the Standard Specifications. No work shall be performed until all applicable permit requirements are fulfilled.

## 20. Easement and Access Agreements

The Village will obtain easements and access easement agreements for all work to be performed within private property. Extreme caution shall be exercised to protect existing trees, signs, light posts, and any specialty items within the work zone.

The cost of this work shall be included in the unit prices bid and no additional compensation shall be allowed for protection and safeguards as specified herein.

## 21. Material and Contractor Requirements

Product, Manufacturer / Installer Qualification Requirements:

Since sewer products are intended to have a 50-year design life, and in order to minimize the Engineer's risk, only proven products with substantial successful long-term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of proposals.

Products and Installers seeking approval must meet all of the following criteria to be deemed Commercially Acceptable:

- A. For a Product to be considered Commercially Proven, a minimum of 1,000,000 linear feet or 4,000 manhole-to-manhole line sections of successful wastewater collection system installations in the U.S. must be documented to the satisfaction of the Engineer to assure commercial viability.
- B. For a Contractor to be considered as Commercially Proven, the Contractor must satisfy all insurance, financial, and bonding requirements of the Engineer, and must have had at least 5 (five) years active experience in the commercial installation. In addition, the Contractor must have successfully installed at least 200,000 feet of the product bid in wastewater collection systems. Acceptable documentation of these minimum installations must be submitted to the Village of Buffalo Grove.
- C. Sewer rehabilitation products submitted for approval must provide third party test results supporting the structural performance (short-term and long-term) of the product and such data shall be satisfactory to the Village. Test samples shall be prepared so as to simulate installation methods and trauma of the product. No product will be approved without independent third-party testing verification.
- D. Both the rehabilitation manufacturing and installation processes shall operate under a quality management system which is third-party certified to ISO 9000 or other recognized organization standards. Proof of certification shall be required for approval.

Documentation for products and installers seeking pre-approved status must be submitted no less than two weeks prior to proposal due date to allow time for adequate consideration. The Village will advise of acceptance or rejection a minimum of three days prior to the due date. All required submittals must be satisfactory to the Village Engineer.

## 22. Required Submittals

Prior to fabrication of materials, the Contractor shall submit shop drawings of proposed materials to the Village Engineer for review and approval. Submittals shall contain:

1. Construction progress schedule.
2. Detailed plan for any applicable bypass pumping.
3. Material Data Sheets.
4. Samples
  - a. Contractor shall submit the number of samples required by the specification.
  - b. Samples shall clearly identify the location of use, material, supplier, pertinent data such as catalog numbers, etc.
5. Pre and post construction of internal television inspections.
  - a. One (1) external USB containing:
    - i. Digital video files (MPEG format)
    - ii. PDFs of digital reports
    - iii. PACP export digital database with observation data
    - iv. Master spreadsheet with hyperlinks to video and pdf reports

- b. One (1) hard copy, appropriately bound and labeled, of all TV reports.
- 6. One (1) set of 'red line' field changes on exhibits
- 7. Notices to residents and business owners

Submittals for approval shall contain:

- Date of submittal and dates of previous submittals.
- Project title and number.
- Contract identification.
- Names of:
  - Contractor
  - Supplier
  - Manufacturer
- Identification of product, with identification numbers, and drawing and specification section numbers.
- Field dimensions clearly identified.
- Identify details required on drawings and in specifications.
- Show manufacturer and model number, give dimensions, and provide clearances.
- Relation to adjacent or critical features of work or materials.
- Applicable standards, such as ASTM or Federal Specification numbers.
- Identification of deviations from Contract Documents.
- Identification of revisions on resubmittals.
- Eight-inch by 3-inch blank space for Contractor and Engineer stamps.
- 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.

This list is non-exhaustive. The Contractor must provide all shop drawings or submittals that are required in the specifications. The cost of this work shall be included in the unit prices bid and no additional compensation shall be allowed to comply with the requirements as specified herein.

### 23. Sequence of Operations

The Contractor shall coordinate his work in a manner that will cause as little inconvenience to traffic as possible. The Contractor shall work closely with Village Officials, Fire, Police Departments and other Contractors in coordinating interruption to normal traffic and parking facilities, access to homes and businesses, and inconvenience to the public.

The proposed work sequence for the Contractor shall be:

1. The proposed sewer main pipe locations and conditions have been determined from the available records. It is the Contractor's responsibility to review the available records, obtain additional new video records for evaluation of existing sewer system condition, field verify locations, elevations and diameters of all to be lined sewer pipes prior to ordering the appropriate materials.
2. Clean existing manholes and sewer lines to condition necessary for proper installation of lining material, including root cutting, removal of debris and other protruding obstructions.
3. Rehabilitate existing sewer systems.
4. Reinstate and reconnect active sewer service connections

If the Contractor proposes a different work schedule than outlined above, the Owner's written approval of the modified schedule must be obtained in advance.

## 24. Material Storage and Removal

The Contractor shall not deliver and store any material on the project site more than one week in advance before commencing with this work. Paved portions of the street may be used for material storage and the exact material storage location shall be approved by the Village. Depending on the specific time of construction, the Village likely can supply equipment and material storage at either 801 McHenry Road or 905 Dundee Road. Both properties are owned by the Buffalo Grove Park District and have been available for use in the past, however, ultimately Park District events and use take precedence.

Any remnants of construction materials, debris and litter generated by the Contractor shall be collected and removed off the jobsite periodically (every week) or the same day if requested by the Village. Any required pavement repair and parkway restoration (sodding), due to the damage caused by on-site material storage, shall be borne by the Contractor and be considered included in the cost of the Contract.

## 25. Quality Assurance

Codes and Standards references:

1. Illinois Department of Transportation
  - a. Standard Specifications for Road and Bridge Construction (Current Edition).
  - b. Illinois Department of Transportation. Bureau of Design. Highway Standards (ILHWSTDS).
  - c. Illinois Department of Transportation. Bureau of Local Roads.
2. Standard Specifications for Water & Sewer Main Construction in Illinois, latest edition (SS W&S).
3. Metropolitan Water Reclamation District of Greater Chicago (MWRD) requirements if applicable to Municipality.
4. American Society for Testing and Materials (ASTM) F 1743, latest edition.
5. ASTM Standard F 1216 "Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube" latest edition.
6. Local municipal improvement codes.

## 26. Corrective Work

Any lining installation that fails to meet performance standards as identified herein or contains other significant defects shall be subjective to corrective action.

The Village shall notify in writing of any work that is rejected and shall specify the reasons for rejection. Within ten (10) days of receiving notice of rejected work, the Contractor shall submit a written proposal to the Village detailing the proposed corrective action for each item of rejected work. The Contractor shall not proceed with corrective action until the Engineer has approved the proposed corrective action. All corrective work must meet the standards and specifications set forth in this contract.

If determined that the existing sewer service is damaged by cutting of the liner, the Village will allow the use of LMK T-Liner (smaller diameter) or LMK Lapel Liner (larger diameter) or approved equal by the Village Engineer.

If it appears that there is no acceptable alternative for sewer repair, the Village may require the Contractor to remove all or a portion of the defective lining and install new lining in place. All expenses for a defective sewer repair/relining work and material shall be borne by the Contractor.

## 27. Sewer Flow Bypassing

Sewer flows will occur during the sewer pipe repair/lining work. It shall be the responsibility of the Contractor to plan and execute, where necessary, sewer bypass pumping operations enough to avoid causing sewer back-ups for each residential and commercial customer and to avoid illegal discharge onto land or into waterways.

Contractor shall ensure that all bypass hoses are in good, working condition, not damaged, i.e., leaking. The Contractor shall also supply adequate hose length to reach the next downstream manhole prior to commencing such work. If bypass hoses

need to cross the roadway, the Contractor will need to furnish traffic ramp and bump signage in both directions along with standard Traffic Control and Protection.

The pump and bypass lines shall be of adequate capacity and size to handle the sewer flow. The Contractor shall be responsible for proper scheduling of all work, taking into consideration the possibility of rapid increases in flow resulting from rainfall and other natural events, and shall be fully prepared for all adverse conditions that may arise.

Village approval is required for any bypass pumping operation that goes beyond normal working hours. The Contractor is responsible for maintaining the pump, and all appurtenances including lines at all times during a bypass operation.

The cost associated with sewer bypassing shall be considered included in the cost of the Contract. The Contractor shall bear all costs arising from failure to anticipate bypass pumping needs, including, but not limited to the emergency stoppage of work, remobilization, removal and replacement of damaged work, emergency response by Village personnel and compensation for damage to public and private property.

## 28. Protection of Environment

The protection of environment shall include:

1. Contractor, in executing work, shall maintain work areas on- and off-site free from environmental pollution that would be in violation of any federal, state or local regulations.
2. Take adequate measures to prevent impairment of operation of existing sewer systems. Prevent construction material, earth, or other debris from entering sewers or sewer structures.
3. Observe rules and regulations of State of Illinois and agencies of U.S. government prohibiting pollution of any lake, stream, river or wetland by dumping of refuse, rubbish, dredge material or debris therein.
4. Comply with procedures outlined in U.S. EPA manuals entitled, "Guidelines for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-R2-72-015 and "Processes, Procedures, and Methods to Control Pollution Resulting from All Construction Activity," Manual EPA 430/9-73-007.
5. Dispose of excess excavated material and other waste material in a lawful manner.
6. 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.
7. Trash burning will not be permitted on construction site.
8. 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.
9. Use of such chemicals and disposal of residues shall be in conformance with manufacturer's instructions.
10. Conduct operations to cause least annoyance to residents in vicinity of work and comply with applicable local ordinances.
11. Equip compressors, hoists, and other apparatus with such mechanical devices as may be necessary to minimize noise and dust.
12. Equip gasoline or oil operated equipment with silencers or mufflers on intake and exhaust lines
13. Line storage bins and hoppers with material that will deaden sounds.
14. Conduct operation of dumping rock and of carrying rock away in trucks to cause minimum of noise and dust.

**End of Section**

**Village of Buffalo Grove  
Contract Special Provisions  
Section 01200**

The following Special Provisions supplement the 'Standard Specifications for Road and Bridge Construction', adopted April 1, 2016, the latest edition of the 'Manual on Uniform Traffic Control Devices for Streets and Highways', the current edition of the 'Standard Specifications for Water Main and Sewer Construction in Illinois', and the 'Manual of Test Procedures of Materials' in effect on the date of invitation of bids, and the Supplement Specifications and Recurring Special Provisions indicated on the Check Sheet included herein which apply to and govern the construction of **2019 LOCAL SEWER LINING PROJECT**, and in case of conflict with any part, or parts, of said Specifications, the said Special Provisions shall take precedence and shall govern.



## Check Sheet For Recurring Special Provisions



The Following Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

### Recurring Special Provisions

<u>Check Sheet #</u>		<u>Page No.</u>
1	<input type="checkbox"/> Additional State Requirements for Federal-Aid Construction Contracts	75
2	<input type="checkbox"/> Subletting of Contracts (Federal-Aid Contracts)	78
3	<input type="checkbox"/> EEO	79
4	<input type="checkbox"/> Specific EEO Responsibilities Non Federal-Aid Contracts	89
5	<input type="checkbox"/> Required Provisions - State Contracts	94
6	<input type="checkbox"/> Asbestos Bearing Pad Removal	100
7	<input type="checkbox"/> Asbestos Waterproofing Membrane and Asbestos HMA Surface Removal	101
8	<input type="checkbox"/> Temporary Stream Crossings and In-Stream Work Pads	102
9	<input type="checkbox"/> Construction Layout Stakes Except for Bridges	103
10	<input type="checkbox"/> Construction Layout Stakes	106
11	<input type="checkbox"/> Use of Geotextile Fabric for Railroad Crossing	109
12	<input type="checkbox"/> Subsealing of Concrete Pavements	111
13	<input type="checkbox"/> Hot-Mix Asphalt Surface Correction	115
14	<input type="checkbox"/> Pavement and Shoulder Resurfacing	117
15	<input type="checkbox"/> Patching with Hot-Mix Asphalt Overlay Removal	118
16	<input type="checkbox"/> Polymer Concrete	120
17	<input type="checkbox"/> PVC Pipeliner	122
18	<input type="checkbox"/> Bicycle Racks	123
19	<input type="checkbox"/> Temporary Portable Bridge Traffic Signals	125
20	<input type="checkbox"/> Work Zone Public Information Signs	127
21	<input type="checkbox"/> Nighttime Inspection of Roadway Lighting	128
22	<input type="checkbox"/> English Substitution of Metric Bolts	129
23	<input type="checkbox"/> Calcium Chloride Accelerator for Portland Cement Concrete	130
24	<input type="checkbox"/> Quality Control of Concrete Mixtures at the Plant	131
25	<input type="checkbox"/> Quality Control/Quality Assurance of Concrete Mixtures	139
26	<input type="checkbox"/> Digital Terrain Modeling for Earthwork Calculations	155
27	<input type="checkbox"/> Reserved	157
28	<input type="checkbox"/> Preventive Maintenance - Bituminous Surface Treatment	158
29	<input type="checkbox"/> Reserved	164
30	<input type="checkbox"/> Reserved	165
31	<input type="checkbox"/> Reserved	166
32	<input type="checkbox"/> Temporary Raised Pavement Markers	167
33	<input type="checkbox"/> Restoring Bridge Approach Pavements Using High-Density Foam	168
34	<input type="checkbox"/> Portland Cement Concrete Inlay or Overlay	171
35	<input type="checkbox"/> Portland Cement Concrete Partial Depth Hot-Mix Asphalt Patching	175

The Following Local Roads And Streets Recurring Special Provisions Indicated By An "X" Are Applicable To This Contract And Are Included By Reference:

Local Roads And Streets Recurring Special Provisions

<u>Check Sheet #</u>		<u>Page No.</u>
LRS 1	<b>Reserved</b>	179
LRS 2	<input type="checkbox"/> Furnished Excavation	180
LRS 3	<input checked="" type="checkbox"/> Work Zone Traffic Control Surveillance	181
LRS 4	<input checked="" type="checkbox"/> Flaggers in Work Zones	182
LRS 5	<input checked="" type="checkbox"/> Contract Claims	183
LRS 6	<input checked="" type="checkbox"/> Bidding Requirements and Conditions for Contract Proposals	184
LRS 7	<input type="checkbox"/> Bidding Requirements and Conditions for Material Proposals	190
LRS 8	<b>Reserved</b>	196
LRS 9	<input type="checkbox"/> Bituminous Surface Treatments	197
LRS 10	<b>Reserved</b>	198
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## Special Provisions

### 1. Pre-Construction Cleaning and Televising of Sewer

This section governs all work required for sewer cleaning and sewer inspection by closed-circuit televising completed in preparation for cured-in-place pipe lining. Cleaning and televising shall be performed on the entire section of sewer between upstream and downstream manhole structures and shall be accomplished meeting the industry standard of 95% clean.

The existing sewer main pipe condition and sewer service locations have been determined from available records. The Village has provided manhole to manhole lengths, pipe sizes, and location maps. However, it is the Contractor's responsibility to re-inspect the condition and verify the size of the existing sewer system. The interior of the sewer pipe and service connections shall be carefully inspected to determine the location of any conditions that may prevent proper installation of the impregnated tube, such as defective (protruding) service connections collapsed or crushed pipe and reductions in ovality of more than ten (10) percent. These conditions shall be recorded and brought to the attention of the Village immediately. The Village shall be notified of any point repairs necessary prior to lining. Any deviation from the location and/or quantity indicated in the bid documents shall be noted and brought to the attention of the Village.

**Equipment.** The Contractor shall furnish and maintain all industry-standard equipment required to complete the work included in this Contract. Each crew shall have a vacuum or jetter combination truck equipped with a high velocity gun for washing and scouring manholes and a TV truck capable of seating a minimum of four (4) persons including the Village personnel. For easement work, the Contractor shall be required to have off-road equipment as necessary to access off-street sewer areas, if applicable.

If any equipment gets stuck in the sewer and needs to be excavated, the Contractor shall be solely responsible for the cost, in its entirety, which includes in-kind restoration, repair of the sewer, and any other costs associated with the retrieval of stuck equipment.

#### Hydraulic Sewer Cleaning Equipment Requirements:

- a. Hydraulic sewer cleaning equipment shall be the movable dam type constructed such that a portion of the dam may be collapsed during cleaning to prevent flooding of the sewer.
- b. The movable dam shall be the same diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of grease.
- c. The Contractor shall take special precautions against flooding prior to using sewer cleaning balls or other equipment that cannot be collapsed instantly.

#### High Velocity Hydro-Cleaning Equipment Requirements:

- a. A minimum of 700 feet of high-pressure hose.
- b. Two (2) or more high velocity nozzles capable of producing a scouring action from ten (10) degrees to 45 degrees in all size lines to be cleaned.
- c. A high velocity gun for washing and scouring manhole walls and floor with the capability of producing flows from a fine spray to a long-distance solid stream.
- d. A 1,500-gallon minimum water tank, auxiliary engines and pumps, and a hydraulically driven hose reel.
- e. Equipment operation controls located above ground.
- f. Minimum working pressure of 1,000 pounds per square inch at a fifty (50) gpm rate.

#### Mechanical Cleaning Equipment Requirements:

- a. Bucket Machines:
  - i. Furnish with buckets in pairs and with sufficient dragging power to perform the work efficiently.
  - ii. Use V-belts for power transmission or have an overload device. No direct drive machines will be permitted.
  - iii. Be equipped with a take up drum and minimum of 500 feet of cable.
- b. Rodding Machines:

- i. Either sectional or continuous.
  - ii. Hold a minimum of 750 feet of rod.
  - iii. The rod shall be specifically heat-treated steel.
  - iv. The machine shall be fully enclosed and have an automatic safety throw out clutch or relief valve.
- c. Lumberjack & Impact Cutters:
- i. Lumberjack high-speed, low-torque, multi-purpose cutters.
  - ii. Speeds up to 50,000 rpm.
  - iii. Paikert low-speed, high-torque, auger cutter.

Closed-Circuit Television Equipment:

- a. Television equipment shall include television camera, television monitor, cables, power source, lights and other equipment necessary to complete sewer televising. The television camera shall be specifically designed and constructed for operation in connection with sewer inspection and pipe joint sealing and testing.
- b. Camera and lighting quality shall be suitable to provide a clear, continuously in-focus picture of the entire inside periphery of the sewer pipe for all conditions encountered during the work. The camera shall be able to operate efficiently in 100% humidity conditions.
- c. The TV camera shall have a rotating head with a high-resolution lens, capable of spanning 360-degrees circumference and 270-degrees on horizontal axis to televise sewer lines 6-inch diameter and larger. Focal distance shall be adjustable through a range of one (1) inch to infinity. The purpose of the rotating head camera is to view all service connections, and to locate all defects, as well as any questionable problem areas. The camera shall be zoom capable.
- d. The TV camera shall be equipped with remote control devices to adjust the light intensity and at a minimum one thousand (1,000) feet of continuous cable shall be provided. The camera shall be able to transmit a continuous image to the television monitor as it is being pulled through the sewer segments. Lighting systems shall be adequate for quality pictures. A reflection in front of the camera may be required to enhance lighting.
- e. For manholes that may be difficult to access or where lamp holes are present in the place of manholes, the Contractor shall have available a self-propelled crawler transporter on which to mount the color television camera to be able to inspect the sewer as required.
- f. The TV camera shall always be able to provide a continuous image of not less than ninety-five (95) percent of the internal pipe surface for sewers eight (8) inches through forty-eight (48) inches in diameter. Maximum acceptable speed of camera through the sewer shall be thirty (30) feet per minute.
- g. The camera, television monitor, and other components of the video system shall be capable of producing a minimum 500-line resolution color video picture.
- h. Electronic media shall visually display and include a narrative noting the following:
  - i. Date, time of day, and depth of flow;
  - ii. Sewer segment number 'from manhole to manhole;
  - iii. Distance from upstream manhole;
  - iv. Locations of service connections into sewer;
  - v. Location of obstructions, structural defects, joint deterioration, leakage or evidence thereof, and other abnormalities with respect to the sewer condition and distance in feet from the upstream manhole centerline.
- i. The remote reading footage counter shall be accurate to two-tenths of a foot over the length of the section being inspected and shall be mounted over the television monitor.
- j. Digital images should be provided in the common format accessible by Windows Media Player or otherwise approved program.

**Sewer Cleaning.** The sewer manhole sections designated for sewer cleaning shall be cleaned using hydraulically propelled, high-velocity jet, or mechanically powered equipment. Selection of the equipment used shall be based on the conditions of the sewer lines at the time the work commences. The equipment and methods selected shall be satisfactory to the Owner. Sewer cleaning shall consist of root cutting, removal of dirt, grease, rocks, sand and other foreign materials and obstructions from sewer lines and manhole troughs. If cleaning of an

entire section cannot be successfully performed from one manhole, the equipment shall be set in the other manhole and cleaning resumed in the opposite direction.

The Contractor shall perform all work in accordance with the latest OSHA confined space entry regulations.

Satisfactory precautions shall be taken to protect the sewer segments and sewer manholes from damage that might be inflicted by the improper use of cleaning equipment. Whenever hydraulically propelled cleaning tools, which depend upon water pressure to provide their cleaning force, or any tools which retard the flow of water in the sewer segment are used, precautions shall be taken to ensure that the water pressure created does not cause any damage or flooding to public or private property being served by the sewer segment involved.

When hydraulic or high velocity cleaning equipment is used, a suitable sand trap, weir, or dam shall be constructed in the downstream manhole in such a manner that all solids and debris are trapped and removed, thereby preventing such material from passing into the next sewer segment.

If conditions such as broken pipe and major blockages are encountered that prevent cleaning from being accomplished or where damage would result if cleaning were attempted or continued, the Contractor shall immediately notify the Village.

**Debris Removal and Disposal.** The Contractor shall remove all sludge, dirt, sand, rocks, grease, and other solid or semisolid material resulting from the cleaning operation from the downstream manhole of the sewer segment being cleaned prior to beginning television inspection. Passing material from sewer segment to sewer segment shall not be permitted. If sludge, dirt, sand, rocks, grease, and other solid or semisolid material resulting from the cleaning operation are observed and/or detected, as passing to downstream sewer segment(s), the Contractor shall clean such sewer segment(s) at no additional cost.

Debris catchers or baskets will be required to be set in the channel of the downstream manhole during all cleaning operations. Additionally, a 'Vactor' or similar vacuum truck must be on-site during all cleaning operations and will be required to be setup on the downstream manhole to pull debris out of the sewer during all cleaning operations. As the sewer jet or other cleaning equipment is in use, the vacuum equipment shall be running in order to prevent debris from moving further downstream. The use of the vacuum truck does not constitute heavy cleaning.

When bucket machines are being used, a suitable container shall be provided to receive the materials dumped from the buckets. The Contractor may use an approved container (roll-off) for the storage of debris removed from the line segments. All material resulting from the cleaning operations shall be removed from the site when the container has reached  $\frac{3}{4}$  of its volume, or at least once per working day and disposed of at a permitted disposal site.

Disposal of all sewer debris shall be the responsibility of the Contractor and shall be done in accordance with the IEPA and all other regulating agencies. Under no circumstances shall the removed sewage or solids be dumped onto streets or into ditches, storm drains, or otherwise. Improper disposal of sewage or solids removed from the sewers may subject the Contractor to fines imposed by the Village. In addition, the Contractor may be subject to civil or criminal penalties for improper disposal under the law.

Removal and disposal of all sewer debris shall be considered included in the cost of the Contract and will not be paid for separately.

**Internal Closed-Circuit TV Inspection.** The inspection of sewer lines by CCTV shall be performed on all lines prior to and after all rehabilitation work by trained experienced PACP certified personnel. The Contractor shall take all necessary measures to televise the internal surface of each sewer segment in its entirety.

The Contractor shall furnish all labor, electronic equipment, and licensed technicians to perform the closed-circuit television inspection of the sewers. Operation of the equipment is to be controlled from above ground with a skilled technician at the control panel in the television studio, controlling the movement of the television camera through the sewer in either direction, one segment at a time.

The video operator(s) shall be Pipeline Assessment Certification Program (PACP) certified by the National Association of Sewer Service Companies (NASSCO), and may be required to show proof of certification prior to performing work on this project. Certification dates must be current.

The Contractor shall begin each inspection with an onscreen written and verbal explanation of the project name, a detailed description of the location, the manhole to manhole segment, the direction of flow, and direction of camera setup. The depth measurement of each manhole shall be recorded on the report. A continuous footage counter shall be provided during the entire inspection and shall be used to accurately record the locations of defects, connections, or objects in the pipe. Verbal commentary shall be maintained to identify any item that is called out on the report.

All inspections shall begin and end in the center of the manhole; this is not NASSCO standard. The start of the video shall NOT begin in the pipe segment. At the end of each inspection, the Contractor shall pan the camera around the ending manhole to get a view of what it looks like for identification purposes as well as documenting all incoming pipes.

The camera shall be moved through the line in either direction at a uniform rate of no more than thirty (30) feet per minute, stopping when necessary to ensure proper documentation of the sewer's condition. The Contractor shall take all necessary measures to televise 95% of the internal surface of each sewer segment in its entirety. If dewatering with the jet truck is required to see 95% of the pipe, no additional compensation shall be allowed.

Any obstructions in the sewer segment that prohibit passage of the television camera shall be immediately reported to the Village.

The Contractor shall be responsible for any damage to public or private property resulting from its televising activities and shall repair, in-kind, at no additional cost to the Village.

**Digital Video & Report Deliverables.** Electronic media of all sections shall be provided to the Village together with the respective television inspection reports. All pre-lining inspections must be submitted to the Village for review and approval prior to liner installation.

Each video shall be named according to the 'upstream manhole # - downstream manhole #.mpg' format. Separate MPEG files and PDF reports shall be created for each manhole to manhole pipe segment inspected. Video recordings shall be one file per sewer line section and shall be included on the external hard drives submitted.

Any out-of-focus video recordings, or portions thereof, shall be cause for rejection of the video recording and will necessitate re-televising at the Contractor's expense. Televising shall be done one section at a time and inspections shall be performed using NAASCO's PACP Version 6.0 or later.

Audio and video observation documentation is to be provided in the most up to date from of a NASSCO PACP coding methodology database. The PACP database shall include all required header information as well as any observations recorded. Links to the videos and the PDF format of the reports shall be included within the database. The database shall be updated monthly and shall contain every observation from the beginning of the project through current delivery date.

The deliverable video file shall be full color, high-resolution, and shall include all pipe surfaces above the water line. At each lateral and connected service line, the camera shall stop, rotate, and record a clear image of the lateral or service line to determine condition and if it is active or inactive. The inspection and database shall be fully compatible with PACP Version 6.0 or later. All televising for this project must be performed and delivered using the same version.

The Contractor shall record inspections in a PACP format, except as noted. Video recordings and inspections shall visually display and include a narrative noting the following:

- a. Date, time of day, and depth of flow;
- b. Sewer segment number 'from manhole to manhole';
- c. Direction of flow;
- d. Distance from upstream manhole;
- e. Locations of service connections into sewer;
- f. All other PACP observations.

The television inspection reports shall be provided both electronically in PDF format and one (1) bound hard copy of the paper report. The file naming format shall follow a similar format to the video naming convention.

The final report files, in paper and electronic PDF format, shall include a still shot image of every observation. A report including NASSCO Structural, O&M and Overall Ratings shall be provided.

The Contractor shall furnish three (3) copies of all deliverables, video, reports, and images on three (3) identically formatted external hard drives with USB 2.0/3.0 connections. External hard drives shall be considered included in the cost of this item.

This work will be measured in place and paid for at the contract unit price per foot for PRE-CONSTRUCTION CLEANING AND TELEVISING OF SEWER, which shall include all labor, material, and equipment required to complete the work as specified herein.

## 2. Dye Testing of Existing Service Connections

Only one lateral reinstatement per property shall be allowed during cured-in-place lining unless otherwise approved by the Owner. Any properties with more than one lateral shall be identified during pre-construction cleaning and televising and shall be dye tested by the Contractor to verify active or abandoned connections to the sewer, prior to cured-in-place lining operations. This work includes contacting the home or business owner, coordinating and performing the dye test, and presenting the findings to the Owner. If the property cannot be dye tested for any reason, the Contractor shall notify the Village immediately. Additional lateral connections with visible caps shall not warrant dye testing and shall be left closed without reinstatement. The Village is willing to assist with accessing a home, as required, on a weekday between 7:00 AM and 3:00 PM. The Village will attempt to work with the Contractor and homeowner to schedule the dye testing, however, if after 48 hours no contact can be made with the homeowner, the Contractor shall launch the lateral to confirm the functionality of the service.

In addition to dye testing, the Contractor shall layout locations of services for any sewer segment that have more active lateral connections than houses on the same segment. The Contractor shall utilize a measuring wheel or tape to measure from the manhole and locate each service lateral at the surface based on camera reel footage. This layout shall aid in confirmation that the correct service location is marked and being reinstated. The Contractor shall paint the location of services in an oil-based white paint for paved areas.

If there is a question whether a service connection is active or abandoned, all video, layout, dye test results, and other pertinent information shall be presented to the Village for a decision on reinstatement prior to cured-in-place pipe operations.

This work will be measured in place and paid for at the contract unit price per each for DYE TESTING OF EXISTING SERVICE CONNECTIONS, which shall include all labor, material, and equipment required to complete the work as specified herein.

## 3. Cured-In-Place Pipe Liner

This work shall include the repair of defective sewer by the installation of a resin impregnated flexible felt tube in all segments as shown on the plans. The tube shall be saturated with a thermosetting resin and installed into the existing sewer using an inversion process. Curing shall be accomplished by circulating hot water or steam to cure the resin into a hard impermeable cured-in-place pipe. When cured, the lined shall be a continuous, tight fitting, and watertight pipe-within-a-pipe.

This specification references American Society for Testing and Materials (ASTM) standard specifications, Insituform of North America, Inc (INA), and Inliner USA, Inc, or the Village approved equal, manufacturer's standards which are made a part hereof by such reference and shall be the latest edition and revision thereof.

**Materials.** The tube shall consist of one or more layers of a flexible needled felt or an equivalent nonwoven or woven material, or a combination of nonwoven and woven materials, capable of carrying resin and withstanding the installation pressures and curing temperatures. The tube should be compatible with the resin system to be used on this project. The material should be able to stretch to fit irregular pipe sections and negotiate bends.

The tube shall be a uniform thickness and when subjected to the installation pressures, will meet or exceed the required finish wall thickness. The tube shall be marked for distance at regular intervals along its entire length, not to exceed five (5) feet. Such markings shall also include the lining manufacturer's name or identifying symbol.

Any plastic film (including polyethylene, polyurethane, and polypropylene layers) applied to the tube on what will become the interior wall of the finished Cured-In-Place Pipe (CIPP) shall be compatible with the resin system used, translucent enough that the resin is clearly visible, firmly bonded to the felt material, and shall be capable of withstanding installation pressures and curing temperatures.

The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured meets the minimum requirements given herein or those that are to be utilized in the design of the CIPP for this project. The manufacturer shall be Insituform, Inliner USA, National Liner or approved equal.

**Sizing of the Liner.** The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the sewer to be lined. Allowance for circumferential stretching of the liner during insertion shall be made as per the manufacturer's standards. The length of the liner shall be that deemed necessary by the Contractor to effectively carry out the insertion and seal the liner at the inlet and outlet points. The Contractor shall verify the lengths in the field. Individual installation runs can be made over one or more access points as determined in the field by the Contractor and approved by the Village.

The liner thickness shall be based on the condition of the existing pipe which shall be classified as fully deteriorated pipe and structurally unsound. The liner shall be designed to withstand all imposed loads. The liner thickness shall have sufficient wall thickness to withstand

the anticipated external pressures and loads which will be imposed after installation. The design of the liner shall include considerations for ring bending, deflection, combined loading, buckling, and ovality. Liner thickness shall be based on the use of the standard flexible pipe equations, as detailed in ASTM F-1216 and shall account for the effects of ovality. The Contractor shall use wall thicknesses appropriate to the depth of pipe being lined.

The design parameters to determine the liner thickness shall be as follows:

1. For pipes up to and including 15" diameter:
  - a. Existing pipe fully deteriorated
  - b. Safety Factor = 2
  - c. Ovality: 5%
  - d. Ground Water Table: Ground water table at surface (except where sewer is in flood plain then use 100-year flood stage elevation)
  - e. Soil Density: 120 lbs/cf
  - f. The following parameters will depend on locations and shall be determined specifically for each sewer segment to be lined: Depth to invert, Live loads, Soil Modules and 100-year flood plan elevation
  - g. Minimum liner thickness: 6.0 millimeters
  
2. For pipes over 15" diameter:
  - a. Existing pipe fully deteriorated
  - b. Safety Factor = 2
  - c. Ovality: 5%
  - d. Ground Water Table: Ground water table at surface (except where sewer is in flood plain then use 100-year flood stage elevation)
  - e. Soil Density: 120 lbs/cf
  - f. The following parameters will depend on locations and shall be determined specifically for each sewer segment to be lined: Depth to invert, Live loads, Soil Modules and 100-year flood plan elevation
  - g. Minimum liner thickness: 10.0 millimeters

**Structural Requirements.** The material properties of the finished CIPP shall meet or exceed the following structural standards:

Property	ASTM Test Method	Polyester System	Filled Polyester System	Vinyl Ester System
Flexural Strength	D790	4,500 PSI	4,500 PSI	5,000 PSI
Flexural Modulus (Initial)	D790	250,000 PSI	400,000 PSI	300,000 PSI
Flexural Modulus (50 Yr)	D790	125,000 PSI	200,000 PSI	150,000 PSI
Tensile Strength	D638	3,000 PSI	3,000 PSI	4,000 PSI

**Execution.** Installation shall be according to standard practice for rehabilitation of existing pipelines and conduits and curing of a resin – impregnated tube ASTM F-1216. The Contractor may use either hot water or steam cure as deemed necessary for the installation, however, specific installations may warrant the designation of a certain curing method and the Contractor is to allow for the installation using either technique.

The Contractor, when required, shall provide for the transfer of flow around the section or sections of pipe that are to be lined. The bypass shall be made by diversion of the flow at an existing upstream access point and pumping the flow into a downstream access point or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the flow. The proposed bypassing system shall be approved by the Village.

No lining will be permitted during periods of high flow.

Prior to any lining of designated sewer segments, the Contractor shall remove internal deposits and roots as necessary to assure proper liner installation. Television inspection and cleaning shall be performed as specified herein.

**Public Notice.** A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sewer and informing them of the work to be conducted, as stated herein.

**Flexible Liner Installation.** The Contractor shall designate a location where the uncured resin in the original containers and unimpregnated fiber felt tube will be vacuum impregnated prior to installation. The Contractor shall allow the Village to inspect the materials and procedures, if requested. A resin and catalyst system compatible with the requirement of this method shall be used. The quantities of the liquid thermosetting materials shall be per the manufacturers standards to provide the lining thickness specified and shall be sufficient to fill the volume of air voids in the tube with additional allowances being made for polymerization shrinkage and the anticipated loss of any resin through cracks and irregularities in the original pipe wall.

The wet out (inversion) fiber felt tube shall be inserted through an existing manhole or other approved access point. The manufacturers standards shall be closely followed during the elevated curing temperatures so as to not over stress the felt fiber and cause damage or failure during the cure.

If the Contractor installs a shot through an existing manhole ('double shot'), it is the Village's intention for the Contractor provide a liner through the manhole channel. The Contractor shall extend the liner to cover as much of the manhole channel as possible. The liner seam, along the manhole bottom, between bench and trough, shall be sealed with an epoxy compatible with CIPP resin.

The finished cured-in-place pipe shall be continuous over the entire length of the insertion run and be as free as commercially practicable from significant defects. Any defects which will affect, in the foreseeable future, or warranty period, the integrity, maintenance, or strength of the cured-in-place pipe, including foreign inclusions, dry spots, pinholes, delamination's, wrinkles, bubbles and blisters shall be repaired at the Contractor's expense, in a manner mutually agreed upon by the Village and Contractor.

**End Seal.** All pipes shall be fitted with a hydrophilic gasket, the 'Insignia' as manufactured by LMK or approved equal, at both ends of each segment prior to installation of the liner. In addition, the liner shall be neatly cut at least four (4) inches from the manhole wall to allow for filling of the annular space at the manhole opening with an epoxy resin compatible to CIPP. This epoxy resin filling, along with a hand brushed hydraulic cement topcoat, shall be applied at all manhole wall to CIPP joints to ensure a watertight seal at the manhole.

The cost for end seals shall be included in the cost of the Contract and will not be paid for as separately.

**Testing.** The Contractor shall prepare a sample for each installation of CIPP. Th samples shall be restrained samples for diameters of CIPP less than 18" and flat plate samples for diameters of CIPP 18" and larger. The flat plate samples shall be taken directly from the wet-out tube., clamped between flat plates, and cured in the downtube. The restrained samples shall be tested for thickness and initial physical properties; flat plate samples shall be tested for initial physical properties only. The Contractor shall be responsible for providing one data set for each week of installation (testing sample to be determined by the Village). If that data set does not meet the testing criteria listed herein, all remaining samples for that week shall be tested for compliance and liners not meeting the design criteria shall be rejected for payment and removed at the Contractor's expense.

**Inspection.** The post-installation television inspection shall be used to confirm tightness of fit of the CIPP to the host pipe and to identify any imperfections; the finished liner shall be continuous over its entire length and be free from visual defects such as foreign inclusions, dry spots, pinholes, delamination areas, wrinkles, bubbles, and blisters. All defects discovered during the post-installation televising shall be corrected by the Contractor at no additional cost, prior to final acceptance. After defects are corrected, the sewer shall be televised again to show effectiveness of the specified repairs. Post-installation televising reports shall be delivered to the Village.

The work for sewer televising post-liner installation shall be included in the cost of the Contract and will not be paid for separately.

This work will be measured in place and paid for at the contract unit price per foot for CURED-IN-PLACE PIPE LINER, of the diameter specified, which shall include all labor, material, and equipment required to complete the work as specified herein.

#### 4. Reinstatement of Service Lateral

This work shall include the reinstatement of active service laterals after cured-in-place pipe lining operations.

**Lateral Reinstatements.** After the cured-in-place pipe has been cured, the Contractor shall reconnect the existing active branch or service lines as designated by the Village. This shall be done without excavation and in the case of non-man entry pipes, from the interior of the sewer segment by means of a television camera and a remote cutting device that reestablishes them to not less than ninety (90) percent capacity and not more than one hundred (100) percent of the internal diameter of the lateral pipe. The surface of the opening shall be wire brushed to remove extraneous material and provide a smooth edge at each lateral connection.

This work will be measured in place and paid for at the contract unit price per each for REINSTATEMENT OF SERVICE LATERAL, which shall include all labor, material, and equipment required to complete the work as specified herein.

## 5. Protruding Tap Removal

For break-in service connections that protrude more than ½ inch into the sewer, the Contractor shall remove the protruding portion of the tap in preparation for cured-in-place lining, grouting, or other rehabilitation work. Cutters used shall be power driven cutting devices (lateral cutters) designed to remove protruding taps. Cutter shall be capable of slicing laterally through cast iron, ¾" rebar and anchors, clay tile, and concrete protruding into sewer lines.

The Contractor shall cut protruding taps so that protrusions are no greater than ½ inch. While using a protruding tap cutter, slow revolution per minute (RPM) will cut more effectively than rapid RPM. The Contractor shall maintain a steady flow and RPM while cutting and shall hydro-flush cut and broken pieces out of the sewer before proceeding to the next protruding tap. If a protruding tap cannot be removed by the cutting device, the Village shall be notified to determine if a point repair will be necessary. If the pipe in the vicinity of the protruding tap is in poor condition, the Contractor is to request authorization from the Village before proceeding with protruding tap removal.

Any damages cause to the sewer main or sewer service lateral during tap cutting shall be the responsibility of the Contractor and shall be repaired at no additional cost to the Village, unless prior authorization has been approved by the Village.

This work will be measured in place and paid for at the contract unit price per each for PROTRUDING TAP REMOVAL, which shall include all labor, material, and equipment required to complete the work as specified herein.

## 6. Traffic Control and Protection

Traffic control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, these special provisions, and any special details and Highway Standards herein and in the plans, if applicable, and the Standard Specifications for Traffic Control Items. Special attention is called to the following sections of the Standard Specifications, the Highway Standards, and the special provisions relating to traffic control:

Delays to the Contractor caused by complying with these requirements will be considered included in the cost of the Contract, and no additional compensation will be allowed.

### Standards

701006-05, 701011-04, 701301-04, 701501-06, 701701-10, 701801-06 and 701901-08

### Details

TC-10 Traffic Control and Protection for Side Roads, Intersections and Driveways

### Special Provisions

Protection of Mailboxes  
Equipment Parking and Storage  
Lights on Barricades  
Traffic Control Devices - Cones

No roads or segments shall be closed without prior written approval from the Village. The Contractor must present to the Village, a detour plan with a detailed description addressing how resident access will be maintained and all applicable signage. Submittal of a road closure request to the Village does not guarantee approval. Any additional traffic control devices required for road closures per the Contractor's request shall not be paid for separately but shall be included in the cost of the contract.

The Contractor shall be properly advised of the regulated weight limits within the surrounding areas of the project. No additional compensation in time or monetary value will be allowed. The Village of Buffalo Grove Police Department requires permits for Overweight/Over-Sized Trucks or Vehicles. The Contractor can find additional information at [www.vbg.org/645/Truck-Enforcement](http://www.vbg.org/645/Truck-Enforcement) or by calling (847) 459-2560.

Temporary "No Parking" signs must be approved by the Engineer prior to installation and the Village must be notified for each individual use or occurrence. The temporary signs must be POSTED AND DATED at least 24 hours before the intended date of use and shall be a minimum size of 8.5"x11", with a contrasting background and be lathe or post mounted. Any signage that is posted without the Engineer's approval will be assessed a monetary penalty of \$500 per day until removed. **The Contractor shall not tow or move any vehicles.**

This work will be measured in place and paid for at the contract unit price per lump sum (LS) for TRAFFIC CONTROL AND PROTECTION, (SPECIAL), which shall include all labor, material, and equipment required to complete the work as specified herein.

End of Section

Village of Buffalo Grove  
Bid Forms  
Section 20300

**CONTRACTOR REFERENCES**

Please list below five (5) references for which your firm has performed similar work for municipalities as identified in Bidder Qualifications.

Municipality: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Contact Person/  
Telephone Number: \_\_\_\_\_  
Dates of Service/Award Amount: \_\_\_\_\_

Municipality: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Contact Person/Telephone  
Number: \_\_\_\_\_  
Dates of Service/Award Amount: \_\_\_\_\_

Agency: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Contact Person/  
Telephone Number: \_\_\_\_\_  
Dates of Service/Award Amount: \_\_\_\_\_

Agency: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Contact Person/  
Telephone Number: \_\_\_\_\_  
Dates of Service/Award Amount: \_\_\_\_\_

Agency: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Contact Person/  
Telephone Number: \_\_\_\_\_  
Dates of Service/Award Amount: \_\_\_\_\_

## DISQUALIFICATION OF CERTAIN BIDDERS

### PERSONS AND ENTITIES SUBJECT TO DISQUALIFICATION

No person or business entity shall be awarded a contract or subcontract, for a stated period of time, from the date of conviction or entry of a plea or admission of guilt, if the person or business entity,

1. has been convicted of an act committed, within the State of Illinois or any state within the United States, of bribery or attempting to bribe an officer or employee in the State of Illinois, or any State in the United States in that officer's or employee's official capacity;
2. has been convicted of an act committed, within the State of Illinois or any state within the United States, of bid rigging or attempting to rig bids as defined in the Sherman Anti-Trust Act and Clayton Act 15 U.S.C.;
3. has been convicted of bid rigging or attempting to rig bids under the laws of the State of Illinois, or any state in the United States;
4. has been convicted of bid rotating or attempting to rotate bids under the laws of the State of Illinois, or any state in the United States;
5. has been convicted of an act committed, within the State of Illinois or any state in the United States, of price-fixing or attempting to fix prices as defined by the Sherman Anti-Trust Act and Clayton Act 15 U.S.C. Sec. 1 et seq.;
6. has been convicted of price-fixing or attempting to fix prices under the laws of the State of Illinois, or any state in the United States;
7. has been convicted of defrauding or attempting to defraud any unit of state or local government or school district within the State of Illinois or in any state in the United States;
8. has made an admission of guilt of such conduct as set forth in subsection (A) through (F) above which admission is a matter of record, whether or not such person or business entity was subject to prosecution for the offense or offenses admitted to;
9. has entered a plea of nolo contendere to charges of bribery, price fixing, bid rigging, bid rotating, or fraud; as set forth in subparagraphs (A) through (F) above.

Business entity, as used herein, means a corporation, partnership, limited liability company trust, association, unincorporated business or individually owned business.

**(Please sign bid form indicating compliance)**

**COLLUSION AFFIDAVIT AND CONTRACTOR'S CERTIFICATION**

\_\_\_\_\_, being first duly sworn,

deposes and says that he is \_\_\_\_\_  
(Partner, Officer, Owner, Etc.)

of \_\_\_\_\_  
(Contractor)

The party making the foregoing proposal or bid, that such bid is genuine and not collusive, or sham; that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference with any person; to fix the bid price element of said bid, or of that of any other bidder, or to secure any advantage against any other bidder or any person interested in the proposed contract.

The undersigned certifies that he is not barred from bidding on this contract as a result of a conviction for the violation of State laws prohibiting bid-rigging or bid-rotating.

The Contractor affirms and covenants that neither the Contractor nor any individual employed by the Contractor for this Work or under this Contract is a person forbidden from doing business with a unit of local government under Executive Order No. 13224 (Sept 23, 2001), 66 Fed. Reg. 49,079 (Sept 23, 2001) or is a person registered on the Specially Designated Nationals and Blocked Persons List. The Contractor shall indemnify the Village from all costs associated with failure to comply with this paragraph.

\_\_\_\_\_  
(Name of Bidder if the Bidder is an Individual)  
(Name of Partner if the Bidder is a Partnership)  
(Name of Officer if the Bidder is a Corporation)

The above statements must be subscribed a sworn to before a notary public.

Subscribed and Sworn to this \_\_\_\_\_ day of \_\_\_\_\_, 2019

\_\_\_\_\_  
Notary Public

**CONFLICT OF INTEREST**

\_\_\_\_\_, hereby certifies that it has conducted an investigation into whether an actual or potential conflict of interest exists between the bidder, its owners and employees and any official or employee of a municipality identified herein.

Bidder further certifies that it has disclosed any such actual or potential conflict of interest and acknowledges if bidder has not disclosed any actual or potential conflict of interest, the Village of Buffalo Grove may disqualify the bid or the affected municipality may void any award and acceptance that the municipality has made.

\_\_\_\_\_  
(Name of Bidder if the Bidder is an Individual)  
(Name of Partner if the Bidder is a Partnership)  
(Name of Officer if the Bidder is a Corporation)

The above statements must be subscribed a sworn to before a notary public.

Subscribed and Sworn to this \_\_\_\_\_ day of \_\_\_\_\_, 2019

\_\_\_\_\_  
Notary Public

*Failure to complete and return this form may be considered enough reason for rejection of the bid.*

**TAX COMPLIANCE AFFIDAVIT**

\_\_\_\_\_, being first duly sworn,

deposes and says that he is \_\_\_\_\_  
(Partner, Officer, Owner, Etc.)

of \_\_\_\_\_  
(Contractor)

The individual or entity making the foregoing proposal or bid certifies that he is not barred from contracting with the any of the Municipalities identified herein because of any delinquency in the payment of any tax administered by the Department of Revenue unless the individual or entity is contesting, in accordance with the procedures established by the appropriate revenue act. The individual or entity making the proposal or bid understands that making a false statement regarding delinquency in taxes is a Class A Misdemeanor and, in addition, voids the contract and allows the municipality to recover all amounts paid to the individual or entity under the contract in civil action.

\_\_\_\_\_  
(Name of Bidder if the Bidder is an Individual)  
(Name of Partner if the Bidder is a Partnership)  
(Name of Officer if the Bidder is a Corporation)

The above statements must be subscribed a sworn to before a notary public.

Subscribed and Sworn to this \_\_\_\_\_ day of \_\_\_\_\_, 2019

\_\_\_\_\_  
Notary Public

*Failure to complete and return this form may be considered enough reason for rejection of the bid.*

**SUBCONTRACTOR INFORMATION**

**(ATTACH ADDITIONAL PAGES AS NEEDED)**

Name: \_\_\_\_\_ # Years in Business: \_\_\_\_\_

Address: \_\_\_\_\_ # Years used by Contractor: \_\_\_\_\_

Services provided by Sub-Contractor: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

.....

Name: \_\_\_\_\_ # Years in Business: \_\_\_\_\_

Address: \_\_\_\_\_ # Years used by Contractor: \_\_\_\_\_

Services provided by Sub-Contractor: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

.....

Name: \_\_\_\_\_ # Years in Business: \_\_\_\_\_

Address: \_\_\_\_\_ # Years used by Contractor: \_\_\_\_\_

Services provided by Sub-Contractor: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# VILLAGE OF BUFFALO GROVE PUBLIC CONTRACT STATEMENTS

The Village of Buffalo Grove is required to obtain certain information in the administration and awarding of public contracts. The following Public Contract Statements shall be executed and notarized.

## PUBLIC CONTRACT STATEMENTS

### CERTIFICATION OF CONTRACTOR/CONSULTANT

In order to comply with 720 Illinois Compiled Statutes 5/33 E-1 et seq., the Village of Buffalo Grove requires the following certification be acknowledged:

The below-signed Contractor/Consultant hereby certifies that it is not barred from Bidding or supplying any goods, services or construction let by the Village of Buffalo Grove with or without Bid, due to any violation of either Section 5/33 E-3 or 5/33 E-4 of Article 33E, Public Contracts, of the Chapter 720 of the Illinois Compiled Statutes, as amended. This act relates to interference with public contracting, Bid rigging and rotating, kickbacks, and Bidding.

### CERTIFICATION RELATIVE TO 65 ILCS 5/11-42.1.1

In order to comply with 65 Illinois Compiled Statutes 5/11-42.1.1, the Village of Buffalo Grove requires the following certification:

The undersigned Contractor/Consultant does hereby swear and affirm that it is not delinquent in the payment of any tax administered by the Illinois Department of Revenue unless it is contesting, in accordance with the procedures established by the appropriate revenue Act, its liability for the tax or the amount of the tax. The undersigned further understands that making a false statement herein: (1) is a Class A Misdemeanor, and (2) voids the contract and allows the Village to recover all amounts paid to it under the contract.

### CONFLICT OF INTEREST

The Village of Buffalo Grove Municipal Code requires the following verification relative to conflict of interest and compliance with general ethics requirements of the Village:

The undersigned Contractor/Consultant hereby represents and warrants to the Village of Buffalo Grove as a term and condition of acceptance of this (Proposal or purchase order) that none of the following Village Officials is either an officer or Manager of Firm or owns five percent (5%) or more of the Supplier: the Village President, the members of the Village Board of Trustees, the Village Clerk, the Village Treasurer, the members of the Zoning Board of Appeals and the Plan Commission, the Village Manager and his Assistant or Assistants, or the heads of the various departments within the Village.

If the foregoing representation and warranty is inaccurate, state the name of the Village official who either is an officer or Manager of your business entity or owns five percent (5%) or more thereof:

(Official) \_\_\_\_\_

\_\_\_\_\_

Print Name of Contractor/Consultant

\_\_\_\_\_

Signature

\_\_\_\_\_

Title

Subscribed and Sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_

Notary Public

Notary Expiration Date \_\_\_\_\_

**PROPOSAL ACCEPTANCE**

**2019 LOCAL SEWER LINING PROJECT  
Village of Buffalo Grove, Illinois**

**ACCEPTANCE**

The Contract/Proposal attached hereto and by this reference incorporated herein and made a part hereof is hereby accepted by the order of \_\_\_\_\_ ("Owner") this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

This Acceptance, together with the Contract/Proposal attached hereto, constitutes the entire and only agreement between the parties relating to the accomplishment of the Work and the compensation therefore and supersedes and merges any other prior or contemporaneous discussions, agreements, or understandings, whether written or oral, and shall prevail over any contradictory or inconsistent terms or conditions contained in any purchase order, acceptance, acknowledgement, invoice, or other standard form used by the parties in the performance of the Contract/Proposal. Any such contradictory or inconsistent terms or conditions shall be deemed objected to by Owner without further notice of objection and shall be of no effect nor in any circumstances binding upon Owner unless accepted by Owner in a written document plainly labeled "Amendment to Contract/Proposal." Acceptance or rejection by Owner or any such contradictory or inconsistent terms or conditions shall not constitute acceptance of any other contradictory or inconsistent terms or conditions.

By: \_\_\_\_\_

Title: \_\_\_\_\_

PERFORMANCE AND PAYMENT BOND

Bond Number:

KNOW ALL MEN BY THESE PRESENTS, That \_\_\_\_\_ (the 'Principal') and \_\_\_\_\_ (the 'Surety'), are held and firmly bound unto the \_\_\_\_\_, an Illinois home-rule unit of government (the 'Village'), the full and just sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful money of the UNITED STATES OF AMERICA as herein provided.

THE CONDITION OF THIS OBLIGATION is such that the Principal and Surety agree to bind themselves, their successors, assigns, executors, heirs and administrators, jointly and severally, for the full and faithful performance of the Work as defined in that particular 2019 Local Sewer Lining Project contract between Principal and the Village dated \_\_\_\_\_ day of \_\_\_\_\_, 2019, (hereinafter referred to as the 'Contract'), a copy of which is attached and incorporated by reference as though fully set forth herein.

NOW THE CONDITIONS OF THIS OBLIGATION ARE SUCH that is the said Principal (i) shall in all respects keep and perform all the undertakings, covenants, terms, conditions and agreements of the Contract; (ii) shall pay all sums of money due or to become due, for any labor, materials, apparatus, fixtures or equipment furnished for the Work provided in said Contract; and (iii) shall remove and replace any defects in workmanship or materials which may be apparent or may develop within the ARTICLE XIX – WARRANTY PERIOD of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the Work thereunder shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work.

IN WITNESS WHEREOF, we have hereunto set our hands seal \_\_\_\_\_ day of \_\_\_\_\_, 2019.

SURETY

PRINCIPAL

By:  
Name:  
Title:

By:  
Name:  
Title:

ATTEST

ATTEST

By:

By:

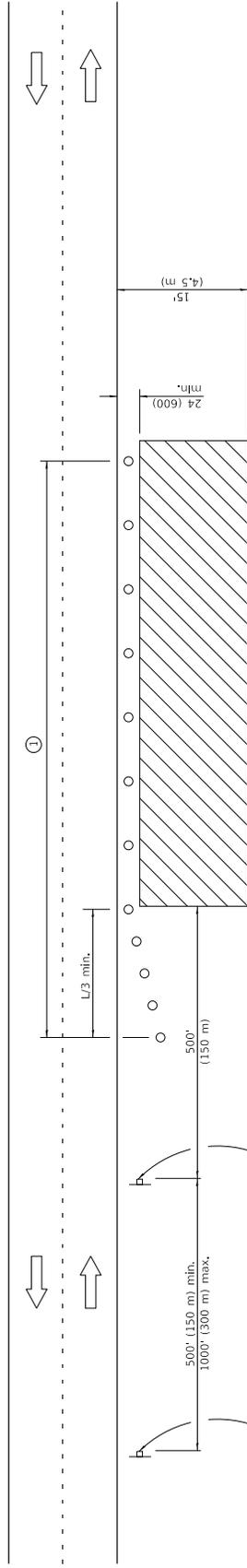
NOTE: Date of Bond must not be prior to date of Contract.  
If Contractor is Partnership, all partners should execute Bond.  
IMPORTANT: Surety companies executing Bonds must appear on the Treasury Departments most current list (Circular 570 as amended) and be authorized to transact business in the State where the Work is located.

## APPENDIX A TABLE OF CONTENTS

### Description

1. IDOT District One Highway Standard – TC-10 Traffic Control and Protection For Side Roads, Intersections, and Driveways
2. Standard 701006-05 Off-Road Operations, 2L, 2W, 15' to 24' From Pavement Edge
3. Standard 701011-04 Off-Rd Moving Operations, 2L, 2W, Day Only
4. Standard 701301-04 Lane Closure, 2L, 2W, Short Time Operations
5. Standard 701701-10 Urban Lane Closure, Multilane Intersection
6. Standard 701801-06 Sidewalk, Corner or Crosswalk Closure
7. Standard 701901-08 Traffic Control Devices
8. Example Pay Estimate – Clarifying Statement Letter
9. Temporary No Parking Sign Example
10. Mailbox Installation Detail
11. Exhibit No. 109 Materials List





For contract construction projects  
 W20-110(0)-48

For maintenance and utility projects  
 W20-110(1)-48

W21-110(1)-48

**TYPICAL APPLICATIONS**

- Utility operations
- Culvert extensions
- Side slope changes
- Guardrail installation and maintenance
- Delineator installation
- Landscaping operations
- Shoulder repair
- Sign installation and maintenance

**SYMBOLS**

- Work area
- Sign
- Cone, drum or barricade

**GENERAL NOTES**

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24 (600) from the edge of pavement.

Calculate L as follows:

**SPEED LIMIT**

English (Metric) FORMULAS

40 mph (70 km/h)  $L = \frac{WS^2}{60}$  or less

45 mph (80 km/h)  $L = \frac{WS^2}{60}$  or greater

$L = (W)(S)$   $L = 0.65(W)(S)$

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

**OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE**

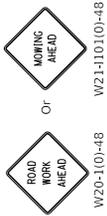
STANDARD 701006-05

Illinois Department of Transportation

PASSED January 2014  
 ENGINEER OF SAFETY ENGINEERING

APPROVED January 2014  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07



Or



W20-103(0)-48

W21-103(0)-48

Varies ①

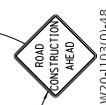


19'  
(4.5 m)

Varies ①

500' (150 m) min.  
1000' (300 m) max.

For contract construction projects



W20-103(0)-48

W21-1(0)-48

For maintenance and utility projects



W20-1(0)-48

W21-101(0)-48

Or

**TYPICAL APPLICATIONS**

Shoulder work  
Utility operations

**GENERAL NOTES**

This Standard is used where at any time, any vehicle, equipment, workers or their activities require an intermittent or continuous moving operation on the shoulder, where the average speed is 1 mph (2 km/h) or less.

When the work operation does not exceed 60 minutes, traffic control may be according to Standard 701301.

① Minimum distance is 200' (60 m). Maximum distance to be determined by the Engineer but should not exceed 1/2 the length required for one normal working day's operation, or 4 miles (6.4 km) whichever is less.

**SYMBOLS**



Work area



Sign

- Flagger with traffic control sign when required

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

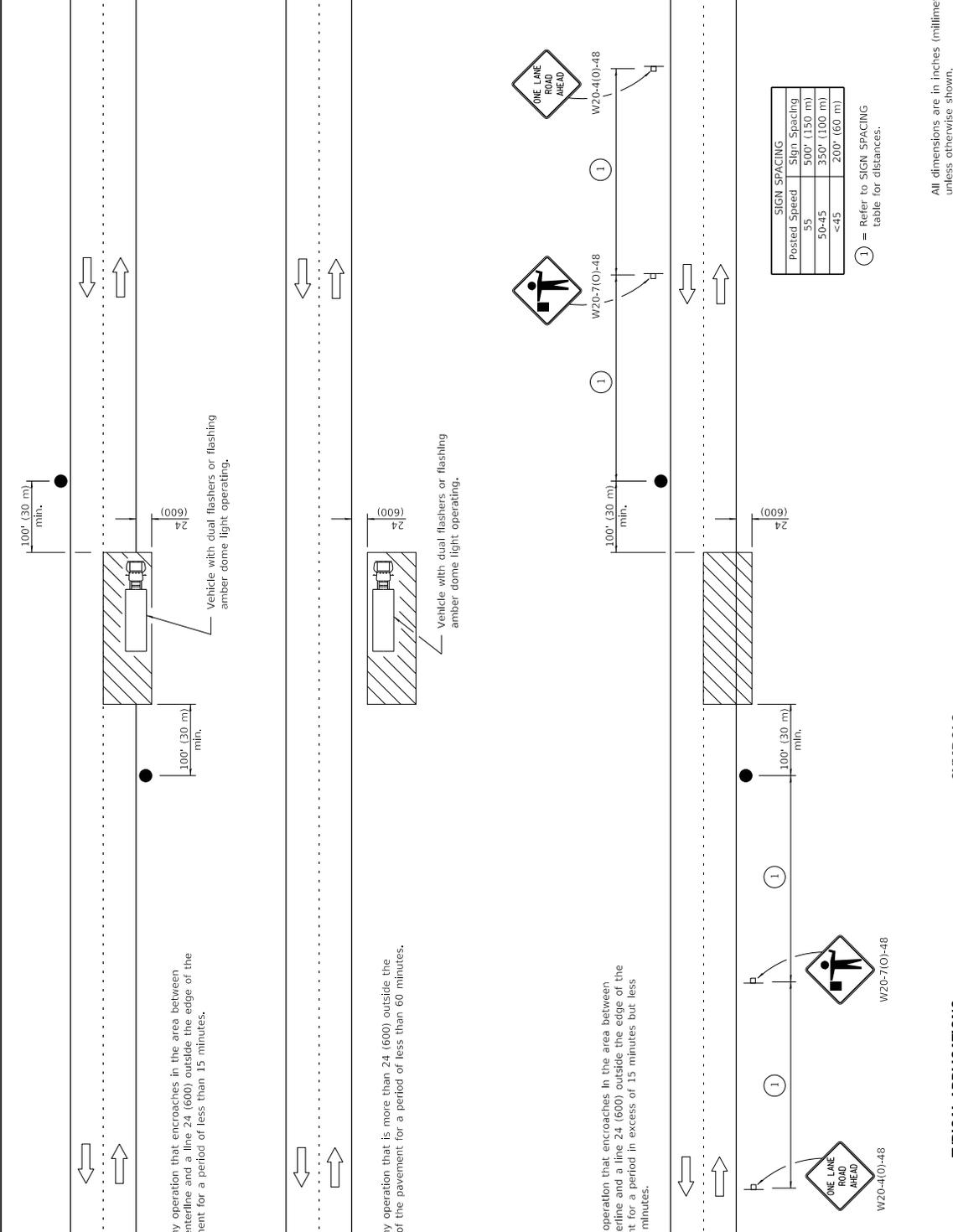
**OFF-RD MOVING OPERATIONS,  
2L, 2W, DAY ONLY**

STANDARD 701011-04

Illinois Department of Transportation

PASSED January 2014  
 APPROVED January 1, 2014  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07



For any operation that encroaches in the area between the centerline and a line 24 (600) outside the edge of the pavement for a period of less than 15 minutes.

For any operation that is more than 24 (600) outside the edge of the pavement for a period of less than 60 minutes.

For any operation that encroaches in the area between the centerline and a line 24 (600) outside the edge of the pavement for a period in excess of 15 minutes but less than 60 minutes.

SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

① = Refer to SIGN SPACING table for distances.

All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to English (metric).

**TYPICAL APPLICATIONS**

- Marking patches
- Field survey
- String line
- Utility operations
- Cleaning up debris on pavement

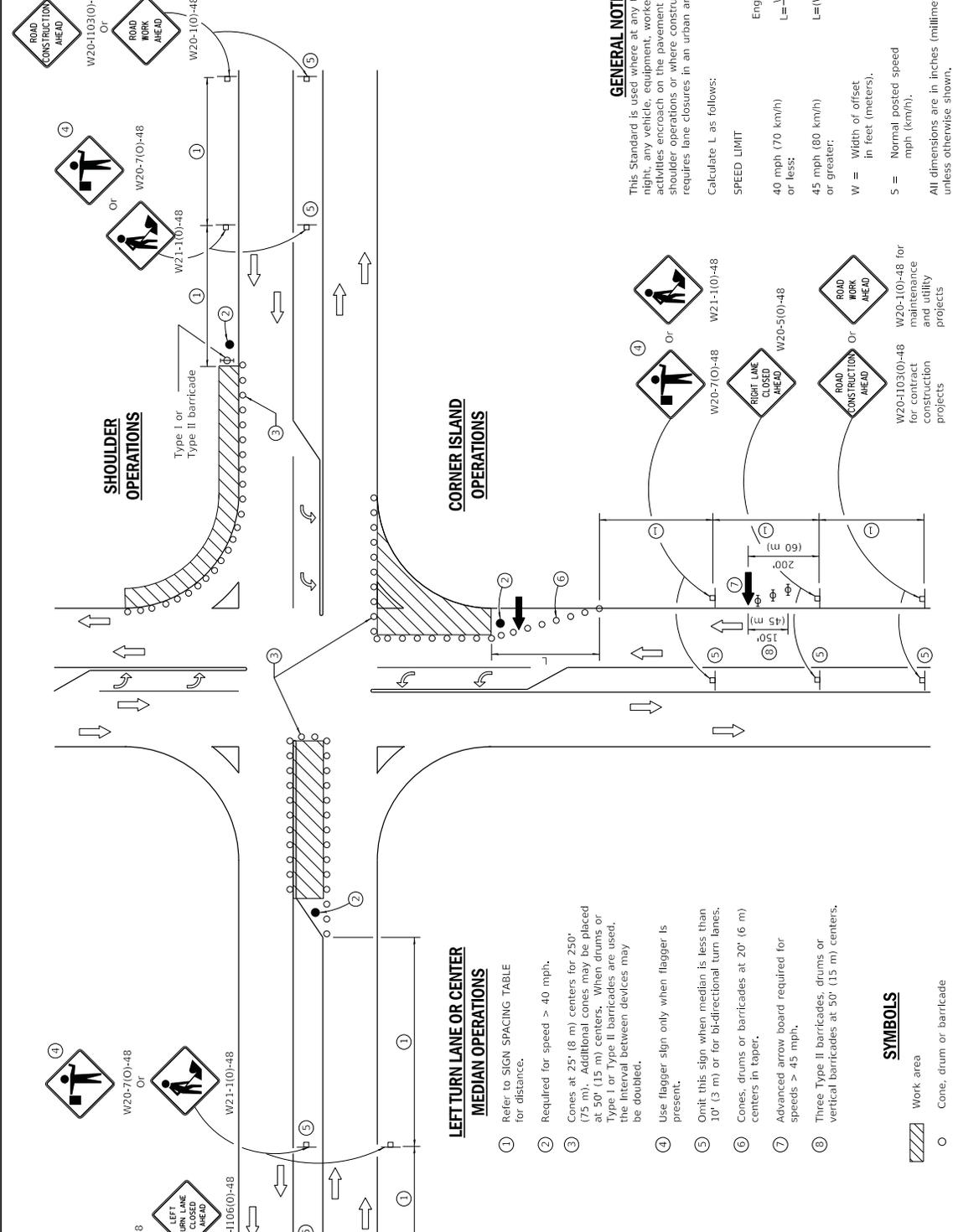
**SYMBOLS**

- Work area
- Sign on portable or permanent support
- Flagger with traffic control sign

**LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS**

**STANDARD 701301-04**

Illinois Department of Transportation  
 PASSED January 1, 2011  
 APPROVED January 1, 2011  
 ENGINEER OF SAFETY ENGINEERING  
 ENGINEER OF DESIGN AND ENVIRONMENT



**LEFT TURN LANE OR CENTER MEDIAN OPERATIONS**

**GENERAL NOTES**

- 1 Refer to SIGN SPACING TABLE for distance.
- 2 Required for speed > 40 mph.
- 3 Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used, the interval between devices may be doubled.
- 4 Use flagger sign only when flagger is present.
- 5 Omit this sign when median is less than 10' (3 m) or for bi-directional turn lanes.
- 6 Cones, drums or barricades at 20' (6 m) centers in taper.
- 7 Advanced arrow board required for speeds > 45 mph.
- 8 Three Type II barricades, drums or vertical barricades at 50' (15 m) centers.

SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

**SYMBOLS**

- Work area
- Cone, drum or barricade
- Sign on portable or permanent support
- Arrow board
- Barricade or drum with flashing light
- Flagger with traffic control sign

**GENERAL NOTES**

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closures in an urban area.

Calculate L as follows:

FORMULAS  
English (Metric)

SPEED LIMIT  
40 mph (70 km/h) or less:  $L = \frac{WS^2}{60}$

45 mph (80 km/h) or greater:  $L = \frac{W(S)(S)}{150}$

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

URBAN LANE CLOSURE, MULTILANE INTERSECTION	
DATE	REVISIONS
4-1-16	Corrected sign number for LEFT TURN LANE CLOSED AHEAD.
1-1-14	Added devices at arrow board upstream from taper.
	Rev. workers sign number.

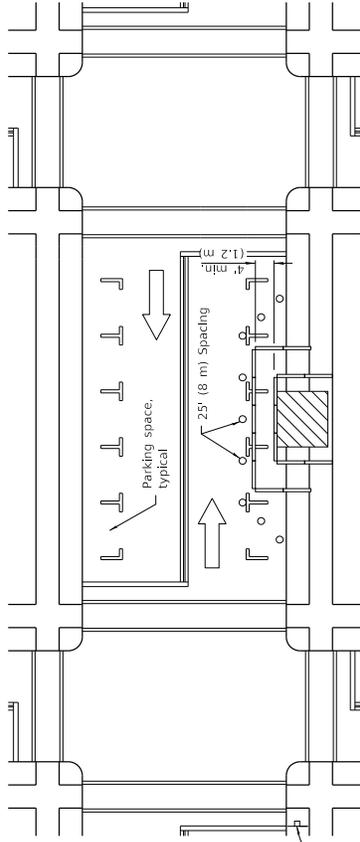
Illinois Department of Transportation

PASSED: April 1, 2016

APPROVED: April 1, 2016

ISSUED: 1-1-07

ENGINEER OF DESIGN AND ENVIRONMENT



W20-1103(10)-48 for contract construction projects

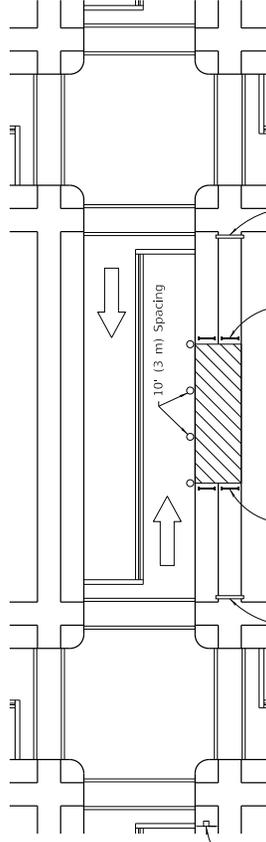


Or

W20-1101-48 for maintenance and utility projects



### SIDEWALK DIVERSION



W20-1103(10)-48 for contract construction projects



Or

W20-1101-48 for maintenance and utility projects



### SIDEWALK CLOSURE

### SYMBOLS

- Work area
- Sign on portable or permanent support
- Barricade or drum
- Cone, drum or barricade
- Type III barricade
- Detectable pedestrian channelizing barricade

### GENERAL NOTES

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.

Temporary facilities shall be detectable and accessible.

The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners of the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

All dimensions are in inches (millimeters) unless otherwise shown.

① Omit whenever duplicated by road work traffic control.

DATE	REVISIONS
4-1-16	Omitted orange safety fence from standard as this is covered in the std. spec.
1-1-12	Added SIDEWALK DIVERSION, Modified appearance of plan views, Renamed Std.

## SIDEWALK, CORNER OR CROSSWALK CLOSURE

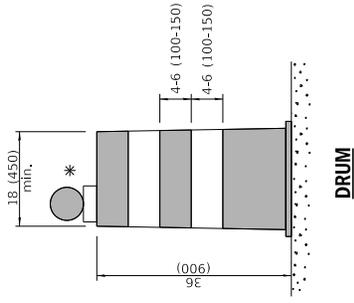
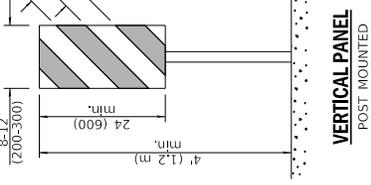
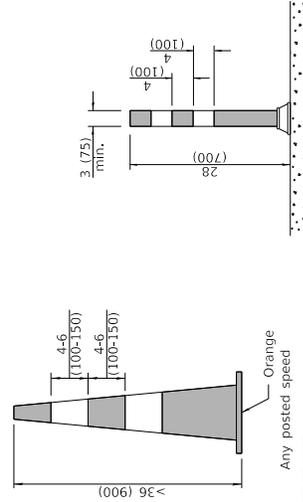
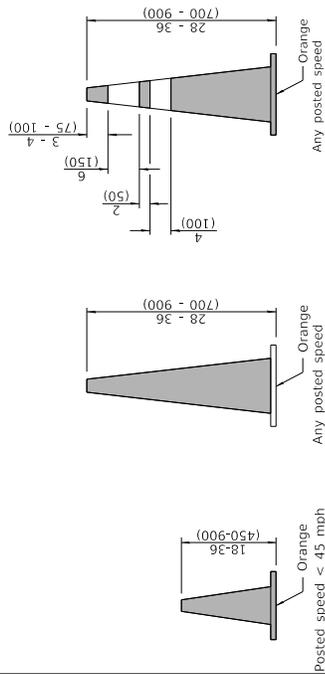
(Sheet 1 of 2)

STANDARD 701801-06

Illinois Department of Transportation  
 PASSED April 1, 2016  
 ENGINEER OF SAFETY ENGINEERING  
 APPROVED April 1, 2016  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07





**CONES**

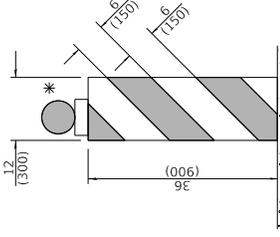
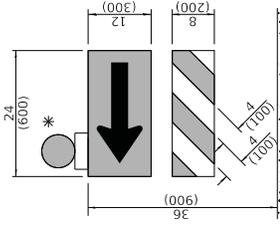
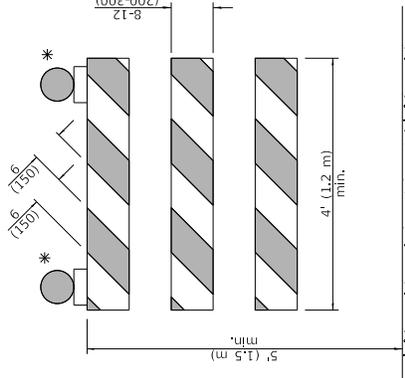
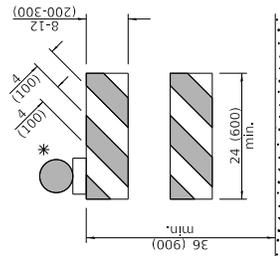
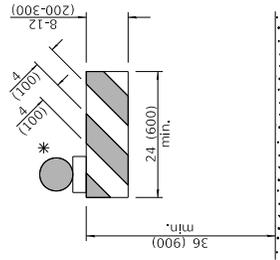
Daytime Use

Day or Nighttime Use

**TUBULAR MARKER**

**VERTICAL PANEL**  
POST MOUNTED

**DRUM**



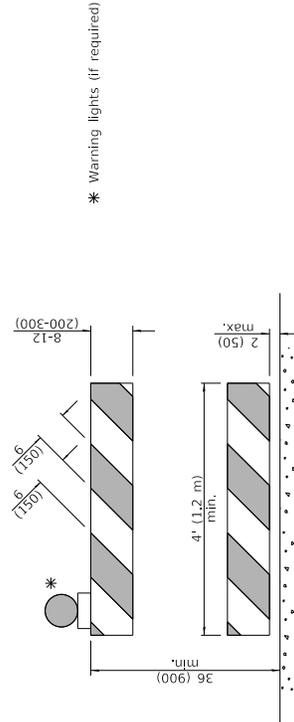
**TYPE I BARRICADE**

**TYPE II BARRICADE**

**TYPE III BARRICADE**

**DIRECTION INDICATOR BARRICADE**

**VERTICAL BARRICADE**



\* Warning lights (if required)

**GENERAL NOTES**

All heights shown shall be measured above the pavement surface.  
All dimensions are in inches (millimeters) unless otherwise shown.

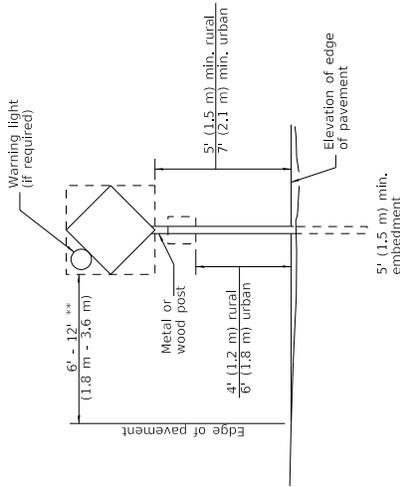
DATE	REVISIONS
1-1-19	Revised cone usage and added cones >36" (900 m) height.
1-1-18	Revised END WORK ZONE SPEED LIMIT sign from orange to white background.

<b>TRAFFIC CONTROL DEVICES</b>	
(Sheet 1 of 3)	
<b>STANDARD 701901-08</b>	

Illinois Department of Transportation  
ISSUED 1-1-13

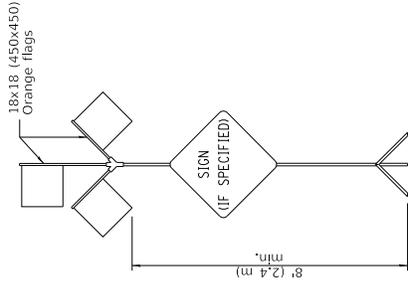
APPROVED January 1, 2019  
  
 CYNTHIA D. WHITE  
 ENGINEER OF SAFETY PROC. AND ENGINEERING

APPROVED January 1, 2019  
  
 SCOTT E. GALT  
 ENGINEER OF DESIGN AND ENVIRONMENT



**POST MOUNTED SIGNS**

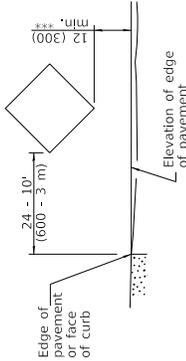
\*\* When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



**HIGH LEVEL WARNING DEVICE**

**SIGNS ON TEMPORARY SUPPORTS**

\*\*\* When work operations exceed four days, this dimension shall be 5' (1.5 m) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder. The height shall be sufficient to be seen completely above the devices.



ROAD CONSTRUCTION NEXT X MILES  
G20-1104(0)-6036

END CONSTRUCTION  
G20-1105(0)-6024

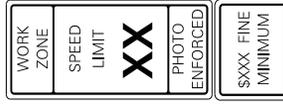
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

**WORK LIMIT SIGNING**



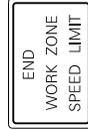
W21-1115(0)-3618

R2-1-3648

R10-1108p-3618 \*\*\*\*

R2-1106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.

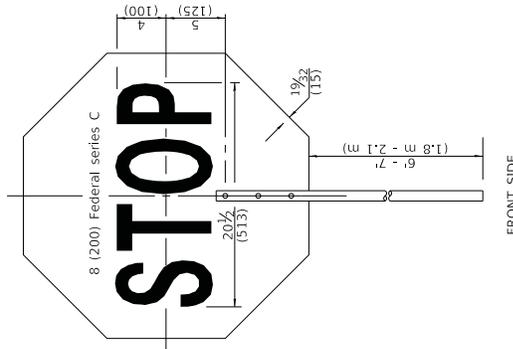


G20-1103-6036

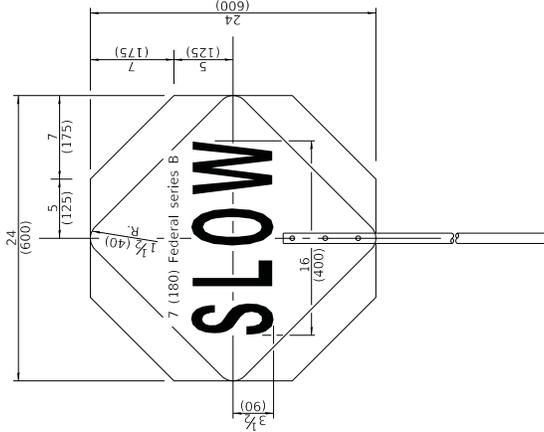
This sign shall be used when the above sign assembly is used.

**HIGHWAY CONSTRUCTION SPEED ZONE SIGNS**

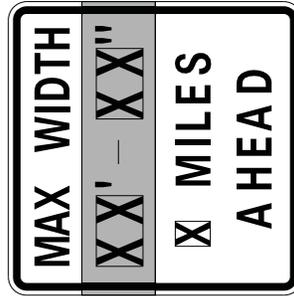
\*\*\*\* R10-1108p shall only be used along roadways under the jurisdiction of the State.



FRONT SIDE



REVERSE SIDE



W12-1103-4848

**WIDTH RESTRICTION SIGN**

XX-XX" width and X miles are variable.

Illinois Department of Transportation  
 APPROVED January 1, 2019  
 Cynthia C. [Signature]  
 ENGINEER OF SAFETY PROC. AND ENGINEERING  
 APPROVED January 1, 2019  
 [Signature]  
 ENGINEER OF DESIGN AND ENVIRONMENT

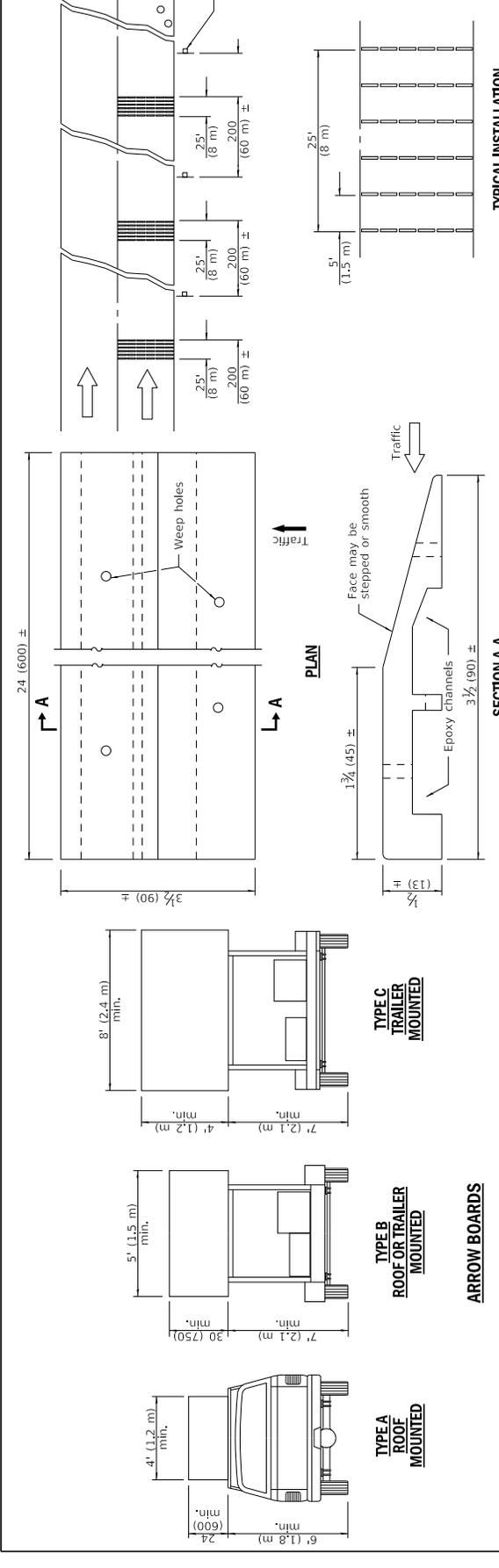
ISSUED 1-1-13

**TRAFFIC CONTROL DEVICES**

(Sheet 2 of 3)

**STANDARD 701901-08**

**FLAGGER TRAFFIC CONTROL SIGN**

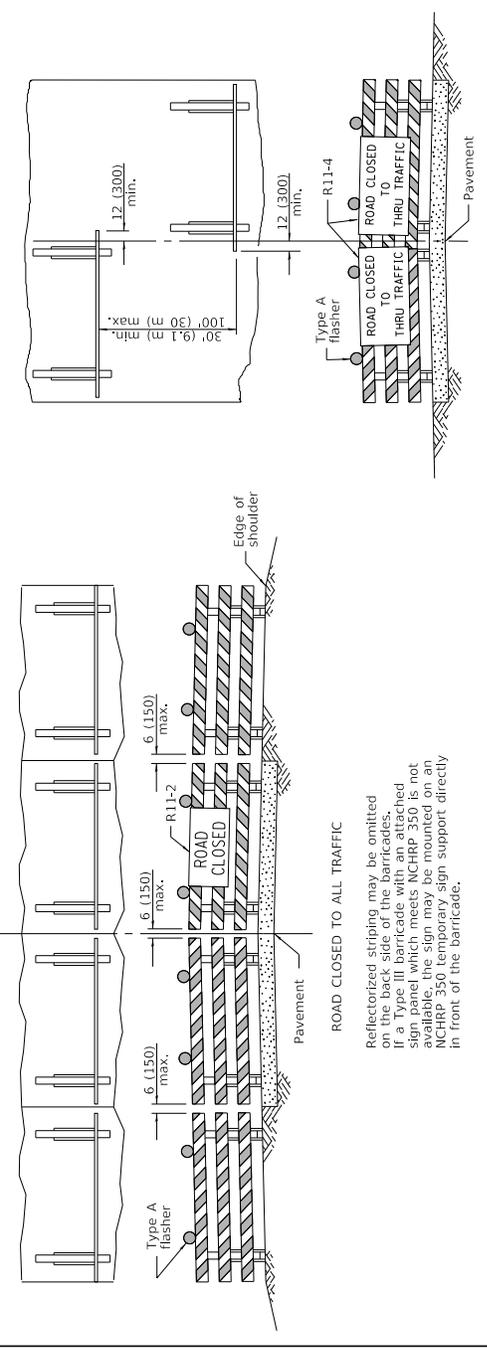


**ARROW BOARDS**

**SECTION A-A**

**TYPICAL INSTALLATION**

**TEMPORARY RUMBLE STRIPS**



**ROAD CLOSED TO ALL TRAFFIC**

ReflectORIZED striping may be omitted on the back side of the barricades. If a Type III barricade will be used, the striping may be omitted. If reflectORIZED striping is not available, the sign may be mounted on an MCHRP 350 temporary sign support directly in front of the barricade.

**ROAD CLOSED TO THRU TRAFFIC**

ReflectORIZED striping shall appear on both sides of the barricades. If a Type III barricade will be used, the striping may be omitted. If reflectORIZED striping is not available, the signs may be mounted on MCHRP 350 temporary sign supports directly in front of the barricade.

**TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD**

Illinois Department of Transportation  
 APPROVED January 1, 2019  
 ENGINEER OF SAFETY PROC. AND ENGINEERING  
 APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

**TRAFFIC CONTROL DEVICES**  
 STANDARD 701901-08  
 (Sheet 3 of 3)

**ABC Construction**

123 Main St., Chicago, IL 60001

1/1/2017

Pay Estimate #1 – Clarifying Statement

Kyle Johnson  
Civil Engineer II  
Village of Buffalo Grove  
51 Raupp Blvd.  
Buffalo Grove, IL 60089

ABC Construction has submitted all necessary certified payroll documentation for Pay Estimate #1 through January 1<sup>st</sup>, 2017. Payrolls included in this period are:

ABC Construction Week Ending 12/24/16 #1

Week Ending 1/1/17 #2

Subcontractor 1 Week Ending 1/1/17 #1

Sincerely,



**Joe Smith, Vice President**



# **TEMPORARY NO PARKING**

---

**TIME:**

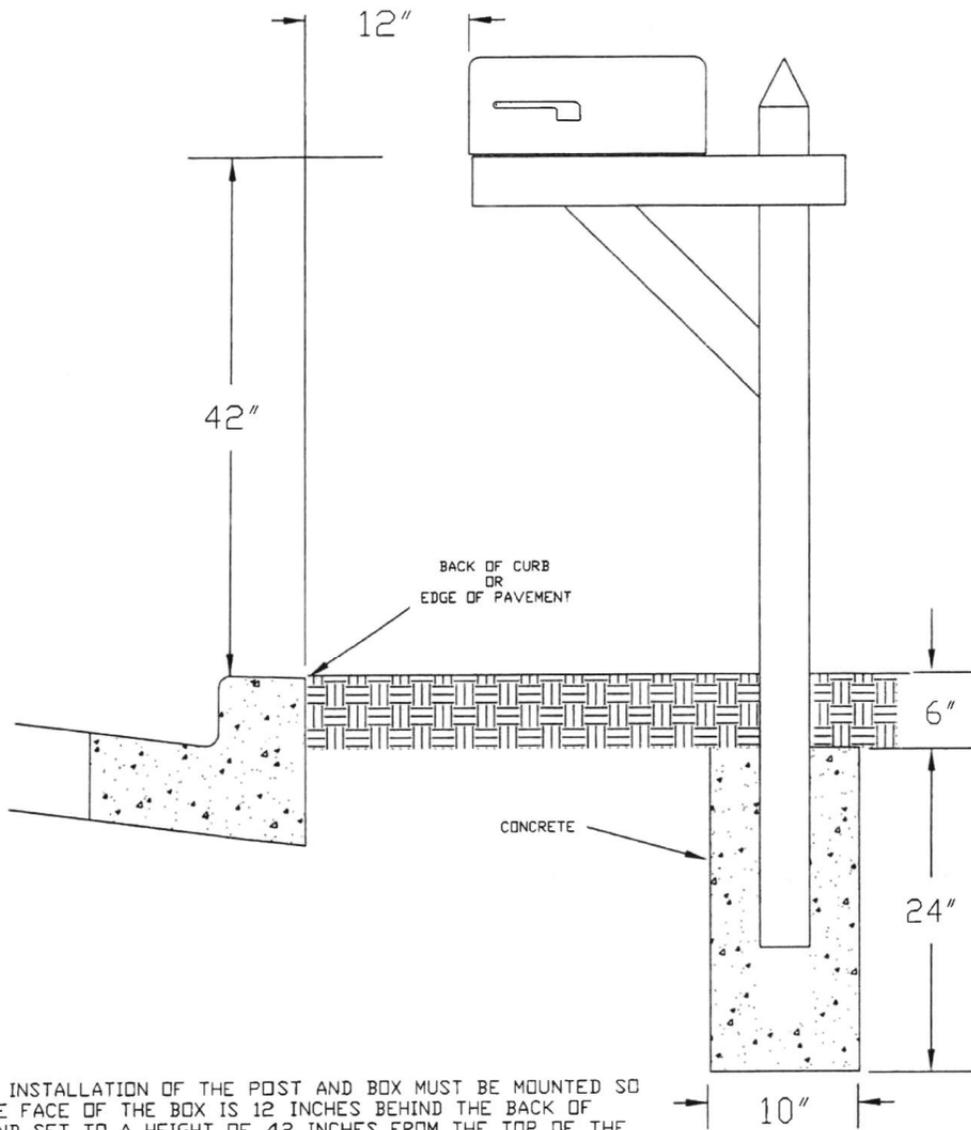
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**DATE:**

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# **CONSTRUCTION ZONE**

*Note – Hand written information must be dark, legible and large. Sign shall be printed on more than paper, unless laminated. Must withstand winds and stay on stake/lath.*



THE INSTALLATION OF THE POST AND BOX MUST BE MOUNTED SO THE THE FACE OF THE BOX IS 12 INCHES BEHIND THE BACK OF CURB AND SET TO A HEIGHT OF 42 INCHES FROM THE TOP OF THE CURB AND TO THE BOTTOM OF THE BOX. THE POST SHOULD BE SET IN A HOLE 10 INCHES IN DIAMETER AND 30 INCHES DEEP.

CONCRETE SHOULD BE PLACED AROUND THE POST AND UP TO 6 INCHES FROM THE FINISHED SURFACE.

THE MATERIAL USED FOR THE POST SHALL BE A 4' X 4' PRESSURE TREATED POST OR 1 1/2" I.D. MINIMUM TO A 2" I.D. MAXIMUM STEEL OR ALUMINUM POST, MAXIMUM WALL THICKNESS 0.154'.

MAILBOX  
INSTALLATION

G:\ENGINEER\FORMS\MAILBOXINSTALLATION.DWG

**EXHIBIT NO.109  
MATERIALS LIST**

Date of revision: 1/1/16

**Water Distribution Material Specifications:**

Water main pipe.	Ductile Iron Pipe. Pipe class thickness—AWWA C150, minimum thickness, Class 52. Pipe—AWWA C151. Pipe lining—AWWA C104. Fittings—AWWA C153. Joints—mechanical and push-on, AWWA C111. Wrap—4 mil. X-Lam conforming to AWWA C105.A21.5 and AWWA C600. No 90 degree bends allowed. All stainless steel trim.
Valves.	American Flow Control, Series 2500 resilient wedge gate valve, All sizes two inch to fourteen inch, counter clockwise to open, AWWA C500., AWWA C504. Clow AWWA C-504 Butterfly Valve for sixteen inch and above. Joint end—mechanical, AWWA C111. All stainless steel trim.
Valve Vault.	All structures shall be monolithically precast with designed openings or mechanically cored in the field and shall have rubber boots conforming to ASTM C-923. Dog house vaults are excluded from these requirements when permitted by Village Engineer. Size: For six and eight inch diameter valves, valve vaults shall have a forty-eight inch inside diameter; for pressure connections and valves ten inches and larger in diameter, valve vaults shall have a sixty inch inside diameter. All valve vault cones must be eccentric centers with valve properly aligned.
Castings.	East Jordan Iron Works 1022 Frame and Lid or Neenah R-1713, embossed per Exhibit No. 401 of Buffalo Grove Numerical Code Title 16.
Fire Hydrant.	Waterous Pacer Model WB67-250, AWWA C502, painted fire engine red above ground, with resilient wedge auxiliary gate valve. Nozzles, two at two and one half inch, one at four and one half inch, with threads conforming to National Standard Specifications. Frangible section (breakaway type) with the break line flange located one inch above finished grade. Joint end, six inch, mechanical or push-on. All stainless steel trim. Auxiliary boxes and hydrants shall be a direct flange-to-flange connection.
Fire hydrant extension	Fire hydrant extensions and parts to be manufactured by Waterous only. All stainless steel trim.
Hydrant Valve Box \ Valve boxes	Hydrant Valve Box Tyler 664-S. Lid embossed "WATER." Rubber valve box stabilizer required.
Service Pipe.	Copper tube, two inches and smaller, ASTM B88, Type K (1" minimum). Ductile iron, larger than two inches. Conform to Water main section above. Service upgrade for existing water main requires a stainless steel tap repair clamp. Ford model FS1-CC, minimum length 15" long.
Corporation Stop.	Mueller H15000, 1" minimum, AWWA C800. 1" Direct tap or 1 1/4" and larger shall use Ford FC202 stainless steel band, epoxy coated saddle.
Curb Stop.	Copper service, Mueller H-15154. Ductile iron service, Resilient wedge counter clockwise to open, AWWA C500. Joint end—mechanical, AWWA C111.
Curb box	Copper service, Mueller H-10302. Ductile iron service, conform to Hydrant Valve Box section above. Ductile iron service, 6" and larger, conform to Valve Vault section above.
Copper to Copper Fittings	Mueller Company Model #H-15400. An all flared coupling is required, no sweat joint or compression allowed.
Pressure Connections	Ford FTSS style tapping sleeve. American Flow Control Series 2500 tapping valve four inch minimum. All stainless steel trim.

**Sanitary Sewer Material Specifications:**

Sewer and Service Connection Pipe	Reinforced concrete pipe—circular reinforcement, minimum Class 3, ASTM C76, with epoxy lining. PVC solid wall (SDR-26H) pipe—ASTM D-3034 for six to fifteen inches in diameter.
Sewer and Service Connection Pipe Joints.	Reinforced concrete pipe—ASTM C443. PVC solid wall (SDR-26H) pipe—ASTM D-3212 for six to eighteen inches in diameter.
Sewer and Service Connection Pipe Fittings	PVC solid wall (SDR-26H) pipe—ASTM D3034 for six to fifteen inches in diameter.
Casing Pipes.	Steel pipe—ASTM A120, three-eighths inch minimum thickness.
Manholes	Size: For sewer eighteen inch diameter or less, manhole shall have a forty-eight inch inside diameter. For sewer twenty-one inch to thirty-six inch diameter, manhole shall have a sixty inch inside diameter. For sewer greater than thirty-six inch diameter, manhole shall have an offset riser pipe of forty-eight inch inside diameter. All structures shall be monolithically precast including bases and invert flow lines.
Castings.	East Jordan Iron Works Frame 1022 or Neenah R-1713, with self-sealing lid and recessed pick hole, embossed per Exhibit No. 301 of Buffalo Grove Numerical Code Title 16.

**Storm Sewer System Material Specifications:**

Structures.	All structures shall be precast with designed openings or mechanically cored in the field.
Castings.	Closed Lid, East Jordan Iron Works 1022 or Neenah R-1713, embossed per Exhibit No. 201., Open Lid, East Jordan Iron Works 1022 or Neenah R-1713, Standard B4.12 or any other barrier curb, Type 11— East Jordan Iron Works 7210 or Neenah 3281-A or Neenah 3170 on existing structures where required. Box height must be 6” minimum with 5’ tapers to match curb height., Depressed barrier curb, Type M3 Grate, Yard inlet, Type 8— East Jordan Iron Works 6517 or Neenah R-4340-B
Sewer Pipe Joints.	Reinforced concrete pipe—ASTM C443 or C361. PVC solid wall (SDR-26H) pipe—ASTM D-3212 for six to eighteen inches in diameter.
Sump pump service connection pipe/sub surface drain pipe.	4” PVC solid wall sewer pipe SDR-35. Blind connections must be cored in storm sewer and pipe connection shall be made with a rubber boot and stainless steel band. Sump pump per Exhibit No. 202 of Buffalo Grove Numerical Code Title 16 and underdrain per Exhibit No. 203.

**Material Specifications For All Utilities:**

Bedding	CA-11, Class B or better. All stone shall be crushed; rounded aggregate will not be permitted. The stone shall be compacted to 90% modified proctor density as required by ASTM D1557 or AASHTO T-180. Recycled materials permitted from IDOT approved sources meeting the correct gradations.
Trench Backfill	CA-11, Class B or better. This item shall meet the requirements of Class B CA-11, per the IDOT Standard Specifications for Road and Bridge Construction. All stone shall be crushed; rounded aggregate will not be permitted. The stone shall be compacted to 95% modified proctor density as required by ASTM D1557 or AASHTO T-180. Jetting of trenches is not permitted. Recycled materials permitted from IDOT approved sources meeting the correct gradations.
Adjustments	No more than two precast concrete adjusting rings with six inch maximum height adjustment shall be allowed, minimum one 2” ring installed on new structures. All adjustment rings less than 2” shall be HDPE rings. Only one HDPE may be used within the precast tolerances. Only precast concrete or

	HDPE adjustment rings permitted. 1/2" x 3.5" mastic to be used between all frames, rings and structures. Mortar around rings, but none between. Bed of mortar can be used on cone or flat top of structure.
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**Miscellaneous Material Specifications:**

Detectable Warnings	East Jordan Iron Works or Neenah cast iron detectable warnings. Color shall be brick red.
Concrete	In accordance with IDOT Standard Specifications for Road and Bridge Construction
Asphalt	In accordance with IDOT Standard Specifications for Road and Bridge Construction and Section 16.50.070 of the Village of Buffalo Grove Municipal Code

\* The Village Engineer shall have the authority to approve the use of alternative materials than those specifically required by Exhibit 109 in the manner provided for in Title 16 of the Village of Buffalo Grove Numerical Code. The Village Engineer may approve alternative materials that are not specifically required by this title when:

1. The materials or their components required by this title are no longer manufactured and available for purchase; and
2. The alternative materials are generally consistent with requirements of this title, including but not limited to those standards relating to production, composition, safety and aesthetics.

**Testing Specifications:**

**(In addition to the requirements of IDOT's Standard Specifications for Road and Bridge Construction or the Standard Specifications for Water and Sewer Construction in Illinois)**

Storm Sewer	Cleaning and televising, with reporting, as directed by the Village Engineer
Sanitary Sewer	Cleaning and televising, with reporting, as directed by the Village Engineer

\*When conflicting information exists between the plans specifications and this exhibit number 109 the information listed in exhibit number 109 shall govern. All castings on a project or development shall come from a single manufacturer.

**APPENDIX B**  
**SCHEDULE OF QUANTITIES AND MAPS**



### Schedule of Sewer Lining

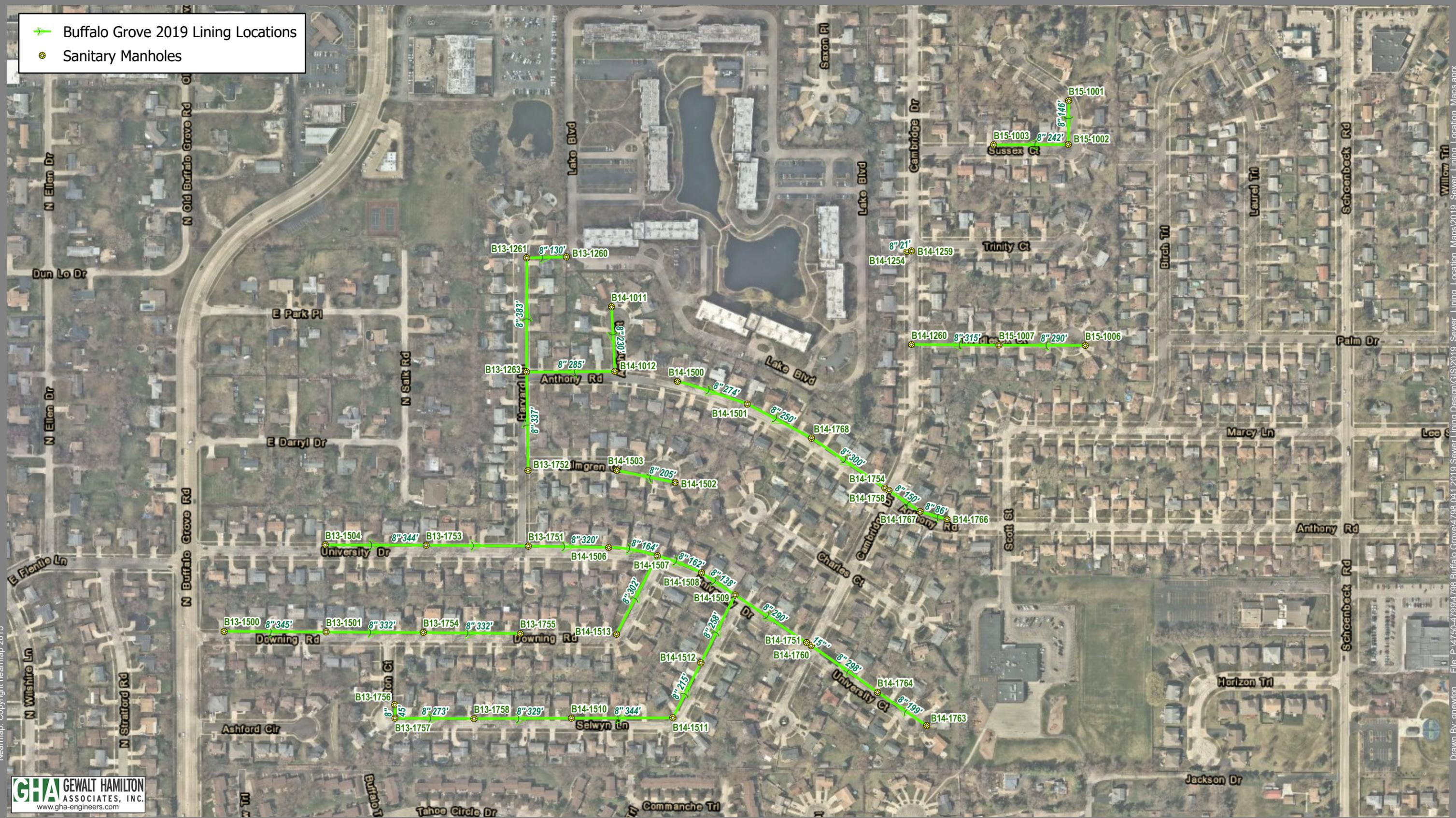
LOCATION	UPSTREAM MANHOLE	DOWNSTREAM MANHOLE	PIPE DIAMETER (INCH)	PIPE MATERIAL	SEGMENT LENGTH (FOOT)	NUMBER OF LIVE SERVICES	NUMBER OF PROTRUDING SERVICES
<b>BASE BID</b>							
Downing Road	B13-1500	B13-1501	8	VCP	353.0	10	1
Downing Road	B13-1501	B13-1754	8	VCP	335.0	9	1
Downing Road	B13-1754	B13-1755	8	VCP	332.0	10	2
Downing Road	B14-1513	B14-1507	8	VCP	295.0	5	
Eton Court	B13-1756	B13-1757	8	VCP	59.0	1	
Selwyn Lane	B13-1757	B13-1758	8	VCP	278.0	7	
Selwyn Lane	B13-1758	B14-1510	8	VCP	332.0	10	1
Selwyn Lane	B14-1510	B14-1511	8	VCP	347.0	10	1
Selwyn Lane	B14-1511	B14-1512	8	VCP	210.0	7	
Selwyn Lane	B14-1512	B14-1509	8	VCP	258.0	6	
University Drive	B13-1504	B13-1753	10	VCP	338.0	10	1
University Drive	B13-1753	B13-1751	10	VCP	348.0	9	1
University Drive	B13-1751	B14-1506	10	VCP	282.0	9	2
University Drive	B14-1506	B14-1507	8	VCP	164.0	5	
University Drive	B14-1507	B14-1508	8	VCP	164.0	4	
University Drive	B14-1508	B14-1509	8	VCP	140.0	3	
University Drive	B14-1509	B14-1751	8	VCP	293.0	4	
University Drive	B14-1751	B14-1760	8	VCP	21.0		
University Court	B14-1764	B14-1760	8	VCP	268.0	6	
University Court	B14-1763	B14-1764	8	VCP	195.0	9	1
Middlesex Court	B15-1007	B14-1260	8	VCP	295.0	6	
Middlesex Court	B15-1006	B15-1007	8	VCP	299.0	12	1
Trinity Court	B14-1259	B14-1254	8	VCP	21.0		
Sussex Court	B15-1002	B15-1003	8	VCP	258.0	9	1
Sussex Court	B15-1001	B15-1002	8	VCP	149.0	5	
Anthony Road	B14-1766	B14-1767	8	VCP	87.0	1	
Anthony Road	B14-1767	B14-1758	8	VCP	120.0		
Anthony Road	B14-1768	B14-1754	8	VCP	305.0	8	1
Anthony Road	B14-1501	B14-1768	8	VCP	243.0	8	1
Anthony Road	B14-1500	B14-1501	8	VCP	284.0	9	1
Anthony Road	B14-1012	B13-1263	8	VCP	292.0	8	1
Anthony Court	B14-1011	B14-1012	8	VCP	218.0	8	1
Harvard Lane	B13-1752	B13-1263	8	VCP	337.0	7	
Harvard Lane	B13-1263	B13-1261	8	VCP	378.0	11	2
Harvard Lane (Easement)	B12-1261	B13-1260	8	VCP	127.0		
Palmgren Court	B14-1502	B14-1503	8	VCP	216.0	10	1
<b>ALTERNATE 01</b>							
Chevy Chase (Easement)	E21-1257	E21-1755	8	VCP	271.0	2	
Chevy Chase (Easement)	E21-1760	E21-1755	8	VCP	199.0	1	
Chevy Chase (Easement)	E21-1753	E21-1760	8	VCP	180.0	2	
Chevy Chase (Easement)	E21-1764	E21-1753	8	VCP	353.0	2	
Chevy Chase (Easement)	E22-1507	E21-1764	8	VCP	116.0	1	
Chevy Chase (Easement)	E21-1257	E21-1758	8	VCP	295.0	6	



### Schedule of Sewer Lining

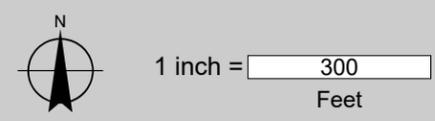
LOCATION	UPSTREAM MANHOLE	DOWNSTREAM MANHOLE	PIPE DIAMETER (INCH)	PIPE MATERIAL	SEGMENT LENGTH (FOOT)	NUMBER OF LIVE SERVICES	NUMBER OF PROTRUDING SERVICES
Chevy Chase (Easement)	E21-1007	E21-1758	10	VCP	127.0	2	
Chevy Chase (Easement)	E21-1758	E21-1501	8	VCP	123.0	4	
Chevy Chase (Easement)	E21-1501	E21-1757	8	VCP	125.0	2	
Chevy Chase (Easement)	E21-1755	E21-1756	8	VCP	288.0	4	
Chevy Chase (Easement)	E21-1756	E21-1757	8	VCP	108.0	1	
Chevy Chase	E21-1757	E21-1502	10	VCP	152.0	3	
Chevy Chase	E21-1502	E21-1503	10	VCP	203.0	1	
Chevy Chase (Easement)	E21-1764	E21-1759	8	VCP	335.0	10	2
Chevy Chase (Easement)	E21-1759	E21-1510	8	VCP	350.0	10	1
Chevy Chase (Easement)	E21-1510	E21-1511	8	VCP	76.0	3	
Chevy Chase (Easement)	E21-1511	E21-1506	8	VCP	324.0	4	
Chevy Chase (Easement)	E21-1753	E21-1754	8	VCP	269.0	8	1
Chevy Chase (Easement)	E21-1754	E21-1503	8	VCP	265.0	6	
Chevy Chase (Easement)	E21-1503	E21-1504	10	VCP	113.0	2	
Chevy Chase (Easement)	E21-1504	E21-1505	8	VCP	222.0	6	
Chevy Chase (Easement)	E21-1505	E21-1506	10	VCP	260.0	8	1
Chevy Chase (Easement)	E21-1506	E21-1507	10	VCP	182.0	3	
<b>ALTERNATE 02</b>							
Roberta Court	C13-1008	C13-1004	8	VCP	148.0	6	
Frances Court	D12-1511	C12-1005	8	VCP	240.0	8	1
Raupp Boulevard	D12-1501	D12-1502	8	ESVCP	344.0	9	1
Raupp Boulevard	D12-1502	D12-1503	8	ESVCP	378.0	12	2
Raupp Boulevard	D12-1503	D12-1504	12	ESVCP	244.0	5	
Raupp Boulevard	D12-1504	D12-1010	12	ESVCP	256.0	8	1
<b>GRAND TOTAL:</b>					<b>15,187.0</b>	<b>375.0</b>	<b>31.0</b>

- Buffalo Grove 2019 Lining Locations
- Sanitary Manholes



Nearmap: Copyright nearmap 2015

File: P:\4750-4799\4798 Buffalo Grove\4798.041 2019 Sewer Lining Design\GIS\2019\_Sewer\_Lining\_Location\_Maps\2019\_Sewer\_Lining\_Location\_Maps.aprx



**Base Bid: Subarea 01**  
 2019 Sewer Lining  
 Village of Buffalo Grove, Illinois



- Buffalo Grove 2019 Lining Locations
- Sanitary Manholes



Nearmap: Copyright nearmap 2015



Map Center: 87.96301°W 42.14753°N

## Alternate 02.: Subarea 03.

2019 Sewer Lining  
Village of Buffalo Grove, Illinois

Date: 6/17/2019 Project: 4798.041

File: P:\4750-4799\4798 Buffalo Grove\4798.041 2019 Sewer Lining Design\GIS\2019\_Sewer\_Lining\_Location\_Maps\2019\_Sewer\_Lining\_Location\_Maps.aprx

Drawn By: gnewton