

12-016.0-CIP

**Proposal
And
Contract Documents
for**

**2012 SANITARY SEWER
MANHOLE REHABILITATION**



CITY OF DUBLIN.

CITY OF DUBLIN, OHIO
ADVERTISEMENT, BID AND
CONTRACT DOCUMENTS
FOR
2012 SANITARY SEWER
MANHOLE REHABILITATION

NOT FOR BID – INFORMATION ONLY

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SECTION 1
BIDDING REQUIREMENTS

INVITATION TO BID

Sealed proposals will be received from qualified bidders by:

City of Dublin, Ohio
Division of Engineering
5800 Shier – Rings Road
Dublin, Ohio 43016

until **2:00 P.M.** local time on **WEDNESDAY SEPTEMBER 19, 2012**, at which time the sealed proposals will be opened by the City Engineer for the following project:

2012 SANITARY SEWER MANHOLE REHABILITATION

The estimated total cost for material and labor for the project is **\$375,000.00**.

The work includes:

Sanitary Sewer Manhole Rehabilitation

Service delivery shall be in accordance with contract documents.

Bidders shall submit with their proposals a bid guaranty in the form of either a bond that meets the requirements of Ohio Revised Code section 153.54 for the full amount of the bid or a certified check, cashier's check or letter of credit in an amount equal to ten percent (10%) of the bid. The surety shall name as payee or obligee the City of Dublin; and the surety must be authorized by the Ohio Department of Insurance to transact business in the State of Ohio, and must currently have an A.M. Best Company Policyholders Rating of "A" or better and has or exceeds the Best Financial Size Category of Class VII.

ODOT Pre-qualification

ODOT Pre-qualification is **NOT** required for this project.

General Specifications

The general specifications for the Project are the following (as all are in effect at time of awarding of the contract): These General Conditions are modified so that the City of Dublin replaces references to the City of Columbus or the Ohio Department of Transportation. To the extent conflicts exist between any documents they shall be resolved in favor of the City of Dublin documents, then the Columbus CMS, and then the ODOT CMS:

- 1). Sections 200 through 1000 of the *Construction and Material Specifications of the City of Columbus, Ohio current edition*, and
- 2). Item 109 and Sections 200 through 700 of the *Construction and Material Specifications of the State of Ohio Department of Transportation current edition*.
- 3.) *Section 100 Modified City of Dublin Construction and Materials Specifications of the City of Columbus, Ohio current edition*.

Copies of the *Construction and Material Specifications of the City of Columbus, Ohio* may be obtained from:

Director of Public Service
City of Columbus, Ohio
90 W. Broad Street, 3rd Floor
Columbus, Ohio 43215

Copies of the *Construction and Material Specifications of the State of Ohio Department of Transportation* may be obtained from:

Ohio Department of Transportation
Bureau of Contract Sales
P.O. Box 899
Columbus, Ohio 43216-0899

Copies of the *Modified City of Dublin Construction and Material Specifications of the City of Columbus, Ohio* may be obtained from:

City of Dublin
Engineering
5800 Shier-Rings Road
Dublin, Ohio 43016

Or the City of Dublin website: www.dublin.oh.us

Contract Documents

The contract documents will be available for examination 8:00 A.M. to 12:00 P.M. and 1:00 P.M. to 4:00 P.M. weekdays until the date of bid opening at:

City of Dublin, Ohio
Division of Engineering
5800 Shier – Rings Road
Dublin, Ohio 43016

and

F.W. Dodge Office
1175 Dublin Road
Columbus, Ohio 43215

For Transportation related construction projects, contractors pre-qualified with the Ohio Department of Transportation may obtain copies of the contract documents for bidding purposes, and all other persons may obtain copies of the contract documents for informational purposes only. Copies of the contract documents may be obtained upon request accompanied by a non-refundable deposit in the amount of **\$75.00** for each set of contract documents. Checks shall be made payable to "City of Dublin, Ohio." Paper copies can be purchased by non-refundable deposit or they are available by CD at no charge. Documents are also available online at <http://www.dublin.oh.us/business/bids>. When downloading bid documents from online you must register as a planholder to receive any addendums that may be issued.

The contract documents may be obtained from:

City of Dublin, Ohio
City Engineer
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016

Prevailing Wages

Bidders shall comply with Chapter 4115 of the Ohio Revised Code (Wages and Hours on Public Works). Bidders are responsible for verifying that the most current wage rates are utilized in their bids. The successful bidder is also responsible for any changes in the prevailing wage rates or classifications throughout its performance of work on the Project.

Bids and Attached Documents

Bidders shall submit their bids on the form of proposal provided by the City Engineer.

Each proposal shall be submitted in its entirety in a sealed envelope addressed to:

City Engineer
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016

Each sealed envelope containing a proposal shall be plainly marked on the outside as – “Bid for: 2012 SANITARY SEWER MANHOLE REHABILITATION. The envelope shall bear the name and address of the bidder.

If forwarded by mail, the sealed envelope containing the proposal must be enclosed in another envelope and the outside of the envelope must be addressed to and marked:

City Engineer
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016

BID FOR: 2012 SANITARY SEWER MANHOLE REHABILITATION

Bidders shall submit the following with their proposals:

1. Non-collusion Affidavit.
2. Bid Guaranty.
3. List of Subcontractors, including the name and address of the site work subcontractor.
4. Delinquent Personal Property Tax Affidavit.
5. Affidavit of Authority (if Bidder is a corporation).
7. Experience Record/References.
8. Power of Attorney (if Bidder is an out-of-state corporation).
9. Declaration Regarding Material Assistance / Nonassistance to a Terrorist Organization

The City of Dublin, Ohio reserves the right to reject any and all proposals and to waive any informalities or irregularities in the proposals.

All bids shall be irrevocable for sixty (60) days after the bid opening date.

Bidders may address inquiries to:

City Engineer
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016
Telephone: (614) 410-4600
The hearing impaired may
call V/TDD at (614) 410-4622

By order of the City Council of the City of Dublin, Ohio.
CITY OF DUBLIN, OHIO
Marsha I. Grigsby
City Manager

INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

Immediately notify the City Engineer upon finding discrepancies or omissions in the bidding documents.

Direct inquiries and questions to the City Engineer, 5800 Shier - Rings Road, Dublin, Ohio 43016.

1. Submit written request for clarification, correction or interpretation to the City not less than 7 days before the date for receipt of bids.
2. Modifications to the bidding documents will be issued as Addenda to the specifications and will become a part of the Contract.
3. No bidder shall rely on oral modifications or any other method of clarification, correction or interpretation of the bidding documents. Only modifications set forth in an Addendum will be binding.

INSTRUCTION TO BIDDERS

To be considered, bids must be submitted in accordance with these Instructions To Bidders.

PART 1 – GENERAL

General Information Notes

A. Definitions set forth in the Section 4 Supplemental Specifications, and Section 5 Standard Drawings, are applicable to these Instructions to Bidders.

B. Communications for the administration of the Contract shall be as set forth in the General Provisions and, in general, shall be through the City Engineer, Division of Engineering, 5800 Shier - Rings Road, Dublin, Ohio 43016; (614) 410-4600.

C. OWNER: City of Dublin
5800 Shier - Rings Road
Dublin, Ohio 43016
Phone: (614) 410-4600

D. PROJECT: 2012 SANITARY SEWER MANHOLE REHABILITATION
PROJECT NUMBER: 12-016.0-CIP

1.01 DOCUMENTS

A. Failure to Execute Contract Documents: In the event the bidder withdraws the bid, or fails to execute the Contract and furnish a satisfactory Contract Performance and Payment Bond within ten (10) days after a contract has been awarded to such bidder, the Owner may declare the bid guaranty forfeited to the Owner for extra costs incurred by reason of delay of the Project and obtaining acceptable prices from another bidder.

B. The Contractors are responsible for thoroughly reviewing the existing conditions, in order to determine exact scope related to the Contract Documents. The documents are schematic in nature, and do not represent all work required to complete the project. The Contractors must use their similar experiences and professional knowledge to determine the actual scope of work. No additional payment will be made to any Contractor who fails to familiarize themselves with the existing conditions and who requests a change in payment for something deemed within the design intent.

1.02 BIDDER'S EXAMINATION AND REPRESENTATION

A. Before submitting a bid, each bidder should carefully examine the documents and the construction site and inform itself with the limitations and conditions related to the Work covered by the bid, and shall include in this bid a sum to cover the cost of such items. Contractors will not be given extra compensation for conditions which could have been determined by examining the site and documents.

B. It is the purpose and intent of the Contract Documents, that a fully complete job be accomplished. It shall be each bidder's responsibility to include costs necessary to provide labor and materials for that portion of the Work bid upon, including incidentals, whether or not specifically called for in the Specifications and Drawings.

C. Each bidder, by making its bid, represents that it has read and understands the bidding documents.

D. Each bidder, by making its bid, represents that it has visited the site and familiarized itself with the local conditions under which the Work is to be performed.

E. Each bidder shall be responsible for coordinating work of its subcontractors.

1.03 QUALIFICATIONS OF BIDDERS

A. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform the Work, and the bidder shall furnish the Owner such data for this purpose as the Owner may request.

Determination of Lowest and Best Bid:

Subject to the right of the Owner to reject any or all bids, the Owner will award the Contract for the Work to the Bidder submitting the lowest and best bid for the project. The Owner, in its sole discretion, will determine whether a bid is best. In determining whether a bid or bidder is best, the Owner may consider the following criteria, and such other criteria as it determines proper.

a. The Bidder's work history. The Bidder should have a record of consistent customer satisfaction and of consistent and timely completion of projects which are comparable to or larger and more complex than the Owner's Projects. If the Bidder's management operates or has operated another construction company, the Owner may consider the work history of that company.

The Owner will consider the Bidder's prior experience on other projects of similar scope and complexity of the Owner, including the Bidder's demonstration of ability to complete its work on these projects in accordance with the Contract Documents and on time, and its ability to work with the Owner.

The Bidder authorizes the Owner and its representatives to contact the owners and design professionals on projects on which the Bidder has worked, and authorizes and requests such Owners and design professionals to provide the Owner with a candid evaluation of the Bidder's performance. By submitting its bid, the Bidder agrees that if it or any person at its urging, directly or indirectly, brings an action against any of such Owners or design professionals or their employees as a

result of or related to such bidder evaluation and such action is not successful, the Bidder will reimburse such Owners, design professionals and/or their employees for all legal fees and expenses incurred by them that are related to such legal action, including the cost of collection. This obligation is expressly intended for the benefit of such Owners, design professionals and their employees.

b. The Bidder's resources, including but not limited to the financial ability to complete the Project or Projects successfully and on time without resort to its Surety, and the experience, adequacy, and numbers of the Bidder's work force.

c. The Bidder's compliance with federal, state and local laws, rules and regulations, including but not limited to the Occupational Safety and Health Act.

d. The foregoing information with respect to each of the Subcontractors which the Contractor intends to use on the Project or Projects.

e. Depending upon the type of work, other essential factors, as the Owner may determine.

f. By submitting its Bid, the Bidder agrees that the Owner's determination of which Bidder is the lowest and best Bidder shall be final and conclusive, and that if the Bidder or any person on its behalf challenges such determination in any legal proceeding, the Bidder will indemnify and hold the Owner and its employees and agents harmless from any claims included or related to such legal proceeding, whether or not proven, and from legal fees and expenses incurred by the Owner, its employees, or agents that arise out of or are related to such challenge

1.04 CLARIFICATION OF BIDDER'S QUESTIONS

A. Bidders must submit all questions about the Drawings and Project Manual to the City Engineer in writing. Replies will be issued to all bidders of record as Addenda and will become part of the Contract Documents. The City Engineer will not be responsible for oral clarification. Questions received less than seven (7) days before the bid opening can not be answered.

B. Each bidder is responsible for calling to the attention of the City Engineer ambiguities, inconsistencies, discrepancies, errors, or omissions which occur in the Contract Documents. Failing to request clarification, the bidder will be expected to overcome such conditions without additions to its bid prices.

C. Prospective bidders in doubt as to the intent of a part of the Drawings, Specifications, or other Contract Documents shall submit to the City Engineer, not less than seven (7) days before closing time for bids, a written request for interpretation and clarification.

D. Bidders are instructed to request interpretations and the issuing of Addenda if the Contract Documents call for materials, equipment or methods which adversely affect the cost or quality of the project, or are unavailable.

1.05 APPROVAL BEFORE BIDDING

A. If a Contractor preparing bids for submission on the Work is in doubt as to the acceptability of a manufacturer's material or equipment, under the requirements set forth in the Specifications, the

Contractor shall require that representatives of the proposed manufacturer or supplier contact the City Engineer and request a ruling on the acceptability of the material or equipment in question. The contact shall be made in sufficient time, no later than seven (7) working days before the date scheduled for the closing of bids, so that an Addendum can be issued to clarify the situation.

B. Prior to receipt of bids, the City Engineer will consider Bids for substitution of materials, equipment, and methods only when such bids are submitted in writing at least ten (10) days before the date set for receipt of bids, and are accompanied by full and complete technical data and other information required by the City Engineer to evaluate the proposed substitution.

C. Requests for product approval shall be sent to the City Engineer.

D. Each bidder understands that past acceptance of products does not assure acceptance on this Projects. Products not specifically specified require requests for approval prior to bid due date. The burden of proof of a product's equality with what is specified lies with the bidder.

1.06 ADDENDA

A. The City Engineer will issue addenda to clarify bidders' questions, to change, alter, or supplement the Contract Documents.

B. The Owner reserves the right to issue addenda changing, altering, or supplementing the Contract Documents, prior to the time set for receiving bids.

C. A copy of the addenda will be either: mailed, e-mailed, faxed, or delivered to each bidder of record, and to each prospective bidder requesting a copy. Bidders who request and are sent documents by the City Engineer are considered "bidders of record." Copies of addenda will be available for inspection where the Contract Documents are on file for that purpose.

D. Bidders are responsible for acquiring each issued addenda in time to incorporate them into their bid. Bidders are encouraged to contact the City Engineer prior to the bid opening to verify the quantity of addenda issued.

E. Each bidder shall enumerate in its bid each addenda it has received.

F. If a bidder fails to indicate receipt of each addenda through the last addenda issued on its Bid Form, the bid of such Bidder may be accepted only if:

1. The bid received clearly indicates that the bidder received the addendum, such as where the addendum added another item to be bid upon and the bidder submitted a bid on that item; or

2. The addendum involves only a matter of form or is one which has either no effect or has merely a trivial or negligible effect on price, quantity, quality, or delivery of the item bid upon.

1.07 BIDDING PROCEDURES

- A. Bids shall be executed upon the Bid Form provided and all blank spaces in the form shall be filled. The signature shall be in longhand and the completed form shall be without interlineations, alteration, or erasure.
- B. A bid is invalid if it has deposited at the designated location after the time and date of receipt of bids indicated in the Invitation to Bid, or after extension thereof issued to the bidders.
- C. Telecommunicated bids will not be accepted.
- D. Bids which are not signed by the individuals making them shall have attached thereto a Power of Attorney evidencing authority to sign the bid in the name of the person for whom it is signed. Bids which are signed for a partnership shall be signed by the partners, or by an attorney-in-fact. If signed by an attorney-in-fact, there shall be attached to the bid a Power of Attorney evidencing authority to sign the bid, executed by the partners.
- E. Bids which are signed for a corporation shall have the authorized officer of the corporation manually written below the corporate name, following the word "By _____."
- F. Each bidder shall enumerate in its bid the addenda it has incorporated into its bid.
- G. It is the bidder's responsibility to include in its bid the costs necessary for a completed and finished job for items of Work bid upon.
- H. Submit one (1) copy of the Bid Form with all required enclosures properly and completely executed.
- I. Bids for Work shall not include the Ohio Sales Tax for materials to be incorporated into the Projects. The Owner will provide necessary tax exemption forms.
- J. The Bidder, in signing the Bid Form, acknowledges and represents to the Owner that it has not engaged in collusion with the intent to defraud with any person or entity in the preparation of its bid. The Owner reserves the right to disqualify Bids, before or after bid opening, upon evidence of collusion with intent to defraud or other illegal practices upon the part of the Bidder.

1.08 BID GUARANTY/BOND REQUIREMENTS

- A. Bonds and Guaranty
 - 1. The Bidder shall furnish a Bid Guaranty as prescribed in Ohio Revised Code section 153.54.
 - 2. The successful Bidder who submitted as a bid guaranty a certified check, cashier's check, or irrevocable letter of credit, shall furnish a Contract Performance and Payment Bond in the form included in the Contract Documents in an amount equal to 100% of the Contract Sum.

3. Premiums for the bonds shall be included in the bid amount and paid for by the Contractor.

4. All bonds shall be signed by an authorized agent of an acceptable surety bonding company and by the Bidder.

5. Surety bonding company bonds shall be supported by credentials showing the legal right of the bonding company to do business in the State of Ohio, and a financial statement of the Surety.

6. The name and address of the Surety and the name and address of the Surety's agent should be typed or printed on each bond.

1.09 IDENTIFICATION AND SUBMISSION OF BID

A. Submit Bid, Bond and other required documents in an opaque, sealed envelope, containing the full information and addressed to:

1. City Engineer
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016
2. Name of Bidder
3. Project Number(s)
4. Date and time of opening of bids.

1.10 DISQUALIFICATION

A. The Owner reserves the right to reject each and every bid, to waive informalities and irregularities in bidding, to accept and reject alternatives.

B. The right is reserved to reject any bid where an investigation of the available evidence of information does not satisfy the Owner that the bidder is qualified to properly carry out the terms of the Contract Documents.

C. Bids which contain qualifications or conditions that are contrary to the text or intent of the Contract Documents, and which are inserted in the bid for purposes of limiting or otherwise qualifying the responsibility of the bidder, outside the text or intent of the Contract Documents, will be subject to disqualification.

D. Failure to submit the requested information with the bid may be grounds for rejecting the bid.

E. The Owner also reserves the right to reject the bid of a bidder who has previously failed to perform or to complete Contracts of a similar nature on time, who is not in a position to perform the Contract, or who has, without just cause, neglected the payment of bills or otherwise disregarded its obligations to subcontractors, material suppliers, or employees.

F. The Bidder acknowledges the right of the Owner to reject each and every bid and to waive informalities and irregularities in bids received. In addition, the Bidder recognizes the right of the Owner to reject a bid if the bidder failed to submit data required by the bid documents, or if the bid is incomplete or irregular.

1.11 OWNER'S DETERMINATION OF LOWEST AND BEST BID

A. Subject to the right of the Owner to reject each and every bid, the Owner will award the Contract(s) for the Work to the bidder submitting the lowest and best bid that is judged to be in the best interest of the Owner to accept.

B. A Contract shall be considered to be awarded when the Bidder receives a Notice of Intent to Award from the City Engineer, which represents the Owner's authorization to give such notice.

1.12 EXECUTION OF THE AGREEMENT

A. A Contractor receiving an award will be required to furnish and execute the following within ten (10) business days after the Agreement is presented for signature.

1. The Agreement form.
2. The Performance and Payment bond, unless the Bidder submitted a bid guaranty and performance bond with its bid.
3. The insurance requirements specified in the Contract Documents.
4. Within ten (10) business days after execution of the Agreement, the awarding Contractor shall provide a Schedule of Values to the City Engineer for application of progress payments.
5. Schedule for completion of the work by the Substantial Completion Date.
6. Schedule for submittals for all components of the Work.

1.13 TIME OF COMMENCEMENT AND COMPLETION

A. Time is of the essence for completion of all Projects. The Contractor shall commence the Work within ten (10) calendar days after the effective date of the Contract, or when notified in writing to proceed, and shall complete the Work within the time limitations established in the Agreement.

PREVAILING WAGE RATE DISK

SECTION 2
BIDDING FORMS

PROPOSAL

2012 SANITARY SEWER MANHOLE REHABILITATION

In conformity with the Plans and Specifications prepared by the City of Dublin, and after an examination of the site(s) and the Bidding and Contract Documents, the undersigned submits this bid and agrees:

1. To hold my Bid(s) open for 60 days after opening the Bids.
2. To accept the provisions in the Instructions to Bidders relating to the submission of bids and the bid guaranty.
3. To enter into and execute a Contract, if awarded on the basis of this Bid, and to furnish a performance and payment bond in accordance with the Instructions to Bidders.
4. To submit Certificates of Insurance for the coverage specified.
5. To accomplish the Work in accordance with the Contract Documents.

It is hereby certified that the undersigned is the only person(s) interested in this Bid as principal, and that the Bid is made without collusion with any person, firm or corporation.

Bidder guarantees that, if awarded the Contract, it will furnish and deliver all materials, tools, equipment, transportation, do and perform all labor, and all means of construction, and to execute, construct and finish, in an expeditious, substantial and workmanlike manner, and in accordance with the plans and specifications, to the complete satisfaction and acceptance of the Owner, for the Work of this Contract.

It is understood that the Owner, reserves the right to reject any or all Bids, or part thereof, and to waive technicalities required for the best interest of the Owner.

Bidder submits this Bid with the understanding that all work shall be substantially complete per the Construction Schedule approved by the City Engineer. Time for completion of the Work shall be considered as of the essence of the Contract. Failure to complete the Work by the date of substantial completion may result in the assessment of liquidated damages in accordance with the Contract Documents.

Bid of:
(Name) _____

(Address) _____

(Telephone) _____

(Contact person) _____

_____ (the "Bidder") submits this Proposal having read and examined the contract documents, including but not limited to the Invitation to Bid; the City of Dublin, Ohio

Addenda Number

Date of Receipt

The Bidder proposes to perform all work in accordance with the contract documents for the following sum:

Total Bid (in figures): \$ _____

Total Bid (in words): \$ _____

In the event of a discrepancy between the amount of the total bid as written in figures and in words, the amount written in words shall govern.

Unless otherwise specified in the Bid Document the amount of the total bid is based on the unit prices or lump sum set forth in the Bid Schedule attached hereto and incorporated herein.

The Bidder understands and agrees that delivery under the Agreement for **2012 SANITARY SEWER MANHOLE REHABILITATION** shall be complete by **MAY 15, 2013**, or as specified in bid documents unless an extension of time is granted by the City Engineer.

Upon failure to have all work completed within the project time, the City of Dublin, Ohio shall be entitled to retain or recover from the Bidder, as liquidated damages, and not as a penalty, the amounts set forth in the following table for each and every calendar day until completion. The right of the City of Dublin, Ohio to recover liquidated damages shall not substitute for any recovery for additional costs in the event the Bidder fails to complete the Agreement for **2012 SANITARY SEWER MANHOLE REHABILITATION** according to the contract documents.

Liquidated Damages:

<u>Contract Amount</u>	<u>Dollars Per Day</u>
\$0-25,000	\$ 100.00
25,001-50,000	150.00
50,001-100,000	200.00
100,001-500,000	300.00
500,001-1,000,000	500.00
1,000,001-2,000,000	750.00
2,000,001-5,000,000	1,000.00
5,000,001-10,000,000	1,500.00
Over \$10,000,001	2,000.00

REPRESENTATIONS OF THE BIDDER

The Bidder represents the following:

1. The Bidder has read and understands the contract documents and understands that it must comply with all requirements of the contract documents, regardless of whether the Bidder has actual knowledge of the requirements and regardless of any statement or omission made by the Bidder which might indicate a contrary intention.
2. The Proposal is based upon the items specified by the contract documents.
3. The Bidder has visited the site, become familiar with local conditions, and has correlated personal observations about the requirements of the contract documents. The Bidder has no outstanding questions regarding the interpretation of the contract documents.

4. The Bidder has submitted the following in connection with this Proposal and the information contained therein is complete and accurate:
 - a. Non-collusion Affidavit.
 - b. Bid Guaranty.
 - c. List of Subcontractors.
 - d. Delinquent Personal Property Tax Affidavit.
 - e. Affidavit of Authority (if Bidder is a corporation).
 - g. Experience Record/References.
 - h. Power of Attorney (if Bidder is an out-of-state corporation).
 - i. Declaration Regarding Material Assistance / Nonassistance to a Terrorist Organization.

5. The Bidder understands that the Agreement for 2012 SANITARY SEWER MANHOLE REHABILITATION is subject to all of the provisions, duties, obligations, remedies and penalties of Ohio Revised Code.

6. Within ten (10) business days from the date of receipt the Notice of Intent to Award, the Bidder understands that it must enter into and execute an Agreement for 2012 SANITARY SEWER MANHOLE REHABILITATION with the City of Dublin, Ohio if awarded on the basis of this Proposal. If the Bidder does not execute an Agreement for 2012 SANITARY SEWER MANHOLE REHABILITATION for any reason, the Bidder and the Bidder's surety shall be liable to the City of Dublin, Ohio as provided in Ohio Revised Code Section 153.54.

7. Within ten (10) business days of the date of receipt of the Notice of Intent to Award, the Bidder understands that it must submit the following:
 - a. Performance and Payment Bond - if not using combination bond.
 - b. Certificate of Insurance and a copy of Additional Insured Endorsement.
 - c. Certificate of Compliance with Affirmative Action.

8. The Bidder understands that it must furnish any other information requested by the City Engineer.

The Bidder hereby signs this Proposal on the ____ day of _____, 2012.

If Bidder is an individual, complete the following:

Signature: _____

Print Name: _____

Name of Business: _____
(if different than above)

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

If Bidder is a partnership, complete the following:

Name of Partnership: _____

By: _____
(Signature)

Print Name: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

Names and Addresses of all general partners:

If Bidder is a joint venture, complete the following:

Name of Joint Venture: _____

By: _____
(Signature)

Print Name: _____

Address: _____

Telephone: () _____

Fax: () _____

Complete the following for each firm represented by the joint venture:

1. Name: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

2. Name: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

If Bidder is a corporation, complete the following:

Name of Corporation: _____

By: _____

(Signature)

Print Name: _____

Title: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

State of Incorporation: _____

Names and addresses of Corporate Officers:

If Bidder is an entity other than those described above, complete the following:

Name of Bidder:

By: _____
(Signature)

Print Name: _____

Title: _____

Federal Identification Number: _____

Address: _____

Telephone: () _____

Fax: () _____

Type of Business Entity: _____

Names and addresses of all Principals:

BID SCHEDULE

**2012 Sanitary Sewer Manhole
Rehabilitation
12-016-CIP**

**CITY OF
DUBLIN**

BIDDER agrees to perform all work described in the CONTRACT DOCUMENTS for the following unit prices:

(8)
(3) x (7)

REF NO.	(1) ITEM	(2) DESCRIPTION	(3) QUANT.	(4) UNIT	(5) LABOR (\$)	(6) MATERIAL (\$)	(7) (5)+(6) TOTAL (\$)	(8) (3) x (7) TOTAL EXTENDED INFORMAL PRICE (\$)
		GENERAL						
1	614	Maintaining Traffic	1	L.S.				
2	SS-3	15-inch, Bypass Pumping	1	L.S.				
3	SS-3	36-inch, Bypass Pumping	1	L.S.				
4	SS-10	Replace Manhole Frame and Cover	15	EA.				
5	604	Manhole Adjusted to Grade	2	EA.				
6	604	Manhole Reconstructed to Grade	17	EA.				
7	SS-10	Cementitious MH Rehabilitation	1,138	VF				
8	SS-10	Cementitious MH Rehabilitation, Total Vertical Length < 100 VF, as Directed by Engineer	25	VF				
9	SS-10	Cementitious MH Rehabilitation, Total Vertical Length > 100 VF, as Directed by Engineer	120	VF				
					GENERAL SUBTOTAL =			
						BASE BID (REF. #'s 1 - 9) =		
		* DENOTES ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION). ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.						
		SUBMITTED: (COMPANY)						

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COMBINED BID BOND AND PERFORMANCE BOND

2012 SANITARY SEWER MANHOLE REHABILITATION

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned

(the "Principal") and _____
(the "Surety") are hereby held and firmly bound unto the City of Dublin, Ohio ("Dublin") as obligee in the penal sum of the dollar amount of the bid submitted by the Principal to Dublin on _____, 2012 to undertake the project known as:

2012 SANITARY SEWER MANHOLE REHABILITATION

The penal sum referred to herein shall be the dollar amount of the Principal's bid to Dublin, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to Dublin, which are accepted by Dublin. In no case shall the penal sum exceed the amount of:

dollars (\$_____). (If the foregoing blank is not filled in, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if the blank is filled in, the amount stated must not be less than the full amount of the bid including alternates, in dollars and cents. A percentage is not acceptable.)

For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal has submitted a bid for 2012 SANITARY SEWER MANHOLE REHABILITATION.

NOW, THEREFORE, if Dublin accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to Dublin the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid and such larger amount for which Dublin may in good faith contract with the next lowest bidder to perform the work covered by the bid, or in the event Dublin does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal will pay Dublin the difference not to exceed ten percent (10%) of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if Dublin accepts the bid of the Principal and the Principal within ten days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein.

NOW ALSO, if the Principal shall well and faithfully do and perform the things agreed by Principal to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, material men, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any material man or laborer having a just claim, as well as for Dublin herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of the Surety on the Surety's bond, and the Surety does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the plans or specifications.

Signed this _____ day of _____, 2012

PRINCIPAL:

By: _____
(Signature)

Print Name: _____

Title: _____

Address:

Telephone: () _____

SURETY:

By: _____
(Signature)

Print Name: _____

Title: _____

Address:

Telephone: () _____

SURETY AGENT:

By: _____
(Signature)

Print Name: _____

Title: _____

Address:

Telephone: () _____

DELINQUENT PERSONAL PROPERTY TAX AFFIDAVIT

2012 SANITARY SEWER MANHOLE REHABILITATION

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant),
_____ (Title) of _____ (the "Bidder"), after
being cautioned and sworn, represent to the City of Dublin, Ohio, the following: (check the appropriate
statement)

At the time the Proposal was submitted, the Bidder was not charged with delinquent
personal property taxes on the General Tax Lists of Personal Property of a county in
which the City of Dublin, Ohio has territory (Franklin, Delaware, and Union Counties).

OR

At the time the Proposal was submitted, the Bidder was charged with delinquent
personal property taxes on the General Tax Lists of Personal Property of a county in
which the City of Dublin, Ohio has territory (Franklin, Delaware, and Union Counties)
and that the amounts of such due and unpaid delinquent taxes, including due and unpaid
penalties and interest, are set forth below:

<u>Taxes:</u>	<u>Penalties and Interest:</u>	<u>Counties:</u>
\$ _____	\$ _____	_____
\$ _____	\$ _____	_____
\$ _____	\$ _____	_____

(Signature of Affiant)

(Print Name)

Sworn to and subscribed before me this ____ day of _____ 2012.

Notary Public

NON-COLLUSION AFFIDAVIT

2012 SANITARY SEWER MANHOLE REHABILITATION

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant),
_____ (Title) of _____ (the
"Bidder"), after being cautioned and sworn, represent to the City of Dublin, Ohio the following:

1. The bid price contained in the Bidder's Proposal for the Project has been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to such bid price with any other bidder or third party.
2. Unless otherwise required by law, neither the bid price nor the Proposal has been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other bidder or to any third party that would have any interest in the bid price.
3. No attempt has been made or will be made by the Bidder to induce any other individual, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

(Signature of Affiant)

(Print Name)

Sworn to and subscribed before me this ___ day of _____, 2012.

Notary Public

AFFIDAVIT OF AUTHORITY

2012 SANITARY SEWER MANHOLE REHABILITATION

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant), after being cautioned and sworn, state the following:

1. I am the Secretary of _____ (the "Company"), a corporation organized and existing under the laws of the State of _____.
2. I am familiar with the records of the Company.
3. _____ (name of officer) is authorized to sign the Proposal and to execute a contract on behalf of the Company for the above-referenced project.

(Signature of Affiant)

(Print Name)

Sworn to and subscribed before me this _____ day of _____, 2012.

Notary Public

***** FOR INSTRUCTIONAL USE ONLY *****

READ BEFORE COMPLETING YOUR DMA FORM

Forms not conforming to the specifications listed below or not submitted to the appropriate agency or office will not be processed.

- To complete this form, you will need a copy of the Terrorist Exclusion List for reference. The Terrorist Exclusion List can be found on the Ohio Homeland Security Web site at the following address:

<http://www.homelandsecurity.ohio.gov/dma/dma.asp>

- Be sure you have the correct DMA form. If you are applying for a state issued license, permit, certification or registration, the "State Issued License" DMA form must be completed (HLS 0036). If you are applying for employment with a government entity, the "Public Employment" DMA form must be completed (HLS 0037). If you are obtaining a contract to conduct business with or receive funding from a government entity, the "Government Business and Funding Contracts" DMA form must be completed (HLS 0038).
- Your DMA form is to be submitted to the issuing agency or entity. "Issuing agency or entity" means the government agency or office that has requested the form from you or the government agency or office to which you are applying for a license, employment or a business contract. For example, if you are seeking a business contract with the Ohio Department of Commerce's Division of Financial Institutions, then the form needs to be submitted to the Department of Commerce's Division of Financial Institutions. Do NOT send the form to the Ohio Department of Public Safety UNLESS you are seeking a license from or employment or business contract with one of its eight divisions listed below.

- Department of Public Safety Divisions:

Administration	Ohio Homeland Security*
Ohio Bureau of Motor Vehicles	Ohio Investigative Unit
Ohio Emergency Management Agency	Ohio Criminal Justice Services
Ohio Emergency Medical Services	Ohio State Highway Patrol

- * DO NOT SEND THE FORM TO OHIO HOMELAND SECURITY UNLESS OTHERWISE DIRECTED. FORMS SENT TO THE WRONG AGENCY OR ENTITY WILL NOT BE PROCESSED.

***** FOR INSTRUCTIONAL USE ONLY *****



GOVERNMENT BUSINESS AND FUNDING CONTRACTS

In accordance with section 2909.33 of the Ohio Revised Code

DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE TO A TERRORIST ORGANIZATION

This form serves as a declaration by an applicant for a government contract or funding of material assistance/nonassistance to an organization on the U.S. Department of State Terrorist Exclusion List ("TEL"). Please see the Ohio Homeland Security Division Web site for a copy of the TEL.

Any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided. Failure to disclose the provision of material assistance to such an organization or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree.

For the purposes of this declaration, "material support or resources" means currency, payment instruments, other financial securities, funds, transfer of funds, financial services, communications, lodging, training, safe houses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel, transportation, and other physical assets, except medicine or religious materials.

COMPLETE THIS SECTION ONLY IF YOU ARE AN INDEPENDENT CONTRACTOR

LAST NAME		FIRST NAME		MI
HOME ADDRESS				
CITY	STATE	ZIP	COUNTY	
HOME PHONE		WORK PHONE		

COMPLETE THIS SECTION ONLY IF YOU ARE A COMPANY, BUSINESS OR ORGANIZATION

BUSINESS/ORGANIZATION NAME			PHONE	
BUSINESS ADDRESS				
CITY	STATE	ZIP	COUNTY	
BUSINESS/ORGANIZATION REPRESENTATIVE NAME			TITLE	

DECLARATION

In accordance with section 2909.32 (A)(2)(b) of the Ohio Revised Code

For each question, indicate either "yes," or "no" in the space provided. Responses must be truthful to the best of your knowledge.

- Are you a member of an organization on the U.S. Department of State Terrorist Exclusion List? Yes No
- Have you used any position of prominence you have with any country to persuade others to support an organization on the U.S. Department of State Terrorist Exclusion List? Yes No
- Have you knowingly solicited funds or other things of value for an organization on the U.S. Department of State Terrorist Exclusion List? Yes No
- Have you solicited any individual for membership in an organization on the U.S. Department of State Terrorist Exclusion List? Yes No
- Have you committed an act that you know, or reasonably should have known, affords "material support or resources" to an organization on the U.S. Department of State Terrorist Exclusion List? Yes No
- Have you hired or compensated a person you knew to be a member of an organization on the U.S. Department of State Terrorist Exclusion List, or a person you knew to be engaged in planning, assisting, or carrying out an act of terrorism? Yes No

If an applicant is prohibited from receiving a government contract or funding due to a positive indication on this form, the applicant may request the Ohio Department of Public Safety to review the prohibition. Please see the Ohio Homeland Security Web site for information on how to file a request for review.

CERTIFICATION

I hereby certify that the answers I have made to all of the questions on this declaration are true to the best of my knowledge. I understand that if this declaration is not completed in its entirety, it will not be processed and I will be automatically disqualified. I understand that I am responsible for the correctness of this declaration. I understand that failure to disclose the provision of material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List, or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree. I understand that any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided by myself or my organization. If I am signing this on behalf of a company, business or organization, I hereby acknowledge that I have the authority to make this certification on behalf of the company, business or organization referenced on page 1 of this declaration.

APPLICANT SIGNATURE X	DATE
--------------------------	------

LIST OF SUBCONTRACTORS

2012 SANITARY SEWER MANHOLE REHABILITATION

NOTE: The bidder must perform at least 50% of the total contract cost with its own forces.

Complete the following information for all subcontractors, which will be employed on the Project.

1. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work
Subcontractor to Provide: _____

Approximate Percentage of the Contract
Cost to be Performed by Subcontractor: _____

Experience Record: _____

2. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work
Subcontractor to Provide: _____

Approximate Percentage of the Contract
Cost to be performed by Subcontractor: _____

Experience Record: _____

3. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work
Subcontractor to Provide: _____

Approximate Percentage of the Contract
Cost to be performed by Subcontractor: _____

Experience Record: _____

4. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work
Subcontractor to Provide: _____

Approximate Percentage of the Contract
Cost to be performed by Subcontractor: _____

Experience Record: _____

5. Name of Subcontractor: _____

Federal Identification Number: _____

Address: _____

Type of Work
Subcontractor to Provide: _____

Approximate Percentage of the Contract
Cost to be performed by Subcontractor: _____

Experience Record: _____

CONTRACTOR STATEMENT OF QUALIFICATIONS
2012 SANITARY SEWER MANHOLE REHABILITATION

NOTE: Bids from contractors inexperienced in this particular type of work will not be considered.

Complete the following information with respect to previous purchasers.

1. Name of Person to Contact for Reference: _____

Address: _____

Phone: () _____

2. Name of Person to Contact for Reference: _____

Address: _____

Phone: () _____

3. Name of Person to Contact for Reference: _____

Address: _____

Phone: () _____

SECTION 3
CONTRACT FORMS

NOTICE OF INTENT TO AWARD

2012 SANITARY SEWER MANHOLE REHABILITATION

To: _____

You are hereby notified that the City of Dublin, Ohio has accepted the Proposal submitted by you on _____, 2012 in response to the Invitation to Bid for the above-referenced project.

Within ten (10) business days from the date of receipt of this Notice of Award, you are required to:

1. Execute an Agreement for Construction.
2. Submit a Performance Bond.
3. Submit a Certificate of Insurance and a copy of an Additional Insured Endorsement.
4. Submit an Affirmative Action Certificate of Compliance.

If you fail to execute the Agreement for **2012 SANITARY SEWER MANHOLE REHABILITATION** or provide the required submittals within ten (10) business days from the date of receipt of this Notice of Intent to Award, you or your surety shall be liable to the City of Dublin, Ohio as provided in Ohio Revised Code Section 153.54 and the City of Dublin, Ohio may award the contract to the next lowest and best bidder.

You are required to prepare and submit a progress schedule prior to the pre-construction conference to be held on at OCTOBER 18, 2012 AT 2:00 P.M. at City of Dublin, Ohio, Division of Engineering , 2nd Floor General Meeting Room, 5800 Shier - Rings Road, Dublin, Ohio 43016.

Return an acknowledged copy of this Notice of Intent to Award to:

City of Dublin
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016

CITY OF DUBLIN, OHIO

Date: _____

By: _____

Paul A. Hammersmith, P.E.
Director of Engineering/City Engineer

RECEIPT OF NOTICE OF INTENT TO AWARD

Receipt of this Notice of Intent to Award is hereby acknowledged this ____ day
of _____, 2012.

Company Name: _____

Signature: _____

Print Name: _____

Title: _____

**STANDARD AGREEMENT
CITY OF DUBLIN, OHIO**

This Agreement is entered into this ____ day of _____, 2012, by and between the City of Dublin, Ohio (**DUBLIN**), the Owner, located at 5200 Emerald Parkway, Dublin, Ohio 43017, and the

SERVICE PROVIDER

Company _____

Address _____

City _____ State _____ Zip _____

FOR THE FOLLOWING:

2012 SANITARY SEWER MANHOLE REHABILITATION

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES. CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS EXECUTION, COMPLETION AND MODIFICATION.

AGREEMENT FOR CONSTRUCTION

This Agreement for Construction (the "Agreement") is entered into by and between the City of Dublin, Ohio ("Dublin") and _____ (the "Contractor") whose business address is _____.

Dublin and the Contractor, in consideration of the mutual promises herein contained, agree as follows:

Section 1. The Work.

The Contractor shall perform the work described in the contract documents and reasonably inferable by the Contractor as necessary to produce the results intended by the contract documents, for the following project:

2012 SANITARY SEWER MANHOLE REHABILITATION

Section 2. Contract Price and Payments.

- 2.1. Dublin shall pay the Contractor for performance of this Agreement, subject to additions and deductions as provided in the contract documents, the amount of \$ _____ (\$ _____) (the "Contract Price"), based upon the Proposal dated _____, 2012 submitted by the Contractor.
- 2.2. The Contract Price shall be paid by Dublin upon payment requests issued by the Contractor and approved by the Engineer as provided in the contract documents. Payment made in accordance with Item 109 of 2010 ODOT CMS.
- 2.3. The Service had the following identification number for tax purposes: _____ - _____.

Section 3. Time of Performance.

- 3.1. The Contractor shall diligently prosecute the work and complete all work by **MAY 15, 2013** (the "Completion Date") following receipt of the Notice to Proceed, unless an extension of time is granted by the City Engineer.
- 3.2. If the Contractor shall fail to complete the work within the Completion Date, Dublin shall be entitled to retain or recover from the Contractor, as liquidated damages, and not as a penalty, the amounts set forth on page 2-4 of this document. The amount of liquidated damages is agreed upon by and between the Contractor and Dublin because of the impracticality and extreme difficulty of ascertaining the actual amount of damage Dublin would sustain.
- 3.3. Dublin's right to recover liquidated damages shall not substitute for any right of recovery for additional costs incurred should the Contractor fail to complete the work.

Section 4. Prevailing Wages.

Contractor and its subcontractors shall comply with Chapter 4115 of the Ohio Revised Code (Prevailing Wages and Hours on Public Works). Contractors are responsible for verifying that the most current wage rates are utilized in their bids. The contractor is also responsible for any changes in the prevailing wage rates or classifications throughout its performance of work on the Project.

Section 5. Income Tax Withholding.

The Contractor agrees to withhold all municipal income taxes due or payable pursuant to the provisions of the Codified Ordinances of the City of Dublin, Ohio, for wages, salaries and commissions paid to its employees and further agrees that all of its subcontractors shall be required to agree to withhold any such income taxes due pursuant to the Codified Ordinance of the City of Dublin, Ohio for the work performed pursuant to this Contract.

Section 6. Indemnification and Hold Harmless.

To the extent permitted by law the Contractor shall indemnify and hold harmless Dublin and its officers, agents, and employees from and against all claims, damages, losses, and expenses arising out of or resulting from the performance of the work under this Contract, provided that any such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom, and is caused in whole or in part by any negligent or willful act or omission of the Contractor and/or its subcontractors or any one directly employed by any of them, or anyone for whose act any of them may be liable. The Contractor shall, at its own expense, defend Dublin in all litigation, and shall pay all attorneys' fees and costs, arising out of the litigation of the claim. The indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any of its subcontractors under the Workers' Compensation, disability or other employee acts. All indemnity obligations set forth in this Agreement shall survive the termination of this Agreement or the completion of the Contractor's work.

Section 7. Discrimination and Intimidation.

- 7.1.** In the hiring of employees for the performance of the work under this contract or any subcontract, the Contractor and all persons acting on its behalf, shall not, by reason of race, creed, sex, handicap, or color, discriminate against any person in the employment of labor or workers who are qualified and available to perform the work to which the employment relates.
- 7.2.** The Contractor and all persons acting on its behalf shall not, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, sex, handicap, or color.

- 7.3. The Contractor shall fully comply with any and all policies and procedures of Dublin relating to discrimination and intimidation and any other applicable laws or regulations relating thereto.
- 7.4. In the event of any breach of the provisions of this Section against discrimination, the following shall apply:
 - 7.4.1 There shall be deducted from the amount payable to the Contractor for a forfeiture of Twenty Five Dollars and No Cents (\$25.00) for each person who is discriminated against or intimidated in violation of this Section.
 - 7.4.2 The Agreement shall be canceled or terminated and all money to become due hereunder shall be forfeited for a second or subsequent violation of the terms of this Section.

Section 8. Insurance.

- 8.1 Contractor shall provide the insurance required and meet the requirements set forth in Section 107.12 of the 2010 Ohio Department of Transportation's Construction and Material Specifications, and name Dublin, its officers, agents and employees as additional insureds.
- 8.2 Contractor on behalf of itself, its insurers, successors and assigns does hereby waive any and all rights of subrogation against Dublin, its officers, agents and employees relating to or arising from any loss or damage which is within any insurance coverage of Contractor, regardless of whether a claim has been submitted to or denied by the insurer.

Section 9. Dispute Resolution.

- 9.1. If a dispute arises out of, or relates to this Agreement or the alleged breach thereof, the parties shall attempt to settle the dispute first through direct discussions by and between the parties' respective Project Managers or principals.
- 9.2. In the event that a dispute is not resolved as set forth above, Dublin shall have the right in its sole and exclusive discretion, to elect whether the dispute will then be decided by arbitration or litigation. In the event that Dublin should elect to resolve the dispute through arbitration Dublin shall so notify Contractor in writing. The parties will then meet or confer to reach agreement on an arbitrator. The arbitration shall be conducted in general conformity with the Construction Industry Rules of the American Arbitration Association, however, the American Arbitration Association shall not administer the arbitration. The locale of any arbitration hearing shall be Dublin, Ohio. Any award rendered in arbitration shall be final and binding upon the parties and may be enforced in any court of competent jurisdiction in Franklin County, Ohio. The costs of the arbitration shall be shared equally by the parties.

- 9.3. In the event Dublin elects to resolve the dispute through litigation, jurisdiction thereof shall reside exclusively with the Court of Common Pleas of Franklin County, Ohio.
- 9.4. Contractor shall carry on the work and maintain the project schedule pending final resolution of a claim unless the Agreement has been terminated or the work suspended. If Contractor is continuing to perform in accordance with the Agreement, Dublin shall continue to make payments for undisputed work as required by the Agreement.

Section 10. General.

- 10.1 The contract documents shall embody the entire understanding of the parties and form the basis of the agreement between Dublin and the Contractor. The contract documents include the Invitation to Bid, the Contractor's bid proposal, affidavits, contract forms and performance and payment bond, special provisions; general and detailed plans; notices to the Contractor, any change orders and supplemental agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions to the completion date, supplemental specifications, and the current edition of Sections 100 through 1000 of the Construction and Material Specifications of the City of Columbus (Col-CMS), and the 2010 edition of Sections 200 through 700 of Construction and Material Specifications of the Ohio Department of Transportation (ODOT-CMS) as modified. In the event of conflict, this document shall control and then Col-CMS shall govern unless compliance with a provision of the ODOT-CMS is specifically required. All of the contract documents shall be considered to be incorporated by reference into this Agreement as if fully rewritten herein.
 - 10.1.1 Contractor warrants and guarantees that all materials and equipment furnished under this Contract will be new unless otherwise specified, and its Work conforms in all respects to the Contract Documents and that it is free from defects in material and/or workmanship. Separate from the foregoing warranty, there shall be a one-year correction period wherein Contractor agrees to correct any Work performed under the Contract that is found to be defective in workmanship or materials within one year of the City's acceptance of the Project. Contractor further agrees to furnish any special warranties required by the Contract Documents relating to its Work prior to and as a condition of final payment. Contractor agrees to perform any remedial or corrective work necessary to satisfy its warranty obligations without cost to Dublin.
- 10.2 The Agreement shall be governed by the laws of the State of Ohio.
- 10.3 If any term or provision of the Agreement, or the application thereof to any person or circumstance, is finally determined, to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the Agreement or the application of such term or provision to other persons or circumstances, shall not be affected thereby, and each term and provision of the Agreement shall be valid and enforced to the fullest extent of the law.

- 10.4 The Agreement shall be binding on the Contractor and Dublin, their successors and assigns, but the Agreement may not be assigned by the Contractor without the prior written approval of the City Engineer.
- 10.5 Dublin may terminate this Agreement in the same manner and for the same reasons as set forth in Sections 108.08 and 108.09 of the 2010 ODOT-CMS.
- 10.6 It is expressly understood by the Contractor that none of the rights, duties and obligations described in the contract documents shall be valid and enforceable unless the Director of Finance of Dublin certifies that funds have been appropriated for the project and that the amount so appropriated is on deposit or in the process of collection to the credit of the appropriate fund free from any previous or outstanding obligations.
- 10.7 The Agreement shall become binding and effective upon execution by the City Manager of Dublin.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the dates set forth below:

CONTRACTOR:

CITY OF DUBLIN, OHIO

By: _____
(Signature)

By: _____
Marsha I. Grigsby, City Manager

(Print Name)

(Print Name)

(Title)

City Manager
(Title)

Date: _____, 2012

Date: _____, 2012

Approved as to form: By _____
Stephen J. Smith, Law Director

Date: _____, 2012

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned (the "Principal") and _____ (the "Surety"), are hereby held and firmly bound unto the City of Dublin, Ohio ("Dublin") in an amount not to exceed one hundred percent (100%) of the agreed contract amount for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE ABOVE OBLIGATION is such, that whereas the Principal did on this ____ day of _____, 2012, enter into a contract with Dublin which said contract is made a part of this bond the same as though set forth herein;

NOW, if the Principal shall well and faithfully do and perform the things agreed by the Principal to be done and performed according to the terms of said contract; and shall pay all lawful claims of subcontractors, material supplier and laborers, for labor performed and materials furnished in the carrying forward, performing or completing of said contract; we agreeing and assenting that this undertaking shall be for the benefit of any material supplier or laborer having a just claim, as well as for Dublin; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The Surety for value received, hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the contract or to the work to be performed there under or in or to the plans or specifications therefore shall in any wise affect the Surety's obligations on this bond.

Signed this _____ day of _____, 2012.

PRINCIPAL: _____

By: _____

(Signature)

Print Name: _____

Title: _____

Address: _____

Telephone: () _____

SURETY: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Address: _____

Telephone: () _____

SURETY AGENT: _____

By: _____
(Signature)

Print Name: _____

Title: _____

Address: _____

Telephone: () _____

CERTIFICATION OF FUNDS

2012 SANITARY SEWER MANHOLE REHABILITATION

I, Angel L. Mumma, Deputy City Manager / Director of Finance of the City of Dublin, Ohio, certify that:

1. The Council of the City of Dublin, Ohio has approved \$ _____ for the above-referenced project by Resolution No. _____ adopted on _____, 2012.
2. The amount so appropriated is on deposit or in the process of collection to the credit of the appropriate fund free from any outstanding obligations.

CITY OF DUBLIN, OHIO

Date: _____

By: _____

Angel L. Mumma
Deputy City Manager / Director of Finance

NOTICE TO PROCEED

2012 SANITARY SEWER MANHOLE REHABILITATION

To: _____

You are hereby notified to commence work within ten (10) business days from the date of receipt of this Notice to Proceed. You are required to complete the work by **MAY 15, 2013**.

Return an acknowledged copy of this Notice to Proceed to:

City of Dublin
Division of Engineering
5800 Shier - Rings Road
Dublin, Ohio 43016

CITY OF DUBLIN, OHIO

Date: _____

By: _____
Paul A. Hammersmith, P.E.
Director of Engineering/City Engineer

RECEIPT OF NOTICE TO PROCEED

Receipt of this Notice to Proceed is hereby acknowledged this ____ day of _____, 2012.

Company Name: _____

Signature: _____

Print Name: _____

Title: _____

NOTICE OF COMMENCEMENT OF PUBLIC IMPROVEMENT

Section 1311.252, Ohio Revised Code

Notice is hereby given of the commencement of a public improvement as follows:

1. The public improvement is identified as:

Project Name: 2012 SANITARY SEWER MANHOLE REHABILITATION

Project Number: 12-016.0-CIP

Location: VARIOUS LOCATIONS WITHIN THE CITY OF DUBLIN

2. The public authority responsible for the public improvement is:

City of Dublin, Ohio
5200 Emerald Parkway
Dublin, Ohio 43017

3. The principal contractor and its surety on the public improvement are as follows:

Principal Contractor: _____	Surety: _____
Name _____	Name _____
Address _____	Address _____
City, State _____	City, State _____
Zip Code _____	Zip Code _____
Telephone Number _____	Telephone Number _____

4. The City of Dublin, Ohio first executed a contract with a principal contractor for the public improvement on _____, 2012.

5. The name and address of the representative of the City of Dublin, Ohio upon whom service may be made for the purposes of serving an affidavit pursuant to Section 1311.26 of the Ohio Revised Code is:

City of Dublin, Ohio
Paul A. Hammersmith, P.E.
Director of Engineering/City Engineer
5800 Shier - Rings Road
Dublin, Ohio 43016

CITY OF DUBLIN, OHIO

By: _____
Paul A. Hammersmith, P.E.
Director of Engineering/City Engineer

Sworn to and subscribed before me this ____ day of _____, 2012.

Notary Public

CHANGE ORDER

2012 SANITARY SEWER MANHOLE REHABILITATION

Change Order No. _____ Contractor Name: _____

Date: _____

Agreement Date: _____

The following changes are made to the contract documents:

The changes are made for the following reasons:

Change to contract price:

Original contract amount: \$ _____

Current contract amount
adjusted by previous
Change Orders: \$ _____

The contract will be (circle one:
increased/decreased) due to this
Change Order by: \$ _____

New contract amount (including
this Change Order): \$ _____

Change to contract time:

The contract time will be (circle one: increased/decreased) due to this Change Order by _____ calendar days.

The date for completion of all work will be _____, 2012.

This Change Order is signed this _____ day of _____, 2012.

CONTRACTOR

By: _____
(signature)

Print Name: _____

Print Name: _____

Title: _____

CITY OF DUBLIN, OHIO

By: _____
Marsha I. Grigsby
City Manager

By: _____
Paul A. Hammersmith, P.E
Director of Engineering/City Engineer

By: _____
Angel L. Mumma
Deputy City Manager / Director of Finance

PAYROLL INFORMATION

2012 SANITARY SEWER MANHOLE REHABILITATION

I, _____ (Name),
_____ (Title) of _____
(Subcontractor/Contractor), state the following:

1. That I pay or supervise the payment of the persons employed by _____ (Subcontractor/Contractor) on the above-referenced project.

2. That during the payroll period commencing on the _____ day of _____, 2012, and ending on the _____ day of _____, 2012, all persons employed on said project have been paid the full weekly wages earned; that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ (Contractor/Subcontractor) from the full weekly wages earned by such persons; and that no deductions have been made either directly or indirectly from the full wages earned by such persons, other than permissible deductions as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. 276c), and described below:

3. That any payrolls otherwise under this Agreement for Construction (the "Agreement") required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in the specifications as supplied by the Department of Industrial Relations or any wage determination incorporated into the Agreement; and that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

4. That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with the Ohio Apprenticeship Council.

5. That (check applicable box):

a. WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS:

In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above-referenced payroll, payments of fringe benefits listed in the Agreement have been or will be made to appropriate programs for the benefit of such employees, except as noted in Section 4(c) below.

b. WHERE FRINGE BENEFITS ARE PAID IN CASH:

Each laborer or mechanic listed in the above-referenced payroll has been paid as indicated on the payroll, and amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the Agreement, except as noted in Section 4(C) below.

c. Exceptions:

Exception (Craft):

Explanation:

_____	_____
_____	_____
_____	_____
_____	_____

Remarks:

(Signature)

(Print Name and Title)

The willful falsification of any of the above statements may subject the Contractor or Subcontractor to fines as described in Section 4115.99 of the Ohio Revised Code.

FINAL PAYROLL AFFIDAVIT

2012 SANITARY SEWER MANHOLE REHABILITATION

STATE OF _____
COUNTY OF _____, SS:

I, _____ (Affiant),
_____ (Title) of _____
(Contractor/Subcontractor), do hereby certify that:

1. The Payroll Information reports submitted on behalf of (Contractor/Subcontractor) for this project are correct.
2. The wages paid to all employees for the full number of hours worked in connection with the Agreement for Construction (the "Agreement") for the above-referenced project during the period from _____ to _____ is in accordance with the prevailing wages prescribed by the Agreement.
3. No rebates or deductions for any wages due any person have been directly or indirectly made other than those provided by law.

(Signature of Affiant)

(Print Name)

Sworn to and subscribed in my presence this ___ day of _____, 2012.

Notary Public

The above affidavit must be executed and sworn to by the officer or agent or the Contractor/Subcontractor who supervised the payment of employees, before the City of Dublin, Ohio will release the surety and/or make final payment due under the terms of the Agreement.



**City of Dublin
PROJECT PAYMENT REQUEST**

Date: _____ Project: _____ Project Name: _____
 PO No. _____ Pay Request No. _____ Contractor: _____
 _____ to _____
 For Period of: _____

C.O. #	Date	Amount (\$)	Notes
1		\$ -	
2		\$ -	
3		\$ -	
4		\$ -	
5		\$ -	
6		\$ -	
7		\$ -	
8		\$ -	
9		\$ -	
10		\$ -	
Total Change Orders: \$			
Adjusted Contract Amount: \$			
Total Amount Paid To Date= \$			

Previous Pay Request #	Previous Amounts Paid To Date
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
Total Amount Paid To Date= \$	

Work Completed This Period: \$	-
Total Contract Work Remaining: \$ (After this request)	-
Total Work Completed To Date: \$	-
Percentage Completed To Date:	
Retainage To Be Withheld: \$ #DIV/0!	-
Total Amount Paid To Date: \$	-
Amount Due This Estimate: \$	-

Contractor Representative: _____ Date: _____ Approval Yes No

Engineering Project Coordinator: _____ Date: _____

Engineering Manager: _____ Date: _____

Director Of Engineering / City Engineer: _____ Date: _____

Director Of Finance: _____ Date: _____

SECTION 4
SUPPLEMENTAL SPECIFICATION

SECTION SS-1

GENERAL

CONTRACT SPECIFICATIONS

All contract specifications in this section are to be considered a part thereof.

CITY OF COLUMBUS

City of Columbus and Ohio Department of Transportation Construction and Material Specifications, current edition, and any supplements thereto, shall govern all construction items unless otherwise noted.

RESPONSIBLE PARTIES

The term OWNER in this specification shall mean the City of Dublin, Ohio, 5200 Emerald Parkway, Dublin, Ohio, 43016.

The term PROJECT ENGINEER in this specification shall mean Mr. Todd Garwick, PE, City of Dublin, 5800 Shier Rings Road, Dublin, Ohio 43016, Ph: 614 410-4665, Fax: 614 410-4699, E-mail: tgarwick@dublin.oh.us.

The term CITY ENGINEER in this specification shall mean Mr. Paul Hammersmith, PE, Director of Engineering/ City Engineer, City of Dublin, 5800 Shier Rings Road, Dublin, Ohio 43016, Ph: 614 410-4617, Fax: 614 410-4699, E-mail: phammersmith@dublin.oh.us.

The term INSPECTOR in this specification shall mean Mr. Grady McGraw, Engineering Project Inspector, City of Dublin, 5800 Shier Rings Road, Dublin, Ohio 43016, Ph: 614 410-4681, Fax: 614 410-4699, E-mail: gmcgraw@dublin.oh.us or Mr. Dean Saunders, Engineering Project Coordinator, City of Dublin, 5800 Shier Rings Road, Dublin, Ohio 43016, Ph: 614 410-4623, Fax: 614 410-4699, E-mail: dsaunders@dublin.oh.us.

The term INDEPENDENT REPRESENTATIVE in this specification shall mean DLZ, Inc., 6121 Huntley Road, Columbus, Ohio 43229 or another designated representative by the OWNER.

NOTICE TO PROCEED

Dublin City Council will give formal approval for Paul Hammersmith, P.E., Director of Engineering/City Engineer to enter into a contract on **October 8, 2012**. The Successful Bidder will be given a Notice To Proceed on or after **October 9, 2012** from The City of Dublin. These dates are subject to change.

PRE-CONSTRUCTION MEETING

The General Contractor and appropriate Sub-Contractors shall attend the pre-construction meeting on **October 18, 2012 @ 2 p.m.** at City of Dublin Engineering, 5800 Shier Rings Road, Dublin, OH, 43016, 2nd Floor General Meeting Room. **All submittals will be presented at this time.**

PROGRESS MEETINGS

The General Contractor and appropriate Sub-Contractors along with OWNER, PROJECT ENGINEER, INSPECTOR shall attend a monthly progress meeting as established at the Pre-Construction Meeting.

SUBMITTALS

A Separate Cover Sheet such as the form bound in these Specifications, including the Item Number, the Specification Section of reference for each submittal, and a brief description of each submittal included, shall be provided by the CONTRACTOR for each separate item submitted. Review of these submittals shall not relieve the CONTRACTOR from responsibility for compliance with the specifications. The CONTRACTOR shall incorporate the submittal review process time and make the necessary scheduling adjustments so that completion of the work within the Contract Time is not affected. See the following Supplemental Specifications for all requirements for submittals:

- Section SS-3, Bypass Pumping
- Section SS-7, Cementitious Grouting
- Section SS-10, Cementitious Manhole Rehabilitation

BUILDING PERMIT

The Contractor is not required to obtain a "Building Permit" for the rehabilitation of the sanitary sewer manholes related to this project. However, the Contractor and all Sub-Contractors shall be registered contractors with the City of Dublin. The Contractor and all Sub-Contractors can register at City of Dublin, Building Department, 5800 Shier Rings Road, Dublin, Ohio, 43016.

WORKING HOURS

The Contractor is permitted to work between 7:00 A.M. and 7:00 P.M., Monday through Saturday. Permission to work on Sunday and holidays must be requested in writing and approved by the City Engineer.

SPECIAL EVENTS

The Contractor shall pay special attention to The Memorial Golf Tournament scheduled for May 27, 2013 thru June 2, 2013 at The Muirfield Village Golf Club. **The General Contractor and all sub-contractors will not perform any work from May 24, 2013(Friday) thru June 2, 2013(Sunday).** Link is provided for reference: <http://www.thememorialtournament.com/>. The Contractor shall properly secure the construction sites during this event.

MAINTENANCE OF TRAFFIC

Traffic control shall be furnished, erected, maintained and removed by the Contractor according to the Ohio Manual of Uniform Traffic Control Devices (OMUTCD), current edition.

All traffic lanes of public roadways shall be fully open to traffic from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m. unless authorized differently by the CITY ENGINEER. At all other hours the Contractor shall maintain minimum one-lane, two-way traffic. Uniformed, off-duty police officers shall replace flagmen designated by the OMUTCD, and shall be present whenever one-lane, two-way traffic control is in effect. Police cruisers may be required as directed by the the CITY ENGINEER.

If the CITY ENGINEER determines that the Contractor is not providing proper provisions for traffic control, the CITY ENGINEER shall assign uniformed, off-duty police officers to the project at no cost to the City.

Steady-burning, Type "C" lights shall be required on all barricades, drums, and similar traffic control devices in use at night.

Access from public roadways to all adjoining properties for existing residents or businesses shall be maintained throughout the duration of the project for mail, public water and sanitary sewer service, and emergency vehicles. The Contractor shall provide a traffic control plan detailing the proposed maintenance of traffic procedures. The traffic control plan proposed by the Contractor must be approved by the CITY ENGINEER prior to construction.

STAGING AREA

The Contractor shall coordinate the location of the staging area with The City of Dublin at the pre-construction meeting. All areas disturbed shall be fully restored to their original conditions or better to the satisfaction of the City of Dublin. The contractor at his expense shall perform all restoration.

GEOTECHNICAL INFORMATION

No subsurface exploration report was performed as a part of this Contract.

INSPECTION

All inspections shall be provided by the City of Dublin. The INSPECTOR in this specification shall mean Dean Saunders, Engineering Project Coordinator, City of Dublin, 5800 Shier Rings Road, Dublin, Ohio 43016, Ph: 614 410-4623, Email: dsaunders@dublin.oh.us
or

Mr. Grady McGraw, Engineering Project Inspector, City of Dublin, 5800 Shier Rings Road, Dublin, Ohio 43016, Ph: 614 410-4681, Fax: 614 410-4699, E-mail: gmcgraw@dublin.oh.us

The City will hire and pay for an INDEPENDENT REPRESENTATIVE to perform testing on the samples provided with this project. The Independent Representative in this specification shall mean DLZ, Inc., 6121 Huntley Road, Columbus, Ohio 43229 or another designated representative by the OWNER.

ACCESSIBILITY FOR OBSERVATION

All work shall be made accessible to the INDEPENDENT REPRESENTATIVE and/or INSPECTOR using the CONTRACTOR'S rigging and equipment. If assistance is required for the INDEPENDENT REPRESENTATIVE and/or INSPECTOR to safely access the work, the CONTRACTOR shall furnish labor to assist the INDEPENDENT REPRESENTATIVE and/or INSPECTOR. The cost of this labor shall be included in the Total Base Bid.

COORDINATION

Contractor shall coordinate his work to facilitate work by others in the project area and outside of the construction work limits. Contractor shall review and familiarize his staff with the plans in coordination with this project. Contractor shall coordinate work to facilitate work by AEP, AT&T, Time Warner Cable, Wide Open West, City of Columbus – Division of Sewerage and Drainage, Village of Shawnee Hills, Ohio Edison, Columbia Gas of Ohio, Delaware County Regional Sewer District and others not listed.

PROPOSAL

No extra compensation will be paid to the Contractor by reason of compliance with any of the requirements indicated in the Specifications, but payment shall be deemed to be included among the several items, as bid upon, unless otherwise specifically provided.

SCHEDULE

The Contractor shall submit a bar chart or progress schedule to the City Engineer at the time of the pre-construction meeting. This schedule will detail the timing of the work activities for the various sections of the project. The project completion date is set for **May 15, 2013**.

COORDINATING WITH UTILITIES

It is the Contractor's responsibility to coordinate their work with the private utilities as required. The utility owner may be required to brace, temporarily support, or relocate their respective utilities so that the manholes can be rehabilitated.

SITE SECURITY

When not working on the manholes or site (such as during evening, weekends, special events, holidays, or rain days), the CONTRACTOR shall secure all openings around the manholes. The CONTRACTOR shall be solely responsible for the security of the site, equipment, and supplies during both working and non-working hours.

WATER SUPPLY

Water for the purpose of this contract must be obtained by the CONTRACTOR through the direct local arrangements with the PROJECT ENGINEER and/or INSPECTOR. The CONTRACTOR shall furnish and supply all necessary temporary piping and valves in connection with such water supply. Water shall be furnished from the OWNER at no cost to the CONTRACTOR as long as the amount of water used remains within reason. All connections to the public water supply system shall contain a back-flow prevention device approved by the INSPECTOR.

ITEM 203 EXCAVATION
ITEM 203 EMBANKMENT

All excavation shall be considered as unclassified, including rock.

STORAGE OF EQUIPMENT AND MATERIALS

No materials, including pipe, shall be stored within twenty (20) feet of any intersecting street, parking lot or driveway. During non-working hours, storage of equipment shall comply with these same requirements and shall not in any way relieve the Contractor of their legal responsibilities or liabilities for the safety of the public.

CONSTRUCTION NOISE

Any devise shall not be operated at any time in such a manner that the noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment.

SANITARY FACILITIES

The CONTRACTOR shall, at the beginning of the work, provide on the premises suitable temporary sanitary toilet, wash-up, decontamination facilities, and changing facilities for the use of workers and shall maintain same in a sanitary condition and remove same when directed by the OWNER. The cost of these sanitary facilities shall be included in the **Total Base Bid**. The CONTRACTOR is advised that the OWNER is in the business of providing potable water and the CONTRACTOR'S sanitary arrangements shall not endanger the OWNER'S facilities.

SECTION SS-3

BYPASS PUMPING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

The Contractor shall provide all labor, materials and equipment necessary to bypass the sewage around:

- A. The sections of host pipe that are to be lined.
- B. Any portion of the host pipe that will require repair prior to the relining.
- C. Manholes that require manhole base and/or channel rehabilitation.
- D. Any portion of sewer to be video taped or inspected.

1.2 SUBMITTALS

- A. The Contractor shall provide for approval by the Engineer, a method of bypassing the sewage that will include but not be limited to:
 - 1. A recommended sequence of operations.
 - 2. Sketches or drawings showing locations of the bypass sewer and construction procedures for crossing streets, excavations for benching along with support methods, all required permit information, applications, fees, etc., to obtain access to the streets when required by the bypass method selected by the Contractor.
 - 3. Locations of manholes from which sewage is to be pumped, locations of receiving manholes, and new manholes.
 - 4. A contingency plan to prevent damage during high flows.
 - 5. Method of handling traffic where streets are to be excavated.
- B. The Contractor shall submit a copy of all property owner/resident notifications to the Engineer prior to notification distribution.

PART 2 MATERIALS

Not Used

PART 3 EXECUTION

3.1 BYPASS PUMPING

- A. Bypass pumping shall be established prior to work. Because of the high flows possible in these sewers, the contractor shall have a contingency plan to prevent damage during high flows. The City will not be responsible for any damages due to high flows.

The contractor should also be aware that adjacent sewers may not be available for bypass discharge due to surcharged conditions in those sewers during heavy rains.

- B. The bypass shall be made by plugging an existing upstream manhole, if necessary, and pumping the sewage into a downstream manhole or adjacent system approved by the Engineer. The pump and the temporary bypass sewer shall be of adequate capacity and size to handle the peak flow and any necessary dewatering. The bypass pumping shall not prohibit access when crossing private access drives or public streets and shall be trenched across pavement and shall either have temporary pavement or be securely plated (if approved by City). The bypass sewer may be laid over ground in all other instances. The bypass shall be a header for all bypass and dewatering pumping. Check valves shall be placed ahead of all pumping connections. By-pass sewers and maintenance of traffic over/around lines shall be shown on the Maintenance of Traffic plans and approved by the Division of Traffic Engineering.
- C. The Contractor may suggest alternate methods of bypassing the sewage but, in any event, the method used shall be approved by the Engineer.
- D. Under no circumstances will the dumping of raw sewage on private property, streets and roads, storm sewer and open channels be allowed nor will surcharge of the sewers be allowed due to insufficient pumping.

3.2 PROPERTY OWNER AND/OR RESIDENT NOTIFICATION

- A. The Contractor shall provide 48-hour prior written notification to all property owners and or residents that may be affected by the diversion of flow in the sewer, explaining work that is to take place and its time frame. The notification shall include the approximate time when sewage cannot be received during sewer work as well as when the sewer will be available again for receiving sewage. All commercial establishments shall be provided with temporary sewer service. The means and methods shall be coordinated with the managers and the affected residents.

- B. A door hanger reminder shall be placed 48 hours prior to reducing the sanitary service.

3.3 MEASUREMENT AND PAYMENT

- A. **General.** This item of work shall include all labor, materials, and equipment necessary to bypass the sewage around the sections of sewer that are to be rehabilitated as well as for host pipe repair, manhole bench or channel work, and during television inspection. Any excavations and excavation supports required to accommodate the bypass setup shall be included in this item.
- B. **Payment.** This item shall be paid at the lump sum price bid per pipe size for the bypass pumping necessary to meet all project requirements.

<u>ITEM</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
SS-3	Lump Sum	Bypass Pumping

END OF SECTION

SECTION SS-7

CEMENTITIOUS GROUTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Plans, videotapes and logs and general provisions of the Contract, including Section 100, General Provisions of the City of Dublin Construction and Material Specifications (CMS) apply to this work.

1.2 DESCRIPTION OF WORK

The Contractor shall provide all labor, materials, and equipment necessary to perform repairs as specified within or as designated by the Engineer. Use of this material is contingent upon approval of the Engineer.

1.3 QUALITY ASSURANCE

A. Codes.

Perform all work in compliance with the most recent federal, state, and local codes.

B. Standards.

All work shall be in compliance with the National Association of Sewer Service Companies (NASSCO).

C. Contractor's Qualifications.

The pressure grouting Contractor shall be a firm having a minimum of 5 years continuous successful experience in pressure grouting similar to that required for this Project.

1.4 SUBMITTALS

Furnish the grout manufacturer's product data, test reports, point repair installation instructions, materials certifications, preparatory work and a list of at least three references for point repairs similar in scope to that required for this project.

1.5 DELIVERY, STORAGE, AND HANDLING

Cement shall be stored in weather tight enclosures to protect against moisture and contamination.

PART 2 - EXECUTION

2.1 GENERAL

Not Used.

2.2 MATERIALS

- A. Portland cement shall conform to CMS 701.01.
- B. Sand shall conform to CMS 703.03.
- C. Water shall be potable.

2.3 EQUIPMENT

If pumping, the grout pump shall be of the positive displacement type and shall be capable of producing adequate pressure to penetrate the area and depth required. The Contractor shall furnish gauges to monitor working pressure.

2.4 COORDINATION

Cementitious grouting shall be performed only as needed and approved by the Engineer.

PART 3 – EXECUTION

3.1 GENERAL

Grouting operations shall be performed under low-pressure conditions and the ground surface above the grouting operations monitored to verify grout is not heaving or surfacing through the cracks or joints in the street.

3.2 BATCHING AND MIXING

The grout mixture shall be proportioned generally in the ratio of one 94 lb. bag of Portland cement to 7.5 gallons (1 cubic foot) of water. This mix can be adjusted by varying the water-cement ratio as grouting proceeds to ensure adequate penetration behind the structure wall, but at no time shall the water-cement ratio of the grout mixture exceed 0.80. All changes in grout mix design must be approved by the Project Engineer prior to use. Grout yield shall be 1.48 cf/bag unless noted.

3.3 PLACEMENT

- A. **Preparatory Work**
The Contractor shall take necessary steps to ensure that the areas designated for repair are suitable and prepared for cementitious grouting prior to commencement of work.
- B. **Quantity**
In order to control the quantity of material placed, pressured grouting shall be accomplished in multiple stages. Grout placed in each stage must not exceed 10 bags of cement per void detected. A 12-hour minimum time interval shall elapse between successive stages. Voids shall be resounded and probed after each stage. Only those areas still indicating void spaces behind the manhole wall will be regrouted.
- C. **Adjacent Facilities**
The Contractor shall take precautions to prevent grout from entering lateral sewers, ductbanks, conduits, or other adjacent structures, and shall monitor working pressures to avoid damage or displacement of the sewer, adjacent structures, or the ground surface. The Contractor shall be responsible for the cost of replacement, repair, or cleanup of utilities or structures adversely affected by grouting procedures.
- D. **Grouting Pressure**
The machine used for grouting shall be capable of providing a pressure up to 75 pounds per square inch (psi) in excess of any external water pressure. The Contractor shall provide gauges to monitor the working pressures during grouting operations, with a gauge recommended at the injection site on the structure. The pressure shall not exceed that which would distort the structure wall, damage or fill adjacent utilities, lift or displace the overburden.
- E. **Pavement Upheaval**
The Contractor shall replace any pavement in like and kind that is upheaved by pressure grout injection at no additional cost to the City.

3.5 CLEAN UP

The Contractor is responsible for containing and removing all excess grout from the sewer and project area. In no case will the Contractor be allowed to flush excess grout from his/her equipment into the sewer or downstream to adjacent facilities.

3.6 MEASUREMENT AND PAYMENT

- A. **General**
This item of work shall include all grout, preparatory work, clean up, and appurtenant work necessary to complete Cementitious Grouting as required.

B. Payment

The payment for this work will be made at the agreed price per each cubic foot of Cementitious Grout installed, following completion and acceptance.

END OF SECTION

SECTION SS-10
CEMENTITIOUS MANHOLE REHABILITATION

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. Scope of Work.** The Contractor shall provide all labor, materials, operation, and equipment necessary to rehabilitate manholes in accordance with the plans and as specified herein. This item shall include all structural restoration; elimination of inflow and/or infiltration; manhole step replacement; base and channel repair; excavation; removal and disposal of all excess materials; restoration; backfill; permanent and temporary pavement replacement; clearing and grubbing; resetting, replacing, and/or raising casting to grade; and dewatering required for manhole rehabilitation. Pre and post-rehabilitation photographs shall be provided for all manholes.

Refer to manhole rehabilitation drawings MR-1 for specific information on manhole rehabilitation and reconstruction as listed herein. All existing frame and covers shall be salvaged and delivered to City of Dublin, Streets and Utilities, 6555 Shier Rings Road, Dublin, Ohio 43016.

1.2 QUALITY ASSURANCE

A. Standards.

1. Referenced ASTM Specifications
2. NASSCO Specifications
3. Manufacturer's Specifications

B. Contractor's Qualifications.

1. The manhole rehabilitation Contractor shall be a firm having a minimum of 3 years continuous successful experience in the rehabilitation of manholes similar to that required for this Project.
2. The manhole lining Contractor shall be certified by the lining material manufacturer to install their manhole liner if the material requires a certified applicator. The City reserves the right to require an on-site manufacturer's representative, knowledgeable in the use and application of the material, for a minimum of two (2) working hours for each supplied material. The material representative shall direct and instruct the Contractor and City inspector on the proper application procedure.

1.3 SUBMITTALS

The following submittals (A-D) shall be made at the pre-construction meeting:

- A. Contractor Qualifications.** The Contractor shall submit a copy of the manufacturer's licensee certificate. If the Contractor is not licensed by the manufacturer, then a manufacturer's representative will be on-site as explained in Section 1.2.B.2. Contractor shall also submit a list of ten (10) similar regional projects completed within the last three (3) years including information such as number of manholes on project, manhole construction type, date completed, municipal contact names and phone numbers, and project cost.
- B. Material Certifications.** The Contractor shall furnish the manufacturer's product data, installation instructions, applicable referenced work standards (American Society for Testing and Materials [ASTM], American Concrete Institute [ACI], etc.), approved laboratory test reports that verify strength requirements of this specification, and materials certification for each product used prior to material installation.
- C. Material Safety Data Sheets.** The Contractor shall submit Material Safety Data Sheets (MSDS) for all materials used for manhole rehabilitation.
- D. Application Methods and Equipment.** The Contractor shall submit a written description of the material application methods including the equipment that will be used. Regardless of application method, materials shall have a troweled and brushed finish

The following submittal (E) shall be made two (2) days prior to manhole rehabilitation:

- E. Pre-rehabilitation photographs.** The Contractor shall submit a minimum of two (2) pre-photographs to the City Inspector before performing manhole lining work. One photograph shall be taken from the ground surface looking into the manhole and one shall be taken from the bottom of the manhole, as close to the invert as possible, looking upwards. Additional photographs of other pertinent features shall be taken if necessary. Digital photos are the required media.

The following submittal (F) shall be made immediately after manhole rehabilitation:

- F. Post-rehabilitation photographs.** The Contractor shall submit post-photographs to the City Inspector immediately following completion of the manhole rehabilitation. The same areas of the manhole will be photographed at the same angles as submitted in the pre-photographs.

1.4 JOB CONDITIONS

A. Environmental Requirements.

1. Do not work in the presence of excessive amounts of water. Refer to Supplemental Specification SS-3, Bypass Pumping.
2. Contractor shall use caution when working in sanitary sewers. During rain events, sanitary sewers may reach capacity quickly and/or head up.

B. Safety. All work to be completed in conformance with all applicable safety standards, in particular OSHA Standard 29CFR1910.146, Permit Required Confined Space Entry.

1.5 DELIVERY, STORAGE, AND HANDLING

- ### A.
- Cementitious materials shall be stored in weather tight, original packaging to protect against moisture and contamination.

1.6 GUARANTEE

- ### A.
- The Contractor shall guarantee all work as stated in the Dublin Modified, refer to Dublin Modified, 100 General Provisions attached in this Contract Document.

PART 2 – PRODUCTS

2.1 MATERIALS

Materials shall meet the following standards, CMSC specifications, or minimum strength requirements:

- ### A. Water Plug.
- Rapid setting hand-mixed cementitious compound specifically formulated for use in stopping infiltration water. Use "Strong Plug" by Strong Seal Systems, Inc., "EMACO 503" by Master Builders, Inc. or approved equal.

Compressive Strength	2000 PSI @24 hrs.	ASTM C-109
Bond	80 PSI @24 hrs.	ASTM C-321

- ### B. Patching Mortar.
- Rapid setting cementitious compound specifically formulated for use in filling voids and repairing inverts. Use "Strong Seal QSR" by Strong Seal Systems, Inc, "EMACO T415" by Master Builders, Inc., or approved equal.

Compressive Strength	2000 PSI @24 hrs.	ASTM C-109
Bond	140 PSI @7 days	ASTM C-321
Shrinkage	0% @ 90% R.H.	ASTM C-596

- ### C. Manhole Liner.
- High strength, corrosion resistant mortar which can be sprayed uniformly onto a vertical surface without sagging or excessive rebound. Use "Quadex QM-1S Restore", "Strong Seal MS-2E or MS-2C"

by Strong Seal Systems, Inc., "SewperCoat 2000 HS Regular" by Master Builders, Inc., or approved equal.

Compressive Strength	2000 PSI @ 24 hrs. AND 6500 PSI @ 28 days	ASTM C-109
Bond	800 PSI @ 28 days OR 130 PSI @ 28 days	ASTM C-882 ASTM C-321
Shrinkage	0% @ 90% R.H.	ASTM C-596
Tensile Strength	500 PSI @ 24 hrs.	ASTM C-496
Flexural Strength	350 PSI @ 24 hrs.	ASTM C-293

- D. Grout.** Portland cement shall conform to CMSC 701.01; sand shall conform to CMSC 703.03.
- E. Manhole Steps.** Steps shall be reinforced polypropylene in accordance with City of Columbus Standard Construction Drawing AA-S119 and CMSC 711.31. Placement of new manhole steps shall utilize a water stopping sealant approved by the Engineer.
- F. Manhole Frames and Covers.** Manhole frames shall be in accordance with City of Columbus Standard Drawing AA-S111 and/or AA-S114. Manhole covers shall be as per City of Dublin Standard Drawing, SA-02. If a 36" casting is set using City of Columbus Standard Drawing AA-S114, it shall contain a self-sealing gasket and concealed lift hole. Vent holes in the lid will not be permitted. Shop drawings of manhole frames and covers shall be submitted prior to installation.
- G. Brick.** Brick used in sanitary structures shall be clay or shale brick and conform to CMSC 704.01.
- H. Manhole Grade Rings.** Manhole grade rings shall conform to ASTM C-478, City of Columbus Standard Construction Drawing AA-S107 and City of Dublin, Standard Drawing SA-01, or approved equal.
- I. Precast Manhole Sections.** Precast manhole sections shall be in accordance with ASTM C-478.
- J. Cast in Place Concrete.** Cast in place concrete shall be class "C" with a 28-day compressive strength of 4000 psi and conform to CMSC 499.
- K. Reinforcing Steel.** Reinforcing steel shall be Grade 60 and in accordance with CMSC 509.
- L. Mortar.** Mortar shall be in accordance with CMSC 602.03.
- M. Water.** Water shall be potable.

2.2EQUIPMENT

- A. Equipment shall be as recommended by the manufacturer to ensure proper mixing and pumping of mortar and shall be clean and in good working order according to the recommendations for safe operation.

PART 3 – EXECUTION

3.1 GENERAL

- A. **Debris Dam.** The Contractor shall place a device in the manhole to catch any debris which may be displaced into the manhole during the performance of the work. **Work shall not proceed until this device is in place.**
- B. **Visual Documentation.** The Contractor shall provide digital photographs before and after rehabilitation of manholes. Refer to Sections 1.3.E and 1.3.F of this specification for detailed information. The photographs are to be labeled with the full manhole number and indicate whether pre- or post- rehabilitation. Photographs shall show the entire height of the manhole. Photographs shall be of good quality and shall be subject to the approval of the City Inspector.
- C. **Steps.** All steps shall be removed completely from those manholes receiving cementitious lining. Care must be taken to minimize damage to the manhole wall during removal of the steps. Steps shall be replaced after lining is completed. In the event the lined manhole is too constricted to allow safe and easy entry with the installation of steps, this item may be non-performed at the direction of the Engineer.
- C. **Cleaning.** Prior to any repair work inside the manhole, all interior wall and invert surfaces shall be pressure washed using equipment capable of producing a minimum of 5,000 pounds per square inch (psi) to remove all foreign matter, loose mortar, grease, oil residues, and to etch the surfaces. If pressure washing cannot be utilized due to the structural condition of the manhole or if pressure washing does not remove all deposits, then a solution of muriatic acid (hydrochloric acid) at a ratio of one part acid to ten parts water shall be applied by spraying from above the manhole. After the acid solution is applied, it shall be washed off completely and the manhole allowed to dry. The mixing, application, and removal of the acid solution shall be done in strict accordance with the manufacturer's specifications and safety procedures. All waste materials resulting from the cleaning operation shall be removed from the manhole being cleaned and properly disposed of by the Contractor. All cleaning of manholes shall not take place more than two (2) days prior to rehabilitation of the manholes.

3.2 RAISE AND/OR REPLACE MANHOLE FRAME AND COVER

- A.** Prior to raising the manhole frame and cover, the Contractor shall confirm the distance from the proposed top of casting to the bottom of the chimney is less than 26 inches. If not, then the Contractor shall reconstruct the manhole per Section 3.3.

The Contractor shall refer to 2012 Sanitary Sewer Manhole Rehabilitation Detail Sheets for Replacement of Frames & Covers.

- B. Manhole located in lawn.** The Contractor shall place a device in the manhole to catch any debris which may be displaced into the manhole during the performance of the work. The soil around the casting shall be removed to a depth which will prevent displacement of material into the manhole after the frame and cover and loose brick work is removed. The existing castings and covers shall be carefully removed and stored or salvaged as directed, as some manholes will receive replacement frames and covers. The top of the walls shall have all loose mortar and deteriorated masonry and brick removed to sound material. The resulting surface shall be cleaned with a water blast to remove any remaining scale, dust and deleterious materials. The bonding agent/slurry shall then be applied and the supporting walls brought to the proper grade with brick and mortar masonry construction. The frame shall be set in a bed of mortar and the casting, vertical chimney section, and the top 6-inches of the corbelling encased with Class "C" concrete to a minimum thickness of 5-inches over the casting flange and 6-inches around the perimeter of the brick and mortar masonry chimney. This collar shall be reinforced with two circumferential number four bars spaced equally along the vertical axis, bar ends lapped 10-inches and embedded with a minimum concrete cover of 2-inches and a maximum of 3-inches.
- C. Manhole located in paved area** – same as Section A above. Any pavement replacement necessary shall be in accordance with Standard Drawing 1441 Drawer A. Cost for pavement replacement shall be included in the unit price bid for Item SS-10, Replace Manhole Frame and Cover.

3.3 RECONSTRUCT MANHOLE TO GRADE

- A. Manhole located in lawn.** The existing frame, chimney section, corbelling, cone and manhole walls shall be removed to the elevation required to properly rebuild the manhole to the specified elevation. The excavation around the periphery of the cone/walls shall be extended below the cone/wall demolition level to provide for encasement of the transition joint. The manhole shall then be reconstructed to the elevation shown on the plans utilizing precast units as shown on the standard

drawings for Type "C" manholes, AA-S102. The transition joint shall be encased with 6-inch thick Class "C" concrete extending 6-inches above and below the horizontal joint. The frame shall be set as described in Section 3.2.B. The manhole wall shall be rehabilitated as set forth below utilizing the cementitious lining.

The Contractor shall refer to 2012 Sanitary Sewer Manhole Rehabilitation Detail Sheets for Item 604, Reconstructed Manholes to Grade.

- B. Manhole located in paved area** – same as Section 3.3.A. The manhole walls shall be rehabilitated as set forth below utilizing the cementitious lining. Any pavement replacement necessary shall be in accordance with Standard Drawing 1441 Drawer A.

The Contractor shall refer to 2012 Sanitary Sewer Manhole Rehabilitation Detail Sheets for Reconstructed Manholes to Grade.

Cost for pavement or driveway replacement shall be included in the unit price bid for Item 604, Reconstructed Manhole to Grade.

3.4 REHABILITATION OF PRECAST MANHOLE

- A. Stopping Infiltration.** The manhole walls shall be visually examined and sounded and/or probed for detection of infiltration and identification of void areas outside of the manhole created by the infiltration. If any voids are detected, they shall be filled with cementitious grout. Any infiltration into the manhole should be stopped using an approved water plug material. If infiltration through the manhole walls is heavy, up to four 5/8-inch diameter holes may be drilled around the base of the manhole to act as relief ports, allowing the water to seep into the manhole flow channel. Once the leaking walls have been sealed, the drilled relief holes shall be plugged with the specified water plug material. The cost of drilling these relief holes shall be included in the cost of the manhole rehabilitation items.
- B. Patching.** Manhole walls shall be patched with an approved mortar in areas where voids exist (i.e., step removal damage, frames, pipes, and mortar joints). All loose or defective material shall be removed from the area to be patched, exposing a sound substrate. The patching mortar specified shall be applied to a dampened surface. The repairs shall be made smooth and flush with the face of the manhole wall.
- C. Cementitious Manhole Lining.** Where there is evidence of a sulfide condition in the manhole, the cementitious lining material shall offer a level of sulfide resistance compatible to what is deemed necessary by the Engineer. Varying levels of protection are offered by materials such as silica-fume enhanced Portland cement, calcium aluminate cement, and calcium aluminate aggregate in conjunction with calcium aluminate cement. The manhole wall surface shall be in a saturated, surface-dry

condition immediately preceding application of the cementitious material, or in accordance with manufacturer's requirements.

The cementitious lining may be applied with low pressure spray equipment or hand troweling methods (requires approval of Owner). If hand troweling is to be utilized, consult manufacturer for special requirements (e.g. scrubbing a bond coat slurry onto the surface.) The cementitious material thickness application shall be a minimum of 0.375-inches and not more than 2.0-inches per pass. The minimum acceptable finished thickness shall be 1-inch from the inside face of the manhole wall. The Contractor shall cure in accordance with the manufacturer's instructions following the application of the final cementitious layer. The cementitious lining shall be applied in not more than two passes from bottom to top. No more than 24-hours shall elapse between successive passes on each manhole. The second pass cannot be made until the first pass has achieved initial set.

3.5 REHABILITATE BENCH AND CHANNEL

- A.** The bench and channel shall be prepared for rehabilitation as previously described for other portions of the manhole structure. Bench and channel rehabilitation shall be performed in conjunction with the rehabilitation of the manhole to create a monolithic interior structure. The preparation work shall include all demolition of deteriorated concrete and removal of all deleterious material from the surfaces to be reconstructed and the removal of sound concrete such that the repair mortar shall not be less than 1-inch in thickness at any point as shown in the attached manhole rehabilitation drawings.
- B.** If active infiltration is present in the bench and channel area of the manhole, dewatering exterior of the manhole with a wellpoint may be required in order to facilitate the reconstruction. The dewatering shall continue for a minimum of 8 hours following completion of the bench and channel repair work. Cost to perform this work shall be included in the unit price bid for cementitious manhole rehabilitation.
- C.** Wastewater flow shall be maintained by methods which prevent contact with any of the repair work for a minimum of 8 hours following completion of the repair work.
- D.** The work on the bench and channel shall also include the work necessary to obtain a watertight seal at all pipe connections, drop inlet connections and between the base and manhole walls. The flowline through the manhole shall be shaped to match the invert of the sewer liner (if present) to prevent any flow obstructions in the manhole.
- E.** For those manholes that the Engineer chooses to have the CIPP material line through the channel, the Contractor shall shape the material as

necessary to support the CIPP liner. Cost to perform this work shall be included in the unit price bid for cementitious manhole rehabilitation.

3.6 REPLACE STEPS

- A.** The manhole steps shall be replaced in accordance with the attached manhole drawings with Item 711.31 steps. The steps shall be selectively placed to position the steps a minimum of 2-inches above or below their previous location. The recommended starting location for step placement is 24-inches +/- 2-inches below the top of the casting. Holes must be carefully drilled so as to minimize damage to manhole linings or seal coats. Steps shall be set at the proper embedment depth per the manufacturer along with an approved waterstopping sealant. The rehabilitated wall shall be closely inspected following placement of the new steps for indications of damage to the lining or seal coat. Repairs shall be as directed by the Engineer. Step replacement shall be non-performed at the direction of the City if the rehabilitated manhole diameter with the steps would be insufficient for future access.

3.7 CLEAN UP

- A.** The Contractor shall be responsible for containing and removal of all the rehabilitation material, rebound, and loose material caused by manhole rehabilitation.

3.8 FIELD QUALITY CONTROL

- A. Visual Inspection.** Manhole sealing will be visually inspected for water tightness upon completion and at any time during warranty period. Any visible leaks or defects that appear shall be repaired to the Owner's satisfaction by the Contractor at no additional cost. The visual inspection upon completion of lining shall be photographed. These photographs shall serve as the post-rehabilitation photographs.
- B. Testing Requirements.**
 1. Manhole liner shall be tested with a wet gauge as directed by the City's representative to verify prescribed thickness. Any area found with less than the prescribed thickness shall immediately receive the additional material needed.
 2. The Contractor shall cast three (3) 2" x 2" cubes for strength verification from each day's liner mix. These samples will be submitted to the City Inspector and tested by an approved laboratory. The City reserves the right to require Contractor to take core samples and to patch the cored location at no additional cost.
 3. Each manhole shall be sounded by the Contractor at seven (7) days. City Inspector must witness these soundings performed by the Contractor. Defects will be corrected by the Contractor to the satisfaction of the Project Engineer.

3.9 MEASUREMENT AND PAYMENT

- A. The unit price bid per vertical foot (VF) for Item SS-10, Cementitious Manhole Rehabilitation shall constitute full payment for this item complete in place including surface preparation, rehabilitating bench and channel, flow maintenance, step removal and replacement, water plug, patching mortar, elimination of inflow/infiltration, excavation, cementitious manhole lining, backfill, pavement removal and replacement, dewatering, disposal of excess materials, seeding and mulching, and clearing and grubbing.
- B. The unit price bid vertical foot (EACH) for Item 604, Reconstruct Manhole to Grade shall constitute full payment for this item complete in place including surface preparation, flow maintenance, water plug, patching mortar; removal and replacement of frame, corbelling, excavation, backfill, driveway and pavement removal and replacement, disposal of excess materials, seeding and mulching, and clearing and grubbing.
- C. The unit price bid for each Item SS-10, Replace Manhole Frame and Cover shall constitute full payment for this item complete in place including removal and replacement of frame and cover, grade rings, mortar, surface preparation, excavation, backfill, pavement removal and replacement, disposal of excess materials, seeding and mulching, and clearing and grubbing.

<u>ITEM</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
SS-10	EA	Replace Manhole Frame and Cover
604	EA	Reconstruct Manhole to Grade
SS-10	VF	Cementitious Manhole Rehabilitation

END OF SECTION

Submittal Cover Sheet

(Name of Contractor)

**2012 Sanitary Sewer Manhole
Rehabilitation Project**

10525 Dublin Road
Dublin, Ohio 43016

(Address)

(City, State, Zip)

City of Dublin
Division of Engineering
5800 Shier Rings Road
Dublin, Ohio 43016

4 Sets of Each Submittal Included

Dublin Project No.: 12-016-CIP

- 1 set of reviewed submittals returned to CONTRACTOR
- 1 sets of reviewed submittals forwarded to INDEPENDENT REPRESENTATIVE
- 1 set of reviewed submittals forwarded to INSPECTOR
- 1 set of reviewed submittals kept by PROJECT ENGINEER

Submittal No. _____ Date _____

SUBMITTAL

Item No.	Specification Section	Description

Review is for General Compliance with Contract Documents and Specifications. No Responsibility is Assumed for Correctness of Dimensions or Details.

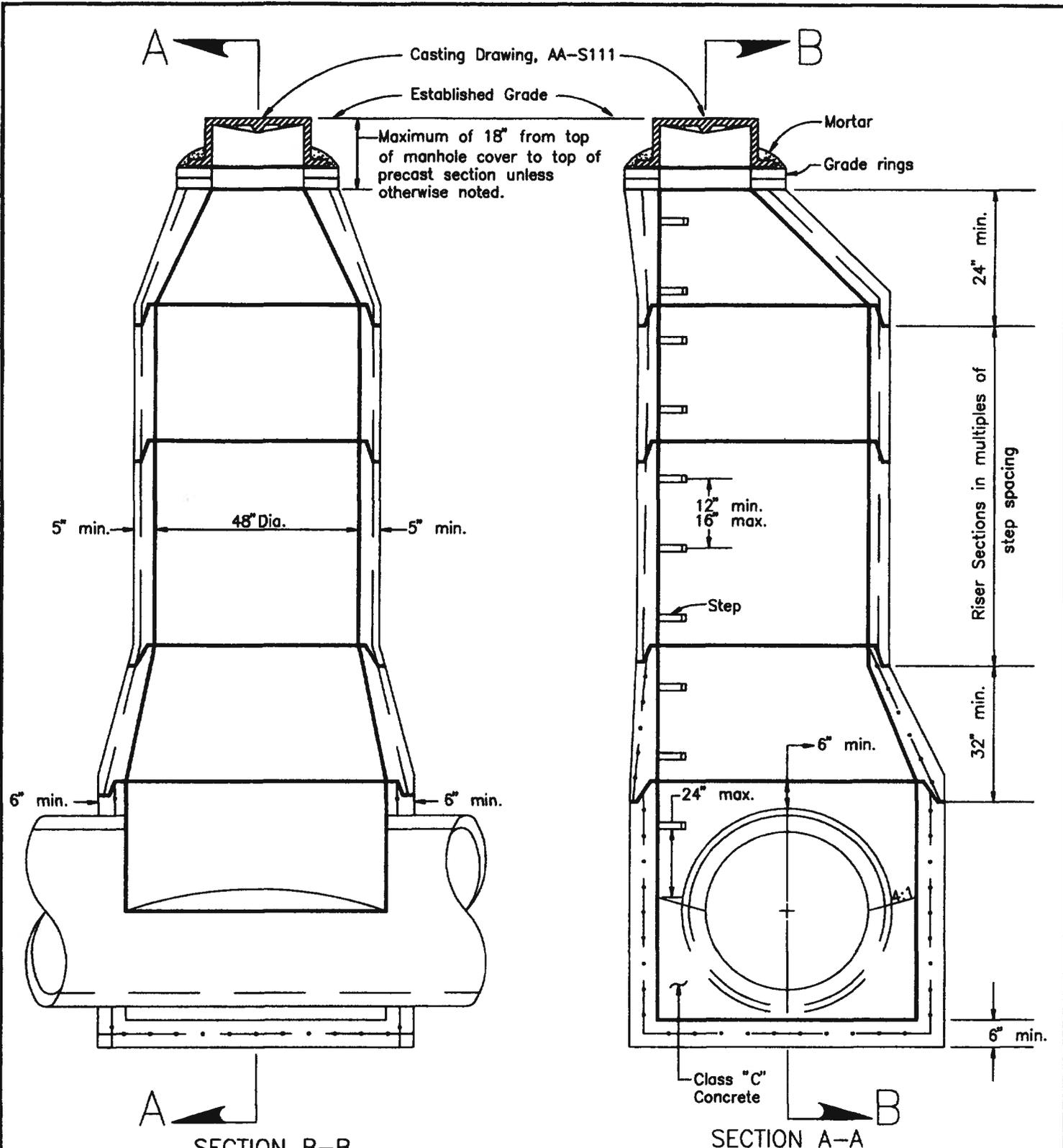
- _____ **No Exceptions Noted**
- _____ **No Action Required by Engineer or Owner**
- _____ **Make Corrections Noted**
- _____ **Revise & Resubmit**
- _____ **Rejected – See Comments**

City of Dublin, Ohio

**Project # 12-016-CIP
Doc. Type: Constr. Dwg. Review**

By: _____ Date: _____

SECTION 5
STANDARD DRAWINGS



NOTE:

1. Joints and connections shall be as specified under 604.06
2. Manholes must be in accordance with ASTM C-478
3. Precast walls shall have a minimum thickness of 5 inches and be reinforced sufficiently to permit shipping and handling without damage.
4. Finish manhole channel according to Standard Drawing AA-S117
5. See table for manhole base diameter

Stephen J. Salay
SEWER SYSTEM ENGINEERING MANAGER

Stephen J. Salay
ADMINISTRATOR

TYPE "C" MANHOLE
42" Dia. & Smaller
Pipe

CITY OF COLUMBUS, OHIO.
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

**STANDARD
CONSTRUCTION DRAWING**

APPROVED _____
REVISED 5-16-97

DR. CAW	SHEET 1	FILE NO.
CK. DJH	OF 2	AA-S102

MANHOLE BASE I.D. (inches)	MAXIMUM PIPE O.D.	
	Straight through Installation (inches)	Right Angle Installation (inches)
48	31	25
60	42	32
72	51	38
84	—	44
96	—	50


 SEWER SYSTEM ENGINEERING MANAGER

 ADMINISTRATOR

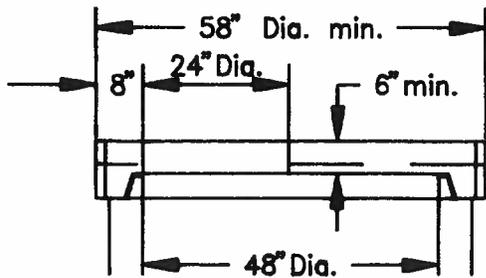
TYPE "C" MANHOLE
 42" Dia. & Smaller
 Pipe

CITY OF COLUMBUS, OHIO.
 DEPARTMENT OF PUBLIC UTILITIES
 DIVISION OF SEWERAGE & DRAINAGE

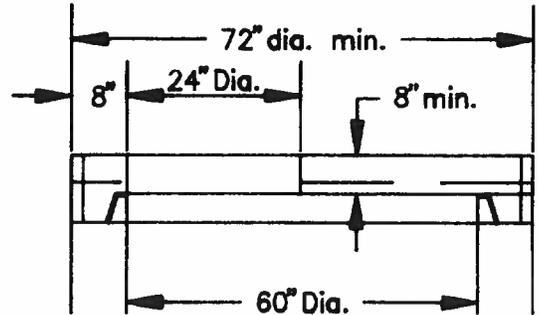
STANDARD CONSTRUCTION DRAWING

DR. <u>RLS</u>	SHEET <u>2</u>	FILE NO.
CK. _____	OF <u>2</u>	AA-S102

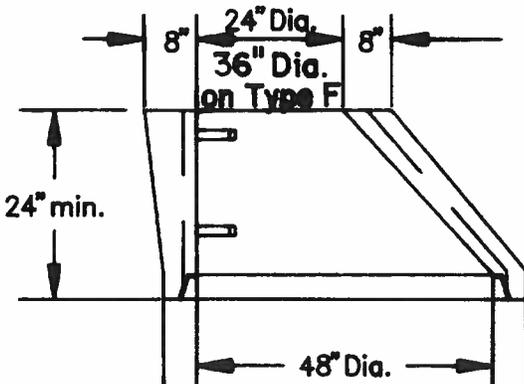
APPROVED _____
 REVISED 5-16-97



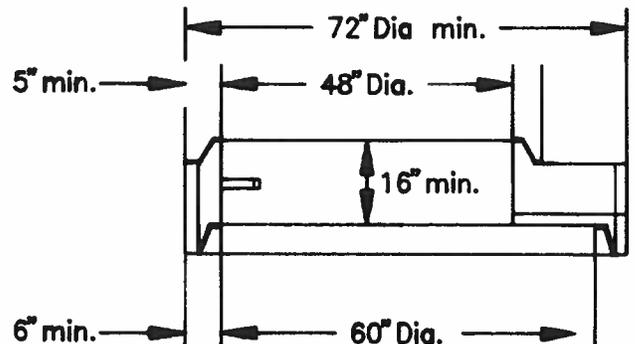
FLAT SLAB TOP
(48" Risers)



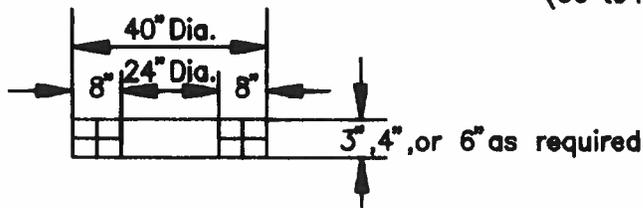
FLAT SLAB TOP
(60" Risers)



ECCENTRIC CONE TOP
(48" Risers)



FLAT SLAB TRANSITION
(60" to 48")



STANDARD GRADE RING

NOTE:

All items in accordance with ASTM C-478

Stephen J. Tolay
SEWER SYSTEM ENGINEERING MANAGER
Jerry Francis
ADMINISTRATOR

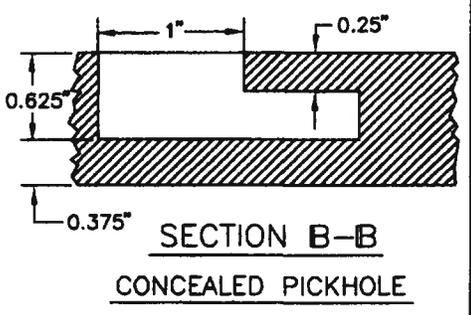
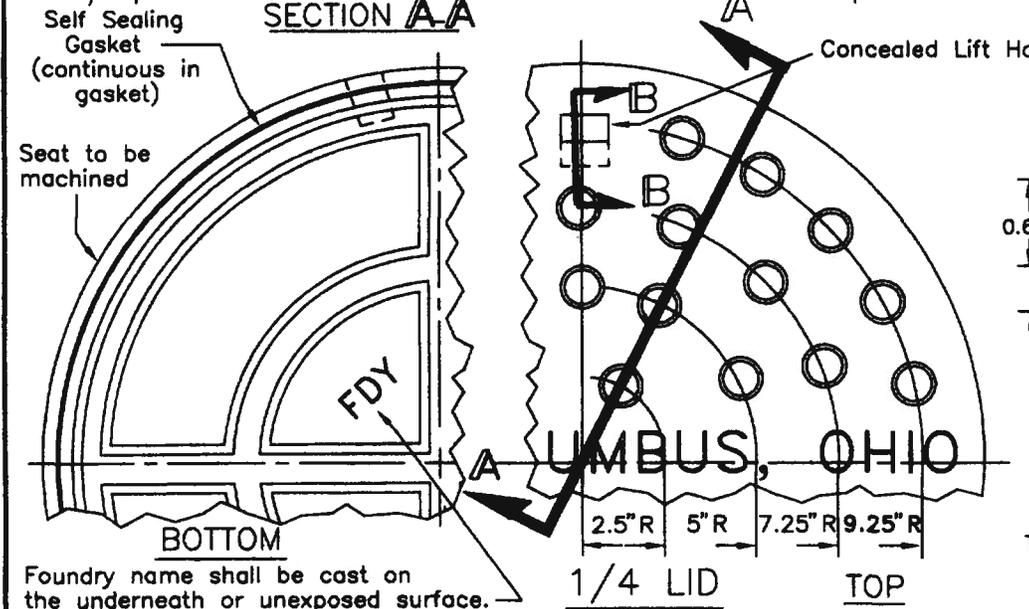
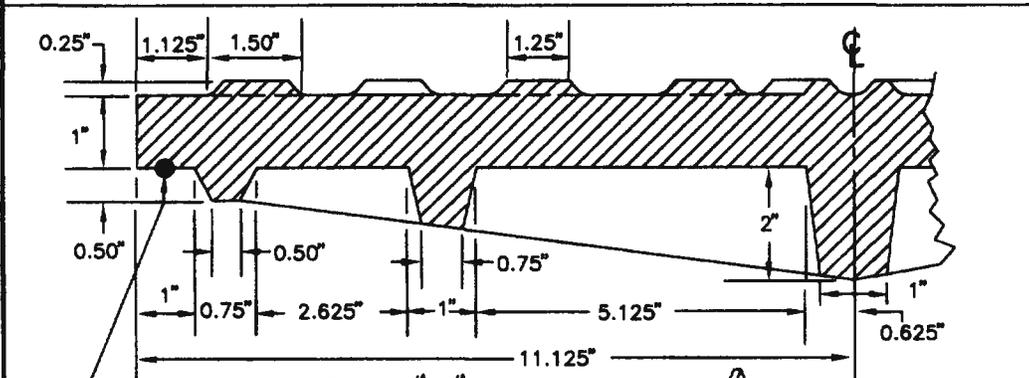
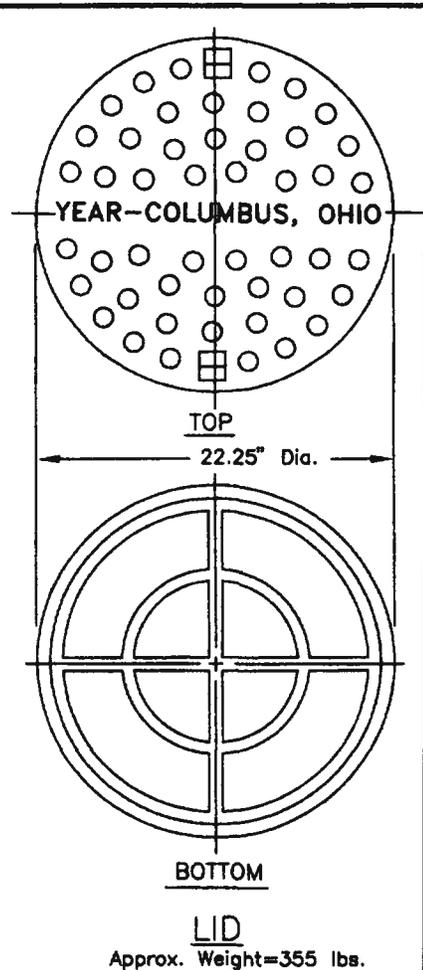
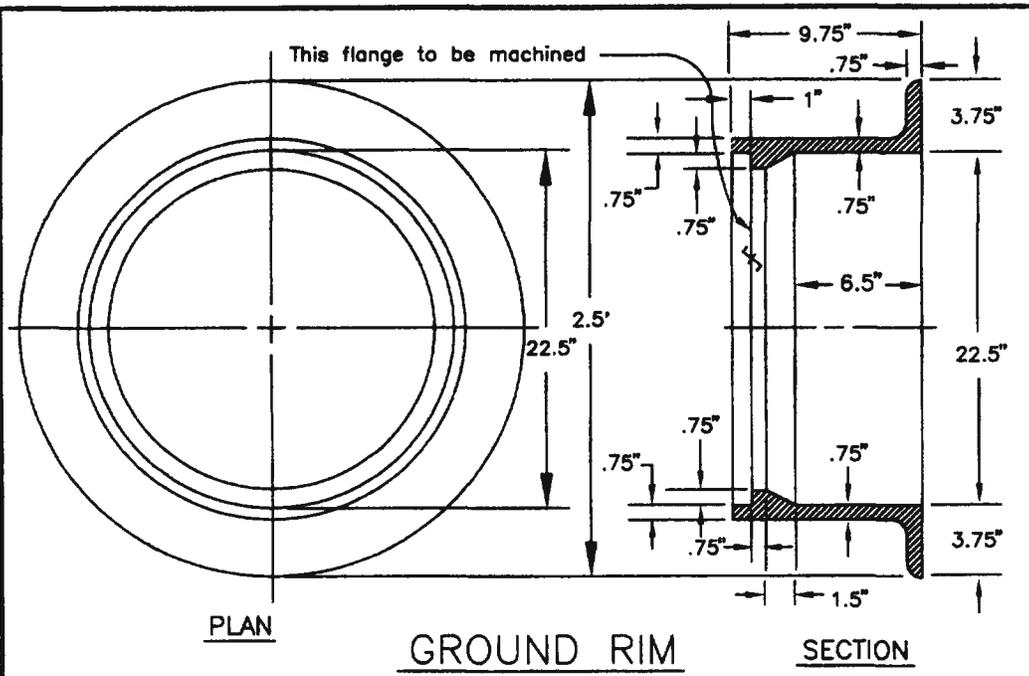
MISC. ITEMS
PRECAST MANHOLES

CITY OF COLUMBUS, OHIO.
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

STANDARD
CONSTRUCTION DRAWING

APPROVED *12/15/93* REVISION

DR. CAW	SHEET 1	FILE NO.
CK. DJH	OF 1	AA-S107



This drawing previously AA-S92

Note:

Frames, grates, and covers shall meet the requirements of 604.02 and AASHTO M306

Stephen J. Salay
SEWER SYSTEM ENGINEERING MANAGER
Stephen J. Eick
ADMINISTRATOR

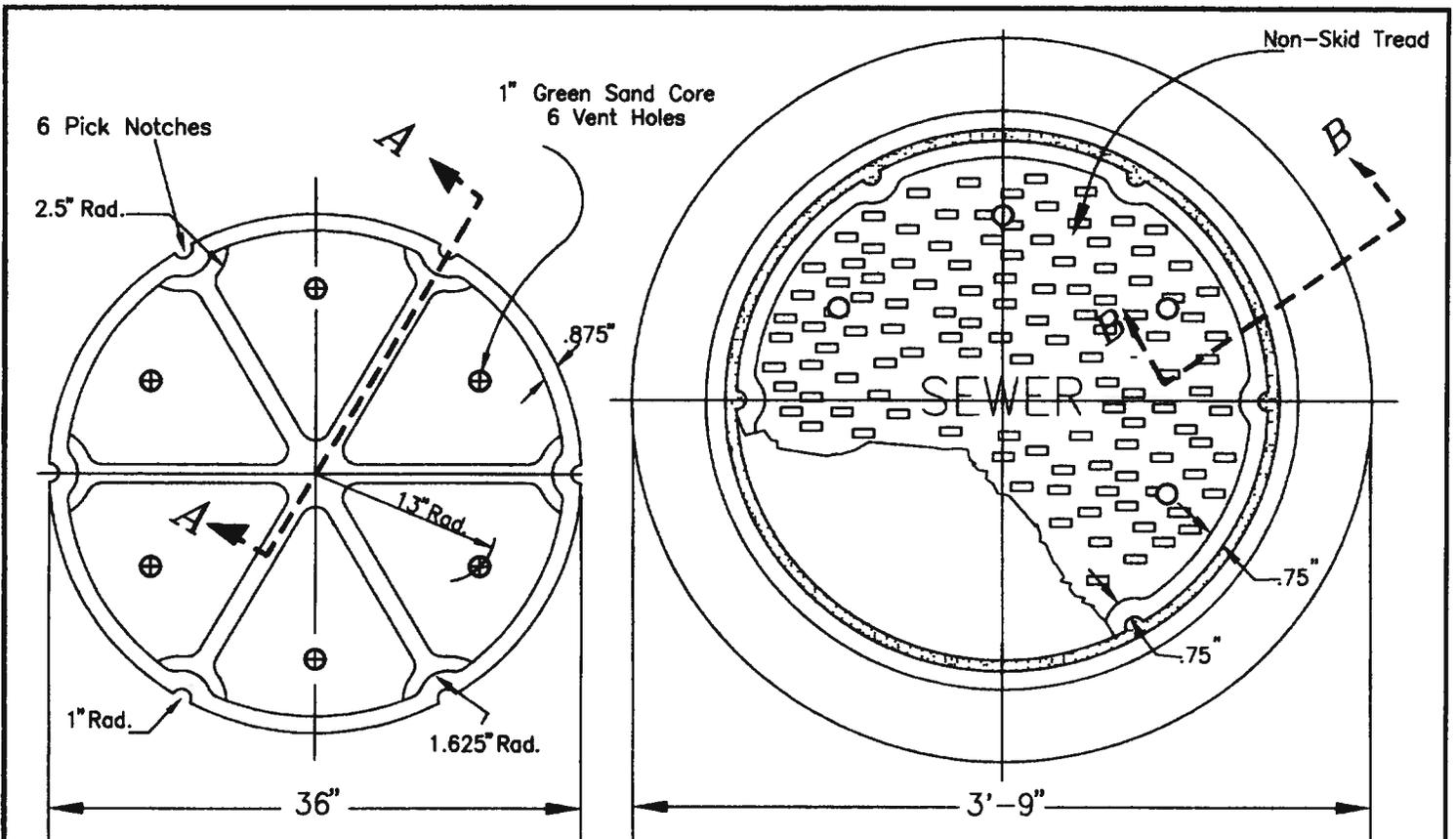
STANDARD DIMENSIONS
FOR
MANHOLE
FRAME & COVER
CASTING
(SANITARY SEWERS)

CITY OF COLUMBUS
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

STANDARD
CONSTRUCTION DRAWING

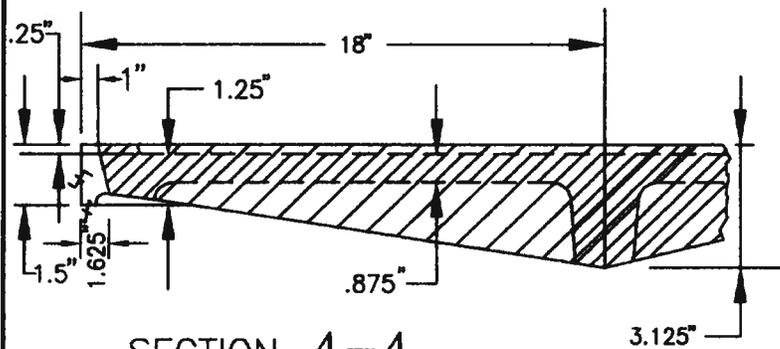
APPROVED _____
REVISED 5-16-97

DR. CLJ SHEET 1 FILE NO.
CK. _____ OF 1 AA-S111



BOTTOM VIEW OF COVER
(SEE SHEET 2 OF 2
FOR ALTERNATE DESIGN)

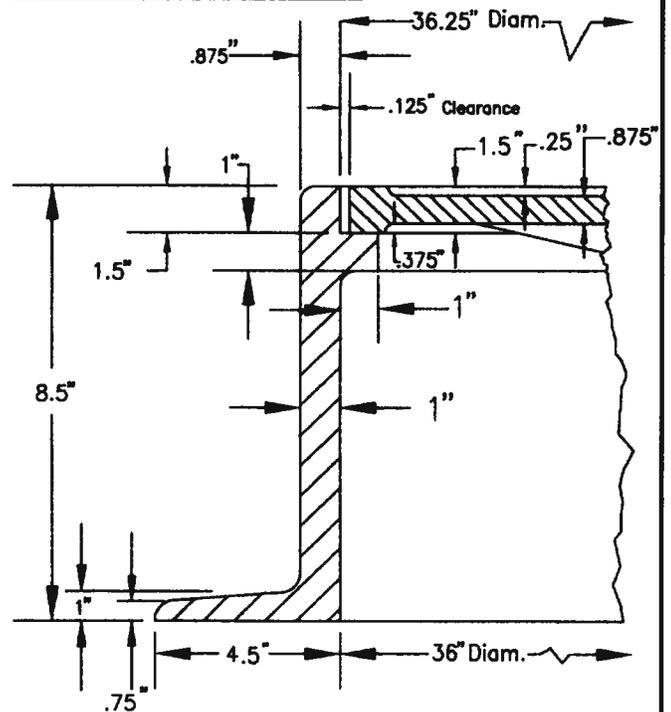
TOP VIEW OF ASSEMBLY



SECTION A-A

Approx. Weight=720 lbs.

This Drawing Previously AA-S19



SECTION B-B

NOTE:

Frames, grates, and covers shall meet the requirements of 604.02 and AASHTO M306

Tom A. Russell
STORMWATER PROGRAM MANAGER

Stephen J. Erickson
ADMINISTRATOR

STANDARD DIMENSIONS
FOR
36" MANHOLE
FRAME & COVER CASTING
(STORM SEWERS)

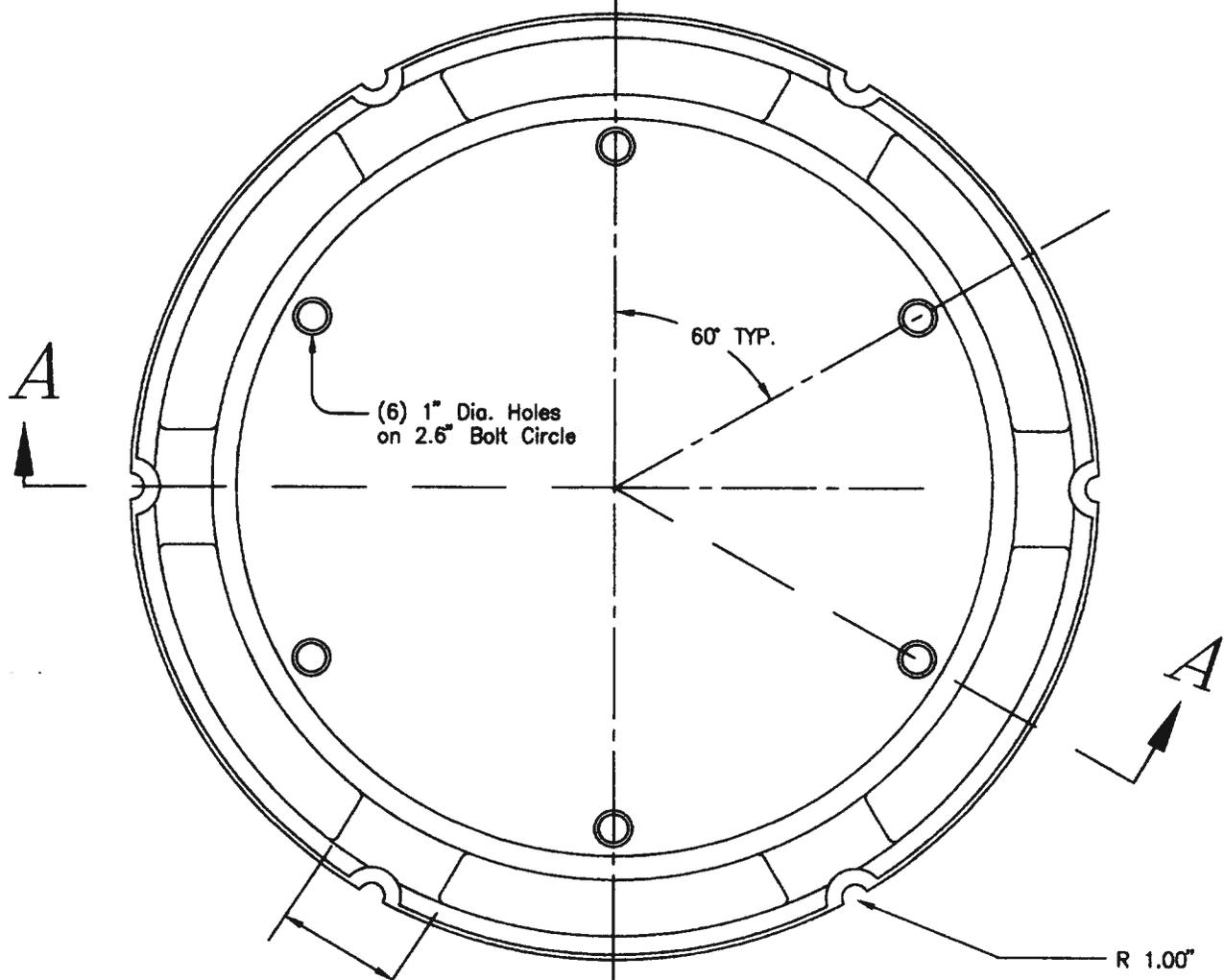
CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

STANDARD
CONSTRUCTION DRAWING

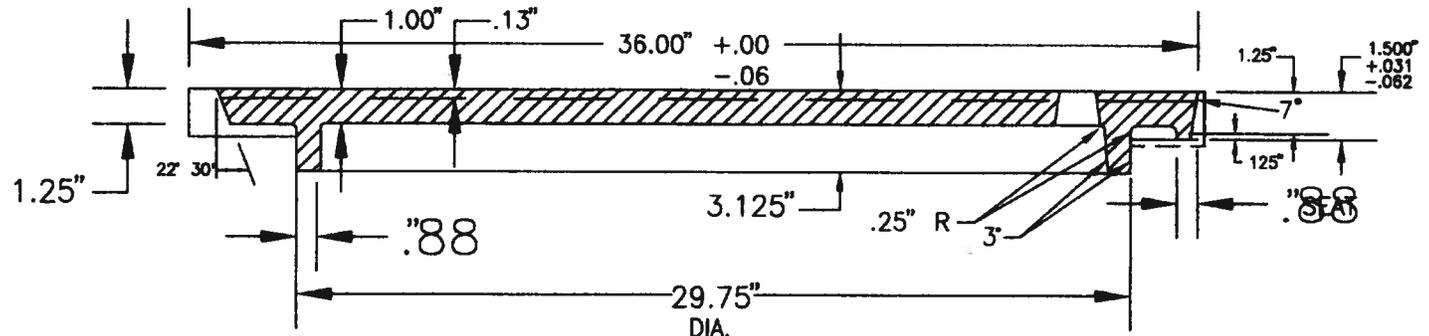
APPROVED

REVISED 5-16-97

DR. J.M.R.	SHEET 1	FILE NO.
CK. _____	OF 2	AA-S114



BOTTOM VIEW OF COVER



SECTION A-A

NOTE:
Frames, grates, and covers shall meet the requirements of 604.02 and AASHTO M306

Tom A. Russell
STORMWATER PROGRAM MANAGER

Stephen E. Erwin
ADMINISTRATOR

ALTERNATE DESIGN
FOR 36" MANHOLE
COVER
(STORM SEWERS)

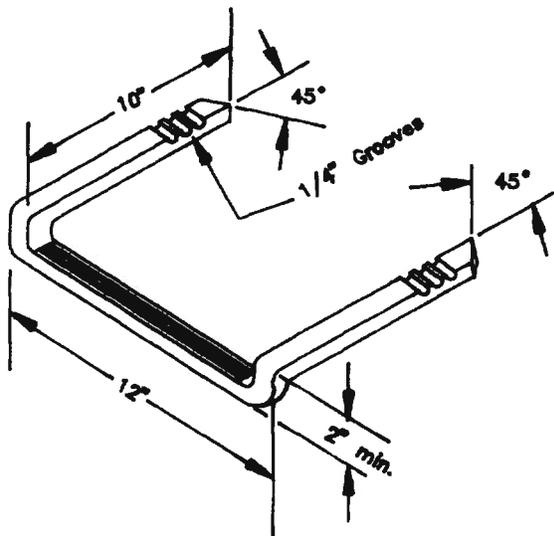
CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

STANDARD
CONSTRUCTION DRAWING

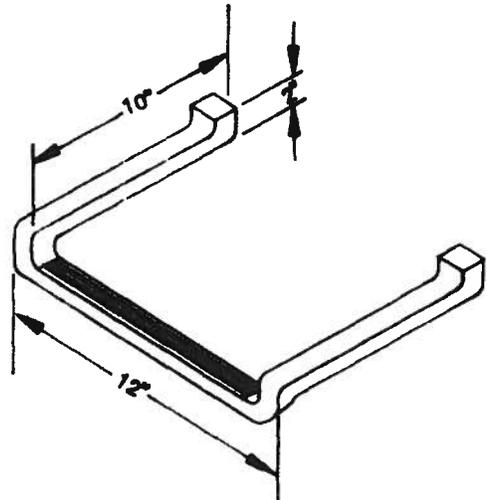
APPROVED

REVISED 5-16-97

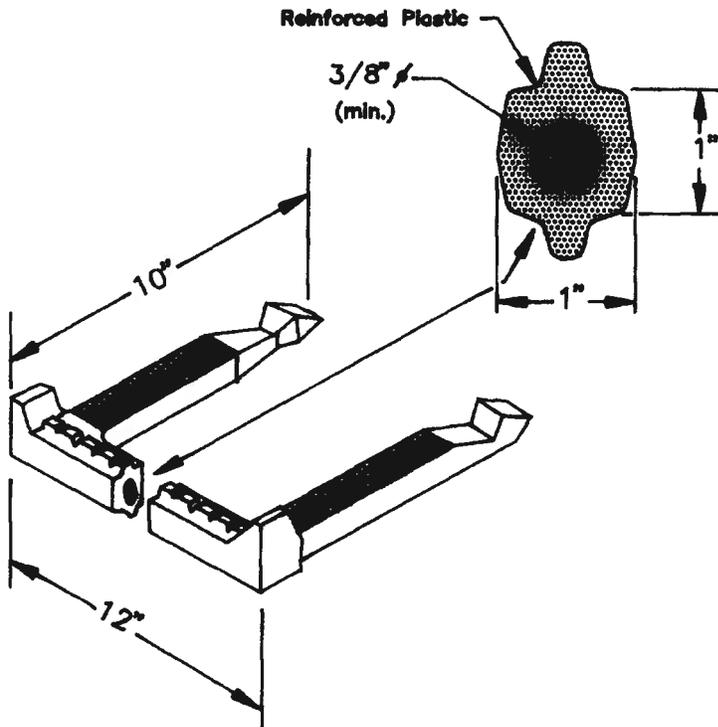
DR. <u>J.M.R.</u>	SHEET <u>2</u>	FILE NO.
CK. _____	OF <u>2</u>	AA-S114



ALUMINUM STEP
Item 711.30



FERROUS METAL STEP
Item 711.13



POLYPROPYLENE STEP
Item 711.31

NOTES :

1. Steps shall meet the requirements of ASTM C-478, and shall be installed with a uniform vertical spacing of 12" to 16".
2. Steps shall have a minimum cross sectional dimension of 1" for ferrous metal and 3/4" for aluminum.

Stephen J. Tolson
SEWER SYSTEMS ENGINEERING MANAGER

James J. Francis
ADMINISTRATOR

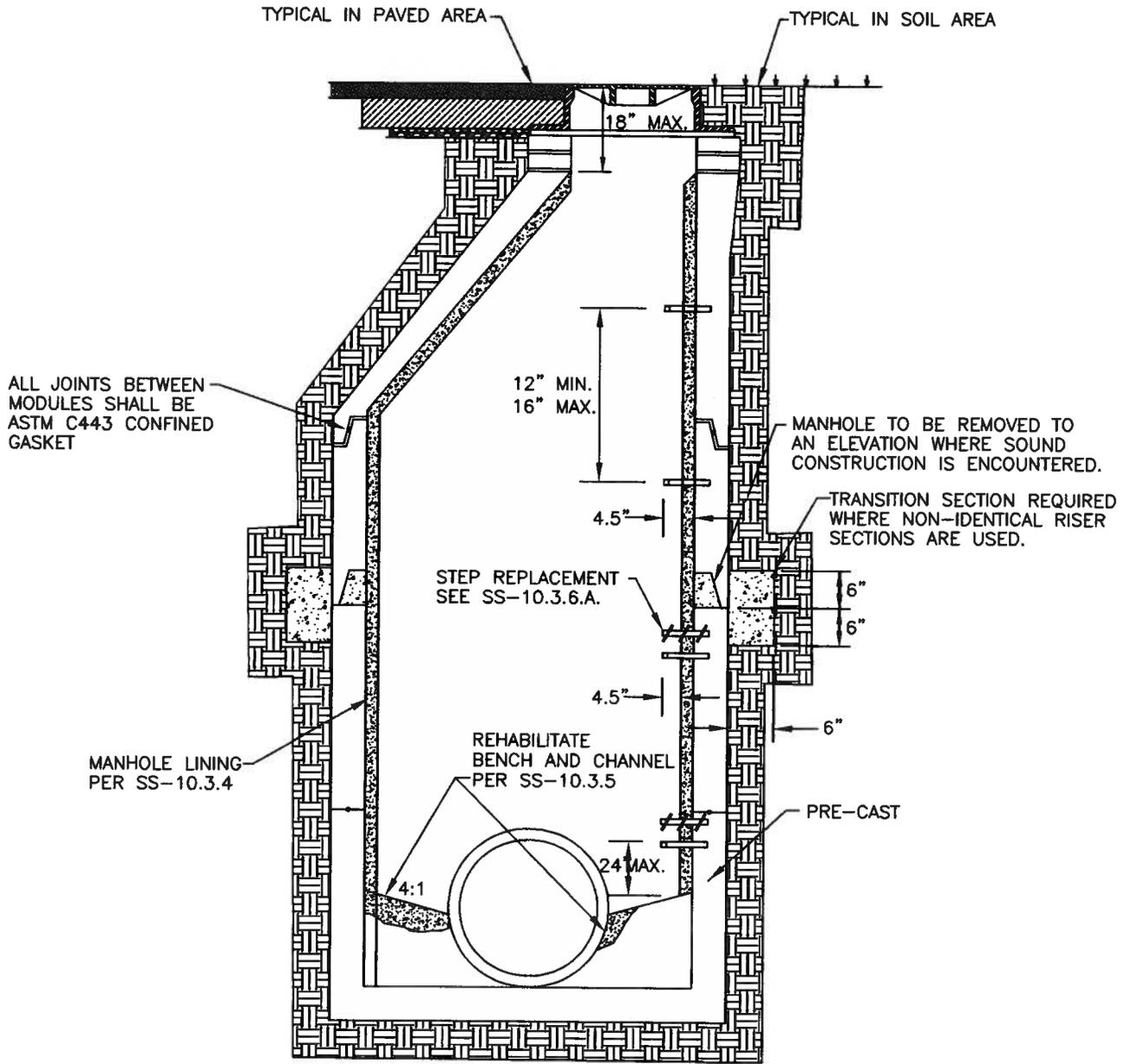
12/15/93
APPROVED

MANHOLE
STEPS
DETAIL

CITY OF COLUMBUS
DEPARTMENT OF
PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

STANDARD
CONSTRUCTION DRAWING

DR. <u>CLJ</u>	SHEET	FILE NO.
CK. _____	OF	AA-S119



1. MANHOLE WALLS SHALL BE SOUNDED WITH A HAMMER, AND ALL VOIDS SHALL BE FILLED WITH GROUT AS PER SS-7.
2. MANHOLE WALLS TO BE CLEANED (3.1.D), PATCHED (3.4.B), AND LINED (3.4.C) PER SS-10.
3. THE CONTRACTOR SHALL PLACE A DEVICE IN THE MANHOLE TO CATCH ANY DEBRIS WHICH MAY FALL INTO THE MANHOLE DURING PERFORMANCE OF WORK. ALL MATERIALS RESULTING FROM THE CLEANING AND/OR REPAIR OF THE MANHOLE SHALL BE REMOVED AND PROPERLY DISPOSED.

Date: 08/21/2012

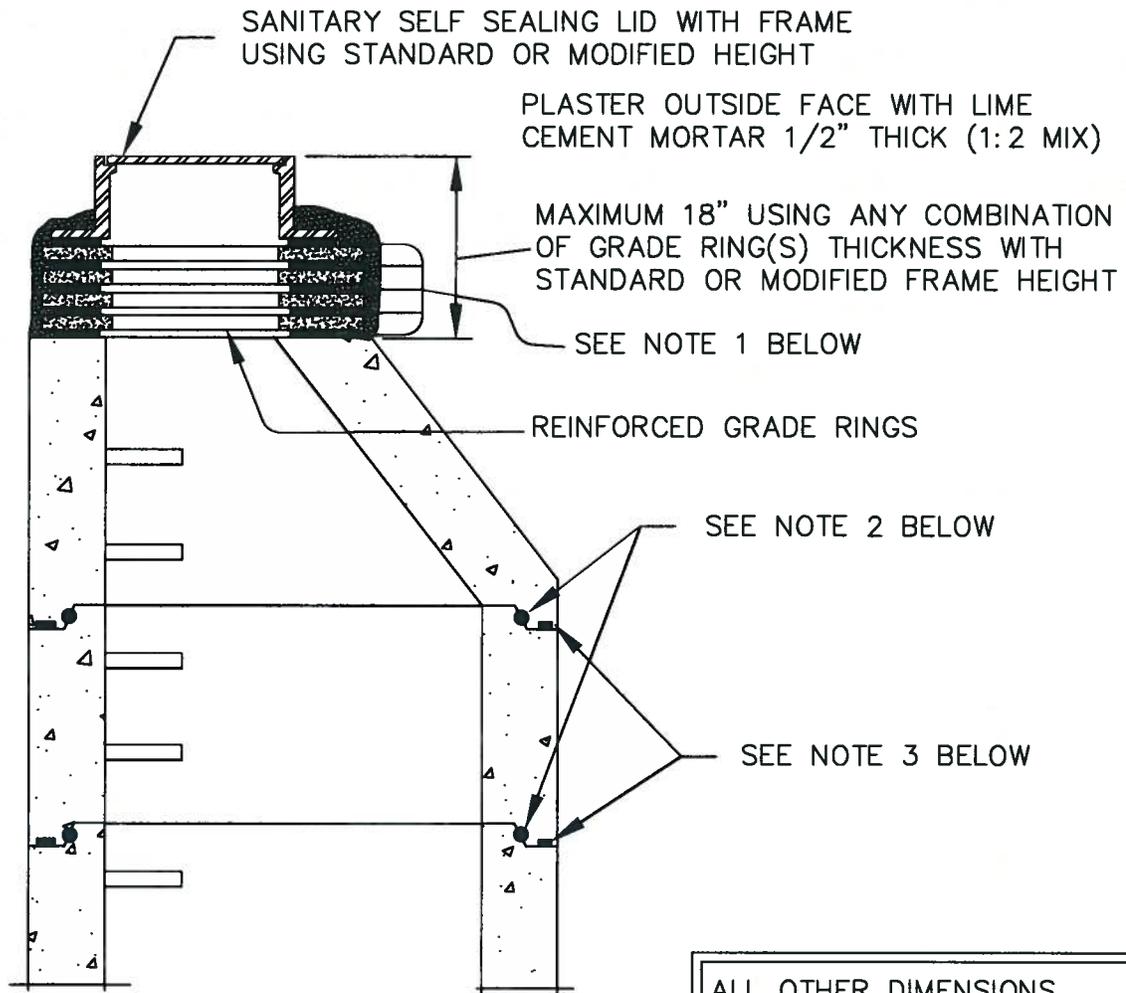


CONSTRUCTION DETAIL

MANHOLE REHABILITATION

SHEET 1 OF 1

DWG. NO. **MR-1**



ALL OTHER DIMENSIONS AND SPECIFICATIONS ARE THE SAME AS CITY OF COLUMBUS SPECS FOR SANITARY MANHOLES

NOTES:

1. 1/2" X 1-1/2" EXTRUDED FLEXIBLE PLASTIC (BUTYL RUBBER) SEALANT O.D.O.T. ITEM 706.14 CONFORMING TO AASHTO M-198, TYPE B AS MANUFACTURED BY CONCRETE SEALANTS INC., "CONSEAL" OR APPROVED EQUAL.

CLEAN EACH SURFACE BY WIRE BRUSHING ALL LOOSE CONCRETE DUST AND DIRT.

PLACE SEALANT IN A CIRCULAR CONFIGURATION ON EACH CONCRETE SURFACE AND OVERLAP A MINIMUM OF 1/4" AND KNEAD ENDS.
2. CLEAN BELL AND SPIGOT JOINT, APPLY APPROVED LUBRICATION TO JOINT SURFACE AND TO "O" RING; THEN EQUALIZE GASKET TO GROOVE.
3. PLACE 1/2" DIAMETER SEALANT AS MANUFACTURED BY CONCRETE SEALANTS INC., "CONSEAL" OR APPROVED EQUAL ON RISER TOP LEDGE.

Date: 09/18/2006



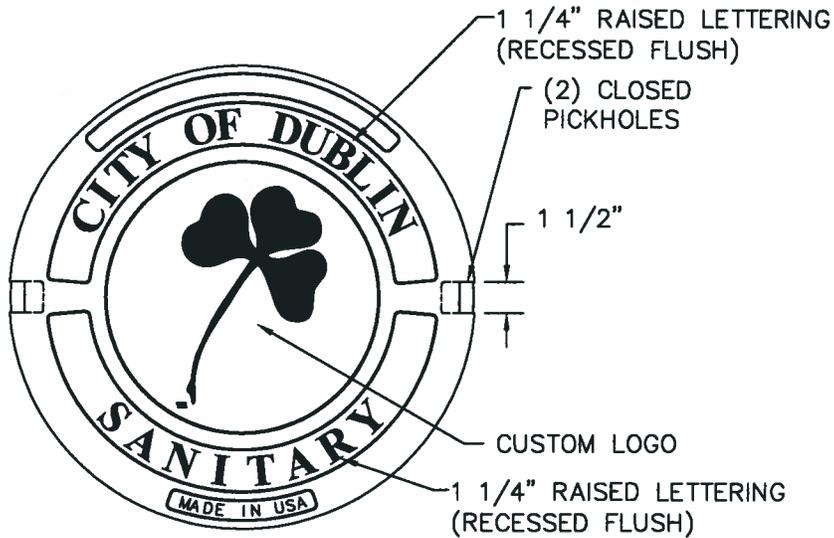
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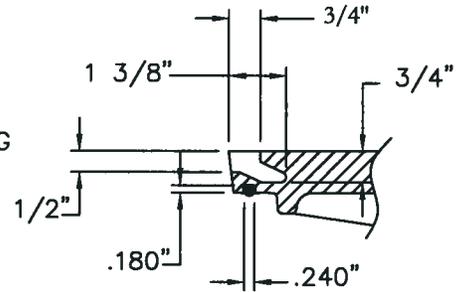
**JOINT SEAL FOR
SANITARY MANHOLE**

SHEET 1 OF 1

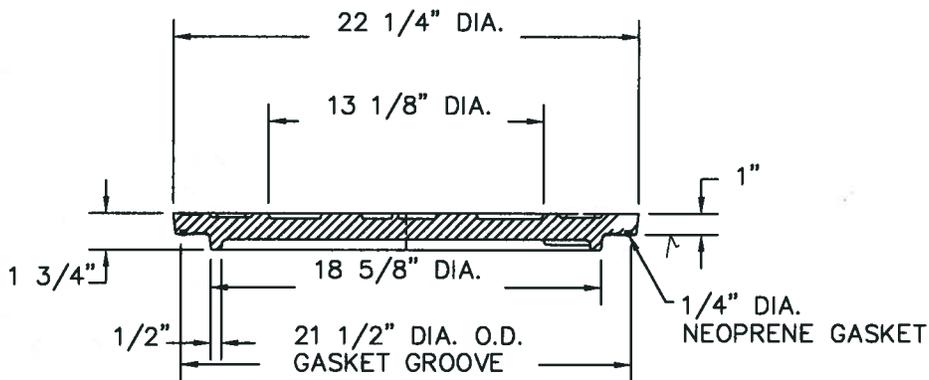
DWG. NO. **SA-01**



COVER FACE



PICK SLOT DETAIL



COVER SECTION

Date: 09/18/2006



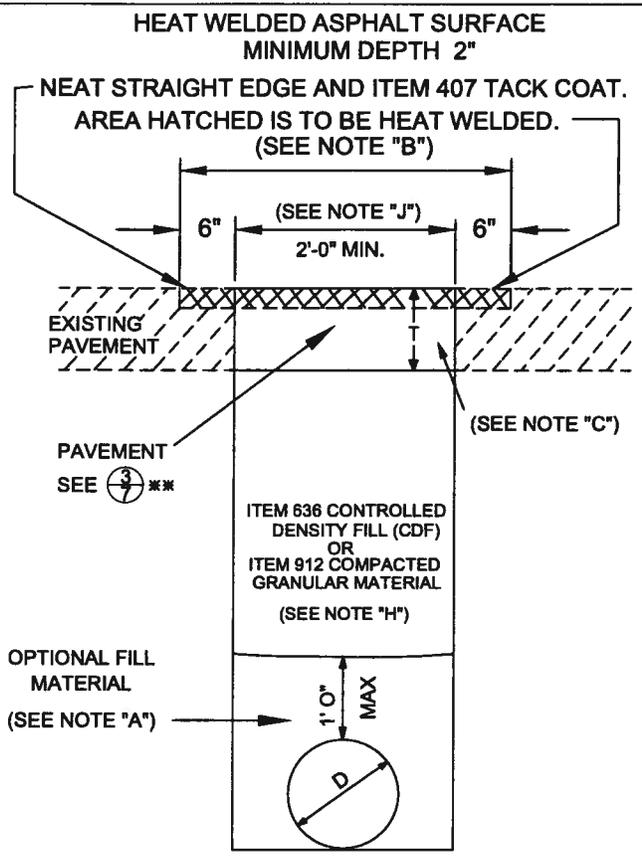
CITY OF DUBLIN™
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STANDARD DRAWING

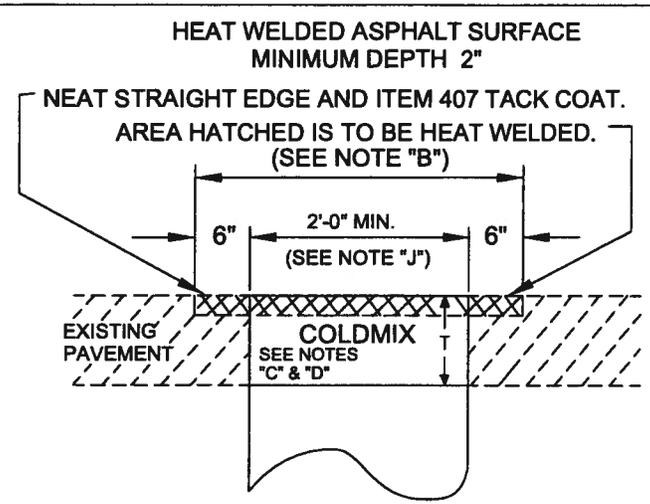
**SANITARY
MANHOLE LID**

SHEET 1 OF 1

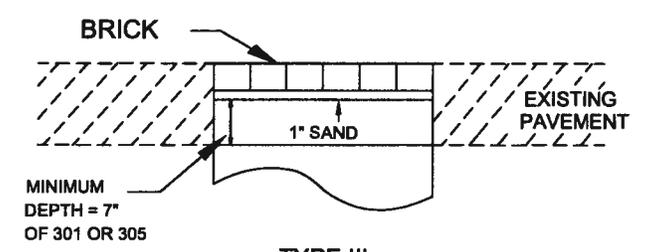
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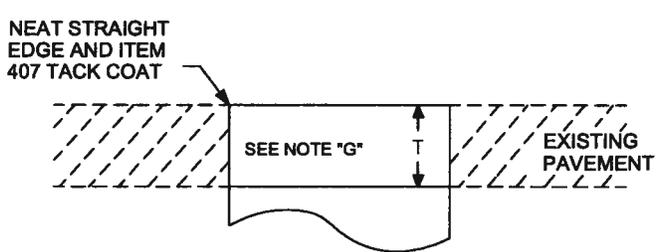
TYPE I
STANDARD FLEXIBLE ASPHALT REPAIR
WITH HEATWELD SURFACE
 (SEE NOTE "B")



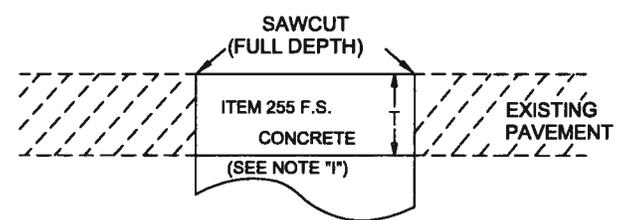
TYPE II
WINTER OPERATIONS
FLEXIBLE ASPHALT REPAIR
WITH HEATWELD SURFACE
 (SEE NOTE "E")



TYPE III
BRICK STREET REPAIR
 (SEE NOTE "F")



TYPE IV
ALLEY REPAIR



TYPE V
CONCRETE STREET REPAIR
OR
CONCRETE BUS PAD

NOTE: BACKFILL FOR ALL TYPES SHALL MEET THE REQUIREMENTS SHOWN IN TYPE I ABOVE.
T: MATCH EXISTING PAVEMENT THICKNESS, HOWEVER, MINIMUM OF 9" ON ALL STREET CUTS.

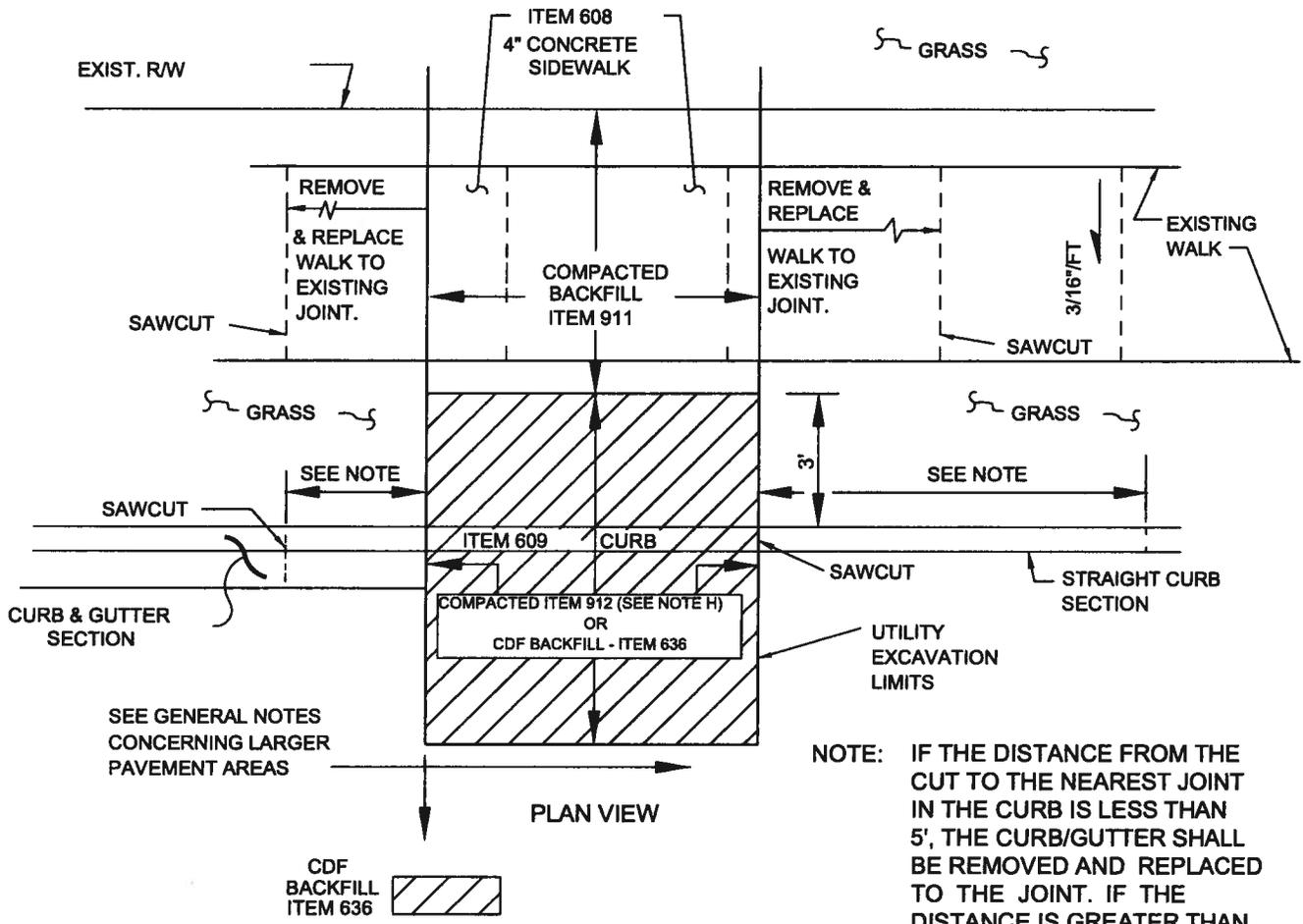
PAVEMENT & UTILITY CUT REPAIR STANDARDS

CITY OF COLUMBUS, OHIO
 DEPARTMENT OF PUBLIC SERVICE
 TRANSPORTATION DIVISION

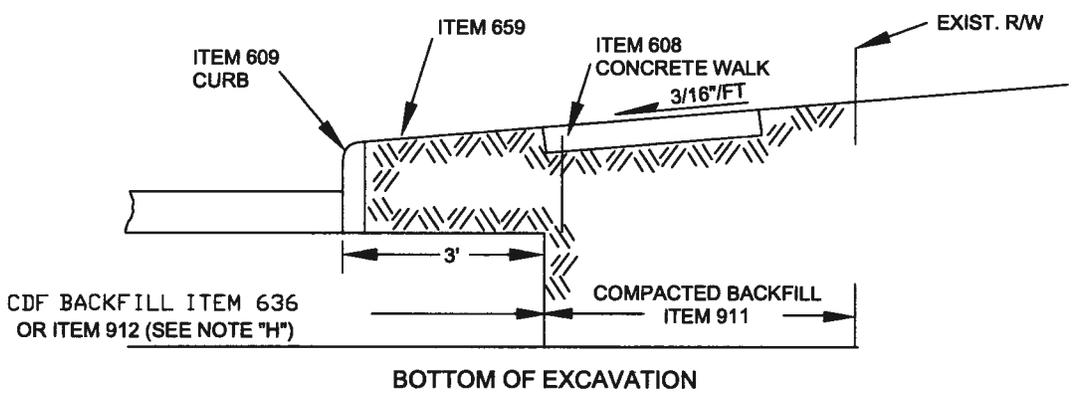
Paul J. Baum
 CITY ENGINEER

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SIDEWALK AND CURB REPAIR DETAILS



NOTE: IF THE DISTANCE FROM THE CUT TO THE NEAREST JOINT IN THE CURB IS LESS THAN 5', THE CURB/GUTTER SHALL BE REMOVED AND REPLACED TO THE JOINT. IF THE DISTANCE IS GREATER THAN 5', THE CURB MAY REMAIN.



ALL GRASS AREAS SHALL BE SEEDED IN ACCORDANCE WITH ITEM 659 SEEDING AND MULCHING.
 IN RESIDENTIAL AREAS WITH ESTABLISHED LAWNS, SOD SHALL BE PLACED RATHER THAN SEEDING.

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GENERAL NOTES

EXCAVATION PERMIT REQUIRED: A CITY OF COLUMBUS STREET EXCAVATION PERMIT IS REQUIRED FOR ALL EXCAVATIONS WITHIN THE PUBLIC RIGHT-OF-WAY, AS SET FORTH BY COLUMBUS CITY CODE, CHAPTER 903 AND ISSUED IN ACCORDANCE WITH PROVISIONS IN THE GENERAL RULES AND REGULATIONS OF THE TRANSPORTATION DIVISION.

SCOPE OF WORK

THIS WORK SHALL CONSIST OF PAVEMENT REMOVAL, NECESSARY EXCAVATION, AND PAVEMENT REPLACEMENT IN ACCORDANCE WITH THE DETAILS SHOWN HEREIN. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATION (CCMS).

PROCEDURES USED FOR THE PAVEMENT REMOVAL AND REPLACEMENT SHALL NOT CAUSE SPALLING OR CRACKING OF ADJACENT PAVEMENT.

WHEN THE PAVEMENT IS REMOVED AND THE CONTRACTOR IS UNABLE TO COMPLETE THE REQUIRED REPLACEMENT IN TIME FOR IT TO BE OPENED TO TRAFFIC AS INDICATED ON THE PERMIT, THE EXCAVATION SHALL BE FILLED WITH A BITUMINOUS PATCH MATERIAL WITH A DURABLE SURFACE OR PROPERLY PLATED. (AS PER CITY CODE CHAPTER 903 &/OR SHEET 7 OF THIS STANDARD DRAWING) THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THESE PATCHES WHILE THEY ARE IN SERVICE. THE COST OF PLACING, MAINTAINING, AND REMOVING AND DISPOSING OF THE TEMPORARY PATCHES OR PLATES WILL BE AT THE CONTRACTOR'S EXPENSE.

WHEN ITEM 636 FCDF IS USED AS A BACKFILL, NO PAVEMENT SHALL BE PLACED UNTIL BLEED WATER HAS BEEN EVAPORATED FROM THE FCDF SURFACE OR HAS BEEN DRAINED OR REMOVED FROM THE SURFACE.

THE BACKFILLING PAVEMENT REPAIR AND/OR HEAT WELDING SHALL BE DONE BY THE CONTRACTOR OR PERMITEE IN ACCORDANCE WITH CITY SPECIFICATIONS. IF DESIRED, ANY OR ALL OF THIS WORK CAN BE PERFORMED BY THE CITY OF COLUMBUS. THE CITY SHALL COLLECT APPROPRIATE FEES AT THE TIME THE PERMIT IS ISSUED FOR SAID WORK.

RESTORATION OF ANY SIDEWALK, CURB, STREET PAVEMENT, ETC., SHALL OCCUR NO LATER THAN 30 DAYS AFTER CONCLUSION OF ANY UTILITY REPAIR OR INSTALLATION ACTIVITY. CONSTRUCTION ACTIVITY COMPLETED DECEMBER THROUGH APRIL SHALL BE RESOLVED NO LATER THAN MAY 31ST. ADDITIONAL PERMITS SHALL NOT BE ISSUED UNTIL THE VIOLATIONS ARE CORRECTED TO THE SATISFACTION OF THE CITY ENGINEER. IN ADDITION, EACH VIOLATION MAY BE DEALT WITH IN ACCORDANCE WITH SECTION 903.99 OF THE COLUMBUS CITY CODE.

**** PAVING STANDARDS FOR LARGE TRENCHES OR PAVING AREAS**

A SMALL LATERAL TRENCH CUT OR SMALL PAVEMENT AREA SHALL BE DEFINED AS 5 FT OR LESS IN WIDTH AND/OR NO GREATER THAN 100 FT IN LENGTH. WHEN REPAIR AREAS EXCEED ONE OR BOTH OF THESE DIMENSIONS, THE PAVEMENT REPAIR SECTION SHALL CONFORM TO 2 INCHES OF ITEM 404 ASPHALT CONCRETE ON EITHER 7 INCHES OF ITEM 301 BITUMINOUS AGGREGATE BASE OR ITEM 305 PORTLAND CEMENT CONCRETE BASE. OTHERWISE PLANS SHOULD REFLECT REPLACEMENT OF THE PAVEMENT IN ACCORDANCE WITH CITY STANDARD TYPICAL SECTIONS AND ARE SUBJECT TO APPROVAL BY THE TRANSPORTATION DIVISION.

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WHEN A TRENCH EXCEEDS 100 FT IN LENGTH, THE REPAIR SHALL INCLUDE PLANING A FULL LANE WIDTH (OR ANY OTHER LANE WIDTH AS DIRECTED BY THE TRANSPORTATION DIVISION) TO A DEPTH OF 1 ¼ INCHES FOR THE ENTIRE LENGTH OF THE TRENCH. THE PLANED AREA SHALL THEN BE REPAVED WITH A PAVER IN ACCORDANCE WITH CURRENT CITY STANDARD SPECIFICATIONS. ITEM 413 CRACK SEALING SHALL BE APPLIED TO EXPOSED JOINTS ONCE THE PAVING OPERATION HAS BEEN COMPLETED.

WHEN TRENCHING WORK CROSSES LANES, ALL AFFECTED LANES SHALL REQUIRE PLANING AND RESURFACING AS DESCRIBED ABOVE. THIS WORK SHALL INCLUDE ALL OF THE AFFECTED PAVEMENT AREA.

SPECIAL NOTES

NOTE 'A' : WHEN USING CONTROLLED DENSITY FILL (CDF), THE OPTIONAL FILL AREA OVER THE CONDUIT MAY BE BACKFILLED WITH SAND, GRANULAR MATERIAL, OR OTHER SUITABLE 912 MATERIAL, FOR A DISTANCE NOT TO EXCEED 1 FT. A PROTECTIVE BARRIER OF VISQUEEN OR SIMILAR MATERIAL IS PERMITTED.

NOTE 'B' : FOR TYPE I AND TYPE II CUT REPAIRS, THE AREA TO BE HEAT WELDED IS TO INCLUDE THE CUT AND EXTEND FOR 6 INCHES BEYOND EACH SIDE OF THE CUT FOR A NOMINAL DEPTH OF 2 INCHES.

NOTE 'C' : FOR TYPE I AND TYPE II PAVEMENT REPAIR, THE ITEM 404 HOT ASPHALT OR COLD MIX SHALL BE PLACED IN LIFTS NOT EXCEEDING 3 INCHES AND COMPACTED WITH A COMBINATION VIBRATORY PLATE COMPACTOR, OR A VIBRATORY STEEL WHEELED ROLLER WITH A MINIMUM CERTIFIED FORCE OF 2000 POUNDS. IN ALL CASES THE SURFACE LIFT SHALL BE COMPACTED WITH THE VIBRATORY STEEL WHEELED ROLLER. WHEN PLACING HCM COLD MIX FULL DEPTH, MATERIAL TEMPERATURE SHALL BE 70 DEGREES OR ABOVE.

NOTE 'D' : COLD MIX SHALL BE HCM COLD MIX OR OTHER COLD MIX APPROVED BY THE CITY OF COLUMBUS. IN LIEU OF COLD MIX, THE CONTRACTOR MAY STOCKPILE 404 ASPHALT AND REHEAT IT TO PLACE IN CUT AS PAVEMENT REPAIR. TYPE II PAVEMENT REPLACEMENT SHALL CONSIST OF FULL DEPTH HPM COLD MIX FOR SMALL EXCAVATIONS. LARGE EXCAVATIONS SHALL REQUIRE A MINIMUM OF 7 INCHES OF FAST SETTING PORTLAND CEMENT AND 2 INCHES OF HPM COLD MIX.

NOTE 'E' : THE COLD MIX IS TO BE REPLACED WITH ITEM 404 ASPHALT WHICH IS TO BE HEAT WELDED AS SET FORTH IN NOTE 'B'. THIS WORK SHALL BE PERFORMED AS SOON AS ASPHALT IS AVAILABLE.

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NOTE 'F' : REPAIR OF BRICK STREETS

1. BRICKS REMOVED FROM A REPAIR AREA SHALL BE STORED IN A SAFE PLACE BY THE CONTRACTOR FOR REUSE. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING ANY BRICKS THAT ARE STOLEN OR DAMAGED, AT NO ADDITIONAL COST TO THE CITY.
2. BRICKS MAY BE PURCHASED FROM THE CITY AT A NOMINAL COST TO THE CONTRACTOR. IF BRICKS ARE SUPPLIED BY THE CONTRACTOR, THEY MUST FIRST BE APPROVED BY THE CITY BEFORE THEY ARE USED.
3. SAW CUTTING: ALL PARTIAL BRICKS SHALL BE SAWCUT. FURTHER, NO BRICK WILL BE PERMITTED TO BE CUT, FOR REPLACEMENT, TO A LENGTH LESS THAN $\frac{1}{2}$ ITS ORIGINAL LENGTH. THIS MAY REQUIRE SAW CUTTING OF ADJACENT UNDISTURBED BRICK(S).
4. THE PERIMETER FACES OF THE EXISTING BASE MATERIAL SHALL BE CUT BACK TO AS NEARLY VERTICAL ORIENTATION AS POSSIBLE. IF SHEARING OF THE ADJACENT BASE RESULTS, THE CONTRACTOR WILL BE PAID FOR THE ADDITIONAL AREAS OF REMOVAL AS DESCRIBED ON THE ATTACHED DETAIL SHEET.
5. THE MAXIMUM WIDTH OF A BRICK MORTAR JOINT SHALL BE $\frac{1}{2}$ INCH. THIS RESTRICTION SHALL ALSO APPLY TO THE JOINT FORMED ADJACENT TO THE PERIMETER OF A REPAIR AREA, WHERE THE ROWS MAY NOT BE PARALLEL TO ONE ANOTHER.
6. MORTARING OF JOINTS: ALL JOINTS SHALL BE MORTARED WITH A 50/50 MIXTURE BY VOLUME OF SAND AND CEMENT SO AS TO PROVIDE A FLUSH FINISH. THIS MAY REQUIRE MORE THAN ONE APPLICATION. FURTHER, MECHANICAL VIBRATION WILL BE REQUIRED FOR CONSOLIDATION OF DRY MORTAR MIX.
7. ALLOWABLE BASE MATERIAL SHALL BE DETERMINED BY THE TRENCH SIZE AS APPLICABLE FOR SMALL OR LARGE EXCAVATIONS, AS AS SPECIFIED ON PAGE 3 OF 7.

NOTE 'G' : FOR ALLEY REPAIRS, THE PROPOSED PAVEMENT REPLACEMENT SHALL CONFORM TO THE EXISTING TYPE AND THICKNESS OF THE PAVEMENT. CHIP AND SEAL TYPE ALLEYS SHALL REQUIRE MATCHING THE EXISTING THICKNESS OF PAVEMENT WITH THE APPROPRIATE COMBINATION OF MATERIALS BASED ON THE SIZE OF THE EXCAVATION. THE MINIMUM SHALL CONSIST OF 3 INCHES OF ITEM 404 ASPHALT CONCRETE. FINISH CONCRETE PAVEMENT IS NOT PERMITTED. MATERIALS USED SHALL CONFORM TO THE REQUIREMENT OF THE CURRENT CCMS.

IF MORE THAN $\frac{1}{3}$ OF THE WIDTH OF AN ALLEY IS REMOVED, THE PAVEMENT SHALL BE REPLACED AS PER TYPICAL AND THEN OVERLAYED OVER THE TOTAL WIDTH OF PAVEMENT AND LENGTH OF TRENCH.

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NOTE 'H' : ITEM 912 - COMPACTED GRANULAR BACKFILL:

THIS METHOD OF BACKFILL CAN ONLY BE USED WITH FULL TIME CITY INSPECTION. AN INSPECTION FEE MUST BE POSTED WHEN THE PERMIT IS ISSUED.

NOTE 'I' : CONCRETE BASE OR PAVEMENT

IF PAVING REQUIREMENTS ALLOW FOR SUFFICIENT CURING TIME SO THAT FAST SETTING CONCRETE IS NOT NEEDED, STANDARD CONCRETE BASE OR PAVEMENT MAY BE PLACED AS PER THE CCMS. THIS OPTION MUST BE NOTED ON THE PERMIT APPLICATION AND APPROVED BY THE CITY OF COLUMBUS.

NOTE 'J' : THE TRENCH WIDTH FOR SMALL PIPES AND CONDUITS SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR THE PROPER PLACEMENT OF THE BACKFILL MATERIAL. THE PAVEMENT PORTION OF THE TRENCH SHALL BE A MINIMUM OF 2 FT IN WIDTH. THIS IS TO ALLOW FOR THE PROPER COMPACTION OF THE ASPHALT PAVEMENT. IF THE TRENCH FOR PLACING CONDUIT IS NARROWER THAN 2 FT THEN THE PAVEMENT PORTION SHALL BE CUT BACK TO PROVIDE THE 2 FT MINIMUM FOR PAVING OPERATIONS.

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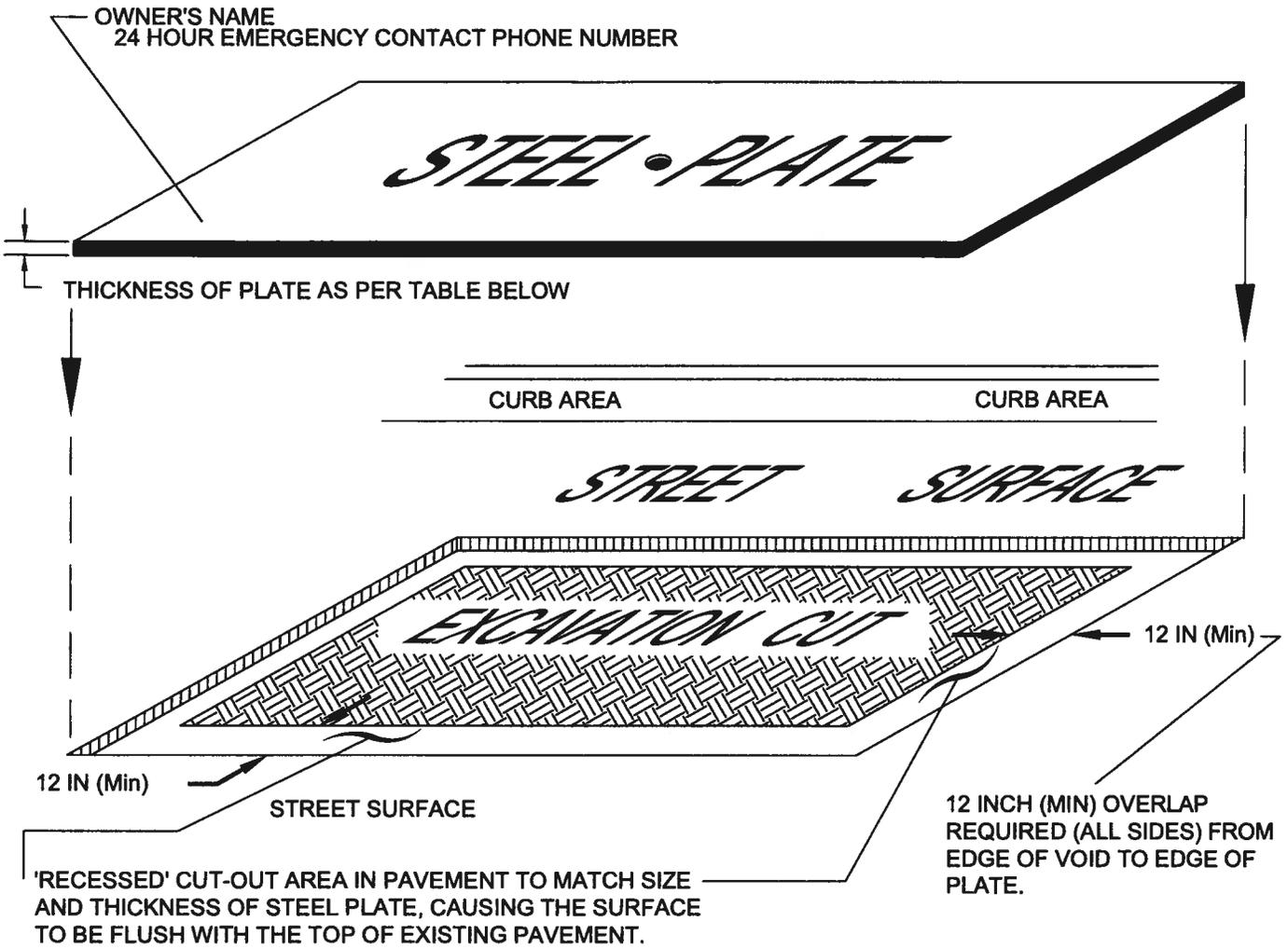
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'RECESSED' CUT-OUT AREA IN PAVEMENT TO MATCH SIZE AND THICKNESS OF STEEL PLATE, CAUSING THE SURFACE TO BE FLUSH WITH THE TOP OF EXISTING PAVEMENT.

12 INCH (MIN) OVERLAP REQUIRED (ALL SIDES) FROM EDGE OF VOID TO EDGE OF PLATE.

THIS DRAWING ONLY APPLIES TO BITUMINOUS ASPHALT SURFACED STREETS

NOTE: ALL STEEL PLATES MUST HAVE THE FOLLOWING INFORMATION CLEARLY AND LEGIBLY 'ETCHED' INTO THEIR TOP SURFACE:
 1 OWNERS NAME
 2 A 24 HR. EMERGENCY CONTACT PHONE NUMBER.

MINIMUM THICKNESS OF STEEL PLATES	
SIZE OF PLATE	THICKNESS
4 FT x 4 FT	1/2 INCH
4 FT x 6 FT	3/4 INCH
LARGER	1 INCH

STEEL PLATE REQUIREMENTS

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