



**CITY OF PHILADELPHIA  
OFFICE OF ECONOMIC OPPORTUNITY  
ANTIDISCRIMINATION POLICY- MINORITY, WOMAN AND DISABLED OWNED  
BUSINESS ENTERPRISES  
FORMS, INSTRUCTIONS AND SPECIAL CONTRACT PROVISIONS  
(SEALED BID CONTRACTS)**

Under the authority of Executive Orders No. 02-05, as reauthorized, and 14-08, the City of Philadelphia has established an antidiscrimination policy ("Policy") relating to the participation of Minority (MBE), Woman (WBE) and Disabled (DSBE) Owned Business Enterprises in City contracts. Executive Order 14-08 disestablished the Minority Business Enterprise Council and transferred its administrative functions under Executive Order 02-05 to the Office of Economic Opportunity ("OEO").

The purpose of this Policy is to provide equal opportunity for all businesses and to assure that City funds are not used, directly or indirectly, to promote, reinforce or perpetuate discriminatory practices. The City is committed to fostering an environment in which all businesses are free to participate in business opportunities without the impediments of discrimination and participate in all City contracts on an equitable basis. In accordance with the contracting requirements of the City, the City's Policy is applicable to this Invitation and Bid (hereinafter, "Bid").

The Office of Economic Opportunity has approved the following projected ranges of participation for this Bid which serve as a guide in determining each bidder's responsibility:

MBE	10% to 15%
WBE	5% to 10%
DSBE	BEST EFFORTS

These ranges represent the percentage of MBE, WBE, DBE<sup>1</sup> and/or DSBE (collectively, "M/W/DSBE") participation that should be attained by M/W/DSBEs from business opportunities existing in the available market absent discrimination in the solicitation and selection of these businesses. These ranges are based upon an analysis of factors such as the size and scope of the contract and the availability of certified M/W/DSBEs to perform various elements of the contract. The submission of a Solicitation For Participation and Commitment Form and any supporting documentation (more fully discussed below) is an element of responsiveness to the Bid and failure to submit the required information will result in rejection of your bid.

**Bidder hereby verifies that all forms, information and documentation submitted to the OEO are true and correct and is notified that the submission of false information by Bidder is subject to the penalties of 18 Pa.C.S. Section 4904 relating to unsworn falsification to authorities. Bidder also acknowledges that if it is awarded a contract resulting from this Invitation and Bid, it is a felony in the third degree under 18 Pa.C.S. Section 4107.2(a)(4) if, in the course of this contract,**

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<sup>1</sup> "DBE" or "Disadvantaged Business Enterprise" means a socially and economically disadvantaged minority or woman owned business that is certified under 49 C.F.R. Part 26. If Bidder makes solicitation(s) and commitment(s) with a DBE, Bidder shall indicate which category, MBE or WBE, is submitted for credit.

**it fraudulently obtains public moneys reserved for or allocated or available to minority business enterprises or women's business enterprises.**

## **A. M/W/DSBE PARTICIPATION**

1. MBE, WBE, DBE and DSBE shall refer to certified businesses so recognized by the City of Philadelphia through its OEO. Only the work or supply effort of firms that are certified as M/W/DSBEs by an OEO approved certifying agency<sup>2</sup> at the time of bid opening will be eligible to receive credit towards the participation ranges. In order to be counted, certified firms must successfully complete and submit to the OEO an application to be included in the OEO Registry which is a list of registered M/W/DSBEs maintained by the OEO and available online at [www.phila.gov/oEO/directory](http://www.phila.gov/oEO/directory).

If bidder or bidder's subcontractor(s) is certified by an approved certifying agency, a copy of that certification should be furnished with the bid.

2. No bidder that seeks to meet the participation range(s) for participation by entering into subcontracts with any M/W/DSBE subcontractor shall be considered to meet the range(s) if the M/W/DSBE subcontractor does not perform a commercially acceptable function ("CAF"). A M/W/DSBE is considered to perform a CAF when it engages in meaningful work or supply effort that provides for a distinct element of the subcontract (as required by the work to be performed in accordance with the Bid), where the distinct element is worthy of the dollar amount of the subcontract and where the M/W/DSBE carries out its responsibilities by actually performing, managing and supervising the work involved; M/W/DSBE subcontractors must perform at least twenty percent (20%) of the cost of the subcontract (not including the cost of materials, equipment or supplies incident to the performance of the subcontract) with their own employees. The OEO may evaluate the amount of work subcontracted, industry practices and any other relevant factors in determining whether the M/W/DSBE is performing a CAF. If it is determined during the review of your Solicitation and Commitment Form that the work described on the Form does not constitute a CAF, your bid may be rejected. For example, a Bidder using an M/W/DSBE non-stocking supplier (i.e., a firm that does not manufacture or warehouse the materials or equipment of the general character described by the Bid specifications and required under the contract) to furnish equipment or materials will only receive credit towards the participation ranges for the fees or commissions charged, not the entire value of the equipment or materials furnished.

3. In order to maximize opportunities for as many businesses as possible, a firm that is certified in two or more categories (e.g. MBE and WBE and DSBE or WBE and DSBE) will only be credited toward one participation range as either an MBE or WBE or DSBE. The firm will not be credited toward more than one category. Bidders will note with their submission which category, MBE or WBE or DSBE, is submitted for credit.

4. An MBE/WBE/DSBE submitting as the prime bidder is required, like all other bidders, to submit a bid that is responsive to the Policy and will only receive credit toward the relevant participation ranges (e.g., MBE range or WBE range or DSBE range) for the amount of its own work or supply effort on this Bid. In addition, the participation of an M/W/DSBE partner, as part of a joint venture created for this bid, may be credited

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<sup>2</sup>A list of "OEO approved certifying agencies" can be found at [www.phila.gov/oEO](http://www.phila.gov/oEO)

towards the participation ranges only to the extent of the M/W/DSBE partner's ownership interest in the joint venture in accordance with the following criteria:

- The MBE, WBE or DSBE partner(s) must be identified in the OEO Registry prior to contract award;
- The M/W/DSBE partner(s) must derive substantial benefit from the arrangement;
- The M/W/DSBE partner(s) must be substantially involved in all phases of the contract including planning, staffing and daily management;
- The business arrangement must be customary (i.e., each partner shares in the risk and profits of the joint venture commensurate with their ownership interest, contributes working capital and other resources, etc).

5. In listing participation commitments on the Solicitation for Participation and Commitment Form, bidders are required to list a detailed description of the work or supply effort, the dollar amount of the quotation, and percentage of the contract the participation represents. In calculating the percentage amount, bidders may apply the standard mathematical rules in rounding off numbers. The OEO reserves the right to request clarifying information in the event of an inconsistency or ambiguity in the Solicitation For Participation and Commitment Form.

## **B. RESPONSIVENESS**

1. A Bid responsive to the Policy is one which contains documentary evidence of the M/W/DSBEs that have been solicited and that will be used by the Bidder on the contract, if awarded; where the Bid satisfies the M/W/DSBE participation ranges for that contract, the Bidder is rebuttably presumed not to have discriminated in its selection of contract participants.

2. Bidders must submit documentary evidence of MBEs, WBEs and DSBEs who have been solicited and with whom commitments have been made in response to the participation ranges included in this Bid. Failure to submit the Solicitation For Participation and Commitment Form will result in the rejection of the Bid as nonresponsive, although the City, at its sole discretion, may allow Bidders to submit or amend the Solicitation For Participation and Commitment Form at any time prior to award. The Solicitation For Participation and Commitment Form must contain the following information:

- Documentation of all solicitations (regardless of whether commitments resulted therefrom) as well as all commitments made on the enclosed document entitled "Solicitation For Participation and Commitment Form". Bidders should only make actual solicitations of M/W/DSBEs whose work or materials are within the scope of this Bid. Mass mailing of a general nature to M/W/DSBEs or similar methods will not be deemed solicitation, but rather will be treated as informational notification only. A reasonable period of time should be given to all solicited firms to ensure that they have sufficient time to adequately prepare their quotes/subproposals. The bidder's listing of a commitment with an M/W/DSBE constitutes a representation that the Bidder has made a legally binding commitment to contract with such firm, upon receipt of a contract award from the City.

- If the Bidder has entered into a joint venture with an MBE, WBE and/or DSBE partner, the bidder is also required to submit along with the Solicitation For Participation and Commitment Form, a document entitled "Joint Venture Eligibility Information Form," available at OEO, for the City's review and approval of the joint venture arrangement.

3. If Bidder does not fully meet each of the range(s) for participation established for this Bid, Bidder must explain what efforts the bidder made to achieve the M/W/DSBE participation ranges. Bidder must demonstrate, through the submission of documentary evidence, that it took all necessary steps and made reasonable efforts to achieve the M/W/DSBE participation ranges, even if these efforts were not fully successful. OEO will evaluate the scope, intensity and appropriateness of these efforts to ascertain whether they could reasonably be expected to achieve M/W/DSBE participation commensurate with the ranges. Failure to submit the documentary evidence will result in rejection of the bid as nonresponsive, although the City, at its sole discretion, may allow bidders to submit or amend their evidentiary submission at any time prior to award. The submission shall contain and discuss, at a minimum, the following:

- Provide reasons for not committing with any M/W/DSBEs that submitted a quote/subproposal, regardless of whether the quote/subproposal was solicited by Bidder.
- Provide list of all certifying directories used to solicit participation for this Bid.
- Provide any additional evidence pertinent to Bidder's conduct relating to this Bid including sufficient evidence which demonstrates to the OEO that Bidder has not engaged in discriminatory practices in the solicitation of and commitment with contract participants. In describing Bidder's efforts to achieve participation within the ranges, Bidder may submit any corroborating documentation (e.g., copies of advertisements for participation).

The bidder's documentary evidence will be reviewed by the OEO to ascertain whether discrimination has occurred in the solicitation or selection of contract participants. The review will include consideration of the following:

- Whether the bidder's actions were motivated by considerations of race or gender or disability. The OEO may investigate the bidder's contracting activities and business practices on similar public and private sector contracts. For example, if bidder rejects any M/W/DSBE based on price, bidder must fully document its reasons for the rejection and also demonstrate that bidder subjects non-M/W/DSBEs to the same pricing standards. OEO will investigate whether there was any attempt at good faith negotiation of price.
- Whether M/W/DSBEs were treated equally as other businesses in the solicitation and commitment process. For example, the OEO will investigate whether M/W/DSBEs are given the same information, access to the plans and requirements of the contract

and given adequate amount of time to prepare a quote/subcontract as others who were solicited by bidder. The OEO will also investigate whether M/W/DSBEs were accorded the same level of outreach as non-M/W/DSBEs, for example whether bidder short listed M/W/DSBEs for participation or solicited M/W/DSBEs at any pre-bid meetings.

- Whether the bidder's contracting decisions were based upon policies which disparately affect M/W/DSBEs. OEO will ascertain whether bidder selected portions of work or material needs consistent with the capacity of available M/W/DSBE subcontractors and suppliers. OEO will consider whether bidder employed policies which facilitate the participation of M/W/DSBEs on City contracts such as segmentation of the contract or prompt payment practices.

4. After review of the bidder's submission and other information the OEO deems relevant to its evaluation, the OEO will make a written determination that will be forwarded to the awarding City Department.

- If the bid is determined nonresponsive by the OEO, the applicant will be notified and may file a written appeal with the OEO within forty-eight (48) hours of the date of notification. The decision of the OEO may be appealed in writing within forty-eight (48) hours of the date of the OEO's decision to the Chief Operating Officer of the Commerce Department or his/her designee whose decision shall be final.

### **C. RESPONSIBILITY**

1. Upon award, the completed Solicitation For Participation and Commitment Form and accompanying documents regarding solicitation and commitments with MBEs, WBEs and DSBEs become part of the contract. M/W/DSBE percentage commitments are to be maintained throughout the term of the contract and shall apply to the total contract value (including amendments). Any change in commitment, including but not limited to substitutions for the listed firm(s), changes or reductions in the work and/or listed dollar/percentage amounts, must be pre-approved in writing by the OEO.

2. The Successful Bidder shall, within five (5) business days after receipt of a payment from the City for work performed under the contract, deliver to its M/W/DSBE subcontractors the proportionate share of such payment for work performed (including the supply of materials) by its M/W/DSBE subcontractors. In connection with payment of its M/W/DSBE subcontractors, the Successful Bidder agrees to fully comply with the City's payment reporting process which may include the use of electronic payment verification systems.

3. No privity of contract exists between the City and any M/W/DSBE subcontractor identified in any contract resulting from this Bid. The City does not intend to give or confer upon any such M/W/DSBE subcontractor(s) any legal rights or remedies in connection with the subcontracted services under Executive Orders 2-05 and 14-08 or by reason of any contract resulting from the Bid except such rights or remedies that the

M/W/DSBE subcontractor may seek as a private cause of action under any legally binding contract to which it may be a party.

4. If the OEO determines that the bidder has discriminated against a M/W/DSBE at any time during the term of the contract, the OEO may recommend to the Procurement Commissioner the imposition of sanctions on the Bidder including debarment of the bidder from submitting and/or participating in future City contracts for a period of up to three (3) years.

#### **D. ACCESS TO INFORMATION**

1. The OEO shall have the right to make site visits to the Bidder's place of business and/or job site and obtain documents, such as quotations, and information from any Bidder, subcontractor, supplier, manufacturer or contract participant that may be required in order to ascertain a Bidder's responsiveness and responsibility.

2. Failure to cooperate with the OEO in its review may result in a recommendation to terminate the contract.

#### **E. RECORDS AND REPORTS**

1. The Successful Bidder shall maintain all books and records relating to its M/W/DSBE commitments (e.g. copies of quotations, subcontracts, joint venture agreement, correspondence, cancelled checks, invoices, telephone logs) for a period of at least three (3) years following acceptance of final payment. These records shall be made available for inspection by the OEO and/or other appropriate City officials. The Successful Bidder agrees to submit reports and other documentation to the OEO as deemed necessary by the OEO to ascertain the successful bidder's fulfillment of its M/W/DSBE commitments.

#### **F. REMEDIES**

1. The Successful Bidder's compliance with the requirements of Executive Orders 2-05 and 14-08, including the fulfillment of any M/W/DSBE commitments, is material to the contract. Any failure to comply with these requirements constitutes a substantial breach of the contract. It is further understood and agreed that in the event the City determines that the Successful Bidder hereunder has failed to comply with these requirements the City may, in addition to any other rights and remedies the City may have under the contract, any bond filed in connection therewith or at law or in equity, exercise one or more of the following remedies, as deemed applicable, which shall be deemed cumulative and concurrent:

a. Withhold payment(s) or any part thereof until corrective action is taken.

b. Terminate the contract, in whole or in part.

c. Suspend/Debar the Successful Bidder from proposing/bidding and/or participating in any future City contracts for a period of up to three (3) years.

d. Recover as liquidated damages, one percent of the total dollar amount of the contract for each one percent (or fraction thereof) of the commitment

shortfall. (NOTE: The “total dollar amount of the contract” shall include approved change orders, amendments and for requirements contracts shall be based on actual quantities ordered by the City. For Concessions, the “total dollar amount of the contract” shall mean the Concession Fee paid to the City.)

The remedies enumerated above are for the sole benefit of the City and City’s failure to enforce any provision or the City’s indulgence of any non-compliance with any provision hereunder, shall not operate as a waiver of any of the City’s rights in connection with any contract resulting from this Bid nor shall it give rise to actions by any third parties including identified M/W/DSBE subcontractors.

SOLICITATION FOR PARTICIPATION AND COMMITMENT FORM (Bid)		COMMERCE DEPARTMENT	
Minority (MBE), Women (WBE), and Disabled (DSBE) Business Enterprises		OFFICE OF ECONOMIC OPPORTUNITY (OEO)	
Name of Bidder		Date of Bid Opening	
List below ALL MBE/WBE/DSBEs that were solicited regardless of whether a commitment resulted therefrom. - Photocopy this form as necessary.			
Company Name	MBE <input type="checkbox"/> WBE <input type="checkbox"/> DSBE <input type="checkbox"/>	Date Solicited By Phone <input type="checkbox"/> By Mail <input type="checkbox"/>	Commitment Made Yes (If Yes, give date) <input type="checkbox"/> NO <input type="checkbox"/>
Address			Give Reason(s) If No Commitment
Contact Person		Quote Received YES <input type="checkbox"/> NO <input type="checkbox"/>	
Telephone Number	Fax #	Amount Committed To Dollar Amount \$	
OEO CERTIFICATION #		Percent of Total Bid %	
Company Name	MBE <input type="checkbox"/> WBE <input type="checkbox"/> DSBE <input type="checkbox"/>	Date Solicited By Phone <input type="checkbox"/> By Mail <input type="checkbox"/>	Commitment Made Yes (If Yes, give date) <input type="checkbox"/> NO <input type="checkbox"/>
Address			Give Reason(s) If No Commitment
Contact Person		Quote Received YES <input type="checkbox"/> NO <input type="checkbox"/>	
Telephone Number	Fax #	Amount Committed To Dollar Amount \$	
OEO CERTIFICATION #		Percent of Total Bid %	
Company Name	MBE <input type="checkbox"/> WBE <input type="checkbox"/> DSBE <input type="checkbox"/>	Date Solicited By Phone <input type="checkbox"/> By Mail <input type="checkbox"/>	Commitment Made Yes (If Yes, give date) <input type="checkbox"/> NO <input type="checkbox"/>
Address			Give Reason(s) If No Commitment
Contact Person		Quote Received YES <input type="checkbox"/> NO <input type="checkbox"/>	
Telephone Number	Fax #	Amount Committed To Dollar Amount \$	
OEO CERTIFICATION #		Percent of Total Bid %	
Company Name	MBE <input type="checkbox"/> WBE <input type="checkbox"/> DSBE <input type="checkbox"/>	Date Solicited By Phone <input type="checkbox"/> By Mail <input type="checkbox"/>	Commitment Made Yes (If Yes, give date) <input type="checkbox"/> NO <input type="checkbox"/>
Address			Give Reason(s) If No Commitment
Contact Person		Quote Received YES <input type="checkbox"/> NO <input type="checkbox"/>	
Telephone Number	Fax #	Amount Committed To Dollar Amount \$	
OEO CERTIFICATION #		Percent of Total Bid %	

(Rev. 1/2008/JS)

<sup>1</sup> M/W/DSBEs listed above must be certified by the OEO prior to bid submission date.  
<sup>2</sup> Failure to give reason for no commitment may result in rejection of your bid.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>2 96</b>
		FIRM NAME (Must be filled in)	

**SECTION 1: GENERAL BID SUBMISSION**

1.1 **TITLE: Sleeves and Valves**

1.2 **SCHEDULE NO: 573**

1.3 **CONTRACT TERM:** 01/01/2012 to 12/31/2012 (“Initial Term”), with an option to renew for up to three (3) additional one (1) year periods, (“the Renewal Term”) exercisable, at the City’s sole discretion, as of the expiration of the Initial Term or then current Renewal term. The City may, at its sole discretion, renew the contract for up to three (3) months at the beginning of each renewal period(s) (the “Additional Performance Period”), if a decision has been made not to renew the contract for an entire year.

1.3.1 The City shall exercise such sole option to renew the Contract Term by issuing a letter (the “Renewal Notice”) notifying the Contractor that the Contract is renewed for the Renewal Term or Additional Performance Period (identified by commencement and termination dates) that is specified in the Renewal Notice. The Contract shall be deemed to be renewed for such Renewal Term or Additional Performance Period, and Contractor shall be obligated to perform all terms and conditions of the Contract throughout such Renewal Term or Additional Performance Period, as of the effective date indicated on the City’s Renewal Notice, whether or not Contractor has agreed, verbally or in writing, to such renewal of the Contract term.

1.3.2 If an individual Performance Bond and/or Payment Bond is required under this Invitation and Bid, such bond(s) shall be and remain in full force and effect throughout the Initial Term, all Renewal Terms, any Additional Performance Period, and the period of any unexpired warranty provided or required under the Contract, without notice of Contract renewal by the City to the surety or the consent of the surety thereto. It is the sole responsibility of the Contractor to ensure that such bond(s) remain in full force and effect as provided in this Section, and failure to do so shall be an event of default pursuant to Section 19, Default, of the attached Terms and Conditions of Bidding and Contract.

If participation in the City’s Master Performance Security Program is required under this Invitation and Bid, Contractor shall pay the required annual fee for such participation for each Renewal Term upon the issuance of the Renewal Notice.

1.4 **CONTRACT TYPE: REQUIREMENTS**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>3 96</b>
		FIRM NAME (Must be filled in)	

1.4.1 The following items are required in the operation of various City agencies as ordered. Exact quantities cannot now be determined but estimates thereof are listed herein. Quantities listed may be increased or decreased to meet the requirements of the City during the period of this contract. A minimum is not guaranteed. Purchase orders issued as a result of this bid will be for materials or services to be delivered generally on an as-needed basis. Successful bidders are cautioned not to deliver any materials or services without first being advised to do so by the ordering agency.

1.4.2 It is the intent of the Procurement Department to make an award for the period as stated above subject to the appropriation of funds in succeeding fiscal year/years by City Council. The City's fiscal year is from July 1st to June 30th inclusive.

Commodities or services on the bid to be ordered after the end of the fiscal year are subject to the issuance of purchase orders for the following fiscal years. The City is not liable for the award involving following fiscal years' funds until such orders are issued.

The successful bidder(s) obligation to deliver on such purchase orders shall not take effect until the orders are issued. To simplify the contract procedure, however, the successful vendor will be required to furnish a Performance Bond or Performance Security Fee to cover units awarded to him.

1.5 **METHODOLOGY OF ACQUISITION: PURCHASE** only.

1.6 **STATEMENT OF DIRECTION:**

It is the intent of the City of Philadelphia to make an award for **Sleeves & Valves** for the City of Philadelphia's Water Department as specified herein during the contract period.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>4 96</b>
		FIRM NAME (Must be filled in)	

## 1.7 BID SECURITY

- 1.7.1 **For the purpose of this bid, Paragraph 2 of the “Terms and Conditions of Bidding and Contract” is deleted. The bid must be accompanied by a Bid Bond in the amount of TEN PERCENT (10%) of the gross amount of the bid for the initial term of the contract 01/01/2012 thru 12/31/2012. All bidders must utilize the City’s standard Bid Bond form, which is included in this bid package, Attachment “A”, in fulfilling the above requirement. No other Bid Bond form is acceptable. Cash is not acceptable.**

## 1.8 BID INFORMATION:

- 1.8.1 All information concerning this bid will be contained in this bid document as issued or amended.
- 1.8.2 Information provided verbally by any City official shall not be binding or relevant.

## 1.9 BID SUBMISSION:

- 1.9.1 Bid information must be submitted to the City of Philadelphia no later than the time and date for the bid opening.
- 1.9.2 Advertised sealed bids will be received and read publicly at 10:30 AM in Room #170A, 1<sup>st</sup> Floor, Municipal Services Building, 1401 JFK Boulevard.
- 1.9.3 Bid should be complete and include ALL information required as described in the various paragraphs of the bid specifications.
- 1.9.4 All pricing must be completed on the forms provided; be complete; and be in ink or typed.
- 1.9.5 The bid must be complete as to required bid signatures and corporate seal, and fully accept the terms and conditions contained in the bid. A bid submitted with counter terms and conditions will be disqualified.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>5 96</b>
		FIRM NAME (Must be filled in)	

- 1.9.6 Delivery unattainable Parts (see para. 4.2.4). Bidders shall submit to the Procurement Department Buyer, a list of parts that cannot be obtained and delivered within the ninety (90) day delivery time frame. This list MUST be submitted with this Invitation and Bid.
- 1.9.7 **BID PROCESSING FEE:**  
All bids submitted where the bid total is greater than \$30,000 shall be accompanied by the proper Bid Processing Fee. The fee shall be in the form of a separate check or money order in accordance with Paragraph 3 of the “Terms and Conditions of Bidding and Contract.”
- 1.9.8 When M-BE, W-BE or DS-BE ranges are required on Invitation and Bid, bidders are reminded that the submission of a blank “Commerce Department Office of Economic Opportunity (OEO)” Solicitation and Commitment Form” will be deemed non-responsive and ineligible for an award. Bidders are reminded to read carefully and entirely the “Bidder’s Guidelines relating to Executive Order 02-05”.
- 1.9.9 In accordance with the City of Philadelphia's Regulations Relating to Local Bidding Preferences for Procurement Contracts, this bid may be subject to a 5% local bid preference. In order to determine eligibility to receive the 5% preference, if applicable, **bidder or subcontractor must be certified at the time of the bid opening and must submit with the bid the Local Business Entity Certification number** as issued by the Procurement Department for the prime contractor or the applicable subcontractor. If the prime relies upon its subcontractor’s LBE status in order to be eligible for the preference, the name and certification number of the subcontractor **must** be submitted with the bid. **Failure to submit the prime’s LBE certification number or the subcontractor’s name and the LBE certification number with the bid will deem bidder ineligible for the 5% preference.**

Further, by submission of this bid, bidder makes the following certification in connection with the grant of any local bidding preference:

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>6 96</b>
		FIRM NAME (Must be filled in)	

“I certify, that if awarded this contract on the basis of application of the LBE preference, my company or my subcontractor, throughout the entirety of this contract, will perform the majority of the work under this contract within the geographic limits of the City of Philadelphia, and I will, or cause my subcontractor to, maintain within the City a majority of the inventory or equipment that will be used on this contract or the amount of inventory that is customary for this industry.”

Prime or subcontractor’s LBE Certification Number\_\_\_\_\_

If applicable:

Subcontractor’s Name\_\_\_\_\_

**NOTE: If you wish to apply for Local Business Entity (LBE) certification, go to [www.phila.gov/bids](http://www.phila.gov/bids). Please provide sufficient time prior to bidding for processing of the LBE application.**

1.9.10

**BID QUESTIONS OR PROBLEMS**

In preparing the bid response, should any bidder need clarification on the bid requirements, identify a discrepancy in the specifications, determine that a specified product has been discontinued or an alternate procedure is advised, etc.; then the bidder is STRONGLY encouraged to bring these issues to the attention of the Procurement Department’s Public Information Unit prior to the bid opening by calling (215) 686-4720 or 4721, or by faxing (215) 686-4716. **Questions, whether phoned or faxed, should be received no later than seven (7) calendar days prior to the scheduled opening date of the bid. The City reserves the right to only respond to those questions submitted prior to the stated deadline.** If it is in the City’s best interest to do so, the bid MAY be amended to reflect the proposed changes/modifications. **Exceptions. taken DO NOT obligate the City to change the specifications. The City of Philadelphia, Procurement Department will notify all bidders in writing, by addendum duly issued, of any interpretations/changes made to specifications or instructions. The City will not accept responsibility for oral instructions, suggestions or changes by any City agency.**

Otherwise the successful bidder will have to provide the product or service exactly as defined in this bid, and in accordance with the specifications and requirements as listed in this Invitation and Bid.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>7 96</b>
		FIRM NAME (Must be filled in)	

1.9.11 **CONTACT PERSON(S):**

**PRE-AWARD:**

Indicate below to whom in your firm questions concerning this Invitation and Bid should be directed:

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

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

City/State/ZC: \_\_\_\_\_

Telephone No.(\_\_\_\_) \_\_\_\_\_ Ext.: \_\_\_\_\_

Fax No.(\_\_\_\_) \_\_\_\_\_

E-mail address \_\_\_\_\_

**State Company Web Site Address:** \_\_\_\_\_

**POST-AWARD:**

Indicate below to whom in your firm questions concerning the Contract resulting from this Invitation and Bid should be directed:

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

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

City/State/ZC: \_\_\_\_\_

Telephone No.(\_\_\_\_) \_\_\_\_\_ Ext.: \_\_\_\_\_

Fax No.(\_\_\_\_) \_\_\_\_\_

E-mail address \_\_\_\_\_

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>8 96</b>
		FIRM NAME (Must be filled in)	

## 1.10 BIDDER QUALIFICATION:

1.10.1 For eligibility, bidders must obtain necessary QC certifications from the Philadelphia Water Department (PWD) and utilize QC-2 (Exhibit C) certified foundries and maintain such throughout the duration of the contract. Bidders must have QC-10 certification (Exhibit D) to be eligible to bid on **GATE VALVES**. Bidders must have QC-11 certification (Exhibit E) to bid on **BUTTERFLY VALVES**. Bidders must have QC-12 certification (Exhibit F) to bid on **RESILIENT-SEATED GATE VALVES**. Any bidders not currently QC certified should submit an application no later than October 4, 2011. To apply for certification the bidders must complete the PWD application process. See "Schedule for Submission Exhibit "B" for submittal instructions".

1.10.2 The QC application process is a thorough review of the bidder's quality assurance program (QA) and quality control procedures (QC). At minimum the PWD will review:

- Bidders' selection criteria for suppliers. The bidders' means of differentiating the reliability of various suppliers to deliver a particular part of a required quality on a consistent basis. The bidders' selection of suppliers based on quality versus price.
- Bidders' quality control procedures
  1. Tool & Die operation
    - a) Schedules for calibrating equipment
    - b) Frequency for periodic testing of Materials and products
    - c) Standard operating procedures
    - d) Labor force by position and required skill level
    - e) Workstations by equipment and required floor space
  2. Valve Assembly and Testing.
- Bidders' document management system
  1. Operational records for equipment
  2. Recorded valve inspections and testing by casting lot number
  3. Recorded shipment dates with cross-references to valve casting lot numbers and serial numbers of shipping containers

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>9 96</b>
		FIRM NAME (Must be filled in)	

4. Ability to trace products and materials to their original supplier

- Bidders' source for iron cast parts. To be eligible, the foundries must be QC-2 certified by PWD. Bidders may contact William Roscioli, Supervisor Water Department Materials Engineering Laboratory at (215) 685-1447 for a listing of foundries certified by the City of Philadelphia Water Department.
  - Bidders' machine shop
  - Bidders' valve assembly and testing shop

1.10.3 All bidders must be a bona fide manufacturer of, or dealer in, the products specified within the bid. To demonstrate this, bidders should submit the following reference information with their bid. References provided should be pertinent to the commodity requested in this Invitation and Bid and demonstrate the bidder's ability to perform on a contract of this size and scope.

Please note that reference information in each section must be completed. Failure to submit this information may result in the bidder's disqualification.

1.10.4 Bidders shall refer to the attached City of Philadelphia Water Department Purchase Specifications referenced in Exhibits G and H of this Invitation and Bid.

1.10.5 Please note, if a supplier doesn't have a satisfactory QC program in place, it is unlikely they will be certified in eight (8) weeks.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>10 96</b>
		FIRM NAME (Must be filled in)	

**SECTION 1:**

Customer References other than an employee or department of the City of Philadelphia, (excluding suppliers or financial institutions).

	A.	B.	C
Firm Name:	_____	_____	_____
Address:	_____	_____	_____
Contact:	_____	_____	_____
Phone #:	_____	_____	_____
Type Work:	_____	_____	_____
Years dealing w/your firm:	_____	_____	_____

**SECTION 2:**

Previous purchase order(s)/contract(s) with the City; (State "None" if applicable)

P.O./Contract Number:	_____	_____	_____
Department:	_____	_____	_____
Contact Name:	_____	_____	_____
Phone #:	_____	_____	_____
Item(s):	_____	_____	_____

**NOTE: Do not provide the name and phone number of a Procurement Department Buyer in this section. Contact name(s) and phone number(s) must be from a City ordering department.**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>11 96</b>
		FIRM NAME (Must be filled in)	

## **SECTION 2: SPECIFICATIONS**

- 2.1 Bidders shall refer to the attached City of Philadelphia Water Department Purchase Specifications referenced in Exhibits G and H of this Invitation and Bid.
- 2.2 Bidders shall submit in Section 5 a firm price for each item listed.
- 2.3 Prices bid and awarded must be held firm for the Initial Term of the Contract. Bidders shall refer to paragraph 4.3 (Price Increase or Decrease) for each renewal term there after, if renewed by the city.
- 2.4 **Warranty:**  
Successful bidder shall guarantee all products supplied for a period of one (1) year from the date of installation. During this period, the successful bidder shall provide all necessary replacement at no cost to the City.
- 2.5 **Delivery:** Products shall be delivered within ninety (90) days after receipt of order (see paragraph 1.9.6)

## **SECTION 3: BID EVALUATION AND AWARD**

### **3.1 EVALUATION:**

- 3.1.1 Bids will be evaluated by the Procurement Department.
- 3.1.2 Bids will be evaluated for responsiveness to the bid specifications and for responsibility of the bidders.
- 3.1.3 Bids which are determined to be non-responsive for reasons of:
- (i) improper bid security
  - (ii) improper bid execution
  - (iii) incompleteness
  - (iv) offering counter terms and conditions
  - (v) improper or incomplete execution of OEO documents (if applicable)
- may be disqualified by the City without notice to the bidder. The decision of the City is final.
- 3.1.4 Bidders whose bids are determined to be non-responsible for reasons of bidder qualification shall be notified by the City of the reasons for the

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>12 96</b>
		FIRM NAME (Must be filled in)	

determination and may contest the finding of non-responsibility through the prescribed procedures described in paragraph 9 of "Terms and Conditions of Bidding and Contract".

### 3.2 **AWARD:**

3.2.1 This bid may be awarded as a whole or by group to the lowest responsive and responsible bidder(s).

3.2.2 Bidders must bid all items within a group to be eligible for award.

- (i) Groups 1 AND 2  
**Standard Pressure Gate Valve Parts 3"-12"**  
(items 5.1.1 to 5.2.24)
- (ii) Groups 3 AND 4  
**Standard Pressure Gate Valve Parts 16"-48"**  
(items 5.3.1 to 5.4.34)
- (iii) Group 5  
**Butterfly Valves**  
Philadelphia Standard (items 5.5.1 to 5.5.12)  
Industry Standard (items 5.5.13 to 5.5.40)
- (iv) Group 6  
**Other Valves**  
(items 5.6.1 to 5.6.59)
- (v) Group 7  
**Valve Boxes**  
(items 5.7.1 to 5.7.18)

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>13 96</b>
		FIRM NAME (Must be filled in)	

(vi) Group 8  
**Tapping Sleeves**  
(items 5.8.1 to 5.8.4.14)

(vii) Group 9  
**Other Sleeves and Gaskets**  
(items 5.9.1 to 5.9.4)

3.2.3 Awarded vendors will provide a prototype of certain components that they have not previously supplied to the City for approval no later than two (2) months after the award. The prototype must be approved as being in compliance with the specifications and drawings prior to the initial shipment. Failure to obtain the City's approval prior to delivery date will result in the cancellation of the contract and assessment of damages (see para. 4.2.4.2).

3.2.4 **LBE CALCULATION**

If the 5 % local bid preference is applicable, the total bid price of the certified Local Business Entity (LBE) will be multiplied by .95 and rounded to the second decimal place. The adjusted bid price of the LBE will then be used in determining the lowest responsive and responsible bidder. If the bid is awarded as a whole, the 5% local bid preference is applicable. If the bid is awarded by line item, the 5% local bid preference is not applicable.

Unless the Procurement Commissioner determines not to grant a preference for the reasons stated in subsection b., of the LBE Regulation, an LBE, whose bid is otherwise responsive and responsible and who has submitted the information required above, shall be granted a five percent bid preference on competitive bid(s) awards that are over \$30,000.00 and awarded as a whole or by section.

3.2.5 **PERFORMANCE SECURITY**

If the total award amount exceeds \$500,000, the Master Performance Security does not apply. Upon notification of award, the City will require the successful vendor to provide an individual Performance Bond in the amount of 100% of the contract award as specified in the Letter of Award. For any subsequent renewal periods, sections 1.3.1 and 1.3.2 shall apply.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>14 96</b>
		FIRM NAME (Must be filled in)	

3.2.6

**INSURANCE:**

Insurance is a requirement for this bid in accordance with Paragraph 15 of the “Terms and Conditions of Bidding and Contract”. No contract will be executed nor purchase order issued unless and until all required insurance certificates, in the required amount, are received. **All insurance MUST meet the following requirements:**

- Insured must be in the same name and address as the Bidder
- The insurance carrier must be rated “A” or better by AM Best
- The certificate holder must be the City of Philadelphia, and specifically named as an additional insured on the certificate in the "Description of Operations section".
- Certificate must be signed by an authorized representative of the insurance company/carrier

All certificates are to be sent to the Office of Risk Management, One Parkway, 1515 Arch Street, 14<sup>th</sup> Floor, Philadelphia, PA 19102, Attn. Debbie Lawton or FAX to (215) 683-1705.

3.2.7

**City of Philadelphia-Business, Corporate and Slavery Era Insurance Disclosure**

In accordance with Section 17-104 of The Philadelphia Code, the Bidder, after execution of this Contract, will complete an affidavit certifying and representing that the Bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with Bidder) has searched any and all records of the Bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

The Bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or equity and the contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>15 96</b>
		FIRM NAME (Must be filled in)	

## **SECTION 4: CONTRACT MANAGEMENT**

### **4.1 CITY OF PHILADELPHIA RESPONSIBILITY:**

4.1.1 City agencies will be notified by Procurement of award(s) and will be provided with vendor(s), vendor contact(s) and applicable pricing. Departments will prepare and submit through the appropriate review channels, a requisition detailing their specific needs and requirements to Procurement. The Procurement Department shall then apply the requisition against the contract and issue a purchase order.

#### **Order Against Contracts**

Subsequent to contract conformance of a Requirements bid, purchase orders will be issued at such time that the product is needed. Such purchase orders will show if delivery is to be made upon receipt of order, or only after notification by the using department.

4.1.2 Invoices shall be submitted after delivery and acceptance of the product by the City. The City attempts to process invoices in a timely manner. Delays can occur because of incomplete or inaccurate invoicing information. Please make sure that invoices contain the following information to help the City process payments to the Contractor as quickly as possible.

- (a) After the delivery has been completed the Contractor must submit three (3) copies of the invoice for payment to the receiving department listed on the purchase order.
- (b) The invoice must correctly reference the purchase order number, the vendor name, address and Federal Employer Identification number.
- (c) Checks will only be made payable to the company name as shown on the purchase order; the invoice must reflect this same company name as the "pay to".
- (d) The invoice must show the quantity and type of item or service and the price.
- (e) The unit of purchase on the invoice must agree with the unit cited on the purchase order. Reference to the specific line item is helpful.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>16 96</b>
		FIRM NAME (Must be filled in)	

4.1.3 The using agencies and departments are responsible for monitoring the products delivered as described in the contract. If any problems arise, a letter should be sent to the vendor requesting resolution by a specified date. A copy should be sent to the buyer. If vendor does not resolve the breach of contract by the requested date the matter should be turned over to the buyer.

4.1.4 **ADD-ONS:**

The City reserves the right to add, delete and/or acquire products that the vendor can supply that are similar to, but not specifically called for in this bid. The procedure for such acquisitions shall be as follows:

Procurement or the using department will obtain from the Vendor a letter (on his/her letterhead) verifying the items to be added. The letter shall include the complete description of the item, the location (if applicable), the bid number bid schedule number, the price to the City and the applicable contract period; and upon receipt and approval by the Procurement Department shall automatically become part of the contract. **The City, however, reserves the right to accept or reject the letter and to acquire the supplies or materials in the open market.**

4.1.5 **MATERIALS TESTING:**

The City of Philadelphia, may, during the life of this contract, supply a delivered product from this contract to the Materials Engineering Laboratory. These products shall be tested to ensure conformance with bid specifications. If product fails, or is different from product supplied at award stage, rejection procedures will be implemented.

4.2 **VENDOR RESPONSIBILITY:**

4.2.1 Contractor may deliver only products, services or equipment (as applicable) as authorized in the contract and only after receipt of a purchase order or other authorized document from the Procurement Department. All orders must be in writing. Contractor shall not accept verbal delivery requests until after receipt of purchase order or other authorizing document from Procurement.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>17 96</b>
		FIRM NAME (Must be filled in)	

4.2.2 Contractor may deliver only products, services or equipment (as applicable) at the prices quoted in the contract and that are reflected on a purchase order or a change to a purchase order (a change to a purchase order is issued whenever the items, unit price, total amount, or terms and conditions change from the original purchase order).

4.2.3 Contractors may deliver products, services or equipment (as applicable) up to the dollar limit of the purchase order and for the period shown on the purchase order. Contractors are requested to carefully monitor obligations against purchase orders and inform the departments of anticipated funding shortfalls.

4.2.4 **DELIVERY**

Upon receipt of a purchase order and associated **RELEASE FORM**, the vendor has **90 days** to furnish the specified items. If the 90 day delivery schedule is unattainable for any specific part or parts, those parts must have been identified on the list submitted per para. 1.9.6 above. It is essential for parts to be received within 90-days so hydrant maintenance and operation is not compromised. Any parts that PWD receives after the expected delivery date will be considered late.

4.2.4.1 See Exhibit "C" for a copy of the Contract Release Form

4.2.4.2 **LIQUIDATED DAMAGES:**

Each day a part is late, 2 1/2% of its cost will be deducted from the payment to the vendor as liquidated damages. Late deliveries are a violation of the contract, which is not negated by the assignment of liquidated damages.

4.2.5 In the event that the contractor receives an order for products, services or equipment not specifically priced and incorporated into the contract, they must:

- (i) bring this to the immediate attention of the Procurement Dept., and
- (ii) notify the ordering agency in writing and refuse to deliver.

4.2.6 Should products, services, or equipment be delivered that are not specifically incorporated and priced into the contract, and/or be delivered without purchase order, the City shall have no obligation for payment.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>18 96</b>
		FIRM NAME (Must be filled in)	

4.2.7 For delivery of products, contractors shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Delivery of product may occur following purchase order expiration, so long as the order was placed prior to the purchase order expiration date.

4.2.8 **Invoices/Receipts:**

4.2.8.1 Successful bidder(s) agrees not to invoice more than once per month.

4.2.8.2 Invoices should be sent in triplicate to each ordering department

4.2.8.2.1 One (1) original and two (2) copies fully itemized invoices.

4.2.8.2.2 See also item 4.1.2 above.

4.2.9 Contract Bid Language Regarding Payments to OEO Subcontractors

The below paragraph applies to all Invitation and Bids (I & B) containing OEO Participation Requirements:

The successful bidder shall, within five (5) business days after receipt of a payment from the City for work performed under the contract, deliver to its M/W/DSBE subcontractors the proportionate share of such payment for work performed (including the supply of materials) by its M/W/DSBE subcontractors.

In connection with payment of its M/W/DSBE subcontractors, the successful bidder agrees to fully comply with the City's payment reporting process. The successful bidder is required to submit with each invoice the completed "Prime Contractor's Payment to OEO Subcontractors' Form" indicating what percentage and dollar amount of the invoice that will be paid to its OEO certified subcontractor(s).

Failure to submit the attached "Prime Contractor's Payment to OEO Subcontractors' Form" with each invoice may result in rejection of the invoice.

4.3 **PRICE INCREASE OR DECREASE:**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>19 96</b>
		FIRM NAME (Must be filled in)	

4.3.1 Prices herein are subject to increase or decrease in the event of any price changes in the general or published price established by the Manufacturer/ Foundry. Notice of all such changes shall be given in writing to the Procurement Department, Department of Finance and the Controller. This notice must be accompanied by the notice from the Manufacturer /Foundry to the vendor showing the price changes. City reserves the right to review the propriety of the price rise and cancel the contract at its discretion.

Vendor must give 60 days notice of price increase, in writing, to the City. Notice shall be sent to the Buyer, Room 120 Municipal Services Building, 1401 JFK Blvd., Phila., PA 19102, referencing the Bid #, Contract # and period of contract.

Failure to notify the City within this sixty (60) day time frame shall result in the following:

the effective date of the price increase shall be sixty (60) days from the receipt of the price increase letter by the City;

or

if the letter is not received before the last day of the contract period, the prices for the renewal period shall be the same as the prices for the previous contract period.

**NOTE: Price decreases may be forwarded to the Procurement Department buyer, in writing at any time during the contract period, to include any renewal period(s).**

**Failure to notify the City within the time frame specified in 4.3.1 will result in a commensurate delay in implementing the price change.**

4.4 **VENDOR ACCEPTANCES – IN SUBMITTING AN EXECUTED BID, THE BIDDER AGREES TO THE CONTRACT MANAGEMENT PROCEDURES IN THIS SECTION.**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>20 96</b>
		FIRM NAME (Must be filled in)	

**SECTION 5: PRICING:**

Prices quoted must not contain more than three (3) decimal places.

**BIDDERS SHALL PRICE THE FOLLOWING SLEEVES, VALVES, ASSEMBLIES, ETC.:**

Bidders must bid on all items in a section to be eligible for an award in that section.

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.1	<b>GROUP 1</b>				
	<b><u>STANDARD PRESSURE RESILIENT WEDGE GATE VALVES 3-12"</u> <u>(PER CITY OF PHILADELPHIA WATER DEPT. PURCHASE SPEC. FOR RESILIENT SEATED GATE VALVES, INSPECTION AS PER QC-10, SECTION 2.4 REQUIRED)</u></b>				
5.1.1	<b>32321 002 300</b> <b>VALVES, TAPPING</b> FLANGED BY MECHANICAL JOINT WITH ONE SET OF INLET FLANGE BOLTS, NUTS AND LEAD GASKET AND ONE SET OF MECHANICAL JOINT ACCESS. FULL WALLED DUCTILE IRON.				
	<b>3"</b>				
		<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>\$2257540</b>	PAGE OF <b>21 96</b>
		FIRM NAME (Must be filled in)	

QTY                      UNIT OF MEASURE                      UNIT PRICE                      TOTAL AMOUNT

5.1.2                      **32321 002 301**  
**VALVES, TAPPING** FLANGED BY MECHANICAL  
JOINT WITH ONE SET OF INLET  
FLANGE BOLTS, NUTS AND LEAD  
GASKET AND ONE SET OF  
MECHANICAL JOINT ACCESS.  
FULL WALLED DUCTILE IRON.

4"

**95**                      **EA**                      \$ \_\_\_\_\_                      \$ \_\_\_\_\_

5.1.3                      **32321 002 302**  
**VALVES, TAPPING** FLANGED BY MECHANICAL  
JOINT WITH ONE SET OF INLET  
FLANGE BOLTS, NUTS AND LEAD  
GASKET AND ONE SET OF  
MECHANICAL JOINT ACCESS.  
FULL WALLED DUCTILE IRON.

6"

**50**                      **EA**                      \$ \_\_\_\_\_                      \$ \_\_\_\_\_

5.1.4                      **32321 002 303**  
**VALVES, TAPPING** FLANGED BY MECHANICAL  
JOINT WITH ONE SET OF INLET  
FLANGE BOLTS, NUTS AND LEAD  
GASKET AND ONE SET OF  
MECHANICAL JOINT ACCESS.  
FULL WALLED DUCTILE IRON.

8"

**1**                      **EA**                      \$ \_\_\_\_\_                      \$ \_\_\_\_\_

QTY                      UNIT OF MEASURE                      UNIT PRICE                      TOTAL AMOUNT

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>22 96</b>
		FIRM NAME (Must be filled in)	

5.1.5      **32321 002 304**  
**VALVES, TAPPING** FLANGED BY MECHANICAL  
JOINT WITH ONE SET OF INLET  
FLANGE BOLTS, NUTS AND LEAD  
GASKET AND ONE SET OF  
MECHANICAL JOINT ACCESS.  
FULL WALLED DUCTILE IRON.

10"

1      EA      \$ \_\_\_\_\_      \$ \_\_\_\_\_

5.1.6      **32321 002 305**  
**VALVES, TAPPING** FLANGED BY MECHANICAL  
JOINT WITH ONE SET OF INLET  
FLANGE BOLTS, NUTS AND LEAD  
GASKET AND ONE SET OF  
MECHANICAL JOINT ACCESS.  
FULL WALLED DUCTILE IRON.

12"

1      EA      \$ \_\_\_\_\_      \$ \_\_\_\_\_

5.1.7      **32321 002 306**  
**VALVES, MECHANICAL JOINT**  
INCLUDING MJ ACCESSORIES,  
FULL WALLED DUCTILE IRON.

3"

1      EA      \$ \_\_\_\_\_      \$ \_\_\_\_\_

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>23 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.1.8	<b>32321 002 307</b> <b>VALVES, MECHANICAL JOINT</b> INCLUDING MJ ACCESSORIES, FULL WALLED DUCTILE IRON.  4"	18	EA	\$ _____	\$ _____
5.1.9	<b>32321 002 308</b> <b>VALVES, MECHANICAL JOINT</b> INCLUDING MJ ACCESSORIES, FULL WALLED DUCTILE IRON.  6"	60	EA	\$ _____	\$ _____
5.1.10	<b>32321 002 309</b> <b>VALVES, MECHANICAL JOINT</b> INCLUDING MJ ACCESSORIES, FULL WALLED DUCTILE IRON.  8"	50	EA	\$ _____	\$ _____



INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>25 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>MEASURE</u>	<u>PRICE</u>	<u>AMOUNT</u>
5.1.15	<b>32321 002 314</b> <b>VALVES, FLANGED ENDS</b> INCLUDING ACCESSORIES, FULL WALLED DUCTILE IRON.				
	6"				
		15	EA	\$ _____	\$ _____
5.1.16	<b>32321 002 315</b> <b>VALVES, FLANGED ENDS</b> INCLUDING ACCESSORIES, FULL WALLED DUCTILE IRON.				
	8"				
		10	EA	\$ _____	\$ _____
5.1.17	<b>32321 002 316</b> <b>VALVES, FLANGED ENDS</b> INCLUDING ACCESSORIES, FULL WALLED DUCTILE IRON.				
	10"				
		1	EA	\$ _____	\$ _____
5.1.18	<b>32321 002 317</b> <b>VALVES, FLANGED ENDS</b> INCLUDING ACCESSORIES, FULL WALLED DUCTILE IRON.				
	12"				
		5	EA	\$ _____	\$ _____
		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>26 96</b>
		FIRM NAME (Must be filled in)	

5.1.19      **32321 002 318**  
**VALVES, CUT-IN**  
PLAIN END BY MECHANICAL  
JOINT INCLUDING ACCESSORIES,  
FULL WALLED DUCTILE IRON  
                  **4"**

1            **EA**            \$ \_\_\_\_\_            \$ \_\_\_\_\_

5.1.20      **32321 002 319**  
**VALVES, CUT-IN**  
PLAIN END BY MECHANICAL  
JOINT INCLUDING ACCESSORIES,  
FULL WALLED DUCTILE IRON  
                  **6"**

1            **EA**            \$ \_\_\_\_\_            \$ \_\_\_\_\_

5.1.21      **32321 002 320**  
**VALVES, CUT-IN**  
PLAIN END BY MECHANICAL  
JOINT INCLUDING ACCESSORIES,  
FULL WALLED DUCTILE IRON  
                  **8"**

1            **EA**            \$ \_\_\_\_\_            \$ \_\_\_\_\_

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>27 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.1.22 <b>32321 002 321</b> <b>VALVES, CUT-IN</b> PLAIN END BY MECHANICAL JOINT INCLUDING ACCESSORIES, FULL WALLED DUCTILE IRON  <b>10"</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.1.23 <b>32321 002 322</b> <b>VALVES, CUT-IN</b> PLAIN END BY MECHANICAL JOINT INCLUDING ACCESSORIES, FULL WALLED DUCTILE IRON  <b>12"</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
<b>SUBTOTAL</b>			<b>\$ _____</b>	



INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>29 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.2.5 <b>32321 004 064</b> <b>MECHANICAL JOINT FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>10" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.6 <b>32321 004 065</b> <b>MECHANICAL JOINT FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>12" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.7 <b>32321 007 000</b> <b>MECHANICAL JOINT GASKETS FOR VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>3" ANSI A21-11</b>	<b>850</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.8 <b>32321 007 001</b> <b>MECHANICAL JOINT GASKETS FOR VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>4" ANSI A21-11</b>	<b>850</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>30 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.2.9 <b>32321 007 002</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPEC. 6" ANSI A21-11	2100	EA	\$ _____	\$ _____
5.2.10 <b>32321 007 003</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPEC. 8" ANSI A21-11	900	EA	\$ _____	\$ _____
5.2.11 <b>32321 007 004</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPEC. 10" ANSI A21-11	420	EA	\$ _____	\$ _____
5.2.12 <b>32321 007 005</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPEC. 12" ANSI A21-11	120	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>31 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.2.13 <b>332321 004 100</b> <b>SPECIAL MECHANICAL JOINT</b> <b>TYPE FOLLOWER RINGS FOR</b> <b>CUT-IN VALVES AND OVERSIZE</b> <b>JOINTS</b> PER WATER DEPARTMENT PURCHASE SPECIFICATION 6"	1	EA	\$ _____	\$ _____
5.2.14 <b>32321 004 101</b> <b>SPECIAL MECHANICAL JOINT</b> <b>TYPE FOLLOWER RINGS FOR</b> <b>CUT-IN VALVES AND OVERSIZE</b> <b>JOINTS</b> PER WATER DEPARTMENT PURCHASE SPECIFICATION W-16/19 8" Drawing NO.175B-290D	1	EA	\$ _____	\$ _____
5.2.15 <b>32321 004 102</b> <b>SPECIAL MECHANICAL JOINT</b> <b>TYPE FOLLOWER RINGS FOR</b> <b>CUT-IN VALVES AND OVERSIZE</b> <b>JOINTS</b> PER WATER DEPARTMENT PURCHASE SPECIFICATION 10"	1	EA	\$ _____	\$ _____
5.2.16 <b>32321 004 103</b> <b>SPECIAL MECHANICAL JOINT</b> <b>TYPE FOLLOWER RINGS FOR</b> <b>CUT-IN VALVES AND OVERSIZE</b> <b>JOINTS</b> PER WATER DEPARTMENT PURCHASE SPECIFICATION 12"	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>32 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.2.17	<b>32321 006 020</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A2111. <b>5/8" X 3"</b>	<b>5,000</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.18	<b>32321 006 021</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A2111. <b>3/4" X 3-1/2"</b>	<b>6,200</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.19	<b>32321 006 022</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A2111. <b>3/4" X 4"</b>	<b>4,200</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.20	<b>32321 006 023</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A2111. <b>3/4" X 4-1/2"</b>	<b>2,400</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.2.21	<b>32321 006 024</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A2111. <b>3/4" X 5"</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>33 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.2.22	<b>32321 006 025 MECHANICAL JOINT BOLTS AND NUTS PER ANSI A2111. 3/4" X 5-1/2"</b>	1	EA	\$ _____	\$ _____
5.2.23	<b>2321 011 036 3/4" x 7" T-Bolt &amp; Nut for mechanical joint</b>	1	EA	\$ _____	\$ _____
5.2.24	<b>32321 011 037 1" x 7" T-Bolt &amp; Nut for mechanical joint</b>	1	EA	\$ _____	\$ _____
	<b>SUBTOTAL</b>			\$ _____	



INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>35 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.3.4 <b>32321 002 403</b> <b>VALVES, MECHANICAL JOINT, VERT.</b> INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>30"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.3.5 <b>32321 002 404</b> <b>VALVES, MECHANICAL JOINT, VERT.</b> INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>36"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.3.6 <b>32321 002 405</b> <b>VALVES, MECHANICAL JOINT, VERT.</b> INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>42"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.3.7 <b>32321 002 406</b> <b>VALVES, MECHANICAL JOINT, VERT.</b> INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>48"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____



INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>37 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.3.12 <b>32321 002 411</b> <b>VALVES, MECHANICAL JOINT, HORZ.</b> PER PHILADELPHIA WATER DEPT. SPEC. INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>36"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.3.13 <b>32321 002 412</b> <b>VALVES, MECHANICAL JOINT, HORZ.</b> PER PHILADELPHIA WATER DEPT. SPEC. INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>42"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.3.14 <b>32321 002 413</b> <b>VALVES, MECHANICAL JOINT, HORZ.</b> PER PHILADELPHIA WATER DEPT. SPEC. INCLUDING MJ ACCESSORIES, REDUCED WALLED DUCTILE IRON.				
<b>48"</b>				
	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
<b>SUBTOTAL</b>			\$ _____	

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>38 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.4	<b>Group 4</b>				
	<b><u>STANDARD PRESSURE GATE VALVE PARTS 16"-48"</u></b>				
5.4.1	<b>32321 007 009 MECHANICAL JOINT GASKETS FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION 16" ANSI A21-11</b>	1	EA	\$ _____	\$ _____
5.4.2	<b>32321 007 009 MECHANICAL JOINT GASKETS FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION 20" ANSI A21-11</b>	1	EA	\$ _____	\$ _____
5.4.3	<b>32321 007 009 MECHANICAL JOINT GASKETS FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION 24" ANSI A21-11</b>	1	EA	\$ _____	\$ _____
5.4.4	<b>32321 007 009 MECHANICAL JOINT GASKETS FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION 30" ANSI A21-11</b>	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>39 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.4.5	<b>32321 007 010</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION <b>36" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.6	<b>32321 007 011</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION <b>42" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.7	<b>32321 007 012</b> <b>MECHANICAL JOINT</b> <b>GASKETS</b> FOR VALVES PER WATER DEPARTMENT PURCHASE SPECIFICATION <b>48" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.8	<b>32321 004 066</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS</b> VALVES PER WATER DEPARTMENT PURCHASE SPEC. <b>16" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.9	<b>32321 004 067</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS</b> VALVES PER WATER DEPARTMENT PURCHASE SPEC. <b>20" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>40 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.4.10	<b>32321 004 068</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>24" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.11	<b>32321 004 069</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>30" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.12	<b>32321 004 070</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>36" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.13	<b>32321 004 071</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>42" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.4.14	<b>32321 004 072</b> <b>MECHANICAL JOINT</b> <b>FOLLOWER RINGS VALVES</b> PER WATER DEPARTMENT PURCHASE SPEC. <b>48" ANSI A21-11</b>	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>41 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.4.15 <b>31630 001 950</b> <b>NUTS for 16" Valves</b>	1	EA	\$ _____	\$ _____
5.4.16 <b>31630 001 951</b> <b>NUTS for 20" Valves</b>	1	EA	\$ _____	\$ _____
5.4.17 <b>31630 001 952</b> <b>NUTS for 24" Valves</b>	1	EA	\$ _____	\$ _____
5.4.18 <b>31630 001 953</b> <b>NUTS for 30" Valves</b>	1	EA	\$ _____	\$ _____
5.4.19 <b>31630 001 954</b> <b>NUTS for 42" Valves</b>	1	EA	\$ _____	\$ _____
5.4.20 <b>31630 001 955</b> <b>NUTS for 48" Valves</b>	1	EA	\$ _____	\$ _____
5.4.21 <b>31630 001 900</b> <b>BOLTS for 16" Valves</b>	1	EA	\$ _____	\$ _____
5.4.22 <b>31630 001 901</b> <b>BOLTS for 20" Valves</b>	1	EA	\$ _____	\$ _____
5.4.23 <b>31630 001 902</b> <b>BOLTS for 24" Valves</b>	1	EA	\$ _____	\$ _____
5.4.24 <b>31630 001 903</b> <b>BOLTS for 30" Valves</b>	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>42 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.4.25	<b>31630 001 904</b> <b>BOLTS for 42" Valves</b>	1	EA	\$ _____	\$ _____
5.4.26	<b>31630 001 905</b> <b>BOLTS for 48" Valves</b>	1	EA	\$ _____	\$ _____
5.4.27	<b>32321 006 020</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A21-11 <b>5/8" X 3"</b>	5,000	EA	\$ _____	\$ _____
5.4.28	<b>32321 006 021</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A21-11 <b>3/4" X 3-1/2"</b>	6,200	EA	\$ _____	\$ _____
5.4.29	<b>32321 006 022</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A21-11 <b>3/4" X 4"</b>	4,200	EA	\$ _____	\$ _____
5.4.30	<b>32321 006 023</b> <b>MECHANICAL JOINT</b> <b>BOLTS AND NUTS PER</b> ANSI A21-11 <b>3/4" X 4-1/2"</b>	2,400	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>43 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.4.31	<b>32321 006 024 MECHANICAL JOINT BOLTS AND NUTS PER ANSI A21-11 3/4" X 5"</b>	1	EA	\$ _____	\$ _____
5.4.32	<b>32321 006 025 MECHANICAL JOINT BOLTS AND NUTS PER ANSI A21-11 3/4" X 5-1/2"</b>	1	EA	\$ _____	\$ _____
5.4.33	<b>32321 011 036 3/4" X 7" T-Bolt &amp; Nut for mechanical joint</b>	1	EA	\$ _____	\$ _____
5.4.34	<b>32321 011 037 1" X 7" T-Bolt &amp; Nut for mechanical joint</b>	1	EA	\$ _____	\$ _____
<b>SUBTOTAL</b>				\$ _____	

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>44 96</b>
		FIRM NAME (Must be filled in)	

QTY      UNIT OF MEASURE      UNIT PRICE      TOTAL AMOUNT

5.5      **Group 5**

**BUTTERFLY VALVES**

5.5.1      **32321003 900**  
**Butterfly valves**, mechanical joint end, AWWA **Standard C504**, Class 150B, **with worm gear actuator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required;** mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). With Packing Bonnet/Operator Adapter - **16"**

4              EA              \$ \_\_\_\_\_              \$ \_\_\_\_\_

5.5.2      **32321 003 901**  
**Butterfly valves**, mechanical joint end, AWWA **Standard C504**, Class 150B, **with worm gear actuator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required,** mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). With Packing Bonnet/Operator Adapter - **20"**

1              EA              \$ \_\_\_\_\_              \$ \_\_\_\_\_

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>45 96</b>
		FIRM NAME (Must be filled in)	

<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
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5.5.3 **32321 003 902**  
**Butterfly valves**, mechanical joint end, AWWA **Standard C504**, Class 150B, **with worm gear actuator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required**, mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). With Packing Bonnet/Operator Adapter - **24"**

1	<b>EA</b>	\$ _____	\$ _____
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5.5.4 **32321 003 903**  
**Butterfly valves**, mechanical joint end, AWWA **Standard C504**, Class 150B, **with worm gear actuator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required**, mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). With Packing Bonnet/Operator Adapter - **30"**

1	<b>EA</b>	\$ _____	\$ _____
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INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>47 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.7 <b>32321 003 906</b> <b>Butterfly valves</b> , mechanical joint end, AWWA <b>Standard C504</b> , Class 150B, <b>with traveling nut operator in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required</b> , mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). <b>16"</b>	<b>15</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.5.8 <b>32321 003 907</b> <b>Butterfly valves</b> , mechanical joint end, AWWA <b>Standard C504</b> , Class 150B, <b>with traveling nut operator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required</b> , mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). <b>20"</b>	<b>7</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>48 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.9 <b>32321 003 908</b> <b>Butterfly valves</b> , mechanical joint end, AWWA <b>Standard C504</b> , Class 150B, <b>with traveling nut operator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required</b> , mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). <b>24"</b>	1	EA	\$ _____	\$ _____
5.5.10 <b>32321 003 909</b> <b>Butterfly valves</b> , mechanical joint end, AWWA <b>Standard C504</b> , Class 150B, <b>with traveling nut operator in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required</b> , mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). <b>30"</b>	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>49 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.11	<b>32321 003 910</b> <b>Butterfly valves</b> , mechanical joint end, AWWA <b>Standard C504</b> , Class 150B, <b>with traveling nut operator in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required</b> , mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). <b>36"</b>	1	EA	\$ _____	\$ _____
5.5.12	<b>32321 003 911</b> <b>Butterfly valves</b> , mechanical joint end, AWWA <b>Standard C504</b> , Class 150B, <b>with traveling nut operator; in accordance with Water Department Purchase Specification including Q.C. participation; inspection as per QC-11, Section 2.4 required</b> , Mechanical joint accessories, epoxy coating, 5' extension stem with 250 ft. lb. shear pin and a torque protector (set at 220 ft. lb. +/-). <b>48"</b>	1	EA	\$ _____	\$ _____



INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>51 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.17	<b>32321 003 803</b> <b>Valve, butterfly, 6", wafer,</b> plain stem only; std. Paint-int., std. paint-ext. Henry Pratt MK11 1508	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.5.18	<b>32321 003 804</b> <b>Valve, butterfly, 8", flanged,</b> plain stem only; std. paint-int., std. paint-ext. Henry Pratt 2F11 1508	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.5.19	<b>32321 003 805</b> <b>Valve, butterfly, 8", wafer,</b> plain stem only; std. paint-int., std. paint-ext. Henry Pratt MK11 1508	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.5.20	<b>32321 003 806</b> <b>Valve, butterfly, 10", flanged,</b> plain stem only; std. paint-int., std. paint-ext. Henry Pratt 2F11 1508	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.5.21	<b>32321 003 807</b> <b>Valve, butterfly, 10", wafer,</b> plain stem only; std. paint-int., std. paint-ext. Henry Pratt MK11 1508	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>52 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.22	<b>32321 003 808</b> <b>Valve, butterfly, 12", flanged,</b> plain stem only; std. paint-int., std. paint-ext. Henry Pratt 2F11 1508	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.5.23	<b>32321 003 809</b> <b>Valve, butterfly, 12", wafer,</b> plain stem only; std. paint-int., std. paint-ext. Henry Pratt MK11 1508	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.5.24	<b>32321 003 810</b> <b>Valve, butterfly, 14", flanged,</b> plain stem only; std. Paint-int., std. Paint-ext. Henry Pratt 2F11 1508	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.5.25	<b>32321 003 811</b> <b>Valve, butterfly, 14", wafer,</b> plain stem only; std. Paint-int., std. Paint-ext. Henry Pratt MK11 1508	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.5.26	<b>32321 009 206</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 3" BRS L1 CI</b> XNBR NBR S2-S2 *LT LUG	<b>1</b>	<b>EA</b>	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>53 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.27	<b>32321 009 207</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 4" BRS L1 CI</b> XNBR NBR S2-S2 *LT LUG 1	<b>EA</b>	\$ _____	\$ _____
5.5.28	<b>32321 009 208</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 6" BRS L1 CI</b> XNBR NBR S2-S2 *LT LUG 1	<b>EA</b>	\$ _____	\$ _____
5.5.29	<b>32321 009 209</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 8" BRS L1 CI</b> XNBR NBR S2-S2 *LT LUG 1	<b>EA</b>	\$ _____	\$ _____
5.5.30	<b>32321 009 210</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 3" BRS WI CI</b> XNBR NBR S2-S2 *LT WAFER 1	<b>EA</b>	\$ _____	\$ _____
5.5.31	<b>32321 009 211</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 4" BRS WI CI</b> XNBR NBR S2-S2 *LT WAFER 1	<b>EA</b>	\$ _____	\$ _____
5.5.32	<b>32321 009 212</b> <b>RESILIENT SEAT BUTTERFLY</b> <b>VALVE 6" BRS WI CI</b> XNBR NBR S2-S2 *LT WAFER 1	<b>EA</b>	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>54 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.33	<b>32321 009 213</b> <b>RESILIENT SEAT BUTTERFLY VALVE 8" BRS WI CI</b> XNBR NBR S2-S2 *LT WAFER	1	EA	\$ _____	\$ _____
5.5.34	<b>32321 003 813</b> <b>16" FLG BUTTERFLY VALVE</b> W/HAND WHEEL	1	EA	\$ _____	\$ _____
5.5.35	<b>32321 003 814</b> <b>12" FLG BUTTERFLY VALVE</b> W/HAND WHEEL	1	EA	\$ _____	\$ _____
5.5.36	<b>32321 001 061</b> <b>4" HAYWARD PVC BUTTERFLY VALVE; LUG BODY COMPLETE</b> W/ROTORK "Q" PAK; 110 VOLT; SINGLE PHASE ACTUATOR; 4-20 mA OUTPUT	1	EA	\$ _____	\$ _____
5.5.37	<b>32321 001 062</b> <b>4" HAYWARD PVC BUTTERFLY VALVE; LUG BODY COMPLETE</b> W/ROTORK "Q" PAK; 110 VOLT; SINGLE PHASE ACTUATOR	15	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>55 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.5.38 <b>32321 009 216</b> 16" Flg. Pratt #2F11, 150B Butterfly valve, int-blk Asphalt, ext. Universal Primer #50029136001 Duplicate of SO-29136-1	4	EA	\$ _____	\$ _____
5.5.39 <b>32321 009 217</b> 18" Flg. Pratt #2F11, 150B Butterfly valve, int-blk Asphalt, ext. Universal Primer #50029136002 Duplicate of SO-29136-2	1	EA	\$ _____	\$ _____
5.5.40 <b>32321 009 219</b> 20" Pratt #2F11-150B, flg butterfly valve, ps, w/packing retainer plate paint, int-black asphalt, exterior Universal Primer less acc. Delivered to jobsite.	1	EA	\$ _____	\$ _____
		<b>SUBTOTAL</b>	\$ _____	

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>56 96</b>
		FIRM NAME (Must be filled in)	

<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
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5.6 **Group 6**

**OTHER VALVES**

5.6.1 **32321 003 500**  
**Surface wash valve,**  
adjustable flange,  
including adaptation  
to existing electric  
motor actuator.  
**6"**

1	EA	\$ _____	\$ _____
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5.6.2 **32321 003 501**  
**Surface wash valve,**  
adjustable flange,  
including adaptation  
to existing electric  
motor actuator.  
**8"**

1	EA	\$ _____	\$ _____
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5.6.3 **32321 003 560**  
**Stem valve** for effluent  
single throttle construction  
valve with SMA-0 electric  
motor actuator.  
**18"**

1	EA	\$ _____	\$ _____
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INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>57 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.4 <b>32321 011 047</b> <b>24" GA INDUSTRIES FIG. #201-D</b> <b>RESILIENT SEATED BALL VALVE</b> W/OIL CYLINDER ACTUATOR, HAND WHEEL MANUAL OVERRIDE AND PANEL MOUNTED ELECTRIC CHECK CONTROLS	1	EA	\$ _____	\$ _____
5.6.5 <b>32321 011 059</b> 2-1/2 FLG, OS&Y, RSGV O/L #8068	1	EA	\$ _____	\$ _____
5.6.6 <b>32321 011 064</b> <b>24" GA INDUSTRIES FIG. #201-D</b> <b>RESILIENT SEATED BALL VALVE</b> <b>W/OIL CYLINDER ACTUATOR</b> , HAND WHEEL MANUAL OVERRIDE AND PANEL MOUNTED ELECTRIC CHECK CONTROLS; W/ULTRA DRIVE GEARBOX DECLUTCHABLE GEARBOX.	1	EA	\$ _____	\$ _____
5.6.7 <b>32321 011 133</b> Valves; drain and influent; Rotork IQ 35, 3 phase actuator, extra limit switches, complete with actuator, machined drive bushing and start up.	1	EA	\$ _____	\$ _____.
5.6.8 <b>32321 011 134</b> Valves; washwater; Rotork IQ 35, 3 phase actuator, extra limit switches; complete with actuator, machined drive bushing adapter plate and start up	1	EA	\$ _____	\$ _____.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>58 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.9	<b>32321 011 138</b> Protector, Aunspach Overtorque, model D86-250; standard black epoxy coating, 200/220 lb. ft. trip torque; <b>2"</b> AWWA nut and socket	<b>10</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____.</b>
5.6.10	<b>32321 009 200</b> <b>Plug Valve ½"</b> 118 SI RS 16 ALG LEVER	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.6.11	<b>32321 009 201</b> <b>Plug Valve 3"</b> 118 E2 RS16 ALG LEVER	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.6.12	<b>32321 009 202</b> <b>Plug Valve 6"</b> 118 F6 RS16 AGG6W8 Chain-wheel	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.6.13	<b>32321 009 203</b> <b>Plug Valve 8"</b> 118 F6 RS16 AGG6W8 Chain-wheel	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.6.14	<b>32321 009 204</b> <b>Plug Valve 10"</b> 118 F6 RS17 AGG6W8 Chain-wheel	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.6.15	<b>32321 009 205</b> <b>Plug Valve 12"</b> 118 F6 RS17 AGG6W8 Chain-wheel	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>59 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.16 <b>32321 011 140</b> 24" resilient wedge gate valve; flanged ends, NRS, w/by-pass, open left, model #AUSP106LO, w/Rotork Electric Actuator IQD25B4/IB6 w/gearbox, 120 volt, DC, NEMA 6 enclosure for open/close service 250 psig working pressure; 3" by pass, stem made of bronze ASTM B584. U.S. Pipe Series AUSP2 or approved equal. <b>INSPECTION AS PER QC-12, SECTION 2.4 REQUIRED,</b>	1	EA	\$_____	\$_____.
5.6.17 <b>32321 011 139</b> 36" resilient wedge gate valve; flanged ends, NRS, w/by-pass, open left, model #AUSP106LO, w/Rotork Electric Actuator IQD25B4/IB8 w/gearbox, 125 volt, DC, NEMA 6 enclosure for open/close service 280 psig working pressure, 3" by pass, stem made of bronze ASTM B584. U.S. Pipe Series AUSP2 or approved equal. <b>INSPECTION AS PER QC-12, SECTION 2.4 REQUIRED,</b>	1	EA	\$_____	\$_____
5.6.18 <b>32321 009 214</b> 4" FLG plug valve, lever operated	1	EA	\$_____	\$_____
5.6.19 <b>32321 011 005</b> 1/2" Velan 150 FLG, <b>TEL50 Ball Valve,</b> Cryogenic w/12" Extension level actuator	1	EA	\$_____	\$_____
5.6.20 <b>32321 011 000</b> 3/4" Velan 150 FLG, <b>TEL50 Ball Valve,</b> Cryogenic w/12" Extension level actuator	1	EA	\$_____	\$_____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>60 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.21	<b>32321 011 001</b> <b>1" Velan 150 FLG,</b> <b>TEL50 Ball Valve,</b> Cryogenic w/12" Extension level actuator	1	EA	\$ _____	\$ _____
5.6.22	<b>32321 011 002</b> <b>1-1/2" Velan 150 FLG,</b> <b>TEL50 Ball Valve,</b> Cryogenic w/12" Extension level actuator	1	EA	\$ _____	\$ _____
5.6.23	<b>32321 011 003</b> <b>2" Velan 150 FLG,</b> <b>TEL50 Ball Valve,</b> Cryogenic w/12" Extension level actuator	1	EA	\$ _____	\$ _____
5.6.24	<b>32321 011 004</b> <b>3" Velan 150 FLG,</b> <b>TEL50 Ball Valve,</b> Cryogenic w/14" Extension level Actuator	1	EA	\$ _____	\$ _____
5.6.25	<b>32321 011 007</b> <b>18" Flange Resilient</b> seated gate valve with metric operator. Drawing #860494.	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>61 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.26	<b>32321 011 020</b> <b>Rotork Actuator</b> <b>IQ10A Electric</b> <b>Motor</b> ; 208v/3HP/60 Hz; water-tight enclosure; non-intrusive calibration	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.6.27	<b>41110 002 001</b> <b>Rotork Actuator</b> <b>IQ40A Electric</b> <b>Motor</b> ; 480/3/60 volt with 4-20 main/out, machined drive bushing; adaption kit to existing gear box and startup.	<b>60</b>	<b>EA</b>	\$ _____	\$ _____
5.6.28	<b>32321 011 039</b> <b>Rotork Actuator</b> <b>IQ10IW5R Electric Motor</b> ; 240/3/60 volt with 4-20 main/out, machined drive bushing; adaption kit to existing gear box and startup.	<b>8</b>	<b>EA</b>	\$ _____	\$ _____
5.6.29	<b>32321 011 019</b> <b>Modified disc pack,</b> including discs, wedges, straps for <b>36" single</b> <b>throttle discharge</b> <b>valve</b>	<b>1</b>	<b>EA</b>	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>62 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.30	<b>32321 011 041</b> <b>6" DeZurik Plug Valve with lever</b>	1	EA	\$ _____	\$ _____
5.6.30.1	<b>32321 011 042</b> <b>Plugs only</b>	1	EA	\$ _____	\$ _____
5.6.30.2	<b>32321 011 043</b> <b>Bonnet Gasket</b>	1	EA	\$ _____	\$ _____
5.6.30.3	<b>32321 011 044</b> <b>Packing kit</b>	1	EA	\$ _____	\$ _____
5.6.31	<b>32321 011 013</b> <b>18" Flanged DeZurik F</b> 118 Handwheel gear operated <b>plug valve</b>	1	EA	\$ _____	\$ _____
5.6.32	<b>32321 011 040</b> <b>24" GA Industries Resilient</b> <b>seated Ball Valve</b> with shaft extension, EIM DC power actuator, cast iron body and 250# flanges	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>63 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.33 <b>32321 011 048</b> Rotork IQTM Motor actuator, 120 volts modulating 4-20 mA, in/out service; (1200 starts/Hr), complete w/machined drive bushing; adaptation kit and start up	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.6.34 <b>32321 011 049</b> Rotork IQ12FA10Z, 480/3/60 volts; modulating 4-20 mA; in/out service; complete w/machined drive bushing; adaptation kit and start up	<b>3</b>	<b>EA</b>	\$ _____	\$ _____
5.6.35 <b>32321 011 050</b> Rotork IQ18, 480/3/60 on/off service for use w/DeZurik valve #9183926; complete w/machined drive bushing	<b>2</b>	<b>EA</b>	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>64 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.36	<b>32321 011 051</b> Rotork IQ 10FA10,57 rpm, 480/3/60 on/off service complete w/machined drive bushing and start up and four (4) extra switches	1	EA	\$ _____	\$ _____
5.6.37	<b>32321 011 069</b> Actuator, Rotork, IQ10/W4R,57 RPM; 480/3/60 w/adapter plate, drive bushing, extra limit switches and start up	1	EA	\$ _____	\$ _____
5.6.38	<b>32321 011 054</b> PTB Influent Gates SG-1-6 on/off service Rotork TQ70; 208/3/60 volt; 29 RPM, Explosion proof, complete w/machined drive bushing adaptation and start up	1	EA	\$ _____	\$ _____
5.6.39	<b>32321 011 055</b> PTB Drain Valve on/off service Rotork IQ12, 230/3/60 Explosion proof, complete w/machined drive bushing, adaptation and start up	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA <b>PROCUREMENT DEPARTMENT</b> PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>65 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.40 <b>32321 011 056</b> RCS MAR 25-30-7 on/off service Rotors ROM - 2, 115 volts; complete w/adaptation, machined drive bushing and start up	5	EA	\$ _____	\$ _____
5.6.41 <b>32321 011 057</b> FST RSSP DV on/off service Rotork IQ10B4/IW5R; 230/3/60 volts, explosion proof actuator and gearbox, complete w/adaptation, machined drive bushing and start up	1	EA	\$ _____	\$ _____
5.6.42 <b>32321 011 058</b> RSSP Modulating Valve Rotork IQTM 1000,115 volts, single phase, modulating 4-20 mA in/out (1200 starts/Hr.) complete w/machined drive busing, adaptation and start up	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>66 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.43	<b>32321 011 065</b> Rotork IQ20 Actuator, 3 phase, on/off service complete w/machined drive bushing, adapter plate and start up	1	EA	\$ _____	\$ _____
5.6.44	<b>32321 011 061</b> Valve, diaphragm; 2"; ITT; ductile iron body, un-lined, FxF ends, natural rubber diaphragm, manual wheel Operator	8	EA	\$ _____	\$ _____
5.6.45	<b>32321 011 062</b> Same as 5.4.37 above except that 3"	1	EA	\$ _____	\$ _____
5.6.46	<b>32321 011 063</b> Same as 5.4.37 above except that 4"	1	EA	\$ _____	\$ _____
5.6.47	<b>32321 011 060</b> Rotork IQ20FA14 electric actuator' 480/3/60, NEMA enclosure; to be mounted to an existing gearbox; to include electric actuator, machined drive bushing, adapter plate and start up. Fasteners not included.	3	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>67 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.48 <b>32321 011 067</b> 8" Golden Anderson PRV valve, Model 4500D, 46 psi outlet pressure; 82 psi inlet pressure.	1	EA	\$ _____	\$ _____
5.6.49 <b>32321 011 081</b> Rotork IQ12FA10/IW6R; 440/3/60 power supply, NEMA 6 enclosure, 8 configurable contacts, open/close service, complete w/a Rotork AWWA gearbox and machined drive bushing.	1	EA	\$ _____	\$ _____
5.6.50 <b>32321 011 082</b> Rotork IQ12 Motor Operator, 440/3/60 power supply, NEMA 6 enclosure, 8 configurable contacts, modulating service, 4-20 mA input/output, 29 rpm, complete with an IW6R Rotork AWWA gearbox and a machined drive bushing, 210:1 ratio for a 108 second stroke time, FA 25 output flange w/mating flanges for KA30, <b>18"</b> hand wheel.	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>68 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.51	<b>32321 011 068</b> Rotork IQ10FA10, 57 RPM 480/3/60 on/off service, complete w/machined drive, bushing, start up and four (4) extra limit switches.	1	EA	\$ _____	\$ _____
5.6.52	<b>32321 011 071</b> Rotork IQ10 Actuator; 460/3/60: on/off service, complete w/machined drive, bushing, start up and four (4) extra limit switches.	1	EA	\$ _____	\$ _____
5.6.53	<b>32321 011 096</b> Controls, Standard; FA-10 base, APT, SS hardware; WP, 18 RPM; Limitorque MX-05.	1	EA	\$ _____	\$ _____
5.6.54	<b>32321 011 097</b> Controls, Modulating; A-1 base, APT, Solid Starter; SS hardware; WP, 18 RPM; Limitorque MX-05.	1	EA	\$ _____	\$ _____
5.6.55	<b>32321 011 098</b> Controls, Standard; A-1 base, APT; SS hardware; WP, 18 RPM; Limitorque MX-05.	1	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>69 96</b>
		FIRM NAME (Must be filled in)	

**QTY                      UNIT OF MEASURE                      UNIT PRICE                      TOTAL AMOUNT**

5.6.56      **32321 011 114**  
**8" 690-01 BOSYKCH**  
Reduced port pressure  
reducing and check valve;  
Globe pattern, ductile iron  
body ASTM A-536, 316  
stainless steel trim, 150#  
flanges ANSI B16.42, 250  
PSI maximum working  
pressure; Buns-n-Rubber  
Parts, interior/exterior  
epoxy coating, bronze  
ASTM B62 Pilot Valve  
System, opening speed  
control, copper and brass  
tubing/fittings, X101  
valve position indicator,  
15-75 PSI spring range in  
Pressure Reducing Control.

**1                      EA                      \$ \_\_\_\_\_                      \$ \_\_\_\_\_**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA  PROCUREMENT DEPARTMENT  PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>70 96</b>
		FIRM NAME (Must be filled in)	

**QTY                      UNIT OF MEASURE                      UNIT PRICE                      TOTAL AMOUNT**

5.6.56            **32321 011 115**  
**10"** 690-01 BOSYKCH Reduced port pressure reducing and check valve; Globe pattern; ductile iron body, ASTM A-536, 316 stainless steel trim, 150# flanges ANSI B16.42, 250-PSI maximum working pressure; Buns-N-Rubber Parts, interior/exterior epoxy coating, bronze ASTM B62 pilot valve system, opening speed control; copper and brass tubing/fittings, X101 valve position indicator, 15-75 PSI spring range in Pressure Reducing Control.

**1                      EA                      \$ \_\_\_\_\_                      \$ \_\_\_\_\_.**

5.6.57            **32321 011 131**  
**6"** DeZurick plug valve, flanged ends, complete w/factory mounted Rotork IQT500 electric motor; 3 phase designed for an on/off service, include extra switches and lone cover. Part #SP-D118-IQT500.

**1                      EA                      \$ \_\_\_\_\_                      \$ \_\_\_\_\_.**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>71 96</b>
		FIRM NAME (Must be filled in)	

	<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.6.58 <b>32321 011 132</b> Same as 5.4.55 except that: long cover and a Packscan board Part #SP-D118-IQT500-PB.	<b>5</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
5.6.59 <b>32321 009 218</b> <b>20"</b> GA Industries Fig# XR201D resilient seated ball valve, including panel mounted controls, including accessories.	<b>1</b>	<b>EA</b>	<b>\$ _____</b>	<b>\$ _____</b>
		<b>SUBTOTAL</b>	<b>\$ _____</b>	

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>72 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.7	<b>Group 7</b>				
	<b>VALVES BOXES</b>				
5.7.1	<b>32321 009 000</b> <b>Parts</b> for Ametek Metro Seven Inch Plastic Valve Box; <b>Adapter; Water Dept.</b> Drawing No. 46G 3827.	<b>500</b>	<b>EA</b>	\$ _____	\$ _____
5.7.2	<b>32321 009 001</b> <b>Parts</b> for Ametek Metro Seven Inch Plastic Valve Box; <b>Cover, Cast Iron; Water Dept.</b> Drawing No. 46G 3827.	<b>700</b>	<b>EA</b>	\$ _____	\$ _____
5.7.3	<b>32321 009 002</b> <b>Parts</b> for Ametek Metro Seven Inch Plastic Valve Box; <b>Upper,</b> <b>Section; Water Dept.</b> Drawing No. 46G 3827. <b>PWD COMMODITY CODE #051048</b>	<b>400</b>	<b>EA</b>	\$ _____	\$ _____
5.7.4	<b>32321 009 003</b> <b>Parts</b> for Ametek Metro Seven Inch Plastic Valve Box; <b>Lower, Section; Water Dept.</b> Drawing No. 46G 3828. <b>PWD COMMODITY CODE #051049</b>	<b>900</b>	<b>EA</b>	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>73 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.7.5	<b>32321 009 005</b> <b>Valve box, electrolysis;</b> <b>valve box top; 5 ¼" 16".</b> <b>Series #6855.</b>	1	EA	\$ _____	\$ _____
5.7.6	<b>32321 009 006</b> <b>Valve box, electrolysis;</b> <b>5 ¼ wafer drop lid.</b>	1	EA	\$ _____	\$ _____
5.7.7	<b>32321 009 007</b> <b>Valve box, electrolysis;</b> <b>6012 Series, 12 x 12</b> <b>wafer lid.</b>	1	EA	\$ _____	\$ _____
5.7.8	<b>32321 009 008</b> <b>Valve box, electrolysis;</b> <b>6012 Series, 12 x 12,</b> <b>roadway box top 13" high.</b>	1	EA	\$ _____	\$ _____
5.7.9	<b>32321 009 100</b> <b>Valve box, service;</b> <b>plastic, 2-1/2".</b>	1800	EA	\$ _____	\$ _____
5.7.10	<b>32321 009 009</b> <b>Lids, repair for curb</b> <b>boxes; 2-1/2".</b>	900	EA	\$ _____	\$ _____
5.7.11	<b>32321 009 010</b> <b>Lids, repair, new style;</b> <b>2-1/2" for curb boxes.</b>	500	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>74 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.7.12	<b>32321 009 011</b> <b>Lids, repair, old style; 3"</b> <b>Buffalo type curb box.</b>	<b>400</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.7.13	<b>32321 011 018</b> <b>Curb Box Repair Lids,</b> <b>Mueller for ref.</b> <b>3" Buffalo Type.</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.7.14	<b>32321 011 015</b> <b>2-1/2" plastic</b> <b>Ametek</b> <b>Service box.</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.7.15	<b>32321 011 052</b> Key curb box, 6 ft; H-10321 shut off rod	<b>70</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.7.16	<b>32321 011 053</b> Key Pentagon for curb box, H-10323 malleable iron	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.7.17	<b>32321 011 072</b> Aunspach over torque protector, model #D-86-250; standard black epoxy coating, 200/220 lbft trip torque, <b>2"</b> AWWA operating nut and socket	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>75 96</b>
		FIRM NAME (Must be filled in)	

5.7.18

**32321 011 141**

**4" PR Vent Box Lids  
SP-PRVENT-LTD**

**1**

**EA**

**\$ \_\_\_\_\_**

**\$ \_\_\_\_\_**

**SUBTOTAL**

**\$ \_\_\_\_\_**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>76 96</b>
		FIRM NAME (Must be filled in)	

<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
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**5.8 Group 8**

**TAPPING SLEEVES**

**5.8.1 SLEEVE, TAPPING DUCTILE IRON COMPRESSION TYPE; SIZES**

5.8.1.1	<b>32321 020 000</b> <b>12" x 12"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.2	<b>32321 020 001</b> <b>12" x 10"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.3	<b>32321 020 002</b> <b>12" x 8"</b>	<b>16</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.4	<b>32321 020 003</b> <b>12" x 6"</b>	<b>41</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.5	<b>32321 020 004</b> <b>12" x 4"</b>	<b>25</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.6	<b>32321 020 005</b> <b>12" x 3"</b>	<b>3</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>77 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.1.7	<b>32321 020 006</b> <b>10" x 10"</b>	1	EA	\$ _____	\$ _____
5.8.1.8	<b>32321 020 007</b> <b>10" x 8"</b>	2	EA	\$ _____	\$ _____
5.8.1.9	<b>32321 020 008</b> <b>10" x 6"</b>	3	EA	\$ _____	\$ _____
5.8.1.10	<b>32321 020 009</b> <b>10" x 4"</b>	9	EA	\$ _____	\$ _____
5.8.1.11	<b>32321 020 010</b> <b>10" x 3"</b>	2	EA	\$ _____	\$ _____
5.8.1.12	<b>32321 020 011</b> <b>8" x 8"</b>	15	EA	\$ _____	\$ _____
5.8.1.13	<b>32321 020 012</b> <b>8" x 6"</b>	15	EA	\$ _____	\$ _____
5.8.1.14	<b>32321 020 013</b> <b>8" x 4"</b>	50	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>78 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.1.15	<b>32321 020 014</b> <b>8" x 3"</b>	<b>14</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.16	<b>32321 020 015</b> <b>6" x 6"</b>	<b>12</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.17	<b>32321 020 016</b> <b>6" x 4"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.1.18	<b>32321 020 017</b> <b>6" x 3"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

5.8.2

**SLEEVE, TAPPING MECHANICAL JOINT WITH ACCESSORIES INCLUDING TWO SETS OF GASKETS PER SLEEVE FOR PIT CAST PIPE RANGES A THROUGH D**

5.8.2.1	<b>32321 021 000</b> <b>12" x 12"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.2.2	<b>32321 021 001</b> <b>12" x 10"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.2.3	<b>32321 021 002</b> <b>12" x 8"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.2.4	<b>32321 021 003</b> <b>12" x 6"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>79 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.2.5	<b>32321 021 004</b> <b>12" x 4"</b>	1	EA	\$_____	\$_____
5.8.2.6	<b>32321 021 005</b> <b>12" x 3"</b>	1	EA	\$_____	\$_____
5.8.2.7	<b>32321 021 006</b> <b>10" x 8"</b>	1	EA	\$_____	\$_____
5.8.2.8	<b>32321 021 007</b> <b>10" x 6"</b>	1	EA	\$_____	\$_____
5.8.2.9	<b>32321 021 008</b> <b>10" x 4"</b>	1	EA	\$_____	\$_____
5.8.2.10	<b>32321 021 009</b> <b>10" x 3"</b>	1	EA	\$_____	\$_____
5.8.2.11	<b>32321 021 010</b> <b>8" x 8"</b>	2	EA	\$_____	\$_____
5.8.2.12	<b>32321 021 011</b> <b>8" x 6"</b>	1	EA	\$_____	\$_____
5.8.2.13	<b>32321 021 012</b> <b>8" x 4"</b>	1	EA	\$_____	\$_____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>80 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.2.14	<b>32321 021 013</b> <b>8" x 3"</b>	1	EA	\$_____	\$_____
5.8.2.15	<b>32321 021 014</b> <b>6" x 6"</b>	1	EA	\$_____	\$_____
5.8.2.16	<b>32321 021 015</b> <b>6" x 4"</b>	1	EA	\$_____	\$_____
5.8.2.17	<b>32321 021 016</b> <b>6" x 3"</b>	1	EA	\$_____	\$_____
5.8.2.18	<b>32321 021 017</b> <b>16" x 8"</b>	1	EA	\$_____	\$_____
5.8.3	Tapping Sleeves MJ with positioning recess conforming to standards of MSS SP-60 "U"				
5.8.3.1	<b>32321 001 046</b> <b>16" x 4"</b>	1	EA	\$_____	\$_____
5.8.3.2	<b>32321 001 047</b> <b>16" x 6"</b>	1	EA	\$_____	\$_____
5.8.3.3	<b>32321 001 048</b> <b>16" x 8"</b>	1	EA	\$_____	\$_____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>81 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.3.4	<b>32321 001 049</b> <b>16" x 10"</b>	1	EA	\$ _____	\$ _____
5.8.3.5	<b>32321 001 050</b> <b>16" x 12"</b>	1	EA	\$ _____	\$ _____
5.8.3.6	<b>32321 001 051</b> <b>20" x 4"</b>	1	EA	\$ _____	\$ _____
5.8.3.7	<b>32321 001 052</b> <b>20" x 6"</b>	1	EA	\$ _____	\$ _____
5.8.3.8	<b>32321 001 053</b> <b>20" x 8"</b>	2	EA	\$ _____	\$ _____
5.8.3.9	<b>32321 001 054</b> <b>20" x 10"</b>	1	EA	\$ _____	\$ _____
5.8.3.10	<b>32321 001 055</b> <b>20" x 12"</b>	1	EA	\$ _____	\$ _____
5.8.3.11	<b>32321 001 056</b> <b>24" x 4"</b>	2	EA	\$ _____	\$ _____
5.8.3.12	<b>32321 001 057</b> <b>24" x 6"</b>	3	EA	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2257540</b>	PAGE OF <b>82 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.3.13	<b>32321 001 058</b> <b>24" x 8"</b>	<b>2</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.3.14	<b>32321 001 059</b> <b>24" x 10"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.3.15	<b>32321 001 060</b> <b>16" x 12"</b>	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.4	Additional Sleeves & Valves				
5.8.4.1	<b>32321 013 000</b> <b>20 x 16 MJ T-9</b> Tapping Sleeve w/AB Gaskets	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>
5.8.4.2	<b>32321 013 001</b> <b>16 x 12</b> Type T-28 compression Tapping sleeve	<b>1</b>	<b>EA</b>	<b>\$_____</b>	<b>\$_____</b>

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>83 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.4.3	<b>32321 011 083</b> 6" x 3/4" CC Double Saddle OD Range 6.84-7.60	<b>460</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.4	<b>32321 011 084</b> 6" x 1" CC Double Saddle OD Range 6.84-7.60	<b>1</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.5	<b>32321 011 085</b> 6" x 2" CC Double Saddle OD Range 6.84-7.60	<b>20</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.6	<b>32321 011 086</b> 8" x 3/4" CC Double Strap Saddle OD Range 8.63-9.80	<b>110</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.7	<b>32321 011 087</b> 8" x 1" CC Double Strap Saddle OD Range 8.63-9.80	<b>1</b>	<b>EA</b>	\$ _____	\$ _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>84 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.8.4.8	<b>32321 011 088</b> 8" x 2" CC Double Strap Saddle OD Range 8.63-9.62	<b>220</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.9	<b>32321 011 089</b> 12" x 3/4" CC Double Strap Saddle OD Range 12.62-14.32	<b>4</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.10	<b>32321 011 090</b> 12" x 1" CC Double Strap Saddle OD Range 12.62-14.32	<b>4</b>	<b>EA</b>	\$ _____	\$ _____
5.8.4.11	<b>32321 011 091</b> 12" x 2" CC Double Strap Saddle OD Range 12.62-14.34	<b>50</b>	<b>EA</b>	\$ _____	\$ _____





INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>87 96</b>
		FIRM NAME (Must be filled in)	

		<u>QTY</u>	<u>UNIT OF MEASURE</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
5.9.4	<b>32321 014 003</b> ROMAC XR 501 12.70-14.41 7" in length Std. SH; DI; CI & AC x Std. SH; DI, CI & AC	1	EA	\$ _____	\$ _____
			<b>SUBTOTAL</b>	\$ _____	
			<b>GRAND TOTAL</b>	\$ _____	

**BIDDER TO STATE HOW PRODUCT(S), SUPPLIES AND/OR PARTS ARE TO BE DELIVERED TO THE CITY OF PHILADELPHIA: (E.G. ON-SITE DELIVERY VIA AWARDED VENDOR'S TRUCK, UNITED PARCEL, U.S. POSTAL SERVICE ETC.).**

**TYPE OF TRANSPORT:** \_\_\_\_\_

**BIDDER SHALL SPECIFY IF DELIVERY IS OTHER THAN 30 DAY**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>88 96</b>
		FIRM NAME (Must be filled in)	

**EXHIBIT A**

**CITY OF PHILADELPHIA**

**BID BOND**

# **CITY OF PHILADELPHIA**



## **BID BOND**

**FOR CITY OF PHILADELPHIA BID NUMBER: S2Z57540**

**KNOW ALL MEN BY THESE PRESENTS, THAT WE** \_\_\_\_\_  
\_\_\_\_\_ as Principal  
(hereinafter called the "Principal Obligor"), and

\_\_\_\_\_ (as Surety) are jointly and severally held and firmly bound unto The City of Philadelphia, in the sum of **TEN PERCENT (10%) OF THE GROSS AMOUNT OF THE BID** lawful money of the United States of America, to be paid to the said City of Philadelphia, its successors and assigns; to which payment, well and truly to be made we do bind ourselves and each of us, our and each of our successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated the \_\_\_\_\_ day of \_\_\_\_\_ two-thousand and six (2006).

**WHEREAS** the above bounded Principal Obligor, submitted a bid pursuant to the above-referenced bid number to provide certain goods, services, or equipment to the City of Philadelphia.

**NOW THE CONDITION OF THIS OBLIGATION IS SUCH**, That if the City of Philadelphia shall accept the bid of the Principal Obligor and the Principal Obligor shall enter into a contract with the City in accordance with the terms of such bid, and furnish such bond or bonds as are specified in the bid documents with good and sufficient surety, for the faithful performance of the contract; or in the event of the failure or refusal of the Principal Obligor to enter into such contract and give such bond or bonds, if the Principal Obligor shall pay to the City the difference between the amount specified in said bid and such larger amount for which the City may legally contract with another party to provide the goods, services, or equipment required by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

And for the doing of these acts this instrument or a copy thereof attested as aforesaid shall be full warrant and authority.

**CORPORATE SEAL:**

**PRINCIPAL OBLIGOR:**

\_\_\_\_\_  
President/Vice-President (SEAL)

\_\_\_\_\_  
Secretary/Treasurer (SEAL)

**SURETY SEAL:**

**SURETY:**

\_\_\_\_\_  
Attorney-In-Fact (SEAL)

---

**INSTRUCTIONS:**

- (1) ALL VENDORS MUST UTILIZE THIS BID BOND FORM WHEN SUBMITTING A BID TO THE CITY.
- (2) IF PRINCIPAL OBLIGOR IS AN INDIVIDUAL OR PARTNERSHIP, BID BOND SHOULD BE SIGNED BY OWNER OR AUTHORIZED GENERAL PARTNER. PLEASE IDENTIFY ON THE BID BOND THE TYPE OF BUSINESS (E.G. INDIVIDUAL PROPRIETORSHIP OR PARTNERSHIP) AND TITLE OF PARTY EXECUTING THE BID BOND.
- (3) BID BOND MUST BE EXECUTED BY A SURETY COMPANY DULY AUTHORIZED AND LICENSED TO ACT AS SURETY BY THE PENNSYLVANIA INSURANCE COMMISSIONER PURSUANT TO THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>89 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT B**

# **SCHEDULE FOR SUBMISSION OF INFORMATION AND BID FOR VALVES AND SLEEVES**

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>90 96</b>
		FIRM NAME (Must be filled in)	

**EXHIBIT "B"**

**"SCHEDULE FOR SUBMISSION  
OF INFORMATION AND BID FOR**

**VALVES AND SLEEVES**

**BID NUMBER: S2Z57540**

1. Bidder to forward QC application materials to the Philadelphia Water Department through registered mail "return receipt" on or before October 4, 2011.

**Philadelphia Water Department  
Materials Engineering Laboratory  
Quality Certification Program  
1500 E. Hunting Park Avenue  
Philadelphia, PA 19124  
Attention: William Roscioli**

2. QC Certification Application results from the Water Department will be available to bidder by November 2, 2011.
3. Bidder to submit list of parts which cannot be delivered within the ninety (90) day time frame specified in para. 1.9.6 and 4.2.4 with the Invitation and Bid , December 6, 2011.
4. Bid opening date: December 6, 2011

**List of bid package contents for Valves and Sleeves:**

1. Application for Certification packages for OC-2, QC-10, OC-11 and QC-12, for bidder's convenience- (exhibits C through F).
2. Invitation and Bid S2Z57740.
3. Exhibit "A" – Bid Bond
4. Exhibit "G" – Water Dept. Specification – Gate Valves.
5. Exhibit "H" – Water Dept. Specification – Butterfly Valves.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>91 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT C**

# **QUALITY CERTIFICATION STANDARD QC-2**



**The City of Philadelphia Water Department  
Bureau of Laboratory Services (BLS)  
Materials Engineering Laboratory (MEL)  
Quality Certification Program**

**QUALITY CERTIFICATION STANDARD QC-2  
FOR GRAY/DUCTILE IRON CASTINGS**

**( REVISION 7/04 )**

# **CONTENTS**

## **INTRODUCTION**

### **Part 1 – GENERAL PROGRAM REQUIREMENTS**

- 1.1 – Application
- 1.2 – Quality Control Plan
- 1.3 – Plant Inspection
- 1.4 – Plant Certification
- 1.5 – Test and Inspection

### **Part 2 – PLANT CERTIFICATION REQUIREMENTS**

- 2.1 – Manufacturer/Foundry Certification
- 2.2 – Materials and Manufacture
- 2.3 – Non-conforming Materials
- 2.4 – Testing Equipment and Instruments
- 2.5 – Documentation

### **Part 3 – PRODUCT CERTIFICATION**

- 3.1 – Heat and Lot Size
- 3.2 – Identification
- 3.3 – Test Bars
- 3.4 – Product Certification Form (79-717)
- 3.5 – Shipping Document

# INTRODUCTION

## SCOPE:

Quality Certification Standard QC-2 establishes the City of Philadelphia Water Department's Quality Certification Program for Gray/Ductile Iron cast products. Manufacturers, Foundries, Suppliers, and Contractors, who sell products directly or indirectly covered by this standard, must adhere to the provisions contained herein.

## PURPOSE:

The purpose of this standard is to assure the Philadelphia Water Department that the Foundries are capable of provide quality products, that adequate quality control and testing procedures are performed and maintained uniformly in the production of gray/ductile iron cast products. PWD reserves the right to perform post-manufacture product testing and evaluation.

## ABBREVIATIONS:

APPLICANT – Foundry, Manufacturer, and or Supplier.  
ASTM – American Society for Testing & Materials  
CITY – City of Philadelphia  
PWD - Philadelphia Water Department  
MEL – Materials Engineering Laboratory  
QCP – Quality Certification Program  
QCS – Quality Certification Standard

## APPLICABLE STANDARDS/DOCUMENTS:

The following standards supplement Contract Plans, Specifications and other requirements.

ASTM A 438 – Test Method for Transverse Testing of Gray Cast Iron.  
ASTM E 8 – Test Method for Tension Testing Metallic Materials.  
ASTM A 536 – Standard Specification for Ductile Iron Castings.  
ASTM A 48 – Standard Specification for Gray Iron Castings.  
ASTM A 370 – Test Methods and Definitions for Mechanical Testing of Steel Products.  
ASTM E 10 – Test Methods for Brinell Hardness of Metals.  
PWD-W14A/19 Standard Specifications for Furnishing STANDARD PRESSURE  
Fire Hydrants  
PWD-W13A/19 Standard Specification for Furnishing HIGH PRESSURE  
Fire Hydrants.

Quality Certification Standard QC-5 for Dry Barrel FIRE HYDRANTS.  
Standard Details and Standard Specifications for Sewers – PWD  
PWD Water Main Standard Details and Corrosion Control Specifications.  
Amendments to Standard Specification and Details for Sewers. – PWD

### **PROCEDURES:**

The Philadelphia Water Department (PWD) maintains a “List of Approved Manufacturers and Foundries. All PWD contractors and vendors are required to limit their procurement of Gray/Ductile Iron Castings to approved foundries and manufacturers. This standard applies to all manufacturers or foundries supplying castings to PWD, either directly or through any other business entity. Suppliers who are not casting manufacturers must present documentation stating that they are an authorized distributor for a certified foundry. Supplier must maintain the authorized distributorship throughout the certification period and the foundry must maintain their certification with PWD. Manufacturers and Foundries interested in becoming certified as a PWD-approved Supplier of gray/ductile iron castings must apply to the PWD Materials Engineering Laboratory Quality Certification Program Section.

APPLICANT(s) must submit in addition to their application, their Quality Control Plan and Testing Procedures, including shop drawings for PWD review. Until all required documents have been submitted and approved by PWD, the application will be considered incomplete. Applicant must consent to the inspection of the manufacturing and foundry facilities as indicated in Part 1 – Program Requirements.

Upon review of the application and following preliminary approval of the required documents, a PWD Quality Certification Program representative will inspect the applicant’s manufacturing, foundry, inspection and testing facilities. The facilities must meet the requirements of Part 2 – Plant Certification Requirements.

Following plant inspection and if approved, the manufacturer/supplier/foundry will be certified and placed on the PWD “LIST OF APPROVED MANUFACTURERS AND FOUNDRIES FOR GRAY/DUCTILE IRON CASTINGS”. An approved manufacturer/supplier/foundry shall deliver product in accordance with the procedures in Part 3 – Product Certification.

PWD has established the Quality Certification Program staff to implement this quality certification standard under the Materials Engineering Laboratory located at:

Philadelphia Water Department  
Central Laboratory Facility  
Materials Engineering Laboratory  
Quality Certification Program  
1500 E. Hunting Park Avenue  
Philadelphia, PA 19124

Tel. No. (215) 685 – 1447  
Fax. No. (215) 743-5594

# **PART 1 – GENERAL PROGRAM REQUIREMENTS**

## **1.1 APPLICATION:**

Manufacturer and/or suppliers must submit a formal application for certification to the Manager of PWD's Materials Engineering Laboratory. The application form (Form 79-716) must be signed by an authorized representative whose signature can legally bind the company to contract. The application must include the company's Quality Control Plan and 3 copies of detailed shop drawings for each of the castings that the Applicant intends to supply to PWD. Additional documents may be required by PWD as needed to judge the ability of the supplier to provide products of acceptable quality. It is assumed that applicants have a satisfactory formal quality control program in place at the time of application. If this is not the case, applicant should anticipate that development of a satisfactory quality control program would require a significant period of time. Applicants should allow sufficient time to make changes to an existing QC plan if required.

Applicants who already have a formal quality control program must submit their application no later than eight (8) weeks prior to the required bid submittal date to allow the QCP staff to inspect the suppliers facilities. Applicants utilizing independent or multiple foundries or suppliers must submit an application package for each manufacturing source. Application submitted within eight (8) weeks will be processed at the sole discretion of PWD. Additional time is required to process remotely located or foreign foundries.

## **1.2 QUALITY CONTROL PLAN:**

The Manufacturer/Supplier must submit for review the plant's current quality control plan. The inspection and test procedures indicated in the quality control plan shall provide assurance that raw materials and final products conform to specification and standard requirements.

## **1.3 QUALIFICATION:**

Manufacturers/Suppliers will be certified only after the QCP Staff determines that the production facilities sampling policies and test methods adhere to the processes and procedures set forth in the applicant's quality control manual.

#### **1.4 PLANT CERTIFICATION:**

Upon satisfactory review of the application and accompanying documents, QCP staff will schedule the inspection of the Applicant's manufacturing and foundry facilities. Inspection consists of a review of the manufacturing process, inspection and testing program, and documentation procedures. **Applicant may be required to supply a product prototype as specified in the contract.** The review and inspection must satisfy the requirements of Part 2 – Plant Certification Requirements.

Upon satisfaction of Part 2 – Plant Certification Requirements, the Applicant will be certified as an approved supplier. A certificate as an approved foundry manufacturer will be issued to the Applicant. This certification will be valid for Two (2) years unless revoked for cause. Previously approved Foundries, Suppliers, and or Manufacturers whose certification has been revoked or expired may not supply gray/ductile iron castings to PWD. Scheduling of subsequent re-certification inspections shall be at the discretion of the Materials Engineering Laboratory.

The Supervisor of the QCP staff must be notified within 30 days of any changes in the Quality Control Manual, manufacturing process, new production facility or a plant re-location. All manufacturing plants are certified individually. New plants and plant re-locations require a new application and certification inspection.

#### **1.5 INSPECTION & TESTING:**

The City reserves the right to inspect all phases of casting and manufacturing processes, and to sample casting components intended for PWD contracts at anytime. PWD will also require testing of these castings by the foundry or manufacturer. Failure of these castings to meet all applicable specifications may result in rejection of the entire lot or shipment at no cost to PWD. The cast samples will be tested for conformance to drawings and specifications. Testing may include visual inspection, dimensional analysis, chemical composition, hardness and tensile strength testing. Repeated failure may result in decertification of the Applicant.

Falsification of documentation or test reports can result in immediate revocation of certification and may place the vendor in default of the contract.

**USE OF THIS STANDARD AND OR INSPECTION BY THE CITY DOES NOT RELIEVE THE MANUFACTURER OR FOUNDRY FROM ITS RESPONSIBILITY TO SUPPLY QUALITY PRODUCTS THAT MEET THE SPECIFICATION REQUIREMENTS.**

## **PART 2 – PLANT CERTIFICATION REQUIREMENTS**

### **2.1 MANUFACTURER/FOUNDRY CERTIFICATION:**

Certification is granted to Applicants with adequate manufacturing facilities and quality control programs for manufacturing and testing of raw materials and manufactured components. The manufacturing facilities must satisfy all of the requirements of QC-2. There must be verification of the satisfactory implementation of the quality control plan through inspection of the processes and testing facilities by the PWD Quality Certification Program staff, before certification is granted.

### **2.2 MATERIALS AND MANUFACTURE:**

Foundry shall maintain effective control of raw materials including steel scrap, iron scrap, alloys, binders, sand, and other such materials utilized in casting of gray/ductile iron products. Control systems shall include inspection and testing of incoming materials and materials certification from other suppliers of materials utilized in the manufacture of PWD components.

Monitoring Systems shall include but not be limited to:

a. Process control Tests;

Liquid temperature determinations or similar methodology shall be employed. Melt adjustment shall be made when deviation from foundry control limits is indicated.

b. Chemical Composition;

Wet chemical or spectro-chemical analyses of the iron shall be performed to verify the effectiveness of the process control and for formal determination of chemical constituents.

c. Grade of Iron;

Foundry shall monitor the grade of iron produced through Tensile and Brinell Hardness Testing of test bars. Bars shall be cast and tested in accordance with applicable standard Specification(s).

Foundry shall maintain an on-site sand testing laboratory. Testing shall include sieve analysis, compressive strength and permeability.

### **2.3 NON-CONFORMING MATERIALS:**

Foundry shall use a suitable method to identify non-conforming castings. The method employed shall be indicated in the Quality Control Plan. Non-conforming castings shall be separated from the general inventory.

The PWD reserves the right to reject and mark as such any non-conforming castings shipped to PWD job-sites.

### **2.4 TESTING EQUIPMENT:**

Testing machines and instruments shall be calibrated at least once per year, and a certificate of calibration shall be in evidence at the testing site. Dimensional testing equipment must be calibrated at least once a year and properly tagged with the current, and due dates of calibration. Calibration verification instruments must also indicate their calibration due dates. Verification procedures used to determine the accuracy and tolerances of Go/No-go gauges used for inspection must be included in the quality control plan. Analytical quality assurance plan for chemical testing which demonstrates precision, accuracy, and sensitivity must also be indicated in the Quality Control Plan.

### **2.5 DOCUMENTATION:**

Manufacturing Records; Inspection and test results shall be properly documented and controlled to provide traceability of manufactured components to melt or production batches and product shipments.

Tensile Tests, Brinell Hardness, Chemical Analysis and Sand Test results shall be retained for a minimum of three (3) years

Product certification documents required in Part 3 of this standard shall be retained on file for five (5) years.

**PWD RESERVES THE RIGHT TO AUDIT ANY RELEVANT DOCUMENTATION.**

## **PART 3 – PRODUCT CERTIFICATION**

### **3.1 HEAT & LOT SIZE:**

For gray iron, Heats shall be divided into Lots. Lot size is defined by the latest revision of ASTM A 48 Standard Specification for Gray Iron Castings, Section 10. For ductile iron, lots shall be defined by ASTM Standard C 536 Standard Specification for Ductile Iron Castings, Section 6.

### **3.2 IDENTIFICATION:**

Foundry shall cast the Foundry Name or trademark, heat number and a lot number on each cast iron casting. Ductile iron markings shall be in accordance with the contract specification.

### **3.3 TEST BARS:**

Two (2) test bars (ASTM A 48 for gray iron or ASTM A 536 for ductile iron) are to be cast from each Lot produced for PWD and must be sent directly to the Materials Engineering Laboratory. The test bars shall have the Heat and Lot identification number along with the letters "PWD" cast in or permanently attached. The foundry shall machine one of the test bars for tensile strength testing in accordance with the applicable test standards.

### **3.4 PRODUCT CERTIFICATION FORM (79-717):**

Product Certification Form (79-717) shall be completed and for each lot produced. The form shall document results of testing performed by the Foundry including:

- a. Brinell Hardness.
- b. Tensile Strength
- c. Chemical Analysis of the Heat (i.e. Carbon, Silicon, Sulfur, & Phosphorous).
- d. Identification of the laboratory performing and submitting the test results.

The Foundry shall deliver a copy of the PRODUCT CERTIFICATION FORM and the two (2) test bars directly to the PWD Materials Engineering Laboratory prior to the shipment of any castings.

### **3.5 SHIPPING DOCUMENT:**

The manufacturer shall submit a SUPPLIER CERTIFICATION DOCUMENT (Form 79-718) to the PWD job-site representative for each shipment of castings delivered. Castings will not be accepted without the completed document. A second copy shall be sent to the Materials Engineering laboratory QCP staff. A third copy shall be retained on the Suppliers file for a period of five (5) years.

**THIS IS THE END OF THE QUALITY CERTIFICATION STANDARD QC-2  
FOR GRAY/DUCTILE IRON CASTINGS**





INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>92 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT D**

# **QUALITY CERTIFICATION STANDARD QC-10**



**Philadelphia Water Department  
Bureau of Laboratory Services (BLS)  
Materials Engineering Laboratory (MEL)  
Quality Certification Program**

**QUALITY CERTIFICATION STANDARD QC-10  
FOR STANDARD PRESSURE GATE VALVES  
(3" – 12") & (16" & LARGER)**

(Revision 7/04)

# **CONTENTS**

## **INTRODUCTION**

## **PROCEDURES**

### **Part 1 – GENERAL PROGRAM REQUIREMENTS**

- 1.1 – Application
- 1.2 – Quality Control Plan
- 1.3 – Plant Certification
- 1.4 – Inspection & Testing

### **Part 2 – PLANT CERTIFICATION REQUIREMENTS**

- 2.1 – Manufacturer/Foundry Plant Certification
- 2.2 – Procurement
- 2.3 – Foundry Process Control
- 2.4 – Testing
- 2.5 – Documentation
- 2.6 - Non-Conforming Material

### **Part 3 – PRODUCT CERTIFICATION**

- 3.1 – Identification
- 3.2 – Product Certification Form
- 3.3 – Shipment Certification Form

# **INTRODUCTION**

## **SCOPE**

Quality Certification Standard QC-10 establishes the City of Philadelphia Water Department's quality assurance program for standard pressure gate valves (3" dia. through 12" dia.) and (16" dia. and larger). Manufacturers, Suppliers, Foundries and Contractors must adhere to the provisions contained in this standard. This certification standard applies to assembled valves as well as individual valve component parts.

## **PURPOSE**

The purpose of this standard is to assure the Philadelphia Water Department that the Manufacturers, Suppliers and Foundries provide products of specified quality and that the necessary quality control and testing procedures are performed and maintained uniformly in the production of standard pressure gate valves (3" dia. through 12" dia.) and (16" dia. and larger). While PWD reserves the right to perform post-manufacture quality testing of products, there are significant operational and economic advantages to controlling product quality in the manufacturing process such as avoiding delivery and/or returning defective products.

## **ABBREVIATIONS**

- APPLICANT – Foundry, Manufacturer, and or Supplier.
- ASTM – American Society for Testing & Materials
- AWWA- American Water Works Association
- CITY – City of Philadelphia
- MEL – Materials Engineering Laboratory
- PWD - Philadelphia Water Department
- QCS – Quality Certification Staff
- QCP - Quality Certification Program

## **APPLICABLE STANDARDS/DOCUMENTS:**

The following standards supplement Contract Plans, Specifications and other requirements.

- ASTM A 126 – Standard Specification for Gray Iron Castings Valves, Flanges, and Pipe Fittings
- ASTM A 438 – Test Method for Transverse Tests of Gray Cast Iron.
- ASTM E 8 – Test Method for Tension of Testing Metallic Materials.
- ASTM A 536 – Standard Specification for Ductile Iron Castings.
- ASTM A 48 – Standard Specification for Gray Iron Castings.
- ASTM A 370 – Test Methods and Definitions for Mechanical Testing of Steel Products.
- ASTM E 10 – Test Methods for Brinell Hardness of Metals.
- AWWA C 500 – Metal-Seated Gate Valves for Water Supply Service
- PWD W-16 – Standard Specifications for Furnishing Standard Pressure Gate Valves

## **PROCEDURES**

The Philadelphia Water Department (PWD) maintains a "List of Approved Suppliers and Manufacturers". **All PWD suppliers are required to limit their procurement of Standard Pressure Gate Valves (3" dia. through 12" dia.) and (16" dia. And larger) to approved manufacturers and suppliers.** Manufacturers and Suppliers must apply for certification in advance to the Materials Engineering Laboratory's Quality Certification Program staff.

In order to be certified the APPLICANT must submit an application package that includes an application form (79-716), a Quality Control Plan and Shop Drawings for PWD review and must also consent to the inspection of the company's manufacturing and foundry facilities as indicated in Part 1 – Program Requirements. All manufacturers must have a formal Quality Control Plan, which adequately addresses all phases of manufacture and must demonstrate full adherence to that quality control plan to QCP inspectors. QCP staff will verify adherence to PWD Quality Certification Program by requesting records, on-site inspections, product inspection, and other means.

Upon review of the application and required documents, a PWD Quality Certification Staff representative will schedule an inspection of the applicant's manufacturing, production and testing facilities. The facilities must meet the requirements of Part 2 – Plant Certification Requirements.

Following the plant certification, if approved, the manufacturer/supplier/foundry will be placed on the PWD "LIST OF APPROVED MANUFACTURERS FOR STANDARD PRESSURE GATE VALVES (3" DIA. TO 12" DIA.) AND (16" DIA. AND LARGER)". An approved manufacturer/supplier/foundry shall deliver in accordance with the procedures in Part 3 – Product Certification.

PWD has established the Quality Certification Program staff to implement this quality certification standard under the Materials Engineering Laboratory is located at:

Philadelphia Water Department  
Central Laboratory Facility  
Materials Engineering Laboratory  
Quality Certification Program  
1500 E. Hunting Park Avenue  
Philadelphia, PA 19124

Tel. No. (215) 685-1447  
Fax. No. (215) 743-559

## **PART 1 – GENERAL PROGRAM REQUIREMENTS**

### **1.1 APPLICATION**

A Manufacturer/Supplier/Foundry must submit a formal application (Form 79-716) for certification as an approved supplier for PWD. The application form must be completed and signed by an authorized representative whose signature can legally bind the company to contract. The application package **must** also include THE COMPANY'S QUALITY CONTROL PLAN and detailed shop drawings of the valve products and components that the APPLICANT intends to supply to PWD. Additional documents may be required as needed to judge the ability of the supplier to provide products of acceptable quality.

ALL APPLICANTS MUST HAVE A SATISFACTORY AND FORMAL QUALITY CONTROL PROGRAM IN PLACE BEFORE THE BID CLOSING DATE. IF THIS IS NOT THE CASE, APPLICANT SHOULD ANTICIPATE THAT THE DEVELOPMENT OF A SATISFACTORY PROGRAM WOULD LIKELY REQUIRE A SIGNIFICANT PERIOD OF TIME.

Applicants who already have a formal quality control plan must submit their application no later than eight (8) weeks prior to the required bid submittal date to allow QCP staff to inspect the suppliers facilities. Applicants utilizing independent or multiple foundries or suppliers must submit an application package for each manufacturing source. Application submitted within eight (8) weeks will be processed at the sole discretion of PWD. Additional time is required to process remotely located facilities or foreign foundries.

### **1.2 QUALITY CONTROL PLAN**

The Manufacturer/Supplier/Foundry must submit for review the plant's current Quality Control Plan. The inspection and test procedures indicated in the Quality Control Plan shall demonstrate and provide assurance that raw materials, components, and final products conform to specification and standard requirements.

### **1.3 PLANT CERTIFICATION**

Upon satisfactory review of the application and accompanying documents, QCP staff will schedule an inspection of the APPLICANT'S manufacturing and production facilities. Inspection consists of a review of the manufacturing process, inspection and testing program, and documentation procedures. Review and inspection must show adherence to the requirements of Part 2 – Plant Certification Requirements. **APPLICANT may be required to supply a product prototype as specified in the contract.** Upon satisfaction of Part 2 – Plant Certification Requirements, certification as an approved supplier/manufacturer/foundry will be issued to the APPLICANT, valid for two (2) years unless revoked for cause.

Approved Manufacturers/Suppliers/Foundries whose certification has been denied, revoked, or expired may not supply for standard pressure gate valves (3" dia. to 12" dia.) and (16" dia. and larger) to PWD. Scheduling of subsequent re-certification inspections shall be at the discretion of the PWD's Materials Engineering Laboratory.

The Supervisor of the Quality Certification Staff must be notified within 30 days of any changes in the Quality Control Manual, manufacturing process, new production facilities or plant relocation. All manufacturing plants are certified individually. New plants and plant relocations require a new application and certification inspection.

#### **1.4 INSPECTION AND TESTING**

The CITY reserves the right to inspect all phases of production and to sample and test valves or components intended for PWD contracts at anytime. The samples will be tested for conformance to drawings and specifications. Testing may include visual inspection, dimensional analysis, chemical composition, hardness and tensile strength testing. Failure of sampled material to meet all applicable specifications will result in rejection. Upon careful consideration and at the discretion of the MEL Vendor Surveillance Staff, repeated failures will result in the de-certification of the manufacturer.

All required records must be available on site at the time of inspection. The QC Manager or other responsible official of the facility must be available at the scheduled time of inspection.

**THE USE OF THIS STANDARD AND OR INSPECTION BY THE CITY DOES NOT RELIEVE THE MANUFACTURER OR SUPPLIER OF THE RESPONSIBILITY TO SUPPLY PRODUCTS THAT MEET SPECIFICATION REQUIREMENTS.**

## **PART 2 – PLANT CERTIFICATION REQUIREMENTS**

### **2.1 MANUFACTURER/SUPPLIER/FOUNDRY PLANT CERTIFICATION**

Certification is granted to APPLICANTS utilizing the proper manufacturing, assembly, testing and foundry facilities. Assembly and testing facilities must pass inspection by the Quality Certification Staff which will verify the satisfactory implementation of the submitted quality control plan, shop drawings, inspection procedures and testing program. QCS inspector shall have access to all areas of manufacture, assembly and testing. For independent or contracted foundries, the plant inspection and quality control plan submittal shall be at the discretion of the QCS.

### **2.2 PROCUREMENT**

Gate valve manufacturers/suppliers must maintain control over the procurement of all valve components through incoming inspection, testing and/or material certifications. Manufacturers/suppliers/foundries quality control systems shall be well documented and provide traceability of completed products and components thereof to testing requirements. Component materials shall conform to the Safe Drinking Water Act as necessary.

### **2.3 FOUNDRY PROCESS CONTROLS**

The Foundry shall maintain effective control of product quality through frequent testing, inspection and documentation of the production process and all materials used in the casting of valve bodies, bonnets and gates.

Foundry shall monitor the grade of cast iron or ductile iron produced through the testing methodology stipulated in the appropriate ASTM standards. Test reports shall be maintained on file for five years and made available to the Quality Certification Staff upon request.

Foundries shall establish control limits and maintain process controls making the necessary adjustments to the melt when testing indicates that control parameters have been exceeded

Foundry shall maintain an on-site laboratory to test foundry sand. Testing shall include sieve analysis, compressive strength, permeability, compactability and clay content as a minimum.

## 2.4 TESTING

The manufacturer shall subject each completed valve (3 in. through 12 in) and (16 in. and Larger) to the operation and hydrostatic testing requirements of AWWA C 500 and PWD Standard Specification W-16. Demonstrations of operation and hydrostatic pressure tests shall be performed at the time of the plant certification inspection and may be required as a condition of qualification for each valve size and type.

**Testing of gate valves 16 inches & larger MUST be witnessed by a Quality Certification Staff inspector unless written permission is given from the Manager of the PWD Materials Engineering Laboratory to proceed without an inspector present. Upon successful completion of required testing, the inspector will tag the valve and release it for shipping. In order to prepare the necessary travel arrangements, suppliers shall contact the QCS at least four (4) weeks prior to final valve assembly and furnish an expected shop testing date.**

Operation Test – Each valve shall be operated in the position for which it will assume in service and for the full length of gate travel in both directions to demonstrate the free and perfect functioning of all parts in the intended manner. Testing shall be performed in accordance with AWWA Standard C 500, Sec. 5.1.1 and PWD Standard Specification W-16, Sec. 16.24.

Hydrostatic Pressure Tests - Each valve shall be tested in accordance with AWWA Standard C 500, Sec. 5.1.2 and PWD Standard Specification W-16, Sec. 16.24.

Tensile Strength Tests - Tensile test bars to verify strength of valve bodies bonnets and gates shall be cast and tested in accordance with ASTM A 126. Test reports shall be made available to the QCS inspector.

## 2.5 DOCUMENTATION

Manufacturer/Supplier/Foundry quality control systems shall be well documented. Records of production, inspection and test results must provide traceability of components and completed products to the required test report, melt, production batch and/or shipment.

## 2.6 NON-CONFORMING MATERIALS

The manufacturer/supplier shall maintain systems to inspect finished products for conformance with specification and testing requirements. The foundry shall utilize a suitable method to identify non-conforming material/castings. The method employed shall be indicated in the Quality Control Plan. Non-conforming material/castings shall be separated from general inventory and clearly marked. PWD reserves the right to reject and mark as such, any non-conforming materials/castings shipped to PWD and its job-sites.

PWD RESERVES THE RIGHT TO AUDIT ANY RELEVANT DOCUMENTATION

## **PART 3 - PRODUCT CERTIFICATION**

### **3.1 IDENTIFICATION**

Identification markings shall be consistent with PWD STANDARD SPECIFICATION W-16 Sec. W-16.22, with the additional requirement that the casting date be integral to the valve body. Additional marking of the completed valve shall be at the discretion of the QCS inspector.

### **3.2 TESTING**

All gate valves must satisfy the testing requirements of Section 2.4 of this Standard. Test results shall be entered on the Product Certification Form.

### **3.3 PRODUCT CERTIFICATION FORM**

A Product Certification Form (79-717) shall be completed for each valve produced (16 inches & Larger). Include required test results. The original copy shall be sent directly to the Quality Certification Staff and a second copy shall remain on file at the manufacturer for a period of five (5) years.

### **3.4 SHIPMENT CERTIFICATION FORMS**

A Shipment Certification Form (79-718) shall be completed for each shipment of valves. The original copy shall be sent directly to the QCS, the second copy shall accompany the products to the job-site or PWD receiving yard and a third copy shall remain on file at the manufacturer for a period of five (5) years. Valves will not be accepted without the completed shipment certification form

THIS IS THE END OF THE QUALITY CERTIFICATION STANDARD QC-10  
FOR STANDARD PRESSURE GATE VALVES  
(3" DIA. THROUGH 12" DIA) AND (16" DIA. AND LARGER)

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>93 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT E**

# **QUALITY CERTIFICATION STANDARD QC-11**



**Philadelphia Water Department  
Bureau of Laboratory Services (BLS)  
Materials Engineering Laboratory (MEL)  
Quality Certification Program**

**QUALITY CERTIFICATION STANDARD QC-11  
FOR STANDARD PRESSURE BUTTERFLY  
VALVES (3" TO 20") & (24" & LARGER)**

**(REVISION 7/04)**

# **CONTENTS**

## **INTRODUCTION**

## **PROCEDURES**

### **Part 1 – GENERAL PROGRAM REQUIREMENTS**

- 1.1 – Application
- 1.2 – Quality Control Plan
- 1.3 – Plant Certification
- 1.4 – Inspection & Testing

### **Part 2 – PLANT CERTIFICATION REQUIREMENTS**

- 2.1 – Manufacturer/Foundry Plant Certification
- 2.2 – Procurement
- 2.3 – Foundry Process Control
- 2.4 – Testing
- 2.5 – Documentation
- 2.6 - Non-Conforming Material

### **Part 3 – PRODUCT CERTIFICATION**

- 3.1 – Identification
- 3.2 – Product Certification Form
- 3.3 – Shipment Certification Form

# **INTRODUCTION**

## **SCOPE**

Quality Certification Standard QC-11 establishes the City of Philadelphia Water Department's quality assurance program for standard pressure butterfly valves (3" dia. through 20" dia.) and (24" dia. and larger). Manufacturers, Suppliers, Foundries and Contractors must adhere to the provisions contained in this standard. This certification standard applies to assembled valves as well as individual valve component parts.

## **PURPOSE**

The purpose of this standard is to assure the Philadelphia Water Department that the Manufacturers, Suppliers and Foundries provide products of specified quality and that the necessary quality control and testing procedures are performed and maintained uniformly in the production of standard pressure butterfly valves (3" dia. through 20" dia.) and (24" dia. and larger). While PWD reserves the right to perform post-manufacture quality testing of products, there are significant operational and economic advantages to controlling product quality in the manufacturing process.

## **ABBREVIATIONS**

APPLICANT – Foundry, Manufacturer, and or Supplier.  
ASTM – American Society for Testing & Materials  
AWWA- American Water Works Association  
CITY – City of Philadelphia  
MEL – Materials Engineering Laboratory  
PWD - Philadelphia Water Department  
QCS – Quality Certification Standard  
QCP - Quality Certification Program

## **APPLICABLE STANDARDS/DOCUMENTS:**

The following standards supplement Contract Plans, Specifications and other requirements.

ASTM A 126 – Standard Specification for Gray Iron Castings Valves, Flanges, and Pipe Fittings  
ASTM A 438 – Test Method for Transverse Tests of Gray Cast Iron.  
ASTM E 8 – Test Method for Tension of Testing Metallic Materials.  
ASTM A 536 – Standard Specification for Ductile Iron Castings.  
ASTM A 48 – Standard Specification for Gray Iron Castings.  
ASTM A 370 – Test Methods and Definitions for Mechanical Testing of Steel Products.  
ASTM E 10 – Test Methods for Brinell Hardness of Metals.  
AWWA C504 – Rubber Seated Butterfly Valves  
PWD BF – Purchase Specification for Standard Pressure Butterfly Valves

## **PROCEDURES**

The Philadelphia Water Department (PWD) maintains a "List of Approved Suppliers and Manufacturers". **All PWD suppliers are required to limit their procurement of Standard Pressure Butterfly Valves (3" dia. through 20" dia.) and (24" dia. & larger) to approved manufacturers and suppliers.** Manufacturers and Suppliers must apply for certification in advance to the Materials Engineering Laboratory's Quality Certification Program staff.

In order to be certified the APPLICANT must submit an application package that includes an application form (79-716), a Quality Control Plan and Shop Drawings for PWD review and must also consent to the inspection of the company's manufacturing and foundry facilities as indicated in Part 1 – Program Requirements. All manufacturers must have a formal Quality Control Plan, which adequately addresses all phases of manufacture and must demonstrate full adherence to that quality control plan to QCP inspectors. QCP staff will verify adherence to PWD Quality Certification Program by requesting records, on-site inspections, product inspection, and other means.

Upon review of the application and required documents, a PWD Quality Certification Staff representative will schedule an inspection of the applicant's manufacturing, production and testing facilities. The facilities must meet the requirements of Part 2 – Plant Certification Requirements.

Following the plant certification, if approved, the manufacturer/supplier/foundry will be placed on the PWD "LIST OF APPROVED MANUFACTURERS FOR STANDARD PRESSURE BUTTERFLY VALVES (3" DIA. TO 20" DIA.) AND (24" DIA. & LARGER)". An approved manufacturer/supplier/foundry shall deliver in accordance with the procedures in Part 3 – Product Certification.

PWD has established the Quality Certification Staff to implement and manage this Standard. The Q.C. Staff is a unit of the Materials Engineering Laboratory located at:

Philadelphia Water Department  
Central Laboratory Facility  
Materials Engineering Laboratory  
Quality Certification Program  
1500 E. Hunting Park Avenue  
Philadelphia, PA 19124

Tel. No. (215) 685-1447  
Fax. No. (215) 743-559

## **PART 1 – GENERAL PROGRAM REQUIREMENTS**

### **1.1 APPLICATION**

A Manufacturer/Supplier/Foundry must submit a formal application (Form 79-716) for certification as an approved supplier for PWD. The application form must be completed and signed by an authorized representative whose signature can legally bind the company to contract. The application package **must** also include THE COMPANY'S QUALITY CONTROL PLAN and detailed shop drawings of the valve products and components that the APPLICANT intends to supply to PWD. Additional documents may be required as needed to judge the ability of the supplier to provide products of acceptable quality.

ALL APPLICANTS MUST HAVE A SATISFACTORY AND FORMAL QUALITY CONTROL PROGRAM IN PLACE BEFORE THE BID CLOSING DATE. IF THIS IS NOT THE CASE, APPLICANT SHOULD ANTICIPATE THAT THE DEVELOPMENT OF A SATISFACTORY PROGRAM WOULD LIKELY REQUIRE A SIGNIFICANT PERIOD OF TIME.

Applicants who already have a formal quality control plan must submit their application no later than eight (8) weeks prior to the required bid submittal date to allow QCP staff to inspect the suppliers facilities. Applicants utilizing independent or multiple foundries or suppliers must submit an application package for each manufacturing source. Application submitted within eight (8) weeks will be processed at the sole discretion of PWD. Additional time is required to process remotely located facilities or foreign foundries.

### **1.2 QUALITY CONTROL PLAN**

The Manufacturer/Supplier/Foundry must submit for review the plant's current Quality Control Plan. The inspection and test procedures indicated in the Quality Control Plan shall demonstrate and provide assurance that raw materials, components, and final products conform to specification and standard requirements.

### **1.3 PLANT CERTIFICATION**

Upon satisfactory review of the application and accompanying documents, QCP staff will schedule an inspection of the APPLICANT'S manufacturing and production facilities. Inspection consists of a review of the manufacturing process, inspection and testing program, and documentation procedures. Review and inspection must show adherence to the requirements of Part 2 – Plant Certification Requirements. **APPLICANT may be required to supply a product prototype as specified in the contract.** Upon satisfaction of Part 2 – Plant Certification Requirements, certification as an approved supplier/manufacturer/foundry will be issued to the APPLICANT, valid for two (2) years unless revoked for cause.

Approved Manufacturers/Suppliers/Foundries whose certification has been denied, revoked, or expired may not supply for standard pressure butterfly valves (3" dia. to 20" dia.) and (24" dia. & larger) to PWD. Scheduling of subsequent re-certification inspections shall be at the discretion of the PWD's Materials Engineering Laboratory.

The Supervisor of the Quality Certification Staff must be notified within 30 days of any changes in the Quality Control Manual, manufacturing process, new production facility or a plant re-location. All manufacturing plants are certified individually. New plants and re-locations require a new application and certification inspection.

#### **1.4 INSPECTION AND TESTING**

The CITY reserves the right to inspect all phases of production, audit records and sample and test valves or components intended for PWD contracts at anytime. The samples will be tested for conformance to drawings and specifications. Testing may include visual inspection, dimensional analysis, chemical composition, hardness and tensile strength testing. Failure of sampled material to meet all applicable specifications will result in rejection. Upon careful consideration and at the discretion of the MEL Vendor Surveillance Staff, repeated failures will result in the de-certification of the manufacturer.

All required records must be available on site at the time of inspection. The QC Manager or other responsible official of the facility must be available at the scheduled time of inspection.

Falsification of documentation or test reports will result in immediate revocation of certification and will cause the vendor to be in default of the contract.

**THE USE OF THIS STANDARD AND OR INSPECTION BY THE CITY DOES NOT RELIEVE THE MANUFACTURER OR SUPPLIER OF THE RESPONSIBILITY TO SUPPLY PRODUCTS THAT MEET SPECIFICATION REQUIREMENTS.**

## **PART 2 – PLANT CERTIFICATION REQUIREMENTS**

### **2.1 MANUFACTURER/SUPPLIER/FOUNDRY PLANT CERTIFICATION**

Certification is granted to APPLICANTS utilizing the proper manufacturing, assembly, testing and foundry facilities. Assembly and testing facilities must pass inspection by the Quality Certification Staff which will verify the satisfactory implementation of the submitted quality control plan, shop drawings, inspection procedures and testing program. QCS inspector shall have access to all areas of manufacture, assembly and testing. For independent or contracted foundries, the plant inspection and quality control plan submittal shall be at the discretion of the QCS.

### **2.2 PROCUREMENT**

Butterfly valve manufacturers/suppliers must maintain control over the procurement of all valve components through incoming inspection, testing and/or material certifications. Manufacturers/suppliers/foundries quality control systems shall be well documented and provide traceability of completed products and components thereof to testing requirements. Component materials shall conform to the Safe Drinking Water Act as necessary.

### **2.3 FOUNDRY PROCESS CONTROLS**

The Foundry shall maintain effective control of product quality through frequent testing, inspection and documentation of the production process and all materials used in the casting of valve bodies, bonnets and gates.

Foundry shall monitor the grade of cast or ductile iron produced through the testing methodology stipulated in the appropriate ASTM standards. Test reports shall be maintained on file for five years and made available to the Quality Certification Staff upon request.

Foundries shall establish control limits and maintain process controls making the necessary adjustments to the melt when testing indicates that control parameters have been exceeded

Foundry shall maintain an on-site laboratory to test foundry sand. Testing shall include sieve analysis, compressive strength, permeability, compactability and clay content as a minimum.

## 2.4 TESTING

The manufacturer shall subject each completed valve (3 in. through 20 in) and (24 in. & Larger) to the testing requirements of AWWA C 504 and PWD Standard Purchase Specification for Butterfly Valves and QC-11. Demonstrations of performance, leakage and hydrostatic pressure tests shall be performed at the time of the plant certification inspection and may be required as a condition of qualification for each valve size and type.

Testing of butterfly valves 24 inches & larger **MUST** be witnessed by a Quality Certification Staff inspector unless written permission is given from the Manager of the PWD Materials Engineering Laboratory to proceed without an inspector present. Upon successful completion of the required testing, the inspector will tag the valve and release it for shipping. In order to prepare the necessary travel arrangements, suppliers shall contact the QCS at least four (4) weeks prior to final valve assembly and furnish an expected shop testing date.

Performance Test – To demonstrate that valve and actuator are workable, each valve shall be shop operated three times from the fully closed position to the fully open position and the reverse under no flow conditions. Testing shall be performed in accordance with AWWA Standard C 504, Sec. 5.2.1 and PWD Purchase Specification for Standard Pressure Butterfly Valves.

Leakage Tests - Each valve shall be tested in accordance with AWWA Standard C 504, Sec. 5.2.2 and PWD Purchase Specification for Standard Pressure Butterfly Valves.

Hydrostatic Tests – Each valve shall be tested in accordance with AWWA Standard C 504, Sec. 5.2.3 and PWD Purchase Specification for Standard Pressure Butterfly Valves.

## 2.5 DOCUMENTATION

Manufacturer/Supplier/Foundry quality control systems shall be well documented. Records of production, inspection and test results must provide traceability of components and completed products to the required test report, melt, production batch and/or shipment.

## 2.6 NON-CONFORMING MATERIALS

The manufacturer/supplier shall maintain systems to inspect finished products for conformance with specification and testing requirements. The foundry shall utilize a suitable method to identify non-conforming material/castings. The method employed shall be indicated in the Quality Control Plan. Non-conforming material/castings shall be separated from general inventory and clearly marked. PWD reserves the right to reject and mark as such, any non-conforming materials/castings shipped to PWD and its job-sites

## **PART 3 - PRODUCT CERTIFICATION**

### **3.1 IDENTIFICATION**

Identification markings shall be consistent with the PWD Purchase Specifications for Standard Pressure Butterfly Valves (mfg. name, cast date, size, working pressure and "PWD" cast or welded on the valve body). Additional marking of the completed valve shall be at the discretion of the QCS inspector.

### **3.2 TESTING**

All butterfly valves must satisfy the testing requirements of Section 2.4 of this Standard.

### **3.3 SHIPMENT CERTIFICATION FORMS**

A Shipment Certification Form (79-718) shall be completed for each shipment of valves 24" & larger. The original copy shall be sent directly to the QCS, the second copy shall accompany the products to the job-site or PWD receiving yard and a third copy shall remain on file at the manufacturer for a period of five (5) years. Valves will not be accepted without the completed shipment certification form

THIS IS THE END OF THE QUALITY CERTIFICATION STANDARD QC-11  
FOR STANDARD PRESSURE BUTTERFLY VALVES  
(3" DIA. THROUGH 20" DIA) AND (24" DIA. AND LARGER)

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>94 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT F**

# **QUALITY CERTIFICATION STANDARD QC-12**



**Philadelphia Water Department  
Bureau of Laboratory Services (BLS)  
Materials Engineering Laboratory (MEL)  
Quality Certification Program**

**QUALITY CERTIFICATION STANDARD QC-12**

**FOR RESILIENT-SEATED GATE VALVES**

**(3" to 12") & (16" to 48")**

# **CONTENTS**

<b>INTRODUCTION</b>	<b>2</b>
<b>PROCEDURES</b>	<b>3</b>
<b>Part 1 – GENERAL PROGRAM REQUIREMENTS</b>	
1.1 – Application	4
1.2 – Quality Control Plan	4
1.3 – Plant Certification	4
1.4 – Inspection & Testing	5
<b>Part 2 – PLANT CERTIFICATION REQUIREMENTS</b>	
2.1 – Manufacturer/Foundry Plant Certification	6
2.2 – Procurement	6
2.3 – Foundry Process Control	6
2.4 – Testing	7
2.5 – Documentation	7
2.6 - Non-Conforming Material	8
<b>Part 3 – PRODUCT CERTIFICATION</b>	
3.1 – Identification	8
3.2 – Product Certification Form	8
3.3 – Shipment Certification Form	8

# **INTRODUCTION**

## **SCOPE**

Quality Certification Standard QC-12 establishes the City of Philadelphia Water Department's quality assurance program for Resilient-Seated Gate Valves. Valves 3" through 12" shall be manufactured in full compliance with ANSI/AWWA C509. Valves 16" through 48" shall be manufactured in full compliance with ANSI/AWWA C515. Manufacturers, Suppliers, Foundries and Contractors must adhere to the provisions contained in this standard. This standard applies to assembled valves and individual valve components.

## **PURPOSE**

The purpose of this standard is to assure the Philadelphia Water Department that the Manufacturers, Suppliers and Foundries provide products of specified quality and that the necessary quality control and testing procedures are performed and maintained uniformly in the production of resilient-seated gate valves. While PWD reserves the right to perform post-manufacture quality testing of products, there are significant operational and economic advantages to controlling product quality in the manufacturing process such as avoiding delivery and/or returning defective products.

## **ABBREVIATIONS**

APPLICANT – Foundry, Manufacturer, and or Supplier.  
ASTM – American Society for Testing & Materials  
AWWA- American Water Works Association  
CITY – City of Philadelphia  
MEL – Materials Engineering Laboratory  
PWD - Philadelphia Water Department  
QCS – Quality Certification Standard  
QCP - Quality Certification Program

## **APPLICABLE STANDARDS/DOCUMENTS:**

The following standards supplement Contract Plans, Specifications and other requirements.

PWD Purchase Specification for Resilient-Seated Gate Valves  
ANSI/AWWA C509 – Resilient-Seated Gate Valves for Water Supply Service  
ANSI/AWWA C515 – Reduced Wall, Resilient-Seated Gate Valves for Water Supply Service  
ASTM A 126 – Standard Specification for Gray Iron Castings Valves, Flanges, and Fittings  
ASTM A 438 – Test Method for Transverse Tests of Gray Cast Iron.  
ASTM E 8 – Test Method for Tension of Testing Metallic Materials.  
ASTM A 536 – Standard Specification for Ductile Iron Castings.  
ASTM A 48 – Standard Specification for Gray Iron Castings.

## **PROCEDURES**

The Philadelphia Water Department (PWD) maintains a "List of Approved Suppliers and Manufacturers". **All PWD suppliers are required to limit their procurement of Resilient-Seated Gate Valves (3" through 12") and (16" through 48") to approved manufacturers and suppliers.** Manufacturers and Suppliers must apply for certification in advance to the Materials Engineering Laboratory's Quality Certification Program staff.

In order to be certified the APPLICANT must submit an application package that includes an application form (79-716), a Quality Control Plan and Shop Drawings for PWD review and must also consent to the inspection of the company's manufacturing and foundry facilities as indicated in Part 1 – Program Requirements. All manufacturers must have a formal Quality Control Plan, which adequately addresses all phases of manufacture and must demonstrate full adherence to that quality control plan to QCP inspectors. QCP staff will verify adherence to PWD Quality Certification Program by requesting records, on-site inspections, product inspection, and other means.

Upon review of the application and required documents, a PWD Quality Certification Staff representative will schedule an inspection of the applicant's manufacturing, production and testing facilities. The facilities must meet the requirements of Part 2 – Plant Certification Requirements.

Following the plant certification, if approved, the manufacturer/supplier/foundry will be placed on the PWD LIST OF APPROVED MANUFACTURERS FOR RESILIENT-SEATED GATE VALVES (3" to 12") AND (16" to 48"). An approved manufacturer/supplier/foundry shall deliver in accordance with the procedures in Part 3 – Product Certification.

PWD has established the Quality Certification Staff to implement this Standard under the management of the Materials Engineering Laboratory.

Philadelphia Water Department  
Central Laboratory Facility  
Materials Engineering Laboratory  
Quality Certification Program  
1500 E. Hunting Park Avenue  
Philadelphia, PA 19124

Tel. No. (215) 685-1447  
Fax. No. (215) 743-5594

## **PART 1 – GENERAL PROGRAM REQUIREMENTS**

### **1.1 APPLICATION**

A Manufacturer/Supplier/Foundry must submit a formal application (Form 79-716) for certification as an approved supplier for PWD. The application form must be completed and signed by an authorized representative whose signature can legally bind the company to contract. The application package **must** also include THE COMPANY'S QUALITY CONTROL PLAN and detailed shop drawings of the valve products and components that the APPLICANT intends to supply to PWD. Additional documents may be required as needed to judge the ability of the supplier to provide products of acceptable quality.

ALL APPLICANTS MUST HAVE A SATISFACTORY AND FORMAL QUALITY CONTROL PROGRAM IN PLACE BEFORE THE BID CLOSING DATE. IF THIS IS NOT THE CASE, APPLICANT SHOULD ANTICIPATE THAT THE DEVELOPMENT OF A SATISFACTORY PROGRAM WOULD LIKELY REQUIRE A SIGNIFICANT PERIOD OF TIME.

Applicants who already have a formal quality control plan must submit their application no later than eight (8) weeks prior to the required bid submittal date to allow QCP staff to inspect the supplier's facilities. Applicants utilizing independent or multiple foundries or suppliers must submit an application package for each manufacturing source. Application submitted within eight (8) weeks will be processed at the sole discretion of PWD. Additional time is required to process remotely located facilities or foreign foundries.

### **1.2 QUALITY CONTROL PLAN**

The Manufacturer/Supplier/Foundry must submit for review the plant's current Quality Control Plan. The inspection and test procedures indicated in the Quality Control Plan shall demonstrate and provide assurance that raw materials, components, and final products conform to specification and standard requirements.

### **1.3 PLANT CERTIFICATION**

Upon satisfactory review of the application and accompanying documents, QCP staff will schedule an inspection of the APPLICANT'S manufacturing and production facilities. Inspection consists of a review of the manufacturing process, inspection and testing program, and documentation procedures. Review and inspection must show adherence to the requirements of Part 2 – Plant Certification Requirements. **APPLICANT may be required to supply a product prototype as specified in the contract.** Upon satisfaction of Part 2 – Plant Certification Requirements, certification as an approved supplier/manufacturer/foundry will be issued to the APPLICANT, valid for two (2) years unless revoked for cause.

Approved Manufacturers/Suppliers/Foundries whose certification has been denied, revoked, or expired may not supply resilient-seated gate valves to PWD. Scheduling of subsequent re-certification inspections shall be at the discretion of the PWD's Materials Engineering Laboratory.

The Materials Engineering Supervisor must be notified within 30 days of any changes in the quality control manual, manufacturing process, new production facilities or a plant re-location. All manufacturing plants are certified individually. New manufacturing plants and plant re-locations require a new application and a certification inspection.

#### **1.4 INSPECTION AND TESTING**

The CITY reserves the right to inspect all phases of production and to sample and test valves or components intended for PWD contracts at anytime. The samples will be tested for conformance to drawings and specifications. Testing may include visual inspection, dimensional analysis, chemical composition, hardness and tensile strength testing. Failure of sampled material to meet all applicable specifications will result in rejection. Upon careful consideration and at the discretion of the Materials Engineering Laboratory, repeated failures will result in the de-certification of the manufacturer.

All required records must be available on site at the time of inspection. The QC Manager or other responsible official of the facility must be available at the scheduled time of inspection.

Falsification of documentation or test reports will result in immediate revocation of certification and will cause the vendor to be in default of the contract.

Production testing of Resilient-Seated Gate Valves 16" through 48" must be witnessed by a Quality Certification Staff inspector prior to shipping.

**THE USE OF THIS STANDARD AND OR INSPECTION BY THE CITY DOES NOT RELIEVE THE MANUFACTURER OR SUPPLIER OF THE RESPONSIBILITY TO SUPPLY PRODUCTS THAT MEET SPECIFICATION REQUIREMENTS.**

## **PART 2 – PLANT CERTIFICATION REQUIREMENTS**

### **2.1 MANUFACTURER/SUPPLIER/FOUNDRY PLANT CERTIFICATION**

Certification is granted to APPLICANTS utilizing the proper manufacturing, assembly, testing and foundry facilities. Assembly and testing facilities must pass inspection by the Quality Certification Staff which will verify the satisfactory implementation of the submitted quality control plan, shop drawings, inspection procedures and testing program. QCS inspector shall have access to all areas of manufacture, assembly and testing. For independent or contracted foundries, the plant inspection and quality control plan submittal shall be at the discretion of the QCS.

### **2.2 PROCUREMENT**

Resilient-Seated gate valve manufacturers/suppliers must maintain control over the procurement of all valve components through incoming inspection, testing and/or material certifications. Manufacturers/suppliers/foundries quality control systems shall be well documented and provide traceability of completed products and components thereof to testing requirements. Component materials shall conform to the Safe Drinking Water Act as necessary.

### **2.3 FOUNDRY PROCESS CONTROLS**

The Foundry shall maintain effective control of product quality through frequent testing, inspection and documentation of the production process and all materials used in the casting of valve bodies, bonnets and gates.

Foundry shall monitor the grade of cast iron or ductile iron produced through the testing methodology stipulated in the appropriate ASTM standards. Test reports shall be maintained on file for five years and made available to the Quality Certification Staff upon request.

Foundries shall establish control limits and maintain process controls making the necessary adjustments to the melt when testing indicates that control parameters have been exceeded

Foundry shall maintain an on-site laboratory to test foundry sand. Testing shall include sieve analysis, compressive strength, permeability, compactability and clay content as a minimum.

## 2.4 TESTING

The manufacturer shall subject each completed valve (3" through 12") and (16" through 48") to the operation and hydrostatic testing requirements of AWWA C509 & C515. Demonstrations of operation and hydrostatic pressure tests shall be performed at the time of the plant certification inspection and may be required as a condition of qualification for each valve size and type.

**Testing of resilient-seated gate valves 16" through 48" MUST be witnessed by a Quality Certification Staff inspector unless written permission is given from the Manager of the PWD Materials Engineering Laboratory to proceed without an inspector present. Upon successful completion of required testing, the inspector will tag the valve and release it for shipping. In order to prepare the necessary travel arrangements, suppliers shall contact the QCS at least four (4) weeks prior to final valve assembly and furnish an expected shop testing date.**

Operation Test – Each valve shall be operated in the position for which it will assume in service and for the full length of gate travel in both directions to demonstrate the free and perfect functioning of all parts in the intended manner. Testing shall be performed in accordance with AWWA C509 (3" - 12") and C515 (16" – 48").

Shell (Hydrostatic) Test - Each valve shall be tested in accordance with AWWA Standard C509 (3" – 12") and C515 (16" – 48"). A hydrostatic test pressure equal to at least twice the rated working pressure of the valve shall be applied to each valve in the open position. Test shall show no leakage through the metal, pressure-containing joints or stem seals.

Seat Test – Each valve shall be tested from each direction at a minimum rated working pressure to prove the sealing ability of the valve from both directions of flow. The test shall show no leakage through the metal, pressure-containing joints or past the seat. Testing shall be performed in accordance with AWWA C509 (3" – 12") and C515 (16" – 48").

Tensile Strength Tests - Tensile test bars to verify strength of valve bodies, bonnets and gates shall be cast and tested in accordance with ASTM A 48 or ASTM A 536. Test reports shall be made available to the QCS inspector.

## 2.5 DOCUMENTATION

Manufacturer/Supplier/Foundry quality control systems shall be well documented. Records of production, inspection and test results must provide traceability of components and completed products to the required test report, melt, production batch and/or shipment. PWD reserves the right to audit any relevant documentation.

**2.6 NON-CONFORMING MATERIALS**

The manufacturer/supplier shall maintain systems to inspect finished products for conformance with specification and testing requirements. The foundry shall utilize a suitable method to identify non-conforming material/castings. The method employed shall be indicated in the Quality Control Plan. Non-conforming material/castings shall be separated from general inventory and clearly marked. PWD reserves the right to reject and mark as such, any non-conforming materials/castings shipped to PWD and its job-sites.

**PART 3 - PRODUCT CERTIFICATION**

**3.1 IDENTIFICATION**

Identification markings shall be consistent with the PWD Purchase Specification for Resilient-Seated Gate Valves Section 10, AWWA C509 (3" – 12") and AWWA C515 (16" - 48').

**3.2 CERTIFICATION**

Resilient-seated gate valves must conform to ANSI/AWWA Standard C509 & C515 and satisfy the testing requirements of Section 2.4 of this Standard. Test results shall be entered on the Product Certification Form.

**3.3 PRODUCT CERTIFICATION FORM**

A Product Certification Form (79-717) shall be completed for all 16" through 48" valve produced. Include required test results. The original copy shall be sent directly to the Quality Certification Staff and a second copy shall remain on file at the manufacturer for a period of three (3) years.

**3.4 SHIPMENT CERTIFICATION FORMS**

A Shipment Certification Form (79-718) shall be completed for each shipment of 16" through 48" valves. The original copy shall be sent directly to the QCS, the second copy shall accompany the products to the job-site or PWD receiving yard. A third copy shall remain on file at the manufacturer for a period of three (3) years. Valves will not be accepted without the completed shipment certification form.

THIS IS THE END OF THE QUALITY CERTIFICATION STANDARD QC-12  
FOR RESILIENT-SEATED GATE VALVES (3" to 12") AND (16" to 48").

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>95 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT G**

# **CITY OF PHILADELPHIA WATER DEPARTMENT PURCHASE SPECIFICATION FOR RESILIENT SEATED GATE VALVES**

**CITY OF PHILADELPHIA**  
**WATER DEPARTMENT**  
**PURCHASE SPECIFICATION**  
**FOR**  
**RESILIENT SEATED GATE VALVES**

<b><u>Subject</u></b>	<b><u>Article</u></b>
Manufacturers' Qualifications	1
Quality Control Measures	2
Bidder Instructions	3
AWWA Standard	4
Operating Conditions	5
Direction of Closing	6
Valve Body	7
Bolts and Nuts	8
Operating Nut	9
Casting Markings	10
Wedging Device	11
Valve Stem	12
Stuffing Box	13
Coatings	14
End Connections	15
Testing	16
Shipping	17
Shop Drawing Review	18

Revisions

**1. Manufacturers' Qualifications:**

The resilient seated gate valves shall be produced by manufacturers of established reputation and experience who shall certify that they have been producing valves of a similar or identical design and size in compliance with similar or identical specifications for a minimum of five years and that their product has proven satisfactory in both performance and service under actual operating conditions at several locations in the Continental USA.

The manufacturer will be required to machine, assemble, and test the valves with his own production force. He shall also be required to establish that he currently has within his own organization, an adequate and experienced engineering staff qualified to analyze and resolve problems which may arise relating to the manufacture, assembly and testing of the valves. Subcontracting or subletting any of the aforementioned portions of the work will not be permitted.

**2. Quality Control Measures:**

In an effort to ensure that the manufacturers' valve designs are in accordance with PWD's specific requirements, that the manufacturing processes are capable of producing a quality product, and that adequate quality control and testing procedures are carried out, the manufacturer will be required to adhere to the provisions contained in PWD's Quality Certification Standard QC -12 for Resilient Seated Gate Valves for Valves 3" to 12" and 16" to 48".

The manufacturer shall also be required to establish that he currently has within his own organization, a competent and adequately staffed operating quality control program responsible for maintaining high standards regarding materials, manufacturing, and testing of work done in his plant.

**3. Bidder Instructions:**

Furnish properly Q.C. certified valves from a current PWD approved source. Notify PWD Q.C. staff of the lead time for these valves so that a Q.C. inspector can be sent to the manufacturers' plant to be present during the construction and testing of the valves. The Department will bear all expenses incurred by the PWD inspector. At least 4 weeks prior to final assembly, the manufacturer shall contact the Department and furnish a detailed work schedule that includes expected shop testing and shipping dates.

Contact:

\*  
→ Edgar Naveira Supervisor, Q.C. Staff  
Philadelphia Water Department  
Materials Engineering  
Central Laboratory Facility  
"O" and Hunting Park Sts.  
(215) 685-1449

**4. AWWA Standard:**

All valves from 3" through 12" shall be manufactured in full compliance with the latest revision of ANSI/AWWA C-509 Standard Specification for Resilient-Seated Gate Valves for Water Supply and as modified herein.

All valves from 16" through 48" shall be manufactured in full compliance with the latest revision of ANSI/AWWA C-515 Standard Specification for Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service and as modified

**5. Operating Conditions:**

All resilient seated gate valves shall be rated for a working pressure of 250 psi.

The valves with gate open shall afford an unobstructed waterway of diameter not less than the full nominal diameter valve. The sealing mechanism shall provide zero leakage at the water working pressure when installed with line of either direction.

**6. Direction of Closing:**

All valves for use in the distribution system shall close by turning wrench nut or hand wheel counter-clockwise. Valves for use in pump stations or treatment plants shall close by turning wrench nut, hand wheel or floor-stand wheel clockwise, unless otherwise called for in the Proposal for Work or noted on the plans. Gate valves shall be manually operated inside screw unless otherwise specified, or outside screw and yoke (when so specified).

**7. Valve Body:**

Furnish valve body, bonnet, and seal plate shall be composed of ASTM 536 Ductile Iron, Grade 65-45-12 or 70-50-05.

For valves 3-inch to 12-inch, the ductile iron thickness requirements shall meet AWWA C-509, Section 4.4. For valves 16-inch to 48-inch, the ductile iron thickness requirements shall meet AWWA C-515, Section 4.4.

**8. Bolts and Nuts**

For body, bonnet, stuffing box, "O" Ring Seal Plate, gear case: bolts, studs and nuts shall be of 304 stainless steel.

**9. Operating Nut:**

The operating nut shall be 2-inch AWWA standard shall be Ductile Iron ASTM 536 Grade 65-45-12 / 70-50-05. The 2" square operating nut shall be attached to the stem by a 304 a stainless steel bolt. This bolt shall not interfere with the valve wrench operation.

**10. Casting Markings:**

Furnish valves with the following information cast into or welded on the valve body's circumference or bonnet: manufacturer's name/initials; year of manufacture; size; rated working pressure and "PWD". The size of the letters for this information shall be at least ½ inch in height and be raised one eighth (1/8 ) inch relief for valves 6" diameter and larger. For valves 3" and 4" in diameter the letter height shall be prorated in order to fit the lettering on the castings as requested. These markings will be readily legible. The manufacturer' name and year of manufacture shall be located at the top of the valve to facilitate retrieval of this information after the valve has been installed.

The valve shall have an arrow cast on the operating nut or hand wheel showing opening direction with the word 'OPEN' in ½ or larger raised letters.

**11. Wedging Device:**

The solid wedge gate shall be of ductile iron or cast iron and shall be fully encapsulated in SBR or EPDM rubber material. The rubber shall be securely bonded tot he gate with the peel strength no less than 75 pounds per inch.

Valves shall be so assembled that the wedging device shall operate freely. The valve gate movement shall be smooth and fully guided throughout travel.

**12. Valve Stem:**

Valve Stem and Stem Nut shall meet the requirements of AWWA C-509-01 with the following exception:

The following stem materials shall be used:

- A. ASTM B98 - UNS- C65500(HO2); C66100 (HO2)
- B. ASTM B763 -UNS C-99500; C-99400

**13. Stuffing Box:**

The valves shall have a stuffing box that is O-Ring sealed. Two O-rings shall be placed above and one O-ring below the stem thrust collar. The upper two rings O-rings shall be field removable with the valve under pressure. The thrust collar area shall be factory lubricated. The thrust collar and its lubrication shall be isolated by the O-rings from the waterway. No outside contamination shall be allowed in through the stuffing box.

**14. Coatings:**

Inside and outside of castings shall be thoroughly clean of sand, oxidation, rust, dust, or any other foreign matter before coating. All cleaning shall be shot blasting only; acids and or brushes are not permitted. The coating surface must meet or exceed the surface requirements of the coating manufacturer.

All ferrous components inside and outside shall be coated with a PWD approved color Fusion Bonded Epoxy (FBE), meeting the requirements of AWWA C550 for epoxy coatings . The dry film thickness shall be between 8 and 14 mils.

**15. End Connections:**

For MJ to MJ valves: Furnish MJ valves with integrally cast mechanical joint ends conforming to AWWA C-110, C-111, and ANSI A-21.11. The retainer glands shall be ductile iron. Furnish approved retainer glands for all mechanical joints. Retainer glands for valves up to 16" shall have a 350 psi rating. Retainer glands for valves 20" and larger shall have a rating of 250 psi.

For Tapping valves: Tapping Valves used in conjunction with Philadelphia Water Department "pressure connections" shall be made in conformance with these standards and as modified herein. Tapping valve bodies shall be flanged on one end to mate with the flange on the tapping sleeve. The other end shall be mechanical joint unless otherwise specified. The tapping valves shall have an inlet flange conforming to ANSI B16.1 Class 125 for attachment to a tapping sleeve. The seat opening shall be at least 3/16" larger than the nominal pipe size to allow for a full size cutter.

**16. Testing:**

Proof of Design Testing shall be done in accordance with AWWA C509 Section 5.1 for valves 3-inch to 12-inch and AWWA C515 Section 5.1 for valves 16-inch to 48-inch.

Production Testing shall be done in accordance with AWWA C509 Section 5.2 for valves 3-inch to 12-inch and AWWA C515 Section 5.2 for valves 16-inch to 48-inch except that the hold time at the test pressure shall not be less than 30 seconds for manual testing and not less than 15 seconds for automatic computer aided testing.

Each valve shall be operated in the position which it will assume in service and for the full length of gate travel in both directions to demonstrate the free and perfect functioning of all parts in the intended manner. Any defects in workmanship shall be corrected and test repeated until satisfactory performance is demonstrated.

The Philadelphia Water Department reserves the right when requested by the PWD inspector to subject the valve body to a Hydro-Static Bulkhead a maximum test pressure. No leakage will be allowed through valve body casting including ends.

Tensile test bars to verify strength of valve bodies, bonnets and gates shall be cast and tested in accordance with ASTM A-536 for ductile iron castings. For gates made from cast iron the tensile test bars shall cast and tested in accordance with ASTM A- 48 for cast iron castings. Test reports shall be made available to the Water Department.

**17. Shipping:**

The valves shall be complete in all respects when shipped. The manufacturer shall use care in preparing them for shipment so that no damage, due to the manufacturer's negligence, will occur in handling or transit. All parts shall be drained of water. The gate shall be placed just off a closed position.

- The valves shall be banded to skids in such a manner as to prevent damage in subsequent handling.
- All uncoated iron machined surfaces shall be coated with a protective slushing compound.
- All valves shall be supplied to the Water Department with caps for each end of the valve. The caps shall be made of rubber, plastic or other synthetic materials. The caps shall prevent vermin and weathering such as rain, snow or sunlight to enter the inside of the valve. The caps shall have a tight fit into the open-ends of the valves and/or fasten tightly to the flange holes.

**18. Shop Drawing Review:**

If the manufacturer has not previously furnished the specified valves he shall submit Shop Drawings to the Water Department for approval prior to the start of assembly. Shop Drawings shall show all dimensions, all types of material used, and shall identify each part of the complete valve assembly. Submit Shop Drawings to:

Michael Lavery  
Manager, Design Branch  
Philadelphia Water Department  
ARAMARK Tower, 2nd Floor  
1101 Market Street  
Philadelphia, PA 19107-2994

After the Shop Drawings have been approved the manufacturer shall furnish three sets of O & M manuals containing the instructions for the operation and maintenance of the valves. The manuals shall clearly indicate the valves to which it applies, including manufacturer, model number, size, serial number, and year of manufacture. Once Shop Drawings have been approved by the Water Department it will not be necessary for the manufacturer to submit drawings on future orders for valves to be used in the City of Philadelphia as long as the valves to be supplied conform to the previously approved Shop Drawings. However, if the manufacturer has modified the design of any portion of the valve assembly he must submit new Shop Drawings which reflect that change.

**REVISIONS:**

REV. #	REV. DATE	APP. BY	REVISION DESCRIPTION
1	10/18/06	F. Mawson	Initial issue date..

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER <b>S2Z57540</b>	PAGE OF <b>96 96</b>
		FIRM NAME (Must be filled in)	

## **EXHIBIT H**

# **CITY OF PHILADELPHIA WATER DEPARTMENT PURCHASE SPECIFICATION FOR STANDARD PRESSURE BUTTERFLY VALVES**

**CITY OF PHILADELPHIA**  
**WATER DEPARTMENT**  
**PURCHASE SPECIFICATIONS**  
**FOR**  
**STANDARD PRESSURE BUTTERFLY VALVE**

<b><u>Subject</u></b>	<b><u>Section</u></b>
Manufacturers' Qualifications	1
Quality Control Measures	2
Bidder Instructions	3
AWWA Standard	4
Operating Conditions	5
Direction of Closing	6
Valve Body	7
Casting Markings	8
MJ Ends	9
Valve Seats	10
Valve Disc	11
Valve Shaft	12
Stuffing Box	13
Valve Operators	14
Worm Gear Operators	14 A
Traveling Nut Operators	14 B
Street Level Over Torque Protector	15
Coatings General	16
Valve Coatings	17
Operator Coatings	18
Exterior Fasteners	19
Testing	20
Shipping	21
Shop Drawing Review	22

Revisions  
Over Torque Protector Detail

**1. Manufacturers' Qualifications:** The butterfly valves shall be produced by manufacturers of established reputation and experience who shall certify that they have been producing valves of a similar or identical design and size in compliance with similar or identical specifications for a minimum of five years (before bid date) and that their product has proven satisfactory in both performance and service under actual operating conditions.

The bidder to whom this purchase contract is awarded, will be required to machine, assemble, and test the valves with his own production force. He shall also be required to establish that he currently has within his own organization, an adequate and experienced engineering staff qualified to analyze and resolve problems which may arise relating to the manufacture, assembly and testing of the valves. Subcontracting or subletting any of the aforementioned portions of the work will not be permitted.

**2. Quality Control Measures:** In an effort to ensure that the manufacturers' valve designs are in accordance with PWD's specific requirements, that the manufacturing processes are capable of producing a quality product, and that adequate quality control and testing procedures are carried out, the bidder to whom this purchase contract is awarded will be required to adhere to the provisions contained in PWD's Quality Certification Standard. The bidder shall also be required to establish that he currently has within his own organization, a competent and adequately staffed operating quality control program responsible for maintaining high standards regarding materials, manufacturing, and testing of work done in his plant.

**3. Bidder Instructions:** Furnish properly Q.C. certified valves from a current PWD approved source. Notify PWD Q.C. staff of the lead time for these valves so that a Q.C. inspector can be sent to the manufacturers' plant to be present during the construction and testing of the valves. The Department will bear all expenses incurred by the PWD inspector. At least 4 weeks prior to final assembly, the manufacturer shall contact the Department and furnish a detailed work schedule including expected shop testing and shipping dates.

Contact:

Edgar Navera Supervisor, Q.C. Staff  
Philadelphia Water Department  
Materials Engineering  
Central Laboratory Facility  
"O" and Hunting Park Sts.  
(215) 685-1448

**4. AWWA Standard:** Butterfly Valves (including operator) shall be in accordance with AWWA C-504, and as stated herein.

**5. Operating Conditions:** Butterfly valves shall be class 150B and shall be suitable for buried service and designed for the following operating conditions with flow in both directions:

Maximum shut off pressure 150 psi  
Maximum velocity for 16" 15 fps  
Maximum velocity for 20" 15 fps  
Maximum velocity for 24" 15 fps  
Maximum velocity for 30" 15 fps  
Maximum velocity for 36" 15 fps  
Maximum velocity for 48" 13 fps

**6. Direction of Closing:** Furnish valves which close when operating nut is turned in a counter-clockwise direction (viewed from above).

**7. Valve Body:** Furnish valves with cast iron valve bodies in accordance with ASTM A-126, Class B.

**8. Casting Markings:** Furnish valves with the following information cast into or welded on the valve body's circumference: manufacturer's name/initials; year of manufacture; size; rated working pressure; and "PWD". The size of the letters for the year for "PWD" and the year of manufacture shall be two (2) inches in height and be raised one eighth (1/8) inch. All other information shall be one (1) inch in height and be raised eighth (1/8) inch. The manufacturer' name and year of manufacture shall be located at the top of the valve to facilitate retrieval of this information after the valve has been installed.

**9. MJ Ends:** Furnish MJ valves with integrally cast mechanical joint ends conforming to AWWA C-110 and ANSI A-21.11. Furnish approved retainer glands for all mechanical joints. Retainer glands for valves up to 16" shall have a 350 psi rating. Retainer glands for valves 20" and larger shall have a rating of 250 psi.

**10. Valve Seats:** Furnish valves with the rubber seats in the body or on the disc. For valves 30" and larger, seats shall be field adjustable and replaceable in accordance with AWWA C-504.

**11. Valve Disc:** Furnish valves with discs made of either cast iron conforming to ASTM A48-Class 40, ductile iron conforming to ASTM A536- grade 65-45-12 or of stainless steel type 316 and which are offset to provide an uninterrupted 360 degree seating edge. Furnish on the circumference of the disc a seating edge of a sturdy design which has proven to be resistant to both wear and corrosion. The seating edge material shall either be stainless steel, type 316 or a material of equal quality. Furnish only stainless steel fasteners to attach the shaft and disc together.

**12. Valve Shaft:** Furnish valves with turned, ground, and polished stainless steel shafts of diameters in accordance with Table 3 of AWWA C-504, Class 150B. Use stainless steel in accordance with ASTM A-276, Type 304. Furnish only stainless steel fasteners to attach the shaft and disc together.

**13. Stuffing Box:** This requirement has been deleted.

**14. Valve Operators:** . Furnish horizontal shaft valves with manual operators, nut operated, for buried service, to close in the direction specified in Paragraph 6. Operators shall conform to the applicable requirements of AWWA C-504 and to the specific requirements stated herein. Operating nut shall be standard AWWA 2 inch square. Furnish operators in a housing which is 90% packed with grease and watertight under pressure to at least 10 psi. The blend of grease shall be tested and appropriate for storage in outdoor temperatures.

Furnish operators with the rated torque capability to seat, unseat, and hold in any intermediate position, without creeping or fluttering, the valve disc it controls under the operating conditions specified. Furnish operators designed for a differential shut-off pressure of 150 psi. All components of the operators must withstand, without damage, an input torque of 300 ft.-lbs. at the operating nut when either in the fully open or closed position.

All fasteners used to secure the operators appurtenances, including spur gears, AWWA stops, and housing covers, and to attach the operator to the valve body shall be type 304 stainless steel. The manufacturer shall indicate a method of assuring the fasteners will not loosen during the shipping process. This method may be through the use of a thread locker or lock washer.

The setting and adjustment of the operator's position limit stops shall be performed by the valve manufacturer.

The operators shall be the traveling nut design or the worm gear design which meets the following applicable specifications. At the time of purchase the Water Department will indicate which arrangement the manufacturer shall furnish.

**A. Worm Gear Operators:** Worm gear operators shall conform to the applicable requirements of AWWA C-504. Furnish operators with a spur gear attachment and AWWA input shaft stops. An adapter plate suitable for buried service shall be furnished, when required, to allow the worm gear operator to be mounted on the manufacturer's valve. This adapter, when required, is considered an important component of the valve assembly and therefore will be subjected to the same review and approval as the other parts of the valves. Attention is directed to Section 22. Shop Drawing Review concerning this matter.

**B. Traveling Nut Operators:** Traveling nut operators shall conform to the applicable requirements of AWWA C-504. Furnish operators of the traveling nut type which are self locking and that have adjustable mechanical stops at both the open and closed position.

**15. Street Level Over Torque Protector:** Furnish valves equipped with an Aunspach valve over torque protector. The Aunspach over torque protector (Model D-86-250) shall disengage automatically if torque in excess of 220 foot-pounds is applied when either opening or closing the valve. It should automatically reset when torque is reduced to pre-set level. The over torque protector shall be configured with a 2 inch AWWA nut at the top for valve key operation, and socket at the bottom to fit over top a 2 inch square AWWA nut. The over torque protector shall have a shaft extension which is configured as shown on the attached drawing. Vendor's design shall be submitted for approval.

The shaft extension shall be type 304 stainless steel with a 2 inch square AWWA operating nut and socket bottom. The shaft's operating nut shall be held in place by a shear pin. The solid stainless steel shear pin shall be 3/16 of an inch in diameter, annealed and cold worked so as to shear at a 250 foot-pounds torque. The shaft's bottom socket shall be field adjustable to allow for field cutting of the shaft length. Furnish shafts in 5 ft. lengths unless otherwise specified.

Furnish a standard PWD 7 inch cast iron valve box to house the over torque protector within the roadway. The valve box shall also extend down around the shaft and set on the valve operator in such a manner so that no foreign matter can collect between the pipe and the shaft.

Over torque protector manufactured by:

Aunspach Controls Company  
1897 McKelvey Hill Drive, Suite 301  
St. Louis, Missouri 63043  
Phone: (314) 576-7587

**16. Coatings General:** The surfaces of iron and carbon steel shall be coated as herein specified or as approved. The surfaces to be coated shall be sand blasted in accordance with the requirements of the Steel Structures Painting Council Surface Preparation Specification No. 10- Near White Blast Cleaning, SSPC-SP10.

There shall be strict adherence to the manufacturer's directions for surface preparation and application of coatings. All coatings must be shop applied at ambient temperature 60 degrees Fahrenheit and above. Coatings shall not be baked but shall be allowed to dry or cure in a controlled environment at temperatures between 60 and 120 degrees Fahrenheit.

The coating film shall not contain any bare spots, blisters, or cracks, and shall be uniformly deposited without runs or sags. The coating shall be worked into angles and crevices formed by joining members.

All coating materials shall be delivered to the manufacturers' shop in original, unbroken and unopened containers plainly marked with name, brand and analysis of the product, and the name of the manufacturer. Maximum storage time of the coating material shall be one year but in no case shall old or outdated material be used on the work. Should any coating be damaged or found unsatisfactory, such coating shall be removed to the extent directed and the affected surface again be prepared, recoated and retested.

**17. Valve Coatings:**

**17.1 Exterior Surfaces:** Coat exterior surfaces with an approved asphalt varnish conforming to Federal Spec. TT-V-15C and in accordance with AWWA C-504. Non-machined surfaces shall be coated to a thickness of 16 mils. Apply as many coats of the manufacturers' suggested coating thickness to achieve the specified thickness.

**17.2 Interior Surfaces:** Coat all interior surfaces of the valves except for stainless steel surfaces, with epoxy that resists corrosion, bacterial attack, and blistering. Use an approved epoxy coating which meets NSF Standard 61 and which is in accordance with AWWA D102. Apply one smooth coat to machined surfaces, spot faces, and bolt holes. Non-machined surfaces shall be coated to a dry film thickness of 16 mils. Apply as many coats of the manufacturers' suggested coating thickness to achieve this specified thickness.

After curing, the interior coating shall not be easily chipped or peeled by penetration with a knife point and the supplier shall touch up all spots damaged by such knife point tests.

The completed interior coating shall be given an electrical flaw detection test in accordance with the recommendations of the manufacturer of the coatings as approved by and under the direction of the Engineer. All damaged or unsatisfactory areas shall be repaired and retested until they are approved.

**18. Operator Coatings:**

**18.1 General:** Coating of assembled valve operators will not be permitted. The supplier shall furnish a coating procedure for each component. The intent of this coating procedure is to provide for disassembly of the equipment without the cracking and breaking away of paint that has bridged and sealed the mating parts.

The following applicable individual components of each operator shall be coated and cured prior to assembly:

- 1-Housings
- 2-Housing Covers
- 3-Housings for AWWA Stops
- 4-Housing Covers for AWWA Stops
- 5-Housing for Spur Gear Attachment
- 6-Any other external mating parts

**18.2 Exterior Surfaces:** The operator's exterior shall be coated with an approved asphalt varnish conforming to Federal Spec. TT-V-15C and in accordance with AWWA C-504. Non-machined exterior surfaces shall be coated to a thickness of 16 mils. Apply as many coats of the manufacturers' suggested coating thickness to achieve the specified thickness.

**18.3 Interior Surfaces:** The interior surfaces of the housings for all components of the operator shall be coated with one of the following processes.

1. Glyptal Series 1201 Red Enamel with a dry film thickness of 3 mils.
2. An epoxy coating which meets NSF Standard 61 and which is in accordance with AWWA D102. Apply one smooth coat to machined surfaces, spot faces, and bolt holes. Non-machined surfaces shall be coated to a dry film thickness of 16 mils. The epoxy coating shall be given an electric flaw detection test in accordance with the coating manufacturers recommendation as approved by the Engineer.

For either process, apply as many coats of the manufacturers' suggested coating thickness to achieve the specified thickness.

**A. Worm Gear Operators:** Furnish worm gear operators with Glyptal Series 1201 Red Enamel interior coating or equal.

**B. Traveling Nut Operators:** Furnish traveling nut operators with epoxy interior coating.

**19. Exterior Fasteners:** Furnish valves with stainless steel, type 304, exterior fasteners on the valve body and the operator.

**20. Testing:** Furnish valves tested in accordance with Sections 5.2, of the Rubber-Seated Butterfly Valves, ANSI/AWWA Standard C504 (most recent revision), *PWD's Quality Certification Standard SIP 93\02 for butterfly valves (24 Inch and Larger Diameter)*, and the requirements of the following paragraphs. Certified copies of proof of design tests performed on prototype valves of the type specified, as described in AWWA C504 Section 5.2.4, shall be furnished to the Engineer.

After assembly, the valves shall be tested with air pressure for bubble tightness at 150 psi differential across a closed disc. Two such tests shall be made for each valve, one with the air pressure on the upstream side of the disc and the second with the air pressure on the downstream side of the disc. Bubble tightness is required in both directions. Duration of all tests shall be not less than ten minutes.

As an alternative to the air pressure test, the valve may be given a 150 psi hydrostatic leakage test. Two such tests shall also be made, one with hydrostatic pressure on the upstream side of the disc and the second with the hydrostatic pressure on the downstream side of the disc. During this test, the valve shall be droptight. Duration of each test shall not be less than ten minutes.

With the disc in the open position, the valve body shall subjected to a 300 psi hydrostatic test for a duration of fifteen minutes. During this test, there shall be no leakage through the metal, the end joints, or the shaft seal, nor shall any part be permanently deformed.

The valves shall be shop adjusted to insure proper operation. The operator shall be installed on the valve prior to the shop adjustment.

**21. Shipping:** The valves shall be complete in all respects when shipped. The manufacturer shall use care in preparing them for shipment so that no damage, due to the manufacturer's negligence, will occur in handling or transit. All parts shall be drained of water. The disc shall be placed just off a closed position.

The valves shall be banded to skids in such a manner as to prevent damage in subsequent handling. All unpainted steel and iron machined surfaces shall be coated with a protective slushing compound.

Fullface flange protectors of waterproof plywood or weather resistant pressboard, of at least the diameter of the flange OD, shall be fastened to each flange to protect both it and the valve interior.

**22. Shop Drawing Review:** If the manufacturer has not previously furnished the specified valves he shall submit Shop Drawings to the Water Department for approval prior to the start of assembly. Shop Drawings shall show all dimensions, all types of material used, and shall identify each part of the complete valve assembly. Submit Shop Drawings to:

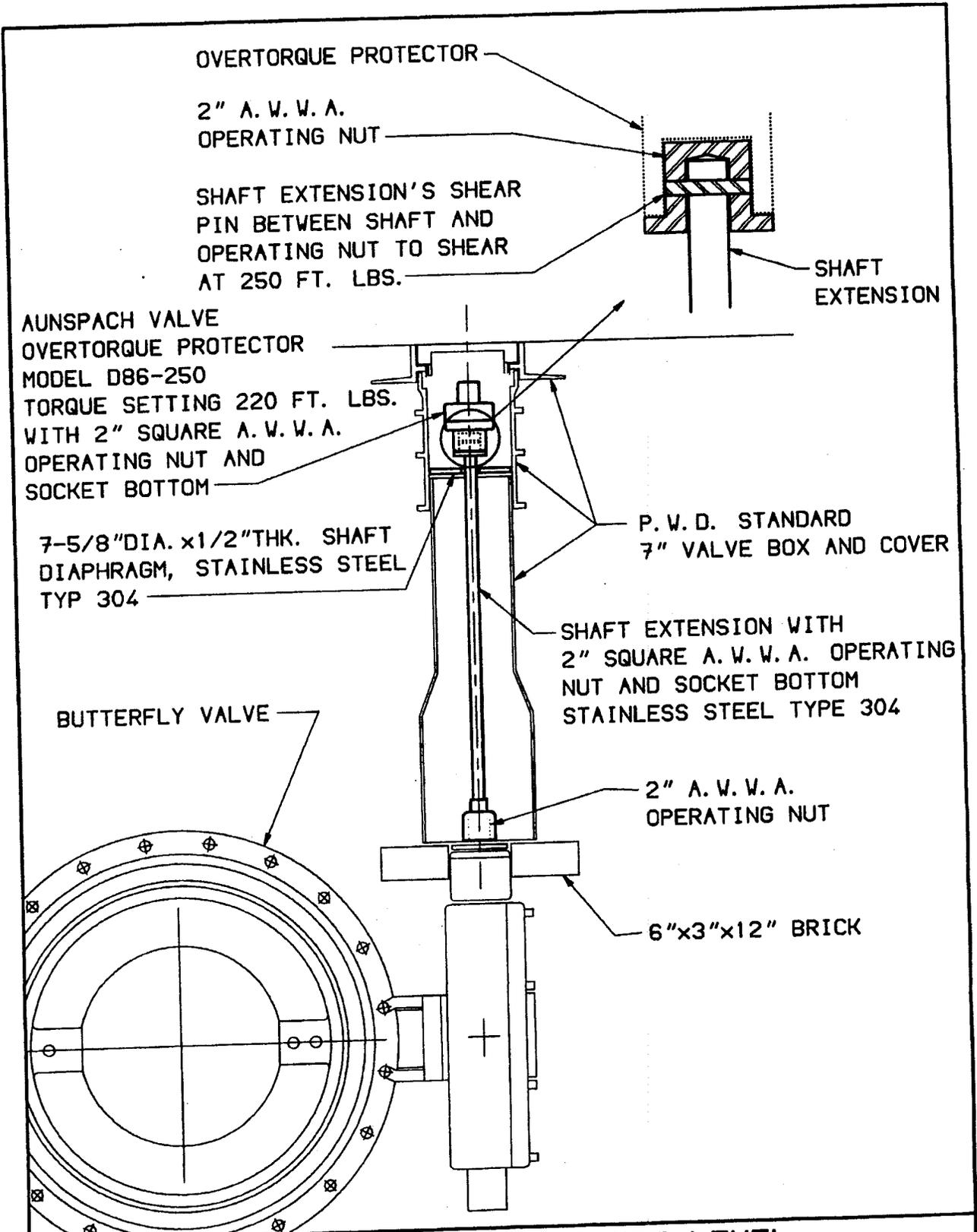
Michael Lavery,  
 Manager, Design Branch  
 Philadelphia Water Department  
 ARAMARK Tower, 2nd Floor  
 1101 Market Street  
 Philadelphia, PA 19107-2994

After the Shop Drawings have been approved the manufacturer shall furnish three sets of O & M manuals containing the instructions for the operation and maintenance of the valves. The manuals shall clearly indicate the valves to which it applies, including manufacturer, model number, size, serial number, and year of manufacture. Once Shop Drawings have been approved by the Water Department it will not be necessary for the manufacturer to submit drawings on future orders for valves to be used in the City of Philadelphia as long as the valves to be supplied conform to the previously approved Shop Drawings. However, if the manufacturer has modified the design of any portion of the valve assembly he must submit new Shop Drawings which reflect that change.

With the incorporation of worm gear operators into this specification, manufacturers who have approved shop drawings for valves supplied to the City in the past will be required to submit only those drawings which detail the operator assembly and the adapter when such an arrangement is specified.

**REVISIONS:**

REV. #	REV. DATE	APP. BY	REVISION DESCRIPTION
1	3/12/93	M. Lavery	Initial issue date..
2	4/12/93	M. Lavery	Section 16 and 18: Added more details on coating requirements.
3	8/30/93	M. Lavery	Section 5: Decreased maximum velocity for 48" from 15 fps to 13 fps Section 14: Added requirements for standardized valve operation. Section 15: Replaced position indicator with over torque protector.
4	12/20/94	M. Lavery	Section 8: Added size & location requirements for casting markings. Section 13: Stuffing Box Section deleted from Specification. Section 14: Added worm gear operator. Section 17 and 18: Revised coating requirements and its testing. Section 20: Modified 300 psi hydrostatic test requirement. It is now to be performed after valve is fully assembled. Section 22: Added section for Shop Drawing Review
5	1/27/98	M. Lavery	Section 14: Added requirements for blend of grease and manufacturer to assure fasteners will not loosen during shipping.
6	12/15/98	M. Lavery	Section 9: Added requirements for retainer glands to be supplied for mechanical joint ends on each valve.
7	9/5/2000	M. Lavery	Section 10: Added option to provide rubber seats on the disc as well as in the body.
8	6/29/2007	F. Mawson	Section 14: Removed requirements for HBC Limatorque worm gear operator. Removed requirements for specified number of turns for worm gear and traveling nut operators.



OVERTORQUE PROTECTOR

2" A. W. W. A.  
OPERATING NUT

SHAFT EXTENSION'S SHEAR  
PIN BETWEEN SHAFT AND  
OPERATING NUT TO SHEAR  
AT 250 FT. LBS.

SHAFT  
EXTENSION

AUNSPACH VALVE  
OVERTORQUE PROTECTOR  
MODEL D86-250  
TORQUE SETTING 220 FT. LBS.  
WITH 2" SQUARE A. W. W. A.  
OPERATING NUT AND  
SOCKET BOTTOM

7-5/8" DIA. x 1/2" THK. SHAFT  
DIAPHRAGM, STAINLESS STEEL  
TYP 304

P. W. D. STANDARD  
7" VALVE BOX AND COVER

SHAFT EXTENSION WITH  
2" SQUARE A. W. W. A. OPERATING  
NUT AND SOCKET BOTTOM  
STAINLESS STEEL TYPE 304

BUTTERFLY VALVE

2" A. W. W. A.  
OPERATING NUT

6"x3"x12" BRICK

**STREET LEVEL  
OVERTORQUE PROTECTOR**



DRAWN BY: T. KAUFMANN  
CHECKED BY: M. LAVERY

DATE: 8-93  
PAGE NO. 1 of 1

**CITY OF PHILADELPHIA  
PROCUREMENT DEPARTMENT  
STANDARDS DIVISION**

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**SPECIFICATION**

No. 32-V-3:07  
Effective Date: 3/07/2007  
Supercedes 32-V-3:99



**WATER DEPARTMENT PURCHASE SPECIFICATIONS  
FOR  
STANDARD PRESSURE BUTTERFLY VALVES**

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<b><u>SUBJECT</u></b>	<b><u>SECTION</u></b>
Manufacturers' Qualifications	1
Quality Control Measures	2
Bidder Instructions	3
AWWA Standard	4
Operating Conditions	5
Direction of Closing	6
Valve Body	7
Casting Markings	8
MJ Ends	9
Valve Seats	10
Valve Disc	11
Valve Shaft	12
Stuffing Box	13
Valve Operators	14
Worm Gear Operators	14A
Traveling Nut Operators	14B
Street Level Over Torque Protector	15
Coatings General	16
Valve Coatings	17
Operator Coatings	18
Exterior Fasteners	19
Testing	20
Shipping	21
Shop Drawing Review	22
Revisions	
Over Torque Protector Detail	

1. **Manufacturers' Qualifications:** The butterfly valves shall be produced by manufacturers of established reputation and experience who shall certify that they have been producing valves of similar or identical design and size in compliance with similar or identical specifications for a minimum of five years (before bid date) and that their product has proven satisfactory in both performance and service under actual operating conditions.

The bidder to whom this purchase contract is awarded, will be required to machine, assemble, and test the valves with his own production force. He shall also be required to establish that he currently has within his own organization, an adequate and experienced engineering staff qualified to analyze and resolve problems which may arise relating to the manufacture, assembly and testing of the valves. Subcontracting or subletting any of the aforementioned portions of the work will not be permitted.

2. **Qualify Control Measures:** In an effort to ensure that the manufacturers' valve designs are in accordance with PWD's specific requirements, that the manufacturing processes are capable of producing a quality product, and that adequate quality control and testing procedures are carried out, the bidder to whom this purchase contract is awarded will be required to adhere to the provisions contained in PWD's Qualify Certification Standard. The bidder shall also be required to establish that he currently has within his own organization, a competent and adequately staffed operating quality control program responsible for maintaining high standards regarding materials, manufacturing, and testing of work done in his plant.

3. **Bidder Instructions:** Furnish properly Q.C. certified valves from a current PWD approved source. Notify PWD Q.C. staff of the lead time for these valves so that a Q.C. inspector can be sent to the manufacturers' plant to be present during the construction and testing of the valves. The Department will bear all expenses incurred by the PWD inspector. At least 4 weeks prior to final assembly, the manufacturer shall contact the Department and furnish a detailed work schedule that includes expected shop testing and shipping dates.

Contact:  
William Roscioli, Supervisor, Q.C. Staff  
Philadelphia Water Department  
Materials Engineering  
Central Laboratory Facility  
"O" and Hunting Park Sts.  
(215) 685-1449

4. **AWWA Standard:** Butterfly Valves (including operator) shall be in accordance with AWWA C-504, and as modified herein.
5. **Operating Conditions:** Butterfly valves shall be class 150B and shall be suitable for buried service and designed for the following operating conditions with flow in both directions:
  - Maximum shut off pressure 150 psi
  - Maximum velocity for 16" 15 fps
  - Maximum velocity for 20" 15 fps
  - Maximum velocity for 24" 15 fps
  - Maximum velocity for 30" 15 fps
  - Maximum velocity for 36" 15 fps
  - Maximum velocity for 48" 13 fps
6. **Directions of Closing:** Furnish valves which close when operating nut is turned in a counter-clockwise direction (viewed from above).
7. **Direction of Closing:** Furnish valves with cast iron valve bodies in accordance with ASTM A-126, Class B.
8. **Casting Markings:** Furnish valves with the following information cast into or welded on the valve body's circumference: manufacturer's name/initials; years of manufacture; size; rated working pressure; and "PWD". The size of the letters for the year for "PWD" and the year of manufacture shall be two (2) inches in height and be raised one eighth (1/8) inch. All other information shall be one (1) inch in height and be raised eighth (1/8) inch. The manufacturer's name and year of manufacture shall be located at the top of the valve to facilitate retrieval of this information after the valve has been installed.
9. **MJ Ends:** Furnish MJ valves with integrally cast mechanical joint ends conforming to AWWA C-110 and ANSI A-21.11. Furnish approved retainer glands for all mechanical joints. Retainer glands for valves up to 16" shall have a 350 psi rating. Retainer glands for valves 20" and larger shall have a rating of 250 psi.
10. **Valve Seats:** Furnish valves with the rubber seats in the body or on the disc. For valves 30" and larger, seats shall be field adjusted and replaceable in accordance with AWWA C-504.

11. **Valve Disc:** Furnish valves with discs made of either cast iron conforming to ASTM A48-Class 40, ductile iron conforming to ASTM A536-grade65-45-12 or of stainless steel type 316 and which are offset to provide an uninterrupted 360 degree seating edge. Furnish on the circumference of the disc, a seating edge of a sturdy design which has been proven to be resistant to both wear and corrosion. The seating edge material shall either be stainless steel, type 316 or a material of equal quality. Furnish only stainless steel fasteners to attach the shaft and disc together.
12. **Valve Shaft:** Furnish valves with turned, ground, and polished stainless steel shafts of diameters in accordance with Table 3 of AWWA C-504, Class 150B. Use stainless steel in accordance with ASTM A-276, Type 304. Furnish only stainless steel fasteners to attach the shaft and disc together.
13. **Stuffing Box:** This requirement has been deleted.
14. **Valve Operators:** Furnish horizontal shaft valves with manual operators, nut operated, for buried service, to close in the direction specified in Paragraph 6. Operators shall conform to the applicable requirements of AWWA C-504 and to the specific requirements stated herein. Operating nut shall be standard AWWA 2 inch square. Furnish operators in a housing which is 90% packed with grease and watertight under pressure to at least 10 psi. The blend of grease shall be tested and appropriate for storage in outdoor temperatures.

Furnish operators with the rated torque capability to seat, unseat, and hold in any intermediate position, without creeping or fluttering, the valve disc it controls under the operating conditions specified. Furnish operators designed for a differential shut-off pressure of 150 psi. All components of the operator must withstand, without damage, an input torque of 300 ft.-lbs. At the operating nut when either in the fully open or closed position.

All fasteners used to secure the operator's appurtenances, including spur gears, AWWA stops, and housing covers, and to attach the operator to the valve body shall be type 304 stainless steel. The manufacturer shall indicate a method of assuring the fasteners will not loosen during the shipping process. This method may be through the use of a thread locker or lock washer.

The setting and adjustment of the operator's position limit stops shall be performed by the valve manufacturer.

**Specification**  
**NO. 32-V-3:07**  
**Effective Date: 3/07/2007**

The operator shall be the traveling nut design or the worm gear design which meets the following applicable specifications. At the time of purchase, the Water Department will indicate which arrangement the manufacturer shall furnish.

- A. Worm Gear Operators:** Worm gear operators shall be H-BC manual operators manufactured by Limatorque Corporation, Lynchburg, VA. Furnish operators with a spur gear attachment and AWWA input shaft stops. Valves shall be furnished with the unit size, spur gear ratio, and number of turns specified herein:

	OPERATOR UNIT	SPUR GEAR RATIO	NUMBER OF TURNS
16" & 20"	H1BC	2.86:1	50
24" & 30"	H3BC	2.86:1	50
36"	H4BC	12.0:1	180
48"	H5BC	12.0:1	195

An adapter plate suitable for buried service shall be furnished to allow the worm gear operator to be mounted on the manufacturer's valve. This adapter is considered an important component of the valve assembly and therefore will be subjected to the same review and approval as the other parts of the valves. Attention is directed to Section 22. Shop Drawing Review concerning this matter.

- B. Traveling Nut Operators:** Furnish operator of the traveling nut type which are self locking and that have adjustable mechanical stops at both the open and closed position. Furnish valves with manual operators that have a total number of input turns within five turns of that specified in this document (See Chart). Furnish operators with the specified valve operation for the first five degrees that the valve disc is opened from its seat so that there can be the identical valve operation for the reloading of the same size water main.

**TRAVELING NUT OPERATION: STANDARDIZED INPUT TURNS VS. VALVE  
 ANGLE FOR 0° - 5°**

<b>SIZE (INCH)</b>	<b>INPUT TURN (#)</b>	<b>ANGLE OF DISC OUT OF SEAT (degrees)</b>	<b>NUMBER OF TOTAL TURNS (+/-5)</b>
<b>16</b>	<b>1</b>	<b>0.8+/-</b>	<b>28</b>
	<b>2</b>	<b>1</b>	
	<b>3</b>	<b>3</b>	
	<b>4</b>	<b>4.5</b>	
	<b>5</b>	<b>6.5</b>	
	<b>6</b>	<b>8.5</b>	
	<b>7</b>	<b>11</b>	
<b>18 &amp; 20</b>	<b>1</b>	<b>0.2+/-</b>	<b>40</b>
	<b>2</b>	<b>0.3+/-</b>	
	<b>3</b>	<b>0.7+/-</b>	
	<b>4</b>	<b>1</b>	
	<b>5</b>	<b>2</b>	
	<b>6</b>	<b>3</b>	
	<b>7</b>	<b>4</b>	
	<b>8</b>	<b>5</b>	
<b>24 &amp; 30</b>	<b>1</b>	<b>0.1+/-</b>	<b>44</b>
	<b>2</b>	<b>0.3+/-</b>	
	<b>3</b>	<b>0.5+/-</b>	
	<b>4</b>	<b>1</b>	
	<b>5</b>	<b>1.5</b>	
	<b>6</b>	<b>2</b>	
	<b>7</b>	<b>3</b>	
	<b>8</b>	<b>4</b>	
	<b>9</b>	<b>5</b>	

**TRAVELING NUT OPERATION: STANDARDIZED INPUT TURNS VS. VALVE ANGLE FOR 0° - 5°**

<b>SIZE (INCH)</b>	<b>INPUT TURN (#)</b>	<b>ANGLE OF DISC OUT OF SEAT (degrees)</b>	<b>NUMBER OF TOTAL TURNS (+/-5)</b>
<b>36</b>	<b>1</b>	<b>0.4+/-</b>	<b>136</b>
	<b>3</b>	<b>1</b>	
	<b>6</b>	<b>2</b>	
	<b>8</b>	<b>3</b>	
	<b>10</b>	<b>4</b>	
	<b>13</b>	<b>5</b>	
<b>42 &amp; 48</b>	<b>1</b>	<b>0.3+/-</b>	<b>215</b>
	<b>5</b>	<b>1</b>	
	<b>9</b>	<b>2</b>	
	<b>13</b>	<b>3</b>	
	<b>17</b>	<b>4</b>	
	<b>20</b>	<b>5</b>	

- 15. Street Level Over Torque Protector:** Furnish valves equipped with an Aunspach valve over torque protector. The Aunspach over torque protector (Model D-86-250) shall disengage automatically if torque in excess of 220 foot-pounds is applied when either opening or closing the valve. It should automatically reset when torque is reduced to pre-set level. The over torque protector shall be configured with a 2 inch AWWA nut at the top for valve key operation, and socket at the bottom to fit over top a 2 inch square AWWA nut. The over torque protector shall have a shaft extension which is configured as shown on the attached drawing. Vendor's design shall be submitted for approval.

The shaft extension shall be type 304 stainless steel with a 2 inch square AWWA operating nut and socket bottom. The shaft's operating nut shall be held in place by a shear pin. The solid stainless steel shear pin shall be 3/16 of an inch in diameter, annealed and cold worked so as to shear at a 250 foot-pounds torque. The shaft's bottom socket shall be field adjustable to allow for field cutting of the shaft length. Furnish shafts lengths unless otherwise specified.

Furnish a standard PWD 7 inch cast iron valve box to house the over torque protector within the roadway. The valve box shall also extend down around the shaft and set on the valve operator in such a manner so that no foreign matter can collect between the pipe and the shaft.

Over torque protector manufactured by:

Aunspach Controls Company  
1897 McKelvey Hill Drive, Suite 301  
St. Louis, Missouri 63043  
Phone (314) 576-7587

- 16. Coatings General:** The surfaces of iron and carbon steel shall be coated as herein specified or as approved. The surfaces to be coated shall be sand blasted in accordance with the requirements of the Steel Structures Painting Council Surface Preparation Specification No. 10-Near White Blast Cleaning, SSPC-SP10.

There shall be strict adherence to the manufacturer's directions for surface preparation and application of coatings. All coatings must be shop applied at ambient temperature 60 degrees Fahrenheit and above. Coatings shall not be baked but shall be allowed to dry or cure in a controlled environment at temperatures between 60 and 120 degrees Fahrenheit.

The Coating film shall not contain any bare spots, blisters, or cracks, and shall be uniformly deposited without runs or sags. The coating shall be worked into angles and crevices formed by joining members.

All coating materials shall be delivered to the manufacturer's shop in original, unbroken and unopened containers plainly marked with name, brand and analysis of the product, and the name of the manufacturer. Maximum storage time of the coating material shall be one year but in no case shall old or outdated material be used on the work. Should any coating be damaged or found unsatisfactory, such coating shall be removed to the extent directed and the affected surface again be prepared, recoated and retested.

**17. Valve Coatings:**

**17.1 Exterior Surfaces:** Coat exterior surfaces with an approved asphalt varnish conforming to Federal Spec. TT-V-15C and in accordance with AWWA C-504. Non-machined surfaces shall be coated to a thickness of 16 mils. Apply as many coats of the manufacturers' suggested coating thickness to achieve the specified thickness.

**17.2 Interior Surfaces:** Coat all interior surfaces of the valves except for stainless steel surfaces, with epoxy that resists corrosion, bacterial attack, and blistering. Use an approved epoxy coating which meets NSF Standard 61 and which is in accordance with AWWA D102. Apply one smooth coat to machined surfaces, spot faces, and bolt holes. Non-machined surfaces shall be coated to a dry film thickness of 16 mils. Apply as many coats of the manufacturers' suggested coating thickness to achieve this specified thickness.

After curing, the interior coating shall not be easily chipped or peeled by penetration with a knife point and the supplier shall touch up all spots damaged by such knife point tests.

The completed interior coating shall be given an electrical flaw detection test in accordance with the recommendations of the manufacturer of the coatings as approved by and under the direction of the Engineer. All damaged or unsatisfactory areas shall be repaired and retested until they are approved

**18. Operator Coatings:**

**18.1 General:** Coating of assembled valve operators will not be permitted. The supplier shall furnish a coating procedure for each component. The intent of this coating procedure is to provide for disassembly of the equipment without the cracking and breaking away of paint that has bridged and sealed the mating parts.

The following applicable individual components of each operator shall be coated and cured prior to assembly:

- 1-Housings
- 2-Housings Covers
- 3-Housings for AWWA Stops
- 4-Housing Covers for AWWA Stops
- 5-Housing for Spur Gear Attachment
- 6-Any other external mating parts

**18.2 Exterior Surfaces:** The operator's exterior shall be coated with an approved asphalt varnish conforming to Federal Spec. TT-V-15C and in accordance with AWWA C-504. Non-machined exterior surfaces shall be coated to a thickness of 16 mils. Apply as many coats of the manufacturers' suggested coating thickness to achieve the specified thickness.

**18.3 Interior Surfaces:** The interior surfaces of the housings for all components of the operator shall be coated with one the following processes.

1. Glyptal Series 1201 Red Enamel with a dry film thickness of 3 mils.
2. An epoxy coating which meets NSF Standard 61 and which is in accordance with AWWA D102. Apply one smooth coat to machined surfaces, spot faces, and bolt holes. Non-machined surfaces shall be coated to a dry film thickness of 16 mils. The epoxy coating shall be given an electric flaw detection test in accordance with the coating manufacturers recommendation as approved by the Engineer.

For either process, apply as many coats of the manufacturers' suggested coating thickness to achieve the specified thickness.

- A. Worm Gear Operators:** Furnish worm gear operators with Glyptal Series 1201 Red Enamel interior coating.
- B. Traveling Nut Operators:** Furnish traveling nut operators with epoxy interior coating

**19. Exterior Fasteners:** Furnish valves with stainless steel, type 304, exterior fasteners on the valve body and the operator.

**20. Testing:** Furnish valves tested in accordance with Section 5.2, of the Rubber-Seated Butterfly Valves, ANSI/AWWA Standard C504 (most recent revision), *PWD's Quality Certification Standard SIP 93/02 for butterfly valves (24 inch and Larger Diameter)*, and the requirements of the following paragraphs. Certified copies of proof of design tests performed on prototype valves of the type specified, as described in AWWA C504 Section 5.2.4, shall be furnished to the Engineer.

After assembly, the valves shall be tested with air pressure for bubble tightness at 150 psi differential across a closed disc. Two such tests shall be made for each valve, one with the air pressure on the upstream side of the disc and the second with the air pressure on the downstream side of the disc. Bubble tightness is required in both directions. Duration of all tests shall be not less than ten minutes.

As an alternative to the air pressure test, the valve may be given a 150 psi hydrostatic leakage test. Two such tests shall also be made, one with hydrostatic pressure on the upstream on the upstream side of the disc and the second with the hydrostatic pressure on the downstream side of the disc. During this test, the valve shall be droptight. Duration of each test shall not be less than ten minutes.

With the disc in the open position, the valve body shall be subjected to a 300 psi hydrostatic test for a duration of fifteen minutes. During this test, there shall be no leakage through the metal, the end joints, or the shaft seal, nor shall any part be permanently deformed.

The valves shall be shop adjusted to insure proper operation. The operator shall be installed on the valve prior to the shop adjustment.

- 21**            **Shipping:** The valves shall be complete in all respects when shipped. The manufacturer shall use care in preparing them for shipment so that no damage, due the manufacturer's negligence, will occur in handling or transit. All parts shall be drained of water. The disc shall be placed just off a closed position.

The valves shall be banded to skids in such a manner as to prevent damage in subsequent handling.

All unpainted steel and iron machined surfaces shall be coated with a protective slushing compound.

Fullface flange protectors of waterproof plywood or weather resistant pressboard, of at least the diameter of the flange OD, shall be fastened to each flange to protect both it and the valve interior.

- 22.**            **Shop Drawing Review:** If the manufacturer has not previously furnished the specified valves, he shall submit Shop Drawings to the Water Department for approval prior to the start of assembly. Shop Drawings shall show all dimensions, all types of material used, and shall identify each part of the complete valve assembly. Submit Shop Drawings to:

Stephen J. Furtek, P.E.  
Chief, Design Branch  
Philadelphia Water Department  
ARAMARK Tower, 2<sup>nd</sup> Floor  
1101 Market Street  
Philadelphia, PA 19107-2994

After the Shop Drawings have been approved, the manufacturer shall furnish three sets of O&M manuals containing the instructions for the operation and maintenance of the valves. The manuals shall clearly indicate the valves to which it applies, including manufacturer, model number, size, serial number, and year of manufacture. Once Shop Drawings have been approved by the Water Department, it will not be necessary for the manufacturer to submit drawings on future orders for valves to be used in the City of Philadelphia as long as the valves to be supplied conform to the previously approved Shop Drawings. However, if the manufacturer has modified the design of any portion of the valve assembly he must submit new Shop Drawings which reflect that change.

**Specification**  
**NO. 32-V-3:07**  
**Effective Date: 3/07/2007**

With the incorporation of worm gear operators into this specification, manufacturers who have approved shop drawings for valves supplied to the City in the past will be required to submit only those drawings which detail the operator assembly and the adapter when such an arrangement is specified.

Attention Bidder:

This bid document may not contain all of the documents that you will need to complete the bid submission. On occasion, it is not possible to include the following:

**Exhibits**

**Drawings**

**Attached specifications**

**Attached documents**

If you have not received a corresponding attachment, drawing or exhibit that is referenced in the bid document you may obtain it by contacting the Public Information Unit at 215-686-4720.



# **CITY OF PHILADELPHIA**

## **INSTRUCTIONS FOR GETTING PAID**

### **BY THE CITY OF PHILADELPHIA**

The City attempts to process invoices in a timely manner. Delays can occur because of incomplete or inaccurate invoicing information. Please make sure that all your invoices contain the following information to help the City in paying you as quickly as possible.

- 1. AFTER THE DELIVERY OR SERVICES HAS BEEN COMPLETED YOU MUST SUBMIT THREE (3) COPIES OF AN INVOICE FOR PAYMENT TO THE RECEIVING DEPARTMENT LISTED ON THE PURCHASE ORDER.**
- 2. THE INVOICE MUST CORRECTLY REFERENCE THE PURCHASE ORDER NUMBER, THE VENDOR NAME, ADDRESS AND FEDERAL EMPLOYER IDENTIFICATION NUMBER.**
- 3. CHECKS WILL ONLY BE MADE PAYABLE TO THE COMPANY NAME AS SHOWN ON THE PURCHASE ORDER; THE INVOICE MUST REFLECT THIS SAME COMPANY NAME AS THE "PAY TO".**
- 4. THE INVOICE MUST SHOW THE QUANTITY AND TYPE OF ITEM OR SERVICE AND THE PRICE.**
- 5. THE UNIT OF PURCHASE ON THE INVOICE MUST AGREE WITH THE UNIT CITED ON THE PURCHASE ORDER. REFERENCE TO THE SPECIFIC LINE ITEM IS HELPFUL.**

Paying vendors is the responsibility of the *receiving* City Department(s), not the Procurement Department. Vendors should bring any problems concerning payments to the attention of the appropriate City receiving department. The name and number of the contact person can generally be found on the purchase order. If all necessary paperwork has been submitted to the department and questions still remain, vendors should contact:

**City of Philadelphia  
Accounting Verification  
Room 1340 Municipal Services Building  
1401 J.F.K. Blvd.  
Philadelphia, PA 19102  
Tel. 215 686 6365**

**VENDORS INTERESTED IN RECEIVING PAYMENTS ELECTRONICALLY MUST COMPLETE AN ACH VENDOR ENROLLMENT AND CHANGE FORM. THIS FORM CAN BE DOWNLOADED FROM [WWW.PHILA.GOV/BIDS](http://WWW.PHILA.GOV/BIDS).**

## **BIDDERS GUIDELINES\***

The following list will assist you in the preparation of your bid.

- Read the entire bid so that you fully understand all the requirements.
- All bids must be submitted to the City no later than the time and date states as the Bid opening.
- Note the City Anti-Discrimination Policy. If Department of Commerce Office of Economic Opportunity (OEO) Participation is required be sure to fill out all appropriate forms. If you have questions call OEO at (215) 683-2000.
- Make sure you submit the appropriate Bid Security and Bid Submission Fee with your bid. Refer to Section 1 of the bid and the Conditions of Bidding sheet.
- Bidder must meet all qualifications.
- If an alternate to any item is being offered, you must follow the instructions in paragraph 2 of the Conditions of Bidding sheet.
- Does the bid require a site inspection, attendance at a Pre-Bid Meeting, samples, financial information or other data you must provide?
- Have you signed and returned all Addenda?
- If the bid is going to be awarded as a whole, you must bid on all items. See Section 3 of the bid: Bid Evaluation and Award.
- Bidders' attention is directed to the Conditions of Bidding sheet regarding the Master Performance Bond.
- Bids and pricing must be written in ink or typed. Faxed bids will not be accepted.
- Do not submit counter terms or conditions. **Your bid will be rejected.**
- Have you signed the Contract Page and affixed your Corporate Seal as required?
- **Do not** combine check amounts. All checks should be individual and specific.
- Please double check all mathematical calculations for errors.

**If you have questions call Public Information at (215) 686-4720.**

\*This information is provided for guidance only and does not preclude your responsibility to read fully and respond to all portions of the bid.



**CITY OF PHILADELPHIA  
PROCUREMENT DEPARTMENT  
Public Information Unit**

**ATTENTION VENDORS**

If your company would like to receive the results of a particular bid, the Public Information Unit of the Procurement Department will forward this information to you at a **\$10.00 fee, company check or money order only, no personal checks or cash, for each bid number requested.** Please be advised that bid tabulations **are not available** by telephone. If you have any questions, Please call 215-686-4755 or 215-686-4756.

**BID RESULTS REQUEST FORM**

Please complete form below. Only one (1) request per form.

Date of Request: \_\_\_\_\_

Bid Number Requested: \_\_\_\_\_ Opening Date: \_\_\_\_\_

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

Company Representative: \_\_\_\_\_

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

Telephone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

**Mail this Request to the address below and enclose the following items:**

- Company check or Money Order payable to **“City of Philadelphia”**
- A self-addressed stamped envelope which is at least 9 ½ ” x 12 ½ ” or larger for each Bid requested.

**Failure to send either of the above items, will void your request.**

**Mail Request To:**

The Procurement Department Public Information Unit  
Attention: Bid Results  
1401 JFK Blvd.  
Room 170B  
Philadelphia, PA 19102

**COMPANY CHECK OR MONEY ORDER ONLY**

Revised 09/08



# CITY OF PHILADELPHIA

Procurement Department  
120 Municipal Services Building  
Philadelphia, PA 19102-1685  
(215) 686-4720  
(215) 686-4716 Fax

Hugh Ortman  
Procurement Commissioner

## Master Bid Security Program for Service, Supplies and Equipment Bids Period of Coverage: July 1, 2011 – June 30, 2012

**(Bids for Professional Consulting Services, Public Works, Construction and Demolition [wrecking and building removal] are not covered under the Master Bid Security Program)**

Dear Vendor:

The Philadelphia City Charter requires that each bid submission over \$30,000 be accompanied by a certified check in the amount specified in the bid invitation. This requirement can be met for most bids if the Bidder is covered under the City's Master Bid Security Program. This program provides bid security coverage for Service, Supply and Equipment bids that have a total dollar value of over \$30,000 up to \$500,000.

To file for coverage under the Bid Security Program, for the period **July 1, 2011 to June 30, 2012**, complete the enclosed application and return it with a check for **\$120.00**. Make the check payable to "City of Philadelphia". It is **non-refundable**. To clarify the precise use of the check, enter the words "**Bid Security Program**" **2011–2012** on the face of the check.

If you do not become a participant in the program at this time, you may still submit bids. However, they must be accompanied by a certified check in the amount specified in the Terms and Conditions of Bidding.

For additional information or inquiries regarding this program, please contact: The Public Information Unit at (215) 686-4719, (215) 686-4720 or (215) 686-4721.

IF A RECEIPT IS REQUESTED, PLEASE ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE.

Forward Check with Application to  
CITY OF PHILADELPHIA  
**MASTER BID SECURITY PROGRAM**  
170A Municipal Services Building  
Philadelphia, PA 19102-1685

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

Fed EIN/SSN: \_\_\_\_\_

Street Address \_\_\_\_\_

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

Contact Person: \_\_\_\_\_

Telephone No: (\_\_\_\_) \_\_\_\_\_ Fax No: (\_\_\_\_) \_\_\_\_\_

A. Check payable to the City of Philadelphia in the amount of \$120.00 for 7/1/11 to 6/30/12  
**DO NOT SEND CASH. NO PERSONAL CHECKS.**

*Internal Use Only*

Rcvd. \_\_\_/\_\_\_/\_\_\_ Pymt. Type \_\_\_\_\_ Ck. Amt. \$ \_\_\_\_\_ Ck.# \_\_\_\_\_



# CITY OF PHILADELPHIA

Office of the Director of Finance  
Room 1330, Municipal Services Bldg.  
1401 John F. Kennedy Boulevard  
Philadelphia, Pa 19102-1685

Rob Dubow  
Director of Finance

The City of Philadelphia is pleased to announce a **Vendor Information Payment System (VIPS)** which will allow businesses such as yours to inquire about the status of invoices billed against purchase orders and professional services contracts. The only requirement is that your invoices utilize a unique number – either alpha, numeric or a combination of the two.

This system will be operational twenty four hours a day, seven days a week. All you have to do is dial **215-686-5968**, and follow the prompts to get an up-to-date status on your payments.

Enclosed for your convenience is an easy to use reference guide which provides a brief overview of what you can expect. I urge you to give it a try and see for yourself how easy it is to use. If you should happen to experience any problems, or if you would like to comment on this system, please call the **Office of the Director of Finance** at **215-686-6167**.

I believe that you will find this way of obtaining payment information convenient and easy to use.

# Vendor Information Payment Reference Guide

- 1- Call 215-686-5968.
- 2- After the prompts, enter the 8 numeric characters that uniquely identifies your purchase order.
- 3- Select one of the three inquiry options:
  - ▶ a) by your purchase order.
  - ▶ b) by your company.
  - ▶ c) by your specific invoice number.
    - (Numeric invoice numbers only)



# CITY OF PHILADELPHIA

PROCUREMENT DEPARTMENT  
120 Municipal Services Building  
Philadelphia, Pa 19102-1685

Hugh Ortman  
Procurement Commissioner

Dear Valued Vendor,

The City of Philadelphia is pleased to announce a new online **Vendor Invoice Information (VII) Website** which will allow businesses such as yours to inquire about the status of invoices billed against purchase orders and professional services contracts. The only requirement is that your invoices utilize a unique number – alpha, numeric or a combination of the two.

This system will be operational twenty four hours a day, seven days a week. All you have to do is log on to the City of Philadelphia website: [www.phila.gov](http://www.phila.gov), click on “Vendor Invoice Information” under the “Help Me” section of the home page, enter your Federal Employer Identification Number (FEIN) and a valid active purchase order. Then, agree to a waiver statement and follow the prompts to get an up-to-date status on your payments.

You are urged to give it a try and see for yourself how easy it is to use. If you should happen to experience any problems, or if you would like to comment on this new system, please e-mail us using the question and comment field provided on the site.

We believe that you will find this new way of obtaining payment information convenient and easy to use.

**TERMS AND CONDITIONS OF BIDDING AND CONTRACT**

**BID SUBMISSION**

**1. PREPARATION AND SUBMISSION OF BID.**

All bids must be written in ink or typewritten and made on the forms issued and signed in ink by a person with legal authority to bind the bidder. The contract awarded hereunder shall consist of the Invitation and Bid, all addenda thereto issued by the City, all exhibits and attachments issued and/or accepted by the City and these Terms and Conditions of Bidding and Contract (the "Contract"). It is the sole responsibility of the bidder to ensure that it has received any and all addenda and the Procurement Commissioner may in his/her sole discretion reject any bid for which all addenda have not been executed and returned in accordance with the instructions provided therein. No bid may be considered if received after the date and time for the opening of bids established by the Invitation and Bid, nor may any bid be modified after that date and time. The time of bid opening shall be the time displayed on the City's official bid clock located at the bid room. In the event of any discrepancy between actual time and the City's official bid clock, the latter shall determine the time of bid opening.

**2. BID SECURITY.** Unless the bidder is enrolled under the City's Annual Master Bid Security Program or an individual bid bond is required in the Invitation and Bid, all bids must be accompanied by a Certified Check, Treasurer's Check, Cashier's Check, Bank Money Order, or United States Postal Money Order made payable to the order of "The City of Philadelphia" in the proper amount as shown below:

AMOUNT OF BID OR ESTIMATED CONTRACT	AMOUNT OF CERTIFIED CHECK
\$ 30,000.00 or less	No Check Required
\$ 30,000.01 - \$ 99,999.99	\$ 500.00
\$100,000.00 - \$249,999.99	\$2,000.00
\$250,000.00 - \$499,999.99	\$4,000.00
\$500,000.00 or more	\$6,000.00

When computing amount of Bid for Certified Check purposes, do NOT deduct for trade-ins.

Any bid in excess of \$500,000 is not covered by the Annual Master Bid Security Program, and bidder must submit a certified check, treasurer's check, cashier's check, bank money order, or United States postal money order made payable to the order of "The City of Philadelphia" in the required amount.

Once the lowest responsive and responsible bidder has been determined all other bidders will receive a refund in the amount of the bid security submitted. Bid security submitted by the lowest responsive and responsible bidder will be refunded after receipt of all duly executed Contract documents, required fees, bonds or other performance security. Funds submitted for the Master Bid Security Program are not refundable.

**3. BID PROCESSING FEE.** In addition to bid security and any other fee or monies required to be submitted with the bid, the bid shall be accompanied by a non-refundable processing fee in the form of a separate standard check, bank money order or United States postal money order made payable to the order of "City of Philadelphia" in an amount based on the gross amount of the bid in accordance with the formula below. Cash is not acceptable.

AMOUNT OF BID OR ESTIMATED CONTRACT	AMOUNT OF PROCESSING FEE
\$ 30,000.00 or less	No Check Required
\$ 30,000.01 - \$ 100,000.00	\$ 10.00
\$ 100,000.01 - \$ 300,000.00	\$ 30.00
\$ 300,000.01 - \$ 500,000.00	\$ 50.00
\$ 500,000.01 - \$1,000,000.00	\$100.00
\$1,000,000.01 - \$2,000,000.00	\$200.00
\$2,000,000.01 - \$3,000,000.00	\$300.00
\$3,000,000.01 - \$4,000,000.00	\$400.00
\$4,000,000.01 - \$5,000,000.00	\$500.00
\$5,000,000.01 or more	\$600.00

**4. SPECIFICATIONS.** When a formal, numbered, specification is referred to in the Invitation and Bid, no deviation therefrom will be permitted, except if/as indicated in the Invitation and Bid and the bidder will be required to furnish articles and/or services in conformity with that specification. When catalogues, model numbers, trade names, or cuts are listed in the Invitation and Bid, they are, unless otherwise specified, included for the purposes of furnishing bidders with information concerning the style, type or kind of article and/or service desired. A bidder may offer an article and/or service which he/she certifies to be equal or better in quality, performance and other essential characteristics. If submitting an alternate, the bidder must specify the alternate (e.g., make and model #) in the bid and submit with the bid a complete description of the article (including any technical literature) and/or service proposed to be furnished. Failure to do so will require the bidder to furnish the article and/or service specified in the Invitation and Bid. The Procurement Commissioner reserves the sole right to determine whether alternates offered are equal or better. Unless otherwise provided in the bid specifications, all items offered by the bidder must be new. A "new" item is one which will be used first by the City. This clause shall not be construed to prohibit bidders from offering goods, supplies, equipment, or materials containing recycled materials or printing with recycled content; bidders intending to provide goods made with recycled materials should notify the Procurement Department.

**5. PATENTS.** The successful bidder shall be solely responsible for all royalties and charges that may be due to any patent holder for or on account of the use of any patented appliance, product or processes. Evidence of such payment shall be submitted upon request of the Procurement Commissioner and failure to submit such evidence may, in the sole discretion of the Procurement Commissioner, result in rejection of the bid or constitute an event of default, entitling the City to all rights and remedies as provided herein in Section 16 and/or 18.

**6. LOCAL BIDDING PREFERENCE**  
In accordance with Chapter 17-109 of the Philadelphia Code relating to Local Bidding Preferences for Procurement Contracts, this bid may be subject to a 5% local bid preference. In order to determine eligibility to receive the 5% preference, if applicable, bidder or subcontractor must be certified at the time of the bid opening and must submit with the bid, the Local Business Entity Certification Number\* as issued by the Procurement Department for the prime contractor or the applicable subcontractor.

## TERMS AND CONDITIONS OF BIDDING AND CONTRACT

\*Note: If you wish to apply for Local Business Entity (LBE) certification, go to [www.phila.gov/bids](http://www.phila.gov/bids). Please allow sufficient time prior to bidding for processing of the LBE application.

### EVALUATION AND AWARD

**7. TYPES OF BIDDER RESTRICTED.** Bidders must not be a party to more than one bid for the same article or service. A violation of this condition may, in the sole discretion of the Procurement Commissioner, result in rejection of any or all such bids in which the bidder has an interest.

**8. RESPONSIVENESS.** Subject to the right of the Procurement Commissioner to waive non-responsiveness as set forth below in this Section, these Terms and Conditions of Bidding and Contract and the specifications and requirements included in the Invitation and Bid are mandatory and must be strictly followed by all bidders in the preparation and submission of their bids. After bids are opened, the Procurement Department, and other City departments or agencies where appropriate or specified, shall review all bids for responsiveness to these Terms and Conditions of Bidding and Contract and the specifications and requirements included in the Invitation and Bid.

Any bid which is incomplete, obscure, conditional, or unbalanced, which contains additions not called for, or irregularities of any kind, including alterations or erasures, or which fails to conform in any respect to these Terms and Conditions of Bidding and Contract and the specifications and requirements included in the Invitation and Bid is non-responsive and shall be rejected, except where the Procurement Commissioner, in his/her sole discretion, determines that the non-responsiveness is not material to the Invitation and Bid or that a waiver of the non-responsiveness is otherwise permitted by the Invitation and Bid, by these Terms and Conditions of Bidding and Contract or by law. The Procurement Department's determination of non-responsiveness shall be final and any bid rejected as non-responsive shall not be eligible for contract award.

**9. RESPONSIBILITY.** Unless otherwise specified, after bids are opened, the Procurement Department, and other City departments or agencies where appropriate or specified, shall review and may investigate the responsibility, including, but not limited to, the qualifications, references, capacity and ability to perform the Contract resulting from the Invitation and Bid in accordance with its terms, and integrity, of the lowest responsive bidder. All determinations of bidder responsibility shall be vested in the sole discretion of the Procurement Commissioner and other City officials. Any bidder who is deemed not responsible shall be ineligible for award of the Contract.

Bidders deemed not responsible will be notified of such determination and the reasons therefore in writing by the Procurement Department, and shall have the right to contest the determination by submitting to the Procurement Department, within forty-eight (48) hours after receipt of its written determination, a written request for reconsideration that includes information relating to the bidder's qualifications and responsibility and demonstrating the insufficiency of the reasons stated in the written determination finding the bidder not

responsible. Any further determination of a contesting bidder's responsibility shall be vested in the sound discretion of the Procurement Commissioner and other City officials.

**10. CANCELLATION AND AWARD.** The Procurement Commissioner, in his/her sole discretion, may cancel any Invitation and Bid prior to bid opening. After bid opening, the Procurement Commissioner, in his/her sole discretion, may reject all bids, if deemed in the best interest of the City. In all cases where a Contract award is made by the Procurement Department, the bidder is bound by the terms and conditions of the Invitation and Bid upon the submission of its bid. All bids are valid for a period of not less than 60 days, or as otherwise specified in the Invitation and Bid. If the bid has not been awarded within the specified period of time, the bid shall be valid for subsequent award only upon the express consent of the bidder, with no change to the submitted bid. Any price increases/decreases expressly provided for in the Invitation and Bid will be allowed. All Contract awards shall be made by the Procurement Department upon written notice to the bidder that is determined by the Procurement Department to be the lowest responsive and responsible bidder.

**11. QUANTITIES AWARDED.** For requirements contracts only, the articles and quantities of such articles as set forth in the Invitation and Bid are estimates and the Procurement Commissioner, in his/her sole discretion, may make an award for all or some of the articles bid and in such quantities as the Procurement Commissioner shall deem appropriate. For firm limit contracts, it is the City's intent to award based upon the quantities set forth in the Invitation and Bid, but the City reserves the right to award more or less.

**12. DELIVERY, PRICE INCREASES AND TIE BIDS.** All articles must be delivered at the price(s) bid, FOB Destination. Bids containing reservations of the right to increase the price(s) bid, including, but not limited to, late payment charges, will not be considered, except where the Procurement Commissioner, in his/her sole discretion, finds it in the City's best interest to do so. In the event of an absolute tie, the award decision will be made in the best interests of the City as determined by the Procurement Commissioner.

### CONTRACT EXECUTION AND CONFORMANCE

**13. CONTRACTS.** Awards of contracts in amounts less than or equal to \$30,000 shall become contracts binding upon the City upon written notice of award by the Procurement Commissioner. Awards of contracts in amounts greater than \$30,000 shall not become contracts binding upon the City until after written notice of award is made and until after all of the following conditions have been satisfied:

- a. Successful bidder posts sufficient performance security, as required in the Invitation and Bid, within the time specified in the written notice of award;
- b. Successful bidder posts a payment bond or other payment security, if and as required by the Invitation and Bid, within the time specified in the written notice of award;

## TERMS AND CONDITIONS OF BIDDING AND CONTRACT

c. Approval of the Contract as to form by the City's Law Department;

d. Certification by the Director of Finance and City Controller as to the availability of funds; and

e. Execution of the Contract by the Procurement Commissioner.

The Procurement Commissioner may, in his/her sole discretion, cancel any Contract award if any of the above conditions (a-e) are not satisfied, or if the Procurement Commissioner, in his/her sole discretion, determines cancellation to be in the best interests of the City. The bidder agrees that in the event of such cancellation, it shall not have any claim against the City, including any claim for breach of contract or of any other legal duty, or for lost profits, costs, damages, or expenses of any kind.

**14. PERFORMANCE SECURITY.** The City of Philadelphia requires performance security for contracts greater than \$30,000. If the amount of the contract to be awarded is greater than \$30,000 but less than or equal to \$500,000, the successful bidder is required to participate in the City's Master Performance Security Program by paying to the City a non-refundable fee of \$5.00 per thousand dollars of the contract amount for firm limit contracts and \$4.00 per thousand dollars of the contract amount for requirements contracts, or as otherwise specified. If the amount of the contract to be awarded is in excess of \$500,000 the successful bidder is required to furnish an individual performance bond, issued by a surety approved by the City on a form prepared by the City's Law Department and in the amount specified in the notice of contract award. The successful bidder is also required to pay a bond preparation fee to the City's Law Department in an amount prescribed by Chapter 17-700 of The Philadelphia Code; a schedule of such fees may be obtained from the Procurement Department's Public Information Office.

**15. INSURANCE.** Unless otherwise specified, the successful bidder (referred to in this Section as "Contractor") shall, at its sole cost and expense, procure and maintain in full force and effect, during the entire period of the Contract (including any applicable warranty and/or renewal periods), the minimum types of insurance specified below. All insurance shall be procured from reputable insurers authorized to do business in the Commonwealth of Pennsylvania and shall be acceptable to the City. All insurance required herein shall be written on an "occurrence" basis and not a "claims-made" basis. The City of Philadelphia, its officers, employees, and agents are to be named as additional insured on all policies required hereunder, except the Workers' Compensation and Employers' Liability. Also, an endorsement is required stating that the coverage afforded these parties as additional insured will be primary to any other coverage available to them. The City's coverage as an additional insured shall be primary coverage. The insurance shall provide for at least thirty (30) days prior written notice to be given to the City in the event coverage is materially changed, canceled or non-renewed. Certificates of insurance evidencing the required coverages shall be submitted to the City within fifteen (15) days of notice of contract award. The City reserves the right to require the Contractor to furnish certified copies of the original

policies of all insurance required hereunder at any time upon fifteen (15) days prior written notice. The insurance requirements set forth herein are not intended and shall not be construed to modify, limit, or reduce the indemnifications made in this Contract by the Contractor to the City of to limit the Contractor's liability under this Contract to the limits of the policies of insurance required to be maintained by the Contractor hereunder.

**(a) WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

(1) Workers' Compensation – Statutory limits

(2) Employers Liability - \$100,000 Each Accident – Bodily Injury by Accident; \$100,000 Each Employee – Bodily Injury by Disease; \$500,000 Policy Limit – Bodily Injury by Disease

(3) Other states insurance including Pennsylvania

**(b) GENERAL LIABILITY INSURANCE**

(1) Limit of Liability: \$1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.

(2) Coverage: Premises operation: Blanket Contractual liability; Personal Injury liability; Products and completed operations; Independent Contractors; Employees as additional insured; Cross liability; Broad form property damage (including loss of use) liability; Asbestos abatement liability coverage (Note: Required for asbestos abatement projects only).

**(c) AUTOMOBILE LIABILITY**

(1) Limit of Liability: \$1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.

(2) Coverage: owned, non-owned and hired vehicles.

**16. INDEMNIFICATION.** All bidders shall indemnify, defend and hold harmless the City, its officers, employees and agents from and against any and all losses, costs (including, but not limited to, litigation and settlement costs and counsel fees), claims, suits, actions, damages, liabilities and expenses, occasioned wholly or in part by the bidder's act or omission or fault or negligence or the act or omission or fault or negligence of bidder's agents, subcontractors (including suppliers), employees or servants in connection with the Contract, including, but not limited to, those acts or omissions or faults or negligence in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, the bidder's default under the Contract, losses incurred by the City's Master Performance Security Program, failure to pay subcontractors and suppliers and any infringement or violation of any proprietary right (including, but not limited to, patent, copyright, trademark, service mark and trade secret). This obligation to indemnify, defend and hold harmless the City, its officers, employees and agents shall survive the termination of the Contract resulting from the Invitation and Bid.

**17. FAILURE TO EXECUTE CONTRACT.** Any bidder not lawfully released from its bid, who refuses to execute a contract in accordance with its bid or who fails, refuses or is unable to furnish any required payment security, performance security or insurance, as may be required by the Invitation and Bid and/or these Terms and Conditions of Bidding and Contract, shall be liable for the entire amount of its bid security, as liquidated damages to the City; or if bid security is furnished under the Annual Master Bid Security

## TERMS AND CONDITIONS OF BIDDING AND CONTRACT

Program, for 10% of the amount of its bid, as liquidated damages to the City; or where the damages are readily ascertainable by the City, for the actual loss, cost or damage incurred by the City as a result of its failure to execute the contract or to furnish such bonds, performance security or insurance.

**18. ASSIGNMENT.** The successful bidder shall not assign the Contract resulting from the Invitation and Bid, or any part of the Contract, or any right to any monies to be paid under the Contract, or delegate performance of the Contract, without obtaining the prior written consent of the Procurement Commissioner. The decision whether to consent to an assignment is within the Procurement Commissioner's sole discretion. In no case shall the Procurement Commissioner's consent to the assignment of any monies to be paid under the Contract relieve the bidder from faithful performance of any of its obligations under the Contract or change any of the terms and conditions of the Contract. Any purported assignment in violation of this provision shall be of no effect.

**19. DEFAULT.** All work performed and goods and services rendered by a successful bidder (referred to in this Section as "Contractor") under any Contract resulting from the Invitation and Bid shall strictly conform to these Terms and Conditions of Bidding and Contract and the specifications and requirements contained in the Invitation and Bid. The successful bidder shall comply with all applicable federal, state and local laws, statutes and ordinances and the regulations of all governmental departments, boards, agencies, and commissions. The following shall constitute events of default under any Contract resulting from the Invitation and Bid:

a. Failure by Contractor to comply with any provision or Section of the Contract, including the bid specifications contained in the Invitation and Bid and these Terms and Conditions of Bidding and Contract and/or failure by Contractor to comply with any federal, state and local law, statute, ordinance or regulation of any governmental department, board, agency and commission.

b. Falseness of any representation or warranty made in the Contract or other document(s) submitted to the City by Contractor in connection with the Invitation and Bid.

c. Failure by Contractor to pay its suppliers or subContractors, misappropriation of any funds provided under the Contract or failure to notify City upon discovery of any misappropriation.

d. A violation of law by Contractor which results in its making a guilty plea, a plea of nolo contendere, or conviction of a criminal offense by Contractor, its directors, employees, or agent or indictment or charges, in the sole judgment of the Procurement Commissioner, adversely affect the performance of the Contract.

e. Failure by Contractor to comply with the Mayoral Executive Order establishing the City's antidiscrimination policy relating to the participation of minority, woman and disabled owned disadvantaged business enterprises.

f. The Procurement Department's determination that the Contractor is not a responsible bidder on the

Invitation and Bid, where such determination is made, and is based upon, information received after award of the Contract and/or after execution of the Contract by the Procurement Commissioner and/or after satisfaction of any or all other conditions of a binding Contract set forth in Section 2 above.

g. Any other act or omission identified in these Terms and Conditions of Bidding and Contract or elsewhere in the Invitation and Bid as an event or condition constituting default.

Upon the occurrence of an event of default, the Procurement Commissioner, in his/her sole discretion, may require Contractor to cure the default within a period of time to be determined by the Procurement Commissioner, or terminate the Contract in whole or in part and exercise any one or more of the following remedies (which remedies may be concurrent and shall be in addition to and not in lieu of the remedies available to the City at law, in equity, under any bond(s) filed in connection with the contract or under other sections of these Terms and Conditions of Bidding and Contract and Contract):

a. Purchase goods and/or services from others in substitution of goods or services that were not furnished or performed by Contractor or that were defective or otherwise in violation of any provision of the Contract; the cost of such substituted goods and services shall be the sole responsibility of Contractor and Contractor agrees to pay immediately, upon receipt of the City's invoice, the difference between the Contract price and the substituted product or service cost, plus any other loss, cost or damages incurred by the City.

b. Appropriate to the payment of the difference between the Contract price and the cost of such substitute goods or services, and the amount of any other loss, cost or damage incurred by the City as a result of the default, any monies which may then be due and payable to Contractor under this Contract or any other Contract that Contractor then has with the City.

The City shall notify Contractor in writing of such termination, which shall be effective as of the date specified in the notice of termination (the "Termination Date"). The Procurement Commissioner may, in his/her sole discretion, require Contractor to continue to furnish all goods and perform all services required under the Contract until the Termination Date, in which case, subject to the remedies enumerated above, the successful bidder shall be paid in accordance with the Contract therefore. If the City requires Contractor to cure the event(s) of default, or to continue to furnish goods or services until the Termination Date, and Contractor refuses or fails to do so, then such failure shall itself be deemed an event of default under this Section, for which the City may exercise any of its rights hereunder.

**20. PAYMENT FOR EQUIPMENT.** Unless otherwise provided in the bid specifications, when equipment involves installation, (which shall also be interpreted to mean erection and/or setting up or placing in position for service or use) and/or testing, and where such installation or testing is delayed though no fault of the contractor, contractor shall be entitled to a payment equal to 50% of the price bid when such equipment is delivered on site and to a further payment equal to an additional 25% of the price bid when the equipment is

## TERMS AND CONDITIONS OF BIDDING AND CONTRACT

installed and ready for test. The balance shall be paid only after the equipment is tested and found to be satisfactory by the City. If the equipment must be tested, but installation is not required to be made by the supplier or if the equipment must be installed but testing is not required, and the installation or testing is delayed through no fault of the contractor, contractor shall be entitled to a payment equal to 75% of the price bid at the time of delivery and the balance shall be paid after satisfactory testing and/or installation, as required.

### TAX MATTERS

**21. TAX EXEMPTION.** The City of Philadelphia is exempt from the payment of any federal excise or transportation taxes and any Pennsylvania sales tax. The price bid must be net, exclusive of taxes. However, when under established trade practice any federal excise tax is included in list prices, bidder may quote the list price and shall show separately the amount of the federal tax, either as a flat sum or as a percentage of the list price, which shall be deducted by the City. In the event bidder pays any sales or use tax, bidder hereby assigns to City, or City's agent, all of its rights, title and interest in any sales or use tax which may be refunded as a result of the purchase of any articles furnished in connection with the Contract and bidder, unless directed by the City, shall not file a claim for any sales or use tax refund subject to this assignment. Bidder authorizes the City, in City's name or the name of bidder, to file a claim for refund of any sales or use tax subject to this assignment.

**22. TAX INDEBTEDNESS.** The City of Philadelphia does not wish to do business with tax delinquents or other businesses indebted to the City. In furtherance of this policy, the following certifications have been developed and shall form a part of any Contract resulting from the Invitation and Bid. The successful bidder or other entity Contracting with the City is referred to below as the "Contractor".

a. Contractor's Certification of Non-Indebtedness - Contractor hereby certifies and represents that Contractor and Contractor's parent company(ies) and subsidiary(ies) are not currently indebted to the City of Philadelphia (the "City") and will not at any time during the term of this Contract (including any extensions or renewals thereof) be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District), liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available to the City at law or in equity, Contractor acknowledges that any breach or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to Contractor and, if such breach or failure is not resolved to the City's satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments and/or the termination of this Contract for default (in which case Contractor shall be liable for all costs, losses and other damages resulting from the termination).

b. Subcontractor's Certification of Non-Indebtedness - Contractor shall require all subcontractors performing work in connection with this Contract ("subcontractor"

shall also include suppliers providing goods or materials) to be bound by the following provision, and Contractor shall cooperate fully with the City in exercising the rights and remedies described below or otherwise available at law or in equity:

"Subcontractor hereby certifies and represents that subcontractor and subcontractor's parent company(ies) and subsidiary(ies) are not currently indebted to the City of Philadelphia ("City"). and will not at any time during the term of Contractor's Contract with the City (the "Contract"), including any extensions or renewals thereof, be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District of Philadelphia), liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available at law or in equity, subcontractor acknowledges that any breach or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to subcontractor for services rendered in connection with the Contract and, if such breach or failure is not resolved to the City's satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments otherwise due to subcontractor and/or the termination of subcontractor for default (in which case subcontractor shall be liable for all costs, losses and other damages resulting from the termination)."

**23. TAX REQUIREMENTS.** Any person or entity who bids on and/or is awarded a contract by the City and/or School District of Philadelphia, is subject to Philadelphia's business tax ordinances and regulations. The City Solicitor has determined that anyone who is awarded a contract by the City and/or School District pursuant to a bid has entered into a contract within the City, and the subsequent delivery of goods into the City or performance of services within the City constitutes doing business in the City and subjects the successful bidder, including but not limited to, one or more of the following taxes:

- a. Business Privilege Tax
- b. Net Profits Tax
- c. City Wage Tax

The successful bidder, if not already paying the aforesaid taxes, is required to apply to the Department of Revenue, 1401 John F. Kennedy Blvd., Public Service Concourse, Municipal Services Building, Philadelphia, PA 19102 for a tax identification number and to file appropriate business tax returns as provided by law. Questions should be directed to the Business and Earnings Tax Unit at (215) 686-6600.

### GENERAL INFORMATION

**24. COMPLIANCE WITH LAWS.** All goods and services and all documents and other materials furnished under the Contract shall conform with all applicable federal, state and local laws, statutes and ordinances and the applicable rules, regulations, methods and procedures of all governmental boards, bureaus, offices, commissions and other agencies. Contractor shall maintain during the term of the Contract all licenses, and authorizations required by

## TERMS AND CONDITIONS OF BIDDING AND CONTRACT

any applicable federal, state or local law or regulation. Applicable law shall include, without limitation, the laws stated in paragraphs 25 through 29 herein.

### 25. NONDISCRIMINATION.

a. Any Contract awarded pursuant to the Invitation and Bid is entered into under the terms of the Philadelphia Home Rule Charter and in its performance, Contractor shall not discriminate nor permit discrimination against any person because of race, color, religion, national origin, or sex. Such discrimination shall constitute an event of default under this Contract entitling City to terminate this Contract forthwith. This right of termination shall be in addition to any other rights or remedies as provided herein in Section 19 or otherwise available to the City at law or in equity.

b. In accordance with Chapter 17-400 of The Philadelphia Code, Contractor agrees that its payment or reimbursement of membership fees or other expenses associated with participation by its employees in an exclusionary private organization, insofar as such participation confers an employment advantage or constitutes or results in discrimination with regard to hiring, tenure of employment, promotions, terms, privileges or conditions of employment, on the basis of race, color, sex, sexual orientation, gender identity, religion, national origin or ancestry, shall constitute an event of default under this Contract and shall entitle the City to all rights and remedies as provided herein in Section 19 or otherwise available to the City at law or in equity. Contractor agrees to include the immediately preceding sentence, with appropriate adjustments for the identity of the parties, in all subcontracts which are entered into pursuant to this Contract. Contractor further agrees to cooperate with the Commission on Human Relations of the City of Philadelphia in any manner which the said Commission deems reasonable and necessary for the Commission to carry out its responsibilities under Chapter 17-400 of The Philadelphia Code. Failure to so cooperate shall constitute an event of default under this Contract entitling the City to all rights and remedies as provided herein in Section 19 or otherwise available to the City at law or in equity.

**26. ETHICS REQUIREMENTS.** To preserve the integrity of City employees and maintain public confidence in the competitive bidding system, the City intends to vigorously enforce the various ethics laws as they relate to City employees in the bidding and execution of City contracts. Such laws are in three categories:

a. Gifts. Executive Order No. 02-04 prohibits City employees from soliciting or accepting anything of value from any person or entity seeking to initiate or maintain a business relationship with the City of Philadelphia, its departments, boards, commissions, and agencies. Bidder understands and agrees that if it offers anything of value to a City official or employee under circumstances where the receipt of such item would violate the provisions of this Executive Order shall be subject to sanctions with respect to future City Contracts. Such sanctions may range from disqualification from participation in a particular Contract to debarment, depending on the nature of the violation. All bidders, agents or intermediaries who are solicited for gifts or gratuities by City employees are urged to report these incidents to the Inspector

General, Aramark Tower, Third Floor, 1101 Market Street, Philadelphia, PA 19107.

b. City Employee Interest in City Contracts. In accordance with Section 10-1112 of The Philadelphia Home Rule Charter, no bid shall be accepted from, or Contract awarded to, any City employee or official, or any firm in which a City employee or official has a direct or indirect financial interest. All bidders are required to disclose any current City employees or officials who are employees or officials of the bidder's firm, or who otherwise would have a financial interest in the Contract.

c. Conflict of Interest. Both the State Ethics Act and the City Ethics Code prohibit a public employee from using his/her public office or any confidential information gained thereby to obtain financial gain for himself/herself a member of his/her immediate family, or a business with which he/she or a member of his/her immediate family is associated. "Use of public office" is avoided by the employee or official publicly disclosing the conflict and disqualifying himself/herself from official action in the matter, as provided in The Philadelphia Code Section 20-608.

**27. NORTHERN IRELAND.** Section 17-104(2)(b) of The Philadelphia Code prohibits the City from accepting bids from companies that do business in Northern Ireland, unless that business has implemented the fair employment principles embodied in the MacBride Principles. In furtherance of this ordinance, bidder makes the following certification and representations:

a. In accordance with Section 17-104 of the Philadelphia Code, bidder by execution of its bid certifies and represents that (i) bidder (including any parent company, subsidiary, exclusive distributor, or company affiliated with Bidder) does not have, and will not have at any time during the term of any Contract resulting from this bid (including any extensions thereof), any investments, licenses, franchises, management agreements or operations in Northern Ireland, and (ii) no product to be provided to the City under any resulting Contract will originate in Northern Ireland, unless Bidder has implemented the fair employment principles embodied in the MacBride Principles.

b. In the performance of any Contract resulting from this bid, Bidder agrees that it will not utilize any suppliers or subcontractors at any tier (i) who have (or whose parent subsidiary, exclusive distributor of company affiliate have) any investments, licenses, franchises, management agreements or operations in Northern Ireland or (ii) who will provide products originating in Northern Ireland unless said supplier or subcontractor has implemented the fair employment principles embodied in the MacBride Principles. Bidder further agrees to include provisions with this subparagraph (b), with appropriate adjustments for the identity of the parties, in all subcontracts and supply agreements which are entered into in connection with the performance of any resulting Contract.

## TERMS AND CONDITIONS OF BIDDING AND CONTRACT

c. Bidder agrees to cooperate with the City's Director of Finance in any manner which the said Director deems reasonable and necessary to carry out the Director's responsibilities under Section 17-104 of The Philadelphia Code. Bidder expressly understands and agrees that any false certification or representation in connection with this subparagraph (c) and/or any failure to comply with the provisions of this subparagraph (c) shall constitute a substantial breach of any Contract resulting from the Invitation and Bid entitling the City to all rights and remedies provided in this bid or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or at equity. In addition, it is understood that false certification or representation is subject to prosecution under IS Pa.C.S. Section 4904.

**28. BUSINESS, CORPORATE AND SLAVERY ERA INSURANCE DISCLOSURE.** In accordance with Section 17-104 of The Philadelphia Code, the successful bidder, after award of the Contract, will complete an affidavit certifying and representing that the bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with bidder) has searched any and all records of the bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

The bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of The Philadelphia Code) or equity and the Contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

**29. PHILADELPHIA 21<sup>ST</sup> CENTURY MINIMUM WAGE STANDARD.** If Contractor is an Employer, as defined in Philadelphia Code Section 17-1302(5) and 17-1303, Contractor shall comply with the minimum compensation standards by providing to those employees an hourly wage, excluding benefits, at least 150 percent of the federal minimum wage, and health benefits to each full-time, non-temporary, non-seasonal covered Employee, as more fully set forth at Philadelphia Code Chapter 17-1300. By submission of its Bid, Contractor so acknowledges and certifies its compliance with Chapter 17-1300 and shall promptly provide to the City, at its request, all documents and information further verifying its compliance with the requirements of this Chapter. Furthermore, Contractor shall notify each affected employee what wages are required to be paid.

The Office of Labor Standards may grant a partial or total waiver of Chapter 17-1300 based on specific stipulated reasons elaborated in Section 17-1304.

**TERMS AND CONDITIONS OF BIDDING AND CONTRACT  
SIGNING OF BIDS**

This contract consists of the Invitation and Bid (including exhibits and attachments), any addenda thereto issued by the City and the foregoing Terms and Conditions of Bidding and Contract (collectively, the "contract") and contains all the terms, conditions and requirements agreed upon by the parties. The terms "contract" and "agreement," whether capitalized or uncapitalized, shall have the foregoing meaning wherever they are used in the invitation and Bid, addenda thereto, the Terms and Conditions of Bidding and Contract, and this page. No other contract or agreement, oral or otherwise, regarding the subject matter of the contract shall be deemed to exist or to bind any party hereto or to vary any of the terms contained in the contract.

This contract may not be changed, amended or renewed, in whole or in part, except by a written amendment signed by the parties. No waiver by the City of any breach or noncompliance by the undersigned with any provision of this contract shall relieve the undersigned of any of its obligations or representations made under this contract.

This contract and all disputes arising under this contract shall be governed, construed and decided in accordance with the laws of the Commonwealth of Pennsylvania. The parties agree that any lawsuit, action, claim or legal proceeding involving, directly or indirectly, any matter arising out of or related to this contract or the relationship created or evidenced thereby, shall be brought exclusively in the United States District Court for the Eastern District of Pennsylvania or the Court of Common Pleas of Philadelphia County. It is the express intent of the parties that jurisdiction over any lawsuit, action, claim, or legal proceeding shall lie exclusively in either of these two forums. The parties further agree not to raise any objection to any lawsuit, action, claim or legal proceeding which is brought in either of these two forums and the parties expressly consent to the jurisdiction and venue of these two forums. The parties further agree that service of original process in any such lawsuit, action, claim or legal proceeding may be duly affected by mailing a copy thereof, by certified mail, postage prepaid to the addresses specified in the Invitation and Bid and/or this page.

**NOTE: ANY BID THAT IS NOT EXECUTED IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BELOW OR THAT DOES NOT INCLUDE STREET ADDRESS, CITY, STATE AND PHONE NUMBER, MAY, IN THE SOLE DISCRETION OF THE PROCUREMENT COMMISSIONER, BE REJECTED.**

**SIGNING OF BIDS:**

If bid is by an **INDIVIDUAL** or a **PARTNERSHIP**, or if the bid does not exceed \$30,000, date and sign the bid here, with the original signatures, in ink.

This \_\_\_\_\_ day of \_\_\_\_\_ 20

\_\_\_\_\_  
(Signature of Owner, Partner)

\_\_\_\_\_  
(Type or Print Name and Title)

\_\_\_\_\_  
(Business Name of Bidder)

\_\_\_\_\_  
(Address, including Zip Code)

\_\_\_\_\_  
(Telephone Number, including Area Code)

If the bid is a **CORPORATION**, date and sign the bid here with original signatures, in ink, by (a) President or Vice President of the Corporation AND (b) Secretary, Assistant Secretary, Treasurer or Assistant Treasurer of the Corporation; and (c) affix the seal of the Corporation. If the form is not signed by the President or a Vice President and Secretary, Assistant Secretary, Treasurer or Assistant Treasurer, attach a duly certified corporate resolution authorizing the person signing in place of such officers to execute this bid for the corporation.

This \_\_\_\_\_ day of \_\_\_\_\_ 20

**CORPORATE SEAL**

\_\_\_\_\_  
(Corporate or Business Name of Bidder)

\_\_\_\_\_  
(Address, including Zip Code)

\_\_\_\_\_  
(Telephone Number, including Area Code)

\_\_\_\_\_  
(Signature of President or Vice President)

\_\_\_\_\_  
(Signature of Secy., Asst. Secy., Treas. or Asst. Treas.)

\_\_\_\_\_  
(Type or Print Name and Title)

\_\_\_\_\_  
(Type or Print Name and Title)

**APPROVED AS TO FORM**

**CONTRACT EXECUTION**

\_\_\_\_\_  
(Assistant City Solicitor)

\_\_\_\_\_  
(Procurement Commissioner)