



# City of Tacoma Tacoma Power / Transmission and Distribution

# REQUEST FOR BIDS PT22-0170F Electrical and Data PVC Conduit Stick Pipe

Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, June 21, 2022

Submittals must be received by the City's Procurement and Payables Division prior to 11:00 a.m. Pacific Time. For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email, <a href="mailto:bids@cityoftacoma.org">bids@cityoftacoma.org</a>, as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals.

**Submittal Delivery:** Sealed submittals will be received as follows:

By Email:

bids@cityoftacoma.org

Maximum file size: 35 MB. Multiple emails may be sent for each submittal.

**Bid Opening:** Held virtually each Tuesday at 11AM. Attend <u>via this link</u> or call 1 (253) 215 8782. Submittals in response to a RFB will be recorded as received. As soon as possible, after 1:00 PM, on the day of submittal deadline, preliminary results will be posted to <u>www.TacomaPurchasing.org</u>.

**Solicitation Documents:** An electronic copy of the complete solicitation documents may be viewed and obtained by accessing the City of Tacoma Purchasing website at <a href="https://www.TacomaPurchasing.org">www.TacomaPurchasing.org</a>.

- Register for the Bid Holders List to receive notices of addenda, questions and answers and related updates.
- Click here to see a list of vendors registered for this solicitation.

Pre-Proposal Meeting: A pre-proposal meeting will not be held.

Project Scope: Supply of electrical and data PVC conduit stick on an as-needed basis.

Estimate: \$875,000 (three year period)

**Paid Sick Leave:** The City of Tacoma requires all employers to provide paid sick leave as set forth in Title 18 of the Tacoma Municipal Code. For more information, visit our Minimum Employment Standards Paid Sick Leave webpage.

Americans with Disabilities Act (ADA Information: The City of Tacoma, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. Specification materials can be made available in an alternate format by emailing Gail Himes at <a href="mailto:ghimes@cityoftacoma.org">ghimes@cityoftacoma.org</a>, or by calling her collect at 253-591-5785.

#### **Title VI Information:**

"The City of Tacoma" in accordance with provisions of Title VI of the Civil Rights Act of 1964, (78 Stat. 252, 42 U.S.C. sections 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration of award.

**Additional Information:** Requests for information regarding the specifications may be obtained by contacting Tisha Rico, Senior Buyer by email to trico@cityoftacoma.org

**Protest Policy:** City of Tacoma <u>protest policy</u>, located at <u>www.tacomapurchasing.org</u>, specifies procedures for protests submitted prior to and after submittal deadline.

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Meeting sites are accessible to persons with disabilities. Reasonable accommodations for persons with disabilities can be arranged with 48 hours advance notice by calling 253-502-8468.

Form No. SPEC-040C Revised: 05/25/2021

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## **SUBMITTAL CHECKLIST**

This checklist identifies items to be included with your submittal. Any submittal received without these required items may be deemed non-responsive and may not be considered for award. <u>Please do not include the entire specification document with your submittal.</u>

Submittals must be received by the City of Tacoma Purchasing Division by the date and time specified in the Request for Bids page at the front of this Specification or subsequent addenda.

The fo	ollowing items, in this order, make up your submittal package:					
1	One electronic copy of your complete submittal package in PDF format.					
	Signature Page with <u>signature</u> , including acknowledgement of any addenda.					
2	This form is intended to serve as the first page of your submittal after the Title Page. Do not alter it in any way or add it to letterhead paper or present cover letters or blank pages ahead of it.					
3	Proposal Sheets					
	Supplemental Information - Section 1.09					
4	<ul> <li>Product Data Sheets and Drawings</li> <li>Manufacturer's Quality Assurance Policy</li> <li>Manufacturer's Facility Inspection Reports</li> </ul>					

## **SUBMITTAL INSTRUCTIONS**

#### **PRE-SUBMITTAL QUESTIONS**

- A. Questions and requests for clarification of these Specifications may be submitted in writing by **3:00 p.m., Pacific Time, June 9, 2022**, via email addressed to the Purchasing contact below. Questions received after this date and time may not be answered.
  - 1. Please indicate the specification number and title in the email subject line.
  - 2. Present your questions in MS Word format or directly in the body of the email message. If applicable, cross reference the specific section of the RFB.
  - 3. Questions will not be accepted by telephone or fax.
  - 4. Questions marked confidential will not be answered.
  - 5. Individual answers will not be provided directly to Respondents.
  - 6. The City reserves the discretion to group similar questions to provide a single answer or not to respond when the requested information is confidential.
  - 7. The City will not be responsible for unsuccessful submittal of questions.
- B. Written answers to all questions will be posted on the Purchasing website at <a href="https://www.TacomaPurchasing.org">www.TacomaPurchasing.org</a> on or about **June 14, 2022**. Navigate to *Contracting Opportunities / Supplies*, and scroll to this RFB. A notice will not be posted with the Specification if no questions are received.
- C. The answers are not typically considered an addendum.
- D. To receive notice of the posted answers, you must register as "bid holder" for this solicitation.

Communication	Addressee
For all questions regarding Specification PT22-0170F	Tisha Rico Senior Buyer trico@cityoftacoma.org - email

### **SUBSTITUTION REQUESTS**

A. If the Respondent elects to bid alternative equipment, materials, or processes where allowed, a Substitution Request Form (Appendix #2) must be submitted by email to Tisha Rico, <a href="mailto:trico@cityoftacoma.org">trico@cityoftacoma.org</a>, a minimum of seven (7) business days prior to the submittal deadline. Substitution Request Forms received after this time will not be accepted. Respondents will be notified of an approved or rejected Substitution Request Form no later than five (5) business days prior to the submittal deadline. See Sections 1.08.3B and 1.08.3C.

### **REVISIONS TO SPECIFICATION**

A. All revisions to this specification will be in the form of written addenda, and no oral revision should be relied upon for any purpose. In the event it becomes necessary to revise any part of this RFB, addenda will be issued to registered planholders and posted on the Purchasing website at <a href="https://www.TacomaPurchasing.org">www.TacomaPurchasing.org</a>: Navigate to Current Contracting Opportunities / Supplies Solicitations, and scroll to this RFB. Failure to acknowledge addenda may result in a submittal being deemed non-responsive.

#### SIGNATURE PAGE

# CITY OF TACOMA TACOMA POWER / TRANSMISSION AND DISTRIBUTION

All submittals must be in ink or typewritten, executed by a duly authorized officer or representative of the bidding/proposing entity, and received and time stamped as directed in the **Request for Bids page near the beginning of the specification**. If the bidder/proposer is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

# REQUEST FOR BIDS SPECIFICATION NO. PT22-0170F ELECTRICAL AND DATA PVC CONDUIT STICK PIPE

The undersigned bidder/proposer hereby agrees to execute the proposed contract and furnish all materials, labor, tools, equipment and all other facilities and services in accordance with these specifications.

The bidder/proposer agrees, by submitting a bid/proposal under these specifications, that in the event any litigation should arise concerning the submission of bids/proposals or the award of contract under this specification, Request for Bids, Request for Proposals or Request for Qualifications, the venue of such action or litigation shall be in the Superior Court of the State of Washington, in and for the County of Pierce.

#### **Non-Collusion Declaration**

The undersigned bidder/proposer hereby certifies under penalty of perjury that this bid/proposal is genuine and not a sham or collusive bid/proposal, or made in the interests or on behalf of any person or entity not herein named; and that said bidder/proposer has not directly or indirectly induced or solicited any contractor or supplier on the above work to put in a sham bid/proposal or any person or entity to refrain from submitting a bid/proposal; and that said bidder/proposer has not, in any manner, sought by collusion to secure to itself an advantage over any other contractor(s) or person(s).

Bidder/Proposer's Registered Name	Signature of Person Authorized to Enter Date into Contracts for Bidder/Proposer
Address	
	Printed Name and Title
City, State, Zip	
	(Area Code) Telephone Number / Fax Number
Authorized Signatory E-Mail Address	
	State Business License Number in WA, also known as UBI (Unified Business Identifier) Number
E.I.No. / Federal Social Security Number Used on Quarterly Federal Tax Return, U.S. Treasury Dept. Form 941	,
readian rax recuiri, o.e. measury bept. reminer	State Contractor's License Number
	(See Ch. 18.27, R.C.W.)
E-Mail Address for Communications	
Addendum acknowledgement #1	#2 #3 #4 #5
dudendum acknowledgement #1	#2#3#4#5

THIS PAGE MUST BE SIGNED AND RETURNED WITH SUBMITTAL.

Form No. SPEC-080A Revised: 06/01/2021



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## **PROPOSAL SHEETS**

#### **NOTES:**

- 1. Quantities listed on the Proposal Pricing Sheets are an estimate only. Actual quantities will be according to purchase order on an as-needed basis.
- 2. Price adjustments will be made per section <u>1.06.4 Semi-Annual Pricing Adjustment.</u>
- 3. All prices shall be submitted as F.O.B. Destination, freight prepaid and allowed (included in the unit price).

### **VENDOR INQUIRY**

<del></del>	
1.	Does your firm accept payment by EFT/ACH?YN (Electronic Funds Transfer (EFT) by Automated Clearing House (ACH))
2.	Does your firm accept payment by credit card (Visa)?YN NOTE: The City of Tacoma will not accept price changes or pay additional fees when a credit card is used.
3.	Prompt Payment discount offered%, days. Only discounts offered of 20 days or more will be considered for bid evaluation purposes.



Bidder

# **PROPOSAL - PRICING SHEET**

Item #	Conduit Size	MID's	Estimated 3 Year Quantity (In Feet)	Pounds of Resin per Foot	Price per Ft. w/ PVC Resin @ \$1.24/lb	Total Price FOB Destination (Qty X Unit Price)	Lead Time (weeks)
	Stick Cor	nduit, 10 ft	. Schedule 40	Gray PVC C	onduit with Dee	p Socket Bellen	d
1	1/2"	19333	500'	lbs.	\$		
2	3/4"	19334	1,000'	lbs.	\$		
3	1"	19335	2,000'	lbs.	\$		
4	1 1/4"	19336	1,000'	lbs.	\$		
5	2"	19338	800'	lbs.	\$		
6	2 ½"	19339	2,500'	lbs.	\$		
7	4"	19342	1,400'	lbs.	\$		
8	5"	19344	2,000'	lbs.	\$		
9	6"	41890	8,000'	lbs.	\$		
	Stick Co	nduit, 20 f	t. Schedule 40	Gray PVC Co	onduit with Deep	Socket Bellend	t
10	2 ½"	19340	73,000'	lbs.	\$		
11	4"	19343	27,000'	lbs.	\$		
	Stick Co	nduit, 10 f	t. Schedule 80	Gray PVC Co	onduit with Deep	Socket Bellend	t
12	2"	19337	1,500'	lbs.	\$		
13	2 ½"	19341	1,000'	lbs.	\$		
14	4"	19354	1,200'	lbs.	\$		
15	5"	19345	200'	lbs.	\$		
16	6"	41891	200'	lbs.	\$		
	Stick Cor	nduit, 20 ft.	Schedule 40	Green PVC C	onduit with Dee	p Socket Bellen	d
17	2"	21642	60,000'	lbs.	\$		

D: 44	
Bidder	•

## **PROPOSAL - PRICING SHEET (CONT.)**

Sub Total for Proposal	\$
Sales Tax @ 10.3%, Location Tax Collected: Tacoma, WA	¢
(Note Paragraph 1.41 of Standard Terms and Conditions)	φ
Total for All Items with Tax	\$

### **Vendor Managed Inventory:**

To expedite lead times and mitigate pricing fluctuations, the City requires the Supplier/Contractor maintain inventory in the quantities noted below solely for use by the City. The City shall not take ownership of the items until they are delivered to the specified City location. The City agrees to purchase remaining inventory, not to exceed the agreed upon quantities, upon expiration of the contract, unless extended. Supplier/Contractor has the option to hold inventory in addition to the agreed upon amount with notice to the City. However, the City will not guarantee purchase of this additional inventory.

Conduit Size	MID	Vendor Managed Inventory
1/2"	19333	80'
3/4"	19334	100'
1"	19335	300'
1 1/4"	19336	200'
2"	19338	150'
2 ½"	19339	500'
4"	19342	250'
5"	19344	350'
6"	41890	1,300'
2 ½"	19340	12,000
4"	19343	4,500'
2"	19337	250'
2 ½"	19341	150'
4"	19354	200'
5"	19345	50'
6"	41891	50'
2"	21642	10,000'



Ridder	

## **PROPOSAL - CONDITIONS SHEET**

The City requires that Respondents determine the cost of compliance with the City's terms and conditions, and include such costs into the unit prices of the items in the Respondent's submittal. Unless a bid responds to the specification in all material respects, it is not a responsive bid. Acknowledge each question with a checkmark ☑ to indicate your response.

1.	Does your submittal make any restrictions or take any exceptions
	to the conditions or provisions outlined in this Specification?

YES	
NO	

2. Do all items submitted per this Specification meet and/or exceed the requirements of the Technical Provisions (Section 2)?

YES	
NO	



List the standard used by your firm:

## Material Specification PT22-0170F Electrical and Data PVC Conduit Stick Pipe

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# **PROPOSAL - VENDOR QUALIFICATION**

Manufacturer	Manufacturing Loca	tions	
State the number of years you products of a similar scope to See Section 1.01.3 for minimum.	those outlined in this Specification.		Years
. •	arty certified quality assurance 9001, ISO 9002, ANSI/ASQC	YES	
Q91, or ANSI/ASQC Q92?		NO	





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# **PROPOSAL - REFERENCES DATA SHEET**

(AS DESCRIBED IN SECTION 1.01.3A)

Seven (7) Utility references are the absolute minimum allowed

UTILITY NAME AND ADDRESS	YEAR PRODUCT SOLD	CONTACT NAME	TELEPHONE NUMBER

## **SUB-VENDOR DATA SHEET**

(AS DESCRIBED IN SECTION 1.01.4)

SUB-VENDOR NAME AND ADDRESS	CONTACT NAME	TELEPHONE NUMBER	DESCRIPTION OF WORK PROVIDED

# **STANDARD TERMS & CONDITIONS REFERENCES**

The following identified paragraphs of the City of Tacoma Standard Terms and Conditions have been referenced or modified within Section 1 – Special Provisions:

Standard Terms & Conditions	Description	Special Provisions	Description
1.16	– Acceptance of submittals	1.06.1	– Prices Quoted
1.20	– Evaluation of Submittals	1.13	– Evaluation & Award
1.20.A.1	– Evaluation Factors	1.01.3	– Qualifications
1.22	– Award	1.01.1A	– Award of Contract
1.36	<ul> <li>Approved Equals when Alternates are Allowed</li> </ul>	1.12.1	– Determination of Equality
1.37	– Risk of Loss, Shipping and Delivery	1.17.1 1.17.2	<ul><li>Delivery Time</li><li>Delivery Location</li></ul>
1.39	– Packing Slips and Invoices	1.16.3 1.19.1	<ul><li>Shipping Notices</li><li>Invoices</li></ul>
1.35	Contract Pricing	1.06.3	– Quantities and Purchase Orders
1.40	Cooperative Purchasing	1.21	- Cooperative Purchases
1.10	– Warranties/Guarantee	1.18.3	– Warranty
1.27	– Termination and Suspension	1.05.4	Cancellation of Contract

Note that the provisions found in Section 1 and Section 2 will prevail over any conflicting provisions found in the Standard Terms and Conditions of this RFB.

## **SECTION I – SPECIAL PROVISIONS**

#### **1.01 - SCOPE OF BID**

#### <u>1.01.1 - PURPOSE</u>

The purpose of these Specifications is to define the scope of supply of materials that meet the minimum requirements as to quality, function, and capacity as outlined in the Special and Technical Provisions that follow.

#### 1.01.1A - AWARD OF CONTRACT

With this solicitation, the City intends to award a single contract and does not anticipate award to multiple Suppliers. Regardless, the City reserves the right to award to one or more Suppliers, or make no award, in the best interest of the City.

#### **1.01.2 - DEFINITIONS**

For the purposes of this Specification, the following definitions shall apply:

Term	Definition
RESPONDENT	A potential Supplier offering a submittal to supply equipment in accordance with these Specifications.
SPECIFICATION	This document, detailing the scope of supply.
SUPPLIER/CONTRACTOR	The Respondent(s) awarded a contract pursuant to these Specifications.
SUB-VENDOR	Any Supplier providing parts, materials, and/or services to the Supplier under these Specifications.
EQUIPMENT/ MATERIAL	A fully functional piece of equipment/material supplied and tested in accordance with these Specifications.
MANUFACTURER	The original manufacturer of the equipment/material.
ENGINEER	The project engineer and/or contract administrator.
CITY	The City of Tacoma, Tacoma Power.
DELIVERY TIME	The length of time starting at the date of Supplier receipt of a purchase order or notice to proceed and ending at the time that the item(s) are received at Tacoma Power.

#### 1.01.3 - QUALIFICATIONS

To further detail the requirements of Section 1.20.A.1 of the City Standard Terms and Conditions, only submittals which offer products from manufacturers experienced in the supply of materials as detailed within this Specification over a period of *five (5) years* or more will be considered responsive. A responsive submittal will demonstrate a record of successful completion of contracts similar in scope and size to that outlined in this Specification. The City shall be the sole judge of the Respondent's ability to meet the requirements of this paragraph.

#### 1.01.3A - REFERENCES

Each Respondent shall complete the "References Data Sheet" as required in the proposal section. A minimum of seven (7) references over the past five (5) years is required.

#### 1.01.3A.1 - CHANGE OF OWNERSHIP

References are intended to be for material/equipment currently supplied under the proposed manufacturer's name. References for material/equipment that has been previously supplied under a different Company's name shall be clearly noted on the reference list.

#### 1.01.3A.2 - DEFINITION OF REFERENCED UTILITIES

The Respondent shall list as references, only those utilities that have purchased material/equipment as the Respondent proposes to offer to the City, from these Specifications.

# 1.01.3B - RESPONDENTS ORIGINATING FROM OUTSIDE THE UNITED STATES

Respondents that originate bids from outside the legal jurisdiction of the United States of America will be subject to the City of Tacoma's Legal Department opinion as to the viability of possible litigation pursuant to a supply contract resulting from this Specification. If it is the opinion of the City of Tacoma's Legal Department that any possible litigation would be beyond reasonable cost and/or enforcement the bid may be excluded from evaluation.

#### **1.01.4 - SUB-VENDORS**

The Respondent shall list, on the form provided, all sub-vendors it intends to use to fulfill requirements in any part of this Specification. Included in the listing shall be the sub-vendor's name, address, and telephone number; contact name; and description of work they will perform. It shall be the responsibility of the awarded Supplier to police, enforce, and ensure that all work performed by any sub-vendor shall be in accordance with this Specification.

#### 1.02 - CONTACT PERSON

#### **1.02.1 - BID INQUIRIES**

Respondent inquiries pertaining to this Specification shall be submitted as directed on the Submittal Instructions Page.

#### 1.03 - PREBID CONFERENCE

A pre-bid conference shall not be required for the acquisition of the material contained in this Specification.

#### 1.04 - POST-AWARD MEETING

A post-award meeting is not scheduled for this bid.



#### **1.05 - CONTRACT**

### 1.05.1 - CONTRACT PERIOD

The contract is intended for a minimum of three (3) years from the award date of the contract.

#### 1.05.2 - CONTRACT EXTENSIONS

Two contract extensions of up to one year per occurrence may be considered upon mutual agreement of both parties to extend the contract under the same terms and conditions of the original contract.

#### 1.05.3 - AWARD DATE OF CONTRACT

The <u>Award Date of Contract</u> is the date that the City of Tacoma Purchasing Division issues the contract. This occurs after the Tacoma Public Utilities Board approves the award of this Contract and all documents (if required) have been returned to the Purchasing Division.

#### 1.05.4 - TERMINATION OF CONTRACT

The City reserves the right to cancel the Contract at any time upon prior notice to the Supplier (refer to Section 1.27 of the Standard Terms and Conditions).

#### 1.06 - PRICING AND PURCHASE ORDERS

#### 1.06.1 - PRICES QUOTED

Per City of Tacoma Standard Terms and Conditions Section 1.16, the prices quoted on the Proposal Pricing Sheets shall remain open for acceptance by the City for a minimum of 30 days from the submittal deadline. Upon award of a contract the unit prices will be adjusted to the most current value of the "Chemical Data Index (CDI) PVC Resin" as outlined in Section 1.06.4A. Subsequently the prices will be adjusted semi-annually. This process of price adjustment will remain consistent through any contract extension periods.

#### 1.06.2 - FREIGHT ALLOWANCES

The Respondent shall provide prices including delivery F.O.B. Destination, Pre-Paid and Allowed (included in unit price), as noted on the Proposal Pricing Sheets.

#### 1.06.3 - QUANTITIES AND PURCHASE ORDERS

The quantities listed on the "Proposal - Pricing Sheet" are an estimate only using historical data gathered from the previous six (6) years. Delivery will be according to purchase order issued on an as-needed basis throughout the contract. The City reserves the right to increase or decrease quantities under this contract (refer to Section 1.35 of the Standard Terms and Conditions). The purchase order will be delivered to the Supplier by email.

#### **1.06.3A - WORKING DAYS**

Working days are weekly Monday through Friday. City observed holidays as listed in City Standard Terms and Conditions Section 1.24 would not be included.

#### 1.06.4 - SEMI-ANNUAL PRICING ADJUSTMENT

On a semi-annual basis, the unit prices of the items bid may be adjusted reflecting the percentage change of *Chemical Data Index (CDI) PVC Resin*. If another resin index is preferred for the quarterly unit price adjustment, this may be submitted with the bid proposal for evaluation.

The use of a third party index such as "*CDI*" greatly simplifies the contract evaluation and award by requesting all Respondents to utilize the same process for escalation. Therefore the evaluation process as listed in Section 1.13 does not need to take into account future



escalations when determining the responsible bidder (s) with the lowest responsive bid. The index also allows for a near automatic process of unit price adjustments without the concern for additional oversight by auditors for either side of the agreement.

#### 1.06.4A - FIRST ADJUSTMENT AFTER AWARD

Upon award of a contract the unit prices will be adjusted to reflect the most current value of "*CDI PVC Resin*".

#### 1.06.4B - PVC RESIN PRICE ADJUSTMENT FOR STICK PIPE

Step	Action		
1	In the first week of <b>each six (6) month period</b> , the Supplier will submit an adjusted price sheet to the Tacoma Power contract manager. The adjusted pricing will be based upon the value of the <i>CDI PVC Resin</i> from the prior quarter. The information supplied shall demonstrate how the item prices were adjusted.		
	Price Source PVC – Pipe (USA Chemical Data Index (CDI) Domestic)		

#### 1.06.4B.1 – RESIN INDEX CALCULATION

To simplify the evaluation process It is preferred that all Respondents submit proposal pricing agreeable to quarterly adjustment based upon the PVC Resin price formula noted below. The calculation is a function of the change in resin costs and the percentage of resin in the compound for each size conduit.

(Unit Price @ .90 resin)\*(1-((2% resin modifier)\*(.90 resin - CR)\*(Comp%)))

CR = Current Resin Cost "*CDI PVC Resin*" value in cents Comp% = Compound Resin Percent in pipe 2% = Percent Modifier for every .01 change in resin index

#### 1.06.4C - APPLICATION

The price to be paid by Tacoma Power will be based on the CDI PVC Resin value in effect within the date of the purchase order creation, <u>NOT THE DATE OF SHIPMENT</u>. Purchase orders received within the first 3 business days of the six (6) month period, provided they were created at the end of the prior six (6) month period, shall be billed at the prior six (6) month period rate.

#### 1.06.5 - UNSCHEDULED ADJUSTMENTS

At the City's discretion, the pricing adjustment terms may be waived for extraordinary conditions that could not have been known by either party at the time of bid or other circumstances beyond the control of both parties.

Requests for increases or decreases, other than scheduled, shall be sent to the Engineer/Contract Manager accompanied by documentation supporting the requested change. No other individual or City Department is authorized to approve such modifications. Changes shall be considered effective upon Supplier's receipt of a revised



contract document. Concurrence is implied unless Supplier rejects the changes in writing immediately upon receipt of the revised contract document.

#### 1.06.6 - PROMOTIONAL PRICING

City is entitled to any promotional pricing during contract period that is lower than the Supplier's pricing as provided in bid. This promotional pricing shall include, but not be limited to: sale prices, price lowering, and/or lump-sum rebates.

#### 1.07 - PERFORMANCE BOND/BID BOND

The Performance and Bid Bonds have been waived for this contract.

#### 1.08 - RESPONDENT'S PROPOSAL

### 1.08.1 - RESPONDENT REQUIREMENTS

Submittals must be emailed with the Specification number, Specification title, and Respondent name in the subject line, and received by the City of Tacoma Purchasing Division by the date and time specified in the "Request for Bids" page or subsequent addenda.

The bid package submitted must be returned with the Respondent's proposal filled in as directed, including all data requested by the Provisions of these Specifications. All blank spaces on the Proposal forms will be properly filled in, printed in ink or typewritten.

#### 1.08.1A - SIGNATURE PAGE

The "Signature Page" included with the original submittal shall be **signed** by the responsible company official and include printed or typewritten designation of the office they hold in the company.

### 1.08.2 - ALTERNATE BIDS

All bids including alternates shall include an original Signature Page. Each bid package submitted must be returned with the Respondent's proposal completed as directed, including all data requested.

#### 1.08.2A - ALTERNATE BID PROPOSALS

Alternate bid proposals must be submitted as a separate bid package and identified as "ALTERNATE".

#### 1.08.2B - ALTERNATE MATERIALS

If the Respondent elects to bid alternative equipment a Substitution Request Form (Appendix #2) must be submitted by email to Tisha Rico, <a href="mailto:trico@cityoftacoma.org">trico@cityoftacoma.org</a>, a minimum of seven (7) business days prior to the submittal deadline. Respondents will be notified of an approved or rejected Substitution Request Form no later than five (5) business days prior to the submittal deadline.

An approved Substitution Request Form shall not indicate acceptance of the alternate by the City. Complete data must be submitted with the bid, including the information as requested in Section 1.12.1A "Required Materials". The data shall demonstrate that the alternative item is of a quality equal to or better than that specified and has the required characteristics for the intended use. Failure to submit such data will render the bid **non-responsive**.



#### 1.08.2C - ALTERNATE EVALUATION

Upon request, the Respondent shall furnish to the City, within five (5) working days, additional information relating to such alternative items as the City may require. In the event that the equivalency is not readily ascertained from the information supplied by the Respondent, the City may test the material/equipment or have it tested. The Respondent shall bear all expenses of the City's determination of whether or not alternative equipment, materials, or processes are equal to those designated.

#### 1.08.3 - ENGLISH LANGUAGE REQUIREMENTS

All drawings, correspondence, catalogs, submittals, nameplates, etc., shall be in the English language as used in the U.S. Dimensions and tolerances shall conform to ANSI Y14.5M and shall be in the U.S. customary units. If units are fabricated utilizing SI units (metric system), both units shall be shown on the drawings, nameplate, etc. U.S. units shall be shown above the SI units. Conversion tolerances shall have a maximum tolerance of 1/32-inch (2.70 mm) and/or one ounce (28.4 grams).

#### 1.08.4 - COSTS TO PREPARE SUBMITTAL

The City is not liable for any costs incurred by the Respondent for the preparation of materials or a proposal submitted in response to this RFB, conducting presentations to the City, or any other activities related to responding to this RFB.

#### 1.08.5 - EXPANSION CLAUSE

Any resultant contract from this RFB may be further expanded in writing to include other related services or products normally offered by the Contractor, as long as the price of such additional services or products have a profit margin equal to or less than that in place at the time of original submittal. Such additions and prices will be established in writing. New items not meeting these criteria will not be added to the contract. Contractor profit margins are not to increase as a result of contract additions.

Any new products or services accepted by the City may be added to this contract and/or substituted for discontinued products or services. New products and services shall meet or exceed all Specifications of original award.

#### 1.09 - ITEMS TO BE INCLUDED WITH BID

#### 1.09.1 - PRODUCT DATA SHEETS

The Respondent shall include with their submittal manufacturer product data sheets (cut sheets) for each material to be supplied. Manufacturer data furnished <u>must be sufficient in detail and clarity</u> to enable making a complete and positive check with compliance of the Technical Provisions of this Specification.

#### 1.09.2 - MANUFACTURER'S QUALITY ASSURANCE POLICY

One (1) copy of the manufacturer's internal "Quality Assurance" policy for the equipment to be supplied shall be included with the submittal. The documentation shall include third party certification of ISO 9000 series qualifications. The policy documents shall include examples of inspection processes and quality control measures utilized to insure supply of a reliable product. Submitted information will be referenced during the bid evaluation. (refer to Section 1.13.2).

#### 1.09.3 - MANUFACTURER'S FACILITY INSPECTION REPORTS

The Respondent shall include the results of the past 2 factory inspection reports conducted to certify that materials meet the test standards as outlined in Section 4.04.1. Reports are required for each facility that will manufacture the materials offered in the submittal.



#### 1.10 - SAFETY AND STANDARDS

The Items supplied shall meet appropriate ANSI, OSHA, WISHA, and all federal, state, and local standards for its intended use. Refer to Section 2.01.4 for specific industry standards that apply to the Specifications of this bid.

#### 1.11 - MATERIALS, DESIGN, WORKMANSHIP, AND TRADE NAMES

Unless otherwise noted in this Specification, all materials and equipment incorporated into any item covered by the Specifications shall be new and of the most suited of their respective kinds for their intended use. All workmanship shall be in accordance with accepted industry practices.

#### 1.11.1 - MANUFACTURING REQUIREMENTS

All major components of the material/equipment must be manufactured or distributed by the original equipment manufacturer and advertised on a factory brochure as a standard or optional component.

### 1.12 - APPROVED EQUAL

The term "approved equal" shall mean that the quality and characteristics of equipment or materials intended for use must be equal to the listed items.

#### 1.12.1 - DETERMINATION OF EQUALITY

The City or its designee will determine the suitability, reliability, and serviceability of a proposed substitute. Refer to Section 1.36 of the Standard Terms and Conditions.

#### 1.12.1A - REQUIRED MATERIALS

To be considered by the City, the request for substitution shall be accompanied with the complete physical data, technical data, certified test results, manufacturer's catalog data, photographs, user's lists, failure data, samples, and the address of the nearest authorized service representative. Any other information, as required by the Engineer, shall be promptly provided upon request. The City shall be the sole arbiter in the determination of equality.

#### 1.13 - EVALUATION & AWARD

Respondents are to provide unit or lump sum pricing for each line item, which will be summed for a subtotal price. Subtotals will be compared amongst each Respondent, including any offered payment discount terms of 20 days or more.

#### 1.13.1 - AWARD OF CONTRACT

The Contract will be awarded to the lowest and best responsible Respondent(s) delivering a responsive submittal in compliance with these Specifications, provided such submittal is reasonable and it is in the best interests of the City to accept. The City, however, reserves the right to reject any and all bids and to waive any informalities in bids received. The award of this contract will not be based on cost alone, as other factors will be considered in the evaluation criteria

#### 1.13.1A - PRICING CONDITIONS OF SPECIAL SECTION 1.06.4

Those bids that do not accept the pricing conditions of Section 1.06.4 may be considered **non-responsive**.



#### 1.13.2 - EVALUATION CRITERIA

In evaluating the proposals, the City will consider any or all of the following:

- Compliance with Specifications
- Proposal prices, listed separately if requested, as well as a lump-sum total
- Minimum order requirements

#### 1.13.2A - OTHER ELEMENTS

The City may also take into consideration other criteria for determining award. Other elements or factors, whether or not specifically provided for in this Specification, which would affect the final cost to and the benefits to be derived by the City, may be considered in determining the award of the contract. The final award decision will be based on the best interests of the City.

#### 1.14 - DELIVERY DATE

Respondents must guarantee delivery times as stated on their Proposal Pricing Summary Sheet. The delivery time will be enforced for all releases of this contract and any contract renewals.

#### 1.14.1 - NOTIFICATION

Notification to deliver product will be by the issuance of a City of Tacoma purchase order (per Section 1.06.3) for the materials described in this Specification. Should delivery not be completed within the time specified in the Respondent's submittal, the Supplier may be subject to liquidated damages (Section 1.15).

#### 1.14.1A - DELAYS BEYOND THE CONTROL OF THE SUPPLIER

Delays caused by problems beyond the control of the Supplier, if fully documented and submitted to the city, may be excused. This allowance shall in no way be construed to apply to or excuse delays caused by negligence on the part of the Supplier. (For additional information, refer to the Force Majeure portion, located in Section 1.15 of this document).

#### 1.15 - FORCE MAJEURE

Unavoidable delays in the prosecution of the work shall include only delays from causes beyond the control of the Supplier and which he/she could not have avoided by the exercise of due care, prudence, foresight and diligence.

The Supplier shall not, be responsible for delays in delivery due to acts beyond his/her or manufacturer's reasonable control, or due to act of god, fire, strikes, epidemics, war, riot, unavoidable delay in transportation or rail car/transport shortages, or documented unavoidable material shortages, provided the City is notified in writing by the Supplier of such pending or actual delay and the reasons therefore. If deemed excusable, the City shall authorize an extension of time. In the event of such an excusable delay, the date of delivery shall be extended for a period equal to the time lost due to the reason for delay. Any damage assessment or extensions of time are to be authorized by written purchase order changes issued by the City of Tacoma.

### 1.15.1 - TERMINATION OF PURCHASE ORDER RELEASE(S)

If the delay will extend beyond 10 working days, the City may exercise the right to terminate any and all purchase order releases that are affected by the delay and obtain the items required materials from other sources.

#### 1.15.2 - TERMINATION OF CONTRACT

If the delay will extend beyond 60 working days the City may exercise the right to terminate the contract and obtain the items required from other sources.

#### 1.15.3 - CONTRACT EXTENSION

Any contract extension shall be limited to a period of time equal in length to the period of such prevention and/or delay.

#### 1.15.4 - DUE DILIGENCE

It shall be the responsibility of the Supplier to supply the City with adequate documentation to demonstrate that the Supplier exercised due diligence in endeavoring to avoid the delay.

#### 1.16 - PACKING AND SHIPPING

The Supplier shall be responsible for industry standard packing that conforms to the requirements of the carrier's tariffs and the ICC regulations.

#### 1.16.1 - PACKING REQUIREMENTS

Stick conduit shall be banded together with 2x4's in such a manner that standard fork lift truck may lift and stack.

Each pallet and conduit sling shall be labeled with:

- Conduit Size
- Quantity
- City of Tacoma Purchase Order Number

#### 1.16.2 - SHIPPING REQUIREMENTS

Materials shall be shipped in such a fashion that they will arrive at the City without transitassociated damage. A complete packing list must be included.

Tacoma Power reserves the right to request and require a change in shipping company utilized by the Supplier based upon history of damaged goods delivered to Tacoma Power and/or evidence of unsafe work practices by the shipping company.

#### 1.16.3 - SHIPPING NOTICE

The shipper shall notify the Tacoma Power Warehouse a minimum of **24** hours prior to arriving at delivery destination. This notice may be sent **via phone or email** and is required to convey final delivery information and insure sufficient staff available to unload cargo.

Tacoma Power Warehouse			
Contact	Keith Wawrin		
Phone Number	(253) 502-8760		
Email Address	kwawrin@cityoftacoma.org		

#### **1.17 - DELIVERY**

#### 1.17.1 - DELIVERY TIME

The completed materials shall be delivered F.O.B. between 9:00 a.m. and 3:30 p.m. Monday through Friday excluding City observed holidays (refer to Section 1.37 of the Standard Terms and Conditions).



#### 1.17.2 - DELIVERY LOCATION

Deliver completed items F.O.B. as directed by the purchase order release to either:

Tacoma Power Warehouse
3628 South 35th Street (rear)
Tacoma, Washington 98409
Attention: TPU Light Stores - South End
Tacoma Power
South Service Center
3002 224<sup>th</sup> St. E
Spanaway, WA 98387

#### 1.17.2A - ALTERNATE DELIVERY LOCATIONS

The City retains the option to have the merchandise delivered to an alternate facility or on-site within a 35-mile radius of the Tacoma Power Warehouse. Notification of any change will be on the purchase order release.

#### 1.18 - INSPECTION & WARRANTY

All goods are subject to final inspection and acceptance by the Engineer and the appropriate shop foreman.

#### 1.18.1 - FAILURE OF INSPECTION

Material failing to meet the requirements of this specification will be held at Supplier's risk and may be returned to Supplier. If so returned, the cost of transportation, unpacking, inspection, repacking, reshipping, or other like expenses are the responsibility of the Supplier.

Charges for dismantling and reinstallation of materials furnished pursuant to the Contract will be the responsibility of the Supplier only when a change out or replacement is required because of a suspected or known design defect or large scale failure of manufacturer's quality control system.

#### 1.18.2 - FACTORY INSPECTION

The Engineer/Contract manager shall be permitted to witness the manufacture of items supplied per this contract and to perform a "quality audit" of the facility manufacturing.

#### 1.18.2A - QUALITY ASSURANCE AUDITS

The City or its representative may audit the quality assurance program at any time prior to and during the Contract period or its extensions.

#### 1.18.2B - QUALITY ASSURANCE DOCUMENTATION

The manufacturer shall provide, when requested, access to and copies of quality assurance documents such as material certificates, inspection and test results obtained in the course of quality assurance, control charts, and other quality documents compiled during the work.

#### 1.18.2C - FACTORY ASSISTANCE DURING INSPECTION

The manufacturer shall have engineering, manufacturing, quality control, and operational factory personnel available who speak technical and conversational English without the need of an interpreter.

#### **1.18.3 - WARRANTY**

Unless a longer period is specified, the Supplier and/or manufacturer of the supplies, materials and/or equipment furnished pursuant to this Contract agrees to correct any defect or failure of the supplies, materials and/or equipment which occurs within **one year** from the date of commencement of use, however, said warranty period shall not extend beyond **eighteen months** after date of receipt by the City.



When the Supplier is not the manufacturer of the item of equipment, Supplier agrees to be responsible for this warranty and Supplier is not relieved by a manufacturer's warranty.

#### 1.18.3A - WARRANTY PERIOD EXTENSION

The Contract warranty period shall be suspended from the time a significant defect is first documented by the City until the material is repaired or replaced by Supplier and accepted by the City. In addition, in the event less than ninety (90) days remain on the warranty period (after recalculating), the warranty period shall be extended to allow for at least ninety (90) days from the date the work or equipment is repaired or replaced and accepted by the City.

### 1.18.3B - WARRANTY WORK

All matierials requiring warranty work will be returned to the manufacturer at its expense or the manufacturer may replace the defective materials. All replaced materials will be held for pick up (no more than) 30 days after the arrival of replacement materials. Tacoma Power at its discretion will dispose of any materials not picked up within 30 days.

#### 1.18.3B.1 - RETURN TIME FRAME

All warranty repair work on returned material/equipment shall be accomplished within the specified lead-time for delivery listed in the Supplier's bid submittal. Warranty repair time will be calculated from the time the material/equipment defect or failure is reported to the Supplier.

#### 1.19 - INVOICES & PAYMENT

All items called for in these Specifications, including, but not limited to, the necessary drawings and test results, must be supplied to the City before the final invoice can be processed.

#### **1.19.1 - INVOICES**

Invoices shall be emailed to: (Per Section 1.39 of the Standard Terms and Conditions)

AccountsPayable@cityoftacoma.org

#### **1.19.2 - PAYMENT**

Upon certification by the Engineer and/or appropriate warehouse personnel that the items have been received in accordance with the Specifications and are in satisfactory condition, a 100 percent payment will be made. Payment methods include:

- A. Credit card. Tacoma's VISA procurement card program is supported by standard bank credit Suppliers and requires merchants abide by the VISA merchant operating rules.
  - Vendors must be PCI-DSS compliant (secure credit card data management).
  - 2. Vendors must be set up by their card processing equipment provider (merchant acquirer) as a minimum of a Level II merchant with the ability to pass along tax, shipping and merchant references information.
- B. Electronic Funds Transfer (EFT) by Automated Clearing House (ACH).
- C. Check or other cash equivalent.

D. The City may consider cash discounts when evaluating submittals. See 1.20.2 of the Standard Terms and Conditions.

#### 1.19.2A - UNSATISFACTORY PERFORMANCE

In the case of unsatisfactory performance, the payment shall be made after the Supplier has made the necessary repairs and/or modifications and satisfactory performance is obtained, or the unit is replaced.

#### 1.20 - CONTRACT EXCEPTIONS

#### 1.20.1 - NON-RESPONSIVE

Bid proposals that claim exceptions to the terms and conditions stated within these Specifications may be declared non-responsive and the bid proposal may be rejected.

#### 1.20.2 - COST OF COMPLIANCE

The City prefers that the Respondents determine the cost of compliance, with the City's terms and conditions, and include such costs into the unit prices, of the items, in the Respondent's proposal.

#### 1.20.3 - MULTIPLE PROPOSALS

Respondents may submit multiple bid proposals to demonstrate the cost savings associated with acceptance of the Respondent's proposed terms and conditions. Refer to Section 1.08.2 for "Alternate Proposals".

#### 1.21 - COOPERATIVE PURCHASES

The Washington State Interlocal Cooperative Act (RCW 39.34) provides that other governmental agencies may purchase goods and services on this solicitation or contract according to the terms and prices indicated therein if all parties are willing. See Section 1.40 of the City Standard Terms and Conditions.

#### 1.22 - EQUITY IN CONTRACTING

The City of Tacoma is committed to encouraging firms certified through the <u>Washington State Office</u> of <u>Minority and Women's Business Enterprise</u> to participate in City contracting opportunities. See the TMC 1.07 Equity in Contracting Policy at the City's <u>Equity in Contracting Program website</u>.

#### 1.23 - STANDARD TERMS AND CONDITIONS

City of Tacoma Standard Terms and Conditions apply.

# THESE TECHNICAL SPECIFICATIONS HAVE BEEN PREPARED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON.

### **SECTION II - TECHNICAL PROVISIONS**

#### 2.01 - SCOPE

These specifications cover the requirements of electrical conduit tested to UL Approved standards for Schedule 40 and Schedule 80 Rigid PVC Conduit.

#### **2.01.1 – APPLICATION**

The conduit purchased per this specification will be used as raceways in underground and riser applications for primary and secondary 90°C electrical conductors and telecommunications conductors of coax and fiber construction.

### 2.01.2 - INSTALLATION PRACTICE

The vast majority of the installations will be installed in underground applications, terminated in pole riser construction and/or vault entry.

#### 2.01.3 - OPERATIONS REQUIREMENTS

The integrity of the conduit has been a significant factor in the past and continues to be so. The more resistant to crushing and breaking the easier it is to handle and install the conduit. Joining with PVC glue is the current method of connection.

#### **2.01.4 – STANDARDS**

All PVC Conduit shall meet the most recent editions of the following standards and all others that are applicable as referenced in these specifications:

Standard Number	Standard Title
UL 651	Standard for Safety Schedule 40 and 80 Rigid PVC Conduit
UL 746A	Standard for Polymeric Materials
NEMA TC2	Standard for Schedule 40 and 80 PVC Conduit
ASTM F512-19	Standard for PVC Conduit for Underground Installation
ASTM D1784-20	Standard Specifications for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride)(CPVC) Compounds
ANSI C2	National Electric Safety Code

#### 2.01.5 – THIRD PARTY INSPECTION

The <u>gray electrical</u> conduit must be labeled as approved by Underwriter Laboratories (UL) or one of the following NRTLs (Nationally Recognized Testing Laboratories) as meeting the minimum requirements of Standard UL 651:

CSA (Canadian Standards Association)

ETL Intertek Testing Services

**NSF** International

#### 2.02 - CONDUIT CHARACTERISTICS

#### 2.02.1 - OPERATING CHARACTERISTICS

The technical requirements for the conduit supplied per this specification is summarized in the table below per UL Standard 651; dimensions for deep socket integral belled ends are also indicated. Specific technical requirements are described in following sections.

Schedule 40 PVC (<2")							
Characteristic	1/2"	1/2"					
Outside Diameter							
Maximum	0.848"	1.060"	1.325"	1.672"			
Minimum	0.832"	1.040"	1.305"	1.648"			
Average	0.840 ±0.004"	1.050 ±0.004"	1.315 ±0.005"	1.660 ±0.005"			
Inside Diameter							
Minimum Average	0.578"	0.780"	1.004"	1.335"			
Wall Thickness							
Minimum	0.060"	0.060"	0.060"	0.070"			

Schedule 40 PVC (2"-6")						
Characteristic	Characteristic 2" 2 ½" 4" 5" 6"					
Outside Diameter						
Maximum	2.387"	2.890"	4.550"	5.613"	6.675"	
Minimum	2.363"	2.860"	4.450"	5.513"	6.575"	
Average	2.375 ±0.006"	2.875±0.007	4.500 ±0.009"	5.563 ±0.010"	6.625 ± 0.011"	
Inside Diameter						
Minimum	2.021"	2.414"	3.961"	4.975"	5.986"	
Wall Thickness						
Minimum	0.154"	0.203"	0.237"	0.258"	0.280"	

Schedule 80 PVC (<2")				
Characteristic	1/2"	3/4"	1"	1-1/4"
Outside Diameter				
Maximum	0.848"	1.060"	1.325"	1.672"
Minimum	0.832"	1.040"	1.305"	1.648"
Average	0.840 ±0.004"	1.050 ±0.004"	1.315" ±0.005"	1.660 ±0.005"
Inside Diameter				
Minimum Average	0.502"	0.698"	0.910"	1.227"
Wall Thickness				
Minimum	0.147"	0.154"	0.179"	0.191"

Schedule 80 PVC (2"-6")							
Characteristic	2"	2" 2 ½" 4" 5" 6"					
Outside Diameter							
Maximum	2.387"	2.890"	4.550"	5.613"	6.675"		
Minimum	2.363"	2.860"	4.450"	5.513"	6.575"		
Average	2.375± 0.006"	2.875± 0.007"	4.500±0.009	5.563± 0.010"	6.625 ± 0.011"		
Inside Diameter							
Minimum Average	1.881"	2.250"	3.737"	4.713"	5.646"		
Wall Thickness							
Minimum	0.218"	0.276"	0.337"	0.375"	0.432"		

Dimensions of Integral Belled Ends									
Characteristic	1/2"	3/4"	1"	1-1/4"	2"	2 1/2"	4"	5"	6"
Depth of Socket	1.250-	1.250-	1.750-	2.000-	3.000-	3.250-	4.250-	5.250-	6.250-
Depth of Socket         2.000"         2.000"         2.500"         2.750"         3.500"         4.000"         5.250"         6.250"         7.250"									
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### **2.03 – CONDUIT**

### 2.03.1 - PVC COMPOUND

The compound of PVC to be used for conduit supplied per this specification shall meet or exceed the cell classification 12123 as described in ASTM D 1784.

#### 2.03.2 - CONSTRUCTION/EXTRUSION

Conduit supplied per this specification shall meet the minimum requirements of UL Standard 651 and NEMA Standard TC-2.

#### **2.03.3 – MARKING**

Conduit shall be marked in accordance with UL Standard 651 Section 8.

Item Type	Labeling Requirements				
	In accordance with UL Standard 651 Section 8  Conduit Size  Manufacturer				
GRAY	Schedule PVC     Manufacturing Location				
(Electrical)	Max 90°C Wire     Date of Manufacture				
	UL or NRTL Mark				
	In accordance with UL Standard 651 Section 8 plus TPU Telecom labeling				
	Manufacturer				
	Conduit Size     Manufacturing Location				
GREEN	Schedule PVC     Date of Manufacture				
(Data)	Max 90°C Wire     Phone handset symbol				
	"TPU Telecom" from ANSI C2 – NESC				
	"Rigid PVC Conduit"				

#### 2.03.4 - COLOR

Conduit shall be manufactured in the colors listed below

Item Type	Color	
GRAY	Chandard many non NEMA Chandard TO 2. Continu 2.2	
(Electrical)	Standard gray per NEMA Standard TC-2, Section 3.2	
GREEN	Green, the specific color to be approved subsequent to award; sewer	
GILLIA	pipe green not acceptable	
(Data)		

## **2.04 – TESTING**

## 2.04.1 - FACTORY TESTING

All conduit shall meet the testing requirements of UL 651 section 6.

UL 651 Section	Test	Minimum Results (Summary)
6.2	Tensile Strength	Not Less than 5000 psi
6.3	Extrusion Process	No Flaking
6.4	Low-Temperature Handling	two 60" drops @ minus 20° C - no shattering, chips, or cracking
6.5	Water Absorption	No more than 0.50% of its own weight in 24 hours
6.6	Resistance to Impact	No Cracking or Tearing longer than 1/32" in 7 out of 10 specimens
6.7	Identification of Compounds	See Standard
6.8	Deflection under load	See Standard
6.9	Resistance to Crushing	6" specimens of finished conduit shall not flatten under load to the point of buckling per table 6.3
6.10	Integral Couplings	Meet Section 6.3 of the Standard
6.11	Flame Test	Not flame longer than 5 seconds after ignition
6.14	Sunlight Resistance	See Table 6.4 of the Standard
6.15	Conduit for 90°C Conductor	See Standard
6.16	Permanency of Printing	See Standard

### 2.04.1A - LOAD FOR CRUSHING TEST

Per table 6.3 of UL Standard 651 the following loads are applied to testing performed in section 6 of UL Standard 651.

Conduit Size	Load for 6" Lo	ong Specimen
Conduit Size	Schedule 40 (lbf)	Schedule 80 (lbf)
1/2"	1000	
3/4"	1000	
1"	1000	
1-1/4"	1000	
2"	700	2000
2 ½"	1000	
4"	900	
5"	850	
6"	850	

### 2.04.1B - HEIGHT FOR IMPACT TEST

Per table 6.2 of UL Standard 651 the following height is from which a test weight is to be dropped onto sample conduit as applied to testing performed in section 6 of UL 651.

Conduit Size	Schedule 40 20 lb @ a height of:	Schedule 80 75 lb @ a height of:
1/2"	2-1/2'	1-1/4'
3/4"	4'	1-1/4'
1"	5'	2'
1-1/4"	6'	2-1/4'
2"	9 ½'	4'
2 ½"	10 ½'	5'
4"	11'	7'
5"	11'	7'
6"	11'	7'

# **APPENDIX #1**

# **SUBSTITUTION REQUEST FORM**



### **Tacoma Public Utilities**

### SUBSTITUTION REQUEST FORM

Specification No. PT22-0170F

Prospective bidders may request the use of substitute materials below.

All requests must be submitted electronically, via e-mail to <a href="mailto:trico@cityoftacoma.org">trico@cityoftacoma.org</a> no later than seven (7) business days prior to the submittal deadline.

Manufacturer/Model:
Manufacturer Contact Information
Name/Title:
Phone Number:
E-Mail:
Describe the differences between the proposed substitution and specified material:
Please attach documentation from manufacturer that certifies the material meets all the criteria outlined in Technical Specifications of this bid specification.
Contractor Name:
Preparer Name/Title:
Mailing Address:
Phone Number:
E-Mail:
Signature:



## **Tacoma Public Utilities**

INTERNAL USE ONLY	
	Approved as Substitute*
	Rejected – Material Not Acceptable
	Rejected – Inadequate Information
	Rejected – Request Received After Deadline
*Subject to review and approval of submittal documents	
Remarks	
Reviewer Name/Title:	
Signatu	re:Date: