



CITY OF TACOMA
Public Works Engineering Division

ADDENDUM NO. 4

DATE 01/19/2024

REVISIONS TO:

**Request for Bids Specification No. PW23-0264F
S 21st St. & S C St. Signal Project**

NOTICE TO ALL BIDDERS:

This addendum is issued to clarify, revise, add to or delete from, the original specification documents for the above project. This addendum, as integrated with the original specification documents, shall form the specification documents. The noted revisions shall take precedence over previously issued specification documents and shall become part of this contract.

REVISIONS TO THE SUBMITTAL DEADLINE:

The submittal deadline is changed to 11:00 a.m., Pacific Time, Tuesday, February 13, 2024.

REVISIONS TO THE PROPOSAL PAGES:

None

REVISIONS TO THE SPECIAL PROVISIONS:

Special Provision 8-20.3(4) Foundations – Revised paragraph
Special Provision 9-29.6 Light and Signal Standards - Added paragraph
Special Provision 9-29.6(5) Foundation Hardware – Revised paragraph
Special Provision 9-29.13 Control Cabinet Assemblies – Revised sentence
Special Provision 9-29.13(4)A Traffic Signal Controller – Revised paragraph

REVISIONS TO THE PLANS:

None

NOTE: Acknowledge receipt of this addendum by initialing the corresponding space as indicated on the signature page. Vendors who have already submitted their bid/proposal may contact the Purchasing Division at 253-502-8468 and request return of their bid/proposal for acknowledgment and re-submittal. Or, a letter acknowledging receipt of this addendum may be submitted in an envelope marked Request for Bids Specification No. PW23-0264F Addendum No. 4. The City reserves the right to reject any and all bids, including, in certain circumstances, for failure to appropriately acknowledge this addendum.

cc: Jon Kulju, Public Works Engineering

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- Locking junction box security lids, security bolts, and all other wire theft deterrent security hardware

All other equipment shall be removed of and disposed of by the Contractor, including but not limited to the following:

- Wood poles
- All wiring outside of the controller cabinet
- Loops
- Non-LED cobra-head fixtures

8-20.3(4) Foundations

This section is supplemented with the following:

~~Breakaway Base Connection brackets for pedestrian pushbutton poles (Type PPB) shall be installed with the flanges parallel to the traveled way, as shown on WSDOT standard plan J-20.15-03.~~

All pedestrian pushbutton poles (Type PPB) foundations shall be constructed in accordance with WSDOT Standard Plan J-20.10-05 or J-20.11-03. The anchor bolt template shall match base called for in Section 9-29.6(1). Anchor bolts shall be in accordance with Section 9-29.6(5).

Anchor bolts for streetlight standards and for strain poles shall extend a minimum of two threads and a maximum of six threads above the top heavy-hex-nut. A minimum of three threads shall remain between bottom of the leveling hex-nut and the top of the foundation.

Foundations shall be excavated using an auger and poured against undisturbed material unless otherwise approved by the Engineer. Vacuum excavation should be used where there is a possibility of conflict with utilities or other facilities.

Forming the foundation with galvanized culvert pipe or similar forming methods will only be allowed when soil conditions or other factors make this method of construction necessary and is approved by the Engineer. Biodegradable forming tubes shall be fully removed from the cured concrete prior to backfilling. When using culvert or tubes, the following backfill requirements will apply. The area between the form and undisturbed material shall be filled with CDF. For lightly loaded installations and only with the approval of the Engineer, Crushed Surfacing Top Course meeting the requirements of Section 9-03.9(3) may be used. Placement shall be in accordance with Section 2-09.3(1)E and shall be backfilled and compacted in the presence of the Engineer.

8-20.3(5) Conduit

8-20.3(5)A General

This section is supplemented with the following:

As soon as the mandrel has been pulled through, both ends of the conduit shall be sealed in an approved manner. Location wire, in conformance with 9-29, shall be installed in all empty conduits. At least three (3) feet of the location wire shall be neatly coiled and secured to the conduit in the same manner as is shown in Washington State Department of Transportation Standard Plan J-28.70-01, Details A and B.

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1 5-strand, class B galvanized steel, pretwisted guy strand dead ends, high strength cable
2 conforming to ASTM Designation A-475, shall be utilized at all span wire terminations. 1/2" rope
3 wire thimbles shall be required where span wire connects to all poles or bull rings, except where
4 thimble eye bolts are used. Span wire shall normally be installed directly pole to pole, unless
5 otherwise directed or specified.

6
7 Strain insulators shall be installed where connecting to wood poles. Where span wire is
8 connected to a steel or concrete pole, insulators shall not be installed. Strain insulators shall be
9 wet process, porcelain, conforming to EEI-NEMA Class 54-2 standards for 12,000-pound
10 ultimate strength and shall be installed 9 feet from the pole.

9-29.6 Light and Signal Standards

11
12 *This section is supplemented with the following:*

13
14 All light and signal standards shall be fixed base.

15
16
17 The head of the handhold security bolt shall be flush with the face of plate. The face plate of
18 the handhole shall be flush with pole.

19
20 The contractor shall provide and install pedestrian pushbutton poles (Type PPB) where shown
21 on the Plans. The Type PPB to be provided shall have a 7-inch square and 10-inch high
22 aluminum frangible with aluminum door and grounding lug, with pole threaded into the base.
23 The pole shall be aluminum, 4.5-inch outside diameter, Schedule 40, with no finish. Set screws
24 shall be used to secure the pole to the base. A pole cap with set screws shall be provided and
25 installed on the pole top. The bolt circle for the base shall be 6 inches. Foundation shall be in
26 accordance with Section 8-20.3(4). Anchor bolts shall be in accordance with Section 9-29.6(5).

9-29.6(3) Timber Light Standards, Timber Strain Poles, Timber Service Supports

27
28 *This section is supplemented with the following:*

29
30 All timber poles shall be Class II unless otherwise specified.

31
32 Mast arms for wood poles shall be "tapered elliptical" or "tapered truss" style, of a size sufficient
33 to be used with a luminaire weight of 48 pounds with an EPA of 1.1 square feet. Arms shall
34 have 2-3/8 inches O.D. x 8-inch long slip fitter for mounting luminaire.

9-29.6(5) Foundation Hardware

35
36 *This section is supplemented with the following:*

37
38 ~~All pedestrian pushbutton poles (Type PPB) shall be installed utilizing a Breakaway Base~~
39 ~~Connection system in conformance with WSDOT standard plan J-20.15-03. Bracket shall be~~
40 ~~sized to accommodate a standard push button pole with an outside diameter of 3.5 inches.~~
41 ~~Anchor bolt receivers shall be installed at 2 3/4 inch by 7 15/16 inch on center.~~

42
43 All pedestrian pushbutton poles (Type PPB) shall be installed utilizing anchor bolts with WSDOT
44 Standard Plan J-20.10-5 and J-20.11-03, with 5/8-inch diameter and hot dip galvanized or
45 stainless steel and shall meet ASTM F1554 Grade 36 specifications. Supplied with each anchor
46 bolt shall be two hex nuts, meeting the requirements of ASTM A563, Grade A and two flat
47 washers, meeting the requirements of ASTM F436.

Addendum #4

1 9-29.13 Control Cabinet Assemblies

2 *This section is revised to read:*

3
4 The Traffic Controller Cabinet Assembly shall be completely wired and tested to the 2003
5 NEMA TS2 Traffic Controller Assemblies Specification with NTCIP Requirements Version
6 02.06, as amended by these specifications.

7
8 Cabinets shall be compatible with both Siemens M50 and M60 series controllers **Econolite**
9 **Cobalt EOS Controller.**

10
11 The following submittals will be required for the review and approval by the City prior to
12 fabrication and wiring:

- 13
- 14 1. Proposed cabinet layout diagram including shelving/rack locations. In addition, detailed
15 diagrams shall be provided for the left side, right side, and back panels. Drawings shall
16 be clearly labeled and dimensioned.
 - 17 2. Proposed cabinet wiring diagram shall be submitted for the review and approval by the
18 City. Wiring of cabinets shall not commence prior to City approval of the cabinet wiring
19 plan.

20 All submittal comments shall be incorporated into a final set of prints and each cabinet shall be
21 furnished to three (3) complete sets of cabinet prints. All cabinet wiring, and layout shall come
22 on (1) E1 size sheet, multiple pages shall not be allowed. Upon request (1) CDROM or USB
23 flash drive with AutoCAD v2008 cabinet drawing for the cabinet wiring.

24
25

26 9-29.13(1) Traffic Control Cabinets

27 Each Traffic Controller Cabinet shall meet the following general operating requirements:

- 28 1. The wired cabinet facility shall use the latest technology applicable meeting the
29 requirements identified by these specifications.
- 30 2. The cabinet shall be designed for 16 channel operation. Load switch(s) 1-8 shall be
31 vehicle phases 1-8; load switch(s) 9-12 shall be pedestrian phases 2, 4, 6, 8; load
32 switch(s) 13-16 shall be overlaps A, B, C, & D; these load switch sockets shall be
33 configured in this manor without rewiring the back side of the load-bay. BIU load switch
34 drivers 1-16 shall be wired to appropriate load switch socket.
- 35 3. The cabinet shall be wired for (32) channels of detection and (4) channels of Opticom™
36 preemption.
- 37 4. The use of PC boards shall not be allowed except in detector racks and SDLC interface
38 panels. With the exception of detection racks, the use of plug and play modules shall
39 not be allowed
- 40 5. All cabinet 120VAC wires shall be 18AWG or greater, including controller "A" and MMU
41 "A & B" cables.
- 42 6. All welds shall be free from burrs, cracks, blowholes or other irregularities.
- 43 7. The cabinet shall be UL listed.

44
45
46

Addendum #4

9-29.13(3)G Auxiliary Switch Panel

The cabinet shall include an auxiliary switch panel mounted to the interior side of the police panel compartment on the cabinet front door. The panel shall be secured to the police panel compartment by (2) Philips head screws and shall be hinged at the bottom to allow access to the soldered side of the switches. Both sides of the panel shall be silkscreened. All of the switches shall be protected by a hinged see-through Plexiglas cover.

The following switches shall be included:

1. **Controller ON/OFF Switch:** There shall be a switch that renders the controller and load-switching devices electrically dead while maintaining flashing operations for purpose of changing the controller or load-switching devices. The switch shall be a general-purpose bat style toggle switch with 0.688-inch long bat.
2. **Signals ON/OFF Switch:** There shall be a switch that renders the field signal displays electrically dead while maintaining controller operation for purpose of monitoring controller operations. The switch shall be a general-purpose bat style toggle switch with 0.688-inch long bat.
3. **Stop Time Switch:** There shall be a 3-position switch labeled “Normal” (up), “Off” (center), and “On” (down). With the switch in the “Normal” position, a stop timing command shall be applied to the controller by the police flash switch or the MMU (Malfunction Management Unit). When the switch is in its “Off” position, stop timing commands shall be removed from the controller. The “On” position shall cause the controller to stop time. The switch shall be a general-purpose bat style toggle switch with 0.688-inch long bat.
4. **Technician Flash Switch:** There shall be a switch that places the field signal displays in flashing operation while the controller continues to operate. This flash shall have no effect on the operation of the controller or MMU. The switch shall be a general-purpose bat style toggle switch with 0.688-inch long bat.
5. **Light Switch:** There shall be a switch that turns cabinet lighting off with the main door open. The switch shall be a general-purpose bat style toggle switch with 0.688-inch long bat.

9-29.13(4) Auxiliary Equipment

9-29.13(4)A Traffic Signal Controller

~~Traffic Signal Controller shall be a Siemens Controller, EPAC M62 with an ATC Communications Module. The CPU operating system shall be Linux. The Contractor shall contact the City of Tacoma Traffic Signal Shop at 253-491-5287 to obtain the current firmware version to be utilized.~~

Traffic Signal Controller shall be an Econolite Cobalt Shelfmount Controller with an Advanced Transportation Controller (ATC) Communications Module and thin film transistor liquid crystal display (TFT LCD) screen. The CPU operating system shall be Linux-based. The Contractor shall contact the City of Tacoma Traffic Signal Shop at 253-591-5287 to obtain the current firmware version to be utilized.

9-29.13(4)B Malfunction Management Unit (MMU)

The cabinet shall come with a Malfunction Management Unit (MMU). The cabinet shall come with a (MMU) that meets all the requirements of NEMA TS2-2003 while remaining downward