

## ADDENDUM NO. 2

**PROJECT NAME:** 2022 Repair and Maintenance of the City of St. Louis Parking Garages and Surface Lots

**PROJECT NO:** 50-22139 & 50-22140

**DATE:** August 24<sup>th</sup>, 2022

**OWNER:** Prepared For  
Treasurer's Office  
City of St. Louis  
421 S. 10<sup>th</sup> Street  
St. Louis, Missouri 63102

**Engineer:** DESMAN, Inc.  
20 North Clark Street, 4<sup>th</sup> Floor  
Chicago Illinois 60602  
312-263-8400

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This addendum is issued prior to the acceptance of bids and is intended to modify and/or interpret the bidding documents by additions, deletions, clarifications and/or corrections. Contractor shall acknowledge in his proposal receipt of this addendum. This addendum shall be made a part of the contract documents. This addendum supplements and/or supersedes the plans, specifications, and all previously dated contract documents. In the case of discrepancies between drawings, specifications or addenda, the addenda shall govern.

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**PART 1 - GENERAL**

**1.1 ADDENDA AND MODIFICATIONS TO PROJECT ARE AS FOLLOWS:**

**A. DRAWINGS**

1. *none*

**B. SPECIFICATIONS**

1. *A new proposal form has been included in this Addendum that adds a line item for light fixture replacement in the Argyle Garage*
2. *A cut sheet for the existing light fixtures in the Argyle Garage has been included in this addendum as a basis for design.*

**C. BID FORM**

1. *none*

**D. BIDDER QUESTIONS**

1. *Contractors are to base their bid on the approved products in the specifications. Substitutions of approved products can submitted as voluntary alternates.*

**PART 2 - NOT APPLICABLE**

**PART 3 - NOT APPLICABLE**

**END OF SECTION 00 91 13**

**00 42 16 PROPOSAL FORM**

Project: 2022 Repair and Preventive Maintenance of the City of St. Louis Parking Garages and Surface Lots

To:

Attn:

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

Submitted By:

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

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

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

The Design of Repairs as prepared by DESMAN, 20 North Clark Street, Suite 300, Chicago, IL 60602, for the construction of said project and having also received, read and taken into account Addenda Nos.:

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and likewise, having inspected the site of and the conditions affecting and governing the cost and construction of said project, the undersigned hereby proposes to furnish all material and perform all labor, as specified and described in said Specifications and as shown in the plans for the said work, for the Contract Amount of:

**SUB-TOTAL FOR BASE BID WORK AT:**

ARGYLE PARKING GARAGE: \$ \_\_\_\_\_

CENTRAL DOWNTOWN PARKING GARAGE: \$ \_\_\_\_\_

CUPPLES STATION PARKING GARAGE: \$ \_\_\_\_\_

KIEL CENTER PARKING GARAGE: \$ \_\_\_\_\_

JUSTICE CENTER PARKING GARAGE: \$ \_\_\_\_\_

CITY HALL PARKING LOT: \$ \_\_\_\_\_

WILLIAMS PARKING LOT: \$ \_\_\_\_\_

**TOTAL AMOUNT FOR BASE BID WORK** \$ \_\_\_\_\_

The scope of work included by this Contract Amount represents the Proposal for work item details and categories indicated in the project documents (drawings and specifications) and the following bid form. This Contract Amount is based on Unit Price Work Items or Lump Sum work items as hereinafter listed for the restoration work and the cost of all other items required for the completion of the work.



material, and protect the new sealant according the manufacturer's recommendations. See specification section 079200 for approved products.

\$ \_\_\_\_\_/LF x 130 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

5. Replace the Expansion Joint Seal at the location shown on the drawings with a new expanded foam joint seal system in accordance with specification section 079500. Unit price includes all required joint preparation (with the exception of repairs due to delaminations) to achieve written acceptance by materials system manufacturer and complete installation. Contractor is to field verify the joint size and submit it to the engineer for approval. Refer to detail 8/R-502.

\$ \_\_\_\_\_/LF x 5 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

6. Installation of new parking area floor drains per Detail 5/R-502 at locations shown on the drawings or as directed by the engineer. New drains are to be connected with piping to nearby existing storm water piping, and the price to install each drain shall include 10' of storm water piping. All necessary piping in addition to the included ten feet shall be billed as part of item 6-ii below. Provide all pipe, connections, joints, and materials to connect to the existing pipes and drainage system. Contractor shall provide all work, labor, materials, equipment, and weather protection as required, and incidentals required to perform all work as described above, per the design drawings & specification, and per manufacturer's instructions, and as directed by the engineer. Contractor shall verify all dimensions and areas required and coordinate other details. Contractor is to paint all drain piping to match existing piping in the garage. Work shall include restoring any waterproofing membrane affected by the installation and tying the new drain into the waterproofing membrane.

Note: Contractor is to submit a plumbing routing plan for review by the Engineer and Owner prior to the installation of new drains.

- i. New Drain Installation:

\$ \_\_\_\_\_/EA x 1 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

- ii. Price per foot of new cast iron piping:

\$ \_\_\_\_\_/LF

7. Installation of a new parking area floor drain **above occupied tenant space** per Detail 5/R-502 at the location shown on Sheet R102.2 of the drawings or as directed by the engineer. New drains are to be connected with piping to nearby existing storm water piping, and the price to install this drain shall include 62' of storm water piping following the presumed path shown on the drawings. All necessary piping in addition to the included 62 feet shall be billed as part of item 7-ii below. Provide all pipe, connections, joints, and materials to

connect to the existing pipes and drainage system and to restore internal finishes affected by the work. Contractor shall provide all work, labor, materials, equipment, and weather protection as required, and incidentals required to perform all work as described above, per the design drawings & specification, and per manufacturer's instructions, and as directed by the engineer. Contractor shall verify all dimensions and areas required and coordinate other details. Contractor is to paint all drain piping to match existing piping in the garage. Work shall include restoring any waterproofing membrane affected by the installation and tying the new drain into the waterproofing membrane.

Note: Contractor is to submit a plumbing routing plan for review by the Engineer and Owner prior to the installation of new drains.

i. New Drain Installation:

\$ \_\_\_\_\_/EA x 1 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

ii. Price per foot of new cast iron piping:

\$ \_\_\_\_\_/LF

8. Clean and Repaint Bollards:

Contractor is to grind any rust to bare metal, clean, prime and repaint bollards to match existing color, as approved by the owner, as indicated on the drawings. Work shall include the removal of any loose concrete around the base plates of the bollards.

\$ \_\_\_\_\_/EA x 9 EA = \$ \_\_\_\_\_

9. Replace Light Fixtures:

Contractor is to remove and replace damaged light fixtures and all wire complete, at locations to be determined by Owner/Engineer. This scope is to be turn-key. See included data sheet for existing light fixtures. Contractor is to submit the existing fixtures or approved equal product prior to installation.

\$ \_\_\_\_\_/EA x 28 EA = \$ \_\_\_\_\_

10. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$ \_\_\_\_\_

**ARGYLE PARKING GARAGE SUB-TOTAL CONTRACT AMOUNT**

\$ \_\_\_\_\_

**B. CENTRAL DOWNTOWN PARKING GARAGE**

**Unit Price for Base Contract (Work Installed)**

1. Project Mobilization and Demobilization including multiphase and/or off-hours work scheduling to meet site constraints of the work in accordance with the scheduling requirements. This item also includes any general or special work permits, licenses, bonds, etc., if any, required to perform the repairs.

Maximum Amount (\$5,000)

LUMP SUM = \$ \_\_\_\_\_

2. Partial depth removal and replacement of top surface horizontal concrete slabs outlined in detail 1/R-501. Work includes saw-cutting along the perimeter of squared off area, removal and disposal of materials, surface preparation, cleaning/coating/ supplementing of all exposed steel components, concrete placement, and proper curing. Assume thickness to average 3 inches. This repair can be performed with either cast in place concrete (section 033000) or fast setting concrete (section 033124).

\$ \_\_\_\_\_/SF x 15 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

3. Remove and replace existing deteriorated control joint sealants at locations shown on the drawings according to detail 6/R-502. Work includes removing the existing sealant, cleaning the joint of all dust and debris, prime the surfaces and fill the joint with an approved sealant material, and protect the new sealant according the manufacturer's recommendations. See specification section 079200 for approved products.

\$ \_\_\_\_\_/LF x 1,750 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

4. Replace the Expansion Joint Seal at the location shown on the drawings with a new expanded foam joint seal system in accordance with specification section 079500. Unit price includes all required joint preparation (with the exception of repairs due to delaminations) to achieve written acceptance by materials system manufacturer and complete installation. Contractor is to field verify the joint size and submit it to the engineer for approval. Refer to detail 8/R-502.

\_\_\_\_\_  
**Bidder's Name**

\$ \_\_\_\_\_/LF x 50 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

5. Replace cover plates with joint at the northwest stair tower per detail 3/R-504 as shown on the drawings. The work includes removal of existing cover plate and the installation of a new stainless-steel cover plate anchored to the concrete slab.

\$ \_\_\_\_\_/LF x 20 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

6. Replace existing sealant at brick to metal façade surround joints at both stair towers at all floors. Includes cleaning the existing joints, removing all existing deteriorated sealant (if any) at designated locations, clean and prepare the surface by approved methods, and install primer and approved sealants according to the detail 4/R-503.

\$ \_\_\_\_\_/LF x 1550 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

7. Provide new "wet-glazing" sealant at glass to metal façade joints at both stair towers at all floors. Includes cleaning the existing joints, removing all existing deteriorated gaskets (if any) at designated locations, clean and prepare the surface by approved methods, install bond breaker tape or backer rod and install primer and approved sealants according to the detail 4/R-503.

\$ \_\_\_\_\_/LF x 2000 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

8. Grind rust to bare metal, clean, prime and repaint handrail at the indicated location shown on the drawings. Contractor is to submit paint color for approval by owner before beginning the painting work.

LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

9. Replace broken floor drain covers at locations shown on the drawings.

\$ \_\_\_\_\_/EA x 2 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

10. Clean and repaint bollards and pipe guards at locations shown the drawings.

\$ \_\_\_\_\_/EA x 4 EA = \$ \_\_\_\_\_



\_\_\_\_\_  
**Bidder's Name**

PRODUCT PROPOSED = \_\_\_\_\_

11. Reinstall flex post bollards at locations shown on the drawings.

\$ \_\_\_\_\_/EA x 6 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

12. Façade Repair Allowance

An allowance has been included in the base bid to provide work to repair the garage facade with the approval of the owner and engineer. Contractor to submit proposal for each use of the Allowance. No work from the allowance is to proceed without approval.

ALLOWANCE = \$ 25,000.00

13. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$ \_\_\_\_\_

**CENTRAL DOWNTOWN PARKING GARAGE SUB-TOTAL CONTRACT AMOUNT**     \$ \_\_\_\_\_

**C. CUPPLES STATION PARKING GARAGE**

**Unit Price for Base Contract (Work Installed)**

1. Project Mobilization and Demobilization including multiphase and/or off-hours work scheduling to meet site constraints of the work in accordance with the scheduling requirements. This item also includes any general or special work permits, licenses, bonds, etc., if any, required to perform the repairs.

Maximum Amount (\$5,000)

LUMP SUM = \$ \_\_\_\_\_

2. Removal and replacement of deteriorated vertical/overhead concrete slabs, beams, and columns outlined in details 3&5/R-501. Work includes, removal and disposal of materials,

**Bidder's Name**

surface preparation, cleaning/coating/supplementing of all exposed steel components, concrete placement, and proper curing. For this work item, the Contractor can utilize trowel applied repair mortars per Specification Section 033715.

\$ \_\_\_\_\_/SF x 25 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

3. Removal of the spalled/deteriorated concrete in the west stair tower by approved methods, sandblast cleaning of the exposed reinforcing steel to remain, applying approved zinc-rich paint onto the exposed steel and installation of supplementary, epoxy-coated reinforcing steel and approved repair material by 'form and pour/pump' repair method to restore the original configuration of the concrete members. (Assume average thickness of 3"). See Detail 3/R-503 and utilize materials per Specification Section 03 37 16.16

\$ \_\_\_\_\_/SF x 100 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

4. Remove deteriorated stair nosing material and install an approved epoxy and sand mixture outlined in detail 5/R-504. Work should be done carefully to prevent damage to frames and utilize epoxy leveling course materials per specification section 071816.

\$ \_\_\_\_\_/EA x 10 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

5. Replace broken floor drain covers at locations shown on the drawings.

\$ \_\_\_\_\_/EA x 1 EA = \$ \_\_\_\_\_

6. Stair tower repair work will include grinding rust to bare metal, cleaning and preparing surface, prime and paint. Any loose concrete around embed plates should be removed and filled with extended epoxy at accessible locations according to detail 2/R-504.

\$ \_\_\_\_\_/LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

7. Handrails are to be secured to the column at loose locations as shown on the drawings. Repair methodology to be approved by engineer.

Allowance = \$ 2,000

PRODUCT PROPOSED = \_\_\_\_\_

8. Grind to bare metal, clean, prime and repaint the metal window and door framing at the west stair tower roof level enclosure. Contractor is to submit paint color for approval by owner before beginning the painting work.

\_\_\_\_\_  
**Bidder's Name**

\$\_\_\_\_\_/LUMP SUM = \$\_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

9. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$\_\_\_\_\_

**CUPPLES STATION PARKING GARAGE SUB-TOTAL CONTRACT AMOUNT**      \$\_\_\_\_\_

**D. KIEL CENTER PARKING GARAGE**

**Unit Price for Base Contract (Work Installed)**

1. Project Mobilization and Demobilization including multiphase and/or off-hours work scheduling to meet site constraints of the work in accordance with the scheduling requirements. This item also includes any general or special work permits, licenses, bonds, etc., if any, required to perform the repairs.

Maximum Amount (\$10,000)      LUMP SUM = \$\_\_\_\_\_

2. Partial depth removal and replacement of top surface horizontal concrete slabs outlined in Details 1/R-501. Work includes saw-cutting along the perimeter of squared off area, removal and disposal of materials, surface preparation, cleaning/coating/ supplementing of all exposed steel components, concrete placement, and proper curing. Assume thickness to average 3 inches. This repair can be performed with cast in place concrete (section 033000).

\$\_\_\_\_\_/SF x 400 SF = \$\_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

3. Removal and replacement of deteriorated vertical/overhead concrete slabs, beams, columns, walls and bollards outlined in Details 3&5/R-501. Work includes, removal and disposal of materials, surface preparation, cleaning/coating/supplementing of all exposed steel components, concrete placement, and proper curing. For this work item, the Contractor can utilize trowel applied repair mortars per Specification Section 033715.

\$\_\_\_\_\_/SF x 120 SF = \$\_\_\_\_\_

\_\_\_\_\_  
**Bidder's Name**

PRODUCT PROPOSED = \_\_\_\_\_

4. Expansion Joint nosing spalls should be repaired according to detail 10/R-503. Work includes removal of nosing material, removal of delaminated elastomeric concrete without damaging wing seal, cleaning the area and utilizing trowel applied elastomeric concrete in accordance with specifications section 071816.

\$ \_\_\_\_\_/SF x 20 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

5. Rout and fill with sealant concrete floor slab cracks at locations shown on the drawings according to detail 6/R-502. Work includes cleaning the crack of all dust and debris, routing the cracks to ½" by ½" V groove, prime the surfaces and fill the joint with an approved sealant material, and protect the new sealant according the manufacturer's recommendations. See specification section 079200 for approved products.

\$ \_\_\_\_\_/LF x 120 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

6. Replace the winged Expansion Joint Seal at locations shown on the drawings with a new system in accordance with specification section 079500. Unit price includes all required joint preparation (with the exception of repairs due to delaminations) to achieve written acceptance by materials system manufacturer and complete installation. Contractor is to field verify the joint size and submit it to the engineer for approval. Refer to detail 8/R-502.

\$ \_\_\_\_\_/LF x 90 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

7. Remove and replace existing deteriorated control joint sealants at locations shown on the drawings according to detail 6/R-502. Work includes removing the existing sealant, cleaning the joint of all dust and debris, prime the surfaces and fill the joint with an approved sealant material, and protect the new sealant according the manufacturer's recommendations.

\$ \_\_\_\_\_/LF x 1,800 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

8. Install new joint filler at locations indicated on drawings according to detail 7/R-502. The work includes the removal of deteriorated sealant, remove debris and prepare surface by manufacturer's guidelines and install an approved sealant with a backer rod. See specification section 079200 for approved products.

\$ \_\_\_\_\_/LF x 80 LF = \$ \_\_\_\_\_

\_\_\_\_\_  
**Bidder's Name**

PRODUCT PROPOSED = \_\_\_\_\_

9. Perform repairs to the ADA Ramp and handrails. The scope of work shall include removing and storing existing handrail, remove all existing handrail post anchors and surrounding concrete, installation of new anchors, vertical handrail posts and placement new concrete around anchors. Weld the existing handrail to new vertical posts all around. Grind rust to bare metal, clean, prime and repaint handrail. Install caulk around new vertical post anchors and clean rust staining from concrete according to detail 8/R-503.

LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

10. Perform repairs to the northeast stair tower. Work includes grinding rust to bare metal, clean, prime and repaint handrails. Remove existing sealant, clean and inspect post bases and notify the engineer of damage or significant corrosion, install new joint sealant at handrail post anchors. See detail 9/R-503.

LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

11. Perform repairs to the northwest stair tower. Work includes grinding rust to bare metal, clean, prime and repaint the bottom 4" of handrails vertical posts. Remove existing sealant, clean and inspect post bases and notify the engineer of damage or significant corrosion, install new joint sealant at handrail post anchors. See detail 9/R-503.

LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

12. Replace damaged vertical handrail posts in northeast and northwest stairwells at the direction of the engineer. Work includes the removal of deteriorated handrail posts, anchors, and surrounding concrete, the installation of new anchors and vertical posts, placement of new concrete and welding the new handrail post to the existing handrail. See detail 8/R-503.

\$ \_\_\_\_\_/EA x 8 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

13. Replace damaged or loose barrier cables at locations shown on the drawings. Replace all existing loose or partially detensioned cables, remove grout at designated pt pockets, clean the pockets, thread a new cable through to the sleeve and stress cables according to detail 7/R-503.

\$ \_\_\_\_\_/EA x 7 EA = \$ \_\_\_\_\_

\_\_\_\_\_  
**Bidder's Name**

PRODUCT PROPOSED = \_\_\_\_\_

14. Splice and retension existing north perimeter barrier cables. Work is to include destressing of the existing deteriorated cable (if necessary), cutting of the existing cable at the indicated locations, the removal of the existing barrier cable, installation of a new galvanized cable and splice connector, and stressing of the new cable following detail 1/R-504.

\$ \_\_\_\_\_/EA x 2 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

15. Replace existing failed "Grabit" barrier cable coupler on the north perimeter barrier cable as indicated on the drawings and restress the barrier cable in accordance with the manufacturer's instructions.

\$ \_\_\_\_\_/EA x 1 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

16. Repair areas of scaled concrete slab according to detail 6/R-501. Contractor should scarify scaled concrete surface, prepare surface for mix, place approved epoxy leveling material per specification section 071816, broadcast aggregate, and cure repair material in accordance with manufacturer's recommendations.

\$ \_\_\_\_\_/SF x 1,000 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

17. Clean, prime and paint exposed steel roof support beams at location shown on the drawings. Contractor is to submit paint color for approval by owner before beginning the painting work.

LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

18. Clean, prime, and repaint base plates of steel bollards shown on the drawings. Color is to match the existing and be approved by the owner.

\$ \_\_\_\_\_/EA x 5 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

19. Remove and replace pipe insulation at locations shown on the drawings.

\$ \_\_\_\_\_/LF x 400 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

20. Perform repairs to the south entry/exit trench drain as directed by the engineer.

Allowance = \$ 8,000

PRODUCT PROPOSED = \_\_\_\_\_

21. Replace broken floor drain covers at locations shown on the drawings.

\$ \_\_\_\_\_/EA x 2 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

22. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$ \_\_\_\_\_

**KIEL CENTER PARKING GARAGE SUB-TOTAL CONTRACT AMOUNT** \$ \_\_\_\_\_

**E. JUSTICE CENTER PARKING GARAGE**

**Unit Price for Base Contract (Work Installed)**

1. Project Mobilization and Demobilization including multiphase and/or off-hours work scheduling to meet site constraints of the work in accordance with the scheduling requirements. This item also includes any general or special work permits, licenses, bonds, etc., if any, required to perform the repairs.

Maximum Amount (\$10,000) LUMP SUM = \$ \_\_\_\_\_

2. Remove and replace existing deteriorated control joint sealants at locations shown on the drawings according to detail 6/R-502. Work includes removing the existing sealant, cleaning the joint of all dust and debris, prime the surfaces and fill the joint with an approved sealant material, and protect the new sealant according the manufacturer's recommendations. See specification section 079200 for approved products.

\$ \_\_\_\_\_/LF x 1,100 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

3. Apply a new clear penetrating silane sealer, per specification Section 071900 to all structurally supported levels of the garage not already or designated to be protected by a waterproofing membrane system. Work includes concrete surface preparation according to the silane sealer manufacturer's requirements and placement of the material according to specifications and detail 2/R-502.

\$ \_\_\_\_\_/SF x 135,000 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

4. Recoat existing waterproofing membrane at locations shown on the drawings and according to Detail 4/R-502. Work includes cleaning and surface preparation of the existing waterproofing surface according to the manufacturer's instruction, and install a new Category B waterproofing membrane system top coat according to Section 071816 of the specifications. This item includes all necessary work to provide an acceptable surface condition to the installation contractor of a new waterproofing membrane system and all testing/inspection required by the membrane manufacturer to warrant the recoat.

\$ \_\_\_\_\_/SF x 26,000 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

5. Restripe all areas of the garage, affected by waterproofing membrane or silane sealer application, layout is to match the existing striping layout. See specification section 099014 for approved concrete striping products.

LUMP SUM = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

6. Remove and replace failed cover plates and gutter system at locations shown on the drawings. Remove the existing cover plates and gutter, and install new expansion joint gutter system and cover plate according to manufacturer's requirements and closely follow details 3&4/R-504.

\$ \_\_\_\_\_/LF x 75 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

7. Splice and retension barrier cables at the locations shown on the drawings. Work is to include destressing of the existing deteriorated cable (if necessary), cutting of the existing cable at the indicated locations, the removal of the existing barrier cable, installation of a new galvanized cable and splice connector, and stressing of the new cable following detail 1/R-504.



\_\_\_\_\_  
**Bidder's Name**

\$ \_\_\_\_\_/EA x 10 EA = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

8. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$ \_\_\_\_\_

**JUSTICE CENTER PARKING GARAGE SUB-TOTAL CONTRACT AMOUNT**                      \$ \_\_\_\_\_

**F. CITY HALL PARKING LOT**

**Unit Price for Base Contract (Work Installed)**

1. Project Mobilization and Demobilization including multiphase and/or off-hours work scheduling to meet site constraints of the work in accordance with the scheduling requirements. This item also includes any general or special work permits, licenses, bonds, etc., if any, required to perform the repairs.

Maximum Amount (\$10,000)    LUMP SUM = \$ \_\_\_\_\_

2. Remove deteriorated concrete from the curb at locations shown on the drawings according to detail 2/R-501. Work includes removal of unsound concrete by sawcutting around the deteriorated area, sandblasting existing reinforcement and applying approved repair material. **Repair is to closely match color and finish of existing curb.**

\$ \_\_\_\_\_/LF x 20 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

3. Remove and replace spalled concrete from sidewalks outlined in detail 5/R-503. Work includes saw-cutting along the perimeter of deteriorated areas, utilizing air-entrained, fiber reinforced concrete and repairing control joints to match existing. **Repair is to closely match color and finish of existing exposed aggregate sidewalk.** Price is to include a 4'x4' mock-up of the sidewalk repair, including one tooled joint, for approval by the owner and engineer prior to commencement of sidewalk repairs.

\$ \_\_\_\_\_/SF x 85 SF = \$ \_\_\_\_\_

\_\_\_\_\_  
**Bidder's Name**

PRODUCT PROPOSED = \_\_\_\_\_

4. Grind uneven surfaces on sidewalk panels to eliminate tripping hazards at locations shown on the drawings.

\$\_\_\_\_\_/EA x 3 EA = \$\_\_\_\_\_

5. Perform repairs to the ADA Ramp and handrails. The scope of work shall include removing and storing existing handrail, remove all existing handrail post anchors and concrete curb, form and pour new concrete curb including placement of new handrail post anchors. Weld the existing handrail to new vertical posts all around. Grind rust to bare metal, clean, prime and repaint handrail. Install caulk around new vertical post anchors and clean rust staining from concrete according to details 2/R-501 & 8/R-503.

LUMP SUM = \$\_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

6. Lower Lot East Portion Asphalt Slab Repairs.

- a. Demolition-Surface milling/removal of existing paving down to the existing granular subgrade. The existing asphalt paving thickness is approximately 3 inches with a surface course thickness nominally 1 ½ inches and binder course nominally 1 ½ inches. This work also includes grading, supplementing and proof rolling the existing subbase as required. See detail 2/R-503 and specification section 02 50 00.

\$\_\_\_\_\_/SF x 36,500 SF = \$\_\_\_\_\_

- b. Subgrade Repairs- Upon removal of existing asphalt and proof rolling of exposed subgrade excavate weak areas of subgrade plus 12 inches of native soil. Replace excavated native soil and existing subgrade with new granular fill, grade and compact as specified.

\$\_\_\_\_\_/CU. YD x 100 CU. YD = \$\_\_\_\_\_

- c. New Hot Mix Asphalt Concrete (HMAC)- Furnish, tack place and compact the specified Standard MoDOT mix design HMAC 1 ½ inch (compacted thickness) of binder/base course 1 ½ inch (compacted thickness) of surface/wearing course. See detail 2/R-503 and specification section 02 50 00.

\$\_\_\_\_\_/SF x 36,500 SF = \$\_\_\_\_\_

- d. Restripe all areas of the City Hall Lower Parking Lot – East Portion, affected by the resurfacing and replacement work. Layout is to match the existing striping layout. See specification section 099014 for approved products

LUMP SUM = \$\_\_\_\_\_

7. Upper Lot Asphalt Slab Repairs.

- a. Clean and sealcoat the City Hall Upper Parking lot area in accordance with specification section 02 50 00.

\$ \_\_\_\_\_/SF x 80,500 SF = \$ \_\_\_\_\_

- b. Restripe all areas of the City Hall Upper Parking Lot, affected by the sealcoating work. Layout is to match the existing striping layout. See specification section 09 90 14 for approved products.

LUMP SUM = \$ \_\_\_\_\_

8. Alderman Lot Asphalt Slab Repairs.

- a. Clean and sealcoat the Alderman Parking lot area in accordance with specification section 02 50 00.

\$ \_\_\_\_\_/SF x 30,000 SF = \$ \_\_\_\_\_

- b. Seal asphalt cracks at locations shown on drawings and/or directed by Engineer in field in accordance with specification section 02 50 00.

\$ \_\_\_\_\_/LF x 1,200 LF = \$ \_\_\_\_\_

- c. Restripe all areas of the Alderman Parking Lot, affected by the sealcoating work. Layout is to match the existing striping layout. See specification section 09 90 14 for approved products.

LUMP SUM = \$ \_\_\_\_\_

9. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$ \_\_\_\_\_

**CITY HALL PARKING LOT SUB-TOTAL CONTRACT AMOUNT** \$ \_\_\_\_\_

**G. WILLIAMS PARKING LOT**

**Unit Price for Base Contract (Work Installed)**

1. Project Mobilization and Demobilization including multiphase and/or off-hours work scheduling to meet site constraints of the work in accordance with the scheduling requirements. This item also includes any general or special work permits, licenses, bonds, etc., if any, required to perform the repairs.

Maximum Amount (\$10,000) LUMP SUM = \$ \_\_\_\_\_

2. Remove deteriorated concrete from the curb at locations shown on the drawings according to detail 2/R-501. Work includes removal of unsound concrete by sawcutting around the deteriorated area, sandblasting existing reinforcement and applying approved repair material. **Repair is to closely match color and finish of existing curb.**

\$ \_\_\_\_\_ /LF x 15 LF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

3. Remove and replace spalled concrete from sidewalks outlined in detail 5/R-503. Work includes saw-cutting along the perimeter of deteriorated areas, utilizing air-entrained, fiber reinforced concrete and repairing control joints to match existing. **Repair is to closely match color and finish of existing exposed aggregate sidewalk.** Price is to include a 4'x4' mock-up of the sidewalk repair, including one tooled joint, for approval by the owner and engineer prior to commencement of sidewalk repairs.

\$ \_\_\_\_\_ /SF x 70 SF = \$ \_\_\_\_\_

PRODUCT PROPOSED = \_\_\_\_\_

4. Install bollards at locations shown on the drawings according to detail 9/R-502.

\$ \_\_\_\_\_ /EA x 4 EA = \$ \_\_\_\_\_

5. Asphalt Slab Crack Repairs

- a. Remove the asphalt slab at wide cracks in the asphalt slab-on-grade at locations shown on the drawings or as directed by the engineer. Work shall include demolition/removal of existing paving down to the existing granular subgrade. The existing asphalt paving thickness is approximately 3 inches with a surface course thickness nominally 1 ½ inches and binder course nominally 1 ½ inches. This work also includes grading, supplementing and proof rolling the existing subbase as required. Removal of the asphalt shall be performed in a minimum width of 3'. See detail 2/R108-1.

\$ \_\_\_\_\_ /LF x 230 LF = \$ \_\_\_\_\_

- b. Perform subgrade repairs upon removal of existing asphalt and proof rolling of exposed subgrade excavate weak areas of subgrade plus 12 inches of native soil. Replace

excavated native soil and existing subgrade with new granular fill, grade and compact as specified. Removal and replacement of subgrade shall be performed in a minimum width of 3'. See detail 2/R108-1.

\$ \_\_\_\_\_/CU. YD x 28. CU.YD = \$ \_\_\_\_\_

- c. Place new asphalt slab to replace slab removed along wide crack at locations shown on the drawings or as directed by the engineer. Furnish, tack place and compact the specified Standard MoDOT mix design HMAC 1 ½ inch (compacted thickness) of binder/base course 1 ½ inch (compacted thickness) of surface/wearing course. Placement of the asphalt shall be performed in a minimum width of 3'. See detail 2/R108-1.

\$ \_\_\_\_\_/LF x 230 LF = \$ \_\_\_\_\_

6. Miscellaneous Items and General Conditions:

Perform any miscellaneous repairs including, but not limited to the following listed, noted on the drawings or in the specifications and not otherwise enumerated in the bid items also including traffic control and temporary signage, supervision, general conditions, dust control, off-hours work if needed, protection of newly installed materials until fully cured, performance of the work in multiple phases in each facility due to the need to minimize disruptions to on-going operations, re-striping parking areas affected by concrete or waterproofing membrane work.

LUMP SUM = \$ \_\_\_\_\_

**WILLIAMS PARKING LOT SUB-TOTAL CONTRACT AMOUNT** \$ \_\_\_\_\_

**TOTAL AMOUNT FOR BASE BID WORK** \$ \_\_\_\_\_

**ALTERNATE BID ITEMS:**

A.1 City Hall Lower Lot West Portion Asphalt Slab Repairs.

- a. Demolition-Surface milling/removal of existing paving down to the existing granular subgrade. The existing asphalt paving thickness is approximately 3 inches with a surface course thickness nominally 1 ½ inches and binder course nominally 1 ½ inches. This work also includes grading, supplementing and proof rolling the existing subbase as required. See detail 2/R-503 and specification section 02 50 00.

\$ \_\_\_\_\_/SF x 49,000 SF = \$ \_\_\_\_\_

- b. Subgrade Repairs- Upon removal of existing asphalt and proof rolling of exposed subgrade excavate weak areas of subgrade plus 12 inches of native soil. Replace excavated native soil and existing subgrade with new granular fill, grade and compact as specified.

\$ \_\_\_\_\_/CU. YD x 100 CU. YD = \$ \_\_\_\_\_

- c. New Hot Mix Asphalt Concrete (HMAC)- Furnish, tack place and compact the specified Standard MoDOT mix design HMAC 1 ½ inch (compacted thickness) of binder/base course 1 ½ inch (compacted thickness) of surface/wearing course. See detail 2/R-503 and specification section 02 50 00.

\$ \_\_\_\_\_/SF x 49,000 SF = \$ \_\_\_\_\_

- d. Restripe all areas of the City Hall Lower Parking Lot – West Portion, affected by the resurfacing and replacement work. Layout is to match the existing striping layout. See specification section 099014 for approved products

LUMP SUM = \$ \_\_\_\_\_

The Bidder agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed." The Bidders proposes to complete all base bid work by no later than \_\_\_\_\_ days from and after the date of "Notice to Proceed."

**GENERAL**

The Bidder shall, before submitting his Proposal, carefully examine the Contract Documents. He shall inspect in detail the site of the proposed work and familiarize himself with all the local conditions affecting The Work and the detailed requirements of construction. If his Proposal is accepted, he will be responsible for all errors in his Proposal resulting from his failure or neglect to comply with these instructions or errors in judgment arising from said inspections of the work site and examination of the Contract Documents. The Engineer and/or the Owner will, in no case, be responsible for any losses or change in Contractor's anticipated profits resulting from such failure or neglect.

If the Bidder finds any language in the Contract Documents inconsistent, vague or difficult to understand or interpret, for any reason, he shall request clarification in writing from the Engineer, no later than \_\_\_\_\_. The Engineer shall issue a written response thereto in writing to all Bidders known to the Owner no later than \_\_\_\_\_. Unless the Bidder seeks clarification in accordance with this paragraph, he will be deemed to have waived his rights, if any he had, to object to said Contract language as vague or misleading for any reason.

When the Plans and Special Conditions include information pertaining to surface observations, material testing and other preliminary investigations, such information represents only the opinion of the Engineer as to the location, character, or quantity of the materials encountered and is only included for the convenience of the Bidder. The Owner/Engineer assumes no responsibility whatever in respect to the sufficiency or accuracy of the information, and there is no guarantee, either expressed or implied, that the conditions indicated are representative of those existing throughout The Work, or that unanticipated developments may not occur. Said information shall not be considered by the parties as a basis for the Contract award amount. The successful Bidder shall coordinate construction operations through the Owner and the Engineer.

The Bidder agrees that adequate time was allowed the Bidder to inspect all work sites and, unless express written request has been made therefore, the Engineer/Owner will be presumed to have supplied the Bidder all the information and access required to adequately complete the Proposal.

The estimated quantities of work to be done and materials to be furnished under these Specifications are given in the Proposal. All quantities are to be considered as approximate and are to be used only for comparison of bids. The unit and lump sum prices to be tendered by the Bidders are to be for the scheduled quantities as they may be increased or decreased. Payments will be made to the Contractor only for the actual quantities of work performed and materials furnished in accordance with the Plans and Specifications.

The scheduled quantities of work to be done and materials to be furnished may each be increased or diminished or entirely deleted. Such changes may become necessary for the best interest of the project due to circumstances not known at the time the Contract was entered into or arising thereafter. In the event, in the sole judgment of the Engineer or its representative, such changes become necessary, the unit and lump sum prices set forth in the Proposal and embodied in the Contract shall remain valid.

Any extra work beyond the scheduled quantities requiring additional cost to the Owner shall be approved by the Owner prior to taking such action. Claims for extra work which have not been authorized in writing by the Owner and approved by the Engineer will be rejected and the Contractor shall not be entitled to payment thereof.

**RIGHT TO REJECT BIDS AND SIGNING CONTRACTS**

In submitting this Bid, it is understood that the right is reserved by the Owner to reject any and all bids. If written notice of acceptance of this bid is mailed, telegraphed or delivered to the undersigned within ninety (90) days after the opening thereof, or at any time thereafter before this Bid is withdrawn by written notification, the undersigned agrees to execute and deliver a Contract in the prescribed form. The work shall be commenced by the Successful Bidder on the date specified in the notice after the Contract is executed.

IN WITNESS WHEREOF, the undersigned Bidder has caused its/his signature and seal to be affixed thereto by its duly authorized officers:

This \_\_\_\_\_ day of \_\_\_\_\_, 2022

Firm Name \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Telephone No. \_\_\_\_\_

Official Address \_\_\_\_\_

Attest:

\_\_\_\_\_  
Secretary

## FEATURES & SPECIFICATIONS

**INTENDED USE** — Ideal for use in applications where smart, energy-efficient fixtures are desired. Typical applications include parking garages, canopies, transportation, schools, hospitals, cold storage and exterior retail environments where moisture or dust is a concern. Polycarbonate enclosure protects fixture while remaining easy to service and clean. Not for use or installation in direct outdoor sunlight. Must be installed under canopy or covered ceiling. For direct sunlight installations, please refer to the [FEX](#) product family. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.** [Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.](#)

**CONSTRUCTION** — UV-stabilized, injection-molded, impact-resistant, frosted polycarbonate housing with continuous poured in place, closed-cell gasket. 20-gauge steel channel and channel cover. Aluminum sheet metal board plate for thermal conduction and support. Captive, tamper-resistant, polycarbonate latches standard (8 Torx T-20 tamper-resistant screws included). Stainless steel latches also available. Fixture design allows for approximately 4% up-light.

**OPTICS** — UV-stabilized, injection-molded, impact-resistant, clear transparent and frosted, polycarbonate lens with aesthetic rib detail (.080" thick). Miro 5 aluminum reflector used to achieve wide distribution.

**ELECTRICAL** — Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Standard 0-10V dimming. Integral 6kV/3kA surge protection, tested in accordance to IEEE/ANSI standards. >L88 at 60,000 hours (see chart on page 3).

**INSTALLATION** — Two stainless steel surface mount brackets standard (unless another mounting option is chosen) allowing for ceiling or suspended mount. A variety of mounting options are available including stainless steel mounting options: J-box mounting and mounting brackets for suspension with aircraft cable (cable not included). Optional stainless steel V-hooks available for chain hanging (chain not included). Surface conduit entry on one end or each end (WLFEND or WLFEND2) and on top (WLF or WLFIN) allow for rigid conduit entry. For horizontal and vertical mounting on a wall, application must be under a covered ceiling and QMB option recommended. 1/2" - 3/4" KO. When wall mounted the product will be rated for damp location only.

**LISTINGS** — CSA Certified to UL and C-UL standards. For use in ambient temperatures ranging from -20°F (-29°C) to 104°F(40°C). VAP LED is wet location listed for covered ceiling applications. IP65 and IP66 rated. VAP LED is NSF Splash Zone rated when suspended or ceiling mounted. When wall mounted the product will be rated for damp location only. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**BUY AMERICAN** — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to [www.acuitybrands.com/buy-american](http://www.acuitybrands.com/buy-american) for additional information.

**WARRANTY** — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

For installed Rough Service Product(s), Acuity warrants that, for the lifetime of the product(s), the polycarbonate lens and/or polycarbonate housing will withstand breakage resulting from occasional physical abuse and rough handling (the "Rough Service Warranty"), not withstanding the vandalism exclusion set forth at [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

ARCHWAY™  
PASSAGE™

Rough Service Fixture

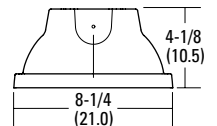
# VAP LED

CEILING/  
SUSPEND MOUNT



### Specifications

Length: 54-3/4 (139.1)  
Width: 8-1/4 (21.0)  
Depth: 4-1/8 (10.5)  
Weight: 13.5 lbs. (5.9 kg)



All dimensions are shown in inches (centimeters) unless otherwise noted.

## A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

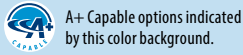
- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or control networks marked by a shaded background\*

To learn more about A+, visit [www.acuitybrands.com/aplus](http://www.acuitybrands.com/aplus).

\*See ordering tree for details



# VAP Linear Rough Service, LED



## ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** VAP 4000LM FST MD MVOLT GZ10 40K 80CRI

VAP Series	Nominal lumens	Diffuser	Distribution	Voltage	Driver	Color temperature	CRI
VAP	4000LM 4,000 lumens	FST Frosted polycarbonate lens	MD Medium	MVOLT 120-277V	GZ10 0-10V dimming	30K 3000K	80CRI 80 CRI
	6000LM 6,000 lumens	PCL Clear polycarbonate lens	WD Wide	120 120V		35K 3500K	90CRI 90 CRI
	8000LM 8,000 lumens ‡			277 277V		40K 4000K	
	12000LM 12,000 lumens ‡			HVOLT 347-480V		50K 5000K	
	15000LM 15,000 lumens ‡			347 347V			
				480 480V			

## Options

<b>Emergency:</b> BGTD Bodine® generator transformer device ‡ BSL722C Bodine® emergency LED battery pack for -20°C and up, CA Title 20 Noncompliant ‡ E15WCP Emergency battery pack, 15W constant power, Certified in CA Title 20 MAEDBS ‡ <b>Other Options:</b> BAA Buy America(n) Act Compliant DL Damp location LSC Lens safety clip SPD Surge protection device ‡ WLF Wet location fitting (two outboard, top) ‡ WLFIN Wet location fitting (two inboard, top) ‡ WLFEND Wet location fitting (one end) WLFEND2 Wet location fitting (both ends) ‡	<b>Cord Sets:</b> CS89 Cord only (no plug), 16 gauge, 3 conductors, 6ft, white, wet location ‡ CS88 Brad Harrison Mini-Change® cordset with straight blade plug, 16 gauge, 3 conductors, 6ft, yellow ‡ CS88L12 Brad Harrison Mini-Change® cordset with straight blade plug, 16 gauge, 3 conductors, 12ft, yellow ‡ <b>Mounting Brackets:</b> CMB Chain-mount suspension bracket JSB Junction box snap-bracket STSL Stainless steel tamper resistant latches QMB Quick-mount ceiling bracket	<b>Individual Controls: ‡</b> MS110NWL 360° Low mount sensor, (8-15' mounting heights), outdoor PIR, ON/OFF occupancy, wet location ( <a href="#">LINK</a> ) MS1102L3VWL 360° Low mount sensor, (8-15' mounting heights), outdoor PIR, occupancy controlled dimming (bi-level), wet location ( <a href="#">LINK</a> ) MS110NWL DSCNWL 360° Low mount sensor, (8-15' mounting heights), outdoor PIR, ON/OFF photocell, wet location ( <a href="#">LINK</a> ) <b>nLight® Wireless: ‡</b> NLTAIR2 RSBOR10 nLight® Air Generation 2 enabled, 360° low mount sensor, (8-15' heights), ( <a href="#">LINK</a> )
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## Accessories: Order as separate catalog number. (Ships separately)

VAP5MB Surface-mount bracket	RK1 T20BIT U Hex base driver bit, Torx T20 Tamper resistant screws with center reject pin
VAPQMB Quick-mount ceiling bracket	
VAPCMB Chain-mount bracket	
VAPJSB Junction box snap bracket	
HC36 M12 Wire hook and 36" chain set ‡	
HC36 ST5 M12 Wire hook and 36" chain set ‡	

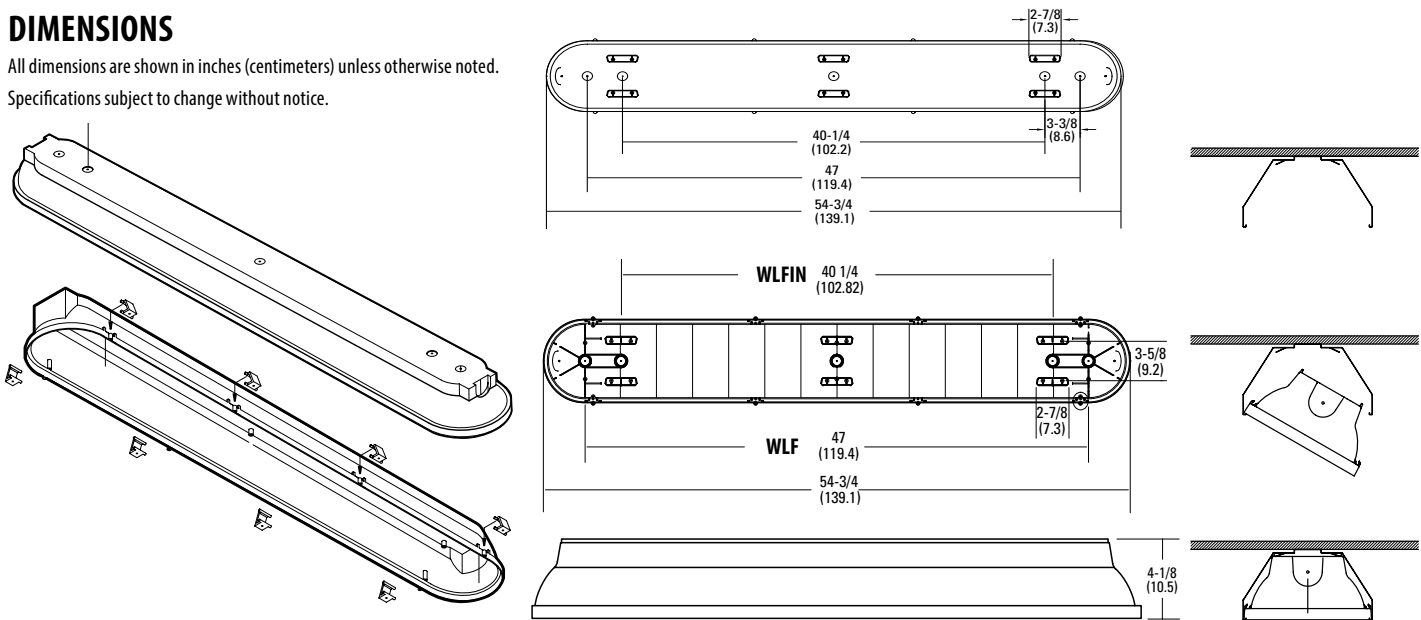
## ‡ Option Value Ordering Restrictions

Option Value	Restriction
8000LM	Not available with BSL722C.
12000LM	Not available with BSL722C or E15WCP.
15000LM	Not available with BSL722C, E15WCP, HVOLT, 347 or 480. Maximum ambient temperature 35°C.
BGTD	Must specify voltage. Not available with HVOLT, 347 or 480. If used with 8000LM, 12000LM or 15000LM, maximum ambient temperature is 35°C. SPD is standard and does not require specification in nomenclature. Not available with batteries.
BSL722C	Not available with HVOLT, 347 or 480. SPD is standard and does not require specification in nomenclature. Maximum ambient temperature 35°C.
CS88, CS88L12	Must specify voltage. 6 foot is the standard cord length. Other lengths are available by specifying the cord length in the nomenclature. Example: CS88L15.
CS89	6 foot is the standard cord length. Other lengths are available by specifying the cord length in the nomenclature. Example: CS89L15.
E15WCP	Utilizes <a href="#">PS1555CP</a> . Not available with HVOLT, 347 or 480. SPD is standard and does not require specification in nomenclature. Minimum ambient temperature is 0°C. Maximum mounting height is 25ft.
HC36, HC36 STS	Requires CMB (chain mount bracket) option.
Individual Controls	Must specify voltage. Not available with HVOLT, 347, 480 or other sensors. SPD is standard and does not require specification in nomenclature.
nLight® Wireless	Must specify voltage. Not available with HVOLT, 347, 480 or other sensors. SPD is standard and does not require specification in nomenclature. Normal luminaires (non-emergency) can be used as a normal power sensing device for nearby nLight AIR devices and luminaires with EM emergency options.
SPD	For additional protection up to 10kV. Not available with BSL722C, E15WCP, BGTD, MS110NWL, MS1102L3VWL and MS110NWL DSCNWL. The SPD is already included when the fixture is ordered with those options. SPD will not be called out in the nomenclature.
WLF, WLFIN, WLFEND	Utilizes 5/8" long NPT threaded hub.
WLFEND2	Not available with cordsets or sensor options. Utilizes 5/8" long NPT threaded hub.

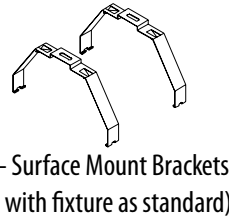
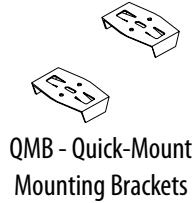
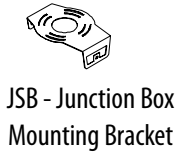
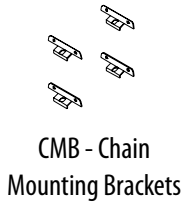
# VAP Linear Rough Service, LED

## DIMENSIONS

All dimensions are shown in inches (centimeters) unless otherwise noted. Specifications subject to change without notice.



## MOUNTING ACCESSORIES



ARCHWAY™ PASSAGE™ LED Specification Matrix											
Nominal lumens	Distribution	Initial delivered lumens @ 80CRI with clear polycarbonate lens				Initial delivered lumens @80CRI with frosted polycarbonate lens				Wattage @120V	Comparable source
		30K	35K	40K	50K	30K	35K	40K	50K		
4000LM	MD	4295	4446	4517	4647	3695	3777	3887	3998	33	2-lamp 32W T8, 1-lamp 54W T5, 70W HID
	WD	4208	4357	4426	4553	3623	3750	3810	3919		
6000LM	MD	6013	6226	6325	6506	5174	5357	5443	5598	49	3-lamp 32W T8, 2-lamp 54W T5, 100W HID
	WD	5892	6100	6198	6375	5072	5251	5335	5488		
8000LM	MD	8348	8643	8781	9032	7183	7437	7556	7772	67	4-lamp 32W T8, 2-lamp 54W T5, 150W HID
	WD	8180	8469	8604	8850	7042	7290	7407	7618		
12000LM	MD	11742	12156	12350	12703	10103	10460	10627	10931	99	6-lamp 32W T8, 3-lamp 54W T5, 250W HID
	WD	11505	11911	12101	12447	9904	10254	10417	10715		
15000LM	MD	14519	15031	15271	15708	12493	12934	13140	13516	115	6-lamp 32W T8, 4-lamp 54W T5, 250W HID
	WD	14226	14728	14963	15391	12246	12679	12881	13249		

### Lumen Maintenance @ 25C

Operating Hours	0	10,000	20,000	25,000	35,000	50,000	60,000	75,000	100,000
4000LM	1	0.980	0.973	0.969	0.962	0.952	0.95	0.935	0.919
6000LM	1	0.972	0.962	0.957	0.950	0.933	0.923	0.909	0.886
8000LM	1	0.962	0.947	0.94	0.925	0.903	0.889	0.868	0.834
12000LM	1	0.970	0.960	0.952	0.940	0.922	0.910	0.900	0.865
15000LM	1	0.969	0.956	0.949	0.936	0.917	0.905	0.886	0.857

## OPTIONS AND ACCESSORIES

The VAP Series fixture offers numerous options for almost every electrical and optical component, including a long list of field-installable accessories.

### rSBOR/SBOR – Fixture Mount Sensor (see [www.sensorswitch.com](http://www.sensorswitch.com) for additional information)

- 360° coverage
- On/Off dim
- Photocell optional
- IP66 rated
- Photocell and 0-10VDC dimming options.

Fixture sensor nomenclature	RSBOR/SBOR sensor nomenclature
For shortest lead times use one of the following SBOR configurations	
NLTAIR2 RSBOR10	RSBOR 10 EB4 WH G2
MSI10NWL	SBOR 10 OEX EB4 WH
MSI102L3VWL	SBOR 10 OEX D EB4 WH 3V
MSI10NWL DSCNWL	SBOR 10 OEX P EB4 WH



## COVERAGE PATTERNS

### PARKING GARAGE / LOW MOUNT APPLICATIONS

In general, the SBOR 10 is recommended for 8-15 ft (2.44-4.57 m) mounting and provides a coverage area radius for walking motion of greater than 2x the mounting height. The SBOR 10 ODP is ideal for parking garage and low pole mount applications. When mounted 10 ft high, for example, on a luminaire in a parking garage, the sensor's coverage for walking motion extends out 30 ft in a 360° pattern. This closely matches the lighting distribution of a typical parking garage luminaire. When mounted to a light pole, for example, in a parking lot or along a path, the sensor provides 270° of coverage (90° is blocked by the pole). Note, walking askew to sensor typically results in earlier detection than walking directly at sensor.

