



**PURCHASING ITEM
FOR
COUNCIL AGENDA**

1. Agenda Item Number:

20

2. Council Meeting Date:
April 28, 2011

TO: MAYOR & COUNCIL

3. Date Prepared: April 5, 2011

THROUGH: CITY MANAGER

4. Requesting Department: City Managers Office

5. SUBJECT: Approve Agreement No. CM1-285-2979 for Building Lighting Retrofitting with Voss Lighting and Wesco Distribution dba Brown Wholesale Electric in an amount not to exceed \$390,777.42.

6. RECOMMENDATION: Recommend approval of Agreement No. CM1-285-2979 for Building Lighting Retrofitting with Voss Lighting and Wesco Distribution dba Brown Wholesale Electric in an amount not to exceed \$390,777.42.

7. HISTORICAL BACKGROUND/DISCUSSION: The City of Chandler was awarded an Energy Efficiency and Conservation Block Grant (EECBG) from the Department of Energy as a part of the American Recovery and Reinvestment Act (ARRA). The Department of Energy approved a number of the City's energy efficiency projects, one of which is to upgrade the existing lighting in the various City buildings with new energy efficient fixtures. Based on both cost and payback, 26 City buildings were selected to receive interior lighting upgrades as a part of this grant project.

This agreement is for the purchase of the lighting equipment only. The design work was previously completed by Wright Engineering and specifications were provided for bidders. Installation of the energy efficient fixtures will be done by in-house electricians.

8. EVALUATION PROCESS: On March 11, 2011 City staff issued a bid for Building Lighting Retrofitting for 26 City Buildings. This will be a one-time project, using the EECBG as a part of the ARRA stimulus funding. All registered contractors were notified and eight (8) responses were received and evaluated. A copy of the spreadsheet is attached for reference.

Staff is recommending award to Voss Lighting and Wesco Distribution dba Brown Wholesale Electric as the lowest responsible, responsive vendors.

9. FINANCIAL IMPLICATIONS: Funds for the requested supplies will come from EECBG as a part of the ARRA stimulus funding, account number 217.1040.0000.6211.EEC001.

10. PROPOSED MOTION: Move to approve Agreement No. CM1-285-2979 for Building Lighting Retrofitting with Voss Lighting and Wesco Distribution dba Brown Wholesale Electric in an amount not to exceed \$390,777.42

ATTACHMENT: Agreements; spreadsheet

APPROVALS

11. Requesting Department

Pat McDermott

Pat McDermott, Assistant City Manager

12. Department Head

Pat McDermott

Pat McDermott, Assistant City Manager

13. Procurement Officer

Sharon Brause

Sharon Brause, CPPB, CPCP

14. Acting City Manager

Rich Dlugas

Rich Dlugas

Building Lighting Retrofits ARRA Funds
CM1-285-2979

Tag	Lamp Description	Qty	Lumintek		Voss Lighting		Summit Electric Supply		Border States Electric		ESSCO		Wesco Distribution		Graybar Electric		Commonwealth Electric	
			Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
L1	51 watt, 8', T8 Fluorescent Lamp	390	\$ -	\$ -	\$ 4.83	\$ 1,883.70	\$ 4.79	\$ 1,868.10	\$ 4.77	\$ 1,860.30	\$ 4.73	\$ 1,844.70	\$ 4.98	\$ 1,942.20	\$ 8.33	\$ 3,248.70	\$ 12.60	\$ 4,914.00
L2	21 watt CFL, PL-C	10	\$ -	\$ -	\$ 3.57	\$ 35.70	\$ 5.22	\$ 52.20	\$ 3.71	\$ 37.10	\$ 3.65	\$ 36.50	\$ 3.68	\$ 36.80	\$ 4.89	\$ 48.90	\$ 11.48	\$ 114.80
L4	29 watt, 2', U-Bent, T8 Fluorescent Lamp, 1-5/8"	4	\$ -	\$ -	\$ 5.90	\$ 23.60	\$ 5.56	\$ 22.24	\$ 5.30	\$ 21.20	\$ 5.45	\$ 21.80	\$ 6.08	\$ 24.32	\$ 9.50	\$ 38.00	\$ 11.38	\$ 45.52
L5	17 watt, 2', T8 Fluorescent Lamp	338	\$ -	\$ -	\$ 1.68	\$ 567.84	\$ 2.08	\$ 703.04	\$ 2.00	\$ 676.00	\$ 1.90	\$ 642.20	\$ 1.74	\$ 588.12	\$ 1.31	\$ 442.78	\$ 7.90	\$ 2,670.20
L6	25 watt, 3', T8 Fluorescent Lamp	38	\$ 1.38	\$ 52.44	\$ 1.82	\$ 69.16	\$ 2.08	\$ 79.04	\$ 2.00	\$ 76.00	\$ 2.00	\$ 76.00	\$ 1.88	\$ 71.44	\$ 1.40	\$ 53.20	\$ 7.90	\$ 300.20
L7	25 watt, 4', T8 Fluorescent Lamp	14867	\$ 1.85	\$ 27,503.95	\$ 1.83	\$ 27,206.61	\$ 1.86	\$ 27,652.62	\$ 1.91	\$ 28,395.97	\$ 1.88	\$ 27,949.96	\$ 1.90	\$ 28,247.30	\$ 2.14	\$ 31,815.38	\$ 7.81	\$ 116,111.27
L8	32 watt, 4', T8 Fluorescent Lamp	75	\$ 1.38	\$ 103.50	\$ 1.43	\$ 107.25	\$ 1.42	\$ 106.50	\$ 1.41	\$ 105.75	\$ 1.60	\$ 120.00	\$ 1.47	\$ 110.25	\$ 1.77	\$ 132.75	\$ 7.28	\$ 546.00
L9	CFL Lamp, wattage & base type to be field determined	2353	\$ -	\$ -	\$ 3.57	\$ 8,400.21	\$ 3.72	\$ 8,753.16	\$ 3.71	\$ 8,729.63	\$ 3.70	\$ 8,706.10	\$ 3.68	\$ 8,659.04	\$ 4.33	\$ 10,188.49	\$ 11.48	\$ 27,012.44
L10	Dimmable LED Lamp	60	\$ -	\$ -	\$ 41.84	\$ 2,510.40	\$ 46.65	\$ 2,799.00	\$ 52.00	\$ 3,120.00	\$ 56.25	\$ 3,375.00	\$ 43.16	\$ 2,589.60	\$ 103.96	\$ 6,237.60	\$ 60.53	\$ 3,631.80
Total Section L:				\$ 27,659.89		\$ 40,804.47		\$ 42,035.90		\$ 43,021.95		\$ 42,772.26		\$ 42,269.07		\$ 52,205.80		\$ 155,346.23
Tag	Ballast Description	QTY	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
B1	Rapid Start CFL Ballast, 26W, 4-Pin, 1 Lamp	5	\$ 12.45	\$ 62.25	\$ 16.67	\$ 83.35	\$ 17.88	\$ 89.40	\$ 15.90	\$ 79.50	\$ 15.95	\$ 79.75	\$ 17.21	\$ 86.05	\$ 19.51	\$ 97.55	\$ 54.03	\$ 270.15
B2	Instant Start, High-Efficiency, 1 Lamp T8, 0.87 BF (40W)	713	\$ 11.97	\$ 8,534.61	\$ 8.71	\$ 6,210.23	\$ 8.78	\$ 6,260.14	\$ 9.00	\$ 6,417.00	\$ 9.00	\$ 6,417.00	\$ 9.00	\$ 6,417.00	\$ 9.83	\$ 7,008.79	\$ 46.76	\$ 33,339.88
B3	Instant Start, High-Efficiency, 2 Lamp T8, 0.87 BF (40W)	3506	\$ 11.97	\$ 41,966.82	\$ 8.71	\$ 30,537.26	\$ 8.78	\$ 30,782.68	\$ 9.00	\$ 31,554.00	\$ 8.75	\$ 30,677.50	\$ 9.00	\$ 31,554.00	\$ 9.83	\$ 34,463.98	\$ 46.76	\$ 163,940.56
B4	Instant Start, High-Efficiency, 3 Lamp T8, 0.87 BF (40W)	2241	\$ 13.73	\$ 30,768.93	\$ 9.73	\$ 21,804.93	\$ 9.84	\$ 22,051.44	\$ 10.05	\$ 22,522.05	\$ 9.70	\$ 21,737.70	\$ 10.05	\$ 22,522.05	\$ 11.39	\$ 25,524.99	\$ 47.81	\$ 107,142.21
B5	Instant Start, High-Efficiency, 4 Lamp T8, 0.87 BF (40W)	335	\$ 15.38	\$ 5,152.30	\$ 10.76	\$ 3,604.60	\$ 11.20	\$ 3,752.00	\$ 11.12	\$ 3,725.20	\$ 11.25	\$ 3,768.75	\$ 11.11	\$ 3,721.85	\$ 12.29	\$ 4,117.15	\$ 48.99	\$ 16,411.65
B6	CFL Ballast, wattage & type to be field determined	1313	\$ -	\$ -	\$ 16.67	\$ 21,887.71	\$ 17.02	\$ 22,347.26	\$ 15.90	\$ 20,876.70	\$ 17.00	\$ 22,321.00	\$ 17.21	\$ 22,596.73	\$ 16.04	\$ 21,060.52	\$ 54.03	\$ 70,941.39
B7	Instant Start, High-Efficiency, 2 Lamp T8, 0.87 BF (57W)	200	\$ -	\$ -	\$ 17.30	\$ 3,460.00	\$ 15.98	\$ 3,196.00	\$ 15.90	\$ 3,180.00	\$ 15.90	\$ 3,180.00	\$ 17.85	\$ 3,570.00	\$ 15.24	\$ 3,048.00	\$ 54.03	\$ 10,806.00
Total Section B:				\$ 86,484.91		\$ 87,588.08		\$ 88,478.92		\$ 88,354.45		\$ 88,181.70		\$ 90,467.68		\$ 95,320.98		\$ 402,851.84
Tag	Ballast Description	QTY	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
B8	Instant Start, Energy-Efficient, 1 Lamp T8, 0.75 BF (40W)	713	\$ -	\$ -	\$ 8.71	\$ 6,210.23	\$ 8.78	\$ 6,260.14	\$ -	\$ -	\$ 9.00	\$ 6,417.00	\$ 9.00	\$ 6,417.00	\$ 8.98	\$ 6,402.74	\$ 47.19	\$ 33,646.47
B9	Instant Start, Energy-Efficient, 2 Lamp T8, 0.75 BF (40W)	3506	\$ -	\$ -	\$ 8.81	\$ 30,887.86	\$ 8.78	\$ 30,782.68	\$ -	\$ -	\$ 8.75	\$ 30,677.50	\$ 9.00	\$ 31,554.00	\$ 8.98	\$ 31,483.88	\$ 47.19	\$ 165,448.14
B10	Instant Start, Energy-Efficient, 3 Lamp T8, 0.75 BF (40W)	2241	\$ -	\$ -	\$ 9.73	\$ 21,804.93	\$ 9.84	\$ 22,051.44	\$ -	\$ -	\$ 9.70	\$ 21,737.70	\$ 10.05	\$ 22,522.05	\$ 11.00	\$ 24,651.00	\$ 48.34	\$ 108,329.94
B11	Instant Start, Energy-Efficient, 4 Lamp T8, 0.75 BF (40W)	335	\$ -	\$ -	\$ 10.76	\$ 3,604.60	\$ 11.20	\$ 3,752.00	\$ -	\$ -	\$ 11.25	\$ 3,768.75	\$ 11.11	\$ 3,721.85	\$ 11.76	\$ 3,939.60	\$ 49.52	\$ 16,589.20
Total Section B Add Alt:				\$ -		\$ 62,507.62		\$ 62,846.26		\$ -		\$ 62,600.95		\$ 64,214.90		\$ 66,477.22		\$ 324,013.75
Tag	Ballast Description	QTY	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
F1	Direct-Indirect Linear Fluorescent Wall Mtd Fixture	4	\$ -	\$ -	\$ -	\$ -	\$ 654.30	\$ 2,617.20	\$ 651.90	\$ 2,607.60	\$ 639.00	\$ 2,556.00	\$ 635.00	\$ 2,540.00	\$ 643.95	\$ 2,575.80	\$ 767.85	\$ 3,071.40
F2	Outdoor CFL Wall pack	7	\$ -	\$ -	\$ -	\$ -	\$ 479.00	\$ 3,353.00	\$ 336.00	\$ 2,352.00	\$ 335.00	\$ 2,345.00	\$ 340.00	\$ 2,380.00	\$ 331.90	\$ 2,323.30	\$ 459.42	\$ 3,215.94
F3	Linear Fluorescent Wall Mtd Fixture	2	\$ -	\$ -	\$ -	\$ -	\$ 511.00	\$ 1,022.00	\$ 50.64	\$ 101.28	\$ 51.00	\$ 102.00	\$ 52.00	\$ 104.00	\$ 50.25	\$ 100.50	\$ 134.94	\$ 269.88
F4	Parking Garage LED Fixture	77	\$ -	\$ -	\$ -	\$ -	\$ 721.08	\$ 55,523.16	\$ 726.10	\$ 55,909.70	\$ 713.50	\$ 54,939.50	\$ 707.00	\$ 54,439.00	\$ 717.25	\$ 55,228.25	\$ 857.50	\$ 66,027.50

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F5	Pole Mounted LED Fixture	34	\$ -	\$ -	\$ -	\$ -	\$ 2,102.20	\$ 71,474.80	\$ 2,096.85	\$ 71,292.90	\$ 2,075.00	\$ 70,550.00	\$ 2,059.00	\$ 70,006.00	\$ 2,091.05	\$ 71,095.70	\$ 2,379.67	\$ 80,908.78
F6	Wall Mounted LED Fixture	14	\$ -	\$ -	\$ -	\$ -	\$ 1,989.50	\$ 27,853.00	\$ 2,003.00	\$ 28,042.00	\$ 1,969.00	\$ 27,566.00	\$ 1,949.00	\$ 27,286.00	\$ 1,979.00	\$ 27,706.00	\$ 2,214.16	\$ 30,998.24
Total Section F:			\$ -	\$ -	\$ -	\$ -	\$ 161,843.16	\$ 160,305.48	\$ 158,058.50	\$ 156,755.00	\$ 159,029.55	\$ 184,491.74						
Tag	Ballast Description	QTY	Unit Cost	Total Cost														
S1	Occupancy Sensor, Wall Mtd., PIR	826	\$ -	\$ -	\$ 44.57	\$ 36,814.82	\$ -	\$ -	\$ 43.73	\$ 36,120.98	\$ 40.21	\$ 33,213.46	\$ 39.78	\$ 32,858.28	\$ 38.07	\$ 31,445.82	\$ 78.16	\$ 64,560.16
S2	Occupancy Sensor, Wall Mtd., PDT	149	\$ 9.75	\$ 1,452.75	\$ 49.76	\$ 7,414.24	\$ -	\$ -	\$ 70.60	\$ 10,519.40	\$ 62.23	\$ 9,272.27	\$ 61.58	\$ 9,175.42	\$ 53.75	\$ 8,008.75	\$ 106.44	\$ 15,859.56
S3	Occupancy Sensor, Ceiling Mtd., PIR	174	\$ -	\$ -	\$ 52.07	\$ 9,060.18	\$ -	\$ -	\$ 62.90	\$ 10,944.60	\$ 82.97	\$ 14,436.78	\$ 82.11	\$ 14,287.14	\$ 72.79	\$ 12,665.46	\$ 326.22	\$ 56,762.28
S4	Occupancy Sensor, Ceiling Mtd., PDT	109	\$ -	\$ -	\$ 85.57	\$ 9,327.13	\$ -	\$ -	\$ 98.00	\$ 10,682.00	\$ 104.25	\$ 11,363.25	\$ 103.16	\$ 11,244.44	\$ 108.07	\$ 11,779.63	\$ 363.16	\$ 39,584.44
S5	Occupancy Sensor, Corner Mtd., PIR	4	\$ -	\$ -	\$ 68.85	\$ 275.40	\$ -	\$ -	\$ 72.25	\$ 289.00	\$ 82.97	\$ 331.88	\$ 82.11	\$ 328.44	\$ 80.00	\$ 320.00	\$ 336.06	\$ 1,344.24
S7	Occupancy Sensor, Wall Mtd., Hallway, PIR	3	\$ -	\$ -	\$ 80.91	\$ 242.73	\$ -	\$ -	\$ 43.73	\$ 131.19	\$ 93.61	\$ 280.83	\$ 92.63	\$ 277.89	\$ 80.00	\$ 240.00	\$ 306.04	\$ 918.12
S8	Occupancy Sensor, Wall Mtd., Hallway No Switch, PIR	1	\$ -	\$ -	\$ 80.91	\$ 80.91	\$ -	\$ -	\$ 43.73	\$ 43.73	\$ 93.61	\$ 93.61	\$ 92.63	\$ 92.63	\$ 80.00	\$ 80.00	\$ 306.04	\$ 306.04
Total Section S:			\$ -	\$ 1,452.75	\$ 63,215.41	\$ -	\$ -	\$ 68,730.90	\$ 68,992.08	\$ 68,264.24	\$ 64,539.66	\$ 179,334.84						
Tag	Switch Description	QTY	Unit Cost	Total Cost														
V1	Vending Miser, Indoor with Occupancy Sensor	43	\$ -	\$ -	\$ 105.81	\$ 4,549.83	\$ -	\$ -	\$ 173.35	\$ 7,454.05	\$ 145.00	\$ 6,235.00	\$ 148.00	\$ 6,364.00	\$ 146.70	\$ 6,308.10	\$ 553.55	\$ 23,802.65
V2	Vending Miser, Indoor without Occupancy Sensor	12	\$ -	\$ -	\$ 99.30	\$ 1,191.60	\$ -	\$ -	\$ 180.00	\$ 2,160.00	\$ 144.00	\$ 1,728.00	\$ 140.00	\$ 1,680.00	\$ 139.60	\$ 1,675.20	\$ 386.80	\$ 4,641.60
V3	Vending Miser, Outdoor with Occupancy Sensor	9	\$ -	\$ -	\$ 128.26	\$ 1,154.34	\$ -	\$ -	\$ 198.95	\$ 1,790.55	\$ 167.00	\$ 1,503.00	\$ 158.00	\$ 1,422.00	\$ 155.65	\$ 1,400.85	\$ 584.89	\$ 5,264.01
V4	Vending Miser, Outdoor without Occupancy Sensor	5	\$ -	\$ -	\$ 122.91	\$ 614.55	\$ -	\$ -	\$ 190.55	\$ 952.75	\$ 159.00	\$ 795.00	\$ 154.00	\$ 770.00	\$ 148.50	\$ 742.50	\$ 399.72	\$ 1,998.60
Total Section V:			\$ -	\$ -	\$ 7,510.32	\$ -	\$ -	\$ 12,357.35	\$ 10,261.00	\$ 10,236.00	\$ 10,126.65	\$ 35,706.86						
TOTAL SECTION L:			\$	27,659.89	\$	40,804.47	\$	42,035.90	\$	43,021.95	\$	42,772.26	\$	42,269.07	\$	52,205.80	\$	155,346.23
TOTAL SECTION B:			\$	86,484.91	\$	87,588.08	\$	88,478.92	\$	88,354.45	\$	88,181.70	\$	90,467.68	\$	95,320.98	\$	402,851.84
TOTAL SECTION B ADD ALT:			\$	-	\$	62,507.62	\$	62,846.26	\$	-	\$	62,600.95	\$	64,214.90	\$	66,477.22	\$	324,013.75
TOTAL SECTION F:			\$	-	\$	-	\$	161,843.16	\$	160,305.48	\$	158,058.50	\$	156,755.00	\$	159,029.55	\$	184,491.74
TOTAL SECTION S:			\$	1,452.75	\$	63,215.41	\$	-	\$	68,730.90	\$	68,992.08	\$	68,264.24	\$	64,539.66	\$	179,334.84
TOTAL SECTION V:			\$	-	\$	7,510.32	\$	-	\$	12,357.35	\$	10,261.00	\$	10,236.00	\$	10,126.65	\$	35,706.86
SUB-TOTAL			\$	115,597.55	\$	261,625.90	\$	355,204.24	\$	372,770.13	\$	430,866.49	\$	432,206.89	\$	447,699.86	\$	1,281,745.26
SALES TAX:			\$	-	\$	24,331.21	\$	-	\$	3,466.76	\$	40,924.74	\$	40,195.24	\$	41,635.06	\$	73,059.48
GRAND TOTAL ALL ITEMS:			\$	115,597.55	\$	285,957.11	\$	355,204.24	\$	376,236.89	\$	471,791.23	\$	472,402.13	\$	489,334.92	\$	1,354,804.74

**CITY OF CHANDLER PURCHASE CONTRACT
BUILDING LIGHTING RETROFITS (ARRA PROJECT) - REBID
AGREEMENT NO.: CM1-285-2979**

THIS AGREEMENT is made and entered into this _____ day of _____, 2011, by and between the City of Chandler, a Municipal Corporation of the State of Arizona, hereinafter referred to as "CITY", and **VOSS LIGHTING**, hereinafter referred to as "CONTRACTOR".

NOW THEREFORE, in consideration of the mutual promises and obligations set forth herein, the parties hereto agree as follows:

1. CONTRACT ADMINISTRATION AND OPERATION:

- 1.1. Contract Administrator:** CONTRACTOR shall act under the authority and approval of the Parks & Facilities Maintenance Manager /designee (Contract Administrator), to provide the goods and merchandise required by this Contract.
- 1.2. Ordering Instructions:** Authorization for purchases under the terms and conditions of this contract will be made only upon issuance of a CITY Purchase Order or use of a City Procurement Card.
- 1.3. Ordering Process.** Upon award of a contract by the City, any designated department may procure the specific product, equipment or material awarded by the issuance of a Contract Purchase Order to the appropriate CONTRACTOR. Each Contract Purchase Order must cite the correct Chandler contract number.

2. GOODS AND MERCHANDISE TO BE PROVIDED: CONTRACTOR shall provide to CITY the goods and merchandise listed on Exhibit A, attached hereto and made a part hereof by reference, at the prices listed on Exhibit B, all as more specifically set forth in the Specifications and details included therein. Exhibit C is hereby added for reference.

- 2.1. Safety Standards:** All items supplied pursuant to this contract must comply with the current applicable occupational safety and health standards of the State of Arizona Industrial Commission, the National Electric Code, and the National Fire Protection Association Standards.
- 2.2. Non-Discrimination.** The CONTRACTOR shall comply with State Executive Order No. 99-4 and all other applicable City, State and Federal laws, rules and regulations, including the Americans with Disabilities Act.
- 2.3. Product Discontinuance (Categories):** In the event that a required product or model is discontinued by the manufacturer, CITY at its sole discretion may allow CONTRACTOR to provide a substitute for the discontinued item. CONTRACTOR shall request permission to substitute a new product or model and provide the following:

A formal announcement from the manufacturer that the product or model has been discontinued.

Documentation from the manufacturer that names the replacement product or model.

Documentation that provides clear and convincing evidence that the replacement will be compatible with all the functions or uses of the discontinued product or model.

Documentation confirming that the price for the replacement is the same as or less than the discontinued model.

If requested by CITY, CONTRACTOR shall provide a sample of the replacement product.

- 2.4. **Licenses:** CONTRACTOR shall maintain in current status all Federal, State and local licenses and permits required for the operation of the business conducted by CONTRACTOR as applicable to this contract.
- 2.5. **Contract Orders:** CONTRACTOR shall, in accordance with all terms and conditions of this Contract, fully perform and shall be obligated to comply with all contract orders received by CONTRACTOR prior to the expiration or termination hereof, unless otherwise directed in writing by the Contract Administrator, including, without limitation, all contract orders received prior to but not fully performed and satisfied at the expiration or termination of this Contract.
- 2.6. **Advertising, Publishing and Promotion of Contract:** The CONTRACTOR shall not use, advertise or promote information for commercial benefit concerning this Contract without the prior written approval of the Procurement Officer.
- 2.7. **Compliance With Applicable Laws:** CONTRACTOR shall comply with all applicable Federal, state and local laws, and with all applicable license and permit requirements.
- 2.8. **Assignment:** Services covered by this Contract shall not be assigned in whole or in part without the prior written consent of CITY.
- 2.9. **Amendments:** The Contract may be modified only through a written Contract Amendment executed by authorized persons for both parties. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by CITY in writing or made unilaterally by the CONTRACTOR are violations of the Contract and of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the CONTRACTOR shall not be entitled to any claim under this Contract based on those changes.
- 2.10. **Payment.** A separate invoice shall be issued for each shipment of goods or materials, and no payment will be issued prior to receipt of goods or materials and receipt of a correct invoice.
- 2.11. **Estimated Quantities.** The quantities shown on Exhibit B (the Price List) are estimates only, based upon available information. Payment shall be based on actual quantities and there is no guarantee that any certain quantity shall be required by CITY. CITY reserves the right to increase or decrease the quantities actually required.
- 2.12. **Catalogs/Contract Price Listing.** As applicable, the CONTRACTOR(s) shall be required to furnish to all requesting departments catalogs at no cost, which will outline contract prices.
- 2.13. **Current Models.** It is CITY's intent to procure materials of the latest technology. All materials bid must be in current production and parts must be available for a minimum of five (5) years from bid date.
- 2.14. **Current Products.** All products offered in response to this solicitation shall be in current and ongoing production; shall have been formally announced for general marketing purposes; shall be a model or type currently functioning in a user (paying customer) environment and capable of meeting or exceeding all specifications and requirements set forth in this solicitation.
- 2.15. **New/Current Products.** All goods, equipment, materials, parts and other components supplied pursuant to this Contract shall be new, or the latest model and of the most suitable grade for the purpose intended.
- 2.16. **Packing and Shipping.** The CONTRACTOR shall be responsible for industry standard packing, which conforms to requirements of carrier's tariffs and Interstate Commerce Commission (ICC) regulations.

Containers must be clearly marked as to lot number, destination, address and purchase order number.

3. WARRANTIES:

- 3.1. Liens:** CONTRACTOR warrants that the materials supplied under this Contract are free of liens and shall remain free of liens.
- 3.2. Quality:** Unless otherwise modified elsewhere in these terms and conditions, CONTRACTOR warrants that, for one year after acceptance by CITY of the materials, they shall be:
- 3.2.1.** Of a quality to pass without objection in the trade under the Contract description;
- 3.2.2.** Fit for the intended purposes for which the materials are used;
- 3.2.3.** Within the variations permitted by the Contract and are of even kind, quantity, and quality within each unit and among all units;
- 3.2.4.** Adequately contained, packaged and marked as the Contract may require; and
- 3.2.5.** Conform to the written promises or affirmations of fact made by CONTRACTOR.
- 3.3. Fitness:** CONTRACTOR warrants that any material supplied to CITY shall fully conform to all requirements of the Contract and all representations of CONTRACTOR, and shall be fit for all purposes and uses required by the Contract.
- 3.4. Inspection/Testing:** The warranties set forth in Section 3 herein are not affected by inspection or testing of or payment for the materials by CITY.
- 3.5. Warranty.** CONTRACTOR must provide a manufacturer's warranty on all goods or equipment supplied pursuant to this Contract.
- 4. ACCEPTANCE AND DOCUMENTATION:** All goods are subject to final inspection and acceptance by CITY. Material failing to meet the requirements of this Contract will be held at CONTRACTOR's risk and may be returned to CONTRACTOR. If so returned, the cost of transportation, unpacking, inspection, repacking, reshipping or other like expenses is the responsibility of CONTRACTOR. CITY may elect to do any or all of the following: Waive the non-conformance; stop the work immediately; or bring the material into compliance. Defective Products. All defective products shall be replaced and exchanged by CONTRACTOR. The cost of transportation, unpacking, inspection, repacking, reshipping or other like expenses shall be paid by the CONTRACTOR. All replacement products must be received by CITY within seven (7) days of initial notification
- 4.1. Records.** The CONTRACTOR shall retain all data and other "records" relating to the acquisition and performance of the Contract for a period of five years after the completion of the Contract.
- 4.2. Audit.** At any time during the term of this Contract and five (5) years thereafter, CONTRACTOR's books and records shall be subject to audit by CITY to the extent that the books and records relate to the performance of the Contract or Subcontract. Upon request, CONTRACTOR shall produce a legible copy of any or all such records.
- 4.3. Delivery.** Delivery shall be made within **thirty (30) calendar days** after receipt of a Contract Purchase Order (ARO).
- 5. PRICE:** CITY shall pay to CONTRACTOR an amount not to exceed **Two Hundred Eighteen Thousand Nineteen Dollars and 48/100 (\$218,019.48)** for the completion of all the work and services

described herein, which sum shall include all costs or expenses incurred by CONTRACTOR, payable as set forth in Exhibit B, attached hereto and made a part hereof by reference.

- 5.1. **Pricing:** Prices stated include all freight, insurance, warranty costs, and any other applicable costs.
- 5.2. **Payment:** A separate invoice shall be issued for each shipment of goods or merchandise, and no payment will be issued prior to receipt of material and a correct invoice. All billing invoices shall include delivery time, purchase order number, and contractual payment terms. Items are to be identified by the name, model number, contract number, line item number, and serial number if applicable. Payment. CONTRACTOR shall submit to the issuing department, after completion of the task or combination of tasks listed by the issuing departments task order, a statement of charges for the work completed under that task order, in conformance with the pricing schedule of this contract, the issuing department shall process the claim for prompt payment in accordance with the standard operating procedures of CITY.
- 5.3. **Delivery:** All prices are F.O.B. Destination and include all delivery and unloading at the specified destinations. CONTRACTOR shall retain title and control of all goods until they are delivered and accepted by CITY. All risk of transportation and all related charges shall be the responsibility of CONTRACTOR. All claims for visible or concealed damage shall be filed by CONTRACTOR. CITY will notify CONTRACTOR promptly of any damaged goods and shall assist CONTRACTOR in arranging for inspection.
- 5.4. **Risk of Loss:** CONTRACTOR shall bear all loss of conforming material covered under this Contract until received by authorized personnel at the location designated in the purchase order or Contract. Mere receipt does not constitute final acceptance. The risk of loss for nonconforming materials shall remain with CONTRACTOR regardless of receipt.
- 5.5. **Taxes:** CONTRACTOR shall be solely legally responsible for any and all tax obligations, which may result out of CONTRACTOR'S performance of this Contract. CITY shall have no legal obligation to pay any amounts for taxes, of any type, incurred by CONTRACTOR. City agrees that Contractor may bill the City for applicable privilege license taxes which are paid for by Contractor and that the City will reimburse Contractor for privilege license taxes actually paid by Contractor. If Contractor obtains any refund of privilege license taxes paid, City will be entitled to a refund of such amounts.
- 5.6. **IRS W9 Form.** In order to receive payment CONTRACTOR shall have a current I.R.S. W9 Form on file with CITY, unless said form is not required by law.
- 5.7. **Acceptance by CITY.** CITY reserves the right to accept or reject the request for a price increase. If CITY approves the price increase, the price shall remain firm for the renewal term for which it was requested. If a price increase is agreed upon a written Contract Amendment must be approved and executed by the Parties.
- 5.8. **Price Reduction.** CONTRACTOR shall offer CITY a price reduction for its products concurrent with a published price reduction made to other customers.
6. **TERM:** The term of the Contract is one (1) year (s), commencing on the **1st day of May, 2011** and terminating on **April 30, 2012**, unless sooner terminated in accordance with the provisions herein. CITY reserves the right, at its sole discretion, to extend the Contract for up to thirty (30) days.
7. **USE OF THIS CONTRACT.** The Contract is for the sole convenience of the City of Chandler. CITY reserves the rights to obtain like goods and materials from another source to secure significant cost savings or when timely delivery cannot be met by CONTRACTOR.
- 7.1. **Cooperative Use of Contract.** In addition to the City of Chandler and with approval of the contracted

CONTRACTOR, this Contract may be extended for use by other municipalities, school districts and government agencies of the State. A current listing of eligible entities may be found at www.maricopa.gov/materials and then click on 'Contracts', 'S.A.V.E.' listing and 'ICPA'. Any such usage by other entities must be in accordance with the ordinance, charter and/or procurement rules and regulations of the respective political entity.

8. CITY'S CONTRACTUAL REMEDIES:

- 8.1. Right to Assurance:** If CITY in good faith has reason to believe that CONTRACTOR does not intend to, or is unable to perform or continue performing under this Contract, the Procurement Officer may demand in writing that CONTRACTOR give a written assurance of intent to perform. Failure by CONTRACTOR to provide written assurance within the number of Days specified in the demand may, at CITY's option, be the basis for terminating the Contract under the Uniform Terms and Conditions or other rights and remedies available by law or provided by the contract.
- 8.2. Non-exclusive Remedies:** The rights and the remedies of CITY under this Contract are not exclusive.
- 8.3. Nonconforming Tender:** Goods, materials or merchandise supplied under this Contract shall fully comply with this Contract and the specifications included herein. The delivery of goods, materials or merchandise or any portion thereof that do not fully comply constitutes a breach of contract. On delivery of nonconforming goods, materials or merchandise, CITY may terminate the Contract for default under applicable termination clauses in the Contract, exercise any of its rights and remedies under the Uniform Commercial Code, or pursue any other right or remedy available to it.
- 8.4. Right of Offset:** CITY shall be entitled to offset against any sums due to CONTRACTOR, any expenses or costs incurred by CITY, or damages assessed by CITY concerning CONTRACTOR's non-conforming performance or failure to perform the Contract, including costs and damages incurred by CITY.

9. TERMINATION:

- 9.1 Termination for Convenience:** CITY reserves the right to terminate this Agreement or any part thereof for its sole convenience with thirty (30) days written notice. In the event of such termination, CONTRACTOR shall immediately stop all work hereunder, and shall immediately cause any of its suppliers and subcontractors to cease such work. As compensation in full for services performed to the date of such termination, the CONTRACTOR shall receive a fee for the percentage of services actually performed. This fee shall be in the amount to be mutually agreed upon by the CONTRACTOR and CITY, based on the agreed Scope of Work. If there is no mutual agreement, the Management Services Director shall determine the percentage of work performed under each task detailed in the Scope of Work and the CONTRACTOR'S compensation shall be based upon such determination and CONTRACTOR'S fee schedule included herein.
- 9.2 Termination for Cause:** City may terminate this Agreement for Cause:

Upon the occurrence of any one or more of the following events:

- 1) If CONTRACTOR fails to perform pursuant to the terms of this Agreement
- 2) If CONTRACTOR is adjudged a bankrupt or insolvent;
- 3) If CONTRACTOR makes a general assignment for the benefit of creditors;
- 4) If a trustee or receiver is appointed for CONTRACTOR or for any of CONTRACTOR 'S property;
- 5) If CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws;
- 6) If CONTRACTOR disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction;

- 7) Where Agreement has been so terminated by CITY, the termination shall not affect any rights of CITY against CONTRACTOR then existing or which may thereafter accrue.
- 9.3. Termination for Misrepresentation.** CITY may, upon written notice, terminate this Contract for any attempt by CONTRACTOR to represent any goods or materials not specifically awarded as being under contract with the CITY of Chandler. Any such action is subject to the legal and contractual remedies available to CITY inclusive of, but not limited to, contract cancellation, suspension and/or debarment of CONTRACTOR.
- 9.4. Cancellation for Conflict of Interest:** Pursuant to A.R.S. § 38-511, CITY may cancel this Contract after Contract execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting or creating the Contract on behalf of CITY is or becomes at any time while the Contract or an extension of the Contract is in effect an employee of or a consultant to any other party to this Contract with respect to the subject matter of the Contract. The cancellation shall be effective when the CONTRACTOR receives written notice of the cancellation unless the notice specifies a later time.
- 9.5. Gratuities:** CITY may, by written notice, terminate this Contract, in whole or in part, if CITY determines that employment or a Gratuity was offered or made by the CONTRACTOR or a representative of the CONTRACTOR to any officer or employee of CITY for the purpose of influencing the outcome of the procurement or securing the Contract, an amendment to the Contract, or favorable treatment concerning the Contract, including the making of any determination or decision about contract performance. CITY, in addition to any other rights or remedies, shall be entitled to recover exemplary damages in the amount of three times the value of the Gratuity offered by the CONTRACTOR.
- 9.6. Suspension or Debarment:** CITY may, by written notice to the CONTRACTOR, immediately terminate this Contract if CITY determines that the CONTRACTOR has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a Sub-CONTRACTOR of any public procurement unit or other governmental body. Submittal of an offer or execution of a contract shall attest that the CONTRACTOR is not currently suspended or debarred. If the CONTRACTOR becomes suspended or debarred, the CONTRACTOR shall immediately notify CITY.
- 9.7. Continuation of Performance Through Termination:** The CONTRACTOR shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.
- 9.8. No Waiver:** Either party's failure to insist on strict performance of any term or condition of the Contract shall not be deemed a waiver of that term or condition even if the party accepting or acquiescing in the nonconforming performance knows of the nature of the performance and fails to object to it.
- 10. FORCE MAJEURE:** Neither party shall be responsible for delays or failures in performance resulting from acts beyond their control. Such acts shall include, but not be limited to, acts of God, riots, acts of war, epidemics, governmental regulations imposed after the fact, fire, communication line failures, power failures, or earthquakes.
- 11. DISPUTE RESOLUTION:**
- 11.1 Alternative Dispute Resolution.** The parties hereby agree that there shall be a sixty (60) day moratorium on litigation commencing on the day that a claim is filed by CONTRACTOR pursuant to A.R.S. § 12-821.01 during which time the parties will negotiate in good faith to resolve the dispute and evaluate the viability of pursuing alternative dispute resolution procedures such as mediation and arbitration.

- 11.2 Arizona Law.** This Agreement shall be governed and interpreted according to the laws of the State of Arizona.
- 11.3 Jurisdiction and Venue.** The parties agree that this Agreement is made in and shall be performed in Maricopa County. Any lawsuits between the Parties arising out of this Agreement shall be brought and concluded in the courts of Maricopa County in the State of Arizona, which shall have exclusive jurisdiction over such lawsuits.
- 11.4 Fees and Costs.** Except as otherwise agreed by the parties, the prevailing party in any adjudicated dispute relating to this Agreement is entitled to an award of reasonable attorney's fees, expert witness fees and costs including, as applicable, arbitrator fees; provided, however, that no award of attorney's fees shall exceed ten percent (10%) of the damages awarded the prevailing party unless the non-prevailing party has been determined to have acted in bad faith or in a frivolous manner during the adjudication.
- 12. INDEMNIFICATION:** To the fullest extent permitted by law, CONTRACTOR shall defend, indemnify and hold harmless the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees individually and collectively; from and against all losses, claims, suits, actions, payments and judgments, demands, expenses, damages, including consequential damages and loss of productivity, attorney's fees, defense costs, or actions of any kind and nature relating to, arising out of, or alleged to have resulted from CONTRACTOR'S work or services. CONTRACTOR'S duty to defend, hold harmless and indemnify the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees shall arise in connection with any claim or amounts arising or recovered under Worker Compensation Laws, damage, loss or expenses relating to, arising out of or alleged to have resulted from any acts, errors, mistakes, omissions, work or services in the performance of this Contract including any employee of CONTRACTOR, anyone directly or indirectly employed by them or anyone for whose acts CONTRACTOR may be liable, regardless of whether it is caused in part by a party indemnified hereunder, including the City of Chandler. IT IS THE INTENTION OF THE PARTIES to this contract that the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees, individually and collectively, are to be indemnified against their own negligence unless and except their negligence is found to be the sole cause of the injury to persons or damages to property.
- 13. NOTICES:** All notices or demands required to be given pursuant to the terms of this Contract shall be given to the other party in writing, delivered by hand or registered or certified mail, at the addresses set forth below, or to such other address as the parties may substitute by written notice given in the manner prescribed in this paragraph.

In the case of CITY

Department: Community Services
 Contact: Kris Kircher
 Mailing Address: PO Box 4008 – MS 906
 Physical Address: 650 E Ryan Rd
 City, State, Zip: Chandler AZ 85244
 Phone: 480-782-2759
 FAX: 480-782-2560

In the case of the CONTRACTOR

Firm Name: Voss Lighting
 Contact: Greg Hill
 Address: 1911 E University Dr
 City, State, Zip: Phoenix AZ 85034
 Phone: 602-340-9500
 FAX: 602-340-9024
 EMAIL: OM55@VossLighting.com

Notices shall be deemed received on date delivered, if delivered by hand, and on the delivery date indicated on receipt if delivered by certified or registered mail.

14. GENERAL TERMS:

- 14.1. Entire Agreement:** This Contract, including Exhibits attached hereto, constitutes the entire understanding of the parties and supersedes all previous representations, written or oral, with respect

to the services specified herein. This Contract may not be modified or amended except by a written document, signed by authorized representatives of each party.

- 14.2. Arizona Law:** This Contract shall be governed and interpreted according to the laws of the State of Arizona.
- 14.3. Assignment:** Services covered by this Contract shall not be assigned in whole or in part without the prior written consent of CITY.
- 14.4. Amendments:** The Contract may be modified only through a written Contract Amendment executed by authorized persons for both parties. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by CITY in writing or made unilaterally by the CONTRACTOR are violations of the Contract and of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the CONTRACTOR shall not be entitled to any claim under this Contract based on those changes.
- 14.5. Conflict of Interest:**
- 14.5.1 No Kickback:** CONTRACTOR warrants that no person has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee; and that no member of City Council or any employee of CITY has any interest, financially or otherwise, in the firm unless this interest has been declared pursuant to the provisions of A.R.S. Section 38-501. Any such interests were disclosed in CONTRACTOR'S proposal to CITY.
- 14.5.2 Kickback Termination:** CITY may cancel this Contract, without penalty or obligation, if any person significantly involved in initiating, negotiating, securing, drafting or creating the agreement on behalf of CITY'S departments or agencies is, at any time while the Contract or any extension of the Contract is in effect, an employee of any other party to the Contract in any capacity or a CONTRACTOR to any other party to the Contract with respect to the subject matter of the Contract. The cancellation shall be effective when written notice from CITY is received by all other parties to the Contract, unless the notice specifies a later time (A.R.S. §38-511).
- 14.5.3 No Conflict:** CONTRACTOR stipulates that its officers and employees do not now have a conflict of interest and it further agrees for itself, its officers and its employees that it will not contract for or accept employment for the performance of any work or services with any individual business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this project.
- 14.6. Independent CONTRACTOR:** The CONTRACTOR under this Contract is an independent contractor. Neither party to this Contract shall be deemed to be the employee or agent of the other party to the Contract.
- 14.7. No Parole Evidence:** This Contract is intended by the parties as a final and complete expression of their agreement. No course of prior dealings between the parties and no usage of the trade shall supplement or explain any terms used in this document and no other understanding either oral or in writing shall be binding.
- 14.8. Authority:** Each party hereby warrants and represents that it has full power and authority to enter into and perform this Contract, and that the person signing on behalf of each has been properly authorized and empowered to enter this Contract. Each party further acknowledges that it has read this Contract, understands it, and agrees to be bound by it.

14.9. **Ownership.** All deliverables and/or other products of the Contract (including but not limited to all software documentation, reports, records, summaries and other matter and materials prepared or developed by CONTRACTOR in performance of the Contract) shall be the sole, absolute and exclusive property of CITY, free from any claim or retention of right on the part of CONTRACTOR, its agents, sub-contractors, officers or employees.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names to this _____ day of _____, 2011.

FOR THE CITY OF CHANDLER

FOR THE CONTRACTOR

MAYOR

By: _____
Signature

ATTEST:

City Clerk

SEAL ATTEST: If Corporation

Secretary

Approved as to form:

City Attorney

**EXHIBIT A
GENERAL SPECIFICATIONS**

- 1. AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 REQUIREMENTS:** On February 17, 2009 President Obama signed the American Reinvestment and Recovery Act of 2009 (ARRA, Act, or the "Recovery Act") as an economic stimulus.

By executing this Agreement, CONTRACTOR certifies to the CITY and in addition, agrees that it will comply with all requirements and applicable regulations specified in this bid and the American Reinvestment and Recovery Act of 2009.

This Agreement will be funded with funds appropriated by the American Reinvestment and Recovery Act of 2009. This procurement is subject to the Federal procurement rules, 24 CFR Part 85. All applicable federal rules and regulations are incorporated by reference herein notwithstanding the fact that they may not be specifically referenced in this solicitation.

Applicable federal laws, regulations and requirements include, but are not limited to the following:

2. BUY AMERICAN. USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS.

- (a) None of the funds appropriated or otherwise made available by this Act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States.
- (b) Subsection (a) shall not apply in any case or category of cases in which the head of the Federal department or agency involved finds that —
 - (1) applying subsection (a) would be inconsistent with the public interest;
 - (2) iron, steel, and the relevant manufactured goods are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
 - (3) inclusion of iron, steel, and manufactured goods produced in the United States will increase the cost of the overall project by more than 25 percent.
- (c) If the head of a Federal department or agency determines that it is necessary to waive the application of subsection (a) based on a finding under subsection (b), the head of the department or agency shall publish in the Federal Register a detailed written justification as to why the provision is being waived.
- (d) This section shall be applied in a manner consistent with United States obligations under international agreements.

CONTRACTOR may be required to submit certificates of compliance from all suppliers of iron, steel or manufactured goods certifying compliance with section 1605 of the American Reinvestment and Recovery Act of 2009.

3. WHISTLEBLOWER PROTECTIONS. PROTECTING STATE AND LOCAL GOVERNMENT AND CONTRACTOR WHISTLEBLOWERS.

- (a) No employee of any non-Federal employer receiving covered funds may be discharged, demoted, or otherwise discriminated against as reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, to the Recovery Accountability and Transparency Board (hereafter the "Board"), an inspector general, the Comptroller General, a member of Congress, a State or Federal regulatory or law enforcement agency, a person with

supervisory authority over the employee (or such other person working for the employer who has the authority to investigate, discover, or terminate misconduct), a court or grand jury, the head of a Federal agency, or their representatives, information that the employee reasonably believes is evidence of—

- (1) gross mismanagement of an agency contract or grant relating to covered funds;
 - (2) a gross waste of covered funds;
 - (3) a substantial and specific danger to public health or safety related to the implementation or use of covered funds;
 - (4) an abuse of authority related to the implementation or use of covered funds; or
 - (5) a violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.
- (b) The term "covered funds" means any contract, grant, or other payment received by any non-Federal employer if the Federal Government provides any portion of the money or property that is provided, requested, or demanded at least some of the funds are appropriated or otherwise made available by the Recovery Act.
- (c) The rights and remedies afforded to employees by this Article and Section 1553 of Division I of the Act may not be waived by any agreement, policy, form, or condition of employment. No dispute arising under this Article shall be subject to any pre-dispute requirement for arbitration, except that an arbitration requirement in a collective bargaining agreement shall be enforceable with respect to disputes arising under that agreement.
- (d) CONTRACTOR must post a notice of the employee rights and remedies under this Article and Section 1553 of Division I of the Act in a prominent and clearly visible location accessible to employees, and require each subcontractor at every tier to do so.
Employee Notice of Rights is attached
- (e) This Article shall be included in all subcontracts at every tier.
- a. Any confirmed incident of reprisal under this Article or Section 1553 of the Act or any failure to comply with the requirements of this Article or Section 1553 of the Act may be justification for termination of the Contract for cause.

4. **LOBBYING RESTRICTIONS.** By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.
5. **CERTIFICATION REGARDING DEBARMENT OR SUSPENSION.** By executing this Agreement, CONTRACTOR certifies to CITY and in addition, agrees that, in any proposal submitted to CITY in connection to this Agreement, CONTRACTOR shall further certify to CITY that neither CONTRACTOR nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in the transaction evidenced by this Agreement by any federal department or agency, and further agrees to comply with the requirements of Appendix B to 24 C.F.R. Part 24, and subpart C of the OMB guidance set forth in 2 C.F.R. Part 180, as supplemented by 2 C.F.R. Part 2424.

No part of the contract shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

6. **REGISTRATION REQUIREMENTS.** CONTRACTOR shall ensure that they have a DUNS number and are registered in the Central CONTRACTOR Registration (CCR) no later than the date the first report is due under FAR 52.204-11 American Recovery and Reinvestment Act – Reporting Requirement

TECHNICAL SPECIFICATIONS

PART 1 – GENERAL

1.1 SUMMARY

- A. The work covered under this specification and the associated Drawings include installing, replacing, repairing, cleaning and servicing lighting fixtures, lenses, lamps, and ballasts, including recycling of components where required.

1.2 REFERENCES

1. Publications listed below (including amendments, addenda, revisions, supplements, and errata) form a part of this specification to the extent referenced. Publications are referenced in the text by designation only.

A. American National Standards Institute (ANSI):

- C78.1-91..... Fluorescent Lamps - Rapid-Start Types - Dimensional and Electrical Characteristics
C78.2-91..... Fluorescent Lamps - Preheat-Start Types - Dimensional and Electrical Characteristics
C78.3-91..... Fluorescent Lamps - Instant Start and Cold-Cathode Types - Dimensional and Electrical Characteristics
C78.376-91..... Chromaticity of Fluorescent Lamps (ANSI/NEMA C78/376-96)

B. Certified Ballast Manufacturers Association (CBM):
Requirements for Ballast Certification.

C. Illuminating Engineering Society Of North America (IESNA)

D. Institute of Electrical and Electronic Engineers (IEEE):
C62.41-91..... Recommended Practice on Surge Voltage in Low Voltage AC Power Circuits

E. National Fire Protection Association (NFPA):
70-02 National Electrical Code (NEC)
101-00 Life Safety Code

F. National Electrical Manufacturer's Association (NEMA)
C82.1-97..... Ballasts for Fluorescent Lamps - Specifications
C82.2-02..... Method of Measurement of Fluorescent Lamp Ballasts
C82.4-02..... Ballasts for High-Intensity-Discharge and Low-Pressure Sodium Lamps
C82.11-02..... High Frequency Fluorescent Lamp Ballasts

G. Underwriters Laboratories, Inc. (UL):
496-96 Edison-Base Lampholders
542-99 Lampholders, Starters, and Starter Holders for Fluorescent Lamps
844-95 Electric Lighting Fixtures for Use in Hazardous (Classified) Locations
924-95 Emergency Lighting and Power Equipment
935-01 Fluorescent-Lamp Ballasts
1029-94 High-Intensity-Discharge Lamp Ballasts
1598-00 Luminaires

H. Federal Communications Commission (FCC):
Code of Federal Regulations (CFR), Title 47, Part 18

1.3 DEFINITIONS

- A. BF: Ballast factor
- B. CCT: Correlated color temperature
- C. CRI: Color-rendering index
- D. CU: Coefficient of utilization
- E. HID: High-intensity discharge
- F. LER: Luminaire efficacy rating
- G. Lumen: Measured output of lamp and luminaire, or both.
- H. Luminaire: Complete lighting fixture, including ballast housing if provided.
- I. RCR: Room cavity ratio.

1.4 SUBMITTALS

- A. Product Data: For each type of lighting fixture, lamp or ballast, arranged in order of fixture designation, include data on features, accessories, finishes, and the following:
 - 1. Physical description of lighting fixture including dimensions.
 - 2. Emergency lighting units including battery and charger.
 - 3. Ballast, including BF.
 - 4. Energy-efficiency data.
 - 5. Life, output (lumens, CCT, and CRI), and energy-efficiency data for lamps, including all information listed in lamp specifications below.
 - 6. Photometric data and adjustment factors based on laboratory tests, complying with IESNA Lighting Measurements Testing & Calculation Guides, of each lighting fixture type. The adjustment factors shall be for lamps, ballasts, and accessories identical to those indicated for the lighting fixture as applied in this Project.
 - a. Testing Agency Certified Data: For indicated fixtures, photometric data shall be certified by a qualified independent testing agency. Photometric data for remaining fixtures shall be certified by manufacturer.
 - b. Manufacturer Certified Data: Photometric data shall be certified by a manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
- B. Qualification Data: For qualified agencies providing photometric data for lighting fixtures.
- C. Product Certificates: For each type of ballast for bi-level and dimmer-controlled fixtures, from manufacturer.
- D. Warranty: Sample of special warranty.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

1.6 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements as indicated on Drawings and these specifications.

2.2 GENERAL REQUIREMENTS FOR LIGHTING FIXTURES AND COMPONENTS

- A. Fluorescent Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5 and NEMA LE 5A as applicable.
- B. Metal Parts: Free of burrs and sharp corners and edges.
- C. Sheet Metal Components: Steel unless otherwise indicated. Form and support to prevent warping and sagging.
- D. Factory-Applied Labels: Comply with UL 1598. Indicate recommended lamps and ballasts. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
1. Label on lamp, ballast and/or fixture shall include the following lamp and/or ballast characteristics, where applicable:
 - a. "USE ONLY" and include specified lamp type.
 - b. Lamp diameter code (T4, T5, T8, T12, etc.), tube configuration (twin, triple, quad, etc.), base type, and nominal wattage for fluorescent and compact fluorescent luminaires.
 - c. Lamp type, wattage, bulb type (ED17, BD56, etc.) and coating (clear or coated) for HID luminaires.
 - d. Start type (preheat, rapid start, instant start, etc.) for fluorescent and compact fluorescent luminaires.
 - e. ANSI ballast type (M98, M57, etc.) for HID luminaires.
 - f. CCT and CRI for all luminaires/lamps.

2.3 BALLASTS FOR LINEAR FLUORESCENT LAMPS

A. General Requirements for Electronic Ballasts:

1. Ballast manufacturer shall be the same as the lamp manufacturer.
2. Ballast shall be Instant Start, unless otherwise indicated on drawings.
3. Ballast shall provide Independent Lamp Operation (ILO) for Instant Start Parallel ballasts allowing remaining lamp(s) to maintain full light output when one or more lamps fail.
4. Designed for type and quantity of lamps served.
5. Ballasts shall be designed for full light output unless another BF, dimmer, or bi-level control is indicated.
6. Sound Rating: Class A.
7. Total Harmonic Distortion (THD) Rating: Ballast input current shall have a THD) of less than 10% when operated at nominal line voltage with primary lamp.
8. Operating Frequency: Between 42kHz and 52 kHz.
9. Lamp Current Crest Factor: 1.7 or less.
- 10. BF: 0.75 for Low Watt, 0.85 for Normal Light Output, and 1.15 for High Light**
11. Power Factor: 0.98 or higher for primary lamp.
12. Parallel Lamp Circuits: Multiple lamp ballasts shall comply with ANSI C82.11 and shall be connected to maintain full light output on surviving lamps if one or more lamps fail.
13. Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
14. Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
15. Ballast shall have a minimum starting temperature of -18C (0F) on Programmed Start ballasts for standard T8 lamps and 16C (60F) for energy-saving T8 lamps.
16. Ballast shall tolerate sustained open circuit and short circuit output conditions.
17. Ballast shall have lamp striation-reduction circuitry.
18. For Programmed Start ballasts, provide lamp EOL protection circuitry.
19. Maximum remote distance for Energy Saving Lamps in Remote/Tandem applications is 6 feet for ICN, IOP, and IOPA Instant Start and Programmed Start models.
20. Ballast shall be provided with integral leads color-coded per ANSI C82.11.

B. Regulatory Requirements for Electronic Ballasts:

1. Ballast shall not contain any Polychlorinated Biphenyl (PCB).
 2. Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
 3. Ballast shall comply with ANSI C62.41 Category A for Transient protection.
 4. Ballast shall comply with ANSI C82.11 where applicable.
 5. Ballast shall comply with UL 935.
 6. Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
 7. Ballast shall meet NEMA/CEE High Performance T8 Lighting System Specifications.
 8. Ballast shall comply with NEMA 410 for in-rush current limits.
- C. Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- D. Ballast shall be manufactured in an ISO 9001 Qualified factory.
- E. Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at maximum case temperature of 90C.
- F. Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

2.4 BALLASTS FOR COMPACT FLUORESCENT LAMPS

A. General Requirements for Electronic Ballasts for Compact Fluorescent Lamps:

1. Ballast shall be electronic-programmed or rapid start type (as specified in drawings), unless otherwise indicated on drawings.
2. Comply with UL 935 and with ANSI C82.11.
3. Designed for type and quantity of lamps served.
4. Ballasts shall be designed for full light output unless another BF, dimmer, or bi-level control is indicated.
5. Sound Rating: Class A.
6. Total Harmonic Distortion (THD) Rating: Ballast input current shall have a THD) of less than 10% when operated at nominal line voltage with primary lamp.
7. Operating Frequency: 40kHz or greater.
8. Lamp Current Crest Factor: 1.7 or less.
9. BF: 0.95 or higher for primary lamp application.
10. Power Factor: 0.98 or higher for primary lamp.
11. Parallel Lamp Circuits: Multiple lamp ballasts shall comply with ANSI C82.11 and shall be connected to maintain full light output on surviving lamps if one or more lamps fail.
12. Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
13. Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
14. Ballast shall have a minimum starting temperature of -18C (0F) for primary lamps.
15. Ballast shall tolerate sustained open circuit and short circuit output conditions.
16. Ballast shall provide lamp EOL protection circuitry.
17. Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
18. Ballast shall be provided with poke-in wire trap connectors color coded per ANSI C82.11.

B. Regulatory Requirements for Electronic Ballasts:

1. Ballast shall not contain any Polychlorinated Biphenyl (PCB).
2. Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
3. Ballast shall be rated for use in air-handling spaces.

4. Ballast shall comply with ANSI C62.41 Category A for Transient protection.
 5. Ballast shall comply with ANSI C82.11 where applicable.
 6. Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
 7. Ballast shall comply with NEMA 410 for in-rush current limits.
- C. Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- D. Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.
- E. Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 75C and three-years for a maximum case temperature of 85C.

2.5 FLUORESCENT LAMPS

A. 24 in, T8, 17 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 17 watts maximum
3. Nominal Length: 24 inches (610 mm)
4. Initial Lumens: 1,350 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

B. 36 in, T8, 25 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 25 watts maximum
3. Nominal Length: 36 inches (915 mm)
4. Initial Lumens: 2,225 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

C. 48 in, T8, 25 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 25 watts maximum
3. Nominal Length: 48 inches (1220 mm)
4. Initial Lumens: 2,475 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

D. 48 in, T8, 32 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 32 watts maximum
3. Nominal Length: 48 inches (1220 mm)

4. Initial Lumens: 2,950 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

E. 96 in, T8, 51 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 51 watts maximum
3. Nominal Length: 96 inches (2438 mm)
4. Initial Lumens: 5,000 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 93% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 30,000 hours
9. Manufacturer Warranty: 24 months (minimum)

F. 6 in spacing, T8 U-bent, 25 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 25 watts maximum
3. Nominal Length: $22 \frac{7}{16}$ inches (570 mm)
4. Initial Lumens: 2,400 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 24,000 hours
9. Manufacturer Warranty: 36 months (minimum)

G. $1 \frac{5}{8}$ " in spacing, T8 U-bent, 29 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 29 watts maximum
3. Nominal Length: $22 \frac{3}{5}$ inches (574 mm)
4. Initial Lumens: 2,600 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 30,000 hours
9. Manufacturer Warranty: 36 months (minimum)

H. 15 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 15 watts maximum
5. Nominal Length: Approx. 5.2 inches (132 mm)
6. Initial Lumens: 1,100 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 16,000 hours
11. Manufacturer Warranty: 24 months (minimum)

I. 21 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 21 watts maximum
5. Nominal Length: Approx. 5.2 inches (132 mm)
6. Initial Lumens: 1,525 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 16,000 hours
11. Manufacturer Warranty: 24 months (minimum)

J. 26 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 26 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 1,800 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

K. 27 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 27 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 1,875 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

L. 32 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 32 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 2,400 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

M. 33 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4

4. Rated 33 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 2,615 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

N. 42 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 42 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 3,200 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

O. 13 Watt Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Rated 13 watts maximum
3. Nominal Length: Up to 5.0 inches (126.7 mm)
4. Initial Lumens: 900 (minimum)
5. CRI: 82 (minimum)
6. Color Temperature: 4000K
7. Average Rated Life: 12,000 hours
8. Manufacturer Warranty: 24 months (minimum)

P. 23 Watt Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Rated 23 watts maximum
3. Nominal Length: Up to 5.5 inches (139.7 mm)
4. Initial Lumens: 1,000 (minimum)
5. CRI: 82 (minimum)
6. Color Temperature: 4100K
7. Average Rated Life: 10,000 hours
8. Manufacturer Warranty: 24 months (minimum)

Q. 14 Watt PAR20 Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Reflector PAR20
3. Rated 14 watts maximum
4. Nominal Length: Up to 4.5 inches (114.3 mm)
5. Initial Lumens: 500 (minimum)
6. CRI: 82 (minimum)
7. Color Temperature: 4000K
8. Average Rated Life: 8,000 hours
9. Manufacturer Warranty: 24 months (minimum)

R. 23 Watt PAR38 Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Reflector PAR38
3. Rated 23 watts maximum
4. Nominal Length: Up to 6.5 inches (165.1 mm)
5. Initial Lumens: 1,300 (minimum)
6. CRI: 82 (minimum)
7. Color Temperature: 4000K
8. Average Rated Life: 8,000 hours
9. Manufacturer Warranty: 24 months (minimum)

2.6 LED LAMPS

A. PAR38, Dimmable, E26 Screw-in Base, LED Lamp:

1. Lamp Size: PAR 38
2. E26 Screw-in Base
3. Dimmable
4. Rated 20 watts maximum
5. Initial Lumens: 900 (minimum)
6. CRI: 67 (minimum)
7. Center Beam Candlepower: 3,100 (minimum)
8. Beam Spread: 25°
9. Color Temperature Range: 3000K to 4200K
10. Average Rated Life: 40,000 hours
11. Manufacturer Warranty: 36 months (minimum)

2.7 OCCUPANCY SENSORS

A. General Requirements for Occupancy Sensors:

1. **All occupancy sensors provided shall be manufactured by the same company, including power packs and other control devices. Mixed manufacturer submittals will not be accepted.**
2. The occupancy sensor system shall sense the presence of human activity within the desired space and fully control the on/off function of the lights.
3. Sensors shall utilize passive infrared (PIR) technology, which detects occupant motion, to initially turn lights on from an off state; thus preventing false on conditions. Ultrasonic or Microwave based sensing technologies shall not be accepted for turning lights on.
4. For applications where a second method of sensing is necessary to adequately detect maintained occupancy (such as in rooms with obstructions), a sensor with an additional "dual" technology shall be used.
5. Dual technology sensors shall have one of its two technologies not require motion to detect occupancy. Acceptable dual technology includes PIR/Sound (also known as Passive Dual Technology or PDT) which both looks for occupant motion and listens for sounds indicating occupants. Sensors where both technologies detect motion only shall not be acceptable.

B. Operation Requirements for Occupancy Sensors:

1. Sensors shall offer a minimum on timer of at least 5 minutes, in order to prevent all cycling of lamps before they have burned for the lamp manufacturers minimum recommended time period. This timer shall be in addition to the regular occupancy time delay that keeps lights on after last detected occupancy. User shall be able to disable/enable and change the value of this timer.
2. Sensors shall utilize an occupancy time delay that keeps lights on after last detected occupancy. Factory default setting of the occupancy time delay shall be 10 minutes. Sensors with a longer factory default setting shall not be permitted as they greatly restrict energy savings potential.
3. Manual adjustment to the occupancy time delay so as to increase it shall be accommodated, but shall not be allowed unless a calculation showing the resulting energy savings loss is presented to the building owner and specifying engineer.
4. Automatic adjustments to the occupancy time delay shall only be permitted if the controlling algorithm

- maximizes both lamp life and energy savings. For example a shorter more energy saving time delay setting shall only be allowed if the resulting lamp life is also improved.
5. Installer, in accordance with manufacturer's recommendation, shall determine final sensor location. All sensors shall be factory calibrated for optimum performance for its installed PIR lens, and shall not require initial or subsequent field adjustment of detection sensitivity.
 6. All sensor setting adjustments shall be digital and made using a push-button. Analog dials, and/or the need for tools of any kind shall not be accepted.
 7. The installing contractor shall be responsible for a complete and functional system in accordance with all applicable local and national codes.
- C. All steps in sensor manufacturing process shall occur in the USA; including population of all electronic components on circuit boards, soldering, programming, wiring, and housing. Manufacturing facility must be ROHS compliant.
- D. All applicable products must be UL / CUL Listed or other acceptable national testing organization.
- E. Sensors shall have a 5 year warranty.
- F. WALL SWITCH OCCUPANCY SENSORS – SMALL AREAS
1. Sensor shall provide wall-to-wall PIR detection such that small hand motions are detected out to a continuous 20 ft. (6.10 m) radius.
 2. In areas with periodic or permanent obstruction to a sensor's field of view, sensors that utilize dual technology (PIR/Sound) detection shall be used (as specified in above general requirements section).
 3. For applications requiring independent control of two loads, a sensor with two dual relays and dual override switches shall be required. Each relay shall have independent programmable occupancy time delays.
 4. Sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz power. A version capable of switching 347 VAC shall also be available. Load ratings shall be 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC, and ¼ HP motor load.
 5. Sensor shall recess into single gang switch box and fit a standard GFI opening.
 6. Sensor shall meet NEC grounding requirements by providing a dedicated ground connection and intrinsically grounding through its mounting strap.
 7. Line and load wire connections shall be interchangeable, such that installer cannot make an improper connection to a line/load in a manner that will cause malfunction or damage to the sensor.
 8. Sensor shall not require a neutral connection regardless of number of poles and/or detection technology (only exception is versions with lighted push-buttons).
 9. Sensor shall not allow any leakage of current to pass to the load when sensor is in the unoccupied (off) condition. Sensor shall not require a minimum load to be connected in order to function.
 10. Sensor shall have optional features for photocell/daylight override, vandal resistant lens, low temperature/high humidity operation.
 11. All sensor settings, including time delay and photocell settings shall be digital and accessible for adjustment via a push-button without requiring removal of cover plate or tools of any kind.
 12. Wall Switch sensors shall have field programmable adjustments for selecting operational modes, occupancy time delays, minimum on time, and photocell set-point as applicable.
 13. All models shall be capable of both Auto-On and Manual On operation.
 14. All models shall be capable of a "Reduced Turn On" operation where the initial PIR turn on level is higher in order to eliminate PIR from reflective surfaces from being detected. PIR shall be returned to normal levels upon initial PIR detection.
 15. All models shall provide high immunity to false triggering from RFI (hand-held radios) and EMI (electrical noise on the line).
 16. All models shall have a "Predictive Off" mode where user can manually turn the lights off when leaving the room and still have them come on automatically when they return to space.
 17. Where specified, wall switch sensors shall provide a field selectable option to convert sensor operation from automatic-ON to manual-ON.
 18. All models shall be capable of disabling override switch.
 19. Where specified, passive infrared ultrasonic and dual technology sensors shall offer daylighting footcandle adjustment control and be able to accommodate dual level lighting.

20. Dual technology sensors shall be wall mounted, corner mounted or ceiling mounted in such a way as to minimize coverage in unwanted areas.
21. In the event of failure, a bypass manual override shall be provided on each sensor. When bypass is utilized, lighting shall remain on constantly or control shall divert to a wall switch until sensor is replaced. This control shall be recessed to prevent tampering.
22. Adjustments and mounting hardware shall be concealed under a removable cover to prevent tampering of adjustments and hardware.

G. WALL SWITCH OCCUPANCY SENSORS – LARGE AREAS

1. Sensor shall provide wall-to-wall PIR detection such that small hand motions are detected out to a continuous 40 ft. (12.19 m) radius.
2. In areas with periodic or permanent obstruction to a sensor's field of view, sensors that utilize dual technology (PIR/Sound) detection shall be used (as specified in above general requirements section).
3. For applications requiring independent control of two loads, a sensor with two dual relays and dual override switches shall be required. Each relay shall have independent programmable occupancy time delays.
4. Sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz. A version capable of switching 347 VAC shall also be available. Load ratings shall be 13A each pole, ¼ HP motor load.
5. Sensor shall meet NEC grounding requirements by providing a dedicated ground connection and intrinsically grounding through its mounting strap.
6. Line and load wire connections shall be interchangeable, such that installer cannot make an improper connection to a line/load in a manner that will cause malfunction or damage to the sensor.
7. Sensor shall not require a neutral connection regardless of number of poles and/or detection technology.
8. Sensor shall not allow any leakage of current to pass to the load when sensor is in the unoccupied (Off) condition. Sensor shall not require a minimum load to be connected in order to function.
9. Where specified, wall switch sensors shall provide a field selectable option to convert sensor operation from automatic-ON to manual-ON.
10. Dual technology sensors shall be wall mounted, corner mounted or ceiling mounted in such a way as to minimize coverage in unwanted areas.
11. In the event of failure, a bypass manual override shall be provided on each sensor. When bypass is utilized, lighting shall remain on constantly or control shall divert to a wall switch until sensor is replaced. This control shall be recessed to prevent tampering.
12. Adjustments and mounting hardware shall be concealed under a removable cover to prevent tampering of adjustments and hardware.

H. LOW VOLTAGE OCCUPANCY SENSORS – CEILING MOUNTED OR WALL MOUNTED (SEE SECTION J: POWER AND AUXILIARY RELAY PACKS FOR REQUIRED POWER SUPPLY, TO BE INCLUDED WITH OCCUPANCY SENSOR ON BID TAB)

1. **Sensors to be low voltage (12V or 24V) and to utilize a power pack (see specification section J below).**
2. Power packs for sensors to be included with occupancy sensor on bid tab.
3. The installing contractor shall install one or more sensors with PIR coverage areas that cover the entire space and all entrance points. Exact placement and quantity required shall be per manufacturer's best practice recommendations.
4. In areas with periodic or permanent obstruction to a sensor's field of view, sensors that utilize dual technology (PIR/Sound) detection shall be used (as specified in above general requirements section).
5. Sensors shall utilize a digital PIR detector (dual element pyro-electric detector) component, so as to provide a high degree of RF immunity.
6. Ceiling mounted sensors shall be mounted to the ceiling with a flat, unobtrusive appearance and provide 360° of coverage.
7. Sensor shall utilize a temperature compensated dual element sensor and a multi-element Fresnel lens. Fresnel lens shall be a Poly IR 4 based material to offer superior performance in the Infrared wavelengths and filter short wavelength infrared, such as those emitted by the sun and other visible light sources. Lens shall have grooves facing in to avoid dust and residue build up which affects IR reception.
8. Line and load wire connections shall be interchangeable, such that installer cannot make an improper connection to a line/load in a manner that will cause malfunction or damage to the sensor.

9. Multiple sensors controlling the same load shall be wired in parallel or per manufacturer's recommendations.
10. Where indicated on the drawings, sensors shall have a manual on function that is facilitated by installing a momentary wall switch.
11. For applications requiring independent control of two loads, a sensor with two dual relays shall be required. Each relay shall have independent programmable occupancy time delays.
12. Dual relay sensors shall have an optional operational mode called "Alternating On" where when during unoccupied periods, one relay is always left closed (thus one load is always on). The particular relay that is left closed alternates each cycle so that the aging of the connected lamps is even.
13. Sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz power. A version capable of switching 347 VAC shall also be available. Load ratings shall be 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC, and ¼ HP motor load.
14. Specific sensors capable of switching 5 Amps of two phase power (208/240 or 480 VAC) shall be available. These sensors shall always simultaneously switch both phases as per NEC guidelines.
15. Wall mounted sensors must be installed at 7 to 8 feet above the floor. Single and two circuit units shall be available.
16. High bay sensors controlling HID Bi-Level must incorporate a "Start to High" timer on initial power up to provide full light output for up to 20 minutes to prevent shortened lamp life.
17. Sensors shall have test mode that temporarily shortens/disable all time delays (e.g., minimum on, occupancy, photocell transition, dimming rates) such that an installer can quickly test operation of sensor. Test mode shall time out and return sensor to normal operation should the installer forget to disable test mode after installation.
18. Sensors shall have optional features for on/off photocell control, automatic dimming control photocell, high/low occupancy based dimming, and usage in low temperature/high humidity environments.
19. Power packs and auxiliary relay packs used with low voltage sensors shall comply with requirements in this specification for those items; see section on Power and Auxiliary Relay Packs.

I. INDOOR PHOTOCELLS AND DAYLIGHT HARVESTING CONTROLS

1. Low voltage photocell shall accept 12 to 24 VAC or VDC and provide a SPDT relay for interface with remote switching system. Sensor shall interface with occupancy sensors, directly with power pack, or other system as shown.
2. Photocell shall provide for an on/off set-point, and a deadband to prevent the artificial light from cycling. Delay shall be incorporated into the photocell to prevent rapid response to passing clouds.
3. Photocell set-point and deadband shall be automatically calibrated through the sensor's microprocessor by initiating an "Automatic Set-point Programming" procedure. Further adjustment may be made manually if needed.
4. Deadband setting shall be verified and modified by the sensor automatically every time the lights cycle to accommodate physical changes in the space (i.e., furniture layouts, lamp depreciation, or lamp outages).
5. Low voltage dimming sensors shall accept 12 to 24 VAC or VDC (from power pack or other low voltage source) and control 0 to 10 VDC dimmable ballasts by sinking up to 20 mA of class 2 current (typically 40 or more ballasts).
6. Low voltage dimming sensor's set point shall be automatically calibrated through the sensor's microprocessor by initiating the "Automatic Set-point Programming" procedure. Min and max dim settings as well as set-point may be manually entered.
7. Low voltage dimming sensors shall be equipped with an automatic override for 100 hour burn-in of lamps. This feature must be available at any time for lamp replacements. (Note: This function should be performed prior to any dimming of the lamps including the "auto set-point" setting.)
8. Combination photocell/dimming sensors shall accept 12 to 24 VAC or VDC (from power pack or other low voltage source) and control the on/off function as well as the dimming function of 0 to 10 VDC dimmable ballasts.
9. Combination photocell/dimming sensor's set-point and deadband shall be automatically calibrated through the sensor's microprocessor by initiating the "Automatic Set-point Programming" procedure. Min and max dim settings as well as set point may be manually entered.
10. Combination photocell/dimming sensors shall be equipped with an automatic override for 100 hour burn-in of lamps. This feature must be available at any time for lamp replacements. (Note: This function should be performed prior to any dimming of the lamps including the "auto set-point" setting.)
11. Dual zone option shall be available for photocell, dimming, or combination units. The second zone shall be controlled as an "offset" from the primary zone and shall be the zone farthest from the natural light

source.

12. Stand-alone ambient light sensors (CM ALC version only) shall interface directly with the 0 to 10 VDC, without any other power source connection, and control dimmable ballasts by sinking up to 20 milliamps of class 2 current. Sensor shall incorporate a photodiode viewing out of a ceiling enclosure at a 30 degree angle from horizontal to detect diffused light from the ambient and artificial sources. Sensor shall allow for removal of response delays for adjustment, however provide dampening delay for normal operation. Settings shall be made manually.
13. Line voltage versions of the above described photocell and combination photocell/dimming sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz power. A version capable of switching 347 VAC shall also be available. Load ratings shall be 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC, and ¼ HP motor load.
14. Line voltage versions of the above described dimming sensors shall be capable of powering off 120/277 VAC.
15. Line voltage versions of the above described photocell and combination photocell/dimming sensors shall be capable of switching 5 Amps of two phase power (208/240 or 480 VAC) shall be available. These sensors shall always simultaneously switch both phases as per NEC guidelines.

J. POWER AND AUXILIARY RELAY PACKS (ITEM INCLUDED WITH OCCUPANCY SENSOR ON BID TAB)

1. Power packs for sensors to be included with occupancy sensor on bid tab.
2. Power pack shall be a self-contained transformer and relay module.
3. For ease and speed of installation, power and auxiliary relay packs shall have 1/2" nipple for 1/2" knockouts and mounting on outside of enclosures.
4. Power and auxiliary relay packs shall have dry contacts capable of switching 20 amp ballast load, 13 amp incandescent, 1 hp @ 120 VAC, 60Hz; 20 amp ballast @ 277 VAC, 60 Hz; 15 amp ballast @ 347 VAC, 60Hz; 15 amp ballast, 1 hp @ 220-240 VAC, 60 Hz; and 20 amp ballast, 13 amp incandescent, 1 hp @ 220-240 VAC, 50 Hz.
5. Power packs shall provide low voltage output in accordance with occupancy sensor requirements.
6. Power packs shall be capable of parallel wiring without regard to AC phases on primary.
7. Auxiliary relay packs shall be identical in physical size of power packs and contain no transformer power supply and shall switch 120VAC, 277 VAC, 347 VAC or low voltage.
8. Power pack can be used as a standalone, low voltage switch, or can be wired to sensor for auto control.
9. Power and auxiliary relay packs shall have low voltage teflon coated leads, rated for 300 volts, suitable for use in plenum applications.
10. Power pack shall be UL 2043 rated, use UL94 V-O plenum rated plastic, and have low voltage teflon coated leads, rated for 300 volts
11. To ensure quality and reliability, power and auxiliary relay packs shall be manufactured by an ISO 9002 certified manufacturing facility and shall have a defect rate of less than 1/3 of 1%.
12. Power and auxiliary relay packs shall have a 5 year warranty.
13. Power and auxiliary relay packs shall be UL and CUL listed.

**EXHIBIT B
MATERIALS PRICING LIST**

Tag	Lamp Description	Specification Section	QTY	Lamp Life	Initial Lumens	Correlated Color Temp	Unit Cost	Total Cost
L1	51 watt, 8', T8 Fluorescent Lamp	2.5-E	390	30,000	5,000	4100K	\$ 4.83	\$ 1,883.70
L2	21 watt CFL, Double or Triple Tube	2.5-I	10	16,000	1,525	4100K	\$ 3.57	\$ 35.70
L4	29 watt, 2', U-Bent, T8 Fluorescent Lamp, 1-5/8"	2.5-G	4	30,000	2,600	4100K	\$ 5.90	\$ 23.60
L5	17 watt, 2', T8 Fluorescent Lamp	2.5-A	338	36,000	1,350	4100K	\$ 1.68	\$ 567.84
L6	25 watt, 3', T8 Fluorescent Lamp	2.5-B	38	36,000	2,225	4100K	\$ 1.82	\$ 69.16
L7	25 watt, 4', T8 Fluorescent Lamp	2.5-C	14867	36,000	2,475	4100K	\$ 1.83	\$27,206.61
L8	32 watt, 4', T8 Fluorescent Lamp	2.5-D	75	36,000	2,950	4100K	\$ 1.43	\$ 107.25
L9	15 watt CFL, Double or Triple Tube	2.5-H	2353	16,000	1,100	4100K	\$ 3.57	\$ 8,400.21
L10	Dimmable LED PAR38 Lamp (E26 Screw-in Base)		60	40,000	900	3000-4200K	\$ 41.84	\$ 2,510.40
TOTAL SECTION "L"								\$40,804.47
Tag	Ballast Description	Specification Section	QTY	Lamp Life	Initial Lumens	Correlated Color Temp	Unit Cost	Total Cost
B1	Rapid Start CFL Ballast, 26W, 4-Pin, 2 Lamp	2.4	5				\$ 16.67	\$ 83.35
B2	Instant Start, Energy-Efficient, 1 Lamp T8, 0.75 BF (40W)	2.3	713				\$ 8.71	\$ 6,210.23
B3	Instant Start, Energy-Efficient, 2 Lamp T8, 0.75 BF (40W)	2.3	3506				\$ 8.81	\$30,887.86
B4	Instant Start, Energy-Efficient, 3 Lamp T8, 0.75 BF (40W)	2.3	2241				\$ 9.73	\$21,804.93
B5	Instant Start, Energy-Efficient, 4 Lamp T8, 0.75 BF (40W)	2.3	335				\$ 10.76	\$ 3,604.60
B6	Rapid Start CFL Ballast, 18W, 4-Pin, 2 Lamp	2.4	1313				\$ 16.67	\$21,887.71
B7	Instant Start, High-Efficiency, 2 Lamp T8, 0.87 BF (57W)	2.3	200				\$ 17.30	\$ 3,460.00
TOTAL SECTION "B"								\$87,938.68

Tag	Switch Description	Specification Section	QTY	Radial Range	Degrees	Unit Cost	Total Cost
S1	Occupancy Sensor, Wall Mtd., PIR	2.7-F OR G	826	20'	180	\$ 44.57	\$36,814.82
S2	Occupancy Sensor, Wall Mtd., PDT	2.7-F OR G	149	20'	180	\$ 49.76	\$ 7,414.24
S3	Low Voltage Occupancy Sensor, Ceiling Mtd., PIR, (incl. power pack)	2.7-H	174	12'	360	\$ 52.07	\$ 9,060.18
S4	Low Voltage Occupancy Sensor, Ceiling Mtd., PDT, (incl. power pack)	2.7-H	109	12'	360	\$ 85.57	\$ 9,327.13
S5	Low Voltage Occupancy Sensor, Corner Mtd., PIR, (incl. power pack)	2.7-H	4	40'	110	\$ 68.85	\$ 275.40
S7	Low Voltage Occupancy Sensor, Wall Mtd., Hallway, PIR, (incl. power pack)	2.7-H	3	130'	10	\$ 80.91	\$ 242.73
S8	Low Voltage Occupancy Sensor, Wall Mtd., Hallway No Switch, PIR, (incl. power pack)	2.7-H	1	130'	10	\$ 80.91	\$ 80.91
TOTAL SECTION "S"							\$63,215.41

Tag	Switch Description	Model Number	QTY	Unit Cost	Total Cost
V1	Vending Miser, Indoor with Occupancy Sensor	USA Technologies VM150	43	\$ 105.81	\$ 4,549.83
V2	Vending Miser, Indoor without Occupancy Sensor	USA Technologies VM151	12	\$ 99.30	\$ 1,191.60
V3	Vending Miser, Outdoor with Occupancy Sensor	USA Technologies VM160	9	\$ 128.26	\$ 1,154.34
V4	Vending Miser, Outdoor without Occupancy Sensor	USA Technologies VM161	5	\$ 122.91	\$ 614.55
TOTAL SECTION "V"					\$7,510.32

TIMELY DELIVERY IS OF UTMOST IMPORTANCE. PLEASE PROVIDE THE ANTICIPATED LENGTH OF TIME IT WILL TAKE TO DELIVER ITEMS: 14 days

TOTAL SECTION L –	\$ 40,804.47
TOTAL SECTION B –	\$ 87,938.68
TOTAL SECTION S –	\$ 63,215.41
TOTAL SECTION V –	\$ 7,510.32
SUB-TOTAL –	\$ 199,468.88
SALES TAX (9.3 %) –	\$ 18,550.60
GRAND TOTAL - ALL ITEMS -	\$218,019.48

EXHIBIT C
WHISTLE BLOWER POSTER

Know Your Rights Under the Recovery Act!

Did you know?

The American Recovery and Reinvestment Act of 2009¹ provides protections for certain employees of non-federal employers who make specified disclosures relating to possible fraud, waste and/or abuse of Recovery Act funds.

Who is protected?

Employees of non-federal employers receiving recovery funds. This includes State and local governments, contractors, subcontractors, grantees or professional membership organizations acting in the interest of recovery fund recipients.

How are Whistleblowers Protected?

You cannot be discharged, demoted or otherwise discriminated against as a reprisal for making a protected disclosure.

What types of disclosures are protected?

The disclosure must be made by the employee to the Recovery Accountability and Transparency Board, an Inspector General, the Comptroller General, a member of Congress, a state or federal regulatory or law enforcement agency, a person with supervisory authority over the employee, a court or grand jury, or the head of a federal agency or his/her representatives.

The disclosure must involve information that the employee believes is evidence of:

- gross mismanagement of an agency contract or grant relating to recovery funds;
- a gross waste of recovery funds;
- a substantial and specific danger to public health or safety related to the implementation or use of recovery funds;
- an abuse of authority related to the implementation or use of recovery funds; or
- a violation of law, rule, or regulation related to an agency contract or grant awarded or issued relating to recovery funds.

Take Action!

Log on to Recovery.gov for more information about your rights and details on how to report at www.recovery.gov.

¹ Section 1553 of Division A, Title XV of the American Recovery and Reinvestment Act of 2009, P.L. 111-5

**CITY OF CHANDLER PURCHASE CONTRACT
BUILDING LIGHTING RETROFITS (ARRA PROJECT) - REBID
AGREEMENT NO.: CM1-285-2979**

THIS AGREEMENT is made and entered into this ____ day of _____, 2011, by and between the City of Chandler, a Municipal Corporation of the State of Arizona, hereinafter referred to as "CITY", and **WESCO DISTRIBUTION dba BROWN WHOLESALE ELECTRIC**, hereinafter referred to as "CONTRACTOR".

NOW THEREFORE, in consideration of the mutual promises and obligations set forth herein, the parties hereto agree as follows:

1. CONTRACT ADMINISTRATION AND OPERATION:

- 1.1. Contract Administrator:** CONTRACTOR shall act under the authority and approval of the Parks & Facilities Maintenance Manager /designee (Contract Administrator), to provide the goods and merchandise required by this Contract.
- 1.2. Ordering Instructions:** Authorization for purchases under the terms and conditions of this contract will be made only upon issuance of a CITY Purchase Order or use of a City Procurement Card.
- 1.3. Ordering Process.** Upon award of a contract by the City, any designated department may procure the specific product, equipment or material awarded by the issuance of a Contract Purchase Order to the appropriate CONTRACTOR. Each Contract Purchase Order must cite the correct Chandler contract number.

2. GOODS AND MERCHANDISE TO BE PROVIDED: CONTRACTOR shall provide to CITY the goods and merchandise listed on Exhibit A, attached hereto and made a part hereof by reference, at the prices listed on Exhibit B, all as more specifically set forth in the Specifications and details included therein. Exhibit C is hereby added for reference.

- 2.1. Safety Standards:** All items supplied pursuant to this contract must comply with the current applicable occupational safety and health standards of the State of Arizona Industrial Commission, the National Electric Code, and the National Fire Protection Association Standards.
- 2.2. Non-Discrimination.** The CONTRACTOR shall comply with State Executive Order No. 99-4 and all other applicable City, State and Federal laws, rules and regulations, including the Americans with Disabilities Act.
- 2.3. Product Discontinuance (Categories):** In the event that a required product or model is discontinued by the manufacturer, CITY at its sole discretion may allow CONTRACTOR to provide a substitute for the discontinued item. CONTRACTOR shall request permission to substitute a new product or model and provide the following:

A formal announcement from the manufacturer that the product or model has been discontinued.

Documentation from the manufacturer that names the replacement product or model.

Documentation that provides clear and convincing evidence that the replacement will be compatible with all the functions or uses of the discontinued product or model.

Documentation confirming that the price for the replacement is the same as or less than the discontinued model.

If requested by CITY, CONTRACTOR shall provide a sample of the replacement product.

- 2.4. **Licenses:** CONTRACTOR shall maintain in current status all Federal, State and local licenses and permits required for the operation of the business conducted by CONTRACTOR as applicable to this contract.
- 2.5. **Contract Orders:** CONTRACTOR shall, in accordance with all terms and conditions of this Contract, fully perform and shall be obligated to comply with all contract orders received by CONTRACTOR prior to the expiration or termination hereof, unless otherwise directed in writing by the Contract Administrator, including, without limitation, all contract orders received prior to but not fully performed and satisfied at the expiration or termination of this Contract.
- 2.6. **Advertising, Publishing and Promotion of Contract:** The CONTRACTOR shall not use, advertise or promote information for commercial benefit concerning this Contract without the prior written approval of the Procurement Officer.
- 2.7. **Compliance With Applicable Laws:** CONTRACTOR shall comply with all applicable Federal, state and local laws, and with all applicable license and permit requirements.
- 2.8. **Assignment:** Services covered by this Contract shall not be assigned in whole or in part without the prior written consent of CITY.
- 2.9. **Amendments:** The Contract may be modified only through a written Contract Amendment executed by authorized persons for both parties. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by CITY in writing or made unilaterally by the CONTRACTOR are violations of the Contract and of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the CONTRACTOR shall not be entitled to any claim under this Contract based on those changes.
- 2.10. **Payment.** A separate invoice shall be issued for each shipment of goods or materials, and no payment will be issued prior to receipt of goods or materials and receipt of a correct invoice.
- 2.11. **Estimated Quantities.** The quantities shown on Exhibit B (the Price List) are estimates only, based upon available information. Payment shall be based on actual quantities and there is no guarantee that any certain quantity shall be required by CITY. CITY reserves the right to increase or decrease the quantities actually required.
- 2.12. **Catalogs/Contract Price Listing.** As applicable, the CONTRACTOR(s) shall be required to furnish to all requesting departments catalogs at no cost, which will outline contract prices.
- 2.13. **Current Models.** It is CITY's intent to procure materials of the latest technology. All materials bid must be in current production and parts must be available for a minimum of five (5) years from bid date.
- 2.14. **Current Products.** All products offered in response to this solicitation shall be in current and ongoing production; shall have been formally announced for general marketing purposes; shall be a model or type currently functioning in a user (paying customer) environment and capable of meeting or exceeding all specifications and requirements set forth in this solicitation.
- 2.15. **New/Current Products.** All goods, equipment, materials, parts and other components supplied pursuant to this Contract shall be new, or the latest model and of the most suitable grade for the purpose intended.
- 2.16. **Packing and Shipping.** The CONTRACTOR shall be responsible for industry standard packing, which conforms to requirements of carrier's tariffs and Interstate Commerce Commission (ICC) regulations.

Containers must be clearly marked as to lot number, destination, address and purchase order number.

3. WARRANTIES:

- 3.1. Liens:** CONTRACTOR warrants that the materials supplied under this Contract are free of liens and shall remain free of liens.
- 3.2. Quality:** Unless otherwise modified elsewhere in these terms and conditions, CONTRACTOR warrants that, for one year after acceptance by CITY of the materials, they shall be:
- 3.2.1.** Of a quality to pass without objection in the trade under the Contract description;
 - 3.2.2.** Fit for the intended purposes for which the materials are used;
 - 3.2.3.** Within the variations permitted by the Contract and are of even kind, quantity, and quality within each unit and among all units;
 - 3.2.4.** Adequately contained, packaged and marked as the Contract may require; and
 - 3.2.5.** Conform to the written promises or affirmations of fact made by CONTRACTOR.
- 3.3. Fitness:** CONTRACTOR warrants that any material supplied to CITY shall fully conform to all requirements of the Contract and all representations of CONTRACTOR, and shall be fit for all purposes and uses required by the Contract.
- 3.4. Inspection/Testing:** The warranties set forth in Section 3 herein are not affected by inspection or testing of or payment for the materials by CITY.
- 3.5. Warranty.** CONTRACTOR must provide a manufacturer's warranty on all goods or equipment supplied pursuant to this Contract.
- 4. ACCEPTANCE AND DOCUMENTATION:** All goods are subject to final inspection and acceptance by CITY. Material failing to meet the requirements of this Contract will be held at CONTRACTOR's risk and may be returned to CONTRACTOR. If so returned, the cost of transportation, unpacking, inspection, repacking, reshipping or other like expenses is the responsibility of CONTRACTOR. CITY may elect to do any or all of the following: Waive the non-conformance; stop the work immediately; or bring the material into compliance. Defective Products. All defective products shall be replaced and exchanged by CONTRACTOR. The cost of transportation, unpacking, inspection, repacking, reshipping or other like expenses shall be paid by the CONTRACTOR. All replacement products must be received by CITY within seven (7) days of initial notification
- 4.1. Records.** The CONTRACTOR shall retain all data and other "records" relating to the acquisition and performance of the Contract for a period of five years after the completion of the Contract.
 - 4.2. Audit.** At any time during the term of this Contract and five (5) years thereafter, CONTRACTOR's books and records shall be subject to audit by CITY to the extent that the books and records relate to the performance of the Contract or Subcontract. Upon request, CONTRACTOR shall produce a legible copy of any or all such records.
 - 4.3. Delivery.** Delivery shall be made within **thirty (30) calendar days** after receipt of a Contract Purchase Order (ARO).
- 5. PRICE:** CITY shall pay to CONTRACTOR an amount not to exceed **One Hundred Seventy Two Thousand Seven Hundred Fifty Seven Dollars and 94/100 (\$172,757.94)** for the completion of all the

work and services described herein, which sum shall include all costs or expenses incurred by CONTRACTOR, payable as set forth in Exhibit B, attached hereto and made a part hereof by reference.

- 5.1. Pricing:** Prices stated include all freight, insurance, warranty costs, and any other applicable costs.
- 5.2. Payment:** A separate invoice shall be issued for each shipment of goods or merchandise, and no payment will be issued prior to receipt of material and a correct invoice. All billing invoices shall include delivery time, purchase order number, and contractual payment terms. Items are to be identified by the name, model number, contract number, line item number, and serial number if applicable. Payment. CONTRACTOR shall submit to the issuing department, after completion of the task or combination of tasks listed by the issuing departments task order, a statement of charges for the work completed under that task order, in conformance with the pricing schedule of this contract, the issuing department shall process the claim for prompt payment in accordance with the standard operating procedures of CITY.
- 5.3. Delivery:** All prices are F.O.B. Destination and include all delivery and unloading at the specified destinations. CONTRACTOR shall retain title and control of all goods until they are delivered and accepted by CITY. All risk of transportation and all related charges shall be the responsibility of CONTRACTOR. All claims for visible or concealed damage shall be filed by CONTRACTOR. CITY will notify CONTRACTOR promptly of any damaged goods and shall assist CONTRACTOR in arranging for inspection.
- 5.4. Risk of Loss:** CONTRACTOR shall bear all loss of conforming material covered under this Contract until received by authorized personnel at the location designated in the purchase order or Contract. Mere receipt does not constitute final acceptance. The risk of loss for nonconforming materials shall remain with CONTRACTOR regardless of receipt.
- 5.5. Taxes:** CONTRACTOR shall be solely legally responsible for any and all tax obligations, which may result out of CONTRACTOR'S performance of this Contract. CITY shall have no legal obligation to pay any amounts for taxes, of any type, incurred by CONTRACTOR. City agrees that Contractor may bill the City for applicable privilege license taxes which are paid for by Contractor and that the City will reimburse Contractor for privilege license taxes actually paid by Contractor. If Contractor obtains any refund of privilege license taxes paid, City will be entitled to a refund of such amounts.
- 5.6. IRS W9 Form.** In order to receive payment CONTRACTOR shall have a current I.R.S. W9 Form on file with CITY, unless said form is not required by law.
- 5.7. Acceptance by CITY.** CITY reserves the right to accept or reject the request for a price increase. If CITY approves the price increase, the price shall remain firm for the renewal term for which it was requested. If a price increase is agreed upon a written Contract Amendment must be approved and executed by the Parties.
- 5.8. Price Reduction.** CONTRACTOR shall offer CITY a price reduction for its products concurrent with a published price reduction made to other customers.
- 6. TERM:** The term of the Contract is one (1) year (s), commencing on the **1st day of May, 2011** and terminating on **April 30, 2012**, unless sooner terminated in accordance with the provisions herein. CITY reserves the right, at its sole discretion, to extend the Contract for up to thirty (30) days.
- 7. USE OF THIS CONTRACT.** The Contract is for the sole convenience of the City of Chandler. CITY reserves the rights to obtain like goods and materials from another source to secure significant cost savings or when timely delivery cannot be met by CONTRACTOR.

7.1. **Cooperative Use of Contract.** In addition to the City of Chandler and with approval of the contracted CONTRACTOR, this Contract may be extended for use by other municipalities, school districts and government agencies of the State. A current listing of eligible entities may be found at www.maricopa.gov/materials and then click on 'Contracts', 'S.A.V.E.' listing and 'ICPA'. Any such usage by other entities must be in accordance with the ordinance, charter and/or procurement rules and regulations of the respective political entity.

8. **CITY'S CONTRACTUAL REMEDIES:**

8.1. **Right to Assurance:** If CITY in good faith has reason to believe that CONTRACTOR does not intend to, or is unable to perform or continue performing under this Contract, the Procurement Officer may demand in writing that CONTRACTOR give a written assurance of intent to perform. Failure by CONTRACTOR to provide written assurance within the number of Days specified in the demand may, at CITY's option, be the basis for terminating the Contract under the Uniform Terms and Conditions or other rights and remedies available by law or provided by the contract.

8.2. **Non-exclusive Remedies:** The rights and the remedies of CITY under this Contract are not exclusive.

8.3. **Nonconforming Tender:** Goods, materials or merchandise supplied under this Contract shall fully comply with this Contract and the specifications included herein. The delivery of goods, materials or merchandise or any portion thereof that do not fully comply constitutes a breach of contract. On delivery of nonconforming goods, materials or merchandise, CITY may terminate the Contract for default under applicable termination clauses in the Contract, exercise any of its rights and remedies under the Uniform Commercial Code, or pursue any other right or remedy available to it.

8.4. **Right of Offset:** CITY shall be entitled to offset against any sums due to CONTRACTOR, any expenses or costs incurred by CITY, or damages assessed by CITY concerning CONTRACTOR's non-conforming performance or failure to perform the Contract, including costs and damages incurred by CITY.

9. **TERMINATION:**

9.1 **Termination for Convenience:** CITY reserves the right to terminate this Agreement or any part thereof for its sole convenience with thirty (30) days written notice. In the event of such termination, CONTRACTOR shall immediately stop all work hereunder, and shall immediately cause any of its suppliers and subcontractors to cease such work. As compensation in full for services performed to the date of such termination, the CONTRACTOR shall receive a fee for the percentage of services actually performed. This fee shall be in the amount to be mutually agreed upon by the CONTRACTOR and CITY, based on the agreed Scope of Work. If there is no mutual agreement, the Management Services Director shall determine the percentage of work performed under each task detailed in the Scope of Work and the CONTRACTOR'S compensation shall be based upon such determination and CONTRACTOR'S fee schedule included herein.

9.2 **Termination for Cause:** City may terminate this Agreement for Cause:

Upon the occurrence of any one or more of the following events:

- 1) If CONTRACTOR fails to perform pursuant to the terms of this Agreement
- 2) If CONTRACTOR is adjudged a bankrupt or insolvent;
- 3) If CONTRACTOR makes a general assignment for the benefit of creditors;
- 4) If a trustee or receiver is appointed for CONTRACTOR or for any of CONTRACTOR 'S property;
- 5) If CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws;
- 6) If CONTRACTOR disregards laws, ordinances, rules, regulations or orders of any public body

- having jurisdiction;
- 7) Where Agreement has been so terminated by CITY, the termination shall not affect any rights of CITY against CONTRACTOR then existing or which may thereafter accrue.
- 9.3. Termination for Misrepresentation.** CITY may, upon written notice, terminate this Contract for any attempt by CONTRACTOR to represent any goods or materials not specifically awarded as being under contract with the CITY of Chandler. Any such action is subject to the legal and contractual remedies available to CITY inclusive of, but not limited to, contract cancellation, suspension and/or debarment of CONTRACTOR.
- 9.4. Cancellation for Conflict of Interest:** Pursuant to A.R.S. § 38-511, CITY may cancel this Contract after Contract execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting or creating the Contract on behalf of CITY is or becomes at any time while the Contract or an extension of the Contract is in effect an employee of or a consultant to any other party to this Contract with respect to the subject matter of the Contract. The cancellation shall be effective when the CONTRACTOR receives written notice of the cancellation unless the notice specifies a later time.
- 9.5. Gratuities:** CITY may, by written notice, terminate this Contract, in whole or in part, if CITY determines that employment or a Gratuity was offered or made by the CONTRACTOR or a representative of the CONTRACTOR to any officer or employee of CITY for the purpose of influencing the outcome of the procurement or securing the Contract, an amendment to the Contract, or favorable treatment concerning the Contract, including the making of any determination or decision about contract performance. CITY, in addition to any other rights or remedies, shall be entitled to recover exemplary damages in the amount of three times the value of the Gratuity offered by the CONTRACTOR.
- 9.6. Suspension or Debarment:** CITY may, by written notice to the CONTRACTOR, immediately terminate this Contract if CITY determines that the CONTRACTOR has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a Sub-CONTRACTOR of any public procurement unit or other governmental body. Submittal of an offer or execution of a contract shall attest that the CONTRACTOR is not currently suspended or debarred. If the CONTRACTOR becomes suspended or debarred, the CONTRACTOR shall immediately notify CITY.
- 9.7. Continuation of Performance Through Termination:** The CONTRACTOR shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.
- 9.8. No Waiver:** Either party's failure to insist on strict performance of any term or condition of the Contract shall not be deemed a waiver of that term or condition even if the party accepting or acquiescing in the nonconforming performance knows of the nature of the performance and fails to object to it.
- 10. FORCE MAJEURE:** Neither party shall be responsible for delays or failures in performance resulting from acts beyond their control. Such acts shall include, but not be limited to, acts of God, riots, acts of war, epidemics, governmental regulations imposed after the fact, fire, communication line failures, power failures, or earthquakes.
- 11. DISPUTE RESOLUTION:**
- 11.1 Alternative Dispute Resolution.** The parties hereby agree that there shall be a sixty (60) day moratorium on litigation commencing on the day that a claim is filed by CONTRACTOR pursuant to A.R.S. § 12-821.01 during which time the parties will negotiate in good faith to resolve the dispute and evaluate the viability of pursuing alternative dispute resolution procedures such as mediation and arbitration.

- 11.2 Arizona Law.** This Agreement shall be governed and interpreted according to the laws of the State of Arizona.
- 11.3 Jurisdiction and Venue.** The parties agree that this Agreement is made in and shall be performed in Maricopa County. Any lawsuits between the Parties arising out of this Agreement shall be brought and concluded in the courts of Maricopa County in the State of Arizona, which shall have exclusive jurisdiction over such lawsuits.
- 11.4 Fees and Costs.** Except as otherwise agreed by the parties, the prevailing party in any adjudicated dispute relating to this Agreement is entitled to an award of reasonable attorney's fees, expert witness fees and costs including, as applicable, arbitrator fees; provided, however, that no award of attorney's fees shall exceed ten percent (10%) of the damages awarded the prevailing party unless the non-prevailing party has been determined to have acted in bad faith or in a frivolous manner during the adjudication.
- 12. INDEMNIFICATION:** To the fullest extent permitted by law, CONTRACTOR shall defend, indemnify and hold harmless the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees individually and collectively; from and against all losses, claims, suits, actions, payments and judgments, demands, expenses, damages, including consequential damages and loss of productivity, attorney's fees, defense costs, or actions of any kind and nature relating to, arising out of, or alleged to have resulted from CONTRACTOR'S work or services. CONTRACTOR'S duty to defend, hold harmless and indemnify the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees shall arise in connection with any claim or amounts arising or recovered under Worker Compensation Laws, damage, loss or expenses relating to, arising out of or alleged to have resulted from any acts, errors, mistakes, omissions, work or services in the performance of this Contract including any employee of CONTRACTOR, anyone directly or indirectly employed by them or anyone for whose acts CONTRACTOR may be liable, regardless of whether it is caused in part by a party indemnified hereunder, including the City of Chandler. IT IS THE INTENTION OF THE PARTIES to this contract that the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees, individually and collectively, are to be indemnified against their own negligence unless and except their negligence is found to be the sole cause of the injury to persons or damages to property.
- 13. NOTICES:** All notices or demands required to be given pursuant to the terms of this Contract shall be given to the other party in writing, delivered by hand or registered or certified mail, at the addresses set forth below, or to such other address as the parties may substitute by written notice given in the manner prescribed in this paragraph.

In the case of CITY
 Department: Community Services
 Contact: Kris Kircher
 Mailing Address: PO Box 4008 – MS 906
 Physical Address: 650 E Ryan Rd
 City, State, Zip: Chandler AZ 85244
 Phone: 480-782-2759
 FAX: 480-782-2560

In the case of the CONTRACTOR
 Firm Name: Wesco Distribution dba
Brown Wholesale Electric
 Contact: Laura Sundberg
 Address: 3425 E Van Buren #140
 City, State, Zip: Phoenix AZ 85008
 Phone: 602-275-8521
 FAX: 602-275-9632
 EMAIL: LSundberg@Wesco.com

Notices shall be deemed received on date delivered, if delivered by hand, and on the delivery date indicated on receipt if delivered by certified or registered mail.

14. GENERAL TERMS:

- 14.1. Entire Agreement:** This Contract, including Exhibits attached hereto, constitutes the entire understanding of the parties and supersedes all previous representations, written or oral, with respect to the services specified herein. This Contract may not be modified or amended except by a written document, signed by authorized representatives or each party.
- 14.2. Arizona Law:** This Contract shall be governed and interpreted according to the laws of the State of Arizona.
- 14.3. Assignment:** Services covered by this Contract shall not be assigned in whole or in part without the prior written consent of CITY.
- 14.4. Amendments:** The Contract may be modified only through a written Contract Amendment executed by authorized persons for both parties. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by CITY in writing or made unilaterally by the CONTRACTOR are violations of the Contract and of applicable law. Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the CONTRACTOR shall not be entitled to any claim under this Contract based on those changes.
- 14.5. Conflict of Interest:**
- 14.5.1 No Kickback:** CONTRACTOR warrants that no person has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee; and that no member of City Council or any employee of CITY has any interest, financially or otherwise, in the firm unless this interest has been declared pursuant to the provisions of A.R.S. Section 38-501. Any such interests were disclosed in CONTRACTOR'S proposal to CITY.
- 14.5.2 Kickback Termination:** CITY may cancel this Contract, without penalty or obligation, if any person significantly involved in initiating, negotiating, securing, drafting or creating the agreement on behalf of CITY'S departments or agencies is, at any time while the Contract or any extension of the Contract is in effect, an employee of any other party to the Contract in any capacity or a CONTRACTOR to any other party to the Contract with respect to the subject matter of the Contract. The cancellation shall be effective when written notice from CITY is received by all other parties to the Contract, unless the notice specifies a later time (A.R.S. §38-511).
- 14.5.3 No Conflict:** CONTRACTOR stipulates that its officers and employees do not now have a conflict of interest and it further agrees for itself, its officers and its employees that it will not contract for or accept employment for the performance of any work or services with any individual business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this project.
- 14.6. Independent CONTRACTOR:** The CONTRACTOR under this Contract is an independent contractor. Neither party to this Contract shall be deemed to be the employee or agent of the other party to the Contract.
- 14.7. No Parole Evidence:** This Contract is intended by the parties as a final and complete expression of their agreement. No course of prior dealings between the parties and no usage of the trade shall supplement or explain any terms used in this document and no other understanding either oral or in writing shall be binding.
- 14.8. Authority:** Each party hereby warrants and represents that it has full power and authority to enter into and perform this Contract, and that the person signing on behalf of each has been properly authorized and empowered to enter this Contract. Each party further acknowledges that it has read this Contract, understands it, and agrees to be bound by it.

14.9. Ownership. All deliverables and/or other products of the Contract (including but not limited to all software documentation, reports, records, summaries and other matter and materials prepared or developed by CONTRACTOR in performance of the Contract) shall be the sole, absolute and exclusive property of CITY, free from any claim or retention of right on the part of CONTRACTOR, its agents, sub-contractors, officers or employees.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names to this ____ day of _____, 2011.

FOR THE CITY OF CHANDLER

FOR THE CONTRACTOR

MAYOR

By: *David Sandhey*
Signature

ATTEST:

SEAL

ATTEST: If Corporation

City Clerk

Jeffrey Kay
Secretary

Approved as to form:

City Attorney *[Signature]*

**EXHIBIT A
GENERAL SPECIFICATIONS**

- 1. AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 REQUIREMENTS:** On February 17, 2009 President Obama signed the American Reinvestment and Recovery Act of 2009 (ARRA, Act, or the "Recovery Act") as an economic stimulus.

By executing this Agreement, CONTRACTOR certifies to the CITY and in addition, agrees that it will comply with all requirements and applicable regulations specified in this bid and the American Reinvestment and Recovery Act of 2009.

This Agreement will be funded with funds appropriated by the American Reinvestment and Recovery Act of 2009. This procurement is subject to the Federal procurement rules, 24 CFR Part 85. All applicable federal rules and regulations are incorporated by reference herein notwithstanding the fact that they may not be specifically referenced in this solicitation.

Applicable federal laws, regulations and requirements include, but are not limited to the following:

2. BUY AMERICAN. USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS.

- (a) None of the funds appropriated or otherwise made available by this Act may be used for a project for the construction, alteration, maintenance, or repair of a public building or public work unless all of the iron, steel, and manufactured goods used in the project are produced in the United States.
- (b) Subsection (a) shall not apply in any case or category of cases in which the head of the Federal department or agency involved finds that —
 - (1) applying subsection (a) would be inconsistent with the public interest;
 - (2) iron, steel, and the relevant manufactured goods are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
 - (3) inclusion of iron, steel, and manufactured goods produced in the United States will increase the cost of the overall project by more than 25 percent.
- (c) If the head of a Federal department or agency determines that it is necessary to waive the application of subsection (a) based on a finding under subsection (b), the head of the department or agency shall publish in the Federal Register a detailed written justification as to why the provision is being waived.
- (d) This section shall be applied in a manner consistent with United States obligations under international agreements.

CONTRACTOR may be required to submit certificates of compliance from all suppliers of iron, steel or manufactured goods certifying compliance with section 1605 of the American Reinvestment and Recovery Act of 2009.

3. WHISTLEBLOWER PROTECTIONS. PROTECTING STATE AND LOCAL GOVERNMENT AND CONTRACTOR WHISTLEBLOWERS.

- (a) No employee of any non-Federal employer receiving covered funds may be discharged, demoted, or otherwise discriminated against as reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, to the Recovery Accountability and Transparency Board (hereafter the "Board"), an inspector general, the Comptroller General, a member of Congress, a State or Federal regulatory or law enforcement agency, a person with

supervisory authority over the employee (or such other person working for the employer who has the authority to investigate, discover, or terminate misconduct), a court or grand jury, the head of a Federal agency, or their representatives, information that the employee reasonably believes is evidence of—

- (1) gross mismanagement of an agency contract or grant relating to covered funds;
 - (2) a gross waste of covered funds;
 - (3) a substantial and specific danger to public health or safety related to the implementation or use of covered funds;
 - (4) an abuse of authority related to the implementation or use of covered funds; or
 - (5) a violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.
- (b) The term "covered funds" means any contract, grant, or other payment received by any non-Federal employer if the Federal Government provides any portion of the money or property that is provided, requested, or demanded at least some of the funds are appropriated or otherwise made available by the Recovery Act.
- (c) The rights and remedies afforded to employees by this Article and Section 1553 of Division I of the Act may not be waived by any agreement, policy, form, or condition of employment. No dispute arising under this Article shall be subject to any pre-dispute requirement for arbitration, except that an arbitration requirement in a collective bargaining agreement shall be enforceable with respect to disputes arising under that agreement.
- (d) CONTRACTOR must post a notice of the employee rights and remedies under this Article and Section 1553 of Division I of the Act in a prominent and clearly visible location accessible to employees, and require each subcontractor at every tier to do so.
- Employee Notice of Rights is attached**
- (e) This Article shall be included in all subcontracts at every tier.
- a. Any confirmed incident of reprisal under this Article or Section 1553 of the Act or any failure to comply with the requirements of this Article or Section 1553 of the Act may be justification for termination of the Contract for cause.

4. **LOBBYING RESTRICTIONS.** By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

5. **CERTIFICATION REGARDING DEBARMENT OR SUSPENSION.** By executing this Agreement, CONTRACTOR certifies to CITY and in addition, agrees that, in any proposal submitted to CITY in connection to this Agreement, CONTRACTOR shall further certify to CITY that neither CONTRACTOR nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in the transaction evidenced by this Agreement by any federal department or agency, and further agrees to comply with the requirements of Appendix B to 24 C.F.R. Part 24, and subpart C of the OMB guidance set forth in 2 C.F.R. Part 180, as supplemented by 2 C.F.R. Part 2424.

No part of the contract shall be subcontracted to any person or firm ineligible to be awarded contracts by the United States Government by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

6. **REGISTRATION REQUIREMENTS.** CONTRACTOR shall ensure that they have a DUNS number and

are registered in the Central CONTRACTOR Registration (CCR) no later than the date the first report is due under FAR 52.204-11 American Recovery and Reinvestment Act – Reporting Requirement

TECHNICAL SPECIFICATIONS

PART 1 – GENERAL

1.1 SUMMARY

- A. The work covered under this specification and the associated Drawings include installing, replacing, repairing, cleaning and servicing lighting fixtures, lenses, lamps, and ballasts, including recycling of components where required.

1.2 REFERENCES

1. Publications listed below (including amendments, addenda, revisions, supplements, and errata) form a part of this specification to the extent referenced. Publications are referenced in the text by designation only.

A. American National Standards Institute (ANSI):

- C78.1-91..... Fluorescent Lamps - Rapid-Start Types - Dimensional and Electrical Characteristics
C78.2-91..... Fluorescent Lamps - Preheat-Start Types - Dimensional and Electrical Characteristics
C78.3-91..... Fluorescent Lamps - Instant Start and Cold-Cathode Types - Dimensional and Electrical Characteristics
C78.376-91..... Chromaticity of Fluorescent Lamps (ANSI/NEMA C78/376-96)

B. Certified Ballast Manufacturers Association (CBM):
Requirements for Ballast Certification.

C. Illuminating Engineering Society Of North America (IESNA)

D. Institute of Electrical and Electronic Engineers (IEEE):
C62.41-91..... Recommended Practice on Surge Voltage in Low Voltage AC Power Circuits

E. National Fire Protection Association (NFPA):
70-02 National Electrical Code (NEC)
101-00 Life Safety Code

F. National Electrical Manufacturer's Association (NEMA)
C82.1-97..... Ballasts for Fluorescent Lamps - Specifications
C82.2-02..... Method of Measurement of Fluorescent Lamp Ballasts
C82.4-02..... Ballasts for High-Intensity-Discharge and Low-Pressure Sodium Lamps
C82.11-02..... High Frequency Fluorescent Lamp Ballasts

G. Underwriters Laboratories, Inc. (UL):
496-96 Edison-Base Lampholders
542-99 Lampholders, Starters, and Starter Holders for Fluorescent Lamps
844-95 Electric Lighting Fixtures for Use in Hazardous (Classified) Locations
924-95 Emergency Lighting and Power Equipment
935-01 Fluorescent-Lamp Ballasts
1029-94 High-Intensity-Discharge Lamp Ballasts
1598-00 Luminaires

H. Federal Communications Commission (FCC):
Code of Federal Regulations (CFR), Title 47, Part 18

1.3 DEFINITIONS

- A. BF: Ballast factor
- B. CCT: Correlated color temperature
- C. CRI: Color-rendering index
- D. CU: Coefficient of utilization
- E. HID: High-intensity discharge
- F. LER: Luminaire efficacy rating
- G. Lumen: Measured output of lamp and luminaire, or both.
- H. Luminaire: Complete lighting fixture, including ballast housing if provided.
- I. RCR: Room cavity ratio.

1.4 SUBMITTALS

- A. Product Data: For each type of lighting fixture, lamp or ballast, arranged in order of fixture designation, include data on features, accessories, finishes, and the following:
 - 1. Physical description of lighting fixture including dimensions.
 - 2. Emergency lighting units including battery and charger.
 - 3. Ballast, including BF.
 - 4. Energy-efficiency data.
 - 5. Life, output (lumens, CCT, and CRI), and energy-efficiency data for lamps, including all information listed in lamp specifications below.
 - 6. Photometric data and adjustment factors based on laboratory tests, complying with IESNA Lighting Measurements Testing & Calculation Guides, of each lighting fixture type. The adjustment factors shall be for lamps, ballasts, and accessories identical to those indicated for the lighting fixture as applied in this Project.
 - a. Testing Agency Certified Data: For indicated fixtures, photometric data shall be certified by a qualified independent testing agency. Photometric data for remaining fixtures shall be certified by manufacturer.
 - b. Manufacturer Certified Data: Photometric data shall be certified by a manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
- B. Qualification Data: For qualified agencies providing photometric data for lighting fixtures.
- C. Product Certificates: For each type of ballast for bi-level and dimmer-controlled fixtures, from manufacturer.
- D. Warranty: Sample of special warranty.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

1.6 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements as indicated on Drawings and these specifications.

2.2 GENERAL REQUIREMENTS FOR LIGHTING FIXTURES AND COMPONENTS

A. Fluorescent Fixtures: Comply with UL 1598. Where LER is specified, test according to NEMA LE 5 and NEMA LE 5A as applicable.

B. Metal Parts: Free of burrs and sharp corners and edges.

C. Sheet Metal Components: Steel unless otherwise indicated. Form and support to prevent warping and sagging.

D. Factory-Applied Labels: Comply with UL 1598. Indicate recommended lamps and ballasts. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label on lamp, ballast and/or fixture shall include the following lamp and/or ballast characteristics, where applicable:

- a. "USE ONLY" and include specified lamp type.
- b. Lamp diameter code (T4, T5, T8, T12, etc.), tube configuration (twin, triple, quad, etc.), base type, and nominal wattage for fluorescent and compact fluorescent luminaires.
- c. Lamp type, wattage, bulb type (ED17, BD56, etc.) and coating (clear or coated) for HID luminaires.
- d. Start type (preheat, rapid start, instant start, etc.) for fluorescent and compact fluorescent luminaires.
- e. ANSI ballast type (M98, M57, etc.) for HID luminaires.
- f. CCT and CRI for all luminaires/lamps.

2.3 BALLASTS FOR LINEAR FLUORESCENT LAMPS

A. General Requirements for Electronic Ballasts:

1. Ballast manufacturer shall be the same as the lamp manufacturer.
2. Ballast shall be Instant Start, unless otherwise indicated on drawings.
3. Ballast shall provide Independent Lamp Operation (ILO) for Instant Start Parallel ballasts allowing remaining lamp(s) to maintain full light output when one or more lamps fail.
4. Designed for type and quantity of lamps served.
5. Ballasts shall be designed for full light output unless another BF, dimmer, or bi-level control is indicated.
6. Sound Rating: Class A.
7. Total Harmonic Distortion (THD) Rating: Ballast input current shall have a THD of less than 10% when operated at nominal line voltage with primary lamp.
8. Operating Frequency: Between 42kHz and 52 kHz.
9. Lamp Current Crest Factor: 1.7 or less.
10. **BF: 0.75 for Low Watt, 0.85 for Normal Light Output, and 1.15 for High Light**
11. Power Factor: 0.98 or higher for primary lamp.
12. Parallel Lamp Circuits: Multiple lamp ballasts shall comply with ANSI C82.11 and shall be connected to maintain full light output on surviving lamps if one or more lamps fail.
13. Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
14. Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
15. Ballast shall have a minimum starting temperature of -18C (0F) on Programmed Start ballasts for standard T8 lamps and 16C (60F) for energy-saving T8 lamps.
16. Ballast shall tolerate sustained open circuit and short circuit output conditions.
17. Ballast shall have lamp striation-reduction circuitry.
18. For Programmed Start ballasts, provide lamp EOL protection circuitry.
19. Maximum remote distance for Energy Saving Lamps in Remote/Tandem applications is 6 feet for ICN, IOP, and IOPA Instant Start and Programmed Start models.
20. Ballast shall be provided with integral leads color-coded per ANSI C82.11.

B. Regulatory Requirements for Electronic Ballasts:

1. Ballast shall not contain any Polychlorinated Biphenyl (PCB).
2. Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
3. Ballast shall comply with ANSI C62.41 Category A for Transient protection.
4. Ballast shall comply with ANSI C82.11 where applicable.
5. Ballast shall comply with UL 935.
6. Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
7. Ballast shall meet NEMA/CEE High Performance T8 Lighting System Specifications.
8. Ballast shall comply with NEMA 410 for in-rush current limits.

C. Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.

D. Ballast shall be manufactured in an ISO 9001 Qualified factory.

E. Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at maximum case temperature of 90C.

F. Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

2.4 BALLASTS FOR COMPACT FLUORESCENT LAMPS

A. General Requirements for Electronic Ballasts for Compact Fluorescent Lamps:

1. Ballast shall be electronic-programmed or rapid start type (as specified in drawings), unless otherwise indicated on drawings.
2. Comply with UL 935 and with ANSI C82.11.
3. Designed for type and quantity of lamps served.
4. Ballasts shall be designed for full light output unless another BF, dimmer, or bi-level control is indicated.
5. Sound Rating: Class A.
6. Total Harmonic Distortion (THD) Rating: Ballast input current shall have a THD) of less than 10% when operated at nominal line voltage with primary lamp.
7. Operating Frequency: 40kHz or greater.
8. Lamp Current Crest Factor: 1.7 or less.
9. BF: 0.95 or higher for primary lamp application.
10. Power Factor: 0.98 or higher for primary lamp.
11. Parallel Lamp Circuits: Multiple lamp ballasts shall comply with ANSI C82.11 and shall be connected to maintain full light output on surviving lamps if one or more lamps fail.
12. Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
13. Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
14. Ballast shall have a minimum starting temperature of -18C (0F) for primary lamps.
15. Ballast shall tolerate sustained open circuit and short circuit output conditions.
16. Ballast shall provide lamp EOL protection circuitry.
17. Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
18. Ballast shall be provided with poke-in wire trap connectors color coded per ANSI C82.11.

B. Regulatory Requirements for Electronic Ballasts:

1. Ballast shall not contain any Polychlorinated Biphenyl (PCB).
2. Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian

Standards Association (CSA) certified where applicable.

3. Ballast shall be rated for use in air-handling spaces.
 4. Ballast shall comply with ANSI C62.41 Category A for Transient protection.
 5. Ballast shall comply with ANSI C82.11 where applicable.
 6. Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
 7. Ballast shall comply with NEMA 410 for in-rush current limits.
- C. Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- D. Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.
- E. Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 75C and three-years for a maximum case temperature of 85C.

2.5 FLUORESCENT LAMPS

A. 24 in, T8, 17 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 17 watts maximum
3. Nominal Length: 24 inches (610 mm)
4. Initial Lumens: 1,350 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

B. 36 in, T8, 25 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 25 watts maximum
3. Nominal Length: 36 inches (915 mm)
4. Initial Lumens: 2,225 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

C. 48 in, T8, 25 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 25 watts maximum
3. Nominal Length: 48 inches (1220 mm)
4. Initial Lumens: 2,475 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

D. 48 in, T8, 32 Watt Fluorescent Lamp:

1. Lamp Diameter: T8

2. Rated 32 watts maximum
3. Nominal Length: 48 inches (1220 mm)
4. Initial Lumens: 2,950 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 36,000 hours
9. Manufacturer Warranty: 36 months (minimum)

E. 96 in, T8, 51 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 51 watts maximum
3. Nominal Length: 96 inches (2438 mm)
4. Initial Lumens: 5,000 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 93% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 30,000 hours
9. Manufacturer Warranty: 24 months (minimum)

F. 6 in spacing, T8 U-bent, 25 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 25 watts maximum
3. Nominal Length: $22 \frac{7}{16}$ inches (570 mm)
4. Initial Lumens: 2,400 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 24,000 hours
9. Manufacturer Warranty: 36 months (minimum)

G. $1 \frac{5}{8}$ " in spacing, T8 U-bent, 29 Watt Fluorescent Lamp:

1. Lamp Diameter: T8
2. Rated 29 watts maximum
3. Nominal Length: $22 \frac{3}{5}$ inches (574 mm)
4. Initial Lumens: 2,600 (minimum)
5. CRI: 85 (± 2)
6. Lumen Maintenance: 94% or greater
7. Color Temperature: 4100K
8. Average Rated Life (12-hr on instant start): 30,000 hours
9. Manufacturer Warranty: 36 months (minimum)

H. 15 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 15 watts maximum
5. Nominal Length: Approx. 5.2 inches (132 mm)
6. Initial Lumens: 1,100 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 16,000 hours
11. Manufacturer Warranty: 24 months (minimum)

I. 21 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 21 watts maximum
5. Nominal Length: Approx. 5.2 inches (132 mm)
6. Initial Lumens: 1,525 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 16,000 hours
11. Manufacturer Warranty: 24 months (minimum)

J. 26 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 26 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 1,800 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

K. 27 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 27 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 1,875 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

L. 32 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 32 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 2,400 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

M. 33 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4

2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 33 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 2,615 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

N. 42 Watt Compact Fluorescent Lamp:

1. Lamp Diameter: T4
2. Double or Triple Tube
3. Number of Pins: 4
4. Rated 42 watts maximum
5. Nominal Length: Approx. 5.0 inches (126.7 mm)
6. Initial Lumens: 3,200 (minimum)
7. CRI: 82 (minimum)
8. Lumen Maintenance: 88% or greater
9. Color Temperature: 4100K
10. Average Rated Life: 20,000 hours
11. Manufacturer Warranty: 24 months (minimum)

O. 13 Watt Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Rated 13 watts maximum
3. Nominal Length: Up to 5.0 inches (126.7 mm)
4. Initial Lumens: 900 (minimum)
5. CRI: 82 (minimum)
6. Color Temperature: 4000K
7. Average Rated Life: 12,000 hours
8. Manufacturer Warranty: 24 months (minimum)

P. 23 Watt Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Rated 23 watts maximum
3. Nominal Length: Up to 5.5 inches (139.7 mm)
4. Initial Lumens: 1,000 (minimum)
5. CRI: 82 (minimum)
6. Color Temperature: 4100K
7. Average Rated Life: 10,000 hours
8. Manufacturer Warranty: 24 months (minimum)

Q. 14 Watt PAR20 Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Reflector PAR20
3. Rated 14 watts maximum
4. Nominal Length: Up to 4.5 inches (114.3 mm)
5. Initial Lumens: 500 (minimum)
6. CRI: 82 (minimum)
7. Color Temperature: 4000K
8. Average Rated Life: 8,000 hours
9. Manufacturer Warranty: 24 months (minimum)

R. 23 Watt PAR38 Compact Fluorescent Lamp with Medium Screw-in Base:

1. Base: Medium
2. Reflector PAR38
3. Rated 23 watts maximum
4. Nominal Length: Up to 6.5 inches (165.1 mm)
5. Initial Lumens: 1,300 (minimum)
6. CRI: 82 (minimum)
7. Color Temperature: 4000K
8. Average Rated Life: 8,000 hours
9. Manufacturer Warranty: 24 months (minimum)

2.6 LED LAMPS

A. PAR38, Dimmable, E26 Screw-in Base, LED Lamp:

1. Lamp Size: PAR 38
2. E26 Screw-in Base
3. Dimmable
4. Rated 20 watts maximum
5. Initial Lumens: 900 (minimum)
6. CRI: 67 (minimum)
7. Center Beam Candlepower: 3,100 (minimum)
8. Beam Spread: 25°
9. Color Temperature Range: 3000K to 4200K
10. Average Rated Life: 40,000 hours
11. Manufacturer Warranty: 36 months (minimum)

2.7 OCCUPANCY SENSORS

A. General Requirements for Occupancy Sensors:

1. **All occupancy sensors provided shall be manufactured by the same company, including power packs and other control devices. Mixed manufacturer submittals will not be accepted.**
2. The occupancy sensor system shall sense the presence of human activity within the desired space and fully control the on/off function of the lights.
3. Sensors shall utilize passive infrared (PIR) technology, which detects occupant motion, to initially turn lights on from an off state; thus preventing false on conditions. Ultrasonic or Microwave based sensing technologies shall not be accepted for turning lights on.
4. For applications where a second method of sensing is necessary to adequately detect maintained occupancy (such as in rooms with obstructions), a sensor with an additional "dual" technology shall be used.
5. Dual technology sensors shall have one of its two technologies not require motion to detect occupancy. Acceptable dual technology includes PIR/Sound (also known as Passive Dual Technology or PDT) which both looks for occupant motion and listens for sounds indicating occupants. Sensors where both technologies detect motion only shall not be acceptable.

B. Operation Requirements for Occupancy Sensors:

1. Sensors shall offer a minimum on timer of at least 5 minutes, in order to prevent all cycling of lamps before they have burned for the lamp manufacturers minimum recommended time period. This timer shall be in addition to the regular occupancy time delay that keeps lights on after last detected occupancy. User shall be able to disable/enable and change the value of this timer.
2. Sensors shall utilize an occupancy time delay that keeps lights on after last detected occupancy. Factory default setting of the occupancy time delay shall be 10 minutes. Sensors with a longer factory default setting shall not be permitted as they greatly restrict energy savings potential.
3. Manual adjustment to the occupancy time delay so as to increase it shall be accommodated, but shall not be allowed unless a calculation showing the resulting energy savings loss is presented to the building

- owner and specifying engineer.
4. Automatic adjustments to the occupancy time delay shall only be permitted if the controlling algorithm maximizes both lamp life and energy savings. For example a shorter more energy saving time delay setting shall only be allowed if the resulting lamp life is also improved.
 5. Installer, in accordance with manufacturer's recommendation, shall determine final sensor location. All sensors shall be factory calibrated for optimum performance for its installed PIR lens, and shall not require initial or subsequent field adjustment of detection sensitivity.
 6. All sensor setting adjustments shall be digital and made using a push-button. Analog dials, and/or the need for tools of any kind shall not be accepted.
 7. The installing contractor shall be responsible for a complete and functional system in accordance with all applicable local and national codes.
- C. All steps in sensor manufacturing process shall occur in the USA; including population of all electronic components on circuit boards, soldering, programming, wiring, and housing. Manufacturing facility must be ROHS compliant.
- D. All applicable products must be UL / CUL Listed or other acceptable national testing organization.
- E. Sensors shall have a 5 year warranty.

F. WALL SWITCH OCCUPANCY SENSORS – SMALL AREAS

1. Sensor shall provide wall-to-wall PIR detection such that small hand motions are detected out to a continuous 20 ft. (6.10 m) radius.
2. In areas with periodic or permanent obstruction to a sensor's field of view, sensors that utilize dual technology (PIR/Sound) detection shall be used (as specified in above general requirements section).
3. For applications requiring independent control of two loads, a sensor with two dual relays and dual override switches shall be required. Each relay shall have independent programmable occupancy time delays.
4. Sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz power. A version capable of switching 347 VAC shall also be available. Load ratings shall be 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC, and ¼ HP motor load.
5. Sensor shall recess into single gang switch box and fit a standard GFI opening.
6. Sensor shall meet NEC grounding requirements by providing a dedicated ground connection and intrinsically grounding through its mounting strap.
7. Line and load wire connections shall be interchangeable, such that installer cannot make an improper connection to a line/load in a manner that will cause malfunction or damage to the sensor.
8. Sensor shall not require a neutral connection regardless of number of poles and/or detection technology (only exception is versions with lighted push-buttons).
9. Sensor shall not allow any leakage of current to pass to the load when sensor is in the unoccupied (off) condition. Sensor shall not require a minimum load to be connected in order to function.
10. Sensor shall have optional features for photocell/daylight override, vandal resistant lens, low temperature/high humidity operation.
11. All sensor settings, including time delay and photocell settings shall be digital and accessible for adjustment via a push-button without requiring removal of cover plate or tools of any kind.
12. Wall Switch sensors shall have field programmable adjustments for selecting operational modes, occupancy time delays, minimum on time, and photocell set-point as applicable.
13. All models shall be capable of both Auto-On and Manual On operation.
14. All models shall be capable of a "Reduced Turn On" operation where the initial PIR turn on level is higher in order to eliminate PIR from reflective surfaces from being detected. PIR shall be returned to normal levels upon initial PIR detection.
15. All models shall provide high immunity to false triggering from RFI (hand-held radios) and EMI (electrical noise on the line).
16. All models shall have a "Predictive Off" mode where user can manually turn the lights off when leaving the room and still have them come on automatically when they return to space.
17. Where specified, wall switch sensors shall provide a field selectable option to convert sensor operation from automatic-ON to manual-ON.
18. All models shall be capable of disabling override switch.

19. Where specified, passive infrared ultrasonic and dual technology sensors shall offer daylighting footcandle adjustment control and be able to accommodate dual level lighting.
20. Dual technology sensors shall be wall mounted, corner mounted or ceiling mounted in such a way as to minimize coverage in unwanted areas.
21. In the event of failure, a bypass manual override shall be provided on each sensor. When bypass is utilized, lighting shall remain on constantly or control shall divert to a wall switch until sensor is replaced. This control shall be recessed to prevent tampering.
22. Adjustments and mounting hardware shall be concealed under a removable cover to prevent tampering of adjustments and hardware.

G. WALL SWITCH OCCUPANCY SENSORS – LARGE AREAS

1. Sensor shall provide wall-to-wall PIR detection such that small hand motions are detected out to a continuous 40 ft. (12.19 m) radius.
2. In areas with periodic or permanent obstruction to a sensor's field of view, sensors that utilize dual technology (PIR/Sound) detection shall be used (as specified in above general requirements section).
3. For applications requiring independent control of two loads, a sensor with two dual relays and dual override switches shall be required. Each relay shall have independent programmable occupancy time delays.
4. Sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz. A version capable of switching 347 VAC shall also be available. Load ratings shall be 13A each pole, ¼ HP motor load.
5. Sensor shall meet NEC grounding requirements by providing a dedicated ground connection and intrinsically grounding through its mounting strap.
6. Line and load wire connections shall be interchangeable, such that installer cannot make an improper connection to a line/load in a manner that will cause malfunction or damage to the sensor.
7. Sensor shall not require a neutral connection regardless of number of poles and/or detection technology.
8. Sensor shall not allow any leakage of current to pass to the load when sensor is in the unoccupied (Off) condition. Sensor shall not require a minimum load to be connected in order to function.
9. Where specified, wall switch sensors shall provide a field selectable option to convert sensor operation from automatic-ON to manual-ON.
10. Dual technology sensors shall be wall mounted, corner mounted or ceiling mounted in such a way as to minimize coverage in unwanted areas.
11. In the event of failure, a bypass manual override shall be provided on each sensor. When bypass is utilized, lighting shall remain on constantly or control shall divert to a wall switch until sensor is replaced. This control shall be recessed to prevent tampering.
12. Adjustments and mounting hardware shall be concealed under a removable cover to prevent tampering of adjustments and hardware.

H. LOW VOLTAGE OCCUPANCY SENSORS – CEILING MOUNTED OR WALL MOUNTED (SEE SECTION J: POWER AND AUXILIARY RELAY PACKS FOR REQUIRED POWER SUPPLY, TO BE INCLUDED WITH OCCUPANCY SENSOR ON BID TAB)

1. **Sensors to be low voltage (12V or 24V) and to utilize a power pack (see specification section J below).**
2. Power packs for sensors to be included with occupancy sensor on bid tab.
3. The installing contractor shall install one or more sensors with PIR coverage areas that cover the entire space and all entrance points. Exact placement and quantity required shall be per manufacturer's best practice recommendations.
4. In areas with periodic or permanent obstruction to a sensor's field of view, sensors that utilize dual technology (PIR/Sound) detection shall be used (as specified in above general requirements section).
5. Sensors shall utilize a digital PIR detector (dual element pyro-electric detector) component, so as to provide a high degree of RF immunity.
6. Ceiling mounted sensors shall be mounted to the ceiling with a flat, unobtrusive appearance and provide 360° of coverage.
7. Sensor shall utilize a temperature compensated dual element sensor and a multi-element Fresnel lens. Fresnel lens shall be a Poly IR 4 based material to offer superior performance in the Infrared wavelengths and filter short wavelength infrared, such as those emitted by the sun and other visible light sources. Lens shall have grooves facing in to avoid dust and residue build up which affects IR reception.

8. Line and load wire connections shall be interchangeable, such that installer cannot make an improper connection to a line/load in a manner that will cause malfunction or damage to the sensor.
9. Multiple sensors controlling the same load shall be wired in parallel or per manufacturer's recommendations.
10. Where indicated on the drawings, sensors shall have a manual on function that is facilitated by installing a momentary wall switch.
11. For applications requiring independent control of two loads, a sensor with two dual relays shall be required. Each relay shall have independent programmable occupancy time delays.
12. Dual relay sensors shall have an optional operational mode called "Alternating On" where when during unoccupied periods, one relay is always left closed (thus one load is always on). The particular relay that is left closed alternates each cycle so that the aging of the connected lamps is even.
13. Sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz power. A version capable of switching 347 VAC shall also be available. Load ratings shall be 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC, and ¼ HP motor load.
14. Specific sensors capable of switching 5 Amps of two phase power (208/240 or 480 VAC) shall be available. These sensors shall always simultaneously switch both phases as per NEC guidelines.
15. Wall mounted sensors must be installed at 7 to 8 feet above the floor. Single and two circuit units shall be available.
16. High bay sensors controlling HID Bi-Level must incorporate a "Start to High" timer on initial power up to provide full light output for up to 20 minutes to prevent shortened lamp life.
17. Sensors shall have test mode that temporarily shortens/disable all time delays (e.g., minimum on, occupancy, photocell transition, dimming rates) such that an installer can quickly test operation of sensor. Test mode shall time out and return sensor to normal operation should the installer forget to disable test mode after installation.
18. Sensors shall have optional features for on/off photocell control, automatic dimming control photocell, high/low occupancy based dimming, and usage in low temperature/high humidity environments.
19. Power packs and auxiliary relay packs used with low voltage sensors shall comply with requirements in this specification for those items; see section on Power and Auxiliary Relay Packs.

f. INDOOR PHOTOCELLS AND DAYLIGHT HARVESTING CONTROLS

1. Low voltage photocell shall accept 12 to 24 VAC or VDC and provide a SPDT relay for interface with remote switching system. Sensor shall interface with occupancy sensors, directly with power pack, or other system as shown.
2. Photocell shall provide for an on/off set-point, and a deadband to prevent the artificial light from cycling. Delay shall be incorporated into the photocell to prevent rapid response to passing clouds.
3. Photocell set-point and deadband shall be automatically calibrated through the sensor's microprocessor by initiating an "Automatic Set-point Programming" procedure. Further adjustment may be made manually if needed.
4. Deadband setting shall be verified and modified by the sensor automatically every time the lights cycle to accommodate physical changes in the space (i.e., furniture layouts, lamp depreciation, or lamp outages).
5. Low voltage dimming sensors shall accept 12 to 24 VAC or VDC (from power pack or other low voltage source) and control 0 to 10 VDC dimmable ballasts by sinking up to 20 mA of class 2 current (typically 40 or more ballasts).
6. Low voltage dimming sensor's set point shall be automatically calibrated through the sensor's microprocessor by initiating the "Automatic Set-point Programming" procedure. Min and max dim settings as well as set-point may be manually entered.
7. Low voltage dimming sensors shall be equipped with an automatic override for 100 hour burn-in of lamps. This feature must be available at any time for lamp replacements. (Note: This function should be performed prior to any dimming of the lamps including the "auto set-point" setting.)
8. Combination photocell/dimming sensors shall accept 12 to 24 VAC or VDC (from power pack or other low voltage source) and control the on/off function as well as the dimming function of 0 to 10 VDC dimmable ballasts.
9. Combination photocell/dimming sensor's set-point and deadband shall be automatically calibrated through the sensor's microprocessor by initiating the "Automatic Set-point Programming" procedure. Min and max dim settings as well as set point may be manually entered.
10. Combination photocell/dimming sensors shall be equipped with an automatic override for 100 hour burn-in of lamps. This feature must be available at any time for lamp replacements. (Note: This function should be performed prior to any dimming of the lamps including the "auto set-point" setting.)

11. Dual zone option shall be available for photocell, dimming, or combination units. The second zone shall be controlled as an "offset" from the primary zone and shall be the zone farthest from the natural light source.
12. Stand-alone ambient light sensors (CM ALC version only) shall interface directly with the 0 to 10 VDC, without any other power source connection, and control dimmable ballasts by sinking up to 20 milliamps of class 2 current. Sensor shall incorporate a photodiode viewing out of a ceiling enclosure at a 30 degree angle from horizontal to detect diffused light from the ambient and artificial sources. Sensor shall allow for removal of response delays for adjustment, however provide dampening delay for normal operation. Settings shall be made manually.
13. Line voltage versions of the above described photocell and combination photocell/dimming sensors shall be capable of switching both 120 VAC and 277 VAC and run off of 50/60 Hz power. A version capable of switching 347 VAC shall also be available. Load ratings shall be 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC, and ¼ HP motor load.
14. Line voltage versions of the above described dimming sensors shall be capable of powering off 120/277 VAC.
15. Line voltage versions of the above described photocell and combination photocell/dimming sensors shall be capable of switching 5 Amps of two phase power (208/240 or 480 VAC) shall be available. These sensors shall always simultaneously switch both phases as per NEC guidelines.

J. POWER AND AUXILIARY RELAY PACKS (ITEM INCLUDED WITH OCCUPANCY SENSOR ON BID TAB)

1. Power packs for sensors to be included with occupancy sensor on bid tab.
2. Power pack shall be a self-contained transformer and relay module.
3. For ease and speed of installation, power and auxiliary relay packs shall have 1/2" nipple for 1/2" knockouts and mounting on outside of enclosures.
4. Power and auxiliary relay packs shall have dry contacts capable of switching 20 amp ballast load, 13 amp incandescent, 1 hp @ 120 VAC, 60Hz; 20 amp ballast @ 277 VAC, 60 Hz; 15 amp ballast @ 347 VAC, 60Hz; 15 amp ballast, 1 hp @ 220-240 VAC, 60 Hz; and 20 amp ballast, 13 amp incandescent, 1 hp @ 220-240 VAC, 50 Hz.
5. Power packs shall provide low voltage output in accordance with occupancy sensor requirements.
6. Power packs shall be capable of parallel wiring without regard to AC phases on primary.
7. Auxiliary relay packs shall be identical in physical size of power packs and contain no transformer power supply and shall switch 120VAC, 277 VAC, 347 VAC or low voltage.
8. Power pack can be used as a standalone, low voltage switch, or can be wired to sensor for auto control.
9. Power and auxiliary relay packs shall have low voltage teflon coated leads, rated for 300 volts, suitable for use in plenum applications.
10. Power pack shall be UL 2043 rated, use UL94 V-O plenum rated plastic, and have low voltage teflon coated leads, rated for 300 volts
11. To ensure quality and reliability, power and auxiliary relay packs shall be manufactured by an ISO 9002 certified manufacturing facility and shall have a defect rate of less than 1/3 of 1%.
12. Power and auxiliary relay packs shall have a 5 year warranty.
13. Power and auxiliary relay packs shall be UL and CUL listed.

**EXHIBIT B
MATERIALS PRICING LIST**

Tag	Fixture Description	Model Number	QTY	Lamp Wattage	Lamp QTY	Lamp Type	Unit Cost	Total Cost
F1	Direct-Indirect Linear Fluorescent Wall Mtd Fixture	Peerless Cerra CRW4-2-32-WHR- 12FT-R12-120-SCT- L/LP-C110	4	25	2	4' T8	\$ 639.00	\$ 2,556.00
F2	Outdoor CFL Wall pack	Gardco 102M226Q120BRP	7	26	2	CFL	\$ 335.00	\$ 2,345.00
F3	Linear Fluorescent Wall Mtd Fixture	Lithonia WC/2/32WT8/MVOLT/ GEB10IS with 25W T8 Lamps per Spec 2.5- C	2	25	2	4' T8	\$ 51.00	\$ 102.00
F4	Parking Garage LED Fixture	BETA LED 304 Series PKG-304-5M-PD-06- D-UL-SV-43K-350- ML2	77	71	1	LED	\$ 713.50	\$ 54,939.50
F5	Pole Mounted LED Fixture	BETA LED Edge Area ARE/EDG/5M/R3/24/C /UL/WH/43K	34	279	1	LED	\$2,075.00	\$ 70,550.00
F6	Wall Mounted LED Fixture	BETA LED Edge Area ARE/EDG/4M/DA/24/ C/UL/WH/43K	14	279	1	LED	\$1,969.00	\$ 27,566.00
TOTAL SECTION "F"								\$158,058.50

TIMELY DELIVERY IS OF UTMOST IMPORTANCE. PLEASE PROVIDE THE ANTICIPATED LENGTH OF TIME IT WILL TAKE TO DELIVER ITEMS: 30 days

SUB-TOTAL - \$158,058.50

SALES TAX (9.3 %) - \$ 14,699.44

GRAND TOTAL - ALL ITEMS - \$ 172,757.94

EXHIBIT C
WHISTLE BLOWER POSTER

Know Your Rights Under the Recovery Act!

Did you know?

The American Recovery and Reinvestment Act of 2009¹ provides protections for certain employees of non-federal employers who make specified disclosures relating to possible fraud, waste and/or abuse of Recovery Act funds.

Who is protected?

Employees of non-federal employers receiving recovery funds. This includes State and local governments, contractors, subcontractors, grantees or professional membership organizations acting in the interest of recovery fund recipients.

How are Whistleblowers Protected?

You cannot be discharged, demoted or otherwise discriminated against as a reprisal for making a protected disclosure.

What types of disclosures are protected?

The disclosure must be made by the employee to the Recovery Accountability and Transparency Board, an Inspector General, the Comptroller General, a member of Congress, a state or federal regulatory or law enforcement agency, a person with supervisory authority over the employee, a court or grand jury, or the head of a federal agency or his/her representatives.

The disclosure must involve information that the employee believes is evidence of:

- gross mismanagement of an agency contract or grant relating to recovery funds;
- a gross waste of recovery funds;
- a substantial and specific danger to public health or safety related to the implementation or use of recovery funds;
- an abuse of authority related to the implementation or use of recovery funds; or
- a violation of law, rule, or regulation related to an agency contract or grant awarded or issued relating to recovery funds.

Take Action!

Log on to Recovery.gov for more information about your rights and details on how to report at www.recovery.gov.

¹ Section 1553 of Division A, Title XV of the American Recovery and Reinvestment Act of 2009, P.L. 111-5