Contract Description

Project Overview:

Waukesha Water Utility (WWU) provides water treatment and distribution services to the City of Waukesha and isolated portions of the Town of Waukesha. WWU owns and operates a system of wells that pumps groundwater from the St. Peter Sandstone Aquifer for treatment and then to WWU's distribution system. The St. Peter Sandstone Aquifer, which has been the primary source of drinking water for not only the City of Waukesha but for communities throughout the Midwest, is being depleted in southeast Wisconsin. This depletion is due in large part to a natural layer of shale rock that restricts groundwater recharge. Depletion of the St. Peter Sandstone Aquifer has also caused increases in the concentrations of radium and other contaminants. As a result, the City of Waukesha needs a long-term, sustainable alternative to its existing water supply to protect public health.

The purpose of the Great Lakes Water Supply Program is to provide a new primary water supply to the City of Waukesha by connecting the city to the Milwaukee Water Works (MWW) supply system. The Department of Justice (DOJ) has placed restrictions on the Program which state that the Program must certify to the DOJ that all project construction is under contract and is 50 percent complete by May 1, 2022. In addition, certification that the Program has completed compliance with all federal and state drinking water radionuclide standards shall be provided by September 1, 2023.

Schedule Milestones	Contract Milestones	Days Added by Change Order	Revised Contract Milestone	
CONTRACT DATES:				
Contract Award:	June 9, 2020	N/A		
Notice to Proceed (NTP):	July 1, 2020	N/A		
DOJ 50% Compliance Certification	May 1, 2022	0 days		
Substantial Completion (SC):	April 22, 2022	36 days	May 28, 2022	
Final Completion (FC):	June 21, 2023	36 days	July 27, 2022	
DOJ Final Completion Compliance	September 1, 2023	0 days		
Summary	**Cost**	**Time**	**Totals**	
CONTRACT BASE BID AMOUNT:				
UNIT COST ITEMS:	$42,636,375.00	N/A		
Franklin Sanitary Sewer	$12,543,850.00			
Outfall Facilities	$3,119,465.00			
ADDITIONAL COST ITEMS:	$699,560.00	N/A		
ALLOWENCE ITEMS:	$210,000.00	N/A		
CONTRACT AWARD AMOUNT:			$59,209,250.00	
PREVIOUS APPROVED CHANGE ORDERS:				
Change Order No. 001	($12,699,523.00)	14 days		
Change Order No. 002	$3,000,000.00	0 days		
ADJUSTED CONTRACT AMOUNT:			$49,509,727.00	(16.38%)
THIS CHANGE ORDER				
Westridge Drive Depth and Alignment Modifications	$630,878.87	22 days		
Reaeration Building Beam Material	$35,958.75	0 days		
S. 60th Street Light Poles and Fixtures	$14,439.40	0 days		
This Change Order Total:			$681,277.02	1.15%
REVISED CONTRACT AMOUNT:			$50,191,004.02	(15.23%)

GREAT WATER ALLIANCE

Department of Justice 50% Compliance Certification is due on:
May 1, 2022
247 days

August 27, 2021

S.J. Louis Construction, Inc.
1351 Broadway Street W, PO Box 459
Rockville, MN 56369-0459

Attention: Frank Wizner, Project Manager

Subject: Change Order Request No. 005 Response
Westridge Drive - Depth and Alignment Changes

Mr. Wizner,

Reference is made to your July 28, 2021 letter, received via email on July 28, 2021. We have reviewed the submitted letter. S.J. Louis Construction, Inc. has submitted a request for an adjustment to Contract Time and Contract Price through Change Order Request No. 005, in response to RFI No. 0038 and RFI No. 0045. S.J. Louis Construction, Inc. has requested an increase to the Contract Time of 32 days, and an increase to the Contract Price of $1,136,270.23.

In accordance with Article 11.06 of the General Conditions and SC-11.06A, Change Order Request No. 005 is denied in part and approved in part. Great Water Alliance (GWA) has several comments detailing the reasons for each.

Change Order Request No. 005 was submitted for Station 3003+00 to Station 3024+23 (2,123 lineal feet). Great Water Alliance has divided this length into sections as follows:

- Station 3003+00 to Station 3005+00: Neither RFI No. 0038 nor RFI No. 0045 impacted the pipeline alignment at this location. The request for increased Contract Time and Contract Price is denied. Between STA 3002+00 and 3002+70, Contractor installed pipe between 8" and 1'-3" deeper than the planned elevation, without indication for reason or direction. Upon identifying the actual elevation of the 12" watermain at STA 3003+00, SJ Louis proposed to deflect over existing watermain. This option would create an additional low point and high point in the line, therefore it was not approved by the CM Team. SJ Louis did not opt to relay pipe to get back online and grade to go over watermain, instead proposed the option of utilizing additional 45 degree bends to go under 12" watermain. This solution was acceptable to CM Team as it did not create any additional high or low points. CM Team never directed SJ Louis to utilize fittings or directed SJ Louis to go under the watermain. Choices were made by SJ Louis staff to not relay Return Flow Pipeline to correct their previous installation elevation errors. Costs incurred by SJ Louis for running offline and not on grade are not the responsibility of the Great Water Alliance and should

not be paid by Owner. Impacts related to additional time, cost, labor, and materials are responsibility of Contractor. Payment for this area will be per the unit prices agreed to in the Contract.

- Station 3005+00 to Station 3016+48.21: RFI No. 0038 impacts this work. The request for increased Contract Time and Contract Price is denied in part and approved in part. Additional information can be found in the attached spreadsheet and below.
- Station 3016+48.21 to Station 3024+23: RFI No. 0045 impacts this work. The request for increased Contract Time and Contract Price is denied. An alignment change was proposed by S.J. Louis Construction, Inc. in RFI No. 0045. Great Water Alliance noted in the answer to the RFI, "Credit shall be provided to Owner if Contractor chooses to construct alignment as proposed.". A separate Change Order Request with credit to Owner should be submitted for this section per RFI No. 0045 and Request for Proposal No. 003.

The attached spreadsheet provides a summary of each Supplemental Payment Request (SPR) submitted by the Contractor, including weekday, date, SPR number, station range (as reported in GWA inspector daily reports), total cost requested in each SPR, Contractor's description of work performed, and comments from the CM Team.

Within the CM Team comments are aspects of the increase in Contract Price that Great Water Alliance would not agree to compensate S.J. Louis Construction, Inc. Examples of activities include Contractor team meetings, installation of additional fittings which were not required by the Contract Documents, and correcting pipe installation errors.

Upon removal of costs that GWA does not agree to compensate, the total cost of work performed by S.J. Louis Construction, Inc. as part of RFI No. 0038 is $1,164,449.28 for Station 3005+00 to Station 3016+48.21 (1,148.21 feet).

The Contract bid items which the work would have been paid under is as follows:

Item No.	Contract Item	Quantity	Unit	Unit Price ($/ft)	Total
3A	Ductile Iron Return Flow Pipeline (Open Cut) - 30-inch, Common Fill	0	LF	365	$ -
3B	Ductile Iron Return Flow Pipeline (Open Cut) - 30-inch, Select Fill	1148.21	LF	470	$ 539,658.70
		1148.21	**LF**		**$ 539,658.70**

S.J. Louis Construction, Inc. performed work between Station 3005+00 to Station 3016+48.21 for 44 days. Restoration and clean-up work accounted for 10 days. Non-workdays accounted for 11 days. Neither restoration nor non-workdays are expected to be impacted by additional depth. Contractor stated in initial Change Order Request that approximately half of the time spent working was associated with additional depth. Half of the remaining 23 days associated with installing pipe at a greater depth is 12 days.

Great Water Alliance would agree to a maximum change in Contract Time of 12 days and maximum change in Contract Price of $624,790.58.

Should you have questions or concerns regarding this information, please do not hesitate to contact me at your convenience.

Sincerely,

GREAT WATER ALLIANCE
Black & Veatch Corporation

Jeffrey A. Champion

Digitally signed by Jeffrey A. Champion
DN: C=US, E=ChampionJA@bv.com, O=Black & Veatch, OU=Water Program and Construction Management, CN=Jeffrey A. Champion
Date: 2021.08.27 09:16:17-05'00'

Jeff Champion, CCM
Deputy Construction Manager

Enclosure

cc: File
C. Richardson, Greeley and Hansen

Day	Date	SPR Number	Station Start	Station End	Total Cost	Contractor's Description of Work Performed	CM Team Comments
Wednesday	28-Apr-21	1	3001+67	3002+58	$ 10,979.01	Discovered a 4" gas HDPE, 2" power conduits and a 2" fiber conduit not shown on plans or located by USIC. Crews hand dug around utilities and placed sand over gas main. Unknown utilities caused delay in production.	
Thursday	29-Apr-21	2	3002+58	3002+90	$ 46,078.20	Crews discovered the 12" waterline shown on plans and an additional 12" waterline not shown on plans or located by USIC. Both utilities were 5' below the elevation shown. B&V directed crews to deflect the 30" line under existing 12" watermain by the use of two 45 Bends. Due to the increased depth additional shoring, wider trench and additional pavement was removed (RFI-0038). Installed 45 Bend at station 3003+00.	One 45 degree bend installed. Between STA 3002+00 and 3002+70, Contractor was running between 8" and 1'-3" deeper than the planned elevation. Upon realizing 12" watermain actual location, SJ Louis proposed to deflect over existing watermain. This option would create an additional low point and high point in the line, so it was not approved by the CM Team. SJ Louis did not opt to relay pipe to get back on line and grade to go over watermain, instead proposed the option of utilizing additional 45 degree bends to go under 12" watermain. This solution was acceptable to CM Team as it did not create any additional high or low points. CM Team never directed SJ Louis to utilize fittings or directed SJ Louis to go under the watermain. Choices were made by SJ Louis staff to not relay Return Flow Pipeline to correct their previous elevation errors. Cost incurred by SJ Louis for running off line and grade are not to be paid by Owner. Costs related to additional time, cost, labor, materials are responsibility of Contractor. Payment for this area will be per the unit prices agreed to in the Bid Form and Contract.
Friday	30-Apr-21	3	3002+90	3003+15	$ 48,276.64	Crew installed new Water Line per the Engineers direction at the increased depth to clear existing utilities. Installed 45 Bends, 27 LF of 30" Pipe, and bedded in 1-1/4" Select Fill. Additional shoring was required for safe excavations.	two 45 degree bends installed
Saturday	1-May-21	4	3003+00		$ 14,014.77	Crew poured concrete to springline on the existing waterline utilities and backfilled over 45 Bends	No inspection
Sunday	2-May-21	No work performed					
Monday	3-May-21	5	3003+15	3003+73	$ 52,102.72	Crews Installing 30" DIP 5' deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill and additional pavement had to be removed. Installed 1 - 45° Ellbow at the east side of deflection. SJ Louis also installed a Groundwater Barrier in this location	one 45 degree bend installed
Tuesday	4-May-21	6	3003+73	3004+81	$ 60,455.90	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. 30" Pipe at Sta.3004+50; ELV 859.56. Installed 6 pieces of pipe. maintain depth due to additional water and sewer conflicts not shown on plans or utility locates. approximately 200' of curb was removed for shoring and wider trench.	
Wednesday	5-May-21	7	3004+81	3005+71	$ 71,153.98	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. 6 Joints of 30" pipe installed from Sta 3004+70 to 3005+78. Backfilled with 1-1/4" Select Fill.	Start of RFI 38 work. Informed Phil from SJ Louis that they were up to 1' deeper than plan grade. SJ Louis attempted to raise the pipe, but only raised it approximately 0.3'. SJ Louis continued to lay pipe. There is some down time attributed to this.
Thursday	6-May-21	8	3005+71	3006+08	$ 41,742.75	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Two joints of 30" pipe installed from Sta 3005+78 to 3006+00. Installed one 22.5 Bend. Backfilled with 1-1/4" Select Fill.	SJ Louis confirmed they created a low point at STA 3005+00. SJ Louis spent a few hours in the afternoon digging up the pipe that was laid low the previous day in order to confirm its depth. 25% (3 of 12 hours) of labor and equipment costs are to be paid for by SJ Louis to fix low point. Deduct $5,428.11 from day, plus 15% markup of this cost, an additional $814.22. **Deduct $6,242.33 for low point repair.**
Friday	7-May-21	9	3006+08	3006+30	$ 37,373.53	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. 30" pipe installed from Sta 3006+00 to 3006+20. Backfilled with 1-1/4" Select Fill.	7:00 am to 3:00 pm crews are fixing low point at STA 3005+00. 66.67% (8 of 12 hours) of labor and equipment costs are to be paid for by SJ Louis to fix low point. Deduct $14,006.96 from day, plus 15% markup of this cost, an additional $2,101.04. **Deduct $16,108.00 for low point repair.**
Saturday	8-May-21	10	3004+89	3006+20	$ 15,864.89	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Poured concrete under existing utlilities at STA 3004+89 and 3006+20. Respread topsoil over new pipe, cleaned up worksite.	No inspection. Day was devoted to cleanup, not directly related to pipe installation.
Sunday	9-May-21	No work performed					
Monday	10-May-21	11	3006+30	3007+45	$ 48,314.27	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Installed 6 joints of pipe from STA 3006+20 to 3007+40. Went under one gas and one fiber optic utility.	
Tuesday	11-May-21	12	3007+45	3008+45	$ 58,002.24	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Installed 5 joints of pipe from STA 3007+40 to 3008+40. Lost addtional curb and Storm Structure due to addtional depths. One communication cable was crossed during installation	
Wednesday	12-May-21	13	3008+45	3009+25	$ 50,371.43	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Installed 4 Joints of pipe from STA 3008+40 to 3009+20. Removed and replaced a sanitary lateral approved by the local utility department. Did not require concrete support as approved by the Engineer and Inspector. Crew also hit unknown power utilities that were determined to be abandond.	SJ Louis chose to remove sanitary lateral near 3008+60.
Thursday	13-May-21	14	3009+25	3010+55	$ 66,673.16	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Installed 7 Joints of pipe from STA 3009+20 to 3010+60. Televised line from STA 3010+60 to 3003+00. Near STA 3010+20, a storm structure fell into excavation due to the additional depth of pipe. Will be replaced at a later date.	
Friday	14-May-21	15	3010+55	3011+35	$ 62,016.33	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Installed 4 Joints of pipe from STA 3010+60 to 3011+40. Crossed Schaffer Ct., 12" Waterline and 30" RCP Storm. Storm Sewer was bedded with Concrete after crossing.	
Saturday	15-May-21	16	3011+35		$ 14,745.22	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew loaded out spoils, cleaned up, and put together shoring and boxes to continue watermain work on Westridge Dr.	No inspection. Day was devoted to cleanup, not directly related to pipe installation.
Sunday	16-May-21	No work performed					
Monday	17-May-21	17	3011+35	3012+92	$ 61,867.28	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Laid 6 pieces of DIP, 1 transition piece, and 1 HDSS from STA 3011+40 to 3013+00. Removed driveway and replaced temporary crossing. Televised new line from STA 3012+40 to 3003+15.	
Tuesday	18-May-21	18	3012+95	3013+85	$ 58,163.81	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Laid 6 pieces of DIP, and two 45 Bends from STA 3013+00 to 3014+20. Bends were staked to be 45 bends instead of 22.5 as shown on the plan. It was confirmed SJ Louis could use 45 Bends in lieu of 22.5 Bends as long as we stayed within our easement. Maintained clearance between exisiting sanitary, storm, and water.	SJ Louis used 45 degree bends instead of 22.5 degree bends. Between approx. STA 3013+00 and 3014+00, the Contractor did not have the correct 22.5 deg bends on site, used 45 deg bends instead. This got them out of alignment and further to the south into the curb line. 11.5 deg bend had to be used to help alignment. Some down time while contractor decided how to proceed. Production very slow because of this.

Day	Date	SPR Number	Station Start	Station End	Total Cost	Contractor's Description of Work Performed	CM Team Comments
Wednesday	19-May-21	19	3013+85	3014+30	$ 52,575.96	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Backfilled around new pipe and existing utlilities. used concrete under the existing 12" Storm and 12" Watermain. It was detirmened the 45 bends did not work to cross Westridge as the alignment was off. SJ Louis installed a 11.25 bend to compensate for this change.	SJ Louis realized that by using two 45 degree bends as opposed to two 22.5 degree bends per plan, the alignment of the pipe was off by 4 to 5 feet horizontally and 15 degrees. SJ Louis proposed an additional 11.25 degree bend to correct the misalignment. Between 12:00 pm and 5:00 pm, SJ Louis's work consisted of obtaining approval for, and installing a fitting which was out of scope and not on the drawings. 47.62% (5 of 10.5 hours) of labor and equipment costs for this modification are to be paid for by SJ Louis. 100% of 11.25 degree bend costs are to be paid for by SJ Louis. **Deduct $10,896.34 for labor and equipment. Deduct $3,194.18 for 11.25 degree bend cost.**
Thursday	20-May-21	20	3014+30	3015+05	$ 52,549.05	Crews Installing 30" DIP 5' deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Continued to lay pipe. Installed a total of 75 feet and two 45 Bends to dive below existing utilities.	
Friday	21-May-21	21	3015+05		$ 30,013.25	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew spent the day excavating during light rains. There were 3 utility crossings all differing from the plan locations. Safe excavation required additional sheeting and shoring in this area.	
Saturday	22-May-21	22	3015+05		$ 56,827.35	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew cleaned up work area, swepped streets, moved equipment, loaded out spoils and poured a concrete pad for valve.	No inspection. Day was devoted to cleanup, not directly related to pipe installation.
Sunday	23-May-21	No work performed					
Monday	24-May-21	23	3015+05		$ 20,175.60	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew continued to exacate in this area and fight ground/rain water. SJ Louis discovered another utility not shown on the plans which was believed to be an irrigation line. Could not install any pipe. Continued to dewater trench overnight to prepare for tomorrow.	
Tuesday	25-May-21	24	3015+05	3015+22	$ 35,950.04	Crews Installing 30" DIP 5' deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew continued to excavate in this area and fight ground/rain water. Able to install 20 feet of pipe from STA 3015+50 to 3015+70. The 12" watermian running parrallel to the trench was exposed from a cave in and SJ Louis had to act to protect the existing line.	
Wednesday	26-May-21	25	3015+22	3015+42	$ 31,922.41	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew continued to exacate in this area and fight ground/rain water. Able to install 20 feet of pipe from STA 3015+70 to 3015+90. The 12" watermian running parrallel to the trench was exposed from a cave in and SJ Louis had to act to protect the existing line. Started to hit rock at the bottom of trench.	
Thursday	27-May-21	26	3015+42		$ 12,237.98	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew cleaned up the job site and prepared for the holiday weekend. Started respreading topsoil from STA 3007+00 to 3010+50.	Day was devoted to cleanup, not directly related to pipe installation.
Friday	28-May-21	No work performed					
Saturday	29-May-21	No work performed					
Sunday	30-May-21	No work performed					
Monday	31-May-21	No work performed					
Tuesday	1-Jun-21	No work performed					
Wednesday	2-Jun-21	27	3015+31		$ 30,134.41	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew started working on building the blowoff valve from the tee placed the week prior. SJ Louis still faced heavy ground water, rock at or below pipe invert, and deaper conditions. installed part of the blowoff valve assembly.	Alignment too far south near sta 3015+25, result of previous installed 45 deg bends in lieu of 22.5 degree bends. Installation and shoring of blow-off effected by this, minimal room to install assembly. Production inefficiencies occurred on 6/2.
Thursday	3-Jun-21	28	3015+31		$ 22,140.70	Crews Installing 30" DIP 5' deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew finished blowoff valve assembly and installation. During installation, SJ Louis continued to fight groundwater and determental conditions.	Alignment too far south near sta 3015+25, result of previous installed 45 deg bends in lieu of 22.5 degree bends. Installation and shoring of blow-off effected by this, minimal room to install assembly. Production inefficiencies occurred on 6/3.
Friday	4-Jun-21	29	3015+42	3015+60	$ 38,019.16	Crews Installing 30" DIP 5' deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew installed 1 joint of pipe. During installation, SJ Louis needed to cut a 6" hydrant lead and storm sewer out of the way. We also restored a valve box near STA 3015+20.	
Saturday	5-Jun-21	30	3015+60	3015+78	$ 26,293.41	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew installed 1 joint of pipe. During installation, SJ Louis continued to remove rock and groundwater. We also restored a valve box near STA 3015+35. SJ Louis discovered an unmarked and unknown 8" C900 Pipe, the City would not be able to inspect it until the following week.	
Sunday	6-Jun-21	No work performed					
Monday	7-Jun-21	31	3015+78	3015+96	$ 37,179.05	Crews Installing 30" DIP 5' deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew installed 1 joint of pipe. During installation, SJ Louis continued to remove rock and groundwater. Crew replaced Hydrant Leed previously removed. City determined that the 8" pipe found last week was an abandoned FM and removed it. Three abondoned power lines were also discovered in this area.	
Tuesday	8-Jun-21	32	3015+96		$ 44,985.27	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew continued to excavate for the new waterline crossing under 15" Sanitary, and an AT&T Duct Bank (8EA - 4" PVC Pipes). Another Cable line was discovered and the excavator could no longer be used to excavate in this area because of the tight conditions. Used Vaccon. Continued to hit rock and water.	

Day	Date	SPR Number	Station Start	Station End	Total Cost	Contractor's Description of Work Performed	CM Team Comments
Wednesday	9-Jun-21	33	3015+96	3016+30	$ 38,225.67	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. SJ Louis had to Jack Hammer rock from beneith the existing 15" Sanitary Sewer to get required seperation. Once the rock had been removed, SJ Louis was able to lay two joint of pipe. Pipe was backfilled and compaction testing was performed.	Had to replace damaged valve box on 6/9 (caused by contractor). Lost production.
Thursday	10-Jun-21	34	3016+30	3016+84	$ 55,482.73	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew continued to install 30" Pipe. SJ Louis installed 3 joint of pipe and one 90 Bend.	90 degree bend installed, ending alignment changes that resulted from RFI 38.
Friday	11-Jun-21	35	3016+84		$ 30,130.52	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on clean up, backfill, loading out spoils and spreding topsoil. No pipe laid today.	Start of RFI 45 work. Crew preparing to mobilize to Durham Drive - no productive work occurred on this day. At end of day, crew decided to install pipe along Moorland for a few more days.
Saturday	12-Jun-21	36	3016+84	3017+64	$ 40,349.92	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Laid 4 joints of pipe from STA 3016+68 - 3017+40. Crews still face heavy amounts of ground water due to increased depths in this area. Still working towards the original plan and profile.	
Sunday	13-Jun-21	No work performed					
Monday	14-Jun-21	37	3017+64	3018+46	$ 68,731.60	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Laid 5 joints of pipe from STA 3017+40 - 3018+30. Crews still face heavy amounts of ground water due to increased depths in this area. Still working towards the original plan and profile but need to stay low to make it under the next Storm Utility.	SJ Louis running 1.3 feet below alignment on their own.
Tuesday	15-Jun-21	38	Restoration work		$ 29,204.14	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on the restoration of Westridge Dr. Installed 12" and 24" RCP Storm, grade topsoil, and clean up. City of New Berlin and Inspector marked curb to be removed and remain.	Restoration work being performed. Majority of work performed during day was related to reinstallation of storm sewers.
Wednesday	16-Jun-21	39	Restoration work		$ 31,370.51	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on the restoration of Westridge Dr. Installed 12" RCP Storm, 8" PVC Storm, and two new Storm Structures. Crew removed curb marked for removal and prep grade for curb restoration.	Restoration work being performed. Majority of work perfomed during day was related to installation of storm structures and reconnect piping neat STA 3008+00 and STA 3010+00.
Thursday	17-Jun-21	40	Restoration work		$ 26,479.19	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on the restoration of Westridge Dr. Crew also poured base slab for the new Blow Off MH.	Work included installation of 2 catch basins and connecting to existing storm sewers. Poured slab for blow-off assembly. Curb and gutter removal also occured. Crew off site for 2.5 hours for company meeting. 11:00 am to 1:30 pm crews are at meeting. 20.83% (2.5 of 12 hours) of labor and equipment costs are to be paid for by SJ Louis. Deduct $4,670.02 from day, plus 15% markup of this cost, an additional $700.50. **Deduct $5,370.52 for company meeting time.**
Friday	18-Jun-21	41	Restoration work		$ 32,411.82	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on the restoration of Westridge Dr. Crew removed curb marked for removal and graded over trench for curb restoration. Final grading shall be the responsibility of the Subcontractor. Mortar risers and castings onto new drainage structures.	Restoration work being performed. Work occurred at surface - payment for this work will be per the contract items as discussed in progress meetings.
Saturday	19-Jun-21	42	Restoration work		$ 31,610.24	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on the restoration of Westridge Dr. Crew removed curb marked for removal and rough graded over pipe trench for curb restoration. Final grading shall be performed by the Subcontractor. Mortar risers and castings onto new drainage structures.	Restoration work being performed. Work occurred at surface - payment for this work will be per the contract items as discussed in progress meetings.
Sunday	20-Jun-21	No work performed					
Monday	21-Jun-21	43	Restoration work		$ 35,208.36	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on the restoration of Westridge Dr. Crew rough grading for curb and road restoration. Mortar risers, castings and doghouses onto new drainage structures.	Restoration work being performed. Work occurred at surface - payment for this work will be per the contract items as discussed in progress meetings.
Tuesday	22-Jun-21	44	3018+46	3018+60	$ 35,225.05	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on 30" Pipe. Installed 1 joint. Heavy dewatering is required for installation and after installing 18 LF, SJ Louis ran into an existing 18" waterline and requred additional shoring to safely excavate the area.	SJ Louis running lower than alignment. SJ Louis damaged watermain that was located on drawings.
Wednesday	23-Jun-21	45	3018+60	3019+66	$ 47,506.92	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on 30" Pipe. Installed 6 joints of pipe. While continuing on new 30" DIP, City of New Berlin water department inspected the 18" Waterline damaged during trenching operations on 6/22. They determined a repair sleeve would accomidate repairs. SJ Louis also trenched and backfilled under an existing 6" Gas Main.	Due to RFI 45, Contractor to provide credit for two 45 degree bends not installed.
Thursday	24-Jun-21	46	3019+66	3019+95	$ 43,169.85	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on 30" Pipe. Installed 2 joints of 30" DIP. The crew had rainfall hit and limit the amount of 30" that could be installed. Part of the crew jumped back for restoration along the pipe alignment.	SJ Louis 1 foot lower than alignment
Friday	25-Jun-21	47	3019+95	3020+50	$ 39,480.75	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. Crew working on 30" Pipe. Installed 3 joints of DIP. Heavy dewatering is required for installation and after installing 54 LF, rain fell causing pipe operations to stop. crew jumped back and started on restoration work over the new aligment and pipe grade area.	SJ Louis 1 foot lower than alignment
Saturday	26-Jun-21	48	3020+50		$ 19,299.06	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. SJ Louis working to clean up site in preparation of pipe installation on Monday. Hauled off construction debris and other spoils. Crew organized materials and moved pipe for Monday.	Day was devoted to cleanup, not directly related to pipe installation.
Sunday	27-Jun-21	No work performed					

Day	Date	SPR Number	Station Start	Station End	Total Cost	Contractor's Description of Work Performed	CM Team Comments
Monday	28-Jun-21	49	3020+50	3021+95	$ 46,202.01	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. SJ Louis continued to lay pipe on the changed alignment along Morland Road. Used Select Fill & Type I Geotextile for 80' and Common Fill & Type 1 Geotextile for 65' as directed. Installed 145 LF under the double driveway @ STA 3021+00.	
Tuesday	29-Jun-21	50	3021+95	3023+57	$ 43,572.06	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. SJ Louis continued to lay pipe on the changed alignment along Morland Road. Used Select Fill & Type I Geotextile for 162' @ STA 3022+00.	
Wednesday	30-Jun-21	51	3023+57	3025+47	$ 45,410.37	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. SJ Louis continued to lay pipe on the changed alignment along Morland Road. Used Select Fill & Type I Geotextile for 190' up to STA 3024+23. SJ Louis also discovered an unmarked/unknown fiberoptic line	Due to RFI 45, Contractor to provide credit for two 45 degree bends not installed. Contractor to provide credit for Air Release Valve not installed.
Thursday	1-Jul-21	52	3025+47		$ 25,224.70	Crews Installing 30" DIP deeper than plans call out due to utility conflicts. Extra depth requires wider trench, additional shoring, select fill, additional pavement had to be removed and a longer time to dig. SJ Louis cleaned up alignment along Moreland Road and prepared to mobilize to another portion of the project. respread topsoil and graded ROW.	Crew cleaned up and mobilized to Durham Drive. No productve work occurred. Not part of RFI 45. Contractor to provide credit for blow off not installed once station is reached.
				Total	**$ 2,073,495.24**		

Work prior to RFI 38 (STA 3000+00 to STA 3005+00)	$ 231,907.24
Work as part of RFI 45 (STA 3016+48.21 to STA 3024+23)	$ 434,221.91
Work included in other Unit Cost Item or not associated with RFI-038	$ 201,105.44
Work as part of RFI 38 (STA 3005+00 to STA 3016+48.21)	$ 1,206,260.65
Deducts (see CM Team Comments)	$ 41,811.37
RFI 38 Total	**$ 1,164,449.28**
Original Unit Item Expected Cost	$ 539,658.70
	$ 624,790.58

July 28, 2021

Jeff Champion
Construction Manager
Black & Veatch
2010 E. Broadway Avenue
Waukesha, WI 53186
ChampionJA@bv.com

S.J. LOUIS
CONSTRUCTION, INC.

Re: Waukesha Water Utility – Great Lakes Water Supply Program
Project 199990-CP6 – Return Flow Pipeline
Request for Information 0038 & 0045 – Change Proposal (Westridge Drive & Mooreland Road)

Dear Jeff,

As discussed in the weekly progress meetings, S.J. Louis Construction, Inc. (SJ Louis) has completed all of the work related to Request for Information (RFI) 0038 & 0045 and is submitting this Change Proposal in good faith in accordance with Article 11.06 of the General Conditions of the Contract.

As you are aware, the alignment and profile of the proposed 30-inch pipe was modified by Black & Veatch (B&V) after data collected and provided by SJ Louis' showed actual locations of existing underground facilities conflicted with the proposed installation of the 30-inch pipe. The modified design added additional depth, and it was agreed SJ Louis would track this Work and submit for its cost incurred plus allowable mark-up. SJ Louis would then deduct the corresponding units underneath the respective bid item.

Attached to this Change Proposal is SJ Louis' Supplemental Payment Requests (SPR) 001 – 052 with supporting data documenting the Cost for this Work between stations 3003+00 to 3024+23 (2,123 lineal feet). The total of SJ Louis' cost to perform this Work with allowable mark-up is $2,073,495.23, this equates to approximately $976.68 a lineal foot.

The Contract bid items which this work would fall underneath is the following:

Item No.	Contract Item	Quantity	Unit	Unit Price	Total
3A	30-Inch, Common Fill	577	LF	$ 365.00	$ 210,605.00
3B	30-Inch, Select Fill	1,546	LF	$ 470.00	$ 726,620.00
		2,123	**LF**		**$ 937,225.00**

This Work began on April 28 and was completed on July 1st, totaling 64 Calendar Days. SJ Louis believes approximately half of that time was delays due to the additional depth.

SJ Louis believes B&V should remove the 2,123 lineal feet of the respective Contract items, and add a lump sum change for the $2,073,495.23 totaling a net increase of $1,136,270.23. SJ Louis is hereby requesting an increase to the Contract Time and Price in the amount of 32 Days and $1,136,270.23, respectively.

The supporting data is accurate and complete and the requested increase to the Contract Time and Price is the entire adjustment SJ Louis believes it is entitled to as a result of the increased depth.

Sincerely,

FrankWizner Digitally signed by FrankWizner
DN: C=US, E=FrankW@sjlouis.com, O=S. J. Louis, OU=Project Manager, CN=FrankWizner
Date: 2021.07.29 15:31:58-05'00'

Frank Wizner
Project Manager
S.J. Louis Construction, Inc.

Enclosures: SPRs 001-052
RFI 0038 & 0045

GREAT WATER ALLIANCE

Department of Justice 50% Compliance Certification is due on:
May 1, 2022
174 days

MEMORANDUM

November 8, 2021

S.J. Louis Construction, Inc.
1351 Broadway Street W, PO Box 459
Rockville, MN 56369-0459

Attention: Trevor Scaife, Project Engineer

Subject: Change Order Request No. 007 Response
Contract Package 6

Mr. Scaife,

Reference is made to your September 16, 2021 letter, received via PMWeb on September 16, 2021. We have reviewed the submitted letter. S.J. Louis Construction, Inc. has submitted a request for an adjustment to the Contract Price through Change Order Request No. 007, in response to RFI No. 0024. S.J. Louis Construction, Inc. has requested an increase to the Contract Price of $14,439.40 to install ten new light fixtures on the replaced light poles and bases on 60th Street. RFI No. 0024 is linked for reference.

In accordance with Article 11.06 of the General Conditions and SC-11.06A, Change Order Request No. 006 is approved. Great Water Alliance would agree to a net increase of $1,443.94 per light fixture replaced, up to a maximum increase of $14,439.40 to the Contract Price.

Should you have questions or concerns regarding this information, please do not hesitate to contact me at your convenience.

Sincerely,

GREAT WATER ALLIANCE

Jeffrey A. Champion

Digitally signed by Jeffrey A. Champion
DN: C=US, E=ChampionJA@bv.com, O=Black & Veatch, OU=Water Program and Construction Management, CN=Jeffrey A. Champion
Date: 2021.11.08 08:52:45-06'00'

Jeff Champion, CCM
Construction Manager
Black & Veatch Corporation

cc: File
C. Walter, WWU
C. Richardson, GH

Waukesha Water Utility
115 Delafield Street P.O. Box 1648
Waukesha, WI 53187-1648 USA
P: (262) 521-5272 F: (262) 521-5399

Great Water Alliance
Great Lakes Water Supply Program
CP6 - Return Flow Pipeline, 18-in Sanitary Sewer and Outfall Facilities

Project No.: 199990-CP6
File No.: 80.1725

S.J. Louis Construction, Inc.
1351 Broadway Street W PO Box 459
Rockville, MN 56369 USA

CHANGE ORDER REQUEST

Change Order Request No.:	000007 Rev.: 0.00
Issue Date:	Thursday, September 16, 2021
Subject:	60th St Light Pole Fixtures
Reference Drawing, Specification or Change Request:	RFI-0024
Workflow Status:	Submitted

CHANGE ORDER REQUEST TO REQUEST CHANGE TO THE TERMS OF THE CONTRACT:

Change Order Request Category: **I - Owner Initiated Change**

Change Order Request Sub-Category: **1 - Owner Initiated**

Purpose for this Change Order Request:

Replace existing light pole fixtures with new fixtures per RFI-0024

Description of Change:

Request for Information (RFI) 0024 states that S.J. Louis Construction, Inc. (SJ Louis) is to replace any light poles and fixtures removed for the construction of Contract Package 6 (CP6) with a new light pole and fixture. Per the plan notes, SJ Louis was instructed to remove and replace light poles, however, there was no specification on light fixtures. SJ Louis initially anticipated salvaging and replacing the light pole fixtures during construction however was directed to remove and replace per RFI-0024. Therefore, the cost of the new material should be compensable. SJ Louis respectfully submits the following pricing for the upgrade of ten light fixtures on 60th St. on CP6. Item No. Description Quantity Unit Unit Price Total 1 GARDCO P-26-80L-900-NW-G2-AR-5-UNV-BK 1 LS $ 12,556.00 $ 12,556.00 Mark-Up: 15% $ 1,883.40 $ 14,439.40 SJ Louis is requesting a net increase to the Contract Price for the change in scope for the light fixture material of $14,439.40. If you have any questions, please feel free to contact me directly at (320) 247-7206. We look forward to working with you.

Item No.	Description	Proposed Qty.	Unit Price	Total
1	GARDCO P-26-80L-900-NW-G2-AR-5-UNV-BK	1 LS	$12556	$12556

REQUESTED ADJUSTMENT TO CONTRACT PRICE: $14,439.40
REQUESTED ADJUSTMENT TO CONTRACT TIME: 0 CDs

Attached:

COR-007 - 60th St Light Pole Fixtures.pdf

Workflow Approvals:

Submit	Thursday, September 16, 2021	Submit	Trevor Scaife

September 16, 2021

Jeff Champion
Construction Manager
Black & Veatch
2010 E. Broadway Avenue
Waukesha, WI 53186
ChampionJA@bv.com

Re: Waukesha Water Utility – Great Lakes Water Supply Program
Project 199990-CP6 – Return Flow Pipeline
Change Order Request (COR) 007 – Light Fixture Pricing

Dear Jeff,

Request for Information (RFI) 0024 states that S.J. Louis Construction, Inc. (SJ Louis) is to replace any light poles and fixtures removed for the construction of Contract Package 6 (CP6) with a new light pole and fixture. Per the plan notes, SJ Louis was instructed to remove and replace light poles, however, there was no specification on light fixtures. SJ Louis initially anticipated salvaging and replacing the light pole fixtures during construction however was directed to remove and replace per RFI-0024. Therefore, the cost of the new material should be compensable.

SJ Louis respectfully submits the following pricing for the upgrade of ten light fixtures on 60th St. on CP6.

Item No.	Description	Quantity	Unit	Unit Price	Total
1	GARDCO P-26-80L-900-NW-G2-AR-5-UNV-BK	1.00	LS	$ 12,556.00	$ 12,556.00
				Total	$ 12,556.00
			Mark-Up	15%	$ 1,883.40
				Total	**$ 14,439.40**

SJ Louis is requesting a net increase to the Contract Price for the change in scope for the light fixture material of **$14,439.40**.

If you have any questions, please feel free to contact me directly at (320) 247-7206. We look forward to working with you.

Sincerely,

Trevor Scaife

Digitally signed by Trevor Scaife
DN: C=US, E=TrevorS@SJLouis.com, O=S.J. Louis, CN=Trevor Scaife
Reason: I am the author of this document
Date: 2021.09.16 14:35:15-05'00'

Trevor Scaife
Project Engineer
Cell: (320) 247-7206
Email: TrevorS@SJLouis.com

Enclosures: RFI-0024 - Street Light Data

CHANGE ORDER PROPOSAL

DATE: 7/29/2021

CUSTOMER: SJ LOUIS

ATTENTION : TREVOR SCIAFE

PROJECT NAME: WAUKESHA WATER SUPPLY

CONTRACT NUMBER: 6

PROJECT NUMBER:

CHANGE ORDER NUMBER:

REVISION NUMBER:

SCOPE OF WORK FOR PROPOSAL:

LIGHT FIXTURES FOR NEW POLES - DRAWINGS C172 THRU C179 & C464

SUMMARY:	I. LABOR			$0
	II. MATERIALS			$12,432
	III. EQUIPMENT RENTAL			$0
	IV. TOOLS			$0
			SUBTOTAL	$12,432
	LABOR & MATERIAL FEE	0.00%		$0
			LABOR & MATERIAL TOTAL	**$12,432**
	IV. SUBCONTRACTS			$0
	SUBCONTRACT FEE	10.00%		$0
			SUBCONTRACT TOTAL	**$0**
			CHANGE ORDER SUB-TOTAL	*$12,432*
	V. BOND			$124
			GRAND TOTAL	**$12,556**

Proposal amount valid for 14 days

PROJECT NAME	CHANGE ORDER NUMBER	DATE	REVISION
WAUKESHA WATER SUPPLY		7/29/2021	

I. LABOR

A. REGULAR

	HOURS		RATE		TOTAL COST
PROJECT MANAGER	0	@	$0.00		
SUPERINTENDENT	0	@	$94.51		
SUPERVISOR	0	@	$91.51		
ELECTRICIAN	0	@	$85.52		
ESTIMATOR	0	@	$0.00		
CAD / BIM	0	@	$0.00		
OTHER	0	@	$0.00		

B. PREMIUM

OVERTIME - ELECTRICIAN	0	@	$0.00		
OVERTIME - SUPERVISOR	0	@	$0.00		
DOUBLE TIME - ELECTRICIAN	0	@	$0.00		
DOUBLE TIME - SUPERVISOR	0	@	$0.00		
				LABOR TOTAL	**$0.00**

II. MATERIALS

MATERIAL PER BREAKDOWN			$12,432
MISCELLANEOUS MATERIAL	0.00%		$0
		SUBTOTAL	***$12,432***
FREIGHT AND HANDLING			$0
SPECIAL EXPEDITING			$0
SALES TAX	0.0%		$0
		MATERIAL TOTAL	**$12,432**

PROPOSAL BREAKDOWN

PROJECT NAME: WAUKESHA WATER SUPPLY			
DRAWING NUMBER OR LOCATION	ESTIMATED BY	ARCH or ENGINEER	CHANGE ORDER

Description	Quantity	Material	Total Material	Labor	Total Labor	Notes
GARDCO P26-80L-900-NW-G2-AR-5-UNV-BK	10	$1,243.20	$12,432.00			
	Total this page	-	$12,432	-		
	Total all pages	**-**	**$12,432**	**-**		

Waukesha Water Utility
115 Delafield Street P.O. Box 1648
Waukesha, WI 53187-1648

Great Water Alliance
Great Lakes Water Supply Program
CP6 - Return Flow Pipeline, 18-in Sanitary Sewer and Outfall Facilities

Project No.: 199990-CP6
File No.: 80.1375

S.J. Louis Construction, Inc.
1351 Broadway Street W PO Box 459
Rockville, MN 56369

Request for Information

Request for Information No.:	0024
Issue Date:	December 4, 2020
Subject:	60th Street Light Poles
Reference Drawing/Specification:	C173-179, C464:None

Request For Information or Clarification

From:

Chris Johnson
S.J. Louis Construction, Inc.

To:

Matt Hayes
Black & Veatch

Requested Response Date:

Importance: Normal

WBS or Facility Identification:

Discipline: Electrical

RFI Question:

Existing 60th St Light poles are concrete exposed aggregate and direct bury with no bases. Light poles and fixtures are decorative and match other lights in the area. The notes in sheets C173-179 ask for removal of up to 11 existing light poles as necessary then installation of new light poles per detail on C464. Detail C464 calls out Valmont bases and aluminum poles. Will the aluminum poles be acceptable to the City of Franklin? If Franklin will accept the aluminum poles, was it the intent to re-use the existing light fixtures and will they fit the specified poles? What is the design and layout of the concrete base's necessary to install the aluminum poles. What is the expected height of the aluminum poles? See Attached Pictures.

Proposed Solution:

SJ Louis will remove and replace as necessary the existing lights and fixtures to the original location and height.

RFI Impacts:

Schedule: ☑ No / ☐ Yes Estimated Impact:

Cost: ☑ No / ☐ Yes Estimated Impact: 0

Contract Documents/Drawings: ☑ No / ☐ Yes

RFI Withdrawn:

By: **Date:**

RFI Response:

If the contractor does not remove an existing light pole, it is acceptable to remain and does not need to be replaced.

If the contractor removes an existing light pole due to the Return Flow Pipeline installation, it is to be replaced with a new light pole and light per the note which references details on C464 and meeting the following requirements:

- Light: Gardco Model P26-80L-900-NW-G2-x
- Pole: Valmont Model 290845906T4 – Black
  - Height: 30 feet
- Concrete base: WisDOT Type 5 & 6
- Pedestal: WisDOT Transformer Base for use with Type 2, 3, 4, 5 & 6 Poles

See attached 60th Street Light Pole Information for additional details.

Respondent: **Co-Respondent(s):**

Jeff Champion/B&V

Response Date: December 11, 2020 **Days Held:** 7 **Workflow Status:** Approved

Attached:

IMG_0031; IMG_0032; IMG_0033; IMG_0034; 60th Street Light Pole Information

SDD 9c3 Transformer/Pedestal Bases

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

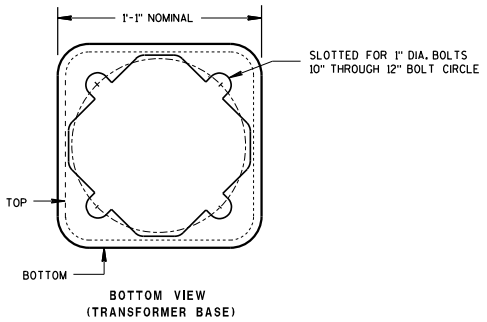
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

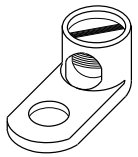
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

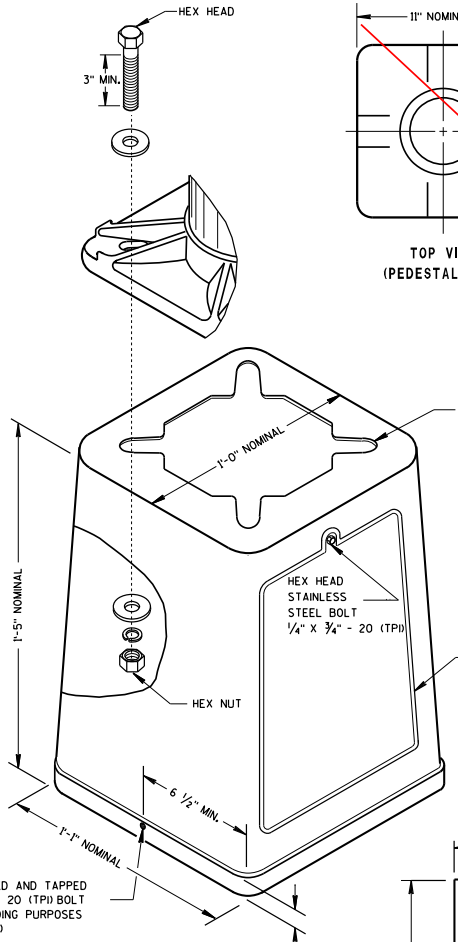
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



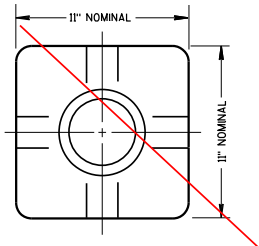
BOTTOM VIEW
(TRANSFORMER BASE)



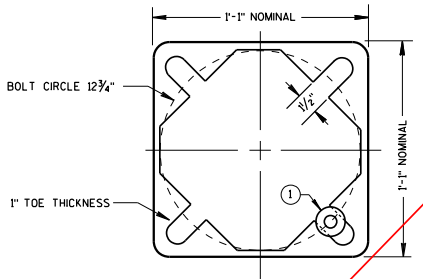
TYPICAL MECHANICAL
CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE



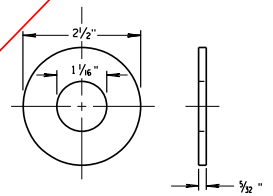
ISOMETRIC VIEW



TOP VIEW
(PEDESTAL BASE)

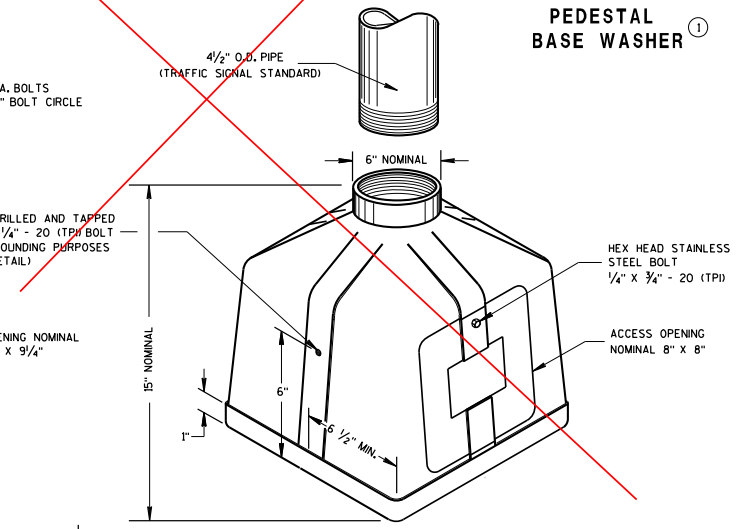


BOTTOM VIEW
(PEDESTAL BASE)

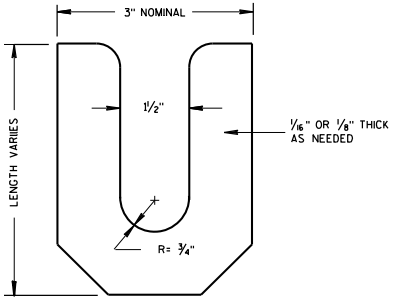


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL
BASE WASHER (1)



ISOMETRIC VIEW
PEDESTAL BASE



LEVELING SHIM

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER
FHWA

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

Transformer/Pedestal Bases

References:

NONE

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT
657.0100	Pedestal Bases	EACH
657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
NONE	

Other SDDs associated with this drawing:

SDD 9C2	Concrete Bases Types 1, 2, 5 and 6

Design Notes:

NONE

Contact Person:

Ahmet Demirbilek (414) 220-6801

GARDCO by signify

Site & Area

PureForm

LED area, medium

Gardco PureForm LED area medium P26 features a sleek, low profile design and optimal performance.
PureForm area medium is designed to achieve maximum pole spacing, with lumen output up to 28,900 lumens. Multiple distribution and shielding options are availble to achieve maximum control. A full range of control options provides additional energy savings.

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Ordering guide

example: P26-64L-800-NW-G2-AR-5-120-HIS-MGY

Prefix	Number of LEDs	Drive Current	LED Color – Generation	Mounting	Distribution	Voltage
P26 PureForm area medium, 26"	**48L** 48 LEDs (3 modules)	**400** 400mA **500** 500mA **600** 600mA **700** 700mA	**WW-G2** Warm White 3000K, 70 CRI Generation 2	**AR** Arm Mount (standard)[2]	**Type 2** **2** Type 2 **2-90** Rotated left 90° **2-270** Rotated right 270° **Type 3** **3** Type 3 **3-90** Rotated left 90° **3-270** Rotated right 270° **Type 4** **4** Type 4 **4-90** Rotated left 90° **4-270** Rotated right 270°	**120** 120V **208** 208V **240** 240V **277** 277V **347** 347V **480** 480V **UNV** 120-277V (50/60Hz) **HVU** 347-480V (50/60Hz)
	64L 64 LEDs (4 modules)	**600** 600mA **700** 700mA **800** 800mA	**NW-G2** Neutral White 4000K, 70 CRI Generation 2	*The following mounting kits must be ordered separately (See accessories)*	**Type 5** **5** Type 5 **5W** Type 5W **AFR** Auto Front Row **AFR-90** Auto Front Row, rotated left 90° **AFR-270** Auto Front Row, rotated right 270° **BLC** Back Light Control **BLC-90** Back Light Control rotated at 90° **BLC-270** Back Light Control rotated at 270°	
	80L 80 LEDs (5 modules)	**700** 700mA **800** 800mA **900** 900mA	**CW-G2** Cool White 5000K, 70 CRI Generation 2	**SF** Slip Fitter Mount[3] (fits to 2 3/8" O.D. tenon)		
			WY-G2 Warm Yellow2700K, 80 CRI Generation 2[1]	**WS** Wall mount with surface conduit rear entry permitted		
			AM-G2 Direct Amber (590nm) Generation 2[1]	**RAM** Retrofit arm mount kit[2]		

Options

Dimming controls	Motion sensing	Photo-sensing	Electrical	Luminaire	Finish
DD 0-10V External dimming (by others)[4] **DCC** Dual Circuit Control[4,5,6] **FAWS** Field Adjustable[4,5] **SW** Interface module for SiteWise[4,6,7] **LLC3** Integral wireless module with #3 lens[4,5,6,8] **LLC4** Integral wireless module with #4 lens[4,5,6,8] **BL** Bi-level functionary with motion sensor[4] **DynaDimmer:** Automatic Profile Dimming **CS50** Security 50% Dimming, 7 hours[4,8] **CM50** Median 50% Dimming, 8 hours[4,8] **CE50** Economy 50% Dimming, 9 hours[4,8] **DA50** All Night 50% Dimming[4,8] **CS30** Security 30% Dimming, 7 hours[4,8] **CM30** Median 30% Dimming, 8 hours[4,8] **CE30** Economy 30% Dimming, 9 hours[4,8] **DA30** All Night 30% Dimming[4,8]	**IMRI3** Integral with #3 lens **IMRI7** Integral with #7 lens **IMRO** Pole mounted motion sensor (see accessories)	**PCB** Photocontrol Button[8,9] **TLRD5** Twist Lock Receptacle 5 Pin[10] **TLRD7** Twist Lock Receptacle 7 Pin[10] **TLRPC** Twist Lock Receptacle w/Photocell[9,11]	**Fusing** **F1** Single (120, 277, 347VAC)[9] **F2** Double (208, 240, 480VAC)[9] **F3** Canadian Double Pull (208, 240, 480VAC)[9,12] **Pole Mount Fusing** **FP1** Single (120, 277, 347VAC)[9] **FP2** Double (208, 240, 480VAC)[9] **FP3** Canadian Double Pull (208, 240, 480VAC)[9] **Surge Protection** (10kA standard) **SP2** Increased 20kA	Square Pole Adapter included as standard **TB** Terminal Block[12] **RPA** Round Pole Adapter (fits to 3"- 3.9" O.D. pole)[13] **HIS** Internal Housing Side Shield[14]	**Textured** **BK** Black **WH** White **BZ** Bronze **DGY** Dark Gray **MGY** Medium Gray **Customer specified** **RAL** Specify optional color or RAL (ex: RAL7024) **CC** Custom color (Must supply color chip for required factory quote)

1. Extended lead times apply. Contact factory for details.
2. Mounts to a 4" round pole with adapter included for square poles.
3. Limited to a maximum of 45 degrees aiming above horizontal.
4. Not available with other control options.
5. Not available with motion sensor.
6. Not available with photocontrol.
7. Available only in 120 or 277V.
8. Not available in 347 or 480V
9. Must specify input voltage.
10. Dimming will not be connected to NEMA receptacle if ordering with other control options.
11. Not available in 480V.
12. Not available with DCC.
13. Not available with SF and WS. RPAs provided with black finish standard.
14. HIS not available with Type 5, 5W, and BLC optics.

Site & Area

PureForm P26 Accessories (ordered separately, field installed)

Controls Accessories

Pole Mount Motion Sensor

MS-A-120V [15] 120V Input
MS-A-277V [15] 277V Input

Wireless systems Remote mount module

LLCR3-(F) [15] #3 lens
LLCR4-(F) [15] #4 lens

Central Remote Motion Response

(used connected to SiteWise main panel)

MS2-A-FVR-3
MS2-A-FVR-7

Shielding Accessories

House Side shield

Standard orientation:

HIS-48-H [14] Internal House Side Shield for 48 LEDs (3 modules)
HIS-64-H [14] Internal House Side Shield for 64 LEDs (4 modules)
HIS-80-H [14] Internal House Side Shield for 80 LEDs (5 modules)

At 90 or 270 orientation:

HIS-48-V [14] Internal House Side Shield for 48 LEDs (3 modules)
HIS-64-V [14] Internal House Side Shield for 64 LEDs (4 modules)
HIS-80-V [14] Internal House Side Shield for 80 LEDs (5 modules)

Mounting Accessories

PureForm PTF2 (pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon)

PTF2-P26-1-90-(F) 1 luminaire at 90°
PTF2-P26-2-90-(F) 2 luminaires at 90°
PTF2-P26-2-180-(F) 2 luminaires at 180°
PTF2-P26-3-90-(F) 3 luminaires at 90°
PTF2-P26-4-90-(F) 4 luminaires at 90°
PTF2-P26-3-120-(F) 3 luminaires at 120°

PureForm PTF3 (pole top fitter fits 3-3 1/2" OD x 6" depth tenon)

PTF3-P26-1-90-(F) 1 luminaire at 90°
PTF3-P26-2-90-(F) 2 luminaires at 90°
PTF3-P26-2-180-(F) 2 luminaires at 180°
PTF3-P26-3-90-(F) 3 luminaires at 90°
PTF3-P26-4-90-(F) 4 luminaires at 90°
PTF3-P26-3-120-(F) 3 luminaires at 120°

PureForm PTF4 (pole top fitter fits 3 1/2-4" OD x 6" depth tenon)

PTF4-P26-1-90-(F) 1 luminaire at 90°
PTF4-P26-2-90-(F) 2 luminaires at 90°
PTF4-P26-2-180-(F) 2 luminaires at 180°
PTF4-P26-3-90-(F) 3 luminaires at 90°
PTF4-P26-4-90-(F) 4 luminaires at 90°
PTF4-P26-3-120-(F) 3 luminaires at 120°

P26-SF-G2-(F) Slip Fitter Mount (fits to 2 3/8" O.D. tenon)
P26-RAM-G2-(F) Retrofit Arm mount kit
P26-WS-G2-(F) Wall mount with surface conduit rear entry permitted
P26-BD-G2 Bird deterrent

(F) = Specify finish

14. HIS not available with Type 5, 5W, and BLC optics.
15. DD option required

P26 PureForm LED area medium

Site & Area

LED Wattage and Lumen Values

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-NW-G2-x	48	400	4000	60	8798	B2-U0-G2	146	8509	B2-U0-G2	142	8827	B2-U0-G2	147
P26-48L-500-NW-G2-x	48	500	4000	74	10755	B2-U0-G2	145	10401	B2-U0-G2	140	10789	B2-U0-G2	145
P26-48L-600-NW-G2-x	48	600	4000	89	12574	B3-U0-G2	141	12160	B2-U0-G2	137	12614	B2-U0-G3	142
P26-48L-700-NW-G2-x	48	700	4000	101	14305	B3-U0-G3	142	13834	B2-U0-G3	137	14351	B2-U0-G3	142
P26-64L-600-NW-G2-x	64	600	4000	114	16617	B3-U0-G3	145	16069	B2-U0-G3	141	16670	B3-U0-G3	146
P26-64L-700-NW-G2-x	64	700	4000	133	18806	B3-U0-G3	142	18186	B3-U0-G3	137	18866	B3-U0-G4	142
P26-64L-800-NW-G2-x	64	800	4000	153	21078	B3-U0-G3	138	20383	B3-U0-G4	134	21145	B3-U0-G4	139
P26-80L-700-NW-G2-x	80	700	4000	169	23764	B3-U0-G3	141	22981	B3-U0-G4	136	23840	B3-U0-G4	141
P26-80L-800-NW-G2-x	80	800	4000	192	26067	B3-U0-G3	136	25208	B3-U0-G4	132	26150	B3-U0-G4	137
P26-80L-900-NW-G2-x	80	900	4000	219	27986	B3-U0-G3	128	27064	B3-U0-G4	123	28076	B3-U0-G4	128

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 5			Type 5W			Type AFR			Type BLC		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-NW-G2-x	48	400	4000	60	9068	B3-U0-G2	151	9114	B4-U0-G2	152	9006	B2-U0-G1	150	6735	B0-U0-G2	112
P26-48L-500-NW-G2-x	48	500	4000	74	11083	B4-U0-G2	149	11141	B4-U0-G2	150	11009	B3-U0-G2	148	8233	B1-U0-G2	111
P26-48L-600-NW-G2-x	48	600	4000	89	12954	B4-U0-G2	146	13025	B4-U0-G2	146	12871	B3-U0-G2	145	9626	B1-U0-G2	108
P26-48L-700-NW-G2-x	48	700	4000	101	14736	B4-U0-G2	146	14819	B4-U0-G2	147	14643	B3-U0-G2	145	10951	B1-U0-G2	108
P26-64L-600-NW-G2-x	64	600	4000	114	17116	B4-U0-G2	150	17214	B5-U0-G3	151	17009	B3-U0-G2	149	12721	B1-U0-G2	111
P26-64L-700-NW-G2-x	64	700	4000	133	19369	B5-U0-G3	146	19481	B5-U0-G3	147	19249	B3-U0-G2	145	14396	B1-U0-G3	108
P26-64L-800-NW-G2-x	64	800	4000	153	21708	B5-U0-G3	142	21834	B5-U0-G3	143	21575	B3-U0-G2	141	16136	B1-U0-G3	106
P26-80L-700-NW-G2-x	80	700	4000	169	24474	B5-U0-G3	145	24617	B5-U0-G4	146	24325	B3-U0-G2	144	18192	B1-U0-G3	108
P26-80L-800-NW-G2-x	80	800	4000	192	26880	B5-U0-G3	140	27003	B5-U0-G4	141	26682	B3-U0-G3	139	19955	B1-U0-G3	104
P26-80L-900-NW-G2-x	80	900	4000	219	28872	B5-U0-G3	132	28991	B5-U0-G4	132	28647	B4-U0-G3	131	21425	B1-U0-G4	98

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L_{70} is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L_{70} hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L_{70} Hours	L_{70} per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 900 mA	>100,000 hours	>60,000 hours	>88%

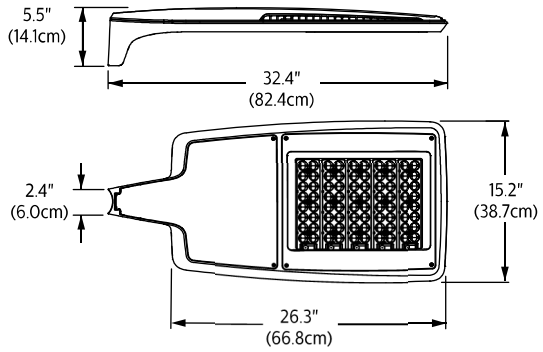
P26 PureForm LED area medium

Site & Area

Dimensions

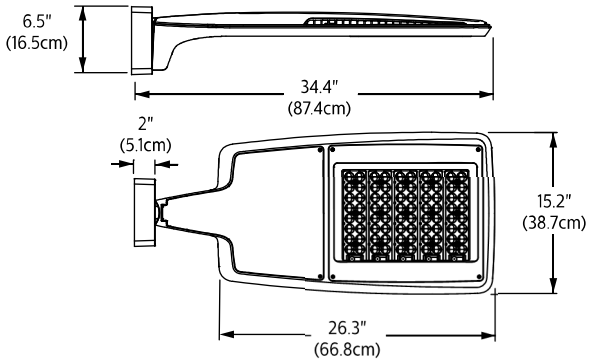
Standard Arm **(AR)**

Weight: 27 Lbs (12.4 Kg) EPA: 0.26ft² (.024m²)



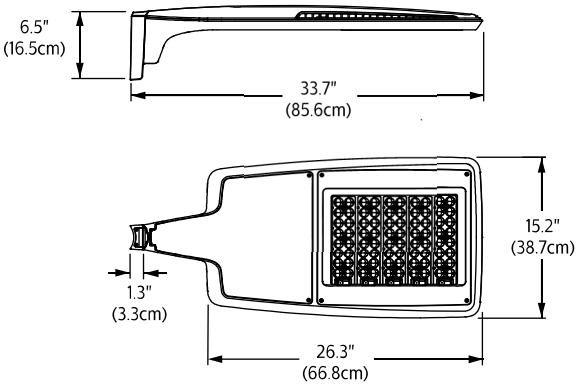
Wall **(WS)**

Weight: 30 Lbs. (13.7 Kg) EPA: 0.30ft² (.028m²)



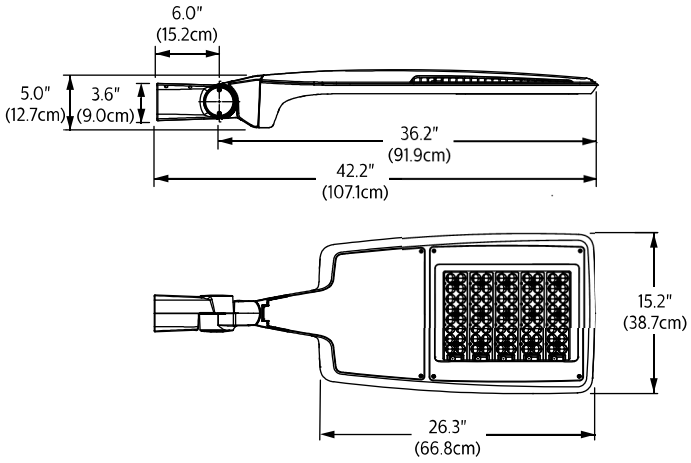
Retrofit Arm **(RAM)**

Weight: 28 Lbs (12.7 Kg) EPA: 0.28ft² (.026m²)

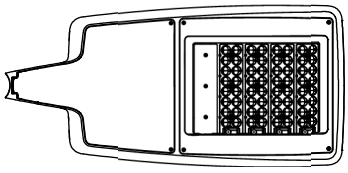


Slip fitter **(SF)**

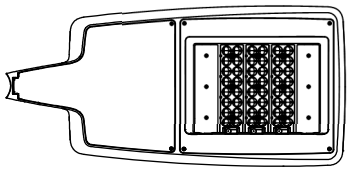
Weight: 32 Lbs (14.6 Kg) EPA: 0.38ft² (.035m²)

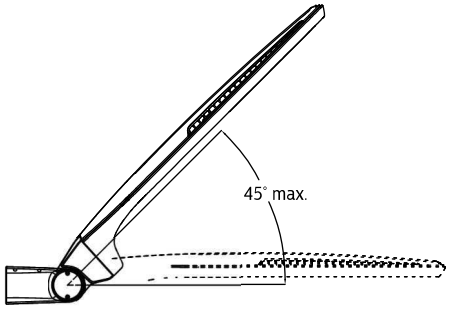


4 module configuration

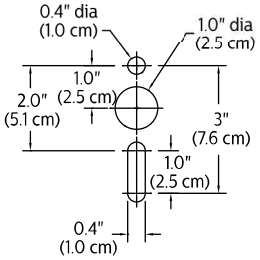


3 module configuration

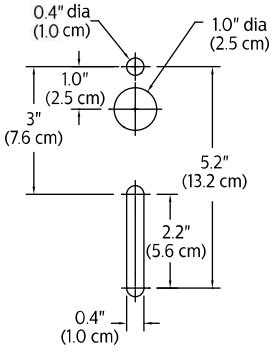




Standard Arm **(AR)** drill pattern



Retrofit arm **(RAM)** drill pattern

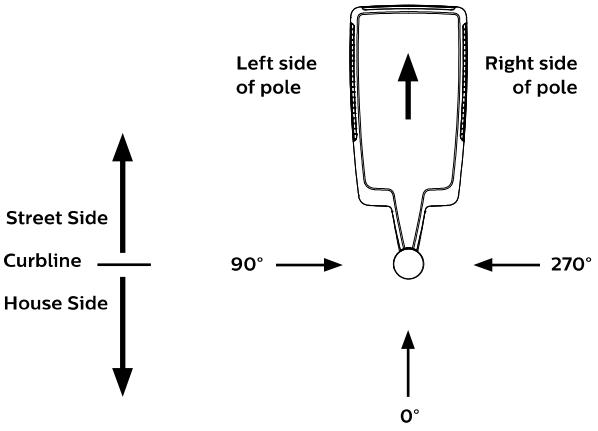


Site & Area

Optical Orientation Information

Standard Optic Position

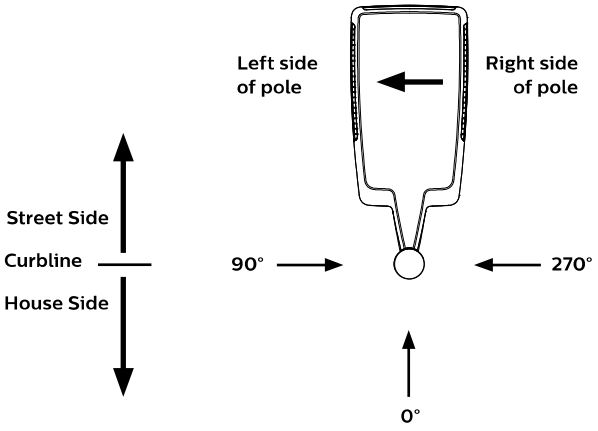
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Left (90°) Optic Position

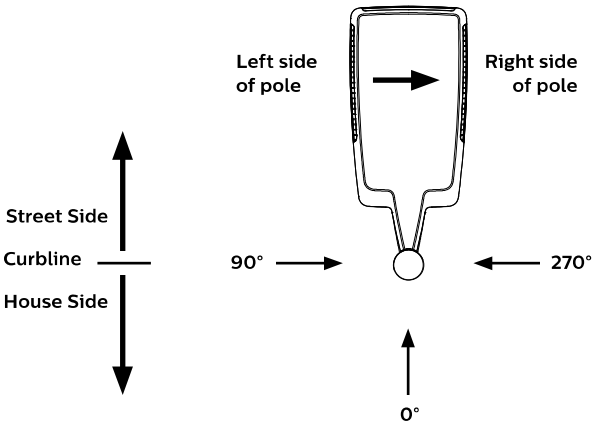
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Right (270°) Optic Position

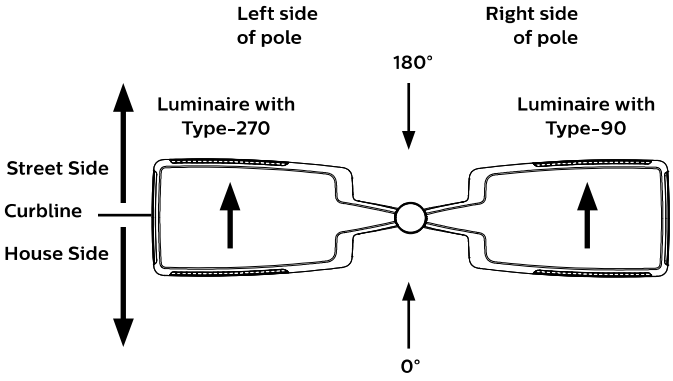
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

Twin Luminaire Assemblies with Type-90/Type-270 Rotated Optical Systems

Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Luminaires with Optic Rotated Right (270°) are installed on the LEFT Side of Pole

Luminaires with Optic Rotated Left (90°) are installed on the RIGHT Side of Pole

Note: The hand hole location will depend on the drilling configuration ordered for the pole.

P26 PureForm LED area medium

Site & Area

Specifications

Housing

Two-piece sealed enclosure with main part of the housing designed as the structural and heat sink frame enclosed by cover to give its unique form. It also includes integral arm and separate, self-retained hinged, one-piece die cast door frame. All die-cast parts made of low copper die cast aluminum alloy for a high resistance to corrosion. The sleek profile with optimized surface area allows housing to provide excellent convection heat transfer with minimum use of heat fins, giving the freedom to have a clean minimalist aesthetic design. Luminaire housing rated to IP66, tested in accordance to Section 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 3, 4 and 5 modules or 48, 64 and 80 LEDs. Module is RoHS compliant. Color temperatures: 3000K +/- 125K, 4000K, 5000K +/- 200K. Minimum CRI of 70. Also available in 2700K and Amber (590nm) with extended lead times. Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

Energy saving benefits

System efficacy up to 150 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

Type 2, 3, 4, 5, 5W, and AFR distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, 4, and AFR distributions including a dedicated BLC optic to provide the best backlight control possible for those stringent requirements around property lines. Types 2, 3, 4, AFR, and BLC when specified and used as rotated, are factory set only. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting

Standard luminaire arm mounts to 4" O.D. round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are slipfitter and wall mounting accessories.

Control options

0-10V dimming (DD): Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

Dual Circuit Control (DCC): Luminaire equipped with the ability to have two separate circuits controlling drivers and light engines independently. Permits separate switching of separate modules controlled by use of two sets of leads, one for each circuit. Not recommended to be used with other control options, motion response, or photocells.

SiteWise (SW): SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at signify.com/sitewise.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

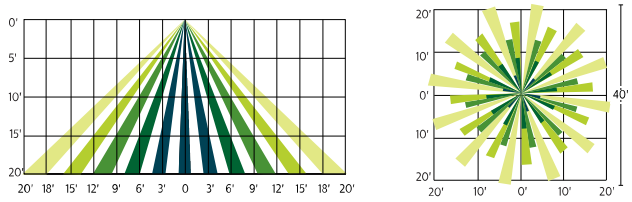
Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profile of 30% or 50% provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic diming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)
- **CE50/CE30:** Economy for 9 hours night duration (Ex., 9 PM - 6 AM)
- **CA50/CA30:** for all night (during all dark hours)

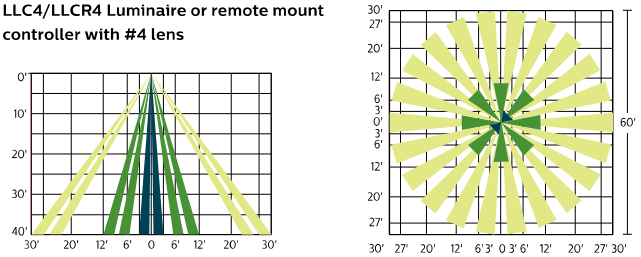
Cannot be used with other control options.

Wireless system (LLC): Optional wireless controller integral to luminaire ready to be connected to a Limelight system (sold by others). The system allows you to wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely. Based on a high-density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless controls can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution. Equipped with motion response with #3 lens (LLC3) for 8-25' mounting heights or #4 lens (LLC4) for 25- 40' mounting heights. Also available with remote pod accessory where pod is mounted separate from luminaire to pole or wall.

LLC3/LLCR3 Luminaire or remote mount controller with #3 lens



LLC4/LLCR4 Luminaire or remote mount controller with #4 lens



Specifications (cont'd)

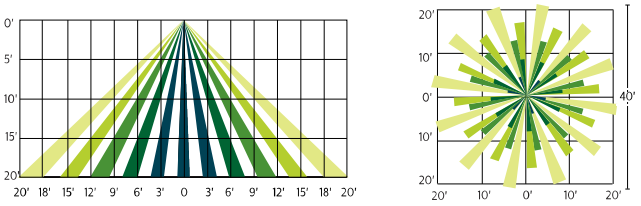
Motion response options

Bi-Level Infrared Motion Response (BL-IMRI): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. P50-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

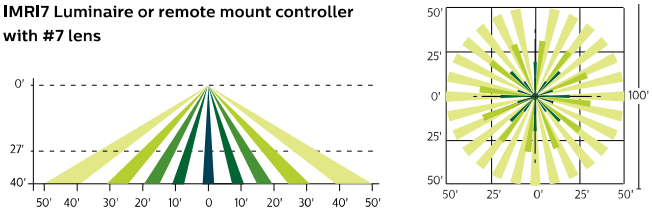
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

Infrared Motion Response Lenses (IMRI3/IMRI7): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

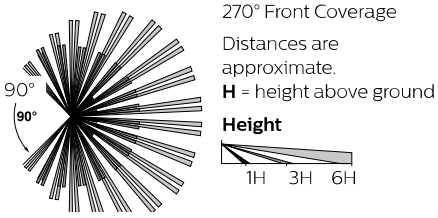
IMRI3 Luminaire or remote mount controllerwith #3 lens



IMRI7 Luminaire or remote mount controller with #7 lens



Infrared Motion Response Outboard (IMRO): Infrared Motion Response Outboard combines the benefits of both automatic profile dimming and motion response. PIR sensor features a pole mounted motion sensor per pole (order MS-A-120 or MS-A-277 separately). IMRO sensors require single voltage 120V or 277V input. If motion is detected during the time that the luminaire is operating at profile dimming mode specified, the luminaire returns to 100% power and light output. The luminaire remains on high until no motion is detected for the duration period, after which the luminaire returns back to automatic profile dimming. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes. The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor (see chart for approximate detection patterns).



Pole Details: IMRO requires that the pole include additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole (see Gardco Poles specification sheets for more information).

Electrical

Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC): Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): Each luminaire is provided as standard with surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/5kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High Test Level 10kV / 5kA. Optional 20kV is available for additional protection.

Specifications (cont'd)

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most PureForm P26 configurations are qualified under Premium DesignLights Consortium® category. Consult DLC Qualified Products list for more details.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty.
See signify.com/warranties for complete details and exclusions.

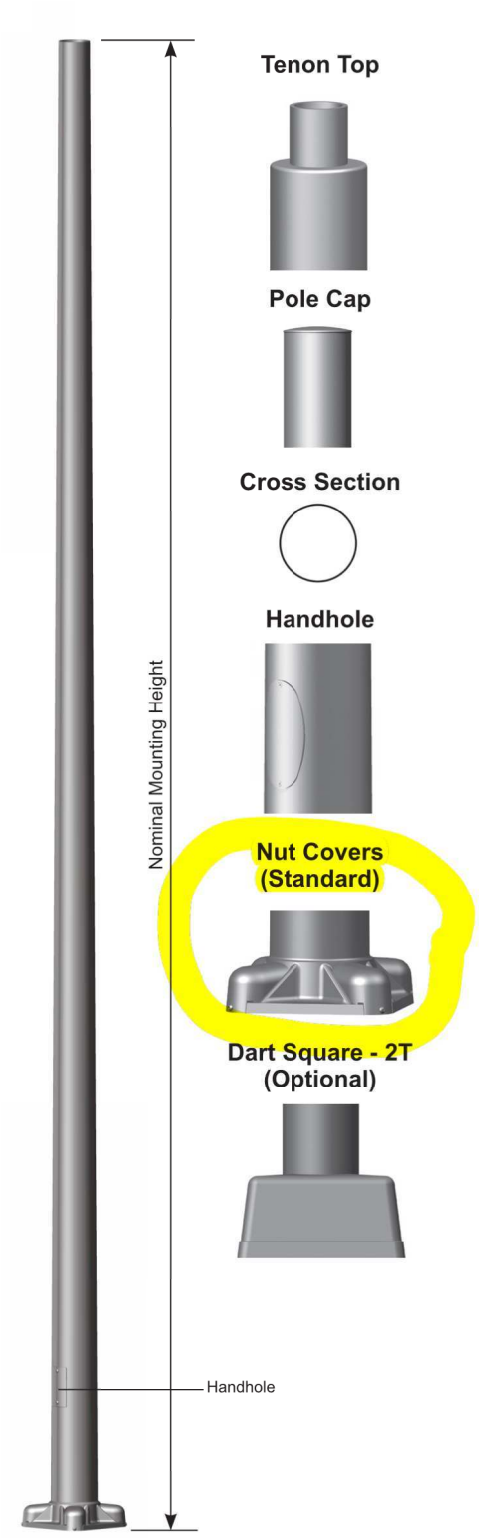
Signify, North America Corp.,
200 Franklin Square Drive,
Somerset, NJ 08873
Tel. 855-486-2216

Signify, Canada Ltd.,
281 Hillmount Rd, Markham, ON,
Canada L6C 2S3
Tel. 800-668-9008

valmont STRUCTURES

28' to 33' ROUND TAPERED ALUMINUM 4-Bolt Anchor Base

Job Name:	Client Name:
Job Location - City: State:	Created By: Date:
Product: Quote:	Customer Approval: Date:



SPECIFICATIONS

Pole - The pole shaft is spun from seamless alloy aluminum.

Pole Top - A pole top tenon is provided for top mount luminaire and/or bracket. A removable pole cap is available for poles receiving drilling patterns for side-mount luminaire arm assemblies.

Handhole - A covered handhole with hardware and grounding provision are provided.

Base Cover - Optional Dart Square-2T cast and decorative base covers available as special order.

Anchor Base - The anchor base is cast from 356 alloy aluminum. The completed assembly is heat-treated to a T6 temper. Aluminum nut covers are included with anchor base unless otherwise specified.

Anchor Bolts - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.

Finish - The standard finish for the pole assembly and components is satin brushed, natural anodize, duranodic or polyester powder applied coating in accordance with Valmont's Specifications. Additional finish options available upon request.

Design Criteria - Please reference Design Criteria Specification for appropriate design conditions.

28' to 33' ROUND TAPERED ALUMINUM 4-Bolt Anchor Base

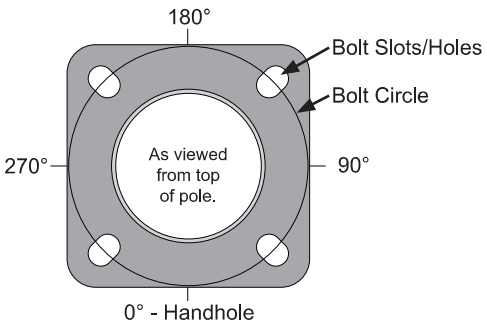
valmont STRUCTURES

Job Name:	Client Name:
Job Location - City: State:	Created By: Date:
Product: Quote:	Customer Approval: Date:

ANCHORAGE DATA

POLE		BASE PLATE				ANCHOR BOLTS		
BASE OD (IN)	WALL THK (IN)	BOLT CIRCLE DIA (IN)	BOLT CIRCLE ± (IN)	SQUARE (IN)	THK (IN)	DIA X LENGTH X HOOK (in)	PROJECTION (IN)	+/- (IN)
7.00	0.156	10.56	0.43	11.26	0.750	1.00 x 36.00 x 4.00	4.13	N/A
8.00	0.156	11.63	0.37	12.05	0.750	1.00 x 36.00 x 4.00	4.13	N/A
8.00	0.188	11.63	0.37	12.05	0.750	1.00 x 36.00 x 4.00	4.13	N/A
8.00	0.250	11.63	0.37	12.05	0.750	1.00 x 36.00 x 4.00	4.13	N/A
9.00	0.156	13.25	0.75	12.48	1.250	1.00 x 36.00 x 4.00	4.13	N/A
9.00	0.188	13.25	0.75	12.48	1.250	1.00 x 36.00 x 4.00	4.13	N/A
10.00	0.188	14.25	0.75	13.19	1.250	1.00 x 36.00 x 4.00	4.75	N/A
10.00	0.250	14.50	0.50	14.00	1.250	1.25 x 42.00 x 6.00	5.25	N/A

Anchor Base Detail



LOAD AND DIMENSIONAL DATA

DESIGN INFORMATION										POLE DIMENSIONS					
	70 MPH w/1.3 GUST		80 MPH w/1.3 GUST		90 MPH w/1.3 GUST		100 MPH w/1.3 GUST		110 MPH w/1.3 GUST						
NOMINAL MOUNTING HEIGHT	MAX EPA[1] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[1] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[1] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[1] (SQ FT)	MAX WEIGHT (LBS)	MAX EPA[1] (SQ FT)	MAX WEIGHT (LBS)	POLE HEIGHT	BASE OD (IN)	TOP OD (IN)	WALL THK (IN)	STRUCTURE WEIGHT[2] (LBS)	MODEL NUMBER
28'-0"	10.5	150	7.1	150	5.0	150	3.7	150	2.8	150	27'-8"	7.00	4.00	0.156	92	+270840705T4
	15.5	150	11.1	150	8.3	150	6.5	150	5.1	150	27'-8"	8.00	4.50	0.156	105	270845805T4
	19.6	150	14.3	150	10.8	150	8.5	150	6.8	150	27'-8"	8.00	4.50	0.188	124	270845806T4
	27.4	150	20.2	150	15.5	150	12.3	150	9.9	150	27'-8"	8.00	4.50	0.250	161	270845808T4
	21.4	150	15.7	150	12.0	150	9.4	150	7.5	150	27'-8"	9.00	4.50	0.156	116	270845905T4
	26.8	150	19.8	150	15.2	150	12.0	150	9.7	150	27'-8"	9.00	4.50	0.188	137	270845906T4
	34.5	200	26.0	200	20.2	200	16.0	200	12.9	200	27'-8"	10.00	6.00	0.188	161	270860106T4
	46.6	300	35.3	300	27.5	300	22.0	300	17.8	300	27'-8"	10.00	6.00	0.250	217	270860108T4
30'-0"	8.8	150	5.7	150	3.8	150	2.7	150	2.0	150	29'-8"	7.00	4.00	0.156	99	+290840705T4
	13.3	150	9.3	150	6.9	150	5.3	150	4.1	150	29'-8"	8.00	4.50	0.156	113	+290845805T4
	17.1	150	12.2	150	9.2	150	7.1	150	5.6	150	29'-8"	8.00	4.50	0.188	134	290845806T4
	18.8	150	13.6	150	10.3	150	8.0	150	6.3	150	29'-8"	9.00	4.50	0.156	127	+290845905T4
	23.7	150	17.4	150	13.3	150	10.4	150	8.3	150	29'-8"	9.00	4.50	0.188	149	290845906T4
	24.2	150	17.7	150	13.6	150	10.7	150	8.6	150	29'-8"	8.00	4.50	0.250	174	290845808T4
	30.9	200	23.2	200	17.9	200	14.1	200	11.3	200	29'-8"	10.00	6.00	0.188	175	290860106T4
	41.9	300	31.7	300	24.6	300	19.6	300	15.8	300	29'-8"	10.00	6.00	0.250	235	290860108T4
33'-0"	10.4	150	7.1	150	5.1	150	3.8	150	2.9	150	32'-8"	8.00	4.50	0.156	124	+320845805T4
	13.8	150	9.7	150	7.1	150	5.5	150	4.2	150	32'-8"	8.00	4.50	0.188	147	320845806T4
	15.3	150	10.9	150	8.1	150	6.2	150	4.8	150	32'-8"	9.00	4.50	0.156	138	+320845905T4
	19.7	150	14.2	150	10.7	150	8.4	150	6.6	150	32'-8"	9.00	4.50	0.188	163	320845906T4
	20.1	150	14.5	150	11.0	150	8.6	150	6.8	150	32'-8"	8.00	4.50	0.250	190	320845808T4
	26.0	200	19.4	200	14.9	200	11.7	200	9.2	200	32'-8"	10.00	6.00	0.188	191	320860106T4
	35.8	300	26.9	300	20.8	300	16.4	300	13.1	300	32'-8"	10.00	6.00	0.250	257	320860108T4

1. EPA represents the Effective Projected Area of each luminaire. Designs are limited to top mount or side-mount luminaires. Variations from sizes above are available upon inquiry at the factory. Satisfactory performance of poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.
2. Structure weight is a nominal value which includes the pole shaft and base plate.
   + Pole includes factory installed vibration damper.

PRODUCT ORDERING CODES

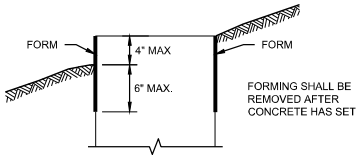
Standard pattern

CROSS SECTION	MODEL NUMBER	FIXTURE MOUNTING	COLOR		OPTIONS
R		--		_	
R = Round	+270840705T4 270845805T4 270845806T4 270845808T4 270845905T4 270845906T4 270860106T4 270860108T4 +290840705T4 +290845805T4 290845806T4 +290845905T4 290845906T4 290845808T4 290860106T4 290860108T4 +320845805T4 320845806T4 +320845905T4 320845906T4 320845808T4 320860106T4 320860108T4	**Drill Mounting** D1 = 1 Luminaire D2 = 2 @ 180° D3 = 3 @ 120° D4 = 4 @ 90° D5 = 2 @ 90° D6 = 3 @ 90° **Tenon Mounting** P2 = 2.38" OD x 4.00" P3 = 3.50" OD x 6.00" P4 = 4.00" OD x 6.00" P5 = 2.88" OD x 4.00" P7 = 2.38" OD x 5.00" PQ = 2.38" OD x 12.00" PD = 3.00" OD x 3.00" -- = Plain Top P9 = Other Tenon (Contact Factory)	**Polyester Powder** DWH = White DSS = Sandstone BR = Burgundy HG = Hunter Green DNA = Natural Aluminum DCG = Charcoal Gray DMB = Medium Bronze SBN = Sanded Brown DNB = New Dark Bronze DDB = Dark Bronze SBK = Sanded Black DBL = Black DSB = Steel Blue DTG = Dark Green DBR = Red SC = Special Color (Contact Factory)	**Anodized** 204 = Clear Natural 311 = Light Bronze* 312 = Medium Bronze* 313 = Dark Bronze* 335 = Black* *Duranodic Anodize **Brushed** SBF = Satin Brushed	See Accessories at valmontstructures.com (Please Specify with Code)

SPC7540 08/12 valmontstructures.com carries the most current spec information and supersedes these guidelines.

SDD 9C2 Concrete Bases, Types 1, 2, 5 & 6

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWINGSHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

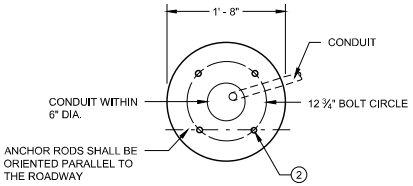
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

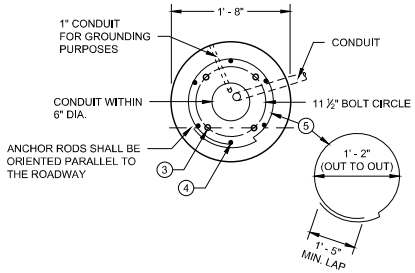
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

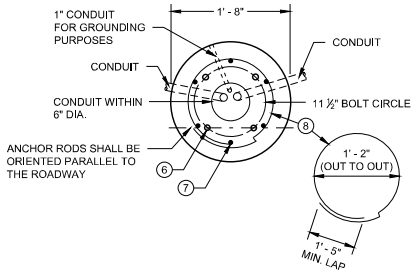
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

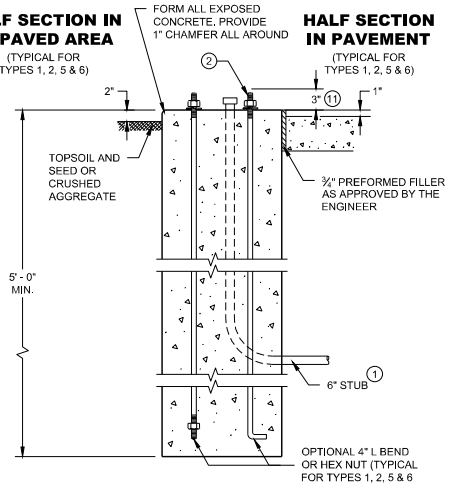




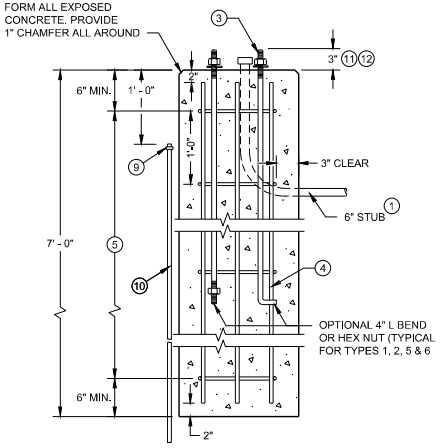


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

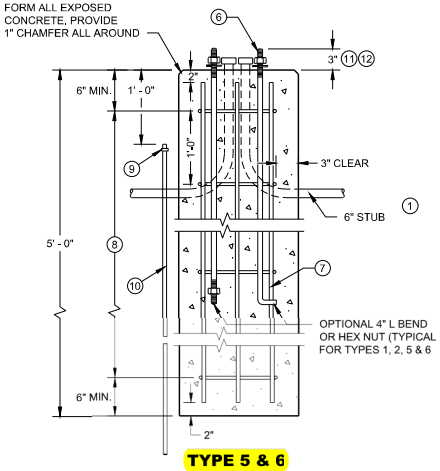
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

1. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
2. (4) 1" DIA. X 3' - 6" ANCHOR RODS.
3. (4) 1" DIA. X 5' - 0" ANCHOR RODS.
4. (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
5. (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
6. (4) 1" DIA. X 3' - 6" ANCHOR RODS.
7. (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
8. (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.
9. EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR
10. ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
11. ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
12. FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA

SDD 09C02 - 09

SDD 09C02 - 09

Version 9	**Standard Detail Drawing 9C2**	*May 2019*
	Concrete Bases Types 1, 2, 5 and 6	

References:

NONE

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT
652.0100 - 0199	Conduit Rigid Metallic (size)	LF
652.0200 - 0399	Conduit Rigid Nonmetallic (schedule)(size)	LF
654.0101	Concrete Bases Type 1	EACH
654.0102	Concrete Bases Type 2	EACH
654.0105	Concrete Bases Type 5	EACH
654.0106	Concrete Bases Type 6	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
NONE	

Other SDDs associated with this drawing:

SDD 9B2	Conduit Under Paved Highways

Design Notes:

Type 1 - for use with up to 15' standards and square 15" pedestal bases.

Type 2 - for use with pole mounting configurations Type 2, 3, and 4.

Type 5 and 6 - for use with pole mounting configurations Type 5 - 6.

Contact Person:

Ahmet Demirbilek (414) 220-6801

Waukesha Water Utility
115 Delafield Street P.O. Box 1648
Waukesha, WI 53187-1648 USA
P: (262) 521-5272 F: (262) 521-5399

Great Water Alliance
Great Lakes Water Supply Program
CP6 - Return Flow Pipeline, 18-in Sanitary Sewer and Outfall Facilities

Project No.: 199990-CP6
File No.: 80.1730

S.J. Louis Construction, Inc.
1351 Broadway Street W PO Box 459
Rockville, MN 56369 USA

WORK CHANGE DIRECTIVE

Work Change Directive No.:	006 Rev.: 0.00
Issue Date:	Tuesday, August 31, 2021
Subject:	Reaeration Building Beam Material
Reference Drawing / Specification:	S802 and RFP No. 002
Workflow Status:	Approved

WORK CHANGE DIRECTIVE TO ACKNOWLEDGE CHANGE TO THE TERMS OF THE CONTRACT:

Work Change Directive Category: **4 - Contractor Initiated**

Work Change Directive Sub-Category: **B - Substitutions and Contractor Initiated Change**

Purpose for this Work Change Directive:

The purpose of Work Change Directive No. 006 is to change the Reaeration Building beam material from aluminum to Type 304 stainless steel. Aluminum beams in the sizes specified in the Contract Documents were not readily available to the Contractor.

Description of Change:

Modifications to the Contract include all labor, material, and equipment cost to: Remove aluminum beams (AL C8x5.62 and AL WF12x18.3) and supports specified to support aluminum walkway above Influent and Effluent Chambers; Add Type 304 stainless steel beams (W12x16 and W16x31) and supports to support aluminum walkway above Influent and Effluent Chambers. The attached drawing shows the acceptable beam sizes, W12x16 for cross beams, and W16x31 for main beams. Pricing submitted by the Contractor is also attached. Request for Proposal No. 002 has been linked for reference.

The acceptance of these changes results in a net increase of $35,958.75 to the Contract Price.

There is no anticipated change in Contract Time.

Item No.	Description	Proposed Qty.	Unit Price	Total	Days
1	Type 304 Stainless Steel Support Beams	1.00 LS	$35,958.75	$35,958.75	0.00
				TOTAL: $35,958.75	

Item No.	Description	Proposed Qty.	Unit Price	Total	Days
1	**Type 304 Stainless Steel Support Beams**	**1.00 LS**	**$35,958.75**	**$35,958.75**	**0.00**
				TOTAL: $35,958.75	

Method of determining change in Contract Price		
Lump Sum	Original Contract Price:	$59,209,250.00
	Previous Approved Changes to Contract Price:	$-9,699,523.00
	Proposed Change to Contract Price:	$35,958.75

Per the Standard General Conditions of the Construction Contract, this Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by this Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding Change of Contract Price.

Workflow Approvals:

Submit		Matt Hayes	Tuesday, August 31, 2021
1	Prepared By:	Jeff Champion	Tuesday, August 31, 2021
2	Recommended By:	Catharine (Katie) Richardson	Wednesday, September 01, 2021
3	Accepted By:	Frank Wizner	Monday, September 27, 2021
4	Approved By:	Christopher (Chris) Walter	Wednesday, October 06, 2021

Potential Cost Impact (PCI)
Proposal Request

PROJECT NAME: Waukesha Aeration
5207 W Oakwood Rd.
Franklin Wisconsin

PROJECT NUMBER: 20057
DATE: 8/12/2021
PCI #: PCI #1 - 2

To: ***Trevor Scaife***
SJ Louis

Email: TrevorS@sjlouis.com
Phone: 320-247-7206

PRICING FOR PCI
DUE BY: 8-12-2021

Description Assoicated costs for the changing of the beams for the catwalk in the building. This is option 2 which is the provide a T304 Stainless Steel beam per the size requirements from Del Lange. The Main beams are W16 x W31 while the cross beams are W12 x W16 which matches the original design sizes... just a different material.

Self-Performed Work:

	Description	Quantity	Labor			Materials	Equipment		Totals
			Total Hours	Hourly Rate	Total Labor	Total	Type	Total	
1									0
2									0
3									0
4									0
5									0
								Subtotal	0
								Overhead Profit & Markup (_____)	0
								Total Contractor cost with markup	0

Sub-Tier Subcontractors:

	Description	Quantity	Total Hours	Hourly Rate	Total Labor	Material	Equipment Type	Equip Total	
1	Cardinal Fabrication - Add T304 Stainless Beam	1				$ 38,000.00			$ 38,000.00
2	Cardinal Fabrication - Remove Aluminum Support	1				$ (4,550.00)			$ (4,550.00)
3									0
								Subtotal	$ 33,450.00
								Subcontractor markup 7.50%	$ 2,508.75
								Total Subcontractor cost with markup	$ 35,958.75
								Total	$ 35,958.75

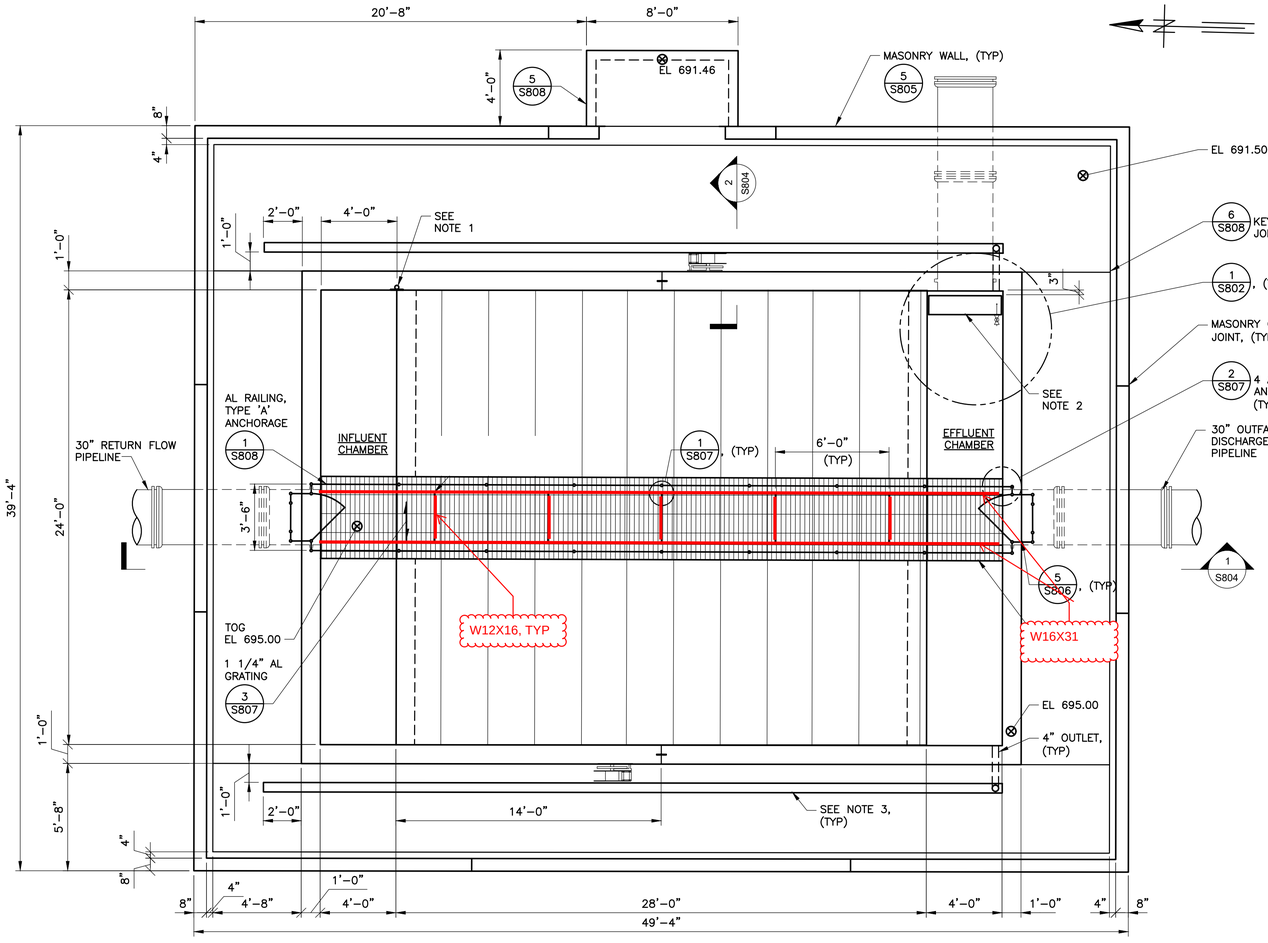
Schedule Impact: 40 Days: Working

Please review and respond NO LATER THAN the date noted above with any and all changes (add, deduct, or no change) to your contract in terms of dollars and/or schedule impact caused by the above modification. It is recommended to use this form when providing your cost, if not please reference PCI Number above to identify this request. Note: if no response is received within the allotted time provided, Miron will proceed with pricing.

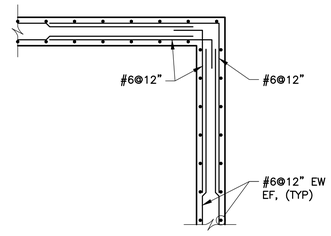
Additional Comments:
This includes the entire I beam system to created the catwalk. It is a price that reflects the removal of old material and the input of the new material.

J.H. Hassinger
Hunter Milner

cc: File
Jobsite



PLAN
SCALE: 1/4" = 1'-0"



1 CORNER REINFORCING DETAIL
SCALE: 3/8"=1'-0"

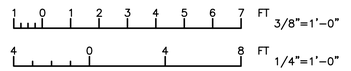
MEMBER SIZES ARE PROVIDED FOR PRICING AND AVAILABLITY COMPARISON BETWEEN GALVANIZED STEEL AND TYPE 304 STAINLESS STEEL.

STAINLESS STEEL MEMBERS SHALL BE THE SAME SIZE AS CARBON STEEL SIZES INDICATED. STAINLESS STEEL MEMBERS SHALL BE TYPE 304.

STEEL MEMBERS SHALL CONFORM TO ASTM A992 AND SHALL BE HOT DIP GALVANIZED

NOTES:

1. THERN DAVIT CRANE 5PA5, WALL MOUNTED WITH 1/2" TYPE 316 SST POWER-STUD SD/6 WEDGE ANCHORS, 4" MIN EMBEDMENT. TOP OF WALL BASE PLATE SHALL BE 1'-0" FROM TOP OF WALL.
2. COLLECTION TROUGH; 1/8" TYPE 316 SST, 1'x3'-10"x2'-0" TALL, OPEN TOP, WELDED JOINTS. FASTEN TROUGH TO SUPPORTS WITH TWO 3/8" TYPE 316 SST BOLTS, EACH SUPPORT.
3. ZURN Z806 6" WIDE REVEAL FIBER REINFORCED POLYMER TRENCH DRAIN SYSTEM. TRENCH SHALL BE 3.5" DEEP AT NORTH END AND SHALL SLOPE SOUTH AT 0.75%.



NO.	DATE	APPD	REVISION

Waukesha Water Utility
SERVING WAUKESHA SINCE 1898

GREELEY AND HANSEN
741 N. GRAND AVE, SUITE 308
WAUKESHA, WI 53186

GREAT WATER ALLIANCE™

CONTRACT PACKAGE 6: RETURN FLOW PIPELINE, 18-INCH SANITARY SEWER, AND OUTFALL FACILITIES
REAERATION BUILDING AND OUTFALL
REAERATION BUILDING PLAN AND DETAIL

APPROVED

SEAL AFFIXED
MONTH / DAY / YEAR

MARCH 2020

JOB NO.: 15310			
DESGN	DRL	CHCK	CA
APPRV	DRL	DRWN	DLM
SCALE:	AS SHOWN		

DRAWING NUMBER

S802

SHEET 255 OF 272 | REV 0

ch2m: