Actuarial Zone Certification Report

Carpenters Local No. 491 Pension Plan

For the Plan Year July 1, 2020 through June 30, 2021

Bolton

Submitted by:

Timothy D. Boles, ASA, EA
Actuary
443.573.3938
tboles@boltonusa.com

Robert W. Niehaus, ASA, EA
Actuary
443.773.2506
rniehaus@boltonusa.com

Table of Contents

Summary of Findings

Determination

We have determined that the Carpenters Local No. 491 Pension Plan is in neither Critical nor Endangered Status for the plan year beginning July 1, 2020 based on the following findings:

(A) The Plan is not in Critical Status, nor will it be in Critical Status for any of the 5 succeeding plan years.

(B) The funded percentage is in excess of 80 percent.

(C) The Plan is not projected to have a Funding Standard Account (FSA) accumulated funding deficiency for the current year or any of the six (6) succeeding plan years. No amortization period extensions have been requested, and therefore, none have been reflected in our analysis.

Sincerely,

Timothy D. Boles

Timothy D. Boles, ASA, EA

Robert Niehaus

Robert W. Niehaus, ASA, EA

Background

For plan years beginning after December 31, 2007, multiemployer defined benefit pension plans must certify their funding status pursuant to the Pension Protection Act of 2006 (PPA). The Multiemployer Pension Reform Act of 2014 (MPRA) modified the funding status criteria for plan years beginning after December 31, 2014 as described below:

Critical Status

A multiemployer plan is in Critical Status for a plan year if, as determined by the plan actuary, the plan is described in one or more of the following subparagraphs as of the beginning of the plan year:

(A) The funded percentage of the plan is less than 65 percent, and the plan is projected to be unable to pay benefits within seven years. The funded percentage is the ratio of the actuarial value of assets to the present value of accumulated plan benefits.

(B) The plan has a FSA accumulated funding deficiency for the current plan year, not taking into account any extension of amortization periods, or the plan is projected to have an FSA accumulated funding deficiency for any of the 3 succeeding plan years (4 succeeding plan years if the funded percentage of the plan is 65 percent or less), not taking into account any extension of amortization periods.

(C) (i) The plan's normal cost for the current plan year, plus interest for the current plan year on the amount of unfunded benefit liabilities under the plan as of the last day of the preceding plan year, exceeds the present value of the reasonably anticipated employer and employee contributions for the current plan year;

(ii) The present value, as of the beginning of the current plan year, of nonforfeitable benefits of inactive participants is greater than the present value of nonforfeitable benefits of active participants, and

(iii) The plan has an FSA accumulated funding deficiency for the current plan year, or is projected to have such a deficiency for any of the 4 succeeding plan years, not taking into account any extension of amortization periods.

(D) The plan is projected to be unable to pay benefits within five years.

Beginning with the first plan year commencing in 2015, a multiemployer plan may elect to be in Critical Status if the plan is projected to be in Critical Status in any of the 5 succeeding plan years. If the plan does not elect to be in Critical Status certification of the projection to be in Critical Status within 5 succeeding plan years is still required.

Background

Critical and Declining Status

A multiemployer plan is in Critical and Declining Status if the plan meets the criteria for Critical Status and is projected to be unable to pay benefits during the current plan year or any of the 14 succeeding plan years. The 14 year period is extended to 19 if either:

(A) The ratio of Inactive to Active participants exceeds 2 to 1, or

(B) The plan's funding percentage is less than 80%.

Endangered Status

A multiemployer plan is in Endangered Status for a plan year if, as determined by the plan actuary, the plan is not in Critical Status for the plan year and, as of the beginning of the plan year, either:

(A) The plan's funding percentage for such plan year is less than 80%, or

(B) The plan has an FSA accumulated funding deficiency for such plan year, or is projected to have such an accumulated funding deficiency for any of the 6 succeeding plan years, taking into account any extension of amortization periods.

A plan is in Seriously Endangered Status for a plan year if the plan is described in both subparagraphs (A) and (B).

A multiemployer plan is not required to enter into Endangered Status if:

(A) The plan is not projected to be in Endangered Status as of the end of the tenth plan year following the plan year of certification, and

(B) The plan was in neither Critical nor Endangered Status for the plan year immediately preceding the year of certification.

Neither Critical Nor Endangered Status

A multiemployer plan is neither Critical nor Endangered Status if it does not fall into any of the categories described above.

Estimated Change in Net Assets Available

Income Statement for the Plan Year Ending June 30, 2020

Beginning of the Year		
Net Assets Available for Benefits as of June 30, 2019	$	47,841,565
Plus: Prior Year's Adjustments	$	-
Net Assets Reflecting Adjustments	**$**	**47,841,565**

Receipts		
Contributions	$	2,330,109
Net Investment Yield	$	2,479,467
Total Estimated Receipts	**$**	**4,809,576**

Disbursements		
Benefits	$	1,328,951
Administrative Expenses	$	327,164
Total Estimated Disbursements	**$**	**1,656,115**

End of the Year		
Net Change in Assets	$	3,153,461
Estimated Net Assets Available for Benefits as of June 30, 2020	**$**	**50,995,026**

Estimated Investment Return (Market Value)

The table below shows the investment yield results at market value for the year ended June 30, 2020. The method used in determining this figure is to divide the investment yield by the investment base. The investment base is the beginning-of-the-year balance plus ½ of the net capital additions (consisting of employer contributions less benefit payments and administrative expenses).

Development of Investment Return		
[1] Opening Balance	$	47,841,565
[2] Estimated Closing Balance	$	50,995,026
[3] Estimated Net Capital Additions	$	673,994
[4] Calculation Base ([1] + 1/2 x [3])	$	48,178,562
[5] Estimated Investment Yield ($)	$	2,479,467
[6] Estimated Investment Yield (%)		5.15%

Asset Valuation Method

The actuarial value of assets is determined using the smoothed market value in accordance with Revenue Procedure 2000-40 and described as follows:

(A) An expected asset value is determined. This value is equal to the market value of assets on the preceding valuation date multiplied by the valuation rate of interest plus the excess of contributions over disbursements during the preceding plan year with interest at the valuation rate from the middle to the end of the year.

(B) If there is an excess of market value over expected value, the difference is a gain. If the expected value is greater than the market value, a loss is determined.

(C) The preliminary actuarial value of assets is equal to the market value of assets, with gains subtracted or losses added as follows:

- (i) 4/5 of the prior year's gain or loss
- (ii) 3/5 of the second preceding year's gain or loss
- (iii) 2/5 of the third preceding year's gain or loss
- (iv) 1/5 of the fourth preceding year's gain or loss

(D) If the preliminary actuarial value of assets is more than 20% above the market value, it is adjusted downward to the value 20% above market value; if more than 20% below market value, it is adjusted upward to the value 20% below market value.

Development of Estimated Actuarial Value of Assets

The Smoothed Market Value Method of Asset Valuation is determined as follows as of July 1, 2020.

Development of Actuarial Value of Assets		
[1] Market Value of Assets as of July 1, 2019	$	47,841,565
[2] Estimated Contributions during the year	$	2,330,109
[3] Estimated Disbursements during the year	$	1,656,115
[5] Interest to July 1, 2020	$	2,890,714
[6] Expected Value as of July 1, 2020 ([1] + [2] - [3] + [5])	$	51,406,273
[7] Estimated Market Value of Assets as of June, 30, 2020	$	50,995,026
[8] 2020 Gain/(Loss) ([7] - [6])	$	(411,247)
[9] July 1, 2020 Write-Ups:		
4/5 of 2020 Gain/(Loss)	$	(328,998)
3/5 of 2019 Gain/(Loss)	$	394,126
2/5 of 2018 Gain/(Loss)	$	222,822
1/5 of 2017 Gain/(Loss)	$	418,839
Total	**$**	**706,789**
[10] Estimated Actuarial Value of Assets as of July 1, 2020 ([7] - [9])	$	50,288,237
[11] Minimum Estimated Actuarial Value of Assets (0.8 x [7])	$	40,796,021
[12] Maximum Estimated Actuarial Value of Assets (1.2 x [7])	$	61,194,031
[13] Final Estimated Actuarial Value of Assets	**$**	**50,288,237**

Actuarial Funding Method

The unit credit cost method is used in establishing the unit credit normal cost and present value of accumulated plan benefits.

The unit credit method assigns the normal costs of the plan to the years in which the benefits accrue.

Unit Credit Normal Cost

In this method an active participant's cost for pension benefits as well as auxiliary benefits earned during the year are calculated. This annual cost is called the unit credit normal cost.

Present Value of Accumulated Plan Benefits

The following table shows a development of the estimated present value of accumulated plan benefits as of July 1, 2020. In general, this term means the present worth, expressed in a single sum, of the benefits yet to be paid, for each of the three major classes of plan participants:

(1) Those already receiving pension benefits;

(2) Those who have been separated from active service, are vested in their accrued benefits, are still living, and are not yet receiving pension benefits; and

(3) Those who are in active service in employment covered by the plan.

Funded Percentage

Also shown in the following table is the estimated funded percentage as of July 1, 2020. The funded percentage is the ratio of the actuarial value of assets to the present value of accumulated plan benefits.

Development of Funded Percentage		
[1] PVAB as of July 1, 2019	$	35,724,062
[2] Estimated Unit Credit Normal Cost	$	1,117,184
[3] Estimated Benefits Paid	$	1,328,951
[4] Interest to July 1, 2020	$	2,170,606
[5] Changes in Liability due to Assumption Change	$	-
[6] Changes in Liability due to Plan Amendment	$	-
[7] Estimated PVAB as of July 1, 2020 ([1] + [2] - [3] + [4] + [5] + [6])	$	37,682,901
[8] Estimated Actuarial Value of Assets	$	50,288,237
[9] Estimated Funded Percentage as of July 1, 2020 ([8] / [7])		133.45%

Funding Standard Account

The Funding Standard Account (FSA) compares:

- The sum of ERISA's minimum requirements since the effective date of ERISA, against,

- The sum of all plan contributions since the effective date of ERISA,

both adjusted for interest.

The minimum required contribution under ERISA consists primarily of two major components. These are:

- The Normal Cost, which is the addition to the plan's assets to cover the growth in plan liabilities due to additional benefits accrued by active participants during the year based on the plan's valuation cost method, and

- Amortization Payments, which are annual payments to cover the difference between existing liabilities and the existing assets.

Each year the actuary measures changes in liabilities from plan amendments, investment and other gains and losses, and other sources, and sets up new schedules with annual amortization payments.

The FSA Credit Balance is used to determine if the plan is meeting the minimum funding requirements of ERISA.

- If contributions have been higher than the minimum, the plan has a Credit Balance, and if current contributions are higher than the current minimum requirements, the Credit Balance is growing.

- If current contributions are less than the minimum, the Credit Balance will decline.

As of June 30, 2020, the estimated Credit Balance is $14,460,392.

The following is a projection of the FSA through the plan year ending June 30, 2050.

Funding Standard Account Projection

Plan Year Beginning 7/1	Beginning Funded Percentage[1]	Beginning Credit Balance	Normal Cost	Net Amortization Charge/(Credit)	Anticipated Contribution	Interest	Ending Credit Balance
2020	129.4%	$ 14,460,392	$ 894,680	$ 552,335	$ 794,029	$ 804,623	$ 14,612,029
2021	133.5%	14,612,029	901,165	535,890	1,790,406	844,211	15,809,591
2022	133.8%	15,809,591	907,780	518,197	2,330,109	932,920	17,646,643
2023	135.7%	17,646,643	914,527	456,605	2,330,109	1,046,434	19,652,054
2024	138.7%	19,652,054	921,409	351,323	2,330,109	1,172,663	21,882,094
2025	141.4%	21,882,094	928,429	286,378	2,330,109	1,309,940	24,307,336
2026	144.6%	24,307,336	935,589	191,628	2,330,109	1,460,710	26,970,938
2027	148.0%	26,970,938	942,892	143,517	2,330,109	1,622,975	29,837,613
2028	151.6%	29,837,613	950,342	131,293	2,330,109	1,795,262	32,881,349
2029	155.5%	32,881,349	957,941	213,263	2,330,109	1,972,512	36,012,766
2030	159.5%	36,012,766	965,691	130,372	2,330,109	2,164,905	39,411,717
2031	163.8%	39,411,717	973,596	130,372	2,330,109	2,368,368	43,006,226
2032	168.3%	43,006,226	981,660	130,372	2,330,109	2,583,555	46,807,858
2033	173.1%	46,807,858	989,885	130,372	2,330,109	2,811,159	50,828,869
2034	178.2%	50,828,869	998,274	130,375	2,330,109	3,051,916	55,082,245
2035	183.5%	55,082,245	1,006,831	90,732	2,330,109	3,308,984	59,623,775
2036	189.1%	59,623,775	1,015,559	7,696	2,330,109	3,585,934	64,516,563
2037	194.9%	64,516,563	1,024,462	0	2,330,109	3,879,429	69,701,639
2038	200.9%	69,701,639	1,033,543	0	2,330,109	4,189,989	75,188,194
2039	207.0%	75,188,194	1,042,806	0	2,330,109	4,518,627	80,994,124
2040	213.3%	80,994,124	1,052,254	0	2,330,109	4,866,415	87,138,394
2041	219.8%	87,138,394	1,061,891	0	2,330,109	5,234,493	93,641,105
2042	226.3%	93,641,105	1,071,720	0	2,330,109	5,624,066	100,523,560
2043	232.8%	100,523,560	1,081,746	0	2,330,109	6,036,412	107,808,335
2044	239.2%	107,808,335	1,091,973	0	2,330,109	6,472,885	115,519,356
2045	245.6%	115,519,356	1,102,404	0	2,330,109	6,934,920	123,681,981
2046	251.8%	123,681,981	1,113,044	0	2,330,109	7,424,039	132,323,085
2047	257.8%	132,323,085	1,123,897	0	2,330,109	7,941,855	141,471,152
2048	263.7%	141,471,152	1,134,967	0	2,330,109	8,490,074	151,156,368
2049	269.4%	151,156,368	1,146,258	0	2,330,109	9,070,510	161,410,729

[1] This plan uses the Entry-Age-Normal funding method, but this funded percentage projection uses the Unit Credit funding method, per PPA rules.

Actuarial Methods and Assumptions

Method of Funding

The Entry-Age-Normal (level dollar) Cost Method has been used to develop the funding requirements presented. Under this method, the normal cost for each participant is the level contribution which would have been required from the participant's age at original entry into the employer's service in order to fund the participant's benefit at retirement age. The unfunded actuarial liability represents the reserve which would have been on hand if the normal cost had been paid for all prior years (as if the plan had always been in effect), less plan assets. Actuarial gains or losses resulting from plan experience which differs from the actuarial assumptions, plan amendments or changes in the actuarial assumptions are considered to be new pieces of actuarial liability and must be funded over no more than fifteen years.

Interest Rate

6.00% per year compounded annually.

Non-Disabled Mortality

RP-2000 Combined Healthy with Blue Collar Adjustment set forward three years and projected generationally using 75% of Scale AA.

Disabled Mortality

RP-2000 Combined Healthy with Blue Collar Adjustment set forward nine years and projected generationally using 75% of Scale AA.

Expenses

The prior year's administrative expenses increased by 2% are assumed as a mid-year number for the current year. That mid-year number is then discounted to the beginning of the year and included in the normal cost.

Expenses are then assumed to increase 2% annually.

Withdrawal

Turnover Table T-6 of the Actuaries Pension Handbook offset by 1951 GAM Male. Select turnover rates of 25%, 25%, and 15% are used for the first three years of service, respectively.

Disability

U.A.W. Disability Table

Actuarial Methods and Assumptions

Retirement Rates

Actives:

Age	Rate
60	5%
61	5%
62	10%
63	20%
64	20%
65	20%
66	10%
67	10%
68	10%
69	20%
70	100%

Terminated Vested: Age 65.

Future Service Credit

Current rate of service for active participants.

Future Vesting Credit

Full year for active participants.

Percent Married

100% of the population is assumed to be married. Female spouse 3 years younger.

Form of Payment

All participants not currently in pay status are assumed to take a single life annuity at retirement.

Actuarial Certification of Funding Status

The Pension Protection Act of 2006 (PPA), as amended by the Multiemployer Pension Reform Act of 2014 (MPRA), requires an actuarial certification of whether or not a multiemployer Plan is in Endangered Status, and whether or not a multiemployer Plan is or will be in Critical Status or Critical and Declining Status, for each plan year. This certification must be completed by the 90th day of the plan year and must be provided to the Secretary of the Treasury and to the Plan sponsor. If the certification is with respect to a plan year that is within the Plan's funding improvement period or rehabilitation period arising from a prior certification of Endangered, Critical or Critical and Declining Status, the actuary must also certify whether or not the Plan is making scheduled progress in meeting the requirements of its funding improvement or rehabilitation Plan. Failure of the Plan's actuary to certify the status of the Plan is treated as a failure to file the annual report under section 502(c)(2) of the Employee Retirement Income Security Act of 1974 (ERISA). Thus, a penalty of up to $1,100 per day may apply.

The following is such actuarial certification for the plan year beginning July 1, 2020, a copy of which was mailed to the Secretary of the Treasury before the 90th day of the plan year.

Bolton
Employee Benefits, Actuarial & Investment Consulting

September 16, 2020

Internal Revenue Service
Employee Plans Compliance Unit
Group 7602 (TEGE:EP:EPCU)
Room 1700, 17th Floor
230 South Dearborn Street
Chicago, Illinois 60604

Re: Certification of the Carpenters Local No. 491 Pension Plan

Dear Sir:

This is a certification required by section 305(b)(3)(A) of ERISA and by section 432(b)(3)(A) of the Internal Revenue Code for the following Plan.

Plan Name: Carpenters Local No. 491 Pension Plan

EIN: 22-2835549

PN: 001

Plan Sponsor: Trustees of Carpenters Local No. 491 Pension Plan
c/o Dave Jensen, Associated Administrators, LLC
911 Ridgebrook Rd
Sparks, MD 21152-9451
(410) 254-6847

Certification for the Plan Year: July 1, 2020 to June 30, 2021

As the Plan actuary, I certify that:

(1) The Plan is NOT in Endangered Status for the plan year ending June 30, 2021

and

(2) The Plan is NOT and WILL NOT be in Critical Status for the plan year ending June 30, 2021, nor will it be in Critical Status for any of the 5 succeeding plan years.

Timothy D. Boles

September 16, 2020

Timothy D. Boles, ASA, EA
Enrollment Number 20-08131

Date