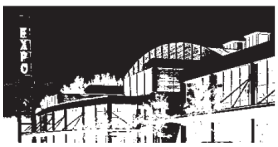
MERC Commission Meeting

January 9, 2013
12:30 pm

Portland Center
for Performing Arts
1111 SW Broadway
Brunish Theater




600 NE Grand Ave.
Portland, OR 97232
503-797-1780

www.oregonmetro.gov

Metro | *Exposition Recreation Commission*

Agenda

Meeting: Metro Exposition Recreation Commission Meeting
Date: Wednesday, January 9, 2013
Time: 12:30 – 2:30 pm
Place: Portland Center for Performing Arts, Brunish Theater

CALL TO ORDER

12:30	**1.**	**QUORUM CONFIRMED**	
12:35	**2.**	**COMMISSIONER COMMUNICATIONS**	**Chris Erickson**
12:45	**3.**	**COO COMMUNICATIONS**	**Martha Bennett**
	3.1	2013-2014 Budget	
1:00	**4.**	**GENERAL MANAGER COMMUNICATIONS**	**Teri Dresler**
	4.1	Financial Report	
1:10	**5.**	**CONSENT AGENDA**	
	5.1	November 7, 2012 MERC Commission Record of Actions	
	5.2	December 4, 2012 MERC Commission Record of Actions	
1:15	**6.**	**MERC VENUES' BUSINESS REPORTS**	**Scott Cruickshank** **Robyn Williams** **Matthew P. Rotchford**
1:30	**7.**	**OPPORTUNITY FOR PUBLIC COMMENT ON NON-AGENDA ITEMS**	
1:35	**8.**	**OREGON SYMPHONY PRESENTATION**	**Oregon Symphony Staff**
1:50	**9.**	**PCPA BRANDING**	**Robyn Williams**
2:15	**10.**	**ACTION AGENDA**	
	10.1	**Resolution 13-01** for the purpose of selecting Hydrotemp Mechanical Inc. as the lowest responsive and responsible bidder in response to a Request For Bids relating to the Portland Center for the Performing Arts (PCPA), Antoinette Hatfield Hall "Cooling Tower and Piping Replacement Project," and authorizing the General Manager to execute a contract with Hydrotemp Mechanical Inc.	**Robyn Williams/Josh Lipscomb**
	10.2	**Resolution 13-02** for the purpose of accepting Carleton Hart Architecture's Proposal for the Oregon Convention Center (OCC) – Consulting Services – Original Building Roof Replacement Project, and authorizing the General Manager to enter into an agreement for Personal Services	**Scott Cruickshank**

ADJOURN

MERC Commission Meeting

January 9, 2013
12:30 pm

4.1 Financial Report

NOVEMBER 2012

FINANCIAL INFORMATION

For Management Purposes only

PORTLAND CENTER FOR THE PERFORMING ARTS

A SERVICE OF METRO

OREGON CONVENTION CENTER

A SERVICE OF METRO

METROPOLITAN EXPOSITION RECREATION COMMISSION

A SERVICE OF METRO

Date: November 27, 2012

To:

Commissioner Chris Erickson, Chair
Commissioner Judie Hammerstad, Vice Chair
Commissioner Terry Goldman, Secretary/Treasurer
Commissioner Ray Leary
Commissioner Cynthia Haruyama
Commissioner Elisa Dozono
Commissioner Karis Stoudamire-Phillips

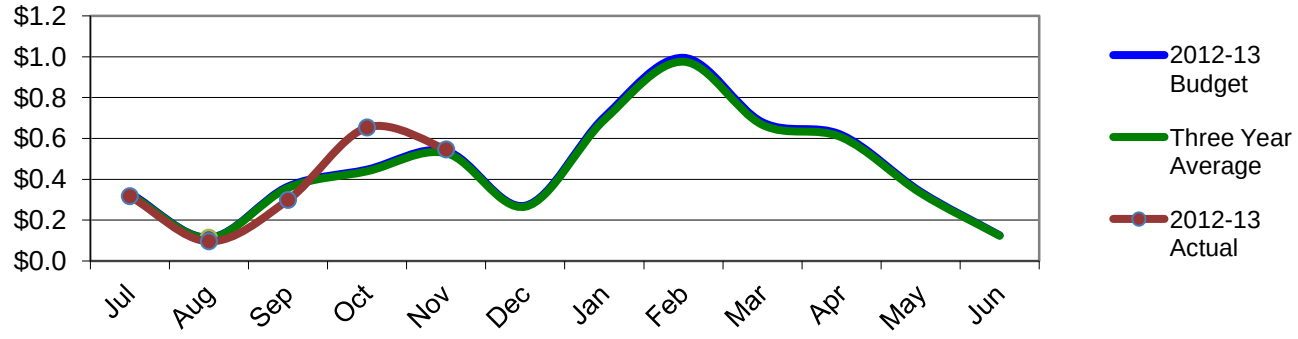
From: Cynthia Hill – Budget/Finance Manager

Re: MERC Financial Information November 2012

Enclosed please find the monthly financial report for the Metropolitan Exposition Recreation Commission reflecting revenues and expenditures as of November 2012.

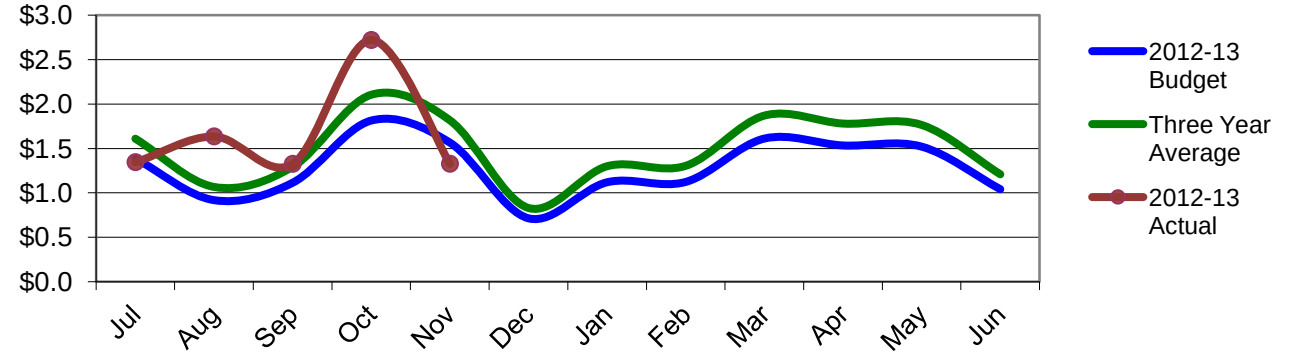
Expo- Operating Revenues by Month

shown in millions



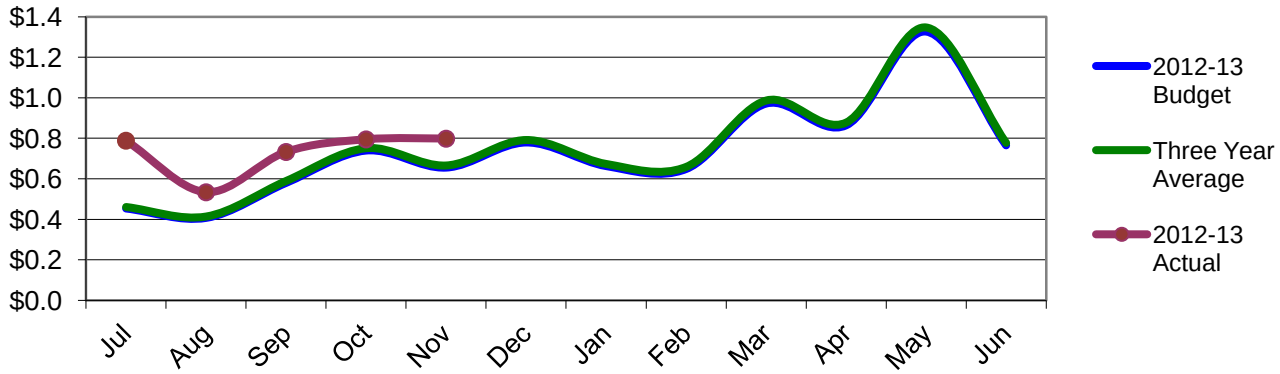
OCC- Operating Revenues by Month

shown in millions



PCPA Operating Revenues by Month

shown in millions

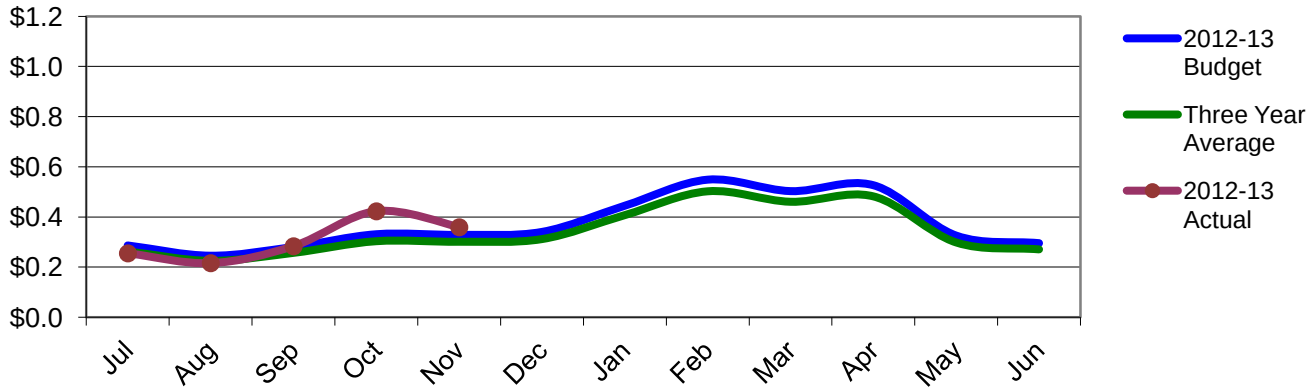


MERC operating revenues are $13.9 million year to date compared to $13.6 million in the prior year, an increase of $300 thousand. Expo Center's top grossing events in the month of November were America's Largest Christmas Bazaar ($184 thousand), the Portland Metro RV Dealers Fall RV Show ($125 thousand), the Portland Skifever and Snowboard Shoe ($101 thousand). The top grossing events at OCC included the Association for Middle Level Education Annual Conference ($245 thousand), Festival of the Trees ($208 thousand) and the National Association of Campus Activities West Region ($103 thousand). PCPA performances included Don Giovanni ($84 thousand), Daniel Tosh ($68 thousand) and the Singing Christmas Tree – 50th Annual Concert ($55 thousand).

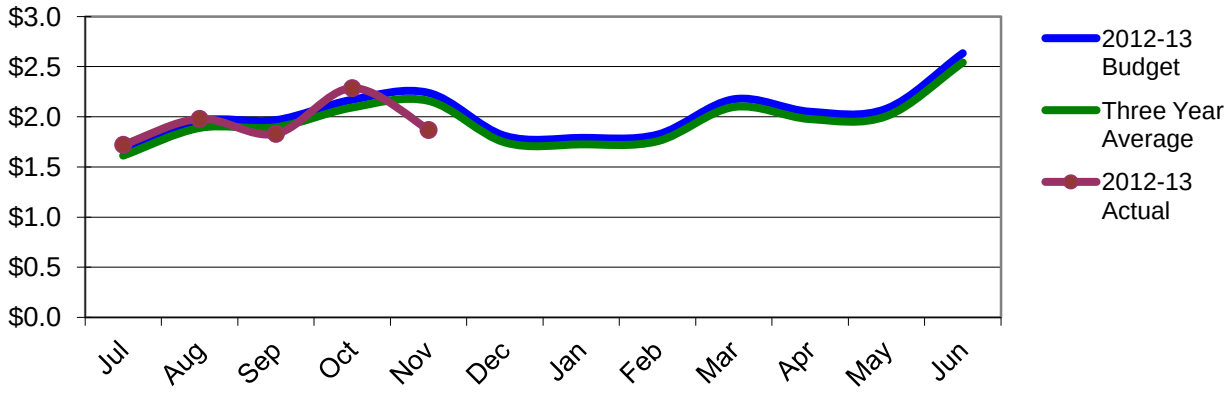
Attendance at Expo was 9,636 less than November 2011 with three fewer events; Attendance at OCC was 23,321 less with four fewer events than last year; Attendance at PCPA was 13,771 higher than November 2011 with 19 more events.

Expo - Operating Expenditures by Month

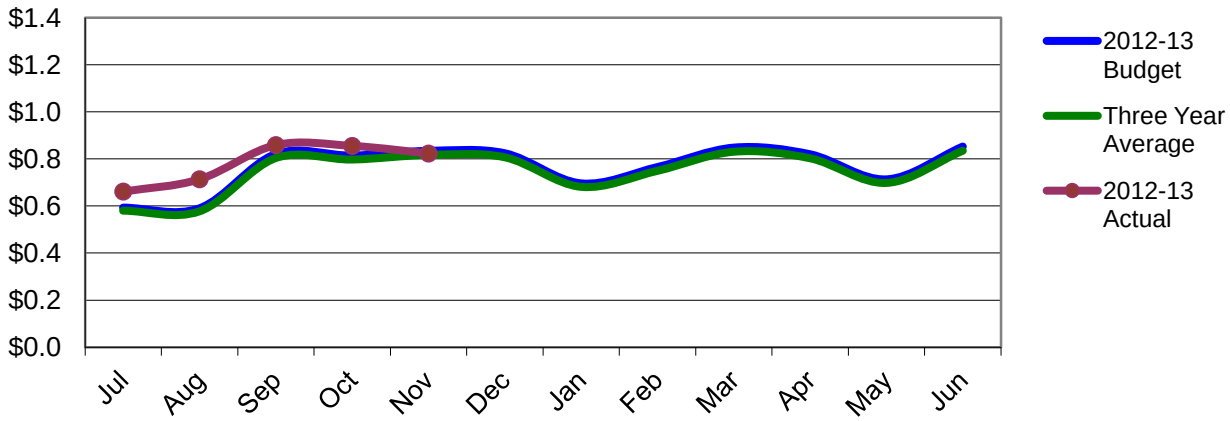
shown in millions



OCC - Operating Expenditures by Month
shown in millions



PCPA - Operating Expenditures by Month
shown in millions



MERC operating expenditures year to date are $15.8 million, compared to $16.1 million in the prior year, a decrease of $329 thousand. Operating expenditures relate directly to the event schedule at each venue. Position vacancies at the Oregon Convention Center continue to generate savings greater than anticipated in the original budget.

Non Operating

Transient Lodging Tax (TLT) receipts provide fundamental operating and marketing financial support for OCC and PCPA. Year to date transfers received from Multnomah County are $3.522 million compared $3.489 million in the prior year.

Operating revenues and expenditures are recognized monthly, while non operating sources such as Visitor Development Fund revenue are received at year end:

The cash flow timing differences create a deficit on the financial statement throughout the year, however it adjusts at year-end.

MERC Visitor Venues

Events-Performances-Attendance

November FY 12-13

	November 2011		November 2012		Net Change from Prior Year	
OCC	**Events**	**Attendance**	**Events**	**Attendance**	**Events**	**Attendance**
Tradeshows/Conventions	4	18,413	3	8,570	(1)	(9,843)
Consumer Public Shows	7	25,718	5	17,686	(2)	(8,032)
Miscellaneous	-	-	-	-	-	-
Miscellaneous -In-House	9	795	12	264	3	(531)
Meetings	18	7,118	17	2,849	(1)	(4,269)
Catering	8	3,667	5	3,021	(3)	(646)
Totals	**46**	**55,711**	**42**	**32,390**	**(4)**	**(23,321)**

	November 2011		November 2012		Net Change from Prior Year	
Expo Center	**Events**	**Attendance**	**Events**	**Attendance**	**Events**	**Attendance**
Consumer Public Shows	4	32,634	4	32,435	-	(199)
Miscellaneous	3	6,670	2	25	(1)	(6,645)
Meetings	3	75	2	55	(1)	(20)
Catering	-	-	-	-	-	-
Tradeshows/Conventions	2	3,216	1	444	(1)	(2,772)
Totals	**12**	**42,595**	**9**	**32,959**	**(3)**	**(9,636)**

	November 2011		November 2012		Net Change from Prior Year	
PCPA	**Performances**	**Attendance**	**Performances**	**Attendance**	**Performances**	**Attendance**
Commercial (Non-Broadway)	4	7,818	9	13,424	5	5,606
Broadway	-	-	-	-	-	-
Resident Company	33	34,939	39	30,266	6	(4,673)
Student	14	5,314	9	4,172	(5)	(1,142)
Non-Profit	9	3,763	22	17,381	13	13,618
Miscellaneous	2	191	2	153	-	(38)
Totals	**62**	**52,025**	**81**	**65,396**	**19**	**13,371**

Metropolitan Exposition-Recreation Commission

MERC Statement of Activity with Annual Budget

All Departments

November 2012

2013-05

	Current Month Actual	Current Year to Date Actual	Prior Year to Date Actual	% of Prior Year	Annual Budget	% of Annual Budget
	November-12	November-12	November-11		November-12	42%
Operating						
Revenue	1,723,319	7,720,260	7,191,314	107%	18,067,732	43%
Revenue - Food and Beverage	948,819	6,196,365	6,411,387	97%	11,804,821	52%
Total Operating Revenue	**2,672,138**	**13,916,625**	**13,602,701**	**102%**	**29,872,553**	**47%**
Costs - Food and Beverage	900,328	4,963,692	5,055,814	98%	9,862,144	50%
Personal Services	1,372,269	6,821,386	7,215,016	95%	17,567,418	39%
Goods & Services	696,716	2,845,977	2,713,376	105%	8,264,736	34%
Marketing Travel Portland	225,004	1,125,020	1,101,050	102%	4,014,278	28%
Total Operating Expenses	**3,194,317**	**15,756,075**	**16,085,255**	**98%**	**39,708,576**	**40%**
Net Operating Results Inc (Dec)	**(522,179)**	**(1,839,450)**	**(2,482,554)**	**74%**	**(9,836,023)**	**19%**
Non Operating	0	-	-		-	
Transient, Lodging Tax	2,673,655	3,521,526	3,488,821	101%	9,985,127	35%
Visitor Development Fund (VDF)	-	-	-	-	3,147,506	0%
Government Support City of Portland	-	-	-	-	793,408	0%
Non-Operating Revenue	13,534	45,080	87,242	52%	156,412	29%
Non-Operating Expense	-	-	-	-	2,200,000	0%
	2,687,189	**3,566,606**	**3,576,063**	**100%**	**11,882,453**	**30%**
Support and Risk Management						
MERC Administration	0	(0)	-	-	-	-
Metro Support Services	207,527	1,043,047	902,020	116%	2,498,424	42%
Metro Risk Management	-	486,202	494,511	98%	729,301	67%
	207,527	**1,529,249**	**1,396,531**	**110%**	**3,227,725**	**47%**
Net Increase (Decrease)	**1,957,483**	**197,907**	**(303,022)**	**-65%**	**(1,181,295)**	**-17%**
Transfers						
Transfers to (Expense)	13,421	67,105	32,450	207%	392,056	17%
Transfers from (Revenue)	4,167	20,835	-	-	2,768,633	1%
Debt Service (Expense)	937,816	937,816	925,816	101%	1,187,132	79%
Net Transfers	**(947,070)**	**(984,086)**	**(958,266)**	**103%**	**1,189,445**	**-83%**
Net Operations	**1,010,413**	**(786,179)**	**(1,261,288)**	**62%**	**8,150**	**-9646%**
	0	0	-		-	
Capital						
Capital Outlay	104,504	476,380	1,018,126	47%	3,344,077	14%
Construction Management	-	-	-	-	-	-
Transient, Lodging Tax	-	-	-	-	-	-
Non-Operating Revenue	-	-	81,212	0%	295,000	0%
Intrafund Transfers (Exp/Rev)	-	-	-	-	-	-
Transfers from (Revenue)	-	-	-	-	-	-
Net Capital	**(104,504)**	**(476,380)**	**(936,914)**	**51%**	**(3,049,077)**	**16%**
Fund Balance Inc (Dec)	**905,910**	**(1,262,559)**	**(2,198,202)**	**57%**	**(3,040,927)**	**42%**
	0	-	-		-	
Food and Beverage Gross Margin	**48,491**	**1,232,673**	**1,355,574**		**1,942,677**	**63%**
Food and Beverage Gross Margin	**5.1%**	**19.9%**	**21.1%**		**16.5%**	
Full Time Employees			**-**		**190.0**	
Excise Tax	**140,140**	**764,621**	**789,317**			
Transient, Lodging Taxes as percent of revenue	**50%**	**20%**	**20%**		**25%**	
Fund Balance						
Beginning Fund Balance		26,161,717	26,357,848		26,161,717	
Fund Balance Inc (Dec)		(1,262,559)	(2,198,202)		(3,040,927)	
Ending Fund Balance		**24,899,158**	**24,159,646**		**23,120,790**	
Unrestricted Fund Balance					2,384,950	
Operating Contingency					2,299,335	
Stabilization Reserve					620,500	
Designated for Renewal & Replacement					12,277,072	
New Capital/Business Strategy Reserve					5,196,719	
Restricted by Agreement - TLT					142,214	
Ending Fund Balance					**23,120,790**	
					-	

Metropolitan Exposition-Recreation Commission

MERC Statement of Activity with Annual Budget

Portland Exposition Center

November 2012

2013-05

	Current Month Actual	Current Year to Date Actual	Prior Year to Date Actual	% of Prior Year	Annual Budget	% of Annual Budget
	November-12	November-12	November-11		November-12	42%
Operating						
Revenue	399,736	1,356,132	1,411,813	96%	3,838,186	35%
Revenue - Food and Beverage	146,268	554,684	481,460	115%	1,864,849	30%
Total Operating Revenue	**546,004**	**1,910,816**	**1,893,273**	**101%**	**5,703,035**	**34%**
Costs - Food and Beverage	127,904	513,139	431,334	119%	1,505,243	34%
Personal Services	133,327	615,333	623,958	99%	1,605,485	38%
Goods & Services	98,133	408,987	400,483	102%	1,342,728	30%
Total Operating Expenses	**359,365**	**1,537,459**	**1,455,776**	**106%**	**4,453,456**	**35%**
Net Operating Results Inc (Dec)	**186,639**	**373,357**	**437,498**	**85%**	**1,249,579**	**30%**
Non Operating						
Non-Operating Revenue	1,196	5,298	6,964	76%	21,290	25%
Non-Operating Expense	-	-	-	-	-	-
	1,196	**5,298**	**6,964**	**76%**	**21,290**	**25%**
Support and Risk Management						
MERC Administration	12,829	64,143	78,057	82%	153,944	42%
Metro Support Services	18,678	93,877	81,180	116%	224,858	42%
Metro Risk Management	-	53,992	57,298	94%	80,988	67%
	31,507	**212,012**	**216,535**	**98%**	**459,790**	**46%**
Net Increase (Decrease)	**156,329**	**166,643**	**227,927**	**73%**	**811,079**	**21%**
Transfers						
Intrafund Transfers	-	-	-	-	-	-
Transfers to	113	565	-	-	1,359	-58%
Transfers from	375	1,875	-	-	4,500	42%
Debt Service	937,816	937,816	925,816	101%	1,187,132	79%
Net Transfers	**(937,554)**	**(936,506)**	**(925,816)**	**101%**	**(1,183,991)**	**79%**
Net Operations	**(781,225)**	**(769,863)**	**(697,889)**	**110%**	**(372,912)**	**206%**
Capital						
Revenue	-	-	-	-	-	
Capital Outlay Expense	40,260	276,526	52,608	526%	574,500	48%
Construction Management Expense	-	-	-	-	-	-
Goods & Services Expense	-	-	-	-	-	-
Non-Operating Revenue	-	-	4,987	0%	-	-
Non-Operating Expense	-	-	-	-	-	-
Intrafund Transfers	-	-	-	-	270,000	-100%
Transfers to	-	-	-	-	-	-
Transfers from	-	-	-	-	-	-
Net Capital	**(40,260)**	**(276,526)**	**(47,621)**	**581%**	**(304,500)**	**91%**
Fund Balance Inc (Dec)	**(821,485)**	**(1,046,390)**	**(745,510)**	**140%**	**(677,412)**	**154%**
Food and Beverage Gross Margin	**18,364**	**41,545**	**50,126**		**359,606**	**12%**
Food and Beverage Gross Margin %	**12.6%**	**7.5%**	**10.4%**		**19.3%**	
Full Time Employees					**13.3**	
Excise Tax	**40,632**	**141,464**	**140,015**		**-**	
Fund Balance						
Beginning Fund Balance		4,310,142	4,732,826		4,310,142	
Fund Balance Inc (Dec)		(1,046,390)	(745,510)		(677,412)	
Ending Fund Balance		**3,263,752**	**3,987,316**		**3,632,730**	
Unrestricted Fund Balance					182,705	
Operating Contingency					364,000	
Stabilization Reserve					186,000	
Designated for Renewal & Replacement					775,000	
New Capital/Business Strategy Reserve					2,125,025	
Ending Fund Balance					**3,632,730**	
		-	-		-	

Metropolitan Exposition-Recreation Commission

MERC Statement of Activity with Annual Budget

Oregon Convention Center

November 2012

2013-05

	Current Month Actual	Excluding EMP Current Year to Date Actual	Prior Year to Date Actual	% of Prior Year	Annual Budget	% of Annual Budget
	November-12	November-12	November-11		November-12	42%
Operating						
Revenue	673,093	3,552,478	3,570,155	100%	7,798,834	46%
Revenue - Food and Beverage	654,514	4,804,850	5,152,406	93%	8,224,999	58%
Total Operating Revenue	**1,327,607**	**8,357,329**	**8,722,561**	**96%**	**16,023,833**	**52%**
Costs - Food and Beverage	663,164	3,769,079	3,987,701	95%	6,880,666	55%
Personal Services	695,359	3,535,195	3,888,510	91%	9,224,471	38%
Goods & Services	284,389	1,251,780	1,385,395	90%	3,884,221	32%
Marketing Travel Portland	225,004	1,125,020	1,101,050	102%	4,014,278	28%
Total Operating Expenses	**1,867,916**	**9,681,073**	**10,362,657**	**93%**	**24,003,636**	**40%**
Net Operating Results Inc (Dec)	**(540,308)**	**(1,323,744)**	**(1,640,096)**	**81%**	**(7,979,803)**	**17%**
Non Operating						
Transient, Lodging Tax	2,330,885	3,070,057	3,025,931	101%	8,729,303	35%
Visitor Development Fund (VDF)	-	-	-	-	2,520,676	0%
Non-Operating Revenue	3,301	14,861	43,188	34%	46,678	32%
Non-Operating Expense	-	-	-	-	2,200,000	0%
	2,334,186	**3,084,918**	**3,069,119**	**101%**	**9,096,657**	**34%**
Support and Risk Management						
MERC Administration	79,823	399,116	485,688	82%	957,878	42%
Metro Support Services	116,215	584,106	505,135	116%	1,399,118	42%
Metro Risk Management	-	272,272	264,912	103%	408,408	67%
	196,038	**1,255,494**	**1,255,735**	**100%**	**2,765,404**	**45%**
Net Increase (Decrease)	**1,597,839**	**505,680**	**173,288**	**292%**	**(1,648,550)**	**-31%**
Transfers						
Transfers to (Expense)	704	3,520	-	-	239,450	1%
Transfers from (Revenue)	2,334	11,670	-	-	2,228,000	1%
Debt Service (Expense)	-	-	-	-	-	-
Net Transfers	**1,630**	**8,150**	**-**	**-**	**1,988,550**	0%
Net Operations	**1,599,469**	**513,830**	**173,288**	**197%**	**340,000**	**151%**
Capital						
Revenue	-	-	-	-	-	-
Capital Outlay Expense	55,329	78,612	647,885	12%	2,152,577	4%
Non-Operating Revenue	-	-	-	-	220,000	0%
Intrafund Transfers (Exp/Rev)	-	-	-	-	90,000	0%
Net Capital	**(55,329)**	**(78,612)**	**(647,885)**	**12%**	**(1,842,577)**	**4%**
Fund Balance Inc (Dec)	**1,544,140**	**435,218**	**(474,597)**	**-92%**	**(1,502,577)**	**-29%**
Food and Beverage Gross Margin	**(8,650)**	**1,035,772**	**1,164,705**		**1,344,333**	**77%**
Food and Beverage Gross Margin %	**-1.3%**	**21.6%**	**22.6%**		**16.3%**	
Full Time Employees					**110.3**	
Excise Tax	**99,508**	**623,157**	**649,062**		**-**	
Transient, Lodging Taxes as percent of revenue	**64%**	**27%**	**26%**		**35%**	
Fund Balance						
Beginning Fund Balance		11,058,549	11,552,031		11,058,549	
Fund Balance Inc (Dec)		435,218	(474,597)		(1,502,577)	
Fund Balance Inc (Dec) for HQH		(143,733)	-		-	
Ending Fund Balance		**11,350,034**	**11,077,434**		**9,555,972**	
Unrestricted Fund Balance					725,337	
Operating Contingency					1,540,000	
Stabilization Reserve					260,000	
Designated for Renewal & Replacement					5,685,779	
New Capital/Business Strategy Reserve					1,334,856	
Ending Fund Balance					**9,555,972**	

Metropolitan Exposition-Recreation Commission

MERC Statement of Activity with Annual Budget

Portland Center for the Performing Arts

November 2012

2013-05

	Current Month Actual	Current Year to Date Actual	Prior Year to Date Actual	% of Prior Year	Annual Budget	% of Annual Budget
	November-12	November-12	November-11		November-12	42%
Operating						
Revenue	650,490	2,811,650	2,206,081	127%	6,430,712	44%
Revenue - Food and Beverage	148,037	836,830	777,521	108%	1,714,973	49%
Total Operating Revenue	**798,527**	**3,648,481**	**2,983,602**	**122%**	**8,145,685**	**45%**
Costs - Food and Beverage	109,260	681,474	636,778	107%	1,476,235	46%
Personal Services	452,385	2,209,842	2,124,533	104%	5,582,207	40%
Goods & Services	260,736	1,018,067	835,040	122%	2,105,811	48%
Total Operating Expenses	**822,381**	**3,909,383**	**3,596,350**	**109%**	**9,164,253**	**43%**
Net Operating Results Inc (Dec)	**(23,854)**	**(260,902)**	**(612,748)**	**43%**	**(1,018,568)**	**26%**
Non Operating						
Transient, Lodging Tax	342,770	451,469	462,890	98%	1,255,824	36%
Visitor Development Fund (VDF)	-	-	-	-	626,830	0%
Government Support City of Portland	-	-	-	-	793,408	0%
Non-Operating Revenue	8,312	22,438	32,587	69%	84,376	27%
Non-Operating Expense	-	-	-	-	-	-
	351,081	**473,907**	**495,477**	**96%**	**2,760,438**	**17%**
Support and Risk Management						
MERC Administration	49,890	249,448	303,555	82%	598,674	42%
Metro Support Services	72,634	365,064	315,705	116%	874,448	42%
Metro Risk Management	-	159,938	172,301	93%	239,905	67%
	122,524	**774,450**	**791,561**	**98%**	**1,713,027**	**45%**
Net Increase (Decrease)	**204,703**	**(561,444)**	**(908,832)**	**62%**	**28,843**	**-1947%**
Transfers						
Intrafund Transfers	-	-	-	-	-	-
Transfers to (Expense)	440	2,200	-	-	5,281	42%
Transfers from (Revenue)	1,458	7,290	-	-	17,500	42%
Net Transfers	**1,018**	**5,090**	**-**	-	**12,219**	**42%**
Net Operations	**205,721**	**(556,354)**	**(908,832)**	**61%**	**41,062**	**-1355%**
Capital						
Revenue	-	-	-	-	-	-
Capital Outlay Expense	8,914	121,242	317,633	38%	570,000	21%
Construction Management Expense	-	-	-	-	-	-
Goods & Services Expense	-	-	-	-	-	-
Non-Operating Revenue	-	-	76,225	0%	75,000	0%
Non-Operating Expense	-	-	-	-	-	-
Intrafund Transfers (Exp/Rev)	-	-	-	-	-	-
Transfers to	-	-	-	-	-	-
Transfers from	-	-	-	-	-	-
Net Capital	**(8,914)**	**(121,242)**	**(241,408)**	**50%**	**(495,000)**	**24%**
Fund Balance Inc (Dec)	**196,807**	**(677,596)**	**(1,150,240)**	**59%**	**(453,938)**	**149%**
Food and Beverage Gross Margin	**38,777**	**155,356**	**140,743**		**238,738**	**65%**
Food and Beverage Gross Margin %	**26.2%**	**18.6%**	**18.1%**		**13.9%**	
Full Time Employees					**46.4**	
Taxes as percent of revenue	**30%**	**11%**	**13%**		**13%**	
Fund Balance						
Beginning Fund Balance		8,445,301	8,490,410		8,445,301	
Fund Balance Inc (Dec)		(677,596)	(1,150,240)		(453,938)	
Ending Fund Balance		**7,767,705**	**7,340,170**		**7,991,363**	
Operating Contingency					300,000	
Stabilization Reserve					174,500	
Designated for Renewal & Replacement					5,345,000	
New Capital/Business Strategy Reserve					1,736,838	
Ending Fund Balance					**7,991,363**	

Metropolitan Exposition-Recreation Commission

MERC Statement of Activity with Annual Budget

Convention Center Enhanced Marketing Project

November 2012

2013-05

	Current Month Actual	Current Year to Date Actual	Prior Year to Date Actual	% of Prior Year	Annual Budget	% of Annual Budget
	November-12	November-12	November-11		November-12	42%
Operating						
Revenue	0	-	-	-	-	-
Personal Services	-	-	-	-	-	-
Goods & Services	38,776	82,913	-	-	372,667	22%
Meetings Expense	*256*	*341*	-	-	*800*	43%
Developer Agreement I	-	-	-	-	-	-
Developer Agreement II	-	-	-	-	-	-
Communications Consulting	-	*3,877*	-	-	*50,000*	8%
Construction Consulting	*4,495*	*16,145*	-	-	*25,000*	65%
Financial Consulting	-	-	-	-	*5,000*	0%
Legal Consulting	-	-	-	-	-	-
Management Consulting	-	*2,000*	-	-	*168,967*	1%
Market Consulting	*34,025*	*60,550*	-	-	*122,900*	49%
Project Management	-	-	-	-	-	-
	(38,776)	**(82,913)**	**-**	**-**	**(372,667)**	**22%**
Non Operating						
Transient, Lodging Tax		-		-	-	-
Government Support City of Portland		-	-	-	-	-
Non-Operating Revenue	-	-	-	-	-	-
Non-Operating Expense	-	-	-	-	-	-
	-	**-**	**-**		**-**	
Support and Risk Management						
Indirect Cost Metro Support	-	-	-		-	
MERC Administration	-	-	-	-	-	-
Metro Support Services		-	-	-	-	-
Metro Risk Management	-	-	-	-	-	-
	-	**-**	**-**		**-**	
Net Increase (Decrease)	**(38,776)**	**(82,913)**	**-**	-	**(372,667)**	
Transfers						
Intrafund Transfers	-	-	-	-	-	-
Transfers to	12,164	60,820	-	-	145,966	42%
Transfers from	-	-	-	-	518,633	0%
Debt Service	-	-	-	-	-	-
Net Transfers	**(12,164)**	**(60,820)**	**-**	-	**372,667**	-16%
Net Operations	**(50,940)**	**(143,733)**	**-**	**-**	**-**	**-**

Metropolitan Exposition-Recreation Commission

MERC Statement of Activity with Annual Budget

MERC Administration

November 2012

2013-05

	Current Month Actual	Current Year to Date Actual	Prior Year to Date Actual	% of Prior Year	Annual Budget	% of Annual Budget
	November-12	November-12	November-11		November-12	42%
Operating						
Revenue	-	-	3,265	0%	-	-
Personal Services	91,198	461,016	578,014	80%	1,155,255	40%
Goods & Services	14,683	84,231	92,459	91%	559,309	15%
Net Operating Results Inc (Dec)	**(105,880)**	**(545,247)**	**(667,208)**	**82%**	**(1,714,564)**	**32%**
Non Operating						
Non-Operating Revenue	726	2,482	4,503	55%	4,068	61%
Non-Operating Expense	-	-	-	-	-	-
	726	**2,482**	**4,503**	**55%**	**4,068**	**61%**
Support and Risk Management						
MERC Administration	142,541	712,707	867,300	82%	1,710,496	42%
	142,541	**712,707**	**867,300**	**82%**	**1,710,496**	**42%**
Net Increase (Decrease)	**37,387**	**169,942**	**204,595**	**83%**	**-**	**-**
Transfers						
Transfers to (Expense)	-	-	32,450	0%	-	-
Transfers from (Revenue)	-	-	-	-	-	-
Net Transfers	**-**	**-**	**(32,450)**	0%	**-**	-
Net Operations	**37,387**	**169,942**	**172,145**	**99%**	**-**	**-**
Capital						
Capital Outlay Expense	-	-	-	-	47,000	0%
Transient, Lodging Tax	-	-	-	-	-	
Non-Operating Revenue	-	-	-	-	-	-
Intrafund Transfers (Exp/Rev)	-	-	-	-	(360,000)	0%
Net Capital	**-**	**-**	**-**	**-**	**(407,000)**	**0%**
Fund Balance Inc (Dec)	**37,387**	**169,942**	**172,145**	**99%**	**(407,000)**	**-42%**
Full Time Employees					**20.0**	
Excise Tax	**-**	**-**	**240**		**-**	
Fund Balance						
Beginning Fund Balance		2,347,725	1,582,581		2,347,725	
Fund Balance Inc (Dec)		169,942	172,145		(407,000)	
Ending Fund Balance		**2,517,667**	**1,754,726**		**1,940,725**	
Operating Contingency					95,335	
Designated for Renewal & Replacement					471,293	
Contingency for Renewal & Replacement					**200,000**	
Restricted by Agreement - TLT					132,214	
Ending Fund Balance					**1,940,725**	

MERC Commission Meeting

January 9, 2013
12:30 pm

5.0 Consent Agenda

Metropolitan Exposition Recreation Commission
Record of MERC Commission Actions

November 7, 2012
Oregon Convention Center
King Board Room
777 NE ML King Jr. Blvd. Portland OR 97232

Present:	Chris Erickson (Chair), Elisa Dozono , Terry Goldman , Judie Hammerstad, Cynthia Haruyama, Ex-officio Rex Burkholder, Karis Stoudamire-Phillips (arrived at 12:15 pm)
Absent:	Ray Leary (Excused)
	A regular meeting of the Metropolitan Exposition Recreation Commission was called to order by chair Chris Erickson at the Oregon Convention Center, King Board Room at 11:30am
1.0	**QUORUM CONFIRMED** A quorum of Commissioners was present.
2.0	**COMMISSIONER EXOFFICIO COMMUNICATIONS** • Commissioner Goldman reported on his meeting with Washington County Board of Commissioners and updated the Headquarter Hotel project. • Chair Erickson reported on his trade mission to China.

3.0	**GENERAL MANAGER COMMUNICATIONS**
	• Teri Dresler presented to the Commission
	  • T. Dresler introduced Margie Helton, the new executive assistant.
	  • Commissioner Leary was reappointed for another term.
	  • Encouraged Commissioner's participation in Travel Portland's FAM event.
	  • Reviewed revised agenda.
	  • Update on Headquarter Hotel negotiation process.
	  - Commissioner Haruyama inquired on public subsidy gap. T. Dresler responded it is larger than expected amount of $35 million.

4.0 **4.1** **4.2** **4.3** **4.4**	**CONSENT AGENDA** • August 1, 2012 MERC Commission Record of Actions • September 5, 2012 MERC Commission Record of Actions • October 3, 2012 MERC Commission Record of Actions • Approval of Ethics Authorization Form for Travel Portland FAM November/December 2012 events • A motion was made by Commissioner Dozono and seconded by Commissioner Hammerstad to approve the Consent Agenda. **VOTING:** Aye: 5 (Dozono, Goldman, Haruyama, Hammerstad, Erickson) Nay: 0 Motion Passed
5.0	**OPPORTUNITY FOR PUBLIC COMMENT ON NON-AGENDA ITEMS** None
6.0	**METRO DIVERSITY ACTION PLAN – Letter of Support** • Bill Tolbert presented to the Commission - Ex-officio Rex Burkholder commented that the council just approved budget amendment to fund broader equity planning effort that will take up to 3 years.
	Commissioner Karis Stoudamire-Phillips arrived at 12:15 p.m.

7.0	**EXECUTIVE SESSION –** for the purpose of consultation with legal counsel concerning legal rights and duties regarding current litigation or litigation likely to be filed pursuant to ORS 192.660(2)(h)
	At 12:46 p.m., MERC Chair Chris Erickson reconvened the regular meeting. As there was no further business to come before the Commission, the meeting was adjourned at 12:47 p.m.

Metropolitan Exposition Recreation Commission
Record of MERC Commission Actions

December 4, 2012
Metro Regional Center, Room 301
600 NE Grand Ave. Portland Oregon 97232

Present:	Chris Erickson (Chair), Ray Leary , Terry Goldman , Karis Stoudamire-Phillips , Judie Hammerstad, Cynthia Haruyama,
Absent:	Elisa Dozono
	A regular meeting of the Metropolitan Exposition Recreation Commission was called to order by chair Chris Erickson at Metro at 1:45pm
1.0	**QUORUM CONFIRMED** A quorum of Commissioners was present.
2.0	**COMMISSIONER EXOFFICIO COMMUNICATIONS** • Commissioner Goldman updated his and Commissioner Leary's attendance at the FAM event held at Andina Restaurant. He acknowledged that the successful event was coordinated by Travel Portland.

3.0	**GENERAL MANAGER COMMUNICATIONS**
	• Teri Dresler presented to the Commission
	  • T. Dresler provided an update of the Headquarter Hotel project. She acknowledged that the market impact study done by the consultant was outstanding. Although the pace needed to be slowed down in order to be diligent, she remains positive that it will succeed.
	  • Commissioner Haruyama expressed some skepticism of the consultant's report. T. Dressler responded that she has specifically asked for fair and balanced data.
	  T. Dresler is considering bringing the evaluation committee back together to discuss the validity of the study. Follow-up will be made available.
	  • T. Dresler updated on the elephant calf ownership issue at the Zoo. The agreement with the group Have Trunk will Travel specifies that they hold ownership rights to every other calf born at the Zoo. This type of long-term borrowing agreement is quite common in the zoo industry. Kim Smith has been in discussions with the group to modify the agreement. Have Trunk Will Travel has no desire to take a calf currently, due to their lack of facilities to care for baby elephants.
	  • T. Dresler provided an update on the Oregon Ballet Theatre's staffing changes including the departure of its artistic director, Stowell.
	  • Jeff Miller of Travel Portland will present its report on 2nd quarter at the February, 2013, meeting.
	  • Commissioner Leary acknowledged Jeff Miller's outstanding contribution in educating the Commission about the travel industry.
	  • The January, 2013, meeting will be held Jan 9th.
	  • Jeff Miller provided an update on the International Association of Hispanic Meeting Planner's yearly meeting event which was successfully held at PCPA.

4.0	**MERC VENUES' BUSINESS REPORTS** • Robyn Williams, Matthew Rotchford and Scott Cruickshank updated the Commission
5.0	**OPPORTUNITY FOR PUBLIC COMMENT ON NON-AGENDA ITEMS** None

6.0 **6.1**	**ACTION AGENDA** **Resolution 12-22 for the purpose of accepting SBS Construction as the lowest responsive and responsible bidder and authorizing the General Manager of Visitor Venues to execute a contract for the Main Kitchen Original Cooler Remodel Project – General Contractor Service at the Oregon Convention Center (OCC), and requesting the Metro Council amend the FY2012-13 through 2016-2017 Capital Improvement Plan.** Scott Cruickshank presented to the Commission • A motion was made by Commissioner Haruyama and seconded by Commissioner Hammerstad to approve Resolution 12-22 as presented. **VOTING:** Aye: 6 (Goldman, Stoudamire-Phillips, Erickson, Hammerstad, Leary, Haruyama) Nay: 0 Motion Passed
	• Commissioner Goldman inquired if there was a response from the Portland Opera to the letter MERC Commission had sent. Teri Dresler responded there was none. She has heard from the Broadway Across America representative from New York that she desires to come to Portland to share details of the joint venture agreement and is attempting to set a meeting with them in a near future. **Meeting adjourned at 2:35 pm**

METROPOLITAN EXPOSITION RECREATION COMMISSION

Resolution No. 12-22

Accepting SBS Construction as the lowest responsive and responsible bidder, authorizing the General Manager of Visitor Venues to execute a contract for the Main Kitchen Original Cooler Remodel Project - General Contractor Services at the Oregon Convention Center (OCC), and requesting the Metro Council amend the FY 2012-2013 through 2016-2017 Capital Improvement Plan.

WHEREAS, OCC requires the replacement of kitchen equipment for its food operation at the OCC; and

WHEREAS, the approved Capital Budget includes provisions for the OCC Main Kitchen Original Cooler Remodel Project - General Contractor Services with use of funds from the Food and Beverage Operations Agreement; and

WHEREAS, staff completed a formal solicitation of bids culminating with a bid opening on October 18, 2012; and

WHEREAS, the Metropolitan Exposition Recreation Commission (MERC) staff have evaluated the bids and the lowest responsive and responsible Bidder was SBS Construction, with a lowest base bid of $115,000.00; and

WHEREAS, two bid alternates were received for additional work that have been accepted totaling $30,275.00; and

WHEREAS, a contract was previously awarded for the cooler structure and equipment purchase and installation totaling $184,298.00, increasing the total project cost from $250,000.00 to $329,573.26, and ARAMARK has agreed to fund the additional costs totaling $79,573.26 with its reserves; and

WHEREAS, Sections 3(B) and 4(D)(1) of MERC's Contracting and Purchasing Rules require that MERC select the lowest responsive and responsible bidder, approve the contract award, and approve the written contract by resolution; and

WHEREAS, adequate appropriation exists to fund this increase to the Main Kitchen Cooler project upon approval by MERC and

WHEREAS, MERC will request that the Metro Council amend the FY 2012-2013 through FY 2016-2017 Capital Improvement Plan to reflect a total budget of $329,573.26 for this project.

BE IT THEREFORE RESOLVED as follows:

1. MERC selects SBS Construction as the lowest responsive and responsible bidder in response to the Request for Bids for the OCC Main Kitchen Original Cooler Remodel – General Contractor Services in the amount of $145,275.00.
2. MERC approves the award of a contract, in a form substantially similar to the attached Exhibit "A," to SBS Construction.
3. MERC delegates authority to the General Manager of Visitor Venues to execute the contract.
4. MERC requests that Metro Council modify the FY 2012-13 through FY 2016-17 Capital Improvement Plan to $329,573.26.

Passed by the Commission on December 4, 2012

Chair

Approved as to form:
Alison Kean Campbell, Metro Attorney

By: _____
Nathan A. Schwartz Sykes, Senior Attorney

_____
Secretary/Treasurer

MERC STAFF REPORT

Agenda Item/Issue: Acceptance of **SBS Construction** bid for the Main Kitchen Original Cooler Remodel – General Contractor Services at the Oregon Convention Center.

Resolution No: **12-22**

Date: **December 4, 2012** **Presented by:** Scott Cruickshank

BACKGROUND: The Oregon Convention Center (OCC) has undertaken a variety of facility renovations and equipment upgrades to achieve optimum energy efficiency and maximum service effectiveness as part of the five-year capital improvement program and long-term sustainability goals. Replacement of the main kitchen walk-in coolers and associated renovations is among this effort and was approved in the FY 2012-2013 budget.

Installed in 1989 during original construction, the existing coolers and equipment are well past their useful life, operate inefficiently and considered obsolete in terms of energy and workforce efficiency. In addition to the coolers, new refrigeration equipment, walls, ceilings, storage racking and all associated materials, will be installed in a similar configuration as the existing layout. Anticipated energy efficiency upgrades qualify the project for an Energy Trust of Oregon rebate totaling approximately $2,000.00. The project also includes a new entrance from the service corridor into the dry storage area adjacent to the coolers and a new chef's office. This project is included in the FY 2012–2013 adopted budget reflected in the Oregon Convention Center Main Kitchen Original Cooler Remodel – Equipment Project.

This contract is for General Contractor Services.

On October 2, 2012, staff issued a Request for Bids (RFB) for the Main Kitchen Original Cooler Remodel – General Contractor Services at the Oregon Convention Center. The Request for Bids was published in the Daily Journal of Commerce and complied with MERC's formal contracting and purchasing policies, Oregon state law and all applicable Bureau of Labor and Industries Prevailing Wage Rate laws and requirements.

On October 9, 2012, a site walk-through was held for all interested bidders; eight (8) general contractors and twenty seven (27) subcontractors attended. Of the sixteen (16) general contractors solicited or attending the walk-through, six (6) were certified by the State of Oregon as minority-owned, women-owned or emerging small businesses (MWESB) and zero (0) were identified as First Opportunity Target Area (FOTA) firms. As a result of staff outreach efforts, two (2) FOTA firms were identified but were found to be ineligible after investigation of license status. Of the twenty seven (27) subcontractors who attended the walk-through, six (6) were certified MWESB's and three (3) were identified as FOTA firms.

Bids were received on October 18, 2012. Four (4) firms submitted base bids ranging from $115,000.00 to $135,487.000. Of the four (4) bids received, two (2) of the firms were certified MWESB or FOTA. In accordance with MERC's procurement policy, the lowest responsible and responsive bidder was selected: **SBS Construction,** an emerging small business (ESB), for the amount of **$115,000.00**. SBS Construction identified two subcontractors to work on the project, one of which is certified minority business enterprise (MBE) and ESB.

In addition to the base bid amounts, two alternates were included in the RFB, totaling **$30,275.00**. Alternate #1 is to remove and replace t-bar ceiling in the dry storage area. Alternate #2 is to replace 600 linear feet of 2" black supply and return process loop piping located in the mechanical spaces of the OCC. Both alternates have been included in the contract amount. The process loop piping is included in the MERC capital budget as a separately funded capital project, but shall be included in this contract for the purposes of construction.

FISCAL IMPACT: This project is budgeted for $250,000.00. A contract was previously awarded for the cooler structure/equipment purchase and installation, totaling $192,115.00 with a deductive change order of $7,816.74, reflecting a final cost of $184,298.26. With other anticipated costs and the total of the two (2) contracts, the anticipated project budget is $329,573.26 or $79,573.26 over the initial budget. The initial cost estimate was based upon a similar, recent cooler installation and as the project became more clearly defined, the cost increased. The project budget shortfall, totaling $79,573.26, will be funded from the ARAMARK reserve fund.

RECOMMENDATION: Staff recommends that the Metropolitan Exposition Recreation Commission accept **SBS Construction** as the lowest bidder and authorize the General Manager of Visitor Venues to sign to a contract with **SBS Construction** in the amount of **$145,275.00** for the main kitchen original cooler remodel – General Contractor Services at the Oregon Convention Center.

Staff also recommends that the Metropolitan Exposition Recreation Commission request that the Metro Council modify the FY 2012-13 through FY 2016-17 Capital Improvement Plan by increasing it from $250,000.00 to $329,573.26 to reflect the increased project costs described above.

Metro | Exposition Recreation Commission
600 NE Grand Ave., Portland, OR 97232-2736
503-797-1700

Standard Public Contract

MERC CONTRACT NO. 303014

For Public Contracts $50,000 & Above

THIS Contract is entered into between Metropolitan Exposition Recreation Commission (MERC), an appointed commission of Metro, whose address is 600 NE Grand Avenue, Portland, Oregon 97232-2736, and SBS Construction (CCB #191920) whose address is PO Box 25132 Portland, OR 97298, hereinafter referred to as the "CONTRACTOR."

THE PARTIES AGREE AS FOLLOWS:

ARTICLE I
SCOPE OF WORK

CONTRACTOR shall perform the work and/or deliver to MERC the goods described in the Scope of Work attached hereto as Attachment A. All services and goods shall be of good quality and, otherwise, in accordance with the Scope of Work.

ARTICLE II
TERM OF CONTRACT

The term of this Contract shall be for the period commencing December 12, 2012, through and including February 28, 2013, with substantial completion by January 13, 2013. This agreement may be renewed or extended at MERC's sole discretion. By executing this Contract, Contractor confirms and accepts that the Contract Time so stated is a reasonable period for performance of all of the Work. The end date of the Contract Term is intended to allow for finalization of all closeout requirements, receipt of warranties, manuals and final payment, but does not alter requirements for substantial completion of the work by the date specified.

ARTICLE III
CONTRACT SUM AND TERMS OF PAYMENT

Contractor shall perform the above work for ONE HUNDRED FORTY-FIVE THOUSAND, TWO HUNDRED SEVENTY-FIVE AND NO/100TH DOLLARS ($145,275.00).

The maximum price includes all fees, costs and expenses of whatever nature. Each of MERC's payments to Contractor shall equal the percentage of the work Contractor accomplished during the billing period. Contractor's billing invoices shall include the MERC contract number, Contractor name, remittance address, invoice date, invoice number, invoice amount, tax amount (if applicable), and an itemized statement of work performed and expenses incurred during the billing period, and will not be submitted more frequently than once a month. Contractor's billing invoices shall be sent to metroaccountspayable@oregonmetro.gov, or Metro Accounts Payable, 600 NE Grand Avenue, Portland, OR 97232-2736 or. The MERC contract number shall be referenced in the email subject line. Contractor's invoice must breakout 5% retainage, and Contractor must submit Certified Payroll with invoices per ARTICLE XII below. Contractor's billing invoices for services through June 30 shall be submitted to MERC by July 15. Payment shall be made by MERC on a Net 30 day basis upon approval of Contractor invoice.

ARTICLE IV
LIABILITY AND INDEMNITY

CONTRACTOR is an independent contractor and assumes full responsibility for the content of its work and performance of CONTRACTOR'S labor, and assumes full responsibility for all liability for bodily injury or physical damage to person or property arising out of or related to this Contract, and shall indemnify, defend and hold harmless MERC, its agents and employees, from any and all claims, demands, damages, actions, losses, and expenses arising out of or in any way connected with its performance of this Contract. CONTRACTOR is solely responsible for paying CONTRACTOR'S subcontractors and nothing contained herein shall create or be construed to create any contractual relationship between any subcontractor(s) and MERC.

ARTICLE V
TERMINATION

MERC may terminate this Contract upon giving CONTRACTOR seven (7) days written notice. In the event of termination, CONTRACTOR shall be entitled to payment for work performed to the date of termination. MERC shall not be liable for indirect, consequential damages or any other damages. Termination by MERC will not waive any claim or remedies it may have against CONTRACTOR.

ARTICLE VI
INSURANCE & BONDS

CONTRACTOR shall purchase and maintain at the CONTRACTOR'S expense, the following types of insurance, covering the CONTRACTOR, its employees, and agents:

A. The most recently approved ISO (Insurance Services Office) Commercial General Liability policy, or its equivalent, written on an occurrence basis, with limits not less than $1,000,000 per occurrence and $1,000,000 aggregate. The policy will include coverage for bodily injury, property damage, personal injury, contractual liability, premises and products/completed operations. CONTRACTOR'S coverage will be primary as respects METRO;
B. Automobile insurance with coverage for bodily injury and property damage and with limits not less than minimum of $1,000,000 per occurrence;
C. Workers' Compensation insurance meeting Oregon statutory requirements including Employer's Liability with limits not less than $500,000 per accident or disease.

METRO, MERC, its elected officials, departments, employees, and agents shall be named as ADDITIONAL INSUREDS on Commercial General Liability and Automobile policies.

CONTRACTOR shall provide to MERC 30 days notice of any material change or policy cancellation.

CONTRACTOR shall provide MERC with a Certificate of Insurance complying with this article upon return of the CONTRACTOR signed agreement to MERC. Certificate of Insurance shall identify the MERC contract number.

CONTRACTOR shall not be required to provide the liability insurance described in this Article only if an express exclusion relieving CONTRACTOR of this requirement is contained in the Scope of Work.

In addition, for public works subject to ORS 279C.800 to 279C.870, CONTRACTOR and every subcontractor shall have a public works bond required by 2005 Oregon Laws Chapter 360 filed with the Construction Contractors Board before starting work on the project, unless exempt under Section 2 of 2005 Oregon Laws Chapter 360.

ARTICLE VII
PUBLIC CONTRACTS

All applicable provisions of ORS chapters 187 and 279A, 279B, and 279C and all other terms and conditions necessary to be inserted into public contracts in the State of Oregon, are hereby incorporated as if such provision were a part of this Agreement. Specifically, it is a condition of this contract that CONTRACTOR and all employers working under this Agreement are subject employers that will comply with ORS 656.017 as required by 1989 Oregon Laws, Chapter 684.

For public work subject to ORS 279C.800 to 279C.870, the CONTRACTOR shall pay prevailing wages. If such public work is subject both to ORS 279C.800 to 279C.870 and to 40 U.S.C. 276a, the CONTRACTOR and every subcontractor on such public work shall pay at least the higher prevailing wage. The CONTRACTOR and each subcontractor shall pay workers not less than the specified minimum hourly rate of wage in accordance with Section 7 of 2005 Oregon Laws Chapter 360. MERC shall pay an administrative fee as provided in ORS 279C.825(1) to the Bureau of Labor and Industries pursuant to the administrative rules established by the Commissioner of Labor and Industries. CONTRACTORS must promptly pay, as due, all persons supplying to such contractor labor or material used in this contract. If the CONTRACTOR or first-tier subcontractor fails, neglects, or refuses to make payment to a person furnishing labor or materials in connection with the public contract for a public improvement within 30 days after receipt of payment from the public contracting agency or a contractor, the CONTRACTOR or first-tier subcontractor shall owe the person the amount due plus shall pay interest in accordance with ORS 279C.515. If the CONTRACTOR or first-tier

subcontractor fails, neglects, or refuses to make payment, to a person furnishing labor or materials in connection with the public contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. CONTRACTOR must pay any and all contributions and amounts due to the Industrial Accident Fund from contractor or subcontractor and incurred in the performance of the contract. No liens or claims are permitted to be filed against MERC on account of any labor or material furnished. CONTRACTORS are required to pay the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

For public improvement work all CONTRACTORS must demonstrate that an employee drug-testing program is in place.

ARTICLE VIII
MODIFICATIONS

MERC may approve changes and modifications to the original contract, including deletions of work, order of additional materials, and additional services reasonably related to the original work scope. Contractor may propose changes in the work that Contractor believes are necessary, will result in higher quality work, improve safety, decrease the amount of the contract, or otherwise result in a better or more efficient work product. If such changes are approved by MERC, they shall be executed by written contract amendment signed by both parties. Such changes shall not relieve Contractor of any obligation or warranty under the contract. No oral statements by either party shall modify or affect the terms of the contract.

ARTICLE IX
QUALITY OF GOODS AND SERVICES

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of the highest quality. All workers and subcontractors shall be skilled in their trades. CONTRACTOR guarantees all work against defects in material or workmanship for a period of one (1) year from the date of acceptance or final payment by MERC, whichever is later. All guarantees and warranties of goods furnished to CONTRACTOR or subcontractors by any manufacturer or supplier shall be deemed to run to the benefit of MERC.

ARTICLE X
OWNERSHIP OF DOCUMENTS

Unless otherwise provided herein, all documents, instruments and media of any nature produced by CONTRACTOR pursuant to this agreement are Work Products and are the property of MERC, including but not limited to: drawings, specifications, reports, scientific or theoretical modeling, electronic media, computer software created or altered specifically for the purpose of completing the Scope of Work, works of art and photographs. Unless otherwise provided herein, upon MERC request, CONTRACTOR shall promptly provide MERC with an electronic version of all Work Products that have been produced or recorded in electronic media. MERC and CONTRACTOR agree that all work Products are works made for hire and Contractor hereby conveys, transfers, and grants to MERC all rights of reproduction and the copyright to all such Work Products.

A. CONTRACTOR and subcontractors shall maintain all fiscal records relating to such contracts in accordance with generally accepted accounting principles. In addition, CONTRACTOR and subcontractors shall maintain any other records necessary to clearly document:

1. The performance of the CONTRACTOR, including but not limited to the contractor's compliance with contract plans and specifications, compliance with fair contracting and employment programs, compliance with Oregon law on the payment of wages and accelerated payment provisions; and compliance with any and all requirements imposed on the CONTRACTOR or subcontractor under the terms of the contract or subcontract;
2. Any claims arising from or relating to the performance of the CONTRACTOR or subcontractor under a public contract;
3. Any cost and pricing data relating to the contract; and
4. Payments made to all suppliers and subcontractors.

B. CONTRACTOR and subcontractors shall maintain records for the longer period of (a.) six years from the date of final completion of the contract to which the records relate or (b.) until the conclusion of any audit, controversy or litigation arising out of or related to the contract.

C. CONTRACTOR and subcontractors shall make records available to METRO, and its authorized representatives, including but not limited to the staff of any METRO department and the staff of the METRO Auditor, within the boundaries of the METRO region, at reasonable times and places regardless of whether litigation has been filed on any claims. If the records are not made available within the boundaries of METRO, the CONTRACTOR or subcontractor agrees to bear all of the costs for METRO employees, and any necessary consultants hired by METRO, including but not limited to the costs of travel, per diem sums, salary, and any other expenses that Metro incurs, in sending its employees or consultants to examine, audit, inspect, and copy those records. If the CONTRACTOR elects to have such records outside these boundaries, the costs paid by the CONTRACTOR to METRO for inspection, auditing, examining and copying those records shall not be recoverable costs in any legal proceeding.

D. CONTRACTOR and subcontractors authorize and permit METRO and its authorized representatives, including but not limited to the staff of any METRO department and the staff of the METRO Auditor, to inspect, examine, copy and audit the books and records of CONTRACTOR or subcontractor, including tax returns, financial statements, other financial documents and any documents that may be placed in escrow according to any contract requirements. METRO shall keep any such documents confidential to the extent permitted by Oregon law, subject to the provisions of section E.

E. CONTRACTOR and subcontractors agree to disclose the records requested by METRO and agree to the admission of such records as evidence in any proceeding between METRO and the CONTRACTOR or subcontractor, including, but not limited to, a court proceeding, arbitration, mediation or other alternative dispute resolution process.

F. CONTRACTOR and subcontractors agree that in the event such records disclose that METRO is owed any sum of money or establish that any portion of any claim made against Metro is not warranted, the CONTRACTOR or subcontractor shall pay all costs incurred by METRO in conducting the audit and inspection. Such costs may be withheld from any sum that is due or that becomes due from METRO.

G. Failure of the CONTRACTOR or subcontractor to keep or disclose records as required by this document or any solicitation document may result in disqualification as a bidder or proposer for future METRO contracts as provided in ORS 279B.130 and Metro Code Section 2.04.070(c), or may result in a finding that the CONTRACTOR or subcontractor is not a responsible bidder or proposer as provided in ORS 279B.110 and Metro Code Section 2.04.052.

ARTICLE XI
SUBCONTRACTORS

CONTRACTOR shall contact MERC prior to negotiating any subcontracts and CONTRACTOR shall obtain approval from MERC before entering into any subcontracts for the performance of any of the services and/or supply of any of the goods covered by this Contract.

MERC reserves the right to reasonably reject any subcontractor or supplier and no increase in the CONTRACTOR'S compensation shall result thereby. All subcontracts related to this Contract shall include the terms and conditions of this agreement. CONTRACTOR shall be fully responsible for all of its subcontractors as provided in Article IV.

ARTICLE XII
RIGHT TO WITHHOLD PAYMENTS

MERC shall have the right to withhold from payments due CONTRACTOR such sums as necessary, in MERC's sole opinion, to protect MERC against any loss, damage or claim which may result from CONTRACTOR'S performance or failure to perform under this agreement or the failure of CONTRACTOR to make proper payment to any suppliers or subcontractors. In addition for public improvement work, if a CONTRACTOR is required to file certified statements under ORS 279C.845, MERC shall retain 25 percent of any amount earned by the CONTRACTOR on the public works until the contractor has filed all required certified statements with MERC.

If a liquidated damages provision is contained in the Scope of Work and if CONTRACTOR has, in MERC's opinion, violated that provision, MERC shall have the right to withhold from payments due CONTRACTOR such sums as shall satisfy that provision. All sums withheld by MERC under this Article shall become the property of MERC and CONTRACTOR shall have no right to such sums to the extent that CONTRACTOR has breached this Contract.

ARTICLE XIII
SAFETY

If services of any nature are to be performed pursuant to this agreement, CONTRACTOR shall take all necessary precautions for the safety of employees and others in the vicinity of the services being performed and shall comply with all applicable provisions of federal, state and local safety laws and building codes, including the acquisition of any required permits.

ARTICLE XIV
FULL AND INTERGRATED AGREEMENT

This Contract represents the entire and integrated agreement between MERC and CONTRACTOR and supersedes all prior negotiations, representations or agreements, either written or oral. This Contract may be amended only by written instrument signed by both MERC and CONTRACTOR. The laws of the state of Oregon shall govern the construction and interpretation of this Contract.

ARTICLE XV
COMPLIANCE

CONTRACTOR shall comply with federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, non-discrimination, safety and health, environmental protection, waste reduction and recycling, fire protection, permits, fees and similar subjects.

ARTICLE XVI
INTERGOVERNMENTAL COOPERATIVE AGREEMENT

Pursuant to ORS 279A and the Metro public contract code, Metro participates in an Intergovernmental Cooperative Purchasing program by which other public agencies shall have the ability to purchase the goods and services under the terms and conditions of this awarded contract. Any such purchases shall be between the Contractor and the participating public agency and shall not impact the Contractor's obligation to Metro under this agreement. Any estimated purchase volumes listed herein do not include volumes for other public agencies, and Metro makes no guarantee as to their participation in any purchase. Any Contractor may decline to extend the prices and terms of this solicitation to any or all other public agencies upon execution of this contract. Unless the Contractor specifically declines to participate in the program by marking the box below, the Contractor agrees to participate in the Intergovernmental Cooperative Purchasing program. **Contractor declines to participate in the Intergovernmental Cooperative Purchasing program or is not applicable to this Contract as indicated by the following initials _____.**

ARTICLE XVII
SITUS

The situs of this Agreement is Portland, Oregon. Any litigation over this agreement shall be governed by the laws of the State of Oregon and shall be conducted in the Circuit Court of the state of Oregon for Multnomah County, or, if jurisdiction is proper, in the U.S. District Court for the District of Oregon.

ARTICLE XVIII
ASSIGNMENT

CONTRACTOR shall not assign any rights or obligations under or arising from this Contract without prior written consent from MERC.

ARTICLE XIV
SEVERABILITY

The parties agree that any provision of this Contract that is held to be illegal, invalid, or unenforceable under present or future laws shall be fully severable. The parties further agree that this Contract shall be construed and enforced as if the illegal, invalid, or unenforceable provision had never been a part of them and the remaining provisions of the Contract shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance from this Contract. Furthermore, a provision as similar to the illegal, invalid, or unenforceable provision as is possible and legal, valid and enforceable shall be automatically added to this Contract in lieu of the illegal, invalid, or unenforceable provision. Any failure by MERC to enforce a provision of the Contract is not to be construed as a waiver by MERC of this right to do so.

ARTICLE XX
COUNTERPARTS

This Contract may be executed in counterparts or multiples, any one of which will have the full force of an original.

ARTICLE XXI
GENERAL CONDITIONS

All services and materials provided by Contractor shall be of good quality, and in accordance with the Scope of Work and in compliance with the Owner's schedule. Contractor agrees to provide all labor, tools, equipment, machinery, supervision, transportation and every other item and service necessary to perform the work described in the contract documents. Contractor shall provide all services and materials necessary to complete the work in a professional manner, in compliance with applicable building codes and per industry standards and practices. Contractor agrees to comply with each and every term, condition and provision of the contract documents. Contractor may be subject to liquidated damages if work not in compliance with Contract Agreement and any and all attachments.

All work included in this Contract is subject to Prevailing Wage Laws and Rates

Contractor shall bring the Work to substantial completion by date listed in ARTICLE II - TERM OF CONTRACT, or at such date as may be extended by Change Order approved by Contractor and Owner. By executing this Contract, Contractor confirms and accepts that the Contract Time so stated is a reasonable period for performance of all of the Work. The end date of the Contract Term is intended to allow for finalization of all closeout requirements, receipt of warranties, manuals and final payment, but does not alter requirements for substantial completion of the work by the date specified. Contractor shall be liable to incur liquidated damages if not substantially complete by contract terms as per Attachment A Scope of Work.

The Oregon Convention Center (OCC) is a member of the Facility Permit Program with the City of Portland. OCC will be providing permits as necessary, with coordination from contractor. If any special inspections are required OCC shall provide them**.**

Contractor is to maintain a worksite free of hazardous work conditions and construction debris and is responsible for cover up and protection of existing equipment/building materials. Contractor is responsible for cleanliness of work areas and should plan to pick up debris created during construction. Dust control is the responsibility of the Contractor. Contractor is to coordinate work with Project Manager and building staff and be prepared to section off and sign work areas as appropriate

A facility events schedule will be provided for the duration of the work. This schedule indicates the dates and approximate shifts that are currently available and unavailable to the Contractor to perform the required work, depending on the location in the building of the scheduled event, the type of event and the work being conducted simultaneously with the event. Contractors work will be scheduled in accordance with the building's events schedule. Due to the likely possibility of additional "bookings" or cancellations of events in the building, this schedule may be modified, which may positively or negatively impact the work schedule. In the event of a schedule change, the Owner will notify the Contractor directly following the implementation of the change so that work plans may be modified accordingly. A formal project schedule is to be provided by the Contractor in accordance with the building event schedule and coordinated with the Project Manager prior to the start of any work.

Standard Public Contract

MERC CONTRACT NO. 303014

Due to the nature of the Public Events Facility Industry, it will be necessary for the contractor to work closely with the Project Manager to coordinate day-to-day logistical requirements for the benefit of the Contractor and to afford Owner staff the necessary time to perform event or non-event related functions. Contractor shall coordinate all work with MERC Project Manager and schedule his work so as to minimize any disruption to the ongoing operations of the Oregon Convention Center. Specific utilization of work areas on a day-to-day basis will be coordinated by the Project Manager or his designee and the Contractor Representative. Contractor shall not interfere with scheduled events or prohibit any tenants or clients from accessing other spaces in the building. Generally, Contractor will be able to conduct work activities at any time as long as those activities do not impact or impede events in progress by noise, dust or construction material blocking access routes to events or facilities. Loud noise can be an issue in the facility; therefore any work that may be louder than a hand drill or similar will need to be coordinated with OCC, so as to not disturb events/clients. This project may require Contractor to work "off hours" in order to complete the project in a timely manner as agreed upon with the OCC. Contractor will be working in an occupied functioning building and could expect to perform work in some areas prior to the building opening at 8:00 AM. It may be possible for the Contractor to work on weekends if the area is available and scheduled with the owner in advance and at no additional cost to the Owner. Safety for Contractor as well as general public and staff is a major concern. .

Owner will provide Contractor access to all areas as necessary to complete the work and access to on-site parking. Contractor shall be responsible for all of Contractor's equipment, tools and materials at all times, Owner shall not be held responsible for any theft

ARTICLE XXII
DELIVERY OF NOTICES

Any notice, request, demand, instruction, or any other communications to be given to any party hereunder shall be in writing, sent by registered or certified mail or fax as follows:

To Contractor: Tom Bergin
SBS Construction
PO Box 25132
Portland, OR 97298
503-608-4095 fax

To MERC: Josh Lipscomb
MERC
600 NE Grand Ave
Portland, Oregon 97232
503-797-1795 fax

CONTRACTOR

By_____

Print Name_____

Date_____

METROPOLITAN EXPOSITION RECREATION COMMISSION

By_____

Print Name_____

Date_____

Scope of Work – Attachment A

MERC Contract No. 303014

1. Purpose and Goal of Work

MERC is contracting for general contractor services for the remodeling of the original cooler/refrigeration space in the Main Kitchen at the Oregon Convention Center (OCC), located at 777 NE MLK Jr Blvd, Portland, OR 97232.

2. Description of the Scope of Work

Contractor shall provide general contracting services including, but not limited to, construction services and work from the following trades: electrical, plumbing, drywall, painting, demolition, carpentry, flooring, and construction clean-up as defined below and per Smith & Greene Company Drawing Set dated September 27, 2012 and hereto attached as *Attachment B*. The area of work is in the main kitchen on the first floor of the facility in the northeast corner.

The Owner will provide items as listed in plan documents. All equipment, materials and labor, for installing cooler walls, pre-fabricated floors, wainscot, cove base, racks and refrigeration equipment will be provided under a separate Kitchen Equipment (KEC) contract.

SCOPE OF WORK

Demolition – Remove and dispose of all existing refrigeration equipment in dry storage area and inside of existing coolers, remove and dispose of all existing cooler walls and ceilings. Removal of existing process loop piping as needed for plumbing of new equipment and demolition of existing mop sink and faucet are included in this scope. Demolition and removal of the floor in the existing freezer and meat cooler areas is included in the scope of work. Cooler floors are expected to be poured over insulation with a rat slab below. The rat slab will remain and the new floor will be installed above. Modifications to the floor will be made to move the floor drains in the dry storage area and also to expand size of the freezer area.

Remove and dispose of existing dropped ceiling in the dry storage area, lighting to be reused (Alternate #1 of RFB #13-2195 - Main Kitchen Original Cooler Remodel – General Contractor Services).

Plumbing – The process loop piping is to be installed to all refrigeration equipment. A city water supply back up is to be installed into the loop system, details are in plans. Evaporator lines and refrigerant lines are to installed by refrigeration contractor and are not provided by this contract. Three (3) floor drains in the dry storage area are to be relocated per plans. A new mop sink is to be installed in the closet area of the dry storage area.

Provide 600 lineal feet of 2" black supply and return process loop piping. Piping is located in two different mechanical areas and is approximately 10 feet above finished floor. All hangars and Victaulic clamps are reusable. Provide 20 new gaskets. (Alternate #2 of RFB #13-2195 - Main Kitchen Original Cooler Remodel – General Contractor Services).

Electrical – Electrical work is to include the installation of lighting and lighting control inside of the coolers, supply lighting above the cooler ceiling, wiring associated with the refrigeration equipment, details have been provided on page KC-3 of Attachment B. The newly created office is to have three electrical outlets and two data connections supplied. Fluorescent lighting is to be installed in the new office to match existing. Light fixtures for coolers will be provided by KEC, including the occupancy sensors. Lighting fixtures to be installed inside of cooler/freezers will be provided by Owner, all others are to be provided by Contractor. All low voltage wiring for refrigeration equipment is to be provided by the Contractor. Main breaker for compressors is located in Electrical Room 1131A Panel LPJ. Contractor is responsible for all electrical work. The existing compressor racks have a built in panel. Wiring may need to be re-fed from panel to new equipment locations.

Flooring – Finished tile floor is to be installed in all areas of damaged or removed tile. Tile is to match existing.

Drywall/Painting – Smooth finish drywall is to be installed at the new office and mop sink area. Drywall repair/modifications may be required at mop sink area and door between main kitchen and dry storage area. All affected walls must be primed and painted from corner to corner. Painting is required on affected and new walls only.

Dropped Ceiling – Ceiling is to be reused at the main kitchen area, but will require reattachment after the new box is installed.

Remove and replace existing ceiling of dry storage area. Match existing in the main kitchen area. (Alternate #1 of RFB #13-2195 - Main Kitchen Original Cooler Remodel – General Contractor Services).

Roll up doors – Installed as specified per plans. Removal of existing doors is the responsibility of the Contractor.

Fire Sprinkler – Contractor is to replace existing dry pendant heads in cooler with new, and modify existing locations to meet applicable codes. Dry storage area, if required by code, is to be modified by Contractor.

Clean up and Disposal – Upon completion of the construction, the project must be professionally cleaned and ready for use in a food service environment. Contractor is responsible for removal of all construction debris. To support the OCC's sustainability goals, materials being removed from the worksite shall be recycled and receipts provided to the MERC project manager. If recycling is not possible, then approval must be obtained from the MERC project manager for disposal.

KEC is responsible for the installation of all walls, ceilings, premanufactured floors, cooler doors, installation of refrigeration equipment, and delivery and assembly of items 4, 5, S1, S2, S3, and S4. Evaporator Controls will be provided by KEC. Wainscoting and cove base is to be provided and installed by KEC. KEC will provide and install evaporator coils and compressors, and condensate drains and refrigeration piping between evaporator coils and compressors. All other items noted in the plans and scope of work are to be provided by Contractor.

The Contractor shall comply with all OSHA regulations and guidelines and is responsible for weekly communication with the Owner regarding schedule and trade work.

Plans shall be used as reference. Contractor is responsible for all field verifications regarding measurements.

3. Clarifications

- Owner will provide 480v power to Contractor to run their equipment, if necessary in work area.
- Kitchen will be substantially, but not completely non-functioning during work. Contactor will be responsible to provide a barrier between work area and food preparation area.
- Kitchen Equipment work is anticipated to be approximately 1 week, during which time Contractor will need to work around and/or simultaneously with KEC.
- Owner will not provide any dumpster for this project. The North Loading Dock area will be available to store a drop box. A map is attached showing location and route from kitchen.
- Office 1 door frame is to match the facility standard which is a steel door and frame, 3' x 7' x 1-3/4". Door Hardware set for the office door need to be a Schlage L9050T Series, 629 bright stainless finish, L17 lever, L full face escutcheon.

4. Deliverables/Outcomes

- Contractor is to bring work to substantial completion by January 13, 2013. Contractor shall be liable to incur liquidated damages if not substantially complete by contract terms, to be assessed at no less than Five Hundred Dollars ($500.00) per day.

- Contractor is to provide three (3) sets of As-Built drawings upon project completion.

MERC Commission Meeting

January 9, 2013
12:30 pm

10.0 Action Agenda

METROPOLITAN EXPOSITION RECREATION COMMISSION

Resolution No. 13-01

For the purpose of selecting Hydrotemp Mechanical Inc. as the lowest responsive and responsible bidder in response to a Request For Bids, relating to the Portland Center for the Performing Arts (PCPA), Antoinette Hatfield Hall "Cooling Tower and Piping Replacement Project," and authorizing the General Manager to execute a contract with Hydrotemp Mechanical Inc.

WHEREAS, the existing cooling tower was installed as part of the original construction and has experienced many significant failures and is currently at the end of its useful life; and

WHEREAS, staff completed a formal solicitation of bids culminating with a bid opening on December 11, 2012; and

WHEREAS, Metropolitan Exposition Recreation Commission (MERC) staff have evaluated the bids and the lowest responsive and responsible Bidder was Hydrotemp Mechanical Inc., with a lowest base bid of $227,800; and

WHEREAS, Sections 3(B) and (D)(1) of the MERC Contracting and Purchasing Rules require MERC to select the lowest responsive and responsible bidder, approve the contract award, and approve the written contract by resolution; and

WHEREAS, the approved Capital Budget includes provisions for the AHH Cooling Tower and associated piping project estimated at $150,000 from the Renewal & Replacement Reserve; and

WHEREAS, MERC will request that the Metro Council amend the FY 2012-13 through FY 2016-17 Capital Improvement Plan to reflect a total budget of $255,000.00 for this project.

BE IT THEREFORE RESOLVED as follows:

1. MERC selects Hydrotemp Mechanical as the lowest responsive and responsible bidder in response to the Request for Bids for the PCPA, Antoinette Hatfield Hall Cooling Tower and Piping Replacement Project in the amount of $227,800;
2. MERC approves the award of a contract, in a form substantially similar to the attached Exhibit "A," to Hydrotemp Mechanical Inc.
3. MERC authorizes the General Manager to execute the contract on behalf of MERC.
4. MERC requests that Metro Council modify the FY 2012-13 through FY 2016-17 Capital Improvement Plan to reflect the increase to $255,000.00 for this project.

Passed by the Commission on January 9, 2013.

_____
Chair

_____
Secretary/Treasurer

Approved As to Form:
Alison Kean Campbell, Metro Attorney

By: _____
Nathan A. Schwartz Sykes
Senior Assistant Metro Attorney

MERC Staff Report

Agenda Item/Issue: For the purpose of selecting Hydrotemp Mechanical Inc. as the lowest responsive and responsible bidder in response to a Request For Bids, relating to the Portland Center for the Performing Arts (PCPA), Antoinette Hatfield Hall "Cooling Tower and Piping Replacement Project," and authorizing the General Manager to execute a contract with Hydrotemp Mechanical Inc.

Resolution No: 13-01 **Presented by:** Robyn Williams

Date: January 9, 2013

Background and Analysis: The existing cooling tower at the Antoinette Hatfield Hall, which was installed as part of the original building in 1984, has experienced many failures and has been repaired several times in the last few years and has now come to the end of its useful life expectancy. With the technology aging and parts no longer easy to come by, replacing the existing cooling tower is in the public's best interest and it is recommended that it be completed as soon as possible as replacement is only feasible during the upcoming winter months.

MERC Staff prepared and issued Bid Documents and a Request for Bids in accordance with MERC's Purchasing Policies for the replacement of the cooling tower. Eleven firms were solicited with eight being MWESB, two being FOTA and two being neither. MERC Staff conducted a site walk for potential bidders in which six mechanical contractors attended. One was FOTA and none were MWESB. The work consists of purchasing and replacing the current cooling tower and associated piping, controls upgrades for proper operation, pump replacement and chemical treatment. Five bids were received on December 11, 2012 and ranged from $227,800 to $319,670. None of the bids were submitted by a certified M/W/ESB contractor, one was submitted by a FOTA contractor. The lowest responsive and responsible bidder was Hydrotemp Mechanical, in the amount of Two-hundred twenty seven thousand, eight hundred & NO/100 dollars ($227,800).

Fiscal Impact: The current budget appropriates $150,000 for this project. An amendment will be presented at the February commission meeting to increase the project budget by $105,000. The additional funding requested is to provide for permits and engineering. The $105,000 will be funded from the renewal and replacement reserve. Adequate appropriations exist in the PCPA budget; however the budget amendment will provide the appropriate resource from the Renewal & Replacement Reserve.

Recommendation: Staff recommends that the Metropolitan Exposition-Recreation Commission, by Resolution No.13-01, approve the contract award and written contract (attached hereto) with Hydrotemp Mechanical , for the amount of Two-hundred twenty seven thousand , eight hundred & NO/100 dollars ($227,800) for the Cooling Tower & Piping Replacement Project at the Antoinette Hatfield Hall, and request that Metro Council modify the FY 2012-13 through FY 2016-17 Capital Improvement Plan to reflect the increase to $255,000.00 for this project.

Metro | Exposition Recreation Commission
600 NE Grand Ave., Portland, OR 97232-2736
503-797-1700

Standard Public Contract

MERC CONTRACT NO. 303018

For Public Contracts $50,000 & Above

THIS Contract is entered into between Metropolitan Exposition Recreation Commission (MERC), an appointed commission of Metro, whose address is 600 NE Grand Avenue, Portland, Oregon 97232-2736, and Hydro-Temp Mechanical, Inc., whose address is 28465 SW Boberg Rd Wilsonville, OR 97070, hereinafter referred to as the "CONTRACTOR."

THE PARTIES AGREE AS FOLLOWS:

ARTICLE I
SCOPE OF WORK

CONTRACTOR shall perform the work and/or deliver to MERC the goods described in the Scope of Work attached hereto as Attachment A. All services and goods shall be of good quality and, otherwise, in accordance with the Scope of Work.

ARTICLE II
TERM OF CONTRACT

The term of this Contract shall be for the period commencing January 16, 2013 through and including June 30, 2013, with substantial completion by April 17, 2013. This agreement may be amended or extended at MERC's sole discretion. By executing this Contract, Contractor confirms and accepts that the Contract Time so stated is a reasonable period for performance of all of the Work. The end date of the Contract Term is intended to allow for finalization of all closeout requirements, receipt of warranties, manuals and final payment, but does not alter requirements for substantial completion of the work by the date specified.

ARTICLE III
CONTRACT SUM AND TERMS OF PAYMENT

Contractor shall perform the above work for TWO HUNDRED TWENTY-SEVEN THOUSAND, EIGHT HUNDRED AND NO/100TH DOLLARS ($227,800.00). Task Based Payments as per Hydro-Temp Mechanical Task Based Payment Rates hereto attached as Attachment D.

The maximum price includes all fees, costs and expenses of whatever nature. Each of MERC's payments to Contractor shall equal the percentage of the work Contractor accomplished during the billing period. Contractor's billing invoices shall include the MERC contract number, Contractor name, remittance address, invoice date, invoice number, invoice amount, tax amount (if applicable), and an itemized statement of work performed and expenses incurred during the billing period, and will not be submitted more frequently than once a month. Contractor's billing invoices shall be sent to metroaccountspayable@oregonmetro.gov or Metro Accounts Payable, 600 NE Grand Avenue, Portland, OR 97232-2736. The MERC contract number shall be referenced in the email subject line. Contractor's invoice must breakout 5% retainage, and Contractor must submit Certified Payroll with invoices per ARTICLE XII below. Contractor's billing invoices for services through June 30 shall be submitted to MERC by July 15. Payment shall be made by MERC on a Net 30 day basis upon approval of Contractor invoice.

ARTICLE IV
LIABILITY AND INDEMNITY

CONTRACTOR is an independent contractor and assumes full responsibility for the content of its work and performance of CONTRACTOR'S labor, and assumes full responsibility for all liability for bodily injury or physical damage to person or property arising out of or related to this Contract, and shall indemnify, defend and hold harmless MERC, its agents and employees, from any and all claims, demands, damages, actions, losses, and expenses arising out of or in any way connected with its performance of this Contract. CONTRACTOR is solely responsible for paying CONTRACTOR'S subcontractors and nothing contained herein shall create or be construed to create any contractual relationship between any subcontractor(s) and MERC.

ARTICLE V
TERMINATION

MERC may terminate this Contract upon giving CONTRACTOR seven (7) days written notice. In the event of termination, CONTRACTOR shall be entitled to payment for work performed to the date of termination. MERC shall not be liable for indirect, consequential damages or any other damages. Termination by MERC will not waive any claim or remedies it may have against CONTRACTOR.

ARTICLE VI
INSURANCE & BONDS

CONTRACTOR shall purchase and maintain at the CONTRACTOR'S expense, the following types of insurance, covering the CONTRACTOR, its employees, and agents:

A. The most recently approved ISO (Insurance Services Office) Commercial General Liability policy, or its equivalent, written on an occurrence basis, with limits not less than $1,000,000 per occurrence and $1,000,000 aggregate. The policy will include coverage for bodily injury, property damage, personal injury, contractual liability, premises and products/completed operations. CONTRACTOR'S coverage will be primary as respects METRO;
B. Automobile insurance with coverage for bodily injury and property damage and with limits not less than minimum of $1,000,000 per occurrence;
C. Workers' Compensation insurance meeting Oregon statutory requirements including Employer's Liability with limits not less than $500,000 per accident or disease.

METRO, MERC, its elected officials, departments, employees, and agents shall be named as ADDITIONAL INSUREDS on Commercial General Liability and Automobile policies.

CONTRACTOR shall provide to MERC 30 days notice of any material change or policy cancellation.

CONTRACTOR shall provide MERC with a Certificate of Insurance complying with this article upon return of the CONTRACTOR signed agreement to MERC. Certificate of Insurance shall identify the MERC contract number.

CONTRACTOR shall not be required to provide the liability insurance described in this Article only if an express exclusion relieving CONTRACTOR of this requirement is contained in the Scope of Work.

In addition, for public works subject to ORS 279C.800 to 279C.870, CONTRACTOR and every subcontractor shall have a public works bond required by 2005 Oregon Laws Chapter 360 filed with the Construction Contractors Board before starting work on the project, unless exempt under Section 2 of 2005 Oregon Laws Chapter 360.

ARTICLE VII
PUBLIC CONTRACTS

All applicable provisions of ORS chapters 187 and 279A, 279B, and 279C and all other terms and conditions necessary to be inserted into public contracts in the State of Oregon, are hereby incorporated as if such provision were a part of this Agreement. Specifically, it is a condition of this contract that CONTRACTOR and all employers working under this Agreement are subject employers that will comply with ORS 656.017 as required by 1989 Oregon Laws, Chapter 684.

For public work subject to ORS 279C.800 to 279C.870, the CONTRACTOR shall pay prevailing wages. If such public work is subject both to ORS 279C.800 to 279C.870 and to 40 U.S.C. 276a, the CONTRACTOR and every subcontractor on such public work shall pay at least the higher prevailing wage. The CONTRACTOR and each subcontractor shall pay workers not less than the specified minimum hourly rate of wage in accordance with Section 7 of 2005 Oregon Laws Chapter 360. MERC shall pay an administrative fee as provided in ORS 279C.825(1) to the Bureau of Labor and Industries pursuant to the administrative rules established by the Commissioner of Labor and Industries. CONTRACTORS must promptly pay, as due, all persons supplying to such contractor labor or material used in this contract. If the CONTRACTOR or first-tier subcontractor fails, neglects, or refuses to make payment to a person furnishing labor or materials in connection with the public contract for a public improvement within 30 days after receipt of payment from the public contracting agency or a contractor, the CONTRACTOR or first-tier subcontractor shall owe the

person the amount due plus shall pay interest in accordance with ORS 279C.515. If the CONTRACTOR or first-tier subcontractor fails, neglects, or refuses to make payment, to a person furnishing labor or materials in connection with the public contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. CONTRACTOR must pay any and all contributions and amounts due to the Industrial Accident Fund from contractor or subcontractor and incurred in the performance of the contract. No liens or claims are permitted to be filed against MERC on account of any labor or material furnished. CONTRACTORS are required to pay the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

For public improvement work all CONTRACTORS must demonstrate that an employee drug-testing program is in place.

ARTICLE VIII
MODIFICATIONS

MERC may approve changes and modifications to the original contract, including deletions of work, order of additional materials, and additional services reasonably related to the original work scope. Contractor may propose changes in the work that Contractor believes are necessary, will result in higher quality work, improve safety, decrease the amount of the contract, or otherwise result in a better or more efficient work product. If such changes are approved by MERC, they shall be executed by written contract amendment signed by both parties. Such changes shall not relieve Contractor of any obligation or warranty under the contract. No oral statements by either party shall modify or affect the terms of the contract.

ARTICLE IX
QUALITY OF GOODS AND SERVICES

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of the highest quality. All workers and subcontractors shall be skilled in their trades. CONTRACTOR guarantees all work against defects in material or workmanship for a period of one (1) year from the date of acceptance or final payment by MERC, whichever is later. All guarantees and warranties of goods furnished to CONTRACTOR or subcontractors by any manufacturer or supplier shall be deemed to run to the benefit of MERC.

ARTICLE X
OWNERSHIP OF DOCUMENTS

Unless otherwise provided herein, all documents, instruments and media of any nature produced by CONTRACTOR pursuant to this agreement are Work Products and are the property of MERC, including but not limited to: drawings, specifications, reports, scientific or theoretical modeling, electronic media, computer software created or altered specifically for the purpose of completing the Scope of Work, works of art and photographs. Unless otherwise provided herein, upon MERC request, CONTRACTOR shall promptly provide MERC with an electronic version of all Work Products that have been produced or recorded in electronic media. MERC and CONTRACTOR agree that all work Products are works made for hire and Contractor hereby conveys, transfers, and grants to MERC all rights of reproduction and the copyright to all such Work Products.

A. CONTRACTOR and subcontractors shall maintain all fiscal records relating to such contracts in accordance with generally accepted accounting principles. In addition, CONTRACTOR and subcontractors shall maintain any other records necessary to clearly document:

1. The performance of the CONTRACTOR, including but not limited to the contractor's compliance with contract plans and specifications, compliance with fair contracting and employment programs, compliance with Oregon law on the payment of wages and accelerated payment provisions; and compliance with any and all requirements imposed on the CONTRACTOR or subcontractor under the terms of the contract or subcontract;
2. Any claims arising from or relating to the performance of the CONTRACTOR or subcontractor under a public contract;
3. Any cost and pricing data relating to the contract; and
4. Payments made to all suppliers and subcontractors.

B. CONTRACTOR and subcontractors shall maintain records for the longer period of (a.) six years from the date of final completion of the contract to which the records relate or (b.) until the conclusion of any audit, controversy or litigation arising out of or related to the contract.

C. CONTRACTOR and subcontractors shall make records available to METRO, and its authorized representatives, including but not limited to the staff of any METRO department and the staff of the METRO Auditor, within the boundaries of the METRO region, at reasonable times and places regardless of whether litigation has been filed on any claims. If the records are not made available within the boundaries of METRO, the CONTRACTOR or subcontractor agrees to bear all of the costs for METRO employees, and any necessary consultants hired by METRO, including but not limited to the costs of travel, per diem sums, salary, and any other expenses that Metro incurs, in sending its employees or consultants to examine, audit, inspect, and copy those records. If the CONTRACTOR elects to have such records outside these boundaries, the costs paid by the CONTRACTOR to METRO for inspection, auditing, examining and copying those records shall not be recoverable costs in any legal proceeding.

D. CONTRACTOR and subcontractors authorize and permit METRO and its authorized representatives, including but not limited to the staff of any METRO department and the staff of the METRO Auditor, to inspect, examine, copy and audit the books and records of CONTRACTOR or subcontractor, including tax returns, financial statements, other financial documents and any documents that may be placed in escrow according to any contract requirements. METRO shall keep any such documents confidential to the extent permitted by Oregon law, subject to the provisions of section E.

E. CONTRACTOR and subcontractors agree to disclose the records requested by METRO and agree to the admission of such records as evidence in any proceeding between METRO and the CONTRACTOR or subcontractor, including, but not limited to, a court proceeding, arbitration, mediation or other alternative dispute resolution process.

F. CONTRACTOR and subcontractors agree that in the event such records disclose that METRO is owed any sum of money or establish that any portion of any claim made against Metro is not warranted, the CONTRACTOR or subcontractor shall pay all costs incurred by METRO in conducting the audit and inspection. Such costs may be withheld from any sum that is due or that becomes due from METRO.

G. Failure of the CONTRACTOR or subcontractor to keep or disclose records as required by this document or any solicitation document may result in disqualification as a bidder or proposer for future METRO contracts as provided in ORS 279B.130 and Metro Code Section 2.04.070(c), or may result in a finding that the CONTRACTOR or subcontractor is not a responsible bidder or proposer as provided in ORS 279B.110 and Metro Code Section 2.04.052.

ARTICLE XI
SUBCONTRACTORS

CONTRACTOR shall contact MERC prior to negotiating any subcontracts and CONTRACTOR shall obtain approval from MERC before entering into any subcontracts for the performance of any of the services and/or supply of any of the goods covered by this Contract.

MERC reserves the right to reasonably reject any subcontractor or supplier and no increase in the CONTRACTOR'S compensation shall result thereby. All subcontracts related to this Contract shall include the terms and conditions of this agreement. CONTRACTOR shall be fully responsible for all of its subcontractors as provided in Article IV.

ARTICLE XII
RIGHT TO WITHHOLD PAYMENTS

MERC shall have the right to withhold from payments due CONTRACTOR such sums as necessary, in MERC's sole opinion, to protect MERC against any loss, damage or claim which may result from CONTRACTOR'S performance or failure to perform under this agreement or the failure of CONTRACTOR to make proper payment to any suppliers or subcontractors. In addition for public improvement work, if a CONTRACTOR is required to file certified statements under ORS 279C.845, MERC shall retain 25 percent of any amount earned by the CONTRACTOR on the public works until the contractor has filed all required certified statements with MERC.

If a liquidated damages provision is contained in the Scope of Work and if CONTRACTOR has, in MERC's opinion, violated that provision, MERC shall have the right to withhold from payments due CONTRACTOR such sums as shall satisfy that provision. All sums withheld by MERC under this Article shall become the property of MERC and CONTRACTOR shall have no right to such sums to the extent that CONTRACTOR has breached this Contract.

ARTICLE XIII
SAFETY

If services of any nature are to be performed pursuant to this agreement, CONTRACTOR shall take all necessary precautions for the safety of employees and others in the vicinity of the services being performed and shall comply with all applicable provisions of federal, state and local safety laws and building codes, including the acquisition of any required permits.

ARTICLE XIV
FULL AND INTERGRATED AGREEMENT

,This Contract represents the entire and integrated agreement between MERC and CONTRACTOR and supersedes all prior negotiations, representations or agreements, either written or oral. This Contract may be amended only by written instrument signed by both MERC and CONTRACTOR. The laws of the state of Oregon shall govern the construction and interpretation of this Contract.

ARTICLE XV
COMPLIANCE

CONTRACTOR shall comply with federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, non-discrimination, safety and health, environmental protection, waste reduction and recycling, fire protection, permits, fees and similar subjects.

ARTICLE XVI
INTERGOVERNMENTAL COOPERATIVE AGREEMENT

Pursuant to ORS 279A and the Metro public contract code, Metro participates in an Intergovernmental Cooperative Purchasing program by which other public agencies shall have the ability to purchase the goods and services under the terms and conditions of this awarded contract. Any such purchases shall be between the Contractor and the participating public agency and shall not impact the Contractor's obligation to Metro under this agreement. Any estimated purchase volumes listed herein do not include volumes for other public agencies, and Metro makes no guarantee as to their participation in any purchase. Any Contractor may decline to extend the prices and terms of this solicitation to any or all other public agencies upon execution of this contract. Unless the Contractor specifically declines to participate in the program by marking the box below, the Contractor agrees to participate in the Intergovernmental Cooperative Purchasing program. **Contractor declines to participate in the Intergovernmental Cooperative Purchasing program or is not applicable to this Contract as indicated by the following initials _____.**

ARTICLE XVII
SITUS

The situs of this Agreement is Portland, Oregon. Any litigation over this agreement shall be governed by the laws of the State of Oregon and shall be conducted in the Circuit Court of the state of Oregon for Multnomah County, or, if jurisdiction is proper, in the U.S. District Court for the District of Oregon.

ARTICLE XVIII
ASSIGNMENT

CONTRACTOR shall not assign any rights or obligations under or arising from this Contract without prior written consent from MERC.

ARTICLE XIV
SEVERABILITY

The parties agree that any provision of this Contract that is held to be illegal, invalid, or unenforceable under present or future laws shall be fully severable. The parties further agree that this Contract shall be construed and enforced as if the illegal, invalid, or unenforceable provision had never been a part of them and the remaining provisions of the Contract shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance from this Contract. Furthermore, a provision as similar to the illegal, invalid, or unenforceable provision as is possible and legal, valid and enforceable shall be automatically added to this Contract in lieu of the illegal, invalid, or unenforceable provision. Any failure by MERC to enforce a provision of the Contract is not to be construed as a waiver by MERC of this right to do so.

ARTICLE XX
COUNTERPARTS

This Contract may be executed in counterparts or multiples, any one of which will have the full force of an original.

ARTICLE XXI
GENERAL CONDITIONS

All services and materials provided by Contractor shall be of good quality, and in accordance with the Scope of Work and in compliance with the Owner's schedule. Contractor agrees to provide all labor, tools, equipment, machinery, supervision, transportation and every other item and service necessary to perform the work described in the contract documents. Contractor shall provide all services and materials necessary to complete the work in a professional manner, in compliance with applicable building codes and per industry standards and practices. Contractor agrees to comply with each and every term, condition and provision of the contract documents. Contractor may be subject to liquidated damages if work not in compliance with Contract Agreement and any and all attachments.

All work included in this Contract is subject to Prevailing Wage Laws and Rates

Contractor shall bring the Work to substantial completion by date listed in ARTICLE II - TERM OF CONTRACT, or at such date as may be extended by Change Order approved by Contractor and Owner. By executing this Contract, Contractor confirms and accepts that the Contract Time so stated is a reasonable period for performance of all of the Work. The end date of the Contract Term is intended to allow for finalization of all closeout requirements, receipt of warranties, manuals and final payment, but does not alter requirements for substantial completion of the work by the date specified. Contractor shall be liable to incur liquidated damages if not substantially complete by contract terms as per Attachment A Scope of Work

The Portland Center for the Performing Arts (PCPA) is a member of the Facility Permit Program with the City of Portland. PCPA will be providing permits as necessary, with coordination from contractor. If any special inspections are required PCPA shall provide them**.**

Contractor is Contractor is to maintain a worksite free of hazardous work conditions and construction debris and is responsible for cover up and protection of existing equipment/building materials. Contractor is responsible for cleanliness of work areas and should plan to pick up debris created during construction. Dust control is the responsibility of the Contractor. Contractor is to coordinate work with Project Manager and building staff and be prepared to section off and sign work areas as appropriate

A facility events schedule will be provided for the duration of the work. This schedule indicates the dates and approximate shifts that are currently available and unavailable to the Contractor to perform the required work, depending on the location in the building of the scheduled event, the type of event and the work being conducted simultaneously with the event. Contractors work will be scheduled in accordance with the building's events schedule. Due to the likely possibility of additional "bookings" or cancellations of events in the building, this schedule may be modified, which may positively or negatively impact the work schedule. In the event of a schedule change, the Owner will notify the Contractor directly following the implementation of the change so that work plans may be modified accordingly. A formal project schedule is to be provided by the Contractor in accordance with the building event schedule and coordinated with the Project Manager prior to the start of any work.

Standard Public Contract

MERC CONTRACT NO. 303018

Due to the nature of the Public Events Facility Industry, it will be necessary for the contractor to work closely with the Project Manager to coordinate day-to-day logistical requirements for the benefit of the Contractor and to afford Owner staff the necessary time to perform event or non-event related functions. Contractor shall coordinate all work with MERC Project Manager and schedule his work so as to minimize any disruption to the ongoing operations of the PCPA. Specific utilization of work areas on a day-to-day basis will be coordinated by the Project Manager or his designee and the Contractor Representative. Contractor shall not interfere with scheduled events or prohibit any tenants or clients from accessing other spaces in the building. Generally, Contractor will be able to conduct work activities at any time as long as those activities do not impact or impede events in progress by noise, dust or construction material blocking access routes to events or facilities. Loud noise can be an issue in the facility; therefore any work that may be louder than a hand drill or similar will need to be coordinated with PCPA, so as to not disturb events/clients. This project may require Contractor to work "off hours" in order to complete the project in a timely manner as agreed upon with PCPA. Contractor will be working in an occupied functioning building and could expect to perform work in some areas prior to the building opening at 8:00 AM. It may be possible for the Contractor to work on weekends if the area is available and scheduled with the owner in advance and at no additional cost to the Owner. Safety for Contractor as well as general public and staff is a major concern. .

Owner will provide Contractor access to all areas as necessary to complete the work and access to on-site parking. Contractor shall be responsible for all of Contractor's equipment, tools and materials at all times, Owner shall not be held responsible for any theft

ARTICLE XXII
DELIVERY OF NOTICES

Any notice, request, demand, instruction, or any other communications to be given to any party hereunder shall be in writing, sent by registered or certified mail or fax as follows:

To Contractor: Kenneth Troy
Hydro-Temp Mechanical, Inc.
28465 SW Boberg Rd
Wilsonville, OR 97070
_____ fax

To MERC: Josh Lipscomb
MERC
600 NE Grand Ave
Portland, Oregon 97232
503-797-1795 fax

CONTRACTOR

By_____

Print Name_____

Date_____

METROPOLITAN EXPOSITION RECREATION COMMISSION

By_____

Print Name_____

Date_____

600 NE Grand Ave., Portland, OR 97232-2736
503-797-1700

Scope of Work – Attachment A

MERC Contract No. 303018

1. Purpose and Goal of Work

The Antoinette Hatfield Hall (AHH), located within the Portland Center for Performing Arts (PCPA) complex, has a cooling tower that is 25 years old and is beyond its useful life. This bid is for the removal and replacement of the existing cooling tower. Antoinette Hatfield Hall is located at 1111 SW Broadway, Portland, OR 97205

2. Description of the Scope of Work

Contractor is to provide all equipment, labor and materials necessary for the removal of the existing open loop cooling tower, installation of a new closed loop cooling tower, associated piping, VFD for fan, base rail, condenser water pump impellers, chilled water pumps and VFD's, piping in pump room, water treatment/flushing and any control modifications; as defined by the attached Division 23 Specifications and R & W Engineering, Inc "PCPA Hatfield Hall Tower Replacement" drawings, dated 8/24/12, hereto attached as Attachment B and Attachment C respectively.

3. Clarifications

- To support the MERC's sustainability goals, materials being removed from the worksite shall be recycled and receipts provided to the MERC project manager. If recycling is not possible, then approval must be obtained from the MERC project manager for disposal.
- Material submittals are required before materials are ordered and must be approved by PCPA.

4. Deliverables/Outcomes

- Contractor shall have work substantially completed by April 17, 2013. Contractor shall be liable to incur liquidated damages if not substantially complete by contract terms, to be assessed at no less than One Hundred Dollars ($100.00) per day.
- Contractor is to provide one (1) set of Red Line drawings, and three (3) hard copies and one (1) electronic copy Operation and Maintenance manuals upon project completion.

DIVISION 23 MASTER MECHANICAL SPECIFICATIONS

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SECTION 23 000
GENERAL MECHANICAL PROVISIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS: Drawings and general provisions of the Contract, including General and other conditions and Division 1 - General requirements Sections apply for the work specified in this Section.

1.2 SCOPE OF WORK: The work covered by this Specification shall include furnishing all labor, materials, equipment and services to construct and install the complete mechanical system as shown on the Drawings and specified herein. Verify all conditions on the job site and lay out work accordingly.

1.3 RELATED WORK:

A. The General Provisions apply to this Division, including but not limited to:

1. Drawings and Specifications.

2. Contract Modifications, addendums and change orders.

B. Division 1, General Requirements, applies to this Division.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements:

1. All work, installations, materials and equipment shall comply with the provision of the following codes, standards and regulations, except where more stringent requirements are shown or specified:

a. State of Oregon International Mechanical Code. (IMC)
b. State of Oregon Plumbing Specialty Code. (UPC)
c. State of Oregon Structural Specialty Code. (IBC)
d. National Electrical Code. (NEC)
e. National Fire Protection Agency. (NFPA)
f. All City, County, State and Federal applicable laws and regulations.
g. Regulations and standards set forth by ASME, ASHRAE, SMACNA, AGA and ARI.

2. Should there be any direct conflict between Codes and the Drawings and Specifications, the Codes, rules and regulations shall govern.

3. Where two or more codes or regulations apply, the more stringent of the two shall be exercised.

4. Should the Documents indicate a condition, which will conflict with the Codes, the Contractor shall inform the Owner's Representative and refrain from installing that portion until resolved. Any work installed in violation of the Codes will be removed and correctly installed as part of the Contract work.

5. If the Drawings and Specifications indicate a higher quality than code, the Drawings and Specifications shall govern.
6. Electrical products shall bear the U.L. label.

B. The entire mechanical system shall operate correctly at full capacity without objectionable noise, vibration or decrease of efficiency.

C. Materials and Equipments:

1. Equipment furnished shall meet all requirements of the Drawings and Specifications and be suitable for the installation. Equipment not meeting all requirements will not be acceptable.

2. Where two or more units of the same class of equipment are furnished, use products of the same manufacturer.

3. Furnish all materials and equipment, new and of size, type and quality herein specified.

D. Workmanship:

1. Follow manufacturers' instructions. If they are in conflict with the Drawings and Specifications, obtain clarification from the Engineer prior to beginning the work.

E. Cutting and Patching:

1. Provide for cutting, patching and repairing for the installation of the work specified, including masonry work, concrete work, carpentry work and painting. Work shall be performed by skilled craftsmen of the respective trade.

1.5 DRAWINGS:

A. The Drawings and Specifications are complementary and what is called for by one shall be as if called for by both. All items shown on the Drawings are not necessarily included in the Specifications. All directives and instructions to furnish, provide, install, complete and test described in the design documents shall be interpreted as directives unless clearly specified otherwise.

B. Bring obscure or questionable items to the attention of the Owner's Representative prior to bid date. Necessary directions and explanations will be given by the Owner's Representative in Addendum Form.

C. Should the Documents indicate a condition which will conflict with the Governing Codes and Regulations, the Contractor shall refrain from installing that portion of the work until receiving verification from the Owner's Representative. Should rearrangement or rerouting of duct or piping be necessary, provide for approval the simplest layout possible for that particular potion of the work. Any work installed in violation of the Governing Codes will be removed and correctly installed by the Contractor as part of the Contract work.

D. Drawings are diagrammatic. They do not show every offset, bend, tee, or elbow which may be required to install work in the space provided. Do not scale drawings for roughing-in measurements, nor use as shop drawings. Make field measurements and prepare shop drawings as required. Coordinate work with shop drawings of other trades. Provide any bends. Offsets and elbows where required by local conditions from measurements taken at the Building (subject to approval) and without additional cost to the Project. The right is reserved to make any reasonable changes in outlet location prior to rough-in.

E. It is the intent of these specifications that the field wiring of all systems provided and modified under this contract shall be complete and operable. Refer to all drawings and specifications, especially the electrical drawings, to determine voltage, phase, circuit ampacity and number of connections indicated. Bring to the attention of the Engineer all conflicts, incompatibilities and discrepancies prior to bid.

F. Where equipment is shown, dimensions have been taken from typical equipment of the class indicated. Carefully check the Drawings to see that the equipment under consideration for installation will fit the space provided and that all connections may be made thereto without impairment of space and height requirements and of Code required clearances. Contractor is responsible for all changes required by equipment dimensions different than those shown.

G. Where equipment manufacturer and model number are listed it is the most recent and/or desired to describe function and quality of equipment to be supplied and installed. Since manufacturers may change model numbers without notification, should the model specified be unavailable, furnish and install the model number that is equal to or better than the one listed.

H. The location of all utilities, wires, conduits, pipes, duct, or other service facilities are shown in a general way only on the Drawings and are taken from existing public records. Ascertain whether any additional facilities other than those shown on the plans may be present and determine the exact location and elevations of all utilities prior to commencing installation.

I. Prior to bid, contact the local utility companies to verify requirements. Provide all material and labor by utilities.

J. The Contractor, before submitting a Bid on the work, must visit the site to become familiar with all visible existing conditions. As a result of having visited the premises, the Contractor shall be responsible for the installation of the work as it relates to such visible existing conditions. The submission of the bid will be considered an acknowledgement of the part of the Bidder of visitation to the site.

K. The owner is responsible to apply for and obtain all necessary permits, fees and inspections required by any public authority having jurisdiction. Refer to General Conditions for additional information.

1.6 SUBSTITUTION AND PRODUCT OPTIONS:

A. The use of manufacturer's names, models and numbers in the Drawings and Specifications is intended to establish style, quality, appearance and usefulness. The model numbers listed are the last available to the designer, if no longer current, substitute equipment equal to or better than that represented by the model number listed. Items noted "or equivalent" will require prior acceptance.

B. Submit for the Owner's Representative's review, manufacturer's detailed specifications and data sheets for all proposed substitutions. Submittals shall consist of a single sheet, or specific data need for consideration of approval. All pertinent data listed in the Specifications and on the Drawings shall be furnished, including all special features. See that all submittals are in proper order, and that all equipment will fit the space provided.

C. All requests for approval of substitutions for materials other than those specified must be submitted in accordance with Instruction to Bidder.

D. Substitution products from approved manufacturers do not need prior approval. Ensure substitutions meet all requirements of the Specifications.

E. All changes required due to product substitutions are the responsibility of the Contractor.

1.7 PROJECT RECORD DRAWINGS:

A. Obtain drawings from Owner.

B. Keep Drawings clean, undamaged and up to date.

C. Record and accurately indicate the following:

1. Depths, sizes and locations of all buried and concealed piping.
2. Locations of all clean-outs.
3. Changes, additions and revisions due to contract modifications.
4. Locations of tracer wire terminal points.

D. Drawings to be available for Architect review.

E. Submit as a part of Project Closeout Documents

1.8 PROJECT CONDITIONS:

A. Existing Conditions: Prior to bidding, verify and become familiar with all existing conditions by visiting the site and include all factors which may affect the execution of this work. Include all related costs in the initial bid proposal.

B. Coordinate exact requirements governed by actual job conditions. Check all information and report all discrepancies before fabrication work. Report changes in the time to avoid unnecessary work. Make changes as directed by Owner's Representative.

1.9 CONTRACT MODIFICATIONS:

A. In addition to the requirements of the General provisions, all supplemental cost proposals for this Division of work shall be accompanied by a complete itemized breakdown of labor and materials for each item. No exceptions will be made. Contract's estimating sheets for supplemental cost proposals shall be made available upon request. Labor must be separated and allocated to each item of work. Changes or additions subject to additional compensation made without written authorization based on agreed price shall be at Contractor's own risk and expense.

1.10 STORAGE AND HANDLING

A. Delivery: Deliver to project site with manufacturer's labels intact and legible.

B. Handling: Avoid damage.

C. Storage: Store material inside, protected from weather, dirt and construction dust. Where necessary to store outside, elevate well above grade and enclose with durable, waterproof wrapping.

1.11 WARRANTY:

A. Provide a written guaranty covering the work of this Division for a period of one calendar year form the data of acceptance of the entire project as required by the General Provisions.

B. Provide manufacturer's written warranties for material and equipment furnished under this Division insuring parts and labor for a period of one year from the date of acceptance of the entire project.

C. Correct warranty items promptly upon notification.

1.12 OPERATIONS AND MAINTENANCE DATA:

A. Prior to final inspection, provide three (3) copies of manufacturer's maintenance manuals for each piece of equipment or items requiring service. Manual shall include manufacturer's operation and maintenance instruction manuals and parts list for each piece of equipment or item requiring servicing. Include in the manual manufacturer's service data, wiring diagrams and parts lists for all major items of equipment, valve charts, balancing data, final control diagrams showing final set points and any additional equipment added by contract modification.

B. Submit bound in 8-1/2 x 11 inch text pages, three ring binders with durable plastic covers.

C. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

D. Internally subdivide the binder contents with permanent page dividers, logically organized with tab titling clearly printed under reinforced lamented plastic table.

1.13 SUBMITTALS:

A. Shop Drawings: The Contract Drawings indicate the general layout of the piping, ductwork and various items of equipment. Prepare and submit for review Shop Drawings of all installation not detailed on the Contract Drawings and all changes to the Contract Drawings.

B. Product Data:

1. Submit for review manufacturer's detailed shop drawings, specifications and stat sheets for all equipment to be furnished, as well as any wiring diagram showing field installed wiring and devices. Arrangement of mechanical equipment has been based on items of specific manufacturer intended as somewhat typical of several makes, which may be approved.

2. Indicate construction, capacities, accessories, etc. Manufacturer's abbreviations or codes are not acceptable.

3. List the name of the motor manufacturer for each piece of equipment.

C. Submission Requirements:

1. Shop Drawings and Product Data:
   a. Submit all equipment and product data for Work of Division 23 together in a group in a 3-ring loose-leaf binder, with each item field under a tab, and labeled with its respective speciation section number, article and paragraph, and mark if applicable.
   b. Include a complete index in the original submittal. Indicate both original items submitted and note stragglers that will be submitted at a later date to avoid delay in submitting.
   c. Additional product data submitted after return of the original binder shall include a tab similar to the originally submitted. Upon receipt of the return submittal, insert them in the previously submitted binder.
   d. Provide five (5) copies of shop drawings.
   e. Indication of unit, model, features, etc being submitted must be marked by bold arrow, bold circle or other clear means that will reproduce in black and white. Use of highlights, colored text or other colored indicators cannot be used.
2. Sample: Submit samples required by each Section of Division 23 at the same time that shop drawings and product data are submitted.

B. It shall be the Contractor's responsibility to:

1. See that all submittals are in proper order.
2. Insure that all equipment will fit in the space provided.
3. Assure that all deviation from Drawings and Specification are specifically noted and called to the attention of the Engineer/Architect/Contracting Officer in the submittals. Failure to comply will void approval automatically.
4. Deviation, discrepancies, and conflicts between the submittals and the contract documents discovered prior to or after the review process shall not relieve the Contractor of this responsibility to comply with the contract documents.

C. Electronic Submission Requirements:

1. Shop Drawings and Product Data:
   c. Submit all equipment and product data for Work of Division 15 together in a group in a single PDF format file, with each item filed behind a cover sheet, and labeled with its respective speciation section number, article and paragraph, and mark if applicable.
   d. Include a complete index in the original submittal. Indicate both original items submitted and note stragglers that will be submitted at a later date to avoid delay in submitting.
   e. Additional product data submitted after return of the original file shall include a cover sheet similar to that originally submitted. Upon receipt of the return submittal, insert them in the previously submitted electronic file.
   f. Submission of overall line or general catalog data will not be accepted, submittals must be tailored to specific model being submitted on.
   g. Indication of unit, model, features, etc being submitted must be marked by bold arrow, bold circle or other clear means that will reproduce in black and white. Use of highlights, colored text or other colored indicators cannot be used.
   h. Electronic submissions review and comment will be in electronic PDF format only. Submission in an electronic format will be considered acceptance of this review process and format.

1.2 START-UP:

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Owner's Representative seven days prior to start-up of each item.

C. Verify that each piece of equipment of system has been checked prior to start-up for proper lubrication, drive rotation, belt tension, control sequence, or other conditions, which may cause damage.

D. Verify that tests, meter readings and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Verify that wiring and support components for equipment are completed and tested.

F. Execute start-up under supervision of responsible manufacturer's representative and Contractor's personnel in accordance with manufacturer's instructions.

G. Cooling Tower: Provide the services of the manufacturer's authorized and factory trained representative to perform start-up. Contact local sales representative of the tower for pricing and factory start-up services.

1. Inspect and verify installation per manufacturer's recommendations and installation manual.

2. Provide checkout and start-up supervision and control.

3. Submit start-up report on factory check list form. Sign, date and certify report.

H. Existing Chiller: For the existing modular chiller, provide the services of the manufacturer's authorized and factory trained representative to perform start-up. Contact Dan Mitchell at Applied Systems Northwest, 360-883-3962.

1. Inspect and verify installation per manufacturer's recommendations and installation manual.

2. Provide checkout and start-up supervision and control.

3. Submit start-up report on factory check list form. Sign, date and certify report

1.3 FEES, PERMITS AND INSPECTIONS:

A. The owner will apply, pay for and obtain all permits. Owner the in partnership with City Facility Permit Program. Refer to General Conditions for additional information.

1.4 DEFINITIONS

A. "Furnish: Means to supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and similar operations.

B. "Install": Describes operations at project site including actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.

C. "Provide": Means to furnish and Install, complete and ready for intended use.

PART 2 - PRODUCTS

2.1 MATERIAL:

A. All materials and products used for construction shall be new, of the best grade, and latest products as listed in printed catalog data. All articles of a kind shall be the standard product of a single manufacturer. Trade names and manufacturers names denote a character and quality of equipment desired and shall no be construed as limiting competition.

B. Asbestos: Do not use products made of or containing asbestos.

2.2 QUALITY ASSURANCE

A. Refer to General Conditions and Division 1 for information regarding available alternatives to materials and equipment specified herein. Product listings are for informational purposes only and establish a general standard of quality.

B. Provide products which are compatible with other portions of the work and provide products with the proper and correct power and fuel burner characteristics and similar adaptations for the project.

2.3 INSPECTION:

A. All work and materials are subject to field observation at any and all times by the Owner's Representative.

B. The Contractor shall notify the Owner's Representative a minimum of two days prior to testing any piping system which must be witnessed and accepted before it is covered up or enclosed.

C. If an observer finds any material or work not conforming to these Specifications, within three days after being notified, remove the materials from the premises and replace with approved materials. If the material has been installed, the entire expense of removing and replacing shall be borne of the Contractor.

PART 3 - EXECUTION

3.1 EQUIPMENT PROTECTION

A. Keep pipe, ductwork and conduit openings closed by means of plugs or caps to prevent the entrance of foreign matter. Protect piping, conduit, ductwork, fixtures, equipment and apparatus against dirty water, chemical or mechanical damage both before and after installation. Restore damaged or contaminated fixtures, equipment or apparatus to original conditions or replace at no cost to the Owner.

B. Protect bright finished shafts, bearing housings, and similar items until in service. No rust will be permitted.

C. Cover or otherwise suitably protect equipment and materials stored on the job site.

3.2 CLEANING

A. General: Clean mechanical and plumbing equipment, fixtures, piping and ductwork of stampings and markings (except those required by codes), iron cuttings, and other refuse.

B. Painted Surfaces: Clean scratched or marred painted surfaces of rust or other foreign mater and paint with matching color industrial enamel, except as otherwise noted.

C. Before operating any equipment or systems, make thorough check to determine that systems have been flushed and cleaned as required and equipment has been properly installed, lubricated and serviced. Check factory instructions to see that installations have been made accordingly and that recommended lubricants have been used.

D. Use particular care in lubricating bearings to avoid damage by over-lubrication and blowing out seals. Check equipment for damage that may have occurred during shipment, after delivery or during installation. Repair damaged equipment as approved or replace with new equipment.

3.3 LAYOUT AND COORDINATION

A. Site Examination: Before starting work, carefully examine site and all contract Drawings so as to become thoroughly familiar with conditions governing work on this project. Verify all indicated elevations, building measurements, roughing-in dimensions and equipment locations before proceeding with any of the work.

B. Coordination:

1. Where the work must be sequenced and positioned with precision in order to fit into the available space, prepare accurate scale shop drawings showing the actual physical dimensions required for the installation and submit prior to purchase-fabrication-installation of any of the elements involved in the coordination.

2. Cooperate with other trades in furnishing material and information for sleeves, bucks, chases, mountings, backing, foundations and wiring required for installation of mechanical items.

3. Coordinate all work with other trades and determine in advance where interfacing of the mechanical work and other work are required to be connected together. Provide all materials and equipment to make those connections. Submit shop drawings showing required connections where special conditions exist.

C. Discrepancies: Report immediately any error, conflict or discrepancy in Plans, Specifications and/or existing conditions. Do not proceed with any questionable items of work until clarification of same has been made. Should rearrangement or re-routing of ducts or piping be necessary, provide for approval the simplest layout possible for that particular portion of the work.

3.4 TEMPORARY FACILITIES AND CONTROLS

A. Permanent mechanical systems' equipment utilized for temporary heating, ventilating and cooling shall be started with all controls and safeties installed and operational. Start-up shall be done by a factory approved mechanic only.

B. Owner's warranties shall not be abridged by Contractor's use of the permanent systems' equipment prior to final acceptance. Warranty period shall begin at final completion.

3.5 MECHANICAL WORK CLOSEOUT

A. General: Refer to the Division 1 sections for general closeout requirements. Calibrate all equipment requiring same.

B. Record Drawings: Submit record set of drawings.

C. Closeout Equipment/Systems Operations: Sequence operations properly so that work of project will not be damaged or endangered. Coordinate with seasonal requirements. Operate each item of equipment and each system in a test run of appropriate duration with the Architect present, and with the Owner's operating personnel present, to demonstrate sustained, satisfactory performance. Adjust and correct operations as required for proper performance. Clean and lubricate each system, and replace dirty filters, excessively worn parts and similar expendable items of the work.

D. Operation and Instruction: Provide eight (8) hours of on-site training to Owner's personnel on all mechanical systems and equipment. Training shall include maintenance, lubrication, troubleshooting and repair. Contractor shall provide necessary written manuals and training aides explaining operational diagrams, emergency and alarm provisions, sequencing requirements, seasonal provisions, security, safety and similar features of the installed system. Six (6) copies of written manuals shall be left with Owner at end of training.

END OF SECTION

SECTION 23 0500
BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Items common to more than one section of Division 15 and general construction procedures and products. Work described in this Section applies to all Sections of Division 23.

1.2 STORAGE AND HANDLING

A. Deliver materials to the project site with manufacturer's labels intact and legible. Handle materials with care to avoid damage. Store materials inside protected from weather, dirt and construction dust. Where necessary to store outside, elevate well above grade and enclose with durable, waterproof wrapping. Label equipment as soon as it arrives at job site.

1.3 SUBMITTALS

A. Submit product data under provisions of Section 23 0000 and Division 1.

B. Provide submittals for:

1. Motors.
2. Starters.
3. Piping and Equipment Identification.
4. Valve Schedule.

PART 2 - PRODUCTS

2.1 QUALITY ASSURANCE

A. Refer to Division 1 Material and Equipment for information regarding available alternatives to materials and equipment specified herein. Product listings are for informational purposes only and establish a general standard of quality.

B. Provide products which are compatible with other portions of the work and provide products with the proper and correct power and fuel burner characteristics and similar adaptations for the project.

2.2 MATERIALS

A. All materials and products used for construction shall be new, of the best grade, and the latest products as listed in printed catalog data.

B. All articles of a kind shall be the standard product of a single manufacturer.

C. Provide products which are compatible with other portions of the work and products which have the proper electrical power and fuel-burning characteristics for this project.

D. Trade names and manufacturers names denote the character and quality of equipment desired and shall not be construed as limiting competition.

2.3 ELECTRIC MOTORS

A. Enclosure Type: Open drip-proof for normal concealed indoor use, guarded where exposed to employees or occupants. Type II for outdoor use, except weather-protected Type I where adequately housed.

B. Bearings: Ball or roller bearings, and design for thrust where applicable; permanent or pressure lubricated anti-friction. Sleeve-type bearings permitted only where indicated for light-duty fractional horsepower motors.

C. Construction: General purpose, continuous duty; NEMA design “B”, except “C” for high starting torque applications.

D. Frames: For single phase motor sizes NEMA No. 48, except 56 for heavy-duty applications. NEMA “T” frames for 1 horsepower and larger polyphase motors.

E. Phases and Current: 1/3 horsepower and smaller capacitor-start single-phase; ½ horsepower and larger, squirrel-cage induction polyphase. Coordinate with actual current characteristics; specified in Division 16 and do not use 230/460 voltage motors on 208 voltage power or vise versa.

F. Service Factor: 1.35 for single-phase; 1.15 for polyphase.

G. Overload Protection: Built-in thermal with internal sensing device for stopping motor, and for signaling where indicated on single phase motors.

H. Speed: Not faster than synchronous speeds of 1800 RPM except where otherwise indicated.

I. Temperature Rating: Class B insulation, except where otherwise indicated or required for service indicated.

J. Starting Capability: As required for service indicated, but not less than 5 starts per hour.

K. Efficiency: The manufacturer’s highest efficiency motors tested under procedures recommended by NEMA Premium (IEEE Standard 112, Test Method B). Minimum 84% efficiency at 3 HP increasing to 90% above 15 HP. Submit manufacturer’s data if motor nameplate does not indicate minimum efficiency.

L. Manufacturers: Century, General Electric, Lincoln, Louis Allis, Baldor, Wagner, Westinghouse or accepted substitute. Where selection of motor manufacturer is within Contractor’s control (independent of mechanical equipment selection), provide motors produced by a single manufacturer.

M. VFD duty: Provide inverter type with shaft grounding rings.

2.4 STARTERS AND SWITCHES

A. General: Provide each motor with starter or switch as approved and recommended by manufacturer of motor or equipment of which motor is a part.

B. Magnetic Starters: Provide for ½ horsepower and larger motors, and for smaller motors on automatic control or with interlock switch. Include pilot lights, reset, trip-free relay on each phase, Hand-Off-Auto switch in cover, and devices for coordination with control system (including transformer for control circuit, verify holding coil voltage requirements with control system design). Provide automatic ambient temperature compensation for starter heaters.

C. Manual Switches: Provide on motors 1/3 horsepower and smaller except where automatic control or interlock is indicated. Include pilot light. Provide overload protection where not protected by panel board circuit breaker or fused disconnect switch.

D. Starter Characteristics: Type I general purpose enclosure with padlock ears and mounting supports. Starter type and size as recommended by motor manufacturer.

E. Manufacturers: General Electric, ITE, Allen Bradley, Cutler-Hammer, Square D or accepted substitute.

2.5 ELECTRICAL EQUIPMENT

A. Equipment Wiring: Interconnecting wiring within or on a piece of mechanical equipment shall be provided with the equipment unless required otherwise. Provide all necessary field wiring and devices from the point of connection indicated on the electrical drawings to each equipment item.

B. Control Wiring: All control wiring for mechanical equipment shall be provided under Section 23 0923 or 23 0933, Controls and Instrumentation.

C. Codes: All electrical equipment and products shall bear the U.L. and/or C.S.A. label as required by governing codes and ordinances. Refer to paragraph 1.3, Quality Assurance for definition of testing agency certification requirements.

2.6 DRIVES

A. General: "V" section belt drives, multiple as required, sized on 1.5 times installed motor horsepower. Provide variable pitch motor sheaves on all one or two belt drives and standard slide rails or approved means of adjustment for each motor with belt drive. Use standard section belts and no sheave smaller than cataloged industry standard; provide countersunk center on shaft ends to receive speed counter tip.

B. Manufacturers: Dayton, Gates, Browning, or accepted substitute.

2.7 MACHINERY GUARDS

A. Furnish guards for protection on all rotating and moving parts of equipment. Provide guards for all metal fan drives and motor pulleys, regardless of being enclosed in a metal cabinet.

B. Design guards so as not to restrict air flow at fan inlets resulting in reduced capacity.

C. Provide 2-1/2 inches diameter access opening holes in guards for easy use of tachometers at pulley centers. Guards shall be easily removable for pulley adjustment or removal and changing of belts.

D. All guards shall meet OSHA requirements including back plates.

2.8 UNIONS

A. Steel pipe union shall be 150-pound malleable iron, brass to iron seat, ground joint, black or galvanized to match pipe.

B. Copper pipe union shall be 200 psig working pressure. Bronze body. Solder ends.

C. Insulating unions shall be 250 psig working pressure. Pipe ends and material to match piping. Electric current below 1% of galvanic current. Gasket material as recommended by manufacturer. Epco or approved.

2.9 MISCELLANEOUS STEEL

A. Provide steel as required for adequate support of all mechanical equipment, angle or channel, I or H sections as required by application. Provide suitable base plates for stands and anchors for hanging equipment. Drill support holes only in flanges of structural center of length as possible. Apply on coat of black rust inhibitive enamel primer to shop fabricated items before delivery to job; other painting as specified herein. Provide shop drawings of supports especially constructed for this project. Burning of holes is not permitted.

2.10 IDENTIFICATION MARKERS

A. Pipe Markers:

1. Adhesive pipe markers of width, letter size and background color conforming to ANSI A13.1.

2. Acceptable Manufacturers: Brady B350 with banding tape. Seaton, Zeston, Porter or accepted substitute.

B. Nameplates:

1. Engraved nameplates, 1/16 inches thick, laminated 3-ply plastic, center ply white, outer ply black, letters formed by exposing center ply.

2. Size: 3 inches by 5 inches nameplates with 1/4-inch high letters.

3. Manufacturers: Lamicoid. Seaton, Brady, Zeston or accepted substitute.

C. Valve Tags:

1. 1-1/2 inches diameter, 18-gauge polished brass tags with 3/16-inch chain hole and 1/4 inch high stamped, black-filled service designation.

2. Manufacturers: Seaton Style 250-BL, Brady, Zeston or accepted substitute.

D. Lettering and Graphics:

1. Coordinate names, abbreviations and other designations used in mechanical identification work with designations shown or scheduled. Provide numbers, lettering and wording as indicated for identification of mechanical systems and equipment.

2. Multiple Systems: Where multiple systems of same name are shown provide identification which indicates individual equipment number as well as service (examples: Chiller (CH) No. 1, Chiller (CH) No. 2, Air Conditioning Unit No. 1 (AC) No. 1, Air Conditioning Unit (AC) No. 2.)

2.11 VALVE SCHEDULES

A. Schedules: Valve schedule for each piping system, typewritten and reproduced on 8-1/2 by 11-inch paper. Indicate valve number, piping system, location of valve (room or space) and normal setting (open, closed, etc.). Mark valves which are intended for emergency shutoff and similar uses by special notation. In addition to mounted copies, furnish five (5) extra copies for maintenance manuals.

PART 3 - EXECUTION

3.1 MECHANICAL EQUIPMENT WIRING

A. Provide all mechanical equipment motors, automatic temperature, limit, float and similar control devices required, with wiring complete from power source indicated on Electrical Drawings.

B. Provide properly rated motor overload and under voltage protection and all manual or automatic motor operating devices for all mechanical equipment.

C. Equipment and systems shown on the Drawings and/or specified, are based upon requirements of specific manufacturers which are intended as somewhat typical of several makes which may be approved. Provide all field wiring and/or devices necessary for a complete and operable system including controls for the actual selected equipment/system.

D. Provide all starters for mechanical motors**.** Review Electrical Specifications and Drawings to determine which mechanical motor starters will be provided under the Electrical Specification Sections and provide all others.

3.2 PAINTING

A. General: Coordinate painting of mechanical equipment and items with products and methods specified under Section 09900, Painting.

B. Painting Materials: material shall comply with Section 09900, Painting.

C. Uninsulated Piping: Paint black or galvanized uninsulated piping located buried in ground, in concrete or masonry one (1) coat acid-resisting black paint. Paint black or galvanized uninsulated piping in moist equipment rooms, crawl spaces without vapor barriers or exposed to weather one (1) coat black asphaltum varnish.

D. Iron Work: Paint hangers, rods, anchors, guides, threads of galvanized pipe, bases, supports, uncoated sheet metal and other iron work without factory finish, exposed to weather, located in moist concealed spaces and moist equipment rooms one coat acid-resisting black paint. Apply one (1) coat Dixon's Aluminum Graphite No. 209 paint over the (1) coat primer as recommended by paint manufacturer to all hot metal surfaces.

E. Sheet Metal: Apply one coat of zinc chromate to mechanical sheet metal exposed to weather, except no painting required on aluminum or stainless steel. Apply one coat of flat black paint to the inside of unlined ducts behind all grilles and registers.

F. Insulated Piping and Other Insulated Surfaces: Paint insulated piping in half-round, split tile, or other inaccessible locations, one (1) coat asphalt emulsion.

3.3 MECHANICAL SYSTEM IDENTIFICATION

A. Piping System: Indicate each pipe system by its generic name (abbreviated) as shown; except vent and drainage piping. Comply with ANSI A13.1 for marker locations, letter sizes, and colors. Include arrows to show direction of flow and "Electric Traced" signs to identify heat cable wrapped piping.

B. Valve Identification: Tag all valves with brass disc and chain. Prepare valve charts indicating valve number, size, location, function and normal position. Use no duplicate numbers in Plumbing and Heating systems. Mount glazed frames containing one set of valve charts in the building as directed.

C. Each new piece of equipment shall bear a permanently attached identification plate, listing the manufacturer’s name, capacities, sizes and characteristics. In addition to the manufacturer’s identification plate, provide nameplates of black phenolic resin laminate and identify new equipment by name and number ½” high letters.

D. Mount valve schedule(s) as directed by Owner.

3.4 ACCESSIBILITY

A. Locate valves, thermometers, cleanout fittings and other indicating equipment or specialties requiring frequent reading, adjustments, inspection, repairs and removal or replacement conveniently and accessibly with reference to the finished building.

B. Thermometers and Gages: Install thermometers and gages so as to be easily read from the floors, platforms and walkways.

3.5 INSTALLATION

A. Locating and Positioning Equipment: Comply with all Codes, Regulations and observe good common practice in locating and installing mechanical equipment and material so that completed installation presents the least possible hazard. Maintain adequate clearances for repair, service and operation to all equipment and comply with Code requirements. Set all equipment level or as recommended by manufacturer.

B. Anchorage: Anchor and/or brace all mechanical equipment, piping and ductwork to resist displacement due to seismic action, include snubbers on equipment mounted on spring isolators.

C. Adjusting: Adjust and calibrate all automatic mechanical equipment, mixing valves, flush valves, float devices, etc. Adjust flow rates at each piece of equipment or fixture.

3.6 SYSTEM ADJUSTMENT

A. Adjust and calibrate all automatic mechanical equipment, mixing valves, float devices, etc. Adjust flow rates at each piece of equipment or fixture. Open and close all shutoff and control valves several times to insure tight glands.

END OF SECTION

SECTION 23 0510
PIPE AND PIPE FITTINGS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide all pipe, piping fittings and all related components required for complete piping system. Refer to each specification section for each system (plumbing, hydronic, etc.) for pipe application.

1.2 REFERENCES

A. ANSI/ASME Sec. 9 - Welding and Brazing Qualifications.

B. ANSI/ASTM B32 - Solder Metal.

C. ANSI/AWS D1.1 - Structural Welding Code.

D. ASME - Boiler and Pressure Vessel Code.

E. ASTM A53 - Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and Seamless.

F. ASTM A120 - Pipe, Steel, Black and Hot-Dipped Zinc Coated (Galvanized), Welded and Seamless, for Ordinary Uses.

G. ASTM A536 – Ductile Iron Castings.

H. ASTM F477 - Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

I. AWS A5.8 - Brazing Filler Metal.

J. AWWA C601 - Standard Methods for the Examination of Water and Waste Water.

K. AWWA C606 – Standard Specification for Grooved and Shouldered Joints.

1.3 QUALITY ASSURANCE

A. Conform to ANSI/ASME B31.9 for pressurized system as well as all applicable codes.

B. Welding Materials and Procedures: Conform to ASME Code and applicable state labor regulations.

C. Welders Certification: In accordance with ANSI/ASME Sec 9. and ANSI/AWS D1.1.

D. All grooved joint couplings, fittings, valves, and specialties shall be the products of a single manufacturer. Grooving tools shall be of the same manufacturer as the grooved components.

E. All castings used for coupling housings, fittings, valve bodies, etc., shall be date stamped for quality assurance and traceability.

1.4 SUBMITTALS

A. Submit product data under provisions of Section 15010 and Division 1.

B. Include data on pipe materials, pipe fittings and accessories.

C. Grooved joint couplings and fittings shall be shown on drawings and product submittals, and shall be specifically identified with the applicable style or series designation.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of Section 15010.

B. Store and protect products under provisions of Section 15010 and provide factory applied end caps each length of pipe and tubes to prevent damage to pipe-ends and eliminate dirt and moisture from inside of pipes and tubes.

PART 2 - PRODUCTS

2.1 CONDENSER AND CHILLED WATER PIPING, ABOVE GROUND

A. Steel Pipe: ASTM A53 or A120, Schedule 40, black. Fittings: ANSI/ASTM B16.3, malleable iron or ASTM A234, forged steel welding type fittings. Joints: Screwed for pipe 2 inches and under, or ANSI/AWS D1.1, welded for pipe over 2 inches.

B. Copper Tubing: ASTM B88, Type L, hard drawn. Fittings: ANSI/ASTM B16.22 cast brass or ANSI/ASME B16.29 solder wrought copper. Joints: ASTM B32, Grade 95TA or ANSI/AWS A5.8, BCuP silver braze. Brazed for pipe 2 inches and over, soldered for pipe under 2 inch.

C. At contractor's option with no additional cost to owner: for sizes larger than 2 inch, cut or roll grooved black steel pipe with Victaulic Style 107 / 07 / 177 / 77 and AGS Series couplings with grade "EHP" or "E" gaskets and appropriate fittings. Type "L" copper Victaulic 'Copper-Connection' approved as optional material.

2.2 EQUIPMENT AND COOLING COIL DRAINS AND OVERFLOWS

A. Copper Tubing: ASTM B88, Type L, hard drawn. Fittings: ANSI/ASTM B16.22, cast brass, or ANSI/ASME B16.29 solder wrought copper. Joints: ASTM B32, solder, Grade 95TA or ANSI/AWS A5.8, BCuP silver braze.

1. At the contractor's option for sizes 1-1/2 inch and smaller, ANSI/ASTM B16.22, cast bronze or ANSI/ASME B16.29, wrought copper fittings with push-to-connect ends, 301 stainless steel internal components, and EPDM seals may be used for services to 200 PSI. Victaulic Permalynx.

B. At contractor's option with no additional cost to owner: for sizes larger than 2 inch, copper-tube dimensioned grooved copper tube with Victaulic style 607 installation-ready couplings with grade "EHP" gaskets and "Copper-Connection" fittings.

2.3 MISCELLANEOUS PIPING MATERIAL

A. Welding Materials: Provide welding materials as determined by the installer to comply with installation requirements. Comply with Section 2-C, ASME Boiler Code for welding materials.

B. Soldering and Brazing Materials: Provide soldering materials as determined by the installer to comply with installation requirements.

1. Tin-Antimony Solder: ASTM B32, Grade 95TA.

2. Lead-Free Solder: ASTM B32, Grade HB. Harris "Bridgit" approved.

3. Silver Solder: ASTM B32, Grade 96.5TS.

C. Gaskets for Flanged Joints: ANSI B16.21; full-faced for cast-iron flanges; raised-face for steel flanges. Pressure and temperature rating required for the service indicated.

D. Grooved Joint Lubricants: Lubricate gaskets in accordance with the manufacturer's recommendations with lubricant supplied by the coupling manufacturer that is suitable for the gasket elastomer and system media. Standard of Acceptance: Victaulic 'Vic-Lube'.

F. Sleeve Seal: Rubber-link pipe wall and casing closure. Thunderline Link-Seal. For fire rated wall, floor or ceiling penetrations, 3-M "CP-25" caulk, "No. 303" putty and/or "PSS 7904" sealing system.

2.4 FLANGES, UNIONS, AND COUPLINGS

A. Pipe Size 2 Inches and Under: 150 psig malleable iron unions for threaded ferrous piping; bronze unions for copper pipe, soldered joints.

B. Pipe Size Over 2 Inches: 150 psig forged steel slip-on flanges for ferrous piping; bronze flanges for copper piping; neoprene gaskets for gas service; 1/16 inch thick performed neoprene bonded to asbestos.

C. Grooved and Shouldered Pipe End Couplings: Two ductile iron housing clamps to engage and lock, designed to permit some angular deflection, contraction, and expansion where required; "C" shape composition sealing gasket; electroplated steel bolts, nuts, and washers; galvanized couplings for galvanized pipe.

1. Steel Piping through 12 Inches:
    a. Rigid Type: Housings shall be cast with offsetting angle-pattern bolt pads to provide rigidity and system support and hanging in accordance with ANSI B31.1 and B31.9.
        1) 2 through 8 Inches: Installation-Ready, for direct stab installation without field disassembly, with grade EHP gasket rated to +250 deg F. Victaulic Style 107.
        2) Victaulic Zero-Flex Style 07.
    b. Flexible Type: For use in locations where vibration attenuation and stress relief are required. Three flexible couplings may be used in lieu of a flexible connector. The couplings shall be placed in close proximity to the source of the vibration. Victaulic Installation-Ready Style 177 or Style 77.
2. Steel Piping 14 through 60 inches: Victaulic AGS series with lead-in chamfer on housing key and wide width FlushSeal® gasket.
    a. Rigid Type: Housing key shall fill the wedge shaped AGS groove and provide rigidity and system support and hanging in accordance with ANSI B31.1 and B31.9. Victaulic Style W07.
    b. Flexible Type: Housing key shall fit into the wedge shaped AGS groove and allow for linear and angular pipe movement. Victaulic Style W77.
3. Copper Tubing, 2 through 8 Inches: Copper-tube dimensions, housings cast with offsetting angle-pattern bolt pads to provide rigidity, Installation-Ready, for direct stab installation without field disassembly, with grade EHP gasket rated to +250 deg F. Victaulic Style 607.
    a. Flaring of tube or fitting ends to accommodate alternate sized couplings is not permitted.

D. Dielectric Connections: Union with galvanized or plated steel threaded end, grooved end, copper solder end, water impervious isolation barrier. Victaulic "Clear Flow", Epco or engineer accepted substitute.

2.5 HEAT TRACE

A. Provide UL or CSA certified, self regulating, pipe heat trace heating cable on all outside pipe exposed to outside air temperature. Provide outside air thermostat control of heat trace that turns heat trace on, only when outside temperature is below 40^0F. Submit schedule for each pipe indicating pipe size, insulation thickness, heat trace watt per foot and wrapping pitch (inches of lineal pipe for complete wrap of heat trace), based on 50^0F pipe temperature and 0^0F outside air temperature. Provide 6 watt/ft cable.

B. Acceptable Manufacturers: Raychem, Chromalox, or accepted substitute.

PART 3 - EXECUTION

3.4 PREPARATION

A. Ream pipe and tube ends. Remove burrs or bevel or groove plain end ferrous pipe.

B. Remove scale and dirt, on inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges, grooved joint couplings, or unions.

3.5 INSTALLATION

A. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

B. Route piping in orderly manner, maintain gradient and conceal all piping unless otherwise indicated.

C. Install piping to conserve building space, not to interfere with use of space or access panels and parallel with walls.

D. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Provide loops, swing joints, pinchers, runouts and spring pieces to prevent damage to piping or equipment.

1. For water systems, use adequate numbers of Victaulic Style 177/77 flexible couplings in header piping to accommodate thermal growth and contraction, and for the elimination of expansion loops. (In accordance with Victaulic instructions and as approved by the engineer.) Where expansion loops are required, use Victaulic Style 177/77 couplings on the loops.

E. Provide clearance for installation of insulation and access to valves and fittings.

F. Grooved joints shall be installed in accordance with the manufacturer's latest published installation instructions. Grooved ends shall be clean and free from indentations, projections, and roll marks in the area from pipe end to groove. Gaskets shall be of an elastomer grade suitable for the intended service, and shall be molded and produced by the coupling manufacturer. The grooved coupling manufacturer's factory trained representative shall provide on-site training for contractor's field personnel in the use of grooving tools and installation of grooved joint products. The representative shall periodically visit the jobsite and review contractor is following best recommended practices in grooved product installation. (A distributor's representative is not considered qualified to conduct the training or jobsite visit(s).)

G. Establish elevations of all heating and cooling piping to ensure minimum of 1 inch pitch for every 40 feet to low point drip or drains.

H. Unions and Flanges: At all equipment to permit dismantling and elsewhere as consistent with good installation practice.

1. Unions and flanges for dismantling are not required in installations using grooved mechanical joint couplings. (The couplings shall serve as unions and disconnect points.)

I. Tracer Wire: Provide tracer wire as close to underground non-metallic water, sanitary and storm sewers and gas pipe in the trench as possible. Tracer wire shall be accessible at grade via all services, valve and meter boxes, curb cocks, cleanouts at the building, manholes (inside the cover near the top), etc. Locate all points on the record as-installed drawings. Splice into utility tracer system where available. Comply with code requirements.

J. Expansion and Flexibility: Install all work with due regard for expansion and contraction to prevent damage to piping, ductwork, equipment, building and its contents. Provide piping offsets, loops, approved type expansion joints, anchors or other means to control piping movement and to minimize pipe forces.

1. For water systems, use adequate numbers of Victaulic Style 177/77 flexible couplings in header piping to accommodate thermal growth and contraction, and for the elimination of expansion loops. (In accordance with Victaulic instructions and as approved by the engineer.) Where expansion loops are required, use Victaulic Style 177/77 couplings on the loops.

K. Reducers and Misc Pipe Fittings: Provide and install pipe reducers and fittings as required when pipe connections are made to equipment with dissimilar connection sizes.

3.6 CLEANING

A. General: Clean all dirt and construction dust and debris from all mechanical piping systems and leave in a new condition. Touch up paint where necessary.

B. Condenser and Chilled Water Systems:

1. Use one pound of trisodium phosphate per 50 gallons in the system, or one pound of sodium carbonate for each 30 gallons in the system or one pound of sodium hydroxide (lye) for each 50 gallons in the system.

2. Fill, vent and circulate the system with this solution at design operating temperature. After circulating for four hours, drain and fill with fresh water including glycol.

3. Test for pH and add sufficient amount of the cleaning chemical to obtain a pH between 7 and 8.

4. Clean all strainers and remove start-up strainers (from suction diffusers) after the system has operated for one week.

3.7 TEST

A. General

1. Minimum duration of two hours or longer, as directed for all tests. Furnish report of test observation signed by qualified inspector. Make all tests before applying insulation, backfilling, or otherwise concealing piping or connecting fixtures or equipment. Where part of the system must be tested to avoid concealment before the entire system is complete, test that portion separately, same as for entire system.

B. Condenser and Chilled Water Piping: 75 psig hydrostatic for 30 psig systems without loss for four hours.

END OF SECTION

SECTION 23 0523
VALVES

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The requirements of this Section apply to the valving for the systems specified elsewhere in Division 23.

1.2 QUALITY ASSURANCE

A. Provide valves from a single manufacturer where possible with manufacturer's name and pressure rating marked on valve body.

B. All castings used for valve bodies shall be date stamped for quality assurance and traceability.

C. Valve size shall be the same as connecting pipe size unless otherwise noted.

D. Grooved end valves shall be of the same manufacturer as the adjoining couplings.

1.3 SUBMITTALS

A. Submit product data under provisions of Section 23 0000.

B. Include data on valves and accessories.

PART 2 - PRODUCTS

2.1 BALL, CHECK, STOP CHECK, NON SLAM CHECK, BUTTERFLY, GATE, GLOBE, LUBRICATED PLUG VALVE TYPES

A. Manufacturers: Crane, ITT, Grinnell, Hammond, Jenkins, Kennedy, Mueler, Lunkenheimer, Milwauke, Nibco, Powell, Stockham, Walworth, Legend or accepted substitute. Grooved end valves Victaulic, Gustin-Bacon or accepted substitute. Victaulic (grooved end) and Grinnell (screwed/flanged) numbers are given except as noted.

B. Condenser Water and Chilled Water System:

1. Valves 2 inches and smaller:
    a. Ball:
        1) (<230 deg. F) Victaulic Series 589 (brass body, standard port) and 569 (stainless steel body, full port), 300 psi.
        2) (<200 deg. F), Fig. 3500 (for hot water only). 125 psi, bronze body, full port.
    b. Check, Fig. 3300. Class 125, bronze body, horizontal swing.
    c. Gate, Fig. 3050. 150 psi, bronze body, non-rising stem.
    d. Globe, Fig. 3240. 150 psi, bronze body.
2. Valves 2-1/2 inches and larger:
    a. Butterfly: Stem shall be offset from the disc centerline to provide full 360-degree circumferential seating.
        1) (<250 deg. F), Victaulic MasterSeal (pressure responsive seat) / AGS-Vic300 (disc mounted seal); 300 psi ductile iron body.
        2) (<200 deg. F), Fig. 8000 (for hot water only). 150 psi, cast iron body.
    b. Check:
        1) Victaulic Series 716 (300 psi) and Series W715 (230 psi), ductile iron body, horizontal or vertical, with stainless steel spring.
        2) Fig. 6300 A. Class 125, cast iron body, horizontal swing.

c. Gate, Fig. 6020 A. Class 125, cast iron body, non-rising stem.

d. Globe, Fig. 6200 A. Class 125, cast iron body, renewable seat, bronze mounted.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide clearance for installation of insulation and access to valves and fittings.

B. Provide access where valves and fittings are not exposed. Coordinate size and location of access door with Section 23 0500.

C. Install valves with stems upright or horizontal, not inverted.

D. Provide one plug cock wrench for every five plug cocks sized 2 inches and smaller. Provide each plug cock sized 2-1/2 inches and larger with a wrench with set screw.

E. Lubricant-Seal: Select and install plug valves with lubricant-seal except where frequent usage is indicated or can be reasonably expected to occur.

F. Grooved joint valves shall be installed in accordance with the manufacturer's latest published installation instructions. The seat material shall be suitable for the intended service. The coupling manufacturer's factory-trained representative shall provide on-site training for the contractor's field personnel in the proper use of grooving tools and installation of grooved joint products. The representative shall periodically visit the job site to ensure best practices in grooved join installations are being followed. (A distributor's representative is not qualified to conduct the training.)

G. Application: Valve type and style as shown on the Drawings. Where style is not indicated, use the following:

1. Condenser/Chilled Water: Use gate valves in mechanical and/or boiler rooms and globe valves for throttling service. For temperatures up to 230 deg. F, ball and butterfly valves may be used with lever operators with infinite number of settings up to 4 inch sizes and gear operator with setting indictor on larger sizes.

2. Use non-rising stem gate valves.

END OF SECTION

SECTION 23 0593
TESTING, ADJUSTING, AND BALANCING

PART 1 - GENERAL

1.1 WORK INCLUDED

A. After completion of the work of installation, test and regulate the chilled water pumps, condenser water pumps and cooling tower to verify water flow rates shown. Note: chilled water pumps to be 300 gpm each, condenser water pumps to be 425 gpm each and cooling tower to be 825 gpm.

B. Testing, adjustment, and balancing of water systems.

C. Measurement of final operating condition of mechanical systems.

1.2 REFERENCES

A. AABC - National Standards for Field Measurement and Instrumentation, Total System Balance.

B. ASHRAE – Measurements, Instruments and Testing, Adjusting and Balancing.

C. NEBB - Procedural Standards for Testing, Balancing and Adjusting of Environmental Systems.

1.3 QUALITY ASSURANCE

A. Agency shall be company specializing in the adjusting and balancing of systems specified in this Section with minimum five years documented experience.

B. Testing, adjusting and balancing shall be performed by a firm with 10 years of experience and certified for direct digital control systems.

1.4 SUBMITTALS

A. Submit name of adjusting and balancing agency for approval within 30 days after award of Contract.

B. Submit test reports as a submittal under provisions of Section 15010.

C. Prior to commencing work, submit draft reports indicating adjusting, balancing, and equipment data required.

D. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect and for inclusion in operating and maintenance manuals.

E. Provide reports in soft cover, letter size, 3-ring binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Provide all necessary personnel, equipment and services.

2.2 REPORT FORMS

A. Submit reports on forms.

B. Forms shall include the following information:

1. Title Page:
   a. Company name.
   b. Company address.
   c. Company telephone number.
   d. Project name.
   e. Project location.
   f. Project Architect.
   g. Project Engineer.
   h. Project Contractor.
   i. Project altitude.
   j. Outdoor conditions.

2. Instrument List:
   a. Instrument.
   b. Manufacturer.
   c. Model.
   d. Serial number.
   e. Range.
   f. Calibration date.

3. Electric Motors and VFD's:
   a. Manufacturer.
   b. HP/BHP.
   c. Phase, voltage, amperage; nameplate, and actual.
   d. RPM.
   e. Service factor.
   f. Starter size, rating, heater elements.

4. V-Belt Drive:
   a. Identification/location.
   b. Required driven RPM.
   c. Driven sheave, diameter and RPM.
   d. Belt, size and quantity.
   e. Motor sheave, diameter and RPM.
   f. Center to center distance, maximum, minimum, and actual.

5. Pumps:
   a. Identification/number.
   b. Manufacturer.
   c. Size/model.
   d. Impeller.
   e. Type of service system.
   f. Design flow rate, pressure drop, BHP.
   g. Actual flow rate, pressure drop, BHP.
   h. Shut off, discharge and suction pressures.

6. Cooling Towers:
   a. Tower identification/location.
   b. Manufacturer.
   c. Model.
   d. Rated capacity.
   e. Entering air WB temperature, specified and actual.
   f. Leaving air WB, specified and actual.
   g. Ambient air DB temperature.
   h. Water temperature, entering and leaving.
   i. Water flow rate.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Before commencing work, verify that systems are complete and operable. Ensure the following:

1. Equipment is operable and in a safe and normal condition.
2. Temperature control systems are installed complete and operable.
3. Proper thermal overload protection is in place for electrical equipment.
4. Final filters are clean and in place. If required, install temporary media in addition to final filters.
5. Duct systems are clean of debris.
6. Correct fan rotation.
7. Fire and volume dampers are in place and open.
8. Coil fins have been cleaned and combed.
9. Access doors are closed and duct end caps are in place.
10. Air outlets are installed and connected.
11. Duct system leakage has been minimized.

B. Report any defects or deficiencies noted during performance of services to Architect.

C. Promptly report abnormal conditions in mechanical systems or conditions which prevent system balance.

D. If, for design reasons, system cannot be properly balanced, report as soon as observed.

E. Beginning of work means acceptance of existing conditions.

3.2 PREPARATION

A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Architect to facilitate spot checks during testing.

B. Provide additional balancing devices as required.

3.3 INSTALLATION TOLERANCES

A. Adjust air handling systems to plus or minus 5 percent for supply, return and exhaust systems from figures indicated.

B. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.

C. At final inspection, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by the Owner.

3.4 ADJUSTING

A. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.

B. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.

C. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.

3.5 WATER SYSTEM PROCEDURES

A. Adjust water systems to provide required or design quantities. Use calibrated orifices or other metered fittings and pressure gauges to determine flow rates for system balance.

B. Adjust systems to provide specified pressure drops and flows through heat transfer elements. Perform balancing by measurement of temperature differential.

C. Effect system balance with automatic control valves fully open.

D. Effect adjustment of water distribution systems by means of balancing valves, valves and fittings. Do not use service or shutoff valves for balancing.

3.6 VERIFICATION OF CONTRACTOR'S PERFORMANCE

A. Balancing data may be spot checked with instruments similar to that used by the balancing firm.

B. If there are discrepancies between balancing data and spot check data, readjust and rebalance the systems at no additional project cost.

END OF SECTION

SECTION 23 0700
MECHANICAL INSULATION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide piping, ductwork and equipment insulation including jacketing, adhesive and all related accessories for complete insulated system.

1.2 QUALITY ASSURANCE

A. Applicator: Company specializing in piping insulation application with three years minimum experience.

B. Insulation, Jacket and all Related Materials: Flame spread rating of 25 and smoke developed rating of 50.

C. Codes: Comply with all applicable codes.

D. Installation: Install in accordance with Manufacturer's recommendations.

E. Prohibited substances: The following substances are prohibited in the State of Oregon for use in manufacturing duct insulation, wraps, or covers and pipe insulation, wraps or covers. Products containing these substances are not allowed for use.

1. Pentabrominated diphenyl ether CAS#32534-81-9.
2. Octobrominated diphenyl ether CAS#32536-52-0.
3. Decabrominated diphenyl ether CAS#1163-19-5.

1.3 SUBMITTALS

A. Submit product data and installation instructions under provisions of Section 23 0000.

B. Include product description, list of materials and thickness for each service, and locations.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver product to site under provisions of Section 23 0000.

B. Store and protect product under provisions of Section 23 0000.

C. Store insulation in original shipping container with labeling in place. Do not install damaged insulation.

1.5 FIRE HAZARD CLASSIFICATION

A. Maximum fire hazard classification of the composite insulation to be not more than a flame spread of 25, fuel contributed of 50 and smoke developed of 50 as tested by ASTM E84, NFPA 255 and UL 723 method.

B. Test pipe insulation in accordance with the requirements of UL “Pipe and Equipment Coverings R5583 400 8.15.”, ASTM C1136 and ASTM C547.

C. Test duct insulation in accordance with ASTM E84 and ASTM C1071 and bear the UL label.

1.6 LINING MATERIALS

A. Materials to be mold, humidity, and erosion resistant surface to meet the requirements of UL 181.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Insulating Manufacturers: Johns Manville, Knauf, Armstrong, Owens-Corning, Certain Teed or accepted substitute.

B. Adhesive Manufacturers: Benjamin Foster, 3M, Borden, Kingco or Armstrong.

2.2 PIPING INSULATION, JACKETING AND ACCESSORIES

A. Fiberglass Pipe Insulation:

1. Fiberglass™ Evolution™ Paper-free ASJ Pipe Insulation.

2. Pipe system to minus 10 to 55 deg. F: Flexible, preformed, pre-slit, self-sealing elastomeric, thermal conductivity of 0.27 Btu/hr. sq. ft./in. at 75 deg. F and vapor transmission rating of 0.2 perms/inch. Apply in thickness necessary to prevent condensation on the surface.

3. Piping Systems 55 to 600 deg. F: Glass fiber preformed pipe insulation with a minimum K-value of 0.23 at 75 deg. F, a minimum density of 3.5 pounds per cubic foot.

B. Heat Tracing Protection: Provide heat trace on piping subject to freezing. Provide electrical connections. Chromalox or approved self-regulating type with 15AWG copper wires, semi-conductive polymer core and flame retardant jacket. Provide power connection kit, thermostat and all devices required for proper operation.

C. Jackets:

1. Interior Applications:

a. Vapor Barrier Jackets: Kraft reinforced foil or vinyl vapor barrier with self-sealing adhesive joints or pressure sensitive seal.

b. PVC Jackets: One piece, premolded type. "

D. Exterior Applications:

1. Aluminum Jackets: ASTM B209; 0.016 inch thick; smooth finish.

E. Accessories:

1. Insulation Bands: 3/4 inch wide; 16 gauge stainless steel.

2. Metal Jacket Bands: 0.25 thick stainless steel.

3. Insulating Cement: ANSI/ASTM C195; hydraulic setting mineral wool.

4. Finishing Cement: ASTM C449.

5. Fibrous Glass Cloth: Untreated; 9 oz/sq yd (305 g/sq m) weight.

PART 3 - EXECUTION

3.1 PREPARATION

A. Install materials after piping, ductwork and equipment has been tested and approved.

3.2 PIPING INSULATION INSTALLATION

A. Install materials in accordance with manufacturer's instructions.

B. Continue insulation with vapor barrier through penetrations.

C. In exposed piping, locate insulation and cover seams in least visible locations.

D. Provide an insert, not less than 6 inches long, of same thickness and contour as adjoining insulation, between support shield and piping, but under the finish jacket, on piping 2 inches diameter or larger, to prevent insulation from sagging at support points. Inserts shall be cork or other heavy density insulating material suitable for the planned temperature range. Factory fabricated inserts may be used.

E. Neatly finish insulation at supports, protrusions, and interruptions.

F. Jackets:

1. Indoor Applications: Insulated pipes conveying fluids above ambient temperature shall have standard jackets, with vapor barrier, factory-applied or field applied. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe, and finish with glass cloth and adhesive.

2. Exterior Applications: Provide vapor barrier jackets. Cover with aluminum jacket with seams located on bottom side of horizontal piping. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe, and finish with glass mesh reinforced vapor barrier cement.

G. Piping Insulation Schedule:

PIPING	PIPE SIZE	INSULATION
Chilled Water Supply and Return	2" and Smaller	1” fiberglass
	2-1/2" and Larger	1-1/2” fiberglass

H. Pipe Fittings:

1. Insulate and finish all fittings including valve bodies, bonnets, unions, flanges and expansion joints with precut fiberglass insulation and preformed PVC covers sealed to adjacent insulation jacket for continuous vapor barrier covering over all fittings.

I. Piping Insulation Lap Seams and Butt Joints: Install insulation jacket in accordance with manufacturer's recommendation. Where jacket joint and lap seams have not adhered, remove affected section of insulation and reinstall.

J. Heat Tracing: Where electric heat tape is to be installed on piping, insulate over the tape.

3.3 INSULATION SHIELDS

A. Provide full size diameter hangers and shields (18 gauge minimum) for all cold piping.

END OF SECTION

SECTION 23 0933
CONTROLS

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

A. Connect to and extend the existing Siemens control system. All new devices, controllers and equipment to be BACnet compliant and be configured to operate in an open and unlocked mode.

B. Wiring: Shall be as required for a complete operating control system, per state and National Electric Code. Provide necessary relays, transformers, fusing, switches and pilot lights. Interlocks and control power from nearest panel.

PART 2 - PRODUCTS

2.1 Provide an APOGEE Facility Management System complete with installation, programming and engineering, cabling, equipment, commissioning and start-up.

2.2 Wiring to include all low voltage control wiring from new and existing controllers and control devices to equipment. Wiring in fan rooms, mechanical rooms and exterior applications to be in conduit.

2.3 Modify Siemens APOGEE front end to represent the installation of new devices, points and equipment, program graphics, trending and alarming per owner requirements.

2.4 Modify Siemens PPCL to reflect the modification of sequence of operations and installation of new devices, points and equipment.

2 EXECUTION

2.3 SEQUENCE OF OPERATION

2.3.1 Cooling Tower: Control condenser water leaving temperature to 85F (adjustable). Control via MS/TP for fan, fan VFD and tower pump to maintain setpoint. Provide points for fan and VFD start/stop, VFD speed, status and alarm. Tower pump to operate from integral tower controls set by water temperature. Tower manufacturer to provide all devices integral tounit to modulate and operate pump. Provide condenser water pressure differential sensor and points for setpoint, actual setting, high alarm and low alarm. Provide new, or utilize existing if available, connection ports in piping for control devices.

2.3.2 Chilled Water Pumps: Pumps to operate on call for cooling from system or on a timed schedule (adjustable). Provide points for pumps and VFD start/stop, VFD speed, status and alarm.

2.3.3 Existing Condenser Water Pumps: Pumps to operate when tower is in operation or on a timed schedule (adjustable). Provide points for pumps and VFD start/stop, VFD speed, status and alarm.

END OF SECTION

SECTION 23 2100
HYDRONIC SYSTEMS

PART 1 - GENERAL

1.1 DESCRIPTION

A. The requirements of this section apply to the Heating and Cooling Equipment.

1.2 SUBMITTALS

A. Submit in accord with Section Division 1 and 23 0000, Submittals.

B. Submit catalog data, construction details, performance characteristics for each type and size of equipment.

C. Shop Drawings: Prove cooling towers and pumps will fit space allocated. Submit complete shop drawings and/or technical brochures of all work prior to fabrication. Indicate size, design, dimensional and capacity characteristics, structural supports required and component parts. Also submit with shop drawings all equipment wiring and control diagrams, installation instructions.

D. Submit operating and maintenance data.

E. Provide submittals for the following:

1. Cooling Towers.
2. Pumps.
3. Hydronic Specialties.
4. Water treatment.
5. Variable Frequency Drives

1.3 QUALITY ASSURANCE

A. Acceptable Manufacturers: standard, nationally recognized manufacturers of products listed by ANSI or ASTM quality standards as specified or approved.

B. Labels: Underwriters Laboratories (UL) labeled or certification by a nationally recognized electrical testing laboratory having the facilities for testing, factory inspection and field inspection as required by the National Electrical Code is required for all fans, controls, all electrically-operated equipment and other electrical items incidental to the work specified, as required by code.

C. Air Conditioning and Refrigeration Equipment Rating: Rated in accordance with ARI certified rating procedures and bear the ARI label.

D. Codes: Comply with applicable sections of the State Mechanical Code. Comply with National Electrical Code (NEC), State of Oregon modifications to the NEC, and all local ordinances applicable to electrical wiring, contacts, controls, etc., included with or contained within manufactured items.

E. Field Wiring: It is the intent of these specifications that all systems shall be complete and operable. Refer to all drawings and specifications, especially the electrical drawings, to determine voltage, phase, circuit ampacity and number of connections provided. Provide all necessary field wiring and devices from the point of connection indicated on the electrical drawings. Bring to the attention of the Architect in writing, all conflicts, incompatibilities, and/or discrepancies prior to bid or as soon as discovered. Comply with requirements of Section 15010, Field Wiring requirements.

F. Installation Contractor: Manufacturer's authorized installation and start-up agency normally engaged and experienced in air conditioning/refrigeration work.

1.4 DELIVERY, STORAGE AND HANDLING

A. Handle piping and equipment carefully to prevent damage. Store in area protected from weather, moisture and possible damage at all times prior to installation.

B. Seal all openings in pipes and/or pipe connecting fittings with caps or plugs, as required to prevent entry of foreign matter.

C. Comply with all manufacturers installation instructions.

PART 2 - PRODUCTS

2.1 SPECIALTIES AND EQUIPMENT

A. Air Vents:

1. Manual Air Vents: Install at all system high points whether shown or not; fabricate of 2" diameter or larger pipe at least 12" long. Manually operated.

2. Automatic Air Vents: float type with pressure rating equal or greater than system pressure.

3. Manufacturers: Bell & Gossett, Armstrong, Hoffman, Spirotherm or approved substitute.

B. Thermometers:

1. Non-mercury type, adjustable stem, separable sockets, 0-120^{0}F range for chilled water, 30-240^{0}F range for heating water (unless indicted otherwise). Weiss numbers are listed, equivalent Marshalltown, Palmer, Taylor, Trerice, Weksler or accepted substitute.

2. Wide case 9" in equipment rooms and all major equipment items.

3. Narrow case 7" in all other locations.

C. Pressure Gauges: Install on discharge of all pumps and where shown on Drawings 4-1/2" dial, 0-100 psig graduation pressure gauges with Ashcroft No. 1106 pulsation dampers and stop cocks. Weiss UGE-1 or equivalent Marshalltown, Ashcroft, Marsh, Trerice, Weksler.

D. Pressure-Temperature Test Plugs:

1. 1/4" or 1/2" NPT fitting of solid brass capable of receiving either an 1/8" OD pressure or temperature probe and rated for zero leakage from vacuum to 1000 psig. Neoprene valve core for temperatures to 200 deg. F. Nordel to 350 deg. F. Provide each test plug with a pressure gauge adapter with 1/16" or 1/8" OD pressure probe.

2. Furnish a test kit containing one 2-1/2" dial pressure test gauge of suitable range, one gauge adapter with 1/16" or 1/8" OD probe and two 5" stem pocket test thermometers - one 0 to 220 deg. F and one 50 to 550 deg. F. Turn the kit over to the Architect. The system balancing firm may use this kit to complete the balancing.

3. Sisco "P/T Plugs," Peterson "Pete's Plug," or accepted substitute.

2.2 BASE MOUNTED (END SUCTION) PUMPS

A. Overhung impeller type with top or end suction and top discharge connection. Shaft shall be heat treated, carbon steel with shaft sleeves keyed to shaft longitudinally and supported on ball bearings capable of carrying radial and thrust loads in either direction. Impellers single suction, closed type, cast in one piece. Pumps directly connected to motor through flexible coupling. Pump and motor shall be mounted on common steel or cast iron base plates. Armstrong base bid. Paco, Taco, B&G accepted as alternate substitute. List alternate manufacturer and deductive price on bid form.

2.3 SUCTION DIFFUSER

B. Provide at each pump inlet where indicated, a suction diffuser size as required for pump and piping. Diffuser shall consist of angle type body rated for 175 psi and 250 degrees F temperature and pressure, with inlet vanes, combination diffuser-strainer-orifice cylinder, removable permanent magnet in flow stream, disposable start up strainer, adjustable support foot, pressure gage tapping and strainer blowdown tapping. Strainer cylinder with 3/16" diameter openings, free area equal to five times cross sectional area of pump connection, designed to withstand pressure differential equal to pump shutoff head, and easily removed through end flange equipped with reusable ring seal. Vane length shall be no less than 2-1/2 times pump connection diameter. Armstrong, base bid.

2.4 CLOSED CIRCUIT COOLING TOWER

A. Furnish and install as shown on the Drawings, factory assembled closed circuit cooler of counterflow blow-through design with single side air entry. Fan assemblies to be built into the pan, with all moving parts aligned.

B. All steel components made from hot dipped galvanized steel, final coating of zinc chromated aluminum applied to the unit after assembly.

C. Pan/Fan Section:

1. The combination pan/fan section constructed of heavy gauge hot dip galvanized steel. The fans and motors located in the dry entering airstream.

2. Standard panel accessories include circular access doors, large area lift-out hot dip galvanized steel strainer or anti-vortexing design, waste water bleed line with valve and brass make-up valve with large diameter plastic float.

D. Fan: Forward curved epoxy coated centrifugal fans statically and dynamically balanced. Fan housings curved inlet rings and rectangular discharge cowls extend into the pan. Fans mounted on a steel fan shaft supported by heavy duty, grease-packed self-aligning, relubricatable ball bearings with cast iron housings.

E. Fan Motor and Drive: Dripproof ball bearing fan motor with 1.15 service factor. Motors suitable for indoor service. Each motor located in a protective enclosure on a heavy duty motor base. V-belt fan drive designed for not less than 150 percent of motor nameplate horsepower. Drive and all moving parts protected by removable hot dip galvanized screens and panels.

F. Coil Section:

1. Encase heat transfer section of the cooler with hot dip galvanized steel panels and the section removable from the pan.

2. All prime surface steel cooler coil, tested at 350 PSIG air pressure under water and hot dip galvanized after fabrication. Design the coil for low pressure drop with sloping tubes for free drainage of the fluid.

G. Water Distribution System: Water distributed uniformly over the coils at a flow rate of not less 4.5 GPM psf of coil cross section. The system consists of hot dip galvanized steel header and spray branched with plastic distribution nozzles.

H. Water Recirculating Pumps: A close-coupled, bronze fitted centrifugal pump equipped with a mechanical seal, mounted on the pan and completely piped to the suction strainer and water distribution system. Install it vertically so that it will drain freely when the pan is drained.

I. Eliminators: Construct eliminators or PVC and be removable in easily handled sections. They have a minimum of three changes in air direction with a hooked leaving edge and directly discharges air away from the fans.

J. Discharge hood: Provide discharge hood with positive closing dampers.

K. Capacity Control: Provide capacity control dampers complete with control package.

L. Units to be a minimum or 12 “outrigger” type spring isolators so that the bottom ot the unit is 2-inches above the floor when operating.

M. Manufacturers: Baltimore Air Coil to be base bid. Evapco is an approved substitute if tower will match the physical dimensions and weight.

N. Options

1. Internal Walkway
2. Intake Screens
3. Internal Access
4. Spring Isolators
5. Factory Supplied NEMA 3 ventilated Control Panel. Panel to house all controls. Panel to house VFD for fan. Panel to house space to house future "Dolphin" control package.

2.5 VARIABLE FREQUENCY DRIVES

A. Variable frequency drives (VFD's): shall be solid state, with a Pulse Width Modulated (PWM) output waveform in a NEMA 1 enclosure, completely assembled and tested by the manufacturer. The VFD shall employ a full wave rectifier (to prevent input line notching, DC line reactor, capacitors, and insulated gate bipolar transistors (IGBT's) as the output switching device. Drive efficiency shall be 97% or better at full speed and full load. Fundamental power factor shall be 0.98 at all speeds and loads. Drive shall be designed specifically for variable torque applications. Drive manufacturer shall have an existing local sales representative with expertise in HVAC systems and controls, and local service organization. Drive and all necessary controls, as herein specified shall be supplied by the drive manufacturer. Manufacturer shall have been engaged in the production of this type of equipment for a minimum of ten years.

1. Referenced Standards:
   a. Institute of Electrical and Electronic Engineers (IEEE), Standard 519-1992, IEEE Guide for Harmonic Content and Control.
   b. Underwriter's Laboratories, UL 508.
   c. National Electrical manufacturer's Association (NEMA), ISC 6, Enclosures for Industrial Controls and Systems.
2. All printed circuit boards shall be completely tested and burned-in before being assembled into the completed VFD. The VFD shall then be subject to a preliminary functional test, minimum eight hour burn-in, and computerized final test. The burn-in shall be at 104^{o}F (40^{o}C), at full rated load, or cycled load. Drive input power shall be continuously cycled for maximum stress and thermal variation.
3. All VFD's shall have the following standard features:
   a. All VFD's shall have the same digital display, keypad and customer connections, regardless of horsepower rating. Keypad to be used for local control, for setting all parameters, and for stepping through the displays and menus.
   b. VFD shall give user the option of either (1) displaying a fault, (2) running at a programmable preset speed, (3) hold the VFD speed based on the last reference received, or (4) cause a warning to be issued, if the input reference (4-20mA or 2-10V) is lost; AFT shall provide a programmable relay output for customer use to indicate loss of reference condition.
   c. VFD's shall utilize plain English digital display (code numbers and letters are not acceptable). Digital display shall be a 40-character (2 line x 20 characters/line) LCD display. LCD shall be backlit to provide easy viewing in any light condition. Contrast should be adjustable to optimize viewing at any angle. All set-up parameters, indications, faults, warnings and other information must be displayed in words to allow user to understand what is being displayed without use of a manual or cross-reference table.

d. VFD's shall utilize pre-programmed application macros specifically designed to facilitate start-up. Application macros shall provide one command to reprogram all parameters and customer interfaces for a particular application to reduce programming time.

e. VFD shall have the ability to automatically restart after an overcurrent, overvoltage, undervoltage, or loss of input signal protective trip. Number of restart attempts, trial time, and time between reset attempts shall be programmable. If time between reset attempts is greater than zero, time remaining until reset occurs shall count down on the display to warn an operator that a restart will occur.

f. VFD shall be capable of starting into a rotating load (forward or reverse) and accelerate or decelerate to setpoint without safety tripping or component damage (flying start).

g. VFD shall be equipped with an automatic extended power loss ride-through circuit which will utilize inertia of the load to keep drive powered. Minimum power loss ride-through shall be one-cycle, based on full load an no inertia. Removing power from motor is not an acceptable method of increasing power loss ride-through.

h. Customer terminal strip shall be isolated from line and ground.

i. Prewired 3-position Hand-Off-Auto switch and speed potentiometer. When in "Hand", the VFD will be started, and the speed will be controlled from the speed potentiometer. When in "Off", the VFD will be stopped. When in "Auto", the VFD will start via an external contact closure, and its speed will be controlled via an external speed reference.

j. VFD shall employ three current limit circuits to provide trip free operation:
    1) Slow current regulation limit circuit shall be adjustable to 125% (minimum) of VFD's variable torque current rating. This adjustment shall be made via the keypad, and shall be displayed in actual amps, and not as percent of full load.
    2) Rapid current regulation limit shall be adjustable to 170% (minimum) of VFD's variable torque current rating.
    3) Current switch-off limit shall be fixed at 255% (minimum, instantaneous) of VFD's variable torque current rating.

k. Overload rating of VFD shall be 110% of its variable torque current rating for 1 minute every 10 minutes, and 140% of its variable torque current rating for 2 seconds every 15 seconds.

l. VFD shall have input line fuses standard in the drive enclosure.

m. VFD shall have a DC line reactor to reduce harmonics to the power line and to increase the fundamental power factor.

n. VFD shall be optimized for a 3 kHz carrier frequency to reduce motor noise and provide high system efficiency. Carrier frequency shall be adjustable by the start-up engineer.

o. VFD shall have a manual speed potentiometer in addition to using the keypad as a means of controlling speed manually.

4. All VFD's shall have the following adjustments:

a. Five (5) programmable critical frequency lockout ranges to prevent the VFD from continuously operating at an unstable speed.

b. PI setpoint controller shall be standard in the drive, allowing a pressure or flow signal to be connected to the VFD, using the microprocessor in the VFD for the closed loop control.

c. Two (2) programmable analog inputs shall accept a current or voltage signal for speed reference, or for reference and actual (feedback) signals for PI controller. Analog inputs shall include a filter, programmable from 0.01 to 10 seconds to remove any oscillation in the input signal. Minimum and maximum values (gain and offset) shall be adjustable within the range of 0-20 mA and 0-10 volts. Additionally, the reference must be able to be scaled so that maximum reference can represent a frequency less than 60 Hz, without lowering drive maximum frequency below 60 Hz.

d. Six (6) programmable digital inputs for maximum flexibility in interfacing with external devices. One digital input is to be utilized as a customer safety connection point for fire, freeze, and smoke interlocks (Enable). Upon remote, customer reset (reclosure of interlock), drive is to resume normal operation.

e. Two (2) programmable analog outputs proportional to frequency, motor speed, output voltage, output current, motor torque, motor power (kW), DC bus voltage, or active reference.

f. Three (3) programmable digital relay outputs. The relays shall be rated for maximum switching current 8 amps at 24 VDC and 0.4 amps at 250 VAC; Maximum voltage 300 VDC and 250 VAC; continuous current rating 2 amps RMS. Outputs must be true from C type contacts; open collector outputs are not acceptable.

g. Seven (7) programmable preset speeds.

h. Two independently adjustable accel and decel ramps. These ramp times shall be adjustable from 1 to 1800 seconds.

i. VFD shall have ramp or coast to a stop, as selected by the user.

5. The following operating information displays shall be standard on the VFD digital display. Display shall be in complete English words (alpha-numeric codes are not acceptable).
   a. Output frequency
   b. Motor speed (RPM, % or engineering units)
   c. Motor current
   d. Calculated motor torque
   e. Calculated motor power
   f. DC bus voltage
   g. Output voltage
   h. Heatsink temperature
   i. Analog input values
   j. Keypad reference values
   k. Elapsed time meter
   l. kWh meter
6. VFD shall have the following protection circuits. In the case of a protective trip, drive shall stop, and announce the fault condition in complete words (alpha-numeric codes are not acceptable).
   a. Overcurrent trip 315% instantaneous (225% RMS) of the VFD's variable torque current rating.
   b. Overvoltage trip 130% of the VFD's rated voltage
   c. Undervoltage trip 65% of the VFD's rated voltage
   d. Overtemperature +70^{o}C (ACH 501); +85^{o}C (ACH 502)
   e. Ground fault either running or at start
   f. Adaptable electronic motor overload (I^2t). The electronic motor overload protection shall protect motor based on speed, load curve, and external fan parameter. Circuits which are not speed dependant are unacceptable. The electronic motor overload protection shall be UL listed for this function.
7. Speed command input shall e via:
   a. Keypad.
   b. Two analog inputs, each capable of accepting a 0-20 mA, 4-20 mA, 0-10V, 2-10V signal. Input shall be isolated from ground, and programmable via the keypad for different uses.
   c. Floating point input shall accept a three-wire input from a Dwyer Photohelic (or equivalent type) instrument.
8. Serial Communications:
   a. VFD shall have an RS-405 port as standard.
   b. VFD shall be able to communicate with PLC's, DCS's. and DDC's.
   c. Serial communication capabilities shall include, but not be limited to, run-stop control, speed set adjustment, proportional/integral PI controller adjustments, current limit, and accel/decel time adjustments. Drive shall have the capability of allowing DDC to monitor feedback such as output speed/frequency, current (in amps), % torque, % power, kilowatt hours, relay outputs, and diagnostic fault information.

9. Accessories to be furnished and mounted by drive manufacturer:
    a. Customer interlock terminal strip - provide a separate terminal strip for connection of freeze, fire, smoke contacts, and external start command. All external interlocks and start/stop contacts shall remain fully functional whether the drive is in Hand, Auto or Bypass.
    b. All wires to be individually numbered at both ends for ease of troubleshooting.
    c. Door interlocked thermal magnetic circuit breaker which will disconnect all input power from the drive and all internally mounted options. The disconnect handle shall be thru-the-door type, and be padlockable in the "Off" position.
10. VFD's shall be UL listed or CSA approved.
11. Submittals shall include the following information:
    a. Outline dimensions.
    b. Weight.
    c. Typical efficiency vs. speed graph for variable torque load.
    d. Compliance to IEEE 519 - Harmonic analysis for particular jobsite including total voltage harmonic distortion and total current distortion.
        1) VFD manufacturer shall provide calculations, specific to this installation, showing total harmonic voltage distortion is less than 5%. Input line filters shall be sized and provided as required by VFD manufacturer to ensure compliance with IEEE standard 519-1992, Guide for Harmonic Control and Reactive Compensation for Static Power Converters. Acceptance of this calculation must be completed prior to VFD installation.
        2) Prior to installation, VFD manufacturer shall provide estimated total harmonic distortion (thd) caused by the VFD's. results shall be based on a computer aided circuit simulation of total actual system, with information obtained from power provider and user.
        3) If voltage THD exceeds 5%, VFD manufacturer is to recommend additional equipment required to reduce the voltage THD to an acceptable level.
12. Install drive in accordance with recommendations of the VFD manufacturer. Complete all wiring in accordance with the recommendations of the VFD manufacturer. Certified factory start-up shall be provided for each drive by a factory authorized service center. A certified start-up form shall be filled out for each drive with copies provided to Architect, Owner, and a coy kept on file at the manufacturer.
13. Warranty shall be 24 months from the date of certified start-up, not to exceed 30 months from the date of shipment. Warranty shall include all parts, labor, travel time, and expenses.
14. Manufacturer shall be ABB Industrial Systems, Inc., Danfoss, Trane, Yaskawa, Siemens or approved equal.

2.6 WATER TREATMENT

A. Start-up and first year monitoring service: The WCTI dealer will provide chemical passivation for new cooling tower for three month period.

The WCTI unit supplied by the registered dealer only, Mt Hood Solutions, Chris Rogers, Perry Kenin, 503 227 3505 will require chemical cleaning and passivation for start up and three months after.

The chemical cleaning shall be supervised by the WCTI dealer.

B. The mechanical contractor shall purchase passive chemical cleaners Hydrosolv for use in the cooling tower from the WCTI dealer. The chemical is neutral and will not cause harm to the new galvanized surfaces. The material shall be dosed into the sump of the new cooling tower while full of water at the dose rate of 1 gallon per 200-300 gallons of systems water.

C. Without delay, the spray pump will be activated and run for a period of 3 hours

D. The tower will be drained by the mechanical contactor and physically washed out to leave a visible clean sump

E. The mechanical contractor shall purchase and 1 x DR 2000 pump timer unit and install the unit for temporary use during the first three months of operation. This shall be installed prior to any operation of the tower. The contractor will be responsible to install the DR 2000 pump timer and provide power. Mt Hood Solutions will direct the contractor for initial installation for this temporary pump timer use.

F. The contractor shall purchase 3 x 5 gallon pails of Protek AL from Mt Hood Solutions. (Lead time on this product is 2 weeks.) Mt Hood technical representative will start a manual bleed on the tower and a chemical feed for the first three months of operation. Monthly inspection and chemical analysis by the WCTI dealers rep, Mt Hood Solutions will be done testing inhibitor, conductivity, pH and Zinc. Written reports will be provided to the owner's representative during this 3 month passivation phase.

G. After three months of monitoring and treatment of the cooling tower and insuring pH levels range between 6.9-8.5, the tower will be considered passivated. The chemical treatment temporary pump can be removed and the manual bleed turned off. At this time the WCTI unit will work with the tower loads to cycle up and created the Colloidal Silica required to protect the passivated tower.

H. During the three months passivation, a constant flow of water is required. Load is not required on the tower but the spray pump shall be manual on to insure passivation takes place on all galvanized surfaces. During this phase, conductivity shall not exceed 200 umohs and manual adjustments of the bleed by the Mt Hood Service tech shall be done to accomplish proper cycles.

1. Circulate the cleaning agent for no less than 4 and no more than 24 hours. At this point the water treatment representative adjusts the pH of the loop water to ensure the water can be discharged to sanitary in accordance with local guidelines for discharge.

2. Discharge 100 percent of the systems water. All strainers are to be cleaned. Refill and discharge the loop as a rinse flush. The loop to be refilled.

3. The loop to be charged with 500 to 1000 PPM of Polyquest to ensure proper passivation. Circulate the loop for a period of 4 to 24 hours with the Polyquest. The loop to be discharged and strainers cleaned.

4. The loop will then be charged by water treatment representative with 800 to 1200 PPM of Corstop or Inhibitor No. 34. This borate Nitrite solution is to be retested monthly for a period of the 1-year warranty. If levels are found low, the Water Treatment Representative is to recharge the loop, insuring the levels stay within Specification.

5. Chemicals: Closed loop corrosion control. Perlolin 336, Mogul, Chemax, or approved.

6. Equipment: One-shot feeder of 2 gallon capacity supplied with fill and drain valves, filling funnel and miscellaneous fittings for connection of fill and drain accessories. 1-inch pipe connection for inlet and outlet piping. 125 PSI maximum operating pressure.

PART 3 - EXECUTION

3.4 PIPING INSTALLATION

A. Refer to applicable Sections for Piping, Valves, Insulation, Painting, etc.

B. Chemical Treatment

1. The closed loop water immediately after pressure testing shall be flushed and chemically cleaned, passivated and treated. The work is to be performed by Mt. Hood Solutions. The cleaning and inhibiting procedures should begin immediately after hydrating the loop to prevent the corrosion process from starting.

2. Flushing: Using fresh water, begin a running flush of the system. Open a low point drain that will not exceed makeup rate of the loop and flush for 24 hours or until water appears clean of construction dirt and debris. After the initial flush, the strainers if present will be cleaned by the piping contractor.

The contractor shall provide estimated system volume, or a construction list of lengths and diameters of piping used and of volume of any vessels within the system to the water treatment provider. Mt. Hood Solution's "Cleanout" Cleaner shall be added, via pot feeder or pump at a rate of 1 gallon per 1000 gallons systems water. The cleaning agent shall be circulated for no less than 24 and no more than 72 hours. The system water should be tested to ensure pH of the loop water meets local parameters for discharged to sanitary.

A low point drain will be used to discharge 100% of the systems water. The contractor will clean all existing strainers. The loop shall be refilled and discharged as a rinse flush. The loop will then be refilled. A velocity Flush begins discharging while making up water. 2.5 ft. sec discharge rate minimum. Continue velocity flush for a period of not less than 8 hours insuring adequate make up water is available to avoid pump cavitation. At the end of the velocity flush period, the end points and dead heads shall be manually cleaned and blown out of debris and all strainers cleaned.

The loop will then be charged with Mt. Hood Solution's "Gro Pro" to achieve 50 ppm of sodium Molybdate to ensure proper passivation. The loop will be circulated for a period of 4-24 hours with the Gro-Pro. The loop will then be discharged from a low point drain by the contractor and strainers will be cleaned and the loop refilled.

With no delay, the loop will then be charged with Mt. Hood Solutions "Corstop" or "Inhibitor #34" to achieve 800-1200 ppm of Borate Nitrite solution.
In addition to the closed loop inhibitor being added, at the end of the protocol, 1 pint of Mt Hood MH 490 will be added to each 1000 gallons of water for bacterial control.

Once tested and balanced certified by the chemical vendor laboratory, if the loop requires glycol, use Propylene glycol only at specified percentage to prohibit freeze exposure. Minimum 30% and may require higher. If boiler has aluminum heat exchanger contractor to adjust pH of entire system to 7.5-8.5 pH and use specialized aluminum safe inhibitors.

Mechanical contractor is to Notify Water Treatment Company of the presence of aluminum to alter this specification for use with specialty chemistry compatible with aluminum.

3. 5 gallon Pot Feeder is to be supplied by Mt. Hood Solutions and installed on the closed loop by the piping contractor. This installation is to be coordinated with the Water Treatment representative to insure proper installation. The Pot Feeder shall be Wingert DB-5 or equivalent. The Pot Feeder shall be pressure rated to 150 PSIG or 300 PSIG to match other valves and pressure rated vessels. The Pot Feeder is to be installed between supply and return with shut off ball valves at the level of the Pot. A discharge line is to be plumbed to drain with a shut off ball valve at the Pot. Install according to manufacturer's recommendations

3.5 EQUIPMENT INSTALLATION

A. Lubrication: Lubricate all moving and rotating parts in accordance with the manufacturer's recommendations prior to start-up.

B. Manual Air Vents: Conduct 1/4" copper tubing from high end of air chambers to accessible locations and terminate with screwdriver cock.

C. Automatic Vent Valves: Install on each hydronic terminal at highest point and on each hydronic piping drop in direction of flow for mains, branches and runouts and elsewhere as indicated. Pipe to approved discharge location.

D. Installation of Temperature Gauges:

1. Install in vertical upright position.

2. Thermometer Wells: Install in piping in vertical upright position. Provide cap.

E. Installation of Pressure Gauges:

1. General: Install pressure gauges in piping tee with pressure gauge cock.

2. Locations: Install as indicated.

F. Expansion Joints: Provide where required to allow pipe expansion due to thermal stresses. Provide locations per manufacturer's recommendations. Provide a pipe guide on each side of each expansion joint, located per manufacturer's recommendations. Provide guides in addition to all other pipe supports and hangers.

G. Pumps: Mount per manufacturer's recommendations in a manner to allow disassembly of pump and motor without disturbing piping. Align flexible connectors. Local manufacturer's representative to provide factory authorized service technician, without additional charge, to align all pumps provided. Alignment shall not occur before all pump components and piping are in place and piping filled with water.

END OF SECTION

Hydro-Temp Mechanical
PCPA Antoinette Hall Cooling Tower Replacement
Task Based Payment Rates

Item No	Description of Work		Scheduled Value
1	Mobilize	$	4,000.00
2	Demo	$	4,500.00
3	Crane	$	5,500.00
4	Piping	$	22,000.00
5	VFD's	$	9,500.00
6	Circ Pumps	$	18,000.00
7	Impellers	$	6,500.00
8	Flush & Clean	$	2,500.00
9	Heat Trace Work	$	2,200.00
10	Piping Inulation	$	5,000.00
11	Evapco Cooling Tower	$	65,000.00
12	Mason Seismic Base	$	12,000.00
13	Clima-Cool Startup	$	6,300.00
14	Labor	$	16,800.00
	Subcontractors		
15	Controls by Seimens	$	23,000.00
16	Mt Hood Chemical	$	16,000.00
17	Electrical	$	9,000.00
	Total	$	227,800.00

METROPOLITAN EXPOSITION RECREATION COMMISSION

Resolution No. 13-02

For the purpose of accepting Carleton Hart Architecture's Proposal for the Oregon Convention Center (OCC) – Consulting Services – Original Building Roof Replacement Project, and authorizing the General Manager to enter into an agreement for Personal Services.

WHEREAS, the Metropolitan Exposition Recreation Commission (MERC) issued a request for proposals for a Qualification Based Selection for personal services related to the OCC Roof Replacement project; and

WHEREAS, on November 13, 2012, final proposals for the OCC – Consulting Services – Original Building Roof Replacement Project were due; and

WHEREAS, staff received five (5) responsive, responsible proposals before the final RFP submittal deadline; and

WHEREAS, an evaluation committee comprised of staff from OCC and Metro scored the proposals and ranked Carleton Hart Architecture highest; and

WHEREAS, no appeals or protests were received within the allotted appeal period; and

WHEREAS, MERC negotiated pricing with Carleton Hart Architecture as the highest qualified proposer and agreed on a pricing schedule for an amount not to exceed $176,119.00 on this contract; and.

WHEREAS, MERC must approve all contracts over $100,000 under Section 5(D) of MERC's Contracting and Purchasing Rules.

BE IT THEREFORE RESOLVED as follows:

1. MERC hereby finds that it is most advantageous to MERC to accept the proposal of Carleton Hart Architecture submitted for the Oregon Convention Center – Consulting Services – Original Roof Replacement Project for an amount not to exceed $176,116.00;
2. MERC approves the award of the personal services agreement, in a form substantially similar to the attached Exhibit "A,";
3. MERC authorizes the General Manager of Visitor Venues to execute the contract on its behalf.

Passed by the Commission on January 9, 2013.

_____
Chair

_____
Secretary/Treasurer

Approved As to Form:
Alison Kean Campbell, Metro Attorney

By: _____
Nathan A. Schwartz Sykes
Senior Assistant Metro Attorney

MERC Staff Report

Agenda Item/Issue: For the purpose of accepting Carleton Hart Architecture's Proposal for the Oregon Convention Center (OCC) – Consulting Services – Original Building Roof Replacement Project, and authorizing the General Manager to enter into an agreement for Personal Services.

Resolution No: 13-02 **Presented by:** Scott Cruickshank

Date: January 9, 2013

Background: The existing roof, installed in 1990, on the original portion of the Oregon Convention Center, has experienced many failures and has been repaired several times in the last few years, and has now come to the end of its useful life. With the vast amount of roofing products and the opportunities for sustainable alternatives, a consultant is necessary to investigate and make recommendations as to the best roofing solution for the OCC. Once recommendations have been made, Carleton Hart Architecture will provide complete drawings and specifications to MERC in such time that following the appropriate bidding process, the roof replacement project can begin in July of 2013. Once the construction portion of the project begins, Carleton Hart Architecture will provide construction administration services for the contractor's work product to ensure adherence to the plans and specifications.

MERC Staff prepared and issued a Request for Proposals in accordance with MERC's Purchasing Policies for the consulting services for the original roof replacement project. Eight firms were solicited with four being M/W/ESB, and none being FOTA. MERC Staff conducted a site walk for potential proposers in which six firms attended, one was FOTA and one was M/W/ESB. Five proposals were received on November 13, 2012. One of the proposals was submitted by a certified M/W/ESB, and one was submitted by a FOTA consultant. The proposals were scored by OCC and Metro staff, with the winning proposer being Carleton Hart Architecture, a Minority Owned Business. Upon notification of the award a cost proposal was discussed and subsequently agreed upon in the amount of One-hundred seventy six thousand, one hundred and nineteen &NO/100 dollars ($176,119). The contract will extend through 2014 to provide for all construction administration services during construction and warranty inspections.

Fiscal Impact: The current budget appropriates $100,000 for this project. The scope of work to be completed this fiscal year will be within the appropriated amount with the balance being funded through the project budget in FY 13-14. The current 5 year plan includes $2,000,000.00 in FY 13-14 for the Original Building Roof Replacement Project.

Recommendation: Staff recommends that the Metropolitan Exposition-Recreation Commission, by Resolution No. 13-02, approve the contract award and written contract (attached hereto) with Carleton Hart Architecture for the amount of One-hundred seventy six thousand, one hundred and nineteen &NO/100 dollars ($176,119) for the Consulting Services – Original Roof Replacement Project at the Oregon Convention Center.

Metro | Exposition Recreation Commission
600 NE Grand Ave., Portland, OR 97232-2736
503-797-1700

Personal Services Agreement

MERC Contract No. 303017

Personal Service Agreement over $50,000

THIS AGREEMENT is between Metropolitan Exposition Recreation Commission (MERC), an appointed commission of Metro, located at 600 N.E. Grand Avenue, Portland, OR 97232-2736, and Carleton Hart Architecture, referred to herein as "Contractor," located at 322 NW 8th Ave, Portland, OR 97209.

In exchange for the promises and other consideration set forth below, the parties agree as follows:

1. Duration. This personal services agreement shall be effective January 16, 2013 and shall remain in effect until and including December 30, 2014 unless terminated or extended as provided in this Agreement. This agreement may be amended or extended at MERC's sole discretion.

2. Scope of Work. Contractor shall provide all services and materials specified in the attached "Attachment A -- Scope of Work," which is incorporated into this Agreement by reference. All services and materials shall be provided by Contractor in accordance with the Scope of Work, in a competent and professional manner. To the extent that the Scope of Work contains additional contract provisions or waives any provision in the body of this Agreement, the Scope of Work shall control.

3. Payment. MERC shall pay Contractor for services performed and materials delivered in the amount(s), manner and at the time(s) specified in the Scope of Work for a maximum sum not to exceed ONE HUNDRED SEVENTY-SIX THOUSAND, ONE HUNDRED NINETEEN AND NO/100THS DOLLARS ($176,119.00). Payment shall be made by MERC on a Net 30 day basis upon approval of Contractor invoice.

The maximum price includes all fees, costs and expenses of whatever nature. Each of MERC's payments to Contractor shall equal the percentage of the work Contractor accomplished during the billing period. Contractor's billing invoices shall include the MERC contract number, Contractor name, remittance address, invoice date, invoice number, invoice amount, tax amount (if applicable), and an itemized statement of work performed and expenses incurred during the billing period, and will not be submitted more frequently than once a month. Contractor's billing invoices shall be sent to Metro Accounts Payable, 600 NE Grand Avenue, Portland, OR 97232-2736 or metroaccountspayable@oregonmetro.gov. The MERC contract number shall be referenced in the email subject line. Contractor's billing invoices for services through June 30 shall be submitted to MERC by July 15. Payment shall be made by MERC on a Net 30 day basis upon approval of Contractor invoice.

4. Insurance. Contractor shall purchase and maintain at the Contractor's expense, the following types of insurance, covering the Contractor, its employees, and agents:

(a) The most recently approved ISO (Insurance Services Office) Commercial General Liability policy, or its equivalent, written on an occurrence basis, with limits not less than $1,000,000 per occurrence and $1,000,000 aggregate. The policy will include coverage for bodily injury, property damage, personal injury, contractual liability, premises and products/completed operations. Contractor's coverage will be primary as respects Metro;

(b) Automobile insurance with coverage for bodily injury and property damage and with limits not less than minimum of $1,000,000 per occurrence;

(c) Workers' Compensation insurance meeting Oregon statutory requirements including Employer's Liability with limits not less than $500,000 per accident or disease; and

(d) Professional Liability Insurance, with limits of not less than $1,000,000 per occurrence, covering personal injury and property damage arising from errors, omissions or malpractice.

Metro, MERC, its elected officials, departments, employees, and agents shall be named as ADDITIONAL INSUREDS on Commercial General Liability and Automobile policies.

Contractor shall provide to MERC 30 days notice of any material change or policy cancellation.

Contractor shall provide MERC with a Certificate of Insurance complying with this article upon return of the Contractor signed agreement to MERC. Certificate of Insurance shall identify the MERC contract number.

5. Indemnification. Contractor shall indemnify and hold MERC, its agents, employees and elected officials harmless from any and all claims, demands, damages, actions, losses and expenses arising out of or in any way connected with its performance of this Agreement, or with any patent infringement or copyright claims arising out of the use of Contractor's designs or other materials by MERC and for any claims or disputes involving subcontractors.

6. Ownership of Documents and Maintenance of Records. Unless otherwise provided herein, all documents, instruments and media of any nature produced by Contractor pursuant to this agreement are Work Products and are the property of MERC, including but not limited to: drawings, specifications, reports, scientific or theoretical modeling, electronic media, computer software created or altered specifically for the purpose of completing the Scope of Work, works of art and photographs. Unless otherwise provided herein, upon MERC request, Contractor shall promptly provide MERC with an electronic version of all Work Products that have been produced or recorded in electronic media. MERC and Contractor agree that all work Products are works made for hire and Contractor hereby conveys, transfers, and grants to MERC all rights of reproduction and the copyright to all such Work Products.

a. Contractor and subcontractors shall maintain all fiscal records relating to such contracts in accordance with generally accepted accounting principles. In addition, Contractor and subcontractors shall maintain any other records necessary to clearly document:

(1) The performance of the contractor, including but not limited to the contractor's compliance with contract plans and specifications, compliance with fair contracting and employment programs, compliance with Oregon law on the payment of wages and accelerated payment provisions; and compliance with any and all requirements imposed on the contractor or subcontractor under the terms of the contract or subcontract;

(2) Any claims arising from or relating to the performance of the contractor or subcontractor under a public contract;

(3) Any cost and pricing data relating to the contract; and

(4) Payments made to all suppliers and subcontractors.

b. Contractor and subcontractors shall maintain records for the longer period of (a.) six years from the date of final completion of the contract to which the records relate or (b.) until the conclusion of any audit, controversy or litigation arising out of or related to the contract.

c. Contractor and subcontractors shall make records available to Metro and its authorized representatives, including but not limited to the staff of any Metro department and the staff of the Metro Auditor, within the boundaries of the Metro region, at reasonable times and places regardless of whether litigation has been filed on any claims. If the records are not made available within the boundaries of Metro, the Contractor or subcontractor agrees to bear all of the costs for Metro employees, and any necessary consultants hired by Metro, including but not limited to the costs of travel, per diem sums, salary, and any other expenses that Metro incurs, in sending its employees or consultants to examine, audit, inspect, and copy those records. If the Contractor elects to have such records outside these boundaries, the costs paid by the Contractor to Metro for inspection, auditing, examining and copying those records shall not be recoverable costs in any legal proceeding.

d. Contractor and subcontractors authorize and permit Metro and its authorized representatives, including but not limited to the staff of any Metro department and the staff of the Metro Auditor, to inspect, examine, copy and audit the books and records of Contractor or subcontractor, including tax returns, financial statements, other financial documents and any documents that may be placed in escrow according to any contract requirements. Metro shall keep any such documents confidential to the extent permitted by Oregon law, subject to the provisions of section E.

e. Contractor and subcontractors agree to disclose the records requested by Metro and agree to the admission of such records as evidence in any proceeding between Metro and the Contractor or subcontractor, including, but not limited to, a court proceeding, arbitration, mediation or other alternative dispute resolution process.

f. Contractor and subcontractors agree that in the event such records disclose that Metro is owed any sum of money or establish that any portion of any claim made against Metro is not warranted, the Contractor or subcontractor shall pay all costs incurred by Metro in conducting the audit and inspection. Such costs may be withheld from any sum that is due or that becomes due from Metro.

g. Failure of the Contractor or subcontractor to keep or disclose records as required by this document or any solicitation document may result in debarment as a bidder or proposer for future Metro contracts as provided in ORS 279B.130 and Metro Code Section 2.04.070(c), or may result in a finding that the Contractor or subcontractor is not a responsible bidder or proposer as provided in ORS 279B.110 and Metro Code Section 2.04.052.

7. Project Information. Contractor shall share all project information and fully cooperate with MERC, informing MERC of all aspects of the project including actual or potential problems or defects. Contractor shall abstain from releasing any information or project news without the prior and specific written approval of MERC.

8. Independent Contractor Status. Contractor shall be an independent contractor for all purposes and shall be entitled only to the compensation provided for in this Agreement. Under no circumstances shall Contractor be considered an employee of MERC. Contractor shall provide all tools or equipment necessary to carry out this Agreement, and shall exercise complete control in achieving the results specified in the Scope of Work. Contractor is solely responsible for its performance under this Agreement and the quality of its work; for obtaining and maintaining all licenses and certifications necessary to carry out this Agreement; for payment of any fees, taxes, royalties, or other expenses necessary to complete the work except as otherwise specified in the Scope of Work; and for meeting all other requirements of law in carrying out this Agreement. Contractor shall identify and certify tax status and identification number through execution of IRS form W-9 prior to submitting any request for payment to MERC.

9. Right to Withhold Payments. MERC shall have the right to withhold from payments due to Contractor such sums as necessary, in MERC's sole opinion, to protect MERC against any loss, damage, or claim which may result from Contractor's performance or failure to perform under this Agreement or the failure of Contractor to make proper payment to any suppliers or subcontractors.

10. State and Federal Law Constraints. Both parties shall comply with the public contracting provisions of ORS chapters 279A, 279B and 279C, and the recycling provisions of ORS 279B.025 to the extent those provisions apply to this Agreement. All such provisions required to be included in this Agreement are incorporated herein by reference. Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations including those of the Americans with Disabilities Act.

11. Situs. The situs of this Agreement is Portland, Oregon. Any litigation over this agreement shall be governed by the laws of the State of Oregon and shall be conducted in the Circuit Court of the state of Oregon for Multnomah County, or, if jurisdiction is proper, in the U.S. District Court for the District of Oregon.

12. Assignment. This Agreement is binding on each party, its successors, assigns, and legal representatives and may not, under any circumstance, be assigned or transferred by either party without MERC's written consent.

13. Termination. This Agreement may be terminated by mutual consent of the parties. In addition, MERC may terminate this Agreement by giving Contractor seven (7) days prior written notice of intent to terminate, without waiving any claims or remedies it may have against Contractor. Termination shall not excuse payment for expenses properly incurred prior to notice of termination, but neither party shall be liable for indirect or consequential damages arising from termination under this section.

14. No Waiver of Claims. The failure to enforce any provision of this Agreement shall not constitute a waiver by MERC of that or any other provision.

15. Modification. Notwithstanding and succeeding any and all prior agreement(s) or practice(s), this Agreement constitutes the entire Agreement between the parties, and may only be expressly modified in writing(s), signed by both parties. MERC may approve changes and modifications to the original contract, including deletions of work, order of additional materials, and additional services reasonably related to the original work scope. Contractor may propose changes in the work that Contractor believes are necessary, will result in higher quality work, improve safety, decrease the amount of the contract, or otherwise result in a better or more efficient work product. If such changes are approved by

MERC, they shall be executed by written contract amendment signed by both parties. Such changes shall not relieve Contractor of any obligation or warranty under the contract. No oral statements by either party shall modify or affect the terms of the contract.

16. Severability. The parties agree that any provision of this Contract that is held to be illegal, invalid, or unenforceable under present or future laws shall be fully severable. The parties further agree that this Contract shall be construed and enforced as if the illegal, invalid, or unenforceable provision had never been a part of them and the remaining provisions of the Contract shall remain in full force and effect and shall not be affected by the illegal, invalid, or unenforceable provision or by its severance from this Contract. Furthermore, a provision as similar to the illegal, invalid, or unenforceable provision as is possible and legal, valid and enforceable shall be automatically added to this Contract in lieu of the illegal, invalid, or unenforceable provision. Any failure by MERC to enforce a provision of the Contract is not to be construed as a waiver by MERC of this right to do so.

17. Counterparts. This Contract may be executed in counterparts or multiples, any one of which will have the full force of an original.

18. Delivery of Notices. Any notice, request, demand, instruction, or any other communications to be given to any party hereunder shall be in writing, sent by registered or certified mail or fax as follows:

To Contractor: William Hart
Carleton Hart Architecture
322 NW 8th Ave
Portland, OR 97209
503-243-3261 fax

To MERC: Josh Lipscomb
MERC
600 NE Grand Ave
Portland, Oregon 97232
503-797-1792 fax

19. Intergovernmental Cooperative Agreement: Pursuant to ORS 279A and the Metro contract code, Metro participates in an Intergovernmental Cooperative Purchasing program by which other public agencies shall have the ability to purchase the goods and services under the terms and conditions of this awarded contract. Any such purchases shall be between the Contractor and the participating public agency and shall not impact the Contractor's obligation to Metro under this agreement. Any estimated purchase volumes listed herein do not include volumes for other public agencies, and Metro makes no guarantee as to their participation in any purchase. Any Contractor may decline to extend the prices and terms of this solicitation to any or all other public agencies upon execution of this contract. Unless the Contractor specifically declines to participate in the program by marking the box below, the Contractor agrees to participate in the Intergovernmental Cooperative Purchasing program. **Contractor declines to participate in the Intergovernmental Cooperative Purchasing program as indicated by the following initials _____.**

Personal Services Agreement

MERC Contract No. 303017

CONTRACTOR	METROPOLITAN EXPOSITION RECREATION COMMISSION
By_____	By_____
Print Name_____	Print Name_____
Date_____	Date_____

Scope of Work – Attachment A

MERC Contract No. 303017

1. Purpose and Goal of Work

MERC is contracting for architectural and engineering services for the purpose of preparing comprehensive construction documents to be used for soliciting bids for construction to replace the roof on the original building portion of the Oregon Convention Center.

2. Description of the Scope of Work

Contractor will conduct a roof assessment and then prepare construction documents for use with bidding and construction to address roof replacement for the original portion of the building. Additionally contractor will evaluate opportunities to incorporate renewable energy and sustainable features, including green or ecoroof options, solar hot water heating, and solar photovoltaics; and evaluate the proposed improvements for their alignment with future LEED certifications requirements.

Contractor will conduct an assessment of existing conditions and understand the design parameters which will influence what renewable energy systems or sustainable features can be added to the existing roof load. Contractor will develop several roof alternatives with their additional roof loads.

DESCRIPTION OF COMPREHENSIVE DESIGN SERVICES

1.0 PRE-DESIGN/ASSESSMENT PHASE

- Meet with Project Team to discuss goals, budget & schedule.
- Obtain and review information from MERC on the facility.
- Review project parameters including structural, seismic load design considerations.
- Conduct an existing condition review and inspection.
- Develop a list of options for each renewable energy alternatives.
- Describe the pro's & con's of each of the proposed systems.
- Describe conceptual costs of each of the proposed systems.
- Estimate the weight of each of the proposed systems.
- Estimate the life cycle costs or annual maintenance costs of each of the proposed systems.
- Summarize the findings.

2.0 SCHEMATIC DESIGN (SD) PHASE

- Consultant to prepare project scoping document w/ the Owner to ascertain the requirements of the project.
- Consultant shall prepare a preliminary evaluation of the project scope and budget requirements, respective to each other.
- Consultants shall review with the Owner alternative approaches to design & construction of the Project.
- One regular Project Team meeting to assess design and track progress.
- Based on mutually agreed-upon scope & project budget requirements, Design Team shall prepare Schematic Design documents for approval by Owner.
- Cost Estimate #1: Consultant to develop a Statement of Probable Construction Cost based on area, volume, or other unit costs, in conformity w/ all elements of the Schematic Design documents.
- Life cycle costs to be included in estimates for each option of sustainable features or renewable energy systems.
- Meet with Owner for review comments of Schematic Design documents. Obtain written approval from Owner to proceed.

3.0 DESIGN DEVELOPMENT (DD) PHASE

- Based on the approved Schematic Design, Design Team shall prepare Design Development documents to describe the size & character of the entire project for approval by the Owner.
- Attend two (2) regular review meetings w/ Project Team to assess design and track progress.
- Meet w/ Owner for review comments of Design Development documents. Obtain written approval from Owner to proceed.

4.0 CONSTRUCTION DOCUMENTS (CD) PHASE

- Based on the approved Design Development documents, Design Team shall prepare Contract Documents to describe the size & character of the entire project for approval by the Owner. Work will include refinements to the roof plan, detailed sketches for all roof areas, technical specification sections and calculations, research, etc.
- Attend two (2) regular review meetings with Project Team to assess design & track progress.
- Site visit to confirm existing detailing.
- Submit final construction documents to Owner for review and approval.

5.0 PERMITTING

- Submit Contract Documents to building dept. for permit review.
- Monitor review process and answer questions/review comments from officials.
- Permit issued.

6.0 BIDDING

- Following the Owner's approval of the Construction Documents & Cost Estimate, assist Owner by preparing documents for bidding.
- Attend pre-bid meeting, prepare agendas, review bids & assist in evaluating bidder qualifications.

7.0 CONSTRUCTION ADMINISTRATION (CA) PHASE

- Proposal is based on a 40 week construction schedule.
- Attend a pre-construction kick-off meeting to establish procedures and communications with Metro's contract administrator, General Contractor, and key sub-contractors.
- Attend twenty (20) on-site construction meetings and prepare meeting minutes. Proposal is based on meeting/site visit frequency of once every two weeks for regular Team meetings.
- Provide up to two reviews of each shop drawing, product and materials submittals.
- Field Reports: Prepare, enforce and file Field Reports.
- Review and evaluate Contractor's change requests and change orders.
- Respond to Contractor's RFI's and issue any necessary ASI's or PR's.
- Review and evaluate Contractor's Request for Payment.
- Conduct and prepare one punch list and one final inspection at end of construction.
- Monitor project closeout procedures. Collect and review O&M manuals prepared by Contractor.
- Review Contractor "as-built" drawings.
- Conduct Month 11 warranty review of completed work.

3. Exclusions

- Any fees for reviews, permits, systems development, etc., levied by applicable agencies towards the project.
- Any special inspections that may be required.
- Any services related to Land Use Review/Design Review.
- Any environmental reports or abatement specifications.
- Any data services: computer cabling, television and security systems.
- Any communications services: telephone cable and equipment.
- Any geotechnical services or site surveying services.
- Any services for developing “as-built” drawings.
- Any perspective renderings or models.

4. Deliverables/Outcomes

- Contractor will provide comprehensive Biddable Construction Documents - consisting of Drawings, Specifications, and other items as may be required to detail the requirements for the construction of the entire project for public bidding in accordance with good design practice and all requirements of agencies having jurisdiction over the work. Consultant shall provide in the Construction Documents all of the necessary bidding information, including site plans, floor plans, elevations, sections and details, specifications, sufficient to show all the requirements of the work. If required by Owner, Consultant shall prepare the Construction Documents for additive alternate bids, unit prices, and phasing of the work. Consultant shall provide all documents for this Project in a format and on media approved by Owner with a base minimum of drawings completed using AutoCAD.
- Contractor will provide a final Statement of Probable Construction cost of the project, including a bidding and design contingency of five percent (5%).
- Contractor will furnish Owner, within 60 days after final completion of the work, one (1) complete set of reproducible record drawings and one (1) electronic copy (as-builts) bound, showing significant changes in the work made during construction based on marked-up prints, drawings, and other data furnished by the contractor.

5. Payment and Billing

Contractor shall perform the above work for a maximum price not to exceed ONE HUNDRED SEVENTY-SIX THOUSAND, ONE HUNDRED NINETEEN AND NO/100THS DOLLARS ($176,119.00).

Hourly rates for additional services as follows:

ARCHITECTURAL - Carleton Hart Architecture	
Principal	$150.00
Project Manager	$120.00
Project Architect	$100.00
Production/Technical Staff	$ 65.00
ROOF ASSESSMENT & ENVELOPE CONSULTANT - KPFF Engineers	
Principal	$180.00
Project Manager	$105.00
STRUCTURAL ASSESSMENT - KPFF Engineers	
Principal	$180.00
Project Manager	$105.00

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SOLAR PHOTOVOLTAIC ASSESSMENT - O'Neill Electric	
Project Manager/Estimator	$105.00
CADD	$ 65.00
LANDSCAPE ARCHITECTURE & ECO-ROOF ASSESSMENT - Walker Macy	
Principal	$160.00
Project Manager	$100.00
Staff	$ 75.00
SOLAR HOT WATER ASSESSMENT - Gen-Con, Inc.	
Principal	$ 75.00
LEED CERTIFICATION & DOCUMENTATION - Brightworks	
Director	$150.00
COST CONSULTANTS - Architectural Cost Consultants	
Principal	$141.00
Project Manager	$ 78.00

Reimbursable expenses including items such as printing, photocopying, mileage, fax transmissions, photography expenses, messenger service, etc. will be billed at cost plus 10%.