ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
January 27, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
LaDonna Jurgensen
Mike Garnsey
Sue Sandstrom

Others Present
Dale Connors, Watershed Investment Consultants
Leslie Thompson, Gabriel Roeder Smith & Co.
Tina Seberg, US Bank
Erik Burge, Finance
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Ms. Jurgensen to approve the minutes, payment of invoices, retirements, vested and non-vested individuals; Mr. Garnsey seconded this. The Chairman called the vote on the motion, and the motion carried, although Ms. Sandstrom did abstain.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201512	$14,166.96**	Plan Administrator
Watershed Investment Consultants Inc.	1524	$20,810.25	Consulting Services
Davis Graham & Stubbs, LLP	719770	$574.00	Plan Matters
Davis Graham & Stubbs, LLP	719771	$109.50	Participant Matters
Davis Graham & Stubbs, LLP	721039	$1,934.50	Plan Matters
Davis Graham & Stubbs, LLP	721040	$1,822.50	Annual Retainer
Davis Graham & Stubbs, LLP	721041	$1,058.50	Participant Matters
Davis Graham & Stubbs, LLP	721042	$566.00	Investment Matters
JP Morgan Asset Management	20151231-26714-A	$11,108.94	Investment Fee
Lifestatus360*	126501	$130.00	Address Search
Milliman	0016ACR-2015-12	$6,750.00	License Fee
IMA, Inc.	1021366	$10,662.00	Liability Insurance
Total Expenditures		$69,693.15	

Acknowledgement of reimbursement in the amount of $70.69 to Lew Quigley for office supplies.
Acknowledgement of reimbursement in the amount of $113.40 to Dennis Lyon for attending the 2015 Rocky Mountain Benefit Plan Conference, in Denver, CO on December 8, 2015.
*Formerly Small World Solutions
** December has three pay periods instead of the normal two per month

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
3	Retirements as described in detail	
2	Vested Withdrawals	$68,371.53
19	Non Vested Withdrawals	$140,890.60
	Total Disbursements	$209,262.13

Watershed Investment Consultants

As 2015 came to an end most asset classes were down for the year, although there were a few bright spots, Real Estate – Core for example was up 14%, International Small Cap as well as some of the Fixed Income holdings. On an individual basis the Plan is over weight in Vanguard Institutional Index, currently holding funds that will be used to fund other investments; and underweight in Tortoise MLP due to current volatility. The Non-US Equity and Fixed Income appear to be running at the target allocation, while the Real Estate sector is as its max limit. With Harbert and Principal coming to their end and already returning investment dollars, Mr. Connors made the recommendation for Harbert Fund VI, see below; Hedge Funds are up slightly, and Private Equity has a very little activity. The Plan began the year at $275M, throughout the year there were out flows, fees and investment losses in the negative thus resulting with a year-end of $265M. The three areas in the Plans holdings not doing very well would be the Tortoise MLP's, Sankaty Senior Loan, and Aberdeen Emerging Markets. Blackstone had an outstanding year being ahead 3.1% and over the past five years up 4.7%. UBS Trumbull Property Fund is up 12.3%, Metropolitan Real Estate is finally winding down and the Plan should receive its initial investment and a bit of a dividend. The Board asked if it would be prudent to have a representative from Tortoise come in and make a presentation as to their performance and outlook going forward. This presentation will be scheduled for the March meeting.

Mr. Connors went over the recommendation that the Plan commit $10 million to the Harbert United States Real Estate Fund VI. This recommendation is based on the fund's under allocation to real estate; that both the Harbert fund and the Principal Real Estate Debt fund will not reach targeted allocations as both are returning capital early; and Harbert's solid execution in Fund V is ahead of schedule. The Plan's target allocation in real estate investments is 20% of assets with 10% in core, income producing equity investments; 5% in value-add equity investments; and 5% in real estate debt. The Plan has benefited from accelerated returns from both Harbert and Principal. In the case of Harbert, their value-add programs have led to quicker than expected sales to core investors. Harbert is currently soliciting investors for their next closed-end value add fund, Harbert United States Real Estate Fund VI. This fund will have the same investment style. This is to acquire under-valued, fundamentally sound office, apartment, and industrial real estate properties in non-gateway cities with strong population and employment growth prospects and in locations that have material barriers to new supply. The recommended investment is the sixth Harbert fund utilizing their value-add equity real estate process. Prior funds have been financially successful with Fund V ahead of schedule and providing strong IRRs and multiples. Given the Plan's target of 20% of assets in real estate while both closed-end investments in the asset class have begun early returns of capital, Watershed is recommending the Board commit to invest in Fund VI. The investment should occur during the initial close in order to take advantage of the reduced fee allowance. Ms. Jurgensen made a motion to invest $10 with Harbert US Real Estate Fund VI, Ms. Sandstrom seconded the motion, the Chairman called the vote and the motion passed.

Gabriel Roeder Smith & Co.

Ms. Thompson brought up an expense incurred for the preparation of materials as they relate to GASB 68 as requested by the County and Clifton Larson Allen, the Plans auditor. Ms. Thompson stated that this invoiced expense is not really a Plan expense since it is a requirement for the employer's audit, , and that it may deemed to belong to the employer, Arapahoe County. The Board directed Ms. Thompson to redirect the invoice to the appropriate department within the County.

Gabriel Roeder Smith & Company was asked to prepare a cost of service projection for a Forward DROP Plan all the while being cost neutral to the Plan. On a birds eye view the only way to make these programs cost neutral is that the benefit needs to be reduced to such a large degree that in most cases these become unattractive. Mr. Garnsey asked about FPPA who supposedly has a Plan that is cost neutral and is that a realty. Ms. Thompson did bring up the new regulations in regards to "Normal Retirement Age" and thought that Ms. Birley should take a look to see what impact this may have on any type of proposed benefit change Ms. Thompson stated that she would contact Ms. Birley to get her thoughts on the "Normal Retirement Age" ruling, see if there were any deal breakers before going any further with this discussion. The Board asked that this issue be brought back before the Board at a later date.

Other Business

Mr. Lyon had distributed expanded duties for fellow Board members asking for input from fellow Board members, some of whom felt that these were good suggestions and in certain instances were already being done, although others may not be aware. Mr. Lyon asked that the Board give some thought to these suggestions and further the discussion at another meeting.

Ms. Jurgensen had a question about continuing education and to what standard should fellow Board members be held? Ms. Darcy spoke to her experience with the CAPPP program and how helpful that was in her understanding of the Plan. It was felt that it would be difficult to make a blanket requirement for everyone since all participants are at different stages in their education development. Mr. Lyon asked that Board members continue to seek out education opportunities and make a report to the Plan Administrator before the end of the year and that report be provided to the Board.

Ms. Jurgensen asked if the Board could ask what is available through the SAP system and how if possible could the Board gather information or reports based upon income and expenditures. Mr. Quigley will pass on this request to the Finance Department to see what may be available to help with the reporting. Board members did voice that they would like to actually tackle a more definitive budget process; this will be explored once Finance provides some more detailed information as to what they can provide in this area.

Board members brought up the subject of RFP's for Vendor Services, and all felt that it would be a good idea to have a written policy statement laying out the expectation in regards to the review and possible RFP process. Mr. Lyon asked if Ms. Sandstrom could create a policy for vendor retention and a timeline for RFP's, she stated she would get with Mr. Quigley to gather the historical information on prior activities.

Ms. Sandstrom brought up the subject of Manager roundtables as it appears according to the 2016 schedule that Investment Managers appear to be missing from the schedule. Mr. Connors reviewed with the Board the various ways this had been accomplished in the past and it was decided that a mix of at least six of the money managers will be brought in for a roundtable discussion. The June meeting will host this year's roundtable; those money managers who may be on the "watch list" will be brought in on an ad hoc basis. Tortoise MLP's will be brought in for the March meeting. The Board made a request that the March meeting be moved to March 30th to accommodate most everyone's schedule.

The Plan Administrator did bring the Board up to date on the year end activity stating that the Annual Statements should available through the MARC website the first week of February; that the year-end information had been given to GRS and had been reviewed and that GRS was waiting for the asset numbers.

In addition, the Plan Administrator did bring the Board up to date on a request for information in regards to one of the Disabled Deferred Vested members, and the Board asked that Ms. Johnson with DGS contact the Mr. Perkins in the County Attorney's office to follow up and determine the information to be provided.

Member Questions

There being no further business to come before the Board, the Chairman adjourned the meeting at 4:00 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
February 24, 2016

The Vice Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Mike Garnsey
Sue Sandstrom
Darcy Kennedy
LaDonna Jurgensen

Others Present
Dale Connors, Watershed Investment Consultants
Cindy Birley, Davis Graham & Stubbs, LLP
Leslie Thompson, Gabriel Roeder Smith & Co.
Paul Wood, Gabriel Roeder Smith & Co.
Bill Petri, Clifton Larson Allen
Shawn Sonnkalb, Finance
Erik Berge, Finance
James Kelley, Road & Bridge
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Ms. Kennedy to approve the consent agenda; Ms. Jurgensen seconded this. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201601	$9,732.12	Plan Administrator
US Bank	9709412	$14,617.53	Custodial Fees
Gabriel Roeder Smith & Co.	420151	$14,568.50	Actuarial Consulting
Fidelity Institutional Asset	20121231-805-A	$24,429.10	Investment Fees
Tortoise	N/A	$25,809.05	Investment Fees
Total Expenditures		$89,156.30	

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
6	Retirements as described in detail	
4	Vested Withdrawals	$196,539.44
13	Non Vested Withdrawals	$110,560.39
	Total Expenditures	$307,099.83

Acknowledgement of reimbursement to Dennis Lyon in the amount of $3,100.00 for registration fees and lodging deposit associated with the 2016 IFEBP Annual Conference and Trustee Masters preconference, to be held in Orlando, FL November 12 – 16, 2016.
Acknowledgement of payment to IFEBP Foundation in the amount of $1,850.00 for registration fees and lodging deposit associated with the attendance of Lew Quigley to the IFEBP Annual Conference to be held in Orlando, FL November 13 – 16, 2016.
Acknowledgement of reimbursement to Lew Quigley in the amount of $385.52 for copier toner and paper.

Audit Roundtable
Board Chairman Dennis Lyon had asked that the parties involved in the annual audit of the Plan come together and give a brief explanation of the audit process, the parties involved and the responsibilities of those involved. Mr. Bill Petri with Clifton Larsen Allen, the auditor, Ms. Leslie Thompson, Gabriel Roeder Smith & Co., the actuary, and Mr. Shawn Sonnkalb, Accounting Manager with Finance were brought in for the roundtable. Mr. Petri started the discussion by giving an overview of the audit process end with the presentation of the audit report upon completion. In addition, he gave a brief description of the testing

process as well as areas of concern or focus. Contributions made by the actuary come from the valuation report, which is used in the preparation of the audit. The audit is scheduled to start on April 24 and continue through the week of May 5, with the hope of completing in a timely manner. The Board did request that they would like to receive the "DRAFT" as early as possible so that they would have a chance to review and comment. Mr. Sonnkalb, who has come onboard as the Accounting Manager briefly described Finances involvement in the audit preparation. On a side note, Ms. Jurgensen did ask about receiving some type of financial reports on either a monthly or a quarterly basis from the Finance Department. Currently these functions are being handled by Mr. Berge, who went into some detail as to his duties as far as reconciliation and reporting. The Board made the request that some type of reporting be available, of which Mr. Sonnkalb felt would not be an issue and would start this process as soon as possible. Ms. Thompson went into the part that the actuary plays in the preparation of the annual audit mainly as a result of the GASB implementation. GASB 67 went into effect December 31, 2014, and the GASB 68 will have an effective date of December 31, 2015, which now requires an additional effort for all participants. Ms. Birley did go over the engagement letter and did make some revisions so that it was clear as to who would be responsible, especially the preparation of the financial statements. These revisions will be forwarded on the Mr. Petri for review.

Normal Retirement Age

The Federal Government has issued proposed changes as to what is to be considered "Normal Retirement Age"; under these proposed changes, the Plan would run into difficult specifically in the manner of re-hires for non-certified public safety employees, apparently there is an exemption for certified public safety officers. Currently the Rule of 75 with the minimum age of 52 would not meet the Safe Harbor and these individuals would be rehired under the Tier III – Rule of 85, thus having two different benefits accrued under two different sets of calculations with the possibility of two different pay schedules. Tier II and Tier III meet the Safe Harbor and not an issue. Chairman Lyons asked fellow Board members if they would like for Ms. Birley to draft a comment letter to the IRS in regards to this issue; Ms. Sandstrom made a motion to draft a comment letter in response to the proposed changes to the Normal Retirement Age sharing the cost with other participating entities , Ms. Kennedy seconded the motion. The Chairman called the vote and the motion passed. Ms. Birley will bring back before the Board the comment letter for review before it is sent to the IRS.

Watershed Investment Consultants

Mr. Connors went over the 4th quarter and year-end review of the Plan's performance highlighting the difficulties of 2015. Global equities, as measured by the MSCI AC World Index, posted modestly positive returns in local currencies, however U.S. Dollar appreciation negated the returns of most foreign equity markets for U.S. based investors.

U.S. Investment Grade fixed income performance was subdued as well in 2015; a year in which the Barclays Aggregate Index posted a 0.5% total return. However, there was intense speculation about Fed policy and the potential for rising rates throughout the year, widening spreads across sectors made a far more significant impact on fixed income performance than changes in interest rates. China, commodities and currencies dominated capital markets returns in 2015, a year marked by subdued returns across asset classes and elevated volatility when compared to earlier years.

Global economic growth, though positive, remained muted, with particular focus on China, which is the world's second largest economy. S&P 500 calendar year 2015 performance was roughly flat; as the Index fell by 0.7%, (the S&P 500 Index earned a total return of 1.4% after dividends). The S&P 500 recouped previous losses in October, only to lose value again in November and December. U.S. equity markets struggled in 2015 because of higher than average valuations and challenging earnings comparisons. Comparisons appear to be particularly challenging for the Energy and Materials Sectors, which are anticipated to fall by 100% and 30%, respectively.

Going forward, consensus expectations are for continued strength among IT, Health Care, and Consumer sectors, as the U.S. economy is expected to remain on a stable, low growth path. Low energy and commodity prices are expected to continue to challenge economically cyclical sectors, including the Energy, Materials, and Industrials sectors, as is USD strength on export-oriented companies.

U.S. large capitalization stocks out – performed their smaller counterparts in 2015, as Mid Cap and Small Cap stocks lost value. Growth companies significantly out-performed their Value counter-parts as investors paid up for earnings growth in a slow-growth economic environment. Momentum and quality Styles significantly out – performed for the year, as did Defensive stocks over Cyclicals. Most international countries trailed the S&P 500 in 2015, with the MSCI AC World ex U.S. Index posting a total return (in USD) of -5.3%. Developed Markets generally out – performed their emerging markets counter-parts as the combination of continued easy money and signs of an uptick in economic activity drove generally positive performance. U.S. Dollar appreciation further pressured international returns for U.S. domiciled investors as USD appreciated relative to foreign
Currencies, with the impact most pronounced relative Latin American Emerging Markets.

The economies of countries that were more closely linked to the Chinese economic growth or commodity exports suffered, and in the case of several countries, experienced significant economic contraction. The impact was most pronounced among Latin American countries including Brazil, Chile, and Peru. Several Emerging Asia countries also suffered, including Indonesia, Malaysia, and Thailand, as did Turkey, Egypt, and South Africa across other regions. In contrast, Japan and developed European countries performed well in local currencies as the combination of a commitment to continued quantitative easing and nascent economic growth led to positive market performance. Most MSCI Europe constituents posted positive performance with the exception of the United Kingdom, Spain, and Greece. Among EAFE constituents, Growth out-performed Value whereas (in contrast to the U.S.). Small Cap companies out – performed their Large Cap counterparts.

2015 was a continuation of performance trends from the end of 2014, characterized by weak performance of global cyclicals and better relative performance among Consumer, IT and Healthcare names. International market sectors generally performed better in local currency, with the most pronounced impact of U.S. Energy under – performance relative to all other sectors.

Falling Energy and Materials prices drove negative performance for the S&P 500 and MSCI EAFE Energy and Materials sectors as commodity prices fell in response to over – supply and concerns about economic growth. Healthcare and Information Technology out – performed in 2015. Within Healthcare, significant deal activity and robust earnings growth drove performance. Year 2015 was also characterized by significant positive performance by select IT names, particularly in the U.S. After years of speculation about the timing, the Federal Open Market Committee increased the Federal Funds rate by 25 bps in December 2015. Despite rising yields on the front end of the curve, investors remained cautious regarding the economic outlook. As further evidence of investor's skepticism, market expectations are for front-end yields to remain lower than Fed projections, despite guidance from the Federal Reserve suggesting that it will target several additional Fed Funds increases in 2016.

Performance for U.S. fixed income was muted for the year, as the Barclays Aggregate Index posted a total return of 0.6% for the year. The largest contributor to performance in 2015 was credit quality – all else being equal, higher quality fixed income out – performed lower quality for the year. The Barclays U.S. Corporate High Yield Index posted a loss of 4.5% in 2015, under- performing Treasuries of comparable duration by 5.8%. Defaults among corporate high yield issuers (including high yield bonds and leveraged loans) are expected to increase in 2016 from low levels in previous years as a result of falling commodities prices. The impact is expected to be most pronounced among Energy and Materials issuers. Securitized bonds generally performed better than comparably rated corporate securities in 2015.

The private equity commercial real estate return, measured by the NCREIF Property Index (National Council of Real Estate Investment Fiduciaries) experienced a slight trend reversal with a quarter returns less than 3%. The 4th quarter return of 2.9% marked the 24th positive quarter for the index. Relative to most other asset class choices, private equity commercial real estate continued to provide institutional investors a solid return. Year 2015 was a year with warmer climates of the West and South region leading to solid returns while the more financially oriented East markets continued to lag. The continued slow economic recovery led to strong returns in the Retail sector and continued to benefit the more cyclical Industrials sector.

Hedge Fund indices posted modestly negative returns in 2015, managers generally struggled against a backdrop of negative to subdued asset class returns in 2015. The HFRI Equity Hedge Index posted a 0.8% loss in 2015. Results varied significantly across managers, as individual managers posted significantly disparate results. Returns were generally muted for the year, with several high profile managers posting significant losses. A few performance trends were apparent in 2015. More hedged less market directional strategies out – performed, Tech and Healthcare out – performed, as did managers with a long bias towards growth companies.

January 2016 was a down month for the Plan, although February appears to be flat, thus stemming any further losses. Markets appear to be on edge and could be a very volatile with daily movements being exaggerated by foreign economies, oil production and pricing, foreign recessions. In the short term until these issues resolve themselves, investing will continue to be difficult.

Other Business

Ms. Sandstrom brought up that the County had its Years of Service Awards and recognized Mr. Quigley with 20 years of service.

Ms. Jurgensen gave a brief mention of the Trustee and Administrators Institute that she attended and stated that one of the concerns going forward was Liability Insurance and the difficulty some organizations are finding affordable coverage. Ms. Kennedy suggested that the Risk Manager should come to a future meeting and answer any questions in regards to the Boards coverage.

Mr. Quigley did remind the Board that the March meeting had been rescheduled for Wednesday March 30, 2016 and that the Fiduciary training had been moved to the April meeting so that all Board members would be present.

In addition, Mr. Quigley gave a brief rundown of the IFEBP training that he attended in respect to government structure and the varying aspects of Public vs: Private.

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:20 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
March 30, 2016

The Chairman called the meeting to order at 1:33 P.M.

Board Members Present
Dennis Lyon
Mike Garnsey - Absent
Sue Sandstrom
LaDonna Jurgensen - Absent
Darcy Kennedy

Others Present
Dale Connors, Watershed Investment Consultants
Cindy Birley, DG&S LLP via phone
Tina Seberg, US Bank
Abel Mojica III, Tortoise Capital Advisors
Erik Burge, Finance
James Kelley, Road & Bridge
Lew Quigley, Plan Administrator

Consent Agenda
Ms. Sandstrom made a motion to approve the consent agenda; Ms. Kennedy seconded this. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201601	$12,086.30	Plan Administrator
Davis Graham & Stubbs LLP	722378	$3,404.00	Plan Matters
Davis Graham & Stubbs LLP	722379	$222.00	Participant Matters
Davis Graham & Stubbs LLP	722380	$756.00	Investment Matters
Davis Graham & Stubbs LLP	723799	$8,124.00	Plan Matters
Davis Graham & Stubbs LLP	723800	$1,189.00	Annual Retainer
Davis Graham & Stubbs LLP	723801	$1,110.00	Participant Matters
Davis Graham & Stubbs LLP	723802	$792.00	Investment Matters
Gabriel Roeder Smith & Co.	420397	$4,753.00	Actuarial Services
Total Expenditures		$32,436.30	

Acknowledgment of reimbursement to Michael Garnsey for registration expenses associated with his attendance to the IFEBP CAPPP Series training to be held June 7 – 10, 2016 in Boston, MA, in the amount of $2,090.00.

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
3	Retirements as described in detail	
3	Vested Withdrawal	$246,056.19
14	Non Vested Withdrawals	$64,809.35
17	Total Expenditures	$310,865.54

Davis Graham & Stubbs LLP
Ms. Birley went over the response letter to the IRS that will be sent on behalf of Adams, Arapahoe, and Pueblo County voicing some concerns with the definition of Normal Retirement as it concerns the various Tiers within the Arapahoe County Retirement Plan, especially the Rule of 75. There were no concerns from the Board members and they were fine with the letter and directed Ms. Birley to go ahead and respond.

Money Manager Presentation

Mr. Mojica III representing Tortoise Capital Advisors brought before the Board a presentation, which was requested by the Board because of the negative performance of late. As a reminder midstream, MPL's are publicly traded companies operating essential energy toll roads in that the pipeline companies generally have a steady, recurring, fee-based cash flows with limited direct commodity price exposure. The cash flows typically grow with the economy, population and project development and acquisitions. Over the last twelve months there have been some significant negative contributors which have been:

- Negative selection effect, natural gas pipeline down 32%
- Underweight in propane, down 20%

There were a couple of positive contributors which did play a part in the funds' performance and those were;

- There was an overweight in the refined product pipelines
- The fund held cash in a negative return market
- And, positive selection effect in which crude oil pipelines were down

Looking to the future, 2015 to 2017, there appears to be strong absolute perform, from inception up 2.4%. There seems to be strong relative performance vs. Alerian MLP index, outperforming upwards of 7.4%. Tortoise expects 16% to 18% MLP market returns for the next 12 months, a combination of both market yield and growth, whereby intermediate and long-term growth outlook remains favorable. The feeling is that during third and fourth quarter there should be sustainable recovery and a positive future going forward. When asked about actual ownership selection and whether there are course corrections as a result of market reactions, the answer was slight tweaks, but the basic philosophy would stay the same, since the holdings are geared towards the long term performance.

Watershed Investment Consultants

Mr. Connors went over the February performance, which had negative returns in all sectors except for Fixed Income; all though March 29, 2016 these are now in the black. Even though there is a disconnect with fundamentals, stocks seems to be not quite as volatile of late. The fund is close to the policy index, and some holding are returning at the same time as asking for additional funds. January was a very difficult month, expenses running ahead of contributions, hopefully by March the fund should be flat if not slightly positive. The Board did request that the asset holding be rebalanced in regards to the MLP holding with Tortoise, Mr. Connors will work with Mr. Quigley to shift funds to fund back up to the target.

Board Member Comments

Mr. Lyon went over his attendance at the IFEBP Trustee institute and gave a brief overview of the topics. Always plan for the long term and do not try to time the market and have a philosophy that you are willing to stick with and ride out the highs and the lows. Mr. Lyon felt the information was timely and would recommend it every three to four years.

Plan Administrator Comments

Mr. Quigley did remind the Board of the next Pre Retirement Training session which will be held on Thursday, April 7, 2016 there is an estimated twenty five attendees. Working with the auditors all requested materials have been provided, the audit team will be on-site the last two weeks of April. There has been a significate uptick in the request for username and passwords for the MARC system. And, a reminder that the April meeting will feature the Fiduciary Training provided by DG&S, LLP

There being no further business to come before the Board, the Chairman adjourned the meeting at 2:50 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
April 27, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Mike Garnsey
Sue Sandstrom
Darcy Kennedy
LaDonna Jurgensen

Others Present
Leslie Thompson, Gabriel Roeder Smith & Co.
Dana Woolfrey, Gabriel Roeder Smith & Co.
Paul Wood, Gabriel Roeder Smith & Co.
Dale Connors, Watershed Investment Consultants
Vicki Johnson, Davis Graham & Stubbs, LLP
Tina Seberg, US Bank
James Kelly, Road & Bridge
Lew Quigley, Plan Administrator

Consent Agenda
Mr. Garnsey made a motion to accept the Consent Agenda; Ms. Kennedy seconded this. The Chairman called the vote and the motion carried.

Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201603	$9732.12	Plan Administrator
Watershed Investment Consultants Inc.	1569	$20,956.00	Consulting Services
J.P. Morgan	20160331-26714-A	$10,798.95	Investment Fees
Gabriel Roeder Smith & Co.	420892	$25,553.50	Actuarial Consulting
Milliman	0016ACR-2016-03	$6,750.00	License Fee
Tortoise		$23,650.68	Investment Fees
Total Expenditures		$97,441.26	

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
5	Retirements as described in detail	
4	Vested Withdrawal	$76,262.72
9	Non Vested Withdrawals	$53,221.54
	Total Expenditures	$129,484.26

Gabriel Roeder Smith & Co.
Mr. Wood brought before the Board the 2015 Valuation of the Arapahoe County Retirement Plan, and, even though the year was not stellar there was some good news, including growth in the active member population which brings additional contributions into the Plan. However, the salary structure grew at a larger than expected rate; and the market did not perform as well as expected. The unfunded accrued liability went up just about $15M over the prior year. The current Funded Ratio is 64.73% based on the Smoothed Value of Assets and 61.7% based on the Market Value of Assets. Looking at the contribution requirement summary, 2015 had a shortfall of 3.52% up slightly from the 3.44% from 2014.

Ms. Woolfrey reminded the Board that when they looked at the Plan redesign in 2012 and 2013 it was discussed that the funded ratio would grow but at a slow rate and not actually gain momentum until closer to thirty years out. These projections were based upon a specific set of assumptions; however the Plan did experience a couple of setbacks of late, one being the lower than expected market returns. Going forward the Plan will have to receive better than expected asset performance or actuarial gains to get back on a trajectory to full funding. If the Plan were to earn a market return of 20% in 2016 or 11.5% for the next three years, the Plan would be back on its trajectory. The 16% contribution rate is sustainable, but postpones the desired funded ratio much farther out than 2042 and if there are any more negative issues the Plan could be in a position where the 16% contribution was no longer sustainable.

Just a reminder that GASB 67 was first incorporated into the Plan financials as of 12/31/2014, and GASB 68 will appear in the County financials as of 12/31/2015. The Board directed Gabriel Roeder Smith and Co. to prepare a presentation for the BOCC Study Session showing the results of the study and the alternative investment return scenarios. Mr. Quigley will work with the BOCC Administrator to set a date for the annual study session.

Davis Graham & Stubbs LLP

Ms. Johnson facilitated her Fiduciary Training session to the Board; typically presented every three to five years, bringing the Board up to date on any changes or issues of importance but in addition to fulfilling the Board's obligation to maintain its fiduciary education. The major areas of concern in the training were:

Definition of a Fiduciary
Fiduciary Duties and Responsibilities
Four Aspects of Fiduciary Duties
Administration
Investments
Actuarial
Legal

The Board overall felt that the training was very valuable and timely and that the handouts beneficial in performing their Board duties.

Watershed Investment Consultants

Mr. Connors briefly went over March's fund performance, which was a vast improvement over February. The Plan is back in the black year to date net of fees; Mr. Connors did state that the Plan might want to discuss the targeted asset return number and possibly put more risk on the table in an effort to earn more returns. The Plan closed the month of March at $264M up $10.7M and fortuitously MLP's are up approximately 9%. Although, Benefits are still out pacing contributions and will continue going forward. All managers are ahead of their index, except for PIMCO which is slightly behind. The month of April appears to be a positive with all sectors on the rise.

Mr. Connors did announce that Watershed will be partnering with J. H. Ellwood & Associates, Inc. a larger operation but very similar in nature, with a much larger resource bank currently handling $52B in assets. The transition would be seamless and Mr. Connors will head their public sector operation and remain focused on Arapahoe County. To start Mr. Connor will not be taking on any new clients and the fee structure will remain the same. This will be a new addition to the J. H. Ellwood & Associates, Inc. scope and they have expressed their desire to grow their public sector client base. Ms. Sandstrom made a motion to approve the transition of Watershed Investments, Inc. to J.H. Ellwood & Associates pending review by Davis Graham & Stubbs, LLP. Ms. Kennedy seconded the motion. The Chairman called the vote and the motion passed. Mr. Lyons asked that Mr. Quigley request a review by Ms. Birley and let the Board know the results.

Board Member Comments

Ms. Jurgensen did inform the Board that she would be letting the BOCC know that she would not be seeking another term, (expires February 14, 2018) and would consider leaving her position early and if the BOCC found a replacement.

Plan Administrator Comments

Mr. Quigley did let the Board know that the auditors were on-site and should be done within 10 days and so far there had not been any issues raised.

Mr. Quigley also informed the Board that he had implanted the on-line service indicator, which if respondents would like to they can click and comment anytime they receive information or materials from the Plan Administrator.

Plan Members Questions

There being no further business to come before the Board, the Chairman adjourned the meeting at 4:12 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
May 25, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Mike Garnsey
Sue Sandstrom
Darcy Kennedy
LaDonna Jurgensen

Others Present
Paul Schreder, Watershed Investment Consultants
Dana Woolfrey, Gabriel Roeder Smith & Co.
James Kelley, Road & Bridge
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Ms. Jurgensen to approve the consent agenda; Ms. Sandstrom seconded this. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201604	$9,732.12	Plan Administrator
Davis Graham & Stubbs, LLP	725271	$1,154.00	Plan Matters
Davis Graham & Stubbs, LLP	725225	$123.00	Annual Retainer
Davis Graham & Stubbs, LLP	725226	$345.00	Participant Matters
Davis Graham & Stubbs, LLP	725227	$252.00	Investment Matters
Davis Graham & Stubbs, LLP	726313	$3,799.00	Plan Matters
Davis Graham & Stubbs, LLP	726226	$999.00	Annual Retainer
Davis Graham & Stubbs, LLP	726227	$74.00	Participant Matters
US Bank	9853141	$14,730.67	Custodial Services
Gabriel Roeder Smith & Co	421742	$1,808.00	Actuarial Services
Total Expenditures		$33,016.79	

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- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
3	Retirements as described in detail	
6	Vested Withdrawal	$260,681.67
12	Non Vested Withdrawals	$91,883.66
1	Death Benefit	$115,920.48
	Total Expenditures	$468,485.81

Gabriel Roeder Smith & Co.
Ms. Woolfrey brought before the Board a DRAFT of the BOCC Study Session presentation and went over it with the Board. The presentation will stress the two main reason for the difference from the prior year to this year were the increase in payroll and the lower than expected return on investment, and subsequent resulting effects of these changes. The Board did request a “peer review” to show what other local plans provide in the ways of contributions,

which will show the BOCC where Arapahoe County stands in comparison to other like entities in the way of contributions. The Board asked for a change in some of the projection charts, to better explain what would be required for a sustainable plan if increased contributions are used to correct the funding trajectory. There was some discussion as to the inclusion of the possibility of asking for a contribution increase in the future, Chairman Lyon, felt that it might be a good idea to advise the BOCC that the Pension Plan may request an increase in a year or so. The presentation will give notice to that possibility. In addition, there will a clarification as to the reporting by the County under GASB 67 and 68.

Ms. Woolfrey brought up the possibility of moving back the annual valuation from April to May because each year it appears to be increasingly difficult to get final asset numbers. Currently these are handled as adjustments, which is why the FINAL valuation is not issued until June. The Board was not receptive and chose to keep the annual valuation presentation in April.

Watershed Investment Consultants

Mr. Schreder went over the April performance showing that all sectors were positive for the month with value outperforming the growth-oriented holdings. Emerging markets had a reversal of last year's negative performance. MLP's are a very large holding and are finally performing in the positive. Fixed Income has outperformed as compared to expectations given the low interest market. Year to date the Plan is up 2.5%, annualized at 5.1% over the three, and five-year averages. Net cash flows continue to outpace the contributions, but have been offset by total appreciation. Overall, the Equity portfolio has performed well even with the negative performance from Tortoise. Staff changes at JP Morgan may be a cause of concern, and Mr. Connors may address this aspect in the future. Hedge Funds were down but did outperform the index. Ms. Sandstrom asked about the volatility of Hedge Funds and the higher fees and wondered if now is the time to reallocate the holding was? Mr. Schreder did not feel that now was the time to pull those funds, and in his opinion the Plans particular holding has a lower risk with a lower standard deviation. Staff is continuing to research other options that have same returns without some of the inherent risk and high fees.

Ms. Sandstrom brought up a peer review showing that the Plans performance was ranked lower than many of respondents, and wondered if now might be the time to look at adjusting the asset allocation and policy targets. Mr. Schreder would relay the concern to Mr. Connors who will address this at future meetings.

Mr. Schreder brought before the Board the first quarter review, which was definitely a tale of two markets; whereby risk assets were sold off globally, and the counter being risk assets doing significantly well. There was concern within the market about the slowing of the Global economic future with conflicting signals from the United States and the continued slowdown in China. The U.S. market continued to out-perform International markets. Within the International markets, Emerging Markets out-performed while Developed Markets, i.e. Japan under-performed. Economic trends across the International sector appear to be flat, tepid at best. China remains a focal point with its slowing economy, although it's hard to get a read on the information coming out of China. Latin America Emerging Markets rallied strongly as oil came back in March with positive performance. Overall, defensive stock generally out performed their cyclical counter-parts.

Fixed Income performed well this quarter despite a very slow start to the year. It appears that longer duration fixed income out-performed as rates fell. Not only that, but Treasuries, corporate bonds, to include Investment Grade and High Yield as well as Leveraged loans posted above average performance.

Interestingly enough the S&P earned a total return of 1.4% for the first quarter; but this amid volatility which saw an 11% loss followed by a 13% rally, by the end of the quarter markets were beginning to trend in a positive direction. As we move into the second quarter there appears to be some credence to the notion that the U.S. economy is on an upward growth path. Conversely there appears to be no change in the S&P Growth story as Energy and Materials companies continue to struggle as they did in 2015.

The private equity commercial real estate return demonstrated a cooling trends with a return of less than 3%, even with this return it still counted as the 25th quarter with positive returns. Compared with other asset classes this continues to provide solid returns.

It would be an understatement to say that the first quarter was a challenge for Hedge fund managers, suffering in January as commodities, global equity and credit markets lost value. As a result, these markets reduced risk and thus missed the rally in the second half of the first quarter.

Large cap stocks generally out-performed for the quarter as larger companies did better than smaller companies did; it appears that Value oriented stock out-performed Growth stock across the board.

Other Business

Mr. Quigley did let the Board know that the audit was complete and that he should have the DRAFT Audit report and Financials in about ten days, at which time he will send out to the Board. Just a reminder that the audit report is on the agenda for July 27, 2016 meeting.

The BOCC Study Session is scheduled for Tuesday July 26, 2016 for 10:00 am in the West Hearing Room; the Board Summary report and handouts need to be turned into the BOCC Administration Office by July 14th; Mr. Quigley will work with Mr. Lyon on the Board Summary Report.

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:40 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
June 22, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
LaDonna Jurgensen - Absent
Mike Garnsey
Sue Sandstrom - Absent

Others Present
Dale Connors, Ellwood Associates
Ashley Cassel, Aberdeen
John Dickie, Aberdeen
Tom Harvey, Aberdeen
Liam Rogers, Blackstone
Christine Thorpe, Fidelity
James Carroll, Fidelity
Mark Romano, PIMCO
Michele Fang, Principal Real Estate
Scott Smith, Principal Real Estate
Keith Mekenney, Vanguard
Lucy Momjian, Vanguard
Dan Einerson, Open Space
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Mr. Garnsey to approve the consent agenda; Ms. Kennedy seconded this. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201605	$9,732.13	Plan Administrator
LifeStatus360	126962	$680.00	Death Audit Service
Clifton Larson Allen	1282707	$13,000.00	Audit Fee
Gabriel Roeder Smith & Co.	422218	$9,964.50	Actuarial Services
Total Expenditures		$33,376.63	

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
7	Retirements as described in detail	
3	Vested Withdrawal	$43,861.24
18	Non Vested Withdrawals	$132,468.25
	Total Expenditures	$176,329.49

Acknowledgement of reimbursement to Michael Garnsey in the amount of $410.87 for travel and lodging expense associated with the IFEBP CAPPP I Training in Boston, MA, June 7 – 8, 2016.

Money Manager Roundtable

Representatives from Vanguard, Fidelity Institutional Asset Management (Pyramis), PIMCO, Principal Real Estate, Blackstone, and Aberdeen were on hand to discuss current trends and outlook for the Market.

Mr. Mekenney and Ms. Momjian with Vanguard stated that in their opinion that the Global economy was a bit shaky but the US sector appears to be the best deal going. There is a belief that inflation may start to rise going forward; in their opinion the long-term outlook is more predictable with equity markets being at 6 to 8% with the US at the lower range, fixed income at 2 to 3% growth.

Mr. Harvey with Aberdeen talked a bit about what may be driving the market, thinking that across the board Emerging Markets look better than they did in the past, and one of the few areas showing growth. They believe that China will normalize and do not feel it is as bad as others have predicted. Overall there is a lowering of investor expectations thus opening up more varied investor options. To this point Mr. Dickie talked about the lower end dealing with small cap companies; and in retrospect it has been a very strong market for the last five to eight years. Thus allowing a return of capital and investors wanting to re-invest these returns. It's striking that investment amounts are being raised in record periods, proving the favorability of these types of holdings. There is a feeling that specialization is the way to go in private equity and that there is a future in this asset class, but investors need to navigate very carefully.

Mr. Rogers representing Blackstone covering a wide variety of hedge funds, where returns have had a return of 1 to 2 percent, thus underperforming the index. One thing to note when investing in hedge funds is to make sure that you are getting something of value for your dollars. A critical item would be the review of the fee structure on such investments, which Blackstone just by the sheer size is able to negotiate favorably. Overall the belief that there will be a GDP growth of 2 to 3 percent. Blackstone tends to be bullish on Emerging Markets, the US Markets is steady as it goes, and not yet ready discount Great Britain.

Mr. Carroll representing Fidelity wanted to compare the market eighteen months ago to today, which continues to be heavily invested in the US Equity market, again using the analogy of "the best house on a crummy street". There is an uptick in the investment within Emerging Markets and less focus on regions and more in sectors; one of the sectors that may be troublesome is healthcare, thus keeping healthcare stock depressed. There is a feeling that the US Market will continue at a steady rate with lots of opportunity.

Mr. Romano with PIMCO talked about the Bond market and the negative connotations whereas negative yields have been out weighing the positive. In the U.S. the return is still positive but not by much, over the past few years we have seen the return go from 4 to 6% to 1.7%. In the past the U.S. has had Quantitative Easing to help prop up the market, QE has been over for a while and we are seeing the results of a market without QE. Historically Bond portfolios have been a protection against loss and have value in in asset allocation and should not be discounted. Bank reforms are starting to come to fruition where many institutional investors may be limited as to where they can invest and only time will tell how this is going to affect the market.

Ms. Fang and Mr. Smith with Principal Real Estate invest in the US economy only, dealing with a wide range of real estate opportunities. There is a belief that there will be one or two rate hikes in the federal interest rate and 2.5% growth in GDP with real estate continuing to be a positive market. They have the feeling that there could be a moderate recession when looking out 5 to 7 years, but nothing in the short term. The feeling is the current recovery is going to continue in the near term. One of the concerns could be overall market perception whereas what was once good is now bad and that perception can change very quickly making it difficult to try to time the market.

Most market types tend to be well balanced, except for multi-family, which may be a bit over stimulated at the current time. The feeling is that he core fund will be at 7.5 to 8% investment returns.

Mr. Connors asked what if Great Britain does exit the EU what would happen, the overall feeling that Europe would take a serious downturn, but at the earliest would be two years before the full effect would take place; but there could be some opportunistic buying.

Many present have the thought that Emerging Markets continues to be favorable although the Plan has scaled back in this sector, and it was interesting that the upcoming U.S. election seems to have a lot of volatility but at the end of the day will have little effect.

Mr. Dickie still thinks that Private Equity or Private Credit might be a way to meet an expected investment return and could be a ready avenue and should be explored understanding the risk factor associated with these types of holdings.

No one present felt that in the next ten years that a plan of this type would earn less than 5%. Two money managers felt that the fund would earn 5 to 6%; two money managers felt that the fund would earn 6 to 7%, and one money manager felt that the plan could earn 7.5% in the next 10 years.

Mr. Lyon asked about the value of the dollar and its outlook, Mr. Harvey felt that US dollar would flat line. No one else had any predictions. He also asked about the future of retail and the thought was that retail, as we know it will change to more on-line and less actual mall type experiences. The feeling that this will be the trend and the definition of "retail" will change going forward.

Watershed Investment Consultants
Mr. Connors has received back four of the risk tolerance survey, waiting for the fifth and will present at the next meeting. Along with a ten and twenty year outlook there will be a review of asset allocation and investment strategy. This was the first month under the new ownership and the monthly reports will include more information with endnotes and footnotes. Mr. Connors went over the May performance numbers, and the total fund was up in most areas the exception being Developed Markets, the US Market appears to be a bit turbulent in June. Non-U.S. stocks have been unsteady this month, but a strong US dollar has helped. YTD the fund is up 3% outperforming the Policy and Strategy Index. Just a note the Vanguard Institutional Index will be using a new index with a wider exposure. PIMCO had a staff reduction and has laid off approximately 3% of its staff. Sankaty will switch its name to Bain Capital. In July, a Private Equity expert with Ellwood Associates will come in to talk to the Board.

Other Business

Board Member Comments
Mr. Garnsey talked about the IFEBP CAPPP I that he attended in Boston, MA and felt that it was very informative and well worthwhile.

Plan Administrator Comments
Mr. Quigley informed the Board that representatives from Gabriel Roeder Smith & Co. would be present at the July 27th meeting to go over the BOCC presentation one last time before the BOCC Study Session scheduled for August 16, 2016. The Board Summary Report and a copy of the presentation have to be in the office of the BOCC

Administration no later than Friday July 29, 2016. A reminder to have all edits/additions/deletions to the Board Summary Report should be in no later than Wednesday July 27, 2016.

As a result of scheduling issue, the Auditors will not be able to present during the July ACG Retirement Board meeting and the Board requested that the Audit Presentation be made during the August 22, 2016 meeting.

Plan Member Questions and Comments

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:26 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
July 27, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Mike Garnsey
Sue Sandstrom
Darcy Kennedy
LaDonna Jurgensen

Others Present
Dale Connors, Ellwood Associates
Andrew Fiegel, Ellwood Associates
Leslie Thompson, Gabriel Roeder Smith & Co.
Tina Seberg, US Bank
Vicki Johnson, Davis Graham & Stubbs, LLP
Loretta Perry Wilborne, Human Services
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Mr. Garnsey to approve the consent agenda; this was seconded by Ms. Kennedy. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201606	$14,598.20*	Plan Administrator
Ellwood Associates	N/A	$20,956.00	Consulting Services
Davis Graham & Stubbs, LLP	727668	$164.00	Legal Services – Plan
Davis Graham & Stubbs, LLP	727669	$197.00	Legal Services – Investments
Clifton Larsen Allen	1300402	$3,500.00	Audit Services
Gabriel Roeder Smith & Co.	423521	$725.00	Actuarial Services
J.P. Morgan	20160630-26714-A	$11,000.14	Investment Fees
Fidelity	20160630-805-A	$46,610.21	Investment Fees
Milliman	016ACR0716	$6,750.00	License Fee
Tortoise		$56,639.09	Investment fees
Total Expenditures		$161,139.64	

*This is for 3 pay periods instead of the normal 2 pay periods per month

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
5	Retirements as described in detail	
2	Vested Withdrawal	$90,453.40
16	Non Vested Withdrawals	$72,916.28
	Total Expenditures	$163,369.68

Gabriel Roeder Smith & Co.

Ms. Thompson brought before the Board the BOCC Study Session presentation one last time for review and comments. The Board just asked that when pertinent to provide backstory on some of the numbers and statistical information. Based upon the Boards suggestions, Ms. Thompson will incorporate the changes and provide a final copy to Mr. Quigley to be passed on to the BOCC.

US Bank

Ms. Seberg from US Bank did go over the trustee services provided to the ACG Retirement Plan. The Plan has had US Bank since 1998 and appreciates their continued support and business. The Plan deals with the Institutional Trust and Custody Services which provides services to a varied sector of institutions. As a directed trustee US Bank takes it direction from the Board, Plan Administrator, and possibly the Investment Consultant on rare occasion. The Board is the Grantor who has granted these responsibilities to US Bank, these are detailed in the Trust Agreement.

Davis Graham & Stubbs, LLP

Ms. Johnson did let the Board know that she will be bring before the Board and amendment which will allow the rollover to "Simple IRS's"; the idea is to wait until the IRS provides further guidance before presenting the amendment.

Ellwood Associates

Mr. Connors and Mr. Fiegel will be co-managers handling the Plan. The Fund Performance report is preliminary and should be final by next meeting. June was as volatile even with the Brexit toward the end of the month. Inflation strategies have done well along with MLP's. YTD up 3.7% net of fees, and outperforming the index. Fairly close to the Plans allocation targets, although the Real Estate sector is quickly picking up and will require capital which will be pulled from other sectors. In the Fixed Income sector there are some issues with PIMCO and the recommendation would be that the Board look at a replacement for PIMCO. Performance wise the Plan is doing fairly well with the run rate on track to meet the 7.5% ROR. For July stocks tend to be up overall and Bonds have been flat.

The Asset Allocation Study and Pacing Model is a look forward over a rolling five year period whereby the Plan meets its 7.5% ROR. This study took a ten and twenty year look at the market, with the realization that in the ten year period the 7.5% ROR may not be achievable; twenty year outlook very feasible.

There were responses from four out of the five Board members thus equal splitting the primary investment objective between real growth after distributions and moderate growth with an emphasis on reduced volatility risk. Cash holding should be held to a minimum allowing the Plans assets to work for the Plan, results were neutral in regards to tracking error levels and trying to structure to outperform in advancing and declining markets. The responses showed a preference to active management vs: indexing and to earn the 7.5% assumed return rate over loss protection with the higher short-term volatility.

Mr. Fiegel brought before the Board the Worst-Case scenario which showed that that in the intermediate-term scenarios under the current policy the loss would be 20.6% which equates to $55.4M. The probability is unlikely but it is good to know the downside as well as the upside. Going forward the feeling to continue to be bullish on Real Estate and Private Equity and to reallocate 5% of equities to Aberdeen. When asked about Hedge Funds, Mr. Connors stated that these were not his favorite and felt that there may be better investments and would be willing to bring back an investment that had been brought before the Board. Mr. Garnsey made a motion to liquidate 5% from EuroPacific and reinvest into Aberdeen Emerging Markets; Ms. Kennedy seconded the motion. The Chairman called the vote and the motion passed. Since these two funds in question are mutual funds this transition should happen very quickly.

Mr. Fiegel talked about bring the Plan up to its 5% allocation in Private Equity, and will bring before the Board two potential managers at the September meeting.

Other Business

The BOCC Board Summary Report and the GRS presentation will go to the BOCC Administration no later than Tuesday, August 2, 2016.

Board Member Comments

Ms. Sandstrom did let the Board know that Mr. Perkins from the County Attorney's Office will be attending the monthly Board meetings in the future.

Plan Administrator Comments

Mr. Quigley reminded the Board that the BOCC Study Session will be held Tuesday, August 16, 2016 @ 1:00 pm in the West Hearing Room of the County Administration Building.

Employee Comments and Questions

None

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:30 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
August 24, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
Sue Sandstrom
Mike Garnsey – Absent
LaDonna Jurgensen

Others Present
Wm. Bill Petri, Clifton Larson Allen
Tim Rawal, Clifton Larson Allen
Russ Hill, Ellwood Associates
Dale Connors, Ellwood Associates
Dan Perkins, County Attorney's Office
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Ms. Sandstrom to approve the consent agenda; Ms. Jurgensen seconded the motion. The Chairman called the vote and the motion carried.

Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201607	$9,732.13	Plan Administrator
US Bank	9997826	$15,242.23	Trustee Services
Davis Graham & Stubbs LLP	729595	$999.00	Plan Matters
Davis Graham & Stubbs LLP	730042	$2,293.00	Plan Matters
Davis Graham & Stubbs LLP	730043	$629.00	Annual Retainer
Davis Graham & Stubbs LLP	730044	$185.00	Participant Matters
Total Expenditures		$29,080.36	

Acknowledgement of reimbursement to Dennis Lyon in the amount of $352.95 for travel expenses associated with the IFEBP Annual Conference to be held in Orlando, FL. November 13 – 16, 2016.
Acknowledgement of reimbursement to Lew Quigley in the amount of $294.20 for travel expenses associated with the IFEBP Annual Conference to be held in Orlando, FL. November 13 – 16, 2016.

Number	Reason	Total
0	Retirements as described in detail	
3	Vested Withdrawal	$141,770.39
20	Non Vested Withdrawals	$124,808.81
	Total Expenditures	$266,579.20

CliftonLarsonAllen, Auditor
Mr. Petri and Mr. Rawal representing CliftonLarsonAllen, gave the annual audit report for the Arapahoe County Retirement Plan. Once again the Plan received a favorable audit without any issues. Any negative issues were

solely driven by the markets erratic behavior, otherwise the Plan performed as expected. Mr. Lyon thanked the auditors for their hard work and service as associated with the completion of the audit.

Ellwood Associates

Mr. Connors introduced the CEO, Russ Hill of Ellwood Associates to the Board who briefly spoke to the mission and vision of Ellwood and the continuing dedication to servicing the Plan.

Mr. Connor briefly went over the July Fund Performance, which was positive, thus the Plan picked up approximately $5m in investment income, YTD the Plan is up 6% thus ending the month of July on the plus side of $275M. It appears that there is a bit of a rotation from Value into Growth. There was a reallocation into Emerging Markets bringing the Plan more in line with its allocation strategy.

There was the presentation of the 2nd Quarter review whose major event was namely "The Brexit" which was the result of the referendum on Great Britain's continued membership in the EU. Unexpectedly, the UK electorate voted 52% to 48% to leave the EU, the theory being that it would allow the UK to assert more control over its regulatory and immigration policies. Over the next two years, the EU and the UK will need to establish new trade and immigration agreements as well as separate trade agreements with other EU participants. The market reacted sharply to the vote with a flight to safety that was a benefit to US Treasuries, gold and the US dollar as well as the Japanese yen. The impact of the vote will have a global effect, but will be felt most painfully in the UK and Europe where the consensus outlook for growth will be much lower than had the measure been defeated.

The second quarter saw that U.S. Large Cap, Fixed Income, Hedge Funds and Commodities holdings slightly behind the index; while U.S. Small Cap stocks were ahead of the index. The negatives were International Developed Markets, while being down were not as down as the index. Energy, Utilities, and Telecom lead the S&P 500, some with double digit returns. Non-U.S. Equity performance was negative although not as bad as the index, and Emerging markets were slightly positive, all being driven by the fallout from "Brexit". Fixed Income markets were slightly positive, although behind the index. Bond yields around the globe fell sharply due to the assumptions about the global central banks would do in reaction to Brexit, with the expectation of the adoption of negative interest rate policies. By the end of the second quarter, 74% of all developed market government bonds were yielding less than 1%, while the remainder were yielding less than 0%.

During the second quarter Hedge Funds rose and turned positive for the first time in 2016. Given the increased volatility during the first quarter, many equity long/short hedge fund managers were very conservative in their holding and lagged the broader equity markets. One of the results that came out of the Risk Tolerance survey shows that the Board would be willing to take more risk with the objective of decreasing the unfunded liability going forward. Real Estate continues to show positive returns with the exception of the Harbert US Real Estate Fund VI which is in its very early stages and hasn't had the opportunity to take off, although all indications that this will also show positive returns for the Plan.

During the July ACG Board meeting there was a discussion relating to the termination of and replacement for PIMCO Total Return due to continued performance challenges as well as organizational changes. Ellwood has proposed three potential managers all of which would be a good fit with current fixed income managers. The three under consideration are:

MetWest Total Return Bond, AKA TCW Group: The team seeks to add value through a long-term value discipline emphasizing bottom-up research and controlling risk through diversification and duration constraints. The fixed income team is comprised of 48 investment professionals including 10 portfolio managers and 38 research analysts. MetWest's expertise in mortgages along with the stability of the investment team has resulted in outperformance versus the benchmark over long-term periods.

Western Core Plus: Western blends the Global Investment Strategy Group's top-down investment outlook with bottom-up fundamental research for sector and issue selection. Western applies a team-based approach to managing portfolios utilizing input from portfolio managers, research analysts and sector analysts. Western's strong credit research team has enabled the strategy to post strong performance versus benchmarks over time.

Manulife Strategic Fixed Income: The strategy uses a multi-sector fixed income approach guided by the Team's macroeconomic outlook to assess the best opportunity set across the universe of fixed income sectors, countries, and currencies. The strategy utilizes a three person portfolio management team led by Dan Janis and is comprised of investment professionals with deep and expansive experiences in credit, currencies, high yield, and emerging markets. There are no portfolio constraints on sector, quality, or position limits. Duration is targeted at 4 years with a +/- 2 year band. Below investment grade exposure could be significant based on market conditions. Currently the strategy has approximately 19% in below investment grade securities. One of the concerns with this particular holding is the high holding of Bain Capital which is already being held by the Plan and could potentially over-weight the allocation to Bain Capital, if this where to be the choice a reallocation would be required.

A motion was made by Ms. Kennedy to pick Western Core Plus as a replacement for PIMCO; Ms. Sandstrom seconded the motion and the Chairman called the vote. The motion passed and Mr. Connors will work with Mr. Quigley to execute the establishment of this new holding.

The next item for discussion was the Private Equity Manager Review, whereby there would three methods of Investing in a Private Equity strategy which would be either:

- Direct Company Investment
- Direct Fund Investing
- Fund of Funds Investing

Ellwood advocates Direct Fund and Fund of Funds investments for distressed, mid and large buyouts, growth equity, and other private credit strategies, which provides a diversification over a number of years. Overall the Plan needs to be very aware of a strategic allocation commitment and not overweight any one sector, and this allocation may change on an annual basis.

In specialty niches such as venture capital and small buyouts (sub $500 million buyout funds), Ellwood believes that Fund of Funds remain the most appropriate vehicle as diversification and access are paramount due to the wide range of returns among funds. Ellwood does not recommend co-investing or direct company investments due to concentration risk and due diligence complexity.

It is the belief that to have a successful Private Equity Program there would be four principals that guide this type of investment. Those four principals are:
Vintage Year Diversification
Strategic Diversification
Robust Investment Manager Due Diligence
Long-term Focus

It is with these principles that Ellwood Associates has recommended that the Plan use the Weathergage Fund IV as it's Private Equity Manager. The feeling that this firm is a small nimble, has the ability to act quickly, current assets under management $970M; it is 100% employee owned; the management team have a number of years of experience and were the core group that created the organization. The final close is late October 2016 with the call of approximately three years for funding, with a twelve year term plus a three year additional time frame. Fees are 1% on committed capital during the first seven years, 90% of prior annual fee thereafter. All investments are Venture Capital although spread out over the market. Since inception Fund I has had a Net IRR of 13.8% and Fund II 18.1%. In the past they have been able to identify some excellent investments who have had excellent returns. The question was how this compare to the universe, and the results since inception show that the firm has been in the top quartile in most vintage years. Westgate is one of four that Ellwood currently invest.

Ms. Sandstrom did have a concern with making a decision having only looked at one firm, Mr. Connors did state that in the opinion of Ellwood they felt that this was the top offering in the field which is currently open and accepting of investments. The initial offering would be $1M called over the next three to five years; although each year these will be reviewed and a new allocation will be decided at that time.

Ms. Jurgensen made a motion to invest $1M with Westgate Fund IV, Ms. Kennedy seconded the motion. The Chairman called the vote and the motion passed, contingent upon review by Davis Graham & Stubbs, LLP.

Other Business

Ms. Sandstrom brought before the Board the BOCC's request for a follow up study session for additional information as requested during the August 16, 2016 study session with Retirement Board. The request was for the payroll percent increase for the past ten years. It was reported during the study session to be a 6.3% from 2015 to 2016 which was more than the Retirement Plans normal salary increase assumption, and there was an inquiry about a RFP for the Investment Advisor. The request for the follow up study session was tentatively scheduled for September 6, 2016 @ 1:30 pm in the East Hearing Room. After much discussion Ms. Sandstrom said that she would contact Diana Maes, BOCC Administration and express to her the Boards response in that individuals would be available to meet on September 6, 2016 and that she would coordinate with Ms. Kennedy, Mr. Weaver, and Mr. Quigley on a strategy to provide the salary information that was requested. In addition if Mr. Quigley could talk with Ms. Thompson to determine how the salary increase percent was determined and to be prepared to explain the process. It was the intention of the Board to invite the BOCC to attend a future Retirement Board meeting at which the salary percentage adjustment would be open for discussion.

The Board asked that Ms. Seberg from US Bank attend to talk about the Money Market calculation going forward which is to take effect on October 26, 2016. Mr. Quigley will contact Ms. Seberg to attend the September meeting and give a brief overview.

Board Member Comments

The Board members present gave their impressions of the BOCC Study Session and felt that they were left with a mixed message and no clear reaction from the BOCC. The Board knew that the salary percent increase was going to be an issue and felt that there was a possible perception that the salary increase percent was overstated and even though the Board tried to explain the increase, they felt to no avail.

Plan Administrator Comments

The next Pre-Retirement Training Session will be held Thursday, September 8th in the East Hearing Room of the County Administration Building. Starting in 2017 these sessions will be offered just once a year with the hopes of a more concentrated audience.

At the September 27th ACG Board meeting will be a presentation by Cathy Lutzkanin, Risk Manager, as it pertains to the Plan.

Participant Comments and Questions

None

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:50 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
September 28, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
Sue Sandstrom
Mike Garnsey
LaDonna Jurgensen

Others Present
Dale Connors, Ellwood Associates
Dana Woolfrey, GRS
Dan Perkins, County Attorney
Cathy Lutzkanin, Risk Management
Eric Burge, Finance
Shawn Sonnkalb, Finance
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Ms. Jurgensen to approve the consent agenda; Mr. Garnsey seconded the motion. The Chairman called the vote and the motion carried.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201608	$9,732.12	Plan Administrator
Gabriel Roeder Smith & Co.	424333	$987.50	Actuarial Services
CliftonLarsonAllen	1334298	$1,500.00	Audit Services
Total Expenditures		$12,219.62	

Acknowledgment of the reimbursement in the amount of $1,666.51 to LaDonna Jurgensen for travel, lodging and registration expenses associated with her attendance to the IFEBP Trustees Institute February 14 -17, 2016 in Orlando FL, and the CPPC Annual Conference August 30 – September 2, 2016 in Beaver Creek, CO.

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
6	Retirements as described in detail	
2	Vested Withdrawal	$88,904.80
17	Non Vested Withdrawals	$119,491.91
1	Death Benefit	$170.200.86
	Total Expenditures	$378,597.57

Risk Management Review
Ms. Lutzkanin the Director of Risk Management for Arapahoe County went over the services that her office provides to the County as well as the Retirement Board in regards to insurance coverages and liabilities. Board members did ask about coverage as fiduciaries and were informed that they have layered coverage and would be covered as long as they were acting in a responsible manner in performing their duties as Board members. Mr. Lyon asked about training of fiduciaries and wondered if that would be helpful when going out to bid, and that the Board would be willing to provide such information if it would be helpful. Ms. Lutzkanin stated that any information is helpful

and also wondered if the Board would be willing to talk with new Insurance providers when going out to bid in the fourth quarter.

Mr. Quigley did ask about Cyber Insurance, and Ms. Lutzkanin stated that currently the County does not have a separate policy just for cyber breaches or attacks. She is hoping to have a minimum amount of coverage introduced for year 2017. As it relates to the Plan working with a third party vendor Mr. Quigley will contact Milliman and get copies of insurance certificates and the type and scope of cyber insurance that may or may not be provided. The Board thanked Ms. Lutzkanin for the information and looked forward to working with her and her staff on the insurance renewals.

Ellwood Associates

Mr. Connors went over the Fund Performance for the month of August, which YTD shows that the Plan has had a return of 6.3% and at the 1 year mark 7%. And providing any unforeseen negative events the Plan could end the year earning its expected rate of return of 7.5%, but between now and the end of the year there could be some unpredictable outcomes. Stocks outperformed other sectors with rewards for risk taking. Global Tactical Asset Allocation is a new broad strategy that Mr. Connors will bring before the Board in the future which takes a more global look at asset allocation the interplay between all of the Plans holdings. It appears that all Equities are outperforming their index, and leveraged loans are doing well, but Fixed Income not so well. Hedge Fund to Funds have not had stellar returns so far this year even with the managers' satisfactory performance.

Mr. Connors brought before the Board the results of the Private Equity Manager search to add to the asset allocation being used by the Plan. There are three types of Private Equity strategies being used in the market at the current time, these are: Direct Company investment, Direct Fund Investing, and Fund of Funds investing. Ellwood advocates direct fund investing in destressed, mid and large buyouts, growth equity, and other private credit strategies.

The core basis for a successful Private Equity Program should include the following:

I. Vintage Year Diversification

- Commit to new private equity funds each year to ensure market diversification.
- Commit a consistent annual dollar amount (e.g., $3 million per year) within each vintage year to further diversify market risk and dollar cost average into private investments.
- Vintage year diversification limits concentration to specific vintage years that may underperform due to unfavorable capital market conditions.

II. Strategy Diversification

- Buyout funds, special situations funds, distressed funds, venture capital funds, and secondary funds should be considered as complementary strategies to enhance risk-adjusted returns.
- Ellwood favors buyout funds due to the lower loss rates and more consistent return premium to public equities.
- Flexible strategy guidelines are preferred to capitalize on investment manager or market opportunities.

III. Robust Investment Manager Due Diligence

- Investment, organizational and operational due diligence are critical due to the illiquid nature of the asset class.
- Ellwood has a dedicated operational due diligence professional to evaluate back and middle office procedures.
- Ellwood's private equity team meets with approximately 100 managers per year and approves between one and four new firms for client capital.

IV. Long-Term Focus

- Private equity investments should be made with a long-term view due to the illiquidity of the asset class.
- A mature private equity program takes five to seven years to build.

Based upon the research and analysis Ellwood Associates believes a small market buyout commitment is the appropriate vehicle for the Arapahoe County Retirement Plan, as such has narrowed the field down to two from four such offerings, the two not being presented currently don't have an offering.

RCP Advisors which is a premier small buyout fund-of-funds manager with a proven track record of success, access, and sourcing capabilities. The team is dedicated solely to the lower middle buyout space and has made over 200 commitments to over 100 different primary fund managers since inception in 2001. Given the team's industry experience, RCP has a unique view that covers a substantial portion of the evolving market. The team favors constructing concise portfolios, investing in 10-15 of the top funds in a three year period, letting the best funds drive results and avoiding "index-like" performance.

Siguler Guff which is one of the most active and experienced investors in the small and lower middle market. The buyout team is dedicated solely to the small and lower middle buyout space and has committed over $1.5B to 67 small buyout funds and over $550m to 90 small buyout co-investments. Siguler Guff has extensive experience and expertise co-investing directly into small companies, enhancing fund returns while reducing fees paid to the underlying GP. The Team is able to leverage their dominant position, often as lead investor, to negotiate favorable terms and conditions, reduce expenses, and increase transparency with underlying GP's. In SBOF II, Siguler Guff was able to enhance the terms and conditions in every fund in which it invested.

Ms. Jurgensen made a motion to make a 2.5 million commitment to Siguler Guff, Ms. Kennedy seconded the motion. The Chairman called the vote and the vote was four in favor and one opposed, Ms. Sandstrom was the opposing vote and she wanted to state that she was fully supportive of the investment but would have liked to have seen more candidates.

Other Business

Ms. Woolfrey did go through the process of explaining the year end evaluation process and the gathering of the "snap shot" data and did come to the conclusion that if anything the 2014 year end may have been understated, again based upon the timing and recording of salary history and salary increases given to employees. When asked if this was enough to make a material difference in the valuation, Ms. Woolfrey did state that in her opinion the difference would be minimal and that going forward the information for year end 2015 was correct and that the valuation presented in year 2016 was accurate, just that the salary increase may have been overstated since two years' worth of increases were added together. Ms. Sandstrom asked if Ms. Woolfrey would be willing to work with herself and Ms. Kennedy, Finance Director to draft a memo detailing the finding to be sent to the BOCC, which was affirmative. Ms. Sandstrom would keep the Board in the loop on any communication to the BOCC.

The question of having a schedule for vendor RFP's was brought forth and Ms. Sandstrom asked that it be an actual agenda item and to try and get something under way. Mr. Quigley did prepare a proposed schedule for vendors review starting with the Investment Consulting in 2016/2017 followed up by Legal Services and Actuarial Services, then using a five-year review period going forward. The Board asked that the Plan Administrator start to work on the county provided RFP form gathering materials from prior RFP's or examples used by like entities and distribute the draft to the Board members for comments and review prior to the October meeting. Upon review the Board will determine if there should be a review with the Purchasing staff before posting; if not then moving forward with the posting and collection of responses. If possible the Board would like to be able to make a choice sometime after the first of the year.

Board Member Comments

None

Plan Administrator Comments

Mr. Quigley did let the Board know that he would be attending the Benefit Fairs in conjunction with the County's Open Enrollment providing information to the employee population in regards to the ACG Retirement Plan.

Ms. Kennedy did ask about the attendance to the Pre-Retirement Training which had 15 attendees, and Mr. Quigley stated that starting in 2017 there would be one session per year and was scheduled for June 2017.

Plan Members Comments

None

There being no further business to come before the Board, the Chairman adjourned the meeting at 3:55 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
October 26, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
Sue Sandstrom
Mike Garnsey by phone
LaDonna Jurgensen

Others Present
Dale Connors, Ellwood Associates
Andrew Fiegel, Ellwood Associates
Shawn Sonnkalb, Finance
Erik Burge, Finance
Lew Quigley, Plan Administrator

Consent Agenda

A motion was made by Ms. Sandstrom to prove the consent agenda with a couple of adjustments to the minutes; Ms. Kennedy seconded the motion. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201609	$9,732.13	Administrator Expense
Ellwood Associates	N/A	$20,956.00	Consulting Services
Davis Graham & Stubbs LLP	731930	$814.00	Annual Retainer
Davis Graham & Stubbs LLP	731929	$4,419.00	Plan Matters
IFEBP	405687-H8R4Q8	$995.00	Annual Membership
Milliman	016ACR1016	$6,500.00	License Fee
J.P.Morgan	20160930-26714-A	$10,506.80	Investment Fees
Fidelity	20160930-805-A	$25,732.65	Investment Fees
NCPERS	5915	$250.00	Membership
Tortoise	N/A	$57,640.20	Investment Fees
Total Expenditures		$137,545.78	

Acknowledgment of reimbursement to LaDonna Jurgensen in the amount of $592.89 for travel and lodging expenses associated with attendance to the CPPC Annual Conference, August 30 - September 2, 2016 in Beaver Creek Colorado.
Acknowledgment of reimbursement to Sue Sandstrom in the amount of $823.39 for travel and lodging expenses associated with attendance to the CPPC Annual Conference, August 30 - September 2, 2016 in Beaver Creek Colorado.
Acknowledgement of reimbursement to Lew Quigley in the amount of $328.11 for office supplies.

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
2	Retirements as described in detail	
1	Vested Withdrawal	$31,148.83
21	Non Vested Withdrawals	$100,776.78
	Total Expenditures	$131,625.61

Ellwood Associates

September was flat overall with value stock somewhat out of favor, growth was showing signs of improving with fundamentals showing success. Looking forward October is down, although Emerging Markets have been positive. The Plan is up 7.1% YTD ahead of the benchmark for the 1, 3, and 5 year milestones. Some of this a result of the negative 2011 months starting to roll off and hopefully the year will end above the expected rate of return of 7.5%.

Mr. Fiegel went over “The Case for Hedge Funds” handout detailing the reasons for and against Hedge Funds and the reason why they should be a piece of the investment portfolio. Hedge funds have a legal structure that allows for increased investment flexibility relative to traditional investments. This flexibility essentially allows a manager to invest in any type of security on both a long and short basis, while utilizing multiple strategies to generate uncorrelated returns to the broader market. The term “hedge fund” has many meanings today. There are various types of underlying strategies that have a place in an overall portfolio by providing return characteristics that cannot otherwise be generated through exposure to long only managers. Managing a hedge fund is a skill that is unique from long only investing, given managers can implement a wide range of strategies, invest across the capital structure, and do not have a defined universe of investments. Performance of underlying strategies ebb and flow during different economic periods, but recent performance across the hedge fund universe has been challenging.

The recent environment has been difficult to navigate for both traditional active managers and hedge fund managers due a strong market rally since the economic crisis. Additionally, equity market diversification has been challenging given the strong returns from U.S. equities. While hedge funds have underperformed the broad equity markets, they have done so with significantly less risk and have protected capital during periods of negative equity market returns. Given both these factors, hedge funds have reduced total portfolio volatility in client portfolios while maintaining similar returns to global equities. The current environment appears to be increasingly attractive for hedge fund strategies for the following reasons: increased equity market volatility, divergent monetary policy, credit spread widening, and increased corporate action. Due to hedge fund’s unique strategies and risks, manager selection and ongoing due diligence continue to be key tenants to investing in the asset class.
Ellwood recommends investors continue to allocate to hedge funds where appropriate given the risk adjusted returns, decreased portfolio volatility, and exposure to unique strategies relative to long only investing. The Board felt that the information was informative and felt that Hedge Funds have a role to play in the Plans overall asset strategy.

Other Business

Mr. Quigley informed the Board that the RFP for Investment Advisory Services will go public on November 3, 2016 with a submission date of December 8, 2016 at which point they will be delivered to the Board members with instructions as to the evaluation and return date. At this point face-to-face interviews are scheduled for January 11, 2017 @ 1:30 in the West Hearing Room. A couple of the Board members would not be able to attend the January 11, 2017 interview and would provide available dates to Mr. Quigley who will coordinate with Purchasing. Ms. Sandstrom also asked that the announcement be posted on the Pension & Investment announcement page providing the contact information for the RFP, she would provide that information and Mr. Quigley will forward on to Purchasing.

There was a question posed by a member of the Citizens Budget Committee regarding "who would be responsible to meet the obligations should the Plan fail". Working with Cindy Birley's office a response along with an additional comment from Mr. Lyon was sent back to Todd Weaver, Budget Manager.

There has been some employee discussion regarding the inclusion of "bonus pay" not only in the calculation of a retirement benefit but as contributable to the Plan. Currently these types of pay are excluded from calculation of benefit and contributions. Cindy Birley will try and clean up the language in the Plan Document when doing the year end amendment and restatement in the area of Compensation.

Vicki Johnson will attend the November meeting and talk to the IRS's definition of "Normal Retirement" which could have an effect on Plan members especially in the case of rehires, fortunately the County does not allow retirees to come back to retirement eligible positions; in addition to doing a year end amendment and restatement.

As a point of reference while doing some research for an old file from an ex-employee questioning if they had a retirement benefit. Pre 2005 old retirement paperwork was kept in the Personnel Files which were stored in the warehouse, whereas if a file was needed it was pulled from the warehouse, copies made and provided to the individual. I was contacted by an individual who left employment in 1997 and by all indications had pulled their account balance, as they were not currently nor had ever been active as a Deferred Vested member. Upon researching this file it was discovered that all personnel files prior to 2006 have been destroyed by Human Resources at the direction of the County Attorney's office. When this was brought to Human Resources attention they didn't even think to reach out to the Retirement Plan to inform them that this was going to happen. In speaking with Vicki Johnson about this situation, there isn't really thing that the Plan can do going backward; going forward the retirement paperwork is being kept in a separate file held by the Retirement Plan never to be destroyed. Ms. Johnson stated that on these historical request the burden of proof should fall back on the former employee to dispute any information that the Plan may hold.

<u>Members Questions</u>

There being no further business to come before the Board, the Chairman adjourned the meeting at 2:35 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
November 30, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
Sue Sandstrom - Absent
Mike Garnsey
LaDonna Jurgensen

Others Present
Dale Connors, Elwood Associates
Cindy Birley, Davis Graham & Stubbs, LLP
Tina Seberg, US Bank
Erik Burge, Finance
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Mr. Garnsey to approve the consent agenda; Ms. Jurgensen seconded the motion. The motion carried and Chairman so ordered.

- Invoices as follows:

Vendor	Invoice #	Amount	Purpose
Arapahoe County Treasurer	201611	$14,456.49	Plan Administrator
US Bank	10137409	$15,477.57	Custodial Fees
Davis Graham & Stubbs LLP	733953	$3,093.00	Plan Matters
Davis Graham & Stubbs LLP	733954	$481.00	Participant Matters
Davis Graham & Stubbs LLP	733955	$9,379.00	Investment Matters
Gabriel Roeder Smith & Co.	425491	$790.00	Actuarial Services
Milliman	016ACR1116	$4,070.00	Actuarial Services
Total Expenditures		$47,888.76	

Acknowledge reimbursement for travel and lodging in the amount of $1,527.62 payable to Lew Quigley for attending the 2016 Annual IFEBP Conference in Orlando, FL.

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
6	Retirements as described in detail	
4	Vested Withdrawal	$145,227.30
6	Non Vested Withdrawals	$31,806.50
	Total Expenditures	$177,033.80

Ellwood Associates
Mr. Connors went over third quarter -- sectors other than Fixed Income did well; Income plays have struggled with investors going back to bonds. Through September the Plan was showing a Return on Investment of 8.6% for the trailing five years, thus outperforming the index with lower volatility. Going forward one month to October showed stocks down although Emerging Markets are holding their own. The market as a whole was not expecting the election results and had positioned itself for a different outcome. For the month of October the Plan's annualized five year Return on Investments was down to 7.2%, down approximately one percent. The Plan is hopefully still on track to end the year and make its 7.5% expected return. Going over the Plan specifics reveal that currently the

Operating Account is carrying a very large balance, which is due to the fact that there has been an increase in Capital Calls, and we are currently using the Operating Account to fund these calls as they come in. The Plan has put in a liquidation request for Trumbull Real Estate in the amount of $5M which should have a settlement date of April 2017. The Plan started the year with $268M and had grown to $278M at the end of September; but the negative activity brought the closing balance to $275M. Many of the sectors are meeting or exceeding their individual benchmarks. First quarter may see a recommendation to return to a target allocation in the Emerging market sector back to 5%. After the first of the year the Ellwood staff is going to do an on-site visit of the Trumbull Real Estate as a matter of review. The Harbert Fund VI is gaining momentum and has extended the closing again, but should close after the first of the year.

Mr. Connors went over the updated Strategic Asset Allocation and Investment Structure document. The direction in regards to the cash balance in the Operating Account will be to increase the cash balance to four million to alleviate the constant need to replenish the operating account. Other updates are the changing of Investment manager product names, deleting closed accounts, and some accounts have been combined. Vendor information has been updated with the latest contact names, addresses, and additional information.

<u>Davis Graham & Stubbs, LLP</u>
Ms. Birley brought before the Board the discussion in regards to what is "normal retirement age" under the IRS regulations. Under the proposed regulations the Plan's Rule of 75 would be in violation of the proposed regulations for any employee hired or rehired on or after January 1, 2017. All Plan documents will need to be updated to reflect the Plan's compliance with the new regulations even though currently it's County policy not to re-hire retirees into retirement eligible positions. The Tier II and III employees currently meet the new regulations. Under Amendment No. 5, as of January 1, 2017 if there were any employees who were under the Rule of 75 rehired into a retirement eligible position they would come back and earn a Rule of 80 benefit, provided the age 52 requirement is met. In addition Amendment No. 5, which will be presented to the Board at the December Board meeting, will include other items, such as clarifying the interest calculation in Article II, Section 3(b)(1), adding language to the definition of "Compensation" to clarify that "Compensation" includes any pay differential as pension eligible salary, and as a result of the PATH Act which went through in late 2015, the Plan would expand the definition of "Eligible Retirement Plan" to provide that an employee may transfer the amount eligible for rollover upon the member's termination directly into a SIMPLE IRA that the person may have from a prior employer, provided the rollover occurs after the 2-year period is met for the SIMPLE IRA. This amendment will be brought before the Board at the December 14, 2017 for approval and signature.

<u>US Bank</u>
Ms. Seberg brought in the third quarter review and once again the bank had record net income and net revenue. US Bank continues to lead the industry in employee giving campaigns and is a very philanthropic organization. The Board thanked Ms. Seberg and her staff for their continued service.

<u>Other Business</u>
Mr. Lyons wanted to go over the Specific Duties for the Board Members and wanted to see if it was worthwhile and if the other Board Members felt like continuing. The Board Members all provided valuable input as to a clarification which will be incorporated and re-distributed at the December Board meeting.

Board Member Comments

Mr. Lyon wanted to bring up the discussion of Consultant/Vendor Evaluations for the December meeting, as he felt that there needs to be some guidelines with built in flexibility.

Plan Administrator Comments

Mr. Quigley talked a little about the IFEBP Annual Conference, which took place right after the national election, he felt and Mr. Lyon concurred that the atmosphere was a bit subdued but that the information was timely and interesting.

Plan Members Question or Comments

There being no further business to come before the Board, the Chairman adjourned the meeting at 2:45 p.m.

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Dennis Lyon, Chairman

ARAPAHOE COUNTY BOARD OF RETIREMENT
MINUTES
December 14, 2016

The Chairman called the meeting to order at 1:30 P.M.

Board Members Present
Dennis Lyon
Darcy Kennedy
Sue Sandstrom
Mike Garnsey
LaDonna Jurgensen - Absent

Others Present
Vicki Johnson, Davis Graham & Stubbs, LLP
Dale Connors, Ellwood Associates
David May, Sheriff
Erik Burge, Finance
Shannon Geyer, Communication Services
Lew Quigley, Plan Administrator

Consent Agenda
A motion was made by Mr. Garnsey to approve the consent agenda; Ms. Kennedy seconded this. The motion carried with three affirmative and one abstention.

Invoices as follows:

Vendor	Invoice #	Amount	Purpose
No invoices as of meeting date			

Acknowledgement of reimbursement to Dennis Lyon in the amount of $1,035.24 for travel expense associated with the attendance to IFEBP Annual Conference, in Orlando, FL Nov 12 – 17, 2016.

- Retirements; Vested/Non-Vested Withdrawals

Number	Reason	Total
4	Retirements as described in detail	
3	Vested Withdrawal	$105,239.13
14	Non Vested Withdrawals	$88,443.69
1	Death Benefit	$93,349.28
	Total Expenditures	$287,032.10

Ellwood Associates
Mr. Connors brought the Board up to date on the November preliminary performance having no Real Estate numbers; US Stocks were up which offset any negatives during the month. YTD returns are at 6.4% and the five year number is at the assumed rate of return of 7.5%. The Fund is a bit over weighted in MLP's and Hedge Funds, consequently the Plan will start to trim that down and place the excess funds in the Institutional Index fund. The reduction of the target for Aberdeen will show up in the December report, and so far Bonds as a whole are down for the month of December.

Davis Graham & Stubbs, LLP

Ms. Johnson brought before the Board Amendment No. 5 to the Plan; which includes the cumulative list with the appropriate effective date; a technical clean up in the explanation of interest earned, the specific inclusion in the term of shift differential pay to be included in the calculation of contributions, re-employment of individuals and the consequences as to their prior Rule of and whether they come back under their original Rule of or a new Rule of, Normal Retirement age's new definition and it's interaction with the current Tier's, and finally the ability to roll monies into a SIMPLE IRA. The Special Tax Notice has been updated and is already being distributed. Ms. Sandstrom made a motion to approve Amendment No. 5; Mr. Garnsey seconded the motion; the Chairman called the vote and the motion passed.

Other Business

Mr. Lyon re-opened the discussion of Board member duties for 2017 asking if anyone had a chance to review and come up with any additional items to works on for the upcoming year. Ms. Jurgensen made a few changes and passed those on to Mr. Lyon for inclusion, there were no other changes or comments. Mr. Lyon went over his specific goals for 2017 and will continue as he has in the past.

An updated financial report was given to the Board as prepared by the Finance Department and Mr. Burge talked about the preparation and that this particular report will be used during the audit process and will be included in the Financial Reports. Ms. Sandstrom asked if the report could include the beginning and ending balance and Mr. Burge stated that he will put on future reports. The hope is that the report will be delivered at least quarterly.

The next item was the annual election of officers for the Arapahoe County Retirement Board. Mr. Lyon called the election and opened the floor for nominations. Mr. Sandstrom nominated Mr. Lyon for Chairman; Mr. Garnsey seconded the nomination. The vote was called and Mr. Lyon was elected Chairman. Mr. Garnsey nominated Ms. Kennedy for Chairman Pro Tem, and Ms. Jurgensen for the Secretary/Treasurer, Ms. Sandstrom seconded the nomination. The vote was called and Ms. Kennedy was elected Chairman Pro Tem and Ms. Jurgensen elected Secretary/Treasurer.

Board Member Comments

Mr. Lyon brought up the idea of having a pre-meeting luncheon before the January 25th meeting, whereby those who wished to attend could meet have lunch and come to the Administration Building for the Board meeting. Ms. Kennedy will set up the location and time for the luncheon and she will work with Mr. Quigley to get that setup as well as posted on the agenda.

Mr. Lyon wanted to bring before the Board the topic of Vendor Evaluations, in his proposal he felt that the Board should go record on a more regular basis with the discussion of vendor performance as he felt that as a Board that this was part of their fiduciary responsibility, although he did not want to lock the Board into a formal RFP schedule. To that point Mr. Lyon put forth a series of situations that would trigger a review and possible formal RFP; those were an increase in price, above what would be considered normal, if the vendor changed hands through sale or re-organization, significant changes in the management structure and/or staff, and relocation of the vendor outside of the Denver metro area. The soon to be announced RFP for Investment Services falls into one of these situations and the Board felt now was a good time to go ahead announce. Mr. Garnsey felt that the annual discussion was an excellent idea and felt that maybe these situations should be included in the Plans Bylaws. Ms. Sandstrom stated that GFOA publishes a set of guidelines which could be used as a reference. Another option would be to do RFI and then based upon the results decide whether to do a RFP. Mr. Lyon will work on Vendor Evaluations and come up with an outline. For 2017 the Board would review the Actuarial Service provider and decide whether to do an RFP, RFI or no action taken.

At this point the Chairman asked to clear the room of everyone except the Board as they were going into Executive Session pursuit to C.R.S. Section 24-6-402 (4)(b) to discuss personnel issues. Ms. Sandstrom made a motion to go into Executive Session, Ms. Kennedy seconded the motion, the Chairman Called the vote and the motion passed.

Ms. Kennedy made a motion to come out of Executive Session, Mr. Garnsey seconded the motion, the Chairman called the vote and the motion passed, hence the Board come out of Executive Session and back into regular session to considered action or recommendations suggested during Executive Session. Ms. Kennedy made a motion to approve the Performance Evaluation, Ms. Sandstrom seconded the motion, the Chairman called the vote and the motion passed. In addition Ms. Sandstrom made a motion to approve a maximum salary increase allowed for individuals with a like rating, Mr. Garnsey seconded the motion; the Chairman called the vote and the motion passed.

Executive Session

There being no further business to come before the Board, the Chairman adjourned the meeting at 2:56 p.m.

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Dennis Lyon, Chairman