

**Arapahoe County Retirement Plan
Strategic Asset Allocation and Investment Structure
September 2022**

This document is intended to supplement the Statement of Investment Policy (“IPS”) of the Arapahoe County Retirement Plan. The IPS is long term in nature while this Strategic Asset Allocation and Investment Structure (“Investment Strategy”) document is designed to be reviewed, and if necessary revised, annually by the Board of the Arapahoe County Retirement Plan (“Board”).

The Investment Strategy includes the following:

- Actuarial assumed rate of return,
- Strategic asset class targets and ranges, refined within the IPS allowable ranges,
- Liquidity policy,
- Investment structure and performance benchmarks for the Total Plan and subcomponents, and
- Contact information for vendors involved with the investments of the Plan.

Actuarial Assumed Rate of Return

The current actuarial assumed rate of return is 7.25%

Strategic Asset Class Targets and Ranges

Asset Class	Sub-Asset Class	Current Target	Allowable Range
Equity		<u>60%</u>	<u>45% - 70%</u>
	Public Equity	50%	40% - 60%
	Private Equity	10%	5% - 15%
Debt		<u>25%</u>	<u>15% - 30%</u>
	Fixed Rate	10%	5% - 25%
	Floating Rate	15%	5% - 20%
Alternatives		<u>15%</u>	<u>10% - 20%</u>
	Equity Real Estate	15%	10% - 20%

Liquidity Policy

The IPS states that the Plan Administrator of the Plan will determine the appropriate level of cash reserves depending on the anticipated liquidity needs. The Plan Administrator has determined that the current liquidity requirement is \$6 million. When the balance exceeds \$8 million, excess reserve cash will be transferred into the invested assets. When the balance falls below \$2 million, the cash reserves will be replenished to \$6 million by liquidation of invested assets. The Plan Administrator, with the assistance of the investment consultant, will coordinate all investment manager cash inflows and outflows with the effected products and with the Plan's custodial bank.

Investment Structure and Performance Benchmarks

The Plan's investments, in total, by asset class and by individual manager, will be measured against appropriate benchmarks. Unless otherwise stated, performance will be compared on a net-of-investment management fees basis.

Total Plan Benchmarks:

Absolute Return:		7.25%	
Relative Return:		Public Defined Benefit Pension Plans	
Benchmark Index:	50%	MSCI All Country World	(Equity – Public)
	10%	Russell 3000 lagged 1 Quarter	(Equity – Private)
	10%	Bloomberg US Aggregate	(Debt – Public Fixed Rate)
	5%	Credit Suisse Leveraged Loan	(Debt – Public Floating Rate)
	10%	Credit Suisse Leveraged Loan lagged 1 Quarter	(Debt – Private Credit)
	10%	NFI ODCE Net of Fees	(Equity Real Estate – Private Core)
	5%	NCREIF Property	(Equity Real Estate – Private Value-add)

Investment management structure and benchmarks are on the following pages.

Investment Manager	Investment Product/Ticker	Fee Structure	Investment Style/Universe	Benchmark Index	Target Allocation
Vanguard Group	Vanguard Institutional Index fund: VINIX	0.03% Expense Ratio	U.S. Equity S&P 500 Index	S&P 500	25%
Vanguard Group	Vanguard Total International Stock Market Index, VTSNX	0.08% Expense Ratio	Non-U.S. Equity Index	FTSE Global All Cap ex-US	10%
Vanguard Group	Vanguard Extended Market Index fund: VIEIX	0.05% Expense Ratio	U.S. Equity Smid Cap Index	S&P Completion Index	5%
Capital Group/American Funds	New Perspective fund – R6 shares, RNP GX	0.42% Expense Ratio	Global Equity – Growth	MSCI All Country World	5%
Dodge & Cox	Dodge & Cox Global Stock fund, DODWX	0.62% Expense Ratio	Global Equity – Value	MSCI All Country World	5%
Private Equity Program	Multiple Managers/Products	Varies	Private Equity	Russell 3000 lagged 1 Qtr.	10%
JPMorgan Asset Management	JPMorgan Core Bond: IRS 81-100 commingled fund	0.30% of Assets	Core Fixed Income	Bloomberg US Aggregate	5%
Western Asset Management	Western Asset Core Plus Bond fund: WACPX	0.42% Expense Ratio	Core Plus Fixed Income	Bloomberg US Aggregate	5%
Bain Capital	Bain Capital Senior Loan Fund, Commingled Fund	0.55% Mgmt. Fee 0.13% Admin. Fee	Senior Secured Floating Rate Debt	Credit Suisse Leveraged Loan	5%
Private Credit Program	Multiple Managers/Products	Varies	Private Credit	Credit Suisse Leveraged Loan lagged 1 Quarter	10%

Investment Manager	Investment Product/Ticker	Fee Structure	Investment Style/Universe	Benchmark Index	Target Allocation
CBRE Global Investors	CBRE U.S. Core Partners	1.0% on first \$10 mil 0.9% on next \$15 mil 0.8% on next \$25 mil	Private Real Estate Equity	NFI ODCE Net of Fees	10%
Harbert Management Corporation	Harbert United States Real Estate Fund V: Commingled fund	1.5% of Assets 20% incentive over 9% Preferred Return	Value-add Private Equity Real estate	NCREIF Property	5%
Harbert Management Corporation	Harbert United States Real Estate Fund VI: Commingled fund	1.25% of Assets 20% incentive over 9% Preferred Return	Value-add Private Equity Real estate	NCREIF Property	

Private Equity Program Structure:

Investment Manager	Investment Product	Commitment Amount	Vintage	Fee Structure	Investment Style
Aberdeen Standard Investment Management	U.S. Private Equity VI	\$4.3 million	2015 - 2017	1.0% of Committed Capital 5% Carry over 8% Preferred	Small Buyout
Horsley Bridge	XI Venture	\$3.0 million	2015 - 2017	1.0% of Committed Capital	Venture Capital Fund-of-Funds
Siguler Guff	Small Buyout Opportunity Fund III	\$2.5 million	2016 - 2018	Yrs. 1-5: 1.0% of Committed Capital Thereafter: 80% of prior annual fee 5% Carry over 8% Preferred	Small Buyout Fund-of-Funds
Weathergagge	Venture Capital IV	\$1.0 million	2016 - 2018	Yrs. 1-7: 1.0% of Committed Capital Thereafter: 90% of prior annual fee 2.5% to 7.5% tiered Carry based on multiples achieved	Venture Capital

Investment Manager	Investment Product	Commitment Amount	Vintage	Fee Structure	Investment Style
Horsley Bridge XIII Ventures	Venture Capital XIII	\$3 million	2019 – 2021	1.0% of Committed Capital during original term 0.50% during extensions 0% thereafter	Venture Capital
Siguler Guff	Small Buyout Opportunity Fund IV	\$4 million	2019 – 2021	Yrs. 1-5: 1.0% of Committed Capital Thereafter: 80% of prior annual fee 5% Carry over 8% Preferred: Fund 15% Carry over 8%: Direct	Small Buyout Fund-of-Funds
Warburg Pincus	Global Growth, LP	\$3.75 million	2019 – 2021	Yrs. 1-6: 1.4% of Committed Capital Thereafter: 80% of prior annual fee 20% Carry, No Preferred	Growth Equity
Crestview Partners	Partners IV	\$4.25 million	2020 – 2022	1.75% during Investment Period 1.5% during Follow-On Period 1.5% during Extension Period 20% Carry over 8% Preferred	Middle Market Buyout

Private Credit Program Structure:

Management Firm	Investment Product	Commitment	Vintage	Investment Fees	Investment Style
Principal Global Investors	Principal Real Estate Debt Fund II, L.P.	\$14 million	2017 – 2019	1.375% of Invested Assets 20% Incentive over 7% Preferred	Mezzanine/High Yield Real Estate Loans
Oak Hill Advisors	OHA Tactical Investment Fund	\$8.5 million	2020 – 2022	0.95% of Invested Assets 15% Incentive over 7% Preferred	Stressed and Distressed Debt

Management Firm	Investment Product	Commitment	Vintage	Investment Fees	Investment Style
Värde Management, L.P.	Värde Dislocation Fund, L.P.	\$8.5 million	2020 – 2022	1.5% Management Fee 20% Carry over 8% Preferred	Stressed and Distressed Debt
Golub Capital Partners	Rollover Fund 2	\$8.25 million	2022	1.0% Management Fee 20% Carry over 8% Preferred	Middle Market Loans

Vendor Information

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Investment Management Firms

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Capital Group (American Funds)

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Dodge & Cox

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Abrdn

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Horsley Bridge Partners

Private Equity – Venture Capital
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Warburg Pincus

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Crestview Partners

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JPMorgan Asset Management

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Western Asset Management

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Bain Capital, L.P.

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Principal Global Investors

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Golub Capital Partners

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