MINUTES OF BOSTON RETIREMENT BOARD

Administrative Session

July 19, 2023 Boston Retirement Board, The Civic Pavilion Boston, Massachusetts 02201

TRUSTEES IN ATTENDANCE: Daniel J. Green, Mayoral appointed Member (Chair). Michael D. O'Reilly, Elected Member; Maureen Joyce, Ex Officio Member; Thomas V.J. Jackson, Fifth Member.

STAFF IN ATTENDANCE: Timothy J. Smyth, Executive Officer; Christine M. Weir, Deputy Executive Officer; Natacha Thomas, General Counsel; John Kelly, Investment Analyst; Ellen M. McCarthy, Comptroller; Greg Molina, Board Secretary.

ALSO IN ATTENDANCE: Michael Manning, Kiley Murphy, Larissa Davy, Matt Ritter, Tage Oster of NEPC; Tim D'Arcy, Peter Larsen of Hamilton Lane; Jeff Chan, Warren Tolman of EnTrust; Jenny Chan, Heather Rosenberg of Macquarie; Kathryn Leaf, Evan Corley, Will Waters of Pantheon; Joseph Francis of Ernst & Young.

EXCUSED ABSENCE: Michael W. McLaughlin, Elected Member.

Administrative Session Convene

The Board voted unanimously via roll call (4-0) to enter into Administrative Session at approximately 10:03 a.m.

Motion accepted (4-0)

Mr. Smyth stated that the June 21, 2023 and May 17, 2023 minutes are available on CSI. However, with Mr. McLaughlin not being present Mr. Smyth suggested that the Board wait until next month, so he can actually sign them before they vote.

Motion made, and seconded, to accept the Administrative Session Minutes of the June 21, 2023 meeting as presented.

Roll Call Vote: Member O'Reilly: Aye; Member Jackson: Aye; Member Joyce: Aye; Chairman Greene: Aye.

Motion accepted (4-0)

Outstanding/Ongoing Administrative Issues: Timothy J. Smyth, Executive Officer

PERAC Memos

The following PERAC memos were offered.

- PERAC Memo 15-2023 re 91A Prosper Tasks.pdf
- PERAC Memo 16-2023 re Mandatory Retirement Board Member Training.

Mr. Smyth stated that the two PERAC memos on the agenda are for educational purposes. There is no action required.

Unused Vacation Buyback supplemental regulation

Mr. Smyth updated the Board on the Unused Vacation Buyback language. Mr. Smyth is hoping to conduct a meeting with the unions August 4th. He has circulated that date to the people in the Administration in the event that they want to participate as well. Once he solidifies the August 4th date, Mr. Smyth will set up a meeting with the unions and present the proposed language and let them weigh in. The hope is to come to some consensus that day. Then the plan would be to bring it back to the Board at the August Board meeting.

• Board Election Update

Mr. Smyth stated that the system has certified six candidates for the election of the two elected Board members. They have all been notified that they have been certified. All the candidates were alerted that they have the option, a short 90-word biography with the ballots. They are due back to us July 28, 2023.

Outstanding/Ongoing Investment Issues: John Kelly, Investment Analyst

Infrastructure (PE) Search

Mr. Manning stated that, the infrastructure search was issued as part of private equity search, which also included diverse fund of funds, and co-investments. The annual pacing plan recommends the System commit \$40 million to private equity in 2023.

At the June 2023 meeting, three energy finalists presented: Carlyle, Kayne Anderson, and NGP. Kayne was selected for a \$15 million commitment, leaving approximately \$25 million more to commit this year. The infrastructure finalists will present today.

Hamilton Lane

Mr. D'Arcy opened by stating that Hamilton Lane is appreciative of the seven-year relationship with the Boston Retirement System. (BRS) Mr. Darcy went through the timeline of the investments by the BRS. The BRS has out performed the bench marks when working with Hamilton Lane. The fee structure is very efficient, in terms of how fees are paid on the product. Ultimately getting to discounts that relate to being an existing customer of Hamilton Lane.

Mr. Larsen continued by thanking the Board for the opportunity to present. He went on to present on Hamilton Lane Infrastructure Opportunities Fund II. The fund that is seeking \$1.25B in total commitments. It is an Infrastructure fund that is focused on co-investments and secondaries. It has a middle market orientation and they believe there is great opportunity for Value creation. The product will provide a diversified exposure across the Infrastructure spectrum in terms of deal sponsors and by sector. Their goal with the fee structure of this vehicle is to minimize gross net spread, to minimize the fees that are being paid by our clients and also enhance the alignment between our clients and Hamilton Lane as a manager.

They believe the advantages are twofold. One, its with unique access and we combine that with the experience of our team to provide an overall better result for our client base. Hamilton Lane has been involved in Infrastructure for 23 years. This is a space they know very well. They currently have over \$52B of assets under management and super vision just within Infrastructure and they have a great deal of connectivity to the market. Having reviewed over 350 funds since 2018. Executed on 89 transactions and having relationships with over 120 unique general partners in the Infrastructure community. They have a very short selection rate to \$1.2B. That's a selection rate of 1.25%.

Terms and Structure Infrastructure Opportunities Fund II. Target Size \$1.25B, minimum Commitment \$5M, Commitment Period 4 years. Partnership Term 10 years + 2 one-year extensions, Hamilton Lane Commitment 1%. Management Fees Commitment Management Fee Basis and Avg. Annual Equivalent. On a <\$25M 1% on Net Invested Capital 35bps. \$25 - \$50M 0.85% on Net Invested Capital 30bps, \$50-100M 0.70% on Net Invested Capital 24bps, \$100M+ 0.60% on Net Invested Capital 21bps. Carried Interest 10% Preferred Return 8%, Fund Structure Options to accommodate different investor types. Discounts* 5% for existing clients / 10bps for first close participants.

Mr. Kelly gave an update on the management account that Hamilton has run for the last six years. We have asked NEPC to hold up to this point this year *Boston Retirement Board Administrative Session Minutes of July 19, 2023 Page 3 of 11*

issuing the RFP because it will be seven years in January. Because PERAC has raised some questions. Regarding OCIO model. There is another vendor that's trying to become the OCIO for an entire board's plan asset. The vendor has flagged their vocabulary between BRS and Hamilton Lane which PERAC approved in 2014 and what they have used for an argument for being allowed to do it. Mr. Smyth and Mr. Kelly have had multiple calls with PERAC staff. Last week the PERAC sub committee's and Hamilton Lane staff participated in a call as well.

Mr. Smyth stated that we The BRS and Hamilton Lane started this relationship in 2014. The system knew back then that it was a little outside the box. The system consulted with PERAC before we issued that RFP. PERAC approved the RFP in 2014. Mr. Kelly provided them the approvals from back in 2014, which PERAC acknowledged. Mr. Smyth's review is that PERAC is focused on whether or not this relationship is in compliant with 23b.

Hamilton Lane, BRS staff, BRS Board and NEPC discussed PERAC concerns and the asset class statues and strategy.

EnTrust

Mr. Tolman introduced himself and Mr. Chan. He went on to state that EnTrust is a firm with \$18B in managed assets with 45 investment professionals. They appreciate being given the opportunity to present.

Mr. Chan went on to state that the Blue Ocean impact strategy is maritime focus infrastructure strategy. Its really focused on generating stable predictable cash flows by providing maritime infrastructure equipment This is equipment that is used for 20 to 30 years on constant deployment. They are doing this in a little different way than your typical infrastructure funds.

When they talk to their existing share holders a lot of times they put this in the bucket of infrastructure plus. Let me explain. There are really two unique aspects of this strategy when you are looking at Blue Ocean for impact.

The first one is that instead of just being a fund, the collection of infrastructure assets. Where your generating cashflows, your making money on the cash flows and then ultimately selling individual assets, one by one. That's what a more traditional Infrastructure fund looks like. Return perspective 8% to 12 %. Much of that coming from the cash flows.

They decided to implement a slightly different strategy. What they did was that instead of having a fund that owns the assets. They started a separate industrial operating company called Puris Marine. Puris Marine is the entity that

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owns and operates all these underlying assets. They are the owner and operator of environmentally-advanced maritime infrastructure assets. An established business with expected run-rate EBITDA of over \$230M with 70 vessels. This strategy has a real and quantifiable environmental impact. 2030s Net zero-carbon ambition for asset operations and >250,000 tonnes CO2 saved per year from current assets.

The broader maritime industry is massive. It's a \$3T industry. Think about all the goods and commodities that are shipped. That happens on big industrial ships. The maritime industry is responsible for 3% of global green gas emissions. To put that in a country context, if the maritime industry was a country, it would be the 6th largest in the world. The industry is a big source of global green gas emissions. There is a real push from not just a regulatory perspective but also from shareholder, bank perspective and customer perspective. In the industry there is a lack of these low carbon vessels. That is the evolution of Puris Maritime.

Puris Marine is focused on the renewal energy sector. That is providing the critical equipment that our customers which are, the energy major need to value the renewable assets train. From the production of renewable energy. This is a big market in Europe and with the passing of the inflation reduction act, there is a real big push in the U.S. to start that on the northeast coast. They also transport low carbon energy. They transport ammonia which has zero carbon gas. When you look beyond oil and gas, what is the next energy source that's being developed in a massive scale is going to be hydrogen and they are focused on the transportation of such energy alternatives.

Investment Closing Date First close in Q3 2021 and final close expected in February 2024. Capital Call and Commitment Period is The Strategy will ordinarily provide 7 business days' written notice for capital calls. The Strategy will have a five-year Investment Period and have the discretion to extend the Investment Period for up to two one-year periods. The Strategy expects to pay a 5% dividend per annum, cumulative and non-compounding, anticipated to commence no sooner than beginning two years from the date of the first capital call. Liquidity Investors will not be entitled to voluntarily withdraw from the Strategy. The Company currently intends to seek to affect an initial public offering, sale (or series of sales), recapitalization, asset sale or other similar event providing liquidity to the Strategy investors, at such time as it determines is most beneficial. Management Fee 2.00% p.a. on total commitment. Distribution/Liquidation Fee Net proceeds received from liquidity events and any other distributions made by the Strategy will be made pursuant to a "European" waterfall: First, to investors, until they have received cumulative distributions equal to 100% of all capital

contributed, plus an annual preferred return of 7% (calculated from the date of deployment through the date of distribution); Thereafter, investors receive 80% of distributions and EnTrust Global receives 20% (with a full "GP catchup") Make-Up Payment 8% annual interest on previous capital calls from the date of the relevant capital call Leverage As is common in the maritime industry, Purus Marine expects to utilize leverage (either at the operating company level or at subsidiary or JV levels) and enter into related guarantees to finance the acquisition of assets and manage corporate needs. The Strategy also intends to utilize a subscription facility to manage capital calls. They then ended their presentation.

Macquarie

Ms. Chan opened and introduced herself and Ms. Rosenberg and gave her background. She went on to state that Macquarie is an Australian stock exchange listed financial service firm. They are one of the largest listed entities in Australia. Market cap is about \$70B Ausie, so a little less than \$50B U.S.

Macquarie Asset Management (MAM) is a leading asset manager with \$582b of assets under management (AUM) globally. They have Public Investments AUM of \$357B. With Equities of \$147b AUM, Fixed Income \$195b AUM and Multi-asset / Other \$16b AUM. The Private Markets AUM is \$225 billion. Infrastructure, \$182b AUM with 170+ portfolio companies. Green Investments of 30+ GW green energy and 222 kilotons C02e GHG emissions avoidance. In Agriculture \$3b AUM with 4.7m hectares of farmland and \$20b AUM with ~590 properties5, Macquarie is a top 50 global asset manager with a number one infrastructure manager based on AUM globally. The company's roots go back to 1994.

Within North America, Macquarie Infrastructure Partners (MIP is a strategy that they have implemented for over 20 years. The fund vintage that they are talking about the seventh in that series of funds. In terms of strategy is, a diversified strategy focusing on five different sectors. Transportation, digital infrastructure, waste management, utilities/energy and social infrastructure. The Key success factors are an experienced, deep and local team. Strong sourcing, execution and operational capabilities and compelling infrastructure opportunity. They practice a diversified exposure to core-plus sectors with over \$20 billion invested / committed in 52 portfolio companies. Another success value is the value creation through operational focus and a strong track record across six predecessor funds. They have produced 23 portfolio company realizations, including 3 fully realized funds.

The region in which the fund will be focused on is North America. The Asset class is Infrastructure with a 10-year term and target commitments of \$7.0-Boston Retirement Board Administrative Session Minutes of July 19, 2023 Page 6 of 11

8.0B. The target returns are target Net IRR of 10% -12%. The Target Gross Yield4 4% - 6%, post investment period.

Ms. Chan stated that the firm sees an Attractive risk-return profile and substantial depth of opportunities within the Americas provides a compelling investment proposition. Why infrastructure? Essential services provide for relatively inelastic demand and therefore can expect lower risk of volatility throughout market cycles. Attractive risk/return profile and lower correlation to traditional asset classes provide portfolio diversification benefits. Inflation hedge benefits through revenue streams directly or indirectly linked to CPI and predictable cash flows over long-term allow for recurring yield to investors.

Why Americas? Strong and consistent transaction activity; ~2,300 transactions with an estimated \$940B aggregate value completed in North America from 2017 to 20211. Significant infrastructure build-out required - \$2.6T projected U.S. public funding gap. Canada also requires significantly more capital investment in infrastructure — current deficit estimated at ~\$190B. In Latin America, gap between projected investment and amount needed for adequate infrastructure by 2040 estimated at ~\$150B per year.

Why now? A Robust transaction activity across key target sectors. Attractive private capital opportunities expected to continue. An increasing enduser data demand. An evolving energy landscape to support the energy transition. Strong volume recovery in key transport sectors and limitations on traditional funding sources. They concluded thanking the Board for their time and consideration.

Pantheon

Mr. Waters opened by thanking the Board for their consideration. They are talking about the Pantheon Global Infrastructure IV Fund PGIF Fund IV today. A differentiated approach to infrastructure investing.

Ms. Leaf continued by stating that there are two key questions that they want to focus on today. One is why assets through secondaries and why Pantheon. The \$3.0bn target size seeks to ensures Pantheon can allocate with scale and lead transactions. Fundraising momentum: ~\$2.3bn raised across the program and a PGIF IV deployment: \$1.3bn committed to 13 investments.

PGIF IV is 58% committed to over 105 high quality infrastructure assets. The current portfolio marked at 1.1x / 23.9% IRR (Net). The offering an attractive fee proposition. The Pantheon Infrastructure Platform has 25 years track record

investing in infrastructure & real assets. The firm counts on \$20.7B assets under management and advice. It employs a dedicated investment team with direct infrastructure experience led by 7 partners. They are historically committed ~\$3.0bn annually to infrastructure investments. They argue that their portfolio provides less risk than your average dedicated direct infrastructure Fund.

One of the many benefits of a secondary approach is that you run into these more seasoned assets and there is ability to generate enhanced cash yields as well as there is an overall enhanced liquidity profile to what they are doing. The firm has been doing this since 2009 and have a portfolio of over 1500 companies. That's a huge underwriting source for them. They are a primary investor in the industry in asset class and are deploying \$1B to \$1.5 B in capital and that means GP's want to work with them. They are seeing significantly larger deal flows than some of their competitors. PGIF III: Significant liquidity since start of the fund \$848 million of portfolio-level realizations since inception. (~41% of cost)

Mr. Corley continued by stating that so far, they have deployed about \$1.3B in capital in 13 deals. # of assets are ~105 Cash-on-Cash returns are 10% Gross, 4% Net. Performance (Net) 1.1x MOIC with a 23.9% IRR as an investment committee they have made the decision to de-prioritize co-invest opportunities. Given the tremendous secondaries opportunities That they are seeing. It's almost unpair able in the last 10 to 12 years. They thanked the Board for the opportunity.

The Board, BRS staff and NEPC discussed the merits, fees, strategies, timelines and performance of each of the recommended managers. The Board also wanted to have the firms of Ares Management, Cerberus and Cohen & Steers to present at August Board meeting on opportunistic Real Estate space.

Real Estate Search

Mr. Ritter stated that the current real estate search encompasses the targeted commitments for 2022 and 2023, totaling approximately \$125 million over the two-year period. The search focused on three strategy types: opportunistic, debt, and value-add.

In 2022 the System committed \$65 million across three value-add strategies, completing that sleeve of the search. At today's meeting we will review the respondents for the opportunistic and debt portions of the search. The goal of today's discussion is to narrow down the list of candidates to interview at an upcoming meeting. Based on the annual pacing plan, the System has approximately \$60 million to commit to real estate strategies in 2023.

June 2023 flash report

Mr. Manning went on to state that for the month of June the system was up + 3.1 % and YTD performance is up + 6.30% through June.

Work Plan

Mr. Manning stated that NEPC has included an updated work plan with the meeting materials. As shown on the work plan.

	July	August	Sept.	Oct.	Nov.	Dec.
TOTAL PLAN						
Asset Allocation						
Performance		Q2			Q3	
Education/Review						
TRADITIONAL						
Search/ Presentations			Issue Custody Search	Review Respondents	Analysis/ Presentations	
HEDGE FUNDS						
Program Planning						
Search/ Presentations						
PRIVATE MARKETS						
Program Planning						Pacing Plan
Search/ Presentations	Infrastructure Presentations					
Performance		Q1			Q2	
REAL ESTATE						
Program Planning						Pacing Plar
Search/ Presentations	Search Review (Opp & Debt)	Analysis/ Presentations	Analysis/ Presentations			
Performance		Q1			Q2	

Outstanding/Ongoing Financial Issues: Ellen M. McCarthy, Comptroller

June 2023 Financial Snapshot

Ms. McCarthy reported the June 2023 pension payroll as follows: Contributory payroll: \$65,283,023; Contributory Payees: 15,826; Non-contributory payroll: \$355,662; Total Non-contributory payees: 41; Regular Retirees: 27; Survivor/Beneficiary Retirees: 2; Disability Retirees: 2; Option C/Disb Surv; 7; Members Refunds: 73 for \$2,099,541; Members Transfers: 14 for \$948,383; Option B Refunds: 3 for \$256,010; Operational Warrants: \$417,969.

22 A09.01 BRS 2022 Audit Result - EY

Ms. McCarthy introduced Mr. Francis who stated that Ernst & Youngs (E&Y) audit scope is consistent with what was planned. After completing our remaining procedures, we expect to issue unmodified opinions on the financial statements and required supplementary information and schedules of employer allocations

and pension amounts by employer.

Overall, the Plan's analysis for significant accounting matters is appropriate. Reasonable judgments and consistency have been used by management to account for significant accounting estimates.

Additional points to consider are; Management and Retirement Board inquiries, (to be conducted at this meeting) Required communications, status update/open items, obtain the executed letter of representations from management, perform subsequent events review procedures through E&Y report date and miscellaneous open items.

Motion made, and seconded, to <u>approve</u> June 2022 audit report of Ernst & Young, as presented.

Roll Call Vote: Member O'Reilly: Aye; Member Jackson: Aye; Member Joyce: Aye; Chairman Greene: Aye.

Motion accepted (4-0)

Outstanding/Ongoing Operations Issues: Christine Weir, Deputy Executive Officer

Operations Update

Ms. Weir provided an update on the payroll numbers for the month of June 2023. 35 new retirees scheduled for the June payroll, 43 Superannuation and 4 Disability Cases and 1 pre-retirement death case. Out of the 35 cases, 5 missed payroll, (4 superannuation, 1 death.) A total of 32 new benefits were put on payroll. (2 disability, 2 deaths, 28 superannuation.) 26 from June and 2 from prior payrolls.

Outstanding/Ongoing Legal Issues: Natacha Thomas, General Council

Legal update

Attorney Thomas stated that there were no legal issues to present at this time.

Adjourn from Administrative Session

The Board voted unanimously to enter into Executive Session and then adjourn from Administrative Session at approximately 12:25 pm.

Motion accepted (4-0)

Respectfully submitted,

BOSTON RETIREMENT BOARD

Daniel J. Greene, Esquire

Mayoral Appointed Member, Chairman

Michael W. McLaughlin

Elected Member

Thomas V.J. Jackson

Fifth Member

Maureen A. Joyce Ex Officio Member

Michael D. O'Reilly

Elected Member