# Massachusetts Bay Transportation Authority
# Retirement Fund

# Investment Policy Statement

**Revised and adopted by the Retirement Board: March 21, 2025**

**INVESTMENT POLICY STATEMENT**

**Table of Contents**

**Schedules and Exhibits**

# MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

# INVESTMENT POLICY STATEMENT

**Initially adopted June 1993, revised and adopted by the Retirement Board: March 21, 2025**

## 1. Purpose of this Investment Policy Statement; PRIT Directive.

The purpose of this Investment Policy Statement (this "IPS") is to enumerate for stakeholders clear and concise guidelines by which the Retirement Board administers the Fund within the requirements of the Trust Agreement and Pension Agreement, each as defined in Section 3 below. The Retirement Board periodically reviews this IPS to ensure that it conforms with best practices applicable to the Fund.

The IPS is designed to allow sufficient flexibility to capture investment opportunities while recognizing requirements and providing guidance to facilitate compliance with the governing documents of the Fund and Massachusetts law. With regard to the aforementioned requirements, this version of the IPS incorporates the 2023 mandate, pursuant to Article VII(1) of the Pension Agreement and Paragraph 7 of the Trust Agreement, that the Retirement Board utilize best efforts to transfer, by March 31, 2028, 50% of the market value of the Fund's assets (as measured on April 30, 2023), to PRIT (the mandate is referred to as the "PRIT Directive"). The Fund intends to seek to achieve the Rate of Return, implement the Asset Allocation and comply with the PRIT Directive through an investment plan that includes significant participation in the PRIT Segmentation Program, as referenced in Section 6.3.2.2.

## 2. Background of the Fund.

The Massachusetts Bay Transportation Authority Retirement Fund (the "Fund") is a private trust, established pursuant to a Declaration of Trust, dated January 1, 1948 (the "1948 Trust Agreement"). The Fund was established for the benefit of the employees of the Metropolitan Transit Authority. The Massachusetts Bay Transportation Authority was created in 1964 as the successor to the Metropolitan Transit Authority.

The Fund is a contributory defined benefit retirement plan for a single employer; it is generally exempt from federal and state income tax and, as a government plan, is exempt from ERISA. The Fund is governed by two documents; the Trust Agreement and the Pension Agreement (each defined below). The Fund continues as a distinct, private trust, "for the exclusive benefit of the members and their beneficiaries and to defray reasonable and necessary expenses".[1] Capitalized terms not defined within the context they are used have the meanings set out in **Exhibit A** (Definitions).

Save for being permitted (but not compelled), under state law, to invest in PRIT[2], the Fund is not referenced in or governed by Massachusetts General Laws (M.G.L.) c. 32 (Retirement Systems and Pensions) and is not a public entity (the Fund is not subject to oversight by Public Employee Retirement Administration Commission ("PERAC"). Notwithstanding that the Fund is not regulated as a public pension fund, the Fund regularly consults with PERAC on pension fund best practices.

## 3. Legal Authority; Structure.

The Trust Agreement, initially dated October 28, 1980, with the Second Amended and Restated Trusted

---

[1] *See* Trust Agreement Paragraph 2. The Pension Agreement sets retirement benefits of eligible retired members of the Fund as well as contribution rates for the employer and employees.

[2] As referenced in Section 6.3.2.2 below, *see* M.G.L. c. 32, Section 1, definition of "system", which includes the Fund for the purposes of investing in PRIT (but no other purpose). All other c. 32 Systems are subject to regulation by PERAC. See M.G.L. c. 32, Section 21(1).

Agreement dated as of as of November 17, 2023[3] (the "Trust Agreement"), by and among the Authority, the Union and the Retirement Board, superseded and replaced the 1948 Trust Agreement. The current version of the Pension Agreement is dated as of March 31, 2023 (the "Pension Agreement") and is the result of collective bargaining between the Authority and the Union. Pursuant to its terms, the Authority and the Union periodically renegotiate the Pension Agreement.

The Retirement Board is the sole trustee of the Fund pursuant to paragraph 1 of the Trust Agreement. The seven members of the Retirement Board are appointed pursuant to Article VI(1) of the Pension Agreement.

This IPS is created under the Retirement Board's authority in paragraph 4 of the Trust Agreement. The Retirement Board has authorized and adopted this IPS pursuant to its authority under Article VI(8) of the Pension Agreement, which allows the Retirement Board to adopt rules for the administration of the Fund. As a private trust, the Fund is generally not subject to state law regulating public entities or laws specifically governing public pension funds,[4] however, the Fund complies with the Public Records Law (the "PRL").[5]

**4. Fiduciary Standards.**

As the trustee of a private trust, the Retirement Board is subject to the terms of the Trust Agreement, Pension Agreement, Massachusetts common law, and the Massachusetts Prudent Investor Act.[6] The Retirement Board's interpretation of its duties required by the Trust Agreement, Pension Agreement, Massachusetts common law, and the Massachusetts Prudent Investor Act are set out in the Standards of Fiduciary Responsibility, a copy is attached hereto as **Exhibit B** (Standards of Fiduciary Responsibility) (the "Fiduciary Standards"). The Retirement Board adopted the Fiduciary Standards per Article VI(8) of the Pension Agreement. The Fiduciary Standards impose fiduciary obligations on each member of the Retirement Board as well as Fund employees and advisors when implementing the Trust and Pension Agreements. The Retirement Board periodically reviews best practices and applies appropriate policies to the Fund.

**5. Duties and Responsibilities.**

Other than as expressly set out below, each individual or entity fulfilling one of the roles below is expected to be familiar with and adhere to this IPS as well as comply with standards and codes of conduct applicable to their profession. Each service provider will execute a contract with the Fund outlining their roles, responsibilities, obligations and, where appropriate, reporting and performance expectations.

**5.1. Retirement Board.**

As the Fund's trustee, the Retirement Board has, subject to the PRIT Directive, authority over the management of the Fund, including "to invest and reinvest the assets of the Fund".[7] Pursuant to the By-

---

[3] The sole substantive change implemented by the restatement of the Trust Agreement was to allow the Retirement Board to engage PRIM as an Investment Manager (*see* Sec. 5.4 below and paragraph 7 of the Trust Agreement).

[4] When state law was amended in 1964 to revise M.G.L. c. 32 (the statute governing public pension plans for state, county and municipal employees), the Fund was expressly excluded from the purview of that statute.

[5] Chapter 121 of the Acts of 2016, effective January 1, 2017, specifically added the Fund to the definition of public records under M.G.L. c. 66. Since then, while reserving its rights to contest application of the PRL to a private trust, the Retirement Board authorized Fund management to comply with the PRL "in spirit".

[6] *See* M.G.L. c. 203C, §§ 1 et seq. For a discussion of how Massachusetts common and statutory law apply to duties of trustees *see The Woodward School for Girls, Inc. v. City of Quincy*, 469 Mass. 151 (2014).

[7] *See* Trust Agreement Paragraphs 1, 3 and 8. For a discussion of the role of the Retirement Board and its members, *see MBTA Ret. Bd. v. State Ethics Comm'n,* 414 Mass. 582, 585 (1993).

Laws, the Retirement Board may appoint committees with powers as determined by the Retirement Board.[8]

### 5.2. Management.

The Executive Director is the chief executive officer of the Fund, who, with the assistance of the other members of Management, is responsible for day to day administration of the Fund, including implementing the policies of the Retirement Board, managing all employees and consultants as well as finalizing contracts and other administrative matters concerning Investment Managers. The Executive Director reports to the Retirement Board. The Trust Agreement recognizes the role of the Executive Director[9] and the By-Laws state that the Retirement Board shall appoint and assign administrative duties to an Executive Director.[10] The Trust Agreement stipulates that the Retirement Board shall elect a Chair and Secretary and "may authorize . . . any agent to execute or deliver any instrument or make any payment."[11] All employees of the Fund are fiduciaries.[12]

### 5.3. Investment Advisor (Investment Consultant).[13]

The Trust Agreement authorizes the Retirement Board to engage an Investment Advisor, which must "be either a bank, a trust company, an insurance company or an investment adviser registered as such" under the Investment Advisors Act.[14] Under the Trust Agreement, the Investment Advisor can be engaged to recommend investment policies, advise on asset allocation, and provide advice regarding the engagement or removal of Investment Managers. An Investment Manager is subject to the Fiduciary Standards.[15] The Investment Advisor is responsible for monitoring Investment Managers for material changes in their performance or status (organizational, ownership or staff) as well as ensuring Investment Managers properly report to the Fund.

### 5.4. Investment Managers.

The Trust Agreement: (i) allows the Retirement Board to segregate a portion of the assets of the Fund and engage an Investment Manager to manage those assets and (ii) requires an Investment Manager to "be either a bank, a trust company, an insurance company," PRIM or an investment adviser registered under the Investment Advisors Act.[16] Investment Managers (other than PRIM and investments made pursuant to the PRIT Directive) are subject to the Fiduciary Standards.[17] Each Investment Manager (other than PRIM) is required to execute a contract with the Fund that delineates such Investment Manger's responsibilities, appropriate performance expectations and reporting obligations. While each Investment Manager (other than PRIM) is expected to adhere to this IPS, the contract between the Investment Manager and Fund may supersede this IPS.

### 5.5. Custodian.

The Trust Agreement permits the Retirement Board to appoint a Custodian and designate specific duties

[8] *See* By-Laws Article II, Section 8.
[9] *See* Trust Agreement, Paragraph 9.
[10] *See* By-Laws, Article II(4).
[11] *See* Trust Agreement, Article VI.
[12] *See* Fiduciary Standards, Article 1.
[13] While the principal investment advisor to a pension fund is typically referred to as the "Investment Consultant" this IPS refers to the 'Investment Advisor' in order to adhere to the term used in the Trust Agreement.
[14] *See* Trust Agreement, Paragraph 4.
[15] *See* Fiduciary Standards, Sections 3.3.4 and 2.7.
[16] *See* Trust Agreement, Paragraph 7. The initial Trust Agreement, dated October 28, 1980, was amended and restated as of July 19, 2019, to allow PRIM to serve as an Investment Manager.
[17] *See* Fiduciary Standards, Sections 3.3.4 and 2.7.

to it.[18] The Custodian is subject to the Fiduciary Standards.[19] The specific obligations of the Custodian are set out in a contract between the Fund and the Custodian, but, generally, the custodian is responsible for the physical retention and administration (including financial reporting) of Fund property it has received.

### 5.6. Actuary; Auditor.

The Pension Agreement directs the Retirement Board to retain an actuary to make annual actuarial valuations of the Fund's contingent assets and liabilities and suggest to the Retirement Board rates of contribution.[20] The Fund engages an auditor to audit its financial statements annually.[21] The Fund engages the actuary to conduct an Experience Study approximately every five years.

### 5.7. Counsel; Investment Counsel.

The Trust Agreement envisions that the Retirement Board will engage counsel to provide legal advice. The Retirement Board has engaged Investment Counsel to assist Management in reviewing matters surrounding the investment and reinvestment of the assets of the Fund.

### 5.8. Proxy Voting Agent.

The Retirement Board will exercise ancillary rights associated with ownership of its assets (such as the right to vote as share or interest holders) for the exclusive purpose of enhancing the value of the Fund. The Retirement Board has adopted (and periodically reviews) a proxy voting policy and engages a third-party (proxy voting agent) to assist in implementation of the policy as well as suggesting periodic revisions and updates. Assets managed by PRIM are governed by its proxy voting guidelines, which are available on PRIM's website.[22] Similarly other Investment Managers, including those managing index funds, conduct proxy voting pursuant to their policies, which are available to and reviewed by the Retirement Board.

## 6. Investment Objective, Philosophy & Vehicles.

### 6.1. Investment Objective.

In fulfilling the mission of the Trust, the objective of the Retirement Board is to ensure the availability of sufficient assets to pay benefits by achieving the highest level of investment performance compatible with acceptable levels of risk in a cost effective manner and prudent investment practices in order to lower costs. Specifically, in order to maintain if not improve upon its funded status, the Retirement Board seeks to meet or exceed the actuarial target rate of return as further discussed in Section 7.1 (Rate of Return Assumption) (the "Assumed Rate of Return"). Maintaining if not exceeding the Assumed Rate of Return should have the benefit of stabilizing employer and employee contributions to the Fund. The Fund shall have a risk tolerance consistent with that of other funds created for similar purposes, and the assets of the Fund shall be invested accordingly. The Fund has adopted a Risk Management Framework, a copy of which is attached as **Exhibit C** (Risk Management Framework), which applies to funds over which it has discretion to invest (e.g. funds invested per the PRIT Directive are exempt from the framework, but are subject to PRIM's risk management framework). As a mature defined benefit

[18] *See* Trust Agreement, Paragraph 3.
[19] *See* Fiduciary Standards, Sections 3.3.4 and 2.7.
[20] *See* Pension Agreement, Article (VI)(9).
[21] Article VI(13) of the Pension Agreement requires the Fund to produce a Comprehensive Annual Financial Audit (CAFR) following Government Finance Officers Association (GFOA) guidelines.
[22] The Investment Policy Statement governing PRIT and other minutes and performance reports, including the current PRIM Trust Agreement, can be found on PRIM's website *(https://www.mapension.com/records-of-interest/)* most recently visited January 16, 2025. PRIM is authorized to vote securities pursuant to Sec. 9.2(g) of the PRIM Trust Agreement, as defined below.

plan, the Fund will generally have a negative cash flow as more participants retire which, in turn, impacts the Fund's tolerance for market risk.

### 6.2. Investment Philosophy.

The Fund's investment program is based on the precepts of the generally accepted capital markets theory of institutional investors, which holds that:

- Increasing risk is rewarded with compensating returns over time and, therefore, prudent risk-taking is justifiable for long-term investors.
- Risk can be mitigated through diversification of asset class exposure, implementation strategies and individual security holdings.
- Diversification benefits shall be measured by examining the correlation between asset classes, implementation strategies and manager styles, with a goal of maximizing diversification and limiting concentration and overlap in asset classes and strategies that are more highly correlated.
- The primary determinant of long-term investment performance is the strategic or long term asset allocation strategy.

The Fund's adherence to these precepts results in a long-term asset allocation policy that balances the desired return with an appropriate risk level. The Retirement Board will evaluate the Fund's performance over long term time horizons as well as complete market cycles, or, if warranted, more frequently.

### 6.3. Investment Vehicles.

Historically the Fund has utilized two broad categories of investment vehicles to implement its investment strategy[23]: (i) separate accounts pursuant to which the Investment Manager trades Fund assets (typically held by the Custodian), and (ii) commingled or pooled accounts of various structures and terms managed by the Investment Manager (typically held by a vehicle managed by the Investment Manager). In each case, investments are governed by agreements between the Fund and the Investment Manager.

#### 6.3.1. Separate Accounts.

The Fund typically attempts to invest in assets in the Equities and Fixed Income classes via a separate account due to the control and transparency afforded by that vehicle. However, a separate account vehicle may not be available or advantageous for a particular asset class or opportunity. The Fund has adopted a form of Investment Services Agreement it prefers to use when engaging an Investment Manager for a separate account.

#### 6.3.2. Commingled Accounts.

Commingled funds are structured such that the Investment Manager is overseeing the assets of multiple investors with assets either held in custody at a bank designated by the Investment Manager or, more typically, by an investment vehicle created by the Investment Manager to execute a specific investment strategy. Some investment strategies are only pursued by commingled accounts. Mutual funds and/or other types of commingled investment vehicles, including, but not limited to, Alternative Investments,

[23] Given the mandate of the PRIT Directive and that the IPS deems PRIT a commingled account (see Section 6.3.2.2), the percentage of the Fund's assets invested in a commingled account (and governed by its structure) will materially increase (notwithstanding the fact that the underlying PRIT assets will be invested in separate accounts) and, with regard to the funds invested per the PRIT Directive, be subject to the liquidity rights granted by PRIM.

may provide lower costs and better diversification than can be obtained with a separate account that pursues the same investment objectives. Typically, once the investment has been made, the Fund holds an interest in the investment vehicle, which is managed by the Investment Manager pursuant to the document(s) that govern that specific vehicle ("Governing Documents"),[24] with the Fund (and all investors in the vehicle) having very limited, if any, management rights. The investment vehicle is, typically, illiquid due to either or both the redemption restrictions in the governing documents or the illiquidity of the underlying assets. Consequently, the right of the Fund to actively manage or redeem its investment in a commingled fund may be severely limited. This, however, does not diminish the obligation that the Fund, Retirement Board, Executive Director, Investment Advisor and Investment Counsel have to actively monitor and take reasonable actions regarding the investment.[25] Finally, Investment Managers that control commingled funds, given that the vehicle has many investors, may be unwilling or unable to agree to adhere to the Fiduciary Standards, in which case the Fund shall utilize reasonable efforts to have the Investment Manager acknowledge fiduciary obligations to the investment vehicle (by virtue of its status as a Registered Investment Advisor or otherwise). The Retirement Board is willing to accept the potential downsides of a commingled account if the potential benefits (investment strategy, lower costs and diversification benefits) warrant.

#### 6.3.2.1. Group Trusts.

A specific type of commingled account is a group trust. The investment theory behind pooling assets generally, and specifically with regard to group trusts, is to achieve economies of scale that allow for lower fees, enhanced risk management and more diverse investment opportunities. The Internal Revenue Service ("IRS") has ruled that tax exempt employee benefit plans (including 'government pension plans' like the Fund) may, if certain conditions are met, invest in group trusts without jeopardizing the tax status of the pension plan or the group trust (which the IRS has held to be tax exempt). Group trusts are frequently utilized surrounding passive investment strategies.

The Retirement Board shall have the authority to invest in group trusts that: (i) are established solely for the purpose of the investment of assets of pension and profit sharing trusts; (ii) are qualified and tax exempt under the Internal Revenue Code; and (iii) meet the requirements imposed by the IRS in Revenue Ruling 81-100. Prior to any investment in a group trust, the Retirement Board, with the assistance of the Executive Director, Investment Advisor and Investment Counsel, shall ensure that the group trust will maintain separate records of account for the assets of the Fund within the group trust fund in order to properly reflect the Fund's share. The Retirement Board may appoint as an ancillary trustee of the Fund, the trustee of any group trust fund designated for investment; provided, however that such ancillary trustee or its affiliate must: (i) be a bank or similar financial institution supervised by the United States or by a state and (ii) maintain the group trust fund exclusively for the collective investment of money contributed by the ancillary trustee (or its affiliate) in a trustee capacity that, as is required by IRS rules and regulations: (a) conforms to the rules of the Comptroller of the Currency then, and (b) conforms to the provisions of the group trust agreement that governs the investment of assets, which are incorporated by reference herein and become part of the plan documents of the Fund. The investment powers delegated to the ancillary trustee shall include only, and be limited to, the right to

---

[24] Typically these agreements take the form of a limited partnership agreement, limited liability company agreement, trust agreement (or similar documents governing an off-shore entity) as well as a subscription agreement, offering memorandum and, in some cases, a side letter that govern the rights and obligations of the manager and investors of the specific fund. The terms of such agreements (governing private equity, hedge and venture capital funds as well as REITs have become standardized, with terms within a band being deemed 'market').

[25] The Supreme Court's recent holding in *Tibble v. Edison International* et al., 135 S.Ct. 1823 (2015) states that a trustee has a continuing duty to monitor and remove imprudent investments, which is separate and apart from the trustee's duty to exercise prudence in selecting an investment.

invest the portion of the assets of the Fund that are held in the group trust fund and only pursuant to the trust agreement of the group trust.

#### 6.3.2.2. PRIT and PRIM.

Notwithstanding the fact that the Fund is a private trust, Section 23 of the 2018 Budget Bill amended M.G.L. c. 32, Section 1 to expand the definition of a "system" to include the Fund. This amendment authorized PRIT to accept investments by the Fund as a Purchasing System, as that term is defined in the PRIM Trust Agreement.[26] As referenced above, 2019 amendments to each of the Pension and Trust Agreements allowed the Fund to invest in PRIT (by deeming PRIM a permitted investment manager). In March and November of 2023, respectively, the Pension Agreement and Trust Agreement implemented the PRIT Directive, requiring the Fund to invest in PRIT.

PRIT, a state entity created by legislative act in 1983, is a pooled investment fund that invests retirement assets of the Commonwealth as well as counties, authorities, school districts and municipalities of the Commonwealth generally governed by M.G.L. c. 32.

PRIT is managed by PRIM, which, in turn, is governed by an Amended and Restated Operating Trust, dated as of September 22, 1998, of the Pension Reserves Investment Management Board (the "PRIM Trust Agreement"). Neither PRIT nor PRIM is registered with the U.S. Securities and Exchange Commission.[27] As of PRIT's fiscal year ended June 30, 2024 it reported $105.3 billion in assets. A system may invest all its assets in PRIT (by investing in the General Allocation Account)(such a system is deemed a "Participating System" under the PRIM Trust Agreement) or, alternatively, purchase units in individual asset classes (referred to by PRIT as the 'segmentation program' (the "PRIT Segmentation Program")(such a system is deemed a "Purchasing System" under the PRIM Trust Agreement)).[28]

PRIM has adopted a number of policies and procedures surrounding its investment practices, including an Investment Policy Statement and Asset Allocation, each of which can be found on its website.[29] PRIM administers PRIT in accord with Massachusetts law (M.G.L. c. 32), regulations and its own policies and procedures. Massachusetts law and regulation prohibit certain investments by PRIM.[30]

For purposes of this IPS, an investment in PRIT will be considered an investment in a commingled account with PRIM as the Investment Manager. It is recognized that an investment in PRIT, whether or not through a PRIT Segmentation Program, shall principally be governed by statutes pertaining to PRIT and PRIM as well as the PRIM Trust Agreement.[31] The Fund and PRIM have executed a letter agreement, ("Letter Agreement with PRIM"), which govern any investment made by the Fund with PRIM generally and stipulates that investments by the Fund in PRIT are governed by the PRIM Trust Agreement.[32] A

---

[26] *See* Sec. 2.8 of the PRIM Trust Agreement. Purchasing Systems are authorized to purchases shares of PRIT as opposed to a "Participating System", which has transferred title and control of all its assets to PRIM.

[27] The MBTARF assumes that PRIM's investment managers are federally registered investment advisors or have otherwise acknowledged that they serve PRIM as a fiduciary.

[28] PRIT Segmentation Program was authorized by a 1994 amendment to the PRIM Trust Agreement. Currently the following ten accounts are available through the PRIT Segmentation Program (each, a "PRIT Segmentation Account"): Domestic Equity, International Equity, Emerging Markets, Core Fixed Income, Public Value Added Fixed Income, Real Estate, Hedge Fund, and Private Equity Vintage Year. See also Sec. 3.4 of the PRIM Trust Agreement.

[29] The Investment Policy Statement of PRIT and other minutes and performance reports, including the PRIM Trust Agreement, can be found on PRIM's website (*https://www.mapension.com/records-of-interest/*).

[30] *See* M.G.L. c. 32, §23(1)(h) barring certain investments.

[31] PRIM will execute agreements with investment managers of separate accounts, commingled accounts and other investment vehicles which will govern the terms between those investment managers and PRIM.

[32] Chapter 32, Section 23(2)(b) states, "[T]he board of each system shall invest and reinvest the funds of the system in the PRIT Fund under subdivision (8) of section 22, in the PRIT Fund by purchasing shares of the fund, as provided for in the trust

copy of each of the Letter Agreement with PRIM and the PRIM Trust Agreement is attached as **Exhibit D**.

PRIM is required by the PRIM Trust Agreement to keep full records and books of accounts and annually distributes (within 90 days of its fiscal year) a statement of statement of assets and transactions to Participating and Purchasing Systems annually as well as filing an annual report of the financial condition of PRIT with the Massachusetts legislature; there is an annual, independent audit of PRIT, a copy of which is provided to each Participating and Purchasing System.[33]

Other than the Fund and the Massachusetts State College Building Authority all other Participating Systems and Purchasing Systems, are subject to M.G.L. c. 32, including regulation by PERAC.

## 7. Fund Return Targets and Asset Allocation Strategy.

### 7.1. Rate of Return Assumption.

The Retirement Board will, with the assistance of the Actuary[34] and Investment Advisor, establish and annually review the Assumed Rate of Return and may adopt changes over a market cycle or more frequently if warranted. As of March 20, 2020, the Retirement Board adopted an Assumed Rate of Return of 7.25% annually, net of all fees and operating expenses. The Retirement Board reviews the rate of return each year but not revised it since 2020. When a new Assumed Rate of Return is adopted by the Retirement Board, then this IPS shall be automatically revised by Management stating such newly adopted Assumed Rate of Return on **Schedule 1** with the date of its adoption.

### 7.2. Relative Return Objectives and Timeline.

The Fund shall seek to achieve a rate of return that ranks in the top half of the appropriate peer fund universes given a comparable level of risk and to achieve a long-term rate of return on investments that is equal to or exceeds both the Asset Allocation Index Return and the Policy Index Return, as each is defined in Section 7.5.2 (Definitions). Given its investment philosophy, the Retirement Board recognizes that the return targets may not be achieved in any single year; the Retirement Board will measure the performance of the Fund over an appropriate longer-term horizon.

### 7.3. Impact of Asset Allocation.

It is generally recognized that asset allocation decisions may account for up to 90% of the investment return for a large pool of assets; in terms of direct impact on the Fund's performance, the Fund's policy asset mix choice outweighs all other decisions. The Retirement Board shall manage the Fund to achieve the Assumed Rate of Return while adhering to fiduciary obligations and ensuring liquidity sufficient to pay benefits.

### 7.4. Current Asset Allocation Targets & Ranges.

The Retirement Board will, with the assistance of the Actuary and Investment Advisor, review the asset allocation targets at least annually and may adopt changes over a market cycle or more frequently if warranted by economic conditions. Factors considered in determining asset allocation include: (i) the

---

agreement adopted by the PRIM board under subdivision (2A), or under the standards in subdivision (3), provided that . . .". While, as referenced above, Chapter 32, §1 was amended to expand the definition of "system" to include the MBTARF, Section 23 of the Acts of 2017, "for the purpose of investing in" the PRIT Fund, the definition of "board" under Chapter 32, see M.G.L. c. 32, §1, was not broadened to include the Retirement Board of the Fund. The fund remains a private trust governed by an independent Retirement Board, not a Chapter 32 "board" as defined in Chapter 32, Section 1.

[33] *See* Secs. 9.6-9.9 of the PRIM Trust Agreement as well as Exhibit A (Definitions).

[34] Pursuant to Article VI(9) of the Pension Agreement, the actuary (annually) values the contingent assets and liabilities of the Fund (to assist the Retirement Board in fixing rates of contributions to the Fund). The actuary also periodically (every 3-5 years) performs a Asset-Liability Management (ALM) study.

Assumed Rate of Return; (ii) the risk tolerance of the Retirement Board; (iii) liquidity requirements; (iv) funded status; and (v) other characteristics unique to the Fund. The current asset allocation targets and ranges, as approved by the Retirement Board on February 16, 2024, are set forth below. The asset allocation may be amended by the adoption by the Retirement Board of a revised asset allocation, which shall be reflected on **Schedule 1** (Assumed Rate of Return / Asset Allocation) (along with the date of adoption) and shall automatically amend this IPS. The Retirement Board may temporarily suspend minimum or maximum exposure limits if factors such as liquidity needs or market conditions so require. If the Fund invests with a PRIT Segmentation Program, the Investment Advisor will, at the time of the investment is being considered by the Retirement Board, suggest to the Retirement Board allocations to the Fund's asset (sub)classes (if necessary), recognizing that a PRIT Segmentation Account may not fit uniformly into the Fund's asset allocation rubric; this assignment will impact the IM Benchmark(s) applicable to the PRIT Segmentation Account.

| ASSET CLASS | Target (%) | Minimum Exposure (%) | Maximum Exposure (%) |
|---|---|---|---|
| **Equities** | **43** | **38** | **48** |
| US Equity | 27 | 22 | 32 |
| International Equity (unhedged) | 12 | 8 | 16 |
| Emerging Markets | 4 | 2 | 6 |
| | | | |
| **Fixed Income** | **26** | **23** | **33** |
| FI – Core | 10 | 6 | 14 |
| FI - Mortgages | 3 | 0 | 5 |
| FI – Inflation Linked Securities | 3 | 0 | 5 |
| FI – Bank Loans | 3 | 0 | 5 |
| FI – Global Multi Sector | 7 | 4 | 10 |
| | | | |
| **Cash** | **2** | **0** | **3** |
| | | | |
| **Alternative Investments** | **29** | **17** | **36** |
| Hedge Funds (FoHF) | 4 | 1 | 7 |
| Private Equity | 8 | 4 | 12 |
| Private Credit | 2 | 0 | 4 |
| Real Estate | 9 | 5 | 12 |
| Opportunistic – Hedge Funds | 2 | 0 | 4 |
| Risk Parity / Diversified Beta | 4 | 1 | 7 |

**Notes to Asset Allocation:**

1. At any time, in order to meet the Fund's liquidity requirements, 3% of the Fund's NAV may be held in cash reserves or a cash equalization account.
2. U.S. Equity may include U.S. Large Cap Equity, U.S. Mid Cap Equity, U.S SMID Cap Equity and U.S. Micro Cap Equity where U.S. Equity investments are allocated to the applicable PRIT Fund Segment.
3. International Equity may include International All Cap Equity, International Large Cap Equity, International Mid Cap Equity, and International Small Cap Equity where International Equity investments are allocated to the applicable PRIT Fund Segment.
4. The Real Estate Equity target encompasses, core, value added and other real estate investment strategies.
5. The Opportunistic – Hedge Funds allocation may include long - only and hedge investment strategies.

### 7.5. Performance Benchmarks for Investment Managers.

#### 7.5.1. Total Fund Return.

Total Fund Return, as defined in Section 7.5.2 (Definitions), shall be compared against other corporate, jointly trusteed and public pension plans of similar size and circumstances, as identified by the Investment Advisor. The Total Fund Return objective is to meet or exceed the Asset Allocation Index Return and the Policy Index Return.

#### 7.5.2. Definitions.

Each of the following returns are measured over a specified period.

The "Asset Allocation Index Return" measures the success of the Fund's current asset allocation. It is calculated by using index rates of return for each asset class multiplied by the actual percent allocated to each asset class. The difference between the Asset Allocation Index Return and the Total Fund Return measures the effect of active management. If the Total Fund Return is greater than the Asset Allocation Index Return net of fees, then active management has added value.

The "Policy Index Return" measures the success of the Fund's target asset allocation. It is calculated by using index rates of return for each asset class multiplied by the percent targeted to each asset class. The difference between the Asset Allocation Index Return and the Policy Index Return measures the effects of deviating from the target allocation. If the Asset Allocation Index Return is greater than the Policy Index Return net of fees, then deviating from the target allocation has added value. If the Asset Allocation Index Return is less than the Policy Index Return, then active management has not added value.

The "Total Fund Return" is the rate of return for the Fund's investment portfolio. The Total Fund Return encompasses all sources of investment return including, but not limited to, dividends, interest, realized and unrealized gains and losses. The Total Fund Return may be reported both gross of investment management fees and net of investment management fees and in such reports the Investment Advisor must clearly state if those returns are gross or net of fees.

#### 7.5.3. Investment Manager Benchmarks.

Net of fee returns generated by the Investment Managers shall be compared to a combination of passively managed index returns matching the managers' specific investment styles, as well as the median manager in their appropriate peer group universe. Where applicable, benchmarks assigned to Fund investment managers are attached as **Exhibit E** (Investment Manager Benchmarks) (each, an "IM Benchmark"). Upon engagement by the Retirement Board of an Investment Manager or the termination of an Investment Manager and liquidation of the associated investment, Management my revise Exhibit E to reflect the Investment Manager and benchmark; the revised Exhibit E shall include a notation indicate the effective date of the revision.

#### 7.5.4. Rebalancing.

The actual asset allocation mix will deviate from the targets due to market movements, cash flows, and manager performance. The Retirement Board and Executive Director with the assistance of the Investment Advisor will review the actual asset allocation at least quarterly to determine compliance with the targets and rebalance as warranted. The Executive Director shall report material rebalancing activity to the Retirement Board.

## 8. Investment Manager Selection.

The Fund is committed to procurements that provide efficient selection of Investment Managers that will provide exceptional service and risk adjusted, cost effective performance. The Fund's Investment Manager Selection Process has been developed and is subject to revisions by Management with the review and approval of the Retirement Board.

## 9. Manager Reporting and Review Process.

### 9.1. PRIM

The reporting and review process of Investment Managers as described in this Section does not apply to PRIM or the Fund's investments in PRIT. The Letter Agreement with PRIM stipulates that PRIM will supply monthly reports on investments and investment performance and that PRIM will make its staff reasonably available to the Retirement Board to review investments. As of the date of this IPS, all investments in PRIT are reported by the Fund one month in arrears. PRIM has informed the Fund that it is unable to deliver monthly statements earlier. All investments in the PRIT Segmentation Program are reviewed annually, at a regularly scheduled meeting of the Retirement Board. PRIM does not provide the same visibility that the Fund has with other Investment Managers (e.g. detail in statements surrounding distributions and capital calls of alternative investment funds).

### 9.2. Reporting Requirements; Diligence by Management.

The investment contract executed by the Fund and each Investment Manager details the applicable reporting requirements. Generally, however, Investment Managers are responsible for reporting holdings, valuations and transactions monthly (Investment Managers within the Real Estate, Private Equity and Fund of Hedge Funds - Opportunistic asset classes report quarterly). Management is able to track assets held by the Custodian daily via information provided by the Custodian; this information is reconciled with the data provided by Investment Managers (when received (monthly or quarterly)). If Management identifies material issues in its daily review, Investment Managers are responsible for working with Management and the Custodian to address those issues. Through this information, Management, with the assistance of the Investment Advisor and Custodian, regularly verifies whether each Investment Manager is meeting its applicable IM Benchmarks and adhering to guidelines.[35] In addition Management, with the assistance of the Investment Advisor, conducts regular due diligence on Investment Managers in order to understand the drivers of performance. If warranted, diligence may involve on-site visits with Investment Managers. Management reports material findings surrounding its Investment Manager monitoring and diligence to the Retirement Board, including identifying potential modifications to the investment strategy that could enhance performance.

### 9.3. General Obligations of Investment Managers.

In addition to the obligations referenced above Investment Managers (other than PRIM) are responsible for timely communicating in writing to the Executive Director material matters surrounding the investment of Fund assets, including, but not limited to: (i) changes in investment strategy, portfolio structure, tactical approaches and market value; (ii) the Investment Manager's progress in meeting the Fund's objectives and guidelines; (iii) changes in the ownership, structure, financial condition, key personnel, or clientele of the Investment Manager; and (iv) any material litigation or investigation concerning the Investment Manager, its affiliates or its key personnel. The Fund also expects that an Investment Manager will initiate written communication with the Executive Director if it believes that applicable guidelines of this IPS should be revised. Investment Managers are also required to provide: information evidencing compliance with the Fiduciary Standards, including documenting brokerage expenses, information supporting buy, sell or hold decisions, and, for Investment Managers other than

---

[35] Fund Management is able to review PRIM performance against third party benchmarks but is not able to verify the internal benchmark detail provided by PRIM.

PRIM, a copy of its most recently filed Form ADV (in compliance with the Investment Advisors Act). Investment Managers of separate accounts shall verify their compliance with this IPS annually.

### 9.4. Retirement Board Review Process.

In order for the Retirement Board to monitor performance and conduct continuing diligence, including receiving updates on how the investment strategy of the Investment Manager may have evolved, the Retirement Board meets with Investment Managers pursuant to the following schedule:

| Asset Class | Target Frequency | Group |
|---|---|---|
| Domestic Equity | Every Year | A |
| International Equity | Every Year | A |
| Global | Every Year | A |
| Emerging Markets Equity | Every Year | A |
| Fixed Income | Every Year | A |
| Hedge Funds | Every Year | A |
| Risk Parity/Diversified Beta | Every Year | A |
| Real Estate – Open End | Every Year | A |
| Real Estate – Closed End | Every 2 Years | B |
| Opportunistic | Every 2 Years | B |
| Private Equity | Every 3 years | C |
| Private Credit | Every 3 Years | C |

This schedule does not preclude the Retirement Board from meeting with any Investment Managers at any time if warranted (e.g. issues arise regarding performance, staffing or business practices). The Retirement Board will also monitor and liquidate investments that are part of an asset class that is no longer included in the Fund’s current asset allocation strategy. The Retirement Board may delegate review of liquidating investments to Management subject to Retirement Board oversight through appropriate reporting (currently the Lifecycle Status Report) and provided that the investment is less than $3 million in current value.

### 9.5. Retirement Board Agenda for Periodic Review.

Typically, the Investment Advisor asks that presentations by an Investment Manager to the Retirement Board include the following:

#### 9.5.1. Performance for Past Period.

Standard time periods for reports should include: (i) most recently completed calendar quarter; (ii) calendar year-to-date; (iii) prior calendar year; (iv) prior 3 years; (v) prior 5 years; and (vi) since inception. Returns should be annualized and calculated on a time-weighted basis for the total portfolio. All returns will include income and dividends and will be reported as gross and net of fees. Reports by the Investment Manager should specify where results are reported net of fees and where results are reported gross of fees.

#### 9.5.2. Rationale for Performance Results.

A discussion of the rationale for performance results, relating results specifically to investment strategy and tactical decisions.

#### 9.5.3. Specific Near-Term Strategy.

A discussion of the Investment Manager’s strategy for the portfolio over the near-term period with specific reference to asset mix (including cash position) and expected portfolio characteristics.

#### 9.5.4. Changes in the Investment Manager's Firm.

A discussion of any changes in the Investment Manager's firm including, but not limited to, professional turnover, ownership changes, investment strategy and philosophy, as well as any pending or threatened litigation that could have a material impact on the Investment Manager.

If the Retirement Board has significant concerns with the recent results, organizational stability or any other matter(s) impacting the performance of the Investment Manager, then the Retirement Board may elect to place the Investment Manager on a "Watch List". Investment Managers on the Watch List receive intensive oversight from Management and the Investment Advisor, which updates the Retirement Board.

## 10. Investment Manager Guidelines.

### 10.1. Introduction.

These Investment Manager Guidelines are not applicable to funds invested in PRIT as managed by PRIM; PRIT is governed by the guidelines adopted by PRIM. As referenced above PRIM has adopted its own investment policy statement, with which the Fund presumes PRIM complies (but cannot independently verify).

#### 10.1.1. General Guidelines and Monitoring.

Each Investment Manager is provided full discretion, within the parameters of this IPS, and specifically this Section 10, to purchase, sell and hold securities as well as the timing of those transactions. When the guidelines contain a limitation expressed as a percentage that percentage shall be measured solely with reference to the portion of the Fund's assets under the control of the specific Investment Manager. With regard to separate accounts, the Investment Manager may not purchase securities that would move the portfolio out of compliance with these guidelines. In the event that a separate account portfolio moves out of compliance with these guidelines as a result of market conditions or other changes outside the control of the Investment Manager, then the Investment Manager shall bring the portfolio back into compliance within 45 days or make a written request for a compliance waiver. The Retirement Board or the Executive Director may elect to provide an Investment Manager with a waiver from specific guidelines of this IPS (either within the investment contract or upon written request). This decision will be based on a documented rationale presented by the Investment Manager and a recommendation by the Investment Advisor. If the Executive Director provides such a waiver, then this will be communicated to the Retirement Board by the Executive Director at the next regularly scheduled meeting of the Retirement Board. Each Investment Manager responsible for a separate account will be provided guidelines and a IM Benchmark (*see* reference to IM Benchmarks in Section 7.5.3 (Investment Manager Benchmarks)) in its investment contract. The Investment Advisor and Management will monitor the compliance of each Investment Manager with the asset allocation through monthly performance reports utilizing comparisons to the relevant benchmarks.

#### 10.1.2. Public Equity Manager Styles and Size Characteristics.

Public equity managers deploying a growth strategy invest in companies that are expected to have above-average prospects for long-term growth (predominately companies with price/earnings ratios, price-to-book values, return-on-assets values, and growth-in-earnings values above the broader market). The so-called 'growth' companies typically do not declare dividends or are characterized by dividend yields below the broader market; they exhibit greater volatility than the broader market as measured by the risk statistics such as 'Beta' and 'Standard Deviation'.

Public equity managers deploying a value strategy invest in companies believed to be undervalued or possessing lower than average price/earnings ratios. These managers seek to identify companies that are 'underpriced.' Thus, these managers invest predominantly in companies with P/E ratios and price-to-book values below the broader market. The dividend yields of these so-called 'value' companies are typically in the high range as compared to the broader market and they exhibit lower risk as measured by risk measures such as Beta and Standard Deviation.

Managers of portfolios focusing on non-U.S. equities deploy a broad range of strategies including core international products, top-down country selectors, bottom-up security selectors, capitalization ranges, growth and value - oriented products and products using various mixtures of these strategies.

The delineation of portfolio assets by size varies by asset class (and can vary by manager within the (sub)class). Generally, entities within the Domestic Equities subclass of 'small cap' include companies with market capitalizations of less than \$2 billion; 'mid cap' stocks are securities of companies with a market capitalization of between \$2 billion and \$10 billion; the securities of 'large cap' entities generally have market capitalizations of \$5 billion or greater. The securities of non-US companies characterized as 'small cap' generally, include ventures with market capitalizations of less than \$5 billion. While size delineations are made on the asset allocation, the guidelines are not distinguished by the size of the underlying assets.

Prior to the PRIT Directive, the IPS stated that no more than 10% of the Fund's total portfolio may be placed with one (1) active Investment Manager and no more than 25% of the portfolio may be placed with one (1) passive Investment Manager (each as measured at the time of the investment). The Fund's assets should be no more than 20% of an Investment Manager's portfolio (as measured at the time of the investment). The foregoing restrictions are applied on an aggregate basis with regard to the Fund's assets and are only applicable to the portion of the Fund's portfolio that is not subject to the PRIT Directive.

#### 10.1.3. General Performance Objectives.

Generally, each Investment Manager is reviewed during the relevant reporting period against its IM Benchmark. Also, in addition to any specific performance guidelines and targets stated in the subsections below addressing specific asset (sub)classes, each Investment Manager is required to achieve the following general minimum performance guidelines:

- a rate of return (after fees) that exceeds the IM Benchmark over a complete market cycle;
- cumulative performance results that consistently rank above the 50$^{th}$ percentile in a relevant style group, as adjusted for risk, over a market cycle; and
- positive risk/reward trade-off when compared to other managers in a relevant style group.

Given short-term market fluctuations, objectives are expected over full market cycles. Quarterly performance will be evaluated to test progress toward attainment of longer-term goals. There are likely to be short-term periods during which performance deviates from market indices; during such times, greater emphasis shall be placed on performance comparisons with managers employing similar styles.

### 10.2. Equity: Passive Managers.

Investment Managers of passively managed public markets equity strategies are responsible for matching the financial and risk characteristics of the applicable index (e.g. Russell 1000, Russell 2000). The Investment Manager may only invest in the securities that comprise the assigned index; provided, however, a manager may use index futures to expedite cash investments or liquidity.

### 10.3. Equity: Domestic Active Managers: Guidelines.

Domestic Equity Investment Managers are subject to the following specific guidelines:

- Investment Managers shall not utilize derivative securities that increase the actual or potential risk posture. Investment Managers may not purchase commodities, securities on margin, sell short, invest in private placements, real estate investments, excluding REITS. Investment Managers may utilize exchange-traded funds ("ETFs") and futures contracts associated with the benchmark index and/or the underlying securities or sectors contained within the benchmark index to manage cash and maintain market exposure provided that the use is not to implement a leveraged portfolio structure.
- Portfolios are to generally remain fully invested. Investment Managers' cash positions are not generally to exceed 5%. It is the responsibility of the Investment Manager to contact the Retirement Board to obtain authorization if and when it becomes clear that a cash position of more than 5% is warranted for more than 90 days.
- Generally, economic sector diversification will be as follows, where the comparable benchmark index sector weights represent:
  - 5% or less of the index: the lesser of five times the index weight, or 15%.
  - 5% to 15% of the index: the lesser of four times the index weight, or 30%.
  - Over 15% of the index: the lesser of two times the index weight, or 60%.
- Generally, investment in all classes of equity securities of any one issuer shall be limited to 5% of the market value of the portfolio. For those companies whose index weight is more than 5%, the following diversification guidelines will apply:
  - no commitment at the time of purchase should represent more than 1.25 times the benchmark weighting of the individual stock.
  - the maximum commitment to a single position will not exceed 1.5 times the benchmark weighting of the individual stock at any time.

### 10.4. Equity: International, Global & Emerging Market Managers.

#### 10.4.1. International Equity: Guidelines.

International equity Investment Managers are subject to the following specific guidelines:

- Assets should primarily be in liquid, marketable securities.
- Investment Managers shall not utilize derivative securities that increase the actual or potential risk posture of the Fund nor may they purchase commodities, securities on margin, sell short, lend securities, invest in private placements, real estate investments, oil, gas and mineral exploration investments, warrants, swaps and similar derivative investments, or other non-marketable securities unless specifically authorized by the investment contract.
- Investment Managers may utilize the futures contracts associated with the benchmark index and/or the underlying securities contained within the benchmark index provided that use is not to implement a leveraged portfolio structure.
- Portfolios are to generally remain fully invested. Managers' cash positions are not generally to exceed 5%. It is the responsibility of the Investment Manager to obtain authorization if and when it becomes clear that a cash position of more than 5% is warranted for more than 90 days.
- Without prior approval of the Fund, no single economic sector shall constitute more than 30% of

the market value of the portfolio, or 1½ times its comparable representation in representative index, whichever is larger, without prior approval from the Retirement Board.

- Investment in all classes of equity securities of any one issuer must be limited to 8% of the market value of the portfolio.
- Investments in Emerging Markets require specific authorization within the investment contract.
- Investment Managers may hedge the currency risk of their portfolio for defensive purposes by utilizing currency derivatives; however, at no time can currency derivatives be used to leverage the portfolio or for speculation.

#### 10.4.2. Global Equity: Guidelines.

The global equity Investment Managers' investments may include: (i) the common stocks of U.S. companies, (ii) American Depository Receipts ("ADRs"), (iii) U.S. exchange listed foreign company stocks, and (v) non-U.S. dollar denominated securities of countries included in the MSCI World Index. ETFs are permitted for the purpose of investing excess cash or gaining exposure to a sector or industry versus an individual security. These Investment Managers may hedge the currency risk of their portfolio by utilizing currency derivatives. At no time may such an Investment Manager use currency derivatives to leverage the portfolio or for speculation.

#### 10.4.3. Emerging Markets Equity: Guidelines.

Emerging markets focused equity Investment Managers may invest in non-U.S. dollar denominated securities and ADRs of the countries included in the MSCI Emerging Markets Index or applicable index as detailed in the applicable IM Benchmark(s). Eligible securities will be listed on a regulated stock exchange or traded in a recognized market. ETFs are permitted for the purpose of investing excess cash or gaining exposure to a sector or industry versus an individual security. Such Investment Managers may also invest in the short-term investment fund of the Fund's custodian and individual securities that qualify for investment as detailed below in the Short-Term Investments section of this IPS. Such Investment Managers may hedge the currency risk of its portfolio by utilizing currency derivatives; provided, however, that such Investment Manager may not use currency derivatives to leverage the portfolio or for speculation.

To the extent that the Fund seeks to achieve its emerging markets equity allocation through a global equity Investment Manager through an overweight to the MSCI Emerging Markets Index, then the designated Investment Manager will be measured against a global equity index and a blended index that includes both a global equity index and an emerging markets index.

### 10.5. Fixed Income: Passive Managers.

Investment Managers deploying passive public markets fixed income strategies are responsible for matching the financial and risk characteristics of the Barclays Capital U.S. Aggregate index or other specified fixed income index. The Investment Manager may only invest in the securities that comprise the assigned index; provided, however, a manager may use index futures to expedite cash investments and/or for liquidity purposes.

### 10.6. Fixed Income: Active Managers.

#### 10.6.1. Fixed Income: General Guidelines.

Fixed income Investment Managers serve in a specialist role managing debt securities. Such Investment Managers are subject to the following specific guidelines:

- Investment Managers shall not utilize derivative securities that increase the actual or potential risk posture of the Fund unless authorized by strategy-specific guidelines. Investment Managers may not generally purchase commodities, securities on margin, or effect short sales of securities. Investment Managers may utilize the futures contracts associated with the benchmark index and/or the underlying securities contained within the benchmark index provided that use is not to implement a leveraged portfolio structure.

- No more than 10% of the portfolio shall be invested in the securities of any single issuer and no more than 5% of the portfolio should be invested in any single issue at the time of purchase. These constraints do not apply to direct or indirect obligations of the U.S. Government.
- Investment Managers are prohibited from investing in venture capital, private equity or limited partnerships, options, futures, warrants, swaps, other derivative investments (except collateralized mortgage obligations ("CMOs") and commercial mortgage backed securities ("CMBS") consistent with this Policy), unless notified by the Executive Director upon authorization by the Retirement Board.
- With regard to derivatives:
    - At no time may derivatives be utilized to leverage the Fund or for speculation.
    - The Investment Manager will maintain sufficient liquidity to meet margin requirements.
    - An Investment Manager investing in CMOs and CMBS shall comply at all times with the Department of Labor's Statement on Derivatives, issued March 21, 1996, as amended.
    - Investments in CMOs and CMBS are limited to planned amortization class (PAC) and sequential issues so long as their inclusion is consistent with guidelines above; provided however, that companion tranches or support bonds, floaters, inverse floaters, income only, and principal only CMOs and structured notes are prohibited unless specifically allowed in the investment contract.
    - Prior to making an investment in CMOs and CMBS, the Investment Manager shall secure sufficient information to independently analyze the credit risk and market risk in making the investment, including the effects that such investments will have on the overall portfolio. Where appropriate, the Investment Manager should use stress simulation models showing the projected performance of the derivative and the portfolio under various market conditions, utilizing the most reliable price comparisons available.
    - After making such an investment in CMOs and CMBS, the Investment Manager shall timely obtain and analyze information regarding the Fund's credit exposure and the current market value of its derivative positions and review with a frequency that is appropriate.
    - An Investment Manager may be given authority in the investment contract to utilize futures, forwards, interest rate swaps, and options; such instruments are permitted only: (i) when the Investment Manager deems the instrument more attractive than a direct investment or (ii) when used to manage risk and as long as risk would not be increased.
    - The Investment Manager will monitor the risk of all positions by accounting for the impact on portfolio duration of each position, which will be used to calculate overall portfolio duration.
- No more than 10% of the portfolio may be invested in each of the following security types: emerging market debt (unless otherwise authorized by the investment contract), private placements, taxable municipal bonds, and convertible bonds; and no more than 20% of the portfolio may be invested in in Yankee Bonds or Eurobonds (as defined in Section 10.6.2 (Fixed Income: Core Guidelines)) unless notified by the Executive Director upon authorization by the Retirement Board

#### 10.6.2. Fixed Income: Core Guidelines.

A domestic core fixed income Investment Managers' investments include securities that are included in the Barclays U.S. Aggregate Bond Index, subject to quality, duration and other limitations and may include: (i) U.S. dollar denominated obligations of the United States Government and its Agencies and instrumentalities, and U.S. corporations; (ii) U.S. corporations; (iii) mortgage-backed securities, including CMOs and CMBS; (iv) Asset Backed Securities (ABSs); (iv) registered Rule 144A securities if applicable; (v) municipal bonds, (vi) short term securities as detailed below in the Short-Term Investments section of this IPS; (vii) securities of foreign companies or foreign countries (sovereigns or supranationals) denominated in U.S. dollars, trading in the U.S. markets and capable of settlement in U.S. markets ("Yankee Bonds"); and (viii) dollar denominated obligations of U.S. companies trading outside the U.S. ("Eurobonds").

Fixed income securities must be rated at least BBB- by Fitch, Baa3 by Moody's or BBB- by Standard & Poor's at the time of purchase. If a security's rating falls below such grades, then the Investment Manager will immediately notify the Executive Director in writing of the event and describe its plan to address. Should the Investment Manager decide to continue to hold the downgraded issue, then the Investment Manager shall report to the Executive Director quarterly in writing as to the status of the security. In the event of a split rating, then the higher rating will be applied. The average option adjusted (effective) duration of the core fixed income Investment Manager's portfolio may not exceed 120% of the Barclay's Capital U.S. Aggregate Index.

#### 10.6.3. Fixed Income: Mortgages Guidelines.

Investment Managers of the mortgage asset subclass serve in a specialist role managing mortgages and real estate debt securities. Unless authorized in its investment contract, then the following guidelines apply to each mortgage Investment Manager. Mortgage securities and mortgage-backed securities may be sourced directly or purchased through or by commingled funds. Selection and evaluation of mortgage securities, mortgage-backed securities, direct mortgages, and other debt instruments shall be assumed by each such mortgage Investment Manager utilizing prudent analysis including but not limited to analysis of credit enhancement, collateral characteristics, loan to value, debt service, diversification, prepayment options, risk adjusted spreads, liquidity, duration and convexity. Mortgage-backed securities may be related to residential and commercial properties and may include CMBS. If disclosed in the funds' prospectus, and subject to the investment guidelines therein, commingled funds may also invest a portion of the portfolio in non-mortgage related fixed income securities including but not limited to (i) cash, (ii) securities issued by the U.S. treasury, (iii) swap contracts; and (iv) agency debentures.

#### 10.6.4. Fixed Income: Inflation Linked Securities Guidelines.

Assets of Investment Managers in the inflation linked securities subclass may include inflation-indexed bonds issued by the U.S. government, its agencies and instrumentalities and corporations. All bonds purchased by such Investment Manager must be rated "investment-grade" at a minimum. Such Investment Manager may invest a limited portion of the portfolio in holdings that are not inflation-indexed investments. These holdings may include (i) corporate debt obligations, (ii) U.S. government and agency bonds, (iii) futures, options and derivatives, (iv) restricted or illiquid securities, and (v) mortgage dollar roll transactions.

#### 10.6.5. Fixed Income: Bank Loans Guidelines.

The senior bank loan Investment Manger invests primarily in senior-secured, floating-rate loans. At least 80% of total assets are invested in these loans, which are generally of below investment-grade quality.

The remaining assets in the portfolio are invested primarily in short-term, higher quality debt securities. The portfolio is measured against the Standard & Poor's/Loan Syndications and Trading Association Index (S&P/LSTA), which is an unmanaged index of the institutional leveraged-loan market.

#### 10.6.6. Fixed Income: Global Multi Sector Guidelines.

Global multi sector Investment Managers are provided broad flexibility to invest across markets, sectors, currencies and security types to access a larger opportunity set than is available within traditional fixed income indexes. As such, this asset subclass is characterized by a higher expected return, higher expected risk and greater variability in returns when compared to traditional benchmark-oriented fixed income managers and indexes. In evaluating the Fund's long-term asset allocation strategy, the Investment Advisor will assist the Fund in assessing the global multi sector Investment Manager(s)' underlying exposures to markets, sectors and currencies and the Investment Manager is expected to be transparent with regard to these issues. Given the broad range of markets, sectors and currencies accessed by the Investment Manager in this asset subclass, particular attention will be paid the assigned guidelines.

An Investment Manager in this subclass may invest in fixed and floating-rate debt securities and debt obligations of government or government-related or corporate issuers worldwide, foreign currencies or securities linked to assets or currencies of any nation, as well as any derivatives on any of those securities. Such Investment Managers may invest in U.S. Treasury securities; government/sovereign bonds; government-related bonds; supranational bonds; inflation-linked government bonds; mortgages including mortgage backed securities, asset-backed securities and commercial mortgage-backed securities; corporate bonds, including investment grade and high yield bonds; municipal bonds; convertible bonds and convertible preferred stock; emerging market debt securities; bank loans; private placement debt securities, including Rule 144A securities; collateralized debt obligations and collateralized loan obligations; money market instruments, cash and cash equivalents; and exchange traded funds/notes, mutual funds and other open-end investment structures.

As part of the strategy, the Fund may have short exposures. Under normal market conditions, the manager may invest up to 50% of total net assets in bonds that are rated below investment grade (below BBB-/Baa3) or securities that are not rated. In addition to the securities listed above, derivatives may be used by such Investment Managers, including for the purposes of managing the risks of the portfolio and gaining exposure to certain asset classes.

Such Investment Managers may leverage its capital if it believes that the use of leverage may enable the Fund to achieve a higher rate of return. Under normal market conditions, such Investment Manager will not borrow for investment purposes, but on an opportunistic basis, may borrow up to 35% of total net assets of the portfolio (this excludes short term borrowings for temporary cash management purposes).

### 10.7. Cash.

The Fund will utilize a short-term investment fund, commonly referred to as a 'STIF', as offered by the Custodian, to invest cash. The Custodian is also responsible for sweeping all Investment Manager accounts daily so that no cash is left uninvested. Finally, the Custodian is responsible for investing unallocated cash from the accounts of equity Investment Managers in a Cash Equalization Portfolio that provides exposure to equity markets through futures and other instruments.

### 10.8. Hedge Fund Managers.

#### 10.8.1. Introduction.

The objective of the asset allocation to hedge funds is to reduce the volatility of the total Fund while maximizing returns in a variety of market conditions. A well-constructed hedge fund program should produce attractive absolute returns that are uncorrelated with other asset classes and with lower risk than long-only equities. The hedge fund allocation is implemented solely through a broadly diversified institutional quality of fund(s) of hedge funds ("FoHFs"). FoHF can be diversified across strategies and managers to reduce risks associated with a single hedge fund. When such funds-of-hedge funds or hedge funds are utilized, the Fund's portfolio is expected to benefit from broader diversification resulting in improved Sharpe Ratios at the portfolio level. The Fund considers an investment in the Hedge Fund PRIT Segmentation Account (*see* Section 6.3.2.2 (PRIT)) to be a FoHF and may encompass opportunistic hedge fund strategies.

#### 10.8.2. Performance Objectives.

Generally, hedge funds are expected to deliver absolute return characteristics and exhibit low correlations to long only equity or fixed income markets over market cycles or rolling three-year periods of time. FoHFs are expected to deliver over a rolling three-year period or a market cycle if longer, net (of fees), absolute returns that are greater than those available from active investment grade fixed income strategies and closer to that of active core large cap equity strategies, with materially lower risk. The Fund has targeted a composite return of T-Bills plus three hundred (300) basis points for the entirety of its hedge fund program. The program will also be evaluated versus commonly available hedge fund peer group indices, including those offered by HFRI (e.g. the HRFI Fund-of-Funds Index). The Investment Advisor, working with Management, shall establish performance objectives for each FoHF Investment Manager consistent with the strategy employed by Investment Manager. In addition, such Investment Advisor will compare the program and individual Investment Managers to relevant peer group universes.

#### 10.8.3. Investment Guidelines.

The hedge fund Investment Manager must provide a minimum level of transparency regarding the underlying hedge fund managers, investment vehicles, and strategies to allow the Retirement Board and its advisors to assess the performance and style. In most cases, this will include a list of underlying manager names, investment vehicle names, and strategies.

### 10.9. Private Equity Managers.

#### 10.9.1. Introduction.

The objective of the asset allocation to private equity funds is, over the long-term, to enhance the rate of return over publicly-traded securities through an asset with a low correlation to other major asset classes (thereby reducing year-to-year portfolio volatility). Such Investment Advisor (or subadvisor) will, annually, prepare a long-term strategic portfolio structure after a review of asset allocation, investment criteria, performance expectations, and liquidity requirements; the strategic portfolio structure will be submitted to the Retirement Board each year for approval. Due to the potential of a conflict of interest, the Fund will not invest in proprietary investment products offered by its Investment Advisor.

#### 10.9.2. Asset Allocation.

Private equity allocations are diversified across strategies, vintage years and managers as a means to managing risk and positioning the portfolio to generate risk-adjusted returns over time consistent with asset class objectives. Private equity strategies may include venture capital, growth equity, buyout, secondary fund of funds, energy, distressed and special situations. When the Fund invests in the Private Equity PRIT Segmentation Account, the Retirement Board, with advice from the Investment Advisor, shall reasonably allocate such investments to ensure private equity investment diversification.

#### 10.9.3. Portfolio Performance.

The Fund monitors the performance and diversification of the private equity program at the portfolio, strategy and Investment Manager levels by:

- measuring the net Internal Rate of Return (by vintage year, strategy and Investment Manager) and comparing it to the return of a custom benchmark;
- evaluating the portfolio by Total Value to Paid in Capital, Distribution Ratio and Call Ratio;
- reviewing value or loss by strategy; and
- performing lifecycle analysis.

#### 10.9.4. Risk Management.

Risk in the private equity portfolio is measured and managed through a combination of quantitative and qualitative constraints as listed below:

##### 10.9.4.1. Liquidity.

Private equity investments are structured as commingled funds and are typically have holding periods of 10-12 years. Investments are typically held until maturity; selling prior to maturity is expected to require selling at a discount to fair value. Liquidity risk is managed by minimizing the possibility of forced sales, allocations to strategies that provide greater liquidity (e.g. mezzanine, secondarys) and conducting periodic liquidity tier analyses. Exposure is managed through commitment pacing and monitoring of multi-year cash flow projections.

##### 10.9.4.2. Vintage Risk.

Vintage is tied to the first capital draw; vintage risk refers to the variability of private equity commitments overtime. The Fund controls the short- and long-term investment pacing that minimizes vintage risk while achieving targeted exposure. Secondary opportunities may be pursued to gain prior vintage year exposure.

##### 10.9.4.3. Manager Risk.

Investment Manger risk consists of two elements: (i) the exposure within an investment vehicle and (ii) the number of private equity Investment Managers in the program. The exposure to a specific Investment Manager within an investment vehicle is controlled by limiting the commitment to a particular Investment Manager. The optimum number of Investment Managers in the portfolio varies with time.

##### 10.9.4.4. Currency.

In recognition of the diversification benefits of investing internationally, the private equity program accepts the currency risks consistent with the geographic constraints of the investment opportunity. Private equity investments generally do not hedge currency risk and the private equity program will not implement currency hedges.

##### 10.9.4.5. Industry and Geography.

Typically, private equity funds are permitted to invest in a wide variety of industries with limited controls. Industry risk is controlled primarily through appropriate diversification (strategies of) Investment Managers. Geographic risk is controlled through a long-term international target exposure. Global opportunities generally indicate geographic limits and exposure will be attributed and monitored accordingly.

#### 10.9.5. Other Restrictions.

- By virtue of its investments in private equity comingled vehicles, the Fund may have opportunities to make direct investments in portfolio companies of the private equity fund or its affiliates. Direct investing in portfolio companies by the Fund is currently prohibited.
- Hedge Funds are not within the scope of the private equity program.
- Investments in real estate are not within the scope of the private equity program.
- Private Equity Investment Managers may focus on investments in options, futures, swaps or derivative securities.
- Stock distributions made to the Fund by an Investment Manager of publicly-traded companies will be liquidated within ninety (90) days of receipt and removal of trading restrictions. Unlisted and thinly traded stock distributions will be liquidated in an orderly manner.

### 10.10. Private Credit Managers

Private credit investment managers serve in specialist roles managing private credit investments. Private credit strategies may include mezzanine debt, senior debt, distressed opportunistic investments and other forms of private debt. Private credit investments are generally fixed income instruments that are not publicly traded. Private credit managers may make bilateral or syndicated loans to private firms in need of additional capital for operations, acquisitions, recapitalization or other business needs. These investments are often implemented through a partnership structure, earn a current coupon, and are secured by a lien on the underlying assets of the business. Private credit strategies are intended to provide the potential for enhanced rates of return over publicly traded debt securities, while generating returns that have low correlations to other major asset classes.  Private credit managers will utilize prudent underwriting criteria in the evaluation. selection and asset management of loans.

### 10.11. Equity Real Estate Managers.

#### 10.11.1. Portfolio Structure.

It is anticipated that investments in equity real estate will, over a full market cycle, produce an income return that is in excess of the yield of an investment grade, core fixed income investment combined with some level of equity appreciation. In addition, it is expected that equity real estate will exhibit a lower correlation with traditional equity and fixed income securities. The Retirement Board acknowledges that the nature of equity real estate investing may require that the Fund make commitments to both open- and closed-end commingled funds that may or may not offer regular liquidity to investors. The equity real estate program will be comprised primarily of two separate, but complementary, investment strategies: core and specialty.

##### 10.11.1.1. Core.

Core property types include multi-family housing, retail, industrial and office buildings. These assets are characterized by stable and increasing income levels and are located principally in major metropolitan areas that exhibit reasonable economic diversification (i.e., multiple industry economy). Properties will be of institutional quality construction.

##### 10.11.1.2. Specialty.

Specialty strategies may include Value Add, Secondary & Opportunistic and Sector Focused and may be included in the real estate program in order to enhance the returns of assets capable of, but not currently, exhibiting core type characteristics. Acceptable specialty strategies may include:

- property types including, but not limited to, hotels, assisted-living and congregate care facilities that require specialized management skills focusing primarily on operating business expertise rather than pure real estate management skills;
- properties that are considered in a “workout” mode;
- properties involving significant repositioning, development, lease-up or renovation risks;
- unique property types requiring specialized acquisition and management expertise including agriculture, timber, self-storage, and single tenant triple-net lease; and
- financing or investment structures that impact cash flows and/or require additional administrative expertise.

#### 10.11.1.3. Portfolio Allocation.

Depending upon the market cycle, the portfolio may be proportionally over weighted toward core or specialty in order to achieve targets. The composition of the portfolio will always be structured to provide targeted returns while assuming an appropriate level of risk and preserving invested capital. The following allocation targets are specified as a guideline for the equity real estate portfolio:

| Investment Category | Minimum Allocation | Maximum Allocation |
|---|---|---|
| Core | 30% | 100% |
| Specialty | 0% | 70% |

### 10.11.2. Investment Guidelines.

The Fund and its real estate Investment Managers shall manage the investment risk associated with equity real estate in several ways, including:

#### 10.11.2.1. Diversification.

The real estate portfolio shall be economically diversified. Other areas of diversification, such as property type and geographic location will be monitored but may, at any given time, exhibit disproportionate over weightings relative to the target index. Diversification reduces the impact on the portfolio of any one investment or any single Investment Manager’s investment style to the extent that an adversity affecting any one particular area will not impact a disproportionate share of the total portfolio. Upon investment, the Fund shall not own more than 25% of a commingled fund and shall seek to continue to adhere to this threshold (if liquidity permits).

#### 10.11.2.2. Ownership Structure.

The Fund will not directly invest in real property. When allocating assets to an Investment Manager, the investment vehicle ownership structure may consist of leveraged or unleveraged equity investments. The primary investment vehicle will be commingled funds.

#### 10.11.2.3. Leverage.

Leverage may be utilized at the discretion of the Investment Managers in a constrained manner, consistent with the commingled fund documents, in order to enhance yields of the various investments and/or facilitate the diversification of the portfolio. The total level of debt for any commingled fund is expected to be commensurate with the stage and structure of the fund, but generally not to exceed 60% of the value of that fund. The Investment Advisor shall monitor leverage and report to Management and the Retirement Board.

#### 10.11.2.4. Return.

With regard to total return, over rolling 5-year periods, the equity real estate investment portfolio is expected to outperform the NCREIF Property Index and the NCREIF ODCE Index. In addition, the Fund shall seek equity real estate investments that can reasonably achieve a minimum annualized income return after investment management fees that exceeds one-half of the total return over rolling 5-year periods.

#### 10.11.2.5. Property Valuation.

Annually, each real estate Investment Manager shall provide the Fund with estimates of investment value (valuations) for all properties for which it has asset management responsibility. The Fund's staff and Investment Consultant will also annually request the Investment Managers' valuation procedures to insure compliance with the Investment Policy Statement's Alternative Investments Valuation Statement.

#### 10.11.2.6. Property Management.

The selection of property management is left to the discretion of the Investment Manager. It is expected that the Investment Manager will retain the highest caliber market rate property management service either through a third-party fee manager or the Investment Manager's affiliated property management division.

### 10.12. Opportunistic Investment Managers.

Investment Managers deploying an "opportunistic" strategy seek to take advantage of a short-medium term investment dislocation in the markets. Such investments may include various asset classes including public or private markets, and may be less liquid than traditional asset class investments. Investment Managers of opportunistic strategies may employ portfolio construction similar to hedge fund strategies, which may involve short and long exposures and leverage. The Fund may utilize a FoHF Investment Manager in this asset subclass, in which case such allocation will not be counted against the Hedge Fund asset allocation target.

### 10.13. Risk Parity / Diversified Beta Managers.

Multi-asset class investments include Investment Managers that invest across the asset class spectrum, including, but not limited to, equity, fixed income, commodities and other assets including alternative asset classes. Exposures maybe equal weighted regardless of the economic environment or may exhibit more variance on a strategic or tactical basis. Exposures may be accessed through the derivatives markets. All derivative investments are subject to the associated guidelines outlined in the Investment Manager's guidelines. Examples of such Investment Managers include Global Tactical Asset Allocation (GTAA), Risk Parity, Diversified Beta, among others. Each mandate and Investment Manager approach is unique with varying goals and objectives.

### 10.14. Valuation of Alternative Investments.

The Fund has an allocation to investments that are illiquid and, therefore, more difficult to value. These investments typically involve commingled vehicles and asset classes such as real estate, private equity, and hedge funds ("Alternative Investments"). Investment Managers utilizing Alternative Investments are responsible for adequately performing valuations and providing audited financial statements.[36]

The Fund's control procedures regarding the valuation of Alternative Investments focus on due diligence, ongoing monitoring and financial reporting controls. Inherent valuation risks associated with Alternative Investments are monitored primarily by Management, the Investment Advisor and the

[36] Alternative Investments that are in liquidation may no longer provided audited financial statements.

Custodian through a monthly and quarterly review process as well as in preparing year end financials. As referenced in Section 5.6 (Actuary; Auditor), the Fund produces a CAFR.

Specifically, Management deploys a program outlined in Section 9.2 (Reporting Requirements; Diligence by Management) and further review is conducted surrounding regularly scheduled meetings of the Retirement Board as described in 9.4 (Retirement Board Review Process). In addition, Management is responsible for sending, and retrieving responses, to an Annual Compliance Questionnaire (the current form of which is attached as **Exhibit F** (Annual Compliance Questionnaire)) from Investment Managers of Alternative Investments other than PRIM.[37] When meeting with the Retirement Board, such Investment Managers are expected to address relevant topics in the Annual Compliance Questionnaire. The Retirement Board grants Management the authority to revise the Annual Compliance Questionnaire to conform to market conditions and best practices.

As part of the Fund's monitoring framework, the Investment Advisor submits a quarterly detailed report on the Fund's private equity and real estate equity investments, which includes valuations, cash flows and performance and risk measures pertaining to Alternative Investments and Investment Managers of Alternative Investments. In addition, in evaluating prospective Investment Managers of Alternative Investments for the Retirement Board, the Investment Advisor includes (as one of seven evaluation criteria) the integrity of such prospective Investment Managers' operational controls, including, but not limited to the valuation process.

[37] The Fund sends the Annual Compliance Questionnaire to PRIM, which has responded in prior years (but has no obligation to respond).

## Schedule 1

Assumed Rate of Return

Pursuant to resolution of the Retirement Board on [insert date], the actuarially required return for the Fund is currently 7.25% annually, net of all fees and operating expenses.

Asset Allocation

Pursuant to resolution of the Retirement Board on [insert date], the Asset Allocation of the Fund is now:

| ASSET CLASS | Target (%) | Minimum Exposure (%) | Maximum Exposure (%) |
|---|---|---|---|
| **Equities** | **43** | **38** | **48** |
| US Equity | 27 | 22 | 32 |
| International Equity (unhedged) | 12 | 8 | 16 |
| Emerging Markets | 4 | 2 | 6 |
| | | | |
| **Fixed Income** | **26** | **23** | **33** |
| FI – Core | 10 | 6 | 14 |
| FI - Mortgages | 3 | 0 | 5 |
| FI – Inflation Linked Securities | 3 | 0 | 5 |
| FI – Bank Loans | 3 | 0 | 5 |
| FI – Global Multi Sector | 7 | 4 | 10 |
| | | | |
| **Cash** | **2** | **0** | **3** |
| | | | |
| **Alternative Investments** | **29** | **17** | **36** |
| Hedge Funds (FoHF) | 4 | 1 | 7 |
| Private Equity | 8 | 4 | 12 |
| Private Credit | 2 | 0 | 4 |
| Real Estate | 9 | 5 | 12 |
| Opportunistic – Hedge Funds | 2 | 0 | 4 |
| Risk Parity / Diversified Beta | 4 | 1 | 7 |

**Notes to Asset Allocation:**

1. At any time, in order to meet the Fund's liquidity requirements, 3% of the Fund's NAV may be held in cash reserves or a cash equalization account.
2. U.S. Equity may include U.S. Large Cap Equity, U.S. Mid Cap Equity, U.S SMID Cap Equity and U.S. Micro Cap Equity where U.S. Equity investments are allocated to the applicable PRIT Fund Segment.
3. International Equity may include International All Cap Equity, International Large Cap Equity, International Mid Cap Equity, and International Small Cap Equity where International Equity investments are allocated to the applicable PRIT Fund Segment.
4. The Real Estate Equity target encompasses, core, value added and other real estate investment strategies.
5. The Opportunistic – Hedge Funds allocation may include long - only and hedge investment strategies.

**Exhibit A**

Definitions

"1948 Trust Agreement" is defined in Section 2 (Background of the Fund).

"ADRs" have the meaning provided in Section 10.4.2 (Global Equity: Guidelines).

"Alternative Investments" are defined in Section 10.14 (Valuation of Alternative Investments).

"Asset Allocation Index Return" is defined in Section 7.5.2 (Definitions).

"Assumed Rate of Return" is defined in Section 6.1 (Investment Objective).

"Authority" is the Massachusetts Bay Transportation Authority, a political subdivision of the Commonwealth.

"By-Laws" are the By-Laws of the Fund, adopted by the Retirement Board and as last amended on March 20, 2009.

"CMOs" have the meaning provided in Section 10.6.1 (Fixed Income: General Guidelines).

"CMBS" have the meaning provided in Section 10.6.1 (Fixed Income: General Guidelines).

"ETFs" are defined in Section 10.3 (Equity: Domestic Active Managers: Guidelines).

"Eurobonds" are defined in Section 10.6.2 (Fixed Income: Core Guidelines).

"Fiduciary Standards" is defined in Section 4 (Fiduciary Standards).

"FoHF" is defined in Section 10.8.1 (Introduction).

"Fund" is defined in Section 2 (Background of the Fund).

"Governing Documents" are defined in Section 6.3.2 (Commingled Accounts).

"IM Benchmark" is defined in 7.5.3 (Investment Manager Benchmarks).

"Investment Advisors Act" is the Investment Advisors Act of 1940, as amended from time to time.

"IPS" is defined in Section 1 (Purpose of this Investment Policy Statement).

"IRS" is defined in Section 6.3.2.1 (Group Trusts).

"Management" shall be the Executive Director and other employees of the Fund as engaged by the Retirement Board or the Executive Director, including, but not limited to, a Deputy Executive Director, Finance Director, Compliance Officer, and Financial Analyst.

"Participating System" is defined in Sec. 2.6 of the PRIM Trust Agreement as any retirement system that transfer all its assets to PRIT per Chapter 32, Section 22(8)(e).

"Pension Agreement" is defined in Section 3 (Legal Authority; Structure).

"PRIM" is the Pension Reserves Investment Management Board, a nine member entity, which, under M.G.L. c. 32, is charged with the general supervision of PRIT.

“PRIT” is the Pension Reserves Investment Trust, a component unit of the Commonwealth, was established by the legislature in 1983 to invest the assets of the Massachusetts State Teachers’ and Employees’ Retirement Systems; it now invests assets of county, authority, district and municipal retirement systems. The governing statute of PRI (and PRIM) is M.G.L. c. 32. PRIT is managed by PRIM.

“PRIT Segmentation Program” is defined in Section 6.3.2.2 (PRIT).

“PRIM Trust Agreement” is the Operating Trust Agreement, dated as of September 22, 1998, by and among the then duly authorized members of the PRIM Board.

“PRL” is defined in Section 3 (Legal Authority; Structure).

“Policy Index Return” is defined in Section 7.5.2 (Definitions).

“Purchasing System” is defined in Sec. 2.8 of the PRIM Trust Agreement as any retirement system, other than a Participating System, that is authorized to and does purchase shares in PRIT.

“Retirement Board” is the sole trustee of the Fund.

“Total Fund Return” is defined in Section 7.5.2 (Definitions).

“Trust Agreement” is defined in Section 3 (Legal Authority; Structure).

“Union” is Local 589, Amalgamated Transit Union, AFL-CIO, which represents a majority of the employees of the Authority.

“Yankee Bonds” are defined in Section 10.6.2 (Fixed Income: Core Guidelines).

**Exhibit B**

Standards of Fiduciary Responsibility

attached

**Exhibit C**
Risk Management Framework

The Massachusetts Bay Transportation Authority Retirement Fund (the "Fund") employs a risk management framework that is designed to enable measurement and management of risk across risk exposures and investment program functions. While maintaining responsibility for risk oversight, the Retirement Board delegates implementation of specific functions to Management, the Investment Advisor, Auditor, Actuary, Custodian, Investment Managers and Investment Counsel who are responsible for managing risk within the scope of their duties and responsibilities.[38] Capitalized terms that are not defined within the body of this text shall take the meaning assigned in the Investment Policy Statement (the "IPS").

As summarized below, the framework includes a governance approach, program of assessments, key measures and reporting processes designed to manage risk categories common to defined benefit pension funds including, but not limited to, market, asset/liability, liquidity, operational and credit risk.[39]

**Risk Governance**

Risk governance includes Retirement Board practices and procedures, contract provisions and procedures the Fund employs to measure and manage risk. Governance encompasses functions within the IPS, which documents roles of fiduciaries (see Sec. 4 (Fiduciary Standards)), asset allocation (see Sec. 7.4 (Current Asset Allocation Targets & Ranges)), risk tolerances (see discussion in Sec. 7.1 (Rate of Return Assumption)), Investment Manager selection (see Sec. 8 (Investment Manager Selection)), Investment Manager monitoring (see Sec. 9 (Manager Reporting and Review Process)) and portfolio rebalancing (see Sec. 7.5.4 (Rebalancing)).

**Audits and Assessments[40]**

Assessments include the annual audit of its financial statements (CAFR), asset/liability modeling (ALM), experience studies, asset allocation modeling, liquidity tier analysis, cash flow projections, stress testing[41] and investment program expense reviews that provide transparency into risk exposures and costs, while also serving as a basis for decision making. Assessments also include an annual compliance

---

[38] See IPS, Sec. 5 (Duties and Responsibilities).

[39] Risk categories include market, liquidity, asset / liability, operational and credit risk:

- Market Risk - Market risk is the risk of loss due to adverse movements in market factors such as asset prices, currency rates or interest rates.
- Liquidity Risk – Liquidity risk may be described as the risk of loss due to an asset owner being unable to sell an asset in a timely manner and for its actual value.
- Asset / Liability Risk - Asset / Liability is that the risk that the Fund's liquidity will not be adequate to meet operational requirements or financial obligations, namely liabilities related to benefit payments.
- Operational Risk - Operational risk is the risk of loss resulting from inadequate or failed processes, people and systems of from external events.
- Credit Risk - Credit risk is the risk of loss due to failure of obligors (e.g. bond issuers) to honor their payments.

[40] Assessments and reports include applicable disclosures under GASB and Actuarial Standards of Practice.

[41] Asset-liability modeling typically includes stress testing under various projected actuarial and market scenarios.

questionnaire to Investment Managers (see Exhibit E (Annual Compliance Questionnaire) of the IPS), and periodic review of the IPS, and portfolio structure reviews.

**Key Measures**

Key measures include, but are not limited to, asset class exposures relative to policy targets and thresholds, industry diversification of equity portfolios, tracking error, bond manager characteristics (e.g. average credit rating and average weighted duration), private markets geographic and asset diversification, and, where permitted, Investment Managers' utilization of leverage and financial instruments (e.g. derivatives) that may magnify market risk. Measures also include value at risk (VaR), standard deviation, Sharpe ratio, down market capture ratio, default rates and security issuer concentration. Key measures of asset / liability risk include the funded ratio, changes to net assets available for benefits, projected cash flows and the accrued unfunded actuarial liability.

**Reporting**

The Retirement Board's ability to manage risk is enabled by reporting provided by the Management, Auditor, Actuary, Investment Advisor, Custodian, and Investment Managers. Reports include, but are not limited to, a monthly report to the Retirement Board (at its regularly scheduled meeting) by the Executive Director, the Custodian's monthly flash report, compliance dashboard, and full accrual, multi-currency accounting statements. Reports also include the Investment Advisor's quarterly total Fund performance and private equity / real estate equity reports, recurring Investment Manager reports, preparation of the CAFR and actuarial reports. The Fund and its service providers utilize information technology and independent, external databases to facilitate reporting processes.

**Exhibit D**

Investment Letter Agreement with PRIM & PRIM Trust Agreement

attached

**Exhibit E**

Investment Manager Benchmarks

| EQUITY MANAGERS | Investment Manager | Style Benchmark | Long-Term |
|---|---|---|---|
| U.S. Large Cap Equities – Core | SSgA Russell 1000 Index Fund | Russell 1000 | Russell 1000 |
| U.S. Large Cap Equities – Value | Boston Partners | Russell 1000 Value Index | S&P 500 |
| U.S. Large Cap Equities – Value | Aristotle Capital Management | Russell 1000 Value Index | S&P 500 |
| U.S. Small Cap Equities – Growth | Alliance Bernstein | Russell 2000 Growth Index | Russell 2000 |
| U.S. Small Cap Equities – Growth | RBC Global Asset Management | Russell 2000 Growth Index | Russell 2000 |
| U.S. Small Cap Equities – Value | SSgA Russell 2000 Index Fund | Russell 2000 Value Index | Russell 2000 |
| Global Equities and Emerging Markets | PRIM Emerging Markets Equity Segmentation | PRIM Emerging Markets Custom Benchmark* | MSCI Emerging Markets Index |
| International Equity | SSGA – MSCI EAFE Index | MSCI EAFE | MSCI EAFE |
| International Equity | PRIM International Equity Segmentation | PRIM International Equity Custom Benchmark* | MSCI EAFE |

U.S. Equity Managers are selected based on their style of management such as Value, Growth and Core. It is expected that U.S. Equity Managers will outperform the Style Benchmark net-of-fees and the median return of a representative database of managers with a similar style over three- and five-year periods or a market cycle. Over longer periods of time, it is expected that net-of-fee returns generated U.S. Equity Managers will exceed the return of the Long-Term Benchmark regardless of the style of management.

It is expected that net-of-fee returns generated by International Equity and Emerging Markets Equity Managers will exceed the return of the Long-Term Benchmark over three- and five-year periods or a market cycle. It is also expected that these Managers will outperform the median return of a representative database of managers with a similar strategy, where applicable, over three- and five-year periods or a market cycle.

*PRIM Custom Benchmarks are provided directly by PRIM and are unable to be independently verified. Composition of these benchmarks can be requested by the client service team.

| FIXED INCOME MANAGERS | Investment Manager | Style Benchmark | Long-Term |
|---|---|---|---|
| Core Fixed Income | Income Research & Management | Barclays Capital Aggregate Index | Barclays Capital Aggregate Index |
| Core Fixed Income | PRIM Core Fixed Income Segmentation | PRIM Core Fixed Income Custom Benchmark* | Barclays Capital Aggregate Index |
| Inflation-Linked Fixed Income | Income Research & Management | Barclays Capital U.S. TIPS Index / Barclays U.S. TIPS 1 – 10 YR. | Barclays Capital U.S. TIPS Index |
| Bank Loans | Eaton Vance Senior Loan Fund | S&P / LSTA U.S. Leveraged Loan Index | S&P / LSTA U.S. Leveraged Loan Index |
| Global Multi Sector | Loomis Sayles & Company | Barclays Capital Gov / Credit Index | Barclays Capital Gov / Credit Index |
| Mortgage-Backed Fixed Income | AFL – CIO Housing Investment Trust | Barclays Mortgage-Backed Index / Barclays Capital Aggregate Index | Barclays Mortgage-Backed Index / Barclays Capital Aggregate Index |
| Value Add Fixed Income | PRIM Value Add Fixed Income Segmentation | PRIM Value-Add Custom Benchmark* | PRIM Value-Add Custom Benchmark* |
| | | | |
| Cash | State Street Bank | 91 Day T – Bill | 91 Day T- Bill |

It is expected that net-of-fee returns generated by Fixed Income Managers will exceed the return of the Long-Term Benchmark over three- and five-year periods or a market cycle. It is also expected Fixed Income Managers will outperform the median return of a representative database of managers with a similar strategy over three- and five-year periods or a market cycle.

*PRIM Custom Benchmarks are provided directly by PRIM and are unable to be independently verified. Composition of these benchmarks can be requested by the client service team.

| ALTERNATIVE MANAGERS | Investment Manager | Style Benchmark | Long-Term |
|---|---|---|---|
| Real Estate Equity (Open End & Closed End Funds) | Multiple Managers[42] | NCREIF NPI / NECREIF ODCE Index | NCREIF NPI / NECREIF ODCE Index |
| Private Equity | Multiple Managers[43] | State Street Private Equity Index | State Street Private Equity Index |
| It is expected that Real Estate Equity Managers' net-of-fee returns will exceed the return of the NCREIF NPI and/or NECREIF ODCE Real Estate Index over the corresponding market cycle.<br>It is expected that Private Equity Managers' net-of-fee returns will exceed the return of the State Street Private Equity Index over the corresponding market cycle. | | | |
| | | | |
| Private Credit | Multiple Managers[44] | State Street PE Credit Benchmark | State Street PE Credit Benchmark |
| Fund of Hedge Funds | PRIM Hedge Fund Segmentation Program | PRIM Hedge Fund Custom Benchmark * / 91 Day T – Bill Plus 300 bps / HFRI FOF Index | PRIM Hedge Fund Custom Benchmark* / 91 Day T – Bill Plus 300 bps / HFRI FOF Index |
| | | | |
| It is expected that Private Credit Managers' net-of-fee returns will exceed the return of theState Street PE Credit Benchmark..<br>It is expected that net-of-fee returns generated by Fund of Hedge Fund Managers will exceed the Style Benchmark with a level of volatility similar to fixed income over three- and five-year periods or a market cycle. | | | |
| | | | |
| Risk Parity / Diversified Beta | Invesco Balanced – Risk Allocation Trust | Bloomberg Barclays 3-month U.S. Treasury Bellwether Index / 91 Day T-Bill Plus 300 BP | Bloomberg Barclays 3-month U.S. Treasury Bellwether Index / 91 Day T-Bill Plus 300 BP |
| | | | |
| It is expected that the Risk Parity Manager's net-of-fee return will exceed the Style Benchmark with a level of volatility similar to fixed income over three- and five-year periods or a market cycle. | | | |
| | | | |
| Opportunistic Investments | Multiple Managers | Bank of America / Merrill Lynch High Yield | Bank of America / Merrill Lynch High Yield |
| It is expected that the Risk Parity Manager's net-of-fee return will exceed the Style Benchmark with a level of volatility similar to fixed income over three and five year periods or a market cycle. | | | |

[42] Details of the Fund's Real Estate Equity Portfolio are described in the Investment Policy Statement and included in Quarterly Reports
[43] Details of the Fund's Private Equity Portfolio are described in the Investment Policy Statement and included in Quarterly Reports.
[44] Details of the Fund's Private Credit Portfolio are described in the Investment Policy Statement and included in Quarterly Reports.

**Exhibit F**

Annual Compliance Questionnaire

attached

MBTA RETIREMENT FUND

# 2024 Compliance Questionnaire

Firm Name: ______________________________

**Please check either yes or no for the following questions with respect to year-to-date 2024.**

**General Questions:**

| | YES | NO |
|---|---|---|
| 1. Have there been any changes to investment strategy? | ☐ | ☐ |
| 2. Have any clients requested a full redemption of their investment? | ☐ | ☐ |
| a. If yes, what was the impact to AUM for this strategy? | | |
| 3. Have there been any changes to the redemption policies? | ☐ | ☐ |
| 4. Are there currently restrictions regarding redemptions? | ☐ | ☐ |
| a. If so, please provide details regarding the queue below. | | |
| 5. Have there been any changes to the valuation policy? | ☐ | ☐ |
| 6. Have there been a "Key-Person" event or significant personnel changes, such as departures or pending departures within the past year? | ☐ | ☐ |
| 7. Have any employees been subject to investigation/warning from a regulating body? | ☐ | ☐ |
| 8. Any criminal/civil/regulatory proceedings or investigations against Partners/employees/affiliated entities? | ☐ | ☐ |
| 9. Recent changes in organizational structure within the firm? | ☐ | ☐ |
| 10. Are there any known conditions (health, financial, litigation, etc.) of any of the Firm's Principals that might influence their ability to execute their duties? | ☐ | ☐ |
| 11. Has the firm utilized the services of a third-party marketing firm or placement agent in its interactions with the Fund? | ☐ | ☐ |
| 12. Has any service provider (auditor, legal, administrator, custodian, etc.) been terminated or replaced over the past year? | ☐ | ☐ |
| 13. Are there conflicts with any 3rd Party Service Providers? | ☐ | ☐ |
| 14. Have any of the portfolio companies or properties held by the Firm filed for bankruptcy in the past year? | ☐ | ☐ |

**Elaborate on any "yes" responses above:**

15. Confirm that the Firm is a registered Investment Advisor under the Investment Company Act of 1940 and has maintained registration throughout the year. If not, please provide an explanation for exemption.

**Cyber – Security Questions:**

**Which of the following tools and policies (if any) are used by the firm to protect against the unauthorized use or disclosure of client information:**

| | YES | NO |
|---|---|---|
| 1. Periodic Cybersecurity Awareness Training for employees | ☐ | ☐ |
| 2. Periodic Vulnerability Testing and/or Security Audits | ☐ | ☐ |
| a. If yes, is testing conducted by a third-party vendor? | ☐ | ☐ |
| 3. Does your firm have cybersecurity insurance? | ☐ | ☐ |
| 4. Does your firm have the following written policies and are they reviewed/tested at least annually: | | |
| a. Written Information Security Policy (WISP) | ☐ | ☐ |
| b. Business Continuity Plan | ☐ | ☐ |
| c. Disaster Recovery Plan | ☐ | ☐ |
| d. Incident Response Plan | ☐ | ☐ |
| 5. Are systems containing sensitive information protected with multifactor authentication (MFA)? | ☐ | ☐ |

**Is the firm aware of the improper access or disclosure of client or investment information within the last year?**

**Please attach the most current Valuation Policy and Form ADV.**

***Please send the completed form and all attachments to Jacquelyn Carey at jcarey@mbtarf.com and mbarrio@mbtarf.com no later than December 16, 2024.***