

BOSTON TRANSPORTATION DEPARTMENT
JACKSON SQUARE SUPPLEMENTAL
TRANSPORTATION ACCESS PLAN GUIDELINES

The Jackson Square area has high levels of vehicular congestion, pedestrian traffic, and parking demand. The Jackson square Development will increase travel demand, and will have transportation impacts that require analysis, review, and mitigation. Through the City of Boston's Article 80 development review process, the Boston Transportation Department (BTD) will work with the Jackson Square Development Team (the "project proponent") to ensure that they thoroughly evaluate the transportation impacts associated with the Jackson Square Development (the "proposed project"), propose and analyze ways to mitigate these transportation impacts, and implement appropriate mitigation measures.

The project proponent is responsible for assessing and mitigating the short-term and long-term impacts of the proposed project and submitting the following documentation to BTD:

1. Transportation Access Plan: The Transportation Access Plan shall fully describe all transportation-related issues surrounding the proposed project. It should include the following principal components:
 - Description of Existing Transportation Conditions - A summary of existing traffic, public transit, pedestrian, bicycle, and parking conditions in the study area.
 - Evaluation of the Proposed Project's Long-Term Transportation Impacts - A detailed description of the proposed project and a detailed analysis of the proposed project's long-term impacts on traffic, public transit, pedestrian, bicycle, and parking conditions.
 - Mitigation of the Proposed Project's Long-Term Transportation Impacts - Identification of appropriate measures to mitigate the proposed project impacts, including physical and operational improvements, transportation demand management (TDM), and long-term proposed project impact monitoring.
 - Description of the Proposed Project's Short-Term Construction Impacts and Proposed Mitigation - General overview of the proposed project's construction impacts, construction schedule and phasing, and measures to mitigate the short-term impacts. This will be a summary of the more detailed Construction Management Plan (CMP) to be submitted to BTD under separate cover.

The Access Plan will comprise the transportation components of the proposed project's various environment filings, such as the Draft Project Impact Report (DPIR) or the Final Project Impact Report (FPIR). The Access Plan may be a separate document. In any case, the Access Plan should adhere to the guidelines and scope of work set forth in the following pages.

2. Construction Management Plan: The Construction Management Plan (CMP) shall include a detailed proposal for the proposed project's construction schedule, phasing, occupancy of the public right-of-way, access and delivery requirements, transportation impacts, and mitigation. The project proponent shall submit the CMP to BTM, under separate cover from the Access Plan. The proposed project's general contractor typically prepares the CMP. Guidelines for preparation of the CMP are available from BTM. The CMP shall be completed prior to the issuance of a Building Permit from the City of Boston's Inspectional Services Department (ISD).

3. Transportation Access Plan Agreement: The Transportation Access Plan Agreement (TAPA) is a formal legal agreement between the project proponent and BTM. The TAPA formalizes the findings of the Access Plan, the mitigation commitments, elements of access and physical design, and any other responsibilities of the developer and BTM. Since the TAPA must incorporate the results of the technical analysis, physical design, and assessment of mitigation requirements, it must be executed after these processes have been completed. However, the TAPA must be executed prior to approval of the proposed project design through the City of Boston's Public Improvements Commission (PIC). An electronic copy of the basic TAPA form is available from BTM. It is the project proponent's responsibility to complete the TAPA so that it reflects the specific findings and commitments for the proposed project, and to get BTM review and approval of the document.

STUDY AREA

The Access Plan shall consist of a thorough analysis of the proposed project's transportation impacts throughout the relevant study area. The study area shall comprise the public right-of-way and important transportation elements of the area described by the following list of intersections:

Centre St./Bickford St.
Centre St./Lamartine St.
Centre St./Ritchie St./Columbus Ave.
Columbus Ave./Heath St./Centre St.
Highland St./Marcella St.
Ritchie St./Marcella St.
Dimock St./Amory St.
Columbus St./Dimock St.
Amory St./Proposed Project Site

The project proponent shall review all relevant proposed project proposals and planning studies that would affect the study area, and incorporate these into the transportation analysis, as appropriate.

DEFINITION OF TASKS

Task 1. Description of Existing Transportation Conditions

The Existing Conditions component shall summarize the current status of the transportation system within the study area. It shall focus on the issues listed below, and shall identify any existing problems or deficiencies in the transportation system. The Existing Conditions analysis will form the basis for projecting future conditions, and enable comprehensive assessment of the proposed project's transportation impacts.

- 1.1 Project Site Conditions. Describe general conditions in the vicinity of the proposed project site, including:
 - Existing land use, including existing site square footage, building square footage, number of employees or residents, zoning provisions, and other applicable information
 - Physical condition of the site, existing access and egress
 - Major streets and intersections in the vicinity of the site
 - On-street regulationsInclude a survey of existing conditions.
- 1.2 Traffic. The Access Plan shall include traffic volume counts at the study area intersections for weekday morning and evening peak periods under existing conditions. In addition, mid-afternoon counts are required the Columbus/Richie/Centre intersection because of the high volume of school buses at this intersection. Additional traffic counts are also required for the Saturday afternoon peak. Existing capacity analyses shall be performed to determine level of service at all study area intersections. Analyses shall reflect realistic peak period characteristics, including pedestrian volumes, requirements for pedestrian phases, curb operations (bus and

school bus stops, pick-up / drop-off), usable lanes, grade, and percentage of heavy vehicles. Appropriate traffic models will be discussed below.

- 1.3 Parking. The Access Plan shall summarize the parking supply within ¼ mile of the proposed project site. The parking inventory shall focus on publicly available spaces, but shall also include private resident or employee spaces as well, if the information is available. The parking inventory shall include:
- a. Location (block face for on-street spaces, facility for off-street spaces). Include a graphic representation of the parking supply locations with respect to the proposed project.
 - b. Type of Space
 - On-street (metered, resident parking, unregulated, etc.)
 - Off-street (surface lot or garage, user type: resident, employee, commercially available, customer, etc.)
 - c. Parking Fees, by Type of Space
 - d. Percentage Utilization During Parking Peak (assume 12 noon)

1.4 Transit. The Access Plan shall describe the study area's mass transit system:

- a. Transit Supply
 - Massachusetts Bay Transportation Authority (MBTA) services, proximity to site
 - Service (mode of transit, line, closest station stop)
 - Service characteristics (frequency during peak periods, geographic connections)
 - Physical characteristics (station conditions, rolling stock)
 - Private transit services (summarize characteristics above)
 - Other transit and high-occupancy vehicle (HOV) services
- b. System Utilization
 - Capacity by line during peak periods
 - Current ridership and percentage capacity utilization by line during peak periods

1.5 Pedestrians. The Access Plan shall include a description of pedestrian conditions on sidewalks and intersections adjacent to the site, including major pedestrian routes and desire lines in and around the site, volumes of pedestrians on these routes, and the conditions of these corridors, including any deficiencies or barriers.

Pedestrian volumes shall be counted and pedestrian level of service shall be calculated at the following intersection crossings and sidewalk locations:

Centre St./Bickford St.	Ritchie St./Marcella St.
Centre St./Lamartine St.	Dimock St./Amory St.
Centre St./Ritchie St./Columbus Ave.	Columbus Ave./Dimock St.
Columbus Ave./Heath St./Centre St.	Amory St./Proposed Development Site
Highland St./Marcella St.	Centre St./MBTA

Describe pedestrian accommodation at signalized intersections in the study area (i.e. exclusive vs. concurrent, crossing time provided).

- 1.6 Bicycles. The Access Plan shall describe existing bicycle usage, primary bicycle routes, accommodation of bicycles in the public right-of-way, and the current supply and location of any existing bicycle racks on or adjacent to the project site. On a day with good weather (record date and weather conditions), survey bicycle rack utilization by location. Document storage of bicycles in locations without bicycle racks. Include bicycle volume counts at the following intersections and bike routes:

Heath St./Columbus Ave./Bikeway
Centre St./Lamartine St.
Centre St./Ritchie St./Columbus Ave.

- 1.7 Loading and Service. The Access Plan shall describe any existing loading and service uses on the site, as well as any special conditions relative to loading and service in the surrounding area.

Task 2. Evaluation of Proposed Project's Long-Term Transportation Impacts

The central component of the Access Plan is the evaluation of the proposed project's long-term transportation impacts. The Access Plan must evaluate these impacts in detail for all the transportation modes and aspects that will be affected, including traffic, parking, public transit, pedestrians, bicycles, and service and loading. Future developments in the study area and future developments outside the study area that have an impact on the study area shall be included in the Access Plan. These impacts must be compared to the appropriate baseline condition and the Future No-Build Condition. The following are the principal issues, modes, and conditions that must be analyzed.

2.1 Project Description. The Access Plan shall include a summary of the key proposed project characteristics that are relevant to the proposed project's transportation impacts. These include:

- Proposed Project name and street address
- Study area, including critical intersections
- Anticipated construction start and completion dates
- Relevant zoning regulations with respect to use, parking and other characteristics
- Required permits, variances, and licenses
- Site area
- Proposed Project's gross square footage and floor-area ratio (FAR)
- Gross square footage by use
- Other relevant variables (e.g. number of dwelling units, number of employees)
- Number of parking spaces, specified by use type
- Number of loading bays, dimensions of bays, design loading vehicle

2.2 Trip Generation Analysis. The Access Plan shall include a clear and detailed trip generation analysis for the proposed uses of the site. This analysis shall include:

- a. Person-Trip Generation. The Access Plan shall summarize the proposed project's person-trip generation, for daily, AM peak, and PM peak trips. In addition, person-trips shall also be calculated for Saturday afternoon peak hour (e.g. cultural, recreational, sport, or entertainment use).

The person-trip calculations shall be based on appropriate trip generation rates, typically the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 6th Edition*. The ITE manual includes comprehensive vehicle-trip generation rates based on surveys in suburban locations throughout the United States. Because Boston benefits from an excellent public transit system and pedestrian access, ITE vehicle-trip generation rates are not directly applicable to resulting vehicle trips. ITE rates shall be used to generate total person-trips by correcting for vehicle occupancy rate (VOR). The person-trip generation analysis shall be summarized in a clear table, in the body of the Access Plan, including all of the following information:

- Land use type
- Square footage, by land use type
- Vehicle-occupancy rate (VOR) assumption, by land use type (for translation of vehicle-trip rates to person-trip rates)
- Daily person-trip generation (by land use and overall)

- Daily person-trip generation rate (per 1,000 square feet, or per unit)
 - Resulting daily person-trip ends
 - AM peak hour person-trip generation (by land use and overall)
 - AM peak hour person-trip generation rate
 - AM peak hour person-trips, entering
 - AM peak hour person-trips, exiting
 - PM Peak Hour person-trip generation (by land use and overall)
 - PM peak hour person-trip generation rate
 - PM peak hour person-trips, entering
 - PM peak hour person-trips, exiting
 - Source for trip generation rates
- b. Mode Split and Vehicle Occupancy Rate. Person-trips shall be apportioned among the various principal modes (automobile, public transit, walking, bicycling) using an appropriate mode split. The mode split shall be presented as percentages of automobile, public transit, and walk / bicycle travel. Working with BTS, the Central Transportation Planning Staff (CTPS) has compiled appropriate mode split assumptions for various sections of Boston, according to trip type. These mode splits, along with VOR for automobile trips, are available from BTS. The Access Plan shall include a clear, easily understood table that summarizes the assumptions and the resulting trips by land use type, by trip purpose, and by mode.
- c. Trip Distribution. The trip distribution shall identify the directional split (i.e. north, south, east, west) of person-trips and vehicle-trips for the specific location and trip types of the proposed project.
- d. Trip Assignment. The distributed trips shall be assigned to the appropriate means of accessing the proposed project: highway routes, surface streets, surface intersections, sidewalks, crosswalks, site access / egress points, and public transit lines. If the proposed project expects to rely upon an off-site parking supply, trips shall be assigned appropriately to these locations. Drop-off, pick-up, and valet trips shall also be assigned appropriately, i.e. both entering and exiting the site access, and entering or exiting an off-site parking area.

2.3 Future No-Build Condition. The analysis of the proposed project's transportation impacts must be based on a comparison with an appropriate baseline condition. The proposed project's impacts would be felt fully during some future "horizon year" when the proposed project is expected to be complete, occupied, and operating. The effects of the proposed project (under the "Future Build Condition") are most appropriately demonstrated in comparison to projected transportation conditions during the horizon year without the effects of the proposed project.

- The horizon year shall be five years in the future, unless specific circumstances require that a different time frame be used.
- The Future No-Build Condition shall be based on the Existing Conditions assessment, with the addition of development and infrastructure projects that have been proposed and are expected to be complete and operational by the horizon year (per BTS and BRA instructions).
- The Future No-Build Condition traffic, transit, and pedestrian volumes shall also include a background growth rate of 1 – 1 ½ % per year (depending upon local

conditions) added to existing traffic volume counts, transit ridership, and pedestrian counts, unless otherwise specified by BTD.

2.4 Future Build Condition. The central component of the Access Plan is the assessment of the proposed project's long-term impacts. This shall include evaluations of the proposed project effects on all transportation modes and aspects, throughout the study area.

a. Traffic Impacts.

i) Traffic Volumes. The traffic analysis shall include diagrams of turning movement volumes generated by the proposed project at all study area intersections, and total turning movement volumes for the Future Build Condition. Therefore, the Access Plan shall include turning movement volume diagrams for AM peak volumes, PM peak volumes, mid-afternoon volumes at Columbus/Richie/Centre and Saturday afternoon peaks of each of the following:

- a) Existing Conditions (based on current traffic counts)
- b) Future No-Build Conditions (Existing Conditions, plus appropriate future changes and growth factor)
- c) Project-Generated Traffic Volumes (based on trip generation)
- d) Future Build Conditions (Future No-Build Conditions, plus Project-Generated Traffic Volumes)
- e) Future Build Conditions with Mitigation (if the project proponent plans to undertake any roadway or signalization changes in order to mitigate traffic impacts of the proposed project)

ii) Traffic Capacity Analysis Software. The Access Plan shall include traffic capacity analyses for Existing Conditions, Future No-Build Conditions, and Future Build Conditions. The capacity analysis shall be performed using an approved and appropriate capacity analysis software program.

- For closely spaced intersections with long queues that create interaction between intersections, the project proponent shall use the computer model Synchro to calibrate field conditions that can accurately model these effects. In such cases, the project proponent shall model all of the intersections that would interact.

The computer model output shall be attached to the Access Plan as an appendix. Provide BTD with an electronic copy of the Traffic Capacity Analysis.

iii) Traffic Capacity Analysis Results Summary. The Access Plan shall include a tabular summary of the traffic capacity analysis, for all conditions (Existing, No-Build, and Build) for each intersection as a whole and for each approach of every intersection. The summary shall include the volume-to-capacity ratio (v/c), level of service (LOS), delay, and estimated queue lengths for each study intersection, and for each approach of every intersection. The summary table shall also highlight changes to intersection and individual approach LOS that result from site-generated traffic. Provide BTD with an electronic copy of the Traffic Capacity Analysis.

iv) Traffic Counts. The project proponent shall submit, under separate cover, turning movement count summary sheets for each intersection in the study area.

- b. **Parking Impacts.** The Access Plan shall include an analysis of projected parking demand and proposed parking supply.
- i) **Parking Demand Analysis.** The Access Plan shall include an analysis of total parking demand in the horizon year, broken down by land use and user type. The parking demand analysis shall include:
- Daily vehicle-trip generation by land use and user type (consistent with mode split and VOR)
 - Parking turnover by land use and user type (cite source)
 - Parking demand peaks by land use and user type
 - Overall parking demand and peak parking demand, based on shared parking among all land uses and user types included in the proposed project
- ii) **Proposed Parking Supply.** The Access Plan shall include a summary of the proposed project's proposal for off-street parking supply. Parking supply, and parking costs, play a central role in determining mode split and vehicular traffic impact. In general, parking shall be limited to a minimum supply that is appropriate to the neighborhood, the proposed project transit access, and the proposed project mode split. The proposed project parking ratios are to be in accordance with the Parking in Boston Guidelines, December 2001. The information below shall be summarized in a clear table.
- Total Spaces
 - Existing
 - Future No-Build (if applicable)
 - Future Build Parking Conditions
 - Parking Allocation
 - Space allocation among various land uses
 - Parking ratios: spaces per thousand square feet or per unit, by land use
 - Specially-designated parking spaces, e.g. vanpools, livery vehicles, rental cars, car-sharing
 - Treatment of existing parking spaces, including displacement of existing parking spaces and how the parking demand for these spaces would be met in the Future Build Condition
 - Comparison of Parking Supply and Demand
 - Projected shortfall or surplus of parking spaces, by land use
 - Proposed management of shortfall or surplus
 - Provide a plan of all parking facilities, including layout, access, and size of spaces.
- iii) **Off-Site Parking Supply.** Describe any anticipated utilization of off-site parking supply (as described in the Existing Conditions section, amended to reflect Future No-Build Conditions) required to satisfy project-generated parking demand.
- On-Street Parking Supply
 - Off-Street Parking Supply
 - Number and type of spaces required (i.e. publicly-available, employee, residential)
 - Resulting parking utilization at 12 noon on a weekday (additional parking survey times may be required, depending upon the nature of the project)

- iv) Proposed Parking Management Plan
 - Description of Proposed Parking Operations
 - Access control
 - Pass or payment medium
 - Management of operations to prevent illegal parking, violation of 5-minute idling law
 - Parking Fees
 - Management of Specially-Designated Parking Spaces (e.g. vanpool, carpools, rental cars, car-sharing)
 - Location
 - Parking fees
 - Accommodation of increased supply if demand warrants

- c. Transit Impacts. Describe the anticipated impacts of the proposed project on the mass transit system, based on the information about Existing Conditions and the projected transit person-trips (based on trip generation – trip distribution – mode split calculations). Future transit conditions shall be based on transit supply and capacity that is expected to be available in the horizon year; if there is some doubt, the project proponent shall consult with BTM and/or the MBTA. The project proponent may use generally available MBTA ridership data as a basis for this analysis. The Access Plan shall include the following information:
 - i) Transit Trip Distribution
 - Distribution of project-generated transit trips by zone
 - Distribution of project-generated transit trips by transit line / route
 - ii) System Utilization
 - Existing Conditions: Capacity and utilization by line
 - No-Build Conditions: Capacity and utilization by line
 - Build Conditions: Capacity and utilization by line

- d. Pedestrian Impacts. Describe future pedestrian conditions in the study area:
 - Pedestrian access to and from the proposed project, pedestrian circulation routes
 - Pedestrian accommodation in the proposed project's public spaces (e.g. sidewalk, adjacent intersections, plaza spaces, benches, etc.)
 - Pedestrian level of service (LOS) at all surveyed crosswalks, sidewalks and other locations
 - Existing Conditions
 - Future No-Build Conditions
 - Future Build Conditions

NOTE: The traffic capacity analyses must also assume appropriate accommodation of pedestrians in all signalization assumptions. The pedestrian impacts analysis shall describe the assumptions regarding accommodation of pedestrians in the traffic analysis, i.e. pedestrian walk rate and percentage of cycles in which pedestrian phase is called (verify with BTM).

- e. Bicycles. Describe bicycle access to, from, and within the proposed project site. Describe bicycle storage and other amenities (e.g. shower and changing facilities) to

be provided. BTD will provide guidelines on bicycle storage requirements based on project type and size.

- f. Loading and Service. The proposed project must accommodate loading and service facilities in an off-street location. The loading and service plan shall not rely upon loading facilities and truck back-up maneuvers in the public right-of-way. Describe service and loading requirements:
- Number of loading bays
 - Services to be provided (e.g. garbage compactor, garbage collection, restaurant service, move-in / move-out, etc.)
 - Level of loading and service activity (number of trucks per day or per week)
 - Loading and service schedule, schedule restrictions (the project proponent shall prohibit or strictly limit loading and service activities during peak periods)
 - Design vehicle(s)
 - Required truck turning movements (show design vehicle turning movements on site plan)
 - Major loading and service vehicle routes for site access and egress
 - Access for emergency vehicles

- 2.5 Site Plan. Provide an engineered site plan showing Build Conditions (contrast with existing conditions):
- Public right-of-way layout
 - Roadways
 - Sidewalks
 - Vehicular access and circulation
 - Service and loading
 - Parking
 - Bicycle storage
 - Proposed on-street regulations

Task 3. Mitigation of the Project's Long-Term Transportation Impacts

The Jackson Square Development offers benefits, but also consumes public services and create impacts on public resources. Chief among these impacts is the proposed project's effect on the transportation system. The project proponent is required to quantify and analyze these impacts through the Access Plan. It is then the responsibility of the project proponent, working with BTM, to develop strategies for reducing and mitigating these impacts. These strategies will include travel demand management (TDM) measures and improvements to Boston's transportation system.

These transportation system improvements and mitigation measures have associated costs. The project proponent should view these costs as an integral component of the overall project cost, necessary to enable the transportation system to accommodate the proposed project's impacts. The mitigation measures benefit the users of the transportation system, in particular the new users associated with the proposed project. The project proponent shall allocate appropriate funding for the mitigation. The mitigation measures associated with the proposed project will be specified in the project's Transportation Access Plan Agreement (TAPA) between the project proponent and BTM.

3.1 Travel Demand Management (TDM). Travel demand management comprises a variety of strategies designed to reduce single-occupancy vehicle (SOV) travel and encourage "alternate modes" of transportation (public transit, walking, bicycling). TDM programs are critical due to the disproportionate impacts of SOV travel on congestion, parking demand, air quality, and quality of life.

In the TAPA, the proponent will be required to implement the following TDM measures:

- a. Transportation Coordinator. Designate a full-time, on-site employee as the development's transportation coordinator. The transportation coordinator shall oversee all transportation issues. This includes managing vehicular operations, service and loading, parking, and TDM programs. In addition, the transportation coordinator will be responsible for the monitoring program and will serve as the contact and liaison for BTM, the MBTA and the Transportation Management Association (TMA).
- b. Ridesharing / Carpooling. Facilitate ridesharing through geographic matching, parking fee discounts, and preferential parking for carpools / vanpools.
- c. Guaranteed Ride Home Program. Offer a "guaranteed ride home" in order to remove an obstacle to transit use and ridesharing
- d. Transit Pass Programs. Encourage employees to use transit through the following measures:
 - Offer on-site transit pass sales or participate in the MBTA Corporate T-Pass Program
 - Offer federal "Commuter Choice" programs, including pre-tax deductions for transit passes and subsidized transit passes
- e. Information and Promotion of Travel Alternatives
 - Provide employees and visitors with public transit system maps and other system information
 - Provide an annual (or more frequent) newsletter or bulletin summarizing transit, ridesharing, bicycling, alternative work schedules, and other travel options

- Sponsor an annual (or more frequent) “Transportation Day” at which employees and residents may obtain information on travel alternatives and register to participate in ridesharing programs
 - Provide information on travel alternatives for employees and visitors via the Internet
 - Provide information on travel alternatives to new employees and residents
- f. Transportation Management Association (TMA) Membership. Investigate joining a Transportation Management Association. Encourage tenants to join the TMA as well. If no TMA is established in the project area, investigate starting a new TMA or becoming affiliated with an existing TMA. A TMA can provide many of these TDM measures, including ridematching, guaranteed ride home, and transit information and promotional materials.
- g. Bicycle Facilities and Promotion
- Provide secure bicycle storage (number of spaces will be specified depending upon size of development and type of land use)
 - Provide additional publicly-accessible bicycle storage (number of spaces will be specified)
 - Promote bicycles as an alternative to SOV travel, provide promotional material on bicycle commuting and bicycle safety, and provide incentives for bicycle use
- h. Parking Management
- Offer preferential parking to carpools and vanpools
 - Offer preferential parking space for car-sharing
 - Offer parking space, charging facilities for electric vehicles
 - Enforce a 5-minute limit on vehicle idling for all users of the proposed project, in accordance with Massachusetts state law
- i. Trip Reduction Strategies. To the degree possible, the project proponent shall implement the following strategies for its own on-site employees and encourage tenants to implement these strategies as well.
- Telecommuting. Reduce overall trip demand by enabling employees to telecommute.
 - Flexible Work Schedules. Reduce peak hour and overall trip demand by enabling employees to telecommute, work a compressed workweek, or work hours that enable off-peak commuting.
 - Local Hiring. Recruit and hire employees from the local area. Such local employees can more easily use alternatives to SOV travel, including walking, bicycling, and transit.

3.2 Transportation System Improvements. In order to meet Boston's mobility needs as its population, density, and land development increase, Boston's transportation system requires improvements. These improvements will offset the transportation impacts of the proposed project. In addition, these improvements can make the traveling experience easier in the vicinity of the proposed project, which accrues, to the benefit of the project proponent and the proposed project users.

- a. Geometric Changes and Improvements to the Public Right-of-Way - The project proponent may be required to make geometric changes and improvements to the roadways, sidewalks, and other elements in the vicinity of the proposed project. These changes and improvements may be necessary in order to enable new circulation patterns resulting from the proposed project and mitigate impacts of new vehicle or pedestrian trips. The project proponent's consultant in consultation with

BTD shall design changes and improvements. The project proponent will be required to directly fund and implement all changes and improvements to the public right-of-way, and to obtain any required permits. The project proponent shall obtain the approval of the City of Boston's Public Improvements Commission (PIC) for any changes to the public right-of-way. These improvements shall be made with input from BTD, per specifications provided by BTD, by a contractor approved by BTD, and subject to final BTD inspection and approval.

- b. Traffic Signal Improvements - Improvements to traffic signals in the vicinity of the proposed project may be necessary to manage the increased travel demands placed on the intersections. Improving the operations of these signals can reduce congestion and improve conditions for pedestrians, bicycles, transit vehicles, and general traffic. Typical traffic signal improvements that BTD may require include:
 - i) Traffic signal equipment
 - Signal controller
 - Signal heads and pedestrian heads
 - Signal poles and mastarms
 - ii) Traffic monitoring equipment
 - System detectors
 - Video monitoring cameras
 - iii) Traffic signal communications equipment
 - Communications conduit (4" PVC)
 - Signal interconnect cable

The project proponent will be required to directly fund and implement all traffic signal improvements, and to obtain any required permits. These improvements shall be made with input from BTD, per specifications provided by BTD, by a contractor approved by BTD, and subject to final BTD inspection and approval.

Task 4. Description of the Proposed Project's Short-Term Construction Impacts and Proposed Mitigation

The Access Plan shall include an overview of construction period transportation impacts and proposed short-term mitigation. This shall be a summary of the more detailed Construction Management Plan (CMP) that must be submitted to BTD under separate cover. The construction management summary in the Access Plan shall provide an appropriate level of information regarding the analysis and proposed management of the impacts of the proposed project during the construction period, including:

- The need for full or partial street closures, street occupancy, sidewalk closures, and/or sidewalk occupancy during construction
- Frequency and schedule for truck movements and construction materials deliveries, including designated and prohibited delivery times
- Designated truck routes
- Plans for maintaining pedestrian and vehicle access during each phase of construction
- Parking provisions for construction workers
- Mode of transportation for construction workers, initiatives for reducing driving and parking demands
- Coordination with other construction projects in the area
- Distribution of information regarding construction conditions and impact mitigation to abutters