The Cecil Group
A subsidiary of Harriman

I-90 Allston Interchange Project
Placemaking Study
List of Standards for Placemaking
Prepared by The Cecil Group/Harriman for the City of Boston
June 27, 2016

This document provides guidance standards for the infrastructure and land areas associated with the Allston-I-90 Interchange Project. These standards should be used to help set the stage for a high quality urban district. The standards are intended to create a framework for a distinctive district of Boston that will be compatible with adjacent and nearby neighborhoods. The framework seeks effective circulation for all modes of transportation and provides for a sustainable, energy-efficient environment. These standards address the existing MassDOT Alternative 3K-4 that has been a focus of this study and should be used to refine the planning and design concepts being prepared for the highway, rail, street and other infrastructure elements that are being advanced. The standards are based on preceding analyses of the urban context and a review of the alternative concepts prepared by MassDOT. The preparation of these standards has incorporated input from the community Task Force established as a forum for review and discussion and from other participants in the public engagement process for the planning of this area of Boston.

Organization of the Placemaking Standards

The Placemaking Standards are organized according to the geographic location to which they apply. Most of the standards are focused on the organization of the transportation infrastructure that will set the stage for future redevelopment of the entire area. A set of guidance standards for the future master planning for the development of the area are also provided at the end of this list.

Categories and Principles for Placemaking

The Placemaking Standards address multiple aspects of placemaking. This analysis and recommendations have been organized to address the following categories for placemaking and the associated principles for planning the infrastructure and future district that will emerge. Many of the standards address multiple categories simultaneously. The categories associated with each standard are indicated on the right hand side of the list.

Public Realm/Open Space

- Enhance access to useable open space
- Reinforce connections to existing resources – Charles River
- Provide active and generous street edges

Mobility/Connectivity

- Reinforce walkable and pedestrian friendly scale
- Enhance multi-modal connections and convenience
- Strengthen connections between adjacent neighborhoods and districts

Development Potential/Flexibility

- Maintain flexible accommodation of a wide variety of building types
- Integrate old and new with context-sensitive, compatible transitions
- Strengthen ability to deck over the highway and rail yards

Distinctive Place/Context Sensitivity

- Provide for future destination places with range of uses and densities
- Maximize opportunities to extend Boston's urban fabric
- Define a network of recognizable places and centers of activity

Energy Efficiency/Sustainability

- Enhance the ability for energy efficient and sustainable district design
- Anticipate climate change, sea-level rise and infrastructure needs

Key Concepts and Contributions of the MassDOT Alternatives

The Massachusetts Department of Transportation (MassDOT proposes to reconstruct the Allston I-90 Interchange (the "Project"). This Project is a complex transportation effort that will rebuild the existing I-90 viaduct (or replace it with an at-grade roadway); build new roadways to connect the highway ramps to existing public streets; construct a new commuter rail and transit station ("West Station"; and build a new rail yard to serve MBTA commuter rail trains. Construction will take place largely on Harvard-owned property, but will also affect roadways and facilities owned and operated by the City of Boston and the Department of Conservation and Development (DCR).

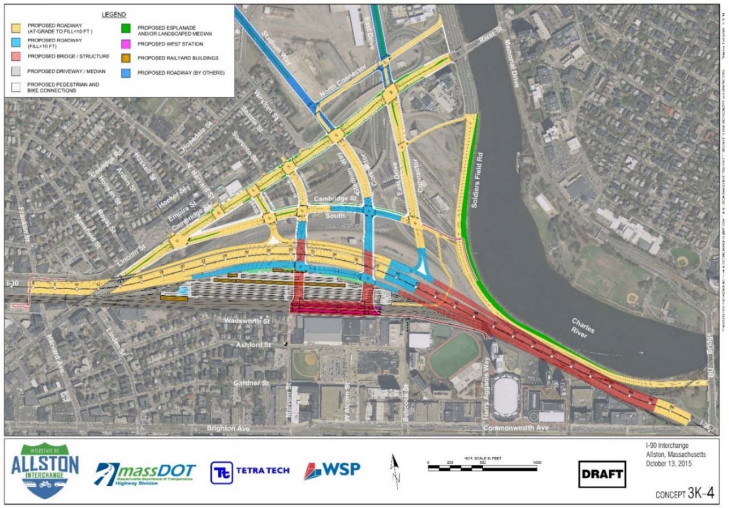
The technical complexities of the Project are further challenged by the context of its location. The interchange is a major gateway for regional traffic moving to and from Boston and Cambridge. It is adjacent to existing residential neighborhoods, regional recreation facilities along the Charles River, and two university campuses. The site also includes rail and industrial uses. The design must balance the requirements associated with the transition from federally-regulated highways to local streets that will serve both existing and future development in a new district. At the same time, the design must consider the concerns and aspirations of the neighboring districts and stakeholders.

An incremental sequence of alternative concepts for restructuring the transportation infrastructure have been prepared and have been the subject of presentations and discussions with a community Task Force and the stakeholders in the future of the area. Early alternatives included suburb-type interchanges which were not pursued, based on the input from the Task Force and others. The most recent concept plan that has emerged is called "Alternative 3K-4". After refinement, this concept and other alternatives will be incorporated into a Draft Environmental Impact Report (DEIR) that will provide technical evaluations and provide the basis for formal public comment and public agency reviews.

The Placemaking Study is primarily focused on providing input and guidance on the refinement of MassDOT's infrastructure concepts so that the infrastructure that will precede the development of a complete district. The goal of this study is to help guide the infrastructure so that it will support – rather than hinder – the future planning, design and development of a new district of Boston that combines new buildings, open space and Complete Streets.

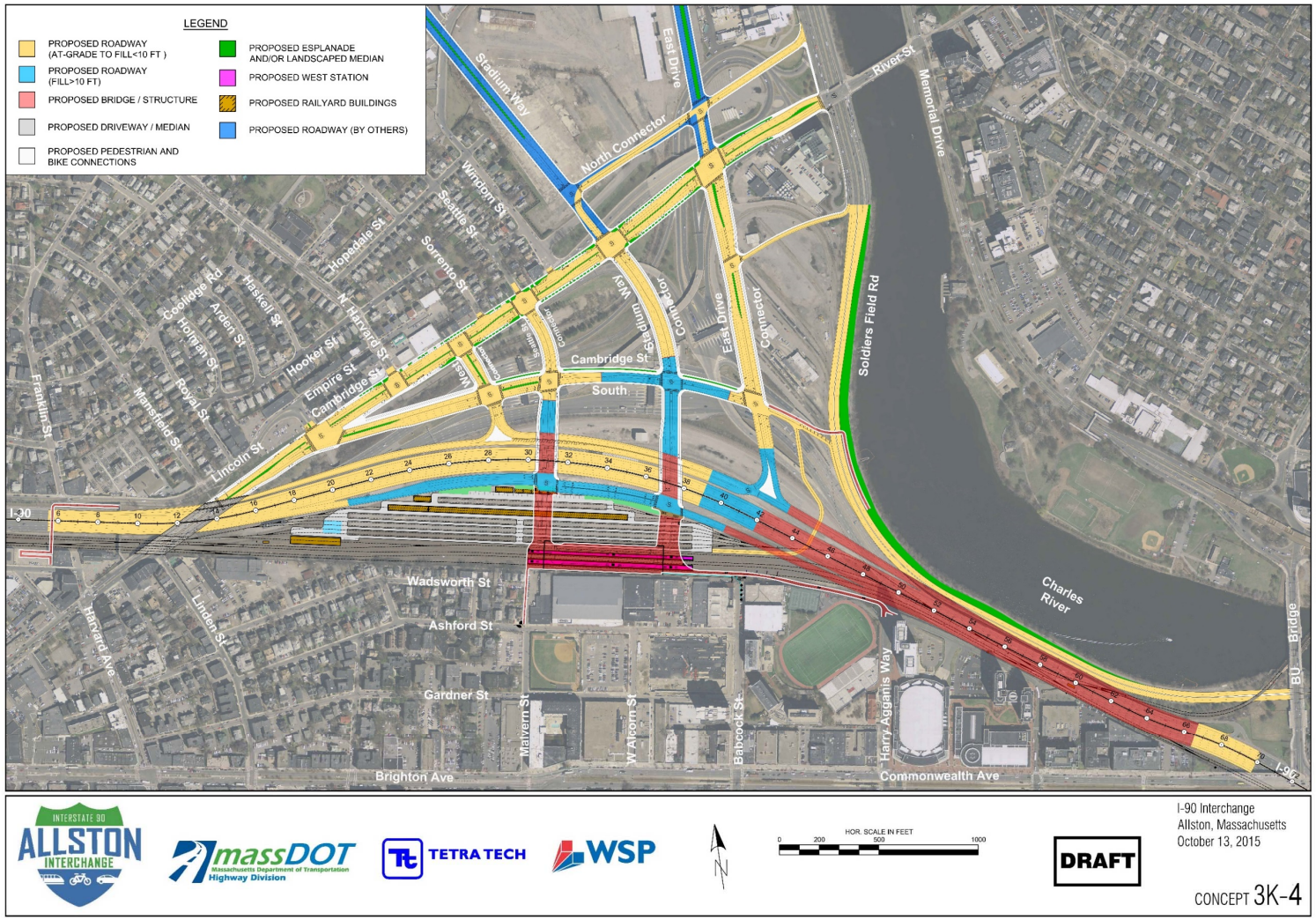
Alternative 3K-4 incorporates many important contributions to placemaking that this study acknowledges and recommends that many of the underlying concepts be retained within any revisions that may be advanced. These include:

- Compact and effective organization of the I-90 off-ramps – Traffic exiting the highway must be incorporated into the urban street network without incurring delays and congestion that would back onto I-90, clogging a transportation lifeline for the City and region. This has been accomplished with a slip ramp that transitions to a frontage road close to the highway that feed multiple streets that distributing and dispersing arriving traffic.
- Compact design and integration of the I-90 on-ramps – The on-ramps use the same concept of slip ramps, using the same frontage road as the off-ramps and connecting them to multiple local streets to distribute traffic seeking highway access.
- Enhanced interstate reliability – The use of all electronic tolling (AET), the improved ramp alignments and the simplified highway alignment will relieve congestion and provide for better traffic operations that are critical to the region's economic prosperity.
- Coordinating infrastructure design with future air-rights development- MassDOT and its consultants have anticipated the likely locations and spacing that will be needed to provide foundations for future air rights development as an integral aspect of the design.
- Provisions for a new Transit Station – The concept provides for a new transit station (West Station) that can serve current commuter train traffic and be adapted to future transit technologies provides multi-modal links for buses, bikes and pedestrians. The streets serving this station span the highway and rail facilities and will become links to the future air rights development around this Transportation Hub.
- Rail transit adaptability – The transit station can serve significant increases in commuter rail or transit service that may occur over the long term.
- Preservation of the Grand Junction Railway connection- The preservation of this connection ensures the ability to adaptively use this rail corridor in the future.
- Provision for multi-modal streets – The 3K-4 Alternative provides for the circulation of pedestrians with sidewalks, bicyclists with lanes and cycle tracks, and motorists along all of the proposed urban streets that will be created or improved. For example, the current design incorporates *MassDOT's Separated Bicycle Land Planning and Design Guide* Standards on all streets.
- Reconstruction of the Franklin Street Pedestrian Bridge – This important pedestrian link over I-90 will be restored as part of 3K-4.
- Provision of additional parkland along the Dudley White Path – Alternative 3K-4 anticipates widening the open space along the Dudley White Bicycle Path that lines the Charles River.



Placemaking Study Area and Context

MassDOT Alternative 3K-4



Standard * These standards can be met by the current 3K-4 Alternative or any reasonable variation. ** These standards require modifications or refinements in the 3K-4 alternative. The design alterations would become part of the entire project and would be integrated into the initial construction, with several noted exceptions where subsequent phasing may be appropriate.	Component Concepts	Public/Realm Open Space	Mobility/ Connectivity	Development Potential/ Flexibility	Distinctive Place/Context Sensitive	Energy Efficiency /Sustainability
Charles River Edges and Connections						
1. Add I-90 and Soldiers Field Road connections – Provide additional access between Soldiers Field Road and new streets leading to the I-90 ramps, in order to reduce vehicular traffic on Cambridge Street and within the new district, and support new development. **	• Limit the amount of regional traffic using Cambridge Street so that it can be designed and used more effectively as a locally serving street. • Re-organize and relocate the connecting ramps to help create a less congested intersection at River Street and Cambridge Street and allowing a more generous area for the Dudley White Path. • More connections into the district should be part of an integrated approach to providing better connectivity overall, including creating pedestrian and bicycle links and open space to/from and along the River. • These connections will promote redevelopment of the former interchange area and the parcels along the riverfront. • Additional roadway connections should not be provided in the form of a flyover road, but should explore at-grade or boat-section grade separated solutions. • Provide a design that is resilient relative to projected flood conditions. • The configuration of these connections must consider the rail access to Houghton Chemical and vehicle access to the MBTA rail maintenance facilities.					
2. Realign portions of Soldiers Field Road along the River – Soldiers Field Road can be pulled further away from the Charles River, creating more useable open space, public access and pedestrian/bicycle connectivity. **	• The realignment will require designing that section of roadway for lower design or operational speeds. • Realignment of Soldiers Field Road should be part of an integrated approach to provide better connectivity to the district, reconfiguring ramps to and from Cambridge Street, and creating more pedestrian and bicycle links between the district and the river in the 3K-4 design.					
3. Create Park Space on the Charles - Provide the space for a new park along the Charles River with revisions to the Soldiers Field Road alignments. **	• Provide space for a park that will be a node along the esplanade and become an easily-accessed open space resource for the district and nearby neighborhoods. • Provide an open space resource for informal recreation, gatherings, events, celebrations and enjoyment of the views of the city, activities on the Charles, and the riverside landscape. • Provide space for a park that can become a destination with features like other comparable segments of the Charles River Reservation, such as the park segments on the Esplanade at Nashua Street, near the Community Boathouse and along Soldiers Field Road south of the Eliot Bridgethat range from about 100 to 200 feet in depth from the River's edge. • Do not create vehicle overpasses that shade the park. • Use new parkland along the river and within the district to improve neighborhood flooding conditions and tidal flood conditions.					
4. Provide a primary, at-grade pedestrian and bicycle connection to the Charles River edge – As part of the roadway interchange and intersection design along Soldiers Field Road, provide a connection to the open space along the River for pedestrians and bicyclists. **	• A clear and strong connection between the riverfront and the new district should be anticipated to allow for an easy route for pedestrians and cyclists that become linked into the new network of sidewalks and shared path. • Provide at least one at-grade connection between the new street network within the district and enhanced open space along the Charles River.					

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5. <u>Consolidate supporting infrastructure to reduce barriers for new streets, open space and development</u> – As part of the transportation and infrastructure components of the district, provide connections to Houghton Chemical and the MBTA rail maintenance facilities that minimize the impact on the district connectivity, development potential and open space.*	• Minimize impact of secondary infrastructure elements, such as vehicular and service access to rail yard or the Houghton rail spur. • Provide a systematic approach to facilitate future piling and column supports for air right development over the service road and rail spur. • Minimize impact of service areas to buildings and blocks through location and orientation away from active public realm frontages.					
6. <u>Improve non-motorized paths along the Charles River Basin</u>- Provide wider and safer paths for walking, bicycling and running. *	• Expand and enhance the riverfront edge to accommodate active walking, running and bicycling on the river. • The Paul Dudley White path is an important piece of regional infrastructure for non-motorized transportation and recreation, and the project should strengthen the path itself as well as connections to it. • Realigning Soldiers Field Road and its ramps will allow the widening of the Dudley White Path that is currently constrained as it approaches River Street.					
7. <u>Maximize the quality of constrained open space in 'throat' area</u> - Promote access, open space and mitigation of highway and rail impacts along the Charles River along the transition from Soldiers Field Road to Storrow Drive.*	• If viaducts are constructed, screening should be created along the river-facing edges to mitigate noise and improve the views towards the highway and rail infrastructure from the Charles River pedestrian and bicycle paths. • Expand the width of the green and publicly accessible space along the edge of the Charles River to improve the visual quality and experience of its users. • Enhanced pedestrian paths and bicycle links should be created in this segment.					
Areas Along and Above the Highway and Rail Alignment						
8. <u>Retain the fundamental urban interchange approach developed in Alternative 3K4</u> – The basic approach to the highway ramp and street connection pattern is compatible with a successful urban district.*	• This alternative provides a compact solution with multiple connection points to and from I-90 that allow both excellent transitions to the district street grid and integrate connections for vehicles to and from West Station. • Overall, this alternative provides excellent solutions for grade changes that are required to provide connections over the highway and rail alignment. • The specific alignment of some ramps may need to be adjusted to accommodate evolving aspects of the connecting street network. The design should evolve to promote connectivity, effective traffic operations and queuing, parcelization for development, and placemaking.					

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9. <u>Provide for an additional east/west street connection between Cambridge Street and the West Station Area</u> – Provide for a direct street connection with bicycle and pedestrian accommodations at or near the Cambridge Street Bridge over I-90 and the West Station area, using air rights. **	• This street can provide a more direct connection between the West Station area and areas to the south of the I-90 alignment, reducing the use of Cambridge Street along the edge of the North Allston neighborhood by regional traffic. • This street should serve pedestrians, bicyclists, and transit. • This street can become an important connection and frontage road for future air rights development above the rail and highway alignments. • The new connection should incorporate sound barriers between the neighborhood and the rail/highway infrastructure so that it also forms a buffer. • Provision of this link should be evaluated further to determine whether it should be included in the initial construction of the Project.	✓	✓	✓	✓	✓
10. <u>Connect West Station to the River</u> – Do not preclude the ability of air rights development to accommodate pedestrian and bicycle connections from West Station to the expanded Charles River open space. *	• Coordinated air rights development can provide opportunities for a convenient route for pedestrians and bicyclists to connect the riverfront and West Station. •	✓	✓		✓	✓
11. <u>Reinforce air rights potential</u> – Enhance the likelihood of future air rights development by providing for future vehicle and pedestrian access and anticipating future parcel locations.*	• Plan the streets and frontages around West Station to become sites for future development so that it becomes an activated transit-oriented node with buildings and public spaces. This refined alternative for the West Station area should provide adequate street widths to absorb the traffic generated by future air rights development, in addition to the traffic, shuttle and bus stops that will be associated with the West Station's transit functions. • Design the rail and road alignments to facilitate future construction including piling spacing and clearances that can provide adequate structural depth for air rights buildings and open spaces. • Anticipate the future use of the connecting street between West Station and the Cambridge Street bridge area as the frontage road leading to and from future air rights development over the rail and highway alignments		✓	✓	✓	✓
12. <u>Provide visual and sound barriers to limit impacts on adjacent, developed parcels</u> – Create a buffer along the rail and highway alignment between West Station and the Cambridge Street bridge. *	• Protect existing development patterns from rail and roadway impacts (noise, air quality, and visual impacts. • Provide an integrated design in concert with the connecting street between West Station and the Cambridge Street bridge area. • Design this with "green" elements to introduce landscaping as part of the transition and neighborhood edge.	✓		✓	✓	✓
13. <u>Ensure that West Station design includes usable public open space</u> – Integrate an open space amenity (such as landscaping, plaza space, seating areas, and special lighting) into the design of West Station to both anchor the transit hub and provide first phase open space improvements. *	• Provide open space that is linked to transit waiting areas and defines a welcoming station/district gateway. • The space should be connected to the widened bridges that will provide access to West Station above the rail and highway alignment as described in Standard #16.	✓		✓	✓	✓

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14. <u>Do not preclude the potential for a future street connection to the south of West Station</u> – Retain the potential to extend street connections south of West Station and ultimately connect to Commonwealth Avenue. *	• The street network must be able to adapt to evolving transportation connections for pedestrians, bicyclists and vehicles over time. • However, extension of automobile traffic connections must be evaluated and determined to be appropriate before improvements are initiated. • Expanded north-south vehicular connections (other than transit) must be consistent with Boston University's intent to create a pedestrian-oriented urban campus.					
15. <u>Provide a north/south link for shuttles and buses</u> – Provide a north/south transit link for buses and shuttles between the North Allston/Harvard Area, West Station, and areas to the east and south, including Kendall Square and the Longwood Medical Area.**	• The project should enable bus and shuttle links between the new street network, West Station and areas to the north and south. This is a critical link between major employment centers and transportation infrastructure. • The type and location of these connections will help determine the design characteristics of the West Station area and the spaces and buildings that will be clustered here. • Routing options could include direct connections to CommonwealthBrighton Avenues, routing to West Station aldong Soldiers Field Road and other options.					
16. <u>Provide added width to the connecting bridges to West Station</u> – Provided added dimension (such as landscaped aprons) to the bridges that span above the highway and rail alignment to provide visual and landscape amenities to support a pleasant pedestrian and bicycle environment.*	• Increase the dimension of bridges (for example, by adding bridge aprons) to provide visual relief, landscaping and amenities to make the long crossing over the rail and highway an attractive route until air rights development fills in this area. • Maximize dimensions for walking and bicycling modes.					
17. <u>Allow a systematic method for locating and constructing air rights development</u> – The basic layout of future columns and utilities should be planned. *	• A grid of potential future columns should be planned as part of the spacing of rails and other infrastructure. • Utility corridors and vertical connections between air rights and at-grade improvements should be anticipated.					

Cambridge Street and Connections to the North							
18. Provide a third north/south arterial street - Provide three north-south streets across Beacon Yards aligned with three north-south streets now being planned for the Harvard Institutional Master Plan (IMP) area.**	• Analyze and plan for future alignment and operations of these streets to meet multiple goals. • Reduce need for traffic to use Cambridge Street, thereby enabling a narrower street and smaller intersections. • Create a more dispersed traffic pattern that reduces concentration and congestion by providing more choices and more intersections. • Provide enhanced capacity for dedicated or prioritized transit lanes. • Create well-proportioned and smaller blocks that will promote well-scaled development patterns and additional frontage opportunities. • Provide at least one through connection to North Harvard Street • Minimize turning movements (especially LT's) on Cambridge Street • Allow for robust development fronting Cambridge Street • Provide at least one corridor for transit priority • Respond to a parcelization plan for both Beacon Yards and IMP • Minimize impacts to surrounding residential neighborhood • Implement the street extension segments as later phases if studies conclude that they are primarily serve future development rather than serving local and regional traffic circulation needs.					
19. Design and build Cambridge Street and its intersections with the minimum necessary general purpose travel lanes, at the minimum necessary lane widths – Limit width of curb-to-curb distances across the right-of-way.*	• Boston Complete Streets Guidelines should be used in setting lane widths that are appropriate to the expected land use and create safe streets for all modes • Use a design speed no greater than 30 mph for Cambridge Street and do not include design elements intended for higher speeds • While general travel lanes should be minimized in number and width, the space allocated for safe, comfortable movement via walking, bicycling, and/or transit should not be designed or built to minimums. • Plan the street widths and intersections in tandem with other modifications included in these Standards.					
20. Consider a direct North Harvard Street intersection alignment – A more direct intersection between Cambridge Street South and North Harvard Street at Cambridge Street would limit neighborhood impacts and reduce unnecessary turning movements, congestion, and street and intersection widths along Cambridge Street.**	• The current intersection concepts may result in congestion leading back into the neighborhood that simplified intersections might relieve. • Other standards in this report may help limit traffic from using the North Harvard Street connection by adding more and better access to the highway ramp areas, which may to reduce the demand along North Harvard Street. • The traffic implications of the flows and intersection alignment at North Harvard should be evaluated as part of the ongoing modeling and studies in order to determine if a direct connection would result in significantly increased traffic impacts on North Harvard Street.					
21. Strengthen Cambridge Street for early redevelopment along its southern edges – Provide the opportunity for an improved Cambridge Street as an early phase redevelopment target. **	• Organize intersections and block configurations along Cambridge Street to support efficient building footprints. • This can be accomplished, in part, by re-aligning the intersection of South Cambridge Street where it meets Cambridge Street and introducing rectilinear blocks associated with three arterial streets linking Harvard's IMP planning area and the new district. • Provide for future block access so that pick-up, drop-off, parking and loading can occur off of Cambridge Street. • Stage phasing and infrastructure construction so that the Cambridge Street frontage has the possibility of early phase redevelopment. • To the greatest extent possible, organize the block configuration and intersection layout to facilitate the ability to align the ground floors of buildings on the south side of Cambridge Street for active retail and service uses that have a minimum building depth of 70 feet perpendicular to the property line					
22. Minimize impact of highway access on active street frontage and pedestrian connectivity – Locate the transition from highway ramps to City streets (the "limited access line") as close to I-90 as possible.*	• The limited access line should extend no further than the signalized intersections at the first cross street (currently shown as Cambridge Street South) to accomplish the transition between highway and City streets. • This transition should not negatively impact pedestrian and bicycle connections to West Station. • This transition should not negatively impact access to air rights parcels or impede potential for air rights development.					
23. Avoid creating medians were possible – A simpler, narrower street is preferable to a landscaped boulevard with a central divider. *	• The urban design vision for Cambridge Street is a street that is easy to cross, lined by buildings and ground level uses that is easy to cross; medians are not desirable. • If medians are employed in select locations, they should be configured to provide pedestrian refuges at mid-points along crosswalks.					

24. Keep the pedestrian crossings short along Cambridge Street – Crossing should be safe and convenient.*	• Provide for protected intersections that limit conflicts between vehicles, pedestrians and bicyclists. • Limit lane widths and vehicle turning radii where practical.					
25. Protect bicyclists as they approach and cross intersection – Separated bike facilities should extend to intersections.*	• Where separated bike lanes cross Cambridge St, the intersections should be designed to minimize conflicts and reduce the speed of turning vehicles. • "Protected intersections" should be built in accordance with the MassDOT Separated Bike Lane Planning and Design Guide. • Include bike-specific signals where warranted.					

Areas within the New District							
26. Create a street hierarchy – The streets should be designed to emphasize the most appropriate modes for their purpose and alignment, rather than meeting uniform standards and characteristics.*	• All modes must be accommodated on all streets. • By emphasizing different needs, there can be variations in the size and proportions of the space devoted to vehicles, transit, bikes and pedestrians. • This should enable the provision of narrower streets and intersections in some locations than would otherwise occur. • One north/south street and one east/west street should function as priority transit corridors					
27. Use a maximum design speed of 30 mph for parkways and neighborhood collectors - Plan for a network that operates well, but at low speeds.*	• As an urban street network, most streets should be designed or operate at speeds associated with similar districts and consistent with City of Boston Complete Streets Design Guidelines. • Minimize the speed of turning movements in accordance with this operating speed • Lower design speeds will allow elimination of clear zones (extra space near the curb), narrower lanes (for example, typical lanes may be 10' wide), tighter turning radiuses that are more favorable for pedestrian crossings, and other similar benefits. • All streets designed to 30 mph should provide space for walking and bicycling that is physically separated from motorized travel					
28. Assume a network of Internal secondary streets – Provide additional internal circulation streets to the extent they reduce demand on key intersections or street segments. Include these streets in traffic modeling to extent that they reduce the need for lanes on other roads.*	• In the Draft EIR alternatives, evaluate the potential to provide several internal connector streets in the new district as part of the modeling and analysis of alternatives to test whether there may be clear benefits in reducing the necessary size of other streets and intersections than would otherwise be required by a simplified network. • If additional secondary streets would be effective in limiting the size of streets and intersections, then they should be implemented prior to development occurring. • If secondary streets do not benefit the network, then they can be deferred until development occurs. • Secondary streets should be designed to a maximum operating speed of 25 miles per hour, per Boston's Complete Streets Design Guidelines.					
29. Phase street and intersection improvements – Do not provide wider streets or intersections unless or until they are necessary.*	• The amount of traffic and its distribution cannot be fully predicted in advance; it is best not to build it for a "worst case" scenario that might not occur. • By monitoring traffic and the development that occurs, there may be opportunities to keep streets narrower and intersections smaller.					
30. Use multiple methods for efficient traffic distribution – Provide for limitations in allowable traffic movements if it results in narrower streets and smaller intersections.*	• Test and apply a range of methods such as one-way streets, prohibited through access, limits on turns at peak hours, or right-in/right-out restrictions if the result is narrower streets and intersections. • However, do not employ methods that would significantly impact the ability to shape both development and open spaces that will be part of the district.					
31. Limit slopes of new streets and associated sidewalks and bike facilities – Limit the maximum slopes for the new roadway network to less than 5%.*	• Create an accessible and pedestrian-friendly environment. • Promote bicycling. • Create a walkable district that accommodates convenient access to new uses and open space.					
32. Organize streets to create blocks that can be flexibly and efficiently developed – Provide a street grid that defines blocks that are scaled consistently and provide continuity of block width and length. **	• Design street alignments so that blocks have the proportions and overall size to support a wide range of building types and allow multiple building footprints on each block. Typical minimum block dimensions should be no less than 120 feet by 400 feet. • Provide rectilinear block boundaries and limit the amount of significant curvature or acutely angled corners to the extent practical. Interior angles of blocks should not be less than 60 degrees typically. • Realigning South Cambridge Street to create larger redevelopment parcels near its intersection with Cambridge Street can provide important flexibility for multi-use development. • The introduction of the three connector arterials between the West Station area and future development areas to the north will result in an improved development pattern in terms of block size and configuration relative to the two arterials anticipated in the 3K-4 Alternative. • Achieving this goal will be facilitated by the other street and roadway alignment Standards in this document.					
33. Enable active block frontages – Optimize the ability to provide active ground floor uses and block frontages.*	• Development should have the ability to provide active ground floor users such as retail and service uses that will serve both the district and local needs. • Minimize the length of street segments that are considered limited access areas due to highway access regulations for vehicular, pedestrian and bicycle use. • Provide viable block frontages as immediately as possible adjacent to limitations on active frontage created by bridges, ramps and other infrastructure. • The inability to provide active frontage should not extend continuously for more than 100 feet without providing the ability for an active block frontage.					

34. Provide streetscape and landscaping at the perimeter of any vacant future development parcels– Vacant areas should not detract from the visual character of the area.*	• Design the interim conditions so that they contribute to stormwater management, and are coordinated with stormwater catchment areas • Design interim landscaping to buffer or conceal highway and rail infrastructure from views until redevelopment occurs. • Provide street trees along all new streets to shade pedestrians and create attractive, distinct corridors.					
35. Provide permanent streetscape and landscape amenities where future redevelopment is not anticipated – Permanent improvements should not be deferred.*	• In locations where space and infrastructure are unlikely to be modified, the design should provide trees, lighting, landscaping or other features that will be a long-term benefit to the area.					
36. Plan for integration of roadway and district stormwater solutions – Design a scalable stormwater management system that is sensitive to district context and hydrological patterns.*	• Street infrastructure should not impede district stormwater solutions or result in costly infrastructure investments. • Allow for solutions that may include a combination of surface and subsurface methods for collection, treatment and infiltration of stormwater.					
37. Create a framework for adaptable and well sized blocks - The street layout should allow block sizes and dimensions that can be adapted to a broad range of building and use types.**	• Categorize reasonable dimensions or proportions based on the road network • Limit or eliminate sharp angle corners. • Ensure that blocks between the highway and "South Cambridge Street" are of reasonable depth for a range of building types and uses. • Balance the idea of short highway ramp segments with reasonable block dimensions.					

Area-Wide Standards							
38. Constrain design and operational speeds - Plan for a network that operates well, but at low speeds.*	• As an urban street network, most streets should be designed or operate at speeds associated with similar districts and consistent with City of Boston standards for developed urban areas. • Lower design speeds will allow elimination of clear zones (extra space near the curb), narrower lanes (for example, typical lanes may be 11' wide), tighter turning radiuses that are more favorable for pedestrian crossings, and other similar benefits.						
39. Follow MassDOT and City of Boston Complete Streets Guidelines – The future streets should implement the State and City policies for Complete Streets.*	• The design should be informed and consistent with relevant guidelines and policy directions from both the State and the City to create balanced, safe and sustainable streets and circulation for all modes.						
40. Provide quality transit accommodations on transit routes – Plan and design streets for transit vehicles and users. *	• Create comfortable, well-lit transit stop locations with shelters						
41. Employ smart curbside principles – Integrate existing and emerging technology into the design of streets from the outset. *	• Integrate best-practice technology to understand use by multiple modes, such as through cameras and permanent counters • Provide for visible, accessible access to carshare • Employ wayfinding signs and maps in accordance with City of Boston wayfinding standards • Provide opportunities for mobile phone integration and devices, such as solar-powered charging stations and Sofa benches						
42. Incorporate Intelligent Transportation Systems into the design - ITS technology can serve to enhance traffic circulation without relying on excessively-sized streets and intersections.*	• Components that should be considered as part of intelligent technologies include links to a control center, cameras and sensors and other tools to optimize coordination and keep streets and intersections smaller than would be required without ITS benefits.						
43. Allow for designated truck routes and truck-restricted streets– To the extent possible, the street network should direct trucks to specific routes. *	• By establishing preferred truck routes, other streets and connections may be designed to be consistent with the requirement of smaller vehicles. the • Truck routes can also be established that minimize impact on residents stemming from trucks on North Harvard Street and other streets with a more residential character.						
44. Provide stormwater solutions that will not impact surrounding areas – Ensure that all stormwater management is contained within the areas where infrastructure changes are made.*	• Improve neighborhood flooding conditions, tidal flood conditions. • Minimize shade and shadow impact through thoughtful building massing and context-sensitive district edges.						
45. Identify options for robust local and regional transit service in the future – This will reduce traffic pressure on roadways from regional traffic and accommodate future development.*	• Anticipating future transit and Transportation Management Programs will be needed to allow a network of streets and intersections that are scaled for a multi model future, rather than automobile-oriented developments.						
46. Plan adequate capacity for future utility corridors – Provide for utility corridors that will serve future development.*	• Include provisions for utility corridors either below grade or integrated with bridge and air rights infrastructure so that they can flexibly serve future parcel and air rights development. • Plan the street and highway infrastructure so that utilities can be installed without undue costs or disruption of circulation.						
47. Anticipate District Energy Systems – Provide an infrastructure that can easily be adapted to district-based energy production and distribution.*	• Include provisions so that the area is easily adaptable to district-based distribution of thermal energy, including duct banks or connection points. • Consider future use of areas below raised roadways or overpasses for siting energy facilities or sewer heat recovery facilities.						

Considerations for Future Master Planning							
48. Create a coordinated balance of open space and buildings that reflect the character of an urban district - Plan for a proportion of open space within the developable area that will create destination and amenities for the district and nearby areas.	• The proportion of ground-level open space available for public access within the district's blocks should be approximately 20% of the total developable land and air rights parcels that will be created in the district. • The new park area along the Charles River will be in addition to the open space provided within the developable areas.					
49. Support an east/west green corridor - Provide a green connecting corridor for pedestrians, bicyclists and amenity for development threading through the district.	• Anticipate a linear sequence of at-grade parks, walkways and bicycle routes that link the Charles River open space with the area in the vicinity of North Harvard Street/Lincoln Street along Cambridge Street.					
50. Create a linked network of open spaces – Principal open spaces created in the district should be linked, to create a sequence of green places.	• Open spaces should be linked visually and with landscaped corridors and sidewalks to create a network for pedestrians, rather than being isolated places. • The linkages should reach to the edges of the district so that neighbors can easily access a sequence and variety of open spaces.					
51. Plan for future Hubway stations – Transit nodes of the future should not be limited to West Station.	• The development and infrastructure planning should provide for ability to add Hubway- type stations to serve the expanding development and population in the district.					
52. Conceal parking supplies – Future district parking must provide an adequate and unobtrusive inventory.	• Parking should be provided out of sight, with no visual impact on primary streets, open spaces, view corridors, or other prominent views. • Parking solutions should use the change in grade as an advantage to place parking supply below the grade of the proposed roadway, but above the existing ground plane. • Parking access should be integrated with the roadway network and avoid locations that would compromise the anticipated traffic flow and circulation. • Parking access should be integrated with the pedestrian environment and bicycle circulation to minimize disruption and reduce conflict with vehicles.					
53. Optimize orientation of buildings to define district and retain views – Future district buildings must be oriented to define district public realm and frame district views.	• Deploy future building and site designs to reinforce district vitality by defining active street edges and open spaces, framing views, and concealing utilitarian functions. • Buildings should be oriented at an angle or perpendicular to the Charles River to avoid creating a visual barrier from other portions of the district.					
54. Use the primary streets as visual corridors – Reinforce views along primary streets through placement of buildings and open spaces.	• Reinforce potential visual corridors to the Charles River on Cambridge Street and Cambridge Street South. • Reinforce potential visual corridors north on Stadium Way and East Drive. Reinforce potential visual connections between open spaces in the district.					
55. Reinforce context-sensitive development on Cambridge Street – Provide moderate scale development along Cambridge Street near existing development.	• Create a context-sensitive transition from the existing neighborhood edge of Cambridge Street into a district with the potential to have buildings of a larger and taller scale. • Moderate scale development adjacent to existing development would limit shadow impacts adjacent to the district.					
56. Reinforce air rights development potential – Enhance the likelihood of future air rights development with connections and parcel sizes to support this specialized type of development.	• Air rights development has special requirements that need to be taken into account, including access, structural systems, feasible scales, and other characteristics that must be anticipated in the planning for future streets, parking, access, adjacencies and many other factors. • Air rights decking should be used to create plazas, walkways and open space as well as building footprints, particularly in areas that are adjacent to West Station.					

57. Integrate buildings, energy facilities and open space networks with potential flood and stormwater management needs – Provide and designs that protect against flood and overflow conditions to reduce risk to surrounding investments.	• All built and critical facilities should be elevated above projected flood conditions and storm-induced events, including protection from flood vulnerabilities near the Cambridge Street/River Street bridge. • Buildings and sites should integrate water collection and retention systems that can communicate with district water management systems to provide for sustainability.					
58. Address sea level rise as part of a broader area solution - Resiliency for this area should be planned in concert with systemic solutions for the Charles River Basin.	• The Charles River Dam protects this area from coastal and ocean conditions, but may not be adequate relative to future projected sea level rise and storm-related events. • Development in this area can contribute to the funding and financing of long-term solutions before there are impacts in the Charles River Basin.					
59. Provide District Energy systems and solutions - As a new, planned area, the efficient and sustainable production and distribution of energy can be achieved.	• Because so much of the land is under single ownership, integrated solutions for multiple buildings and sites can be planned and implemented. • Survey and take advantage of siting opportunities for geothermal and aquifer-based thermal storage and exchange systems as part of the district-wide development and open space planning.					
60. Follow best-practice Transportation Demand Management strategies for all new development – Minimize vehicular demand on new streets by actively encouraging alternative strategies.						
61. Provide comfortable, attractive connections for pedestrians and bikes above I-90 – Extend pedestrian and bicycle connections above the Pike wherever there are new streets or air rights development.	• Include dedicated pedestrian and bike links between the Cambridge Street bridge area to the West Station area in conjunction with a vehicle connection in the same location. • As future air rights development extends coverage of the I-90, provide safe, convenient routes for people walking and bicycling as part of a non-motorized circulation network.