



## **13. CONCLUSIONS, RECOMMENDATIONS AND NEXT STEPS**

### **13.1 Conclusions and Recommendations**

The purpose of the Route 440/Routes 1&9T Multi-Use Urban Boulevard and Through Truck Diversion Concept Development Study is to improve existing and future safety, traffic operations, multi-modal mobility, and accessibility; to support and interconnect growth areas and livable communities along both sides of the corridor; and to support local and regional economic development.

This study undertook a detailed evaluation of a broad range of alternatives for the corridor, the gateway intersection and for through truck diversion to meet the project purpose and need, and the goals of the Circulation Element of the Jersey City Master Plan. The study culminated in the identification of a Locally Preferred Alternative (LPA) for reconstruction of the existing Route 440/Routes 1&9T corridor within the Jersey City from the Bayonne border to NJ Route 7 as a boulevard and complete street. This study recommends advancement of the corridor and gateway intersection LPA through the preliminary engineering and final design phases of the NJDOT project delivery process, with construction of the first phase of the improvement to be completed by the year 2020, and full build out of the boulevard and complete street by 2035, or sooner should resources become available

In addition, the study identified four potential preferred alternatives for diversion of heavy through trucks away from the study corridor to alternative travel routes. The boulevard and complete street LPA was designed to accommodate heavy trucks in the event that none of the through truck diversion alternatives are constructed. These alternatives are recommended for advancement through the concept development, preliminary engineering and final design phases of the NJDOT project delivery process.

#### **13.1.1 Recommended Alternative for the Boulevard and Complete Street**

In conformance with the requirements of the National Environmental Policy Act (NEPA), this study identified and evaluated a range of alternatives. The development and analysis of the alternatives and recommendation of the LPA was based upon detailed investigation of the efficiency of future traffic operations and safety, enhancements to multimodal mobility, impacts to the environment and environmental justice communities, and support for livable communities and local and regional economic development.



Of all of the varied alternative concepts evaluated for the corridor and intersection of Route 440 with Communipaw Avenue, the Locally Preferred Alternative (detailed in Chapter 8) best addresses the defined purpose and need, and supports the goals and objectives of the Circulation Element of the Jersey City Master Plan. The boulevard and complete street is designed to accommodate future traffic demand through the year 2050, by which time it is anticipated that build out of the Western Waterfront of Jersey City will be achieved. Key features and benefits of the combined corridor and gateway intersection LPA include:

- The LPA significantly improves traffic operations and safety along the length of the corridor over existing and future No-Build conditions. The boulevard and complete street is designed to accommodate heavy trucks traveling along and across the corridor. Even if heavy through trucks are diverted to other travel paths, there will still be a need for heavy trucks to access local destinations within the Western Waterfront.
- Segregated through-travel lanes within the central boulevard (Danforth Avenue to Communipaw Avenue), separate through traffic from local traffic, and create a calm environment along the edges of the boulevard. The calm environment supports an attractive public realm, vibrant street life, and livability in the existing and future neighborhoods along the corridor.
- Local travel lanes are provided within the central boulevard to accommodate neighborhood access and circulation. Local neighborhood and boulevard circulation are supported by a concept network of local parallel and cross-streets.
- A variety of public transit alternatives, including local bus service, BRT service and an extension of the HBLR are incorporated into the boulevard and complete street to further reduce dependence on the automobile for travel to, from and within the Western Waterfront.
- The boulevard and complete street improve traffic operations and reduce congestion along the length of the corridor. All approaches to all intersections along the corridor operate at acceptable levels of service during the peak travel demand periods through the year 2050. The analysis is based on the assumption that new development occurs within the density that is anticipated by the Circulation Element of the Jersey City Master Plan, as adopted in April 2009, and certain modal split assumptions for that new development. The modal split assumptions are dependent upon both the construction of BRT dedicated lanes within the boulevard and complete street and the extension of HBLR to Bayfront.



- On-street parking is provided along the length of the local lanes, accommodating short-term parking needs while providing a buffer between the local travel lane and the sidewalk, helping to reduce noise and enhance public safety.
- The entire corridor is posted with a speed limit of 30 mph. This reduced speed limit reduces road noise and supports a calm traffic environment that encourages bicycle and pedestrian activity. The 30 mph speed limit coupled with the spacing of the traffic signal controlled intersections supports a coordinated traffic signal timing plan that minimizes vehicle stopped delay time along the corridor, reducing congestion of vehicle emissions that degrade air quality. The signal timing plan accommodates safe bicycle and pedestrian crossings of all legs of all signalized intersections along the boulevard and complete street.
- An attractive and safe network of sidewalks provides access to all neighborhoods and existing and future parks along the corridor, as well as access to public transit opportunities. These sidewalks provide pedestrian accommodation both along and across the boulevard, and include space for pedestrian amenities such as sidewalk cafés, kiosks, benches, street trees, etc.
- A comprehensive network of bicycle paths providing access to all neighborhoods and existing and future parks along the corridor, as well as access to public transit opportunities is provided. This network of bicycle paths along and across the boulevard also provides a recreational amenity for bicyclists and connections to existing and future parks along the corridor as well as to the East Coast Greenway.
- Safe crossings of the corridor by bicyclists and pedestrians are accommodated at all traffic signal controlled intersections with the exception of the at-grade intersection under the Gateway Circle. Bicyclists and pedestrian crossings of Communipaw Avenue are accommodated on the Gateway Circle above the intersection.
- Landscaping along a majority of the corridor is placed in continuous 20" high raised planters. The height of the planters combined with the dense landscaping within deters mid-block crossings of the corridor by bicyclists and pedestrians.
- Extensive landscaping is provided throughout the corridor creating a visually appealing environment and reducing impervious cover and enhancing sustainability.
- An elevated traffic circle with clockwise traffic flow above an at-grade traffic signal controlled intersection is provided at the intersection of Route 440 and Communipaw Avenue. The at-grade intersection accommodates all through movements and right turns, while the elevated traffic circle accommodated all left turn movements. The 1.65± acre area within the center of the circle is a bicycle, pedestrian and ADA



accessible public space on a decked platform over the intersection. The design creates an attractive gateway, efficient traffic flow operations, safe and easy pedestrian and bicycle crossings, and provides an attractive public realm to support redevelopment of adjoining lands.

### **13.1.2 Recommended Alternatives for Through Truck Diversion**

Of the twenty four heavy through truck diversion alternatives identified and evaluated, four were determined to provide sufficient benefit and support of the project purpose and need to warrant advancement into detailed evaluation and design. These through truck diversion alternatives provide a range of benefits, enhancing regional truck mobility while reducing the volume of heavy through trucks traveling along the boulevard and complete street, and are recommended for detailed concept development analysis.

Two of the four alternatives construct a new connection across Newark Bay north of and parallel to the New Jersey Turnpike Extension Casciano Bridge. This connection does not connect with the NJ Turnpike, but creates a new roadway connection that links the port activities in Jersey City and Bayonne (Global Marine Terminal and MOTBY) with the Newark/Elizabeth seaport complex.

The other two of the four alternatives create connections between the intersection of Routes 1&9T with NJ Route 7 and the northern end of Doremus Avenue in Newark. While providing a number of benefits in support of the project purpose and need, these alternatives create negative impacts EJ communities. In advancing these alternatives for further study, special attention should be paid to the impacts of Alts W-4 and W-5 on EJ communities.

## **13.2 Next Steps – Jersey City Actions**

### **13.2.1 Concept Development Phase II**

The Federal Highway Administration (FHWA) requires use of a formal project delivery process to obtain approval and access to Federal funding. Aligned with the FHWA's regulations, the New Jersey Department of Transportation (NJDOT) established their Capital Project Delivery



Process guiding the evaluation, planning, design and construction of capital projects. The process is designed to ensure consistency in the project development process and make the best use of limited resources by advancing projects that provide the greatest benefit to the transportation system on which New Jersey residents, businesses and visitors rely. The previous NJDOT Capital Project Delivery Process consisted of the following phases:

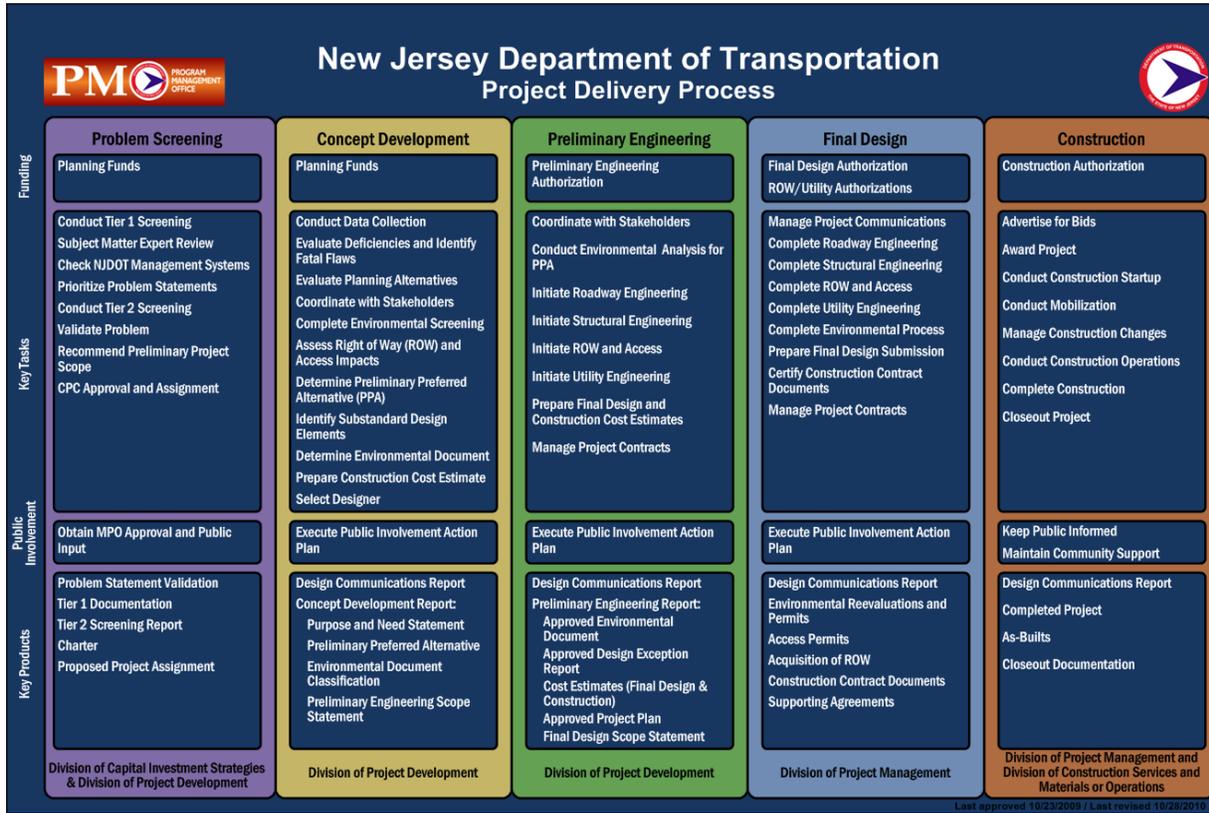
- Problem Statement
- Tier II Assessment and Project Pipeline Determination
- Concept Development
- Feasibility Assessment
- Preliminary Engineering
- Final Design
- Construction

On November 29, 2010, subsequent to initiation of this study, the NJDOT revised the project delivery process, eliminating the Feasibility Assessment phase and adding new items to the Concept Development phase of project development. Accordingly, while the preliminary environmental screening and alternatives assessment was conducted, additional effort is needed to complete the Concept Development phase in accordance with the new NJDOT project delivery process. The new NJDOT Capital Project Delivery Process consists of the following phases (Figure 13.1):

- Problem Screening
- Concept Development (CD)
- Preliminary Engineering (PE)
- Final Design (FD)
- Construction



Figure 13.1: NJDOT Project Delivery Process



During the Concept Development phase, NJDOT evaluates alternative solutions to address the project purpose and need. An alternative (LPA) is selected based on environmental impacts, constructability, cost effectiveness, how effectively the alternative addresses the project need, and if the project can be constructed in a timely manner. This selected alternative becomes the Preliminary Preferred Alternative (PPA). The Project Delivery Process ensures that the PPA addresses the original project need, has the lowest negative impact to the environment and the transportation system, and can be delivered in a timely manner and a reasonable cost. Subsequent to NJDOT approval of the PPA, the project is advanced into the Preliminary Engineering phase.

The new project delivery process increases the scope of what is included in the concept development phase. Accordingly, a number of items detailed in the new NJDOT process remain to be completed prior to advancement of the LPA into the preliminary engineering phase. What follows is a list and description of the specific tasks that remain to be addressed to complete the concept development phase. The numbers in parenthesis are the Task ID numbers assigned to each task in the NJDOT procedures manual.



### **13.2.1.1 Tasks to be Completed by the Project Consulting Team under Direction of the City of Jersey City, in Consultation and Coordination with NJDOT**

The NJDOT procedures manual assigns responsibility for each task to either the project consultant (referred to in the procedures as the Task Order Consultant), or the NJDOT. The following tasks remain to be completed and are to be performed, in whole or in part, by the project consultant during Concept Development Phase II.

#### **Obtain Maps for Storm Water Management Rules Compliance (2145)**

Obtain soil survey maps (Arc/Info coverage) from the Natural Resource Conservation Service (NRCS) and Land Use maps (Arc/Info coverage) from NJDEP for the study area, and a USGS Digital Elevation Model. Obtain United States Geological Survey (USGS) Digital Elevation Model (DEM 1:24,000). Geo-reference all digital maps to the State plane coordinate system to delineate the drainage areas and compute the hydrologic parameters.

#### **Prepare Drainage Area Maps (2150)**

Produce Drainage Area Maps for the study area. Delineate the watershed boundaries that contribute stormwater runoff to the project site. In the field, verify the drainage area boundaries and add additional drainage features identified in the study area that may alter the hydrologic characteristic of the watershed. Determine the existing drainage areas contributing runoff to the roadway and runoff from NJDOT right of way. Determine runoff from offsite contributing areas to the roadway. Determine if offsite runoff can be separated from NJDOT drainage systems to reduce the volume of water.

#### **Conduct Hydrologic & Hydraulic Analysis (2230)**

Perform hydrologic and hydraulic (H&H) analysis for a stream or river for each alternative that involves a change to the bridge opening, roadway profile, or any item within the 100-year floodplain of a stream with a drainage area over 50 acres.

Secure all pertinent information, data, and details necessary to model the stream flow including existing HEC-2 analysis, if State studied stream from New Jersey Department of Environmental Protection (NJDEP). Perform backwater analysis to determine impacts to water surface elevation. Present the study to NJDEP to confirm conformance with regulations and to



identify potential problems. Note modifications to bridge/culvert design, if required. Compute storm water runoff rates and storm water volumes (from the contributing watershed areas to the Storm Water Management Area) by utilizing the Natural Resources Conservation Service Method, and to treat for water quality and volume.

The Task Order Consultant prepares an H&H Analysis Report documenting the analysis.

### **Develop Preliminary Detour and Construction Staging Plans (2320)**

Prepare a preliminary construction-staging plan to help determine how many stages of construction, anticipated durations, and if a detour of traffic will be necessary for all valid alternatives. Determine if a detour will be needed for traffic control. Coordinate efforts with outside agencies if a detour plan is proposed. These outside agencies will include local and county officials and engineers. Keep documentation of support from the local and county officials for a specific detour route on file and in the CD Report. Obtain concurrence from appropriate NJDOT Subject Matter Expert groups.

### **Perform SWM Analysis (2365)**

The Task Order Consultant evaluates the developed alternatives to determine if storm water management (SWM) compliance is necessary by consulting the current New Jersey Department of Environmental Protection regulations. Current 2010 regulations state that SWM compliance is required for an alternative that has over one-quarter acre of new impervious surface or over one acre of ground disturbance.

If SWM compliance is required, the Task Order Consultant evaluates non-structural strategies to address SWM. Determine Total Suspended Solids (TSS) removal rates and recharge potential to comply with all SWM rules. If non-structural strategies are feasible, the Division of Project Development (DPD) Lead Engineer coordinates with the NJDOT SWM subject matter experts to determine if soil testing is necessary. If soil testing is necessary, the Task Order Consultant conducts soil tests in potentially suitable areas to determine soil permeability and the seasonal water table, as well as any other information that will conform to regulations. Determine right-of-way issues.

If a non-structural strategy is not feasible, the Task Order Consultant evaluates structural Best Management Practices (BMP). Document the future maintenance requirements of the BMP chosen within the Alternatives Matrix. Provide a summary of the required maintenance plan.



### **Prepare PE Public Involvement Action Plan (2515)**

The Division of Project Development (DPD) Lead Engineer and Task Order Consultant develop a PE Public Involvement Action Plan (PIAP) to identify critical points for public involvement during PE, and the objectives for each point. The PE PIAP includes, at a minimum, updating the database of known stakeholders, determining the number of anticipated meetings with local officials, citizens groups and any outside agencies impacted by the proposed project.

Circulate the PIAP to the NJDOT Office of Community Relations (OCR) for final comments and signature.

### **Prepare PE Scope Statement (2520)**

The Task Order Consultant reviews the master PE Scope Statement template and updates it with the tasks necessary for the completion of PE. The PE Scope Statement is for the entire study corridor from the Bayonne border to NJ Route 7, and documents commitments from supporting subject matter expert (SME) units and provides an area for the SME units to state any assumptions, to clarify and customize standard activities, and to add new activities and their descriptions. This PE Scope Statement will include all the tasks needed to conduct PE, and will be used to solicit a designer fee proposal for PE.

The Division of Project Development (DPD) Lead Engineer circulates the PE Scope Statement to all the NJDOT SME units for official sign-off. The Manager of each SME unit will sign and return the form to the DPD Lead Engineer within three weeks.

### **Prepare Systems Engineering Review Form (2535)**

All Information Technology Systems (ITS) deployments, regardless of funding source, must be in conformance with the ITS Architecture and Systems Engineering requirements. In coordination with the Division of Project Development Lead Engineer, the Task Order Consultant must reach out to the respective Traffic Operations Center (TOC) to document the purpose and need for ITS facilities, and how to address existing ITS. For the majority of standard ITS deployments, a programmatic conformance process has been established and a Systems Engineering Review Form (SERF) must be completed. Any ITS deployment that is not covered as programmatic will require the Task Order Consultant to develop a Concept of Operations Report, including coordination with impacted stakeholders to address the seven sections under the SERF. The SERF, including a detailed Concept of Operations Report, if



required, is included as an attachment within the CD Report and is approved by Traffic Operations and FHWA. Submission of a SERF is not required if the scope is only replacing in-kind existing ITS facilities.

#### **Prepare CD ROW and Access Impact Plan and Matrix (2540)**

Develop a Right of Way (ROW) and Access Impact Plan and Matrix for the selected Preliminary Preferred Alternative (PPA). This plan and matrix shows the affected properties. The ROW plan will show the area of takings, type of use of properties, and any potential easements needed for the proposed project.

When there are potential candidates for PPA, request ROW comparisons prior to the selection of the PPA to assist in the shaping of the selected PPA.

The matrix will list each affected parcel by Block and Lot indicating the type of acquisition it will be (partial, entire or easement), the amount of property to be acquired, the existing use of the property (e.g. residential, commercial, industrial) and the access impacts (adjustment, modification, revocation, waiver).

#### **Review Draft CD Report and Address Comments (2580)**

The Division of Project Development (DPD) Lead Engineer and Division of Project Management Project Manager (DPM PM) will review the Draft CD Report and provide comments to the Task Order Consultant. The Task Order Consultant will address the DPD Lead Engineer and DPM PM's comments and make the appropriate changes. The Task Order Consultant will submit a final Draft CD Report to the DPD Lead Engineer.

The DPD Lead Engineer presents the PPA to CPSC. The CPSC provides their recommendation for advancement to the DPD Lead Engineer and forwards their recommendation to the Capital Program Committee (CPC) for approval.

#### **Finalize CD Report (2630)**

The Task Order Consultant updates the CD Report, indicating Capital Program Committee approval. The Task Order Consultant provides copies of the Finalized CD Report to the Division



of Project Development Lead Engineer, Division of Project Management Project Manager and in-house designer if they will be completing the project design work.

### **13.2.1.2 Tasks to be Completed by the City of Jersey City in Consultation and Coordination with the NJDOT**

The following tasks are to be performed by the City of Jersey City in consultation and coordination with the NJDOT. While these NJDOT procedures assign responsibility for completion of these tasks to the NJDOT project manager, consultation with and input from the City of Jersey City, and the Task Order Consultant (the project consultant team) is required.

#### **Prepare Railroad Agreement (2315)**

If applicable, the Division of Project Development (DPD) Lead Engineer prepares a funding agreement for railroad review work. The DPD Lead Engineer sends four (4) copies of a railroad engineering construction authorization (RECA) to the railroad company.

#### **Coordinate with Permitting Agencies (2400)**

Since the environmental screening undertaken in this study identified the likely need for preparation of an environmental impact statement, the Division of Environmental Resources should initiate consultation with permitting agencies. The permitting agencies should include, but not be limited to the NJ Meadowlands Commission, the NJ State Historic Preservation Office, the NJ Department of Environmental Protection, and the U.S. Army Corps of Engineers.

#### **Conduct Value Engineering Review (2435)**

The Value Engineering (VE) Unit performs a review of the draft Preliminary Preferred Alternative (PPA) to identify, evaluate, develop and recommend alternative designs or methods that will provide an acceptable or improved product to maximize the value of every dollar spent and minimize life cycle costs. The multi-disciplined value engineering team identifies the function of the proposed project and provides a cost effective, quality solution.



While a formal value engineering review has not been conducted as part of the development of the LPA, two NJDOT Core Group meetings were held to present the alternatives and the LPA to the NJDOT Subject Matter Experts (SME). Comments received from the SME's were incorporated in the alternative development and the LPA identification process. If significant issues are identified through a formal value engineering review, an outcome of this review may be to re-evaluate one or more alternatives and perform further analysis. In consultation with the City of Jersey City, the Division of Project Development (DPD) Lead Engineer will determine the level of work required to address the VE recommendations.

This activity may require a workshop to perform an adequate review with appropriate internal and/or external stakeholders. If a workshop is necessary, the duration will increase by a minimum of 20 days.

As per FHWA Regulation 23 CFR Part 627, a Value Engineering Technical Report shall be prepared on all Federal-aid projects with an estimated total cost of \$25 million or more for roadway projects, a total cost of \$20 million or more for bridge projects or any other project designated by the Secretary of Transportation.

In addition to meeting the federal requirements, a VE Review should be performed for any project over \$20 million (state or federal) or any project that the DPD Lead Engineer deems appropriate.

#### **Prepare Value Engineering Technical Report (2445)**

The Value Engineering (VE) Unit prepares a Technical Report documenting the VE review results and recommendations. Approximately 10 days after the VE Review is conducted, the VE Technical Report is begun.

The VE Technical Report is included as an attachment within the CD Report.

#### **Preliminary Preferred Alternative Selected (2480)**

Based upon input received from the Value Engineering review, revise the Locally Preferred Alternative as appropriate for designation as the Preliminary Preferred Alternative (PPA).



### **Perform PPA Constructability Review (2500)**

The constructability review will provide an opportunity for construction personnel to review the Preliminary Preferred Alternative (PPA) and provide comments to improve the construction methods and construction staging. The goal is to incorporate construction's comments into the PPA to potentially reduce the construction duration. The constructability review may help to develop a more accurate construction cost estimate.

The Division of Project Development (DPD) Lead Engineer sends a memo to the Bureau of Construction Management requesting an evaluation of the constructability and staging of the proposed project. Include the study location and enclose a copy of the PPA and Staging Plan. All comments shall be in writing.

DPD may request a meeting with the Bureau of Construction Management and Regional Construction Engineer to discuss the constructability issues.

### **Confirm Environmental Document (2510)**

The Division of Project Development Lead Engineer coordinates with the Division of Environmental Resources (DER) to determine the environmental document that will be obtained in PE. If DER determines that a Categorical Exclusion is applicable, Certified Categorical Exclusion (CCE) criteria are assessed.

### **Develop PE Project Management Plan (2530)**

The Division of Project Development Lead Engineer develops the PE Project Management (PM) Plan, which is the formal document that defines how the specific project will be executed, monitored and controlled. It is typically written at a summary level defining the overall approach and documenting any exceptions to the typical process. The objective of a PM Plan is to define the approach to be used by NJDOT to deliver the intended project. Determine if in-house design staff will design the project and include in the PM Plan. Document any customization of the project delivery process within the PM Plan. A PM Plan is mandatory for all projects.



**Prepare CD ROW and Access Cost Estimate (2550)**

The Division of Project Development (DPD) Lead Engineer requests a right of way (ROW) and access cost estimate from the ROW Regional Office. This provides an estimate of the future ROW funding needs of the proposed project. Send the CD ROW and Access Impact Matrix and three sets of the CD ROW and Access Impact Plan of the Preliminary Preferred Alternative. Also include a map depicting the study area and tax maps.

**FHWA Reviews and Approves CD Report (2600)**

FHWA will review the Draft CD Report and provide comments to the Division of Project Development (DPD) Lead Engineer for incorporation in the CD Report. The Task Order Consultant addresses FHWA's comments and the DPD Lead Engineer re-submits to FHWA for approval. This process will be repeated until FHWA approves the report.

The duration for FHWA review and comment is 30 days. The duration for making changes to the CD Report will vary based on the extent of FHWA comments.

**Present to CPSC (2610)**

The Division of Project Development (DPD) Lead Engineer sends a memo to the Division of Capital Investment Planning and Development (CIPD) once FHWA has approved the CD Report. The memo will either recommend that the Preliminary Preferred Alternative (PPA) advance to PE or no further action be taken and will request placement on the agenda of the next scheduled Capital Program Screening Committee (CPSC) Meeting. The memo will also include an information package that briefly presents the PPA and provides supporting documentation. The corresponding DPD Regional Manager will forward the approved memo and package information to CIPD. CIPD will place the study on the agenda of the next CPSC meeting.

**CPC Approves Advancement to PE (2620)**

The Capital Program Committee (CPC) provides agreement and support to advance the proposed project to PE. If the Preliminary Preferred Alternative is approved by the CPC to advance to PE, the PE designer selection process may begin if in-house design staff will not be completing the project design work.



The Division of Project Development Lead Engineer signs and approves the CD Quality Certification upon receipt of CPC approval to advance the project to the PE phase.

#### **Complete CD Closeout (2640)**

As outlined in the NJDOT Procedures Manual, perform the series of steps necessary to close out the existing task order in CD. Instruct the Task Order Consultant to submit their Final Invoice. Update the Project Reporting System and notify appropriate subject matter expert units of the Capital Program Committee decision.

#### **Prepare Solicitation Package (2700)**

The Division of Project Development (DPD) Lead Engineer determines the selection process (1-Step or 2-Step) to be used and prepares the solicitation package. DPD Director sends the solicitation package to the Division of Procurement Professional Services. Professional Services approves and posts the solicitation documents on the NJDOT Website.

#### **Form Technical Evaluation Committee (2710)**

The Division of Project Development (DPD) Lead Engineer will form a Technical Evaluation Committee consisting of the DPD Lead Engineer, Division of Project Management Project Manager, a Division of Environmental Resources representative and an appropriate subject matter expert unit staff. The committee is responsible for developing rating criteria, evaluating and ranking designers' technical proposals for a 1-Step process and oral presentations when required for the 2-Step process.

#### **Receive Technical Proposals (2720)**

After the solicitation has been posted, pre-qualified consultants submit Technical Proposals to the Division of Procurement Professional Services within 15 working days from the posting date, unless otherwise noted.

#### **Score Proposals (2730)**

1-Step Process: The Technical Evaluation Committee will review and rank technical proposals and submit the results to the Consultant Selection Committee (CSC).



**2-Step Process:** The Technical Evaluation Committee will review and rank technical proposals and submit the results to the CSC. The Technical Evaluation Committee also determines the list of technically qualified firms within 5% of the top ranked firm. The Division of Project Development Lead Engineer presents this list to the CSC to determine the short-list of technically qualified firms that will be requested to give an oral presentation.

**Hold Oral Presentations (2 Step) (2740)**

The second step of a 2-Step process will be an oral presentation. The oral presentation will be followed by a question and answer period from the Technical Evaluation Committee. After presentations are evaluated and ranked, prepare and forward the scores and designer recommendation to the Secretary/Moderator of the Consultant Selection Committee, to request selection.

**Select Designer (2750)**

The Division of Project Development (DPD) Lead Engineer presents the technical evaluation results and designer recommendation to the Consultant Selection Committee (CSC). The CSC reviews the recommendation for selection, the factors responsible for the distribution of the scores, significance of the rating criteria, selects one designer and verifies that the selected designer has an approved Quality Management Plan. The Division of Procurement Professional Services notifies the DPD Lead Engineer and the selected designer of the outcome of the Consultant Selection Committee meeting. If the selected designer does not have an approved Quality Management Plan, they have 10 working days to obtain one. Upon confirmation that the selected designer has an approved quality management plan, the Deputy Commissioner signs the Executive Decision Document approving selection.

Prepare an electronic debriefing memo and provide to designers upon request.

**Develop PE Independent Cost Estimate (2800)**

The Division of Project Development (DPD) Lead Engineer requests that Program Systems Management develop an Independent Cost Estimate (ICE) to compare to the designer's fee proposal. An ICE will be used in contract negotiations. The DPD Lead Engineer submits the PE Scope Statement and the solicitation package to Program Systems Management. Program Systems Management consults with subject matter expert units when developing man-hour



estimates on unique or major tasks. Program Systems Management submits the Preliminary ICE to the DPD Lead Engineer for review and comment.

#### **Develop Designer Fee Proposal (2810)**

The selected designer will prepare a Fee Proposal utilizing the PE Scope Statement and forward the proposal to Division of Project Development (DPD) within 10 days of the selection. The DPD Lead Engineer ensures the Fee Proposal is prepared in accordance with internal NJDOT Policy and Procedure #328, "Agreement Development Process for Procurement of Professional Services."

#### **Negotiate Contract (2820)**

The Division of Project Development (DPD) Lead Engineer reviews the Designer Fee Proposal and negotiates with the designer utilizing the Independent Cost Estimate (ICE) as a comparison. If PE is performed in-house, the DPD Lead Engineer will negotiate with NJDOT Design Services. The designer may update the PE Scope Statement with detailed task descriptions, if necessary. Changes to the PE Scope Statement will be approved by the DPD Lead Engineer. If the designer's fee proposal exceeds 10% of the ICE, review and request further clarification and justification.

After completion of negotiations, the DPD Lead Engineer sends the total negotiated hours to Program Systems Management. The DPD Lead Engineer may request Program Systems Management prepare a Summary ICE Report that provides a comparison of design man-hour estimates between ICE values and the designer's man-hour proposal.

#### **Finalize Proposal (2830)**

The designer revises the original fee proposal per negotiations and submits to the Division of Project Development (DPD) Lead Engineer.

#### **Prepare Draft Agreement (2840)**

Once the final proposal is fully negotiated, enter the fee proposal, schedule and scope of services into the appropriate Model Agreement. The Division of Project Development (DPD) Lead Engineer prepares the Draft Agreement and sends to the Division of Procurement



Professional Services for review and comment. If changes are needed to the Draft Agreement, the Division of Procurement Professional Services sends comments to the DPD Lead Engineer. Once Professional Services provides the DPD Lead Engineer with final approval, the Draft Agreement is considered final.

### **Develop PE Schedule (2850)**

The Division of Project Development (DPD) Lead Engineer or DPD Scheduler request Program Systems Management to create an active schedule in Primavera based on a standard PE schedule template. The DPD Lead Engineer sends the standard PE schedule template to the Designer to customize the schedule based on the PE Scope Statement and historic data. The DPD Lead Engineer negotiates the draft schedule with the Designer. The DPD Lead Engineer provides the negotiated draft schedule to the DPD Scheduler or Program Systems Management to update the active schedule.

The DPD Lead Engineer is responsible for updating all schedules on a monthly basis and may do so by providing updates to the DPD Scheduler or Program Systems Management.

### **Approve PE Schedule (2855)**

The Division of Project Development (DPD) Lead Engineer completes the Project Baseline Schedule Approval form and submits it to the DPD Regional Manager and Director for approval. DPD Lead Engineer forwards the Project Baseline Schedule Approval form to Program Systems Management. Program Systems Management creates the baseline for the PE Schedule.

### **Develop PE Budget (2860)**

The Division of Project Development (DPD) Lead Engineer requests Program Systems Management develop a PE man-hour budget estimate. The budget estimate includes subject matter expert (SME) unit man-hours to support the Designer. If NJDOT Design Services completes PE, the budget estimate includes in-house design man-hours. A Program Systems Management Budget Analyst develops the Draft Budget in the Project Reporting System with input from SME units for support hours. The DPD Lead Engineer is responsible for negotiating any SME unit support hours.



### **Finalize PE Budget (2865)**

The Division of Project Development (DPD) Lead Engineer completes the Budget Action Request Form and compiles the PE documents required for both budget approval and funding authorization. These documents include the PE Budget Estimate, Budget Action Request Form and if appropriate, Designer's Fee Proposal. Forward the compiled PE documents to the DPD Director.

### **Approve PE Budget (2870)**

The Division of Project Development (DPD) Director reviews and approves the PE Budget Package. The DPD Lead Engineer forwards the Budget Action Request Form to Program Systems Management to document approval in the Project Reporting System.

### **Authorize PE Funding (2880)**

The Division of Project Development (DPD) Lead Engineer requests FHWA authorization to begin PE. The DPD Lead Engineer prepares and submits the funding request to the Division of Capital Investment Planning and Development (CIPD) (as per FHWA authorization procedures), who prepares the request to FHWA for authorization of funds. CIPD notifies the DPD Regional Manager of FHWA approval and provides a copy of the job number and Federal Agreement ID.

### **Execute Designer Agreement (2890)**

The Division of Project Development (DPD) Contract Manager sends the Final Agreement and Articles to the Designer. The Designer signs the Final Agreement and sends two signed and sealed original copies back to the DPD Contract Manager along with copies of the Corporate Resolution and Business Registration Certificates for the Prime and all Sub-consultants. The DPD Contract Manager sends the signed and sealed Final Agreement Package to the Deputy Attorney General for approval. The DPD Contract Manager forwards the approved Final Agreement Package and an AD-12 to NJDOT Management for signature and approval. The DPD Contract Manager distributes the executed Agreement to the appropriate parties, including FHWA.

Upon completion of the above tasks, the Concept Development Phase has been completed.



### **13.2.2 Revision of the NJDOT Desirable Typical Section**

Formalized within the NJAC 16:47 – New Jersey State Highway Access Management Code, a Desirable Typical Section (DTS) is defined for all roadways under NJDOT jurisdiction. The DTS defines the NJDOT’s long range plan for the state highway configuration. The DTS may generally be viewed as a right of way reservation for future roadway improvements, within which construction of buildings or other constraints prohibited.

The entire portion of the Route 440/Routes 1&9T corridor within the study area is defined with a DTS classification 6A. DTS 6A is described as a 148-foot with right of way containing six travel lanes, divided, with shoulders or parking. The existing right-of-way of the Route 440/Routes 1&9T corridor varies from a maximum of 112-feet (Route 440 between Danforth Avenue and Communipaw Avenue) and a minimum of 60-feet (Routes 1&9T between Communipaw Avenue and the pedestrian overpass connecting the eastern and western portions of Lincoln Park).

Upon completion of the NJDOT Concept Development process, the DTS for the length of the project corridor should be formally revised with an amendment to the NJDOT State Highway Access Management Code. The revised DTS should be made consistent with the boulevard setback lines defined as part of the boulevard and complete street LPA. The process is initiated by the City of Jersey City submitting a written request for the revision to the NJDOT Major Access Bureau detailing the requested DTS along the length of the corridor, with reference to the completed NJDOT Concept Development study and the preliminary preferred alternative.

### **13.2.3 Waivers and Design Exceptions**

The LPA incorporates closely spaces signalized intersections as a means of increasing the number and attractiveness of safe crossing locations for bicycles and pedestrians. The NJDOT traffic signal spacing policy set forth in the New Jersey State Highway Access management Code N.J.A.C. 16:47-3.4 establishes a minimum distance between traffic signals along state roadways of 2,640 feet (1/2 mile). NJDOT procedures permit granting of a waiver of this minimum spacing criterion if it can be demonstrated that through travel along the main roadway would not be adversely affected by the installation of additional traffic signals.

Placement of additional traffic signals along the corridor is a key feature of the LPA in that the additional signalized intersections create safe crossing locations for pedestrians and bicyclists,



and facilitate metering of traffic flow along the north/south roadway to control travel speeds. Analysis of the traffic operations of the boulevard and complete street (Chapter 9) demonstrate that efficient operations are maintained along the entire corridor subsequent to construction of the LPA. Securing of this waiver is recommended as part of Phase II of the Concept Development process.

As stated in the NJDOT Roadway Design Manual, “median widths of 20 feet to 25 feet or more are desirable at intersections with a single left-turn lane, but widths of 15 feet to 18 feet are acceptable.” A median width of 18 feet is considered the absolute minimum along the boulevard due to the need to provide safe havens large enough to safely accommodate the significant pedestrian activity that is anticipated in the future. Confirmation of NJDOT acceptance of the planned median width should be requested during the value engineering component of Phase II of the Concept Development process.

Dedicated left turn lanes are integrated into the center median at the signalized intersections, providing access to the existing and future local adjacent land uses. The NJDOT Roadway Design Manual states that within a median “left-turn lanes with median curbing should be 11 feet wide and desirably 14 feet wide. The lane width is measured from the curb face to the edge of through lane. Left-turn lanes without median curbing should be at least 11 feet wide and preferably 12 feet wide.” While minimum 11 foot turn lanes are desirable, in urban settings the use of 10 foot turn lanes is common. The ten-foot width is adequate to physically accommodate the vehicle movement while encouraging slower travel speeds and a calm traffic environment. Confirmation of NJDOT acceptance of the planned left turn lane width should be requested during the value engineering component of Phase II of the Concept Development process.

#### **13.2.4 Adoption of Set-Back Lines and Density Bonuses**

Along various sections of the corridor, the recommended LPA improvements will be constructed wholly within the existing right-of-way, while significant widening will be required along other sections. Establishment and formal adoption of a right-of-way reservation area will be critical in preserving the ability to construct the LPA improvements. Incorporation of this reserved area into the municipal zoning code will ensure that new structures that are built within the Western Waterfront do not impede the ability to construct the LPA infrastructure



improvements that provide the necessary transportation infrastructure capacity to support all of the development that is anticipated to occur.

It is recommended that the setback lines defined as the outer edges of the boulevard and complete street LPA be established by the City of Jersey City through amendment of the Jersey City Land Development Ordinance (JC LDO), in accordance with the Circulation Element of the Jersey City Master Plan. The ordinance should incorporate requirements that the facades of new buildings along the boulevard and complete street within the redevelopment areas be constructed to the setback lines. It is further recommended that the Circulation Element of the Jersey City Master Plan be amended to incorporate the specific concept design and alignment of the boulevard and complete street and gateway intersection LPA, as well as the specific concept plan of new local streets that was developed by this study.

It is further recommended that a policy of providing density bonuses in exchange for contributions of land that is needed for the boulevard and complete street LPA right-of-way be codified through adoption by the JC LDO and/or redevelopment plan ordinances. Construction of the LPA requires dedication of privately-owned land outside of the existing roadway's corridor right-of-way. The rational nexus between the density bonus and the land donation is the need to provide the transportation infrastructure capacity that is needed to support higher density development. The aggregate development densities for each growth area may not exceed the anticipated density for each growth area articulated in the 2009 circulation element of the Jersey City Master Plan, as excess development have not been tested by the corridor operations modeling that was conducted by this study.

These density bonuses would apply to all areas along the corridor except the Bayfront redevelopment area and the NJCU West Campus redevelopment area as density bonuses in exchange for land contributions have already been codified for these redevelopment areas.

### **13.2.5 Adoption of Urban Design Principles and Guidelines**

The Jersey City Route 440/Routes 1 & 9T Multi-Use Urban Boulevard Concept Development Study provides the overall concept plan for the transformation of the roadway. The Urban Design Principles and Guidelines developed as a companion to this study (Appendix 10.1) provide an overview of the design concepts and envisioned palette of material types and styles that are critical to achieving the vision for the Route 440/Routes 1&9T Urban Boulevard.



The Urban Design Principles and Guidelines are a supplement to the study, providing an overview of the design concepts and examples of material types and styles that are appropriate for constructing the LPA and achieving the vision articulated in this study.

It is recommended that the Urban Design Guidelines be formally established as requirements of the Jersey City Land Development Ordinance. The ordinance should require that all redevelopment along the boulevard and complete street be designed and constructed in conformance with the Urban Design Guidelines to ensure uniformity in the selection and application of materials and construction along the length of the corridor. Establishment and formal adoption of the Urban Design Guidelines through zoning will ensure consistency in the visual and operational characteristics of the various segments of the corridor as they move through the design and implementation process as redevelopment advances in the Western Waterfront.

#### **13.2.6 Establishment of a Special Improvement District**

Maintenance and upkeep of the boulevard and complete street is critical in maintaining livability of the neighborhoods that abut the corridor. The LPA includes landscaped medians within the existing NJDOT right of way, with additional landscaped areas located outside of the existing NJDOT right of way. While the NJDOT typically assumes responsibility for maintenance activities within their rights of way, it is recommended that a Special Improvement District (SID) be created to provide adequate upkeep of all aspects of the boulevard and complete street landscaping. The NJDOT should participate in the funding for maintenance to be undertaken through the SID, with additional funding secured through special assessments on development along the corridor.

#### **13.2.7 Utility Concerns and Coordination**

A number of major utility lines run below ground along, adjacent to and across the Route 440/Routes 1&9T corridor. Construction of the LPA requires relocation, reconstruction or replacement of a number of these utilities due to the additional load placed upon the utility lines by elevation of the boulevard roadway and the planting of the median areas. These utilities are owned and maintained by a number of private entities as well as the Jersey City and the Bayonne Municipal Utility Authorities. The extent of the utility improvement need will be determined during the preliminary engineering phase of project advancement. It is recommended that the owners of all of the utilities that will be affected by construction of the



LPA be assembled into a working group to guide the design and construction of the utility improvements, and participate in the securing of funding for the reconstruction.

### **13.2.8 Support Advancement of HBLR Extension and Establishment of BRT Service**

NJ Transit has identified their preferred alternative for extension of the HBLR to the west side of Route 440 in the vicinity of Culver Avenue. This study assumed completion of the extension of the HBLR by the year 2020. This study also assumed that BRT service would be initiated along the boulevard and complete street some time after the year 2020, providing a public transit connection between the Western Waterfront and Journal Square. Extending the HBLR into the Western Waterfront and providing BRT service to Journal Square are critical in attaining the low automobile utilization rates envisioned for the Western Waterfront. These low automobile utilization rates were incorporated into the future travel demand forecasts and tested through the corridor operations modeling that was conducted by this study.

The alignment and configuration of the HBLR extension preferred alternative and dedicated lanes for operation of the BRT service were incorporated into the development of the boulevard and complete street LPA. It is recommended that the City of Jersey City adopt a formal resolution of support for advancement of the design and construction of the HBLR extension consistent with the preferred alternative. The resolution should also support initiation of a formal study of the planned BRT service and initiation of the service between the Western Waterfront and Journal Square.

The close coordination between the City of Jersey City and NJ Transit throughout the preparation of the HBLR Extension Alternatives Analysis should continue throughout the preliminary engineering and final design phases. This coordination should be extended to include planning of the BRT operating schedule and design of the stations and other physical facilities required to support the operation of the BRT service. This coordination is necessary to ensure that the construction schedules for the HBLR extension, BRT stations and the boulevard and complete street are coordinated and that design issues that may affect the projects are resolved.

For example, NJ Transit typically requires that fencing or other barriers be constructed beneath elevated sections of the HBLR to prevent unauthorized access. Placement of barriers to entry beneath the entire length of the HBLR elevated crossing of Route 440 would adversely affect the continuity of the median bike paths planned as part of the boulevard and complete street. Appropriate design treatments must be developed to adequately safeguard



the HBLR infrastructure while still accommodating the bike paths to cross beneath the overpass.

Placement of the overpass support columns within the median areas of the boulevard and complete street must be coordinated to ensure adequate separation between the columns and the riding surface of the bike paths within the medians. In addition, placement of the columns must consider the location of the subsurface utilities in the area to avoid impacts to the existing systems that are to remain and permit access for maintenance of the subsurface utilities in the future.



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