CHAPTER G21

ROADWAY IMPROVEMENTS

PERFORMANCE

A. Basic Function:

1. The Design-Builder shall conduct all Work necessary to design, document, and construct all street improvements necessary for the NE Pacific Pl. roadway lowering as described in the Conceptual Documents. Elements of Work shall include, but are not limited to, the following:
   a. Provide pavements and surfacing, as shown in the 50% Schematic Design and the Conceptual Documents and by code, that are adequate in extent and sufficiently durable to accommodate without damage the types of traffic that can be reasonably anticipated for the facility type and intended user population.

2. Pavements and surfacing comprise the following elements:
   a. The roadway and sidewalks of NE Pacific Pl.
   b. Appurtenances for the roadway and sidewalks, including curbs, gutters, guardrails, and pavement markings.
   d. Coordination with Seattle City Light (SCL) and Seattle Department of Transportation (SDOT) for lighting.
   e. Coordination with King County Metro for transit bus stop design.
   f. Coordination with SDOT for traffic signals.

3. The design and construction shall not impact the existing King County Metro Regulator Station.

B. Design Criteria

1. City of Seattle Department of Transportation (SDOT) Standards.

2. The design speed, posted speed limit, and maximum roadway grade shall be as determined and approved by SDOT. The Design-Builder shall use the minimum design speed as currently categorized by the City of Seattle, if no design speed assigned by the city, then a minimum of 25 mph shall be used for purposes of preparing its submittal under this RFP unless it can provide confirmation from SDOT that a higher minimum design speed shall be acceptable.

3. The minimum vertical clearance from the bottom of the Rainier Vista Pedestrian Landbridge to the roadway surface shall be as determined and reviewed by SDOT and King County Metro. The Design-Builder should use a minimum 19-foot vertical clearance for purposes of preparing its submittal under this RFP unless it can provide confirmation from SDOT and King County Metro that a lesser vertical clearance shall be acceptable.

4. The completed facility will include an at-grade pedestrian crossing of Montlake Boulevard. SDOT will be responsible for installing the crosswalk improvements and a new traffic signal, if needed.

5. The completed facility must retain the existing driveway to the Triangle Parking Garage. Changes in grade and width of driveway can be proposed if they can be shown to not affect access to and from the garage.

6. Roadway section shall be as indicated in the Conceptual Documents and includes;
   a. Two, 11-foot lanes. One lane each in the east and westbound directions
   b. Auxiliary turn lanes on Pacific Place approaching the Montlake Boulevard intersection, including one left turn lane, one left-thru lane, and one right turn lane with a radius that will
accommodate a 60-foot articulated bus. The future auxiliary lanes must be at least as long as the existing lanes.

c. An 8-foot sidewalk (including the curb) on each side of Pacific Place.

d. One eastbound bus layover lane with a minimum width of 11 ft. 6 in., but a preferred width of 12 feet. Roadway widens at intersection with Montlake Blvd.

i. The geometry for the bus layover lane shall be as follows:

ii. Arrival Section (only for bus pullout design): This tapered section shall be a minimum of 40 ft.

iii. Layover Section: First bay shall have a minimum length of 124 ft to accommodate two 60 ft. articulated coaches. A minimum distance of 90 ft. shall be maintained between the first bay and the second bay. Second bay shall have a minimum length of 124 ft. to accommodate two 60 ft. coaches. Total length of the layover section shall be 308 ft.

iv. Departure Section (only for bus pullout design): This tapered section shall have a minimum length of 40 ft.

v. A bus zone approximately 100 ft. in length shall be provided on NE Pacific Place between the west end of the bus layover area and the entrance to the Triangle parking garage on NE Pacific Place.

vi. Location of the bus zone shall not cause a bus in the zone to impede sight distance of vehicles exiting from the Triangle garage.

vii. The longitudinal slope of layover roadway shall not exceed 7.0 percent

viii. Street Trees: Should street trees be required by the City of Seattle within the sidewalk adjacent to the bus layover zone, tree pit openings shall be installed with steel gratings to provide adequate sidewalk width to meet ADA accessible route design criteria. Root barriers shall be installed at tree pits to prevent sidewalk buckling.

e. Overhead power for electric trolleys to replace existing electric service. The overhead power service must be constructed to King County Metro standards

7. Bus Layover Lane and Bus Stop:

a. Construct with Portland Cement Concrete (non-reinforced) with doweled joints at not more than 12 ft space. Dowels shall be 1-1/2” diameter x 18” stainless steel smooth bars. Thickness of PCCP shall be 10 inches and concrete compressive strength shall provide a minimum 20 year design life.

b. Pavement design method shall be according to AASHTO. Bus axle loads shall be as following:

   - Front Axle: 12,600 lbs
   - 2nd Axle: 15,000 lbs
   - 3rd Axle: 30,000 lbs

   Annual volume layover usage is estimated to be around 19,500 buses.

c. Concrete curb shall be 6 inch high integrated curb (or doweled curb) with rebar dowels at 28” o.c. Concrete curb shall be painted per City of Seattle’s standard designated for bus parking only.
The bus layover lane shall be graded and equipped with sufficient drainage structures to prevent water ponding.

8. Sidewalks: shall meet City of Seattle’s design standards and shall be at least 8 ft. deep from the face of curb to the back of sidewalk for bus wheelchair ramp deployment and ADA access. Sidewalks shall be provided adjacent to both east- and westbound travel lanes. Sidewalks shall meet State of Washington’s ADA guidelines. Sidewalks shall be equipped with handrails, if necessary, to meet the accessible route design criteria.

9. Left turns into the Triangle Parking Garage shall be accommodated for westbound traffic along NE Pacific Place. The design vehicle for these maneuvers shall be a Single Unit (SU) truck. Turning movement does not require a dedicated left turn lane.

Note: The Roadway section described in the Conceptual Documents and this RFP is in draft form and has been approved by SDOT and the University. Any change to the basic configuration may require changes to other portions of the Project, including the Pedestrian Landbridge alignment, and additional review by the University and SDOT.

C. Layout
   1. Roadway and sidewalks shall be located on City of Seattle right of way.

D. Substantiation:
   1. Preliminary Design: Preliminary plan and profile based on grading shown on the Conceptual Plans, including proposed bridge clearances.
   2. Design Development: Site plans showing all roadway and pedestrian paving, signage, lighting, landscaping and methods of achieving appearance requirements.
   3. Construction Documents: Identify paving sections, key details, and conform with plan submittal requirements of Authorities having jurisdiction.

METHODS OF CONSTRUCTION

A. During construction of the proposed roadway the Design-Builder shall coordinate with University and King County when working in the vicinity of the existing Utilidor, 138-inch combined sewer and Regulator Station.

END OF CHAPTER G21
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