PROJECT DESCRIPTION:

The project includes the design of pavement repair and restoration work, ADA upgrades, and traffic signal upgrades for Nichols Boulevard between the north side of Louisiana Street (Magnolia St.) and south of Washington Way (between 26th and 25th Avenue). The improvements include the following:

1. Pavement surface rehabilitation for Nichols from curb to curb. Two options for surface rehabilitation are being considered; removing (planing) the existing AC pavement and overlaying with HMA; or removing (planing) the existing AC pavement and micro-planing the existing cement concrete street surface to restore and establish a finished street surface. The preferred option will be determined at the conclusion of project assessement with Task C, or during the initial phase of construction.
2. Based on visual inspection, failing cement concrete panels will be replaced. If the existing cement concrete street surface is in extensive disrepair, panels will be removed and replaced, and the entire street will be overlaid with an HMA surface.
3. The ramps and traffic islands will be replaced and upgraded to current ADA standards at the intersection of Nichols and Louisiana/Magnolia/27th.
4. The pedestrian traffic signal systems will be upgraded to current ADA standards at the intersection of Nichols and Louisiana/Magnolia/27th.
5. The ramps will be replaced and upgraded to current ADA standards at the intersection of Nichols and Washington/Fir/26th.
6. The vehicle and pedestrian traffic signal systems (poles and equipment) will be replaced and upgraded to current standards at Nichols and Washington/Fir/26th.
7. The ramps (east and west) will be replaced and upgraded to current ADA standards at the pedestrian crossings north and south of Hemlock Street on Nichols.
8. Surface utility (manholes, catch basins, valve boxes) will be adjusted as required by the surface improvements.
9. Other improvements such as pavement markings and traffic signal detection replacement will be incorporated into the design and plans.

The east-west and north-south routes for the pedestrian crossings at the intersections will remain unchanged.

SCOPE OF WORK:

Task A: Project Management and Coordination

Scope of Work:

1. Coordinate with the City Project Manager to confirm design elements and design issues, and coordinate PS&E documents.
2. Provide design team management and coordination.
3. Provide project updates (email or verbal) to City Project Manager.
4. Provide contract administration and management.

Assumptions:

1. City coordination meetings are included in the tasks listed below.

Task B: Topographic Surveying Services

Scope of Work:

1. Project Setup
   - Complete necessary survey research of the Cowlitz County records in order to evaluate the right of way lines and survey monuments at each location.
   - Mark area and request utility locates.
2. Survey Control Network
   - Establish horizontal and vertical control using a combination of GPS, optical instruments and leveling.
   - Locate existing property corners within the project area for monument preservation (See Task B.4 below).
3. Topographic Survey
   - Complete topographic survey of the project area. It is assumed that the topographic survey is limited to the area within the existing road right of way and within 30 feet of the existing curb ramp, as required by the design engineer to establish pavement drainage.
   - Topographic survey to include, but not limited to, the following items: trees, fences, visible utility structures, utility locate paint, landscaping, driveways, ramps, curb lines, sidewalks, AC core locations, and grade elevations.
   - Produce topographic design survey base map to include topographic survey items along with the apparent or estimated right of way lines and found survey monuments.
4. Contingency Task – DNR Monument Preservation and Documentation
   - A permit to "Remove or Destroy a Monument" will be documented and filed with the Washington State D.N.R. for existing monuments that are in danger of being destroyed.
   - HHPR will file the necessary permits with the state, and perpetuate the monuments, as needed.

Assumptions:

1. Vertical elevations based on GPS solutions.
2. Horizontal datum will be Washington State Plane South zone.
3. The number of monuments that will be impacted by this work associated Contingency Task B.4 is unknown. Six (6) monuments have been included in the scope and fee estimated.
4. Right-of-way research and resolution is not included in the scope of work. Estimation for the right-of-way locations will be based on the limited record research provided with Task B.1 and discovered with Task B.2.
5. Traffic control for survey work to be provided by the City.
6. Coring of existing AC (by City) to be completed prior to field survey work.

Task C: Project Assessment, Concept Design and Memo

Scope of Work:

1. Research and collect available aerial files, GIS information and system as-built and record drawings from the City for the development of the project base maps.
2. Walk the project site (with the City Project Manager and maintenance supervisor as required) to confirm street widths, pavement condition, past maintenance activities, options for project limits, and locations for manholes, catch basins, valve boxes, signal loops, signal j-boxes, drainage issues, potential repairs (sub-grade failures), and confirm pavement rehabilitation design approach.

3. As required, meet with City Project Manager after site visit to review and discuss project goals, pavement restoration methods, drainage issues and mitigation, construction traffic control, construction methods and potential phasing, and schedule milestones.
4. Identify any potential areas for street reconstruction due to sub-grade failures.
5. Based on site visit and visual pavement assessment, develop pavement restoration and repair recommendations for the project.
6. Identify traffic signal loop replacement requirements.
7. Identify pavement marking and striping work.
8. Develop construction cost estimates for the recommended work for pavement repair, ADA ramp and island replacement, pavement marking, striping, vehicle and pedestrian signal replacement, and loop replacement with "Gridsmart" video detection.
9. Identify guidelines for potential phasing and traffic control / detour options.
10. Utilizing Topographic Survey field data, City supplied aerial and GIS files, and as-built record drawings, HHPR will prepare the project area design base-maps including project limits, curbs, ramps, islands, signals, surface utility features, and pavement conditions for design and plan preparation.
11. Develop project basemap and prepare 30% Concept Plans.
12. Prepare "Project Design Memo" summarizing project findings, project limits, recommendations, and costs as noted above.
13. Meet with City Project Manager and Staff to present and discuss the Concept Plan and Design Memo and recommendations.

Deliverables:

1. Project 30% Concept Plan.
2. Project Design Memo.

Assumptions:

1. Attend up to two meetings (with project site visit) at the City of Longview with City Project Manager and Staff; One meeting to visit the site and review project goals, the other meeting to discuss the Concept Plan and Design Memo.
2. Pavement assessment and surfacing design based on visual inspection with City input, and does not include pavement section design based on pavement / subgrade testing and traffic data.
3. Task C.2 includes Mike Maloney (Principal Pavement Engineer) with GRI to be involved with the site visit and visual assessment of the existing pavement and discussion regarding the two pavement restoration options (HMA Overlay and Existing Cement Concrete Surface Reuse).

Task D: Preliminary Design (90%)

Scope of Work:

If the "Existing Cement Concrete Surface Reuse" restoration option is preferred, two designs for pavement restoration will be developed and plans prepared for bidding with an alternate bid schedule. The base scope will be to remove the existing AC surfacing, leaving the concrete street structure and surface as the finished riding surface. Failing cement concrete street panels will be replaced as part of the project scope. An "add alternate" will be designed and plans prepared to provide for the HMA overlay of the existing concrete street surface if the underlying concrete street surface is determined to be unsuitable as an acceptable street surface or structure. The grades and any layout changes for the ramp and island replacements will be designed when it is determined if the HMA overlay "add alternate" will be utilized.

1. Design pavement restoration/repair work, drainage adjustments, striping and pavement markings, and signal loop detection replacement as developed with Task F.
2. Design layout for ramp and island replacements.
3. Design grading for ramps and Island replacements. *Grading of ramps may be designed during construction.*
4. Visit the project area and review existing condition to assist with the design and plan preparation. Site visit may include meeting with the City Project Manager to discuss and resolve design issues.
5. Prepare preliminary plans and detail sheets (including HMA add alternate plans).
6. Review City's Bid Documents (sections I – III) and provide input.
7. Develop bid items and quantities (including HMA add alternate).
8. Prepare Special Provisions (section II).
9. Prepare construction cost estimate (including HMA add alternate).
10. Submit preliminary (90%) PS&E.
11. Prepare Traffic Control plans upon direction from the City.
12. Plans and specifications to be prepared using WSDOT Standard Specifications and City of Longview Standard Details.

Deliverables:

1. Preliminary (90%) design plans, specifications and cost estimate (PSE). PSE submittals include three sets of documents and digital PDF (PSE), and MSWord docs (specs).

Assumptions:

1. Pavement restoration work will be based on visual pavement survey, and does not include pavement testing and analysis. City to perform cleaning and crack sealing treatment of existing joints.
2. Detailed grading will be designed for the ramps and island improvements, and will completed either during the "design" phases or at the initial phase of construction. This will be depending on the preferred pavement rehabilitation option selected.
3. It is not anticipated that street pavement grades will be redesigned to provide for new drainage flow patterns or profiles to correct "street ride".
4. Preparation of detailed construction staging/phasing and detour plans will be provided as directed by the City. It is anticipated that special provisions will be prepared that outline the criteria and restrictions for traffic control, lane closures, and work hours.
5. Meet with City Staff and visit the project site once during this task.
6. Except as noted above, the City will prepare Construction Bid Documents.

Task E: Final Design

Scope of Work:

1. Meet with City Project Manager to address City review comments of the 90% documents, and visit the project area to discuss and resolve design issues.
2. Revise design and plans based on review comments following the preliminary plan (90%) review.
3. Prepare final bid-ready plans and detail sheets.
4. Update bid items and quantities, "Special Provisions" and "Scope of Work" special provision section.
5. Update construction cost estimate.
6. Submit final (bid-ready) PSE.

Deliverables:

1. Final bid-ready plans and detail sheets. PSE submittals include one set of original documents, digital DWG and PDF drawing files (PSE), and MSWord docs (specs).

Assumptions:

1. Meet with City Staff and visit the project site once during this task.

Task F: Traffic Signal Modification Design (Services by Global Transportation Engineering – GTEng)

Scope of Work:

1. Research and collect available information and system as-built drawings from the City. Information will be gathered on the Louisiana St/Nichols Blvd and Washington Way/Nichols Blvd intersections.
2. Conduct a field review with the City Project Manager and maintenance staff to field verify wiring and cable routing. Information will be used in developing the traffic signal modification plan and wiring diagrams.
3. Louisiana St/Nichols Blvd Intersection – Design traffic signal modifications to upgrade the vehicle loop detection to a "Gridsmart" detection system and make required modifications to existing push button locations to accommodate ADA Ramp and median island improvements.
4. Washington Way/Nichols Blvd Intersection - Design traffic signal modifications to upgrade the vehicle loop detection to a "Gridsmart" detection system and make required modifications to existing push button locations to accommodate ADA Ramp and median island improvements.
5. Design support included under this Task will be done according to the requirements of the WSDOT Design Manual. All traffic control devices included in the design will meet the requirements of the WSDOT, ADA accessibility requirements, Manual on Uniform Traffic Control Devices and City of Longview design standards.
6. For the 30% Design, plans will be developed that show removal of existing hardware and the preliminary above ground signal hardware locations. A 30% Engineer's Cost Estimate shall also be developed. GTEng will provide input and narrative for the Design Report.
7. For the 90%, and Final Design Levels and based on the approved signal hardware locations, GTEng shall prepare final traffic signal plans with guidance provided by the WSDOT Design Manual, WSDOT Traffic Manual, WSDOT Standard Specifications for Road, Bridge, and Municipal Construction and requirements identified by the City of Longview. Plans will include but are not limited to the following:
    - 2-Traffic Signal Removal Plans – (1"=20')
    - 2-Traffic Signal Modification Plans – (1"=20')
    - 2-Traffic Signal Wiring Schematics – (NTS)
    - 2-Traffic Signal Detail Sheets – (NTS)

    In addition to the plans, GTEng shall develop special provisions and an Engineer's Cost Estimate. The cost estimates will be based on Agency bid items and current average unit cost data. Special provisions will be based on the WSDOT Standard Specifications for Road, Bridge, and Municipal Construction and City of Longview Design Standards.
8. Up to three meetings in the City of Longview have been estimated under this Task. Meetings will consist of one kick-off meeting, a 30% Concept Review Meeting, and one field visit.

Assumptions:

1. Record drawings or field review with maintenance will be required to produce wiring schematics.
2. Washington Way/Nichols Blvd Intersection – Up to two poles strain poles will be replaced as part of the "Gridsmart" detection system.
3. Geotechnical data for mast arm pole foundation will be provided by others.
4. No temporary signal plans will be prepared for the DAP submittal.

Deliverables

1. 30% Design – Traffic signal removal plan, traffic signal plan, and an Engineer's Cost Estimate.
2. 90% Design - Traffic signal plans, Wiring Schematics, Details, Special Provisions and an Engineer's Cost Estimate.
3. Final Design - Traffic signal plans, Wiring Schematics, Details, Special Provisions and an Engineer's Cost Estimate.

Task G: Bidding Support Services

Scope of Work:

1. Respond to questions and issues that arise during bidding as requested by the City.
2. Prepare one addendum during bidding as requested by the City.

Task H: Construction Design, Staking and Support Services *(In Lieu of Task I)*

Scope of Work:

1. Attend pre-construction meeting led by the City Construction Manager.
2. Provide design clarification during construction of the design elements.
3. Review civil design related change order requests and provide recommendations.
4. Walk the project with the City Project Manager and Inspector at the substantial complete phase to assist with preparation of "final punchlist".
5. Provide survey staking for ramps, curbs, islands, and signal equipment.
6. Prepare as-built record plans based on "redline" plans from inspector and survey information.

Assumptions:

1. Visit the project area up to three times during construction to address construction issues, and once to identify "punch list" items as requested by the City.
2. Staking of HMA overlay (add alternate) is assumed not required.
3. Includes one site visit by Global Transportation Engineering related to traffic signal work.

Optional Task I: Construction Administration, Observation and Staking Services *(In Lieu of Task H)*

1. Coordinate construction activities with the City Construction Manager and Contractor.
2. Attend pre-construction meeting and weekly construction meetings organized and led by the City Construction Manager.
3. Review and process "request for information" from the Contractor.
4. Review and process "change order proposals".
5. Review and process "pay requests".
6. Review and process "project closeout" documents.
7. Provide daily construction observation services.
8. Prepare daily observation reports and project photo log.
9. Provide survey staking for ramps, curbs, islands, and signal equipment.
10. Prepare as-built record plans based on "redline" plans from inspector and survey information.

Assumptions:

1. Testing services by construction material testing company under separate City contract.
2. Staking of HMA overlay (add alternate) is assumed not required.
3. Construction working days assumed to be 35 days.
4. Assume up to 5 hours per visit for construction observation.
5. Assume up to 8 site meetings for task I.2
6. Assume up to 3 request for information.
7. Assume up to 2 change order proposals.
8. Assume up to 2 pay requests.
9. Includes one site visit by GTEng related to traffic signal work.