



**REPUBLIC**  
M I S S O U R I

**REQUEST FOR QUALIFICATIONS**

**ENGINEERING DESIGN FOR  
HIGHWAY MM EXPANSION  
JOB#8S0836B**

**FOR THE  
BUILDS DEPARTMENT  
CITY OF REPUBLIC, MISSOURI**

Garrett Brickner  
Engineering Manager  
204 North Main Street  
Republic, MO 65738  
(417) 732-3400

## **NOTICE TO PROPOSERS**

The **City of Republic, Missouri** is requesting the services of a consulting engineering firm to perform the described professional services for the project: **Engineering design for the 5 Lane expansion of State Highway MM from Interstate 44 south to James River Freeway**, including all plans and documentation required for construction, access management, utility coordination, surveying, ~~and~~ right of way acquisition, and NEPA clearance. Further details are included in Exhibit A. If your firm would like to be considered for these consulting services, you may express your interest by responding to the appropriate office, which is indicated on the attachments. Limit your letter of interest and Qualifications to no more than 30 pages. This submittal should include any information which might help us in the selection process, such as the persons or team you would assign to each project, the backgrounds of those individuals, and other projects your company has recently completed or are now active. It is required that your firm's Statement of Qualification (RSMo 8.285 through 8.291) be submitted with your firm's Letter of Interest or be on file with the City of Republic.

DBE firms must be listed in the MRCC DBE Directory located on MoDOT's website at [www.modot.gov](http://www.modot.gov), in order to be counted as participation towards an established DBE Goal. We encourage DBE firms to submit letters of interest as prime consultants for any project they feel can be managed by their firm.

It is required that your firm be prequalified with MoDOT and listed in [MoDOT's Approved Consultant Prequalification List](#), or your firm will be considered non-responsive.

**Submittals must be received by the City of Republic's Community Development Office** in a sealed envelope that is clearly marked, **RFQ J8S0836B ENGINEERING DESIGN FOR THE 5 LANE EXPANSION OF STATE HIGHWAY MM FROM INTERSTATE 44 SOUTH TO JAMES RIVER FREEWAY** no later than **3:00 PM CST Friday March 25, 2022**. As projects are identified in the subject area, the selection team will evaluate and score the firms.

There is no express or implied obligation for the City of Republic to reimburse responding firms for any expenses incurred through the preparation of responses to this Request for Qualification and no reimbursement will be made. The City reserves the right to cancel this solicitation at any time.

---

Garrett Brickner, Engineering  
Manager

Date

<b>City/County: <u>Greene</u></b>	<b>Route: <u>Route MM</u></b>
Federal Aid No:	
Location:	From I-44 to US 360 (James River Freeway) Republic/Greene County MO
Proposed Improvement:	Design and Engineering for 5 Lane Highway Expansion
Length:	~1.237 Miles
Approximate Total Project Cost:	\$10.2 Million
DBE Goal Determination:	10%
Consultant Services Required:	Please see exhibit A
Other Comments:	<p>Interviews or presentation will not be required for the consultant selection.</p> <p>Tentative Date of Consultant Selection-April 2022</p> <p>Fee Proposal will be required from the consultant within two (2) weeks of selection notification.</p> <p>Limited LiDAR Survey data will be provided by MoDOT. The consultant will be required to provide site specific surveying not covered by LiDAR or available survey data from MoDOT.</p> <p>Proposed Project Schedule*:</p> <ul style="list-style-type: none"> <li>• Access Management Study – August 2022</li> <li>• Preliminary Plans – November 2022</li> <li>• Right of Way Plans – February 2023</li> <li>• PS&amp;E Plans and Documents – February 2024</li> <li>• Anticipated Letting – April 2024</li> <li>• Construction Inspection – 2024 -2025</li> </ul> <p>*Submittals for Review will be required one month in advance of deadline listed above.</p>
Contact:	Name: Garrett Brickner Address: 204 N Main St. Republic MO 65738 Phone: (417) 732-3405 Email: Gbrickner@republicmo.com
Deadline:	<b><u>3:00 PM CST Friday March 25, 2022</u></b>
<p>•Submit: Letter of interest and Qualifications should not exceed <u>30</u> pages total. A page is defined as 8-1/2 by 11 inches and printed on one side. <u>3</u> copies of the letter interest should be received at the address and by the time specified.</p>	

Pursuant to the Brooks Act for Consultant Selection – the following criteria will be the basis for selection. Additional criteria can be added with the approval of Central Office Design- MoDOT.

#### **Rating Criteria w/Weighted Values**

Project Understanding & Innovation	25 Points Max
Past Performance	25 Points Max
Qualifications of Personnel Assigned	20 Points Max
General Experience of Firm	10 Points Max
Familiarity/Capability	10 Points Max
Accessibility of Firm & Staff	<u>10 Points Max</u>
	100 Points Max Total

#### **QUALIFICATIONS/REQUIREMENTS**

- (1) Individual and/or firm is expected to possess adequate organization, facilities, and personnel to ensure that services are provided to the City of Republic in a prompt and efficient manner.
- (2) Provide a description and the history of the individual and/or firm.
- (3) Provide a description of individual personnel qualifications relevant to this project.
- (4) Individual and/or firm must be available to the BUILDS Department Staff and/or Technical Review Team as needed, including email communication, conference calls, and special presentations conducted in-person or by conference calls as directed by the Community Development Director or their designee.
- (5) Provide recent experience from the last ten (10) years demonstrating current capacity, familiarity, and expertise in best practices. Experience that is similar in nature to the Scope of Services will be most useful.
- (6) Provide three (3) references for which the individual and/or firm has performed services within the past two (2) years that are similar in nature to the Scope of Services.

#### **SUBMITTAL REQUIREMENTS**

Qualification Submittals should be in the format stated below

Three (3) Original Submission consisting of:

- **Title Page:** Name of individual/firm, address, telephone number, name of contact person, email of contact person, and the date of the submission.
- **Transmittal Letter:** Addressed letter including a subject label containing the Services for which qualifications have been submitted and a statement of the contents of the Qualification Submittal with timestamp.
- **Letter of Interest:** any information which might help us in the selection process, such as the persons or team you would assign to the project, the backgrounds of those individuals, and other projects your company has recently completed or are now active
- **Qualifications:** Include the requirements as listed in Qualification/Requirements
- **References:** Include references as listed in Qualification/Requirements
- **Sample Documents:** Applicants are encouraged to include examples of previous work that bears similarity to that of the Scope of Services
- A digital copy of submittal documents contained on a flash drive and submitted with sealed submittals

# EXHIBIT A - SCOPE OF SERVICES

## Project Description

This scope of services has been developed as a , Local Public Agency (LPA) Project managed by the City of Republic (hereinafter referred to as “City”), Job No. J8S0836B to provide roadway improvements as an expansion of Route MM in Greene County from 2/3 lanes to 5 lanes with curb and gutter. The project limits extend from the eastbound ramp intersections of Interstate 44 south to the westbound ramp intersections of US 360 (James River Freeway). In addition to these improvements, it is anticipated that there will be required utility relocations requiring coordination that includes but not limited to water, sewer, gas and electric from multiple providers.

This contract shall be in two phases, with the potential for a third supplemental phase. Phase 1 consists of the access management study, surveying, and preliminary plans to obtain NEPA clearance to proceed with right-of-way acquisition. Public involvement will occur in this first phase. Phase 2 consists of development of right-of-way plans and acquisition services, PS&E plans and documents for bid letting, as well as preconstruction consultation. Phase 3, if elected by the City, may authorize construction inspection services as part of the contract.

**The CONSULTANT shall provide the professional, technical, and other personnel resources, equipment, materials, and all other things necessary to prepare an access management study and report, public meeting exhibits, preliminary plans for NEPA approval/proceed to A-date request, right-of-way plans and acquisition services, construction plans and bid documents, and construction inspection for MoDOT Project J8S0836B.**

The CONSULTANT shall perform these services, all in accordance with the standard practice of federal and state requirements as outlined in the MoDOT Engineering Policy Guide (EPG) Section 136 LPA Policy and using AASHTO Green Book and other resources as listed in the EPG. A more detailed description of the process and requirements used by MoDOT for completion of the design may be found in the EPG. The CONSULTANT is encouraged to review the appropriate sections of the manual to supplement the information contained in the scope of services and provide additional guidance in the requirements and expectations of the City for completion of the design services. Any deviations from Commission established procedures for design, construction or materials shall be approved by the City with consent from MODOT. This documentation shall include a brief justification for the deviation and the signature of the CONSULTANT project manager.

Preparation of a supplemental agreement is necessary prior to performance of any work, which is considered as additional services, not included in the original scope of services. The CONSULTANT will not be compensated for additional services performed prior to execution of a supplemental agreement. Only additional services, which are required due to changed or unforeseen conditions or are due to a change in the specified product, will be considered for inclusion in a supplemental agreement. Services rendered by the CONSULTANT, which are considered additional services, will be addressed as per the contract Consultant Agreement. The

provisions of the Consultant Agreement outlining the responsibilities of the CONSULTANT regarding the quality and accuracy of the deliverables and products shall apply to any decisions regarding determinations of additional services.

This scope of services is intended to be an accurate description of the items and tasks required for completion of the design of this project. However, each segment or intersection of the corridor is unique and may require more or less effort in an individual task to complete the design. The following information will explain and define in general terms the major design items of importance relating to this project. Where in conflict the EPG and LPA Policy will govern the requirements listed herein. All the elements of work that are necessary to satisfactorily complete the design of this project will be listed.

## I. Project Management and Coordination Tasks – Phase 1 & 2

The CONSULTANT shall perform the following Administration/Project Management and Coordination tasks:

1. Coordinate with City Project Manager to schedule and plan the kick-off core team meeting. Participate in the kick-off core team meeting, inviting any sub consultants that need to attend. All project submittals will be required to be submitted to the City directly for approval before submission to MODOT as needed for further approval. A MODOT representative will participate as a core team member
2. Schedule, plan and participate core team meetings consisting of City Staff and assigned representatives from MODOT. A total of four (4) virtual core team meetings is anticipated for Phase 1 of this contract. The CONSULTANT will establish and lead progress meetings once a month or as needed with the project's core team coordinated through the City's project manager. The purpose of the progress meetings is to review the project performance and other parts of the work necessary to keep the project on scope, schedule and within budget. The objective of each meeting is to provide stakeholders opportunity to provide input on the design of the project. The project's core team communication will be coordinated by the CONSULTANT to establish the necessary stakeholder engagement. The following shall be included as part of the project coordination.
  - a. Prepare minutes for all meetings and provide to core team. Provide all meeting materials to participants at least three business days prior to the meeting for review and provide meetings minutes of all meeting, including action items, within three business days after the meeting for review and concurrence.
  - b. Prepare monthly progress reports that include the following:
    - i. Past month's activities/accomplishments
    - ii. Pending issues and decisions
    - iii. Problem areas and recommended corrective actions
    - iv. Schedule summary status (chart showing baseline schedule vs. actual schedule)
    - v. Next month's planned activities/goals
    - vi. Summary of coordination efforts (including correspondence summaries)
  - c. All of the above include/address sub-consultant tasks.

3. The CONSULTANT will create a draft report of the Access Management Study as outlined below and submit an electronic version of the draft to the core team for review and comment. The CONSULTANT will conduct a charrette/workshop with the core team and other pertinent stakeholders to review the findings of the study and determine solutions.

## II. Access Management Study Report – Phase 1

The CONSULTANT's attention is directed to Section 940 of MoDOT's Engineering Policy Guide (EPG) for general guidelines and requirements for the access management study. The CONSULTANT will identify existing driveway site locations and conditions to determine areas prone to congestion and/or safety-related issues and make recommendations for future limitations of right-of-way access along the corridor. In cases where the access management criteria cannot be met, a detailed analysis is to be performed to determine the optimum solution. This solution is to improve safety and operations along the roadway and maintain uninterrupted flow on the transportation system and adequate access to the adjoining properties. Flexibility, good judgment, negotiation and compromise will be necessary to determine the right solution for each location.

1. The intent of the 5-lane widening is to accommodate left turn movements utilizing two-way left turn lanes. Dedicated right turn lanes are not anticipated for this project. However, lane alignments must be analyzed to determine where lane additions would be effectively designed and implemented along the corridor with respect to parcel and existing right-of-way constraints. Geometric concepts are as follows:
  - a. Establish and optimize horizontal and vertical geometry.
  - b. Estimate lane widths, storage lengths, and structure locations and sizes.
  - c. Estimate locations of traffic barriers and traffic control devices, as applicable.
  - d. Estimate area of right-of-way needs. It is expected that the locations of some existing driveways may be altered for preferred access management to meet the objectives of the corridor widening project.
  - e. Identify potential design exceptions that may be required.
  - f. Identify preferred driveway or access roads locations as a limited access right-of-way corridor, inventory of existing driveways, and recommendations for relocation of those existing driveways for improved access to the corridor.
  - g. Estimate and identify utility relocations and impacts.
  - h. Evaluate constructability and feasibility of the alternatives.
  - i. CONSULTANT will prepare AutoTurn simulations and exhibits as directed by MoDOT to demonstrate traffic movement through any upgrades to intersections and turn-lane movements.
2. The CONSULTANT shall review "as built" plans, aerial photographs, manuscripts, etc. and other information to be provided by the COMMISSION. The CONSULTANT shall perform a field investigation to assure that there have been no significant changes since the information was recorded or obtained. The CONSULTANT shall incorporate any significant changes found during the field investigation as part of this contract, and document the extent of

changes, location of new improvements (driveways, intersection quadrant, etc.), project exceptions and utility improvements.

3. The CONSULTANT shall summarize the determinations made during the field evaluation in a Access Management Report. The CONSULTANT shall include the following:
  - a. The CONSULTANT shall evaluate right of way impacts of the proposed improvements and the need for additional right of way, permanent easements and temporary construction easements.
  - b. The CONSULTANT will evaluate the location of the proposed improvements for existing utility conflicts and will develop and document the need for relocation and work with the MoDOT utility section to develop a cost estimate for relocation to be included in the preliminary cost estimate.
4. Estimate shall include construction cost, right of way costs, specialty costs for pedestrian access, signing, and lighting revisions, and potential for any utility adjustments. The consultant shall prepare an estimate using BidTabs.Net format, utilizing district, county and statewide averages for item costs. If needed, square foot right of way cost estimates and utility relocation cost can be provided by MoDOT.
5. The CONSULTANT shall develop exhibit drawings to be included in the Access Management Report, and to the quality and detail that they can be included in any public involvement efforts.

### III. Survey Services – Phase 1

The CONSULTANT shall review "as built" plans, aerial photographs, manuscripts, etc. and other information to be provided by MoDOT and make the necessary field investigations to assure that there have been no significant changes since any available MoDOT survey was recorded or obtained.

1. The CONSULTANT shall provide all land survey control information for each project, including benchmarks and alignment reference ties, horizontal and vertical survey control.
2. The CONSULTANT shall be responsible for topographic survey and all surveying items necessary to provide preliminary plans, right of way plans, and final plans.
3. The CONSULTANT shall provide all property lines and ownership, other land survey information, city limits, existing right-of-way and MODOT easements. Easements not owned by the COMMISSION on private property shall be provided by the CONSULTANT, if new right of way or temporary easement will be required for the project at that location. These can typically be obtained by a title commitment. The CONSULTANT shall incorporate(draw) all recorded or known easements not owned by the COMMISSION (including utility easements) into the project drawings (microstation files).



4. MoDOT will provide any available survey data for the entire corridor. Surveying for Areas beyond that survey for design purposes will be required by the CONSULTANT. Currently, there is no LIDAR survey available from MoDOT within the corridor, other than within the right-of-way limits of US 360 and I-44.
  - a. The CONSULTANT shall submit a Survey Request to MoDOT that includes detailed information on any available survey data needed for the project.
  - b. The CONSULTANT shall provide an exhibit (pdf map or kmz file) that shows the outline and/or location of the requested survey.
5. The CONSULTANT will be responsible for providing any additional needed survey for the 5-lane additions associated with the corridor widening project.
6. The CONSULTANT shall follow MoDOT's Surveying Policies and Guidelines as stated in the Engineering Policy Guide (EPG). The CONSULTANT is directed to review EPG Section 238.
7. The survey data shall be based on the Missouri State plane coordinate system, Central zone. The modification factor shall be determined by the CONSULTANT in accordance with the Missouri Coordinate System of 1983 Manual for Land Surveyors. All elevations and vertical control shall be based on NAVD 88.
8. The CONSULTANT shall verify or establish horizontal and vertical control with reference to MoDOT's RTK coordinate system. Horizontal and vertical control to be based on the Missouri State Plane Coordinate system, Central Zone, NAD83, NAVD 88.
9. If necessary for the project, the CONSULTANT shall establish or re-establish any necessary section corners or land-ties.
10. The CONSULTANT shall locate all Section Corners, Quarter Section Corners and personal property monuments within project limits.
11. The CONSULTANT shall coordinate utility locates with Missouri One-Call and locate utilities as marked by One-Call (visible from existing paint marks, flagging) and incorporate utilities as shown by utility owner as-builts if not marked by Missouri One-Call. Sewer structure information (top, flow-line and pipe sizes) of all sewers and cross road culverts within the project limits and the next upstream and downstream structures shall be surveyed. Locate pavement markings, edge of pavement and treed area.
12. The CONSULTANT shall perform a land survey of the Right of Way corridor for the project compliant with the Missouri Standards for Property Boundary Surveys.
  - a. The survey plan shall include a land description of the highway Right of Way corridor. This description shall:
    - i. Be based on the location survey.

- ii. Be concise.
  - iii. Contain title identity.
  - iv. Contain bearings, measured distances and highway stationing in ground units.
  - v. Contain measurement data that describes the geometric area of the corridor and closes mathematically.
  - vi. Contains information that does not lend to alternate interpretations.
  - vii. Be written to facilitate the relocation of the corridor by a professional land surveyor.
13. The CONSULTANT shall perform the layout of the Right of Way corridor with the placement of monuments at the locations of line breaks in the Right of Way. Monumentation in compliance with the standards for the permanent monuments including a cap stamped with the department's name shall be placed.
14. The CONSULTANT shall prepare property exhibits and tract maps. The CONSULTANT will prepare signed and sealed legal descriptions, compile the Location Survey Plan, stake proposed easement and right of way information, and monument new permanent right of way boundaries.
15. The CONSULTANT shall provide topographic survey including contours at one-four contour intervals.
16. All topographic surveys shall be prepared with GeoPak SS4 or OpenRoads Designer software as applicable. The topographic survey drawing shall be prepared in a 2D drawing file. CONSULTANT shall prepare a 3D TIM model (DTM) and include a separate drawing with 3D points, break lines and triangles which was used to prepare the TIN.
17. The survey drawing(s) shall include all topographic features and utilities and existing R/W and permanent easement boundaries. All topographic and boundary survey drawings and documentation shall be prepared using MoDOT standards.
18. The CONSULTANT shall be responsible for staking and re-staking tentative right of way on individual properties, as required by City staff, during right of way negotiations and acquisition phase of the project.
19. The CONSULTANT shall be responsible to monument new right of way and provide a location survey.
20. The CONSULTANT will not be responsible for re-establishing any monuments destroyed during construction of the project.
21. The CONSULTANT shall provide signed and sealed legal descriptions for any easement or land acquisition necessary.

22. The CONSULTANT shall complete and record the required location survey and final documentation of new permanent right-of-way points after construction is complete.
23. Upon completion of survey files approved by the City and MoDOT, all electronic survey drawings and documentation shall be provided to MoDOT's Survey Manager for state recordkeeping.

#### IV. Utility Coordination – Phase 1 and 2

The CONSULTANT shall lead the effort on utility coordination and shall work with the professional land surveyors for the following project documentation and plan details:

1. Review completed topographic surveys to develop preliminary plans, right-of-way plans and final roadway plans, including any necessary improvements and existing topography within the limits of the project. Topographic surveys shall consist of pertinent topographic features, but not limited to:
  - a. existing drainage and sanitary structures (pipes, types, flowlines, sizes) where pipe improvements were identified during the concept and preliminary phases
  - b. all identifiable utility locations and equipment at signalized intersections and longitudinal areas in between intersections that are adversely impacted
  - c. existing signal, lighting and any ITS equipment inside slope limits
  - d. sign posts, size, identification and photo log
2. Field locate visible above ground evidence of utilities located within the project area. "Missouri One Call" and MoDOT will be contacted and a formal request will be submitted for marking the locations of member utilities. In the event that "Missouri One Call" fails to respond, in whole or in part, to the formal request, underground facilities, structures, and utilities will be plotted from surveys and/or available records. The locations of all utilities are to be considered approximate. There may be other utilities, whose existence may not be known at the time of the survey.
3. Consult with the City and MoDOT's Utility Section to coordinate with surveyors on underground utility locates.
4. Coordinate to obtain One-Call tickets to have utilities located in identified areas of proposed project. An estimate of 1 MO One Call ticket for every 400 linear feet of sidewalk is reasonable for preliminary design. Additional MO One Call tickets after preliminary design is complete will be required where additional items were added to the final design plans compared to the concept design plans.
5. Coordinate with the City and MoDOT's Survey Section to complete utilities survey and verify completeness and accuracy of utility topographical survey. Service connections shall be included as part of the utility survey.

6. Coordinate with utility companies on the development of the plan of adjustment and obtain cost estimates for reimbursable utilities for the City and MoDOT's Utility Section approval.
7. Show the existing utility facilities and plan of adjustments for proposed utilities facilities in the contract plans. (plans sheets, cross sections, culvert sections).
8. Work with the various utility owners to determine if any needs for renewals within the project limits.
9. Coordinate relocation of each impacted utility on the project during design and construction.
10. Prepare special utility sheets as necessary (including utility profile and exhibits).
11. Assist MoDOT's Utility Section in the preparation of agreements.
12. Identify locations for power service needs, prepare service request for submittal and coordinate with the power company to obtain estimated costs.
13. Coordinate with MoDOT's Utility Section regarding the need for test holes and initiating the potholing with the applicable utility owner. Provide test hole information at critical utility locations to MoDOT's Utility Coordinator.
14. Prepare utility job special provision and information for the preparation of the Utility Status Letter for MoDOT approval.
15. Provide assistance and answer utility related questions during the construction phase for Citystaff and the roadway contractor.
16. Review City and MoDOT excavation permits in project area for conflicts with design and construction phase. This includes new utility installation, modifications to existing facilities, and any developer driven improvement within the project limits.

## V. Preliminary Plans – Phase 1

The CONSULTANT's attention is directed to Section 235 of MoDOT's Engineering Policy Guide (EPG) for general guidelines and requirements for preliminary design. It is the intent of this scope of services for Phase 1 that the CONSULTANT prepares preliminary plans at a quality that gains permission from MoDOT's Environmental Section and SHPO to proceed to negotiate R/W for acquisition and approval to proceed with requesting an A-date required for NEPA clearance for the project.

1. The City shall furnish the CONSULTANT the pavement design recommendation (if needed) and general special provisions to be used in the preliminary plans to be approved by MODOT.
2. The CONSULTANT shall prepare and submit for approval any design exceptions.
3. The CONSULTANT shall prepare storm water drainage, hydrologic and hydraulic studies and preliminary drainage plans, including crossroad drainage.
4. The CONSULTANT shall prepare a conceptual traffic control plan with an outline for construction staging conforming to the requirements of the MUTCD and the EPG. This plan shall also be described in the Preliminary Plans letter of transmittal.
5. At a minimum, the following shall be submitted for the Preliminary Plans:
  - a. Preliminary Plan Title Sheet
  - b. Typical Sections
  - c. Plan Sheets at 1" = 20' horizontal (or different scale as determined by The City Project Manager for clarity) and extend to 100 feet beyond the project limits.
  - d. Special Sheets for geometrics and special design features.
  - e. Traffic control and staging concept.
  - f. Preliminary culvert sections for storm sewers at 1"=10', horizontal and vertical or as determined by The City project manager.
  - g. Preliminary cross sections at 25-foot intervals, 1"=10', horizontal and vertical or as determined by The City project manager, including entrance sections with existing and proposed grades and intermediate cross sections as necessary to accurately estimate earthwork.
  - h. Tentative Easement and Right of Way limits with property lines, acquisition areas and dimensions/offsets, and ownership information.
  - i. Plans showing anticipated permanent and temporary best management practices for erosion control.
6. As applicable, the CONSULTANT shall use the Southwest District ADA Streamlining processes.
7. The CONSULTANT shall prepare the preliminary plan construction cost estimate.
  - a. The City will prepare the right of way cost estimate based on the right of way requirements furnished by the CONSULTANT, if needed.
  - b. The CONSULTANT shall prepare the cost estimate for any utility impacts. The CONSULTANT shall include utility impacts in the plans and construction cost estimate for those utility impacts that are determined to be included in the construction contract.
8. The CONSULTANT shall prepare the letter of transmittal for the preliminary plans. City will provide the MoDOTtemplate upon request.

9. The CONSULTANT shall complete the preliminary plan checklist. The City will furnish the MoDOT checklist upon request.
10. The CONSULTANT shall arrange for a design field check to review Preliminary Plans with the City. The CONSULTANT shall make any necessary revisions to the Preliminary Plans as determined by this design field check.
11. The CONSULTANT shall provide one (1) electronic copy of the preliminary plans, construction cost estimate, preliminary plan checklist and letter of transmittal to The City electronically for review and approval with subsequent review and approval by MoDOT.

## VI. Environmental Services – Phase 1 and 2

1. The CONSULTANT shall submit the preliminary stage RES upon approval of the access management report and upon confirmation of proposed scope of corridor. The CONSULTANT shall note any known right of way or easement acquisition needs in this submittal (Phase 1) and attach to the RES an electronic copy of the preliminary plans in pdf format.
2. The CONSULTANT shall submit the Right of Way stage RES upon approval of the preliminary plans (Phase 2).
3. The CONSULTANT shall submit the final stage RES at least 90 days prior to the PS&E deadline (Phase 2).
4. MoDOT will undertake any necessary environmental studies, including tasks associated with an environmental assessment such as archaeology, historic properties, delineation of wetlands, development of wetland mitigation measures, noise studies, and preparation of necessary maps. The CONSULTANT will coordinate design activities with the City and MoDOT related to environmental studies, including preparation of exhibits necessary for NEPA clearance.
5. Based on the construction of widened and expanded lanes within close proximity of noise sensitive receptors, a noise analysis will be required and provided by MoDOT. It is **not** anticipated that sound wall design will be required by the CONSULTANT for this project.
6. The CONSULTANT shall review the comments provided by the City and MoDOT's Environmental Staff with each RES submittal. The CONSULTANT shall provide any requested information to the City and MoDOT's Environmental Staff.. Items that may need to be addressed include historical buildings, bridges and sites, archeological sites, conversion of farmland, endangered species, wetlands and parklands.
7. MODOT will coordinate with the SHPO regarding potential cultural, historical, and archeological issues.
8. If more than twelve (12) months lapse between required RES submittals, the CONSULTANT shall submit a new RES.

## VII. Public Involvement – Phase 1 and 2

The City will be the main point of contact for receiving calls from the public. The CONSULTANT will interact with external agencies and the public as required to accomplish the scope of services of this contract.

1. The CONSULTANT will be required to attend meetings with regulatory agencies, organizations, county officials, local municipalities, property owners and other entities as required. It is anticipated that four meetings with the community will be held. The first meeting will involve the access management plan anticipated along the corridor, as well as potential right-of-way acquisitions for the various parcels affected.
2. The CONSULTANT will be required to attend public meetings. As determined by the City public meetings may be held as virtual, pending status of the COVID-19 pandemic. It is anticipated that one design public meeting will be required for each project phase.
3. The CONSULTANT shall participate in planning meetings with core team personnel before meetings and public meetings.
4. The CONSULTANT shall provide exhibits for public meetings based on conceptual/preliminary drawings as requested by the City.
5. The CONSULTANT shall provide the City and MoDOT a database containing all property owners contiguous to the project, or within a reasonable distance of the project. The database shall be of similar format and contain the same information as the example database provided by the COMMISSION to the Consultant. The database shall also designate whether the individual is someone the Commission will need to obtain right of way and/or easements from.
6. The City shall coordinate with MoDOT to advertise for meetings, obtain the meeting location and room, produce copies of handouts and perform mass mailings of notices of meetings or hearings, and newsletters.
7. The CONSULTANT shall record and prepare the meeting minutes of the public meeting and shall prepare the transcript, if applicable.

## VIII. Right of Way Plans – Phase 2

1. The CONSULTANT will provide title insurance information for parcels where new right of way is being acquired, prepare right of way appraisals and secure the necessary right of way by negotiation or condemnation, if necessary, for construction of this project. Any ownership deeds, easements deeds, subdivision plats, etc. needed or used in the development of existing property lines for the right of way plans will be furnished by the CONSULTANT. The CONSULTANT will also provide last ownership deed of record and existing utility easement deeds for all parcels that have a new acquisition of easements or new land.
2. The CONSULTANT shall be responsible for staking and re-staking tentative right of way on individual properties, as required by City staff, during the right of way negotiation and acquisition phase of the project.

3. The CONSULTANT shall prepare right of way plans, which may be separate drawings from those used for design and construction details. The right of way plans shall show alignment, geometric design, removal of improvements, drainage facilities, property lines and ownership,  $\frac{1}{4}$   $\frac{1}{4}$  section lines, subdivision lot lines, other land survey information, street lines and existing right of way and easements.
4. The CONSULTANT shall include any plan details, which will require additional right of way or easements during the construction phase of the project such as bypasses, temporary erosion control, etc. Areas of new right of way, permanent easements and/or temporary easements required from each individual property owner must be denoted underneath the Parcel Number and Name on each individual tract.
5. Right of way plans shall be submitted to the City for review and approval as required by negotiated schedule followed by review and approval as required by MoDOT. The right of way plans shall be at the same scale as the construction plans. The right of way plans shall include any design details that control the width of right of way and necessary easements.
6. The following minimum design features shall be included on the right of way plans:
  - a. Title sheet with appropriate project limits, access note and traffic data completed.
  - b. Typical Sections
  - c. Plan and Profile Sheets at 1"=50' horizontal and 1"=10' vertical. The CONSULTANT shall finalize and detail the horizontal and vertical improvements, and shall clearly describe important design notes and features on all plan sheets in standard MoDOT format.
    - i. New right of way lines and all easements shall be dimensioned from the centerline, or cross road centerlines, if necessary. Bearings and distances on the right of way lines will be required on the final location survey.
    - ii. Construction limits (slope lines); drainage facilities; entrances and their reference location along with existing and proposed entrance grades, width and type; property owners, with areas of new right of way, easements and remaining property size; centerline bearing, ties to legal land corners from centerline stations with notation for corner witness by a registered land surveyor; existing utility locations and easements, including replacement utility easements; horizontal curvature information; and proper right of way symbolization for new right of way (access control) and easements, including areas which may be required to accommodate temporary erosion control.
    - iii. Section, Township, Range, and/or U.S. Survey information on each plan sheet near the title block or appropriate survey/section line. The section line information will be provided to the  $\frac{1}{4}$   $\frac{1}{4}$  section lines.
  - d. Reference Points.
  - e. Driveway Profiles – CONSULTANT shall develop and layout horizontal and vertical alignments for all driveways within the project limits.
  - f. Special Sheets as necessary.
  - g. Traffic Control Sheets.
  - h. Erosion Control Sheets.
  - i. Signing Sheets.
  - j. Pavement Marking Sheets.
  - k. Culvert Sections/Storm Drainage – CONSULTANT shall finalize size and length of any culverts and place description on plan sheets.



- l. Cross sections at 25-foot intervals, including additional sections as required to accurately define construction limits. The CONSULTANT shall develop cross sections for the purpose of determining right of way impacts/takes and quantities.
  - m. Job Special Provisions as applied to right-of-way acquisition and utility coordination.
  - n. Work Day Study to demonstrate construction schedule, by work days and calendar days, with specific milestones and tasks.
- 7. The CONSULTANT shall prepare legal descriptions of right-of-way to be acquired for the project. Descriptions will reference the parent tract, but shall only describe in metes and bounds format (along with areas) those lands being purchased by MoDOT. Both written descriptions and right-of-way exhibits shall be prepared and reviewed by a land surveyor registered in the state of Missouri.
  - a. The CONSULTANT will locate all section and US Survey lines,  $\frac{1}{4}$   $\frac{1}{4}$  section lines, and Township and Range lines, legal land corner, and all property lines within the project limits. The CONSULTANT shall obtain all available title information and subdivision plats.
  - b. The CONSULTANT will provide to MoDOT a digital file in GEOPAK format of preliminary alignment points to include: the beginning of project; the ending of project; all intersection points; all points of curvature and points of tangency; all radius points; all equations; and all traverse locations. The file shall indicate: point identification; X, Y, and Z coordinates; point identification codes compliant with MoDOT feature codes; and the alignment stationing for each point.
  - c. The CONSULTANT will identify utility owners, type of facility, size of structure and locate all utility lines and structures within the project limits, based on visible features, record information provided by utility companies, and facilities field-marked by the utility companies. Needed facilities will include water, electric, cable, telephone, and septic service lines to residences and commercial buildings, including but not limited to wells, cisterns, and septic tank drain fields.
  - d. The CONSULTANT will be responsible for verification, certification, furnishing, and recording of all legal land corners. The CONSULTANT will tie the approved corners into the centerline.
  - e. The CONSULTANT will provide all found right-of-way and easement limits of record along Route MM and intersecting city or county roads along the project limits, including all found right-of-way markers.
  - f. MoDOT will provide a legible copy of all original field survey notes, including all electronic files in ASCII format of all surveyed points indicating the following: point identification; X, Y, and Z coordinates; point identification code compliant with MoDOT feature codes. The CONSULTANT will provide a legible copy of all original field survey notes for supplemental field survey and boundary survey.
- 8. If needed, the CONSULTANT shall schedule a meeting and/or field check with the City to review right of way plans prior to the completion of the right of way plans. The CONSULTANT shall make any necessary revisions to the right of way plans as determined by this meeting and field check.
- 9. The CONSULTANT shall provide an updated construction cost estimate for the Right of Way design stage.
- 10. The CONSULTANT shall submit the Right of Way plans and construction cost estimate with a letter of transmittal. The letter of transmittal shall be provided as a word document.

11. The CONSULTANT shall submit the Right of Way Plan checklist. The City shall provide the checklist to the Consultant upon request.
12. The CONSULTANT shall be responsible for making all revisions to the right of way and construction plans due to negotiations with the property owners in an effort to acquire right of way.
13. The CONSULTANT shall provide one (1) electronic set of fully signed and sealed right of way plans for core team review and approval.
14. The CONSULTANT shall provide one (1) electronic set of approved Right of Way plans and cross sections to be used by MoDOT's Utilities Section. The known utilities shall be color-coded on the plans.
15. If needed, the CONSULTANT shall schedule a meeting and/or design field check to review right-of-way plans with MoDOT right-of-way personnel and the City prior to completion of the right-of-way plans. The CONSULTANT shall make any necessary revisions to the plans as determined by this design field check.
16. The City shall review, approve and certify the right of way plans as completed by the CONSULTANT.
17. The CONSULTANT will be responsible for the preparation of the location survey plat for the entire right-of-way corridor.
18. The CONSULTANT will prepare right of way appraisals and secure the necessary right of way by negotiation or condemnation, if necessary, for construction of this project as outlined below.

## IX. Right-of-Way Acquisition – Phase 2

Collaboration with property owners and other stakeholders is the most effective method to achieve improvements that satisfy both operational and economic needs. The specific services required for this project will cover the range of those typically provide by a full-service land acquisition and relocation assistance consultant. Some tasks listed herein may be unnecessary, and, if necessary, others of a more specialized nature may be added. The CONSULTANT agrees to perform specific services in accordance with section 136.8 of LPA manual to include, but not be limited to the following:

1. Public Involvement.
  - a. The selected consultant, with the assistance and guidance of the City, may be required to provide all necessary handouts/graphics and attend or participate in informational presentations regarding ROW procedures provided by the City and MoDOT, at formal public hearings, or at one (or more) separate public meetings or virtual meetings.
2. Pre-Acquisition Meeting and Progress Report Meetings

- a. The selected consultant and their sub consultants may be required to participate in a pre-acquisition meeting prior to the start of a project. This meeting will be with the City Project Manager, MoDOT District Project Manager, District ROW Manager and may include other MoDOT Support Staff. This meeting will be to discuss project timelines, project milestones and review the scope of work responsibilities.
- b. Selected Consultant will be required to participate in a minimum bi-weekly progress meetings with the City or as needed.

## X. Final Design – Phase 2

The CONSULTANT shall prepare all plans through use of a Computer Aided Drafting (CAD) program, and provide the plans in pdf and dgn format. The CONSULTANT shall conform to the Missouri Department of Transportation Specifications for Computer Deliverable Contract Plans as referenced in the MoDOT EPG. The CONSULTANT shall use Microstation and OpenRoads Designer software.

1. The CONSULTANT shall prepare storm water drainage, hydrologic and hydraulic studies and detail drainage plans, including both alternate pavements and crossroad drainage, for review and approval the City before inclusion in the final design plans.
2. The CONSULTANT shall furnish design plans, which show approved right-of-way, drainage facilities, signing plans, striping plans, lighting plans (as applicable), cross sections and roadway design features, and bid quantities for handling and coordination with the utility companies' existing facilities, and proposed plans of adjustments. The CONSULTANT shall revise plans to adhere to all utility company standards and requirements, and make necessary utility plan revisions as become necessary during final plan design and approvals.
3. The CONSULTANT shall furnish design detailed traffic control plans with an outline for construction staging conforming to the requirements of the MUTCD and the EPG, and as may be supplemented by samples provided by the City. The traffic control plan requires submittal to City for review and approval prior to inclusion in the final design plans.
4. If determined necessary, a field check shall be held with CONSULTANT and City staff prior to completing final design plan quantities. The CONSULTANT shall make any necessary revisions to the final plans as determined by this design field check.
5. The CONSULTANT shall utilize MoDOT's Southwest District ADA Streamline typical sections and methods of design and quantity calculations.
6. The CONSULTANT shall utilize MoDOT's Southwest District Temporary Traffic Control streamline plans.
7. The CONSULTANT shall prepare detailed temporary erosion control plans for review and approval before inclusion in the final design plans.
8. The CONSULTANT shall prepare computations for all design plan quantities. All plan quantities shall be shown on the Quantity Sheets, and by construction stage, if applicable.

The format for these sheets shall be furnished by the City. Specialty items may have separate sheets for quantity tabulations.

9. The City shall prepare for review and approval by the City all General Job Special Provisions, which are to supersede the Missouri Standard Specification for Highway Construction. A brief reason for the deviation from the standard plans and specifications should also be provided. The CONSULTANT shall prepare only Job Special Provisions related to design elements shown in the plans. The City shall provide any JSPs that are required as a result of right of way acquisition, utility impacts and environmental issues.
10. The CONSULTANT shall prepare for review and approval any design exceptions required for construction of the project.
11. At a minimum, the final design plans shall include:
  - a. Title Sheet
  - b. Typical Sections showing optional pavement types.
  - c. Quantity Sheets – the latest version of the temporary traffic control summary sheet
  - d. Plan Sheets at 1"=20' horizontal (or different scale as determined by MoDOT Project Manager for clarity). Plan sheets shall include all necessary adjustments to signing and proposed pavement marking.
  - e. Profile Sheets at 1"=50' horizontal and 1"=5' vertical or as determined by MoDOT project manager.
  - f. Reference Points
  - g. Coordinate Points Sheet
  - h. Culvert Sections at 1"=10', if needed
  - i. Special Sheets for geometrics or any special design features.
  - j. Temporary Traffic Control Plan Sheets at 1"=20' horizontal.
  - k. Erosion Control Sheets at 1"=20' horizontal.
  - l. Culvert Sections for storm sewers at 1"=10', horizontal and vertical or as determined by MoDOT project manager.
  - m. Lighting Plan Sheets, if needed
  - n. Signing Plan Sheets, if needed
  - o. Pavement Marking Plan Sheets at 1"=20' horizontal, or as determined by MoDOT project manager.
  - p. Earthwork Quantities, Cross Sections at 25' intervals, 1"=10' (1:100), horizontal and vertical, including entrance sections with existing and proposed grades and intermediate cross sections as necessary to accurately estimate earthwork.
  - q. Tabulation of Quantity Sheets
  - r. Job Special Provisions in electronic format readable in MoDOT's current word processor
  - s. File with the bid items and quantities as generated by COMMISSION's Estimate Program
  - t. Equipment and Materials List D-15 – generated from MoDOT's Estimate BidTabs.Net Program
  - u. Construction Workday Study
  - v. Workzone Impact Analysis Spreadsheet
  - w. Traffic Management Plan
  - x. Electronic Deliverables as per the EPG
  - y. District Contract Plans (QA/QC) or PS&E Checklist.
12. Additional plans and information may be required to complete the Final Design Plans. With the submittal of the Final Design, the CONSULTANT shall also provide the City a statement

that an internal quality control check has been conducted and to the best of the CONSULTANT's knowledge the final design plans are free of gross errors, misleading or confusing typos, and includes adequate information to construct the project.

## XI. Bidding and Construction – Phase 2

1. After the Final Design Phase of the project is completed the CONSULTANT shall be available to the City to discuss and interpret the plans and specifications during the bidding and construction phase of the project as determined necessary by the ENGINEER. During this phase of the project the CONSULTANT will also be required to attend the virtual pre-bid conference/pre-construction meeting. If a partnering meeting is held between the construction contractor City personnel, the CONSULTANT will be required to attend.
2. If issues arise during construction necessitating plan corrections or clarifications by the CONSULTANT, there will be a direct line of communication established between the City Construction Office and the CONSULTANT. The CONSULTANT will immediately inform City Project Manager of any recommendations or clarifications made to the Construction Office.
3. The CONSULTANT shall provide miscellaneous support and answer contractor requests for information.
4. In the instance that additional rehabilitation scope items are added during the construction phase and require design by the CONSULTANT, the communication system described above shall apply.
5. It is anticipated that City staff will be conducting construction inspection services for the project. In the event that these services require outsourcing, a separate supplemental agreement will be negotiated with the CONSULTANT for consideration of inspection services as outlined below.

## XII. Construction Inspection Services – Phase 3

1. Purpose
  - a. The CONSULTANT shall provide construction inspection, materials testing, and other services as needed. Support services will be assigned by the City Engineer as described within this Exhibit..
  - b. The CONSULTANT shall provide support services as requested throughout the following phases of the Project: CONSTRUCTION.
  - c. The CONSULTANT shall provide PROJECT related services as described herein.
    - i. The consultant shall provide to MoDOT qualified inspection services to supplement The City;s Engineer and staff on the inspection of the above referenced project(s).
    - ii. The services provided shall include Quality Assurance (QA) verifications on all items of installed work and QA tests as outlined in the attached Contractor Quality Control Job Special Provision (JSP). Testing frequencies shall be no less than as

defined in the Inspection Testing Plan (ITP) and in accordance with the applicable Missouri Standard Specifications for Highway Construction. Above referenced documents can be found at <https://www.modot.org>.

- iii. Any testing performed by the consultant can only be performed by personnel certified for the tests being conducted through MoDOT's technician certification program AND testers must carry current credentials validating their certification
- iv. The consultant's inspector shall be present on the jobsite daily to capture necessary diary information for progress monitoring. For periods of work between critical installations and at certain hold points, the inspection time spent on the project (while daily) can be minimal if approved by the City Engineer
- v. Daily, the inspector shall provide/perform:
  - A daily work report entered into AASHTOWare Project documenting all construction activities on the project.
  - Any QA tests required by the ITP for the work being performed.
  - All test results shall be recorded in AASHTOWare Project in the proper format as defined by the Sampling Checklist and Materials Summary.
  - A work zone traffic control review of all TCDs associated to the project to ensure compliance with the plans and MUTCD. All reviews will be maintained and available for review upon request by the RE.
- vi. On a semi-monthly basis, the inspector may be required to run an AASHTOWare Project estimate and submit to the RE for review.
- vii. As needed, develop change orders to document overruns/underruns on the project to ensure prompt payment to the contractor.
- viii. At project completion, the inspector shall provide the RE with a set of marked up Final Plans, including final quantities, for each Project in the Contract, and in accordance with direction given by the Resident Engineer.
- ix. After completion of ADA work at each location, the following ADA checklist shall be completed by the inspector and provided to the Resident Engineer (RE) for Review and Approval. ADA exceptions can only be approved by the MoDOT RE. [https://epg.modot.org/files/1/1a/136.9.4\\_Mar\\_2021.docx](https://epg.modot.org/files/1/1a/136.9.4_Mar_2021.docx)
- x. Expected allocation of resources are as follows:
  - Staffing of above referenced projects will be confirmed by the City Engineer however it is anticipated inspection services will be needed from Bid Award to Project Closeout. Services may be extended or modified by supplemental or an amendment to the contract amount.
  - The consultant should expect to dedicate 1 individual for a total of 40 hours per week for the duration of the project(s) except for intervals of time that the weather will not allow the work to continue or the contractor chooses not to staff the project in question.

## 2. Quality Assurance Personnel Duties and Responsibilities

- a. Quality Assurance Testers – Quality Assurance Testers will perform testing and sampling during construction as outlined in the Inspection & Test Plan (ITP). The QA sampling and testing will be performed by QA Testers certified through the MoDOT Technician

Certification Program or a certification program preapproved by MoDOT. The QA Testers report directly to the Quality Assurance Inspector (QAI). **The QA tester can be the QAI.**

- b. QA Tester responsibilities:
  - i. Perform required tests and document test in accordance with contract documents.
  - ii. Conduct material sampling and testing in conformance with the appropriate methods and frequencies.
  - iii. Ensure all measuring and test equipment is properly maintained and calibrated.
  - iv. Promptly communicate nonconforming material to City Engineer and production staff.
- c. Quality Assurance Inspectors (QAI) – Quality Assurance Inspectors will have a thorough understanding of the contract requirements and will perform inspections during construction to ensure the quality of the work meets or exceeds contract specifications. The QA Inspector will be knowledgeable of the work he/she is inspecting and will be able to recognize conforming and nonconforming work and material. The QA Inspector reports directly to the City Engineer.
- d. QA Inspector responsibilities:
  - i. Perform required inspections and complete checklists in accordance with contract documents and found at the following link - [http://www.modot.org/business/contractor\\_resources/Quality\\_Management/](http://www.modot.org/business/contractor_resources/Quality_Management/)
  - ii. Ensure inspection observations are included on Daily Inspection Report (DWR).
    - Ensure material is conforming to the contract requirements before being incorporated into the work.
    - Promptly communicate nonconformance material and work to City Engineer.
    - Wage rate inspections are required at a maximum of 1 every week per job. QAI needs to discuss required frequency on each job with the RE prior to work to ensure accuracy.
    - CUF (commercially useful function) reviews on all DBE Subs, minimum 1/sub/job. These must be submitted to the City within 24 hours of completion.
- e. Pre-Activity Meeting
  - i. Pre-Activity Meetings are necessary to discuss details of the Work Plan and schedule. Pre-Activity Meetings will be held 24-hours prior to the start of each new project activity or change in work crew. The Superintendent/Job Foreman of the activity will lead the meeting and others present at the meeting will be the QA Inspection and Testing Staff, and the City.
- f. Inspection and Testing
  - i. Inspection and testing are performed during all phases of the work from start to completion to ensure the work and testable material (asphalt, concrete, aggregate, etc.) meets or exceeds the contract requirements. Consultant will perform inspection and testing of the work and material as specified in the Inspection and Testing Plan and MoDOT-provided checklists. All results will be documented in AASHTOWare Project.

### 3. Inspection and Testing Plan (ITP)

- a. The Inspection and Testing Plan (ITP) outlines the acceptance criteria for contract items for this project along with the required tests, testing frequency, and the required QA

documentation. The ITP is provided by MoDOT. Any changes to the specifications, testing procedures, or the testing frequencies from the standard ITP will be implemented via change order. In addition, a change order will be completed to add acceptance criteria for nonstandard contract items not included in the standard ITP.

- b. See link for ITP:

[http://www.modot.org/business/contractor\\_resources/Quality\\_Management/](http://www.modot.org/business/contractor_resources/Quality_Management/)

#### 4. Daily Work Report (DWR)

- a. A Daily Inspection Report (DWR) will be completed on the project each day to document pertinent project activities. The report will include a detailed diary that describes the work performed as well as observations made by QA Inspection staff regarding quality assurance. The DWR will include other items such as weather conditions, location of work, installed quantities, tests performed, and a list of all subcontractors that performed work on that date. The DWR is completed in AASHTOWare Project.

#### 5. Hold Points

- a. Hold Points are events in the work process that require approval from the City prior to continuing work. Hold Points occur between different definable stages of work when the succeeding work depends on the acceptance of the preceding work. A list of minimum Hold Points is available on MoDOT's website and can be provided upon request. Additional Hold Points can be added by the City.
- b. Hold Point inspections will be at times planned in the Weekly Schedule. The Hold Points may be rescheduled as needed, but the Consultant Inspector will provide a minimum 24-hour advance notification to the City, unless otherwise approved by the City.
- c. Prior to all Hold Point inspections, the consultant Inspection Staff will provide the City with the Daily Inspection Reports, Inspection Checklists, Test Reports, and Materials Receiving Inspection Reports for the work performed leading up to the Hold Point. City-identified issues will be corrected prior to continuing work and a new Hold Point scheduled.

#### 6. Material Receiving

- a. Material Receiving is assurance that products and materials are identified from receipt and during all stages of production, delivery and installation. At receipt, the Consultant Inspection Staff will inspect general condition of material and determine if material is compliant based on the requirements specified in the ITP, Specifications, Job Special Provisions, Standard Drawings, or other pertinent contract documents. For products that require on-site inspection by City Materials staff, the City Engineer will notify The City staff promptly to schedule the inspection.
- b. Some materials are pre-qualified or pre-accepted for use on City projects. A list of these items is maintained by MoDOT and can be found on the MoDOT internet site. These lists include: Pre-Acceptance List (PAL), Approved Product List (APL), Bridge Pre-qualified Products List (BPPL), and the Qualified List (QL). Although pre-qualified or pre-accepted, appropriate documentation detailed in the Specifications will accompany these products for acceptance.
- c. All material delivered to the project, excluding testable material, will be inspected for appropriate dimensions, quantity, condition, markings, etc., and accompanied with



appropriate documentation. All PAL items will be inspected to ensure material conforms to plans and specifications

## 7. Quality Documentation

- a. Project documentation (inspection checklists, daily work reports, test records, Materials Receiving Inspection Reports, etc.) referenced in this plan will be electronically stored and organized by the Consultants Inspection Staff
- b. Project documentation will be electronically saved within 48-hours after the work shift ends.
- c. In addition, to the above, all project correspondence must be delivered to the City electronically so it can be archived with the project's permanent records. Copies should be maintained by the consultant for access as needed. This includes, but is not limited to: delivery tickets, mix designs, mill test reports, certifications, test reports, contractor schedule, any letters associated to the contract, wage rate inspections, NCR's, and order records.
- d. Certified payrolls for contractor activity will be checked and maintained by The City

## 8. Control of Non-Conforming Work And Material

- a. Non-conformance reporting will be used to identify and ensure that work, material, and/or processes (i.e. QC inspections, tests, documentation, etc.) that fail to satisfy the contract requirements are identified and promptly resolved. QA staff or production staff will identify non-conformances and the QAI will document using a Non-Conformance Report (NCR). The City may also initiate an NCR.
- b. The NCR process is as follows:
  - i. Non-conforming work and/or material are identified.
  - ii. NCR is issued on the provided standard form.
  - iii. QAI forwards copy of NCR to the City with proposed resolution.
  - iv. MoDOT either approves or rejects the proposed resolution. A dialogue will ensue following any rejected proposals until an acceptable solution is identified.
  - v. The City-approved resolution is executed.
  - vi. New inspection and/or test of previously identified non-conforming item is completed.
  - vii. QAI verifies previously identified non-conforming item is now compliant and requests final approval from the City
  - viii. The City evaluates previously identified non-conforming item. If accepted, The City signs NCR for closure.

## XIII. Deliverables

The CONSULTANT shall furnish to MoDOT and the City with the following completed sheets and documents, as applicable, for the construction project included in this contract, as follows:

1. All mapping, sketches, cross sections and all other engineering documents necessary to secure permits from the administrator of the FEMA Flood Insurance Program (if required) and Section 401 and 404 permits as administered by the United States Army Corps of Engineers (if required).

2. One (1) electronic copy of the Access Management Study Report with conceptual plans and exhibits, and cost estimate for review and approval. After any corrections, one (1) updated copy of the report, exhibits and cost estimate.
3. One (1) electronic copy of any and all exhibits prepared for public meetings.
4. One (1) electronic copy of the preliminary roadway plans, including any lighting plans, signing plans and preliminary cost estimate for review and approval. The CONSULTANT shall prepare the signing layout and structures, as applicable. MoDOT shall prepare the sign details. After any corrections, one (1) updated set of preliminary plans.
5. One (1) electronic copy of the Right of Way plans, including cross sections and driveway profiles and updated cost estimate for review and approval. After any corrections, one (1) updated set with a sealed title sheet.
6. One (1) electronic copy of preliminary and right-of-way plans for utility review, including cross sections. The utilities will be color coded on the plans, with the remaining plan details in black, for emphasis of the utilities.
7. One (1) electronic copy of the preliminary plans and erosion control plans for MoDOT Environmental review and comments. After any corrections, one (1) updated set will be required.
8. After RES clearance, provide one (1) electronic copy of the right-of-way plans and final plans for Environmental review and comments.
9. One (1) electronic copy of drainage and engineering calculations and analyses.
10. One (1) electronic copy of the traffic control plans for review and comments. After any corrections, one (1) updated set will be required.
11. One (1) electronic draft copy of the job special provisions for review. After corrections, one (1) final sealed copy of the job special provisions shall be furnished. The PS&E submittal will be in word format.
12. One (1) electronic copy of the 95% roadway plans for initial review and comments. After corrections, one (1) fully checked, sealed, original drawings of the final design plans shall be furnished.
13. One (1) electronic copy of the estimate of construction costs for the PS&E submittal. The estimate shall be prepared using the latest version of the Commission's cost estimating software.
14. One (1) electronic copy of the workday study showing the estimated number of workdays required to construct the project.
15. One (1) electronic copy of the D15 Equipment and Materials List (if applicable).
16. One (1) electronic copy of the D12 District Final Design Plans Checklist.
17. One (1) electronic copy of the Workzone Impact Analysis Spreadsheet.

18. One (1) electronic copy of approved Design Exceptions (if applicable).
19. One (1) electronic copy of Floodplain Development Permit and No-Rise Certification (if applicable).
20. One (1) electronic copy of the recorded Location Survey.

## XIV. Standards

The CONSULTANT shall use the latest version of the following publications to determine the design criteria and procedures which will be followed for development of the project.

1. Federal Emergency Management Administration Flood Insurance Guidelines and Specifications.
2. MoDOT Engineering Policy Guide (EPG)
3. Manual on Uniform Traffic Control Devices (MUTCD)
4. A Policy on Geometric Design of Highways and Streets
5. AASHTO LRFD Bridge Design Specifications
6. AASHTO Green Book
7. Highway Safety Manual (HSM)
8. Missouri Standard Specifications for Highway Construction
9. Missouri Standard Plans
10. MoDOT Bridge Manual
11. Missouri Department of Transportation for Computer Deliverable Contract Plans
12. Any other publications which the City directs the CONSULTANT to use including any applicable City Standards or Ordinances required for work within the City of Republic.