



**DRAFT REQUEST FOR PROPOSALS
For The Bridge Improvement Program**

**BOOK 2 — PERFORMANCE
REQUIREMENTS**

Project Number J5B0800
Missouri Department of Transportation
1320 Creek Trail Drive
Jefferson City, MO 65109





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1 GENERAL

The contractor will reconstruct, or rehabilitate the bridges listed in Book 4 to improve their National Bridge Inventory Condition Ratings to a minimum of 6, and maintain the bridges for a minimum 25 years after these improvements have been made, such that the Deck, Superstructure & Substructure ratings each have a minimum of a 6 rating at the end of the contract period. The reconstruction includes actions to improve structurally deficient bridges, and remove national bridge inventory deficiencies. The primary purpose of this project is to improve the aging infrastructure.

1.1 Configuration Requirements

The configuration requirements are as follows:

- If possible, all work is to be constructed within the Right of Way limits shown on the existing plans included in Book 4.
- If possible, for projects that involve railroads, all work is to be completed within MoDOT's existing easement with the railroad.
- If possible, all work is to be constructed without disturbing existing Utilities.
- If road closure is allowed, road closures shall be kept to minimum duration and detours lengths shall be minimized.



2 PROJECT MANAGEMENT

All Project Management activities, including scope, schedule and document management shall be used to manage both the combination of multiple bridge improvement projects being designed, constructed or maintained concurrently and also individual Bridge Improvement Projects.

2.1 Web Page

The contractor shall create a web page that includes information from the schedule in this section and all deliverables included in Book 2 of this RFP. This web page shall contain sufficient information to keep the public and MoDOT personnel informed of public hearings, traffic detours, construction schedules, and maintenance activities. Some information will be required to be protected from public with security measures to allow viewing by authorized individuals only. This web page shall be updated at minimum monthly as revised schedules and deliverables are submitted to MoDOT.

The following shall be considered minimum requirements and any deviations from such shall require approval from the project director:

- This web page shall be organized with a map showing each bridge, referenced by its existing bridge number, located reasonably close to its geographic location with reference to its county, crossing feature, and route.
- All bridges in this program shall be represented on the map
- Easy distinction should be able to be made from bridges under construction, bridges already improved, and bridges to start construction in the next three months.
- All bridges should have information on anticipated public hearing dates and anticipated construction schedules.
- The schedule for bridges with no anticipated work in the following three months should contain at minimum an estimated start of construction date.
- Each structure schedule shall be complete and posted at least two months prior to any traffic disturbances with the exception of emergency work.

2.2 Schedules

A schedule that is well organized and meeting the need of this section shall be created and maintained through out the life of this contract.

If at any time a significant contract delay that could prevent the initial construction completion is identified on the schedule, it shall be brought to the attention of the BIP team.



2.2.1 Initial Schedule

A preliminary schedule shall be submitted within 60 days of the NTP with each structure in the program referenced. This preliminary schedule shall include estimated design and construction dates for every structure. This schedule will be the base to build from as more details become available and will be archived for viewing by authorized MoDOT personnel. For this contract this will be considered the master schedule.

2.2.2 Updates and Archived Records

The master schedule is recommended to be continually updated, but shall be updated at minimum once a month until initial construction has been completed. After initial construction has been completed revisions of anticipated and actual activities shall be updated quarterly.

The first of each quarter shall be defined as the first business day in Jan, April, July, and October. The current schedule shall be archived the first of each quarter for viewing by authorized personnel to monitor changes and track trends.

2.2.3 Minimum detail requirements

The master schedule will be able to be sorted by District and have the ability to isolate any period of time.

The master schedule shall include any key dates referenced in this contract, public hearings, design times, construction times, and any other items necessary to control and track the progress of this contract on a global scale as well as for each individual structure.

All applicable components listed on the master schedule shall also show tracking of actual progress.

Each structure shown on the master schedule will either have a collapsible detailed individual structure schedule or a reference to a structure specific schedule showing specific components of the entire process including all phases of design and construction including utility work, right of way acquisition, third party agreements, environmental clearances, construction duration and traffic closures.

2.2.4 Schedule and Software Requirements

1. Scheduling Software

The software for all schedules shall be approved by the Commission.

2. General Scheduling Constraints

In all Contract Schedules, the Contractor shall:



- Ensure that the actual number of activities in the schedule is sufficient to assure adequate planning of the Work for the bridge improvement projects.
- Depict the sequence and interdependence of activities required for complete performance of the work beginning with the date at NTP and concluding at Bridge Improvement project completion.
- Include the completion deadlines set forth in the contract. ,in addition to any other constraints.
- Depict the required coordination with and work to be performed by other contractors, utility owners, governmental persons, engineers, architects, subcontractors, and suppliers.

2.3 Annual Report

The contractor shall submit a report annually for the bridges listed in book 4 to the Project Director. It shall describe the work that has been done on the bridges during the last year, any special required operation maintenance, and the work that is proposed for each bridge during the upcoming year. The first annual report will be due on the first January 2nd after the NTP. The last annual report will be due on January 2nd of the last year of the 25 year maintenance period and shall certify that the current condition ratings on the bridges are a 6 condition rating or better.

2.4 Maintenance Period

The Contractor shall develop and make available to MoDOT a schedule that tracks all activities to maintain the bridges. These activities may include maintenance or reconstruction task. The Contractor shall provide timely notification to MoDOT of maintenance or reconstruction activities that effect MoDOT operations, require MoDOT action, such as environmental work, or restrict traffic.

2.5 Facilities

The Contractor shall provide office space, and equipment as needed to prosecute the work included in this contract. This shall include providing a common location for contractor staff, MoDOT personnel and other personnel working under the direction of MoDOT as described in this section. The contractor shall make its proposed facilities available for inspection and approval by MoDOT prior to MoDOT occupying any contractor provided facilities. Both parties shall participate in a facility condition inspection prior to and at the completion of occupancy. MoDOT shall return possession of contractor provided facilities to the contractor in essentially the same condition as when MoDOT initially occupied the facilities except for reasonable wear and tear. The contractor shall secure sites, obtain all site permits, install, set up, and provide utility services and maintain the facilities as part of the Work.

In the event that office spaces or appurtenant facilities are stolen, destroyed, or damaged during the work, except by fault of MoDOT, the contractor shall at its expense repair or replace those items provided to their original condition within five working days. If loss or damage is caused by MoDOT personnel, the Contractor



shall replace the facilities within five working days, except MoDOT shall be responsible for costs incurred.

2.5.1 Centralized Office

The Centralized Office shall be located in Jefferson City Missouri. The Contractor shall provide space and facilities to allow MoDOT staff to co-locate within the same building as contractor staff. The contractor shall furnish MoDOT's staff with offices that are in good and serviceable condition, at least of the same quality as the contractor's counterpart staff, and be available for occupancy no later than 60 Days after the Notice to Proceed for the Initial Construction period. The contractor shall maintain the office for at least 90 Days after the improvement projects are completed for all the bridges.

The contractor shall be responsible for disposal or removal of all contractor-provided facilities and any site restoration work required.

At a minimum, the contractor shall provide the following or any comparable alternate approved by the project director:

1. Telephone service for MoDOT offices, conference rooms, break room, and filing room, consisting of 10 workstation telephones with direct dial, speakerphone, voice mail, transfer, conference calling, and rollover capabilities. The Contractor shall be responsible for its own staff receptionist/operator.
2. One dedicated telephone line for fax service.
3. Facilities that meet OSHA and code requirements for office space.
4. Office space for MoDOT staff not less than the size indicated below:
 - A. A minimum of 10 offices: 100 square feet enclosed office space per office (cubicles/partitions are acceptable). These offices shall be able to be secured by a locked door from the rest of the building.
 - B. One enclosed conference room with doors capable of accommodating a 30 person meeting, with at least 15 seats at the conference table. This can be a shared conference room between the contractor and MoDOT.
 - C. One enclosed conference room with doors for MoDOT's exclusive use capable of accommodating a 20 person meeting, with a fifteen person seating capacity at the conference table. The conference room shall be in an adjacent space to the MoDOT offices.
 - D. One reception area, with common access to central office space.
 - E. Break room: 150 square feet with hot and cold running water, sink, counter, microwave, and 20 cubic foot refrigerator. This can be a shared break room between the contractor and MoDOT.



- F. Filing space: 500 square feet, enclosed, with lockable door and 16 steel, 5-drawer, locking, lateral file cabinets (approximate size = 18 inches by 42 inches). The file room shall also have two 30 inch by 72 inch utility tables with two chairs each.
5. Workstations for MoDOT staff, as follows, for each office:
 - A. Desk and chair, compatible for computer utilization, with locking drawers
 - B. Two drawer filing cabinet, with locking drawers
 - C. OSHA-approved desk chair
 - D. Extra office chair
 - E. Book shelf
 - F. Wastebasket
 6. Furnishings, as follows, for each conference room:
 - A. Conference table and chairs.
 - B. Wastebasket.
 - C. Hanging, erasable white board, six foot wide minimum.
 7. Indoor restrooms, men's and women's.
 8. Parking, one space per office for MoDOT staff plus fifteen MoDOT visitor spaces.
 9. Weekly janitorial service.
 10. Maintenance of the exterior area of office, including access to parking, mowing and snow removal.
 11. Heating, ventilation and air conditioning/cooling systems adequate for office use.
 12. 24-hours/7-days a week access with security after normal working hours.

2.4.2 Network Requirements

The Contractor shall provide and maintain the following for MoDOT's exclusive use at the Centralized Office:

Computer Network: The Contractor shall provide a 100 Megabit per second (Mbps) LAN network wiring infrastructure. The network shall be complete and separate from the Contractor's network wiring topology. The network-wiring infrastructure shall use category 5E cable and category 5 rated patch panels and shall be compliant with ANSI/EIA/TA 568A standards. Two network connections will also be provided to a central location for network printer access by office staff. Rack space shall be provided for MoDOT file servers, patch panels, routers, and switches. Power requirements for office and network equipment will include two 20 amp circuits centrally located with printer network connections specified above. It will also include two 20 amp circuits in close proximity to networking equipment (routers, switches,



patch panel and file server). Ample room and cooling should be provided to a space large enough to collocate network equipment and file server, preferably behind a lockable door. The Contractor shall supply wiring topology, As-Built Documents, and cable test certifications. Staff installing the network shall hold current industry certification for 5E.

Internet Connection: MoDOT's computer network shall have a dedicated WAN consisting of a minimum of one T-1 to 601 W. Main, Jefferson City, Missouri. MoDOT will provide firewall protection.

2.5.2 Project Directory

The Contractor shall maintain and furnish a project directory listing the names, addresses and telephone (office, home, mobile, facsimile and pager) numbers of the key personnel and critical support staff of the contractor and each subcontractor for the projects. The project directory shall be submitted to MoDOT within 60 days following NTP. The Contractor shall update the project directory quarterly for the duration of the Work.



2.6 Deliverables

All deliverables for all disciplines shall include a minimum of one hard copy and one electronic copy unless otherwise specified in Book 1 or Book 2.

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

2.6.1.1.1.1 Deliverable	Review or Approval	Schedule	Reference Section
Web Page	Approval	Within sixty working days following NTP	2.1
Initial Schedule	Review	Within sixty days following NTP	2.2.1
Updates	Review	Monthly for construction improvements, Quarterly after initial construction	2.2.2
Archived Records	Review	Quarterly	2.2.2
Annual Maintenance Report	Review	Yearly during the contract period. Receive with Yearly Invoice Submittal until 30 years from NTP1.	2.3
Facilities	(varies)	(see appropriate reference section)	2.4
Network Requirements	(varies)	(see appropriate reference section)	2.5
Project Directory	Review	Within 30 Days of NTP1	2.6

3 QUALITY MANAGEMENT

3.1 Quality Management System

The terms and definitions used in this Section 3, not otherwise defined herein, shall have the meanings prescribed by the ISO 9000:2000 standard. The Contractor shall develop, implement and maintain a quality management system meeting the requirements of ISO 9001:2000 standard and the requirements below.

The scope of the quality management system shall cover all requirements of the Contract. The quality management system shall include a Quality Manual, submitted for MoDOT Approval, to which MoDOT will respond within 21 days.

The Quality Manual shall indicate the frequency at which the Contractor's top management will review the quality management system. The Quality Manager and quality assurance staff shall have no responsibilities in the production of the Work and shall report to the Contractor's top management only. Quality control staff shall only have responsibilities in the production of the Work and shall remain independent of the quality assurance staff. The Contractor shall ensure that all personnel who perform inspection, sampling or testing are certified according to a recognized technician certification program and any other required certifications, for the tasks for which they are responsible. The Contractor shall ensure that all laboratories performing testing participate in and achieve a score of three or greater in the AASHTO Materials Reference Laboratory (AMRL) and/or Cement and Concrete Reference Laboratory (CCRL) proficiency sample programs for the tests being performed by that laboratory.

The following quality planning aspects shall be agreed to with MoDOT and included in the Quality Manual:

- All quality control and quality assurance activities and their standards, methods or procedures, and frequencies for product control and acceptance.
- All release points at which work shall be formally accepted by quality assurance personnel independent of the work, prior to proceeding.
- The requirements to be verified at each release point.
- The agency/person/position responsible to perform the verification.
- The method of verification.
- The resulting record.

The Contractor's proposed resolution to MoDOT identified nonconformance(s) shall be documented in a format and medium acceptable to MoDOT. Following approval of the proposed resolution by MoDOT, the Contractor shall, when implementing the proposed resolution, provide MoDOT with 24 hours notification so that MoDOT may witness the implementation, should MoDOT so choose. The Contractor shall ensure that this procedure is applied to all contract requirements, including design, construction/operational and management systems. The Engineer responsible for

the design shall approve all resolutions of non-conformances that require design changes, repairs, or rework.

The Contractor's proposed corrective action to MoDOT identified corrective action requests shall be documented in a format and medium acceptable to MoDOT. Following Approval of the proposed corrective action by MoDOT, the Contractor shall advise MoDOT when the corrective action has been implemented so MoDOT may confirm the implementation, should MoDOT so choose.

The Quality Manual shall describe how the verification records/forms will clearly show whether the Work meets the contract requirements. The Quality Manual shall describe how material quantities will be calculated and documented in order to enable the Contractor and MoDOT to sample at their required frequencies.

3.2 Design Documents

Design Documents include Released for Construction Documents, Final Design Documents, and As-Built Documents. The Contractor shall ensure that all Design Documents are formatted for 8½" x 11" or 11" x 17" and in English units. All Design Documents shall be submitted in an electronic format and developed using versions of MicroStation and GEOPAK compatible with MoDOT's and shall follow MoDOT's CADD Standards and MoDOT's GEOPAK and MicroStation Drawing Standards. MoDOT will provide seed files upon request. Electronic submissions shall be in original Microstation or Geopak format and in MoDOT's version of Acrobat. Each deliverable shall include an index detailing the contents and an Acrobat file of the Design Documents, created directly from the native software and organized in a manner that allows easy retrieval of any part of the Design Documents, including individual drawings.

3.2.1 Released for Construction Documents

Released for Construction Documents shall be all drawings, specifications, shop drawings, reports, calculations, revisions thereto, and any other items necessary to construct the Work. The Contractor shall ensure that no construction Work is undertaken without Sealed, Released for Construction Documents. Six hard copies and one electronic copy of all Released for Construction Documents shall be submitted for review to the project director prior to construction.

3.2.2 Final Design Documents

Final Design Documents shall compile in a consistent manner, with the intent that all design information is in one place, without duplication of sheets. Final Design Documents shall include design information from the most current version of Released for Construction Documents and all design back-up information, including design plans, shop drawings, calculations, reports, specifications, and electronic MicroStation and GEOPAK data. Design back-up information, calculations & reports shall be submitted on compact disk in adobe acrobat 5.0 format or greater. Each compact disk that is submitted shall include an index file with electronic links to the files contained within. Final Design Documents shall be submitted prior to construction.

3.2.3 As-Built Documents

As-Built Documents shall be the final record set of documents that incorporate: any changes occurring after the Final Design Documents; all manufacturers' warranties, guarantees, instruction sheets, parts lists, and other product data; and all required evidence of conformance with requirements. The As-Built Documents shall be organized and indexed to facilitate easy retrieval of information and be certified by the Contractor's Project Manager to reflect the actual condition of the constructed Work.

3.3 MoDOT Quality Oversight

MoDOT's quality oversight will include the use of an audit approach for assessing the Contractor's performance. This will entail checking on a sampling basis whether the Work is complying with the contractual requirements.

Auditing will entail the collection and documentation of objective evidence to confirm whether specified requirements have been met. The results of auditing will be documented on standardized audit report forms with copies provided to the Contractor. Nonconformances will be communicated and tracked in separate reports. The audit results will also be recorded in a database, and regular summary and status reports will be provided to the Contractor. The timing, frequency, and depth of auditing will be at MoDOT's discretion.

The Contractor shall provide safe access to the Work, its organization, and all Subcontractor and supplier organizations to allow MoDOT to carry out quality oversight activities. This will include the allowing of samples for the purposes of testing, the provision of information and records, and interviews with personnel from the Contractor's organization and all Subcontractor and supplier organizations. All costs associated with this section will be considered completely covered. No additional payments for sampling will be made.

MoDOT's confirmation results shall take precedence over the Contractor's results in determining the acceptability of Work or the quantification of disincentives. The Contractor shall not use the results of MoDOT's quality oversight activities as a substitute for its own quality activities. The Contractor shall provide to MoDOT copies of specific records within three Days of receipt of request. When requested, the Contractor shall advise MoDOT of the time, to within four hours accuracy, that a specific activity, scheduled within the next five Days, is scheduled to occur.

Representatives of agencies of the federal, state and local government shall have the right to inspect the Work to the same extent provided above for MoDOT. The Contractor shall notify the appropriate District Construction and Materials Engineer with MoDOT to coordinate Independent Assurance Sampling (IAS) prior to starting construction. Contact information for the District and Construction Engineers can be found on the MoDOT Web Site; on the business page, in the Materials Manual, under Materials Personnel. The IAS will be in addition to MoDOT's quality oversight.



3.4 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

Deliverable	Review or Approval	Schedule	Reference Section
Quality Manual	Approval	Prior to any construction	3.1
Released for Construction Documents	Review	No later than when they are issued to the contractor responsible for constructing the Work.	3.2.1
Final Design Documents	Review	After completion of design	3.2.2
As-Built Documents	Approval	Condition of Project Acceptance	3.2.3

4 PUBLIC INFORMATION

4.1 Public Information Plan

The Contractor shall prepare and maintain a Public Information Plan (PIP) to address the development and communication of information to and from the public throughout the initial design and construction phase of this bridge improvement program. The PIP shall be individually tailored for each of MoDOT's 10 districts, and shall identify key stakeholders and methods that will be used to coordinate with them throughout the Bridge Improvement Program to accommodate local needs. An important element of the PIP will be the ability to build understanding and acceptance of the program and bridge closures. The PIP shall provide for outreach efforts in advance of construction that communicate the goals of the program, how those goals apply to localized areas, the Contractor's improvement strategies and how construction activities will be scheduled. Where bridge closures are required to construct the improvements at any of the locations listed in book 4, the PIP shall communicate alternate routes and detours that minimize the length of out-of-direction travel by customers and limit the duration of public inconvenience during construction. The PIP shall be used throughout the Program by the Contractor to manage and implement the construction and traffic coping aspects of the public information process.

The Contractor shall provide MoDOT contact information on its key personnel of which at a minimum shall include the Project Manager and Public Information Manager within 30 Days following NTP1. The Contractor's PI Manager shall be co-located with MoDOT as part of the Contractor's team.

4.1.1 Public Hearings

A public hearing shall be held a minimum of 30 days prior to any full facility closure (this hearing could cover the closure of multiple facilities within the same county).

Should the selected treatment strategy require additional right of way or easements the MoDOT PDM should be consulted to determine if a public (hearing / meeting) will be required.

The MoDOT PDM also indicates the requirements for conducting the public hearing. The Contractor shall provide MoDOT with a plan that satisfies these requirements and obtain MoDOT's concurrence in that plan.

The Contractor will record and prepare the (hearing / meeting) transcript, including the executive summary, and prepare any exhibits required for the appropriate Commission approval. MoDOT will be responsible for all other documents necessary to obtain Commission approval. MoDOT will provide the Contractor with notification of Commission approval or rejection.

4.1.2 Final Public Information Plan

The Contractor's final Public Information Plan (PIP) shall be submitted to MoDOT for Approval no later than 60 Days following NTP1.



4.1.3 Information Materials

Any information materials developed by the Contractor for release to the public shall be approved by MoDOT before public distribution.

4.1.4 Commercial Vehicle Access and Restriction Information

The Contractor shall inform the appropriate district of any construction-related events, including geometric constraints that could restrict or impede the movement of commercial vehicles.

4.2 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

Deliverable	Review or Approval	Schedule	Reference Section
Public information staff contact information	Review	Within 30 Days following NTP1	4.1
Final Public Information Plan (PIP)	Approval	Within 60 Days following NTP1	4.1.2
Information packet materials	Approval	Prior to the scheduled distribution date	4.1.3
Public hearing/meeting transcript	Approval	Within 30 days of event	4.1.1

5 ENVIRONMENTAL REQUIREMENTS

The Contractor shall comply with the environmental requirements set forth in the FHWA approved National Environmental Policy Act (NEPA) documents and federal, state, and local permits, certifications, and approvals obtained by MoDOT for the life of the project (from those held now and will be held in the future).

5.1 General

MoDOT will provide the NEPA clearance for the bridges; a list of bridges requiring permits, certifications and clearances; and a list of the anticipated timelines for acquisition of those permits, certifications and clearances.

MoDOT will conduct Endangered Species Act and Tribal consultations; obtain appropriate Section 106, 4(f), 6(f) clearances; obtain Clean Water Act Sections 404 permits and 401 certificates; obtain Federal Emergency Management Agency (FEMA) buy-out approvals; screen for hazardous waste sites; and obtain appropriate permits for the latter.

All stream crossings, including temporary crossings, shall maintain the natural low flow characteristics of the stream.

A majority of the bridges have a NEPA classification of Categorical Exclusions (CEs). If it is found during the life of the project that a new or updated NEPA classification is required for a bridge or group of bridges, the Contractor shall provide elements needed to process NEPA classifications, which include the following: work descriptions, location information, anticipated right of way, preliminary engineering, and if necessary, future and construction year traffic, alternatives, and/or purpose and need analyses.

Some bridge work identified in the list of bridges have known environmental and/or cultural resources that will require more than the average time for processing. The Contractor shall and MoDOT will negotiate timing of the bridge work for those bridges that will take more than the average time to receive permits, certificates and clearances.

The Contractor shall provide the following list of deliverable items:

- A standardized format for all maps, and plan sheets needed for permits and environmental and historic preservation clearances.
- Preliminary engineering drawings and a detailed description of the bridge work plans, to include the bridge number, future and construction year traffic analysis, scope of work, termini points, anticipated right of way needs, and the maximum footprint of disturbance delineated for bridges that involve reconstruction, with updates, when any of these items change.
- Landowner information and permission to access land, if land is needed on a temporary or permanent basis.

5.2 Erosion Control

MoDOT maintains a Missouri Department of Natural Resources (MoDNR) Section 402 National Pollution and Discharge Elimination System (NPDES) Permit, Chapter 644 RSMO, Missouri Clean Water Law for construction. The Contractor shall be responsible for developing an erosion control plan, based on the Storm Water Pollution Plan that is part of MoDOT's NPDES Permit, and adhering to the permit and plan.

5.3 Wetlands and Waters of the US

The Contractor shall fulfill the terms and conditions of both the Clean Water Act Section 404 permit and the Section 401 Water Quality Certification, as required by the U.S. Army Corps of Engineers (USACE) and the MoDNR, respectively. The Contractor shall integrate design practices to avoid and/or minimize potential bridge work impacts to wetlands and waters of the U.S. The Contractor shall participate in the development of all stream and/or wetland mitigation required to fulfill the permitting requirements.

The Contractor shall provide the following list of deliverable items:

- Cut and fill quantities, location of impacts, and bridge work design plans including cross-sections as necessary to secure a Clean Water Act Section 404 and 401 permit.

5.4 Threatened and Endangered Species

The Contractor shall comply with all aspects of the Endangered Species Act, including Section 7 consultations. The Contractor shall coordinate with MoDOT when it is determined that there are any threatened or endangered species or rare natural communities in the vicinity of any of the bridges. In some instances surveys may be necessary to determine if a bridge work will impact a species. The Contractor shall coordinate with MoDOT to determine measures that can be implemented to avoid or minimize the construction impacts to threatened and endangered species and rare natural communities.

5.5 Cultural Resources

The Contractor shall supply adequate maps, plans, and photos to assist the State Historic Preservation Office (SHPO) and MoDOT in the identification of potential impacts to Historic Properties eligible for or listed on the National Register of Historic Places (NRHP) and to obtain the appropriate Section 106 clearance. The contractor shall comply and coordinate with MoDOT to test, avoid, or mitigate those properties identified by the SHPO.

The Contractor shall provide the following deliverable item:



- Photographs of the bridge and any bridges and structures located within 100 feet of existing MoDOT right of way or within right of way to be acquired for a specific bridge work.

5.6 Hazardous Waste

The U.S. Environmental Protection Agency (EPA) has determined that bridges are defined as structures per 40CFR61 Subpart M, NESHAP (National Emission Standard for Hazardous Air Pollutants), therefore subject to inspection, notification, and removal requirements per federal, state, and local laws and regulations. The Contractor shall comply with applicable laws and coordinate with MoDOT regarding potential hazardous waste impacts. Upon request, MoDOT will provide information to the Contractor from testing to identify lead base paint and asbestos containing materials on bridge structures within 30 prior to start of bridge construction.

5.7 Public Lands

The Contractor shall coordinate with MoDOT on the potential to impact public lands; including parks, trails, and other recreational type lands; that could potentially be classified as Section 4(f) or Section 6(f) properties to facilitate avoidance or mitigation.

5.8 Borrow and Staging Areas

All Contractor furnished borrow and staging areas are subject to the same environmental evaluation as the specific bridge work. The Contractor shall adhere to all laws and regulations regarding the borrow, wasting and staging sites, as if these areas were included in the bridge location. The contractor shall provide to MoDOT the location; extent of staging, wasting, and borrow areas; and copies of permits and clearances obtained. MoDOT's NPDES permit covers borrow sites that are adjacent to MoDOT's right of way. However, it does not cover those borrow sites not contiguous with MoDOT right of way.

The Contractor shall provide the following list of deliverable items:

- Location and extent of impact of all staging, wasting, and borrow areas.
- Copies of permits and clearances for staging and borrow areas.

5.9 Mitigation

MoDOT will plan, in consultation with the Contractor, for mitigation. MoDOT may have mitigation in place, such as wetland mitigation banks, that may be appropriate for bridge impacts.



5.10 Regulatory Compliance

It is the Contractor's responsibility and at the Contractor's expense to correct any problems and pay resulting fines upon receiving a verbal warning, Letter of Warning, or Notice of Violation from any agency with legal jurisdiction that finds the work is out of regulatory compliance.

5.11 Deliverables

The Contractor shall provide the following list of deliverable items:

DELIVERABLES	Information or Review	Schedule	Reference Section
Standardized maps and plan sheets	Information	As developed and no later than six months after contract execution	5.1
Preliminary engineering drawings with detailed description of bridge work and maximum footprint of disturbance.	Information	Six months before construction or rehab work begins	5.1
Landowner permission to access	Information	As needed for studies during life of project	5.1
Cut and fill quantities and locations for Section 404 Permit and 401 certification	Information	Six months before construction or rehab work begins	5.3
Photographs of bridges and structures	Information	Within three months of contract execution	5.5
Location and extent of staging and borrow areas for mitigation coordination	Information	Six months before construction or rehab work begins	5.8
Copies of staging, wasting, and borrow area clearances and permits	Review and approval	Two months before construction or rehab work begins	5.8

6 THIRD PARTY AGREEMENTS

6.1 Administrative Requirements

MoDOT will enter into agreements with all Incorporated Cities, all Counties, and all railroad companies where these entities have property or facilities that will be permanently affected by construction of any bridge project. Any temporary work on property or facilities of the above described entities shall not require a third party agreement with MoDOT.

6.2 Working with Local Agencies

Coordination with local agencies will be a cooperative process between the Contractor and MoDOT. The Contractor shall be responsible for drafting all third party agreements and securing execution from local agencies. Prior to execution of any agreement, the Contractor shall provide MoDOT a draft of the agreement for review and subsequent execution by MoDOT. Any changes or additions to the project as may be requested by the local agencies will not be a reason for any delays to the project schedule. Changes to the project may include but not be limited to the following: Improvements to local roads, landscaping, tree plantings, roadway lighting, bridge lighting, bicycle or pedestrian accommodations, additional noise abatement, decorative fencing, sidewalks, additional aesthetics to bridges or walls, etc. Changes or additions requested by local entities will be allowed only when the entity agrees to completely fund the additional cost for incorporation of all additional improvements into the proposed treatment. Proposed treatments that will disturb existing third party facilities shall include provisions for replacement of the facility, at the Contractor's cost.

6.3 Railroad Agreements

If the proposed bridge replacement or widening project crosses a railroad right-of-way, an agreement with the affected railroad will be required prior to beginning construction. The Contractor shall be responsible for negotiating any job specific provisions with the railroad company prior to commencement of all construction work. At least 18 months prior to the planned date of construction the contractor shall provide MoDOT a list of bridges that will require a Railroad Agreement, as defined below. All work to be performed over or on railroad right of way may be subject to the affected railroad's approval. For each bridge on this list the contractor shall supply all required railroad submittal documents.

The contractor shall also include a traffic control plan with the expected dates of construction, proposed detours, length, and road closures if applicable. Also included with this traffic control submittal will be an explanation of the time and duration of any expected railroad track closures.

A project that includes the construction of a new bridge over a railroad track shall require a Grade Separation Agreement (GSA) between the railroad company and the Commission. The GSA will define the terms and conditions for the construction and



the maintenance of the new structure, and the easement granted by the railroad needed to secure the Commission’s property rights. The GSA will include the railroad job special provisions that will detail the railroad’s requirements for the Contractor’s work over the railroad including railroad insurance requirements and need for railroad flagging. The drafting and negotiation of these documents will need to be coordinated with MoDOT’s Railroad Liaison after the Contractor has secured the railroad’s approval of preliminary plans for the new structure.

Projects that involve the rehabilitation of a bridge over railroad track will require minor railroad involvement, and thus may not require a new agreement since the Commission currently has the right to maintain existing structures over the railroad in previously negotiated agreements with railroad companies. The Contractor shall be responsible in securing the railroad company’s approval of the proposed work and the negotiation for the terms and conditions of working on and over the railroad’s property including insurance requirements and railroad flagging.

If all proposed work is on the deck surface of the structure or in spans not over the railroad property than there is no railroad involvement, and thus no new agreement shall be required. These projects may include work on structures over railroad facilities or property, but none of the work can interfere with the rail operations.

6.4 Deliverables

Deliverable	Review or Approval	Schedule	Reference Section
Local Entity Agreement Submittal	Review	6 months prior to planned construction at each bridge, if applicable.	6.1, 6.2
Railroad Agreement Submittal	Review	18 months prior to planned construction at each bridge, if applicable.	6.2, 6.5

7 UTILITIES

The Contractor shall coordinate all Utility Work. The Contractor's treatment strategy to meet the project objectives for each bridge site shall avoid relocation of utilities to the extent practicable. Betterments are not included within the Contractor's Work. This section applies to existing and proposed underground and overhead Utilities, except traffic signals, street lighting, variable message signs, video and video detection systems, and Intelligent Transportation Systems (ITS). The terms of all Utility Agreements and any amendments shall be in MoDOT's sole discretion.

7.1 Contractor Responsibility

The Contractor shall locate all utilities that may be affected by the proposed bridge and related roadway work. If Utility relocation is necessary, the Contractor shall coordinate utility relocation according to requirements of 7 CSR 10-3 and any applicable utility agreements.

The Contractor shall maintain and provide to MoDOT an updated Utility Tracking Report (UTR) for information purposes separated by MoDOT District that lists the utilities that need to be relocated by individual bridge project location. The following information shall be included in this report for each bridge improvement project:

1. The County, Route, and Existing Bridge Number that contains the Utility that requires relocation.
2. The name of the Utility Owner.
3. A brief description of the Utility type and size.
4. The location of the utility based on datum or station and offset.
5. The proposed treatment of the Utility.

7.2 General Obligations

The Contractor's obligations with respect to each impacted Utility shall include the following activities, all of which shall constitute a part of the Utility Work:

- Performance of all tasks, obligations, and duties assigned to the Contractor in the Utility Agreements.
- Performance of all Incidental Utility Work. The Contractor shall make all arrangements and perform all Utility Work necessary in order to accomplish the Incidental Utility Work, including, but not limited to, locating existing Utilities, identifying conflicts, performing any necessary coordination with Utility Owners and property owners, and ensuring compliance with all applicable legal requirements and required Governmental approvals.
- Identification and verification of all existing Utilities located within the ROW or otherwise impacted by the Bridge Improvement Projects.

- Coordination and schedule verification with all Utility Owners as necessary for all Utility Work.
- Preparation and processing of all applicable MoDOT and non-MoDOT permits for the Utility Work performed by the Contractor or by the Utility Owners.
- Providing survey coordinates on the Utility Relocation Plans and in the field for construction of the Relocations.
- Obtain all utility easements necessary for Utility Work.
- Coordinate all necessary Work associated with utility work.

7.3 Utility Permits and Construction Easements

The Contractor shall coordinate with the Utility Owner to obtain MoDOT and non-MoDOT permits and/or Construction Easements or agreements. Separate permits may be required for Work on streets under local entity jurisdictions. In the event the Contractor determines that a Utility Owner does not have the required permits, the Contractor shall immediately notify MoDOT in writing. The Contractor shall comply with all such Utility permits and Construction Easements or agreements.

7.4 Utilities Adjacent to and on Structures

Utility attachments to bridges are not permitted unless MoDOT has an agreement executed with the Utility Owner to permit the attachment. If placement on a bridge structure is necessary, the Contractor shall provide details of the proposed installation to MoDOT as soon as the need has been determined but no less than 12 months prior to scheduled construction. If MoDOT agrees the attachment is permissible, the contractor shall coordinate with MoDOT to provide the approved details and information so MoDOT can negotiate with the Utility Owner and enter into an appropriate agreement. The agreement will be of the form commonly used by the Commission for utility attachments to structure.

7.5 Notices

The Contractor shall notify all affected Utility Owners at least 48 hours before commencing any operations that affect a Utility, unless otherwise agreed to in a Utility Agreement. For excavation operations, the Contractor shall mark the proposed excavation before contacting Missouri One Call. The Contractor shall call Missouri One Call at least 48 hours (excluding Saturdays, Sundays, and holidays) before starting excavation operations. MoDOT facilities are not included in Missouri One Call list. Notification to MoDOT is to be accomplished by submitting the Notice of Intent form located at <http://www.modot.mo.gov/asp/intentToWork.shtml>

The Contractor shall not start construction operations adjacent to Utility properties until arrangements, satisfactory to the Utility Owner, have been made by the Contractor for the protection of the Utility and continuation of service. Should the Contractor's equipment come in contact with or damage a Utility in any way, even

though there may be no apparent evidence of breakage or harm, the Contractor shall promptly notify the proper authorities and cooperate with those authorities in determining damage and restoring interrupted services as may be needed. Where contact is made with a Utility, the Contractor shall suspend operations immediately and vacate the area until it has been determined by the Utility Owner that it is safe to resume operations.

Notices Regarding Utility Owner Performance

The Contractor shall be responsible for verifying progress of the Utility Owner's work and for notifying MoDOT should the Contractor have cause to believe that the Utility Owner will not meet the specified time frame(s) for any of the following: construction; review of the Contractor's plans; or inspection. The Contractor shall provide such written notice to MoDOT immediately after discovery.

7.6 Coordination and Cooperation

MoDOT and the Contractor shall be available to meet at the request of the other party, as necessary, to discuss and resolve matters relating to the Utility Work. The requesting party shall provide the other party with not less than seven Days prior notice of such meetings.

The Contractor shall produce minutes of all meetings with Utility Owners and/or MoDOT and shall distribute copies of the minutes to the Utility Owner and MoDOT no later than seven Days after each meeting date. The Contractor shall provide MoDOT copies of all correspondence between the Contractor and any Utility Owner no later than seven Days after receipt or sending.

The allocation of responsibility for any Utility Work to a Utility Owner will not relieve the Contractor of the obligation to coordinate with the Utility Owner as necessary for the Utility Work to be performed or of the obligation to perform any other Utility Work not specifically assigned to such Utility Owner.

7.7 Cost

The contractor shall be responsible for all costs associated with Utility Work, including but not limited to cost of additional utility easements and reimbursable utility relocation costs. Relocation of utilities within the limits of MoDOT Right of Way is by permit and is not reimbursable.

7.8 Damage to Utilities by Contractor

The Contractor shall be responsible for any and all damage caused by the Contractor's Subcontractors, employees or agents to the property, facilities, structures, or persons of the Utility Owner. The Contractor shall immediately notify the affected Utility Owners of any Utilities damaged by the Contractor during the Contractor's performance of the Work. The Contractor shall be responsible for all costs and/or schedule impact associated with said damage.

Promptly after the Contractor's discovery of such damage or the Contractor's receipt of notice of any such damage from the Utility Owner or from any other source: (a) the Contractor shall repair the damage to the Utility Owner's satisfaction, or (b) at the Utility Owner's election, the Utility Owner may make such repairs at the Contractor's expense. If the Contractor fails to make any payment to a Utility Owner required within 60 Days after receipt of the Utility Owner's invoice, MoDOT may make such payment if required pursuant to the applicable MUA or otherwise at MoDOT's sole discretion. If the Contractor's failure to pay is due to a reasonable dispute, then MoDOT may not make such payment until at least 60 Days after the final resolution of such dispute has occurred without payment by the Contractor. If MoDOT makes any payment, the Contractor shall reimburse MoDOT for such payment within 10 Days after receipt of MoDOT's invoice, or, in MoDOT's discretion, MoDOT may deduct the amount of reimbursement due from the next payment (or payments, if necessary) due to Contractor under the Contract.

7.9 Partnering and Dispute Resolution Procedures

Any disputes that arise between MoDOT and the Contractor shall be subject to the Dispute Resolution provisions set forth in Book 1; however, if the dispute involves a Utility Owner, the Dispute Resolution provisions set forth in Book 1 shall be modified in accordance with this section to include participation by the Utility Owners, or as modified in the applicable MUA(s) with the Utility Owner(s).

The Contractor and MoDOT agree that the Utility Owner(s) shall be invited to participate in all partnering activities related to the Utility Work of the affected Utility Owner(s). If any dispute arises between the Contractor and MoDOT that involves a Utility Owner(s) and the dispute is not resolved during the partnering process, the Dispute Review Board (DRB) procedures set forth in Book 1 shall be modified to allow the affected Utility Owner(s) to select one member to participate on the DRB for the issues affecting the Utility Owner(s), such member to be Approved by MoDOT and the Contractor. Regardless of how many Utility Owners are involved in the dispute, the Utility Owners will only have one member on the DRB. The Utility Owners' DRB member shall have the experience and qualifications required in Book 1 for the DRB members and shall comply with all of the requirements applicable to DRB members therein. If a dispute involves an affected Utility Owner(s), the chairperson of the DRB will act as chairperson for the DRB procedures, but will not participate in any deliberations or decisions. The Contractor, MoDOT and the Utility Owners may agree to a modified dispute resolution process either in the MUA or in a separate agreement.

7.9 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

**The Bridge Improvement Program
Missouri Department of Transportation
Draft Request for Proposals
Book 2 – Performance Requirements
July 21, 2006**

Deliverable	Review or Approval	Schedule	Reference Section
Utility Tracking Report (UTR)	Review	Quarterly or as otherwise directed by MoDOT	7.2

8 RIGHT OF WAY

8.1 Administrative Requirements

MoDOT will retain possession of each parcel and all improvements, if any, made thereon by the Contractor. The Contractor's access and use of the Right of Way arises solely from the permission granted by MoDOT under the Contract. The Contractor is responsible for the right of way and easements required for the performance of the work.

8.2 Right of Way Acquisition

- The Contractor shall fund right of way cost including condemnation awards.
- The Contractor shall fund the cost of acquiring right of way to be performed by MoDOT staff or a Right of Way Acquisition Contractor, under contract with the Contractor and direct oversight by MoDOT.
- The Contractor shall fund the cost of relocation of displaced persons and property in accordance with the Uniform Relocation Assistance Act.
- The Contractor shall develop Preliminary Right of Way Needs List or Preliminary Right of Way Design. Preliminary design or Preliminary Right of Way Needs List must be developed in year 1, with some right of way plans being provided to MoDOT Right of Way in year 2.

The Preliminary List or Design will be used by MoDOT to:

- Determine Environmental requirements of the new right of way.
- Develop a work plan for the RW Acquisition Contractor or MoDOT staff.
- Develop a preliminary right of way cost estimate.
- Coordinate public involvement.
- Coordinate utility relocation requirements.
- The Contractor shall order and fund the cost of ownership information.
- The Contractor shall develop right of way plans in accordance with the requirements for right of way design specified in Chapter IV of the MoDOT Project Development Manual (PDM).
- The Contractor shall write legal descriptions.
- MoDOT will prepare right of way acquisition documents incorporating Contractor's legal descriptions.
- The Contractor shall survey and stake the proposed rights of way.
- MoDOT staff or Right of Way Acquisition Contractor will acquire right of way and perform relocation services of displaced persons and property.
- Contractor may purchase a Temporary Construction Easement (TCE) without an appraisal up to \$10,000.00. An appraisal waiver shall be performed only by a real estate professional with extensive knowledge and experience of real estate values and sales history in the market area.

In cases where the TCE causes relocation of personal property in excess of \$1,000.00, the Contractor must provide MoDOT's Right of Way Manager with a relocation proposal for the property to ensure compliance with the Uniform Relocation Assistance Act.

After each TCE is acquired, the Contractor shall submit a complete parcel acquisition file, which includes, but is not limited to, copies of just compensation agreements, fully

executed easement documents and/or agreements, the negotiator's signed diary, and a statement signed by the property owner acknowledging receipt of payment in full. Temporary easement acquisition files shall be maintained by Contractor throughout the project and shall be subject to review by MoDOT or Federal Highway Administration upon request. All temporary easement files will then be submitted to MoDOT following acceptance of the project. If a TCE is to be acquired from a property that MoDOT has an unsettled condemnation case, the contractor shall provide to MoDOT a copy of all plans and offers pertaining to the easement so that they may be provided to MoDOT's legal counsel in the condemnation case.

If the Contractor cannot reach an agreement with a property owner for a TCE acquisition, the Contractor may request in writing that MoDOT acquire the easement or easements through condemnation proceedings. The Contractor shall prepare and submit to MoDOT for approval, a properly completed Condemnation Memorandum and Check List Form in accordance with the instructions contained in the MoDOT Right of Way Manual.

The Contractor shall make plan changes requested by MoDOT to accommodate and facilitate property owner desires and to mitigate impact on property.

- MoDOT will provide Contractor notice of fully acquired right of way on each bridge, individually.
- The Contractor shall process right of way acquisition payments and condemnation awards to property owners, escrow agents and courts.
- The Contractor shall process payments to providers of ownership information and escrow services.
- MoDOT will coordinate and perform condemnation.
- The Contractor shall fund and process payments for title insurance on acquired rights of way.

8.3 Demolition

- The Contractor shall be responsible for demolishing, removing and disposing of all existing buildings and other structures from the ROW, Permanent Easements and Temporary Easements. Removal of all buildings shall include all attached structures, existing rubbish, trash and contents in and adjacent to the building on each parcel.
- The Contractor shall follow all applicable state and local laws and regulations.
- Demolition of the subject buildings cannot begin until after the contractor is notified that the ROW has been acquired.
- The Contractor shall notify the Missouri Department of Natural Resources 10 working days before the demolition of any building structure.



8.6 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or approval:

Deliverable	Review or Approval	Schedule	Reference Section
Right of Way Acquisition Funding Recording Fees for acquisition documents Title Insurance on acquired Right of Way		Actual Cost with direct payments to owners and providers.	8
Preliminary Right of Way Needs List Or Preliminary Plans		As soon as practical In year 1 and early year 2.	8
Ownership information		As soon as practical beginning in year 1 and early year 2.	8
Right of Way Plans		One year prior to start of construction	8
Legal Descriptions		Submitted concurrently with completed right of way plans.	8
Right of Way Survey And Staking		Concurrently with completed right of way plans.	8
Plan Changes And Replacement Staking		As needed to accommodate property owners, facilitate acquisition and mitigate impacts to property.	8



9 SURVEY

9.1 Project Survey Coordination

The Contractor shall designate a Professional Land Surveyor registered in the State of Missouri, as the responsible person in charge of all Contractor survey activities on the Project. The Contractor shall comply with the most recent and applicable State and Federal Laws. Survey procedures and criteria shall be in accordance with 20 CSR 2030-16, the *Missouri Minimum Standards for Property Boundary Surveys*, and any applicable portions of Chapter 3 of the MoDOT Project Development Manual.

The Contractor's Professional Land Surveyor (PLS) shall be required to sign and seal all survey documentation in accordance with 20 CSR 2030-16.

9.2 Contractor Supplied Survey Data

Except as provided by MoDOT, the Contractor shall provide all survey work required for completion of the Project.

Any source data provided to the Contractor by MoDOT shall be returned in the same manner and condition as when it was provided. The data should be returned at the point when it is no longer needed by the Contractor to perform the services required by this agreement or at the conclusion of the contract, which ever occurs first.

9.3 Preservation of Survey Control Monuments

The Contractor shall preserve all survey control monuments and any governmental defined land corners that are located on MHTC right-of-way. The Contractor shall notify MoDOT as soon as it becomes known that a monument is in a position that will interfere with new construction or with Contractor operations. The monument position shall be accurately preserved prior to disturbing any such monument.

If an existing marker is disturbed, or cannot be preserved in place, the Contractor's PLS shall set the new marker in accordance with the requirements of 20 CSR 2030-16. New survey monuments shall be furnished and placed in accordance with the standards for permanent monuments, including a cap stamped with MHTC's name, and the highway station and offset for that location as detailed in Chapter 3 of the MoDOT Project Development Manual.

9.4 Permission to Enter Property

The Contractor shall secure property owner permission, fully executed Rights of Entry or Easements prior to entering any property outside of MHTC right-of-way for surveying purposes. The Contractor shall retain all such documents for MoDOT review.

9.5 Right-of-Way Surveys

Where new right-of-way or easements are required, the Contractor's PLS shall reestablish the existing alignment, right-of-way, and survey any new project alignment to meet the standards of the MoDOT's Project Development Manual, Chapter 3-04.2,



and conform to all requirements of 20 CSR 2030-16. This includes a Location Survey Plan for any new land acquisition that may be required for additional right-of-way purchases. All monumentation for new right-of-way and permanent easements shall be in place at the conclusion of the project.

The Location Survey Plan will include a land description of the existing and new right of way or easements at the structure location. This description shall: (1) be based on the location survey, (2) be concise, (3) contain title identity, (4) contain measured dimensions and highway stationing in ground units, (5) contain measurement data that describes the geometric area of the corridor and closes mathematically, (6) contains information that does not lend to alternate interpretations, and (7) be written to facilitate the relocation of the corridor by any other professional land surveyor.

9.6 Legal Property Surveys

The Contractor's PLS shall perform the survey of existing property boundaries included in the legal description and a land survey of any additional right of way or easements required for the selected treatment. This survey shall be in accordance with 20 CSR 2030-16. The results of the land survey will be included in the Location Survey Plan that will serve as the recordable survey plat.

The Contractor's PLS shall be responsible for verifying, furnishing, and recording of any public survey corners necessary for legal descriptions used in deed writing and/or the development of the Location Survey Plan. The Contractor shall reference Chapter 3 of the MoDOT Project Development Manual to ensure that the public survey corners are obtained in accordance with the requirements of the MoDOT. The Contractor's PLS shall tie any public survey corners used in the Location Survey Plan to the highway survey alignment.

9.7 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or approval:

Deliverable	Review or Approval	Schedule	Reference Section
Location Survey Plan(s) for New Land Acquisition required for any additional Right-of-Way purchases	Review	As soon as practical In year 1 and early year 2.	9.5, 9.6



10 GEOTECHNICAL

The Contractor shall determine the need for geotechnical information and conduct investigations as necessary to complete the analyses, design, and construction.

10.1 Geotechnical Report

The Contractor shall prepare and submit a copy of the Geotechnical Report with the as-built plans. The Geotechnical Report shall include a detailed method statement describing the general philosophy and methods of design and construction and the rationale for selection of the proposed construction methods for all geotechnical and foundation aspects of the Project. The method statement shall indicate how material and design details are chosen to match selected construction methods and construction details and the soil, rock, and groundwater environment for the site.

The Geotechnical Report shall define the engineering and design approach that will be followed in order to develop technically and environmentally acceptable and durable foundations, cut and fill slopes, retaining structures, and geotechnical designs for the Project.

The Geotechnical Report shall be prepared and signed and sealed by a Professional Engineer or Professional Geologist registered in the State of Missouri.

10.2 Geotechnical Data

The Contractor shall form its own interpretation of any existing geotechnical data that is obtained or may become available from MoDOT. If the Contractor obtains or is provided existing geotechnical data from MoDOT, the Contractor assumes the sole risk of liability or loss, as provided in Sec 102.5 of the Standard Specifications, if the Contractor does rely on these documentary interpretations and conclusions to its detriment, delay or loss. .

10.3 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

Deliverable	Review or Approval	Schedule	Reference Section
Geotechnical Report	Review	Submit with as-built plans	10.1



11 SIGNING, PAVEMENT MARKING, AND LIGHTING

11.1 Signing

The design and plans shall address modifications to permanent signing to current MoDOT standards required by the project.

The Contractor shall install all new sign panels.

The Contractor shall furnish and install delineation on the bridge and approach per MoDOT standards.

11.2 Pavement Marking

Pavement markings will be provided throughout the course of the project. If pavement markings are to be relocated during construction, temporary marking will be provided. Conflicting pavement markings, either temporary or permanent, will be removed as needed. Permanent pavement marking will be installed by the contractor upon completion of the project.

The pavement marking system shall match MoDOT's Roadway Visibility Direction Implementation Plan requirements. On Major roads, consideration to allow High Build paint may be given, if neither of the roadways that approach the ends of the bridge have the durable marking system currently in place (i.e. the bridge would be the only surface with the durable markings).

Any permanent intersection pavement markings; crosswalks, stop bars, turn arrows, etc., that are damaged or need relocating due to lane or geometric changes, the contractor must replace with Type II tape

11.3 Permanent Lighting

Basic lighting shall be provided at any locations that currently have basic lighting, and the existing lighting is being removed due to the construction of the bridge improvements.

1. The average illumination of the traveled way including ramp terminals shall provide an average maintained intensity of not less than 0.6 foot-candles, and a minimum intensity of not less than 0.2 foot-candles.

Continuous lighting shall be provided where continuous lighting is currently used, and the existing lighting is being removed due to the construction of the bridge improvements.

1. The average illumination of the traveled way and ramp connections shall provide an average maintained intensity of not less than 0.6 foot-candles, and a minimum intensity of not less than 0.2 foot-candles.
2. The average illumination of cross streets shall provide an average maintained

intensity of not less than 0.4 foot-candles, and a minimum intensity of not less than 0.2 foot-candles.

3. Must provide a uniformity ratio of 4:1 or better for 45' mounting height and 6:1 or better for 30' mounting height

Lighting shall be provided under all bridges over 75 feet wide where necessary to maintain the continuity of existing or proposed lighting.

The average illumination in pedestrian tunnels shall provide an average maintained intensity of not less than 0.5 foot-candles. Pedestrian level lighting shall be provided for sidewalks on bridges.

The contractor shall contact MoDOT a minimum of 4 weeks in advance of proposal to locate existing facilities in the area of highway lighting. If any lighting is damaged by construction activities, the contractor shall replace in kind with new materials. Lighting poles shall be kept in the current location, relocation will not be allowed, unless the contractor proposes an alternative design that does not effect performance or safety near the lighting. Lighting must remain operational at all times.

Any changes in lighting design must meet the illumination criteria in the current MoDOT policy manual. Contractor shall submit lighting calculations showing the proposed lighting plan meets the illumination criteria if different than the standard layouts in the current MoDOT policy manual. If currently using 30-foot pole design for lighting, the contractor may propose replacing the existing lighting poles with 45-foot pole design lighting. However, entire interchange must be converted to same system. Pull boxes located on the bridges shall be replaced.

If current lighting wiring is located under the bridge or not in conduit, the contractor shall replace wiring and add pull boxes and conduit to the bridges. The new pull box shall be located in the toe of the barrier wall. If any conduit located on the bridges is damaged by construction activities, it shall be replaced

If there are non-breakaway light poles, the contractor shall replace with AT type poles.

Any changes made to the lighting system must complete the 15 day system test as outlined in the Missouri Standard Specifications for Highway Construction. All products used must be as listed on the Traffic Signal and Highway Lighting Approved Products List.

Refer to Missouri Standard Specifications for Highway Construction for completion of work.

11.4 Navigation Lighting

Navigation lighting shall be kept operational with a permanent system. See Missouri Standard Specifications for Highway Construction for operation and completion of work information.

If the navigation lighting system is indicated for replacement, the installation will be completed according to the Missouri Standard Specifications for Highway Construction. If navigation lighting is replaced, products from the Traffic Signal and Highway Lighting Approved Product List shall be used.

11.5 Aviation Lighting

Must remain operational at all times.

If aviation lighting is replaced, products from the Traffic Signal and Highway Lighting Approved Product List shall be used.

12 Hydrology and Hydraulics

The Project shall include all Work for the design and construction of drainage facilities at each bridge improvement project location including temporary and permanent erosion control measures.

12.2 Coordination with Other Agencies

The Contractor shall coordinate all sewer and drainage issues with affected regulatory agencies that have interest or jurisdiction over the project.

The Contractor shall include MoDOT in all contacts with affected regulatory agencies.

12.3 MoDOT Drainage Facilities

MoDOT drainage facilities include pipes, closed conduits, culverts, bridges, natural channels, and man-made channels receiving stormwater that are owned and maintained by MoDOT. The following criteria apply:

Gutter Flow Spread

Design Spread shall not exceed the lesser of 6 ft or the shoulder width + 3 feet for an 8.5 in/hr intensity.

Bridge and Culvert Hydraulic Design Criteria

The following requirements are applicable to structures that are replaced or structures that have their substructure widened.

MoDOT encourages the contractor to establish the appropriate hydraulic design performance criteria at each location a bridge is being replaced. However, if the appropriate criteria do not meet the criteria established below, a design exception, documenting the reason for deviation is required.

- Roadway Overtopping
 - Minor Routes: The water level shall be no deeper than 1 foot below the lowest shoulder point during a 25 year event.
 - Major Routes: The water level shall be no deeper than 1 foot below the lowest shoulder point during a 50 year event (100 year event for interstates).
- The freeboard for all bridges on all routes shall be evaluated for the 50 year event. The freeboard shall be greater than 1 foot for drainage areas less than 20 sq. miles and greater than 2 feet for drainage areas greater than 20 sq. miles. The Design High Water (DHW) shall be based on the return period used for the freeboard (50 year).

- Backwater/Headwater for bridges and box culverts on all routes shall meet NFIP requirements. The maximum backwater compared to natural conditions shall be 2 feet for the 100 year event.

12.5 Methods to Estimate Flow

The Contractor shall ensure that the conditions in the watershed conform to the limitations method of analysis. For all methods, available historical data shall be reviewed and the design flow justified as meeting the local Project conditions.

12.6 Hydraulic Design

The Corps of Engineers Hydrologic Engineering Center's River Analysis System (HEC-RAS) shall be used to develop water surface profile models for the hydraulic analysis of bridges.

12.7 Regulatory Floodway and Floodplains

The Contractor shall complete hydraulic studies to assess floodplain and regulatory floodway impacts. All impacts shall be documented and meet the requirements of all federal and state regulations. The Contractor shall obtain a Floodplain Development Permit from the State Emergency Management Agency (SEMA) for construction within areas of identified flood hazard prior to proceeding with construction.

The Contractor shall upon discovery notify MoDOT, if the bridge work will impact FEMA/SEMA buyout property.

The Contractor shall provide the following deliverable items:

- Floodplain Development Permit
- A "No Rise" certificate for construction within a regulatory floodway.

12.8 Bridge Rehabilitations

No hydraulic analysis is required unless substructure is widened or SIA Item 113 is less than 5.



12.9 Deliverables

The following are required when hydraulic analysis is performed.

Deliverable	For Approval	Schedule	Reference Section
Flood Plain Development Permit		Before Construction	
“No-Rise” Certificate		Before Construction	
Bridge Survey Report		With as-built plans	12
Bridge Hydraulics and Scour Report or Culvert Hydraulics Report		With as-built plans	12
Input and Output files from water surface profile models		With as-built plans	12

13 ROADWAYS AND PAVEMENTS

13.1 Traffic and Accident Analysis

MoDOT will furnish the Contractor traffic information for the construction and design years. Design year traffic volumes will be used to determine design year levels of service (LOS) for each structure location.

13.2 Design Criteria

The Contractor is encouraged to use alternative standards and innovative methods to fulfill the objectives of the program. Should the Contractor desire to use established standards from another DOT or other alternative standards, MoDOT reserves the right to review and approve those standards. In the absence of approval to use other standards, the Contractor shall use MoDOT or established AASHTO standards.

Any deviations from agreed upon standards for design criteria, construction procedures or materials specifications shall be approved by MoDOT and documented by the Contractor. This documentation shall include a brief justification for the deviation and the signature of the Contractor's engineer. The Contractor shall be responsible for obtaining approval from FHWA, when required.

13.3 Non-Vehicular Transportation Provisions

MoDOT values the needs of all customers including non-motorized travelers.

The provision to accommodate bicycle and/or pedestrian facilities associated with the proposed treatment should be included when the local jurisdiction agrees to completely fund the additional cost for incorporation of the non-vehicular facility into the proposed treatment. Proposed treatments that will disturb existing bicycle and/or pedestrian facilities shall include provisions for replacement of the facility.

The provision to accommodate bicycle and/or pedestrian facilities associated with the proposed treatment should be considered when any one or more of the following conditions exist:

- The local jurisdiction has a comprehensive bicycle and/or pedestrian policy in effect that includes the area of the structure location and would require the accommodation of non-vehicular traffic
- There is public support through local planning organizations or other local jurisdictions for the inclusion of bicycle and/or pedestrian facilities
- Bicycle and/or pedestrian traffic generators are located near the structure location (i.e. residential neighborhoods, employment centers, shopping centers, schools, parks, libraries, etc.) and there are no reasonable alternative crossings of a natural or man-made barrier (i.e. bridges over rivers, roadways, or railroads or under access controlled facilities)



- There is evidence of bicycle and/or pedestrian traffic at (on, under, or adjacent to) the proposed structure location and the local community supports the incorporation of facilities at this time.

13.4 Pavement Selection

The Contactor shall attempt to minimize the disturbance and replacement of roadway pavements to the greatest extent possible. Where pavement replacement is necessary and adjacent to structure treatments, the new pavement thickness shall generally be equivalent to the existing pavement thickness on four inches of aggregate base but not less than 5 3/4 inches of pavement on four inches of aggregate base. For these sections, the new pavement may consist of asphaltic concrete (cold mix or hot mix) or portland cement concrete pavement, at the Contractor's option. If the AADT is greater than 2000, the cold mix asphalt option is not allowed.

13.5 Release for Construction Plans

The Contractor shall provide a set of Release for Construction Plans for each structure location and provide a copy to MoDOT prior to beginning construction for a given structure. The format of how this information is conveyed to MoDOT shall be at the Contractor's option.

13.6 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for Review or Approval:

Deliverable	Review or Approval	Schedule	Reference Section
Optional DOT Standards	Approve	Include with Proposal	13.2
Release for Construction Plans	Review	Prior to Construction work	13.5

14 SIGNALS AND INTELLIGENT TRANSPORTATION SYSTEMS

14.1 Temporary and Permanent Traffic Signalization

The Contractor shall keep any existing signals functional, including maintaining any existing communication links between the signal controllers and other equipment. If signals must be shut down, the Contractor shall provide temporary signals or appropriate traffic control. Temporary signals shall be provided according to the Missouri Standard Specifications for Highway Construction and the Missouri Standard Plans for Highway Construction.

The contractor shall contact MoDOT a minimum of 4 weeks to locate existing facilities in the area of signals.

If the signals will be altered, by either closing an approach or changing traffic patterns, the contractor shall submit a signal timing and phasing plan to the engineer for approval prior to altering the traffic pattern or provide the appropriate traffic control.

The contractor shall replace or repair any conduit located on bridges, damaged or destroyed by construction or maintenance activities. As an alternative, if the conduit contains interconnect wiring only, the contractor can install a wireless interconnect system on the effected bridges, instead of the conduit.

The contractor shall replace in kind, any detection loops on bridge decks or roadway pavement destroyed by the construction improvement or construction activities. As an alternative to the detection loops, the contractor can install a video detection system on the effected bridges. If the geometrics of an intersection are altered the contractor shall submit a location plan for the placement of new detection loops or video and be approved by the engineer. If contractor chooses to use video detection, the contractor must also upgrade the equipment as necessary to use the system and make it operational.

The contractor shall relocate or replace any other signal facilities, including but not limited to; cabinet: conduit: base: pull boxes: etc. altered or destroyed because of the bridge improvements.

For any modified signals, the contractor shall complete the 15-day system test as outlined in the Missouri Standard Specifications for Highway Construction.

The contractor shall use products from the Traffic Signal and Highway Lighting Approved Products List.

Refer to Missouri Standard Specifications for Highway Construction for completion of work.

14.2 Intelligent Transportation Systems

The contractor shall relocate or replace any ITS equipment; cabinets, conduits, pull boxes, data collection equipment, etc., is altered or damaged because of the bridge improvements or construction activity. The Contractor shall keep any existing dynamic message signs and traffic sensors functional. MoDOT owns some sensors, and some sensors may be owned by other entities.

14.2.1 Communication System

The contractor shall relocate or replace any communication equipment; cabinets, conduits, pull boxes, underground fiber optic network, etc., which may be altered or damaged because of the bridge improvements or construction activity.

14.3 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

Deliverable	Review or Approval	Schedule	Reference Section
Signal Timing and Phasing Plan	Approval	As needed, 4 weeks prior to planned construction	
Detection Loop or Video Plan	Approval	As needed, 4 weeks prior to planned construction.	

15 STRUCTURES

15.1 General

Designs shall be in accordance with applicable state and federal regulations.

The Contractor shall request a bridge number for each bridge. All correspondence relative to a specific bridge shall contain the bridge number in the subject line.

Regardless of the treatment strategy the following requirements shall be met:

- 1) The initial construction shall eliminate all deficiencies.
- 2) The initial construction shall eliminate all load postings, except due to the commercial zone posting truck.
- 3) The coating condition shall be at minimum condition “fair” at the acceptance of initial construction.
- 4) Curbs and Railings shall provide adequate safety and shall not, in combination with the structure width, restrict the mobility of equipment and machinery beyond that of the existing structure and railing.
- 5) The minimum curb-to-curb width for new bridges shall be the greater of either 24’ or the existing approach roadway width including shoulder; for rehabilitated structures the minimum shall be 22’.
- 6) Pedestrian access and mobility shall not be decreased.
- 7) The contractor shall provide revetments, slope protection and bank protection that contain no noteworthy deficiencies at the completion of initial construction. MoDOT will maintain the revetment / slopes unless damage is a result of drainage from the bridge.

MoDOT will perform safety inspection and evaluation for bridges.

15.2 Rehabilitation

At completion of initial construction, rehabilitated structures shall meet or exceed the minimum NBIS values listed in Table 1.



TABLE 1 - REHABILITATED BRIDGE PERFORMANCE MINIMUMS

	Guide Item								
	58	59	60	62	68	69	71	72	113
	Deck Cond.	Super Cond.	Sub Cond.	Culvert Cond.	Deck Geometry	Under-clearance	Waterway Adequacy	Approach Align	Scour
	6	6	6	6	4	4	4	4	5

Table 1 is based upon the “Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation’s Bridges”.

MoDOT will evaluate and assign values to the above items. MoDOT’s staff assigning the SI&A values will meet the requirements of Title 23CFR for inspection personnel. MoDOT will base all ratings on the NBIS and MoDOT’s Bridge Inspection Rating Manual available at: <http://www.modot.mo.gov/business/manuals/bridgeinspectrating.htm>

15.3 Design Loading

Designs for rehabilitation shall be in accordance with either AASHTO Standard Specifications for Highway Construction or AASHTO LRFD Bridge Design Specifications. The Design Truck for newly constructed elements shall be as follows:

Location	Specification	
	LFD	LRFD
NHS and within Commercial Zones	HS-25	HL-93
Other	HS-20	HL-93

15.4 Load Rating / Posting Values

The Contractor shall load rate all bridges. The load ratings shall be in accordance with the “Load Rating for Design Build Bridges” memorandum. A report for each structure shall be supplied detailing the ratings for all axle configurations identified by the memorandum. The Contractor shall use VIRTIS software to rate each structure. The input and output shall be supplied to MoDOT in electronic format.

At initial construction completion and throughout the remainder of the Maintenance Period, regardless of treatment strategy, structures shall not be posted for any restriction on legal loads. This requirement includes lane and speed restrictions. The commercial zone posting truck, MO5, is excluded from this requirement. The minimum ratings shall be as follows: 1) Missouri H20, 23 Tons and 2) Missouri 3S2, 40 Tons.

Existing substructure to be used in place shall have adequate operating capacity.

15.5 Maintenance / Bridge Inspections

MoDOT staff will perform annual routine and / or random intermediate bridge inspections for all structures. MoDOT may but has no obligation to notify the contractor of when or where bridge inspections are to be performed. MoDOT will submit to the Contractor, at a minimum, inspection reports on an annual basis. Results of all annual routine and all random intermediate inspections are subject to the performance criteria established herein. The Contractor has the right to discuss with MoDOT, but not dispute the results of these inspections.

Maintenance Period: The Contractor shall perform, subcontract for, or procure the required Maintenance and / or Rehabilitation Work required pursuant to the terms and conditions of this Contract. As necessary and applicable, the Contractor shall: (i) furnish design services; (ii) provide management and supervision services for the Required Work; (iii) provide for the maintenance of traffic.

The Contractor is required to maintain all elements of the structures in working order. These include but are not limited to, expansion devices, bearings, railings, protective coatings, bridge approaches and drainage systems. MoDOT's inspection staff will be the sole authority when assessing the condition of these elements.

If MoDOT load posts, or otherwise restricts a structure due to condition subsequent to initial construction completion, the contractor shall take immediate action to return the structure to unrestricted operation.

The contractor shall maintain the wearing surface of all bridges in satisfactory condition.

The coating systems shall be maintained in fair condition. Any coating identified as "poor" on a structure shall be restored to "fair" or better within 24 months subsequent to receipt of the inspection report or notification.

Allowances: During the Maintenance Period, NBIS Items 58,59,60 and 62 (condition rating) will be allowed to fluctuate within the following established parameters:

During the Maintenance Period, the condition of any structure shall not be rated below 6 for more than 24 consecutive months nor shall a structure have a condition rating of less than 6 on inspection reports for 5 total years during the contract maintenance period.

Following acceptance of the initial construction projects, no condition ratings shall fall below 4. Upon notification from MoDOT that a structure(s) has been identified with a condition rating less than 4, the Contractor shall take immediate action to repair, rehabilitate or replace deficient elements.

Non-compliance: The Contractor shall have six months following written notification to restore unsatisfactory elements to conditions specified in this section. If corrections are not completed within the allotted time, or if a structure is closed,

MoDOT, at the expense of the Contractor, has the right to immediately pursue corrective measures. Compensation for both the direct and indirect costs incurred by MoDOT will be by 1) reduced payment(s) 2) bond forfeiture or 3) combination thereof.

If MoDOT exercises its right to pursue corrective measures, the treatments and procurement of work to restore a structure(s) to the minimum performance level are wholly MoDOT's discretion. Corrective measures employed by MoDOT may exceed the minimum stated performance levels.

Once notified that MoDOT is taking corrective action, the Contractor shall refrain from working on the affected item unless approval is obtained from MoDOT.

Final Acceptance: The condition ratings for the last inspection cycle prior to final acceptance shall be condition 6 or better. All elements (of the structure(s)) shall be in working order at final acceptance. Coatings shall be evaluated at fair or better.

Exclusions: Unless necessary repair work covered by Section 15.5 is directly caused by acts or omissions of the Contractor, the Contractor shall have, following acceptance of initial construction, no obligation to repair, unless via force account, deficient elements attributed to the following circumstances:

- a) **MoDOT and Third Party Maintenance.** Damage to a Bridge caused by or resulting from MoDOT or third party Work including damage caused by snow plows.
- b) **Accidents.** Damage to a structure caused by or resulting from accidents including collisions, spills, fires, explosions, chemicals and releases of Hazardous Materials.
- c) **Nature.** Damage to a structure caused by or resulting from Acts of God including Floods, Earthquakes, landslides and tornadoes unless the damage was caused or materially contributed to by the work or omissions of the Contractor.
- d) **Vandalism, Civil Strife and Hostilities.** Graffiti removal, theft.
- e) **Equipment, Trucks and Machinery.** Damage to a structure caused by or resulting from equipment, trucks, and machinery operated on the bridge without an approved permit and in violation of legal weight restrictions or other legal restrictions prohibiting the operation of such vehicles upon the structure.

Drift: MoDOT will remove drift accumulation in accordance to standard practice, unless the accumulation is directly attributed to an error or oversight of the Contractor.

15.6 Deliverables

At a minimum the Contractor shall submit the following to MoDOT:



Deliverable	For Approval	Schedule	Reference Section
Virtis Rating of each Bridge		Before Construction of Each Bridge	15



16 MAINTENANCE OF TRAFFIC

The Contractor shall develop and submit a Maintenance of Traffic (MOT) Plan for approval at least 30 Days prior to beginning the first phase or stage of construction of each improvement. The MOT Plan shall identify the contractor's strategy to provide for the safe and efficient movement of people, goods and services through and around each improvement while minimizing impacts to local residents, business and commuters; their approach to developing detailed Traffic Control Plans (TCP); and an access management plan and access maintenance plan for all impacted parcels (note: access to all parcels within each improvement limit shall be maintained or the Contractor shall provide alternative access. Contractor shall describe the MOT plan with reasonable, measurable tasks and milestones.

16.1 Traffic Control Plans

The Contractor shall develop and submit Traffic Control Plans for each stage of construction on each improvement that shows the Contractor's proposed construction staging and proposed traffic control devices consistent with the MOT Plan. The TCP shall be submitted to MoDOT prior to construction of the Work shown in the TCP. Major revision to a TCP shall also be submitted to MoDOT. The TCPs shall include, at a minimum, the following elements:

- A detailed diagram which shows the location of all traffic control devices.
- An access maintenance plan for all properties requiring access during construction. The plan shall also indicate the areas where equipment will be stored and vehicles parked if within the Project limits.
- A plan for maintaining and controlling pedestrian, bicycle, and other non-vehicular traffic.

16.2 Construction Requirements

- The Contractor shall provide a paved surface for all Major Route detours.
- The Contractor's placement of construction equipment, materials and vehicles shall comply with AASHTO.

16.3 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

Deliverable	Review or Approval	Schedule	Reference Section
Final Maintenance of Traffic Plan	Approval	30 Days prior to start of Construction	16
Traffic Control Plans	Review	Prior to Implementation	16.1

17 MAINTENANCE DURING CONTRACT PERIOD

17.1 Maintenance Prior To Bridge Rehabilitation/Replacement

MoDOT will perform the routine safety bridge inspections and schedule the needed maintenance to keep the structure safe and operational until the Contractor begins rehabilitation or replacement.

17.2 Maintenance During Rehabilitation/Replacement

The Contractor will be responsible for the safety and all maintenance of the work site and bridge while the structure is under construction.

17.3 Maintenance After Completion of Rehabilitation/Replacement

MoDOT will schedule and perform safety inspection of bridges. A Contractor representative, qualified as a Bridge Inspection Team Leader according to Title 23CFR shall accompany the MoDOT bridge inspector on safety inspections during the Contract Maintenance Period.

The contractor shall be responsible for the repair and maintenance of sidewalks on bridges.

MoDOT will perform Routine Maintenance for all structures that are not under Contractor Control. Examples of Routine Maintenance follow:

- 1) Snow removal
- 2) Carcass removal
- 3) Graffiti Removal
- 4) Repair or replace bridge fill erosion unless caused by actions of the contractor
- 5) Mowing or vegetation control, except during construction.

During the contract maintenance period, in order to preserve the safe, uninterrupted operation of its facilities, MoDOT will continue to perform, at its discretion, emergency / “short- term” repairs, routine to its operations. Repairs performed by MoDOT shall not diminish the Contractor’s obligation to maintain these facilities nor shall, in any way, be considered as a basis for compensation should MoDOT repairs adversely affect treatments planned by the Contractor. Examples of MoDOT “short-term” repairs include, but are not limited to the following:

- 1) Filling potholes with cold mix
- 2) Removing hazardous spalls
- 3) Installing temporary shoring
- 4) Removing debris

5) Addressing immediate hazards

MoDOT will notify the Contractor of such repairs and if further corrective action is required. MoDOT will not pursue reimbursement for the above “short-term” repairs provided the Contractor is in compliance with the provisions contained herein.

17.4 Bridge Inspection Rating Dispute Resolution

In the event the Contractor disagrees with the condition rating(s) assigned by the MoDOT inspector, the Contractor’s inspector shall discuss the justification for the rating on site. Should the disputed rating be less than 6 and differ by more than 2, the Contractor may utilize the following dispute resolution procedure:

- 1) Resolve dispute by mutual agreement at bridge site during the inspection.
- 2) Hire a mutually agreed upon third party independent bridge inspector as follows:

All third-party inspections shall occur within six months of completing safety inspections on all bridges in the Bridge Improvement Program in a given inspection cycle. The third party inspections shall use the rating guidelines contained in this contract to determine condition ratings.

If the third party inspection condition rating is less than 6 for the bridge component in dispute, the time requirement to raise the condition rating to 6 or greater shall begin on the date of the initial disputed safety inspection.

Third party independent bridge inspection shall be at the Contractor’s expense unless the findings of the third party inspection supports the contractor’s rating of the disputed component, in which case MoDOT will be responsible for payment.

17.5 Maintenance of Right of Way

During any construction activities, the Contractor shall maintain properties and provide reasonable safety and security measures to preserve the existing or acquired right of way and easements. During periods of construction or reconstruction at individual bridge locations, the Contractor shall prevent, minimize, or correct problems in the vicinity of the bridge construction site such as mowing vegetation, vandalism, trespassing, rodent infestation, weed control, illegal dumping or disposal of rubble, and other debris.



17.6 Deliverables

At a minimum, the Contractor shall submit the following to MoDOT for review or Approval:

Deliverable	Acceptance or Approval	Schedule	Reference Section
Maintenance Plan	Approval	No later than 30 days following the Contract Award Date.	17