

CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

| | | | |
|--|---|---|---|
| | REQUISITION NUMBER | DUE DATE | TIME DUE |
| MDOT PROJECT MANAGER | JOB NUMBER (JN) | CONTROL SECTION (CS) | |
| DESCRIPTION | | | |
| MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED ** = OPTIONAL Check the appropriate Tier in the box below | | CONSULTANT: Provide only checked items below in proposal | |
| <input type="checkbox"/> TIER I (\$50,000 - \$150,000) | <input type="checkbox"/> TIER II (\$150,000-\$1,000,000) | <input type="checkbox"/> TIER III (>\$1,000,000) | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Understanding of Service ** |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <i>Innovations</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Organizational Chart |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Qualifications of Team |
| Not required as part of Official RFP | Not required as part of Official RFP | <input type="checkbox"/> | Quality Assurance/Quality Control ** |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site p=inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity. |
| N/A | N/A | <input type="checkbox"/> | Presentation ** |
| N/A | N/A | <input type="checkbox"/> | Technical Proposal (if Presentation is required) |
| 3 pages (MDOT Forms not counted) (No Resumes) | 7 pages (MDOT Forms not counted) | 14 pages (MDOT forms not counted) | Total maximum pages for RFP not including key personnel resumes. Resumes limited to 2 pages per key staff personnel. |

PROPOSAL AND BID SHEET EMAIL ADDRESS – mdot-rfp-response@michigan.gov

GENERAL INFORMATION

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least five (5) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet

5100J – Consultant Data and Signature Sheet (Required only for firms not currently prequalified with MDOT)

(These forms are not included in the proposal maximum page count.)

REQUEST FOR PROPOSAL

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest (Consultant/Vendor Selection Guidelines for Services Contracts" and "Guideline for Completing a Low Bid Sheet(S)*, if a low bid is involved as part of the selection process. **Reference Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

ENGINEERING SERVICES BUREAU OF TRANSPORTATION PLANNING OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

NO YES DATED _____ THROUGH _____

Prequalified Services – See the attached Scope of Services for required Prequalification Classifications.

Non-Prequalified Services – If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed. **Form 5100J is required with Proposal for firms not currently prequalified with MDOT**

Qualifications Based Selection – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the selection team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

Qualification Based Selection / Low Bid – Use Consultant/Vendor Selection Guidelines. See Bid Sheet instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted. The vendor that has met established qualification threshold and with the lowest bid will be selected.

Best Value – Use Consultant/Vendor Selection Guidelines, See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

Low Bid (no qualifications review required – no proposal required.) See Bid Sheet Instructions below for additional instructions.

BID SHEET INSTRUCTIONS

Bid Sheet(s) must be submitted in accordance with the "Guidelines for Completing a Low Bid Sheet(s)* (available on MDOT's website). Bid Sheet(s) are located at the end of the Scope of Services. Submit bid sheet(s) with the proposal, to the email address: mdot-rfp-response@michigan.gov. Failure to comply with this procedure may result in your bid being rejected from consideration.

PARTNERSHIP CHARTER AGREEMENT

MDOT and ACEC created a Partnership Charter Agreement which establishes guidelines to assist MDOT and Consultants in successful partnering. Both the Consultant and MDOT Project Manager are reminded to review the [ACEC-MDOT Partnership Charter Agreement](#) and are asked to follow all communications, issues resolution and other procedures and guidance's contained therein.

**NOTIFICATION
MANDATORY ELECTRONIC SUBMITTAL**

Proposals submitted for this project must be submitted electronically.

The following are changes to the Proposal Submittal Requirements:

- Eliminated the Following Requirements:
 - Safety Program
 - Communication Plan
 - Past Performance as *a separate section*
 - Separate section for DBE Statement of goals. Include information in Qualification of Team section

- Implemented the Following Changes:
 - All proposals require an Organization Chart
 - Resumes must be a maximum of two pages
 - Only Key (lead) staff resumes may be submitted
 - Tier III proposal reduced from 19 to 14 pages
 - Forms 5100D, 5100I, and 5100G combined – 5100D
 - Forms 5100B and 5100H combined – 5100B
 - RFP's will be posted on a weekly basis -- on Mondays

The following are Requirements for Electronic Submittals:

- Proposals must be prepared using the most current guidelines
- The proposal must be bookmarked to clearly identify the proposal sections (See Below)
- For any section not required per the RFP, the bookmark must be edited to include “N/A” after the bookmark title.
Example: Understanding of Service – N/A
- Proposals must be assembled and saved as a single PDF file
- PDF file must be 5 megabytes or smaller
- PDF file must be submitted via e-mail to MDOT-RFP-Response@michigan.gov
- MDOT's requisition number and company name must be included in the subject line of the e-mail. The PDF shall be named using the following format:
 - Requisition#XXX_Company Name.PDF
- MDOT will not accept multiple submittals
- Proposals must be *received* by MDOT on or before the due date and time specified in each RFP

If the submittals do not comply with the requirements, they may be determined unresponsive.

The Consultant's will receive an e-mail reply/notification from MDOT when the proposal is received. Please retain a copy of this e-mail as proof that the proposal was received on time. **Consultants are responsible for ensuring the MDOT receives the proposal on time.**

****Contact Contract Services Division immediately at 517-373-4680 if you do not get an auto response****

Required Bookmarking Format:

- I. Request for Proposal Cover Sheet Form 5100D
 - A. Consultant Data and Signature Sheet, Form 5100J (if applicable)
- II. Understanding of Service
 - A. Innovations
- III. Qualifications of Team
 - A. Structure of Project Team
 - 1. Role of Firms
 - 2. Role of Key Personnel
 - B. Organization Chart
 - C. Location
- IV. Quality Assurance / Quality Control Plan
- V. Resumes of Key Staff
- VI. Pricing Documents/Bid Sheet (if applicable)

2/14/12

**NOTIFICATION
E-VERIFY REQUIREMENTS**

E-Verify is an Internet based system that allows an employer, using information reported on an employee's Form I-9, Employment Eligibility Verification, to determine the eligibility of that employee to work in the United States. There is no charge to employers to use E-Verify. The E-Verify system is operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. E-Verify is available in Spanish.

The State of Michigan is requiring, under Public Act 200 of 2012, Section 381, that as a condition of each contract or subcontract for construction, maintenance, or engineering services that the pre-qualified contractor or subcontractor agree to use the E-Verify system to verify that all persons hired during the contract term by the contractor or subcontractor are legally present and authorized to work in the United States.

Information on registration for and use of the E-Verify program can be obtained via the Internet at the DHS Web site: <http://www.dhs.gov/E-Verify>.

The documentation supporting the usage of the E-Verify system must be maintained by each consultant and be made available to MDOT upon request.

It is the responsibility of the prime consultant to include the E-Verify requirement documented in this NOTIFICATION in all tiers of subcontracts.

9/13/12

Michigan Department of Transportation

**SCOPE OF SERVICES
FOR
DESIGN SERVICES**

CONTROL SECTION(S): 63112, 63131, 63132, 82052, 82023. 50111, 50112, 50051

JOB NUMBER(S): 121505, 121586, 121587, 121591, 121592, 121594

PROJECT LOCATION: The projects are located within Oakland, Wayne, and Macomb Counties, Metro Region.

PROJECT DESCRIPTION: Roadway Scoping
Pre-preliminary, Preliminary, and Final Scoping Packages for the rehabilitation of the roadways as identified in Attachment C.

The intent is to hire up to 3 (Three) consultants to prepare scoping packages. Each consultant will be awarded up to three (3) contracts.

ANTICIPATED START DATE: December 1, 2013

ANTICIPATED COMPLETION DATE: July 31, 2014

PRIMARY PREQUALIFICATION CLASSIFICATION:
Roadway Rehabilitation & Rural Freeways

SECONDARY PREQUALIFICATION CLASSIFICATION:
Maintaining Traffic Plans & Provisions
Safety Studies

DBE REQUIREMENT: N/A

MDOT PROJECT MANAGER:

Ashok K. Punjabi, P.E.
MDOT, Metro Region
18101 West Nine Mile Road
Southfield, MI 48075
248-483-5175
Punjabia@michigan.gov

CONSULTANT RESPONSIBILITIES:

The CONSULTANT shall prepare Pre-preliminary, Preliminary, and Final Scoping Packages for each of assigned project locations listed in Attachment C. As part of this project, the CONSULTANT shall prepare and evaluate the proposed treatment for each roadway and determine the extent and cost of all work required for its implementation.

The CONSULTANT shall provide staff who demonstrates technical expertise in road design as well as construction/constructability. At least one key member of the construction/constructability team shall have a minimum of 5 years of technical experience equivalent to the MDOT designated Construction Engineer Level 14 level.

For the project, complete the Scoping. This will include, but will not be limited to, the following

- A. Verify the project location, the limits and the extents, and attend road-scope scope verification meeting.
- B. Conduct field reviews to obtain existing, missing, or supplement incomplete information.
- C. Establish and detail the proposed scope of road work.
- D. Determine Federal, State, and Local requirements, and project conformance.
- E. Perform Crash Analysis and recommend countermeasures.
- E. Review, identify, make recommendations, and incorporate traffic signal upgrade needs.
- F. Review, identify, make recommendations, and incorporate Sidewalk, bike paths, and ADA compliance features in scoping report.
- G. Review existing corridor studies completed by local and other agencies, and make recommendations for incorporation of those study recommendations in compliance with Federal, State, and Local Standards and regulations.
- H. Perform Traffic Capacity Analysis (if required by MDOT Project Manager or as determined at scope verification meeting).
- I. Review and develop Illustrative Fix Alternatives as may be needed.
- J. Perform videotaping and condition assessment of 10% or more of storm sewers through project limits (as may be needed and determined by MDOT Project Manager or as determined at scoping verification process).
- K. Project Area Contamination Survey (PACS)
- L. Prepare CPM (Critical Path Method) Schedule.
- M. Evaluate and make recommendations for future Value Engineering needs during the design phase of the project.
- N. Evaluate and make recommendations for future Corridors Coordination and/or Studies.
- O. Evaluate and make recommendations for Innovative Construction Contracting based on the recommended fix and scope of work for the project.
- P. Compute and calculate detailed cost estimates for recommended and alternative fixes using MDOT Pay Items and Unit Costs.

- Q. Compute and verify all quantities.
- R. Complete the Project Concept Statement and the Project Scoping Checklist.
- S. Prepare a design hours estimate.
- T. Prepare required documents to include summary, typical cross sections, photographs, base plans, etc) required to answer all questions relating to the project scope of work (See Attachment A).
- U. Identify, contact, and coordinate with all affected governmental agencies and stakeholders including coordinating, preparing meeting materials, and attending meetings as may be necessary. Also, request communities/counties to provide public utility information within project limits.
- V. Identify, review and coordinate existing and future Transit (SMART, BRT, DDOT, etc) facilities and issues.
- W. Identify and recommend solutions for Multi-modal/Complete Streets features and opportunities where feasible and in conformance with AASHTO, MDOT, State, and Local standards and recommendations.
- X. Perform an in-depth review of right-of-way impacts (ROW), prepare ROW costs in coordination with MDOT Real Estate Section and incorporate such costs into the project costs.
- Y. Assess and evaluate combined sewer system (if one exists within project limits) and make recommendations for its separation as may be feasible.
- Z. Identify and recommend opportunities and solutions for Access Management through the scoping corridor.
- AA. Identify and provide solutions to any unique problems that may arise during the design of the project or that may affect the constructability.
- AB. Working with SEMTOC Development Engineer, identify and evaluate ITS needs for the scoping corridor and incorporate into the scoping document.
- AC. Prepare estimates and checklists as per MDOT Project Scoping Manual.

DELIVERABLES:

Obtaining, reviewing, analyzing and incorporating project data and recommendations for all scoping related work. All work shall conform to current applicable MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Roadside Design Guide, AASHTO Road Side Design Guide, AASHTO Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, MDOT Drainage Manual, MDOT Project Scoping Manual, and other AASHTO, FHWA, MDOT, and Industry guidelines, policies, and standards, etc.) This will include, but will not be limited to the following for the preparation of the Preliminary Scoping and the Final Scoping Packages for EACH of the project locations.

PRE-PRELIMINARY AND PRELIMINARY SCOPING PACKAGE

Pre-preliminary scoping document shall be submitted on or before April 15, 2014 for discussion and determining the recommended type of fix for the project. The pre-preliminary scoping document shall include sufficient evaluation and information that will provide participants sufficient information to discuss and deliberate the merits of various fixes recommended by the Consultant for the project. Subsequent to MDOT approval of recommended fix type, Preliminary Scoping Packages shall be submitted on or before June 1, 2014 for MDOT review and comment. The Preliminary Scoping Package shall address all the items listed under Section: CONSULTANT DUTIES, Attachment A and under Section: CONSULTANT RESPONSIBILITIES (GENERAL). If any of the aforementioned items are not included or not sufficiently complete as determined by the MDOT Project Manager, the Preliminary Scoping Package will be rejected. The Consultant will have up to three (3) working days to make the changes, as directed by the MDOT Project Manager and re-submit the Preliminary Scoping Package. No additional compensation will be provided to the Consultant for costs associated with making the changes.

The pavement section and geotechnical recommendations are subject to change pending the outcome of the geotechnical investigations and Scope Review Meetings.

In the Preliminary Scoping Package, if there are any items, in the CONSULTANTS opinion, that need further review, discussion, and/or additional information is needed from MDOT, those items shall be clearly listed on a cover sheet accompanying the Preliminary Scoping Package.

FINAL SCOPING PACKAGE

Final Scoping Packages shall be submitted on or before July 31, 2014. The Final Scoping Package shall address and document all the items listed under Section: CONSULTANT DUTIES, Attachment A and under Section: CONSULTANT RESPONSIBILITIES (GENERAL) and incorporate the comments and/or changes received during Pre-preliminary Scope review meeting, Preliminary Scoping Package and the Preliminary Scope Review meeting.

The Final Scoping Package shall also include, two CD's/DVD's. There shall be one single CD/DVD for the projects electronic files of the Base Map (.dgn file), cross sections (.dgn files), electronic files of the photos (.jpg files) and location map (file type subject to MDOT approval) and other electronic documents. The second CD/DVD shall be a copy of the entire Final Scoping Package in pdf format. Each CD/DVD shall be contained in a separate envelope labeled with the control section, job number, project location and the CD/DVD contents. Each envelope shall be included as part of the package and shall be attached and connected through the 3 ring binder. Form of connection shall be approved by the MDOT Project Manager.

MDOT will have a minimum of ten (10) working days to review the Final Scoping Packages and if any of the aforementioned items are not included or are not sufficiently complete, the Final Scoping Package will be rejected. The Consultant will have up to August 15, 2014 to make the changes, as directed by the MDOT Project Manager and re-submit the Final Scoping Package. No additional compensation will be given to the Consultant for costs associated with making the changes.

Before spreadsheets are submitted as part of the Final Scoping Package, a preliminary copy (both hard copy and electronic format) shall be sent to the MDOT Project Manager for review and approval as to form and content.

PROJECT CONSTRUCTION COST

For the project location a cost estimate shall be developed. The cost estimate shall include an adjustment for inflation (5% annual rate or as directed by MDOT Project Manager). The following are the items that shall be considered and shall be broken down by MDOT Pay Items and then rolled up into the categories as identified in the Project Scoping Checklist:

- A. The estimated construction cost shall address:
 - 1. Safety Related Work
 - 2. Mainline Pavement (Base, Surface, and Shoulder)
 - 3. Non-Motorized facilities
 - 4. Geometric Improvements
 - 5. Improve Alignment (Vertical/Horizontal)
 - 6. Drainage Adjustment and Improvements
 - 7. Joint Repair and Pavement Patching
 - 8. Detours and Maintaining Traffic
 - 9. Permanent Pavement Markings/Signs/Signals
 - 10. Environmental
 - 11. Miscellaneous
 - 12. Aesthetic Opportunities
 - 13. Incentive/Disincentive Costs
 - 14. Intelligent Transportation Systems Components

- B. The estimated number of real estate parcels and type (grading permit, easement or fee) and the associated cost for each. The ROW costs shall be developed in coordination with MDOT Real Estate office.

PROJECT SCHEDULE:

The scheduled completion date for the Preliminary Scoping Packages is June 1, 2014, and July 31, 2014 for the Final Scoping Packages. The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts. These dates shall be used in preparing the Consultant's Monthly Progress Reports.

| <u>Target Date</u> | <u>Description</u> |
|--------------------|--|
| April 15, 2014 | Pre-Preliminary Scoping Documents |
| April 25-30, 2014 | Pre-Preliminary Scope-Type of Fix Review Meeting |

| | |
|------------------|------------------------------------|
| June 1, 2014 | Submit Preliminary Scoping Package |
| June 16-12, 2014 | Preliminary Scope Review Meeting |
| July 31, 2014 | Submittal of Final Scoping Package |

MDOT will provide a preliminary pavement design for estimating purposes. However, the pavement design is subject to change.

MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to the MDOT Project Manager, Ashok Punjabi, P.E. at Punjabia@Michigan.gov (248-483-5175). The monthly progress report shall follow the guidelines in Attachment K.

FORMAT

The Preliminary and Final Scoping Packages (See Attachment A for items that will be included) for each project location as identified in Attachment C shall be presented on regular letter size paper (8 ½" x 11") with the exception of the Base Maps, sketches and diagrams and spreadsheets which shall be on 11" x 17" paper (and folded to match the 8 ½" x 11" paper). A cover sheet shall be entitled "Preliminary Scoping Package" or "Final Scoping Package", as appropriate, and shall also include control section, job number, route, location description and recommended fix type. An index page shall also be included in each package.

The Preliminary Scoping Package will be submitted and distributed electronically as "pdf" file with appropriate book marking through MDOT "ftp" site. Three (3) hard binder copies each of the Final Scoping Package will be required as final submittal.

The Preliminary Scoping Packages (see Attachment A for items that will be included) will be presented in a labeled (cover and side on white paper, to be entitled "Preliminary Scoping Package", listing the control section, job number, route, location description and proposed fix type.) with an index and tabbed sections, in regular letter size paper (8 ½" x 11") for the majority of the documents. 11" x 17" paper may be used for Base Maps, sketches, spreadsheets, and diagrams. If there are any items, in the CONSULTANTS opinion, that need further review, discussion and/or additional information from MDOT, those items shall be clearly listed on a cover sheet accompanying the Preliminary Scoping Package. The photographs included in the documents shall be in an electronic .jpg format with printouts at 4" x 6", in color, labeled with the location, direction from which the picture was taken, date, particular feature needing improvement and the approximate mile point. No fewer than 12 and no greater than 24 photos are to be provided.

The Final Scoping Packages (see Attachment A for items that will be included) will be presented in a labeled (cover and side, paper color shall be determined by the MDOT Project Manager, to be entitled "Final Scoping Package" and shall also list the control section, job number, route, location description and proposed fix type.) three ring binder, with an index and tabbed sections, containing regular letter size paper (8 ½" x 11") for the majority of the documents. 11" x 17" paper may be used for Base Maps, sketches and diagrams. The photographs included in the documents shall be in an electronic .jpg format with printouts at 4" x 6", in color, labeled with the location, direction from which the picture was taken, date, particular feature needing

improvement and the approximate mile point in the Packages. No fewer than 12 and no greater than 24 photos are to be provided.

The Base Map as identified in Attachment A is to be created electronically, using the MicroStation design software, and following all MDOT current drafting standards and guidelines. The entire Base Map is to be created in English units. The full size of the MDOT printed sheet is (24" x 36"), however, only an (11" x 17"), a reduced size copy, needs be provided.

An English alignment shall be created. The alignment shall describe stations as 100 ft and carry the decimal place out to 2 decimal places (ie: 10+00.00). The alignment shall draw the station ticks at every 100 ft, and annotate the station ticks at every station (ie: 1+00.00, 2+00.00, 3+00.00). The stationing of the alignment shall match that of the old plans. If old plans are not available, then the alignment shall start at 10+00.00 and shall increase in station from either south to north, or west to east. The location of the alignment will match that of the old plans. If old plans are not available, then the alignment shall be located down the center of the roadway.

The CPM Schedule shall be created electronically as stated in Attachment I and shall be plotted on 1 sheet of (11" x 17") paper. The critical path shall be clearly identified on the plot. Accompanying the plot shall be Work Day / Completion Date Determination Worksheet and a List of any other assumptions or controlling factors used in creating the network all of which shall be printed on (8 ½" x 11 ½") paper .

All spreadsheets shall be created using Excel (.xls files). Before the final spreadsheets are submitted, a preliminary copy (both hard copy and electronic format) shall be sent to the MDOT Project Manager for review and approval as to form and content.

All estimates and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the MDOT Project Manager.

All project related items are subject to review and approval by the MDOT Project Manager.

TRAFFIC CONTROL AND MDOT PERMITS

The CONSULTANT shall be responsible for all traffic control required to perform the tasks as outlined in this Project Scope of Design Services.

The CONSULTANT shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Joe Rios, Utilities/Permits Section, Development Services Division at (517) 373-7680.

CONSULTANT RESPONSIBILITIES (GENERAL)

1. The MDOT Project Manager shall be the official MDOT contact person for the CONSULTANT. The CONSULTANT must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records. The MDOT Project Manager shall be made aware of all communications regarding this project.
2. The CONSULTANT shall meet with the MDOT Project Manager and MDOT TSC/Region /Lansing staff to review the project, location of data sources, contact persons and relevant MDOT operations. This Kick-off/Scope Verification and any subsequent Meetings may include project location field visits. The CONSULTANT shall review and clarify project issues, data needs and availability, the sequence of events and team meetings that are essential to complete the project scoping by the project completion date. Attention shall be given to critical target dates that may require a large lead time, such as scope review meetings, etc.
3. Maintain a Scoping Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the scopes, dates of submittals and receipt of information.
4. The CONSULTANT shall contact, in writing, the MDOT Project Manager whenever discoveries or design alternatives have the potential to require significant changes in the limits, quantities, costs, or right-of-way of the project.
5. Attend any project-related meetings as directed by the MDOT Project Manager.
6. The CONSULTANT representative shall record and submit type-written minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The CONSULTANT shall bring an additional person to all meetings who's responsibility will be to take notes/minutes. The CONSULTANT shall also distribute the minutes to all meeting attendees.
7. The CONSULTANT will conduct field reviews to obtain missing or supplement incomplete information.
8. The CONSULTANT will be responsible for providing elevation view sketches at both sides of each and every bridge in the project area. The sketch must show the elevation of the roadway at 2 feet inside of the inside edge of metal and 2 feet outside of the outside edge of metal, as well as the interior lane lines, crown point and shoulder edges. The corresponding elevation of the structure under clearance immediately overhead must also be shown. The CONSULTANT shall field measure all elevations. All under clearance sketches must be shown looking up station and clearly depict the clear roadway width.
9. As determined at Pre-preliminary/Scope Fix Review meeting or thereafter and as directed by MDOT Project Manager, the consultant will make recommendations for section breakdowns (into 2 or more sections) of the each roadway scoping limits and provide cost estimates for each breakdown sections of the scope. This will help MDOT the flexibility to fund the entire scoping project limits or fund one or more sections considering funding, mobility, and other project and corridor considerations.

9. Determine impacts of the proposed pavement treatment on the existing horizontal and vertical alignments, pavements, curb and gutter, drainage, transit stops, right of way (ROW), etc. Every effort shall be made to minimize ROW impacts within the limits of the project. In areas of potential ROW impacts, the CONSULTANT shall request, in writing, copies of ROW maps from the MDOT Project Manager (requests may take up to two weeks from the date the request is received to fill) and document and identify the potential need for additional ROW, by station or address, type of ROW required (grading permit, easement or fee), and roadside improvements proposed (i.e. fencing, turf establishment, landscaping, non-motorized, etc.)
10. Generate a Base Map, created electronically using the MicroStation design software and formatted as described in Section VIII FORMAT, of the existing roadway using information from old plans, and/or, on site field reviews. The Base Map is to visually describe the existing roadway within the limits of the project. The project limits shall be defined for this task as either be the greater of 250 feet beyond the Point of Beginning (POB) and the Point of Ending (POE) or the limits needed to fully accommodate the maintaining traffic limits as determined in Attachment G. The detail of the Base Map is to include the location of existing roadways, bridges, ramps, cross roads, interchanges and/or intersections. The Base Map is to show existing features; i.e. edge of pavements, edge of shoulders, curb lines, drainage courses, etc.. The Base Map is to represent existing conditions and no proposed work is to be shown.
11. Prepare existing and proposed typical cross sections.
12. WATER MAINS, SANITARY SEWERS, PUBLIC AND PRIVATE UTILITIES. The CONSULTANT shall contact in writing any and all utility owners within the project limits and request utility information. The request shall be made using the form provided by the MDOT Project Manager, as seen in Attachment E. Requested information shall include existing utilities and any future plans regarding the utilities. If water mains and/or sanitary sewers are present within the project limits, the CONSULTANT shall evaluate the necessity for the relocation of water mains and sanitary sewers, in accordance with Design Division's Informational Memorandum #441B and #402R dated April 13, 1992 and/or any latest MDOT directive/memo. Send a letter to the MDOT Project Manager and outline where water main and/or sanitary sewer relocation is needed/ recommended. Provide the limits, an explanation for the relocation and a cost estimate for each location.
13. Perform storm water design calculations, including appropriate outlets and energy dissipation as necessary, as outlined in the MDOT Drainage Manual. Detention may be required. Detention pond design must meet, but is not limited to, local agency storm water regulations and Michigan Department of Environmental Quality water quality permit requirements and other applicable standards or regulations. All design calculations, drainage maps and proposed profiles shall be included in the Preliminary and Final Scoping Reports under Attachment A Section #23.
14. Review and document final scope conformance to design elements as listed in Attachment F and 3R/4R Guidelines for non freeway jobs and 3R/4R, AASHTO and Interstate Standards for freeway jobs. Documentation shall be broken down into the following sections for each element: Existing condition, Treatment As Per Design Standards, and Proposed Treatment. If the Proposed Treatment is not in accordance with the Treatment Per Standard, an additional section shall be added entitled "Reason for not Meeting Standard" which shall contain documentation for reason and justification (if cost is given as the

reason, the cost for doing the Treatment per Standard shall be given along with the cost for the Proposed Treatment. Normally cost alone is not a proper justification for not meeting standards.) .

15. Prepare a table of the values used for the evaluation of the elements as listed in Attachment D and 3R/4R Guidelines for non freeway jobs and 3R/4R, AASHTO and Interstate Standards for freeway jobs. The table shall at a minimum contain the following; all the minimum values as per standard for the associated design element, where the minimum value as per design standard were derived from, all values used to determine conformance, where values used for conformance were derived from and all formulas used for the calculation of values.

Before the final tables are submitted, an advance copy (both hard copy and electronic format) shall be sent to the MDOT Project Manager for review and approval as to form and content.

16. Review and document the roadside safety related items (i.e. guardrail, barriers, attenuators, etc.) which need to be modified or included in the project. Documentation is to include location, existing type and condition, and the recommended treatment. This information shall be included in the appropriate area of the Attachment A.
17. **CRASH ANALYSIS AND RECOMMEND COUNTERMEASURES.** Perform crash analysis and recommend countermeasures, see Attachment H for details. This shall include but shall not be limited to, the following. Perform crash analysis which shall include the last 5 years (7 years or more if there were fatalities) of reliable data for the analysis period. The CONSULTANT will be furnished 5 or more years of data.

Determine countermeasures based on the crash analysis and provide a detail drawing explaining each recommendation. Determine ROW impacts for each countermeasure identified. Determine the construction cost estimate for each countermeasure using MDOT Pay Items. Summarize the countermeasures for each crash pattern individually. Include the corresponding countermeasure, along with the associated ROW impacts and construction cost estimate. The construction cost estimate for each countermeasure recommendation shall be presented in the Preliminary Scoping Package(s) and shall be reviewed and approved by MDOT before inclusion into the Final Scoping Package. Develop a Time of Return (TOR) analysis for each countermeasure using the MDOT TOR format as provided by the MDOT Region Traffic Safety Engineer.

18. **PROJECT AREA CONTAMINATION SURVEY.** Perform a Project Area Contamination Survey, see Attachment F for details.
19. Document and identify locations of possible environmental issues (historical, archeological, LUST Sites, wetlands, tree removals, etc.) which may impact the project, and estimate the cost of treatment. For every estimated tree removed, two shall be replaced. This information shall be included in the appropriate area of the Attachment A.
20. If excavation is required, submit the excavation locations (list them by station) which may contain contamination. This information shall be included in the appropriate area of the Attachment A.

21. Document and identify (location and who has responsibility for) any existing lighting and/or SEMTOC work that may be impacted, or should be included, in the projects. Incorporate work into the estimate. (Lighting on Non-Freeway roads is the responsibility of the local jurisdiction.) Include any additional SEMTOC work (to be provided by MDOT).
22. Identify, document, coordinate, review and provide appropriate transit access designs as per SMART, DDOT, and other applicable transit agency standards. Additionally, identify and estimate the type and amount of ROW that would be necessary for implementation.
23. Identify, recommend, and incorporate solutions for Multi-modal/Complete Streets features and opportunities where feasible and in conformance with AASHTO, MDOT, State, and Local standards.
23. CARPOOL LOTS. Identify areas within the project limits that have potential for becoming carpool lots ("park and ride" lots). If an area is identified as having potential to become a carpool lot, estimate the construction cost, including any amount of ROW that would be necessary for implementation.
24. MAINTAINING TRAFFIC. Develop the Maintaining Traffic Plan, as per Attachment G. Prepare Traffic Management Plan (TMP) per accepted guidelines at a scoping level.
25. CPM SCHEDULE. The CPM (Critical Path Method) Schedule shall be developed as per Attachment I.
26. Compute and verify all quantities necessary to complete the Project Concept Statement and Project Scoping Checklist for each of the projects. See Attachment J for the blank forms and for an example of the data types required.
27. Specifically identify any local participation that is required and/or requested for the project location. Examples where local participation is required are: Act 51, water, sanitary, storm sewer upgrades, work beyond the spring points on local streets, and/or drainage. For each agency (there may be more than one), individually identify the type of work/improvement, itemize the costs and then separately estimate the amount of the respective agencies participation.
28. Identify, contact and coordinate with all affected governmental agencies (County, SEMCOG, and/or city, township) within the project limits (and directly abutting if any part of the construction influence area will be within another agencies area). Coordination will involve, at a minimum, an initial letter stating the project and its scope and requesting local input, within 30 days, in the development of the detailed scope. A meeting with affected local agencies may be necessary to discuss and seek additional input for the project scope. A follow-up letter, if no response is given, and a final letter stating the process that occurred and what the final scope will be to all affected governmental agencies. A copy of all letters sent to cities, townships and counties shall be sent to SEMCOG. There may be the need to attend meetings and receive and return telephone calls from the affected agencies. All local requests shall be forwarded to, and reviewed, with the MDOT Project Manager. The CONSULTANT shall not, and cannot, make any commitment to a local agency for the inclusion of work into a project. Only MDOT can make such a commitment. Any commitment from MDOT shall be in written form from the MDOT Project Manager.

MDOT shall be informed of any meeting with the affected agencies a minimum of 72 hours in advance of the meeting. All discussions with agencies shall be documented and submitted with the monthly progress reports.

29. Incorporate any MDOT identified and/or approved (if approved, include copy of MDOT approval) local needs/requests into project scope.
30. Provide photographs and digital files (.jpg files) of the existing roadway and roadside conditions to document the needs as identified in the project scope.
31. Prepare a spreadsheet summary of the local coordination that occurred. The summary shall document the planning/coordination process that occurred with each of the affected local agencies. The summary shall include at a minimum specifically what was sent to who and when, what was received from who and when and what responses were made (and why) to who and when.
32. Intelligent Transportation Systems (ITS) Plan: Coordinate with the MDOT ITS Development Engineer to determine if any ITS devices are currently located in the area. Review Region ITS plans (including the MDOT ITS Pre-Deployment Plan, Region Communications Plan and other documents), as provided by the MDOT ITS Development Engineer, and meet with SEMTOC Center staff to determine if any ITS components are proposed or required for the area.

Prepare a layout of proposed ITS devices in the area. Include all costs and quantities in the overall project quantities and costs.
33. Perform Capacity Analysis for the project, if determined to be necessary at the scope verification/kick-off meeting or as directed by MDOT Project Manager.

MDOT RESPONSIBILITIES (GENERAL):

- A. Schedule and/or conduct the following:
 1. Project related meetings.
 2. Coordinate all scoping activities that require MDOT personnel.
- B. Furnish electronic copies of old plans within the control section for the area, if available.
- C. Perform preliminary pavement designs.
- D. Furnish hard data for Crash Analysis.
- E. Provide Geotechnical Recommendations
- F. Provide Traffic Data through Traffic Analysis Report Request (TAR Form)
- G. Environmental Review/Classification based on recommended fix of the project

CONSULTANT PAYMENT – Actual Cost Plus Fixed Fee:

Compensation for this project shall be on an **actual cost plus fixed fee** basis. This basis of payment typically includes an estimate of labor hours by classification or employee, hourly labor rates, applied overhead, other direct costs, subconsultant costs, and applied fixed fee. The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

All billings for services must be directed to the Department and follow the current guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's website. This document contains instructions and forms that must be followed and used for billing. Payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the Consultant. Typically, billings must be submitted within 60 days after the completion of services for the current billing. The final billing must be received within 60 days of the completion of services. Refer to your contract for your specific contract terms.

Direct expenses, if applicable, will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

For projects advertised May 1, 2013, or later, MDOT will reimburse the CONSULTANT for vehicle expenses and the costs of travel to and from project sites in accordance with MDOT's Travel and Vehicle Expense Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Travel_Guidelines_05-01-13_420289_7.pdf?20130509082418. MDOT's travel and vehicle expense reimbursement policies are intended primarily for construction engineering work. Reimbursement for travel to and from project sites and for vehicle expenses for all other types of work will be approved on a case by case basis.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior written approval by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager.

For projects advertised May 1, 2013, or later, MDOT will pay overtime in accordance with MDOT's Overtime Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Overtime_Guidelines_05-01-13_420286_7.pdf?20130509081848. MDOT's overtime reimbursement policies are intended primarily for construction engineering work. Overtime reimbursement for all other types of work will be approved on a case by case basis.

ATTACHMENT "A"

The Preliminary and Final Scoping Packages

The Preliminary and Final Scoping Packages shall be prepared for each project location. The packages shall contain the following, and shall be assembled in the order as listed.

1. List of Invitees and Sign in Sheet for Scope Review Meetings.

The list of people invited to the Scope Review Meetings (to be supplied by MDOT Project Manager) and the actual sign-in sheet from the Scope Review Meeting.

2. Location Map

A location map shall show a map of the project area showing the roadway name, roadway number, project beginning, project ending, project length, major cross streets, interchanges and local municipalities affected. The Location Map shall be presented on regular letter size paper (8 ½" x 11").

3. Sign off sheet

A sheet listing the members of the Consultant's Scoping Team (the members name, members signature and area of contribution). Also on this sheet, the Consultant is to list all the sources used in establishing existing information (old plans used, limits of coverage of old plans, date of on site visits, etc).

4. Summary

A project specific Summary (see Attachment B).

5. Minutes from Scope Review Meeting

Project specific notes from the Scope Review Meeting.

6. Photographs - Road Only

Provide actual photographs and digital files (.jpg files on attached CD ROM) of the existing roadway and roadside conditions to document the needs as identified in the project scope. The photographs included in the documents shall be 4" x 6", in color, labeled with the location, direction from which the picture was taken, date, particular feature needing improvement and the approximate mile point. No fewer than 12 and no greater than 24 photos per project location are to be provided.

7. Base Map

Generate a single Base Map, created electronically using the MicroStation design software and formatted as described in Section VIII FORMAT, of the existing roadway using information from old plans, and/or, on site field reviews. The Base Map is to visually describe the existing roadway within the limits of the project on one page. The project limits shall be defined for this task as either be the greater of 250 feet beyond the Point of Beginning (POB) and the Point of Ending (POE) or the limits needed to fully accommodate the maintaining traffic limits as determined in Attachment G. The detail of the Base Map is to include the location of existing roadways, bridges, ramps and cross roads. The Base Map is to completely show all interchanges and/or intersections. The Base Map is to show all existing features; i.e. edge of pavements, edge of shoulders, curb lines, drainage courses etc. and label all roads, railroads and drainage features. The Base Map is to represent existing conditions and no proposed work is to be shown.

An 11" x 17", a reduced size copy, of the electronically created base map, showing the entire project limits, on 1 page, without using match lines, is to be provided.

8. Existing and Proposed Typical Cross Sections

Prepare existing typical cross sections and proposed typical cross sections - generally one per standard cross section area (i.e. normal section, super elevation section, roadway with ramp taper section).

The typical cross sections, for each standard cross section area, are to be created on 8 ½" x 11" sheets, with the existing typical cross section for the standard cross section area, drawn above the proposed typical cross section for the same standard cross section area.

The existing and proposed typical cross sections shall, for each standard cross section area, detail the existing conditions (pavement type, lane width, curb and gutter, catch basins, storm sewer location, side slopes, ditch location, setback to existing right of way line, lighting, etc) and the proposed pavement treatments (cold mill / resurface / reconstruct / etc, new lane widths, curb and gutter, catch basins (new or adjusts), storm sewers (new or tap into existing), ditches, etc). If retaining walls, or sound walls, are recommended, this should be reflected within the typical cross sections.

The MDOT reviewer, by viewing the typical cross sections, should be able to understand the existing pavement section, the proposed pavement section, and the work required to construct the project. For example, if additional right of way will be required, the typical cross sections should provide a visual explanation as to why so that the MDOT reviewers can evaluate options.

9. MDOT Maintaining Traffic Recommendation & TMP

The written recommendations for maintaining traffic and the maintaining traffic typical cross sections as outlined in Attachment G. Please include the original requirements provided by MDOT. Provide scoping level Traffic Management Plan.

10. CPM.

An 11" x 17" plot of the network. The critical path shall be clearly identified on the plot. A larger plot may be required for complex networks. The Work Day / Completion Date Determination Worksheet. A list of any other assumptions or controlling factors used in creating the network. Also the electronic format of the CPM as outlined in Attachment I shall be included.

11. Scope Conformance

Review and document scope conformance to the 3R/4R Guidelines, AASHTO and Interstate Standards AND for each Design Element listed in Attachment D. Documentation shall be broken down into the following sections for each: Existing condition, Treatment As Per Design Standards, and Proposed Treatment. If the Proposed Treatment is not in accordance with the Treatment Per Standard, an additional section shall be added entitled "Reason for not Meeting Standard" which shall contain documentation for reason and justification (if cost is given as the reason, the cost for doing the Treatment per Standard shall be given along with the cost for the Proposed Treatment. Normally cost alone is not a proper justification for not meeting standards.).

12. Table of Values for Determination of Scope Conformance

Prepare a table of the values used for the evaluation of 3R/4R Guidelines, AASHTO and Interstate Standards AND for each Design Element listed in Attachment D. The table shall at a minimum contain the following; all the minimum values as per standard for the associated design element, where the minimum value as per design standard were derived from, all values used to determine conformance, where values used for conformance were derived from and all formulas used for the calculation of values.

13. MDOT Pavement Recommendation

The actual MDOT Pavement Recommendation (ie: memo, letter, e-mail, etc.).

14. Crash Analysis Report.

The Crash Analysis and countermeasures recommendation, which shall include each locations crash pattern, listed individually, with the associated countermeasure recommendation, including a detail, along with the associated ROW impacts, construction cost estimate and TOR. See Attachment H.

If there are no recommended countermeasures, then state the different crash types, the total number of crashes, and then state that “no correctable crash patters were identified”.

15. Vertical Underclearance Information and Clear Roadway Width

The Vertical Underclearance Information, as outlined within item 8 under Section XI. CONSULTANT RESPONSIBILITIES (GENERAL).

16. Project Area Contamination Survey Information

The Project Area Contamination Survey Information, as outlined within Attachment F.

17. ITS Layout

On the base map, lay out the ITS components as identified through meetings with MDOT SEMTOC Center personnel and from a review of documented ITS plans for the area. Include all quantities and costs in the detailed cost estimate.

18. Detailed Cost Estimate

Estimates are to be as detailed as possible. They shall be developed using the most recent MDOT Pay Items and are to be provided in spread sheet format. Individual Pay Item costs shall be rolled up into a Construction Cost

The cost will be calculated in both 2014 dollars, and the anticipated year of construction, 2020 (inflated at 5% / year compounded).

19. Detailed Design Hour Estimate

Estimates are to be as detailed as possible, attempt to breakdown hours per PPMS tasks.

20. Project Concept Statement and Project Scoping Checklist

Compute and verify all quantities necessary to complete the Project Concept Statement and Project Scoping Checklist for each of the projects. (See Attachment J).

21. Correspondence (Local, and MDOT)

Actual correspondence sent and received, organized by correspondent, in order of increasing date. Include correspondence regarding public utility information.

Place the prepared spreadsheet summary, see item 30 under Section XI. CONSULTANT RESPONSIBILITIES (GENERAL), of the local coordination that occurred, at the front of the section.

22. Quantity Calculations

23. Storm Sewer Design Calculations and supporting documentation

24. Transit Documentation

25. Field Notes

26. Scoping Project Record

27. Miscellaneous information

Information which is available, but does not fit into any of the previously mentioned sections.

ATTACHMENT " B "

Scope of Work Summary

The Summary is the complete written description, and explanation, of the entire project scope.

The project shall be scoped prior to writing the summary. Items and issues encountered impact more than one section of the summary, and it is required that the summary reflect this.

The Summary is to be written using complete sentences and sentence structure. Simple, clear and concise language is required to ensure that the Summary is both readable and understandable.

It must be understood that this summary will be read by people who are not designers. Vague statements, such as "build to standard", are unacceptable. This is because many of the readers may be unfamiliar with what standard is. In all cases, the standard shall be called out, with references stated.

In addition, it is not the intent of the summary to contain only statements about the existing conditions and the proposed recommendations. The summary shall also provide direction to the designer regarding how the proposed recommendations are to be implemented.

Also, the following format contains many sections which may, or may not, apply to the project. Sections which do not apply may be omitted from the Summary. Information which has no apparent section, may either be placed within a related section, or within a newly created section. Keep the addition of new sections to a minimum.

Furthermore, all information contained within the scoping package shall be mentioned within the summary. It is not necessary for the summary to go into the detail contained within the later sections, but the issues, impacts and recommendations shall be called out.

There shall be no surprises when reviewing later sections.

Scope of Work Summary

Date:

Control Section:

Job Number:

Route Number:

Brief Project Description:

List the primary pavement treatment for the project (ie: a mill and resurface, an overlay, a reconstruction, a concrete patching, etc) and generally list additional work that will be needed for the project (drainage, curb and gutter, ramps, etc). Section should average no more than 3-6 sentences.

Limits of Project

Establish the project limits (roadway name, roadway number, project beginning, project ending, mile points, project length, major cross streets, local municipalities affected, etc). List also if this roadway is an NHS route, a non-NHS route, list the level of Corridor of Highest Significance, list if it is registered as a National Historic Highway.

In addition, list the percentage of work to be completed within each local municipality.

Summary of Detailed Cost

A summary of the estimated direct construction cost. Also, list the number of lane miles within the project limits, and a price per lane mile. Also, include the estimated design hours for the project.

ADT

Provide the ADT within the project limits as obtained from the most recent version of the MDOT Sufficiency Rating Manual. If ADT significantly changes within the project limits, the various ADTs shall be noted along with their corresponding sections of roadway.

Design Speed Signed Speed (mph) = _____
Design Speed (mph) = _____

List this information for each of the major roadways, cross roads and ramps within the project limits.

Existing Cross Section

A brief description of the existing cross section (pavement type, lane width, curb and gutter, catch basins, storm sewer location, side slopes, ditch location, setback to existing right of way line, lighting, etc). Are there on street parking issues and/or transit stops? Public utilities?

Proposed Cross Section

A brief description of the proposed cross section (cold mill / resurface /reconstruct / etc, new lane widths, curb and gutter, catch basins (new or adjusts), storm sewers (new or tap into existing), ditches, etc). Will there be a Grade Raise? Will SEMTOC sensors be impacted (or do they need to be included)? Will existing lighting or public utilities be impacted? Will a retaining wall or sound wall, be affected, required or proposed?

Are there on street parking issues and/or transit stops? Where is parking and/or transit stops located? Will it be retained? What impact will this project have upon the existing parking agreement? What impact will this project have upon transit operations?

Compliance with ADA regulations?

Crown Correction and Super Elevation

A brief statement addressing the existing pavement crown and super elevation, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments).

Curb and Gutter

A brief statement regarding the impact the proposed pavement treatment will have upon existing, or proposed, curb and gutter.

Slopes (FS, Ditches and BS)

A brief statement addressing the existing slopes and ditches, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

Are there any clear zone or sight distance issues? Are retaining walls or sound walls affected and/or required? Tree removals?

Sidewalk

A brief statement to establish the presence and location of existing pedestrian sidewalk, and existing sidewalk ramp terminals at sidewalk street intersections. Note: At locations of sidewalk street intersections, if not already present, ramp terminals will be installed.

Don't forget to evaluate the sidewalk needs at the bridge structures.

Compliance with ADA regulations?

Vertical Alignment Corrections

A brief statement addressing the existing vertical alignment of the roadway, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments).

How many crest / sag curves are there? Of them, how many of the curves are non-conforming? Recommended treatment?

Horizontal Alignment Corrections

A brief statement addressing the existing horizontal alignment of the roadway, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments).

How many horizontal curves are there? Of them, how many are non-conforming? Recommended treatment?

Fencing

A brief statement addressing the existing fencing, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments).

Drainage System

A brief statement addressing the existing drainage, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments). Please note that the existing drainage structures cross leads, within the limits of this project, will be cleaned out.

How will the proposed system drain? Where are the outlets? Who owns the outlets and are there any issues to be resolved in using them? Will on site detention become an issue? Provide storm water findings as outlines in Consultant Responsibilities item #13.

(When listing structures for this section, list in order of appearance, from POB to POE.)

Roadway over Structures

List all existing structures, within the limits of this project, in which the roadway crosses over the structure. A brief statement explaining, for each structure, how the pavement transition into the deck will be addressed. Provide lane and clear shoulder widths over the structures. Are bridge struts present?

IN GENERAL, how will the proposed roadway treatment, and maintaining traffic concept, impact the existing the structures, and what is the proposed treatment?

Roadway under Structures

List all existing structures, within the limits of this project, in which the roadway passes under the structure. A brief statement, listing the existing under clearance for each structure, explaining how the

pavement will be treated below the bridge, and how the issue of under clearance will be addressed. Provide lane and clear shoulder widths under structures.

IN GENERAL, how will the proposed roadway treatment, and maintaining traffic concept, impact the existing the structures, and what is the proposed treatment?

(When listing interchanges for this section, list in order of appearance, from POB to POE.)
(Break each interchange out separately and include the interchange ramps, listed individually).

Interchanges

For each interchange, a brief statement addressing the existing interchange, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments)

Ramps

What is the existing and proposed cross section? For each ramp within each interchange, a brief statement addressing the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments). May impact acceleration and deceleration lane distances, lane widths, terminal configuration, etc. If the information to complete this section cannot be found using old plans, then the CONSULTANT will be required to obtain the missing information by field measurement during their field reviews.

(List the ramps with their corresponding interchanges together. Separate ramps by interchange)

Service Roads

A brief statement addressing the service roads, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments).

Lighting

A brief statement addressing the lighting, listing the existing condition and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments). Who has jurisdiction over the lighting? (Freeway lighting is under MDOT jurisdiction. Non-freeway lighting non-MDOT.)

Major Intersections (signalized)

List all Major (signalized) Intersections within the limits of this project. A brief description of the existing intersections, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments). Limits of work down cross roads?

Minor Intersections

List the number of Minor intersections present within the limits of this project. A brief description of the type of intersections, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments). Limits of work down cross roads?

Cross Overs (both Median and Maintenance)

List the number of Cross Overs present within the limits of this project. A brief description of the type of Cross Overs, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

Other Geometric Improvements

A brief statement addressing any additional recommended geometric improvements. A brief description of the type improvement, and the impact that they will have upon the proposed project.

Crash Analysis Recommended Countermeasures

A summary of the recommended countermeasures as identified through the Crash Analysis, and the impact that these improvement will have upon the proposed project

When recommending a counter measure, a detail needs to be provided. The detail is to include a graphic drawing of the existing condition, the proposed treatment and the impacts that this improvement will have upon the proposed project. All countermeasures must include a Time of Return analysis in the MDOT TOR format as provided by the MDOT Region Traffic Safety Engineer.

Traffic Signals

A brief statement addressing the existing traffic signals, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

For traffic signals being upgraded in a corridor, identify the means by which those signals will be interconnected after project completion.

Don't forget the signals at the ramp terminals!

Traffic Signs (to include ground mounts, trusses, cantilevers and mounted on structures)

A brief statement addressing the existing traffic signs, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

Rail Road Crossings

A brief statement addressing existing rail road crossings, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

Commercial Driveways

List the number of commercial driveways present within the limits of this project. A brief description of the type of driveways, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

Residential Driveways

List the number of residential driveways present within the limits of this project. A brief description of the type of driveways, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments).

Right of Way

For each the roadway in general, each intersection and/or interchange, geometric improvement, recommended Crash Analysis countermeasure, commercial and/or residential driveway, signal or sign. A brief statement addressing the existing right of way, and the impact that the proposed project will have upon it (to include any potential corrections or recommended adjustments). If additional right of way is required, note type (fee take, grading permit, permit to grade drive, etc).

Public and Private Utilities (water, sanitary, storm, street lighting, phone, gas, etc)

A brief statement addressing the existing utilities present within the roadway, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments). If you foresee an impact, list cause of impact.

Include a list of the Agencies contacted (with addresses and contacts)

Guardrail and Attenuators

A brief statement addressing the existing guardrail and attenuators, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments). See item 16 under Section XI. CONSULTANT RESPONSIBILITIES (GENERAL).

Intelligent Transportation Systems

A statement describing the ITS components to be added to the system as well as those that are being replaced (or upgraded) as a result of construction. For new infrastructure, a statement describing which plan recommended the new infrastructure.

Project Area Contamination Survey

A brief statement summarizing the findings from the Project Area Contamination Survey, and the potential impact that the proposed project will have upon them (to include any potential corrections or recommendations).

Environmental Issues (impacts to wetlands? tree removal/replacement? possible permits?)

A brief statement addressing any existing environmental issues, and the impact that the proposed project will have upon them (to include any potential corrections or recommended adjustments). If trees will be impacted by the project, the number by type and size of each tree impacted shall be listed along with the cost for replacement, replacements shall be 2 for 1. See items 18 and 19 under Section XI. CONSULTANT RESPONSIBILITIES (GENERAL).

Local Concerns

A brief statement addressing the local concerns or issues, and the impact that these issues may have on the proposed project.

This section shall summarize the requests and comments contained within the correspondence and communications with the local governments. It is not necessary to go into the detail contained within the actual correspondence, but the issues, impacts and recommendations shall be called out.

Miscellaneous/ Aesthetic Opportunities

Identify possible aesthetic opportunities. Include a cost of 1% of the estimated construction cost for the project.

Design Exceptions

Of the 13 Design Elements Subject to Formal Exceptions, provide a brief statement addressing which of the Design Elements, for this project, will require a Design Exception (please list each of the Design Elements only once). Explain where they are needed, why they are needed and the impact to the project if they are not obtained.

Provide a justification for each Design Exception noting the existing condition, treatment as per Design Standards, the proposed treatment and the reason for not meeting the standard.

This section should summarize the needs for Design Exceptions. All the needs, shall have been mentioned in previous sections of this summary. This should be a recap of previously mentioned problems and Design Exception needs.

Constructability Issues

A statement addressing areas where the scoping team feels needs to be reviewed from a constructability standpoint.

Maintaining Traffic Issues

A statement addressing how traffic will be maintained during construction. An abbreviated version of Attachment G's written recommendation for maintaining traffic.

CPM Schedule

The outcome from the CPM Schedule. List the anticipated start date, finish date and duration of construction.

ATTACHMENT "C"

PROJECT LOCATIONS

| CS | JN | BMP | EMP | Route | LOCATION |
|-------------|-----------|------------|-------------|--------------|--------------------------------|
| 50111/50012 | 121591 | 6.05/0.0 | 17.792/0.41 | I-94 | Masonic Blvd. to 23 Mile Rd |
| 50051 | 121592 | 6.888 | 9.786 | M-3 | 14 Mile Rd. to Remick Rd. |
| 82023 | 121594 | 0.00 | 3.55 | I-94 | Wyoming to E. of I-96 Interch. |
| 82052 | 121587 | 9.05 | 10.737 | US-24 | Van Born to Oxford Rd |
| 63112 | 121505 | 6.472 | 10.982 | M-24 | S. of Goldengate to Harriet |
| 63131/63132 | 121586 | 0.0/0.0 | 0.657/2.728 | M-150 | M-59 to Clinton River |

ATTACHMENT " D "

13 Design Elements Subject to Formal Exceptions

1. Design Speed
2. Lane Width
3. Shoulder Width
4. Bridge Width
5. Structural Capacity
6. Horizontal Alignment
7. Vertical Alignment
8. Grade
9. Stopping Sight Distance
10. Cross Slope
11. Super elevation
12. Vertical Clearance
13. Horizontal Clearance (not including clear zone)

For the 3R/4R Guidelines, refer to Chapter 3, "Geometrics", of the Michigan Department of Transportation Road Design Manual.

ATTACHMENT "E"

“Utility Information Request Form”

Please contact MDOT Project Manager to obtain up to date fillable Utility Information Request Form.

ATTACHMENT "F"

PROJECT AREA CONTAMINATION SURVEY (PACS)

TASK DESCRIPTION:

The purpose of this task is to investigate parcels of property for the presence of environmental contamination. The primary objective in conducting the Project Area Contamination Survey (PACS) is to determine if further investigation and/or any remediation activities may be necessary regarding hazardous waste or environmental contamination issues in areas conflicting with project construction activities.

The PACS shall be performed by the selected CONSULTANT utilizing ASTM Standard E 1527-00. Information obtained by the CONSULTANT on any Recognized Environmental Conditions (RECs) or sites of environmental concern found in the project area is then provided to MDOT in a designated MDOT format.

REPORT FORMAT

DESCRIPTION

When a PACS is performed for MDOT projects a written report is to be provided to the MDOT Project Manager. This report should follow research methods as defined in ASTM standard 1527. However, the written report will be modified from the ASTM 1527 standard to accommodate MDOT's need for specific information. The following report format provides specific information related to road or bridge construction projects.

REPORT FORMAT

The report will include two parts: 1. Written copy. 2. Electronic copy in an acceptable processing software, including electronic drawings, scanned pictures, or maps (as described in Section VIII FORMAT).

The following format is to be utilized in preparation of a written report. All research materials and references are to be listed in the Bibliography/Reference Section. Only sources of information need to be listed rather than any specific records. Sufficient information is to be included so that the research conducted in the report could be duplicated by another qualified professional. Specific information requests will accompany any request for a PACS (ISA, Phase I). The written report should be set up as follows:

1. Title Page or MDOT memo format
2. Project Identification
Control Section
Job Number, (Parcel number if applicable)
Roadway; project description
Type of activity (PACS, Phase I, indicate Parcel)

3. Executive Summary (maximum one page, preferably one half page)
 - a. Include number of Recognized Environmental Conditions (RECs), known sites, potential sites. Include only those RECs that will intersect project or are located adjacent to proposed work areas.
 - b. Indicate if any specific site will affect project (monitor wells in right of way, gasoline in groundwater, underground tanks in proposed right of way, etc.)
 - c. Include recommendations for additional testing, records review, interviews, or additional information.
 - d. Identify project location (rural, suburban, urban, city or village)
4. Site Identification and Information Section
Identify RECs by address, location, and/or Station number.
Provide site information on status and site specific information.
Provide recommendations relative to MDOT's need (soil characterization when excavation occurs, groundwater treatment, monitor wells in ROW).
Provide information on location of RECs on MDOT highway plans.
5. Bibliography/References Section (list only sources from which research could be duplicated in the future).
6. Provide a list of references and databases checked, list date of publication. Do not include individual information
7. Sources of information such as aerial photograph, include year of photos reviewed.
8. Directories and maps. Include year of information reviewed
9. Interviews. Include name and title of person interviewed.
10. Site Documentation Reviewed. Include name and year published.
11. Digital photos of all RECs.

This information shall be included in the appropriate area of the Attachment A.

ATTACHMENT "G"

DEVELOP MAINTAINING TRAFFIC

1. SCOPE

This procedure covers the initial development of a plan to maintain and control traffic during construction.

2. WORK STEPS

- A. Review the type of construction task(s) included in the project.
- B. Contact the MDOT Project Manager and request a meeting with the Region and/or TSC Traffic & Safety Engineer (allow a minimum of 2 weeks for a meeting date to be determined). Review the traffic data and the project site to determine project specific construction zone traffic requirements. Requirements shall be consistent with the constraints identified at the meeting with the Region Traffic & Safety Engineer. Any necessary or recommended exceptions shall be clearly identified and justification provided.
- C. Prepare preliminary written recommendations for maintaining traffic. Items that SHALL be included in the recommendations at a minimum are:
 - i. Constraints as identified by the Region and/or TSC Traffic and Safety Engineer
 - ii. Method for maintaining traffic.(Typical and non-typical areas shall be addressed. All areas where pavement widths are narrower than typical shall be clearly noted and the recommendations for maintaining traffic shall address these areas.)
 - iii. Exceptions to Constraints as identified by the Region and/or TSC Traffic and Safety Engineer. Justification shall be required for any exceptions.
 - iv. Need for detour, staging and/or flagging operation.
 - v. Need for temporary widenings and/or shoulder upgrading.
 - vi. Time constraints and laneage requirements (number and width).
 - vii. Method for maintaining traffic at cross street, cross overs and/or interchanges/ramps.
 - viii. Local considerations (school buses, emergency vehicles, large traffic generators, etc.).
 - ix. Need for temporary traffic signals (a minimum of two signal heads in view at all times).
 - x. Construction zone speed limits.
 - xi. Special events (parades, festivals, etc.).
 - xii. Recommendations for expedited construction.
- D. Based on the preliminary written recommendation (developed above), prepare maintaining traffic typicals. Typicals shall be prepared using the existing typical cross sections developed in Section XI CONSULTANT RESPONSIBILITIES

(GENERAL) item #11 as a base. Each of the stages developed in 2. WORK STEPS C shall be superimposed onto those typicals.

- E. Submit the written recommendations for maintaining traffic to the MDOT Project Manager for review and approval
- F. Receive any items returned by the MDOT Project Manager as incomplete or deficient.
- G. Make necessary changes and resubmit the incomplete items, including a written response to all comments.

This information shall be included in the appropriate area of the Attachment A.

Also prepare Traffic Management Plan (TMP according to the current MDOT guidelines.

ATTACHMENT "H"

Draft and Final Crash Analysis Reports

The Consultant shall provide MDOT with a Crash Analysis Report which shall detail the safety performance of the project location (includes not only the mainline but all ramps, major and minor intersections and crossovers within the project limits) and provide detailed graphic depiction of countermeasures and cost/benefit analysis for crash concentration locations. The Crash Analysis Report shall at a minimum compare the project location features (mainline, ramps, major intersections, minor intersections and cross overs) to regional averages, identify crash concentration locations, examine crash concentration locations for crash patterns and provide countermeasures for correctable crash patterns. The Consultant shall combine a thorough review of computer-based crash records with field reviews of the roadways characteristics (geometric and operational features shall be specifically noted) to identify crash concentration locations. Crash diagrams shall be provided for the crash concentration locations. The Consultant shall provide a Draft Crash Analysis Report and upon review and comment by MDOT, the Consultant shall make any changes identified and submit a Final Crash Analysis Report.

The Consultant shall review and analyze the most recent five years of MDOT crash data. For the analysis, the Consultant shall stratify the data by location and the crash data shall also be aggregated by similar roadway segment characteristics. The Consultant shall quarry SEMCOG to determine regional crash averages which will provide a normative measure of comparison to aid in the identification of crash concentration locations.

The Consultant shall identify crash concentration locations and determine crash patterns. Based on the crash patterns identified for each crash concentration location the Consultant shall develop proposed crash countermeasures. The countermeasures shall be graphically depicted, to scale, with sufficient detail to determine the countermeasures impact to the existing roadway and the proposed roadway improvement.

The countermeasures may range from simple sign / marking / signal modifications up through substantial reconstruction. The Consultant shall present countermeasures stratified into short and long-term solutions. The Consultant shall provide a construction cost estimate for each countermeasure using MDOT Pay Items and shall clearly identify any right-of-way impacts a countermeasure may have. The Consultant shall provide a full cost/benefit analysis for each countermeasure. The Consultant shall also evaluate the crash impacts on design exceptions sought.

Develop a Time of Return (TOR) analysis for each countermeasure using the MDOT TOR format as provided by the MDOT Region Traffic Safety Engineer. This information shall be included in the appropriate area of the Attachment A.

ATTACHMENT "I"

CONSTRUCTION CRITICAL PATH NETWORKS

I. INTRODUCTION

The Consultant is required to submit a Construction Critical Path Network as part of the Preliminary Scoping Package and for the Final Scoping Package.

Construction Critical Path Networks are often needed to develop the progress schedule for a project. They are required on any project designated to include an Incentive/Disincentive or Special Liquidated Damages clause.

As noted in MDOT's Construction and Technology Instructional Memorandum 1997-7, Progress Schedule Determinations/Critical Path Rates,

preparation of a Critical Path is a requirement on all Consultant-designed projects, regardless of the project type or complexity

MDOT requires the precedence diagramming method. The Consultant will submit this network in MPX version 4.

II. NETWORK DEVELOPMENT

The network will be defined using the following steps.

1. Activity definition.
2. Activity sequencing.
3. Duration estimation.
4. Schedule development.

1. ACTIVITY DEFINITION

The Consultant will define the specific activities in enough detail so that the proper objectives will be met. The Consultant must identify assumptions (those factors considered true, real or certain). Supporting detail for the activities should be documented and organized as needed to simplify the review of the activities by MDOT personnel.

The Construction Critical Path Network must start with the **Letting Date** as the first activity and terminate with the **End of Project** as the finish activity.

A sufficient number of activities will be required with sufficient detail so that the controlling construction operation(s) may be identified. Notation on each activity shall include a brief work description and activity time duration.

2. ACTIVITY SEQUENCING

Activity sequencing involves identifying and documenting interactivity dependencies. The Consultant must sequence activities accurately to support later development of a realistic and achievable construction schedule. Two types of dependencies should be considered. Mandatory dependencies are inherent in the nature of the work being done, such as construction sequencing. Discretionary dependencies are based on a knowledge of the work to be done. Constraints are used to show how the activities relate to each. The Consultant must include documentation supporting all discretionary dependencies used in the project. All activities must lead to another activity. Only Start to Start, Finish to Finish and Finish to Start relationships will be allowed. All logic shall show how the given activity is dependent on its preceding activities.

3. DURATION ESTIMATION

After the Consultant has sequenced the activities, the Consultant should determine the activity duration. Activity duration estimating involves assessing the number of work periods likely to be needed to accomplish each activity. Duration (working days): No activity will have a duration greater than 20 working days unless approved by the Engineer. Activities that will be allowed to exceed 20 working days include, but are not limited to, working drawing approvals or other activities not under the control of the Contractor. If requested by the Engineer, the Consultant shall explain the reasonableness of activity time durations. The approved MDOT production rates will be used in estimating activity duration. These are available in the Supplemental Information section of this attachment. The Consultant must document and submit all assumptions made during the duration estimation to MDOT.

4. SCHEDULE DEVELOPMENT

The activity sequencing, duration estimations and the calendars are combined to create the construction schedule. During the development of the schedule the Consultant will verify:

1. The required schedule to build the project.
2. The constructability of the project.
3. If the maintaining traffic scheme will work.
4. If seasonal limitations will affect the construction.
5. Any other project specific considerations.

The MDOT Calendars will be used by the Consultant in developing the network. The calendars are based on a 4, 5 or 6 day work week. The MDOT Calendars are included in the Supplemental Information section of this attachment.

At this point there should be no negative float in the network. If there is, there is an error in the network and the error must be corrected before network submittal.

All summary tasks shall be removed prior to submittal to MDOT Project Manager

III. DELIVERABLES

After this final step the design Consultant will submit the finished CPM schedule to MDOT

1. Documents

- A. 11" x 17" plot of the network. The critical path shall be clearly identified on the plot. A larger plot may be required for complex networks.
- B. Work Day / Completion Date Determination Worksheet.
- C. List of any other assumptions or controlling factors used in creating the network. For example, permit or maintaining traffic restrictions.

2. Electronic Format

This section sets the requirements for the electronic submittal of the Consultant's Construction Network. All networks shall be submitted on a 3.5 inch floppy disk (or via E-mail) using one of the following formats:

- A. **Standard Electronic Media Format:** This is a standard ASCII text file containing the data elements below, in the order specified. This file can be created using any text editor or word processing application (i.e., MS-Word, WordPerfect, Notepad, Write) but must be saved as an ASCII file.

The **first line** will provide a descriptive header describing the submittal and containing:

- Control Section
- Job Number
- Route
- Consultant name
- Date of Submittal

The next line will be **blank**, followed by multiple data lines.

Each **data line** will contain one record pertaining to one task of the job. Separate data fields by a comma. Fields within each task line are as follows:

(Note that the term "task" is synonymous with "activity." Leave fields that are not required blank)

- (1) Task # (Job # followed by a hyphen followed by this task's unique 4 digit task number. This is the Preceding Event Activity Code)
- (2) Description of Task, Milestone or Hammock, blank if this record is a constraint
- (3) Calendar (see attached list)

- (4) Duration of task, blank for constraints
- (5) Task # of the next task (Succeeding Event) - leave blank if this record is not a constraint or hammock
- (6) Type of constraint (FS, SS, FF) - leave blank if this record is not a constraint.
- (7) Delay, if required
- (8) Original "Baseline" Start Date
- (9) Original "Baseline" Finish Date
- (10) Current (forecast) Start Date (early start)
- (11) Current (forecast) Finish Date (early finish)
- (12) Estimated completion date (if different from early start + current duration)
- (13) Late Start Date
- (14) Late Finish Date
- (15) Actual Start Date
- (16) Actual Finish Date

Example - each line contains the following:

Task # (preceding event), Description, Calendar, Duration, Next Task # (succeeding event), Constraint Type, Delay, Baseline Start, Baseline Finish, Early Start, Early Finish, Estimated Completion Date, Late Start, Late Finish, Actual Start, Actual Finish, Total Float.

- B. **Primavera Project Planner(P3) 2.0 Export Procedure:** Users who have Primavera Project Planner(P3) version 2.0 can automatically create a export file by following the export procedure below. **Users having an older version of Primavera may use the applications export feature only if they are able to include all the data elements listed in the version 2.0 format.**

1. Choose Tools, Project Utilities, **EXPORT**
2. Click **ADD**, then click **OK** to accept the next sequential ID number, or type a unique number to identify the specifications and click **OK**
3. Enter a description for the specification in the Title field
4. Specify data items to export

Activities

Contents of List

- Use the Description column to specify which data items to export
- To add items, click the right mouse button in the Description column and choose from the list. Suggested Items include: **Activity ID, Activity Description, Actual Start, Actual Finish, Calendar ID, Early Start, Early Finish, Late Start, Late Finish, Original Duration.**
- Select **All Current, All Target, or All Target2**
- Set Description Length to 48

OR

Constraints

- Select **Successor relationships** - Choose this option to export Activity IDs and their corresponding successors only. Lags and relationship types will also be displayed in this output file.

5. Click **FORMAT** in Export Dialog Box
6. In the Output file section, enter a new name and path (ex. A:\actexp or A:\conexp). Do not include a file extension.
7. In the type field, click the minimize button and choose the **[.PRN] - ASCII** file format for the output file.
8. Select **CALENDAR** for Date Format
9. Set ASCII Output Field Separation to **1** and Blank column width to **0**
10. Click **RUN**
11. In the Output Options dialog box, click on **OK**

NOTE: A COMPLETED FILE EXPORT WILL CONSIST OF 2 EXPORT FILES (ACTIVITIES & CONSTRAINTS)

- C. **Microsoft Project Export Procedure:** Users of Microsoft Project Version 4.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the Save File as Type box Select **MPX 4.0**
3. On the drive box select a: or whichever drive is the 3.5" Floppy drive
4. Click on **OK**

This saves the file in MPX format.

- D. **Primavera Sure Track:** Users of Sure Track Version 2.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the filename box input a filename
3. In the Save File as Type box Select **MPX**
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**

This saves the file in MPX format

- E. **Scitor Project Scheduler 7 Export Procedure:** Users of Scitor Project Scheduler Version 7 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In filename box select a filename
3. In the Save File as Type box Select **MPX**

4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
 5. Click on **OK**
- This saves the file in MPX format

F. **Export Files with Other Scheduling Applications:** Most scheduling packages have export functions similar to those described above. If the Consultant chooses to use packages with export capabilities, they shall include all items listed in the Standard Media Format in a text or ASCII type file.

IV. SUPPLEMENTAL INFORMATION

A. MDOT CRITICAL PATH-CONSTRUCTION TIME ESTIMATES

Drainage

Cross Culverts

| | |
|--|--------------|
| Rural Highways | 44 yd./day |
| Expressways | 55 yd./day |
| Large Headwalls | 5 days/unit |
| Slab or Box Culverts | 5 days/pour |
| Plowed in Edge Drain (production type project) | 4921 yd./day |
| Open Graded Underdrain (production type project) | 1312 yd./day |

Sewers

| | |
|--|---------------------------|
| 0m-5m(up to 60 in. (1500mm)) | 44 yd./day |
| 0m-5m(over 60 in. (1500mm)) | 27 yd./day |
| 5m-over(up to 60 in. (1500mm)) | 27 yd./day |
| 5m-over(over 60 in. (1500mm)) | 22 yd./day |
| Jacked-in-place including excavation pit & set up | 14 yd./day min. 5 days |
| Tunnels | |
| hand mining | 9 yd./day |
| machine mining | 22 yd./day |
| including excavation pit & set up | min. 5 days |

Manholes

Catch Basin

3 units/day
4 units/day

Utilities

| | |
|--|-------------|
| Water Main(up to 16 in. (400mm)) | 109 yd./day |
| Flushing, Testing & Chlorination | 4 days |
| Water Main(20 in. (500mm) – 40 in. (1050mm)) | 27 yd./day |

| | |
|---|---------------|
| Flushing, Testing & Chlorination | 5 days |
| Order & Deliver 24 in. (600 mm) HP Water Main | 50 days/order |
| Gas Lines | 109 yd./day |

Earthwork and Grading

| | Metro Exp | Rural |
|--|----------------------------|-----------------------------|
| Embankment(CIP) | 1962 yd. ³ /day | 6932 yd. ³ /day |
| Excavation and/or Embankment(Freeway) | 1962 yd. ³ /day | 12033 yd. ³ /day |
| Excavation and/or Embankment(Reconstruction) | 981 yd. ³ /day | 4970 yd. ³ /day |
| Embankment(Lightweight Fill) | 392 yd. ³ /day | 785 yd. ³ /day |
| Muck(Excavated Waste & Backfill) | 1962 yd. ³ /day | |
| Excavation(Widening) | 656 yd./day | |
| Grading(G & DS) | 820 yd./day | |
| Subbase and Selected Subbase(up to 8 yd. (7.4m)) | 656 yd./day | |
| Subbase and Selected Subbase(8 yd. (7.4 m) & over) | 492 yd./day | |
| Subgrade Undercut & Backfill | 1962 yd. ³ /day | |
| Subbase & Open-Graded Drainage Course | 492 yd./day | |

Surfacing

| | |
|---|----------------------------|
| Concrete Pavement (8 ft. (7.3m)) | 492 yd./day |
| Including Forming & Curing | min. 7 days |
| Bituminous Pavement (8 ft. (7.3m)) | 1312 yd./day/course |
| Concrete Ramps(5.6 yd. (4.9m)) | 328 yd./day |
| Including Forming & Curing | min. 7 days |
| Curb(1 side) | 820 yd./day |
| Concrete Shoulder-Median | 1435 yd. ² /day |
| Bituminous Shoulders(1 side per course) | 820 yd./day |
| Sidewalk | 215 yd. ² /day |
| Sidewalk(Patching) | 78 yd. ² /day |

Structures

| | |
|---------------------------------------|---------------------------|
| Sheeting(Shallow) | 33 yd./day |
| General Excavation at Bridge Site | 981 yd. ³ /day |
| Excavation for Substructure(Footings) | 1 unit/day |
| Piles(12m) | 15 piles/day |
| Substructure(Piers & Abutments) | 5 days/unit |

| | |
|---|------------------------------------|
| Order and Delivery of Beams | |
| Plate Girders | 100-120 days/order |
| Rolled Beams | 90-120 days/order |
| Concrete Beams | 50 days/order |
| Erection of Structural Steel | 3 days/span |
| Bridge Decks | |
| Form & Place Reinforcement(66 yd. (60m) Structure) | 15 days |
| Pour Deck Slab(1 1/5 days/pour) | 2 days/span |
| Cure | 14 days |
| 2 Course Bridge Decks | |
| Add 9 days for Second Course Latex | |
| Add 12 days for Second Course Low Slump | |
| Sidewalks and Railings | |
| Sidewalks and Parapets | 5 days/span |
| Slip Formed Barriers | 2 days/span |
| Clean Up | 10 days |
| Pedestrian Fencing | |
| Shop Plan Approval & Fabrication | 1-2 months |
| Erection | 1 week/bridge |
| Rip Rap Placement | |
| Bucket Dumped | 504 yd. ³ /day |
| Bucket Dumped and Hand Finished | 171 - 684 yd. ³ /day |
| Retaining Walls | 1 Panel/day min. 10 days |
| Railroad Structures | |
| Grade Temporary Runaround | 981 yd. ³ /day |
| Ballast, Ties & Track | 55 yd./day |
| Place Deck Plates | 5 days/span |
| Waterproof, Shotcrete & Mastic | 5 days/span |
| Railroad Crossing Reconstruction | 10-15 work days |

(depends on whether concrete base is involved)

Temporary Railroad Structures

| | |
|-----------------------|---------------|
| Order & Deliver Steel | 55 days/order |
| Erect Steel | 1 day/span |
| Ties and Track | 3 days/span |

Pumphouse

| | |
|---|-------------------|
| Structure | 30 days/structure |
| Order & Deliver Electrical & Mechanical Equipment | 90 days |
| Install Electrical & Mechanical Equipment | 30 days |

Miscellaneous

| | |
|---|-----------------------------|
| Removing Old Pavement | 66 yd./day |
| Removing Old Pavement for Recycling(8 yd. (7.3m)) | 492 yd./day |
| Crushing Old Concrete for 6A or OGDC | 1488 tons/day |
| Removing Trees(Urban) | 15 units/day |
| Removing Trees(Rural) | 30 units/day |
| Removing Concrete Pavement | 538 yd. ² /day |
| Removing Sidewalk | 299 yd. ² /day |
| Removing Curb & Gutter | 492 yd./day |
| Removing Bituminous Surface | 1914 yd. ² /day |
| Conditioning Aggregate | 984 yd./day |
| Bituminous Base Stabilizing | 2990 yd. ² /day |
| Ditching | 656 yd./day |
| Trenching for Shoulders | 820 yd./day |
| Station Grading | 667 yd./day |
| Clearing | 9568 yd. ² /day |
| Restoration(Topsoil, Seeding, Fertilizer & Mulch) | 1973 yd. ² /day |
| Sodding | 2512 yd. ² /day |
| Seeding | 47840 yd. ² /day |
| Guard Rail | 252 yd./day |
| Fence(Woven Wire) | 394 yd./day |
| Fence (Chain Link) | 164 yd./day |
| Clean Up | 656 yd./day |

| | |
|---|----------------------------|
| Concrete Median Barrier | 328 yd./day |
| Cure | min. 7 days |
| Reroute Traffic(Add 4 days if 1st item) | 1 day/move |
| Concrete Glare Screen | 492 yd./day |
| Light Foundations | 6 units/day |
| Order & Delivery | 6-8 week/order |
| Remove Railing & Replace with Barrier(1 or 2 decks at a time) | 4 days/side |
| Longitudinal Joint Repair | 1750 yd./day |
| Crack Sealing | 5249 yd./day |
| Joint and Crack Sealing | 547 yd./day |
| Repairing Pavement Joints - Detail 7 or 8 | 219 yd./day |
| Seal Coat | 6999 lane yd./day |
| Diamond Grinding/Profile Texturing Concrete | 3947 yd. ² /day |
| Rest Area Building | |
| Order Material | 3 months |
| Construct Building | 9 months |
| Tower Lights | |
| Order and Deliver Towers | 100 days |
| Weigh-In-Motion | |
| Order and Deliver Materials | 1 month- 6weeks |
| O & D with Installation | 3 months |
| Raised Pavment Markers | 300 each/day |
| Attenuators | 2 each/day |
| Shoulder Corrugations, Ground or Cut | 5 - 6 mi./side/day |
| Aggregate Base | 3468 yd. ² /day |
| Aggregate Shoulders | 458 yd. ³ /day |
| Freeway Signing - 3# Post Type | 50 signs/day |
| Concrete Joint Repair (High Production- Projects with > 1000 patches) | |
| Average(2 yd. (1.8m)) | 50 patches/day |
| Large(>2 yd. (1.8m)) | 598 yd. ² /day |
| Bridge Painting | 108 yd. ² /day |
| Pin and Hanger Replacement | 3 beams/day |
| Order Pin & Hanger | 60 days |

Bridge Repair

| | |
|--------------------------------------|--------------------------------------|
| Scarifying(Including Clean up) | 11960 yd. ² /day |
| Joint Removal(Including Clean up) | 4 yd./day |
| Forming & Placement | 3.8 yd./day |
| Hydro-Demolishing | 328 yd./day |
| Barrier Removal | 16 yd./day |
| Placement | 49 yd./day |
| Hand Chipping (Other than Deck) | 0.31 yd. ³ /person/day |
| Shoulder Corrugations, Ground or Cut | 5 - 6 mi./side/day |
| Casting Latex Overlay | 273 yd./day |
| Curing Overlay | |
| Regular | 4 days |
| High Early | 1 day |
| Thrie Beam Retrofit | 33 yd./day |
| Beam End Repairs | |
| Welded Repairs | .75 days/repair |
| Bolted Repairs | .50 days/repair |
| Bolted Stiffeners (Pair) | .25 days/repair |
| Grind Beam Ends | .25 days/repair |
| Welded Stiffeners (Pair) | .25 days/repair |
| H-Pedestal Repairs: | |
| Welded Repair | .50 days/each |
| Replacement | 1 day/each |
| Deck Removal | 281 yd. ² /day |

Surfacing-Bituminous

| | |
|---|----------------------------|
| Metro-Primary(<(19800 tons (18000mtons)) | |
| Paving | 594 tons/day |
| Joints | 164 yd./day |
| Cold Milling | 4066 yd. ² /day |
| Aggregate Shoulders | 990 tons/day |
| Metro Primary(>(19800 tons (18000mtons)) | |
| Paving | 594 tons/day |
| Joints | 219 yd./day |
| Cold Milling | 8970 yd. ² /day |
| Metro Interstate(>(19800 tons (18000mtons)) | |

| | |
|---|-----------------------------|
| Paving | 1210 tons/day |
| Joints | 394 yd./day |
| Aggregate Shoulders | 990 tons/day |
| Urban Primary(<(19800 tons (18000mtons)) | |
| Paving | 704 tons/day |
| Joints | 109 yd./day |
| Cold Milling | 2033 yd. ² /day |
| Rubbleizing | 2033 yd. ² /day |
| Aggregate Shoulders | 495 tons/day |
| Urban Primary(>(19800 tons (18000mtons)) | |
| Paving | 1100 tons/day |
| Joints | 131 yd./day |
| Cold Milling | 2033 yd. ² /day |
| Aggregate Shoulders | 550 tons/day |
| Urban Interstate(>(19800 tons (18000mtons)) | |
| Paving | 1320 tons/day |
| Joints | 241 yd./day |
| Cold Milling | 2033 yd. ² /day |
| Rubbleizing | 6937 yd. ² /day |
| Aggregate Shoulders | 704 tons/day |
| Rural Primary(<(19800 tons (18000mtons)) | |
| Paving | 704 tons/day |
| Joints | 131 yd./day |
| Cold Milling | 649 tons/day |
| Crush & Shape | 11960 yd. ² /day |
| Aggregate Shoulders | 704 tons/day |
| Rural Primary(>(19800 tons (18000mtons)) | |
| Paving | 1210 tons/day |
| Joints | 164 yd./day |
| Cold Milling | 880 tons/day |
| Crush & Shape | 11960 yd. ² /day |
| Rural Interstate(>(19800 tons (18000mtons)) | |
| Paving | 1411 tons/day |
| Joints | 240 yd./day |

C. MDOT CALENDARS

The following are the MDOT 4, 5 and 6 day calendars:

| CALENDAR | DESCRIPTION | START | FINISH |
|-----------------|-----------------------------------|------------------|------------------|
| 1 | Std - Apr 16 - Nov 15 - 4 day | APR 16 | NOV 15 |
| 2 | LP - Bit Stab - 4 day | MAY 15 | OCT 15 |
| 3 | UP - Bit Stab - 4 day | JUN 01 | OCT 01 |
| 4 | LP S of M-46 - Bit Pave - 4 day | MAY 05 | NOV 15 |
| 5 | LP N of M-46 - Bit Pave - 4 day | MAY 15 | NOV 01 |
| 6 | UP - Bit Pave - 4 day | JUN 01 | OCT 15 |
| 7 | LP - Bit Seal Coat - 4 day | JUN 01 | SEP 15 |
| 8 | UP - Bit Seal Coat - 4 day | JUN 15 | SEP 01 |
| 9 | Tree Planting - Deciduous - 4 day | MAR 01 OCT 01 | MAY 15 NOV 15 |
| 10 | Tree Planting - Evergreen - 4 day | MAR 01 | JUN 01 |
| 11 | South LP - Restoration - 4 day | MAY 01 | OCT 10 |
| 12 | North LP - Restoration - 4 day | MAY 01 | OCT 01 |
| 13 | UP - Restoration - 4 day | MAY 01 | SEP 20 |
| 14 | Full Year - Winter Work - 4 day | JAN 01 | DEC 31 |
| 21 | Std - Apr 16 - Nov 15 - 5 day | APR 16 | NOV 15 |
| 22 | LP - Bit Stab - 5 day | MAY 15 | OCT 15 |
| 23 | UP - Bit Stab - 5 day | JUN 01 | OCT 01 |
| 24 | LP S of M-46 - Bit Pave - 5 day | MAY 05 | NOV 15 |
| 25 | LP N of M-46 - Bit Pave - 5 day | MAY 15 | NOV 01 |
| 26 | UP - Bit Pave - 5 day | JUN 01 | OCT 15 |
| 27 | LP - Bit Seal Coat - 5 day | JUN 01 | SEP 15 |
| 28 | UP - Bit Seal Coat - 5 day | JUN 15 | SEP 01 |
| 29 | Tree Planting - Deciduous - 5 day | MAR 01 OCT 01 | MAY 01 NOV 15 |
| 30 | Tree Planting - Evergreen - 5 day | MAR 01 | JUN 01 |
| 31 | South LP - Restoration - 5 day | MAY 01 | OCT 10 |

| | | | |
|----|---------------------------------|--------|--------|
| 32 | North LP - Restoration - 5 day | MAY 01 | OCT 01 |
| 33 | UP - Restoration - 5 day | MAY 01 | SEP 20 |
| 34 | Full Year - Winter Work - 5 day | JAN 01 | DEC 31 |
| 35 | Full Year - Expedited - 6 day | JAN 01 | DEC 31 |

ATTACHMENT "J"

Sewer/Utilities Videotaping

(Contact MDOT Project Manager regarding the report format/details)

ATTACHMENT “K”
Project Concept Statement and Project Scoping Checklist Forms

(contact the MDOT Project Manager to obtain the form)