

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 _____

<input type="checkbox"/> Prequalified Services – See the attached Scope of Services for required Prequalification Classifications.	<input type="checkbox"/> 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
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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 SERVICE
FOR
TRAFFIC & SAFETY SERVICES
Traffic Signal Modernization Design for 8 Contract Locations**

CONTROL SECTION(S): 63900

JOB NUMBER(S): 114867A

PROJECT LOCATION:

- #1: M-59 EB at crossover west of Milford Rd, Highland Township, Oakland County (63041-101).
- #2: US-24BR at Lahser Rd, Bloomfield Township, Oakland County (63052-022).
- #3: M-24 at Championship Drive, City of Auburn Hills, Oakland County (63112-029).
- #4: M-150 at Old M-59, City of Rochester Hills, Oakland County (63132-001).
- #5: M-150 at Woodward Ave, City of Rochester, Oakland County (63132-004).
- #6: M-150 at Avon Rd, City of Rochester Hills, Oakland County (63132-006).
- #7: M-150 at Hamlin Rd, City of Rochester Hills, Oakland County (63132-010).
- #8: Old I-96BL (Grand River Ave) at Drake Rd, City of Farmington Hills, Oakland County (63821-019).

PROJECT DESCRIPTION:

Signal Modernization Design and perform any survey and ramp design necessary to comply with MDOT design practices and ADA requirements at all locations.

Signal Modernization Design consists of the design for upgrading of the existing traffic signal equipment including but not limited to 16-Load Switch Base-Mounted ("EPAC" type controllers), Traffic and Pedestrian heads, Pedestrian push button actuated (if necessary), ADA Ramp Design (if necessary) embedded loop and/or camera design (if necessary), illuminated case signs, Box Span wire, signal support poles and supporting structures (if necessary). Radio Interconnect Design , Replace all existing traffic and pedestrian signal heads crossing all legs with 12" heads.

The existing drawings and Layout Request Form for the above mentioned intersections will be provided to the consultant.

Note: First option for signal design should be "Box Span" design. The signal designs should incorporate the use of LED technology. The consultant identifies and notes the existing posted speed limit on all approaches of the intersection(s) on the plan. Design for Radio Interconnect requires performing the Radio Survey and submitting the Signal Radio Survey Form.

Copy of Final Approved Electronic files of all signal plans must be submitted to Traffic Signal Unit.

ANTICIPATED SERVICE START DATE: 7/12/2013

ANTICIPATED SERVICE COMPLETION DATE: 10/10/2014

PRIMARY PREQUALIFICATION CLASSIFICATION(S):

Traffic Signal Design

SECONDARY PREQUALIFICATION CLASSIFICATION(S):

Right of Way Surveys (See attachment A)

Road Design Surveys (See attachment A)

Roads and Streets

Geotechnical Engineering Services

Maintaining Traffic Plans and Provisions

DBE REQUIREMENT: 5%

MDOT PROJECT ENGINEER MANAGER:

Jeffrey Pitt, PE

Senior Contracts Engineer

MDOT – Oakland TSC

800 Vanguard Drive

Pontiac, MI 48341

Ph: 248-451-2430

Fax: 248-451-0125

E-mail: pittj@michigan.gov

CONSTRUCTION COST:

A. The estimated cost of construction is: **\$ 1,800,000**

B. The estimated cost of real estate is: **\$ 0**

The above construction total is the amount of funding programmed for this project.

The Consultant is expected to design the project within the programmed amount.

If at any time the estimated cost of construction varies by more than 5% of the current programmed amount, then the Consultant will be required to submit a letter to the MDOT Project Manager justifying the changes in the construction cost estimate.

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

Consultant is required to use MDOT's current version of Bentley MicroStation for CADD applications and Bentley GEOPAK for road design as well as the most current workspace as published monthly. Consultant shall comply with all MDOT CADD standards and file naming conventions.

CONSULTANT RESPONSIBILITIES:

The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job and perform field operations in accordance with the Department's Personal Protective Equipment (PPE) policy as stated in the MDOT Guidance Document #10118.

Complete the design of this project including, but not limited to the following:

- 1) Any pedestrian detour plans must be developed as part of the proposal or plan sheets.
- 2) Proposed plan views must have a 1"=30' scale when plotted to 11"x17".
- 3) Utility Coordination:
 - a. The Consultant shall be responsible for obtaining and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project.
 - b. The Consultant will be responsible for miscellaneous staking of utilities.
 - c. The consultant will call in a design/survey Miss Dig at least two weeks prior to any design survey or design field visit. The consultant will include design/survey Miss Dig locates and all other utility information on the plans (both existing and proposed plans). MDOT will provide the consultant with all information received from soliciting the utility companies.
 - b. The consultant will stake proposed foundation locations in the field prior to any field utility coordination meeting.
 - c. The consultant will attend utility coordination meetings and on-site field meetings as required with the utility engineer and the affected utility companies in the area and make any necessary design and plan revisions. The consultant will actively work with MDOT personnel until utility conflicts are resolved.

- 4) Meetings:
 - a. The consultant is responsible for scheduling, attending, and providing meeting minutes for the following meetings:
 - i) Design kick off meeting
 - ii) Plan review meeting at preliminary plan stage
 - iii) Utility coordination meeting (coordinate scheduling with utility engineer)
 - iv) Utility coordination field meetings as required (coordinate scheduling with utility engineer)
 - v) OEC meeting prior to plan completion.
- 5) Perform strain pole foundation design as required. The MDOT has developed a strain pole foundation design table for box span signals. This table can be found on the Traffic and Safety website in the signals correspondence and guidelines area. A special foundation design may be necessary depending on site specific soil properties and proposed signal layout and geometry.
- 6) Perform design service including the design and preparation of base plans, preliminary (75%) plans, OEC plans, final plans, "E proposal" package, specifications, wiring diagrams, interconnect drawings, bills of materials, measurement and payment items, and cost estimates for all construction work for this project, including necessary alterations to power, lighting, and interconnect facilities. Traffic signal work may include installation of: signal support poles and/or pedestals, span wire, traffic and pedestrian signals, and traffic signal controller, traffic loops, handholes, wireless interconnect, and video detection.
- 7) Perform Design Service for drilled shaft foundations as required including soil boring information, identification of any suspected contamination of the boring site, and preliminary foundation investigation. (Refer to MDOT's website.) The following information must be provided for proper analysis of strain pole foundations:
 - a. Accurate pole location information
 - b. Soil classification
 - c. Standard penetration values every 2.5 feet (750 mm) extending 20 feet (6.1 m) below the ground surface elevation (blows/foot in accordance with ASTM D1586)
 - d. Unconfined compressive shearing resistance (PSF, for cohesive soils)
 - e. Ground water table elevation
- 8) The Consultant shall contact the Region Materials/Testing Engineer or Soils Engineer before proceeding with any geotechnical work and submit the results of the preliminary subsurface investigation for their review, approval, and recommendations for foundation design.
- 9) In the performance of design service, govern all project design and plan work by the applicable codes, standards, and practices of the Michigan Department of Transportation, hereinafter referred to as the department, and the current *Michigan Manual of Uniform Traffic Control Devices*.

- 10) Supply all materials necessary for completion of the projects, except as hereinafter described, including incidental prints required.
- 11) All documents prepared by the Consultant, including, drawings, estimates, specifications, field notes, investigation studies, etc., are the property of the department.
- 12) Plans are to be designed using the current MDOT Standard Specifications.
- 13) Perform any design/coordination tasks with any railroad company involved within the project limits, including (but not limited to):
 - a. Determine railroad contact person(s)
 - b. Complete any applications required by the railroad company to perform the proposed traffic signal work.
 - c. Include related notes and special provisions as required in the proposal.
- 14) Any existing or proposed pedestrian pushbuttons and ramps must be accessible per ADA guidelines and MDOT design practices including:
 - a. Pushbutton must be within 24" from edge of sidewalk
 - b. The pushbutton must be located in the middle of a 4' pushbutton landing (maximum slope of 2%).
 - c. ADA ramps are required at every crosswalk controlled by a pedestrian signal head.
 - d. Sidewalk is required to connect ADA ramps on a quadrant.
- 15) Perform sidewalk and ramp design as needed to comply with MDOT design practices and ADA requirements. For all stop and go traffic signals, all ADA ramps will be replaced unless the existing ramps are compliant with MDOT design practices and ADA guidelines. For flashing signals, pedestrian ramps will not be replaced unless they are disturbed.
- 16) Perform survey as needed in compliance with MDOT survey practices and standards in accordance with attachment A.

Task 1: Base Plan Preparation

1. Design and develop contract base plans necessary for new installation or modernization of electronic traffic signal control devices to be accomplished by contract bid letting. Base plans include (but are not limited to):
 - a. Existing road rights-of-way (ROW)
 - b. Field measured/surveyed road and lane geometry and posted speed limits
 - c. Field measured/surveyed locations of any visible utilities
 - d. Utility note sheet listing the contact names and phone numbers for each utility having facilities within the project limits.
 - e. Field measured/surveyed locations of all utility markings from design/survey Miss Dig
 - f. All utility information received from MDOT soliciting utility companies
 - g. Proposed types and locations of poles and controller

- h. Proposed traffic and pedestrian signal head types and locations
 - i. Proposed pushbuttons, traffic loops, and antennas
 - j. Proposed traffic signal removal (if required) and installation plan(s)
 - k. Proposed phasing (as required)
 - l. POCH diagram for proposed attachments to wood poles (not required for steel pole attachments)
 - m. Maintaining traffic concept
2. Where applicable, the intersection and ADA ramp survey will be used to develop base plans
 3. If existing or proposed equipment appear to be outside existing right-of-way, contact PM and Douglas Adelman (517-373-2363), Traffic Signal Unit in Lansing.

Task 1: Deliverables (Base Plans)

1. All traffic signal plan and interconnect sheets (no details required) in the following formats:
 - a. One 11x17 pdf file Distributed as follows:
 - i. Traffic Signals Unit: Pdf file
 - ii. TSC Delivery Engineer: Pdf file
 - iii. TSC Traffic & Safety Engineer: Pdf file
 - iv. TSC Utilities Engineer: Pdf file
 - v. Region Soils Engineer: Pdf file
 - vi. Region Traffic & Safety Engineer: Pdf file
 - vii. Maintaining Agency (if applicable): Pdf file
 - viii. Utility company supplying power: Pdf file

Task 2: Preliminary (75%) Plan Preparation

1. Design and develop preliminary (75%) contract plans necessary for new installation or modernization of electronic traffic control devices to be accomplished by contract bid letting. Preliminary (75%) plans include (in addition to base plan information):
 - a. Location and types of utilities as provided by the utility companies and resulting from utility coordination meeting(s) as required.
 - b. Separate Interconnect plan sheet (if the scope requires “Radio Interconnect Design”)
 - c. List of Materials and Quantities
 - d. Wiring diagram
 - e. ADA ramp and pushbutton design (including existing and proposed elevations)
 - f. Point of Contact Height (POCH) diagram(s)
 - g. Appropriate note blocks for contact persons, etc.
 - h. Proper file names, levels, and text sizes
 - i. Any additional right-of-way required for existing and proposed traffic signal appurtenances

- j. Soil boring information including depths, soil description, water level, and depth of foundation (if required)
 - k. Maintaining traffic special provision and TMP.
2. Attend plan review meeting at the local TSC.

Task 2: Deliverables Preliminary (75%) Plans

- 1) A summary spreadsheet listing utility conflicts by location and quadrant including the following:
 - a) Specify utility conflicts as overhead or underground
 - b) Specify utility and owner (if unknown label as such)
 - c) Specify locations and utilities for which inadequate information was received
- 2) All traffic signal plan and interconnect sheets including details.
- 3) All required special provisions, notices to bidders, and specifications in E-Proposal format including a draft progress clause, a draft coordination clause, and a draft special provision for maintaining traffic and TMP.
- 4) Preliminary pedestrian detour plans must be included as 8 ½"x11" sheets within the maintaining traffic special provision or in the plans as 11"x17" sheets.
- 5) Format of Task 3 Deliverables
 - a) One electronic 11x17 pdf file (filename: Job#PLANHALF.pdf)
 - b) One electronic proposal pdf file (filename: Job#PROPOSAL.pdf)
- 6) Distribute Task 3 Deliverables as follows:
 - i) Traffic Signals Unit
 - ii) TSC Delivery Engineer
 - iii) TSC Traffic & Safety Engineer
 - iv) TSC Utilities Engineer
 - v) Region Soils Engineer
 - vi) Region Traffic & Safety Engineer
 - vii) Lansing Signal Shop
 - viii) Maintaining Agency (if applicable)
 - ix) Utility company supplying power

Task 3: OEC Plans and Proposal Preparation

- 1) Incorporate the department's comments on the plans and prepare complete detailed construction OEC plans, supplemental specifications, special provisions, measurement and payment items, estimates of quantities, span calculations, and engineer's estimates of cost for all necessary construction and related work included in this project.
- 2) During preparation of the OEC plans, make such alterations, corrections, and revisions to said plans and supporting materials as are deemed necessary and desirable by the department to insure conformance of plans to good design and standard practices and to have said plans and other material in proper form for receiving bids.
- 3) During preparation of the proposal, work with the appropriate MDOT personnel to obtain final bid proposal documents including progress clause, coordination clause, special provision for maintaining traffic, and utility relocation status (form 2286).

- 4) Pedestrian detour plans must be included as 8 ½"x11" sheets within the maintaining traffic special provision or in the plans as 11"x17" sheets.
- 5) Attend and provide electronic plans for the OEC meeting.

Task 3: Deliverables (OEC Plans and Proposal):

1. Deliver to the department electronic OEC plans, proposal and supporting documents compatible with current "E- Proposal" requirements (Refer to MDOT website: E-Proposal Training for MDOT Consultants Document).

Task 4: Final Plan and Proposal Preparation

- 1) Make any final changes necessary to the plans and proposal and supporting documents

Task 4: Deliverables (Final Plans):

1. Upon completion of design services for this project and final approval thereof by the department, deliver to the department final plans, proposal and supporting documents compatible with current "E- Proposal" requirements (Refer to MDOT website: E-Proposal Training for MDOT Consultants Document). All CAD files must be "Intergraph Microstation Version 8 file format" and all PDF files must be Adobe Acrobat version 6.

Format of Task 4 Deliverables (Final Plans):

- a) One (1) 11"x17" paper copy of the title sheet with original stamps and signatures including a map of the area with work locations identified, a list of locations, and other items as determined by Traffic Signal Unit
- b) Final Approved Electronic files of all signal plans must be submitted to Traffic Signal Unit.
- c) Electronic (pdf) 11"x17" plan file (filename: Job#PLANHALF.pdf)
- d) Electronic (pdf) proposal file (filename: Job#PROPOSAL.pdf)
- e) Electronic (pdf) files of all required supporting documents
- f) Editable electronic files of all supporting documents and of all files inserted into proposal document. For example, submit the progress clause as a word document in addition to the progress clause (pdf) which will also be inserted in the proposal pdf.
- g) One set of estimates of cost of construction (8-1/2" x 11" paper copy).
- h) One copy of all design computations as required for use by the department.
- i) Upon request by the department, make available thereto all notes utilized in preparation of the plans, supplemental specifications, and cost estimates.
- j) For all signal contracts, a "txt" or "csv" file compatible with Transport system detailing the materials used
- k) Checklist of "typical" signal details to be used
- l) All required checklists of MDOT Special Provisions extracted per E-Proposal format

Distribute Task 4 Deliverables to Lansing Traffic Signals Unit only as follows:

- i) One (1) 11"x17" paper copy of the title sheet
- ii) All electronic files to be delivered on a compact disk (CD) and sent via email

MDOT RESPONSIBILITIES:

Utilities:

MDOT staff will:

- Distribute plans to all the utility companies in the area
- Receive and pass on all utility information
- Assist in scheduling and conducting utility coordination meeting(s)
- Coordinate any necessary utility relocation

Department Review:

The department will review and comment on the base plan, the preliminary (75%) plan, and the OEC plan submittals. Additional plan review may be required dependent on completeness and accuracy of the plans submitted.

Information services to be provided by the MDOT are:

- Control section numbers
- Job numbers
- Contact information for TSC/Region/C&T personnel
- Appropriate Traffic and Safety Notes
- Available signal design plans and/or layout drawings for each location
- Available signal phasing or operational information for each location
- A Proposal file will be made available to be used as a template
- Items available on MDOT's website - www.michigan.gov/mdot
(Select: Doing Business with MDOT, Traffic & Safety Services, Typical/Details/Guides)

1. Signal Details

- a. MDOT Typical Signal Construction Detail Sheets
- b. MDOT Typical Signal Information Note Sheet
- c. MDOT Typical Signal Legend Sheet

2. Traffic Consultant Files

- a. Cell libraries
- b. Microstation information
- c. CAD instructions for consultants
- d. MDOT sample layouts
- e. MDOT Suggested Traffic Signal Design Procedure
- f. MDOT Requirements for Preliminary Geotechnical Investigations for Signal Foundations
- g. Method of Measurement and Basis of Payment for Signal Contracts
- h. Signal Span Calculation Program (non-disclosure statement required)

3. Traffic Guidelines

- Traffic Signal Head Placement Diagrams

Signal special provisions are now available on the Design IRS menu.

Reference Documents and Standards to be Used:

- *National Manual of Uniform Traffic Control Devices*
- *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)*
- *Michigan Vehicle Code*
- Local and national electrical codes
- MDOT Standards, Specifications, and Construction Details
- MDOT Pay Item Code Book

From this list, the following documents can be ordered from MDOT Financial Services Division (517-335-2519). The Consultant must pay the cost.

- MMUTCD
- MDOT 2012 Standard Specifications for Construction
- MDOT Pay Item Code Book

PROJECT COORDINATION:

Coordinate design service with MDOT, Traffic and Safety Support Area, Traffic Signal Unit, Douglas Adelman (517-373-2363); overhead and/or underground utility/telephone companies.

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.MDOT

Please indicate with a check in the box next to each task number whether you believe that task will require consultant involvement on the job. Milestones (a specific event at a point in time) are italicized and underlined. See the [P/PMS Task Manual](#) for more details. Scheduling assistance may be accomplished with estimated completion dates. While not part of P/PMS, an Authorization Milestone and Post-Design Tasks have been included for your reference.

		P/PMS TASK NUMBER AND DESCRIPTION
YES	NO	CONSULTANT CONTRACT AUTHORIZATION/EXECUTION
		EPE SCOPING ANALYSIS
	X	2100 Scope Verification and Initiation of EPE Activities
	X	210M Program & Project Review Board Concurrence
	X	2115 Traffic Data Collection
	X	2120 Prepare Traffic Analysis Report
	X	2125 Traffic Capacity Analysis
	X	2130 Prepare Project Justification
	X	213M Concurrence by Regulatory Agencies with the Purpose and Need
	X	2140 Develop and Review Illustrative Alternatives
	X	2155 Request/Perform Safety Analysis
	X	2160 Prepare and Review EIS Scoping Document
	X	211M Public Information Meeting
		EPE DRAFT ANALYSIS
	X	2310 Conduct Technical SEE Studies
	X	2311 Cultural Resources Survey
	X	2312 Recreational Survey – Section 4(f)/6(f)
	X	2313 Endangered Species Survey
	X	2314 Wetland Assessment
	X	2315 Wetland Mitigation
	X	2316 Other Technical Reports
	X	2321 Prepare for Aerial Photography
	X	2322 Finish/Print Aerial Photography
	X	2330 Collect EPE Geotechnical Data
	X	2340 Develop and Review Practical Alternatives
	X	233M Aerial Photography Flight
	X	2360 Prepare and Review EA
	X	231M Approval of EA by FHWA
	X	2370 Prepare and Review Draft EIS
	X	237M Approval of Draft EIS by FHWA
	X	2380 Distribute EA
YES	NO	CONSULTANT CONTRACT AUTHORIZATION/EXECUTION
	X	232M Public Hearing for EA

	X	2390	Distribute DEIS
	X	239M	Public Hearing for DEIS
	X	2510	Determine and Review Recommended Alternative
	X	250M	Concurrence by Regulatory Agencies with Recommended Alternatives
	X	2525	Prepare and Review Engineering Report
	X	2530	Prepare and Review Request for FONSI
	X	252M	Approval of FONSI by FHWA
	X	2540	Prepare and Review FEIS
	X	254M	Approval of FEIS by FHWA
	X	2550	Obtain ROD
	X	255M	ROD Issued by FHWA
	X	2570	ITS Concept of Operations
			CONTAMINATION INVESTIGATION
	X	2810	Project Area Contamination Survey (PCS)
	X	2820	Preliminary Site Investigation (PSI) for Contamination
			DESIGN SCOPE VERIFICATION AND BASE PLAN PREPARATION
x		3130	Verify Design Scope of Work and Cost
	X	3310	Prepare Aerial Topographic Mapping
	X	3320	Conduct Photogrammetric Control Survey
	X	3321	Set Aerial Photo Targets
x		3330	Conduct Design Survey
	X	3340	Conduct Structure Survey
	X	3350	Conduct Hydraulics Survey
x		3360	Prepare Base Plans
x		311M	Utility Notification
x		3361	Review and Submit Preliminary ROW Plans
x		331M	Preliminary ROW Plans Distributed
	X	3365	Pre-Conceptual ITS Design and Meeting
	X	3370	Prepare Structure Study
	X	3375	Conduct Value Engineering Study
	X	3380	Review Base Plans
x		332M	Base Plan Review (Pre-GI Inspection)
x		3390	Develop the Maintaining Traffic Concepts
			PRELIMINARY PLANS PREPARATION
x		3510	Perform Roadway Geotechnical Investigation
	X	3520	Conduct Hydraulic/Hydrologic and Scour Analysis
	X	3522	Conduct Drainage Study, Storm Sewer Design
YES	NO		CONSULTANT CONTRACT AUTHORIZATION/EXECUTION
	x	3530	Conduct Structure Foundation Investigation
	x	3535	Conduct Structure Review for Architectural and Aesthetic Improvements
x		3540	Develop the Maintaining Traffic Plan
x		3551	Prepare/Review Preliminary Traffic Signal Design Plan

	x	3552	Develop Preliminary Pavement Marking Plan
	x	3553	Develop Preliminary Non-Freeway Signing Plan
	x	3554	Develop Preliminary Freeway Signing Plan
x		3555	Prepare/Review Preliminary Traffic Signal Operations
	x	3570	Prepare Preliminary Structure Plans
x		3580	Develop Preliminary Plans
x		3581	Review and Submit Final ROW Plans
x		351M	Final ROW Plans Distributed
	x	3585	Final ITS Concept Design and Meeting
x		3590	Review Preliminary Plans (Hold Plan Review Meeting)
x		352M	THE Plan Review (Grade Inspection)
	x	3595	Conduct ITS Structure Foundation Investigation
			UTILITIES
x		3610	Compile Utility Information
	x	3615	Compile ITS Utility Information
	x	3650	Coordinate RR Involvement for Grade Separations
	x	3655	Coordinate RR Involvement for At-Grade Crossings
	x	3660	Resolve Utility Issues
x		360M	Utility Conflict Resolution Plan Distribution
x		361M	Utility Meeting
	x	3670	Develop Municipal Utility Plans
	x	3672	Develop Special Drainage Structures Plans
	x	3675	Develop Electrical Plans
	x	3680	Preliminary ITS Communication Analysis
	x	3690	Power Design (Power Drop in Field)
			MITIGATION/PERMITS
	x	3710	Develop Required Mitigation
	x	3720	Assemble Environmental Permit Applications
	x	3730	Obtain Environmental Permit
			FINAL PLAN PREPARATION
x		3821	Prepare/Review Final Traffic Signal Design Plan
	x	3822	Complete Permanent Pavement Marking Plan
	x	3823	Complete Non-Freeway Signing Plan
YES	NO		CONSULTANT CONTRACT AUTHORIZATION/EXECUTION
	x	3824	Complete Freeway Signing Plan
x		3825	Prepare/Review Final Traffic Signal Operations
x		3830	Complete the Maintaining Traffic Plan
x		3840	Develop Final Plans and Specifications
x		380M	Plan Completion
	x	3850	Develop Structure Final Plans and Specifications
x		3870	Hold Omissions/Errors Check (OEC) Meeting

x		387M Omissions/Errors Checks Meeting
x		389M Plan Turn-In
	x	3880 CPM Quality Assurance Review
	x	3890 Final ITS Communication Analysis
		EARLY RIGHT OF WAY WORK
	x	4120 Obtain Preliminary Title Commitments
x		4130 Prepare Marked Final Right Of Way Plans
	x	413M Approved Marked Final ROW
	x	4140 Prepare Property Legal Instruments
		ROW ACQUISITION
	X	4411 Preliminary Interviews
	X	441M Post-Decision Meeting
	X	4412 Real Estate Services Assignment Proposal and Fee Estimate (Form 633s) for Appraisal Work Authorization
	X	4413 Appraisal Reports
	X	4420 Appraisal Review Reports
	X	4430 Acquire Right Of Way Parcels
	X	4510 Conduct Right Of Way Survey & Staking
		ROW RELOCATION
	X	4710 Relocation Assistance
	X	4720 Prepare Improvement Removal Plan
	X	442M ROW Certification
	X	4810 Complete Acquisition Process
	X	4820 Manage Excess Real Estate
	X	4830 Provide Post-Certification Relocation Assistance
	X	4910 Conduct ROW Monumentation
	X	5010 Construction Phase Engineering and Assistance
	X	5020 Prepare As-Built Drawings

FOR YOUR INFORMATION

For questions on specific tasks, refer to the P/PMS Task Manual located on the MDOT Bulletin Board System.

For assistance in accessing this manual, please contact one of following:

Dennis Kelley: (517) 373-4614

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.

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.

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.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

MDOT will pay overtime in accordance with MDOT's current Overtime Reimbursement Guidelines.

MDOT will reimburse the CONSULTANT for vehicle expenses and the costs of travel to and from project sites in accordance with MDOT's current Travel and Vehicle Expense Reimbursement Guidelines.

ATTACHMENT A

March 2013

SURVEY SCOPE OF WORK

Survey Limits: As needed for Design, Right of Way, and Construction. A description of survey limits detailing length, width and cross roads must be included in the Survey Work Plan.

NOTES: The Selected Consultant shall discuss the scope of this survey with an MDOT Region Surveyor or an MDOT Lansing Design Surveyor before submitting a priced proposal.

The Selected Consultant surveyor must contact the Region or TSC Traffic and Safety Engineer for work restrictions in the project area prior to submitting a priced proposal.

A **detailed Survey Work Plan must** be included in the project proposal. A **spreadsheet estimate** of hours by specific survey task such as horizontal control, leveling, mapping, alignment determination, etc., **must** be included in the **priced proposal**.

It is the responsibility of the Professional Surveyor to safeguard all corners of the United States Public Land Survey System, published Geodetic Control and any other Property Controlling corners that may be in danger of being destroyed by the proposed construction project.

GENERAL REQUIREMENTS:

1. Surveys must comply with **all Michigan law** relative to land surveying.
2. Surveys must be done under the **direct supervision** of a Professional Surveyor licensed to practice in the State of Michigan, according to Public Act 299 of 1980.
3. Work in any of the following categories of survey: Road Design, Structure, Hydraulic, Right-of-Way, Photogrammetric Ground Control, and/or Geodetic Control must be completed by a survey firm which is pre-qualified by MDOT for that category.
4. Surveys must meet all requirements of the Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated March 2013. Please contact the MDOT Design Survey office to clarify any specific questions regarding these standards.
5. Consultants must obtain all necessary permits required to perform this survey on any public and/or private property, including an up-to-date permit from the MDOT Utilities Coordination and Permits Section.

6. Prior to performing the survey, the Consultant must contact all landowners upon whose lands they will enter. The contact may be personal, phone or letter, but must be documented. This notice must include the reasons for the survey on private land, the approximate time the survey is to take place, the extent of the survey including potential brush cutting (which must be minimized), and an MDOT contact person (the MDOT Project Manager or designate).
7. The Consultant must contact any and all Railroads prior to commencing field survey on railroad property. The cost for any permit, flaggers and/or training that is required by the Railroad will be considered as a direct cost, but only if included in the Consultant's priced proposal.
8. The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job.
9. Consultants are responsible for a comprehensive and conscientious research of all records, including MDOT records, essential for the completion of this project.
10. Measurements, stationing, recorded data, and computations must be in **International Feet**, unless specified otherwise by the MDOT Project Manager.
11. Coordinate values shall be based upon the Michigan State Plane coordinate system NAD83. All elevations must be based upon the North American Vertical Datum of 1988 (NAVD88). The datums must be clearly stated in the Survey Work Plan and subsequent submittal.
12. **If paper copies are required**, the survey notes must be submitted to the Design Survey Unit in 10" by 12" divided portfolios with flap covers. As many portfolios should be used as are needed to contain all of the required documents and Compact Discs (CD's) or DVD's. Duplicate CD's must be included in the portfolio, with one set labeled "Region Surveyor". **Electronic submittal only unless specified otherwise.**
13. Each portfolio and CD must be labeled on the outside as in the following example:
 Survey Notes for:
 Route, Location and Project Limits [I-94 under Beaubien Street]
 Control Section [S06 of 82024] Job Number [45197D] Date [*of submittal*]
 By [*Name of Firm*]
 Michigan Professional Surveyor [] License # []
14. Each submittal is to be divided into six sections. These sections are to be labeled as follows: **Administrative, Alignment, Control, Property, Mapping, and Miscellaneous.**
15. To be included in the Administrative section shall be a copy of the **Survey Project Portfolio QA/QC Check-off list**, March 2013 revision, available from the MDOT Survey Support Unit. This document shall be signed and certified by the Professional Surveyor responsible for the project QA/QC. It is highly recommended that the

consultant become familiar with this document prior to preparing the proposal and again prior to assembling the final portfolio. **Failure to use and include this document may result in the immediate return of the project portfolio for completion.**

16. **All data**, whether electronic or paper, **must be recorded on non-rewritable Compact Discs (CD's) or DVD's**. All paper files, including MicroStation files, must be scanned and/or converted to Adobe Acrobat .PDF format. It is not necessary to include raw survey data files in the Adobe file. CD's must be organized in the same manner as the portfolio, such as by Administrative section, Control section, etc. A Table of Contents in Adobe Acrobat format is required that has all .PDF pages of the CD bookmarked/linked so each place in the .PDF archive can be accessed with a single click of the computer mouse. Specified format files such as Microsoft Word and MicroStation must have separate access in native format outside of the .PDF file.
17. The MDOT Project Manager is the official contact for the Consultant. The Consultant must send a copy of all project correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all communications regarding this project. Any survey related questions regarding this project should be directed to an MDOT Survey Consultant Project Manager or MDOT Region Surveyor. **The MDOT Project Manager must be copied on any and all correspondence.**

At the completion of this survey for this project, legible copies of all field survey notes, all electronic data, and all research records obtained for this project will be considered the property of MDOT and **must be sent to** the MDOT, Design Division, Supervising Land Surveyor, P.O. Box 30050, Lansing, MI 48909. Please use MDOT's Form 222(5/01) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL" for all transmittals. A copy of this transmittal form must also be sent to the MDOT Project Manager for Design.

Acceptance of this survey by the MDOT Supervising Land Surveyor and/or the MDOT Project Manager does not relieve the Consultant of any liability for the content of the survey.

WORK RESTRICTIONS

The Selected Consultant, and the Selected Consultant only, is advised to discuss Traffic Control scenarios with the MDOT Traffic and Safety Engineer at the closest MDOT TSC prior to submitting a priced proposal.

No work shall be performed or lane closures allowed during the Memorial Day, July 4th, or Labor Day holiday periods, as defined by the MDOT Project Manager or representative specifically designated by the Project Manager (the Traffic & Safety Engineer at the MDOT TSC).

Work on weekends, if approved, shall be as directed by the MDOT Project Manager or Designate.

The Consultant must call the MDOT Region or TSC Traffic and Safety Engineer before beginning work to inform him or her of surveying activity in the area. The MDOT Region or TSC must be notified at least two weeks prior to lane closures so advance notice can be posted on the Web site.

Traffic shall be maintained by the Consultant throughout the project in accordance with Sections 812, 922, 103.05 and 103.06 of the *Standard Specifications for Construction*, 2012 edition, <http://mdotwas1.mdot.state.mi.us/public/specbook/2012/> and any Supplemental Specifications currently in effect clarifying the Standard Specifications for Construction. All traffic control devices shall conform to the current edition, as revised, of the *Michigan Manual of Uniform Traffic Control Devices* (MMUTCD). All warning signs for maintenance of traffic used on this project shall be fabricated with prismatic retro-reflective sheeting, and shall be set up five feet above ground.

The Consultant shall use MDOT standard “maintaining traffic” typicals for any and all closures. Typical MDOT traffic control diagrams are available on line at <http://mdotwas1.mdot.state.mi.us/public/tands/plans.cfm>

COORDINATION WITH OTHER CONTRACTS IN THE VICINITY

The Consultant shall coordinate operations with contractors performing work on other projects within or adjacent to the Construction Influence Area (CIA).

MDOT maintenance crews and/or Contract Maintenance Agencies may perform maintenance work within or adjacent to the CIA. The Maintenance Division of MDOT and/or Contract Maintenance Agency will coordinate their operations with the MDOT Project Manager or Designate to minimize the interference to the Consultant.

The Consultant must contact the Development Engineer at the nearest MDOT TSC for information regarding project coordination.

The Consultant’s attention is called to the requirements of cooperation with others as covered in Article 104.08 of the 2012 Standard Specifications for Construction. Other contracts or maintenance operations may occur during the life of the project.

No claim for extra compensation or adjustment in contract unit prices will be allowed on account of delay or failure of others to complete work unit scheduled.

POST SURVEY CLEAN-UP

Once the survey is complete, all stakes must be removed from the MDOT median and ROW to aid the maintenance crews and adjacent property owners. All benchmarks and control points and their witnesses must remain in place.

FINAL REPORT: DELIVERABLES

The final report for this project shall include:

1. In the first directory on the CD, and first pocket of the portfolio if requested, labeled **ADMINISTRATIVE**, the following will appear:
 - a. MDOT's Form 222(5/01) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL"
 - b. The project's Professional Surveyor's Report on company letterhead, consisting of:
 - i) A comprehensive synopsis of the work performed on this project, signed and sealed by the project's Professional Surveyor.
 - ii) The source and methods used to establish the project horizontal and vertical control and alignment(s) for this project.
 - iii) A detailed explanation of anything discovered during the survey of this project that may create a problem for the designer or another surveyor.
 - c. CD or DVD with all documents scanned or converted into a Master PDF file, named (JN)123456C_TaskXXXX. Each Section and sub-section of this PDF file must be bookmarked for easy retrieval. An example can be provided upon request.
 - d. MDOT QA/QC Portfolio Checklist (revised March 2013).
2. In the second directory on the CD, and second pocket of the portfolio if requested, labeled **ALIGNMENT**, the following will appear:
 - a. An annotated MicroStation drawing of the alignment(s), showing:
 - i) A statement defining the alignment(s) as **legal or non-legal**, and a key box with description of type and origin of all alignments, such as 1958 Survey Alignment, 1966 Construction Alignment or, 2013 As Constructed Alignment
 - ii) Stationing, source of stationing, and station equation to existing stationing
 - iii) Curve data, including coordinates of P.I.s, P.C.s, and P.T.s.
 - iv) Physical alignment points found or set
 - v) Control points
 - vi) Reference lines and angles of crossing (if appropriate)
 - vii) Government corners with bearing and distance ties to alignment along the government lines.
 - b. Witness list for the alignment points found or set, which shows coordinates, stationing and four witnesses for each alignment point. **WITNESS LISTS MUST USE ONLY UPPER CASE LETTERS.**
 - c. LCRC's for legal alignment points with physical monumentation, found or set.
3. In the third directory on the CD, and third pocket of the portfolio if requested, labeled **CONTROL**, the following will appear:
 - a. Documentation of horizontal and vertical datum sources.
 - b. OPUS documentation, long version.
 - c. Least squares adjustments for the horizontal and vertical control.
 - d. It is not necessary to submit electronic raw survey data in hardcopy form, nor in the .PDF file.
 - e. Text files which contain the witness lists for the horizontal alignment points, horizontal control points, benchmarks and government corners. All witness lists must note the datum(s), a combined scale factor for state plane grid-to-ground conversion, and an

- example thereof. WITNESS LISTS MUST USE ONLY UPPERCASE LETTERS.
- f. An MDOT-formatted Microsoft Word file, **SurveyInfoSheet.doc**, showing the data in e. above, using ONLY UPPER CASE LETTERS.
4. In the fourth directory on the CD, and fourth pocket of the portfolio if requested, labeled **PROPERTY**, the following will appear:
 - a. Tax maps and descriptions with owner names, addresses and phone numbers, if Right of Way is to be acquired, or if riparian ownerships are required.
 - b. Maps, plats, and recorded surveys.
 - c. Documents such as plats, Act 132 Certificates and/or tax maps marked with point numbers as property ties, if Right of Way is to be acquired.
 - d. Legible **recorded** copies of all Land Corner Recordation Certificates (LCRC) filed for the government corners (PLSS corners and Property Controlling Corners) used for computations and/or in danger of obliteration by impending construction.
 5. In the fifth directory on the CD, and fifth pocket of the portfolio if requested, labeled **MAPPING**, the following will appear:
 - a. Mapping files in MDOT MicroStation V8i format in the current MDOT workspace, and also converted to .PDF format. ALL POINT AND LINE DESCRIPTIONS MUST USE ONLY UPPER CASE LETTERS. Naming convention: 123456C_PL_3D.dgn and 123456C_PL_2D.
 - b. All Geopak design files produced by survey, including: .xml alignment files, triangle.dgn file, .dtm, .tin, and .gpk files.
 - c. All field survey notes and electronic mapping data used for the project. It is not necessary to submit electronic raw survey data in hardcopy form, nor in the .PDF file.
 - d. All supporting and supplemental information or data, such as drainage and utilities, electronically only if possible.
 6. In the sixth directory on the CD, and sixth pocket of the portfolio if requested, labeled **MISCELLANEOUS**, the following will appear:
 - a. Any photographs taken for clarity of an area
 - b. Any newspaper clippings related to the project
 - c. Any information not covered in this scope that will be of benefit to the designer or another surveyor