

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

MDOT PROJECT MANAGER			JOB NUMBER (JN)	CONTROL SECTION (CS)
DESCRIPTION				
<b>MDOT PROJECT MANAGER:</b> Check all items to be included in RFP  WHITE = REQUIRED GRAY SHADING = OPTIONAL			<b>CONSULTANT:</b> Provide only checked items below in proposal	
Check the appropriate Tier in the box below				
<b>TIER I (\$25,000-\$99,999)</b>	<b>TIER II (\$100,000-\$250,000)</b>	<b>TIER III (&gt;\$250,000)</b>		
			Understanding of Service	
			<i>Innovations</i>	
			<i>Safety Program</i>	
N/A			Organizational Chart	
			Qualifications of Team	
			Past Performance	
Not required As part of Official RFP	Not required As part of Official RFP		Quality Assurance/Quality Control	
			<b>Location:</b> The percentage of work performed in Michigan will be used for all selections unless the project is for on-site 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		Presentation	
N/A	N/A		Technical Proposal (if Presentation is required)	
3 pages (MDOT Forms not counted) <b>(No Resumes)</b>	7 pages (MDOT Forms not counted)	19 pages (MDOT Forms not counted)	<b>Total maximum pages for RFP not including key personnel resumes</b>	

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 Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

## RFP SPECIFIC INFORMATION

BUREAU OF HIGHWAYS

BUREAU OF TRANSPORTATION PLANNING \*\*

OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

NO

YES

DATED

THROUGH

**Prequalified Services** – See page \_\_\_ of 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 Required with Proposal)**

**Qualifications Based Selection** – Use Consultant/Vendor Selection Guidelines

**For all Qualifications Based Selections**, the section team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

**\*\*For RFP's that originate in Bureau of Transportation Planning only**, a priced proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning (see address list, page 2). The priced proposal must be submitted in a sealed envelope, clearly marked "**PRICE PROPOSAL.**" The vendor's name and return address **MUST** be on the front of the envelope. The priced proposal will only be opened for the highest scoring proposal. Unopened priced proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your priced proposal being opened erroneously by the mail room.

**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.

**Qualifications Review / 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 and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

**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

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked "**SEALED BID.**" The vendor's name and return address **MUST** be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

**PROPOSAL SUBMITTAL INFORMATION**

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER	PROPOSAL/BID DUE DATE	TIME DUE
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**PROPOSAL AND BID SHEET MAILING ADDRESSES**

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

MDOT Project Manager

MDOT Other

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

<b>Lansing Regular Mail</b>	<b>OR</b>	<b>Lansing Overnight Mail</b>
Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

**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 four (4) 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 Non-Prequalified Work)

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

# Michigan Department of Transportation

## SCOPE OF SERVICES FOR DESIGN SERVICES

**CONTROL SECTION:** 84900

**JOB NUMBER:** 104025

**PROJECT LOCATION:** STATEWIDE

**DESCRIPTION:** Provide Second Order benchmark elevations for stream gauges and submit the appropriate data to the National Geodetic Survey for acceptance.

**NUMBER OF SELECTED CONSULTANTS:** UP TO 5

**ANTICIPATED START DATE:** September 2011

**ANTICIPATED COMPLETION DATE:** November 2011

**PRIMARY PREQUALIFICATION CLASSIFICATION:**  
Geodetic Control & Leveling

**SECONDARY PREQUALIFICATION CLASSIFICATION:**  
None

**MDOT PROJECT MANAGER:**

Michael C. Barger, PS  
Survey Project Manager / Consultant Coordinator  
425 W. Ottawa Street Lansing, MI 48909  
Phone: 517-241-3431  
Fax: 517-241-4631  
Email questions to [bargerm@michigan.gov](mailto:bargerm@michigan.gov).

**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.).

- MDOT can provide a kickoff meeting before the price proposal is finalized to explain the routes and clarify questions the consultant may have. Because multiple consultants may be chosen, only one meeting will be scheduled to reduce the required time.
- MDOT at its option may have a representative on site to observe the procedures being used.
- The goal of this project is to update elevations at various USGS stream gage benchmarks. **Any portion of the job that is not accepted by NGS shall be re-done by the Consultant at the consultants own expense.**
- MDOT has completed reconnaissance of the monuments to be used for this process within the last 6 months. The leveling line order will be provided prior to commencement of the work.
- MDOT will supply the bench mark descriptions in printed format (the binary \*.dsc file will be available upon request) and a map with the bench marks plotted on it. MDOT will provide Project title, Project number, line numbers, and job code.
- MDOT will analyze and approve all collected data prior to payment.

### **CONSULTANT RESPONSIBILITIES:**

- Read and verify the information provided in the description of each bench mark or station prior to the mark(s) being used in the level run. Locate and remove ground (if applicable) in order to recover benchmarks. All of the marks will have been recently recovered and should be easy to locate.
- Notify and coordinate accessibility to benchmarks with an airport manager or duly appointed representative prior to entering airport facilities if applicable (i.e. any area within the airport property boundaries.)
- Notify and coordinate accessibility to benchmarks with private owners if the benchmarks fall within private property prior to entering the premises.
- The CONSULTANT is *not* required to set benchmarks. The consultant may have to write recovery notes or bench mark information if an error is discovered in the benchmark information provided. The consultant will have to write a description for the gage reference mark.
- The CONSULTANT shall provide calibration certifications for all level rods and instruments to be used as primary or backup prior to commencing field observations. Only after the MDOT and the National Geodetic Survey (NGS) have accepted the calibration certifications as complete will field observations be permitted to begin.
- The CONSULTANT shall ensure that the equipment used for the project shall be well maintained. Major equipment, such as the level instrument and the level rods, must be exchanged if it is damaged, dropped or exposed to an excessive negative physical environment. No major equipment shall be exchanged for other similar equipment in the middle of a run.
- The CONSULTANT'S field personnel assigned to this project shall remain **unchanged during the extent of this project because changes affect efficiency, the quality of the data and the data processing techniques available.**
- The CONSULTANT shall ensure that all personnel are properly equipped and trained for the necessary tasks and safety procedures for this type of work.
- Perform the data acquisition of geodetic leveling to Second Order, Class II standards and specifications as described in the following:
  - "Standards and Specifications for Geodetic Control Networks," September 1984,

- Federal Geodetic Control Committee (FGCC), Reprinted 1993.
  - "Geodetic Leveling," NOAA Manual NOS NGS3, NOAA, National Geodetic Survey, August 1981.
  - "Interim FGCS Specifications and Procedures to Incorporate Electronic Digital/Bar-Code Leveling Systems" FGCS (Ver. 4.1 5/27/2004).
  - "VFPROC--Vertical Control Field Data Processing System," NOAA, C&GS, National Geodetic Survey, Version 3.00, December 1992.
  - "Input Formats and Specifications for the National Geodetic Survey Data Base," Vertical Control Data, Federal Geodetic Data Committee, September 1994, Reprinted November 1998, Volume I & II.
  - "NGS PROPOSAL for An Addendum to Current FGCS Specifications and Procedures to Incorporate Electronic Digital/Bar-Code Leveling Systems" National Geodetic Survey, February, 2001
  - NGS "DRAFT Guidelines for Establishing GPS-Derived Orthometric Heights" Version 1.4, October 2005.
  - Proficiently use the latest version of Windesc Software.
  - Proficiently use the latest version of Translev Software.
- The level lines shall be observed in the order provided by MDOT at the start of the project. No changes to the schedule shall be made without prior approval from the MDOT project manager.
  - Junction marks serve as the connection between level lines. The survey shall begin at the mark located previous to the junction mark on another line and end at a mark located past the junction mark on another line. The survey between the connecting marks at the beginning and end of a level line shall be double-run except when work has been performed prior to or will be progressing past the end mark on the line. It is acceptable to single run this connection if the return run is/was performed within one week. In no cases shall a connection between level lines be single run without prior MDOT approval.

### **PROJECT DELIVERABLES:**

- Submit the geodetic leveling observational data according to the following:
  - The CONSULTANT shall utilize software to collect and process the raw field observations as specified for use by NGS/FGCC/FGDC/NOAA to meet Second Order, Class II specifications or other software approved by the MDOT prior to the commencement of the work.
  - The CONSULTANT shall submit digital data to the MDOT on DVD/CD media or other medium as approved by the MDOT.
  - A final report shall be submitted that includes:
    - Editorial on general project description, location, and final leveling route.
    - Listing all of the bench mark(s) and/or station(s) observed on the line.
    - Listing of all of the personnel utilized on the line. (Include the Observer numbers for each observer.)
    - Listing of all equipment utilized on the line.
    - Listing of all of the software utilized on the line.
    - Checks performed between other lines when applicable.
    - Description of any problems encountered.

- All mark descriptions
- Digital Images of all stations observed as specified by the DEPARTMENT.
- Original (\*.raw or \*.dat) and processed (\*.BOK & \*.BLU) data files using the NGS software Vertical Control Field Data Processing System (VFPROC) software programs to process the raw field observation, or a software system compatible with and equal or exceeding the capabilities of VFPROC. NGS will make the determination if an alternate system is "compatible with and equal or exceeding the capabilities of VFPROC." A copy of the latest VFPROC programs is available from NGS upon request.
- Upon approval by MDOT, the CONSULTANT will submit the leveling data to NGS.

## **WORK RESTRICTIONS**

The Consultant must notify the region Traffic & Safety Engineer for the portions of the project that affect the MDOT trunk lines prior to submitting a priced proposal and prior to beginning work activities within an MDOT trunk line.

No work shall be performed or lane closures allowed during the Labor Day holiday period. The consultant shall also check with the local agencies that have jurisdiction to determine the best timeframe to avoid construction sites, local festivals and other activities that may slow the progress of the crew.

Traffic shall be maintained by the Consultant throughout the project in accordance with the latest edition of the *Standard Specifications for Construction*, [www.mdot.state.mi.us/specbook/](http://www.mdot.state.mi.us/specbook/). 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.

The Consultant shall use MDOT standard "maintaining traffic" typicals for any and all closures, unless modified by the region Traffic & Safety Engineer. Typical MDOT traffic control diagrams are available on line at [www.mdot.state.mi.us/tands/plans.cfm](http://www.mdot.state.mi.us/tands/plans.cfm)

## **PAYMENT SCHEDULE**

Compensation for this Scope of Services shall be on a Milestone basis. Bills will be approved at these milestones:

Submittal to NGS	89%
Approval by NGS	100%

## **CONSULTANT PAYMENT -- Milestone:**

Compensation for this project shall be on a **milestone** basis. Compensation shall be divided into payments for the completion of a portion of the services (deliverables).

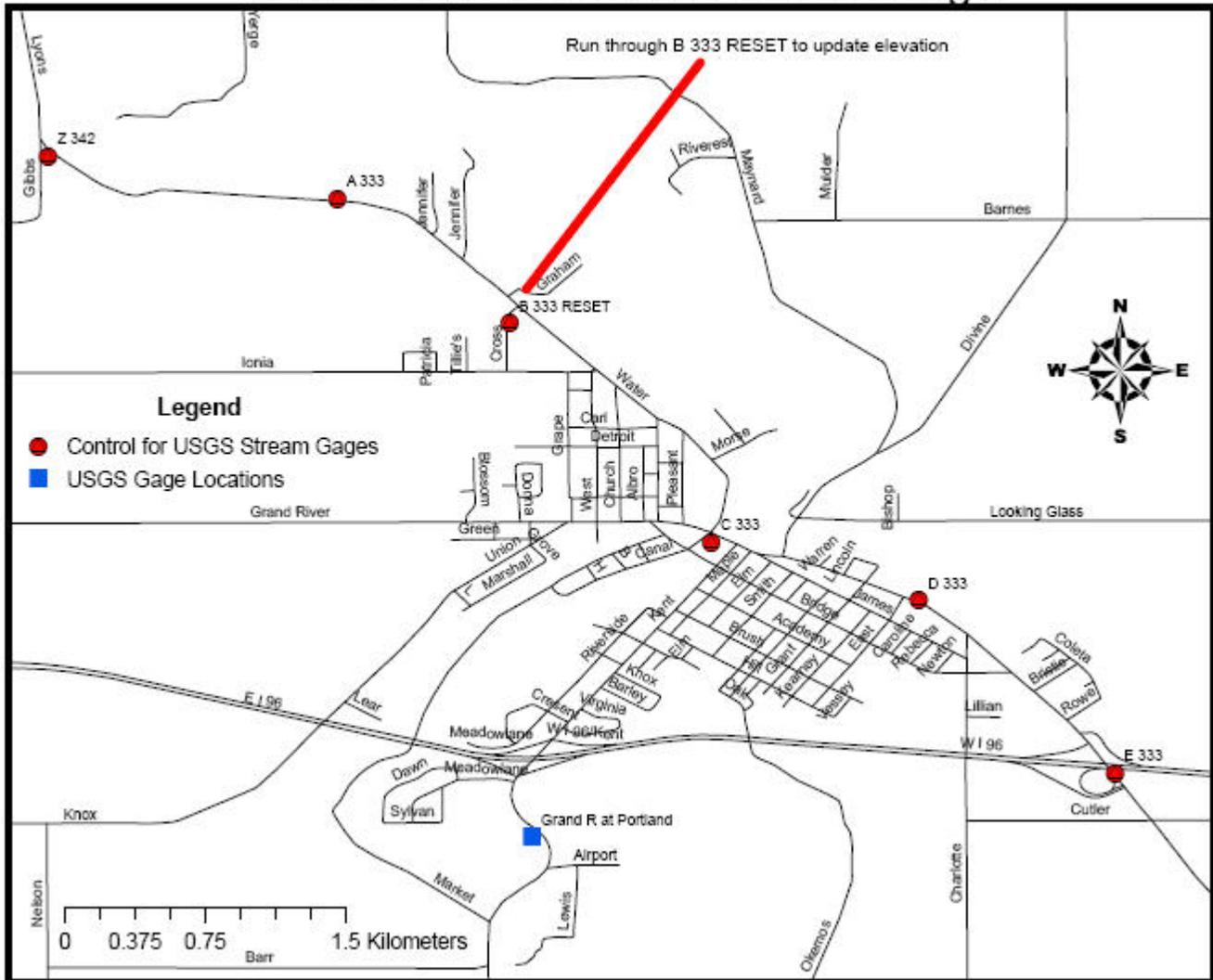
The MDOT Project Manager may authorize payment if a milestone is delayed due to circumstances beyond the Consultant's control.

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.



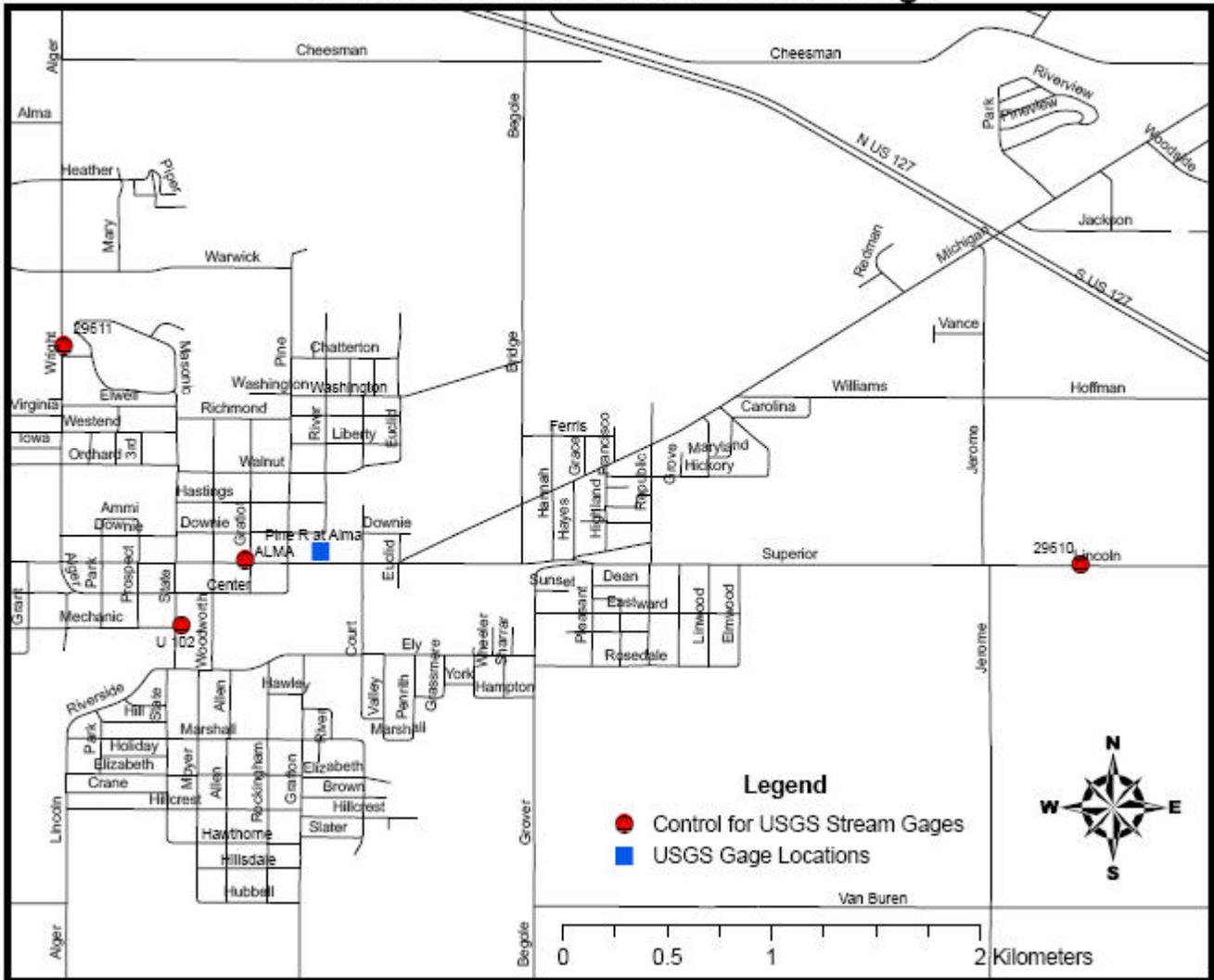
## Grand River at Portland Stream Gage



### Details for USGS Stream Gage 0411400 RM

- Locate A333, B333 RESET, C333, D333, E333 and one of the following reference marks:
  - RM15: chiseled square in downstream streamward corner of left upper level downstream bridge abutment.
  - RM16: chiseled square in top of downstream concrete guardrail 20 feet streamward of left downstream bridge abutment (next to wire-weight gage).
- Single run between A333, B333 RESET, & C333 and D333 & E333
- Double run between C333 & reference mark and D333 and reference mark

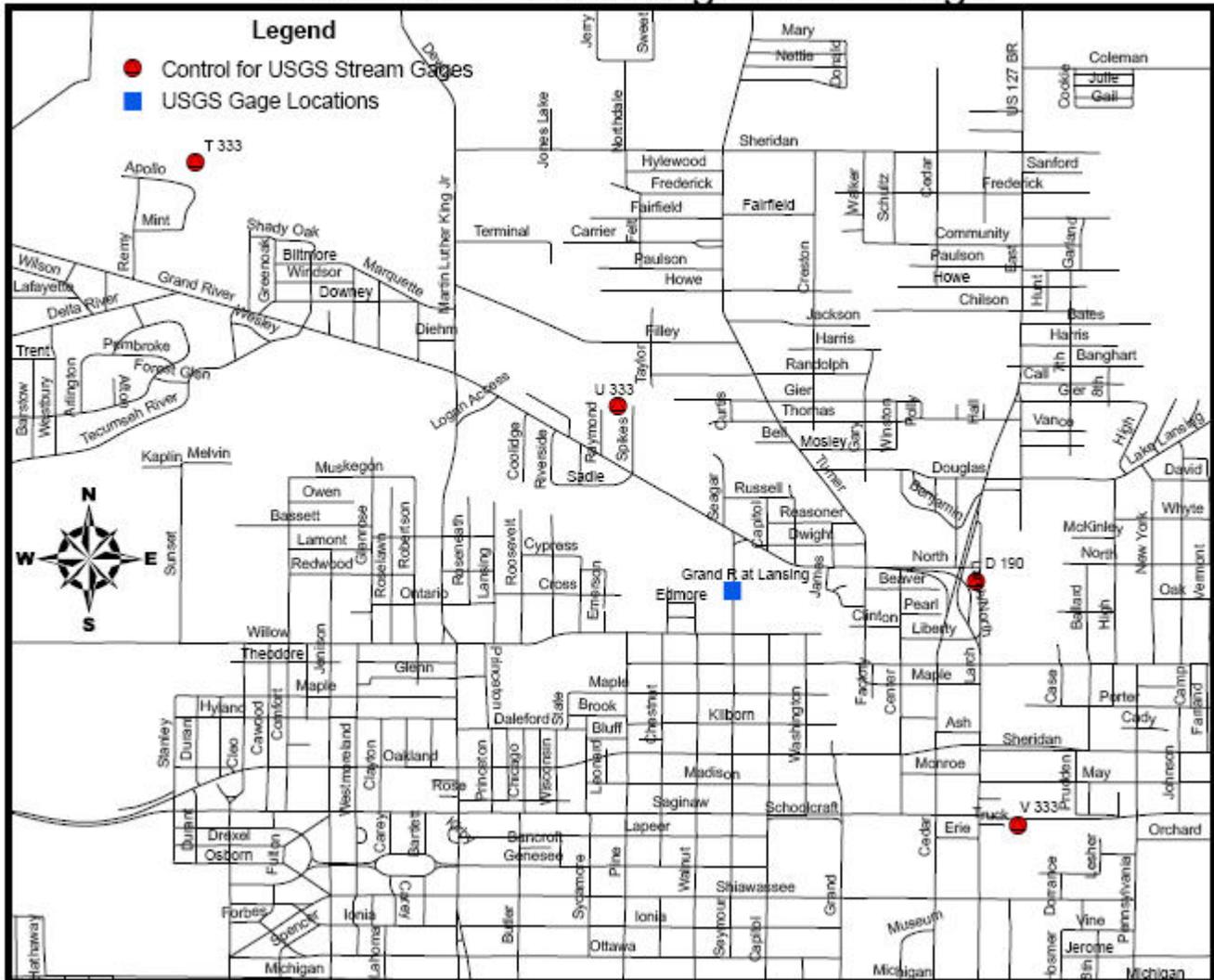
## Pine River at Alma Stream Gage



Details for USGS Stream Gage 04155000 RM:

- Locate 29611, ALMA, U102, 29610 and one of the following reference marks
  - RM14: USGS tablet near the right bank entrance to foot bridge upstream from gage house
- Single run between 29611 & ALMA and U102 & 29610
- Double run between ALMA & reference mark and U102 & reference mark

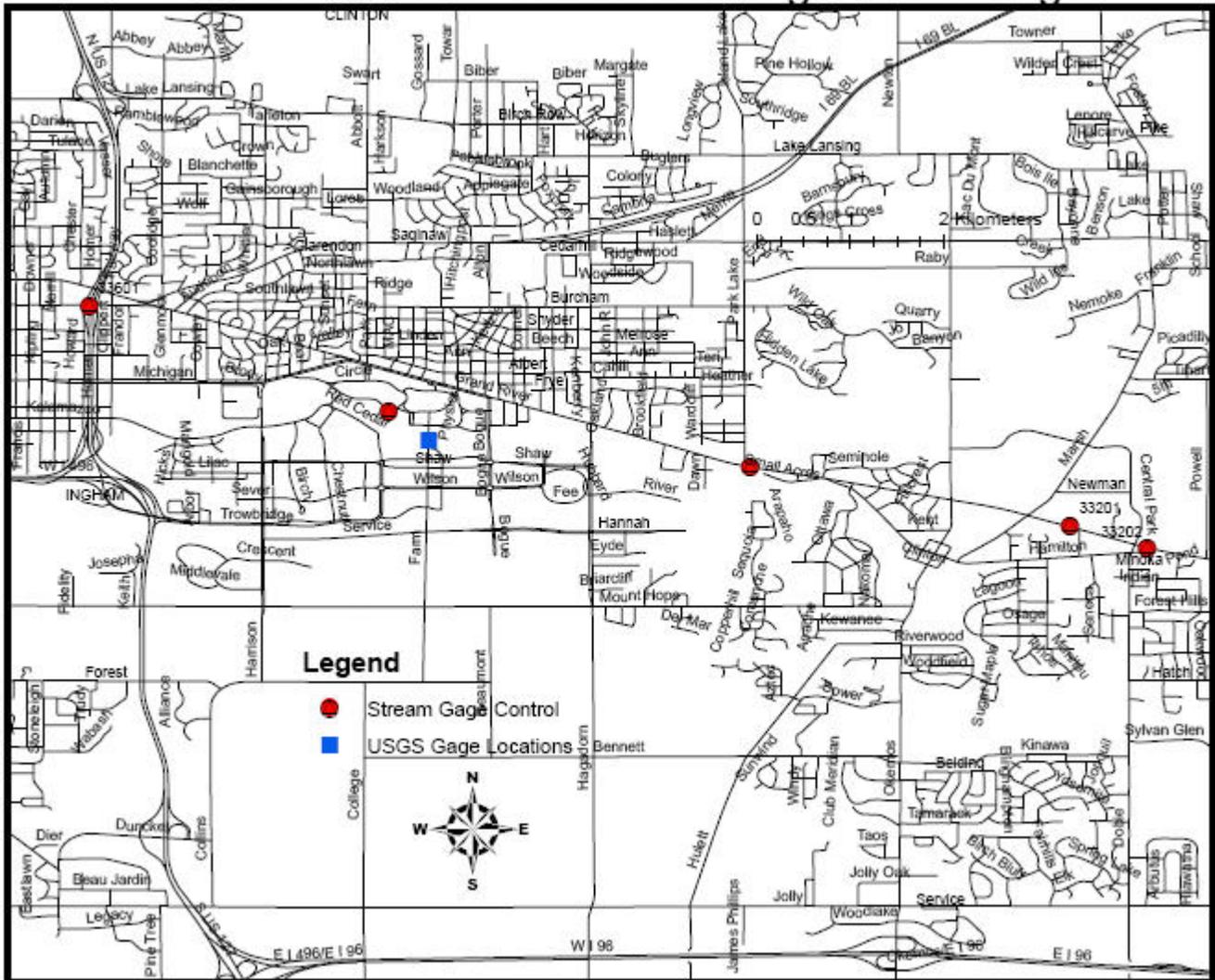
## Grand River at Lansing Stream Gage



Details for USGS Stream Gage 04113000 RM:

- Locate T333, U333, D190, V333 and one of the following reference marks:
  - RM 9: chiseled square in the upstream landward corner of the right upstream bridge abutment.
- Single run between T333 & U333 and D190 & V333
- Double run between U333 & reference mark and D190 & reference mark

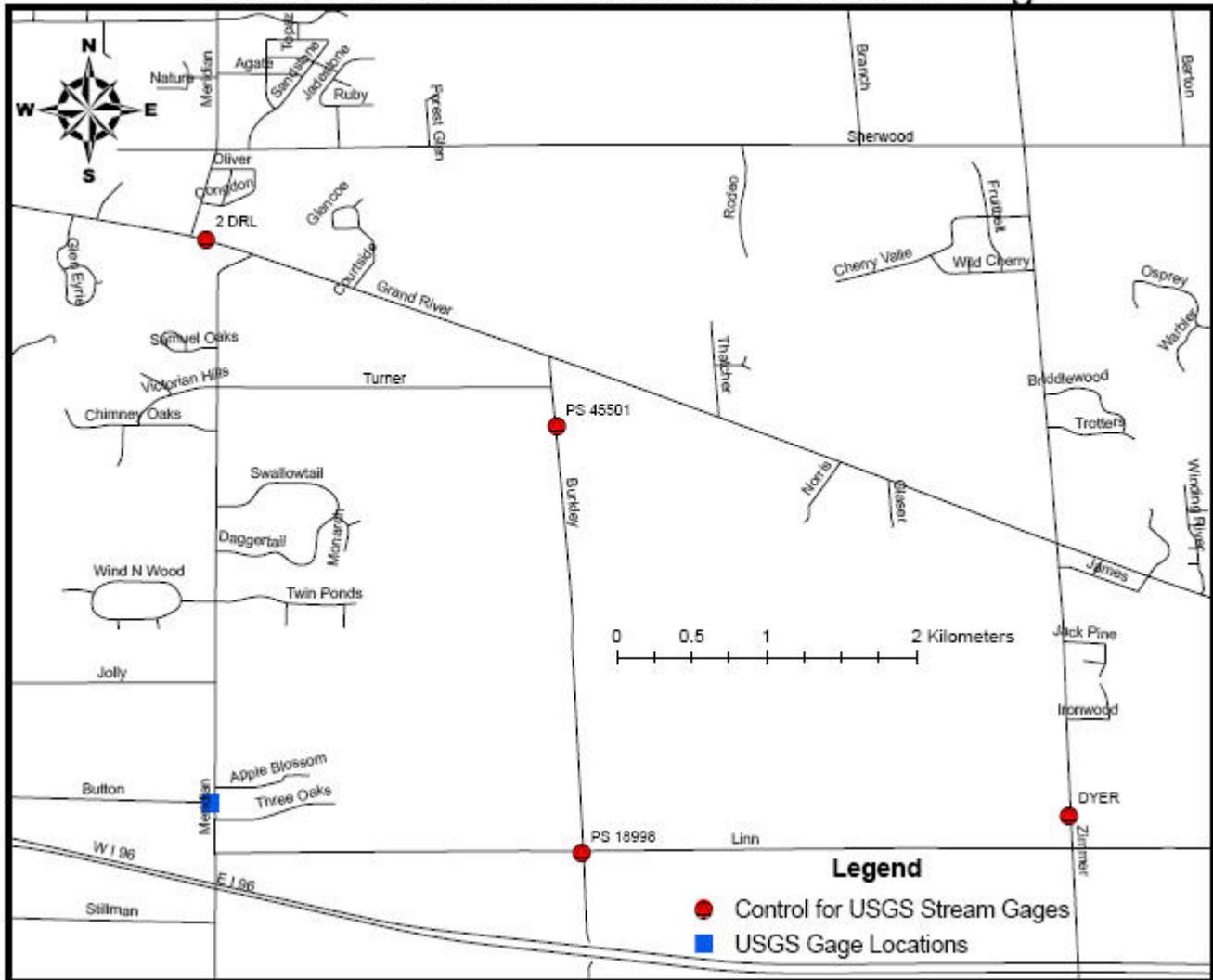
## Red Cedar River at East Lansing Stream Gage



Details for USGS Stream Gage 04112500 RM:

- Locate 33601, MICHIGAN STATE COLLEGE, PS46676, 33201, 33202 and one of the following reference marks
  - USGS brass tablet set in top of downstream end of lower landing at left side of bridge
- Single run between 33601 & MICHIGAN STATE COLLEGE and PS46676, 33201 & 33202
- Double run between MICHIGAN STATE COLLEGE & reference mark and PS46676 (if it checks) or 33201 & reference mark

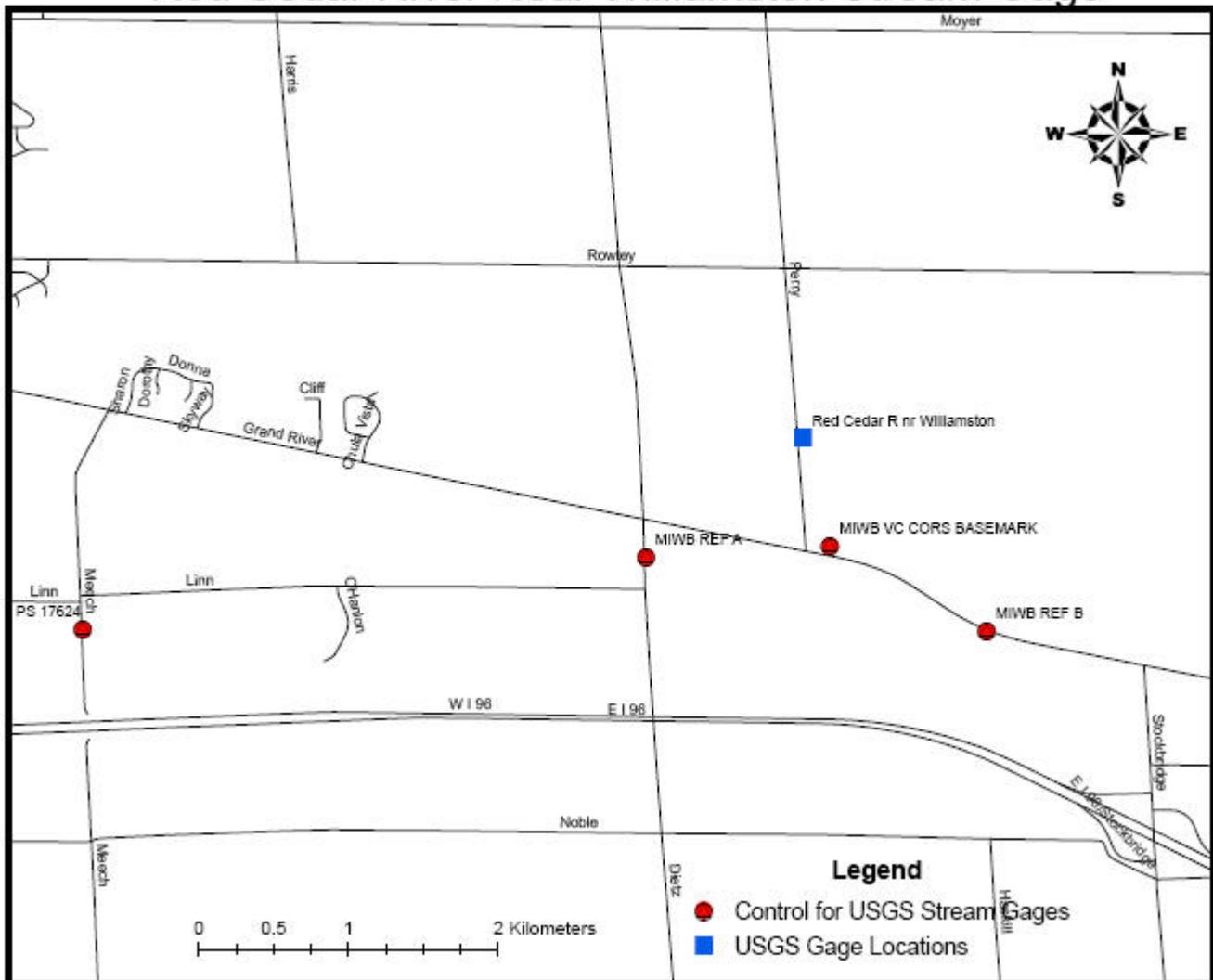
## Sloan Creek Near Williamston Stream Gage



Details for USGS Stream Gage 0411200 RM:

- Locate PS45501, 2DRL, PS18998, DYER and one of the following reference marks
  - RM7: chiseled X in the end of the upstream landward bolt fastening the cableway A-frame to the footing on the left bank
  - RM8: Filed X in the top of the furthest downstream rib on top of the culvert.
  - RM9: chiseled square on top of rock located 13 feet downstream from gage and 18 feet landward from V-notch portion of the weir
  - RM12: chiseled X on top of large rock 13 feet downstream from gage
- Single run between PS45501 & 2DRL and PS18998 & DYER
- Double run between 2DRL & reference mark and PS18998 & reference mark

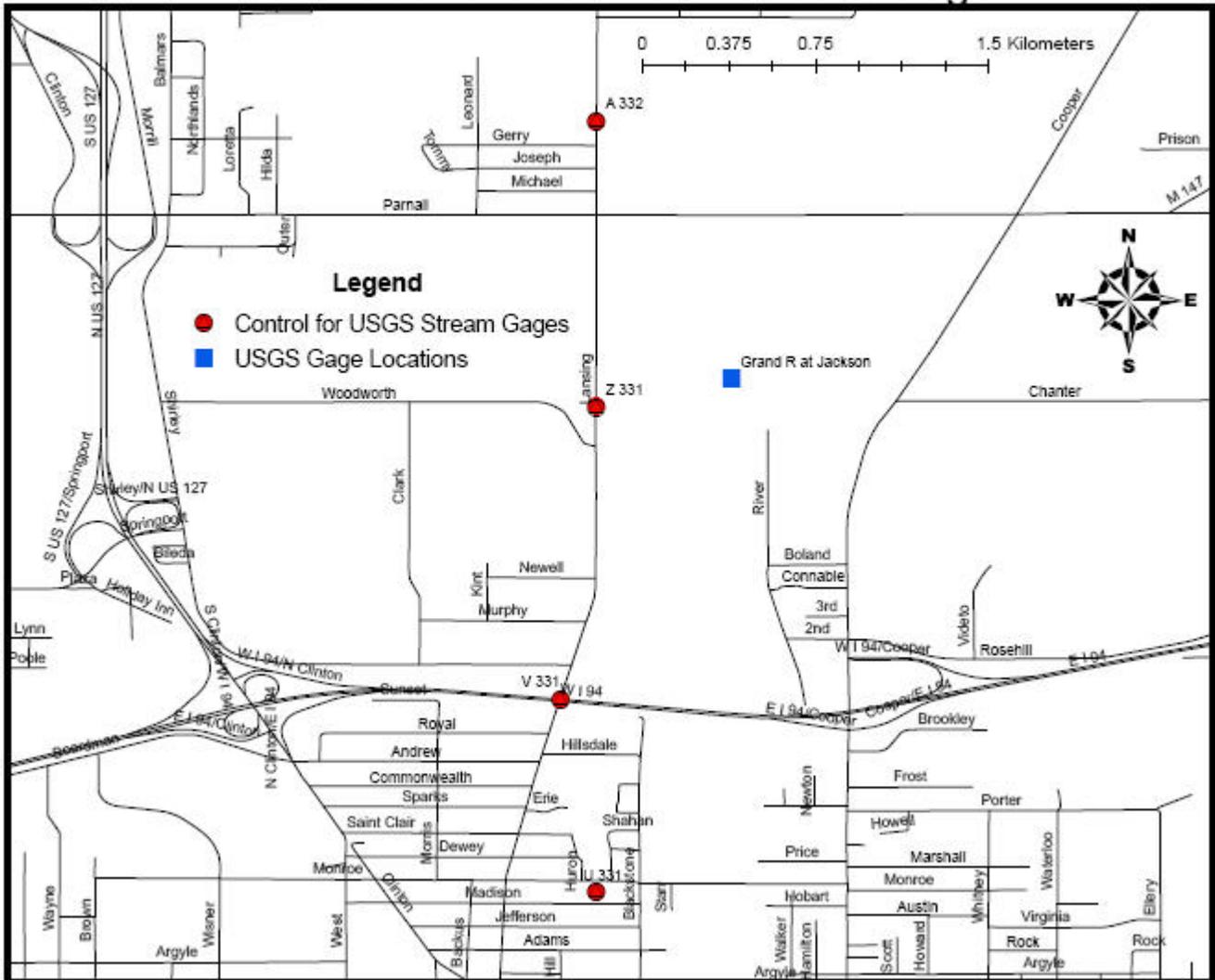
## Red Cedar River Near Williamston Stream Gage



Details for USGS Stream Gage 04111379 RM:

- Locate PS17624, MIWB REF A, MIWB VC CORS BASEMARK, MIWB REF B and one of the following reference marks:
  - RM1: chiseled square on the streamward corner of the right upstream abutment
  - RM2: chiseled square on the streamward corner of the left upstream abutment
- Single run between PS17624 & MIWB REF A and MIWB VC CORS BASEMARK & MIWB REF B
- Double run between MIWB REF A & reference mark and MIWB VC CORS BASEMARK & reference mark

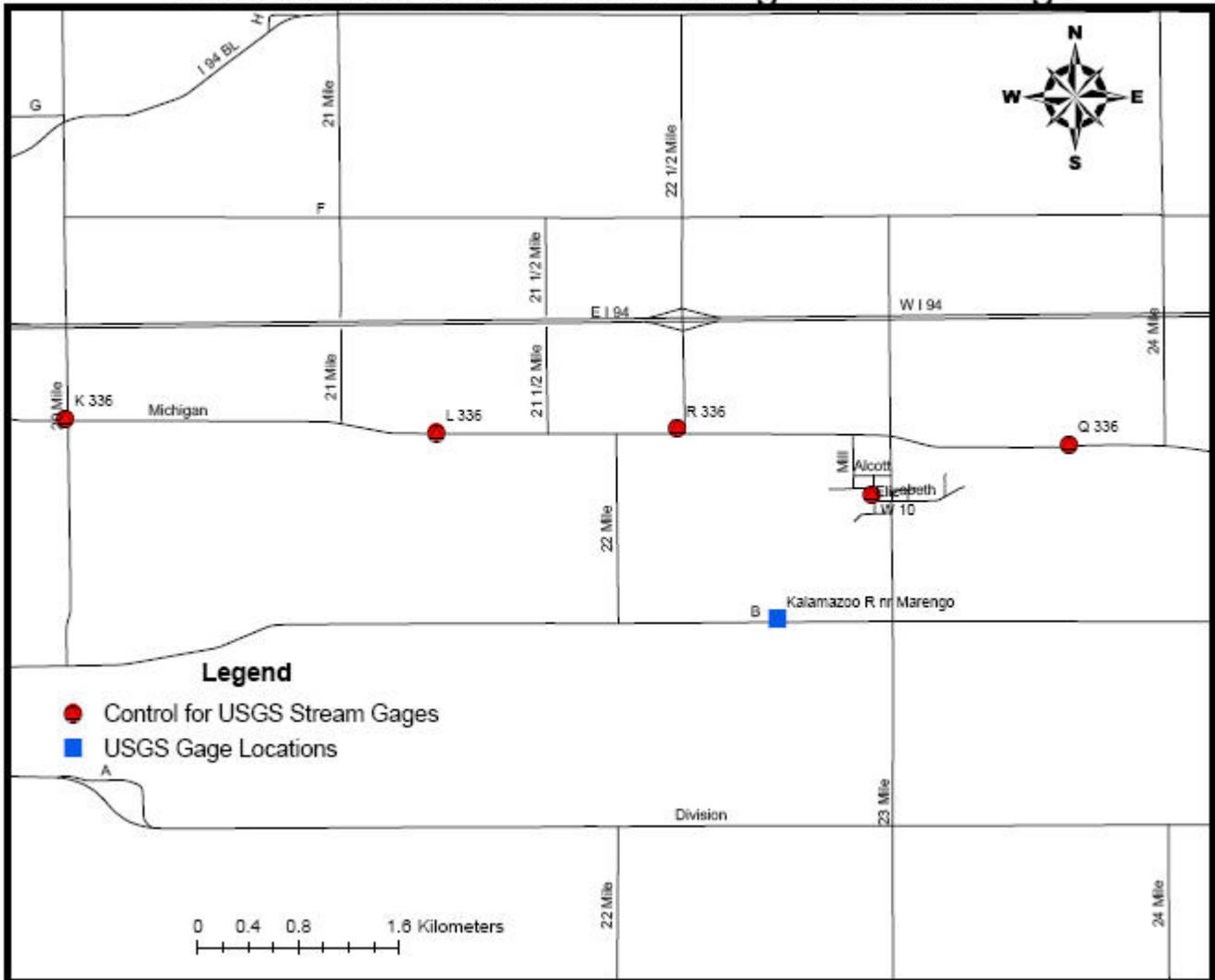
## Grand River at Jackson Stream Gage



Details for USGS Stream Gage 04109000 RM:

- Locate A332, Z331, V331, U331 and one of the following reference marks
  - RM6: chiseled square on top of granite boulder 34 feet landward of gage
  - RM7: chiseled square on top of concrete post about 30 feet downstream from gage house
- Single run between A332 & Z331 and V331 & U331
- Double run between Z331 & reference mark and V331 & reference mark

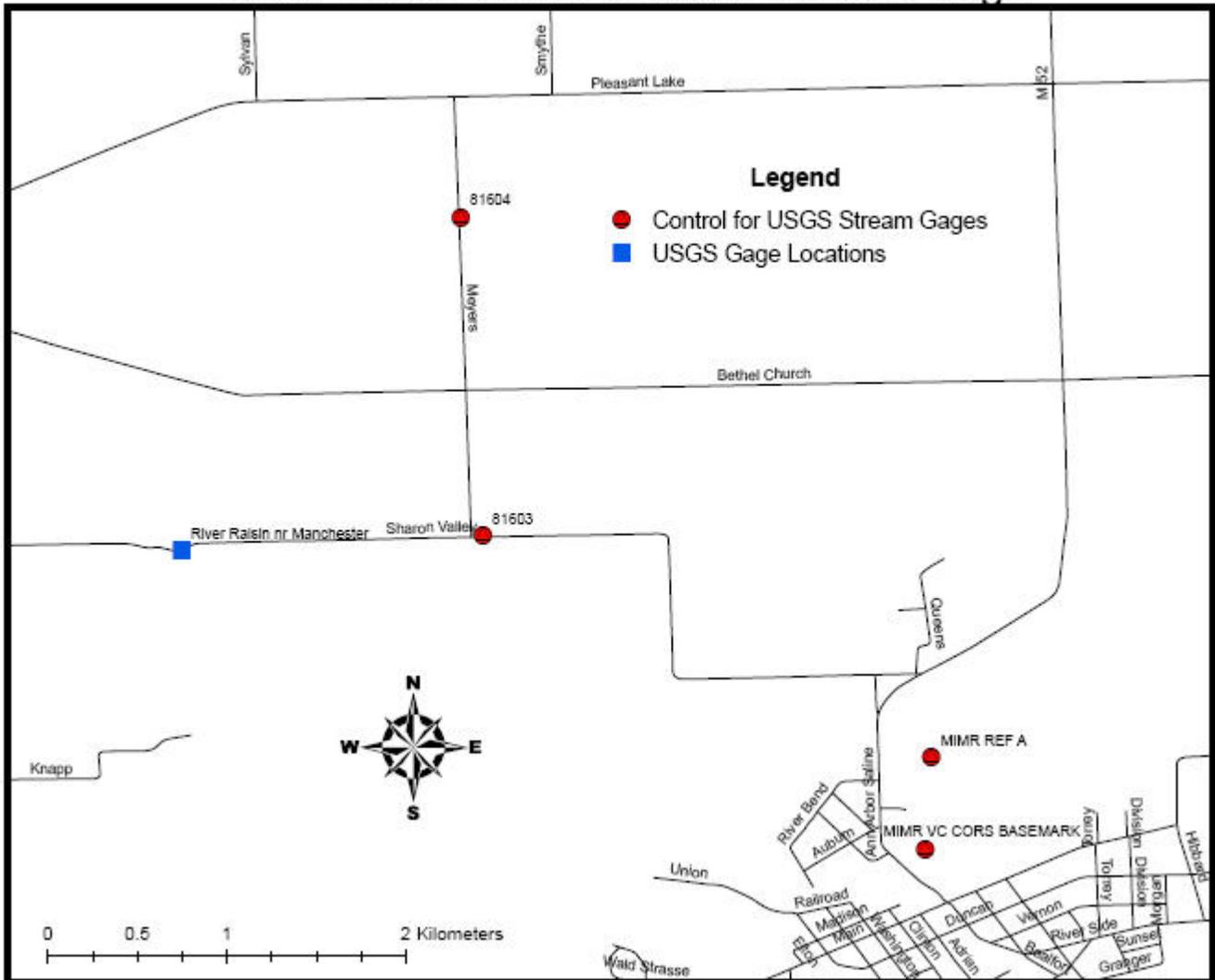
## Kalamazoo River Near Marengo Stream Gage



Details for USGS Stream Gage 04103010 RM:

- Locate K336, L336, R336 (was not found in initial search), W10, Q336 and one of the following reference marks
  - RM1: filed + on top of bolt head at left upstream wingwall
  - RM2: filed + on top of bolt head at right upstream abutment
  - RM3: filed + on top of bolt head at right upstream abutment
- Single run between K336 & L336 (L336 & R336 if found) and W10 & Q336
- Double run between L336 (R336 if found) & reference mark and W10 & reference mark

## River Raisin at Manchester Stream Gage



Details for USGS Stream Gage 04175600 RM:

- Locate 81604, 81603, MIMR REF A, MIMR VC CORS BASEMARK and one of the following reference marks
  - RM2: chiseled square at end of left upstream abutment. Older guardrail was covering mark making it unusable but newer guardrail is not covering it now
  - RM3: chiseled square at end of right upstream abutment
  - RM4: chiseled square at roadward corner of left downstream abutment
- Single run between 81604 & 81603 and MIMR REF A & MIMR VC CORS BASEMARK
- Double run between 81603 & reference mark and MIMR REF A & reference mark