

**Metropolitan Transportation Commission  
Programming and Allocations Committee**

February 12, 2020

Agenda Item 2b

**MTC Resolution No. 4078, Revised**

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**Subject:** Revisions to MTC's Pavement Management Technical Assistance Program (P-TAP) Guidelines and Project Oversight Measures.

**Background:** P-TAP provides jurisdictions with assistance and expertise in implementing and maintaining a Pavement Management System and Non-Pavement Asset Management projects. Since 1999, MTC has programmed almost \$21.3 million in STP funds to 837 P-TAP projects and assisted all Bay Area cities and counties with their pavement needs.

The P-TAP Guidelines propose program goals, eligibility and project selection criteria for this program to benefit Bay Area jurisdictions' pavement management programs. The P-TAP Guidelines will inform the programming of federal Surface Transportation Program (STP) funds for FY2020-21, for P-TAP Round 22, totaling \$1.5 million, and subsequent rounds, subject to funding availability.

Changes to Attachment A:

In addition to updates made to applicable dates and fiscal years, substantive changes to the guidelines in Attachment A have been highlighted and include:

(1) The proposed project selection criteria was revised to remove engineering design for pavement rehabilitation (PS&E) projects in order to allow sufficient funding for pavement management system and non-pavement management projects. Jurisdictions may now use California Senate Bill 1 (SB 1) funds for PS&E projects.

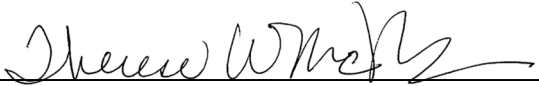
(2) The Project Oversight Measures were revised to include more stringent acceptance criteria for contractors and quality management reporting.

MTC staff proposes to formalize these criteria for P-TAP project selection through Commission adoption.

**Issues:** None

**Recommendation:** Refer MTC Resolution No. 4078, Revised, to the Commission for approval.

**Attachments:** MTC Resolution No. 4078, Revised

  
Therese W. McMillan

Date: November 28, 2012  
W.I.: 1233  
Referred by: PAC  
Revised: 02/24/16-C  
02/26/20-C

ABSTRACT

Resolution No. 4078, Revised

This Resolution adopts the program guidelines for MTC's Pavement Management Technical Assistance Program (P-TAP), funded with Surface Transportation Program (STP) funds.

The following attachments are provided with this Resolution:

Attachment A – Pavement Management Technical Assistance Program Guidelines

Attachment B – Project Oversight Measures and Project Assignment Criteria for P-TAP Consultants

On February 24, 2016, Attachment A was revised to include alternative scoring for jurisdictions that update their pavement management systems (PMS) outside of the P-TAP program and are requesting funding for non-PMS projects.

On February 26, 2020, Attachment A was revised to remove engineering design for pavement rehabilitation (PS&E) projects from the list of eligible project scopes for P-TAP; and to include more stringent acceptance criteria for contractors and quality management reporting in Appendix A.

Further discussion of this action is contained in the MTC Programming and Allocations Committee Summary Sheets dated November 14, 2012, February 10, 2016, and February 12, 2020.

Date: November 28, 2012  
W.I.: 1233  
Referred by: PAC

RE: Pavement Management Technical Assistance Program Guidelines and Project Oversight Measures

METROPOLITAN TRANSPORTATION COMMISSION  
RESOLUTION NO. 4078

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation agency for the San Francisco Bay Area pursuant to Government Code Section 66500 *et seq.*; and

WHEREAS, MTC has developed a process and criteria to be used in the selection of Pavement Management Technical Assistance Program (P-TAP) projects and to monitor and oversee the projects once selected attached hereto and incorporated herein as though set forth at length; and

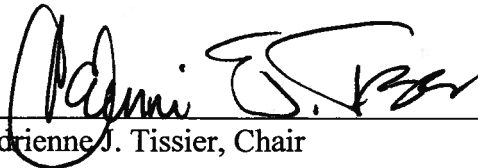
WHEREAS, MTC will use the process and criteria set forth in Attachment A of this Resolution to develop a program of projects for the P-TAP; and

WHEREAS, MTC will use the project oversight measures set forth in Attachment B to monitor project data quality and assign consultant to PTAP projects; now, therefore be it

RESOLVED, that MTC approves the process and criteria to be used in the selection and monitoring and oversight of P-TAP projects, as set forth in Attachments A and B of this Resolution; and be it further

RESOLVED, that the Executive Director shall make available a copy of this Resolution, and such other information as may be required, to such other agencies as may be appropriate.

METROPOLITAN TRANSPORTATION COMMISSION

  
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Adrienne J. Tissier, Chair

The above Resolution was entered into by the Metropolitan Transportation Commission at a regular meeting of the Commission held in Oakland, California, on November 28, 2012.

Date: November 28, 2012  
W.I.: 1233  
Referred by: PAC  
Revised: 02/24/16-C  
02/26/20-C

Attachment A  
MTC Resolution No. 4078  
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## **Pavement Management Technical Assistance Program (P-TAP) Guidelines**

## **Pavement Management Technical Assistance Program Guidelines**

**1. Program Goals:** The Pavement Management Technical Assistance Program (P-TAP) is intended to fund projects that:

- Implement, update and maintain jurisdictions' pavement management databases
- Provide local decision-makers with accurate pavement condition data to inform funding pavement maintenance
- ~~Support jurisdictions in engineering design for pavement preservation projects~~
- Support jurisdictions' management of non-pavement local street and road assets

### **2. Funding**

P-TAP is funded with federal Surface Transportation Program (STP) funds. P-TAP funding is not guaranteed and is dependent upon fund availability.

Single-Year Programming: each P-TAP Round starts and ends in the middle of the federal fiscal year, so each round covers one year but spans two fiscal years (P-TAP Round 22 occurs during FY2020-21 and FY2021-22, and so on).

Funding Agreement: MTC may enter into a funding agreement with a jurisdiction to add local funds to a P-TAP project, conditioned on the following: additional local funds total more than \$25,000; the funding agreement does not delay the project schedule; and the additional scope is an eligible use of P-TAP funds.

### **3. Eligibility**

Project Sponsors: All Bay Area cities, counties and other public agencies within the region in charge of maintaining streets and roads are eligible to apply for P-TAP funds. Priority is given to local jurisdictions whose PMS certifications have expired or are expiring within six months of project award.

Project Sponsors that Do Not Use the P-TAP Program for PMS Projects: an alternative scoring criteria will be applied to applications for project sponsors who elect to perform PMS projects, including PMS inspections, updates to StreetSaver®, and the production of complete certification materials, outside of the P-TAP program. Such sponsors may apply for **PS&E and Non-Pavement Asset Management** projects. To receive scoring consideration in this situation, PMS Certification must be current and all inspections must have been performed by an MTC-certified PMS inspector; PMS certification shall remain current throughout the duration of the P-TAP cycle when a **PS&E or Non-Pavement Asset Management** project is awarded. Project sponsors that meet the criteria referenced herein will be awarded the maximum possible points available within "Project scope", or 25 points, for **PS&E and Non-Pavement Asset Management** projects.

Eligible Projects: P-TAP funding is available for projects in the following categories:

- Pavement Management System Projects: A Pavement Management System (PMS) performs diverse functions geared towards helping Project Sponsors understand the condition of their pavement and whether current and future revenues will be sufficient to fund the pavement maintenance necessary to ensure streets and roads are at an acceptable level of quality. A consultant will work with an awarded Project Sponsor to provide services including, but not limited to the following:
  - Update the Project Sponsor's pavement management system
  - Review and audit the database inventory of the Project Sponsor's road network
  - Enter Maintenance and Rehabilitation (M&R) history, if available
  - Update the decision trees within the system based on the Project Sponsor's preferred treatment strategies
  - Perform pavement inspections and data entry of all distresses found during pavement inspections into StreetSaver®
  - Implement a Quality Control Plan
  - Estimate available revenues for pavements over the next five years
  - Run at least three budget and/or target-driven scenario analyses and show their impacts through the use of GIS maps in the StreetSaver® GIS Toolbox
  - Provide the Project Sponsor with ways to improve their pavement maintenance strategies
  - Deliver an updated PMS database and a Budget Options Report (BOR) to the Project Sponsor for review
  - Establish full linkage of pavement data to GIS map through StreetSaver®
  - Provide assistance with council presentations
  - Provide training on using StreetSaver®
- ~~PS&E Projects: Provide assistance to the Project Sponsor in developing PS&E design work for specific roadway infrastructure maintenance, rehabilitation and/or reconstruction projects. PS&E projects are eligible for P-TAP funding only if the roads are on the federal system (i.e., arterials and collectors); residential PS&E projects are ineligible for P-TAP funds. Tasks in the construction phase including bid support are not eligible uses of P-TAP funds. The Project Sponsor must demonstrate that the construction phase is fully funded before assistance shall be awarded.~~
- Non-Pavement Assets: Provide inventory and condition assessments for signs, storm drains, culverts, curbs and gutters, sidewalks, traffic signals, and street lights.

MTC reserves the right to fund projects other than those listed above that fit within the overall goal of the program.

#### **4. Application and Grant Award Process**

##### Application Process:

**Step 1:** MTC issues a “call for projects” on an annual basis.

**Step 2:** Jurisdictions submit applications to MTC for funding consideration. The application is available online.

**Step 3:** MTC staff evaluates project proposals based on the criteria below and recommends a proposed program of projects that aligns with the funding available.

**Step 4:** Staff recommends a program of projects to the Commission.

**Step 5:** Following the Commission’s approval, grant recipients will receive letters with their award confirmation and participate in a program kick off meeting/webinar.

Program Schedule: P-TAP projects must be completed by the deadline set for each round of the program. In general, projects start and end in the spring, and consultants may begin work three to six months after project award, provided the consultant’s contract with MTC is finalized and MTC has issued a Notice to Proceed. The project start date is dependent upon the timing of contract approval. A sample program schedule follows, and may be modified as necessary for the current round of P-TAP:

October	MTC issues “call for projects”
November	P-TAP applications due to MTC
January/February	Program of Projects recommended to Commission for approval MTC notifies Project Sponsor of their award status
February	Program kick off meeting/webinar
February/March	Contracts between MTC and consulting firms approved
March/April	MTC issues a Notice to Proceed to Consultant
June	Work for PMS projects and Non-Pavement Asset Management projects begin
October	Inspections completed, draft Non-Pavement Asset Management report prepared
December	Consultant provides draft report to Project Sponsor for review
February	Consultant revises draft report and submits final report for review
April	Project Sponsor reviews and approves final report
April 30	Project Sponsor for PMS project provides updated PMP Certification Status letter to MTC

Project Selection: MTC is responsible for ensuring a competitive selection process to determine which projects shall receive funding. Projects will be selected on the basis of the following scoring criteria:

<b>Criteria</b>	<b>Maximum Score</b>
1) <u>Project scope</u> : Project Sponsors applying for PMS projects will receive higher scores than those applying for PS&E and Non-Pavement Asset Management projects. However, Project Sponsors that do not use the P-TAP Program to fund the update of their PMS and can demonstrate that, <ul style="list-style-type: none"> <li>A. they have used an MTC-certified inspection team to perform their PMS update; and</li> <li>B. the jurisdiction’s certification status will remain current throughout the duration of the P-TAP Round, will receive points consistent with a PMS project for a Non-Pavement Asset Management project.</li> </ul>	25
2) <u>Number of centerline miles</u> : Project Sponsors with fewer centerline miles will receive higher scores	20
3) <u>Prior P-TAP recipient</u> : Project Sponsors that have not recently received P-TAP funds will receive higher scores	30
4) <u>Certification status</u> : Project Sponsors without current PMP certification will receive higher scores	25

Other Considerations: MTC may consider the program budget for each year of P-TAP, and award the maximum number of projects to match the available funds. MTC may also consider an equitable distribution of project funds among the region’s counties when selecting projects for a round of P-TAP.

Assignment Process: MTC matches Project Sponsors and consulting firms based on the following assignment criteria: (1) Project Sponsor preference; (2) geographic proximity; and (3) history of working with the consulting firm. Project Sponsors are encouraged to include their preference for a particular P-TAP consulting firm in their application. Geographic proximity may be assessed as either the proximity of the firm to the Project Sponsor, or the proximity of the firm’s assigned project sponsors to one-another for quality control purposes. MTC reserves the right to assign Project Sponsors to work with a new firm after working with the same firm for three consecutive rounds of P-TAP.



Local Contribution: P-TAP requires a local contribution of 20% of the total project cost. The 20% local contribution is due to MTC within two months of project award. Local contributions subsidize the federal match (11.47%), provide a two-year subscription for StreetSaver®, and help to fund a portion of MTC's pavement management activities on behalf of local jurisdictions.

Project Cancellation: If an awarded project is cancelled, either at the request of the Project Sponsor or at MTC's discretion, funds may revert back to be reassigned to another project in that round of P-TAP, or the funds may be carried over to the next round. MTC may or may not reassign the funds from cancelled projects to the consulting firm that was first assigned to the cancelled project.

Changes to the Scope, Schedule or Cost of an Existing Project: To change the scope, schedule or total cost of a project, the Project Sponsor and consultant must obtain approval from MTC. The request for a change to the project shall include the reason for the change, and any schedule modifications must meet the program's final deadline.

Deliverables Checklists: MTC developed checklists that allow project sponsors to sign off on the consulting firm's work at four deliverable milestones. MTC shall withhold payment of the consulting firm's invoices until the deliverables checklists have been signed by a project sponsor. These checklists provide an additional level of project oversight.

Project Sponsor's Responsibilities: Project sponsors shall attend a P-TAP kick off meeting/webinar; work with their assigned consulting firms to develop a scope of work; review work deliverables in a timely manner and return signed deliverables checklists to the consulting firm within a reasonable amount of time (i.e., one week for reviewing checklists and two weeks for reviewing work deliverables); provide feedback on the project and the consultant's work. Project sponsors are required to sign and mail their certification letters to MTC within two weeks of receipt from their P-TAP consultant.

Addressing Complaints: MTC encourages project sponsors to work with their assigned consulting firms to address their concerns. If the consulting firm does not adequately address their concerns, project sponsors shall contact MTC's P-TAP Project Manager at the earliest extent possible, so that corrective actions may be discussed. The Project Manager shall coordinate with the project sponsor and assigned consulting firm to generate corrective actions to resolve the concerns prior to the end of the P-TAP round and prior to acceptance of the final report.

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02/26/20-C

Attachment B  
MTC Resolution No. 4078  
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## **Project Oversight Measures and Project Assignment Criteria for P-TAP Consultants**

### 1. Project Oversight

MTC has developed a Data Quality Management Plan for P-TAP, which includes pre-qualification, quality control, and acceptance measures and describes MTC's Rater Certification Program (see Appendix A).

### 2. Project Assignment Criteria

MTC reserves the right to distribute P-TAP funding and projects among the P-TAP consulting firms according to its discretion, and employs the following criteria when determining project assignments: (1) Project Sponsor preference (25%), (2) firm's past performance in P-TAP (25%), (3) firm's communication with MTC (15%), (4) experience of firm's staff (15%), and, if available, (5) feedback from Project Sponsors (20%).

Date: January 8, 2020  
W.I.: 1233  
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MTC Resolution No. 4078  
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## **Appendix A**

### **Data Quality Management Plan MTC Pavement Management Technical Assistance Program (P-TAP)**

January 2020

## **MTC DATA QUALITY MANAGEMENT PLAN**

To ensure quality data from our Pavement Management Technical Assistance Program (P-TAP) consultants for maintenance needs assessments, MTC has developed procedures and guidelines for managing the quality of pavement data collection activities before, during, and after production.

MTC's Data Quality Management Plan includes three components:

1. Consultant pre-qualification
2. Quality control --before, during and after production
3. Data quality acceptance

The pre-qualification process is part of consultant selection and is an integral part of the data quality plan during P-TAP's Request for Qualification (RFQ). For consultants that miss the pre-qualification test associated with the P-TAP RFQ, MTC administers a Vendor Certification Program that is essentially identical to the pre-qualification process. The Rater Certification Program; however, ensures that raters are capable of providing the desired level of accuracy on pavement condition ratings. Some StreetSaver<sup>®</sup> users at the local agency level, within or outside the Bay Area, may require that consultants' raters be certified or that the firm is either pre-qualified or vendor-certified by MTC to perform data collection.

### **1) PRE-QUALIFICATION**

Pre-qualification of contractors is the first component of the pavement distress data quality plan. The pre-qualification process can ensure that the potential contractors selected to participate in the P-TAP contracts are capable of collecting distress data that is reasonably close to what would be collected by an "expert" rater. However, that does not ensure that the data collected during the network-level distress data collection is reasonably accurate at the desired resolution and precision desired. In this discussion, accuracy indicates that the distress identified is the correct distress, e.g. alligator cracking is identified as alligator cracking instead of block cracking. Resolution indicates that correct severity levels are identified, e.g. low severity longitudinal cracking is identified rather than ignored or high severity longitudinal cracking is recorded as high severity instead of low severity longitudinal cracking. Precision indicates that repeated rating produce reasonably similar recorded distress type, severity, density combinations.

#### **a) Pre-qualification Sites**

The pre-qualification sites should be residential streets in a small geographic area of the city near the office building where MTC is located. Specific segments should be selected so that as many as possible of the standard ~~MTC seven asphalt surfaced distress types~~ **eight (8) flexible pavement distress types, and seven (7) rigid pavement distress types** at the three severity levels are included in at least one of the segments. The segments must be carefully rated using a walking survey conducted by very experienced raters. Extensive photographs and distress maps must be completed on all segments included in the pre-qualification sites. The distress data from these sites will be used to calculate the reference or "ground truth" PCI values of the segments. These segments must be full width of the paved surface by 100 feet long for the manual survey segments and 12 feet wide by 200 feet long for the semi-automated survey segments. The beginning and ending of each segment must be marked on the street, and the corners must also

be marked for the semi-automated segments. In all, two segments in very good condition (PCI greater than 75), two in very poor condition (PCI less than 20), and about fourteen in moderate condition (PCI less than 75 and greater than 20) should be selected to include in the pre-qualification process.

**b) Data Collection by Potential Contractors**

The potential contractors shall rate up to ~~20~~ 24 designated segments (20 flexible and 4 rigid) within ~~a short period of time after the reference inspection under the supervision of MTC or contracted staff~~ an 8-hour period proctored by MTC or contracted staff. The distress data should be provided to MTC staff immediately after the surveys are completed so that they can be entered into the MTC StreetSaver<sup>®</sup> software by MTC or contracted staff to calculate the PCI values.

**c) Acceptance Criteria for Pre-qualification**

The following acceptance criteria should be used:

- i) At least 50 percent of the PCI values for the rated sections must be within +/- 5 PCI points of the reference, or “ground truth,” PCI values.
- ii) No more than 12 percent of the PCI values for the rated sections can be greater than +/- 15 PCI points of the reference, or “ground truth,” PCI values.

**d) Pre-qualified Contractor**

Potential contractors that passed the pre-qualification test will be certified by MTC for eligibility to submit Statement of Qualification (SOQ) for P-TAP contracts. This certification is valid for two (2) years and can be renewed through the Vendor Certification Program.

**2) QUALITY CONTROL PLAN**

Each qualified firm is responsible for providing quality data to the project sponsor and MTC. In the Quality Control Plan (QCP), each firm will be required to describe the qualifications of each rater who will collect pavement distress data, including training and experience. If new raters will be assigned to collecting pavement distress data, the data collection contractor will need to describe the training and supervision that will be exercised during their “internship” period. The qualifications of the new raters must be provided to and approved by MTC before they will be allowed to conduct survey without the direct supervision of experienced raters.

All firms should describe the data verification processes that they will employ to validate accuracy, resolution and precision of the data collected. “Accuracy” indicates that the distress is identified correctly, e.g., alligator cracking is identified as alligator cracking instead of block cracking. “Resolution” indicates that severity levels are identified accurately, e.g., low severity longitudinal cracking is identified and recorded rather than omitted. “Precision” indicates that repeated surveys produce reasonably similar recorded distress type, severity and density combinations. Data verification processes must include:

- i. Periodic **re-survey re-inspection** of “control” sections by survey teams at least once every two weeks.
- ii. **Re-survey re-inspection** of at least 5 percent of the sections previously rated within one month of completing surveys. The same survey team may do the re-surveys.
- iii. **Re-survey re-inspection** of at least 5 percent of the rated sections by a supervisor.
- iv. Checks of collected data against prior survey data and checks of calculated PCI values against PCI values based on prior survey data projected to the survey date for the same section if no treatments have been applied since the prior survey. All of those outside plus or minus 15 PCI point differences should be checked by a supervisor or other person approved by MTC.

The QCP must define what results will be considered acceptable; at a minimum, results must meet the acceptance criteria as defined in **the pre-qualification Section 1(c)**. The firm must also describe which remedial actions will be taken if the results of the data checks are not acceptable. The Plan must identify when, in what format, and how often the results of the quality control plan checks and corrective actions will be submitted to MTC. The Plan must also identify when the **survey inspection** results will be entered into the StreetSaver<sup>®</sup> software, the PCI values calculated, and the results made available to MTC.

~~Even if a firm has pre-qualified, all of the firm’s inspectors must be certified by MTC through the Inspector Certification Program. In order to be certified, inspectors must inspect test sites as directed by MTC, and achieve the required level of accuracy performing inspections as defined by the Acceptance Criteria in the Pre-Qualification.~~

#### **a) Quality Management Reporting**

Quality management reporting encompasses documentation of the QCP procedures performed during all phases of data collection. At a minimum, the quality management reporting should include:

- i. **Quality Management Approach**
- ii. **Deliverables, Protocols, and Quality Standards**
- iii. **Quality Control**
- iv. **Quality Team Roles and Responsibilities**
- v. **Quality Reporting Plan, documenting data verification process and remedial actions**

#### **b) Rater Certification Program**

Under P-TAP, even if a firm has been pre-qualified, all of the firm’s raters must be certified by MTC through the Rater Certification Program (RCP). The RCP consists of passing a pavement distress manual survey exam, and an online written exam. These exams are designed to evaluate the skills and knowledge of raters in pavement condition rating based on the MTC’s 8AC/7PCC-

distress protocol. A rater must rate up to 24 test sites and achieve the required level of accuracy performing ratings as defined by the RCP Acceptance Criteria below:

**RCP Acceptance Criteria:**

- i) At least 50 percent of the PCI values for the rated sections must be within +/- 8 PCI points of the reference, or “ground truth,” PCI values.
- ii) No more than in 12 percent of the PCI values for the rated sections can be greater than +/- 18 PCI points of the reference, or “ground truth,” PCI values.

Raters from non-P-TAP consulting firms and local agencies can be certified. The rater certification exam will be conducted at least once a year or as needed. Upon successful completion of the exams, a certificate will be issued that is valid for two years. Renewal is good for another two more years upon successful completion of an online refresher course. Every four years, all certified raters must take the field and written exams to be re-certified.

### 3) **QUALITY ACCEPTANCE PLAN**

If the data collection contractor does not meet the requirements of the data collection quality control plan or if MTC determines that the collected data does not meet the requirements established in the prequalification requirements, MTC can issue a stop work order and require corrective actions. This may include requiring the data collection contractor to re-qualify all of the survey teams being used to collect data under the P-TAP contract, and re-surveying all sections rated since the last checks that showed the contractor was meeting contract requirements. Other less onerous corrective actions may be imposed by MTC on the data collection contractor. Multiple violations could result in termination of the data collection contract. MTC or its contracted staff will administer the Quality Acceptance Plan.

#### **a) Administer Rater Certification Program**

Contractor pre-qualification does not insure that all raters are capable of rating with the desired level of accuracy. All raters employed by the qualified contractors will need to complete the survey of sites as directed by MTC and achieve the same level of accuracy as defined by the Acceptance Criteria in Pre-qualification. Raters from other consulting firms and local agencies can be certified. The Rater Certification Program consists of a field pavement distress survey test, and an online written test. Tests will be given up at least once a year. Upon successful completion of the tests, a certificate will be issued that is valid for two (2) years, and will be renewed for two (2) additional years upon passing an online refresher course.

#### **b) Conduct Audits of Contractor's Quality Control Plan**

MTC shall verify that the quality control plans adopted by the data collection contractors are being completed in a timely manner. MTC may conduct audits of the quality control plan results to ensure that the data collected by contractors are meeting the requirements established in their plans. The task will be to spot check or conduct a full audit of the Quality Control Plan from selected projects.

#### **c) Verify Data Collected by Contractors**

MTC shall conduct data verification actions including at least some of the following:

1. Checks of collected data against prior survey data and checks of calculated PCI values against PCI values based on prior survey data projected to the survey date for the same section if no treatments have been applied since the prior survey.
2. Survey of sections previously rated by the data collection contractor.