



SOUTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

**Policies and Procedures**  
**for**  
**CONTRACTOR PERFORMANCE**  
**EVALUATION**

**Rev. November 1, 2013**

This document is a working document that may be updated as necessary to meet the needs of the South Carolina Department of Transportation.

**Office of the**  
**DIRECTOR OF CONSTRUCTION**

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## **PREFACE**

Development of the Contract Performance Evaluation System started in June of 2002, as a research project. The Steering Committee for the project contained both SCDOT personnel and Contractors. Research involved investigating all Contractor evaluation employed by other DOTs across the county. A workshop to evaluate ideas gained from the research was held in April of 2003. It included representatives from colleges and universities, in-state and out-of-state Contractors, SCDOT field and headquarters personnel, as well as, the Director of the Kentucky Transportation Cabinet's Office of Contractor Evaluation, which had implemented their own Contractor Evaluation System a year earlier in 2002. By February of 2004, an experimental system, modeled after the Kentucky system, was developed. It was composed of 28 multiple-choice questions to be answered by the RCE on each project, and therefore, it was 100% subjective because the score was dependent on the personal opinions and judgment of 50 RCEs. A pilot program with 140 projects was conducted, and although no logistical problems were encountered, the Steering Committee was still not satisfied with the fact that our system was purely subjective. In September of 2004, the Steering Committee incorporated 5 objective categories of measurement: On-Time, On-Budget, Quality Management Team Scores, Claims Filed and Claims Denied. The revised system was based on 110 points and was 77% objective and 23% subjective. The Committee thought that since the Contractors were being evaluated it was only fair that the RCEs and Department personnel involved with Construction projects, such as the DOC office, Accounting office, Preconstruction, Maintenance, and Traffic Engineer personnel that develop the plans and specifications for the projects, should be evaluated also. The final Contract Performance Evaluation System, which included 3 separate evaluations, the Contractor Performance Evaluation, the RCE Performance Evaluation, and the SCDOT Performance Evaluation, was launched in January of 2005. Data was collected for a year, and in January of 2006, Contractor Performance Scores were issued. There were changes in the system the years. Some were proposed by Contractors and some were proposed by SCDOT personnel, and the ones that improved the system were incorporated. The system is evergreen meaning that it is a living system and changes may be incorporated in the future.

In June of 2008, the South Carolina Code of Regulations, Section 63-307 was revised to expand regulations for prequalification to include the Department's right to use a Contractor evaluation system, and also, provided regulations for how the Department could set a Minimum Required Contractor Performance Score for certain projects and prohibit Contractors with Contractor Performance Scores below this minimum required performance score from bidding on these projects. The method for determining the Contractor Performance Score and for setting the Minimum Required Contractor Performance Score for bidding is part of the Contractor Performance Evaluation in conformance with the state regulations is described herein.

This document deals only with the Contractor Performance Evaluation, Contractor Performance Score, Contractor Performance Threshold, and the Minimum Required Contractor Performance Score.

# CONTRACTOR PERFORMANCE EVALUATION

## CONTRACTOR PERFORMANCE SCORE

### SCORING CATEGORIES

The Contractor Performance Evaluation is based on a 100 point scoring system. The evaluation results in a score, which is called the Contractor Performance Score (CPS). Eighty percent (80%) of the CPS, or eighty (80) points, is derived from five categories of objective measurements, which are Safety, On-Budget, On-Time, QMT, and Claims Denied. The remaining twenty percent (20%) of the CPS, or twenty (20) points, is derived from an Assessment by the RCE of the Contractor's performance and use of resources during the project. The scoring categories and their Maximum Point Value are shown in the table below.

Scoring Category	Maximum Point Value
Safety	15
On-Budget	15
On-Time	20
QMT	20
Claims Denied	10
Assessment by RCE	20
TOTAL	100

### IMPACT WINDOWS

An impact window is the period of time during which performance data is used in calculating a Contractor's CPS. When an impact window expires, any data associated with that impact window also expires. The starting date and length of the impact window for each scoring category is shown in the following table:

Scoring Category	Starting Date	Length of Impact Window
Safety	Effective Date of EMR <sup>1</sup>	12 Months
On-Budget	SWKC <sup>2</sup> Date	36 months
On-Time	SWKC <sup>2</sup> Date	36 months
QMT	Date of Field Audit	36 months
Claims Denied	Date of DRB Decision Date of ALC Decision (if nec.)	36 months <sup>3</sup> 36 months <sup>3</sup>
Assessment by RCE	SWKC <sup>2</sup> Date	36 months

*Footnotes are on the following page*

1. EMR = Experience Modification Ratio
2. SWKC = Substantial Work Complete
3. There are two possible impact windows for Claims Denied data. One starting on the date of the Dispute Review Board decision, and if the claim is taken to litigation, a second starting on the date of the Administrative Law Court decision.

## **CALCULATION OF CATEGORY POINTS**

In order to compare Raw Scores, indices were established for each scoring category. The Index Values can be thought of as corresponding to a grade for the Raw Score. When there is data from multiple projects, the Raw Scores are indexed individually, and then an Average Index Value is determined. Category Points are then determined by multiplying the Average Index Value by the Maximum Points for that category.

### ***PROJECT-GENERATED DATA***

Project-generated data used in calculating a CPS is data available when a project has achieved any of the following:

- ▶ Substantial Work Complete (SWKC) Date,
- ▶ QMT Field Audit Score,
- ▶ Resolution of a Claim.

### ***DEFAULT INDEX VALUES AND CATEGORY POINTS***

A Default Index Value is assigned for those categories with no project-generated scoring data. The Claims Denied category has a Default Index Value set at 100%, but for all other categories, the Default Index Value is set equal to the median of all the Raw Scores in the category. The median is the score that has an equal number of scores above it and below it. These Index Default Values are set at the median, so as not to substantially hurt nor help a Contractor's CPS. Category Default Points are determined by multiplying the Default Index Value by the Maximum Points for the category.

The Default Index Value and Default Points of each category are shown in the following table:

<b>Scoring Category</b>	<b>Default Index Value</b>	<b>Default Points</b>
Safety	75%	11.3
On-Budget	75%	11.3
On-Time	75%	15.0
QMT Field Audit	75%	15.0
Claims Denied	100%	10.0
Assessment by RCE	80%	16.0

Default Index Values are assigned to the category as a whole, not for each project.

Once data is available in a category, the Default Index Value and Default Points are no longer used. The Raw Score and Category Index Value are calculated using project-generated data to determine the Category Points.

## **SAFETY CATEGORY**

The Safety category is an objective measure of the Contractor's current Experience Modification Ratio (EMR). The EMR is based on Workers Compensation claims filed by the Contractor, and is issued annually. The EMR compares losses of similarly classified employers, which in this case are Contractors. A Contractor whose losses are equal to industry standard would have an EMR equal to 1.00. Most states use the National Council of Compensation Insurance, Inc. (NCCI) as the EMR source, but a few states have their own Rating Bureaus that issue experience modification rates. The EMR is not related to a particular size or type of project.

Unless verification of an updated EMR is provided by the Contractor, the EMR used in the Raw Score is the one provided in the *SCDOT Prime Contractor Prequalification Questionnaire* either submitted for initial prequalification or for renewal of prequalification. Verification requires submission of documentation from the issuing source. The Contractor is solely responsible for notifying the Department of changes in the EMR. The updated EMR data will be used in the recalculation of the CPS, which will be effective at the end of the next calendar quarter.

The Safety Raw Score is equal to the EMR:

$$\text{Safety Raw Score} = \text{EMR}$$

The Safety Index Value is calculated using one of the following formulae depending on the Raw Score:

$$\begin{aligned} \text{For } 0.50 \leq \text{Raw Score} \leq 1.00, \text{ Index} &= (2.50 - \text{Raw Score}) \times 50.0\% \\ \text{For } 1.00 < \text{Raw Score} \leq 1.50, \text{ Index} &= (1.50 - \text{Raw Score}) \times 150.0\% \end{aligned}$$

The table on the next page is the Safety Index Table in increments of 0.05 values of Raw Scores and the corresponding Index Values for the Safety category.

SAFETY INDEX TABLE	
RAW SCORE	INDEX VALUE
0.50	100%
0.55	98%
0.60	95%
0.65	93%
0.70	90%
0.75	88%
0.80	85%
0.85	83%
0.90	80%
0.95	78%
1.00	75%
1.05	68%
1.10	60%
1.15	53%
1.20	45%
1.25	38%
1.30	30%
1.35	23%
1.40	15%
1.45	8%
1.50	0%

Default Index Value

←

The Safety Index is capped at the maximum and minimum values shown in the table above.

The following is an example of the calculation of Safety Category Points:

Given:

Contractor's EMR = 0.92 (from their last prequalification questionnaire)

Calculate Safety Category Points:

*Raw Score* = EMR = 0.92

*Index Value* = (2.50 – Raw Score) X 50.0%  
= (2.50 – 0.92) X 50.0%  
= (1.58) X 50.0%  
= 79.0%

*Category Points* = Maximum Points X Index Value  
= 15.0 points X 79.0%  
= 15.0 points X 0.790  
= 11.9 points

## ON-BUDGET CATEGORY

The On-Budget category is an objective measure of the Paid Amount compared to the Bid Amount. The On-Budget category is the only category that has an Index that is based on the monetary size of the project. There are 3 project sizes, which are based on the original bid amount of the project. The 3 project sizes are as follows:

1. Less than \$1,000,000
2. Between \$1,000,000 and \$10,000,000
3. Greater than \$10,000,000.

It is important to note that the On-Budget data is only measured after the SWKC date, and it may still change up until the Final Estimate is paid and the project is closed out. The On-Budget Raw Score is determined by the following formula:

$$\text{On-Budget Raw Score} = \frac{\text{Paid Amount} - \text{Extensions} + \text{LDs}}{\text{Bid Amount}}$$

The Paid Amount has two adjustments made to it, Extensions and Liquidated Damages (LDs). An Extension is work that is beyond the original scope or limits of the project such as adding a road to a resurfacing project or extending the paving of a road beyond the original limits of the project. Liquidated Damages is a monetary penalty withheld from the amount paid to a Contractor because of the failure to meet the contract completion requirements. The LDs are added back to the Paid Amount, so that the Contractor does not benefit in the On-Budget category for completing the project behind schedule.

Although almost all contracts have Change Orders (COs), there are no adjustments for specific individual COs in the On-Budget Raw Score for such things as overrun or underrun of plan quantities, incorrect plan details or plan errors (unless gross errors are found), required rework by the Contractor, or asphalt or fuel adjustments. Contractors generally take the position that COs are beyond their control, and although it is rare for a project not to have any COs, over many projects the plus and minus COs balance out. Even for the Contractor that has only a few or even only one project, there are ways to avoid or minimize the effect of COs. These measures include, but are not limited to, Value Engineering, implementing strict loss control procedures in the use of materials, assigning their best trained personnel to the project, avoiding re-work, careful planning of the work, adhering to a well developed project schedule, and avoiding liquidated damages.

However, occasionally there may be some projects with COs beyond the normal number or dollar amount. For this reason, the On-Budget Indices include a 2% increase beyond the historic amount paid on projects that included COs.

The On-Budget Index Value for each size category is calculated by one of the following the formulae corresponding to the project size:

**For Projects Less than \$1M;      I = (1.75 – Raw Score) X 100.0%**

**For Projects \$1M to \$10M;      I = (1.77 – Raw Score) X 100.0%**

**For Projects Greater than \$10M; I = (1.82 – Raw Score) X 100.0%**

Below is an abbreviated table showing some Raw Scores and their corresponding Index Values.

ON-BUDGET INDEX TABLE					
GREATER THAN \$10M		\$1M TO \$10M		LESS THAN \$1M	
RAW SCORE	INDEX VALUE	RAW SCORE	INDEX VALUE	RAW SCORE	INDEX VALUE
0.82	100%	0.77	100%	0.75	100%
0.87	95%	0.82	95%	0.80	95%
0.92	90%	0.87	90%	0.85	90%
0.97	85%	0.92	85%	0.90	85%
1.02	80%	0.97	80%	0.95	80%
1.07	75%	1.02	75%	1.00	75%
1.12	70%	1.07	70%	1.05	70%
1.17	65%	1.12	65%	1.10	65%
1.22	60%	1.17	60%	1.15	60%
1.27	55%	1.22	55%	1.20	55%
1.32	50%	1.27	50%	1.25	50%
1.37	45%	1.32	45%	1.30	45%
1.42	40%	1.37	40%	1.35	40%
1.47	35%	1.42	35%	1.40	35%
1.52	30%	1.47	30%	1.45	30%
1.57	25%	1.52	25%	1.50	25%
1.62	20%	1.57	20%	1.55	20%
1.67	15%	1.62	15%	1.60	15%
1.72	10%	1.67	10%	1.65	10%
1.77	5%	1.72	5%	1.70	5%
1.82	0%	1.77	0%	1.75	0%

Default Index Value

The On-Budget Index is capped at the maximum and minimum values shown in the table above.

The following is an example of the calculation of On-Budget Category Points:

Given:

\$ Bid Amount = \$1,500,000

\$ Paid Amount = \$1,600,000

\$ Extension = \$225,000

\$ LDs = 25 days late X \$800/day = \$20,000

Calculate Category Points:

$$\text{Raw Score} = \frac{\text{Paid Amount} - \text{Extensions} + \text{LDs}}{\text{Bid Amount}}$$

$$= \frac{\$1,600,000 - \$225,000 + \$20,000}{\$1,500,000}$$

$$= 0.930$$

*Index Value*

For project size = \$1,500,000, use Index formula for \$1M to \$10M

$$= (1.77 - 0.930) \times 100.0\%$$

$$= (0.84) \times 100.0\%$$

$$= 84.0\%$$

*Category Points* = Maximum Points X Index Value

$$= 15.0 \times 84.0\%$$

$$= 15 \times 0.840$$

$$= \underline{12.6 \text{ points}}$$

## ON-TIME CATEGORY

The On-Time score is an objective measure of how well the Contractor met the project SWKC date. The On-Time Raw Score is a ratio of time it took to reach SWKC to the required time and is calculated by the following formula:

$$\text{On-Time Raw Score} = \frac{\text{SWKC Date} - \text{NTP Date}}{\text{Completion Date} - \text{NTP Date}}$$

Where:

**SWKC Date** = Substantial Work Complete Date

**NTP Date** = Notice To Proceed Date

**Completion Date** = Original Completion Date or Adjusted Completion Date, whichever is greater

The On-Time Index is calculated by the following formula:

$$\text{On-Time Index Value} = (2.50 - \text{Raw Score}) \times 50.0\%$$

The table below is an abbreviated On-Time Index table showing some Raw Scores and the corresponding Index Values.

ON-TIME INDEX TABLE	
RAW SCORE	INDEX VALUE
0.50	100%
0.60	95%
0.70	90%
0.80	85%
0.90	80%
1.00	75%
1.10	70%
1.20	65%
1.30	60%
1.40	55%
1.50	50%
1.60	45%
1.70	40%
1.80	35%
1.90	30%
2.00	25%
2.10	20%
2.20	15%
2.30	10%
2.40	5%
2.50	0%

Default Index Value

The On-Time Index is capped at the maximum and minimum values shown in the table above.

The following is an example of the calculation of On-Time Category Points:

Given:

NTP Date = 03/01/2006

Original Completion Date = 10/31/2007

Original Completion Date was adjusted 38 days by COs for utility delays.

Adjusted Completion Date = 10/31/2007 + 38days = 12/08/2007

SWKC Date = 11/08/2007 (30 days early)

Calculate the Category Points:

$$\begin{aligned}
 \text{Raw Score} &= \frac{\text{SWKC Date} - \text{NTP Date}}{\text{Completion Date} - \text{NTP Date}} \\
 &= \frac{11/08/2007 - 03/01/2006}{12/08/2007 - 03/01/2006} = \frac{617}{647} = 0.953
 \end{aligned}$$

$$\begin{aligned}
 \text{Index Value} &= (2.50 - \text{Raw Score}) \times 50.0\% \\
 &= (2.50 - 0.953) \times 50.0\% \\
 &= (1.547) \times 50.0\% \\
 &= 77.4\% \\
 \text{Category Points} &= \text{Max. Points} \times \text{Index Value} \\
 &= 20.0 \times 77.4\% \\
 &= 20.0 \times 0.774 \\
 &= \underline{15.5 \text{ points}}
 \end{aligned}$$

## QUALITY MANAGEMENT TEAM CATEGORY

The Quality Management Team (QMT) category is an objective measure of the adherence to proper procedures during the field work on the project. The QMT visits the site and conducts an in-depth audit of the RCE's office, the Contractor's work, and the field conditions on the project. The RCE, Contractor, and Project each receive a QMT Field Audit score. The Contractor's score is the only one used in the CPS.

The Raw Score for QMT category is equal to the QMT Field Audit score:

<b>QMT Raw Score = QMT Field Audit Score</b>
----------------------------------------------

When a QMT field audit results in a substandard score, a follow-up visit is scheduled to the project, usually within a few weeks of the original audit. The QMT score from follow-up visit is not used in the QMT category because in the follow-up audit only deficient areas are re-audited, and using them would diminish the value of the original field audit score.

If a project receives two or more QMT field scores, an Index Value for each QMT field score on the project is determined, and an average Index Value for the project is found. The average Index Value for the project is then averaged with the Index Values from any other projects to determine the Averaged Index Value and is used to determine the Category Points (i.e., Raw Scores are not averaged, only Index Values are averaged).

The QMT Index Value is calculated using the following formulae depending on the QMT Raw Score:

<b>For QMT Raw Scores from 2.60 to 3.00:</b>
----------------------------------------------

<b>QMT Index Value = (Raw Score - 2.20) X 125.0%</b>
------------------------------------------------------

<b>For QMT Raw Score from 2.50 to 2.59:</b>
---------------------------------------------

<b>QMT Index Value = (Raw Score - 2.50) X 500.0%</b>
------------------------------------------------------

Below is an abbreviated QMT Index Table showing some Raw Scores and their corresponding Index Values.

QMT INDEX TABLE	
RAW SCORE	INDEX VALUE
3.00	100%
2.95	94%
2.90	88%
2.85	81%
2.80	75%
2.75	69%
2.70	63%
2.65	56%
2.60	50%
2.55	25%
2.50	0%

Default Index Value

The QMT Index is capped at the maximum and minimum vales show table above.

The following is an example that illustrates how QMT Category Points are calculated when there is more than field audit.

Given:

- 1<sup>st</sup> QMT field score on 07/14/2006 = 2.58
- Follow-up QMT field score on 8/01/2006 = 2.87
- 2<sup>nd</sup> QMT field score on 03/15/2007 = 2.92

Calculate Category Points:

$$\begin{aligned} \text{Raw Score OMT1} &= 1^{\text{st}} \text{ QMT field score on 07/14/2006} \\ &= 2.58 \end{aligned}$$

$$\begin{aligned} \text{Index Value QMT1} &= (\text{Raw Score} - 2.50) \times 500.0\% \\ &= (2.58 - 2.50) \times 500.0\% \\ &= (0.08) \times 500.0\% \\ &= 40.0\% \end{aligned}$$

$$\begin{aligned} \text{Raw Score QMT2} &= \text{QMT2 field score on 05/15/2007} \\ &= 2.92 \end{aligned}$$

$$\begin{aligned} \text{Index Value QMT2} &= (\text{Raw Score} - 2.20) \times 125.0\% \\ &= (2.92 - 2.20) \times 125.0\% \end{aligned}$$

$$\begin{aligned} &= (0.72) \times 125.0\% \\ &= 90.0\% \end{aligned}$$

$$\begin{aligned} \text{Average Index Value} &= (\text{Index Value 1} + \text{Index Value 2}) \div 2 \\ &= (40.0\% + 90.0\%) \div 2 \\ &= 130.0\% \div 2 = 65.0\% \end{aligned}$$

$$\begin{aligned} \text{Category Points} &= \text{Maximum Points} \times \text{Average Index Value} \\ &= 20.0 \times 65.0\% \\ &= 20.0 \times 0.650 \\ &= \underline{\underline{13.0 \text{ points}}} \end{aligned}$$

## **CLAIMS DENIED CATEGORY**

The purpose of this category is to encourage Contractors to resolve a potential claim before a claim is certified and submitted to a Dispute Review Board (DRB). The Contractor should thoroughly review its claim and make certain the claim is not inflated by questionable damages. Filing a *SCDOT Form 100.04, Contractor Notice of Claim*, merely reserves the Contractor's right to submit a claim at a later date, and it has no impact on a Contractor's CPS. A request for additional compensation becomes a claim only after it has been certified as specified in Section 105.16.8 of the *2007 Standard Specifications for Highway Construction*.

A claim can only negatively impact the Contractor's CPS if a portion of the claim amount is denied and not awarded to the Contractor as a result of the decision by the Dispute Review Board. Regardless of whether or not the Contractor accepts the decision, a 36-month impact window opens on the date the decision is rendered, and the portion of the claim denied as a result of the decision is used in calculating the CPS.

If the Contractor takes the same claim or a revised amount to the Administrative Law Court (ALC), the claim will not impact the CPS until a decision is rendered. On the date of the ALC decision, a second impact window opens, and the portion of the claim denied as a result of the decision is used in calculating the CPS.

If a mutually agreed upon settlement is reached between the Contractor and the SCDOT before a decision is rendered by the DRB or the ALC, the claim has no effect on the CPS because the associated impact window does not open. In either case, if 100% of the claim amount is awarded to the Contractor by decision of the DRB or the ALC, the claim has no effect on the Contractor's CPS because the Contractor will receive 100% of the Category Points.

The Raw Score for Claims Denied is determined by the following formula:

$$\text{Claims Denied Raw Score} = \frac{\text{Percent of the Claim Amount Denied}}{\text{Number of Projects}}$$

Where:

Number of Projects = The number of projects with a SWKC date within the 3 years previous to Claim Certification date.

The Claim Denied Index Value is calculated using the following the formula:

$$\text{Claim Denied Index Value} = (10.00\% - \text{Raw Score}) \times 10.0$$

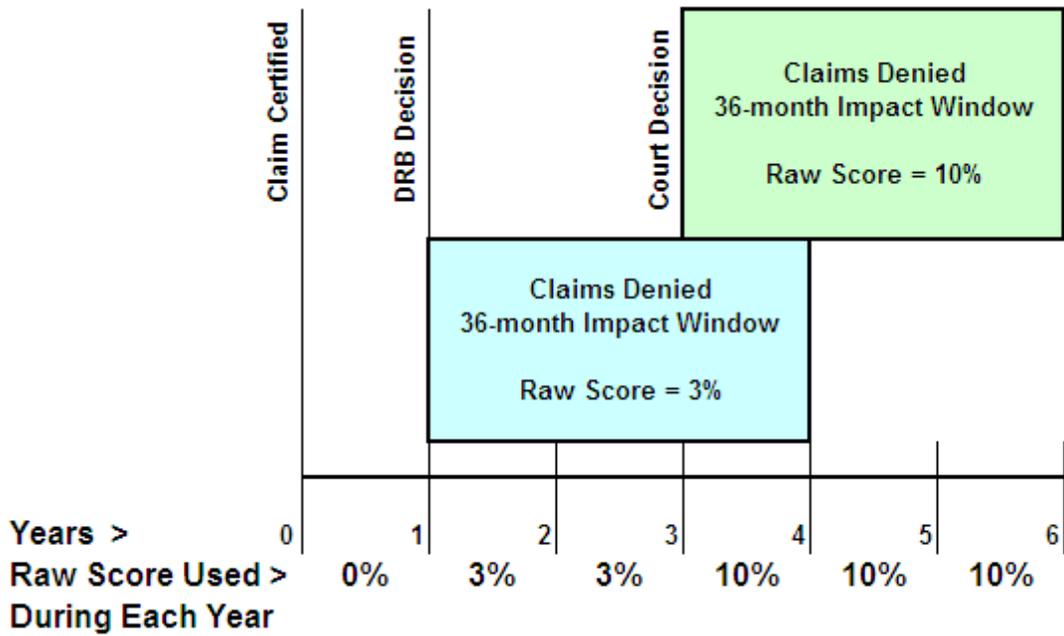
The claim actions and impact windows are summarized in the table below.

Action by Contractor	Start of Impact Window	Length of Impact Window
<i>Form 100.04</i> is submitted	NA	NA
Mutually Agreed upon Settlement is Reached before Decision of DRB or ALC	NA	NA
Claim is Certified	Date of DRB Decision	36 Months
Claim is taken to Administrative Law Court	Date of ALC Decision	36 Months

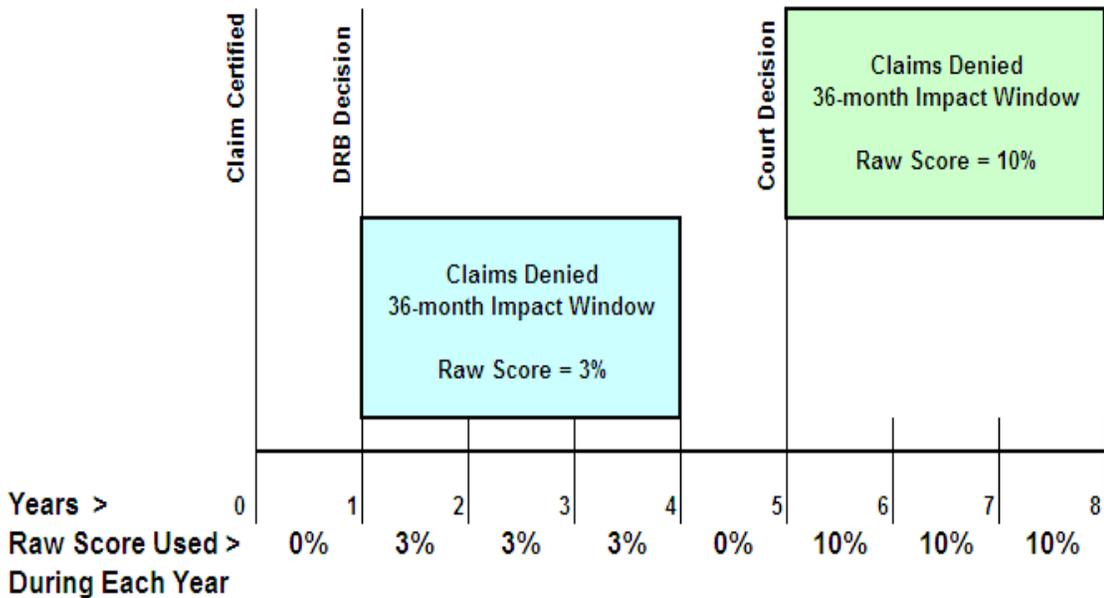
If the two impact windows overlap, the highest Raw Score would govern during the overlap period as in the example below.

Example:

If a Contractor certifies a claim and it goes all the way to a DRB decision, the Raw Score for the claim is 3% calculated using results of the DRB decision. The impact window would start on the date of the DRB decision. If the Contractor does not accept the DRB decision, takes the claim to the Administrative Law Court, the date of the ALC decision is two years after the DRB decision, and the ALC decision results in a Raw Score of 10%, a second impact window starts on the date of the ALC decision. An overlap of the impact windows occurs during the last year of the first impact window and the first year of the second impact window. This example is illustrated in the diagram on the following page:



Using the same DRB decision date, but the date of the ALC decision is not until 4 years after the DRB decision. The illustration would change to the following:



The amount of the claim awarded to the Contractor will not be counted in the On-Budget category.

Below is an abbreviated Claims Denied Index Table showing some Raw Scores and their corresponding Index Values:

CLAIMS DENIED INDEX TABLE	
RAW SCORE	INDEX VALUE
0.0%	100%
1.0%	90%
2.0%	80%
3.0%	70%
4.0%	60%
5.0%	50%
6.0%	40%
7.0%	30%
8.0%	20%
9.0%	10%
10.0%	0%
>10.0%	0%

Default Index Value

←

The Claims Denied Index is capped at the maximum and minimum values shown in the table above.

The following is an example of the calculation of Claim Denied Category Points:

Given:

Claim Certification Date = 10/31/2007

Amount of Claim = \$500,000

Decision of the DRB = \$300,000 awarded to the Contractor

Percent of Claim Denied =  $\frac{\$500,000 - \$300,000}{\$500,000}$   
= 0.400 = 40.0%

Date of Decision by DRB = 1/27/2008

Number of Projects = 7 projects with SWKC date within 3 years previous to the Claim Certification date (10/31/2007)

Calculate Category Points:

*Raw Score* =  $\frac{\text{Percent of the Claim Amount Denied}}{\text{Number of Projects}}$

=  $\frac{40.0\%}{7}$  = 5.71 %

*Index Value* = (10.00% – Raw Score) X 10.0

= (10.00% – 5.71%) X 10.0

$$= (4.29\%) \times 10.0$$

$$= 42.9\%$$

*Category Points*

$$= \text{Max. Points} \times \text{Index Value}$$

$$= 10.0 \times 42.9\%$$

$$= 10.0 \times 0.429$$

$$= \underline{4.3 \text{ points}}$$

## ASSESSMENT BY RCE CATEGORY

The Assessment by the RCE consists of 18 multiple choice questions about the Contractor's performance and its use of resources on the project. The Assessment questions were first issued in January 2005, and in January 2007, the original 18 questions were re-examined. Some of the original questions were revised, and the revised question became effective 01/01/2008. The 18 original questions are numbered 1 through 9 and 11 through 19 and are used on projects with a SWKC date before 01/01/2008. The original questions are attached to this document as Appendix C. The table below shows the original question numbers and their maximum point value.

Original Assessment Questions and Maximum Points for Projects with SWKC before 01/01/2008																				
Question No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
Max. Points	10	5	5	10	5	5	5	5	5	NA	5	5	5	5	5	5	5	5	5	100

The 18 revised questions are numbered 1 through 18 and are used for projects with a SWKC after 01/01/2008. The revised questions are attached to this document as Appendix D. The table below shows the question numbers and their maximum point value.

Assessment Questions and Maximum Points for Projects with SWKC after 01/01/2008																				
Question No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
Max. Points	10	5	5	10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	NA	100

The RCE fills out the Assessment and submits it on-line as soon as he or she has all the information needed to answer the applicable questions. The questions have a maximum value of 5 points each, except for Question No. 1 and Question No. 4 in both the original and revised sets. Question No. 1 concerns safety, and Question No. 4 concerns environmental issues. These two areas are very important to the SCDOT; and therefore, they are given twice the weight as the other questions and are worth a maximum of 10 points each. Each of the multiple choice answers selected by the RCE corresponds to the

points scored for that question. There is no Index used in this category because the Raw Scores are already a percentage that ranges from 0% to 100%.

The Raw Score for Assessment by RCE is determined by the following formula:

$\text{Raw Score} = \frac{\text{Points Scored}}{\text{Maximum Points}} \times 100.0\%$
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Not all questions will apply to all projects, so some questions will have a NA (Not Applicable) choice selected. If the NA box is selected the maximum points for that question is not included in the Maximum Points in the formula above.

Example:

Given:

The following table shows the results of an Assessment by RCE for project that has a SWKC date of 11/08/2007.

Question No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
Max. Points	10	5	5	10	5	5	5	0	5	NA	5	5	5	5	5	5	0	5	5	90
Points Scored	8	4	5	10	1	3	3	NA	4	0	4	5	3	1	3	4	NA	3	4	65

Question No. 10 is not included because the SWKC date for this project is before 01/01/2008. Question Nos. 8 and 17 received a NA response; and therefore, the maximum 5 possible points for those two questions are not included in the Total of the Max. Points row or the Points Scored row.

$$\begin{aligned}
 \text{Raw Score} &= \frac{\text{Number of Points Scored}}{\text{Maximum Possible Points}} \times 100.0\% \\
 &= \frac{65}{90} \times 100.0\% \\
 &= 72.2\%
 \end{aligned}$$

Since there is no index used in this category, the Category Points are determined as follows:

$$\begin{aligned}
 \text{Category Points} &= \text{Maximum Points} \times \text{Raw Score} \\
 &= 20.0 \times 72.2\% \\
 &= 20.0 \times 0.722 \\
 &= \underline{14.4 \text{ points}}
 \end{aligned}$$

## SUMMATION OF CATEGORY POINTS FOR CPS

If the CPS for the project illustrated in Section Nos. 6 through 11 above is calculated on 03/31/2009, the Category Points and CPS would be as shown in the table below.

Scoring Category	Category Index	Category Points
Safety	79.0%	11.9
On-Budget	84.0%	12.6
On-Time	77.4%	15.5
QMT	65.0%	13.0
Claims Denied	42.9%	4.3
Assessment by RCE	72.2%	14.4
<b>Total CPS =</b>		<b>71.7</b>

Not all projects will have a **QMT** or a **Claims Denied** Raw Score data. If that were the case for the Example project and it was the Contractor's only project, the Default Point Values would be used in those categories as shown in the table below.

Scoring Category	Category Index	Category Points
Safety	79.0%	11.9
On-Budget	84.0%	12.6
On-Time	77.3%	15.5
<b>QMT</b>	<b>75% (Default)</b>	<b>15.0 (Default)</b>
<b>Claims Denied</b>	<b>100%(Default)</b>	<b>10.0 (Default)</b>
Assessment by RCE	72.2%	14.4
<b>CPS =</b>		<b>79.4</b>

It is important to remember that when two or more projects have Raw Scores in a category, an Index Value is calculated for each individual Raw Score, then the Index Values are averaged. The Average Index Value is multiplied by the Maximum Points to determine the Category Points.

Example:

Given:

The CPS for a Contractor is being calculated for the end of the 2<sup>nd</sup> Quarter of 2009, and on 06/30/2012, the Contractor has 2 completed projects and one active project with the following information:

Safety: (Not Project-generated)

EMR (Effective Date 07/01/2006) = Company started business – No EMR  
Use Default Raw Score = 1.00 (Default Raw Score)  
Default Index Value = 75.0% (Default Index Value)  
Expires when company gets its first EMR in 2009.

EMR (Effective Date 10/01/2009) = 0.90 Expires 09/30/2010  
*Raw Score* = 0.90  
*Index Value* = 80.0%

EMR (Effective Date 10/01/2010) = 0.95 Expires 09/30/2011  
*Raw Score* = 0.95  
*Index Value* = 77.5%

EMR (Effective Date 10/01/2011) = 1.10 Expires 09/30/2012  
*Raw Score* = 1.10  
*Index Value* = 60.0% ✓

Project 1:

Given:

- ▶ SWKC = 06/05/2009 (limit of 36-month impact window is 06/05/2012)  
*On-Budget Index* = 87.9%  
*On-Time Index* = 80.2%  
Assessment by RCE Index = 88.6%
- ▶ QMT Audit Date = 06/15/2008 (limit of 36-month impact window is 06/15/2011)  
QMT Index = 92.8%,
- ▶ Claim Denied (Claim Certified 05/25/2009)  
DRB Decision on 02/07/2010 (limit of 36-month impact window is 02/7/2013)  
*Raw Score based on DRB Decision* = 3.0%  
*Index Value based on DRB Decision* = 70.0%  
DRB not accepted by Contractor, and claim taken to litigation.

ALC Decision on 10/3/2011 (limit of 36-month impact window is 10/3/2014)

*Raw Score based on ALC Decision* = 6.0%

*Index Value based on ALC Decision* = 40.0%✓

There is an overlap of impact windows on 06/30/2012

Since the higher Raw Score on 06/30/2012 is from ALC Decision,

*Claim Denied Index Value* = 40.0% ✓

### Project 2:

Given:

- ▶ SWKC = 05/12/2010 (limit of 36-month impact window is 05/12/2013)

*On-Budget Index* = 63.2% ✓

*On-Time Index* = 72.3% ✓

Assessment by RCE Index = 65.6% ✓

- ▶ Audit Date = 09/15/2009 (limit of 36-month impact window is 09/15/2012)

*QMT Index* = 71.0% ✓

- ▶ Claim certified on 05/01/2012

Claim settlement reached for 20% of the claim amount before DRB Decision, but, no effect on score.

Claim Denied Index = 100% ✓

### Project 3:

Given:

- ▶ SWKC = not substantial complete

On-Budget Index = No SWKC

On-Time Index = No SWKC

Assessment Index = No SWKC

- ▶ Audit Date= 09/15/2011 (limit of 36-month impact window is 09/15/2014)

QMT Index = 67.5% ✓

- ▶ No Claims filed

Claim Denied Index = 100% Default Index

The Category Index Values, Category Points, and **CPS on 06/30/2012** are shown in the following table:

Scoring Category	Category Indices <b>Project 1</b>	Category Indices <b>Project 2</b>	Category Indices <b>Project 3</b>	Average Category Index	Max. Category Points	Total Category Points
Safety	N/A	N/A	N/A	60.0%	15.0	9.0
On-Budget	Expired	63.2%	No data	63.2%	15.0	9.5
On-Time	Expired	72.3%	No data	72.3%	20.0	14.5
QMT	Expired	71.0%	67.5%	69.3%	20.0	13.9
Claims Denied	40.0%	N/A	N/A	40.0%	10.0	4.0
Assessment RCE	Expired	65.6%	No data	65.6%	20.0	13.1
<b>CPS =</b>						<b>64.0</b>

The N/A is used for the Safety category because the EMR is not associated with a project. The current annual EMR is used for any CPS that is calculated.

On Project 1, the Raw Scores and Category Index Values for the On-Budget, On-Time, and Assessment by RCE categories have all expired with the end of the SWKC 36-month impact window on 06/05/2012. Similarly the Raw Score and Category Index Value for the QMT category expired with the end of the QMT 36-month impact window on 06/15/2011.

On Project 2, there was a claim certified, but it was settled for 20% of the claim, but because the claim was settled before the DRB decision, the claim does not count in the scoring.

On Project 3, there are no Raw Scores or Category Index Values for On-Budget, On-Time, and Assessment by RCE categories because data for those categories is only available on projects with an open SWKC impact window.

There are no Default Index Values used because there is at least one calculated Category Index Value in every category. If the claim in Project 1 had the ALC decision had not come until after 06/30/2012 (date of the CPS), then the Average Category Index for Claims Denied category would have been the Default Category Index of 100% instead of 40%.

## **WHEN IS THE CPS ISSUED?**

### ***CPS WITHOUT ANY PROJECT-GENERATED DATA***

When a Contractor is initially prequalified, it has no project-generated scoring data for use in calculating a CPS, but it does have Safety category data, namely an Experience Modification Rate (EMR), which is provided in the Prequalification Questionnaire. A CPS for Contractors in this situation is calculated using the Safety category data and Default values

in the other five scoring categories. This CPS is provided on the Prequalification Certificate, and will not be recalculated until the renewal of the Prequalification Certificate or until project-generated data becomes available. The effective date of the CPS for Contractors without project-generated data is the date the Prequalification Certificate is issued. If the Contractor furnishes new verified EMR information before the renewal of its Prequalification Certificate, the CPS will be recalculated using the new EMR, and the effective date will be the end of the next calendar quarter after the revised CPS has been recalculated.

***CPS WITH PROJECT-GENERATED DATA***

Once project-generated data is available, the Contractor will be issued a Quarterly CPS at the end of the next calendar quarter and every calendar quarter thereafter until the impact windows close for a project-generated data.

The effective date of a Quarterly CPS will be the 15<sup>th</sup> day of the month following the last day of a calendar quarter. The table below show the effective dates for each quarter.

<b>Effective Date of a Quarterly CPS</b>	
<b>Calendar Quarter</b>	<b>Effective Date of Quarterly CPS</b>
<b>1<sup>st</sup> Quarter</b>	<b>April 15<sup>h</sup></b>
<b>2<sup>nd</sup> Quarter</b>	<b>July 15</b>
<b>3<sup>rd</sup> Quarter</b>	<b>October 15</b>
<b>4<sup>th</sup> Quarter</b>	<b>January 15</b>

The Quarterly CPS is mailed to Contractors before the effective date of the CPS. The Contractor receives a CPS Breakdown sheet, which contains the score of each Category and all the Raw Score data and Indices for each Category. With this information, the Contractor can and is encouraged to double check the calculation of its CPS. If the Contractor thinks there has been an error or incorrect data used in the calculation its CPS, he/she should contact the CONSTRUCTION DATA SUPPORT ENGINEER. The ENGINEER will double check the data and CPS and will report his/her findings to the Contractor. If there has been an error or incorrect data used in the calculation, the CPS is changed and the revised CPS is effective immediately. If the Contractor disagrees with the ENGINEER'S findings, he/she can request a meeting to go over the data and the calculations.

When an Impact Window for project-generated data closes in the middle of a Quarter, the revision to CPS will be issued at the end of the next Quarter. When all the impact windows for project-generated data have closed, the Contractor's will be issued at the end of the next Quarter, but the Contractor will not receive a breakdown sheet for subsequent Quarters new data is generated by either project data or a new EMR. The CPS may be revised, if necessary, based on the EMR submitted on the next renewal application and it is shown on the new Prequalification Certificate.

The Contractor may have a new CPS calculated because a new EMR that is issued before the next prequalification renewal, but it will not be effective until the end of the next Quarter after the EMR verification data is received by the CONSTRUCTION DATA SUPPORT ENGINEER.

## **REQUEST FOR REVIEW OF CPS**

A Contractor may request a conference with the Director of Construction or his designee to review the data and calculations that were used to determine its latest CPS. At the conference all the data and Raw Scores will be reviewed, and the methodology and calculations that were used to determine each Category Index Values, Category Points, and the aggregate CPS will be reviewed. The Department urges all Contractors to request such a CPS review meeting before filing a formal Appeal of its CPS. A Contractor is welcome to request a CPS review conference at any time. New Contractors that do not have a CPS are especially encouraged to request a conference to go over the entire Contract Performance Evaluation System.

## **RIGHT TO APPEAL**

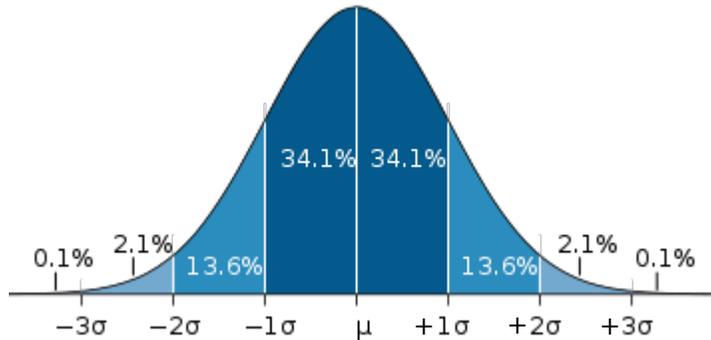
If the Contractor thinks there may have been an error in calculating its CPS, the Contractor may appeal its CPS by submitting a written appeal along with relevant evidence concerning the appeal to the Deputy Secretary for Engineering. The appeal must state a specific reason or basis for the appeal. The Deputy Secretary may consider evidence submitted by the contractor and any other relevant evidence and consult with SCDOT staff and any other person or entity for recommendations concerning the appeal. After review, the Deputy Secretary for Engineering will make a recommendation for a decision to the Secretary of Transportation, who will issue the final agency decision on the appeal within ninety (90) days of the appeal submission date.

## **CONTRACTOR PERFORMANCE THRESHOLD**

The Contractor Performance Threshold (CPT) is the CPS below which performance is judged to be substandard. The CPT is calculated at the end of the last Quarter of the previous year and remains in effect for the remainder of the calendar year, unless there is a change in methodology or procedures for determining the CPT. Using all of the CPS scores containing project-generated data that are available on December 31, 2011, as the data population, the CPT is set equal to the statistical point equal to the low 2<sup>nd</sup> standard deviation ( $-2\sigma$ ) of a normal distribution.

The graphic representation of a normal distribution is also known as a bell curve and is commonly used for predicting results or assigning grades for test scores. The scores would be found on the horizontal axis, and a vertical line drawn through the mean score ( $\mu$ ) or average score represents the number contractors the same score, starting from zero. The

curve formed by the number of occurrences of the same score should form a bell curve. The more scores the smoother the curve will be. A typical bell curve is shown below.



The  $\mu$  score on the horizontal scale is the location of the mean or average score. Typically, the number of occurrences of each score diminishes in both directions away from the mean score. The first low ( $-1\sigma$ ) and high ( $+1\sigma$ ) standard deviations are the mean score ( $\mu$ ) minus and plus one standard deviation ( $1\sigma$ ) respectively. The second low ( $-2\sigma$ ) and high ( $+2\sigma$ ) standard deviations are the mean score ( $\mu$ ) minus and plus two standard deviations ( $2\sigma$ ) respectively.

For a normal distribution as shown above, the standard deviation is a calculation of the a statistical variance or distribution away from the mean score required to form the shape of a bell curve. Typically 34.1% of all the scores should fall between the  $-1\sigma$  or the  $+1\sigma$  on each side of the mean score,  $\mu$ . Theoretically, 68.2% of all the scores should fall between the  $-2\sigma$  and  $+2\sigma$  on each side of the mean score,  $\mu$ . Theoretically, 13.6% of all the scores should fall between the 1<sup>st</sup> and 2<sup>nd</sup> standard deviations on each side of the mean score. Approximately 95% of all the scores would fall between  $-2\sigma$  and  $+2\sigma$ .

On January 1, 2012, the mean CPS or  $\mu$  was 78.0246 based on 134 Contractors with a CPS containing project generated data. With this information and assuming a normal distribution, a standard deviation was calculated to be 4.7328. Rounded to one decimal place, the  $-1\sigma$  and the  $+1\sigma$  were 73.3 and 82.8 respectively, and the  $-2\sigma$  and the  $+2\sigma$  were 68.6 and 87.5 respectively. The standard deviation values for 2013 are shown in the table below.

$-2\sigma$	$-1\sigma$	$\mu$	$+1\sigma$	$+2\sigma$
68.6	73.3	78.0	82.8	87.5

The CPT for 2013 was set at the  $-2\sigma$  or 68.6. If there is a change in the scoring methodology during the year, the CPT will be adjusted accordingly.

## **CPS BELOW CPT**

If a Contractor's quarterly CPS falls below the CPT, the Contractor, upon notification, must schedule and participate in a CPS review meeting with the Director of Construction. This meeting is optional for Contractors with a CPS without project-generated data. The review meeting must take place before the end of the next quarter. All the data, Raw Scores, and Category Indices that were used to calculate the CPS will be reviewed. An in-depth explanation of the CPES, Contractor Performance Evaluation, and QMT Field Audit procedures will be discussed at the meeting. The intent is to provide the Contractor with an in-depth knowledge of the system, determine the causes of the substandard CPS, and determine ways to improve scores on active projects.

A consequence of having a CPS below the CPT is that the Contractor will be prohibited from bidding on projects with a Minimum Required CPS because the Minimum Required CPS is never be set below the CPT.

## **PROJECT TERMINATED FOR DEFAULT**

If a project is terminated for default, the project's On-Time and On-Budget Index Values will be set at 0.0% for 36 months from the SWKC date set for the defaulted project. All others category indices and points will be calculated as normal.

## **CPS FOR A JOINT VENTURE**

The CPS for a Joint Venture enterprise will be calculated by averaging the current CPS of each of the participants at the time of prequalification. The CPS will be shown on the Prequalification Certificate and will not be recalculated until the renewal of the certificate.

## **MINIMUM REQUIRED CPS**

The Department may set a Minimum Required CPS on a project as a prequalification for bidding in accordance with SC Code of Regulations, Chapter 63, Article 8, Section 63-307. If a Minimum Required CPS is set on a project, it means that the Department will not accept a bid from a Contractor whose latest effective CPS is below the Minimum Required CPS set for the project. The Minimum required CPS will be clearly stated in the project advertisement and the project proposal.

Not all projects will have a Minimum Required CPS, which means there is no minimum CPS required for bidding. If a Contractor has appealed its last CPS within 30 days of issue, and the final decision has not been issued, the Contractor's CPS from the previous quarter will apply.

The Minimum Required CPS is determined by evaluating the project using the ten (10) categories list below:

1. Complex engineering design
2. Critical time constrains that must be met
3. Environmentally sensitive project
4. High profile project
5. Complex traffic control
6. High level of interaction between Subcontractors and/or with Utilities
7. Highly specialized equipment required
8. Located in a densely populated area, or surrounding properties and business will be severely impacted
9. ADT greater than 10,000 vpd
10. Engineer's Estimate greater than \$1,000,000

Projects that qualify for 0, 1, or 2 of these categories will not have a Minimum Required CPS. Projects that qualify for 3 of these categories will have a Minimum Required CPS set equal to the value of the low 2<sup>nd</sup> standard deviation of all of the CPS at the beginning of the calendar year. Projects that qualify for 4, 5, or 6 of these categories will have a Minimum Required CPS set equal to the value of the low 2<sup>nd</sup> standard deviation + 1.0 point. Projects that qualify for 7 or more of these categories will have a Minimum Required CPS set equal to the value of the low 1<sup>st</sup> standard deviation of all of the CPS at the beginning of the calendar year. The Minimum Required CPS values are shown in the following table.

No. of Qualifying Categories	0, 1, or 2	3	4, 5, or 6	7 or more
Minimum Required CPS Equals	None	Low 2 <sup>nd</sup> Standard Deviation	Low 2 <sup>nd</sup> Standard Deviation + 1.0 Point	Low 1 <sup>st</sup> Standard Deviation

## **CONTACT INFORMATION**

For any questions concerning the Contract Performance Evaluation System or the Contractor Performance Evaluation, please contact the Contract Engineer by telephone at (803)737-2031, or by mail at the following address:

Construction Data Support Engr.  
SCDOT Room 330  
PO Box 191  
Columbia, SC 29202

A copy of this document is available on-line at the following Internet web site:

<https://www.scdot.org/business/contractor-Prequalified.aspx>