Prepared By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

Preparer Name, PE Date

Preparer Firm Name

Firm Registration No. F-####

TxDOT concurs that the report complies with the approved Quality Assurance Program for the Project Name project.

TxDOT Concurrence \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

TxDOT PM Name, PE Date

TxDOT Project Manager

Table of Contents

Introduction 1

Verification Trend 3

Level 1 and Level 2 Analysis Results 3

Embankment, Subgrade, Backfill, and Base Course 4

Asphalt Treated Base (Plant Mix) 5

Seal Coats 6

Structural Hydraulic Cement Concrete 7

Non-Structural Hydraulic Cement Concrete 8

Hydraulic Cement Concrete Pavement 9

Hot-Mix Asphalt Pavement 10

Level 3 Observation Verification 11

Other Verification Efforts 12

Summary 12

Verification Summary 12

Nonconforming Materials 13

Materials Certifications 13

Conclusion 14

Appendices 15

Appendix A – Level 1 Continuous Analysis Results 16

Appendix B – Level 2 Independent Verification Results 17

Appendix C – Level 3 Observation Verification Results 18

Appendix D – Split Sample Test Results 19

Appendix E – IQF engineering Judgment (EJ) Log 20

Appendix F – OVF Engineering Judgment (EJ) Log 21

Appendix G – Nonconformance Report (NCR) Log 22

Appendix H – Monthly IQF Materials certifications 23

Appendix I – Project-Specific Levels of Analysis 24

Introduction

[Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project Description Project]

**Project Map**

This project is being constructed in accordance with TxDOT’s 2014 Standard Specifications as modified by the [Comprehensive Development Agreement or Design-Build Agreement] Technical Provisions. [Add language on any construction processes or specifications that may be noteworthy.]

Construction acceptance on the Project Name project is performed by TxDOT and the Developer. The Developer’s Independent Quality Firm (IQF) performs Independent Quality (IQ) while TxDOT and their Owner Verification Testing and Inspection (OVTI) consultant performs Owner Verification (OV). The following entities are performing the construction quality roles on the project.

Table 1: Construction Quality Roles and Entities

|  |  |
| --- | --- |
| Role | Performed By |
| Quality Control (QC) | Name of Developer or Firm Performing QC |
| Independent Quality (IQ) | Name of Firms Performing IQ |
| Owner Verification (OV) | TxDOT Project Team, Name of Firms Performing OV |
| Independent Assurance (IA) | TxDOT [XYZ] District Lab or IA Firm Name |
| Referee | TxDOT CST/M&P or Accredited Third-Party Laboratory Firm Name (approved by TxDOT) |

The OVF is responsible for monitoring and observing the Work for compliance with the TxDOT’s Quality Assurance Program for CDA/ Design-Build Projects with a Capital Maintenance Agreement with Three Optional 5-Year Terms (DB QAP), Design-Build Agreement and the Developer’s Construction Quality Management Plan (CQMP). This responsibility includes performing OV testing and performing verification of the DB Contractor-performed IQ tests, investigating analysis that are not verified, oversight of engineering judgment and nonconformance reports. OVF performed statistical analyses and generated the tables and graphs presented in this report. The following appendices are also included with this report.

* Appendix A – Level 1 Statistical Analysis Report
* Appendix B – Level 2 Independent Verification Report
* Appendix C – Level 3 Observation Verification Report
* Appendix D – Split-Sample Test Results
* Appendix E –IQF Engineering Judgment (EJ) Log
* Appendix F – OVF Engineering Judgment (EJ) Log
* Appendix G – Nonconformance Log
* Appendix H – IQF monthly Certification Letters
* Appendix I – Project Name Project-Specific Levels of Analysis

The approved levels of significance () for Level 1 F- and t- tests on this project are shown in Table 2 below.

Table 2: Level of Significance for F- and t- Tests

|  |  |
| --- | --- |
| Material Category | Level of Significance (****) |
| Embankment, Subgrade, Backfill, and Base Courses | 0.01 |
| Asphalt Treated base (Plant Mix) | 0.01 |
| Seal Coats | 0.01 |
| Hydraulic Cement Concrete (Structural) | 0.025 |
| Hydraulic Cement Concrete (Non-Structural) | 0.01 |
| Hydraulic Cement Concrete Pavement | 0.025 |
| Hot-Mix Asphalt Pavement (Items 341, 342, 34, 346, 347, 348) | 0.025 |

Detailed requirements for performing OV are contained in TxDOT’s DB QAP dated [Month Date, Year], and the Project Name Owner Verification Testing and Inspection Plan (OVTIP). Levels of Analysis from the OVTIP are included in Appendix I.

Test results for all materials installed on the project (permanent and temporary) are entered into TxDOT’s I2MS software for analysis. I2MS generates reports for the three levels of analysis required in the DB QAP and those reports are included in this report.

Verification Trend

This Owner Verification Report presents the results and findings from [Date] through [Date]. Figure 1 below shows the trend in number of Level 1 analysis categories and the total number of non-validated Level 1 analysis categories by quarter. [Insert brief discussion on trends and explanation for the trends.]

Figure 1. Trend in Number of Level 1 Analysis Categories and Non-Validating Categories by Quarter

Level 1 and Level 2 Analysis Results

Level 1 verification is performed using continuous F- and t- tests at a predetermined level of significance () shown in Table 1. If either the F- or the t- test is not validating for a given analysis run, that analysis run is considered non-validating. An individual non-validating analysis run does not make the analysis category non-validating for that reporting period. The following criteria is used to determine if a Level 1 analysis category is validating or non-validating for the purposes of the quarterly Owner Verification Report.

1. Analysis categories that have a maximum of three OVF test results in the reporting time period with very small standard deviations that lead to statistically significant but not practically significant differences are not reported as non-validating. A note is included in Appendix A with the analysis category to indicate the reason for the non-validating analysis run(s).
2. Analysis runs that trigger the “no test left behind” rule and have greater than 25 OVF test results are not considered non-validating runs due to large sample size and the effect it has on the F- and t- test. A note is included in Appendix A with the analysis category to indicate the reason for the non-validating analysis run(s).
3. It is natural for some analysis runs to be non-validating from time to time. Therefore, an analysis category is considered non-validating for a given quarter and the non-validation investigation is presented in this report if the level of non-validation meets the criteria below. If an analysis category has fewer non-validating analysis runs than shown in criteria (b) or (c) below, a note with the text from bullet (b) or (c), as applicable, is included in Appendix A to indicate the reason for not providing a non-validation investigation write-up in this report.
4. One or more non-validating analysis runs when there are five or less analysis runs in the quarter;
5. Two or more non-validating analysis runs when there are between six and 20 analysis runs in the quarter;
6. Three or more non-validating analysis runs when there are 21 or more analysis runs in a quarter;
7. The last analysis run for the quarter is non-validating.

Level 2 verification is performed using independent verification. Verification is determined through engineering judgment.

Tables # through # summarize the Level 1 and Level 2 analyses performed on the different material categories with the analysis details provided in Appendices A and B, respectively. Each table is followed by a discussion on analysis categories that were not verified.

Embankment, Subgrade, Backfill, and Base Course

Level 1 and Level 2 analyses for embankment, subgrade, backfill and base course are shown in Tables 3 and 4, respectively.

Table 3: Level 1 Analysis Summary for Embankment, Subgrade, Backfill, and Base Course

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Section | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
| 132 | ROW PI≤15, Ty A | (115) In-Place Density | 10/10 | 10/10 | 25 | 7 | 1 | 0 |
| 247 | 1 Base A, Gr 5 | (115) In-Place Density | – | – | – | – |  |  |
| 247 | 2 Base B, Gr 1-2 | (115) In-Place Density | – | – | 2 | 1 | 0 | 0 |
| 247 | 2 Base B, Gr 1-2 | (106) Plasticity Index | – | – | 2 | 1 | 0 | 0 |
| 275 | 3 ROW | (115) In-Place Density | 13/15 | 14/15 | 30 | 4 | 5 | 2 |
| 275 | 4 ROW | (140) Average Depth | 14/15 | 11/15 | 30 | 6 | 0 | 0 |

1 Base A, Item 247, Tex-115-E, In-Place Density

Base A is being replaced with Base B and will not be used on the project moving forward. This analysis category is greyed out in Table 3 and will be removed from future reports unless the DB Contractor decides to reintroduce the use of Base A material.

2 Base B, Item 247, Tex-115-E, In-Place Density and PI

There were only 2 IQF results and 1 OVF result this quarter. Therefore, the F- and t- tests could not be performed. This analysis category will be tracked and analyses performed in future quarters as more tests are performed.

3 ROW, Item 275, Tex-115-E, In-Place Density

[Insert discussion on the non-validation investigation and the results of the investigation.]

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Firm | No. of Tests | Mean | Standard Deviation | Specification | | Percent Within Limits |
| Lower Limit | Upper Limit |
| OVF | 10 | 97.4 | 1.2 | 95 | – | 98% |
| IQF | 75 | 97.2 | 1.1 | 95 | – | 98% |

[Insert affirmative statement that materials were accepted and the reason for the acceptance decision.]

4 ROW, Item 275, Tex-140-E, Average Depth

[See example from Note 3 for what needs to be included in the write-up.]

Table 4: Level 2 Analysis Summary for Embankment, Subgrade, Backfill, and Base Course

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Section | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
| 247 | ABC Base | (110) Gradation | 30 | 6 | Yes | None |
| 247 | XYZ Base | (110) Gradation | 10 | 3 | No | See Note 1 below |
|  |  |  |  |  |  |  |

1 XYZ base, Item 247, Gradation

[Insert Discussion on XYZ Base, Item 247, Gradation] [Insert affirmative statement that materials were accepted and the reason for the acceptance decision.]

Asphalt Treated Base (Plant Mix)

Level 1 and Level 2 analyses for asphalt treated base (plant mix) are shown in Tables 5 and 6, respectively.

Table 5: Level 1 Analysis Summary for Asphalt Treated Base (Plant Mix)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

[Non-Validating Category Title 1]

[Insert Discussion on Non-Validating Category 1]

[Non-Validating Category Title 2]

[Insert Discussion on Non-Validating Category 2]

Table 6: Level 2 Analysis Summary for Asphalt Treated Base (Plant Mix)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[Nonverifying Category Title 1]

[Insert Discussion on Nonverifying Category 1]

[Nonverifying Category Title 2]

[Insert Discussion on Nonverifying Category 2]

Seal Coats

Level 1 and Level 2 analyses for seal coats are shown in Tables 7 and 8, respectively.

Table 7: Level 1 Analysis Summary for Seal Coats

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

[Non-Validating Category Title 1]

[Insert Discussion on Non-Validating Category 1]

[Non-Validating Category Title 2]

[Insert Discussion on Non-Validating Category 2]

Table 8: Level 2 Analysis Summary for Seal Coats

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[Nonverifying Category Title 1]

[Insert Discussion on Nonverifying Category 1]

[Nonverifying Category Title 2]

[Insert Discussion on Nonverifying Category 2]

Structural Hydraulic Cement Concrete

Level 1 and Level 2 analyses for structural hydraulic cement concrete are shown in Tables 9 and 10, respectively.

Table 9: Level 1 Analysis Summary for Structural Hydraulic Cement Concrete

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

[Non-Validating Category Title 1]

[Insert Discussion on Non-Validating Category 1]

[Non-Validating Category Title 2]

[Insert Discussion on Non-Validating Category 2]

Table 10: Level 2 Analysis Summary for Structural Hydraulic Cement Concrete

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[Nonverifying Category Title 1]

[Insert Discussion on Nonverifying Category 1]

[Nonverifying Category Title 2]

[Insert Discussion on Nonverifying Category 2]

Non-Structural Hydraulic Cement Concrete

Level 1 and Level 2 analyses for non-structural hydraulic cement concrete are shown in Tables 11 and 12, respectively.

Table 11: Level 1 Analysis Summary for Non-Structural Hydraulic Cement Concrete

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

[Non-Validating Category Title 1]

[Insert Discussion on Non-Validating Category 1]

[Non-Validating Category Title 2]

[Insert Discussion on Non-Validating Category 2]

Table 12: Level 2 Analysis Summary for Non-Structural Hydraulic Cement Concrete

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[Nonverifying Category Title 1]

[Insert Discussion on Nonverifying Category 1]

[Nonverifying Category Title 2]

[Insert Discussion on Nonverifying Category 2]

Hydraulic Cement Concrete Pavement

Level 1 and Level 2 analyses for hydraulic cement concrete pavement are shown in Tables 13 and 14, respectively.

Table 13: Level 1 Analysis Summary for Hydraulic Cement Concrete Pavement

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

[Non-Validating Category Title 1]

[Insert Discussion on Non-Validating Category 1]

[Non-Validating Category Title 2]

[Insert Discussion on Non-Validating Category 2]

Table 14: Level 2 Analysis Summary for Hydraulic Cement Concrete Pavement

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[Nonverifying Category Title 1]

[Insert Discussion on Nonverifying Category 1]

[Nonverifying Category Title 2]

[Insert Discussion on Nonverifying Category 2]

Hot-Mix Asphalt Pavement

Level 1 and Level 2 analyses for hot-mix asphalt pavement are shown in Tables 15 and 16, respectively.

Table 15: Level 1 Analysis Summary for Hot-Mix Asphalt Pavement

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of Validating Analysis/Total No. of Analysis | | Final No. of Tests | | No. of Failing Tests | |
| F-test | t-test | IQF | OVF | IQF | OVF |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

[Non-Validating Category Title 1]

[Insert Discussion on Non-Validating Category 1]

[Non-Validating Category Title 2]

[Insert Discussion on Non-Validating Category 2]

Table 16: Level 2 Analysis Summary for Hot-Mix Asphalt Pavement

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | Source/Supplier/ Mix ID | (Test Method) Property | No. of IQF Tests | No. of OV Tests | Verified? | Comments |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

[Nonverifying Category Title 1]

[Insert Discussion on Nonverifying Category 1]

[Nonverifying Category Title 2]

[Insert Discussion on Nonverifying Category 2]

Level 3 Observation Verification

Level 3 verification is performed through observing a technician performing a test and recording if the technician performed the test according to the test procedure. Table 17 summarizes the Level 3 observations performed this time period with additional details in Appendix C.

Table 17: Level 3 Observations

|  |
| --- |
| Test Method - Property |
| Tex-###-X - Property |
| Tex-###-X - Property |
| Tex-###-X - Property |

[Insert Discussion on Level 3 Observations, As Required]

Other Verification Efforts

[Insert Discussion on Other Verification Efforts including start-up and ongoing split sample testing, etc.]

Summary

This quarterly Owner Verification report presents work performed to comply with TxDOT’s DB QAP, TxDOT’s Owner Verification Report Guide, and 23 CFR 637B. The evaluation is based on the plan and specification requirements, verification of selected test results based on the I2MS reports and engineering judgment, review of nonconformance logs, review of engineering judgment logs, and monthly materials certifications.

Verification Summary

Table 18 presents a summary of the verifications performed this quarter with details discussed in previous sections and analysis reports provided in Appendices A, B and C. [Insert brief discussion on trends and observations from analyses above and address any key issues.]

Table 18: Verification Summary

|  |  |  |  |
| --- | --- | --- | --- |
|  | No. of Analyses/Observation Categories | No. Verified | Percentage Verified |
| Level 1 – Continuous Analysis | 30 | 27 | 90 |
| Level 2 – Independent Verification | 50 | 50 | 100 |
| Level 3 – Observation Verification | 10 | 10 | 100 |

Nonconforming Materials

Table 19 presents a summary of engineering judgments this quarter with details provided in Appendices F and G, respectively, for the IQF and OVF. [Insert brief discussion on trends and observations on engineering judgement and address any key issues. Patterns of multiple failing tests accepted through engineering judgement should be specifically addressed.]

Table 19: Engineering Judgment Summary

|  |  |
| --- | --- |
| No. of Engineering Judgments | |
| IQF | OVF |
| 25 | 3 |

Table 20 presents a summary of the status of NCRs with a detailed NCR log shown in Appendix H. [Insert brief discussion on trends and observations from NCRs and address any key issues. Reference NCRs that include reduced pay for accepting nonconforming material.]

Table 20: Nonconformance Report Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | No. of Open NCRs | No. of New NCRs | No. of NCRs Closed | No. of NCRs Remaining Open |
| Previous Quarters | 5 |  | 4 | 1 |
| Current Quarter |  | 20 | 18 | 2 |

Materials Certifications

The IQF’s monthly materials certifications for the time period covered in this report are listed in Table 21 and provided in Appendix H. The IQF Manager certifies that the IQF performed their portion of the acceptance in compliance with the approved CQMP and that the work they have accepted is in compliance with the approved plans and specifications for the project unless otherwise noted on the certification.

Table 21: IQF Monthly Materials Certifications

|  |  |
| --- | --- |
| Certification No. | Period Covered |
| #### | Month, DD, YY to Month, DD, YY |
| #### | Month, DD, YY to Month, DD, YY |
| #### | Month, DD, YY to Month, DD, YY |

Conclusion

Based on the results discussed in this report, the materials incorporated from [Date] through [Date] comply with the approved DB QAP for the project. All material test results in this reporting period were accepted through passing specification limits, engineering judgment or closed NCRs except for open NCRs which will be addressed in future reports.

Appendices

Appendix A – Level 1 Continuous Analysis Results

Appendix B – Level 2 Independent Verification Results

Appendix C – Level 3 Observation Verification Results

Appendix D – Split Sample Test Results

Appendix E – IQF Engineering Judgment (EJ) Log

Appendix F – OVF Engineering Judgment (EJ) Log

Appendix G – Nonconformance Report (NCR) Log

Appendix H – Monthly IQF Materials Certifications

Appendix I – Project Name Project-Specific Levels of Analysis