

DCE Meeting Minutes
September 17 and 18, 2008
Orlando, FL

The meeting opened with introductions. The following individuals attended the DCE Meeting:

David Sadler, Calvin Johnson, Nancy Aliff, Pat McCann, Pete Nissen, Brian Pickard, Patrick Stanford, Brian McKishnie, Ernest Garcia, Tim Ruelke, Frank O'Dea, Lorie Wilson, Jennifer Taylor, Derek Fusco, Paul Wai, Bill Sears, Matt Price, Terry Muse, Alan Autry, Jon Sands, Mark Croft, Rudy Garcia, Barbara Espino, Mario Cabrera, Alan Hyman, David Chason, Tom Malerk, Dan Hurtado

Joint DMRE/DCE Meeting Topics:

- 1. Structural steel inspection in the field.** SMO provides inspection at point of fabrication only. Materials engineers concerned that more field inspection may be needed, training may be needed in what to look for in steel beams, bolted connections etc, and procedures may need to be updated. Would like to have dialogue with construction on how to proceed.

*Steve Dukes presented his training proposal, attachment. It was discussed that CEI's should have training in numbers 6, 7, 9 and 10 thru their scope of services and numbers 11,12 and 13 should be needed by the CEI for specific type of projects. (i.e. bascule bridges). **Action:** This will need to be addressed in a CEI Manager's Meeting.*

- 2. C-22 Sample cards.** Turnpike is piloting a bar code system that would change the way we capture sample data and would like to present a demonstration.

Todd Kelly, Turnpike Materials, gave a presentation on the concept of barcode labeling. Bar code labeling would eliminate the C-22 sample cards. Bar code labeling keeps track of material sampling, expedites LIMS entry, and increases security and integrity. This should be expanded to other project testing samples as presently has been tested on concrete cylinders.

- 3. Response Time to Defective Materials**

- Change CPPR Category 6; Mitigate Cost and Time Overruns, to CQC Compliance.
- Idea is to account in CPPR for contractor's performance with CQC requirements – responsiveness on DDM's/EAR's, entry of results, etc.
- Develop criteria for evaluation in this category.
- Any necessary spec revision to address CQC?

Quick background on this.....

DMREs wanted us to add some language to the specifications on the timeliness of EARs. (Some contractors were waiting until the job was just about finished before getting them completed, and

then dumping multiple EARs on the Department to review at the last minute). You and Duane (Brautigam) both said that you thought the current spec language was adequate and that basically we shouldn't be paying for the failing material until the failure gets resolved. You (SCO) guys were planning on discussing this issue with the DCE's. DMREs still would like to see some additional language in the specifications that says the contractor can't cover up failing material until the failure gets addressed.

James A. Musselman, P.E.
Florida Department of Transportation

I think that Duane makes a good point with the language that is currently in the specifications. If that is not what is happening in the field, we can step up the utilization of that spec for on-going work.

David A. Sadler, P.E.

I agree that this is the way to go, however, based on feedback from the Districts I don't think this is currently being enforced. Should we add language to 6-4 that says something to the effect of "...any defective material left in place or material that is currently being evaluated will have its payment withheld per 9-5.3 pending its final resolution"?

James A. Musselman, P.E.

I agree with Dave's approach. Furthermore, in my opinion, we don't need any spec language beyond what we already have in 9-5.3.1.

9-5.3 Withholding Payment:

9-5.3.1 Withholding Payment for Defective Work: If the Department discovers any defective work or material prior to the final acceptance, or if the Department has a reasonable doubt as to the integrity of any part of the completed work prior to final acceptance, then the Department will not allow payment for such defective or questioned work until the Contractor has remedied the defect and removed any causes of doubt.

When I was with a Contractor working for FDOT, the CEI on our job certainly was not shy about deducting payment from our monthly pay estimate for any item of work in question. We didn't call them EARs then, but it amounted to the same thing. When we were able to satisfy whatever concerns the Department had about the work in question, we got the money back. Until then, we were not paid. It was an effective motivation factor.

Duane F. Brautigam, P.E.
Manager, Specifications & Estimates

Here are my thoughts on this.

I believe the approach we should take in the specs is that if a material fails and requires an EAR, that payment will be deducted from project estimates until such time that the EAR has been submitted and resolved. We would need to wordsmith this concept into the specs.

The reason I'd prefer this approach is that we are hearing a lot of push back from the Surety Industry on projects where the Surety has taken over the project because of failure on the part of the contractor to perform. What we are hearing from Sureties regarding the payment issue is that an owners payment of materials or work that is known to have failed impairs the Sureties ability to recover those costs and increases the Sureties risks. This is becoming more prevalent as a result of the Impairment of Suretyship Doctrine. To protect the Department and not risk claims issues from the Surety, I believe the best course of action for the Department is deduct failed material payment from estimates until acceptance issues (i.e., EAR) is resolved. This should speed up the process.

David A. Sadler, P.E.

Guys,

Susan and I are working with a Task Team on an assignment given to us by the District Materials Engineers. Basically the issue is that Contractors are taking too long on the EAR process. On some projects they wait until the final days of the project and then submit a mass of EARs to the Department to review all at once – and it really puts the Materials folks in a bind to get the reviews completed without delaying the job – even though the failures occurred many months ago.

We've really struggled with this, and finally came up with the attached changes to Sections 6 and 105 - but we're not real crazy about them. Can you please look them over and give us your thoughts?

James A. Musselman, P.E.

*Not getting results of DDM/EAR's in a timely manner. DDM/EAR's are coming in much later in the project. **Action:** David proposed to modify category 6 of the CPPR to a direct connection to CQC compliance. A draft of this will be developed and industry will be approached with the concept.*

- **3A.** *Deborah Synder requested additional guidance and the Owner's role with regard to material inspection and certification on LAP projects, Developer P3 projects, and permit projects. There is too much inconsistency statewide. **Action:** Derek to work with Project Management Office and Greg Schiess*

4. Summary of SA's – discuss SA tracking systems being deployed by the districts and how contractors have access to information about their project SA's.

From Poll of the Districts:

District 1

In D1 we have a SA tracking chart which is accessible through an FTP site which tracks the status of each SA submitted to the District Office for processing. Here is the link if you want to see what it looks like. The spreadsheet you will download is updated on a daily basis by the District Construction Contract Support Specialist who is responsible for processing SA's in D1.

<http://www.dot.state.fl.us/construction/DistrictOffices/d1web/ContractAdministration/SA%20Tracking/SAHOME.shtm>

District 2

District 2 does not post a list of SA's or provide any details to contractors about projects, other than their own.

District 3

We do not send a report providing details regarding the SA's reason and status to the contractor. We do provide an original executed copy to the contractor as required in Chapter 7 of the CPAM.

We do not post any SA's to a particular site for all contractors to see.

District 4

We only post the monthly estimates. We do not post any information on SA's.

District 5

We currently do not post any information on the status of SA's issued against contracts. Never heard of such a practice. I have not had any contractor request any such general information.

Contractors that do want to know that status of a particular SA coordinate with their assigned project personnel (as it should be).

If required to do so, it would be a considerable staff impact to make sure accurate information was posted on a daily basis.

District 6

D6 is posting this information on the FTP Site with the monthly estimates. See the link below.

ftp://ftp.dot.state.fl.us/fdot/d6/monthly_estimates/

District 7

The District has a tracking system of the SA's so the Contractor's knows when they should receive their payment.

Turnpike

We do not post SA's. For each project via ProjectSolve, our project management staff and contractor are able to access the SA's for their project.

David noted contractors have complained that SA's take too long to process. District's should not be posting SA's on their websites of projects for all contractors to view. The districts all indicated they have processes in place to allow the contractors access to their own SA information tracking.

5. MRP results for recently completed construction projects – attachments

*Tim Lattner could not be present. The attachments were reviewed as a group. It was noted that construction project scopes do not always include MRP items that are being reviewed/rated. **Action:** Need to get with Tim to send out District specific reports.*

6. Warranty Work on Federal Aid Jobs – discussion of Federal requirements for remedial/warranty work.

From: Blanchard, Brian

Subject: RE: Warranty Work on Federal Aid Jobs

Talk to David and Jim about this. We need to update section 5.4 of the CPAM and discuss it at the DCE meeting. Also, since we are developing a warranty tracking system, talk to Jim about adding a flag to remind us that prevailing wage requirements apply on federal aid projects. Jim should have a distribution list for the warranty coordinators. You can send them a similar email. Thanks for the information.

From: Smith, Kim

To: Blanchard, Brian; Sadler, David A

Subject: Warranty Work on Federal Aid Jobs

The FHWA sent out a memorandum to consolidate guidance on the applicability of the prevailing wage rate requirements, both in general and in specific, identified circumstances (see attached). One of the specific circumstances where the prevailing wage requirements apply is warranty work where the original contract required application of Davis Bacon. I distributed this guidance to the districts when we received it in June. Subsequent correspondence with one of our districts indicated that we may not have established a systemic method of assuring compliance with the prevailing wage and reporting requirements on warranty work. We need to assure that the District Contract Compliance Managers are notified when warranty work is to be performed on a job where the original contract carried the prevailing wage requirements. We should also advise the contractor when we invoke the warranty and call upon the contractor to make repairs.

I'm not sure how to best accomplish these goals. You may want to add this to the agenda for the DCE meeting in September, and/or document the requirement in the CPAM or in a DCE Memo. I am aware that some districts have warranty coordinators, but I don't know if all districts do or if there is any standardized structure. Also, this may involve Maintenance as they will have taken responsibility for most issues of maintaining the roadway/bridge after construction was completed. Let me know how you want to proceed with this.

Kim Smith
Sr. Construction Accountant/
Prevailing Wage Rate Survey Coordinator

The question came up as to why Federal wage rates apply to remedial work if the Department is not paying for the work? The Department does not have any leverage in the remedial work for certified payrolls, etc... Action: Need to discuss this with Kim Smith to clarify and determine if there is relief available on this requirement.

7. FHWA will be in Florida to review our use of CQC.

FHWA survey questions were filled out, but they did not really apply to FDOT's CQC system. FHWA review will take place in 2009. Action: Districts would like more details on the review and timeframe for the review.

8. District executed SA's being sent to the State Construction Office should be sent electronically and no hard copies.

DCE's were advised not to send hardcopies of SA's to Derek Fusco. Please send all SA's electronically.

9. Addition of extra work to a project in Liquidated Damages – discuss ramifications of adding work to a project that is in Liquidated Damages.

Nancy Aliff explained that if you add work during liquid damages, the liquid dated damages could be at risk and the Districts need to understand that before proceeding with adding work. Please work with Nancy or Calvin if a District needs to add work to a project that is in LD's. Any work added after the project is in LD's needs to be weighed against the risks to the LD's. In addition, FDOT Project Managers need to ensure CEI's talk with the Department if this issue comes about.

10. Damage Claims from motorists (Black Hole) – From Henry Fuller Task Team meeting in Fall 2007: Brian discussed contractor responsibilities for vehicular damage claims. This is a customer service issue for the Department. Brian sent an email to the District Construction Engineers (DCE) addressing this because when they are sent to the contractor to address, they sometimes appear to have fallen into a black hole. CEI will be required to track this and will require a response from the Contractor. If there are obvious damage claims (i.e., green paint on a car while bridge is being painted green) and the contractor does not address, CEI's are instructed to withhold payment for this

issue. “The CEI’s responsibility is to aggressively pursue third party claims.” Discussed Brian’s email and industry suggested that it be revised to state that “The CEI’s responsibility to pursue responses from the contractor regarding its handling of the issue.” Industry suggested that Brian take out the wording requiring the CEI to pursue third party claims against the contractor proactively and aggressively.

Industry believes that this is an area that FDOT needs to stay out of since they are handling these with their insurance and safety people.

Industry says that there needs to be an accident report because these are turned over to their insurance carriers to handle. Industry asking to allow the contractor to provide updates of this every project progress meeting, provide a tracking system to ensure that the claim is addressed.

ACTION: SCO will consider adding this to Preconstruction topic to request the contractor provide a tracking of third party claimant issues and provide regular updates so FDOT can respond to claimant when contacted as to the status of the claim.

Ananth reminded this group that the subrogation of rights for this issue has been discussed in this forum and can be done. Past minutes reflect that this has been discussed but industry was not in favor of it.

FDOT is requesting regular updates from the contractor about the status of the claims so that when FDOT is contacted by the third party we can let them know.

Industry feels that when letter to Contractor is copied to the third party that the third party feels a check is imminent and that the FDOT agrees with the claimant.

John Coxwell explained his process of hiring a retired FHP officer that will investigate the claimants issue almost immediately after it receives the letter from FDOT or claim from motorists. They will sometimes settle quickly only later to have that person’s neighbors make similar claims that they then have to contend with.

ACTION: FDOT will look at language of the letter to see if there is any implied agreement with the claimant’s issue. Review with legal.

*The Department needs to be kept in the loop on damage claims as they arise. Discussed the need for this to be pre-construction agenda item to the contractors. **Action:** Districts need additional guidance on this.*

- 11. DRB Candidates** – assure candidates have the spec. required 10 years of construction experience when evaluating them for use as DRB member.

*The District’s need to watch for this, DRB candidates need to have 10 years of experience. **Action:** Discussed the need for an evaluation process of DRB participants.*

- 12. District websites – legal discussion:** posting meeting minutes, these become public records and need for retention of documents (electronic scanned files)

Nancy explained that meeting minutes (i.e. DCE meeting, Resident Engineer meeting) need to be saved electronically after taken off websites.

- 13. Hurricane memo** (suspensions vs prohibited lane closures), what's reasonable for compensation in lieu of weather days, and any other questions they may have.

Per the DCE Memo 22-08, during the period of State of Emergency, the Department elects to pay the Contractor, where the Contractor has taken every reasonable precaution, for District directed suspension of operations during the days following a storm, idle equipment and labor for the days on which the contractor could have prosecuted the work but for the suspension. In the days immediately following the event, the Department may prohibit lane closures to allow returning travelers and assistance service vehicles unrestricted ingress. These days, up to two calendar days with prohibited lane closures, would not be eligible for compensation. State Construction is reviewing the language of this memorandum for any possible changes.

- 14. H contracts** (and what to do if the contractor won't sign it)

*H-contracts are working well in District 5. It was discussed that the tracking and federal reimbursement is more difficult with SA's rather than H-contracts. It was noted that fin nos. are needed for each work activity on a construction project, and a separate H-contract is not necessary for each activity. In addition, need a separate H-contract for the CEI for each activity. **Action:** Jennifer to send D5 guidance to SCO. Question on set up and take down of MOT items for Federal reimbursement, federal funded/state funded jobs? Conflicts with Hurricane memo? SCO to meet with Comptroller's Office, issue a DCE Bulletin and revise Memo 22-08. The Memo will need to address bonus modifications.*

- 15. DRB review of recommendations by independent party** (Pete Nissen)

See number 11 above.

- 16. Status of Reduction of PAR's** -Discussed at the DCE Meeting but have not heard a final decision.

*A reduction in PAR's took place several years ago, but David Chason is finding statewide problems on the \$2 million to \$25 million construction projects in the PAR reviews. Most of the problems are in the asphalt area having to do with composite pay factors and adjustments. **Action:** We need to evaluate the problems, where the risks are and focus on key issues/areas and where training is needed.*

- 17. Specification 234-9 Method of Payment-** This method of calculation is cumbersome and time consuming what is wrong with using the overall spreadrate?- attachment

The subject spec is not being followed correctly statewide, “The project average spread rate is calculated by totaling the arithmetic mean of the average daily spread rate values for each layer.” Why are we doing this? Action: This spec needs to be reviewed.

18. CPAM Chapters 8.11, 10.6, and 10.10

Chapter 10.10 – New chapter that involves Central Office staff on Complex Cat II on technical and construction bridge issues. Some thoughts are that it goes further than guidance in the memo, jumps to a higher level of management, confuses the role of the EOR and CEI and DCE should not have final approval. Please review this new chapter, comments on the new CPAM Chapter are due on 9/26.

Chapter 8.11- New chapter on contractor initiated requests for a change, modification or change in the plans. RFI vs. a change to design? This chapter will define what type of change is what and identify the types of changes. Please review and comment

Chapter 10.6 – New chapter on underwater bridge inspection for bridge foundations and pilings after a bridge has been in service for a few years. There is a need to involve services of underwater dive inspection prior to final inspection. Please review and comment.

19. Training Phase I Steel Inspection- attachment

See number 1 above.

- 20. The Department and Accord Industries, LLC** have executed the Agreement and Bond in place. Projects where payment has been withheld pending the execution of this agreement should be processed in accordance with the contract. Also, projects with Final Acceptance pending may now be accepted in accordance Specification Section 5-11.

Accord Industries had approximately 1,000 poles that were not in compliance with specifications. Per this agreement, Accord Industries will warranty all poles for 5 years and the Districts are to release any payments that were with held. Discussed that because a product is on the QPL does not necessarily mean that it can be used on a project – must also check to ensure that the product is on an approved producer list at materials if that product has that spec requirement. All of the DCE meeting attendees thought the idea of the having photographs on the QPL would provide a real value to field personnel. Action: SCO working with Product Evaluation Office on the QPL process. Any

suggestions, comments or recommendations with the QPL process should be sent to David.

- 21. Union Metal Corporation**, which is one of the six Fabricators listed on the State Construction Office website for “Prequalified Fabricators of Painted Galvanized Steel Strain Poles, Steel Mast Arms & Monotube Assemblies” has been temporarily removed from the list pending receipt of the renewal bond.

Union Metal Corporation has temporarily been removed as a prequalified fabricator because they have not renewed their bond.

22. Performance Evaluations for CEI Consultants

Approved: Effective: August 21, 2008

Office: Project Management

Topic No.: 375-030-007-g

PROFESSIONAL SERVICES CONSULTANT WORK PERFORMANCE EVALUATION

PURPOSE:

To establish the methods for evaluating and reporting to the Department the work performance of professional services consultants under contract

GENERAL:

The Department contracts with professional services consultants to provide a variety of services to the Department. This procedure provides the Department with a means of evaluating the work performance of those consultants. For all professional services contracts, the consultant’s work performance for each advertised major type of work must be evaluated by the project manager. Consultants may also be evaluated on minor types of work if that work is considered significant by the project manager. Exempt contracts with fees under \$25,000 (threshold amount for category two according to *Section 287.017, F.S.*) do not require evaluation.

2. PERFORMANCE EVALUATIONS FOR CEI CONSULTANTS

2.1 The evaluation of a CEI consultant will be performed by the CPM. The evaluation requirements are as follows:

(A) The CPM will complete and distribute the evaluation quarterly during the months of February, May, August, and November, beginning with the first full quarter. The end of contract evaluation will cover the period from the end of the contract to the previous evaluation. This evaluation will be due within 30 days after completion and approval of basic services even if it does not fall within the designated quarters. The final evaluation shall reflect the overall performance for the entire contract period and will be the average of all evaluations for the contract.

FHWA Process Review

- For interim Consultant Evaluation – The Professional Services Consultant Work Performance Evaluation, Procedure 375-030-007 and CPAM Chapter 4 requires that evaluations of consultants will be done on a quarterly basis. Please insure that we comply with these requirements and the evaluations are completed timely and entered into the system. The interim grades should be used to determine the consultant’s final grade for overall performance on the contract. Also the performance evaluations will be used as a tool for selection purposes for future projects.
- Consultant Performance evaluations / Major Classes of Work – Projects that a advertised with more than one major class of work will require an interim evaluation to be performed for each category of work being performed at the time of the evaluation.

When contract time is extended on a project, make sure that the interim consultant evaluations are completed during the extended period.

Per the results of a recent FHWA review, it was found that the Department was not always conducting interim CEI evaluations. It was agreed with FHWA that this would be discussed at this meeting as a reminder so that is the purpose of this discussion. Also, if contract time is extended this would trigger another evaluation.

23. CPAM Revision

- 4.1.10 Training Courses

(A) District Level Responsibilities

The District Construction Training Administrator or designee shall advise the Consultant, through the Construction Project Manager, of any construction training courses presented by the Department. The District Construction Engineer will make space available for Consultant personnel for training **and informational meetings** that is available to Department field personnel. Training is considered an overhead expense in accordance with Federal Acquisition Regulations. Therefore, training costs are not to be charged directly to Department projects **without specific approval from the Construction Project Manager.** However, the District Construction Engineer **may authorize Consultants working on projects within a District to attend District specific informational sessions and meetings (Resident Engineer meeting, etc.)** in which case, the Consultants will be reimbursed for the hours spent in travel and in the session as part of their billable hours. No additional reimbursement will be made for incidental travel **items, including but not limited to, mileage, lodging, meals, etc.** Consultants will not be reimbursed for attendance at meetings **which are considered optional and not project specific, including but not limited to Contractor Quarterly meetings, statewide committee meetings and conferences.**

This is a CPAM Revision, per highlights above. These revisions are in regard to payments to consulting firms for training. The Districts should not be paying consultants to attend contractor quarterly meetings or Construction Conferences as training. Districts need to be in compliance with this change.

Other items:

- *David surveyed the group about the Asphalt Conference. The following were noted: presentations were good, Q&A should have been split between the morning and afternoon sessions rather than just being in the afternoon session, motivational speaker was too long for a one day conference, could have been more questions in the afternoon session*
- *Calvin/Nancy discussed statewide legal issues: projects in liquidated damages, Pipe defect issues, Errors and Omission on design issues/Department seeking reimbursement, CEI negligence issues, Department prevailed on a second project lawsuit that was thrown out, defaulted a contractor and it was ruled a proper default and that the contractor failed to give proper notice for claims*
- *Discussed issues with bids being received and possible ramifications; penny bids, bid protests, new bidders not familiar with FDOT processes and procedures*
- *Dealing with new Surety companies being not familiar with the Department's way of doing business*
- *District 5 is using language on SA's to settle outstanding claim issues. This language is on D-5's website. **Action:** Send out language to DCE's*
- *Contractors requesting Department's calculated schedules to get more time for evidence. Legal cases have shown that these are not relevant since the contract time allowed in contract is what bidder agreed to meet.*
- *Tom Malerk noted the Sampling, Testing and Reporting Guide is being revamped, more user friendly.*
- *Tom Malerk noted that a Steering Committee has redone the LIMS entry sheet specifically for each material type.*
- *Spec 4-3.2 is still being worked on, issue on subcontractor mark ups and 8% mark up with the Prime*
- *Performance turf issue with mowing requirement. Mowing is in the specification, but not clear. Difficult to get the contractor to mow. **Action:** SCO to remove mowing from the Performance Turf specification.*
- *The Department is in the process of having a conduit installation item by size and by foot. This should resolve directional bore vs. open cut.*
- ***Action:** The specification for major item of work being decreased under 75% of the original quantity needs to be reviewed.*

- *Temporary detection systems being maintained by a local agency and back charged to the contractor. This was presented to the LESS committee. Also, this issue can be extended to traffic cabinets. Payment mechanisms needs to be looked at too; per unit, per day, per intersection... **Action:** David to discuss with Stefanie.*
- *District 5 has a lot of ITS systems on the interstate and arterials. Lighting projects in urban areas have potential conflicts with installed ITS systems. District 5 Traffic Ops Department is working with EOR's to help locate ITS hubs on projects.*
- *VECP's- Industry is claiming EOR's are having the perception that VECP's show that their design was incorrect/wrong. Discussed with the DCEs and one indicated that he had heard that comment from an EOR.*
- *District found a project where a completed construction project did not meet the design criteria on cross slope per the plans. Per specification, contractor needs to be checking cross slope and the Department needs to be verifying it. This needs to be checked as construction is progressing.*
- *The unencumbered money for CPF, Fuel and Bit, etc.... Are these built into the performance measures? Yes. These are to be treated as overruns and should be documented what they are. **Action:** SCO will look at accounting for these in the Transportation Commission Report but separating them out as a line item.*
- *Construction would like a 14 day asphalt cure period before thermoplastic is to be installed. Roadway Design and Specs Offices are still at 30 days so asked DCEs again to look for projects on which they can apply the thermo after 14 days and collect reflectivity and CAP Y readings at 14 and 30 days for comparison.*

District 5 Guidelines for H-Contracts Preparation
Reference procedure 375-040-130-j

H-Contracts for repair work to infrastructure not currently under construction

- Document the work site including Daily reports and pictures.
- Send documentation to FHWA coordinator and request DDIR's for reimbursement.
- Make sure that we have copies of the Governor & Transportation Secretary's Executive Orders that suspend the regular rules & purchasing procedures. The suspension continues until the Governor terminates it or the Emergency Order expires, whichever occurs first.
- Prepare a detailed scope of services. Request a lump sum price for the work.
- Prepare an Engineer's Estimate.
- Request funds to be set-up through the District Work Program Office. (The comptroller requires us to obtain funds prior to commitment) Separate phases need to be assigned to the projects for MOT (L =), In-House CEI (61), In-House work (G1), Contractor work (G2), and Consultant CEI (62).
- Solicit quotes from at least 3 contractors. Request a lump sum price for the work. Obtain a Schedule of Values from the contractor who is selected to do the work.
- Complete the Emergency Contract, Form 375-040-61.
- Execute 4 copies of the contract
 - Copy to the contractor
 - Copy to District Contracts for funds encumbrance
 - Copy to Project administrator
 - Copy for file

H-Contracts for repair work to infrastructure on existing construction contracts (A separate H-contract should be prepared for the CEI work associated with this contract. Existing contract prices should be used but a quote will still need to be submitted by the CEI firm)

- Document the work site including Daily reports and pictures.
- Send documentation to FHWA coordinator and request DDIR's for reimbursement.
- Make sure that we have copies of the Governor & Transportation Secretary's Executive Orders that suspend the regular rules & purchasing procedures. The suspension continues until the Governor terminates it or the Emergency Order expires, whichever occurs first.
- Prepare a detailed scope of services. Include a justification of the benefit to the state for utilizing the on-site contractor instead of obtaining quotes.
- Prepare an Engineer's Estimate.
- Request contract number from District Contracts Office.
- Request funds to be set-up through the District Work Program Office. (The comptroller requires us to obtain funds prior to commitment) A financial project number will be assigned. Separate phases need to be assigned to the projects for MOT (L =), In-House CEI (61), In-House work (G1), Contractor work (G2), and Consultant CEI (62).
- Request a price proposal from the contractor on site. (Final price should be lump sum with a break-out of any costs associated with MOT take down prior to the storm and placement of MOT back on the road after the storm.)
- Request a schedule of values from the contractor. We need to be able to justify the lump sum cost when requesting reimbursement from FHWA or FEMA.
- Request contract number from District Contracts Office.
- Complete the Emergency Contract, Form 375-040-61.
- Execute 4 copies of the contract
 - Copy to the contractor
 - Copy to District Contracts for funds encumbrance
 - Copy to Project administrator
 - Copy for file

For questions:

- H-Contract preparation Charles Johnson 850-414-4479
- Comptroller's office Teresa Masten 850-414-4173
- Comptroller's office John Fain 850-414-4309
- Construction Office David Sadler 850-414-4150

07/08 MRP EVALUATION OF CONSTRUCTION PROJECTS



State Maintenance Office
Florida Department of Transportation

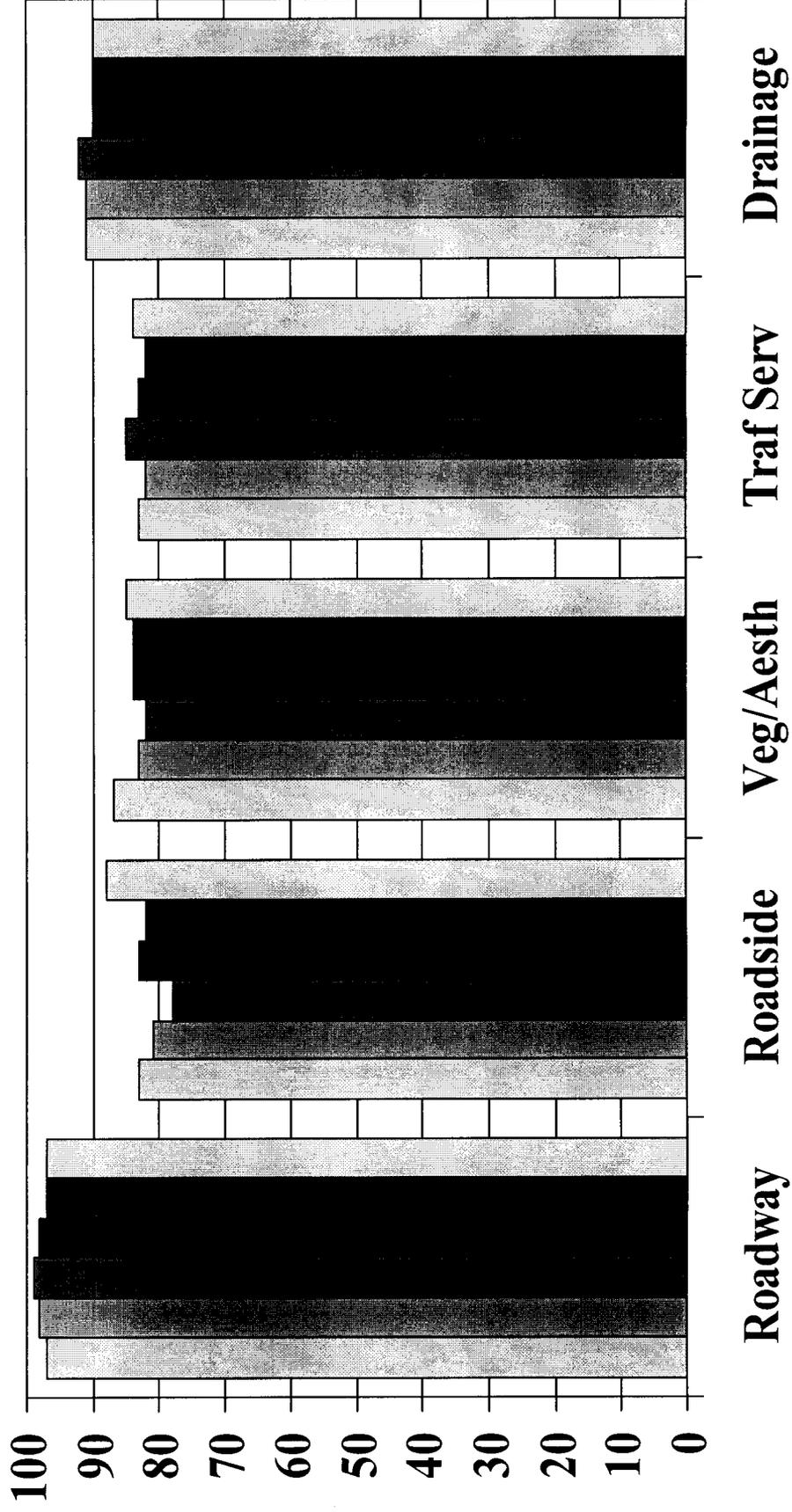
July 23, 2008

MRP Evaluation Process

- Sample locations randomly selected
- Systematic flagging of samples reported as construction complete within the last 12 months
- DMEs verified data
- Raw data compiled statewide
- % meeting standards calculated
- 5 elements/36 characteristics reviewed

MRP Elements:

% Meeting Standards



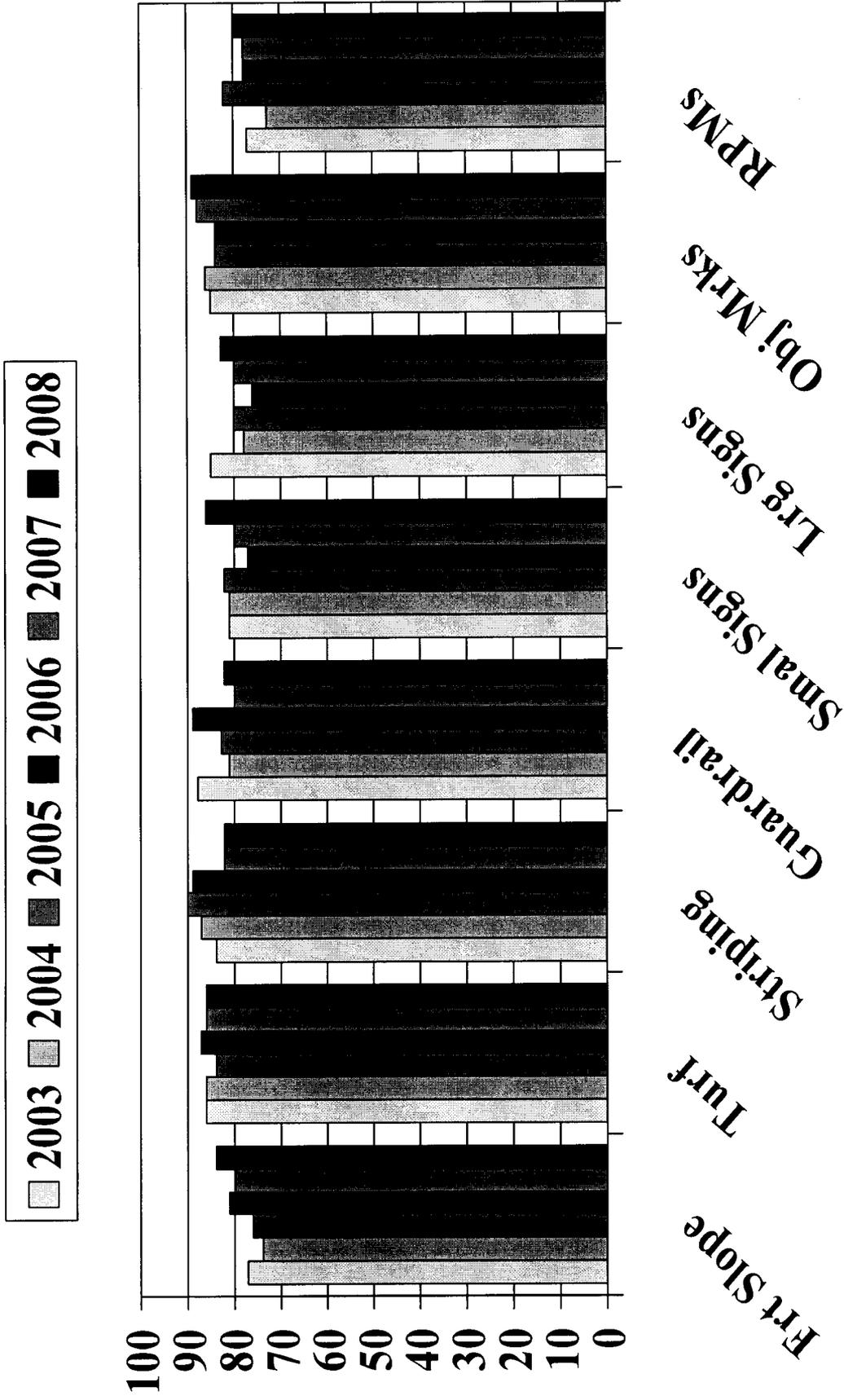
MRP Elements:

% Meeting Standards

Fiscal Year	Roadway	Roadside	Veg/Aesthetics	Traffic Services	Drainage
2002	99	82	85	84	85
2003	97	83	87	83	91
2004	98	81	83	82	91
2005	99	78	82	85	92
2006	98	83	84	83	90
2007	97	82	84	82	90
2008	97	88	85	84	90

MRP Characteristics of Interest:

% Meeting Standards



MRP Characteristics of Interest:

% Meeting Standards

Fiscal Year	Front Slope	Turf	Striping	Guardrail	Signs <30 sf	Signs >30 sf	Object Markers	RPMs
2002	78	81	84	85	75	63	69	97
2003	77	86	84	88	81	85	85	77
2004	74	86	87	81	81	78	86	73
2005	76	84	90	83	82	80	84	82
2006	81	87	89	89	77	76	84	78
2007	80	86	82	80	80	80	88	78
2008	84	86	82	82	86	83	89	80

Increase / Decrease from 06 to 08

- ✓ Small Signs + 9 points
- ✓ Large Signs + 6 points
- ✓ Object Markers + 5 points
- ✓ Front Slope + 3 points
- ✓ RPMs + 2 points
- Turf - 1 point
- Striping - 7 points
- Guardrail - 7 points

Suggested Future Steps

- Continue to focus on:
 - Guardrail
 - Striping
 - Signs
 - Object markers
 - Front slope
 - Turf condition
 - RPMs

STATEWIDE MRP EVALUATION ON CONSTRUCTION PROJECTS

STATEWIDE FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POT HOLE	970	960	99%
	FLEX EDGE RVL	88	88	100%
	FLEX SHO VING	970	970	100%
	FLEX DEP/BUMP	971	935	96%
	FLX PVD SH/TO	943	886	94%
	RIGID POT HOLE	104	101	97%
	RIGID DEP/BMP	104	97	93%
	RGD JOINT/CRK	104	103	99%
	RGC PVD SH/TO	134	134	100%
	ROADWAY ELEMENT	4388	4274	97%
ROADSIDE	SHLDR UNPAVED	916	780	85%
	FRONT SLOPE	940	787	84%
	SLOPE PAVEMENT	48	48	100%
	SIDEWALK	178	177	99%
	FENCE	570	546	96%
	ROADSIDE ELEMENT	2652	2338	88%
VEGETATION-AESTHETICS	ROADSIDE MOW	1023	881	86%
	SLOPE MOW	187	181	97%
	LANDSCAPING	42	35	83%
	TREE TRIMMING	1052	845	80%
	CURB/SW EDGE	229	166	72%
	LITTER REMOVE	1051	906	86%
	TURF CONDITION	1029	887	86%
	VEG/AESTH ELEMENT	4613	3901	85%
TRAFFIC SERVICES	RAISED MARKER	1051	846	80%
	STRIPING	1052	864	82%
	PAVT SYMBOL	414	375	91%
	GUARDRAIL	426	349	82%
	ATTENUATOR	22	22	100%
	SIGNS < 30SF	506	434	86%
	SIGNS > 30SF	205	171	83%
	OBJECT MARKER	643	572	89%
	LIGHTING	250	225	90%
	TRAFFIC SERVICES ELEMENT	4569	3858	84%
DRAINAGE	SIDE/CRS DRAIN	377	324	86%
	RS/MED DITCH	855	820	96%
	OUTFALL DITCH	28	28	100%
	INLETS	495	439	89%
	MISC DRAINAGE	291	216	74%
	SWEEPING	448	429	96%
	DRAINAGE ELEMENT	2494	2256	90%

DISTRICT 1 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POT HOLE	250	246	98%
	FLEX EDGE RVL	14	14	100%
	FLEX SHO VING	250	250	100%
	FLEX DEP/BUMP	250	248	99%
	FLX PVD SH/TO	252	241	96%
	RIGID POT HOLE	6	6	100%
	RIGID DEP/BMP	6	6	100%
	RGD JOINT/CRK	6	6	100%
	RGC PVD SH/TO	2	2	100%
	ROADWAY ELEMENT	1036	1019	98%
ROADSIDE	SHLDR UNPAVED	251	222	88%
	FRONT SLOPE	251	222	88%
	SLOPE PAVEMENT	10	10	100%
	SIDEWALK	6	6	100%
	FENCE	218	215	99%
	ROADSIDE ELEMENT	736	675	92%
VEGETATION-AESTHETICS	ROADSIDE MOW	253	212	84%
	SLOPE MOW	35	35	100%
	LANDSCAPING	0	0	n/a
	TREE TRIMMING	253	230	91%
	CURB/SW EDGE	12	10	83%
	LITTER REMOVE	253	222	88%
	TURF CONDITION	253	179	71%
	VEG/AESTH ELEMENT	1059	888	84%
TRAFFIC SERVICES	RAISED MARKER	253	189	75%
	STRIPING	253	190	75%
	PAVT SYMBOL	50	43	86%
	GUARDRAIL	72	49	68%
	ATTENUATOR	3	3	100%
	SIGNS < 30SF	88	77	88%
	SIGNS > 30SF	64	52	81%
	OBJECT MARKER	130	119	92%
	LIGHTING	43	43	100%
	TRAFFIC SERVICES ELEMENT	956	765	80%
DRAINAGE	SIDE/CRS DRAIN	93	86	92%
	RS/MED DITCH	247	238	96%
	OUTFALL DITCH	1	1	100%
	INLETS	86	83	97%
	MISC DRAINAGE	46	41	89%
	SWEEPING	55	52	95%
	DRAINAGE ELEMENT	528	501	95%

DISTRICT 2 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS	
ROADWAY	FLEX POTHOLE	88	88	100%	
	FLEX EDGE RVL	4	4	100%	
	FLEX SHOVIING	88	88	100%	
	FLEX DEP/BUMP	88	87	99%	
	FLX PVD SH/TO	67	66	99%	
	RIGID POTHOLE	0	0	n/a	
	RIGID DEP/BMP	0	0	n/a	
	RGD JOINT/CRK	0	0	n/a	
	RGC PVD SH/TO	20	20	100%	
	ROADWAY ELEMENT		355	353	99%
ROADSIDE	SHLDR UNPAVED	67	48	72%	
	FRONT SLOPE	68	52	76%	
	SLOPE PAVEMENT	0	0	n/a	
	SIDEWALK	24	24	100%	
	FENCE	29	26	90%	
	ROADSIDE ELEMENT		188	150	80%
VEGETATION-AESTHETICS	ROADSIDE MOW	88	67	76%	
	SLOPE MOW	3	3	100%	
	LANDSCAPING	0	0	n/a	
	TREE TRIMMING	88	62	70%	
	CURB/SW EDGE	29	20	69%	
	LITTER REMOVE	88	76	86%	
	TURF CONDITION	88	82	93%	
	VEG/AESTH ELEMENT		384	310	81%
	TRAFFIC SERVICES	RAISED MARKER	88	80	91%
STRIPING		88	74	84%	
PAVT SYMBOL		43	31	72%	
GUARDRAIL		18	12	67%	
ATTENUATOR		0	0	n/a	
SIGNS < 30SF		48	36	75%	
SIGNS > 30SF		8	8	100%	
OBJECT MARKER		51	39	76%	
LIGHTING		9	9	100%	
TRAFFIC SERVICES ELEMENT			353	289	82%
DRAINAGE	SIDE/CRS DRAIN	36	27	75%	
	RS/MED DITCH	62	53	85%	
	OUTFALL DITCH	2	2	100%	
	INLETS	41	34	83%	
	MISC DRAINAGE	15	9	60%	
	SWEEPING	38	36	95%	
	DRAINAGE ELEMENT		194	161	83%

DISTRICT 3 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POT HOLE	118	118	100%
	FLEX EDGE RVL	16	16	100%
	FLEX SHO VING	118	118	100%
	FLEX DEP/BUMP	118	118	100%
	FLX PVD SH/TO	111	108	97%
	RIGID POT HOLE	0	0	n/a
	RIGID DEP/BMP	0	0	n/a
	RGD JOINT/CRK	0	0	n/a
	RGC PVD SH/TO	12	12	100%
	ROADWAY ELEMENT		493	490
ROADSIDE	SHLDR UNPAVED	107	100	93%
	FRONT SLOPE	109	82	75%
	SLOPE PAVEMENT	6	6	100%
	SIDEWALK	16	16	100%
	FENCE	62	60	97%
ROADSIDE ELEMENT		300	264	88%
VEGETATION-AESTHETICS	ROADSIDE MOW	116	102	88%
	SLOPE MOW	29	29	100%
	LANDSCAPING	0	0	n/a
	TREE TRIMMING	118	82	69%
	CURB/SW EDGE	19	9	47%
	LITTER REMOVE	118	73	62%
	TURF CONDITION	118	113	96%
VEG/AESTH ELEMENT		518	408	79%
TRAFFIC SERVICES	RAISED MARKER	118	108	92%
	STRIPING	118	102	86%
	PAVT SYMBOL	27	25	93%
	GUARDRAIL	33	29	88%
	ATTENUATOR	1	1	100%
	SIGNS < 30SF	42	32	76%
	SIGNS > 30SF	13	6	46%
	OBJECT MARKER	65	51	78%
	LIGHTING	6	5	83%
TRAFFIC SERVICES ELEMENT		423	359	85%
DRAINAGE	SIDE/CRS DRAIN	61	57	93%
	RS/MED DITCH	104	97	93%
	OUTFALL DITCH	6	6	100%
	INLETS	57	51	89%
	MISC DRAINAGE	79	35	44%
	SWEEPING	59	57	97%
DRAINAGE ELEMENT		366	303	83%

DISTRICT 4 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POT HOLE	13	13	100%
	FLEX EDGE RVL	0	0	n/a
	FLEX SHO VING	13	13	100%
	FLEX DEP/BUMP	13	13	100%
	FLX PVD SH/TO	11	10	91%
	RIGID POT HOLE	0	0	n/a
	RIGID DEP/BMP	0	0	n/a
	RGD JOINT/CRK	0	0	n/a
	RGC PVD SH/TO	0	0	n/a
	ROADWAY ELEMENT		50	49
ROADSIDE	SHLDR UNPAVED	10	8	80%
	FRONT SLOPE	11	11	100%
	SLOPE PAVEMENT	1	1	100%
	SIDEWALK	2	2	100%
	FENCE	7	5	71%
	ROADSIDE ELEMENT		31	27
VEGETATION-AESTHETICS	ROADSIDE MOW	13	12	92%
	SLOPE MOW	2	2	100%
	LANDSCAPING	2	2	100%
	TREE TRIMMING	13	11	85%
	CURB/SW EDGE	2	1	50%
	LITTER REMOVE	13	11	85%
	TURF CONDITION	13	10	77%
	VEG/AESTH ELEMENT		58	49
TRAFFIC SERVICES	RAISED MARKER	13	10	77%
	STRIPING	13	13	100%
	PAVT SYMBOL	9	9	100%
	GUARDRAIL	8	7	88%
	ATTENUATOR	0	0	n/a
	SIGNS < 30SF	8	7	88%
	SIGNS > 30SF	3	3	100%
	OBJECT MARKER	7	5	71%
	LIGHTING	5	4	80%
	TRAFFIC SERVICES ELEMENT		66	58
DRAINAGE	SIDE/CRS DRAIN	2	1	50%
	RS/MED DITCH	11	11	100%
	OUTFALL DITCH	1	1	100%
	INLETS	5	4	80%
	MISC DRAINAGE	1	1	100%
	SWEEPING	9	9	100%
	DRAINAGE ELEMENT		29	27

DISTRICT 5 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POT HOLE	161	160	99%
	FLEX EDGE RVL	22	22	100%
	FLEX SHOVING	161	161	100%
	FLEX DEP/BUMP	161	149	93%
	FLX PVD SH/TO	124	117	94%
	RIGID POT HOLE	3	3	100%
	RIGID DEP/BMP	3	3	100%
	RGD JOINT/CRK	3	3	100%
	RGC PVD SH/TO	18	18	100%
	ROADWAY ELEMENT		656	636
ROADSIDE	SHLDR UNPAVED	126	90	71%
	FRONT SLOPE	127	99	78%
	SLOPE PAVEMENT	1	1	100%
	SIDEWALK	39	38	97%
	FENCE	65	62	95%
ROADSIDE ELEMENT		358	290	81%
VEGETATION-AESTHETICS	ROADSIDE MOW	156	149	96%
	SLOPE MOW	18	15	83%
	LANDSCAPING	1	0	0%
	TREE TRIMMING	161	116	72%
	CURB/SW EDGE	49	28	57%
	LITTER REMOVE	161	144	89%
	TURF CONDITION	156	136	87%
	VEG/AESTH ELEMENT		702	588
TRAFFIC SERVICES	RAISED MARKER	161	132	82%
	STRIPING	161	130	81%
	PAVT SYMBOL	77	75	97%
	GUARDRAIL	57	46	81%
	ATTENUATOR	0	0	n/a
	SIGNS < 30SF	77	71	92%
	SIGNS > 30SF	21	19	90%
	OBJECT MARKER	91	84	92%
	LIGHTING	11	10	91%
TRAFFIC SERVICES ELEMENT		656	567	86%
DRAINAGE	SIDE/CRS DRAIN	66	55	83%
	RS/MED DITCH	126	126	100%
	OUTFALL DITCH	2	2	100%
	INLETS	91	80	88%
	MISC DRAINAGE	39	32	82%
	SWEEPING	49	47	96%
	DRAINAGE ELEMENT		373	342

DISTRICT 6 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS	
ROADWAY	FLEX POT HOLE	164	163	99%	
	FLEX EDGE RVL	24	24	100%	
	FLEX SHOVING	164	164	100%	
	FLEX DEP/BUMP	165	149	90%	
	FLX PVD SH/TO	171	153	89%	
	RIGID POT HOLE	45	42	93%	
	RIGID DEP/BMP	45	39	87%	
	RGD JOINT/CRK	45	45	100%	
	RGC PVD SH/TO	50	50	100%	
	ROADWAY ELEMENT		873	829	95%
ROADSIDE	SHLDR UNPAVED	154	144	94%	
	FRONT SLOPE	163	136	83%	
	SLOPE PAVEMENT	23	23	100%	
	SIDEWALK	72	72	100%	
	FENCE	53	47	89%	
	ROADSIDE ELEMENT		465	422	91%
VEGETATION-AESTHETICS	ROADSIDE MOW	179	155	87%	
	SLOPE MOW	32	31	97%	
	LANDSCAPING	30	27	90%	
	TREE TRIMMING	195	149	76%	
	CURB/SW EDGE	92	77	84%	
	LITTER REMOVE	195	171	88%	
	TURF CONDITION	184	168	91%	
	VEG/AESTH ELEMENT		907	778	86%
	TRAFFIC SERVICES	RAISED MARKER	195	131	67%
STRIPING		195	142	73%	
PAVT SYMBOL		128	113	88%	
GUARDRAIL		68	56	82%	
ATTENUATOR		9	9	100%	
SIGNS < 30SF		149	130	87%	
SIGNS > 30SF		36	26	72%	
OBJECT MARKER		101	87	86%	
LIGHTING		62	58	94%	
TRAFFIC SERVICES ELEMENT			943	752	80%
DRAINAGE	SIDE/CRS DRAIN	43	33	77%	
	RS/MED DITCH	95	89	94%	
	OUTFALL DITCH	5	5	100%	
	INLETS	94	78	83%	
	MISC DRAINAGE	31	25	81%	
	SWEEPING	98	92	94%	
	DRAINAGE ELEMENT		366	322	88%

DISTRICT 7 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POT HOLE	76	72	95%
	FLEX EDGE RVL	3	3	100%
	FLEX SHO VING	76	76	100%
	FLEX DEP/BUMP	76	72	95%
	FLX PVD SH/TO	107	106	99%
	RIGID POT HOLE	50	50	100%
	RIGID DEP/BMP	50	49	98%
	RGD JOINT/CRK	50	49	98%
	RGC PVD SH/TO	32	32	100%
	ROADWAY ELEMENT		520	509
ROADSIDE	SHLDR UNPAVED	101	81	80%
	FRONT SLOPE	112	99	88%
	SLOPE PAVEMENT	7	7	100%
	SIDEWALK	19	19	100%
	FENCE	71	69	97%
	ROADSIDE ELEMENT		310	275
VEGETATION-AESTHETICS	ROADSIDE MOW	118	114	97%
	SLOPE MOW	31	31	100%
	LANDSCAPING	1	1	100%
	TREE TRIMMING	124	102	82%
	CURB/SW EDGE	24	19	79%
	LITTER REMOVE	123	113	92%
	TURF CONDITION	117	106	91%
	VEG/AESTH ELEMENT		538	486
TRAFFIC SERVICES	RAISED MARKER	123	103	84%
	STRIPING	124	119	96%
	PAVT SYMBOL	55	55	100%
	GUARDRAIL	88	74	84%
	ATTENUATOR	6	6	100%
	SIGNS < 30SF	66	56	85%
	SIGNS > 30SF	41	39	95%
	OBJECT MARKER	101	92	91%
	LIGHTING	84	74	88%
	TRAFFIC SERVICES ELEMENT		688	618
DRAINAGE	SIDE/CRS DRAIN	46	40	87%
	RS/MED DITCH	110	107	97%
	OUTFALL DITCH	5	5	100%
	INLETS	76	67	88%
	MISC DRAINAGE	57	51	89%
	SWEEPING	83	79	95%
	DRAINAGE ELEMENT		377	349

DISTRICT 8 FY 07/08

MRP ELEMENT	MAINTENANCE RATING CHARACTERISTIC	# OF SITES EVALUATED	# OF SITES MEETING STNDS	% MEETING STANDARDS
ROADWAY	FLEX POTHOLE	100	100	100%
	FLEX EDGE RVL	5	5	100%
	FLEX SHOING	100	100	100%
	FLEX DEP/BUMP	100	99	99%
	FLX PVD SH/TO	100	85	85%
	RIGID POTHOLE	0	0	n/a
	RIGID DEP/BMP	0	0	n/a
	RGD JOINT/CRK	0	0	n/a
	RGC PVD SH/TO	0	0	n/a
	ROADWAY ELEMENT		405	389
ROADSIDE	SHLDR UNPAVED	100	87	87%
	FRONT SLOPE	99	86	87%
	SLOPE PAVEMENT	0	0	n/a
	SIDEWALK	0	0	n/a
	FENCE	65	62	95%
ROADSIDE ELEMENT		264	235	89%
VEGETATION-AESTHETICS	ROADSIDE MOW	100	70	70%
	SLOPE MOW	37	35	95%
	LANDSCAPING	8	5	63%
	TREE TRIMMING	100	93	93%
	CURB/SW EDGE	2	2	100%
	LITTER REMOVE	100	96	96%
	TURF CONDITION	100	93	93%
	VEG/AESTH ELEMENT		447	394
TRAFFIC SERVICES	RAISED MARKER	100	93	93%
	STRIPING	100	94	94%
	PAVT SYMBOL	25	24	96%
	GUARDRAIL	82	76	93%
	ATTENUATOR	3	3	100%
	SIGNS < 30SF	28	25	89%
	SIGNS > 30SF	19	18	95%
	OBJECT MARKER	97	95	98%
	LIGHTING	30	22	73%
TRAFFIC SERVICES ELEMENT		484	450	93%
DRAINAGE	SIDE/CRS DRAIN	30	25	83%
	RS/MED DITCH	100	99	99%
	OUTFALL DITCH	6	6	100%
	INLETS	45	42	93%
	MISC DRAINAGE	23	22	96%
	SWEEPING	57	57	100%
	DRAINAGE ELEMENT		261	251

Specification Requirement

234-9 Method of Measurement.

The quantity to be paid for will be the plan quantity. The pay area will be adjusted based upon the following formula:

Pay Area = Surface Area (Project Average Spread Rate/Specified Spread rate for the Total Thickness).

Where: The project average spread rate is calculated by totaling the arithmetic mean of the average daily spread rate values for each layer, and the specified spread rate for the total thickness is based upon the plan thickness converted to spread rate as defined in 234-8.1.

The pay area shall not exceed 105% of the designed surface area.

234-8 Thickness Requirements.

234-8.1 General: When the Department pays for the pavement on a square yard basis, the Engineer will determine the thickness of the asphalt base based upon the spread rate of the material. The minimum spread rate for the total thickness shall be established from the plan thickness in the following manner: 43.3 lbs/sy multiplied by the maximum specific gravity of the mix (as indicated on the mix design) for every one inch of desired thickness, or as determined by the Engineer. The weight of the mixture shall be determined as provided in 320-2.2 (including the provisions for automatic recordation system).

The spread rate for each individual layer shall be established by the Engineer. The minimum layer spread rate shall be 43.3 lbs/sy multiplied by the maximum specific gravity (G_{mm}) of the mix (as indicated on the mix design) for every one inch of desired thickness.

9.6.4. Rejected Surface

Defective surface will be rejected and will be replaced with a satisfactory surface at no compensation for the replaced area in accordance with **Article 330-12** of the **Specifications**.

Should the rejected surface area not be corrected to the satisfaction of the Project Engineer (PE) or Project Administrator (PA), no pay for the rejected area should be made in accordance with **Subarticle 9-5.3** of the **Specifications**.

9.7 CORE OUT ADJUSTMENT (OPTIONAL BASE ONLY)

Adjustments in accordance to Specifications and Special Provisions:

9.7.1 Square Yard Items (Bit Included)

When the pavement is to be paid for on an area basis, the area to be paid for shall be Plan Quantity subject to the provisions of **Subarticle 9-3.2** of the **Specifications**, adjusted as follows:

- (A) The volume of pavement represented by the difference between the average thickness (determined as specified in **Article 285-7 or 200-9** of the **Standard Specifications**), and specified thickness shall be converted to equivalent square yards (SY) of pavement of specified thickness and the quantity thereby obtained shall be added to, or deducted, from the pay areas as appropriate.

The maximum average thickness of pavement, upon which payment will be made, shall be limited as follows:

Example Core-Out Adjustment

Type Limerock	7.00"
Plan Quantity	8,000 SY

Specifications allow 1/2" per Subarticle 285-7

Actual core out = 7.50"

Therefore = $\frac{7.50" - 7.00"}{7.00"} = .071428571 \times 100 = 7.1428571 \% > 5\%^*$

*Optional Base shall not exceed 105% of the surface area per **Article 285-8** of the **Specifications**.

Therefore: $0.05 \times 8,000 \text{ SY} = 400 \text{ SY}$ Thickness Adjustment

400 SY will need to be shown as a line item adjustment.

(B) Spread Rate Adjustments

Superpave Base shall be adjusted based on the spread of the mixture. The pay area shall be based on the project average spread rate divided by the specified rate. The adjustment shall not exceed 105%. This is calculated using the following equation:

$$\text{Pay Area} = \text{Surface Area (SY)} \times \frac{\text{Project Average Spread rate}}{\text{Specified Spread Rate for Total Thickness}}$$

However, the Project Average Spread Rate is calculated by totaling the arithmetic mean of the average daily spread rate value for each layer. The daily spread rate for each individual layer shall be established by the Engineer. The minimum layer spread rate shall be calculated by multiplying 43.3 Lbs/SY by the Maximum Specific Gravity (Gmm) of the mix (shown on the mix design) for every inch of desired thickness, as described using the following formula:

$$43.3 \text{ Lbs/SY} \times \text{Gmm} \times t$$

The Specified Spread Rate for the Total Thickness is based upon the plan thickness converted to Spread Rate.

Example: To calculate the Project Spread Rate:

A project with Superpave Base Asphalt, Type B 12.5, Group 9 (pay Item 285-709) that is 6" thick.

Plan Quantity Area = 46,800 SY
Unit Price = \$10.08 per SY
Specified Spread Rate = 600 Lbs/SY

The Contractor will lay the 6" in 2 courses; 3" each course

Target Spread Rate set at 312 Lbs/SY per layer (per Engineer prior to paving).

The Spread Rate for each layer (from the QC Report) will be summarized for the overall Spread for each layer as shown below:

► Layer 1

Day 1	321.17 Lbs/SY
Day 2	309.33 Lbs/SY
Day 3	310.60 Lbs/SY
Day 4	<u>308.11 Lbs/SY</u>
Total	= 1249.21 Lbs/SY

The Average mean = $1249.21 \div 4 = 312.30 = 312$ Lbs/SY

► Layer 2

Day 5	318.22 Lbs/SY
Day 6	307.13 Lbs/SY
Day 7	315.45 Lbs/SY
Day 8	<u>303.23 Lbs/SY</u>
Total	= 1244.03 Lbs/SY

The Average Mean = $1244.03 \div 4 = 311.01 = 311$ Lbs/SY

Total Average Mean = 312
 $+ \underline{311}$
 623

Project Average Spread Rate = 623 Lbs/SY

The Project Specified Rate for Total Thickness = 600 Lbs/SY

The equation, per **Specifications**:

Pay Area = Surface Area (SY) X $\frac{\text{Project Average Spread rate}}{\text{Specified Spread Rate for Total Thickness}}$

Plan Quantity total area = 46,800 SY, so Pay Area =

$$46,800 \times \frac{(623)}{(600)} = 48,594 \text{ SY}$$

And $48,594$
 $- \underline{46,800}$ (Plan Quantity)
 $1,794$ SY Spread Rate Adjustment

1,794 SY will need to be shown as a line item adjustment in SiteManager
And $1,794 \text{ SY} \times \$10.08 = \$18,083.52$ is the amount the Contractor will receive based on the Specifications for the Spread Rate Adjustment.

Reminder: Maximum spread rate will not exceed 105%: $600 \times 1.05 = 630$ Lbs/SY maximum we can pay. However, in the above example the Contractor will receive payment for all asphalt produced and accepted due to the spread rate not exceeding 105% per **Specifications**.

(C) Plan Quantity Vs Road Report:

In some instances, the CQC road report will show more or less square yards than plan quantity. The contractor should use due care when reporting square yards to accurately report the length and width of area being placed. Should the square yards not match plan quantity, the yardage will be adjusted to pay plan quantity and paid on the last composite pay factor adjustment. The PA shall use reasonable investigation to see if plan quantity is in error and warrants an adjustment.

(D) Composite Base:

Composite base is a combination of granular material and asphalt. The Subbase (granular) will be cored prior to placing asphalt. All areas over 1/2" or under 1/4" will be corrected prior to placing asphalt. The asphalt is based on a spread converting inches to pounds according to **Article 234-8** of the **Specifications** and will be controlled within +/-5% of the specified spread rate. The average spread rate of the asphalt shall be converted back to inches by reversing the formula specified in **Article 234-8.1** of the **Specifications** and added to the average thickness of the Subbase. The thickness adjustment will then be applied for the composite base pay item limited to a maximum 105% of the surface area, as specified in **Article 285-8**. (See attached example below.) For Bituminous Adjustments on Composite base, refer to **Chapter 6, Section 6-8** of this **Manual**. **Section 234** of the **Specifications, Basis of Payment**, refers to **Section 334** of the **Specifications**, which determines requirements of mixture, and CPF.

Example: Thickness Adjustment

Composite base = 4" Limerock and 4" Type B-12.5 asphalt

Convert 4" of asphalt to Lbs/SY by the following formula as specified in **Article 234-8.1** of the **Specifications**.

$43.3^* \times \text{inches} \times \text{Gmm}^{**}$

*43.3 is a constant derived by the State Materials Office.

LOT 20

Project Number 23842415201

Pay Item # 285709

Directions: Enter data in blue cells, red cells are formulas.

Given:

Plan Quantity	=	2308 SY	Make sure u enter these right
Final Quantity	=	1761 SY	
FQ-PQ	=	-547 SY	If PQ item, is this a ch or err?
Final Tons	=	565.34 TN	
Unit Price	=	\$8.40 \$ Per S.Y.	
Typ Sec SR lbs/sy	=	6 in	
Design Mix gmm	=	2.468 gmm	Be sure to plug in the correct gmm from design mix.
Job lbs. Per Inch	=	106.86	
Lift Thickness	=	2 in	

Results:

Specified SR	=	641.16 lbs	
Avg Daily SR	=	213.72 lbs/sy w/in +/- 5%	
Proj Avg SR	=	642.07 lbs/sy	
Max SR allowed	=	673.22 lbs/sy	
Proj. Avg sr/Spec. sr	=	1.001419303 a ratio	
Add Thickness Adj. Item	=	2 Adjusted Square Yards	
Adjusted SY x Unit Price	=	\$16.80 Dollar am't of adjustment	

Condition: If cell > than 1.05, pay 1.05 max

#VALUE!
#VALUE!

the max ratio
Adjusted Square Yards
Dollar am't of adjustment

OLD method
Under 105%

Lot 20

Project Number 24542515201

Pay Item # 285715

Directions: Enter data in blue cells, red cells are formulas.

Given:

Plan Quantity	=	2308 SY	Make sure u enter these right
Final Quantity	=	1761 SY	
FQ-PQ	=	-547 SY	If PQ item, is this a ch or err?
Final Tons	=	565.34 TN	
Unit Price	=	\$8.40 Per S.Y.	
Typical Sec Inches	=	6 in	
Design Mix gmm	=	2.468 gmm	Be sure to plug in the correct gmm from design mix.
Job lbs. Per Inch	=	106.86	
Lift Thickness	=	2 in	

Results:

Specified SR Target Thickness	=	641.16 lbs
Avg Daily SR/Lift Thickness	=	213.72 lbs/sy w/in +/- 5%
Max SR allowed	=	673.22 lbs/sy
Min SR allowed	=	609.10 lbs/sy
Arithmetic Mean	=	214.57 lbs/sy Avg. Daily Spread Per Lift #1
Arithmetic Mean	=	214.23 lbs/sy Avg. Daily Spread Per Lift #2
Arithmetic Mean	=	214.89 lbs/sy Avg. Daily Spread Per Lift #3
Arithmetic Mean	=	0.00 lbs/sy Avg. Daily Spread Per Lift #4
Arithmetic Mean	=	0.00 lbs/sy Avg. Daily Spread Per Lift #5
Proj Avg SR	=	643.69 lbs/sy
Proj. Avg SR/Spec. SR	=	1.003945973 a ratio
Add Thickness Adj. Item	=	7 Adjusted Square Yards
Adjusted SY x Unit Price	=	\$58.80 Dollar am't of adjustment

Condition: If cell > than 1.05, pay 1.05 max

#VALUE! the max ratio
 #VALUE! Adjusted Square Yards
 #VALUE! Dollar am't of adjustment

New method

Asphalt Roadway - Daily Report of Quality Control

Date: February 19, 2007 Page No. 3 of 4

Fin. Project ID: 23842415201 Material No. / ID: 123L Type of Mix: 12.5C Mix Design No.: SP 06-4645C

Intended use: Base Plant No.: A0715 Lot No.: 12 Intended Lot Size: 4000

Sublot	Lanes / Lift # of #	Station To Station		Loads	Linear Ft	Width	SY	Tons	Spread
1	Bike Path 1/3	1907 + 07	1907 + 63	1	56.00	4.00	24.89	4.19	336.68
1	L3 1/3	1907 + 07	1907 + 63	1	56.00	12.00	74.67	12.58	336.95
1	L2 1/3	1907 + 07	1907 + 63	1-2	56.00	9.00	56.00	9.43	336.79
1	L2 1/3	1908 + 00	1907 + 07	2	93.00	3.00	31.00	5.22	336.77
1	L1 1/3	1908 + 00	1907 + 07	2-3	93.00	7.00	72.33	12.18	336.79
1	Wash. St 1/3	29 + 45	29 + 33	3	12.00	12.00	16.00	2.69	336.25
1	Bike Path 2/3	1907 + 07	1907 + 63	3	56.00	4.00	24.89	4.19	336.68
1	L3 2/3	1907 + 07	1907 + 63	3	56.00	12.00	74.67	12.58	336.95
1	L2 2/3	1907 + 07	1907 + 63	3-4	56.00	9.00	56.00	9.43	336.79
1	L2 2/3	1908 + 00	1907 + 07	4	93.00	3.00	31.00	5.22	336.77
1	L1 2/3	1908 + 00	1907 + 07	4-5	93.00	7.00	72.33	12.18	336.79
1	Wash. St 2/3	29 + 45	29 + 33	5	12.00	12.00	16.00	2.74	342.50
		+	+						

2020.23 / 6 = 336.71

2026.48 / 6 = 337.75

Record Of Bituminous Materials		Total =	549.78	92.63
		Average Spread Rate =	336.97	
		Target Spread Rate =	324.0	

Pay Item No.									
Grade Of Asphalt									
FDOT Calibration Tank No.									
Beginning IN									
Gallons									
Ending IN									
Gallons									
Time of Day after Unloading	AM	AM	PM	AM	PM				
Temperature F									
Net Hot Gallons									
Correction Factor									
Prev. Gallons @ 60F									
Today Gallons @ 60F									
Accum. Gallons @ 60F									
SY Covered									
Spread Rate Gal/SY									

Paving Completed									
Pay Item	2	2	8	5	7	0	9		
Measured In	Tons		SY		This Lot				
Prev. Adj. Tot.	0.00		0.00		0.00				
Today's	92.63		366.52		92.63				
Total	92.63		366.52		92.63				
Waste	0.00		0		0.00				
Adj. Total	92.63		366.52		92.63				
LOT Density Calculations				Temperature F					
Density Required				Established	310				
Prev. Tons	0.00		Average	315					
Today's	0.00		Maximum	320					
Total	0.00		Minimum	310					
No Density Required				Average of 1st 5	315				
Prev. Tons	0.00								
Today's	92.63								
Total	92.63								

B45251373

Qualified Technician ID# (TIN)

9/5/07

Remarks: Night Shift

See page 1 of 4 for tack

Asphalt Roadway - Daily Report of Quality Control

Date February 19, 2007 Page No. 4 of 4

Fin. Project ID: 23842415201 Material No. / ID: 123L Type of Mix: 12.5C Mix Design No.: SP 06-4645C

Intended use: Base Plant No.: A0715 Lot No.: 12 Intended Lot Size: 4000

Sublot	Lanes / Lift # of #	Station To Station		Loads	Linear Ft	Width	SY	Tons	Spread		
1	Bike Path 3/3	1907	+ 07	1907	+ 63	5	56.00	4.00	24.89	4.19	336.68
1	L3 3/3	1907	+ 07	1907	+ 63	5	56.00	12.00	74.67	12.58	336.95
1	L2 3/3	1907	+ 07	1907	+ 63	5-6	56.00	9.00	56.00	9.43	336.79
1	L2 3/3	1908	+ 00	1907	+ 07	6	93.00	3.00	31.00	5.22	336.77
1	L1 3/3	1908	+ 00	1907	+ 07	6	93.00	7.00	72.33	12.18	336.79
1	Wash. St 3/3	29	+ 45	29	+ 33	6-7	12.00	12.00	16.00	2.71	338.75
			+		+						
			+		+						
			+		+						
			+		+						
			+		+						
			+		+						
			+		+						

Record Of Bituminous Materials				Total =	274.89	46.31
				Average Spread Rate =	336.93	
				Target Spread Rate =	324.0	

Pay Item No.				Paving Completed													
Grade Of Asphalt				Pay Item	2	2	8	5	7	0	9						
FDOT Calibration Tank No.				Measured In	Tons		SY		This Lot								
Beginning IN				Prev. Adj. Tot.	92.63		366.52		92.63								
Gallons				Todays	80.33		91.63		80.33								
Ending IN				Total	172.96		458.15		172.96								
Gallons				Waste	34.02		0		34.02								
Time of Day after Unloading	AM		AM	Adj. Total	138.94		458.15		138.94								
Temperature F				LOT Density Calculations				Temperature F									
Net Hot Gallons				Density Required				Established									
Correction Factor				Prev. Tons				Average									
Prev. Gallons @ 60F				0.00				315									
Today Gallons @ 60F				Todays				Maximum									
Accum. Gallons @ 60F				0.00				320									
SY Covered				Total				Minimum									
Spread Rate Gal/SY				No Density Required				Average of 1st 5									
				Prev. Tons				310									
				92.63				315									
				Todays				320									
				46.31				310									
				Total				315									
				138.94													

B45251373

Qualified Technician ID# (TIN)

Handwritten signature and date: 4/5/07

Remarks: Night Shift

See page 1 of 4 for tack

2022.73 / 6 = 337.12

Asphalt Roadway - Daily Report of Quality Control

Date **February 20, 2007** Page No. **2** of **3**

Fin. Project ID: **23842415201** Material No. / ID: **123L** Type of Mfc: **12.5C** Mix Design No.: **SP06-4645C**

Intended use: **BASE** Plant No.: **A0715** Lot No.: **12** Intended Lot Size: **4000**

Subplot	Lanes / Lift # of #	Station To Station		Loads	Linear Ft	Width	SY	Tons	Spread
1	BIKE PATH 1/3	1907 + 07	1906 + 83	1	24.00	4.00	10.67	2.27	425.49
1	L-3 1/3	1907 + 07	1906 + 83	1	24.00	12.00	32.00	6.81	425.63
1	L-2 1/3	1907 + 07	1906 + 38	1-2	69.00	12.00	92.00	19.58	425.65
1	L-1 1/3	1907 + 07	1906 + 20	2-3	87.00	7.00	67.67	14.40	425.59
1	WASH. STREET 1/3	29 + 45	29 + 19	3	26.00	24.00	69.33	14.76	425.79
1	BIKE PATH 2/3	1907 + 07	1906 + 83	3	24.00	4.00	10.67	2.27	425.49
1	L-3 2/3	1907 + 07	1906 + 83	3-4	24.00	12.00	32.00	6.81	425.63
1	L-2 2/3	1907 + 07	1906 + 38	4-5	69.00	12.00	92.00	19.58	425.65
1	L-1 2/3	1907 + 07	1906 + 20	5	87.00	7.00	67.67	14.40	425.59
1	WASH. STREET 2/3	29 + 45	29 + 19	5-5	26.00	24.00	69.33	14.76	425.79
		+	+						
		+	+						
		+	+						

2128.15 / 5 = 425.63

Record Of Bituminous Materials				Total =		543.34	115.64				
				Average Spread Rate =		425.66					
				Target Spread Rate =		324.0					
				Paving Completed							
Pay Item No.				Pay Item	2	2	8	5	7	0	9
Grade Of Asphalt				Measured In	Tons		SY		This Lot		
FDOT Calibration Tank No.				Prev. Adj. Tot.	138.94		458.15		138.94		
Beginning IN				Today's	115.64		181.11		115.64		
Gallons				Total	254.58		639.26		254.58		
Ending IN				Waste	0.00		0		0.00		
Gallons				Adj. Total	254.58		639.26		254.58		
Time of Day after Unloading	AM PM	AM PM	AM PM	LOT Density Calculations				Temperature F			
Temperature F				Density Required				Established		310	
Net Hot Gallons				Prev. Tons	0.00		Average		315		
Correction Factor				Today's	0.00		Maximum		320		
Prev. Gallons @ 60F				Total	0.00		Minimum		315		
Today Gallons @ 60F				No Density Required				Average of 1st 5		315	
Accum. Gallons @ 60F				Prev. Tons	138.94						
SY Covered				Today's	115.64						
Spread Rate Gal/SY				Total	254.58						

B45251373

Qualified Technician ID# (TIN)

2/20/07

Remarks: **PM SHIFT. SEE PAGE 1 OF 3 FOR TACK. SPREAD RAN HIGH DUE TO CORRECTING GRADE AFTER OLD CONCRETE ROAD TORN OUT IN INTERSECTION.**

Lot 12

Project Number 23842415201

Pay Item # 285709

Directions: Enter data in blue cells, red cells are formulas.

Given:

Plan Quantity	=	2308 SY	Make sure u enter these right
Final Quantity	=	547 SY	
FQ-PQ	=	-1761 SY	If PQ item, is this a ch or err?
Final Tons	=	312.46 TN	
Unit Price	=	\$8.40 \$ Per S.Y.	
Typ Sec SR lbs/sy	=	6 in	
Design Mix gmm	=	2.501 gmm	Be sure to plug in the correct gmm from design mix.
Job lbs. Per Inch	=	108.29	
Lift Thickness	=	2 in	

Results:

Specified SR	=	649.74 lbs	
Avg Daily SR	=	216.58 lbs/sy w/in +/- 5%	
Proj Avg SR	=	1142.45 lbs/sy	
Max SR allowed	=	682.23 lbs/sy	
Proj. Avg sr/Spec. sr	=	1.758318712 a ratio	
Add Thickness Adj. Item	=	415 Adjusted Square Yards	
Adjusted SY x Unit Price	=	\$3,486.00 Dollar am't of adjustment	

Condition: If cell > than 1.05, pay 1.05 max

1.05 the max ratio
27 Adjusted Square Yards
\$226.80 Dollar am't of adjustment

OLD method Not according to Spec.
Over 1.05?

Lot 12

Project Number 24542515201

Pay Item # 285715

Directions: Enter data in blue cells, red cells are formulas.

Given:

Plan Quantity	=	2308 SY	Make sure u enter these right
Final Quantity	=	547 SY	
FQ-PQ	=	-1761 SY	If PQ item, is this a ch or err?
Final Tons	=	312.46 TN	
Unit Price	=	\$8.40 Per S.Y.	
Typical Sec Inches	=	6 in	
Design Mix gmm	=	2.501 gmm	Be sure to plug in the correct gmm from design mix.
Job lbs. Per Inch	=	108.29	
Lift Thickness	=	2 in	

Results:

Specified SR Target Thickness	=	649.74 lbs
Avg Daily SR/Lift Thickness	=	216.58 lbs/sy w/in +/- 5%
Max SR allowed	=	682.23 lbs/sy
Min SR allowed	=	617.25 lbs/sy
Arithmetic Mean	=	381.17 lbs/sy Avg. Daily Spread Per Lift #1
Arithmetic Mean	=	381.69 lbs/sy Avg. Daily Spread Per Lift #2
Arithmetic Mean	=	381.52 lbs/sy Avg. Daily Spread Per Lift #3
Arithmetic Mean	=	0.00 lbs/sy Avg. Daily Spread Per Lift #4
Arithmetic Mean	=	0.00 lbs/sy Avg. Daily Spread Per Lift #5
Proj Avg SR	=	1144.38 lbs/sy
Proj. Avg SR/Spec. SR	=	1.761289131 a ratio
Add Thickness Adj. Item	=	416 Adjusted Square Yards
Adjusted SY x Unit Price	=	\$3,494.40 Dollar am't of adjustment

Condition: If cell > than 1.05, pay 1.05 max

1.05 the max ratio
 27 Adjusted Square Yards
 \$226.80 Dollar am't of adjustment

New Method
Over 105%

2009/2009

Florida Department of Transportation

TRAINING, PHASE I AND II STEEL INSPECTION

Training, Phase I and II Steel Inspection

Training Phase I Steel Inspection							
#	Provider	Course Title	Time	Cost	Exams		
					Written	Hands-On	Cert.
1	FDOT	Construction Math	Self-Study	N/A	Yes	No	No
2	FDOT	Construction Plans Reading	Self-Study	N/A	Yes	No	No
3	FDOT	Structures I	Self-Study	N/A	Yes	No	No
4	FDOT	Structures II	Self-Study	N/A	Yes	No	No
5	FDOT	Structures III	Self-Study	N/A	Yes	No	No
6	FDOT	Structural Bolting Inspection	4 Days	N/A	Yes	Yes	Yes
7	FDOT	Welding Inspection	5 Days	N/A	Yes	Yes	No
8	FDOT	Florida Projects	4.5 Days	N/A	No	No	No
9	FDOT	Specification and ASTM Review	3 Days	N/A	Yes	No	No
10	FDOT	Non-Destructive Examination	5 Days	N/A	Yes	Yes	Yes
11	SSPC	Fundamentals of Protective Coatings (C1)	5 Days	\$995.00	Yes	No	No
12	SSPC	Bridge Coating Inspector	5 Days	\$1,445.00	Yes	Yes	Yes
13	AGA	Galvanize It Seminar & Plant Tour	1 Day	N/A	No	No	No
14	FHWA	Engineering Concepts for Bridge Inspections	5 Days	\$650.00	Yes	No	No
15	FHWA	Bridge Construction Inspection	4.5 Days	\$600.00	No	No	No
16	FHWA	Fracture Critical Inspection Techniques for Steel Bridges	3.5 Days	\$460.00	No	No	No
17	FHWA	Inspection & Maintenance of Ancillary Highway Structures	2 Days	\$300.00	No	No	No

Training, Phase I and II Steel Inspection

Training Phase II Steel Inspection		
#	Provider	
1	FDOT	Certification as a Level II in Die Penetrate Examination
2	FDOT	Certification as a Level II in Magnetic Particle Examination
3	FDOT	Certification as a Level II in Ultrasound Examination
4	FDOT	Certification as a Radiographic Interpreter
5	FDOT	Certification as a Certified Welding Inspector

All Phase II Training requires written and hands-on testing for certification.

For example, the Certified Welder Inspector Certification requires the passing of 3 Exams.

Exam 1: 100 question, multiple choice test on general knowledge (2 hrs.)

Exam 2: 64 question multiple choice test on your selected code (2 hrs.)

Exam 3: Hands-on testing in the use of various inspection tools and knowledge (2 hrs.)

Training, Phase I and II Steel Inspection

Training Phase I Steel Inspection Course Descriptions

1-5. Construction Math, Construction Plans Reading, Structures I, II, and III:

DESCRIPTION:

These are self-study tutorials. All course material and exams should be obtained and coordinated with the District Construction Training Coordinator.

6. Structural Bolting Inspection:

DESCRIPTION:

Hands-on and educational learning, leading to the attendee becoming an FDOT Certified Bolting Inspector. Recommendations from the AASHTO/NSBA Steel Bridge Collaboration on Qualification of Structural Bolting Inspectors will be used for curricula.

7. Welding Inspection:

DESCRIPTION:

A general course of knowledge, skills and abilities needed to perform basic functions as a steel inspector. Topics to be covered will be, but not limited to, welding processes, welding metallurgy, weld joint geometry, visual and other inspection processes, weld symbols, etc.

8. Florida Projects

DESCRIPTION

A current overview of various District projects that are being inspected by KTA, US Bureau Veritas, and MACTEC. Each firm will present a project or projects that they are inspecting and the various and unique aspects of those particular projects.

9. Specification and ASTM Review:

DESCRIPTION

A comprehensive review and examination of the specifications and ASTMs that govern the fabrication and coating of structural and miscellaneous steel products used on FDOT projects. Also to be covered, State Materials Manual Chapters 5 & 11.

10. Non-Destructive Examination:

DESCRIPTION

An intense educational and hands-on course covering the 4 main non-destructive examination methods used in the inspection of structural and miscellaneous steels. This is the first phase of obtaining certification on the various methods of examination.

11. Fundamentals of Protective Coatings (C1)

DESCRIPTION

This course provides a practical and comprehensive overview for those who are new to the protective coatings industry. It is also an ideal refresher for reviewing the fundamentals of corrosion and the use of coatings as a protective mechanism against corrosion and deterioration of industrial structures.

COURSE CONTENT

- Corrosion and Corrosion Control
- Coating Types and Their Mechanisms and Protection
- Surface Preparation for Painting
- Application of Coatings
- Inspection and Quality Control

Training, Phase I and II Steel Inspection

- Coatings for Steel Structures
- Coating Degradation, Defects, and Failures
- Coating of Concrete Surfaces
- Safety in Painting Operations

12. Bridge Coating Inspector

DESCRIPTION

The Coatings Inspection Training and Certification for the Bridge Industry program has been developed by an expert task group assembled of bridge facility owners (DOT's and Bridge and Tunnel Authorities) to serve as a certification process for bridge coatings inspectors. The program consists of three days of lecture and practical hands-on instruction, a course examination and a certification examination. This program is designed for bridge coatings inspection personnel from facility owners, contractors and consultants.

The BCI course covers the fundamentals of how to inspect surface preparation and application of protective coatings on bridge steel. These fundamentals are applicable to those who inspect coating work both in the shop and in the field. The course covers unique situations that will affect inspection in the field (e.g. containment, field safety hazards, changing weather conditions), as well as the fundamental inspection skills required to inspect new bridge steel painted in the shop or in the field or maintenance systems applied in the field.

13. Galvanize It Seminar & Plant Tour

DESCRIPTION

Presented by the American Galvanizers Association (AGA) staff and/or members of AGA. This educational seminar will assist you in the design and integration of corrosion protection into your project. The seminar material includes corrosion theory, design of galvanized steel products for quality galvanizing, discussion and video footage of the actual galvanizing process, pertinent ASTM specifications, inspection and painting over the galvanized coating, cathodic protection, electrochemical and galvanic corrosion, and much more.

14. STRUCTURES

COURSE NUMBER: FHWA-NHI-130054

COURSE TITLE: Engineering Concepts for Bridge Inspectors

DESCRIPTION:

This course provides knowledge of the elementary concepts in bridge engineering that are needed by bridge inspectors. Materials, material properties, bridge components and details, loadings, stresses and strains, and deterioration of bridge materials and members are covered. The course concludes with an examination reviewing key elements of bridge engineering.

This course prepares technicians and other personnel who have a limited knowledge of bridge engineering for a more intensive course in bridge inspection, such as the 2-week course FHWA-NHI-130055 Safety Inspection of In-Service Bridges.

15. STRUCTURES

COURSE NUMBER: FHWA-NHI-130088

COURSE TITLE: Bridge Construction Inspection

DESCRIPTION:

The Bridge Construction Inspection Course (BCIC) is one of the core curriculum initiatives cited by AASHTO, FHWA, and the five regional organizations. These core curriculum initiatives are being pursued in order to maximize regional, public, and industry resources in the development

Training, Phase I and II Steel Inspection

of core training and qualification-based certification programs, improve the quality of bridge construction, and promote uniformity in training content and qualification requirements.

Overall, the BCIC improves quality, ensures uniformity, and establishes minimum competencies for bridge construction inspection. The underlying themes of the course can be broken down into key segments. The BCIC will provide the construction inspector with:

1. The requisite knowledge of construction that will make him/her an effective inspector
2. An overall awareness of the problems and consequences that can arise during construction and how these factors will impact the safety and service life of the structure
3. A knowledge of the inspections that should be performed to confirm conformance to the contract documents, or document contract nonconformance

16. STRUCTURES

COURSE NUMBER: FHWA-NHI-130078

COURSE TITLE: Fracture Critical Inspection Techniques for Steel Bridges

DESCRIPTION:

The course curriculum reflects current practices and addresses new and emerging technologies available to bridge inspectors. In addition, the course includes exemplary training and hands-on workshops for popular types of nondestructive testing (NDT) equipment and a case study for the preparation of an inspection plan for a fracture critical bridge.

The first day of the course focuses on the concept of fracture critical members (FCMs), FCM identification, failure mechanics, and fatigue in metal. These fundamentals are followed by an overview of NDT methods. Day two provides demonstration sessions and hands-on applications of NDT techniques for dye penetrant, magnetic particle testing, Eddy current, and ultrasonic testing. Days three and four emphasize inspection procedures and reporting for common FCMs, including problematic details, I-girders, floor beams, trusses, box girders, pin and hanger assemblies, arch ties, eyebars, and cross girders/pier caps. A case study of the preparation of an inspection plan of a fracture critical bridge closes out the presentation. The course includes daily participant assignments. The schedule can be tailored to specific agency requirements.

17. STRUCTURES

COURSE NUMBER: FHWA-NHI-130087

COURSE TITLE: Inspection and Maintenance of Ancillary Highway Structures

DESCRIPTION:

This course provides training in the inspection and maintenance of ancillary structures, such as structural supports for highway signs, luminaries, and traffic signals. Its goal is to provide agencies with information to aid in establishing and conducting an inspection program in accordance with the FHWA "Guidelines for the Installation, Inspection, Maintenance, and Repair of Structural Supports for Highway Signs, Luminaries, and Traffic Signals."