

**DATE:** April 5, 2004

**TO:** Basis of Estimate Handbook Users

**FROM:** David Duncan

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**SUBJECT:** **Mid Year Basis of Estimate Handbook  
Electronic Edition - Summary of Major Changes**

The Coordination Team made recommendations for the implementation of changes to pay items and specifications that have been developed within the last six months. The implementation plan for each issue has been approved by the appropriate office and concurred to by the Directors of both the Office of Design, and Highway Operations. A detailed description of each of these changes and their implementation date is attached. The following is a summary of issues addressed in this update:

<b>Group</b>	<b>Minor Changes/Updates/Corrections</b>	<b>Effective Letting</b>	<b>Page No.</b>
Erosion Control	Mowing	As soon as practical	2
EMO	Landscape Complete	As soon as practical	2
Roadway	Fencing	July 2004	3

<b>Group</b>	<b>Issue Description</b>	<b>Effective Letting</b>	<b>Page No.</b>
Pavement Design	Pavement Thickness	January 2005	4 - 5
Structures	Steel Sheet Piling	January 2005	6 - 7

## **General Notices**

### ***Issue: Mowing***

The BOE detail for mowing has been updated to better estimate the area to be mowed. Please update plan quantities based on the information below:

This item is included for routine maintenance of existing, permanent, and temporary grassing until the project is completed. Use total grassed area, plus any other undisturbed areas within the project limits that need to be mowed during the life of the contract. Obtain the mowing cycle from the local Maintenance Office and multiply the area by the number of mowing cycles to be performed during the life of the contract. Convert units to acres (hectares), as necessary. Detail calculations in the comp book

### ***Issue: Documentation for Landscape Complete***

When using item 580-1-A Landscape Complete- LS, the Designer is required to tabulate all of the plants and related work in the plans, according to the instructions in the Plans Preparation Manual, Volume 2, Chapter 26. The computation book will use Form 700-050-05 Lump Sum Quantities. On the form, refer to the plans tabulation sheet for calculations; do not repeat tabulation sheet information on the form.

**Effective July 2004 letting  
Updated Structure Only**

**Issue:        Fencing**

Corrected structure to the October 1, 2003 BOE cover letter

550-10-ABC	Fencing	LF
2550-10-ABC	Fencing	MI

- a = Fence Type
- 1 (Type A)
  - 2 (Type B)
  - 3 (Type R ~~Full Enclosure~~)
  - 4 (Type R ~~Partial Enclosure~~)
  - 9 (Special)
- b = Fabric/Material Height
- 1 (0.0- 5.0' Height)    Note: Type A Standard
  - 2 (5.1- 6.0' Height)    Note: Type B Standard
  - 3 (6.1- 7.0' Height)
  - 4 (7.1- 8.0' Height)
  - 5 (8.1-10.0' Height)
- 
- 1 (0.0- 1.5m Height)    Note: Type A Standard
  - 2 (1.6- 1.8m Height)    Note: Type B Standard
  - 3 (1.9- 2.1m Height)
  - 4 (2.2- 2.4m Height)
  - 5 (2.5- 3.1m Height)
- c = Details/Features
- 0 (Standard)
  - 1 (w/Barbed Wire Attmt)(Type B Only)
  - 2 (w/Vinyl Coating)(Type B Only)
  - 3 (Full Enclosure)(Type R Only)
  - 4 (Partial Enclosure)(Type R Only)
  - 5 (Vertical)(Type R Only)
  - 8 (Reset Existing)
  - 9 (Special)

*Effective January 2005 letting*

***Issue: Asphalt Pavement***

***History:***

1. The Department has decided to show asphalt pavement layers in inches rather than by spread rate in the plans, but will continue to pay for the asphalt by the ton. For estimating quantities, use:
  - a. 

Type SP Structural Courses	110 lb/yd <sup>2</sup> per 1 in.	(24 kg/m <sup>2</sup> ) per 10 mm
FC-5 (Rubber)	80 lb/yd <sup>2</sup>	(44 kg/m <sup>2</sup> )
FC-5 (PG 76-22)	80 lb/yd <sup>2</sup>	(44 kg/m <sup>2</sup> )
FC-12.5 Rubber)	160 lb/yd <sup>2</sup>	(88 kg/m <sup>2</sup> )
FC-9.5 (Rubber)	110 lb/yd <sup>2</sup>	(60 kg/m <sup>2</sup> )
FC-12.5 (PG 76-22)	160 lb/yd <sup>2</sup>	(88 kg/m <sup>2</sup> )
FC-9.5 (PG 76-22)	110 lb/yd <sup>2</sup>	(60 kg/m <sup>2</sup> )
  - b. The actual spread rate will be based on the contractors mix design per specifications.

The reason for this change is because thickness based on spread rate varies with the weight of the aggregate used. When a spread rate is called for in the plans and asphalt mix contains a heavy aggregate, a thinner than intended layer of asphalt is placed in the field. The Department wants to require the asphalt pavement layers be placed at a specified thickness, regardless of the aggregate weight used in the mix design.

2. When Level D or E structural mix is used, call for (PG 76-22) in friction course rather than rubber.

***Implementation Plan:***

**Central Office Design:**

Establish the following new pay item April 2004:

337-7-Xaa Asphalt Concrete Friction Course (Inc Bit) TN  
aa = 22(FC-5) (PG 76-22)

The PPM exhibits will be updated to show pavement layers thickness in inches. Example:

“OPTIONAL BASE GROUP 9 WITH TYPE SP STRUCTURAL COURSE (TRAFFIC D) (2”), TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 ½”) (PG 76-22) AND FRICTION COURSE (FC-5) (3/4”) (PG 76-22).”

**District Design:** On applicable projects:

Update plans to show asphalt pavement layers thickness in inches.

Verify the quantities shown in TRNS\*PORT and the computation book are based on estimated quantities shown above.

**Specifications:** Specifications will be available for the January 2005 letting.

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*Effective with the January 2005 letting*

**Issue:**                    *Steel Sheet Piling*

**History:** Critical temporary steel sheet piling is required to be fully detailed in the plans. A critical temporary sheet pile wall is one that is necessary to maintain the safety of the traveling public or structural integrity of nearby structures, roadway and utilities for the duration of the construction contract.

The specifications will be revised to define critical temporary sheet pile walls. Critical temporary walls as detailed in the plans are to be paid for separately under the new pay item. All non-critical walls are to be incidental to the cost of related items. A pay item name change is required for the contractor to differentiate between critical walls and non-critical walls for payment purposes.

***Implementation Plan:***

**Central Office Design:**

Establish the following new pay items July, 2004

455-133-xxa	Steel Sheet Piling	SF
2455-133-xxa	<i>Steel Sheet Piling</i>	<i>M2</i>
2	(Temporary-Critical)	
3	(Permanent)	

Permanently block the following pay items on December 31, 2004

455-133-xxa	Steel Sheet Piling	SF
2455-133-xxa	<i>Steel Sheet Piling</i>	<i>M2</i>
	Blank (Furnish & Install)	
1	(Temporary)	

**District Design:**            Update plans and Summary of Pay Items to indicate the use of the new pay items beginning with the January 2005 letting.

**Specifications:**            Specifications are currently being modified to incorporate the above revisions and will be available for the January 2005 letting

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