

CHAPTER 7
Traffic Signal and Lighting System Items

	PAGE
SECTION A	
Instructions.....	7-1
SECTION B	
Structure List.....	7-2
SECTION C	
Index and Initial Key.....	7-3
SECTION D	
Description Page.....	7-4
SECTION E	
Each Item	
Listed separately.....	7-5
Each entry at .5.....	7-6
SECTION F	
Linear Foot Item	
Run numbers and stations.....	7-7

Rev 11/09

**DOCUMENTATION REQUIREMENT
SECTION A
TRAFFIC SIGNAL AND LIGHTING SYSTEM ITEMS**

Contracts containing traffic signal and lighting system items shall be documented in an ELECTRICAL book, identified by intersections or locations.

To setup the field books, the information on traffic signal or lighting system items shall be found in the contract plans on the Main Structure list, or on a Traffic Signal/Lighting System Structure list, or on the Estimate of Quantities. An illustration of a Traffic Signal Structure list is shown on page 7-2 and an illustration of an Estimate of Quantities is shown in Chapter 2 (Setting up a Contract, Book Format, etc.).

A traffic signal or lighting system area may be placed in a book by itself or with as many traffic signal or lighting systems as room permits. Each traffic signal or lighting system area will have a description page and **each item will be listed on a separate page. Skip at least one line between entries. Make sure to leave enough pages between areas for added or missed items.**

Documentation is different for each unit of measure (UOM). All items shown on the structure list of the plans as incidental to the traffic signal or lighting system area shall be documented in this book, except 201 and 202 removal items, as illustrated in Chapter 4 (Removal Items).

Documentation for practically any traffic signal or lighting system items can be provided by setting up the item in the same manner as an item with the same UOM. Some minor modifications may be required to show the unusual circumstances that may occur with different items, but the general format must be followed. If there are items that cannot be documented according to the illustrations, please call Headquarters Construction for assistance.

Any items requiring measurements, percentages, or final quantity calculations must be shown in the field book or on a CALCULATION sheet (Form No. 040-034) and filed in the CALCULATION book as illustrated in Chapter 2 (Setting up a Contract, Book Format, etc.). Make sure to cross reference the quantity in the field book(s) to the CALCULATION sheet and the CALCULATION sheet to the field book(s) and page(s).

Traffic signal or lighting system items **paid by the ton** shall be measured and documented in the same manner as illustrated in Chapter 8 (Roadway Aggregates).

It is important that all records be kept in a neat and legible manner. All **notes in the remarks column must be initialed** by the person or persons responsible for the entry. **All calculations must be checked and initialed by the checker.**

Each book shall be set up according to Chapter 2 (Setting up a Contract, Book Format, etc.) and recapped as illustrated in Chapter 24 ("Finaling Out" a Contract).

**DOCUMENTATION REQUIREMENT
SECTION C
TRAFFIC SIGNAL OR LIGHTING SYSTEM ITEMS
(INDEX AND INITIAL KEY)**

Below are illustrations of an index and an initial key. When setting up a field book at the beginning of a contract make sure each item in the book is listed on the index. During the contract if anything is added to the book make sure it is placed on the index. At job closeout make sure the index has the ending page for each item listed on more than one page. Make sure to list the book recap page(s) on the index. If room permits skip a line between entries on the index. Check the initial key each progress payment to assure that everyone who has made entries in the book has initialed and signed the initial key. If the signature is not legible, have the person print his/her name under the signature. Make sure the initials used throughout the book match the way the initials show on the initial key. If the initials change, add the new initials to the initial key next to the original initials.

Use when only one area is placed in a book. 

Index Description		Initial Key		
Page	Description	Initials	Signature	Title
4	'BD' 10155.04 To 'BD' 62+69.89 Install Interconnect (Blue Diamond)	SK	Shelli Cores	Tech IV
6-7	No. 7 Pull Box	TJ	Tom James	Tech III
9	No. 9 Pull Box	JD	Jack Dougherty	Tech 3
11	Steel Pole Type 1A	TC	Teri Carson	Tech 1
15-25	3-inch Conduit			
30-40	Single Mode Fiber optic Cable (72' Fiber)			
42-50	Directional Drilling			
75	Book recap			

Use when multiple areas are placed in a book. 

Index Description		Initial Key		
Page	Description	Initials	Signature	Title
4-20	'BD' 10155.04 To 'BD' 62+69.89 Install Interconnect (Blue Diamond)	SK	Shelli Cores	Tech IV
25-50	'BD' 26+00 Install Traffic Counting Loops w/pull Boxes 85.69' (RT) and 83.44' (LT)	TJ	Tom James	Tech III
		JD	Jack Dougherty	Tech 3
		TC	Teri Carson	Tech 1
75	Book Recap			

**DOCUMENTATION REQUIREMENT
SECTION D
TRAFFIC SIGNAL OR LIGHTING SYSTEM ITEMS
(DESCRIPTION PAGE)**

The following is an illustration for the Description Page:

The **Officeperson** shall complete a full description as shown in the plans on the structure list for each traffic signal or lighting system area.

This page is required and if more than one area is placed in a field book, this page is used to separate the different areas.

DESCRIPTION PAGE

The image shows a page from a field book, divided into two sections. The left section is ruled with horizontal lines and contains handwritten text: "BD" 10+55.04 To "BD" 62+69.89 Interconnect (Blue Diamond) (Refer to sheets T65 thru T68). The right section is a grid of small squares, with a vertical red line down the center and a horizontal red line near the top. The number "4" is written in the top right corner of the grid.

**DOCUMENTATION REQUIREMENT
SECTION E
TRAFFIC SIGNAL AND LIGHTING SYSTEM ITEMS
(WHEN PAID BY EACH)**

Traffic signal and lighting system items shall be documented in an **ELECTRICAL book identified by intersections or locations.**

The following is an illustration for an item with a UOM of Each.

The illustration below is located on a structure list from the contract plans as shown on page 7-2 and is listed separately. If there are questions on whether an each item can be listed separately or combined, please call Headquarters Construction for assistance.

The **Officeperson** shall complete for each page the item number, item description, plan quantity this installation, the significant figure on the top right-hand side of the page, all column headings, and the page total in the bottom left-hand corner of the page. **Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items.**

Daily, the **Inspector** shall document the station, qty, date, initials, AEB#, and any remarks that are needed. **Skip at least one line between entries.**

Note: All entries must be entered as called out in the plans and document left, right, or centerline, where applicable.

Payment for Each items will be based on field count.

Station	Qty	Date	Insp	AEB#	Pmt#	Remarks
"BD" 17+90 LT (+Q)	1	9/3/08	TJ	8		63' LT
"BD" 21+40 LT (+e)	1	9/3/08	TJ	8		63' LT
"BD" 24+90 25+08 LT (+f)	1	9/3/08	TJ	8		Pull Box was moved 18' EAST. STORM DRAIN IN THE WAY. 81.5' LT
Page total:						

Sig Fig = 1 6

When making out the field books if a required item of work is not illustrated in this chapter, use an illustration that has the same UOM.

Traffic signal and lighting system items shall be documented in an ELECTRICAL book, identified by intersections or locations.

The following is an illustration for an item with a UOM of Each.

The illustration below is located on a structure list from the contract plans as shown on page 7-2 and is paid at 50% for the pole base and the remaining 50% to be paid when the pole is complete. If there are questions on whether an each item may be paid in this manner, please call Headquarters Construction for assistance.

The **Officeperson** shall complete for each page the item number, item description, plan quantity this installation, the significant figure on the top right-hand side of the page, all column headings, and the page total in the bottom left-hand corner of the page. **Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items.**

Daily, the **Inspector** shall document the location, qty, date, initials, AEB#, and any remarks that are needed. **Skip at least one line between entries.**

Note: All entries must be entered as called out in the plans and document left, right, or centerline, where applicable. The location column can list pole number or letter, run numbers, stations, or station to station.

Tip: When paying 50% (.5) make sure to leave enough room for the remaining 50% (.5) to be placed on the next line.

Payment for Each items will be based on field count.

Item No: 623 0300				Sig Fig = 1		11
Item: Steel Pole Type 1A				50% Base		
Plan Qty This Installation: 5 Each				50% Pole		
Location	Qty	Date	Insp	AEB#	Pmt#	Remarks
Pole A	.5	9/11/08	JD	8		Pole Base Complete
Pole B	.5	9/11/08	JD	8		Pole Base Complete
	.5	9/12/08	JD	8		Pole Complete
Pole C	.5	9/15/08	JD	8		Pole Base complete
<p>When making out the field books if a required item of work is not illustrated in this chapter, use an illustration that has the same UOM.</p>						
Page total:						

**DOCUMENTATION REQUIREMENT
SECTION F
TRAFFIC SIGNAL AND LIGHTING SYSTEM ITEMS
(WHEN PAID BY LINEAR FOOT)**

Traffic signal and lighting system items shall be documented in an ELECTRICAL book, identified by intersections or locations.

The following is an illustration for an item with a UOM of Linft.

The illustration below is located on a structure list from the contract plans as shown on page 7-2

The **Officeperson** shall complete for each page the item number, item description, plan quantity this installation, the significant figure on the top right-hand side of the page, all column headings, and the page total in the bottom left-hand corner of the page. **Skip at least one line between entries. A separate page shall be provided for each bid item. Make sure to leave enough pages between items for any added or missed items.**

Daily, the **Inspector** shall document the location, meas linft, date, initials, AEB#, and any remarks that are needed. **Skip at least one line between entries.**

Note: All entries must be entered as called out in the plans and document left, right, or centerline, where applicable. The location column can list pole number or letter, run numbers, stations, or station to station. **If runs are to be combined in one entry, each run must be listed in the location column and run number and quantity must be listed separately in the remarks column. If a run is not complete make sure to leave enough room below the entry to complete the run.**

Payment for Linft items will be based on field measure.

Location	Meas Linft	Date	Insp	AEB#	Pmt#	Remarks
Run 4+5	1150	9/2/08	TC	B		Run# 4=510 Run#5=640 ✓ Complete
Run 6	520	9/5/08	TC	B		complete
Run 7,8,9,41D	1520	9/5/08	TC	B		Run#7=320 Run#8=590 ✓ Run#9=430 Run#10=180 complete
Run 11	200	9/2/08	TC	B		Partial
Run 11	300	9/5/08	TC	B		complete
- BD 12+55 TO - BD 15+00 RT	245	9/6/08	TC	B		Complete
Page total						

Sig fig: 1 15

Officeperson's Hint: The length does not always equal the difference between the beginning and ending station. Sometimes there is a curve or an obstacle that will affect the distance. Always check with the **Inspector** before assuming the calculations are incorrect.

When making out the field books if a required item of work is not illustrated in this chapter, use an illustration that has the same UOM.