### 2011 Substitute Forms Design Individual & Corporate Forms July 2011 Revised May 31, 2012

#### INTRODUCTION

2011 Kentucky tax forms and schedules, including individual, partnership, fiduciary and corporation income returns and all appropriate schedules for these returns, must be submitted in an approved format as prescribed by the Kentucky Department of Revenue. Individual (resident) income tax returns must be designed in 2D-barcode format as prescribed by the Kentucky Department of Revenue even if a vendor does not support the barcode for Kentucky. The approval process ensures that substitute tax forms:

- Are compatible with the Department's automated processing system or 2D barcode system; and
- Present information in a uniform pattern.

#### **Definition of a Substitute Tax Form**

It is a form, other than the official form printed by the Department, which is commercially typeset and printed, or computer produced or computer programmed.

#### APPROVAL OF SUBSTITUTE INCOME TAX FORMS

Any company that designs and /or markets substitute tax forms that are submitted for processing by the Department must get prior approval from the Department. Approval is required each year before releasing or distributing substitute tax forms as paper copy or as part of a software product to its customers or clients.

Prior to or included with the first transmission of forms for approval, each vendor should include a list of all forms they expect to submit for approval. This will help the Department determine when a vendor has submitted all of their forms so we can update our website with approval information. Please submit the lists broken down by tax type. (If the vendor cannot submit the list of forms that will need approval, the status for that vendor on our website will remain pending until the Department is notified by the vendor that no other forms will be submitted. It will be the vendor's responsibility to notify the Department when all of the forms have been submitted and approved.)

If a vendor uses another vendor's forms in their software package, they should submit data filled forms for data placement approval. It would be helpful if you could notify the Department of which forms are in this category.

Once a vendor has received approval, their customers or clients do not need to get additional approval to use the approved substitute tax forms. Vendors are encouraged to include approval information in their release.

#### **GUIDELINES FOR PROGRAMMING SUBSTITUTE TAX FORMS**

Reproduced tax forms that deviate from the official forms (including those produced by tax software) are considered substitute tax forms and must be approved before use.

Substitute tax forms, including corporation income returns and all appropriate schedules for these returns, must be compatible with the Department's automated processing system and the Department must be able to process the forms in the same manner as the official form.

The Department reserves the right to reject any substitute tax form that does not meet the guidelines mentioned in this document or that would cause processing problems.

#### **Margins and Layout**

Substitute tax forms must have margins on all sides at least as large as the margins on the official forms. One-sided reproduced tax forms are acceptable even if the official form is two-sided.

Some official forms are designed with dropout ink boxes to guide a taxpayer through manual preparation. For computer generated forms these boxes are not needed or desired. Eliminating these boxes allows the vertical placement on the page to be adjusted to allow for easier programming. See formatting requirements for each form. The formatting will not be exactly the same as the official forms but will be grouped in the same manner.

#### **Text on Substitute Forms and Schedules**

The order of a substitute schedule must follow the official schedule, including title, space for taxpayer name and identification number, year, captions, line numbers and line descriptions. To avoid having text in the areas to be read, omit the text that designates placement of name and address and the text at the tops of the columns that say "DOLLARS" and "CENTS". Captions and line descriptions from the official schedules may be shortened to one print line on substitute forms. To do this, it is acceptable to use abbreviations and contractions and omit articles and prepositions. However, key words that make identification of the caption or line description clear must be retained. Instructional text may be omitted.

Substitute tax forms must closely resemble the style and size of type used on the official form.

The Taxpayer/Preparer signature area may not be rearranged, relocated or reworded. The perjury statement and signature line areas must be retained and worded exactly as on the official form. The signature area format on substitute forms must conform to that of the official form.

#### **Printing Amounts in Data Fields**

- Characters in data fields must be printed at a minimum of 10 characters per inch. For data entry in areas that have handprint boxes on the official form, data should be printed without lines beneath the data.
- Amounts should be right justified with decimals and cents on the individual income tax forms. Corporate forms do not require the decimal and cents be generated. Spaces should not be placed between characters but commas may be used.
- Amounts must be rounded to whole dollars; cents should be shown with zeros.
- If a monetary amount is negative, place a leading minus sign in the first field to the left of the first number.
- All numeric fields should be left blank if there is no entry.

#### **Boxes Designating an Option**

• On the official form there are boxes to be checked. These all may be marked with an "X" without the box but in the area designated on the layout for that form. Although the boxes may be (and some should be) omitted, the text for the boxes must be printed.

#### **Company Identification Code**

Substitute tax forms must include a company identification code if the form does not contain a 1D barcode in the header section of the page. The company identification code is a four character numeric code assigned by the NACTP. Beginning with 2006 tax returns, a 1D barcode was placed on the majority of tax forms containing the tax year, the four (4) digit company ID code and a four (4) digit form number. A complete listing of the forms containing the 1D barcode can be found later in this document.

In some cases, the design of the form, and the design of the software to perform the tax calculations are created by two separate organizations. The four digit company identification code refers to the developer who creates the form design only, and not to the developer who designs the software to perform the tax calculations.

The company identification code must be printed on each substitute tax form where specified in the specifications for that form. Substitute forms that do not have this will not be approved.

Vendors that produce a 2D barcode but do not produce their own forms should place their company identification code in the lower right hand corner of the return. The lower left-hand corner of the return is reserved for the form developer.

#### **Internal Control Numbers**

Internal control numbers and symbols used by computerized processors to identify the taxpayer and tax practitioner may be shown on substitute forms. If these numbers or symbols are used, print them in the upper right margin of the substitute tax form.

#### **GUIDELINES FOR CUSTOMER USE**

Vendors are requested to inform their customers and clients of paper and printing requirements for substitute forms.

#### **Paper Requirements**

Use white paper of equal or better quality than the 20-lb. paper used for the official form. Use the same size paper as the official form.

#### **Printing Requirements**

All forms must have a high standard of legibility for printing and for data entry. The Department reserves the right to reject forms with poor legibility. The ink and printing method used must ensure that no part of a form (including text, graphics and data entries)

develops smears or other quality deterioration during preparation or processing. Black ink must be used

#### SUBSTITUTE TAX FORM APPROVAL PROCESS

#### What the Company Must Do

- Submit your substitute tax forms to the Department for review before distribution or release to customers or clients. The Department requires a minimum of 2 samples for testing purposes. Samples must be produced in accordance with the specifications outlined in this procedure. One sample should be blank and the other should be data filled. The data filled return can consist of X's and 9's.
- Make corrections and revisions to substitute tax forms upon notification by the Department and resubmit for approval. Revisions may be submitted via fax or by sending a pdf of the form to the contact person for that particular tax type.
- Provide customers or clients with the instructions for correctly producing approved substitute tax forms. These instructions must include information on the printer fonts required to produce approved substitute tax forms.
- Upon request, provide customers or clients with copies of a substitute tax form approval letter.

#### What the Department Will Do

- Disseminate information regarding substitute tax forms design and development;
- Review substitute tax forms;
- Send a list via email indicating which forms are approved and which forms are not approved. If forms are not approved, substitute tax forms with errors noted will be returned with a request for the forms to be corrected and resubmitted. If the vendor requires a letter of approval be mailed, they should contact the person approving the forms and one will be sent. Otherwise, this will be done via email for efficiency in the approval process.

Note: The Department does not review or approve the logic of specific software programs or confirm the calculations entered on substitute tax forms output from software programs. The Department will not be responsible for proofreading the forms for spelling and grammatical errors. The accuracy of software programs is the responsibility of the software developer, distributor or user.

If you experience any problems with approvals of any type of form, please contact Audrey Terry at the address or phone number listed below for assistance.

## Mailing addresses and phone numbers for forms contacts. A complete listing is included at http://revenue.ky.gov

Please be sure to send your forms to the appropriate person for approval. Forms sent to the incorrect contact will delay approval of the form as they must be routed to appropriate personnel. This list has been expanded to include Sales, Withholding, Bank Franchise and Miscellaneous Tax Forms contact information.

#### **Individual Income Tax – Partnership - Fiduciary**

Audrey J. Terry Kentucky Department of Revenue 501 High Street - Mail Station 22 Frankfort, KY 40601 (502) 564-7862 Fax: (502) 564-0230

Email: audreyj.terry@ky.gov

#### **Property Tax**

Andy R. Boblitt Kentucky Department of Revenue 501 High Street – Mail Station 32 Frankfort, KY 40601-2103 (502) 564-7138

Fax: (502) 564-8192

Email: Andy.Boblitt@ky.gov

## Sales Tax Scan able Forms Withholding Tax Scan able Forms

Nick Harren Kentucky Department of Revenue 501 High Street – Mail Station 22 Frankfort, KY 40601 (502) 564-7887 Fax: (502) 564-0230

Email: Nick.Harren@ky.gov

#### Sales Tax (Non Scan able)

Kevin West Kentucky Department of Revenue 501 High Street, Station 67 Frankfort, KY 40601 (502) 564-8920 Fax: (502) 564-2041

Email: Kevin.West@ky.gov

#### **Bank Franchise Tax**

Judy Stephenson Kentucky Department of Revenue 501 High Street, Station 62 Frankfort, KY 40601 (502) 564-9280

Fax: (502) 564-3393

Email: Judy.Stephenson@ky.gov

#### **Corporation Tax**

Dawn Terry
Kentucky Department of Revenue
501 High Street - Mail Station 22
Frankfort, KY 40601
(502) 564-7964
Fax: (502) 564-0230

Email: **DawnM.Terry@ky.gov** 

#### **Collections Forms**

Brian Redmon Kentucky Department of Revenue 501 High Street – Mail Station 41 Frankfort, KY 40620 (502) 564-4921 Ext. 4521 Fax: (502) 564-9200

Email: Brian.Redmon@ky.gov

#### **Taxpayer Registration Forms**

Janine Shackelford Kentucky Department of Revenue 501 High Street PO Box 299, Station 20A Frankfort, KY 40602-1074 (502) 564-2730

Fax: (502) 564-0796

Email: Janine.Shackelford@ky.gov

#### Withholding Tax (Non Scan able)

Melissa D. Perry Kentucky Department of Revenue 501 High Street, Station 57 Frankfort, KY 40601 (502) 564-7617 Fax: (502) 564-3685

rax. (302) 304-3063

Email: MelissaD.Perry@ky.gov

#### **Miscellaneous Tax Forms**

Judy Stephenson Kentucky Department of Revenue 501 High Street, Station 62 Frankfort, KY 40601 (502) 564-9280 Fax: (502) 564-3393

Email: Judy.Stephenson@ky.gov

The following are the secondary contacts for form approvals. They should only be contacted in case of an emergency.

#### **Individual Income Tax – Partnership – Fiduciary Forms**

**Corporation Tax Forms** 

Jason Crothers – 502-564-7324 **Jason.Crothers@ky.gov** 

**Property Tax Forms** 

William Lawson – 502-564-7125 William.Lawson@ky.gov

**Collections Forms** 

Allison Crume – 502-564-4921 Ext. 4449

Allison.Crume@ky.gov

Taxpayer Registration Forms

Celeste Popplewell – 502-564-7435 <u>Celeste.Popplewell@ky.gov</u>

Withholding Tax Forms (Non Scan able)

Debbie Travis – 502-564-7598 **Deborah. Travis@ky.gov** 

Sales Tax Forms (Non Scan able)

Ricky Haven – 502-564-6828 Ricky.Haven@ky.gov

**Bank Franchise** 

Matt Warfield - (502) 564-9300 <u>Matt.Warfield@ky.gov</u>

**Miscellaneous Tax Forms** 

Matt Warfield - (502) 564-9300 <u>Matt.Warfield@ky.gov</u>

#### GENERAL INFORMATION ON RECORD LAYOUT

Vertical and horizontal starting positions are the top and left edges of the paper. Vertical print spacing is 6 lines per inch and horizontal measurement is 12 characters per inch. The positions shown in the tables are the range of positions that can be used.

#### Reference Mark on 740-ES

The reference mark is the first item scanned; all other data is measured in relationship to the reference mark. It must be identical in size, thickness and position as the official form produced by the Department. The reference mark (line is 2 point) is printed on lines in positions unless otherwise noted. There should be at least three-sixteenth inch white space around the reference mark.

#### Form ID Numbers on 740-ES

Failure to read the document ID number will cause the entire document to be rejected. **This number must be printed with an OCR-A font.** Space around the form ID should be at least three-sixteenth inch. The form ID is printed on line 15 starting in position 69 unless otherwise noted.

#### **Company ID Code**

**This number can be printed with a courier font.** Space around the form ID should be at least three-sixteenth inch. The Company ID is printed on lines 62 starting in position 8 unless otherwise noted.

The Company code on Form 720-ES is on line 21.

#### **Barcode Placement**

The horizontal placement of the barcode on the 740 and 740-EZ is position 47 through 77. The vertical placement of the barcode varies on each form. The 740 (lines 7 through 17) and the 740-EZ (lines 7 through 17). Any vendor that supports the 2D barcode for KY should have the default set to ON for the barcode.

#### SCANNABLE INCOME TAX FORMS AND SCHEDULES

42A740ES - 740-ES INDIVIDUAL ESTIMATED TAX VOUCHER

(SCANNABLE FORM) Form ID 42A740ES0002

Please review the layouts for the 740-ES at the end of this document.

#### 1D BARCODE DESIGN FOR INCOME TAX FORMS AND SCHEDULES.

The following forms contain a 1D barcode. Please use the following instructions for the design and placement of the 1D barcode. These forms must have the 4 digit Company ID CODE contained in the 1D Barcode in positions 3 through 6.

#### **1D Barcode Specifications:**

**Location on Page** – The 1D barcode should be printed on the upper center portion of the return with ½ inch of surrounding white space.

Size and Type – 30 point, 3 of 9 barcode font.

#### NON-SCANNABLE INCOME TAX FORMS AND SCHEDULES WITHOUT A FORM ID

The following forms are non-scannable unless noted. There is no reference mark or Form ID. These forms must have the Company Name or 4 digit ID printed on the form in the lower left hand corner. Only individual and corporate forms are listed here. Please make sure you send the forms to the appropriate contact for approval. Sending forms to the wrong contact will cause a delay in receiving your approval. Thanks.

# INDIVIDUAL, GENERAL PARTNERSHIP & FIDUCIARY FORMS (Approval Contact: Audrey Terry)

1D Barcode (XXXX =

Form / Schedule	Page #	Vendor ID Code)		
INDIVIDUAL INCOME TAX FORMS				
42A740 - FORM 740	1	11XXXX0001		
42A740 - FORM 740	2	11XXXX0002		
42A740 - FORM 740	3	11XXXX0040		
42A740-EZ - FORM 740-EZ	1	11XXXX0003		
42A740-NP - FORM 740-NP	1	11XXXX0004		
42A740-NP - FORM 740-NP	2	11XXXX0005		
42A740-NP - FORM 740-NP	3	11XXXX0006		
42A740-NP - FORM 740-NP	4	11XXXX0041		
42A740-NP-R - FORM 740-NP-R	1	11XXXX0007		
42A740-X - FORM 740-X	1	11XXXX0008		
42A740-X - FORM 740-X	2	11XXXX0009		
42A740-XP - FORM 740-XP	1	11XXXX0010		
42A740-XP - FORM 740-XP	2	11XXXX0011		
42A740-A - SCHEDULE A	1	11XXXX0012		
42A740-A - SCHEDULE A	2	11XXXX0013		
42A740-NP-A, SCHEDULE A	1	11XXXX0014		
42A740-NP-ME, SCHEDULE ME	1	11XXXX0015		
42A740-J - SCHEDULE J	1	11XXXX0016		
42A740-KNOL - SCHEDULE KNOL	1	11XXXX0017		
42A740-M - SCHEDULE M	1	11XXXX0018		
42A740-P - SCHEDULE P	1	11XXXX0019		
42A740-UTC - SCHEDULE UTC	1	11XXXX0020		
42A740-UTC - SCHEDULE UTC	2	11XXXX0021		
42A740-S1 - 2210-K	1	11XXXX0022		
42A740-S1 - 2210-K	2	11XXXX0046		
42A740-S21 - 4972-K	1	11XXXX0023		
42A740-S18 - 8582-K	1	11XXXX0025		
42A740-S24 - 8863-K	1	11XXXX0026		
42A740-S24 - 8863-K	2	11XXXX0045		
42A740-S25 – 8948-K	1	11XXXX0048		
40A100 - APPLICATION FOR REFUND OF				
INCOME TAXES	1	11XXXX0027		
40A102 - EXTENSION	1	11XXXX0028		
FIDUCIARY FORMS				
42A741 - FORM 741	1	11XXXX0029		
42A741 - FORM 741	2	11XXXX0030		
42A741-D - FORM 741 SCHEDULE D	1	11XXXX0031		
42A741-D - FORM 741 SCHEDULE D	2	11XXXX0032		
42A741(K-1) - FORM 741 SCHEDULE K-1	1	11XXXX0033		

GENERAL PARTNERSHIP FORMS			
42A765-GP - FORM 765-GP	1	11XXXX0034	
42A765-GP - FORM 765-GP (SCHEDULE K)	2	11XXXX0035	
42A765-GP - FORM 765-GP (SCHEDULE K)	3	11XXXX0042	
42A765-GP(K) - FORM 765-GP(K)	1	11XXXX0037	
42A765-GP(K) - FORM 765-GP(K)	2	11XXXX0044	
42A765-GP(K) - FORM 765-GP(K)	3	11XXXX0047	
42A765-GP(K-1) - FORM 765-GP SCHEDULE K-1	1	11XXXX0036	
42A765-GP(K-1) - FORM 765-GP SCHEDULE K-1	2	11XXXX0043	

The following Individual Income Tax forms do not have a 1D barcode. The Vendor Identification Code is required in the lower left hand corner of the form for identification.

42A740-S22 – FORM 8879-K
42A740-S23 - FORM 740-V
40A727 – FORMS REQUISITION
12A200 INSTALLMENT AGREMENT
42A818 – KBI ANNUAL REPORT

The following Individual Income Tax form does not have a 1D barcode.

42A740ES - 740-ES INDIVIDUAL ESTIMATED TAX VOUCHER

#### CORPORATE INCOME TAX FORMS

**CORPORATION FORMS (FORM 720) (Approval Contact: Dawn Terry)** 

41A720 - FORM 720

41A720AM - FORM 720-Amended

41A720-Amended (2007) - FORM 720 Amended 2007

41A720CR - SCHEDULE CR

41A720CR-C - SCHEDULE CR-C

41A720KCR – SCHEDULE KCR

41A720KCR-C - SCHEDULE KCR-C

41A720NOL – SCHEDULE NOL

41A720NOL-CF - SCHEDULE NOL CF

41A720X – AMENDED

41A851-K - FORM 851-K

#### CORPORATION FORMS (FORM 720-S) (Approval Contact: Dawn Terry)

41A720S - FORM 720-S

41A720S(K) – FORM 720S(K)

41A720S(K-1) - SCHEDULE K-1

41A720S-O – SCHEEDULE O-PTE

**CORPORATION FORMS (FORM 725) (Approval Contact: Dawn Terry)** 

```
41A725 – FORM 725
41A725CP – SCHEDULE CP (FORM 725)
```

#### CORPORATION FORMS (FORM 750) (Approval Contact: Dawn Terry)

41A750 - FORM 750

#### PARTNERSHIP FORMS (FORM 765) (Approval Contact: Dawn Terry)

```
41A765 – FORM 765
41A765(K) – FORM765(K)
41A765(K-1) – SCHEDULE K-1
```

# Corporate Forms used for multiple corporate returns. Only one approval for these forms is necessary.

```
40A200 - FORM PTE-WH
40A201 - FORM 740NP-WH
40A202ES - FORM 740-NP-WH-ES, Kentucky Estimated Tax Voucher for Pass-Through Entity
Nonresident Income Tax Withholding
41A720A - SCHEDULE A
41A720A-C - SCHEDULE A-C
41A720A-N – SCHEDULE A-N, Apportionment Factor Schedule (For a Nexus Consolidated Tax Return)
41A720BIO – SCHEDULE BIO
41A720CC - SCHEDULE CC
41A720CCI - SCHEDULE CCI
41A720CELL – SCHEDULE CELL
41A720CI – SCHEDULE CI
41A720ES - 720-ES CORPORATE ESTIMATED TAX VOUCHER
41A720ETH – SCHEDULE ETH
41A720EZC – SCHEDULE EZC
41A720HH - SCHEDULE HH
41A720LLET - SCHEDULE LLET
41A720LLET-C - SCHEDULE LLET-C
41A720-O - SCHEDULE O- 720
41A720QR - SCHEDULE QR
41A720RC - SCHEDULE RC
41A720RC(C) – SCHEDULE RC(C) CONTINUATION
41A720RC-R - SCHEDULE RC-R
41A720RR-E - SCHEDULE RR-E
41A720RR-I – SCHEDULE RR-I
41A720SL - FORM 720-SL
41A720TCS – SCHEDULE TCS
```

#### **Economic Development Forms and Schedules**

```
41A720-S16 – SCHEDULE KREDA
41A720-S17 – SCHEDULE KREDA-T
41A720-S18 – SCHEDULE KREDA-SP
```

41A720VERB – SCHEDULE VERB 41A720-S1 – SCHEDULE 2220-K 41A720-S5 – SCHEDULE 8903-K

```
41A720-S20 – SCHEDULE KIDA
41A720-S21 – SCHEDULE KIDA-T
41A720-S22 – SCHEDULE KIDA-SP
```

#### **Economic Development Forms and Schedules, continued.**

```
41A720LLET(K) – SCHEDULE LLET(K)
41A720LLET(K)-C - SCHEDULE LLET(K)-C
41A720-S24 - SCHEDULE KIRA`
41A720-S25 – SCHEDULE KIRA-T
41A720-S26 - SCHEDULE KIRA-SP
41A720-S27 - SCHEDULE KJDA
41A720-S28 - SCHEDULE KJDA-T
41A720-S29 - SCHEDULE KJDA-SP
41A720-S35 – SCHEDULE KRA
41A720-S36 - SCHEDULE KRA-SP
41A720-S37 - SCHEDULE KRA-T
41A720-S40 - SCHEDULE KEOZ
41A720-S41 – SCHEDULE KEOZ-SP
41A720-S42 - SCHEDULE KEOZ-T
41A720-S43 - SCHEDULE KESA
41A720-KESA-SP – SCHEDULE KESA-SP
41A720-S44 - SCHEDULE KESA-T
41A720-S45 - SCHEDULE KJRA
41A720-S46 - SCHEDULE KJRA-T
41A720-S47 – SCHEDULE KJRA-SP
41A720-S50 – SCHEDULE IEIA
41A720-S51 - SCHEDULE IEIA-T
41A720-S52 – SCHEDULE IEIA-SP
41A720-S53 – SCHEDULE KBI
41A720-S54 - SCHEDULE KBI-SP
41A720-S55 - SCHEDULE KBI-T
41A720-S80 – APPLICATION FOR NEW MARKETS TAX CREDIT
41A720-S81 - SCHEDULE 8874(K)-A
41A720-S82 - SCHEDULE 8874(K)-B
41A720-S85 – APPLICATION FOR PRELIMINARY AUTHORIZATION OF THE ENDOW KENTUCKY
           TAX CREDIT
41A720-S86 – SCHEDULE ENDOW
```

#### KENTUCKY INDIVIDUAL INCOME TAX ESTIMATED VOUCHER 42A740-ES

**VOUCHER SIZE**  $8^{1}/_{2}$  x  $3^{1}/_{2}$  inches (21 lines)

Name of Field	Line number from top of voucher	Position
Primary social security number (text is on line 8)	10	9-19
Check digit on primary social security number	10	22
Secondary social security number (text is on line 8)	10	27-37
Check digit on secondary social security number	10	40
Year ending (text is on line 8)	10	47-56
Amount paid (text is on line 8)	11	61-81
Name (Last name, primary first name, middle initial, secondary first name, middle initial)	15	11-35
Street address	16	11-35
City	17	11-27
State	17	29-30
Zip	17	33.42
Form ID (42A740ES0002)	15	70-81
Reference Mark	Top of line 17 to bottom of line 19	73-77
Company Code	18	61-65

KENTUCKY ESTIMATED TAX VOUCHER **2012 INDIVIDUAL INCOME TAX** Form 740-ES INSTALLMENT 1 Due April 17, 2012 Your Social Security No. Spouse's Social Security No.

Year Ending 12/31/2012 For FISCAL year filers ONLY FISCAL year ending \_ \_/\_ \_

> Make check payable to: Kentucky State Treasurer

> > 0 0

Amount Paid

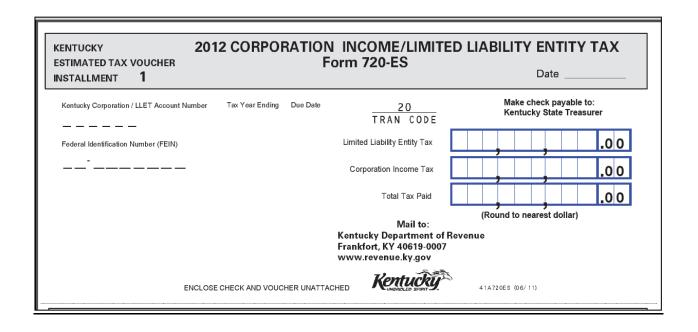
Kentucky Department of Revenue 42A740ES0001 Frankfort, KY 40620-0009



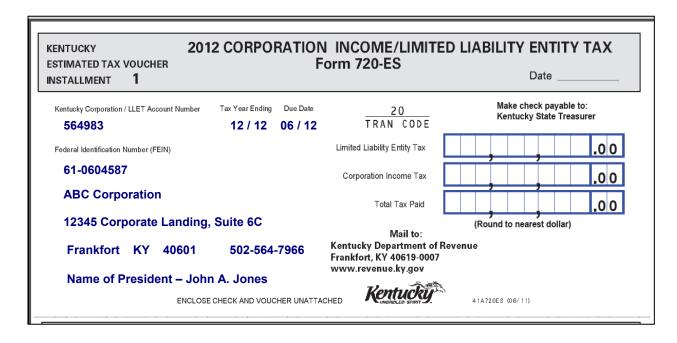
42A740-ES (06/11)

DO NOT ATTACH CHECK TO VOUCHER

The following example is included as a reference point for the development of the Form 720-ES – Corporation Income / LLET Estimated Tax Voucher.



The placement of required data on this form should look similar to the example below.



#### **Modulus 10 Check Digit Routine**

In this example, "C" will hold the place of the check digit to be calculated. The string of characters for which the check digit is to be calculated is weighted from right to left by 2 then 1. Working from right to left, the digit from the string is multiplied by the assigned weight. That figure is then divided by 10 and the whole number equivalent of the integer and modulus results are added together to form a single digit. This single digit value is accumulated for each digit in the string. The total is divided by 10 again. This calculation differs from the calculations of the individual digits as the integer portion of the result is discarded and the whole number representation of the modulus portion is subtracted from 10 resulting in the check digit for the string. If the check digit calculates to be 10, then the check digit will be 0.

			Total=0
Weights: String:	212121212 10686072 <b>3</b> C	2*3=06 $06/10=0.6$ $0+6=6$	
Weights: String:	212121212 1068607 <b>2</b> 3C	1*2 = 02 02/10 = 0.2 0 + 2 = 2	Total = Total + 6 = 6
Weights: String:	212121212 106860 <b>7</b> 23C	2*7 = 14 $14/10 = 1.4$ $1 + 4 = 5$	Total = Total + 2 = 8
Weights: String:	212121212 10686 <b>0</b> 723C	1*0 = 00 $00/10 = 0.0$ $0 + 0 = 0$	Total = Total + 5 = 13
Weights: String:	212121212 1068 <b>6</b> 0723C	2 * 6 = 12 $12/10 = 1.2$ $1 + 2 = 3$	Total = Total + 0 = 13
Weights: String:	212121212 106 <b>8</b> 60723C	1*8 = 08 08/10 = 0.8 0 + 8 = 8	Total = Total + 3 = 16
Weights: String:	212121212 10 <b>6</b> 860723C	2 * 6 = 12 12/10 = 1.2 1 + 2 = 3	Total = Total + 8 = 24
Weights: String:	212121212 1 <b>0</b> 6860723C	1*0 = 00 00/10 = 0.0 0 + 0 = 0	Total = Total + 3 = 27
Weights: String:	212121212 106860723C	2 * 1 = 02 02/10 = 0.2 0 + 2 = 2	Total = Total + 0 = 27
			Total = Total + 2 = 29 Total/ $10 = 2.9$ Check digit = $10 - 9 = 1$