



**TY 24 Substitute Forms W-3/W-2  
2-D Barcoding Standards**

Version 1.0

Updated August 15, 2024

### What's New

Version	Date	Summary Of Changes	Editor
1.0	8/15/2024	<ul style="list-style-type: none"><li>• TY 23 changed to TY 24.</li><li>• Updated W-3 barcode layout. Updated line 5 Specification Version to 24.01.</li><li>• Updated W-2 barcode layout. Updated line 5 Specification Version to 24.01.</li><li>• Updated URL to Taxpayer First Act information in Section 1.</li></ul>	OCO, OEIO, DTTPS, MSB

## **Substitute Forms W-3/W-2 2-D Barcoding Standards**

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## 1. Overview

This document relates to TY 24 Substitute Forms W-3/W-2 2-D Barcoding Standards. Information and specifications for Substitute Forms W-2 and W-3 can be found in Internal Revenue Service (IRS) [Publication 1141](#) *General Rules and Specifications for Substitute Forms W-2 and W-3*. The 2-D barcode is intended to represent the information on the paper Forms W-2 and W-3. In a situation where multiple Forms W-2 are provided to an employee from one employer (for instance, an employee has more state withholding information than can fit on a single form) a barcode will be placed on each Form W-2 and will only contain the data on that form. This version will comply with computerized industry standards. If the software does not support 2-D barcodes, visit [Publication 1141](#), specifically Section 2.2 Specifications for Substitute Black-and-White Copy A and W-3 Forms Filed With the SSA.

**Note:** The Social Security Administration (SSA) encourages all employers to e-file. E-filing can save time and effort, and helps ensure accuracy. You can complete and electronically submit up to 50 Forms W-2 by using W-2 Online. For additional information, visit the Business Services Online (BSO) site at: <https://www.ssa.gov/employer/>. You can also visit <https://www.ssa.gov/employer/taxpayer.html> for information regarding the Taxpayer First Act.

## 2. Approval Requirements

Below are the requirements for software vendors when submitting 2-D barcoded Forms W-2 and W-3 for review and approval:

- Include in your submission the name, telephone number, fax number, and email address of a contact person who can answer questions regarding your sample vendor forms.
- A vendor code is required to submit barcoded forms for approval and must be displayed on all pages. If you do not have a vendor code, contact the National Association of Computerized Processors (NACTP) at <https://www.nactp.org/>. For non-NACTP members, contact SSA at [copy.a.forms@ssa.gov](mailto:copy.a.forms@ssa.gov) to obtain an SSA- issued code.
- You can expect approval or denial via email by the SSA within 30 days of receipt of your sample vendor forms.
- You are required to submit:
  - o One set of blank (without data) 2-D barcoded Forms W-2 and W-3
  - o One set of dummy-data 2-D barcoded Forms W-2 and W-3
  - o One set of maximum filled 2-D barcoded Forms W-2 and W-3

**Note:** Sample forms that are maximum filled must have data in each box entry and filled to the maximum length using numeric or alpha data. The data contained in the 2-D barcode samples must reflect the data on the forms.

- For approval, submit via email your 2024 sample barcoded substitute black-and-white Forms W-2 (Copy A) and Form W-3 in a PDF version electronically to [copy.a.forms@ssa.gov](mailto:copy.a.forms@ssa.gov) mailbox or mail the paper samples to:

Social Security Administration  
Direct Operations Center  
Attn: Copy A Forms Approval, Room 341  
1150 E. Mountain Drive  
Wilkes-Barre, PA 18702-7997

**Note:** Please remind your customers NOT to mail their company's payroll to the Copy A mailing address. They must mail the copies to the address listed on the W-3.

### 3. Duration of Approvals

Approvals are valid for only one tax year (January through December). Each tax year requires a new approval.

**Note:** Questions about the barcode approval requirements may be emailed to [copy.a.forms@ssa.gov](mailto:copy.a.forms@ssa.gov).

### 4. Barcode Specifications

Below are specifications that must be followed when preparing barcoded Forms W-2 and W-3:

- The barcode will be a 2-D barcode in the PDF-417 format. The PDF-417 has error detection and correction capabilities. The error correction level should be set to level 4.
- All fields within the barcode will use the carriage return <cr> as a field delimiter.
- All barcode fields are required. If no data is provided, the barcode data for that field will be blank followed by the <cr> delimiter. Exception: Federal ID fields may not be left empty (i.e., Employer Identification Number (EIN) and Social Security Number (SSN)).
- Do not zero fill or fill with spaces if a field is to be left blank. If there is no data, the field should be left empty followed by a terminating <cr>. It is up to the decoder to determine how to handle empty fields. *Exception:* Federal ID fields must be zero filled if no data is available.
- Do not handwrite changes or make any modifications after printing the form and barcode.
- The Y/X ratio will be 2.
- The Mode setting will be ASCII to cover alpha-numeric characters.
- The truncate symbol setting should be off to allow for right-side endbars.
- End of Data (EOD), the final field in the data stream, should be the characters \*EOD\* followed by a <cr>.
- Do not stretch or scale the barcode, it changes its integrity and reduces the readability.

### 5. 2-D Barcode Rules

Barcode rules are applied for the following fields on the 2-D barcoded Forms W-2 and W-3:

- Money fields must:
  - o Contain only numbers
  - o Not contain punctuation
  - o Not contain signed amounts (high order signed or low order signed)
  - o Not contain negative amounts
  - o Include both dollars and cents with the decimal point assumed (i.e., 59.60 = 5960)
  - o Not be rounded to the nearest dollar

- Address fields must:
  - Contain only the two-letter abbreviations for U.S. States
  - Conform to United States Postal Service (USPS) rules since address fields are used by SSA to prepare mail correspondence when necessary. For more information, please see:
    - USPS Publication 28 for Postal Addressing Standards at: <https://pe.usps.com/cpim/ftp/pubs/Pub28/pub28.pdf>
    - USPS address formats at: <https://pe.usps.com/BusinessMail101/Index?ViewName=Addressing>
    - Or call the USPS at 1-800-275- 8777
  
- Employer Identification Number (EIN) field must:
  - Contain only numeric characters
  - Not contain hyphens
  - Match the EIN under which tax payments were submitted to the IRS under Form 941, 943, 944, CT-1, or Schedule H
  - Not begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79, or 89

**Note:** Visit the IRS website where employers can apply for an Employer Identification Number (EIN) online at: [Apply for an Employer Identification Number \(EIN\) Online | Internal Revenue Service \(irs.gov\)](#).

- Social Security Number (SSN) field must:
  - Use the number shown on the original/replacement SSN card
  - Contain only numeric characters
  - Not contain hyphens
  - Not begin with 000, 666, or 9
  - Not end in 0000
  - Not be a fictitious SSN (i.e., 111111111, 333333333, 123456789)
  - Be zero filled if the employee's SSN is unknown
  - Not only show the last four digits of an SSN (i.e., xxx-xx-1234)

**Note:** The SSA allows employers to verify employee names and SSNs online using the Social Security Number Verification Service (SSNVS). For information about this free Service, visit the Employer W-2 Filing Instructions & Information website at: <https://www.ssa.gov/employer/>. If there is no SSN available for the employee, enter zeros (000000000) and have your employee call the SSA at 1-800-772-1213 or visit their local Social Security office to obtain an SSN.

- Employer's Email Address field must:
  - o Contain only one @ symbol
  - o Not contain consecutive periods
  - o Not contain empty spaces
  - o Not contain a period in the first or last position
  - o Not contain a period immediately to the left or right of the @ symbol

**Note:** An example of a well-formed email address contains a local part (everything before the @ symbol) and a domain part (everything after the @ symbol). Within the domain, everything after the last "." is considered the top-level domain. The following example describes the various parts of an E-mail: local-part@domain.top-level-domain. An example of a well-formed email address is: jsmith@example.com.

- Employee Name fields must:
  - o Contain the name as shown on your employee's Social Security Card (first name, middle initial, last name)
  - o Contain suffix (if shown on Social Security Card, i.e., "Jr.", "Sr.")
  - o Not include any titles (i.e., "Dr.", "RN")

## 6. Field Types

Field Type	Data Limitations	Print Format	2-D Barcode Format
Text	<ul style="list-style-type: none"> <li>All printable characters allowed</li> <li>No leading or trailing blanks</li> </ul>		
Amount	<ul style="list-style-type: none"> <li>Money fields</li> <li>Only characters 0-9 allowed</li> <li>Right justified, no leading zeroes</li> </ul>	999999999.99	99999999999
Federal ID	<ul style="list-style-type: none"> <li>Only characters 0-9 allowed</li> <li>Must contain exactly nine characters</li> <li>Must not be blank</li> </ul>	99-9999999 123-45-6789	999999999 123456789
Alpha-Numeric	<ul style="list-style-type: none"> <li>Only characters A-Z allowed</li> <li>Only characters 0-9 allowed</li> </ul>		
Numeric	Only characters 0-9 allowed		
Check Box	Must be Upper Case "X" or blank		



## 7. W-3 Barcode Layout

Line Number And Description	Box # on Form	Field Type	Max Field Length	Field Notes
1 - Header Version Number		Text	2	Version of general 2-D specs used to create barcode. This field is static. Currently, the text "T1"
2 - Developer Code		Numeric	4	Vendor's NACTP ID or SSA provided ID. ID code should be present.
3 - Form Description		Numeric	5	33333
4 - Form Year		Numeric	4	Four digit year (CCYY)
5 - Specification Version		Text	5	Version of this specification used to create barcode. Currently, the text "24.01"
6 - Software ID		Text	30	Software product used to create barcode. Should indicate product name and version.
7 - Control Number	a	Text	16	This field is not used by SSA for paper processing. This field is used for numbering the whole transmittal. This field can be blank.
8 - Employer Identification Number (EIN)	e	Federal ID	9	<ul style="list-style-type: none"> <li>Only numeric characters</li> <li>Omit hyphens</li> <li>Must NOT begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79, or 89.</li> </ul>
9 - Kind of Payer - 941	b	Check Box	1	"X" or blank. Only one Kind of Payer box can be checked.
10 - Kind of Payer - Military	b	Check Box	1	"X" or blank. Only one Kind of Payer box can be checked.
11 - Kind of Payer - 943	b	Check Box	1	"X" or blank. Only one Kind of Payer box can be checked.
12 - Kind of Payer - 944	b	Check Box	1	"X" or blank. Only one Kind of Payer box can be checked.
13 - Kind of Payer - CT1	b	Check Box	1	"X" or blank. Only one Kind of Payer box can be checked.
14 - Kind of Payer - Household	b	Check Box	1	"X" or blank. Only one Kind of Payer box can be checked.

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Line Number And Description	Box # on Form	Field Type	Max Field Length	Field Notes
15 - Kind of Payer - Medicare Gov Emp	b	Check Box	1	“X” or blank. Only one Kind of Payer box can be checked.
16 - Kind of Employer - None Apply	b	Check Box	1	“X” or blank. Only one box can be checked unless the 2 <sup>nd</sup> one is the 3 <sup>rd</sup> party sick pay box.
17 - Kind of Employer - 501c Non-Govt	b	Check Box	1	“X” or blank. Only one box can be Checked unless the 2 <sup>nd</sup> one is the 3 <sup>rd</sup> party sick pay box.
18 - Kind of Employer - State/Local non - 501c	b	Check Box	1	“X” or blank. Only one box can be checked unless the 2 <sup>nd</sup> one is the 3 <sup>rd</sup> party sick pay box.
19 - Kind of Employer - State/Local 501c	b	Check Box	1	“X” or blank. Only one box can be checked unless the 2 <sup>nd</sup> one is the 3 <sup>rd</sup> party sick pay box.
20 - Kind of Employer - Federal Govt	b	Check Box	1	“X” or blank. Only one box can be checked unless the 2 <sup>nd</sup> one is the 3 <sup>rd</sup> party sick pay box.
21 - Third-Party Sick Pay indicator	b	Check Box	1	“X” or blank.
22 - Total number of forms W-2	c	Numeric	7	
23 - Establishment Number	d	Alpha- Numeric	4	For multiple ER reports with same EIN. Enter any combination of blanks, numbers or letters.
24 - Employer Name	f	Text	57	
25 - Employer Address Line 1	g	Text	35	
26 - Employer Address Line 2	g	Text	35	
27 - Employer City	g	Text	35	
28 - Employer State	g	Text	2	
29 - Employer Postal Code	g	Text	9	Populated for non-foreign addresses only.

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Line Number And Description	Box # on Form	Field type	Max Field Length	Field Notes
30 - Employer Country	g	Text	32	This field is not used by SSA for paper processing.
31 - Other EIN used this year	h	Numeric	9	<ul style="list-style-type: none"> <li>• Field can be blank;</li> <li>• Only numeric characters</li> <li>• Omit hyphens</li> <li>• If not blank, the Other EIN must NOT begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79 or 89.</li> </ul>
32 - Wages, Tips, other compensation	1	Amount	15	
33 - Federal Income Tax withheld	2	Amount	15	
34 - Social Security Wages	3	Amount	15	
35 - Social Security Tax withheld	4	Amount	15	
36 - Medicare wages and tips	5	Amount	15	
37 - Medicare tax withheld	6	Amount	15	
38 - Social Security tips	7	Amount	15	
39 - Allocated tips	8	Amount	15	
40 -	9	Amount	15	Blank
41 - Dependent Care Benefits	10	Amount	15	

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<b>Line Number And Description</b>	<b>Box # on Form</b>	<b>Field Type</b>	<b>Max Field Length</b>	<b>Field Notes</b>
42 - Nonqualified plans	11	Amount	15	
43 - Deferred compensation	12a	Amount	15	
44 -	12b	Amount	15	Blank
45 - For third-party sick pay use only	13	Text	26	This field is not used by SSA for paper processing "Third-Party Sick Pay RECAP"
46 - Income tax withheld by payer of third-party sick pay	14	Amount	15	
47 - State Code	15	Text	2	
48 - State ID number	15	Text	26	Employer's state ID number
49 - State Wages	16	Amount	15	State wages, tips, etc.
50 - State Withheld	17	Amount	15	State income tax
51 - Local Wages	18	Amount	15	Local wages, tips, etc.
52 - Local Withheld	19	Amount	15	Local income tax
53 - Employer's Contact Person		Text	27	Enter the name of the person to be contacted by SSA concerning earnings
54 - Employer's telephone number		Numeric	20	Enter Employer's telephone number including the area code (15 characters) and extension number (5 characters)

Line Number And Description	Box # on Form	Field type	Max Field Length	Field Notes
55 - Employer's fax number		Numeric	10	Enter Employer's fax number including area code
56 - Employer's email address		Text	40	Enter Employer's email address
57 - End of Data indicator		Text	5	*EOD*

### 8. W-2 Barcode Layout

Line Number And Description	Box # on Form	Field type	Max Field Length	Field Notes
1 - Header Version Number		Text	2	Version of general 2-D specs used to create barcode. This field is static. Currently, the text "T1"
2 - Developer Code		Numeric	4	Vendor's NACTP ID or SSA provided ID. ID code should be present.
3 - Form Description/Form ID		Numeric	5	22222
4 - Form Year (Tax Year)		Numeric	4	Four digit year (CCYY)
5 - Specification Version		Text	5	Version of this specification used to create barcode. Currently, the text "24.01"
6 - Software ID		Text	30	Software product used to create barcode. Should indicate product name and version.
7 - Control Number	d	Text	21	This field is not used by SSA for paper processing. This field is used for numbering the whole transmittal. This field can be blank.

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Line Number And Description	Box # on Form	Field type	Max Field Length	Field Notes
8 - Employer Identification Number (EIN)	b	Federal ID	9	This is a required field <ul style="list-style-type: none"> <li>• Only numeric characters</li> <li>• Omit hyphens</li> <li>• Must NOT begin with 00, 07, 08, 09, 17, 18, 19, 28, 29, 49, 69, 70, 78, 79, or 89.</li> </ul>
9 - Employer Name	c	Text	41	
10 - Employer Address Line 1	c	Text	41	SSA will truncate as needed
11 - Employer Address Line 2	c	Text	41	
12 - Employer City	c	Text	27	
13 - Employer State	c	Text	2	For a foreign address, fill with blanks
14 - Employer Postal Code	c	Text	9	
15 - Employer Country	c	Text	41	For use with Foreign addresses
16 - Employee SSN	a	Federal ID	9	No dashes. Only numeric characters
17 - Employee First Name	e	Text	15	
18 - Employee Middle Initial	e	Text	1	

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<b>Line Number And Description</b>	<b>Box # on Form</b>	<b>Field type</b>	<b>Max Field Length</b>	<b>Field Notes</b>
19- Employee Last Name	e	Text	20	
20 - Employee Suffix	e	Text	4	
21 - Employee Address Line 1	f	Text	41	SSA will truncate as needed
22 - Employee Address Line 2	f	Text	41	
23 - Employee City	f	Text	27	
24 - Employee State	f	Text	2	
25 - Employee Postal Code	f	Text	9	
26 - Employee Country	f	Text	41	For use with foreign addresses
27 - Wages, Tips, other compensation	1	Amount	11	
28 - Federal Withholding	2	Amount	11	
29 - Social Security Wages	3	Amount	11	
30 - Social Security Tax	4	Amount	11	
31 - Medicare Wages and Tips	5	Amount	11	

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<b>Line Number And Description</b>	<b>Box # on Form</b>	<b>Field type</b>	<b>Max Field Length</b>	<b>Field Notes</b>
32 - Medicare Tax	6	Amount	11	
33 - Social Security Tips	7	Amount	11	
34 - Allocated Tips	8	Amount	11	
35 -	9	Alpha- Numeric	16	Blank
36 - Dependent care	10	Amount	11	
37 - Non-qualified plan	11	Amount	11	
38 - Code 1	12a	Text	2	These are for box 12; up to four box 12 items per form are supported
39 - Code 1 Year		Numeric	2	
40 - Code 1 Amount	12a	Amount	11	
41 - Code 2	12b	Text	2	
42 - Code 2 Year		Numeric	2	
43 - Code 2 Amount	12b	Amount	11	
44 - Code 3	12c	Text	2	
45 - Code 3 Year		Numeric	2	



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Line Number And Description	Box # on Form	Field type	Max Field Length	Field Notes
46 - Code 3 Amount	12c	Amount	11	
47 - Code 4	12d	Text	2	
48 - Code 4 Year		Numeric	2	
49 - Code 4 Amount	12d	Amount	11	
50 - Statutory Employee	13	Checkbox	1	“X” or blank.
51 - Retirement Plan	13	Checkbox	1	“X” or blank.
52 - Third Party Sick pay	13	Checkbox	1	“X” or blank.
53 - Other 1	14	Alpha- Numeric	15	These are for box 14; up to four box 14 items per form are supported. Description first followed by amount
54 - Other 2	14	Alpha- Numeric	17	
55 - Other 3	14	Alpha- Numeric	17	
56 - Other 4	14	Alpha- Numeric	17	
57 - State 1 Code	15	Text	2	
58 - State 1 ID number	15	Text	18	

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<b>Line Number And Description</b>	<b>Box # on Form</b>	<b>Field type</b>	<b>Max Field Length</b>	<b>Field Notes</b>
59 - State 1 Wages	16	Amount	11	
60 - State 1 Income Tax	17	Amount	11	
61 - State 2 Code	15	Text	2	
62 - State 2 ID number	15	Text	18	
63 - State 2 Wages	16	Amount	11	
64 - State 2 Income Tax	17	Amount	11	
65 - Locality 1 Name	20	Text	7	
66 - Local 1 Wages	18	Amount	11	
67 - Local 1 Income Tax	19	Amount	11	
68 - Locality 2 Name	20	Text	7	
69 - Local 2 Wages	18	Amount	11	
70 - Local 2 Income Tax	19	Amount	11	
71 - End of Data indicator		Text	5	*EOD*