

# ACE Truck Manifest QR Code Specifications Guide

March 26, 2020



On February 29, 2020, U.S. Customs and Border Protection (CBP) will begin supporting an optional Quick Response (QR) Code in the Automated Commercial Environment (ACE) Truck Portal. To use the QR Code, users will need to print it on the Truck Manifest Cover Sheet.

While QR codes are optional, the benefits of using them include:

1. Uniquely identify the electronically filed manifest information associated with a conveyance.
2. Minimize actions required of a driver.
3. Maximize match probability.

For more information on how to participate using the QR Code on the Truck Manifest Cover Sheet, please see the QR specifications listed below. For any questions, please contact Linda Olsen at [linda.m.olsen@cbp.dhs.gov](mailto:linda.m.olsen@cbp.dhs.gov).

## QR Specifications:

### (a) Data required:

The set of information that is to be stored in the QR shall include:

1. Data layout version number (3 characters).
2. Shipper- (or agent-) defined Trip ID (25 characters).
3. Estimated date of arrival (8 characters (yyyymmdd)).
4. Tractor license plate (12 characters, including ISO country code (2), administrative unit code (3), and plate number (7)).
5. Trailer (equipment) license plate (12 characters)

The total data load is, therefore,  $3+25+8+12+12 = 60$  characters. With a single-character delimiter between the data elements, the total text string length is 64 characters.

### (b) Technical requirements:

1. The QR code shall use alphanumeric mode.
2. The character encoding shall be plain ASCII.
3. Characters shall be upper-case alphabetic characters (A-Z), numerals (0-9), and the space character (" "), only.
4. The text string shall have a length of 64 characters. All non-informational characters shall be filled with the ASCII space character (0x20).
5. The text string shall contain the data in fixed fields, according to the data layout described in (c), below
6. The QR code shall use Error Correction Code (ECC) Level-H (highest level).



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7. The QR code shall be of “Version 5,” i.e., a QR code of size 37x37 pixels. (Compliance may be checked by verifying that there are 11 black pixels the timing mark rows—the 7<sup>th</sup> row from the top, and the 7<sup>th</sup> column from the left.)
8. Data layout shall include a version number. If an alternate layout is defined in the future, the new layout will be assigned a different version number.

**(c) Data layout:**

The data layout shall be as follows:

**V01** **MYTRIPIDENTIFICATIONS54321** **20190430** **US** **TXAAA1234** **MXCOAABC3637**

1                  2                  3                  4                  5                  6

1234567890123456789012345678901234567890123456789012345678901234

Columns	Data item	Notes
1-3	Data layout version number	“V01”
4	Separator character	Space character. (ASCII 0x20)
5-29	Trade-assigned trip ID number	Trip ID can be entered with fewer than 25 characters. In such case, the field shall be right-padded with spaces.  Note that the first four characters of the trip ID represent the shipment company.
30	Separator character	Space character. (ASCII 0x20)
31-38	Estimated arrival date in yyymmdd format	Not necessarily the current date.
39	Separator character	Space character. (ASCII 0x20)
40-41	Tractor license plate country	Expect values of “US”, “CA”, or “MX”. See Appendix A for other valid values.
42-44	Tractor license plate administrative unit	For US and Canada, where the state/province codes are 2 letters, the <i>first</i> character shall be the space character. (That is, state abbreviation is right-justified in the three-character field.) Mexican estados have three-letter abbreviations. (See Appendix B)



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Columns	Data item	Notes
45-51	Tractor license plate number	Seven characters reserved. If fewer than 7 characters, right-pad with spaces.
52	Separator character	Space character. (ASCII 0x20)
53-54	Trailer license plate country	Fill with space characters, if none.
55-57	Trailer license plate administrative unit	See above, under "License plate 1 administrative unit."
58-64	Trailer license plate number	Fill with space characters, if none.

This is the QR code for the example data:



#### (d) RFID devices and tags:

If a Second Generation (Gen-2) RFID device is used, with programmable user memory (Memory Bank 3: User Data), the 64 characters shall be identical to the data layout described for QR codes.





## Appendix A: ISO-3166 two-letter country codes for the Americas

Code	Country	Administrative subdivisions
AR	Argentina	24
BO	Bolivia	9
BR	Brazil	27
BZ	Belize	6
CA	Canada	13
CL	Chile	16
CO	Colombia	33
CR	Costa Rica	7
EC	Ecuador	24
GF	French Guiana	1
GT	Guatemala	22
GY	Guyana	10
HN	Honduras	18
MX	Mexico	32
NI	Nicaragua	17
PA	Panama	12
PE	Peru	26
PY	Paraguay	18
SR	Suriname	10
SV	El Salvador	14
US	United States	57
UY	Uruguay	19
VE	Venezuela	25
XX*	None of the above	N/A





## Appendix B: ISO-3166-2 Subdivision codes for US, Canada, and Mexico

AB	CA	Alberta
BC	CA	British Columbia
MB	CA	Manitoba
NB	CA	New Brunswick
NL	CA	Newfoundland & Labrador
NS	CA	Nova Scotia
NT	CA	Northwest Territories
NU	CA	Nunavut
ON	CA	Ontario
PE	CA	Prince Edward Island
QC	CA	Quebec
SK	CA	Saskatchewan
YT	CA	Yukon Territory

AGU	MX	Aguascalientes
BCN	MX	Baja California Norte
BCS	MX	Baja California Sur
CAM	MX	Campeche
CHH	MX	Chihuahua
CHP	MX	Chiapas
CMX	MX	Ciudad de Mexico
COA	MX	Coahuila
COL	MX	Colima
DF	MX	Distrito Federal
DUR	MX	Durango
GRO	MX	Guerrero
GUA	MX	Guanajuato
HID	MX	Hidalgo
JAL	MX	Jalisco
MEX	MX	Mexico
MIC	MX	Michoacán
MOR	MX	Morelia
NAY	MX	Nayarit
NLE	MX	Nuevo Leon
OAX	MX	Oaxaca
PUE	MX	Puebla
QUE	MX	Queretaro
ROO	MX	Quintana Roo
SIN	MX	Sinaloa
SLP	MX	San Luis Potosi
SON	MX	Sonora
TAB	MX	Tabasco
TAM	MX	Tamaulipas
TLA	MX	Tlaxcala
VER	MX	Veracruz
YUC	MX	Yucatan
ZAC	MX	Zacatecas



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AK	US	Alaska
AL	US	Alabama
AR	US	Arkansas
AS	US	American Samoa
AZ	US	Arizona
CA	US	California
CO	US	Colorado
CT	US	Connecticut
CZ	US	Canal Zone
DC	US	District of Columbia
DE	US	Delaware
FL	US	Florida
GA	US	Georgia
GU	US	Guam
HI	US	Hawaii
IA	US	Iowa
ID	US	Idaho
IL	US	Illinois
IN	US	Indiana
KS	US	Kansas
KY	US	Kentucky
LA	US	Louisiana
MA	US	Massachusetts
MD	US	Maryland
ME	US	Maine
MI	US	Michigan
MN	US	Minnesota
MO	US	Missouri
MP	US	North. Mariana Isl's

MS	US	Mississippi
MT	US	Montana
NJ	US	New Jersey
NC	US	North Carolina
ND	US	North Dakota
NE	US	Nebraska
NH	US	New Hampshire
NM	US	New Mexico
NV	US	Nevada
NY	US	New York
OH	US	Ohio
OK	US	Oklahoma
OR	US	Oregon
PA	US	Pennsylvania
PR	US	Puerto Rico
RI	US	Rhode Island
SC	US	South Carolina
SD	US	South Dakota
TN	US	Tennessee
TX	US	Texas
UM	US	US Minor Outlying Isl's
UT	US	Utah
VA	US	Virginia
VI	US	Virgin Islands
VT	US	Vermont
WA	US	Washington
WI	US	Wisconsin
WV	US	West Virginia
WY	US	Wyoming





## Appendix C: QR Code – Features for Verification

