

<b>Element</b>	
<b>Domain of Values for this Element</b>	Yes
<b>Source of Values</b>	Assigned by the sender or the receiver of a data set.
<b>How Defined (e.g., locally, from standard, other)</b>	Assigned by the sender or the receiver of a data set.
<b>Example</b>	Dataset ID <b>1475</b>
<b>Notes/Comments</b>	<ol style="list-style-type: none"> <li>1. The content of the file-level metadata is specified in the FGDC's Content Standard for Digital Geospatial Metadata.</li> <li>2. The ID may be assigned by the sender upon transmittal of the dataset or the recipient upon receipt.</li> <li>3. Normally the identifier will be numeric, but the standard does not preclude alphanumeric identifiers.</li> </ol>
<b>XML Tag</b>	<DataSetID>
<b>XML Model</b>	<pre> &lt;xsd:simpleType name="DataSetID_type"&gt;   &lt;xsd:restriction base="xsd:string"&gt;     &lt;xsd:pattern value=".*"&gt;&lt;/xsd:pattern&gt;   &lt;/xsd:restriction&gt; &lt;/xsd:simpleType&gt; </pre>
<b>XML Example</b>	<DataSetID>1457</DataSetID>
<b>Quality Measures</b>	<a href="#">Related Not Null Measure</a>
<b>Quality Notes</b>	

1380

1381 

## 3 Address Data Classification

1382 

### 3.1 Introduction

1383 

#### 3.1.1 Basis for Classification

1384 The classification part of this standard classifies addresses according to their syntax, that is,

1385 their address elements and the order in which the elements are arranged. Syntax determines

1386 the record structure needed to hold and exchange an address, and often it is all that is known  
1387 about the addresses in a given file.

1388 Classifying addresses by syntax rather than semantics (i.e. meaning) allows the users of the  
1389 standard to focus on record structures, and to avoid making any assumptions about what  
1390 [Address Feature Type](#) the address might identify. Classifying addresses by [Address Feature](#)  
1391 [Type](#) can be frustrating or impossible because:

- 1392 1. Reliable information about an address may be unavailable.
- 1393 2. Often, one address is used to identify several types of features (e.g., parcel,  
1394 building, building entrance, utility meter, utility pole, incident location, etc.) at the  
1395 same location.
- 1396 3. [Address Feature Type](#) categories may be found to be ambiguous or incomplete  
1397 when applied to a given address.

### 1398 **3.1.2 Organization**

1399 The classes are presented in four broad groups:

- 1400 1. **Thoroughfare addresses** specify a location by reference to a thoroughfare.
- 1401 2. **Landmark addresses** specify a location by reference to a named landmark.
- 1402 3. **Postal delivery addresses** specify points of postal delivery which have no definite  
1403 relation to the location of the recipient, such as post office boxes, rural route  
1404 boxes, overseas military addresses, or general delivery offices.

1405           4. The **general address class** may include addresses from any or all of the other  
1406           classes, or addresses whose class is unknown, or whose syntax does not conform  
1407           to any of the thoroughfare, landmark, and postal classes.

1408   Each class is described by giving its:

- 1409           1. **Name:** The name of the class.
- 1410           2. **Syntax:** The address elements required and permitted in the class, and the order in  
1411           which they are arranged.
- 1412           3. **Defining Characteristics:** The elements and arrangement that distinguish this  
1413           class from the other classes.
- 1414           4. **Examples:** Illustrative examples of the class.
- 1415           5. **Notes:** Explanatory notes about the class.
- 1416           6. **XML Tag:** The XML tag for the class.
- 1417           7. **XML Model:** XML model of the class.
- 1418           8. **XML Example:** The XML model applied to a specific example of the class.
- 1419           9. **XML Notes:** Explanatory notes about the XML model.
- 1420           10. **Quality Measures:** Data quality tests applied to the class.
- 1421           11. **Quality Notes:** Explanatory notes about the data quality measures applied to this  
1422           class.

### 1423   **3.1.3 Formatting Conventions**

1424           **Syntax and Formatting.** The following notation is used to show how classes are  
1425           constructed from elements:

1426            {} enclose the name of an element.

1427            \* indicates that the element is **required** in addresses of that class. Otherwise the  
1428            element may be omitted when desired.

1429            + indicates "and" (concatenation), with a space implied between each component  
1430            unless stated otherwise.

1431            Example: { [Complete Address Number](#) \*} + { [Complete Street Name](#) \*} + {  
1432            [Complete Subaddress](#) }

1433            **Complex Elements Include All Combinations of Their Component Elements.** To  
1434            avoid a multiplicity of insignificant permutations and combinations, complex elements  
1435            are used to represent the various combinations of the simple elements that comprise  
1436            them. Thus, for example, {CompleteAddressNumber} includes all of the following  
1437            combinations:

- 1438            ○ { [Address Number](#) \* }
- 1439            ○ { [Address Number](#) \* } + { [Address Number Suffix](#) }
- 1440            ○ { [Address Number](#) \* } + { [Separator Element](#) } + { [Address Number Suffix](#) }
- 1441            ○ { [Address Number Prefix](#) } + { [Address Number](#) \* }
- 1442            ○ { [Address Number Prefix](#) } + { [Separator Element](#) } + { [Address Number](#) \* }
- 1443            ○ { [Address Number Prefix](#) } + { [Address Number](#) \* } + { [Address Number Suffix](#) }
- 1444            ○ { [Address Number Prefix](#) } + { [Separator Element](#) } + { [Address Number](#) \* } + {  
1445            [Address Number Suffix](#) }

- 1446           ○ { [Address Number Prefix](#) } + { [Address Number](#) \*} + { [Separator Element](#) } + {  
1447           [Address Number Suffix](#) }  
1448           ○ { [Address Number Prefix](#) } + { [Separator Element](#) } + { [Address Number](#) \*} + {  
1449           [Separator Element](#) } + { [Address Number Suffix](#) )  
1450           [Place State ZIP](#) is **Shown in Parsed Form**. In each class syntax pattern, the  
1451           [Complete Place Name](#), [State Name](#), [ZIP Code](#), [ZIP Plus 4](#), and [Country Name](#), are  
1452           shown separately. They could also be shown in their unparsed form as the [Place](#)  
1453           [State ZIP](#) element. However, the elements are shown separately in each syntax  
1454           pattern, to emphasize that the importance of each separate element in the address.  
1455           **XML Notation and Formatting.** XML models and examples conform to the  
1456           W3C XML Core Working Group's "Extensible Markup Language (XML) 1.0"  
1457           (see Part 6: References for a complete citation).

## 1458   **3.2 Address Classes**

### 1459   **3.2.1 Thoroughfare Address Classes**

1460   A thoroughfare address specifies a location by reference to a thoroughfare. A thoroughfare in  
1461   this context is a road or other access route by which the addressed feature can be reached  
1462   (definition adapted from Universal Postal Union, *"International Postal Address Components*  
1463   *and Templates"*, Publication S42-4 (approved July 6, 2004), section 5.2.9). A thoroughfare is  
1464   typically but not always a road — it may be, for example, a walkway, a railroad, or a river. In  
1465   most but not all addresses the thoroughfare is designated by a [Complete Street Name](#) and sites

1466 or features along the thoroughfare are designated in sequence by their [Complete Address](#)  
1467 [Number](#).

### 1468 3.2.1.1 Numbered Thoroughfare Address

1469 **Syntax:** { [Complete Address Number](#) \* } + { [Complete Street Name](#) \* } + { [Complete](#)  
1470 [Subaddress](#) } + { [Complete Place Name](#) \* } + { [State Name](#) \* } + { [ZIP Code](#) } + { [ZIP](#)  
1471 [Plus 4](#) } + { [Country Name](#) }

#### 1472 Defining Characteristics:

- 1473 1. Addresses of this class must include a [Complete Address Number](#) and a [Complete](#)  
1474 [Street Name](#).
- 1475 2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
1476 [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

#### 1477 Examples:

- 1478 • 123 Main Street Buffalo Lake MN 55314
- 1479 • 123 Main Street Apt 3A Buffalo Lake MN 55314
- 1480 • 123 North Main Street Le Sueur MN 56058
- 1481 • 123A North Main Street Le Sueur MN 56058
- 1482 • 123 South Avenue C Cheyenne WY 82007
- 1483 • A123 Calle B Ponce PR 00716-2525
- 1484 • 123 Boulevard of the Allies Pittsburgh PA 15222-1613

- 1485       •       123 Camino de la Placitas Taos NM 87571
- 1486       •       Mile Post 142.5, Sterling Highway, Happy Valley, AK 99639
- 1487       •       White House, 1600 Pennsylvania Avenue, Washington DC 20500
- 1488       •       Heinz Hall, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh PA
- 1489       15217
- 1490       •       Standard Office Building, Suite 400, 600 North Milwaukee Street, Milwaukee, WI
- 1491       53202
- 1492       •       Urbanizacion Las Gladiolas, 150 Calle A, San Juan PR 00926-3232
- 1493       •       Carver Park, 2730 Unwin Road, Cleveland, OH 44104
- 1494       **Notes:**
- 1495       1.       Most business and residential addresses are [Numbered Thoroughfare Addresses](#).
- 1496       2.       [Numbered Thoroughfare Addresses](#) are sometimes preceded by [Complete](#)
- 1497       [Landmark Names](#). For example:
- 1498       •       White House, 1600 Pennsylvania Avenue, Washington DC 20500
- 1499       •       Heinz Hall, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh PA
- 1500       15217
- 1501       •       Standard Office Building, Suite 400, 600 North Milwaukee Street, Milwaukee,
- 1502       WI 53202
- 1503       3.       Less commonly, [Numbered Thoroughfare Addresses](#) are preceded by [Complete](#)
- 1504       [Place Names](#), such as, for example, the name of a neighborhood, housing project, or
- 1505       Puerto Rican urbanization:

- 1506           •       Urbanizacion Las Gladiolas, 150 Calle A, San Juan PR 00926-3232
- 1507           •       Carver Park, 2730 Unwin Road, Cleveland, OH 44104
- 1508       4.       Strictly speaking, these are hybrid addresses. Logically they can each be
- 1509           decomposed to two related addresses, a [Numbered Thoroughfare Address](#), and a
- 1510           [Landmark Address](#) or [Community Address](#). For that reason, the [Complete Landmark](#)
- 1511           [Name](#) and [Complete Place Name](#), although permitted, are not shown in the syntax of
- 1512           the [Numbered Thoroughfare Address](#).
- 1513       5.       If the [Complete Address Number](#) is missing, then either the address is incomplete,
- 1514           or the address should be classified as an [Unnumbered Thoroughfare Address](#).
- 1515       6.       In Puerto Rico it is common practice to name subdivisions and neighborhoods
- 1516           ("urbanizacions"), number the streets within them (Calle 1, Calle 2, etc.), and assign
- 1517           [Complete Address Numbers](#) that duplicate [Complete Address Numbers](#) in other
- 1518           nearby urbanizacions. As a result a jurisdiction or postal delivery area may contain
- 1519           duplicate [Complete Street Names](#) and address ranges. In these cases the urbanizacion
- 1520           name is required to tell the duplicates apart:
- 1521           •       Urbanizacion Royal Oak, 123 Calle 1, Bayamon PR 00961-0123
- 1522           •       Urbanizacion Hermosillo, 123 Calle 1, Bayamon PR 00961-1212
- 1523       7.       Some Puerto Rican urbanizacion addresses include [Complete Street Names](#), and
- 1524           some do not. Urbanizacion addresses are classified as [Numbered Thoroughfare](#)
- 1525           [Addresses](#) if they include a thoroughfare name. Without a thoroughfare name, they are
- 1526           classified as [Community Addresses](#):
- 1527           •       ([Numbered Thoroughfare Address](#)): Urbanizacion Royal Oak, 123 Calle 1,
- 1528           Bayamon PR 00961-0123



1529           •       ([Community Address](#)): 1234 Urbanizacion Los Olmos, Ponce PR 00731

1530       8.       For additional information on Puerto Rican addressing see USPS “Addressing

1531           Standards for Puerto Rico and the Virgin Islands” (page 1), and also USPS Publication

1532           28, Section 29.

1533       **XML Tag:** <NumberedThoroughfareAddress>

1534       **XML Model:**

1535           <xsd:complexType name="NumberedThoroughfareAddress\_type">

1536           <xsd:annotation>

1537           <xsd:documentation xml:lang="en">

1538           The Address Class

1539           associated with singular locations

1540           referenced off of a linear feature,

1541           having numeric

1542           identifiers.

1543           </xsd:documentation>

1544           </xsd:annotation>

1545           <xsd:sequence>

1546           <xsd:element name="CompleteAddressNumber"

1547           type="addr\_type:CompleteAddressNumber\_type"

1548           minOccurs="1" maxOccurs="1" />

1549           <xsd:element name="CompleteStreetName"

1550           type="addr\_type:CompleteStreetName\_type"

1551        minOccurs="1" maxOccurs="1" />  
1552        <xsd:element name="CompleteSubaddress"  
1553        type="addr\_type:CompleteSubaddress\_type" minOccurs="0"  
1554        maxOccurs="1" />  
1555        <xsd:group ref="addr\_type:PlaceStateZip\_group" minOccurs="0"  
1556        maxOccurs="unbounded" />  
1557        <xsd:group ref="addr\_type:AddressAttributes\_group"  
1558        minOccurs="0" maxOccurs="1" />  
1559        </xsd:sequence>  
1560        <xsd:attribute name="action" type="addr\_type:Action\_type"  
1561        use="optional" />  
1562        </xsd:complexType>

1563        **XML Example:**

1564        <?xml version="1.0" encoding="UTF-8"?>  
1565        <addr:AddressCollection version="0.4" xmlns:addr="addr"  
1566        xmlns:addr\_type="addr\_type" xmlns:gml="http://www.opengis.net/gml"  
1567        xmlns:smil20="http://www.w3.org/2001/SMIL20/"  
1568        xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"  
1569        xmlns:xlink="http://www.w3.org/1999/xlink"  
1570        xmlns:xml="http://www.w3.org/XML/1998/namespace"  
1571        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
1572        xsi:schemaLocation="addr addr.xsd ">

1573        <NumberedThoroughfareAddress>  
1574        <CompleteAddressNumber>  
1575        <AddressNumber>123</AddressNumber>  
1576        </CompleteAddressNumber>  
1577        <CompleteStreetName>  
1578        <StreetName>Main</StreetName>  
1579        <StreetNamePostType>Street</StreetNamePostType>  
1580        </CompleteStreetName>  
1581        <CompletePlaceName>  
1582        <PlaceName>Buffalo Lake</PlaceName>  
1583        </CompletePlaceName>  
1584        <StateName>MN</StateName>  
1585        <ZIPCode>55314</ZIPCode>  
1586        </NumberedThoroughfareAddress>  
1587        </addr:AddressCollection>

1588        **XML Notes:**

1589        **Quality Measures:**

1590        [Address Completeness Measure](#)

1591        [Left Right Odd Even Parity Measure](#)

1592        [Address Number Fishbones Measure](#)

1593        [Range Domain Measure](#)

1594 **3.2.1.2 Intersection Address**

1595       **Syntax:** { [Complete Street Name](#) \* { [Separator Element](#) \* } } (2..n) + { [Complete Place](#)  
1596       [Name](#) \*} + { [State Name](#) \*} + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

1597       **Defining Characteristics:**

- 1598       1.       Addresses of this class must include two or more [Complete Street Names](#),  
1599       separated by [Separator Elements](#).
- 1600       2.       In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
1601       [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

1602       **Examples:**

- 1603       •       Boardwalk and Park Place, Atlantic City, NJ
- 1604       •       Hollywood Boulevard and Vine Street, Hollywood, CA 90028
- 1605       •       West Street & Main Street, Newtown CT 06470
- 1606       •       P Street && 19th Street && Mill Road, Ellicott City MD 21043
- 1607       •       Avenida Rosa y Calle 19, Bayamon PR 00961
- 1608       •       Memorial Park, Last Chance Gulch and Memorial Drive, Helena, MT 59601
- 1609       •       Phoenix Village, Scovill Avenue and East 59th Street, Cleveland, Ohio 44104

1610       **Notes:**

- 1611       1.       Intersection addresses are useful for recording events occurring in the street, such  
1612       as accidents, infrastructure locations, etc. However, when referring to a feature on one

- 1613 corner of an intersection, the [Numbered Thoroughfare Address](#) for that corner is  
1614 always preferable to the intersection address.
- 1615 2. A [Complete Landmark Name](#) or [Complete Place Name](#) may precede an  
1616 [Intersection Address](#). For example:
- 1617 • Memorial Park, Last Chance Gulch and Memorial Drive, Helena, MT 59601
  - 1618 • Phoenix Village, Scovill Avenue and East 59th Street, Cleveland, Ohio 44104
- 1619 3. Strictly speaking, these are hybrid addresses. Logically they can each be  
1620 decomposed to two related addresses, an [Intersection Address](#), and a [Landmark](#)  
1621 [Address](#) or [Community Address](#). For that reason, the [Complete Landmark Name](#) and  
1622 [Complete Place Name](#), although permitted, are not shown in the syntax of the  
1623 [Intersection Address](#).
- 1624 4. Intersections of more than two streets can be represented as one sequence of three  
1625 or more street names, or as every pairwise combination of the names.
- 1626 5. Separator values include " and ", " at ", " @ ", " & ", and " && " " + ", " - ", and " y  
1627 " or " con " (Spanish) each having a space before and after. Other values may also be  
1628 in use.
- 1629 6. Some address parsing software permits the use of ampersands (" & " or " && ") to  
1630 signify intersection addresses, because the double ampersand does not occur in any  
1631 street names, and ampersands rarely do. Be wary, though--in many programming  
1632 languages, ampersands are reserved for other uses, which could complicate data  
1633 exchange.
- 1634 **XML Tag:** <IntersectionAddress>

**1635 XML Model:**

```
1636 <xsd:complexType name="IntersectionAddress_type">
1637   <xsd:sequence>
1638     <xsd:element name="CompleteStreetName"
1639       type="addr_type:CompleteStreetName_type" minOccurs="1"
1640       maxOccurs="1" />
1641     <xsd:group ref="addr:IntersectionAddress_StreetName_group" minOccurs="1"
1642       maxOccurs="unbounded"/>
1643     <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
1644       maxOccurs="1" />
1645     <xsd:group ref="addr_type:AddressAttributes_group"
1646       minOccurs="0" maxOccurs="1" />
1647   </xsd:sequence>
1648   <xsd:attribute name="action" type="addr_type:Action_type"
1649     use="optional" />
1650 </xsd:complexType>
```

**1651 XML Example:**

```
1652 <?xml version="1.0" encoding="UTF-8"?>
1653 <addr:AddressCollection version="0.4" xmlns:addr="addr"
1654   xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
1655   xmlns:smil20="http://www.w3.org/2001/SMIL20/"
```

1656        xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"

1657        xmlns:xlink="http://www.w3.org/1999/xlink"

1658        xmlns:xml="http://www.w3.org/XML/1998/namespace"

1659        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

1660        xsi:schemaLocation="addr addr.xsd ">

1661        <IntersectionAddress>

1662        <CompleteStreetName>

1663        <StreetName>Boardwalk</StreetName>

1664        </CompleteStreetName>

1665        <SeparatorElement>and</SeparatorElement>

1666        <CompleteStreetName>

1667        <StreetName>Park</StreetName>

1668        <StreetNamePostType>Place</StreetNamePostType>

1669        </CompleteStreetName>

1670        <CompletePlaceName>

1671        <PlaceName>Atlantic City</PlaceName>

1672        </CompletePlaceName>

1673        <StateName>NJ</StateName>

1674        </IntersectionAddress>

1675        </addr:AddressCollection>

1676

1677        **Quality Measures**

1678        [Intersection Validity Measure](#)

1679        [Pattern Sequence Measure](#)

### 1680    **3.2.1.3 Two Number Address Range**

1681        **Syntax:** { [Complete Address Number](#) (low) \*} + { [Separator Element](#) \*} + { [Complete](#)  
1682        [Address Number](#) (high)\*} + { [Complete Street Name](#) \* } + { [Complete Place Name](#) \*  
1683        } + { [State Name](#) \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

#### 1684        **Defining Characteristics:**

- 1685        1. Addresses of this class must include two [Complete Address Numbers](#) separated by  
1686        a hyphen. The first [Complete Address Number](#) must be less than or equal to the  
1687        second.
- 1688        2. The two [Complete Address Numbers](#) must be followed by a [Complete Street](#)  
1689        [Name](#).
- 1690        3. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
1691        [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

#### 1692        **Examples:**

- 1693        • 401-418 Green Street, Flint MI 48503
- 1694        • 1400-1420 Smith Street, West Monroe, LA 71292
- 1695        • 13-25 Elm Street, Muncie, IN 47305
- 1696        • 214-02 - 214-14 1/2 Evergreen Street, New York, NY 11364
- 1697        • 55A - 55H Kelly Circle SW, Bolling Air Force Base, Washington, DC



- 1698           • Quincy Market, 1-47 Faneuil Hall Market Place, Boston, MA 02109

1699

1700           **Notes:**

- 1701           1. The [Two Number Address Range](#) includes a set of two [Complete Address](#)
- 1702           [Numbers](#), which represent the low and high values of a continuous series of
- 1703           [Complete Address Numbers](#). By convention, the first [Complete Address Number](#)
- 1704           represents the low end of the range, and the second represents the high end, and
- 1705           they are separated by a hyphen.
- 1706           2. Generally, but not always, if a range refers to [Complete Address Numbers](#) on one
- 1707           side of a thoroughfare, the [Complete Address Numbers](#) in the range will all have
- 1708           the same parity, that is, they will all be either odd or even. However, mixed
- 1709           parities do occur in some places.
- 1710           3. A range can begin or end with a [Complete Address Number](#) that has a suffix or
- 1711           prefix. USPS Publication 28 Appendix E contains instructive notes on the
- 1712           complexities of these address ranges.
- 1713           4. Use the [Address Range Type](#) to show whether a [Two Number Address Range](#)
- 1714           represents an actual or potential range.
- 1715           5. Use the [Address Range Parity](#) attribute to show whether a [Two Number Address](#)
- 1716           [Range](#) includes [Complete Address Numbers](#) that are odd, even, or both.
- 1717           6. If a [Two Number Address Range](#) is related to a transportation segment (or set of
- 1718           segments) in a transportation network model, then:

- 1719                   • The [Address Range Side](#) attribute may be used to show if the [Complete](#)  
1720                   [Address Numbers](#) in the range are on the right side, left side, or both sides of  
1721                   the segment(s).
- 1722                   • The [Address Range Directionality](#) attribute may be used to show if the  
1723                   [Complete Address Numbers](#) in the range increase with or against the  
1724                   directionality of the segment(s).
- 1725                   • The [Address Range Span](#) attribute may be used to show whether the range  
1726                   spans a part of one segment, one entire segment, multiple segments, or the  
1727                   entire length of the thoroughfare.
- 1728               7. Use the [Address Transportation System Name](#), [Address Transportation System](#)  
1729               [Authority](#), [Address Transportation Feature Type](#), [Address Transportation Feature](#)  
1730               [ID](#), and [Related Transportation Feature ID](#) attributes to relate a particular address  
1731               range to a specific transportation segment (or set of segments) in a specific  
1732               transportation network model. Transportation segments, and transportation  
1733               network models generally, are defined and described in the FGDC's "Geographic  
1734               Information Framework Data Content Standard Part 7: Transportation Base."
- 1735               8. Ranges should not be confused with hyphenated address numbers that denote a  
1736               single site. A range must be composed of two [Complete Address Numbers](#).  
1737               Certain areas of New York City, southern California, and Hawaii use hyphens in  
1738               [Complete Address Numbers](#). In the example above, "214-02 Evergreen St" would  
1739               be one address, and "214-14 1/2 Evergreen Street" would be a second address, and  
1740               neither one alone is an address range.

9. A [Two Number Address Range](#) may be preceded by a [Complete Landmark Name](#) or [Complete Place Name](#) that spans the range. (for example: "Quincy Market, 1-47 Faneuil Hall Market Place, Boston, MA 02109"). Strictly speaking, this is a hybrid address. Logically it could be decomposed to two related addresses, the [Two Number Address Range](#), and a corresponding [Landmark Address](#) or [Community Address](#). For that reason, the [Complete Landmark Name](#) and [Complete Place Name](#), although permitted, are not shown in the syntax of the [Two Number Address Range](#).

**XML Tag:** <TwoNumberAddressRange>

**XML Model:**

```
<xsd:complexType name="TwoNumberAddressRange_type">
  <xsd:sequence>
    <xsd:element name="CompleteAddressNumber"
      type="addr_type:CompleteAddressNumber_type"
      minOccurs="1" maxOccurs="1" />
    <xsd:element name="SeparatorElement" type="addr_type:Separator_type"
      minOccurs="1" maxOccurs="1"/>
    <xsd:element name="CompleteAddressNumber"
      type="addr_type:CompleteAddressNumber_type"
      minOccurs="1" maxOccurs="1" />
    <xsd:element name="CompleteStreetName"
      type="addr_type:CompleteStreetName_type"
```

```
1763         minOccurs="1" maxOccurs="1" />
1764     <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
1765         maxOccurs="1" />
1766     <xsd:group ref="addr_type:AddressAttributes_group"
1767         minOccurs="0" maxOccurs="1" />
1768 </xsd:sequence>
1769 <xsd:attribute name="action" type="addr_type:Action_type"
1770     use="optional" />
1771 </xsd:complexType>
```

1772 **XML Example:**

```
1773 <?xml version="1.0" encoding="UTF-8"?>
1774 <addr:AddressCollection version="0.4" xmlns:addr="addr"
1775     xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
1776     xmlns:smil20="http://www.w3.org/2001/SMIL20/"
1777     xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"
1778     xmlns:xlink="http://www.w3.org/1999/xlink"
1779     xmlns:xml="http://www.w3.org/XML/1998/namespace"
1780     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
1781     xsi:schemaLocation="addr addr.xsd ">
1782     <TwoNumberAddressRange>
1783     <CompleteAddressNumber>
1784     <AddressNumber>401</AddressNumber>
```

1785           </CompleteAddressNumber>  
1786           <SeparatorElement>--</SeparatorElement>  
1787           <CompleteAddressNumber>  
1788           <AddressNumber>418</AddressNumber>  
1789           </CompleteAddressNumber>  
1790           <CompleteStreetName>  
1791           <StreetName>Green</StreetName>  
1792           <StreetNamePostType>Street</StreetNamePostType>  
1793           </CompleteStreetName>  
1794           <CompletePlaceName>  
1795           <PlaceName>Flint</PlaceName>  
1796           </CompletePlaceName>  
1797           <StateName>MI</StateName>  
1798           <ZIPCode>48503</ZIPCode>  
1799           </TwoNumberAddressRange>  
1800           </addr:AddressCollection>

1801           **Quality Measures**

1802           [Address Number Fishbones Measure](#)  
1803           [Address Number Range Completeness Measure](#)  
1804           [Address Number Range Parity Consistency Measure](#)  
1805           [Address Number Range Sequence Measure](#)

1806 [Low High Address Sequence Measure](#)

1807 [Overlapping Ranges Measure](#) [Range Domain Measure](#)

1808 **3.2.1.4 Four Number Address Range**

1809 **Syntax:** { [Complete Address Number](#) \*(left low) } + { [Complete Address Number](#)  
1810 \*(left high) } + { [Complete Address Number](#) \* (right low) } + { [Complete Address](#)  
1811 [Number](#) \* (right high) } + { [Complete Street Name](#) \* } + { [Complete Place Name](#) \* } +  
1812 { [State Name](#) \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

1813 **Defining Characteristics:**

- 1814 1. Addresses of this class must include four [Complete Address Numbers](#),  
1815 representing respectively the left low, left high, right low, and right high four  
1816 [Complete Address Numbers](#) for the block or transportation segment(s), followed  
1817 by a [Complete Street Name](#).
- 1818 2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
1819 [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.
- 1820 3. The [Four Number Address Range](#) syntax follows the structure established by the  
1821 U.S. Census Bureau for TIGER/Line file street segment address ranges (see  
1822 <http://www.census.gov/geo/www/tiger/tgrshp2008/TGRSHP08.pdf> ("All Lines  
1823 Shapefile" attribute table layout)).

1824 **Examples:**

1825       • U.S. Census Bureau TIGER file formatted address ranges (left low, left high, right  
1826       low, right high, street name) are the most widely-used examples of [Four Number](#)  
1827       [Address Ranges](#).

1828       **Notes:**

- 1829       1. Address ranges are important for municipal operations (such as snow plow  
1830       dispatch), emergency dispatch, and geocoding.
- 1831       2. A [Four Number Address Range](#) includes four [Complete Address Numbers](#),  
1832       representing, for each side of a block or transportation segment, the low and high  
1833       end of the [Complete Address Number](#) range. By convention, based on the attribute  
1834       structure established by the U.S. Census Bureau for the TIGER/Line files, the left-  
1835       side low [Complete Address Number](#) is given first, followed by the left-side high  
1836       [Complete Address Number](#), followed by the right-side low and high [Complete](#)  
1837       [Address Numbers](#).
- 1838       3. Generally, but not always, the left and right ranges will have different parities  
1839       (even or odd). However, mixed parities do occur in some places.
- 1840       4. A range can begin or end with a [Complete Address Number](#) that has a suffix or  
1841       prefix. USPS Publication 28 Appendix E contains instructive notes on the  
1842       complexities of these address ranges.
- 1843       5. Use the [Address Range Type](#) attribute to show whether a [Four Number Address](#)  
1844       [Range](#) represents an actual or potential range.
- 1845       6. Use the [Address Range Parity](#) attribute to show whether a [Four Number Address](#)  
1846       [Range](#) includes [Complete Address Numbers](#) that are odd, even, or both.

- 1847 7. If a [Four Number Address Range](#) is related to a transportation segment (or set of  
1848 segments) in a transportation network model, , then:
- 1849 • The [Address Range Side](#) attribute may be used to show if the [Complete](#)  
1850 [Address Numbers](#) in the range are on the right side, left side, or both sides of  
1851 the segment(s).
  - 1852 • The [Address Range Directionality](#) attribute may be used to show if the  
1853 [Complete Address Numbers](#) in the range increase with or against the  
1854 directionality of the segment(s).
  - 1855 • The [Address Range Span](#) attribute may be used to show whether the range  
1856 spans a part of one segment, one entire segment, multiple segments, or the  
1857 entire length of the thoroughfare.
- 1858 8. Use the [Address Transportation System Name](#), [Address Transportation System](#)  
1859 [Authority](#), [Address Transportation Feature Type](#), [Address Transportation Feature](#)  
1860 [ID](#), and [Related Transportation Feature ID](#) attributes to relate a particular address  
1861 range to a specific transportation segment (or set of segments) in a specific  
1862 transportation network model. Transportation segments, and transportation  
1863 network models generally, are defined and described in the FGDC's "Geographic  
1864 Information Framework Data Content Standard Part 7: Transportation Base."
- 1865 9. A [Four Number Address Range](#) may be preceded by a [Complete Landmark Name](#)  
1866 or [Complete Place Name](#) that encompasses the range. Strictly speaking, this would  
1867 be a hybrid address. Logically it could be decomposed to two related addresses,  
1868 the [Four Number Address Range](#), and a corresponding [Landmark Address](#) or  
1869 [Community Address](#). For that reason, the [Complete Landmark Name](#) and



1870 [Complete Place Name](#), although permitted, are not shown in the syntax of the

1871 [Four Number Address Range](#).

1872 **XML Tag:** <FourNumberAddressRange>

1873 **XML Model:**

1874 <xsd:complexType name="FourNumberAddressRange\_type">

1875 <xsd:annotation>

1876 <xsd:documentation> TIGER file ranges (left low, left high, right

1877 low, right high, street name) are the most widely-used example of

1878 block ranges Notes: Although they do not necessarily refer to one

1879 specific site, block addresses are important for municipal

1880 operations (such as snow plow dispatch), emergency dispatch, and

1881 geocoding. A block address range may be expressed by four numbers,

1882 representing the low and high end of the numeric range for each side

1883 of a block. By convention, the first number represents the low end

1884 of the range of addresses for the left side, the second number

1885 represents the high end of the range of addresses for the left side,

1886 the third number represents the low end of the range of addresses

1887 for the right side, and the fourth number represents the high end of

1888 the range for the right side. A block face is defined as one side of

1889 a thoroughfare between two intersecting street segments. Generally,

1890 but not always, a block face has addresses of a single parity, that

1891 is, either odd or even numbers. However, mixed parities do occur in

1892           some places. In other cases, where the numeric ranges on opposite  
1893           sides of the same block are not within the same general range, it is  
1894           preferable to express the range in terms of the left low-high, right  
1895           low-high, or to provide individual block face ranges. A block range  
1896           may refer to either a theoretical range (the possible range of  
1897           addresses along that street segment) or to an actual or used range  
1898           of addresses. These types (actual or theoretical) are distinguished  
1899           by the range type attribute.

1900           </xsd:documentation>

1901           </xsd:annotation>

1902           <xsd:sequence>

1903           <xsd:element name="CompleteAddressNumber"

1904           type="addr\_type:CompleteAddressNumber\_type"

1905           minOccurs="1" maxOccurs="1" />

1906           <xsd:element name="SeparatorElement" type="addr\_type:Separator\_type"

1907           maxOccurs="1" minOccurs="1"/>

1908           <xsd:element name="CompleteAddressNumber"

1909           type="addr\_type:CompleteAddressNumber\_type"

1910           minOccurs="1" maxOccurs="1" />

1911           <xsd:element name="CompleteAddressNumber"

1912           type="addr\_type:CompleteAddressNumber\_type"

1913           minOccurs="1" maxOccurs="1" />

1914           <xsd:element name="SeparatorElement" type="addr\_type:Separator\_type"

```
1915         maxOccurs="1" minOccurs="1"/>
1916         <xsd:element name="CompleteAddressNumber"
1917         type="addr_type:CompleteAddressNumber_type"
1918         minOccurs="1" maxOccurs="1" />
1919         <xsd:element name="CompleteStreetName"
1920         type="addr_type:CompleteStreetName_type"
1921         minOccurs="1" maxOccurs="1" />
1922         <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
1923         maxOccurs="1" />
1924         <xsd:group ref="addr_type:AddressAttributes_group"
1925         minOccurs="0" maxOccurs="1" />
1926     </xsd:sequence>
1927     <xsd:attribute name="action" type="addr_type:Action_type"
1928     use="optional" />
1929 </xsd:complexType>
```

1930 **XML Example:**

```
1931     <?xml version="1.0" encoding="UTF-8"?>
1932     <addr:AddressCollection version="0.4" xmlns:addr="addr"
1933     xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
1934     xmlns:smil20="http://www.w3.org/2001/SMIL20/"
1935     xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"
1936     xmlns:xlink="http://www.w3.org/1999/xlink"
```

1937           xmlns:xml="http://www.w3.org/XML/1998/namespace"

1938           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

1939           xsi:schemaLocation="addr addr.xsd ">

1940           <FourNumberAddressRange>

1941           <CompleteAddressNumber>

1942           <AddressNumber>1900</AddressNumber>

1943           </CompleteAddressNumber>

1944           <SeparatorElement>-</SeparatorElement>

1945           <CompleteAddressNumber>

1946           <AddressNumber>1908</AddressNumber>

1947           </CompleteAddressNumber>

1948           <CompleteAddressNumber>

1949           <AddressNumber>1901</AddressNumber>

1950           </CompleteAddressNumber>

1951           <SeparatorElement>-</SeparatorElement>

1952           <CompleteAddressNumber>

1953           <AddressNumber>1909</AddressNumber>

1954           </CompleteAddressNumber>

1955           <CompleteStreetName>

1956           <StreetName>Bear</StreetName>

1957           <StreetNamePostType>court</StreetNamePostType>

1958           </CompleteStreetName>

1959           <CompletePlaceName>

1960            <PlaceName>Fort Collins</PlaceName>

1961            </CompletePlaceName>

1962            <StateName>CO</StateName>

1963            <ZIPCode>80525</ZIPCode>

1964            </FourNumberAddressRange>

1965            </addr:AddressCollection>

1966            **Quality Measures**

1967            [Address Number Fishbones Measure](#)

1968            [Address Number Range Completeness Measure](#)

1969            [Address Number Range Parity Consistency Measure](#)

1970            [Address Number Range Sequence Measure](#)

1971            [Left Right Odd Even Parity Measure](#)

1972            [Low High Address Sequence Measure](#)

1973            [Overlapping Ranges Measure](#) [Range Domain Measure](#)

1974            **3.2.1.5 Unnumbered Thoroughfare Address**

1975            **Syntax:** { [Complete Street Name](#) \* } + { [Complete Subaddress](#) } + { [Complete Place](#)

1976            [Name](#) \* } + { [State Name](#) \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

1977            **Defining Characteristics:**

1978            1. Addresses of this class must contain a [Complete Street Name](#) with no [Complete](#)

1979            [Address Number](#) preceding it.

1980           2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
1981           [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

1982           **Example:**

- 1983           • Ili'ili Airport Road, Ili'ili, AS
- 1984           • East End Road, St. Croix, VI 00820
- 1985           • Ilisagvik College, Stevenson Street, Barrow, AK 99723
- 1986           • Orote Point Lighthouse, San Luis Drive, Santa Rita, GU

1987           **Notes:**

- 1988           1. In many areas no address numbers have been assigned, and addresses in those  
1989           areas often include only the thoroughfare name. This class separates those  
1990           addresses from addresses that include address numbers or cross-streets.
- 1991           2. An [Unnumbered Thoroughfare Address](#) may be preceded by a [Complete](#)  
1992           [Landmark Name](#) or [Complete Place Name](#) (for example, "Ilisagvik College,  
1993           Stevenson Street, Barrow, AK 99723"). Strictly speaking, this would be a hybrid  
1994           address. Logically it can be decomposed to two related addresses, the  
1995           [Unnumbered Thoroughfare Address](#), and a corresponding [Landmark Address](#) or  
1996           [Community Address](#). For that reason, the Complete Landmark Name and  
1997           Complete Place Name, although permitted, are not shown in the syntax of the  
1998           [Unnumbered Thoroughfare Address](#).

1999           **XML Tag:** <UnnumberedThoroughfareAddress>

2000           **XML Model:**

2001           <xsd:complexType name="UnnumberedThoroughfareAddress\_type">

2002           <xsd:annotation>

2003           <xsd:documentation xml:lang="en">

2004           The Address Class

2005           associated with singular locations

2006           referenced off of a linear feature,

2007           lacking numeric

2008           identifiers.

2009           </xsd:documentation>

2010           </xsd:annotation>

2011           <xsd:sequence>

2012           <xsd:element name="CompleteStreetName"

2013           type="addr\_type:CompleteStreetName\_type"

2014           minOccurs="1" maxOccurs="1" />

2015           <xsd:element name="CompleteSubaddress"

2016           type="addr\_type:CompleteSubaddress\_type"

2017           minOccurs="0" maxOccurs="1" />

2018           <xsd:group ref="addr\_type:PlaceStateZip\_group" minOccurs="1"

2019           maxOccurs="1" />

2020           <xsd:group ref="addr\_type:AddressAttributes\_group"

2021           minOccurs="0" maxOccurs="1" />

2022           </xsd:sequence>

2023           <xsd:attribute name="action" type="addr\_type:Action\_type"

2024            use="optional" />

2025            </xsd:complexType>

2026            **XML Example:**

2027            <?xml version="1.0" encoding="UTF-8"?>

2028            <addr:AddressCollection version="0.4" xmlns:addr="addr"

2029            xmlns:addr\_type="addr\_type" xmlns:gml="http://www.opengis.net/gml"

2030            xmlns:smil20="http://www.w3.org/2001/SMIL20/"

2031            xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"

2032            xmlns:xlink="http://www.w3.org/1999/xlink"

2033            xmlns:xml="http://www.w3.org/XML/1998/namespace"

2034            xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

2035            xsi:schemaLocation="addr addr.xsd ">

2036            <UnnumberedThoroughfareAddress>

2037            <CompleteStreetName>

2038            <StreetName>Fagaima</StreetName>

2039            <StreetNamePostType>Road</StreetNamePostType>

2040            </CompleteStreetName>

2041            <CompletePlaceName>

2042            <PlaceName>Nu'uli</PlaceName>

2043            </CompletePlaceName>

2044            <StateName>AS</StateName>

2045            <ZIPCode>96799</ZIPCode>



2046                   </UnnumberedThoroughfareAddress>

2047                   </addr:AddressCollection>

## 2048                   **Quality Measures**

2049                   [Pattern Sequence Measure](#)

### 2050                   **3.2.2 Landmark Address Classes**

2051                   A landmark address specifies a location by reference to a named landmark. A landmark is a  
2052                   relatively permanent feature of the manmade landscape that has recognizable identity within a  
2053                   particular cultural context (definition adapted from U.S. Board on Geographic Names,  
2054                   *"Principles, Policies, Procedures,"* (Online Edition (revised)), 2003, p. 48, definition of  
2055                   "geographic name").

#### 2056                   **3.2.2.1 Landmark Address**

2057                   **Syntax:** { [Complete Landmark Name](#) \* } (1..n) + { [Complete Subaddress](#) } + {  
2058                   [Complete Place Name](#) \* } + { [State Name](#) \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + {  
2059                   [Country Name](#) }

#### 2060                   **Defining Characteristics:**

2061                   1. Addresses of this class must include a [Complete Landmark Name](#), with no  
2062                   [Complete Address Number](#) preceding it and no [Complete Street Name](#) following  
2063                   it.

2064 2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
2065 [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

2066 **Examples:**

- 2067 • Statue of Liberty, New York NY 10004
- 2068 • Langston Housing Complex, Building 7, Apartment 290, Kansas City KS  
2069 66101
- 2070 • Condominium Garden Hills Plaza, Torre 2, Apartamento 905, Mayaguez PR  
2071 00680-1233
- 2072 • Condominium Del Mar, Apartamento 905, Ponce PR 00731
- 2073 • Residencial Las Margaritas, Edificio 1, Apartamento 104, San Juan PR 00924

2074 **Notes:**

- 2075 1. This class includes the "condominium" addresses found in Puerto Rico, where a  
2076 complex or building is known by name, without reference to a street.

2077 **XML Tag:** <LandmarkAddress>

2078 **XML Model:**

2079 <xsd:complexType name="LandmarkAddress\_type">  
2080 <xsd:sequence>  
2081 <xsd:element name="CompleteLandmarkName"  
2082 type="addr\_type:CompleteLandmarkName\_type"  
2083 minOccurs="1" maxOccurs="1" />

```
2084      <xsd:element name="CompleteSubaddress"
2085      type="addr_type:CompleteSubaddress_type"
2086      minOccurs="0" maxOccurs="1" />
2087      <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
2088      maxOccurs="1" />
2089      <xsd:group ref="addr_type:AddressAttributes_group"
2090      minOccurs="0" maxOccurs="1" />
2091    </xsd:sequence>
2092    <xsd:attribute name="action" type="addr_type:Action_type"
2093      use="optional" />
2094  </xsd:complexType>
```

2095 **XML Example:**

```
2096    <?xml version="1.0" encoding="UTF-8"?>
2097    <addr:AddressCollection version="0.4" xmlns:addr="addr"
2098      xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
2099      xmlns:smil20="http://www.w3.org/2001/SMIL20/"
2100      xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"
2101      xmlns:xlink="http://www.w3.org/1999/xlink"
2102      xmlns:xml="http://www.w3.org/XML/1998/namespace"
2103      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
2104      xsi:schemaLocation="addr addr.xsd ">
2105    <LandmarkAddress>
```

2106           <CompleteLandmarkName>  
2107           <LandmarkName>Condominium Garden Hills Plaza</LandmarkName>  
2108           </CompleteLandmarkName>  
2109           <CompleteSubaddress>  
2110           <SubaddressElement SubaddressComponentOrder="1">  
2111           <SubaddressType>Torre</SubaddressType>  
2112           <SubaddressIdentifier>2</SubaddressIdentifier>  
2113           </SubaddressElement>  
2114           <SubaddressElement>  
2115           <SubaddressType>Apartamento</SubaddressType>  
2116           <SubaddressIdentifier>905</SubaddressIdentifier>  
2117           </SubaddressElement>  
2118           </CompleteSubaddress>  
2119           <CompletePlaceName>  
2120           <PlaceName>Mayaguez</PlaceName>  
2121           </CompletePlaceName>  
2122           <StateName>PR</StateName>  
2123           <ZIPCode>00608</ZIPCode>  
2124           <ZIPPlus4>1233</ZIPPlus4>  
2125           </LandmarkAddress>  
2126           </addr:AddressCollection>

2127           **Quality Measures**

2128 [Pattern Sequence Measure](#)

### 2129 3.2.2.2 Community Address

2130 **Syntax:** { [Complete Address Number](#) \* } + { [Complete Landmark Name](#) or [Complete](#)  
2131 [Place Name](#) \* } + { [Complete Subaddress](#) } + { [Complete Place Name](#) \* } + { [State](#)  
2132 [Name](#) \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

#### 2133 Defining Characteristics:

- 2134 1. Addresses of this class must include a [Complete Address Number](#) followed by a  
2135 [Complete Landmark Name](#) or a [Complete Place Name](#), and they must not include  
2136 a [Complete Street Name](#).
- 2137 2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
2138 [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

#### 2139 Examples:

- 2140 1. 1234 Urbanizacion Los Olmos, Ponce PR 00731
- 2141 2. A17 Jardine Fagota, Ponce PR 00731
- 2142 3. B133 Urbanizacion Golden Gate, San Juan PR 00920
- 2143 4. 23B Edgewater Park, Apartment 12, Bronx, NY 10465

#### 2144 Notes:

- 2145 1. [Community Addresses](#) may be found in gated communities, housing projects,  
2146 Puerto Rican urbanizations, trailer courts, and similar developments that are built

2147 around interior walkways or roadways. Their [Complete Address Numbers](#) refer to  
2148 the community name, not to a thoroughfare. The community name might be a  
2149 treated as a [Landmark Name](#) or [Place Name](#)--the distinction is often arbitrary or  
2150 unclear for community names.

2151 2. If there is no [Complete Address Number](#) preceding the urbanization name, the  
2152 address fits into the [Landmark Address](#) class.

2153 3. If the address includes both a [Complete Street Name](#) and a community name, it  
2154 fits in the [Numbered Thoroughfare Address](#) class.

2155 4. This class includes Puerto Rican urbanization addresses where the urbanization  
2156 name is preceded by a number, and no street name is included. In Puerto Rico, an  
2157 urbanization denotes an area, sector, or residential development within a  
2158 geographic area. For more information on Puerto Rican addressing conventions,  
2159 see USPS Publication 28 Section 29, and USPS “Addressing Standards for Puerto  
2160 Rico and the Virgin Islands”. See also the notes under [Numbered Thoroughfare](#)  
2161 [Address](#).

---

2162 **XML Tag:** <CommunityAddress>

2163 **XML Model:**

2164 <xsd:complexType name="CommunityAddress\_type">

2165 <xsd:annotation>

2166 <xsd:documentation> 1. Community Addresses are commonly used for

2167           housing projects, Puerto Rican urbanizations, trailer courts, and  
2168           similar developments that are built around unnamed interior walkways  
2169           or roadways. Their Complete Address Numbers refer to the community  
2170           name, not to a thoroughfare. 2. A Community Address includes a  
2171           Complete Address Number, a community name, and a Place Name. The  
2172           address does not include a Complete Street Name. The community name  
2173           might be a treated as a Landmark Name or Place Name--the distinction  
2174           is often arbitrary or unclear for community names. 3. If there is no  
2175           Complete Address Number preceding the urbanization name, the address  
2176           fits into the Landmark Address class. 4. If the address includes  
2177           both a Complete Street Name and a community name, it fits in the  
2178           Landmark Site Address class. 5. This class includes Puerto Rican  
2179           urbanization addresses where the urbanization name is preceded by a  
2180           number, and no street name is included. In Puerto Rico, an  
2181           urbanization denotes an area, sector, or residential development  
2182           within a geographic area. For more information on Puerto Rican  
2183           addressing conventions, see USPS Publication 28 Section 29, and USPS  
2184           “Addressing Standards for Puerto Rico and the Virgin Islands”.  
2185           </xsd:documentation>  
2186           </xsd:annotation>  
2187           <xsd:sequence>  
2188           <xsd:element name="CompleteAddressNumber"  
2189           type="addr\_type:CompleteAddressNumber\_type"

```
2190         minOccurs="1" maxOccurs="1" />
2191     <xsd:choice>
2192         <xsd:element name="CompleteLandmarkName"
2193             type="addr_type:CompleteLandmarkName_type"
2194             minOccurs="1" maxOccurs="1" />
2195         <xsd:element name="CompletePlaceName"
2196             type="addr_type:CompletePlaceName_type"
2197             minOccurs="1" maxOccurs="1" />
2198     </xsd:choice>
2199     <xsd:element name="CompleteSubaddress"
2200         type="addr_type:CompleteSubaddress_type"
2201         minOccurs="0" maxOccurs="1" />
2202     <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
2203         maxOccurs="1" />
2204     <xsd:group ref="addr_type:AddressAttributes_group"
2205         minOccurs="0" maxOccurs="1" />
2206 </xsd:sequence>
2207 <xsd:attribute name="action" type="addr_type:Action_type"
2208     use="optional" />
2209 </xsd:complexType>

2210 XML Example:
2211 <?xml version="1.0" encoding="UTF-8"?>
```



```
2212      <addr:AddressCollection version="0.4" xmlns:addr="addr"
2213      xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
2214      xmlns:smil20="http://www.w3.org/2001/SMIL20/"
2215      xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"
2216      xmlns:xlink="http://www.w3.org/1999/xlink"
2217      xmlns:xml="http://www.w3.org/XML/1998/namespace"
2218      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
2219      xsi:schemaLocation="addr addr.xsd ">
2220      <CommunityAddress>
2221      <CompleteAddressNumber>
2222      <AddressNumberPrefix>A</AddressNumberPrefix>
2223      <AddressNumber>17</AddressNumber>
2224      </CompleteAddressNumber>
2225      <CompleteLandmarkName>
2226      <LandmarkName>Jardine Fagota</LandmarkName>
2227      </CompleteLandmarkName>
2228      <CompletePlaceName>
2229      <PlaceName>Ponce</PlaceName>
2230      </CompletePlaceName>
2231      <StateName>PR</StateName>
2232      <ZIPCode>00731</ZIPCode>
2233      </CommunityAddress>
2234      </addr:AddressCollection>
```

2235        **Quality Measures**2236        [Pattern Sequence Measure](#)2237        **3.2.3 Postal Delivery Address Classes**

2238        A postal delivery address specifies a point of postal delivery that has no definite relation to the  
2239        location of the recipient, such as a post office box, rural route box, overseas military address,  
2240        or general delivery office. The USPS specifies each class in detail in USPS Publication 28.

2241        Postal addresses are often combined with thoroughfare and landmark addresses. Examples:

- 2242            • Landmark-Postal Address: Wagon Wheel Ranch, RR1 Box 100, Pawhuska, OK
- 2243            • Postal-Thoroughfare Address: 200 South Minnesota Avenue, PO Box 1304, Sioux  
2244            Falls, SD
- 2245            • Landmark-Postal-Thoroughfare Address: Twin Falls Extension Center, Evergreen  
2246            Building, College of Southern Idaho, PO Box 1827, 315 Falls Avenue East, Twin  
2247            Falls, ID

2248        These potential classes are not recognized in this standard because the USPS strongly  
2249        discourages their use (USPS Publication 28 sections 215, 245, 255, 295.6 and 295.7). Within  
2250        the standard they can be handled in two ways:

- 2251            1. Separate them into their component types, create records for each, and relate the  
2252            records to show that they refer to the same location.
- 2253            2. Treat the entire address as a [General Address Class](#) address.

**2254 3.2.3.1 USPS Postal Delivery Box**

2255       **Syntax:** { [USPS Box](#)\* } + { [Complete Subaddress](#) } + { [Complete Place Name](#)\* } + {  
2256       [State Name](#)\* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2257       [USPS Box](#) Format: [USPS Box](#) = "PO Box"\* + { [USPS Box ID](#)\* }

2258       In this address class, the phrase "PO Box" is the only permitted value for [USPS Box](#)  
2259       [Type](#).

**2260 Defining Characteristics:**

- 2261       1. Addresses of this class must include a [USPS Box](#) in the required format, and must  
2262       not include a [USPS Route](#).
- 2263       2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
2264       [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

**2265 Example:**

- 2266       • PO BOX 16943, New Orleans LA 70112
- 2267       • PO BOX 1890, Kryton TN 38188-1890
- 2268       • PO BOX G, Gabbs NV 89409
- 2269       • PO BOX 159753 PMB 3571, Herndon VA 22071-2716

**2270 Notes:**

- 2271       1. This class is defined in USPS Publication 28, Sections 281-283. The phrase "PO  
2272       Box" is mandatory as the USPS Box Type.

- 2273           2. USPS Pub 28 Sec. 282: "Post Office Box numbers that are preceded by significant  
2274           leading zeroes are identified in the ZIP+4 File by a hyphen (-) preceding the box  
2275           number. Convert the hyphen into a zero on the output mailpiece.
- 2276           • ZIP+4 File: PO BOX -0145
  - 2277           • Mailpiece: PO BOX 00145"
- 2278           3. USPS Pub 28 Sec. 283: "PO Box addresses often appear with the word CALLER,  
2279           FIRM CALLER, BIN, LOCKBOX, or DRAWER. Change these to PO BOX."
- 2280           • Incorrect: DRAWER L
  - 2281           • Correct: PO BOX L
- 2282           4. The [Complete Subaddress](#), if it appears at all, must have only one [Subaddress](#)  
2283           [Element](#), and that [Subaddress Element](#) must have a [Subaddress Type](#) of "PMB".
- 2284           5. In [USPS Postal Delivery Box](#) addresses, the [Complete Place Name](#) element may  
2285           include multiple [Place Names](#), but the USPS strongly prefers that only the postal  
2286           community name be used. Example:
- 2287           • **Preferred:** Wailuku, HI
  - 2288           • **Acceptable:** Wailuku, Maui, HI
- 2289           **XML Tag:** <USPSPostalDeliveryBox>
- 2290           **XML Model:**
- 2291           <xsd:complexType name="USPSPostalDeliveryBox\_type">  
2292           <xsd:sequence>  
2293           <xsd:element name="USPSBox" type="addr\_type:USPSBox\_type"  
2294           minOccurs="1" maxOccurs="1" />

```
2295     <xsd:element name="CompleteSubaddress"
2296     type="addr_type:CompleteSubaddress_type"
2297     minOccurs="0" maxOccurs="1" />
2298     <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
2299     maxOccurs="1" />
2300     <xsd:group ref="addr_type:AddressAttributes_group"
2301     minOccurs="0" maxOccurs="1" />
2302 </xsd:sequence>
2303 <xsd:attribute name="action" type="addr_type:Action_type"
2304     use="optional" />
2305 </xsd:complexType>
```

2306 **XML Example:**

```
2307 <?xml version="1.0" encoding="UTF-8"?>
2308 <addr:AddressCollection version="0.4" xmlns:addr="addr"
2309     xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
2310     xmlns:smil20="http://www.w3.org/2001/SMIL20/"
2311     xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"
2312     xmlns:xlink="http://www.w3.org/1999/xlink"
2313     xmlns:xml="http://www.w3.org/XML/1998/namespace"
2314     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
2315     xsi:schemaLocation="addr addr.xsd ">
2316 <USPSPostalDeliveryBox>
```

2317           <USPSBox>  
2318           <USPSBoxType>PO BOX</USPSBoxType>  
2319           <USPSBoxId>159753</USPSBoxId>  
2320           </USPSBox>  
2321           <CompleteSubaddress>  
2322           <SubaddressElement>  
2323           <SubaddressType>PMB</SubaddressType>  
2324           <SubaddressIdentifier>3571</SubaddressIdentifier>  
2325           </SubaddressElement>  
2326           </CompleteSubaddress>  
2327           <CompletePlaceName>  
2328           <PlaceName>Herndon</PlaceName>  
2329           </CompletePlaceName>  
2330           <StateName>VA</StateName>  
2331           <ZIPCode>22071</ZIPCode>  
2332           </USPSPostalDeliveryBox>  
2333           </addr:AddressCollection>

2334           **Quality Measure**

2335           [Pattern Sequence Measure](#)

2336 **3.2.3.2 USPS Postal Delivery Route**

2337       **Syntax:** { [USPS Address](#) \* } + { [Complete Place Name](#) \* } + { [State Name](#) \* } + { [ZIP](#)  
2338       [Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2339       **Type 1: Rural Route (RR):**

2340       [USPS Address](#) = "RR"\* + { [USPS Box Group ID](#) \* } + "BOX"\* + ( [USPS Box ID](#)  
2341       \* } + { [Private Mail Box](#) }

2342       **Syntax:** { [USPS Address](#)\* } + { [Complete Place Name](#) \* } + { [State Name](#) \* } + {  
2343       [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2344       **Type 2: Highway Contract Route (HC):**

2345       [USPS Address](#) = "HC"\* + { [USPS Box Group ID](#) \* } + "BOX"\* + ( [USPS Box](#)  
2346       [ID](#) \* } + { [Private Mail Box](#) }

2347       **Syntax:** { [USPS Address](#)\* } + { [Complete Place Name](#) \* } + { [State Name](#) \* } + {  
2348       [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2349       **Type 3: Overseas Military or Diplomatic Delivery:**

2350       [USPS Address](#) = "PSC" or "CMR" or "UNIT" \* + { [USPS Box Group ID](#) \* } +  
2351       "BOX"\* + ( [USPS Box ID](#) \* }

2352       **Syntax:** { [USPS Address](#)\* } + { "APO" or "FPO" or "DPO" \* } + { "AE" or "AP"  
2353       or "AA" \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2354       **Defining Characteristics:**

2355 1. Addresses of this class must include a [USPS Address](#) in the specified RR or HC or  
2356 overseas military delivery format.

2357 1. In addition, all thoroughfare, landmark, and postal addresses must include a  
2358 [Place Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not  
2359 mandatory.

## 2360 **Notes and Examples**

2361 **1. General.** In RR and HC addresses, the [Complete Place Name](#) element may include  
2362 multiple [Place Names](#), but the USPS recommends that only the postal community  
2363 name be used. Example:

- 2364 • Preferred: Wailuku, HI
- 2365 • Acceptable: Wailuku, Maui, HI

2366

## 2367 **2. Rural Route Address Notes and Examples (per USPS Pub 28 sec. 24):**

- 2368 • USPS Pub 28 Sec. 241: “Print rural route addresses on mailpieces as: RR N BOX  
2369 NN. Do not use the words RURAL, NUMBER, NO., or the pound sign (#).”

- 2370 • RR 2 BOX 152

- 2371 • RR 9 BOX 23A

- 2372 • USPS Pub 28 Sec. 242: “A leading zero before the rural route number is not  
2373 necessary.”

- 2374 • Acceptable: RR03 BOX 98D

- 2375 • Preferred: RR 3 BOX 98D



- 2376           • USPS Pub 28 Sec. 243: “Print hyphens as part of the box number only when they  
2377           are part of the address in the ZIP+4 File.”
- 2378           • RR 4 BOX 19-1A
- 2379           • USPS Pub 28 Sec. 244: “Change the designations RFD and RD (as a meaning for  
2380           rural or rural free delivery) to RR.”
- 2381           • Incorrect: RFD ROUTE 4 #87A
- 2382           • Correct: RR 4 BOX 87A
- 2383           • USPS Pub 28 Sec. 245: “There should be no additional designations, such as town  
2384           or street names, on the Delivery Address Line of rural route addresses. Because  
2385           street names used together with route and box numbers can create potential  
2386           matching difficulty, mailers are encouraged to use only one style of addressing. If  
2387           secondary name information is used, however, place it above the Delivery  
2388           Address Line.”
- 2389           • Incorrect: RR 2 BOX 18 BRYAN DAIRY RD
- 2390           • Correct: RR 2 BOX 18
- 2391           • USPS Pub 28 Sec. 246: “When applying a ZIP+4 code to a rural address, an exact  
2392           match is preferred. If a box number is included in the address, the mailpiece must  
2393           bear the appropriate ZIP+4 code representing the range for that box number.  
2394           When box number information is not available, the Rural Route base record must  
2395           be used.”
- 2396           **3. Highway Contract Route Address Notes and Examples (per USPS Pub 28 sec.**  
2397           **25)**

- 2398           • USPS Pub 28 Sec. 251: "Print highway contract route addresses on a mailpiece as:
- 2399           HC N BOX NN. Do not use the words HIGHWAY CONTRACT, ROUTE,
- 2400           NUMBER, NO., STAR ROUTE, or the pound sign (#).
- 2401           • Incorrect: HIGHWAY CONTRACT ROUTE 68 BOX 23A
- 2402           • Correct: HC 68 BOX 23A"
- 2403           • USPS Pub 28 Sec. 252: "A leading zero before the highway contract route number
- 2404           is not needed.
- 2405           • Acceptable: HC068 BOX 98D
- 2406           • Preferred: HC 68 BOX 98D"
- 2407           • USPS Pub 28 Sec. 253: "Print hyphens as part of the box number only when they
- 2408           are part of the address in the ZIP+4 File.
- 2409           • HC 68 BOX 19-2B "
- 2410           • USPS Pub 28 Sec. 254: "Change the designation STAR ROUTE, which usually
- 2411           refers to highway contract route, to HC.
- 2412           • Incorrect: STAR ROUTE 68 BOX # 45
- 2413           • Correct: HC 68 BOX 45"
- 2414           • USPS Pub 28 Sec. 255: "There should be no additional designations, such as town
- 2415           or street names, on the Delivery Address Line of highway contract route
- 2416           addresses. Street names used together with route and box numbers can create
- 2417           potential matching difficulty. Mailers are encouraged to use only one style of
- 2418           addressing. If secondary name information is used, however, place it above the
- 2419           Delivery Address Line.

- 2420                   • Incorrect: HC 72 BOX 18 BRYAN DAIRY RD
- 2421                   • Correct: HC 72 BOX 18"
- 2422                   • USPS Pub 28 Sec. 256: "When applying a ZIP+4 code to a highway contract route
- 2423                   address, an exact match is preferred. If a box number is included in the address,
- 2424                   the mailpiece must bear the appropriate ZIP+4 code representing the range for that
- 2425                   box number. When box number information is not available, the highway contract
- 2426                   base record must be used."
- 2427                   **4. Overseas Military PSC, CMR, or UNIT Address Notes and Examples** (per
- 2428                   USPS Pub 28 sec. 225.1, 238.1, and 239)
- 2429                   • PSC stands for Postal Service Center. CMR stands for Common Mail Room.
- 2430                   • USPS Pub 28 Sec. 238.1: "The Delivery Address Line for all APO/FPO military
- 2431                   mail must be standardized as follows:
- 2432                   • PSC (CMR OR UNIT) NNNN
- 2433                   • BOX NNNN
- 2434                   • **Examples:**
- 2435                   • CMR 830 BOX 51
- 2436                   • PSC 1650 BOX 10
- 2437                   • UNIT 908 BOX 111
- 2438                   • **APO, FPO; AA, AE, AP:** USPS Pub 28 Sec. 225.1 "Overseas military addresses
- 2439                   must contain the APO or FPO designation along with a two-character "state"
- 2440                   abbreviation of AE, AP, or AA and the ZIP Code or ZIP+4 code."
- 2441                   • APO AE 09001-5275

- 2442                               • FPO AP 96606-2783
- 2443                               • APO AA 34035-4198
- 2444                               • APO stands for Army Post Office
- 2445                               • FPO stands for Field Post Office or Fleet Post Office
- 2446                               • AE is used for armed forces in Europe, the Middle East, Africa, and Canada;
- 2447                               • AP is for the Pacific; and
- 2448                               • AA is the Americas excluding Canada."
- 2449                               • **DPO:** USPS Pub 28 Sec. 239 The Delivery Address Line for DPO (Diplomatic
- 2450                               Post Office) Department of State mail must be standardized to include the DPO
- 2451                               designation and the appropriate two-letter abbreviation (AA, AE or AP), followed
- 2452                               by the ZIP+4 or 5-digit ZIP Code.
- 2453                               • **Complete Address Examples:**
- 2454                               • PSC 802 BOX 74 APO AE 09499-0074
- 2455                               • UNIT 2050 BOX 4190 APO AP 96278-2050
- 2456                               • UNIT 9900 DPO AE 09701-1000
- 2457
- 2458                               **XML Tag:** <USPSPostalDeliveryRoute>
- 2459                               **XML Model:**
- 2460                               <xsd:complexType name="USPSPostalDeliveryRoute\_type">
- 2461                               <xsd:sequence>
- 2462                               <xsd:element name="USPSAddress" type="addr\_type:USPSAddress\_type"

```
2463         minOccurs="1" maxOccurs="1" />
2464     <xsd:group ref="addr_type:PlaceStateZip_group" minOccurs="1"
2465         maxOccurs="1" />
2466     <xsd:group ref="addr_type:AddressAttributes_group"
2467         minOccurs="0" maxOccurs="1" />
2468 </xsd:sequence>
2469 <xsd:attribute name="action" type="addr_type:Action_type"
2470     use="optional" />
2471 </xsd:complexType>
```

2472 **XML Example:**

```
2473 <?xml version="1.0" encoding="UTF-8"?>
2474 <addr:AddressCollection version="0.4" xmlns:addr="addr"
2475     xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
2476     xmlns:smil20="http://www.w3.org/2001/SMIL20/"
2477     xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"
2478     xmlns:xlink="http://www.w3.org/1999/xlink"
2479     xmlns:xml="http://www.w3.org/XML/1998/namespace"
2480     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
2481     xsi:schemaLocation="addr addr.xsd ">
2482     <USPSPostalDeliveryRoute>
2483     <USPSAddress>
2484     <USPSRoute>
```

2485           <USPSBoxGroupType>RR</USPSBoxGroupType>

2486           <USPSBoxGroupId>2</USPSBoxGroupId>

2487           </USPSRoute>

2488           <USPSBox>

2489           <USPSBoxType>Box</USPSBoxType>

2490           <USPSBoxId>18</USPSBoxId>

2491           </USPSBox>

2492           </USPSAddress>

2493           <CompletePlaceName>

2494           <PlaceName>Largo</PlaceName>

2495           </CompletePlaceName>

2496           <StateName>FL</StateName>

2497           <ZIPCode>33777</ZIPCode>

2498           </USPSPostalDeliveryRoute>

2499           </addr:AddressCollection>

2500           **Quality Measures**

2501           [Pattern Sequence Measure](#)

### 2502    3.2.3.3 USPS General Delivery Office

2503           **Syntax:** { [USPS General Delivery Point](#) \* } + { [Complete Place Name](#) \* } + { [State](#)

2504           [Name](#) \* } + { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2505           **Type 1: General Delivery:**

2506           **USPSGeneralDeliveryPoint** = "GENERAL DELIVERY" \*

2507           **Syntax:** "GENERAL DELIVERY"\* + { [Complete Place Name](#) \* } + { [State](#)

2508           [Name](#) \* } + { [ZIP Code](#) \* } + "9999" + { [Country Name](#) }

2509           **Type 2: Overseas Military Address:**

2510           **USPSGeneralDeliveryPoint** = SHIP'S NAME

2511           **Syntax:** SHIP'S NAME\* + { "APO" or "FPO" \* } + { "AE" or "AP" or "AA" \* }

2512           + { [ZIP Code](#) \* } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2513           **Defining Characteristics:**

2514           1. Addresses of this class must include a [USPS General Delivery Point](#) in the  
2515           specified format.

2516           2. In addition, all thoroughfare, landmark, and postal addresses must include a [Place](#)  
2517           [Name](#) and a [State Name](#). A [ZIP Code](#) is recommended but not mandatory.

2518           **Notes and Examples**

2519           **1. General.** In General Delivery addresses, the [Complete Place Name](#) element may  
2520           include multiple [Place Names](#), but the USPS recommends that only the postal  
2521           community name be used. Example:

2522           • Preferred: Wailuku, HI

2523           • Acceptable: Wailuku, Maui, HI

2524           **2. General Delivery Addresses Note and Example {per USPS Pub 28 sec. 26}**

- 2525           •       USPS Pub 28 Sec. 261: “Use the words GENERAL DELIVERY, uppercase
- 2526                   preferred, spelled out (no abbreviation), as the Delivery Address Line on the
- 2527                   mailpiece. Each record will carry the 9999 add-on code.”
- 2528           •       **Complete Example:**
- 2529                   GENERAL DELIVERY
- 2530                   TAMPA FL 33602-9999
- 2531           **3. Overseas Military Addresses Notes and Examples {per USPS Pub 28 sec. 225.1**
- 2532           **and 238.1}**
- 2533           •       USPS Pub 28 Sec. 238.1: "The Delivery Address Line for all APO/FPO military
- 2534                   mail must be standardized as follows:
- 2535                   •   SHIP’S NAME
- 2536                   •   **Example:**
- 2537                   •   USS SEA DEVIL SSN-664
- 2538           •       USPS Pub 28 Sec. 225.1 "Overseas military addresses must contain the APO or
- 2539                   FPO designation along with a two-character “state” abbreviation of AE, AP, or
- 2540                   AA and the ZIP Code or ZIP+4 code.
- 2541                   •   APO AE 09001-5275
- 2542                   •   FPO AP 96606-2783
- 2543                   •   APO AA 34035-4198
- 2544                   •   AE is used for armed forces in Europe, the Middle East, Africa, and Canada;
- 2545                   •   AP is for the Pacific; and
- 2546                   •   AA is the Americas excluding Canada."



2547                   •   **Complete Example:**

2548                   USCGC HAMILTON

2549                   FPO AP 96667-3931

2550               **XML Tag:** <USPSGeneralDeliveryOffice>2551               **XML Model:**

2552                   &lt;xsd:complexType name="USPSGeneralDeliveryOffice\_type"&gt;

2553                   &lt;xsd:sequence&gt;

2554                   &lt;xsd:element name="USPSGeneralDeliveryPoint"

2555                   type="addr\_type:USPSGeneralDeliveryPoint\_type" /&gt;

2556                   &lt;xsd:group ref="addr\_type:PlaceStateZip\_group" minOccurs="1"

2557                   maxOccurs="1" /&gt;

2558                   &lt;xsd:group ref="addr\_type:AddressAttributes\_group"

2559                   minOccurs="0" maxOccurs="1" /&gt;

2560                   &lt;/xsd:sequence&gt;

2561                   &lt;xsd:attribute name="action" type="addr\_type:Action\_type"

2562                   use="optional" /&gt;

2563                   &lt;/xsd:complexType&gt;

2564               **XML Example:**

2565                   &lt;?xml version="1.0" encoding="UTF-8"?&gt;

2566                   &lt;addr:AddressCollection version="0.4" xmlns:addr="addr"

2567                   xmlns:addr\_type="addr\_type" xmlns:gml="http://www.opengis.net/gml"

2568           xmlns:smil20="http://www.w3.org/2001/SMIL20/"

2569           xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"

2570           xmlns:xlink="http://www.w3.org/1999/xlink"

2571           xmlns:xml="http://www.w3.org/XML/1998/namespace"

2572           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

2573           xsi:schemaLocation="addr addr.xsd ">

2574           <USPSGeneralDeliveryOffice>

2575           <USPSGeneralDeliveryPoint>General

2576           Delivery</USPSGeneralDeliveryPoint>

2577           <CompletePlaceName>

2578           <PlaceName>Tampa</PlaceName>

2579           </CompletePlaceName>

2580           <StateName>FL</StateName>

2581           <ZIPCode>33602</ZIPCode>

2582           <ZIPPlus4>9999</ZIPPlus4>

2583           </USPSGeneralDeliveryOffice>

2584           </addr:AddressCollection>

2585           **Quality Measures**

2586           [Pattern Sequence Measure](#)

### 2587 **3.2.4 General Address Class**

2588 The general address class handles all of the above classes, for files in which the various classes  
2589 may be mixed together, and addresses that do not conform to any of the above classes.

#### 2590 **3.2.4.1 General Address Class**

##### 2591 **Syntax:**

2592 **Type 1:** The complete address as a single unparsed string of text.

2593 **Type 2:** The complete address with place, state and zip code parsed out to a  
2594 single field

2595 { [Delivery Address](#) \* } + { [Place State ZIP](#) \* }

2596 **Type 3:** The complete address with place, state and zip code parsed out to  
2597 separate fields

2598 { [Delivery Address](#) \* } + { [Complete Place Name](#) \* } + { [State Name](#) \* } +

2599 { [ZIP Code](#) } + { [ZIP Plus 4](#) } + { [Country Name](#) }

2600 **Defining Characteristic:** In addresses of this class the [Delivery Address](#) must be  
2601 unparsed (except that in Types 2 and 3 the [Complete Subaddress](#) may be separated  
2602 from the rest of the [Delivery Address](#)) and may contain thoroughfare, landmark, or  
2603 postal syntaxes. This class may also include addresses that do not conform to any of  
2604 the thoroughfare, landmark, or postal classes, including non-U.S. addresses.

2605       **Examples:**2606       **Type 1:**

- 2607       • Record 1: Address = **123 Main Street, Apt. 1, Ames, IA 50010**
- 2608       • Record 2: Address = **Ames High School, Room 12, Ames, IA 50010**
- 2609       • Record 3: Address = **PO Box 1511, Ames, IA 50010**

2610       **Type 2:**

- 2611       • Record 1: [Delivery Address](#) = **123 Main Street, Apt. 1**; [Place State ZIP](#) =  
2612       **Ames, IA 50010**
- 2613       • Record 2: [Delivery Address](#) = **Ames High School, Room 12**; [Place State ZIP](#)  
2614       = **Ames, IA 50010**
- 2615       • Record 3: [Delivery Address](#) = **PO Box 1511**; [Place State ZIP](#) = **Ames, IA**  
2616       **50010**

2617       **Type 3:**

- 2618       • Record 1: [Delivery Address](#) = **123 Main Street, Apt. 1**; [Complete Place](#)  
2619       [Name](#) = **Ames**; [State Name](#) = **IA**; [ZIP Code](#) = **50010**
- 2620       • Record 2: [Delivery Address](#) = **Ames High School, Room 12**; [Complete Place](#)  
2621       [Name](#) = **Ames**; [State Name](#) = **IA**; [ZIP Code](#) = **50010**
- 2622       • Record 3: [Delivery Address](#) = **PO Box 1511**; [Complete Place Name](#) = **Ames**;  
2623       [State Name](#) = **IA**; [ZIP Code](#) = **50010**

2624       **Notes:**

- 2625           1. Address files often contain—and need to contain—street, landmark, and postal  
2626           addresses mixed together. The general address class is intended to provide a basis  
2627           for handling these kinds of files.
- 2628           2. The general class provides a way to handle addresses that do not conform to any  
2629           of the thoroughfare, landmark, or postal classes, including non-U.S. addresses.
- 2630           3. In the general class, at minimum, the complex element [Delivery Address](#) is  
2631           unparsed (except that in Types 2 and 3 the [Complete Subaddress](#) may be separated  
2632           from the rest of the [Delivery Address](#)) and may contain thoroughfare, landmark, or  
2633           postal syntaxes.
- 2634           4. Within the general class, the three types differ as follows:
- 2635           • In Type 1, the entire address is a single unparsed string of text.
- 2636           • In Type 2, the [Delivery Address](#) line is separated from the [Place State ZIP](#) line.
- 2637           • In Type 3, the [Complete Place Name](#), [State Name](#), [ZIP Code](#), [ZIP Plus 4](#), and  
2638           [Country Name](#) are separated from each other.
- 2639           5. In Types 2 and 3, if the [Complete Subaddress](#) is separated from the rest of the  
2640           [Delivery Address](#), then the [Delivery Address Type](#) value should be "Subaddress  
2641           Excluded".

2642           **XML Tag:** <GeneralAddressClass>

2643           **XML Model:**

2644           <xsd:complexType name="GeneralAddressClass\_group">

2645           <xsd:choice>

2646           <xsd:element name="GeneralAddress">

```
2647         type="addr_type:GeneralAddress_type" />
2648     <xsd:sequence>
2649         <xsd:element name="USPSGeneralDeliveryPoint"
2650             type="addr_type:USPSGeneralDeliveryPoint_type" />
2651         <xsd:group ref="addr_type:PlaceStateZip_group"
2652             minOccurs="1" maxOccurs="1" />
2653         <xsd:group ref="addr_type:AddressAttributes_group"
2654             minOccurs="0" maxOccurs="1" />
2655     </xsd:sequence>
2656 </xsd:choice>
2657 <xsd:attribute name="action" type="addr_type:Action_type" />
2658 </xsd:complexType>
```

2659 **XML Example:**

2660 **Type 1:**

2661 123 Main Street, Apt 1, Ames, IA 50010

2662 **Type 2:**

```
2663 <?xml version="1.0" encoding="UTF-8"?>
2664 <addr:AddressCollection version="0.4" xmlns:addr="addr"
2665     xmlns:addr_type="addr_type" xmlns:gml="http://www.opengis.net/gml"
2666     xmlns:smil20="http://www.w3.org/2001/SMIL20/"
2667     xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language">
```

2668           xmlns:xlink="http://www.w3.org/1999/xlink"

2669           xmlns:xml="http://www.w3.org/XML/1998/namespace"

2670           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

2671           xsi:schemaLocation="addr addr.xsd ">

2672           <GeneralAddressClass>

2673           <DeliveryAddress>123 Main Street, Apt 1</DeliveryAddress>

2674           <CompletePlaceName>

2675           <PlaceStateZip>Ames, IA 50010</PlaceStateZip>

2676           </CompletePlaceName>

2677           </GeneralAddressClass>

2678           </addr:AddressCollection>

2679           **Type 3:**

2680           <?xml version="1.0" encoding="UTF-8"?>

2681           <addr:AddressCollection version="0.4" xmlns:addr="addr"

2682           xmlns:addr\_type="addr\_type" xmlns:gml="http://www.opengis.net/gml"

2683           xmlns:smil20="http://www.w3.org/2001/SMIL20/"

2684           xmlns:smil20lang="http://www.w3.org/2001/SMIL20/Language"

2685           xmlns:xlink="http://www.w3.org/1999/xlink"

2686           xmlns:xml="http://www.w3.org/XML/1998/namespace"

2687           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

2688           xsi:schemaLocation="addr addr.xsd ">

2689           <GeneralAddressClass>

2690           <DeliveryAddress>123 Main Street, Apt 1</DeliveryAddress>

2691           <CompletePlaceName>

2692           <PlaceName>Ames</PlaceName>

2693           </CompletePlaceName>

2694           <StateName>IA</StateName>

2695           <ZIPCode>50010</ZIPCode>

2696           </GeneralAddressClass>

2697           </addr:AddressCollection>

2698           **Quality Measures**

2699           [Pattern Sequence Measure](#)

2700

### 2701   **3.3 Abstract Address Feature Class and Address Collection**

#### 2702   **3.3.1 Abstract Address Feature Class**

2703   All of the address classes described above are specific implementations of an abstract Address

2704   Feature class. The Address Feature class is compatible with the abstract Feature class that is

2705   generally described in the FGDC Geographic Information Framework Data Content Standard,

2706   Base Part, section 7.8.1. The Address Feature is modeling concept used to bind together

2707   within the framework. It is described in more detail in Part 4 of this standard.



### 2708 **3.3.2 Address Collection**

2709 An Address Collection is an aggregation of address data with its associated metadata, which  
2710 can then be transferred from one party to another. The Address Collection conforms to the  
2711 Feature Collection construct that is generally described in the FGDC Geographic Information  
2712 Framework Data Content Standard, Base Part, section 7.8.1. The Address Collection is  
2713 described in more detail in Part 4 of this standard.

2714

## 2715 **4 Address Data Quality**

### 2716 **4.1 Introduction**

#### 2717 **4.1.1 Purpose**

2718 The purpose of Part Four is to help users assess the quality of their address data. It provides  
2719 ways to measure each element, attribute and classification. Some measures compare values to  
2720 address assignment schemes or domains of values. Others check internal consistency, one of  
2721 the most important aspects of addresses. Addresses are interdependent: the validity of all can  
2722 be affected by some. Parity, for example, is an important part of address assignment. In most  
2723 address schemes, even and odd addresses on the same side of the street disrupt normal address  
2724 usage. While the assignment of each address is important, patterns make the system work. The  
2725 methods describe ways to discover anomalies and how to report the quality of the data.