

## 4.1.1. Reference Set Descriptor

The 900000000000456007 |reference set descriptor reference set| is a reference set used to specify the format of all reference sets included in a release. The data type and meaning of the referenced component and each additional field within each reference set is described by this reference set. More specifically, the reference set descriptor is used to define:

1. The order of appearance of additional attributes (other than those mandatory for all reference sets). The *AttributeOrder attribute*
2. The name and purpose of the additional attributes. The *attributeDescription attribute*
3. The data types for the additional attributes. The *attributeType attribute*

The table below shows an excerpt from the Reference Set Descriptor, to illustrate how the attributes of the predefined reference set types are specified consistently.

**Table 4.1.1-1: Sample of the | reference set descriptor reference set (foundation metadata concept) | (human-readable view with some attributes omitted for brevity)**

...	referencedComponentId	referencedComponentId_term	attributeDescription	attributeDescription_term	attributeType	attributeType_term	
	446609009	Simple type reference set	449608002	Referenced component	900000000000461000	Concept type component	0
	447258008	Ordered type reference set	449608002	Referenced component	900000000000460000	Component type	0
	447258008	Ordered type reference set	447255006	Priority order reference set attribute	900000000000478000	Unsigned integer	1
	447258008	Ordered type reference set	447257003	"Linked to" reference set attribute	900000000000460000	Component type	2
	900000000000480006	Attribute value type	449608002	Referenced component	900000000000460000	Component type	0
	900000000000480006	Attribute value type	900000000000491004	Attribute value	900000000000461000	Concept type component	1
	900000000000496009	Simple map	900000000000500006	Map source concept	900000000000461000	Concept type component	0
	900000000000496009	Simple map	900000000000499002	Scheme value	900000000000465000	String	1
	900000000000506000	Language type	900000000000510002	Description in dialect	900000000000462000	Description type component	0
	900000000000506000	Language type	900000000000511003	Acceptability	900000000000461000	Concept type component	1
	900000000000512005	Query specification type reference set	900000000000514006	Generated reference set	900000000000461000	Concept type component	0
	900000000000512005	Query specification type reference set	900000000000515007	Query	900000000000465000	String	1
	900000000000516008	Annotation type	900000000000518009	Annotated component	900000000000461000	Concept type component	0
	900000000000516008	Annotation type	900000000000519001	Annotation	900000000000465000	String	1
	900000000000521006	Association type	900000000000532006	Association source component	900000000000460000	Component type	0
	900000000000521006	Association type	900000000000533001	Association target component	900000000000460000	Component type	1

## Specializing a Descriptor Template

When a new [reference set](#) is created in an [extension](#), it must (by default) conform to the reference set descriptors of its closest supertype (if one exists). Creation of a description template for a new [reference set](#) is optional in an extension, if the reference set has a supertype which itself has a descriptor template.

However, it is possible for a [reference set](#) to specialize the descriptor template of its supertype, by creating a copy and replacing the 900000000000458008 |Attribute description| or 900000000000459000 |Attribute type| values with a subtype.

For example, if a [reference set](#) has a descriptor, in which the 900000000000458008 |Attribute description|= 449608002 |Referenced component| and the 900000000000459000 |Attribute type|= 900000000000460005 |Component type|, then the [reference set](#)'s subtype may replace this descriptor with one in which the 900000000000458008 |Attribute description|= 900000000000460005 |Component type| and the 900000000000459000 |Attribute type|= 900000000000461009 |Concept type component| (since 900000000000461009 |Concept type component| is a subtype of 900000000000460005 |Component type|). In this way, the [reference set](#) descriptors may be specialized for use by the subtypes of the [reference set](#).