

**.NET Software Development Kit (SDK):  
Developing Applications Using the USPS  
Rate Engine Framework**

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# **1 .NET Software Development Kit Overview**

This software development kit (SDK) is intended to provide software and Internet developers with the ability to integrate postage rate information into programs and/or web sites.

## **1.1 Licenses and Liability**

The information and components contained within this SDK may be distributed only to individuals who have signed the USPS User License and may only be used in accordance with the terms of the USPS User License. The USPS assumes no liability for the incorrect implementation of this SDK once it has been incorporated into a client product. The USPS will supply upgrades to the data and/or the objects when needed, but it assumes no part in distribution of these upgrades once the engine has been integrated into client products.

## **1.2 Purpose**

This document is to be used as a supplement to .NET Software Development Kit documentation for the Domestic, International and Business Rate Engines. These documents are titled as following:

- .NET Software Development Kit (SDK): Developing Applications Using the USPS Domestic Retail Rate Engine
- .NET Software Development Kit (SDK): Developing Applications Using the USPS International Retail Rate Engine
- .NET Software Development Kit (SDK): Developing Applications Using the USPS Domestic Business Rate Engine

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## 2 Application Programming Interface (API)

### 2.1 AdditionalInputValue Class

#### 2.1.1 Namespace

ManTech.Usps.RateEngine.Entity

#### 2.1.2 Base Class

None

#### 2.1.3 Constructors

publicAdditionalInputValue()

publicAdditionalInputValue(string typeId, decimal enteredValue)

publicAdditionalInputValue(string typeId, string enteredValueString)

#### 2.1.4 Properties

Name	Type	Description
EnteredValue	decimal	Gets or sets the value of the additional input.
TypeID	string	Gets or sets the type ID to identify the additional input value. See TypeID table below for valid values.

#### TypeID

Name	Description
dv	Declared Value
ac	Amount to Collection

## 2.2 AdditionalInputValueCollection Class

### 2.2.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.2.2 Base Class

List<AdditionalInputValue>

### 2.2.3 Properties

Name	Type	Description
[string typeID]	decimal	Gets or sets the type id for the additional input values being accessed. See TypeID table in the AdditionalInputValue section. This allows for member of the collection to be access using the following notation.  <code>additional_field_values["dv"].EnteredValue</code>

### 2.2.4 RemoveType Method

#### Description

This method is used to remove an AdditionalInputValue from the collection. If the collections contains an AdditionalInputValue that it's TypeID matches the passed parameter it is removed from the list. If an AdditionalInputValue with the passed parameter TypeID is not found the call has no effect.

#### Syntax

```
public void RemoveType(  
    string typeID  
)
```

#### Parameters

*typeID*  
Type: string  
Namespace: none

#### Return Value

Type: void

#### Example

```

AdditionalInputValueCollection additional_field_values = new
    AdditionalInputValueCollection();

// add declared value of 1000
additional_field_values.Add(new AdditionalInputValue("dv", 1000.00));
// add amount to collection of 100
additional_field_values.Add(new AdditionalInputValue("ac", 100.00));

// remove the declared value
additional_field_values.RemoveType("dv");

```

## 2.2.5 UpdateInputValues Method

### Description

This method is used to update the additional input values.

### Syntax

```

public void UpdateInputValues(AdditionalInputValue additionalInputValue)
public void UpdateInputValues(AdditionalInputValueCollection inputValues)

```

### Parameters

*additionalInputValue*

Type: AdditionalInputValue

Namespace: ManTech.Usps.RateEngine.Entity

*additionalInputValueCollection*

Type: AdditionalInputValueCollection

Namespace: ManTech.Usps.RateEngine.Entity

### Return Value

void

### Example

```

AdditionalInputValueCollection additional_field_values = new
    AdditionalInputValueCollection();

// add declared value of 1000
additional_field_values.Add(new AdditionalInputValue("dv", 1000.00));
// add amount to collection of 100
additional_field_values.Add(new AdditionalInputValue("ac", 100.00));

// create new collection
AdditionalInputValueCollection update_additional_field_values = new
    AdditionalInputValueCollection();

// add declared value of 1000
update_additional_field_values.Add(new AdditionalInputValue("dv",
    2000.00));
// add amount to collection of 100

```

```
update_additional_field_values.Add(new AdditionalInputValue("ac",  
    200.00));
```

```
additional_field_values.UpdateInputValues(update_additional_field_value  
    s);  
Console.WriteLine(additional_field_values.ToString());
```

## 2.2.6 ToString Method

### Description

This method will return a string that contains the AdditionalInputValue as the URL parameter list.

### Syntax

```
public string ToString()
```

### Parameters

None

### Return Value

Type: string  
description

### Example

```
AdditionalInputValueCollection additional_field_values = new  
    AdditionalInputValueCollection();  
  
// add decalred value of 1000  
additional_field_values.Add(new AdditionalInputValue("dv", 1000.00));  
// add amount to collection of 100  
additional_field_values.Add(new AdditionalInputValue("ac", 100.00));  
  
Console.WriteLine(additional_field_values.ToString());
```

## 2.3 Breadcrumb Class

### 2.3.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.3.2 Base Class

None

### 2.3.3 Properties

Name	Type	Description
ForPage	PageID	Gets or sets the ID of the page that the breadcrumb will be constructed for. See <i>PageID</i> Enumeration for valid values.
MailProperties	MailProperties	Gets or sets a reference to the MailProperties object used to construct the breadcrumb.
MailService	MailService	Gets or sets a reference to the MailService object used to construct the breadcrumb.

### 2.3.4 PageID Enumeration

Name	Value	Description
Unknown	0	The ID of the page that the breadcrumb will be constructed for is unknown.
MailServices	1	The ID of the page that the breadcrumb will be constructed for is mail services.
ExtraServices	2	The ID of the page that the breadcrumb will be constructed for is extra services.
Summary	3	The ID of the page that the breadcrumb will be constructed for is summary.

## 2.4 ClientService Class

### 2.4.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.4.2 Base Class

None

### 2.4.3 Constructors

public ClientService()

### 2.4.4 Properties

Name	Type	Description
ClientServiceID	ClientServiceID	Gets or sets the Client's ID
ClientType	MailProperties.ClientType	Gets or sets the Client Type
IsAvailable	bool	Gets or sets if the item is available for the client.

## 2.5 ClientServiceCollection Class

### 2.5.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.5.2 Base Class

List<ClientService>

### 2.5.3 Constructors

```
public ClientServiceCollection()
```

### 2.5.4 FindByClientType Method

#### Description

This method will return the ClientService object of the ClientType.

#### Syntax

```
public ClientService FindClientType(  
    MailProperties.ClientType clientType  
)
```

#### Parameters

*clientType*

Type: MailProperties.ClientType

Namespace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: ClientService

The Client Service object that matches the ClientType

### 2.5.5 Contains Method

#### Description

This method is used to check if the list contains a Client Service for the specified ClientServiceID and ClientType.

#### Syntax

```
public bool Contains(  
    ClientServiceID clientServiceID,  
    MailProperties.ClientType clientType  
)
```

#### Parameters

*clientServiceID*



Type: ClientServiceID  
Namespace: ManTech.Usps.RateEngine.Entity

*clientType*

Type: MailProperties.ClientType  
Namespace: ManTech.Usps.RateEngine.Entity

**Return Value**

Type: bool

## 2.6 ClientServiceID Class

### 2.6.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.6.2 Base Class

None

### 2.6.3 Constructors

public ClientServiceID(short id)

public ClientServiceID(string idString)

### 2.6.4 Properties

Name	Type	Description
Empty (static)	ClientServiceID	Gets an empty ClientServiceID.
Value	short	Gets or sets the value of the ClientServiceID.

### 2.6.5 ToShort Method

#### Description

This method returns the client service id as a short.

#### Syntax

```
public short ToShort()
```

#### Parameters

None

#### Return Value

Type: short

## **2.7 ClientServiceIDCollection Class**

### **2.7.1 Namespace**

ManTech.Usps.RateEngine.Entity

### **2.7.2 Base Class**

List<ClientServiceID>

### **2.7.3 Constructors**

public ClientServiceIDCollection()

public ClientServiceIDCollection(IEnumerable<ClientServiceID> collection)

## 2.8 Country Class

### 2.8.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.8.2 Base Class

None

### 2.8.3 Constructors

```
public Country()
```

```
public Country(CountryID countryID)
```

```
public Country(string countryName)
```

### 2.8.4 Properties

Name	Type	Description
AKA	CountryAliasCollection	Gets the list of aliases for a country.
Code	string	Gets or sets the code for the country.
CountryID	CountryID	Gets or sets the ID for the country.
IsDisplayed	bool	Gets or sets a flag that indicates if the country is displayed.
IsParent	bool	Get or sets a flag that indicates if the country is the parent country.
MaxWeight	Weight	Gets or sets the Max Weight for the country.
Name	string	Gets or sets the Name for the country.
NameParts	string[]	Gets or sets an array of name parts for the country.
ShowOnlinePrice	bool	Gets or sets a flag that indicates if the country allows online prices.
Status	CountryStatus	Gets or sets the status of the country. See the <i>CountryStatus</i> enumeration for valid values.
TypeOf	short	Gets or sets the type of country.

### 2.8.5 CountryStatus Enumeration

Name	Value	Description
Unknown	0	The status of the country is unknown.
Normal	1	The status of the country is normal.

NoOnlineService	2	The status of the country is that there is no online service.
ServiceSuspended	3	The status of the country is that service is suspended.

## 2.9 CountryAlias Class

### 2.9.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.9.2 Base Class

None

### 2.9.3 Properties

Name	Type	Description
Alias	String	Gets or sets the Alias for a country.

## 2.10 CountryAliasCollection Class

### 2.10.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.10.2 Base Class

List<CountryAlias>

### 2.10.3 Contains Method

#### Description

This method is used to see if a country's alias is contained within its collection.

#### Syntax

```
public bool Contains(  
    string aliase  
)
```

#### Parameters

*aliase*

Type: string

Namespace: none

#### Return Value

Type: bool

## 2.11 CountryCollection Class

### 2.11.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.11.2 Base Class

List<Country>

### 2.11.3 FindByCountryID Method

#### Description

This method is used to find a country by using the country's ID. If the country is not found the result is null.

#### Syntax

```
public Country FindByCountryID(  
    CountryID countryID  
)
```

#### Parameters

*countryID*

Type: CountryID

Namespace: ManTech.Usps.RateEngine.International.Entity

#### Return Value

Type: Country

A reference to the Country object, null if a match was not found.

### 2.11.4 FindByCountryName Method

#### Description

This method is used to find a country by using the country's Name. If the country is not found the result is null.

#### Syntax

```
public Country FindByCountryName(  
    string countryName  
)
```

#### Parameters

*countryName*

Type: string

Namespace: none



**Return Value**

Type: Country

A reference to the Country object, null if a match was not found.

**Example**

```
// find the country with the ID of 12000 Alberta (Canada)  
Country country = countries.FindByCountryID(new CountryID(12000));
```

```
// find the country with the Name of Alberta (Canada)  
Country country = countries.FindByCountryName("Alberta (Canada)");
```

## **2.12 CountryException Class**

### **2.12.1 Namespace**

ManTech.Usps.RateEngine.International.Entity

### **2.12.2 Base Class**

RateEngineException

### **2.12.3 Constructors**

```
public CountryException(string message)
```

```
public CountryException(string message, int errorNumber)
```

## 2.13 CountryID Class

### 2.13.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.13.2 Base Class

None

### 2.13.3 Constructors

```
public CountryID(int id)
```

```
public CountryID(string idString)
```

### 2.13.4 Properties

Name	Type	Description
Empty (static)	CountryID	Gets an Empty CountryID.
Value	int	Gets or sets the value of the CountryID.

### 2.13.5 ToInt Method

#### Description

This method returns the country ID as an integer.

#### Syntax

```
public int ToInt()
```

#### Parameters

None

#### Return Value

Type: int

The CountryID represented as an integer.

## **2.14 CountryInformation Class**

### **2.14.1 Namespace**

ManTech.Usps.RateEngine.International.Entity

### **2.14.2 Base Class**

List<CountryInformationItem>

### **2.14.3 Constructors**

public CountryInformation(int capacity)

public CountryInformation(IEnumerable<CountryInformationItem> collection)

## 2.15 CountryInformationItem Class

### 2.15.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.15.2 Base Class

List<CountryInformationItem>

### 2.15.3 Constructors

public CountryInformationItem()

### 2.15.4 Properties

Name	Type	Description
CommercialPlusPrice	decimal	Gets or sets commercial plus price of the mail service.
CountryToExtraServices	CountryToExtraServiceCollection	Gets a reference to a CountryToExtraService collection that contains the extra service information.
CountryToMailService	CountryToMailService	Gets a reference to a Mail Service object that contains the mail service information.
OnlinePrice	decimal	Gets or sets the online price of the mail service.
Price	decimal	Gets or sets the price of the mail service.

## 2.16 CountryRegulation Class

### 2.16.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.16.2 Base Class

None

### 2.16.3 Constructors

public CountryRegulation()

### 2.16.4 Properties

Name	Type	Description
AdditionalRestrictions	string	Gets or sets the additional restrictions.
Country	Country	Gets or sets a reference to the Country object.
CustomForms	string	Gets or sets the custom forms.
ExpressMailNote	string	Gets or sets the Express Mail notes.
ExpressMailRegulations	string	Gets or sets the Express Mail regulations.
Observations	string	Gets or sets the observations.
Prohibitions	string	Gets or sets the prohibitions.
Restrictions	string	Gets or sets the restrictions.

## **2.17 CountryRegulationCollection Class**

### **2.17.1 Namespace**

ManTech.Usps.RateEngine.International.Entity

### **2.17.2 Base Class**

List<CountryRegulation>

## 2.18 CountyToExtraService Class

### 2.18.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.18.2 Base Class

None

### 2.18.3 Constructors

```
public CountryToExtraService()
```

### 2.18.4 Properties

Name	Type	Description
ExtraServiceID	ExtraServiceID	Gets or sets the ID of the extra service.
IsAvailable	bool	Gets or sets if the extra service is available for the Country.
OnlinePrice	decimal	Gets or sets the online price of the extra service.
Price	decimal	Gets or sets the price of the extra service.
ServiceTitle	string	Gets or sets the extra service name.



## 2.19 CountyToExtraServiceCollection Class

### 2.19.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.19.2 Base Class

List<CountryToExtraService>

### 2.19.3 FindByExtraServiceID Method

#### Description

This method is used to find a CountryToExtraService object by specifying an ExtraServiceID.

#### Syntax

```
public CountryToExtraService FindByExtraServiceID(  
    ExtraServiceID id  
)
```

#### Parameters

*id*

Type: ExtraServiceID

Namespace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: CountryToExtraService

A reference to a CountryToExtraService object.

## 2.20 CountryToMailService Class

### 2.20.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.20.2 Base Class

None

### 2.20.3 Constructors

```
public CountryToMailService()
```

### 2.20.4 Properties

Name	Type	Description
DimensionalRange	DimensionalRange	Gets a reference to a DimensionalRange object that contains the dimension ranges for the mail service.
EstimatedDeliveryTime	string	Gets or sets the estimated delivery time.
InsuranceMax	decimal	Gets or sets the maximum allowed insurance for the mail service.
IsAvailable	bool	Gets or sets if the extra service is available for the Country.
MailServiceID	MailServiceID	Gets or sets the ID of the mail service.
ServiceTitle	string	Gets or sets the service name.
WeightLimit	Weight	Gets or sets the maximum weight allowed for the mail service.
WeightLimitOperator	Weight.WeightOperator	Gets or sets the maximum weight operator.
WeightMin	Weight	Gets or sets the minimum weight allowed for the mail service.
WeightMinOperator	Weight.WeightOperator	Gets or sets the minimum weight operator.
Zone	short	Gets or sets the country zone

## 2.21 CountyToMailServiceCollection Class

### 2.21.1 Namespace

ManTech.Usps.RateEngine.International.Entity

### 2.21.2 Base Class

List<CountryToMailService>

### 2.21.3 FindByMailServiceID Method

#### Description

This method is used to find a CountryToMailService object by specifying an MailServiceID.

#### Syntax

```
public CountryToMailService FindByMailServiceID(  
    MailServiceID id  
)
```

#### Parameters

*id*

Type: MailServiceID

Namespace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: CountryToMailService

A reference to a CountryToMailService object.

## 2.22 Dimension Class

### 2.22.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.22.2 Base Class

None

### 2.22.3 Constructors

public Dimension(decimal dimension)

public Dimension(string dimensionString)

### 2.22.4 Properties

Name	Type	Description
Empty (static)	Dimension	Gets an Empty Dimension.
Value	decimal	Gets or sets the Value of the dimension.

### 2.22.5 ToDecimal Method

#### Description

This method returns the dimension as a decimal.

#### Syntax

```
public decimal ToDecimal()
```

#### Parameters

None

#### Return Value

Type: decimal

The Dimension represented as a decimal.

### 2.22.6 ToString Method

#### Description

This method returns the dimension as a string.

#### Syntax

```
public string ToString()
```

**Parameters**

None

**Return Value**

Type: string

The Dimension represented as a string.

## 2.23 DimensionalRange Class

### 2.23.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.23.2 Base Class

None

### 2.23.3 Properties

Name	Type	Description
AdditionalSizes	DimensionalRangeCollection	Gets additional sizes.
MaxLength	Dimension	Gets or sets the maximum length.
MaxWidth	Dimension	Gets or sets the maximum width.
MaxHeight	Dimension	Gets or sets the maximum height.
MaxLengthPlusGirth	Dimension	Gets or sets the maximum length + girth.
MaxLWH	Dimension	Gets or sets the maximum length + width + height.
MinLength	Dimension	Gets or sets the minimum length.
MinWidth	Dimension	Gets or sets the minimum width.
MinHeight	Dimension	Gets or sets the minimum height.
MinThickness	Dimension	Gets or sets the minimum thickness.
Text	string	Gets or sets the dimensional range text.

## **2.24 DimensionalRangeCollection Class**

### **2.24.1 Namespace**

ManTech.Usps.RateEngine.Entity

### **2.24.2 Base Class**

List<DimensionalRange>

## 2.25 Dimensions Class

### 2.25.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.25.2 Base Class

None

### 2.25.3 Constructors

publicDimensions()

publicDimensions(decimal length, decimal width, decimal height)

publicDimensions(decimal length, decimal width, decimal height, decimal girth, bool isRectangular)

### 2.25.4 Properties

Name	Type	Description
CubicFeet	decimal	Gets the calculated cubic feet for the supplied dimensions.
CubicInches	decimal	Gets the calculated cubic inches for the supplied dimensions.
DimensionalWeight	decimal	Gets the calculated dimensional weight for the supplied dimensions.
Girth	decimal	Gets or sets the girth of the mail piece.
GirthFromString	string	Sets the girth of the mail piece as a string. The underlying code will convert the string to a decimal.
Height	decimal	Gets or sets the height of the mail piece.
HeightFromString	string	Sets the height of the mail piece as a string. The underlying code will convert the string to a decimal.
IsRectangular	bool	Gets or sets if the mail piece is rectangular.
IsRectangularFromString	string	Sets if the mail piece is rectangular as string. The underlying code will convert the string to a boolean.
Length	decimal	Gets or sets the length of the mail piece.
LengthFromString	string	Sets the length of the mail piece as a string. The underlying code will convert the string to a decimal.
LengthPlusGirth	decimal	Gets the calculated length plus the girth for the



		supplied dimensions.
RoundDownToQuarterInch	bool	Gets or sets if the mail piece needs to be rounded down to quarter inch.
Width	decimal	Gets or sets the width of the mail piece.
WidthFromString	string	Sets the width of the mail piece as a string. The underlying code will convert the string to a decimal.

### 2.25.5 IsZeroed Method

#### Description

This method is to determine if all the dimensions are set to zero.

#### Syntax

```
Public bool IsZeroed()
```

#### Parameters

None

#### Return Value

Type: bool

### 2.25.6 SetZeroed Method

#### Description

This method is used to set all the dimensions to zero.

#### Syntax

```
public void SetZeroed()
```

#### Parameters

None

#### Return Value

Type: void

### 2.25.7 IsOversized Method

#### Description

This method is used to determine if the mail piece is oversized. Note all the dimensions must be set before calling this method.

#### Syntax

```
public bool IsOversized()
```

```
public bool IsOversized(  
    decimal maxLength,  
    decimal maxLenHeightWidth  
)
```

```
public bool IsOversized(  
    decimal maxLength,  
    decimal maxLenHeightWidth,  
    decimal maxLengthPlusGirth  
)
```

#### **Parameters**

*maxLength*

Type: decimal

Namespace: none

*maxLenHeightWidth*

Type: decimal

Namespace: none

*maxLengthPlusGirth*

Type: decimal

Namespace: none

#### **Return Value**

Type: bool

### **2.25.8 Validate Method**

#### **Description**

This method is used to validate that the supplied are valid. The dimensions will be checked to see if any are set to zero, if the dimension is greater than the maximum for that dimension and if the overall size of the mail piece is too large.

#### **Syntax**

```
public void Validate(  
    bool allowOversized  
)
```

```
public void Validate(  
    DimensionalRange dimensionalRange,  
    bool allowOversized  
)
```

**Parameters**

*dimensionalRange*

Type: DimensionalRange

Namespace: ManTech.Usps.RateEngine.Entity

*allowOversized*

Type: bool

Namespace: none

**Return Value**

Type: void

**Exceptions**

Type: DimensionsException

## **2.26 ExtraPostageService Class**

For future uses

## **2.27 ExtraPostageServiceCollection Class**

For future uses

## 2.28 ExtraService Class

### 2.28.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.28.2 Base Class

None

### 2.28.3 Properties

Name	Type	Description
AdditionalFields	AdditionalInputCollection	Gets a collection of additional input fields required for the extra service.
Category	string	Gets or sets the category for the extra service.
ClientServiceID	ClientServiceID	Gets or sets the ID of the extra service known by the client.
CommercialPlusPrice	decimal	Gets or sets the commercial plus price of the extra service.
CommercialPlusCost	decimal	Gets or sets the commercial plus cost of the extra service.
Cost	decimal	Gets or sets the cost of the extra service.
CostString	string	Gets the cost as a formatted string.
ErrorMessage	string	Gets or sets an error message if mail properties specified caused an error.
ErrorNumber	int	Gets or sets an error number if mail properties specified caused an error.
HelpLink	TextWithLinks	Gets the help link information.
Id	ExtraServiceID	Gets or sets the ID of the extra service.
IsAvailable	bool	Gets or sets if the extra service is available to retail.
IsNSAAvailable	bool	Gets or sets if the extra service is available to NSA.
IsOnlineAvailable	bool	Gets or sets if the extra service is available to online.
NSAPrice	decimal	Gets or sets the NSA price of the extra service.
NSACost	decimal	Gets or sets the NSA cost of the extra service.
OnlineCost	decimal	Gets or sets the online cost of the extra service.

OnlineCostString	string	Gets the online cost as a formatted string.
OnlinePrice	decimal	Gets or sets the online price of the extra service.
OnlinePriceString	string	Gets the online price as a formatted string.
Price	decimal	Gets or sets the price of the extra service.
PriceDetails	PriceDetailCollection	A collection of price detail fields that describe the price for the extra service.
PricePrefix	string	Gets or sets the prefix for the extra service price. i.e. From.
PriceString	string	Gets the price as a formatted string.
ServiceName	string	Gets or sets the extra service name.

## 2.29 ExtraService.AdditionalInput Class

### 2.29.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.29.2 Base Class

None

### 2.29.3 Constructors

publicAdditionalInput()

publicAdditionalInput(string typeId, string label, decimal minValue, decimal maxValue)

publicAdditionalInput(string typeId, string label, decimal minValue, decimal maxValue, decimal defaultValue)

### 2.29.4 Properties

Name	Type	Description
DefaultValue	decimal	Gets or sets the default value for this input field.
Footnotes	TextWithLinksCollection	Gets a collection of footnotes that specific for the input field.
Label	string	Gets or sets the label for the input field.
MinValue	decimal	Gets or sets the minimum value for this input field.
MaxValue	decimal	Gets or sets the maximum value for this input field.
TypeID	string	Gets or sets the type ID to identify the additional input value. See TypeID table below for valid values.

#### TypeID

Name	Description
dv	Declared Value
ac	Amount to Collection

## 2.30 ExtraService.AdditionalInputCollection Class

### 2.30.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.30.2 Base Class

List<ExtraService.AdditionalInput>

### 2.30.3 Properties

Name	Type	Description
[string typeID]	AdditionalInput	Gets the type ID for the additional input values being accessed. See TypeID table in the AdditionalInputValue section. This allows for member of the collection to be access using the following notation.  additional_input["dv"].Label

### 2.30.4 FindByTypeID Method

#### Description

This method is used to find an AdditionalInput object the matches a specific type ID.

#### Syntax

```
public AdditionalInput FindByTypeID(string typeID)
```

#### Parameters

*typeID*

Type: string

Namespace: none

#### Return Value

Type: AdditionalInput

A reference to an AdditionalInput object.



## 2.31 ExtraServiceCollection Class

### 2.31.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.31.2 Base Class

List<ExtraService>

### 2.31.3 FindByExtraServiceID Method

#### Description

This method is used to find an ExtraService object by specifying a ExtraServiceID.

#### Syntax

```
public ExtraService FindByExtraServiceID(  
    ExtraServiceID id  
)
```

#### Parameters

*id*

Type: ExtraServiceID

Namespace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: ExtraService

A reference to an ExtraService object.

## 2.32 ExtraServiceID Class

### 2.32.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.32.2 Base Class

None

### 2.32.3 Constructors

```
public ExtraServiceID(int id)
```

```
public ExtraServiceID(string idString)
```

### 2.32.4 Properties

Name	Type	Description
Empty (static)	ExtraServiceID	Gets an empty ExtraServiceID.
Value	int	Gets or sets the value of the ExtraServiceID.

### 2.32.5 ToLong Method

#### Description

This method returns the extra service id as an integer.

#### Syntax

```
public int ToLong()
```

#### Parameters

None

#### Return Value

Type: int

## 2.33 ExtraServiceIDCollection Class

### 2.33.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.33.2 Base Class

List<ExtraServiceID>

### 2.33.3 Constructors

```
public ExtraServiceIDCollection()
```

```
public ExtraServiceIDCollection(string ids)
```

### 2.33.4 Exists Method

#### Description

This method is used to determine if the collection contains a specified extra service ID.

#### Syntax

```
public bool Exist(  
    ExtraServiceID extraServiceID  
)
```

#### Parameters

*extraServiceID*

Type: ExtraServiceID

Namespace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: bool

### 2.33.5 AddExclusive Method

#### Description

This method is used to add a extra service ID to the collection if the collection doesn't already contain the specified extra service ID. If the specified extra service ID is already in the collection the collection will remain unchanged.

#### Syntax

```
public void AddExclusive(  
    ExtraServiceID extraServiceID  
)
```

#### Parameters

*extraServiceID*

Type: ExtraServiceID

Namespace: ManTech.Usps.RateEngine.Entity

### **Return Value**

Type: void

## **2.33.6 RemoveById Method**

### **Description**

This method is used to remove a specified extra service ID from the collection. If the collection does not contain the specified extra service ID the collection will remain unchanged. The method returns true if the id was found and removed and false if the id was not found.

### **Syntax**

```
public bool RemoveById(  
    ExtraServiceID extraServiceID  
)
```

### **Parameters**

*extraServiceID*

Type: ExtraServiceID

Namespace: ManTech.Usps.RateEngine.Entity

### **Return Value**

Type: bool

## **2.33.7 ToString Method**

### **Description**

This return value of this method contains a comma delineated string that contains all of the extra service IDs contained in the collection.

### **Syntax**

```
public string ToString()
```

### **Parameters**

None

### **Return Value**

Type: string

## 2.34 Link Class

### 2.34.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.34.2 Base Class

None

### 2.34.3 Properties

Name	Type	Description
CSSClass	string	Gets or sets the cascading style sheet class for the web tag.
Id	short	Gets or sets the ID of the link.
Styles	string	Gets or sets the style for the web tag.
Target	string	Gets or sets the web target.
Text	string	Gets or sets the text for the link.
WebURL	string	Gets or sets the web navigation URL.
WinURL	string	Gets or sets the windows navigation URL.

## 2.35 GXGLocation Class

### 2.35.1 Namespace

ManTech.Usps.RateEngine.International.Retail.Entity

### 2.35.2 Base Class

None

### 2.35.3 Properties

Name	Type	Description
City	string	Gets or sets the City address for the location.
LocationName	string	Gets or sets the Location Name.
SaturdayCutoff	string	Gets or sets the Saturday Cutoff time for the location.
State	string	Gets or sets the State address for the location.
Street	string	Gets or sets the Street address for the location.
WeekdayCutoff	string	Gets or sets the Weekday Cutoff time for the location.
ZipCode	ZipCode	Gets or sets the ZIP Code address for the location.

## 2.36 GXGLocationCollection Class

### 2.36.1 Namespace

ManTech.Usps.RateEngine.International.Retail.Entity

### 2.36.2 Base Class

List<GXGLocation>

### 2.36.3 ContainsZIPCode Method

#### Description

This method is used to validate if the length plus girth is within the maximum for a Global Express Guaranteed package.

#### Syntax

```
public bool ContainsZIPCode(ZipCode zipCode)
```

#### Parameters

*zipCode*

Type: ZipCode

Namespace: none

#### Return Value

Type: bool

## 2.37

## 2.38 LinkCollection Class

### 2.38.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.38.2 Base Class

List<Link>

## 2.39 Location Class

### 2.39.1 Namespace

ManTech.Usps.RateEngine.Domestic.Entity

### 2.39.2 Base Class

None

### 2.39.3 Constructors

```
public Location()
```

```
public Location(string zip, string financeCode, string city, string state, string  
classificationCode, TypeOfLocation locationType)
```

```
public Location(ZipCode zip, string financeCode, string city, string state, string  
classificationCode, TypeOfLocation locationType)
```

```
public Location(ZipCode zipCode, TypeOfLocation locationType, bool isValid)
```

```
public Location(Location fromLocation)
```

### 2.39.4 Properties

Name	Type	Description
City	string	Gets or sets the City for this location.
ClassificationCode	string	Gets or sets the Classification Code for this location.
FincanceCode	string	Gets or sets the Finance Code for this location.
IsApo	bool	Gets if the location is an APO/FPO/DPO
IsHoldForPickupAvailable	bool	Gets or sets if hold for pickup is available.
IsMailable	bool	Gets if the location can be mailed to.
IsSundayHolidayAvailable	bool	Gets or sets if Sunday or holiday is available.
IsValid	bool	Gets or sets if this is a valid location.
LocationType	TypeOfLocation	Gets or sets the Location Type.
NonDeliveryDays	List<DayOfWeek>	Gets a list of non delivery days.
NonProcessingDays	List<DayOfWeek>	Gets a list of non-processing days.
PremiumDays	List<DayOfWeek>	Gets a list of premium days.
State	string	Gets or sets the State for this location.



ZipCode	ZipCode	Gets or sets the ZIP Code for this location.
---------	---------	--

### 2.39.5 Validate Method

#### Description

This method is used to determine if this is a valid location.

#### Syntax

```
public void Validate()
```

#### Parameters

None

#### Return Value

Type: void

#### Exceptions

Type: LocationException

## **2.40 LocationCollection Class**

### **2.40.1 Namespace**

ManTech.Usps.RateEngine.Domestic.Entity

### **2.40.2 Base Class**

List<Location>

## 2.41 MailProperties Class

### 2.41.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.41.2 Base Class

None

### 2.41.3 Properties

Name	Type	Description
AdditionalExtraServiceInputValues	AdditionalInputValueCollection	Gets a reference to the AdditionalInputValueCollection object.
CharacteristicsID	short	Gets or sets the characteristics ID. This id is used to specify mail characteristics such as ridged or odd shaped. See the <i>Characteristics</i> table for valid values for this field.
Client	ClientType	Gets or sets the Type of Client making the class to the rate engine. See the <i>ClientType</i> enumerator for valid values for the field.
ClientMailServiceID	ClientServiceID	Gets or sets the ClientMailServiceID. The ClientMailServiceID is the ID known by the Client.
ClientExtraServiceIDs	ClientServiceIDCollection	Gets a reference to a collection that contains the Client Extra Service ID of selected Extra Services. The ExtraServiceID is the ID known by the Client
Dimensions	Dimensions	Gets or sets a reference to a Dimensions object.
ExtraServices	ExtraServiceIDCollection	Gets a reference to a collection that contains the Extra Service ID of selected Extra Services.
MailShapeAndSize	MailShapeAndSizeEnum	Gets or sets the mail piece shape and size. See the <i>MailShapeAndSizeEnum</i> for valid values for this field.
MailShapeAndSizeString	string	Gets or sets the mail piece shape and size as a string.
MailServiceID	MailServiceID	Gets or sets the MailServiceID. The

		MailServiceID is used to specify the selected Mail Service.
Weight	Weight	Gets or sets a reference to a Weight object.

#### 2.41.4 GetDimensionShapeAndSize Method

##### Description

This method is used to determine the mail piece shape and size based on the dimensions provided.

##### Syntax

```
public MailShapeAndSizeEnum GetDimensionShapeAndSize()
```

##### Parameters

None

##### Return Value

Type: MailShapeAndSizeEnum

#### 2.41.5 Characteristics Table

Mail Shape and Size	Characteristics ID	Reason
Letter	0	Machinable
Letter	1	Square Envelope
Letter	2	Envelope containing a rigid object
Letter	3	Odd shaped envelope
LetterLarge	0	Machinable
LetterLarge	4	Non-Machinable

#### 2.41.6 ClientType Enumeration

Name	Value	Description
Unknown	0	The system being used client type is unknown.
RateCalculator	1	The system being used client type is the rate calculator.
LegacySDK	2	The system being used client type is the legacy SDK.
WebTools	3	The system being used client type is web tools.
POS	4	The system being used client type is POS.
APC	5	The system being used client type is APC.
CARS	6	The system being used client type is CARS.
eVS	7	The system being used client type is eVS
CnS	8	The system being used client type is CnS

CnSBusiness	9	Not currently defined
PCPostage	10	Not currently defined
PASS	11	Not currently defined

## 2.42 MailingRestriction Class

### 2.42.1 Namespace

ManTech.Usps.RateEngine.Domestic.Entity

### 2.42.2 Base Class

None

### 2.42.3 Constructors

public MailingRestriction()

public MailingRestriction(ZipCode zipCode)

### 2.42.4 Properties

Name	Type	Description
Restrictions	RestrictionCollection	Gets or sets a reference to a collection of mailing restrictions.
ZipCode	ZipCode	Gets or sets the ZIP Code for the mailing restrictions.

## 2.43 MailingRestriction.Restriction Class

### 2.43.1 Namespace

ManTech.Usps.RateEngine.Domestic.Entity

### 2.43.2 Base Class

None

### 2.43.3 Constructors

public Restriction()

public Restriction(string code)

### 2.43.4 Properties

Name	Type	Description
Code	string	Gets or sets the code for the mailing restriction.
Description	string	Gets or sets the description of the mailing restriction.

## **2.44 MailingRestriction.RestrictionCollection Class**

### **2.44.1 Namespace**

ManTech.Usps.RateEngine.Domestic.Entity

### **2.44.2 Base Class**

List<MailingRestriction.Restriction>



## **2.45 MailingRestrictionCollection Class**

### **2.45.1 Namespace**

ManTech.Usps.RateEngine.Domestic.Entity

### **2.45.2 Base Class**

List<MailingRestriction>

## 2.46 MailService Class

### 2.46.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.46.2 Base Class

None

### 2.46.3 Properties

Name	Type	Description
ClientServiceID	ClientServiceID	Gets or sets the mail service ID known by the client.
CommercialPlusPrice	decimal	Gets or sets commercial plus price of the mail service.
CommercialPlusPriceString	string	Gets the mail service commercial plus price as a formatted string.
DimensionalRange	DimensionalRange	Gets a reference to a DimensionalRange object that contains the dimension ranges for the mail service.
ErrorMessage	string	Gets or sets an error message.
ErrorNumber	int	Gets or sets an error number.
EstimatedDeliveryTime	string	Gets or sets the estimated delivery time.
HelpLink	TextWithLinks	Gets a reference to a TextWithLinks object that contains the help link information.
Id	MailServiceID	Gets or sets the mail service ID.
IncludedIndemnity	decimal	Gets or sets the insurance indemnity allowed for the mail service.
InsuranceMax	decimal	Gets or sets the maximum allowed insurance for the mail service.
IsAvailable	bool	Gets or sets if the extra service is available to retail.
IsNSAAvailable	bool	Gets or sets if the extra service is available to NSA.
IsOnlineAvailable	bool	Gets or sets if the extra service is available to online.

MaxWeight	Weight	Gets or sets the maximum weight allowed for the mail service.
MinWeight	Weight	Gets or sets the minimum weight allowed for the mail service.
Notes	TextWithLinksCollection	Gets a reference to a Collection of TextWithLinks object that contains the note information.
NSAPrice	decimal	Gets or sets the NSA price of the mail service.
OnlinePrice	decimal	Gets or sets the online price of the mail service.
OnlinePriceString	string	Gets the mail service online price as a formatted string.
OnlinePriceTextWithLinks	TextWithLinks	Gets the mail service online price as a TextWithLinks object.
OrderIndex	int	Gets or sets the value used to sort the mail services.
Price	decimal	Gets or sets the price of the mail service.
PriceDetails	PriceDetailCollection	Gets a reference to a Collection of PriceDetail object that contains the pricing information.
PriceLink	TextWithLinks	Gets or sets a link associated with the mail service price.
PriceString	string	Gets the mail service price as a formatted string.
PriceTextWithLinks	TextWithLinks	Gets the mail service price as a TextWithLinks object.
ServiceName	string	Gets or sets the service name.

## 2.47 MailServiceCollection Class

### 2.47.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.47.2 Base Class

List<MailService>

### 2.47.3 FindByMailServiceID

#### Description

This method is used to find a MailService object by specifying a MailServiceID.

#### Syntax

```
public MailService FindByMailServiceID(  
    MailServiceID mailServiceID  
)
```

#### Parameters

*mailServiceID*

Type: MailServiceID

Namespace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: MailService

A reference to the Mail Service found for the specified MailServiceID. Null is returned if no mail service is found.

## 2.48 MailServiceID Class

### 2.48.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.48.2 Base Class

None

### 2.48.3 Constructors

```
public MailServiceID(short id)
```

```
public MailServiceID(string idString)
```

### 2.48.4 Properties

Name	Type	Description
Empty (static)	MailServiceID	Gets an empty MailServiceID.
Value	short	Gets or sets the value of the MailServiceID.

### 2.48.5 ToShort Method

#### Description

This method returns the mail service ID as an integer.

#### Syntax

```
public short ToShort()
```

#### Parameters

None

#### Return Value

Type: short

## **2.49 MailServiceIDCollection Class**

### **2.49.1 Namespace**

ManTech.Usps.RateEngine.Entity

### **2.49.2 Base Class**

List<MailServiceID>

## 2.50 MailShapeAndSizeEnum Enumerator

### 2.50.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.50.2 MailShapeAndSizeEnum Enumerator

Name	Value	Description
Undefined	0	The mail piece Shape and Size is unknown.
Letter	1	The mail piece is a letter.
LetterLarge	2	The mail piece is a large letter.
Package	6	The mail piece is a package.
PackageLarge	7	The mail piece is a large package.
Postcard	8	The mail piece is a postcard.
PostcardLarge	9	The mail piece is a large postcard.
PackageOversized	10	The mail piece is an oversized package.
KeysandIDs	11	The mail piece contains keys and/or IDs.
FlatRateBox	12	The mail piece is a Flat Rate Box product.
FlatRate	13	The mail piece is a Flat Rate product.
Cubic	14	The mail piece is calculated by Cubic feet.
ExpressMailServices	15	The mail piece is an Express Mail.
PriorityMailServices	16	The mail piece is an Priority Mail.
FirstClassMailServices	17	The mail piece is an First-Class Mail.
PostalServices	18	The mail piece is a Postal Services Mail.
MBag	19	The mail piece is a MBag.
FlatRateEnvelope	20	The mail piece is a Flat Rate Envelope

## **2.51 PostageAttribute Class**

For future uses

## **2.52 PostageAttributeCollection Class**

For future uses

## **2.53 PostagePrice Class**

For future uses

## **2.54 PostagePriceCollection Class**

For future uses

## **2.55 PostageService Class**

For future uses

## **2.56 PostageServiceCollection Class**

For future uses



## 2.57 PriceDetail Class

### 2.57.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.57.2 Base Class

None

### 2.57.3 Constructors

publicPriceDetail()

publicPriceDetail(string key, string value)

### 2.57.4 Properties

Name	Type	Description
Key	string	Gets or sets the key for the price detail.
Value	string	Gets or sets the value for the price detail.

## 2.58 PriceDetailCollection

### 2.58.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.58.2 Base Class

List<PriceDetail>

### 2.58.3 Constructors

public PriceDetailCollection()

public PriceDetailCollection(IEnumerable<PriceDetail> collection)

### 2.58.4 Properties

Name	Type	Description
[string key]	string	Gets or sets the key for the price detail.

## **2.59 ResultSection Class**

For future uses

## **2.60 ResultSectionCollection Class**

For future uses

## **2.61 SummaryCollection Class**

### **2.61.1 Namespace**

ManTech.Usps.RateEngine.Entity

### **2.61.2 Base Class**

List<SummaryItem>

## 2.62 SummaryItem Class

### 2.62.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.62.2 Base Class

None

### 2.62.3 Properties

Name	Type	Description
CommercialPlusCost	decimal	Gets or sets the commercial plus cost of the service.
Cost	decimal	Gets or sets the cost of the service.
CostString	string	Gets the cost of the service as a formatted string.
IsAvailable	bool	Gets or sets a flag that indicates if the retail cost is available.
IsOnlineAvailable	bool	Gets or sets a flag that indicates if the online cost is available.
OnlineCost	decimal	Gets or sets the online cost of the service.
OnlineCostString	string	Gets the online cost of the service as a formatted string.
ServiceName	string	Gets or sets the name of the service. This can be a mail service or extra service.

## 2.63 TextWithLinks Class

### 2.63.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.63.2 Base Class

None

### 2.63.3 Properties

Name	Type	Description
CssClass	string	Gets or sets the cascading style sheet class for the web tag.
Id	short	Gets or sets the ID of the TextWithLinks object.
Links	LinkCollection	Gets or sets a reference to a collection of links that are associated with that object.
Text	string	Gets or sets the text to be displayed.

## 2.64 TextWithLinksCollection Class

### 2.64.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.64.2 Base Class

List<TextWithLinks>

### 2.64.3 AddLinkTo Method

#### Description

This method is used to add a link to a TextWithLinks object.

#### Syntax

```
public void AddLinkTo(  
    Link link,  
    int id  
)
```

#### Parameters

*link*

Type: Link

Namespace: ManTech.Usps.RateEngine.Entity

*id*

Type: int

Namespace: none

#### Return Value

Type: void

### 2.64.4 RemoveByID Method

#### Description

This method is used to remove a link from the TextWithLinks object by specifying an ID.

#### Syntax

```
public void RemoveByID(  
    short id  
)
```

#### Parameters

*id*

Type: short  
Namespace: none

### **Return Value**

Type: void

## **2.64.5 FindByID Method**

### **Description**

This method is used to find a link from the TextWithLinks object by specifying an ID and returning a TextWithLinks object if found.

### **Syntax**

```
public TextWithLinks FindByID(  
    short id  
)
```

### **Parameters**

*id*

Type: short  
Namespace: none

### **Return Value**

Type: TextWithLinks

## **2.64.6 ContainsID Method**

### **Description**

This method is used to determine if the TextWithLinks object exists by specifying an ID.

### **Syntax**

```
public bool ContainsID(  
    short id  
)
```

### **Parameters**

*id*

Type: short  
Namespace: none

### **Return Value**

Type: bool



## 2.65 Weight Class

### 2.65.1 Namespace

ManTech.Usps.RateEngine.Entity

### 2.65.2 Base Class

None

### 2.65.3 Constructors

public Weight()

public Weight(decimal ounces, decimal pounds)

### 2.65.4 Properties

Name	Type	Description
Ounces	decimal	Gets or sets the ounces.
OuncesFromString	string	Sets the ounces with a string value. The string will be converted to a decimal. If the string is invalid an exception of type <i>WeightException</i> is thrown.
Pounds	decimal	Gets or sets the pounds.
PoundsFromString	string	Sets the pounds with a string value. The string will be converted to a decimal. If the string is invalid an exception of type <i>WeightException</i> is thrown.
Units	WeightUnit	Gets or sets default units to be used when calling weight methods. See the <i>WeightUnit</i> enumeration for valid values.

### 2.65.5 WeightUnit Enumeration

Name	Value	Description
Unknown	0	The weight unit of measurement to be used is unknown.
Ounces	1	The weight unit of measurement to be used is ounces.
Pounds	2	The weight unit of measurement to be used is pounds.

### 2.65.6 WeightOperator Enumeration

Name	Value	Description
Unknown	0	The weight operator to be used is unknown.
LessThan	1	The weight operator to be used is '<'.
LessOrEqual	2	The weight operator to be used is '<='.
Equal	3	The weight operator to be used is '='.
GreatOrEqual	4	The weight operator to be used is '>='.
GreatThan	5	The weight operator to be used is '>'.

## 2.65.7 ToPounds Method

### Description

This method is used to get the weight represented as the whole and fractional pounds value. Note both the ounces and pounds fields are returned as a pounds value.

### Syntax

```
public decimal ToPounds()
```

### Parameters

None

### Return Value

Type: decimal

### Example

```
Weight mail_weight = new Weight(4, 2);  
Console.WriteLine(mail_weight.ToPounds());
```

### Example Output

2.25

## 2.65.8 ToOunces Method

### Description

This method is used to get the weight represented as the whole and fractional ounces value. Note both the ounces and pounds fields are returned as an ounces value.

### Syntax

```
public decimal ToOunces()
```

### Parameters

None

### Return Value

Type: decimal  
description

### Example

```
Weight mail_weight = new Weight(4, 2);  
Console.WriteLine(mail_weight.ToOunces());
```

### Example Output

## 2.65.9 ToString Method

### Description

This method is used to get the weight as a string value. The Units field will affect the returned value. If the Units are set to WeightUnit.Ounces the string is formatted as the amount of ounces contained with the weight object, if the Units are set to WeightUnit.Pounds the string is formatted as the amount of pounds contained with the weight object.

### Syntax

```
public string ToString()
```

### Parameters

None

### Return Value

Type: string

## 2.65.10 ToPoundsOuncesString Method

### Description

This method is used to get the weight as string value that displays the whole pounds and ounces.

Example:

If the pounds are set to 2.5 and the ounces are set to 6; the string returned will read:  
*"3 pounds 0 ounces"*

If the pounds are set to 2 and the ounces are set to 24; the string return will read:  
*"3 pounds 6 ounces"*

### Syntax

```
public string ToPoundsOuncesString()
```

### Parameters

None

### Return Value

Type: string

## 2.66 ZipCode Class

### 2.66.1 Namespace

ManTech.Usps.RateEngine.Domestic.Entity

### 2.66.2 Base Class

None

### 2.66.3 Constructors

ZipCode(string zip)

### 2.66.4 Properties

Name	Type	Description
Empty (static)	ZipCode	Gets an Empty ZIPCode.
IsDepartmentOfHomelandSecurity	bool	Gets a flag that indicates if the ZIP Code is one of the Department of Homeland Security ZIP Codes
IsDestinationOnly	bool	Gets a flag that indicates if the ZIP Code can only be a destination only ZIP Code
IsExtendedStateDepartment	bool	Gets a flag that indicates if the ZIP Code is one of the Extended State Department ZIP Codes.
IsStateDepartment	bool	Gets a flag that indicates if the ZIP Code is one of the State Department ZIP Codes.
IsOffShore	bool	Gets a flag that indicates if the ZIP Code is one of the off shore ZIP Codes.
Value	string	Gets or sets the Value of the ZIP Code.

**NOTE:** To create a zip code using 3 digits, enter underscores ('\_') for the last 2 digits.

### 2.66.5 ToString3Digit Method

#### Description

This method is used to get the sub 3 digit ZIP Code.

#### Syntax

```
public string ToString3Digit()
```

#### Parameters

None

#### Return Value

Type: string

## 2.67 ZipCodeCollection Class

### 2.67.1 Namespace

ManTech.Usps.RateEngine.Domestic.Entity

### 2.67.2 Base Class

List<ZipCode>

### 2.67.3 Constructors

```
public ZipCodeCollection()
```

```
public ZipCodeCollection(IEnumerable<ZipCode> zipCodes)
```

### 2.67.4 ContainsZipCode Method

#### Description

This method is used to determine if the collection already contains the zip code.

#### Syntax

```
public bool ContainsZIPCode(  
    ZipCode zipCode  
)
```

#### Parameters

*zipCode*

Type: ZipCode

NameSpace: ManTech.Usps.RateEngine.Entity

#### Return Value

Type: bool

## 2.68 Zone Class

### 2.68.1 Namespace

ManTech.Usps.RateEngine.Domestic.Entity

### 2.68.2 Base Class

None

### 2.68.3 Constructors

publicZone()

publicZone(ZipCode originZipCode, ZipCode destinationZipCode, int zoneCount, bool isIntraBMC, bool isLocal)

### 2.68.4 Properties

Name	Type	Description
DestinationZipCode	ZipCode	Gets or sets the destination ZIP Code.
IsIntraBMC	bool	Gets or sets a flag that indicates if the zone is intra BMC.
IsLocal	bool	Gets or sets a flag that indicates if the zone is local.
OriginZipCode	ZipCode	Gets or sets the origin ZIP Code.
ZoneCount	int	Gets or sets the zone count.

## **2.69 ZoneCollection Class**

### **2.69.1 Namespace**

ManTech.Usps.RateEngine.Domestic.Entity

### **2.69.2 Base Class**

List<Zone>

### 3 Document Control

#### 3.1 Amendment List

Date	Section	Amendment Description	Author
10/14/2010	All	Updated for R10.3	James M. Fleeson
2/9/2011	2.23	Added section 2.23, 2.23.1 and 2.23.2. Incremented all sections after 2.23	James M. Fleeson
	2.39.3	Added new service commitment properties to table.	
	2.40.3	Updated table for new service commitment properties.	
4/27/2011	Multiple Sections	Updated current documentation to reflect current code base, made general format changes, and also made corrections where needed.	Jared Simpson
5/10/2011	Multiple Sections	Updated current documentation to reflect the SDC code additions. This includes updating the ServiceCommitment Class section and adding the OnlineServiceCommitment Class, the RetailServiceCommitment Class, the RetailCommitmentStandard Class, and the RetailCommitmentStandardCollection Class.	Jared Simpson
6/3/2011	Multiple Sections	Made several typo corrections, updated the RetailCommitmentCondition Enumerator, and added the RetailCommitmentDetail Class, the RetailCommitmentDetailCollection Class, the RetailDeliveryOption Class, and the RetailDeliveryOptionCollection Class.	Jared Simpson
11/16/2011	2.52.3 and 2.52.5	Added the ServiceCommitmentGuarantee Property to the ServiceCommitment Class and added the new Guarantee Enumerator.	Jared Simpson
	2.14.3	Added the AdditionalSizes Property to the DimensionalRange Class	
	2.15	Added the DimensionalRangeCollection Class.	
11/23/2011	2.36.2	Added PostalServices to the MailShapeAndSizeEnum enumerator.	Jared Simpson



1/3/2012	2.61.6	Corrected a typo and removed 'None' from the WeightOperator enumerator.	Jared Simpson
	2.62.4	Added note to the ZIP Code Properties on how to create a ZIP Code using 3 digits.	
7/26/2012	2.60.5	Added FindByID Method to the TextWithLinksCollection Class	Jared Simpson
	2.60.6	Added ContainsID Method to the TextWithLinksCollection Class	
	2.62.4	Added IsDepartmentOfHomelandSecurity Property to the ZipCode Class	
	2.62.4	Added IsDestinationOnly Property to the ZipCode Class	
12/13/2012	Multiple Sections	Added section 2.13, 2.14, 2.15, 2.16, 2.17 and 2.18. Incremented all sections after 2.18	James Fleeson
	2.23.3	Added PriceDetails, NSAPrice, NSACost and IsNSAAvailable to properties table	
	2.38.3	Added IsAvailable, IsNSAAvailable, IsOnlineAvailable, NSAPrice and PriceDetails to properties table	
6/4/2013	2.42.2	Added MBag to MailShapeAndSizeEnum enumerator.	Jared Simpson
	2.23.3	Added CommercialPlusPrice and CommercialPlusCost Properties to the ExtraService Class.	
	2.64.3	Added CommercialPlusCost Property to the SummaryItem Class.	
8/20/2014	Multiple Sections	Updated contract information and other sections to reflex the Sept 2014 Price Change	James Fleeson