TypeofStation	INTEGER	DESCRIPTION Integer value that indicates the type of station. If the station is a hybrid station, it shall be defined as two stations, one staffed and one automatic. Value — Description 0 - automatic — the data is collected electronically/mechanically 1 - staffed — the data is collected by humans 3 - missingValue — the type of station is unknown.
AvgWindDirection	INTEGER	A two-minute average of the direction from which the wind is blowing measured clockwise in degrees from true North and measured at a height as indicated by WindSensorHeight. A value of 361 shall indicate an error condition or missing value." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 11 001."
AvgWindSpeed	INTEGER	A two minute average of the wind speed in tenths of meters per second measured at a height as indicated by WindSensorHeight. A value of 65535 shall indicate an error condition or missing value." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 11 002."
MaxWindGustSpeed	INTEGER	The maximum wind gust recorded during the 10 minutes preceding the observation at a height as indicated by WindSensorHeight and measured in tenths of meters per second. The value 65535 shall indicate an error condition or missing value." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 11 041."
MaxWindGustDir	INTEGER	The direction of the maximum wind gust recorded during the 10 minutes preceding the observation at a height as indicated by WindSensorHeight; measured in degrees clockwise from true North. The value 361 shall indicate an error condition or missing value." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 11 043."
RelativeHumidity	INTEGER	The relative humidity in percent. The value of 101 shall indicate an error condition or missing value." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 13 003."
PrecipRate	INTEGER	The rainfall, or water equivalent of snow, rate in tenths of grams per square meter per second (for rain, this is approximately 0.36 mm/hr). A value of 65535 shall indicate an error condition or missing value." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 13 014."
NtcipNum	IPADDRESS	The unique IP Address of the station. This will make duplication of a BUFR identification number less likely to occur.
NtcipCategory	ENUM	Indicates the type of station. Value — Range — Description 1 — other — of a design not listed in this standard. 2 — permanent — not designed to be relocated. 3 — transportable — able to be relocated, but does not take readings while moving. 4 — mobile — capable of taking readings while moving.
NtcipSiteDescription	STRING	A textual description of the station's location.
ReferenceHeight	INTEGER	The reference elevation of the ESS in meters above mean sea level. For a permanent station, this height shall be measured to the base of the structure. The value 8001 shall indicate an missing value."
WindSensorHeight	INTEGER	The height of the wind sensor with respect to the ReferenceHeight in meters. The value 1001 shall indicate a missing value.
SpotWindDirection	INTEGER	The direction from which the wind is blowing measured in degrees clockwise from true North and measured at a height as indicated by WindSensorHeight. A value of 361 shall indicate an error condition or missing value. REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 11 001."
SpotWindSpeed	INTEGER	The wind speed in tenths of meters per second measured at a height as indicated by WindSensorHeight. A value of 65535 shall indicate an

		error condition or missing value. For mobile platforms, the wind speed shall be corrected for vehicle movement." REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 11 002."
WindSituation	ENUM	Describes the weather and travel situation in terms of wind from staffed stations only. Specific ranges for these values are defined in the Glossary of Meteorology. Defined values are: Value Range Meaning 1 other not defined within this standard. 2 unknown Unknown conditions 3 calm Calm 4 lightBreeze Light breeze 5 moderateBreeze Moderate breeze 6 strongBreeze Strong breeze 7 gale Gale 8 moderateGale Moderate gale 9 strongGale Strong gale 10 stormWinds Storm winds 11 hurricaneForceWinds Hurricane force winds 12 gustyWinds Gusty winds - defined by a peak and a lull of greater than 46.3 tenths of meters per second within a 2 minute period."
NumTemperatureSensors	INTEGER	Indicates the number of entries in the temperature sensor table.
TemperatureSensorIndex	INTEGER	Indicates the number of this entry within the temperature sensor table.
TemperatureSensorHeight	INTEGER	The height of the temperature sensor as measured in meters above ReferenceHeight
AirTemperature	INTEGER	The dry-bulb temperature in tenths of degrees Celsius. The temperature is an instantaneous reading at the height specified by TemperatureSensorHeight. The value 1001 shall indicate an error condition or missing value." REFERENCE "Resolution is based on WMO Code Form FM 94 BUFR Table B item 0 12 004; temperature in kelvin is determined by adding 273.15 to this value."
DewpointTemp	INTEGER	The dewpoint temperature in tenths of degrees Celsius. The temperature is an instantaneous reading at the height specified by the TemperatureSensorHeight as specified in the first row of the TemperatureTable. The value 1001 shall indicate an error condition or missing value." REFERENCE "Resolution is based on WMO Code Form FM 94 BUFR Table B item 0 12 006; temperature in kelvin is determined by adding 273.15 to this value."
MaxTemp	INTEGER	The maximum temperature in tenths of degrees Celsius recorded during the 24 hours preceding the observation at the height specified by the TemperatureSensorHeight as specified in the first row of the TemperatureTable. The value 1001 shall indicate an error condition or missing value." REFERENCE "Resolution is based on WMO Code Form FM 94 BUFR Table B item 0 12 016; temperature in kelvin is determined by adding 273.15 to this value."
MinTemp	INTEGER	The minimum temperature in tenths of degrees Celsius recorded during the 24 hours preceding the observation at the height specified by the TemperatureSensorHeight as specified in the first row of the TemperatureTable. The value 1001 shall indicate an error condition or missing value." REFERENCE "Resolution is based on WMO Code Form FM 94 BUFR Table B item 0 12 017; temperature in kelvin is determined by adding 273.15 to this value."
PrecipYesNo	ENUM	Indicates whether or not moisture is detected by the sensor. Value Meaning 1 precip 2 noPrecip

		3 error
PrecipSituation	ENUM	Describes the weather situation in terms of precipitation. Defined values of intensity are: Intensity — Meaning slight — < 2mm/h water equivalent moderate — >= 2 and < 8 mm/h water equivalent heavy — >= 8 mm/h water equivalent If one exists, the corresponding BUFR value is indicated for staffed (BUFRs) and automated (BUFRa) stations. The indicated value can be found in the BUFR Table referenced below. Defined values are: Range — BUFRa — BUFRs — Meaning 1 — other 2 — unknown 3 — no precipitation 4 — unidentified slight 5 — unidentified moderate 6 — unidentified heavy 7 — 171 — 85 — snow slight 8 — 172 — 86 — snow moderate 9 — 173 — 86 — snow heavy 10 — 61 — rain slight 11 — 165 — 63 — rain moderate 12 — 163 — 65 — rain heavy 13 — frozen precipitation slight 14 — frozen precipitation moderate 15 — frozen precipitation heavy" REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 20 003."
Visibility	INTEGER	Surface visibility measured in one tenth of a meter. The value 1000001 shall indicate an error condition or missing value." REFERENCE "The value for WMO Code Form FM 94 BUFR Table B item 0 20 001 is given by this value divided by 100."
VisibilitySituation	ENUM	Describes the travel environment in terms of visibility. If one exists, the corresponding BUFR value is indicated for staffed (BUFRs) and automated (BUFRa) stations. The indicated value can be found in the BUFR Table referenced below. Defined values are: Range — BUFRs — BUFRa — Meaning 1 — other visibility anomaly 2 — unknown 3 — 0 — 100 — clear 4 — 44 — 130 — Fog - not patchy 5 — 41 — 131 — Patchy fog 6 — 36 — 127 — Blowing snow --- Note: Sensors for our configuration will never return values --- in this bottom range: 7 — 04 — 104 — Smoke 8 — 07 — 207 — Sea Spray 9 — Vehicle Spray 10 — 31 — 127 — Blowing dust or sand 11 — sun glare 12 — Swarms of insects" REFERENCE "WMO Code Form FM 94 BUFR Table B item 0 20 003."
NumPavementSensors	INTEGER	A value to indicate the number of pavement sensors configured for this site.
PavementSensorIndex	INTEGER	A value to specify the specific pavement sensor within the available pavement sensors configured for this site.
PavementSensorLocation	STRING	A textual string indicating the location of the pavement sensor.
PavementType	ENUM	Indicates the type of pavement on the roadway.

		Value Meaning Description 1 other a different type of bridge deck 2 unknown the data was never recorded in the system 3 asphalt asphalt pavement on ground 4 concrete concrete pavement on ground 5 steelBridgeconcrete a concrete driving surface on a steel girder bridge 6 steelBridgeAsphalt an asphalt driving surface on a steel girder bridge 7 steelBridge a steel lattice driving surface on the bridge 8 concreteBridge a concrete driving surface on a concrete bridge 9 concreteBridgeAsphalt an asphalt overlay driving surface on a concrete bridge 10 timberBridge a wooden deck driving surface on the bridge
PavementElevation	INTEGER	The elevation of the street surface in meters with respect to the ReferenceHeight. The value 1001 shall indicate a missing value.
PavementExposure	INTEGER	Indicates a very rough percentage of the solar energy that will directly hit the sensor. A value of 100 indicates a fully visible sky. A value of 101 shall indicate a missing value.
PavementSensorType	ENUM	A value indicating the type of pavement sensor. Value Meaning 1 other 2 contactPassive 3 contactActive 4 infrared 5 radar 6 vibrating 7 microwave
SurfaceStatus	ENUM	A value indicating the pavement surface status. Value Meaning 1 other 2 error 3 dry 4 traceMoisture 5 wet 6 chemicallyWet 7 iceWarning 8 iceWatch --- Note: Sensors for our configuration will never return values --- in this bottom range: 9 snowWarning 10 snowWatch 11 absorption 12 dew 13 frost 14 absorptionAtDewpoint
SurfaceTemperature	INTEGER	The current pavement surface temperature in tenths of degrees Celsius. The value 1001 shall indicate an error condition or missing value.
SurfaceConductivity	INTEGER	Indicates the conductance of the ice/liquid mixture on the pavement as detected by the sensor, in mhos, which is the inverse of ohms. The value 65535 shall indicate an error condition or missing value.
SurfaceFreezePoint	INTEGER	The temperature in tenths of degrees Celsius at which the existing solution on the roadway will freeze. The value 1001 shall indicate an error condition or missing value.
PavementSensorError	ENUM	A value indicating the type of pavement sensor error.

		Value Meaning 1 other 2 none 3 noResponse 4 cutCable 5 shortCircuit --- Note: Sensors for our configuration will never return values --- in this bottom range: 6 dirtyLens
Latitude	INTEGER	The latitude in 10^-6 degrees of the ESS station. The Latitude at the North Pole is 90,000,000. The Latitude at the South Pole is a negative (-) 90,000,000. The value 90,000,001 shall indicate a missing value. REFERENCE “Resolution based on on-going location referencing activities; the WMO Code Form FM 94 BUFR Table B item 0 05 001 can be obtained by dividing this value by 10.”
Longitude	INTEGER	"The east longitude in 10^-6 degrees from the Prime Meridian of the ESS location. The Longitude of 180 degrees West shall be a negative (-) 180,000,000. The Longitude of 180 degrees East shall be 180,000,000. The value 180,000,001 shall indicate a missing value." REFERENCE "Resolution based on on-going location referencing activities; the WMO Code Form FM 94 BUFR Table B item 0 06 001 can be obtained by dividing this value by 10."