DIGITAL METADATA FOR FAF-3.1 RELEASE

IDENTIFICATION INFORMATION

Data Set Identity*:*   Freight Analysis Framework (FAF) Network

Identification Code: None

Data Set Description: The spatial component of the FAF network is derived from National Highway System Version 2009.11 and contains state primary and secondary roads, National Highway System (NHS), National Network (NN) and several intermodal connectors as appropriate for the freight network modeling. The network consists of over 447,808 miles of equivalent road mileage. The data set covers the 48 contiguous States plus the District of Columbia, Alaska, and Hawaii. The nominal scale of the data set is 1:100,000 with a maximal positional error of ±80 meters.

Theme:
Theme Keyword Thesaurus: None
Theme Keyword: Network

Bounding Coordinates:
West_Bounding_Coordinate: -88.468248
East_Bounding_Coordinate: -84.995385
North_Bounding_Coordinate: 35.005803
South_Bounding_Coordinate: 30.251503

Data Set Citation: "Freight Analysis Framework Network Machine Readable Data Files" were prepared by the Federal Highway Administration Office of Freight Management and Operations, Washington DC, 2010

Data Set Credit: The freight assignment, capacity analysis and modeling portions of "FAF Network" are developed by Battelle Memorial Institute, Columbus, OH.

Use Restrictions: The FAF network, or any portion thereof, can be freely distributed as long as this metadata entry is included with each distribution. The original metadata entry cannot be modified or deleted from any data transfer.

DATA QUALITY INFORMATION

Beginning Date of Information Content: 20101025

Ending Date of Information Content: 20101025

Thematic Quality:

Thematic Accuracy Report: The FAF network retains NHS Version 2009.11 attribute fields of RECTYPE, ORIGID, STFIPS, CTFIPS, SIGN1, SIGNT1, SIGNN1, SIGNQ1, SIGN2, SIGNT2, SIGNN2, SIGNQ2, SIGN3, SIGNT3, SIGNN3, SIGNQ3, LNAME, MILES, FCLASS, RUCODE, STATUS, NHS. All other fields listed in the NHS Version 2009.11 metadata are dropped. The accuracy of these fields is consistent with Version 2009.11 except the MILES attribute values. The accuracy of field "MILES" is unverified and may have distorted during modification of the network for modeling purpose. New fields added to FAF network are, ID, LENGTH, DIR, NN, TRK_RTE and LCV_TYPE. The field "ID" is used to join the freight modeling algorithm variables for assignment as well as assignment outputs for thematic display purpose. The mileage reported in the field "LENGTH" is based on great circle distance.

Logical Consistency Report: All node and link topological relationships and uniqueness of entity IDs are verified by computer algorithm.

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Completeness Report: The completed FAF network was delivered to the FHWA on October 2010.

Positional Quality:

Horizontal Positional Quality

Horizontal Positional Accuracy Report: As reported in the NHS Version 2009.11 metadata, the elements of the NHS have been conflated to the 1:100,000 DLG-3 data set which maintains a nominal accuracy of at least ±80 meters. Where new roads have been added which are not in the DLG-3 database link alignments have been digitized or converted from digital sources acquired from State DOTs with a map scale of at least 1:100,000.

SPATIAL DATA ORGANIZATION INFORMATION

Direct Spatial Reference Method: Vector

Point and Vector Object Information:

Vector Object Information:

SDTS Vector Object Type: "line, non-planar graph"

Vector Object Count: 170,994

SPATIAL REFERENCE INFORMATION

Horizontal Coordinate System Definition:

Geographic:

Latitude Resolution: 0.000464

Longitude Resolution: 0.000464

Geographic Coordinate Units: "Decimal Degrees"

STATUS INFORMATION

Data Set Status: Available

Release Date: 20101025

Maintenance And Update Frequency: None

LINEAGE

Source Information:

Source Citation: "NHS Version 2009.11, Federal Highway Administration, Washington DC, HEP-10

Source Citation Abbreviation: NSH V 2009.11

Beginning Date of Source Currentness: 20100831

Source Contribution: NHS, Interstate, and other arterial highway system, intermodal connectors.

Process_Step:

Process_Description: Update NHS and intermodal connector links. States edge matched and NHS attributes verified.

Process_Date: 20101025

Process_Step:

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Process_Description: Update and integrate intermodal terminals. States geo-location
matched and attributes verified.
Process_Date: 20101025
Process_Step:
Process_Description: Modified NHS codes as per direction of the FHWA.
Process_Date: 20101025
Process_Step:
Process_Description: Verified Intermodal terminals.
Process_Date: 220101025
Process_Step:
Process_Description: Modified NHS based on amendments.
Process_Date: 220101025
 Process_Step:
Process_Description: Update LCV codes based on FHWA Truck Size and Weight
Regulations. Verified with state specific input from DOT website or direct contact.
Process_Date: 220101025
Process_Description: Update National Network (NN) codes based on the information
provided to Battelle by the FHWA office of Freight Management and Operation and the
information sited under FHWA Truck Size and Weight Regulation Study, 1998.
Process_Date: 220101025
Process_Description: Update truck route restrictions code and include restrictions due to
height and hazmat designation using the State data sources, and the Rand McNally truck
road atlas.

ENTITY AND ATTRIBUTE INFORMATION

Entity And Attribute Overview: Data dictionaries for FAF network link, freight assignment
output and capacity analysis output are available in the Freight Analysis Framework
Methodology Document.

ID	Integer	Unique Identification Number
LENGTH	Number	Length of arc (miles)
DIR	Number	Freight Direction for Freight Modeling
		0 Both Direction
		1 Link AB Direction
		-1 Link BA Direction
RECTYPE	Character	Identifies Arc File records, valid value 'L'
VERSION	Character	
		The Version ID is used to maintain consistency across data files containing alternate releases of the FAF. The Version Code consists of a leading Version Number (Main release) and a trailing number (modification number), thus, 3.1 describes Major Release 3 and modification number 1.
STATE	Character	State Abbreviation
STFIPS	Numeric	State FIPS Code
CTFIPS	Numeric	3 digit County FIPS Code

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SIGN1   Character   Designated primary Sign Route for the arc.

SIGNT1   Character   Describes the type of the sign route.
    Attribute_Domain_Values:
      Enumerated_Domain_Value: 'I'
      Enumerated_Domain_Value_Definition: Interstate
      Enumerated_Domain_Value: 'U'
      Enumerated_Domain_Value_Definition: US Route
      Enumerated_Domain_Value: 'S'
      Enumerated_Domain_Value_Definition: State Route
      Enumerated_Domain_Value: 'O'
      Enumerated_Domain_Value_Definition: Off-Interstate Business Marker
      Enumerated_Domain_Value: 'C'
      Enumerated_Domain_Value_Definition: County Route
      Enumerated_Domain_Value: 'T'
      Enumerated_Domain_Value_Definition: Township
      Enumerated_Domain_Value: 'M'
      Enumerated_Domain_Value_Definition: Municipal
      Enumerated_Domain_Value: 'P'
      Enumerated_Domain_Value_Definition: Parkway or Forest Route Marker
      Enumerated_Domain_Value: 'N'
      Enumerated_Domain_Value_Definition: None of the above
      Enumerated_Domain_Value: (blank)
      Enumerated_Domain_Value_Definition: Not signed or not applicable

SIGNN1   Character

        Contains the actual sign route numbers. Using HPMS standards, an optional directional indicator (N, S, E, W) can also be used as part of this field.

SIGNQ1   Charcter

        Sign Route Qualifier Record which is used to qualify the sign route description follows the Sign Route Number.
      Enumerated_Domain_Value: 'A'
      Enumerated_Domain_Value_Definition: Alternate Route
      Enumerated_Domain_Value: 'B'
      Enumerated_Domain_Value_Definition: Business Route
      Enumerated_Domain_Value: 'P'
      Enumerated_Domain_Value_Definition: By Pass
      Enumerated_Domain_Value: 'S'
      Enumerated_Domain_Value_Definition: Spur
      Enumerated_Domain_Value: 'L'
      Enumerated_Domain_Value_Definition: Loop
      Enumerated_Domain_Value: 'F'
      Enumerated_Domain_Value_Definition: Proposed (future)
      Enumerated_Domain_Value: 'D'
      Enumerated_Domain_Value_Definition: Temporary (detour)

Enumerated_Domain_Value: 'T'
Enumerated_Domain_Value_Definition: Truck Route
Enumerated_Domain_Value: 'N'
Enumerated_Domain_Value_Definition: None of the above
Enumerated_Domain_Value: (Blank)
Enumerated_Domain_Value_Definition: No Qualifier, not signed, or not applicable

SIGN2   Character   contains the designated secondary Sign Route for the arc.
SIGNT2   Character   Describes the type of the sign route.
Enumerated_Domain_Value: 'I'
Enumerated_Domain_Value_Definition: Interstate
Enumerated_Domain_Value: 'U'
Enumerated_Domain_Value_Definition: US Route
Enumerated_Domain_Value: 'S'
Enumerated_Domain_Value_Definition: State Route
Enumerated_Domain_Value: 'O'
Enumerated_Domain_Value_Definition: Off-Interstate Business Marker
Enumerated_Domain_Value: 'C'
Enumerated_Domain_Value_Definition: County Route
Enumerated_Domain_Value: 'T'
Enumerated_Domain_Value_Definition: Township
Enumerated_Domain_Value: 'M'
Enumerated_Domain_Value_Definition: Municipal
Enumerated_Domain_Value: 'P'
Enumerated_Domain_Value_Definition: Parkway or Forest Route Marker
Enumerated_Domain_Value: 'N'
Enumerated_Domain_Value_Definition: None of the above
Enumerated_Domain_Value: (blank)
Enumerated_Domain_Value_Definition: Not signed or not applicable

SIGNN2   Character   Contains the actual sign route numbers .
SIGNQ2   Character   Sign Route Qualifier Record
Enumerated_Domain_Value: 'A'
Enumerated_Domain_Value_Definition: Alternate Route
Enumerated_Domain_Value: 'B'
Enumerated_Domain_Value_Definition: Business Route
Enumerated_Domain_Value: 'P'
Enumerated_Domain_Value_Definition: By Pass
Enumerated_Domain_Value: 'S'
Enumerated_Domain_Value_Definition: Spur
Enumerated_Domain_Value: 'L'
Enumerated_Domain_Value_Definition: Loop
Enumerated_Domain_Value: 'F'
Enumerated_Domain_Value_Definition: Proposed (future)
Enumerated_Domain_Value: 'D'
Enumerated_Domain_Value_Definition: Temporary (detour)

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  Enumerated_Domain_Value: 'T'
  Enumerated_Domain_Value_Definition: Truck Route
  Enumerated_Domain_Value: 'N'
  Enumerated_Domain_Value_Definition: None of the above
  Enumerated_Domain_Value: (Blank)
  Enumerated_Domain_Value_Definition: No Qualifier, not signed, or not applicable.
SIGN3 Character Contains the designated additional secondary Sign Route
SIGNT3 Character Describes the type of the sign route.
  Enumerated_Domain_Value: 'I'
  Enumerated_Domain_Value_Definition: Interstate
  Enumerated_Domain_Value: 'U'
  Enumerated_Domain_Value_Definition: US Route
  Enumerated_Domain_Value: 'S'
  Enumerated_Domain_Value_Definition: State Route
  Enumerated_Domain_Value: 'O'
  Enumerated_Domain_Value_Definition: Off-Interstate Business Marker
  Enumerated_Domain_Value: 'C'
  Enumerated_Domain_Value_Definition: County Route
  Enumerated_Domain_Value: 'T'
  Enumerated_Domain_Value_Definition: Township
  Enumerated_Domain_Value: 'M'
  Enumerated_Domain_Value_Definition: Municipal
  Enumerated_Domain_Value: 'P'
  Enumerated_Domain_Value_Definition: Parkway or Forest Route Marker
  Enumerated_Domain_Value: 'N'
  Enumerated_Domain_Value_Definition: None of the above
  Enumerated_Domain_Value: (blank)
  Enumerated_Domain_Value_Definition: Not signed or not applicable
SIGNN3 Character Contains the actual sign route numbers
SIGNQ3 Character Sign Route Qualifier Record which
  Enumerated_Domain_Value: 'A'
  Enumerated_Domain_Value_Definition: Alternate Route
  Enumerated_Domain_Value: 'B'
  Enumerated_Domain_Value_Definition: Business Route
  Enumerated_Domain_Value: 'P'
  Enumerated_Domain_Value_Definition: By Pass
  Enumerated_Domain_Value: 'S'
  Enumerated_Domain_Value_Definition: Spur
  Enumerated_Domain_Value: 'L'
  Enumerated_Domain_Value_Definition: Loop
  Enumerated_Domain_Value: 'F'
  Enumerated_Domain_Value_Definition: Proposed (future)
  Enumerated_Domain_Value: 'D'
  Enumerated_Domain_Value_Definition: Temporary (detour)
  Enumerated_Domain_Value: 'T'
  Enumerated_Domain_Value_Definition: Truck Route

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Enumerated_Domain_Value: 'N'
Enumerated_Domain_Value_Definition: None of the above
Enumerated_Domain_Value: (Blank)
Enumerated_Domain_Value_Definition: No Qualifier, not signed, or not applicable.

LNAME	Character	Local Road Name
MILES	Numeric	Length of arc (miles)
FCLASS	Numeric	Functional Class
		01 Rural Interstate
		02 Rural Principal Arterial
		06 Rural Minor Arterial
		07 Rural Major Collector
		08 Rural Minor Collector
		09 Rural Local
		11 Urban Interstate
		12 Urban Freeway or Expressway
		14 Urban Principal Arterial
		16 Urban Minor Arterial
		17 Urban Collector
		19 Urban Local
RUCODE	Numeric	Rural/Urban Code
		1 Rural
		2 Small Urban (1990 pop 5,000 -49,999)
		3 Large Urban (1990 >= 50,000)
STATUS	Numeric	Open status of road
		0 Proposed/Under construction
		1 Open to traffic
		2 Ferry route
		3 Canadian routes connecting Alaska to the contiguous States.
NHS	Numeric	National Highway System
		0 Not on NHS
		1 Interstate
		3 Non-Interstate STRAHNET
		4 STRAHNET Connector
		7 Other NHS
		8 Approved Intermodal Connector
NN	Numeric	National Network
		1 on NN system
TRK_Type	Numeric	Truck route related restrictions
		1 State designated truck route
		2 NN system

3	Long Combination Vehicle (LCV) route
5	Arc with state truck restriction
6	Low clearance
8	NN with low clearance
9	NN with state truck restriction
11	Hazmat restriction
09	Rural Local

LCV_TYPE   Integer   Identify the LCV character

1	Double with length less than 100'
2	Double with length up to and over 100'
3	Double and Triple with length less than 100'
5	Double and triple up to and over 100'
6	Low clearance

DISTRIBUTION INFORMATION
Distribution Contact:
  Contact Information: Mr. Michel Sprung
                          Federal Highway Administration
                          Office of Freight Management & Operations
                          1200 New Jersey Ave, SE
                          Washington, DC 20590

Distribution Liability: None
Standard Transfer Options:
  Digital Form:
    Digital Transfer Information:
      Format Name: shape file
      Format Version Number: generic
      Format Version Date: none
    Digital Transfer Options:
      Offline Options:
        Offline Media: CD-ROM
          Recording Format: generic
          Computability Information: None

METADATA REFERENCE INFORMATION
Metadata Date: 20101025
Metadata Standard Name: FGDC Content Standards for Digital Spatial Metadata
Metadata Standard Version: 19940331

CONTACT INFORMATION
Contact Organization Primary: Federal Highway Administration
                                     Office of Freight Management & Operations
                                     1200 New Jersey Ave, SE

DIGITAL METADATA FOR FAF-3.1 RELEASE

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