



USER MANUAL

# Dynamap<sup>®</sup>/Transportation

version 6.x

2004

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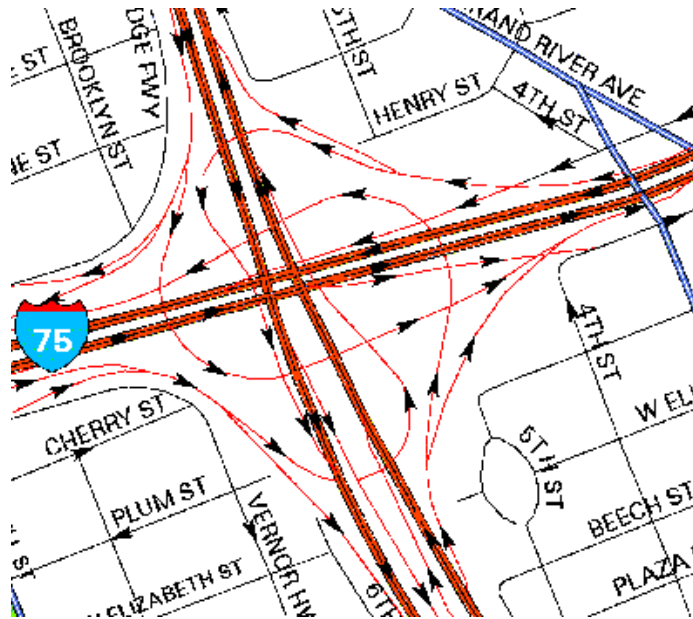
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***In This Section:***

- *What is Dynamap/Transportation?*
- *Product Improvements*
- *Version History*
- *The GDT Master Street Database*

## What is Dynamap/Transportation?

Dynamap/Transportation is a vector based, digital, geographic database in which streets and features are represented as line segments, polygons or points. The product is designed specifically with enhanced routing functionality. It retains the superior geocoding and display attributes of Dynamap/2000. The data and the formatting of the data have been designed to meet the needs of routing customers requiring a complete database solution.



Dynamap/Transportation contains addressed and unaddressed street segments as well as railroads, airports, point features (such as churches, schools, public buildings, hospitals), area features (such as parks, golf courses), and water features. It also has County, Place, State, Nation and Postal Code boundaries for the US and State, Nation and Postal Code boundaries for Canada.

Dynamap/Transportation is the most data intensive nationwide street network available. There are more streets with current addresses and routing information than in any other database. The currentness of the data and completeness of the

coverage set Dynamap/Transportation apart from all other commercially available databases.

The GDT master internal database is continuously updated with new streets and address ranges, changes in street names, and additions and changes to Postal Codes. Over 3 million changes are made in a typical three-month period.

Dynamap/Transportation version 6.2 includes improved exit ramp routing. One-way information is contained in the street layer data.

Dynamap/Transportation includes important routing features such as impedance (cost), speed, length, turn restriction, and from- and to- node elevation (f\_zlev, t\_zlev) to handle complex overpasses and underpasses. The preferred routing and geocoding names are indicated for all segments.

Dynamap/Transportation version 6.2 includes landmark layers such as airports, parks, recreational areas, transportation terminals, etc. The landmark structure will provide increased flexibility and a more useful product for your business geographics applications.

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## ***Features***

- COMPLETE**
- Latitude and longitude coordinate pairs for almost every street segment in the country
  - Location of churches, schools, public buildings, major retail centers, hospitals, parks, bus and ferry terminals, train stations and airports
  - Rivers, ponds and lakes
  - Highways
  - County, Place, State, Nation and Postal Code Boundary layers (US) and State, Nation and Postal Code Boundary layers (Canada)

- CURRENT**
  - Quarterly updates with over 3 million changes
  - Current and accurate Postal Codes
- ACCURATE**
  - Based on USPS standards
- VERSATILE**
  - Can be used for a variety of routing applications. Available in ArcInfo, ArcView, ArcSDE and ASCII formats
- SUPPORTED**
  - Comprehensive user documentation
  - Toll-free customer support 9 am to 5 pm EST
  - [Online support request form](#)

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### ***Geographic Coverage***

Dynamap/Transportation is available for all 50 states, the District of Columbia, Puerto Rico, and all Canadian provinces. It is available by county, state/province or nation. A complete list of U.S. counties is found in the dynamename.\* file included with each order.

## Tiles and Layers

Dynamap/Transportation includes the following layers:

Tile*	Layer	Abbreviation	Feature Type
County, State	Airport Information	ai	Attribute Table
County, State	Large Area Landmark	al	Polygon
County, State	Airport	ap	Polygon
County, State	Exit	ex	Point
County, State	Highway	hy	Line
County, State	Institution	in	Point
County, State	Linear Water	lw	Line
County, State	Maneuver	mn	Point
County, State	Major Water	mw	Polygon
County, State	Placeholder	ph	Point
County, State	Park	pk	Polygon
County, State	Recreation Area	ra	Point
County, State	Major Retail Center	rc	Point
County, State	Railroad	rr	Line
County, State	Street Alt. Name	sa	Attribute Table
County, State	Street FIPS Information	sf	Attribute Table
County, State	Street	st	Line
County, State	Toll	tl	Attribute Table
County, State	Turn Restriction	tn	Attribute Table
County, State	Transportation Terminal	tt	Point
County, State	Water Polygon	wp	Polygon
State	County Boundary**	cyb	Polygon
State	County Inventory**	cyi	Point
State	Postal Code Alt. Name	pca	Attribute Table
State	Postal Code Boundary	pcb	Polygon
State	Postal Code Inventory	pci	Point
State	Place Boundary	plb	Polygon
State	Populated Locality Inventory	pli	Point
Nation	State Boundary	stb	Polygon
Nation	State Inventory	sti	Point
World	Nation Boundary	ntb	Polygon

\*ArcSDE tile and delivery is unique and is described within the ArcSDE-Loadable Format section of this document.

\*\* Not available for Canada

Some duplication of street or boundary segments may occur between layers. When working with more than one layer you should be aware that the top or last drawn layer may cover a duplicate segment in one of the layers drawn first. Drawing any reference layers first and the layer of primary interest last will put the desired data where you can access it easily.

If you require additional boundary information, GDT offers a number of other boundary products.

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## Projection and Datum

Dynamap/Transportation files are delivered in a geographic projection using latitude/longitude coordinate values with an implied six decimals of precision.

All coordinates are based on the 1983 North American Datum (NAD83). The datum is specified in a file named DATUM.TXT.

**NOTE:**

Changing projection may slightly affect coordinate and topology precision resulting in less than exact overlays in enlarged views. Nation boundaries are in WGS 84 datum.

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## Metadata

Each data layer that can be represented geographically as a point, line or polygon will also include a metadata file using the <layername>.xml naming convention. See the [metadata](#) reference document on this documentation CD for more details.

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## ZIP Data Currentness

Version Number	Release Date	USPS Currentness
6.0	January 1, 2004	November, 2003
6.1	April 1, 2004	February, 2004
6.2	July 1, 2004	May, 2004
6.3	October 1, 2004	August, 2004

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## Generalization

Boundary layers, except for postal codes, have not been generalized. Every polygon (area surrounded by boundary segments) and every feature (geographic unit formed by one or more polygons) has as many points as are required to draw its shape accurately.



Postal Code boundaries are generalized to a maximum 4000 points per polygon.

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## **Data Representation**

### **LATITUDE/LONGITUDE DATA**

Except for DIME format (ASCII) boundary files, all latitude and longitude coordinates are signed and have six implied decimal places. Northern latitudes are positive (0° to 90°), southern latitudes are negative (0° to -90°). West longitudes (including most of the USA) are negative (0° to -180°), and east longitudes are positive (0° to 180°).

DIME format boundary file coordinates are expressed as all positive values with six implied decimal places. Any longitude west of 180° is expressed in increasing, rather than decreasing values (181°, 182°, 183°, instead of 179°, 178°, 177°). No other east/west delineation is expressed.

### **SEWING**

A state database will "sew" to the corresponding segments in the database from an adjacent state.

### **WATER**

The coastal extreme of a database is represented by the political boundary or twelve-mile limit. Note that extensions into water are included in area calculations.

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## What is New with This Release

- Currency update

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## Version History

- Version 2.3 Currency update; nation boundary layer added; airport, street and postal layers combined in one layer in ArcSDE format
- Version 3.0 Currency update; maneuver layer added; turn restriction layer modified to accommodate maneuver layer; nation boundaries specified from WGS 84 datum; ACC coding changed blank ACC codes now set to 4 in preparation for rolling out a 6-code system
- Version 3.1 Currency update, ArcSDE: updated table layout for Turn Restrictions and Maneuvers
- Version 3.2 Currency update; exit numbers
- Version 3.3 Currency update
- Version 4.0 Type fields in all street and placeholder tables have a width of 6; TF\_DIR, FT\_DIR and Name\_Flag added to all street and alternate name tables; Census attribute fields updated to '00' where '90' was part of the field name; GENF replaces PUBGRF file
- Version 4.1 Currency update
- Version 4.2 Currency update
- Version 4.3 Currency update
- Version 5.0 Currency update; metadata files added to each geographic layer; D31, D61, D62 included in large area landmark layer
- Version 5.1 Currency update; Hawaii now in NAD83 datum
- Version 5.2 Currency update;
- Version 5.3 Currency update

- Version 6.0 Currency update; Broomfield County, CO (FIPS 08014) added; Clifton Forge Independent city, VA dissolved (FIPS 51560 removed) into Alleghany County (FIPS 51005); Canadian Census Divisions removed from product; Canadian Census Subdivisions replaced with Canadian Delivery Area Localities (DAL); Canadian Urban Agglomerations replaced with Canadian Street Delivery Areas (SDA); Places and pli redefined in Canada; MCDs redefined in Canada; new Genf file for Canada.
- Version 6.1 Currency update.
- Version 6.2 Currency update.

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## ***The GDT Master Street Database***

The GDT internal street network database, on which this product is based, contains nearly every street in the U.S. and Canada, and is constantly being updated. As new streets are reported, they are added by Digital Map Technicians (DMTs) working in regions covering an entire nation.

GDT has many sources for new addresses. In the U.S., the primary ones are the monthly ZIP+4 transactions received from the U.S. Postal Service, E911 addresses (new city-style addresses assigned to homes in rural areas in order to conform to the 911 emergency response system) and customer enhancement requests.

As DMTs work through their particular regions, they concentrate on areas that contain the largest numbers of missing addresses, usually newly developed areas. They apply address ranges to unaddressed street segments, digitize new streets and correct inaccurate segment shapes. They are also continually adding useful attributes to street segments such as exits, turn restrictions and one-way restrictions. Each addition is verified with current maps and other data. Changes made each day are checked for accuracy before being applied to the master database.

The above modifications are part of GDT's initiatives aimed at improving the overall quality and usability of the data used in this product.

### **FEATURE CLASSIFICATION**

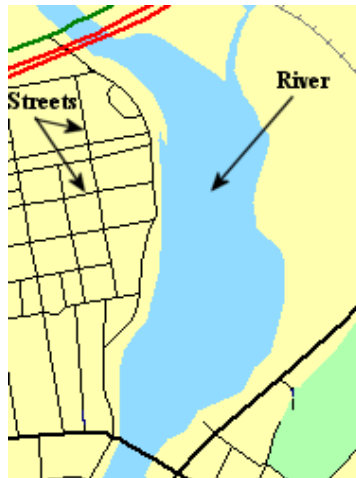
Feature classification codes (FCCs) in some databases are based on the maintenance of streets and roads and can vary dramatically in different geographic areas.

To create a consistent nationwide highway system, GDT re-classifies almost every street and road in the

master street database based on its use rather than its maintenance.

### **LANDMARK AND WATER IMPROVEMENT**

Although lines are reasonable for streets, they often do not represent areas such as water very well. A river, for example, is represented by two lines that correspond to the two shorelines. GDT applies enhancement initiatives to fix and name these water features.



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***In This Section:***

- *What's In This Package*
- *Installation*
- *Directory Naming Conventions*
- *Copyright File*

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## ***What's In This Package?***

With your shipment of this product you should have received:

- Product files on the correct media and in the correct format
- Packing Slip (paper or electronic listing of package contents)
- Documentation CD

Check now to be sure that you have received the correct order.

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## ***Installation***

For information on the installation of these files see the **Data Installation** manual on the Documentation CD.

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## Directory Naming Conventions

When you receive Dynamap/Transportation 6.2, you can identify its contents by understanding our naming conventions. GDT uses a simple coding system to identify directories for its products.

`\nat\st\stcnty\`

where **nat**, **st** and **cnty**, are the nation, state and county abbreviations, respectively. **Nat** is the 3-character ISO nation abbreviation; **st** is the 2-character state abbreviation and **cnty** is the 4-character county abbreviation. Note that **cnty** will be padded with "\_" if the county name is not a full 4 characters long.

In addition there are three auxiliary files:

**dynaname.\***      Name correspondence file (in US coverage only)

**datum.txt**      Datum specification file

**genf<stfips>.\***      Geographic Entity Name file

For a description of these files, see the section Auxiliary Files in this manual.

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## Copyright File

The copyright file included with this product is one of the following:

File name	1 <sup>st</sup> character of extension:	2 <sup>nd</sup> and 3 <sup>rd</sup> characters of extension:
<b>copyright.txx</b>	t=carriage return/line feed	<b>xx</b> =fillers
<b>copyright.lxx</b>	l=line feed	<b>xx</b> =fillers
<b>copyright.xxx</b>	x=no delimiter	<b>xx</b> =fillers
<b>copyright.txt</b>	text file	

and contains the following text:

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***In This Section:***

- *Linear Features*
- *Feature and Geographic Codes*
- *Layers*

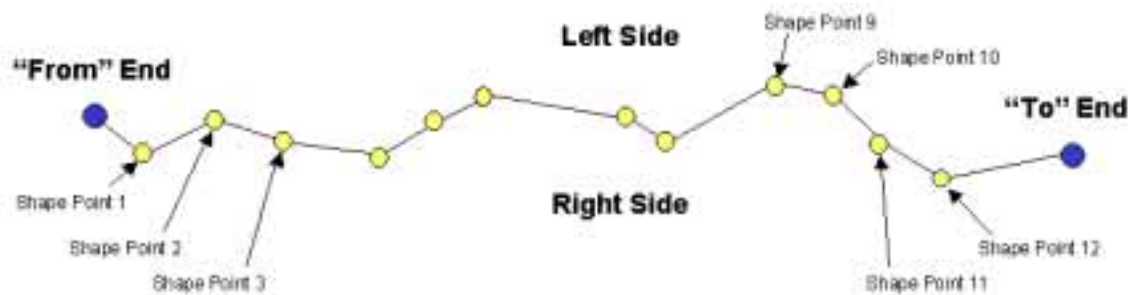
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## Linear Features

Linear features such as streets, highways and political or water boundaries are represented using line segments. Each segment has a "from" end, a "to" end, a left side and a right side. The "from" and "to" ends represent the digitized direction of the segments, not traffic flow direction in street layers.



A line segment can have shape nodes that indicate the position of intermediary points along that line.



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# Feature and Geographic Codes

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## Feature Class Codes (FCC)

The Feature Class Code (FCC) field indicates whether a segment is a street, highway, stream, etc. A complete FCC list used in Dynamap/Transportation appears in the Reference Documentation on this CD.

The FCC field is made up of an *alpha* character that defines the physical class of the feature and a numeric portion that further defines the subclass of the feature. A common feature class is "A40"; 'A' being the physical class of "ROAD"; and '40' being the qualifier of that class, "NEIGHBORHOOD ROAD".

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## Geographic Area Codes

Dynamap/Transportation products (U.S.) contain FIPS codes for State, County, Place and MCD in an auxiliary file. Refer to the Street FIPS Information table for additional information.

For Canada, codes refer to Province/Territory (State equivalent), Street Delivery Localities (Place equivalent) and Delivery Area Localities (MCD equivalent).

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# Layers

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## Highways Layer

Highways in this product include segments with an ACC of 1, 2 or 3. As a result, all ramps and connector roads necessary to route at a national, state and county level are included:

- |                      |                     |
|----------------------|---------------------|
| Interstate highways  | US highways         |
| Trans-Canada Highway | Provincial highways |
| Autoroutes           | Named highways      |

State highways  
Routes  
Expressways  
Ramps

Parkways  
Highways by other names  
Ferry routes (vehicular)

**NOTE:**

Some counties may not have a Highways layer.

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## Highway Naming

Highways names are applied according to a layered hierarchy. Where a highway segment has more than one name, the higher level name will be used, and always in this order: Interstates, then US Highways, and then State Highways.

For example, the stretch of pavement near New London, Connecticut that is both “I 95” and “US HWY 1” has “I 95” as its primary name and “US HWY 1” as its alternate name. Highways can also have tertiary names that may be a highway type or a street name (Main Street, for example).

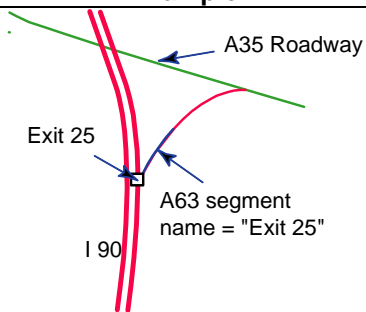
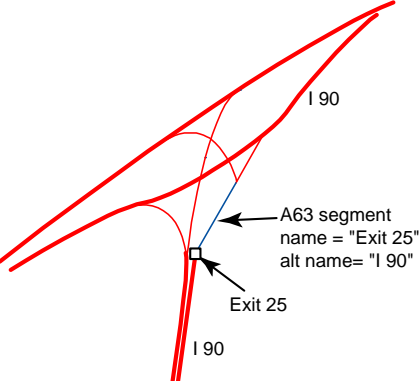
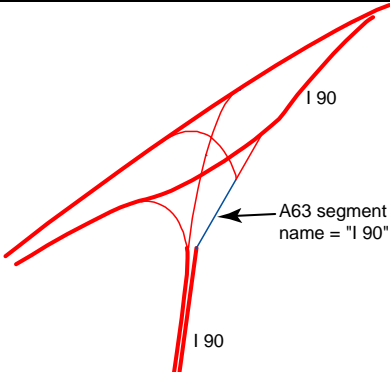
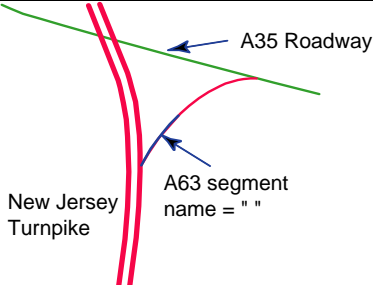
Highways uses standard naming conventions for both prefixes and suffixes of all highways in the database as shown below.

type	name	example
Interstates	I nnn	I 495
US Highways	US HWY nnn	US HWY 66
State Highways	STATE HWY nnn	STATE HWY 9

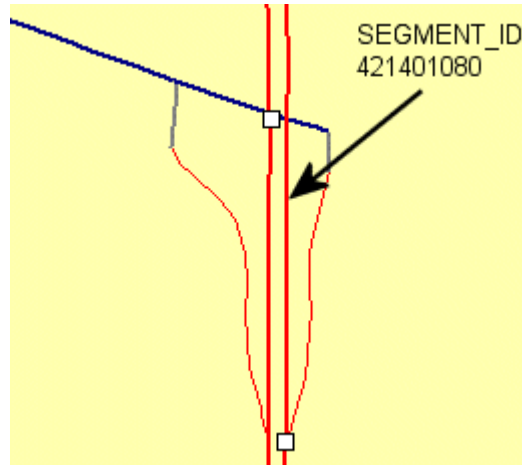
There are instances where the “official” name of a highway includes directionality: N, S, E or W. For example, in Texas there is an I 35E and an I 35W. The “E” and “W” are part of the official names.

## Ramp Naming

Below are some examples of how highway ramps may be named in Dynamap/Transportation:

Example	Condition	Ramp Naming
	First A63 segment after exit point. Exit point is named.	Exit 25
	First A63 segment after exit point. Exit point is named. Interstate name is the only name present connecting Interstate to Interstate.	Exit 25 I 90 is an alternate name
	A63 segment not touching an exit point, or no exit number available. Interstate name is the only name present connecting Interstate to Interstate.	I 90
	Segment not touching an exit point (or no exit number available).	(blank)

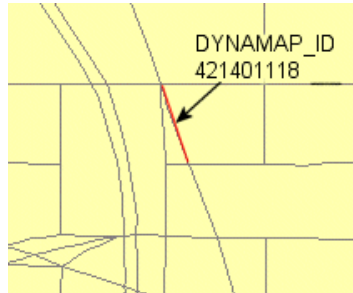
An example taken from the highway layer:



FIELD	CONTENTS	DESCRIPTION
SEGMENT_ID	421401080	The id of the selected highway segment
PREFIX	(blank)	The highway name has no prefix
NAME	I 395	The highway name is I 395
TYPE	(blank)	No "type" for interstate highway
SUFFIX	(blank)	No name suffix for this highway segment
FCC	A15	An FCC of A15 indicates a separated limited access highway
ACC	2	An ACC of 2 indicates an inter-metropolitan highway of high mobility
SHIELD	I	The "I" designation indicates an interstate highway
HWY_NUM	395	The interstate number is 395
SEG_LEN	0.6057	The length of the selected portion of the highway is 0.6057 miles long
SPEED	55	GDT assigns an average speed of 55 mph to an A15 highway
ONE_WAY	TF	The selected portion of the highway is a one-way in the segment's "to-from" direction
F_ZLEV	0	The "from" portion of the selected segment is at ground level
T_ZLEV	0	The "to" portion of the selected segment is at ground level
FT_COST	-1.00000	The "-1" designation in the FT_COST field indicates that the selected portion of the highway is not traversable in the "from-to" direction
TF_COST	0.66071	The cost (time) to travel the portion of the selected segment in the "to-from" direction is 0.66071 minutes.
FT_DIR	(blank)	Navigational direction of the selected segment is in the "to-from" direction, therefore the "from-to" field is blank
TF_DIR	N	Navigational direction of the selected segment in the "to-from" direction is North
NAME_FLAG	1	The highway name is appropriate for Routing
(Click on <a href="#">blue</a> text for more detailed explanations of fields)		

## Street Layers

An example taken from the street layer:



FIELD	CONTENTS	DESCRIPTION
DYNAMAP_ID	421401118	The id of the selected street segment
L_F_ADD	900	Left side of "from" end of street segment begins with address 900
L_T_ADD	980	Left side of "to" end of street segment ends with address 980
R_F_ADD	901	Right side of "from" end of street segment begins with address 901
R_T_ADD	981	Right side of "to" end of street segment ends with address 981
PREFIX	(blank)	Street name has no prefix
NAME	NEW JERSEY	Street name is New Jersey
TYPE	AVE	Street type is Avenue
SUFFIX	NW	Street name suffix is Northwest
FCC	A40	An FCC of A40 indicates a local street
POSTAL_L	20001	The postal code (ZIP) on the left side of the street is 20001
POSTAL_R	20001	The postal code (ZIP) on the right side of the street is 20001
ACC	4	An ACC of 4 indicates a local street
NAME_TYPE	R	This indicates that the street name is the primary routing name
SHIELD	(blank)	The street does not have a shield
HWY_NUM	(blank)	There is no highway number for this street
SEG_LEN	0.0702	The length of the selected street segment is 0.0702 miles long
SPEED	25	GDT assigns an average speed of 25 mph to an A40 street
ONE_WAY	FT	The selected street segment is a one-way in the segment's "from-to" direction
F_ZLEV	0	The "from" end of the selected segment is at ground level
T_ZLEV	0	The "to" end of the selected segment is at ground level
FT_COST	0.16860	The cost (time) to travel the selected street segment in the "from-to" direction is 0.16860 minutes.
TF_COST	-1.00000	The "-1" designation in the TF_COST field indicates that the selected street segment is not traversable in the "to-from" direction
FT_DIR	(blank)	Navigational direction fields are confined to limited access highways
TF_DIR	(blank)	Navigational direction fields are confined to limited access highways
NAME_FLAG	3	The street name is appropriate for Routing and Geocoding

(Click on [blue](#) text for more detailed explanations of fields)

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## Street and Highway Field Definitions

Field definitions in this section apply to some or all street layers (street, highway, street alternate name).

### STREET TYPES

In Reference Documentation are the US Postal Service, Tiger and GDT street designators and their abbreviations. A street designator or type refers to the portion of a road name that is called "ST", "AVE", "PL" etc. Only road features have street designators or types.

### NODE (SEGMENT END) ELEVATION

There are two Node Elevation fields, F\_ZLEV (From end) and T\_ZLEV (To end) for each segment. These fields indicate planar connectivity for each end of the segment.

- Segments at ground level have ZLEV=0.
- Segments with ZLEV >0 are man-made structures that are suspended or elevated above ground level. Example: a bridge spanning a river or street would have a ZLEV >=1.
- Segments with ZLEV <0 are underground or under-water structures below ground level.  
**Negative ZLEV exception:** In ArcView format, the value -9 in the ZLEV field is used to indicate that the name in the Name field is an alternate name.

For two segments to route correctly, the elevations for the connecting segments must be the same.

### NAME TYPE:

The Name\_type field indicates whether each name is the Primary Routing Name ("R"), the Primary Geocoding Name ("G"), or Other (blank). If the Primary Routing Name is also the Primary Geocoding Name, the value will be "R".

### SHIELD TYPE:



The Shield\_type field indicates what shield should be used to represent each name based on its Primary Highway Name. “T” = Trans-Canada, “I” = Interstate, “U” = US Hwy, “S” = State Hwy, “A” = Autoroute and blank = other.

Shield Types will only be available for highways whose names match GDT’s naming conventions for highways.

#### **HIGHWAY NUMBER:**

The HWY\_NUM field indicates the number that appears in the shield for that highway. This will only be present for Interstates, US Highways, State Highways, Trans-Canadian Highways and Autoroutes. The HWY\_NUM field will only be populated on FCC segments of A1\*, A2\* and A3\*.

#### **SEGMENT LENGTH:**

The SEG\_LEN field contains the length of the segment (including shape nodes). The distance is calculated using the arc distance with correction for the earth’s curvature. Units are in miles. The precision is 4 decimal places.

#### **ARTERIAL CLASSIFICATION CODE (ACC)**

The set of Arterial Classification Codes (ACCs) is GDT's system for categorizing roads according to the level of travel mobility that they provide in the road network. Mobility refers to the volume of traffic that a stretch of road carries and the length of trip that it serves.

- Roads at the highest level of mobility (lowest ACC number) serve the greatest number of trips and the longest trips. High-mobility roads provide the lowest level of access to property.
- Descending through the table below, higher ACC numbers represent a decrease in relative importance to routing: a decrease in the number and length of routes using the road.

Valid ACC entries are "1", "2", "3", or "4". See table below.

ACC	Geographic Significance	Routing Importance
<b>1</b>	North America / Continental	Largest / Longest Highways
	Inter-state	Connect Major / Largest Cities
		"Coast-to-Coast" Origin to Destination
		Interstate Commerce / Travel
		Intrastate Commerce / Travel
<b>2</b>	Inter-Metropolitan Area	Long / Large Highways
		Beltways / Secondary Freeways
		Connect Major Cities
<b>3</b>	Intra-State	Medium Highways
	Intra-Metropolitan Area	US/State Highway Network
	Inter-Metropolitan Area	Connect Minor Cities
		Intrastate Commerce
		Recreational Travel
<b>4</b>	City / County/Local	Local Arteries
		Retail Commerce
		Recreational Activities
		Initial Route Origin / Final Destination
		All other roads

#### SEGMENT SPEED FIELD:

The Segment SPEED field contains the average speeds categorized by FCC and defined in the [FCC to Speed](#) table located in the Reference Document section on this CD. The units are in miles per hour.

#### ONE-WAYS:

The One\_Way field is filled with either "FT", "TF" or blank. "FT" indicates that the segment is one way, from the From end to the To end. "TF" indicates the opposite direction of travel. A blank field indicates that travel is permitted in both directions.

Note that "TF" and "FT" are digitized segment directions between segment nodes and may not correspond to traffic direction of a one-way street.

#### SEGMENT IMPEDANCE:

Each segment has 2 fields named "FT\_COST" and "TF\_COST" which represent the cost to travel the segment in that direction in minutes. The values are based on the length of the segment and its speed

value. If travel is impossible due to a one-way flag or FCC, these fields are set to -1. Units are in minutes. Precision is 5 decimal places. See [FCC to Speed](#) table to view routable FCCs.

#### **NAVIGATIONAL DIRECTION:**

The FT\_Dir and TF\_Dir fields convey information about the described direction of travel along highways. This directional is distinct from the existing directional suffix field in that it is not part of the recognized postal name. To accommodate single carriageway streets, two fields are used. Permissible values for this field are N,S,E,W,NE,SE,NW,SW.

#### **NAME\_FLAG**

The Name\_Flag provides additional information about the primary and alternate names along streets. This field can be used instead of the existing Name\_Type field. The following information may be known about a given name:

- Routing – The name is most appropriate for statewide or cross-country directions
- Geocoding – The name is appropriate for geocoding applications
- Local – The name is most appropriate for local directions
- Historical – The name was once valid, but has been changed

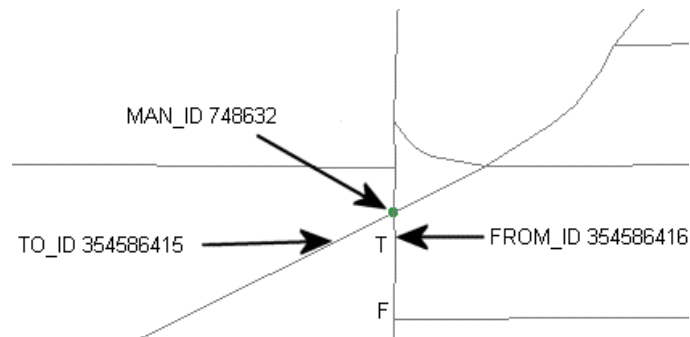
The following table represents the number applied to each flag.

<b>Name_Flag</b>	<b>Routing</b>	<b>Geocoding</b>	<b>Local</b>	<b>Historical</b>
0	N	N	N	N
1	Y	N	N	N
2	N	Y	N	N
3	Y	Y	N	N
4	N	N	Y	N
5	Y	N	Y	N
6	N	Y	Y	N
7	Y	Y	Y	N
8	N	N	N	Y
9	Y	N	N	Y
10	N	Y	N	Y
11	Y	Y	N	Y
12	N	N	Y	Y
13	Y	N	Y	Y
14	N	Y	Y	Y
15	Y	Y	Y	Y

## Maneuvers Layer:

The Maneuver file gives detailed information about ordered sequences of segments in GDT's Dynamap/Transportation database. Currently it lists restricted maneuvers by referencing the segment IDs involved. All turn restrictions previously delivered in the Turn Restriction layer are now delivered as Prohibited Maneuvers as well as Turn Restrictions to support different routing systems.

**An example of a prohibited maneuver:**



FIELD	CONTENTS	DESCRIPTION
MAN_ID	748632	The maneuver id
SEQUENCE	1	No additional records necessary to define the maneuver
MAN_TYPE	P	Maneuver from the from_id to the to_id is prohibited
FROM_ID	354586416	ID# of the "from" segment
FROMID_END	T	The "to" end of the "from" segment indicates which end of the segment the maneuver is located
ANGLE	114.87	The angle of the from_id to the to_id
COST	-1.00000	The maneuver is prohibited
HOO		A blank Hours Of Operation field indicates that the maneuver is never allowed
TO_ID	354586415	ID# of the "to" segment
VIA1	0	The Via fields are only used if more than 2 segments are needed to describe a maneuver
VIA2	0	" "
VIA3	0	" "
VIA4	0	" "
VIA5	0	" "
LONGITUDE	-77.041608	The longitude of the maneuver point in decimal degrees
LATITUDE	38.916751	The latitude of the maneuver point in decimal degrees

(Click on [blue](#) text for more detailed explanations of fields)

---

## Maneuver Fields

### MAN\_ID

This ID is unique per maneuver.

### SEQUENCE

A separate record gives the information for each maneuver. Sequence ascends only when multiple records are needed to reference additional Via IDs. Only if a maneuver involves more than 5 “via” IDs in addition to the From\_id and To\_id will this be higher than “1”.

### MAN\_TYPE

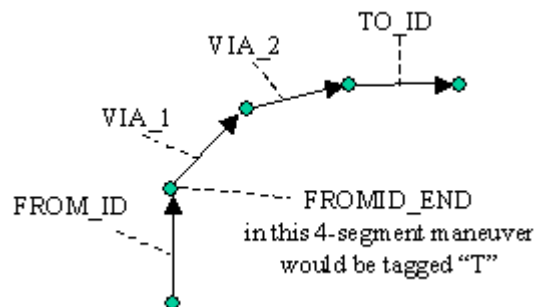
Indicates the maneuver type. Currently this will always be “P” for prohibited, but future iterations may expand to include other maneuver designations.

### FROM\_ID

The Segment\_ID of the segment being departed.

### FROMID\_END

All GDT segments are delivered with designated 'From' and 'To' ends. In multi-segment maneuvers, the FROMID\_END will be the node that joins the first and second segment of the maneuver. See below.



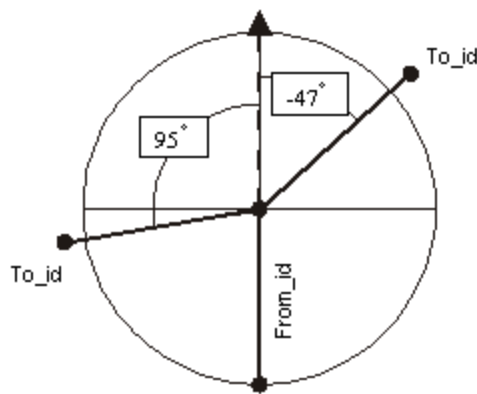
The FROMID\_END is particularly important for a single-segment U-turn indication, in order to know which end of a single-digitized segment has a U-turn restriction. If U-turns were restricted at both ends of a segment, two maneuver entries would be present.

“T” = To end

“F” = From end

### ANGLE

The angle of the To\_id segment from the From\_id segment. The angle measures the departure according to ESRI standards. This ranges in value from -179.99 to 180.00, and is the mathematical supplement to the interior angle of the two segments.. Negative values indicate right turns, while positive values indicate left turns. U-turns generate a value of 180. 2 decimal places of precision.



Angle measures deviance from straight, right =  $0^\circ$  -  $-179^\circ$ , left =  $0^\circ$  -  $180^\circ$ .

### COST

Currently the value of this field will always be -1.00000 to indicate that the turn is restricted.

### HOO (HOURS OF OPERATION)

The GDF Time Domain specifications will be used to indicate the time period during which this maneuver is allowed. A basic Time Domain is the combination of a Starting Date and a Time Duration with the following notation:

**[(Starting Date) {Time duration}]**

e.g., [(M5d1){d1}] means :

Starting Date : any year, month 5 (May), day 1st, at 0:00am.

Time Duration: 1 complete day (i.e. 24 hours or 1440 minutes).

**To\_ID**

The Segment\_ID of the segment being accessed (or in this case the segment to which access is restricted). If this ID is the same as the From\_id, it refers to a U-turn. If it is a segment which is not adjacent to the From\_id segment, then there will always be additional segments listed in the Via section to connect the two.

**VIA1-VIA5**

These IDs, in order, reference all segments involved in the maneuver. As a result, the complete maneuver would be: From\_id, <Via1>, <Via2>, ..., <Via5>, To\_id.

**LONGITUDE, LATITUDE**

If the maneuver may be represented as a turntable, i.e. if it involves a unique intersection of two adjacent segments at a node, then this point represents that node. If it cannot be represented as such, this represents the From\_id end node. Coordinate information is typically not necessary to use the maneuver file, as it defines relationships between other objects. This information is provided for easy examination of maneuver locations. 6 decimal places of precision.

**Longitude:**

Longitude coordinate for the intersection/maneuver.

**Latitude:**

Latitude coordinate for the intersection/maneuver.

---

## **Rules for Turn Restrictions**

**PHYSICAL TURN RESTRICTIONS****Overpass/underpass:**

All segments will contain node elevation (segment-end elevation) values to indicate planar connectivity. The default value is 0, but can range from -8 to 99 as needed.



**Multi-level:**

Chains will be duplicated as necessary to maintain traffic flow for each level. Node elevation values will be used to distinguish each layer from the next. (Ex: I-93 entering Boston, bridges in San Francisco, San Diego, Los Angeles, etc.). These segments will each have unique Dynamap\_IDs, not equal to layers above or below them. This will be represented by parallel segments with a separation of .00003 (30 micro degrees, approximately 10 feet.).

**LEGAL TURN RESTRICTIONS****(No left turn, no U-turn, etc.):**

It is assumed that there is no turn restriction, UNLESS a turn restriction entry indicates the segment sequence, in correct order. (Ex: In the typical traffic circle, 2 short ramps exit and enter for each street involved. A turn restriction will prevent turning from a given circle exit ramp to the associated entrance ramp.) The Turn Restriction file references the subset of the Prohibited Maneuvers in the Maneuvers file that can be represented as isolated ordered pairs.

---

**Water Layers**

Three water layers are provided in Dynamap/Transportation: Linear Water, Major Water and Water Polygon. The Linear Water layer describes streams and small rivers. Major Water and Water Polygon layers display all water features that can be represented by polygons, such as lakes, double line rivers and oceans.

**NOTE:**

Some counties may not have water or water polygon layers.

---

## Landmark Layers

Landmark layers contain landmark features of point, line and area.

Landmark layers in this product are limited to the following feature class codes:

Large Area Landmarks:	
D10	Military
D31	Hospital
D37	Prison
D43	School
D61	Retail Center
D62	Industrial Area
D64	Amusement Park
D65	Government Facility
D67	Stadium
D81	Golf Course
D82	Cemetery

Institutions	
D31	Hospital
D43	School
D44	Church
D65	Government Facility
D82	Cemetery

Recreation Areas	
D67	Stadium (Canada Only)
D81	Golf Course
D92	Point of Interest

Retail Center	
D61	Retail Center

Park	
D83	National Park
D85	State Park
D89	Local Park

Transportation Terminal	
D52	Train Station
D53	Bus Terminal
D54	Marina Terminal
D56	Subway/Metro Terminal (Canada Only)

**NOTE:**

Some counties may not have landmark or landmark polygon layers.

---

## ***Populated Locality Inventory Layer***

This point layer consists of: all Census Incorporated Places; a subset of the GNIS Populated Place File localities; and all State/Province capitals (including DC & PR). There are 85,000 estimated Populated Locality Inventory points for the U.S.




---

## ***Place Boundary Layer – U.S.***

The Place Boundary Layer files contain the geographic data required to depict maps of Census Place (or community) boundary lines for the United States. Data is available for the nation by state tile.

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## ***Census Information - Canada***

The following Canadian-specific areas are defined by GDT to facilitate street-level address matching and are referenced from data products including Canadian postal code reference address files and GDT's populated locality inventories (PLI).

---

### **Canada Place Boundary (Street Delivery Localities)**

A GDT-generated code, a Street Delivery Locality (SDL) is used to populate the Place coding for segments in the “street FIPS” correspondence file.

Street Delivery Localities represent populated settlements that contain street level address attribution.

---

### **Canada MCD Fields (Delivery Area Localities)**

A GDT-generated code, a Delivery Area Locality (DAL) is used to populate the MCD coding for segments in the “street FIPS” correspondence file.

Delivery Area Localities represent more rural settlements that may not have complete street names and address ranges.

---

### **Postal Code Layer**

Dynamap/Transportation provides Postal Code information. Postal Codes can designate either areas or points as described below. See [Dynamap Definitions and Statistics](#) on this CD for an explanation of Canadian features included in the Dynamap/Transportation products.

## **UNITED STATES**

### **POLYGONS & POINT ZIPs**

Street Delivery Postal (ZIP) codes identify **areas** where mail is delivered (from a city block or two to an entire rural town). These areas are represented by **polygons** and appear in both ZIP Boundary and Inventory Files.

There are many other Postal (ZIP) codes, however, that have no area and are represented as **points** rather than polygons. In other words, they appear as dots on

a map with no area and, therefore, no boundaries. These are ZIPs which have no geographic extent defined in terms of street segments, or which correspond to geography not defined in any Postal Service data files.

Examples of point ZIPs include Post Office box ZIPs and Unique ZIPs (single site, building or organization).

Point ZIPs are found in the Inventory files only, not in the Boundary files.

### POINT ZIPs & ENCLOSING ZIPs

For all point ZIPs, the Dynamap/ZIP Inventory file provides an enclosing ZIP to which data for that point ZIP can be mapped. The enclosing ZIP is identical for all entries that are located within the same ZIP.

An area calculation in square miles and a centroid in latitude/longitude coordinates is calculated for each ZIP Code. Point ZIPs by definition have no area and may have the same centroid as their enclosing ZIP.

Enclosing ZIPs are particularly important for Boundary file users who want to map point ZIPs to enclosing ZIPs.

To assign the enclosing ZIP, the actual location of the point is determined on a map. The boundary ZIP associated with the geographic location is the enclosing ZIP.

#### **NOTE:**

Universities, military bases, large hospitals, etc. may be defined as points or polygons.

### ZIP CODES SERVING MANY LOCALITIES

ZIP Codes with one or more post offices may serve many localities. The term **Place Name** is Post Office terminology for an area inside a ZIP, which could include towns, parts of towns, airports, and office complexes. When these have been defined, we have

included them in the **NAME** field. Place Names are listed together for each ZIP Code, with the principal station in that ZIP not necessarily listed first. Check the **NAME\_TYPE** field to verify which name is the main Post Office.

Where no place name was listed in the *USPS City/State File*, the parent post office name was used. If both fields were blank in the *USPS City/State File*, this field may be blank. The area and centroid fields for such entries represent the area and centroid for the entire ZIP Code. Therefore, these fields will be identical for all entries with the same ZIP Code.

**PC\_TYPE** and **NAME\_TYPE** information obtained directly from the *USPS City/State File* has been added to the ZIP Inventory File to assist in identifying primary and box only ZIP Codes.

**L** in the **LASTL\_FLAG** field means that the **place** in the name field is correct for use in an address last line, Lebanon, NH 03766, for example. An **N** indicates that it is not the name used in an address last line.

#### ANOMALIES

A small percentage of errors in coding can be expected in fields obtained directly from the *USPS City/State File*. Therefore, some coding may be contradictory to the polygonal representation of the ZIP. Some of the following may occur:

- A ZIP may have been coded incorrectly in the *USPS City/State File*.
- Single address delivery ZIPs (such as 245 Park Ave.) that are not represented as polygons in the Boundary file may be coded as Street Delivery.
- Point ZIPs represented as polygons in the Boundary File because they take up significant land area--usually a hospital, university, or military base in a metropolitan area where ZIP area for the point is recognized in Census

TIGER/Line GRFN reference files--may be coded as Unique Point ZIPs.

For ZIP Codes that extend into more than one county, the FIPS Code of the county in which the greatest area of the ZIP Code polygon is located is listed as **CTY1FIPS** (major). The next greatest area is listed as **CTY2FIPS** (minor), and then, if applicable, **CTY3FIPS**. Additional counties are not listed if a ZIP Code extends into more than three counties. County information is obtained from the ZIP Boundary file.

ZIP areas including one or more polygons may be divided by a county boundary. If the ZIP's polygons fall within the same county, the inventory will contain the centroid of the largest polygon. If a ZIP is divided by one or more county boundaries, each county's ZIP Inventory will contain the centroid for the ZIP polygon in that county.

#### **DUPLICATE STATE FIPS CODES**

There are six ZIP Codes listed in the ZIP Inventory File with more than one state code. These are ZIPs with delivery areas that span a state boundary.

ZIP	Affected States
42223	KY, TN
57724	MT, SD
63673	IL, MO
71749	AR, LA
72395	AR, TN
73949	OK, TX

---

## ZIP Type, Postal Facility, and County Codes

### UNITED STATES

#### PC\_TYPE CODES

ZIP Codes are identified by type in the PC\_TYPE field of the ZIP Inventory record. Type codes (**blank**), **P**, **U**, and **M** are from the *USPS City/State File*. Type code **G** is a GDT code for zero delivery areas.

PC_Type	Description
N	Non-unique ZIP
P	PO Box
U	Unique ZIP
M	Military ZIP
G	GDT ZIP (zero delivery area)

#### Non-Unique ZIPs

Any ZIP code that the USPS has not assigned to a specific organization, but rather to the City Place Name listed in the record is called a non-unique ZIP Code. Non-unique ZIPs are the most common of all ZIP Codes.

**NOTE:**

When a ZIP area is known by more than one name, the USPS has assigned additional records for the ZIP.

A City Place Name can have more than one ZIP Code assigned to that name; these are known as "multi ZIP-coded" cities. The ZIPs assigned in such cases can be both non-unique *and* unique ZIP Codes.

Multi-coded cities contain more than one Postal (ZIP) code for delivery within a finance number. Normally, further matching beyond just the *City/State File* is required to validate a Postal (ZIP) code. An example of a multi-coded city is Manchester, NH.



## PO Box ZIPs

The USPS uses PO Box ZIPs to identify ZIP Codes which are used for true post office box type addressing or non-carrier-delivery post offices.

## Unique ZIPs

A unique ZIP Code is one which the USPS has assigned to a business, site, or other organization. The name of the organization appears in the field in unique ZIP Code records.

## Military ZIPs

Army and Air Force Post Offices and Navy Fleet Post Offices are given Military ZIPs, valid for APOs and FPOs in the given area *only*.

The county code for APO/FPOs is **601**. For a list of all APO/FPOs see the Postal Statistics Manual also on this CD ROM.

## GDT ZIPs

Some areas, such as parks, forests, deserts and lakes have been assigned codes by GDT. These “GDT Zips” range from 00001 to 00199. The PC\_TYPE field for these zero delivery areas are coded **G** by GDT. The NAME\_TYPE field for GDT ZIPs is blank.

## POST OFFICE FACILITY CODES

Letter codes for facility types (NAME\_TYPE field) below are from the *USPS City/State File*.

<b>A</b>	Airport Mail Facility
<b>B</b>	Branch
<b>C</b>	Community
<b>D</b>	Area Distribution Center
<b>E</b>	Sectional Center Facility
<b>F</b>	Delivery Distribution Center
<b>G</b>	General Mail Facility
<b>K</b>	Bulk Mail Center
<b>M</b>	Money Order Unit
<b>N</b>	Non-postal Name

- P** Post Office
- S** Station
- U** Urbanization
- “ “ (blank) GDT designated ZIP area

**NOTE:**

Branch P.O. name may be preferable to Main P.O. for labeling purposes.

**COUNTY FIPS CODES**

County information is obtained from GDT's ZIP Boundary file which is updated quarterly. **CTY2FIPS** (minor) and **CTY3FIPS** are used for second and third counties in which ZIP is found. Counties listed are in order of greatest geographic area covered.

For unique point ZIPs represented as points, county information is assigned based on the geographic location of the point, and verified manually by GDT operators.

**CANADA****FSAs**

The following definition of an FSA is from [www.canadapost.ca](http://www.canadapost.ca):

“A postal code is a uniform six-character code made up of letters and numbers. The first three characters of the postal code comprise the FSA or Forward Sortation Area. An FSA (Forward Sortation Area) provides the general area where the mail is going.

The first character in the FSA identifies any one of ten provinces, three territories, and six districts or geographic regions across Canada. For example, all postal codes that begin with the letter "A" refer to Newfoundland, while all codes that begin with the letter "T" refer to Alberta.

The second and third characters in the FSA help to identify the exact area in a city or town (or other geographic location) where mail will be delivered.”




---

### ***National Boundaries***

The source for the Nation Boundary layer is the *National Imagery and Mapping Agency (NIMA)*. This layer is based on the WGS 84 (World Geodetic Systems 1984) datum.

---

## Airport Information

Below are fields included in this layer.

### FCC

Airports are represented as polygons and include the following Feature Class Codes:

FCC	Description
D58	(GDT FCC) airport property boundary
D59	(GDT FCC) airport runway

All airports have a boundary and most have at least one runway.

Note that in areas where GDT source data shows no clearly defined runway (grass landing strips), runway polygons are not represented.

Airports are identified by Feature Class Code and a location ID.

Airport data was merged from the following four Federal Aviation Administration (FAA) landing facilities databases:

National Flight Data Center (NFDC) database for February 1994

National Plan of Integrated Airport Systems (NPIAS) database, current as of May 1994

Air Carrier Activity Information System (ACAIS) database for calendar year 1992

Terminal Area Forecast (TAF) for FY91

### Loc\_ID

This field contains a 3-4 character international identifier.

### USE

The 2-character code in this field identifies the airport as either:

**PU**=Public, or **PR**=Private

**OWNER**

This field contains the name of the owner of the airport. The field width is limited to 29 characters in most formats. ArcSDE format's limit is 30 characters for this field.

**ELEVATION**

This field contains the elevation in feet at the highest point on the centerline of the landing surface.

**CONGESTION**

**S**=Severe; **M**=Moderate; **U**=Uncongested;  
**O**=(information not currently available)

**SERVICE**

**PR**=Primary commercial service airport;  
**CM**=Commercial service other than primary airport;  
**CR**=Commercial service airport that also serves as a reliever airport;  
**GA**=General aviation airport;  
**RL**=General aviation airport that serves as a reliever airport or heliport;  
**GP**= General aviation airport that meets the criteria for a primary airport (PR) but has been declared ineligible to be a primary airport;  
**RP**= General aviation airport that meets criteria for a primary airport (PR), serves as a reliever airport, but has been declared ineligible to be a primary airport.;  
**GC**= General aviation airport that meets criteria for a commercial service other than a primary airport (CM), but has been declared ineligible to be a commercial airport.

**LG\_CERT\_AC**

Total domestic and foreign enplanements on large certificated U.S. air carriers during calendar year 1992. A large certificated air carrier is a carrier holding a certificate issued under Section 401 of the Federal Aviation Act of 1958 and that operates aircraft designed to have a maximum passenger seating capacity of more than 60 seats or a maximum payload

capacity of more than 18,000 pounds or that conducts international operations.

#### **COMMUTER**

Total enplanements by small certificated air carriers during calendar year 1992 operating scheduled service. Scheduled service provides five or more round trips per week between two or more points, with flight schedules published which specify the times, days of the week, and points between which such flights are performed.

#### **AIR\_TAXI**

Total enplanements on air taxis during calendar year 1992. Air taxi flights are any on-demand flights by aircraft with a gross take-off weight of 6,000 pounds or more.

#### **FOREIGN**

Total enplanements by foreign carriers during calendar year 1992. This data has been filtered to exclude those airports where the number of foreign carriers providing service was less than three.

#### **IN\_TRANSIT**

Passengers onboard international flights that transit an airport for purposes other than boarding and de-boarding passengers, limited to airports in the 48 contiguous states.

#### **HUB\_SIZE**

**L**=Large; **M**=Medium; **S**=Small; **N**=Non-hub;  
**G**=General aviation

#### **TOWER\_TYPE**

**0**=No tower; **1**=Tracon, Rapcon, Cerap; **2**=Radar tower; **3**=Limited radar tower; **4**=Non-radar tower; **5**=VFR tower; **6**=Non-FAA facility; **7**=Contract tower

---

***In This Section:***

- *Introduction*
- *Directories and Files*
- *Spatial Indexing*
- *Geocoding*
- *Record Layouts*

---

## **Introduction**

---

### **Versions Supported**

Dynamap/Transportation 6.2 in Environmental Systems Research Institute (ESRI) ArcInfo format is designed for use with the following version of ArcInfo software:

ArcInfo 7.X and higher

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### **Precision**

ArcInfo format products are delivered in double precision.

Precision refers to the number of bits (single - 32 bits, double - 64 bits) used to store coordinate data.

Coverages in double precision are slightly more accurate, but larger than those in single precision.

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### **Native Format**

ArcInfo coverages are shipped in native format (unEXPORTed) ready for use, and do not need to be processed in any way. Native format ArcInfo coverages consist of the COVERAGE directory and an associated INFO directory.



---

## Directories and Files

ArcInfo format Dynamap/Transportation is structured as follows:

### State or Province-tiled data:

```
|
  All World-tiled layers
  copyright.txt
  datum.txt
  \info
  \nat
    All Nation-tiled layers
    dynamname.dbf (included in USA coverage only)
    datum.txt
    \info
    \st
      All State or Province-tiled layers
      genf<stfips>.txt
      datum.txt
      \info
```

### County-tiled data (USA only):

```
|
  All World-tiled layers
  copyright.txt
  datum.txt
  \info
  \nat
    All Nation-tiled layers
    dynamname.dbf
    datum.txt
    /info
    \st
      All State-tiled layers
      genf<stfips>.txt
      datum.txt
      \info
      \stcnty
        All County-tiled layers
        datum.txt
        \info
```

**where:** *nat* = 3-character ISO Nation abbr. (usa,can,arg,bra)    *st* = 2-character State or Province abbr.  
           *cnty* = 4-character County abbr.                                *x*= filler

**Note:** Due to the non-existence of certain layers in some geographic areas, not all file types will be present.

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## **Spatial Indexing**

Spatial indexes for drawing and query speed up graphic selection and drawing by 10 to 50 times. Spatial indexes are provided for all data layers. See the ArcInfo User's Guide for instructions.

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## **Geocoding**

Geocoding indexes (.ADD files) are provided for Street and Placeholder layers.

Addresses for geocoding must first be formatted correctly for ArcInfo and then placed into an INFO data file. Any number of attributes in addition to addresses may be in this file, but the only attributes the geocoding software looks at are the address and postal zone. Address matching requires that all of the address components be in a single item in the INFO data file. This file can then be matched to the Dynamap/Transportation street and placeholder layer geocoding indexes.

For a full explanation see your ArcInfo User's Guide on Address Geocoding.

## Record Layouts

### Notes:

Grey field(s) indicate format-specific internal fields

**Type:** B=Binary; C= Character; F=Floating Point; I=Integer

**Justify:** L=Left; R=Right; F=Filled. Note that this only applies to character fields, and only when they contain data (Ex: the ONE\_WAY field contains either “TF”, “FT”, or is blank.)

**\*# and \*-ID fields:** “\*” represents the coverage name.

**Canadian equivalents in Description fields:** State=Province or Territory; MCD=GDT DAL; Place=GDT SDL

### LINEAR LAYERS:

#### Highway Layer: \*hy.aat

Item Name	Type	Width	Output	Dec.	Justify	Description
FNODE#	B	4	5			ArcInfo from node ID
TNODE#	B	4	5			ArcInfo to node ID
LPOLY#	B	4	5			ArcInfo left polygon ID
RPOLY#	B	4	5			ArcInfo right polygon ID
LENGTH	F	8	18	5		ArcInfo length
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
SEGMENT_ID	B	4	10			Unique NorAm record number
PREFIX	C	2	2		L	Street prefix
NAME	C	40	40		L	Street name
TYPE	C	6	6		L	Street type
SUFFIX	C	2	2		L	Feature direction suffix
FCC	C	3	3		F	Feature Class Code
ACC	C	1	1		F	Arterial Classification Code
SHIELD	C	1	1		F	“T”, “I”, “U”, “S”, “A”, or blank
HWY_NUM	C	5	5		L	#, # with letter, or blank
SEG_LEN	F	8	10	4		Segment length in miles
SPEED	I	3	3			Speed in miles per hour
ONE_WAY	C	2	2		F	One-way indicator
F_ZLEV	I	2	2			From node elevation
T_ZLEV	I	2	2			To node elevation
FT_COST	F	8	10	5		From-To Impedance in minutes
TF_COST	F	8	10	5		To-From Impedance in minutes
FT_DIR	C	2	2		L	From_To Direction
TF_DIR	C	2	2		L	To_From Direction
NAME_FLAG	I	3	3			Name metadata flag

**Street Layer: \*st.aat**

Item Name	Type	Width	Output	Dec.	Justify	Description
FNODE#	B	4	5			ArcInfo from node ID
TNODE#	B	4	5			ArcInfo to node ID
LPOLY#	B	4	5			ArcInfo left polygon ID
RPOLY#	B	4	5			ArcInfo right polygon ID
LENGTH	F	8	18	5		ArcInfo length
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
DYNAMAP_ID	B	4	10			Unique NorAm record number
L_F_ADD	C	11	11		L	Left from address
L_T_ADD	C	11	11		L	Left to address
R_F_ADD	C	11	11		L	Right from address
R_T_ADD	C	11	11		L	Right to address
PREFIX	C	2	2		L	Street prefix
NAME	C	40	40		L	Street name
TYPE	C	6	6		L	Street type
SUFFIX	C	2	2		L	Feature direction suffix
FCC	C	3	3		F	Feature Class Code
POSTAL_L	C	5	5		L	Postal code (ZIP or FSA) left
POSTAL_R	C	5	5		L	Postal code (ZIP or FSA) right
ACC	C	1	1		F	Arterial Classification Code
NAME_TYPE	C	1	1		F	"R" (always PRN for this product)
SHIELD	C	1	1		F	"T", "I", "U", "S", "A", or blank
HWY_NUM	C	5	5		L	#, # with letter, or blank
SEG_LEN	F	8	8	4		Segment length in miles
SPEED	I	3	3			Speed in miles per hour
ONE_WAY	C	2	2		F	One-way indicator
F_ZLEV	I	2	2			From node elevation
T_ZLEV	I	2	2			To node elevation
FT_COST	F	8	10	5		From-To Impedance in minutes
TF_COST	F	8	10	5		To-From Impedance in minutes
FT_DIR	C	2	2		L	From_To Direction
TF_DIR	C	2	2		L	To_From Direction
NAME_FLAG	I	3	3			Name metadata flag

**Street Geocoding Index: \*st.add**

Item Name	Type	Width	Output	Dec.	Justify	Description
ADDRESS	C	45	45			ArcInfo address
ZONE	C	15	15			ArcInfo zone
SIDE	C	1	1			ArcInfo side
PARITY	C	1	1			ArcInfo parity
SOUNDEX	C	6	6			ArcInfo soundex
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
<b>** REDEFINED ITEMS **</b>						
F-ADD	I	6	6			From address
T-ADD	I	6	6			To address
PRE.DIR	C	2	2			Directional prefix
STREET.NAME	C	20	20			Street name
STREET.TYPE	C	4	4			Street type
SUF.DIR	C	2	2			Directional suffix

**Street Alternate Name: \*sa.dat**

Item Name	Type	Width	Output	Dec.	Justify	Description
DYNAMAP_ID	B	4	10			Unique NorAm record number
SEQUENCE	I	1	1			Sequence number*
PREFIX	C	2	2		L	Street prefix
NAME	C	40	40		L	Street name
TYPE	C	6	6		L	Street type
SUFFIX	C	2	2		L	Feature direction suffix
NAME_TYPE	C	1	1		F	"R", "G", or blank
SHIELD	C	1	1		F	"T", "I", "U", "S", "A", or blank
HWY_NUM	C	5	5		R	#, # with letter, or blank
FT_DIR	C	2	2		L	From_To Direction
TF_DIR	C	2	2		L	To_From Direction
NAME_FLAG	I	3	3			Name metadata flag

**\* Sequence number:** This is number represents the number of alternate names a segment has. It will start at 1 and increase to the number of the last alternate name. I.E. if the segment has five alternate names then the sequence number will be 1- 5 for that segment id.

**Street FIPS Information: \*sf.dat – U.S.**

Item Name	Type	Width	Output	Dec.	Justify	Description
DYNAMAP_ID	B	4	10			Unique NorAm record number
STATE00_L	C	2	2		L	2000 state FIPS left
STATE00_R	C	2	2		F	2000 state FIPS right
COUNTY00_L	C	3	3		F	2000 county FIPS left
COUNTY00_R	C	3	3		R	2000 county FIPS right
MCD00_L	C	5	5		F	2000 FIPS left
MCD00_R	C	5	5		F	2000 FIPS right
PLACE00_L	C	5	5		F	2000 FIPS Place left
PLACE00_R	C	5	5		F	2000 FIPS Place right

**Street FIPS Information: \*sf.dat - Canada**

Item Name	Type	Width	Output	Dec.	Justify	Description
DYNAMAP_ID	B	4	10			Unique record number
STATE00_L	C	2	2		F	Province code left
STATE00_R	C	2	2		F	Province code right
COUNTY00_L	C	3	3		F	Always '000'
COUNTY00_R	C	3	3		R	Always '000'
MCD00_L	C	5	5		F	GDT Delivery Area Locality left
MCD00_R	C	5	5		F	GDT Delivery Area Locality right
PLACE00_L	C	5	5		F	GDT Street Delivery Locality left
PLACE00_R	C	5	5		F	GDT Street Delivery Locality right

**Toll: \*tl.dat**

Item Name	Type	Width	Output	Dec.	Justify	Description
DYNAMAP ID	B	4	10			Unique NorAm record number
TOLL	C	1	1		F	"Y" = toll

**Street Turn Table: \*st.trn**

Item Name	Type	Width	Output	Dec.	Justify	Description
NODE#	B	4	5			ArcInfo Node ID
ARC1#	B	4	5			ArcInfo From-arc ID
ARC2#	B	4	5			ArcInfo To-arc ID
AZIMUTH	F	4	12	3		Azimuth
ANGLE	F	4	12	3		Turn Angle
ARC1-ID	B	4	10			From-arc Dynamap ID
ARC2-ID	B	4	10			To-arc Dynamap ID
COST	F	8	10	3		"-1" if turn is restricted
MAN_ID	B	4	10			Unique Permanent Turn Restriction ID

**Railroad: \*rr.aat**

Item Name	Type	Width	Output	Dec.	Justify	Description
FNODE#	B	4	5			ArcInfo from node ID
TNODE#	B	4	5			ArcInfo to node ID
LPOLY#	B	4	5			ArcInfo left polygon ID
RPOLY#	B	4	5			ArcInfo right polygon ID
LENGTH	F	8	18	5		ArcInfo length
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
DYNAMAP_ID	B	4	10			Unique NorAm record number
NAME	C	40	40		L	Railroad name
FCC	C	3	3		F	Feature Class Code

**Linear Water: \*lw.aat**

Item Name	Type	Width	Output	Dec.	Justify	Description
FNODE#	B	4	5			ArcInfo from node ID
TNODE#	B	4	5			ArcInfo to node ID
LPOLY#	B	4	5			ArcInfo left polygon ID
RPOLY#	B	4	5			ArcInfo right polygon ID
LENGTH	F	8	18	5		ArcInfo length
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
DYNAMAP_ID	B	4	10			Unique NorAm record number
NAME	C	40	40		L	Water feature name
FCC	C	3	3		F	Feature Class Code

**POINT LAYERS:****Maneuver:** \*mn.pat

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo area (sq. dec. deg.)
PERIMETER	F	8	18	5		ArcInfo perimeter (dec.deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ARC/INFO USER ID
MAN_ID	B	4	10		R	Unique Permanent Maneuver ID
SEQUENCE	I	1	1		F	Sequence number of maneuver record
MAN_TYPE	C	1	1		F	Maneuver Type
FROM_ID	B	4	10		R	From Dynamap_ID
FROMID_END	C	1	1		F	“T” or “F” indicating end of From_ID
ANGLE	F	8	10	2	R	Turn angle from From_ID to To_ID
COST	F	8	10	5	R	Restricted = “-1”
HOO	C	100	100		R	Hours of Operation (GDF)
TO_ID	B	4	10		R	To/Destination Dynamap_ID
VIA1	B	4	10		R	Via Dynamap_ID 1
VIA2	B	4	10		R	Via Dynamap_ID 2
VIA3	B	4	10		R	Via Dynamap_ID 3
VIA4	B	4	10		R	Via Dynamap_ID 4
VIA5	B	4	10		R	Via Dynamap_ID 5
LONGITUDE	F	8	15	6	R	6 implied decimals of precision
LATITUDE	F	8	13	6	R	6 implied decimals of precision

**Placeholder:** \*ph.pat

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
DYNAMAP_ID	B	4	10			Unique NorAm record number
FR_ADD	C	11	11		L	From address
TO_ADD	C	11	11		L	To address
PREFIX	C	2	2		L	Street prefix
NAME	C	40	40		L	Street name
TYPE	C	6	6		L	Street type
SUFFIX	C	2	2		L	Feature direction suffix
FCC	C	3	3		F	Feature Class Code
POSTAL	C	5	5		L	Postal code (ZIP or FSA)



**Placeholder: \*ph.add**

Item Name	Type	Width	Output	Dec.	Justify	Description
ADDRESS	C	45	45			ArcInfo address
ZONE	C	15	15			ArcInfo zone
SIDE	C	1	1			ArcInfo side
PARITY	C	1	1			ArcInfo parity
SOUNDEX	C	6	6			ArcInfo soundex
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
F-ADD	I	6	6			From address
T-ADD	I	6	6			To address
PRE.DIR	C	2	2			Directional prefix
STREET.NAME	C	20	20			Street name
STREET.TYPE	C	6	6			Street type
SUF.DIR	C	2	2			Directional suffix

**Exit: \*ex.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
EXIT_ID	B	4	10		R	Unique NorAm record number
FROM_NAME	C	40	40		L	Highway name exit leaves
EXIT	C	10	10		R	Number(s) if applicable
TO_NAME	C	40	40		L	Highway/street name exit accesses

**All Point Landmark Layers: \*(in, ra, rc, tt).pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Landmark name
FCC	C	3	3		F	Feature Class Code

**Postal Code Inventory: <st>xx0pci.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
POSTAL	C	5	5		L	5 digit (ZIP) or 3 digit (FSA) postal code
ENC_POSTAL	C	5	5		L	Enclosing ZIP or FSA
STATE	C	2	2			State or Province 2-letter abbreviation
STFIPS	C	2	2			State FIPS or Province code
NAME	C	28	28		L	ZIP or FSA PO name
NAME_TYPE	C	30	30		L	Name Type
LASTL_FLAG	C	1	1			Lastline Flag
COUNTY1	C	20	20		L	US – Full County name 1; CA – always blank
CTY1FIPS	C	3	3			US – County 1 FIPS; CA – always ‘000’
COUNTY2	C	20	20		L	US – Full County name 2; CA – always blank
CTY2FIPS	C	3	3			US – County 2 FIPS; CA – always ‘000’
COUNTY3	C	20	20		L	US – Full County name 3; CA – always blank
CTY3FIPS	C	3	3			US – County 3 FIPS; CA – always ‘000’
AREA_MI	F	8	10	3		Area in square miles
LATITUDE	F	8	13	6		Latitude
LONGITUDE	F	8	15	6		Longitude
RPO_FLAG	C	1	1			RPO Flag (“R” or blank)
PC_TYPE	C	20	20		L	Postal code type
PT_LOC	C	1	1			Point Location (“A” for actual)

**Postal Code Alternate Names: <st>xx0pca.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
POSTAL	C	5	5		L	5 digit (ZIP) or 3 digit (FSA) postal code
NAME1	C	28	28		L	Alternate postal name 1
NAME_TYPE1	C	30	30		L	Alternate postal name type 1
NAME2	C	28	28		L	etc.
NAME_TYPE2	C	30	30		L	
NAME3	C	28	28		L	
NAME_TYPE3	C	30	30		L	
NAME4	C	28	28		L	
NAME_TYPE4	C	30	30		L	
NAME5	C	28	28		L	
NAME_TYPE5	C	30	30		L	

**County Inventory: <st>xx0cyi.pat – U.S.**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full County name
KEY	C	5	5		F	State FIPS and County FIPS code

**Populated Locality Inventory: <st>xx0pli.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Cleaned name
KEY	C	10	10		L	US – State, County FIPS, Place code CA – Province, '000', SDL code
CAPITAL	C	1	1		F	"Y" = State or Province Capital (+DC & PR)
POPULATION	B	4	10		R	Population, if available

**State/Province Inventory: <nt>xx0sti.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full State or Province name
STATE	C	2	2		F	2-character State or Province abbreviation
KEY	C	2	2		F	State FIPS or Province code

**POLYGON LAYERS:****Airport: \*ap.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Airport name
FCC	C	3	3		F	Feature Class Code
LOC ID	C	4	4		L	3 or 4 character identifier

**Airport: \*ai.dat**

Item Name	Type	Width	Output	Dec.	Justify	Description
NAME	C	40	40		L	Airport name
FCC	C	3	3		F	Feature Class Code
LOC_ID	C	4	4		L	3 or 4 character identifier
USE	C	2	2			public (PU); private (PR)
OWNER	C	29	29			
ELEVATION	C	5	5			
CONGESTION	C	1	1			congestion level
SERVICE	C	2	2			service level
LG_CERT_AC	C	10	10			1992 large certified air carrier enplaning
COMMUTER	C	7	7			1992 commuter enplaning
AIR_TAXI	C	7	7			1992 air taxi enplaning
FOREIGN	C	8	8			1992 foreign enplaning
IN_TRANSIT	C	10	10			1992 in-transit enplaning
HUB_SIZE	C	1	1			based on % of national enplanements
TOWER_TYPE	C	1	1			tower type code

**All Polygonal Landmark Layers: \*(al, pk).pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Landmark name
FCC	C	3	3		F	Feature Class Code

**All Polygonal Water Layers: \*(mw, wp).pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Landmark name
FCC	C	3	3		F	Feature Class Code

**Postal Code Boundary: <st>xx0pcb.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	ZIP or FSA name
ST_FIPS	C	2	2		F	State FIPS or Province code
CTY_FIPS	C	3	3		F	US – County FIPS code CA – always '000'
KEY	C	5	5		L	5 digit (ZIP) or 3 digit (FSA) postal code

**Postal Code Boundary Regions: <st>xx0pcb.patpcb**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
PCB#	B	4	5			ArcInfo internal ID
PCB-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	ZIP or FSA name
ST_FIPS	C	2	2		F	State FIPS or Province code
CTY_FIPS	C	2	2		F	US – County FIPS code CA – always ‘000’
KEY	C	5	5		L	5 digit (ZIP) or 3 digit (FSA) postal code

**County Boundary: <st>xx0cyb.pat – U.S.**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full County name
KEY	C	5	5		F	State FIPS code and County FIPS code

**County Boundary Regions: <st>xx0cyb.patcyb – U.S.**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
CYB#	B	4	5			ArcInfo internal ID
CYB-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full County name
KEY	C	5	5		F	State FIPS code and County FIPS code

**Place Boundary: <st>xx0plb.patplb**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full Place name
KEY	C	10	10		F	US - State, County FIPS, Place code CA - Province, ‘000’, SDL code

**Place Boundary Regions: <st>xx0plb.patplb**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
PLB#	B	4	5			ArcInfo internal ID
PLB-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full Place name
KEY	C	10	10		F	US - State, County FIPS, Place code CA - Province, ‘000’, SDL code

**State/Province Boundary: <nt>xx0stb.pat**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
<cover>#	B	4	5			ArcInfo internal ID
<cover>-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full State or Province name
STATE	C	2	2		F	2-character State or Province abbreviation
KEY	C	2	2		F	State FIPS or Province code

**State/Province Boundary Regions: <nt>xx0stb.patstb**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
STB#	B	4	5			ArcInfo internal ID
STB-ID	B	4	5			ArcInfo user ID
NAME	C	40	40		L	Full State or Province name
STATE	C	2	2		F	2-character State or Province abbreviation
KEY	C	2	2		F	State FIPS or Province code

**Nation Boundary: woxx0ntb.patntb**

Item Name	Type	Width	Output	Dec.	Justify	Description
AREA	F	8	18	5		ArcInfo Area (sq. dec.deg.)
PERIMETER	F	8	18	5		ArcInfo Perimeter (dec. deg.)
NTB#	B	4	5			ArcInfo internal ID
NTB-ID	B	4	5			ArcInfo user ID
NAME	C	50	50		L	Full Nation name
NATION	C	2	2		F	2-character Nation abbr.

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***In This Section:***

- *Introduction*
- *Directories and Files*
- *ArcView Portable APRs*
- *County-Tile Users*
- *Indexes*
- *Record Layouts*

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## Versions Supported

This GDT product is compatible with Environmental Systems Research Institute's (ESRI) ArcView software version:

ArcView 3.1 or higher

This product can also be read by ArcGIS<sup>™</sup> 8.x.

See your ArcGIS<sup>™</sup> or ArcMap<sup>™</sup> documentation to add an ArcView shape file.

**Note:** This product does not contain a projection file (\*.prj file). In certain ArcGIS operations, if no .prj file is present with the data files, the software defaults to an assumed geographic coordinate system using the NAD27 datum. This product was built to the North American Datum 1983. See the ArcGIS help files to create a simple .prj file or to transform the geographic coordinate system.

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## Directories and Files

ArcView format Dynamap/Transportation comes in a nationwide directory with state, county or province sub directories.

For a detailed explanation of the name correspondence files see the Auxiliary Files Section in this manual.

Each county directory has 2 project files (.apr) (one for Unix and one for PC) and geocoding indexes (.ixs and .mxs).

Each layer has shape files (.shp), dBASE data files (.dbf), and ArcView index files (.shx, .sbx, .sbn).

On the following page is a chart showing ArcView format directory structures.



### State or Province-tiled data:

```
|
  All World-tiled layers
  datum.txt
  cpyright.txt
  |nat
    All Nation-tiled layers
    dynaname.dbf (included in USA coverage only)
    datum.txt
    |st
      All State or Province-tiled layers
      genf<stfips>.txt
      datum.txt
      stxxxxpc.apr
      stxxxxux.apr
      |.nws
```

### County-tiled data (USA only):

```
|
  All World-tiled layers
  datum.txt
  cpyright.txt
  |nat
    All Nation-tiled layers
    dynaname.dbf
    datum.txt
    |st
      All State-tiled layers
      genf<stfips>.txt
      datum.txt
      |stcnty
        All County-tiled layers
        datum.txt
        stcntypc.apr
        stcntyux.apr
        |.nws
```

**where:** *nat* = 3-character ISO Nation abbr. (usa,can,arg,bra)    *st* = 2-character State or Province abbr.  
*cnty* = 4-character County abbr.    *x*= filler

**Note:** Due to the non-existence of certain layers in some geographic areas, not all file types will be present.

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## ***ArcView Portable APRs***

The .apr files will load all data files automatically as long as the .apr file remains in the same relative directory position to the data as shipped. If the .apr is moved to a different location, it will not be able to find the data and will prompt the user to locate all data.

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## Alternate Names

Up to 9 alternate names can be stored for each street segment. Each name is stored as a duplicate segment with special attributes to distinguish it from the primary segment. Each alternate segment has its node elevation values (ZLEV) set to “-9”. This means that for a given street segment, there could be up to 10 segments: one primary with node elevations  $\geq 0$ , and 9 alternate segments with node elevations = -9. The Name\_Type, Shield, and Hwy\_Num fields are populated appropriately for each name. The TF\_Cost and FT\_Cost fields are set to “-1”. All other fields, including the Dynamap\_ID, are set to the value for the primary segment.

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## Geocoding

When geocoding, all alternate names should be included. To allow geocoding to alternate names, activate the street theme, choose **Theme Properties**, press **Clear** to remove [Name\_type] = "R" filter. Press **OK** to accept.

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## Zoom Layering

Selected themes are displayed when the .apr file is opened. All other themes will display when zooming into the county shape file.

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## County-Tile Users:

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### Single County Display.

To view a single county shape file from within ArcView:

1. Begin an ArcView session
2. Select **Open Project**
3. Select the desired County Project (\*.apr).

The required data files are opened and the data is displayed using specified shapes and colors.

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### Multi-County Display

To view multi-county data sets:

1. Choose **Open Project** from the File menu.
2. Navigate to the appropriate directory and open the project file (\*.apr) for the desired county.
3. Click on the top of the View screen and resize the window until the preceding screen is visible. Select the preceding window by clicking on the top of the display.
4. Choose **Import** from the Project menu. Scroll to Project (\*.apr) in the "List Files of Type:" section. Select another county you wish to view and click OK.
5. Choose Open for the new view. Resize the present view until both views are displayed on the screen. Select all themes (or layers) you wish to display in one coverage (hold the Shift key while clicking on appropriate themes). Choose **Copy Themes** from the Edit menu.
6. Select the view you wish to copy the themes to and choose Paste from the Edit menu.




















All themes you selected should now be visible in one view.

## Default Colors and Symbols

Theme (Lines)	Order	Abbr	Symbol	Color
Highway (FCC)	14	hy		
A1			Solid (thick)	Red
A2			Solid (thick)	Dk
A3			Solid	Dk
A4			Solid	Dk
A6			Solid (thin)	Red
Street	13	st	Solid	Dk
Railroad	12	rr	Ticked	Dk
Linear Water	11	lw	Solid	Lt

### Notes:

The drawing order is reversed highest number to lowest with highest displayed on top. Dxx in the “theme” columns represent the FCC designations. See the Appendix section for a list of FCC designations.

Theme(Points)	Order	Abbr.	Symbol	Color
Exit	24	ex		White
Placeholder	23	ph		Black
Recreation Area	22	ra		
D92 - Points of Interest				Blue
D81 - Golf Course				Dk Green
D64 - Amusement Park				Red
D67 - Stadium				Black
Transportation Terminal	21	tt		
D52 - Train Station				Dk Blue
D53 - Bus Terminal				Dk Green
D54 - Ferry Terminal				Blue
D56- Subway/Metro Station				Dk Blue
Major Retail Center	20	rc		Dk Green
Institution	19	in		
D31 - Hospital				Blue
D43 - School				Dk Blue
D44 - Church				Dk Gray
D82 - Cemetery				Black
D65 - Government Facility				Black
Postal Code Inventory	18*	pci		Blue
County or CD Inventory	17*	cyi		Red
Place Inventory	16*	pli		Black
State or Province Inventory	15*	sti		Blue

### Note:

\* These layers are included in the legend but are not drawn.

Theme (Polygons)	Order	Abbr.	Fill Foreground	Outline Style	Outline Color
Airport	8	ap			
D58 – Airport			Lt Gray	*	*
D59 – Runway			Dk Gray	*	*
Large Area Landmarks	7	al			
D10 - Military			Lt Gray	*	*
D31 - Hospitals			Pink	*	*
D37 - Prison			Dk Gray	*	*
D43 - School			Lavender	*	*
D61 - Major Retail Centers			Orange	*	*
D62 - Industrial Complex			Blue-Gray	*	*
D64 - Amusement Park			Lt Green	*	*
D65 - Government Facility			Dk Gray	*	*
D67 - Stadium			Lavender	*	*
D81 - Golf Course			Med Green	*	*
D82 - Cemetery			Lt Gray	*	*
Park	6	pk			
D83 - National Park			Dk Green	*	*
D85 - State Park			Lt Green	*	*
D89 - Local Park			Lt Green	*	*
Major Water	9	mw	Lt Blue	*	*
Water Polygon	10	wp	Lt Blue	*	*
Postal Code Boundary	5**	pcb	Transparent	Solid	Red
County or CD Boundary	3	cyb	Lt Yellow	Solid	Dk Gray
Place Boundary	4	plb	Lt Orange	*	*
State or Province Boundary	2	stb	Lt Yellow	Solid	Dk Gray
Nation Boundary	1	ntb	Lt Yellow	Solid	Dk Gray

\*\* These layers are included in the legend but are not drawn.

---

## Indexes

Geocoding indexes are provided for the Street and Placeholder layers. Spatial indexes are provided for all layers.

## Record Layouts

Following are the record layouts of the data files for each tile. The data in these files may be accessed through the *stcntypc.apr* or *stcntyux.apr* project files or *stcntyll.shp* shape files (tiled by county) where “ll” indicates a given layer abbreviation. When tiled by state, these files are *stxxxxpc.apr* or *stxxxxux.apr* and *stxxxxll.shp* respectively.

### Notes:

Grey field(s) indicate format-specific internal fields

The Shape field is invisible in most views of the data.

**Type:** S= Shape; C= Character; D= Decimal

**Index:** Y= Yes, it is indexed; N= No, it is not indexed

**Justify:** L=Left; R=Right; F=Filled. Note that this only applies to character fields, and only when they contain data (Ex: the ONE\_WAY field contains either “TF”, “FT”, or is blank.)

**Canadian equivalents in Description fields:** State=Province or Territory; MCD=GDT DAL; Place=GDT SDL

### LINEAR LAYERS:

**Highway:** \*hy.\*

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	9	Y			Spatial information storage
SEGMENT_ID	D	10	N			Unique NorAm record number
PREFIX	C	2	N		L	Street prefix
NAME	C	40	N		L	Street name
TYPE	C	6	N		L	Street type
SUFFIX	C	2	N		L	Feature direction suffix
FCC	C	3	N		F	Feature Class Code
ACC	C	1	N		F	Arterial Classification Code
SHIELD	C	1	N		F	“T”, “I”, “U”, “S”, “A”, or blank
HWY_NUM	C	5	N		L	#, # with letter, or blank
SEG_LEN*	D	10	N	4		Segment length in miles
SPEED	D	3	N			Speed in miles per hour
ONE_WAY	C	2	N		F	One-way indicator
F_ZLEV	D	2	N			From node elevation
T_ZLEV	D	2	N			To node elevation
FT_COST	D	10	N	5		From-To impedance in minutes
TF_COST	D	10	N	5		To-From impedance in minutes
FT_DIR	C	2	N		L	From-To direction
TF_DIR	C	2	N		L	To-From direction
NAME_FLAG	D	3	N	0		Name metadata flag

\* Alias to miles

**Street: \*st.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	9	Y			Spatial information storage
DYNAMAP_ID	D	10	N			Unique NorAm record number
L_F_ADD	C	11	N		L	Left from address
L_T_ADD	C	11	N		L	Left to address
R_F_ADD	C	11	N		L	Right from address
R_T_ADD	C	11	N		L	Right to address
PREFIX	C	2	N		L	Street prefix
NAME	C	40	N		L	Street name
TYPE	C	6	N		L	Street type
SUFFIX	C	2	N		L	Feature direction suffix
FCC	C	3	N		F	Feature Class Code
POSTAL_L	C	5	N		L	Postal code (ZIP or FSA) left
POSTAL_R	C	5	N		L	Postal code (ZIP or FSA) right
ACC	C	1	N		F	Highway Connectivity flag
NAME_TYPE	C	1	N		F	“R” (always PRN for this product)
SHIELD	C	1	N		F	“T”, “I”, “U”, “S”, “A”, or blank
HWY_NUM	C	5	N		L	#, # with letter, or blank
SEG_LEN*	D	8	N	4		Segment length in miles
SPEED	D	3	N			Speed in miles per hour
ONE_WAY	C	2	N		F	One-way indicator
F_ZLEV	D	2	N			From node elevation
T_ZLEV	D	2	N			To node elevation
FT_COST	D	10	N	5		From-To impedance in minutes
TF_COST	D	10	N	5		To-From impedance in minutes
FT_DIR	C	2	N		L	From-To direction
TF_DIR	C	2	N		L	To-From direction
NAME_FLAG	D	3	N	0		Name metadata flag

\* **Seg\_len:** Aliased to miles in APR**Street Alternate Name: \*sa.dbf**

Item Name	Type	Width	Index	Dec.	Justify	Description
DYNAMAP_ID	D	10	N			Unique NorAm record number
SEQUENCE	D	2	N			Sequence number**
PREFIX	C	2	N		L	Street prefix
NAME	C	40	N		L	Street name
TYPE	C	6	N		L	Street type
SUFFIX	C	2	N		L	Feature direction suffix
NAME_TYPE	C	1	N		F	“G” or blank
SHIELD	C	1	N		F	“T”, “I”, “U”, “S”, “A”, or blank
HWY_NUM	C	5	N		R	#, # with letter, or blank
FT_DIR	C	2	N		L	From-To direction
TF_DIR	C	2	N		L	To-From direction
NAME_FLAG	D	3	N	0		Name metadata flag

\*\* **Sequence number:** This number represents the number of alternate names a segment has. It will start at 1 and increase to the number of the last alternate name. I.E. if the segment has five alternate names then the sequence number will be 1- 5 for that segment id.



**Street FIPS Information: \*sf.dbf – U.S.**

Item Name	Type	Width	Index	Dec.	Justify	Description
DYNAMAP_ID	D	10	N		R	Unique record number
STATE00_L	C	2	N		L	2000 state FIPS left
STATE00_R	C	2	N		F	2000 state FIPS right
COUNTY00_L	C	3	N		F	2000 county FIPS left
COUNTY00_R	C	3	N		F	2000 county FIPS right
MCD00_L	C	5	N		F	2000 FIPS MCD left
MCD00_R	C	5	N		F	2000 FIPS MCD right
PLACE00_L	C	5	N		F	2000 FIPS Place left
PLACE00_R	C	5	N		F	2000 FIPS Place right

**Street FIPS Information: \*sf.dbf – Canada**

Item Name	Type	Width	Index	Dec.	Justify	Description
DYNAMAP_ID	D	10	N		R	Unique record number
STATE00_L	C	2	N		L	Province code left
STATE00_R	C	2	N		F	Province code right
COUNTY00_L	C	3	N		F	Always '000'
COUNTY00_R	C	3	N		F	Always '000'
MCD00_L	C	5	N		F	GDT Delivery Area Locality left
MCD00_R	C	5	N		F	GDT Delivery Area Locality right
PLACE00_L	C	5	N		F	GDT Street Delivery Locality left
PLACE00_R	C	5	N		F	GDT Street Delivery Locality right

**Toll: \*tl.dbf**

Item Name	Type	Width	Index	Dec.	Justify	Description
DYNAMAP_ID	D	10	N			Unique NorAm record number
TOLL	C	1	N		F	"Y" = toll

**Turn Table: \*tn.dbf**

Item Name	Type	Width	Index	Dec.	Justify	Description
JUNCTION	D	11	N			Node ID number
F_EDGE	D	11	N			From-seg ID number
T_EDGE	D	11	N			To-seg ID number
AZIMUTH	D	12	N	3		Azimuth
ANGLE	D	12	N	3		Turn Angle
FROM_ID	D	11	N			From Dynamap ID
TO_ID	D	11	N			To Dynamap ID
COST	D	11	N			Always set to "-1"
MAN_ID	D	11	N			Unique Permanent Maneuver ID

**Railroad: \*rr.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	9	Y			Spatial information storage
DYNAMAP_ID	D	10	N			Unique NorAm record number
NAME	C	40	N		L	Railroad name
FCC	C	3	N		F	Feature Class Code

**Linear Water: \*lw.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	9	Y			Spatial information storage
DYNAMAP ID	D	10	N			Unique NorAm record number
NAME	C	40	N		L	Water feature name
FCC	C	3	N		F	Feature Class Code

**POINT LAYERS:****Maneuver: \*mn.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
MAN_ID	D	10	N		R	Unique Permanent Maneuver ID
SEQUENCE	D	1	N		F	Sequence # of maneuver record
MAN_TYPE	C	1	N		F	Maneuver Type
FROM_ID	D	10	N		R	From Dynamap_ID
FROMID_END	C	1	N		F	“T” or “F” indicating end of From_ID
ANGLE	D	10	N	2	R	Turn angle from From_ID to To_ID
COST	D	10	N	5	R	Restricted = “-1”
HOO	C	100	N		R	Hours of Operation (GDF)
TO_ID	D	10	N		R	To/Destination Dynamap_ID
VIA1	D	10	N		R	Via Dynamap_ID 1
VIA2	D	10	N		R	Via Dynamap_ID 2
VIA3	D	10	N		R	Via Dynamap_ID 3
VIA4	D	10	N		R	Via Dynamap_ID 4
VIA5	D	10	N		R	Via Dynamap_ID 5
LONGITUDE	D	15	N	6	R	6 implied decimals of precision
LATITUDE	D	13	N	6	R	6 implied decimals of precision

**Placeholder: \*ph.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
DYNAMAP_ID	D	10	N			Unique NorAm record number
FR_ADD	C	11	N		L	From address
TO_ADD	C	11	N		L	To address
PREFIX	C	2	N		L	Street prefix
NAME	C	40	N		L	Street name
TYPE	C	6	N		L	Street type
SUFFIX	C	2	N		L	Feature direction suffix
FCC	C	3	N		F	Feature Class Code
POSTAL	C	5	N		L	Postal code (ZIP or FSA)

**Exit: \*ex.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
EXIT_ID	D	10	N		R	Unique NorAm record number
FROM_NAME	C	40	N		L	Highway name exit leaves
EXIT	C	10	N		R	Number(s) if applicable
TO_NAME	C	40	N		L	Highway/street name exit accesses

**All Point Landmark Layers: \*(in, ra, rc, tt).\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
NAME	C	40	N		L	Landmark name
FCC	C	3	N		F	Feature Class Code

**Postal Code Inventory: <st>xx0pci.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
POSTAL	C	5	N		L	5 digit (ZIP) or 3 digit (FSA) postal code
ENC_POSTAL	C	5	N			Enclosing ZIP or FSA
STATE	C	2	N			State or Province 2-letter abbreviation
STFIPS	C	2	N			State FIPS or Province code
NAME	C	28	N		L	ZIP or FSA PO name
NAME_TYPE	C	30	N			Name Type
LASTL_FLAG	C	1	N			Lastline Flag
COUNTY1	C	20	N			US – Full County name 1; CA – always blank
CTY1FIPS	C	3	N			US – County 1 FIPS; CA – always ‘000’
COUNTY2	C	20	N			US – Full County name 2; CA – always blank
CTY2FIPS	C	3	N			US – County 2 FIPS; CA – always ‘000’
COUNTY3	C	20	N			US – Full County name 3; CA – always blank
CTY3FIPS	C	3	N			US – County 3 FIPS; CA – always ‘000’
AREA_MI	D	10	N	3		Area in square miles
LATITUDE	D	13	N	6		Latitude
LONGITUDE	D	15	N	6		Longitude
RPO_FLAG	C	1	N			RPO Flag (“R” or blank)
PC_TYPE	C	20	N			Postal code type
PT_LOC	C	1	N			Point Location (“A” for actual)

**Postal Code Alternate Name: <st>xx0pca.dbf**

Item Name	Type	Width	Index	Dec.	Justify	Description
POSTAL	C	5	N		L	5 digit (ZIP) or 3 digit (FSA) postal code
NAME1	C	28	N		L	Alternate postal name 1
NAME_TYPE1	C	30	N		L	Alternate postal name type 1
NAME2	C	28	N		L	etc.
NAME_TYPE2	C	30	N		L	
NAME3	C	28	N		L	
NAME_TYPE3	C	30	N		L	
NAME4	C	28	N		L	
NAME_TYPE4	C	30	N		L	
NAME5	C	28	N		L	
NAME_TYPE5	C	30	N		L	

**County Inventory: <st>xx0cyi.\* - U.S.**

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
NAME	C	40	N		L	Full County name
KEY	C	5	N		F	State and County FIPS

**Populated Locality Inventory: <st>xx0pli.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
NAME	C	40	N		L	Cleaned name
KEY	C	10	N		L	US – State, County FIPS, Place code CA – Province, '000', SDL code
CAPITAL	C	1	N		F	“Y” = State or Province Capital (+DC & PR)
POPULATION	D	10	N		R	Population, if available

**State/Province Inventory: <st>xx0sti.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	6	Y			Spatial information storage
NAME	C	40	N		L	Full State or Province name
STATE	C	2	N		F	2-character State or Province abbreviation
KEY	C	2	N		F	State FIPS or Province code

**POLYGON LAYERS:****Airport: \*ap.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	Airport name
FCC	C	3	N		F	Feature Class Code
LOC_ID	C	4	N		L	3 or 4 character identifier

**Airport Information: \*ai.dbf**

Item Name	Type	Width	Index	Dec.	Justify	Description
NAME	C	40	N		L	Airport name
FCC	C	3	N		F	Feature Class Code
LOC_ID	C	4	N		L	3 or 4 character identifier
USE	C	2	N			public (PU); private (PR)
OWNER	C	29	N			
ELEVATION	C	5	N			
CONGESTION	C	1	N			congestion level
SERVICE	C	2	N			service level
LG_CERT_AC	C	10	N			1992 large certified air carrier enplaning
COMMUTER	C	7	N			1992 commuter enplaning
AIR_TAXI	C	7	N			1992 air taxi enplaning
FOREIGN	C	8	N			1992 foreign enplaning
IN_TRANSIT	C	10	N			1992 in-transit enplaning
HUB_SIZE	C	1	N			based on % of national enplanements
TOWER_TYP	C	1	N			tower type code

**All Polygonal Landmark Layers: \*(al, pk, plc).\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	Landmark name
FCC	C	3	N		F	Feature Class Code

**All Polygonal Water Layers: \*(mw, wp).\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	Landmark name
FCC	C	3	N		F	Feature Class Code

**Postal Code Boundary: <st>xx0pcb.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	ZIP or FSA name
ST_FIPS	C	2	N		F	State or Province FIPS code
CTY_FIPS	C	3	N		F	US – County FIPS code CA – always ‘000’
KEY	C	5	N		L	Postal Code (ZIP or FSA)

**County Boundary: <st>xx0cyb.\* - U.S.**

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	Full County name
KEY	C	5	N		F	State FIPS code and County FIPS code

**Place Boundary: <st>xx0plb.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	Full Place name
KEY	C	10	N		L	US - State, County FIPS, Place code CA - Province, ‘000’, SDL code

**State/Province Boundary: <nt>xx0stb.\***

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	40	N		L	Full State or Province name
STATE	C	2	N		F	2-char State or Province abbreviation
KEY	C	2	N		F	State FIPS or Province code

**Nation Boundary: woxx0ntb. patntb**

Item Name	Type	Width	Index	Dec.	Justify	Description
SHAPE	S	8	Y			Spatial information storage
NAME	C	50	N		L	Full Nation name
NATION	C	2	N		F	2 character Nation abbr.

# ArcSDE-Loadable Format 6

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## *In This Section:*

- *Versions Supported*
- *Format Specifics*
- *Default ArcSDE-Loadable Layer Data Dictionary*
- *Layer Details*



---

## **Versions Supported**

GDT's ArcSDE-Loadable solution is compatible with ArcSDE v8.x and is supported on a range of operating systems and databases.

---

## **Format Specifics**

GDT provides data for this product for use in ESRI's Spatial Database Engine (ArcSDE). ArcSDE is used to store, manage and serve spatial data in Relational Database Management Systems (RDBMS). It provides a scalable solution for delivering spatial data to a wide variety of applications such as ArcIMS, ArcInfo, ArcView, and MapObjects.

Data for an ArcSDE-based spatial data server must be loaded into the database on-site and is not "ready-to-use" off the shelf. In addition, designing and implementing an ArcSDE database vary greatly depending on application requirements and system/network architecture. GDT provides custom ArcSDE-loadable solutions that are tailored to each customer's requirements. In addition to ArcSDE-loadable data files, GDT's ArcSDE shipments include loading utilities, database-specific design suggestions, size estimates, and tuning parameters. To ensure that every feature will be successfully inserted into the customer's database, all features in GDT's ArcSDE-loadable files are verified against ArcSDE's geometry verification rules prior to being shipped.

---

## **ArcSDE-Loadable Data**

ArcSDE supports both seamless and tiled data. To facilitate the data loading process, GDT provides compressed data files in a tiled format (county, state or nation) that can be assembled into a seamless database or a user-defined tile database.

GDT's "compressed file format" is different from ESRI's ArcSDE export format and can only be accessed with GDT processing tools.

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## **Default ArcSDE-Loadable Layer Data Dictionary**

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### **Business Tables**

The table definitions beginning on the following page are the default values provided by GDT.

In many installations, some column names are changed or columns may be omitted entirely. Customization done by GDT, if any, is described in the 'readme.first' file included with the shipment. **Please see your custom GDT documentation when referencing table definitions.**

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### **BUS\_FID Field**

NOTE: All ArcSDE attribute tables, or "business tables" have a spatial-enabling column added which is maintained by SDE. GDT uses the default name: "BUS\_FID" for this spatial column.

Business Table Attribute types are described in terms of SDE data type mappings. See the ArcSDE documentation from ESRI for your database for a mapping of these types to your database types.

## Layer Details

		<b>Notes:</b>
<b>Type:</b>	P=Point	C=SE_STRING_TYPE
	L=Simple Line (linestring)	I=SE_INTEGER_TYPE
	S=Line (spaghetti)	D=SE_DOUBLE_TYPE
	A=Area	
<b>Canadian equivalents in Description fields:</b> State=Province or Territory; MCD=GDT DAL; Place=GDT SDL		

### LINEAR LAYERS:

#### Highway:

Item Name	Type	Width	Dec.	Description
BUS_FID	S	-		Spatial information storage
SEGMENT_ID	I	10		Unique NorAm record number
PREFIX	C	2		Street prefix
NAME	C	40		Street name
TYPE	C	6		Street type
SUFFIX	C	2		Feature direction suffix
FCC	C	3		Feature Class Code
ACC	C	1		Artery Classification Code
SHIELD	C	1		"T", "I", "U", "S", "A", or blank
HWY_NUM	C	5		#, # with letter, or blank
SEG_LEN	D	8	4	Segment length in miles
SPEED	I	3		Speed in miles per hour
ONE_WAY	C	2		One-way indicator
F_ZLEV	I	2		From node elevation
T_ZLEV	I	2		To node elevation
FT_COST	D	10	5	From-To impedance in minutes
TF_COST	D	10	5	To-From impedance in minutes
FT_DIR	C	2		From-To direction
TF_DIR	C	2		To-From direction
NAME_FLAG	I	3		Name metadata flag

**Street:**

Item Name	Type	Width	Dec.	Description
BUS_FID	L	-		Spatial information storage
DYNAMAP_ID	I	10		Unique NorAm record number
L_F_ADD	C	11		Left from address
L_T_ADD	C	11		Left to address
R_F_ADD	C	11		Right from address
R_T_ADD	C	11		Right to address
PREFIX	C	2		Street prefix
NAME	C	40		Street name
TYPE	C	6		Street type
SUFFIX	C	2		Feature direction suffix
FCC	C	3		Feature Class Code
POSTAL_L	C	5		Postal code (ZIP or FSA) left
POSTAL_R	C	5		Postal code (ZIP or FSA) right
ACC	C	1		Artery Classification Code
NAME_TYPE	C	1		"R" (always PRN for this product)
SHIELD	C	1		"T", "I", "U", "S", "A", or blank
HWY_NUM	C	5		#, # with letter, or blank
SEG_LEN	D	8	4	Segment length in miles
SPEED	I	3		Speed in miles per hour
ONE_WAY	C	2		One-way indicator
F_ZLEV	I	2		From node elevation
T_ZLEV	I	2		To node elevation
FT_COST	D	10	6	From-To impedance in minutes
TF_COST	D	10	6	To-From impedance in minutes
FT_DIR	C	2		From-To direction
TF_DIR	C	2		To-From direction
NAME_FLAG	I	3		Name metadata flag
ALT1_PREFIX	C	2		Street prefix
ALT1_NAME	C	40		Street name
ALT1_TYPE	C	6		Street type
ALT1_SUFFIX	C	2		Feature direction suffix
ALT1_NAME_TYPE	C	1		"G" or blank
ALT1_SHIELD	C	1		"T", "I", "U", "S", "A", or blank
ALT1_HWY_NUM	C	5		#, # with letter, or blank
ALT1_FT_DIR	C	2		From_To direction
ALT1_TF_DIR	C	2		To_From direction
ALT1_NAME_FLAG	I	3		Name metadata flag
ALT2_PREFIX	C	2		Street prefix
ALT2_NAME	C	40		Street name
ALT2_TYPE	C	6		Street type
ALT2_SUFFIX	C	2		Feature direction suffix
ALT2_NAME_TYPE	C	1		"G" or blank
ALT2_SHIELD	C	1		"T", "I", "U", "S", "A", or blank
ALT2_HWY_NUM	C	5		#, # with letter, or blank
ALT2_FT_DIR	C	2		From_To direction

ALT2_TF_DIR	C	2		To_From direction
ALT2_NAME_FLAG	I	3		Name metadata flag
ALT3_PREFIX	C	2		Street prefix
ALT3_NAME	C	40		Street name
ALT3_TYPE	C	6		Street type
ALT3_SUFFIX	C	2		Feature direction suffix
ALT3_NAME_TYPE	C	1		“G” or blank
ALT3_SHIELD	C	1		“T”, “I”, “U”, “S”, “A”, or blank
ALT3_HWY_NUM	C	5		#, # with letter, or blank
ALT3_FT_DIR	C	2		From_To direction
ALT3_TF_DIR	C	2		To_From direction
ALT3_NAME_FLAG	I	3		Name metadata flag
ALT4_PREFIX	C	2		Street prefix
ALT4_NAME	C	40		Street name
ALT4_TYPE	C	6		Street type
ALT4_SUFFIX	C	2		Feature direction suffix
ALT4_NAME_TYPE	C	1		“G” or blank
ALT4_SHIELD	C	1		“T”, “I”, “U”, “S”, “A”, or blank
ALT4_HWY_NUM	C	5		#, # with letter, or blank
ALT4_FT_DIR	C	2		From_To direction
ALT4_TF_DIR	C	2		To_From direction
ALT4_NAME_FLAG	I	3		Name metadata flag
ALT5_PREFIX	C	2		Street prefix
ALT5_NAME	C	40		Street name
ALT5_TYPE	C	6		Street type
ALT5_SUFFIX	C	2		Feature direction suffix
ALT5_NAME_TYPE	C	1		“G” or blank
ALT5_SHIELD	C	1		“T”, “I”, “U”, “S”, “A”, or blank
ALT5_HWY_NUM	C	5		#, # with letter, or blank
ALT5_FT_DIR	C	2		From_To direction
ALT5_TF_DIR	C	2		To_From direction
ALT5_NAME_FLAG	I	3		Name metadata flag
STATE00_L	C	2		US - State FIPS left; CA – Province code left
STATE00_R	C	2		US - State FIPS right; CA – Province code right
COUNTY00_L	C	3		US - County FIPS left; CA – ‘000’
COUNTY00_R	C	3		US - County FIPS right; CA – ‘000’
MCD00_L	C	5		US - FIPS MCD left; CA – DAL left
MCD00_R	C	5		US - FIPS MCD right; CA – DAL right
PLACE00_L	C	5		US - FIPS Place left; CA – SDL left
PLACE00_R	C	5		US - FIPS Place right; CA – SDL right

**Toll:**

Item Name	Type	Width	Dec.	Description
DYNAMAP_ID	I	10		Unique NorAm record number
TOLL	C	1		“Y” = toll

**Railroad:**

Item Name	Type	Width	Dec.	Description
BUS_FID	L	-		Spatial information storage
DYNAMAP_ID	I	10		Unique NorAm record number
NAME	C	40		Railroad name
FCC	C	3		Feature Class Code

**Linear Water:**

Item Name	Type	Width	Dec.	Description
BUS_FID	L	-		Spatial information storage
DYNAMAP_ID	I	10		Unique NorAm record number
NAME	C	40		Water feature name
FCC	C	3		Feature Class Code

**POINT LAYERS:****Turn Restriction:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
ANGLE	D	12	3	Turn angle from From_ID to To_ID
FROM_ID	I	10		Dynamap ID for first segment
TO_ID	I	10		Dynamap ID for second segment
COST	D	8	5	“-1” if turn is restricted
MAN_ID	I	10		Unique Permanent Maneuver ID
LONGITUDE	D	11	6	Longitude (implied 6 decimal places)
LATITUDE	D	10	6	Latitude (implied 6 decimal places)

**Maneuver:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
MAN_ID	I	10		Unique Permanent Maneuver ID
SEQUENCE	I	1		Sequence # of maneuver record
MAN_TYPE	C	1		Maneuver Type
FROM_ID	I	10		From Dynamap_ID
FROMID_END	C	1		“T” or “F” indicating end of From_ID
ANGLE	D	12	3	Turn angle from From_ID to To_ID
COST	D	8	5	Restricted = “-1”
HOO	C	100		Hours of Operation (GDF)
TO_ID	I	10		To/Destination Dynamap_ID
VIA1	I	10		Via Dynamap_ID 1
VIA2	I	10		Via Dynamap_ID 2
VIA3	I	10		Via Dynamap_ID 3
VIA4	I	10		Via Dynamap_ID 4
VIA5	I	10		Via Dynamap_ID 5
LONGITUDE	D	11	6	Longitude (implied 6 decimal places)
LATITUDE	D	10	6	Latitude (implied 6 decimal places)

**Placeholder:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
DYNAMAP_ID	I	10		Unique NorAm record number
FR_ADD	C	11		From address
TO_ADD	C	11		To address
PREFIX	C	2		Street prefix
NAME	C	40		Street name
TYPE	C	6		Street type
SUFFIX	C	2		Feature direction suffix
FCC	C	3		Feature Class Code
POSTAL	C	5		Postal code (ZIP or FSA)

**Exits:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
EXIT_ID	I	10		Unique NorAm record number
FROM_NAME	C	40		Highway name exit leaves
EXIT_NUM	C	10		Number(s) if applicable
TO_NAME	C	40		Highway/street name exit accesses

**Recreation Area:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Transportation Terminal:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Major Retail Center:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Institution:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Postal Code Inventory:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
POSTAL	C	5		5 digit (ZIP) or 3 digit (FSA) postal code
ENC_POSTAL	C	5		Enclosing ZIP or FSA
STATE	C	2		State or Province 2-letter abbreviation
STFIPS	C	2		State FIPS or Province code
NAME	C	28		ZIP or FSA PO name
NAME_TYPE	C	30		Name Type
COUNTY1	C	20		US – Full County name 1; CA – always blank
CTY1FIPS	C	3		US – County 1 FIPS; CA – always '000'
COUNTY2	C	20		US – Full County name 2; CA – always blank
CTY2FIPS	C	3		US – County 2 FIPS; CA – always '000'
COUNTY3	C	20		US – Full County name 3; CA – always blank
CTY3FIPS	C	3		US – County 3 FIPS; CA – always '000'
AREA_MI	D	9	3	Area in square miles
LATITUDE	D	10	6	Latitude
LONGITUDE	D	11	6	Longitude
RPO_FLAG	C	1		RPO Flag ("R" or blank)
PC_TYPE	C	20		Postal code type
PT_LOC	C	1		Point Location ("A" for actual)
NAME1	C	28		Alternate postal name 1
NAME_TYPE1	C	30		Alternate postal name type 1
NAME2	C	28		etc.
NAME_TYPE2	C	30		
NAME3	C	28		
NAME_TYPE3	C	30		
NAME4	C	28		
NAME_TYPE4	C	30		
NAME5	C	28		
NAME_TYPE5	C	30		

**County Inventory: - U.S.**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Full County name
COUNTY_KEY	C	5		State and County FIPS



**Populated Locality Inventory:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Cleaned name
PLACE_KEY	C	10		US – State FIPS, County FIPS, Place code CA - Province code, '000', SDL code
CAPITAL	C	1		“Y” = State or Province Capital (+DC & PR)
POPULATION	I	10		Population (if available)

**State/Province Inventory:**

Item Name	Type	Width	Dec.	Description
BUS_FID	P	-		Spatial information storage
NAME	C	40		Full State or Province name
STATE	C	2		2-char. State or Province abbreviation
STATE_KEY	C	2		State FIPS or Province code

**POLYGON LAYERS:****Airport:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Airport name
FCC	C	3		Feature Class Code
LOC_ID	C	4		3 or 4 character identifier
USERS	C	2		public (PU); private (PR)
OWNER	C	29		
ELEVATION	C	5		
CONGESTION	C	1		congestion level
SERVICE	C	2		service level
LG_CERT_AC	C	10		1992 large certified air carrier enplaning
COMMUTER	C	7		1992 commuter enplaning
AIR_TAXI	C	7		1992 air taxi enplaning
FOR_ENP	C	8		1992 foreign enplaning
IN_TRANSIT	C	10		1992 in-transit enplaning
HUB_SIZE	C	1		based on % of national enplanements
TOWER_TYPE	C	1		tower type code

**Large Area Landmark:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Park:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Major Water:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Water Polygon:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Landmark name
FCC	C	3		Feature Class Code

**Postal Code Boundary:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		ZIP or FSA name
ST_FIPS	C	2		State FIPS or Province code
CTY_FIPS	C	3		US - County FIPS CA - '000'
POSTAL	C	5		5 digit (ZIP) or 3 digit (FSA) postal

**County Boundary: - U.S.**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Full County name
COUNTY_KEY	C	5		State FIPS code

**Place Boundary:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Full Place name
PLACE_KEY	C	10		US - State, County FIPS, Place code CA - Province, '000', SDL code

**State/Province Boundary:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Full State or Province name
STATE	C	2		2-char. State or Province abbreviation
STATE_KEY	C	2		State FIPS or Province code

**Nation Boundary:**

Item Name	Type	Width	Dec.	Description
BUS_FID	A	-		Spatial information storage
NAME	C	40		Full Nation name
NATION	C	2		2-character Nation abb.

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***In This Section:***

- *Introduction*
- *Directories and Files*
- *Primary Layers*
- *Additional Layers*
- *Auxiliary Files*
- *Primary Layer Record Layouts*

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## Introduction

GDT's ASCII format is based on the TIGER format developed by the U.S. Census Bureau, but with some noticeable differences. See the Primary Layers portion of this section for a description of the ASCII format for this product.

---

## Directories and Files

### State/Province-tiled data:

```
|
  woxx0ntb.mif
  cpyright.txt
  datum.txt
  |nat
    State/Province Boundary and Inventory files
    dynaname.txx (included in USA coverage only)
    datum.txt
    |st
      All files available by State
      Place Boundary and Inventory files
      County Boundary and Inventory files (USA only)
      Postal Code Boundary and Inventory files
      datum.txt
      genf<stfips>.txt
```

### County-tiled data (USA only):

```
|
  woxx0ntb.mif
  cpyright.txt
  datum.txt
  |nat
    State Boundary and Inventory files
    dynaname.txx
    datum.txt
    |st
      Place Boundary and Inventory files
      County Boundary and Inventory files
      Postal Code Boundary and Inventory files
      datum.txt
      |stcnty
        All files available by County
        datum.txt
        genf<stfips>.txt
```

**where:** *nat* = 3-character ISO Nation abbr. (usa, can, etc.)

*st* = 2-char. State abbr.

*cnty* = 4-character County abbr.

*x* = filler

**Note:** Due to the non-existence of certain layers in some geographic areas, not all file types will be present.

**File Naming**

**County and State Tiled Layers (Tile= “C, S”)**

**County-tiled data:** (USA only)

*stcntyll.dx#*

**State/Province-tiled data;**

*stxxxll.dx#*

<i>st</i>	State 2-character abbreviation
<i>cnty</i>	County 4-character abbreviation
<i>ll</i>	Layer abbreviation
<i>d</i>	Delimiter
	l LF
	t CRLF
	x None
<i>x</i>	filler
<i>#</i>	File Type Number or Indicator
	1 GDT Record Type 1
	2 Record Type 2
	3 GDT Record Type 3
	4 GDT Record Type 4
	5 Record Type 5
	7 Record Type 7
	8 Record Type 8
	a Record Type A
	i Record Type I
	x other

**State-tiled only Layers**

*stxx#ll.dvn*

<i>st</i>	State FIPS Code
<i>xx</i>	filler
<i>#</i>	Generalization (0-3, where 0 = no generalization)
<i>lll</i>	Layer abbreviation
<i>d</i>	Delimiter
	l LF
	t CRLF
	x None
<i>vn</i>	Version Number

---

## Primary Layers

---

### Record Types

Street, water segment and railroad layers may contain Type 1 and Type 2 records:

**Type 1:** Segments      **Type 2:** Shape list

Type 4 Records contain alternate name pointers which are a link between Type 1 and Type 5 Records.

Dynamap/Transportation includes only the *alternate* feature names in Type 5 Records. This eliminates some duplication, results in a smaller file size, and should have no adverse affects on algorithms searching for alternate feature names. To generate a unique list of feature names in a county, however, the user must scan through both Record Type 1 and Record Type 5.

Records Type 2, 4, or 5 may or may not be present depending on the county.



Parks and Large Area Landmarks are polygon layers and contain the **Type 1, Type 2, Type 7, Type 8, Type A and Type I** Records. Recreational Areas, Transportation Terminals, Institutions and Major Retail Centers are point files and consist of **Type 7 Records**. Note: Some Retail Centers may also be represented as polygons in the Large Area Landmark layer.

The Placeholder layer may contain **Type 1, Type 4 and Type 5 Records** containing Placeholder point coordinates and associated data. Placeholders are mail delivery locations other than streets, or points marking the approximate location of new and as yet undigitized streets.

The Airports layer has a separate Airport information (GDT Type AIR) file and records of six types:

<b>Type 1:</b>	Segments	<b>Type 8:</b>	Polygons
<b>Type 2:</b>	Shape list	<b>Type I:</b>	Polygons
<b>Type A:</b>	Alternate poly info	<b>Type 7:</b>	Polygon names

---

## **Record ID**

With the following exceptions, all Primary layer records have identification codes (IDs) that are unique nationwide.

State border segments are duplicated in the two neighboring states (state tiling).

County border segments are duplicated in two neighboring counties (county tiling).

Landmark layer and Major Water polygons records have their own separate Ids unless regionalized.

---

## Record Type Relationships

Record Types 1, 2, 4, and I are linked by use of the DYNAMAP\_ID field. Type 2 and 4 records that have the same DYNAMAP\_ID as found in a Record Type 1 record represent corresponding information for that segment. Some Type 1 records have more than one corresponding record in the Type 2 and/or Type 4 file.

**GDT Type 1 records** contain street or line segments defined by “from” and “to” nodes.

The Street layers will contain GDT Record Type 1 file, if information is present for that file. This is a GDT file format, different from the standard TIGER Type 1 file, but similar in usage. The Highways layer will contain another GDT style Type 1 file. See *Primary Record Layouts* in this section for details. Any other layer requiring a Type 1 file will use the standard TIGER Type 1 layout.

**Type 2 records** with the same DYNAMAP\_ID as found in Record Type 1 are shape coordinates for line segments defined in Record Type 1. There may be many Type 2 records for a single Type 1 record. A single shape record contains coordinates for up to 10 shape points for a segment record. If additional shape points are needed to describe a line, as many more Type 2 records are used as are needed. If a shape record has less than 10 shape points the unused coordinate value fields are filled out with zeros. Since it is imperative to apply the coordinate information in Type 2 records in sequence order, each is given a Record Sequence Number (RTSQ). The first coordinate for the segment is the "from" node (Record Type 1), followed by shape point 1, shape point 2, etc., ending with the "to" node (Record Type 1).

### NOTES:

The shape list is a series of latitude/longitude coordinate values that add form to a straight line. Shape records are not included for every line segment, and line segments may refer to several shape records. Shape records are not required to show segments on a map display, but they add identity to features. Generally the exclusion of shape

records in a display speeds up the drawing time at the expense of a less visually pleasing and precise map.

If you draw without shapes you may get crossing lines.

Coordinate values have six implied decimal places and are preceded with a "+" for latitude and "-" for longitude.

**GDT Type 4 records** list alternate name pointers for each DYNAMAP\_ID from the Record Type 1 file(s). Any matching Type 4 record found contains an alternate feature number and a sequence number (RTSQ). Additional records may be present indicated by the same DYNAMAP\_ID number and a different sequence number.

The feature numbers listed in this file are for finding the additional names for the segment. The name appearing in Record Type 1 is the Primary Highway Name, that name most suitable for routing based on GDT's naming hierarchy; any other feature names for a segment will be in the alternate name list. A line segment may have more than one name and also more than one alternate name. For example: Record Type 1 may have the name "MAIN ST" as the primary name for a segment, and may also point to alternates listed in Record Type 4. Two Record Type 4 records list two alternate feature numbers for that segment. The names matching those feature numbers are found in Record Type 5, "4TH ST" and "ST HWY 101". There may be one alternate, many alternates or none. If a zero is listed as an alternate feature number, the number should be ignored. This is a GDT file format, different from the standard TIGER Type 4 file, but similar in usage.

**NOTES:**

The Type 4 file for the Highways layer differs from that used in the Streets layer. Refer to *Primary Record Layouts* in this section for details.

**Type 5 records** list alternate names. Primary names appear in Record Type 1 while names for any feature numbers listed in Record Type 4 are found in Record Type 5. The NAME\_ID from Record Type 4 is used to find a record in Record Type 5 that has the same NAME\_ID. Once found, that record contains the direction prefix, alternate name, street type, and direction suffix.

**NOTES:**

There is an important difference between TIGER and GDT format in the Alternate Feature Name List. TIGER lists all the unique feature names for a county in Record Type 5. Dynamap lists only those feature names that appear in the Alternate Feature Name Index.

**Type 7 Records** (Water Polygons, Major Water, Airports, Parks, Recreational Areas, Transportation Terminals, Institutions, Major Retail Centers, and Large Area Landmarks layers) contain point landmark features and landmark names. Area landmark features are included in Type 1 records. If a county file has no landmarks and no airport information, then it will not have a Record Type 7.

**NOTES:**

Coordinate values are filled for point landmarks only. Area landmark coordinates are defined by Type 1 and Type 2 records. Coordinate values have implied six decimal places and are preceded with a "+" for latitude and "-" for longitude.

**Type 8 Records** (Water Polygons, Major Water, Airports, Parks and Large Area Landmarks layers) contain polygon IDs and feature name links. Each large area landmark, all water, major water, airport boundary or runway that is a complete polygon is assigned a unique ID in the TIGER Type 8 file.

Note that polygons such as Major Water and Large Area Landmarks may be regionalized with more than one polygon containing the same ID.

**Note:**

The Ids assigned in the point and polygon layers are unique within a state.

**Type A Records** (Water Polygons, Major Water, Airports, Parks and Large Area Landmarks layers) contain alternate polygon information. All fields below POLYID are blank filled.

**Type I Records** (Water Polygons, Major Water, Airports, Parks and Large Area Landmarks layers) contain segment record numbers that make up landmark boundary and landmark polygons. These segments and their shape points are also found in Record Type 1 and Type 2 files.

**Turn Restrictions file** contains segment pairs. A turn is broken down into the two segments that represent the turn. A turn is made from one segment to another segment. In GDT format, each turn restriction requires two Dynamap\_IDs. One is the "FROM" segment; the other is the "TO" segment.

**Airport Information file** – see [Airport information](#) in this manual for field descriptions.

**Dynaname File** – see [Name Correspondence File](#) in this manual for details.

---

## Field Terms

**RT** - a one character field to show Record type.

**VERSION** - four character internal GDT code representing year and month of database currency.

**RECNUM** - GDT unique record number. Landmark layer records have their own unique nationwide identification codes. Because of this there may be Landmark layer records with the same IDs as records from other layers.

**RTSQ** - Record Sequence Number field used when a segment has more than one Record Type 2 or 4. For example, there is an additional Record Type 2 (RTSQ 2) if a segment has more than ten shape points. If it has more than 20 shape points another Record Type 2 (RTSQ 3) is required. An additional Record Type 4 (RTSQ 2) is required if a segment has more than 1 alternate name. There may be as many additional Records as a segment requires identified in order by the Record Sequence Number.

**Other Field Terms** - For additional field term explanations see the Record Type Descriptions in the File Content section.

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## Additional Layers

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### Highways

Dynamap/Highways in GDT format consists of a single combined layer for each county (or state).

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### Postal Codes

The postal code layer includes a DIME (ASCII) Boundary file and an ASCII format Inventory file.

Each DIME format **ZIP Boundary file** record represents one straight line segment with a logical record length of 60 characters plus delimiter.

Areas outside of file coverage and major water features within file coverage are coded State FIPS or Province code, County or "000" and Postal Code "00000". Major water features are water areas which span more than one county.

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### State, Province, County Layers

In these layers each DIME format **boundary file** record represents one straight line segment with a logical record length of 64 characters plus delimiter.

Areas outside of coverage and water features in nationwide files are: state or province code 00, county code 000. Longitude and latitude have 6 implied decimal places. For example: 33125684 = 33.125684.

ASCII format **Inventory files** provide additional information about boundary file polygons such as names, census area codes, area in square miles, and centroid position. The record length is 80 characters plus delimiter.

Polygons with area calculations of less than or equal to 1/1000 square miles have been assigned "0.001".

Centroid latitude and longitude are signed with an implied six decimals of precision.

Centroid location is always within the boundary of a polygon, even in horseshoe shaped polygons where the balance point is outside of the polygon. Centroids for multiple polygon features are at the center of the largest polygon.

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## ***Nation Layers***

The source for the Nation Boundary layer is the *National Imagery and Mapping Agency (NIMA)*.

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## ***Auxiliary Files***

The following auxiliary files are included:

<b>dynaname.txx</b>	Name Correspondence file. (USA only)
<b>copyright.txt</b>	Copyright file
<b>datum.txt</b>	Datum specification file
<b>genf&lt;stfips&gt;.txt</b>	Geographic Entity Name file provides the official names for 2000 FIPS codes.



## Primary Layer Record Layouts

### Notes:

**Type:** C = character.

**Justify:** l - left, r - right, and f - filled.

**Fill:** sp - space, and zero - 0.

ASCII files in this product end with a carriage return / line feed.

**Canadian equivalents in Description fields:** State=Province or Territory; MCD=GDT DAL; Place=GDT SDL

### Highway GDT Record Type 1: Primary Data Record, \*.tx1

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (Value "1")
VERSION	4	C	f		GDT Version Number*
SEGMENT_ID	10	C	r	sp	GDT Record Number
FEDIRP	2	C	l	sp	Feature Direction, Prefix
FENAME	30	C	l	sp	Feature Name
FETYP	6	C	l	sp	Feature Type
FEDIRS	2	C	l	sp	Feature Direction Suffix
FCC	3	C	f	sp	Feature Class Code
FRLONG	10	C	r	sp	Longitude From (leading -, implied 6 decimal places)
FRLAT	9	C	r	sp	Latitude From (leading +, implied 6 decimal places)
TOLONG	10	C	r	sp	Longitude To (leading -, implied 6 decimal places)
TOLAT	9	C	r	sp	Latitude To (leading +, implied 6 decimal places)
ACC	1	C	f	sp	Artery Classification Code
SHIELD	1	C	f	sp	"T", "I", "U", "S", "A", or blank
HWY_NUM	5	C	l	sp	#, # with letter, or blank (if SHIELD_TYPE is filled)
LENGTH	8	C	r	sp	Seg length in miles, (implied 4 decimal places)
SPEED	3	C	r	sp	Speed in mph (US)
ONE_WAY	2	C	f	sp	"FT", "TF", or ""
F_ZLEV	2	C	r	sp	Functional From segment-end elevation
T_ZLEV	2	C	r	sp	Functional To segment-end elevation
FT_COST	8	C	r	zero	From-to travel time (minutes, implied 5 decimal places)
TF_COST	8	C	r	zero	To-from travel time (minutes, implied 5 decimal places)
FT_DIR	2	C	l	sp	From-to direction
TF_DIR	2	C	l	sp	To-from direction
NAME_FLAG	3	C	r	sp	Name metadata flag
DELIMITER	2		f		Carriage return/line feed

**Street GDT Record Type 1: Primary Data Record, \*.tx1**

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record type (value "1")
VERSION	4	C	f		GDT Version Number*
DYNAMAP_ID	10	C	r	sp	Gdt record number
FEDIRP	2	C	l	sp	Feature direction, prefix
FENAME	30	C	l	sp	Feature name
FETYP	6	C	l	sp	Feature type
FEDIRS	2	C	l	sp	Feature direction suffix
FCC	3	C	f	sp	Feature class code
FRADDL	11	C	r	sp	From address left
TOADDL	11	C	r	sp	To address left
FRADDR	11	C	r	sp	From address right
TOADDR	11	C	r	sp	To address right
POSTAL_L	5	C	l	sp	Postal Code (ZIP or FSA) Left
POSTAL_R	5	C	l	sp	Postal Code (ZIP or FSA) Right
FRLONG	10	C	r	sp	Longitude From (leading –, implied 6 decimal places)
FRLAT	9	C	r	sp	Latitude From (leading +, implied 6 decimal places)
TOLONG	10	C	r	sp	Longitude To (leading –, implied 6 decimal places)
TOLAT	9	C	r	sp	Latitude To (leading +, implied 6 decimal places)
ACC	1	C	f	sp	Artery Classification Code (1-6)
NAME_TYPE	1	C	f	sp	"R" (always PRN for this product)
SHIELD	1	C	f	sp	"T", "I", "U", "S", "A", or blank
HWY_NUM	5	C	r	sp	#, # with letter, or blank (if SHIELD is filled)
LENGTH	8	C	r	sp	Seg length in miles, (implied 4 decimal places)
SPEED	3	C	r	sp	Speed in mph (US)
ONE_WAY	2	C	f	sp	"FT", "TF", or ""
F_ZLEV	2	C	r	sp	Functional From segment-end elevation
T_ZLEV	2	C	r	sp	Functional To segment-end elevation
FT_COST	8	C	r	zero	From-to travel time (minutes, implied 5 decimal places)
TF_COST	8	C	r	zero	To-from travel time (minutes, implied 5 decimal places)
FT_DIR	2	C	l	sp	From-to direction
TF_DIR	2	C	l	sp	To-from direction
NAME_FLAG	3	C	r	sp	Name metadata flag
DELIMITER	2	C	f		Carriage return/line feed

**GDT Record Type 1: Primary Data Record with Census Information (Airport, Area Landmarks, Parks, Water and Railroads)**

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (Value "1")
VERSION	4	C	f		Internal GDT Version Number
RECNUM	10	C	r	sp	GDT Record Number
SIDE1	1	C	f	sp	Side Code**
SOURCE	1	C	f	sp	Source Code***
FEDIRP	2	C	l	sp	Feature Direction, Prefix
FENAME	30	C	l	sp	Feature Name
FETYP	4	C	l	sp	Feature Type
FEDIRS	2	C	l	sp	Feature Direction Suffix
FCC	3	C	f	sp	Feature Class Code
FRADDL	11	C	r	sp	From Address Left
TOADDL	11	C	r	sp	To Address Left
FRADDR	11	C	r	sp	From Address Right
TOADDR	11	C	r	sp	To Address Right
FRIADDFL	1	C	f	sp	From Imputed Address Flag Left****
TOIADDFL	1	C	f	sp	To Imputed Address Flag Left****
FRIADDFR	1	C	f	sp	From Imputed Address Flag Right****
TOIADDFR	1	C	f	sp	To Imputed Address Flag Right****
ZIPL	5	C	f	sp	ZIP Code Left
ZIPR	5	C	f	sp	ZIP Code Right

Notes:	
*	Four character internal GDT code representing year and month of database currency.
**	Blank if no data. Value of "1" indicates that a segment is on a tile boundary.
***	A series of codes that specify the original digital source of the line segment. For example: Census Bureau 1980 GBF/DIME file or a USGS 1:100,000-scale DLG-3 file (see Appendix section).
****	Blank if no data. Value of "1" indicates an imputed address range (see Explanation of Field Terms above).

**Record Type 1 table continued on the following page**

(continued)

Field	Size	Type	Justify	Fill	Description
FAIRL*	5	C	f	sp	FIPS PUB 55 Code Left American Indian reservation (AIR), Alaska Native Village Statistical Area (ANVSA), Tribal Jurisdiction Statistical Area (TJSA), Tribal Designated Statistical Area (TDSA)
FAIRR*	5	C	f	sp	FIPS PUB 55 Code Right American Indian reservation (AIR), Alaska Native Village Statistical Area (ANVSA), Tribal Jurisdiction Statistical Area (TJSA), Tribal Designated Statistical Area (TDSA)
ANRCL*	2	C	f	sp	Alaska Native Regional Corporation Code Left
ANRCR*	2	C	f	sp	Alaska Native Regional Corporation Code Right
STATEL	2	C	f	sp	FIPS State Code Left
STATER	2	C	f	sp	FIPS State Code Right
COUNTYL	3	C	f	sp	FIPS County Code Left or "000" for Canada
COUNTYR	3	C	f	sp	FIPS County Code Right or "000" for Canada
FMCDL	5	C	f	sp	FIPS PUB 55 Code Left (MCD) or DAL Left (Canada)
FMCDR	5	C	f	sp	FIPS PUB 55 Code Right (MCD) or DAL Right (Canada)
FSMCDL	5	C	f	sp	FIPS PUB 55 Code Left (SUB-MCD)
FSMCDR	5	C	f	sp	FIPS PUB 55 Code Right (SUB-MCD)
FPLL	5	C	f	sp	FIPS PUB 55 Code Left (PLACE) or SDL Left (Canada)
FPLR	5	C	f	sp	FIPS PUB 55 Code Right (PLACE) or SDL Right (Canada)
CTBNAL	6	C	l	sp	Census Tract Code Left of 4 digits and 2-digit suffix (implied 2 decimal places). If suffix is absent it will be zero filled.
CTBNAR	6	C	l	sp	Census Tract Code Right of 4 digits and 2-digit suffix (implied 2 decimal places). If suffix is absent it will be zero filled.
BLKL	4	C	l	sp	Tabulation Block Number Left of 4 digits
BLKR	4	C	l	sp	Tabulation Block Number Right of 4 digits
FRLONG	10	C	r	sp	Longitude From (leading -, implied 6 decimal places)
FRLAT	9	C	r	sp	Latitude From (leading +, implied 6 decimal places)
TOLONG	10	C	r	sp	Longitude To (leading -, implied 6 decimal places)
TOLAT	9	C	r	sp	Latitude To (leading +, implied 6 decimal places)
DELIMITER	2	C			Carriage return/line feed

**NOTE:**

The CTBNAL and CTBNAR fields consist of a basic tract code of 4 digits with implied 2 decimal places followed by a 2 digit suffix.

Census data is provided only for Street and Placeholder layers.

\* FAIRL, FAIRR, ANRCL, ANRCR fields are always blank.

**Record Type 2: Shape Coordinate List, \*.tx2**

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (value "2")
VERSION	4	C	f		GDT Version Number
DYNAMAP_ID	10	C	r	sp	GDT nationwide unique segment ID
RTSQ	3	C	r	sp	Record Sequence Number
LONG1	10	C	r	sp	Point 1, Longitude (-)
LAT1	9	C	r	sp	Point 1, Latitude (+)
LONG2	10	C	r	sp	Point 2, Longitude (-)
LAT2	9	C	r	sp	Point 2, Latitude (+)
			ETC.		
LONG10	10	C	r	sp	Point 10, Longitude (-)
LAT10	9	C	r	sp	Point 10, Latitude (+)
DELIMITER	2	C			Carriage return/line feed

**GDT Record Type 4: Alternate feature name index - streets, placeholders \*.tx4**

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (value "4")
VERSION	4	C	f		GDT Version Number
DYNAMAP_ID	10	C	r	sp	GDT nationwide unique segment ID
RTSQ	3	C	r	sp	Record Sequence Number
NAME_ID	8	C	r	sp	Alternate Feature Name ID
NAME_TYPE	1	C	f	sp	Alternate Feature Name Type
SHIELD	1	C	f	sp	"T", "I", "U", "S", "A", or blank
HWY_NUM	5	C	r	sp	#, # with letter, or blank
FT_DIR	2	C	l	sp	From-to direction
TF_DIR	2	C	l	sp	To-from direction
NAME_FLAG	3	C	r	sp	Name metadata flag
DELIMITER	2	C			Carriage return/line feed

**GDT Record Type 4: Alternate feature name index - highways, \*.tx4**

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (value "4")
VERSION	4	C	f		Version Number
SEGMENT_ID	10	C	r	sp	GDT nationwide unique segment ID
RTSQ	3	C	r	sp	Record Sequence Number
NAME_ID	8	C	r	sp	Alternate Feature Name ID
SHIELD_TYPE	1	C	f	sp	"T", "I", "U", "S", "A", or blank
HWY_NUM	5	C	r	sp	#, # with letter, or blank
FT_DIR	2	C	l	sp	From-To direction
TF_DIR	2	C	l	sp	To-From direction
NAME_FLAG	3	C	r	sp	Name metadata flag
DELIMITER	2	C			Carriage Return/Line Feed

**Record Type 5: Alternate feature name list, \*.tx5**

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (value "5")
STATE	2	C	f	zero	FIPS State Code for File
COUNTY	3	C	f	zero	FIPS County Code for File or "000" (Canada)
NAME_ID	8	C	r	sp	Alternate Feature Name ID
FEDIRP	2	C	l	sp	Feature Direction, Prefix
FENAME	30	C	l	sp	Feature Name
FETYP	6	C	l	sp	Street Type
FEDIRS	2	C	l	sp	Feature Direction, Suffix
DELIMITER	2	C			Carriage return/line feed

**Record Type 7: Landmark Features**

Record Type 7 contains landmarks, major water, all water and airport information including name and landmark ID. If a county tile has no landmarks and no airport information, it will not have any Record Type 7. Coordinate values are filled for point landmarks only. Area landmark coordinates are defined by Type 1 and Type 2 records. Coordinate values have implied six decimal places and are preceded with a "+" for latitude and "-" for longitude. The unused numeric field at the beginning of a longitude value is blank.

Field	Size	Type	Justify	Fill	Description
RT	1	C	f		Record Type (value "7")
VERSION	4	C	f		GDT Version Number
STATE	2	C	f	zero	State FIPS or Province Code
COUNTY	3	C	f	zero	County FIPS or "000" (Canada)
LAND	10	C	r	sp	Location Identification Number from Type 8 file
SOURCE	1	C	r	sp	Source Code
FCC	3	C	f		Feature Class Code
LANAME	30	C	l	sp	Landmark Feature Name
LONG	10	C	r	sp	Longitude (point only) (signed, implied 6 decimal places)
LAT	9	C	f		Latitude (point only) (signed, implied 6 decimal places)
FILLER	1	C	f	sp	Filler (to make even character count)
DELIMITER	2	C			Carriage Return/Line Feed

**Record Type 8: Landmark Polygons**

Each large area landmark, all water, major water, airport boundary or runway that is a complete polygon is assigned a unique ID in the TIGER Type 8 file. Note that some large area landmarks and major water areas may be regionalized with more than one feature containing the same ID.

Field	Size	Type	Justify	Fill	Description
RECORD TYPE	1	C	f		Record Type (value "8")
VERSION	4	C	f		GDT Version Number
STATE	2	C	f	zero	State FIPS or Province Code for polygon
COUNTY	3	C	f	zero	County FIPS or "000" (Canada)
FILE ID	5	C	f	zero	Polygon State and County FIPS (US) Polygon Province and "000" (Canada)
POLYID	10	C	r	sp	Polygon ID
LAND	10	C	r	sp	Landmark identification number
FILLER	1	C	f	sp	To even the record length
DELIMITER	2	C			Carriage Return/Line Feed

**Record Type A: Landmark Polygon Information**

Field	Size	Type	Justify	Fill	Description
RECORD TYPE	1	C	f		Record Type (value "A")
VERSION	4	C	f		GDT Version Number
STATE FIPS	2	C	f	zero	State FIPS or Province code
COUNTY FIPS	3	C	f	zero	County FIPS or "000" (Canada)
CENID	5	C	r	zero	
POLYID	10	C	r	sp	Polygon ID
(15 more fields)	73	C	f	zero	blank filled
DELIMITER	2	C			Carriage Return/Line Feed

**Record Type I: Landmark Segments**

Field	Size	Type	Justify	Fill	Description
RECORD TYPE	1	C	f		Record Type (value "I")
VERSION	4	C	f		GDT Version Number
DYNAMAP ID	10	C	r	sp	GDT nationwide unique segment ID
STATE FIPS	2	C	f	zero	State FIPS or Province code
COUNTY FIPS	3	C	f	zero	County FIPS or "000" (Canada)
RTLINK	1	C	r	sp	Set to blank
FILE ID LEFT	5	C	f	zero	Left file ID
POLY ID LEFT	10	C	r	sp	Left side polygon ID
FILE ID RIGHT	5	C	f	zero	Right file ID
POLY ID RIGHT	10	C	r	sp	Right side polygon ID
FILLER	1	C	f	sp	To even the record length
DELIMITER	2	C			Carriage Return/Line Feed

**Additional Airport Information: \*ap.air (text file)**

Field	Size	Type	Fill	Justify	Description
FACILITY NAME	42	C			Facility name
FCC	3	C			Feature Class Code
LOCID	4	C			
FACILITY USE	2	C			Public (PU); private (PR)
OWNER NAME	29	C			
ELEVATION	5	C			
CONGESTION LEVEL	1	C			Congestion level
SERVICE LEVEL	2	C			Service level
LARGE CERTIFIED AIR CARRIER ENPL	10	C			1992 large certified air carrier enplanements
COMMUTER ENPL	7	C			1992 commuter enplanings
AIR TAXI ENPL	7	C			1992 air taxi enplanings
FOREIN ENPL	8	C			1992 foreign enplanings
IN-TRANSIT ENPL	10	C			1992 in-transit enplanings
HUB SIZE	1	C			Based on % of national enplanements
TOWER TYPE	1	C			Tower type code

**Exit File: \*ex.txx**

Field	Size	Type	Justify	Fill	Description
STATE	2	C	f	sp	State FIPS code
COUNTY	3	C	f	sp	County FIPS code
EXIT ID	10	C	r	sp	GDT nationwide unique exit ID
FROM NAME	40	C	l	sp	Highway name exit leaves
EXIT NUMBER	10	C	r	sp	Number if applicable
TO NAME	40	C	l	sp	Highway/street name exit accesses
LONGITUDE	10	C	r	sp	Longitude (implied 6 decimal degrees)
LATITUDE	9	C	r	sp	Latitude (implied 6 decimal degrees)
DELIMITER	2	C	f		Carriage return/line feed

**Turn Restriction File: \*tn.txx**

Field	Size	Type	Justify	Fill	Description
ANGLE	12	C	r	sp	Implied 3 decimal places
FROM_ID	10	C	r	sp	Dynamap ID for first segment
TO_ID	10	C	r	sp	Dynamap ID for second segment
COST	8	C	r	sp	“-0100000”
MAN_ID	10	C	r	sp	Unique Permanent Maneuver ID
LONGITUDE	10	C	r	sp	Longitude (6 decimal places)
LATITUDE	9	C	f	sp	Latitude (6 decimal places)
DELIMITER	2	C			Carriage Return/Line Feed



**Maneuver: \*mn.txx**

Field	Size	Type	Justify	Fill	Description
MAN_ID	10	D	r	sp	Unique Permanent Maneuver ID
SEQUENCE	1	D	f	sp	Sequence # of maneuver record
MAN_TYPE	1	C	f	sp	Maneuver Type "P"=Prohibited
FROM_ID	10	D	r	sp	From Dynamap_ID
FROMID_END	1	C	f	sp	"T" or "F" indicating end of From_ID
ANGLE	6	D	r	sp	Turn angle from From_ID to To_ID (Implied 3 dec.)
COST	8	D	r	sp	Restricted = "-0100000"
HOO	100	C	r	sp	Hours of Operation (GDF)
TO_ID	10	D	r	sp	To/Destination Dynamap_ID
VIA1	10	D	r	sp	Via Dynamap_ID 1
VIA2	10	D	r	sp	Via Dynamap_ID 2
VIA3	10	D	r	sp	Via Dynamap_ID 3
VIA4	10	D	r	sp	Via Dynamap_ID 4
VIA5	10	D	r	sp	Via Dynamap_ID 5
LONGITUDE	11	D	r	sp	Longitude (6 decimal places)
LATITUDE	10	D	r	sp	Latitude (6 decimal places)
DELIMITER	2	C			Carriage Return/Line Feed

**Street FIPS Information: \*sf.txx – U.S.**

Field	Size	Type	Justify	Fill	Description
DYNAMAP_ID	10	C	r	zero	GDT nationwide unique segment ID
STATE00_L	2	C	l	zero	2000 FIPS state left
STATE00_R	2	C	f	zero	2000 FIPS state right
COUNTY00_L	3	C	f	zero	2000 FIPS county left
COUNTY00_R	3	C	r	zero	2000 FIPS county right
MCD00_L	5	C	f	zero	2000 FIPS MCD left
MCD00_R	5	C	f	zero	2000 FIPS MCD right
PLACE00_L	5	C	f	zero	2000 FIPS Place left
PLACE00_R	5	C	f	zero	2000 FIPS Place right
DELIMITER	2	C			Carriage Return/Line Feed

**Street FIPS Information: \*sf.txx – Canada**

Field	Size	Type	Justify	Fill	Description
DYNAMAP_ID	10	C	r	zero	Unique record number
STATE00_L	2	C	l	zero	Province code left
STATE00_R	2	C	f	zero	Province code right
COUNTY00_L	3	C	f	zero	Always '000'
COUNTY00_R	3	C	r	zero	Always '000'
MCD00_L	5	C	f	zero	GDT Delivery Area Locality left
MCD00_R	5	C	f	zero	GDT Delivery Area Locality right
PLACE00_L	5	C	f	zero	GDT Street Delivery Locality left
PLACE00_R	5	C	f	zero	GDT Street Delivery Locality right
DELIMITER	2	C			Carriage Return/Line Feed

**Toll File: \*tl.txx**

Field	Size	Type	Justify	Fill	Description
DYNAMAP_ID	10	C	r	sp	GDT nationwide unique segment ID
TOLL	1	C	f	sp	“Y” = toll
DELIMITER	2	C			Carriage Return/Line Feed

**Postal Code Boundary File (DIME format): <st>xx0pcb.txx**

Field	Size	Type	Justify	Fill	Description
LEFT STATE	2	C	r	zero	Left State FIPS or Province code
LEFT COUNTY	3	C	r	zero	US – County FIPS code CA – always ‘000’
LEFT POSTAL CODE	5	C	r	zero	Left Postal Code (ZIP or FSA)
BLANKS	3	C		sp	
RIGHT STATE	2	C	r	zero	Right State FIPS or Province code
RIGHT COUNTY	3	C	r	zero	US – County FIPS code CA – always ‘000’
RIGHT POSTAL CODE	5	C	r	zero	Right Postal Code (ZIP or FSA)
BLANKS	3	C		sp	
FROM LATITUDE	8	C	r	sp	From latitude value (implied 6 decimal degrees)
FROM LONGITUDE	9	C	r	sp	From longitude value (implied 6 decimal degrees)
TO LATITUDE	8	C	r	sp	To latitude value (implied 6 decimal degrees)
TO LONGITUDE	9	C	r	sp	To longitude value (implied 6 decimal degrees)
DELIMITER	2	C			Carriage Return/Line Feed

**Postal Code Inventory File <st>xx0pci.txx**

Field	Size	Type	Justify	Fill	Description
STATE	2	C			State FIPS or Province code
POSTAL	5	C	l		5 digit (ZIP) or 3 digit (FSA) postal code
ENC_POSTAL	5	C			Enclosing ZIP or FSA
AREA_MI	9 or 10	C			Area in square miles, 3 dec. deg. precision (Area_Mi size=9 for US; 10 for Canada)
GEOLAT	8	C			Geometry-based Latitude, 6 dec. deg. precision
GEOLON	9	C			Geometry-based Longitude, 6 dec. deg. precision
DELLAT	8	C			Delivery-based Latitude, 6 dec. deg. precision
DELLON	9	C			Delivery-based Longitude, 6 dec. deg. precision
NAME	28	C	l		ZIP or FSA name
PC_TYPE	1	C			Postal code type
NAME_TYPE	1	C			Name Type
CTY1FIPS	3	C			US – County FIPS code 1 CA – always ‘000’
CTY2FIPS	3	C			US – County FIPS code 2 CA – always ‘000’
CTY3FIPS	3	C			US – County FIPS code 3 CA – always ‘000’
RPO_FLAG	1	C			RPO Flag (“R” or blank)
LASTL_FLAG	1	C			Lastline Flag

PT_LOC	1	C			Point Location (“A” for actual)
BLANKS	3	C			Blanks
DELIMITER	2	C			Carriage Return/Line Feed

**Place Boundary File (DIME format): <st>xx0plb.txx**

Field	Size	Type	Justify	Fill	Description
LEFT STATE	2	C	r	zero	Left State FIPS or Province code
LEFT COUNTY	3	C	r	zero	US - Left County FIPS CA – always ‘000’
LEFT PLACE CODE	5	C	r	zero	US - Left Place code CA – Left SDL code
BLANKS	5	C		sp	
RIGHT STATE	2	C	r	zero	Right State FIPS or Province code
RIGHT COUNTY	3	C	r	zero	US - Right County FIPS CA – always ‘000’
RIGHT PLACE CODE	5	C	r	zero	US - Right Place code CA – Right SDL code
BLANKS	5	C		sp	
FROM LATITUDE	8	C	r	sp	From latitude value (implied 6 decimal degrees)
FROM LONGITUDE	9	C	r	sp	From longitude value (implied 6 decimal degrees)
TO LATITUDE	8	C	r	sp	To latitude value (implied 6 decimal degrees)
TO LONGITUDE	9	C	r	sp	To longitude value (implied 6 decimal degrees)
DELIMITER	2	C			Carriage Return/Line Feed

**Populated Locality Inventory File: <st>xx0pli.txx**

Field	Size	Type	Justify	Fill	Description
NAME	40	C	L		Cleaned name
KEY	10	C	L	zero	US – State FIPS, County FIPS, Place code CA – Province code, ‘000’, SDL code
CAPITAL	1	C	F	sp	“Y” = State Capital (inc. DC & PR)
POPULATION	10	C	R	sp	Population (if available)
LONGITUDE	10	C	R	sp	Longitude (leading - implied 6 decimal places)
LATITUDE	9	C	F		Latitude (leading + implied 6 decimal places)
DELIMITER	2	C			Carriage Return/Line Feed

**County Dime File Record Layout: <st>xx0cyb.txx – U.S.**

Field	Size	Type	Justify	Fill	Description
LEFT STATE FIPS CODE	2				State FIPS code Left
LEFT COUNTY FIPS CODE	3				County FIPS code Left
BLANKS	10				
RIGHT STATE FIPS CODE	2				State FIPS code Right
RIGHT COUNTY FIPS CODE	3				County FIPS code Right
BLANKS	10				
FROM LATITUDE	8				From latitude value (implied 6 decimal degrees)
FROM LONGITUDE	9				From longitude value (implied 6 decimal degrees)
TO LATITUDE	8				To latitude value (implied 6 decimal degrees)
TO LONGITUDE	9				To longitude value (implied 6 decimal degrees)
DELIMITER	2				Carriage return/line feed

**County Inventory File Record Layout: <st>xx0cyi.txx – U.S.**

Field	Size	Type	Justify	Fill	Description
STATE FIPS CODE	2				State FIPS code
COUNTY FIPS CODE	3				County FIPS code
BLANKS	13				
STATE ABBREVIATION	2				State abbreviation
COUNTY NAME	28				Full County name
AREA CALCULATION	11				Decimal point in position 56
BLANK	1				
CENTROID LATITUDE	9				Unsigned, decimal point in position 63
CENTROID LONGITUDE	11				Signed, decimal in position 74
DELIMITER	2				Carriage return/line feed

**State Dime File Record Layout: <nt>xx0stb.txx**

Field	Size	Type	Justify	Fill	Description
LEFT STATE FIPS CODE	2	C	r	zero	State FIPS, Province code Left
BLANKS	13	C		zero	
RIGHT STATE FIPS CODE	2	C	r	zero	State FIPS, Province code Right
BLANKS	13	C		sp	
FROM LATITUDE	8	C	r	sp	From latitude value (implied 6 decimal degrees)
FROM LONGITUDE	9	C	r	sp	From longitude value (implied 6 decimal degrees)
TO LATITUDE	8	C	r	sp	To latitude value (implied 6 decimal degrees)
TO LONGITUDE	9	C	r	sp	To longitude value (implied 6 decimal degrees)
DELIMITER	2	C			Carriage return/line feed

**State Inventory File Record Layout: <nt>xx0sti.txx**

Field	Size	Type	Justify	Fill	Description
STATE FIPS CODE	2				State FIPS, Province code
BLANKS	16				
STATE ABBREVIATION	2				State/Province abbreviation
STATE NAME	28				
AREA CALCULATION	11				Decimal point in position 56
BLANK	1				
CENTROID LATITUDE	9				Unsigned, decimal point in position 63
CENTROID LONGITUDE	11				Signed, decimal in position 74
DELIMITER	2				Carriage return/line feed

**Nation MID File Record Layout: woxx0ntb.\***

Field	Size	Decimal	Type	Justify	Description
NATION NAME	50	-	C	l	Nation Name
NATION ABBR.	2	-	C	f	Nation Abbr

# Auxiliary Files

# 8

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*In This Section:*

- *Name Correspondence File*
- *Geographic Entity Name File (GENF)*

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## ***Name Correspondence File - USA Only***

The Name Correspondence file (**dynaname.dbf** or **dynaname.txt**) provides a quick reference to relate state and county abbreviations and FIPS codes to county names. File layout is shown below.

Field	Width	Type	Description
STATE	2	C	State abbreviation
COUNTY	20	C	County name
FIPS	5	C	State and county FIPS
DYNA_NAME	6	C	State abbreviation and first four letters of county name

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## ***Geographic Entity Name File (GENF)***

See [Geographic Entity Name File](#) on this Documentation CD.

# If You Need Help

# 9

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## *In This Section:*

- *If You Need Help*

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## ***If You Need Help***

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### ***Correction Policy***

Our geographic data files are made as accurately as possible. If you find a problem, please contact us.

All corrections and problems are noted and examined as soon as possible. GDT makes every attempt to include any new information in the next product update.

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### ***Customer Support***

If you have any questions about the files you have purchased, or are having difficulties with them, please call the GDT Customer Support Help Line at:

**1-800-331-7881 or 1-603-643-0330**

or contact us through the Internet at:

<http://www.geographic.com/support/supform.cfm>

Hours are Monday through Friday from 9:00 a.m. to 5:00 p.m., Eastern Standard Time.

Please have the following information available when you call:

- The product name and version number
- The format you received (for example, ArcInfo)
- The GDT Order Number (on the Packing Slip).

#### **Contact Information:**

Customer Support  
Geographic Data Technology, Inc.  
11 Lafayette Street  
Lebanon, NH 03766-1445

Phone: 1-800-331-7881 or 1-603-643-0330

Fax: 1-603-643-6808

e-mail: [support@gdt1.com](mailto:support@gdt1.com)



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***In This Section:***

- *Appendix A: Dynamap File Codes*
- *Reference Documentation*

## Appendix A: Dynamap File Codes

The following codes appear in the Dynamap product line.

### SOURCE CODES

The original digital source of the line segment, such as a Census Bureau 1980 GBF/DIME-File or a USGS 1:100,000-scale DLG-3 file.

Code	Description
(Blank)	Non documented
A	1980 GBF/DIME-File
B	USGS 1:100,000-Scale DLG-3 File
C	Other USGS Map
J	Pre-1990 Census Updates
K	Post-1990 Census Updates (1990-1994)
L	Pre-Census 2000 Local Official Updates (1995-Census 2000)
M	Pre-Census 2000 Field Operations (1995-Census 2000)
N	Pre-Census 2000 Office Update Operations (1995-Census 2000)
O	Post-Census 2000 (2000-2002)

### DIRECTION CODES

Note: Direction Codes “O”, “NO”, and “SO” do not apply to U.S. GDT data.

Code	Description
(Blank)	No Directional
N	North, Norte, Nord
S	South, Sur, Sul, Sud
E	East, Este, Leste, Est
W	West,
O	Ouest, Occidental
NE	Northeast, Nordestal, Nordeste, Nord-est
NW	Northwest
NO	Nord-ouest, Noroeste
SE	Southeast, Suroriental, Sudeste, Sud-est
SW	Southwest
SO	Sud-ouest, Sudoeste

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## **Reference Documentation**

See [GDT Transportation Reference Documentation](#) on this Documentation CD for links to detailed information on:

- Abbreviations for Street Designators
  - Dynamap Definitions and Statistics
  - Feature Class Codes
  - Hours of Operation (HOO)
  - State and County FIPS Codes
  - Metadata
  - GDT Abbreviations - Canada
  - Province and Territory Codes and Abbreviations
- ... and more.