

OFFICE OF MANAGEMENT AND BUDGET

Economic Classification Policy Committee: Standard Industrial Classification Replacement--The North American Industry Classification System Proposed Industry Classification Structure

AGENCY: Office of Management and Budget, Executive Office of the President.

ACTION: Notice of solicitation of comments for North American Industry Classification System industries.

SUMMARY: Under Title 44 U.S.C. 3504, the Office of Management and Budget (OMB) is seeking public comment on a series of notices documenting the development of the new North American Industry Classification System (NAICS), the industry classification system being proposed to replace the current Standard Industrial Classification (SIC) system. All Federal agencies that collect establishment-based data are expected to utilize the new system.

This notice, the fourth related to preparation of NAICS and the second in a series seeking comment on proposed industry structures, presents the proposed industry structure for the NAICS subsectors listed in the Supplementary Information section below.

OMB is seeking comments on the usefulness and advisability of the proposed new NAICS subsectors submitted by the Economic Classification Policy Committee (ECPC), an interagency committee established by OMB. Subsequent **Federal Register** notices will seek comment on other industry sector and subsector proposals. A final **Federal Register** notice will include the entire NAICS structure for public comment. NAICS is being developed in cooperation with Statistics Canada and Mexico's Instituto Nacional de Estadística, Geografía e Informática (INEGI). The new

NAICS system provides common industry definitions for Canada, Mexico, and the United States to facilitate economic analyses that cover the economies of the three North American countries. The three country collaboration on an industry classification system for North America was announced for public comment in the **Federal Register**, July 26, 1994, pp. 38092-38096.

The July 26, 1994, **Federal Register** notice includes the concepts for the new system, as developed by Statistics Canada, Mexico's INEGI, and ECPC. It also includes a copy of the joint statement of the three countries' statistical agencies regarding the development of NAICS. That agreement includes the following principles:

(1) NAICS will be erected on a production-oriented, or supply-based, conceptual framework. This means that producing units that use identical or similar production processes will be grouped together in NAICS.

(2) The system will give special attention to developing production-oriented classifications for (a) new and emerging industries, (b) service industries in general, and (c) industries engaged in the production of advanced technologies.

(3) Time series continuity will be maintained to the extent possible. However, changes in the economy and proposals from data users must be considered. In addition, adjustments will be required for sectors where the United States, Canada, and Mexico presently have incompatible industry classification definitions in order to produce a common industry system for all three North American countries.

(4) The system will strive for compatibility with the 2-digit level of the International Standard Industrial Classification of All Economic Activities (ISIC, Rev.

3) of the United Nations.

ECPC Report No. 3 -- Summary of Public Responses to the Proposed New North American Industry Classification Industry System provides a summary of public comments

received in response to the July 26, 1994, **Federal Register** notice.

A notice was published in the **Federal Register**, July 26, 1995, pp.38436-38452, requesting comment on proposed industry structures for petroleum and coal product manufacturing, chemical manufacturing, and rubber and plastic manufacturing; for broadcasting and telecommunications; and for food services and drinking places and accommodations.

DATES: To ensure consideration and response to all comments on the proposals set forth in this notice, comments must be in writing and should be submitted as soon as possible, but no later than April 8, 1996. The proposed industry system would become effective in the U.S. on January 1, 1997.

ADDRESSES: Correspondence about the industry proposals of the NAICS structure announced in this **Federal Register** notice should be sent to: Carole A. Ambler, Coordinator, Economic Classification Policy Committee, Bureau of the Census, U.S. Department of Commerce, Room 2633-3, Washington, DC 20233, telephone number: (301) 457-2668, FAX number: (301) 457-1343.

Copies of all ECPC issues papers and ECPC reports are available by contacting Jack E. Triplett, Chairman, Economic Classification Policy Committee, Bureau of Economic Analysis (BE-42), U.S. Department of Commerce, Washington, DC 20230,

telephone number: (202) 606-9615, FAX number: (202) 606-5311.

ELECTRONIC AVAILABILITY AND COMMENTS: This document is available on the Internet from the Census Bureau via WWW browser, ftp, and E-mail.

To obtain this document via WWW browser, connect to “<http://www.census.gov>” then select “Economy,” then select “Economy-Wide Programs,” then select “NAICS Documents.”

To obtain this document via ftp, log in to <ftp.census.gov> as anonymous, and retrieve the file “prop01.txt” from the “/pub/epcd/naics” directory. (That directory also contains previous NAICS Federal Register Notices and related documents.)

To obtain this document via Internet E-mail, send a message to majordomo@census.gov with the body text as follows: “get gatekeeper prop01.txt”. The document will be delivered as a message attachment.

Comments may be sent via Internet E-mail to the Census Bureau at naics@census.gov (do not include any capital letters in the address). Comments received at this address by the date specified above will be included as part of the official record.

FOR FURTHER INFORMATION CONTACT: Carole A. Ambler, Coordinator, Economic Classification Policy Committee, Bureau of the Census, U.S. Department of Commerce, Room 2633-3, Washington, DC 20233, telephone number: (301) 457-2668, FAX number: (301) 457-1343.

SUPPLEMENTARY INFORMATION:

Structure of Notice: There are seven parts to this notice. PART I includes the proposals for crop production, animal production, forestry and logging, fishing, hunting and trapping, and support activities for agriculture; PART II includes textile mills, textile product mills, apparel manufacturing, and leather and allied product manufacturing; PART III includes food and kindred product manufacturing and beverage and tobacco product manufacturing; PART IV includes fabricated metal product manufacturing; PART V includes machinery manufacturing; PART VI includes electrical equipment, appliance, and component manufacturing; PART VII includes transportation equipment manufacturing.

Each of the seven parts of the notice is organized into two sections. The first section includes a copy of the proposed agreement signed by ECPC, Statistics Canada, and INEGI; the structure of NAICS; and an explanation of the structure. For a number of reasons, NAICS industries do not always provide as much industry detail as has been present in the U.S. SIC. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries. The second section of the notice includes the U.S. detailed industries within NAICS and two comparison tables showing the differences between the 1987 SIC and the 1997 NAICS with United States detail.

NAICS is organized in a hierarchical structure much like the existing SIC. The first digit of a NAICS code designates the sector. The code also designates 2-digit

subsectors, 3-digit industry groups, and 4-digit industries. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries. The proposed United States NAICS system, for example, would include 5-digit industries. These represent important industries in the U.S. that cannot be recognized in the statistical systems of either Canada or Mexico because of size restrictions, confidentiality or other reasons.

The NAICS numbering system is still under development; therefore the hierarchical structure is displayed in this document with X's representing the following:

X Industry Sector.

XX Industry Subsector.

XXX Industry Group.

XXXX Industry.

XXXXX U.S. National Industry.

The terms “Industry Sector” and “Industry Subsector” are changes from the terms “Division” and “Major Group” used in the 1987 SIC manual.

Time Series Summary

The standard approach to preserving time series continuity after classification revisions is to create linkages where the series break. This is accomplished by producing the data series using both the old and new classifications for a given period of transition. With the dual classifications of data, the full impact of the revision can be

assessed. Data producers then may measure the reallocation of the data at aggregate industry levels and develop a concordance between the new and old series for that given point in time. The concordance creates a crosswalk between the old and new classification systems. This link between the 1987 U.S. SIC and NAICS (with U.S. national detail) will be developed by the statistical agencies in the U.S.

Outreach Activities

OMB and the Economic Classification Policy Committee (ECPC) are seeking comments on the proposed NAICS structure for the industries described in this notice.

In carrying out its mandate to ensure maximum public participation in the process of constructing NAICS, the ECPC has already discussed many of these industry proposals with industry and user groups and will continue to do so. In addition, the ECPC is replying on a flow basis as soon as the work is completed for industry subsectors to previous **Federal Register** notices. Thus, this **Federal Register** notice supplements other ECPC public outreach activities in the development of NAICS.

Part I--Proposed New Industry Structure for Crop Production; Animal Production; Forestry and Logging; Fishing, Hunting, and Trapping; and Support Activities for Agriculture and Forestry

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 4

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Crop Production

Animal Production

Forestry and Logging

Fishing, Hunting, and Trapping

Support Activities for Agriculture and Forestry

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users. Comments received will be shared among the countries and additional discussions will be held before a final decision on the structure is made. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries. This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held on August 30, 1995 - September 1, 1995 in Washington, DC.

Accepted:

Signature

Date

Canada	/S/	Jacob Ryten	9/1/95
Mexico	/S/	Enrique Ordaz	9/1/95
United States	/S/	Jack E. Triplett	9/1/95

ATTACHMENT 1--NAICS STRUCTURE

XX	Crop Production
XXX	Grain and Oilseed Farming
XXXX	Wheat Farming
XXXX	Corn Farming
XXXX	Rice Farming
XXXX	Other Grain Farming
XXXX	Soybean Farming
XXXX	Oilseed Farming, except Soybean Farming
XXXX	Dry Pea and Bean Farming
XXX	Root, Tuber, and Peanut Farming
XXXX	Potato Farming
XXXX	Peanut and Other Root and Tuber Farming
XXX	Vegetable and Melon Farming
XXXX	Vegetable and Melon Farming
XXX	Tree Nut and Fruit Farming
XXXX	Orange Groves

XXXX	Other Citrus Groves
XXXX	Tree Nut and Noncitrus Fruit Farming
XXX	Greenhouse, Nursery, and Floriculture Production
XXXX	Food Crops Grown Under Cover
XXXX	Nursery and Floriculture Production
XXX	Other Crop Farming
XXXX	Tobacco Farming
XXXX	Cotton Farming
XXXX	Sugarcane Farming
XXXX	Hay Farming
XXXX	All Other Crop Farming
XX	Animal Production
XXX	Cattle Ranching and Farming
XXXX	Beef Cattle Ranching and Farming, Including Feedlots
XXXX	Dairy Cattle and Milk Production
XXXX	Dual-Purpose Cattle Ranching and Farming
XXX	Hog and Pig Farming
XXXX	Hog and Pig Farming
XXX	Poultry Production
XXXX	Chicken Egg Production
XXXX	Broiler and Other Meat-Type Chicken Production
XXXX	Turkey Production
XXXX	Poultry Hatcheries and Other Poultry Production

XXX	Sheep and Goat Farming
XXXX	Sheep Farming
XXXX	Goat Farming
XXX	Animal Aquaculture
XXXX	Animal Aquaculture
XXX	Other Animal Production
XXXX	Apiculture
XXXX	Horses and Other Equine Production
XXXX	Fur-Bearing Animal and Rabbit Production
XXXX	All Other Animal Production
XX	Forestry and Logging
XXX	Timber Tract Operations
XXXX	Timber Tract Operations
XXX	Forest Nurseries and Gathering of Forest Products
XXXX	Forest Nurseries and Gathering of Forest Products
XXX	Logging
XXXX	Logging
XX	Fishing, Hunting, and Trapping
XXX	Fishing
XXXX	Fishing
XXX	Hunting and Trapping
XXXX	Hunting and Trapping
XX	Support Activities for Agriculture And Forestry

XXX	Support Activities for Crop Production
XXXX	Support Activities for Crop Production
XXX	Support Activities for Animal Production
XXXX	Support Activities for Animal Production
XXX	Support Activities for Forestry
XXXX	Support Activities for Forestry

Attachment 2--North American Industry Classification System

Draft Classification for:

Crop Production

Animal Production

Forestry and Logging

Fishing, Hunting, and Trapping

Support Activities for Agriculture and Forestry

Representatives of the statistical agencies of Canada, Mexico, and the United States agree to a draft industry classification for these industries.

The draft classification applies to the five subsectors, Crop Production; Animal Production; Forestry and Logging; Fishing, Hunting, and Trapping; and Support Activities for Agriculture and Forestry. These subsectors are sub-divided into twenty industry

groups and forty-three industries. The subsectors are part of the Agriculture, Forestry, Fishing, Hunting, and Trapping sector of the classification.

A General Outline

The Crop Production industries involve growing crops mainly for food and fiber. The industries are grouped by similarity of production activity, biological and physiological characteristics, and economic requirements. The length of growing season, degree of crop rotation, extent of input specialization, labor requirements, and capital demands were taken into account when developing the industry structure. The production process is typically completed when the raw product or commodity grown reaches the "farm gate" for market or point of first sale or price determination.

The subsector Animal Production involves raising animals. These animals are kept for eventual sale and gain in product value. The animals may be raised in various environments, from total confinement or captivity to controlled grazing on open range pasture.

The Forestry and Logging subsector involves timber tract and other forest operations. A distinction has been made for the length of the production cycle for wood products. The production of short rotation woody crops such as cut Christmas trees and cottonwoods for pulpwood are considered to be agricultural crop production, and so have been placed in Nursery and Floriculture Production. The typical life cycle of this process is ten years or less. On the other hand, timber production often requires

fifty years.

The Fishing, Hunting, and Trapping subsector includes establishments engaged in the harvesting of animals in a natural habitat. Activities involving the raising of animals in captivity for eventual sale or market are classified in Animal Production, e.g., Animal Aquaculture, Fur-bearing Animal and Rabbit Production, and so forth.

The Support Activities for Agriculture and Forestry include activities that support growing crops, raising animals and producing forest products. These activities are in a separate agricultural, forestry, fishing, hunting, and trapping subsector. These establishments provide an alternative source of inputs required for the production process for a given crop, animal, or forestry industry.

Limitations and Constraints of the Classification

There are some analytical needs that cannot be met by an industry classification. There are needs for information on the total production of various agriculture commodities. However, because of vertical integration and multiple activities occurring at a single farm, an industry classification system will not provide this information. For example, wine-making establishments that produce their own grapes will be included in the Wines, Brandy and Brandy Spirits industry not the Tree Nut and Noncitrus Fruit Farming industry.

Though the industries are defined by similarities in the types and quantities of inputs per unit of output used in production, data users should be aware that certain differences in technologies and cultivating or production practices exist within

industries.

There are a few factors that constrained the structure and detail of the classification in the area under consideration. In the Crop and Animal Production subsectors, most activities present in one country exist in the others. However, often an activity is not economically significant to the same degree in all countries due to factors such as climate and soil conditions. For example, cotton cannot be grown in Canada. Further, data for some significant activities cannot be published for a particular country for reasons of confidentiality. Finally, the way activities are combined in establishments differs to some extent in the different countries.

Economic significance in each country also influenced the development of the classification structure. For example, apple production is significant in the three countries but fruit production, excluding apples in Canada, is too small for separate publication at the industry level. Each country will publish additional categories that comprise subdivisions of the NAICS industries to present data for activities that are nationally significant.

Relationship with ISIC

Most 4-digit NAICS industries in these subsectors are contained within Division 01, Agriculture, Hunting and Related Service Activities of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. Data tabulated using NAICS can be retabulated according to ISIC with one exception: Tree Nut and Noncitrus Fruit Farming cannot be assigned to an

ISIC division without being sub-divided since integrated grape growing and wine manufacturing are classified in ISIC as an agricultural activity and in NAICS as a manufacturing activity.

Some Changes to the National Classifications

For Canada, Mexico, and the United States, an industry group is created for root, tuber, and peanut farming. The grouping includes industry activities for potatoes, sugar beets, peanuts, and other root-type crops, except vegetables. Canada previously classified these establishments in field crops and the U.S. in field crops, except cash grains. In Mexico, the industries were classified in CMAP 111102 or 111103 as short-cycle crops.

Support Activities for Agriculture and Forestry is redefined for Canada, Mexico, and the United States. This subsector contains the following industry groups: Support Activities for Crop Production, Support Activities for Animal Production, and Support Activities for Forestry. The CSIC Major Group 02, Service Industries Incidental to Agriculture, is included in the NAICS Support Activities subsector with some exceptions, namely veterinary services, companion animal services except breeding, certain research activities, and selected activities related to ornamental plants. For Mexico, the activities included in this subsector are moved from CMAP 971010. For the United States, support activities include 1987 SIC Industry Group 085, Forestry Services, and 1987 SIC Major Group 07, Agricultural Services, with the exception of veterinary services, landscape and horticultural services, animal specialty services,

except breeding and equine support activities.

For the United States, cotton ginning has been moved to Miscellaneous Manufacturing as a separate 4-digit NAICS industry. Cotton ginning is the mechanical process of removing the seed from the cotton lint. The activity generally takes place “off the farm” at a cotton gin.

For Canada and the U.S., the new industry group Grain and Oilseed Farming constitutes a change in the crop production structure. It essentially replaces the CSIC industry group Field Crop Farms and the 1987 SIC Industry Group 011, Cash Grains.

Orange Groves are a separate crop farming industry for Mexico and the United States. Historically, Mexico and the U.S. classified these establishments in Growing of Fruit Trees and Citrus Fruits, respectively.

Canadian Poultry and Egg Farms and Mexican Poultry Farms are disaggregated into Chicken Egg Production, Broiler and Other Meat-type Chicken Production, and Turkey Production. These NAICS industries plus Poultry Hatcheries and Other Poultry Production form the industry group Poultry Production. The new industries reflect the structure and current production practices within each country.

Animal Aquaculture is a new industry for both Canada and Mexico. The Canadian industry, Services Incidental to Fishing, has been deleted since the other activities within the industry were either identified as non-existent or were more appropriately classified elsewhere. In Mexico, aquaculture has been moved from the fishing subsector 13 to Animal Production to be consistent with the production oriented principle. In the U.S., Fish Hatcheries and Preserves classified in 1987 SIC 0921 and

fish propagation in captivity are included in this industry group.

For Mexico, the CMAP class 111212 for hunting is moved to the NAICS subsector Fishing, Hunting, and Trapping.

For the U.S., a new industry will exist for apiculture.

The subsector Forestry and Logging includes logging, formerly in the U.S. Manufacturing 1987 SIC 2411. As a production activity, the harvesting of standing timber or logging is more similar to the harvesting of agricultural crops than the processing of harvested wood products, the primary activity of the 1987 SIC Major Group 24, Lumber and Wood Products, except Furniture. The production activity for the forestry industry is narrowly defined to be long-term timber growth. Short rotation timber growth and its harvesting is placed in the NAICS industry for Nursery and Floriculture Production.

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System. It is comprised of industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. In the main, the hierarchical structure of the classification also follows the production concept.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry, (4-digit) level of the structure. All countries agree on the definitions of

the industries.

Other objectives of the NAICS project such as the inclusion of new and emerging industries, service industries, and advanced technology producing industries were not as relevant in this area of the classification as in others. This is due to the relatively well established and technological stable nature of the agricultural and related subsectors.

The industries have high specialization ratios, and with the exception of citrus and cotton farming in Canada and dual purpose cattle farming in Canada and the United States, they are economically significant. Smaller industries are present because comparability is given priority over size. Finally, disruptions to time series have been kept to a minimum. Most of the changes to existing classifications are marginal. The major changes have been identified and can be taken into account in linking time series.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the three NAICS industry subsectors presented in *Part 1, Section A-- Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three

country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the five NAICS industry subsectors covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; L-null industry for the U.S.; N-new industry R-revised industry; and * means “part of”. The abbreviation NEC is used for Not Elsewhere Classified.

1997 NAICS and U.S. description	Status code	1987 SIC code	1987 SIC description
XX Crop Production			
XXX Grain and Oilseed Farming			
XXXX Wheat Farming	E	0111	Wheat General Farms, Primarily Crop (Wheat Farming)
XXXX Corn Farming	R	0115	Corn
		*0119	Cash Grain, NEC (Popcorn Farming)
XXXX Rice Farming	E	0112	Rice
XXXX Other Grain Farming	R	*0119	Cash Grains, NEC (Except Popcorn, Barley, Soybean, and Dry Pea and Bean)
			Soybeans
XXXX Soybean Farming	E	0116	Soybeans
XXXX Oilseed Farming, Except Soybean Farming	N	*0119	Cash Grains, NEC (Oilseed, Except Soybean)
XXXX Dry Pea and Bean Farming	N	*0119	Cash grains, NEC (Dry Pea and Bean)
XXX Root, Tuber, and Peanut Farming			
XXXX Potato Farming	E	0134	Irish Potatoes
XXXX Peanut and Other Root and Tuber Farming			
XXXXX Sugarbeet Farming	N	*0133	Sugar Cane and Sugar Beets (Sugarbeet Farming)
XXXXX Peanut Farming	N	*0139	Field crops, Except Cash Grains, NEC (Peanut Farming)
XXXXX Other Root and Tuber Farming	N	*0139	Field Crops, Except Cash Grains, NEC (Root and Tuber, Except Potato and Sugarbeet)
XXX Vegetable and Melon Farming			
XXXX Vegetable and Melon Farming	E	0161	Vegetables and Melons
XXX Tree Nut and Fruit Farming			
XXXX Orange Groves	N	*0174	Citrus Fruits (Orange Groves)
XXXX Other Citrus Groves	R	*0174	Citrus Fruits (Except, Orange Groves)
XXXX Tree Nut and Noncitrus Fruit Farming			
XXXXX Apple Orchards	N	*0175	Deciduous Tree Fruits (Apple)
XXXXX Grape Vineyards	E	0172	Grapes

XXXXX	Strawberry Farming	N	*0171	Berry Crops (Strawberry)
XXXXX	Other Berry Farming	R	*0171	Berry Crops (Except Strawberry)
XXXXX	Tree Nut Farming	E	0173	Tree Nuts
XXXXX	Other Noncitrus Fruit Farming	R	*0175	Deciduous Fruits (Except Apple)
			0179	Fruit and Tree Nuts, NEC
XXX	Greenhouse, Nursery and Floriculture Production			
XXXX	Food Crops Grown Under Cover			
XXXXX	Mushroom Production	N	*0182	Food Crop Grown Under Cover (Mushroom)
XXXXX	Other Food Crops Grown Under Cover	R	*0182	Food Crops Grown Under Cover (Except Mushroom)
XXXX	Nursery and Floriculture Production			
XXXXX	Nursery and Tree Production	N	*0181	Ornamental Nursery Products (Nursery Farming)
			*0811	Timber Tracts (Short Rotation Woody Crops)
XXXXX	Floriculture Production	N	*0181	Ornamental Nursery Products Farms (Floriculture Farming)
XXX	Other Crop Farming			
XXXX	Tobacco Farming	E	0132	Tobacco
XXXX	Cotton Farming	E	0131	Cotton
XXXX	Sugarcane Farming	N	*0133	Sugarcane and Sugar Beets (Sugarcane)
XXXX	Hay Farming	N	*0139	Field Crops, Except Cash Grains, NEC (Hay, Farming)
XXXX	All Other Crop Farming	R	*0139	Field Crops, Except Cash Grains, NEC (Except Root, Tuber, Peanut, and Hay)
			0191	General Farms, Primary Crop
			*0831	Forest Products (Maple Sap)
XX	Animal Production			
XXX	Cattle Ranching and Farming			
XXXX	Beef Cattle Ranching and Farming, Including			
	Feedlots			
XXXXX	Beef Cattle Ranching and Farming	E	0212	Beef Cattle, Except Feedlots (Cattle Farming)
XXXXX	Cattle Feedlots	E	0211	Beef Cattle Feedlots (Cattle Farming)
XXXX	Dairy Cattle and Milk Production	E	0241	Dairy Farms
XXXX	Dual Purpose Cattle Ranching and Farming	L		
XXX	Hog and Pig Farming			
XXXX	Hog and Pig Farming	E	0213	Hogs
XXX	Poultry Production			
XXXX	Chicken Egg Production	E	0252	Chicken Eggs
XXXX	Broilers and Other Meat Type Chicken	E	0251	Broiler, Fryer, and Roaster Chickens
	Production			
XXXX	Turkey Production	E	0253	Turkeys and Turkey Eggs

XXXX	Poultry Hatcheries and Other Poultry Production				
XXXXX	Poultry Hatcheries	E	0254	Poultry Hatcheries	
XXXXX	Other Poultry Production	E	0259	Poultry and Eggs, NEC	
XXX	Sheep and Goat Farming				
XXXX	Sheep Farming	N	*0214	Sheep and Goats (Sheep)	
XXXX	Goat Farming	N	*0214	Sheep and Goats (Goat)	
XXX	Animal Aquaculture				
XXXX	Animal Aquaculture				
XXXXX	Finfish Production	N	*0273	Animal Aquaculture (Finfish)	
			*0921	Fish Hatcheries and Preserve (Finfish Hatcheries)	
XXXXX	Shellfish Production	N	*0273	Animal Aquaculture (Shellfish)	
			*0921	Fish Hatcheries and Preserve (Shellfish Hatcheries)	
XXXXX	Other Animal Aquaculture	R	*0273	Animal Aquaculture (Except Finfish and Shellfish)	
XXX	Other Animal Production				
XXXX	Apiculture	N	*0279	Animal Specialties, NEC (Apiculture)	
XXXX	Horse and Other Equine Production	E	0272	Horse and Other Equine	
XXXX	Fur-Bearing Animal and Rabbit Production	E	0271	Fur-Bearing Animals and Rabbits	
XXXX	All Other Animal Production	R	0219	General Livestock NEC	
			*0279	Animal Specialties, NEC (Except Apiculture)	
			0291	General Farms, Primarily Animals	
XX	Forestry and Logging				
XXX	Timber Tract Operations				
XXXX	Timber Tract Operations	R	*0811	Timber Tracts (Long Term Timber Farming)	
XXX	Forest Nurseries and Gathering of Forest Products				
XXXX	Forest Nurseries and Gathering of Forest Products	E	*0831	Forest Products (Forest Products, Except Maple Sap)	
XXX	Logging				
XXXX	Logging	E	2411	Logging	
XX	Fishing, Hunting, and Trapping				
XXX	Fishing				
XXXX	Fishing				
XXXXX	Finfish Fishing	E	0912	Finfish	
XXXXX	Shellfish Fishing	E	0913	Shellfish	
XXXXX	Other Marine Fishing	E	0919	Miscellaneous Marine Products	
XXX	Hunting and Trapping				
XXXX	Hunting and Trapping	E	0971	Hunting and Trapping, and Game Propagation	
XX	Support Activities for Agriculture and Forestry				
XXX	Support Activities For Crop Production				
XXXX	Support Activities For Crop Production				
XXXXX	Soil Preparation, Planting, and Cultivating	R	0711	Soil Preparation Services	

XXXXX	Crop Harvesting, Primarily by Machine	E	0721	Crop Planting, Cultivating, and Protecting
XXXXX	Postharvest Crop Activities	E	0722	Crop Harvesting, Primarily by Machine
XXXXX	Farm Labor Contractors and Crew Leaders	E	0723	Crop Preparation Services For Market
			0761	Farm Labor Contractors
XXX	Support Activities For Animal Production			
XXXX	Support Activities For Animal Production	N	*0751	Livestock Services, Except Veterinary
			*0752	Animal Specialty Services, Except Veterinary
			*7699	Repair Services, NEC (Farriers)
XXX	Support Activities for Forestry			
XXXX	Support Activities for Forestry	E	0851	Forestry Services

TABLE 2

The abbreviation “pt” means “part of”. @ means time series break has been created that is greater than 3% of the 1992 revenues for the 1987 SIC industry.

1987 SIC code	1987 SIC description	1997 U.S. description
0111	Wheat	Wheat Farming
0112	Rice	Rice Farming
0115	Corn	Corn Farming
0116	Soybeans	Soybean Farming
0119	Cash Grains, NEC	
	Dry Pea and Bean Farms	Dry Pea and Bean Farming
	Oilseed, Except Soybean Farms	Oilseed Farming, Except Soybean Farming
	Popcorn Farms	Corn Farming
	Other Farms	All Other Grain Farming
0131	Cotton	Cotton farming
0132	Tobacco	Tobacco Farming
0133	Sugarcane and Sugar Beets	
	Sugarbeet	Sugarbeet Farming
	Sugarcane	Sugarcane Farming
0134	Irish Potatoes	Potato Farming
0139	Field Crops, Except Cash Grains, NEC	
	Hay, Farms	Other Hay Farming
	Peanut Farming	Peanut Farming
	Root and Tuber, Except Potato, Farms	Other Root and Tuber Farming
	Other Field Crop Farms	All Other Crop Farming
0161	Vegetables and Melons	Vegetable and Melon Farming
0171	Berry Crops	
	Strawberry Farms	Strawberry Farming
	Other Berry Farms	Other Berry Farming
0172	Grapes	Grape Vineyards
0173	Tree Nuts	Tree Nut Farming
0174@	Citrus Fruits	
	Orange Groves and Farms	Orange Groves
	Other Citrus Groves and Farms	Other Citrus Groves
0175	Deciduous Tree Fruits	
	Apple Orchard and Farms	Apple Orchards
	Other Farms	Other Noncitrus Fruit Farming (pt)

0179@	Fruits and Tree Nuts, NEC	Other Noncitrus Fruit Farming (pt)
0181@	Ornamental Nursery Products	
	Floriculture Farming	Floriculture Production
	Nursery Farming	Nursery and Tree Production (pt)
0182	Food Crops Grown Under Cover	
	Mushroom, Growing Of	Mushroom Production
	Other Food Crops Grown Under Cover	Other Food Crops Grown Under Cover
0191@	General Farms, Primarily Crop	All Other Crop Farming (pt)
0211	Beef Cattle Feed Lots	Cattle Feedlots
0212	Beef Cattle, Except Feedlots	Beef Cattle Ranching and Farming
0213	Hogs	Hog and Pig Farming
0214	Sheep and Goats	
	Sheep Farms	Sheep Farming
	Goat Farms	Goat Farming
0219@	General Livestock, NEC	All Other Animal Production (pt)
0241	Dairy Farms	Dairy Cattle and Milk Production
0251	Broiler, Fryers, and Roaster Chickens	Broilers and Other Meat-Type Chicken Production
0252	Chicken Eggs	Chicken Egg Production
0253	Turkey and Turkey Eggs	Turkey Production
0254	Poultry Hatcheries	Poultry Hatcheries
0259	Poultry and Eggs, NEC	Other Poultry Production
0271	Fur-Bearing Animals and Rabbits	Fur-Bearing Animal and Rabbit Production
0272	Horses and Other Equines	Horses and Other Equine Production
0273	Animal Aquaculture	
	Finfish Farming	Finfish Production
	Shellfish Farming	Shellfish Production
	Other Animal Aquaculture	Other Animal Aquaculture (pt)
0279@	Animal Specialities, NEC	
	Apiculture	Apiculture
	Other	All Other Animal Production (pt)
0291@	General Farms, Primarily Animal	All Other Animal Production (pt)
0711	Soil Preparation Services	Soil Preparation, Planting and Cultivating (pt)
0721	Crop Planting and Protecting	Soil Preparation, Planting and Cultivating (pt)
0722	Crop Harvesting	Crop Harvesting, Primarily By Machine
0723	Crop Preparation Services For Market	Postharvest Crop Activities
0724	Cotton Ginning	Cotton Ginning (Included in Miscellaneous Manufacturing
		subsector)
0741	Veterinary Service For Livestock	Veterinary Services(pt) (Included in Services to be shown
		later)

0742	Veterinary Services, Specialties	Veterinary Service (pt) (Included in Services to be shown later)
0751@	Livestock Services, Except Veterinary Custom Slaughtering	Animal Slaughtering and Processing (pt) (Included in Food Manufacturing subsector)
0752@	Other Livestock Service, Except Veterinary Animal Specialty Service Horses and Equines Services and Animal Production Breeding Other Specialty Animal Services	Support Activities For Animal Production (pt) Support Activities For Animal Production (pt) Animal Specialty Services, Except Veterinary (pt) (Included in Services to be shown later)
0761 0762@	Farm Labor Contractors Farm Management Services Animal Production Management Services Crop Production Management Services	Farm Labor Contractors and Crew Leaders Support Activities For Animal Production (pt) Included with the particular crop production industries they serve
0781	Landscape Counseling and Planning	Included in Services and Construction Industries to be shown later
0782	Lawn and Garden Services	Included in Services and Construction Industries to be shown later
0783	Ornamental Shrub and Tree Services	Included in Services and Construction Industries to be shown later
0811@	Timber Tracts Short Rotation Woody Crops Long Term Crops	Nursery and Tree Production (pt) Timber Tract Operations
0831@	Forest Products Maple Sap Other Forest Products	All Other Crop Production (pt) Forest Nurseries and Gathering of Forest Products
0851	Forestry Services	Support Activities For Forestry
0912	Finfish	Finfish Production
0913	Shellfish	Shellfish Production
0919	Miscellaneous Marine Products	Other Animal Aquaculture
0921@	Fish Hatcheries and Preserves Finfish Hatcheries	Finfish Production (pt)

Shellfish Hatcheries
Fish Preserves

Shellfish Production (pt)
Nature Parks and Similar Institutions (pt) (Included in

Museums, Historical Sites and Similar Institutions subsector

0971

Hunting, Trapping, Game Propagation

to be shown later)
Hunting and Trapping

Description of Changes to the U. S. System

A number of the changes listed in this section were made for reasons of international comparability. Where one or more of the three North American countries had different definitions of an industry classification, adjustments to the definitions in one or more countries were required. In constructing NAICS, the three countries agreed to move, where change was required to attain international comparability, in the direction of the country or countries whose existing classification definitions most closely corresponded to the production-oriented concept adopted for NAICS. Cases where the U.S. changed are listed below; other cases where Canada or Mexico moved toward the U.S. classification are not, of course, listed in this section.

Crop Production - There were 13 new industries added to the 1997 industry structure in this industry subsector. New industries were created for:

Oilseed Farming, Except Soybean Farming and Dry Pea and Bean Farming from part of 1987 SIC 0119, Cash Grains, NEC, in response to a proposal and to achieve international comparability.

Sugarbeet Farming and Sugarcane Farming from 1987 SIC 0133, Sugar Cane and Sugar Beets, to recognize significant industries with unique production processes and to achieve international comparability.

Peanut Farming, Other Root and Tuber Farming, and Hay Farming from part of 1987 SIC 0139, Field Crops, Except Cash Grains, NEC, to recognize industries with unique production processes and to achieve international comparability.

Orange Groves from part of 1987 SIC 0174, Citrus Fruits, to recognize an existing large industry with a unique production process.

Apple Orchards from part of 1987 SIC 0175, Deciduous Tree Fruits, to recognize an existing large industry with a unique production process.

Strawberry Farming from part of 1987 SIC 0171, Berry Crops, to recognize an existing large berry industry.

Mushroom Production from part of 1987 SIC 0182, Food Crop Grown Under Cover, in response to a data user's proposal and to achieve international comparability.

Nursery and Tree Production from part of 1987 SIC 0181, Ornamental Nursery Product, and part of 1987 SIC 0811, Timber Tract Operations, to achieve international comparability.

Floriculture Production from part of 1987 SIC 0181, Ornamental Nursery Products, to recognize an existing large industry with a unique production process.

Two activities were transferred into the 1997 Crop Production subsector.

Short rotation woody crops (e.g., Christmas trees) farming was transferred from part of 1987 SIC 0811, Timber Tracts, into Nursery and Tree Production, in response to a proposal and because of similar production processes. Christmas trees and other woody products life cycle is typically less than ten years in contrast to trees growing in forests with a much longer growth cycle.

Maple sap gathering was transferred from part of 1987 SIC 0831, Forest Products, into All Other Crop Production in response to an industry proposal. The production of maple syrup at the site where maple sap is gathered is included in All Other Crop Production

while the production of maple syrup at a separate location is in the Manufacturing sector of NAICS.

Also, there were several activities that transferred within the crop production industry group. The number of crop production industries increased from 20 in 1987 to 29 in 1997. For time series linkage, 16 of the 20 1987 industries are comparable within three percent of the 1997 industries.

Animal Production - There were five new industries added to the 1997 industry structure for this industry subsector. New industries were created for:

Sheep Farming and Goat Farming from 1987 SIC 0214, Sheep and Goats, to achieve international comparability with Mexico.

Finfish Production and Shellfish Production from part of 1987 SIC 0273, Animal Aquaculture, to recognize emerging industries with unique production processes.

Apiculture from part of 1987 SIC 0279, Animal Specialties, NEC, to achieve international comparability.

Dual Purpose Cattle Ranching and Farming will be a null industry for the United States.

One activity transferred into the 1997 Animal Production industry subsector.

Fish Hatcheries were transferred from 1987 SIC 0921, Fish Hatcheries and Preserves, into Animal Aquaculture, to reflect a production process for fish propagated in captivity.

A few activities were transferred within the animal production industry group. The number of animal production industries increased from 16 in 1987 to 19 in 1997. For time series linkage, 13 of the 16 1987 industries are comparable within three percent

of the 1997 industries.

Forestry and Logging - Three activities were transferred out of the 1987 Major Group 08, Forestry.

Short rotation woody crops (e.g., Christmas trees) were transferred from part of 1987 SIC 0811, Timber Tracts, into Nursery and Tree Production to reflect similar production processes based on the length of the commodities growth cycle.

Maple sap gathering was transferred from part of 1987 SIC 0831, Forest Products, into part of All Other Crop Production in response to an industry proposal.

1987 SIC 0851, Forestry Services, was transferred into the 1997 Support Activities for Crop and Animal Production and Forestry subsector, to reflect similar production support processes.

One activity was transferred into 1997 Forestry and Logging Industry subsector.

1987 SIC 2411, Logging, was transferred into this subsector because the production process is more clearly aligned to forestry and for international comparability.

The number of 1997 forestry and logging industries remained unchanged at three from 1987. For time series linkage, only one of the three 1987 industries are comparable within three percent of the 1997 industries.

Fishing, Hunting, and Trapping - Two activities were transferred out of the 1987 Major Group 09, Fishing, Hunting, and Trapping.

Fish hatcheries were transferred from part of 1987 SIC 0921, Fish Hatcheries and Preserves, into Finfish Hatcheries and Shellfish Hatcheries, to reflect production processes for fish propagated in captivity.

Fish preserves were transferred from part of 1987 SIC 0921, Fish Hatcheries and Preserves, into 1997 NAICS Museums, Historical Sites and Similar Institutions subsector, to reflect similar production processes.

Also, there were several activities that transferred within the fishing, hunting and trapping industries. The number of fishing, hunting, and trapping industries decreased from five in 1987 to four in 1997. For time series linkage, four of the 1987 industries are comparable within three percent of the 1997 industries.

Support Activities for Agriculture and Forestry - There was one new industry added to the industry structure for this subsector. An industry was created for:

Support Activities for Animal Production from part of 1987 SIC 0751, Livestock Services, Except Veterinary; 0752, Animal Specialty Services, Except Veterinary; and 7699, Repair Services, NEC, to reflect similar production processes.

Eight activities were transferred out of 1987 SIC Major Group 07, Agriculture Services.

Cotton Ginning was transferred into the NAICS Miscellaneous Manufacturing subsector, to achieve international comparability with Mexico.

Veterinary Services for Livestock, 1987 SIC 0741, and Veterinary Services for Animal Specialties, 1987 SIC 0742, will be combined and transferred into one of the 1997 services industry subsectors, to achieve international comparability. Also, the services require very specialized input and highly skilled workers not found in other support activities for animal production.

Custom slaughtering was transferred from part of 1987 SIC 0751, Livestock Services, Except Veterinary, into the 1997 manufacturing industry subsector Food Product Manufacturing, to reflect a similar production process.

Animal Specialty Services, Except Veterinary were transferred from part of 1987 SIC 0752, Animal Specialty Services, Except Veterinary, into one of the new service industry subsectors, to reflect unique production processes. Services for horses and equines and activities related to breeding of animals will be in Support Activities for Animal Production.

Farm Management Services, 1987 SIC 0762, will be integrated with the particular crop production industries they serve. For example, “citrus grove management and maintenance” will be classified with Orange Groves or Other Citrus Groves, depending on the crop managed. If there is not a dominant cropping activity, crop farm management services will be placed with the 4-digit NAICS industry, All Other Crop Farming. Activities are grouped together that have similar production processes.

Landscape architects and landscape planning was transferred from part of 1987 SIC 0781, Landscape Counseling and Planning, into 1997 NAICS subsector, Professional, Technical, and Scientific Services, to reflect similar production processes involving similar inputs and particularly skills in architecture and planning.

Garden planning horticulture advisory and counseling services were transferred from part of 1987 SIC 0781, Landscape Counseling and Planning, into one of the 1997 services industries, to achieve international comparability and separate out non-crop production activities.

Lawn and garden care services, excluding installation and initial planting activities were transferred from part of 1987 SIC 0782, Lawn and Garden Services, and 1987 SIC 0783, Ornamental Shrub and Tree Service, was transferred partly into one of the new 1997 services industries. Lawn and garden installation and initial planting of materials were transferred into the Construction Industries sector, to reflect similar production processes. Also, this achieves international comparability with Canada that now divides these industries between construction and services.

Two activities were transferred into the NAICS Support Activities for Agriculture and Forestry subsector.

1987 SIC 0851, Forestry Services, were transferred into the industry group, Support Activities for Forestry, to reflect similar production processes, i.e., support activities for agriculture and forestry.

Farriers (Blacksmith Shops) were transferred from part of 1987 SIC 7699, Repair Services, NEC, into the industry group, Support Activities for Animal Production, to achieve international comparability. This activity provides direct support to the animal production subsector.

Also, there were several activities that transferred within the support activities for crop and animal production and forestry industries. The number of support activities for crop and animal production and forestry industry decreased from 14 in 1987 to 6 in 1997. For time series linkage, 11 of the 14 1987 industries are comparable within three percent of the 1997 industries.

Part II--Proposed New Industry Structure for Textile Mills, Textile Product Mills, Apparel Manufacturing, Leather and Allied Product Manufacturing.

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 5

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Textile Mills

Textile Product Mills

Apparel Manufacturing

Leather and Allied Product Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users . For the apparel industries only, each country may develop a different national structure. These structures must, however, permit each country to aggregate to the NAICS structure in Attachment 1. Each country's detailed apparel structure is shown in Attachment 3. Comments received

will be shared among the countries and discussions held before a final decision on the structure is made. This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held June 22 and 23, 1995 in Ottawa, Canada.

Accepted:	Signature	Date
Canada	/S/ Jacob Ryten	6/ 23/95
Mexico	/S/ Enrique Ordaz	6/23/95
United States	/S/ Jack E. Triplett	6/23/95

ATTACHMENT 1--NAICS STRUCTURE

XX	Textile Mills
XXX	Fiber, Yarn and Thread Mills
XXXX	Fiber, Yarn and Thread Mills
XXX	Fabric Mills
XXXX	Broadwoven Fabric Mills
XXXX	Narrow Fabric Mills and Schiffli Machine Embroidery
XXXX	Nonwoven Fabric Mills
XXXX	Knit Fabric Mills
XXX	Textile and Fabric Finishing and Fabric Coating Mills
XXXX	Textile and Fabric Finishing Mills
XXXX	Fabric Coating Mills
XX	Textile Product Mills
XXX	Textile Furnishings Mills
XXXX	Carpet and Rug Mills
XXXX	Curtain and Linens Mills
XXX	Miscellaneous Textile Product Mills
XXXX	Textile Bags and Canvas Mills
XXXX	Other Miscellaneous Textile Product Mills

XX	Apparel Manufacturing
XXX	Cut and Sew Apparel Manufacturing
XXXX	Outerwear Manufacturers and Jobbers
XXXX	Underwear and Nightwear Manufacturers and Jobbers
XXXX	Cut and Sew Apparel Contractors
XXX	Apparel Knitting Mills
XXXX	Hosiery and Socks Mills
XXXX	Other Apparel Knitting Mills
XXX	Apparel Accessories and Other Apparel Manufacturing
XXXX	Apparel Accessories and Other Apparel Manufacturing
XX	Leather And Allied Product Manufacturing
XXX	Leather and Hide Tanning and Finishing
XXXX	Leather and Hide Tanning and Finishing
XXX	Footwear Manufacturing
XXXX	Footwear Manufacturing
XXX	Miscellaneous Leather and Allied Product Manufacturing
XXXX	Miscellaneous Leather and Allied Product Manufacturing

Attachment 2--North American Industry Classification System

Draft Classification for:

Textile Mills

Textile Product Mills

Apparel Manufacturing

Leather and Allied Product Manufacturing

Representatives of the statistical agencies of Canada, Mexico and the United States agree to a draft industry classification for these industries.

The draft classification provides for four subsectors; Textile Mills; Textile Product Mills; Apparel Manufacturing; and Leather and Allied Product Manufacturing. These groups are further sub-divided into eleven industry groups and twenty industries. The subsectors will be part of the Manufacturing sector of the NAICS classification.

A General Outline

Textile Mills comprise a group of industries that transform a basic fiber (natural or synthetic) into a product that is further manufactured into usable items such as apparel, sheets and towels, and textile bags for individual or industrial consumption. The main processes in this subsector include preparation and spinning of fiber, knitting or weaving of fabric, and finally the finishing of the textile. The NAICS structure

follows and captures this process flow. Major industries in this flow such as preparation of fibers, weaving of fabric, knitting of fabric, and fiber and fabric finishing are uniquely identified. Texturizing, throwing, twisting, and winding of yarn contains aspects of both fiber preparation and fiber finishing. In the end, the decision was to class these with preparation of fibers rather than with finishing of fiber.

The subsector Textile Product Mills includes the production of textile products, except apparel. With a few exceptions, processes used in these industries are generally "cut and sew," i.e., purchasing fabric and cutting and sewing to make a non-apparel textile product such as sheets and towels. By creating a separate subsector, the classification more accurately reflects both the production aspect and the strong desire for a separate identification for these activities by many data users.

The Apparel Manufacturing subsector consists of establishments with two distinct manufacturing processes: (1) "cut and sew" as described above and (2) the manufacture of garments in establishments that first knit fabric and then cut and sew the fabric into a garment. Knitting, when done alone, is classified in the Textile Mills subsector, but when knitting is combined with the production of complete garments, the production processes are similar to those in Apparel Manufacturing. The three countries agreed to establish separate subsectors for Textile Product Mills and Apparel Manufacturing. These groupings allow for the unique identification at a high classification level for Apparel Manufacturing, an extremely important international trade grouping.

The subsector Leather and Allied Product Manufacturing consists of transforming hides into leather by tanning or curing, and fabricating the leather into products for

final consumption. It also includes the manufacture of certain other, similar products from other materials, including products other than apparel made from "leather substitutes", such as rubber, plastic, or textiles. Rubber footwear, textile luggage, and plastic purses or wallets are examples of "leather substitute" products included in this group. The products made from leather substitutes are produced in similar ways as are the leather products (luggage, for example) and they are made in the same establishments so it is not practical to separate them. The inclusion of leather production in this subsector is partly because leather tanning is a relatively small industry that has few close neighbors as a production process, partly because leather is an input to some of the other products classified in this subsector, and partly for historical reasons.

Limitations and Constraints of the Classification

There are some analytical needs that cannot be met by this industry classification. For example, there is a need in the U.S. and Canada for data for separate statistics for men's and women's apparel, even though overlap of production exists for many specific clothing items. This cannot be accommodated by NAICS because of differences in the way apparel production is organized in Canada, Mexico, and the U.S. Specifically, in Mexico, producers of children's wear are not specialized according to gender as they are in the U.S. and Canada. It is therefore, not possible for Mexico to create separate industries for men's and boys' versus women's and girls'. Canada and the U.S., on the other hand, can recognize this distinction and in the

national detail of the two countries, these groupings are recognized. Moreover, Mexico requires that uniforms be grouped together in a single industry; in the U.S. and Canada, production of men's uniforms is usually separate from production of women's uniforms. Additionally, size constraints prohibit separation of some activities in Canada. For example, Canada cannot support a separate men's work clothing industry.

These differences in the way apparel production is organized in the three countries also greatly limits the number of NAICS industries that can be defined in this subsector. As a result, NAICS industries have been defined at a rather highly aggregated level (e.g., outerwear) because only at these levels of aggregation will it be possible to publish comparable data across all three countries. Therefore, the three countries agreed that each country will publish more detailed national industries that meet their respective national needs for data on apparel. For the apparel industries only, each country may develop a different national structure. These structures must, however, permit each country to aggregate to the NAICS structure shown in Attachment 1. Attachment 3 shows each country's detailed national structure for apparel.

For users requiring detailed commodity information, each country will publish information on products of these industries. Efforts also are underway to harmonize the commodity classifications to allow comparability of these statistics.

An issue related to the coding structure is the ability to publish, and the economic significance of the items defined in the classification. In the apparel industry, most activities that were identified in one country exist in the others. However, often an activity is not economically significant to the same degree in all countries. Further,

data for some significant activities cannot be published for a particular country because of confidentiality rules. Finally, the way activities are combined in establishments differs to some extent in the different countries. A structure could have been developed that specified such activities in NAICS, but the resulting statistical tables for any given country would have numerous insignificant or suppressed entries. For example, Canada cannot support a separate men's work clothing industry because of size. It was preferable to adopt an operating rule for this industry subsector that the NAICS industries must be economically significant and publishable. It is anticipated that each country will publish additional categories that comprise sub-divisions of NAICS industries to present data for activities that are nationally significant.

Relationship to ISIC

The new NAICS structure for textiles, apparel, and leather does not match the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3). The ISIC divisions covered by these NAICS subsectors are: Division 17, Manufacture of Textiles; Division 18, Manufacture of Wearing Apparel: Dressing and Dyeing of Fur; and Division 19, Tanning and Dressing of Leather; Manufacture of Luggage, Handbags, Saddlery, Harness and Footwear. Within ISIC, apparel made from fabric made in the same establishment is classified in one division and that made from fabric made by another establishment is classified in a different division. Within ISIC, both manufacturing of primary textiles and made-up textile products are classified in the same division while in NAICS these functions have been

separated into two subsectors.

However, of the twenty one NAICS 4-digit industries in these subsectors, only four do not fall within a single ISIC Division. The four that do not, cross two ISIC divisions.

Moreover, the majority of the NAICS industries created fall within a single 4-digit ISIC industry.

Some Changes to the National Classifications

This section highlights some of the significant changes to existing national classifications.

In Textile Mills, the NAICS structure following the production flow resulted in a major restructuring for Canada. Every new national industry in Canada will have some change. For the United States, the main industry change involves moving finishing of fiber, yarn, thread, and wool fabric into separate classifications. The United States converters of non knit (woven) fabric also were moved to manufacturing. In Mexico, the changes were minor.

The subsector Textile Product Mills contains no major changes for any of the three countries. In NAICS, all three countries moved curtains and draperies made from purchased materials to this grouping.

The major change for Mexico and the U. S. for all NAICS industries in Apparel Manufacturing was the classification of cut and sew contracting into a separate NAICS

industry group. The fact that cut and sew apparel contractors make women's dresses one week and women's blouses the next or make men's shirts one week and men's pants the next results in difficulties in classifying establishments. In addition, these contractors are typically small, thus causing additional difficulties in classifying these establishments. Classifying all contractors together eases the data collection process. Creating a separate contracting industry for apparel results in a change in virtually every U.S. (13) and Mexican (6) apparel manufacturing industry. Canada already recognizes apparel contracting in its current structure. It should be noted that Mexico will continue to collect and publish a combined industry (including contractors) for the cut and sew area, but will publish separate NAICS for this industry. The U.S. Census Bureau has published information in the past on cut and sew contractors. This information will be used as a bridge to link the 1997 Economic Census data based on NAICS to data that would have been published on the 1987 SIC basis. This link will provide data users essential information for time series comparability.

Achievement of Objectives

The classification meets the objectives for the NAICS. It is comprised of industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. In the main, the hierarchical structure of the classification also follows the production concept.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at

the industry level of the structure. All countries agree on the detailed definitions of the industries.

Other objectives of the NAICS project are not as relevant in this area of the classification as in others. These objectives are the delineation of new and emerging industries, service industries, and industries engaged in the production of advanced technologies. The industry subsector in question is relatively mature, generally produces goods, and has employed relatively stable technology. Therefore, the emphasis was on the objectives listed above.

The industries have high specialization ratios, and they are economically significant. The detail and structure of the classification are balanced in size. This enhances the classification's suitability for sampling, data-publishing and other aspects of survey operations. For Textile Mills and Textile Product Mills, disruptions to time series have been kept to a minimum. In Apparel Manufacturing, however, the establishment of a separate industry for cut and sew contractors results in a change for the U.S. to nearly all of the existing apparel industries. A link between the old and new industries will be provided where possible.

Attachment 3--Individual Country Structure for Apparel Manufacturing--

NAICS Description

CANADA

XX	Apparel Manufacturing
XXX	Men's and Boys' Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Shirt, including Work Shirt Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Trouser, Slack and Jean, including Work Clothing Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Other Outerwear Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturers and Jobbers
XXX	Women's and Girls' Cut and Sew Apparel Manufacturers and Jobbers

XXXX	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Dress Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket and Skirt Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Other Outerwear Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Lingerie, Loungewear and Nightwear Manufacturers and Jobbers
XXX	Other Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Infants' Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Fur and Leather Apparel Manufacturers and Jobbers
XXXX	All Other Cut and Sew Apparel Manufacturers and Jobbers
XXX	Cut and Sew Apparel Contractors
XXX	Apparel Knitting Mills
XXXX	Hosiery and Socks Mills
XXXX	Other Apparel Knitting Mills
XXX	Apparel Accessories and Other Apparel Manufacturing
XXXX	Apparel Accessories and Other Apparel Manufacturing
MEXICO	
XX	Apparel Manufacturing

XXXXXX	Making up of mass-produced men's outerwear
XXXXXX	Making up of made-to-measure men's outerwear
XXXXXX	Making up of mass-produced women's outerwear
XXXXXX	Making up of women's made-to-measure outerwear
XXXXXX	Making up of shirts
XXXXXX	Making up of uniforms
XXXXXX	Making up of men's wear from leather, hides and synthetics
XXXXXX	Making up of women's wear from leather, hides and synthetics
XXXXXX	Making up of children's outerwear
XXXXXX	Making up of other outerwear
XXXXXX	Making up of foundation garments
XXXXXX	Making up of other innerwear
XXXXXX	Manufacture of hats, caps, etc.
XXXXXX	Manufacture of hats, caps, etc., from palm and other hard fibers
XXXXXX	Manufacture of gloves, ties, scarves, etc.

UNITED STATES

XX	Apparel Manufacturing
XXX	Men's and Boys' Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Shirt, except Work Shirt Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Trouser, Slack, and Jean

	Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Work Clothing Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Other Outerwear Manufacturers and Jobbers
XXXX	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturers and Jobbers
XXX	Women's and Girls' Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Dress Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket and Skirt Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Other Outerwear Manufacturers and Jobbers
XXXX	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturers and Jobbers
XXX	Other Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Infants' Cut and Sew Apparel Manufacturers and Jobbers
XXXX	Fur and Leather Apparel Manufacturers and Jobbers
XXXX	All Other Cut and Sew Apparel Manufacturers and Jobbers

XXX	Cut and Sew Apparel Contractors
XXXX	Men's and Boys' Apparel Contractors
XXXX	Women's and Girls' Apparel Contractors
XXX	Apparel Knitting Mills
XXXX	Hosiery and Socks Mills
XXXXX	Sheer Hosiery Mills
XXXXX	Other Hosiery and Socks Mills
XXXX	Other Apparel Knitting Mills
XXXXX	Outerwear Knitting Mills
XXXXX	Underwear and Nightwear Knitting Mills
XXX	Apparel Accessories and Other Apparel Manufacturing
XXXX	Hat, Cap, and Millinery Manufacturing
XXXX	Glove and Mitten Manufacturing
XXXX	Men's and Boys' Neckwear Manufacturing
XXXX	Apparel Belt, Apparel Accessories, and Other Apparel Manufacturing

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the three NAICS industry subsectors presented in *Part I, Section A-- Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the three NAICS industry subsectors covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; N-new industry; R-revised industry; and * means "part of". The abbreviation NEC is used for Not Elsewhere Classified.

1997 NAICS and U.S. description		Status code	1987 SIC code	1987 SIC description
XX	Textile Mills			
XXX	Fiber, Yarn, and Thread Mills			
XXXX	Fiber, Yarn, and Thread Mills			
XXXXXX	Yarn Spinning Mills	R	2281	Yarn Spinning Mills
			*2299	Textile Goods, NEC (Yarn of Hard Fiber)
			*3999	Manufacturing Industries NEC (Yarn of Animal Hair)
XXXXXX	Yarn Texturing, Throwing, and Twisting Mills	R	*2282	Throwing and Winding Mills (Except Spooling Purchased)
XXXXXX	Thread Mills	R	*2284	Thread Mills (Except Finishing)
			*2299	Textile Goods, NEC (Thread of Hard Fiber)
			*3999	Manufacturing Industries NEC (Thread of Animal Hair)
XXX	Fabric Mills			
XXXX	Broadwoven Fabric Mills	N	2211	Broadwoven Fabric Mills, Cotton
			2221	Broadwoven Fabric Mills, Manmade
			*2231	Broadwoven Fabric Mills, Wool (Except Wool Finishing)
			*2299	Textile Goods, NEC (Broadwoven Fabrics of Hard Fiber)
XXXX	Narrow Fabric Mills and Schiffli Machine Embroideries			
XXXXXX	Narrow Fabric Mills	R	2241	Narrow Fabric Mills
			*2299	Textile Goods, NEC (Narrow Fabric of Hard Fiber)
XXXXXX	Schiffli Machine Embroideries	E	2397	Schiffli Machine Embroideries
XXXX	Nonwoven Fabric Mills	R	2297	Nonwoven Fabrics
			*2299	Textile Goods, NEC (Nonwoven Felt)
XXXX	Knit Fabric Mills			
XXXXXX	Weft Knit Fabric Mills	R	*2257	Weft Knit Fabric Mills (Except Finishing)
			*2259	Knitting Mills NEC (Finished Articles)
XXXXXX	Other Knit Fabric and Lace Mills	R	*2258	Lace and Warp Knit Fabric Mills (Except Finishing)
			*2259	Knitting Mills NEC (Finished Articles)

XXX	Textile and Fabric Finishing and Fabric Coating Mills			
XXXX	Textile and Fabric Finishing Mills			
XXXXX	Broadwoven Fabric Finishing Mills	N	*2231	Broadwoven Fabric Mills, Wool (Wool Broadwoven Fabric Finishing)
			2261	Finishing Plants, Cotton
			2262	Finishing Plants, Manmade
			*2269	Finishing Plants, NEC (Linen Fabric Finishing)
			*5131	Piece Goods and Notions (Broadwoven Converters)
XXXXX	Textile and Fabric Finishing Mills, except Broadwoven Fabric	N	*2231	Broadwoven Fabric Mills, Wool (Wool Finishing except Broadwoven Fabric)
			2257	Weft Knit Fabric Mills (Finishing)
			*2258	Lace and Warp Knit Fabric Mills (Finishing)
			*2269	Finishing Plants, NEC (Except Linen Fabric Finishing)
			*2282	Throwing and Winding Mills (Yarn Finishing)
			*2284	Thread Mills (Thread Finishing)
			*2299	Textile Goods, NEC (Finishing Yarn/Thread of Hard Fibers)
			*5131	Piece Goods and Notions (Converters, Except Broadwoven and Knit)
XXXX	Fabric Coating Mills	R	2295	Coated Fabrics, Not Rubberized
			*3069	Fabricated Rubber Products, NEC (Rubberized Fabric)
XX	Textile Product Mills			
XXX	Textile Furnishings Mills			
XXXX	Carpet and Rug Mills	E	2273	Carpets and Rugs
XXXX	Curtain and Linen Mills			
XXXXX	Curtain and Drapery Mills	E	2391	Curtains and Draperies
XXXXX	Other Household Textile Product Mills	R	*2392	Housefurnishings, NEC (Except Mops and Bags)
XXX	Miscellaneous Textile Product Mills			
XXXX	Textile Bags and Canvas Mills			
XXXXX	Textile Bag Mills	R	*2392	Housefurnishings, NEC (Blanket and Laundry Bags)
			2393	Textile Bags
XXXXX	Canvas and Related Product Mills	E	2394	Canvas and Related Products
XXXX	Other Miscellaneous Textile Product Mills			
XXXXX	Rope, Cordage and Twine Mills	E	2298	Cordage and Twine
XXXXX	Tire Cord and Tire Fabric Mills	E	2296	Tire Cord and Fabrics
XXXXX	All Other Miscellaneous Textile Product Mills	R	*2259	Knitting Mills, NEC (Except Apparel)
			*2299	Textile Goods, NEC (Other Textile Products)
			*2395	Pleating and Stitching (Except Apparel Contractors)

				*2396	Automotive and Apparel Trimmings (Textile Products Except
					Automotive Trim and Printing on Apparel)
				*2399	Fabricated Textile Products, NEC (Except Apparel, Automotive
					Seat Belts, and Seat Covers)
XX	Apparel Manufacturing				
XXX	Men's and Boys' Cut and Sew Apparel Manufacturers and				
	Jobbers				
XXXX	Men's and Boys' Cut and Sew Shirt, except Work Shirt	R		*2321	Men's and Boys' Shirts (Except Contractors)
	Manufacturers and Jobbers				
				*2361	Girls' and Children's Dresses, Blouses (Boys' Except
					Contractors)
XXXX	Men's and Boys' Cut and Sew Trouser, Slack, and Jean	R		*2325	Men's and Boys' Trousers and Slacks (Except Contractors)
	Manufacturers and Jobbers				
				*2369	Girls' and Children's Outerwear, NEC (Boys' Except
					Contractors)
XXXX	Men's and Boys' Cut and Sew Work Clothing	R		*2326	Men's and Boys' Work Clothing (Except Contractors)
	Manufacturers and Jobbers				
XXXX	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat	R		*2311	Men's and Boys' Suits and Coats (Except Contractors)
	Manufacturers and Jobbers				
				*2369	Girls' and Children's Outerwear, NEC (Boys' Except
					Contractors)
				*2385	Waterproof Outerwear (Men and Boys' Except Contractors)
XXXX	Men's and Boys' Cut and Sew Other Outerwear	R		*2329	Men's and Boys' Clothing, NEC (Except Contractors)
	Manufacturers and Jobbers				
				*2369	Girls' and Children's Outerwear, NEC (Boys' Except
					Contractors)
				*2385	Waterproof Outerwear (Except Contractors)
XXXX	Men's and Boys' Cut and Sew Underwear and Nightwear	R		*2322	Men's and Boys' Underwear and Nightwear (Except
	Manufacturers and Jobbers				Contractors)
				*2341	Women's and Children's Underwear (Boys' Except Contractors)
				*2369	Girls' and Children's Outerwear, NEC (Boys' Robes Except
					Contractors)
				*2384	Robes and Dressing Gowns (Men's Except Contractors)

XXX	Women's and Girls' Cut and Sew Apparel Manufacturers and Jobbers			
XXXX	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturers and Jobbers	R	*2331	Women's and Misses' Blouses and Shirts (Except Contractors)
			*2361	Girls' and Children's Dresses, Blouses (Girls' Except Contractors)
XXXX	Women's and Girls' Cut and Sew Dress Manufacturers and Jobbers	R	*2335	Women's, Juniors', and Misses' Dresses (Except Contractors)
			*2361	Girls' and Children's Dresses, Blouses (Girls' Except Contractors)
XXXX	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket and Skirt Manufacturers and Jobbers	R	*2337	Women's and Misses' Suits and Coats (Except Contractors)
			*2369	Girls' and Children's Outerwear, NEC (Girls' Except Contractors)
XXXX	Women's and Girls' Cut and Sew Other Outerwear Manufacturers and Jobbers	R	*2385	Waterproof Outerwear (Except Contractors)
			*2339	Women's and Misses' Outerwear, NEC (Except Contractors)
			*2369	Girls' and Children's Outerwear, NEC (Girls' Except Contractors)
XXXX	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear	R	*2385	Waterproof Outerwear (Women's and Girls' Except Contractors)
			*2341	Women's and Children's Underwear (Women and Girls' Except Contractors)
			2342	Bras, Girdles, and Allied Garments (Except Contractors)
			*2369	Girls' and Children's Outerwear, NEC (Girls' Except Contractors)
			*2384	Robes and Dressing Gowns (Women's Except Contractors)
			*2389	Apparel and Accessories, NEC (Garter Belts)
XXX	Other Cut and Sew Apparel Manufacturers and Jobbers			
XXXX	Infants' Cut and Sew Apparel Manufacturers and Jobbers	R	*2341	Women's and Children's Underwear (Infants' Except Contractors)
			*2361	Girls' and Children's Dresses, Blouses (Infants' Except Contractors)

			*2369	Girls' and Children's Outerwear, NEC (Infants' Except Contractors)
			*2385	Waterproof Outerwear (Infants' Except Contractors)
XXXX	Fur and Leather Apparel Manufacturers and Jobbers	N	2371	Fur Goods
			2386	Leather and Sheep-lined Clothing
XXXX	All Other Cut and Sew Apparel Manufacturers and Jobbers	R	*2329	Men's and Boys' Outerwear, NEC (Athletic Uniforms Except Contractors)
			*2339	Women's and Misses' Outerwear, NEC (Athletic Uniforms Except Contractors)
			*2385	Waterproof Outerwear (Except Contractors)
			*2389	Apparel and Accessories, NEC (Garments)
XXX	Cut and Sew Apparel Contractors			
XXXX	Men's and Boys' Cut and Sew Apparel Contractors	N	*2311	Men's and Boys' Suits and Coats (Contractors)
			*2321	Men's and Boys' Shirts (Contractors)
			*2322	Men's and Boys' Underwear and Nightwear (Contractors)
			*2325	Men's and Boys' Trousers and Slacks (Contractors)
			*2326	Men's and Boys' Work Clothing (Contractors)
			*2329	Men's and Boys' Clothing, NEC (Contractors)
			*2341	Women's and Children's Underwear (Boys' Contractors)
			*2361	Girls' and Children's Dresses, Blouses (Boys' Contractors)
			*2369	Girls' and Children's Outerwear, NEC (Boys' Contractors)
			*2384	Robes and Dressing Gowns (Men's Contractors)
			*2385	Waterproof Outerwear (Men's and Boy's Contractors)
			*2395	Pleating and Stitching (Men's and Boy's Contractors)
XXXX	Women's and Girls' Cut and Sew Apparel Contractors	N	*2331	Women's and Misses' Blouses and Shirts (Contractors)
			*2335	Women's, Juniors', and Misses' Dresses (Contractors)
			*2337	Women's and Misses' Suits and Coats (Contractors)
			*2339	Women's and Misses' Outerwear, NEC (Contractors)
			*2341	Women's and Children's Underwear (Women's and Girls' Contractors)
			*2342	Bras, Girdles, and Allied Garments (Contractors)
			*2361	Girls' and Children's Dresses, Blouses (Girls' Contractors)
			*2369	Girls' and Children's Outerwear, NEC (Girls' Contractors)
			*2384	Robes and Dressing Gowns (Women's Contractors)
			*2385	Waterproof Outerwear (Women's and Girls' Contractors)
			*2389	Apparel and Accessories, NEC (Contractors)
			*2395	Pleating and Stitching (Contractors)
XXX	Apparel Knitting Mills			
XXXX	Hosiery and Socks Mills			

XXXXXX	Sheer Hosiery Mills	R	2251	Women's Hosiery, except Socks
XXXXXX	Other Hosiery and Socks Mills	R	*2252	Hosiery, NEC (Girls' Hosiery)
XXXX	Other Apparel Knitting Mills			
XXXXXX	Outerwear Knitting Mills	R	2253	Knit Outerwear Mills
			*2259	Knitting Mills, NEC (Gloves and Mittens)
XXXXXX	Underwear and Nightwear Knitting Mills	E	2254	Knit Underwear Mills
			*2259	Knitting Mills, NEC (Girdles)
XXX	Apparel Accessories and Other Apparel Manufacturing			
XXXX	Hat, Cap, and Millinery Manufacturing	E	2353	Hats, Caps, and Millinery
XXXX	Glove and Mitten Manufacturing	R	2381	Fabric Dress and Work Gloves
			3151	Leather Gloves and Mittens
XXXX	Men's and Boys' Neckwear Manufacturing	E	2323	Men's and Boys' Neckwear
XXXX	Apparel Belt, Apparel Accessories and Other Apparel Manufacturing	N	*2339	Women's and Misses' Outerwear, NEC (Scarves)
			*2385	Waterproof Outerwear (Except Raincoats)
			2387	Apparel Belts
			*2389	Apparel and Accessories, NEC (Handkerchiefs, Arm Bands, etc.)
			*2396	Automotive and Apparel Trimmings (Apparel Findings and Trimming)
			*2399	Fabricated Textile Products, NEC (Except Automotive Seat Belts, Seat Covers, and Textile Products)
XX	Leather and Allied Product Manufacturing			
XXX	Leather and Hide Tanning and Finishing			
XXXX	Leather and Hide Tanning and Finishing	R	3111	Leather Tanning and Finishing
			*3999	Manufacturing Industries, NEC (Fur Dressing and Finishing)
XXX	Footwear Manufacturing			
XXXX	Footwear Manufacturing			
XXXXXX	Rubber and Plastic Footwear Manufacturing	E	3021	Rubber and Plastics Footwear
XXXXXX	House Slipper Manufacturing	E	3142	House Slippers
XXXXXX	Men's Footwear Manufacturing, except Athletic	E	3143	Men's Footwear, except Athletic
XXXXXX	Women's Footwear Manufacturing, except Athletic	E	3144	Women's Footwear, except Athletic
XXXXXX	Other Footwear Manufacturing	E	3149	Footwear except Rubber, NEC
XXX	Miscellaneous Leather and Allied Product Manufacturing			

XXXX	Miscellaneous Leather and Allied Product Manufacturing			
XXXXX	Luggage Manufacturing	E	3161	Luggage
XXXXX	Women's Handbag and Purse Manufacturing	E	3171	Women's Handbags and Purses
XXXXX	Other Miscellaneous Leather Good Manufacturing	R	*3131	Boot and Shoe Cut Stock and Findings(Except Wood Heels and Metal Buckles)
			3172	Personal Leather Goods, except Women's Handbags and Purses
			3199	Leather Goods, NEC

TABLE 2

The abbreviation “pt” means “part of”, @ means time series break has been created that is greater than 3% of the 1992 value of shipments for the 1987 SIC industry. The abbreviation NEC is used for Not Elsewhere Classified.

1987 SIC code	1987 SIC description	1997 U.S. description
2211@	Broadwoven Fabric Mills, Cotton	Broadwoven Fabric Mills (pt)
2221@	Broadwoven Fabric Mills, Manmade	Broadwoven Fabric Mills (pt)
2231@	Broadwoven Fabric Mills, Wool Except Finishing	Broadwoven Fabric Mills (pt)
	Except Finishing	Broadwoven Fabric Mills (pt)
	Finishing	Broadwoven Fabric Finishing Mills (pt)
2241	Narrow Woven Fabric Mills	Narrow Fabric Mills (pt)
2251@	Women's Hosiery, Except Socks	Sheer Hosiery Mills (pt)
2252 @	Hosiery, NEC	
	Girls' Hosiery	Sheer Hosiery Mills (pt)
	Socks	Other Hosiery and Socks Mills
2253@	Knit Outerwear Mills	Outerwear Knitting Mills (pt)
2254	Knit Underwear Mills	Underwear and Nightwear Knitting Mills
2257@	Weft Knit Fabric Mills	Weft Knit Fabric Mills
	Except Finishing	Weft Knit Fabric Mills
	Finishing	Textile and Fabric Finishing Mills Except Broadwoven Fabric (pt)
2258@	Lace and Warp Knit Fabric Mills	
	Except Finishing	Other Knit Fabric and Lace Mills
	Finishing	Textile and Fabric Finishing Mills, except Broadwoven Fabric (pt)

2259@	Knitting Mills, NEC	
	Knit Gloves and Mittens	Outerwear Knitting Mills (pt)
	Girdles	Underwear and Nightwear Knitting Mills (pt)
	Finished Articles of Weft Knit Fabric	Weft Knit Fabric Mills (pt)
	Finished Articles of Warp Knit Fabric	Other Knit Fabric and Lace Mills (pt)
2261@	Finishing Plants, Cotton	Broadwoven Fabric Finishing Mills (pt)
2262@	Finishing Plants, Manmade	Broadwoven Fabric Finishing Mills (pt)
2269@	Finishing Plants, NEC	
	Broadwoven Finishing	Broadwoven Fabric Finishing Mills (pt)
	Except Broadwoven Finishing	Textile and Fabric Finishing Mills, except Broadwoven Fabric (pt)
2273	Carpets and Rugs	Carpet and Rug Mills
2281@	Yarn Spinning Mills	Yarn Spinning Mills (pt)
2282@	Throwing and Winding Mills	
	Except Spooling Purchased Yarn	Yarn Texturing, Throwing and Twisting Mills
	Spooling Purchased Yarn	Textile and Fabric Finishing Mills, except Broadwoven Fabric (pt)
2284@	Thread Mills	
	Except Finishing	Thread Mills (pt)
	Finishing	Textile and Fabric Finishing Mills, Except Broadwoven Fabric (pt)
2295@	Coated Fabrics, Not Rubberized	Fabric Coating Mills (pt)
2296	Tire Cord and Fabrics	Tire Cord and Tire Fabric Mills
2297@	Nonwoven Fabrics	Nonwoven Fabric Mills (pt)
2298	Cordage and Twine	Rope, Cordage and Twine Mills
2299@	Textile Goods, NEC	
	Broadwoven Fabric of Hard Fibers	Broadwoven Fabric Mills (pt)
	Nonwoven Felt	Nonwoven Fabric Mills (pt)
	Finishing Hard Fiber Thread and Yarn	Textile and Fabric Finishing Mills, except Broadwoven Fabric (pt)

	Narrow Woven Fabric of Hard Fibers	Narrow Fabric Mills (pt)
	Thread of Hard Fibers	Thread Mills (pt)
	Yarn of Hard Fibers	Yarn Spinning Mills (pt)
	Other Textile Goods	All Other Miscellaneous Textile Product Mills (pt)
2311@	Men's and Boys' Suits and Coats	
	Contractors	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturers and Jobbers (pt)
	Except Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
2321@	Men's and Boys' Shirts	
	Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Except Contractors	Men's and Boys' Cut and Sew Shirt, except Work Shirt Manufacturers and Jobbers (pt)
2322@	Men's and Boys' Underwear and Nightwear	
	Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Except Contractors	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturers and Jobbers (pt)
2323	Men's and Boys' Neckwear	Men's and Boys' Neckwear
2325@	Men's and Boys' Trousers and Slacks	
	Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Except Contractors	Men's and Boys' Cut And Sew Trouser, Slack, And Jean Manufacturers and Jobbers (pt)
2326@	Men's and Boys' Work Clothing	
	Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Except Contractors	Men's and Boys' Cut and Sew Work Clothing Manufacturers and Jobbers

2329@	Men's and Boys' Clothing, NEC Contractors Except Contractors Athletic Uniforms	 Men's and Boys' Cut and Sew Apparel Contractors (pt) Other Men's and Boys' Cut and Sew Outerwear Manufacturers and Jobbers (pt) All Other Cut and Sew Apparel (pt)
2331@	Women's and Misses' Blouses and Shirts Contractors Except Contractors	 Women's and Girls' Cut and Sew Apparel Contractors (pt) Women's and Girls' Cut and Sew Blouse and Shirt Manufacturers and Jobbers (pt)
2335@	Women's, Junior's, and Misses' Dresses Contractors Except Contractors	 Women's and Girls' Cut and Sew Apparel Contractors (pt) Women's and Girls' Cut and Sew Dress Manufacturers and Jobbers (pt)
2337@	Women's and Misses' Suits and Coats Contractors Except Contractors	 Women's and Girls' Cut and Sew Apparel Contractors (pt) Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturers and Jobbers (pt)
2339@	Women's and Misses' Outerwear, NEC Scarves Contractors Except Contractors Athletic Uniforms	 Apparel Belt, Apparel Accessories and Other Apparel Manufacturing (pt) Women's and Girls' Cut and Sew Apparel Contractors (pt) Women's and Girls' Cut and Sew Outerwear Manufacturers and Jobbers (pt) All Other Cut and Sew Apparel Manufacturers and Jobbers (pt)
2341@	Women's Underwear	

	Women and Girls' Contractors	Women's and Girls' Cut and Sew Apparel contractors (pt)
	Boys' Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Women's and Girls', Except Contractors	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturers and Jobbers (pt)
	Boys' Except Contractors	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturers and Jobbers (pt)
	Infants'	Infants' Cut and Sew Apparel Manufacturers and Jobbers (pt)
2342@	Bras, Girdles, and Allied Garments Contractors	Women's and Girls' Cut and Sew Apparel Contractors (pt)
	Except contractors	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturers and Jobbers (pt)
2353	Hats, Caps, and Millinery	Hat, Cap, and Millinery Manufacturing
2361@	Girls' and Children's Dresses, Blouses	
	Infants' Dresses, Blouses, and Shirts	Infants' Cut and Sew Apparel Manufacturers and Jobbers (pt)
	Boys' Shirts	Men's and Boys' Cut and Sew Shirt, except Work Shirt Manufacturers and Jobbers (pt)
	Girls' Blouses and Shirts	Women's and Girls' Cut and Sew Blouse and Shirt Manufacturers and Jobbers (pt)
	Girls' Dresses	Women's and Girls' Cut and Sew Dress Manufacturers and Jobbers (pt)
	Girls' Contractors	Women's and Girls' Cut and Sew Apparel Contractors (pt)
2369@	Girls' and Children's Outerwear, NEC	
	Infants' Outerwear, NEC	Infants' Cut and Sew Apparel Manufacturers and Jobbers (pt)
	Boys' Suits and Coats	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturers and Jobbers (pt)

	Boys' Trousers and Slacks	Men's and Boys' Cut and Sew Trouser, Slack, and Jean Manufacturers and Jobbers (pt)
	Boys' Outerwear, NEC	Other Men's and Boys' Cut and Sew Outerwear Manufacturers and Jobbers (pt)
	Boys' Robes	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturers and Jobbers (pt)
	Boys' Contractors	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Girls' Suits, Coats, Skirts, Etc.	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturers and Jobbers (pt)
	Girls' Outerwear, NEC	Women's and Girls' Cut and Sew Outerwear Manufacturers and Jobbers (pt)
	Girls' Robes	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturers and Jobbers (pt)
	Girls' Contractors	Women's and Girls' Cut and Sew Apparel Contractors (pt)
2371	Fur Goods	Fur and Leather Apparel Manufacturing (pt)
2381@	Fabric Dress and Work Gloves	Glove and Mitten Manufacturing (pt)
2384@	Robes and Dressing Gowns	
	Women's Except Contractors	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturers and Jobbers (pt)
	Men's Except Contractors	Men's and Boys' Cut and Sew Underwear and Nightwear Manufacturers and Jobbers (pt)
	Men's and Boys' Contractors	Men's and Boys' Cut and Sew Apparel Contractors
	Women's and Girls' Contractors	Women's and Girls' Cut and Sew Apparel Contractors
2385@	Waterproof Outerwear	

	Raincoats (Men's and Boys')	Men's and Boys' Cut and Sew Suit, Coat, and Overcoat Manufacturers and Jobbers (pt)
	Raincoats (Women's and Girls')	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturers and Jobbers (pt)
	Other Men's and Boys' Outerwear	Men's and Boys' Cut and Sew Outerwear Manufacturers and Jobbers
	Other Women's and Girls' Outerwear	Women's and Girls' Cut and Sew Outerwear Manufacturers and Jobbers
	Infants' Waterproof Outerwear Except Contractors	Infants' Cut and Sew Apparel Manufacturers and Jobbers
	Aprons, Bibs, and Other Miscellaneous Waterproof Items	Apparel Belt, Apparel Accessories, and Other Apparel Manufacturing (pt)
	Contractors (Men's and Boys')	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Contractors (Women's and Girls')	Women's and Girls' Cut and Sew Apparel Contractors (pt)
2386@	Leather and Sheep-Lined Clothing	Fur and Leather Apparel Manufacturing (pt)
2387@	Apparel Belts	Apparel Belt, Apparel Accessories, and Other Apparel Manufacturing (pt)
2389@	Apparel and Accessories, NEC	
	Handkerchiefs, Arm bands, etc.	Apparel Belt, Apparel Accessories, and Other Apparel Manufacturing (pt)
	Academic/Clerical Outerwear	All Other Cut and Sew Outerwear Manufacturers and Jobbers (pt)
	Garters and Garter Belts	Women's and Girls' Cut and Sew Lingerie, Loungewear, and Nightwear Manufacturers and Jobbers (pt)
	Women's Contractors	Women's and Girls' Cut and Sew Apparel Contractors (pt)
	Men's Contractors	Mens' and Boys' Cut and Sew Apparel Contractors (pt)
2391	Curtains and Draperies	Curtain and Drapery Mills
2392@	Housefurnishings, NEC	

	Blanket and Laundry Bags	Textile Bag Mills (pt)
	Mops	Broom and Brush Manufacturing (pt)
	Other Housefurnishings	Other Household Textile Product Mills (pt)
2393@	Textile Bags	Textile Bag Mills (pt)
2394	Canvas and Related Product Mills	Canvas and Related Product Mills
2395@	Pleating and Stitching	
	Pleating and Stitching, Except Apparel Contractors	All Other Miscellaneous Textile Product Mills (pt)
	Apparel Contractors (Men's)	Men's and Boys' Cut and Sew Apparel Contractors (pt)
	Apparel Contractors (Women's)	Women's and Girls' Cut and Sew Apparel Contractors (pt)
	Automotive and Apparel Trimmings	
2396@		
	Apparel Findings and Trimmings	Motor Vehicle Fabric Accessory and Seat Manufacturing (pt) (Included in the Transportation Equipment Manufacturing subsector)
	Automotive Trimmings	Motor Vehicle Fabric Accessory and Seat Manufacturing (pt) (Included in the Transportation Equipment Manufacturing subsector)
	Printing On Apparel	Other Commercial Printing (Included in the Printing and Related Support Activities subsector)
	Other Trimmings and Findings	All Other Miscellaneous Textile Product Mills (pt)
2397	Schiffli Machine Embroideries	Schiffli Machine Embroideries
2399@	Fabricated Textile Products, NEC	
	Aprons, Money Belts, and Diapers	Apparel Belt, Apparel Accessories, and Other Apparel Manufacturing (pt)
	Seat Belts and Seat and Tire Covers	Motor Vehicle Fabric Accessory and Seat Manufacturing (pt) (Included in the Transportation Equipment Manufacturing subsector)
	Other Fabricated Textile Products	All Other Miscellaneous Textile Product Mills (pt)

3111	Leather Tanning and Finishing	Leather and Hide Tanning and Finishing
3131@	Footwear Cut Stock	
	Wood Heels	All Other Miscellaneous Wood Product Manufacturing (Included in the Wood Product Manufacturing, except Furniture subsector)
	Metal Buckles	Fastener, Button, Needle and Pin Manufacturing (Included in Miscellaneous Manufacturing subsector) (pt)
	Other Footwear Cut Stock	Other Miscellaneous Leather and Allied Product Manufacturing (pt)
3142	House Slippers	House Slipper Manufacturing
3143	Men's Footwear, Except Athletic	Men's Footwear Manufacturing, Except Athletic
3144	Women's Footwear, Except Athletic	Women's Footwear Manufacturing, Except Athletic
3149	Footwear, Except Rubber, NEC	Other Footwear Manufacturing
3161	Luggage	Luggage Manufacturing
3171	Women's Handbags and Purses	Women's Handbag and Purse Manufacturing
3172@	Personal Leather Goods, NEC	Other Miscellaneous Leather Good Manufacturing (pt)
3199@	Leather Goods, NEC	Other Miscellaneous Leather Good Manufacturing (pt)

Description of Changes to the U.S. System

1. Subsector Structure - Three industry subsectors replace 1987 Major Groups 22, Textile Mill Products and 23, Apparel and Other Textile Products.

The Textile Mills subsector includes the activities of fiber and yarn preparation and finishing, fabric forming, and fabric finishing. It includes 1987 SIC Industry Groups 221, Broadwoven Fabric Mills, Cotton; 222, Broadwoven Fabric Mills, Manmade Fiber and Silk; 223, Broadwoven Fabric Mills, Wool; 224, Narrow Fabric Mills; 226, Textile Finishing, except Wool; and 228, Yarn and Thread Mills. It also includes 1987 SIC codes 2257, Weft Knit Fabric Mills; 2258, Lace and Warp Knit Fabric Mills; 2295, Coated Fabrics; 2297, Nonwoven Fabrics; and 2397, Schiffli Machine Embroideries.

The Textile Product Mills subsector includes the activities of manufacturing finished textile products other than apparel. It includes 1987 SIC Industry Groups 227, Carpets and Rugs; 1987 SIC industries 2296, Tire Cord and Tire Fabric; 2298, Cordage and Twine; 2391, Curtains and Draperies; 2392, Housefurnishings, NEC; 2393, Textile Bags; 2394, Canvas and Related Products; and 2399, Fabricated Textile Products, NEC.

The Apparel Manufacturing subsector includes the activities of manufacturing apparel. It includes the 1987 SIC Industry Groups 231, Men's and Boys' Suits and Coats; 232, Men's and Boys' Furnishings; 233, Women's and Misses' Outerwear; 234, Women's and Children's Undergarments; 235, Hats, Caps and Millinery; 236, Girls'

and Children's Outerwear; 237, Fur Goods; and 238, Miscellaneous Apparel and Accessories. It also

includes 1987 SIC industries 2251, Women's Hosiery, except Socks; 2252, Hosiery, NEC; 2253, Knit Outerwear Mills; and 2254, Knit Underwear Mills.

This structure represents the flow of activities through the various textile and apparel industries. It was strongly supported by several segments of the industry and agreed to by both Canada and Mexico.

The total number of industries for these subsectors is 44 and unchanged from 1987 to 1997. There are six new industries for these subsectors. For time series linkage, eleven of the 1987 industries are comparable within three percent of the 1997 industries.

2. Textile Mills - Two new industries were added to the 1997 national industry structure for this subsector. New industries were created for:

Broadwoven Fabric Mills from 1987 SIC 2211, Broadwoven Fabric Mills, Cotton; 1987 SIC 2221, Broadwoven Fabric Mills, Manmade; part of 1987 SIC 2231, Broadwoven Fabric Mills, Wool; and part of 1987 SIC 2299, Textile Goods, NEC.

These industries include establishments that weave yarn into fabric. In the past, the weaving industries were separated by type of yarn used, e.g., cotton, manmade, etc. and this resulted in substantial industry switching and classification problems.

Broadwoven Fabric Finishing Mills from 1987 SIC 2261, Finishing Plants, Cotton; 1987 SIC 2262, Finishing Plants, Manmade; and part of 1987 SIC 2231, Broadwoven

Fabric Mills, Wool. As with weaving above, these industries are made up of establishments that perform the same activity, finishing of textile fabric.

Three activities were transferred into the 1997 Textile Mills subsector.

Broadwoven converters were transferred from part of 1987 Wholesale Trade SIC 5131, Piece Goods and Notions, into part of NAICS industry Broadwoven Fabric Finishing. This entrepreneurial function is more closely related to manufacturing than wholesaling.

Converters, except broadwoven were transferred from part of 1987 Wholesale Trade SIC 5131, Piece Goods and Notions, into the new industry Finishing, Except Broadwoven Fabric Finishing. This entrepreneurial function is more closely related to manufacturing than wholesaling.

Rubberized fabric was transferred from part of 1987 SIC 3069, Fabricated Rubber Products, NEC, into Fabric Coating Mills because coating fabric is the same activity regardless of the material used.

Five activities included in this 1997 subsector were transferred from one industry to another within the Textile Mills subsector.

Yarn of hard fiber was transferred from part of 1987 SIC 2299, Textile Goods, NEC, into Yarn Spinning Mills because there is no difference in the spinning activity.

Thread of hard fiber was transferred from part of 1987 SIC 2299, Textile Goods, NEC, into Thread Mills because the production of thread does not vary by type of

fiber.

Broadwoven fabric of hard fiber was transferred from part of 1987 SIC 2299, Textile Goods, NEC, into Broadwoven Fabric Mills because there is no difference in the weaving activity.

Narrow fabric of hard fiber was transferred from part of 1987 SIC 2299, Textile Goods, NEC, into Narrow Fabric Mills because of the same reason shown above.

Felt transferred from part of 1987 SIC 2299, Textile Goods, NEC, into Nonwoven Fabric Mills because it is one of several ways to manufacture nonwoven fabric.

The number of textile mills industries for 1997 is 12. For time series linkage, only one of the 1987 industries is comparable within three percent of 1997 industries.

3. Textile Product Mills - There were no new industries created for this subsector. One activity transferred out of this subsector.

Mops were transferred from part of 1987 SIC 2392, House Furnishings, NEC, into Broom and Brush Manufacturing in the Miscellaneous Manufacturing subsector to achieve international comparability.

One activity included in the 1997 Textile Product Mills subsector was transferred between industries.

Knit gloves and girdles were transferred from part of 1987 SIC 2259, Knitting Mills, NEC, into All Other Miscellaneous Textile Product Mills as a function of a textile product mill rather than a basic textile mill.

There are eight industries in the 1997 Textile Product Mills subsector. For time

series linkage, six of the 1987 industries are comparable within three percent of the 1997 industries.

4. Apparel Manufacturing - Four new industries were created for this 1997 industry subsector.

Men's and Boys' Cut and Sew Apparel Contractors from parts of the 1987 Men's and Boys', Children's and Miscellaneous Apparel industries. This industry was created because the production function of contractors is so different than that of manufacturers and jobbers.

Women's and Girls' Cut and Sew Apparel Contractors from parts of the 1987 Women's, Girls', Children's, and Miscellaneous Apparel industries. This industry was created because the production function of contractors is so different than that of manufacturers and jobbers.

Fur and leather clothing from the 1987 SIC 2386, Leather and Sheep Lined Clothing, and fur apparel from part of 1987 SIC 2371, Fur Goods. Both of these industries are very small and somewhat similar in function.

Apparel Belt, Accessories and Other Apparel Manufacturing from 1987 SIC 2387, Apparel Belts; 1987 SIC 2396, Automotive and Apparel Trimmings; and 1987 SIC 2399, Fabricated Textile Products, NEC. This is essentially a new all other category that was created from pieces left from several industries.

Three activities were transferred from 1987 Major Group, Apparel and Other Textile Products.

Seat belts and seat and tire covers were transferred from part of 1987 SIC 2399,

Fabricated Textile Products, NEC, into Motor Vehicle Fabric Accessory and Seat Manufacturing in the Transportation Equipment Manufacturing subsector to achieve international comparability. Canada and Mexico already have these activities associated with motor vehicle manufacturing.

Automotive trimmings were transferred from part of 1987 SIC 2396, Automotive and Apparel Trimmings, into Motor Vehicle Fabric Accessory and Seat Manufacturing in the Transportation Equipment Manufacturing subsector to achieve international comparability. Canada and Mexico already have these activities associated with motor vehicle manufacturing.

Printing on apparel was transferred from part of 1987 SIC 2396, Automotive and Apparel Trimming, into Other Commercial Printing in the Printing and Related Support Activities subsector to be shown later. This was done to achieve international comparability. Mexico's establishments do printing without regard to the material.

One activity was transferred into this subsector.

Leather gloves and mittens were transferred from 1987 Major Group 31, Leather and Leather Products, into Glove and Mitten Manufacturing to achieve international comparability. Canada cannot separate the production of leather gloves and mittens from fabric gloves and mittens because the leather activity is too small.

Also there were a large number of activities that transferred to other industries within the textiles and apparel subsectors. Some of the more significant of these are:

Little boys' apparel was transferred from parts of 1987 SIC codes 2341, Women's

and Children's Underwear; 2361, Girls' and Children's Dresses, Blouses, and Shirts; and 2369, Girls' and Children's Outerwear, NEC, to parts of various industries for men's and boys' apparel because of the overlap with manufacturers of men's and boys' clothing.

Cut and sew contractors were transferred from each of the 1987 SIC codes for outerwear and underwear into the two new industries for contractors. This industry was created because the production function of contractors is so different than that of manufacturers and jobbers.

There are 24 industries included in Apparel Manufacturing. For time series comparability, four 1987 industries are comparable within three percent of 1997.

5. Leather and Allied Product Manufacturing - Three activities were transferred out of the subsector.

Wood heels were transferred from part of 1987 SIC 3131, Footwear Cut Stock, into All Other Miscellaneous Wood Product Manufacturing to be published separately to achieve international comparability. Canada and Mexico had these classified elsewhere.

Metal buckles were transferred from part of the 1987 SIC 3131, Footwear Cut Stock, into Fastener, Button, Needle, and Pin Manufacturing in the Miscellaneous Manufacturing subsector to be published separately, to achieve international comparability. Canada and Mexico had these classified elsewhere.

Leather gloves and mittens were transferred into Glove and Mitten Manufacturing for international comparability.

Two activities were transferred into NAICS Leather and Allied Product Manufacturing.

Fur dressing and finishing was transferred from part of 1987 SIC 3999 Manufacturing Industries, NEC, into Leather and Hide Tanning and Finishing to achieve international comparability. The U.S. changed in order to agree with Canada and Mexico.

Rubber and plastic footwear was transferred from the 1987 Major Group 30, Rubber and Miscellaneous Plastics Products, into this subsector to achieve international

comparability. Canada and Mexico do not distinguish footwear manufacturing based on material.

Also, there were several activities that transferred within the leather and allied product manufacturing industries. The number of leather and allied product manufacturing industries decreased from 11 in 1987 to 7 in 1997. For time series linkage, 7 of the 11 1987 industries are comparable within three percent of the 1997 industries.

PART III--Proposed New Industry Structure for Food Manufacturing and Beverage and Tobacco Product Manufacturing

Section A--NAICS Structure

North American Industry Classification System (NAICS)

Agreement Number 6

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Food Manufacturing

Beverage and Tobacco Product Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users . Comments received will be shared among the countries and discussions held before a final decision on the structure is made.

Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries.

This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held on August 30, 1995 through September 1, 1995 in Washington, D.C.

Accepted:	Signature	Date
Canada	/S/ Jacob Ryten	9/1/95

Mexico	/S/ Enrique Ordaz	9/1/95
United States	/S/ Jack E. Triplett	9/1/95

Attachment 1--NAICS STRUCTURE

XX	Food Manufacturing
XXX	Animal Food Manufacturing
XXXX	Animal Food Manufacturing
XXX	Grain and Oilseed Milling
XXXX	Flour Milling and Malt Manufacturing
XXXX	Starch and Vegetable Fats and Oils Manufacturing
XXXX	Breakfast Cereal Manufacturing
XXX	Sugar and Confectionery Product Manufacturing
XXXX	Sugar Manufacturing
XXXX	Chocolate and Confectionery Manufacturing from Cocoa Beans
XXXX	Confectionery Manufacturing from Purchased Chocolate
XXXX	Non-Chocolate Confectionery Manufacturing
XXX	Preserved Fruit, Vegetable, and Specialty Manufacturing
XXXX	Frozen Food Processing
XXXX	Canning, Pickling and Drying
XXX	Dairy Product Manufacturing
XXXX	Dairy Product, Except Frozen Dairy Product Manufacturing
XXXX	Ice Cream and Frozen Dessert Manufacturing
XXX	Meat and Seafood Product Manufacturing
XXXX	Animal Slaughtering and Processing
XXXX	Seafood Product Preparation and Packaging
XXX	Bakeries and Tortilleries
XXXX	Bread and Bakery Product Manufacturing
XXXX	Cookie, Cracker, and Pasta Manufacturing
XXXX	Tortilleries
XXX	Miscellaneous Food Manufacturing
XXXX	Snack Food Manufacturing
XXXX	Coffee and Tea Manufacturing
XXXX	Flavoring Syrup and Concentrate Manufacturing
XXXX	Seasoning and Dressing Manufacturing
XXXX	Other Miscellaneous Food Manufacturing

XX	Beverage and Tobacco Product Manufacturing
XXX	Beverage Manufacturing
XXXX	Soft Drink and Ice Manufacturing
XXXX	Breweries
XXXX	Wineries
XXXX	Distilleries
XXX	Tobacco Manufacturing
XXXX	Tobacco Stemming and Redrying
XXXX	Tobacco Product Manufacturing

Attachment 2--North American Industry Classification System

Draft Classification for:

Food Manufacturing

Beverage and Tobacco Product Manufacturing

Representatives of the statistical agencies of Canada, Mexico, and the United States agree to a draft industrial classification for these industries.

The draft classification provides for two subsectors, Food Manufacturing and Beverage and Tobacco Product Manufacturing. These subsectors are sub-divided into ten industry groups and twenty eight industries. The subsectors are part of the Manufacturing sector of the classification.

A General Outline

Food Manufacturing includes establishments that transform livestock and agricultural products into products for intermediate or final consumption. The industry groups are distinguished by the processes and the nature of the raw materials used. The first two categories, Animal Food Manufacturing and Grain and Oilseed Milling, are characterized by the grinding process. Excluded from this industry group is the nixtamal milling carried out in Mexico, due to the integration of this activity with the preparation of corn tortillas.

The Sugar and Confectionery Product Manufacturing industry group includes establishments that process agricultural inputs such as sugar cane, beet, and cocoa to give rise to a new product (sugar or chocolate) and those that begin with sugar and chocolate and process these further.

The Preserved Fruit, Vegetable and Specialty Manufacturing industry group includes two types of establishments: those that freeze food and those that combine preservation processes such as pickling, canning, dehydrating and so forth. Both types begin their productive process with inputs of vegetable or animal origin.

The establishments that manufacture dairy products and meat products are defined by the inputs used: milk and meat, respectively.

Industry group, Bakeries and Tortilleries have a common denominator, the kneading and cooking process that takes place in ovens or flat earthenware pans. In this industry group is the nixtamal mill.

The industry group Miscellaneous Food Manufacturing includes industries with different productive processes such as snack food manufacturing; coffee and tea manufacturing; concentrate, syrup, condiment, and spice manufacturing; and in general an entire range of other miscellaneous products.

The Beverage and Tobacco Product Manufacturing subsector has two industry groups. The first one, Beverage Manufacturing, includes three types of establishments: those that manufacture non-alcoholic beverages; those that manufacture alcoholic beverages through the fermentation process; and those that produce distilled alcoholic beverages. Ice

manufacturing, while not a beverage, is included with non-alcoholic beverage manufacturing because it is the same production process as water purification.

In the case of activities related to the manufacture of beverages, the structure follows the defined productive processes. Brandy, a distilled beverage, was not placed under distillery product manufacturing, but rather under the NAICS class for winery product manufacturing since the productive process used in the manufacturing of alcoholic grape-based beverages, produces both wines (fermented beverage) and brandies (distilled beverage).

The second industry group, Tobacco Product Manufacturing, includes two types of establishments: those engaged in redrying and stemming tobacco and those that manufacture cigarettes and cigars.

Limitations and Constraints of the Classification

There are a few factors that constrained the structure and detail of the classification in the area under consideration. In the Food Manufacturing subsector, most activities that were identified in one country exist in the others. However, the way activities are combined in establishments differs to some extent in the different countries. For example, in Canada and the United States, corn oil is produced in the same establishments that manufacture corn starch and corn sweeteners. In Mexico, corn oil is produced in specialized establishments. All of the establishments that produce these products along with those producing other vegetable fats and oils, are combined into

one NAICS industry, Starch and Vegetable Fats and Oils Manufacturing. Each country will publish additional categories that comprise sub-divisions of NAICS industries to present data for activities that are nationally significant.

For those users requiring detailed commodity information, each country will publish information on products of these industries. Efforts are also underway to harmonize the commodity classifications to allow comparability of these statistics.

Relationship of ISIC

Most 4-digit NAICS industries in these subsectors are contained within Division 15, Manufacture of Food Products, of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. The following NAICS industry cannot be assigned to an ISIC division. Wineries that grow their own grapes and then manufacture wine are classified in ISIC as an agriculture activity and in NAICS as a manufacturing activity.

Some Changes to the National Classifications

A significant change for all three countries is the inclusion of malt manufacturing in the NAICS industry Flour Milling and Malt Manufacturing. Malt was formerly included in the beer manufacturing industry in Mexico and the United States and in

Miscellaneous Manufacturing in Canada, but was moved to the flour milling and malt manufacturing NAICS industry because the production process used to manufacture malt is similar to that of the flour milling industry.

Grouping the production of starches and vegetable fats and oils in a single class also is a significant change for all three countries. In Canada and the United States, corn oil is produced in the same establishments that produce starch products, while in Mexico, corn oil is produced in establishments that manufacture vegetable fats and oils. Thus, the difference in the production processes across the three countries necessitated this grouping.

The creation of two industries for chocolate and confectionary products made from cocoa beans and confectionery made from purchased chocolate is a change for Canada since these industries were previously combined. The NAICS industry Non-Chocolate Confectionery Manufacturing is new for all three countries, and includes chewing gum.

Other Miscellaneous Food Manufacturing includes the preparation of food to be consumed fresh (e.g., salads, sandwiches, etc. that are sold for immediate or almost immediate consumption). It is characterized by the preparation of food in volume that the manufacturer sells to a specialized establishment that sells it either through a service or a retail establishment. It is not specifically defined in the existing classification systems of the three countries.

The inclusion of bakeries that prepare the dough, bake the bread, and sell on the premises in manufacturing is a major change for Canada and the United States. These

establishments formerly were included in the retail sector in both countries. The manufacture of ice, an activity that up to now had been considered by the three countries to be part of food, has been transferred to beverage manufacturing.

The grouping of Beverage and Tobacco Manufacturing into a subsector represents a major restructuring for all three countries. In Canada, the current two-digit groups for Beverages (CSIC 10, 11) and Tobacco (CSIC 12) have been combined in one NAICS subsector, Beverage and Tobacco Product Manufacturing. For Mexico, the current subsector Food Products, Beverages, and Tobacco has been split into two subsectors. In the United States, tobacco is a separate two-digit major group (Major Group 21, Tobacco Products) while beverages is a three-digit industry group, (Industry Group 208, Beverages).

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System (NAICS). It is comprised of industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. In the main, the hierarchical structure of the classification also follows the production concept.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry (4-digit) level of the structure. All countries agree on the detailed

definitions of the industries.

The classification improves comparability with other countries. Most industries are compatible with the two-digit level of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. This means that each comparable NAICS industry is the same as, or part of, a single ISIC two-digit Division.

Other objectives of the NAICS project are not as relevant in this area of the classification as in others. These objectives are the delineation of new and emerging industries, service industries and industries engaged in the production of advanced technologies. The industrial sector in question is relatively mature, generally produces goods, and employs relatively stable technology. Therefore, the emphasis was on the objectives listed above.

The industries have high specialization ratios, and with the exception of tortillas in Canada, they are economically significant. The detail (4-digit) and structure of the classification are balanced in size. This enhances the classification's suitability for sampling and other aspects of survey operations. Finally, disruptions to time series, while they exist, have been minimized. Most of the changes to existing classifications are marginal. The major changes are well-identified and can be taken into account in linking time series.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the two NAICS industry subsectors presented in *Part I, Section A-- Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the two NAICS industry subsectors covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E = existing industry; N = new industry; R = revised industry; and * means "part of". The abbreviation NEC is used for Not Elsewhere Classified.

1997 NAICS and US description		Status code	1987 SIC code	1987 SIC description
XX	Food Manufacturing			
XXX	Animal Food Manufacturing			
XXXX	Animal Food Manufacturing			
XXXXX	Dog and Cat Food Manufacturing	E	2047	Dog and Cat Food
XXXXX	Other Animal Food Manufacturing	R	*2048	Prepared Feeds, NEC (Except Slaughtering Animals for Pet Food)
XXX	Grain and Oilseed Milling			
XXXX	Flour Milling and Malt Manufacturing			
XXXXX	Flour Milling	R	*2034	Dehydrated Fruits, Vegetables and Soups (Vegetable Flour)
			2041	Flour and Other Grain Mill Products
XXXXX	Rice Milling	E	2044	Rice Milling
XXXXX	Malt Manufacturing	E	2083	Malt

XXXX	Starch and Vegetable Fats and Oils Manufacturing				
XXXXX	Soybean Processing	E	2075	Soybean Oil Mills	
XXXXX	Wet Corn Milling	E	2046	Wet Corn Milling	
XXXXX	Other Oilseed Processing	N	2074	Cottonseed Oil Mills	
			2076	Vegetable Oil Mills, NEC	
XXXXX	Edible Fats and Oils Manufacturing	R	*2077	Animal and Marine Fat and Oil (Vegetable Oil Foots)	
			2079	Edible Fat and Oil, NEC	
XXXX	Breakfast Cereal Manufacturing	E	*2043	Cereal Breakfast Foods (Breakfast Cereal)	
XXX	Sugar and Confectionery Product Manufacturing				
XXXX	Sugar Manufacturing				
XXXXX	Sugarcane Mills	E	2061	Raw Cane Sugar	
XXXXX	Cane Sugar Refining	E	2062	Cane Sugar Refining	
XXXXX	Beet Sugar Manufacturing	E	2063	Beet Sugar	
XXXX	Chocolate and Confectionery Manufacturing from Cocoa Beans	E	2066	Chocolate and Cocoa Products	
XXXX	Confectionery Manufacturing from Purchased Chocolate	N	*2064	Candy and Other Confectionery Products (Chocolate Confectionery)	
XXXX	Non-Chocolate Confectionery Manufacturing	N	*2064	Candy and Other Confectionery Products (Non-Chocolate Confectionery)	
			2067	Chewing Gum	
			*2099	Food Preparations, NEC (Marshmallow Creme)	
XXX	Preserved Fruit, Vegetable, and Specialty Manufacturing				
XXXX	Frozen Food Processing				

XXXXX	Frozen Fruit, Juice, and Vegetable Processing	E	2037	Frozen Fruits and Vegetables
XXXXX	Frozen Specialty Processing	E	2038	Frozen Specialties, NEC
XXXX	Canning, Pickling, and Drying			
XXXXX	Fruit and Vegetable Canning	R	2033	Canned Fruits and Vegetables
			*2035	Sauces, and Salad Dressings (Pickled Fruits and Vegetables)
XXXXX	Specialty Canning	R	*2032	Canned Specialties (Except Canned Puddings)
XXXXX	Dried and Dehydrated Food Manufacturing	R	2034	Dried and Dehydrated Fruits, Vegetables and Soups (Except Vegetable Flour)
			*2099	Food Preparation, NEC (Bouillon)
XXX	Dairy Product Manufacturing			
XXXX	Dairy Product, Except Frozen Dairy Product Manufacturing			
XXXXX	Fluid Milk Manufacturing	E	2026	Fluid Milk
XXXXX	Creamery Butter Manufacturing	E	2021	Creamery Butter
XXXXX	Cheese Manufacturing	E	2022	Cheese, Natural and Processed
XXXXX	Dry, Condensed, and Evaporated Milk Manufacturing	E	2023	Dry, Condensed and Evaporated Products
XXXX	Ice Cream and Frozen Dessert Manufacturing	E	2024	Ice Cream and Frozen Desserts
XXX	Meat and Seafood Product Manufacturing			
XXXX	Animal Slaughtering			
XXXXX	Animal Slaughtering and Processing			Livestock Services, Except Veterinary (Custom
		R	*0751	Slaughtering)
			2011	Meat Packing Plants
			*2048	Prepared Foods, NEC (Animal Slaughtering for Pet Food)

XXXXX	Meat Processed From Purchased Carcasses		*2013	Sausage and Other Prepared Meats (Meat Processing)
			*5147	Meat and Meat Products (Boxed Beef)
XXXXX	Poultry Processing	R	*2015	Poultry Processing (Poultry Processing)
XXXXX	Rendering and Meat By-product Processing	N	*2013	Sausage and Other Prepared Meats (Lard)
			*2077	Animal and Marine Fats and Oils (Animal Fat and Oil)
XXXX	Seafood Product Preparation and Packaging			
XXXXX	Seafood Canning	R	*2077	Animal and Marine Fats and Oils (Canned Marine Fat and Oil)
			2091	Canned and Cured Fish and Seafood
XXXXX	Fresh and Frozen Seafood Processing	R	*2077	Animal and Marine Fats and Oils (Fresh and Frozen Marine Fats and Oil)
			2092	Fresh or Frozen Prepared Fish
XXX	Bakeries and Tortilleries			
XXXX	Bread and Bakery Product Manufacturing			
XXXXX	Commercial Bakeries	R	2051	Bread, Cake, and Related Products
			*2052	Cookies and Crackers (Unleavened Bread)
XXXXX	Retail Bakeries	N	*5461	Retail Bakeries (Bread, Cake and Related Products Baked and Sold on Premise)
XXXXX	Frozen Bakery Product Manufacturing	E	2053	Frozen Bakery Products
XXXX	Cookie, Cracker, and Pasta Manufacturing			
XXXXX	Cookie and Cracker Manufacturing	R	*2052	Cookies and Crackers (Cookies and Crackers)
XXXXX	Flour Mixes and Dough from Purchased Flour Manufacturing	E	2045	Prepared Flour Mixes and Doughs

XXXXX	Pasta Manufacturing	E	2098	Macaroni and Spaghetti
XXXX	Tortilleries	N	*2099	Food Preparations, NEC (Tortillas)
	Miscellaneous Food Manufacturing			
XXX				
XXXX	Snack Food Manufacturing			
XXXXX	Roasted Nuts and Peanut Butter Manufacturing	R	2068	Salted and Roasted Nuts and Seeds
XXXXX	Other Snack Food Manufacturing			
			*2099	Food Preparations, NEC (Peanut Butter)
		R	*2052	Cookies and Crackers (Pretzels)
			2096	Potato Chips and Similar Product
XXXX	Coffee and Tea Manufacturing	N	*2043	Cereal Breakfast Foods (Coffee Substitute)
			*2095	Roasted Coffee (Roasted Coffee)
			*2099	Food Preparations, NEC (Tea)
XXXX	Flavoring Syrup and Concentrate Manufacturing	R	*2087	Flavoring Extracts and Syrups (Flavoring Syrup and Concentrate)
XXXX	Seasoning and Dressing Manufacturing			
XXXXX	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	N	*2035	Pickles, Sauces and Salad Dressings (Sauces and Salad Dressing)
			*2099	Food Preparations, NEC (Vinegar)
XXXXX	Spice and Extract Manufacturing	N	*2087	Flavoring Extracts and Syrups (Flavoring Extracts)
			*2095	Roasted Coffee (Coffee Extracts)
			*2099	Food Preparations, NEC (Spices, Dip Mix, Salad Dressing Mix, and Seasoning Mix)
			*2899	Chemical Preparations, NEC (Salt)

XXXX	Other Miscellaneous Food Manufacturing				
XXXXX	Perishable Prepared Food Manufacturing	N	*2099	Food Preparations, NEC (Perishable Prepared Food)	
	All Other Miscellaneous Food Manufacturing	R	*2015	Poultry and Egg Processing (Egg Processing)	
XXXXX			*2032	Canned Specialties (Canned Pudding)	
			*2087	Flavoring Extracts and Syrups (Powered Drink Mix)	
			*2099	Food Preparations, NEC (Except Marshmallow Cream, Peanut Butter, Perishable Prepared Foods, Tortillas, Tea and Vinegar)	
XX	Beverage and Tobacco Product Manufacturing				
XXX	Beverage Manufacturing				
XXXX	Soft Drink and Ice Manufacturing				
XXXXX	Soft Drink Manufacturing	R	*2086	Bottled and Canned Soft Drinks (Except Purified Water)	
XXXXX	Ice Manufacturing and Water Purification	N	2097	Manufactured Ice	
			*2086	Bottled and Canned Soft Drinks (Purified Water)	
XXXX	Breweries	E	2082	Malt Beverages	
XXXX	Wineries	E	2084	Wines, Brandy, and Brandy Spirits	
XXXX	Distilleries	R	2085	Distilled Spirits	
			*2869	Industrial Organic Chemicals (Potable Ethyl Alcohol)	
XXXX	Tobacco Stemming and Redrying	R	*2141	Tobacco Stemming and Redrying (Redrying and Stemming)	
XXXX	Tobacco Product Manufacturing				
XXXXX	Cigarette Manufacturing	E	2111	Cigarette, Including Non-tobacco Cigarettes	
XXXXX	Other Tobacco Product Manufacturing	N	2121	Cigars	

2131	Chewing and Smoking Tobacco
*2141	Tobacco Stemming and Redrying (Reconstituted Tobacco)

TABLE 2

The abbreviation "pt" means "part of". @ means time series break has been created that is greater than 3% of the 1992 value of shipments for the 1987 SIC industry. The abbreviation NEC is used for Not Elsewhere Classified.

1987 SIC code	1987 SIC description	1997 U.S. description
2011	Meat Packing Plants	Animal Slaughtering
2013@	Sausages and Other Prepared Meats	
	Meat Processing	Meat Processed From Purchased Carcasses
	Lard	Rendering and Meat By-product Processing (pt)
2015@	Poultry Slaughtering and Processing	
	Poultry Processing	Poultry Processing
	Egg Processing	All Other Miscellaneous Food Manufacturing (pt)
2021	Creamery Butter	Creamery Butter Manufacturing
2022	Cheese, Natural and Processed	Cheese Manufacturing
2023	Dry, Condensed, and Evaporated Products	Dry, Condensed, and Evaporated Milk Manufacturing
2024	Ice Cream and Frozen Desserts	Ice Cream and Frozen Dessert Manufacturing

2026	Fluid Milk	Fluid Milk Manufacturing
2032	Canned Specialties	
	Canned Specialty	Specialty Canning (pt)
	Canned Pudding	All Other Miscellaneous Food Manufacturing (pt)
2033@	Canned Fruits and Vegetables	Fruit and Vegetable Canning (pt)
2034	Dehydrated Fruits, Vegetables, and Soup	
	Dried and Dehydrated Fruit, Vegetable, and Soup Mix	Dried and Dehydrated Food Manufacturing (pt)
	Vegetable Flours	Flour Milling (pt)
2035	Pickles, Sauces and Salad Dressings	
	Pickled Fruit and Vegetable	Fruit and Vegetable Canning
	Sauce and Salad Dressing	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
2037	Frozen Fruits, and Vegetables	Frozen Fruit, Juice, and Vegetable Processing
2038	Frozen Specialties, NEC	Frozen Specialty Processing
2041	Flour and Other Grain Mill Products	Flour Milling (pt)
2043	Cereal Breakfast Foods	
	Coffee Substitute	Coffee and Tea Manufacturing (pt)
	Breakfast Cereal	Breakfast Cereal Manufacturing
2044	Rice Milling	Rice Milling
2045	Prepared Flour Mixes and Doughs	Flour Mixes and Dough Manufacturing from Purchased Flour
2046	Wet Corn Milling	Wet Corn Milling
2047	Dog and Cat Food	Dog and Cat Food Manufacturing

2048	Prepared Feed, NEC	
	Animal Slaughtering, for Pet Food	Animal Slaughtering (pt)
	Except Slaughtering Animals for Pet Food	Other Animal Food Manufacturing
2051	Bread, Cakes and Related Products	Commercial Bakeries (pt)
2052@	Cookies and Crackers	
	Cookie and Cracker	Cookie and Cracker Manufacturing
	Pretzels	Other Snack Food Manufacturing (pt)
	Unleavened Bread	Commercial Bakeries (pt)
2053	Frozen Bakery Products, Except Bread	Frozen Bakery Product Manufacturing
2061	Raw Cane Sugar	Sugarcane Mills
2062	Cane Sugar Refining	Cane Sugar Refining
2063	Beet Sugar	Beet Sugar Manufacturing
2064@	Candy and Other Confectionery Products	
	Chocolate Confectionery	Chocolate and Confectionery Manufacturing from Purchased Chocolate
	Non-Chocolate Confectionery Manufacturing	Non-Chocolate Confectionery Manufacturing (pt)
2066	Chocolate and Cocoa Products	Chocolate and Confectionery Manufacturing from Cocoa Beans
2067@	Chewing Gum	Chewing Gum and Other Non-Chocolate Confectionery Product Manufacturing (pt)
2068@	Salted and Roasted Nuts and Seeds	Roasted Nuts and Peanut Butter Manufacturing (pt)
2074@	Cottonseed Oil Mills	Other Oilseed Processing, (pt)

2075	Soybean Oil Mills	Soybean Processing
2076@	Vegetable Oil Mills, NEC	Other Oilseed Processing (pt)
2077@	Animal and Marine Fats and Oils	
	Animal Fat and Oil	Rendering and Meat By-product Processing (pt)
	Canned Marine Fat and Oil	Seafood Canning (pt)
	Fresh and Frozen Marine Fat and Oil	Fresh and Frozen Seafood Processing (pt)
	Vegetable Oil Foot	Edible Fats and Oils Manufacturing (pt)
2079	Edible Fat and Oil, NEC	Edible Fats and Oils Manufacturing (pt)
2082	Malt Beverages	Breweries
2083	Malt	Malt Manufacturing
2084	Wines, Brandy, and Brandy Spirits	Wineries
2085	Distilled and Blended Liquors	Distilleries
2086	Bottled and Canned Soft Drinks	
	Soft Drinks	Soft Drink Manufacturing
	Purified Water	Ice Manufacturing and Water Purification (pt)
2087@	Flavoring Extracts and Syrups NEC	
	Flavoring Syrup and Concentrate	Flavoring Syrup and Concentrate Manufacturing
	Flavoring Extracts	Spice and Extract Manufacturing (pt)
	Powered Drink Mix	All Other Miscellaneous Food Product Manufacturing (pt)
2091@	Canned and Cured Fish and Seafood	Seafood Canning (pt)
2092@	Fresh or Frozen Prepared Fish	Fresh and Frozen Seafood Processing (pt)
2095@	Roasted Coffee	
	Roasted Coffee	Coffee and Tea Manufacturing (pt)
	Coffee Extracts	Spice and Extract Manufacturing (pt)

2096@	Potato Chips, and Similar Snacks	Other Snack Food Manufacturing (pt)
2097	Manufactured Ice	Ice Manufacturing and Water Purification (pt)
2098	Macaroni and Spaghetti	Pasta Manufacturing
2099	Food Preparations, NEC	
	Bouillon	Dried and Dehydrated Food Manufacturing
	Marshmallow Creme	Non-Chocolate Confectionery Manufacturing (pt)
	Peanut Butter	Roasted Nuts and Peanut Butter Manufacturing (pt)
	Perishable Prepared Food	Perishable Prepared Food Manufacturing
	Tortillas	Tortilleries
	Tea	Coffee and Tea Manufacturing (pt)
	Vinegar	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing (pt)
	Other	All Other Miscellaneous Food Manufacturing (pt)
2111	Cigarettes	Cigarette Manufacturing
2121	Cigars	Other Tobacco Product Manufacturing (pt)
2131@	Chewing and Smoking Tobacco	Other Tobacco Product Manufacturing (pt)
2141@	Tobacco Stemming and Redrying	
	Reconstituted Tobacco	Other Tobacco Product Manufacturing (pt)
	Redrying and Stemming	Tobacco Redrying and Stemming

Description of Changes to the U.S. System

A number of the changes listed in this section were made for reasons of international comparability. Where one or more of the three North American countries had different definitions of an industry classification, adjustments to the definitions in one or more countries were required. In constructing NAICS, the three countries agreed to move, where change was required to attain international comparability, in the direction of the country or countries whose existing classification definitions most closely corresponded to the production-oriented concept adopted for NAICS. Cases where the U.S. changed are listed below; other cases where Canada or Mexico moved toward the U.S. classification are not, of course, listed in this section.

Structure - The 1987 Major Groups 20, Food and Kindred Products, and 21, Tobacco Products, were reorganized to create two new subsectors. Beverages were separated from food and combined with tobacco. A number of activities that were included in 1987 Industry Group 208, Beverages, were retained in the Food Manufacturing subsector:

Malt manufacturing from 1987 industry group 208. This was done to promote comparability with ISIC and because malt production is a milling operation, not a beverage operation.

Flavoring syrup and concentrate manufacturing from part of 1987 SIC 2087, Flavoring Extracts and Syrups, NEC, to improve comparability with Mexico.

Flavoring extracts from part of 1987 SIC 2087, Flavoring Extracts and Syrups, to create a new 1997 industry for spices and extracts. This is consistent with Canada and ISIC.

Powdered drink mixes from part of 1987 SIC 2087, Flavoring Extracts and Syrups, into

part of All Other Miscellaneous Food Manufacturing to improve comparability with Canada.

Manufactured ice was previously part of 1987 industry group 209, Miscellaneous Food Preparations and Kindred Products. NAICS includes this in Beverage Manufacturing.

Food Manufacturing - Ten new industries were added to the 1997 industry structure for this subsector. New industries were created for:

Other Oilseed Processing by combining 1987 SIC 2074, Cottonseed Oil Mills, and 1987 SIC 2076, Vegetable Oil Mills, NEC. Cottonseed processing is very small and the production function is identical except for the inputs used.

Confectionery Manufacturing from Purchased Chocolate from part of 1987 SIC 2064, Candy and Other Confectionery Products, to promote comparability with Mexico. This industry also is characterized by the production process as chocolate as an input to confectionery is unique and is distinguished by process.

Non-Chocolate Confectionery Manufacturing from parts of 1987 SIC 2064, Candy and Other Confectionery Products; 1987 SIC 2067, Chewing Gum; and 1987 SIC 2099, Food Preparations, NEC. Chewing gum is a disclosure in the U.S. and is too small in Canada.

Rendering and Meat By-product Processing from parts of 1987 SIC 2013, Sausage and Other Prepared Meats, and 1987 SIC 2077, Animal and Marine Fats and Oils, since there are specialized processes involved and they tend to be performed in separate establishments.

This proposal is supported by The National Renderer's Association.

Tortilleries from part of 1987 SIC 2099, Food Preparations, NEC, in response to a proposal from the industry association and to promote comparability with Mexico.

Coffee and Tea Manufacturing from parts of 1987 SIC 2043, Cereal Breakfast Foods; 1987

SIC 2095, Roasted Coffee; 1987 SIC 2099, Food Preparations, NEC, to promote comparability with Canada.

Mayonnaise, Dressing and Other Prepared Sauce Manufacturing from parts of 1987 SIC 2035, Pickles, Sauces and Salad Dressings, and 1987 SIC 2099, Food Preparations, NEC, to promote comparability with Mexico. The U.S. found a good production basis and more than sufficient data user interest for this change.

Spice and Extract Manufacturing from parts of 1987 SIC 2087, Flavoring Extracts and Syrups; 1987 SIC 2095, Roasted Coffee; 1987 SIC 2099, Food Preparations, NEC; and 1987 SIC 2899, Chemical Preparations, NEC resulted from a modification of a proposal to create a spice industry. There is considerable overlap between the production of extracts and spices. Spice production alone produced a low specialization rate (75%), but the combined industry exhibits good specialization (91%).

Retail Bakeries from part of 1987 SIC 5461, Retail Bakeries, to obtain comparability with Mexico. A new industry was created since their production function is different than that of a commercial bakery and in order to retain time series continuity.

Perishable Prepared Food Manufacturing from part of 1987 SIC 2099, Food Preparations, NEC, to reduce the size of SIC 2099 and improve comparability with Mexico.

Three activities were transferred into the 1997 Food Manufacturing subsector:

Custom slaughtering was transferred from 1987 SIC 0751, Livestock Services, Except Veterinary, into Animal Slaughtering because the production process is slaughtering whether done on a production or custom basis, and in response to a proposal.

Boxed beef from purchased carcasses was transferred from 1987 SIC 5147, Meat and Meat

Products, into Meat Processed From Purchased Carcasses to improve comparability with Canada. The production function of these establishments is much more a manufacturing type operation, in that they are very large, highly automated plants that produce bulk products that must still be further broken down before they are ready for sale to the final consumer.

Salt was transferred from part of 1987 SIC 2899, Chemical Preparations, NEC, into Spice and Extract Manufacturing to promote comparability with Mexico.

Also there were several activities that transferred within the Food Manufacturing subsector. The number of food manufacturing except beverages manufacturing industries increased from 43 in 1987 to 47 in 1997. For time series linkage, 26 of the 43 1987 industries are comparable within three percent of the 1997 industries.

Beverage and Tobacco Product Manufacturing - Two new industries were created for this subsector.

Ice Manufacturing and Water Purification from 1987 SIC 2097, Manufactured Ice, and part of 1987 SIC 2086, Bottled and Canned Soft Drinks, to promote comparability with Mexico.

Other Tobacco Product Manufacturing by combining 1987 SIC 2121, Cigars; 1987 SIC 2131, Chewing and Smoking Tobacco; and Reconstituted Tobacco from part of 1987 SIC 2141, Tobacco Stemming and Redrying.

One activity transferred into the Beverage and Tobacco Product Manufacturing subsector:

Potable ethyl alcohol was transferred from part of 1987 SIC 2069, Industrial Organic Chemicals, into NAICS Distilleries to promote comparability with Canada.

The number of beverage and tobacco product industries decreased from ten in 1987 to eight in 1997. For time series linkage, five of the ten 1987 beverage and tobacco product manufacturing industries are comparable within three percent of the 1997 industries.

**Part IV--Proposed New Industry Structure for Fabricated Metal Product
Manufacturing**

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 7

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Fabricated Metal Product Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users . Comments received will be shared among the countries and additional discussions will be held before a final decision on the structure is made. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit

NAICS level in order to ensure full comparability among the three countries. This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held August 30, 1995 - September 1, 1995 in Washington, D.C.

Accepted:	Signature	Date
Canada	/S/ Jacob Ryten	9/1/95
Mexico	/S/ Enrique Ordaz	9/1/95
United States	/S/ Jack E. Triplett	9/1/95

ATTACHMENT 1--NAICS STRUCTURE

XX Fabricated Metal Product Manufacturing

XXX Forging and Stamping

XXXX Forging and Stamping

XXX Cutlery and Hand Tool Manufacturing

XXXX Cutlery and Hand Tool Manufacturing

XXX Architectural and Structural Metal Manufacturing

XXXX Platework and Fabricated Structural Product Manufacturing

XXXX Ornamental and Architectural Metal Product Manufacturing

XXX Boiler, Tank, and Shipping Container Manufacturing

XXXX Power Boiler and Heat Exchanger Manufacturing

XXXX Metal Tank (Heavy Gauge) Manufacturing

XXXX Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing
XXX Hardware Manufacturing
XXXX Hardware Manufacturing

XXX Spring, Wire and Turned Product Manufacturing
XXXX Spring and Wire Product Manufacturing
XXXX Turned Product Manufacturing
XXX Other Fabricated Metal Product Manufacturing
XXXX Metal Valve Manufacturing
XXXX All Other Fabricated Metal Product Manufacturing
XXX Machine Shops and Coating, Engraving, Heat Treating, and Allied Activities
XXXX Machine Shops
XXXX Coating, Engraving, Heat Treating, and Allied Activities

Attachment 2--North American Industry Classification System

Draft Classification for:

Fabricated Metal Product Manufacturing

Representatives of the statistical agencies of Canada, Mexico, and the United States agree to a draft industrial classification for these industries.

This draft classification applies to the subsector Fabricated Metal Product Manufacturing. This subsector is further sub-divided into eight industry groups and fourteen industries. The

subsector will be part of the Manufacturing sector of the classification.

A General Outline

The Fabricated Metal Product Manufacturing industries transform metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture. Some important fabricated metal processes are forging, stamping, bending, forming, and machining, which are used to shape individual pieces of metal. Processes such as welding and assembling are used to join separate parts together. Establishments may use one of these processes or they may be used in combination. The NAICS structure distinguishes the forging and stamping processes in a single industry. Other industries identify categories of products whose manufacture involves similar combinations of processes. For example, establishments in Platework and Fabricated Structural Product Manufacturing work with heavy gauge metal; those in Ornamental and Architectural Metal Product Manufacturing work with light gauge metal.

NAICS makes a basic distinction between establishments that draw wire from bars or rods, and those that purchase wire and make products from it. The former are classified in the Primary Metal Manufacturing subsector and the latter either in the Fabricated Metal Product Manufacturing subsector; in Spring and Wire Product Manufacturing, if the products are not insulated; or if the product is insulated wire, the establishments are classified in the Electrical Equipment, Appliance, and Component Manufacturing subsector.

Limitations and Constraints of the Classification

There are some analytical needs that cannot be met by the industrial classification. For example, relatively broad NAICS industries were created for Forging and Stamping; Ornamental and Architectural Metal Product Manufacturing; Metal Can, Box and Other Metal Container (Light Gauge) Manufacturing; and Spring, Wire and Turned Product Manufacturing. The way activities are combined in establishments differs to some extent in some countries. For example, forgings and stampings are often made in the same establishments in Mexico, while they are usually produced in separate establishments in Canada and the United States. More often, size constraints prohibit separation of activities in Canada or Mexico. In the Fabricated Metal Product Manufacturing subsector, most activities that were identified in one country exist in the others, but sometimes an activity is not economically significant to the same degree in all countries. For example, Canada cannot support a Precision Turned Product Manufacturing industry because of size.

A structure could have been developed that specified such activities in NAICS, but the resulting statistical tables for any given country would have numerous insignificant or suppressed entries. An operating rule has therefore been adopted for this industry subsector that the NAICS industries must be economically significant and publishable. Each country will publish additional categories that comprise sub-divisions of NAICS industries, to present data for activities that are nationally significant.

For those users requiring detailed commodity information, each country will publish information on the products of these industries. Efforts are also underway to harmonize the commodity classifications to allow for greater comparability of these statistics.

Relationship to ISIC

Eight industries can be assigned entirely to ISIC Division 28, Manufacture of Fabricated Metal Products, except Machinery and Equipment of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. The following NAICS industries belong largely to ISIC Division 28 with the exception of the activities indicated: Platework and Fabricated Structural Product Manufacturing (fabricated bar joists and concrete reinforcing bars); Power Boiler and Heat Exchanger Manufacturing (heat exchangers); Metal Valve Manufacturing (hose nozzles, rubber hose and tube assemblies, and metal pipe fittings); All Other Fabricated Metal Product Manufacturing (industrial patterns, and ball and roller bearings); Spring and Wire Product Manufacturing (wire carts and hand sieves); and Metal Tank (Heavy Gauge) Manufacturing (gas absorbers, autoclaves, buoys, and floating structures). However, because the exceptions indicated above are a relatively small part of the output of these six NAICS industries, one can combine the industries of NAICS for this subsector, and be quite comparable to ISIC 28, Manufacture of Fabricated Metal Products, except Machinery and Equipment.

Some Changes to the National Classifications

The Forging and Stamping industry represents a major restructuring for Canada. Non-

ferrous forgings have been moved from the Primary Metals Major Group, and they are no longer split by type of metal such as aluminum or bronze. Stampings are brought together from two existing CSIC industries.

The creation of the Hardware Manufacturing industry represents significant change for both Canada and Mexico. Their current classifications place hardware for transportation equipment in a variety of industries, based on the type of vehicle. All hardware, including locks, is combined in one industry in NAICS.

Coating, Engraving, Heat Treating and Allied Activities in NAICS brings together all activities performed on metal, such as coating and heat treating. This is a significant change for Canada and Mexico, whose classifications only distinguish coating activities. For the United States, heat treating of metals is currently in Primary Metal Manufacturing.

The creation of a Machine Shop industry is a change for all three countries that currently combine this activity with various others. Other changes for the United States involve the creation of several new national industries within the various NAICS industries.

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System (NAICS). It is comprised of industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. The hierarchical structure of the classification also follows the production concept.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry (4-

digit) level of the structure. All countries agree on the detailed definitions of the industries.

Other objectives of the NAICS project are not as relevant in this area of the classification as in others. These objectives are the delineation of new and emerging industries, service industries and industries engaged in the production of advanced technologies. The industrial sector in question is relatively mature, generally produces goods, and employs relatively stable technology. Therefore, the emphasis is on the objectives listed above.

The industries have high specialization ratios, and they are economically significant. The detail (4-digit level) and structure of the classification are balanced in size. This enhances the classification's suitability for sampling and other aspects of survey operations. Finally, disruptions to time series, while they exist, have been minimized. The statistical agencies can develop statistical "links" to enable the re-tabulation of time series on the new NAICS classification structure.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the three NAICS industry subsectors presented in *Part I, Section A--Attachment I*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the three NAICS industry

subsectors covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; N-new industry; R-revised industry; and * means “part of”. The abbreviation NEC is used for Not Elsewhere Classified.

			1987	
		Status	SIC	
1997 NAICS and U.S. description	code	code	code	1987 SIC description
XX	Fabricated Metal Product Manufacturing			
XXX	Forging and Stamping			
XXXX	Forging and Stamping			
XXXXX	Custom Roll Forming	N	*3449	Miscellaneous Structural Metal Work (Custom Roll Forming)
XXXXX	Iron and Steel Forging	E	3462	Iron and Steel Forgings
XXXXX	Nonferrous Forging	E	3463	Nonferrous Forgings
XXXXX	Crown and Closure Manufacturing	E	3466	Crowns and Closures
XXXXX	Metal Stamping and Powder Metallurgy Manufacturing	N	*3469	Metal Stampings, NEC (Except Kitchen Utensils, and Pots and Pans for Cooking)
			*3499	Fabricated Metal Products, NEC (Powder Metallurgy)
XXX	Cutlery and Hand Tool Manufacturing			
XXXX	Cutlery and Hand Tool Manufacturing			
XXXXX	Cutlery and Flatware Manufacturing, except Precious	N	3421	Cutlery
			*3914	Silverware, Plated Ware, and Stainless Steel Ware (Cutlery and Flatware except Precious)

XXXXXX	Hand and Edge Tool Manufacturing	R	3423	Hand and Edge Tools Except Machine Tools and Handsaws
			*3523	Farm Machinery and Equipment (Hand Hair Clippers for Animals)
			*3524	Lawn and Garden Tractors and Home Lawn and Garden Equipment (Nonpowered Lawnmowers)
			*3545	Cutting Tools, Machine Tools Accessories, and Machinist Precision Measuring Devices (Precision Measuring Devices)
			*3799	Transportation Equipment, NEC (Wheelbarrows)
			*3999	Manufacturing Industries, NEC (Tape Measures)
XXXXXX	Saw Blade and Handsaw Manufacturing	E	3425	Saw Blades and Handsaws
XXXXXX	Kitchen Utensil, Pot and Pan Manufacturing	N	*3469	Metal Stampings, NEC (Kitchen Utensils, Pots, and Pans for Cooking)
XXX	Architectural and Structural Metal Manufacturing			
XXXX	Platework and Fabricated Structural Product Manufacturing			
XXXXXX	Fabricated Structural Metal Manufacturing	E	3441	Fabricated Structural Metal
			*3449	Miscellaneous Structural Metal Work (Fabricated Bar Joists and Concrete Reinforcing Bars)
XXXXXX	Plate Work Manufacturing	N	*3443	Fabricated Plate Work (Boiler Shops) (Fabricated Plate Work and Metal Weldments)
XXXXXX	Prefabricated Metal Building and Component Manufacturing	E	3448	Prefabricated Metal Buildings and Components

XXXX	Ornamental and Architectural Metal Product Manufacturing			
XXXXX	Metal Door, Sash, Frame, Molding, and Trim Manufacturing	E	3442	Metal Doors, Sash, Frames, Molding and Trim
			*3449	Miscellaneous Structural Metal Work (Curtain Wall)
XXXXX	Sheet Metal Work Manufacturing	R	*3444	Sheet Metal Work (Ducts, Flumes, Flooring, Siding, Dampers, etc.)
XXXXX	Ornamental and Architectural Metal Work Manufacturing	R	3446	Architectural and Ornamental Metal Work
			*3449	Miscellaneous Structural Metal Work (Metal Plaster Bases)
			*3523	Farm Machinery and Equipment (Corrals, Stalls, and Holding Gates)
XXX	Boiler, Tank, and Shipping Container Manufacturing			
XXXX	Power Boiler and Heat Exchanger Manufacturing	N	*3443	Fabricated Plate Work (Boiler Shops) (Power Boilers and Heat Exchangers)
XXXX	Metal Tank Manufacturing (Heavy Gauge)	N	*3443	Fabricated Plate Work (Boiler Shops) (Heavy Gauge Tanks)
XXXX	Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing			
XXXXX	Metal Can Manufacturing	E	3411	Metal Cans
XXXXX	Other Metal Container Manufacturing	R	3412	Metal Shipping Barrels, Drums, Kegs, and Pails
			*3429	Hardware, NEC (Vacuum and Insulated Bottles, Jugs, and Chests)

				*3444	Sheet Metal Work (Metal Bins and Vats)
				*3499	Fabricated Metal Products, NEC (Metal Boxes)
				*3537	Industrial Trucks, Tractors, Trailers, and Stackers (Metal Air Cargo Containers)
				*5085	Industrial Supplies (Reconditioning Drums)
XXX	Hardware Manufacturing				
XXXX	Hardware Manufacturing	R		*3429	Hardware, NEC (Hardware, Except Hose Nozzles, and Vacuum and Insulated Bottles, Jugs and Chests)
				*3499	Fabricated Metal Products, NEC (Safe and Vault Locks)
XXX	Spring, Wire and Turned Product Manufacturing				
XXXX	Spring and Wire Product Manufacturing				
XXXXX	Steel Spring Manufacturing, except Wire	E		3493	Steel Springs, Except Wire
XXXXX	Wire Spring Manufacturing	E		*3495	Wire Springs (Except Watch and Clock Springs)
XXXXX	Other Fabricated Wire Product Manufacturing	R		*3315	Steel Wiredrawing and Steel Nails and Spikes (Steel Nails and Spikes Not Made in Wiredrawing Plants)
				*3399	Primary Metal Products, NEC (Nonferrous Nails, Brads, Staples, etc.)
				3496	Miscellaneous Fabricated Wire Products
XXXX	Turned Product Manufacturing				
XXXXX	Precision Turned Product Manufacturing	E		3451	Screw Machine Products
XXXXX	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	E		3452	Bolts, Nuts, Screws, Rivets, and Washers

XXX	Other Fabricated Metal Product Manufacturing			
XXXX	Metal Valve Manufacturing			
XXXXX	Industrial Valve Manufacturing	E	3491	Industrial Valves
XXXXX	Fluid Power Valve and Hose Fitting Manufacturing	R	3492	Fluid Power Valves and Hose Fittings
			*3728	Aircraft Parts and Auxiliary Equipment, NEC (Fluid Power Aircraft Subassemblies)
XXXXX	Other Metal Valve and Pipe Fitting Manufacturing	R	*3429	Hardware, NEC (Hose Nozzles)
			*3432	Plumbing Fixture Fittings and Trim (Valves Classified as Fittings and Trim)
			*3494	Valves and Pipe Fittings, NEC (Except Metal Pipe Hangers and Supports)
			*3499	Fabricated Metal Products, NEC (Metal Aerosol Valves)
XXXX	All Other Fabricated Metal Product Manufacturing			
XXXXX	Enameled Iron and Metal Sanitary Ware Manufacturing	E	3431	Enameled Iron and Metal Sanitary Ware
XXXXX	Small Arms Ammunition Manufacturing	E	3482	Small Arms Ammunition
XXXXX	Ammunition Manufacturing, except Small Arms	E	3483	Ammunition, Except for Small Arms
XXXXX	Small Arms Manufacturing	E	3484	Small Arms
XXXXX	Other Ordnance and Accessory Manufacturing	E	3489	Ordnance and Accessories, NEC
XXXXX	Fabricated Pipe and Pipe Fitting Manufacturing	E	3498	Fabricated Pipe and Pipe Fittings
XXXXX	Industrial Pattern Manufacturing	E	3543	Industrial Patterns
XXXXX	Ball and Roller Bearing Manufacturing	E	3562	Ball and Roller Bearings
XXXXX	All Other Miscellaneous Fabricated Metal Product Manufacturing	R	*3053	Gaskets, Packing, and Sealing Devices (Metal Gaskets)
			*3291	Abrasive Products (Steel Wool With or Without Soap)

			*3432	Plumbing Fixture Fittings and Trim (Metal Shower Rods)
			*3494	Valves and Pipe Fittings, NEC (Pipe Hangers and Supports)
			*3497	Metal Foil and Leaf (Foil and Foil Containers)
			*3499	Fabricated Metal Products, NEC (Other Metal Products)
			*3537	Industrial Trucks, Tractors, Trailers, and Stackers (Metal Pallets)
			*3599	Industrial and Commercial Machinery and Equipment, NEC (Flexible Metal Hose)
			*3993	Signs and Advertising Specialties (Metal Signs)
			*3999	Manufacturing Industries, NEC (Other Miscellaneous Metal Products, such as Combs, Hair Curlers, etc.)
XXX	Machine Shops and Coating, Engraving, Heat Treating, and Allied Activities			
XXXX	Machine Shops	N	*3599	Industrial and Commercial Machinery and Equipment, NEC (Machine Shops)
XXXXX	Coating, Engraving, Heat Treating, and Allied Activities			
XXXXX	Metal Heat Treating	E	3398	Metal Heat Treating
XXXXX	Metal Coating, Engraving and Allied Services to Manufacturers, Except Jewelry	R	*3479	Coating, Engraving, and Allied Services, NEC (Except Jewelry Engraving and Etching)

XXXXX	Electroplating, Plating, Polishing, Anodizing and Coloring	E	*3399	Primary Metal Products, NEC (Laminating Steel)
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TABLE 2

The abbreviation “pt” means “part of”, @ means time series break has been created that is greater than 3% of the 1992 value of shipments for the 1987 SIC industry. The abbreviation NEC is used for Not Elsewhere Classified.

1987 SIC code	1987 SIC description	1997 U.S. description
3053@	Gaskets, Packings and Sealing Devices	
	Cork Gaskets, Packing, and Sealing Devices	Other Wood Product Manufacturing (pt) (Included in Wood Product Manufacturing, except Furniture subsector)
	Metal Gaskets, Packing, and Sealing Devices	All Other Fabricated Metal Product Manufacturing (pt)
	Plastics Gaskets, Packing and Sealing Devices	All Other Plastic Product Manufacturing (pt) (Included in Rubber and Plastic Product Manufacturing subsector)
	Rubber Gaskets, Packing and Sealing Devices	All Other Rubber Product Manufacturing (pt) (Included in Rubber and Plastic Product Manufacturing subsector)

3291	Abrasive Products	
	Steel Wool With or Without Soap	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
	Abrasive Products (Except Steel Wool With or Without Soap)	Abrasive Product Manufacturing (Included in Nonmetallic Mineral Product Manufacturing subsector)
3315@	Steel Wiredrawing and Steel Nails and Spikes	
	Steel Wiredrawing and Steel Nails and Spikes (Except Steel Nails and Spikes Not Made in Wiredrawing Plants)	Hot-Rolling Mills., Wire Drawing and Other Primary Metal Product Manufacturing (pt) (Included in Primary Metal Manufacturing subsector)
	Steel Nails and Spikes Not Made in Wiredrawing Plants	Other Fabricated Wire Product Manufacturing (pt)
3398	Metal Heat Treating	Metal Heat Treating
3399@	Primary Metal Products, NEC	
	Iron and Steel Powder, Paste, Flakes, etc.	Hot-Rolling Mills, Wire Drawing, and Other Primary Metal Product Manufacturing (pt) (Included in Primary Metal Manufacturing subsector)
	Aluminum Powder, Paste Flakes, etc.	Aluminum Extruded Product Manufacturing (pt) (Included in Primary Metal Manufacturing subsector)
	Nonferrous Powder, Paste, Flakes, etc.	Secondary Smelting and Refining of Nonferrous Metals (pt) (Included in Primary Metal Manufacturing subsector)
	Nonferrous Nails, Brads, Staples, etc.	Other Fabricated Wire Product Manufacturing (pt)
	Laminated Steel	Electroplating, Plating, Polishing, Anodizing, and Coloring (pt)
3411	Metal Cans	Metal Can Manufacturing

3412	Metal Shipping Barrels, Drums, Kegs and Pails	Other Metal Container Manufacturing (pt)
3421	Cutlery	Cutlery and Flatware Manufacturing, Except Precious (pt)
3423	Hand and Edge Tools, Except Machine Tools and Handsaws	Hand and Edge Tool Manufacturing (pt)
3425	Saw Blades and Handsaws	Saw Blade and Handsaw Manufacturing
3429@	Hardware, NEC	
	Vacuum and Insulated Bottles, Jugs, and Chests	Other Metal Container Manufacturing (pt)
	Hose Nozzles	Other Metal Valve and Pipe Fitting Manufacturing (pt)
	Hardware, NEC (Hardware, Except Hose Nozzles, and Vacuum and Insulated Bottles, Jugs, and Chests)	Hardware Manufacturing (pt)
3431	Enameled Iron and Metal Sanitary Ware	Enameled Iron and Metal Sanitary Ware Manufacturing
3432	Plumbing Fixture Fittings and Trim	
	Valves Classified as Fittings and Trim	Other Valve and Pipe Fitting Manufacturing (pt)
	Metal Shower Rods	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
3433	Heating Equipment, Except Electric and Warm Air Furnaces	Heating Equipment except Electric Warm Air Furnace Manufacturing (pt) (Included in Machinery Manufacturing subsector)
3441	Fabricated Structural Metal	Fabricated Structural Metal Manufacturing

3442	Metal Doors, Sash, Frames, Molding, and Trim	Metal Door, Sash, Frame, Molding, and Trim Manufacturing
3443@	Fabricated Plate Work (Boiler Shops)	
	Fabricated Plate Work and Metal Weldments	Plate Work Manufacturing
	Power Boilers and Heat Exchangers	Power Boiler and Heat Exchanger Manufacturing
	Heavy Gauge Tanks	Metal Tank Manufacturing (Heavy Gauge)
	Metal Cooling Towers	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (pt) (Included in Machinery Manufacturing subsector)
3444	Sheet Metal Work	
	Ducts, Flumes, Flooring, Siding, Dampers, etc.	Sheet Metal Work Manufacturing (pt)
	Metal Bins and Vats	Other Metal Container Manufacturing (pt)
3446	Architectural and Ornamental Metal Work	Ornamental and Architectural Metal Work Manufacturing (pt)
3448	Prefabricated Metal Buildings and Components	Prefabricated Metal Building and Component Manufacturing
3449@	Miscellaneous Structural Metal Work	
	Custom Roll Forming	Custom Roll Forming
	Fabricated Bar Joists and Concrete Reinforcing Bars	Fabricated Structural Metal Manufacturing (pt)
	Curtain Wall	Metal Door, Sash Frame, Molding, and Trim Manufacturing (pt)
	Metal Plaster Bases	Ornamental and Architectural Metal Work Manufacturing (pt)

3451	Screw Machine Products	Precision Turned Product Manufacturing
3452	Bolts, Nuts, Screws, Rivets, and Washers	Bolt, Nut, Screw, Rivet, and Washer Manufacturing
3462	Iron and Steel Forgings	Iron and Steel Forging
3463	Nonferrous Forgings	Nonferrous Forging
3465	Automotive Stampings	Motor Vehicle Metal Stamping Manufacturing (Included in Transportation Equipment Manufacturing subsector)
3466	Crowns and Closures	Crown and Closure Manufacturing
3469	Metal Stampings, NEC	
	Metal Stampings, NEC (Except Kitchen Utensils, and Pots and Pans for Cooking)	Metal Stamping and Powder Metallurgy Manufacturing (pt)
	Kitchen Utensils, and Pots and Pans for Cooking	Kitchen Utensil, Pot, and Pan Manufacturing
3471	Electroplating, Plating, Polishing, Anodizing, and Coloring	Electroplating, Plating, Polishing, Anodizing, and Coloring (pt)

3479	Coating, Engraving, and Allied Services, NEC Coating, Engraving, and Allied Services, NEC (Except Jewelry Engraving and Etching) Jewelry Engraving and Etching	Metal Coating, Engraving, and Allied Services to Manufacturers, except Jewelry Precious Metal Jewelry Manufacturing (pt) (Included in the Miscellaneous Manufacturing subsector)
3482	Small Arms Ammunition	Small Arms Ammunition Manufacturing
3483	Ammunition, Except for Small Arms	Ammunition Manufacturing, except Small Arms
3484	Small Arms	Small Arms Manufacturing
3489	Ordnance and Accessories, NEC	Other Ordnance and Accessory Manufacturing
3491	Industrial Valves	Industrial Valve Manufacturing
3492	Fluid Power Valves and Hose Fittings	Fluid Power Valve and Hose Fitting Manufacturing
3493	Steel Springs, Except Wire	Steel Spring Manufacturing, except Wire
3494	Valves and Pipe Fittings, NEC Valves and Pipe Fittings, NEC (Except Metal Pipe Hangers and Supports) Metal Pipe Hangers and Supports	Other Metal Valve and Pipe Fitting Manufacturing (pt) All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)

3495	Wire Springs	Wire Spring Manufacturing
	Wire Springs (Except Watch and Clock Springs)	Watch, Clock, and Part Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
	Watch and Clock Springs	
3496	Miscellaneous Fabricated Wire Products	Other Fabricated Wire Product Manufacturing (pt)
3497	Metal Foil and Leaf	
	Laminated Aluminum Foil Rolls/Sheets for Flexible Packaging Uses	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses (Included in Paper Manufacturing subsector)
	Foil and Foil Containers	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
3498	Fabricated Pipe and Pipe Fittings	Fabricated Pipe and Pipe Fitting Manufacturing
3499@	Fabricated Metal Products, NEC	
	Powder Metallurgy	Metal Stamping and Powder Metallurgy Manufacturing (pt)
	Metal Boxes	Other Metal Container Manufacturing (pt)
	Safe and Vault Locks	Hardware Manufacturing (pt)
	Metal Aerosol Valves	Other Valve and Pipe Fitting Manufacturing (pt)
	Metal Furniture Parts, Household	Metal Household Furniture Manufacturing (pt) (Included in Furniture Manufacturing subsector)
	Metal Furniture Parts, Office	Metal Office Furniture Manufacturing (pt) (Included in Furniture Manufacturing subsector)

	Trophies, Except Precious	Costume Jewelry Manufacturing (Included in Miscellaneous Manufacturing subsector)
	Other Metal Products	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
3523@	Farm Machinery and Equipment	
	Farm Machinery and Equipment (Except Corrals, Stalls, Holding Gates, Hand Hair Clippers for Animals, Farm Conveyors, Elevators, Loaders, Stackers and Bale Throwers)	Farm Machinery and Equipment Manufacturing (Included in Machinery Manufacturing subsector)
	Corrals, Stalls, Holding Gates	Ornamental and Architectural Metal Work Manufacturing (pt)
	Hand Hair Clippers for Animals	Hand and Edge Tool Manufacturing(pt)
	Farm Conveyors and Farm Elevators, Stackers, and Bale Throwers	Conveyor and Conveying Equipment Manufacturing (pt) (Included in Machinery Manufacturing subsector)
3524	Lawn and Garden Tractors and Home Lawn and Garden Equipment	
	Lawn and Garden Tractors and Home Lawn and Garden Equipment (Except Nonpowered Lawnmowers)	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing (Included in Machinery Manufacturing subsector)
	Nonpowered Lawnmowers	Hand and Edge Tool Manufacturing (pt)
3537	Industrial Trucks, Tractors, Trailers, and Stackers	
	Industrial Trucks, Tractors, Trailers, and Stackers (Except Metal Pallets and Air Cargo Containers)	Industrial Truck, Tractor, Trailer, and Stacker Manufacturing (Included in Machinery Manufacturing subsector)
	Metal Pallets	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)

	Metal Air Cargo Containers	Other Metal Container Manufacturing (pt)
3543	Industrial Patterns	Industrial Pattern Manufacturing
3545@	Cutting Tools, Machine Tool Accessories, and Machinists' Precision Measuring Devices	
	Cutting Tools, Machine Tool Accessories, and Machinists' Precision Measuring Devices (Except Precision Measuring Devices)	Cutting Tool and Machine Tool Accessory Manufacturing (Included in Machinery Manufacturing subsector)
	Precision Measuring Devices	Hand and Edge Tool Manufacturing (pt)
3562	Ball and Roller Bearings	Ball and Roller Bearing Manufacturing
3599	Industrial and Commercial Machinery and Equipment, NEC	
	Industrial and Commercial Machinery and Equipment, NEC (Except Flexible Metal Hose; Gasoline, Oil and Intake Filters for Internal Combustion Engines, Except those for Motor Vehicles; Carnival Amusement Park Equipment and Machine Shops)	Other Industrial Manufacturing and Industrial Commercial Machinery and Equipment (pt) (Included in Machinery Manufacturing subsector)
	Flexible Metal Hose	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
	Gasoline, Oil and Intake Filters for Internal Combustion Engines, Except those for Motor Vehicles	Other Motor Vehicle Part Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)

	Carnival Amusement Park Equipment	Other Commercial and Service Industry Machinery Manufacturing (pt) (Included in Machinery Manufacturing subsector)
	Machine Shops	Machine Shops
3728	Aircraft Parts and Auxiliary Equipment, NEC	
	Fluid Power Aircraft Subassemblies	Fluid Power Valve and Hose Fitting Manufacturing (pt)
	Other Aircraft Parts and Equipment	Other Aircraft Part and Auxiliary Equipment Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)
3799@	Transportation Equipment, NEC	
	Wheelbarrows	Hand and Edge Tool Manufacturing (pt)
	Automobile, boat, light truck, and utility trailers	Travel Trailer and Camper Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)
	Other	All Other Transportation Equipment Manufacturing (Included in Transportation Equipment Manufacturing subsector)
3914	Silverware, Plated Ware, and Stainless Steel Ware	
	Cutlery and Flatware Except Precious	Cutlery and Flatware Manufacturing, Except Precious (pt)
	Silverware, Plated Ware, and Stainless Steel Ware (Except Nonprecious Flatware and Cutlery)	Silverware and Plated Ware (Included in Miscellaneous Manufacturing subsector)
3993@	Signs and Advertising Specialties (Metal Signs)	
	Electrical Signs	Electric Sign Manufacturing (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)

	Metal Signs	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)
	Plastic Signs	All Other Plastic Product Manufacturing (pt) (Included in Rubber and Plastic Product Manufacturing subsector)
	Wood Signs	Other Wood Product Manufacturing (pt) (Included in Wood Product Manufacturing, except Furniture subsector)
3999@	Manufacturing Industries, NEC	
	Beauty and Barber Chairs	Metal Office Furniture Manufacturing (pt) (Included in Furniture Manufacturing subsector)
	Burnt Wood Articles	Other Wood Product Manufacturing (pt) (Included in Wood Product Manufacturing, except Furniture subsector)
	Fur Bleaching, Currying, Scraping, Tanning and Dyeing	Leather and Hide Tanning and Finishing Manufacturing (pt) (Included in Leather and Leather Product Manufacturing subsector)
	Lamp Shades of Paper and Textile	Other Lighting Equipment Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
	Matches	Other Miscellaneous Chemical Product Manufacturing (pt) (Included in Chemical Manufacturing subsector)
	Metal Products, such as Combs, Hair Curlers, etc.	All Other Fabricated Metal Product Manufacturing (pt)
	Plastics Products, such as Combs, Hair Curlers, etc.	All Other Plastic Product Manufacturing (pt) (Included in Rubber and Plastic Product Manufacturing subsector)
	Flexographic Printing Eyeglass Frames for the Trade	Commercial Flexographic Printing (pt) (Included in Printing and Related Support Activities subsector)

	Gravure Printing Eyeglass Frames for the Trade	Commercial Gravure Printing (pt) (Included in Printing and Related Support Activities subsector)
	Lithographic Printing Eyeglass Frames for the Trade	Commercial Lithographic Printing (pt) (Included in Printing and Related Support Activities subsector)
	Screen Printing Eyeglass Frames for the Trade	Commercial Screen Printing (pt) (Included in Printing and Related Support Activities subsector)
	Other Printing Eyeglass Frames for the Trade	Other Commercial Printing (pt) (Included in Printing and Related Support Activities subsector)
	Tape Measures	Hand and Edge Tool Manufacturing (pt)
	Other	All Other Miscellaneous Manufacturing (pt) (Included in Miscellaneous Manufacturing subsector)
5085	Industrial Supplies (Wholesale)	
	Reconditioning Drums	Other Metal Container Manufacturing (pt)
	Other	(Included in Wholesale subsector)

Description of Changes to the U.S. System

A number of the changes listed in this section were made for reasons of international comparability. Where one or more of the three North American countries had different definitions of an industry classification, adjustments to the definitions in one or more countries were required. In constructing NAICS, the three countries agreed to move, where change was required to attain international comparability, in the direction of the country or countries whose existing classification definitions most closely corresponded to the production-oriented concept adopted for NAICS. Cases where the U.S. changed are listed below; other cases where Canada or Mexico moved toward the U.S. classification are not, of course, listed in this section.

Eight new industries were added to the 1997 industry structure for this industry subsector. Four of these new industries were created by breaking apart 1987 not elsewhere classified (nec) industries. New industries were created for:

Custom Roll Forming Manufacturing from part of 1987 SIC 3449, Miscellaneous Structural Metal Work. This was requested by the industry and is defined by production process.

Metal Stamping and Powder Metallurgy Manufacturing from part of 1987 SIC 3469, Metal Stampings, NEC, and part of 1987 SIC 3499, Fabricated Metal Products, NEC. This achieves international comparability and combines activities having similar processes. The U.S. moved to match Canada.

Cutlery and Flatware Manufacturing, except Precious from 1987 SIC 3421, Cutlery, and part of 1987 SIC 3914, Silverware, Plated Ware, and Stainless Steel Ware, to

achieve international comparability. The change combines activities having similar production processes.

Kitchen Utensil, Pot and Pan Manufacturing from part of 1987 SIC 3469, Metal Stampings, NEC, to achieve international comparability. Mexico had an industry, CMAP 381411, Manufacturing of Kitchen Utensils, Pots and Pans.

Plate Work Manufacturing from part of 1987 SIC 3443, Fabricated Plate Work (Boiler Shops), to achieve international comparability. Both Canadian and Mexican classification systems contained an industry for this activity.

Power Boiler and Heat Exchanger Manufacturing from part of 1987 SIC 3443, Fabricated Plate Work (Boiler Shops), to achieve international comparability. Both Canadian and Mexican classification systems contained an industry for this activity.

Metal Tank Manufacturing (Heavy Gauge) from part of 1987 SIC 3443, Fabricated Plate Work (Boiler Shops), to achieve international comparability. Both Canadian and Mexican classification systems contained an industry for this activity.

Machine Shops from part of 1987 SIC 3599, Industrial and Commercial Machinery and Equipment, NEC, to achieve international comparability, and combine similar production processes. This industry includes establishments engaged in machining or otherwise working of industrial material, on a job or order basis, producing parts from raw materials, or rebuilding existing parts.

Two complete industries were transferred out of this industry group, because of NAICS decisions that produced international comparability:

Heating Equipment, Except Electric and Warm Air Furnaces was transferred into the Machinery Manufacturing subsector.

Motor Vehicle Metal Stampings were transferred into the Transportation Equipment Manufacturing subsector.

Four activities were transferred out of 1987 SIC Major Group 34, Fabricated Metal Products, and are described more fully in their new respective NAICS subsectors.

Clock and watch spring manufacturing was transferred from 1987 SIC 3495, Wire Springs, into Navigational, Measuring and Control Instrument Manufacturing.

Metal laminated foil roll and sheet manufacturing for flexible packaging was transferred from part of 1987 SIC 3497, Metal Foil and Leaf, to the subsector for Paper Manufacturing, because the production processes are similar, regardless of the material used. This is the lamination, not creation of foil.

Metal cooling tower manufacturing was transferred from 1987 SIC 3443, Fabricated Plate Work, to the Machinery Manufacturing subsector for international comparability. In Canada, cooling towers are produced by establishments producing air conditioning equipment.

Metal furniture part manufacturing was transferred from 1987 SIC 3499, Fabricated Metal Products, NEC, into Metal Furniture Manufacturing.

Three industries were transferred into this subsector:

Industrial Pattern Manufacturing was transferred from 1987 SIC 3543, Industrial Patterns (in the Industrial and Commercial Machinery and Computer Equipment major groups), to achieve international comparability. The U.S. and Mexico moved to match Canada.

Metal Heat Treating was transferred from 1987 SIC 3398, Metal Heat Treating (in the Primary Metal Industries major group). This change achieves international comparability. The U.S. moved to match Canada and Mexico.

Ball and Roller Bearing Manufacturing from 1987 SIC 3562, Ball and Roller Bearings (in the Industrial and Commercial Machinery and Computer Equipment major group). This reflects the fact that this activity is really metal fabrication. Previously, the U.S., Canada, and Mexico all had this industry in machinery.

Seventeen activities were transferred into the Fabricated Metal Product Manufacturing subsector:

Nonpowered hand-held animal clipper manufacturing was transferred from 1987 SIC 3523, Farm Machinery and Equipment, into Hand and Edge Tool Manufacturing, to achieve international comparability and combine activities having similar inputs and production processes.

Metal corral, stall, and holding gate manufacturing was transferred from 1987 SIC 3523, Farm Machinery and Equipment, into Ornamental and Architectural Metal Work Manufacturing, to achieve international comparability.

Nonpowered lawnmower manufacturing was transferred from 1987 SIC 3524, Lawn and Garden Tractors and Home, Lawn and Garden Equipment, into Hand and Edge Tool Manufacturing, to achieve international comparability and combine activities having similar inputs and production processes. The U.S. and Canada moved to agree with Mexico.

Precision measuring tool manufacturing was transferred from 1987 SIC 3545, Cutting Tools, Machine Tools Accessories and Machinist Precision Measuring

Devices, into Hand and Edge Tool Manufacturing, to achieve international comparability and combine activities having similar inputs. The U.S. and Canada moved to agree with Mexico.

Wheelbarrow manufacturing was transferred from 1987 SIC 3799, Transportation Equipment, NEC, into Hand and Edge Tool Manufacturing to achieve international comparability. The U.S. and Canada moved to agree with Mexico.

Tape measure manufacturing was transferred from 1987 SIC 3999, Manufacturing Industries, NEC, into Hand and Edge Tool Manufacturing to achieve international comparability. The U.S. and Canada moved to agree with Mexico.

Metal air cargo container manufacturing was transferred from 1987 SIC 3537, Industrial Trucks, Tractors, Trailers, and Stackers, into Other Metal Container Manufacturing to achieve comparability with Mexico.

Metal pallet manufacturing was transferred from 1987 SIC 3537, Industrial Trucks, Tractors, Trailers, and Stackers, into All Other Fabricated Metal Product Manufacturing to achieve comparability with Mexico.

Reconditioning drum manufacturing was transferred from 1987 SIC 5085, Wholesale of Industrial Supplies, into Metal Shipping Barrels, Drums, Kegs, and Pails Manufacturing to achieve comparability with Mexico. In NAICS, rebuilding on a factory basis is placed in the Manufacturing sector.

Nonferrous nail, brad and staple manufacturing was transferred from 1987 SIC 3399, Primary Metal Products, into Miscellaneous Fabricated Wire Product Manufacturing to achieve international comparability, and because of similar production processes. If the process includes drawing, it remains in primary metals.

Steel nail, spike, etc., manufacturing was transferred from 1987 SIC 3315, Steel Wiredrawing and Steel Nails and Spikes, into Miscellaneous Fabricated Wire Product Manufacturing to achieve international comparability, and because of similar production processes. If the process includes drawing, it remains in primary metals.

Metal gasket packing and sealing device manufacturing was transferred from 1987 SIC 3053, Gaskets, Packing, and Sealing Devices, into All Other Fabricated Metal Product Manufacturing to achieve international comparability. The U.S. and Canada moved to match Mexico.

Steel wool manufacturing was transferred from 1987 SIC 3291, Abrasive Products, into All Other Fabricated Metal Product Manufacturing to achieve international comparability. The U.S. moved to match Canada and Mexico.

Flexible metal hose manufacturing was transferred from 1987 SIC 3599, Industry and Commercial Machinery and Equipment, NEC, into All Other Fabricated Metal Product Manufacturing to achieve international comparability.

Metal sign manufacturing was transferred from 1987 SIC 3993, Signs and Advertising Specialties, into All Other Fabricated Metal Product Manufacturing to achieve international comparability. The U.S. and Canada moved to match Mexico.

Comb, hair curler, and other metal product manufacturing was transferred from 1987 SIC 3999, Manufacturing Industries, NEC, into All Other Fabricated Metal Product Manufacturing to achieve international comparability.

Laminating steel was transferred from 1987 SIC 3399, Primary Metal Products, NEC, into Electroplating, Plating, Polishing, Anodizing and Coloring. This change achieves international comparability. The U.S. moved to match Canada and Mexico.

Also, there were several activities that transferred within the Fabricated Metal Product Manufacturing subsector. The number of Fabricated Metal Product industries increased from 38 in 1987 to 41 in 1997. For time series linkage, 32 of the 38 1987 industries are comparable within three percent of the 1997 industries.

Part V--Proposed New Industry Structure for Machinery Manufacturing

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 8

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Machinery Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users. Comments received will be shared among the countries and additional discussions will be held before a final decision on the structure is made. Each country may add additional detailed industries, below the 4-

digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries. This NAICS structure was presented and provisionally accepted at the Committee meeting held August 30, 1995 - September 1, 1995 in Washington, D.C.

Accepted:		Signature	Date
Canada	/S/	Jacob Ryten	9/1/95
Mexico	/S/	Enrique Ordaz	9/1/95
United States	/S/	Jack E. Triplett	9/1/95

ATTACHMENT 1--NAICS STRUCTURE

XX	MACHINERY MANUFACTURING
XXX	Agricultural, Construction, and Mining Machinery Manufacturing
XXXX	Agricultural Implement Manufacturing
XXXX	Construction Machinery Manufacturing
XXXX	Mining and Oil and Gas Field Machinery Manufacturing
XXX	Industrial Machinery Manufacturing
XXXX	Sawmill and Woodworking Machinery Manufacturing
XXXX	Rubber and Plastic Industry Machinery Manufacturing

XXXX	Other Industrial Machinery Manufacturing
XXX	Commercial and Service Industry Machinery Manufacturing
XXXX	Commercial and Service Industry Machinery Manufacturing
XXX	Heating, Ventilation, Air Conditioning, and Commercial Refrigeration Manufacturing
XXXX	Heating, Ventilation, Air Conditioning, and Commercial Refrigeration Manufacturing
XXX	Metalworking Machinery Manufacturing
XXXX	Metalworking Machinery Manufacturing
XXX	Engine, Turbine, and Power Transmission Equipment Manufacturing
XXXX	Engine, Turbine, and Power Transmission Equipment Manufacturing
XXX	Other General Purpose Machinery Manufacturing
XXXX	Pump and Compressor Manufacturing
XXXX	Material Handling Equipment Manufacturing
XXXX	All Other General Purpose Machinery Manufacturing

Attachment 2--North American Industry Classification System

Draft Classification for:

Machinery Manufacturing

Representatives of the statistical agencies of Canada, Mexico, and the United States

agree to a draft industrial classification for these industries.

This draft classification applies to the subsector, Machinery Manufacturing. This subsector is sub-divided into seven industry groups and thirteen industries. The subsector will be part of the Manufacturing sector of the classification.

A General Outline

The industries included in the Machinery Manufacturing subsector create end products that apply mechanical force, for example, the application of gears and levers to perform work. Some important processes for manufacture of machinery are forging, stamping, bending, forming, and machining that are used to shape individual pieces of metal. Processes such as welding and assembling are used to join separate parts together. These processes are similar to those used in metal fabricating establishments. However, machinery manufacturing typically employs multiple metal forming processes in manufacturing the various parts of the machine and complex assembly operations are an inherent part of the production process.

In general, design considerations are very important in machinery production. Establishments specialize in producing machinery designed for particular applications. Thus design is considered to be part of the production process for the purpose of implementing NAICS. The structure reflects this by defining industries and industry groups that produce machinery for different applications. A broad distinction exists between machinery that is generally used in a variety of industrial applications (general purpose machinery) and machinery that is designed to be used in a particular

industry (special purpose machinery). Three industry groups consist of special purpose machinery - Agricultural, Construction, and Mining Machinery Manufacturing; Industrial Machinery Manufacturing; and Commercial and Service Industry Machinery Manufacturing. The other industry groups produce general-purpose machinery - Heating, Ventilation, Air Conditioning, and Commercial Refrigeration Manufacturing; Metalworking Machinery Manufacturing; Engine, Turbine, and Power Transmission Equipment Manufacturing; and Other General Purpose Machinery Manufacturing.

Limitations and Constraints of the Classification

Relatively broad industries were created in several areas including: Other Industrial Machinery Manufacturing; Heating, Ventilation, Air Conditioning, and Commercial Refrigeration Manufacturing; and Engine, Turbine and Power Transmission Equipment Manufacturing. Occasionally, these aggregations are a consequence of differences in the degree of specialization of the three countries. For example, Canada cannot support a separation of mining machinery manufacturing from oil and gas field machinery manufacturing because of the combination of these activities in the same establishments.

More often, size constraints prohibit separation of activities in Canada or Mexico. For example, separate industries are possible for textile machinery manufacturing in the United States and Mexico, or for paper industry machinery manufacturing in Canada and the United States. But due to size constraints, it is not possible to create

the textile machinery manufacturing industry in Canada or the paper industry machinery manufacturing industry in Mexico. Therefore, textile machinery manufacturing and paper machinery manufacturing are included in the four-digit industry, Other Industrial Machinery Manufacturing.

Each country will publish additional categories that comprise sub-divisions of industries, to present data for activities that are nationally significant.

For those users requiring detailed commodity information, each country will publish information on the products of these industries. Efforts also are underway to harmonize the commodity classifications to allow for greater comparability of these statistics.

Relationship to ISIC

Ten of the thirteen four-digit industries in this subsector can be assigned to Division 29, Manufacture of Machinery and Equipment, NEC, of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. The following three industries belong largely to ISIC Division 29, with the exception of the activities indicated: Mining, Oil and Gas Field Machinery (drilling bits for oilfield and gas drilling equipment); Commercial and Service Industry Machinery Manufacturing (optical instruments and lenses and photographic equipment and supplies, except photographic films, paper, and chemicals); and Other General Purpose Machinery (balance equipment, other than automotive wheel). However, because the exceptions indicated are a relatively small part of the output of these two

NAICS industries, one can combine the industries of NAICS for this subsector, and be quite comparable to ISIC 29.

Some Changes to the National Classifications

The Canadian classification's Machinery Industries major group is similar in coverage to the subsector proposed here. The manufacturing of heating equipment, now treated as metal fabricating; of some office machinery, now classified as electrical equipment; and of engines, now classified as transportation equipment have been moved to this subsector. Furthermore, the structure - special-purpose machinery and general-purpose machinery - is similar. However, the classification has more detail, with thirteen industries compared to seven; the Canadian national detail adds three more.

The Mexican classification's Manufacture, Repair and Assembly of Machinery and Equipment for Specific Purposes and Manufacture, Repair and Assembly of Machinery and Equipment for General Use have a combined coverage similar to the subsector proposed here. The manufacturing of heating equipment, now treated as metal fabricating, of some office machinery, now classified as electrical equipment, and of engines now classified as transportation equipment, have been moved to this subsector. Furthermore, the structure -special-purpose machinery and general-purpose machinery - is similar. The amount of detail in the subsector is similar to that of the existing classification.

For the United States, a major change is the movement of computers and peripherals

out of this group to the new subsector for Computers and Electronic Product Manufacturing. Heating equipment, currently in the 1987 SIC Fabricated Metal major group, and optical instruments, lenses, and photographic equipment, currently in the 1987 SIC Instruments and Related Products major group, have been transferred into this subsector. Other changes involve the movement of a number of relatively small activities from one national industry to another to achieve comparability with Canada and Mexico, and/or to better meet production principles. Otherwise, the new structure, with U.S. national industry detail, is comparable with the 1987 SIC. For example, only seven 1987 U.S. industries have time series breaks that amount to more than 3 percent of the industry value of shipments in 1992.

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System (NAICS). It is comprised of industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. In the main, the hierarchical structure of the classification also follows the production concept.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry (4-digit) level of the structure. All countries agree on the detailed definitions of the industries.

Other objectives of the project are not as relevant in this area of the classification as in others. These objectives are the delineation of new and emerging industries, service industries, and industries engaged in the production of advanced technologies. The industrial sector in question is relatively mature, generally produces goods, and employs relatively stable technology. Therefore, the emphasis is on the objectives listed above.

The industries have high specialization ratios, and they are economically significant. The detail (4-digit level) and structure of the classification are balanced in size. This enhances the classification's suitability for sampling and other aspects of survey operations. Finally, disruptions to time series, while they exist, have been minimized. Most of the changes at the detail to existing classifications are marginal. The major changes are well-identified and can be taken into account in linking time series.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the three industry subsectors presented in *Part I, Section A-- Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the industry subsector covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; N-new industry; R-revised industry; and * means "part of". The abbreviation NEC is used for Not Elsewhere Classified.

1997 and U.S. DESCRIPTION	Status code	1987 SIC code	1987 SIC description
XX Machinery Manufacturing			
XXX Agriculture, Construction, and Mining Machinery Manufacturing			
XXXX Agricultural Implement Manufacturing			
XXXXX Farm Machinery and Equipment Manufacturing	R	*3523	Farm Machinery and Equipment (Except Corrals, Stalls, Holding Gates, Hand Clippers for Animals, and Farm Conveyors/Elevators)
XXXXX Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	R	*3524	Lawn and Garden Tractors and Home Lawn and Garden Equipment (Except Nonpowered Lawnmowers)
XXXX Construction Machinery Manufacturing	R	*3531	Construction Machinery and Equipment (Except Railway Track Maintenance Equipment; Winches, Aerial Work Platforms; and Automotive Wreckers Hoists)
XXXX Mining and Oil and Gas Field Machinery Manufacturing			
XXXXX Mining Machinery and Equipment Manufacturing	E	3532	Mining Machinery and Equipment, Except Oil and Gas Field Machinery and Equipment
XXXXX Oil and Gas Field Machinery and Equipment Manufacturing	E	3533	Oil and Gas Field Machinery and Equipment

XXX	Industrial Machinery Manufacturing			
XXXX	Sawmill and Woodworking Machinery Manufacturing	E	3553	Woodworking Machinery
XXXX	Rubber and Plastic Industry Machinery Manufacturing	N	*3559	Special Industry Machinery, NEC (Rubber and Plastics Manufacturing Machinery)
XXXX	Other Industrial Machinery Manufacturing			
XXXXX	Textile Machinery Manufacturing	E	3552	Textile Machinery
XXXXX	Paper Industry Machinery Manufacturing	E	3554	Paper Industries Machinery
XXXXX	Printing Machinery and Equipment Manufacturing	E	3555	Printing Trades Machinery and Equipment
XXXXX	Food Product Machinery Manufacturing	E	3556	Food Products Machinery
XXXXX	Semiconductor Machinery Manufacturing	N	*3559	Special Industry Machinery, NEC (Semiconductor Machinery Manufacturing)
XXXXX	All Other Industrial Machinery Manufacturing	R	*3559	Special Industry Machinery, NEC (Except Rubber and Plastics Manufacturing Machinery, Semiconductor Manufacturing Machinery, and Automotive Maintenance Equipment)
XXX	Commercial and Service Industry Machinery Manufacturing			
XXXX	Commercial and Service Industry Machinery Manufacturing			
XXXXX	Automatic Vending Machine Manufacturing	E	3581	Automatic Vending Machines
XXXXX	Commercial Laundry, Drycleaning and Pressing Machine Manufacturing	E	3582	Commercial Laundry, Drycleaning and Pressing Machines

XXXXX	Office Machinery Manufacturing	N	*3578	Calculating and Accounting Machinery, Except Electronic Computers (Except Point of Sales Terminals (Scanning Devices) and Funds Transfer Devices)
			*3579	Office Machines, NEC (Except Timeclocks, Time Stamps, Pencil Sharpeners, Stapling Machines, etc.)
XXXXX	Optical Instrument and Lense Manufacturing	E	3827	Optical Instruments and Lenses
XXXXX	Photographic and Photocopying Equipment Manufacturing	N	*3861	Photographic Equipment and Supplies (Except Photographic Films, Paper and Chemicals)
XXXXX	Other Commercial and Service Industry Machinery Manufacturing	R	*3559	Special Industry Machinery, NEC (Automotive Maintenance Equipment)
			3589	Service Industry Machinery, NEC
			*3599	Industrial and Commercial Machinery and Equipment, NEC (Carnival Amusement Park Equipment)
			*3699	Electrical Machinery, Equipment and Supplies, NEC (Electronic Teaching Machines and Flight Simulators)
XXX	Heating, Ventilation, Air-Conditioning, and Commercial Refrigeration Manufacturing			
XXXX	Heating, Ventilation, Air-Conditioning, and Commercial Refrigeration Manufacturing			
XXXXX	Heating Equipment Manufacturing, Except Electric and Warm Air Furnaces	R	3433	Heating Equipment, Except Electric and Warm Air Furnaces

			3634	Electric Housewares and Fans (Permanent Electric Wall and Baseboard Heating Equipment)
XXXXXX	Air Purification Equipment Manufacturing	N	*3564	Industrial and Commercial Fans and Blowers and Air Purification Equipment (Air Purification Equipment)
XXXXXX	Industrial and Commercial Fan and Blower Manufacturing	R	*3564	Industrial and Commercial Fans and Blowers and Air Purification Equipment (Fans and Blowers)
XXXXXX	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	R	*3443	Fabricated Plate Work (Boiler Shops) (Metal Cooling Towers)
			*3585	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment (Except Water Coolers)
XXX	Metalworking Machinery Manufacturing			
XXXX	Metalworking Machinery Manufacturing			
XXXXXX	Machine Tool Manufacturing, Metal Cutting Types	E	3541	Machine Tools, Metal Cutting Type
XXXXXX	Machine Tool Manufacturing, Metal Forming Types	E	3542	Machine Tools, Metal Forming Type
XXXXXX	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	R	*3544	Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds (Except Molds)
XXXXXX	Industrial Mold Manufacturing	R	*3544	Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds (Molds)
XXXXXX	Cutting Tool and Machine Tool Accessory Manufacturing	R	*3545	Cutting Tools, Machine Tool Accessories, and Machinists' Precision Measuring Devices (Except Precision Measuring Devices)

XXXXX	Rolling Mill Machinery and Equipment Manufacturing	E	3547	Rolling Mill Machinery and Equipment
XXXXX	Other Metalworking Machinery Manufacturing	E	3549	Metalworking Machinery, NEC
XXX	Engine, Turbine, and Power Transmission Equipment Manufacturing			
XXXX	Engine, Turbine, and Power Transmission Equipment Manufacturing			
XXXXX	Steam, Gas, and Hydraulic Turbine, and Turbine Generator Set Unit Manufacturing	E	3511	Steam, Gas, and Hydraulic Turbines, and Turbine Generator Set Units
XXXXX	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	E	3566	Speed Changers, Industrial High-Speed Drives, and Gears
XXXXX	Mechanical Power Transmission Equipment Manufacturing	E	3568	Mechanical Power Transmission Equipment, NEC
XXXXX	Other Engine Equipment Manufacturing	R	*3519	Internal Combustion Engines, NEC (Except Stationary Engine Radiators)
			*3699	Electrical Machinery, Equipment and Supplies, NEC (Outboard Electric Motors)
XXX	Other General Purpose Machinery Manufacturing			
XXXX	Pump and Compressor Manufacturing			
XXXXX	Pump and Pumping Equipment Manufacturing	E	3561	Pumps and Pumping Equipment
			*3743	Railroad Equipment (Locomotive Fuel Lubricating or Cooling Medium Pumps)

XXXXX	Air and Gas Compressor Manufacturing	E	3563	Air and Gas Compressors
XXXXX	Measuring and Dispensing Pump Manufacturing	E	3586	Measuring and Dispensing Pumps
XXXX	Material Handling Equipment Manufacturing			
XXXXX	Elevator and Moving Stairway Manufacturing	E	3534	Elevators and Moving Stairways
XXXXX	Conveyor and Conveying Equipment Manufacturing	R	*3523	Farm Machinery and Equipment (Conveyors and Elevators)
			3535	Conveyors and Conveying Equipment
XXXXX	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	R	3536	Overhead Traveling Cranes, Hoists, and Monorail Systems
			*3531	Construction Machinery and Equipment (Winches, Aerial Work Platforms, and Automobile Wrecker Hoists)
XXXXX	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	R	*3537	Industrial Trucks, Tractors, Trailers, and Stackers (Except Metal Pallets and Metal Air Cargo Containers)
XXXX	All Other General Purpose Machinery Manufacturing			
XXXXX	Power-Driven Hand Tool Manufacturing	E	3546	Power-Driven Handtools
XXXXX	Welding and Soldering Equipment Manufacturing	R	*3548	Electric and Gas Welding and Soldering Equipment (Except Transformers for Arc-Welding)
XXXXX	Packaging Machinery Manufacturing	E	3565	Packaging Machinery
XXXXX	Industrial Process Furnace and Oven Manufacturing	E	3567	Industrial Process Furnaces and Ovens
XXXXX	Fluid Power Cylinder and Actuator Manufacturing	E	3593	Fluid Power Cylinders and Actuators
XXXXX	Fluid Power Pump and Motor Manufacturing	E	3594	Fluid Power Pumps and Motors
XXXXX	Scale and Balance Manufacturing, Except Laboratory	E	3596	Scales and Balances, Except Laboratory

XXXXX

All Other General Purpose Machinery Manufacturing

R

*3599

Industrial and Commercial Machinery

and Equipment, NEC (Other Machinery)

3569

General Industrial Machinery and Equipment, NEC

TABLE 2

The abbreviation “pt” means “part of”, @ means time series break has been created that is greater than 3% of the 1992 value of shipments for the 1987 SIC industry. The abbreviation NEC is used for Not Elsewhere Classified.

1987 SIC code	1987 SIC Description	1997 U.S. Description
3433	Heating Equipment, Except Electric and Warm Air Furnaces	Heating Equipment Manufacturing, Except Electric and Warm Air Furnaces (pt)
3443@	Fabricated Plate Work (Boiler Shops)	
	Fabricated Plate Work and Metal Weldments	Plate Work Manufacturing (Included in Fabricated Metal Product subsector)
	Power Boilers and Heat Exchangers	Power Boiler and Heat Exchanger Manufacturing (Included in Fabricated Metal Product subsector)
	Heavy Gauge Tanks	Metal Tank Manufacturing (Heavy Gauge) (Included in Fabricated Metal Product subsector)
	Metal Cooling Towers	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing (pt)
3511	Steam, Gas, and Hydraulic Turbines, and Turbine Generator Set Units	Steam, Gas, and Hydraulic Turbine, and Turbine Generator Set Unit Manufacturing
3519	Internal Combustion Engines, NEC	
	Stationary Engine Radiators	Other Motor Vehicle Part Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)

	Internal Combustion Engines , NEC; (Except Stationary Engine Radiators)	Other Engine Equipment Manufacturing (pt)
3523	Farm Machinery and Equipment	
	Farm Machinery and Equipment (Except Corrals, Stalls, Holding Gates, Hand Clippers for Animals, Farm Conveyors/Elevators	Farm Machinery and Equipment Manufacturing
	Metal Corrals, Stalls, Holding Gates	Architectural and Ornamental Metal Work Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
	Hand Hair Clippers for Animals	Hand and Edge Tool Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
	Farm Conveyors and Farm Elevators	Conveyor and Conveying Equipment Manufacturing (pt)
3524	Lawn and Garden Tractors and Home Lawn and Garden Equipment	
	Lawn and Garden Tractors and Home Lawn and Garden Equipment (Except Nonpowered Lawnmowers)	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
	Nonpowered Lawnmowers	Hand and Edge Tool Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
3531@	Construction Machinery and Equipment	
	Construction Machinery and Equipment (Except Railway Track Maintenance Equipment; Winches, Aerial Work Platforms; and Automotive Wrecker Hoists)	Construction Machinery Manufacturing

	Railway Track Maintenance Equipment	Railroad Rolling Stock Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)
	Winches, Aerial Work Platforms; and Automotive Wrecker Hoists	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing (pt)
3532	Mining Machinery and Equipment, Except Oil and Gas Field Machinery and Equipment	Mining Machinery and Equipment Manufacturing
3533	Oil and Gas Field Machinery and Equipment	Oil and Gas Field Machinery and Equipment Manufacturing
3534	Elevators and Moving Stairways	Elevator and Moving Stairway Manufacturing (pt)
3535	Conveyors and Conveying Equipment	Conveyor and Conveying Equipment Manufacturing (pt)
3536	Overhead Traveling Cranes, Hoists and Monorail Systems	Overhead Traveling Crane, Hoist and Monorail System Manufacturing (pt)
3537	Industrial Trucks, Tractors, Trailers, and Stackers	
	Industrial Trucks, Tractors, Trailers, and Stackers (Except Metal Pallets and Air Cargo Containers)	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing
	Metal Pallets	All Other Fabricated Metal Product Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
	Metal Air Cargo Containers	Other Metal Container Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
3541	Machine Tools, Metal Cutting Type	Machine Tool Manufacturing, Metal Cutting Types
3542	Machine Tools, Metal Forming Type	Machine Tool Manufacturing, Metal Forming Types
3543	Industrial Patterns	Industrial Pattern Manufacturing (Included in Fabricated Metal Product Manufacturing subsector)
3544	Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds	

	Special Dies and Tools, Die Sets, Jigs and Fixtures	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing
	Industrial Molds	Industrial Mold Manufacturing
3545@	Cutting Tools, Machine Tool Accessories, and Machinists'	
	Precision Measuring Devices	
	Precision Measuring Devices	Hand and Edge Tool Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
	Other	Cutting Tool and Machine Tool Accessory Manufacturing
3546	Power-Driven Handtools	Power-Driven Hand Tool Manufacturing
3547	Rolling Mill Machinery and Equipment	Rolling Mill Machinery and Equipment Manufacturing
3548@	Electric and Gas Welding and Soldering Equipment	
	Welding and Soldering Equipment	Welding and Soldering Equipment Manufacturing
	Transformers for Arc-Welding	Power, Distribution, and Specialty Transformer Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
3549	Metalworking Machinery, NEC	Other Metalworking Machinery Manufacturing
3552	Textile Machinery	Textile Machinery Manufacturing
3553	Woodworking Machinery	Sawmill and Woodworking Machinery Manufacturing
3554	Paper Industries Machinery	Paper Industry Machinery Manufacturing
3555	Printing Trades Machinery and Equipment	Printing Trade Machinery and Equipment Manufacturing
3556	Food Products Machinery	Food Product Machinery Manufacturing
3559@	Special Industry Machinery, NEC	

	Special Industry Machinery, NEC (Except Rubber and Plastics Manufacturing Machinery, Semiconductor Manufacturing Machinery and Automotive Maintenance Equipment)	All Other Industrial Machinery Manufacturing (pt)
	Rubber and Plastics Manufacturing Machinery	Rubber and Plastic Industry Machinery Manufacturing
	Automotive Maintenance Equipment	Other Commercial and Service Industry Machinery Manufacturing (pt)
	Semiconductor Machinery Manufacturing	Semiconductor Manufacturing Machinery
3561	Pumps and Pumping Equipment	Pump and Pumping Equipment Manufacturing
3562	Ball and Roller Bearings	Ball and Roller Bearing Manufacturing (Included in Fabricated Metal Product Manufacturing subsector)
3563	Air and Gas Compressors	Air and Gas Compressor Manufacturing
3564	Industrial and Commercial Fans and Blowers and Air Purification Equipment	
	Air Purification Equipment	Air Purification Equipment Manufacturing
	Fans and Blowers	Industrial and Commercial Fan and Blower Manufacturing
3565	Packaging Machinery	Packaging Machinery Manufacturing
3566	Speed Changers, Industrial High-Speed Drives, and Gears	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
3567	Industrial Process Furnaces and Ovens	Industrial Process Furnace and Oven Manufacturing
3568	Mechanical Power Transmission Equipment, NEC	Mechanical Power Transmission Equipment Manufacturing
3569	General Industrial Machinery and Equipment, NEC	All Other General Purpose Machinery Manufacturing (pt)
3571	Electronic Computers	Electronic Computer Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3572	Computer Storage Devices	Computer Storage Device Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)

3575	Computer Terminals	Computer Terminal Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3577	Computer Peripheral Equipment, NEC	Computer Peripheral Equipment Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3578@	Calculating and Accounting Machinery, Except Electronic Computers	
	Calculating and Accounting Machinery, Except Electronic Computers (Except Point of Sales Terminals and Funds Transfer Devices)	Office Machinery Manufacturing (pt)
	Point of Transfer Terminals and Fund Transfer Devices	Other Computer Peripheral Equipment Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3579@	Office Machines, NEC	
	Office Machines, NEC (Except Timeclocks, Time Stamps, Pencil Sharpeners, Stapling Machines, etc.)	Office Machinery Manufacturing (pt)
	Timeclocks, Time Stamps	Watch, Clock, and Part Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
	Pencil Sharpeners, Stapling Machines, etc.	Lead Pencil, Crayon and Artist Material Manufacturing (pt) (Included in Miscellaneous Manufacturing subsector)
3581	Automatic Vending Machines	Automatic Vending Machine Manufacturing
3582	Commercial Laundry, Drycleaning, and Pressing Machines	Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing
3585	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment	

	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment (Except Water Coolers) Water Coolers	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing Household Refrigerator and Home and Farm Freezer Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
3586	Measuring and Dispensing Pumps	Measuring and Dispensing Pump Manufacturing
3589	Service Industry Machinery	Other Commercial and Service Industry Machinery Manufacturing (pt)
3592	Carburetors, Pistons, Piston Rings, and Valves	Carburetor, Piston, Piston Ring, and Valve Manufacturing (Included in Transportation Equipment Manufacturing subsector)
3593	Fluid Power Cylinders and Actuators	Fluid Power Cylinder and Actuator Manufacturing
3594	Fluid Power Pumps and Motors	Fluid Power Pump and Motor Manufacturing
3596	Scales and Balances, Except Laboratory	Scale and Balance Manufacturing, Except Laboratory
3599@	Industrial and Commercial Machinery and Equipment, NEC Industrial and Commercial Machinery and Equipment, NEC (Other Machinery) Flexible Metal Hose Gasoline, Oil and Intake Filters for Internal Combustion Engines, Except those for Motor Vehicles Carnival Amusement Park Equipment Machine Shops	All Other General Purpose Machinery Manufacturing (pt) All Other Fabricated Metal Product Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector) Other Motor Vehicle Part Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector) Other Commercial and Service Industry Machinery Manufacturing (pt) Machine Shops (Included in Fabricated Metal Product Manufacturing subsector)
3634	Electric Housewares and Fans	

	Electric Housewares and Fans (Except Permanent Electric Wall and Baseboard Heating Units)	Electric Housewares and Fan Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
	Permanent Electric Wall and Baseboard Heating Units	Heating Equipment Manufacturing, Except Electric and Warm Air Furnaces (pt)
3639	Household Appliances, NEC	
	Floor Waxing and Floor Polishing Machines	Household Vacuum Cleaner Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
	Household Sewing Machines	All Other Industrial Machinery Manufacturing (pt)
	Other	Other Household Appliance Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
3699	Electrical Machinery, Equipment, and Supplies, NEC	
	Electronic Teaching Machines and Flight Simulators	Other Commercial and Service Industry Machinery Manufacturing (pt)
	Outboard Electric Motors	Other Engine Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)
	Bar Code Scanners	Other Computer Peripheral Equipment Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
	Lasers	Classify According to Function
	Christmas tree lighting sets, electric insect lamps	Other Lighting Equipment Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)
	Other	Other Electrical Industrial Apparatus Manufacturing (pt) (Included in Electrical Equipment, Appliance and Component Manufacturing subsector)

3743	Railroad equipment	
	Railroad Equipment (Except Railroad Locomotive Pumps)	Railroad Equipment Manufacturing (Included in Transportation Equipment Manufacturing subsector)
	Locomotive Fuel Lubricating or Cooling Medium Pumps	Pump and Pumping Equipment Manufacturing
3827	Optical Instruments and Lenses	Optical Instrument and Lense Manufacturing
3861@	Photographic Equipment and Supplies	
	Photographic Equipment and Supplies (Except Photographic Films, Paper and Chemicals)	Photographic and Photocopying Equipment Manufacturing

Description of changes to the U.S. System

A number of the changes listed in this section were made for reasons of international comparability. Where one or more of the three North American countries had different definitions of an industry classification, adjustments to the definitions of one or more countries were required. In constructing NAICS, the three countries agreed to move, where change was required to attain international comparability, in the direction of the country or countries whose existing classification definitions most closely corresponded to the production-oriented concept adopted for NAICS. Cases where the U.S. changed are listed below; other cases where Canada or Mexico moved toward the U.S. classification are not, of course, listed in this section.

Five new industries were added to the 1997 industry structure for this industry subsector. New industries were created for:

Semiconductor Machinery Manufacturing from part of 1987 SIC 3559, Special Industry Machinery, NEC, in response to an industry proposal and because of the highly specialized production processes involved.

Rubber and Plastic Industry Machinery Manufacturing from part of 1987 SIC 3559, Special Industry Machinery, NEC, in response to a plastics industry proposal and because of the highly specialized production processes involved. Rubber machinery was included with plastics machinery because of shared production characteristics.

Air Purification Equipment Manufacturing from part of 1987 SIC 3564, Industrial and Commercial Fans and Blowers and Air Purification Equipment, in response to an industry proposal and because of highly specialized production processes involved.

Office Machinery Manufacturing from part of 1987 SIC 3578, Calculating and Accounting Machinery, Except Electronic Computers, and from part of 1987 SIC 3579, Office Machines, NEC, to achieve international comparability. Mexico has a separate class already broken out. More advanced electronic office machinery is placed in the new Computer and Electronic Product Manufacturing subsector, because the production processes are very different.

Photographic and Photocopying Equipment Manufacturing from Part of 1987 SIC 3861, Photographic Equipment and Supplies, to achieve international comparability.

Seven industries were removed from this industry group, and transferred elsewhere. All seven of these were moved to achieve international comparability, or to create the new Computer and Electronic Product Manufacturing subsector.

Industrial Pattern Manufacturing was transferred into the Fabricated Metal Product Manufacturing subsector.

Ball and Roller Bearing Manufacturing was transferred into the Fabricated Metal Product Manufacturing subsector.

Carburetor, Piston, Piston Ring, and Valve Manufacturing was transferred into the Transportation Equipment Manufacturing subsector.

Electronic Computer Manufacturing was transferred into the Computer and Electronic Component Manufacturing subsector.

Computer Storage Product Device Manufacturing was transferred into the Computer and Electronic Product Manufacturing subsector.

Computer Terminal Manufacturing was transferred into the Computer and Electronic Product Manufacturing subsector.

Computer Peripheral Equipment, NEC was transferred into the Computer and Electronic Product Manufacturing subsector.

Fifteen activities transferred out of 1987 Major Group 35, Industrial and Commercial Machinery and Computer Equipment, and are described more fully in their new respective subsectors.

Ferrous and nonferrous mold manufacturing was transferred from part of 1987 SIC 3544, Special Dies and Tools, Die Sets, Jigs and Fixtures, and Industrial Molds, into the Primary Metal Manufacturing subsector.

Hand hair clippers for animals and metal corral, stall, and holding gate manufacturing were transferred from part of 1987 SIC 3523, Farm Machinery and Equipment, into the Fabricated Metal Product Manufacturing subsector.

Nonpowered lawn mower manufacturing was transferred from part of 1987 SIC 3524, Lawn and Garden Tractors and Home Lawn and Garden Equipment, into the Fabricated Metal Product Manufacturing subsector.

Precision measuring tool manufacturing was transferred from part of 1987 SIC 3545, Cutting Tools, Machine Tool Accessories, and Machinists' Precision Measuring Devices, into the Fabricated Metal Product Manufacturing subsector.

Metal air cargo container and metal pallet manufacturing was transferred from part of 1987 SIC 3537, Industrial Trucks, Tractors, Trailers, and Stackers, into the Fabricated Metal Product Manufacturing subsector.

Machine shops were transferred from part of 1987 SIC 3599, Industrial and Commercial Machinery and Equipment, NEC, into the Fabricated Metal Product

Manufacturing subsector, to achieve international comparability. Canada had machine shops in CSIC 30, Fabricated Metal Products Industries.

Stationery engine radiator manufacturing was transferred from part of 1987 SIC 3519, Internal Combustion Engines, NEC, into the Transportation Equipment Manufacturing subsector.

Gasoline, oil, and air filters for internal combustion engines, except motor vehicle was transferred from part of 1987 SIC 3599, Industrial and Commercial Machinery and Equipment, NEC, into the Transportation Equipment Manufacturing subsector.

Railway track maintenance equipment manufacturing was transferred from part of 1987 SIC 3531, Construction Machinery and Equipment, into the Transportation Equipment Manufacturing subsector.

Arc-welding transformer manufacturing was transferred from part of 1987 SIC 3548, Electric and Gas Welding and Soldering Equipment, into the Electrical Equipment, Appliance and Component Manufacturing subsector.

Water cooler manufacturing was transferred from 1987 SIC 3585, Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment, into the Electrical Equipment, Appliance and Component Manufacturing subsector.

Point of sale (computerized cash register), fund transfer machine, and automatic teller machine terminal manufacturing was transferred from part of 1987 SIC 3578, Calculating

and Accounting Machines, Except Electronic Computers, into the Computer and Electronic Product Manufacturing subsector.

Pencil sharpener and stapling machine manufacturing was transferred from part of 1987 SIC 3579, Office Machines, NEC, into the Miscellaneous Manufacturing subsector.

Time clock and other time recording device manufacturing was transferred from part of 1987 SIC 3579, Office Machines, NEC, into the Computer and Electronic Product Manufacturing subsector.

Two industries were transferred into this subsector:

Heating equipment manufacturing, except electric and warm air furnaces was transferred from 1987 SIC 3433, Heating Equipment, Except Electric and Warm Air Furnace (in the Fabricated Metal Manufacturing major group), to achieve international comparability. Canada had this in machinery manufacturing.

Optical Instrument and Lense Manufacturing was transferred from 1987 SIC 3827, Optical Instrument and Lenses, to achieve international comparability.

Six activities were transferred into the Machinery Manufacturing subsector.

Household sewing machine manufacturing was transferred from part of 1987 SIC 3639, Household Appliances, NEC, into All Other Industrial Machinery Manufacturing, to achieve international comparability. The U.S. and Canada moved to agree with Mexico, because the manufacture of household and industrial sewing machines are similar production processes.

Teaching machine and flight simulator manufacturing was transferred from part of

1987 SIC 3699, Electrical Machinery, Equipment, and Supplies, NEC, into Other Commercial and Service Industry Machinery Manufacturing, to achieve international comparability. The U.S. and Canada moved to match Mexico.

Metal cooling tower manufacturing was transferred from part of 1987 SIC 3443, Fabricated Plate Work (Boiler Shops), into Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing, to achieve international comparability. Canada includes cooling towers in CSIC 31, Machinery Industries.

Permanent electric wall and baseboard heating equipment manufacturing was transferred from part of 1987 SIC 3634, Electric Housewares and Fans into Heating Equipment, Except Electric and Warm Air Furnace Manufacturing, to achieve international comparability. The U.S. and Canada (from CSIC 30, Fabricated Metals) moved to match Mexico.

Locomotive fuel lubricating and cooling medium pump manufacturing was transferred from part of 1987 SIC 3743, Railroad Equipment, into Pump and Pumping Equipment Manufacturing, to reflect similarities in production.

Outboard electric motor manufacturing was transferred from part of 1987 SIC 3699, Electrical Machinery, Equipment, and Supplies, NEC, into Other Engine Manufacturing, to achieve international comparability. The U.S. moved to match Canada and Mexico.

Also, there were several activities that transferred within the Machinery Manufacturing subsector. The number of machinery manufacturing industries

increased from 38 in 1987 to 46 in 1997. For time series linkage, 31 of the 1987 industries are comparable within three percent of the 1997 industries.

Part VI--Proposed New Industry Structure for Electrical Equipment, Appliance and Component Manufacturing

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 9

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:
Electrical Equipment, Appliance and Component Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users. Comments received will be shared among the countries and additional discussions will be held before a final decision on the structure is made. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional

detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries.

This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held on August 30, 1995 - September 1, 1995 in Washington, D.C.

Accepted:		Signature	Date
Canada	/S/	Jacob Ryten	9/1/95
Mexico	/S/	Enrique Ordaz	9/1/95
United States	/S/	Jack E. Triplet	9/1/95

ATTACHMENT 1--NAICS STRUCTURE

XX Electrical Equipment, Appliance, and Component Manufacturing
XXX Electric Lighting, Equipment and Sign Manufacturing
XXXX Electric Lamp Bulb and Part Manufacturing
XXXX Electric Sign and Lighting Fixture Manufacturing
XXX Household Appliance Manufacturing
XXXX Small Electrical Appliance Manufacturing
XXXX Major Appliance Manufacturing

- XXX Electrical Equipment Manufacturing
- XXXX Electrical Equipment Manufacturing

- XXX Other Electrical Equipment and Component Manufacturing
- XXXX Accumulator and Battery Manufacturing
- XXXX Communication and Energy Wire Manufacturing
- XXXX Accessories and Conductors for Carrying Current Manufacturing
- XXXX All Other Electrical Equipment and Component Manufacturing

Attachment 2--North American Industry Classification System

Draft Classification for:

Electrical Equipment, Appliance and Component Manufacturing

Representatives of the statistical agencies of Canada, Mexico, and the United States agree to a draft industrial classification for these industries.

This draft classification applies to the subsector, Electrical Equipment, Appliance and Component Manufacturing. This subsector is sub-divided into four industry groups and nine industries. This subsector is part of the Manufacturing sector.

A General Outline

The Electrical Equipment, Appliance and Component Manufacturing industries create products that generate, distribute and use electrical power. While establishments classified in many parts of manufacturing make products that use electricity, the manufacture of electric lighting equipment and signs and household appliances require particular attention to the application of electricity. That is the reason for their inclusion in this subsector.

Electrical Equipment Manufacturing establishments produce goods that generate and distribute electrical power, or that are made with similar production technology, such as motors, generators, transformers and switchgear apparatus. Other Electrical Equipment and Component Manufacturing establishments produce devices for storing electrical power (e.g., accumulators), for transmitting electricity (e.g., insulated wire), and accessories for carrying current. Activities in both Electrical Equipment Manufacturing and Other Electrical Equipment and Component Manufacturing industry groups all involve the manufacture of machinery for the generation and distribution of power.

Limitations and Constraints of the Classification

In the Electrical Equipment, Appliance and Component Manufacturing subsector, most activities identified in one country exist in the others. The way activities are combined in establishments differs to some extent in the different countries. For example, Canada cannot separate the manufacturing of household

cooking equipment from refrigerators and freezers because these activities are often combined in Canadian establishments. Often an activity is not economically significant to the same degree in all countries. For example, size constraints in Canada prohibit separating the manufacture of batteries from accumulators. For those reasons, some NAICS industries in this subsector are broader than would be desirable in a system that distinguishes as does NAICS among production processes. Each country will publish additional categories that comprise subdivisions of NAICS industries to present data for activities that are nationally significant.

For those users requiring detailed commodity information, each country will publish information on the products of these industries. Efforts are also underway to harmonize the commodity classifications to allow comparability of these statistics.

Relationship to ISIC

Most of the NAICS four-digit industries created in this subsector can be assigned to Division 28, Manufacture of Fabricated Metal Products, Except Machinery and Equipment or Division 31, Manufacture of Electrical Machinery and Apparatus, nec of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. Therefore, data tabulated using NAICS can readily be re-tabulated according to ISIC with the following exception: NAICS industry, All Other Electrical Equipment and Component Manufacturing includes non-electrical products of graphite or carbon because those nonelectrical

products are made in the same establishments as electrical graphite and carbon products. In ISIC, this activity is included in Division 26, Manufacture of Other Non-Metallic Mineral Products.

Some Changes to the National Classifications

For Canada, the Electrical Equipment, Appliance and Component Manufacturing subsector is part of the existing Canadian classification's Electrical and Electronic Products Industries major group. A large part of that major group will form part of the new NAICS Computer and Electronic Product Manufacturing subsector. As well, establishments that draw wire and insulate it are classified in Primary Metal Manufacturing in NAICS. This subsector includes electric signs that are classified in Miscellaneous Manufacturing in the current Canadian classification. The structures of the NAICS and Canadian classifications are similar. There are fewer industries in NAICS, but national industries will provide the same level of detail as before.

For Mexico, the Electrical Equipment, Appliance and Component Manufacturing subsector includes many of the activities currently in the Mexican classification's Manufacture and Assembly of Machinery, Equipment and Electrical Accessories and Manufacture and Assembly of Electric and Non-Electric Appliances and Accessories for Home Use. However, NAICS includes the manufacturing of turbines and some engines in Machinery Manufacturing, rather than in electrical

machinery and it classifies electrical apparatus for transportation equipment in Transportation Equipment Manufacturing. The structure of the NAICS subsector is not similar to that of the corresponding areas of the Mexican classification. There are fewer industries in NAICS, but national industries will provide the same level of detail as before.

For the United States, a major change to the structure encompasses the transfer of twelve industries out of the existing 1987 SIC major group, Electronic and Other Electrical Equipment and Components Except Computer Equipment, to the proposed new NAICS subsector, Computer and Electronic Product Manufacturing. The industries moved are those that manufacture electronic components such as printed circuit boards and semiconductors and related devices. Two industries that produce electrical equipment/components for motor vehicles, aircraft etc. have been moved to the Transportation Equipment Manufacturing subsector.

Additional changes for the United States for this subsector include moving the manufacture of electric signs from the Miscellaneous Manufacturing subsector and the creation of a new industry from the Primary Metal Manufacturing subsector for the manufacture of insulated wire and cable from purchased wire. The relocation of insulated wire from Primary Metal Manufacturing to the Electrical Equipment, Appliance and Component Manufacturing subsector is a significant improvement of the classification with respect to the production principle as it now allows for a distinction between establishments that first draw wire and then insulate it and those

that only insulate.

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System (NAICS). It is comprised of industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. In the main, the hierarchical structure of the classification also follows the production concept.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry (4-digit) level of the structure. All countries agree on the detailed definitions of the industries.

Other objectives of the NAICS project are not as relevant in this area of the classification as in others. These objectives are the delineation of new and emerging industries, service industries, and industries engaged in the production of advanced technologies. The industrial sector in question is relatively mature, generally produces goods, and employs relatively stable technology. Therefore, the emphasis is on the objectives listed above.

The industries have high specialization ratios, and they are economically significant. The detail and structure of the classification are balanced in size. This enhances the classification's suitability for sampling, data-publishing and other aspects

of survey operations. Finally, disruptions to time series, while they exist, have been minimized. The statistical agencies can develop statistical “links”, to enable the re-tabulation of time series on the new NAICS classification structure.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the three NAICS industry subsectors presented in *Part I, Section A--Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the NAICS industry subsector covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; N-new industry; R-revised industry; and * means “part of”. The abbreviation NEC is used for Not Elsewhere Classified.

			1987	
	1997 NAICS and U.S. description	Status	SIC	1987 SIC description
		code	code	
XX	Electrical Equipment, Appliance and Component Manufacturing			
XXX	Electric Lighting Equipment and Sign Manufacturing			
XXXX	Electric Lamp Bulb and Part Manufacturing	E	3641	Electric Lamp Bulbs and Tubes
XXXX	Electric Sign and Lighting Fixture Manufacturing			
XXXXX	Electric Sign Manufacturing	N	*3993	Signs and Advertising Specialties (Electric signs)
XXXXX	Residential Electric Lighting Fixture Manufacturing	E	3645	Residential Electric Lighting Fixtures
			*3999	Manufacturing Industries, NEC (Lamp shades of paper or textile)
XXXXX	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	E	3646	Commercial, Industrial, and Institutional Electric Lighting Fixtures
XXXXX	Other Lighting Equipment Manufacturing	R	3648	Lighting Equipment, NEC

			*3699	Electrical Machinery, Equipment, and Supplies, NEC (Christmas tree lighting sets and electric insect lamps)
XXX	Household Appliance Manufacturing			
XXXX	Small Electrical Appliance Manufacturing			
XXXXX	Electric Housewares and Fan Manufacturing	R	*3634	Electric Housewares and Fans (Except wall and baseboard heating units for permanent installation)
XXXXX	Household Vacuum Cleaner Manufacturing	R	3635	Household Vacuum Cleaners
			*3639	Household Appliances, NEC (Floor waxing and floor polishing machines)
XXXX	Major Appliance Manufacturing			
XXXXX	Household Cooking Appliance Manufacturing	E	3631	Household Cooking Equipment
XXXXX	Household Refrigerator and Home and Farm Freezer Manufacturing	R	*3585	Refrigeration and Heating Equipment (Water Coolers)
			3632	Household Refrigerators and Home and Farm Freezers
XXXXX	Household Laundry Equipment Manufacturing	E	3633	Household Laundry Equipment

XXXXX	Other Household Appliance Manufacturing	R	*3639	Household Appliances, NEC (Except floor waxing and floor polishing machines, and household sewing machines)
XXX	Electrical Equipment Manufacturing			
XXXX	Electrical Equipment Manufacturing			
XXXXX	Power, Distribution and Specialty Transformer Manufacturing	R	*3548	Electrical and Gas Welding and Soldering Equipment (Transformers for arc-welders)
			3612	Power, Distribution, and Specialty Transformers
XXXXX	Switchgear and Switchboard Apparatus Manufacturing	E	3613	Switchgear and Switchboard Apparatus
XXXXX	Motor and Generator Manufacturing	E	3621	Motors and Generators
XXXXX	Relay and Industrial Control Manufacturing	E	3625	Relays and Industrial Controls
XXX	Other Electrical Equipment and Component Manufacturing			
XXXX	Accumulator and Battery Manufacturing			
XXXXX	Storage Battery Manufacturing	E	3691	Storage Batteries
XXXXX	Dry and Wet Primary Battery Manufacturing	E	3692	Primary Batteries, Dry and Wet

XXXX	Communication and Energy Wire Manufacturing			
XXXXX	Fiber Optic Cable Manufacturing	N	*3357	Drawing and Insulating of Nonferrous Wire (Fiber Optic Cable-Insulating Only)
XXXXX	Other Communication and Energy Wire Manufacturing	N	*3357	Drawing and Insulating of Nonferrous Wire (Except Fiber Optic-Insulating Only)
XXXX	Accessories and Conductors for Carrying Current Manufacturing			
XXXXX	Current-Carrying Wiring Device Manufacturing	E	3643	Current-Carrying Wiring Devices
XXXXX	Noncurrent-Carrying Wiring Device Manufacturing	E	3644	Noncurrent-Carrying Wiring Devices
XXXX	All Other Electrical Equipment and Component Manufacturing			
XXXXX	Carbon and Graphite Product Manufacturing	E	3624	Carbon and Graphite Products
XXXXX	All Other Electrical Industrial Equipment and Supply Manufacturing	R	3629	Electrical Industrial Apparatus, NEC
			*3699	Electrical Machinery, Equipment, and Supplies, NEC (Other electrical industrial apparatus)

TABLE 2

The abbreviation “pt” means “part of”, @ means time series break has been created that is greater than 3% of the 1992 value of shipments for the 1987 SIC industry. The abbreviation NEC is used for Not Elsewhere Classified.

1987 SIC code	1987 SIC Description	1997 U.S. Description
3612	Power, Distribution, and Specialty Transformers	Power, Distribution, and Specialty Transformer Manufacturing (pt)
3613	Switchgear and Switchboard Apparatus	Switchgear and Switchboard Apparatus Manufacturing
3621	Motors and Generators	Motor and Generator Manufacturing
3624	Carbon and Graphite Products	Carbon and Graphite Product Manufacturing
3625	Relays and Industrial Controls	Relay and Industrial Control Manufacturing
3629	Electrical Industrial Apparatus, NEC	All Other Electrical Industrial Equipment and Supply Manufacturing (pt)
3631	Household Cooking Equipment	Household Cooking Appliance Manufacturing
3632	Household Refrigerators and Home and Farm Freezers	Household Refrigerator and Home and Farm Freezer Manufacturing (pt)
3633	Household Laundry Equipment	Household Laundry Equipment Manufacturing
3634	Electric Housewares and Fans	
	Heating, cooking, and other electric housewares including fans	Electric Housewares and Fan Manufacturing (pt)
	Wall and baseboard heating units for permanent installation	Heating Equipment Manufacturing, Except Electric and Warm Air Furnaces (Included in Machinery Manufacturing subsector)

3635	Household Vacuum Cleaners	Household Vacuum Cleaner Manufacturing (pt)
3639	Household Appliances, NEC	
	Floor waxing and floor polishing machines	Household Vacuum Cleaner Manufacturing (pt)
	Household sewing machines	All Other Industrial Machinery Manufacturing (pt) (Included in Machinery Manufacturing subsector)
	Other household appliances	Other Household Appliance Manufacturing (pt)
3641	Electric Lamp Bulbs and Tubes	Electric Lamp Bulb and Part Manufacturing
3643	Current-Carrying Wiring Devices	Current-Carrying Wiring Device Manufacturing
3644	Noncurrent-Carrying Wiring Devices	Noncurrent-Carrying Wiring Device Manufacturing
3645	Residential Electric Lighting Fixtures	Residential Electric Lighting Fixture Manufacturing
3646	Commercial, Industrial, and Institutional Electric Lighting Fixtures	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
3647	Vehicular Lighting Equipment	Vehicular Lighting Equipment Manufacturing (Included in Transportation Equipment Manufacturing subsector)
3648@	Lighting Equipment, NEC	Other Lighting Equipment Manufacturing (pt)
3651	Household Audio and Video Equipment	Audio and Video Equipment Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3652	Phonograph Records and Prerecorded Audio Tapes and Disks	
	Record publishing	Record Production (pt) (Included in new Information sector)
		Integrated Record Companies (pt.) (Included in new Information sector)

	Reproduction of recording media	Prerecorded Compact Disc, Tape, and Record Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3661	Telephone and Telegraph Apparatus	
	Telephone and telegraph apparatus, except telephone transformers, and consumer external modems	Telephone Apparatus Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
	Telephone transformers	Electronic Coil, Transformer, and Other Inductor Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
	Consumer external modems	Other Electronic Component Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3663	Radio and Television Broadcasting and Communication Equipment	Broadcast and Studio Equipment Manufacturing for Radio, TV, and Cable (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3669	Communications Equipment, NEC	Other Communication Equipment Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3671	Electron Tubes	Electron Tube Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3672	Printed Circuit Boards	Printed Circuit Board Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3674	Semiconductors and Related Devices	Semiconductor and Related Device Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)

3675	Electronic Capacitors	Electronic Capacitor Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3676	Electronic Resistors	Electronic Resistor Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3677	Electronic Coils, Transformers, and Other Inductors	Electronic Coil, Transformer, and Other Inductor Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3678	Electronic Connectors	Electronic Connector Manufacturing (Included in Computer and Electronic Product Manufacturing subsector)
3679	Electronic Components, NEC	
	Electronic control modular chips for motor vehicles	Motor Vehicle Electrical and Electronic Equipment Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)
	Communication equipment	Broadcast and Studio Equipment Manufacturing for Radio, TV and Cable (Included in Computer and Electronic Product Manufacturing subsector)
	Other electronic components	Other Electronic Component Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3691	Storage Batteries	Storage Battery Manufacturing
3692	Primary Batteries, Dry and Wet	Dry and Wet Primary Battery Manufacturing
3694	Electrical Equipment for Internal Combustion Engines	Motor Vehicle Electrical and Electronic Equipment Manufacturing (pt) (Included in Transportation Equipment Manufacturing subsector)

3695	Magnetic and Optical Recording Media	Magnetic and Optical Recording Media Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
3699@	Electrical Machinery, Equipment, and Supplies, NEC	
	Christmas tree lighting sets and electric insect lamps	Other Lighting Equipment Manufacturing (pt)
	Bar code scanners	Other Computer Peripheral Equipment Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)
	Electric outboard motors	Other Engine Manufacturing (pt) (Included in Machinery Manufacturing subsector)
	Flight simulators and electronic teaching machines	Other Commercial and Service Industry Machinery Manufacturing (pt) (Included in Machinery Manufacturing subsector)
	Lasers	Classified according to function
	Other electrical machinery, equipment, and supplies	All Other Electrical Industrial Equipment and Supply Manufacturing (pt)

Description of Changes to the U.S. System

A number of the changes listed in this section were made for reasons of international comparability. Where one or more of the three North American countries had different definitions of an industry classification, adjustments to the definitions in one or more countries were required. In constructing NAICS, the three countries agreed to move, where change was required to attain international comparability, in the direction of the country or countries whose existing classification definitions most closely corresponded to the production-oriented concept adopted for NAICS. Cases where the U.S. changed are listed below; other cases where Canada or Mexico moved toward the U.S. classification are not, of course, listed in this section.

Three new industries were added to the 1997 industry structure for this subsector.

Electric Sign Manufacturing from part of 1987 SIC Code 3993, Signs and Advertising Specialties, to achieve international comparability. The U.S. and Canada moved to match Mexico.

Fiber Optic Cable Manufacturing (not drawn) from part of 1987 SIC 3357, Drawing and Insulating of Nonferrous Wire, for reasons of international comparability and because of the highly specialized production processes involved, and because this is a newly-emerging technology.

Other Communication and Energy Wire Manufacturing (insulating of only) from part of 1987 SIC Code 3357, Drawing and Insulating of Nonferrous Wire, for purposes of

international comparability and to better reflect production principles. The U.S. moved to match Canada and Mexico.

Sixteen industries were transferred out of 1987 SIC Major Group 36, Electronic and Other Electrical Equipment and Components, Except Computer Equipment. Of the sixteen industries, twelve are included in 1997 NAICS Subsector, Computer and Electronic Product Manufacturing, a new subsector; two transferred to NAICS Subsector, Transportation Equipment Manufacturing; and two were divided into several activities that were transferred into the 1997 NAICS Subsectors, Computer and Electronic Product Manufacturing and Transportation Equipment Manufacturing; and the new Information sector.

The following twelve industries were transferred to 1997 NAICS Subsector, Computer and Electronic Product Manufacturing:

Household Audio and Video Equipment

Telephone and Telegraph Apparatus

Radio and Television Broadcasting and Communication Equipment

Communications Equipment, NEC

Electron Tubes

Printed Circuit Boards

Semiconductors and Related Devices

Electronic Capacitors

Electronic Resistors

Electronic Coils, Transformers, and Other Inductors

Electronic Connectors

Magnetic and Optical Recording Media.

Two industries were transferred from 1987 SIC Major Group 36, Electronic and Other Electrical Equipment and Component, Except Computer Equipment, to 1997 NAICS Subsector, Transportation Equipment Manufacturing. They were 1987 SIC 3647, Vehicular Lighting Equipment, and 1987 SIC 3694, Electrical Equipment for Internal Combustion Engines.

Record publishing moved from part of 1987 SIC 3652, Phonograph Records and Prerecorded Audio Tapes and Disks, to the new NAICS Information sector. The remaining activities were transferred to 1997 NAICS Subsector, Computer and Electronic Product Manufacturing.

1987 SIC 3679, Electronic Components, NEC, was split three ways. One part, electronic control modular chips for motor vehicles, was transferred to 1997 NAICS Subsector, Transportation Equipment Manufacturing, and the other two parts, communication equipment and other electronic components, moved to two separate industries within 1997 NAICS Subsector, Computer and Electronic Product Manufacturing.

Three activities transferred into the 1997 Electrical Equipment, Appliance and Component subsector:

Transformers for arc-welders from part of 1987 SIC 3548, Electrical and Gas Welding and Soldering Equipment, to Power, Distribution, and Specialty Transformer

Manufacturing, to achieve international comparability. Canada had this in CSIC Major Group 33, Electrical and Electronic Products Industries.

Lamp shades of paper and textiles from part of 1987 SIC 3999, Manufacturing Industries, NEC, to Residential Electric Lighting Fixture Manufacturing, to achieve international comparability. Canada had lamp shades in CSIC MG 33, Electrical and Electronic Products Industries.

Water coolers from part of 1987 SIC 3585, Refrigeration and Heating Equipment, to Household Refrigerator and Home and Farm Freezer Manufacturing, to achieve international comparability. The U.S. and Canada moved to match Mexico.

Also, several activities transferred within the Electrical Equipment, Appliance and Component Manufacturing subsector. The number of electrical equipment, appliance and component manufacturing industries decreased from 37 in 1987 to 23 in 1997. Excluding the sixteen industries that were moved out of this subsector, all but 2 of the 22 remaining 1987 industries are comparable within three percent of the 1997 industries; both of the time series breaks involve splitting activities out of old NEC categories.

Part VII--Proposed New Industry Structure for Transportation Equipment

Manufacturing

Section A--NAICS Structure

North American Industry Classification System

(NAICS)

Agreement Number 10

This Document represents the proposed agreement on the structure of the North American Industry Classification System (NAICS) for the following industries:

Transportation Equipment Manufacturing

The detailed NAICS structure along with a brief description of the structure is attached (Attachments 1 and 2). Each country agrees to release a copy of the proposed NAICS structure to interested data users. Comments received will be shared among the countries and additional discussions will be held before a final decision on the structure is made. Each country may add additional detailed industries, below the 4-digit level of NAICS, as necessary to meet national needs, so long as this additional detail aggregates to a 4-digit NAICS level in order to ensure full comparability among the three countries.

This NAICS structure was presented and provisionally accepted at the NAICS Committee meeting held on August 30, 1995 - September 1, 1995 in Washington, DC.

Accepted:	Signature	Date
Canada	/S/ Jacob Ryten	9/1/95
Mexico	/S/ Enrique Ordaz	9/1/95
United States	/S/ Jack E. Triplett	9/1/95

ATTACHMENT 1--NAICS STRUCTURE

XX Transportation Equipment Manufacturing

XXX Motor Vehicle Manufacturing

XXXX Passenger Car and Light Duty Truck Manufacturing

XXXX Heavy Duty Truck Manufacturing

XXX Truck and Bus Body and Trailer Manufacturing

XXXX Truck and Bus Body and Trailer Manufacturing

XXX Motor Vehicle Part Manufacturing

XXXX Motor Vehicle Gasoline Engine and Engine Part
Manufacturing

XXXX Motor Vehicle Electrical and Electronic

	Equipment Manufacturing
XXXX	Motor Vehicle Steering and Suspension Component (Except Springs) Manufacturing
XXXX	Motor Vehicle Brake System Manufacturing
XXXX	Motor Vehicle Transmission and Power Train Part Manufacturing
XXXX	Motor Vehicle Fabric Accessory and Seat Manufacturing
XXXX	Motor Vehicle Metal Stamping
XXXX	Other Motor Vehicle Part Manufacturing
XXX	Aerospace Product and Part Manufacturing
XXXX	Aerospace Product and Part Manufacturing
XXX	Railroad Rolling Stock Manufacturing
XXXX	Railroad Rolling Stock Manufacturing
XXX	Ship and Boat Building
XXXX	Ship and Boat Building
XXX	Miscellaneous Transportation Equipment Manufacturing
XXXX	Miscellaneous Transportation Equipment Manufacturing

Attachment 2--North American Industry Classification System

Draft Classification for:

Transportation Equipment Manufacturing

Representatives of the statistical agencies of Canada, Mexico, and the United

States agree to a draft industrial classification for these industries.

The draft classification provides for the subsector, Transportation Equipment Manufacturing. This subsector is further subdivided into seven industry groups and fifteen industries. The subsector will be part of the Manufacturing sector of the classification.

A General Outline

The Transportation Equipment Manufacturing industries produce equipment for transporting people and goods.

Assembly of components, usually purchased as subassemblies, characterizes the chief production process in this subsector. Other processes employed in industries in this subsector include bending, forming, welding, machining, and assembly of metal or plastic to make parts for the subassemblies that are further fabricated into the finished product by other establishments in the group. Though many of these individual production processes appear in other machinery and equipment industries, transportation equipment is accorded an entire subsector because of its economic importance in all three countries.

NAICS has industry groups for each mode of transport - road, rail, air and water. Parts for motor vehicles are important enough to warrant a separate industry group. Moreover, establishments that manufacture only parts are not as vertically integrated as those that produce complete vehicles and parts manufacture requires less assembly.

Limitations and Constraints of the Classification

In the Transportation Equipment Manufacturing industry, most activities that were identified in one country exist in the others. However, often an activity is not economically significant to the same degree in all countries. For example, a relatively broad NAICS industry was created for Aerospace Product and Part Manufacturing because this industry is less prominent in Canada and Mexico than in the United States. In Mexico, it is not possible to subdivide truck and bus body from trailer manufacturing for reasons of size. Size constraints in Canada and Mexico prohibit separating ship building from boat building.

An operating rule has therefore been adopted for this industry subsector that the NAICS industries must be economically significant and publishable in all three countries. Each country will publish additional categories that comprise subdivisions of NAICS industries, to present data for activities that are nationally significant.

For those users requiring detailed commodity information, each country will publish information on the products of these industries. Efforts are also underway to harmonize the commodity classifications to allow for greater comparability of these statistics.

Relationship to ISIC

Most NAICS 4-digit industries in this subsector are contained in Division 34, Manufacture of Motor Vehicles, Trailers and Semi-Trailers, and Division 35, Building and Repairing of Ships and Boats of the current International Standard Industrial Classification of all Economic Activities (ISIC, Revision 3) of the United Nations. There are, however, some differences between the two systems. ISIC has two divisions for transportation equipment, Divisions 34 and 35. NAICS, on the other hand, treats this as a single subsector with seven industry groups. NAICS treats some activities, such as the manufacture of engine pumps, motor vehicle electrical equipment, automotive fabrics, and automotive seats as the manufacture of automotive parts in the Transportation Equipment Manufacturing subsector. ISIC classifies these activities elsewhere. ISIC treats guided missiles, tanks and armored vehicles as machinery. NAICS includes these activities in Transportation Equipment Manufacturing because the production processes are similar to that of other transportation equipment. NAICS groups automotive hardware (door handles and similar parts) with other hardware because the production processes are similar, but includes stamping in automotive parts because auto stampings are produced in specialized establishments.

The following NAICS industries belong to ISIC Divisions 34 and 35 with the exception of the activities indicated: Truck and Bus Body and Trailer Manufacturing (dump truck lifting mechanisms); Motor Vehicle Gasoline Engine and Engine Part Manufacturing (motor vehicle engine pumps); Motor Vehicle and Electronic Equipment Manufacturing (electrical and electronic motor vehicle equipment); Motor Vehicle Fabric Accessory and Seat Manufacturing (automotive fabrics, linings and

trimmings); Other Motor Vehicle Part Manufacturing (filters for internal combustion engines, except motor vehicles); Aerospace Product and Part Manufacturing (aircraft pumps and guided missiles and parts); and Other Transportation Equipment Manufacturing (tanks and armored vehicles). Despite these differences that for the most part, are relatively small portions of the NAICS industries, this NAICS subsector is substantially the same as the combination of the two ISIC Divisions.

Some Changes to the National Classifications

For Canada, the Transportation Equipment Manufacturing subsector is largely the same as the current Canadian classification's Transportation Equipment Industries major group. The NAICS subsector includes the rebuilding of motor vehicle parts on a factory basis, that are partly in Fabricated Metal Industries and partly in Wholesaling in the Canadian classification. On the other hand, the NAICS classifies hardware for transportation equipment in Fabricated Metal Product Manufacturing, while the Canadian classification includes their manufacture in Transportation Equipment. The structure and amount of detail of this NAICS subsector is similar to that of the corresponding areas of the Canadian classification.

For Mexico, the Transportation Equipment Manufacturing subsector has coverage similar to the Mexican classification's Automotive Industry and Manufacture, Repair and Assembly of Other Transportation Equipment and Parts. The NAICS subsector includes the rebuilding on a factory basis of motor vehicle gasoline engines, now classified in the Mexican classification's Repair and Maintenance

subsector. It also includes the manufacture of electrical equipment for transportation equipment, currently classified with electrical equipment in the Mexican classification; automotive fabrics, currently in textiles; and fiberglass boats, currently in the manufacture of plastic products. However, the manufacturing of hardware and springs for transportation equipment is classified in Fabricated Metal Product Manufacturing in NAICS, not in transportation equipment as in the Mexican classification. The structure and amount of detail of this NAICS subsector is similar to that of the corresponding areas of the Mexican classification.

For the United States, several activities related to the production of transportation equipment are transferred into this subsector. For example, automotive job stamping of body parts is now included in this subsector. It has been transferred to this subsector to achieve comparability with Canada and Mexico, and because the production processes involved are exclusively devoted to the production of transportation equipment. The capital equipment required to produce automotive job stamping cannot be easily changed to produce other kinds of stamping, such as appliance parts. Further, most automotive job stamping producers have arrangements (contractual etc.) that makes it even harder to switch production to other kinds of stamping. Other activities moved to this subsector for the United States include automotive lighting, electronic components, fabric accessories and seating, essentially for the reasons listed above. In addition, NAICS provides more industry detail than the 1987 SIC. Heavy duty truck manufacturing is separated from manufacture of light trucks and passenger cars to recognize differences in the production process for heavy trucks and truck bodies, and the high degree of specialization in establishments that

build heavy trucks.

Achievement of Objectives

The classification meets the objectives for the North American Industry Classification System (NAICS). It includes industries that group establishments with similar production processes, that is, it applies the production-oriented economic concept. In the main, the hierarchical structure of the classification also follows the production concept.

An objective of the NAICS project is the delineation of industries engaged in the production of advanced technologies. The proposed structure takes account of the development of advanced electronic sensors and control mechanisms in automobiles. Existing classifications do not have a clear location for the production of these goods. It is expected that this activity will grow and the proposed structure will allow for the creation of a separate industry for this activity in the future.

The industries have high specialization ratios, and they are economically significant. The detail (4-digit) level and structure of the classification are balanced in size. This enhances the classification's suitability for sampling, data-publishing and other aspects of survey operations. Finally, while disruptions to time series exist, they have been minimized. The statistical agencies can develop statistical "links", to enable

the re-tabulation of time series on the new NAICS classification structure.

The classification achieves comparability for the three participating countries. Based on existing data, all three countries expect to be able to publish data regularly at the industry (4-digit) level of the structure. All countries agree on the detailed definitions of the industries.

Section B-Annex: United States National Industry Detail

As explained in the *Structure* presentation of this notice, for a number of reasons 4-digit industries in the three NAICS industry subsectors presented in *Part I, Section A--Attachment 1*, contain less detail than is currently in the U.S. SIC system, and less detail than is required to meet important analytical requirements in the U.S. The three country agreement on NAICS envisions that each country may develop national detailed industries below the NAICS industry level, so long as the national detail can be aggregated to the NAICS classification, thus assuring full North American comparability.

The ECPC is proposing U.S. 5-digit industry detail for the NAICS industry subsector covered in Part I of this notice. For cases where no 5-digit detail is shown, the ECPC is proposing that the NAICS 4-digit industries will also represent the most detailed U.S. industries.

TABLE 1

The definitions of status codes are as follows: E-existing industry; N-new industry; R-revised industry; and * means "part of". The abbreviation NEC is used for Not Elsewhere Classified.

		1987			
		Status	SIC		
1997 NAICS and U.S. description		code	code	1987 SIC description	
XX	Transportation Equipment Manufacturing				
XXX	Motor Vehicle Manufacturing				
XXXX	Passenger Car and Light Duty Truck Manufacturing	N	*3711	Motor Vehicles and Passenger Car Bodies (Passenger Car and Light Duty Trucks)	
XXXX	Heavy Duty Truck Manufacturing	N	*3711	Motor Vehicles and Passenger Car Bodies (Heavy Duty Trucks)	
XXX	Truck and Bus Body and Trailer Manufacturing				
XXXX	Truck and Bus Body and Trailer Manufacturing				
XXXXX	Truck and Bus Body Manufacturing	R	*3711	Motor Vehicles and Passenger Car Bodies (Kit Car and Other Passenger Car Bodies)	
			3713	Truck and Bus Bodies	
			*3714	Motor Vehicle Parts and Accessories (Dumptruck Lifting Mechanisms and Fifth Wheels)	
XXXXX	Truck Trailer Manufacturing	E	3715	Truck Trailers	

XXXXXX	Motor Home Manufacturing	E	3716	Motor Homes
XXXXXX	Travel Trailer and Camper Manufacturing	R	3792	Travel Trailers and Campers
			*3799	Transportation Equipment, NEC (Automobile, Boat, Utility and Light Truck Trailers)
XXX	Motor Vehicle Part Manufacturing			
XXXX	Motor Vehicle Gasoline Engine and Engine Part Manufacturing			
XXXXXX	Carburetor, Piston, Piston Ring and Valve Manufacturing	E	3592	Carburetors, Pistons, Piston Rings, and Valves
XXXXXX	Engine and Engine Part Manufacturing	N	*3714	Motor Vehicle Parts and Accessories (Gasoline Engines and Engine Parts Including Rebuilt)
XXXX	Motor Vehicle Electrical and Electronic Equipment Manufacturing			
XXXXXX	Vehicular Lighting Equipment Manufacturing	E	3647	Vehicular Lighting Equipment
XXXXXX	Motor Vehicle Electrical and Electronic Equipment Manufacturing	R	*3679	Electronic Components, NEC (Electronic Control Modular Chips for Motor Vehicles)
			3694	Electrical Equipment for Internal Combustion Engines

			*3714	Motor Vehicle Parts and Accessories (Wiring Harness Sets, Other Than Ignition; Block Heaters and Battery Heaters; Instrument Board Assemblies; Permanent Defrosters; Windshield Washer-Wiper Mechanisms; Cruise Control Mechanisms; and Other Electrical Equipment for Internal Combustion Engines)
XXXX	Motor Vehicle Steering and Suspension Component (Except Springs) Manufacturing	N	*3714	Motor Vehicle Parts and Accessories (Steering and Suspension Parts)
XXXX	Motor Vehicle Brake System Manufacturing	N	*3292	Asbestos Products (Asbestos Brake Linings and Pads)
			*3714	Motor Vehicle Parts and Accessories (Brake and Brake Systems, Including Assemblies)
XXXX	Motor Vehicle Transmission and Power Train Part Manufacturing	N	*3714	Motor Vehicle Parts and Accessories (Transmissions and Power Train Parts, Including Rebuilding)
XXXX	Motor Vehicle Fabric Accessory and Seat Manufacturing	N	*2396	Automotive Trimmings, Apparel Findings, and Related Products (Textile Motor Vehicle Trimmings)
			*2399	Fabricated Textile Products, NEC (Motor Vehicle Seat Belts, and Seat and Tire Covers)
			*2531	Public Building and Related Furniture (Seats for Motor Vehicles)
XXXX	Motor Vehicle Metal Stamping	E	3465	Automotive Stampings
XXXX	Other Motor Vehicle Part Manufacturing	R	*3519	Internal Combustion Engines, NEC (Stationary Engine Radiators)

*3599	Industrial and Commercial Machinery and Equipment, NEC (Gasoline, Oil and Intake Filters for Internal Combustion Engines, Except those for Motor Vehicles)
*3714	Motor Vehicle Parts and Accessories (Except Truck and Bus Bodies, Trailers, Engine and Engine Parts, Motor Vehicle Electrical and Electronic Equipment, Motor Vehicle Steering and Suspension Components, Motor Vehicle Brake Systems, and Motor Vehicle Transmission and Power Train Parts)

XXX	Aerospace Product and Part Manufacturing			
XXXX	Aerospace Product and Part Manufacturing			
XXXXXX	Aircraft Manufacturing	E	3721	Aircraft
XXXXXX	Aircraft Engine and Engine Part Manufacturing	E	3724	Aircraft Engines and Engine Parts
XXXXXX	Other Aircraft Part and Auxiliary Equipment Manufacturing	R	*3728	Aircraft Parts and Auxiliary Equipment, NEC (Except Fluid Power Aircraft Subassemblies)
XXXXXX	Guided Missile and Space Vehicle Manufacturing	E	3761	Guided Missiles and Space Vehicles
XXXXXX	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Part Manufacturing	E	3764	Guided Missile and Space Vehicle Propulsion Units and Propulsion Unit Parts
XXXXXX	Other Guided Missile and Space Vehicle Part and Auxiliary Equipment Manufacturing	E	3769	Guided Missile and Space Vehicle Parts and Auxiliary Equipment
XXX	Railroad Rolling Stock Manufacturing			

XXXX	Railroad Rolling Stock Manufacturing	R	*3531	Construction Machinery and Equipment (Railway Maintenance of Way Equipment)
			*3743	Railroad Equipment (Except Locomotive Fuel Lubricating or Cooling Medium Pumps)
XXX	Ship and Boat Building			
XXXX	Ship and Boat Building			
XXXXX	Ship Building and Repairing	E	3731	Ship Building and Repairing
XXXXX	Boat Building	R	*3732	Boat Building and Repairing (Boat Building and Boat Building and Repair in the same establishment)
XXX	Miscellaneous Transportation Equipment Manufacturing			
XXXX	Miscellaneous Transportation Equipment Manufacturing			
XXXXX	Motorcycle, Bicycle and Part Manufacturing		*3944	Games, Toys, and Children's Vehicles, Except Dolls and Bicycles (Metal Tricycles)
			3751	Motorcycles, Bicycles and Parts
XXXXX	Military Armored Vehicle, Tank, and Tank Component Manufacturing	R	*3711	Motor Vehicles and Passenger Car Bodies (Military Armored Vehicles)
			3795	Tanks and Tank Components

XXXXX

Other Miscellaneous Transportation Equipment
Manufacturing

R

*3799

Transportation Equipment, NEC (Except Automobile,
Boat, Utility Light Truck Trailers; and Wheelbarrows)

TABLE 2

The abbreviation “pt” means “part of”, @ means time series break has been created that is greater than 3% of the 1992 value of shipments for the 1987 SIC industry. The abbreviation NEC is used for Not Elsewhere Classified.

1987 SIC code	1987 SIC description	1997 U.S. description
2396@	Automotive Trimmings, Apparel Findings, and Related Products	
	Textile Motor Vehicle Trimmings	Motor Vehicle Fabric Accessory and Seat Manufacturing (pt)
	Apparel Articles	Apparel Belt, Apparel Accessories, and Other Apparel Manufacturing (pt) (Included in Apparel Manufacturing subsector)
	Printing on Apparel	Other Commercial Printing (pt) (Included in Printing and Related Support Activities subsector)
	Other Automotive Trimmings, Apparel Findings, and Related Products	Other Miscellaneous Textile Product Manufacturing (pt) (Included in Textile Product Mills subsector)
2399	Fabricated Textile Products, NEC	
	Motor Vehicle Seat Belts, and Seat and Tire Cover	Motor Vehicle Fabric Accessory and Seat Manufacturing (pt)
	Aprons, Money Belts, and Diapers	Apparel Belt, Apparel Accessories and Other Apparel Manufacturing (pt) (Included in Apparel Manufacturing subsector)
	Other Fabricated Textile Products	All Other Miscellaneous Textile Product Mills (pt) (Included in Textile Product Mills subsector)

2531@	Public Building and Related Furniture	
	Seats for Motor Vehicle	Motor Vehicle Fabric Accessory and Seat Manufacturing (pt)
	Wood Furniture Made for Use in Public Buildings	Wood Office and Public Building Furniture manufacturing (pt) (Included in Furniture Manufacturing subsector)
	Metal Furniture Made for Use in Public Buildings	Metal Office and Public Building Furniture Manufacturing (pt) (Included in Furniture Manufacturing subsector)
	Other than Wood or Metal Furniture Made for Use in Public Buildings	Other Furniture Manufacturing (pt) (Included in Furniture Manufacturing subsector)
3292	Asbestos Products	
	Asbestos Brake Linings and Pads	Motor Vehicle Brake System Manufacturing (pt)
	Other Asbestos Products	Other Nonmetallic Mineral Product Manufacturing (pt) (Included in Nonmetallic Mineral Product Manufacturing subsector)
3465	Automotive Stamping	Motor Vehicle Metal Stamping
3519	Internal Combustion Engines, NEC	
	Stationary Engine Radiators	Other Motor Vehicle Part Manufacturing (pt)
	Internal Combustion Engines	Other Engine Manufacturing (pt) (Included in Machinery Manufacturing subsector)
3531@	Construction Machinery and Equipment	
	Railway Maintenance of Way Equipment	Railroad Rolling Stock Manufacturing (pt)
	Winches, Aerial Work Platforms, and Automotive Wreckers	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing (pt) (Included in Machinery Manufacturing subsector)
	Hoists	
	Other Construction Machinery and Equipment	Construction Machinery Manufacturing (Included in Machinery Manufacturing subsector)

3592	Carburetors, Pistons, Piston Rings and Valves	Carburetor, Piston, Piston Ring and Valve Manufacturing
3599@	Industrial and Commercial Machinery and Equipment, NEC Gasoline, Oil and Intake Filters for Internal Combustion Engines, Except Motor Vehicle Flexible Metal Hose Carnival Amusement Park Equipment Machine Shops Semiconductor Machinery Other Industrial and Commercial Machinery and Equipment	Other Motor Vehicle Part Manufacturing (pt) All Other Fabricated Metal Product Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector) Other Commercial and Service Industry Machinery Manufacturing (pt) (Included in Machinery Manufacturing subsector) Machine Shops (Included in Fabricated Metal Product Manufacturing subsector) Semiconductor Machinery Manufacturing (Included in Machinery Manufacturing subsector) Other General Purpose Machinery Manufacturing (pt) (Included in Machinery Manufacturing subsector)
3647	Vehicular Lighting Equipment	Vehicular Lighting Equipment Manufacturing
3679	Electronic Components, NEC Electronic Control Modular Chips for Motor Vehicles Manufacturing (pt) Communication Equipment Other Electronic Components Including Loaded PC Boards	Motor Vehicle Electrical and Electronic Equipment Manufacturing Broadcast and Studio Equipment for Radio, TV and Cable Manufacturing (Included in Computer and Electronic Product Manufacturing subsector) Other Electronic Component Manufacturing (pt) (Included in Computer and Electronic Product Manufacturing subsector)

3694	Electrical Equipment for Internal Combustion Engines	Motor Vehicle Electrical and Electronic Equipment Manufacturing (pt)
3711@	Motor Vehicles and Passenger Car Bodies	
	Passenger Car and Light Duty Trucks	Passenger Car and Light Duty Truck Manufacturing
	Heavy Duty Trucks	Heavy Duty Truck Manufacturing
	Kit Car and Other Passenger Car Bodies	Truck and Bus Body and Trailer Manufacturing (pt)
	Military Armored Vehicles	Military Armored Vehicle, Tank, and Tank Component Manufacturing (pt)
3713	Truck and Bus Bodies	Truck and Bus Body and Trailer Manufacturing (pt)
3714@	Motor Vehicle Parts and Accessory	
	Dump-Truck Lifting Mechanisms and Fifth Wheels	Truck and Bus Body and Trailer Manufacturing (pt)
	Gasoline Engines Including Rebuilt and Engine Parts Including Rebuilt for Motor Vehicles	Engine and Engine Part Manufacturing
	Wiring Harness Sets, Other than Ignition; Block Heaters and Battery Heaters; Instrument Board Assemblies; Permanent Defroster; Windshield Washer-Wiper Mechanisms; Cruise Control Mechanism; and Other Electrical Equipment for Internal Combustion Engines	Motor Vehicle Electrical and Electronic Equipment Manufacturing (pt)
	Steering and Suspension Parts	Motor Vehicle Steering and Suspension Component (Except Springs) Manufacturing
	Brake and Brake Systems, Including Assemblies	Motor Vehicle Brake System Manufacturing
	Transmissions and Power Train Parts, Including Rebuilding Radiators	Motor Vehicle Transmission and Power Train Part Manufacturing
	Other Motor Vehicle Parts	Other Motor Vehicle Part Manufacturing (pt)
3716	Motor Homes	Motor Home Manufacturing

3721	Aircraft	Aircraft Manufacturing
3724	Aircraft Engines and Engine Parts	Aircraft Engine and Engine Part Manufacturing
3728	Aircraft Parts and Auxiliary Equipment, NEC	
	Fluid Power Aircraft Subassemblies	Fluid Power Valve and Hose Fitting Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
	Other Aircraft Parts and Equipment	Other Aircraft Part and Auxiliary Equipment Manufacturing
3731	Ship Building and Repairing	Ship Building and Repairing
3732	Boat Building and Repairing	
	Boat Repair done Outside Boat Yard	Included in Services subsector
	Boat Building and Repair done Inside Boat Yard	Boat Building (pt)
3743	Railroad Equipment	
	Locomotive Fuel Lubricating or Cooling Medium Pumps	Pump and Pumping Equipment Manufacturing (pt) (Included in Machinery Manufacturing subsector)
	Other Railroad Equipment	Railroad Rolling Stock Manufacturing (pt)
3751	Motor cycles, Bicycles, and Parts	Motorcycle, Bicycle, and Part Manufacturing (pt)

3761	Guided Missiles and Space Vehicles	Other Guided Missile and Space Vehicle Manufacturing
3764	Guided Missile and Space Vehicle Propulsion Units and Propulsion Unit Parts	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Part Manufacturing
3769	Guided Missile Space Vehicle Parts and Auxiliary Equipment, NEC	Guided Missile and Space Vehicle Part and Auxiliary Equipment Manufacturing
3792	Travel Trailers and Campers	Travel Trailer and Camper Manufacturing (pt)
3795	Tanks and Tank Components	Military Armored Vehicle, Tank, and Tank Component Manufacturing (pt)
3799@	Transportation Equipment, NEC	
	Automobile, Boat, Utility and Light Truck Trailers	Travel Trailer and Camper Manufacturing (pt)
	Wheelbarrows	Hand and Edge Tool Manufacturing (pt) (Included in Fabricated Metal Product Manufacturing subsector)
	Other Transportation Equipment	Other Miscellaneous Transportation Equipment Manufacturing
3944	Games, Toys, and Children's Vehicles, Except Dolls and Bicycles	
	Metal Tricycles	Motorcycle, Bicycle and Part Manufacturing (pt)

Other Games, Toys and Children's Vehicles

Game, Toy, and Children's Vehicle Manufacturing (pt) (Included in Miscellaneous
Manufacturing subsector)

Description of Changes to the U.S. System

A number of the changes listed in this section were made for reasons of international comparability. Where one or more of the three North American countries had different definitions of an industry classification, adjustments to the definitions in one or more countries were required. In constructing NAICS, the three countries agreed to move, where change was required to attain international comparability, in the direction of the country or countries whose existing classification definitions most closely corresponded to the production-oriented concept adopted for NAICS. Cases where the U.S. changed are listed below; other cases where Canada or Mexico moved toward the U.S. classification are not, of course, listed in this section.

Eight new industries were added to the 1997 industry structure for this industry subsector. The eight industries created were:

Passenger Car and Light Duty Truck Manufacturing and Heavy Duty Truck Manufacturing, both from parts of 1987 SIC 3711, Motor Vehicles and Passenger Car Bodies. The industry association suggested making additional industries from 1987 SIC 3711. The new industries are defined by high specialization, and in the case of Passenger Car and Light Duty Truck Manufacturing, large capital-intensive production facilities. This is a change for all three countries.

Engine and Engine Part Manufacturing, Motor Vehicle Steering and Suspension Component (Except Springs) Manufacturing, and Motor Vehicle Transmission and Power Train Part Manufacturing from parts of 1987 SIC 3714, Motor Vehicle Parts

and Accessories. The industry suggested making additional industries from 1987 SIC 3714 and the production processes are sufficiently distinct to justify separate industries. Mexico already had separate industries for engines and for transmission and power trains, and Canada had a separate industry for steering and suspension so the U.S. change also facilitated international comparability.

Motor Vehicle Brake System Manufacturing from parts of 1987 SIC 3292, Asbestos Products, and 1987 SIC 3714, Motor Vehicle Parts and Accessories, to achieve international comparability. Mexico and Canada already had separate industries for brake system manufacturing.

Motor Vehicle Fabric Accessory and Seat Manufacturing from parts of 1987 SIC 2396, Automotive Trimmings, Apparel Findings, and Related Products; 1987 SIC 2399, Fabricated Textile Products, NEC; and 1987 SIC 2531, Public Building and Related Furniture. This change was made for international comparability, and is an improvement on production grounds.

1987 SIC 3694, Electrical Equipment for Internal Combustion Engines, is combined with part of 1987 SIC 3679, Electronic Components, NEC, and part of 1987 SIC 3714, Motor Vehicle Parts and Accessories, to form NAICS Electrical Equipment for Internal Combustion Engine Manufacturing.

Three industries were transferred into NAICS Transportation Equipment Manufacturing:

1987 SIC 3465, Automotive Stampings, is renamed Motor Vehicle Metal Stamping to achieve international comparability and for the reasons noted in the *Changes to National Classifications* section above. The United States moved to match Canada and Mexico.

1987 SIC 3592, Carburetors, Pistons, Piston Rings and Valves, is renamed Carburetor, Piston, Piston Ring and Valve Manufacturing to achieve international comparability. Canada had these in CSIC 32, Transportation Equipment Industries.

1987 SIC 3647, Vehicular Lighting Equipment, is renamed Vehicular Lighting Equipment Manufacturing to achieve international comparability. Canada had this in CSIC MG 32, Transportation Equipment.

Also, four activities were transferred into the 1997 Transportation Equipment Manufacturing.

Stationary engine radiators from 1987 SIC 3519, Internal Combustion Engines, NEC, to Other Motor Vehicle Part Manufacturing, to achieve international comparability. The U.S. and Mexico moved to match Canada, because the production of radiators is a similar process whether for stationary or nonstationary engines. .

Gasoline, oil and intake filters for internal combustion engines, except those for motor vehicles, from 1987 SIC 3599, Industrial and Commercial Machinery and

Equipment, NEC, to Other Motor Vehicle Part Manufacturing, to achieve international comparability. The U.S. moved to match Canada and Mexico, because the production of filters is a similar process whether for stationary or non stationary engines.

Railway maintenance of way equipment from 1987 SIC 3531, Construction Machinery and Equipment, to Railroad Rolling Stock Manufacturing, to achieve international comparability. The U.S. moved to match Canada and Mexico.

Tricycles made primarily of metal from 1987 SIC 3944, Games, Toys, and Children's Vehicles, Except Dolls and Bicycles, to Motorcycle, Bicycle, and Part Manufacturing, to achieve international comparability. The U.S. and Canada moved to match Mexico. Plastic tricycles remain in toy manufacturing.

Three activities were transferred out of 1987 Major Group 37, Transportation Equipment Manufacturing, and are described more fully in their new respective NAICS subsectors.

Boat repair done outside boat yards was transferred from 1987 SIC 3732, Boat Building and Repairing, into the Services subsector.

Locomotive fuel lubricating or cooling medium pumps were transferred from 1987 SIC 3743, Railroad Equipment, into the Machinery Manufacturing subsector.

Wheelbarrows from 1987 SIC 3799, Transportation Equipment, NEC, were transferred into Hand and Edge Tool Manufacturing in the Fabricated Metal Product Manufacturing subsector.

Several activities were transferred within the Transportation Equipment

Manufacturing subsector. The number of transportation equipment industries increased from 18 in 1987 to 28 in 1997. For time series linkage, all but 3 of the 18 1987 industries are comparable within three percent of the 1997 industries. One of the three is an NEC industry.

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