Higher Committee for
Greater Cairo Transportation Planning
Government of the Arab Republic of Egypt

Japan International Cooperation Agency
(JICA)

# Transportation Master Plan and Feasibility Study of Urban Transport Projects in Greater Cairo Region in the Arab Republic of Egypt

**PHASE I FINAL REPORT**

**Volume IV: CREATS Urban Transport Database**

**November 2002**

Pacific Consultants International (PCI)

The following foreign exchange rates are applied in this study.
USD $1.00 = 4.58 Egyptian Pound (LE)

（As of August 2002）

**PREFACE**

In response to a request from the Government of the Arab Republic of Egypt, the Government of Japan decided to conduct the Study for the Transportation Master Plan and Feasibility Study of Urban Transport Projects in Greater Cairo Region in the Arab Republic of Egypt and entrusted the Study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Dr. Katsuhide Nagayama of Pacific Consultants International to the Arab Republic of Egypt between March 2001 and September 2002. In addition, JICA set up an Advisory Committee headed by Professor Noboru Harata of Tokyo University between March 2001 and October 2002, which examined the Study from Specialist and technical point of view.

The Study Team held discussions with the officials concerned of the Government of the Arab Republic of Egypt and conducted field surveys at the study area. Upon returning to Japan, the Study Team conducted further studies and prepared this report.

I hope that this report will contribute to development in the Arab Republic of Egypt, and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Arab Republic of Egypt for their close cooperation extended to the Study Team.

November 2002

Takao Kawakami
President
Japan International Cooperation Agency

November 2002

Mr. Takao Kawakami
President
Japan International Cooperation Agency
Tokyo, Japan

# Letter of Transmittal

Dear Sir,

We are pleased to formally submit herewith the Final Report of "Transportation Master Plan and Feasibility Study of Urban Transport Project in Greater Cairo Region in the Arab Republic of Egypt."

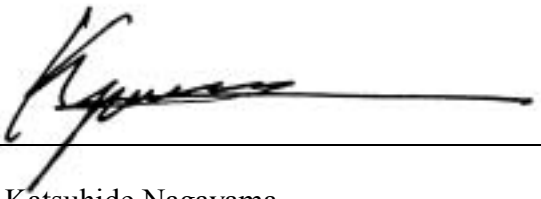
This report compiles the results of the Study which was undertaken in the Arab Republic of Egypt from March 2001 through September 2002 by the Study Team organized by Pacific Consultants International under the contract with the JICA.

This report compiles Transport Master Plan based upon identification of present condition in order to contribute to the sustainable development in Greater Cairo Region.

We would like to express our sincere gratitude and appreciation to all the officials of your agency and the JICA advisory Committee. We also would like to send our great appreciation to all those extended their kind assistance and cooperation to the Study Team, in particular, Ministry of Transport and Egyptian National Institute of Egypt as the counterpart agency. We beg to acknowledge our sincere gratitude to Dr. Ibrahim El Dimeery, the ex-Minister of Transport, for his devoted initiation of the Study as well as H.E. Eng. Hamdy Al Shayeb, the Minister of Transport, for his strong support to our activities.

We hope that the report will be able to contribute significantly to development in the Arab Republic of Egypt.

Very truly yours,



Dr. Katsuhide Nagayama
Team Leader,
The Study Team for the Transportation Master Plan and Feasibility Study of Urban Transport Project in Greater Cairo Region in the Arab Republic of Egypt

**CREATS INTERIM REPORT**
***Volume IV: CREATS Urban Transport Database***

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## LIST OF ABBREVIATIONS

| | |
|---|---|
| ACLM | American Council of Logistics Management |
| AE | Acid Equivalent |
| ASG | Assignment Group (Code) |
| AfDB | African Development Bank |
| BiH | Bosnia and Herzegovina |
| BOOT | Build-Own-Operate-Transfer |
| BOT | Build-Operate-Transfer |
| Br. | Bridge |
| C/C | Counterpart Committee |
| CAIP | Cairo Air Improvement Project |
| CAPMAS | Central Agency for Public Mobilization and Statistics |
| CBD | Central Business District |
| CEDARE | Center for Environment and Development for Arab Region and Europe |
| CEHM | Cairo University Center for Environmental Hazard Mitigation |
| CIDA | Canadian International Development Agency |
| $CH_4$ | Methane |
| CLS | Cordon Line Survey |
| CMO | Cairo Metro Organization |
| CNG | Compressed Natural Gas |
| CO | Carbon Monoxide |
| $CO_2$ | Carbon Di-Oxide |
| CORPS | Corniche, Ramses and Port Said Streets |
| CREATS | Cairo Regional Area Transportation Study |
| CRR | Cairo Ring Road |
| CTA | Cairo Transport Authority |
| CTEB | Cairo Traffic Engineering Bureau |
| CTP | Common Transport Policy |
| CTS | Cargo Transport Survey |
| DANIDA | Danish Agency for Development Assistance |
| DRTPC | Development Research and Technological Planning Center of Cairo University |
| DfID | Department for International Development (UK) |
| EAS | Environmental Awareness Survey |
| EC | European Community |
| ECMT | European Conference of Ministers of Transport |
| EEA | European Environment Agency |
| EEAA | Egyptian Environmental Affairs Agency |
| EEIF | Egyptian Environmental Initiative Fund |
| EEIS | Egyptian Environmental Information System |
| EIA | Environmental Impact Assessment |
| EIMP | Environmental Information and Monitoring Program |
| EMT | Environmental Management and Technology Fund |
| ENIT | Egyptian National Institute of Transport |
| ENL | Effective Number of Lanes |
| ENR | Egyptian National Railways |

| | |
|---|---|
| EQI | Environmental Quality International |
| ESE | Egyptian Stock Exchange |
| EU | European Union |
| FCL | Fully Loaded Containers |
| GARBLT | General Authority for Roads, Bridges and Land Transport |
| GC | Greater Cairo |
| GCBC | Greater Cairo Bus Company |
| GCMA | Greater Cairo Metropolitan Area |
| GCR | Greater Cairo Region |
| GDP | Gross Domestic Product |
| GIS | Geographic Information System |
| GNP | Gross National Product |
| GOE | Government of Egypt |
| GOPP | General Organization for Physical Planning |
| GRDP | Gross Regional Domestic Products |
| GSLTD | General Syndicate for Land Transport Drivers |
| HC | Hydro-Carbons |
| H/C | Higher Committee |
| HCM | Highway Capacity Manual |
| HIS | Home Interview Survey |
| HOV | High Occupancy Vehicle (Lane) |
| HRT | Heavy Rail Transit |
| HSR | High Speed Rail |
| IAURIF | l'Insitut d'Aménagement et d'Urbanisme de la Region d'Ile-de-France |
| IC | Interchange |
| ICT | International Cargo Transport |
| ID | Identification |
| IEE | Initial Environmental Examination |
| IHCM | Indonesian Highway Capacity Manual |
| IHS | Internal Homogeneous Planning Sector |
| IMF | International Monetary Fund |
| IRMS | Integrated Road Management System |
| ISO | International Organization for Standardization |
| ITS | Information Transfer Strategy |
| ITU | Intermodal Transport Unit |
| JICA | Japan International Cooperation Agency |
| LE | Egyptian Pound |
| LOS | Level of Service |
| LRT | Light Rail Transit |
| M/M | Minutes of the Meetings |
| MCA | Multi-Criteria Analysis |
| MENA | Middle East and North African Nations |
| MHUUC | Ministry of Housing, Utilities and Urban Communities |
| MINUTP | Mini Urban Transport Planning Program |
| MOE | Ministry of Environment |
| MOIC | Ministry of International Cooperation |

| | |
|---|---|
| MOO | Metro Operation Organization |
| MOP | Ministry of Planning |
| MOT | Ministry of Transport |
| MRT | Mass Rapid Transit |
| MS | Mobile Station for Air Quality Monitoring |
| MSEA | Ministry of State for Environmental Affairs |
| MTBE | Methyl Tertiary Butyl Ether |
| Mμ | Micrometer |
| N.A. | Not Applicable/Available |
| NAT | National Authority for Tunnels |
| NCPDM | National Council of Physical Distribution Management |
| NEAP | National Environmental Action Plan |
| NGO | Non Governmental Organization |
| NMHC | Non Methane Hydro-Carbons |
| NNL | Nominal Number of Lanes |
| NO | Nitrogen Monoxide |
| $NO_2$ | Nitrogen Dioxide |
| NOx | Nitrogen Oxides |
| NPDCR | National Project for the Development of Cairo Region |
| OD | Origin-Destination |
| OECD | Organization for Economic Co-operation and Development |
| O&M | Operation & Maintenance |
| PCI | Pacific Consultants International |
| PCI | Pavement Condition Index |
| PCU | Passenger Car Unit |
| PHR | Peak Hour Ratio (peak hour volume/daily volume) |
| $PM_{10}$ | Particulate Matter (particles) less than 10 micro meter (μm) |
| $PM_{2.5}$ | Particulate Matter (particles) less than 2.5 micro meter (μm) |
| PPP | Public-Private Partnership |
| PPP | Purchasing Power Parity |
| PR/PI | Public Relations and Public Involvement |
| PTB | Bus |
| PTF | Ferry |
| PTM | Metro |
| PTSR | Suburban Rail |
| PTST | Super Tram |
| PTT | Tram |
| RPS | Revealed Preference Survey |
| S/C | Steering Committee |
| SEA | Strategic Environmental Assessment |
| SLS | Screen Line Survey |
| $SO_2$ | Sulphur Dioxide |
| SPS | Stated Preference Survey |
| TCB/AET | Technical Consultation Bureau & Applied Engineering Technologies |
| TEN | Trans-European Networks |
| TNI | Traffic Noise Index |

| | |
|---|---|
| TOR | Terms of Reference |
| TPA | Transport Planning Authority |
| TRIPS | Transportation Integrated Planning Software |
| TSP | Total Suspended Particulate Matter |
| TransCAD | Transportation Computer Assisted Design Program |
| UAE | United Arab Emirates |
| UK | United Kingdom of Great Britain and Northern Ireland |
| US | United States of America |
| USAID | United States Agency for International Development |
| VOC | Vehicle Organic Compounds |
| WB | World Bank (International Bank for Reconstruction and Development) |
| WHO | World Health Organization |

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| ***Consultants*** | |
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| The Transportation Programme, Development Research and Technological Planning Center, DRTPC, Cairo University | Surveys<br>• Household Interview Survey (HIS)<br>• Revealed Preference Survey (RPS)<br>• Stated Preference Survey (SPS)<br>• Environmental Awareness Survey (EAS)<br>• Cordon Line Survey<br>• Cargo Transport Survey<br>• Public Transport Passengers Survey<br>• Transport Network Survey |
| The Transport and Traffic Consultations Unit (TTCU), Ain Shams University | |

| | |
|---|---|
| *Group 2* | |
| Technical Consultations Bureau & Applied Engineering Technologies (TCB/AET) | <u>Surveys</u><br>• Household Interview Survey (HIS)<br>• Revealed Preference Survey (RPS)<br>• Stated Preference Survey (SPS)<br>• Environmental Awareness Survey (EAS)<br>• Cordon Line Survey<br>• Cargo Transport Survey<br>• Public Transport Passengers Survey |
| | <u>Practical Demonstration</u><br>• Demonstration of A Traffic Safety Education Program and Campaign |
| *Group 3* | |
| Sound and Vibration Lab, Faculty of Engineering, Ain Shams University | <u>Surveys</u><br>• Environmental Survey |

# CHAPTER 1: INTRODUCTION

## 1.1 OVERVIEW

The urban transport database can be considered as the backbone of a transport model development. This database is used in quantifying and describing the current conditions of transport system in the Study Area. The precise definition of existing transport problems would lead to appropriate solutions and remedies. Therefore, a great effort has been done to collect all the necessary information relevant to transport planning and compiling it in an extensive database.

CREATS database, which houses the planning and transport system inventory of computer-based data, is the most comprehensive database ever built for urban transport in Greater Cairo Region. It consists of the outcomes of 11 transport and traffic surveys in addition to data collected from different local authorities. An innovative GIS database is a major component of CREATS database. Figure 1.1.1 illustrates the tree structure of different database components. The database structure is built to be consistent with the structure of Volume II of Progress Report (2).

This volume of the Phase I Final Report presents a description of CREATS database structure and summarizes each of its components. In this way it is hoped that a constructive and comprehensive picture will be drawn of how the database will be used.

The details of the data description files are included in this report describing the structure of each database including file name, number of records, file path, data source and data fields definitions.

In this report, it is intended to show anyone with some computing knowledge and experience how to make use of the assembled data. The documentation is aimed at a readership which has some understanding of database concepts, and practical experience of using popular commercially available database software packages and transport analysis. It is also aimed at indicating where certain types of data can be found.

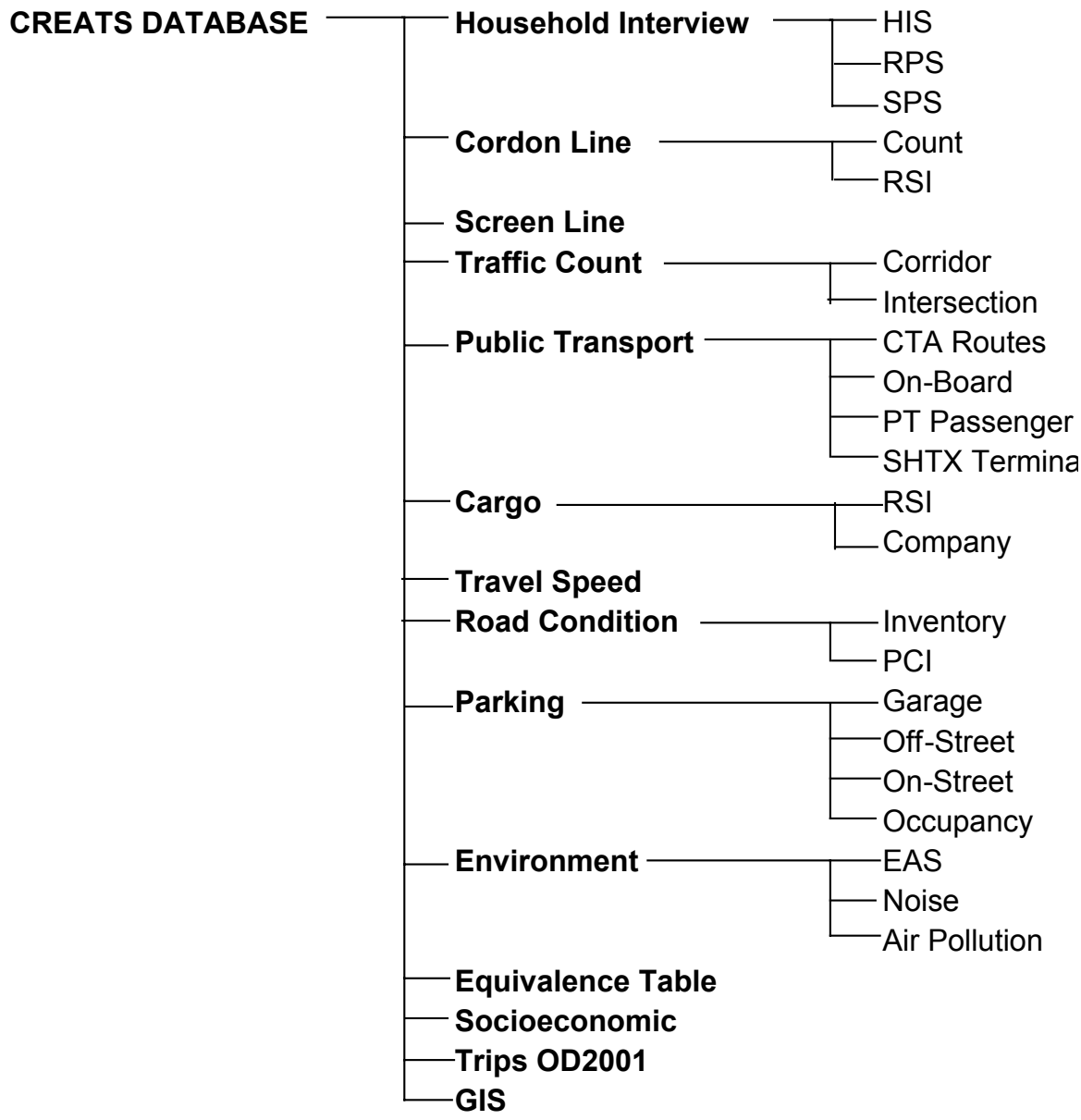


**Figure 1.1.1 CREATS Urban Transport Database Structure**

## 1.2 INTEGRATION WITH CREATS TRANSPORT MODEL

CREATS database provides the necessary supporting information and inputs to the developed transport model. The structure of the database has been built to ensure great flexibility of use and the ability to accommodate new survey and other data sources as and when they become available.

In particular, it is important the structure of the database should allow:

- Adoptability to future needs.
- Ease of familiarity to relevant staff.
- Ease of interaction with transport models and levels of model operation.
- Ease of interaction with outside agencies for data provision.
- Minimization of repetitive tasks.
- Minimization of costs and staff time including training.
- Maximization of efficiency and economies of scale.
- Full integration and interfacing with GIS systems.

A unique structure format for database files can help understanding the contents of CREATS database and retrieving necessary information easily. Therefore, most of the survey data has been converted to a database format except for some surveys that require different arrangement and formatting for collected data such as travel speed and road inventory surveys.

## 1.3 REPORT STRUCTURE

This report includes fifteen Chapters in addition to this introduction. Chapter two describes the flexible yet comprehensive structure of the CREATS database. It also addresses some of the data concepts such as different structures of database, database linkage, database aggregation and management. Standard format of database structure is also presented in Chapter 2. Data dictionaries for different database files are presented in the remaining chapters of this report. Chapters 3 through 12 describe the database files of CREATS traffic and transport surveys including:

- Household Interview Survey
- Cordon Line Survey
- Screen Line Survey
- Traffic Count Survey

- Public Transport Passenger Survey and Transport Network Survey
- Cargo Survey
- Vehicle Travel Speed Survey
- Road Condition Survey
- Parking Survey
- Environmental Survey

Chapters 3 through 12 are arranged to reflect the sequence mentioned in Progress Report II, Vol. (2). However, public transport passenger survey and transport network surveys are combined together in Chapter 7.

The equivalence table database, which defines the relationship between different zoning systems (Shiakha, traffic zone, Qism, Sector and Super Zone) is presented in Chapter 13. Population, employment, number of students and income class in various planning years (2001, 2007, 2012 and 2022) are gathered in a socio-economic database as shown in Chapter 14. The last Chapter addresses the Geographic Information System database including the relationship between different zoning system and some land use data connected to traffic zone, which can be easily aggregated to a coarser zoning system.

The presentation of CREATS database depends to a great extent on the traffic survey forms. Therefore, most of the traffic survey forms used by the Study Team are provided in the Appendix for the convince of database user.

# CHAPTER 2: DATA CONCEPTS

This chapter focuses on the technical aspects of database structure and management. It highlights the main features of databases and what database is commonly used for. It discusses concepts and terms and the way in which database hierarchies and structures can be organized to optimize data storage and retrieval.

## 2.1 DATA FEATURES AND USES

Organization and storage of computer datasets into databases affords the manager/user some useful features such as:

- Organization and storage of survey and other data.
- Ease of maintenance and updating of contents.
- Location and retrieval of subsets of the data that meet a given set of specifications.
- Linking data items in separate database files to achieve an indirect indexing on the data items.
- Making use of the retrieval and linkage facilities to produce cross-tabulations and data report summaries.

## 2.2 ORGANAZATION WITHIN INDIVIDUAL DATASETS

The database would be made up of numerous computer datasets (files). Each dataset is composed entirely of individual data records. However, the information stored at this level can be organized and viewed in a number of ways. The two most popular methods of organization are the hierarchical method and the relational method. Both of which are discussed below.

### 2.2.1 Hierarchical Structure

The hierarchical method involves the use of a tree structure. The tree not only defines the data elements but also the inter-relationship amongst the data elements. Typically, home interview transport-based survey databases utilizes a hierarchical

structure, for the data obtained from such surveys usually comprises several different types of data records interlinked at the household level, such as:

- Household data.
- Person characteristics data.
- Individual trip travel characteristics data.

### 2.2.2 Relational Structure

A relational structure is used in Relational Databases, in which a simple relationship exists amongst the data elements. The data is organized into a two-dimensional structure, with each row containing one entry in the database. Data within a row is divided into several columns, each column representing a particular attribute. Each row is termed a data record, whilst each column is termed a data field. A typical example would be a traffic count survey dataset, stored in a relational database structure. In general, CREATS database structure employs the relational type. However, the user can change some of the database components such as household interview database to a hierarchical type.

## 2.3 DATABASE LINKAGE AND AGGEGATION

The ability to link data items together across different databases, using linkage variables common to each is an important database feature, as is the ability to aggregate data to produce summary report tables. The linkage of database items is an essential feature in all database system. They are various levels in the database hierarchy, where this may take place depending upon user requirements and the particular categories and subsets of data being accessed.

It is important to explain what the terms linkage and grouping mean in the context of a database structure. In simple terms, linkage connects to separate and distinct databases. Grouping and amalgamation, either for reporting purposes or for the creation of data subsets, involve aggregating data once the linkage connections are in place.

The common spatial variable which will link all urban transport databases together is the ***traffic zone***. The function of traffic zones is to provide data at the most appropriate level for transport model operation and therefore represents the smallest acceptable spatial data unit. As for CREATS, 464 traffic zones have been built based on the 512-Shiakha zoning system.

A hierarchal database structure, by definition, has an implicit built into its structure. In the case of home interview transport survey data, the database houses three types of data records interlinked at the household level. By selecting a code unique to a specific household, the linkage ensures the selection of all data records relating to that household, whether they be household data records, person data records or

individual trip data records. The linkage is achieved by having the household identification variable as a data field common to all three types of data records.

Data aggregation must provide a basis for deriving data control totals, as well as facilitating a clear summary presentation of data in forms which are readily comprehensible. Traffic zones are far too numerous to facilitate ease of presentation. The next level up would be the Qism level or even coarser at Sector level. For reporting purposes, the database can be analyzed, aggregated and presented at coarser zoning systems such as 60-Qism, 18-Sector or 8-Superzone.

## 2.4 DATABASE MANAGEMENT

The term Database Management System (DBMS) is a common term used to refer to the systematic organization and management of a large collection of computer held information. The database software package carries out these functions under the control of the user either by means of interactive screen menu-led computing sessions or by writing and utilizing database computer programs developed for specific tasks.

A database itself is a collection of useful information organized in a specific manner; in other words a reference library of computerized data. Most commonly, the term "database" is a generic term used to describe the complete library.

## 2.5 DATABASE STRUCTURE FORMAT

A unique structure format is maintained for most of CREATS database files except for a limited number of traffic surveys. Unless it is mentioned explicitly, this unique structure format will be the default file structure. The description of each database file is presented in two tables. The first table describes file structure and the other table defines field codes of the first table. The following items are listed for each database file in the first description table:

- File name
- Number of data records
- File path on the hard disk
- Source of database file
- Filed number, name, data type, width, code type and description

If any of the data field is coded, i.e. tagged with "Y" udder the column "Coded", a second description table is provided to list field code values together with their definitions. Figure 2.5.1 and 2.5.2 illustrate a sample of the two standard tables used to describe CREATS urban transport database.

**Figure 2.5.1 Sample of the Standard Table Format for Describing Database File Structure**

| **Structure for Database:** | **HIS_FORM2_1.DBF** |
|---|---|
| Number of Data Records: | **234,805** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/HIS/ |
| Database Source: | Household Interview Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | HH_ID | Numeric | 8 | | Household ID |
| 2 | PRSN_ID | Numeric | 2 | | Person ID |
| 3 | SHKH_ID | Numeric | 6 | Y | Shiakha Code |
| 4 | ZONE | Numeric | 3 | Y | Traffic Zone Code |
| 5 | GENDER | Numeric | 1 | Y | Gender |
| 6 | AGE | Numeric | 1 | Y | Age Group |
| 7 | PRFSHN | Numeric | 2 | Y | Profession for Employees |
| … | … | … | … | … | … |

**Figure 2.5.2 Sample of the Standard Table Format for Describing Data Field Codes**

| **Field Codes Used in Database:** | | **HIS_FORM2_1.DBF** | | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | SHKH_ID | Shiakha Code | | See Equivalence Table ….. |
| 4 | ZONE | Traffic Zone Code | | See Equivalence Table ….. |
| 5 | GENDER | Gender | 1 | Male |
| | | | 2 | Female |
| | | | 9 | Unknown |
| 6 | AGE | Age Group | 1 | 7 - 9 years |
| | | | 2 | 10 - 19 years |
| | | | 3 | 20 - 29 years |
| | | | 4 | 30 - 39 years |
| | | | 5 | 40 - 49 years |
| | | | 6 | 50 - 60 years |
| | | | 7 | More than 60 years |
| | | | 9 | Unknown |
| 7 | PRFSHN | Profession for Employees | 1 | Legislature, Administrative and Management Workers |
| | | | 2 | Professional Workers |
| | | | 3 | Technicians and Assistants |
| | | | 4 | Clerks and related Workers |
| | | | 5 | Sale and Service Workers |
| | | | 6 | Farmers, Fishers and Hunters |
| | | | 7 | Craftsmen and related Workers |
| | | | 8 | Production Workers and related Workers |
| | | | 9 | Unskilled Workers |
| | | | 10 | Others |
| | | | 99 | Non-Working Person or No Answer |
| … | … | … | … | … |
| … | … | … | … | … |

# CHAPTER 3: HOUSEHOLD INTERVIEW DATABASE

This Chapter addresses three database components; Household Interview Survey (HIS), Revealed Preference Survey (RPS) and Revealed Preference Survey (RPS). HIS, RPS and SPS are presented in Sections 3.1, 3.2 and 3.3, respectively.

## 3.1 HOUSEHOLD INTERVIEW SURVEY (HIS)

### 3.1.1 Overview

It is well known to transport specialists that home interview survey is the most accurate and comprehensive Origin/Destination survey method. This can be attributed to its nature involving visiting a large sample of households at their residence places to ask about socio-economic features and travel characteristics of the household and its individual members.

Household interview survey (HIS) is aiming at identifying the characteristics of households, persons and trips within the study area. The collected information constitutes a comprehensive database of transport and traffic related data that would facilitate the diagnosis of existing conditions including the current travel patterns. One major objective of HIS is to build a transport demand forecast model.

HIS includes the important household characteristics such as family size by gender, car ownership and income level supported by telephone bill and electricity consumption as proxies. Person attributes such as gender, age, profession, employment sector, monthly income and vehicle availability were also identified. The travel pattern could be monitored through total number of daily trips, where the trip starts and where it ends (origin- destination movement), trip purpose, travel time, mode of transport. The un-linked trips were further investigated to identify different components of total travel time (access, waiting, in-vehicle and egress time) in addition to the transport mode and transfer points.

HIS of CREATS is the largest O/D home interview survey made in Greater Cairo Region calling for a sample of around 60,000 households, which necessitates the mobilization of around 1,000 persons including different specialties such as interviewers, supervisors, data coding team and data entry operators under the leadership of transport experts.

The execution of full-scale HIS took five weeks to be completed starting on 23 September 2001 and ending on 16 October 2001.

### 3.1.2 HIS Database Structure

HIS database in divided into 3 basic elements including household, person and trip characteristics. Person and trip files are further sub-divided into 2 files, which are compatible with HIS survey forms. Tables 3.1.1 and 3.1.2 presents the description of database file structure for household characteristics. The first four lines of Table 3.1.1 provide the computer file name, number of database records, file path and data source, respectively. The columns of this table give the field number, field name, field data type (numeric, character, date, etc.), type of filed coding (Y if Yes or blank if No) and field description. For instance, fields number 2, 3, 4, 27, 29, 30 and 31 of Table 3.1.1 are stored as codes instead of their actual values. Therefore, the description of these codes are listed in the second description Table 3.1.2. It can be observed from Table 3.1.1 that the total number of interviewed households are 56,013 as shown in the second line, which is less than the total number of interviewed household during HIS survey. This is due to the deletion of some invalid household interview records.

The person characteristics database is shown in Tables 3.1.3 and 3.1.4, which utilize the standard file structure format of Tables 3.1.1 and 3.1.2, respectively. Around 234,800 persons were interviewed during HIS execution to identify their characteristics such as, gender, age, occupation, employment sector, status for non-working person, monthly income, type of driving license, car availability, total number of trips per day, etc. As for working persons and students, the work/school place is coded together with place of residence as shown in Tables 3.1.5 and 3.1.6.

Tables 3.1.7 and 3.1.8 present the description of database file structure for trip characteristics such as trip origin, destination, purpose, mode of transport, start time, end time. The characteristics of unlinked trips are shown in Tables 3.1.9 and 3.1.10. A total of 268,360 trips per day were reported by interviewed persons from which part of them constitute unlinked trips. The unlinked trip data includes mode of transport, fare type, fare cost, access time, waiting time, in-vehicle travel time, egress time, parking type, parking cost and Qism code of transfer point for modal interchange.

It should be noted that HH_ID field is a common field in all HIS database files to easily connect between them and to establish a relationship that can be used to extract some information from different database files on different hierarchal levels. The same rule is applied for PERSON_ID and TRIP_ID when possible. Each of them is connected to all its corresponding lower-level database files.

## Table 3.1.1 Description of HIS Database (Household Characteristics)

| **Structure for Database:** | **HIS_FORM1_1.DBF** |
|---|---|
| Number of Data Records: | **56,013** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/HIS/ |
| Database Source: | Household Interview Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | HH_ID | Numeric | 8 | | Household ID |
| 2 | QISM_ID | Numeric | 4 | Y | Qism Code |
| 3 | SHKH_ID | Numeric | 6 | Y | Shiakha Code |
| 4 | ZONE | Numeric | 3 | Y | Traffic Zone Code |
| 5 | MALE_TOT | Numeric | 2 | | Total No. of Male Persons per Household |
| 6 | MALE_EMP | Numeric | 2 | | No. of Male Employees per Household |
| 7 | MALE_STD | Numeric | 2 | | No. of Male Students per Household |
| 8 | MALE_OTH | Numeric | 2 | | No. of Other Males per Household |
| 9 | FMAL_TOT | Numeric | 2 | | Total No. of Female Persons per Household |
| 10 | FMAL_EMP | Numeric | 2 | | No. of Female Employees per Household |
| 11 | FMAL_STD | Numeric | 2 | | No. of Female Students per Household |
| 12 | FMAL_OTH | Numeric | 2 | | No. of Other Females per Household |
| 13 | HH_6YR | Numeric | 2 | | No. of Household Members > 6 Years |
| 14 | OWN_VEH | Numeric | 1 | | Do you own Motorized Vehicles |
| 15 | MCYC_STR | Numeric | 2 | | No. of Owned Motorcycles & Parked on-Street |
| 16 | MCYC_GRG | Numeric | 2 | | No. of Owned Motorcycles & Parked off-Street |
| 17 | AUTO_STR | Numeric | 2 | | No. of Owned Private Cars & Parked on-Street |
| 18 | AUTO_GRG | Numeric | 2 | | No. of Owned Private Cars & Parked off-Street |
| 19 | PKUP_STR | Numeric | 2 | | No. of Owned Pickups & Parked on-Street |
| 20 | PKUP_GRG | Numeric | 2 | | No. of Owned Pickups & Parked off-Street |
| 21 | TAXI_STR | Numeric | 2 | | No. of Owned Taxis & Parked on-Street |
| 22 | TAXI_GRG | Numeric | 2 | | No. of Owned Taxis & Parked off-Street |
| 23 | SHTX_STR | Numeric | 2 | | No. of Owned Shared Taxis & Parked on-Street |
| 24 | SHTX_GRG | Numeric | 2 | | No. of Owned Shared Taxis & Parked off-Street |
| 25 | TRUK_STR | Numeric | 2 | | No. of Owned Trucks & Parked on-Street |
| 26 | TRUK_GRG | Numeric | 2 | | No. of Owned Trucks & Parked off-Street |
| 27 | HOUS_TYP | Numeric | 2 | Y | Type of Residence Place |
| 28 | NO_ROOMS | Numeric | 2 | | No. of Rooms plus Living Room in Residence Place |
| 29 | ELCTRCTY | Numeric | 4 | Y | Value of Monthly Electricity Consumption (LE) |
| 30 | TEL_BILL | Numeric | 5 | Y | Value of Telephone Bill during the last 6 Months (LE) |
| 31 | HH_INCM | Numeric | 1 | Y | Total Monthly Income per HH |
| 32 | HH_EXP | Numeric | 8.2 | | HH Expansion Factor of Total HH Number |

## Table 3.1.2 Field Code Definition of HIS (Household Characteristics)

| **Field Codes Used in Database:** | | | **HIS_FORM1_1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | QISM_ID | Qism Code | | See Equivalence Table ….. |
| 3 | SHKH_ID | Shiakha Code | | See Equivalence Table ….. |
| 4 | ZONE | Traffic Zone Code | | See Equivalence Table ….. |
| 27 | HOUS_TYP | Type of Residence Place | 1 | Owned Villa |
| | | | 2 | Rented Villa |
| | | | 3 | Owned Apartment |
| | | | 4 | Rented Apartment |
| | | | 5 | Shared Apartment |
| | | | 6 | Rural House |
| | | | 7 | Improvised / Temporary Hut |
| | | | 8 | Other |
| | | | 9 | No Answer |
| 29 | ELCTRCTY | Value of Monthly Electricity Consumption (LE) | 0 | No Electricity |
| | | | 1 | 1 - 10 LE |
| | | | 2 | 11 - 20 LE |
| | | | 3 | 21 - 30 LE |
| | | | 4 | 31 - 40 LE |
| | | | 5 | 41 - 50 LE |
| | | | 6 | 51 - 60 LE |
| | | | 7 | 61 - 70 LE |
| | | | 8 | 71 - 80 LE |
| | | | 9 | 81 - 100 LE |
| | | | 10 | 101 - 200 LE |
| | | | 11 | 201 - 400 LE |
| | | | 12 | More Than 400 LE |
| | | | 99 | No Answer |
| 30 | TEL_BILL | Value of Telephone Bill during the last 6 Months (LE) | 0 | No Telephone Line |
| | | | 1 | 1 - 50 LE |
| | | | 2 | 51 - 100 LE |
| | | | 3 | 101 - 200 LE |
| | | | 4 | 201 - 300 LE |
| | | | 5 | 301 - 400 LE |
| | | | 6 | 401 - 500 LE |
| | | | 7 | 501 - 1000 LE |
| | | | 8 | More Than 1000 LE |
| | | | 9 | No Answer |
| 31 | HH_INCM | Total Monthly Income per HH | 1 | Less than 300 LE |
| | | | 2 | 301-500 LE |
| | | | 3 | 501-1000 LE |
| | | | 4 | 1001-2000 LE |
| | | | 5 | 2001-5000 LE |
| | | | 6 | More than 5000 LE |
| | | | 9 | No Answer |

## Table 3.1.3 Description of HIS Database (Person Characteristics)

| **Structure for Database:** | **HIS_FORM2_1.DBF** |
|---|---|
| Number of Data Records: | **234,805** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/HIS/ |
| Database Source: | Household Interview Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | HH_ID | Numeric | 8 | | Household ID |
| 2 | PRSN_ID | Numeric | 2 | | Person ID |
| 3 | SHKH_ID | Numeric | 6 | Y | Shiakha Code |
| 4 | ZONE | Numeric | 3 | Y | Traffic Zone Code |
| 5 | GENDER | Numeric | 1 | Y | Gender |
| 6 | AGE | Numeric | 1 | Y | Age Group |
| 7 | PRFSHN | Numeric | 2 | Y | Profession for Employees |
| 8 | EMP_SCTR | Numeric | 2 | Y | Employment Sector for Employees |
| 9 | WRK_PLAC | Numeric | 1 | Y | Work Place |
| 10 | WRK_TIM1 | Numeric | 2 | | Work Start Hour |
| 11 | WRK_TIM2 | Numeric | 2 | | Work End Hour |
| 12 | PRSN_INC | Numeric | 1 | Y | Person Monthly Income |
| 13 | NW_STATS | Numeric | 2 | Y | Status of Non-Working Person |
| 14 | WEEKEND1 | Numeric | 1 | Y | First Weekend Day |
| 15 | WEEKEND2 | Numeric | 1 | Y | Second Weekend Day |
| 16 | DRV_LICN | Numeric | 1 | Y | Type of Driving License |
| 17 | VEH_AVL | Numeric | 1 | Y | Available Car for Work or School |
| 18 | MTR_PASS | Numeric | 1 | Y | Type of Metro Seasonal Ticket |
| 19 | MTR_COST | Numeric | 3 | Y | Cost of Metro Seasonal Ticket (LE) |
| 20 | CTA_PASS | Numeric | 1 | Y | Type of CTA Seasonal Ticket |
| 21 | CTA_COST | Numeric | 3 | Y | Cost of CTA Seasonal Ticket (LE) |
| 22 | ENR_PASS | Numeric | 1 | Y | Type of ENR Seasonal Ticket |
| 23 | ENR_COST | Numeric | 3 | Y | Cost of ENR Seasonal Ticket (LE) |
| 24 | PUB_COST | Numeric | 3 | | Additional Cost of Public Transport and Taxi (LE/Day) |
| 25 | DAY_TRIP | Numeric | 2 | | Total Number of Trips in Previous Day |
| 26 | WHYNOTRIP | Numeric | 1 | Y | What the Reason of Having No Trips |
| 27 | EXPF | Numeric | 8.2 | | Person Expansion Factor |

## Table 3.1.4 Field Code Definition of HIS Database (Person Characteristics)

| **Field Codes Used in Database:** | | | **HIS_FORM2_1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | SHKH_ID | Shiakha Code | | See Equivalence Table ….. |
| 4 | ZONE | Traffic Zone Code | | See Equivalence Table ….. |
| 5 | GENDER | Gender | 1 | Male |
| | | | 2 | Female |
| | | | 9 | Unknown |
| 6 | AGE | Age Group | 1 | 7 - 9 years |
| | | | 2 | 10 - 19 years |
| | | | 3 | 20 - 29 years |
| | | | 4 | 30 - 39 years |
| | | | 5 | 40 - 49 years |
| | | | 6 | 50 - 60 years |
| | | | 7 | More than 60 years |
| | | | 9 | Unknown |
| 7 | PRFSHN | Profession for Employees | 1 | Legislature, Administrative and Management Workers |
| | | | 2 | Professional Workers |
| | | | 3 | Technicians and Assistants |
| | | | 4 | Clerks and related Workers |
| | | | 5 | Sale and Service Workers |
| | | | 6 | Farmers, Fishers and Hunters |
| | | | 7 | Craftsmen and related Workers |
| | | | 8 | Production Workers and related Workers |
| | | | 9 | Unskilled Workers |
| | | | 10 | Others |
| | | | 99 | Non-Working Person or No Answer |
| 8 | EMP_SCTR | Employment Sector for Employees | 1 | Agriculture and Hunting |
| | | | 2 | Mining and Quarrying |
| | | | 3 | Manufacturing |
| | | | 4 | Electricity, Gas and Water |
| | | | 5 | Construction |
| | | | 6 | Restaurants, Hotels and Tourism |
| | | | 7 | Transportation, Storage and Communications |
| | | | 8 | Financing, Real Estate and Business Service |
| | | | 9 | Community, Social and Personal Service |
| | | | 10 | Wholesale, Retail Trade and Repairing |
| | | | 11 | Education |
| | | | 12 | Health and Social Work |
| | | | 13 | Others |
| | | | 99 | Non-Working Person or No Answer |

**Table 3.1.4 Field Code Definition of HIS Database (Person Characteristics), Continued**

| Field Codes Used in Database: | | | HIS_FORM2_1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 9 | WRK_PLAC | Work Place | 1 | Different from Residence Place |
| | | | 2 | Same as Residence Place |
| | | | 3 | Movable |
| | | | 9 | Non-Working Person or No Answer |
| 12 | PRSN_INC | Person Monthly Income | 1 | Less than 300 LE |
| | | | 2 | 301-500 LE |
| | | | 3 | 501-1000 LE |
| | | | 4 | 1001-2000 LE |
| | | | 5 | 2001-5000 LE |
| | | | 6 | More than 5000 LE |
| | | | 7 | No Income |
| | | | 9 | Non-Working Person or Refused . |
| 13 | NW_STATS | Status of Non-Working Person | 1 | Student (Primary) |
| | | | 2 | Student (Secondary) |
| | | | 3 | Student (High School) |
| | | | 4 | Student (Technical) |
| | | | 5 | Student (University) |
| | | | 6 | Housewife |
| | | | 7 | Retired Person |
| | | | 8 | Jobless |
| | | | 9 | Working Person or No Answer |
| 14 | WEEKEND1 | First Weekend Day | 1 | Saturday |
| | | | 2 | Sunday |
| | | | 3 | Monday |
| | | | 4 | Tuesday |
| | | | 5 | Wednesday |
| | | | 6 | Thursday |
| | | | 7 | Friday |
| | | | 8 | Not Fixed or More Than Two Days |
| | | | 9 | No Weekend or No Answer |
| 15 | WEEKEND2 | Second Weekend Day | 1 | Saturday |
| | | | 2 | Sunday |
| | | | 3 | Monday |
| | | | 4 | Tuesday |
| | | | 5 | Wednesday |
| | | | 6 | Thursday |
| | | | 7 | Friday |
| | | | 8 | Not Fixed or More Than Two Days |
| | | | 9 | No Weekend or No Answer |

**Table 3.1.4 Field Code Definition of HIS Database (Person Characteristics), Continued**

| Field Codes Used in Database: | | | HIS_FORM2_1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 16 | DRV_LICN | Type of Driving License | 1 | Private |
| | | | 2 | Commercial Vehicle |
| | | | 3 | Motorcycle |
| | | | 4 | No Driving License |
| | | | 9 | Unknown |
| 17 | VEH_AVL | Available Car for Work or School | 1 | Own Use |
| | | | 2 | Shared with Others |
| | | | 3 | No Available Vehicle |
| | | | 9 | No Answer / Has No Vehicle |
| 18 | MTR_PASS | Type of Metro Seasonal Ticket | 1 | Metro: One-Month Seasonal Ticket |
| | | | 2 | Metro: Three-Month Seasonal Ticket |
| | | | 3 | Metro: One-Year Seasonal Ticket |
| | | | 4 | Metro: Free Seasonal Ticket |
| | | | 5 | Others |
| | | | 6 | No Pass |
| | | | 9 | Unknown |
| 19 | MTR_COST | Cost of Metro Seasonal Ticket (LE) | 0 | Free Pass |
| | | | 1 | 1 - 10 LE |
| | | | 2 | 11 - 20 LE |
| | | | 3 | 21 - 30 LE |
| | | | 4 | 31 - 40 LE |
| | | | 5 | 41 - 50 LE |
| | | | 6 | > 50 LE |
| | | | 9 | No Pass / Unknown |
| 20 | CTA_PASS | Type of CTA Seasonal Ticket | 1 | Bus: One-Month Seasonal Ticket |
| | | | 2 | Bus: Three-Month Seasonal Ticket |
| | | | 3 | Bus: One-Year Seasonal Ticket |
| | | | 4 | Bus: Free Seasonal Ticket |
| | | | 5 | Others |
| | | | 6 | No Pass |
| | | | 9 | Unknown |
| 21 | CTA_COST | Cost of CTA Seasonal Ticket (LE) | 0 | Free Pass |
| | | | 1 | 1 - 10 LE |
| | | | 2 | 11 - 20 LE |
| | | | 3 | 21 - 30 LE |
| | | | 4 | 31 - 40 LE |
| | | | 5 | 41 - 50 LE |
| | | | 6 | > 50 LE |
| | | | 9 | No Pass / Unknown |

**Table 3.1.4 Field Code Definition of HIS Database (Person Characteristics), Continued**

| Field Codes Used in Database: | | | HIS_FORM2_1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 22 | ENR_PASS | Type of ENR Seasonal Ticket | 1 | Train: One-Month Seasonal Ticket |
| | | | 2 | Train: Three-Month Seasonal Ticket |
| | | | 3 | Train: One-Year Seasonal Ticket |
| | | | 4 | Train: Free Seasonal Ticket |
| | | | 5 | Others |
| | | | 6 | No Pass |
| | | | 9 | Unknown |
| 23 | ENR_COST | Cost of ENR Seasonal Ticket (LE) | 0 | Free Pass |
| | | | 1 | 1 - 10 LE |
| | | | 2 | 11 - 20 LE |
| | | | 3 | 21 - 30 LE |
| | | | 4 | 31 - 40 LE |
| | | | 5 | 41 - 50 LE |
| | | | 6 | > 50 LE |
| | | | 9 | No Pass / Unknown |
| 26 | WHYNOTRIP | What the Reason of Having No Trips | 1 | As Usual |
| | | | 2 | Sick |
| | | | 3 | Weekend |
| | | | 4 | Holiday |
| | | | 5 | Does Not Work |
| | | | 6 | Others |
| | | | 9 | Non-Working Person / Unknown |

**Table 3.1.5 Description of HIS Database (Work/Education Place)**

| **Structure for Database:** | **HIS_FORM2_2.DBF** |
|---|---|
| Number of Data Records: | **144,295** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/HIS/ |
| Database Source: | Household Interview Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | HH_ID | Numeric | 8 | | Household ID |
| 2 | PRSN_ID | Numeric | 2 | | Person ID |
| 3 | QISM_WS | Numeric | 4 | Y | Qism Code of Work/School Place |
| 4 | SHKH_WS | Numeric | 6 | Y | Shiakha Code of Work/School Place |
| 5 | ZONE | Numeric | 3 | Y | Traffic Zone Code |
| 6 | ZONE_RES | Numeric | 3 | Y | Traffic Zone Code of Residence Place |
| 7 | EXPF | Numeric | 8.2 | | Person Expansion Factor |
| 8 | EMP_PRI | Numeric | 10.2 | | No. of Employees of Primary Sector |
| 9 | EMP_SEC | Numeric | 10.2 | | No. of Employees of Secondary Sector |
| 10 | EMP_TER | Numeric | 10.2 | | No. of Employees of Tertiary Sector |
| 11 | STUDENT_NU | Numeric | 10.2 | | No. of Non-University Students |
| 12 | STUDENT_U | Numeric | 10.2 | | No. of University Students |
| 13 | PRFSHN | Numeric | 2 | Y | Profession for Employees |

**Table 3.1.6 Field Code Definition of HIS Database (Work/Education Place)**

| **Field Codes Used in Database:** | | | **HIS_FORM2_2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | QISM_WS | Qism Code of Work/School Place | | See Equivalence Table ….. |
| 4 | SHKH_WS | Shiakha Code of Work/School Place | | See Equivalence Table ….. |
| 5 | ZONE | Traffic Zone Code | | See Equivalence Table ….. |
| 6 | ZONE_RES | Traffic Zone Code of Residence Place | | See Equivalence Table ….. |
| 13 | PRFSHN | Profession for Employees | 1 | Legislature, Administrative and Management Workers |
| | | | 2 | Professional Workers |
| | | | 3 | Technicians and Assistants |
| | | | 4 | Clerks and related Workers |
| | | | 5 | Sale and Service Workers |
| | | | 6 | Farmers, Fishers and Hunters |
| | | | 7 | Craftsmen and related Workers |
| | | | 8 | Production Workers and related Workers |
| | | | 9 | Unskilled Workers |
| | | | 10 | Others |
| | | | 99 | Non-Working Person or No Answer |

**Table 3.1.7 Description of HIS Database (Unlinked Trip Characteristics)**

| **Structure for Database:** | | | **HIS_FORM3_1.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **268,360** | | |
| Database File Path: | | | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/HIS/ | | |
| Database Source: | | | Household Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | HH_ID | Numeric | 8 | | Household ID |
| 2 | PRSN_ID | Numeric | 2 | | Person ID |
| 3 | TRIP_ID | Numeric | 2 | | Trip ID |
| 4 | SHKH_ID | Numeric | 6 | Y | Shiakha Code |
| 5 | TRIPDATE | Date | 8 | | Trip Date |
| 6 | TIME_ORG | DateTime | 8 | | Trip Start Time at Origin |
| 7 | TIME_DES | DateTime | 8 | | Trip End Time at Destination |
| 8 | DAY_FLAG | Numeric | 1 | Y | Day Identifier |
| 9 | PLAC_ORG | Numeric | 1 | Y | Place of Trip Start |
| 10 | QISM_ORG | Numeric | 4 | Y | Qism Origin Code |
| 11 | SHKH_ORG | Numeric | 6 | Y | Shiakha Origin Code |
| 12 | PLAC_DES | Numeric | 1 | Y | Place of Trip End |
| 13 | QISM_DES | Numeric | 4 | Y | Qism Destination Code |
| 14 | SHKH_DES | Numeric | 6 | Y | Shiakha Destination Code |
| 15 | ZONE_OR | Numeric | 3 | Y | Traffic Zone Origin Code |
| 16 | ZONE_DES | Numeric | 3 | Y | Traffic Zone Destination Code |
| 17 | PURPOSE | Numeric | 2 | Y | Trip Reason |
| 18 | WALKONLY | Numeric | 1 | Y | Walk Only |
| 19 | EXPF | Numeric | 8.2 | | Trip Expansion Factor |
| 20 | TRIP_PURP | Numeric | 1 | Y | Trip Purpose |
| 21 | COM_MODE | Numeric | 2 | Y | Combined Modes |

## Table 3.1.8 Field Code Definition of HIS Database (Trip Characteristics)

| Field Codes Used in Database: | | | HIS_FORM3_1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 4 | SHKH_ID | Shiakha Code | | See Equivalence Table ….. |
| 8 | DAY_FLAG | Day Identifier | 0 | No Change |
| | | | 1 | Add 24 Hours to the Time_Des Field |
| 9 | PLAC_ORG | Place of Trip Start | 1 | Home |
| | | | 2 | Work Place |
| | | | 3 | Study Place |
| | | | 4 | End of Last Journey |
| | | | 5 | Other |
| | | | 9 | No Answer |
| 10 | QISM_ORG | Qism Origin Code | | See Equivalence Table ….. |
| 11 | SHKH_ORG | Shiakha Origin Code | | See Equivalence Table ….. |
| 12 | PLAC_DES | Place of Trip End | 1 | Home |
| | | | 2 | Work Place |
| | | | 3 | Study Place |
| | | | 4 | End of Last Journey |
| | | | 5 | Other |
| | | | 9 | No Answer |
| 13 | QISM_DES | Qism Destination Code | | See Equivalence Table ….. |
| 14 | SHKH_DES | Shiakha Destination Code | | See Equivalence Table ….. |
| 15 | ZONE_OR | Traffic Zone Origin Code | | See Equivalence Table ….. |
| 16 | ZONE_DES | Traffic Zone Destination Code | | See Equivalence Table ….. |
| 17 | PURPOSE | Trip Reason | 1 | To Work |
| | | | 2 | To School / Institution |
| | | | 3 | To Home |
| | | | 4 | Selling or Delivering |
| | | | 5 | Meeting or Other Business Purpose |
| | | | 6 | Return to Working Place |
| | | | 7 | Shopping or Eating |
| | | | 8 | Sending or Fetching |
| | | | 9 | Recreation |
| | | | 10 | Medical Treatment |
| | | | 11 | Social Visit or Other Private Purpose |
| | | | 12 | Other |
| | | | 99 | No Answer |

**Table 3.1.8 Field Code Definition of HIS Database (Trip Characteristics), Continued**

| Field Codes Used in Database: | | | HIS_FORM3_1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 18 | WALKONLY | Walk Only | 1 | Yes |
| | | | 2 | No |
| | | | 9 | No Answer |
| 20 | TRIP_PURP | Trip Purpose | 1 | Home Based - Work (HBW) |
| | | | 2 | Home Based - Education (HBE) |
| | | | 3 | Home Based - Other (HBO) |
| | | | 4 | Non-Home Based (NHB) |
| | | | 9 | No Answer |
| 21 | COM_MODE | Combined Modes | 1 | On-Foot |
| | | | 2 | Bicycle |
| | | | 3 | Motorcycle |
| | | | 4 | Private Car Driver |
| | | | 5 | Private Car Passenger |
| | | | 6 | Pickup for Passengers |
| | | | 7 | Taxi |
| | | | 8 | Shared Taxi |
| | | | 9 | Public Minibus |
| | | | 10 | Public Bus |
| | | | 11 | Public A/C Bus |
| | | | 12 | Cooperative Minibus |
| | | | 13 | Company (Work) Car |
| | | | 14 | Factory/Company Bus |
| | | | 15 | School Bus |
| | | | 16 | Truck for Passengers |
| | | | 17 | Nile Bus |
| | | | 18 | Tram |
| | | | 19 | Heliopolis Metro |
| | | | 20 | Underground Metro |
| | | | 21 | ENR Train |
| | | | 22 | Animal Drawn |
| | | | 23 | Others |
| | | | 99 | No Answer |

**Table 3.1.9 Description of HIS Database (Unlinked Trip Characteristics)**

| **Structure for Database:** | | | **HIS_FORM3_2.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **230,515** | | |
| Database File Path: | | | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/HIS/ | | |
| Database Source: | | | Household Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | HH_ID | Numeric | 8 | | Household ID |
| 2 | PRSN_ID | Numeric | 2 | | Person ID |
| 3 | TRIP_ID | Numeric | 2 | | Trip ID |
| 4 | JRNY_ID | Numeric | 1 | | Journey ID |
| 5 | MODE_ID | Numeric | 2 | Y | Mode of Transport |
| 6 | FARE_ID | Numeric | 1 | Y | Fare Type |
| 7 | FARE_CST | Numeric | 4 | | Fare Cost (Piaster) |
| 8 | WLK1_TIM | Numeric | 2 | | Access Walking Time (Min) |
| 9 | WAIT_TIM | Numeric | 2 | | Waiting Time (Min) |
| 10 | JRNY_TIM | Numeric | 3 | | Journey In-Vehicle Travel Time (Min) |
| 11 | WLK2_TIM | Numeric | 2 | | Egress Walking Time (Min) |
| 12 | TRNS_QSM | Numeric | 4 | Y | Qism Code for Mode Transfer |
| 13 | TRNS_SHK | Numeric | 6 | Y | Shiakha Code for Mode Transfer |
| 14 | NO_PASS | Numeric | 2 | | Number of Passengers of Private Car |
| 15 | PARK_TYP | Numeric | 1 | Y | Parking Type of Private Car |
| 16 | PARK_CST | Numeric | 3 | | Parking Cost of Private Car |
| 17 | EXPF | Numeric | 8.2 | | Journey Expansion Factor |

**Table 3.1.10 Field Code Definition of HIS Database (Unlinked Trip Characteristics)**

| **Field Codes Used in Database:** | | | **HIS_FORM3_2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 5 | MODE_ID | Mode of Transport | 1 | On-Foot |
| | | | 2 | Bicycle |
| | | | 3 | Motorcycle |
| | | | 4 | Private Car Driver |
| | | | 5 | Private Car Passenger |
| | | | 6 | Pickup for Passengers |
| | | | 7 | Taxi |
| | | | 8 | Shared Taxi |
| | | | 9 | Public Minibus |
| | | | 10 | Public Bus |
| | | | 11 | Public A/C Bus |
| | | | 12 | Cooperative Minibus |
| | | | 13 | Company (Work) Car |
| | | | 14 | Factory/Company Bus |
| | | | 15 | School Bus |
| | | | 16 | Truck for Passengers |
| | | | 17 | Nile Bus |
| | | | 18 | Tram |
| | | | 19 | Heliopolis Metro |
| | | | 20 | Underground Metro |
| | | | 21 | ENR Train |
| | | | 22 | Animal Drawn |
| | | | 23 | Others |
| | | | 99 | No Answer |
| 6 | FARE_ID | Fare Type | 1 | Ticket |
| | | | 2 | Student Pass |
| | | | 3 | Ordinary Pass |
| | | | 4 | Governmental Pass |
| | | | 5 | Special Pass |
| | | | 6 | Free Pass |
| | | | 7 | Others |
| | | | 9 | No Answer |
| 12 | TRNS_QSM | Qism Code for Mode Transfer | | See Equivalence Table ….. |
| 13 | TRNS_SHK | Shiakha Code for Mode Transfer | | See Equivalence Table ….. |
| 15 | PARK_TYP | Parking Type of Private Car | 1 | On-Street Without Stopping |
| | | | 2 | On-Street Free |
| | | | 3 | On-Street Paid |
| | | | 4 | Off-Street Private Paid |
| | | | 5 | Off-Street Private Free |
| | | | 6 | Off-Street Public Paid |
| | | | 7 | Off-Street Public Free |
| | | | 8 | Others |
| | | | 9 | No Answer |

## 3.2 REVEALED PREFERENCE SURVEY (RPS)

### 3.2.1 Overview

Revealed Preference Survey (RPS) aims at gathering information of individual modal choice so as to develop disaggregate mode choice models. Therefore, the RPS includes individual attributes, which is similar to the HIS, actual modal choice with information on the travel, which is also similar to the HIS in addition to information on available alternative travel modes for the trip made by an individual, which is not in the HIS.

The RPS survey intends to collect actual modal choice information of the residents. To collect such information efficiently, the Study Team decided to adopt "choice based sampling method" and conducted the survey at transport terminals for public transport and parking areas for private transport in principle.

A sample of travelers were planned to be interviewed in the RPS at the terminals classified as follows:

- Formal public transport modes: Bus, Metro, Tram/Heliopolis Metro and Suburban Rail.
- Informal public transport: Shared Taxi and Cooperative Minibus.
- Parking places: On Street and Off Street for private car user.

However, it appeared difficult to conduct the interview at the terminals in some cases. The first case was interviews at large-scale railway stations of ENR, where it was difficult to distinguish between commuting passengers and long-distance travel passengers. The other case was cooperative minibus passenger interview, because the cooperative minibuses have no terminals. The Study Team decided to conduct on-board interview surveys to the users of those two modes instead of terminal interviews.

The RPS started on 16 October 2001 and ended by 10 November 2001, in which 2,940 passengers were interviewed. The total sample is distributed among different transport modes as follows:

| | |
|---|---|
| Private Car (on street parking) | 565 |
| Private Car (off street parking) | 520 |
| Bus | 304 |
| Minibus | 224 |
| Tram/Heliopolis Metro | 210 |
| Metro | 324 |
| Suburban Rail | 264 |
| Shared Taxi | 308 |
| Cooperative Minibus | 221 |

## 3.2.2 RPS Database Structure

The RPS database is divided into two major categories including private car and public transport users. Database structure file of the interviews with private car users are shown in Tables 3.2.1 through 3.2.4, while public transport users database structure is presented in Tables 3.2.5 and 3.2.8. As long as the files take the extension of (dbf), the standard description files are utilized. The file structure containing the survey records of private car users is outlined in Table 3.2.1.

It can be observed that around 1,085 car users were interviewed either at off-street or on-street parking locations. The dataset file name is given in the first line of Table 3.2.1 as "RPS_CAR_FORM1.DBF", which has a file path indicated in the third line of this table. Usually, the database source is shown in the fourth line of the first description table.

The definition of field codes that have been tagged with "Y" under the column "Coded" of Table 3.2.1 are illustrated in Table 3.2.2. Field number, filed name, filed description, code and field code description are arranged in five columns of Table 3.2.2, respectively.

The evaluation of private car user for different public transport modes (advantages and disadvantages) is presented in Tables 3.2.3 and 3.2.4. The evaluation includes bus, metro, shared taxi, tram, taxi, suburban railway and Nile ferry. The importance of travel time, travel cost, number of transfers, comfort, security, safety and accessibility were also evaluated.

The survey results of public transport users are stored in database files, whose structure is shown in Tables 3.2.5 through 3.2.8 The format of these tables follows the format of Tables 3.2.1 through 3.2.4.

## Table 3.2.1 Description of RPS Database (Private Car User: Form 1)

| **Structure for Database:** | **RPS_CAR_FORM1.DBF** |
|---|---|
| Number of Data Records: | **1,085** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ |
| Database Source: | Revealed Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | DATE | Date | 8 | | Survey Date |
| 3 | STATION | Numeric | 3 | Y | Survey Location Code |
| 4 | TIME_MIN | Numeric | 3 | | Survey Time (Min) |
| 5 | TIME_HR | Numeric | 3 | | Survey Time (Hr) |
| 6 | SEX | Numeric | 2 | Y | Sex |
| 7 | AGE | Numeric | 2 | Y | Age |
| 8 | LICENSE | Numeric | 2 | Y | Do You Have a Driving License |
| 9 | CAR_OWN | Numeric | 3 | Y | Car Ownership of Household |
| 10 | CAR_AVAIL | Numeric | 2 | Y | Car Availability |
| 11 | CAR_DRIVE | Numeric | 2 | Y | Did You Drive Your Car by Yourself |
| 12 | OCCUP | Numeric | 3 | Y | Occupation |
| 13 | INCOME | Numeric | 2 | Y | Income Class |
| 14 | KISM_ORG | Numeric | 5 | Y | Qism Code of Origin Station |
| 15 | SHKH_ORG | Numeric | 3 | Y | Shiakha Code of Origin Station |
| 16 | KISM_DES | Numeric | 5 | Y | Qism Code of Destination Station |
| 17 | SHKH_DES | Numeric | 3 | Y | Shiakha Code of Destination Station |
| 18 | TRP_PURP | Numeric | 3 | Y | Trip Reason |
| 19 | TR_TIM_M | Numeric | 3 | | Total Travel Time: Minutes Portion |
| 20 | TR_TIM_H | Numeric | 2 | | Total Travel Time: Hours Portion |
| 21 | PRK_CST_R | Numeric | 5 | | Parking Ticket Cost (Piaster) |
| 22 | PRK_CST_P | Numeric | 6 | | Parking Pass Cost (Piaster) |
| 23 | EMPL_PARK | Numeric | 2 | Y | Employer Parking Reimbursement |
| 24 | EMPL_OIL | Numeric | 2 | Y | Employer Fuel Reimbursement |
| 25 | ALT1_MOD1 | Numeric | 3 | Y | Alternative Mode 1: Transfer 1 |
| 26 | ALT1_MOD2 | Numeric | 3 | Y | Alternative Mode 1: Transfer 2 |
| 27 | ALT1_MIN | Numeric | 3 | | Travel Time of Alternative Mode 1: Minutes Portion |
| 28 | ALT1_HR | Numeric | 2 | | Travel Time of Alternative Mode 1: Hours Portion |
| 29 | ALT1_TK_CS | Numeric | 5 | | Ticket Cost of Alternative Mode 1 (Piaster) |
| 30 | ALT1_PS_CS | Numeric | 6 | | Pass Cost of Alternative Mode 1 (Piaster) |
| 31 | ALT1_TRNSF | Numeric | 2 | | No of Transfers of Alternative Mode 1 |
| 32 | ALT1_WAIT1 | Numeric | 3 | | Waiting Time of Alternative Mode 1: Transfer 1 |
| 33 | ALT1_WAIT2 | Numeric | 3 | | Waiting Time of Alternative Mode 1: Transfer 2 |
| 34 | ALT1_ACCES | Numeric | 3 | | Access Time of Alternative Mode 1 (Min) |
| 35 | ALT1_EGRES | Numeric | 3 | | Egress Time of Alternative Mode 1 (Min) |

**Table 3.2.1 Description of RPS Database (Private Car User: Form 1), Continued**

| **Structure for Database:** | | | **RPS_CAR_FORM1.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **1,085** | | |
| Database File Path: | | | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ | | |
| Database Source: | | | Revealed Preference Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 36 | ALT2_MOD1 | Numeric | 3 | Y | Alternative Mode 2: Transfer 1 |
| 37 | ALT2_MOD2 | Numeric | 3 | Y | Alternative Mode 2: Transfer 2 |
| 38 | ALT2_MIN | Numeric | 3 | | Travel Time of Alternative Mode 2: Minutes Portion |
| 39 | ALT2_HR | Numeric | 2 | | Travel Time of Alternative Mode 2: Hours Portion |
| 40 | ALT2_TK_CS | Numeric | 5 | | Ticket Cost of Alternative Mode 2 (Piaster) |
| 41 | ALT2_PS_CS | Numeric | 6 | | Pass Cost of Alternative Mode 2 (Piaster) |
| 42 | ALT2_TRNSF | Numeric | 2 | | No of Transfers of Alternative Mode 2 |
| 43 | ALT2_WAIT1 | Numeric | 3 | | Waiting Time of Alternative Mode 2: Transfer 1 |
| 44 | ALT2_WAIT2 | Numeric | 3 | | Waiting Time of Alternative Mode 2: Transfer 2 |
| 45 | ALT2_ACCES | Numeric | 3 | | Access Time of Alternative Mode 2 (Min) |
| 46 | ALT2_EGRES | Numeric | 3 | | Egress Time of Alternative Mode 2 (Min) |

**Table 3.2.2 Field Code Definition of RPS Database (Private Car User: Form 1)**

| **Field Codes Used in Database:** | | | **RPS_CAR_FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | STATION | Survey Location Code | 11 | On-Street Parking: Sudan |
| | | | 12 | On-Street Parking: Nahdat Masr |
| | | | 13 | On-Street Parking: Qasr El Nile |
| | | | 14 | On-Street Parking: Shobra |
| | | | 15 | On-Street Parking: Portsaid |
| | | | 16 | On-Street Parking: Abbas El Aqqad |
| | | | 17 | On-Street Parking: Mohey El Deen |
| | | | 21 | Off-Street Parking: Sphinx |
| | | | 22 | Off-Street Parking: Mogamaa El Giza |
| | | | 23 | Off-Street Parking: Abdel Moniem Reyad |
| | | | 24 | Off-Street Parking: Falaky |
| | | | 25 | Off-Street Parking: Saray El Qobba |
| 6 | SEX | Sex | 1 | Male |
| | | | 2 | Female |

**Table 3.2.2 Field Code Definition of RPS Database (Private Car User, Form 1), Continued**

| Field Codes Used in Database: | | | RPS_CAR_FORM1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 7 | AGE | Age | 2 | 10 - 19 years |
| | | | 3 | 20 - 29 years |
| | | | 4 | 30 - 39 years |
| | | | 5 | 40 - 49 years |
| | | | 6 | 50 - 60 years |
| | | | 7 | More than 60 years |
| | | | 9 | No Answer |
| 8 | LICENSE | Do You Have a Driving License | 1 | Yes |
| | | | 2 | No |
| 10 | CAR_AVAIL | Car Availability | 1 | Always |
| | | | 2 | Often |
| | | | 3 | Occasionally |
| | | | 4 | Seldom |
| | | | 5 | Not available |
| 11 | CAR_DRIVE | Did You Drive Your Car by Yourself | 1 | Yes |
| | | | 2 | No |
| 12 | OCCUP | Occupation | 1 | Administration |
| | | | 2 | Professional |
| | | | 3 | Tech/ Assist |
| | | | 4 | Clerk |
| | | | 5 | Sales/Service |
| | | | 6 | Farmer/fisher |
| | | | 7 | Craftsman |
| | | | 8 | Production |
| | | | 9 | Unskilled |
| | | | 10 | Student |
| | | | 11 | Housewife |
| | | | 12 | Retired |
| | | | 13 | Jobless |
| | | | 14 | Others |
| | | | 99 | No Answer |
| 13 | INCOME | Income Class | 1 | Less than 300 LE |
| | | | 2 | 301-500 LE |
| | | | 3 | 501-1000 LE |
| | | | 4 | 1001-2000 LE |
| | | | 5 | 2001-5000 LE |
| | | | 6 | More than 5000 LE |
| | | | 7 | No Income |
| | | | 9 | No Answer |
| 14 | KISM_ORG | Qism Code of Origin Station | | See Equivalence Table ….. |
| 15 | SHKH_ORG | Shiakha Code of Origin Station | | See Equivalence Table ….. |
| 16 | KISM_DES | Qism Code of Destination Station | | See Equivalence Table ….. |
| 17 | SHKH_DES | Shiakha Code of Destination Station | | See Equivalence Table ….. |
| 14 | KISM_ORG | Qism Code of Origin Station | | See Equivalence Table ….. |
| 15 | SHKH_ORG | Shiakha Code of Origin Station | | See Equivalence Table ….. |
| 16 | KISM_DES | Qism Code of Destination Station | | See Equivalence Table ….. |

**Table 3.2.2 Field Code Definition of RPS Database (Private Car User: Form 1), Continued**

| Field Codes Used in Database: | | | RPS_CAR_FORM1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 18 | TRP_PURP | Trip Reason | 1 | Work |
| | | | 2 | Education |
| | | | 3 | Home |
| | | | 4 | Selling/delivering |
| | | | 5 | Meeting/Business |
| | | | 6 | Return work place |
| | | | 7 | Shopping/eating |
| | | | 8 | Sending/fetching |
| | | | 9 | Recreation |
| | | | 10 | Medical |
| | | | 11 | Social |
| | | | 12 | Other |
| | | | 99 | No answer |
| 23 | EMPL_PARK | Employer Parking Reimbursement | 1 | Yes |
| | | | 2 | Partly |
| | | | 3 | No |
| 24 | EMPL_OIL | Employer Fuel Reimbursement | 1 | Yes |
| | | | 2 | Partly |
| | | | 3 | No |
| 25 | ALT1_MOD1 | Alternative Mode 1: Transfer 1 | 1 | On-Foot |
| 26 | ALT1_MOD2 | Alternative Mode 1: Transfer 2 | 2 | Bicycle |
| 36 | ALT2_MOD1 | Alternative Mode 2: Transfer 1 | 3 | Motorcycle |
| 37 | ALT2_MOD2 | Alternative Mode 2: Transfer 2 | 4 | Private Car Driver |
| | | | 5 | Private Car Passenger |
| | | | 6 | Pickup for Passengers |
| | | | 7 | Taxi |
| | | | 8 | Shared Taxi |
| | | | 9 | Public Minibus |
| | | | 10 | Public Bus |
| | | | 11 | Public A/C Bus |
| | | | 12 | Cooperative Minibus |
| | | | 13 | Company (Work) Car |
| | | | 14 | Factory/Company Bus |
| | | | 15 | School Bus |
| | | | 16 | Truck for Passengers |
| | | | 17 | Nile Bus |
| | | | 18 | Tram |
| | | | 19 | Heliopolis Metro |
| | | | 20 | Underground Metro |
| | | | 21 | ENR Train |
| | | | 22 | Animal Drawn |
| | | | 23 | Others |
| | | | 99 | No Answer |

**Table 3.2.3 Description of RPS Database (Private Car User: Form 2)**

| **Structure for Database:** | **RPS_CAR_FORM2.DBF** |
|---|---|
| Number of Data Records: | **1,085** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ |
| Database Source: | Revealed Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Character | 6 | | Sample ID |
| 2 | USE_PT | Character | 2 | Y | Use Public Transport if Services Improve |
| 3 | IMP_TRP_TM | Character | 2 | Y | Importance of Travel Time |
| 4 | IMP_TRP_CS | Character | 2 | Y | Importance of Travel Cost |
| 5 | IMP_TRNSFR | Character | 2 | Y | Importance of Number of Transfers |
| 6 | IMP_CMFRT | Character | 2 | Y | Importance of Comfort |
| 7 | IMP_SCRTY | Character | 2 | Y | Importance of Security |
| 8 | IMP_SAFETY | Character | 2 | Y | Importance of Safety |
| 9 | IMP_ACCESS | Character | 2 | Y | Importance of Accessibility |
| 10 | FUEL_DBL | Character | 2 | Y | Use Public Transport If Fuel Cost Is Doubled |
| 11 | MTR_ADV1 | Character | 3 | Y | Metro Advantage 1 |
| 12 | MTR_ADV2 | Character | 3 | Y | Metro Advantage 2 |
| 13 | MTR_ADV3 | Character | 3 | Y | Metro Advantage 3 |
| 14 | MTR_DISAD1 | Character | 3 | Y | Metro Disadvantage 1 |
| 15 | MTR_DISAD2 | Character | 3 | Y | Metro Disadvantage 2 |
| 16 | MTR_DISAD3 | Character | 3 | Y | Metro Disadvantage 3 |
| 17 | ST_ADV1 | Character | 3 | Y | Shared Taxi Advantage 1 |
| 18 | ST_ADV2 | Character | 3 | Y | Shared Taxi Advantage 2 |
| 19 | ST_ADV3 | Character | 3 | Y | Shared Taxi Advantage 3 |
| 20 | ST_DISAD1 | Character | 3 | Y | Shared Taxi Disadvantage 1 |
| 21 | ST_DISAD2 | Character | 3 | Y | Shared Taxi Disadvantage 2 |
| 22 | ST_DISAD3 | Character | 3 | Y | Shared Taxi Disadvantage 3 |
| 23 | BUS_ADV1 | Character | 3 | Y | Bus Advantage 1 |
| 24 | BUS_ADV2 | Character | 3 | Y | Bus Advantage 2 |
| 25 | BUS_ADV3 | Character | 3 | Y | Bus Advantage 3 |
| 26 | BUS_DISAD1 | Character | 3 | Y | Bus Disadvantage 1 |
| 27 | BUS_DISAD2 | Character | 3 | Y | Bus Disadvantage 2 |
| 28 | BUS_DISAD3 | Character | 3 | Y | Bus Disadvantage 3 |
| 29 | TRAM_ADV1 | Character | 3 | Y | Tram Advantage 1 |
| 30 | TRAM_ADV2 | Character | 3 | Y | Tram Advantage 2 |
| 31 | TRAM_ADV3 | Character | 3 | Y | Tram Advantage 3 |

**Table 3.2.3 Description of RPS Database (Private Car User: Form 2), Continued**

| **Structure for Database:** | | | **RPS_CAR_FORM2.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **1,085** | | |
| Database File Path: | | | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ | | |
| Database Source: | | | Revealed Preference Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 32 | TRAM_DISAD | Character | 3 | Y | Tram Disadvantage 1 |
| 33 | TRAM_DISA2 | Character | 3 | Y | Tram Disadvantage 2 |
| 34 | TRAM_DISA3 | Character | 3 | Y | Tram Disadvantage 3 |
| 35 | TAXI_ADV1 | Character | 3 | Y | Taxi Advantage 1 |
| 36 | TAXI_ADV2 | Character | 3 | Y | Taxi Advantage 2 |
| 37 | TAXI_ADV3 | Character | 3 | Y | Taxi Advantage 3 |
| 38 | TAXI_DISAD | Character | 3 | Y | Taxi Disadvantage 1 |
| 39 | TAXI_DISA2 | Character | 3 | Y | Taxi Disadvantage 2 |
| 40 | TAXI_DISA3 | Character | 3 | Y | Taxi Disadvantage 3 |
| 41 | RAIL_ADV1 | Character | 3 | Y | Railway Advantage 1 |
| 42 | RAIL_ADV2 | Character | 3 | Y | Railway Advantage 2 |
| 43 | RAIL_ADV3 | Character | 3 | Y | Railway Advantage 3 |
| 44 | RAIL_DISAD | Character | 3 | Y | Railway Disadvantage 1 |
| 45 | RAIL_DISA2 | Character | 3 | Y | Railway Disadvantage 2 |
| 46 | RAIL_DISA3 | Character | 3 | Y | Railway Disadvantage 3 |
| 47 | FERY_ADV1 | Character | 3 | Y | Nile Ferry Advantage 1 |
| 48 | FERY_ADV2 | Character | 3 | Y | Nile Ferry Advantage 2 |
| 49 | FERY_ADV3 | Character | 3 | Y | Nile Ferry Advantage 3 |
| 50 | FERY_DISAD | Character | 3 | Y | Nile Ferry Disadvantage 1 |
| 51 | FERY_DISA2 | Character | 3 | Y | Nile Ferry Disadvantage 2 |
| 52 | FERY_DISA3 | Character | 3 | Y | Nile Ferry Disadvantage 3 |
| 53 | IMP_ROUTS | Character | 2 | Y | Importance of Printed Route Maps |
| 54 | IMP_SCHDL | Character | 2 | Y | Importance of Printed Schedules |
| 55 | IMP_COORD | Character | 2 | Y | Importance of Coordinated Schedules |
| 56 | IMP_TCKT | Character | 2 | Y | Importance of Combined Ticket |
| 57 | IMP_PASS | Character | 2 | Y | Importance of Seasonal Ticket |
| 58 | IMP_BUSLAN | Character | 2 | Y | Importance of Separate Lanes (Bus Only) |

## Table 3.2.4 Field Code Definition of RPS Database (Private Car User: Form 2)

| **Field Codes Used in Database:** | | | **RPS_CAR_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | USE_PT | Use Public Transport if Services Improve | 1 | Never |
| | | | 2 | Highly unlikely |
| | | | 3 | Unlikely |
| | | | 4 | Likely |
| | | | 9 | No answer |
| 3 | IMP_TRP_TM | Importance of Travel Time | 1 | Not Important |
| 4 | IMP_TRP_CS | Importance of Travel Cost | 2 | Not So Much |
| 5 | IMP_TRNSFR | Importance of Number of Transfers | 3 | Neutral |
| 6 | IMP_CMFRT | Importance of Comfort | 4 | Important |
| 7 | IMP_SCRTY | Importance of Security | 5 | Very Important |
| 8 | IMP_SAFETY | Importance of Safety | | |
| 9 | IMP_ACCESS | Importance of Accessibility | | |
| 10 | FUEL_DBL | Use Public Transport If Fuel Cost Is Doubled | 1 | Never |
| | | | 2 | Highly unlikely |
| | | | 3 | Unlikely |
| | | | 4 | Likely |
| | | | 9 | No answer |
| 11 | MTR_ADV1 | Metro Advantage 1 | 1 | Speed |
| 12 | MTR_ADV2 | Metro Advantage 2 | 2 | Cost |
| 13 | MTR_ADV3 | Metro Advantage 3 | 3 | On-time |
| 14 | MTR_DISAD1 | Metro Disadvantage 1 | 4 | Access/Egress |
| 15 | MTR_DISAD2 | Metro Disadvantage 2 | 5 | Comfort |
| 16 | MTR_DISAD3 | Metro Disadvantage 3 | 6 | Direct |
| 17 | ST_ADV1 | Shared Taxi Advantage 1 | 7 | Safety |
| 18 | ST_ADV2 | Shared Taxi Advantage 2 | 8 | Security |
| 19 | ST_ADV3 | Shared Taxi Advantage 3 | 9 | Crowded |
| 20 | ST_DISAD1 | Shared Taxi Disadvantage 1 | 10 | Other |
| 21 | ST_DISAD2 | Shared Taxi Disadvantage 2 | 99 | No Answer |
| 22 | ST_DISAD3 | Shared Taxi Disadvantage 3 | | |
| 23 | BUS_ADV1 | Bus Advantage 1 | | |
| 24 | BUS_ADV2 | Bus Advantage 2 | | |
| 25 | BUS_ADV3 | Bus Advantage 3 | | |
| 26 | BUS_DISAD1 | Bus Disadvantage 1 | | |
| 27 | BUS_DISAD2 | Bus Disadvantage 2 | | |
| 28 | BUS_DISAD3 | Bus Disadvantage 3 | | |

**Table 3.2.4 Field Code Definition of RPS Database (Private Car User: Form 2), Continued**

| Field Codes Used in Database: | | | RPS_CAR_FORM2.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 29 | TRAM_ADV1 | Tram Advantage 1 | 1 | Speed |
| 30 | TRAM_ADV2 | Tram Advantage 2 | 2 | Cost |
| 31 | TRAM_ADV3 | Tram Advantage 3 | 3 | On-time |
| 32 | TRAM_DISAD | Tram Disadvantage 1 | 4 | Access/Egress |
| 33 | TRAM_DISA2 | Tram Disadvantage 2 | 5 | Comfort |
| 34 | TRAM_DISA3 | Tram Disadvantage 3 | 6 | Direct |
| 35 | TAXI_ADV1 | Taxi Advantage 1 | 7 | Safety |
| 36 | TAXI_ADV2 | Taxi Advantage 2 | 8 | Security |
| 37 | TAXI_ADV3 | Taxi Advantage 3 | 9 | Crowded |
| 38 | TAXI_DISAD | Taxi Disadvantage 1 | 10 | Other |
| 39 | TAXI_DISA2 | Taxi Disadvantage 2 | 99 | No Answer |
| 40 | TAXI_DISA3 | Taxi Disadvantage 3 | | |
| 41 | RAIL_ADV1 | Railway Advantage 1 | | |
| 42 | RAIL_ADV2 | Railway Advantage 2 | | |
| 43 | RAIL_ADV3 | Railway Advantage 3 | | |
| 44 | RAIL_DISAD | Railway Disadvantage 1 | | |
| 45 | RAIL_DISA2 | Railway Disadvantage 2 | | |
| 46 | RAIL_DISA3 | Railway Disadvantage 3 | | |
| 47 | FERY_ADV1 | Nile Ferry Advantage 1 | | |
| 48 | FERY_ADV2 | Nile Ferry Advantage 2 | | |
| 49 | FERY_ADV3 | Nile Ferry Advantage 3 | | |
| 50 | FERY_DISAD | Nile Ferry Disadvantage 1 | | |
| 51 | FERY_DISA2 | Nile Ferry Disadvantage 2 | | |
| 52 | FERY_DISA3 | Nile Ferry Disadvantage 3 | | |
| 53 | IMP_ROUTS | Importance of Printed Route Maps | 1 | Not Important |
| 54 | IMP_SCHDL | Importance of Printed Schedules | 2 | Not So Much |
| 55 | IMP_COORD | Importance of Coordinated Schedules | 3 | Neutral |
| 56 | IMP_TCKT | Importance of Combined Ticket | 4 | Important |
| 57 | IMP_PASS | Importance of Seasonal Ticket | 5 | Very Important |
| 58 | IMP_BUSLAN | Importance of Separate Lanes (Bus Only) | | |

**Table 3.2.5 Description of RPS Database (Public Transport User: Form 1)**

| **Structure for Database:** | **RPS_PT_FORM1.DBF** |
|---|---|
| Number of Data Records: | **1,822** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ |
| Database Source: | Revealed Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | DATE | Date | 8 | | Survey Date |
| 3 | MODE | Character | 1 | Y | Current Transport Mode |
| 4 | STATION | Character | 3 | Y | Survey Location Code |
| 5 | TIME_MIN | Numeric | 3 | | Survey Time (Min) |
| 6 | TIME_HR | Numeric | 3 | | Survey Time (Hr) |
| 7 | SEX | Numeric | 2 | Y | Sex |
| 8 | AGE | Numeric | 2 | Y | Age |
| 9 | LICENSE | Numeric | 2 | Y | Do You Have a Driving License |
| 10 | CAR_OWN | Numeric | 2 | | Car Ownership of Household |
| 11 | CAR_AVAIL | Numeric | 2 | Y | Car Availability |
| 12 | CAR_DRIVE | Numeric | 2 | Y | Why Did Not You Use the Private Car |
| 13 | OCCUP | Numeric | 3 | Y | Occupation |
| 14 | INCOME | Numeric | 2 | Y | Income Class |
| 15 | KISM_ORG | Numeric | 5 | Y | Qism Code of Origin Station |
| 16 | SHKH_ORG | Numeric | 3 | Y | Shiakha Code of Origin Station |
| 17 | KISM_DES | Numeric | 5 | Y | Qism Code of Destination Station |
| 18 | SHKH_DES | Numeric | 3 | Y | Shiakha Code of Destination Station |
| 19 | TRP_PURP | Numeric | 3 | Y | Trip Reason |
| 20 | EMPL_SHAR | Numeric | 2 | Y | Employer Reimbursement for Travel Cost |
| 21 | USE_PASS1 | Numeric | 2 | Y | Use of Pass 1 for Current Mode |
| 22 | USE_PASS2 | Numeric | 2 | Y | Use of Pass 2 for Transfer Mode 1 |
| 23 | USE_PASS3 | Numeric | 2 | Y | Use of Pass 3 Transfer Mode 2 |
| 24 | USE_PASS4 | Numeric | 2 | Y | Use of Pass 4 Transfer Mode 3 |
| 25 | TR_TIM_M | Numeric | 3 | | Travel Time: Minutes Portion |
| 26 | TR_TIM_H | Numeric | 2 | | Travel Time: Hours Portion |
| 27 | TCKT_CST | Numeric | 5 | | Ticket Cost (Piaster) |
| 28 | PASS_CST | Numeric | 6 | | Pass Cost (Piaster) |
| 29 | MODE_ACCES | Numeric | 3 | | Access Time of Current Mode (Min) |
| 30 | MODE_EGRES | Numeric | 3 | | Egress Time of Current Mode (Min) |
| 31 | MODE_TRNSF | Numeric | 2 | | No of Transfers of Current Mode |
| 32 | MODE_WAIT | Numeric | 3 | | Waiting Time of Current Mode |

**Table 3.2.5 Description of RPS Database (Public Transport User: Form 1), Continued**

| **Structure for Database:** | **RPS_PT_FORM1.DBF** |
|---|---|
| Number of Data Records: | **1,822** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ |
| Database Source: | Revealed Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 33 | ALT1_MOD | Numeric | 3 | Y | Alternative Mode 1 |
| 34 | ALT1_MIN | Numeric | 3 | | Travel Time of Alternative Mode 1: Minutes Portion |
| 35 | ALT1_HR | Numeric | 2 | | Travel Time of Alternative Mode 1: Hours Portion |
| 36 | ALT1_TK_CS | Numeric | 5 | | Ticket Cost of Alternative Mode 1 (Piaster) |
| 37 | ALT1_PS_CS | Numeric | 6 | | Pass Cost of Alternative Mode 1 (Piaster) |
| 38 | ALT1_TRNSF | Numeric | 2 | | No of Transfers of Alternative Mode 1 |
| 39 | ALT1_WAIT | Numeric | 3 | | Waiting Time of Alternative Mode 1 |
| 40 | ALT1_ACCES | Numeric | 3 | | Access Time of Alternative Mode 1 (Min) |
| 41 | ALT1_EGRES | Numeric | 3 | | Egress Time of Alternative Mode 1 (Min) |
| 42 | ALT2_MOD | Numeric | 3 | Y | Alternative Mode 2 |
| 43 | ALT2_MIN | Numeric | 3 | | Travel Time of Alternative Mode 2: Minutes Portion |
| 44 | ALT2_HR | Numeric | 2 | | Travel Time of Alternative Mode 2: Hours Portion |
| 45 | ALT2_TK_CS | Numeric | 5 | | Ticket Cost of Alternative Mode 2 (Piaster) |
| 46 | ALT2_PS_CS | Numeric | 6 | | Pass Cost of Alternative Mode 2 (Piaster) |
| 47 | ALT2_TRNSF | Numeric | 2 | | No of Transfers of Alternative Mode 2 |
| 48 | ALT2_WAIT | Numeric | 3 | | Waiting Time of Alternative Mode 2 |
| 49 | ALT2_ACCES | Numeric | 3 | | Access Time of Alternative Mode 2 (Min) |
| 50 | ALT2_EGRES | Numeric | 3 | | Egress Time of Alternative Mode 2 (Min) |

**Table 3.2.6 Field Code Definition of RPS Database (Public Transport User: Form 1)**

| **Field Codes Used in Database:** | | | **RPS_PT_FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | MODE | Current Transport Mode | A | CTA Minibus |
| | | | B | CTA Bus |
| | | | C | Cooperate Minibus |
| | | | M | Metro |
| | | | R | ENR Suburban Railway Lines |
| | | | S | Shared Taxi |
| | | | T | Tram |
| 4 | STATION | Survey Location Code | A1 | MBS: Giza |
| | | | A3 | MBS: Boolaq El Daqroor |
| | | | A4 | MBS: Abdel Moniem Reyad |
| | | | A6 | MBS: Ataba |
| | | | A8 | MBS: Gamaa St. |
| | | | A9 | MBS: Shobra |
| | | | B1 | BUS: Giza |
| | | | B2 | BUS: Abaseya |
| | | | B3 | BUS: Boolaq El Daqroor |
| | | | B4 | BUS: Abdel Moniem Reyad |
| | | | B5 | BUS: Basateen |
| | | | B6 | BUS: Madinat El Salam |
| | | | B7 | BUS: Remaya |
| | | | B8 | BUS: Imbaba |
| | | | C1 | COB: Giza |
| | | | C2 | COB: Imbaba |
| | | | C3 | COB: Ramsees |
| | | | M1 | MTR: Helwan |
| | | | M2 | MTR: Maasara |
| | | | M4 | MTR: Dar El Salam |
| | | | M5 | MTR: Sadat |
| | | | M7 | MTR: Ain Shams |
| | | | M8 | MTR: Giza |
| | | | R11 | ENR: Ayat |
| | | | R12 | ENR: Marazeeq |
| | | | R13 | ENR: Mazgoona |
| | | | R14 | ENR: Badrasheen |
| | | | R15 | ENR: Hawamdeya |
| | | | R20 | ENR: Marg |
| | | | R21 | ENR: 23 July |
| | | | R22 | ENR: Qalag El Mahata |
| | | | R23 | ENR: Qalag |
| | | | R24 | ENR: Gabal El Asfar |
| | | | R25 | ENR: Khanka |
| | | | R26 | ENR: Abu Zaabal |
| | | | R27 | ENR: Mahager |

**Table 3.2.6 Field Code Definition of RPS Database (Public Transport User: Form 1), Continued**

| Field Codes Used in Database: | | | RPS_PT_FORM1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| | | | R27 | ENR: Mahager |
| | | | R28 | ENR: Arab El Olayqat |
| | | | R29 | ENR: Shobak |
| | | | R30 | ENR: Shebeen El Qanater |
| | | | R31 | ENR: Nikla |
| | | | R32 | ENR: Manashy |
| | | | R37 | ENR: Bashteel El Balad |
| | | | R39 | ENR: Imbaba |
| | | | R40 | ENR: Qahera |
| | | | R41 | ENR: Badrasheen |
| | | | R42 | ENR: October |
| | | | R43 | ENR: Giza |
| | | | S1 | STX: Helwan |
| | | | S2 | STX: Basateen |
| | | | S3 | STX: Giza |
| | | | S4 | STX: Abdel Moniem Reyad |
| | | | S5 | STX: Boolaq El Daqroor |
| | | | S6 | STX: Abaseya |
| | | | S7 | STX: Remaya |
| | | | S8 | STX: Madinat El Salam |
| | | | S9 | STX: Sayeda Zeinab |
| | | | T1 | TRM: Ramsees |
| | | | T2 | TRM: Ain Shams |
| | | | T3 | TRM: Matareya |
| 7 | SEX | Sex | 1 | Male |
| | | | 2 | Female |
| 8 | AGE | Age | 2 | 10 - 19 years |
| | | | 3 | 20 - 29 years |
| | | | 4 | 30 - 39 years |
| | | | 5 | 40 - 49 years |
| | | | 6 | 50 - 60 years |
| | | | 7 | More than 60 years |
| | | | 9 | No Answer |
| 9 | LICENSE | Do You Have a Driving License | 1 | Yes |
| | | | 2 | No |
| 11 | CAR_AVAIL | Car Availability | 1 | Always |
| | | | 2 | Often |
| | | | 3 | Occasionally |
| | | | 4 | Seldom |
| | | | 5 | Not available |

**Table 3.2.6 Field Code Definition of RPS Database (Public Transport User: Form 1), Continued**

| Field Codes Used in Database: | | | RPS_PT_FORM1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 12 | CAR_DRIVE | Why Did Not You Use Private Car | 1 | Being used |
| | | | 2 | Parking charge |
| | | | 3 | No parking space |
| | | | 4 | Expensive |
| | | | 5 | Traffic congestion |
| | | | 6 | Car is broken |
| | | | 7 | Others |
| | | | 9 | No answer |
| 13 | OCCUP | Occupation | 1 | Administration |
| | | | 2 | Professional |
| | | | 3 | Tech/ Assist |
| | | | 4 | Clerk |
| | | | 5 | Sales/Service |
| | | | 6 | Farmer/fisher |
| | | | 7 | Craftsman |
| | | | 8 | Production |
| | | | 9 | Unskilled |
| | | | 10 | Student |
| | | | 11 | Housewife |
| | | | 12 | Retired |
| | | | 13 | Jobless |
| | | | 14 | Others |
| | | | 99 | No Answer |
| 13 | INCOME | Income Class | 1 | Less than 300 LE |
| | | | 2 | 301-500 LE |
| | | | 3 | 501-1000 LE |
| | | | 4 | 1001-2000 LE |
| | | | 5 | 2001-5000 LE |
| | | | 6 | More than 5000 LE |
| | | | 7 | No Income |
| | | | 9 | No Answer |
| 14 | KISM_ORG | Qism Code of Origin Station | | See Equivalence Table ….. |
| 15 | SHKH_ORG | Shiakha Code of Origin Station | | See Equivalence Table ….. |
| 16 | KISM_DES | Qism Code of Destination Station | | See Equivalence Table ….. |
| 17 | SHKH_DES | Shiakha Code of Destination Station | | See Equivalence Table ….. |

**Table 3.2.6 Field Code Definition of RPS Database (Public Transport User: Form 1), Continued**

| Field Codes Used in Database: | | | RPS_PT_FORM1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 18 | TRP_PURP | Trip Reason | 1 | Work |
| | | | 2 | Education |
| | | | 3 | Home |
| | | | 4 | Selling/delivering |
| | | | 5 | Meeting/Business |
| | | | 6 | Return work place |
| | | | 7 | Shopping/eating |
| | | | 8 | Sending/fetching |
| | | | 9 | Recreation |
| | | | 10 | Medical |
| | | | 11 | Social |
| | | | 12 | Other |
| | | | 99 | No answer |
| 23 | EMPL_SHAR | Employer Reimbursement for Travel Cost | 1 | Yes |
| | | | 2 | Partly |
| | | | 3 | No |
| 21 | USE_PASS1 | Use of Pass 1 for Current Mode | 1 | Bus |
| 22 | USE_PASS2 | Use of Pass 2 for Transfer Mode 1 | 2 | Metro |
| 23 | USE_PASS3 | Use of Pass 3 Transfer Mode 2 | 3 | Tram |
| 24 | USE_PASS4 | Use of Pass 4 Transfer Mode 3 | 4 | Other |
| | | | 5 | No |
| 33 | ALT1_MOD1 | Alternative Mode 1: Transfer 1 | 1 | On-Foot |
| 42 | ALT1_MOD2 | Alternative Mode 1: Transfer 2 | 2 | Bicycle |
| | | | 3 | Motorcycle |
| | | | 4 | Private Car Driver |
| | | | 5 | Private Car Passenger |
| | | | 6 | Pickup for Passengers |
| | | | 7 | Taxi |
| | | | 8 | Shared Taxi |
| | | | 9 | Public Minibus |
| | | | 10 | Public Bus |
| | | | 11 | Public A/C Bus |
| | | | 12 | Cooperative Minibus |
| | | | 13 | Company (Work) Car |
| | | | 14 | Factory/Company Bus |
| | | | 15 | School Bus |
| | | | 16 | Truck for Passengers |
| | | | 17 | Nile Bus |
| | | | 18 | Tram |
| | | | 19 | Heliopolis Metro |
| | | | 20 | Underground Metro |
| | | | 21 | ENR Train |
| | | | 22 | Animal Drawn |
| | | | 23 | Others |
| | | | 99 | No Answer |

**Table 3.2.7 Description of RPS Database (Public Transport User: Form 2)**

| **Structure for Database:** | **RPS_PT_FORM2.DBF** |
|---|---|
| Number of Data Records: | **1,822** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ |
| Database Source: | Revealed Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | MODE | Character | 2 | Y | Transport Mode Code |
| 3 | IMP_TRP_TM | Numeric | 2 | Y | Importance of Travel Time |
| 4 | IMP_TRP_CS | Numeric | 2 | Y | Importance of Travel Cost |
| 5 | IMP_TRNSFR | Numeric | 2 | Y | Importance of Number of Transfers |
| 6 | IMP_CMFRT | Numeric | 2 | Y | Importance of Comfort |
| 7 | IMP_SCRTY | Numeric | 2 | Y | Importance of Security |
| 8 | IMP_SAFETY | Numeric | 2 | Y | Importance of Safety |
| 9 | IMP_ACCESS | Numeric | 2 | Y | Importance of Accessibility |
| 10 | MTR_ADV1 | Numeric | 3 | Y | Metro Advantage 1 |
| 11 | MTR_ADV2 | Numeric | 3 | Y | Metro Advantage 2 |
| 12 | MTR_ADV3 | Numeric | 3 | Y | Metro Advantage 3 |
| 13 | MTR_DISAD1 | Numeric | 3 | Y | Metro Disadvantage 1 |
| 14 | MTR_DISAD2 | Numeric | 3 | Y | Metro Disadvantage 2 |
| 15 | MTR_DISAD3 | Numeric | 3 | Y | Metro Disadvantage 3 |
| 16 | ST_ADV1 | Numeric | 3 | Y | Shared Taxi Advantage 1 |
| 17 | ST_ADV2 | Numeric | 3 | Y | Shared Taxi Advantage 2 |
| 18 | ST_ADV3 | Numeric | 3 | Y | Shared Taxi Advantage 3 |
| 19 | ST_DISAD1 | Numeric | 3 | Y | Shared Taxi Disadvantage 1 |
| 20 | ST_DISAD2 | Numeric | 3 | Y | Shared Taxi Disadvantage 2 |
| 21 | ST_DISAD3 | Numeric | 3 | Y | Shared Taxi Disadvantage 3 |
| 22 | BUS_ADV1 | Numeric | 3 | Y | Bus Advantage 1 |
| 23 | BUS_ADV2 | Numeric | 3 | Y | Bus Advantage 2 |
| 24 | BUS_ADV3 | Numeric | 3 | Y | Bus Advantage 3 |
| 25 | BUS_DISAD1 | Numeric | 3 | Y | Bus Disadvantage 1 |
| 26 | BUS_DISAD2 | Numeric | 3 | Y | Bus Disadvantage 2 |
| 27 | BUS_DISAD3 | Numeric | 3 | Y | Bus Disadvantage 3 |
| 28 | TRAM_ADV1 | Numeric | 3 | Y | Tram Advantage 1 |
| 29 | TRAM_ADV2 | Numeric | 3 | Y | Tram Advantage 2 |
| 30 | TRAM_ADV3 | Numeric | 3 | Y | Tram Advantage 3 |
| 31 | TRAM_DISAD | Numeric | 3 | Y | Tram Disadvantage 1 |
| 32 | TRAM_DISA2 | Numeric | 3 | Y | Tram Disadvantage 2 |
| 33 | TRAM_DISA3 | Numeric | 3 | Y | Tram Disadvantage 3 |

**Table 3.2.7 Description of RPS Database (Public Transport User: Form 2), Continued**

| **Structure for Database:** | | | **RPS_PT_FORM2.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **1,822** | | |
| Database File Path: | | | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/RPS/ | | |
| Database Source: | | | Revealed Preference Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 34 | TAXI_ADV1 | Numeric | 3 | Y | Taxi Advantage 1 |
| 35 | TAXI_ADV2 | Numeric | 3 | Y | Taxi Advantage 2 |
| 36 | TAXI_ADV3 | Numeric | 3 | Y | Taxi Advantage 3 |
| 37 | TAXI_DISAD | Numeric | 3 | Y | Taxi Disadvantage 1 |
| 38 | TAXI_DISA2 | Numeric | 3 | Y | Taxi Disadvantage 2 |
| 39 | TAXI_DISA3 | Numeric | 3 | Y | Taxi Disadvantage 3 |
| 40 | RAIL_ADV1 | Numeric | 3 | Y | Railway Advantage 1 |
| 41 | RAIL_ADV2 | Numeric | 3 | Y | Railway Advantage 2 |
| 42 | RAIL_ADV3 | Numeric | 3 | Y | Railway Advantage 3 |
| 43 | RAIL_DISAD | Numeric | 3 | Y | Railway Disadvantage 1 |
| 44 | RAIL_DISA2 | Numeric | 3 | Y | Railway Disadvantage 2 |
| 45 | RAIL_DISA3 | Numeric | 3 | Y | Railway Disadvantage 3 |
| 46 | FERY_ADV1 | Numeric | 3 | Y | Nile Ferry Advantage 1 |
| 47 | FERY_ADV2 | Numeric | 3 | Y | Nile Ferry Advantage 2 |
| 48 | FERY_ADV3 | Numeric | 3 | Y | Nile Ferry Advantage 3 |
| 49 | FERY_DISAD | Numeric | 3 | Y | Nile Ferry Disadvantage 1 |
| 50 | FERY_DISA2 | Numeric | 3 | Y | Nile Ferry Disadvantage 2 |
| 51 | FERY_DISA3 | Numeric | 3 | Y | Nile Ferry Disadvantage 3 |
| 52 | IMP_ROUTS | Numeric | 2 | Y | Importance of Printed Route Maps |
| 53 | IMP_SCHDL | Numeric | 2 | Y | Importance of Printed Schedules |
| 54 | IMP_COORD | Numeric | 2 | Y | Importance of Coordinated Schedules |
| 55 | IMP_TCKT | Numeric | 2 | Y | Importance of Combined Ticket |
| 56 | IMP_PASS | Numeric | 2 | Y | Importance of Seasonal Ticket |
| 57 | IMP_BUSLAN | Numeric | 2 | Y | Importance of Separate Lanes (Bus Only) |

## Table 3.2.8 Field Code Definition of RPS Database (Public Transport User: Form 2)

| **Field Codes Used in Database:** | | | **RPS_PT_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | MODE | Current Transport Mode | A | CTA Minibus |
| | | | B | CTA Bus |
| | | | C | Cooperate Minibus |
| | | | M | Metro |
| | | | R | ENR Suburban Railway Lines |
| | | | S | Shared Taxi |
| | | | T | Tram |
| 3 | IMP_TRP_TM | Importance of Travel Time | 1 | Not Important |
| 4 | IMP_TRP_CS | Importance of Travel Cost | 2 | Not So Much |
| 5 | IMP_TRNSFR | Importance of Number of Transfers | 3 | Neutral |
| 6 | IMP_CMFRT | Importance of Comfort | 4 | Important |
| 7 | IMP_SCRTY | Importance of Security | 5 | Very Important |
| 8 | IMP_SAFETY | Importance of Safety | | |
| 9 | IMP_ACCESS | Importance of Accessibility | | |
| 10 | MTR_ADV1 | Metro Advantage 1 | 1 | Speed |
| 11 | MTR_ADV2 | Metro Advantage 2 | 2 | Cost |
| 12 | MTR_ADV3 | Metro Advantage 3 | 3 | On-time |
| 13 | MTR_DISAD1 | Metro Disadvantage 1 | 4 | Access/Egress |
| 14 | MTR_DISAD2 | Metro Disadvantage 2 | 5 | Comfort |
| 15 | MTR_DISAD3 | Metro Disadvantage 3 | 6 | Direct |
| 16 | ST_ADV1 | Shared Taxi Advantage 1 | 7 | Safety |
| 17 | ST_ADV2 | Shared Taxi Advantage 2 | 8 | Security |
| 18 | ST_ADV3 | Shared Taxi Advantage 3 | 9 | Crowded |
| 19 | ST_DISAD1 | Shared Taxi Disadvantage 1 | 10 | Other |
| 20 | ST_DISAD2 | Shared Taxi Disadvantage 2 | 99 | No Answer |
| 21 | ST_DISAD3 | Shared Taxi Disadvantage 3 | | |
| 22 | BUS_ADV1 | Bus Advantage 1 | | |
| 23 | BUS_ADV2 | Bus Advantage 2 | | |
| 24 | BUS_ADV3 | Bus Advantage 3 | | |
| 25 | BUS_DISAD1 | Bus Disadvantage 1 | | |
| 26 | BUS_DISAD2 | Bus Disadvantage 2 | | |
| 27 | BUS_DISAD3 | Bus Disadvantage 3 | | |
| 28 | TRAM_ADV1 | Tram Advantage 1 | | |
| 29 | TRAM_ADV2 | Tram Advantage 2 | | |
| 30 | TRAM_ADV3 | Tram Advantage 3 | | |
| 31 | TRAM_DISAD | Tram Disadvantage 1 | | |
| 32 | TRAM_DISA2 | Tram Disadvantage 2 | | |
| 33 | TRAM_DISA3 | Tram Disadvantage 3 | | |

**Table 3.2.8 Field Code Definition of RPS Database (Public Transport User: Form 2), Continued**

| Field Codes Used in Database: | | | RPS_PT_FORM2.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 34 | TAXI_ADV1 | Taxi Advantage 1 | 1 | Speed |
| 35 | TAXI_ADV2 | Taxi Advantage 2 | 2 | Cost |
| 36 | TAXI_ADV3 | Taxi Advantage 3 | 3 | On-time |
| 37 | TAXI_DISAD | Taxi Disadvantage 1 | 4 | Access/Egress |
| 38 | TAXI_DISA2 | Taxi Disadvantage 2 | 5 | Comfort |
| 39 | TAXI_DISA3 | Taxi Disadvantage 3 | 6 | Direct |
| 40 | RAIL_ADV1 | Railway Advantage 1 | 7 | Safety |
| 41 | RAIL_ADV2 | Railway Advantage 2 | 8 | Security |
| 42 | RAIL_ADV3 | Railway Advantage 3 | 9 | Crowded |
| 43 | RAIL_DISAD | Railway Disadvantage 1 | 10 | Other |
| 44 | RAIL_DISA2 | Railway Disadvantage 2 | 99 | No Answer |
| 45 | RAIL_DISA3 | Railway Disadvantage 3 | | |
| 46 | FERY_ADV1 | Nile Ferry Advantage 1 | | |
| 47 | FERY_ADV2 | Nile Ferry Advantage 2 | | |
| 48 | FERY_ADV3 | Nile Ferry Advantage 3 | | |
| 49 | FERY_DISAD | Nile Ferry Disadvantage 1 | | |
| 50 | FERY_DISA2 | Nile Ferry Disadvantage 2 | | |
| 51 | FERY_DISA3 | Nile Ferry Disadvantage 3 | | |
| 52 | IMP_ROUTS | Importance of Printed Route Maps | 1 | Not Important |
| 53 | IMP_SCHDL | Importance of Printed Schedules | 2 | Not So Much |
| 54 | IMP_COORD | Importance of Coordinated Schedules | 3 | Neutral |
| 55 | IMP_TCKT | Importance of Combined Ticket | 4 | Important |
| 56 | IMP_PASS | Importance of Seasonal Ticket | 5 | Very Important |
| 57 | IMP_BUSLAN | Importance of Separate Lanes (Bus Only) | | |

## 3.3 STATED PREFERENCE SURVEY (SPS)

### 3.3.1 Overview

The main objective of the Stated Preference Survey (SPS) is to clarify individual choice change when some conditions change, while the Revealed Preference Survey (RPS) analyzes actual choice activity of individuals. Therefore, the SPS is generally utilized to analyze individual choice activity, which would not be done by the RPS provided that some conditions change drastically.

For example, if a new transport mode is to be introduced, it is generally difficult to analyze how many passengers would use the new proposed mode when the RPS survey is the only information for the analysis. In this case, an opinion survey is conducted to obtain individuals tendency to use the new mode, by showing level of service and fare level of the new mode. Based on this kind of survey (SPS), modeling exercise can cope with the issue. SPS is also utilized to estimate people's choice changes when a drastic change happens to, for example, transport fare, petrol cost, travel speed and so on.

In the Greater Cairo Region, population concentration to the city center has been a big problem. The Government has been constructing "new communities" around the region to move the residents from center to the suburbs. In this context, transport modes between new communities and central Cairo has been one of big topics for years. The existing road network would not be able to satisfy the transport demand in future. A new rail-based public transport mode might be necessary by considering environmental aspect.

Based on the above discussion, the Study Team conducted the SPS for a sample of the residents of new communities around Cairo to obtain:

- Individual potential to use public transport modes in case the service is improved drastically between the new communities and the central Cairo;
- Private car user potential to use the public transport instead of his own car as a result of various public transport oriented measures; and,
- Individual opinion on living environment of the new communities.

The SPS was conducted during 27 and 31 October 2001 to a sample of the residents of eight new communities in the suburbs of Cairo: 6th of October, Sheikh Zayed, 10th of Ramadan, Badr, Shebeen El Qanater, Shorooq, Oboor, 15th of May and New Cairo. The distribution of 1,375 interviewed residents in different new communities is shown below.

| | | | |
|---|---|---|---|
| 15th of May | 272 | El Shorooq | 116 |
| 10th of Ramadan | 349 | El Oboor | 58 |
| 6th of October and Sheikh Zayed | 290 | Badr | 74 |
| New Cairo | 116 | Shebeen El Qanater | 100 |

## 3.3.2 SPS Database Structure

The SPS database is divided into 3 components based on 3 survey forms. The first survey form is designed to identify the person characteristics (sex, income, car availability, having a driving license), resident information (reasons of selecting place of residence and trip information (number of weekly trips to Cairo, trip destination and purpose). The second survey form is intended to identify the characteristics of both private car and public transport users and their willingness to pay more if the service is improved. It should be noted that private car and public transport users are coded in two separate database files (Form 2-1 and Form 2-2). The last survey form aims at investigating individual evaluation of the level of service of existing public transport modes.

The database structure of the first component of SPS is presented in Tables 3.3.1 and 3.3.2. Around 1,375 residents were interviewed during SPS to identify some aspects such as: gender, age, driving license status, car ownership, income class, occupation, reason of choosing this community to live in, number of weekly trips to Cairo, trip purpose and transport mode. The willingness to move to Cairo and its reasons were also declared.

The second survey form of SPS is presented in Tables 3.3.3 through 3.3.6 because it is divided into car user and public transport user. Individual motivation to use alternative transport mode was investigated. Travel time, travel cost, waiting time, walking time and number of transfers both current used mode and its alternatives were reported by each interviewee as shown in Table 3.3.3. The effect of improving the level of service of public transport modes was also inferred in addition to the individual willingness to pay more based on level of service improvement.

Public transport users survey records are stored in a file named “SPS-FORM3.DBF” and presented in Table 3.3.5 together with field code description in Table 3.3.6. The characteristics of various transport modes such as travel time, fare type, ticket cost, pass cost, number of transfer, access time, waiting time and egress time were examined. The importance of travel time, travel cost, number of transfers, comfort, security, safety and accessibility were also evaluated by each interviewed person.

The individual opinion survey (Form 3) is presented in Tables 3.3.7 and 3.3.8, in which the advantages and disadvantages of public modes (bus, metro, shared taxi, tram, taxi, suburban railway and Nile ferry) were evaluated in terms of speed, cost, on-time, access/egress, comfort, direct, safety, security and crowdness.

**Table 3.3.1 Description of SPS Database (Person/Trip Information: Form 1)**

| **Structure for Database:** | **SPS-FORM1.DBF** |
|---|---|
| Number of Data Records: | **1,375** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/SPS/ |
| Database Source: | Stated Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | DATE | Date | 8 | | Survey Date |
| 3 | TIME_MIN | Numeric | 2 | | Survey Time (Min) |
| 4 | TIME_HR | Numeric | 2 | | Survey Time (Hr) |
| 5 | KISM_KD | Numeric | 4 | Y | Qism Code |
| 6 | SHKH_KD | Numeric | 2 | Y | Shiakha Code |
| 7 | SEX | Numeric | 1 | Y | Sex |
| 8 | AGE | Numeric | 1 | Y | Age |
| 9 | LICENSE | Numeric | 1 | Y | Do You Have Driving License |
| 10 | CAR_OWN | Numeric | 2 | Y | Car Ownership of Household |
| 11 | CAR_AVAIL | Numeric | 1 | Y | Car Availability |
| 12 | OCCUP | Numeric | 2 | Y | Occupation |
| 13 | INCOME | Numeric | 1 | Y | Income Class |
| 14 | WHN_MV | Numeric | 2 | Y | When Did You Move to This City (Years) |
| 15 | WHT_RSN | Numeric | 1 | Y | Reason for Moving to This City |
| 16 | MV_CAIRO | Numeric | 1 | Y | Want to Move to Cairo |
| 17 | MV_WORK | Numeric | 1 | Y | Want to Move Reason: Work |
| 18 | MV_ED | Numeric | 1 | Y | Want to Move Reason: Education |
| 19 | MV_MED | Numeric | 1 | Y | Want to Move Reason: Medical Services |
| 20 | MV_SCR | Numeric | 1 | Y | Want to Move Reason: Security |
| 21 | MV_TRN | Numeric | 1 | Y | Want to Move Reason: Transportation |
| 22 | MV_ENTR | Numeric | 1 | Y | Want to Move Reason: Entertainment |
| 23 | MV_SHP | Numeric | 1 | Y | Want to Move Reason: Shopping |
| 24 | MV_OTHER | Numeric | 1 | Y | Want to Move Reason: Others |
| 25 | TRIP_WEEK | Numeric | 2 | | Number of Regular Trips per Week |
| 26 | END_KISM | Numeric | 4 | Y | Destination Qism Code |
| 27 | END_SHKH | Numeric | 2 | Y | Destination Shiakha Code |
| 28 | TRP_PURP | Numeric | 2 | Y | Trip Reason |
| 29 | TRNS_MODE | Numeric | 1 | Y | Transport Mode |

**Table 3.3.2 Field Code Definition of RPS Database**
**(Person/Trip Information: Form 1)**

| **Field Codes Used in Database:** | | | **SPS-FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 5 | KISM_KD | Qism Code | | See Equivalence Table ….. |
| 6 | SHKH_KD | Shiakha Code | | See Equivalence Table ….. |
| 7 | SEX | Sex | 1 | Male |
| | | | 2 | Female |
| 8 | AGE | Age | 2 | 10 - 19 years |
| | | | 3 | 20 - 29 years |
| | | | 4 | 30 - 39 years |
| | | | 5 | 40 - 49 years |
| | | | 6 | 50 - 60 years |
| | | | 7 | More than 60 years |
| | | | 9 | No Answer |
| 9 | LICENSE | Do You Have Driving License | 1 | Yes |
| | | | 2 | No |
| 11 | CAR_AVAIL | Car Availability | 1 | Always |
| | | | 2 | Often |
| | | | 3 | Occasionally |
| | | | 4 | Seldom |
| | | | 5 | Not available |
| 12 | OCCUP | Occupation | 1 | Administration |
| | | | 2 | Professional |
| | | | 3 | Tech/ Assist |
| | | | 4 | Clerk |
| | | | 5 | Sales/Service |
| | | | 6 | Farmer/fisher |
| | | | 7 | Craftsman |
| | | | 8 | Production |
| | | | 9 | Unskilled |
| | | | 10 | Student |
| | | | 11 | Housewife |
| | | | 12 | Retired |
| | | | 13 | Jobless |
| | | | 14 | Others |
| | | | 99 | No Answer |
| 13 | INCOME | Income Class | 1 | Less than 300 LE |
| | | | 2 | 301-500 LE |
| | | | 3 | 501-1000 LE |
| | | | 4 | 1001-2000 LE |
| | | | 5 | 2001-5000 LE |
| | | | 6 | More than 5000 LE |
| | | | 7 | No Income |
| | | | 9 | No Answer |
| 14 | WHN_MV | When Did You Move to This City (Years) | 1 | 0 - 5 Years Ago |
| | | | 2 | 6 - 10 Years Ago |
| | | | 3 | 11 - 15 Years Ago |
| | | | 4 | 16 - 20 Years Ago |
| | | | 5 | < 20 Years Ago |
| | | | 9 | No answer |

## Table 3.3.2 Field Code Definition of RPS Database (Person/Trip Information: Form 1), Continued

| Field Codes Used in Database: | | | SPS-FORM1.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 15 | WHT_RSN | Reason for Moving to This City | 1<br>2<br>3<br>4<br>5<br>9 | Living condition<br>Near to work place<br>Environment<br>Transportation<br>Others<br>No answer |
| 16 | MV_CAIRO | Want to Move to Cairo | 1<br>2<br>3<br>4<br>5 | No<br>Yes: To Central<br>Yes: To suburbs<br>Yes: Anywhere<br>Yes and No |
| 17 | MV_WORK | Want to Move Reason: Work | 1<br>2 | Yes<br>No |
| 18 | MV_ED | Want to Move Reason: Education | 1<br>2 | Yes<br>No |
| 19 | MV_MED | Want to Move Reason: Medical Services | 1<br>2 | Yes<br>No |
| 20 | MV_SCR | Want to Move Reason: Security | 1<br>2 | Yes<br>No |
| 21 | MV_TRN | Want to Move Reason: Transportation | 1<br>2 | Yes<br>No |
| 22 | MV_ENTR | Want to Move Reason: Entertainment | 1<br>2 | Yes<br>No |
| 23 | MV_SHP | Want to Move Reason: Shopping | 1<br>2 | Yes<br>No |
| 24 | MV_OTHER | Want to Move Reason: Others | 1<br>2 | Yes<br>No |
| 26 | END_KISM | Destination Qism Code | | See Equivalence Table ….. |
| 27 | END_SHKH | Destination Shiakha Code | | See Equivalence Table ….. |
| 28 | TRP_PURP | Trip Reason | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>99 | Work<br>Education<br>Home<br>Selling/delivering<br>Meeting/Business<br>Return work place<br>Shopping/eating<br>Sending/fetching<br>Recreation<br>Medical<br>Social<br>Other<br>No answer |
| 29 | TRNS_MODE | Transport Mode | 1<br>2<br>3<br>9 | Private Car<br>Public transport<br>Other<br>No trips to Cairo |

## Table 3.3.3 Description of SPS Database (Private Car User: Form 2-1)

| **Structure for Database:** | **SPS-FORM2.DBF** |
|---|---|
| Number of Data Records: | **94** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/SPS/ |
| Database Source: | Stated Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | TR_TIM_M | Numeric | 2 | | Total Travel Time: Minutes Portion |
| 3 | TR_TIM_H | Numeric | 1 | | Total Travel Time: Hours Portion |
| 4 | PRK_CST_R | Numeric | 2 | | Parking Charge: Piaster Portion |
| 5 | PRK_CST_P | Numeric | 2 | | Parking Charge: Pounds Portion |
| 6 | USE_ALTR | Numeric | 1 | Y | Do You Use An Alternative to Private Car If It Is Not Available |
| 7 | ALT_MOD1 | Numeric | 2 | Y | Alternative Mode 1 |
| 8 | TR_TIM_M1 | Numeric | 2 | | Travel Time of Alternative Mode 1 (Min) |
| 9 | TR_TIM_H1 | Numeric | 1 | | Travel Time of Alternative Mode 1 (Hr) |
| 10 | TCKT_CST1 | Numeric | 4 | | Ticket Cost of Alternative Mode 1 (Piaster) |
| 11 | PASS_CST1 | Numeric | 5 | | Pass Cost of Alternative Mode 1 (Piaster) |
| 12 | TRNSF_NO1 | Numeric | 1 | | Transfers No of Alternative Mode 1 |
| 13 | WAIT_TIM1 | Numeric | 2 | | Waiting Time of Alternative Mode 1 |
| 14 | WALK_ORG1 | Numeric | 2 | | Walk Time from Origin for Alternative 1 (Min) |
| 15 | WALK_DES1 | Numeric | 2 | | Walk Time to Destination for Alternative 1 (Min) |
| 16 | ALT_MOD2 | Numeric | 2 | Y | Alternative Mode 2 |
| 17 | TR_TIM_M2 | Numeric | 2 | | Travel Time of Alternative Mode 2 (Min) |
| 18 | TR_TIM_H2 | Numeric | 1 | | Travel Time of Alternative Mode 2 (Hr) |
| 19 | TCKT_CST2 | Numeric | 4 | | Ticket Cost of Alternative Mode 2 (Piaster) |
| 20 | PASS_CST2 | Numeric | 5 | | Pass Cost of Alternative Mode 2 (Piaster) |
| 21 | TRNSF_NO2 | Numeric | 1 | | Transfers No of Alternative Mode 2 |
| 22 | WAIT_TIM2 | Numeric | 2 | | Waiting Time of Alternative Mode 2 |
| 23 | WALK_ORG2 | Numeric | 2 | | Walk Time from Origin for Alternative 2 |
| 24 | WALK_DES2 | Numeric | 2 | | Walk Time to Destination for Alternative 2 |
| 25 | USE_PUBL | Numeric | 1 | Y | Use Public Transport If Service Improves |
| 26 | TM_SV_BS | Numeric | 1 | Y | Time Saving in Bus |
| 27 | TM_SV_AB | Numeric | 1 | Y | Time Saving in Air-Conditioned Bus |
| 28 | TM_SV_ST | Numeric | 1 | Y | Time Saving in Shared Taxi |
| 29 | TM_SV_MT | Numeric | 1 | Y | Time Saving in Metro |
| 30 | TM_SV_RW | Numeric | 1 | Y | Time Saving in ENR |
| 31 | PAY_IMP_BS | Numeric | 3 | | Willingness to Pay for Improved Bus |
| 32 | PAY_IMP_AB | Numeric | 3 | | Willingness to Pay for Improved Air-Conditioned Bus |
| 33 | PAY_IMP_ST | Numeric | 3 | | Willingness to Pay for Improved Shared Taxi |
| 34 | PAY_IMP_MT | Numeric | 3 | | Willingness to Pay for Improved Metro |
| 35 | PAY_IMP_RW | Numeric | 3 | | Willingness to Pay for Improved ENR |
| 36 | IMP_TRP_TM | Numeric | 1 | Y | Importance of Travel Time |
| 37 | IMP_TRP_CS | Numeric | 1 | Y | Importance of Travel Cost |
| 38 | IMP_TRNSFR | Numeric | 1 | Y | Importance of Number of Transfers |
| 39 | IMP_CMFRT | Numeric | 1 | Y | Importance of Comfort |
| 40 | IMP_SCRTY | Numeric | 1 | Y | Importance of Security |
| 41 | IMP_SAFETY | Numeric | 1 | Y | Importance of Safety |
| 42 | IMP_ACCESS | Numeric | 1 | Y | Importance of Accessibility |
| 43 | FUEL_DBL | Numeric | 1 | Y | Use Public Transport If Fuel Cost Is Doubled |

**Table 3.3.4 Field Code Definition of RPS Database**
**(Private Car Transport User: Form 2-1)**

| **Field Codes Used in Database:** | | | **SPS-FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 6 | USE_ALTR | Do You Use An Alternative to Private Car If It Is Not Available | 1 | No |
| | | | 2 | Yes |
| 7 | ALT_MOD1 | Alternative Mode 1 | 1 | On-Foot |
| | | | 2 | Bicycle |
| | | | 3 | Motorcycle |
| | | | 4 | Private Car Driver |
| | | | 5 | Private Car Passenger |
| | | | 6 | Pickup for Passengers |
| | | | 7 | Taxi |
| | | | 8 | Shared Taxi |
| | | | 9 | Public Minibus |
| | | | 10 | Public Bus |
| | | | 11 | Public A/C Bus |
| | | | 12 | Cooperative Minibus |
| | | | 13 | Company (Work) Car |
| | | | 14 | Factory/Company Bus |
| | | | 15 | School Bus |
| | | | 16 | Truck for Passengers |
| | | | 17 | Nile Bus |
| | | | 18 | Tram |
| | | | 19 | Heliopolis Metro |
| | | | 20 | Underground Metro |
| | | | 21 | ENR Train |
| | | | 22 | Animal Drawn |
| | | | 23 | Others |
| | | | 99 | No Answer |
| 16 | ALT_MOD2 | Alternative Mode 2 | | Same As ALT_MOD1 |
| 25 | USE_PUBL | Use Public Transport If Service Improves | 1 | Never |
| | | | 2 | Highly unlikely |
| | | | 3 | Unlikely |
| | | | 4 | Likely |
| | | | 9 | No answer |
| 26 | TM_SV_BS | Time Saving in Bus | 1 | 10% |
| 27 | TM_SV_AB | Time Saving in Air-Conditioned Bus | 2 | 25% |
| 28 | TM_SV_ST | Time Saving in Shared Taxi | 3 | 50% |
| 29 | TM_SV_MT | Time Saving in Metro | 9 | No answer |
| 30 | TM_SV_RW | Time Saving in ENR | | |
| 36 | IMP_TRP_TM | Importance of Travel Time | 1 | Not Important |
| 37 | IMP_TRP_CS | Importance of Travel Cost | 2 | Not So Much |
| 38 | IMP_TRNSFR | Importance of Number of Transfers | 3 | Neutral |
| 39 | IMP_CMFRT | Importance of Comfort | 4 | Important |
| 40 | IMP_SCRTY | Importance of Security | 5 | Very Important |
| 41 | IMP_SAFETY | Importance of Safety | | |
| 42 | IMP_ACCESS | Importance of Accessibility | | |
| 43 | FUEL_DBL | Use Public Transport If Fuel Cost Is Doubled | 1 | Never |
| | | | 2 | Highly unlikely |
| | | | 3 | Unlikely |
| | | | 4 | Likely |
| | | | 9 | No answer |

**Table 3.3.5 Description of SPS Database (Public Transport User: Form 2-2)**

| **Structure for Database:** | **SPS-FORM3.DBF** |
|---|---|
| Number of Data Records: | **792** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/SPS/ |
| Database Source: | Stated Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | MODE1 | Numeric | 2 | Y | Mode 1 Used |
| 3 | TR_TIM_M | Numeric | 2 | | Total Travel Time: Minutes Portion |
| 4 | TR_TIM_H | Numeric | 1 | | Total Travel Time: Hours Portion |
| 5 | TCKT_CST | Numeric | 4 | | Ticket Cost (Piaster) |
| 6 | PASS_CST | Numeric | 5 | | Pass Cost (Piaster) |
| 7 | TRNSF_NO1 | Numeric | 1 | | No of Transfers |
| 8 | WAIT_TIM1 | Numeric | 2 | | Waiting Time of Mode 1 |
| 9 | WALK_ORG1 | Numeric | 2 | | Walk Time from Origin |
| 10 | WALK_DES1 | Numeric | 2 | | Walk Time to Destination |
| 11 | MODE2 | Numeric | 2 | Y | Mode 2 Used |
| 12 | WAIT2 | Numeric | 2 | | Waiting Time of Mode 2 |
| 13 | MOD3 | Numeric | 2 | Y | Mode 3 Used |
| 14 | WAIT3 | Numeric | 2 | | Waiting Time of Mode 3 |
| 15 | MOD4 | Numeric | 2 | Y | Mode 4 Used |
| 16 | WAIT4 | Numeric | 2 | | Waiting Time of Mode 4 |
| 17 | USE_PASS1 | Numeric | 1 | Y | Pass Type for Mode 1 |
| 18 | USE_PASS2 | Numeric | 1 | Y | Pass Type for Mode 2 |
| 19 | USE_PASS3 | Numeric | 1 | Y | Pass Type for Mode 3 |
| 20 | USE_PASS4 | Numeric | 1 | Y | Pass Type for Mode 4 |
| 21 | IMP_TRP_TM | Numeric | 1 | Y | Importance of Travel Time |
| 22 | IMP_TRP_CS | Numeric | 1 | Y | Importance of Travel Cost |
| 23 | IMP_TRNSFR | Numeric | 1 | Y | Importance of Number of Transfers |
| 24 | IMP_CMFRT | Numeric | 1 | Y | Importance of Comfort |
| 25 | IMP_SCRTY | Numeric | 1 | Y | Importance of Security |
| 26 | IMP_SAFETY | Numeric | 1 | Y | Importance of Safety |
| 27 | IMP_ACCESS | Numeric | 1 | Y | Importance of Accessibility |

**Table 3.3.6 Field Code Definition of RPS Database**
**(Public Transport User: Form 2-2)**

| **Field Codes Used in Database:** | | | **SPS-FORM3.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | MODE1 | Mode 1 Used | 1 | On-Foot |
| 11 | MODE2 | Mode 2 Used | 2 | Bicycle |
| 13 | MOD3 | Mode 3 Used | 3 | Motorcycle |
| 15 | MOD4 | Mode 4 Used | 4 | Private Car Driver |
| | | | 5 | Private Car Passenger |
| | | | 6 | Pickup for Passengers |
| | | | 7 | Taxi |
| | | | 8 | Shared Taxi |
| | | | 9 | Public Minibus |
| | | | 10 | Public Bus |
| | | | 11 | Public A/C Bus |
| | | | 12 | Cooperative Minibus |
| | | | 13 | Company (Work) Car |
| | | | 14 | Factory/Company Bus |
| | | | 15 | School Bus |
| | | | 16 | Truck for Passengers |
| | | | 17 | Nile Bus |
| | | | 18 | Tram |
| | | | 19 | Heliopolis Metro |
| | | | 20 | Underground Metro |
| | | | 21 | ENR Train |
| | | | 22 | Animal Drawn |
| | | | 23 | Others |
| | | | 99 | No Answer |
| 17 | USE_PASS1 | Pass Type for Mode 1 | 1 | No Pass |
| 18 | USE_PASS2 | Pass Type for Mode 2 | 2 | Bus Pass |
| 19 | USE_PASS3 | Pass Type for Mode 3 | 3 | Metro Pass |
| 20 | USE_PASS4 | Pass Type for Mode 4 | 4 | Train Pass |
| | | | 5 | Other Pass |
| | | | 9 | No answer |
| 21 | IMP_TRP_TM | Importance of Travel Time | 1 | Not Important |
| 22 | IMP_TRP_CS | Importance of Travel Cost | 2 | Not So Much |
| 23 | IMP_TRNSFR | Importance of Number of Transfers | 3 | Neutral |
| 24 | IMP_CMFRT | Importance of Comfort | 4 | Important |
| 25 | IMP_SCRTY | Importance of Security | 5 | Very Important |
| 26 | IMP_SAFETY | Importance of Safety | | |
| 27 | IMP_ACCESS | Importance of Accessibility | | |

**Table 3.3.7 Description of SPS Database (Individual Opinion: Form 3)**

| **Structure for Database:** | **SPS_FORM3.DBF** |
|---|---|
| Number of Data Records: | **1,375** |
| Database File Path: | C:/CREATS DATABASE/HOUSEHOLD INTERVIEW/SPS/ |
| Database Source: | Stated Preference Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | SMPL_NO | Numeric | 6 | | Sample ID |
| 2 | MTR_ADV1 | Numeric | 2 | Y | Metro Advantage 1 |
| 3 | MTR_ADV2 | Numeric | 2 | Y | Metro Advantage 2 |
| 4 | MTR_ADV3 | Numeric | 2 | Y | Metro Advantage 3 |
| 5 | MTR_DISAD1 | Numeric | 2 | Y | Metro Disadvantage 1 |
| 6 | MTR_DISAD2 | Numeric | 2 | Y | Metro Disadvantage 2 |
| 7 | MTR_DISAD3 | Numeric | 2 | Y | Metro Disadvantage 3 |
| 8 | ST_ADV1 | Numeric | 2 | Y | Shared Taxi Advantage 1 |
| 9 | ST_ADV2 | Numeric | 2 | Y | Shared Taxi Advantage 2 |
| 10 | ST_ADV3 | Numeric | 2 | Y | Shared Taxi Advantage 3 |
| 11 | ST_DISAD1 | Numeric | 2 | Y | Shared Taxi Disadvantage 1 |
| 12 | ST_DISAD2 | Numeric | 2 | Y | Shared Taxi Disadvantage 2 |
| 13 | ST_DISAD3 | Numeric | 2 | Y | Shared Taxi Disadvantage 3 |
| 14 | BUS_ADV1 | Numeric | 2 | Y | Bus Advantage 1 |
| 15 | BUS_ADV2 | Numeric | 2 | Y | Bus Advantage 2 |
| 16 | BUS_ADV3 | Numeric | 2 | Y | Bus Advantage 3 |
| 17 | BUS_DISAD1 | Numeric | 2 | Y | Bus Disadvantage 1 |
| 18 | BUS_DISAD2 | Numeric | 2 | Y | Bus Disadvantage 2 |
| 19 | BUS_DISAD3 | Numeric | 2 | Y | Bus Disadvantage 3 |
| 20 | TAXI_ADV1 | Numeric | 2 | Y | Taxi Advantage 1 |
| 21 | TAXI_ADV2 | Numeric | 2 | Y | Taxi Advantage 2 |
| 22 | TAXI_ADV3 | Numeric | 2 | Y | Taxi Advantage 3 |
| 23 | TAXI_DISAD | Numeric | 2 | Y | Taxi Disadvantage 1 |
| 24 | TAXI_DISA2 | Numeric | 2 | Y | Taxi Disadvantage 2 |
| 25 | TAXI_DISA3 | Numeric | 2 | Y | Taxi Disadvantage 3 |
| 26 | RAIL_ADV1 | Numeric | 2 | Y | Railway Advantage 1 |
| 27 | RAIL_ADV2 | Numeric | 2 | Y | Railway Advantage 2 |
| 28 | RAIL_ADV3 | Numeric | 2 | Y | Railway Advantage 3 |
| 29 | RAIL_DISAD | Numeric | 2 | Y | Railway Disadvantage 1 |
| 30 | RAIL_DISA2 | Numeric | 2 | Y | Railway Disadvantage 2 |
| 31 | RAIL_DISA3 | Numeric | 2 | Y | Railway Disadvantage 3 |
| 32 | IMP_ROUTS | Numeric | 1 | Y | Importance of Printed Route Maps |
| 33 | IMP_SCHDL | Numeric | 1 | Y | Importance of Printed Schedules |
| 34 | IMP_COORD | Numeric | 1 | Y | Importance of Coordinated Schedules |
| 35 | IMP_TCKT | Numeric | 1 | Y | Importance of Combined Ticket |
| 36 | IMP_PASS | Numeric | 1 | Y | Importance of Seasonal Ticket |
| 37 | IMP_BUSLAN | Numeric | 1 | Y | Importance of Separate Lanes (Bus Only) |

## Table 3.3.8 Field Code Definition of RPS Database (Individual Opinion: Form 3)

| Field Codes Used in Database: | | | SPS_FORM3.DBF | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | MTR_ADV1 | Metro Advantage 1 | 1 | Speed |
| 3 | MTR_ADV2 | Metro Advantage 2 | 2 | Cost |
| 4 | MTR_ADV3 | Metro Advantage 3 | 3 | On-time |
| 5 | MTR_DISAD1 | Metro Disadvantage 1 | 4 | Access/Egress |
| 6 | MTR_DISAD2 | Metro Disadvantage 2 | 5 | Comfort |
| 7 | MTR_DISAD3 | Metro Disadvantage 3 | 6 | Direct |
| 8 | ST_ADV1 | Shared Taxi Advantage 1 | 7 | Safety |
| 9 | ST_ADV2 | Shared Taxi Advantage 2 | 8 | Security |
| 10 | ST_ADV3 | Shared Taxi Advantage 3 | 9 | Crowded |
| 11 | ST_DISAD1 | Shared Taxi Disadvantage 1 | 10 | Other |
| 12 | ST_DISAD2 | Shared Taxi Disadvantage 2 | 99 | No Answer |
| 13 | ST_DISAD3 | Shared Taxi Disadvantage 3 | | |
| 14 | BUS_ADV1 | Bus Advantage 1 | | |
| 15 | BUS_ADV2 | Bus Advantage 2 | | |
| 16 | BUS_ADV3 | Bus Advantage 3 | | |
| 17 | BUS_DISAD1 | Bus Disadvantage 1 | | |
| 18 | BUS_DISAD2 | Bus Disadvantage 2 | | |
| 19 | BUS_DISAD3 | Bus Disadvantage 3 | | |
| 20 | TAXI_ADV1 | Taxi Advantage 1 | | |
| 21 | TAXI_ADV2 | Taxi Advantage 2 | | |
| 22 | TAXI_ADV3 | Taxi Advantage 3 | | |
| 23 | TAXI_DISAD | Taxi Disadvantage 1 | | |
| 24 | TAXI_DISA2 | Taxi Disadvantage 2 | | |
| 25 | TAXI_DISA3 | Taxi Disadvantage 3 | | |
| 26 | RAIL_ADV1 | Railway Advantage 1 | | |
| 27 | RAIL_ADV2 | Railway Advantage 2 | | |
| 28 | RAIL_ADV3 | Railway Advantage 3 | | |
| 29 | RAIL_DISAD | Railway Disadvantage 1 | | |
| 30 | RAIL_DISA2 | Railway Disadvantage 2 | | |
| 31 | RAIL_DISA3 | Railway Disadvantage 3 | | |
| 32 | IMP_ROUTS | Importance of Printed Route Maps | 1 | Not important |
| 33 | IMP_SCHDL | Importance of Printed Schedules | 2 | Important |
| 34 | IMP_COORD | Importance of Coordinated Schedules | 3 | Very Important |
| 35 | IMP_TCKT | Importance of Combined Ticket | 9 | No Answer |
| 36 | IMP_PASS | Importance of Seasonal Ticket | | |
| 37 | IMP_BUSLAN | Importance of Separate Lanes (Bus Only) | | |

# CHAPTER 4: CORODON LINE DATABASE

## 4.1 OVERVIEW

The objective of Cordon Line Survey (CLS) is to collect data on both person trips and cargo entering and leaving the Study Area. The selected count stations cover all intersections of the external boundary of the Study Area with road network. The Cordon Line Survey comprises the following four major survey types:

- Classified traffic count survey and roadside interview at cordon stations, around 24,800 interviews in 22 stations.
- Passenger interview and counting survey at five intercity bus terminals, around 5,210 interviews.
- Passenger interview and counting survey on ENR trains and/or at stations, around 3,020 interviews on seven suburban ENR railway lines.
- Passenger interview and counting survey at Cairo International Airport, around 2,140 interviews at two terminals.

The CLS was carried out on normal weekdays, e.g. Monday through Wednesday. Public holidays were excluded from the survey such as the national festival on the 6$^{th}$ of October.

Twelve vehicle types were counted for 24 hours from 6:00 AM to 6:00 AM of the following day for all sites. On the other hand, the roadside interview survey (RSI) period was only 16 hours from 6:00 AM to 10:00 PM to ensure safety during CLS implementation.

## 4.2 CORDON LINE DATABASE STRUCTURE

Cordon line database includes two major components; traffic counts and passenger interview at different locations for several transport modes. Tables 4.2.1 through 4.2.3 describe the database file structure of traffic counts carried out during roadside interview completion. Information of site code, direction, survey data and 12 vehicle type are shown in Table 4.2.1 followed by a description of some fields in Table 4.2.2. A third table is provided to define the survey locations as shown in Table 4.2.3.

The results of Roadside Interview (RSI) are stored in two files; "RSI_FORM1.DBF" and "RSI_FORM2.DBF", which consist of 24,812 and 28,655 records as shown in Tables 4.2.4 and 4.2.5, respectively. Number of passengers including driver, trip origin, trip destination, trip purpose were identified for each interviewed passenger as illustrated in Table 4.2.6. In case of interviewing a truck some addition information was obtained such as commodity type, truck loading type and loading condition (see Table 4.2.7 for field code description).

Around 5,210 bus passengers were interviewed at 5 bus terminals to define their travel pattern such as trip origin, trip destination, departure station, arrival station, trip purpose, access mode, egress mode. The bus passengers database is explained in Tables 4.2.8 through 4.2.11. A quite similar database is built for railway passengers (3,020 interviews) as shown in Tables 4.2.12 through 4.2.15.

A sample of around 2,140 passengers leaving the Study Area to other countries were interviewed at International Airport. Similar information to bus and railway passengers was collected except for meaningless data such as egress mode because it will happen in another country. The database description of Airport passengers is illustrated in Tables 4.2.16 through 4.2.19

**Table 4.2.1 Description of Cordon Line Database (Traffic Counts)**

| **Structure for Database:** | | | **CORDON_COUNTS.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **4,224** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/COUNT/ | | |
| Database Source: | | | Traffic Counts Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | SITE_NO | Numeric | 4 | | Site No |
| 2 | SITE_CODE | Character | 4 | Y | Site Code and Description |
| 3 | DIRECTION | Numeric | 1 | Y | Direction of Travel |
| 4 | DAY | Numeric | 2 | | Day of Traffic Count Survey |
| 5 | Month | Numeric | 2 | | Month of Traffic Count Survey |
| 6 | HOUR | Numeric | 2 | | End of 15-Minute Period (Hour) |
| 7 | MIN | Numeric | 2 | | End of 15-Minute Period (Minute) |
| 8 | DURATION | Numeric | 2 | Y | Duration of Traffic Count Survey |
| 9 | CAR | Numeric | 6 | | Passenger Car |
| 10 | TAXI | Numeric | 6 | | Taxi (Cairo taxi and intercity taxi). |
| 11 | BUS_PUB | Numeric | 6 | | Public Bus (CTA, GCBC, Governorate and Intercity Bus) |
| 12 | BUS_MINI | Numeric | 6 | | Public Minibus. |
| 13 | BUS_PVT | Numeric | 6 | | Private Bus (School Bus, Company and Tourist Bus) |
| 14 | TAXI_SHARE | Numeric | 6 | | Shared Taxi |
| 15 | PICKUP | Numeric | 6 | | Light Commodity Vehicle (Pickup and Vans) |
| 16 | TRUCK_2 | Numeric | 6 | | 2 Axles Truck |
| 17 | TRUCK_3 | Numeric | 6 | | 3 Axles Truck |
| 18 | TRUCK_HVY | Numeric | 6 | | Heavy Truck (More Than Three Axles, Trailer and Semi-Trailer) |
| 19 | MOT_CYC | Numeric | 6 | | 2-wheeler (Motorcycle) |
| 20 | OTHER | Numeric | 6 | | Others (Military, Police, Ambulance and etc.) |
| 21 | TOT_VEH | Numeric | 8 | | Total Counted Vehicles During 15-Minute Period |

**Table 4.2.2 Field Code Definition of Cordon Line Database (Traffic Counts)**

| **Field Codes Used in Database:** | | | **CORDON_COUNTS.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | SITE_CODE | Site Code and Description | | See Site Description File: CORDON_SITES.DBF |
| 3 | DIRECTION | Direction of Travel | | See Site Description File: CORDON_SITES.DBF |
| 8 | DURATION | Duration of Traffic Count Survey | 16 | Traffic Count Survey for 16-Hour Period |
| | | | 24 | Traffic Count Survey for 24-Hour Period |

**Table 4.2.3 Description of Cordon Line Database (Count Sites)**

| **Structure for Database:** | | | **CORDON_SITES.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **44** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/COUNT/ | | |
| Database Source: | | | Traffic Counts Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | COUNT_TYPE | Character | 20 | | Type of Traffic Count |
| 2 | SITE_NO | Numeric | 3 | | Site No |
| 3 | SITE_CODE | Character | 5 | | Site Code and Description |
| 4 | DIRECTION | Numeric | 1 | | Direction of Travel Code |
| 5 | DIR_TO | Character | 24 | | Direction of Travel Description |
| 6 | DURATION | Numeric | 2 | | Duration of Traffic Count Survey |
| 7 | DAY_WEEK | Character | 3 | | Day of the Week |
| 8 | SRVY_DAY | Numeric | 2 | | Survey Day |
| 9 | SRVY_MONTH | Numeric | 2 | | Survey Month |
| 10 | SRVY_YEAR | Numeric | 4 | | Survey Year |
| 11 | SITE_NAME | Character | 65 | | Name of Traffic Count Site |

**Table 4.2.4 Description of Cordon Line Database (Road Side Interview: Form 1)**

| **Structure for Database:** | | | **RSI_FORM1.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **24,812** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/RSI/ | | |
| Database Source: | | | Cordon Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | ID | Numeric | 16 | | Unique ID Number for Each Record |
| 2 | DIRECTION | Numeric | 2 | Y | Code of Interview Direction |
| 3 | LOCATION | Numeric | 3 | Y | Survey Location Code |
| 4 | DAY | Numeric | 3 | | Survey Day |
| 5 | MONTH | Numeric | 3 | | Survey Month |
| 6 | YEAR | Numeric | 5 | | Survey Year |
| 7 | HOUR | Numeric | 3 | | Survey Hour |
| 8 | MINUTE | Numeric | 3 | | Survey Minute |
| 9 | SHEET_NO | Numeric | 5 | | Serial Number of Survey Sheets |

**Table 4.2.5 Field Code Definition of Cordon Line Database**
**(Road Side Interview: Form 1)**

| **Field Codes Used in Database:** | | | **RSI_FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | DIRECTION | Code of Interview Direction | 1 | Outside the Study Area (Outgoing) |
| 3 | LOCATION | Survey Location Code | 1 | Upper Egypt Agr. Road, Shobak El Gharby |
| | | | 2 | Giza - Asyoot Desert Road, West Of Nile, South Of Dahshoor |
| | | | 3 | Cairo - Fayoom Road, South Of Railway Crossing |
| | | | 4 | Cairo - Wahaat Road |
| | | | 5 | Cairo - Alexandria Desert Road, After North Entrance Of October City |
| | | | 6 | Qanater El Khayreya - Khatatba Road, West Of Nikla |
| | | | 7 | Qanater El Khayreya - Shebeen El Koom Road, South Of Shatanoof |
| | | | 8 | Cairo - Alexandria Agr. Road, South Of Qaha |
| | | | 9 | Shebeen El Qanater - Tookh Road, North Of Sh. Al-Qanater |
| | | | 10 | Shebeen El Qanater - Belbies Road, East Of Sh. Al-Qanater |
| | | | 11 | Cairo Ismailya Agr. Rd., East Of Abu-Zabaal |
| | | | 12 | Hykesteb - Belbeis Rd., After Inshas And Oboor Entrance |
| | | | 13 | 10 Of Ramadan - Belbies Rd., North Of 10 Ramadan City |
| | | | 14 | Cairo - Ismailya Desert Rd., After Entrance Of 10 Ramadan City |
| | | | 15 | Shatanoof - Ashmoon Road |
| | | | 16 | Cairo Suez Desert Rd., After Badr City |
| | | | 18 | Qatameya - Ain El Sokhna Rd., West Of El Amal City |
| | | | 19 | Giza - El Saf Road, East Of Nile, South Of Helwan |
| | | | 20 | Cairo - Ismailya Desert Rd., After Entrance Of El Shorooq City |
| | | | 21 | Entrance Of 6 October City From 26 July Corridor |
| | | | 22 | Entrance Of 6 October City From Fayoom Road |
| | | | 23 | Qanater El Khayreya - Banha, A Secondary Road From Qanater - Qalyoob Rd. |

**Table 4.2.6 Description of Cordon Line Database (Road Side Interview: Form 2)**

| **Structure for Database:** | **RSI_FORM2.DBF** |
|---|---|
| Number of Data Records: | **28,655** |
| Database File Path: | C:/CREATS DATABASE/CORDON LINE/RSI/ |
| Database Source: | Cordon Interview Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | ID | Numeric | 16 | | Unique ID Number of RSI Form1 |
| 2 | SHEET_NO | Numeric | 5 | | Serial Number of Survey Sheets |
| 3 | SUB_SAMPLE | Numeric | 3 | | Serial No of Survey Sheets |
| 4 | VEH_TYPE | Numeric | 3 | Y | Serial No of Each Interview Record |
| 5 | NO_PASS | Numeric | 3 | | No of Passenger Including Driver |
| 6 | ORG_QISM | Numeric | 5 | Y | Origin Qism Code |
| 7 | ORG_SHKH | Numeric | 3 | Y | Origin Shiakha Code |
| 8 | DES_QISM | Numeric | 5 | Y | Destination Qism Code |
| 9 | DES_SHKH | Numeric | 3 | Y | Destination Shiakha Code |
| 10 | ADRS_QISM | Numeric | 5 | Y | Qism Code of Address of Interviewed Passenger |
| 11 | ADRS_GVRN | Numeric | 3 | Y | Governorate Code in Which the Address of Interviewed Passenger Exists |
| 12 | TRIP_PRPS | Numeric | 3 | Y | Trip Reason |
| 13 | COMM_TYPE | Numeric | 3 | Y | Commodity Type Loaded in Truck |
| 14 | LOAD_TYPE | Numeric | 3 | Y | Truck Loading Type |
| 15 | LOADING | Numeric | 2 | Y | Loading Condition |

**Table 4.2.7 Field Code Definition of Cordon Line Database (Road Side Interview: Form 2)**

| **Field Codes Used in Database:** | | | **RSI_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 4 | VEH_TYPE | Serial No of Each Interview Record | 1 | Passenger cars |
| | | | 2 | Taxi |
| | | | 3 | Public Bus |
| | | | 4 | Shared Taxi |
| | | | 5 | Public Minibus |
| | | | 6 | Public Bus |
| | | | 7 | Light Commodity Vehicles (Pickup) |
| | | | 8 | Two Axles Trucks |
| | | | 9 | Three Axles Heavy Trucks |
| | | | 10 | Heavy Trucks (Over Three Axles) |
| | | | 11 | Two Wheelers |
| | | | 12 | Others |
| 6 | ORG_QISM | Origin Qism Code | | See Equivalence Table ….. |
| 7 | ORG_SHKH | Origin Shiakha Code | | See Equivalence Table ….. |

**Table 4.2.7 Field Code Definition of Cordon Line Database (Road Side Interview: Form 2), Continued**

| **Field Codes Used in Database:** | | | **RSI_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 8 | DES_QISM | Destination Qism Code | | See Equivalence Table ….. |
| 9 | DES_SHKH | Destination Shiakha Code | | See Equivalence Table ….. |
| 10 | ADRS_QISM | Qism Code of Address of Interviewed Passenger | | See Equivalence Table ….. |
| 11 | ADRS_GVRN | Governorate Code in Which the Address of Interviewed Passenger Exists | | See Equivalence Table ….. |
| 12 | TRIP_PRPS | Trip Reason | 1 | To Work |
| | | | 2 | To School / Institution |
| | | | 3 | To Home |
| | | | 4 | Selling or Delivering |
| | | | 5 | Meeting or Other Business Purpose |
| | | | 6 | Return to Working Place |
| | | | 7 | Shopping or Eating |
| | | | 8 | Sending or Fetching |
| | | | 9 | Recreation |
| | | | 10 | Medical Treatment |
| | | | 11 | Social Visit or Other Private Purpose |
| | | | 12 | Other |
| | | | 99 | No Answer |
| 13 | COMM_TYPE | Commodity Type Loaded in Truck | 1 | Agricultural and Live Stock |
| | | | 2 | Food Stuff and Animal Food |
| | | | 3 | Solid Fuels |
| | | | 4 | Petrol and Petrol Distilled Products |
| | | | 5 | Metal Residues and Mining Products |
| | | | 6 | Metallurgical Products |
| | | | 7 | Raw Materials and Derivations |
| | | | 8 | Fertilizers |
| | | | 9 | Chemical Products |
| | | | 10 | Machines and Vehicles |
| | | | 11 | Other Cargo |
| 14 | LOAD_TYPE | Truck Loading Type | 1 | Flat Rack Truck |
| | | | 2 | Covered Truck |
| | | | 3 | Tank Truck |
| | | | 4 | 20-Feet Contatiner |
| | | | 5 | 40-Feet Contatiner |
| | | | 6 | Flat Rack Trailer |
| | | | 7 | Covered Trailer |
| | | | 8 | Reefer Trailer |
| | | | 9 | Tank Trailer |
| | | | 10 | Others |
| 15 | LOADING | Loading Condition | 1 | Empty |
| | | | 2 | Less Than 25% Loaded |
| | | | 3 | 25% Loaded |
| | | | 4 | 50% Loaded |
| | | | 5 | 75% Loaded |
| | | | 6 | Full Loaded |
| | | | 7 | Over Loaded |

**Table 4.2.8 Description of Cordon Line Database (Bus Terminal Interview: Form1)**

| **Structure for Database:** | **BUS_FORM1.DBF** |
|---|---|
| Number of Data Records: | **1,543** |
| Database File Path: | C:/CREATS DATABASE/CORDON LINE/RSI/ |
| Database Source: | Cordon Interview Survey of CREATS |

| Field | Field Name | Type | Width | Coded | Field Description |
|---|---|---|---|---|---|
| 1 | ID | Numeric | 16 | | Unique ID Number for Each Record |
| 2 | DIRCTION | Numeric | 2 | Y | Code of Outgoing Direction |
| 3 | LOCATION | Numeric | 2 | Y | Bus Terminal Code |
| 4 | DAY | Numeric | 3 | | Survey Day |
| 5 | MONTH | Numeric | 3 | | Survey Month |
| 6 | YEAR | Numeric | 5 | | Survey Year |
| 7 | HOUR | Numeric | 3 | | Survey Hour |
| 8 | MINUTE | Numeric | 3 | | Survey Minute |
| 9 | SHEET_NO | Numeric | 4 | | Serial Number of Survey Sheets |
| 10 | BUS_CMPNY | Numeric | 3 | Y | Bus Company Code |
| 11 | LICN_GVRN | Numeric | 3 | Y | Governorate Code in Which the Bus Is Registered |
| 12 | PLATE_NO | Numeric | 7 | | Plate No of Interviewed Bus |
| 13 | ORG_QISM | Numeric | 5 | Y | Qism Code from Which the Bus Route Starts |
| 14 | ORG_SHKH | Numeric | 3 | Y | Shiakha Code from Which the Bus Route Starts |
| 15 | DES_QISM | Numeric | 5 | Y | Qism Code at Which the Bus Route Ends |
| 16 | DES_SHKH | Numeric | 3 | Y | Shiakha Code at Which the Bus Route Ends |

**Table 4.2.9 Field Code Definition of Cordon Line Database (Bus Terminal Interview: Form 1)**

| **Field Codes Used in Database:** | | | **BUS_FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | DIRCTION | Code of Outgoing Direction | 1 | Outside the Study Area (Outgoing) |
| 3 | LOCATION | Bus Terminal Code | 1 | Abood Terminal (Cairo) |
| | | | 2 | Moneeb Terminal (Giza) |
| | | | 3 | New Marg Terminal (Cairo) |
| | | | 4 | Almaza Terminal (Cairo) |
| | | | 5 | Torgoman Terminal (Cairo) |
| 10 | BUS_CMPNY | Bus Company Code | 1 | Arabic Union (Super Jet) Company |
| | | | 2 | West Delta Company |
| | | | 3 | East Delta Company |
| | | | 4 | Middle Delta Company |
| | | | 5 | Upper Egypt Company |
| 11 | LICN_GVRN | Governorate Code in Which the Bus Is Registered | | See Equivalence Table ….. |
| 13 | ORG_QISM | Qism Code from Which the Bus Route Starts | | See Equivalence Table ….. |
| 14 | ORG_SHKH | Shiakha Code from Which the Bus Route Starts | | See Equivalence Table ….. |
| 15 | DES_QISM | Qism Code at Which the Bus Route Ends | | See Equivalence Table ….. |
| 16 | DES_SHKH | Shiakha Code at Which the Bus Route Ends | | See Equivalence Table ….. |

**Table 4.2.10 Description of Cordon Line Database (Bus Terminal Interview: Form 2)**

| **Structure for Database:** | | | **BUS_FORM2.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **5,211** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/RSI/ | | |
| Database Source: | | | Cordon Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | ID | Numeric | 16 | | Unique ID Number of Form 1 |
| 2 | SUB_SAMPLE | Numeric | 2 | | Serial No of Survey Sheets |
| 3 | ORG_QISM | Numeric | 5 | Y | Qism Code from Which the Trip Starts |
| 4 | ORG_SHKH | Numeric | 3 | Y | Shiakha Code from Which the Trip Starts |
| 5 | DES_QISM | Numeric | 5 | Y | Qism Code at Which the Trip Ends |
| 6 | DES_SHKH | Numeric | 3 | Y | Shiakha Code at Which the Trip Ends |
| 7 | ADRS_QISM | Numeric | 5 | Y | Qism Code in Which the Address of Interviewed Passenger Exists (Inside the Study Area) |
| 8 | ADRS_GVRN | Numeric | 3 | Y | Governorate Code in Which the Address of Interviewed Passenger Exists |
| 9 | ORG_STN | Numeric | 8 | Y | Code of Departure Station |
| 10 | DES_STN | Numeric | 9 | Y | Code of Arrival Station |
| 11 | PRPS_IN | Numeric | 3 | Y | Trip Reason Code Inside the Study Area |
| 12 | PRPS_OUT | Numeric | 3 | Y | Trip Reason Code Outside the Study Area |
| 13 | MOD_ACCESS | Numeric | 3 | Y | Code of Access Mode to the Departure Station |
| 14 | MOD_EGRESS | Numeric | 3 | Y | Code of Egress Mode from the Arrival Station |

**Table 4.2.11 Field Code Definition of Cordon Line Database**
**(Bus Terminal Interview: Form 2)**

| **Field Codes Used in Database:** | | | **BUS_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | ORG_QISM | Qism Code from Which the Trip Starts | | See Equivalence Table ….. |
| 4 | ORG_SHKH | Shiakha Code from Which the Trip Starts | | See Equivalence Table ….. |
| 5 | DES_QISM | Qism Code at Which the Trip Ends | | See Equivalence Table ….. |
| 6 | DES_SHKH | Shiakha Code at Which the Trip Ends | | See Equivalence Table ….. |
| 7 | ADRS_QISM | Qism Code in Which the Address of Interviewed Passenger Exists (Inside the Study Area) | | See Equivalence Table ….. |
| 8 | ADRS_GVRN | Governorate Code in Which the Address of Interviewed Passenger Exists | | See Equivalence Table ….. |
| 9 | ORG_STN | Code of Departure Station | | See Equivalence Table ….. |
| 10 | DES_STN | Code of Arrival Station | | See Equivalence Table ….. |
| 11<br>12 | PRPS_IN<br>PRPS_OUT | Trip Reason Code Inside the Study Area<br>Trip Reason Code Outside the Study Area | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>99 | To Work<br>To School / Institution<br>To Home<br>Selling or Delivering<br>Meeting or Other Business Purpose<br>Return to Working Place<br>Shopping or Eating<br>Sending or Fetching<br>Recreation<br>Medical Treatment<br>Social Visit or Other Private Purpose<br>Other<br>No Answer |
| 13<br>14 | MOD_ACCESS<br>MOD_EGRESS | Code of Access Mode to the Departure Station<br>Code of Egress Mode from the Arrival Station | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>99 | On-Foot<br>Bicycle<br>Motorcycle<br>Private Car<br>Pickup for Passengers<br>Taxi<br>Shared Taxi<br>Public Minibus<br>Public Bus<br>Factory/Company Bus<br>School Bus<br>Truck for Passengers<br>Nile Bus<br>Tram<br>Heliopolis Metro<br>Underground Metro<br>ENR Train<br>Animal Drawn<br>Others<br>No Answer |

**Table 4.2.12 Description of Cordon Line Database**
**(ENR Passenger Interview: Form 1)**

| | | | | | |
|---|---|---|---|---|---|
| **Structure for Database:** | | | **ENR_FORM1.DBF** | | |
| Number of Data Records: | | | **1,256** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/RSI/ | | |
| Database Source: | | | Cordon Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | ID | Numeric | 4 | | Unique ID Number for Each Record |
| 2 | DIRCTION | Numeric | 2 | Y | Code of Interview Direction |
| 3 | LOCATION | Numeric | 2 | Y | Survey Location Code |
| 4 | DAY | Numeric | 3 | | Survey Day |
| 5 | MONTH | Numeric | 3 | | Survey Month |
| 6 | YEAR | Numeric | 5 | | Survey Year |
| 7 | HOUR | Numeric | 3 | | Survey Hour |
| 8 | MINUTE | Numeric | 3 | | Survey Minute |
| 9 | SHEET_NUM | Numeric | 4 | | Serial Number of Survey Sheets |
| 10 | TRAIN_TYPE | Numeric | 3 | Y | Code of Train Type |
| 11 | TRAIN_NO | Numeric | 3 | | No of Train Trip |

**Table 4.2.13 Field Code Definition of Cordon Line Database (ENR Passenger Interview: Form 1)**

| **Field Codes Used in Database:** | | | **ENR_FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | DIRCTION | Code of Outgoing Direction | 1 | Outside the Study Area (Outgoing) |
| 3 | LOCATION | Survey Location Code | 1 | Qalyob - Banha Section |
| | | | 2 | Marazeeq- Wasta Section |
| | | | 3 | Qalyob-Minoof Section |
| | | | 4 | Qalyob-Zagazeeq Section |
| | | | 5 | Ain Shams- Suez Section |
| | | | 6 | Manashy - Khatatba Section |
| 10 | TRAIN_TYPE | Code of Train Type | 1 | Air-Conditioned Express Train Includes High-Class Spanish Coaches of Classes 1 and 2 |
| | | | 2 | Express Train Includes Ordinary Coaches of Classes 2 and 3 |
| | | | 3 | Train Includes Ordinary Coaches of Classes 2 and 3 in Addition to an Air-Conditioned Grade |
| | | | 4 | Train Includes Ordinary Coaches of Classes 2 in Addition to an Air-Conditioned Grade. |
| | | | 5 | Air-Conditioned Express Train Includes High-Class Coaches of Classes 1 and 2 |
| | | | 6 | Express Train Includes High-Class Air-Conditioned Coaches of Classes 2 and Ordinary Coaches of Grades 2 |
| | | | 7 | Air-Conditioned Turbini Train Includes High-Class Coaches of Classes 1 and 2 |
| | | | 8 | Passenger's Train Includes Ordinary Coaches of Grades 2 and 3. |
| | | | 9 | Passenger Train Includes Ordinary Coaches of Classes 2 and 3 in Addition to an Air-Conditioned Grade |
| | | | 10 | Express Train Includes Excellent Coaches |
| | | | 11 | Express Train Includes Excellent Coaches and an Air-Conditioned Class |
| | | | 12 | Fast Sleeping Train |
| | | | 13 | Sleeping Train |
| | | | 14 | Local Train |

**Table 4.2.14 Description of Cordon Line Database (ENR Passenger Interview: Form 2)**

| | | | | | |
|---|---|---|---|---|---|
| **Structure for Database:** | | | **ENR_FORM2.DBF** | | |
| Number of Data Records: | | | **1,256** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/RSI/ | | |
| Database Source: | | | Cordon Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | ID | Numeric | 14 | | Unique ID Number of Form 1 |
| 2 | SUB_SAMPLE | Numeric | 2 | | Serial No of Survey Sheets |
| 3 | ORG_QISM | Numeric | 5 | Y | Qism Code from Which the Trip Starts |
| 4 | ORG_SHKH | Numeric | 3 | Y | Shiakha Code from Which the Trip Starts |
| 5 | DES_QISM | Numeric | 5 | Y | Qism Code at Which the Trip Ends |
| 6 | DES_SHKH | Numeric | 5 | Y | Shiakha Code at Which the Trip Ends |
| 7 | ADRS_QISM | Numeric | 3 | Y | Qism Code in Which the Address of Interviewed Passenger Exists (Inside the Study Area) |
| 8 | ADRS_GVRN | Numeric | 3 | Y | Governorate Code in Which the Address of Interviewed Passenger Exists |
| 9 | ORG_STN | Numeric | 7 | Y | Code of Departure Station |
| 10 | DES_STN | Numeric | 8 | Y | Code of Arrival Station |
| 11 | PRPS_IN | Numeric | 3 | Y | Trip Reason Code Inside the Study Area |
| 12 | PRPS_OUT | Numeric | 3 | Y | Trip Reason Code Outside the Study Area |
| 13 | MOD_ACCESS | Numeric | 3 | Y | Code of Access Mode to the Departure Station |
| 14 | MOD_EGRESS | Numeric | 3 | Y | Code of Egress Mode from the Arrival Station |

## Table 4.2.15 Field Code Definition of Cordon Line Database (ENR Passenger Interview: Form 1)

| **Field Codes Used in Database:** | | | **ENR_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | ORG_QISM | Qism Code from Which the Trip Starts | | See Equivalence Table ….. |
| 4 | ORG_SHKH | Shiakha Code from Which the Trip Starts | | See Equivalence Table ….. |
| 5 | DES_QISM | Qism Code at Which the Trip Ends | | See Equivalence Table ….. |
| 6 | DES_SHKH | Shiakha Code at Which the Trip Ends | | See Equivalence Table ….. |
| 7 | ADRS_QISM | Qism Code in Which the Address of Interviewed Passenger Exists (Inside the Study Area) | | See Equivalence Table ….. |
| 8 | ADRS_GVRN | Governorate Code in Which the Address of Interviewed Passenger Exists | | See Equivalence Table ….. |
| 9 | ORG_STN | Code of Departure Station | | See Equivalence Table ….. |
| 10 | DES_STN | Code of Arrival Station | | See Equivalence Table ….. |
| 11 | PRPS_IN | Trip Reason Code Inside the Study Area | 1 | To Work |
| 12 | PRPS_OUT | Trip Reason Code Outside the Study Area | 2 | To School / Institution |
| | | | 3 | To Home |
| | | | 4 | Selling or Delivering |
| | | | 5 | Meeting or Other Business Purpose |
| | | | 6 | Return to Working Place |
| | | | 7 | Shopping or Eating |
| | | | 8 | Sending or Fetching |
| | | | 9 | Recreation |
| | | | 10 | Medical Treatment |
| | | | 11 | Social Visit or Other Private Purpose |
| | | | 12 | Other |
| | | | 99 | No Answer |
| 13 | MOD_ACCESS | Code of Access Mode to the Departure Station | 1 | On-Foot |
| 14 | MOD_EGRESS | Code of Egress Mode from the Arrival Station | 2 | Bicycle |
| | | | 3 | Motorcycle |
| | | | 4 | Private Car |
| | | | 5 | Pickup for Passengers |
| | | | 6 | Taxi |
| | | | 7 | Shared Taxi |
| | | | 8 | Public Minibus |
| | | | 9 | Public Bus |
| | | | 10 | Factory/Company Bus |
| | | | 11 | School Bus |
| | | | 12 | Truck for Passengers |
| | | | 13 | Nile Bus |
| | | | 14 | Tram |
| | | | 15 | Heliopolis Metro |
| | | | 16 | Underground Metro |
| | | | 17 | ENR Train |
| | | | 18 | Animal Drawn |
| | | | 19 | Others |
| | | | 99 | No Answer |

**Table 4.2.16 Description of Cordon Line Database (Airport Passenger Interview: Form 1)**

| **Structure for Database:** | | | **AIR_FORM1.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **557** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/RSI/ | | |
| Database Source: | | | Cordon Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | ID | Numeric | 9 | | Unique ID Number for Each Record |
| 2 | DIRCTION | Numeric | 2 | Y | Code of Interview Direction |
| 3 | LOCATION | Numeric | 2 | Y | Survey Location Code |
| 4 | DAY | Numeric | 3 | | Survey Day |
| 5 | MONTH | Numeric | 2 | | Survey Month |
| 6 | YEAR | Numeric | 5 | | Survey Year |
| 7 | HOUR | Numeric | 3 | | Survey Hour |
| 8 | MINUTE | Numeric | 3 | | Survey Minute |
| 9 | SHEET_NUM | Numeric | 5 | | Serial Number of Survey Sheets |

**Table 4.2.17 Field Code Definition of Cordon Line Database (Airport Passenger Interview: Form 1)**

| **Field Codes Used in Database:** | | | **AIR_FORM1.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | DIRCTION | Code of Outgoing Direction | 1 | Outside the Study Area (Outgoing) |
| 3 | LOCATION | Bus Terminal Code | 1 | The Old Terminal (Terminal 1) |
| | | | 2 | The New Terminal (Terminal 2) |

**Table 4.2.18 Description of Cordon Line Database (Airport Passenger Interview: Form 2)**

| | | | | | |
|---|---|---|---|---|---|
| **Structure for Database:** | | | **AIR_FORM2.DBF** | | |
| Number of Data Records: | | | **2,142** | | |
| Database File Path: | | | C:/CREATS DATABASE/CORDON LINE/RSI/ | | |
| Database Source: | | | Cordon Interview Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | ID | Numeric | 9 | | Unique ID Number of Form 1 |
| 2 | SUB_SAMPLE | Numeric | 2 | | Serial No of Survey Sheets |
| 3 | ORG_QISM | Numeric | 5 | Y | Qism Code from Which the Trip Starts |
| 4 | ORG_SHKH | Numeric | 3 | Y | Shiakha Code from Which the Trip Starts |
| 5 | DES_QISM | Numeric | 5 | Y | Qism Code at Which the Trip Ends |
| 6 | DES_SHKH | Numeric | 3 | Y | Shiakha Code at Which the Trip Ends |
| 7 | ADRS_QISM | Numeric | 5 | Y | Qism Code in Which the Address of Interviewed Passenger Exists (Inside the Study Area) |
| 8 | ADRS_GVRN | Numeric | 3 | Y | Governorate Code in Which the Address of Interviewed Passenger Exists |
| 9 | PRPS_IN | Numeric | 3 | Y | Trip Reason Code Inside the Study Area |
| 10 | PRPS_OUT | Numeric | 3 | Y | Trip Reason Code Outside the Study Area |
| 11 | MOD_ACCESS | Numeric | 3 | Y | Code of Access Mode to the Departure Station |
| 12 | FLIGHT_NO | Numeric | 5 | Y | Code of Egress Mode from the Arrival Station |
| 13 | GROUP_NO | Numeric | 3 | | No of Persons Traveling with the Interviewed Passenger |

## Table 4.2.19 Field Code Definition of Cordon Line Database (Airport Passenger Interview: Form 2)

| **Field Codes Used in Database:** | | | **AIR_FORM2.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 3 | ORG_QISM | Qism Code from Which the Trip Starts | | See Equivalence Table ….. |
| 4 | ORG_SHKH | Shiakha Code from Which the Trip Starts | | See Equivalence Table ….. |
| 5 | DES_QISM | Qism Code at Which the Trip Ends | | See Equivalence Table ….. |
| 6 | DES_SHKH | Shiakha Code at Which the Trip Ends | | See Equivalence Table ….. |
| 7 | ADRS_QISM | Qism Code in Which the Address of Interviewed Passenger Exists (Inside the Study Area) | | See Equivalence Table ….. |
| 8 | ADRS_GVRN | Governorate Code in Which the Address of Interviewed Passenger Exists | | See Equivalence Table ….. |
| 9<br>10 | PRPS_IN<br>PRPS_OUT | Trip Reason Code Inside the Study Area<br>Trip Reason Code Outside the Study Area | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>99 | To Work<br>To School / Institution<br>To Home<br>Selling or Delivering<br>Meeting or Other Business Purpose<br>Return to Working Place<br>Shopping or Eating<br>Sending or Fetching<br>Recreation<br>Medical Treatment<br>Social Visit or Other Private Purpose<br>Other<br>No Answer |
| 13 | MOD_ACCESS | Code of Access Mode to the Departure Station | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>13<br>14<br>15<br>16<br>17<br>18<br>19<br>99 | On-Foot<br>Bicycle<br>Motorcycle<br>Private Car<br>Pickup for Passengers<br>Taxi<br>Shared Taxi<br>Public Minibus<br>Public Bus<br>Factory/Company Bus<br>School Bus<br>Truck for Passengers<br>Nile Bus<br>Tram<br>Heliopolis Metro<br>Underground Metro<br>ENR Train<br>Animal Drawn<br>Others<br>No Answer |

# CHAPTER 5: SCREEN LINE DATABASE

## 5.1 OVERVIEW

The Screen Line Survey (SLS) aims at obtaining the existing traffic volume on the screen line, analyzing the existing traffic condition and adjusting the results of HIS.

The Nile River was set as the most preferable screen line in the study area. The Nile divides the study area into the east and the west into two. Cairo Governorate, the Gazeera Island, the Rooda Island and Qalyobeya Governorate are included in the east. The western part of the Giza Governorate is included in the west.

The screen line consists of the following eleven (11) bridges crossing the Nile:

| | | | |
|---|---|---|---|
| 1 | Waraq | 7 | Gamaa |
| 2 | Rood El Farag | 8 | Giza |
| 3 | Imbaba | 9 | Moneeb |
| 4 | 15th of May | 10 | Marazeeq |
| 5 | 6th of October | 11a | Delta Barrage at Damietta |
| 6 | Galaa | 11b | Mohammed Ali Barrage |

The screen line survey was performed on normal weekday from Monday through Wednesday excluding public holidays. Survey hours were 24 hours from 6:00 in the morning to 6:00 in the morning on the next day.

Some of these surveys were repeated for a typical weekday during Ramadan. The reason for the repeated surveys was to estimate changing traffic patterns during Ramadan

The following outcomes were obtained from the screen line survey:

- Traffic volumes by location, by direction, by hour and by vehicle type.
- Vehicle composition.
- Hourly fluctuation of traffic volume.
- Average passenger occupancy by vehicle type

The counted vehicle were classified into 12 vehicle types as follows:

- Passenger car.
- Taxi (Cairo taxi and intercity taxi).
- Public buses (CTA, GCBC, Governorate and intercity bus).
- Public minibus.
- Private buses (school bus, company and tourist bus).
- Shared taxi.
- Light commodity vehicle (pickup and vans).
- 2 Axles truck.
- 3 Axles truck.
- Heavy truck (over three axles, trailer, semi-trailer).
- 2-wheeler (motorcycle).
- Others (military, police, ambulance and etc.).

## 5.2 SCREEN LINE DATABASE STRUCTURE

The screen line database is simple and consists of three datasets in Tables 5.2.1 through 5.2.3. Traffic count database at screen line includes 3,456 records, which covers 11 count sites in addition to other traffic counts during Ramadan for 7 selected bridges.

The database structure of screen line counts is presented in Table 5.2.1 followed by a code description to some of its fields, i.e., site code, direction and duration. A third database file is provided to describe the count locations including type of traffic count, site number, site code, site description, direction of travel, traffic count duration, survey date and name of traffic count site.

## Table 5.2.1 Description of Screen Line Database

| **Structure for Database:** | | | **SCREENLINE_COUNTS.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **3,456** | | |
| Database File Path: | | | C:/CREATS DATABASE/SCREEN LINE/ | | |
| Database Source: | | | Traffic Counts Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | SITE_NO | Numeric | 4 | | Site No |
| 2 | SITE_CODE | Character | 4 | Y | Site Code and Description |
| 3 | DIRECTION | Numeric | 1 | Y | Direction of Travel |
| 4 | DAY | Numeric | 2 | | Day of Traffic Count Survey |
| 5 | Month | Numeric | 2 | | Month of Traffic Count Survey |
| 6 | HOUR | Numeric | 2 | | End of 15-Minute Period (Hour) |
| 7 | MIN | Numeric | 2 | | End of 15-Minute Period (Minute) |
| 8 | DURATION | Numeric | 2 | Y | Duration of Traffic Count Survey |
| 9 | CAR | Numeric | 6 | | Passenger Car |
| 10 | TAXI | Numeric | 6 | | Taxi (Cairo Taxi and Intercity Taxi). |
| 11 | BUS_PUB | Numeric | 6 | | Public Bus (CTA, GCBC, Governorate and Intercity Bus) |
| 12 | BUS_MINI | Numeric | 6 | | Public Minibus. |
| 13 | BUS_PVT | Numeric | 6 | | Private Bus (School Bus, Company and Tourist Bus) |
| 14 | TAXI_SHARE | Numeric | 6 | | Shared Taxi |
| 15 | PICKUP | Numeric | 6 | | Light Commodity Vehicle (Pickup and Vans) |
| 16 | TRUCK_2 | Numeric | 6 | | 2 Axles Truck |
| 17 | TRUCK_3 | Numeric | 6 | | 3 Axles Truck |
| 18 | TRUCK_HVY | Numeric | 6 | | Heavy Truck (More Than Three Axles, Trailer and Semi-Trailer) |
| 19 | MOT_CYC | Numeric | 6 | | 2-wheeler (Motorcycle) |
| 20 | OTHER | Numeric | 6 | | Others (Military, Police, Ambulance and etc.) |
| 21 | TOT_VEH | Numeric | 8 | | Total Counted Vehicles During 15-Minute Period |

**Table 5.2.2 Field Code Definition of Screen Line Database**

| **Field Codes Used in Database:** | | | **SCREENLINE_COUNTS.DBF** | |
|---|---|---|---|---|
| **Field** | **Field Name** | **Field Description** | **Code** | **Field Code Description** |
| 2 | SITE_CODE | Site Code and Description | | See Site Description File: SCREENLINE_SITES.DBF |
| 3 | DIRECTION | Direction of Travel | | See Site Description File: SCREENLINE_SITES.DBF |
| 8 | DURATION | Duration of Traffic Count Survey | 16 | Traffic Count Survey for 16-Hour Period |
| | | | 24 | Traffic Count Survey for 24-Hour Period |

**Table 5.2.3 Description of Screen Line Database (Count Sites)**

| **Structure for Database:** | | | **SCREENLINE_SITES.DBF** | | |
|---|---|---|---|---|---|
| Number of Data Records: | | | **38** | | |
| Database File Path: | | | C:/CREATS DATABASE/SCREEN LINE/ | | |
| Database Source: | | | Traffic Counts Survey of CREATS | | |
| **Field** | **Field Name** | **Type** | **Width** | **Coded** | **Field Description** |
| 1 | COUNT_TYPE | Character | 20 | | Type of Traffic Count |
| 2 | SITE_NO | Numeric | 3 | | Site No |
| 3 | SITE_CODE | Character | 5 | | Site Code and Description |
| 4 | DIRECTION | Numeric | 1 | | Direction of Travel Code |
| 5 | DIR_TO | Character | 24 | | Direction of Travel Description |
| 6 | DURATION | Numeric | 2 | | Duration of Traffic Count Survey |
| 7 | DAY_WEEK | Character | 3 | | Day of the Week |
| 8 | SRVY_DAY | Numeric | 2 | | Survey Day |
| 9 | SRVY_MONTH | Numeric | 2 | | Survey Month |
| 10 | SRVY_YEAR | Numeric | 4 | | Survey Year |
| 11 | SITE_NAME | Character | 65 | | Name of Traffic Count Site |