COMMONWEALTH OF KENTUCKY
DEPARTMENT OF TRANSPORTATION
FRANKFORT, KENTUCKY 40601
BUREAU OF HIGHWAYS
JAMES E. GRAY
COMMISSIONER

ELIJAH M. HOGGE
SECRETARY

WENDELL H. FORD
GOVERNOR

January 15, 1974

H.3.10

MEMORANDUM

TO: HIS Evaluation Committee
G. F. Vansant, Chairman
J. T. Anderson
C. G. Grayson
J. W. Spurrier
B. D. Henson
W. C. Semones

FROM: H. F. Southgate, Chairman
Uniform Project Identification Task Force

SUBJECT: Final Report from the UPI Task Force

Attached is the final report on Uniform Project Identification from the Task Force. This report represents the unanimous position of the members of the Task Force. All assigned tasks have been accomplished.

The following persons comprised the Task Force: George Asbury, Davis Jackson, Jim Kuzirian, L. H. Rodgers, and Lynn Vaughn. Elwood Conway and Tony Marraccini provided very valuable consulting services. The Chairman would like to express his appreciation to those responsible for the assignment of such top quality personnel to the Task Force and to the members for their devoted diligence, congeniality, and most cooperative attitudes.

HFS/sh
Attachment
cc's: Task Force
D. V. Ellis
John Bridwell
James Fehr
A. R. Romine
E. B. Gaither
J. H. Havens

Report 383

RECOMMENDATIONS FOR IMPLEMENTATION OF UNIFORM PROJECT IDENTIFICATION FROM THE UPI TASK FORCE

Final Report

by

H. F. Southgate, Chairman
Uniform Project Identification Task Force

January 1974

INTRODUCTION

For years project identifications have been based upon county, section, subsection, and phase of work. While this system worked well in the beginning, overlay constructions, widening efforts, etc. have caused overlapping of projects to the point that identification of a given portion of a highway has become very difficult. Furthermore, each of the many separate phases of work has its own project number and may not be so readily identifiable as the succeeding work phase.

Management came to realize there was a need for a numbering identification system that would be readily understandable. The direct result was the development of the Reference Point (RP) system and the resulting use of the Hardin County file on the GIM computer system. Subsequently, the Division of Planning was given the responsibility of assigning RP's to all state system highways and preparing a complete set of county RP maps and RP descriptions.

On May 15, 1973, the Secretary of Transportation signed Official Order No. 80184 (see APPENDIX A) authorizing the formation of the Uniform Project Identification (UPI) Task Force, which was to be responsible to the Highway Indexing System Evaluation Committee. The Task Force personnel were assigned by mid-July, and the first meeting was held the end of July 1973. Meetings were conducted during August, September, early October, and late November 1973, and resulted in the issuance of memorandums dated August 15, 1973, and September 24, 1973 (see APPENDIX B).

TASK FORCE ASSIGNMENTS

The HIS Evaluation Committee assigned the following tasks as items of work for the Task Force:

1. develop an UPI system including the identification necessary for the Bureau of Highways operations,
2. identify those Department of Transportation forms which should contain the RP identification scheme,
3. outline the procedure and flow of forms and information to implement the project identification system,
4. develop an organizational chart and job descriptions for the UPI staff, and
5. develop a time schedule and a financial estimate for implementation of the UPI system.

UNIFORM PROJECT IDENTIFICATION SYSTEM

The existing project numbering system involves the use of sections, subsections, etc. within a county. Each section is defined by starting and ending points. These termini can also be assigned RP's according to the Division of Planning RP maps. Thus the RP system provides the basis for the UPI system. The backbone of the UPI system then becomes a cross reference correlating the beginning and ending RP's with the respective sections of the existing numbering system. This will cause the least disruptive impact to the Department of Transportation.

The creation and continuation of the proposed UPI Cross-Reference File will require only six existing Department of Transportation forms to have RP's added to them. They are as follows:

1. TD 10-1, Project Authorization,
2. TD 10-2, Project Authorization Modifications,
3. TD 14-20, Subsections of Contract,
4. TD 31-303, Project Validity Sheet,
5. TD 61-409, Order for Survey and Plans, and
6. TD 62-233, Right of Way Encumbrance and Advice of Change.

Example forms containing the RP modifications are shown in APPENDIX C. One additional form should be designed for the Division of Planning to use at the initiation of each new study. A portion of the remaining hundreds of forms may have RP's added to them as the users determine their requirement and(or) desirability.

To implement the UPI system, the following initial steps will have to be accomplished:

1. load the RP numbers and their descriptions into an Information Management Systems computer file to create the RP File, pending approval from the Director of Information Systems Planning in the Department of Finance and Administration (IMS is a totally new computer system and is not what was known as MIS);
2. obtain a computer listing of project numbers and their termini descriptions; and
3. with (1) and (2) above plus paper files, assign RP numbers to project number termini descriptions and load on IMS to create the UPI Cross-Reference File.

A typical example of a UPI cross-reference listing is shown in Table 1.

PROCEDURE AND FLOW OF FORMS

The UPI Cross-Reference File should be initiated with all projects that are currently in the Project Validity File. As new projects are initiated, the authorization document would be sent to the UPI Section (discussed below) for RP assignments before final authorization is granted. Upon authorization, the document would be sent to the Validity Section in the Division of Accounts who in turn would code all the required data for the Project Validity File and the UPI Cross-Reference File. Projects that have been completed will have to be loaded from the paper files. It is recommended that cross-referencing of existing project numbers should extend back to the beginning of the Appalachian and Interstate Systems as a minimum. This should be accomplished by yearly increments, starting with the present and working backwards in time. Thus the more important projects would be in the computer's UPI Cross-Reference File.

ORGANIZATION, RESPONSIBILITIES, AND PERSONNEL

It is recommended that a central group be structured to implement and continue to operate the UPI system. This group would be charged with the following duties:

1. assign RP's to project authorization documents;
2. code, load, maintain, and update the RP File on the IMS computer system;
3. provide proper RP data to the Validity Section of the Division of Accounts who will then load the Project Validity File and UPI Cross-Reference File; and
4. keep an up-to-date pencil copy of the RP maps. The Division of Planning would be assigned the responsibility of periodically updating the original maps.

Two organizational charts along with job descriptions for each position are included in APPENDIX D. The first chart is for a totally new group and the second chart shows the expansion of the existing Project Identification Section of the Division of Design. Note that both charts contain a permanent RP staff and a temporary RP staff for the initial data loading phase. Upon completion of the initial loading of the UPI Cross-Reference File, the temporary staff could be reassigned to their original positions or to new duties within the same group. It is recommended that both staffs be filled with experienced personnel who are familiar with Department of Transportation operations in order to minimize problems, time, and costs of implementing the UPI system.

TIME SCHEDULES AND FINANCIAL ESTIMATES

APPENDIX E contains two time schedules and two financial estimates based upon the two organizational charts found in APPENDIX D. The difference between the two financial estimates is in personnel costs. The existing organization presently has a clerk typist. The supervisor's salary is estimated at one half because existing duties would continue to occupy approximately half his time. A third financial estimate is included that would cover the annual cost of continuing and maintaining the UPI Cross-Reference File only. None of the financial estimates include the costs of the following:

1. updating the original RP maps by the Division of Planning,
2. creation and(or) expansion of any user computer files; and
3. integration of the UPI and IMS systems beyond the costs of the UPI Cross-Reference File.

APPENDIX F contains two time schedules which can be applied to either organizational arrangement.

GENERAL COMMENTS

Detailed operating procedures for the creation and maintenance of the UPI Cross-Reference File will have to be determined as the file is created. The Task Force has attempted to point out some general procedures but cannot anticipate all of the little problems that will arise. The present numbering system is rigid; consequently, the UPI system should be kept flexible and not be allowed to become rigid.

After the initial loading of the UPI Cross-Reference File is well under way, consideration should be given to the creation of user computer data storage files utilizing the IMS system. The design, implementation, and loading of these files are beyond the scope of the assignments to this Task Force and would be predicated upon the types of information desired and the determination of whom the users are to be. Suitable guidelines for these and other factors should be determined by the HIS Committee before file designs are attempted.

It has come to the attention of the Task Force that the creation of the RP maps has presented a storage problem for the Division of Planning. Four map file storage cabinets are needed; the total estimated cost should be less that $1,000 but was not included in any of the financial estimates found in this report.

TABLE 1. TYPICAL EXAMPLE OF A UPI CROSS-REFERENCE LISTING

STATE PROJECT NO.	FEDERAL PROJECT NO.	BEGINNING RP	ENDING RP	VERBAL DESCRIPTION
SP 56-0583-C2	T 3001	60*289+1.022	60*291+0.033	(Optional)
FP 95-0033-GD	T 5014	75*26+0.158	75*33+0.596	

APPENDIX A

OFFICIAL ORDER NO. 80184

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF TRANSPORTATION
FRANKFORT, KENTUCKY 40601

OFFICE OF THE SECRETARY OFFICIAL ORDER NO. 80184

SUBJECT: Uniform Project Identification Task Force
Steering Committee

It is essential that the Uniform Project Identification discipline be implemented within the Department during the coming year. For this purpose, without disrupting the organizational structure, appointees are authorized for full-time effort on the task force from the following functional areas:

Division of Accounts
Division of Technical Computing
Division of Planning
Division of Maintenance
Division of Design
Division of Research

The selection of the persons from each of these functional areas will be a responsibility of the supervisor. Replacements, when necessary, shall also be a responsibility of the supervisor. The appointee from the Division of Research shall be expected to provide continuity on the Task Force and should be selected to serve for a term of approximately two years.

The Steering Committee for the Uniform Project Identification tasks shall be a function of the Highway Indexing System Evaluation Committee. It is expected that the Task Force would meet on a monthly basis with the Steering Committee to provide reports on progress and needs for management decisions.

Signed and approved by me, this 15th day of May, 1973.

E. M. HOGGE
SECRETARY OF TRANSPORTATION

APPENDIX B

MEMORANDUM DATED AUGUST 15, 1973
MEMORANDUM DATED SEPTEMBER 24, 1973

August 15, 1973

H.3.10

MEMORANDUM TO: HIS Evaluation Committee
Guy F. Vansant, Jr., Chairman
J. T. Anderson
Calvin G. Grayson
John W. Spurrier
B. D. Henson
Wesley C. Semones

FROM: H. F. Southgate, Chairman
Uniform Project Identification Task Force HFS

SUBJECT: Work Program for Task Force

The HIS Evaluation Committee assigned the following tasks as items of work for the Task Force:

1. develop the Uniform Project Identification System, including the identification of all elements of project identification necessary for the Bureau of Highways operations,
2. identify those Bureau forms which should contain the reference point (RP) identification scheme, and
3. outline the procedure and flow of forms and information to implement the Project Identification System.

We believe there is a basic conceptual difference in definition between what the Task Force and the HIS Evaluation Committee understand as Uniform Project Identification (UPI).

We understand the Committee to think of UPI as the combination of Route, Starting RP, and Ending RP as a single number. This number, which in effect is a definition of length and the assignment of a unique number to the defined length, would be applied to multiple occurrences of existing numbering systems which occur within its termini. Unfortunately this system does not allow for the unique identification of each and every occurrence within the existing numbering systems and in effect creates the same operational inefficiencies inherent in the section-subsection premise of our current numbering systems (see Figure 1 and Table 1).

The Task Force envisions UPI being provided by developing the relationship between each of the existing numbering systems and the corresponding RP's at its beginning and ending termini. Each existing numbering system can remain unchanged and in force, yet be related to one common basis, thus causing the least disruptive impact to the Department of Transportation.

Computer Adaptability and Usage

Data systems and computer software packages more than adequate for the task are presently on order and should be available for Bureau use by October 15, 1973. The envisaged systems will require storage of a data item one time and will eliminate the useless redundancy experienced in the Hardin County demonstration model.

Features

Any information that can be related to RP's and/or MP's can be stored to any desired level of detail at any time. Retrieval of the stored data can be to any desired level that is the same or lesser than the level on which it was stored. This data can be an individual data item or condensed and grouped for summary reports. Typical examples are:

1. All the various project numbering systems,
2. Maintenance Physical Inventory of Roads,
3. Traffic Accident Files,
4. Status reports for projects,
5. Related estimated costs, bid costs, and contract costs, etc., and
6. Any other desired data.

Two important features are 1) updating will be relatively simple and fast and 2) this system will allow all existing project numbering systems as currently used by various Divisions to continue to be used without any complications.

Task Force Work Phases Yet To Be Accomplished

When approval from the Committee is received for the Reference Point basis for Uniform Identification, the following items will be required:

1. All functional areas will be reviewed to determine those which have information that will be required for input to the Data Management System,
2. An analysis will be needed to determine the degree of detail desired so that the items of data can be determined to fulfill it, and
3. As the Task Force determines the functional areas, the forms within each area, and data items to be chosen, the Division of Administrative Information Systems (AIS) will begin to build File Segments for computer application.

The following are specific Task Force responsibilities as of this time:

1. A list will be made of the necessary forms on which the RP's should be added as identification items,
2. A budget estimate will be submitted along with the staffing requirements for implementation and continuing efforts, and
3. The procedure, flow of forms, filing of paperwork, and organizational structure will be formulated as recommendations to the Committee for adoption.

Paper Flow and Procedures

The Task Force has given some preliminary thought to this subject. The present thinking is that a centralized section will be responsible for assigning and/or validating RP's to projects, filing of paperwork, etc. As now envisaged, the different functional areas will assign their own project numbers to their forms and will simply furnish a Xerox copy of the form to the central section. The above procedure will cause the least disruptive impact to each functional area. A functional area has needs and uses for certain types of data. As the data are stored, a computer listing of that data, i.e. current RP's and project number(s), will be furnished to that functional area and other appropriate functional areas. The advantage of this concept is that the central section can monitor the overall progress of any given project and determine what information or functional area is missing so appropriate data can be retrieved. Specific recommendations from the Task Force to the Committee on this subject will be submitted later, and no action by the Committee is required at this time.

Problem Areas As Determined By Task Force

A significant portion of the work done by the Division of Maintenance is accomplished on the "Unclassified" and "State Property" roads. RP's have not been assigned to these two categories but will be required to make UPI procedures functional and provide management with the desired information. One direct delay will result because the Division of Planning will have to add these RP's to the maps and write descriptions.

Recommendations

Action by the Committee is required on the following recommendations from the Task Force before any further work can proceed:

1. Reference Points will be the basis for Uniform Project Identification within the Department of Transportation,
2. It is recommended that consideration be given to extending the RP System to cover Unclassified and State Property Roads,
3. Consideration should be given to issuing final disposition of county cross roads and frontage roads built in conjunction with Interstates and Parkways, and
4. The Division of Planning should be instructed to add RP's to the level of roads approved by the Committee.

HFS/sh

cc's: J. R. Harbison
George Asbury
Davis Jackson
Mel Jenkins
Jim Kuzirian
Bud Rodgers
Lynn Vaughn
Elwood Conway
Tony Marraccini

REFERENCE POINT+ ADDITIONAL MILEAGE

Example: 288 + 0.256

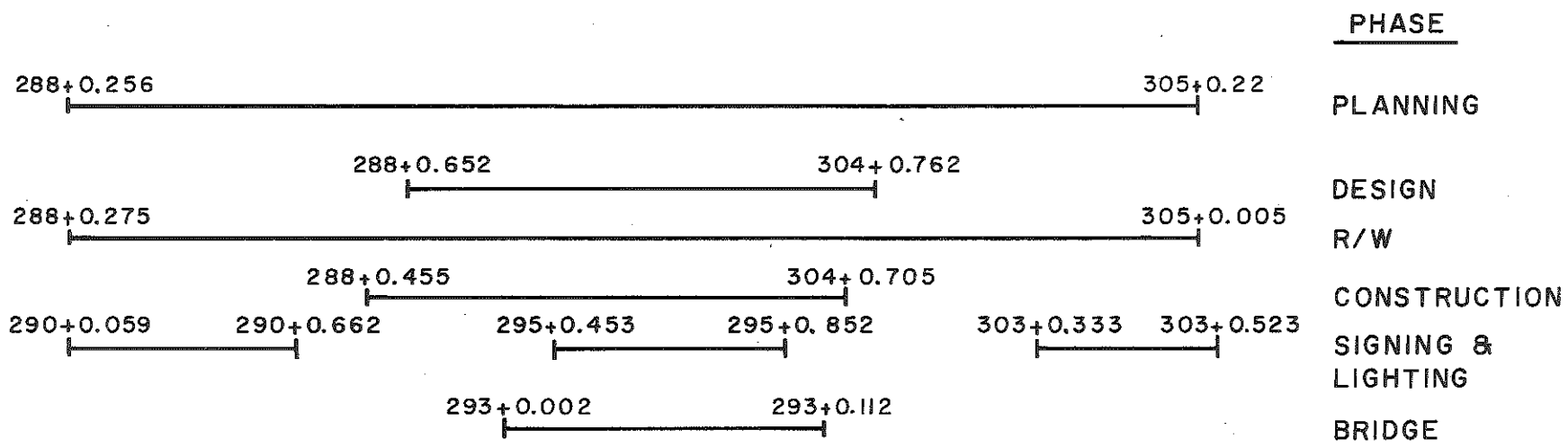


FIGURE 1

TABLE 1

TYPICAL PROJECT NUMBERING SYSTEMS

PREFIX	COUNTY	SECTION	SUBSECTION
AP	027	46	5R
SP	027	46	5L
MP	027	46	H
RP	027	46	G
RP	027	46	5UA
RP	027	46	5UB
RP	027	46	5U1
RP	027	46	5U2
APD	642		23
SP	027		8PSR
SF	027	DW99	8SR
HF	028	J392	AOCB2

September 24, 1973

H.3.10

MEMORANDUM TO: HIS Evaluation Committee

G. F. Vansant, Chairman
C. G. Grayson
J. T. Anderson
J. W. Spurrier
B. D. Henson
W. C. Semones

FROM: Herbert F. Southgate, Chairman
Uniform Project Identification Task Force

SUBJECT: Interim Findings and Recommendations for Highway Uniform Project Identification Implementation

There will be a joint meeting of the HIS Committee and the Task Force in the 10th Floor Conference Room at 1:30 p.m., September 27, 1973. Your kind participation will be greatly appreciated.

The Task Force has determined that only six (6) Bureau of Highway forms will require Reference Points to be added to them. They are as follows:

1. TD 10-1 Project Authorization
2. TD 10-2 Project Authorization Modifications
3. TD 14-20 Subsections of Contract
4. TD 31-303 Project Validity Sheet
5. TD 61-409 Order for Survey and Plans
6. TD 62-233 Right of Way Encumbrance and Advice of Change

A portion of the remaining hundreds of forms may have reference points added to them as the users determine their requirement and/or desirability.

The following initial steps will have to be accomplished:

1. Load the RP numbers and their descriptions into an Information Management Systems computer file, pending approval from the Director of Information Systems Planning in the Department of Finance and Administration. (IMS is a totally new computer system and is not what was known as MIS.)
2. Obtain a computer listing of Project Numbers and their termini descriptions.
3. With (1) and (2) above plus paper files, assign and load RP numbers to the Project Number termini descriptions.

As the separate Divisions determine the type and items of information that will be desirable in the IMS file, internal file structures will be built by AIS. When a file structure has been built, data will be retrieved from existing computer tapes and disks and loaded into IMS with a relatively few commands. It is estimated that 80 to 85 percent of the desired data is already on the computer and filed by Project Number. A large part of the remaining 15 to 20 percent will be obtained by the physical inventory that Maintenance Division is starting. As new projects are authorized, that information will be automatically loaded into the file. The remaining historical data will be loaded after the current data are processed.

As RP's are assigned to the termini of respective Project Numbers and loaded into the computer, a preprinted computer form could be completed with the appropriate information that is relative to

a given Division or group. Currently there are data stored in the computer that is technically retrievable, but not in a meaningful manner. With IMS and RP's, these same data can be retrieved, massaged, and assembled in a manner heretofore unthinkable. As experience is gained, a whole new series of forms and reports could conceivably be generated that are not presently in use.

Recommended Organization, Operation Procedures, and Personnel

It is recommended that a central group be structured to implement and continue to operate the Uniform Project Identification System. This group would be charged with the following duties:

1. Assign reference points to project authorization documents.
2. Code and load reference point data into the computer.
3. Provide the Validity Section of the Division of Accounts with the proper RP data for loading the Validity Check file.
4. Keep an up-to-date pencil copy of the reference point maps. The Division of Planning would be assigned the responsibility of periodically updating the original maps.
5. Handle all informational queries from any group so authorized to have access to the necessary data.

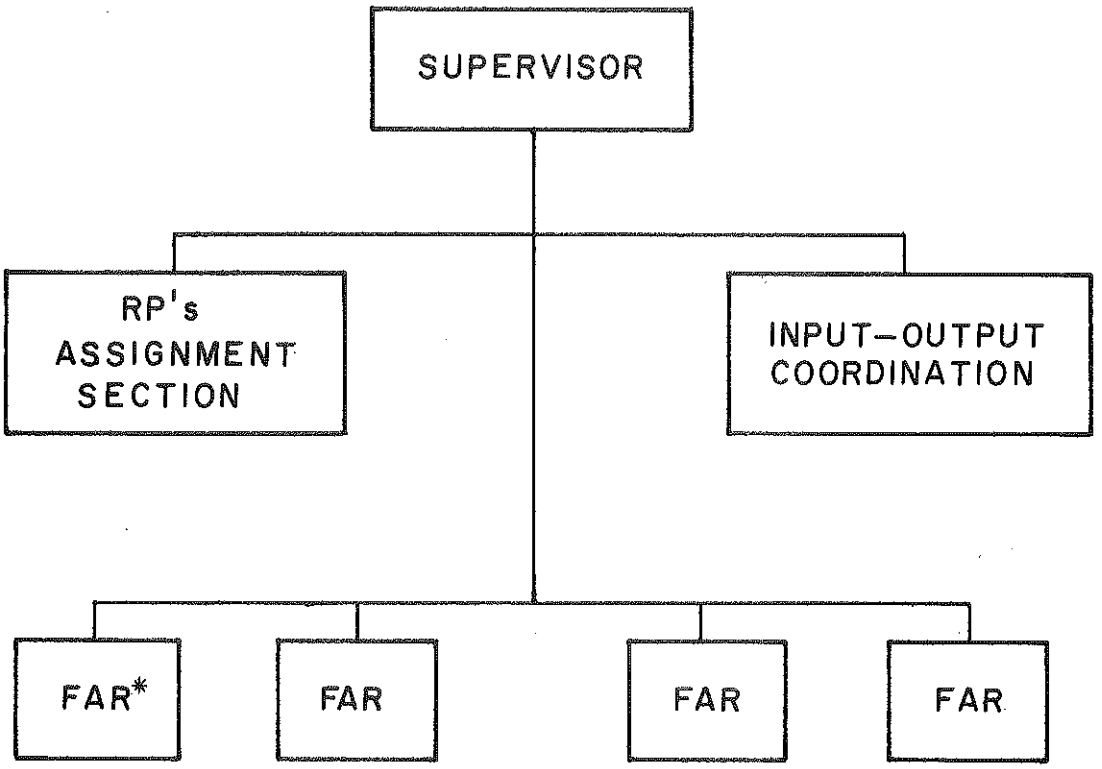
Attachment 1 shows a tentative organizational chart for this central group. The Functional Area Representatives (FAR) should be highly qualified personnel from key groups and/or Divisions that have primary interests in data storage, retrieval, and reports. These FAR's would know how to phrase questions to be submitted to the computer to insure that proper information is retrieved and assembled in the form desired by the requesting agency.

The complexity of tasks that will be assigned to this group demands that very experienced personnel be assigned. It is also recommended that these job positions be financed to a high level in order to attract and retain these key persons.

Remaining Committee Assignments to the Task Force

If the committee accepts the above report and recommendations, the Task Force will attempt to determine a realistic time schedule and financial estimate. Unless the Committee determines additional assignments for the Task Force, the Task Force will have then completed its assignment as now envisaged.

HFS:sh
Attachment
cc's: J. R. Harbison
George Asbury
Davis Jackson
Jim Kuzirian
L. H. Rodgers
Lynn Vaughn
Elwood Conway
Tony Marraccini



* FUNCTIONAL AREA REPRESENTATIVE

ATTACHMENT: CONCEPTUAL ORGANIZATIONAL CHART FOR CENTRAL GROUP FOR UNIFORM PROJECT IDENTIFICATION

APPENDIX C

BEGINNING AND ENDING RP BLOCKS ADDED TO SIX EXISTING DEPARTMENT OF TRANSPORTATION FORMS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT, KENTUCKY

TD 10-1
6-65

PROJECT AUTHORIZATION

OFFICIAL ORDER-
AUTHORIZATION NO. _____

It is hereby ordered that the project described herein be undertaken and accomplished.

PROJECT IDENTIFICATION	BEGINNING RP	ENDING RP

1. District	County	Route Number	Project Control Number State - Federal -
2. Road System	Road Name		Program Item

3. Project Description and Type of Work.

4. Design Class	Traffic Present - Projected -	Project Length

RESPONSIBILITIES

5. Design	Right of Way	Title Deeded To
6. Utility	Construction	Maintenance

SOURCE OF FUNDS AND ESTIMATED COST

7. Design	Estimated Cost	Account Number	Fiscal Year
8. Right of Way	Estimated Cost	Account Number	Fiscal Year
9. Utilities	Estimated Cost	Account Number	Fiscal Year
10. Construction	Estimated Cost	Account Number	Fiscal Year
11. Total Estimated Cost		Project Completion Date (month and year)	

12. Remarks:

PROJECT APPROVAL RECOMMENDED BY

_____
Signature

_____
Date

SIGNED AND APPROVED

_____
Commissioner of Highways
or Designated Representative

_____ 19 ____
Date

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

TD 10-2
7-67

OFFICIAL ORDER
AUTHORIZATION NO. _____

PROJECT AUTHORIZATION MODIFICATION

It is hereby ordered that the project described herein be amended to conform to the following description.

PROJECT IDENTIFICATION	BEGINNING RP		ENDING RP
1. District	County	Route Number	Project Control Number State - Federal -
2. Road System	Road Name		Program Item

3. Project Description and Type of Work

4. Design Class	Traffic Present - Projected -	Project Length

RESPONSIBILITIES

5. Design	Right of Way	Title Deeded To
6. Utility	Construction	Maintenance

SOURCE OF FUNDS AND ESTIMATED COST

7. Design	Estimated Cost	Account Number	Fiscal Year
8. Right of Way	Estimated Cost	Account Number	Fiscal Year
9. Utilities	Estimated Cost	Account Number	Fiscal Year
10. Construction	Estimated Cost	Account Number	Fiscal Year
11. Total Estimated Cost		Project Completion Date (month and year)	

12. Remarks: (Description of Amendment)

PROJECT APPROVAL RECOMMENDED BY

Signature _____ Date _____

SIGNED AND APPROVED

Commissioner of Highways or Designated Representative _____ Date _____

TD 14-20
Rev. 8-73

:TTING DATE:_____

.ANS:

SUBSECTIONS OF CONTRACT FOR

GROUP (197)

COUNTY

_____

_____ROAD

BEGINNG RP	ENDING RP

TD 31-303
Rev. 11-72

PROJECT VALIDITY SHEET

BEGINNING DATE
1-2 MO. | 3-4 DAY | 5-6 YEAR

CH NUMBER
7-11

ACCOUNT
12-14

BEGINNING RP _____

SUBLEDGER
15-17

ENDING RP _____

PROJECT AUTHORIZATION NUMBER
40-45

LOCATION
46

STATE PROJECT NUMBER
47-49 COUNTY | 50-53 SECTION | 54-58 SUBSECTION

FEDERAL PROJECT NUMBER
59-62 PREFIX | 63-66 CONTROL | 67-69 SUB

PROJECT PREFIX
70-71

ENDING DATE
74-75 MO. | 76-77 DAY | 78-79 YEAR

CONTROL
80

Code 4 Add
Code 7 Delete
Code 5 Correct

TD 61-409
Rev. 7-70

KENTUCKY DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN
FRANKFORT, KENTUCKY

ORDER FOR SURVEY AND PLANS

As Authorized by HD 10-1, No._____, Approved on Date_____,

Beginning on Road System_____in District No._____,
County of_____, on Route No._____,
In or Near Locality of_____,
On Road Name_____,
BEGINNING RP_____ ENDING RP_____
Starting From_____
_____,
Thence Proceeding in a Cardinal Direction (check one) Northward___ Eastward_____,
Ending at_____
_____,

A Length of Approximately_____, Being identified as
State Project No._____, Federal Project No._____,
State Project No._____, Federal Project No._____,
_____, _____,

By_____ Date_____,
PROJECT IDENTIFICATION SECTION

It is hereby ordered that work begin on the following functions:

FUNCTIONS:	WORK TO BE PERFORMED BY:
1. Field Surveys	
2. Roadway Cut Soundings & Cores	
3. Bridge & Culvert Soundings & Cores	
4. Subsurface Investigation and Soils Analysis	
5. Right of Way and Roadway Plans	
6. Structure Plans	
7. Lighting Plans	
8. Signing Plans	
9. Environmental Impact Analysis	
10.	

Effective date of this work order shall be ..... Date_____.

_____ Date_____
DIRECTOR, DIVISION OF DESIGN

TD 62–233
Rev. 5–73

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCUMBRANCE AND ADVICE OF CHANGE

R/W ENCUMBRANCE NO. 1-

REQUEST NUMBER

ACCOUNT NUMBER 43-5-11-

ACCOUNT NAME

ORIGINAL ☐

INCREASE ☐

DECREASE ☐

BEGINNING RP			ENDING RP	
DATE	R/W ENC. NO. 1-	GEN. LED.	OBJECT 7	DISTRICT
COUNTY NAME	COUNTY NO.	SECTION	SUB-SECTION	FEDERAL NO.
ROAD NAME				ACQUISITION ORDER NO.

EXPLANATION OF CHANGE	AMOUNT
TOTAL	$

REQUESTED BY:

DIRECTOR OF RIGHT OF WAY — DATE

FUNDS AVAILABLE:

DIRECTOR OF ACCOUNTS — DATE

APPROVED BY:

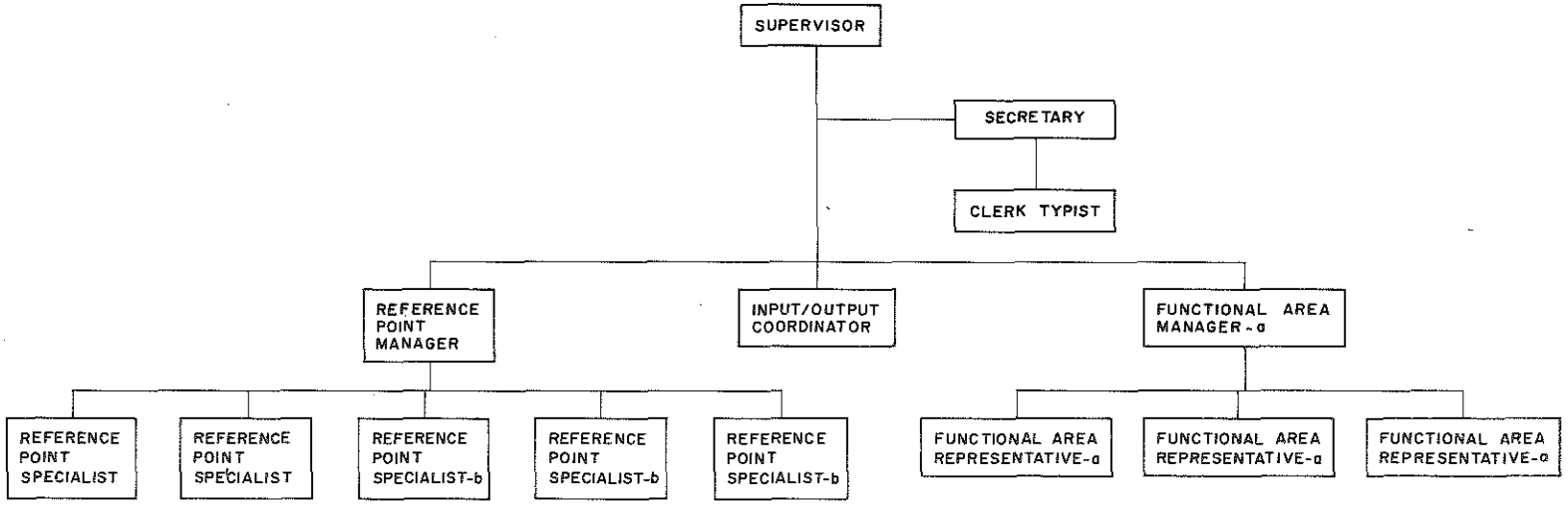
COMMISSIONER OF FINANCE — DATE

YELLOW - Dept. of Finance - Accounts
WHITE - Dept. of Transp. - Accounts
BLUE - Dept. of Transp. - Right of Way

Date	Voucher No.	Payment No.	Credit	Debit	Balance

APPENDIX D

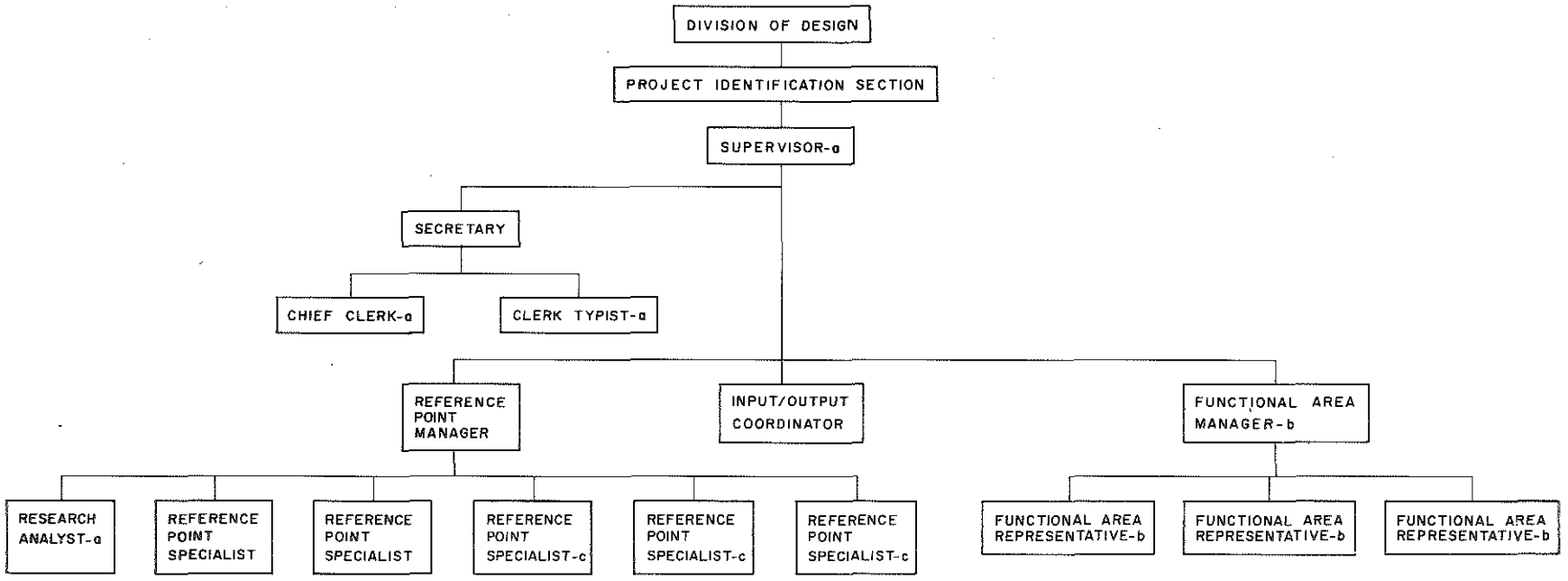
TWO ORGANIZATIONAL CHARTS
AND
JOB DESCRIPTIONS



a- FUTURE REQUIREMENTS WILL DETERIMINE THE NUMBER OF POSITIONS

b- REQUIRED FOR INITIAL LOADING OF UPI CROSS-REFERENCE FILE AND REASSIGNED UPON COMPLETION OF INITIAL LOADING

ORGANIZATIONAL CHART NO. 1 FOR A TOTALLY NEW GROUP



a- EXISTING STAFF

b- FUTURE REQUIREMENTS WILL DETERMINE THE NUMBER OF POSITIONS

c- REQUIRED FOR INITIAL LOADING OF UPI CROSS-REFERENCE FILE AND REASSIGNED UPON COMPLETION OF INITIAL LOADING

ORGANIZATIONAL CHART NO. 2 FOR EXPANSION OF EXISTING PROJECT IDENTIFICATION SECTION IN DIVISION OF DESIGN

Highway and Industrial
Research Group
Code No.
Grade 16

CLASS TITLE: Uniform Project Identification Supervisor

CHARACTERISTICS OF THE CLASS: See Class Title: Principal Research Analyst; Code No. 1350

Highway and Industrial
Research Group
Code No.
Grade 14

CLASS TITLE: Reference Point Manager

CHARACTERISTICS OF THE CLASS: Under general direction, has responsibility for the accumulation, manipulation, storage and retrieval of data used in identification of all types of projects within the Department of Transportation; and does related work as required.

EXAMPLE OF DUTIES: Assigns and supervises work load of the reference point specialists. Coordinates work load with Input/Output Coordinator for computer file input and output. Supervises the maintaining and updating of pencil copies of RP maps and requests Division of Planning to make changes on permanent RP maps and furnish necessary copies of changes. Routes paperwork for typing and filing as required. Responsible to and performs tasks assigned by the Supervisor. Be able to perform all duties of a Reference Point Specialist.

MINIMUM QUALIFICATIONS

Training and Experience: Graduation from an accredited college or university supplemented by three years of responsible experience in drafting, business, or statistical methods, two years of which must have been in work with or for a highway department; or graduation from high school supplemented by eight years of experience in drafting, business, or statistical methods, two years of which must have been in work with or for a highway department.

Special Knowledge, Skills and Abilities: Thorough knowledge of departmental rules and regulations. Thorough knowledge of methods and techniques used in statistical analysis of highway studies. Ability to work with high level engineering personnel. Ability to plan, organize, assign, supervise, and inspect the work of professional and subprofessional personnel.

Highway and Industrial
Research Group
Code No.
Grade 12

CLASS TITLE: Reference Point Specialist

CHARACTERISTICS OF THE CLASS: Under direct supervision, has immediate charge of specific projects requiring an adequate professional background to analyze and manipulate technical material and assist in short- and long-range planning; have ability to understand and utilize data contained in computer storage; and does related work as required..

EXAMPLE OF DUTIES: Assigns Reference Points to project termini descriptions upon receipt of correct documents. Updates data processing files to insure proper correlation of Reference Points with project numbers. Insures proper and correct Reference Point information is utilized by coordination of efforts with Functional Area Representatives and Input/Output Coordinator. Determines which documents require Reference Points to be added for input/output reports. Maintains pencil copies of updated county and state maps showing Reference Points. Maintains Reference Point description dictionary.

MINIMUM QUALIFICATIONS

Training and Experience: Graduation from an accredited college or university supplemented by two years of responsible experience in drafting, business or statistical methods, one year of which must have been in work with or for a highway department; or graduation from high school supplemented by six years of experience in drafting, business, or statistical methods, two years of which must have been in work with or for a highway department.

Special Knowledge, Skills and Abilities: Thorough knowledge of departmental rules and regulations. Considerable knowledge of methods and techniques used in statistical analysis of highway studies and in computer data storage and retrieval processes. Considerable knowledge of the various types of graphs and charts used to illustrate statistical data. Ability to plan, organize, assign, supervise, and inspect the work of professional and subprofessional personnel. Ability to interpret professional and technical reports and papers. Ability to work with high level engineering personnel. Ability to plan and execute work efficiently. Ability to exercise good judgment in evaluating situations and in making decisions.

Data Processing Group
Code No.
Grade 14

CLASS TITLE: Input/Output Coordinator

CHARACTERISTICS OF THE CLASS: Under general direction, surveys management procedures and practices aimed at the development and design of relatively simple systems and data processing applications.

EXAMPLE OF DUTIES: Responsible for master documentation within the UPI central group that represents all functions and documents contained within the operations of individual functional areas. Responsible for coordination of all inputs and outputs, utilizing the master documentation for insuring that a minimum amount of redundant effort occurs in the process of data manipulation. Coordinator and interface representative between Division of Data Services and multiple functional areas.

MINIMUM REQUIREMENTS

Training and Experience: Graduate of an accredited college or university supplemented by two years' experience in systems analysis. Additional systems analysis and(or) programming experience may substitute for the required education on a year-for-year basis.

Special Knowledge, Skills, and Abilities: Knowledge of data processing applications and equipment. Ability to think logically. Ability to analyze and understand business procedures. Ability to communicate effectively.

Highway and Industrial
Research Group
Code No.
Grade 14

CLASS TITLE: Functional Area Manager

CHARACTERISTICS OF THE CLASS: Under general direction, has the responsibility for manipulation of computer data to provide information required from and by divisions and offices within the Department of Transportation; and does related work as required.

EXAMPLE OF DUTIES: Assigns and supervises work load of the Functional Area Representatives. Coordinates work load with Input/Output Coordinator for computer file input and output. Devises report forms to meet data output requirements of the different user organizations. Works with Administrative Information Services to coordinate development of computer files for data storage and retrieval. Routes input requests and output reports to and from Input/Output Coordinator and to requesting users. Be able to perform all duties of a Functional Area Representative.

MINIMUM QUALIFICATIONS

Training and Experience: Graduation from an accredited college or university supplemented by three years of responsible experience in drafting, business, or statistical methods, two years of which must have been in work with or for a highway department; or graduation from high school supplemented by eight years of experience in drafting, business, or statistical methods, two years of which must have been in work with or for a highway department.

Special Knowledge, Skills and Abilities: Thorough knowledge of departmental rules and regulations. Thorough knowledge of methods and techniques used in statistical analysis of highway studies. Ability to work with high level engineering personnel. Ability to plan, organize, assign, supervise, and inspect the work of professional and subprofessional personnel.

Highway and Industrial
Research Group
Code No.
Grade 12

CLASS TITLE: Functional Area Representative

CHARACTERISTICS OF THE CLASS: Under direct supervision, has immediate charge of specific projects requiring an adequate professional background to analyze and assemble technical material to furnish essential reports to requesting agencies; have ability to understand and utilize data contained in computer storage; and does related work as required.

EXAMPLE OF DUTIES: Responsible for all operational documentation which relates to gathering and(or) retrieval of pertinent data for the area(s) which he represents. Performs tasks required in data gathering and information retrieval. Develops and maintains schedules by which data will be loaded and information retrieved. Performs whatever auditing tasks are requested by his area(s) to insure data information validity.

MINIMUM QUALIFICATIONS

Training and Experience: Graduation from an accredited college or university supplemented by two years of responsible experience in drafting, business, or statistical methods, one year of which must have been in work with or for a highway department; or graduation from high school supplemented by six years of experience in drafting, business, or statistical methods, two years of which must have been in work with or for a highway department.

Special Knowledge, Skills and Abilities: Thorough knowledge of departmental rules and regulations. Considerable knowledge of methods and techniques used in statistical analysis of highway studies and in computer data storage and retrieval processes. Considerable knowledge of the various types of graphs and charts used to illustrate statistical data. Ability to plan, organize, assign, supervise, and inspect the work of professional and subprofessional personnel. Ability to interpret professional and technical reports and papers. Ability to work with high level engineering personnel. Ability to plan and execute work efficiently. Ability to exercise good judgment in evaluating situations and in making decisions.

APPENDIX E

THREE FINANCIAL ESTIMATES

FINANCIAL ESTIMATE FOR INITIAL LOADING OF UPI CROSS-REFERENCE FILE ACCORDING TO ORGANIZATIONAL CHART NO. 1

SALARIES*		$35,600
Supervisor	$ 4,800	
1 RP Manager	4,200	
5 RP Specialists	18,000	
I/O Coordinator	3,600	
Secretary	2,600	
Clerk Typist	2,400	
EQUIPMENT		5,000
Office	5,000	
SUPPLIES		600
Office	600	
RENTALS		7,200
Office Space	1,200	
Keypunching and Data Processing	6,000	
TOTAL FOR 6 MONTHS INITIAL LOADING		48,400

*This Financial Estimate does not include the future positions of Functional Area Manager and Functional Area Representatives.

FINANCIAL ESTIMATE FOR INITIAL LOADING OF UPI CROSS-REFERENCE FILE ACCORDING TO ORGANIZATIONAL CHART NO. 2

SALARIES*		$30,800
Supervisor**	$2,400	
1 RP Manager	4,200	
5 RP Specialists	18,000	
I/O Coordinator	3,600	
Secretary	2,600	
EQUIPMENT		5,000
Office	5,000	
SUPPLIES		600
Office	600	
RENTALS		7,200
Office Space	1,200	
Keypunching and Data Processing	6,000	
TOTAL FOR 6 MONTHS INITIAL LOADING		43,600

*This financial estimate does not include the salaries for the existing positions of one-half time for the Supervisor; full time for Research Analyst, Chief Clerk, and Clerk Typist; or the future positions of Functional Area Manager and Functional Area Representatives.

**The present Supervisor would account approximately one half his time against the UPI Cross-Reference File.

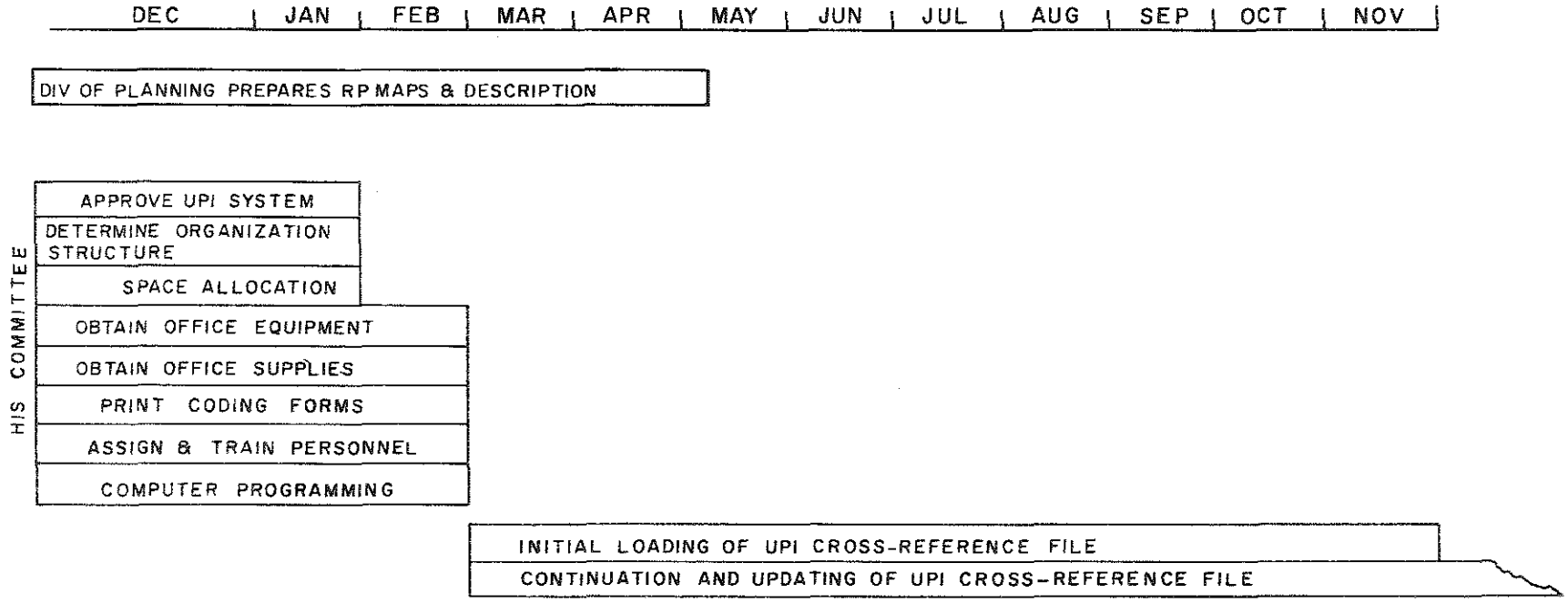
FINANCIAL ESTIMATE FOR UPDATING UPI CROSS-REFERENCE FILE

SALARIES*		50,500
Supervisor	9,600	
1 RP Manager	8,400	
2 RP Specialists	15,000	
I/O Coordinator	7,500	
Secretary	5,200	
Clerk Typist	4,800	
EQUIPMENT		300
Office Files	300	
SUPPLIES		300
Office	300	
RENTALS		6,400
Office Space	2,400	
Keypunching	4,000	
TOTAL ANNUAL COST		57,500

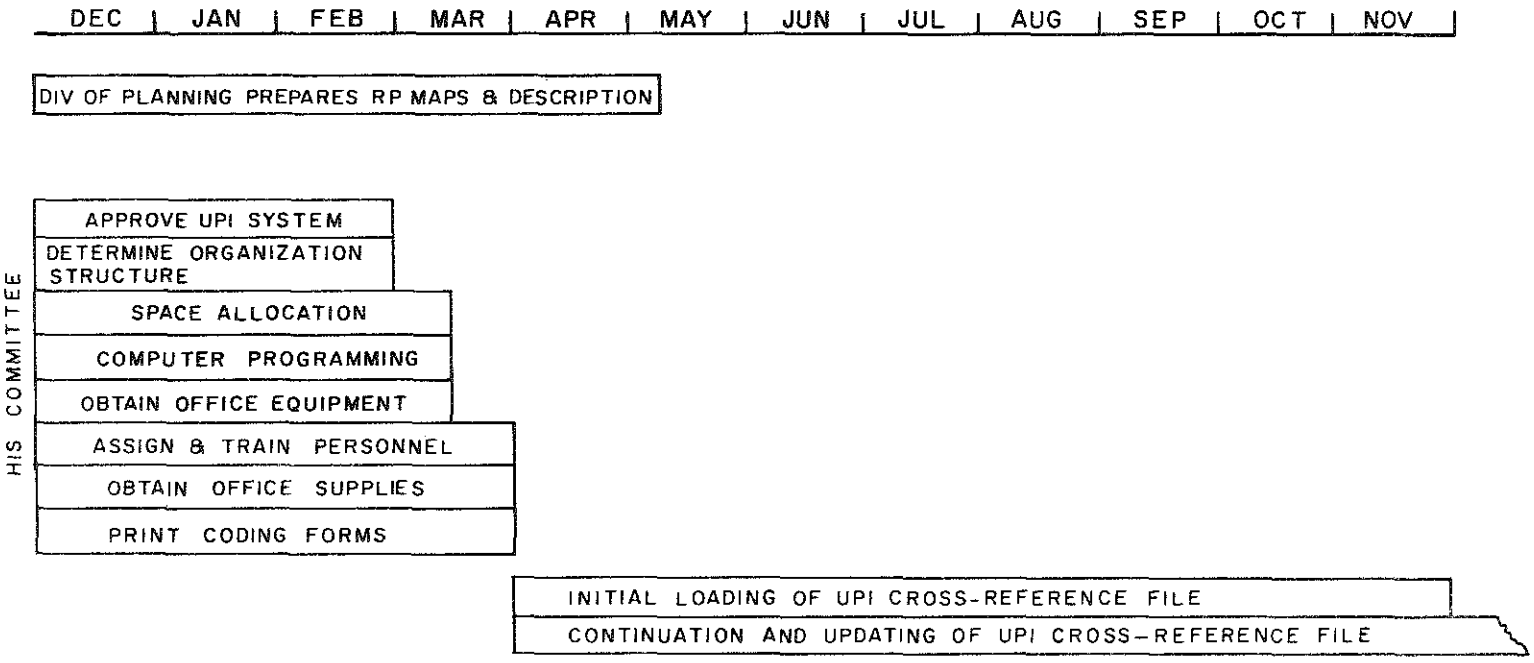
*This Financial Estimate does not include the salaries for existing positions such as Research Analyst or Chief Clerk and any future positions such as Functional Area Manager and Functional Area Representatives.

APPENDIX F

TWO TIME SCHEDULES



TIME SCHEDULE NO. 1



TIME SCHEDULE NO. 2