Lee County Board Of County Commissioners
Agenda Item Summary **Blue Sheet No. 20021146**

1. REQUESTED MOTION:

ACTION REQUESTED: Approve Change Order No. 1 to ERES Consultants (Contract 1802) for CN-01-06, Development & Implementation of a Pavement Condition Index (PCI) Network Level Pavement Management System for Lee County, in the amount of $66,192.00, for a total contract amount of $365,964.00, and approve Interlocal Agreement with City of Fort Myers. Also, approve an Addendum to the original contract clarifying dispute resolution among the County, ERES, and the City of Fort Myers.

WHY ACTION IS NECESSARY: Requires BOCC approval for Change Order, Interlocal Agreement and amendment to CIP.

WHAT ACTION ACCOMPLISHES: Allows City of Fort Myers to share in the cost of the Pavement Management System.

2. DEPARTMENTAL CATEGORY: COMMISSION DISTRICT # CW C9D	**3. MEETING DATE:** 10-29-2002

4. AGENDA:	**5. REQUIREMENT/PURPOSE:** *(Specify)*	**6. REQUESTOR OF INFORMATION:**
X CONSENT	STATUTE	A. COMMISSIONER
ADMINISTRATIVE	ORDINANCE	B. DEPARTMENT Transportation
APPEALS	ADMIN. CODE	C. DIVISION
PUBLIC	X OTHER	BY: Scott M. Gilbertson
WALK ON		
TIME REQUIRED:		

7. BACKGROUND:

On May 22, 2001, the Board of County Commissioners approved award of a Pavement Management contract to ERES Consultants (Contract 1802), CN-01-06 in the amount of $299,772.00. The City of Fort Myers has requested ERES Consultants to provide Pavement Management Services on behalf of the City in the amount of $66,192.00.

Funds will be available in: 20468330700.506510.

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
					OA	OM	Risk	GC	
10/8/02	10/8/02	NA	CAO 10/8		10-16-02	10/17/02	10/17/02	10/17/02	10.8.02

10. COMMISSION ACTION:

____ APPROVED
____ DENIED
____ DEFERRED
____ OTHER

Rec. by CoAtty
Date: 10/8/02
Time: 2:27 pm
Forwarded To:

RECEIVED BY COUNTY ADMIN. RK
10-15-02
11:45
COUNTY ADMIN. FORWARDED TO:
10/17

S:\DOCUMENT\Blue Sheet\2002\Pavement Condition Index-City of Ft Myers.doc

CITY OF FORT MYERS, FLORIDA

CITY CLERK'S OFFICE
PO DRAWER 2217
FORT MYERS, FL 33902
239-332-6740 TEL
239-461-2650 FAX

September 24, 2002

Mr. Randy Cerchie, Construction Manager
Lee County Department of Transportation
1500 Monroe Street
Fort Myers, FL 33901

Dear Mr. Cerchie:

Enclosed herewith are two originals of the Interlocal Agreement between Lee County and the City of Fort Myers for Pavement Management System Contractor. This agreement was approved by City Council at their regular meeting held on September 3, 2002.

Please have both originals signed by the Chairman of the Board of County Commissioners of Lee County, retain one original for your file and return the other original to my attention.

Yours truly,

CITY OF FORT MYERS

Marie Adams

Marie Adams, CMC
City Clerk

MA:mf

Enclosure

RECEIVED
SEP 26 2002

INTERLOCAL AGREEMENT
BETWEEN
LEE COUNTY AND THE CITY OF FORT MYERS
REGARDING PAVEMENT MANAGEMENT SYSTEM CONTRACTOR

THIS INTERLOCAL AGREEMENT is made and entered into this ___ day of _____, 2002, by and between **LEE COUNTY**, a political subdivision and charter county of the State of Florida, hereinafter referred to as "COUNTY", and the **CITY OF FORT MYERS**, a municipal corporation of the State of Florida, hereinafter referred to as "CITY", collectively, the "Parties" hereto.

WITNESSETH:

WHEREAS, both the COUNTY and the CITY are duly empowered pursuant to Florida Statutes, in particular Section 163.01, to enter into interlocal agreements for the sharing of certain governmental powers and obligations; and,

WHEREAS, Pavement Management Systems are necessary to evaluate and plan roadway improvements; and,

WHEREAS, the CITY desires to investigate all of its pavement conditions to provide a more effective evaluation for roadway improvements within the CITY; and,

WHEREAS, the COUNTY Department of Transportation, through its Pavement Management Consultant, ERES Consultants, is capable of assisting the CITY; and,

WHEREAS, the Parties find that entering into this Interlocal Agreement serves a public purpose, is to the public's benefit, and is in the public's interest.

NOW THEREFORE, in consideration of the foregoing and the mutual covenants contained herein, the COUNTY and the CITY agree as follows:

1. The recitals contained above are incorporated into this Interlocal Agreement as if set forth herein at length.

2. It is the purpose and intent of this Interlocal Agreement to define the terms and conditions under which the CITY will provide to the COUNTY, certain funding for a Pavement Management System.

All terms and conditions of this Interlocal Agreement shall be interpreted in a manner consistent with, and in furtherance of, the purpose set forth above.

3. COUNTY Pavement Management Consultant, ERES Consultants, pursuant to the Addendum to the Contract No. 1802, CN-01-06, agrees to provide and perform the necessary services to the CITY as set forth in Exhibit "A" and made a part of this Interlocal Agreement.

4. The CITY will pay to the COUNTY a sum not-to-exceed Sixty-Six Thousand, One Hundred Ninety-Two Dollars and 00/100 ($66,192.00) for the Pavement Management System consultation set out at Exhibit "A", within ten (10) days of executing this Interlocal Agreement.

5. The COUNTY will process the Consultant invoices, for no more than a total of Sixty-Six Thousand, One Hundred Ninety-Two Dollars and 00/100 ($66,192.00), with the approval of the CITY.

6. Any dispute, conflict or disagreement that may arise between the CITY and ERES Consultants, shall not be mediated nor resolved by the COUNTY, and shall not in any way have any force or effect upon the Agreement between the COUNTY and the

Consultant.

7. This Interlocal Agreement shall begin upon the execution of the Agreement by both Parties, and shall continue for a period of one year or until the conclusion of the project, whichever is later.

8. Either party may terminate this Interlocal Agreement by giving the other party ninety (90) days written notice, with the appropriate financial reconciliation between the Parties, if any.

9. This Interlocal Agreement may only be amended in writing and duly executed by the COUNTY and the CITY with the same formalities as this Agreement.

10. Any notices or other documents permitted or required to be delivered pursuant to this Interlocal Agreement shall be delivered to the COUNTY at the Department of Transportation and to the CITY at the Office of the City Clerk.

11. This Interlocal Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

12. The Parties agree that by execution of this Agreement, no party will be deemed to have waived its statutory defense of sovereign immunity, or increased its limits of liability as provided for by Florida Statutes.

IN WITNESS WHEREOF, the Parties hereto have caused the execution hereby by their duly authorized officials on the date set forth above.

ATTEST:

By: Marie Adams
City Clerk

CITY OF FORT MYERS

By: _____
Mayor

APPROVED AS TO FORM:

By: _____
for City Attorney

ATTEST: CHARLIE GREEN
CLERK OF COURTS

By: _____
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA

By: _____
Chairman

APPROVED AS TO FORM:

By: _____
Office of the County Attorney

ADDENDUM TO 1802, CN-01-06, BETWEEN LEE COUNTY AND ERES CONSULTANTS

THIS AMENDMENT to the Contractual Agreement (1802, CN-01-06) dated May 22, 20 01, by and between **LEE COUNTY**, a political subdivision and charter county of the State of Florida, hereinafter referred to as "COUNTY", and **ERES CONSULTANTS**, a division of Applied Research Associates, Inc., whose address is 505 West University Avenue, Champaign, Illinois 61820, hereinafter referred to as "ERES", collectively, the "Parties" hereto.

RECITALS

WHEREAS, ERES and the COUNTY entered into an Agreement regarding their respective duties and responsibilities for Pavement Management System Agreement, 1802, CN-01-06; and,

WHEREAS, it is in the public's interest for the COUNTY to amend the Agreement dated May 22, 2001; and,

WHEREAS, ERES and the COUNTY desire to amend the Agreement dated May 22, 2001, 1802, CN-01-06, attached hereto as Exhibit "A", to provide for additional funding from, and services to, the City of Fort Myers pursuant to the attached Interlocal Agreement (No. _____).

NOW THEREFORE, in consideration of the above premises and other good and valuable consideration, the sufficiency of which is hereby acknowledged by the Parties, ERES and the COUNTY hereby agree to amend this Agreement as follows:

1. The Recitals set forth above are incorporated into the terms of this Agreement as if set out herein at length.

2. This Agreement is hereby amended as follows, with underlined language being the Amendment:

> ERES agrees to provide and perform the necessary Pavement Management System services as set forth in Exhibit "B" on behalf of the City of Fort Myers for a sum not to exceed Sixty-Six Thousand, One Hundred Ninety-Two Dollars and 00/100 ($66,192.00).
>
> The COUNTY will process ERES' invoices with the approval of the City for payment.
>
> Any dispute, conflict or disagreement that may arise between the City and ERES regarding performance of services in Exhibit "B" and any payment hereof will not be mediated or resolved by the COUNTY, and will not in any way have any force or effect on the COUNTY'S Agreement (1802, CN-01-06) with ERES.

3. All of the remaining terms in the Agreement dated May 22, 2001, 1802, CN-01-06, attached hereto, remain the same.

IN WITNESS WHEREOF, the Parties have set their hands and seals on the day and year first written above.

ERES CONSULTANTS, a division of Applied Research Associates, Inc.

By: _____

Name: Curt A. Beckemeyer, P.E.

Its: Division Manager

SWORN TO AND SUBSCRIBED before me this 10th day of October, 2002 by Curt A. Beckemeyer (name of person making statement) who is personally known to me or has produced _____ (type of identification) as identification.

_____
(Signature of person taking acknowledgment)

_____
(Name typed, printed, or stamped)

OFFICIAL SEAL
DEBRA L. TIFFAN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 4/06/04

LEE COUNTY PROFESSIONAL SERVICE/SERVICE PROVIDER AGREEMENT
CHANGE ORDER/SUPPLEMENTAL TASK AUTHORIZATION

☒ Change Order NO.: 1
☐ Supplemental Task Authorization

(A Change Order or Supplemental Task Authorization Requires Approval by the Department Director for Expenditures Under $25,000 or Approval by the County Manager for Expenditures Between $25,000 and $50,000 or Approval by the Board of County Commissioners for Expenditures over $50,000)

CONTRACT/PROJECT NAME: Development & Implementation of a Pavement Condition Index Network Level Payement Management System for Lee County

CONSULTANT: ERES Consultants PROJECT NO.: _____

SOLICIT NO.: CN-01-06 CONTRACT NO.: 1802 ACCOUNT NO.: _____

REQUESTED BY: DOT DATE OF REQUEST: 10/1/02

Upon the completion and execution of this Change Order or Supplemental Task Authorization by both parties the Consultant/Provider is authorized to and shall proceed with the following:

EXHIBIT "CO/STA-A: SCOPE OF PROFESSIONAL SERVICE: DATED: 10/1/02

EXHIBIT "CO/STA-B: COMPENSATION & METHOD OF PAYMENT: DATED: 10/1/02

EXHIBIT "CO/STA-C: TIME AND SCHEDULE OF PERFORMANCE: DATED: 10/1/02

EXHIBIT "CO/STA-D: CONSULTANT'S/PROVIDERS ASSOCIATED SUB-CONSULTANT(S)/SUB-CONTRACTORS: DATED: 10/1/02

EXHIBIT "CO/STA-E: PROJECT GUIDELINES AND CRITERIA: DATED: 10/1/02

It is understood and agreed that the acceptance of this modification by the CONSULTANT/PROVIDER constitutes an accord and satisfaction.

RECOMMENDED:

By: _____ 10/8/02
Department Director Date

By: _____ 10/7/02
Contracts Mgmt Date

APPROVED:

By: _____
*County Attorney's Office Date

*County Attorney signature needed for **over** Board level expenditures only.

ACCEPTED:

By: _____
Consultant/Provider
Curt A. Beckemeyer, PE
Division Manager
Date Accepted: 10/3/2002

Corporate Seal

ERES CONSULTANTS
A Division of Applied Research Associates, Inc.
505 W. University Ave.
Champaign, IL 61820

COUNTY APPROVAL:

By: _____
Department Director
(Under $25,000)
Date Approved: _____

By: _____
County Manager (Between
($25,000 and under $50,000)
Date Approved: _____

By: _____
Chairman
Board of County Commissioners
Date Approved: _____

CMO:023

☒ CHANGE ORDER AGREEMENT No. 1
or
☐ SUPPLEMENTAL TASK AUTHORIZATION No._____

EXHIBIT "CO/STA-A"

Date: 10/1/02

SCOPE OF PROFESSIONAL SERVICES

for Development & Implementation of a Pavement Condition Index (PCI) Network Level Pavement Management System
(Enter Project Name from Page 1 of the Change Order or Supplemental Task Authorization)

SECTION 1.00 CHANGE(S) TO PROFESSIONAL SERVICES

The "Scope of Professional Services" as set forth in Exhibit "A" of the Professional Services Agreement, or Service Provider Agreement, referred to hereinbefore is hereby supplemented, changed or authorized, so that the CONSULTANT or SERVICE PROVIDER, shall provide and perform the following professional services, tasks, or work as a supplement to, change to, or authorized to, the scope of services previously agreed to and authorized:

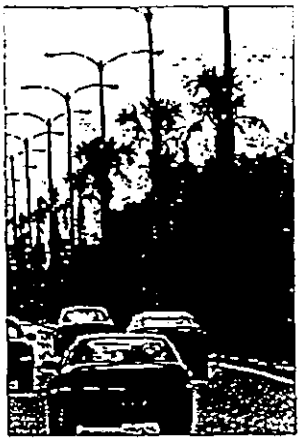
Increase the contract to include the additional work necessary to perform Pavement Management System service for the City of Ft Myers (under the attached interlocal Agreement). As per the attached Exhibit A, Proposal dated February 26,2002.

*Attach additional pages, if needed.

EXHIBIT A – FEBRUARY 26, 2002

A Proposal for

Development & Implementation of a Pavement Condition Index (PCI) Network Level Pavement Management System for the City of Ft. Myers, Florida



February 26, 2002

Prepared for

The City of Ft. Myers, Florida

Submitted by

ERES CONSULTANTS

A Division of

EXHIBIT A – FEBRUARY 26, 2002

Development & Implementation of a Pavement Condition Index (PCI) Network Level Pavement Management System For the City of Ft. Myers, Florida

PROPOSAL

Prepared for:

The City of Ft. Myers
Public Works Department
Engineering Division
2200 Second Street, 2nd Floor
Fort Myers, Florida 33902
(941) 332-6820

Prepared by:

ERES Consultants, a division of Applied Research Associates, Inc.
505 West University Avenue
Champaign, Illinois 61820
Phone: (217) 356-4500
Facsimile: (217) 356-3088

February 26, 2002
ERES Proposal No. 6945 (revised)

EXHIBIT A – FEBRUARY 26, 2002

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EXHIBIT A – FEBRUARY 26, 2002

1. PROJECT UNDERSTANDING

The City of Ft. Myers's Goals and Objectives

The City of Ft. Myers currently has maintenance responsibilities for approximately 314 centerline miles of roadway and many other related assets. The roadway network consists of local streets to major arterial routes and is comprised almost entirely of asphalt concrete (AC) pavement. The City of Ft. Myers's typical maintenance and roadway improvement activities include pavement resurfacing, pothole patching, and shoulder regrading. The City of Ft. Myers is now looking to enhance its overall asset management efforts with the implementation of a pavement management system that will:

- Warehouse multiple years of pavement information (construction records, materials information, traffic data, deflection testing results, and condition information) on a section-by-section basis.
- Project future pavement conditions using "pavement family" techniques.
- Project future pavement rehabilitation needs (short- and long-term needs) based on pavement conditions and any other criteria specified by the City.
- Provide detailed reports.
- Provide a logical basis for identifying and selecting roadway improvement projects.
- Link with the County's existing geographical information system (GIS) to provide graphical summaries of data and analysis results. Lee County currently possesses an extensive and widely used GIS, and it is important that the new pavement management system integrates with the GIS.
- Be easy to use and be located within the City's offices.

To achieve these pavement management goals, The City of Ft. Myers is looking for assistance from a pavement engineering consultant with experience and expertise in pavement management systems for local transportation agencies. Specifically, the City is seeking assistance to implement an efficient system that can be operated using the in-house staff and resources. Major tasks required for the initial implementation effort include the following:

- Inventory of roadways.
- Research historical records (construction and maintenance).
- Determine and document the last construction date for each roadway.
- Collect pavement condition data.
- Analyze the collected survey data.
- Upload data into the selected pavement/asset management software.
- Prepare a report documenting the implementation results.
- Prepare initial output reports from the new system.
- Integrate the system with the City of Ft. Myers's existing GIS.
- Implement (install) the system at the City of Ft. Myers's offices.
- Provide the City of Ft. Myers staff with training.

EXHIBIT A – FEBRUARY 26, 2002

Project Approach

To avoid the pitfalls that plague many local government pavement management system implementations, ERES is utilizing a two-phase approach to implementing Lee County's pavement management system. During Phase 1 of the project, ERES conducted a needs assessment for Lee County that accomplished the following objectives considered critical to the overall success of the implementation effort:

- Thorough assessment of each agency's current pavement management practices to identify the basic decision-making process, lines of communication, and potential areas of improvement. Regardless of whether an agency has a "true" pavement management system, it has a basic process for managing its pavement network.
- Assessment of each agency's information management systems so that the proposed pavement management system integrates into the existing systems.
- Selection of the software that best meets each agency's needs. All too often, agencies arbitrarily select pavement management software without a comprehensive evaluation of how well it fits their pavement management process. As a result, the software tools are not used frequently and quickly become antiquated and abandoned.
- Selection of a condition survey process that best meets each agency's needs. Many agencies use the traditional Pavement Condition Index (PCI) approach, as it is a widely recognized methodology. Unfortunately, the PCI approach is a detailed survey process that is too extensive and costly to be used routinely by many local agencies. As a result, condition data is not updated regularly, and the information within the system becomes outdated quickly and produces inaccurate results.
- Immediate involvement of City staff in the implementation effort to ensure proper buy-in from the staff. Without staff buy-in, the system is not likely to be used for an extended period of time.

In this needs assessment, the ERES team worked closely with Lee County and involved local municipalities, including the City of Ft. Myers, to define current pavement management processes, highlight what typically works well, and identify what could be done to make the overall process even better. As part of the needs assessment effort, ERES evaluated the data requirements and decision-making processes for Lee County, Ft. Myers, and other neighboring cities. The results of this evaluation are presented in the Needs Assessment Report dated September 21, 2001, and allowed the project team to:

- Identify Cartegraph's PAVEMENTView Plus pavement management software as the best available software to meet the pavement management needs of Lee County and its neighboring municipalities.
- Identify manual data collection techniques as the most cost-effective condition survey methodology.
- Identify the critical pavement management data elements.

With the Phase 1 needs assessment successfully completed, the ERES team has embarked on the actual pavement management system implementation for Lee County. Furthermore, the ERES team is prepared to implement a similar pavement management system for the City of Ft. Myers and other surrounding communities. Provided in the remaining sections of this proposal are a summary of the qualifications of the ERES team, a detailed outline of our approach to implementing Ft. Myers' pavement management system, and summaries of the associated project costs and schedule.

2. PROJECT PERSONNEL PLAN

Introduction

Phase 2 of this project will involve collecting data, customizing software, integrating with Lee County's GIS, developing a pavement rehabilitation program, and training. To ensure the success of this effort, ERES has brought together a team of pavement engineers, information technology (IT) experts, GIS specialists, and technicians who are experienced in these areas. In addition, the ERES team includes two consultants that will provide the team with local expertise and manpower.

ERES will also utilize the City's assistance in gathering/compiling the roadway information and conducting the pavement condition surveys. Staff involvement in the project will allow the City to maximize the use of its staffing resources, minimize consultant costs, and help ensure staff "buy-in" of the pavement management system. The ERES team will also turn to the City to facilitate interaction with Lee County, particularly its GIS staff. Lee County is currently developing a comprehensive county-wide GIS map and database that includes all of the roadways within Lee County (both County maintained and non-County maintained). ERES plans to use the County's GIS map and database for the Ft. Myers implementation and will need the City to facilitate official procurement of these items.

Proposed Project Team

The organizational chart for the ERES team is provided in figure 2.1. Additional discussions about the proposed project team, each member's role on the project, and each member's qualifications are provided in the paragraphs that follow.

Paul Foxworthy, Ph.D., P.E. (ERES)

Paul Foxworthy is the ERES team's Project Principal and Project Manager. He has over 28 years of experience in highway pavement design, pavement materials testing, nondestructive pavement evaluation, and pavement management system implementation. His primary expertise centers around the use of the Falling Weight Deflectometer (FWD) and ground penetrating radar (GPR) for pavement rehabilitation and Cartegraph's PAVEMENTView Plus for network pavement management system implementation. He has implemented PAVEMENTView Plus for the cities of Manhattan, Kansas, Jennings, Missouri, and Merced City, California. In addition, he has used both manual and automated surface distress data collection techniques to implement pavement management systems.

Richard Speir, P.E. (ERES)

Mr. Speir will serve as the ERES team's Quality Control and Assurance Manager. He joined ERES in 2001, and he has 15 years of experience in project engineering and management, including planning, quality control, and design. He is also well-versed in operations management and administration, including pavement management system implementation and developing programs for maintenance, repair, and construction. His pavement management surveying and systems implementation experience includes:

- Pavement management call-in services for the Port Authority of New York & New Jersey
- Pavement management implementation for South Western Regional Planning Agency, Connecticut for the towns of Greenwich, Stamford, Westport and Darien
- Pavement management system implementation for all roadways at LaGuardia Airport
- Pavement management system implementations for the FHWA's National Park Service

William R. Weiss, P.E. (ERES)

Mr. Weiss is a Senior Engineer in ERES's Pavement Management group. He routinely performs pavement surface condition assessment, pavement management system implementation, and maintenance and repair recommendations. Mr. Weiss coordinates pavement condition survey data collection activities and oversees the establishment of pavement management databases. Recent projects include the pavement management system implementations for Griffin, Georgia; Peoria, Arizona; Livonia, Michigan; and the Illinois State Toll Highway Authority.

Jacob D. Walter (ERES)

Mr. Walter provides database setup, implementation, management, and administration services on ERES's pavement management projects. He also provides similar databases for the North Central region of the FHWA's LTPP program and assists with ERES's pavement condition surveys. Mr. Walter is currently writing software for the processing of PCI-based distress data and assisting in the development of a pavement management system for the Illinois State Toll Highway Authority. He also established the databases and GIS mapping links for both the ISTHA and the City of Griffin, Georgia.

Nasir G. Gharaibeh, Ph.D. (ERES)

Dr. Gharaibeh is a Senior Engineer at ERES, and he has extensive experience in database management systems and GIS. For the Illinois State Toll Highway Authority, Dr. Gharaibeh is modifying and implementing the pavement management software, calibrating performance prediction models, and providing training to agency personnel. For the national Development of the 2002 Guide for Design of New and Rehabilitated Pavement Structures project, Dr. Gharaibeh is planning, designing, and constructing a user-friendly software system that automates the entire pavement design process.

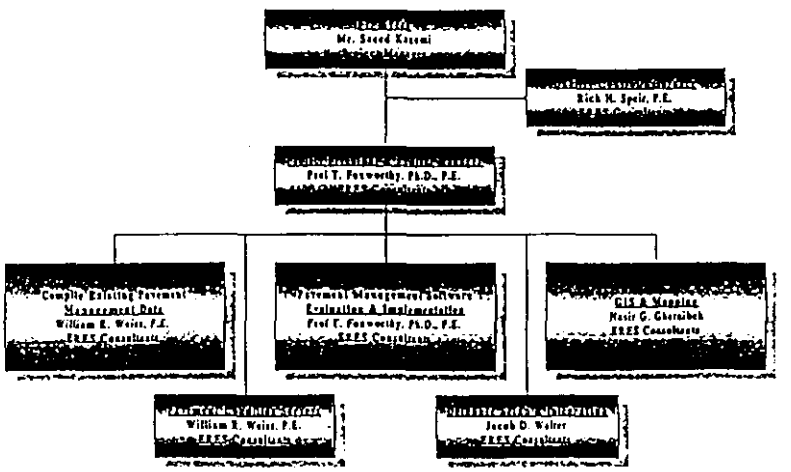

Figure 2.1 Organizational chart.

EXHIBIT A – FEBRUARY 26, 2002

3. PROJECT WORK PLAN

Introduction

As outlined in section 1, several tasks must be completed to successfully implement the City of Ft. Myers's pavement management system. The work will require several data collection activities, implementing and customizing the pavement management software, and integrating the data and systems with the current information systems (GIS, databases, etc.). Provided in the paragraphs that follow are task-by-task summaries of ERES's proposed scope of services for Phase 2 of the pavement management system implementation. Included in the task descriptions are brief summaries of the anticipated or potential roles of the ERES staff and the City of Ft. Myers staff.

Pavement Management System Implementation

A Phase 1 pavement management system needs assessment was recently completed by ERES for Lee County, and the City of Ft. Myers has accepted the proposed approach for implementing its pavement management system. The ERES team now proposes to commence with the system implementation effort, which includes the following major tasks:

- Gathering/compiling the roadway information (e.g., construction history, traffic, roadway class).
- Sectioning the City of Ft. Myers's roadway network.
- Developing the database of roadway sections.
- Conducting the pavement condition survey
- Uploading the roadway information and condition survey data into the pavement management database.
- Developing pavement performance models and treatment matrices (customization of software to the City of Ft. Myers).
- Linking the pavement management database to the Lee County GIS.
- Developing an initial multi-year pavement rehabilitation program.
- Installing the pavement management software at the City of Ft. Myers's office.
- Providing the City of Ft. Myers staff with training on using the pavement management system.

Detailed summaries of each of these activities are included in the task-by-task descriptions provided in the paragraphs that follow.

Task 2a. Compile the Available Roadway Information

In Task 2a, the ERES team, with assistance from the Lee County GIS and other staff, will compile the City's available roadway data. The data will be acquired from sources made available by the County (e.g., digital files, construction plans, reports). The ERES team will compile the information into a Microsoft Excel® file that will be uploaded into the PAVEMENTView Plus pavement management software. The desired inventory information to be compiled for the pavement management system includes:

- Roadway composition
- Commissioner district
- Date of last resurfacing
- Segment length

- Segment width
- Number of lanes
- Curb and gutter locations
- Sidewalk locations
- Designated evacuation routes
- Traffic (ADT, % trucks, and growth rates)
- Occupancy
- City boundaries and other jurisdictions

Task Leader: ERES will take the lead role in collecting and compiling the available roadway information with support from the City of Ft. Myers.

Task 2b. Section the Roadway Network into Management Units

In Task 2b, ERES will work with the City of Ft. Myers to obtain a copy of the latest Lee County GIS map, GIS database, and construction records to section the roadway network into pavement management units that will be used to link inventory and condition data. The County is currently finalizing this map and the associated map sectioning, and the resulting product will form the basis of the City of Ft. Myers pavement management system implementation.

The roadway network will be delineated into a three-tier hierarchy. First, the entire network will be divided into *zones* based on the City's commissioner districts. Second, each zone will be divided into roadway *branches*, with each road considered a branch. Finally, each branch will be divided into roadway *segments* that will consist of a junction-to-junction (block to block) delineation of the roadway network. Some subdividing of certain segments may be required because each segment should be similar in composition, condition, and use. An example of the proposed sectioning scheme is shown in table 3.1.

Table 3.1. Potential hierarchy for pavement management sectioning.

Actual Entity	Pavement management hierarchy	Pavement management name
Ortiz Avenue	Zone	ORTIZ_AV
Ortiz Avenue between Ballard Road and Tice Street	Roadway branch	ORTIZ_AV BLD_TICE
Segment A of the portion of Ortiz Avenue between Ballard Road and Tice Street	Pavement Management segment	ORTIZ_AV BLD_TICE A

Network sectioning serves a vital role in data collection and analysis. The roadway segment will be the common link between all of the assets evaluated in this project, and it will be the element in which users reference information such as:

- What are the pavement conditions on a given roadway segment?
- When was the roadway segment originally constructed, and what was the original cross section?
- When was the roadway segment last resurfaced? When is the next overlay scheduled for a given pavement management segment?
- What are traffic volumes on a particular segment?

Task Leader: ERES will take the lead role in sectioning the City of Ft. Myers roadway network, with significant input and support from the County GIS staff. ERES understands that the County GIS staff will section the GIS map, based on guidance provided by ERES.

Task 2c. Develop Database of Ft. Myers Roadways

In Task 2c, ERES will work with the City staff to develop a database of the City's roadways that includes all of the information compiled in Task 2a. As a result of the County's advanced GIS, developing the roadway database for the pavement management system should be a fairly straightforward effort that can be completed with some minor assistance from the Lee County GIS staff and some guidance from ERES. For the purpose of this proposed project, ERES requests that the City organize and coordinate the interaction between ERES and Lee County.

Once completed, the pavement management database will serve as the basis of the implementation effort. The database will be used to warehouse the roadway information collected in Task 2a, as well as to store the pavement condition information that will be collected as part of the implementation effort. Furthermore, the pavement management system will ultimately access the database to generate reports, conduct analyses, and link to the County's GIS.

Task Leader: ERES Consultants will take the lead role in the database development effort, with assistance from the City of Ft. Myers in coordinating interaction between ERES staff and Lee County GIS staff.

Task 2d. Implement Pavement Condition Survey Protocols

A combination of "windshield" and "walking" data collection methods will be employed during the implementation of the City of Ft. Myers's pavement management system using City personnel that have been trained by ERES personnel. ERES has developed a visual condition survey guide containing both text guidelines and color photographs to aid the survey teams in assessing roadway conditions. The survey teams will use these simplified PCI procedures to identify predominant distress types, severities, and extents on the approximate 314 miles of paved roads in Ft. Myers.

The following data collection protocols will be used:

- The approximate 314 miles of urban local, collector, and arterial roads in the City will require a rigorous application of the simplified PCI survey procedure for surface distress identification and will be surveyed using two-person crews per vehicle. The productivity of these crews, however, is anticipated to be only about 3 miles per hour because of the expected traffic congestion on these roads during the winter months. In some cases, the inspection will be more efficient if both crew members walk the roads to collect the data.

- The four most predominant pavement surface distress data elements from the following list, along with their extents and severities, will be collected on the 314-mile paved road network:

    - Alligator cracking
    - Block cracking
    - Edge cracking
    - Longitudinal cracking and transverse cracking

- Reflection cracking
- Patching
- Potholes
- Rutting
- Roughness
- Shoving
- Bleeding
- Polished aggregate
- Weathering/raveling
- Lane/shoulder drop-off and lane/shoulder separation
- High shoulders

Task Leader: ERES will take the lead in customizing the simplified-PCI manual for the City of Ft. Myers. ERES will also fully train City technicians in the identification, measurement, and recording of pavement surface distress using simplified PCI procedures.

Task 2e. Conduct a Pavement Condition Survey on the Roadway Network

After the completion of Tasks 2a through 2d, the ERES team will conduct a visual survey of the approximately 314 centerline miles of the City of Ft. Myers-maintained roads. Field survey crews will conduct the pavement surveys using the survey guides, protocols, and training accomplished in Task 2d.

The surveys will be performed using the survey guides, measuring wheels, and handheld computers for ease of data entry and transfer. We envision that the field survey work can be performed without any traffic control, and we have not included any traffic control costs in this proposal. If necessary, we assume that the City will provide any needed traffic control.

No physical testing of the pavement (e.g., coring, soil borings, deflection testing) is planned for this project. ERES's approach is to perform only a visual condition survey of the pavements and to use the survey results to generate a multi-year pavement rehabilitation program and to identify candidate roadway segments for rehabilitation. The condition surveys provide a wealth of information about the pavement conditions and the likely causes of any deterioration, and the visual survey results are more than adequate to conduct network-level planning.

Task Leader: ERES will take the lead role in managing the condition survey effort and provide a technician to work with a City of Ft. Myers technician to complete the approximately 314 centerline miles of the survey. It is anticipated that the City of Ft. Myers will contribute at least 150 labor hours toward this data collection effort.

Task 2f. Upload Inventory and Survey Data into Software Databases

In Task 2f, ERES will upload the distress survey data and the roadway inventory information into the PAVEMENTView Plus databases. The City of Ft. Myers will then be able to access this information easily and logically via the MAPDirector software interface.

Task Leader: ERES Consultants will take the lead role in uploading the pavement management data into the pavement management database.

Task 2g. Customize Pavement Management Software

ERES will work closely with the Lee County staff as part of that project to customize the engineering analysis models in the PAVEMENTView Plus pavement management software so that they accurately incorporate the County's maintenance and rehabilitation practices and anticipated funding levels. ERES will then incorporate these same models into the City of Ft. Myers PAVEMENTview Plus database.

The following paragraphs describe the steps that ERES will take to fully customize the software to meet the County's needs. The results from the Lee County effort will also be adopted for the City of Ft. Myers.

Develop Pavement Performance Models: ERES will develop pavement performance models based on the pavement condition data collected in Task 2e. The performance modeling will use the pavement "family class" approach, where a "family class" is defined as a group of pavements with similar composition and use. The final models will be stored in the PAVEMENTView Plus pavement management software.

Develop Maintenance, Repair, and Rehabilitation (MRR) Activity Selection Criteria: The objective of this step is to establish a table of realistic MRR activities that can be applied to the various pavement family classes based on the amount and type of distress present in the pavement section. To do this, ERES will use the following procedure:

1. Prepare a preliminary list of MRR activities that can be applied to the different pavement family classes based on input from Lee County and the City of Ft. Myers and ERES's experience.
2. Submit this list to Lee County and the City of Ft. Myers for review.
3. Schedule a customization meeting with Lee County and the City of Ft. Myers to establish the final MRR decision matrix. During this meeting, the timing, cost, and anticipated benefit of applying a certain activity to the various pavement family classes will be established.
4. Integrate the MRR decision matrix into the selected software system.

Establish Budget Scenarios and Work Priorities: During the customization process, ERES will define the different budgeting scenarios and priorities that the City of Ft. Myers wants to use in the analyses. This information will be gathered during the records review, customization meeting, and through follow-up interviews and contacts with City personnel.

Task Leader: ERES will take the lead role in customizing the pavement management software, with input from the City of Ft. Myers.

Task 2h. Develop the Multi-Year Pavement MRR Plan

The multi-year MRR program will be prepared using the simulation capabilities of PAVEMENTView Plus. This software package will allow the City of Ft. Myers to generate several different budgeting scenarios that effectively illustrate a) the adverse effect delayed rehabilitation would have on pavement condition or b) the benefits of applying an activity in a timely manner. To accomplish this, PAVEMENTView Plus will select a single activity from a list of feasible alternatives to repair a given pavement section. PAVEMENTView Plus uses a benefit/cost analysis to evaluate not only the additional pavement life anticipated by the application of an activity, but also the change in condition provided by that activity. The result is a benefit/cost ratio that can be used to rank activities based on their overall cost-effectiveness to an agency.

To accommodate realistic funding scenarios and exceptions to standard funding procedures, PAVEMENTView Plus also allows the selections to be overridden (or filtered) in cases where political or managerial factors prohibit the selection of the most cost-effective activity, or where projects were already "in the pipeline" prior to implementing the program. The feasible alternatives for each segment are evaluated on an automated life cycle benefit/cost analysis and then ranked in order from the most beneficial to the least beneficial, based on the pavement segment's priority among other pavement segments and actual dollars available. Based on user input, budget estimates, and the prioritization scheme, the projects are ranked from the highest benefit/cost ratio to the lowest for each of the years in the budget analysis.

An initial MRR program will be prepared under the assumption of an unlimited budget. This plan will identify the optimum time to repair each segment, regardless of its level of importance, its size, or where it is situated relative to other segments that may or may not have been triggered for repair. The results from this analysis will provide interesting insight into where each pavement segment currently lies in the deterioration curve; however, it is not realistic from an operational or budgetary viewpoint.

A "no available funding" scenario will also be developed to illustrate how Ft. Myers's roadway network will deteriorate if not properly maintained. Additional repair programs will be generated using a range of more realistic annual budget levels. The additional scenarios will also take into account projects that have already been committed by the City during the analysis period.

Task Leader: ERES will take the lead role in developing the multi-year pavement MRR plan, with input and support from the City of Ft. Myers.

Task 2i. Develop GIS Mapping Link

ERES will be working with the Lee County GIS staff as part of that separate project to link their pavement management system database to their existing GIS map using ArcView®. When linking the databases to the map, the key linking element will be the roadway segments that are developed in Task 2b. As part of this effort, ERES will coordinate with the County's GIS staff to modify the current GIS map to create roadway segments that match those developed in Task 2b. These roadway segments will be the map element that users click on to access the associated pavement information. The modified GIS map will eventually serve as a map layer in the County's GIS software.

As the City is fully aware, the benefit of linking the electronic maps to the pavement management database is twofold. First, it provides the ability to generate color maps for information presentation. Second, it provides instant access to pavement section information by simply clicking on the pavement sections as they are displayed on the GIS map. Figure 3.1 provides an example of the mapping outputs that the City will be able to generate using the pavement management software and the ArcView® software.

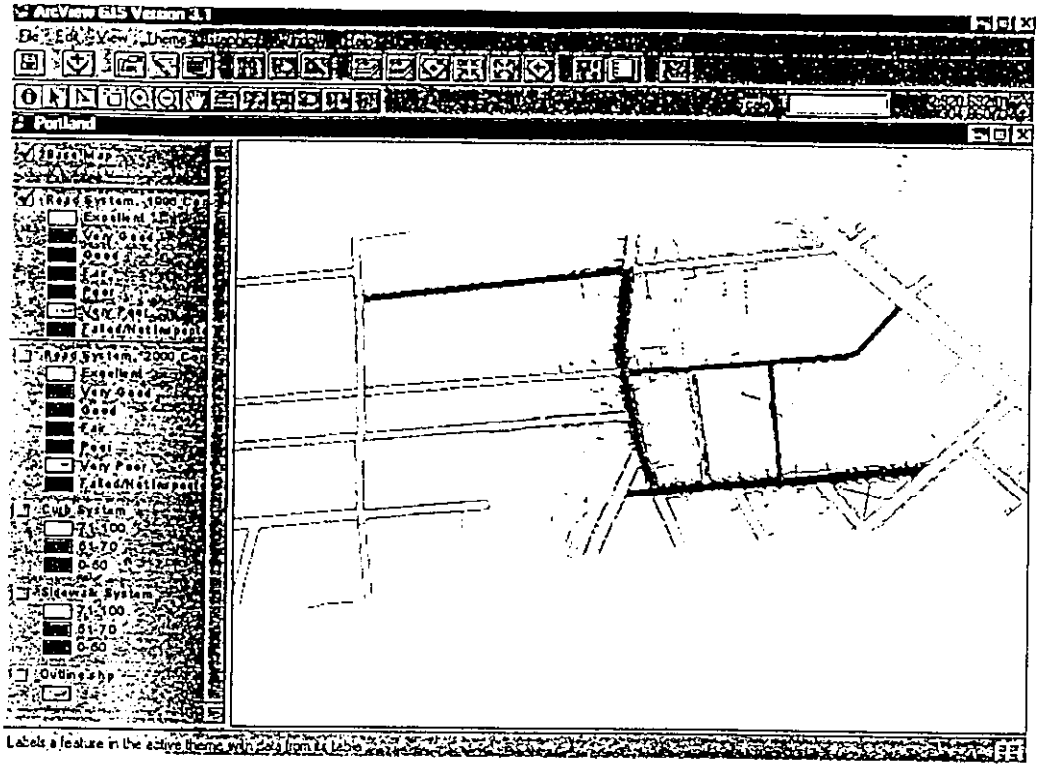

Figure 3.1. Example of mapping output from ArcView®.

Task Leader: ERES will work with the City of Ft. Myers' staff to develop their GIS link under a cooperative agreement between the City and County.

Task 2j. Generate Final Implementation Report

A summary report will be delivered at the completion of the project. The report will document the implementation process and results. Appendixes will also be included that contain pavement management system-generated reports and maps showing information on inventory, pavement condition, performance models, maintenance and rehabilitation decision criteria, budget scenarios, and MRR multi-year repair plans.

As part of the documentation, a comprehensive user's guide for PAVEMENTView Plus will be provided to the City of Ft. Myers. In addition, the software will contain an on-line help system for easy access while using the software.

Task Leader: ERES Consultants will take the lead role in generating the final report.

Task 2k. Install Pavement Management System and Provide On-Site Training

In Tasks 2k, ERES will install the Oracle version of the PAVEMENTview Plus software and database, as well as the MAPdirector software to link with the County's GIS, on the City of Ft. Myers' computer network. This software and all appropriate licenses, including one year of Cartegraph technical support, will also be delivered to the City.

As part of the software installation effort, ERES will provide training to the City staff on using the pavement management software. The duration of the training is expected to be 2 to 3 days and will be held in conjunction with the training to be conducted for Lee County. The City of Ft. Myers will obtain an agreement with Lee County to participate in their training. The objective of the training session will be to familiarize the City staff with the pavement management software's features and to acquaint the staff with the procedures for performing future pavement condition surveys.

Task Leader: ERES will take the lead role in installing the pavement management software and providing training to the City.

4. PROJECT COSTS

The ERES team will provide the Phase 2 pavement management services outlined above at the task-by-task lump sum rates shown in table 4.1. These costs are based on a roadway network of 314 miles of urban roads and assistance from the City of Ft. Myers and Lee County as outlined below.

- Provide ERES with complete and accurate GIS shape files for centerline coverage of the entire City, segmented on an intersection-to-intersection basis. These maps will establish the baseline to be used for the project.
- Establish the number of centerline miles in the City.
- Match street names in the GIS database to the 911 database street names.
- Update or add roadway functional classifications to the GIS database.
- Add all existing traffic data (ADT, % trucks, growth rates) to the GIS database.
- Provide ERES with a copy of the Road Resurfacing Database.
- Identify any roads with travel predominantly in one direction.
- Identify any roads with 4 or more lanes that will require surveys for both directions.
- Notify local authorities about the project and provide them with a schedule for field data collection.
- Assist with the field condition survey efforts. As part of these efforts, the City is to accompany an ERES person in the survey of 314 miles of urban roads. ERES will provide training to the City of Ft. Myers staff.

ERES will invoice the City of Ft. Myers monthly on a percent complete basis by task, and payment of invoices is expected within 30 days of the date of the invoice. A brief progress report will be provided with each invoice.

EXHIBIT A – FEBRUARY 26, 2002

Table 4.1. Cost estimate.

Tasks	Total Cost
Task 2a: Compile the available roadway information.	$2,626
Task 2b: Section the roadway network into management units.	$720
Task 2c: Develop database of Ft. Myers roadways.	$1,264
Task 2d: Implement pavement condition survey protocols.	$2,246
Task 2e: Conduct pavement condition surveys on paved urban roads.	$19,096
Task 2f: Upload inventory and survey data into software databases.	$2,001
Task 2g: Customize pavement management software.	$8,143
Task 2h: Develop multi-year pavement rehabilitation plan.	$8,774
Task 2i: Develop GIS mapping link.	$951
Task 2j: Generate final implementation report.	$3,377
Task 2k: Install system and provide on site training.	$16,993
Project Total:	$66,192

5. SCHEDULE

The ERES team can begin work immediately on Phase 2 of the City of Ft. Myers pavement management system implementation. Our staff of almost 100 places us in a position to be very responsive to the City's needs. The schedule for Phase 2 of the project will require no more than 10 months to complete, assuming the level of participation in the project by the City of Ft. Myers staff stipulated for each task.

CITY OF FORT MYERS, FLORIDA

CITY CLERK'S OFFICE
PO DRAWER 2217
FORT MYERS, FL 33902
239-332-6740 TEL
239-461-2650 FAX

September 24, 2002

Mr. Randy Cerchie, Construction Manager
Lee County Department of Transportation
1500 Monroe Street
Fort Myers, FL 33901

Dear Mr. Cerchie:

Enclosed herewith are two originals of the Interlocal Agreement between Lee County and the City of Fort Myers for Pavement Management System Contractor. This agreement was approved by City Council at their regular meeting held on September 3, 2002.

Please have both originals signed by the Chairman of the Board of County Commissioners of Lee County, retain one original for your file and return the other original to my attention.

Yours truly,

CITY OF FORT MYERS

Marie Adams

Marie Adams, CMC
City Clerk

MA:mf

Enclosure

RECEIVED
SEP 26 2002

☒ CHANGE ORDER AGREEMENT No. 1
or
☐ SUPPLEMENTAL TASK AUTHORIZATION No. –

EXHIBIT "CO/STA-B"

Date: 10/1/02

COMPENSATION AND METHOD OF PAYMENT

for Development and Implementation of a Pavement Condition Index Network Level Pavement Mgmt System

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization)

SECTION 1.00 CHANGE(S) IN COMPENSATION

The compensation the CONSULTANT, or SERVICE PROVIDER, shall be entitled to receive for providing and performing the supplemented, changed or authorized services, tasks, or work as set forth and enumerated in the Scope of Services set forth in this CHANGE ORDER OR SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", attached hereto shall be as follows:

NOTE: A Lump Sum (L.S.) or Not-to-Exceed (N.T.E.) amount of compensation to be paid the CONSULTANT should be established and set forth below for each task or sub-task described and authorized in Exhibit "S/COA-A". In accordance with Professional Services Agreement Article 5.03(2) "Method of Payment", tasks to be paid on a Work-in-Progress payment basis should be identified (WIPP).

Task Number	Task Title	Amount of Compensation	Indicate Basis of Compensation LS or NTE	If Applicable Indicate (W.I.P.P.)
	Perform Pavement Mgmt. System services as set forth in Exhibit B on behalf of the City of Ft Myers per Interlocal Agreement			
2a	Compile the available roadway info	2626.00		
2b	Section the roadway network into mgmt units	720.00		
2c	Develop database of Ft Myers roadways	1264.00		
2d	Implement pavement conditon survey	2246.00		
2e	Conduct pavement condition surveys on paved urban roads.	19096.00		
2f	Upload inventory & survey data into software databases	2001.00		
2g	Customize pavement mgmt software	8143.00		
2h	Develop multi-year pavement rehabilitation plan	8774.00		
2i	Develop GIS mapping link	951.00		
2j	Generate final implementation report	3377.00		
2k	Install system & provide on site training	16993.00		
TOTAL		$66,192.00	LS	

(Unless list is continued on next page)

☒ CHANGE ORDER AGREEMENT No. 1
or
☐ SUPPLEMENTAL TASK AUTHORIZATION No. _____

SECTION 2.00 SUMMARY OF CHANGE(S) IN COMPENSATION

Pursuant to and in consideration of the change(s) in the Scope of Professional Services set forth in the CHANGE ORDER or AGREEMENT, Exhibit "CO/STA-A", the compensation the COUNTY has previously agreed to pay to the CONSULTANT, or SERVICE PROVIDER, as set forth in Exhibit "B" of the Professional Services Agreement, or Service Provider Agreement, shall be changed to be as follows:

Section/Task Number	Section/Task Name	Compensation In the Basic Agreement	Adjustment(s) by Previous CO or STA Nos. 1	Adjustment(s) Due to this CO or STA	Summary of Changed Compensation
		$19,872.00			
STA 1			$279,900.00		
CO 1				66,192.00	
TOTAL		19,872.00	279,900.00	66,192.00	$365,964.00

CMO:026
09/25/01

☒ CHANGE ORDER AGREEMENT No. 1
or
☐ SUPPLEMENTAL TASK AUTHORIZATION No. _____

EXHIBIT "CO/STA-C"

Date: 10/1/02

TIME AND SCHEDULE OF PERFORMANCE

for Development & Implementation of a Pavement Condition Index Network Level Pavement Mgmt System

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization Agreement)

SECTION 1.00 CHANGES FOR THIS CHANGE ORDER OR SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT

The time and schedule of completion for the various phases or tasks required to provide and perform the services, tasks, or work set forth in this CHANGE ORDER or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", entitled "Scope of Professional Services" attached hereto is as follows:

Phase and/or Task Reference as Enumerated in EXHIBIT "A"	Name or Title of Phase and/or Task	Number of Calendar Days For Completion of Each Phase and/or Task	Cumulative Number of Calendar Days For Completion from Date of Notice to Proceed For this CO or STA
Phase 2	City of Ft Myers project		10 months

CMO:027
09/25/01

☒ CHANGE ORDER AGREEMENT No. 1
or
☐ SUPPLEMENTAL TASK AUTHORIZATION No. _____

EXHIBIT "CO/STA-D"

Date: 10/1/02

CONSULTANT'S, OR SERVICE PROVIDER'S, ASSOCIATED SUB-CONSULTANT(S) AND SUBCONTRACTOR(S)

for Development & Implementation of a Pavement Conditon Index (PCI) Network Level Pavement Mgmt. System

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization Agreement)

CONSULTANT, or SERVICE PROVIDER, intends to engage the following sub-consultant(s) and/or sub-contractor(s) to assist the CONSULTANT, or SERVICE PROVIDER, in providing and performing the services, tasks, or work required under this CHANGE ORDER, or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT.

(If none, enter the word "none" in the space below.)

Service and/or Work to be Provided or Performed	Name and Address of Individual or Firm	Disadvantaged, Minority or Women Business Enterprise, (If Yes, Indicate Type)			Sub-Consultant Services are Exempted from Prime Consultant's Insurance Coverage	
	None	Yes	No	Type	Yes	No

CMO:028
09/25/01

☒ CHANGE ORDER AGREEMENT No. 1
or
☐ SUPPLEMENTAL TASK AUTHORIZATION No. _____

EXHIBIT "CO/STA-E"

Date: 10/1/02

PROJECT GUIDELINES AND CRITERIA

for Development and Implementation of a Pavement Condition Index Network Level Pavement Mgmt System

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization Agreement)

As a supplement, or change, to the Project Guidelines and Criteria set forth in the Professional Services Agreement, or Service Provider Agreement, Exhibit "E", the COUNTY has established the following Guidelines, Criteria, Goals, Objectives, Constraints, Schedule, Budget, and/or Requirements which shall serve as a guide to the CONSULTANT, or SERVICE PROVIDER, in performing the professional services, tasks, or work to be provided pursuant to the professional services set forth hereinbefore in CHANGE ORDER or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", attached hereto:

(If none, enter the word "None" in the space below.)

ITEM No. 1
Lee County will process ERES' invoices with the approval of the City of Ft. Myers for pavement.

Any dispute, conflict or disagreement that may arise between the City of Ft Myers and ERES regarding performance of services in in Exhibit "B" and any pavement herof will not be mediated or resolved County, and will not in any way have any force or effect County's Agreement.