



**AUTHORIZED FEDERAL SUPPLY
SCHEDULE CATALOG AND PRICE LIST
for ENERGY MANAGEMENT, WATER
CONSERVATION and SUPPORT SERVICE
(Federal Supply Schedule Industrial
Group 03FAC-871)**

**Contract Number: GS-21F-0023X
Effective November 8, 2010 –
November 7, 2015**

To Place an Order Contact:

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**Tucker, Young, Jackson, Tull, Inc.
565 E. Larned Street
Detroit, MI 48226
www.tyjt.com**



Eligible to fulfill American Recovery and Reinvestment Act orders



State and local governments may procure Disaster Recovery through this contract

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Customer Information



Data Universal Numbering System (DUNS):

11-927-2722

Type of Contractor:

Other than Small Business

NAICS Codes:

541330, 541618, 541620, 561990, 238320

Contractors Taxpayer Identification Number

(TIN): 382508733

Cage Code: 4UC13

1. AWARDED SPECIAL ITEM NUMBERS (SINs:)

871 202 – Energy Management Planning and Strategies

871 204 – Metering Services

871 205 - Energy Program Support Services

871 207 – Energy Audit Services

871 208 – Resource Efficiency Management

871 210 – Water Conservation

871 299 – Introduction of New Services

2. MAXIMUM ORDER:

\$1,000,000. Threshold applicable to orders where RFQ is sent by customer to no more than three contractors.

3. MINIMUM ORDER:

\$100. When the Government requires supplies or services covered by the contract in an amount of less than \$100, the Government is not obligated to purchase, nor is TYJT obligated to furnish, those supplies or services under the contract

4. GEOGRAPHIC COVERAGE:

The delivery area for this contract is for the United States.

5. POINT OF PRODUCTION:

TYJT's main point of production for this contract is located in Detroit, MI. Other locations are Pontiac, MI; Baltimore, MD; and Cleveland, OH



6. DISCOUNT FROM LIST PRICES OR STATEMENT OF NET PRICE:

Prices shown in this Price List are Net Prices.

7. QUANTITY DISCOUNTS:

3% for orders of \$350,000 - \$750,000. 4% for orders of \$750,000 - \$1,000,000.

8. PROMPT PAYMENT TERMS:

Net 30 days.

9A. NOTIFICATION THAT GOVERNMENT PURCHASE CARDS ARE ACCEPTED AT OR BELOW THE MICRO-PURCHASE THRESHOLD:

TYJT accepts Government Credit Cards on all orders regardless of size.

9B. NOTIFICATION WHETHER GOVERNMENT PURCHASE CARDS ARE ACCEPTED OR NOT ACCEPTED ABOVE THE MICRO-PURCHASE THRESHOLD:

TYJT accepts Government Credit Cards on all orders regardless of size.

10. FOREIGN ITEMS (LIST ITEMS BY COUNTRY OF ORIGIN):

None.

11. TIME OF DELIVERY (a-d):

To be negotiated with ordering agency on each task order.

12. F.O.B. POINT(S).

To be negotiated with ordering agency on each task order.

13a. ORDERING ADDRESS(es):

Tucker, Young, Jackson, Tull, Inc.

Sadia Kissoon-Parker, P.E., CHMM, Program Manager

565 E. Larned, Suite 300, Detroit, MI 48226

Phone: (313) 963-0612/Fax: (313) 963-2156

Cell: (313) 498-6603

Email: skissoon-parker@tyjt.com

13b. ORDERING PROCEDURES:

For supplies and services, the ordering procedures, and information on Blanket Purchase Agreements (BPA's) are found in Federal Acquisition Regulation (FAR) 8.405-3.

14. PAYMENT ADDRESS(es):

Tucker, Young, Jackson, Tull, Inc.

Accounts Receivable

565 E. Larned, Suite 300

Detroit, MI 48226

15. WARRANTY PROVISION:

Not applicable.

16. EXPORT PACKING CHARGES:

Not applicable.



17. TERMS AND CONDITIONS OF GOVERNMENT PURCHASE CARD ACCEPTANCE:

No limitation on acceptance.

18. TERMS AND CONDITIONS OF RENTAL, MAINTENANCE, AND REPAIR:

Not applicable.



19. TERMS AND CONDITIONS OF INSTALLATION:

Not applicable.

20. TERMS AND CONDITIONS OF REPAIR PARTS INDICATING DATE OF PARTS PRICE LISTS AND ANY DISCOUNT FROM PRICE LISTS:

Not applicable.

20a. TERMS AND CONDITIONS OF ANY OTHER SERVICES:

Not applicable.



21. LIST OF SERVICE AND DISTRIBUTION POINTS:

Not applicable.

22. LIST OF PARTICIPAING DEALERS:

Not applicable.

23. PREVENTATIVE MAINTENANCE:

Not applicable.

24. ENVIRONMENTAL ATTRIBUTES:

TYJT promotes energy and water conservation, recycling of paper, plastic and aluminum, and reducing pollutants in the workplace.

25. DUNS NUMBER:

11-927-2722

26. REGISTRATION IN CENTRAL CONTRACTOR REGISTRATION (CCR) DATABASE:

Yes.

About Tucker, Young, Jackson, Tull, Inc.



About TYJT

Tucker, Young, Jackson, Tull, Inc., (TYJT) is a full service consulting firm, established in 1984 to provide comprehensive environmental and civil engineering services. The firm is managed and operated by eight (8) licensed professional engineers with combined experience in various phases of civil, environmental, process, mechanical, electrical and transportation engineering. TYJT, with a staff of sixty (60) professional and administrative personnel, serves public and private clients including municipalities, governmental agencies, private businesses, institutional markets, commercial establishments, and industrial concerns. TYJT is headquartered in Michigan with branch offices in Cleveland, Ohio, and Baltimore, Maryland.

TYJT has received several awards for outstanding engineering design and services. We maintain professional technical staff to serve as the Prime Contractor on over 50 percent of our work. Thirty-five to 40 percent of TYJT's staff are licensed professional engineers who provide a variety of services in the areas of water, wastewater, infrastructure, and environmental management services. We are certified as a Minority Business Enterprise (MBE) with several municipalities in the communities in which we serve and we are certified with the City of Detroit as a Detroit Headquartered Business (DHB). In addition, we aggressively look for opportunities to provide subcontracting opportunities to other Minority-Owned, Small and Woman-Owned Businesses.

TYJT's extensive experience in Energy and Water Conservation includes a comprehensive approach developed with our clients that is customized to meet their specific energy needs. The approach establishes policies and programs that ultimately support a sustainable program that will benefit our clients in the future. Our experience includes:

- Water system operations, design, construction assistance, commissioning, trouble shooting and maintenance
- Water audits, including leak detection
- Pump optimization
- Energy efficient specifications and design
- Renewable energy development
- Energy conservation analysis
- Electric rate schedule expertise
- Power sale contract negotiations
- Power market knowledge and experience
- Expert witness



- Utility financing
- Education and training

This broad depth of expertise will allow us to work with clients to create an energy management program that is cost effective, flexible and meets operational and policy objectives.



TYJT's water conservation expertise is best demonstrated by previous performance relating to the following areas of work: *Water Feasibility and Planning Studies*: hydraulic system modeling, water quality modeling, water system master plan studies, water rate studies, hydro-energy resource recovery studies, water supply studies; *Water Operations*: water audits, pump energy optimization, and S.C.A.D.A.



Procedures for Hiring TYJT



All federal agencies may access TYJT's services under this GSA Contract. State and local governments can also access TYJT through the emergency provisions in the contract. To obtain TYJT's services, a potential client must go through a contracting office just as they would for issuing a task order under any other contract.



Federal agencies can use the GSA Advantage™ system and e-Buy program to solicit and obtain services from the Schedule holder. TYJT will respond to solicitation notices from the GSA e-buy in a timely manner.

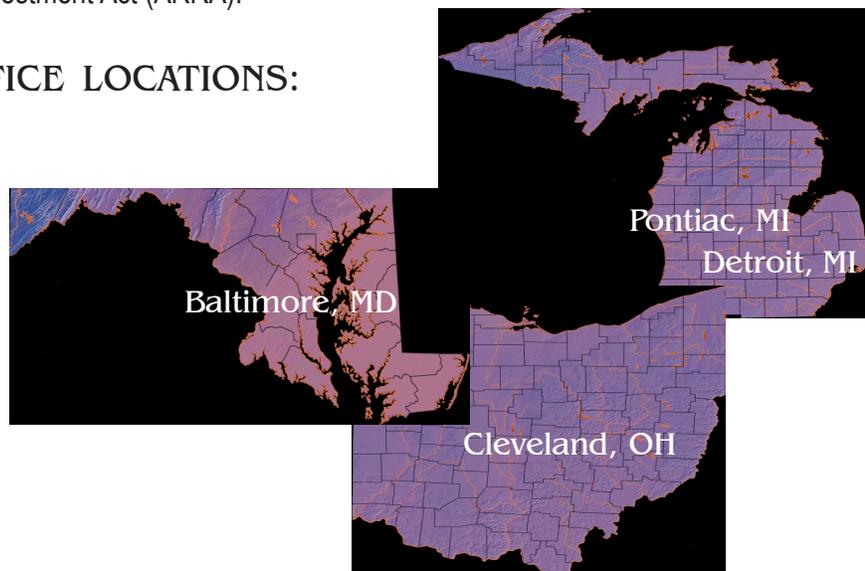


The streamlined ordering process is just a few simple steps.

- For task orders less than or equal to \$2,500, simply develop a SOW, choose a GSA pre-qualified contractor, and have your contracting officer issue the task order directly with TYJT.
- For task orders greater than \$2,500, but less than \$1 million, again the first step is to develop the SOW. Next, the agency must prepare an RFQ with the contracts office that will be managing the procurement and submit it to TYJT and at least two other qualified contractors (three in total). After receipt of responses, select the firm offering the “best value” for your agency.
- If the RFQ task order is greater than \$1 million, the same steps apply except you must submit to TYJT and 3 other qualified GSA contractors.

Note that TYJT has accepted modifications to its contract that allows state and local government entities to procure services through the schedule for disaster response and recovery activities. In addition, state and local government entities can also use the schedule for obtaining services in support of projects funded through the American Recovery and Reinvestment Act (ARRA).

OFFICE LOCATIONS:



Description of Services



TYJT is qualified under the following Special Item Numbers (SINs). Detailed descriptions of these SINs are provided in Appendix A.

871 202 – Energy Management Planning and Strategies

Tucker, Young, Jackson, Tull (TYJT) and its joint venture partner HDR performed a comprehensive utility rate study for the Detroit Water and Sewerage Department (DWSD). The project evolved, in part, out of the electric industry's deregulated environment. Given the opportunities in the deregulated marketplace, DWSD determined that it was appropriate to study and evaluate its utility rates to determine how it could take advantage of the competitive market environment to minimize the total energy costs for DWSD. To date, the work has included:



- Electrical energy audit
- Feasibility study
- Energy management plan
- Implementation of energy management plan recommendations
- General energy management and technical assistance

871 204 – Metering Services



The City of Detroit, under the Detroit Water and Sewerage Department (DWSD) operates a Treated Water Transmission System (TWTS) with a capacity of 1,720 MGD. The TWTS serves over 4 million people in the City of Detroit and 126 neighboring communities within a nine-county area of Southeastern Michigan. The service area covers approximately 1,071

square miles and it is supplied by five water treatment plants, 21-booster station (16 with reservoirs) and 46 remote valve and pressure locations. The DWSD had operated the TWTS with a tone telemetry system that provided minimal information and control to a control board at DWSD's System Control Center (SCC). The control board provided chart



recordings of system pressures and reservoir elevations, indication of station pumps on and off status and general station alarms.

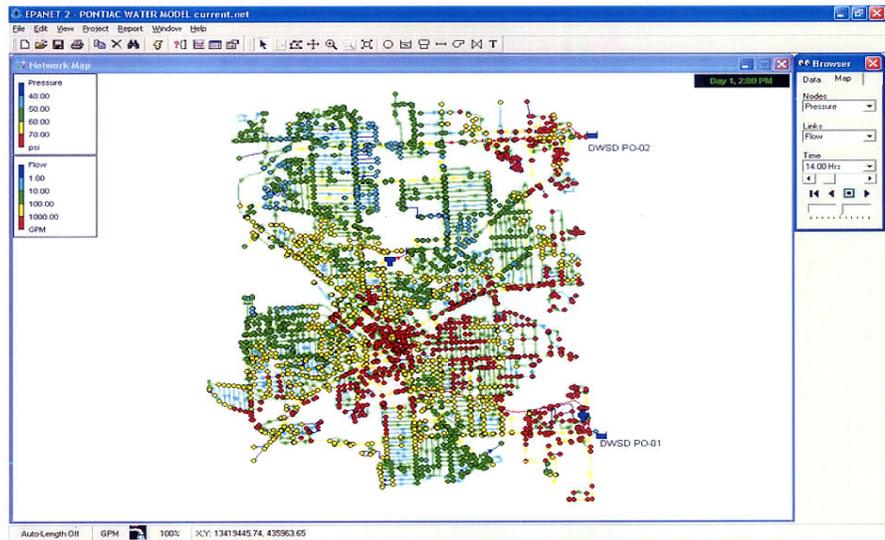


TYJT completed a five year upgrade of the TWTS control and monitoring system including the installation of new Distributive Control System (DCS) instrumentation at each of its five water treatment plants (WTP), 21 booster stations, at the 46 remote valve and pressure locations and the design and construction of a new SCC.



During construction services, TYJT engineers were on site during field installation of the new DCS and provided assistance with the identification of wiring and terminations. The engineers played a key role during the phase over and start-up of the DCS at each facility. All equipment and instrumentation was checked for the correct wiring and terminations at the piece of equipment and at the DCS. During phase over, each piece of equipment and instrumentation was tested for proper functionality first locally, then at the local DCS Remote Operator Station (ROS) and then at the System Control Center ROS.

871 205 - Energy Program Support Services



Under the U.S. Department of Energy, Energy Efficiency Conservation Block (EECB) Grant the City of Pontiac is undertaking a comprehensive energy efficiency project to assess its energy management and usage. The energy efficiency and conservation activities included:

- Development of a comprehensive energy efficiency and conservation strategy for the City
- Evaluation and replacement of street lighting
- Evaluation (Energy Audit) and implementation of energy efficient components in City owned buildings and facilities



- Hydraulic model development and analysis of the existing water system pumping operations to minimize energy consumption

TYJT is supporting the City of Pontiac in all of these work activities. The energy project will be completed by October 2012. The City of Pontiac's strategy will focus on three EECB Grant project activities: 1) Street Lighting; 2) Water Pumping Efficiencies; and 3) Building and Facilities Energy Efficiencies.

871 207 – Energy Audit Services

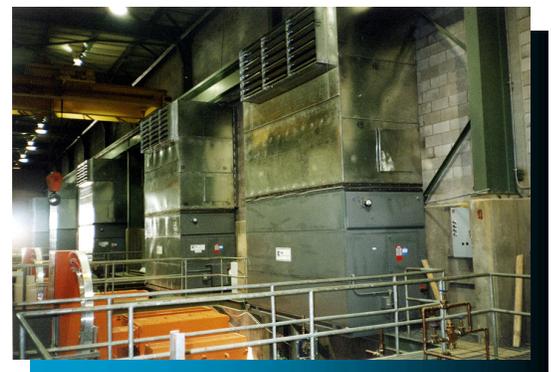
Tucker, Young, Jackson, Tull (TYJT) and its joint venture partner HDR performed energy audits to determine the energy usage and costs for the Detroit Water and Sewerage Department (DWSD). The project evolved, in part, out of the electric industry's deregulated environment. Given the opportunities in the deregulated marketplace, DWSD determined that it was appropriate to study and evaluate its utility rates to determine how it could take advantage of the competitive market environment to minimize the total energy costs for DWSD.

The work included investigating peak load reduction, planning for energy efficient combinations of pumping units and developing an understanding of pump use relative to electric rates. The audits are used as part of DWSD's Energy Management Plan to implement energy savings that have been identified as cost effective. The tasks included:

- Generator use evaluation
- Electrical equipment replacement assessment guidelines
- Evaluation of energy conservation measures
- Development of standard specifications to incorporate energy savings

871 208 – Resource Efficiency Management

The Detroit Water and Sewerage Department (DWSD) contracted Tucker, Young, Jackson, Tull, Inc. (TYJT) as the prime consultant to provide engineering design services and to produce construction bid documents for the Imlay Station Improvements Project, DWSD Contract No. DWS-812 and CS-2015.



This project consisted of facility enhancements to DWSD's Imlay Station located northeast of Imlay City, Michigan. Imlay Station is designed to pump into two separate transmission mains; west to the City of Flint, and south to DWSD's North Service Center. The pumping



systems, piping, valves, and control systems are designed to accommodate the different pressures in the two transmission mains.

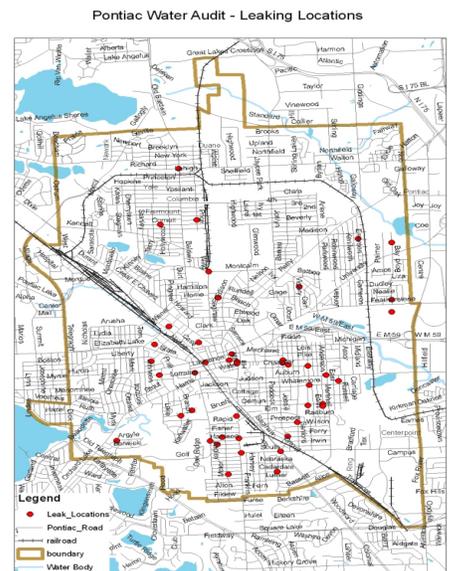
TYJT was the prime consultant that designed the station improvements. The work included the procurement and installation of five 70 MGD double volute horizontal pumps, eight horizontal motors rated between 5,250 and 6,000 horsepower, a new line-up of double-ended 15,000 volt metal-clad switchgear and five 6,000 horsepower pulse-width-modulation variable frequency drives (VFDs). Additional improvements included the fabrication and installation of a new 108" suction header with associated piping and valves.

Before the improvements, the Imlay station operated as a reservoir station only. As a reservoir station the Lake Huron Water Treatment Plant would pump water to the Imlay reservoirs where the pumping energy would be dissipated. The Imlay station would then re-pump the water from the reservoir, West to the City of Flint and South to the northern suburbs of Detroit. The pumping energy from the Lake Huron Water Treatment Plant was lost once the water was placed in the Imlay reservoir.

The innovative design of the new header allows dual operation of six of the eight pumping units. These six pumping units can function either as line pumps that re-pump directly from the suction line, or as reservoir pumps drawing directly from the reservoir. By being able to pump water directly from the water main, the Imlay station is able to conserve energy by reusing some of the energy already in the flow of water from the Lake Huron Water Treatment Plant pumping.

871 210 – Water Conservation

The City of Pontiac undertook a comprehensive water audit to assess its revenue and non-revenue sources. The project directly led to reducing its unaccounted-for water in the City. Under this contract, a leak detection survey covered approximately 180 miles of water mains in the City. The survey identified leaks within approximately ten feet of the source. As part of the survey, personnel also identified map corrections on Pontiac's section maps and completed weekly reports for the City. These map corrections were input into the City's Geographic Information System (GIS).

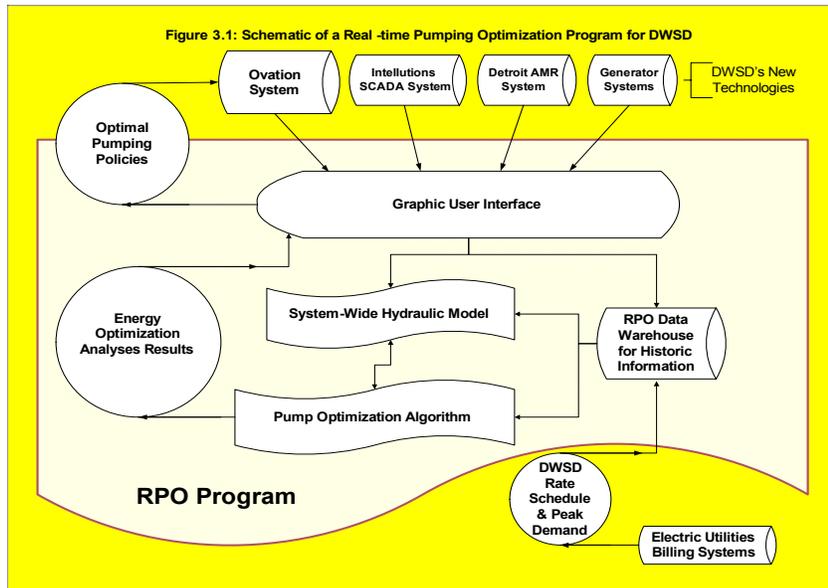




The water audit analysis included:

- Consumption patterns and trends to locate decreasing or erratic historical use
- Estimated and inactive accounts
- Historical meter reading problems
- Zero historical use on active accounts
- Meter age review
- Usage patterns of compound meters
- Over-sizing and under-sizing of meters
- Two register compound meter usage ratios
- Comparison of historical use to typical customer use based on the type of industry or commercial entity
- Consumption use to typical water use based on customer fixtures

871 299 – Introduction of New Services



The Detroit Water and Sewerage Energy Optimization Program for the Water Distribution System Operations was expanded to include facilities that were not originally part of the program. These facilities included West Service Center, Franklin and Adams Road.

A report was developed that documented the findings of a comprehensive comparison between two models of the DWSD water distribution system: 1) the Water Quality Hydraulic Model and 2) the Energy Optimization Program Pump Model.



Optimal pumping operations of a large distribution system constitute a challenging task for operators. In an effort to assist operators to assess their pumping practices and develop efficient pumping policies, a user-friendly computer program was developed. As the prime consultant, Tucker, Young, Jackson, Tull, Inc. (TYJT) was responsible for all phases of the work.



This project was first initiated through the U.S. Department of Energy's Energy Task Force of the Urban Consortium for Technology Initiatives. The program was further developed through the DWSD to be used by its operation staff.



The stand alone computer program provides system operators with pumping policies capable of maintaining pressures at specified locations at or above the prescribed values. From the set of possible pumping policies, the methodology will compute pumping costs so that the system operators may select cost-effective operating strategies.

During the data collection phase, the utility rates at the WTP's and applicable booster stations were analyzed. Based on this analysis, the energy optimization program included a subroutine to select optimal pump groups such that the Maximum Demand charge component of the rate schedule would be reduced.

To calibrate the hydraulic model used in the program, a comprehensive pump-testing program was conducted at three (3) of the pumping facilities. The testing included determining the head/flow characteristics of each pump at several different operating points. Overall efficiency data at the operating points for each pump was also determined. With this information, TYJT was able to provide updated input data for the models and revise the manufacturer's curves of the pumps for DWSD.

Contract Price List

Tucker, Young, Jackson, Tull Inc. Pricing Proposal						
SINs 871 202, 871 204, 871 205, 871 207, 871 208, 871 210 and 871 299						
GSA Labor Category	Title	Year 1 Hourly	Year 2 Hourly	Year 3 Hourly	Year 4 Hourly	Year 5 Hourly
EN-7	Principal (President)	\$230.67	\$239.90	\$249.50	\$259.48	\$269.85
EN-6	Practice Director (Vice President)	\$182.84	\$190.15	\$197.76	\$205.67	\$213.89
EN-5	Senior Associate Engineer	\$143.39	\$149.12	\$155.09	\$161.29	\$167.74
EN-4	Senior Engineer	\$122.53	\$127.43	\$132.52	\$137.83	\$143.34
EN-3	Engineer Resident Engineer	\$92.36	\$96.05	\$99.89	\$103.89	\$108.04
EN-2	Engineer	\$76.13	\$79.18	\$82.34	\$85.64	\$89.06
EN-1	Engineer	\$66.28	\$68.93	\$71.69	\$74.55	\$77.53
TE-2*	Technician/Inspector	\$80.69	\$83.91	\$87.27	\$90.76	\$94.39
TE-1*	Technician/Inspector	\$63.40	\$65.93	\$68.57	\$71.31	\$74.16
CAD-3*	CAD Operator	\$74.92	\$77.92	\$81.04	\$84.28	\$87.65
CAD-2*	CAD Operator	\$66.28	\$68.93	\$71.69	\$74.55	\$77.53
IT-1*	Information Technology Specialist	\$87.00	\$90.48	\$94.09	\$97.86	\$101.77
CL-2*	Clerical	\$56.19	\$58.44	\$60.78	\$63.21	\$65.74
Note: * Indicates Service Contract Act (SCA) eligible categories. See the SCA Matrix below for additional information regarding these labor categories.						
SCA Eligible Contract Labor Category	SCA Equivalent Code Title	WD Number				
Technician/Inspector (TE-1)	30081 – Engineering Technician I	WD 05-2273 (Rev 9)				
Technician/Inspector (TE-2)	30081 – Engineering Technician II	WD 05-2273 (Rev 9)				
CAD Operator (CAD-2)	30061 – Drafter/CAD Operator II	WD 05-2273 (Rev 9)				
CAD Operator (CAD-3)	30061 – Drafter/CAD Operator III	WD 05-2273 (Rev 9)				
Information Technology Specialist (IT-1)	14073 – Computer System Analyst III	WD 05-2273 (Rev 9)				
Clerical (CL-2)	01112 – General Clerk II	WD 05-2273 (Rev 9)				

A description of all corresponding commercial job titles, experience, functional responsibility and education for those types of employees who will perform services is provided in **Appendix B**.

Appendix A



SIN 871 202 - Energy Management Planning and Strategies

TYJT's four-phase Comprehensive Energy Management Solution consists of all four phases of an energy project and pertain to a variety of energy projects that include, but are not limited to, renewable energy, sustainable energy, and energy efficient buildings certification programs such as LEED.



1. Consulting/Auditing/Energy Management Solutions - The strategic planning, energy assessments e.g. feasibility, vulnerability and other detailed assessments, developing and executing of energy audits, audit plans and energy management solutions.
2. Concept Development and Requirements Analysis - The analysis of the audit results and outlined requirements to design a detailed energy management project concept.
3. Implementation and Change Management - The implementation and integration of more energy efficient practices and systems and training in using them effectively.
4. Measurement and Verification - The performance assessment and measurement of the effectiveness and energy efficiency of the project and can include long term monitoring, verification of savings and benchmarking.



Our services under this SIN include the following services:

- Energy Audits
- Feasibility Studies
- Energy Management Planning
- Implementing Energy Management Plan
- Energy Management and Technical Assistance
- Education and Training

SIN 871 204 – Metering Services

Including, but not limited to:

1. Installation of metering equipment and software used for the collection of data and measurement of energy consumption through electric, gas, water or steam utilities.
2. Utilization of data to ensure energy conservation goals are being met, and allows for the measurement and tracking of the cost effectiveness of energy technology investments.



This could include basic metering services, advanced metering services, maintenance, installation, removal and disposal of new or existing equipment. Security clearances such as HSPD-12 may be required.

Our services under this SIN include the following services:

- Installation of Metering Equipment and Software
- Measurement of Energy Consumption
- Tracking Energy Consumption Goals
- Measurement and Tracking of Cost Effectiveness of Conservation Investments



SIN 871 205 – Energy Program Support Services

1. Including, but not limited to, billing and management oversight and assistance in preparing energy services related agency statements of work.
2. Energy efficient buildings certification programs such as LEED may be included.

TYJT provides management oversight and assistance in preparing energy services Statement of Works, RFQs, and consulting support for energy efficient building certification programs including LEED® and Energy Star. Under this SIN, TYJT will assist federal facilities in preparing SOWs and RFQs for equipment upgrades and energy curtailment programs.

SIN 871 207 – Energy Audit Services

1. Including, but not limited to, developing, executing, and reporting on audit plans and/or perform energy and water audit services.
2. Energy audits may range from cursory to comprehensive including, but not limited to data collection, data analysis, benchmarking with tools such as Energy Star, and written recommendations of suggested upgrades of electrical and mechanical infrastructure, including their impact on energy consumption and pollution.
3. Including, but not limited to, billing and management oversight and assistance in preparing energy services related, can include recommendations for using alternative Energy Sources.
4. Energy efficient buildings certification programs such as LEED may be included.

TYJT's services under this SIN include developing, executing, and reporting on audit plans and/or performing energy and water audit services and monitoring real-time energy consumption information in a web-accessible database to provide enhanced targeting of opportunities and on-going measurement and verification of results.



SIN 871 208 – Resource Efficiency Management

1. Including, but not limited to, providing information on possible steps that will improve energy efficiency.
2. Information shall include estimates of cost savings and environmental benefits. This includes onsite analysis of current operations, equipment, and energy purchasing patterns.
3. This may include the services of a resource efficiency advocate for individual or aggregated building(s) in order to maximize resource efficiency.
4. Energy efficient buildings certification programs such as LEED may be included.

TYJT provides Resource Efficiency Management (REM) to municipalities to justify and implement energy efficiency improvements. We provide onsite analysis of operations, equipment and energy purchasing patterns to identify and quantify measures to improve energy efficiency, reduce energy costs and provide environmental benefits.

SIN 871 210 – Water Conservation

Water Conservation: Services and consulting related to:

1. Reduction of water usage
2. Recycling of water for multiple purposes
3. Retention of water
4. Improvement of water quality and water flow

These services can include, but are not limited to, facility water audits, water balance, and water system analysis.

Our services under this SIN include the following services:

- Reduction of Water Usage
- Improvement of Water Quality and Flow
- Improved Water Usage for Fire Protection
- Facility Water Audits



- Water Balance
- Water System Analysis

SIN 871 299 – Introduction to New Services

A new service may be a task, procedure, or product existing in the commercial market which is being developed, improved, or not yet introduced to the Federal Government or not currently available under any GSA Contract, but is categorically related to this procurement.

Our services under this SIN include the following services:



- Real time pumping optimization services.



APPENDIX B

LABOR CATEGORY DESCRIPTIONS

Title	Labor Category	Definition of Labor Category	Education	Experience
<i>PROFESIONAL STAFF</i>				
Principal (President)	EN-7	Assumes responsible charge of the firm's operation and direction. Recognized leader in the industry. Negotiate contract terms and conditions with clients. Provides executive-level administrative oversight and consults with project managers on large, complex projects.	Masters Degree Registered P.E.	30+ years
Practice Director (Vice President)	EN-6	Responsible for senior level decisions and recommendations related to the operation and business activities of the company. Negotiate contract terms and conditions with clients. Project manager or technology specialist on large or complex projects.	Masters Degree Registered P.E.	25+ years
Senior Associate Engineer	EN-5	Project manager or technology specialist. Leads the development of scope definitions. Estimates level of effort and contract approaches. Initiates and maintains extensive contacts with clients, key engineers and officials of other organizations and companies.	B. S. Degree Registered P.E.	15+ years
Senior Engineer	EN-4	Project manager or technology specialist. Leads the development of scope definitions. Initiates and maintains liaison with clients and consultants.	B. S. Degree Registered P.E.	7+ years
Engineer Resident Engineer	EN-3	Plans and conducts work requiring judgment in the independent evaluation, selection, and design of equipment and systems. Functions as lead discipline engineer. Exhibits good oral and communication skills.	B. S. Degree Registered PE or Completion of F.E. Exam	5+ years
Engineer	EN-2	Performs assignments designated to develop professional working knowledge and abilities. Works under close management and supervision. Limited exercise of judgment is required in making preliminary selections and adaptations of engineering alternatives.	B. S. Degree Registered PE or Completion of F.E. Exam	3+ years
Engineer	EN-1	Performs assignments designated to develop professional working knowledge and abilities. Works under close management and supervision. Limited exercise of judgment is required in making preliminary selections and adaptations of engineering alternatives.	B. S. Degree Registered PE or Completion of F.E. Exam	1year

APPENDIX B

LABOR CATEGORY DESCRIPTIONS

Title	Labor Category	Definition of Labor Category	Education	Experience
<i>TECHNICIANS</i>				
Technician/ Inspector	TE-2	Perform field inspection of construction projects to insure compliance with contract documents, documentation of inspections, field surveys, leak detection, and other field related duties. Limited exercise of judgment is required in completing assignments. Exhibits good oral and communication skills.	High School. Trained in field inspection software.	3+ years
Technician/ Inspector	TE-1	Perform field inspection of construction projects to insure compliance with contract documents, documentation of inspections, field surveys, leak detection, and other field related duties. Limited exercise of judgment is required in completing assignments.	High School	1 year
CAD Operator	CAD-3	Prepares clear, complete and accurate working plans and detailed drawings from rough or detailed sketches or notes using computer aided drafting (CAD) software. Leads the development of contract drawings, manages other operators and coordinates work assignments with the engineers. Exhibits good oral and communication skills.	High School, certifications in CAD software.	10+ years
CAD Operator	CAD-2	Prepares clear, complete and accurate working plans and detailed drawings from rough or detailed sketches or notes using computer aided drafting (CAD) software. Limited exercise of judgment is required in completing assignments.	High School, certifications in CAD software.	5+ years
Information Technology Specialist	IT-1	Responsible for identify computer-user problems and coordinating to resolve them and installing, configuring and monitoring local and wide-area networks, hardware and software. Provides customer and network administration services such as passwords, electronic mail accounts, security and troubleshooting. Constructs, edits and test computer system programs.	Associate Degree B.S. or B.A. Degree preferred	10+ years
Clerical	CL-2	Provides general administrative assistance and support, reception, mail room, data entry and other routine and organizational and clerical duties as directed by senior staff. Requires active supervision and guidance.	High School	5-7 years