





EXHIBIT "A"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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**PROJECT DESCRIPTION**

The services designated herein as "Services provided by the ENGINEER" shall include the performance of all engineering services for the following described facility:

COUNTY/CITY: Hidalgo County

CONTROL: \_\_\_\_\_

PROJECT/DESCRIPTION: Survey, H&H Analysis, PS&E and Irrigation System Inspection

LENGTH: N/A

HIGHWAY: P2 Admin Bldg Parking Lot

LIMITS: At P2 Admin Bldg

**PROJECT CLASSIFICATION**

(Place an "X" in only one Project Classification)

- Surface Treatment
- Overlay
- Rehabilitation Existing Road (Scarify & Reshape)
- Convert Non-Freeway to Freeway
- Widen Freeway
- Widen Non-Freeway
- New Location Toll Freeway
- New Location Non-Freeway
- Interchange (New or Reconstruct)
- Bridge Widening or Rehabilitation
- Bridge Replacement
- Upgrade to Standards - Freeway
- Upgrade to Standards - Non-Freeway
- Miscellaneous Studies (Use Function Code 110 for All Tasks)
- X Parking Lot Improvements

ENGINEER shall mean GDJ Engineering.

COUNTY shall mean Hidalgo County.

LPA shall mean Hidalgo County.

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**PRELIMINARY PROJECT DEVELOPMENT**  
(Function Code 102)

**PRELIMINARY PROJECT DEVELOPMENT:**

The ENGINEER will perform any needed preliminary project development which will include:

1. Establish Preliminary Design Values
  - a. The Engineer will work with the LPA to establish basic design concepts, project controls and a general scope for the Project.
2. Prepare Preliminary Cost Estimates
  - a. The Engineer will calculate preliminary construction cost estimates for the location and geometry of the Projects.
3. Preliminary Environmental Analysis (for Fatal Flaws)
  - a. The Engineer will perform Preliminary Environmental Constraint Mapping to determine if any fatal flaws exist at the proposed project location.
4. Prepare a Project Fact Sheet for All Anticipated Costs
  - a. The Engineer will produce a Project Fact Sheet providing summaries of all pertinent items in the scope of services (as required) and providing estimated local costs vs. total project costs for the Projects.
5. Meetings, Coordination & Support for Project Development
  - a. The Engineer shall provide coordination services and shall assist in meetings and workshops with TxDOT, Hidalgo County, Hidalgo County Drainage District No. 1, any Hidalgo County Irrigation Districts, and all other affected parties. The Engineer shall serve as representative for the LPA in coordination items. The Engineer shall coordinate with the LPA's staff on all Project related items.

\* A Phase I or better survey for hazardous materials should be included as a determining factor of route selection. Projects which do not require additional ROW should be considered separately from an expansion or new location.

**ROUTE AND DESIGN STUDIES**  
(Function Code 110)

**DESIGN STUDIES:**

The ENGINEER will perform any of the following tasks needed for the design studies:

1. Develop Design Criteria
  2. Coordinate and Attend a Project Design Concept Conference
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FIELD SURVEYING AND PHOTOGRAMMETRY  
(Function Code 150)

**BOUNDARY & TOPOGRAPHY SURVEYS:**

The SURVEYOR will perform Topographic Surveying for the project which will include:

1. Topography Survey
  - a. Include all subsurface structures (pipe sizes, flow lines, measure downs, etc...)
  - b. Include all surface items (utilities, large vegetation, concrete items, etc...)
  - c. Parking Lot Entrances/Exits
  - d. Roadside Ditch along Hall Acres Rd
  - e. Outfall drainage ditch (2 cross sections at drainage ditch outfall)
  - f. Natural ground spot elevation grid every 100'
  - g. Set 2 horizontal/vertical control points for construction at opposite ends of project limits

NOTE: ALL BEARING AND DISTANCE SHALL BE BASED ON THE STATE PLANE COORDINATE SYSTEM NAD 1983, SOUTH ZONE.

ALL DISTANCES AND COORDINATES SHALL BE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 1.00004

**ADDITIONAL RESPONSIBILITIES**

**A. TRAFFIC CONTROL:**

The SURVEYOR shall control traffic in and near surveying operations adequately to comply with provisions of the latest edition of the TxDOT Manual on Uniform Traffic Control Devices – Part VI and the latest edition of the Occupational Safety Manual both of which can be found on the TxDOT internet site.

In the event field crew personnel must divert traffic or close traveled lanes, a Traffic Control Plan based upon principles outlined in the latest edition of the TxDOT Manual on Uniform Traffic Control Devices – Part VI shall be prepared by the SURVEYOR and approved by the ENGINEER prior to commencement of field work. A copy of the approved plan shall be in the possession of field crew personnel on the job site at all times and shall be made available to the ENGINEER for inspection upon request.

**B. INVOICING:**

Payment requests shall include a SURVEYOR's invoice. With each payment request, the SURVEYOR shall submit a project status report which will, as a minimum, include the percentage of total work complete as of the date of the payment request and a description of current work activity. The percentage of total work complete shall not be based simply on the percentage of funds expended, but shall be based on the best judgment of the SURVEYOR as to the percentage of actual work complete.

**C. EASEMENTS, LETTERS OF PERMISSION, ETC.**

The SURVEYOR shall be responsible for delineating easements. The SURVEYOR will be responsible for securing the necessary legal instruments and obtaining all Right-of-Entries (ROEs).

**D. MEETINGS:**

The ENGINEER shall setup the necessary meetings with the SURVEYOR in order to assure all field information is provided on-time and products are delivered in accordance with TxDOT's/LPA's specifications. SURVEYOR must attend all meetings involving data provided if requested by ENGINEER.

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EXHIBIT "A"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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**E. PROJECT MANAGER/SURVEYOR COMMUNICATION:**

The SURVEYOR shall designate one Texas Registered Professional Land Surveyor (RPLS) to be responsible throughout the project for project surveying coordination and all communications, including billing, with the ENGINEER.

**F. OFFICE LOCATION:**

The SURVEYOR will perform the services to be provided under this agreement out of a local office and have a crew available to perform requested tasks within 24 hours of request. The coordinating SURVEYOR's Project Manager (RPLS) shall be accessible at all times and working from the local office.

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EXHIBIT "A"  
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**ROADWAY DESIGN CONTROLS**

(Function Code 160)

**ROADWAY DESIGN:**

The ENGINEER will perform roadway design services for the needed construction repairs along the project limits. The services will include:

1. Geometric Design
  - a. Horizontal and Vertical Alignment
  - b. All geometric design shall be in conformance with the State's Design Division, Operations and Procedures Manual, except where variances are permitted in writing by the LPA.
  - c. Handling of traffic during construction shall be a consideration in the development of preliminary designs.
  
2. Exhibits for Airway/Highway clearance permits (if within airport vicinity)
  
3. Grading Design
  - a. Refine the horizontal alignment including the following items
    - i. Typical Sections
    - ii. Design Cross Sections
    - iii. Determine Cut and Fill Quantities
    - iv. Slope Stability Analysis, if applicable
    - v. Embankment Foundation Stability Analysis, if applicable
    - vi. Embankment Settlement Analysis, if applicable
  
4. Pavement Design
  - a. Prior to initiating detailed plan preparations for a project, a preliminary investigation shall be made to determine the approximate section and pavement type to be used for the pavement structure. The Flexible Pavement Design Manual for flexible pavement, "Appendix F" of the Design Division, Operations and Procedures Manual, and the current AASHTO Guide for the Design of Pavement Structures, may be used for this purpose.
  - b. The typical section shall also reflect proposed geometric including pavement cross slopes, lane and shoulder widths, and slope rates whenever this data have not been previously shown on a schematic submission.
  - ~~c. Embankment and Subgrade~~
    - ~~i. Provide Soil Core Holes (location and number to be agreed upon with LPA)~~
      - ~~1. Along center line of each roadway~~
    - ~~ii. Identify, interpret and summarize the geological features that affect engineering design (PI, sulfate content & % of lime)~~
  - ~~d. Traffic Data for Pavement Design~~
  - e. Basic Design Criteria
  - ~~f. Life Cycle Cost Analysis(es)~~
  - g. Cost Data
  - h. Pavement Material Properties
  - ~~i. Rehabilitation Investigations~~
    - ~~i. Soil Core Holes to determine type and depth of existing material, pavement, etc. The ENGINEER, in coordination with LPA, will determine whether to salvage the existing ACP and Flexbase.~~

**EXHIBIT "A"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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**DRAINAGE**  
(Function Code 161)

**DRAINAGE DESIGN:**

The ENGINEER will perform drainage design services for the needed construction repairs along the project limits. All hydraulic design shall be in accordance with TxDOT's Hydraulic Manual, except where variances are permitted in writing by the LPA. The services will include:

1. Hydraulic Studies, Discharges
    - a. Hydrologic Map showing drainage areas, contours and drainage Q's.
    - b. Drainage area maps showing existing conditions and proposed improvements.
    - c. Hydrologic data/discharge determination
  
  2. Hydraulic Drainage Study & Documentation
    - a. Hydraulic Computations, if applicable
      - i. Storm water detention available within the ROW (linear ft. along side drain ditch).
      - ii. Storm water detention available outside the ROW (as per local Drainage District)
      - iii. Culverts
      - iv. Channels
      - v. Storm sewers/inlets
      - vi. Irrigation Canals/Siphons
    - b. Federal Emergency Management Agency (FEMA) floodway requirements
    - c. Determine impact of proposed drainage plan on Drainage District or Irrigation District receiving streams
  
  3. Layout, Structural Design and Detailing of Drainage Features
    - a. Culverts
      - i. New Culverts
      - ii. Culvert widening and/or lengthening
      - iii. Culvert replacements
    - b. Storm Sewers
      - i. New storm sewers
      - ii. Modify existing storm sewers
      - iii. Inlets
      - iv. Manholes
      - v. Trunk lines
    - c. Energy Dissipators
    - d. Outfall channel(s) within the ROW
    - e. Outfall channel(s) outside the ROW
    - f. Summary of Quantities
  
  4. Storm Water Pollution Prevention Plan (SW3P)
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EXHIBIT "A"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER  

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**SIGNING, MARKINGS AND SIGNALIZATION**  
(Function Code 162)

**PAVEMENT MARKINGS:**

The ENGINEER will provide pavement marking layouts for the needed construction repairs along the project limits. The services will include:

1. Signing and Markings Layout
  - a. Roadway layout
  - b. Center line with station numbering
  - c. ROW lines
  - d. Culverts and other structures that present a hazard to traffic
  - e. Location of utilities, if not shown on plan and profile
  - f. Existing signs to remain, to be removed, to be relocated
  - g. Proposed signs (illustrated and numbered)
  - h. Existing overhead sign bridges to remain, to be revised, removed or relocated
  - i. Proposed overhead sign bridges indicating location by plan layout (electrical details need not be shown on this layout)
  - j. Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation
  - k. Quantities of existing pavement markings to be removed
  - l. Proposed delineators and object markers
2. Summary of Small Sign Tabulation
3. Sign Detail Sheets
  - a. Dimensions of letters, shields, borders, corner radii, etc.
  - b. Designation of shields attached to guide signs
  - c. Designation of arrow used on exit direction signs

**MISCELLANEOUS ROADWAY**  
(Function Code 163)

**TRAFFIC CONTROL PLAN, DETOURS AND SEQUENCE OF CONSTRUCTION:**

The ENGINEER will provide a Traffic Control Plan (TCP) for the needed construction repairs along the project limits. TCP's are required for all projects; therefore a detailed TCP shall be developed when traffic handling during construction involves complications for which a feasible solution is not covered by the Texas MUTCD or the current Barricade and Construction (BC) standards. The following items are required on all TCP Layouts:

1. The Sequence of Construction and method of handling traffic during each phase
  2. Roadway layout
  3. Center line with station numbering
  4. The existing and proposed traffic control devices that will be used to handle traffic during each construction sequence. Include signals, regulatory signs, warning signs, construction warning signs, guide signs, route markers, construction pavement markings, channelizing devices, portable changeable message signs, flashing arrow boards, barricades, barriers, etc...
  5. The proposed traffic control devices (stop signs, signals, flag person, etc.) at grade intersections during each construction sequence.
  6. Where detours are provided, typical cross sections shall be shown.
  7. Road construction work hours shall be developed after an investigation of the traffic volumes has been performed.
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**EXHIBIT "A"**  
**SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER**

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**IRRIGATION SYSTEM INSPECTION & DESIGN:**

The ENGINEER will inspect the existing irrigation (sprinkler) system for any leaks, defects and/or damaged components. If any such items are found, the ENGINEER will provide a plan to remedy the situation as part of the construction plans and include in the construction estimate.

**COMPUTE AND TABULATE QUANTITIES:**

The ENGINEER will provide a summary of quantities sheet in the plans identifying all estimated project quantities.

**PROJECT ESTIMATE:**

The ENGINEER will provide a project estimate summarizing all estimated construction costs.

**SPECIFICATIONS AND GENERAL NOTES:**

The ENGINEER will provide all relevant project specification and general notes to the project construction activities.

**PROJECT MANAGEMENT**

(Function Code 164)

**MEETINGS, COORDINATION & SUPPORT FOR PROJECT MANAGEMENT:**

The ENGINEER shall meet and coordinate with all relevant entities (i.e. County, Regional Mobility Authority, Texas Department of Transportation, Rio Grande Valley Metropolitan Planning Organization, etc...) and all other affected parties. The Engineer shall serve as representative for the LPA in coordination items. The Engineer shall coordinate with the LPA's staff on all Project related items.

**CONSTRUCTION PHASE SERVICES**

(Function Code 320)

The ENGINEER will provide engineering and support services for and during the construction of the Project or portions of the Project approved by the LPA. Specific (basic and special) services for CONSTRUCTION MANAGEMENT AND SUPPORT by the ENGINEER will include the following:

**CONSTRUCTION BIDDING:**

1. The ENGINEER will furnish the LPA the necessary copies of approved plans, specifications, notices to bidders, and proposals as prepared under PS&E.
2. The ENGINEER will assist the LPA on the tabulation of bids, recommendations to the LPA as to the proper action on all bid proposals received, and the preparation of formal contract documents for the award of each construction contract.

**CONSTRUCTION CONTRACT ADMINISTRATION AND INSPECTION:**

1. In general, the ENGINEER will provide the management and engineering support/data required for consultation and advisement to the LPA and act as the LPA's representative as provided in the General Condition of the Construction Contract.
  2. The ENGINEER will coordinate and conduct a pre-construction conference (if required).
  3. Defects and Deficiencies. The ENGINEER will use his best efforts to protect the LPA against defects and deficiencies in the work of the Contractor. The ENGINEER will promptly notify the
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## EXHIBIT "A"

### SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

LPA of any such defect or deficiency, and take all steps possible to require the Contractor to correct the defect or deficiency.

4. Contractor Payment. The ENGINEER will review quantities as submitted by the Contractor and will coordinate with the LPA for the preparation of the monthly and final estimates for payment to the Contractor.
5. The ENGINEER will provide Project site inspection of the authorized construction contract as follows:
  - a. Project Engineer. The ENGINEER will provide visits by the Project Engineer or a competent representative of the ENGINEER to the site of construction for the purpose of monitoring the Contractor's progress and conformance to the construction contract plans and specifications.
  - b. Resident Engineer and/or Construction Inspector(s). The ENGINEER will furnish the services of a Resident Engineer and/or Construction Inspector(s) for on the site inspection construction to monitor/inspect the Contractor's daily progress and conformance to TxDOT's PS&E specifications.

### MISCELLANEOUS TECHNICAL ACTIVITIES:

1. Shop Drawings. The ENGINEER will review and check all shop or working drawings furnished by the Contractor.
2. Control of Materials & Equipment. The ENGINEER will provide inspection of all materials and equipment furnished/used by the Contractor as follows:
  - a. Review and record all laboratory, shop and mill tests of materials and equipment for compliance with the construction contract specifications.
  - b. Observe and/or perform Project record testing and/or independent assurance testing as outlined in the construction contract specifications.
3. Change Orders. When applicable the ENGINEER will prepare the engineering data, including plan sheet drawings, specifications, and estimates, for the preparation of construction contract change orders, which may be required due to actual field conditions encountered or new requirements directed by the LPA.

EXHIBIT "A"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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**ADDITIONAL RESONSIBILITIES**

**EASEMENTS, LETTERS OF PERMISSION, ETC.:**

The ENGINEER shall be responsible for delineating easements. The ENGINEER will be responsible for securing the necessary legal instruments.

**MEETINGS:**

Meetings will be held with the FHWA, State Officials, local governments, property owners, utility owners, railroad companies, other consulting firms, etc., as needed or required by the LPA. The ENGINEER shall coordinate through the LPA for the development of this project with any local entity having jurisdiction or interest in the project (i.e., city, county, etc).

**SPECIFICATIONS, SPECIAL PROVISIONS, SPECIAL SPECIFICATIONS:**

Use the State's standard specifications or previously approved special provisions and/or special specifications. If a special provision and/or special specification is developed for this project, it shall be in the State's format and incorporate references to approved State test procedures.

**PROJECT MANAGER/ENGINEER COMMUNICATION:**

The ENGINEER shall designate one Texas Registered Professional Engineer to be responsible throughout the project for project management and all communications, including billing, with the LPA's Director. Any replacements to the ENGINEER's designated Project Manager/Engineer must be approved by the LPA.

Engineering documents produced for the department's engineering projects shall be signed, sealed and dated or CADD sealed in accordance with Administrative Order No. 5-89 and Administrative Circular No. 26-91.

**DESIGN RESPONSIBILITIES:**

The ENGINEER is responsible for design errors and/or omissions that become evident before, during or after construction of the project. The ENGINEER's responsibility for all questions arising from design errors and/or omissions will be determined by the LPA and all decisions shall be final and binding. This would include, but not necessarily be limited to:

1. All design errors and/or omissions resulting in additional design work to correct the errors and/or omissions.
2. Preparation of design documents and detail drawings necessary for a field change due to design errors and/or omissions.
3. Revision of original tracings to the extent required for a field change due to design errors and/or omissions.

The ENGINEER shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of the work by the LPA will not relieve the ENGINEER of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities.

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EXHIBIT "A"  
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

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**DOCUMENT AND INFORMATION EXCHANGE:**

Data, Plan Sheets, General Notes and/or Specifications provided to the LPA shall be furnished on 8GB USB flash drives. Each 8 GB flash drive shall have a file titled Table of Contents. The Table of Contents shall indicate the locations of files within the directory structure of the documentation.

General Notes and specifications shall be provided in MS Office 2007 format. Plan sheets shall be provided in Microstation DGN or GEOPAK GPK format. PDF copies of plan sheets shall also be provided.

Two copies of the documentation shall be provided to the LPA.

If required, the ENGINEER shall provide to the LPA, a CD that contains all the plan sheets for the project. The graphics tape shall be compatible with the LPA's computer system.

CD Tape Required (YES or NO): YES

**PROPOSAL TIME:**

The time indicated in the proposal and the contract shall include time necessary for reviews, approval, etc.

**OFFICE LOCATION:**

The ENGINEER will perform all services to be provided under this agreement out of their office located at: 2805 Fountain Plaza Blvd., Suite A, Edinburg, Texas 78539

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**"EXHIBIT B"  
Cost Proposal**

Pct. #2 Admin Parking Lot Improvements

Administration Building Parking Lot Improvements Hidalgo County - Pct. #2		MANHOURS						Total Hours	Total Line Item Cost	
		Principal	Project Manager	Project/Design Engineer	EIT	Engineering Tech	Admin/Clerical			
<b>TASK</b>										
<b>Design Engineering Tasks</b>										
1	Topographic Survey								SUBCONSULTANT COST	\$ 7,500.00
2	Irrigation System Inspection								SUBCONSULTANT COST	\$ 500.00
3	H&H Analysis	1	14	24	20	16		75		\$ 8,637.00
4	Pavement Design (Based on GeoTechnical Report - Provided by County)	1	6	18	10	18		53		\$ 5,821.00
5	Construction Plan Development	2	16	30	34	40		122		\$ 13,190.00
6	Utility Design & Coordination	1	6	8	10			25		\$ 3,095.00
7	Develop Road Repair Construction Estimate, Specifications & General Notes	1	8	10	12			32	1	\$ 3,910.00
<b>Subtotal (Design Engineering)</b>		<b>6</b>	<b>50</b>	<b>90</b>	<b>86</b>	<b>74</b>		<b>307</b>	<b>1</b>	<b>\$ 42,653.00</b>
<b>Construction Bidding Tasks</b>										
8	Construction Bid Assistance (Bid Specs Prep, Pre-Bid & Pre-Con Mtgs, etc...)	1	6	8	10			26	1	\$ 3,150.00
9	Construction Bid Analysis & Recommendation of Award	1	8	8	10			28	1	\$ 3,470.00
<b>Subtotal (Construction Bidding)</b>		<b>2</b>	<b>14</b>	<b>16</b>	<b>20</b>	<b>0</b>		<b>54</b>	<b>2</b>	<b>\$ 6,620.00</b>
<b>Construction Engineering &amp; Inspection Tasks</b>										
10	Construction Inspection (Est. 2.5 Months of Construction Duration)									SUBCONSULTANT COST
11	Construction Pay Application Review & Approval		6	8				14		\$ 1,960.00
<b>Subtotal (Construction Engineering &amp; Inspection)</b>		<b>0</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>0</b>		<b>14</b>	<b>0</b>	<b>\$ 10,960.00</b>
<b>Project Management</b>										
12	Project Site Visits	2	4	4				10		\$ 1,510.00
13	Meetings/Coordination/Management Oversight	2	8	8				19	1	\$ 2,705.00
<b>Subtotal (Project Management)</b>		<b>4</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>0</b>		<b>29</b>	<b>1</b>	<b>\$ 4,215.00</b>
<b>PROJECT SUBTOTAL LABOR HOURS</b>		<b>12</b>	<b>82</b>	<b>126</b>	<b>106</b>	<b>74</b>		<b>404</b>	<b>4</b>	
<b>Labor Hours</b>		<b>12</b>	<b>82</b>	<b>126</b>	<b>106</b>	<b>74</b>		<b>404</b>		
<b>Contract Rate</b>		\$ 185.00	\$ 160.00	\$ 125.00	\$ 95.00	\$ 82.00		\$ 55.00		
<b>Total Labor Costs</b>		\$ 2,220.00	\$ 13,120.00	\$ 15,750.00	\$ 10,070.00	\$ 6,068.00		\$ 220.00	\$ 47,448.00	\$ 64,448.00

LINE ITEM EXPENSES

\$ -

Total Expenses

\$ -

GDJ Engineering Total Cost

**\$ 64,448.00**