CAMINO REAL REGIONAL MOBILITY AUTHORITY
BOARD RESOLUTION

WHEREAS, the Camino Real Regional Mobility Authority (CRRMA) previously selected Huitt-Zollars, Inc. as a Consultant Engineering Team (the Engineer) for the provision of consultant engineering services to the CRRMA for Indefinite Deliverable Contracts in support of the 2013 El Paso County Comprehensive Mobility Plan (2013 CMP); and

WHEREAS, the CRRMA and the Engineer previously entered into a Contract for Engineering Services (Contract) to establish the various terms and conditions applicable to future work authorizations that could be used for the Engineer to provide various design services for plans, specifications and estimates (PS&E) to the CRRMA as the CRRMA may be requested from time to time; and

WHEREAS, the CRRMA and the Engineer now desire to execute a work authorization, pursuant to and in accordance with the Contract, in order for the Engineer to provide PS&E to the CRRMA for the Darrington Roadway Improvement Project from the 2013 CMP.

NOW, THEREFORE, BE IT RESOLVED BY THE CAMINO REAL REGIONAL MOBILITY AUTHORITY:

THAT the Executive Director be authorized to execute **Work Authorization No. 2** with Huitt-Zollars, Inc., including any additional documents or materials as may be required, for the provision of various design services for plans, specifications and estimates (PS&E) on the Darrington Roadway Improvements Project.

PASSED AND APPROVED THIS 10TH DAY OF FEBRUARY 2016.

CAMINO REAL REGIONAL MOBILITY AUTHORITY

_____
Joe D. Wardy, Vice Chair

ATTEST:

_____
Susan A. Melendez, Board Secretary

APPROVED AS TO CONTENT:

_____
Raymond L. Telles
Executive Director

WORK AUTHORIZATION NO. 2
CONTRACT FOR ENGINEERING SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 5 of the Contract for Engineering Services (the Contract) entered into by and between the CAMINO REAL REGIONAL MOBILITY AUTHORITY (the "CRRMA"), and HUITT-ZOLLARS, INC., having its principal business address at 5822 Cromo Dr. Ste. 210 El Paso, Texas 79912-5502 (the "Engineer").

PART I. The Engineer will perform engineering services generally described as the preparation of plans, specifications and estimate for the construction project known as Darrington Rd. from Eastlake Blvd. to Pellicano Dr. in accordance with the project description attached hereto and made a part of this Work Authorization. The responsibilities of the CRRMA and the Engineer as well as the work schedule are further detailed in exhibits A, B and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is $854,210.60 and the method of payment is Specified Rate Basis as set forth in Attachment E of the Contract. This amount is based upon fees set forth in Attachment E, Fee Schedule, of the Contract and the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule, which is attached and made a part of this Work Authorization.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Articles 3 thru 5 of the Contract, and Attachment A, General Provisions, Article 1.

PART IV. This Work Authorization shall become effective on the last date executed by the Parties hereto and shall terminate upon CRRMA final acceptance of the completed project, unless extended by a supplemental Work Authorization as provided in Attachment A, General Provisions, Article 1.

PART V. This Work Authorization does not waive the Parties' responsibilities and obligations provided under the Contract.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

CAMINO REAL REGIONAL MOBILITY AUTHORITY

By: _____
Raymond L. Telles
Executive Director
Date: _____

HUITT-ZOLLARS, INC.

By: _____
_____
Date: _____

LIST OF EXHIBITS

Exhibit A	Services to be provided by the CRRMA
Exhibit B	Services to be provided by the Engineer
Exhibit C	Work Schedule
Exhibit D	Fee Schedule/Budget

Exhibit A

SERVICES TO BE PROVIDED BY THE CRRMA

The CRRMA shall perform and provide the following in a timely manner so as not to delay the service to be provided by the Engineer:

1. Authorize the Engineer in writing to proceed

2. Place at Engineer's disposal all reasonably available information pertinent to the project, including previous reports, drawings, specifications or any other data relative to the project.

3. Designate in writing a person to act as the Authority's representative, such person to have complete authority to transmit instructions, receive information and interpret and define Authority's decisions with respect to the services to be provided by the Engineers.

4. Render decisions and approvals, as soon as reasonably possible to allow for the expeditious performance of the service to be provided by the Engineer.

[END OF EXHIBIT]

Exhibit B

SERVICES TO BE PROVIDED BY THE ENGINEER

I. PROJECT SUMMARY

Darrington Road is an existing 2 lane facility from the intersection of Eastlake Boulevard to Pellicano Dr., approximately 1.5 miles north. This project is a widening of the existing facility to a 4 lane divided roadway with median and curbed section. The project must match the existing alignment of Darrington Road, providing HMAC, signalization, illumination, safety appurtenances, landscape and drainage throughout. The project is anticipated to be let in 2017.

Professional Services will be provided by the Engineer to produce preliminary plan documents and final plans, specifications, and estimates (PS&E) for the widened roadway. These services generally will include topographic surveying, development of roadway geometry, pavement design, drainage, traffic, signalization at Pellicano and coordination for signalization at Paseo del Este and Eastlake, right-of-way mapping, geotechnical, stakeholder coordination, document preparation, illumination, landscaping and design services necessary for the preparation of PS&E. Coordination with the various municipalities as well as EPCPW, town of Horizon, Horizon Regional MUDD, Gas, Developers, and all utilities is required. The Engineer will also be required to prepare a complete bid package, participate during the bid phase (respond to any questions received by prospective bidders and attend a pre-bid conference). This project will be locally let by the CRRMA.

II. SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer will be designed to the latest TxDOT standards, TxDOT 2014 Standard Specifications, and other local codes, ordinances, criteria, standards, regulations, policies, guidelines, practices and procedures.

The Engineer will work at the direction and supervision of the CRRMA Executive Director and its consultants, providing reports and findings, as required. The consultant team will work cooperatively and collaboratively with other governmental agencies and design consultant firms who are responsible for adjacent projects or jurisdictional approval.

Scheduling of activities below will conform to established CRRMA, El Paso County Public Works Dept (EPCPW) and/or other municipal review and comment periods for each deliverable of the project.

The Scope of Services to be provided by the Engineer may include, but are not limited to the following key elements:

- Project Management
- Surveying

- Right of Way Mapping
- Geotechnical Investigations
- Drainage study
- Stakeholder coordination
- Plans, Specifications and Estimates
- Utility Coordination

A. Project Management and Administration

The consultant prime, in coordination with the CRRMA, will be responsible for directing and coordinating all activities related to the Project. Project management and administration tasks shall include a Project Management/Work Plan, Progress Reporting, Coordination/Administration, Project Control/Scheduling, and Subconsultant Management. The prime provider's efforts shall include but not limited to the following:

1. Project Management/Work Plan
    1.1 Develop a Project Management/Work Plan to reflect the following:
        - organization and responsibilities
        - coordination and communication procedures
        - coordination meetings
        - deliverables
        - graphic production standards
        - quality control (QC) procedures/plan to ensure the accuracy and quality of the deliverables produced
        - other important operational information pertaining to prime provider/CRRMA collaboration.
        - Coordination with other projects in the area.
2. Progress Reporting
    2.1 Prepare and submit to the CRRMA monthly progress reports of activities completed during reporting period.
        2.1.1 Activities Completed
        2.1.2 Initiated and Ongoing Activities
        2.1.3 Planned Activities
        2.1.4 Problems Encountered/Problem Remedies
        2.1.5 Overall Status including Tabulation of Percentage Complete by Task
        2.1.6 Updated Project Schedule

    2.2 Prepare and Submit Invoices. The report shall be submitted as an attachment to the invoice submittal.
        2.2.1 Financial and DBE Participation
        2.2.2 Hours Worked by Individual
        2.2.3 Hourly Rate
        2.2.4 Monthly Invoice Amount as Compared to Baseline Monthly Estimate

2.2.5 Monthly Cumulative Invoice Amount as Compared to Baseline Monthly Cumulative Estimate

2.2.6 Reasons for Deviations from Baseline

3. Coordination/Administration

3.1 The Engineer shall prepare for and attend one kick-off meeting to discuss project guidelines and present general project requirements and expectations.

3.2 Maintain a communication tracking system, identifying all formal communications.

3.3 Coordinate with the CRRMA's GEC staffand meet biweekly or as needed throughout project development.

3.4 Compile and maintain a comprehensive Administrative Record.

3.5 Corrodinate with other projects

4. Project Control/Scheduling

4.1 Develop and maintain a Master Schedule for the Project indicating tasks/subtasks, critical dates, milestones, deliverables, and review requirements.

4.2 Update and Schedule on a Monthly Basis

4.3 Include CRRMA GEC, EPCPW and other 3rd Party Reviews into the Schedule

5. Subconsultant Management

5.1 Develop and implement a plan to manage subconsultants (as part of the project management plan).

5.2 Prepare subcontracts for subconsultant(s).

5.3 Monitor subconsultant activities (staff and schedule).

5.4 Review and recommend approval of subconsultant progress reports and invoices.

Deliverables

- Project Management Plan
- Progress Reports and Invoices
- Summaries of all meetings
- Administrative Record
- Project Schedule and monthly updates
- Subconsultant Contracts, Progress Reports and Invoices

B. Surveying

All surveying shall comply with the Professional Land Surveying Practices Act, Article 5282c, Vernon's Texas Civil Statutes. All surveying shall comply with applicable rules promulgated by the Texas Board of Professional Land Surveying. The Manual of Practice published by the Society of Professional Surveyors shall be used as a guide in determining accuracy requirements and procedures to follow. The Engineer's field surveying efforts shall include the following:

1. Project Control

1.1 Establish primary and secondary control monuments. The horizontal and vertical datum for the existing control monuments will be as follows:

- Horizontal – Texas State Plane Coordinate System of 1983(NAD-83 State Plane Coordinates)
- Vertical – NAVD 88, GEOID 2012A.

2. Ground Survey
   2.1 The Engineer will provide a boundary and topographic improvements survey of the entire roadway corridor. Survey information beyond/outside the ROW will require permission from the impacted property Owner(s). Requests for access from private property owner(s) and surveys in private property will be the responsibility of the Engineer.
   2.2 Perform any ditch/channel cross-sections at 25-foot intervals along and perpendicular to the ditch/channel centerline for a distance of 100 feet left and right of the existing right-of-way (ROW).
   2.3 Survey the horizontal location of visible aboveground utility appurtenances within the existing ROW.
   2.4 Survey the horizontal and vertical location of the existing roadway for a distance of 1,000 feet each side of the Project limits.

Deliverables

- Final planimetric and topographic base map showing all mapped planimetrics and supplemental field survey data described above.
- Final Triangulated Irregular Network (TIN) file
- All electronic files shall be fully compatible with the State's MicroStation GeoPak system without further modification or conversion.
- All MicroStation V8 2D and 3D files will be in U.S. survey feet.

C. Right-of-Way Mapping

1. Perform a right-of-way survey to determine existing and proposed right-of-way limits, easements and actual property owners.
2. As necessary, acquire permissions for right of entry or other written evidence of permission before entering private property.
3. Prepare right of way map and property description for the project limits. It is anticipated that the property acquisition will consist of parcels for the construction of retention ponds and needed ROW to be acquired by others.

Deliverables

- Complete right of way map and property descriptions throughout project corridor.

D. Geotechnical Investigations

1. Subsurface Exploration and Testing
   1.1 Perform a geotechnical engineering investigation at the site of the project.

1.1.1 Conduct subsurface explorations and provide information needed for site preparation, pavement design, drainage apurtenances and illumination and signal foundations for the proposed roadway improvements.

Contact utility one call services to mark all existing utilities in the project corridor prior to starting work activities.

1.1.2 Implement traffic control as required to accomplish the exploratory drilling. Prepare and submit to EPCPW for review and approval, necessary traffic control plans and permit forms.

1.1.3 Perform split spoon standard penetration tests (SPT) at 2.5 feet below grade and 5 feet thereafter.

1.1.5 Develop a laboratory soils testing program to perform moisture content (ASTM D 2216), dry unit weight (ASTM D 2937), percent passing the No. 200 sieve (ASTM D 1140), Atterberg limits determination (ASTM D 4318), perk tests, and sieve analysis (ASTM D 6913) for each major soil type encountered. Utilize the index test to classify the recovered soils in accordance with the Unified Soils Classification System.

1.1.6 Derive soil strength utilizing the split spoon SPT blow counts or unconfined compressive strength tests (ASTM D 2166) on selected soils.

2. Geotechnical Design

2.1 Perform an engineering evaluation in general accordance with the AASHTO pavement design guide to determine pavement base and pavement thickness for a flexible pavement section.

2.2 Provide recommendations for underground storm water pipe bedding and backfill.

2.3 Provide recommendations for illumination pole foundations, traffic signal mast arm foundations.

2.4 Summarize results of the geotechnical engineering investigations in a written report.

Deliverables

- Provide three (3) PE sealed and signed copies of report.

E. Drainage Study

1. Perform a drainage study of the Project watershed to determine the drainage requirements for the Project.
    1. The study will consider the location of retention ponding areas for storing runoff from the project. The study will be documented in a bound Drainage Study report.
2. Prepare layouts, drainage area maps, and design of all drainage components. The Engineer shall design all conventional storm drainage and cross drainage in conformance with TxDOT and EPCPW design guidelines.

3. Storm drain design will be performed using WinStorm or GEOPAK Drainage. Cross drainage design will be performed using WINSTORM, HY 8 or HEC RAS.
4. Coordinate with the EPCPW, El Paso County, and adjoining developers to check that all proposed drainage systems accommodate the proposed construction.
5. Included in this study are the following:
    1. Prepare drainage area maps.
    2. Prepare culvert plan and elevation sheets.
    3. Prepare plan/profile sheets for storm drain systems and outfall ditches.
    4. Identify potential utility conflicts and design around them, wherever possible.
    5. Prepare preliminary layouts of proposed ponding areas

Deliverables

- Three copies of the bound Drainage Study report.

F. Stakeholder Coordination

The Engineer will be responsible for implementing any stakeholder involvement. Services will include identifying stakeholders affected by the project and coordination of meetings to establish a proactive involvement process during the Project development. The stakeholder involvement activities sought under this scope of services, include, but are not limited to the following:

a) Identify stakeholders
b) Facilitate meetings.
c) Prepare Meeting Summary, including a response to comments received.

Deliverables

- Meeting Summary

G. Plans, Specifications and Estimates (PS&E)

1. As necessary, update traffic data, right of way maps, and other information from previous projects and other activities.

2. Complete the Design Summary Report
    a) Design Summary Report
    b) Hold a Design Conference at 30% design stage.
3. Initial design
    a) develop traffic control plan/detour plans
    b) obtain environmental permits
    c) coordinate approval of pavement design
    d) prepare hydrologic/hydraulic reports as necessary
4. Utility Coordination
    a) research and determination of the location of existing utilities
    b) minimization of utility conflicts with the proposed design

c) coordination with utilities to develop relocation plans
d) develop Utility Layout Plan
e) develop utility relocation schedule

5. Roadway design
    a) design final vertical and horizontal alignments
    b) develop cross-section and earthwork volumes
    c) detail design elements throughout project including illumination, driveway access, bicycle and pedestrian facilities, landscape, and miscellaneous details
    d) submit design exceptions/waivers as required on project
6. Operational design
    a) develop signing and pavement marking plans
    b) develop signalization plans for Pellicano
7. Drainage Design
    a) develop retention pond design
    b) prepare retention pond details
    c) develop hydraulic design for culverts and storm drains
    d) prepare culvert and storm drain details
    e) design final vertical and horizontal alignments for storm drains
    f) Prepare culvert plan and elevation sheets.Prepare plan/profile sheets for storm drain systems and outfall ditches.
    g) Select standard details from EPCPW or TxDOT list of standards for items such as inlets, manholes, junction boxes and end treatment, etc.
    h) Prepare details for non-standard inlets, manholes and junction boxes.
    i) Prepare drainage details for outlet protection, outlet structures and utility accommodation structures.
    j) Identify pipe strength requirements.
    k) Prepare drainage facility quantity summaries.
    l) Identify potential utility conflicts and design around them, wherever possible.
    m) If applicable, prepare Hydraulic Data Sheets for any bridge or cross drainage structures at outfall channel. (Indicate site location such as name of creeks and stations)
    n) Develop plans for all temporary drainage facilities necessary to allow staged construction of the project and to conform with the phasing of adjacent construction projects without significant impact to the hydraulic capacity of the area.
8. Traffic Control
    a) attend up to two meetings to present and discuss the proposed construction sequence and traffic control plans for the project.
    b) prepare traffic control drawings including: Line Diagrams; Detour Plans; TCP, General Note Guidelines for Contractor to follow; TCP Details/Standards.
    c) compile TCP Details/Standards using available TxDOT Standards.
9. Storm Water Pollution Prevention Plan (SW3P)
    a) prepare SW3P Narrative

b) prepare Storm Water Pollution Prevention Plans
c) prepare SW3P Manual (Binder)

10. Final assembly of PS&E Package and supporting documents
    a) complete final construction plans
    b) develop standard and special specifications
    c) develop special provisions
    d) develop cost estimate
    e) develop bid document package
    f) support CCRMA's develop of project agreements related to the Project
11. ADA compliance Services
    a) Engineer will perform plan review and inspections for ADA, T.A.S, and Texas Department of Licensing and Regulation requirements.

12. Bid assistance
    a) assist with bid process and provide answers to CRRMA for prospective bidders
    b) attend pre-bid conference

Deliverables

- 30, 60, 90, 100% Submittals: The Engineer will prepare and provide five (5) reproducible copies of the 30,60, 90, 100% Design documents and corresponding electronic (pdf) files
- QC redlines at (30, 60, and 90 percent) design review
- Specification list
- Preliminary (30, 60, and 90 percent) design review
- Final hydraulic report
- Final approved design exceptions/waivers
- Plans estimate
- Specification list, general notes, special provisions, specifications, special specifications
- Final signed and sealed construction plans
- Bid document package
- Environmental Permits

H. Utility Coordination

1. conduct a records research and acquisition of available as-built utility records. This information will be placed on the base map and provided to all utility companies.
2. designate known utilities throughout the ROW, as provided by utility owners.
3. conduct utility coordination meetings to review record drawings and proposed improvements with affected utility owners individually at each phase submittal. Utilities that may be affected include: El Paso Electric Company, Texas Gas Service, HR MUDD, Time Warner Cable, TW Telecom, ATT Telephone, AT&T Distribution Cable, MCI, QWEST Communications, and others.
4. prepare and issue minutes for each meeting.
5. provide base map information to all utility companies at each submittal phase.

6. obtain clearance letters and provide copies of documentation to the CRRMA at the Final submittal phase. Utilities can request that their new service lines be included as part of the bid package provided that the utility company signs an agreement with the CRRMA and funding is provided.

[END OF EXHIBIT]

Exhibit C
Work Schedule

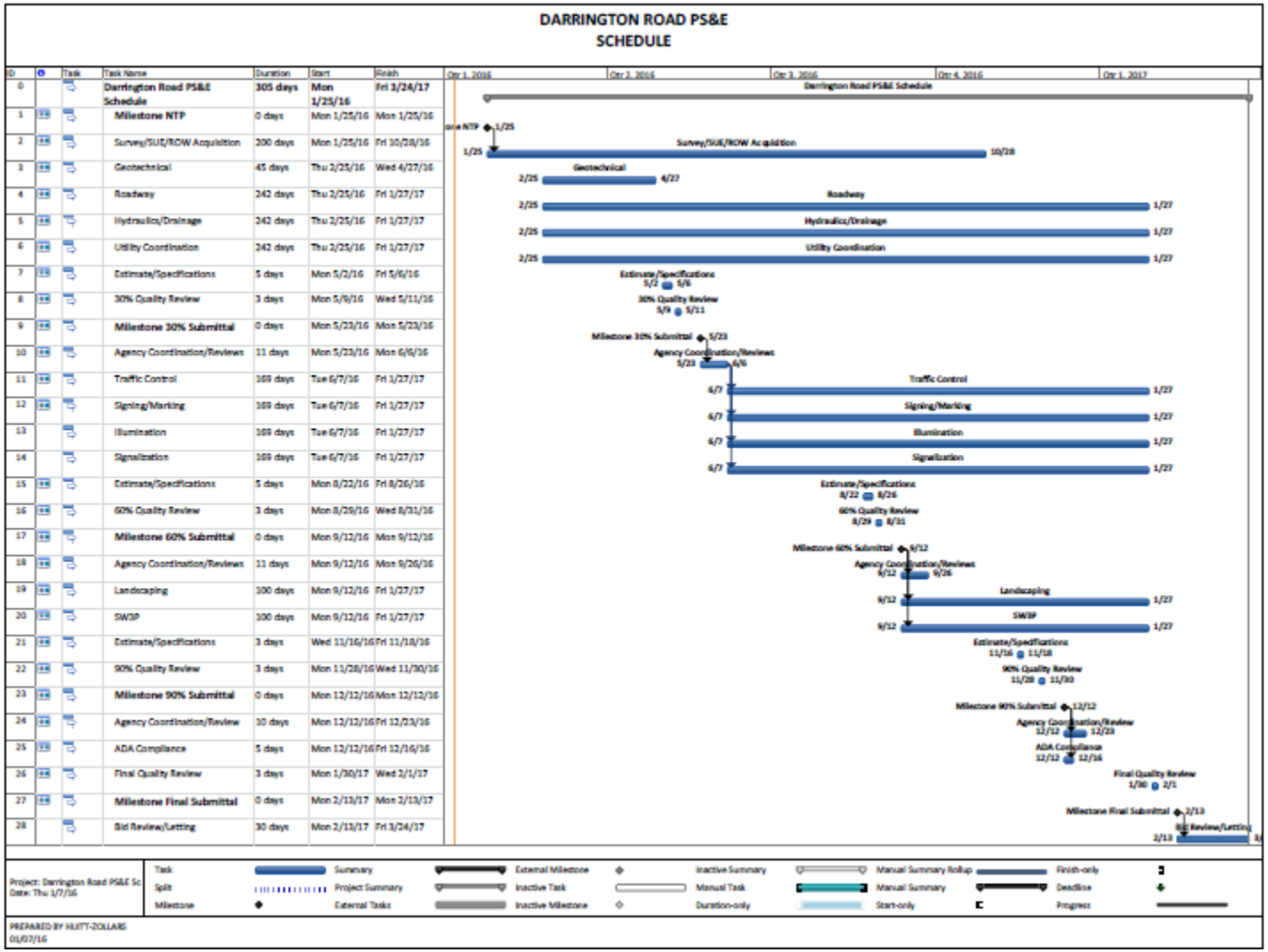

EXHIBIT D
FEE SCHEDULE
(Final Cost Proposal)

This attachment provides the basis of payment and fee schedule**. The basis of payment for this contract is indicated by an "X" in the applicable box.** The basis shall be supported by the Final Cost Proposal (FCP) shown below. If more than one basis of payment is used, each one must be supported by a separate FCP.

"X"	Basis	
____	Lump Sum	The lump sum shall be equal to the maximum amount payable. The lump sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.
____	Unit Cost	The unit cost(s) for each type of unit and number of units are shown in the FCP. The unit cost includes all direct and indirect costs and fixed fee. The Engineer shall be paid based on the type and number of units fully completed and the respective unit cost. For payment, the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or any other cost data. The FCP may include special items, such as equipment which are not included in the unit costs. Documentation of these special costs may be required. The maximum amount payable equals the total of all units times their respective unit cost plus any special direct items shown.
__X__	Specified Rate Basis	The specified rates for each type of labor are shown in the FCP below. The FCP may include special items, such as equipment which are not included in the specified rates. Payment shall be based on the actual hours worked multiplied by the specified rate for each type of labor plus other agreed to special direct cost items. The specified rate includes direct labor and indirect cost and fixed fee. The CRRMA may request documentation of reimbursable direct costs including hours worked. Documentation of special item costs may be required. The specified rate is not subject to audit.
____	Cost Plus Fixed Fee	Payment shall be based on direct and indirect costs incurred plus a pro rata share of the fixed fee based on the ratio of labor and overhead cost incurred to total estimated labor and overhead cost in the FCP or the percentage of work completed. The invoice must itemize labor rates, hours worked, other direct costs and indirect costs. The Engineer may be required to provide documentation of hours worked and any eligible direct costs claimed. The overhead rate charged is subject to audit and adjustment to actual rates incurred. The FCP below shows the hourly rates for labor, other direct expenses including but not limited to travel and allowable materials, overhead rate and the fixed fee. __A. Actual Cost Plus Fixed Fee - Actual wages are paid (no minimum, no maximum. This option does not apply to Indefinite Deliverable Contracts.) __B. Range of Cost Plus Fixed Fee – Actual wages must be within the allowable range shown on the Final Cost Proposal.

EXHIBIT D
FEE SCHEDULE

Final Cost Proposal (FCP) Supporting Basis of Payment

* The **MAXIMUM AMOUNT PAYABLE** is $854,210.60

* Maximum amount payable must be negotiated for each work authorization.

The maximum amount payable is based on the following data and calculations:

[HZ, P]
Darrington Road

Company	Fee
[HZ, P]	$696,951.60
[PSI, S1]	$34,981.85
[VVInc Dar, S2]	$48,392.08
[Quantum, S3]	$49,480.84
[Frank X. Spencer, S4]	$24,404.23
[Firm Name, S5]	$0.00
[Firm Name, S6]	$0.00
[Firm Name, S7]	$0.00
[Firm Name, S8]	$0.00
Total	**$854,210.60**

[HZ, P]
Darrington Road

Task	[HZ, P]	[PSI, S1]	[VVInc Dar, S2]	[Quantum, S3]	[Frank X. Spencer, S4]	[Firm Name, S5]	[Firm Name, S6]	[Firm Name, S7]	[Firm Name, S8]
A. Project Management	$112,479.46	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
B. Surveying	$43,005.90	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
C. Right-Of-Way Mapping	$39,485.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
D. Geotechnical Investigations	$0.00	$9,221.85	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
E. Schematic Design	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
F. Drainage Study	$70,104.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
G. Stakeholder Coordination	$34,509.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
H. Plans, Specifications and Estimates (PS&E)	$361,703.88	$0.00	$47,319.08	$48,463.34	$0.00	$0.00	$0.00	$0.00	$0.00
I. Utility Coordination	$25,684.30	$0.00	$0.00	$0.00	$11,404.23	$0.00	$0.00	$0.00	$0.00
Sub Totals	**$686,973.70**	**$9,221.85**	**$47,319.08**	**$48,463.34**	**$11,404.23**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Direct Expenses	**$9,977.90**	**$25,760.00**	**$1,073.00**	**$1,017.50**	**$13,000.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Totals	**$696,951.60**	**$34,981.85**	**$48,392.08**	**$49,480.84**	**$24,404.23**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
Grand Total					**$854,210.60**				

Participation Percentage	81.59%	4.10%	5.67%	5.79%	2.86%	0.00%	0.00%	0.00%	0.00%

Total DBE Percentage: 14.31%