



**CITY OF PLANO
COUNCIL AGENDA ITEM**

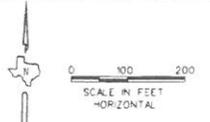
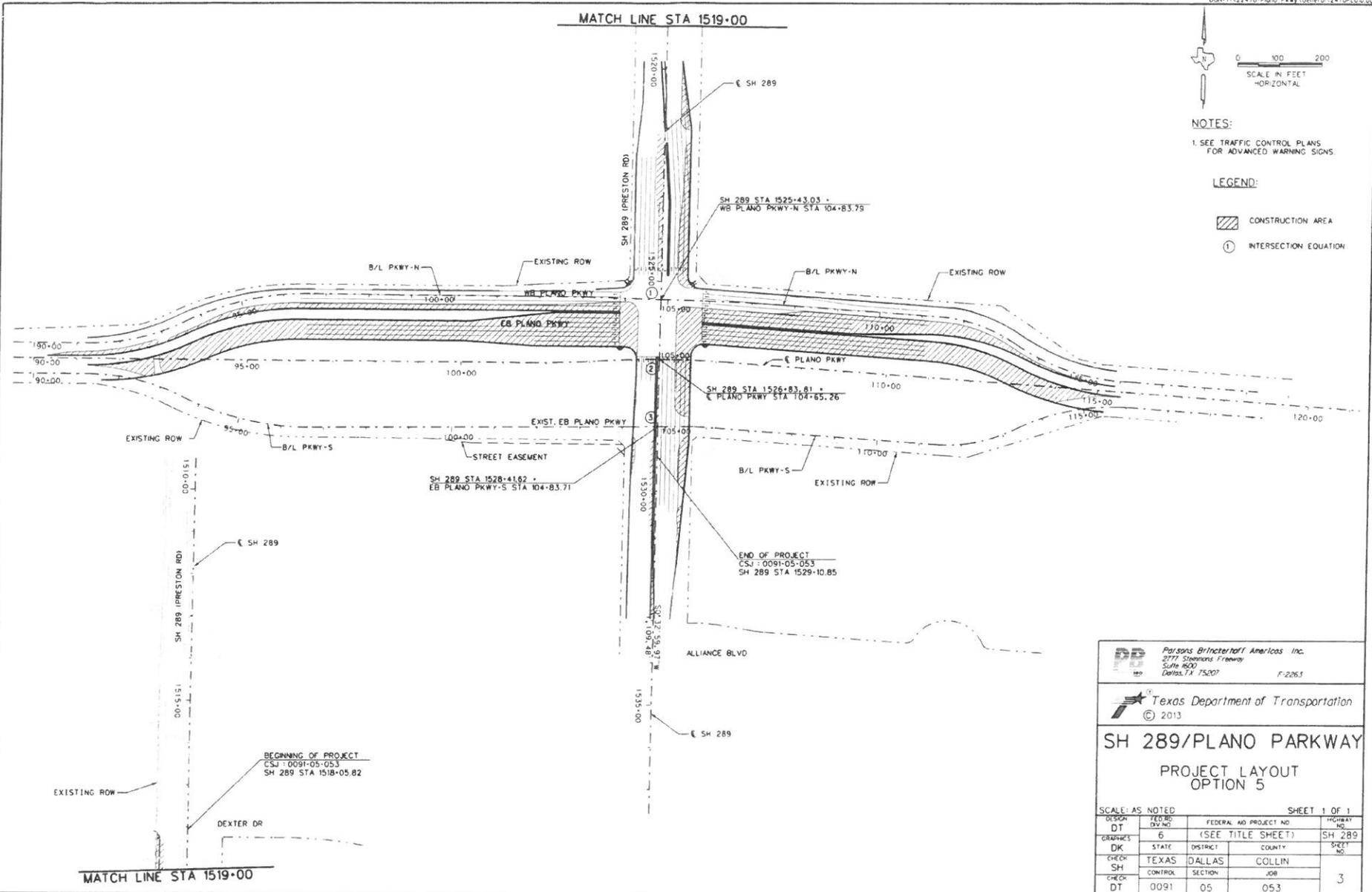
CITY SECRETARY'S USE ONLY				
<input type="checkbox"/> Consent <input type="checkbox"/> Regular <input type="checkbox"/> Statutory				
Council Meeting Date:		11/24/14		
Department:		Engineering		
Department Head		Jack Carr, P.E.		
Agenda Coordinator (include phone #):		Kathleen Schonne (7198)		Project No. 5283
CAPTION				
To approve and authorize Contract Modification No. 4 for the purchase of Professional Engineering Services for additional design of Preston Road and Plano Parkway Intersection Improvements in the amount of \$354,416 from Parsons Brinckerhoff, Inc., and authorizing the City Manager or his designee to execute all necessary documents.				
FINANCIAL SUMMARY				
<input type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> OPERATING EXPENSE <input type="checkbox"/> REVENUE <input checked="" type="checkbox"/> CIP				
FISCAL YEAR: 2014-15	Prior Year (CIP Only)	Current Year	Future Years	TOTALS
Budget	28,207	1,366,793	1,120,000	2,515,000
Encumbered/Expended Amount	-28,207	-110,887	0	-139,094
This Item	0	-354,416	0	-354,416
BALANCE	0	901,490	1,120,000	2,021,490
FUND(S): STREET IMPROVEMENT CIP				
COMMENTS: Funding is available for this item in the 2014-15 Street Improvement CIP. This item, in the amount of \$354,416, will leave a current year balance of \$901,490 available for further expenditures on the intersection improvements project at Preston Road and Plano Parkway.				
STRATEGIC PLAN GOAL: Obtaining additional professional services for intersection improvements in Plano relates to the City's Goal of Financially Strong City with Service Excellence.				
SUMMARY OF ITEM				
Additional design services are required for the additional engineering necessary to complete the construction documents for the Preston Road and Plano Parkway Intersection Improvements project. This modification will provide for elimination of the original median crossover concept and provide a single point intersection at the location of the current westbound lanes of Plano Parkway at their intersection with Preston Road (SH 289).				
The original contract amount was \$224,941.15. The Engineering Department is seeking City Council approval of this fourth modification in the amount of \$354,415.86 because the amount of the modification increase exceeds \$50,000.00. The revised contract amount is \$683,425.26.				
https://maps.google.com/maps?q=plano+parkway+%26+preston+road&hl=en&sl=33.061262,-96.736625&sspn=0.198537,0.363579&t=h&hnear=Plano,+Texas&z=16				
List of Supporting Documents:			Other Departments, Boards, Commissions or Agencies	
Location Map Project Layout Plan; Contract Modification No. 4			N/A	

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Revision 29 - 04 - 2011 - 03/0

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NOTES:
 1. SEE TRAFFIC CONTROL PLANS FOR ADVANCED WARNING SIGNS.

LEGEND:
 [Hatched Box] CONSTRUCTION AREA
 (1) INTERSECTION EQUATION

Parsons Brinckerhoff Americas Inc. 2777 Stemmons Freeway Suite 8000 Dallas, TX 75207 F-2263			
Texas Department of Transportation © 2013			
SH 289/PLANO PARKWAY PROJECT LAYOUT OPTION 5			
SCALE: AS NOTED		SHEET 1 OF 1	
DESIGN	DESIGN NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
DT	6	(SEE TITLE SHEET)	SH 289
CHECKS	STATE	DISTRICT	COUNTY
SH	TEXAS	DALLAS	COLLIN
CHECK	CONTROL	SECTION	JOB
DT	0091	05	053

CONTRACT MODIFICATION NO. 4

**PRESTON ROAD AND PLANO PARKWAY INTERSECTION IMPROVEMENTS
(TXDOT) PHASE II**

PROJECT NO. 5283

PURCHASE ORDER NO. 103074

CIP NO. 31410

This shall serve as a Fourth Modification to the Contract between the City of Plano, Texas (hereinafter "City"), and **PARSONS BRINCKERHOFF, INC.** (hereinafter "Consultant"), dated July 27, 2006, for Professional Engineering Services for the referenced project (hereinafter "Project").

Basic Services to be Provided by the Consultant

Introduction

The Consultant shall develop a revised schematic design and appropriate revised environmental documents. Upon approval of the schematic design, the Consultant shall prepare construction Plans, Specifications and Estimates (PS&E) consistent with the approved schematic. The City has chosen Option 5 as the preferred alternative which provides four (4) through lanes, dual (2) left turn lanes and one (1) right turn lane on each approach. Lane geometry shall be consistent with Figure 1 of the City's Thoroughfare Standards Rules and Regulations (Ref ORD 97-8-7). Turn lanes storage length shall be based on traffic demand for the design year of 2035 with minimum length not less than lengths provided in Figure 1. No additional alternatives shall be considered as part of this contract.

The design shall include replacing or adjusting existing water and wastewater mains or related appurtenances along Preston Road in accordance with TxDOT utility relocation procedures, if required. Also included shall be replacement or adjustment of existing water and wastewater mains or related appurtenances along Plano Parkway, if required.

The design shall also include paving, grading, storm drainage, landscaping and irrigation, traffic control plan and sequencing, storm water pollution prevention plans, environmental evaluation, signing and pavement markings and traffic signal design and timing.

The Project will be constructed entirely within the existing right of way and therefore will not require field notes and parcel plats for acquisition of right of way or easements. The existing right of way shall be identified and shown on project paving plans.

The Project involves TxDOT funds and as such will have to meet all requirements as set forth in the publication "Local Governments project Procedures-Project Development and Engineering Design" and "Local Government Project Procedures for highway Construction and Related Projects".

The Consultant shall perform the necessary engineering and related technical services for the Basic Design and Construction Phase Services, including any necessary Special Services for

the development of this Project according to the following sections of this agreement. The Consultant will prepare a schematic showing the horizontal layout and typical sections of the proposed improvement and obtain approval of the schematic from the City of Plano and TxDOT prior to performing any additional design of the Project. This schematic will be submitted in the Environmental Categorical Exclusion document. The Project will not be bid until the schematic, Environmental clearance and Construction documents are approved by the City of Plano and TxDOT.

Project Management and Administration

The Consultant shall provide general project management work, including coordination with the City. The Consultant shall prepare, invoicing and progress reports, on a monthly basis in accordance with the City requirements and format. The Consultant shall attend project meetings as required with the City Project Manager to monitor and discuss the development of the Project or to discuss comments or questions concerning the plans. The Consultant shall attend project kick-off meeting and review meetings to discuss review comments of a Schematic submittal and PS&E 60%, 95% and Final 100% submittal. The Consultant shall prepare project meeting minutes and submit to the City's Project Manager for review via e-mail.

Project Schedule

The Consultant shall prepare a project schedule indicating task, subtasks, milestones, and deliverables. The Consultant shall submit the schedule on a monthly basis with the project invoice to indicate progress to date on each task and subtask. The consultant shall obtain approval in advance from the City prior to making major revisions to the schedule.

Description of Option 5:

Option 5 entails the realignment of eastbound Plano parkway on a new alignment from approximately 1800 ft west of Preston Road to approximately 1500 east of Preston Road. The existing westbound Plano Parkway will remain in place and widened towards the median. In addition, northbound Preston Road will be widened to the outside in order to accommodate the proposed lane configurations. The two existing at-grade signalized intersections located at Plano Parkway westbound and eastbound roadway and Preston Road will be replaced with a single four-leg intersection at the existing westbound Plano Parkway and Preston Road intersection. Detailed descriptions of the proposed improvements are provided below.

Proposed Typical Section: The proposed Typical Section for Plano Parkway would have a divided eight (8) thru lanes with dual left turn lanes on each the eastbound and westbound approaches and 14-foot outside lanes to accommodate bicycles. In addition, this option provides a single right turn lane on both the eastbound and westbound approaches. The typical median width is 26 feet (face-to-face) that would be transitioned to 6 feet wide (back to back of each curb) at the approaches to the signalized intersection. The existing Border width along the westbound Plano Parkway will be maintained. - East of the intersection with Preston Road, the minimum existing Border width, which is between the outside edge of the sidewalk to the right-of-way, line is approximately eleven feet (11') and six inches (6"), and twelve feet (12') and six inches (6") west of the intersection.

The proposed Typical Section for Preston Road would also have a divided eight (8) lanes with dual left turn lanes on both the northbound and southbound approaches and a single right turn lane on each of the approaches. A six (6) feet wide median (back to back of each curb) would be provided on both approaches that would be transitioned out to match the existing median width. The existing Border width along the northbound Preston Road is reduced - South of the

proposed intersection with Plano Parkway, the minimum Border width is reduced to approximately seven feet (7') and four inches (4"). The minimum Border width along the southbound Preston Road is fifteen feet (15').

Proposed Eastbound Plano Parkway: The eastbound Plano Parkway will be shifted northward on a new alignment such that the eastbound lanes would be approximately parallel with the westbound lanes. At both ends of the project, the proposed four (4) through lanes will be transitioned to match with the existing three (3) through lanes. At the intersection with Preston Road, four (4) through lanes with a 14-foot outside lane for bicycles, dual (2) left turn lanes and a right turn lane would be provided. Three (3) alternate concepts for treatment of driveway access will be submitted - Eight (8) such driveways have been identified.

Proposed Westbound Plano Parkway: The existing westbound Plano Parkway will be widened to accommodate four (4) through lanes. The proposed four (4) through lanes will be transitioned to match with the existing three (3) through lanes at both ends of the project. The existing roadway horizontal curves will be evaluated to determine that they comply with current City Standards. At the intersection with Preston Road, four (4) through lanes with a 14-foot outside lane for bicycles, dual (2) left turn lanes and a right turn lane would be provided. The existing pavement, if acceptable, will be salvaged and widening will be limited to the south side only.

Proposed Northbound Preston Road: The existing northbound Preston Road will be widened to accommodate four (4) through lanes, dual (2) left turn lanes and a right turn lane.

Proposed Southbound Preston Road: The existing southbound Preston Road will be restriped to accommodate four (4) through lanes, dual (2) left turn lanes and a right turn lane. If pavement installation is required, that shall be done where needed.

A. Research and Data Collection –

1. Meet with City of Plano Engineering staff and obtain design criteria, pertinent utility plans, street plans, plats and right-of-way maps, existing easement information, and other information available for the project area.
2. Meet with the City of Plano Project Manager and conduct an on-site review and walk through.
3. Meet with TxDOT Engineering staff to obtain proposed and existing roadway construction plans to coordinate proposed connections and construction phasing related to TxDOT roadways in the project area.
4. Meet with private utility companies to have existing facilities marked for identification to be included in the design plans.

B. Design Survey –

1. Attend any required meetings in Plano
2. Attend two coordination meetings with PB in Dallas.
3. Set permanent control monuments at 500 foot intervals (X,Y,Z) out of the way of construction.
4. Locate property pins and right of way markers to establish the existing right of way on Preston Road (SH 289) and along Plano Parkway.
5. Prepare an Ownership map with owners names, addresses, subdivision name, lot/block numbers and deed recording data.

6. Easement and right of way parcel descriptions and related deed research and boundary survey are not included in the scope of services.
7. Provide complete topographic survey along Preston Road and Plano Parkway within the limits of the project entirely within the ROW line.
8. Show the horizontal location and vertical elevation of all utilities within the survey area limits and include rim elevations and measure downs/flow lines in wastewater and storm drain manholes and storm drain structure along with elevations of top of operating nut on water valves. Probing, exposure of or pot-holing of existing buried utilities is not included in the scope of surveying services.
9. Provide contour mapping in Geopak format at 1 ft contour interval along with TIN files and break lines as necessary.
10. Perform quality checking of all survey deliverables.
11. Deliverables include a CD with electronic files of the topographic mapping, contour mapping, TIN files, break lines, level list, point lists and control monument data, right of way, property and ownership data along with hard copies of each.

C. Right of way and Easement Requirements

Proposed ROW and/or Easements: This option was selected as it does not appear to require additional ROW. The geometric design will be developed to keep the proposed improvements within the existing ROW. The need for temporary construction easements will be evaluated during schematic developments.

D. Geotechnical Report

1. Utilize existing geotechnical data available from the City of Plano and TxDOT for improvements.
2. Geotechnical services are not included in this Project

E. Environmental Studies

1. PB will prepare a Categorical Exclusion (CE) document for the proposed project including necessary drawing exhibits and schematic.
2. The data to be used for CE will be collected from resources agencies, database, site reconnaissance, and other sources as applicable. The CE will be conducted in accordance with the guidelines of FHWA, NEPA and Executive Orders, and will be written in the format preferred by the TxDOT Dallas District.
3. The CE will consist of a purpose and need, description of the existing facility and proposed action, and a discussion of any impact associated with right-of-way and displacements, socio-economics and environmental justice, land use, vegetation, threatened and endangered species, and wildlife habitat, farmland, historic and archeological sites, section 4(f) lands, waters of the U.S. and wetlands, water quality, floodplains, hazardous materials, air quality, traffic noise, construction, and items of special nature such as airway/ highway clearance.
4. PB will conduct field surveys and research and approval for Haz-Mat, cultural resources, biology, and environmental justice.
5. PB will organize, conduct and participate in all required Public Meetings (prepare presentation, mail outs and run meeting).
6. Categorical Exclusion (CE)
 - a. The Consultant believes that Categorical Exclusion would be the appropriate environmental clearance for the Project as provided in Option 5.

- b. The Consultant shall prepare the CE Determination Checklist and supporting documentation.
- c. The Consultant shall assist the City with the public involvement process.
- d. The Consultant shall prepare written summary of the public involvement and supporting documents for any meetings.

7. Deliverables:

- Completed CE determination checklist and supporting documentation
- Prepare public Involvements notice and mailing list
- Prepare Exhibits to be used for public meeting
- Prepare Public Meeting Summary report.

F. Preliminary Design

1. All plan sheets to the City will be at a scale suitable for 22"x34" sheets with the appropriate scale shown below and submitted plan sheets will be half size or 11"x17".
2. Provide general project administration and management services throughout the duration of Phase II design.
3. Attend up to four (4) progress meetings with City of Plano staff
4. Organize, conduct and participate in two public education or information meetings in Plano (prepare presentation, mail outs, and run meeting).
5. Attend up to two (2) coordination meetings with TxDOT, Dallas District
6. Make three (3) site visits during the design stage to verify existing and proposed conditions.
7. Prepare and distribute meeting minutes for all project coordination meetings.
8. Prepare paving plan layouts at 1" = 20' and paving details
9. Prepare grading plans at 1" = 20' scale
10. Prepare project right of way and control data sheets at 1" = 100' scale
11. Prepare a drainage area map at 1" = 50' scale
12. Prepare runoff, inlet and storm drain calculations and include as a plan sheet
13. Prepare storm drain plan-profile sheets and storm drain lateral profile sheets at 1" = 20' (H) and 1" = 5' (V) scales.
14. Monitor utility plans, landscaping plans and digital data prepared by sub-consultants.
15. Prepare traffic control, sequencing and temporary drainage plans at 1" = 20' scale.
16. Prepare temporary traffic signal plans at 1" = 20' scale.
17. Prepare street light plans at 1" = 100 scale.
18. Prepare Storm Water Pollution Prevention Plan (SWPPP), narrative, EPIC sheet and details at 1" = 100' scale.
19. Prepare Landscape Plans for the median only.
20. Prepare Irrigation Plans for the median only.
21. Prepare Utility Relocation Plans as needed once the utilities to be relocated are identified. This will be considered additional work and executed by a supplemental agreement.
22. Prepare roadway cross section for determining earthwork quantities at 1" = 10' (H) and 1" = 5' (V) scale.
23. Prepare Removal plans at 1" = 20' scale.
24. Prepare sign layout and sign panel details at 1" = 20' scale to include disposition of all existing signs (remove, remain, relocate, etc).
25. Prepare permanent pavement marking plans and details at 1" = 20' scale.

26. Traffic signal design services shall include the design of new traffic signals at the intersection of Preston Road at Plano Parkway.
27. Prepare plans to modify existing vivid detection system and wireless traffic signal coordination system (spread spectrum) in accordance with the current City of Plano transportation Department Standards.
28. Traffic signal design services by PB shall include providing three (3) traffic signal timing plans (AM peak, Noon peak, and PM peak) for a typical weekday and a Saturday timing plan (noon), coordinating the proposed signals with existing traffic signal systems along Plano Parkway and Preston Road. PB shall not be responsible for collecting turning movement or traffic data for the timing plan design. This data shall be provided by the city of Plano.
29. Coordinated traffic signal timing plans shall be prepared for Plano Parkway from Ohio Road to Ventura and on Preston Road from the eastbound SH 190 Frontage Road to Old Shepard Place.
30. Prepare quantity summaries of all construction items.
31. Prepare opinion of probable construction cost at the 30% (schematic), 60% and 95% stages of design.
32. Select TxDOT Standard Details and print them to be included in the construction documents.
33. Prepare special specification for items not included In TXDOT or City of Plano Standard Specifications.
34. Perform in-house quality plan checking at 30% (schematic), 60% and 95% PS&E review stages prior to submitting to City of Plano and TxDOT.
35. Prepare and assemble construction documents to be submitted to the City of Plano and TxDOT at the 30% (schematic), 60%, and 95% PS&E design stages.

G. Landscaping and Irrigation -

1. Provide landscaping and irrigation design to include a single row of trees in median island areas of 20' width or more (or as otherwise determined) on Plano Parkway as agreed by the City Park Department. This project does not include islands along Preston Road.
2. The phases of work shall consist of landscape & irrigation construction documents. Landscaping plans shall be prepared utilizing AutoCAD software.
3. Prepare landscaping and irrigation construction documents.
4. Prepare Planting Plans to include landscape area calculations and design calculations. These plans will show location, name and quantity of all proposed plantings.
5. The Plant Legend & Details will contain the following information for all proposed plantings; quantity, botanical names, sizes, spacing, minimum height, and minimum spread. Sketch details will be provided to aid in the installation of trees, shrubs and groundcovers.
6. Plant specifications will be prepared to provide guidance and control for all plantings and will meet the city of Plano Standards.
7. Prepare an irrigation plan with specifications, notes and details to serve as irrigation construction documents. These plans will not be based on adapting to the existing irrigation system and will include irrigation sleeves and meter information.
8. A total of two project meeting are anticipated for this project
9. Prepare quantity summaries and cost estimate at 60%, 95% and 100% stages.

Traffic Analysis

The Consultant is responsible for data compilation from North Central Texas Council of Governments and the TxDOT Transportation Planning and Programming (TPP) division and collected data that the city of Plano does not readily have available (certain turning data movement counts at specific times of the day). A PTZ traffic monitoring camera shall be included in the plan set for both interim and permanent construction conditions.

PB shall obtain from North Central Texas Council of Governments and the Transportation Planning and Programming (TPP) division updated 2035 traffic volumes to be used for the schematic development and to perform the traffic operational analysis. The peak design hourly volume will be used for the operational analysis using Synchro and the latest versions of HCM/HCS. The Consultant shall prepare an Operational Analysis Report for the City's review and approval.

Deliverables:

- Traffic Operational Analysis report

Schematic Design

The Consultant shall develop a schematic design consistent with the Option 5 design concept. The schematic shall be submitted as a 100% complete document with the first submittal. If review comments are received from TxDOT or the City, it will be assumed for scheduling purposes, that all comments will be satisfied with the first PS&E submittal. However, in any case all comment from TxDOT or the City must be satisfied whenever they are received by the Consultant. The schematic shall include the following:

Research and Data Collection: The Consultant shall collect, review and evaluate readily available data from the City and the State that would be useful for the schematic development including but not limited to existing utilities, ROW maps, existing easements, and TxDOT average low bid unit prices.

Typical Sections: The consultant shall provide existing and proposed typical sections for Plano Parkway and Preston Road.

Geometric Design: The consultant shall establish horizontal alignments and profiles for Plano Parkway and Preston Road consistent with the City's Thoroughfare Standards Rules and Regulations and in conformance with the latest version of the TxDOT roadway Design Manual. For driveways to be connection to the realigned eastbound Plano Parkway, the consultant shall provide profiles.

Cross Sections: The Consultant shall develop preliminary cross sections at 100-foot intervals order to verify that no additional ROW and corner-clips would be needed.

Right –Of-Way and Easements: The Consultant shall show all existing ROW lines on the schematic and establish any temporary easements that would be appropriate.

Preliminary Cost Estimate: The Consultant shall prepare preliminary cost estimate based on the schematic design.

Driveways: During the schematic development, the Consultant shall develop conceptual layouts of all the driveway accesses to be provided between the existing driveways and the eastbound Plano parkway. Upon review and approval from the City, the Consultant shall incorporate the conceptual driveway layouts into the schematic.

Utility Relocations: The Consultant shall determine which utilities will require relocation including water and wastewater lines, communication, electric, etc and provide a preliminary utility concept plan showing the relocations.

Deliverables:

- Conceptual Driveways layout Exhibit prior to 30% schematic submittal.
- Schematic design on a roll plot using 1" = 100' scale.
- Probable construction cost estimate.
- Utility list of impact utilities.
- Utility concept plan showing possible relocations.

Plans, Specifications and Estimates (PS&E)

The Consultant shall prepare PS&E set of plans on 22"x34" sheets for the final submittal using scale as stated in the original contract. The PS&E set shall include Traffic Control Plans, Drainage sheets, Roadway Details, Traffic Item sheets including Traffic Signal sheets, Utility relocation sheets (if applicable), EPIC sheet, standard sheets and appropriate miscellaneous sheets. Storm sewer design shall be done using GEOPAK drainage. PS&E development shall follow 30%, 60%, 95% and 100% submittals.

Deliverables:

30% Submittal: The Schematic shall be considered as the 30% submittal.

60% Submittal: The Consultant shall submit the following in the 60% PS&E set: (submit five (5) half size plan sets for City review plus sets as required by TxDOT.

- Written response to the 30% (schematic) City review comments
- Written response to the 30% (schematic) STATE review comments
- Title Sheet
- Index of Sheets, with all sheets numbered on index and plan sheets
- Project Layout with Advance Warning Signs
- Existing and Proposed Typical Sections
- Preliminary Quantity Summary Sheets
- Preliminary and Conceptual Sequence of Work and TCP
- Removal Plans
- Sequence of Work and Traffic Control Plans (11"x17" sheets)
- Temporary Signals During Construction
- Alignment Data Sheets
- Plan-Profile sheets Including ROW & Easements
- Paving Contour and Grading Plans
- Miscellaneous Paving Details
- Driveway Plans/Profiles

- Drainage Area Maps
- Storm Sewer Computation sheets
- Storm Sewer Plans/Profiles sheets
- Landscape Plans only for the medians
- Irrigation Plans only for the medians
- Culvert Computations (if applicable)
- Culvert Plans-Profiles Sheets (if applicable)
- Sound Wall Layouts (if applicable)
- Signs and Pavement Markings
- Summary of Small & Large Signs
- Street lighting plan
- Traffic Signal Plans
- Draft EPIC Sheet and SW3P Plans
- Utility Relocations Sheets – (If applicable)
- Appropriate Standard sheets
- Preliminary Cross-Sections

95% Submittal: The Consultant shall submit the following in the 95% PS&E set: In addition to all sheets listed under the 60% submittal, the Consultant shall submit the following at 95% submittal: (Submit five (5) half size plan sets for City review plus sets as required by TxDOT.

- Written response to the 60% City review comments
- Written response to the 60% STATE review comments
- List of Specifications and Special Provisions
- List General Notes and Specification Data
- Construction cost Estimate
- New Special Provisions and Special Specifications (If applicable)
- Contract Time Determination

H. Final Design (100%)

1. Revise preliminary plans (95%) incorporating comments from the City of Plano and TxDOT.
2. Incorporate comments from the utility companies.
3. Traffic signal plans.
4. Street lighting plans.
5. Finalize construction plans for proposed improvements.
6. Finalize special technical specifications and special conditions (if any).
7. Incorporate standard details into the construction plans and prepare additional details as required.
8. Take off final construction quantities and prepare final construction cost estimates.
9. Submit one set of final plans, special technical specifications, draft bid schedule and final statement of probable construction cost to the City for review.
10. Incorporate City final comments into the plans and bid documents.
11. Submit three (3) sets of final (100%) blue line prints (22" X 34"), three bound copies of the bid documents and one unbound original bid document set (22" X 34") to the City of Plano.

12. Attend a utility coordination meeting to start relocation process with affected franchise utilities. Distribute copy of final plans and proposed schedule for bid letting and construction to all affected franchise utilities.

100% Submittal: The Consultant shall submit the following in the Final PS&E set: In addition to all sheets listed under the 95% submittal, the Consultant shall submit the following at 100% submittal:

- Written response to the 95% City review comments
- Written response to the 95% STATE review comments

Upon addressing any additional review comment from the City and the STATE, the consultant shall submit the following final plans:

- Final plans on 11"x17" Mylar (1 set)
- Electronic copy of construction cost estimate

Traffic Signal Timing and Coordination:

Based on the proposed intersection configuration, the Consultant shall provide traffic signal design for the intersection of Preston road and Plano Parkway. The Consultant shall modify the existing vivid detection system and wireless traffic signal coordination system (spread spectrum) in coordination with the City. Where applicable, the Consultant shall use STATE standards and guidelines. The Consultant shall prepare time-of-day signal timing plans (AM Peak, Noon Peak and PM peak) for weekdays and a separate timing plan for Saturdays (Peak period) and use the same timing for Sunday's maximum green time.. The City shall provide existing time-of-day signal system data for both Preston road and Plano Parkway. The Consultant shall update and optimize the existing signal system(s) by removing the existing two signalized intersections (located at Plano Parkway and Preston Road) and incorporating the proposed signal timing plan into the system. In addition, the Consultant shall optimize the signal systems in order to achieve optimized green splits that will provide the best Level of Service and improvements in travel time. The consultant shall use Synchro software for signal timing and coordination unless directed otherwise by the City. The City shall provide turning movement counts to be used for signal timing.

Deliverables:

- Traffic Signal Timing and Coordination Technical Memorandum
- Electronic Synchro file

Bid Phase Services:

1. Assist the City Staff in advertizing for bids.
2. PB will print the construction bid document and distribute them to prospective bidder for a cost to be retained by PB to reimburse PB for the printing and handling of this distribution. Partial sets will not be distributed. PB will keep records of the plan set

holders, contact names, email addresses, phone numbers in order to transmit Addenda to them during the bidding phase. Electronic plans may be viewed by prospective bidders at Bid Sync.

3. Submit one (1) set of final plan prints and one (1) bound copy of the bid documents to the designated Material Testing Laboratory.
4. Assist City staff in conducting a pre-bid conference, if required and provide written responses to bidder's questions.
5. Prepare and distribute Addenda to bid document as necessary.
6. Assist City staff as required in bid opening. Submit list of plan holders to the City, 48-hours prior to the bid letting.
7. Submit a CD-Rom disk of the bid set in a pdf format
8. Provide bid tabulation to the city of Plano within four (4) working days of the bid letting.
9. Evaluate the low and second low bidders. Prepare letter of recommendation to the City of Plano and TxDOT for awarding a contract to the lowest responsible bidder within four working days of the bid letting.

I. Construction Administration –

1. Assist City staff in pre-construction conference
2. Furnish fifteen (15) set of final construction plans and seven (7) sets of the contract documents manual to the City for construction, plus plans as required by TxDOT.
3. Perform up to six (6) periodic site visits by the design Consultant with a written inspection report submitted to the City for each visit.
4. Provide written responses to requests for information or clarifications.
5. For the City of Plano, prepare construction "Record drawings" based upon mark-ups and information provided by the construction contractor(s). Submit one blackline set to the City and two (2) CD-ROM disk containing scanned images of the 22" X 34" final 'as constructed' blackline drawings (with "Record drawing stamps" bearing the signature of the Consultant and the date). The drawing shall be scanned 1 to 1 as Group 4 TIF files at a minimum resolution of 200 dots per inch and maximum resolution of 400 dots per inch. The TIF file shall be legible and shall include any post processing that may be required to enhance image quality (e.g., de-speckling, de-shading, de-skewing, etc). Each file shall be named in numeric order. If additional as-built plans are required by TxDOT, those shall be provided as required.
6. Prepare plans and quantity revisions as required for change orders. The City of Plano will prepare the actual change order and get it executed by the contractor.

J. Construction Control Survey

1. Set vertical and horizontal control stakes for construction at 500' intervals, and a minimum of one at each end of the project.

Special Services: These are considered additional items to the contract.

A. Right-of Way and Easement Surveying

1. None

B. Bridge Design

1. None

C. Floodplain Hydraulic Analysis and Permit(s)

1. None

D. Water & Wastewater Main relocation:

1. Attend the project start-up meeting in Plano.
2. Attend two coordination meetings at the PB Dallas office. (City does not attend)
3. Review the utility locations prepared by Gorrondona and Associates, Inc. (topo surveying) and compare to utility company as-built plans as available along Preston Road and Plano Parkway.
4. Send project plans to utility owners for verification of their facilities and revise the existing utility layout according to comments received along Preston Road or Plano Parkway.
5. Review existing water and wastewater plans and design relocations as necessary to resolve conflicts with the proposed roadway improvement along Preston road only.
6. Coordinate fire hydrant locations with the Plano CIP Engineering to determine any improvement that may be needed along Preston Road only.
7. Review specifications of the City of Plano and select appropriate ones to be included in the construction documents.
8. Prepare all plans in accordance with TxDOT standards and criteria.
9. Submit plans to PB one week before the 60%, 95% and 100% submittal dates for review by PB. Revise plans for each submittal per PB comments prior to submittals.
10. Prepare quantity take-offs and cost estimates for 60%, 95% and 100% submittals.
11. Provide one original reproducible set of plans to PB for each submittal. PB will make the necessary prints.
12. Perform quantity checking of plans prior to submitting to PB at each submittal date and document the checking process.
13. Deliverables include a CD with PDF files of plans, estimate, calculations and special provisions that may need to be prepared along with a hard copy of each. One set of original reproducible plans will be submitted at 60%, 95%, 100% review dates and sealed mylars will be submitted as Final plans, if required by TxDOT (not a City requirement).

E. Retaining Wall Design -

1. None

F. Exclusions -

1. 404 permits is not anticipated for this project and is therefore not included in the required services
2. Although the project will be designed in conformance to ADA/TAS requirements, this requirements will be valued at less than \$50,000 and plan submitted to TDLR for review, comment or inspection is not included the required services.
3. Fee for permits and advertizing.
4. Construction staking.
5. Full time project inspection.
6. Design for trench safety.
7. Design of structures, retaining walls, etc not included in proposal.
8. Additions and revisions to plans as a result of requests after completion of original final design (unless to make corrections).
9. Quality control and testing services.

10. Prints furnished after acceptance of the required fifteen sets for construction by the City in accordance with this agreement plus plan sets as required by TxDOT.
11. Geotechnical investigation for design and design of a pavement section.
12. Monthly coordination meetings with contractors, inspection personnel and city representatives.
13. Expert witness testimony.
14. Subsurface utility engineering to determine existing facility locations and depths.
15. Review monthly payment requests from the contractor.
16. Water and wastewater improvements.
17. Landscaping and irrigation design for the Preston Road medians.
18. Topographic field surveys beyond the existing ROW line.
19. Final inspection and acceptance recommendation.
20. Analysis and/or design of existing storm drainage systems in Preston Road and in Plano Parkway. Existing systems are presumed to be adequately sized for storm water runoff associated with the proposed paving improvements.
21. Design of storm water detention structure or facilities.
22. Structural design of special ornate sign supports, sign bridges and sign mountings, TxDOT standard sign mountings will be used for all signs.
23. Data collection of turning movements and traffic counts for timing and phasing designs. These are to be provided by the City of Plano. Except as described under the Traffic Analysis section above.

Such services are estimated to be completed by March 22, 2016

Compensation:

For additional services provided pursuant to this Modification, City shall pay Consultant an amount not to exceed \$354,415.86. Such payment shall be made in accordance with the payment terms specified in the Contract. See Attachment A for a breakdown of fee amounts to individual task categories.

In the event of any conflict or inconsistency between the provisions set forth in this Modification and the Contract, this Modification shall govern and control. For and in consideration of the covenants, duties and obligations herein contained, the parties do mutually agree that except as provided above, all other terms and conditions of the Contract shall remain unchanged and in full force and effect.

Original Contract Amount	\$	<u>224,941.15</u>
Contract Amount (Including Previous Modifications)	\$	<u>329,009.40</u>
Amount, Modification No. 4	\$	<u>354,415.86</u>
Revised Contract Amount	\$	<u><u>683,425.26</u></u>
Total Percent Increase Including Previous Modifications		<u>203.82%</u>

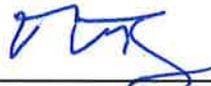
Authority to Sign:

The undersigned officers and/or agents of the parties hereto are the properly authorized officials and have the necessary authority to execute this Agreement on behalf of the parties hereto.

CITY OF PLANO
OWNER

PARSONS BRINCKERHOFF, INC.
CONSULTANT

By: _____
(Signature)

By:  _____
(Signature)

Print
Name: Bruce D. Glasscock

Print
Name: Robert M. Brown, P.E.

Print
Title: City Manager

Print
Title: Vice President

Date: _____

Date: 10/31/14

Approved as to form:

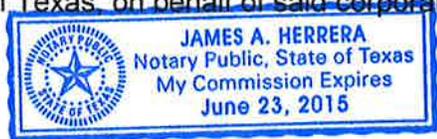
Paige Mims
City Attorney

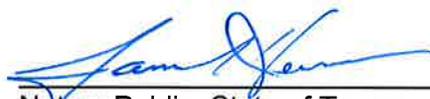
ACKNOWLEDGMENTS

STATE OF TEXAS

COUNTY OF DALLAS

This instrument was acknowledged before me on the 31st day of OCTOBER, 2014, by **ROBERT M. BROWN, P.E., VICE PRESIDENT** of **PARSONS BRINCKERHOFF, INC.**, a New York corporation, licensed to do business in the State of Texas, on behalf of said corporation.





Notary Public, State of Texas

STATE OF TEXAS

COUNTY OF COLLIN

This instrument was acknowledged before me on the _____ day of _____, 2014, by **BRUCE D. GLASSCOCK, CITY MANAGER** of the **CITY OF PLANO, TEXAS** of the **CITY OF PLANO, TEXAS**, a Home-Rule Municipal Corporation, on behalf of said municipal corporation.

Notary Public, State of Texas

Attachment A

Adjustment to existing fee amounts for individual task categories shall be as follows:

Task Description	Contract Amount Including Contract Modifications No. 1, No. 2, No. 3	Contract Amount Adjustment Per Contract Modification No. 4	Total Contract Amount with Contract Modification No. 4
1. Route Schematic	\$47,977.62	\$71,354.37	\$119,331.99
2. Right of Way & Utility Adjustments	\$17,351.91	- \$7,055.00	\$10,296.91
3. Field Surveying	\$19,649.22	\$9,030.00	\$28,679.22
4. Roadway Design	\$77,468.37	\$78,151.02	\$155,619.39
5. Drainage	\$5,983.78	\$42,106.22	\$48,090.00
6. Signing, Pavement Marking & Traffic Signalization	\$50,639.38	\$40,069.23	\$90,708.61
7. Miscellaneous Roadway	\$29,559.95	\$49,076.86	\$78,636.81
8. Bid Phase Studies	\$6,991.20	\$6,295.78	\$13,286.98
9. Environmental Studies	\$33,854.94	\$31,150.41	\$65,005.35
10. Project Administrative Services	\$18,719.56	\$24,486.27	\$43,205.83
11. Construction Phase Services	\$12,963.90	\$2,716.98	\$15,680.88
12. Expenses	\$7,849.57	\$7,033.72	\$14,883.29
Total	\$329,009.40	\$354,415.86	\$683,425.26