

ATTACHMENT "A"

General Scope of Services

"Scope of Services set forth herein can only be modified by additions, clarifications, and/or deletions set forth in the supplemental Scope of Services. In cases of conflict between the Supplemental Scope of Services and the General Scope of Services, the Supplemental Scope of Services shall have precedence over the General Scope of Services."

GENERAL

1) Preliminary Conference with City

The Engineer shall attend preliminary conferences with authorized representatives of the City regarding the scope of project so that the plans and specifications which are to be developed hereunder by the Engineer will result in providing facilities which are economical in design and conform to the City's requirements and budgetary constraints.

2) Coordination with Outside Agencies/Public Entities

The Engineer shall coordinate with officials of other outside agencies as may be necessary for the design of the proposed street, and storm drain and/or water and wastewater facilities/improvements. It shall be the Engineer's duty hereunder to secure necessary information from such outside agencies, to meet their requirements.

3) Geotechnical Investigations

The Engineer shall advise the City of test borings, and other subsurface investigations that may be needed. In the event it is determined necessary to make borings or excavate test holes or pits, the Engineer shall in coordination with the City and the City's geotechnical engineering consultant, draw up specifications for such testing program. The cost of the borings or excavations shall be paid for by the City.

4) Agreements and Permits

The Engineer shall complete all forms/applications to allow the City of Fort Worth to obtain any and all agreements and/or permits normally required for a project of this size and type. The Engineer will be responsible for negotiating and coordinating to obtain approval of the agency issuing the agreement and/or permits and will make any revisions necessary to bring the plans into compliance with the requirements of said agency, including but not limited to highways, railroads, water authorities, Corps of Engineers and other utilities.

5) Design Changes Relating to Permitting Authorities

If permitting authorities require design changes, the Engineer shall revise the plans and specifications as required at the Engineers own cost and expense, unless such changes are required due to changes in the design of the facilities made by the

permitting authority. If such changes are required, the Engineer shall notify the City and an amendment to the contract shall be made if the Engineer incurs additional cost. If there are unavoidable delays, a mutually agreeable and reasonable time extension shall be negotiated.

6) Plan Submittal

Copies of the original plans shall be provided on reproducible mylar or approved plastic film sheets, or as otherwise approved by the Department of Engineering and shall become the property of the City. City may use such drawings in any manner it desires; provided, however that the Engineer shall not be liable for the use of such drawings for any project other than the project described herein; and further provided, that the Engineer shall not be liable for the consequences of any changes that are made to the drawings or changes that are made in the implementation of the drawings without the written approval of the Engineer.

PHASE 1

7) Right-of-Way, Easement and Land Acquisition Needs

The Engineer shall determine the rights-of-way, easement needs for the construction of the project. Engineer shall determine ownership of such land and furnish the City with the necessary right-of-way sketches, prepare necessary easement descriptions for acquiring the rights-of-way and/or easements for the construction of this project. Sketches and easement descriptions are to be presented in form suitable for direct use by the Department of Engineering in obtaining rights-of-way, easements, permits and licensing agreements. All materials shall be furnished on the appropriate City forms in a minimum of four (4) copies each.

8) Design Survey

The Engineer shall provide necessary field survey for use in the preparation of Plans and Specifications. The Engineer shall furnish the City certified copies of the field data.

9) Utility Coordination

The Engineer shall coordinate with all utilities, including utilities owned by the City, as to any proposed utility liens or adjustment to existing utility lines within the project limits. The information obtained shall be shown on the conceptual plans. The Engineer shall show on the preliminary and final plans the location of the proposed utility lines, existing utility lines, based on the information provided by the utility, and any adjustments and/or relocation of the existing lines within the project limits. The Engineer shall also evaluate the phasing of the water, wastewater, street and drainage work, and shall submit such evaluation in writing to the City as part of this phase of the project.

10) **Conceptual Plans**

The Engineer shall furnish four (4) copies of the Phase 1 concept engineering plans which include layouts, preliminary right-of-way needs and preliminary estimates of probable construction costs for the Engineer's recommended plan. For all submittals, the Engineer shall submit plans and documents for street/storm drain and water/wastewater facilities. The Engineer shall receive written approval of the Phase 1 Plans from the City's project manager before proceeding with Phase 2.

PHASE 2

11) **Design Data**

The Engineer shall provide design data, reports, cross-sections, profiles, drainage calculations, and preliminary estimates of probable construction cost.

12) **Preliminary Construction Plans and Technical Specifications**

The Engineer shall submit twenty (20) copies of Phase 2 preliminary construction plans and five (5) copies of the preliminary technical specifications for review by the City and for submission to utility companies and other agencies for the purposes of coordinating work with existing and proposed utilities. The preliminary construction plans shall indicate location of existing/proposed utilities and storm drain lines. The Engineer shall receive written approval of the Phase 2 plans from the City's project manager before proceeding with Phase 3.

PHASE 3

13) **Final Construction Plans**

The Engineer shall furnish five (5) copies of the final construction plans and contract specifications for review by the City.

14) **Detailed Cost Estimate**

The Engineer shall furnish four (4) copies of detailed estimates of probable construction costs for the authorized construction project, which shall include summaries of bid items and quantities.

15) **Plans and Specification Approval**

The Engineer shall furnish an original cover mylar for the signatures of authorized City officials. The Contract Documents shall comply with applicable local, state and federal laws and with applicable rules and regulations promulgated by local, state and national boards, bureaus and agencies. The Engineer shall receive written approval of the Phase 3 plans from the City's project manager before proceeding with Phase 4.

PHASE 4

16) Final Approved Construction Plans

The Engineer shall furnish 45 bound copies of Phase 4 final approved construction plans and contract specifications. The approved plans and contract specifications shall be used as authorized by the City for use in obtaining bids, awarding contracts, and constructing the project.

17) Bidding Assistance

The Engineer shall issue addenda as appropriate to interpret, clarify, or expand the bidding documents, and assist the owner in determining the qualifications and acceptability of prospective constructors, subcontractors, and suppliers. When substitution prior to the award of contracts is allowed by the bidding documents, the Engineer will advise the owner as to the acceptability of alternate materials and equipment proposed by the prospective constructors.

18) Recommendation of Award

The Engineer shall assist in the tabulation and review of all bids received for the construction of the project and shall make a recommendation of award to the City.

19) Prebid Conference

The Engineer shall attend the prebid conference and the bid opening, prepare bid tabulation sheets and provide assistance to the owner in evaluating bids or proposals and in assembling and awarding contracts for construction, materials, equipment, and services.

PHASE 5

20) Preconstruction Conference

The Engineer shall attend the preconstruction conference.

21) Construction Survey

The Engineer shall be available to the City on matters concerning the layout of the project during its construction and will set control points in the field to allow City survey crews to stake the project. The setting of line and grade stakes and route inspection of construction will be performed by the City.

22) Site Visits

The Engineer shall visit the project site at appropriate intervals as construction proceeds to observe and report on the progress and the quality of the executed work.

23) Shop Drawing Review

The Engineer shall review shop and erection drawings submitted by the contractor for compliance with design concepts. The Engineer shall review laboratory, shop, and mill test reports on materials and equipment.

24) Instructions to Contractor

The Engineer shall provide necessary interpretations and clarifications of contract documents, review change orders and make recommendations as to the acceptability of the work, at the request of the City.

25) Differing Site Conditions

The Engineer shall prepare sketches required to resolve problems due to actual field conditions encountered.

26) Record Drawings

The Engineer shall prepare record drawings from information submitted by the contractor.

EXHIBIT "A-1"
SUPPLEMENTAL SCOPE OF SERVICES
(SUPPLEMENT TO ATTACHMENT "A")
DOE NO. 4161 PS46-070460140310

PHASE I - DESIGN SERVICES: SANITARY SEWER MAIN EXTENSION TO SERVE WALSH RANCH, PHASES II & III

The following is a clarification of the tasks that the ENGINEER will perform under ATTACHMENT "A". Work under this attachment includes engineering services for sanitary sewer improvements for the following:

The Walsh Ranch Sanitary Sewer Phases II & III consist of the extension of approximately 13,000 linear feet of 24" sanitary sewer located in northwest Fort Worth. The total sewershed is approximately 11,770 acres. Assuming 18 people per acre, the estimated design flow is 37.2 MGD.

Upon receipt of notice to proceed, the ENGINEER will perform the following tasks:

PART A - CONCEPTUAL DESIGN

1. Initial Data Collection

a. Pre-Design Coordination Meetings

ENGINEER will attend and document meetings, as required, to discuss and coordinate various aspects of the project and to ensure that the project stays on schedule. For purposes of establishing a level of comfort, two (2) meetings are anticipated. These include the following:

One (1) pre-design kick-off meeting, (including the CITY's Department of Engineering and other departments that are impacted by the project).

One (1) review meeting at completion of the City's review of the conceptual engineering plans.

b. Data Collection

In addition to data obtained from the City, ENGINEER will research and make efforts to obtain pertinent information to aid in coordination of the proposed improvements with any planned future improvements that may influence the project. ENGINEER will also identify and seek to obtain data for existing conditions

that may impact the project including; utilities, City Master plans, property ownership as available from the Tax Assessor's office.

c. Coordination with Other Agencies/Consultants

During the concept phase the ENGINEER shall coordinate with all utilities, Walsh Ranch Engineering Consultants, and City Staff. These entities shall also be contacted if applicable, to determine plans for any proposed facilities or adjustment to existing facilities within the project limits. The information obtained shall be shown on the concept plans. The ENGINEER shall show the location of the proposed utility lines, existing utility lines and any adjustments and/or relocation of the existing lines within the project limits.

2. Monthly Progress Report

The ENGINEER shall submit a progress schedule after the design contract is fully executed. The schedule shall be updated and submitted to the CITY along with monthly progress report as required under Attachment B of the contract.

3. Corps of Engineers Section 404 Permit

- a. Wetland Delineation – Utilize available topographic maps, aerial photos, soil survey, etc to develop a base map of the project area. Identify and map hydric soils specific vegetation communities, 100-year flood plain and wetlands. Compile information to base map. Conduct site observations and coordinate with Corps of Engineers. Prepare a wetland delineation map.
- b. Section 404 Nationwide 12 Permit – Prepare documentation for Nationwide 12 Permit. Coordinate with Corps of Engineers.

4. Archaeological Survey (if necessary)

- a. Secure Archaeological Survey permit from the Texas Historical Commission
- b. Conduct records search to determine if cultural resources have been recorded in the vicinity of the proposed project.
- c. Conduct on-the-ground pedestrian survey of the pipeline route. Conduct about 30 shovel tests along the route. Artifacts recovered from these excavations will be analyzed and prepared for permanent curation.

- d. Prepare a written report to be submitted to the Texas Historical Commission (THC). Revise the report, if necessary, following review by the THC and City of Fort Worth. Submit 20 copies of the final report to the THC and 3 copies to the City of Fort Worth.

5. **Geotechnical Investigation**

- a. **Field Investigation** – Conduct fifteen (15) borings to an average depth of about 25 feet. The location and depth will be determined based on the City approved alignment.
- b. **Laboratory Investigation** – Evaluate soil engineering properties and physical properties of the soil. Classify soils according to the Unified Soil Classification using classification tests. These tests will include natural moisture content, dry unit weights, and the liquid and plastic limits. The undrained shear strengths of cohesive soils will be determined by hand penetrometer tests, and confirmed with unconfined compressive strength testing.
- c. **Engineering Analysis** – Document the results of the field and laboratory work. Provide engineering recommendations for design and construction of proposed pipeline.

PART B - CONSTRUCTION PLANS AND SPECIFICATIONS

1. **Surveys for Design**

Information gathered during the survey shall include topographic data, elevations of all known sanitary and adjacent storm sewers, rim/invert elevations, location of known buried utilities, structures, and other features relevant to the final plan sheets. A base plan of topographic mapping and supplemental survey data shall be compiled at 1" = 40' horizontal and 1" = 4' vertical scale. ENGINEER will coordinate the following:

- a. Obtain permission from affected property owners to survey through private property.
- b. Establish horizontal and vertical control. Vertical Datum shall be based on City of Fort Worth Vertical Datum. Horizontal Datum shall be based on Texas State Plane Coordinates NAD 83.
- c. Locate the proposed centerline alignment in the field based on City approved route.

- d. Conduct topographic design surveys (50' wide corridor along proposed alignment). Survey creek centerline at 500' intervals along the proposed route.
- e. Conduct property survey to locate the Walsh Ranch property (assumes Walsh Ranch Boundary Survey to be provided by City/Developer's Engineer) and affected adjacent property corners. A property map (deed sketch) shall be prepared showing property lines and identifying property owners of affected parcels of land.
- f. Conduct property deed research to obtain available copies of deeds and plats for affected properties. Prepare 18 permanent and 18 temporary construction easements (legal descriptions and exhibits).

2. Conceptual Engineering Plan Submittal

- a. Conceptual plans shall be submitted to City 60 calendar days after Notice to Proceed Letter is issued.
- b. The ENGINEER shall perform conceptual design of the proposed improvements and furnish four (4) copies of the Concept Engineering Plan, which includes the alignment, flow requirements, preliminary right-of-way needs and cost estimate for the ENGINEER's recommended plan. The Concept plan shall be prepared utilizing available aerial photographs and the Tarrant Appraisal District's property map. Following approval of the alignment, the ENGINEER shall perform remaining field surveys required for final design of selected route. The ENGINEER shall also evaluate the phasing of the sanitary sewer work, and shall submit such evaluation in writing to the City as a part of the concept phase of the project. All design shall be in conformance with Fort Worth Water Department policy and procedure for processing water and sewer design. ENGINEER shall review the City's water and sewer master plan and provide a summary of findings pertaining to the proposed project.

3. Preliminary Construction Plans

Upon approval of Part B, Section 2, ENGINEER will prepare preliminary construction plans as follows:

- a. Overall sanitary sewer layout sheets and an overall easement layout sheet(s)
- b. Preliminary project plans and profile sheets, utilizing LIDAR topographic mapping, (3-D digital files to be provided by the City of Fort Worth) and field surveys which show the following: Proposed sanitary sewer plan/profile and recommended pipe size, manholes, aerial crossings, and all pertinent information needed to construct

the project. Legal description (Lot Nos., Block Nos., and Addition Names) along with property ownership shall be provided on the plan view.

- c. For sewer lines, pipelines schedule for point repairs, rehabilitation and replacement will be located on the base sheets prepared from survey information gathered under Part B, Section 2. Conflicts shall be resolved where pipelines are to be rehabilitated on the same line segment. Base sheets shall reference affected or adjacent streets. Where open-cut construction is anticipated, below and above ground utilities will be located and shown on the base sheets.
- d. Existing utilities and utility easements will be shown on the plan and profile sheets. ENGINEER will coordinate with utility companies and the City of Fort Worth to determine if any future improvements are planned that may impact the project.
- e. The ENGINEER shall conduct preliminary research for availability of existing easements where open-cut construction or relocation of existing alignments is probable. Temporary and permanent easements will be approximated based on available information.

Legal descriptions and plot maps will be prepared on 8.5"x14" standard sheets for all necessary temporary and permanent easements required for relief sewer construction. Descriptions shall be prepared in standard format as directed by Department of Engineering (DOE). Temporary and permanent easements shall be delineated on plan sheets. Exhibits shall be prepared. Legal descriptions shall also be prepared if needed. A total of nine (9) permanent easements and nine (9) temporary construction easements are included. The CITY will secure easements and rights-of-entry agreements as necessary.

- f. The ENGINEER shall make provisions for reconnecting all water and/or wastewater service lines which connect directly to any main being replaced, including replacement of existing service lines within City right-of-way or utility easement. When the existing alignment of a water and sanitary sewer main or lateral is changed, provisions will be made in the final plans and/or specifications by the ENGINEER to relocate all service lines which are connected to the existing main and connect said service lines to the relocated main.
- g. The ENGINEER will prepare standard and special detail sheets for water line installation and sewer rehabilitation or replacement that are not already included in the D-Section of the City's specifications. These may include connection details between various parts of the project, tunneling details, boring and jacking details,

waterline relocations, details unique to the construction of the project, trenchless details, and special service lateral reconnections.

4. Preliminary Construction Plan Submittal

- a. Preliminary plans and specifications shall be submitted to City 90 calendar days after approval of Part B, Section 2.
- b. The ENGINEER shall deliver twenty (20) sets of preliminary construction plans and two (2) sets of specifications and contract documents to CITY for review and delivery to utility companies. Generally, plan sheets shall be organized as follows:

Cover Sheet

Drainage Area Map and Computations

Easement layout (if applicable)

Plan & Profile Sheets

Standard Construction Details

Special Details (If applicable)

- c. **Review Meetings with City**

The ENGINEER shall meet with CITY to discuss review comments for preliminary submittal. The CITY shall direct the ENGINEER in writing to proceed with Final Design for Final Review.

- d. **Public Meeting (if necessary)**

After the preliminary plans have been reviewed and approved by the City, ENGINEER shall prepare exhibits along with an invitation letter and attend public meeting to help explain the proposed project to residents. The CITY shall mail the invitation letters.

- e. The ENGINEER shall submit a preliminary estimate of probable construction cost with the preliminary plans submitted. ENGINEER shall assist City in selecting the feasible and/or economical solutions to be pursued.

5. **Final Design and Final Review**

- a. Final Construction Documents shall be submitted to CITY 60 calendar days after approval of Part B, Section 4.

Following CITY approval of the recommended improvements, the ENGINEER shall prepare final plans and specifications and contract documents to CITY (each sheet shall be stamped, dated, and signed by the ENGINEER) and submit two (2) sets of plans and construction contract documents within 21 calendar days of CITY's final approval. Plan sets shall be used for Part C activities.

- b. **ENGINEER's Estimate of Probable Construction Cost**

The ENGINEER shall submit a final estimate of probable construction cost with the final plans submitted.

PART C - PRE-CONSTRUCTION ASSISTANCE

1. **Administration**

- a. **Deliver Bid Documents**

The ENGINEER will make available for bidding, upon request by the CITY, up to forty-five (45) sets of the final approved and dated plans and specifications and contract documents for the projects to the CITY for distribution to potential bidders.

**EXHIBIT B-3A
 (SUPPLEMENT TO ATTACHMENT B)
 SUMMARY OF TOTAL PROJECT FEES
 DESIGN FEE COST SUMMARY**

**SANITARY SEWER EXTENSION TO SERVE WALSH RANCH
 PHASES I AND II
 DOE NO. 4161
 SEWER PROJECT NO. PS46-070460140310**

Scope of Services	Total Fee	M/WBE	Percent
Sanitary Sewer Design	\$362,020	\$138,960	38.4%

M/WBE Subconsultants	Services	Fees	% of Total
Gorrondona & Associates	Surveying/Easements	\$35,000	9.7%
ANA Consultants	Engineering/Survey	\$31,300	8.6%
Law Reality Advisors	Market Study/Appraisals	\$68,400	18.9%
Hugo Trevino and Associates	Reproduction	\$4,260	1.2%
TOTAL		\$138,960	38.4%

Non-M/WBE Subconsultants	Services	Fees	% of Total
AR Consultants	Archeological Study	\$5,500	1.5%
CMJ Engineering	Geotechnical	\$11,100	3.1%
TOTAL		\$16,600	4.6%

**EXHIBIT B-3B
(SUPPLEMENT OT ATTACHMENT B)
FEE SUMMARY**

**SANITARY SEWER EXTENSION TO SERVE WALSH RANCH
PHASES I AND II
DOE NO. 4161
SEWER PROJECT NO. PS46-070460140310**

BASIC SERVICES (Halff Associates, Inc.)

Curve A	7.8%	\$837,100	0.85	\$55,500
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BASIC SERVICES (ANA Consultants, Inc.)

Curve A	10.1%	\$209,600	0.85	\$18,000
		Preparation of Bid Documents		-\$2,000
		Total (ANA)		\$16,000

SUBTOTAL BASIC SERVICES FEE **\$71,500**

10% for MWBE Subconsultant **\$1,600**

TOTAL BASIC SERVICES FEE **\$73,100**

**EXHIBIT B-3C
BREAKDOWN OF SPECIAL SERVICES**

**Sanitary Sewer Extension to Serve Walsh Ranch Phases II & III
DOE No. 4161
Sewer Project No. PS46-0070460140310**

Special Services

1. **Design Surveys = \$ 44,000**
See scope of services description under Part B.2 of Exhibit "A-1". The route to be surveyed is generally wooded and includes multiple streams that will have to be surveyed.
2. **Property Surveys = \$ 21,400**
Includes property research, deed sketch, locating property corners, boundary solution and parcel map for 18 tracts of land.
3. **Easement Document Preparation = \$ 26,300**
This contract includes the preparation of 18 temporary construction easements and 18 permanent easements. Metes and bounds descriptions and an exhibit will be prepared for both the permanent and temporary easements in City of Fort Worth format.
4. **Route Study = \$ 11,300**
As described in Part B.1 of Exhibit "A-1", a route study will be prepared that addresses the horizontal and vertical alignment, line sizing, and easement needs of the proposed sanitary sewer lines.
5. **Public Meetings = \$ 1,000**
As outlined in Exhibit "A-1", the ENGINEER will assist the City in conducting public meetings to inform the citizens about the project.
6. **Wetland Determination / 404 Permit = \$ 7,500**
Includes Wetland Delineation and preparation of Corps Section 404 Nationwide Permit No. 12.
7. **Printing/Plotting = \$ 4,260**
This item covers printing, plotting and other reproduction costs to be incurred during the course of the project.
8. **Monthly Progress Meeting / Reports = \$ 5,000**
The ENGINEER will attend monthly progress meetings with the City staff and the consultants working on other phases of the Walsh Ranch water and sewer extension project.
9. **Geotechnical Investigation = \$ 11,100**
The scope of services for the geotechnical investigation is presented in Part B.3.m of Exhibit "A-1". The Scope includes 15 sample borings to depths of 25 feet.

**EXHIBIT B-3C
BREAKDOWN OF SPECIAL SERVICES**

**Sanitary Sewer Extension to Serve Walsh Ranch Phases II & III
DOE No. 4161
Sewer Project No. PS46-0070460140310**

10. **Easement Acquisition = \$125,100**
See scope of services description in Exhibit "A-1", Part B.3.o. A breakdown of the fees is presented below:
- Easement Acquisition w/ Market Study 18 parcels @ \$3,800 = \$ 68,400
 - Appraisals (all tracts except Golf Course) 18 parcels @ \$2,500 = \$ 45,000
 - Condemnation Assistance (max. 3 hours) 18 parcels @ \$ 400 = \$ 7,200
 - Release Temporary Construction Easements 18 parcels @ \$ 250 = \$ 4,500
- The fee includes the preparation of a Market Study and Appraisal for 18 properties. It also includes a maximum of approximately 3 hours of assistance with condemnation preparation, and proceedings for each parcel. This does not include an update of the appraisal for the condemnation. If the Appraisal is not needed or if the condemnation assistance is not needed, the ENGINEER will not bill for these services.
11. **SWPPP = \$ 4,800**
The scope of services for the SWPPP is described in Part B.3.n of Exhibit "A-1".
12. **Archaeological Investigation = \$ 5,500**
An archaeological investigation will be performed as described in Part B.3.p of Exhibit "A-1".
13. **10% for Subconsultants = \$ 13,960**
Halff Associates, Inc. is utilizing subconsultants for sewer design, geotechnical investigation, easement acquisition, archaeological investigation and printing. This fee is full compensation to Halff Associates, Inc. for managing the subconsultants.
14. **Construction Assistance = \$ 5,700**
The ENGINEER will assist the City with the construction phase of the project as outlined in Part C of Exhibit "A-1".
15. **Record Drawings = \$ 2,000**
After the construction is complete, the ENGINEER will furnish the City with reproducible record drawings.
- TOTAL SPECIAL SERVICES = \$ 288,920**

EXHIBIT B-4
 OPINION OF PROBABLE CONSTRUCTION COST

SANITARY SEWER EXTENSION TO SERVE
 WALSH RANCH, PHASES II AND III

Item	Description	Qty	Unit	Price	Subtotal	Total
Sanitary Sewer Improvements - Phase II (5,000 LF) & Lower Phase III (5,000 LF)						
1	24" Sanitary Sewer	10,000	LF	\$ 51.00	\$ 510,000	
2	Elevated Aerial Crossing	1	EA	\$ 80,000.00	\$ 80,000	
3	Trench Safety System	10,000	LF	\$ 1.00	\$ 10,000	
4	Std. 6' Manhole to 6' Depth	3	EA	\$ 3,000.00	\$ 9,000	
5	Extra Depth for 6' Manhole > 6'	35	VF	\$ 150.00	\$ 5,250	
6	Std. 5' Manhole to 6' Depth	11	EA	\$ 2,500.00	\$ 27,500	
7	Extra Depth for 5' Manhole > 6'	150	VF	\$ 120.00	\$ 18,000	
8	Std. Manhole Insert	14	EA	\$ 100.00	\$ 1,400	
7	Concrete Collar	14	EA	\$ 300.00	\$ 4,200	
8	Vacuum Test of Manhole	14	EA	\$ 150.00	\$ 2,100	
9	Concrete Encasement	300	LF	\$ 45.00	\$ 13,500	
10	Rock Riprap/Gabion	200	CY	\$ 100.00	\$ 20,000	
11	Hydro Mulch Seeding	10,000	LF	\$ 2.50	\$ 25,000	
12	Crushed limestone for misc. placement	40	CY	\$ 25.00	\$ 1,000	
13	Ballast stone for misc. placement	40	CY	\$ 25.00	\$ 1,000	
14	Class "B" Concrete	80	CY	\$ 50.00	\$ 4,000	
15	Class "E" Concrete	80	CY	\$ 50.00	\$ 4,000	
16	Post-const. television inspection	10,000	LF	\$ 2.50	\$ 25,000	
	Subtotal					\$ 761,000
	10% Contingency					\$ 76,100
	TOTAL (Phase II & Lower Phase III)					\$ 837,100
Sanitary Sewer Improvements - Upper Phase III (3,000 LF)						
1	24" Sanitary Sewer	3,000	LF	\$ 51.00	\$ 153,000	
2	Trench Safety System	3,000	LF	\$ 1.00	\$ 3,000	
3	Std. 5' Manhole to 6' Depth	4	EA	\$ 2,500.00	\$ 10,000	
4	Extra Depth for 5' Manhole > 6'	40	VF	\$ 120.00	\$ 4,800	
5	Std. Manhole Insert	4	EA	\$ 100.00	\$ 400	
6	Concrete Collar	4	EA	\$ 300.00	\$ 1,200	
7	Vacuum Test of Manhole	4	EA	\$ 150.00	\$ 600	
8	Hydro Mulch Seeding	3,000	LF	\$ 2.50	\$ 7,500	
9	Crushed limestone for misc. placement	10	CY	\$ 25.00	\$ 250	
10	Ballast stone for misc. placement	10	CY	\$ 25.00	\$ 250	
11	Class "B" Concrete	20	CY	\$ 50.00	\$ 1,000	
12	Class "E" Concrete	20	CY	\$ 50.00	\$ 1,000	
13	Post-const. television inspection	3,000	LF	\$ 2.50	\$ 7,500	
	Subtotal					\$ 190,500
	10% Contingency					\$ 19,100
	TOTAL (Upper Phase III)					\$ 209,600
	TOTAL (Phase II & Lower Phase III)					\$ 837,100
	TOTAL (Upper Phase III)					\$ 209,600
	GRAND TOTAL					\$ 1,046,700

ATTACHMENT "C"

AMENDMENTS TO ARTICLES IV, V, AND VI AND ATTACHMENT "A"

Article IV.K.(2)(i):

Endorsements are noted on the Certificate of Insurance provided to the City for this project.

Article IV.K.(2) (l):

Business automobile insurance is written on an accident basis.

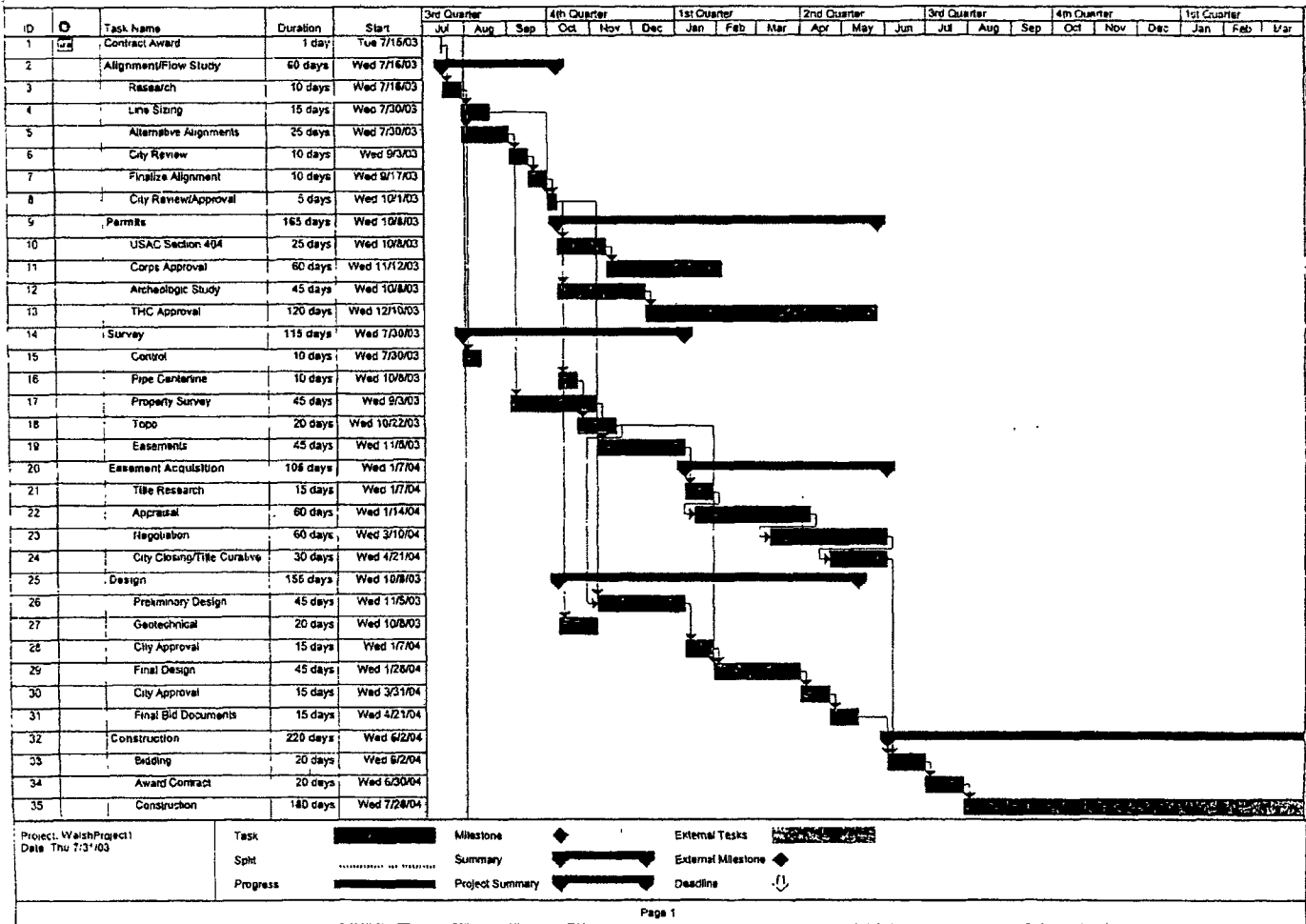
Article VI.L., line 4:

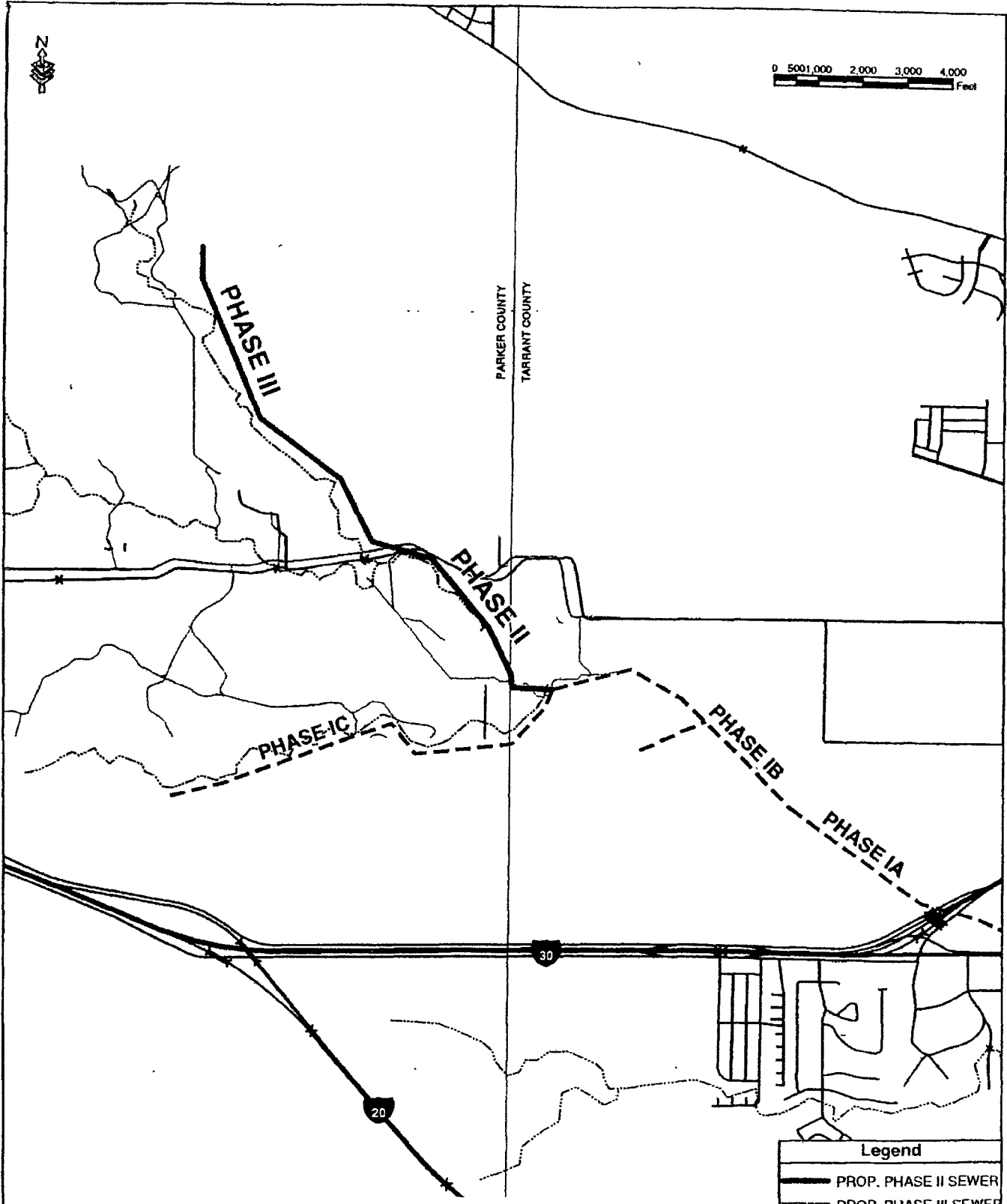
Remove the following: "or may be enacted later"

Attachment A, Item 26:

Delete this Item, the Engineer will not prepare "record drawings" for this project.

Attachment D
 SANITARY SEWER EXTENSION TO SERVE WALSH RANCH, PHASES II AND III





MAPSCO No. 71 E,J, 711 S,T,U,W,X,Y, and 761 D,H

Legend	
	PROP. PHASE II SEWER
	PROP. PHASE III SEWER
	EXIST. SEWER

Halff Associates
 ENGINEERS - ARCHITECTS - SCIENTISTS - PLANNERS - SURVEYORS

Sanitary Sewer Extension to Serve
 WALSH RANCH
 PHASE II & III
 Council District 7 After
 Annexation is Completed

EXHIBIT
 E

City of Fort Worth, Texas
Mayor and Council Communication

DATE 8/26/03	REFERENCE NUMBER **C-19730	LOG NAME 30WALSHPH23	PAGE 1 of 2
SUBJECT	ENGINEERING AGREEMENT WITH HALFF ASSOCIATES, INC. FOR WALSH RANCH SEWER MAIN EXTENSION, PHASES II AND III		

RECOMMENDATION:

It is recommended that the City Council authorize the City Manager to execute an engineering agreement with Halff Associates, Inc. in the amount of \$362,020 for the design of Walsh Ranch Sewer Main Extension, Phase II and III.

DISCUSSION:

On April 29, 2003 (M&C C-19566), the City Council authorized the City Manager to execute an Economic Development Agreement for Walsh Ranch with Walsh Ranches Limited Partnership, H. Howard Walsh, Jr. and various Walsh family trusts (Walsh).

The agreement includes terms of design and construction of water and wastewater infrastructure to serve the property and requires the City to design and construct the first phase of Phase I water facilities and Phases 1A, 1B, 1C, 1D, IVA and IVB wastewater facilities within approximately 36 months after execution of the agreement. Walsh may terminate the agreement if the City does not appropriate funds for the design of such infrastructure by September 1, 2003. Thereafter, subsequent City obligations will be dependent on construction of facilities by Walsh and will be constructed as warranted as the property is developed.

This project includes the design and survey of approximately 13,000 feet of 24-inch sewer line. The project also includes acquisition services for 18 permanent and temporary construction easements needed to construct the project. The location of the project is shown on the attached location map.

The City received 17 proposals from local engineering firms in response to a Request for Proposals for the design of the Walsh Ranch sewer project. A selection committee comprised of Water and Engineering Department staff reviewed the proposals and considers Halff Associates, Inc. to be the most qualified for the design of this particular project.

Halff Associates, Inc. proposes to perform the design work for a lump sum fee of \$362,020. Staff considers this fee to be fair and reasonable for the scope of services proposed.

Halff Associates, Inc. is in compliance with the City's M/WBE Ordinance by committing to 22% M/WBE participation. The City's goal on this project is 38%.

In addition to the contract amount, \$11,000 is required for project management by the Engineering Department.

This project will be located in COUNCIL DISTRICT 7, pending the completed annexation for the project, Mapsco 71E and J; 711S, T, U, W, X, and Y; and 761D and H.

City of Fort Worth, Texas
Mayor and Council Communication

DATE 8/26/03	REFERENCE NUMBER **C-19730	LOG NAME 30WALSHPH23	PAGE 2 of 2
SUBJECT ENGINEERING AGREEMENT WITH HALFF ASSOCIATES, INC. FOR WALSH RANCH SEWER MAIN EXTENSION, PHASES II AND III			

FISCAL INFORMATION/CERTIFICATION:

The Finance Director certifies that funds are available in the current capital budget, as appropriated, of the Commercial Paper - Sewer Fund.

MO:r

Submitted for City Manager's Office by:	FUND	ACCOUNT	CENTER	AMOUNT	CITY SECRETARY
Marc Ott 8476	(to)				APPROVED 08/26/03
Originating Department Head:					
Douglas Rademaker 6157	(from)				
	PS46	531200	070460140310	\$362,020.00	
Additional Information Contact:					
Douglas Rademaker 6157					

10-26-03 11:50 AM

**CITY OF FORT WORTH, TEXAS
STANDARD AGREEMENT FOR ENGINEERING SERVICES**

CITY SECRETARY
CONTRACT NO. 29020

This AGREEMENT is between the City of Fort Worth (the "CITY"), and TranSystems Corporation Consultants, (the "ENGINEER"), for a PROJECT generally described as: Walsh Ranch Sewer Main Extension, Phases 1A, 1B and 1D.

Article I

Scope of Services

- A. The Scope of Services is set forth in Attachment A.

Article II

Compensation

- A. The ENGINEER's compensation is set forth in Attachment B.

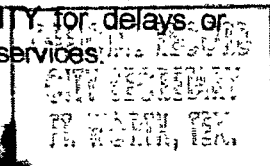
Article III

Terms of Payment

Payments to the ENGINEER will be made as follows:

- A. Invoice and Payment
- (1) The Engineer shall provide the City sufficient documentation to reasonably substantiate the invoices.
 - (2) The ENGINEER will issue monthly invoices for all work performed under this AGREEMENT. Invoices are due and payable within 30 days of receipt.
 - (3) Upon completion of services enumerated in Article I, the final payment of any balance will be due within 30 days of receipt of the final invoice.
 - (4) In the event of a disputed or contested billing, only that portion so contested will be withheld from payment, and the undisputed portion will be paid. The CITY will exercise reasonableness in contesting any bill or portion thereof. No interest will accrue on any contested portion of the billing until mutually resolved.
 - (5) If the CITY fails to make payment in full to ENGINEER for billings contested in good faith within 60 days of the amount due, the ENGINEER may, after giving 7 days' written notice to CITY, suspend services under this AGREEMENT until paid in full, including interest. In the event of suspension of services, the ENGINEER shall have no liability to CITY for delays or damages caused the CITY because of such suspension of services.

ORIGINAL



Article IV

Obligations of the Engineer

Amendments to Article IV, if any, are included in Attachment C.

A. General

The ENGINEER will serve as the CITY's professional engineering representative under this Agreement, providing professional engineering consultation and advice and furnishing customary services incidental thereto.

B. Standard of Care

The standard of care applicable to the ENGINEER's services will be the degree of skill and diligence normally employed in the State of Texas by professional engineers or consultants performing the same or similar services at the time such services are performed.

C. Subsurface Investigations

- (1) The ENGINEER shall advise the CITY with regard to the necessity for subcontract work such as special surveys, tests, test borings, or other subsurface investigations in connection with design and engineering work to be performed hereunder. The ENGINEER shall also advise the CITY concerning the results of same. Such surveys, tests, and investigations shall be furnished by the CITY, unless otherwise specified in Attachment A.
- (2) In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect the total PROJECT cost and/or execution. These conditions and cost/execution effects are not the responsibility of the ENGINEER.

D. Preparation of Engineering Drawings

The ENGINEER will provide to the CITY the original drawings of all plans in ink on reproducible plastic film sheets, or as otherwise approved by CITY, which shall become the property of the CITY. CITY may use such drawings in any manner it desires; provided, however, that the ENGINEER shall not be liable for the use of such drawings for any project other than the PROJECT described herein.

E. Engineer's Personnel at Construction Site

- (1) The presence or duties of the ENGINEER's personnel at a construction site, whether as on-site representatives or otherwise, do not make the ENGINEER or its personnel in any way responsible for those duties that belong to the CITY and/or the CITY's construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the Contract Documents and any health or safety precautions required by such construction work. The ENGINEER and its personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions.
- (2) Except to the extent of specific site visits expressly detailed and set forth in Attachment A, the ENGINEER or its personnel shall have no obligation or responsibility to visit the construction site to become familiar with the progress or quality of the completed work on the PROJECT or to determine, in general, if the work on the PROJECT is being performed in a manner indicating that the PROJECT, when completed, will be in accordance with the Contract Documents, nor shall anything in the Contract Documents or the agreement between CITY and ENGINEER be construed as requiring ENGINEER to make exhaustive or continuous on-site inspections to discover latent defects in the work or otherwise check the quality or quantity of the work on the PROJECT. If, for any reason, the ENGINEER should make an on-site observation(s), on the basis of such on-site observations, if any, the ENGINEER shall endeavor to keep the CITY informed of any deviation from the Contract Documents coming to the actual notice of ENGINEER regarding the PROJECT.
- (3) When professional certification of performance or characteristics of materials, systems or equipment is reasonably required to perform the services set forth in the Scope of Services, the ENGINEER shall be entitled to rely upon such certification to establish materials, systems or equipment and performance criteria to be required in the Contract Documents.

F. Opinions of Probable Cost, Financial Considerations, and Schedules

- (1) The ENGINEER shall provide opinions of probable costs based on the current available information at the time of preparation, in accordance with Attachment A.
- (2) In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the PROJECT, the ENGINEER has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality

of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate PROJECT cost or schedule. Therefore, the ENGINEER makes no warranty that the CITY's actual PROJECT costs, financial aspects, economic feasibility, or schedules will not vary from the ENGINEER's opinions, analyses, projections, or estimates.

G. Construction Progress Payments

Recommendations by the ENGINEER to the CITY for periodic construction progress payments to the construction contractor will be based on the ENGINEER's knowledge, information, and belief from selective sampling and observation that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by the ENGINEER to ascertain that the construction contractor has completed the work in exact accordance with the Contract Documents; that the final work will be acceptable in all respects; that the ENGINEER has made an examination to ascertain how or for what purpose the construction contractor has used the moneys paid; that title to any of the work, materials, or equipment has passed to the CITY free and clear of liens, claims, security interests, or encumbrances; or that there are not other matters at issue between the CITY and the construction contractor that affect the amount that should be paid.

H. Record Drawings

Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the PROJECT was finally constructed. The ENGINEER is not responsible for any errors or omissions in the information from others that is incorporated into the record drawings.

I. Minority and Woman Business Enterprise (M/WBE) participation

In accord with City of Fort Worth Ordinance No. 15530, the City has goals for the participation of minority business enterprises and woman business enterprises in City contracts. Engineer acknowledges the M/WBE goal established for this contract and its commitment to meet that goal. Any misrepresentation of facts (other than a negligent misrepresentation) and/or the commission of fraud by the Engineer may result in the termination of this agreement and debarment from participating in City contracts for a period of time of not less than three (3) years.

J. Right to Audit

- (1) ENGINEER agrees that the CITY shall, until the expiration of three (3) years after final payment under this contract, have access to and the right to examine and photocopy any directly pertinent books, documents, papers and records of the ENGINEER involving transactions relating to this contract. ENGINEER agrees that the CITY shall have access during normal working hours to all necessary ENGINEER facilities and shall be provided adequate

and appropriate work space in order to conduct audits in compliance with the provisions of this section. The CITY shall give ENGINEER reasonable advance notice of intended audits.

- (2) ENGINEER further agrees to include in all its subconsultant agreements hereunder a provision to the effect that the subconsultant agrees that the CITY shall, until the expiration of three (3) years after final payment under the subcontract, have access to and the right to examine and photocopy any directly pertinent books, documents, papers and records of such subconsultant, involving transactions to the subcontract, and further, that the CITY shall have access during normal working hours to all subconsultant facilities, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of this article together with subsection (3) hereof. CITY shall give sub-consultant reasonable advance notice of intended audits.
- (3) ENGINEER and subconsultant agree to photocopy such documents as may be requested by the CITY. The CITY agrees to reimburse ENGINEER for the cost of copies at the rate published in the Texas Administrative Code in effect as of the time copying is performed.

K. ENGINEER's Insurance

- (1) Insurance coverage and limits:

ENGINEER shall provide to the City certificate(s) of insurance documenting policies of the following coverage at minimum limits that are to be in effect prior to commencement of work on the PROJECT:

Commercial General Liability
\$1,000,000 each occurrence
\$1,000,000 aggregate

Automobile Liability
\$1,000,000 each accident (or reasonably equivalent limits of coverage if written on a split limits basis). Coverage shall be on any vehicle used in the course of the PROJECT.

Worker's Compensation
Coverage A: statutory limits
Coverage B: \$100,000 each accident
\$500,000 disease - policy limit
\$100,000 disease - each employee

Professional Liability
\$1,000,000 each claim/annual aggregate

- (2) Certificates of insurance evidencing that the ENGINEER has obtained all required insurance shall be delivered to the CITY prior to ENGINEER proceeding with the PROJECT.
- (a) Applicable policies shall be endorsed to name the CITY an Additional Insured thereon, as its interests may appear. The term CITY shall include its employees, officers, officials, agents, and volunteers as respects the contracted services.
 - (b) Certificate(s) of insurance shall document that insurance coverage specified according to items section K.(1) and K.(2) of this agreement are provided under applicable policies documented thereon.
 - (c) Any failure on part of the CITY to request required insurance documentation shall not constitute a waiver of the insurance requirements.
 - (d) A minimum of thirty (30) days notice of cancellation or material change in coverage shall be provided to the CITY. A ten (10) days notice shall be acceptable in the event of non-payment of premium. Such terms shall be endorsed onto ENGINEER's insurance policies. Notice shall be sent to the respective Department Director (by name), City of Fort Worth, 1000 Throckmorton, Fort Worth, Texas 76102.
 - (e) Insurers for all policies must be authorized to do business in the state of Texas or be otherwise approved by the CITY; and, such insurers shall be acceptable to the CITY in terms of their financial strength and solvency.
 - (f) Deductible limits, or self-insured retentions, affecting insurance required herein shall be acceptable to the CITY in its sole discretion; and, in lieu of traditional insurance, any alternative coverage maintained through insurance pools or risk retention groups must be also approved. Dedicated financial resources or letters of credit may also be acceptable to the City.
 - (g) Applicable policies shall each be endorsed with a waiver of subrogation in favor of the CITY as respects the PROJECT.
 - (h) The City shall be entitled, upon its request and without incurring expense, to review the ENGINEER's insurance policies including endorsements thereto and, at the CITY's discretion, the ENGINEER may be required to provide proof of insurance premium payments.
 - (i) The Commercial General Liability insurance policy shall have no exclusions by endorsements unless the CITY approves such exclusions.

- (j) The Professional Liability insurance policy, if written on a claims made basis shall be maintained by the ENGINEER for a minimum two (2) year period subsequent to the term of the respective PROJECT contract with the CITY unless such coverage is provided the ENGINEER on an occurrence basis.
- (k) The CITY shall not be responsible for the direct payment of any insurance premiums required by this agreement. It is understood that insurance cost is an allowable component of ENGINEER's overhead.
- (l) All insurance required in section K, except for the Professional Liability insurance policy, shall be written on an occurrence basis in order to be approved by the CITY.
- (m) Subconsultants to the ENGINEER shall be required by the ENGINEER to maintain the same or reasonably equivalent insurance coverage as required for the ENGINEER. When subconsultants maintain insurance coverage, ENGINEER shall provide CITY with documentation thereof on a certificate of insurance. Notwithstanding anything to the contrary contained herein, in the event a subconsultant's insurance coverage is canceled or terminated, such cancellation or termination shall not constitute a breach by ENGINEER of the Agreement.

L. Independent Consultant

The ENGINEER agrees to perform all services as an independent consultant and not as a subcontractor, agent, or employee of the CITY.

M. Disclosure

The ENGINEER acknowledges to the CITY that it has made full disclosure in writing of any existing conflicts of interest or potential conflicts of interest, including personal financial interest, direct or indirect, in property abutting the proposed PROJECT and business relationships with abutting property cities. The ENGINEER further acknowledges that it will make disclosure in writing of any conflicts of interest that develop subsequent to the signing of this contract and prior to final payment under the contract.

N. Asbestos or Hazardous Substances

- (1) If asbestos or hazardous substances in any form are encountered or suspected, the ENGINEER will stop its own work in the affected portions of the PROJECT to permit testing and evaluation.
- (2) If asbestos or other hazardous substances are suspected, the ENGINEER will, if requested, assist the CITY in obtaining the services of a qualified subcontractor to manage the remediation activities of the PROJECT.

O. Permitting Authorities - Design Changes

If permitting authorities require design changes so as to comply with published design criteria and/or current engineering practice standards which the ENGINEER should have been aware of at the time this Agreement was executed, the ENGINEER shall revise plans and specifications, as required, at its own cost and expense. However, if design changes are required due to the changes in the permitting authorities' published design criteria and/or practice standards criteria which are published after the date of this Agreement which the ENGINEER could not have been reasonably aware of, the ENGINEER shall notify the CITY of such changes and an adjustment in compensation will be made through an amendment to this AGREEMENT.

Article V

Obligations of the City

Amendments to Article V, if any, are included in Attachment C.

A. City-Furnished Data

The CITY will make available to the ENGINEER all technical data in the CITY's possession relating to the ENGINEER's services on the PROJECT. The ENGINEER may rely upon the accuracy, timeliness, and completeness of the information provided by the CITY.

B. Access to Facilities and Property

The CITY will make its facilities accessible to the ENGINEER as required for the ENGINEER's performance of its services and will provide labor and safety equipment as required by the ENGINEER for such access. The CITY will perform, at no cost to the ENGINEER, such tests of equipment, machinery, pipelines, and other components of the CITY's facilities as may be required in connection with the ENGINEER's services. The CITY will be responsible for all acts of the CITY's personnel.

C. Advertisements, Permits, and Access

Unless otherwise agreed to in the Scope of Services, the CITY will obtain, arrange, and pay for all advertisements for bids; permits and licenses required by local, state, or federal authorities; and land, easements, rights-of-way, and access necessary for the ENGINEER's services or PROJECT construction.

D. Timely Review

The CITY will examine the ENGINEER's studies, reports, sketches, drawings, specifications, proposals, and other documents; obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other

consultants as the CITY deems appropriate; and render in writing decisions required by the CITY in a timely manner in accordance with the project schedule in Attachment A.

E. Prompt Notice

The CITY will give prompt written notice to the ENGINEER whenever CITY observes or becomes aware of any development that affects the scope or timing of the ENGINEER's services or of any defect in the work of the ENGINEER or construction contractors.

F. Asbestos or Hazardous Substances and Indemnification

- (1) To the maximum extent permitted by law, the CITY will indemnify and release ENGINEER and its officers, employees, and subcontractors from all claims, damages, losses, and costs, including, but not limited to, attorney's fees and litigation expenses arising out of or relating to the presence, discharge, release, or escape of hazardous substances, contaminants, or asbestos on or from the PROJECT. Nothing contained herein shall be construed to require the CITY to levy, assess or collect any tax to fund this indemnification.
- (2) The indemnification and release required above shall not apply in the event the discharge, release or escape of hazardous substances, contaminants, or asbestos is a result of ENGINEER'S negligence or if such hazardous substance, contaminant or asbestos is brought onto the PROJECT by ENGINEER.

G. Contractor Indemnification and Claims

The CITY agrees to include in all construction contracts the provisions of Article IV.E. regarding the ENGINEER's Personnel at Construction Site, and provisions providing contractor indemnification of the CITY and the ENGINEER for contractor's negligence.

H. Contractor Claims and Third-Party Beneficiaries

- (1) The CITY agrees to include the following clause in all contracts with construction contractors and equipment or materials suppliers:

"Contractors, subcontractors and equipment and materials suppliers on the PROJECT, or their sureties, shall maintain no direct action against the ENGINEER, its officers, employees, and subcontractors, for any claim arising out of, in connection with, or resulting from the engineering services performed. Only the CITY will be the beneficiary of any undertaking by the ENGINEER."

- (2) This AGREEMENT gives no rights or benefits to anyone other than the CITY and the ENGINEER and there are no third-party beneficiaries.
- (3) The CITY will include in each agreement it enters into with any other entity or person regarding the PROJECT a provision that such entity or person shall have no third-party beneficiary rights under this Agreement.
- (4) Nothing contained in this section V.H. shall be construed as a waiver of any right the CITY has to bring a claim against ENGINEER.

I. CITY's Insurance

- (1) The CITY may maintain property insurance on certain pre-existing structures associated with the PROJECT.
- (2) The CITY will ensure that Builders Risk/Installation insurance is maintained at the replacement cost value of the PROJECT. The CITY may provide ENGINEER a copy of the policy or documentation of such on a certificate of insurance.
- (3) The CITY will specify that the Builders Risk/Installation insurance shall be comprehensive in coverage appropriate to the PROJECT risks.

J. Litigation Assistance

The Scope of Services does not include costs of the ENGINEER for required or requested assistance to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CITY. In the event CITY requests such services of the ENGINEER, this AGREEMENT shall be amended or a separate agreement will be negotiated between the parties.

K. Changes

The CITY may make or approve changes within the general Scope of Services in this AGREEMENT. If such changes affect the ENGINEER's cost of or time required for performance of the services, an equitable adjustment will be made through an amendment to this AGREEMENT with appropriate CITY approval.

Article VI

General Legal Provisions

Amendments to Article VI, if any, are included in Attachment C.

A. Authorization to Proceed

ENGINEER shall be authorized to proceed with this AGREEMENT upon receipt of a written Notice to Proceed from the CITY.

B. Reuse of Project Documents

All designs, drawings, specifications, documents, and other work products of the ENGINEER, whether in hard copy or in electronic form, are instruments of service for this PROJECT, whether the PROJECT is completed or not. Reuse, change, or alteration by the CITY or by others acting through or on behalf of the CITY of any such instruments of service without the written permission of the ENGINEER will be at the CITY's sole risk. The final designs, drawings, specifications and documents shall be owned by the CITY.

C. Force Majeure

The ENGINEER is not responsible for damages or delay in performance caused by acts of God, strikes, lockouts, accidents, or other events beyond the control of the ENGINEER.

D. Termination

- (1) This AGREEMENT may be terminated only by the City for convenience on 30 days' written notice. This AGREEMENT may be terminated by either the CITY or the ENGINEER for cause if either party fails substantially to perform through no fault of the other and does not commence correction of such nonperformance with 5 days of written notice and diligently complete the correction thereafter.
- (2) If this AGREEMENT is terminated for the convenience of the City, the ENGINEER will be paid for termination expenses as follows:
 - a.) Cost of reproduction of partial or complete studies, plans, specifications or other forms of ENGINEER'S work product;
 - b.) Out-of-pocket expenses for purchasing storage containers, microfilm, electronic data files, and other data storage supplies or services;
 - c.) The time requirements for the ENGINEER'S personnel to document the work underway at the time the CITY'S termination for convenience so that the work effort is suitable for long time storage.
- (3) Prior to proceeding with termination services, the ENGINEER will submit to the CITY an itemized statement of all termination expenses. The CITY'S approval will be obtained in writing prior to proceeding with termination services.

E. Suspension, Delay, or Interruption to Work

The CITY may suspend, delay, or interrupt the services of the ENGINEER for the convenience of the CITY. In the event of such suspension, delay, or interruption, an equitable adjustment in the PROJECT's schedule, commitment and cost of the ENGINEER's personnel and subcontractors, and ENGINEER's compensation will be made.

F. Indemnification

- (1) The ENGINEER agrees to indemnify and defend the CITY from any loss, cost, or expense claimed by third parties for property damage and bodily injury, including death, caused solely by the negligence or willful misconduct of the ENGINEER, its employees, officers, and subcontractors in connection with the PROJECT.
- (2) If the negligence or willful misconduct of both the ENGINEER and the CITY (or a person identified above for whom each is liable) is a cause of such damage or injury, the loss, cost, or expense shall be shared between the ENGINEER and the CITY in proportion to their relative degrees of negligence or willful misconduct as determined pursuant to T.C.P. & R. Code, section 33.011(4) (Vernon Supplement 1996).

G. Assignment

Neither party shall assign all or any part of this AGREEMENT without the prior written consent of the other party.

H. Interpretation

Limitations on liability and indemnities in this AGREEMENT are business understandings between the parties and shall apply to all the different theories of recovery, including breach of contract or warranty, tort including negligence, strict or statutory liability, or any other cause of action, except for willful misconduct or gross negligence for limitations of liability and sole negligence for indemnification. Parties mean the CITY and the ENGINEER, and their officers, employees, agents, and subcontractors.

I. Jurisdiction

The law of the State of Texas shall govern the validity of this AGREEMENT, its interpretation and performance, and any other claims related to it. The venue for any litigation related to this AGREEMENT shall be Tarrant County, Texas.

J. Alternate Dispute Resolution

- (1) All claims, disputes, and other matters in question between the CITY and ENGINEER arising out of, or in connection with this Agreement or the PROJECT, or any breach of any obligation or duty of CITY or ENGINEER hereunder, will be submitted to mediation. If mediation is unsuccessful, the claim, dispute or other matter in question shall be submitted to arbitration if both parties acting reasonably agree that the amount of the dispute is likely to be less than \$50,000, exclusive of attorney's fees, costs and expenses. Arbitration shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association or other applicable rules of the Association then in effect. Any award rendered by the arbitrators less than

\$50,000, exclusive of attorney's fees, costs and expenses, will be final, judgment may be entered thereon in any court having jurisdiction, and will not be subject to appeal or modification except to the extent permitted by Sections 10 and 11 of the Federal Arbitration Act (9 U.S.C. Sections 10 and 11).

- (2) Any award greater than \$50,000, exclusive of attorney's fees, costs and expenses, may be litigated by either party on a de novo basis. The award shall become final ninety (90) days from the date same is issued. If litigation is filed by either party within said ninety (90) day period, the award shall become null and void and shall not be used by either party for any purpose in the litigation.

K. Severability and Survival

If any of the provisions contained in this AGREEMENT are held for any reason to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability will not affect any other provision, and this AGREEMENT shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein. Articles V.F., VI.B., VI.D., VI.H., VI.I., and VI.J. shall survive termination of this AGREEMENT for any cause.

L. Observe and Comply

ENGINEER shall at all times observe and comply with all federal and State laws and regulations and with all City ordinances and regulations which in any way affect this AGREEMENT and the work hereunder, and shall observe and comply with all orders, laws ordinances and regulations which may exist or may be enacted later by governing bodies having jurisdiction or authority for such enactment. No plea of misunderstanding or ignorance thereof shall be considered. ENGINEER agrees to defend, indemnify and hold harmless CITY and all of its officers, agents and employees from and against all claims or liability arising out of the violation of any such order, law, ordinance, or regulation, whether it be by itself or its employees.

Article VII

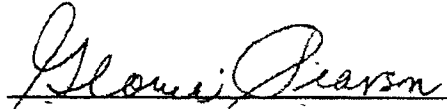
Attachments, Schedules, and Signatures

This AGREEMENT, including its attachments and schedules, constitutes the entire AGREEMENT, supersedes all prior written or oral understandings, and may only be changed by a written amendment executed by both parties. The following attachments and schedules are hereby made a part of this AGREEMENT:

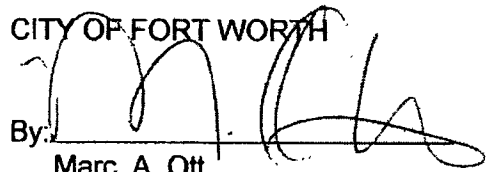
- Attachment A - Scope of Services
- Attachment B - Compensation
- Attachment C - Amendments to Standard Agreement for Engineering Services
- Attachment D - Project Schedule
- Attachment E - Location Map

Executed this the 20th day of Aug., 2003.

ATTEST:



 Gloria Pearson
 City Secretary

CITY OF FORT WORTH
 By: 

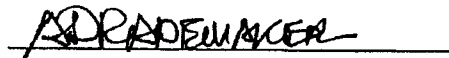
 Marc A. Ott
 Assistant City Manager

C-19703

 Contract Authorization
8/12/03


 Date

APPROVAL RECOMMENDED



 A. Douglas Rademaker, P.E.
 Director, Engineering Department

APPROVED AS TO FORM AND LEGALITY

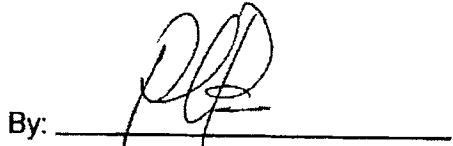


 Assistant City Attorney

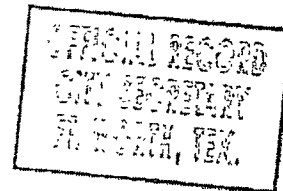
ATTEST:

TRANSYSTEMS CORPORATION
 CONSULTANTS

 ENGINEER

By: 

 Raul Pena, III, P.E.
 Regional Vice-President



ATTACHMENT "A"

General Scope of Services

"Scope of Services set forth herein can only be modified by additions, clarifications, and/or deletions set forth in the supplemental Scope of Services. In cases of conflict between the Supplemental Scope of Services and the General Scope of Services, the Supplemental Scope of Services shall have precedence over the General Scope of Services."

GENERAL

1) **Preliminary Conference with City**

The Engineer shall attend preliminary conferences with authorized representatives of the City regarding the scope of project so that the plans and specifications which are to be developed hereunder by the Engineer will result in providing facilities which are economical in design and conform to the City's requirements and budgetary constraints.

2) **Coordination with Outside Agencies/Public Entities**

The Engineer shall coordinate with officials of other outside agencies as may be necessary for the design of the proposed street, and storm drain and/or water and wastewater facilities/improvements. It shall be the Engineer's duty hereunder to secure necessary information from such outside agencies, to meet their requirements.

3) **Geotechnical Investigations**

The Engineer shall advise the City of test borings, and other subsurface investigations that may be needed. In the event it is determined necessary to make borings or excavate test holes or pits, the Engineer shall in coordination with the City and the City's geotechnical engineering consultant, draw up specifications for such testing program. The cost of the borings or excavations shall be paid for by the City.

4) **Agreements and Permits**

The Engineer shall complete all forms/applications to allow the City of Fort Worth to obtain any and all agreements and/or permits normally required for a project of this size and type. The Engineer will be responsible for negotiating and coordinating to obtain approval of the agency issuing the agreement and/or permits and will make any revisions necessary to bring the plans into compliance with the requirements of said agency, including but not limited to highways, railroads, water authorities, Corps' of Engineers and other utilities.

5) **Design Changes Relating to Permitting Authorities**

If permitting authorities require design changes, the Engineer shall revise the plans and specifications as required at the Engineers own cost and expense, unless such changes are required due to changes in the design of the facilities made by the

permitting authority. If such changes are required, the Engineer shall notify the City and an amendment to the contract shall be made if the Engineer incurs additional cost. If there are unavoidable delays, a mutually agreeable and reasonable time extension shall be negotiated.

6) **Plan Submittal**

Copies of the original plans shall be provided on reproducible mylar or approved plastic film sheets, or as otherwise approved by the Department of Engineering and shall become the property of the City. City may use such drawings in any manner it desires; provided, however that the Engineer shall not be liable for the use of such drawings for any project other than the project described herein; and further provided, that the Engineer shall not be liable for the consequences of any changes that are made to the drawings or changes that are made in the implementation of the drawings without the written approval of the Engineer.

PHASE 1

7) **Right-of-Way, Easement and Land Acquisition Needs**

The Engineer shall determine the rights-of-way, easement needs for the construction of the project. Engineer shall determine ownership of such land and furnish the City with the necessary right-of-way sketches, prepare necessary easement descriptions for acquiring the rights-of-way and/or easements for the construction of this project. Sketches and easement descriptions are to be presented in form suitable for direct use by the Department of Engineering in obtaining rights-of-way, easements, permits and licensing agreements. All materials shall be furnished on the appropriate City forms in a minimum of four (4) copies each.

8) **Design Survey**

The Engineer shall provide necessary field survey for use in the preparation of Plans and Specifications. The Engineer shall furnish the City certified copies of the field data.

9) **Utility Coordination**

The Engineer shall coordinate with all utilities, including utilities owned by the City, as to any proposed utility liens or adjustment to existing utility lines within the project limits. The information obtained shall be shown on the conceptual plans. The Engineer shall show on the preliminary and final plans the location of the proposed utility lines, existing utility lines, based on the information provided by the utility, and any adjustments and/or relocation of the existing lines within the project limits. The Engineer shall also evaluate the phasing of the water, wastewater, street and drainage work, and shall submit such evaluation in writing to the City as part of this phase of the project.

10) **Conceptual Plans**

The Engineer shall furnish four (4) copies of the Phase 1 concept engineering plans which include layouts, preliminary right-of-way needs and preliminary estimates of probable construction costs for the Engineer's recommended plan. For all submittals, the Engineer shall submit plans and documents for street/storm drain and water/wastewater facilities. The Engineer shall receive written approval of the Phase 1 Plans from the City's project manager before proceeding with Phase 2.

PHASE 2

11) **Design Data**

The Engineer shall provide design data, reports, cross-sections, profiles, drainage calculations, and preliminary estimates of probable construction cost.

12) **Preliminary Construction Plans and Technical Specifications**

The Engineer shall submit twenty (20) copies of Phase 2 preliminary construction plans and five (5) copies of the preliminary technical specifications for review by the City and for submission to utility companies and other agencies for the purposes of coordinating work with existing and proposed utilities. The preliminary construction plans shall indicate location of existing/proposed utilities and storm drain lines. The Engineer shall receive written approval of the Phase 2 plans from the City's project manager before proceeding with Phase 3.

PHASE 3

13) **Final Construction Plans**

The Engineer shall furnish five (5) copies of the final construction plans and contract specifications for review by the City.

14) **Detailed Cost Estimate**

The Engineer shall furnish four (4) copies of detailed estimates of probable construction costs for the authorized construction project, which shall include summaries of bid items and quantities.

15) **Plans and Specification Approval**

The Engineer shall furnish an original cover mylar for the signatures of authorized City officials. The Contract Documents shall comply with applicable local, state and federal laws and with applicable rules and regulations promulgated by local, state and national boards, bureaus and agencies. The Engineer shall receive written approval of the Phase 3 plans from the City's project manager before proceeding with Phase 4.

PHASE 4

16) **Final Approved Construction Plans**

The Engineer shall furnish 45 bound copies of Phase 4 final approved construction plans and contract specifications. The approved plans and contract specifications shall be used as authorized by the City for use in obtaining bids, awarding contracts, and constructing the project.

17) **Bidding Assistance**

The Engineer shall issue addenda as appropriate to interpret, clarify, or expand the bidding documents, and assist the owner in determining the qualifications and acceptability of prospective constructors, subcontractors, and suppliers. When substitution prior to the award of contracts is allowed by the bidding documents, the Engineer will advise the owner as to the acceptability of alternate materials and equipment proposed by the prospective constructors.

18) **Recommendation of Award**

The Engineer shall assist in the tabulation and review of all bids received for the construction of the project and shall make a recommendation of award to the City.

19) **Prebid Conference**

The Engineer shall attend the prebid conference and the bid opening, prepare bid tabulation sheets and provide assistance to the owner in evaluating bids or proposals and in assembling and awarding contracts for construction, materials, equipment, and services.

PHASE 5

20) **Preconstruction Conference**

The Engineer shall attend the preconstruction conference.

21) **Construction Survey**

The Engineer shall be available to the City on matters concerning the layout of the project during its construction and will set control points in the field to allow City survey crews to stake the project. The setting of line and grade stakes and route inspection of construction will be performed by the City.

22) **Site Visits**

The Engineer shall visit the project site at appropriate intervals as construction proceeds to observe and report on the progress and the quality of the executed work.

23) Shop Drawing Review

The Engineer shall review shop and erection drawings submitted by the contractor for compliance with design concepts. The Engineer shall review laboratory, shop, and mill test reports on materials and equipment.

24) Instructions to Contractor

The Engineer shall provide necessary interpretations and clarifications of contract documents, review change orders and make recommendations as to the acceptability of the work, at the request of the City.

25) Differing Site Conditions

The Engineer shall prepare sketches required to resolve problems due to actual field conditions encountered.

26) Record Drawings

The Engineer shall prepare record drawings from information submitted by the contractor.

EXHIBIT "A-1"
SUPPLEMENTAL SCOPE OF SERVICES
(SUPPLEMENT TO ATTACHMENT "A")

Sanitary Sewer Extension to Serve Walsh Ranch
Phases 1A, 1B, and 1D
Project No. PS46- 070460140290
DOE No. 4159

PHASE 1 - DESIGN SERVICES: SEWER PIPELINE

The following is a clarification of the tasks that the ENGINEER will perform under ATTACHMENT "A". Work under this attachment includes the design of approximately 15,000lf of 12"-30" diameter sewer. This project will begin, on the downstream end, at a connection point to the existing sanitary sewer M - 450 (approx. station 31+41) and continue north along Mary's creek. The project will terminate on the upstream end near the eastern boundary limits of Walsh Ranch with connection points to sewer phases 1C and 1D. Upon receipt of Notice to Proceed, the ENGINEER will perform the following tasks:

PART A – PRE-ENGINEERING

1. **Initial Data Collection**
 - a. **Pre-Design Coordination Meetings**

ENGINEER will attend and document meetings, as required, to discuss and coordinate various aspects of the project and to ensure that the project stays on schedule. These include the following:

One (1) pre-design kick-off meeting, including representatives from the City of Fort Worth and the design consultants working on other phases of the project.

Information meeting with property owners along proposed route.

One (1) review meeting at completion of the City's review of the Route Study.

properties of the soil. Classify soils according to the United States Classification using classification tests. These tests will include natural moisture content, dry unit weights, and the liquid and plastic limits. The undrained shear strengths of the cohesive soils will be determined by hand penetrometer tests and confirmed with unconfined compressive strength testing.

- c. Engineering Analysis – Document the results of the field and laboratory work. Provide engineering recommendations for design and construction of proposed pipeline.

PART B - CONSTRUCTION PLANS AND SPECIFICATIONS

1. Route Study Phase

- a. Route Study Base Map – The Engineer will prepare a base map for all sewer phases that will contain: property ownership information (from tax records), floodplain, existing sewer mains from City mapping files, aerial photos, Walsh Ranch concept plan, and other available information. This base map will be provided to all firms for their use in finalizing routes in their phases.
- b. Route Study -The ENGINEER will meet with affected parties as outlined in Part A above to gather information pertinent to the alignment of the proposed sanitary sewer improvements for phases 1A, 1B and 1D. Engineer will evaluate up to a maximum of three alternatives horizontally and provide a vertical profile of the preferred alternative. These alternatives will be evaluated using a scale of 1"=200' with areas of interest enlarged as needed.
- c. Project Coordination – the Engineer will perform the following services in an effort to coordinate with all consultants working on providing Sanitary Sewer Service to the Walsh Ranch:
 1. Schedules - coordinate all schedules and codify into one master schedule. Schedule will be updated on a monthly basis.
 2. Surveys – Set control network for horizontal and vertical control and coordinate with all Consulting firms working on the Walsh Ranch project for the CITY.
 3. Standardization of plans- coordinate with all consultants and prepare documentation of standards concerning, plan index, standard CAD layering, details common to all projects, and coordination of design software.
 4. Mapping – upon completion of project all sewer project phases will be consolidated into one mapping system for the Cities use in a GIS system. This mapping will include; 1) sewer line, 2) lift stations and structures, 3) Property Parcel and Easements, 4) floodplain, 5) roads and 6) project control.

- d. Walsh Ranch Sewer Study - Engineer will review existing Walsh Ranch sewer flow studies. These studies will be verified and updated to include the entire sewer shed. ENGINEER will coordinate with the CITY to verify additional land to be served beyond the limits of Walsh Ranch and land use projections. Projected design flows will be broken out into sub-areas (as defined by sewer phases), calculated and presented in tabular form with an accompanying report. ENGINEER will provide the CITY with alternative sizing alternatives based on varying development scenarios.
- e. Mary's Creek Water Recycling Center Feasibility Study
 1. Prepare for and participate in project start-up meeting. During this meeting, review and refine project objectives and approach and discuss information required for this project.
 2. Obtain from the City of Fort Worth (City) available information relevant to this project, including:
 - a. Projected population, water demand, and wastewater flows.
 - b. Previous water and wastewater studies in the Mary's Creek watershed.
 - c. Wastewater interceptor locations, shown on a map, and their capacities.
 - d. Planned future wastewater interceptors and areas to be served.
 - e. Current perspectives about the rates to be charged for reclaimed water.
 - f. Results from interceptor modeling to determine capacity requirements.
 - g. Conceptual water treatment processes for proposed water treatment plant to serve the Mary's Creek watershed.
 - h. Available aerial photographs and maps.
 - i. Property records and plats.
 3. Select two potential sites for the proposed Mary's Creek Water Recycling Center (WRC). Perform an investigation of each site using available aerial photographs, available topographic maps, and field observations made from public roads. Consider proximity to the general public, environmental permitting issues, proximity to existing and/or proposed interceptors, and proximity to receiving water bodies.
 4. Assist the City in evaluating the effect of the WRC on needed wastewater system infrastructure improvements.
 - a. Identify, in coordination with the City, required interceptor flow modeling of the Clear Fork and West Fork interceptor systems to update flow characteristics presented in the 1998 Master Plan. It is anticipated that this modeling and analysis, to be performed by the City, will involve updating previous modeling of the Clear Fork and West Fork interceptor systems to determine existing and projected (2020) dry-weather and wet-weather peak and average flows. One or more

additional model runs would be made to determine the effect of up to two options for diverting and treating wastewater at the WRC. APAI will provide a request to the City for the modeling and analysis required to develop this information.

- b. Perform, in coordination with the City, the analysis necessary to relate flow statistics modeled in the Clear Fork and West Fork interceptors to flows common in the design of wastewater treatment facilities (e.g., 2-hour peak flow, annual average daily flow, dry weather flow, and maximum monthly average daily flow).
 - c. Determine, in coordination with the City, an opinion of the probable value of the Clear Fork and West Fork infrastructure cost savings realized by diverting wastewater flow to the WRC.
5. Perform mathematical water quality modeling of the receiving streams for each potential WRC site. The mathematical modeling would be performed with an uncalibrated model to develop preliminary impact information. The mathematical modeling will provide the probable discharge permit requirements (including BOD, ammonia nitrogen, and dissolved oxygen and excluding nutrient criteria) for use in identification of treatment measures in Item 6.
 6. Develop treatment processes for each potential WRC site. Develop process flow schematics and preliminary plant site layouts. Develop an opinion of probable costs (capital and operation and maintenance) for each of the treatment processes.
 7. For each potential WRC site, make recommendations for dewatering and disposal of bio-solids and for providing odor control. Develop a conceptual design and an opinion of probable costs for each site.
 8. Develop a conceptual plan for beneficial use of the reclaimed water from the WRC. The conceptual plan will include provisions for use of reclaimed water for non-potable purposes (i.e., irrigation of golf courses and other areas, known commercial or industrial water users, etc.) and for augmentation of surface water supply. Reclaimed water delivery system requirements, including pump stations and delivery pipelines, will be identified in this Item. An opinion of probable costs for each potential WRC site, including capital and operation and maintenance costs, will be developed for the reclaimed water conceptual plan. The potential demand for beneficial use of the reclaimed water would be based on available studies and other information provided by the City and developed by this project.
 9. Based on the potential demand for reclaimed water identified in Item 8, analyze proposed water treatment plant capacity requirements (to be provided by the City) for potential cost savings due to the substitution of reclaimed water to meet non-potable water demands. The timing of projected reclaimed water and potable water supply and demand will be considered in this analysis.
 10. Perform an economic evaluation for each potential WRC site. This

evaluation will include infrastructure savings and potential potable water treatment savings associated with each viable diversion alternative and will determine probable capital, operation and maintenance, and unit costs for each phase of the WRC.

11. Identify and discuss relevant issues associated with implementing the WRC, including environmental permitting, probable schedule, water rights, augmentation of potable water supply, off-site odors, and probable public position.
12. Based on information developed in Items 1 through 11, develop WRC site selection screening criteria. Using these criteria, select the most promising WRC site and perform a market analysis to identify the probable market value of that site.
13. Based on the findings of Items 1 through 12, determine whether a Mary's Creek WRC is feasible and identify a recommended implementation date. Develop an Implementation Plan that shows recommended dates for construction of required facilities and other key items. Present the Implementation Plan and Schedule in a draft report. Prepare 5 copies of the draft report, which will include recommendations, schedules, and opinions of probable costs. Address the City's comments on the draft report and finalize the report. Provide 20 copies of the final report.
14. Prepare for and participate in up to two progress meetings in addition to the above project start-up meeting. The final progress meeting will be used to present the findings of the project.

2. Surveys for Design

- a. ENGINEER will perform field surveys to collect horizontal and vertical elevations and other information which will be needed for use by the ENGINEER in design and preparation of plans for the project. Information gathered during the survey shall include topographic data, elevations of sanitary and adjacent storm sewers, rim/invert elevations, location of buried utilities, structures, and other features relevant to the final plan sheets. Specifically the design survey will include the following:
 1. ENGINEER will obtain permission for surveying through private property. A topographic survey will be prepared along the route 50 feet left and right of the proposed centerline. Existing features will be tied including fences, buildings, power poles, grade breaks, visible utilities and creeks.
 2. Up to fifteen boreholes will be staked for the geotechnical investigation. Horizontal and vertical information will be provided for each borehole.
 3. Property corners will be tied along the route as necessary to establish existing property boundaries.
 4. Documentation for up to 10 permanent easements with adjacent temporary construction easements will be prepared. The easement documents will be prepared in the City of Fort Worth format and include

metes and bounds descriptions and sketches. Temporary construction easements will be included on the sketch and metes and bounds descriptions will be provided.

b. **Engineer Will Provide The Following Information:**

All plans, field notes, plats, maps, legal descriptions, or other specified documents prepared in conjunction with the requested services shall be provided in a digital format compatible with the electronic data collection and computer aided design and drafting software currently in use by the CITY. All text data such as plan and profile, legal descriptions, coordinate files, cut sheets, etc., shall be provided in the American Standard Code for Information Interchange (ASCII) format, all drawing files shall be provided in Microstation Version 5.0 (DGN) or Autocad (DWG or DXF) format (currently 2000), or as otherwise approved in writing by the CITY, and all data collected and generated during the course of the project shall become the property of the CITY.

The minimum information to be provided in the plans shall include the following:

- i. A Project Control Sheet, showing ALL Control Points, used or set while gathering data. Generally on a scale of not less than 1:400:
 - ii. The following information about each Control Point;
 - a. Identified (Existing City Monument #8901, PK Nail, 5/8" Iron Rod)
 - b. X, Y and Z Coordinates, in an identified coordinate system, and a referred bearing base. Z coordinate on City Datum only.
 - c. Descriptive Location (Ex. Set in the centerline of the inlet in the South curb line of North Side Drive at the East end of radius at the Southeast corner of North Side Drive and North Main Street).
 - iii. Coordinates on all P.C.'s, P.T.'s, P.I.'s, Manholes, Valves, etc., in the same coordinate system, as the Control.
 - iv. No less than two horizontal control points and 2 bench marks per sheet.
 - v. Bearings given on all proposed centerlines, or baselines
 - vi. Station equations relating utilities to paving, when appropriate
- c. **Public Notification**

Prior to conducting design survey, ENGINEER will notify affected property owners of the project in writing. The notification letter shall be on company letterhead and shall include the following: project name, limits, DOE project no., Consultant's project manager and phone no., scope of survey work and design survey schedule. The letter will be reviewed and approved by the City prior to distribution.

3. **Preliminary Engineering**

Upon approval of Part B, Section 1, ENGINEER will prepare preliminary construction plans as follows:

- a. Overall sanitary sewer layout sheets and an overall easement layout sheet(s).
- b. Preliminary project plans and profile sheets which show the following: Proposed sanitary sewer plan/profile and recommended pipe size, pertinent information needed to construct the project. Legal description (Lot Nos., Block Nos., and Addition Names) along with property ownership shall be provided on the plan view.
- c. Existing utilities and utility easements will be shown on the plan and profile sheets. ENGINEER will coordinate with utility companies and the City of Fort Worth to determine if future improvements are planned that may impact the project.
- d. The ENGINEER shall make provisions for reconnecting wastewater service lines which connect directly to any main being replaced, including replacement of existing service lines within City right-of-way or utility easement. When the existing alignment of sanitary sewer main or lateral is changed, provisions will be made in the final plans and/or specifications by the ENGINEER to relocate all service lines which are connected to the existing main and connect said service lines to the relocated main.
- e. The ENGINEER will prepare standard and special detail sheets for sewer construction that are not already included in the D-Section of the City's specifications. These may include connection details between various parts of the project, tunneling details, boring and jacking details, waterline relocations, details unique to the construction of the project, trenchless details, and special service lateral reconnections.
- f. **Right-of-Way Research**
The ENGINEER will conduct preliminary research for availability of existing easements where open-cut construction or relocation of existing alignments is probable. Temporary and permanent easements will be appropriated based on available information and recommendations will be made for approval by the City.
- g. **Right-of-way/Easement Preparation and Submittal**
Preparation and submittal of right-of-way, easements and rights-of-entry will be in conformance with "Submittal of Information to Real Property for Acquisition of Property".
- h. **Utility Clearance Phase**
 1. The ENGINEER will consult with the City's Water Department, Department of Engineering, and other CITY departments, public utilities, private utilities, and government agencies to determine the approximate location of above and underground utilities, and other facilities that have an impact or influence on the project.
 2. ENGINEER will design City facilities to minimize conflicts with existing utilities.
 3. The ENGINEER shall deliver a minimum of 13 sets of approved preliminary construction plans to the City's Utility Coordinator for forwarding to all utility

- companies, which have facilities within the limits of the project.
- i. Preliminary construction plan submittal
 1. Preliminary plans and specifications shall be submitted to City within 180 calendar days after approval of Part B, Section 1.
 2. The ENGINEER shall deliver two (2) sets of preliminary construction plans and two (2) sets of specifications and contract documents to CITY for review. Generally, plan sheets shall be organized as follows:
 - i. Cover Sheet
 - ii. Layout Sheet
 - iii. Easement layout (if applicable)
 - iv. Plan & Profile Sheets
 - v. Standard Construction Details
 - vi. Special Details (If applicable)
 3. The ENGINEER shall submit a preliminary estimate of probable construction cost with the preliminary plans submitted. ENGINEER shall assist City in selecting the feasible and/or economical solutions to be pursued.
 - j. Review Meetings with City

The ENGINEER shall meet with CITY to discuss review comments for preliminary submittal. The CITY shall direct the ENGINEER in writing to proceed with Final Design for Final Review.
 - k. Public Meeting

After the preliminary plans have been reviewed and approved by the CITY, ENGINEER shall prepare exhibits and attend public meeting to help explain the proposed project to the residents. The CITY shall mail the invitation letters.
 - l. Geotechnical Investigation
 1. Experienced drillers and technicians will evaluate subsurface conditions with a total of 15 sample borings to depths of 15' below existing grades.
 2. Laboratory services shall include: moisture content and soil identification, liquid and plastic limits determination, unconfined compression
 - m. Storm Water Pollution Prevention Plan (SWPPP)

Engineer will prepare the SWPPP required for the project for use by the contractor during construction. The City of Fort Worth's example will be used as a template. Engineer will prepare drawings and details for proposed SWPPP improvements that the Contractors must use during construction. Contractor shall be responsible for filing the SWPPP plan with the appropriate regulatory agencies.

4. Final Engineering Plan Submittal

- a. Final Construction Documents shall be submitted to CITY 180 calendar days after

approval of Part B, Section 2.

Following CITY approval of the recommended improvements, the ENGINEER shall prepare final plans and specifications and contract documents to CITY (each sheet shall be stamped, dated, and signed by the ENGINEER) and submit two (2) sets of plans and construction contract documents within 15 days of CITY's final approval. Plan sets shall be used for Part C activities.

b. Easement Acquisition

OWNER CONTACT: Each owner will be contacted to inform them of the project and seek right of entry for surveying as well as environmental and geo-technical work to be performed on the property.

APPRAISAL/MARKET STUDY: The ENGINEER's agent shall provide Market Study with price ranges to be approved by the City of Fort Worth prior to negotiations with the property owners. The Market Study will be completed by an independent appraiser who will also complete the appraisals as such are necessary. If negotiations are not successful based on these ranges, the City may authorize the independent appraiser under the management of the ENGINEER'S agent to provide an appraisal of the property to use in further negotiations. The fixed fee presented in Exhibit "B-3C" includes the Market Study, Negotiations, and Project Management. The appraisal fee and condemnation fee are listed separate in Exhibit "B-3C". If the Appraisal is not necessary on a particular property, the City will not be billed for that parcel. The fixed fee presented in Exhibit "B-3C" also provides for the Appraiser to be present and testify at condemnation proceedings if requested by the City. The fee is based on the assumption that approximately 3 hours of the Appraiser's time will be spent attending and testifying at the hearing. If the Appraiser's assistance with the condemnation proceedings is not necessary, the City will not be billed for that parcel. Should additional time be required, the Appraiser's fee would be based on their hourly rate.

The appraisals and Market Study will be prepared by State Certified appraisers in accordance with the Uniform Standards of Professional Appraisal Practice (USPAP). The appraisals will be suitable for use in condemnation proceedings if necessary. The ENGINEER's agent will present to the City of Fort Worth a copy of the appraisals for the City's approval.

TITLE INFORMATION: This contract assumes that Title Policies will be purchased.

The ENGINEER's agent shall review liens or other exceptions reported in the Title Commitment. The ENGINEER's agent shall be responsible for the determination of the location and the effect of any utility easements. The ENGINEER's agent shall report the results of the Title Commitment to the City, recommending the disposition of the exceptions. The decision whether the reported exceptions are acceptable or must be eliminated will be the responsibility of the City. Any action required to clear title is not included in the

Scope of Work for this project, and if this task is necessary, will require an amendment to the contract.

RECOMMENDED NEGOTIATING PRICE: The offer to purchase the properties will be based on the Market Study and/or Appraisals as indicated above. The City will approve the value to be used in negotiation and the range of negotiating authority to be given to the ENGINEER's agent

4. ENGINEER's Estimate of Probable Construction Cost

The ENGINEER shall submit a final estimate of probable construction cost with the final plans submitted.

PART C - PRE-CONSTRUCTION ASSISTANCE

1. Administration

a. Deliver Bid Documents

The ENGINEER will make available for bidding, upon request by the CITY, up to forty (40) sets of the final approved and dated plans and specifications and contract documents for the projects to the CITY for distribution to potential bidders. Proposal will be delivered in electronic format.

b. Bidding Assistance

- i. The ENGINEER shall assist the CITY during bid phase including preparation and delivery of addenda to plan holders and responses to questions submitted to the Department of Engineering prospective bidders. Engineer shall attend the scheduled pre-bid conference.
- ii. The ENGINEER shall assist in reviewing the bids for completeness and accuracy.
- iii. The ENGINEER shall attend the project bid opening, develop bid tabulations in hard copy and electronic format, and submit four (4) copies of the bid tabulation.

Exhibit B-1

(SUPPLEMENT TO ATTACHMENT "B")

METHOD OF PAYMENT

**Sanitary Sewer Extension to Serve Walsh Ranch
Phases 1A, 1B, and 1D
Project No. PS46- 070460140290
DOE No. 4159**

I. Method of Payment for Lump Sum Compensation

The ENGINEER shall be paid in seven partial payments as outlined below:

The ENGINEER shall be paid in four partial payments as outlined below:

Partial Payment Number 1, which shall be equivalent to 30% of the total lump sum fee, shall be payable after submittal of draft copy of studies outlined in Study Phase of Exhibit "A-1", Part B Section 1.

Partial Payment Number 2, which shall be equivalent to 40% of the total lump sum fee, less previous payment, shall be payable after submittal of final copy of studies outlined in Study Phase of Exhibit "A-1", Part B Section 1.

Partial Payment Number 3, which shall be equivalent to 50% of the total lump sum fee, less previous payments, shall be payable after topographic surveys for design are completed as outlined in Exhibit "A-1", Part B Section 1.

Partial Payment Number 4, which shall be equivalent to 70% of the total lump sum fee, less previous payments, shall be payable after submittal of preliminary plans and easement requirements as outlined in Exhibit "A-1", Part B, Section 2.

Partial Payment Number 5, which shall be equivalent to 85% of the total lump sum fee, less previous payments, shall be payable after submittal of final plans as outlined in Exhibit "A-1", Part B, Section 3.

Partial Payment Number 6, which shall be equivalent to 95% of the total lump sum fee, less previous payments, shall be payable after approval by City of final plans as outlined in Exhibit "A-1", Part B, Section 3.

Partial Payment Number 7, which shall represent the balance of the earnings, less previous payments, shall be payable after all the pre-construction meetings for the project have been conducted.

II. Progress Report

- A. The ENGINEER shall submit to the designated representative of the Director of the Department of Engineering monthly progress reports covering all phases of design by the 15th of every month in the format required by the City.
- B. If the ENGINEER determines in the course of making design drawings and specifications that the construction cost estimate of \$2,715,000 (as estimated in Exhibit "B-4") will be exceeded, whether by change in the scope of the project, increased costs or other conditions, the ENGINEER shall immediately report such fact to the City's Director of the Department of Engineering and, if so instructed by the Director of the Engineering Department shall suspend all work hereunder.



July 30, 2003

Mr. Tony Sholola, P.E.
City of Fort Worth
100 Throckmorton St.
Fort Worth, TX 76101

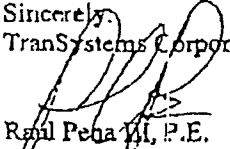
Re: Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID
Project No. PS46- 070460140290
DOE No. 4159


Dear Mr. Sholola:

TranSystems is presenting this "Letter of Intent" to Arlington Bluelines to provide assistance with the above referenced project. The project will consist of providing printing services for the above referenced project.

Arlington Bluelines will be providing printing for a fee of \$ 5,000 dollars to be a portion of the 22% MBE goal.

If you have any questions or comments or require any additional information concerning this matter please do not hesitate to call.

Sincerely,
TranSystems Corporation Consultants

Paul Peña III, P.E.
Regional Vice President

Accepting:
Arlington Bluelines.

Owner



July 30, 2003

Mr. Tony Sholola, P.E.
City of Fort Worth
100 Throckmorton St.
Fort Worth, TX 76101

Re: Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID
Project No. PS46- 070460140290
DOE No. 4159

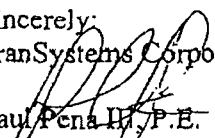
Dear Mr. Sholola:

TranSystems is presenting this "Letter of Intent" to James Daniel and Associates, Inc to provide Easement Acquisition and Appraisal services for the above referenced project.

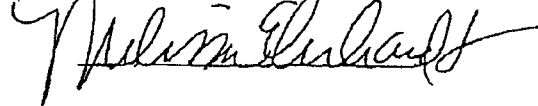
James Daniel and Associates will be providing the above referenced services for a fee of \$73,750.00 dollars to be a portion of the 22% MBE goal.

If you have any questions or comments or require any additional information concerning this matter please do not hesitate to call.

Sincerely:
TranSystems Corporation Consultants


Raul Pena III, P.E.
Regional Vice President

Accepting:
James Daniels and Associates





July 30, 2003

Mr. Tony Sholola, P.E.
City of Fort Worth
1000 Throckmorton St.
Fort Worth, TX 76102

Re: Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID
Project No. PS46- 070460140290
DOE No. 4159

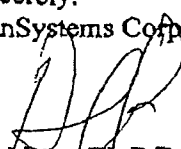
Dear Mr. Sholola:

TranSystems is presenting this "Letter of Intent" to A.N.A. Consultants, L.L.C. to provide assistance with the above referenced project. The project will consist of providing topographic surveys for the above referenced project.

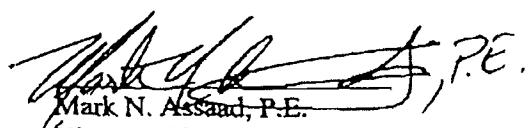
ANA Consultants will be providing surveying services for a fee of \$35,000 dollars to be a portion of the 22% MBE goal.

If you have any questions or comments or require any additional information concerning this matter please do not hesitate to call.

Sincerely:
TranSystems Corporation Consultants


Raul Pena III, P.E.
Regional Vice President

Accepting:
A.N.A. Consultants, L.L.C.


Mark N. Assaad, P.E.
Vice President



July 30, 2003

Mr. Tony Sholola, P.E.
City of Fort Worth
100 Throokmorton St.
Fort Worth, TX 76101

Re: Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID
Project No. PS46- 070460140290
DOE No. 4159

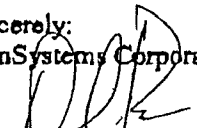
Dear Mr. Sholola:

TranSystems is presenting this "Letter of Intent" to ANA Consultants, L.L.C. to provide assistance with the above referenced project. The project will consist of assistance in preparation of an engineering study and report.

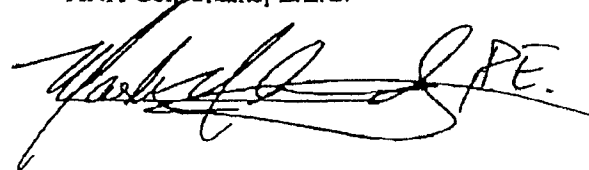
ANA Consultants will be providing design services for a fee of \$12,000 dollars to be a portion of the 22% MBE goal. ANA Consultants will be providing these services to Alan Plummer and Assoc. which is a sub-consultant to TranSystems Corporation.

If you have any questions or comments or require any additional information concerning this matter please do not hesitate to call.

Sincerely:
TranSystems Corporation Consultants


Raul Pena III, P.E.
Regional Vice President

Accepting:
ANA Consultants, L.L.C.



Accepting:
Alan Plummer and Associates, Inc





July 30, 2003

Mr. Tony Sholola, P.E.
City of Fort Worth
100 Throckmorton St.
Fort Worth, TX 76101

Re: Sanitary Sewer Extension to Serve Walsh Ranch
Phases 1A, 1B, and 1D
Project No. PS46- 070460140290
DOE No. 4159

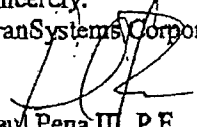
Dear Mr. Sholola:

TransSystems is presenting this "Letter of Intent" to James Daniels and Associates, Inc to provide Easement Acquisition and Appraisal services for the above referenced project.

James Daniels and Associates will be providing appraisal services for a fee of \$3,000 dollars to be a portion of the 22% MBE goal. James Daniels and Associates will be providing these services to Alan Plummer and Assoc. which is a sub-consultant to TransSystems Corporation.

If you have any questions or comments or require any additional information concerning this matter please do not hesitate to call.

Sincerely:
TransSystems Corporation Consultants


Raul Pena III, P.E.
Regional Vice President

Accepting:
James Daniels and Associates, Inc.



Accepting:
Alan Plummer and Associates, Inc



Exhibit B-2

Hourly Rate Schedule

Sanitary Sewer Extension to Serve Walsh Ranch
 Phases 1A, 1B, and 1D
 Project No. PS46- 070460140290
 DOE No. 4159

Staff Type	Class	Hourly Rate
Technician V	T5	\$100.00
Technician IV	T4	\$90.00
Technician III	T3	\$65.00
Technician II	T2	\$60.00
Technician I	T1	\$50.00
Surveyor V	S5	\$100.00
Surveyor IV	S4	\$95.00
Surveyor III	S3	\$70.00
Surveyor II	S2	\$45.00
Surveyor I	S1	\$35.00
Planner V	P5	\$135.00
Planner IV	P4	\$100.00
Planner III	P3	\$80.00
Inspector V	I5	\$110.00
Inspector IV	I4	\$85.00
Inspector III	I3	\$80.00
Inspector II	I2	\$65.00
Inspector I	I1	\$50.00
Principal/Engineer V	E5	\$175.00
Engineer IV	E4	\$135.00
Engineer III	E3	\$115.00
Engineer II	E2	\$90.00
Engineer I	E1	\$70.00
Clerical III	C3	\$45.00
Clerical II	C2	\$40.00
Clerical I	C1	\$35.00
Administrator V	A5	\$258.00
Administrator IV	A4	\$85.00
Administrator III	A3	\$65.00
Administrator II	A2	\$55.00
Administrator I	A1	\$45.00
4 Man Survey Crew	4M	\$175.00
3 Man Survey Crew	3M	\$125.00
2 Man Survey Crew	2M	\$95.00
GPS Survey Crew	1M	\$140.00

Subcontracted labor, material testing equipment, printing and technical photography, and all other direct job expenses to be paid at cost. Vehicle mileage to be paid at the current IRS rate per mile.



“ EXHIBIT B-2A ”
(SUPPLEMENTAL TO ATTACHMENT B)

SUMMARY OF DESIGN FEE

**Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID**

Project No. PS46- 070460140290

DOE 4159

July 28, 2003

Mr. Tony Sholola, P.E.
Department of Engineering
City of Fort Worth
1000 Throckmorton Street
Fort Worth, TX 76102-6311

RE: Walsh Ranch
D.O.E. No. 4159
Sewer Project No. PS46-070460140290

Dear Tony:

We appreciate the opportunity to present this proposal and fee schedule for your consideration. Attached please find a construction cost estimate, and exhibit depicting the scope and limits of work for the sewer line improvements. We propose to complete the proposed work in accordance with the following fee schedule which includes two public meeting and exhibits:

Estimated Construction Costs (Sewer line): \$2,715,000

Basic Engineering Design Services: (TSPE Curve A 6.75% x 0.85 = 5.7%)
TranSystems Corporation Consultants Fee \$ 155,775.00

Mr. Tony Sholola, P.E.
July, 28, 2003
Page 2

Special Services		\$ 422,495.00
• Easement / Appraisal Services (Exhibit B-2B)	\$ 73,750.00	
• Design Surveys (Exhibit B-2C,10 Parcels)	\$ 78,685.00	
• Route Study Base Map (Exhibit B-2D)	\$ 7,300.00	
• Geotechnical Investigation (Exhibit B-2E)	\$ 12,240.00	
• Walsh Ranch Sewer Study (Exhibit B-2F)	\$ 17,250.00	
• Consultant Coordination (Exhibit B-2G)	\$ 59,715.00	
• Environmental Documentation (Exhibit B-2H)	\$ 15,990.00	
• Permitting (Exhibit B-2i)	\$ 12,800.00	
• Water Recycling Center Study (Exhibit B-2J)	\$ 116,255.00	
• Public Meetings (2)	\$ 1,800.00	
• Pre-Construction services(Exhibit B-2K)	\$ 5,710.00	
• Subconsultant Management	\$ 21,000.00	
Reproductions*		\$ 6,790.00
16 Sets of preliminary plans (util. clear.)	\$ 800.00	
44 Sets of Construction Plans	\$ 2,500.00	
44 Sets of Specifications (\$30.00/ea.)	\$ 2,640.00	
Mylar set of final plans	\$ 850.00	
TOTAL LUMP SUM		\$ 585,060.00

We will be using A.N.A. Consultants to provide surveying services, Arlington Bluelines for reproductions and James Daniel and Associates for Right -of-Way acquisitions. These firms will be used to meet MBE goals of 22%.

If you have any questions or require additional information please give me a call.

Sincerely,
TranSystems Corporation Consultants

Raul Pena III

Raul Pena III, P.E.
Principal

C:\Documents and Settings\rpena\My Documents\My Documents\proposals\walsh ranch\Exhibit B-2A.DOC

Exhibit B- 2B

JAMES DANIELS & ASSOCIATES, INC.
Right-of-Way Services
9239 Vista Way
Fort Worth, Texas 76126

Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID
Project No. PS46- 070460140290
DOE 4159

COMPENSATION TO THE CONTRACTOR: If the number of the parcels to be appraised or acquired is reduced, the price per parcel will need to be reviewed. The time required to perform certain of these activities is not always a function of the number of parcels involved as the costs are often apportioned among all the appraisals. Therefore, any reduction in the number of parcels involved may actually result in an increase of the fee. Any adjustment of the fees will be determined through negotiations between the Engineer and the Contractor.

In the event the **SCOPE OF WORK** as described above is expanded from the total number of parcels or the number of relocations or any type of the City or Engineer requests extra work be performed in addition to that defined in the above **Scope Of Work**, the expanded or extra work will be paid for as **Additional Services**. Compensation for additional services as previously defined shall be based on actual hourly rates and costs in accordance with the schedule shown in the section entitled **Compensation For Additional Services**.

PROJECTED NOT TO EXCEED FEE:
10 Parcels @ \$4,250/PARCEL OR
\$42,500(Inclusive of Market Study)

Appraisals(If Necessary)-\$2,750/PARCEL OR \$27,500

This proposal does not include the area within the Walsh Ranch Development. It is assumed that the City of Fort Worth will acquire this area. The proposed fee does not include any costs paid for the properties acquired, incidental expenses, (filing fees and copies of documents), title examinations, or attorney expenses or court costs, all of which will be borne by the City or others.

PROJECT CLOSURE: Upon completion of the project(s), the Contractor will be responsible for the delivery of the files to the City. A final list of property owners, with names and addresses, will be submitted with these files.

COMPENSATION FOR ADDITIONAL SERVICES: Compensation to the Contractor for additional services as previously defined shall be based on actual hourly rates and costs in accordance with the schedule shown below.

Staff Appraiser	\$125.00 per hour
Director	\$ 53.25 per hour
Senior Right-of-Way Agent	\$ 47.00 per hour
Landman	\$ 35.00 per hour
Secretary	\$ 25.00 per hour
Mileage	Current IRS rates
Office Expense (Telephone, copies, postage, etc.)	Actual cost
Travel Expense over night	Actual cost

Testimony in court and/or Commissioner Hearings and preparation will be billed at the rate of \$125.00 per hour.

TERRA-MAR



Consulting Engineers • Geotechnical • Environmental • Construction Materials Testing

DALLAS • FORT WORTH • HOUSTON • AUSTIN

Exhibit B-2E

July 8, 2003
TMI No. P03-2171FE

TranSystems Corporation Consultants
500 West Seventh St., Suite 600
Fort Worth, Texas 76102

Attn: Mr. Kent A. Lunski, P.E.

Re: Geotechnical Investigation
Walsh Ranch Phase 1A, 1B, 1D
Fort Worth, Texas

Dear Mr. Lunski,

Terra-Mar Inc. (TMI) is pleased to submit this cost estimate and scope of services to provide Geotechnical Engineering Services for the proposed project. The following describes our understanding of the project and the proposed scope of services to be provided.

Project Description and Purpose

The project consists of the installation of 54-inch, 48-inch and 24-inch diameter, 15,500 foot long sanitary sewer pipeline. The sanitary sewer main alignment is generally located north of the I.H. 30 and I.H. 20 Junction in West Fort Worth.

The purpose of the proposed investigation will be to evaluate subsurface conditions along the alignment; provide recommendations regarding pipe embedment and design of the structures; and evaluate the corrosion potential on concrete structures and pipes.

Geotechnical Field Investigation

Based on TMI's site vicinity experience the site is located in the Goodland Limestone Formation. This formation consists of highly active clays overlying limestone.

In accordance with your request, a total of 15 borings are planned. Boring depths are anticipated to extend about 20 feet below existing grade. The general boring locations and depths have been selected by TranSystems. The boring depths have been selected to provide a depth of exploration to a minimum depth of 5 feet below the bottom of the pipe and/or structure.

All soils will be sampled using Shelby tube samplers in clays and split spoon samplers in predominately granular soils. The underlying rock formation will be evaluated with a TxDOT Cone Penetrometer Test.

TERRA-MAR

TMI Proposal No. P03-2171FE, July 8, 2003
Page 2 of 4

Very hard rock layers ranging from 3 to 5 feet thick are present in this formation. If auger drilling techniques are not able to penetrate the very hard resistant rock, the rock layer will be cored using a double tube, N/X-size barrel fitted with a diamond cutting bit.

Groundwater measurements will be taken at the completion of drilling operations and the borings will then be backfilled at completion. TMI will perform the staking of the borings and clearance of underground utilities, and will provide appropriate traffic control measures. If required, the ground surface elevation at each borehole location will be determined by others, or estimated based on topographic maps provided by the design team.

Laboratory Investigation

The objective of the laboratory-testing program will be to evaluate engineering properties and parameters required for the design and construction of the proposed project elements. Physical properties of the soil as well as data necessary for classification by the Unified Soil Classification System (USCS) will be determined by classification tests. These tests will include the determination of natural moisture contents, unit dry density, percent passing No. 200 sieve and Atterberg limits.

Undrained shear strengths of clayey soils will be evaluated by hand penetrometer tests, and confirmed by unconfined compressive strength testing. The results of all of these tests will be included at the appropriate depths on the boring logs and figures.

Resistivity and corrosion tests (including sulfide, sulfate, pH tests and oxidation/reduction) will be performed on selected soil samples to evaluate their potential for corrosion of concrete and metal.

Geotechnical Engineering Analyses and Report

The results of the field and laboratory investigation will be presented in a geotechnical engineering report which will include a plan of the borings, logs of the exploratory borings, and the results of the laboratory testing program. The report will address the following topics:

- A detailed description of subsurface and groundwater conditions at the boring locations, and their effect on design and construction, including a description of the soil stratigraphy, underlying rock formation, and any noteworthy geologic conditions;
- The effects of groundwater on the design and installation of the project elements;
- Recommendations regarding pipe embedment and trench construction;
- Recommendations for foundation types, depths and design parameters (I.E. Allowable Bearing Capacity) for the below grade structures;
- Estimation of modulus of subgrade reaction of enveloping earth (Including K_a and K_p);
- Lateral earth pressures for the design of the below grade walls;
- Maximum excavation slopes; and
- Corrosion potential of subgrade materials.

TMI will remain available for consultation as the project progresses.

TERRA-MAR

TMI Proposal No. P03-2171FE, July 8, 2003
 Page 4 of 4

**SCHEDULE AND BUDGET ESTIMATES
 GEOTECHNICAL INVESTIGATION
 WALSH RANCH PHASE 1A, 1B, 1D
 FORT WORTH, TEXAS**

<u>Task Description</u>	<u>Estimated Number</u>	<u>Units</u>	<u>Cost Per Unit</u>	<u>Estimated Cost</u>
<u>Geotechnical Field Investigation</u>				
Drilling Rig Mob./Demob.	1	trip	\$175.00	\$175.00
Intermittent Soil Sampling	270	foot	\$12.00	\$3,240.00
Intermittent Soil Sampling (ATV)	30	foot	\$14.00	\$420.00
Traffic Control	5	hours	\$50.00	\$250.00
Field Coordination	16	hours	\$65.00	\$1,040.00
Utility Clearance	16	hours	\$65.00	<u>\$1,040.00</u>
SUBTOTAL – FIELD INVESTIGATION				\$6,165.00
<u>Laboratory Investigation</u>				
Liquid and Plastic Limits	20	each	\$40.00	\$800.00
Moisture Content	20	each	\$4.50	\$90.00
Unconfined Compression, Soil	15	each	\$35.00	\$525.00
Soil Unit Weight	15	each	\$15.00	\$225.00
Corrosion Testing	3	each	\$160.00	<u>\$480.00</u>
SUBTOTAL – LABORATORY TESTING				\$2,120.00
<u>Geotechnical Engineering and Report Preparation</u>				
Graduate Engineer, Laboratory Classification	5	hours	\$70.00	\$350.00
Graduate Engineer, Report	24	hours	\$70.00	\$1,680.00
Senior Engineer, Report	16	hours	\$95.00	\$1,520.00
Drafting	3	hours	\$35.00	<u>\$105.00</u>
SUBTOTAL – ENGINEERING				\$3,655.00
TOTAL				\$11,940.00
<u>Contengency Fee</u>				
Rock Coring Sur Charge	50	foot	8.00	\$400.00

Exhibit B-2G
 PROPOSED FEE
 Consultant Coordination Services

29-Jul-03

Project: Walsh Ranch									
WORK TASK DESCRIPTION	HOURLY RATE WORK								Total Cost Estimate (\$)
	Estimated Manhours								
	Principal 150.00	RPLS 95.00	Survey GPS 140.00	Survey Crew 125.00	CADD Tech 90.00	Survey Tech 70.00		Clerical 40.00	
A. Scheduling									
Master Schedule	20							8	\$ 3,320.00
Coordination / Tracking of Consultants	48								\$ 7,200.00
Monthly progress reports	48							8	\$ 7,520.00
								sub-total	\$ 18,040.00
B. Surveys (Control for all phases)									
Research / Recon		8		8				8	\$ 2,320.00
GPS Static Session		2	48					6	\$ 7,330.00
Post Process		5						15	\$ 1,525.00
Control Data Sheets								8	\$ 560.00
Vertical loop for City Datum				8	4				\$ 1,360.00
Supervision	12	12							\$ 2,940.00
								sub-total	\$ 16,035.00
C. Standardization of plans									
Index	2				24				\$ 2,460.00
Establish standard layering and CAD Drafting criteria (Autocad and Microstation)	2				40				\$ 3,900.00
Software coordination	2				30				\$ 3,000.00
								sub-total	\$ 9,360.00
D. Easements									
Spreadsheet of status	16				8				\$ 3,120.00
Monitoring and updates	40							8	\$ 6,320.00
								sub-total	\$ 9,440.00
E. Mapping of Sewer System									
Sewer line - structures - lift stations, etc	8				24				\$ 3,360.00
Property parcels and easements	4				12				\$ 1,680.00
Floodplain					4				\$ 360.00
Roads / streets					12				\$ 1,080.00
Control					4				\$ 360.00
								sub-total	\$ 6,840.00
								TOTAL	\$ 59,715.00
Fee does not include:									
Coordination of permitting									
Standardization of specifications									

Exhibit B-2J
 City of Fort Worth
 Feasibility Study - Mary's Creek WRC
 Feasibility Study - Mary's Creek WRC
 Project No. 1

Level 2 (Phase) No. and Description Level 3 (Task) No. and Description	Principal (hrs)	Sr. Proj Mgr (hrs)	Proj Mgr (hrs)	Proj Engr (hrs)	Technician (hrs)	Clerical (hrs)	QC (hrs)	Total Labor		Percent of Total Fee
								Hours	Fee (\$/hr)	
Feasibility Study - Mary's Creek WRC	60	119	126	356	85	62	16	824	\$ 96,516	100.0%
A Feasibility Study	60	68	126	356	85	62	0	777	\$ 89,353	92.6%
1. Marine Studies	25		13	5				20	\$ 3,248	3.4%
2. Geology Data from City								12	\$ 1,096	1.1%
3. Soil Investigation								17	\$ 1,840	1.9%
4. Manometer Monitoring & Recorder								10	\$ 1,094	1.1%
5. Hydrologic Data Analysis								10	\$ 1,094	1.1%
6. Hydrologic Data Summary								20	\$ 2,188	2.3%
7. Hydrologic Forecasting								184	\$ 18,828	19.6%
8. Summary of Findings								124	\$ 14,856	15.2%
9. Summary of Recommendations								21	\$ 2,526	2.6%
10. Final Report Preparation								72	\$ 8,190	8.5%
11. Final Report Production								32	\$ 3,952	4.1%
12. Summary of Findings								26	\$ 4,344	4.5%
13. Summary of Recommendations								24	\$ 2,944	3.1%
14. Summary of Findings								141	\$ 14,882	15.4%
15. Summary of Recommendations								65	\$ 8,107	8.4%
B Level 2 (Phase) Name	0	0	0	0	0	0	0	0	\$ -	0.0%
1. Level 2 (Task) Name								0	\$ -	0.0%
2. Level 2 (Task) Name								0	\$ -	0.0%
3. Level 2 (Task) Name								0	\$ -	0.0%
4. Level 2 (Task) Name								0	\$ -	0.0%
5. Level 2 (Task) Name								0	\$ -	0.0%
C Level 2 (Phase) Name	0	0	0	0	0	0	0	0	\$ -	0.0%
1. Level 2 (Task) Name								0	\$ -	0.0%
2. Level 2 (Task) Name								0	\$ -	0.0%
3. Level 2 (Task) Name								0	\$ -	0.0%
4. Level 2 (Task) Name								0	\$ -	0.0%
5. Level 2 (Task) Name								0	\$ -	0.0%
D Level 2 (Phase) Name	0	0	0	0	0	0	0	0	\$ -	0.0%
1. Level 2 (Task) Name								0	\$ -	0.0%
2. Level 2 (Task) Name								0	\$ -	0.0%
3. Level 2 (Task) Name								0	\$ -	0.0%
4. Level 2 (Task) Name								0	\$ -	0.0%
5. Level 2 (Task) Name								0	\$ -	0.0%
PM ADMINISTRATIVE/QC TASKS	0	31	0	0	0	0	16	47	\$ 7,295	7.6%
1. Quality Control								16	\$ 2,800	2.9%
2. Project Management		31						31	\$ 4,495	4.7%
TOTAL LABOR	60	119	126	356	85	62	16	824	\$ 96,516	100.0%
Total Labor Hours	60	119	126	356	85	62	16	824		
Total Labor Amount									\$ 96,516	100.0%
Labor Rates per Hour	\$200	\$145	\$121	\$104	\$82	\$86	\$175			
Total Amounts by Labor Category	\$ 12,000	\$ 17,255	\$ 16,306	\$ 37,024	\$ 6,970	\$ 4,092	\$ 2,800		\$ 96,516	
Labor Category Percent of Total Labor	18.4%	17.8%	17.1%	38.3%	7.2%	4.2%	2.9%			100.0%
TOTAL EXPENSES (see breakdown below)										
Total Subcontracts									\$ 17,250	
Total Reimbursables									\$ 2,358	
Total Expenses									\$ 19,608	
GRAND TOTAL - Feasibility Study - Mary's Creek WRC									\$ 116,255	

Code	Description	Budget (\$)	Markup	Fee (\$)
CA	Architect Consultant		1.15	\$ -
CC	ANA Consultants	\$ 2,000	1.15	\$ 13,400
CE	Electrical Consultant		1.15	\$ -
CG	Geotechnical Consultant		1.15	\$ -
CM	Mechanical Consultant		1.15	\$ -
CO	James Daniels Associates	\$ 2,000	1.15	\$ 3,450
CS	Structural Consultant		1.15	\$ -
CY	Surveying Consultant		1.15	\$ -
CZ	Unidentified Fee		1.00	\$ -
C1			1.15	\$ -
C2			1.15	\$ -
C3			1.15	\$ -
C4			1.15	\$ -
C5			1.15	\$ -
TOTAL SUBCONSULTANT EXPENSES		\$ 15,000		\$ 17,250

Code	Description	Budget (\$)	Markup	Fee (\$)
RA	Laboratory Analysis		1.15	\$ -
RC	Computer		1.15	\$ -
RH	Historical		1.15	\$ -
RI	In-House Reproduction		1.15	\$ 230
RL	Long Distance Telephons		1.15	\$ -
RM	Employee Messge		1.15	\$ 133
RO	Other Expenses		1.15	\$ -
RP	Purchased Services		1.15	\$ -
RR	Reproduction		1.15	\$ 345
RS	Shipping, Delivery, Postage		1.15	\$ -
RT	Travel, Meals, Lodging		1.15	\$ -
RU	Telecommunications	\$ 1,435	1.15	\$ 1,650
R1			1.15	\$ -
R2			1.15	\$ -
TOTAL REIMBURSABLE EXPENSES		\$ 2,051		\$ 2,358

EXHIBIT "B-3A"

SUMMARY OF TOTAL PROJECT FEES

Sewer Main Extension To Serve Walsh Ranch
 Phase IA,IB, & ID
 DOE No. 4159
 Sewer Project Nos. PS46-070460140290

<u>Scope of Services</u>	<u>Total Fee</u>	<u>M/WBE</u>	<u>%</u>
Sanitary Sewer Design	\$ 585,060.00	\$ 128,750.00	\$ 22.0

Water Design Fee = \$0

Sanitary Sewer Design Fee = \$ 585,060.00

<u>Tier</u>	<u>Proposed M/WBE Sub-consultants</u>	<u>Services</u>	<u>Fees</u>	<u>% of Total</u>
1	ANA Consultants	Surveying	\$ 35,000.00	\$ 6.0
1	Arlington	Reproduction	\$ 5,000.00	\$ 0.9
1	James Daniels & Assoc.	Acquisition	\$ 73,750.00	\$ 12.6
2	James Daniels & Assoc. (Plummer)	Acquisition	\$ 3,000.00	\$ 0.5
2	ANA Consultants (Plummer)	Engineering	\$ 12,000.00	\$ 2.1
	<u>Proposed Non-M/WBE Sub-consultants</u>	<u>Services</u>	<u>Fees</u>	<u>% of Total</u>
	Terra-Mar	Geotech	\$ 12,240.00	\$ 2.1
	AR Consultants, Inc.	Archeological	\$ 5,000.00	\$ 0.9
	Alan Plumer Associates	Water Recycling St	\$ 116,255.00	\$ 19.9

Exhibit B-4
PRELIMINARY OPINION OF PROBABLE COST

Walsh Ranch
Summary of Phases 1A, B and D
Project No. PS46-070460140290
DOE No. 4159

Prepared by:
TranSystems Corporation Consultants
 July 28, 2003

ITEM No.	Description	QTY.	UNITS	UNIT PRICE	TOTAL AMOUNT
1	30" SANITARY SEWER PIPE	12915	LF	\$ 105.00	\$ 1,356,075.00
2	30" SEWER BY OTHER THAN OPEN CUT	1000	LF	\$ 400.00	\$ 400,000.00
3	12" SANITARY SEWER PIPE	1585	LF	\$ 50.00	\$ 79,250.00
4	CONCRETE ENCASEMENT	500	LF	\$ 150.00	\$ 75,000.00
5	CONSTR. STD. 4' DIA. SANITARY SEWER MANHOLE	4	EA	\$ 2,000.00	\$ 8,000.00
6	CONSTR. STD. 5' DIA. SANITARY SEWER MANHOLE	32	EA	\$ 2,500.00	\$ 80,000.00
7	EXTRA DEPTH FROM 4' SANITARY SEWER MANHOLE	320	VF	\$ 125.00	\$ 40,000.00
8	EXTRA DEPTH FROM 5' SANITARY SEWER MANHOLE	50	VF	\$ 175.00	\$ 8,750.00
9	JUNCTION STRUCTURE FOR SIPHON	4	EA	\$ 16,000.00	\$ 64,000.00
10	JUNCTION STRUCTURE	2	EA	\$ 8,000.00	\$ 16,000.00
11	MANHOLE INSERT	36	EA	\$ 85.00	\$ 3,060.00
12	PASSIVE ODOR CONTROL	32	EA	\$ 2,000.00	\$ 64,000.00
13	POST-CONSTRUCTION T.V.	15,500	LF	\$ 2.00	\$ 31,000.00
14	VACUUM TEST MANHOLES	36	EA	\$ 150.00	\$ 5,400.00
15	HMAC PERMANENT PAVEMENT REPAIR (MIN 2")	400	SY	\$ 35.00	\$ 14,000.00
16	6" GRAVEL DRIVEWAY	200	LF	\$ 25.00	\$ 5,000.00
17	SEEDING	15,500	LF	\$ 1.00	\$ 15,500.00
18	6" TOPSOIL	52,000	SY	\$ 3.00	\$ 156,000.00
19	SWPPP	1	LS	\$ 20,000.00	\$ 20,000.00
20	TRENCH SAFETY	15,500	LF	\$ 1.75	\$ 27,125.00
				Subtotal	\$ 2,468,160.00
				10% Contingency	\$ 246,816.00
				TOTAL	\$ 2,714,976.00

ATTACHMENT "C"

Sanitary Sewer Extension to Serve Walsh Ranch
Phases IA, IB, and ID
Project No. PS46- 070460140290
DOE No. 4159

ADMENDMENTS TO ARTICLES IV, V, AND VI AND ATTACHMENT "A"

Article IV.K.(2)(i):

Endorsements are noted on the Certificate of Insurance provided to the City for this project.

Article IV.K.(2) (I):

Business automobile insurance is written on an accident basis.

Article VI.L., line 4:

Remove the following: "or may be enacted later"

ATTACHMENT D-1
Schedule

City of Fort Worth
 Sanitary Sewer Main IA, 1B, & 1D
 D.O.E. 4159
 Water Project No. PS 46-070460140290

ITEM	DESCRIPTION	PROJECTED			ACTUAL		
		START	FINISH	DUR.	START	FINISH	DUR.
	DESIGN						
1	Notice to Proceed	8/1/2003	8/1/2003	0			
2	Recycling Center Study	8/2/2003	1/31/2004	182			
3	Walsh Ranch Sewer Study	8/2/2003	10/1/2003	60			
4	Conceptual Design/Alignment Analysis	10/1/2003	12/30/2003	90			
5	Concept Review by City/Walk Alignment	11/1/2003	11/7/2003	6			
6	Alignment Approval	11/7/2003	11/7/2003	0			
7	Survey	8/1/2003	10/20/2003	80			
8	Geotechnical Investigation	2/1/2004	5/1/2004	90			
9	Wetlands Determination	2/1/2004	5/1/2004	90			
10	Archeological Survey	2/1/2004	5/1/2004	90			
11	Preliminary Design Plans & Specs.	1/17/2004	4/30/2004	104			
12	Preliminary Design Plan Review by City	5/1/2004	5/15/2004	14			
13	Prepare /Submit Permits	11/1/2003	8/31/2004	304			
14	Final Design Plans and Specs	5/22/2004	8/30/2004	100			
15	Final Design Plan Review by City	8/31/2004	9/14/2004	14			
16	Revise Final and Prep. for Advert.	9/11/2004	10/22/2004	41			
17	Prepare Draft Easements	11/1/2003	3/30/2004	150			
18	Obtain Easements	5/1/2004	10/22/2004	174			
	BID & AWARD						
19	Advertise for Construction	10/22/2004	11/21/2004	30			
20	Award Process for Const. Contract	11/21/2004	12/31/2004	40			
	CONSTRUCTION PHASE						
21	Construction	1/1/2005	6/30/2005	180			
22	Final Inspection & Acceptance	7/1/2005	7/30/2005	29			

CALENDAR DAYS
(7-DAYS/WEEK)

CALENDAR DAYS
(7-DAYS/WEEK)

City of Fort Worth, Texas
**Mayor and Council
 Communication**

DATE 8/12/03	REFERENCE NUMBER **C-19703	LOG NAME 30WALSHPH1A	PAGE 1 of 2
SUBJECT	ENGINEERING AGREEMENT WITH TRANSYSTEMS CORPORATION CONSULTANTS FOR WALSH RANCH SEWER MAIN EXTENSION, PHASES IA, 1B AND 1D		

RECOMMENDATION:

It is recommended that the City Council authorize the City Manager to execute an engineering agreement with TranSystems Corporation Consultants in the amount of \$585,060 for the design of Walsh Ranch Sewer Main Extension, Phases IA, 1B and 1D.

DISCUSSION:

On April 29, 2003 (M&C C-19566), the City Council authorized the City Manager to execute an Economic Development Agreement for Walsh Ranch with Walsh Ranches Limited Partnership, H. Howard Walsh, Jr. and various Walsh family trusts (Walsh).

The agreement includes terms of design and construction of water and wastewater infrastructure to serve the property and requires the City to design and construct the first phase of Phase 1 water facilities and Phases 1A, 1B, 1C, 1D, II, III, IVA and IVB wastewater facilities within approximately 36 months after execution of the agreement. Walsh may terminate the agreement if the City does not appropriate funds for the design of such infrastructure by September 1, 2003. Thereafter, subsequent City obligations will be dependent on construction of facilities by Walsh and will be constructed as warranted as the property is developed.

This project includes the design and survey of approximately 15,000 feet of 30-inch sewer line and acquisition services for 10 permanent and temporary construction easements needed to construct the project. The project also includes the preparation of an engineering study to identify two potential locations for a water recycling center. The location of the project is shown on the attached location map.

The City received 17 proposals from local engineering firms in response to a Request for Proposals for the design of the Walsh Ranch sewer project. A selection committee comprised of Water and Engineering Department staff reviewed the proposals and considers TranSystems Corporation Consultants to be the most qualified for the design of this particular project.

TranSystems Corporation Consultants proposes to perform the design work for a lump sum fee of \$585,060. Staff considers this fee to be fair and reasonable for the scope of services proposed.

TranSystems Corporation Consultants is in compliance with the City's M/WBE Ordinance by committing to 22% M/WBE participation. The City's goal on this project is 22%.

In addition to the contract amount, \$14,000 is required for project management by the Engineering Department.

This project will be located in COUNCIL DISTRICT 7, pending the completed annexation for the project,

City of Fort Worth, Texas

Mayor and Council

Communication

DATE 8/12/03	REFERENCE NUMBER **C-19703	LOG NAME 30WALSHPH1A	PAGE 2 of 2
SUBJECT		ENGINEERING AGREEMENT WITH TRANSYSTEMS CORPORATION CONSULTANTS FOR WALSH RANCH SEWER MAIN EXTENSION, PHASES 1A, 1B AND 1D	

Mapsco 71E, F, L and R; and 72N.

FISCAL INFORMATION/CERTIFICATION:

The Finance Director certifies that funds are available in the current capital budget, as appropriated, of the Commercial Paper - Sewer Fund.

MO:r

Submitted for City Manager's Office by:	FUND	ACCOUNT	CENTER	AMOUNT	CITY SECRETARY
Marc Ott 8476	(to)				APPROVED 08/12/03
Originating Department Head:					
Douglas Rademaker 6157	(from)				
Additional Information Contact:					
Douglas Rademaker 6157	PS46	531200	070460140290	\$585,060.00	

COMMUNITY FACILITIES AGREEMENT

THE STATE OF TEXAS §

City Secretary

COUNTY OF TARRANT §

Contract No. 33490

WHEREAS, Wilbow-Skyline Development Corporation, hereinafter called "Developer", desires to make certain improvements to **Skyline Ranch (Walnut Creek Sanitary Sewer Interceptor, Phase II and III)**, an addition to the City of Fort Worth, Texas; and

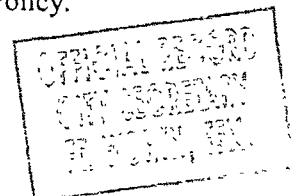
WHEREAS, the said Developer has requested the City of Fort Worth, a municipal corporation of Tarrant, Wise, and Denton Counties, Texas, hereinafter called "City", to do certain work in connection with said improvements.

NOW, THEREFORE, KNOW ALL BY THESE PRESENTS:

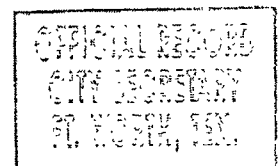
That said Developer, acting herein by and through Chas Fitzgerald, its duly authorized President, and the City, acting herein by and through Marc Ott, its duly authorized Assistant City Manager, for and in consideration of the covenants and conditions contained herein, do hereby agree as follows:

I. General Requirements

- A. The Policy for the Installation of Community Facilities ("Policy") dated March 2001, subsequently amended and approved by the City Council of the City of Fort Worth, is hereby incorporated into this Community Facilities Contract as if copy herein verbatim. Developer agrees to comply with all provisions of said Policy in the performance of its duties and obligations hereunder.
- B. The requirements of the Policy shall govern this Community Facilities Agreement, provided, however, that any conflict between the terms of this Community Facilities Agreement and the Policy shall be resolved in favor of this Agreement.
- C. Developer shall provide financial security in conformance with paragraph 6, Section II, of the Policy.
- D. The Developer shall award all contracts for the construction of community facilities in accordance with Section II, paragraph 7 of the Policy.



- E. The contracts for the construction of the public infrastructure shall be administered in conformance with paragraph 8, Section II, of the Policy.
- F. The Developer further covenants and agrees to, and by these presents does hereby, fully indemnify, hold harmless and defend the City, its officers, agents and employees from all suits, actions or claims of any character, whether real or asserted, brought for or on account of any injuries or damages sustained by any persons (including death) or to any property, resulting from or in connection with the construction, design, performance or completion of any work to be performed by said Developer, his contractors, subcontractors, officers, agents or employees, or in consequence of any failure to properly safeguard the work, or on account of any act, intentional or otherwise, neglect or misconduct of said DEVELOPER, his contractors, sub-contractors, officers, agents or employees, whether or not such injuries, death or damages are caused, in whole or in part, by the alleged negligence of the City of Fort Worth, its officers, servants, or employees.
- G. Developer shall install or adjust all of the required utilities to serve the development or to construct the improvements required herein.
- H. In the event that City participation exceeds \$25,000, Developer agrees that no street construction or storm drainage will begin prior to City Council approval of this Community Facilities Agreement. (Article 104.100, Ordinance 7234).
- I. Developer agrees that no lot shall be occupied under a certificate of occupancy until the improvements required herein have been constructed according to the terms of this agreement (Article 104.100, Ordinance 7234).
- J. Developer hereby releases and agrees to indemnify and hold the City harmless for any inadequacies in the preliminary plans, specifications and cost estimates supplied by the Developer for this contract.



- K. Developer agrees to provide, at its expense, all necessary rights of way and easements across property owned by Developer required to construct current and future improvements provided for in this agreement.
- L. Developer agrees to construct proposed improvements as shown on the exhibits attached hereto. The following exhibits are made a part hereof: Water (A)attached; Sewer (A-1)attached; Paving (B)none; Storm Drain (B-1)none; Street Lights and Signs (C)none.
- M. City shall not be responsible for any costs that may be incurred by Developer in the relocation of any utilities that are or may be in conflict with any of the community facilities to be installed hereunder.

II. Water and Sewer Facilities

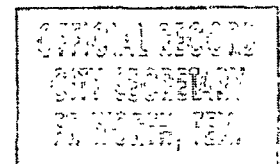
- A. Developer shall install the proposed water line(s), fire line(s) and/or meters as shown on Exhibit A, the estimated cost of which is \$515,804. The City agrees to record the location of each said service line in respect to the corner of the lot served, and to retain said records in its possession. The Developer and the City shall share in the cost of the water improvements as follows:

WATER FACILITIES:

	Estimated Developer Cost	Estimated City Cost	Estimated Total Cost
Mains within Skyline Ranch, Phase I (Walnut Creek Phase III)	\$ 459,307	\$ 56,497	\$ 515,804
Approach	\$ -0-	\$ -0-	\$ -0-
Easements*	\$ -0-	\$ -0-	\$ -0-
Services	\$ -0-	\$ -0-	\$ -0-
Sub-Total Water	\$ 459,307	\$ 56,497	\$ 515,804

* To be dedicated by the developer

The costs stated herein may be based upon construction estimates rather than actual cost. The final cost to Developer and City shall be based upon public open bid and actual quantities installed.



WATER COST SHARE FOR THE CITY (For Skyline Ranch, Phase I (Walnut Creek Phase III) the Developer pays for 12" water pipe, 12" gate valve, and 24" steel casing. The City pays for 24"/12" water pipe, 24"/12" gate valve, and 42"/24" steel casing.)

24"/12" water pipe (\$65-\$28)		
401 L.F. x \$37 =	\$	14,837
24"/12" gate valve (\$21,000-\$1,300)		
1 EA. x \$19,700 =	\$	19,700
42"/24" steel casing (\$420-\$300)		
183 L.F. x \$120 =	\$	21,960
	\$	<u>56,497</u>

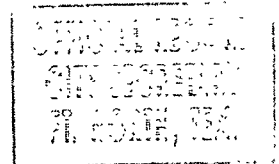
B. Developer shall install sanitary mains as shown on Exhibit A-1, the estimated cost of which is \$2,089,534. The City agrees to record the location of each said service line in respect to the corner of the lot served, and to retain said records in its possession. The Developer and the City shall share in the cost of the sewer improvements as follows:

SANITARY SEWER FACILITIES:

	Estimated Developer Cost	Estimated City Cost	Estimated Total Cost
Mains within Skyline Ranch, Phase I (Walnut Creek Phase III)	\$ 330,414	\$ -0-	\$ 330,414
33" Sewer Trunk Main (Walnut Creek Phase II)*	\$ 255,260	\$ 1,096,520	\$ 1,351,780
30" Sewer Trunk Main (Walnut Creek Phase III)	\$ 163,430	\$ 243,910	\$ 407,340
Easements**	\$ -0-	\$ -0-	\$ -0-
Services	\$ -0-	\$ -0-	\$ -0-
Sub-Total Sewer	\$ 749,104	\$ 1,340,430	\$ 2,089,534

*BBT Crossing Ltd. contributed \$150,000 toward the City's portion of the construction cost to the 33" sewer trunk main. BBT Crossing Ltd. will be responsible for the cost and construction of a meter station, and will dedicated the appropriate easements in accordance with the Memorandum of Understanding dated _____ (M&C C- 21433 dated 5/2/06)

**To be dedicated by the developer.



The costs stated herein may be based upon construction estimates rather than actual cost. The final cost to Developer and City shall be based upon public open bid and actual quantities.

SEWER COST SHARE FOR THE CITY (For Walnut Creek Sanitary Sewer Interceptor, Phase II, the Developer pays for 8" sewer pipe. The City pays for 33"/8" sewer pipe. For Walnut Creek Sanitary Sewer Interceptor, Phase III, the Developer pays for 8" sewer pipe and 4' diameter manholes. The City pays for 30"/8" sewer pipe and 5'/4' diameter manholes.)

Walnut Creek Sanitary Sewer Interceptor, Phase II

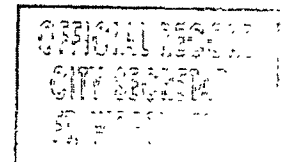
33"/8" sewer pipe (\$1,351,780-\$255,260)
 1 LS x \$1,096,520 = **\$1,096,520**

Walnut Creek Sanitary Sewer Interceptor, Phase III

30"/8" sewer pipe (\$74-\$23)
 4,610 L.F. x \$51 = **\$ 235,110**
 5'/4' diameter manhole (\$2,500-\$1,500)
 2 EA. x \$1,000 = **\$ 2,000**
 5'/4' diameter manhole w/ knockout panels (\$2,800-\$1,700)
 6 EA. x \$1,100 = **\$ 6,600**
 5'/4' vacuum test manhole (\$100-\$75)
 8 EA. x \$25 = **\$ 200**
\$ 243,910

TOTAL WATER AND SANITARY SEWER FACILITIES:

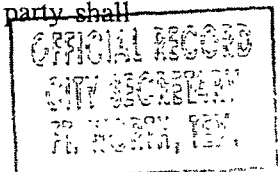
	Estimated Developer Cost	Estimated City Cost	Estimated Total Cost
Sub-Total Water	\$ 459,307	\$ 56,497	\$ 515,804
Sub-Total Sewer	\$ 749,104	\$ 1,340,430	\$ 2,089,534
Total Water and Sewer Construction	\$ 1,208,411	\$ 1,396,927	\$ 2,605,338
Construction Inspection	\$ 24,168	\$ 27,939	\$ 52,107
Grand Total	\$ 1,232,579	\$ 1,424,866	\$ 2,657,445



III. Special Provisions

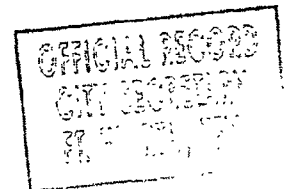
A. Due to the timing of the construction of Walnut Creek Sanitary Sewer Interceptor Phase I and II, which serves Skyline Ranch, Wilbow-Skyline Development Corporation will enter into a private maintenance agreement with the City of Fort Worth for the pumping of the sanitary sewer collection main and transportation to an acceptable dumpsite, which must be approved by the Texas Commission on Environmental Quality (TCEQ). If Phase II of the Walnut Creek Sanitary Sewer Interceptor is not completed and accepted by the City, this pumping permit must be approved by TCEQ before building permits are issued. As part of the TCEQ approved private maintenance agreement, construction and completion of the approach sewer main will not be an additional City requirement for the issuance of building permits and certificates of occupancy (if applicable) or final inspections for the construction of single-family homes within Skyline Ranch, Phase 1. As Building Permits are issued, Wilbow-Skyline Development Corporation shall be committed to the private maintenance and pumping of sewer at station 23+75.15 of the sanitary sewer collection main until the downstream side (Walnut Creek Sanitary Sewer Interceptor Phase II) of the sewer mains are constructed and accepted by the City.

B. Partial Payments for City's Share of Costs. On or before the fifth (5th) day of each calendar month during the term hereof, Developer shall submit to the City (i) an Application for Payment (herein so-called) describing the work completed on the Community Facilities through the last day of the previous month, and (ii) invoices relating to such work previously performed and/or materials installed that are the subject of the Application for Payment. No later than the tenth (10) day of the month (the "Review Period") the City shall review and approve the Application for Payment, and the City shall pay the authorized recipient the amount (less any statutory or contractual retainage) requested in the Application for Payment and approved by the City within twenty-five (25) days after the earlier of (1) the expiration of the Review Period or (2) approval or deemed approval of the Application for Payment. If any portion of the Application for Payment is disputed by the City, then the disputing party shall



deliver to the Developer a written objection notice during the Review Period setting forth such objections in reasonable detail. The undisputed portion of the Application for Payment shall be timely paid to the authorized recipient as provided above. If the City fails to timely and reasonably object to such Application for Payment as provided above, the City shall be deemed to have approved the Application for Payment. If the City timely and reasonably objects to the Application for Payment, Developer shall exercise good faith efforts to cure the objectionable items to the City's reasonable satisfaction, and the process set forth above shall be repeated until the Application for Payment is completely approved and fully paid. After the City has paid the funds requested in an Application for Payment, the Developer will obtain a release and/or waiver of liens, claims, security interests and encumbrances arising out of the work paid for by the City and provide copies thereof to the City with each following Application for Payment. Upon execution hereof, the City and Developer may execute a consent to assignment of payment form so that payments due the Developer may be paid directly to its construction contractor. If Developer assigns its right to payments under this Agreement, Developer will remain responsible for the payment procedures set forth above.

C. Wilbow-Skyline Development Corporation agrees to construct the future extension of the Walnut Creek Sanitary Sewer Interceptor to the westernmost edge of its development (to its intersection with FM Highway 2871) as part of and integral with the construction of the corresponding future phase of Skyline Ranch. Wilbow-Skyline Development Corporation shall receive payment for the City's Share of Costs per Section III B above. Should Wilbow-Skyline Development Corporation not require connection to the future extension of the Walnut Creek Sanitary Sewer Interceptor, Wilbow-Skyline Development Corporation shall have no Share of Cost for its future extension. Wilbow-Skyline Development Corporation agrees to grant the necessary easements to the City for the construction of the future Walnut Creek Sanitary Sewer Interceptor extension across the future phase of Skyline Ranch.



IN TESTIMONY WHEREOF, the City of Fort Worth has caused this instrument to be executed in quadruplicate in its name and on its behalf by its Assistant City Manager, attested by its City Secretary, with the corporate seal of the City affixed, and said Developer has executed this instrument in quadruplicate, at Fort Worth, Texas this the 14th day of May, 2006.

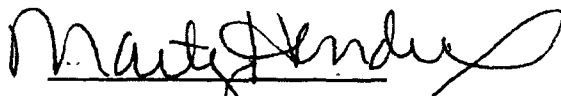
Approval Recommended:

Water Department



S. Frank Crumb
Director

C-21432
Contract Authorization
5-2-06
Date

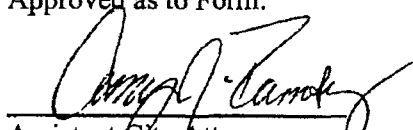
ATTEST:


City Secretary
Marty Hendrix


City Of Fort Worth


Assistant City Manager
Marc A. Ott

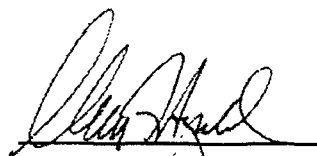
Approved as to Form:

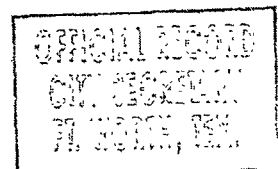

Assistant City Attorney

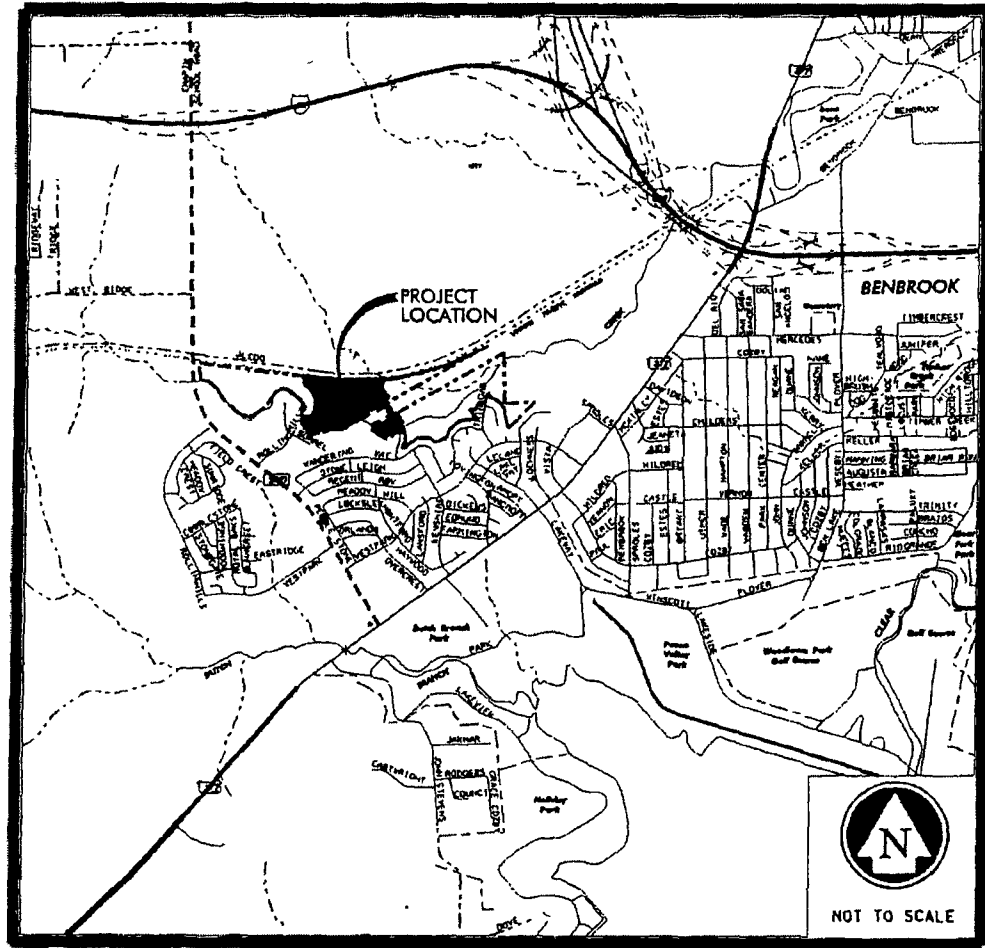
ATTEST:


Corporate Secretary

DEVELOPER
Wilbow-Skyline
Development Corporation


Chas Fitzgerald
President





LOCATION MAP
SKYLINE RANCH
PHASE I

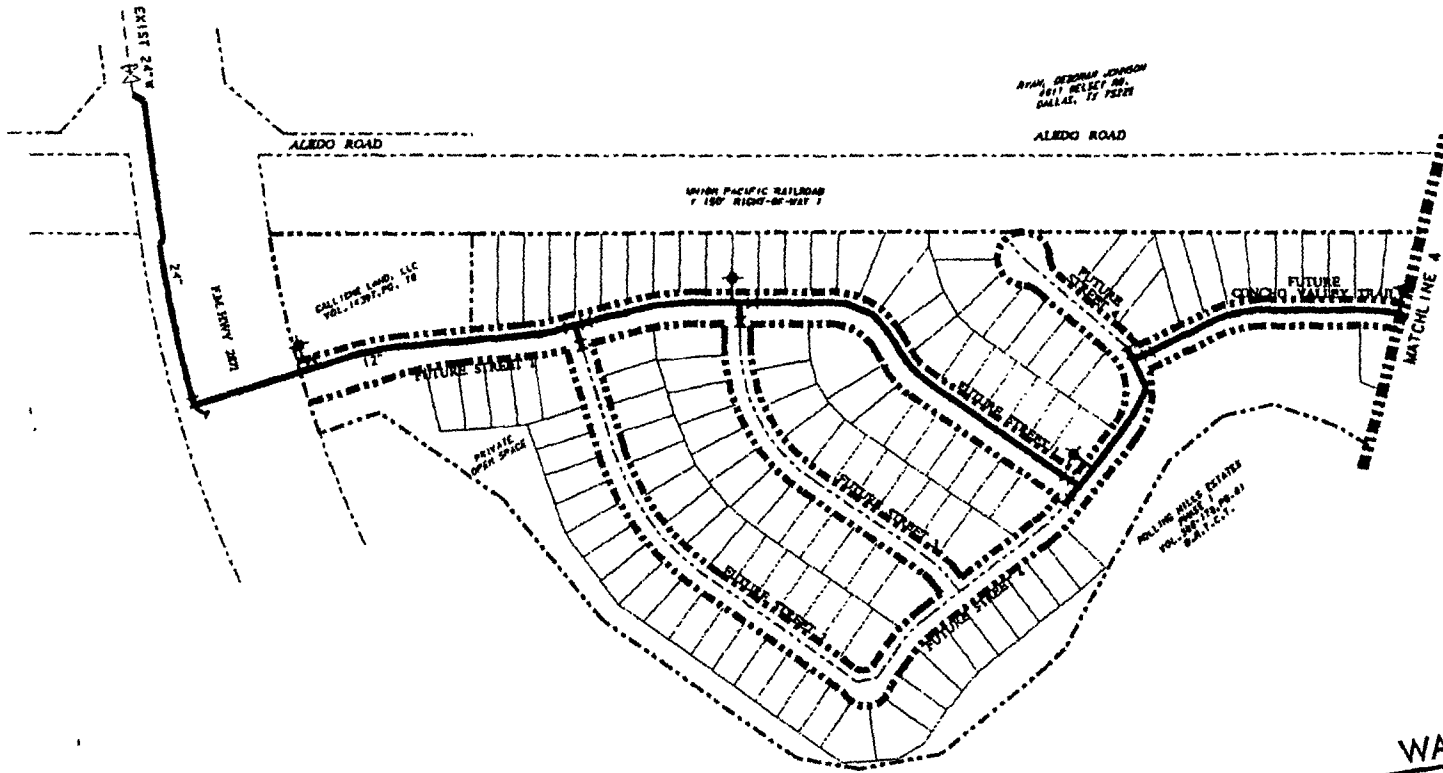
Carter & Burgess

CARTER & BURGESS, INC.
777 MAIN STREET
FORT WORTH, TX 76102
(817) 755-4000
PROJECT NO. 013363.010.1.0630

DATE: 01/11/00
BY: [illegible]
CHECKED: [illegible]
APPROVED: [illegible]



SCALE: 1" = 300'



CCN Area 3
Contract No. 33490
Walnut Creek Sanitary Sewer Ph. II

WATER EXHIBIT 'A' SKYLINE RANCH PHASE I **Carter & Burgess**

CARTER & BURGESS, INC.
177 MAIN STREET
PORT WORTH, TX 76071
PROJECT NO. 013363.010.1.0630

PAGE 2 OF 15

LEGEND

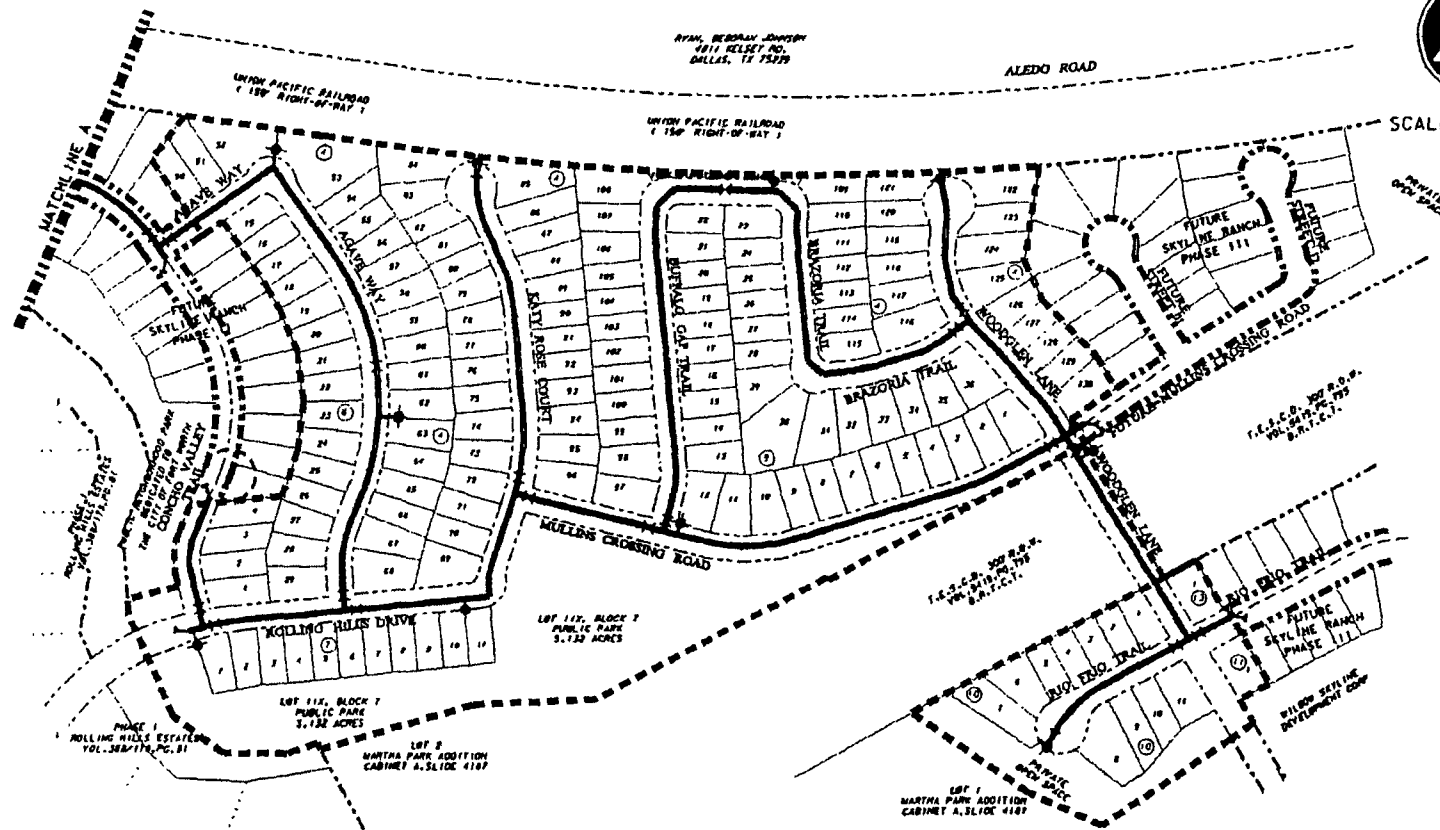
- PROP. WATER LINE
- PROP. GATE VALVE
- PROP. FIRE HYDRANT
- EXIST. WATER LINE
- EXIST. GATE VALVE
- FUTURE WATER LINE
- EXIST. FIRE HYDRANT
- LIMITS OF PROJECT

PROPOSED WATER
LINES ARE 8" UNLESS
OTHERWISE INDICATED

D:\proj\106\013363\civ\3631cfa.dgn



SCALE: 1" = 300'



LEGEND

- PROP. WATER LINE
 - PROP. GATE VALVE
 - PROP. FIRE HYDRANT
 - EXIST. WATER LINE
 - EXIST. GATE VALVE
 - FUTURE WATER LINE
 - EXIST. FIRE HYDRANT
 - LIMITS OF PROJECT
- PROPOSED WATER LINES ARE 8" UNLESS OTHERWISE INDICATED

WATER
EXHIBIT 'A'
SKYLINE RANCH
PHASE I
Carter-Burgess

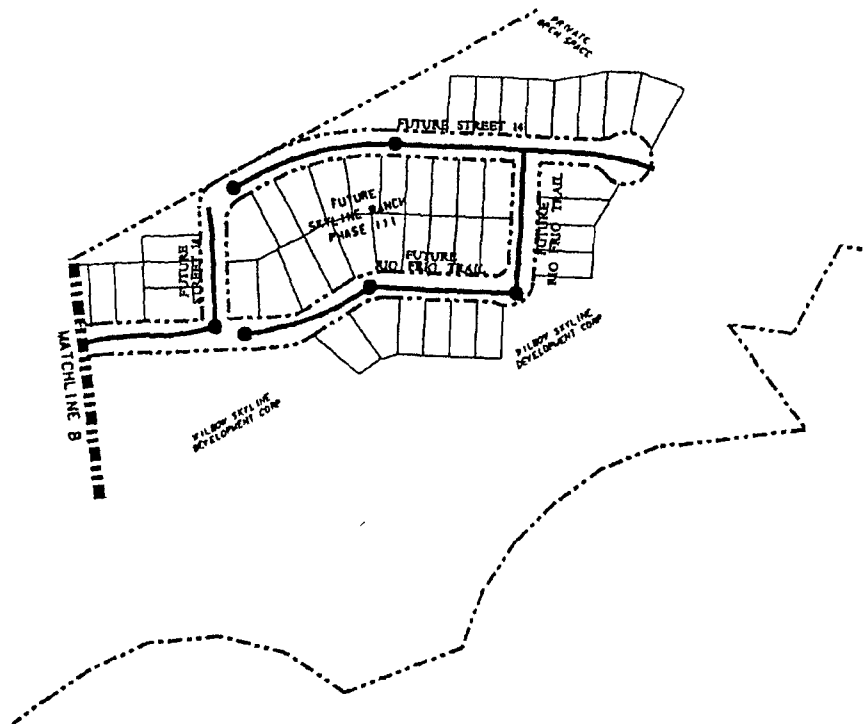
CARTER & BURGESS, INC.
 777 MAIN STREET
 FORT WORTH, TX 76102
 (817) 735-4900
 PROJECT NO. 013363.010.1.0630

DGN: 013363.ctb 363.ctb.dgn

CCN Area 3
Contract No. 33490
Walnut Creek Sanitary Sewer Ph. II



SCALE: 1" = 300'



LEGEND

- PROP. SANITARY SEWER
- PROP. MANHOLE
- LIMITS OF PROJECT

PROPOSED SEWER LINES ARE
8" UNLESS OTHERWISE
INDICATED

SANITARY SEWER EXHIBIT 'A-1'

SKYLINE RANCH PHASE I

Carter & Burgess

CARTER & BURGESS, INC.
777 MAIN STREET
FORT WORTH, TX 76102
(817) 735-6000

PROJECT NO. 013363.010.1.0630

PAGE 5 OF 15

Walnut Creek Sanitary Sewer Ph. I

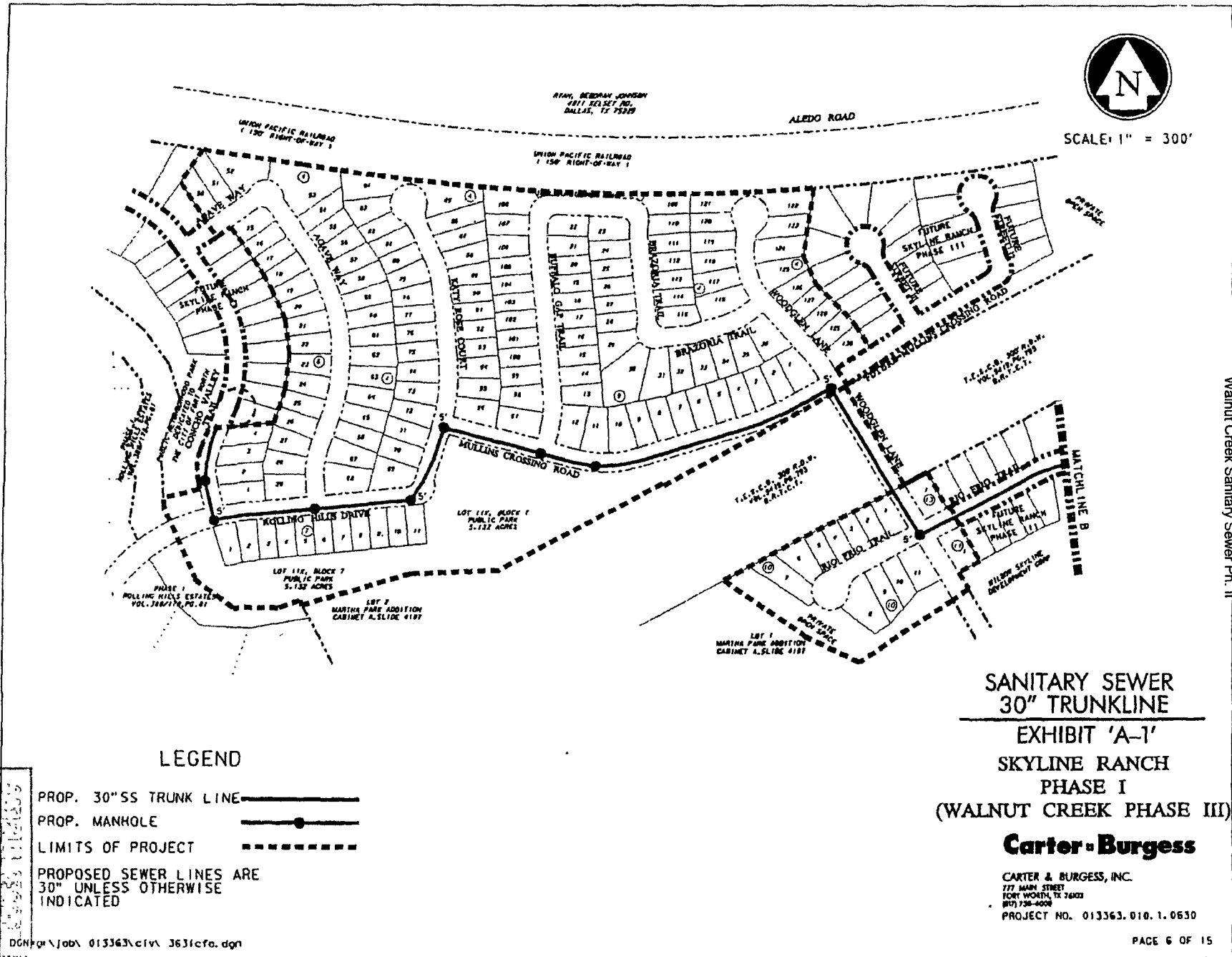
CCN Area 3
Contract No. 33490

D:\p\job\ 013363\civ\ 3631cfa.dgn

DATE PLOTTED: 11/11/03
TIME PLOTTED: 11:11 AM
PLOTTER: HP DesignJet 500
CARTER & BURGESS, INC.
777 MAIN STREET
FORT WORTH, TX 76102
(817) 735-6000



SCALE: 1" = 300'



LEGEND

- PROP. 30" SS TRUNK LINE
- PROP. MANHOLE
- LIMITS OF PROJECT
- PROPOSED SEWER LINES ARE 30" UNLESS OTHERWISE INDICATED

**SANITARY SEWER
30" TRUNKLINE**

EXHIBIT 'A-1'

**SKYLINE RANCH
PHASE I**

(WALNUT CREEK PHASE III)

Carter • Burgess

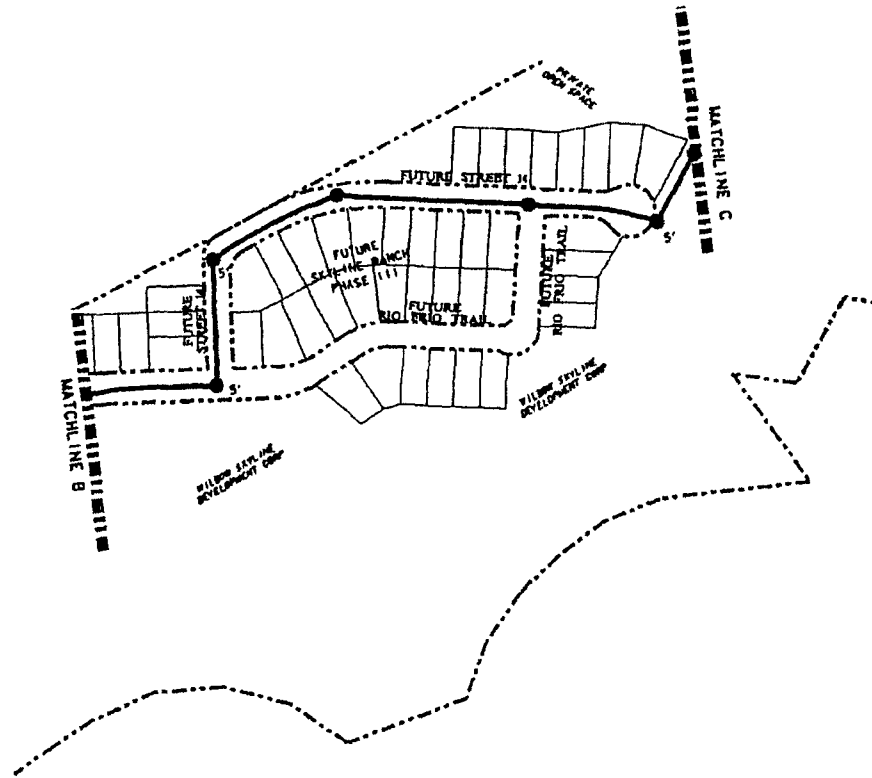
CARTER & BURGESS, INC.
 777 MAIN STREET
 FORT WORTH, TX 76102
 (817) 738-4000
 PROJECT NO. 013363.010.1.0630

DGN: job\job 013363\civ\ 3631cfo.dgn

Walnut Creek Sanitary Sewer Ph. II
 Contract No. 33490
 CCN Area 3



SCALE: 1" = 300'



LEGEND

- PROP. 30" SS TRUNK LINE ————
- FUTURE SS TRUNK LINE - - - - -
- PROP. MANHOLE ———●————
- LIMITS OF PROJECT - - - - -

PROPOSED SEWER LINES ARE 30" UNLESS OTHERWISE INDICATED

DCN=gl Job\ 013363\civil\ 3631cfa.dgn

**SANITARY SEWER
30" TRUNKLINE**

EXHIBIT 'A-1'

**SKYLINE RANCH
PHASE I
(WALNUT CREEK PHASE III)**

Carter & Burgess

CARTER & BURGESS, INC.
777 MAIN STREET
FORT WORTH, TX 76102
(817) 738-6000

PROJECT NO. 013363.010.1.0630

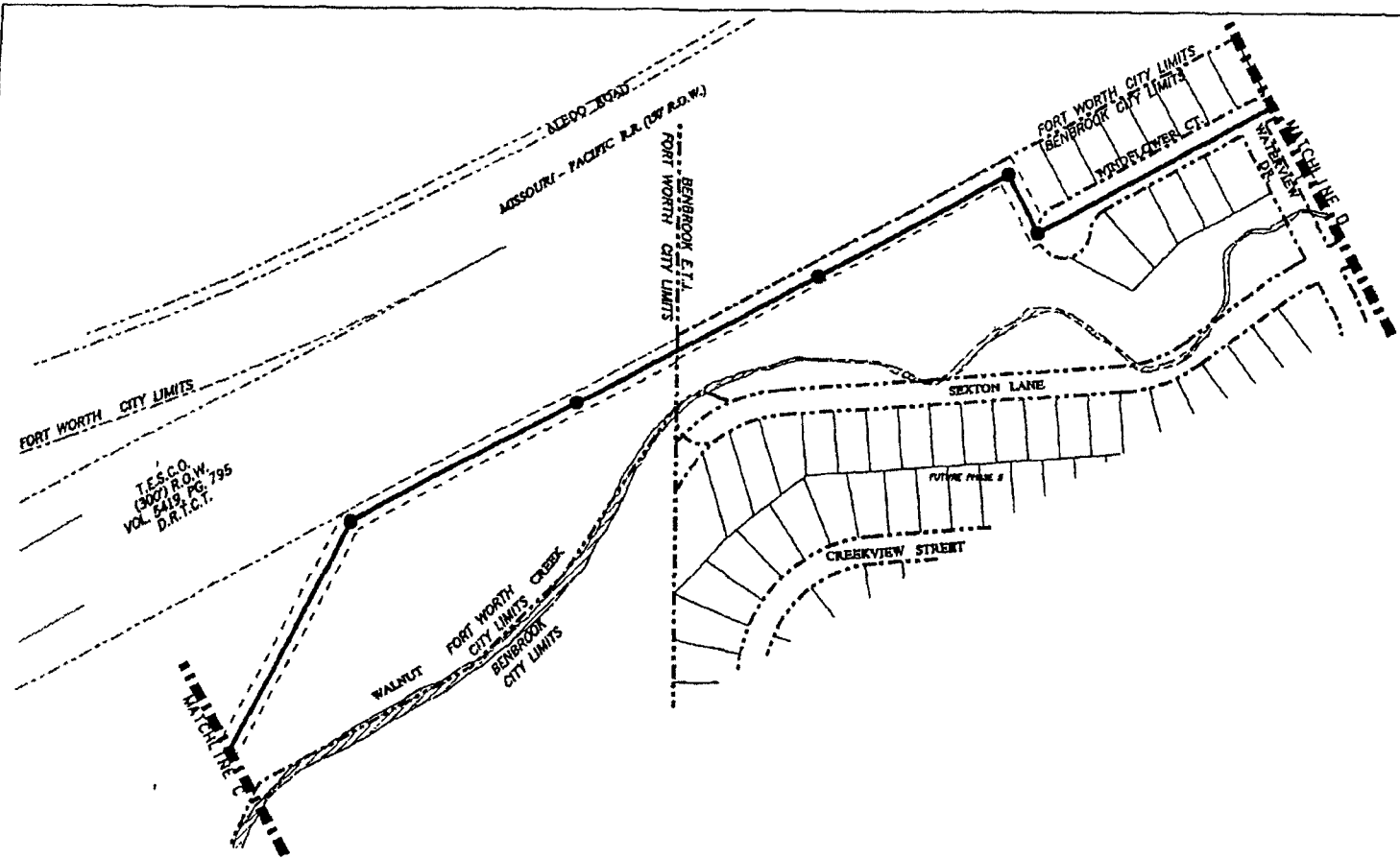
PAGE 7 OF 15

CCN Area 3
Contract No. 33490
Walnut Creek-Sanitary Sewer Ph. II



SCALE: 1" = 300'

CCN Area 3
Contract No. 33490
Walnut Creek Sanitary Sewer Ph. II



LEGEND

- PROP. SANITARY SEWER ————
- PROP. MANHOLE ———●———
- EXIST. SANITARY SEWER - - - - -
- EXIST. MANHOLE - - - ○ - - -

LIMITS OF PROJECT
 PROPOSED SEWER LINES ARE
 33" UNLESS OTHERWISE
 INDICATED

SANITARY SEWER 33" TRUNKLINE

EXHIBIT 'A-1' WALNUT CREEK PHASE II

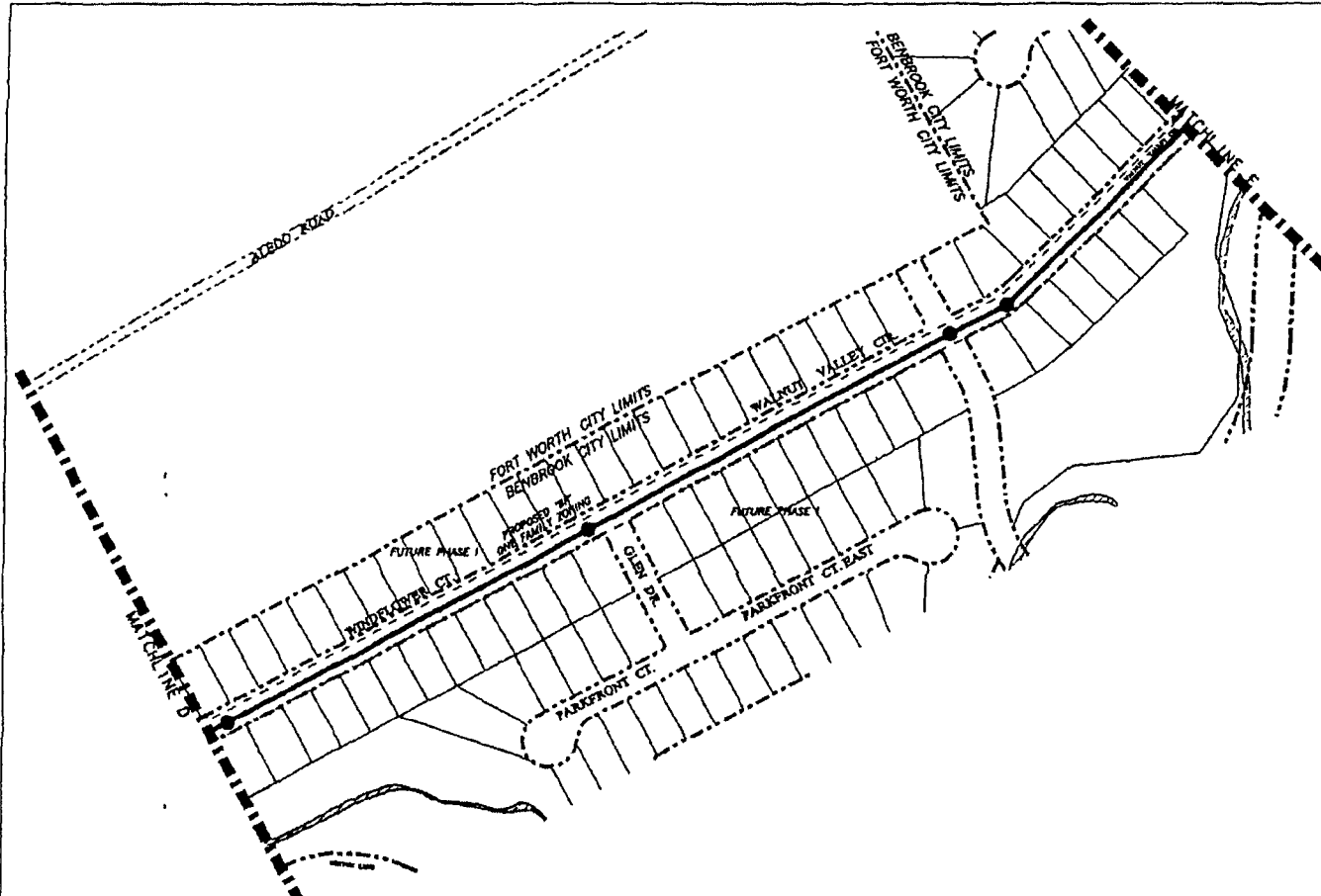
Carter & Burgess

CARTER & BURGESS, INC.
 777 MAIN STREET
 FORT WORTH, TX 76102
 (817) 736-4000
 PROJECT NO. 013363.010.1.0630

DCN=G:\JOB\ 013363\CIV\3631cfa_SS.dgn



SCALE: 1" = 300'



LEGEND

- PROP. SANITARY SEWER ————
- PROP. MANHOLE ————●———
- EXIST. SANITARY SEWER - - - - -
- EXIST. MANHOLE - - - - -○- - - - -

LIMITS OF PROJECT
PROPOSED SEWER LINES ARE
33" UNLESS OTHERWISE
INDICATED

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SANITARY SEWER
33" TRUNKLINE
EXHIBIT 'A-1'
WALNUT CREEK
PHASE II

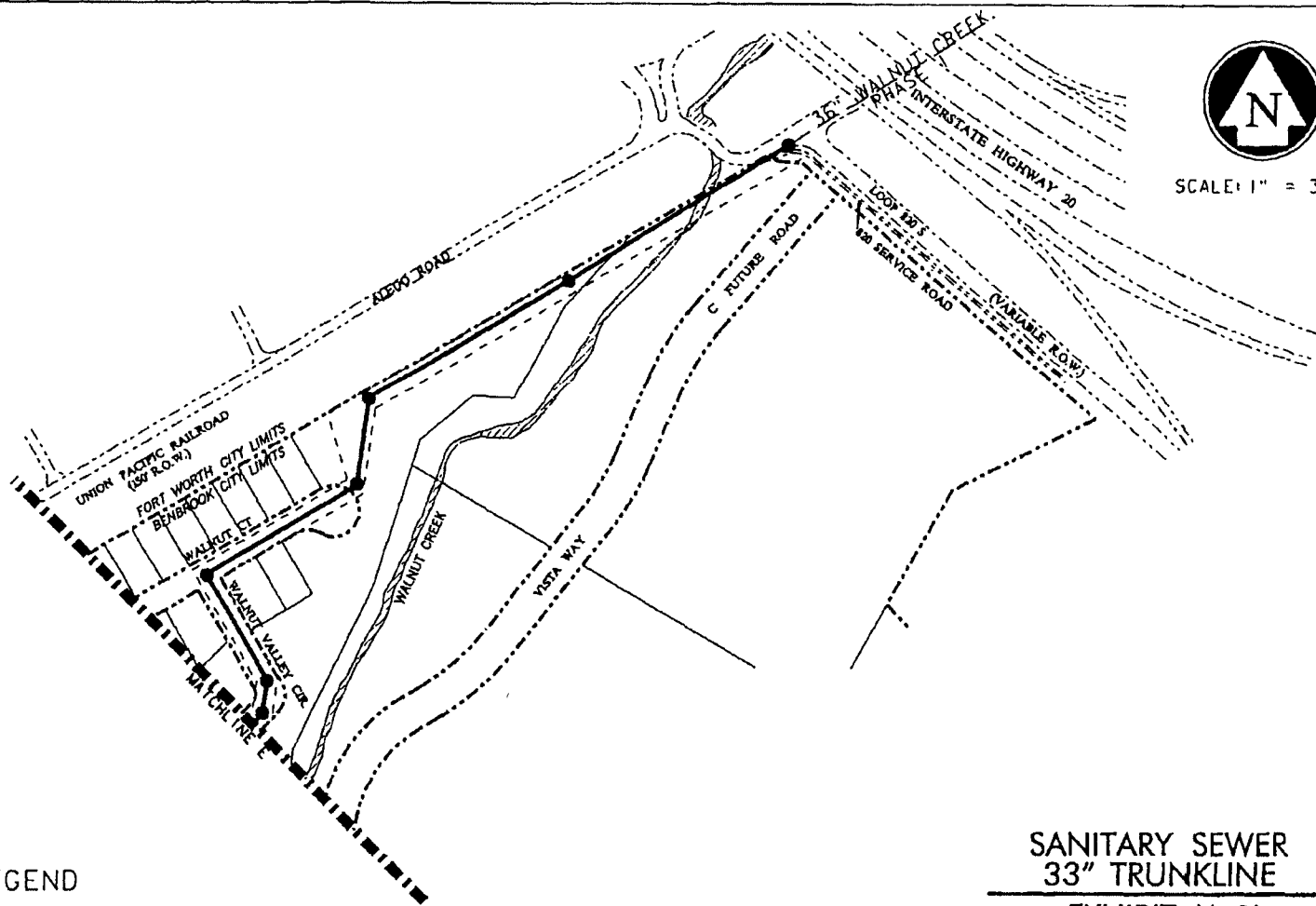
Carter Burgess

CARTER & BURGESS, INC.
777 MAIN STREET
FORT WORTH, TX 76102
(817) 783-6000
PROJECT NO. 013363.010.1.0630

Walnut Creek Sanitary Sewer Ph. II
Contract No. 33490
CCN Area 3



SCALE: 1" = 300'



LEGEND

- PROP. SANITARY SEWER ————
- PROP. MANHOLE ———●———
- EXIST. SANITARY SEWER - - - - -
- EXIST. MANHOLE - - - ○ - - -

LIMITS OF PROJECT
 PROPOSED SEWER LINES ARE
 33" UNLESS OTHERWISE
 INDICATED

**SANITARY SEWER
 33" TRUNKLINE**
EXHIBIT 'A-1'
**WALNUT CREEK
 PHASE II**

Carter Burgess

CARTER & BURGESS, INC.
 777 MAIN STREET
 FORT WORTH, TX 76102
 (817) 735-4000
 PROJECT NO. 013363.010.1.0630

CCN Area 3
 Contract No. 33490
 Walnut Creek Sanitary Sewer Ph. II

DATE: 01/11/01
 TIME: 10:00 AM
 USER: JG
 PLOT: 013363.010.1.0630

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