City Council Action Report

To: Mayor and Council
Submitted By: Dana M. Carter, P.E., Civil Engineer I
Subject: Huron Street Improvements Design
Date: September 5, 2006
Strategic Council Goals: Goal #1 – Upgraded City Infrastructure and Facilities

Recommended Action and Major Considerations:

- Authorize the Mayor to execute the attached agreement between the City of Northglenn and J&T Consulting, Inc. for an amount of $218,850.00 to complete the design of the Huron Street Improvements and the shoreline stabilization along the eastern shore of Croke Reservoir.
- Authorize the City Manager to approve minor changes in the scope of work and execute relevant change orders up to a City Council approved contingency expenditure limit of $21,885.00.
- Adequate funding for this project is available from the General Fund CIP.
- This project meets Council's Objective of Improved Street Quality and Traffic Flow under "Upgraded City Infrastructure and Facilities".
  - Completion of this program will ensure that the City's streets will continue to improve.
  - Completion of this project will reduce future maintenance costs, and improve safety on this street.

Background and Other Information:

- On July 19, 2006, the City issued a Request for Proposals for the design of the Huron Street Improvements and the Croke Reservoir Shoreline Stabilization. The proposals were to include the engineering and design of roadway improvements on Huron Street and shoreline stabilization along the eastern shore of Croke Reservoir, as well as associated drainage improvements, new mast arm traffic signals, and landscaping.
- The City received seven proposals, however two proposals were immediately eliminated for failure to return the required illegal immigration documentation. A selection committee scored each proposal in categories including project approach, experience, personnel, acceptable work schedule, and total cost. J&T Consulting, Inc. was the unanimous first choice.
- A final cost of $218,850.00 was reached for the primary scope of work and the value added services proposed by J&T Consulting, Inc.
- J&T Consulting, Inc. has completed other projects in the City. Northglenn staff was very happy with the quality of their work on these projects. Other references are attached for review.

Legal Considerations:

- The Council is within its legal purview to accept bids and approve contracts.

Policy Considerations:

- This project meets Council's Objective of Improved Street Quality and Traffic Flow under "Upgraded City Infrastructure and Facilities".

Budget Information:

- Staff is requesting Council approval for these design costs in the amount of $218,850.00, and a contingency of $21,885 (10%) for a total design cost of $240,735.00.
- The adopted General Fund CIP Budget includes an appropriation of $240,735.00 in account number 410.69211.000.3999.142 for this project.

Respectfully Submitted:	Approved for Submittal:	Funding Available:
Dana M. Carter, P.E.	Steve Zoet	Brent Worthington
Civil Engineer I	Interim City Manager	F.I.S.S. Director

COUNCIL ACTION TAKEN:

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT is made and entered into this **6th** day of **September**, 2006, by and between the City of Northglenn, State of Colorado (hereinafter referred to as the "City") and **J&T Consulting, Inc.** (hereinafter referred to as "Consultant").

RECITALS:

A. The City requires professional services.

B. Consultant has held itself out to the City as having the requisite expertise and experience to perform the required work for the Project.

NOW, THEREFORE, it is hereby agreed for the consideration hereinafter set forth, that Consultant shall provide to the City, professional consulting services for the Project.

I. SCOPE OF SERVICES

Consultant shall furnish all labor and materials to perform the work and services required for the complete and prompt execution and performance of all duties, obligations, and responsibilities for the Project which are described or reasonably implied from **Exhibit A** which is attached hereto and incorporated herein by this reference.

II. THE CITY'S OBLIGATIONS/CONFIDENTIALITY

The City shall provide Consultant with reports and such other data as may be available to the City and reasonably required by Consultant to perform hereunder. No project information shall be disclosed by Consultant to third parties without prior written consent of the City or pursuant to a lawful court order directing such disclosure. All documents provided by the City to Consultant shall be returned to the City. Consultant is authorized by the City to retain copies of such data and materials at Consultant's expense.

III. OWNERSHIP OF WORK PRODUCT

The City acknowledges that the Consultant's work product is an instrument of professional service. Nevertheless, the products prepared under this Agreement shall become the property of the City upon completion of the work.

IV. COMPENSATION

A. In consideration for the completion of the services specified herein by Consultant, the City shall pay Consultant an amount not to exceed **two hundred eighteen thousand eight hundred fifty** dollars (**$218,850.00**). Payment shall be made in accordance with the schedule of charges in **Exhibit B** which is attached hereto and incorporated herein by this reference. Invoices will be itemized and include hourly breakdown for all personnel and other charges. The maximum fee specified herein shall include all fees and expenses incurred by Consultant in performing all services hereunder.

B. Consultant may submit monthly or periodic statements requesting payment. Such request shall be based upon the amount and value of the work and services performed by Consultant under this Agreement except as otherwise supplemented or accompanied by such supporting data as may be required by the City.

1. All invoices, including Consultant's verified payment request, shall be submitted by Consultant to the City no later than the twenty-fourth (24th) day of each month for payment pursuant to the terms of this Agreement. In the event Consultant fails to submit any invoice on or before the twenty-fourth (24th) day of any given month, Consultant defers its right to payment pursuant to said late invoice until the twenty-fourth (24th) day of the following month.

2. Progress payments may be claimed on a monthly basis for reimbursable costs actually incurred to date as supported by detailed statements, including hourly breakdowns for all personnel and other charges. The amounts of all such monthly payments shall be paid within thirty (30) days after the timely receipt of invoice as provided by this Agreement.

C. The City has the right to ask for clarification on any Consultant invoice after receipt of the invoice by the City.

D. In the event payment for services rendered has not been made within forty-five (45) days from the receipt of the invoice for any uncontested billing, interest will accrue at the legal rate of interest. In the event payment has not been made within ninety (90) days from the receipt of the invoice for any uncontested billing, Consultant may, after giving seven (7) days written notice and without penalty or liability of any nature, suspend all work on all authorized services specified herein. In the event payment in full is not received within thirty (30) days of giving the seven (7) days written notice, Consultant may terminate this Agreement. Upon receipt of payment in full for services rendered, Consultant will continue with all authorized services.

E. Final payment shall be made within sixty (60) calendar days after all data and reports (which are suitable for reproduction and distribution by the City) required by this Agreement have been turned over to and approved by the City and upon receipt by the City of Consultant's certification that services required herein by Consultant have been fully completed in accordance with this Agreement and all data and reports for the Project.

V. COMMENCEMENT AND COMPLETION OF WORK

Within seven (7) days of receipt from the City of a Notice to Proceed, Consultant shall commence work on all its obligations as set forth in the Scope of Services or that portion of such obligations as is specified in said Notice. Except as may be changed in writing by the City, the Project shall be complete and Consultant shall furnish the City the specified deliverables as provided in Exhibit A.

VI. CHANGES IN SCOPE OF SERVICES

A change in the Scope of Services shall constitute any material change or amendment of services or work which is different from or additional to the Scope of Services specified in Section I of this

Agreement. No such change, including any additional compensation, shall be effective, or paid unless authorized by written amendment executed by the City. If Consultant proceeds without such written authorization, then Consultant shall be deemed to have waived any claim for additional compensation, including a claim based on the theory of unjust enrichment, quantum merit or implied contract. Except as expressly provided herein, no agent, employee, or representative of the City shall have the authority to enter into any changes or modifications, either directly or implied by a course of action, relating to the terms and scope of this Agreement.

VII. PROFESSIONAL RESPONSIBILITY

A. Consultant hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.

B. The work performed by Consultant shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community.

C. Consultant shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by Consultant under this Agreement. Consultant shall, without additional compensation, correct or resolve any errors or deficiencies in his designs, drawings, specifications, reports, and other services, which fall below the standard of professional practice, and reimburse the City for construction costs caused by errors and omissions which fall below the standard of professional practice.

D. Approval by the City of drawings, designs, specifications, reports, and incidental work or materials furnished hereunder shall not in any way relieve Consultant of responsibility for technical adequacy of the work. Neither the City's review, approval or acceptance of, nor payment for, any of the services shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and Consultant shall be and remain liable in accordance with applicable performance of any of the services furnished under this Agreement.

E. The rights and remedies of the City provided for under this Agreement are in addition to any other rights and remedies provided by law.

VIII. COMPLIANCE WITH LAW

The work and services to be performed by Consultant hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

A. **UNLAWFUL EMPLOYEES, CONTRACTORS AND SUBCONTRACTORS:** Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Contractor shall not knowingly contract with a subcontractor that (a) knowingly employs or contracts with an illegal alien to perform work under this Contract or (b) fails to certify to the Contractor that the subcontractor will not knowingly employ or contract with an illegal alien to perform work under this Contract. [CRS 8-17.5-102(2)(a)(I) & (II).]

B. **VERIFICATION REGARDING ILLEGAL ALIENS:** Contractor has verified or attempted to verify through participation in the basic pilot program of the United States Government that Contractor does not employ any illegal aliens or Contractor verifies that Contractor has not been accepted into the basic pilot program prior to entering into this Contract. Contractor further verifies that if Contractor has not been accepted in to the basic pilot program of the United States Government, Contractor will apply to participate in the basic pilot program of the United States Government every three months until Contractor is accepted or this Contract is completed, whichever is earlier. [CRS 8-17.5-102(2)(b)(I).]

C. **LIMITATION REGARDING BASIC PILOT PROGRAM:** Contractor shall not use basic pilot program procedures to undertake preemployment screening of job applicants while performing this Contract. CRS 8-17.5-102(2)(b)(II).]

D. **DUTY TO TERMINATE A SUBCONTRACT; EXCEPTIONS:** If Contractor obtains actual knowledge that a subcontractor performing work under this Contract knowingly employs or contracts with an illegal alien, the Contractor shall, unless the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien:

(a) notify the subcontractor and the City within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

(b) terminate the subcontract with the subcontractor if, within three days of receiving notice that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien, the subcontractor does not stop employing or contracting with the illegal alien. CRS 8-17.5-102(2)(b)(III)(A) & (B).]

E. **DUTY TO COMPLY WITH STATE INVESTIGATION:** Contractor shall comply with any reasonable request of the Colorado Department of Labor and Employment made in the course of an investigation pursuant to C.R.S. 8-17.5-102 (5). CRS 8-17.5-102(2)(b)(IV).]

F. **DAMAGES FOR BREACH OF CONTRACT:** In addition to any other legal or equitable remedy the City may be entitled to for a breach of this Contract, if the City terminates this Contract, in whole or in part, due to Contractor's breach of any paragraph A through E inclusive, Contractor shall be liable for actual and consequential damages to the City.

IX. INDEMNIFICATION

Consultant agrees to indemnify and hold harmless the City, its officers, employees, and insurers, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, if such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the negligent act, omission, error, professional error, mistake, negligence, or other

fault of Consultant, any subconsultant of Consultant, or any officer, employee, representative, or agent of Consultant or of any subconsultant of Consultant, or which arise out of any workmen's compensation claim of any employee of Consultant or of any employee of any subconsultant of Consultant. Consultant agrees to investigate, handle, respond to, and to provide defense for and defend against any such liability, claims or demands at the sole expense of Consultant, or at the option of the City, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with, any such liability, claims, or demands. Consultant also agrees to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims, or demands alleged are groundless, false, or fraudulent. If it is determined by the final judgment of a court of any competent jurisdiction that such injury, loss, or damage was caused in whole or in part by the act, omission, or other fault of the City, its officers, or its employees, the City shall reimburse Consultant for the portion of the judgment attributable to such act, omission, or other fault of the City, its officers, or employees.

X. INSURANCE

A. Consultant agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by Consultant pursuant to paragraph A. above. Such insurance shall be in addition to any other insurance requirements imposed by this Agreement or by law. Consultant shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section IX. Indemnification, above, by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

B. Consultant shall procure and maintain, and shall cause any subconsultant of Consultant to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by Consultant pursuant to Section IX. Indemnification, above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workmen's compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Agreement, and Employer's Liability insurance with minimum limits of five hundred thousand dollars ($500,000) each accident, one million dollars ($1,000,000) disease - policy limit, and one million dollars ($1,000,000) disease - each employee. Evidence of qualified self-insured status may be substituted for the workmen's compensation requirements of this paragraph.

2. Commercial general liability insurance with minimum combined single limits of six hundred thousand ($600,000) each occurrence and one million dollars ($1,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall contain a severability of interests provision.

3. Professional liability insurance with minimum limits of six hundred thousand dollars ($600,000) each claim and one million dollars ($1,000,000) general aggregate.

4. The policy required by paragraph 2. above shall be endorsed to include the City and the City's officers, employees, and consultants as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City, its officers, its employees, or its consultants shall be excess and not contributory insurance to that provided by Consultant. No additional insured endorsement to the policy required by paragraph 1. above shall contain any exclusion for bodily injury or property damage arising from completed operations. Consultant shall be solely responsible for any deductible losses under any policy required above.

5. The certificate of insurance provided for the City shall be completed by Consultant's insurance agent as evidence that policies providing the required coverages, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the City prior to commencement of the Agreement. No other form of certificate shall be used. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the City. The completed certificate of insurance shall be sent to:

   City of Northglenn
   11701 Community Center Drive
   Northglenn, Colorado 80233-8061
   Attn: **Dana Carter**

6. Failure on the part of Consultant to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of agreement upon which the City may immediately terminate this Agreement, or at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.

7. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

8. The parties hereto understand and agree that the City, its officers, and its employees, are relying on, and do not waive or intend to waive by any provision of this Agreement, the monetary limitations (presently one hundred fifty thousand dollars ($150,000) per person and six hundred thousand dollars ($600,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Colo. Rev. Stat. §24-10-101 et seq., 10 Colo. Rev. Stat., as from time to time amended, or otherwise available to the City, its officers, or its employees.

XI. NON-ASSIGNABILITY

Neither this Agreement, nor any of the rights or obligations of the parties hereto, shall be assigned by either party without the written consent of the other.

XII. TERMINATION

This Agreement shall terminate at such time as the work in Section I is completed and the requirements of this Agreement are satisfied, or upon the City's providing Consultant with seven (7) days advance written notice, whichever occurs first. In the event the Agreement is terminated by the City's issuance of said written notice of intent to terminate, the City shall pay Consultant for all work previously authorized and completed prior to the date of termination. If, however, Consultant has substantially or materially breached the standards and terms of this Agreement, the City shall have any remedy or right of set-off available at law and equity. If the Agreement is terminated for any reason other than cause prior to completion of the Project, any use of documents by the City thereafter shall be at the City's sole risk, unless otherwise consented to by Consultant.

XIII. CONFLICT OF INTEREST

The Consultant shall disclose any personal or private interest related to property or business within the City. Upon disclosure of any such personal or private interest, the City shall determine if the interest constitutes a conflict of interest. If the City determines that a conflict of interest exists, the City may treat such conflict of interest as a default and terminate this Agreement.

XIV. VENUE

This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in the County of Adams, State of Colorado.

XV. INDEPENDENT CONTRACTOR

Consultant is an independent contractor. Notwithstanding any provision appearing in this Agreement, all personnel assigned by Consultant to perform work under the terms of this Agreement shall be, and remain at all times, employees or agents of Consultant for all purposes. Consultant shall make no representation that it is the employee of the City for any purposes.

XVI. NO WAIVER

Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligation of this Agreement.

XVII. ENTIRE AGREEMENT

This Agreement and the attached Exhibits A and B is the entire Agreement between Consultant and the City, superseding all prior oral or written communications. None of the provisions of this Agreement may be amended, modified, or changed, except as specified herein.

XVIII. NOTICE

Any notice or communication between Consultant and the City which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States Mail, addressed as follows:

The City: City of Northglenn
11701 Community Center Drive
Northglenn, Colorado 80233-8061

Consultant: J&T Consulting, Inc.
1400 W 122nd Avenue, Suite 120
Westminster, CO 80234

IN WITNESS WHEREOF, the parties hereto each herewith subscribe the same in duplicate.

CITY OF NORTHGLENN, COLORADO

By: _____

Title: _____

ATTEST:

_____
Diana L. Lentz, City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CONSULTANT

By: J. C. [signature]

Secretary/Principal 9/06/06
Title Date

ATTEST:

_____

_____
Title Date

PROSPECTIVE CONTRACTOR'S CERTIFICATE REGARDING EMPLOYING OR CONTRACTING WITH AN ILLEGAL ALIEN

FROM: J+T Consulting, Inc.
(Prospective *Contractor*)

TO: City of Northglenn
11701 Community Center Drive
Northglenn, CO 80233

Project Name Huron Street Improvements and Croke Reservoir Shoreline Stabilization

Bid Number 2006 RFP-14 Project No. _____

As a prospective contractor for the above-identified bid, I (we) do hereby certify that, as of the date of this certification, I (we) do not knowingly employ or contract with an illegal alien and that I (we) have participated in or attempted to participate in the basic pilot program of the state of Colorado in order to verify that I (we) do not employ any illegal aliens.

Executed this 6th day of September, 2006.

Prospective Contractor J+T Consulting, Inc.

By: J. C. York

Its: Secretary / Principal
Title

Reference Check

Contractor: J&T Consulting, Inc.
Date: September 6, 2006

Project Location:	Contact for Reference:	Contact Phone Number:	Reference:
Big Dry Creek Wastewater Treatment Facility Improvements, City of Westminster Standley Lake Dam and Reservoir Improvements, City of Westminster Served as Owner's Representative	Mr. Kent Brugler City of Westminster, CO	303-430-2400 x2196	Mr. Brugler said that Wastewater project has gone extremely well. He stated that J&T Consulting, Inc. is very efficient and very practical in their approach to projects, and they are resolution oriented. They have a common sense approach to projects, and they are detail oriented. They have good task tracking and a great ability to manage the design and construction of a project. The City of Westminster has been very pleased with the results and service on both projects, and would definitely use them again.
Upper Gunnison River Water Conservancy District "Upper Gunnison Project"	Mr. John McClow Upper Gunnison River Water Conservancy District	970-641-6065	Mr. McClow was not available, however another staff member closely involved with the project was available for comment. She stated the project went very well. J&T Consulting handled everything well, and the project was completed on time and within the design budget.

Reference Check

Contractor: J&T Consulting, Inc.
Date: September 6, 2006

Project Location:	Contact for Reference:	Contact Phone Number:	Reference:
Drainage Master Plan Update, City of Northglenn	Pam Acre City of Northglenn	303-450-8792	Ms. Acre has been very pleased with the results of this project. She stated the project has gone very well, and the only hold-ups for the completion have been on the City's part. She stated they have not requested numerous change orders and they have been very good to work with. They have established a clear communication channel, and have been very good about communicating difficulties to the City throughout the project.

J&T Consulting, Inc.

City of Northglenn

Huron Street Improvements and Croke Reservoir Shoreline Stabilization
8/21/2006
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Northglenn - Huron-Croke - Fee Summary.xls

Professional Services Scope and Fee Summary

Item Description	Project Manager $95.00	Project Engineer $85.00	Senior Designer $75.00	Designer $65.00	Sub-Consultants: Sorenson	LSC	TSR	Cesare	ERC	DU	Am West	Item Subtotal
PRIMARY SCOPE OF WORK												
Project Coordination												
Project Management	60											$5,700
Project Kickoff Meeting	2	4			$200	$200		$200			$200	$1,330
Site Visits	2	16			$400							$1,950
Progress Meetings	10	20			$800	$600	$400	$800	$400		$200	$5,850
Subtotals	*74*	*40*	*0*	*0*	*$1,400*	*$800*	*$400*	*$1,000*	*$400*	*$0*	*$400*	*$14,830*
Phase I - Preliminary Design Report												
Design Survey	2	4									$13,400	$13,930
Site Investigations	2	16			$800			$3,500				$5,850
Traffic Study	2				$800	$6,600						$7,590
Utility Potholing (10@$275)(traffic control 2@$1,650)	2	4								$6,050		$6,580
Report Preparation	4	24			$1,600							$4,020
Subtotals	*12*	*48*	*0*	*0*	*$3,200*	*$6,600*	*$0*	*$3,500*	*$0*	*$6,050*	*$13,400*	*$37,970*
Phase II - 60% Submittal												
Roadway Design	8	48	48	80	$6,000							$19,640
Traffic Signal Design	2				$200	$4,400						$4,790
Traffic Control Plan	2	8	8	4	$600							$2,330
Construction Phasing Plan	1	2	2	2	$200							$745
Shoreline Stabilization/Extension Design	4	20	12	8								$3,500
Landscape Design	1	4	8	32			$3,500					$6,615
Storm Sewer Design	4	20	12	8								$3,500
Reservoir Outlet Design	4	16	10	8								$3,010
Environmental Assessments	1	4							$8,250			$8,685
Technical Specifications TOC	2	4			$100							$630
Stormwater Management Plan	4	20	12	8								$3,500
Phase III Drainage Report	4	32	16	8								$4,820
Opinion of Probable Cost	2	12	8		$1,000		$200					$3,010
Subtotals	*39*	*190*	*136*	*158*	*$8,100*	*$4,400*	*$3,700*	*$0*	*$8,250*	*$0*	*$0*	*$64,775*
Phase III - 90% Submittal												
Roadway Design	4	30	30	40	$2,700							$10,480
Traffic Signal Design	1				$200	$3,300						$3,595
Traffic Control Plan	1	4	4	2	$300							$1,165
Construction Phasing Plan	1	2		2	$100							$495
Shoreline Stabilization/Extension Design	2	10	8	4								$1,900
Landscape Design	1	2	4	24			$3,100					$5,225
Storm Sewer Design	2	10	8	4								$1,900
Reservoir Outlet Design	2	8	6	4								$1,580
Technical Specifications	8	40	10		$3,000	$1,000						$8,910
Stormwater Management Plan	2	10	8	4								$1,900
Phase III Drainage Report	2	20	10	4								$2,900
Opinion of Probable Cost	1	8	4		$750		$200					$2,025
Subtotals	*27*	*144*	*92*	*88*	*$7,050*	*$4,300*	*$3,300*	*$0*	*$0*	*$0*	*$0*	*$42,075*

J&T Consulting, Inc.

City of Northglenn

Huron Street Improvements and Croke Reservoir Shoreline Stabilization
8/21/2006
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Northglenn - Huron-Croke - Fee Summary .xls

Professional Services Scope and Fee Summary

Item Description	Project Manager $95.00	Project Engineer $85.00	Senior Designer $75.00	Designer $65.00	Sub-Consultants: Sorenson	LSC	TSR	Cesare	ERC	DU	Am West	Item Subtotal
PRIMARY SCOPE OF WORK CONTINUED												
Phase IV - 100% Submittal												
Roadway Design	2	4	4	8	$1,000							$2,350
Traffic Signal Design	1				$100	$1,100						$1,295
Traffic Control Plan	1	1	2	2	$100							$560
Construction Phasing Plan	1	2		2	$100							$495
Shoreline Stabilization/Extension Design	1	2	4	2								$695
Landscape Design	1	1	2	8			$600					$1,450
Storm Sewer Design	1	2	4	2								$695
Reservoir Outlet Design	1	2	4	2								$695
Technical Specifications	2	8	4									$1,170
Stormwater Management Plan	1	2	4	2								$695
Phase III Drainage Report	1	2		1								$330
Opinion of Probable Cost		4	2		$250		$100					$840
Subtotals	*13*	*30*	*30*	*29*	*$1,550*	*$1,100*	*$700*	*$0*	*$0*	*$0*	*$0*	*$11,270*
Phase V - Bidding Phase Assistance (4 weeks)												
Addenda Review/Recommendations	2	8	4		$800							$1,970
Subtotals	*2*	*8*	*4*	*0*	*$800*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,970*
Phase VI - Construction Services Assistance (24 weeks)												
Submittal Review/Recommendations (4 weeks)	2	8	4		$800							$1,970
RFI Review/Recommendations (12 weeks)	6	12	6		$600							$2,640
Change Proposal Review/Recommendations (4 weeks)	2	8	4		$800							$1,970
Progress Meetings (24 weeks)	24				$2,400							$4,660
Subtotals	*34*	*28*	*14*	*0*	*$4,600*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$11,260*

Primary Scope of Work Subtotal	$184,150
Primary Scope of Work Expenses	$11,050
Primary Scope of Work Total	**$195,200**

Supplemental Primary Scope of Work												
Reservoir/Embankment Analysis and Report	4							$7,400				$7,780
Groundwater Mitigation Analysis and Report	4							$8,700				$9,080
Clean Water Act Section 404 Permit	2								$6,600			$6,790
Subtotals	*10*	*0*	*0*	*0*	*$0*	*$0*	*$0*	*$16,100*	*$6,600*	*$0*	*$0*	*$23,650*

J&T Consulting, Inc.

City of Northglenn

Huron Street Improvements and Croke Reservoir Shoreline Stabilization
8/21/2006
tpy
Northglenn - Huron-Croke - Fee Summary .xls

Professional Services Scope and Fee Summary

Item Description	Project Manager $95.00	Project Engineer $85.00	Senior Designer $75.00	Designer $65.00	Sub-Consultants: Sorenson	LSC	TSR	Cesare	ERC	DU	Am West	Item Subtotal
ALTERNATE SCOPE OF WORK												
Phase V - Bidding Phase Assistance (4 weeks)												
Project Coordination (4 weeks)	8	16										$2,120
Bid Package Development and Distribution (2 weeks)	8	16	8		$1,600							$4,320
Addenda Development (2 weeks)	4	16	8		$1,600							$3,940
Bid Opening Facilitation	8											$760
Bid Tabulation Development	2	8	8									$1,470
Bid Review/Qualification/Selection Recommendation	2	8			$400							$1,270
Subtotals	*32*	*64*	*24*	*0*	*$3,600*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$13,880*
Phase VI - Construction Services Assistance (24 weeks)												
Project Coordination (24 weeks)	24	192										$18,600
Construction Observation (20 weeks)	40	320										$31,000
Submittal Review/Approval (4 weeks)	4	16	8		$1,600							$3,940
RFI Review/Response Development (12 weeks)	12	24	12		$2,400							$6,480
Change Proposal Review/Approval (4 weeks)	4	16	8		$1,600							$3,940
Progress Meetings (24 weeks)	48				$2,400							$6,960
Payment Application Review/Approval (6 weeks)	6	24			$1,200							$3,810
Monthly Report Development (6 weeks)	24											$2,280
Substantial Completion Walkthrough	8											$760
Punchlist Development	4	12										$1,400
Final Walkthrough	8											$760
Coordination of As-built Requirements	2	8	8									$1,470
Final Approval/Coordination	8											$760
Subtotals	*192*	*612*	*36*	*0*	*$9,200*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$82,160*

Alternate Scope of Work Subtotal	$96,040
Alternate Scope of Work Expenses	$5,760
Alternate Scope of Work Total	**$101,800**

2006 Rate Schedule

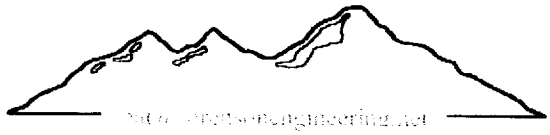
Professional Services

Clerical Support	$45
Designer	$65-$75
Senior Designer	$75-$85
Project Manager / Owner's Representative	$85 - $105
Senior Technical Advisor	$105 - $125
PE I (Design & Field)	$75 - $105
PE II (Project Management & Public Hearings)	$105 - $125
PE III (Expert Witness)	$150

Expenses

Mileage	Current IRS Rate
Office Materials, Postage & Reproduction	Cost + 5%
Normal Density Bond Plots (line work)	$1.50 / sf
High Density Bond Plots (images, photos, charts, etc.)	$4.00 / sf
Mylar Media Surcharge	$5.00 / sf
Grey Scale prints (text)	$0.05 / page
Color Prints (text)	$0.10 / page
High Density Prints (images, photos, charts, etc.)	$1.00 / page

Sorenson Engineering, Inc.



2006 RATE SCHEDULE

PROFESSIONAL SERVICES

Clerical Support	$ 40.00
CAD I	$ 60.00
CAD II	$ 70.00
EIT I	$ 80.00
EIT II	$ 90.00
PE I (Design & Field)	$ 100.00
PE II (Review, Certification, Meetings)	$ 120.00
PE III (Public Hearings & Expert Witness)	$ 150.00

REIMBURSABLE EXPENSES

Mileage	IRS Rate
Office Materials, Electronic Data, Postage & Reproduction	Cost + 10%
Plots, Prints, and Other provided supplies attributable to work	Cost + 10%
Subconsultants	Cost + 10%

LSC TRANSPORTATION CONSULTANTS, INC.

1889 York Street
Denver, Colorado 80206
Phone: (303) 333-1105
FAX: (303) 333-1107
e-mail: lsc@lscdenver.com

STANDARD BILLING RATES

1. LABOR	RATE
Principals	$150.00/Hour
Associates	$115.00/Hour
Senior Engineers	$100.00/Hour
Senior Planners	$100.00/Hour
Project Engineers	$75.00/Hour
Project Planners	$75.00/Hour
Engineers	$70.00/Hour
Planners	$60.00/Hour
Senior CAD Operators	$65.00/Hour
Administrative Assistants	$45.00/Hour
Traffic Count Manager	$45.00/Hour
Traffic Count Technician	$35.00/Hour

2. SPECIALIZED EQUIPMENT	
Computer and Specialized Software	$15.00/Hour
Turning-Movement Traffic Keyboard	$3.00/Hour
Automatic Traffic Counter	$25.00/Day
Auto	$0.47/Mile
Photocopies	$0.10/Copy
Color Copies	$0.15/Copy
Plots	$5.00/D size Plot

3. **OUTSIDE CONSULTANTS, SUB-CONTRACTORS AND CONTRACT LABOR**
Billed at our cost + 10 percent.

4. **OTHER DIRECT PROJECT EXPENSES** such as Airfare, Lodging, Meals, Car Rental, Telephone, Postage, Parking Fees, Printing, Graphics, Delivery Charges, etc., are billed at our cost.

Effective January, 1, 2006

SCHEDULE OF FEES

Senior Principal	$145.00/hour
Principal	$125.00/hour
Quality Manager	$104.00/hour
Senior Engineer/Scientist/Geologist	$104.00/hour
Staff Engineer/Scientist/Geologist	$91.00/hour
Field Engineer	$70.00/hour
Senior Technician/Construction Observer	$62.50/hour
Field/Laboratory Technician	$52.00/hour
Technical Support	$46.50/hour
Computerized Drafting	$78.00/hour
Coring Operations	$88.50/hour
Expenses	Cost
Outside Services	Cost + 10%
Mileage	$0.50/mile
Overtime & Non-Standard Time [2]	1.3 x rate
Equipment Rental	Quoted upon request

[1] Payment is due within 30 days of receipt of our invoice. Accounts unpaid after 30 days will be assessed a service charge of 1-1/2% of the unpaid balance.

[2] Overtime Premium applies to Field Engineer and Technician hours exceeding 10 hours per day or 40 hours per week, charged to a single project.

Effective 1/15/06 to 12/31/06

SCHEDULE.2006 - 01.15.06

2006 Rate Sheet

Professional Services

Senior Water Resource Engineer.....$95.00 per hour

Senior Ecologist.....$90.00 per hour

Water Resource Engineer.....$90.00 per hour

Engineer.....$82.00 per hour

Ecologist.....$68.00 per hour

Staff Engineer.....$68.00 per hour

Expenses

GPS rental.....$250.00 per day

Mileage.....IRS Rate

Plots (B&W or Color, 24"x36"). .....$6.00 per sheet

*Additional direct project expenses billed at cost

Rates listed on this sheet are valid from January 1, 2006 through December 31, 2006. ERC reserves the right to increase rates effective January 1, 2007.

July 2006

American West Land Surveying Co. Rate Schedule

29 South 4th Avenue
Brighton, CO 80601
303-659-1532

Item Description:	Unit:	Unit Price:
• **Crew Rates:**		
One person & Equipment	Hour	$110.00
One person & GPS (Trimble 5700 / RTK)	Hour	$125.00
Two person & Equipment	Hour	$140.00
Two person & GPS (Trimble 5700 / RTK)	Hour	$210.00
Project Manager/Research	Hour	$85.00
PLS Review & Certification	Hour	$100.00
CAD/Survey Technician	Hour	$75.00
• **Miscellaneous Services:**		
Field Supplies		Cost + 30%
Per Diem (when required)	Day	$125.00
Consultation in Connection with Litigation Testimony and Similar Matters.	Hour	$150.00
Transportation	Mile	$1.10
• **Overtime Rates:**		
All Crew Rates	Hour	Standard Rate + 50%

J&T Consulting, Inc.

1400 W 122nd Avenue – Suite 120
Westminster, CO 80234
Ph: 303-457-0735 / Fax: 303-920-0343

PROPOSAL FOR:

HURON STREET IMPROVEMENTS AND CROKE RESERVOIR SHORELINE STBILIZATION

2006 RFP-14

AUGUST 21, 2006

August 21, 2006

City of Northglenn
Attn: Dana Carter, P.E. – Civil Engineer I
11701 Community Center Drive
Northglenn, Colorado 80233

RE: "Northglenn Huron Street Improvements and Croke Reservoir Shoreline Stabilization 2006 RFP-14"

Dear Ms. Carter:

Thank you for the opportunity to submit our proposal for the "Northglenn Huron Street Improvements and Croke Reservoir Shoreline Stabilization." We have compiled a project team of professionals that are proficient and highly regarded in their respective fields.

Our professional services team is comprised of J&T Consulting, Inc., Sorenson Engineering, Inc., LSC Transportation Consultants, Inc., JA Cesare & Associates, Inc., Ecological Resource Consultants, Inc., American West Land Surveying, the TSR Group, and Diversified Underground. This team of professionals has worked on a broad range of projects that were successfully completed within budget and on schedule. We believe our team of consultants will be an asset to the City of Northglenn based on our background and experience.

J&T Consulting, Inc. has read and accepts the terms and conditions as detailed in the RFP subject to the items described in the Exception of Terms and Conditions section of this proposal. J&T Consulting, Inc. has received and acknowledged addenda 14a, 14b, and 14c. Cost information for this proposal shall remain valid for 120 days as expressed in section two of the RFP.

Cordially,

J.C. York, P.E.

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LETTER OF INTRODUCTION/EXECUTIVE SUMMARY

J&T Consulting, Inc. (JT) is a civil engineering firm with an office located in Westminster, Colorado. The firm currently employs a wide variety of experience ranging from municipal engineering, street and roadway engineering, water resources engineering, general site civil engineering, owners representation services, construction management, hydrology and hydraulic engineering.

JT was founded in 2004 by Jason Murray and Todd Yee. J.C. York joined JT shortly after it was founded rounding out JT's current principals. Together the principals hold a wealth of consulting and engineering knowledge. The following is a partial list of current and past clients:

Current Clients (2005-2006)

Ms. Pam Acre
Stormwater Coordinater
City of Northglenn
303-450-8792

Mr. Kent Brugler
Project Manager
City of Westminster
303-430-2400 x2196

Mr. Abel Moreno
Capital Projects Manager
City of Westminster
303-430-2400 x2194

Mr. Phil Carter
Water System Engineer
City of Greeley
970-350-9826

Mr. Wally Welton
President
Consolidated Mutual Water Co.
303-238-0451

Ms. Diane Van Fossen
Project Manager
City of Thornton
303-255-7833

Mr. John Zadel
Owner
Northern Colorado Constructors, Inc.
303-857-1754

Mr. Brian Rick
Owner
Brian Rick and Associates
c/o Sorenson Engineering, Inc.

Mr. Jerry Doherty
Owner
Divide Constructors, Inc.
970-532-3761

Mr. John McClow
General Council
Upper Gunnison River Water
Conservancy District
970-641-6065

JT has compiled a project team of consultants with professional experience and expertise to meet the needs and goals of the City of Northglenn for this project. With all of our projects we establish a project management plan that defines the roles, responsibilities, lines of communication, project goals, project risks, and project schedule. Our team members understand the project management approach we use and realize the most important part of the design process is communication between each member to ensure that design issues are brought forth and addressed.

The following is an explanation of how our project team will function as a cohesive unit based on our past projects/relationships with all members of our project team.

J.C. York, PE, Jason Murray, EIT, Todd Yee
J&T Consulting, Inc.
Project Managers and Project Engineers
J.C. will serve as Project Manager/Project Engineer and primary point of contact for the City of Northglenn Project Manager for technical, contract, financial, scopes of work, team coordination, scheduling, and other requirements. J.C. has relationships with each of the Project Team members, including personal knowledge of their capabilities and skill sets.

Jason Murray will serve as Asst. Project Manager/Project Engineer with design support from Todd Yee. They are both very familiar with the detailed technical requirements of street and roadway design and construction as well as large and small reservoir design and construction.

Together the principals of JT have investigated and provided technical assistance for a number of clients on many similar projects. The clients have been municipalities, private entities, water districts and water conservancy districts.

Patric Sorenson, PE
Sorenson Engineering, Inc.
Street and Roadway Design Engineer/Senior Technical Advisor/Traffic Study QA/QC
We have worked with Pat for about the last 10 years, on various municipal and land development projects. While working together at a previous firm we worked closely with Pat to provide engineering services on a similar project for the City of Broomfield's award winning (1999 APWA Medium Community Street Design Award) 136th Avenue Traffic Calming and Streetscape design and construction. We have also teamed together recently on several park/trail rehabilitation projects for the City of Thornton, which were designed and constructed within the budget limits. Pat will serve as the Design Engineer/Senior Technical Advisor for the street and roadway portion of project. Pat has over 20 years experience providing public works/community enhancement services to municipal clients.

Alex Ariniello, PE, PTOE, Benjamin T. Waldman, PE, PTOE
LSC Transportation Consultants, Inc.
Traffic Study
Mr. Ariniello has completed traffic studies for Sorenson Engineering, Inc. over the past several years. The majority of the work was in the City of Lafayette for the Coal Creek Village and Coal Creek Village North subdivisions. Mr. Ariniello is very experienced with over 30 years of service in the public and private sector of public works and transportation engineering.

Joseph A. Cesare, PE, Jonathan A. Crystal, PE
Joseph A. Cesare & Associates, Inc.
Geotechnical/Geologic Engineering
We have a long standing relationship with Joe Cesare, and have utilized his expertise on several projects dealing with reservoir storage. Joe has provided engineering services on all phases of street and roadway projects as well as dam and reservoir evaluations, designs, and construction observation and management services. Joe will be managing the geotechnical portion of this project with support from Jon Crystal. Jon and has conducted numerous subsurface investigations and have a vast amount of experience in collecting, classifying, and testing soils for engineering properties.

Curtis Hoos, PLS, and Merle Hoos
American West Land Surveying Co.
Surveying
We have worked with Curtis on municipal/land development projects over the last year. During that time our appreciation for their quality of work has grown, as has our loyalty to them. We have worked together specifically on the Fair Meadows Subdivision to provide topographic and boundary surveys. We have benefited from Curtis and Merle acting as our eyes and ears on sites, projects, and construction. We respect their judgment and we have great confidence in their knowledge of when to call and let the rest of the Team in on those developments or questions.

Troy Thompson, PE, Ecological Resource Consultants, Inc.
Wetlands and Threatened & Endangered Species Specialist
We have worked with Troy for six years, and after experience with other wetlands and environmental specialists have a great loyalty to him for his ability to provide practical solutions with these types of issues/risks. Troy worked on environmental assignments for several water resources infrastructure projects we have been a part of including the Standley Lake Rehabilitation project, the City of Northglenn Master Drainage Update, and the Big Dry Creek Sanitary Sewer Diversion project. He kept the projects moving ahead while protecting the Client and our Team.

Molly Orkild-Larsen
The TSR Group
Landscape Architecture
We have worked with Molly on numerous municipal/land development projects over the last ten years. Molly has participated in the design for the Webster Lake rehabilitation project along with members of J&T Consulting, Inc. and Sorenson Engineering, Inc. while at a previous firm. Recently Molly provided landscape design services on the City of Thornton Parks projects as sub-consultant to Sorenson Engineering, Inc. We are confident in Molly's abilities to provide creative and cost conscious landscape designs.

Diversified Underground
Diversified staff has over 30 years experience in the underground construction and utility locating industry. Their role in this project is very important as they will be locating all utilities that need physical location where construction will undoubtedly be affected. We have worked with the staff at Diversified Underground more frequently over the last year as they have met all of our needs in locating critical utilities so our designs include and accommodate potential utility conflicts.

Similar Projects (Primary and Alternate Scope)

Welton Dam and Reservoir & HWY 72 Improvements

Mr. Jason Murray served as project manager for The Consolidated Mutual Water Company and assisted (along with other members of JT while at a previous design firm) in the preliminary and final engineering design submittal of the Welton Dam and Reservoir to the Office of the State Engineer. The dam is a 125-foot high earth embankment, located in Jefferson County Colorado, with a 5,200-foot crest length and approximately 5,000,000 cubic yards of fill with a completed project cost of approximately $30 million. Jason served as the on-site resident engineer and the Owner's onsite representative and construction manager during the construction phase of the project.

The project also included providing the design of the widening of State Highway 72 and the construction of the sub-grade for the expansion as a requirement to construct the dam and reservoir. The paving of the expansion was delayed until the extra lanes are needed.

The project was completed in 2002 on schedule and under budget.

Project Budget:	Project Contact:
Design/Construction Admin – $750 thousand	Mr. Wally Welton
Construction – $30 million	303-238-0451

City of Thornton Parks Improvements

JT teamed with Sorenson Engineering to provide engineering services to the City of Thornton on their 2005 Parks Rehabilitation project. JT provided design and support services for the development of construction plans, specifications and construction documents for the project, while Sorenson Engineering provided project engineering/management. The project included a wide variety of services for three separate park sites, all of which are currently nearing completion.

Services on the Grandview Ponds project included the design of a new trail system, picnic shelters, and numerous other amenities throughout the park. The two main ponds were upgraded to improve the fishery characteristics of the ponds as well as providing ADA compliant access locations.

Services on the Harvest Ridge Detention project included the design of a reconfigured detention pond, including extensive retaining wall systems, to improve capacity and maintainability of the existing pond, providing a sidewalk connection between E. 97th Drive and York Street and upgrading the landscaping features to improve the aesthetics of the overall site.

Services on the Northbrook Park project included the design of a new regulation size soccer field, optimizing the new turf section and park drainage patterns to insure proper field performance, while preserving existing landscaping features that were present.

The project is scheduled for completion in the fall of 2006.

Project Budget:	Project Contact:
Design/Limited Construction Admin – $131 thousand	Ms. Diane Van Fossen
Construction – $925 thousand	303-255-7833

Highline Watershed Improvement District Ditch Rehabilitation

Mr. J.C. York (while at a previous firm) served as project engineer and manager during design and construction of the improvements. The project was funded by the Wyoming Water Development Commission with 50% in the form of a grant and the other 50% as a loan to the District. The construction cost was $750,000.

The Highline Watershed Improvement District Ditch Rehabilitation Project consisted of pipe drop structures to bypass severely eroded canal areas. The two main pipe drops involved in the project were constructed using 48-inch and 36-inch diameter solid wall polyethylene pipe (2,500 lineal feet) with a Corp's of Engineer's stilling well at the downstream end for energy dissipation.

Responsibilities included production of final design and construction documents, bidding services, resident project representative, construction administration, construction materials testing (soils and concrete), and review and approval of payment applications.

The project was completed in 2002 on schedule and within the allotted budget.

Project Budget:	Project Contact:
Design/Construction Admin – $125 thousand	Mr. Mike Hackett
Construction – $750 thousand	307-777-7626

Similar Projects (Primary Scope)

City of Northglenn City Wide Drainage Update

The City of Northglenn retained JT to provide an update to the master drainage plan developed in 1985-86. JT teamed up with Environmental Resource Consultants, Inc. (ERC) to perform the master plan update. The City had identified several problem areas to be evaluated and tasked JT/ERC with providing a review of the existing problem areas, identification of new problem areas, providing recommendations for improvements, compiling opinions of probable project costs, and prioritization/classification of improvement areas for incorporation into the City's Capital Improvement Projects budget.

Currently JT and ERC have submitted the draft report. Work for the project includes working with the Storm Water Coordinator, Public Works Engineering and Operations Staff, and City Council. Other aspects of the project included public meeting/work sessions for information from constituents on potential problem areas, project management, hydrology and hydraulic calculation/evaluation of problem area infrastructure, opinions of probable construction and total project costs, and a prioritization rating system for existing problem areas and general storm water system maintenance.

Project Budget:	Project Contact:
Design – $118 thousand	Ms. Pam Acre
	303-450-8792

City of Westminster 132nd Avenue Extension

Mr. J.C. York (while at a previous firm) served as project engineer for design of the improvements. The improvements included 1500 lineal feet of collector

street, storm inlets, and 240 lineal feet of 36-inch diameter reinforced concrete pipe.

The City needed to address neighborhood traffic as a result of a new school that was constructed in 1997. The selected alternate to relieve and divert traffic from the adjacent neighborhoods was to extend 132nd Avenue east to Pecos Street. This extension involved bisecting an existing detention pond.

Responsibilities included production of final design and construction documents. The City of Westminster staff conducted the construction administration.

The project was completed in 1998 on schedule and within the allotted budget.

Project Budget:
Design – $45 thousand

Project Contact:
Ms. Sheila Beisel
No longer with City

Upper Gunnison River Water Conservancy District "Upper Gunnison Project"

The Upper Gunnison River Water Conservancy District retained JT with J.C. York as project manager to complete a feasibility analysis for the development of conditional water rights and associated projects referred to as the "Upper Gunnison Project".

The "Upper Gunnison Project" included the evaluation of two potential water storage sites and the alignment of a proposed canal system. Overall project cost is estimated to be on the order of $20-$25 million.

In addition to evaluating the proposed projects and preparing the feasibility report, the responsibilities of the project manager included being regularly available and present in the District's basin during the period of the feasibility analysis, working with the with the District Manager and the Board of Directors, coordinating of the sub-consultant's support analysis, and presenting at Board meetings and work sessions.

Project Budget:
Design – $120 thousand

Project Contact:
Mr. John McClow
(970) 641-6065

Coal Creek Village and Coal Creek Village North

Sorenson Engineering, Inc. retained JT to assist in the design of roads, utilities, site grading, and drainage facilities for Coal Creek Village Development, LLC.

Work began in 2003 and continues in 2006 with the infrastructure nearly complete and housing underway. The site encompasses approximately 70 acres and is situated in Eastern Boulder County adjacent to open space, near a new major medical center, and within a few miles of the Northwest Parkway.

Professional engineering work tasks included street and roadway design, utility design and layout, site grading, on-site and offsite drainage studies, the design of on-site storm water conveyance systems and the design of on-site storm water detention systems. Post construction work included preparation of an as constructed plan set for submittal to the City
Coal Creek Village North builds off the successful Coal Creek Village Project. Services included the design of all roadway, utility, grading, and storm drainage facilities. As part of these services, the adjacent Coal Creek Village detention ponds were analyzed and reconfigured to allow the required detention for this site to be relocated to the existing Coal Creek Village detention pond areas, maximizing the on-site area available for development.

Project Budget:
Design – Confidential

Project Contact:
Mr. Brian Rick
Brian Rick & Associates
303-664-5704

Similar Projects (Alternate Scope)

Big Dry Creek Wastewater Treatment Facility Improvements

JT is part of the Owner's Representative team with Sorenson Engineering, Inc. and JA Cesare & Associates, Inc., for the City of Westminster.

The Big Dry Creek Waste Water Treatment Facility expansion project is a $38 million dollar rehabilitation and expansion project that incorporates a change in treatment process to include Biological Nutrient Removal as well as a new administration building, headworks, bio-filter, secondary clarifier, and secondary digester. Virtually every component of the facility is undergoing some form of update and rehabilitation. The project design was completed in September 2005 and will proceed into a 30 month construction schedule under a negotiated GMP contract. The facility must remain in operation during the entire construction process.

To date, responsibilities have included negotiation of an additional design engineering contract, GMP negotiation with the contractor, and value engineering efforts resulting in $5.5 million of savings and reduced scope. The project is approximately 40% complete.

Project Budget:	Project Contact:
Owner's Rep – $700 thousand	Mr. Kent Brugler
Construction - $38 million	303-430-2400 x2196

Standley Lake Dam & Reservoir Improvements

Mr. Jason Murray was part of the Owners' Representative team, for the Cities of Westminster, Northglenn, and Thornton, in cooperation with JA Cesare and Associates, Inc.

The Standley Lake Dam Rehabilitation project is a $36 million dollar rehabilitation project that incorporates a new labyrinth spillway and RCC/rip-rap lined spillway channel, 1200 feet of conventional tunneling, 1800 feet of micro tunneling under the lake, 120' vertical by 30' diameter valve shaft construction, over 5000 feet of 36" to 102" diameter steel mortar lined pipe, stability berm construction, and construction of new outlet works conduits, buildings, and related infrastructure.

Responsibilities included insuring the Owners interest in the project and maintaining an onsite presence during construction, review and approval of payment application, responding to design changes, and providing a point contact between the design team and engineers, the staff of three cities, and the Contractor. The project finished 4 months ahead of schedule and approximately 4% under budget.

Project Budget:	Project Contact:
Owner's Rep – $450 thousand	Mr. Dan Streitelmeier
Construction - $30 million	303-430-2400 x2179

City of Westminster Salt Storage Facility

JT was retained by the City to provide owner's representative services for the construction phase of the Salt Storage Facility. The facility will include construction of a large wooden framed industrial building to house the City's snow removal equipment as well as storing the salt/sand materials. Other improvements include an access road, parking lot, and drainage facilities.

The project tasks include bidding assistance (project currently out to bid), project management, project coordination with the design engineer and selected

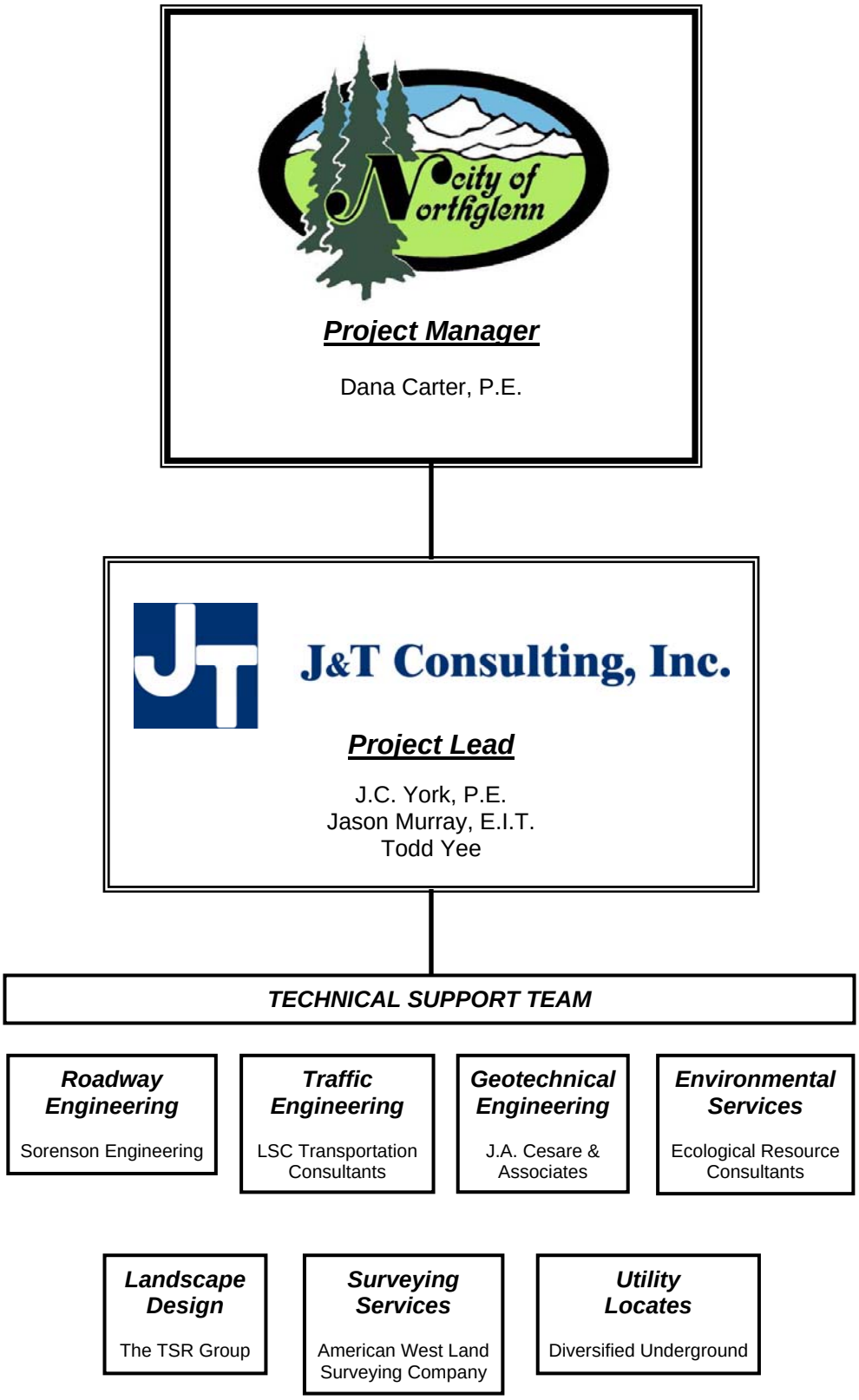
contractor, construction observation, submittals review, change order review and processing, payment application review, monthly project summary, substantial completion walkthrough, punch list development, final completion walkthrough, and coordination of as-built document and GIS requirements with the contractor/engineer.

Project Budget:
Owner's Rep – $30 thousand
Construction - $750 thousand

Project Contact:
Mr. Abel Moreno
303-430-2400 x2194

PROJECT TEAM

ORGANIZATIONAL CHART



J&T Consulting, Inc.

FIRM DESCRIPTION

J&T Consulting, Inc. (JT) is a consulting engineering firm providing a full range of services for land development, water resource, and gravel mine projects to public and private clients.

JT was founded in 2004 by Jason Murray and Todd Yee. J.C. York joined JT shortly after it was founded rounding out JT's current principals. Together the principals hold a wealth of consulting and engineering knowledge.

Project Approach and Philosophy

We strive to **create value by providing solutions** for the project stakeholders – business partners, clients, sub-consultants, agencies, and our employees. JT insists on creating value whether we are leading and managing a project from beginning to end or just an integral piece of a large or small project team.

At JT we provide a **practical approach to evaluating projects** and providing our clients with truly what is needed (i.e. planning, design engineering, project management, financial analysis, owner's representation, communication, etc.) for project solutions and success.

Our approach and the ability to meet and exceed our clients satisfaction is the key to our company's growth and sustainability. We pride ourselves in maintaining project "buy in" and support with our staff, sub-consultants, and clients to ensure a successful project.

Services and Capabilities

JT has completed the following type of projects: water supply, water transmission, water distribution, reservoirs, gravel pit reclamation, gravel mine permitting, street and road improvements, irrigation systems, storm drainage/flood control systems, and sanitary sewer systems.

JT's services include project management, owner's representation, public hearings and neighborhood meetings, feasibility studies, funding investigations, financial analysis, reports, permitting, civil design, plans and specifications, cost approximations, construction contract administration, scheduling, disbursement projections, project cost monitoring and resident review of construction.

The office maintains a network of computers for Computer Aided Drafting (CAD), engineering design, project management, research, data processing and financial management. Our network is constantly protected and updated with the latest software and hardware updates. The network includes state of the art workstations for design and project management and a connection to the internet for research and communications for each employee. The company provides software and technology hardware training to maintain efficiency and skill with the latest technology. Continuing education opportunities are encouraged and pursued whenever possible so that each team member can utilize new knowledge to pass on to our clients.

J&T Consulting, Inc.

We provide professional management, representation, and consulting services to private and public clients interested in efficient and highly accountable solutions to the successful management and completion of their projects.

Welton Dam and Reservoir, Prior to Filling Reservoir, Located in Jefferson County, Colorado.

Evaluation of reservoir storage sites near Gunnison, Colorado.

Canal rehabilitation and expansion feasibility analysis near Gunnison, Colorado.

102" Diameter Steel Pipe in Outlet Tunnel at Standley Lake, Located in Westminster, Colorado

Reservoir Clay Liner Construction.

Water resource planning, feasibility analysis, and owner's representation for numerous water (irrigation and potable) and sewer providers.

Labyrinth Spillway at Standley Lake

Several studies conducted evaluating/masterplanning/designing storage reservoirs in Colorado including gravel pit reservoirs, reservoir rehabilitation, and new reservoir construction.

City of Louisville Non-Potable Waterline Interconnect – Designed 16" transmission line to connect the northern and southern water delivery systems to the City's North & Howard Berry Water Treatment Plants.

Standley Lake Outlet Pipe – 102" butterfly valve at one year post construction inspection in cooperation with Ecological Resource Consultants.

36" sewer by-pass vault at upstream side of the Big Dry Creek Waste Water Treatment Facility, in Westminster, Colorado

Excavating for New Lake Intake at Standley Lake, in Westminster, Colorado

Services Provided for Completion of These Projects Include:

- Owner's Representation Services
- Project Development, Coordination and Management
- Construction Management
- Contract Administration
- Design
- Constructability Analysis
- Value Engineering Analysis
- Permitting – Federal, State, Local
- Cost Estimating and Funding
- Environmental Assessment
- Public Hearings

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J&T Consulting, Inc.

We provide professional management, representation, and consulting services to private and public clients interested in efficient and highly accountable solutions to the successful management and completion of their projects.

Oak Meadows PUD Filings 1 & 2 (150 acres/354 single family units), Filing 1 built out and Filing 2 75% complete on construction of roads and utilities, Located in Firestone, Colorado.

Coal Creek Village – 447 unit single family, multifamily and small business community PUD is located in Lafayette, Colorado.

Coal Creek Village North – Plan builds off the successful Coal Creek Village Project currently under construction to the south. Services included the design of all roadway, utility, grading, and storm drainage facilities.

Land Development – planning, engineering, financial analysis, agency processes/reviews, development and consultant partner selections are all services that can be provided through our network of development consultants and partners.

Services Provided for Completion of These Projects Include:

- Owner's Representation Services
- Project Development, Coordination and Management
- Construction Management/Administration
- Design
- Value Engineering Analysis and Constructability Analysis
- Permitting – Federal, State, Local
- Financial Analysis and Project Partner/Team Selections
- Environmental Assessment
- Public Hearings

Del Camino Junction Business Park – project management, liaison between, CDOT, Weld County, Firestone, the impacted irrigation ditch companies and adjacent landowners, design of all infrastructure, and modeling. 20 lot commercial development.

The Fairways at Pole Creek – Construction plans for on-site and off-site infrastructure. Cost estimates, construction observation and County review support were provided to the developer. Located near Winter Park, Colorado in Grand County.

Plum Creek Commercial Filing One – 180 unit townhome project located in the Town of Castle Rock. The project is an infill site adjacent to a golf course, residential and commercial neighborhoods.

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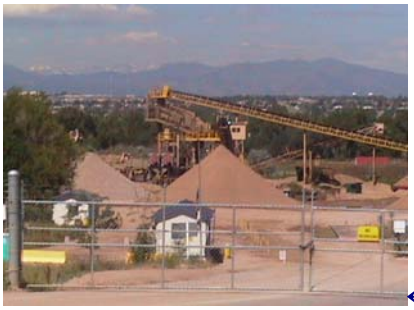

Provided technical support for the permitting of a 300-acre aggregate mine site along the South Platte River. Also provided design, project management, and onsite engineering services for the relocation of a 350 foot cable suspension bridge, construction of an 80 foot pre-stressed concrete bridge, 80 foot steel truss bridge, the relocation and modification of an 800 ton per hour processing facility, and Interstate Highway frontage road access plans.

Services Provided for Completion of These Projects Include:

- Project Development, Coordination and Management
- Construction Management
- Structural Design
- Mine Site Design
- Constructability Analysis
- Value Engineering Analysis
- Permitting – Federal, State, Local
- Cost Estimating
- Environmental Assessment
- Public Hearings

Permitting Assistance and Preparation, Reserve Analysis, Mine Planning and Phasing, and Reclamation Planning and Strategy for numerous Aggregate Mines and Quarries in Colorado and Wyoming.

105' High "Rock Ladder" located in Aggregate Quarry in Douglas County, Colorado.

Provided permitting services, technical support, and engineering services for the relocation and modification of an aggregate processing plant in Weld County.

Provided permitting services and engineering services for the design and construction of a 105' span Conveyor Bridge in Adams County Colorado.

Challenger Pit – 60 acre aggregate mine site included preparation and submittal of all required local, state, and federal permit applications necessary for gravel mining operations to be approved.

Perry Pit East – provided end use reservoir configuration and analysis, flood plain and spillway analysis and design, phasing development, and reservoir slurry wall construction plan.

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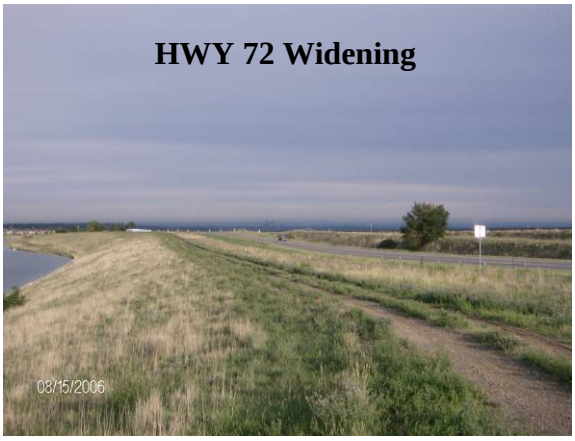
Mr. Jason Murray served as project manager for **The Consolidated Mutual Water Company** and assisted in the preliminary and final engineering design submittal of the Welton Dam and Reservoir to the Office of the State Engineer. The dam is a 125-foot high earth embankment, located in Jefferson County Colorado, with a 5,200-foot crest length and approximately 5,000,000 cubic yards of fill with a completed project cost of approximately $30 million. Jason served as the on-site resident engineer and the Owner's onsite representative and construction manager during the construction phase of the project. The project also included providing the design of the widening of State Highway 72 and the construction of the sub-grade for the expansion as a requirement to construct the dam and reservoir. The paving of the expansion was delayed until the extra lanes are needed.

Mr. Murray was directly responsible for the coordination between the contractor, owner, design team, and the State Engineer's office for Dam safety, as well as the day-to-day construction management of the project. Construction observation work included working with the contractor to insure that construction specifications were met, the construction drawings were followed, quality control measures were implemented, and supervising the onsite quality control and testing staff. Onsite construction management services included review and approval of all requests for information, request for payment, and change order documents.

Aerial View – 60% Complete

Backfilling Keyway

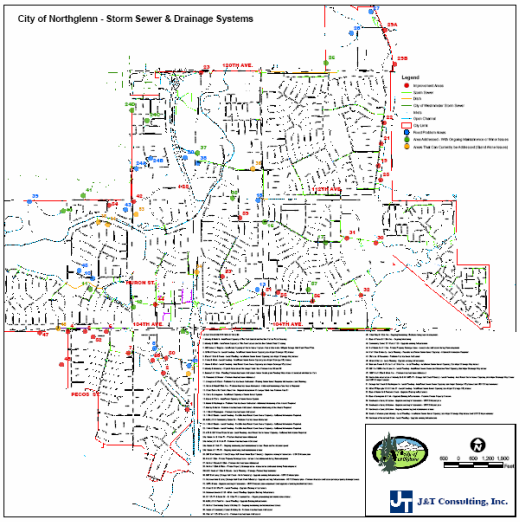
Placing Outlet Pipe

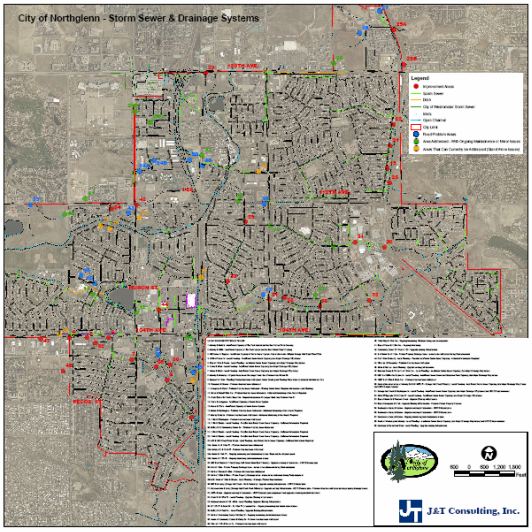


HWY 72 Widening

The City of Northglenn retained **J&T Consulting, Inc.** (J&T) to provide an update to the master drainage plan developed in 1985-86. J&T teamed up with Environmental Resource Consultants, Inc. (ERC) to perform the master plan update. The City had identified several problem areas to be evaluated and tasked J&T/ERC with providing a review of the existing problem areas, identification of new problem areas, providing recommendations for improvements, compiling opinions of probable project costs, and prioritization/classification of improvement areas for incorporation into the City's Capital Improvement Projects budget.

Currently J&T and ERC are evaluating the problem areas and preparing updates to the master drainage plan. Work for the project includes working with the Storm Water Coordinator, Public Works Engineering and Operations Staff, and City Council. Other aspects of the project included public meeting/work sessions for information from constituents on potential problem areas, project management, hydrology and hydraulic calculation/evaluation of problem area infrastructure, opinions of probable construction and total project costs, and a prioritization rating system for existing problem areas and general storm water system maintenance.





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Mr. J.C. York served as project engineer and manager during design and construction of the improvements. The project was funded by the Wyoming Water Development Commission.

The Highline Watershed Improvement District Ditch Rehabilitation Project consisted of pipe drop structures to bypass severely eroded canal areas. The two main pipe drops involved in the project were constructed using 48-inch and 36-inch diameter solid wall polyethylene pipe (2,500 lineal feet) with a Corp's of Engineer's stilling well at the downstream end for energy dissipation.

Responsibilities included production of final design and construction documents, bidding services, resident project representative, construction administration, construction materials testing (soils and concrete), and review and approval of payment applications.

COAL CREEK VILLAGE PUD — PROJECT BRIEF

This is a highly visible, successful and unique 447 unit single family, multifamily and small business community PUD is located in Lafayette, Colorado.

Work began in 2003 and continues in 2006 with the infrastructure nearly complete and housing underway. The site encompasses approximately 70 acres and is situated in Eastern Boulder County adjacent to open space, near a new major medical center, and within a few miles of the Northwest Parkway.

Professional engineering work tasks included on-site and offsite drainage studies, the design of on-site storm water conveyance systems and the design of on-site storm water detention systems. Post construction work included preparation of an as constructed plan set for submittal to the City.

COAL CREEK VILLAGE NORTH PUD — PROJECT BRIEF

This project received City of Lafayette, Colorado Planning Commission Approval on October 26, 2004. The site encompasses approximately 30 acres and will include 300 residential attached units, approximately 35,000 sf commercial, 6 acres of public park land and trail dedication along with approximately 1 acre of private open space tracts.

This plan builds off the successful Coal Creek Village Project currently under construction to the south. Services included the design of all roadway, utility, grading, and storm drainage facilities. As part of these services, the adjacent Coal Creek Village detention ponds were analyzed and reconfigured to allow the required detention for this site to be relocated to the existing Coal Creek Village detention pond areas, maximizing the on-site area available for development.

Coal Creek Village Development, LLC (CCVD) retained **J&T Consulting, Inc.** (JT) through Sorenson Engineering, Inc. to provide value engineering design and analysis for the storm sewer system in Coal Creek Village North as well as an existing drainageway in the City of Lafayette, Colorado. JT had identified several alternate routes for the proposed main storm sewer to convey storm runoff to existing detention ponds south of the developed area that could be modified to handle the required detention storage and allowable releases. This allowed CCVD the ability to provide the required park dedication area to the City of Lafayette while increasing their number of saleable lots.

After reviewing the alternates three were selected to provide more in depth analysis including initial storm sewer sizing calculations, hydraulic modeling, utility interferences, roadway cover constraints, and compilation of opinions of probable project costs. The analysis of the existing drainageway included hydraulic modeling to determine elevations of the hydraulic grade line during a 100-year storm event so an overflow could be constructed to minimize inundation to areas adjacent to the drainageway. The existing drainageway is 72” diameter reinforced concrete pipe and 72” equivalent diameter horizontal elliptical reinforced concrete pipe. The overflow will function as a safety valve in the system to release flow from the drainageway when larger storm events occur.

The eventual selected alternate included approximately 900 lineal feet of 42” and 48” diameter reinforced concrete pipe with the remaining 950 lineal feet being 54” equivalent diameter horizontal elliptical reinforced concrete pipe. Several special fittings (bends and tees) were utilized to reduce hydraulic losses in the system. The proposed modifications to the grading and infrastructure of existing detention ponds were accepted by the City of Lafayette.

BIG DRY CREEK WASTE WATER TREATMENT FACILITY EXPANSION

PROJECT BRIEF

Mr. Jason Murray, of J&T Consulting, Inc. is part of the Owner's Representative team, for the **City of Westminster.**

The Big Dry Creek Waste Water Treatment Facility expansion project is a $38 million dollar rehabilitation and expansion project that incorporates a change in treatment process to include Biological Nutrient Removal as well as a new administration building, headworks, bio-filter, secondary clarifier, and secondary digester. Virtually every component of the facility is undergoing some form of update and rehabilitation. The project design was completed in September 2005 and will proceed into a 30 month construction schedule under a negotiated GMP contract. The facility must remain in operation during the entire construction process.

To date, responsibilities have included negotiation of an additional design engineering contract, GMP negotiation with the contractor, and value engineering efforts resulting in $5.5 million of savings and reduced scope.

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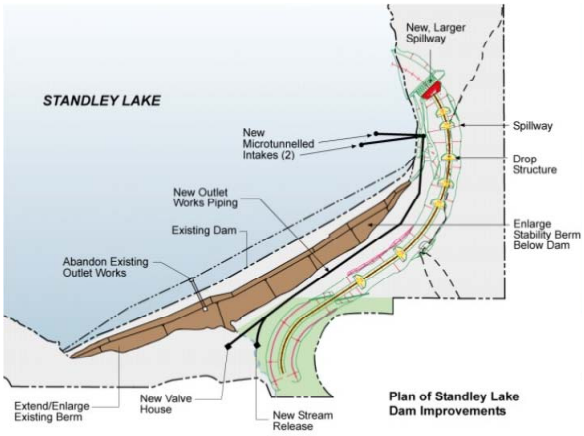
Mr. Jason Murray was part of the Owners' Representative team, for the Cities of **Westminster, Northglenn, and Thornton**, in cooperation with **JA Cesare and Associates, Inc**.

The Standley Lake Dam Rehabilitation project is a $36 million dollar rehabilitation project that incorporates a new labyrinth spillway and RCC/rip-rap lined spillway channel, 1200 feet of conventional tunneling, 1800 feet of micro tunneling under the lake, 120' vertical by 30' diameter valve shaft construction, over 5000 feet of 36" to 102" diameter steel mortar lined pipe, stability berm construction, and construction of new outlet works conduits, buildings, and related infrastructure.

Responsibilities included insuring the Owners interest in the project and maintaining an onsite presence during construction, review and approval of payment application, responding to design changes, and providing a point contact between the design team and engineers, the staff of three cities, and the Contractor. The project finished 4 months ahead of schedule and approximately 4% under budget.



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DEL CAMINO JUNCTION BUSINESS PARK — PROJECT BRIEF

Specific responsibilities included project management, liaison between, CDOT, Weld County, Firestone, the impacted irrigation ditch companies and adjacent landowners, design of all infrastructure, modeling, and over-seeing resident engineering services. This 20 lot commercial development is located at the Northeast corner of I-25 and CO Highway 192 now part of incorporated Firestone, Colorado.

The civil engineering project highlights include a 3 tiered detention pond system that outlets into a Weld County recreational lake, lane improvements to the I-25 frontage road at this key intersection, and extensive irrigation ditch crossings. All work was completed in 2000 in accordance with the final design documents.

MOUNTAIN VIEW INDUSTRIAL PARK — PROJECT BRIEF

Mountain View Industrial Park is located at Havana Street and 96th Avenue in Commerce City Colorado. The site consists of 20 Business, Commercial, Industrial sites on approximately 40 acres.

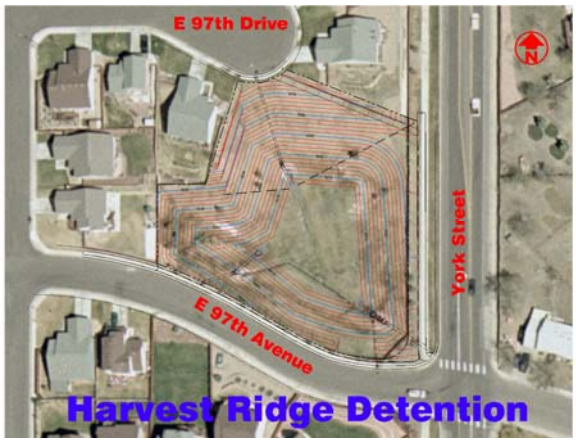
Extensive engineering technical skills were required for this site for offsite street, drainage and utility improvements. City regulations were exceeded on drainage improvements beyond their standard detention requirements to near full retention attenuating off-site flows to effectively mitigate current impacts to master planned drainage systems not currently in place.

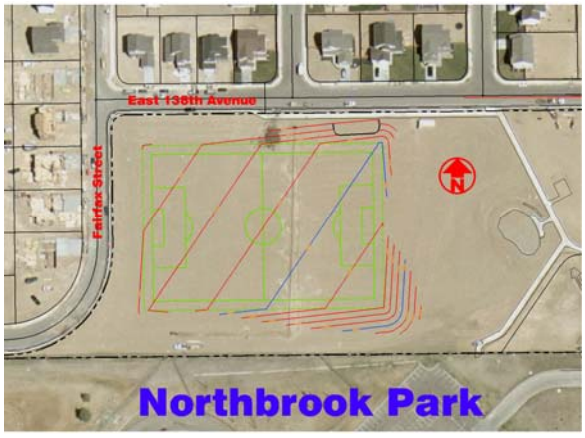
Coordination was also required with an adjacent land owner on the realignment of Havana Street, a major North-South Arterial Street in the Denver metropolitan area.

J&T Consulting, Inc. (J&T) teamed with Sorenson Engineering to provide engineering services to the City of Thornton on their 2005 Parks Rehabilitation project. J&T provided design and support services for the development of construction plans, specifications and construction documents for the project. The project included a wide variety of services for three separate park sites, all of which are currently in the bidding or construction stage.

Services on this project included the design of a new trail system, picnic shelters, and numerous other amenities throughout the park. The two main ponds were upgraded to improve the fishery characteristics of the ponds as well as providing ADA compliant access locations.

Services on this project included the design of a reconfigured detention pond, including extensive retaining wall systems, to improve capacity and maintainability of the existing pond, providing a sidewalk connection between E. 97th Drive and York Street and upgrading the landscaping features to improve the aesthetics of the overall site.





Services on this project included the design of a new regulation size soccer field, optimizing the new turf section and park drainage patterns to insure proper field performance, while preserving existing landscaping features that were present.

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  Fax: 303-920-0343
  Cell: 970-222-9530
  jcyork@j-tconsulting.com

Education:

- BS / Civil Engineering, University of Wyoming
- 1995

Registrations:

- Professional Engineer Colorado and Wyoming

Professional Affiliations:

- Wyoming Engineering Society

Specific Project Experience

Upper Gunnison River – Water Conservancy District
Gunnison, Colorado

J.C. served as project manager, for the Upper Gunnison River Water Conservancy District, during the feasibility analysis for the development of conditional water rights and associated projects referred to as the "Upper Gunnison Project".

The "Upper Gunnison Project" included the evaluation of two potential water storage sites and the alignment of a proposed canal system. Overall project cost is estimated to be on the order of $20-$25 million.

In addition to evaluating the proposed projects and preparing the feasibility report, the responsibilities of the project manager included being regularly available and present in the District's basin during the period of the feasibility analysis, working with the with the District Manager and the Board of Directors, coordinating of the sub-consultant's support analysis, and presenting at Board meetings and work sessions.

Highline Watershed Improvement District Ditch Rehabilitation Project – Saratoga, Wyoming

J.C. served as project engineer and manager during design and construction of the improvements. The project was funded by the Wyoming Water Development Commission.

The Highline Watershed Improvement District Ditch Rehabilitation Project consisted of pipe drop structures to bypass severely eroded canal areas. The two main pipe drops involved in the project were constructed using 48-inch and 36-inch diameter solid wall polyethylene pipe (2,500 lineal feet) with a Corp's of Engineer's stilling well at the downstream end for energy dissipation.

Responsibilities included production of final design and construction documents, bidding services, resident project representative, construction administration, construction materials testing (soils and concrete), and review and approval of payment applications.

Specific Project Experience Cont.

Denver Wells, LLC – Water Line Design – Denver, Colorado
J.C. served as project manager during the conceptual, preliminary, and final design of water transmission line from four different well heads in downtown Denver.

The Denver Wells Project consisted of 8-inch waterline from the well heads to existing storm sewers where the water being pumped from the wells could be delivered to the South Platte River for augmentation use.

Responsibilities included coordination of sub-consultants for phase I and II environmental audits, storm sewer infrastructure investigation, potholing of existing utilities, production of final design and construction documents, and project management.

Sinclair Oil Refinery Hydrocracker Unit – Sinclair, Wyoming
J.C. served as project engineer performing the construction materials sampling and testing for five separate construction companies on the project.

J.C. was directly responsible for the reporting of test results to the contractor and the owner. Nuclear moisture and density testing of the fill was provided for moisture and density control per the specifications. Sand cone testing was provided for correlation of moisture content and wet density. Concrete testing and sampling was performed for cast-in-place structures and foundations. The tests included air, slump, yield, and compression.

Hugus Ditch Rehabilitation Project – Saratoga, Wyoming
J.C. served as project engineer and manager providing assistance to the Wyoming Water Development Commission by conducting a Level II Rehabilitation Study of the ditch system within the town limits. The project consisted of replacing existing street crossings with concrete box culverts to improve flow capacity and concrete lining in areas where leakage was most prevalent.

Lost Creek Compressor Station – Wamsutter, Wyoming
J.C. served as project engineer performing the construction materials sampling and testing. Soils testing included nuclear moisture and density. Concrete testing and sampling for foundations included air, slump, yield, and compression tests.

Coal Creek Village PUD – Lafayette, Colorado
Assisted with the drainage design, hydraulic modeling, and final drainage report for a large single family residential, multi-family residential, and commercial subdivision.

Kern Reservoir Outlet Structure & Flow Measurement Devices – Windsor, Colorado
J.C. served as project manager for a feasibility study to determine pro's and con's of using Rubicon gates versus long-throated flumes and radial gates to provide flow measurement and canal flow control.

Firestone Meadows Multi-Family Residential Development – Firestone, Colorado
Assisted with the design and preparation of construction documents, roadway plan and profiles, utility design, and drainage facility design and final report.

Rawlins Pre-Treatment Water Plant – Rawlins, Wyoming
Performed construction materials sampling and testing. Soils testing included sampling, standard proctor, and nuclear moisture and density testing. Concrete testing and sampling for foundations and hydraulic structures included tests for air, slump, yield, and compression.

Specific Project Experience Cont.

Owl Creek Reservoir – Ault, Colorado
Assisted with development of a rehabilitation plan for Owl Creek Reservoir and Dam. Owl Creek Reservoir is a 700 acre-foot storage reservoir with a one mile long sand embankment. J.C. assisted with the alternate spillway design and construction document preparation.

Fulton Lakes Mine Site – Adams County, Colorado
Aggregate Industries, Inc.
Assisted with design and construction observation of the riverbank and pit side protection. J.C. provided design, project management, and coordination with Urban Drainage on required improvements.

Experience Summary

J.C.'s engineering experience is very diverse, with project experience in reservoir design and construction, construction materials testing, irrigation rehabilitation projects, sanitary sewer replacement, raw waterline design, drainage and hydraulics, construction management, roadway design, residential and commercial site development, project management and scheduling, master planning and program development, and feasibility studies.

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Treasurer/Owner:

- **Bruce Murray Construction, Inc.**
  4252 Weld County Rd 27
  Fort Lupton, CO 80621
  Ph/Fax: 303-857-4995
  Cell: 720-235-7334

Education:

- BS / Civil Engineering, University of Colorado – Boulder / 1997

Registrations:

- Engineer in Training State of Colorado
- Survey Intern, State of Colorado

Professional Affiliations:

- Associate Member of American Society of Civil Engineers

Specific Project Experience

City of Northglenn Master Drainage Update
The City of Northglenn

Jason is serving as project manager for the update to the master drainage plan for the City of Northglenn. The project is 90-95% complete and JT has submitted the draft report to the City.

The City had identified several problem areas to be evaluated and tasked JT with providing a review of the existing problem areas, identification of new problem areas, providing recommendations for improvements, compiling opinions of probable project costs, and prioritization/classification of improvement areas for incorporation into the City's Capital Improvement Projects budget.

Responsibilities included public meeting/work sessions for information from constituents on potential problem areas, project management, hydrology and hydraulic calculation/evaluation of problem area infrastructure, opinions of probable construction and total project costs, and a prioritization rating system for existing problem areas and general storm water system maintenance.

Big Dry Creek Waste Water Treatment Facility Expansion
The City of Westminster

Jason is serving as part of the Owners Representative team during the design and construction, in cooperation with Sorenson Engineering, Inc.

The Big Dry Creek Waste Water Treatment Facility expansion project is an estimated $35-$40 million dollar rehabilitation and expansion project that incorporates a change in treatment process to include Biological Nutrient Removal as well as a new administration building, headworks, bio-filter, secondary clarifier, and secondary digester. Virtually every component of the facility is undergoing some form of update and rehabilitation. The project is scheduled for completion of design in June 2005 and will proceed into a 30 month construction schedule under a negotiated GMP contract. The facility must remain in operation during the entire construction process.

To date, responsibilities have included negotiation of an additional design engineering contract, GMP review with the contractor and assisting with completing the design phase.

Specific Project Experience Cont.

Standley Lake Dam Improvement Project
The Cities of Westminster, Northglenn, and Thornton

Jason served as part of the Owners Representative team, for the three Cities, during the construction, in cooperation with JA Cesare and Associates, Inc.

The Standley Lake Dam Rehabilitation project was a $36 million dollar rehabilitation project that incorporated a new labyrinth spillway and RCC/rip-rap lined spillway channel, 1200 feet of conventional tunneling, 1800 feet of micro tunneling under the lake, 120' vertical by 30' diameter valve shaft construction, over 5000 feet of 36"to 102" steel mortar lined pipe, stability berm construction, and construction of new outlet works conduits, buildings, and related infrastructure.

Responsibilities included insuring the Owners interest in the project and maintaining an onsite presence during construction, review and approval of payment application, responding to design changes, and providing a point contact between the design team and engineers, the staff of three cities, and the Contractor. The project finished 4 months ahead of schedule and approximately 4% under budget.

Fortune Reservoir
The Consolidated Mutual Water Company

Jason served as project manager and assisted in the preliminary and final engineering design submittal of Fortune Dam and Reservoir to the Office of the State Engineer. The dam is a 125-foot high earth embankment with a 5,200-foot crest length and 5,000,000 cubic yards of fill with a completed project cost of approximately $30 million. Jason served as the on-site resident engineer and the Owner's onsite representative during the construction phase of the project.

Jason was directly responsible for the coordination between the contractor, owner, design team, and the State Engineer's office for Dam safety, as well as the day-to-day construction management of the project. Construction observation work included working with the contractor to insure that construction specifications were met, the construction drawings were followed, quality control measures were implemented, and supervising the onsite quality control and testing staff. Onsite construction management services included review and approval of all requests for information, request for payment, and change order documents.

Oak Meadows Residential Development
Assisted with the permitting, design, and preparation of construction documents, roadway plan and profiles, utility design, and drainage facility design for a 300 lot residential development.

Del Camino Junction Business Park
Assisted with the permitting, design, and preparation of construction documents, roadway plan and profiles, utility design, and drainage facility design for a 20 lot (plus) commercial development.

Mountain View Industrial Business Park
Assisted with the permitting, design, and preparation of construction documents, roadway plan and profiles, utility design, and drainage facility design for a 28 lot Commercial/Industrial development

Owl Creek Reservoir
Owl Creek Reservoir Company
Developed a rehabilitation plan for Owl Creek Reservoir and Dam. Owl Creek Reservoir is a 700 acre-foot storage reservoir with a one mile long sand embankment. Jason was also responsible for developing the construction documents associated with the dam rehabilitation.

Specific Project Experience Cont.

Howe Haller Reservoir
Lafarge, Inc.
Assisted with the design and project management of a 2,200-acre foot lined gravel pit water storage reservoir for Lafarge, Inc. This reservoir is a part of a series of reservoirs (6,500 acre-feet total) that are currently under construction. This project involved all phases of design and construction of the reservoir as well as coordination between the government agencies.

Fulton Lakes Mine Site
Aggregate Industries, Inc.
Assisted with the permitting of a 300-acre mine site along the South Platte River. Jason also provided design, project management, and onsite engineering services for the construction of a 350 foot cable suspension bridge, 80 foot pre-stressed concrete bridge, 80 foot steel truss bridge, and an 800 ton per hour processing facility, and I-76 frontage road access plans

Deer Creek Canyon Rock Ladder
Aggregate Industries, Inc.
Designed and prepared drawings for a 75' high tower and a 105' steel truss bridge to connect the tower to the mining bench.

Challenger Project
Apex Materials, Inc.
Jason served as project manager for the State (DMG) and local permitting of a 60-acre mine site along the South Platte River. Jason also provided design engineering and management services for the mining slope stability analysis, ground water analysis, mine site layout, reclamation plan and reservoir design and development, project financial analysis, sub consultant coordination, and public process support.

Experience Summary

Jason's field is project management, program development, and design and construction of civil projects. His engineering experience remains diverse, with project experience in sand and gravel mine permitting, reservoir design and construction, drainage and hydraulics, construction management, roadway and pipeline design, structural steel and concrete design, and residential and commercial site development.

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  Cell: 303-947-8742
  toddyee@j-tconsulting.com

Education:

- 3 Years University of Colorado, Boulder - Civil Engineering Program

Specific Project Experience

Lafayette, Co – Coal Creek Village PUD & Coal Creek Village North PUD
These adjacent developments encompass 100 acres and include over 400 residential, multi family, and commercial units. Services included the analysis and design of all public infrastructure required for the developments. An overall drainage study and stormwater conveyance design was also done to optimize the sites to enable the sharing of a three tiered detention pond system.

Keenesburg, Co –Fair Meadows, PUD
Services for this 23 lot single family infill development included the analysis and design of all public infrastructure required for the development. Offsite roadway, utility and drainage systems were analyzed and additional offsite elements were designed to upgrade the affected infrastructure.

Grand County, Co - Legacy Park Ranch Cluster Development
Services on this 106 unit residential development on an 1800 acre tract of ground included roadway design of over 10 miles of on-site and off-site local and collector systems, drainage system analysis and design, and numerous site features and amenities.

Grand County, Co - Fairways at Pole Creek Golf Course
Design work for this project picked up where preliminary plans left off and included street, drainage, utility and water supply for the homes to be built in this 250 estate lot community along with design support services to the expansion of a 9-hole golf course onto an existing 18 - hole course. Accel/decel laneage design, along with permitting and construction support was also provided for Left and Right Turn lanes on US Highway 40.

Firestone, Co – Oak Meadows PUD
Services for this 300 lot residential development encompassed all site/civil aspects including lot/street layout, roadway design, grading, drainage system analysis and design, water, sanitary sewer, and storm sewer utility design, off site water, sanitary sewer, and storm sewer utility design, and construction assistance.

Firestone, Co – Del Camino Junction Business Park
Services for this 20 lot commercial development encompassed all site/civil aspects including lot/street layout, roadway design, grading, drainage system analysis and design, water, sanitary sewer, and storm sewer utility design, accel/decel laneage design and permitting for Interstate 25 frontage road, construction cost estimating, public process assistance, and construction assistance.

Specific Project Experience Cont.

Brighton, Co – Challenger Pit
Services on this 60 acre site included preparation and submittal of all required local and state permit applications necessary for gravel mining operations to be approved. Aspects addressed were mining and reclamation plan development, slope stability analysis, gravel reserve evaluation, plant site layout, groundwater analysis and mitigation, traffic study analysis, roadway maintenance agreements, utility relocation, end use reservoir configuration and analysis, phasing development, oil and gas lease requirements, surrounding property owner negotiations, project financial analysis, sub consultant coordination, and public process support.

Ovid, Co – Ovid Reservoir
Services on this site included developing the preliminary design, construction plans and design report for a 15,000 linear foot, thirty five foot high jurisdictional dam. Items addressed included the water delivery systems, dam embankment, outlet works, emergency spillway, and outfall system. The design included analyses of embankment slope stability, seepage, erosion protection, channel conveyance systems, surface drainage, reservoir capacity, reservoir financial analysis, construction costs, potential alluvial storage, earthwork balance, groundwater impacts, and all associated reservoir infrastructure.

Miscellaneous Site Specific Plans
Provided specialized and general designs, reports, construction drawings, bid documents, coordination and construction assistance, including all civil engineering tasks for projects such as Foothills Bible Church, Northside Baptist Church, Texas Roadhouse, Pavestone, Lafayette Industrial Park, Moutain View Industrial Park, Buffalo Run Golf Course, clubhouse, cart barn and maintenance facility, and Perkins.

Miscellaneous Gravel Pit and Quarry Services
Provided specialized and general designs, reports, construction drawings, coordination and construction assistance, including plant site layout, structures, reserve analysis, mine planning and phasing, reclamation planning and strategy, visual impact analysis and modeling, groundwater analysis, slope stability, local and state permitting, drainage analysis and design, floodplain delineation, silt pond design, dewatering system design, and public process assistance for projects such as Howe/Haller Pit, Dunes Pit, Riverside Pit, Specification Aggregates Quarry, Deer Creek Canyon Quarry, Thornton Pit, Hazeltine Pit, and Platte Valley Pit.

Miscellaneous Reservoir and Water Storage Services
Provided specialized and general designs, feasibility studies, reports, construction drawings, bid documents, coordination and construction assistance for below and above grade water storage projects, including zoned embankments, homogenous embankments, slope stability, liners, spillways, outlet works, drainage analysis, floodplain analysis, open channel conveyance analyses, filters, toe drains, dam classification reports, inundation plans, slurry walls, delivery systems, outfall systems, wet wells, erosion protection, seepage, reservoir capacity, water storage financial analysis, construction cost estimating, and all associated reservoir infrastructure. Representative projects include Welton Reservoir, Tigers Reservoir, Magic Mountain Reservoir, Legacy Park Reservoir, Owl Creek Reservoir, Howe/Haller Pit, Transit Mix East Pit, Transit Mix Rocky Ford Pit, and Hazeltine Pit.

Miscellaneous Quality Assurance Inspection and Testing Services
Provided on site and laboratory quality assurance inspection and testing of construction materials and methods including concrete, grout, mortar, steel, bituminous pavement, soil, and construction aggregates for projects such as Denver International Airport, City of Longmont Ute Highway Water Storage Tanks, Mclane Distribution Warehouse, Erie Airport Runway Assessment, City of Longmont Civic Center, Case Logic, St Vrain Valley Schools, Hover Road Improvements, City of Louisville Downtown Rehabilitation, Alexander Dawson School Expansion, Goosehaven Reservoir, and Fairmont Reservoir.

2006 Rate Schedule

Professional Services

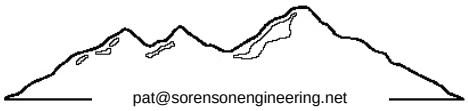
Clerical Support	$45
Designer	$65-$75
Senior Designer	$75-$85
Project Manager / Owner's Representative	$85 - $105
Senior Technical Advisor	$105 - $125
PE I (Design & Field)	$75 - $105
PE II (Project Management & Public Hearings)	$105 - $125
PE III (Expert Witness)	$150

Expenses

Mileage	Current IRS Rate
Office Materials, Postage & Reproduction	Cost + 5%
Normal Density Bond Plots (line work)	$1.50 / sf
High Density Bond Plots (images, photos, charts, etc.)	$4.00 / sf
Mylar Media Surcharge	$5.00 / sf
Grey Scale prints (text)	$0.05 / page
Color Prints (text)	$0.10 / page
High Density Prints (images, photos, charts, etc.)	$1.00 / page

Sorenson Engineering, Inc.

Sorenson Engineering, Inc.



pat@sorensonengineering.net

Patric N. Sorenson, PE
1169 Aspen Street, Broomfield, CO 80020
Ph/Fax: 303-439-0381

"Our mission is to provide our civil engineering expertise to enhance the quality of life for all communities we are privileged to serve."

Technical Expertise

Patric N. Sorenson, PE and Owner of Sorenson Engineering, Inc. has 24 years of city engineering, general civil engineering design and project management experience. His past employment includes 12 years working for two different City's and similarly, 12 years working for two different engineering firms in Colorado and North Dakota.

Sorenson Engineering's expertise encompasses project management, owner's representation, construction management and observation, civil design, construction specifications, reports, right of way acquisition, expert witness, neighborhood meetings, public hearings, inspection, survey, testing, and cost estimating for a wide array of community enhancement improvements. These improvements include transportation; storm water and flood control; sanitary sewer and water systems; reservoirs, permitting (Local, State, and Federal), parks, trails and open space; and public operation facilities. The specific areas these apply to include:

- ✓ Urban and rural business, commercial and residential development
- ✓ Water supply systems , pump stations, dams and water storage reservoirs
- ✓ Streetscape, traffic mitigation, highway accel-decel lanes, and traffic controls
- ✓ Site, grading, and drainage plans for private and public facilities including churches and schools
- ✓ Recreational facilities, golf courses and city parks
- ✓ Permitting, planning, and engineering support for aggregate mining.

Design philosophy, approach and elements

Common principals do not apply to all issues, problems and opportunities. Design standards or criteria should be considered as minimum guidelines and not all-encompassing for preparation of final documents. The key project elements must be clearly identified up front in a project management plan and at a minimum need to include:

- ✓ The goals and objectives
- ✓ Scope, schedule, and financial plan
- ✓ Team organization, resources and responsibilities
- ✓ Communication plan
- ✓ Quality control process
- ✓ Alternate team support options and a contingency/risk management plan
- ✓ Successful and Complete Closure Plan

The overall success of any plan or program is dependant on timely, open and continuous communications in all arenas whether by email or facsimile, telephone or writing, or in person. Every project team and the communities they work in will thrive by following this philosophy, approach and these elements, especially the communication component.

Resources

Sorenson Engineering, Inc. has developed a relationship based teamwork operation with highly capable, skilled and trusted resources in the Denver metro community. These resources provide expertise in CADD, environmental, geotechnical, structural, and survey with state of the art technological skills and equipment along with up to date liability and licensing fulfillments.

Sorenson Engineering, Inc.

pat@sorensonengineering.net

Patric N. Sorenson, PE
1169 Aspen Street, Broomfield, CO 80020
Phone: 303-439-0381 Fax: 303-438-8681

We provide professional design and consulting services to private and public clients for community infrastructure, business, commercial, residential, and recreational improvements.

South Public Road Full Engineering Services for Downtown Business Street Improvement District

South Boulder Road Full Engineering Services to Various Segments Throughout Entire City

Coal Creek Trail Design, ROW Acquisition and Construction

US 287 – Owner's Rep., Utility Relocates, Water Supply, and Accel-Decel Lanes

Civil Engineering Services for the Completion of These Community Enhancement Projects Included:

- Design of hard and soft surface improvements
- Project Coordination and Management
- Permitting – Federal, State, Local
- Cost Estimating and Funding
- ROW Negotiations
- Public Hearings
- Water Supply
- Storm Water Management
- Utility relocations for:
  - Potable Water
  - Sanitary Sewer
  - Other Dry Utilities

Webster Lake Pedestrian Bridge, Perimeter Walkway and Parking *("2001 CCASLA Professional Design Awards Program-Merit Award")*

City of Broomfield Arterial Street Traffic Calming & Separation *("1999 Colorado APWA Medium Size Community Minor Arterial Street Transportation Improvement Award")*

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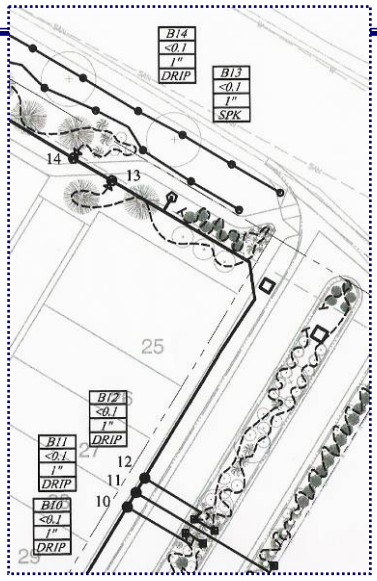
Our technical skills also extend to water resources encompassing non-potable and potable supply, stormwater management, water quality enhancement, and reservoirs.

Lead Engineer for Webster Lake Water Supply Interconnection from 4 sources, Aquatic habitat design, Site "Hard", Soft", and Recreational Facility replacements. Before and after photos provided by City of Northglenn. Opened July 4, 2001.

Civil Engineering Services for the Completion of These Community Enhancement Projects Included:

- Project Coordination and Management
- Permitting – Federal, State, Local
- Design and construction review
- Storm Water Management
- Public Hearings
- Sanitary Sewer
- Water Supply
- Dry Utilities

Review of design and lead engineer for construction observation of 5 MG potable water storage facility



Project Manager for Landscape and Irrigation System Design completed and approved under 2004 “drought” based development code revision.

Lead Engineer for 2000 ac-ft water storage supplied by Boulder Creek. Design and Construction Review included interconnections, pump station, and measuring systems

Lead Engineer form stormwater modeling of multi-basin water shed. Services extended from Master Planning support to permitting through federal, state & local agencies and construction review.

136TH AVE. ARTERIAL STREET SEPARATION — PROJECT BRIEF

Arterial Traffic Calming and Streetscape
"1999 APWA Medium Community Street Design Award"

This project involved the management and design for an arterial expansion and separation improvements includes a frontage road, landscape, striping, and signage in accordance with AASHTO requirements.

Specific engineering services included information gathering, alignment analysis, overseeing landscape and irrigation design, signage and striping, drainage controls, utility adjustments, neighborhood meetings, city staff meetings, construction plans and specifications, and construction assistance

US 287 ACCEL- DECEL & UTILITY RELOCATES — PROJECT BRIEF

This segment of a multi city project in northern metropolitan Denver involved the widening and realignment of roughly 15 miles of and urban highway connecting Broomfield, Lafayette, Longmont and unincorporated Boulder County, Colorado. Engineering services included City representative at CDOT hearings and review meetings, project coordination, utility relocation designs and construction coordination.

Additional work outside of the specific project included design and representation of a private developer and the City of Lafayette for accel – decel lane improvements to service a new shopping center.

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WEBSTER LAKE IMPROVEMENTS — PROJECT BRIEF

Northglenn, CO - EB Raines Park/Webster Lake Design
"2001 ASLA Award Winning Urban Park Redevelopment Project"

The project involved the management and design of the reconstruction of all lake facilities including recreational structures; the mixture of lake, ditch, well, and potable water supplies; regrading and lining the lake bottom; replacing a perimeter concrete path; adding and replacing retaining walls; landscape beds and trees; drainage improvements; three pedestrian bridges; aquatic habitat improvements; and enclosing a large irrigation ditch.

Project management extended to coordination with an aquatics scientist, n architect, an irrigation consultant, and City Staff.

COAL CREEK TRAIL SYSTEM — PROJECT BRIEF

Lafayette, CO – Pedestrian, Cycling & Maintenance Vehicle Trail Design

This link to the Boulder County Trail System was initiated through and intergovernmental agreement between the Urban Drainage and Flood Control District, Boulder County, the City of Louisville and the City of Lafayette.

Engineering services included alignment, drainage design, material specifications and bridge alignments and locations. Services also extended to easement acquisition and utility crossings. The trail system provides for a soft surface non-motorized pathway that is sufficient to support routine maintenance equipment and emergency repair equipment.

The trail is located roughly a minimum of 3 feet above the normal water surface of Coal Creek and therefore is subject to a high frequency of flooding therefore bridges, gates, etc. have breakaway design features The trail alignment is also utilized for underground utilities including water, sewer and telecommunication systems.

President/Owner:

- **Sorenson Engineering Inc.**
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  Broomfield, CO 80020
  Ph/Fax 303-439-0381
  Cell 720-560-0381
  pat@sorensonengineering.net

Registrations:

- Professional Engineer
  Colorado and North Dakota

Awards:

- American Public Works Association Institute of Municipal Engineers: 1993 Engineer of the Year
- Professional Engineers of Colorado: 1998-1999 Outstanding Service Award

Professional Affiliations:

- Professional Engineers of Colorado

Previous Work Experience:

- Applegate Group, Inc.
  Westminster, CO
  1995-2004, Project Engineer, Project Manager, Community Enhancement Group Leader
- City of Lafayette, CO
  1984-1995
  City Engineer
- City of Dickinson, ND
  1982-1984
  Assistant City Engineer
- Swenson, Hagen & Co.
  Bismarck, ND
  1979-1982
  Engineer in Training

Education:

- BS / Civil Engineering
  University of North Dakota/1979

Featured Community Enhancement Experience

Thornton, CO – Parks Rehabilitation Projects Three sites are currently in construction to include a soccer field restoration, a detention pond and City Park upgrade with retaining walls and landscape improvements and a fishery site with four ponds to include pedestrian bridges, shelters, and an ADA accessible pier over the water, and numerous other amenities. Sorenson Engineering, with a diverse team of skilled experts completed the design and specifications for all of these facilities in 2005.

Thornton, CO – Treated Water System Improvements This 2005 project involved the replacement of a neighborhood watermain, services, hydrants, pavement restoration and upgrades/ repairs to 6 PRV's throughout the City. Project submittals included civil and electrical engineering plans, specifications, traffic control, and cost estimates.

Lafayette, CO – 2005 Street Improvements In 2005, the City programmed their largest series of street improvement projects in 20 years retaining Sorenson Engineering for specialty design of a downtown street repair and replacement of a residential street. Certain details could not be reasonably determined during design requiring field support work to value engineer certain details.

White River National Forest, CO - Roadway and Drainage Systems Sorenson Engineering was retained for preliminary design of 6 miles of a roadway system and for final design of 2 miles of a roadway system to service 7 natural gas pad sites in a highly environmentally sensitive area. All roads were designed for a 30 year life to consider future restoration to the site back to a "natural" condition. Design criteria included AASHTO standards, Federal Highway standards, and US Forest service site specific permitting and licensing criteria.

Louisville, CO – 66th Street Non-potable Water Interconnect The City has recently completed the construction of a 16"-30" water line through part of Boulder County that provides for the transfer of water from Eldorado Springs to Marshall Lake. Sorenson Engineering provided project management, design and resident engineering lead for the City; also provided all permitting including the Boulder County 1041 process, the Corps of Engineer's nationwide permit, and the CDOT utility permit.

Northglenn, CO - EB Raines Park/Webster Lake Design
"2001 ASLA Award Winning Urban Park Redevelopment Project" Pat Sorenson provided management and design for reconstruction of lake facilities including recreational structures; the mixture of lake, ditch, well, and potable water supplies; lining the lake bottom; replacing a perimeter concrete path; adding and replacing retaining walls; landscape beds and trees; drainage improvements; 3 pedestrian bridges; and, enclosing a large irrigation ditch.

Broomfield, CO - Kohl Street and 136th Avenue Collector/Arterial Traffic Calming and Streetscape
"1999 APWA Medium Community Street Design Award"
This project involved the management and design for an arterial expansion and separation improvements includes a frontage road, landscape, striping, and signage in accordance with AASHTO requirements.

Other Project Engineering Experience

Lafayette, CO - Indian Peaks Golf Course Regional Storm Water Mitigation Facility
Specific responsibilities included project management; liaison between USCOE, CDOT, Boulder County UDFCD, Louisville, and Lafayette; design; modeling; and, resident engineering services. This facility functions as a multi-jurisdictional metro-Denver urban drainage and flood control district storm water control system including dual detention pond controls and inlet and outlet control systems.

Commerce City, CO - First Creek and DFA 0055 Drainage Analysis
Project management, field research, and report writing encompassed a full analysis for existing and future developed conditions on large watersheds located in the Rocky Mountain Arsenal and downstream areas. Evaluation of topographical, infiltration, environmental, ground cover, wildlife, and master planning, including a RMA environmental remediation plan. Work included coordination with Adams County, RMA, UDFCD, Commerce City, and property owners.

Lafayette, CO - Public Road Streetscape
As City Engineer, work included participation at public hearings, and provided costing, design and inspection of the Commercial Special Street Improvement District for full concrete restoration; drainage; lighting; irrigation system; and, landscape improvements in downtown Lafayette, CO.

Lafayette, CO - South Boulder Road Widening
As City Engineer, responsibilities included full range project management, public hearing and owner coordination for design and inspection of a 2-mile urban arterial widening including landscape median improvements with ISTEA funding.

Miscellaneous Site Specific Plans
Provided specialized and general design, reports, and/or participation in hearings, including presentations for all civil engineering tasks including Denver Water Board Operations and Maintenance Center, Perkins, Albertsons, Texas Road House, Buffalo Run Golf Course Clubhouse, Basin Electric Corporate Center, and Days Inn. Other site experience includes site development planning and engineering, CDOT access designs, and extensive support services for numerous municipal facilities including plants, maintenance shops, recreation centers, and a City Hall.

City of Bismarck, ND
Lead Engineer for Zonta Park Regional Drainage Improvements Design and Construction Observation, East City Regional Detention Pond and Outfall Study, and Hillside Park Storm Sewer Outfall.

Other Residential and Business Development Private Sector Experience

Combined with the above descriptions, consulting civil engineering skills include the following:

- Ten years of design, resident engineering and survey support services on municipal street, storm drainage and rural water and sewer systems including large scale developments along the front range and western slope of Colorado for projects such as the Coal Creek PUD in Lafayette, Firestone Meadows Apartments, Fairways at Pole Creek in Grand County, and Legacy Park in Grand County.

Other Municipal Engineering Public Sector Experience

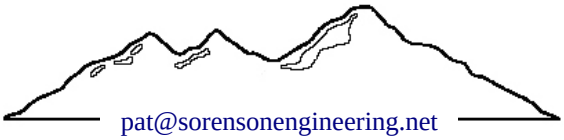
Also combined with the above descriptions, public civil engineering skills include the following:

- Twelve years of serving for municipal engineering departments on street; water and sewer systems; traffic signals; traffic studies; alignment studies; easement acquisition; and, detailed design and construction supervision of numerous major and minor infrastructure components.

References

Available Upon Request

Sorenson Engineering, Inc.



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2006 RATE SCHEDULE

PROFESSIONAL SERVICES

Clerical Support	$ 40.00
CAD I	$ 60.00
CAD II	$ 70.00
EIT I	$ 80.00
EIT II	$ 90.00
PE I (Design & Field)	$ 100.00
PE II (Review, Certification, Meetings)	$ 120.00
PE III (Public Hearings & Expert Witness)	$ 150.00

REIMBURSABLE EXPENSES

Mileage	IRS Rate
Office Materials, Electronic Data, Postage & Reproduction	Cost + 10%
Plots, Prints, and Other provided supplies attributable to work	Cost + 10%
Subconsultants	Cost + 10%

LSC Transportation Consultants

LSC provides consulting services in all phases of transportation planning and traffic engineering throughout the western United States. With three offices in Colorado and California, the goal of the firm is to perform highly competent planning and engineering services within the transportation field. The firm is the successor to Leigh, Scott & Cleary, Inc. and has provided consulting services continuously since 1975.

LSC's clients include government agencies, institutions, private organizations and individuals. We specialize in

- traffic engineering
- traffic systems management
- traffic signal design
- multimodal transportation planning
- transit planning and operations
- parking analysis
- parking facility design
- traffic impact studies
- access planning and design
- roundabout analysis and design
- bicycle/pedestrian circulation.

The firm's strength lies in the staff's broad range of professional experience. Transportation planning and traffic engineering studies requiring a timely, personal response by experienced professionals are the company's specialties. We take pride in offering the sensitivity, flexibility, and innovative ability that small firms characteristically provide best.

Visit our website at www.lsctrans.com to learn more about our firm, our employees, and our services.

LSC Transportation Consultants, Inc.

1889 York Street
Denver, CO 80206
(303) 333-1105

P. O. Box 5875
2690 Lake Forest Road
Tahoe City, CA 96145
(530) 583-4053

516 North Tejon Street
Colorado Springs, CO 80903
(719) 633-2868

SERVICES OFFERED

Transportation Planning

In order to best serve the goals of a particular community, large or small, it is generally recognized that planning new or improved transportation services must be viewed in a comprehensive context—services or individual transportation systems are merely parts of a total system. The approach is designed to consider all possible transportation elements and to select those which best provide a solution to the problem. Transportation systems planning attempts to relate the reasons for travel (work, shop, etc.) and travel dimensions (trip length, etc.) with travel modes and transportation facilities. LSC applies the principles of systems management and planning to all work involving transportation planning for communities and proposed land use changes.

Mountain Resort Transportation Planning

LSC has developed an extensive list of transportation plans for mountain resort communities throughout the American West, including Aspen, Vail, Squaw Valley, Mammoth Lakes, Telluride, Park City, Jackson, Steamboat Springs, and Summit County, Colorado. Working for municipalities, resort developers, and transit agencies, we have successfully developed plans and designs for roadways, parking systems, transit systems, and pedestrian/bicycle facilities.

Transit Planning

Careful planning of short- and long-range transit improvements, together with evaluations of all alternatives, are prerequisites to every transit program. LSC specializes in transit planning for cities, counties, and resort areas. We have experience in helping many areas start a new transit service or improve an existing service. We can also assist in the planning of non-conventional transit service such as demand-response service, route deviation, elderly/disabled transportation, or user-side programs.

Transit Marketing Plans

An essential element in the success of transit services is a clear, positive public image. LSC has assisted both demand-response and fixed-route transit systems in the development of efficient, cost-effective marketing programs, as well as the evaluation of existing marketing efforts.

Transit Training Seminars

Employee turnover in the transit industry generates an ongoing need for management training. LSC has developed a series of training seminars and workshops regarding financial planning, operations planning, the competitive contracting process, and transit demand analysis geared toward managers of small to mid-sized transit properties.

Transit Operations

Assistance is provided by LSC in improving the operations of existing transit systems. This may include updating bus routes and schedules, design of transit centers and park-and-ride facilities, modifications to traffic signals, improved dispatching procedures, or bus stop signing, etc. We can also assist in improving management and maintenance practices, forecasting future patronage, and developing financial and organizational plans.

Transportation Facility Planning and Design

LSC has extensive experience in the design and planning for intermodal centers, transit maintenance facilities, roadway, pedestrian/bicycle, and parking facility design. Our work has included programming, site design, functional design, cost estimating, and environmental analysis for a wide range of public and private clients.

Parking Planning and Design

Parking control can be a key strategy in achieving economic vitality, traffic congestion, air quality, and revenue generation goals. We can assist public and private agencies in the evaluation of parking demand, space requirements, control mechanisms, and development of layout plans including plans and construction cost estimates. In addition, we have had considerable experience in all aspects of parking feasibility studies including analysis of rate structures, operating costs, financing, and bond requirements.

Pedestrian/Bicycle Planning

The planning and preliminary design of facilities for non-motorized forms of transportation is becoming increasingly important. LSC has developed plans for bicycle and pedestrian facilities in a variety of urban and rural study areas, for both public and private clients.

Traffic/Environmental Impact Studies

There is a growing need for traffic and traffic-related impact analyses related to proposed residential, commercial, and industrial development projects. In response, local planning agencies are becoming increasingly aware of the importance of good transportation planning and the need for sound analysis of the traffic, air, and noise impacts of proposed developments. A well-designed internal traffic network is critical to the success of a project and the development's impact on the total community's transportation system cannot be overlooked. We provide analysis of all aspects of a proposed development's potential traffic generation, distribution, and impact characteristics, including the associated air quality and noise impact, and the identification of warranted mitigation measures.

Traffic Engineering

Our traffic engineering services emphasize the development of plans which integrate circulation, access, pedestrian, and parking facilities in order to optimize capacity and safety. Our experience encompasses all aspects of traffic engineering, including operations, design, and safety.

Traffic Safety

Our studies of traffic safety focus on the development of improvement programs which can be readily implemented. These studies include traffic accident analysis, identification of safety deficiencies, development of safe routes to school, and special needs studies and programs.

Expert Testimony

We frequently make technical presentations to citizens groups and government bodies. We are also fully qualified to serve in the role of expert witness for our clients.

Traffic Signals

The proper design, phasing, and timing of a traffic signal is critical to the efficiency and safety with which pedestrians and vehicles are able to proceed through the controlled intersection. At locations where signalized intersections are relatively close to each other, further improvements in efficiency and safety can often be achieved by linking the signals into systems. We offer the capability for the design of individual intersections and for studies of the design of signal systems. We also have the capability to produce the plans, specifications, and estimates required to implement installation of signal systems. The final steps of construction supervision and acceptance testing are also available.

Traffic Data Collection

LSC has been involved in a wide variety of data collection since the firm's inception. Our studies have included machine traffic volume counts, peak-hour turning movement counts, parking lot studies, vehicle classification counts, and speed and delay studies. We provide the basic services of set-up, periodic checking, and compiling the data. The firm uses the latest, state-of-the-art computer hardware and software in its computer-assisted analyses of transportation data. In addition, LSC survey crews have successfully conducted many data collection efforts regarding trail user surveys, parking accumulation and turnover surveys, as well as boarding/alighting, on-time performance, and passenger surveys for transit systems.

Roundabouts

The development and increasing popularity of the modern roundabout in North America is one of the most exciting recent innovations in the field of traffic engineering. In addition to the dramatic reduction in traffic accidents that roundabouts provide, their installation can generate substantial reduction in delays and associated air emissions, improve intersection capacity and pedestrian travel, and can be a key element in improving the visual quality of roadway corridors and town centers. Not only can properly designed roundabouts provide significant operational, safety, and environmental benefits, the growing knowledge and evidence regarding their superior safety performance has led many public jurisdictions to their use. Proper planning and engineering design as well as public involvement and communication of the roundabout option requires a detailed understanding of their operation, design, and implementation. LSC staff has the experience and knowledge regarding roundabout design and operations necessary to ensure that each facility operates safely and efficiently.

TRAFFIC SIGNAL DESIGN

With a long and diverse list of projects, LSC Transportation Consultants brings many years of experience to the field of Traffic Signal Design. LSC has analyzed and designed many intersections in the Denver Metropolitan Area, ranging from single intersections to a series of interconnected intersections. LSC approaches each project with an eye toward the overall movement and safety of traffic.

Representative Projects

CDOT/State Highway Projects

SH 52/Frederick Way
Frederick, CO

SH 82/El Jebel Road
I-70 Edwards Spur/Miller Ranch
Eagle County, CO

US 34/Sculptor Drive
Greeley, CO

SH 170/McCaslin
Superior, CO

US 34/Centerra Parkway
Loveland, CO

US 287/119th Street
Greeley, CO

SR 267/Northstar
Tahoe, CA - CALTRANS

Arvada, CO
- 52nd Avenue/Yarrow Street
- Mountain Shadows (2)

Aurora, CO
- Tower Road/Amherst Street
- Alameda/Abilene (Aurora Town Center)
- Alameda/Crystal (Aurora Town Center)
- Sable/Bayaud (Aurora Town Center)
- Smoky Hill Road/Arapahoe Road

Arapahoe County, CO
- Iliff/Yosemite

Broomfield, CO
- 92nd Avenue/Mall Access

Denver, CO
- Denver University Signals
- Colfax Avenue/Columbine Street

Douglas County, CO
- County Line Rd./Fox Ridge
- Colorado Blvd./Venneford Ranch Rd.
- Waterton Road/Roxborough Drive

Fort Collins, CO
- Timberline (2)

Golden, CO
- Colfax Avenue/Interplaza

Greeley, CO
- 26th/Target Access (CenterPlace)

Jefferson County, CO
- Ken Karyl Avenue/Shaffer Parkway
- Kipling/Chatfield

Lone Tree, CO
- Lincoln Avenue/Park Meadows
- RidgeGate Pkwy/Lincoln Ave.

Loveland, CO
- 1st/Taft Hill
- Byrd Drive/Crossroads Avenue
- 57th/Taft
- 57th/Wilson
- 50th/Taft
- Centerra Traffic Signals (3)

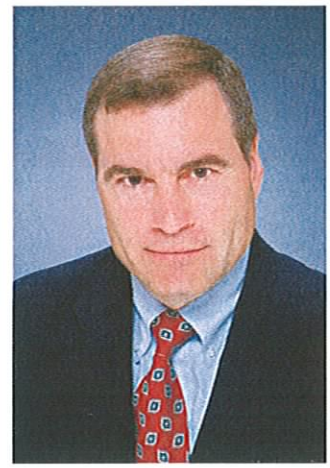
Parker, CO
- Stroh Road/Stroh Ranch Way
- Parker Road/Stroh Ranch Road

Superior, CO
- Rock Creek Parkway/Indiana Street
- Rock Creek Parkway/Coalton Road

Thornton, CO
- 120th Avenue/Madison Street
- Colorado Blvd./Thornton Parkway

Westminster, CO
- 108th Avenue/Wadsworth Parkway

ALEX ARINIELLO, P.E., PTOE



Education

Master of Science in Civil Engineering
(Transportation Planning)
Princeton University
Bachelor of Science in Basic Engineering
Princeton University

Professional Registrations/Memberships

Registered Professional Engineer in Colorado
Registered Professional Engineer in Utah (#5737155-2202)
Professional Traffic Operations Engineer (ITE)
Colorado-Wyoming Section President, 2002
Institute of Transportation Engineers

Experience

Alex Ariniello has had over 30 years experience in public works and transportation engineering. Mr. Ariniello serves as President of LSC Transportation Consultants, Inc., and has been associated with the firm since March, 1993. He has been project manager on several major traffic impact studies for LSC and has been involved in transportation planning studies in Delta County, Colorado; Park County, Colorado; Eagle County, Colorado; Superior, Eagle, and Golden, Colorado. Mr. Ariniello brings unique, senior-level experience in the fields of transportation planning, transportation demand management and transportation project implementation.

From April, 1993 to December, 1995, Mr. Ariniello was Director of the Colorado Transportation Information Center at Colorado State University. He was responsible for developing and conducting training programs to meet the needs of transportation agencies throughout Colorado and for tribal governments in the four corner states. He conducted training on traffic counting, sign management, GIS, GPS, site impact analysis, roadway and roadside safety, and work zone traffic control.

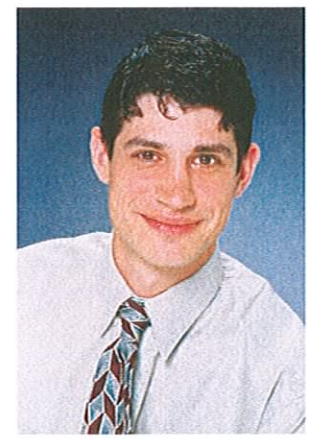
From March, 1981 to January, 1993, Mr. Ariniello served as County Public Works Director for Boulder County, Colorado. In that position, he directed a staff of 120 professional, technical, clerical and service employees in the areas of transportation planning and traffic engineering, roadway design and construction, and other public works activities. While in that position, he developed the Boulder County Transportation Plan and the Capital Improvement Program. He also updated the County's *Road Policies, Standards, and Specifications* and developed the County *Road Access Regulations*. In 1990-91, he chaired a technical committee which assisted in developing the Northwest Parkway Intergovernmental Agreement which included highway capacity, travel demand management, and open space acquisition elements.

Prior to his service as Public Works Director, Mr. Ariniello served Boulder County as County Engineer (from April, 1978 to February, 1981) and as the County Transportation Engineer (from October, 1975 to March, 1978). In the latter position he supervised all transportation planning and traffic engineering for Boulder County. While residing in New Jersey from 1973 to 1975, Mr. Ariniello served as the Middlesex County (population 600,000) Transportation Engineer, working for the Middlesex County Planning Board. He was responsible for the development of a Transportation Plan, the Transit Development Program and the Capital Improvement Program.

Mr. Ariniello has served on numerous regional and state technical committees dealing with transportation issues. These include Colorado Counties, Inc. committees on bridge programs, highway users tax funding, federal and state legislation. He also served on a National Association of County Engineers (NACE) committee which authored the NACE *Transportation Planning Manual*, published in 1996. Mr. Ariniello is active in the Colorado-Wyoming Section of the Institute of Transportation Engineers, serving as Vice President in 2001 and President in 2002.

In addition to his professional services, Alex Ariniello has served three elected terms as Councilman for the City of Lafayette (1980 to 1989) and was Lafayette's representative for the Board of Directors for the Denver Regional Council of Governments from May, 1980 to May, 1988. He was a founding member of the Board of Directors for Boulder County's Special Transit System, which serves the elderly and disabled population of the county. He served on the Colorado University Parents Association Board of Directors from 1995-99, serving as President during 1997-98.

BENJAMIN T. WALDMAN, P.E., PTOE



Education

Master of Science in Transportation Engineering
University of Texas at Arlington, 1999
Bachelor of Science in Civil Engineering
University of Texas at Austin, 1994

Professional Registrations/Membership

Registered Professional Engineer in Colorado
Registered Professional Traffic Operations Engineer
Institute of Transportation Engineers

Experience

Benjamin Waldman joined the staff of LSC Transportation Consultants, Inc. at its main office in Denver in January, 2000. During the time he has been with the firm, Mr. Waldman has performed many traffic impact and access analyses studies for a variety of land development engineering projects in Colorado. In these projects, he has utilized a number of microcomputer-based analysis techniques. In addition, Mr. Waldman has completed several traffic signal designs, roundabout designs and design of intersection capacity improvements.

Prior to joining LSC, Mr. Waldman worked for a year with Sverdrup Civil Inc.. With Sverdrup, Mr. Waldman performed many traffic impact and access studies for land development projects in the Dallas, Texas area. Mr. Waldman also assisted with signing and striping, geometric design and design of permanent and temporary traffic signals for 1.4 miles of the President George Bush Turnpike in Carrollton, Texas. Prior to working with Sverdrup Civil Inc., Mr. Waldman worked for a year with the City of Carrollton. With the City of Carrollton, Mr. Waldman reviewed traffic impact studies and transportation related civil engineering plans for new developments, including roadway geometric design, intersection spacing, signing and pavement marking and work zone traffic control. Mr. Waldman also designed several traffic signals and optimized traffic signal timing for various corridors in the City of Carrollton. Prior to working with the City of Carrollton, Mr. Waldman worked for over two Years with the Texas Department of Transportation (TxDOT). With TxDOT, Mr. Waldman worked with field engineers reviewing field changes to traffic control plans for the reconstruction of US 75, including detour geometry and signing and pavement markings.

Mr Waldman has professional experience with the following transportation software:

- Transportation Planning Models: MINUTP, QRS-II, Transplan
- Traffic Analysis and Simulation: Highway Capacity Manual Software, Synchro/Sim Traffic, CORSIM, VISSIM, Rodel and Sidra Roundabout Analysis
- GIS Software: Maptitude, Arcview
- Computer Aided Drafting: ACAD, Microstation, Autoturn

LSC TRANSPORTATION CONSULTANTS, INC.

TRANSPORTATION
CONSULTANTS, INC.

1889 York Street
Denver, Colorado 80206
Phone: (303) 333-1105
FAX: (303) 333-1107
e-mail: lsc@lscdenver.com

STANDARD BILLING RATES

1. LABOR	RATE
Principals	$150.00/Hour
Associates	$115.00/Hour
Senior Engineers	$100.00/Hour
Senior Planners	$100.00/Hour
Project Engineers	$75.00/Hour
Project Planners	$75.00/Hour
Engineers	$70.00/Hour
Planners	$60.00/Hour
Senior CAD Operators	$65.00/Hour
Administrative Assistants	$45.00/Hour
Traffic Count Manager	$45.00/Hour
Traffic Count Technician	$35.00/Hour

2. SPECIALIZED EQUIPMENT	
Computer and Specialized Software	$15.00/Hour
Turning-Movement Traffic Keyboard	$3.00/Hour
Automatic Traffic Counter	$25.00/Day
Auto	$0.47/Mile
Photocopies	$0.10/Copy
Color Copies	$0.15/Copy
Plots	$5.00/D size Plot

3. OUTSIDE CONSULTANTS, SUB-CONTRACTORS AND CONTRACT LABOR
Billed at our cost + 10 percent.

4. OTHER DIRECT PROJECT EXPENSES such as Airfare, Lodging, Meals, Car Rental, Telephone, Postage, Parking Fees, Printing, Graphics, Delivery Charges, etc., are billed at our cost.

Effective January, 1, 2006

J.A. Cesare & Associates

COMPANY DESCRIPTION

Joseph A. Cesare and Associates, Inc. (JAC) is a consulting engineering firm specializing in the areas of Geotechnical and Geological Engineering, Engineering Geology, and Construction Observation and Testing. The firm, incorporated in 1987, is headed by Mr. Joseph A. Cesare, P.E., who has over 30 years consulting experience. His experience includes both large and small projects that range from feasibility level studies through design and construction services for multi-million dollar projects.

JAC maintains offices in Centennial, Colorado and Las Vegas, Nevada. Our total staff includes approximately 50 dedicated engineers, geologists, and technicians. Our capabilities and experience cover all aspects of geotechnical and geological engineering, construction observation and materials testing, and engineering design for embankment dams and related works. JAC operates an AASHTO certified testing laboratory equipped to perform most field and laboratory testing services.

Our mission statement is to "*satisfy our client's needs by providing a full range of geotechnical, geological, and related civil and environmental engineering services in an efficient and personal manner*." To accomplish this mission, JAC maintains a professional staff focused on quality project performance and state-of-the-art capabilities.

We are a well-established professional firm with sufficient staff to handle a wide variety of projects, both large and small. Our staff takes pride in meeting our clients' needs in a timely and cost-effective manner.

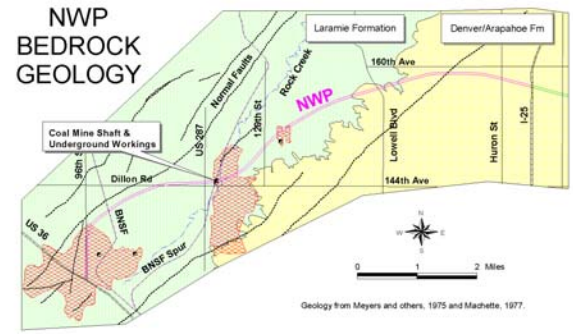
NORTHWEST PARKWAY, BROOMFIELD COUNTY, COLORADO

Joseph A. Cesare and Associates, Inc. (JAC) conducted geotechnical investigations and presented design recommendations for 7.8 miles of limited access freeway and 21 bridge structures around the northwest quadrant of the Denver Metro area. The Northwest Parkway extends from US Highway 36 in Broomfield to Interstate-25 in Adams County. Design recommendations included bridge foundation systems, embankment construction, pavement design, and other construction issues. Unique geotechnical challenges included soft compressible clay soils, high groundwater, expansive soils and claystone bedrock of the Laramie, Denver and Arapahoe Formations, dipping bedrock, and the presence of coal mine shafts and loose coal mine waste.

Over 250 soil borings for roadways, bridge structures, and retaining walls were drilled and sampled. Laboratory testing was conducted on Shelby tube samples, California liner samples, and bulk samples. Laboratory testing included typical index property values, R-values, unconfined compressive strength, time consolidation and direct shear. Recommendations were provided for pavement sections, pipe and utility trench backfill, drilled pier bridge supports, driven pile bridge supports, spread footing foundations, toll booth building and tunnel foundations, lateral loads on retaining walls, wick drain installation, MSE wall soil parameters and global stability, and measures for ground water control. JAC also provided consultation on geotechnical issues during construction.

Based on past experience, JAC was concerned for the long-term stability of MSE walls founded on claystone bedrock. Claystone tends to swell upon exposure to water which results in a weakening of the overall clay structure and a loss of support strength. The reduction of foundation strength had to be considered in the wall design.

Brian McLaren, P.E.
Washington Group International
7800 E. Union Avenue, Suite 100
Denver, Colorado 80237
303-843-2000



E-470 SEGMENT IV, ADAMS COUNTY, COLORADO

Joseph A. Cesare and Associates, Inc. (JAC) conducted geotechnical investigations and presented design recommendations for 7.6 miles of limited access freeway and 16 bridge structures around the northeast quadrant of the Denver Metro area. The E-470 Segment IV extends from Interstate-25 to 120th Avenue in Adams County. Design recommendations included bridge foundation systems, embankment construction, pavement design, groundwater drainage, and other construction issues. Unique geotechnical challenges included high groundwater in areas of deep cut and highly expansive soils and claystone bedrock of the Denver Arapahoe Formations. Over 325 soil borings for roadways, bridge structures, and retaining walls were drilled and sampled. Laboratory testing included typical index property values, R-values, unconfined compressive strength, time consolidation and direct shear. Recommendations were provided for pavement sections, pipe and utility trench backfill, drilled pier bridge supports, driven pile bridge supports, spread footing foundations, lateral loads on retaining walls, MSE wall soil parameters and global stability, and measures for ground water control. JAC also provided consultation on geotechnical issues during construction. Drilled straight shaft caissons were used to support the high structural loads of ramp piers and bridge intermediate supports. Caissons are typically 36 to 60 inches in diameter and support loads as high as 900 tons. Driven steel H-piles are used to support the bridge abutments and abutment wing walls. Piles were driven to a refusal criterion based on the results of PDA testing. JAC initially established a refusal depth at SPT N-values of 70 to 80. Actual pile driving records and the results of the PDA tests showed that this criterion was generally valid.

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I-25/E-470 Interchange at start of construction

I-25/E-470 Interchange at end of construction

ARAPAHOE ROAD, AURORA, COLORADO

Joseph A. Cesare and Associates, Inc./Construction Technical Services (JAC/CTS) conducted geotechnical investigations, presented design recommendations and conducted construction materials testing for approximately 3800 linear feet of Arapahoe Road in Aurora, Colorado. The alignment extends from Gartrell Road on the east to Smoky Hill Road on the west and passes beneath E-470 south of the Smoky Hill Road interchange. Arapahoe Road is a divided 4-lane arterial roadway paved with flexible pavement for most of the alignment and rigid pavement at the South Aurora Parkway and Smoky Hill Road intersections. Design recommendations included pavement recommendations, soft subgrade stabilization, swelling soil mitigation, and other construction issues.

Laboratory testing was conducted on California liner samples and bulk samples. Laboratory testing included typical index property values, R-values, and swell/ consolidation. Swelling soils were mitigated by overexcavation of 3 feet of subgrade and replacement with on-site non-swelling materials.

Chris Bremner
Carma, Colorado Highland Place II
9110 E Nichols Avenue #180
Englewood CO 80112
303-706-9451

96TH STREET EXTENSION, LOUISVILLE, COLORADO

Joseph A. Cesare and Associates, Inc. (JAC) conducted geotechnical investigations and presented design recommendations for approximately 2500 linear feet of 96th Street in Louisville, Colorado. This portion of the alignment crosses the BNSF Railroad and Coal Creek. This required the construction of a two span bridge over the railroad alignment and a single span bridge over Coal Creek. The proposed construction also included the lowering of the grade of the railroad, which required slopes of 1.5 horizontal to 1 vertical (1.5:1). Design recommendations included bridge foundation systems, embankment construction, pavement recommendations, slope stabilization, and other construction issues. Unique geotechnical challenges included hard bedrock conditions, high groundwater, expansive soils, and the presence of coal mine workings beneath the alignment.

Laboratory testing was conducted on California liner samples and bulk samples. Laboratory testing included typical index property values, R-values, swell/ consolidation and direct shear. Recommendations were provided for pavement sections, embankment backfill, railroad cut stability, drilled pier bridge supports, and driven pile bridge supports.

Anthony Marcello, P.E.
Washington Group International
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Denver, Colorado 80237
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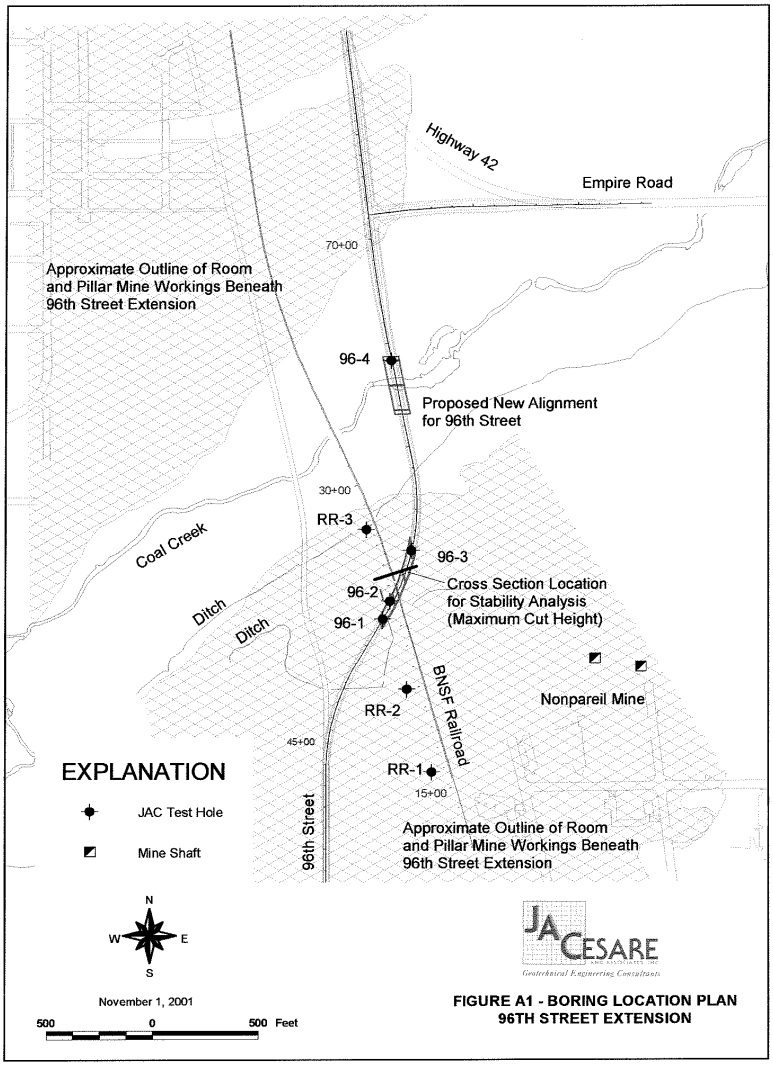

FIGURE A1 - BORING LOCATION PLAN
96TH STREET EXTENSION

Senac Dam/Aurora Reservoir - Aurora, Colorado

Joseph A. Cesare and Associates, Inc. (JAC) conducted feasibility studies to evaluate several alternative sites for construction of a raw water storage reservoir for the City of Aurora, Colorado. JAC conducted preliminary geotechnical and geological investigations for the alternative sites. Based on the results of the investigations, and preparation of preliminary design evaluations, the most cost-effective site was identified. Design-level investigations of the selected site were conducted, and based on the results, JAC provided the design of the embankment dam. The dam is approximately 175 feet high at its maximum section, and has a crest length of close to 2-1/2 miles. Storage capacity is approximately 30,000 acre-feet. Along with the design, JAC provided specifications for construction. JAC worked closely with the State Engineer's office throughout the project in order to satisfy the State's concerns regarding the project, and to provide for timely review and approval of the project.

JAC provided staff on site, and was involved in services during construction, as part of the project team that consisted of CH2M Hill and JAC. The project required 6 million cubic yards of fill, and the total cost was approximately $30 million.

Project manager was Joseph A. Cesare, P.E. He may be contacted for further information regarding this project.

Rooney Valley Dam - Jefferson County, Colorado

JAC conducted a feasibility level geological and geotechnical investigation in 2001 for the proposed Rooney Valley Dam located in Jefferson County, Colorado at the Chieftain Clay Mine. The structure was proposed as a zoned compacted earth fill dam that would provide a storage facility for municipal raw water. The reservoir was planned to impound approximately 1,500 acre-feet of water with a maximum water depth of 95 feet and an estimated surface area of 27.6 acres. The crest of the proposed dam would be 25 feet wide and approximately 2,560 feet long. Both upstream and downstream dam embankment slopes were proposed at 3H:1V (horizontal to vertical).

Bedrock units at the site are Cretaceous and Tertiary sediments that are tilted to the east to near vertical orientation due to their position in the Denver Basin. The units from oldest to youngest are the Pierre Shale, Fox Hills Sandstone, Laramie Formation, and the Denver/Arapahoe Formation. Bedrock units strike N15°W and dip at approximately 80° to the east in the central dam and reservoir area. The dip decreases rapidly to the east, however. Subsurface conditions at the site were investigated by excavating test trenches, drilling core holes, and performing packer tests in the exploratory test holes. The bedrock encountered was found to be relatively impervious with the exception of fractured coal seams in the Laramie Formation.

Concerns existed over the shear strength associated with the Pierre Shale and Laramie Formation due to interbedded clay shale layers. Also, grouting of the coal seams was recommended but permeability tests in other bedrock units did not indicate a need to grout or a need to line the entire reservoir. However, it was recommended to place a lining of 5 feet of excavated compacted clayey material to cover the surface trace of the Fox Hills Sandstone to reduce potential seepage through this unit.

The study concluded that the project was feasible as planned. Project manager for the study was Fred Limbach, P.E. He may be contacted for additional information on the project.

Upper Beaver Brook Dam No. 3A - Jefferson County, Colorado

Joseph A. Cesare and Associates, Inc. (JAC) designed a spillway modification to safely pass the PMP flood of 19,000 cfs, and designed modifications to the existing dam to increase stability and to provide additional storage capacity for the full decreed water rights. The existing Upper Beaver Brook Dam No. 3A was found during State review to have an inadequate spillway and inadequate embankment stability. JAC was retained by the Owner to evaluate alternatives for increasing the embankment height and reservoir storage and to design a spillway capable of passing the PMP flood. JAC conducted geotechnical and geological studies for the site and provided designs that optimized the spillway, embankment height and construction costs. The spillway consisted of an 85-foot deep rock cut. Material excavated from the rock cut was used to stabilize the down stream slope and to create a stability berm on the downstream slope. The embankment was raised approximately 30 feet to a new crest height of approximately 100 feet. JAC worked closely with the State Engineer's office throughout the project in order to satisfy the State's concerns regarding the project. JAC provided plans, specifications, and full-time construction observation, and Owner's Representative services during construction.

Project manager was Joseph A. Cesare, P.E. He may be contacted for further information regarding this project.

Construction Technical Services
7108 South Alton Way, Building B
Centennial, Colorado 80112
Phone: (303) 220-0300; Fax: (303) 220-0442

JOSEPH A. CESARE, P.E.

President, Consulting Geotechnical Engineer

EDUCATION

University of Missouri - Rolla, Missouri: Professional Degree in Geological Engineering, 1993
University of Missouri - Rolla, Missouri: M.S. Geological Engineering, 1974
Kent State University - Kent, Ohio: B.S. Mathematics, Minor in Geology, 1972

REGISTRATION

Professional Engineer	California	No. 26896
Professional Engineer	Colorado	No. 15797
Professional Engineer	Oregon	No. 13401
Professional Engineer	Nebraska	No. E-4846
Professional Engineer	Arizona	No. 26710
Professional Engineer	Nevada	No. 8574
Professional Engineer	Wyoming	No. 5447
Professional Engineer	Illinois	No. 0062-050564
Professional Engineer	New Mexico	No. 15728

PROFESSIONAL HISTORY

Mr. Cesare is the president of Joseph A. Cesare and Associates, Inc. Joseph A. Cesare and Associates, Inc. is a geotechnical engineering and materials testing firm with offices in Centennial, Colorado and Las Vegas, Nevada. Mr. Cesare currently serves as a consulting geotechnical engineer and project manager for geotechnically intensive projects. This responsibility and expertise has been gained over his 30 years as a practicing geotechnical engineer. Mr. Cesare's work experience is as follows:

January 1987 to Present

President of Joseph A. Cesare and Associates, Inc. Duties include overall management of the firm and senior level geotechnical consulting, review, design, project management, and Owner's representative services.

January 1985 to December 1986

President and co-owner of JCR Consultants, Inc. JCR Consultants, Inc. provided geotechnical engineering and environmental engineering services. Mr. Cesare was in charge of geotechnical engineering and overall firm management.

January 1984 to December 1984

Senior Engineer for Lachel-Hansen and Associates, Inc. Duties included providing geotechnical engineering consulting services primarily on heavy civil projects. A majority of the projects consisted of tunnels and shafts.

July 1981 to December 1983

Vice-President and Principal of A. G. Wassenaar, Inc. in Denver, Colorado. Duties included senior geotechnical engineering and review of primarily subsurface investigations for structure foundations. Mr. Cesare was also the project manager on specialized geotechnical projects.

June 1974 to July 1981

Geotechnical Engineer for CH2M Hill. Mr. Cesare started in the Corvallis, Oregon office and was transferred from there to the Redding, California office in 1976. In 1978 Mr. Cesare was transferred to Denver, Colorado to be the Manager of Geotechnical Engineering for the Rocky Mountain Region. Mr. Cesare performed many site investigations, designs, and acted as overall project manager on numerous and varied geotechnical engineering projects.

REPRESENTATIVE PROJECTS

The following projects represent examples of the work Mr. Cesare has performed:

Owner's Representative Services

Mr. Cesare was in charge of the Owner's Representative Services for the Standley Lake Improvement Project in Westminster, Colorado. This was a $30 million dollar renovation that required the oversight and coordination of four owners with a design consortium of three major firms and a joint venture contractor.

Mr. Cesare is involved with the Owner's representative services for the Westminster Wastewater Treatment Plant Expansion.

Mr. Cesare has been involved with mediation, arbitrations and negations with clients, contractors and law firms.

Foundation Engineering

Mr. Cesare's foundation experience includes numerous multi-story structures, commercial structures, public buildings, residences, and subdivisions. He has also been involved in numerous evaluations of distressed structures related to swelling and collapsing soils and mass movement. Examples of Mr. Cesare's foundation experience are as follows:

Brush Co-Generation Facilities in Brush, Colorado. Foundations consisted of driven piling.

Numerous school structures including structures over 100,000 square feet in area for Douglas County Schools, Cherry Creek Schools, Denver Public Schools, and Elizabeth School District.

Bridge and Tower foundations in both soil and rock. These projects have primarily been in the states of California, Colorado, Nebraska, Nevada, and Oregon. Most recently, Mr. Cesare was involved with the management of the geotechnical engineering for the E-470 and Northwest Parkways. This involved over 20 miles of interstate highway and numerous bridges.

Residences and subdivisions in Colorado and Nevada.

Dam and Reservoir Engineering

Mr. Cesare has provided engineering services on all phases of dam and reservoir evaluations, designs, and construction observation and management services. Examples of these projects are:

FERC inspections for the Loup River Power District in Genoa, Nebraska. Inspection included power house, power intakes, penstocks and miles of power canal.

Design of Modifications to Keystone Diversion Dam, Ogallala, Nebraska.
FERC inspections for Nebraska Public Power District. Inspections included over 65 miles of canal, penstocks, and siphons, concrete diversion facilities and gates, and two earth dams between Ogallala and North Platte, Nebraska.

Inspection of Lookout Mountain Water District Dams 1, 2, and 3 in Clear Creek County, Colorado; 13 high elevation dams and front range dams for Agricultural Ditch and Reservoir Company; and miscellaneous dams for municipal and private clients. These dams consist of rockfill, masonry and concrete, and earthfill dams.

Feasibility study, preliminary design, investigations, final design and services during construction for Upper Beaver Brook Dam No. 3A in Clear Creek County, Colorado; Aurora Dam and Reservoir in Aurora, Colorado; Keystone Diversion Dam in Ogallala, Nebraska; Stillwater Dam in Greenland, Colorado; renovation of Miami Dam, Springer, New Mexico; and lined lagoons for the Kuiper Water Treatment Plant in Aurora, Colorado.

Geotechnical consulting, services during construction, and construction management for Lake Las Vegas Dam in Henderson, Nevada; Hannah Ranch Diversion Dam in Fountain, Colorado; and Fortune Dam in Jefferson County, Colorado.

Seismicity analysis for Aurora Reservoir; Quartz Dam in Sonora, California; Loup River Power Canal; and Lake Las Vegas Dam.

Design of mitigation program, grouting, and construction management for Aurora Rampart Reservoir in Jefferson County, Colorado.

Review of geotechnical evaluations and design and construction review on Roan Creek Dam in Garfield County, Colorado; Cowlitz Falls Dam in Washington; Fancy Hill Tailings Dam in Hopper, Arkansas; Porcupine Dam in Utah; and Fortune Dam in Jefferson County, Colorado.

Miscellaneous Geotechnical Engineering Projects

Slope stability analysis and design of slope stabilization for landslides at Strontia Springs Dam, Denver, Colorado.

Rock bolt designs for renovation work at the Incline Elevator at Royal Gorge, Canon City, Colorado.

Slope stabilization alternatives for Navajo National Monument, Kayenta, Arizona.

Pit slope stability analysis for the Milchem Open Pit Barite Mine in Hopper, Arkansas.

Consulting design and services during construction on Aurora Foothills Tunnel, Aurora, Colorado.

Pavement designs for numerous roads in Nebraska, Colorado, and Nevada.

Shoring designs consisting of sheet piles, soldier piles, tiebacks, soil nailing, and shields, and excavation bracing in Denver, Colorado; Chicago, Illinois; and Las Vegas.

FAILURE INVESTIGATIONS

Mr. Cesare has been involved in the evaluations of distressed structures and determination of their causes. In some instances repairs were designed.

Representative projects include:

Dunsmuir Landslide in Dunsmuir, California
Roseburg TVOR Landslide, Roseburg, California
Strontia Springs Rockslide, Waterton Canyon, Colorado
Telluride Airport Landslide, Telluride, Colorado
Evaluation of distress of commercial structures, multi-family developments, and residences from soils-related problems in Colorado, Wyoming, and Nevada
Evaluation of distress from collapsing soils in Wyoming, Colorado, and Nevada
Evaluation of numerous retaining wall failures including both conventional retaining walls and reinforced earth
Evaluation of numerous slope stability issues in Colorado, Nevada, Oregon, and California

AFFILIATIONS

American Society of Civil Engineers
Colorado Association of Geotechnical Engineers
Consulting Engineers Council of Colorado

PUBLICATIONS AND PRESENTATIONS

"The Effects of Mine Dewatering on the Shallow Aquifer in the New Lead Belt, Missouri", U.S. Government Publication, 1975.

"Rapid Monitoring of Coal Refuse Embankments; Proceedings of the Conference and Geotechnical Practice for Disposal of Solid Waste Materials", ASCE, 1977. Co-authors: L.H. Roth and G.S. Allison.

"Sky Eye Monitors Tailings Dam", Coal Age, McGraw-Hill, Inc., Volume 82, Number 8, August 1977. Co-authors: L.H. Roth and G.S. Allison.

Chairman, ASCE, What's New in Earth Dams Conference, Colorado School of Mines, 1986.

Instructor, Design of Embankment Slope Protection, Organization of Dam Safety Officials, Golden, Colorado, 1991.

Lecturer, Soil-Cement for Water Control Structures, Portland Cement Association, 1989.

Developer and Presenter of Conference entitled “Soil Mechanics for Contractors”, 1998.

Principal author of “Commentary on Geotechnical Practices, Drilled Pier Design Criteria for Lightly Loaded Structures in the Denver Metropolitan Area” for the Colorado Association of Geotechnical Engineers.

Results and Design Recommendations from Geotechnical Investigations on the Northwest Parkway and E-470 ASCE Colorado Section, More Than Just a Line on a Map, Geotechnical Engineering Transportation, October 4, 2002. Co-authors: D. R. Duran, L. F. Lewis, and F. W. Limbach.

"Pinery Dam Outlet Conduit Repair", Geotechnical Practice Publication No. 2, H2GEO: Geotechnical Engineering for Water Resources, Biennial Denver Geotechnical Symposium, October 2004. Co-author: D. J. Brauer.

Joseph A. Cesare and Associates, Inc.
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Jonathan A. Crystal, P.E.
Senior Geotechnical Engineer

EDUCATION

New Mexico State University; B.S. Civil Engineering 1977
Graduate Classes; University of Arizona, University of New Mexico, University Texas at El Paso

REGISTRATION/CERTIFICATION

Professional Engineer	Colorado	No. 32837
Professional Engineer	New Mexico	No. 8347
Professional Engineer	Texas	No. 57587
Professional Engineer	Arizona	No. 27640
Professional Engineer	Wyoming	No. 9048
Professional Engineer	Utah	No. 4736927-2204

PROFESSIONAL HISTORY

October 2004 - Present
Senior Engineer, Joseph A. Cesare and Associates, Inc., Centennial, Colorado. Conduct forensic geotechnical investigations of distressed structures and poorly performing construction, primarily for litigation support and insurance information. Provide project engineering and management support on general geotechnical engineering projects.

2001-2004
Senior Project Manager, Geocal, Inc., Aurora, Colorado. Managed and conducted geotechnical investigations for commercial, government, and institutional buildings and public infrastructure. Clientele and owners included design professionals and government, institutional, and private developers.

1998-2001
Regional Engineer, Professional Service Industries, Inc., Wheat Ridge, Colorado. Managed and conducted geotechnical investigations for commercial and government buildings, residential housing, and public infrastructure. Clientele and owners included design professionals and government and private developers.

1996-1998
Principal Engineer, Pavement Maintenance Information Source, Mesa, Arizona. Managed and conducted pavement condition surveys, prepared pavement maintenance recommendations and construction documents, and managed pavement maintenance construction projects. Clientele included corporate, institutional, and homeowner associations.

1994-1996
Geotechnical and Materials Department Manager, Kleinfelder, Inc., Tempe, Arizona. Managed department staff of 10, including engineers and technicians. Managed and conducted geotechnical investigations for commercial and government buildings and public infrastructure. Engineering oversight of construction material testing and observation projects. Clientele and owners included design professionals and government, corporate, and private developers.

1993-1994
Senior Project Manager, AGRA, Inc., Phoenix, Arizona. Managed and conducted geotechnical investigations for commercial, institutional, and government buildings and public infrastructure. Clientele and owners included design professionals and government, corporate, institutional, and private developers.

1984-1993
Vice President, Operations Manager, Sergent Hauskins & Beckwith, Inc./AGRA, Inc., El Paso, Texas. Managed and conducted geotechnical investigations for commercial, institutional, and government buildings and public infrastructure. Managed a large pavement management system implementation. Managed and/or oversight on construction material testing and observation projects. Principal review of environmental assessment and remediation projects. Clientele and owners included design professionals and government, corporate, institutional, and private developers.

1979-1984
Staff & Project Engineer, Project Manager, Sergent Hauskins & Beckwith, Inc., Albuquerque, New Mexico. Managed and conducted geotechnical investigations for commercial and government buildings, residential housing, and public infrastructure. Participated in geotechnical investigations for mining, milling, and mill tailings facilities. Resident Engineer on three tailings dam construction projects. Clientele and owners included design professionals and government, corporate, institutional, and private developers.

1978-1979
Staff Engineer, Marco Soil and Foundation Engineers, Tucson, Arizona. Prepared engineering reports for commercial buildings, residential housing, and public infrastructure. Collected and reduced field survey data. Clientele and owners included design professionals, government, and private developers.

REPRESENTATIVE PROJECTS

The following represent examples of the work Mr. Crystal has performed

Foundation Engineering
Geotechnical investigations for individual residential construction in the Denver Metropolitan Area and Albuquerque, New Mexico.

Geotechnical investigations for high-rise and low-rise commercial buildings, manufacturing facilities, and industrial facilities in Denver and Colorado Springs, Colorado; New Mexico; West Texas; and Arizona. Examples of Mr. Crystal's experience include the following:

Uptown Plaza in Albuquerque, New Mexico. The project consisted of three 10-story

office towers and three 3-story parking structures.

Intel, Inc. FAB 8 Addition and FAB 9 in Rio Rancho, New Mexico and FAB 12 in Chandler, Arizona. Large microchip manufacturing facilities that required minimizing vibrations from sources inside and outside the buildings.

Hoover, Azar Nuts, and Leviton Manufacturing Plants and Wrangler Distribution Facility in El Paso, Texas. These facilities were 250,000 to 500,000 square feet in plan area. All had strict requirements for superflat floors, which required minimal post-construction movement.

Geotechnical investigations for mining and milling facilities, power transmission lines and distribution substations, and tailings dams in New Mexico, Texas, Arizona, and Montana. Examples of his experience include the following:

- Kerr-McGee Uranium Tailings Dam at Ambrosia Lake, New Mexico.
- Shafter Gold Mine and Mill in Shafter, Texas.
- Pajarito to Four Corners 500-kV Transmission Line from Albuquerque, New Mexico to Four Corners Power Plant (180 miles).
- Black Pine Mine Tailings Dam near Phillipsburg, Montana.
- Ray Mine in Ray, Arizona.

<u>Pavement, Roads, and Bridges</u>
Roadway pavement and bridge investigations for streets, roads, and highways in New Mexico, Texas, Arizona, and Colorado. Examples of these projects are as follows:

- Kolb Road Extension in Tucson, Arizona. The project was about 7 miles in total length of new and reconstructed major arterial roadway. The project included numerous bridge structures involving automobile, railroad, or aircraft loading.
- Eagle Mountain Radar Site and Access Road near Allamore, Texas. The project included about 13 miles of all-weather access road and a new radar facility for the Federal Aviation Administration. Approximately half the road was new alignment through hard rock mountain slopes requiring geologic reconnaissance, seismic refraction investigative techniques, and rock slope analysis.
- Arenal Road Extension in Albuquerque, New Mexico. The project consisted of about 3 miles of new major arterial roadway.
- Overton Road Realignment in Pueblo, Colorado. The project consisted of about 2 miles of realignment due to the existing roadway being undercut by Fountain Creek. The new alignment crossed an area of collapsible and dispersive soils.
- I-40/I-15 Interchange in Flagstaff, Arizona. The project consisted of reconstructing the entire interchange and the highway within a mile in four directions. Elements included flyover bridges, a tunnel, and numerous bridges and slopes.

Landside and airside airfield pavement investigations in New Mexico, Texas, Arizona, and Colorado. Examples of Mr. Crystal's experience are as follows:

- Cutter Aircraft Hangar and Apron at Albuquerque International Airport in Albuquerque, New Mexico.
- Runway 22R/7L Reconstruction at El Paso International Airport in El Paso, Texas.
- Apron Rehabilitation at Deer Valley Airport near Phoenix, Arizona.

- Taxiway A Realignment at Jefferson County Airport in Jefferson County, Colorado.

Slope Stability
Geotechnical investigations for cut and fill slope stability in New Mexico, Texas, Arizona, and Colorado.

Special Assignments
Assistant geotechnical auditor for design of the T-Rex multi-modal transportation project along the I-25 corridor through the Denver Metropolitan Area.

Litigation Consultation
Conducted forensic geotechnical investigations and provided procedural, deposition, and court testimony for distressed structures, construction citations, and other disputes in El Paso, Texas.

AFFILIATIONS

Member, American Society of Civil Engineers
Member, ASFE
Member, Association of Consulting Engineering Companies, Texas and Colorado

JACESARE AND ASSOCIATES, INC.
Geotechnical Engineering Consultants

CTS "The Lab"
Construction Materials Testing & Inspection

SCHEDULE OF FEES

Senior Principal	$145.00/hour
Principal	$125.00/hour
Quality Manager	$104.00/hour
Senior Engineer/Scientist/Geologist	$104.00/hour
Staff Engineer/Scientist/Geologist	$91.00/hour
Field Engineer	$70.00/hour
Senior Technician/Construction Observer	$62.50/hour
Field/Laboratory Technician	$52.00/hour
Technical Support	$46.50/hour
Computerized Drafting	$78.00/hour
Coring Operations	$88.50/hour
Expenses	Cost
Outside Services	Cost + 10%
Mileage	$0.50/mile
Overtime & Non-Standard Time [2]	1.3 x rate
Equipment Rental	Quoted upon request

[1] Payment is due within 30 days of receipt of our invoice. Accounts unpaid after 30 days will be assessed a service charge of 1-1/2% of the unpaid balance.

[2] Overtime Premium applies to Field Engineer and Technician hours exceeding 10 hours per day or 40 hours per week, charged to a single project.

Effective 1/15/06 to 12/31/06

SCHEDULE.2006 - 01.15.06

7108 South Alton Way, Building B • Centennial, Colorado 80112-2109 • www.jacesare.com
Main Phone 303-220-0300 • Fax 303-220-0442 • Lab Phone 303-783-9965 • Lab Fax 303-783-9964

Ecological Resource Consultants

Ecological Resource Consultants, Inc.

Ecological Resource Consultants, Inc. (ERC) was formed to offer innovative solutions for water resource management, aquatic restoration design, environmental planning and regulatory permitting projects. ERC is comprised of a multidisciplinary team with expertise in water resource engineering, ecology, biology, geomorphology and environmental regulatory issues. This range of experience allows us to develop comprehensive solutions that meet the needs of our clients and are compatible with the natural environment. ERC uses this experience to provide a full range of environmental and water resource services.

Water Resources

- Hydrologic analyses and modeling
- Hydraulic investigation and design
- Floodplain modeling and permitting
- Stormwater and drainage designs
- Water balance investigations
- Groundwater studies and modeling

Streams

- Stream evaluations and restoration design
- Bank stabilization and erosion control
- Aquatic habitat suitability evaluations
- Sediment transport modeling
- Riparian corridor revegetation and bioengineering
- Stream construction observation

Wetlands

- Field identification and delineations
- Impact, minimization and alternative analyses
- 404 and 401 consultation and permitting
- Mitigation design and construction
- Monitoring and maintenance

Environmental

- Threatened and endangered species studies
- Environmental and biological assessments
- Environmental impact statements
- Water quality sampling and evaluations
- Minimum instream flow requirements

ERC takes great pride in our services, is committed to the needs of our clients and appreciates the opportunity to apply sustainable solutions to the natural and built environments.

Office Locations

Evergreen Office
35715 US Hwy. 40, Suite D204
Evergreen, CO 80439
Phone/Fax: 303.679.4820

Boulder Office
5672 Juhls Drive
Boulder, CO 80301
Phone: 720.564.0788
Fax: 303.530.2296

Wetland Services

Ecological Resource Consultants, Inc. (ERC) offers a complete range of professional wetland services to municipal, commercial and private clients throughout the Rocky Mountain region. From wetland delineations and Corps of Engineer verification to 404 permitting, mitigation design, construction, monitoring and maintenance, ERC's staff provides the experience required for a successful project. ERC personnel have solid, long-term relationships with the Omaha, Albuquerque and Sacramento Districts of the Army Corps of Engineers and have completed multiple delineations, permits and mitigation designs in each District.

Wetland Delineations

ERC's staff has experience with wetland delineations ranging from single lots to 2,500-acre sites. Delineations are performed through an evaluation of vegetation, soils and water according to the methodology prescribed in the Corps 1987 Wetland Delineation Manual. ERC conducts wetland functions and values assessments and prepares wetland inventory reports. ERC uses backpack GPS technology to map wetland boundaries during the field delineation program allowing us to produce wetland maps without requiring a separate survey, saving our clients time and money.

404 Permitting

In the event that a proposed project will impact jurisdictional wetlands or Waters of the U. S., ERC is available to handle all aspects of the Army Corps 404 permit process. Our expertise in the wetland sciences, knowledge of 404 requirements and working relationships with the different Corps offices facilitates efficient permit preparation, submittal and coordination. ERC is experienced and successful in obtaining Corp approval for projects ranging from Nationwide to the most complex Individual Permit.

Wetland Mitigation

When project requirements result in unavoidable loss of wetland habitat, ERC designs, oversees construction, monitors and maintains wetland mitigation sites for our clients. Mitigation sites are selected based on ecological setting, water supply and the client's land constraints. We are experiences designing and implementing wetland project from low plains to alpine environments. ERC offers construction observation services to ensure critical design conditions are met and monitors and maintains wetlands as required to obtain Corps acceptance of the successful mitigation project.

Environmental Services

Ecological Resource Consultants, Inc. (ERC) provides environmental consulting services to private, commercial and municipal clients. Threatened and endangered species (T&ES) screenings, Phase 1 environmental site assessments, biological opinions and baseline environmental studies are offered in additional to wetland consulting and environmental permitting allowing ERC to provide a full range of environmental services.

Photo - USFWS

Threatened and Endangered Species

ERC's staff is experienced in the full range of threatened and endangered species (TES) studies including Preble's Meadow Jumping Mouse (Zapus hudsonius preblei), Ute Ladies' Tresses Orchid (Spiranthes diluvialis Sheviak) and Boreal Toad (Bufo boreas boreas). Initially desktop evaluations are preformed on a property to define species of concern and known species population boundaries. ERC then conducts field reconnaissance as part of the presence/absence screening for individual species. Results of the field evaluation are presented to the U.S. Fish and Wildlife Service (USFWS), which often results in official clearance of a property. In the event that TES are present, ERC is experienced writing biological assessments, developing mitigation plans and working with the USFWS and resolving issues in a timely, efficient manner.

Phase 1 Environmental Site Assessments

ERC performs Phase 1 ESAs using ASTM Standard E-1527-00 protocol. Our Phase I ESAs are often conducted in conjunction with wetland and T&ES screening to provide clients with the full range of environmental topics as part of the due diligence process.

Environmental Baseline Studies

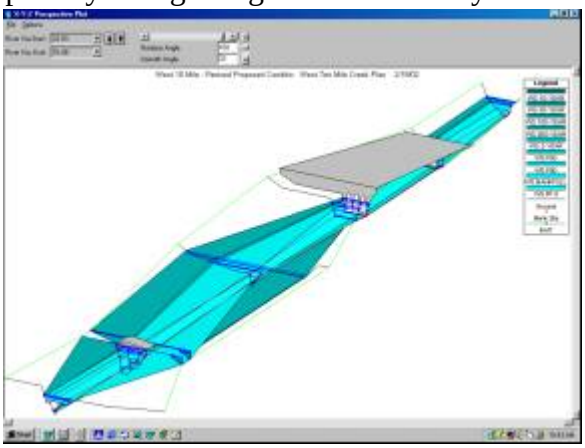
Many projects require environmental studies to define baseline conditions for a site. ERC is experienced evaluating and documenting physical and environmental site conditions. Past baseline studies conducted by ERC staff includes conservation easements, habitat studies, water quality assessments, water table depth and aquifer mining definition, flow gauging and avalanche and rockfall hazard evaluations.

Water Resources Services

Ecological Resource Consultants, Inc. (ERC) provides water resource engineering for stand-alone projects and in support of stream enhancement and wetland creation projects. Services include field assessments, hydrologic and hydraulic modeling, design of hydraulic structures, optimization studies, resource planning studies, floodplain permitting and construction oversight.

Hydrology and Hydraulics

ERC performs hydrological and hydraulic analysis using standard modeling software and custom developed applications for unique situations to meet the specific needs of a project. ERC has gained its substantial hydrological expertise through studies of drainage networks, irrigation and flow conveyance structures, river catchments and reservoirs in a variety of climatic zones. Investigations completed by ERC include the development and monitoring of rainfall and streamflow gage networks, rainfall-runoff modeling, floodplain evaluations and permitting, water surface profile modeling, minimum instream flow requirements, water balance studies, reservoir simulations, seepage investigations, PMP/PMF studies, spillway sizing and groundwater analysis.



Hydraulic Design

ERC is experienced in the evaluation and design of hydraulic structures. We have completed design and rehabilitation studies of diversion ditches, canals, detention ponds, dams, spillways, flood levees, drop structures, intake structures, culverts, pipelines, energy dissipation structures, infiltration galleries, drains and wells. Throughout the evaluation and design process, ERC looks for practical, cost-effective solutions to achieve the required function of the project and meet the need of our clients.

Wetland and Stream Restoration

ERC conducts detailed water resource evaluations in support of all our wetland and stream restoration services. Precipitation, runoff, evaporation, evapotranspiration and infiltration and seepage studies are performed as part of the water budget evaluation for all wetlands designed to ensure adequate water is available to support sustainable wetland growth. Floodplain evaluations, sediment transport modeling and minimum instream flow evaluations are conducted as part of channel restoration.

Ecological Resource Consultants, Inc.

As the acting engineer for the Church Ditch Water Authority, the Farmers Reservoir and Irrigation Company and the German Ditch Company, ERC is responsible for the design and review of all aspects of hydrologic and hydraulic improvements. With projects involving conveyance structures, gates, storm sewers, drainage concerns, erosion protection, floodplain issues and erosion protection, ERC understands the value of quality infrastructure and appreciates the need for cost effective designs.

We are experienced in all phased of work from conceptual level design and community input to design, permitting and implementation. Our knowledge of wetlands and threatened and endangered species will help Northglenn select alternatives to their drainage concerns that have the least impact to the environment and are the easiest to permit.

Troy D. Thompson, P.E., President, Senior Engineer

Master of Science, Water Resources Engineering, University of Colorado
Bachelor of Science, Civil & Environmental Engineering, Cornell University

Professional Affiliations
Registered Engineer, State of Colorado # 32913
American Society of Civil Engineers
American Water Resource Association
Colorado Association of Stormwater and Floodplain Managers

Employment History
Ecological Resource Consultants, Inc., Golden, CO. 2000-Present. President, Senior Engineer
Aquatic and Wetland Company, Boulder CO. 1999-2000. Managing Engineer
Hydro-Triad, Ltd., Lakewood, CO. 1993-1999. Water Resource Engineer
Central Engineers and Architects, Beaver Dam, WI. 1991,1992. Staff Engineer/Surveyor
Cornell University, Ithaca, NY. 1993. Hydraulic Research Assistant

Areas of Expertise
Hydrology and Hydraulics, Floodplain Delineation, Stormwater Evaluations, Stream Restoration, Sediment Transport Modeling, Aquatic Habitat Evaluations, Stochastic Computer Modeling, Groundwater Evaluations.

Mr. Thompson is responsible for technical oversight and project management of water resource projects for ERC. He is responsible for directing project work from field studies to conceptual level evaluations and final design and construction. His engineering experience on water resource projects complement the multidisciplinary project approach emphasized by ERC. Examples of Mr. Thompson's project experience includes:

Selected Project Experience

Marshall, Milton and Barr Dams Spillway Adequacy Studies, Colorado – Project engineer for evaluating adequacy of an existing spillways and alternatives evaluation for design of required improvements. Generated general and local PMP events, defined unit hydrographs and developed HEC-HMS rainfall-runoff models for the drainage basins. Performed alternatives cost evaluation and preliminary design for required spillway improvements.

Van Bibber Creek/Croke Canal Crossing, Jefferson County, Colorado – Project engineer for hydraulic evaluation and final design of a culvert crossing for Van Bibber Creek under the Croke Canal. Analyzed culvert hydraulics including face, throat, barrel and outlet control. Optimized flow capacity by utilizing a side tapered inlet with an improved entrance and culvert slope transition to overcome geometric constraints and increase the crossing's capacity from 35 cfs to 730 cfs. Performed seepage evaluation to size and locate cutoff collars.

Farmers Highline Canal Flushing Structure, Arvada, Colorado – Project engineer for hydraulic and environmental studies associated with the FHL flushing structure. Obtained a Nationwide 18 permit for the project from the Army Corps of Engineers and clearance for Preble's Mouse and Ute Ladies' Tresses Orchid for the project. Evaluated alternative gates for shutting down the Croke Canal and spilling into Little Dry Creek. Selected 8' x 4' gate and box culvert for the flushing structure and a 20' x 5' foot gate across the FHL based on technical and economic evaluations. Evaluated hydraulic jump and corresponding erosive forces downstream of the main gate and used results to size energy dissipation basin.

Church Ditch Water Authority, Northglenn, Colorado – Responsible for proposed development design review, hydraulic evaluation and stormwater management analysis associated with 26 mile Church Ditch and associated facilities from Golden to 100th and Simms.

Farmers Reservoir and Irrigation Company, Brighton, Colorado – Responsible for hydraulic and hydrologic design for conveyance, drainage, flow measurement, stormwater and storage facilities operated by FRICO. Review proposed development adjacent to FRICO facilities to assess impacts. Completed revision of FRICO's design review process and drainage criteria manual.

Nicholson Property, Watkins Farm, Wind Farm, Baranmor and Brantner the Highlands Floodplain Evaluations, Colorado – Project engineer for floodplain delineation for properties with proposed development within or adjacent to the regulatory floodplain. Developed HEC-2 and HEC-RAS models for existing and proposed conditions. Obtained required permitting through local and FEMA regulators.

Covenant, Tollgate, Cottonwood and Pinnacle Farms Developments, Colorado – Project engineer for drainage studies and design associated with residential development. Completed rainfall and runoff calculations, sized drainage facilities and prepared drainage plans.

Eagle, Blue, San Miguel and East Fork of the Williams Fork Rivers Stream Restoration and Habitat Improvement Projects, Colorado – Project engineer for stream restoration and riparian corridor enhancement on degraded river systems. Projects included field analysis and surveying; hydrologic, hydraulic and geomorphologic analysis; restoration design; and construction implementation. Bank stabilization was accomplished using standard engineering and bioengineering applications. Riparian and instream aquatic habitat enhancements completed and Army Corps 404 permits obtained.

Crown Jewel Mine Streamflow and Water Rights Evaluation, Washington – Technical leader responsible for evaluating impacts of proposed mine activities on regional groundwater levels, streamflow quantities and water rights. Conducted hydrologic and geomorphologic studies of the streambed to evaluate water losses into the alluvium. Reviewed instream flow incremental method (IFIM) study to evaluate impacts on aquatic habitat. Analyzed water augmentation plan including groundwater recharge operations. Provided expert testimony regarding findings of evaluation as part of a dispute over Section 404 of the Clean Water Act.

La Romana Water Resources Evaluation, Dominican Republic – Project manager for the water supply master plan of the La Romana Province in the Dominican Republic. Quantified potable water demands for municipal and commercial water users. Performed statistical evaluations of flow data to determine the reliable yield from surface sources. Evaluated long-term changes to the groundwater table and correlated recent drawdown to pumping operations. Determined the safe aquifer yield for future development. Performed cost/benefit analysis to determine the most technologically and economically feasible future supply.

David J. Blauch, Vice President, Senior Ecologist

Bachelor of Science, Environmental Resource Management, Pennsylvania State University

Employment History
Ecological Resource Consultants, Inc., Boulder, CO. 2000-Present. Vice-President, Senior Ecologist
Aquatic and Wetland Company, Boulder CO. 1996-2000. Senior Ecologist
Environmental Concern, Inc., St. Michaels, CO. 1994-1996. Wetland Ecologist
Pennsylvania Dept. of Environmental Resources, Harrisburg, PA. 1994, Field Biologist
Pennsylvania State University, State College, PA. 1993. Constructed Wetland Research Assistant

Areas of Expertise
Jurisdictional Delineation, Section 404 Clean Water Act (CWA), 401 Regulatory Guidance, Wetland Mitigation Design and Monitoring, Habitat Evaluations, Stream Enhancement/Restoration, Threaten and Endangered Species Screening, GPS Mapping, AutoCAD Drafting

Mr. Blauch is responsible for technical oversight and project management of ecological related projects for ERC. He responsible for directing project work from field studies to conceptual level evaluations and final design and construction. His experience in ecological projects complements the multidisciplinary project approach emphasized by ERC.

Representative Professional Experience:

Ecological Assessment, City of Westminster, Sewer Main Crossing, Adams, County, CO
Project Ecologist, provided a complete ecological assessment of the 1-acre project located along Big Dry Creek within Big Dry Creek Open Space. An Ecological Assessment was conducted to identify jurisdictional wetland habitat and potential threatened, endangered and species of concern. Obtained a wetland delineation verification and Nationwide Permit 12 (CWA) for a 200' sewer line bypass project from the US Army Corps of Engineers Denver Regulatory Office.

Ecological Assessment, City of Northglenn, Hoop Creek Stabilization Project, CO
Project Ecologist, provided a complete ecological assessment of the Hoop Creek drainage corridor from the summit of Berthoud Pass 1,500 feet south. Ecological Assessment included jurisdictional wetland delineation plus complete GPS mapping, US Forest Service coordination and obtaining a Nationwide Permit 23 (Categorical Exclusion) from the US Army Corps of Engineers Denver Regulatory Office.

Ecological Assessment, Mandalay Town Center, Jefferson County, CO
Project Ecologist, provided a complete ecological assessment of the Mandalay Town Center project located along Walnut Creek in Jefferson County, Colorado. An initial ecological assessment was conducted to identify jurisdictional wetland habitat and potential threatened, endangered and species of concern. Obtained a wetland delineation verification, Nationwide Permit 39 (CWA) and coordinated the purchase of wetland mitigation credit for the project with the US Army Corps of Engineers Denver Regulatory Office. Clearance of potential Preble's Meadow Jumping Mouse habitat was also obtained from the US Fish and Wildlife Service for the project site.

Ecological Assessment, Buckley Ranch, Adams County, CO
Project Ecologist, provided a complete ecological assessment of the Buckley Ranch Project site located along Second Creek in Adams County, Colorado. An initial ecological assessment was conducted to identify jurisdictional wetland habitat and potential threatened, endangered and species of concern. Obtained wetland delineation verification and several Nationwide Permits (CWA) for the proposed project from the US Army Corps of Engineers Denver Regulatory Office.

Ecological Assessment, Centerra East, Larimer County, CO
Project Ecologist, conducted a complete ecological assessment of a proposed 3,000-acre development site. Ecological assessment included jurisdictional wetland delineation, natural area buffer zone analysis, vegetation community inventory, wildlife use analysis, screening of threatened, endangered and of concern species, project impact analysis and wetland mitigation/enhancement design and construction. Obtained wetland delineation verification and a Section 404 (CWA) Individual Permit from the US Army Corps of Engineers Denver Regulatory Office.

Ecological Assessment, Waterview Center, Boulder County, CO
Project Ecologist, conducted a complete ecological assessment of a proposed 30-acre mixed-use development site located along South Boulder Creek within the City of Boulder. Ecological assessment included City of Boulder and federal wetland evaluations, species of concern screening (existence of potential Preble's Mouse and Ute Ladies'-tresses Orchid habitat), buffer zone establishment, wetland and buffer zone impact analysis and development of mitigation plans. Conducted Preble's Meadow Jumping Mouse population survey and obtained clearance from the US Fish and Wildlife Service for the project site.

Environmental Assessment, I-25 Improvement Project, Colorado Springs, CO
Project Ecologist, completed a vegetation community inventory, wildlife use analysis and screening of threatened, endangered and of concern species as part of an Environmental Assessment (NEPA) for the I-25 Improvement Project in Colorado Springs, Colorado. The project area spanned 30 miles and covered approximately 1,500 acres.

Ecological Assessment, City Park Improvement Project, City of Thornton, CO
Project ecologist responsible for jurisdictional delineation of wetlands along Grande Hall Creek and species of concern screening (Preble's Mouse, Ute Ladies'-tresses Orchid and Black-tailed prairie dog) associated with the development of a 5-acre City park. Received Army Corps of Engineers verification of delineation and property clearance of species of concern from the US Fish and Wildlife Service.

Migratory Bird Use Study, Roadway Expansion Project, City of Arvada, CO
Completed a 1.5 mile roadway extension project area corridor study for the presence/use of migratory birds and bird nests protected under the Migratory Bird Treaty Act. Approved by US Fish and Wildlife Service.

Ecological Characteristics Study, Loveland, Larimer County, CO
Project ecologist responsible for completion of a Ecological Characteristics Study per the City of Loveland City of Loveland Development Code on a proposed development site located adjacent to City identified Natural Area. Ecological assessment included jurisdictional wetland delineation (verified by US Army Corps of Engineers, Omaha District), vegetation community inventory, wildlife use analysis, screening of threatened, endangered and of concern species, buffer zone analysis and project and mitigation/enhancement recommendations.

Ecological Assessment, Snowmass Base Village Expansion, Snowmass Village, CO
Completed an ecological assessment on four parcels covering 74 acres. Ecological assessment included jurisdictional wetland delineation (verified by US Army Corps of Engineers, Sacramento District), vegetation community inventory, wildlife use analysis, screening of threatened, endangered and of concern species, project impact analysis and mitigation/enhancement plans for 1 acre of wetland habitat and 1,000 linear feet of stream.

Ecological Assessment, Copper Mountain Ski Resort, Summit County, CO
Completed 850-acre jurisdictional delineation and received verification from U.S Army Corps (Sacramento District). Delineated over 100 acres of montane, palustrine emergent, palustrine scrub-scrub, forested and riverine jurisdictional habitat. Completed two Individual Permits (Section 404, CWA) for impacts associated with base area expansion, designed and implemented stream enhancement project as well as a 1.8 acres of wetland mitigation.

2006 Rate Sheet

Professional Services

Senior Water Resource Engineer…..…..……..$95.00 per hour

Senior Ecologist…….……..……$90.00 per hour

Water Resource Engineer……..$90.00 per hour

Engineer……..…….……..……..$82.00 per hour

Ecologist……..……..…….……$68.00 per hour

Staff Engineer……..…….……...……..$68.00 per hour

Expenses

GPS rental……..$250.00 per day

Mileage……..…IRS Rate

Plots (B&W or Color, 24”x36”). …….……..$6.00 per sheet

*Additional direct project expenses billed at cost

Rates listed on this sheet are valid from January 1, 2006 through December 31, 2006. ERC reserves the right to increase rates effective January 1, 2007.

The TSR Group

The TSR Group

The TSR Group, a 10 to 15 person firm, was founded in 1997 in Golden, Colorado where it is currently headquartered. The firm is comprised of employees who are Design, Natural Resource, GIS, CAD and software engineering experts.

The TSR Group was born out of the desire to utilize the immense wealth of GIS functionality and data that exists with the goal of reducing design and construction project time lines and costs. The TSR Group accomplishes this by using and integrating various spatial tools including CAD, GPS, GIS and web-based collaboration technology.

Design Philosophy

A better design done faster saves time and money.

As design professionals with industry specific expertise, we provide an innovative and comprehensive approach tailored to meet each project's specific need. The TSR Group's integrated approach to design and data solutions produces clear advantages for our clients – high quality products that are produced rapidly and effectively.

Land Planning

Physically functional, politically viable, aesthetically pleasing, and financially successful.

Through thoughtful design we are committed to creating true communities that are environmentally sensitive, and enhance the neighborhoods in which we plan to build. The TSR Group's proven approach to land planning is rooted in the thorough understanding of three critical factors:

1. **The physical characteristics of the site;**
2. **Local zoning, development regulations and political climate;**
3. **Owner/developer programming requirements.**

By making sure we understand all of the relevant parameters of the project from the beginning, we strive to produce plans that are physically functional, politically viable which will mesh well with our client's vision of the property.

Landscape Architecture/Design

An integrated element of our planning and design projects is Landscape architecture. The TSR Group consistently provides thoughtful, innovative, yet practical design whether with residential master planning and design, park design, urban renewal, streetscaping, and road corridor studies. The foundation of any landscape plan is to truly appreciate the use of any area and utilize native /natural plants and materials to limit maintenance, preserve context, and support the environmental climate.

Civil Engineering and Other Discipline Expertise

Coordinated system-wide expertise with attention to detail.

At The TSR Group, we strive to provide the highest quality civil engineering for every client. Roadway design, traffic engineering, site grading, utility design, drainage, and erosion control are all areas in which we leverage expertise. In addition, we have experience integrating many other disciplines in order to complete a job including; hydrology, geotechnical engineering, boundary, design and construction survey. The TSR Group is committed to providing engineering that works on a system-wide level on opening day and into the future.

Project Management

An extension of your staff working as coordinators, technical experts, and project advocates.

Our disciplinary expertise in land planning and civil engineering, combined with our data management and delivery capabilities make The TSR Group the natural choice for project management. The role we strive to achieve is truly that of owner's agent. We act as the technical experts representing our clients' interests from proforma evaluation through construction. We have an excellent history of successfully managing and coordinating the often large and complex teams of sub-consultants required to entitle land, build infrastructure, and sell property.

Projects
Webster Lake

Project Statistics:

Client: City of Northglenn
Reference:

Completion: 2001
Services: Planning

Project Description:

Webster Lake is located within the E.B. Rains, Jr. Park in the City of Northglenn. This park is very popular and used by many local residents for a variety of recreational activities ranging from walking to fishing.

As the result of water seepage from the lake, Molly Orkild-Larson, then at Applegate Group, Inc. was hired to address this water loss and redesign the surrounding areas adjacent to the lake. Other issues addressed under this design included shoreline erosion, wildlife issues, pedestrian/bicycle/vehicular circulation, fishing and paddleboat conflicts, handicap access, park aesthetics, and storage of recreation equipment. Environmental concerns such as water quality were also considered during the development of this plan.

This design addresses both existing and future needs of the park and was further documented through a final site plan and construction documents. Construction commenced in 2000 and was completed in 2001.

This project received a Merit Award presented by the American Society of Landscape Architects, Colorado Chapter, on February 1, 2002.

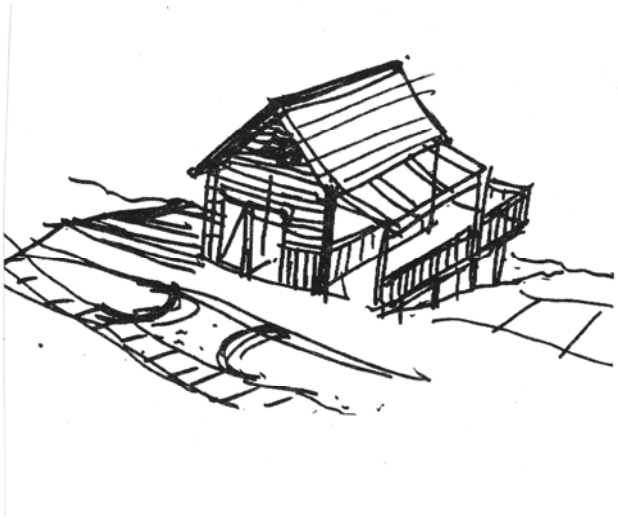
Projects

E. B. RAINS JR. PARK RENOVATION

Project Statistics:

Client: City of Northglenn

Completion: 2001
Services: Planning
Landscape Design
Stabilization



Project Description:

Located in Northglenn, Colorado this park is very popular and used by many local residents for a variety of recreational activities ranging from walking to fishing. It also hosts the City of Northglenn's annual events such as the fireworks for the Fourth of July.

Renovation of the park included redesign of the existing lake and its' surrounding areas, shoreline stabilization, pedestrian, bicycle, and vehicular circulation, fishing and paddleboat conflicts, handicap access, recreation equipment storage and wildlife habitats.

Projects

Greenwood Village Parks, Trails And Open Space Master Plan

Project Statistics:

Client:	Design Concepts
Reference:	Robby Layton Principal
Completion:	2005
Services:	GIS GPS Planning and Public Involvement

Project Description:

The TSR Group is involved with planning for the future the Greenwood Village Parks, Trails and Open Space. The TSR Group's primary responsibilities on the Greenwood Village Parks Master Plan consulting team is to provide a comprehensive GIS database, a project web site, and public involvement support. The TSR Group is using its spatial data and planning expertise to create a planning, public involvement and technical database to support the process and conclusion of the master plan. The data collected and centralized will also be useful in the long term by giving Greenwood Village Parks and Recreation department a good base dataset to manage their parks in the future. The study will use GIS, GPS and Remote Sensing technology to incorporate all public comments and technical information in one central location. The data will be served on the Internet and on CD-ROM.

Projects
Toscana Bay

Project Statistics:

Client: Mandalay Bay Partners, LLC
Reference: Bill Wynne
(949) 888-6662
Completion: 2004
Services: GIS Consulting
Master Planning
Web Site Design
Internet Data Distribution

Project Description:

Toscana Bay is a mixed-use residential and commercial parcel in Ventura County, California. Located one-quarter mile from the Pacific Ocean, Toscana Bay offers single-family detached, patio, town home, and condominium living with ocean canal access to nearly all properties. Water is a feature throughout the site as a commercial, open space, park, and residential amenity. Two main thoroughfares bind the property and the commercial parcels back to the ocean canal with a promenade along the water affording dual storefront exposure.

The TSR Group is providing economic feasibility and phasing analysis for this 135-acre parcel. The TSR Group's use of QuickTimeVR for visual inventory and economic analysis is ushering this project through the planning process in a timely manner. Consultants can view project information on the Internet via an interactive map display developed by The TSR Group. Here they can not only view data, but also query data, post questions and view the details of the site with QuickTimeVR movies.

Matthew C. “Quint” Redmond

Education:
Master of Urban and Regional Planning (M.U.R.P.), 1992
University of Colorado - Denver

Master of Landscape Architecture (M.L.A.), 1993
University of Colorado - Denver

Bachelor of Science, Geology, 1984
Tulane University

Continuing Education:
NEPA Project Development Course FHWA, 1996
Introduction to Solaris 2.X, 1994
ESRI Introduction to Arc/Info, 1994
Private Pilot’s License ASEL #522-04-9658, 1993
Wetland Delineation, Wetland Training Institute - Kalispell, MT., 1993
Emergency Medical Technician - Basic Certified, 1985-89

Professional Organizations:
Colorado Regional Arc/Info Users Group, CRAIG
American Planning Association, APA
American Society of Landscape, Architects, ASLA
International Association for Landscape Ecology, IALE
Society of Wetland Scientists, SWS

Mr. Redmond is co-owner of The TSR Group. He has extensive knowledge of both natural resource research and GIS/GPS technologies. He brings all of these skills to the projects he works on providing seamless deliverables that have been thoroughly researched in the field and integrated accurately within the project mapping. His primary focus is wetlands and landscape ecology. He has experience in wetland delineation, analysis and permitting, as well as mitigation design and planning for projects. His regional area of experience includes the Rocky Mountain States. Research experience includes on site field botany, soils and hydrologic investigations. Wetland mitigation design includes: well monitoring design and analysis, grading, planting and re-vegetation design, habitat evaluation including functions and values of wetlands, and enhancement design evaluation. Additionally, he is well versed in the use of Arc/Info, ArcView and other GIS/GPS software.

Project Experience

Salt Lake Organizing Committee / Utah Dept. of Transportation, **Salt lake City, UT:** Principal in Charge. Implementation and customization of TCMap, data collection, research and coordination, complete system development. The system allowed access to detailed event and routing information to support the 2002 Winter Games in Salt Lake City. Effort required the integration of geographic data, CAD drawings, drivers-view photography, panoramic (360 degree) photography, event databases and routing to be accessed through a single Internet application (TCMap). TCMap was customized and implemented with 4 months and utilized ESRI ArcSDE, ArcGIS and ArcIMS technologies. The application manages route selection and display by date and venue, event schedule information, and user security. This highly scalable system utilized multiple spatial servers, a separate database server and web server to quickly provide GIS data to users. The map interface features complete map navigation, printing and measurement functions and allows users to select multiple features to compare attribute information. This project relieved the client of maintaining and reproducing an extensive event planning, routing, and staffing document for all participants and provides a training platform for out of state staff.

Harlan Street Extension, HDR Engineering/Tupa Associates, Westminster, CO: Provided GIS/GPS support for environmental inventory services that included wetland delineation, Threatened and Endangered Species reconnaissance and vegetation mapping. Using Trimble sub meter DGPS and existing local digital base mapping, delineated wetlands and recorded and mapped the extent of wetlands within the study area for bridge and roadway extension. Also mapped T&E plant habitat, trapping locations for Preble's Mouse survey. Provided digital file to engineers for design information.

Snowmass Village Comprehensive Plan, Design Studios West, Denver, CO: Provided GIS services and support for comprehensive planning effort. Teamed with a planning and landscape architecture firm, data, expertise and analysis were provided to support master planning efforts. Services include data compilation, organization and display from multiple sources. Data sources include, Pitkin County assessor's, Colorado Division of Wildlife, Harrison Datasets, digitizing hardcopy maps and 3D DEM manipulation. Data compilation required importation, manipulation and re-projection into single useful project dataset.

Ft. Washington Way, Parsons Brinckerhoff, Cincinnati, OH: Provided GPS support services for digital visualization project. Provided Sub-meter Differential GPS equipment and training for determining locations of Quick Time Virtual Reality (QTVR) nodes. 89 QTVR nodes were shot and the locations were marked using GPS. These nodes were then differentially corrected and projected to coincide with CAGIS data.

Jefferson County Transportation Plan Data Compilation, Jefferson County, CO: Created an entire transportation data set for use on transportation planning and public involvement. The data set was designed to be completely integrated with Jeffco's existing GIS and to be integrated with DRCOG's traffic and transportation model (MINUTP). A data model showing all the layers and attributes of the proposed data set was created and used to generate consensus on the substance of the project. Data from such varied sources as the MINUTP transportation model and RTD's bus stop database were all compiled into one workable source.

U.S. 36 Corridor Study, Boulder, CO: Regional Transportation Corridor Study looking at long range land use and transportation issues related to the current and impending congestion. Provided GIS support and cartographic expertise. Created analytical mapping from commercially available US Bureau of Census data including STF3 files to the block group level TIGER line files and USGS land use data. This data was purchased from Harrison Datasets, Fort Collins CO. Imported and updated existing land use data, created and existing zoning coverage, produced wall display graphics.

South East Corridor Major Investment Study, Denver, CO: Provided GIS and Environmental support. Gathered data from a variety of sources to combine into a full data set. Activities included transportation modeling display of origination/destination and production/attraction analysis; graphic analysis and display of regional socio-economic data, TAZ analysis, preliminary environmental mapping, aerial photo scanning/registering/rectifying and interpretation, data import and export, digitizing and attribute data input.

South East Aurora Transportation Study, Aurora, CO: GIS project support. Created a transportation network layout for a quickly developing suburban area. Imported data from jurisdiction, edited spatial and attribute elements and created map/graphics using AML for public involvement. Selected data was then exported from Arc/Info to Intergraph Microstation for use in civil design. New centerlines of preliminary alignments were translated back into Arc/Info and given transportation attributes such as No. of Lanes, surface etc.

Loveland East / West Mobility Study, City of Loveland, CO: Provided GIS coordination and technical support. Transportation study involving multiple scale of inquiry. Arc/Info and ArcView were used to import, register, rubbersheet and analyze both aerial photography and planimetric data provided by the client. Additional data was supplied to integrate the regional transportation model with the road network and the TAZ polygons. In all, conceptual design elements were addressed as well as regional transportation issues.

US 93 Somers to Whitefish, Flathead County, MT: Landscape Architect/Landscape Ecologist Delineated wetlands using the 1987 USCOE Manual along a 27 mile stretch of rural highway. Approximately 80 acres total wetland area were delineated at 22 sites. Wetland types encountered include riparian shrub scrub, freshwater emergent, wet meadow, and non-jurisdictional. Produced wetland finding including ranking of functions and values for each site. Provided mapping and impact calculations and mitigation support. Additional services

provided were farmland, water, geological, bicycle/pedestrian, visual resource investigation and documentation, mapping of environmental constraints, programming, site analysis and presentation graphics.

C-470 Extension EA, Jefferson County, CO: Provided GIS support and technical expertise to produce environmental documentation. Procured/Imported data from client and others to provide basic database for project. Delineated wetland areas according USCOE 1987 Manual. Wetlands areas within the proposed impact area were delineated and a wetland finding was produced according the FHWA guidelines. Section 404 permitting was then based on this finding. Additional work on the project included analytical transportation support (using DRCOG TAZ data, map production using AML and graphic display, provided environmental base mapping using Arc/Info 7.0.3 and ArcView 2.

Teaching Experience:

Introduction to Digital Cartography (Geog 3080), University of Colorado at Denver, Dept. of Geology, Geography and Environmental Sciences, Spring 1998.

Introduction to Digital Cartography (Geog 3080), University of Colorado at Denver, Dept. of Geology, Geography and Environmental Sciences, Spring 1997.

Introduction to Geographic Information Systems, Red Rocks Community College, Dept. of Geology, Fall 1996.

Introduction to GIS and Planning, teaching assistant, University of Colorado at Denver Graduate School of Architecture and Planning, Fall 1995.

Publications:

"Habitat vs. Landuse Anthropocentric Viewpoint and Scale in Land use/Land cover Classification: International Association of Landscape Ecologists Annual Conference, Poster Session. Galveston, Texas 1996.

"Using GIS for Micro-Ecological Management", guest editorial within The Ecology of Golf, by Max Turman.

Molly Orkild-Larson

Education:
Master of Urban and Regional Planning (M.U.R.P.), 1992
University of Colorado – Denver, Colorado

Bachelor of Science, Landscape Architecture, 1983
Colorado State University – Fort Collins, Colorado

Continuing Certifications/Education:
Registered Landscape Architect – State of Kansas, 1998
American Institute of Certified Planners, 1994
Continuing Education in Landscape Architecture, University of Copenhagen, Denmark, 1983

Ms. Orkild-Larson is a landscape architect and land planner for The TSR Group. She has over 20 years of experience in site planning and landscape design and has practiced in both the public and private sectors. She has worked extensively in residential master planning and design, park design, urban renewal, streetscaping, road corridor studies and sand and gravel mining and reclamation.

Project Experience:

Webster Lake, Northglenn, Colorado
This CCASLA award-winning project is located in E.B. Raines Park. The renovation of this popular park involved the reconfiguration of the existing lake to improve existing uses such as fishing and paddleboats, development of shoreline treatments that eliminates erosion, design and documentation of a pavilion area along the lake and pedestrian trails and development of landscape planting plans.

Grandview Ponds, Thornton, Colorado
This 200 acre park project involved the upgrade of the site to be more inviting, ADA accessible and sensitive to existing wildlife. The two of the four ponds were deepened and edge treatment applied (large rocks conducive to sitting/standing on) to improve the existing fish, eliminate erosion and maintain the shoreline vegetation. A trail system was developed linking the all the ponds, new shade shelters and picnic pavilion together. Park upgrades also had to take into consideration “special events” such as Fish Derby Days and Father/Son Fishing Day that attract large crowds.

136th Avenue Streetscape, Broomfield, Colorado
This project involved developing a planting plan for a landscape median designed to separate 136th Avenue traffic from traffic of local residences. Several neighborhood meetings were held to inform the neighbors of the street improvement plan and to receive input on the design.

Kwinana Corridor Study, Kwinana, Western Australia
Project manager and designer for a regional landscape plan along 25 miles of the Kwinana Highway, south of Perth. She developed guidelines and landscape enhancement strategies to screen blighted areas and enhance aesthetic views along this corridor. She also presented landscape alternatives at bi-monthly meetings to the Town of Kwinana’s Coordinating Committee and addressed concerns of local residents and steering committee.

Fawn Valley Neighborhood Park, Kiowa, Colorado
Designed a five-acre handicap assessable park with a variety of recreation amenities. Water conservation techniques were applied in the landscape plan and were accomplished through plant selection and irrigation techniques.

Baldivis Woodland Cemetery, Baldivis, Western Australia
Project manager and designer for a 150-acre woodland cemetery and park, located on the outer edge of the Perth metropolitan area. The design proposal was unusual in that it was a multi-purpose cemetery, a cemetery with low-impact recreation. She developed a master plan defining land uses and vehicular and pedestrian circulation within the site. She also prepared site plans for Phase One including a cost estimate, construction details, planting plans and scheduling plan. Throughout the course of the project, she worked closely with a cemetery steering committee, shire and local governing agencies to comply with health regulations and shire design standards.

City West Redevelopment, West Perth, Western Australia
Through sensitive redevelopment, an historic chocolate factory was turned into a shopping destination for the Perth metropolitan area. Designed and documented the landscaping for the outdoor walking malls, restaurant patios and plazas for the development.

Baseline Sand and Gravel Project, Adams County, Colorado
Developed mining and reclamation documents to be reviewed by the State of Colorado and County for a sand and gravel mining operation. This project entailed addressing many issues including: access, traffic, re-vegetation of new slopes, wetlands and adjacent neighborhood concerns.

American West Land Surveying Co.

American West Land Surveying Co.
A Colorado Corporation

American West Land Surveying Co. has a long history of providing surveying services to the Colorado front range. Founded in 1991 by M. Douglas Hoos, our firm has grown from a one man operation to a staff of ten full time employees.

We take pride in offering our clients personalized service using state of the art equipment and knowledgeable personnel. Our clients include private individuals, developers, utility companies, lenders, title companies, law firms, engineering firms, municipalities, and federal agencies to name a few.

Key Personnel:

M. Douglas Hoos, PLS 27269 - Owner / President:

- Began his surveying career in the mid 70' for E. Schafe & Associates in Delta, CO performing mineral patent surveys in numerous western states.

- Began work for Adams County Public Works Survey Division in 1982 performing public works improvement and construction surveys, eventually retiring from Adams County in 1991 as head of the Surveying Division.

- Started American West Land Surveying Co. in 1991 performing mortgage surveys and residential lot surveys. At present oversees the day to day operations of the company.

Curtis D. Hoos, PLS 37971 - Operations Manager:

- Began his surveying career in 1996 under the supervision of M. Douglas Hoos assisting in performing mortgage surveys and residential lot surveys. At present oversees the day to day operations of projects and survey crews.

Merle R. Hoos - Project Manager:

- Began his surveying career in 1993 under the supervision of M. Douglas Hoos assisting in performing mortgage surveys and residential lot surveys. At present manages field work for various types of residential and commercial projects.

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Please find attached several examples of similar projects which our firm has had an opportunity to be involved with.

East 152nd Avenue ROW Topographic Survey:

Client: Western Engineering Consultants, Inc. Brighton, CO.
Topographic ROW survey of 1600+/- LF of East 152nd Avenue, for turn lane addition. Including existing conditions of roadway and adjacent utility locations.

Weld Central High School Boundary & Topographic Survey:

Client: Weld County School District RE-3J. Greeley, CO.
Boundary & Topographic Survey of the 20 Ac.+/- Weld Central High School site and adjacent 2640+/- LF of adjacent ROW. Including building, infrastructure improvements, and utilities.

Land Survey Plat of Southern Street ROW:

Client: Western Engineering Consultants, Inc. Brighton, CO.
Boundary Survey of 2640+/- LF of Southern Street ROW in Brighton Colorado. Including title research of adjacent properties and monumenting the boundaries of existing ROW.

29 S 4th Ave., P.O. Box 129, Brighton, CO 80601
PH: 303-659-1532 FX: 303-655-0575

July 2006

American West Land Surveying Co. Rate Schedule

29 South 4th Avenue
Brighton, CO 80601
303-659-1532

Item Description:	Unit:	Unit Price:
• **Crew Rates:**		
One person & Equipment	Hour	$110.00
One person & GPS (Trimble 5700 / RTK)	Hour	$125.00
Two person & Equipment	Hour	$140.00
Two person & GPS (Trimble 5700 / RTK)	Hour	$210.00
Project Manager/Research	Hour	$85.00
PLS Review & Certification	Hour	$100.00
CAD/Survey Technician	Hour	$75.00
• **Miscellaneous Services:**		
Field Supplies		Cost + 30%
Per Diem (when required)	Day	$125.00
Consultation in Connection with Litigation Testimony and Similar Matters.	Hour	$150.00
Transportation	Mile	$1.10
• **Overtime Rates:**		
All Crew Rates	Hour	Standard Rate + 50%

SCOPE OF WORK

SCOPE OF WORK

We would like to thank you for considering J&T Consulting, Inc. (JT) to provide engineering services to the City of Northglenn. Per your request we have reviewed the request for proposal and addenda and have developed the following approach to completing the proposed project.

We perceive the overall goals of the project are as follows:

- Develop construction documents for the full reconstruction of Huron Street from Naiad to Kennedy Street and the reconstruction of Kennedy Street from Huron Street to Roseanna Drive.

- Develop construction documents for stabilizing and extending the east shoreline of Croke Reservoir that will include a new fence line and pedestrian trail along the west side of Huron Street.

- Select a contractor to construct the improvements by the spring of 2007.

- Complete construction of the improvements by years end in 2007.

The City has had some of the initial design effort completed. The initial geotechnical engineering investigation was completed by MFG to evaluate the subsurface conditions and provide geotechnical recommendations and geotechnical design criteria for the project. Our project team has reviewed this report and has provided input based on this information that is detailed in our project approach and phased tasks. Some landscaping concepts and pedestrian trail layouts have also been provided by the City for what is envisioned. The project team has also reviewed this document and will build off of the conceptual layouts.

PROJECT APPROACH

JT has provided a phased task approach to this project that will place emphasis on communication and exchange of information between City staff, citizens of Northglenn, and our project team to provide a thorough and efficient approach to performing the design and developing the construction documents for this project. The scope of work described in our proposal is based on the requirements of the request for proposals and project team's previous experience with similar projects.

PRIMARY SCOPE OF WORK

PROJECT COORDINATION

Project Management

Project management of the overall project will be provided by JT. Mr. J.C. York will be the project manager and liaison between the City and the JT project team. Mr. Jason Murray will be the assistant project manager and provide an alternate contact.

Our approach to project management is to develop a project management plan with the City to ensure their requirements are addressed. The elements of the project management plan will included the goals and objectives of the project (assumptions taken from the RFP to be confirmed during contract negotiations and at the project kickoff meeting), scope of work (taken from RFP and confirmed during contract negotiations), project schedule, financial plan/budget, consultant and City project team organization/resources/responsibilities, communication plan, contingency/risk management plan, and the ongoing quality control process.

Part of this task will include monthly status reports describing the progress on the individual tasks in the scope of work. These reports will also include the project team invoicing, overall budget tracking schedule of tasks and fees, and the overall budget tracking S-curve exhibit.

Communication will be emphasized in this task to keep Ms. Dana Carter and the City staff apprised of any project issues that arise. A log of the project issues will be kept to ensure that issues are addressed and indicate when and what decisions/actions were made to keep the project moving in an efficient manner to meet the overall project schedule and budget constraints.

Project Kickoff Meeting

A project kickoff meeting will occur after the notice to proceed has been issued. The City should dedicate a two hour block of time as there are many initial items and action items to discuss. This meeting will be very important for the City team and the JT project team to communicate with each other to better define the goals, objectives, success factors, and associated performance measures of the project. A communication plan will be established for all of the team members involved to setup contact information and project/progress/milestone meetings.

Site Visits

Site visits are an important part of the project and will be necessary throughout the project to gain information about site conditions, utilities, and infrastructure. We have provided eight site visits in our fee schedule.

Progress Meetings

JT anticipates that the project and progress meetings will occur at the beginning and end of major tasks/milestones. Progress meetings will be necessary to discuss project issues with City staff. JT envisions the frequency of meetings to be bi-weekly during the initial phases of the project and monthly thereafter.

PHASE I – PRELIMINARY DESIGN REPORT

JT will provide a preliminary design report addressing design considerations for the Huron Street improvements and the Croke Reservoir shoreline stabilization. Five (5) copies of the design report and a CD containing a pdf of the report will be submitted to the City. Several information gathering and inventory tasks will be completed during this phase of the project. The following tasks are to be completed and included with the Preliminary Design Report.

Design Survey

JT will coordinate with Curtis Hoos of American West Surveying Co. to provide the design survey. This task will include a title search for all adjacent properties, establishment of horizontal and vertical control (State Plane Coordinates NAD 83 and NAVD 88), locations of all utilities in the area, ROW corridor survey, topographic survey, locations of existing roadway, curb and gutter, driveways, sidewalks, traffic signals, and drainage structures. JT has assumed that Croke Reservoir will not be dewatered during the survey and as such has had American West Surveying Co. program fees to conduct underwater survey using sounding equipment for the topography on the bottom of the reservoir.

Utility Potholing

JT will coordinate with Diversified Underground for the utility potholing. This task will consist of physical location of all utilities that may affect the design of the proposed improvements for vertical and horizontal location/confirmation. Traffic control is included in the fee schedule for two days, additional days for traffic control will be at the unit cost presented in the fee schedule if required. Ten potholes are included in the fee schedule, additional potholes will be at the unit cost presented in the fee schedule if required.

Site Investigations

Site investigations will be performed to inventory the existing infrastructure and confirm the existing conditions of the roadway, traffic signals, dry and wet utilities, sidewalks, driveways, curb and gutter, and Croke Reservoir shoreline/outlet structure. The investigation will include digital photographs and video of the project area to capture the existing condition of the project area.

JT will also provide alternatives and opinions of probable construction cost associated with the shoreline stabilization. The two alternates that will be investigated are using a beaching slope (6:1 or flatter) vs. a steeper riprap lined slope (3:1). We will need to investigate the water rights associated with Croke Reservoir as we will not want to affect the storage associated with any water rights unless the City of Northglenn owns them. We understand that the City of Thornton may own a small amount of storage in Croke Reservoir. The results of this alternatives analysis will provide the information needed for the City to make a choice/decision on how to proceed with the design of the slope stabilization.

The following subtasks will be included as a part of the site investigations:

- Review of the existing geotechnical report by MFG – JT will coordinate with JA Cesare and Associates to review the report. The review will focus on the conclusions presented and if alternate conclusions and recommendations are possible or warranted. Pavement sections and recommendations for over excavation along Huron Street are possible areas of change, based on the review. The review will also consider the need, if any, for additional investigation of the site, particularly in reference to the embankment repairs. If the review indicates additional investigative work is needed for Huron Street or the Croke Reservoir embankment, we will prepare a supplemental scope of work for presentation to the City. The additional tasks are included in the supplemental scope section later in this proposal.

- Traffic Study of the project area – JT will coordinate with Sorenson Engineering, Inc. and LSC Transportation Consultants to conduct the traffic study. The study will determine new lane configurations (if needed), turn lane lengths, and access to existing businesses and residences. Conceptual drawings will be provided along with the traffic study to be included in the preliminary design report.

One of the first items that will be critical to the project will be the classification of Croke Reservoir as a jurisdictional or non-jurisdictional dam. This determination will have a substantial affect on the costs of the project. Jurisdictional dams have more stringent requirements for design and construction.

We have assumed that the classification will be a non-jurisdictional dam. We have reviewed the previous dam safety reports from the State Engineer and the reports indicate that the dam is proposed to be re-classified as non-jurisdictional. We will meet with the State Engineer's Office to discuss the classification status of the embankment, and we will endeavor to formalize the non-jurisdictional designation that was proposed in the most recent dam safety report. A brief section of the preliminary design report will include a discussion about the classification decision by the State. The design parameters allowed by the classification will be summarized in this section of the preliminary design report. Should the classification remain jurisdictional adjustments will have to be made to the fee schedule to incorporate the State Engineer's requirements.

PHASE II – 60% SUBMITTAL

The 60% submittal will include the preliminary construction drawings of the roadway improvements, trail alignment, landscaping, and shoreline stabilization/extension based off of the information gathering contained in the preliminary design report. The 60% submittal will also include the environmental assessment regarding the Croke Reservoir shoreline stabilization area. JT will coordinate all the design efforts and reproduction of the drawings and provide a complete package for the submittal to the City. 15 copies of the drawing set will be provided along with the table of contents for the technical specifications.

Roadway Design

The roadway design will be provided by JT and Sorenson Engineering, Inc. Sorenson Engineering, Inc. will assist JT with the initial layout and design of the roadway based on the results of the Traffic Study. Plan and profile drawings will be completed to the 60% stage to depict the horizontal and vertical alignments. Cross-sections will be cut in critical areas only at this stage of the project. The drawings will be based off of the survey information provided from American West Land Surveying Co. Over excavation limits will be included with the profile and cross-sections to determine if any utility re-location is warranted. The drawings will conform to the City of Northglenn Standards and Specifications and CDOT Standard Specifications for Road and Bridge Construction.

Traffic Signal Design

The traffic signal design will be provided by LSC Transportation Consultants, Inc. Signal layout drawings will be completed to the 60% stage. The signals will be pole and mast arm type. The 60% drawings will indicate the detection zone layout as well as the conduit runs for power and communication. The drawing(s) will conform to the City of Northglenn Standards and Specifications, CDOT

Standard Specifications for Road and Bridge Construction, and the Manual of Uniform Traffic Control Devices (MUTCD).

Traffic Control Plan

The traffic control design will be provided by JT and Sorenson Engineering, Inc. Sorenson Engineering, Inc. will assist JT with the initial layout and design of the traffic control to provide traffic flow along Huron and into businesses during the construction of the improvements. The plan will conform to the City of Northglenn Standards and Specifications, CDOT Standard Specifications for Road and Bridge Construction, and the MUTCD. Drawings will be completed to the 60% stage to depict the phases of the traffic control as construction progresses.

Construction Phasing Plan

A construction phasing plan will be provided by JT with input from all members of the project team as well as the City's team. The phasing plan will identify proposed project sequencing. The sequencing for construction will be estimated during the design phases and must be confirmed when a contractor is selected for construction.

Shoreline Stabilization/Extension Design

JT will coordinate with JA Cesare and Associates, Inc. for the initial design of the shoreline stabilization. The design will be based on JA Cesare and Associates, Inc. review of the existing geotechnical report and the outcome of the determination from the State Engineer's Office on weather or not Croke Reservoir is a jurisdictional or non-jurisdictional dam.

The design will include a plan view drawing showing initial grading, fence line, and trail alignment. Cross-sections showing typical slopes will be developed in this phase with detailed cross-sections being provided in the 90% submittal. We are assuming the extension of the shoreline will increase by a minimum of 20 feet to assure enough work space for the contractor to build the proposed trail, landscaping, and fence along the west side of Huron Street.

At this point we believe a beaching slope (6:1 or flatter) will be utilized to protect the slope from wave action rather than a steeper (3:1) riprap lined slope simply because of cost. The results of the preliminary design report will determine which slope is selected as preliminary cost estimates will be provided to assist the City in making a choice on the slope stabilization.

Landscape Design

The landscape design will be coordinated by JT with assistance from the TSR Group. The initial design and plan will be based off of the concepts provided by the City. Coordination with City staff will be important to gain information on previous public input for the proposed landscape treatments and how they can be implemented. The landscaping plan will be based from the shoreline stabilization grading plan. The plan will include the initial trail alignment and layout as well as the preliminary planting layouts for trees, shrubs, grasses, mulch, benches, etc.

Storm Sewer/Reservoir Outlet Design

The storm sewer and reservoir outlet design will be provided by JT. Plan and profile drawings will be completed to the 60% stage to depict the horizontal and vertical alignments. Cross-sections will be cut from the profile drawings to provide detail of the reservoir outlet structure as it relates to the extended slope of the Croke Reservoir shoreline. The drawings will be based off of the survey information provided from American West Land Surveying Co.

The storm sewer design is expected to include the outlet pipe/box culvert from Croke Reservoir and inlets located in Huron Street. The outlet pipe/box culvert from the reservoir replacement is due to the findings of Northglenn's current TV survey of this infrastructure. The existing pipe is corroded and no longer serviceable. The outlet pipe/box culvert will be extended to accommodate the slope stabilization and tie back into the existing storm sewer in 106th.

The outlet design will require extending the outlet west into Croke Reservoir to satisfy the slope stability requirements in stabilizing the shoreline. The concrete structure will be designed to the same size as the existing outlet structure but may require a different gate setup based on the flatter slopes that will be designed for the extended shoreline. Details for the outlet structure will be provided with the 60% submittal for sizing/layout and initial rebar placement.

Environmental Assessments

JT will coordinate with Ecological Resource Consultants, Inc. (ERC) to perform the environmental assessments. An onsite evaluation of existing waters/wetland habitat within the study area will be performed. The evaluation is intended to document specific existing characteristics which may provide assistance for an ACOE jurisdictional/non-jurisdictional determination. ERC will prepare documentation for ACOE submittal which will include: (1) summary of findings from the onsite evaluation and (2) request for jurisdictional/non-jurisdictional determination (depending on findings).

Upon evaluation and documentation of existing conditions, sufficient evidence may be present for the ACOE to make a clear non-jurisdictional determination. In the event a non-jurisdictional determination can be made, the ACOE will provide written authorization that the reservoir and project area is non-jurisdictional and that no permit is required for the project under the Clean Water Act, Section 404. In the event that the ACOE cannot make a clear non-jurisdictional determination or that the project area does contain other jurisdictional wetlands and waters. ACOE documentation of such a decision will be obtained. Should the project require permit authorization under Section 404 of the Clean Water Act, a fee to prepare proper documentation and obtain project authorization from the ACOE has been provided in the supplemental scope tasks.

The reservoir being a nature reserve presents the possible presence of state, federal and/or sensitive species and habitat. ERC will perform a screening of potential state and federal threatened, endangered and species of concern (TES). The screening will consist of a literature review of potential species which may occur in the general project vicinity as well as an onsite preliminary habitat assessment. The screening will document the presence or absence of such species and potential habitat. A summary of findings report will be prepared documenting the presence or absence of TES. If no TES are identified, the document will be suitable for submission to the USFWS/CDOW for clearance during any permitting process. Should potential TES or habitat be identified, the report will document the findings and outline the appropriate steps which will be required for continuation of the project. These steps are not known at this time and we have not provided a fee in the supplemental tasks if TES habitat is identified. We are assuming that the appropriate clearances can be obtained at this time.

Technical Specifications

Technical specifications will be identified in the 60% submittal by creating a table of contents. The table of contents will include all the specification divisions and individual titles that will be included with the 90% submittal. The details and actual specifications will be submitted with the 90% submittal.

Stormwater Management Plan

The stormwater management plan will identify the proposed best management practices for erosion and sediment control. The plan will include a narrative of the types of practices to be installed during the construction of the improvements until final stabilization of the landscaping has occurred. The plan will be completed to 60% for submittal to the City for review.

The locations of the best management practices such as silt fence, vehicle tracking control, straw bale barriers, and inlet protection will be depicted on a plan sheet along with detail drawings for each best management practice. The plan will be in accordance with the State of Colorado's requirements. The plan will be provided to the contractor to maintain for the duration of the project once a contractor is selected.

Phase III Drainage Report

The drainage report will identify if the existing storm sewer system is adequate for the proposed improvements. The report will include hydrology and hydraulic calculations to identify street capacities, inlet capacities, and storm sewer capacities.

Based on information from the draft master drainage update the problem area associated with the Tuck Lateral has been repaired, however the drainage capacity and actual runoff being collected should still be confirmed for the existing inlets in Huron Street. The report will be prepared to 60% complete for the City's review. The report will also include a basin map to show the areas, runoff coefficients, and time of concentration paths.

Opinion of Probable Construction Costs

JT will produce an opinion of probable construction costs that will provide unit costs for installation of the main infrastructure improvements (i.e. paving, sub-grade, earthwork, storm sewer, cast-in-place concrete structures, etc.). Construction cost contingencies will be included to account for incidentals not identified in the main infrastructure improvements. The opinion of probable construction costs will be updated to provide more detail and itemization in the 90% submittal and contingencies may be relaxed to a lesser percentage as more data is available on material and labor cost fluctuations.

PHASE III – 90% SUBMITTAL

This phase of the design will first include implementing any review comments from the City regarding the 60% submittal. The construction drawing documents will continue to be developed to provide specific details in relation to the roadway improvements (i.e. plan and profile drawings, cross-sections, typical details, intersection details, driveway details), storm sewer improvements (i.e. plan and profile drawings, details), shoreline stabilization (i.e. grading plan, cross-sections, details), reservoir outlet (i.e. structural details, outlet gate details), landscape plan, fence details, and trail alignment/details. The technical specifications will be compiled to include all sections identified in the 60% submittal along with the

City's review comments. Additional sections will be inserted as needed based on the final design.

Construction phasing will be re-visited in greater detail to determine construction sequencing and identify all the risks associated with the proposed phasing. The construction phasing should also be reviewed by the selected contractor to ensure they can accommodate what is proposed and possibly provide an alternate phasing plan that meets the City's requirements.

JT will coordinate all the design efforts and reproduction of the construction documents and provide a complete package for the submittal to the City. 15 copies of the construction documents and the technical specifications will be provided to the City for review.

PHASE IV – 100 % SUBMITTAL

JT will coordinate with all the sub-consultants to address the review comments provided by the City on the 90% submittal. Comments will be addressed and final documents will be submitted to the City. The 100% submittal will include 15 sets of the construction documents along with a CD containing the electronic drawings in AutoCAD version 2000 or later format and the specifications in Microsoft Word format. These drawings will be used for the bidding phase of the project. Once the bidding phase is completed and if any revisions to the drawings are needed two (2) sets final mylar drawings will be submitted to the City

PHASE V – LIMITED BIDDING PHASE ASSISTANCE

JT has provided limited engineering assistance for the primary scope as indicated in the RFP. The level of assistance will be engineering review of addenda items that would include responses to the City to provide information for the addenda they would be processing for the bidding phase.

PHASE VI – LIMITED CONSTRUCTION PHASE ASSISTANCE

JT has provided limited engineering assistance for the primary scope as indicated in the RFP. The level of assistance will be engineering review of submittals, RFI's, and change proposal requests. The reviews would include responses to the City to address the submittals, RFI's, and change proposal requests.

SUPPLEMENTAL SCOPE OF WORK

JT has provided the following supplemental scope to the primary scope as we feel it is important to identify potential tasks that may have to be completed as a

result of the initial investigations that will be performed during the preliminary design. We have included additional geotechnical investigation for the reservoir/embankment as it appears there could be a need for borrow material that may not be readily available for the extension of the Croke Reservoir shoreline. We have also included additional environmental permitting services if it is determined that the wetlands along the east shoreline of Croke Reservoir are jurisdictional.

Reservoir/Embankment Analysis

Of primary concern for rehabilitation of the embankment is the design of the upstream slope and the material to be used to construct the slope. Our review of the MFG work may indicate that other options are available for design of the slope, and additional or alternate borrow material may be required. If that is the case, one possible source is the reservoir basin. In order to evaluate use of borrow material from the basin, we propose excavating 5 test pits in the basin floor and conducting laboratory testing of the materials encountered. Exploration of the basin floor will require that the reservoir be drained sufficiently to allow access to a track hoe. One caution, however, regarding use of borrow from the basin is that the basin will likely have some depth of slime material that would require processing for use as embankment fill. If the depth of slime is more the 2 or 3 feet, borrowing from the basin may not be feasible from an economics standpoint.

Groundwater Mitigation Analysis

One of the concerns for the study undertaken by MFG was identification of groundwater conditions through the embankment and under Huron Street. The intent was to identify ways of reducing seepage so that the street sub-grade could be improved, and groundwater problems in nearby apartment buildings would be reduced. Our review may indicate that this work requires additional subsurface investigation. The exact nature of this work will depend on the results of our review, but we anticipate that up to 3 borings may be required, along with laboratory testing and analysis of seepage conditions.

If we determine that control of groundwater is required, conceptual plans will be developed to provide the appropriate level of control. A consideration of alternative plans may be warranted.

Clean Water Act Section 404 Permit

In the event that the ACOE cannot make a clear non-jurisdictional determination or that the project area does contain other jurisdictional wetlands. ACOE documentation of such a decision will be obtained. Should the project require

permit authorization under Section 404 of the Clean Water Act, ERC will prepare proper documentation and obtain project authorization from the ACOE.

ALTERNATE SCOPE OF WORK

JT has provided an alternate scope of work as requested in the RFP. JT has provided the tasks we are accustomed to associating with full-time construction administration.

PHASE V BIDDING PHASE ASSISTANCE

During this phase we will review existing project documents and develop a project management plan, prepare and reproduce the contract documents for distribution to prospective bidders/material suppliers/plan rooms, prepare bid addenda, work to resolve any design issues, work to obtain the necessary permits, facilitate the bid opening, and assist in the selection of a contractor.

PHASE VI CONSTRUCTION PHASE ASSISTANCE

During this phase JT (with assistance from Sorenson Engineering, Inc.) will perform the following tasks that are typically required of a construction project: General project coordination and contract administration for the contractor, construction observation, QA/QC coordination and review, coordination and facilitate progress/construction meetings, pay application review and certification, submittal reviews and RFI responses, change order reviews, and provide coordination and submission of progress updates to City staff. This task does not include construction testing or specialty inspection. During construction closeout phase we will provide the services typically associated with the completion of a project: Work with City staff to develop punch list items and determine substantial completion, coordinate completion and acceptance of punch list items, schedule and coordinate final walk through/acceptance, review as-built documents, and assist the city with close out activities (final payment, advertisement, etc.)

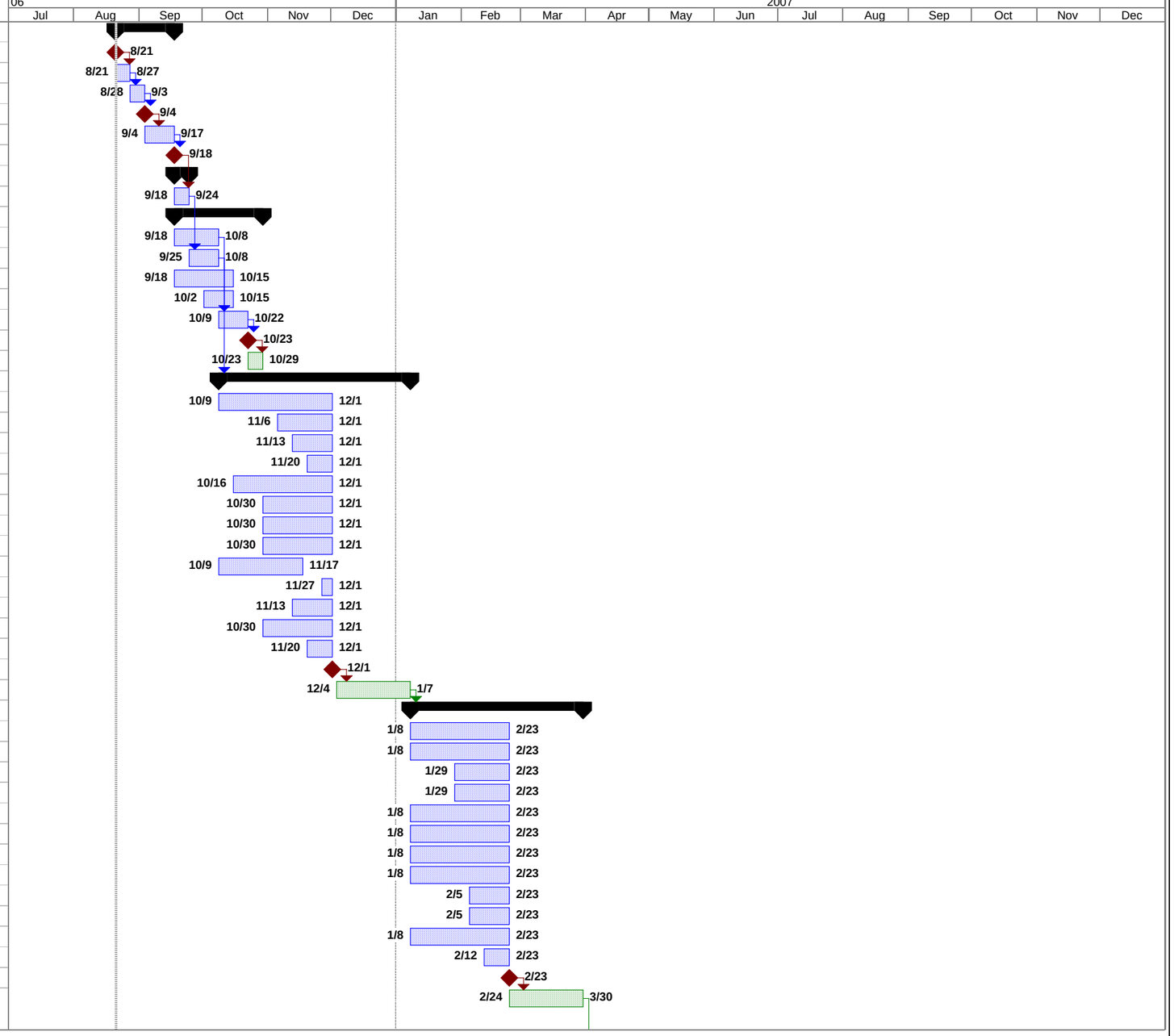
PROJECT SCHEDULE

The project schedule was developed based on our experience with similar projects and the requirements spelled out in the RFP. We have provided a reasonable schedule to complete the project. We have assumed there will be constant communication between the project team and the City's team and could see instances where review periods for the City may not require the 30 days as defined in the RFP. This is definitely an item that should be discussed at the project kickoff meeting so the City can help us better understand the requirements of the proposed schedule. We have provided a schedule that

allows for the project to be completed before the end of 2007. The attached schedule is provided in the form of a gant chart on the following pages.

City of Northglenn
Huron Street Improvements and Croke Reservoir Shoreline Stabilization

ID	Task Name	Duration	Start	Finish	Predecessors
1	**RFP and Award**	**28 days**	**Mon 8/21/06**	**Mon 9/18/06**	
2	Proposal Deadline	0 days	Mon 8/21/06	Mon 8/21/06	
3	Proposal Review / Short List Determination	7 days	Mon 8/21/06	Sun 8/27/06	2
4	Short List Interviews / Consultant Selection	7 days	Mon 8/28/06	Sun 9/3/06	3
5	Notice of Award	0 days	Mon 9/4/06	Mon 9/4/06	4
6	Contract Negotiations	14 days	Mon 9/4/06	Sun 9/17/06	5
7	Notice to Proceed	0 days	Mon 9/18/06	Mon 9/18/06	6
8	**Project Initiation**	**7 days**	**Mon 9/18/06**	**Sun 9/24/06**	
9	Project Kickoff Meeting	7 days	Mon 9/18/06	Sun 9/24/06	7
10	**Phase I - Preliminary Design Report**	**42 days**	**Mon 9/18/06**	**Sun 10/29/06**	
11	Design Survey	21 days	Mon 9/18/06	Sun 10/8/06	
12	Site Investigations	14 days	Mon 9/25/06	Sun 10/8/06	9
13	Traffic Study	28 days	Mon 9/18/06	Sun 10/15/06	
14	Utility Potholing	14 days	Mon 10/2/06	Sun 10/15/06	
15	Report Preparation	14 days	Mon 10/9/06	Sun 10/22/06	12
16	Preliminary Design Report Submittal	0 days	Mon 10/23/06	Mon 10/23/06	15
17	City Review	7 days	Mon 10/23/06	Sun 10/29/06	16
18	**Phase II - 60% Submittal**	**91 days**	**Mon 10/9/06**	**Sun 1/7/07**	**11**
19	Roadway Design	54 days	Mon 10/9/06	Fri 12/1/06	
20	Traffic Signal Design	26 days	Mon 11/6/06	Fri 12/1/06	
21	Traffic Control Plan	19 days	Mon 11/13/06	Fri 12/1/06	
22	Construction Phasing Plan	12 days	Mon 11/20/06	Fri 12/1/06	
23	Shoreline Stabilization/Extension Design	47 days	Mon 10/16/06	Fri 12/1/06	
24	Landscape Design	33 days	Mon 10/30/06	Fri 12/1/06	
25	Storm Sewer Design	33 days	Mon 10/30/06	Fri 12/1/06	
26	Reservoir Outlet Design	33 days	Mon 10/30/06	Fri 12/1/06	
27	Environmental Assessments	40 days	Mon 10/9/06	Fri 11/17/06	
28	Technical Specifications Table of Contents	5 days	Mon 11/27/06	Fri 12/1/06	
29	Stormwater Managemement Plan	19 days	Mon 11/13/06	Fri 12/1/06	
30	Phase III Drainage Report	33 days	Mon 10/30/06	Fri 12/1/06	
31	Opinion of Probable Cost	12 days	Mon 11/20/06	Fri 12/1/06	
32	60% Submittal Package to City	0 days	Fri 12/1/06	Fri 12/1/06	
33	City Review	35 days	Mon 12/4/06	Sun 1/7/07	32
34	**Phase III - 90% Submittal**	**82 days**	**Mon 1/8/07**	**Fri 3/30/07**	**33**
35	Roadway Design	47 days	Mon 1/8/07	Fri 2/23/07	
36	Traffic Signal Design	47 days	Mon 1/8/07	Fri 2/23/07	
37	Traffic Control Plan	26 days	Mon 1/29/07	Fri 2/23/07	
38	Construction Phasing Plan	26 days	Mon 1/29/07	Fri 2/23/07	
39	Shoreline Stabilization/Extension Design	47 days	Mon 1/8/07	Fri 2/23/07	
40	Landscape Design	47 days	Mon 1/8/07	Fri 2/23/07	
41	Storm Sewer Design	47 days	Mon 1/8/07	Fri 2/23/07	
42	Reservoir Outlet Design	47 days	Mon 1/8/07	Fri 2/23/07	
43	Technical Specifications	19 days	Mon 2/5/07	Fri 2/23/07	
44	Stormwater Managemement Plan	19 days	Mon 2/5/07	Fri 2/23/07	
45	Phase III Drainage Report	47 days	Mon 1/8/07	Fri 2/23/07	
46	Opinion of Probable Cost	12 days	Mon 2/12/07	Fri 2/23/07	
47	90% Submittal Package to City	0 days	Fri 2/23/07	Fri 2/23/07	
48	City Review	35 days	Sat 2/24/07	Fri 3/30/07	47

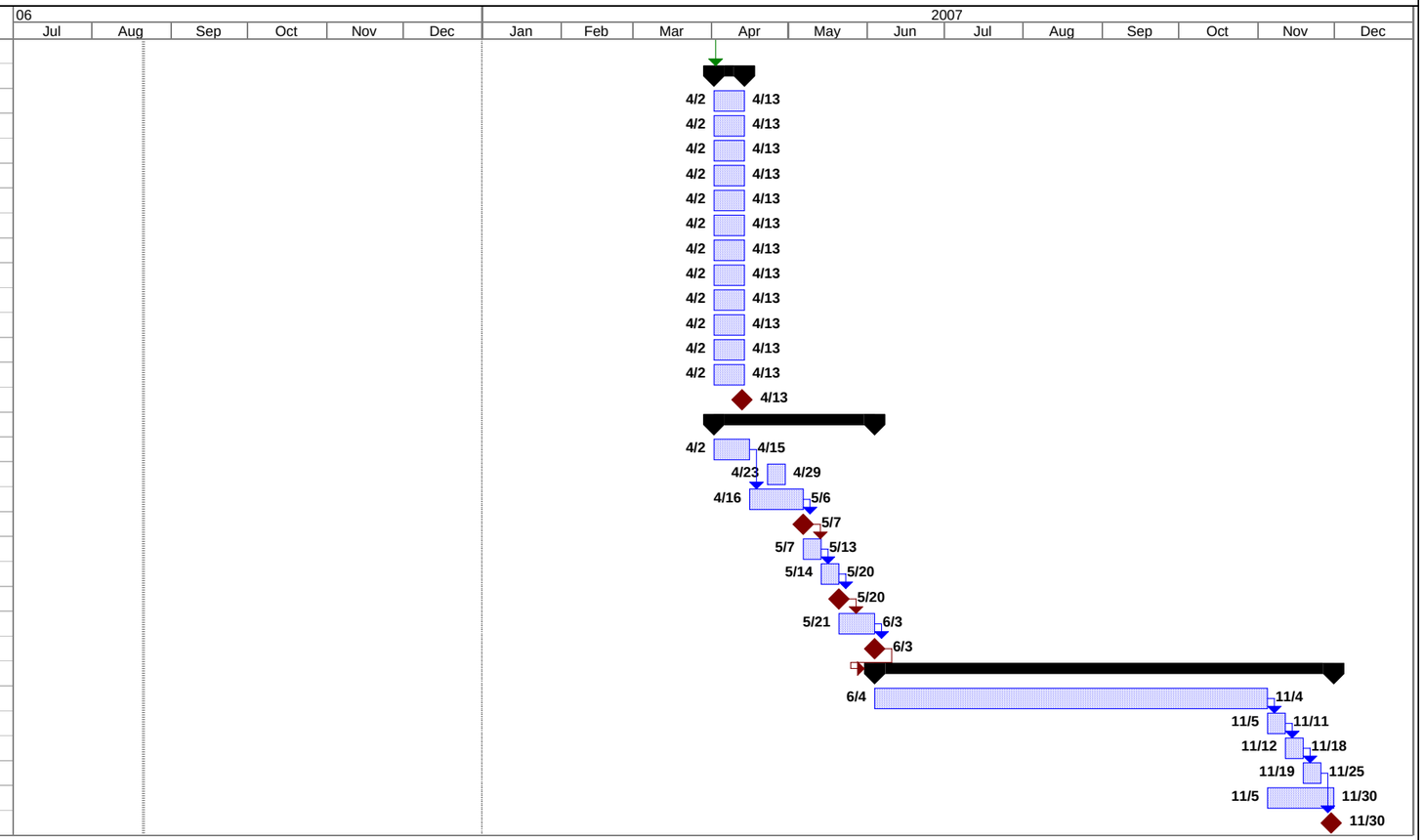


Huron Street Improvements and Croke Reservoir Shoreline Stabilization
TPY - 8/21/2006

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Deadline

City of Northglenn
Huron Street Improvements and Croke Reservoir Shoreline Stabilization

ID	Task Name	Duration	Start	Finish	Predecessors
49					
50	**Phase IV - 100% Submittal**	**12 days**	**Mon 4/2/07**	**Fri 4/13/07**	**48**
51	Roadway Design	12 days	Mon 4/2/07	Fri 4/13/07	
52	Traffic Signal Design	12 days	Mon 4/2/07	Fri 4/13/07	
53	Traffic Control Plan	12 days	Mon 4/2/07	Fri 4/13/07	
54	Construction Phasing Plan	12 days	Mon 4/2/07	Fri 4/13/07	
55	Shoreline Stabilization/Extension Design	12 days	Mon 4/2/07	Fri 4/13/07	
56	Landscape Design	12 days	Mon 4/2/07	Fri 4/13/07	
57	Storm Sewer Design	12 days	Mon 4/2/07	Fri 4/13/07	
58	Reservoir Outlet Design	12 days	Mon 4/2/07	Fri 4/13/07	
59	Technical Specifications	12 days	Mon 4/2/07	Fri 4/13/07	
60	Stormwater Managemement Plan	12 days	Mon 4/2/07	Fri 4/13/07	
61	Phase III Drainage Report	12 days	Mon 4/2/07	Fri 4/13/07	
62	Opinion of Probable Cost	12 days	Mon 4/2/07	Fri 4/13/07	
63	100% Submittal Package to City	0 days	Fri 4/13/07	Fri 4/13/07	
64	**Phase V - Bidding**	**63 days**	**Mon 4/2/07**	**Sun 6/3/07**	
65	Bid Package Development/Advertisement	14 days	Mon 4/2/07	Sun 4/15/07	
66	Addenda Development	7 days	Mon 4/23/07	Sun 4/29/07	
67	Contractor Bid Preparation	21 days	Mon 4/16/07	Sun 5/6/07	65
68	Bid Deadline	0 days	Mon 5/7/07	Mon 5/7/07	67
69	Bid Tabulation Development	7 days	Mon 5/7/07	Sun 5/13/07	68
70	Bid Review/Qualification/Selection	7 days	Mon 5/14/07	Sun 5/20/07	69
71	Notice of Award	0 days	Sun 5/20/07	Sun 5/20/07	70
72	Contract Negotiation	14 days	Mon 5/21/07	Sun 6/3/07	71
73	Notice to Proceed	0 days	Sun 6/3/07	Sun 6/3/07	72
74	**Phase VI - Construction**	**180 days**	**Mon 6/4/07**	**Fri 11/30/07**	**73**
75	Construction Through Substantial Completion	154 days	Mon 6/4/07	Sun 11/4/07	
76	Substantial Completion Walkthrough	7 days	Mon 11/5/07	Sun 11/11/07	75
77	Punchlist Development	7 days	Mon 11/12/07	Sun 11/18/07	76
78	Final Walkthrough	7 days	Mon 11/19/07	Sun 11/25/07	77
79	As-built Development	26 days	Mon 11/5/07	Fri 11/30/07	
80	Final Approval	0 days	Fri 11/30/07	Fri 11/30/07	78



Huron Street Improvements and Croke Reservoir Shoreline Stabilization
TPY - 8/21/2006

Task		Summary		Rolled Up Progress		Project Summary	
Progress		Rolled Up Task		Split		Group By Summary	
Milestone		Rolled Up Milestone		External Tasks		Deadline	

FORM OF PROPOSAL

J&T Consulting, Inc.

City of Northglenn

Huron Street Improvements and Croke Reservoir Shoreline Stabilization

8/21/2006

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Northglenn - Huron-Croke - Fee Summary .xls

Professional Services Scope and Fee Summary

Item Description	Project Manager $95.00	Project Engineer $85.00	Senior Designer $75.00	Designer $65.00	Sub-Consultants: Sorenson	LSC	TSR	Cesare	ERC	DU	Am West	Item Subtotal
PRIMARY SCOPE OF WORK												
Project Coordination												
Project Management	60											$5,700
Project Kickoff Meeting	2	4			$200	$200		$200			$200	$1,330
Site Visits	2	16			$400							$1,950
Progress Meetings	10	20			$800	$600	$400	$800	$400		$200	$5,850
Subtotals	*74*	*40*	*0*	*0*	*$1,400*	*$800*	*$400*	*$1,000*	*$400*	*$0*	*$400*	*$14,830*
Phase I - Preliminary Design Report												
Design Survey	2	4									$13,400	$13,930
Site Investigations	2	16			$800			$3,500				$5,850
Traffic Study	2				$800	$6,600						$7,590
Utility Potholing (10@$275)(traffic control 2@$1,650)	2	4								$6,050		$6,580
Report Preparation	4	24			$1,600							$4,020
Subtotals	*12*	*48*	*0*	*0*	*$3,200*	*$6,600*	*$0*	*$3,500*	*$0*	*$6,050*	*$13,400*	*$37,970*
Phase II - 60% Submittal												
Roadway Design	8	48	48	80	$6,000							$19,640
Traffic Signal Design	2				$200	$4,400						$4,790
Traffic Control Plan	2	8	8	4	$600							$2,330
Construction Phasing Plan	1	2	2	2	$200							$745
Shoreline Stabilization/Extension Design	4	20	12	8								$3,500
Landscape Design	1	4	8	32			$3,500					$6,615
Storm Sewer Design	4	20	12	8								$3,500
Reservoir Outlet Design	4	16	10	8								$3,010
Environmental Assessments	1	4							$8,250			$8,685
Technical Specifications TOC	2	4			$100							$630
Stormwater Management Plan	4	20	12	8								$3,500
Phase III Drainage Report	4	32	16	8								$4,820
Opinion of Probable Cost	2	12	8		$1,000		$200					$3,010
Subtotals	*39*	*190*	*136*	*158*	*$8,100*	*$4,400*	*$3,700*	*$0*	*$8,250*	*$0*	*$0*	*$64,775*
Phase III - 90% Submittal												
Roadway Design	4	30	30	40	$2,700							$10,480
Traffic Signal Design	1				$200	$3,300						$3,595
Traffic Control Plan	1	4	4	2	$300							$1,165
Construction Phasing Plan	1	2		2	$100							$495
Shoreline Stabilization/Extension Design	2	10	8	4								$1,900
Landscape Design	1	2	4	24			$3,100					$5,225
Storm Sewer Design	2	10	8	4								$1,900
Reservoir Outlet Design	2	8	6	4								$1,580
Technical Specifications	8	40	10		$3,000	$1,000						$8,910
Stormwater Management Plan	2	10	8	4								$1,900
Phase III Drainage Report	2	20	10	4								$2,900
Opinion of Probable Cost	1	8	4		$750		$200					$2,025
Subtotals	*27*	*144*	*92*	*88*	*$7,050*	*$4,300*	*$3,300*	*$0*	*$0*	*$0*	*$0*	*$42,075*

J&T Consulting, Inc.

City of Northglenn

Huron Street Improvements and Croke Reservoir Shoreline Stabilization
8/21/2006
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Northglenn - Huron-Croke - Fee Summary .xls

Professional Services Scope and Fee Summary

Item Description	Project Manager $95.00	Project Engineer $85.00	Senior Designer $75.00	Designer $65.00	Sub-Consultants: Sorenson	LSC	TSR	Cesare	ERC	DU	Am West	Item Subtotal
PRIMARY SCOPE OF WORK CONTINUED												
Phase IV - 100% Submittal												
Roadway Design	2	4	4	8	$1,000							$2,350
Traffic Signal Design	1				$100	$1,100						$1,295
Traffic Control Plan	1	1	2	2	$100							$560
Construction Phasing Plan	1	2		2	$100							$495
Shoreline Stabilization/Extension Design	1	2	4	2								$695
Landscape Design	1	1	2	8			$600					$1,450
Storm Sewer Design	1	2	4	2								$695
Reservoir Outlet Design	1	2	4	2								$695
Technical Specifications	2	8	4									$1,170
Stormwater Management Plan	1	2	4	2								$695
Phase III Drainage Report	1	2		1								$330
Opinion of Probable Cost		4	2		$250		$100					$840
Subtotals	*13*	*30*	*30*	*29*	*$1,550*	*$1,100*	*$700*	*$0*	*$0*	*$0*	*$0*	*$11,270*
Phase V - Bidding Phase Assistance (4 weeks)												
Addenda Review/Recommendations	2	8	4		$800							$1,970
Subtotals	*2*	*8*	*4*	*0*	*$800*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,970*
Phase VI - Construction Services Assistance (24 weeks)												
Submittal Review/Recommendations (4 weeks)	2	8	4		$800							$1,970
RFI Review/Recommendations (12 weeks)	6	12	6		$600							$2,640
Change Proposal Review/Recommendations (4 weeks)	2	8	4		$800							$1,970
Progress Meetings (24 weeks)	24				$2,400							$4,680
Subtotals	*34*	*28*	*14*	*0*	*$4,600*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$11,260*

Primary Scope of Work Subtotal	$184,150
Primary Scope of Work Expenses	$11,050
Primary Scope of Work Total	**$195,200**

Supplemental Primary Scope of Work												
Reservoir/Embankment Analysis and Report	4							$7,400				$7,780
Groundwater Mitigation Analysis and Report	4							$8,700				$9,080
Clean Water Act Section 404 Permit	2								$6,600			$6,790
Subtotals	*10*	*0*	*0*	*0*	*$0*	*$0*	*$0*	*$16,100*	*$6,600*	*$0*	*$0*	*$23,650*

J&T Consulting, Inc.

City of Northglenn

Huron Street Improvements and Croke Reservoir Shoreline Stabilization

8/21/2006

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Northglenn - Huron-Croke - Fee Summary .xls

Professional Services Scope and Fee Summary

Item Description	Project Manager $95.00	Project Engineer $85.00	Senior Designer $75.00	Designer $65.00	Sub-Consultants: Sorenson	LSC	TSR	Cesare	ERC	DU	Am West	Item Subtotal
ALTERNATE SCOPE OF WORK												
Phase V - Bidding Phase Assistance (4 weeks)												
Project Coordination (4 weeks)	8	16										$2,120
Bid Package Development and Distribution (2 weeks)	8	16	8		$1,600							$4,320
Addenda Development (2 weeks)	4	16	8		$1,600							$3,940
Bid Opening Facilitation	8											$760
Bid Tabulation Development	2	8	8									$1,470
Bid Review/Qualification/Selection Recommendation	2	8			$400							$1,270
Subtotals	*32*	*64*	*24*	*0*	*$3,600*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$13,880*
Phase VI - Construction Services Assistance (24 weeks)												
Project Coordination (24 weeks)	24	192										$18,600
Construction Observation (20 weeks)	40	320										$31,000
Submittal Review/Approval (4 weeks)	4	16	8		$1,600							$3,940
RFI Review/Response Development (12 weeks)	12	24	12		$2,400							$6,480
Change Proposal Review/Approval (4 weeks)	4	16	8		$1,600							$3,940
Progress Meetings (24 weeks)	48				$2,400							$6,960
Payment Application Review/Approval (6 weeks)	6	24			$1,200							$3,810
Monthly Report Development (6 weeks)	24											$2,280
Substantial Completion Walkthrough	8											$760
Punchlist Development	4	12										$1,400
Final Walkthrough	8											$760
Coordination of As-built Requirements	2	8	8									$1,470
Final Approval/Coordination	8											$760
Subtotals	*192*	*612*	*36*	*0*	*$9,200*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$82,160*

Alternate Scope of Work Subtotal	$96,040
Alternate Scope of Work Expenses	$5,760
Alternate Scope of Work Total	**$101,800**

EXCEPTION OF TERMS AND CONDITIONS

EXPLANATION OF EXCEPTIONS

JT has the required levels of insurance as spelled out in the RFP, however our insurance company will require a review of the professional services agreement in order to determine if the negotiated contract can be insured. If JT is awarded the proposal we will work diligently with the City to enter into an agreement.

Contractor's Certificate Regarding Employing or Contracting with an Illegal Alien

PROSPECTIVE CONTRACTOR'S CERTIFICATE REGARDING EMPLOYING OR CONTRACTING WITH AN ILLEGAL ALIEN

FROM: J&T CONSULTING, INC.
(Prospective Contractor)

TO: CITY OF NORTHGLENN
c/o CIP Coordinator
11701 Community Center Drive
Northglenn, Colorado 80233

Project Name HURON STREET IMPROVEMENTS AND CROKE RESERVOIR SHORELINE STABILIZATION

Bid Number 2006 RFP-14 Project No. _____

As a prospective contractor for the above-identified bid, I (we) do hereby certify that, as of the date of this certification, I (we) do not knowingly employ or contract with an illegal alien and that I (we) have participated in or attempted to participate in the basic pilot program of the United States Government in order to verify that I (we) do not employ any illegal aliens.

Executed this 21 day of AUGUST, 2006.

Prospective Contractor J&T CONSULTING, INC.

By: (TODD YEE)

Its: VICE PRESIDENT
Title

(Insert the Individual, Corporate or Partnership Certificate as appropriate)

OFFICE OF THE SECRETARY OF STATE
OF THE STATE OF COLORADO

CERTIFICATE

I, Ginette Dennis, as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office,

J & T CONSULTING, INC.

is a
Corporation

formed or registered on 04/20/2004 under the law of Colorado, has complied with all applicable requirements of this office, and is in good standing with this office. This entity has been assigned entity identification number 20041145645 .

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 08/16/2006 that have been posted, and by documents delivered to this office electronically through 08/20/2006 @ 19:20:19 .

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, authenticated, issued, delivered and communicated this official certificate at Denver, Colorado on 08/20/2006 @ 19:20:19 pursuant to and in accordance with applicable law. This certificate is assigned Confirmation Number 6566162 .

Ginette Dennis

Secretary of State of the State of Colorado

**********End of Certificate**********

Notice: A certificate issued electronically from the Colorado Secretary of State's Web site is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Certificate Confirmation Page of the Secretary of State's Web site, http://www.sos.state.co.us/biz/CertificateSearchCriteria.do entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our Web site, http://www.sos.state.co.us/ click Business Center and select "Frequently Asked Questions."

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