



State of Vermont  
 Agency of Transportation  
 National Life Building  
 Drawer 33  
 Montpelier, VT  
 05633-5001

# VT Trans *Working to Get You There*

October 8, 2003

**RECEIVED**

OCT 09 2003

Mr. Christopher S. Pecor, P.E.  
 Project Manager  
 Dufresne-Henry, Inc.  
 P.O. Box 2246  
 South Burlington, VT 05407

DUFRESNE - HENRY  
 SOUTH BURLINGTON, V

Re: Hartford STP 0113(59)S  
 Authorization No. DH-2001-11A- Contract Number # 0284315

Dear Mr. Pecort:

You are hereby notified that you are being awarded the work under the Program Development Engineering Services Contract for the above-referenced project. The official start date will be the date upon which a copy of this letter is signed by your firm and returned to the Agency. Please sign and return this letter to the Agency. Per your cost estimate dated September 19, 2003, the work shall be done at a cost not to exceed \$9,921.00. Work shall be done in accordance with our Agreement dated September 27, 2001.

On your invoices for this project, please reference your contract number, 0284315 the project name Hartford STP 0113(59)S and the EA number, 0113059-100. If you have any questions concerning this assignment, please do not hesitate to contact me at (802) 828-2583. We look forward to working with you on this project.

Sincerely,

Robert White  
 Project Supervisor

RW: gg

Dufresne-Henry, Inc.  
 South Burlington, VT 05407

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

www.aot.state.vt.us  
 Telecommunications Relay Service 1-800-253-0191

*Vermont is an Equal Opportunity Employer*

encl 9-19-03

September 19, 2003

Mr. Rob White  
Vermont Agency of Transportation  
National Life Building, Drawer 33  
Montpelier, VT 05633

**RE: VTrans-LTF  
General Design Services Retainer Contract #0284059  
Hartford--Sykes Mountain Ave/RT 5 Intersection  
DH Project No. 6310013.14**

Dear Mr. White:

As we have discussed and due to the additional work requested to analyze impacts of the Ramp intersection adjacent to the limits of this project, Dufresne-Henry, Inc. is submitting a request for Amendment No. 1. This information is submitted for your review and processing. Specific items include the following:

1. Review of existing exit ramp traffic volumes and characteristics.
2. Analyze the performance, determine lane needs and overall geometric requirements for three alternatives. The alternatives include T-intersection (no slip lane), Right-Turn only (no slip lane) and a Roundabout intersection.
3. The analysis will include a one to two page summary of results and impacts.
4. Upon selection of a viable alternative conceptual design may be developed, but is not part of this proposal.

Should you have any questions, suggestions or wish to discuss this request in further detail, please do not hesitate to contact me at 864-0223.

Very truly yours,

Christopher S. Pecor, P.E.  
Project Manager

Enclosure

cc: G. Edwards

**PROJECT COSTS:  
AMENDMENT NO. 1**

**Request for:  
Additional Work  
Fixed Fee Adjustment**

Last State Audit  
Submittal Year: 2000

Consultant: **Dufresne-Henry, Inc.**

Contract No.: **284059**

Project Name: **VTrans - Sykes Ave./Route 5**

Project No.: **STP 0113(59)S**

DH Project No.: **6310013.14**

Date: **September 2003**

	Current Contract	Amendment Number 1	Total New Contract
Direct Labor	\$21,736	\$3,434	\$25,170
Overhead @ 156%	\$33,908	\$5,494	\$39,402
Fixed Fee	\$5,564	\$893	\$6,457
Direct Expenses	\$800	\$100	\$900
Subtotal	\$62,008	\$9,921	\$71,930
<b>Subconsultants</b>			
Subtotal			\$0
<b>TOTAL</b>	\$62,008	\$9,921	\$71,930

**REQUEST FOR CONTRACT AMENDMENT NO 1**  
**VTrans - Sykes Ave./Route 5 Intersection**  
**STP 0113(59)S**  
**Contract No. 0284059**

**RA EXIT RAMP ALTERNATIVES**

- A. **Scope:** Due to the I-89 Northbound off-ramp's close proximity and at the request of the Town, DH will analyze three alternative solutions, their affect on the Route 5/Sykes Mountain Ave. Intersection. DH will provide 1 to 2 page summary letter report indicating the positives and negatives of each scenario. The traffic analysis will include the following

Alternative 1 - Tee Intersection: Traffic data (provided by VTrans) will be used to analyze the current conditions, to determine the limits of queuing up the ramp. Based on the requirements for stopping site distance the feasibility of providing or removing the slip lane will be determined.

Alternative 2 - Close Median: Right Turn Only: Queuing and lane requirements based on traffic data collected for Alternative 1 will be determined. Increased footprint/ROW impacts to the proposed Roundabout at Sykes Mountain Ave./Rte. 5 will be determined. Design with new volumes using RODEL will be required to determine the new dimensional needs.

Alternative 3 - Roundabout: This alternative will require design based on previous traffic volumes to determine feasibility of roundabout centered between the on and off ramps. Queuing and geometric requirements will be determined.

- B. **Estimated Costs:** The additional estimated hours to complete the scope above are shown below.

	CATEGORY				Total
	Principle/ Sr. Engr.	Project Manager	Project Engineer	Technical/ Clerical	
Alt 1 - Tee	1	4	16	2	23
Alt. 2 - Rt. Only	2	8	32	8	50
Alt. 3 - Roundabout	2	12	40	8	62
<b>Total Hours</b>	5	24	88	18	135
Average Hourly Rate	\$46	\$32	\$24	\$18	
Estimated Direct Labor \$	\$230	\$768	\$2,112	\$324	\$3,434
<b>Total Direct Labor Costs</b>					\$3,434
Overhead @ 160%					\$5,494
Fixed Fee					\$893
Direct Expenses (mileage, prints, etc)					\$100
<b>TOTAL</b>					<b>\$9,921</b>

DUFRESNE-HENRY

PREPARED BY MCS DATE 9.18.03 PROJECT NO. 6310013.14  
 CALCULATIONS CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_ SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 ASSUMPTIONS / METHODS CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SUBJECT AMBUSH MOUNT #1 TECH  
MNGR ENG CLERK

rev. design  
 collect data (Speed, geometry, lane widths, grades) 4  
 determine volumes 2  
 " SSD of Ramp (over backstop) 4  
 design criteria 4  
 review AASHTO design methodology 4  
 analyze performance x 3 1 10  
 determine lane needs x 3 4  
 draw geometry x 3 1 20 <sup>6+6+24</sup> ~~36~~ 30  
 review new vol. @ Sykes Ave. 2 20  
 determine effects @ Sykes 1 4  
 with report 4 20 16 10 8  
 Submit 2 2  
 meet to discuss 4 4  
 address comments 2 8  
 mngr. staff 10

24 24 22  
 108  
 CSP est 24 72 112  
 9

Very High

# Project Complete Report

Dufresne Henry, Inc.

Order By: IDNO

Project: 6310013.14 — 6310013.14  
 Office: — 99  
 Department: — 99

6310013.14 HARTFORD SYKES AVE/RT 5 ROUNDABOUT  
 HARTFORD ROUND  
 Office 60 Burlington  
 Department 63 HIGHWAY #2-SO BURL

Status Active  
 Principal 62 SO, BURLINGTON  
 Project Manager 621042 PECOR, CHRISTOPHER  
 Start Date 04/28/2003

**Billing Address - Client ID 62VAOT**

State of Vermont  
 VTRANS-PROGRAM DEVELOPMENT OFFICE  
 MONTPELER VT 05633-5001.  
 (802) 828-2583 Ext Fax  
 ROB WHITE  
 Cell Pager

**Billing Information**

Time Level 3 (Level3)  
 Expense Level 2 (Level2)  
 Invoice ID HHH  
 Earning Method  
 Project Type 3  
 Last Invoice Date / /  
 Billing Schedule 2.816 NO OT  
 Expense Rate Id \*  
 Next Invoice #  
 Payment Terms 0 Days

**Project Address**

Email Ext Fax  
 Account Group ID: GL019

**Multipliers**

DPE Multiplier 1.0000  
 OH Multiplier 2.5600  
 Profit Multiplier 1.1000  
 Consultant Markup 1.0000  
 Reimbursable Markup 1.0000

AR		RMB	06000
Fee/Cost	06000	RMB M/U	06000
DPE	06000	Retainage	06000
OH	06000	Advance	
PR	06000	Interest	
Tax	06000	User Defined 1	
CNS	06000	User Defined 2	
CNS M/U	06000	User Defined 3	

**Retainage**

No Retainage

Forgive Unpaid Interest Yes Last Interest Post Date / /

**Fee Project to Date Figures**

	Contract	Billed	Received	Cost	Total	Budget
	61,209.00	0.00	0.00	0.00	0.00	21,736.00
Consultant	0.00	0.00	0.00	0.00	0.00	0.00
Tax	800.00	0.00	0.00	0.00	0.00	800.00
Reimbursable				0.00	0.00	0.00
Non-Reimbursable		0.00	0.00			
<b>Total</b>	<b>62,009.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22,536.00</b>
Interest		0.00	0.00			865.00
Hours		0.00		0.00		0.00%
% Completion	0.00%	0.00	0.00			
Advance			0.00			

Order: Project

Current Period: 01/01/1900 - 04/30/2003

Project To Date: As of 04/30/2003

Project/Level2/Level3	Curr Hours	Current Dollars	Total Hours	Total Dollars	Budget Hours	Budget Dollars	% Hrs	% \$	% Inp	BTF Hours	BTF Dollars
6310013.14 HARTFORD ROUND											
[Principal: SO. BURLINGTON Project Manager: PECOR, CHRISTOPHER S]											
A INFO COLLECTION					42	1,114				42	1,114
A INFO COLLECTED					3	80				3	80
B REVIEW P&N					12	336				12	336
C RES TEAM COORD											
					57	1,530				57	1,530
B ALTERNATIVES					431	11,028				431	11,028
A ALTERNATIVE DEV					4	128				4	128
B RESOURCE REEVAL											
					435	11,156				435	11,156
C CONCEPTUAL					211	4,772				211	4,772
A PLANS					16	394				16	394
B CE											
					227	5,166				227	5,166
ROW & 502					44	1,216				44	1,216
A P/O MEETINGS					52	1,258				52	1,258
B 502 HEARING					34	914				34	914
C 502 COMMENTS					16	496				16	496
D SELECTBOARD APL											
					146	3,884				146	3,884
					865	21,736				865	21,736

Project Total =>

Project/Level2	Current Dollars	Total Dollars	Budget Dollars	% \$	% Inp	BTF Dollars
RMB REIMBURSABLE			800			800
			800			800

Project Total =>

Project	Curr Hours	Current Dollars	Total Hours	Total Dollars	Budget Hours	Budget Dollars	% Hrs	% \$	% Inp	BTF Hours	BTF Dollars
					865	56,444				865	56,444

Order: Project

Current Period: 01/01/1900 - 04/30/2003

Project To Date: As of 04/30/2003

GRAND TOTAL	Curr Hours	Current Dollars	Total Hours	Total Dollars	Budget Hours	Budget Dollars	% Hrs	% \$	% Inp	BTF Hours	BTF Dollars
					865	21,736				865	21,736

GRAND TOTAL	Currenb Dollars	Total Dollars	Budget Dollars	% \$	% Inp	BTF Dollars
						800

GRAND TOTAL	Curr Hours	Currentd Dollars	Total Hours	Total Dollars	Budget Hours	Budget Dollars	% Hrs	% \$	% Inp	BTF Hours	BTF Dollars
					865	56,444				865	56,444



621042  
Edit 1 Screen

Project ID #: 6310013.5A (14)	Short Name (<15 ch.): VT Trans Hartford Round	Status (Circle One)	P	(A)	I
Long Name (<40 ch.): VT Trans Hartford, Sykes Ave/RT 5	Client Name: VT Trans - LTF	Start Date: 04/29/03	Project Type: 1 & 3		
Billing Address					
Address 1: VT Trans - Program Development Office					
Address 2: National Life Bldg., Drawer 33					
City, ST, Zip: Montpelier, VT 05633-5001					
Contact 1: Rob White	Contact 2:	Invoice Type: H2A			
Telephone #: 828-2583	FAX #:	Time Level (Circle One)	1	2	(3)
Project Address or Owner's Name & Address					
Address:					
City, ST, Zip:	Project Mgr. Empl #: 621042	Expense Level (Circle One)	1	2	(3)
Division #: 68	Edit 3 Screen				
Invoice Note 1: Please setup invoicing 5th year to	Default Multipliers				
Invoice Note 2: 6310013.04	Direct Per Exp (DPE) 1.0000				
Invoice Note 3:	Overhead (OH) 3.1000 2.56				
Invoice Note 4:	Profit (PR) 1.0000 1.10				
Note 5:	Consultant (CNS) 1.0000				
Note 6:	Reimbursable (RMB) 1.0000				
User Definable Fields					
Mileage Rate:	Prop. Due: 3 / 5 / 03	Inv. Option (circle below)	S	C	L
Unit Qty:		Prob. (Circle One)	(0)	1	
Unit Rate:		Prob. Year:	03		
(Above for Fixed Rate invoice type)	Client Type: STATE	Limit of Liability: Y or N			
	Pt. Charlotte Use:	Next Inv: Circle 1 for a Sequence # to appear or FINAL to apply retainer to the final invoice			
	Discipline: TRANS	Proj. Mgr. Init: C S P			
		621042			
Billing Schedule (Multiplier): 3.10 or project multiplier 2.816 Or attach a separate sheet with hourly or set rates					
Contract Amount		Budget Amount			
Total: 62,009		22,536			
Fee: 61,209		21,736			
Cons:		800			
Reim:		800			
Non R:		800			
Please complete the Contract Information on Reverse Side					

Items in red added 4-30-03 by CSF  
# proceed per attached NTP dated 4-22-03

AK

Contract nation:

Estimated cost given to client:  Yes  No

Prepared By: Ced

Contract signed/received in accounting:  Yes  No

Reviewed By: \_\_\_\_\_

Client is:  New  Prior

Approved By: \_\_\_\_\_

Credit check completed:  Yes  No

Explanation: NTP received 4-15-03, part of VTrans General Services Contract

Payment Experience is:  Good  Bad

Retainer Required:  Yes  No

Type of Contract: Letter

Date Sent to Client: 1/1

Short Form: 1

Amount Received: 1

DISCIPLINE	SEMA4 ENTRY	INVOICE TYPES available to date:	PROJECT TYPES SEMA4 ENTRY	CLIENT TYPES	SEMA4 ENTRY
Airport	AIRPORT	H1A - Hourly to Level 1	Municipal	Architect	ARCH
Building Engineering	BLDG ENG	H2A - Hourly to Level 2 by Long Name	Regional	Federal	FED
Civil/Environmental	CIV/ENV	H2B - Hourly to Level 2 by Staff Type	State	Industry	IND
Contract Operations	CON OPS	P1A - Percent Complete to Level 1	Federal	Military	MIL
LA/Civil	LA/CIV	P2A - Percent Complete to Level 2	Military	Municipal	MUN
Miscellaneous	MISC	P3A - Percent Complete to Level 3	Business	Private	PRIV
Solid Waste	SOL WAS	F1A - Fixed Rate to Level 1	Industrial	Regional	REG
Testing	TESTING	F2A - Fixed Rate to Level 2	Architect	State	ST
Transportation	TRANS	F3A - Fixed Rate to Level 3	Medical		
Waste Management	WASTE	L2A - Mixed Types to Level 2	Education		
Water	WATER		Recreation		
			Other		
			Airport		
			Private		

**USER DEFINABLE FIELD DEFINITIONS:**

- Mileage Rate:** Please fill in if different from the company standard of 35¢.
- Unit Quantity:** Is used when preparing a Fixed Rate invoice design.
- Unit Rate:** Is used when preparing a Fixed Rate invoice design.
- Prop. Due:** Represents the date a proposal is due to be submitted.
- Client Type:** Is selected from the client type chart above.
- Pt. Char. Use:** Is a field used by Port Charlotte in developing a project database.
- Discipline:** Is selected from the discipline chart above.
- Inv. Option:** Each position of the field is used independently during invoicing:
  - S prints an a/r summary on the invoice
  - C prints the contract amount on the invoice
  - L handles the project as Limiting Sum

- Limit of Liab:** Is there an Indemnification Clause in the contract?
- Next Inv.:** Either circle the number 1 or write in the word FINAL.
  - A number in the field will print on the invoice as next sequence number
  - The word FINAL in this field will apply the retainer to the final invoice
- Prob. G/L:** Is the probability of a win Greater or Less than 75%
- Prob. Year:** What year do we expect to win the job.
- Prob. Qtr.:** What quarter do we expect to win the job.
- Proj. Mgr.:** Please enter the project manager's initials.

# Marketing & Up Form

Project Description (including firm responsibility and any unique aspects):

Evaluation of intersection alternatives including Roundabouts for the route 5 / Sykes Mountain Ave intersection in Montford VT. Effort to include alternatives early, Conceptual plans & 50% hearing process.

Principal In Charge: GAE  
 Project Manager: Col

Project Team & In-House Search Codes:

Team Member	Code
MA's	1418
GAG	1408

Project In-House Search Codes (Select as many as applicable): 1418, 1408

Circle one:  Prime  Subconsultant  Joint Venture

Project Funding Source: Fed / State

Construction Completion Date (Estimate): 2008

Project Construction Cost (Estimate): \$1,000,000

Referable:  Yes  No

Federal Profile Codes (Circle one):

- 005-Airports
- 010-Barracks; Dormitories
- 011-Bridges
- 017-Commercial Buildings; Shopping Centers
- 025-Dams; Dikes; Levees
- 027-Dining Halls; Clubs; Restaurants
- 029-Educational Facilities; Classrooms
- 035-Field Houses; Gyms; Stadiums
- 039-Garages; Parking Decks
- 042-Harbors; Jetties; Piers; Ship Terminal Facilities
- 046-Highways; Streets; Parking Lots
- 048-Hospital and Medical Facilities
- 050-Housing
- 052-Industrial Buildings; Manufacturing Plants
- 054-Industrial Waste Treatment
- 072-Office Buildings; Industrial Parks
- 076-Petroleum and Fuel
- 083-Power Generation, Transmission, Distribution
- 084-Prisons & Correctional Facilities
- 088-Recreational Facilities (Parks, Marinas, etc.)
- 090-Resource Recovery; Recycling
- 092-Rivers, Canals; Waterways; Flood Control
- 096-Sewage Collection, Treatment and Disposal
- 099-Solid Wastes; Incineration; Land Fill
- 104-Stormwater Handling
- 110-Urban Renewals; Community Development
- 114-Water Resources, Hydrology
- 115-Water Supply, Treatment, Distribution

**AVIATION**

- 1101 - Airfield Pavements/Maintenance
- 1102 - Airfield pavement Rehabilitation Reconstruction
- 1103 - Airfield Pavements/New Design-Expansion
- 1104 - Airfield Lighting (HIRLS, REILS, TRSLS, MITLS, Airport Beacon, MALSR)
- 1105 - Airfield Navigation Systems (PAPI, ILS, NDB)
- 1106 - Fuel Management Systems
- 1107 - Airport Planning
- 1108 - Airport Environmental Studies
- 1109 - Airport Obstruction Studies
- 1110 - Terminal, Hangars, SRE, Maintenance Facilities
- 1111 - Security Fence Installation
- 1112 - Land Acquisition (Fee, Easement, Eminent Domain)
- 1113 - Misc. Airport Planning/Feasibility Studies, Site Selection
- 1114 - Airport Equipment Purchases
- 1120 - Local, State and Federal Permitting
- 1121 - Value Engineering
- 1122 - Funding Administration

**BUILDING SERVICES**

- 1201 - Commercial Buildings
- 1202 - Educational Facilities
- 1203 - Industrial Buildings
- 1204 - Health Care/Hospital
- 1205 - Airports
- 1206 - Federal Contracts
- 1207 - Water Systems
- 1208 - Wastewater Systems
- 1209 - Utilities
- 1210 - Instrumentation & Controls
- 1211 - Forensic Engineering
- 1212 - Recreational Facilities

**LANDSCAPE ARCHITECTURE AND PLANNING**

- 1301 - Waterfront Planning and Design
- 1302 - Urban & Community Planning and Design
- 1303 - Parks and Recreation Planning and Design
- 1304 - Resort Planning and Design
- 1305 - Public Participation
- 1306 - Natural/Cultural/Historic Resource Planning
- 1307 - Transportation Planning and Design (Multi-Modal)
- 1308 - Utility Planning and Design
- 1309 - Commercial Planning and Design
- 1310 - Residential Planning and Design
- 1311 - School and Institutional Planning and Design
- 1312 - Visual Resource Management

**CIVIL/TRANSPORTATION**

- 401 - Conceptual Design
- 402 - Commercial Site Development
- 403 - Industrial Site Development
- 404 - Residential Site Development
- 405 - Institutional (Churches; Schools)
- 406 - Recreational
- 407 - Utility Layout
- 408 - Roadway Design
- 409 - Grading Design

- 1410 - Bike Paths and Routes, Greenspace
- 1411 - Downtown Rehabilitation
- 1412 - Soils and Geotechnical Studies; Foundations
- 1413 - Geotechnical Investigation(pre-construction)
- 1414 - Soils and Concrete Testing (construction)
- 1415 - Surveying, Platting, Mapping
- 1416 - Boundary, Topographic & Location
- 1417 - Construction Stake Out
- 1418 - Traffic Engineering/Planning
- 1419 - Storm Water Handling & Facilities
- 1420 - Flood Plain Management
- 1421 - Construction Management
- 1422 - Bridges
- 1423 - Railroad, Rapid Transit
- 1424 - Subdivision Review
- 1430 - Local, State and Federal Permitting
- 1431 - Value Engineering
- 1432 - Funding Administration

**SOLID WASTE**

- 1501 - Solid Waste Management Plans
- 1502 - Sanitary Landfills - Closures
- 1503 - Sanitary Landfills - New and Expansions
- 1504 - Hazardous Landfills - Closures
- 1505 - Hazardous Landfills - New and Expansions
- 1506 - Leachate Management & Treatment
- 1507 - Transfer Station/Recycling
- 1508 - Monitoring
- 1509 - Construction Services
- 1520 - Local, State and Federal Permitting
- 1521 - Value Engineering
- 1522 - Funding Administration
- 1523 - Groundwater Monitoring

**ENVIRONMENTAL**

- 1601 - Acoustics, Noise Abatement
- 1602 - Air Pollution
- 1603 - Ecological & Archaeological Studies
- 1604 - Environmental Impact Studies, Assessments or Statements
- 1605 - Contamination Assessments
- 1606 - Remediation System Design
- 1607 - Groundwater Monitoring
- 1608 - Hydrology
- 1609 - UST Studies/Removal/Replacement
- 1610 - Property Site Assessments
- 1611 - Water Quality and Soil Sampling
- 1612 - Geologic Analysis and Mapping
- 1613 - Hydrogeologic Investigation
- 1614 - Dam Evaluation and Design
- 1615 - Asbestos Removal
- 1616 - Local/State/Federal Permitting
- 1617 - Wetland Delineation/Permitting

**WASTE MANAGEMENT**

- 1701 - Wastewater Treatment
- 1702 - Industrial Wastewater Treatment
- 1703 - Combined Sewer Overflow
- 1704 - Biosolids Management
- 1705 - Storm Water Management
- 1706 - Wastewater Collection System
- 1707 - Infiltration/Inflow/SSES
- 1708 - Odor Control
- 1709 - Septage Management
- 1710 - Contract Operations
- 1711 - Construction Services
- 1712 - Design/Build
- 1720 - Local, State and Federal Permitting
- 1721 - Value Engineering
- 1722 - Funding Administration
- 1723 - WWTF Evaluation
- 1724 - Industrial Pretreatment

**WATER**

- 1801 - Water Rate Analysis
- 1802 - Water Regulation Compliance
- 1803 - Surface Water Treatment
- 1804 - Groundwater Treatment
- 1805 - Water Distribution Systems
- 1806 - Water Storage Facilities
- 1807 - Water Source Development
- 1808 - Wells and Pumping Stations
- 1809 - Water System Planning and Analysis
- 1810 - Hydrogeologic Studies
- 1811 - Contract Operations
- 1813 - Construction Resident Inspection
- 1814 - Design/Build
- 1815 - Pilot Water Treatment
- 1820 - Local, State and Federal Permitting
- 1821 - Value Engineering
- 1822 - Funding Administration

6310013.14



State of Vermont  
Agency of Transportation  
National Life Building  
Drawer 33  
Montpelier, VT  
05633-5001

# VT Trans

*Working to Get You There*

April 22, 2003

**RECEIVED**

APR 28 2003

DUFRESNE - HENRY  
SOUTH BURLINGTON, VT

Mr. Gregory A. Edwards, P.E.  
Vice President  
Dufresne Henry, Inc.  
P.O. Box 2246  
South Burlington, VT 05407

Re: Hartford STP 0113(59)S  
Authorization No. DH-2001-11 - Contract Number 0284315

Dear Mr. Edwards:

You are hereby notified that you are being awarded the work under the Program Development Engineering Services Contract for the above-referenced project. The official start date is April 14, 2003. Please sign and return this letter to the Agency. Per your cost estimate dated March 24, 2003, the work shall be done at a cost not to exceed \$62,009.00. Work shall be done in accordance with our Agreement dated September 27, 2001.

On your invoices for this project, please reference your contract number, 0284315, the project name and number, Hartford STP 0113(59)S and the EA number, 0113059-100. If you have any questions concerning this assignment, please do not hesitate to contact me at (802) 828-3413. We look forward to working with you on this project.

Sincerely,

Dan Peterson  
Project Manager

DP:tlh

Dufresne Henry, Inc.  
South Burlington, Vermont

By: *John A. Edwards*  
Title: *Vice President*  
Date: *4/29/03*

6310013.14

Hartford

Budget / Costs

Level		Task	Budget	
2	3		Hours	\$-Direct
A		Information Collection		
	A	Info Collect.	42	\$1114
	B	Review P&N	3	\$80
	C	Resource Team Coord.	12	\$336
B		Alternatives		
	A	Alternatives Devel	431	11,028
	B	Resource Reeval.	4	128
C		Conceptual		
	A	Concept Plans	211	4,772
	B	CE	16	394
D		Row & 502		
	A	Prep. Own. Mtgs	44	1216
	B	502 Hearing	52	1258
	C	502 Comments	34	914
	D	Selectboard Approval	16	496
			865	\$21,736



**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford,VT

**Task / Labor Hour Schedule**

4/30/2003

Task	Principal Sr. Eng.	Proj. Mgr.	Planner / Proj. Eng.	Desig.	Clk.	Total
<b>Information Collection</b>						
<b>1. Information Collection</b>						
a. Field review	2	4	4			10
b. Meet with stakeholders	2	4	4			10
c. Solicit and review existing VTrans information		4	8	8	2	22
Hours	4	12	16	8	2	42
Cost	\$176	\$384	\$384	\$144	\$26	\$ 1,114
<b>2. Local Concerns &amp; Purpose and Need Statement</b>						
a. Obtain and review information		1	2			3
Hours	0	1	2	0	0	3
Cost	\$0	\$32	\$48	\$0	\$0	\$ 80
<b>3. Resource Team Review</b>						
a. Solicit and review existing information		2	2			4
b. Meet with VTrans Environmental staff		4	4			8
Hours	0	6	6	0	0	12
Cost	\$0	\$192	\$144	\$0	\$0	\$ 336
<b>Alternatives</b>						
<b>4. Alternatives Development Review and Acceptance</b>						
a. Establish design criteria		2	4			6
b. Perform capacity analysis (assume 2 roundabouts)	1	4	12		2	19
c. Develop layout plans and review with stakeholders	4	40	60	12		116
d. Finalize plan and geometry	2	16	40	16		74
d. Develop Profiles		4	16	4		24
e. Develop critical sections		4	16	2		22
f. Compile construction estimate	1	2	4	16		23
g. Develop evaluation matrix	1	2	8		2	13
h. Alternatives presentation						
- Prepare presentation graphics	2	4	8	24		38
- Arrange, attend and document presentation mtg	4	8	8			20
i. Prepare scoping report Addendum	4	24	40		8	76
Hours	19	110	216	74	12	431
Cost	\$836	\$3,520	\$5,184	\$1,332	\$156	\$ 11,028
<b>5. Resource Re-evaluation and Update</b>						
a. Meet with VTrans Resources staff		4				4
Hours	0	4	0	0	0	4
Cost	\$0	\$128	\$0	\$0	\$0	\$ 128
<b>Conceptual</b>						
<b>6. Conceptual Plan Development</b>						
a. Develop plan set to include:						
- Title page		2		4		6
- Roadway typical		2		4		6
- Base plans		2	40	40		82
- Profiles		2	4	4		10
- Environmental resource sheet ( assume not req'd)						0
- Cross sections		4	16	40		60
- Pavement design (assume completed)						0
- Traffic control plans ( assume not required)						0
- Design parameter documentation		2	4			6
- Construction cost estimate	1	4	8	16		29
- Quality review	8	4				12
Hours	9	22	72	108	0	211
Cost	\$396	\$704	\$1,728	\$1,944	\$0	\$ 4,772



**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

4/30/2003

Task	Principle Sr. Engr.	Proj. Mgr.	Planner Proj. Eng.	Tech.	Clk.	Total
<b>7. Categorical Exclusion Re-evaluation</b>						
a. Complete analysis sheet and cover letter		4	8		2	14
b. Submit to VTrans			2			2
Hours	0	4	10	0	2	16
Cost	\$0	\$128	\$240	\$0	\$26	\$ 394
ROW & 502						
<b>8. Property Owner Meetings</b>						
a. Schedule, attend and document meetings (assume 5)		16	16			32
b. Meet with stakeholder and resolve PO issues		4	8			12
Hours	0	20	24	0	0	44
Cost	\$0	\$640	\$576	\$0	\$0	\$ 1,216
<b>9. 502 Hearings</b>						
a. Prepare displays and handouts		8	4	16	2	30
b. Submit to VTrans for review			2			2
c. Attend skull session		4	4			8
d. Attend and document hearing		4	8			12
Hours	0	16	18	16	2	52
Cost	\$0	\$512	\$432	\$288	\$26	\$ 1,258
<b>10. 502 Hearing Comments</b>						
a. Compile comments and propose resolutions	2	4	8			14
b. Meet with VTrans and resolve comments		4	4			8
c. Develop memo summarizing resolutions		2	8		2	12
Hours	2	10	20	0	2	34
Cost	\$88	\$320	\$480	\$0	\$26	\$ 914
<b>11. Selectboard Approval</b>						
a. Meet with Selectboard	4	4	8			16
Hours	4	4	8	0	0	16
Cost	\$176	\$128	\$192	\$0	\$0	\$ 496
Total Hours	38	209	392	206	20	865
Average Direct Hourly Rate	\$44	\$32	\$24	\$18	\$13	
Total Direct Labor Costs	\$1,672	\$6,688	\$9,408	\$3,708	\$260	\$21,736
				Overhead (156%)		\$33,908
				Expenses		\$800
				Fixed Fee		\$5,564
				Subtotal		\$62,009
				<b>Subconsultants</b>		
				GeoArch (WBE)		\$0
				Daly & Associates (WBE)		\$0
				Wm. D. Countryman		\$0
				<b>TOTAL PROJECT COST</b>		<b>\$62,009</b>





# Transmittal

Creating Better Places To Live, Work And Play

TO: <i>VTrans</i>	DATE: <i>4-16-03</i>	JOB NO: <i>6310013.14</i>
	ATTENTION: <i>Rob White</i>	
	RE: <i>Hartford Roundabout</i>	
	<i>STP 0113(59)S</i>	

WE ARE SENDING YOU:  Attached  Under separate cover via \_\_\_\_\_ the following items

Shop Drawings  Prints  Plans  Samples  Specifications

Copy of Letter  Change Order  Other: \_\_\_\_\_

COPIES	DATE	NO	DESCRIPTION
<i>1</i>			<i>Task List</i>

THESE ARE TRANSMITTED AS CHECKED BELOW:

For Approval  Approved as Submitted  Resubmit \_\_\_\_\_ Copies for Approval

For Your Use  Approved as Noted  Submit \_\_\_\_\_ copies for Distribution

As requested  Returned for Corrections  Return \_\_\_\_\_ Corrected Prints

For Review and Comment  Other

FOR BIDS DUE \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS:

*Hello Rob,  
As discussed.*

COPY TO: *GAE, File*

SIGNED:



**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

4/16/2003

Task	Principle Sd. Engr.	Proj. Mgr.	Planner/ Proj. Eng.	Tech.	Clk.	Total
<b>1 Information Collection</b>						
a. Field review	2	4	4			10
b. Meet with stakeholders	2	4	4			10
c. Solicit and review existing VTrans information		4	8	8	2	22
<b>2 Local Concerns &amp; Purpose and Need Statement</b>						
a. Obtain and review information		1	2			3
<b>3 Resource Team Review</b>						
a. Solicit and review existing information		2	2			4
b. Meet with VTrans Environmental staff		4	4			8
<b>4 Alternatives Development Review and Acceptance</b>						
a. Establish design criteria		2	4			6
b. Perform capacity analysis (assume 2 roundabouts)	1	4	12		2	19
c. Develop layout plans and review with stakeholders	4	40	60	12		116
d. Finalize plan and geometry	2	16	40	16		74
d. Develop Profiles		4	16	4		24
e. Develop critical sections		4	16	2		22
f. Compile construction estimate	1	2	4	16		23
g. Develop evaluation matrix	1	2	8		2	13
h. Alternatives presentation						
- Prepare presentation graphics	2	4	8	24		38
- Arrange, attend and document presentation mtg	4	8	8			20
i. Prepare scoping report Addendum	4	24	40		8	76
<b>5 Resource Re-evaluation and Update</b>						
a. Meet with VTrans Resources staff		4				4
<b>6 Conceptual Plan Development</b>						
a. Develop plan set to include:						
- Title page		2		4		6
- Roadway typical		2		4		6
- Base plans		2	40	40		82
- Profiles		2	4	4		10
- Environmental resource sheet ( assume not req'd)						0
- Cross sections		4	16	40		60
- Pavement design (assume completed)						0
- Traffic control plans ( assume not required)						0
- Design parameter documentation		2	4			6
- Construction cost estimate	1	4	8	16		29
- Quality review	8	4				12
<b>7 Categorical Exclusion Re-evaluation</b>						
a. Complete analysis sheet and cover letter		4	8		2	14
b. Submit to VTrans			2			
<b>8 Property Owner Meetings</b>						
a. Schedule, attend and document meetings (assume 5)		16	16			32
b. Meet with stakeholder and resolve PO issues		4	8			12



**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

4/16/2003

Task	Principle/ S. Engr.	Proj. Mgr.	Planner/ Proj. Eng.	Tech.	Cler.	Total
<b>9. 502 Hearings</b>						
a. Prepare displays and handouts		8	4	16	2	30
b. Submit to VTrans for review			2			2
c. Attend skull session		4	4			8
d. Attend and document hearing		4	8			12
<b>10. 502 Hearing Comments</b>						
a. Compile comments and propose resolutions	2	4	8			14
b. Meet with VTrans and resolve comments		4	4			8
c. Develop memo summarizing resolutions		2	8		2	12
<b>11. Selectboard Approval</b>						
a. Meet with Selectboard	4	4	8			16
<b>Total Hours</b>	<b>38</b>	<b>209</b>	<b>392</b>	<b>206</b>	<b>20</b>	<b>863</b>
<b>Average Direct Hourly Rate</b>	<b>\$44</b>	<b>\$32</b>	<b>\$24</b>	<b>\$18</b>	<b>\$13</b>	
<b>Total Direct Labor Costs</b>	<b>\$1,672</b>	<b>\$6,688</b>	<b>\$9,408</b>	<b>\$3,708</b>	<b>\$260</b>	<b>\$21,736</b>
				Overhead (156%)		\$33,908
				Expenses		\$800
				Fixed Fee		\$5,564
				Subtotal		\$62,009
				<b>Subconsultants</b>		
				GeoArch (WBE)		\$0
				Daly & Associates (WBE)		\$0
				Wm. D. Countryman		\$0
				<b>TOTAL PROJECT COST</b>		<b>\$62,009</b>

6310013.14  
c/c  
Rec'd



State of Vermont  
Agency of Transportation  
National Life Building  
Drawer 33  
Montpelier, VT  
05633-5001

# VT Trans

Working to Get You There

April 22, 2003

RECEIVED

APR 28 2003

DUFRESNE - HENRY  
SOUTH-BURLINGTON, VT

Mr. Gregory A. Edwards, P.E.  
Vice President  
Dufresne Henry, Inc.  
P.O. Box 2246  
South Burlington, VT 05407

Re: Hartford STP 0113(59)S  
Authorization No. DH-2001-11 - Contract Number 0284315

Dear Mr. Edwards:

You are hereby notified that you are being awarded the work under the Program Development Engineering Services Contract for the above-referenced project. The official start date is April 14, 2003. Please sign and return this letter to the Agency. Per your cost estimate dated March 24, 2003, the work shall be done at a cost not to exceed \$62,009.00. Work shall be done in accordance with our Agreement dated September 27, 2001.

On your invoices for this project, please reference your contract number, 0284315, the project name and number, Hartford STP 0113(59)S and the EA number, 0113059-100. If you have any questions concerning this assignment, please do not hesitate to contact me at (802) 828-3413. We look forward to working with you on this project.

Sincerely,

Dan Peterson  
Project Manager

DP:tlh

Dufresne Henry, Inc.  
South Burlington, Vermont

By: [Signature]  
Title: Vice President  
Date: 4/29/03

www.aot.state.vt.us  
Telecommunications Relay Service 1-800-253-0191

Vermont is an Equal Opportunity Employer



Hand delivered  
by CSF 4-16-03

Creating Better Places To Live, Work And Play

---

March 24, 2003

Robert White  
VTrans Local Transportation Facilities  
National Life Building  
Drawer 33  
Montpelier, VT 05633-5001

**RE: US Route 5 / Sykes Avenue Improvements  
Hartford, Vermont  
DH Project No. 6310013.SA**

Dear Mr. White:

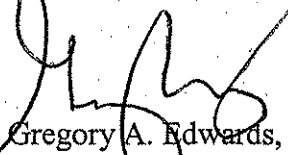
As requested, we have revised the attached Scope and Fee for the above-referenced project. Based on our discussions, these revisions include:

1. Providing an alternatives presentation to project stakeholders.
2. Removing the PDT presentation.
3. Indicating DH performs the 502 presentation.

I have adjusted the task schedule and fee to reflect these changes. We look forward to working with you on this project.

Sincerely,

**DUFRESNE-HENRY, INC.**



Gregory A. Edwards, P.E.  
Vice President

GAE:mak

Attachment

K:\1-DH Proposals\TRANSPORTATION PROPOSALS\1-6310013.SA-14 - US5-Sykes Ave Roundabout\Cover ltr.doc

# SCOPE OF SERVICES

## 1. Introduction

Due to capacity and safety concerns, improvements to the US Route 5 and Sykes Avenue intersection have been developed by the Vermont Agency of Transportation (VTrans). An Alternatives Analysis, Scoping Report, and Conceptual Plans were completed. The preferred alternative consisted of additional lanes, pedestrian facilities, access management, and new signal equipment. Upon completion of conceptual plans, the Transportation Board requested a roundabout alternative be considered for this intersection. The following describes Dufresne-Henry's (DH) Scope of Services to accomplish the development of the roundabout alternative. This proposed approach uses much of the existing information and expands it to include the following alternatives:

1. A roundabout at the US Route 5/Sykes Avenue intersection.
2. A roundabout at the Ralph Leman Drive/Sykes Avenue intersection.
3. A roundabout at both locations.

The same DH team members proposed for the Hartford Bike/Pedestrian study in this project area are proposed for this project. This will provide a potential for combining efforts, allowing coordination and economizing costs to VTrans.

## 2. Information Provided by VTrans

VTrans will make available to DH any existing information relating to the project. The following is a list of those materials to be provided to DH by VTrans:

- A. Traffic data and accident data, including projected design year turning movements and traffic analysis for signalized alternatives.
- B. Existing electronic conceptual plans in MicroStation.
- C. Existing highway Right-of-Way in electronic format.
- D. Survey control points
- E. Electronic CADD files in MicroStation and Intergraph Inroads format, including previously proposed alternatives. It is assumed previous alternatives will include 3-D files with limits of work
- F. Design parameter documentation forms
- G. Typical sections
- H. Standard details
- I. Copies of applicable supplemental specifications

**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

- J. Environmental resource plots in electronic format
- K. Archaeological and historic investigations (reports and resource limits in electronic format)
- L. Ground survey in electronic format
- M. Preliminary subsurface information
- N. Pavement design
- O. Public hearing / meeting notification and display plan as previously developed. Assume can be used unedited for future meetings
- P. Utilities - assume all existing utilities are provided in 3-D electronic format
- Q. Previously completed VTrans Scoping Report.

### 3. Design Standards, Criteria & Guidelines

DH shall comply with all VTrans design standards, specifications and policies, to include (but not limited to) the latest approved editions of the following:

- A. Vermont State Standards for the Design of Transportation Construction, Reconstruction, and Rehabilitation on Freeways, Roads and Streets
- B. AASHTO A Policy of Geometric Design of Highways and Streets
- C. AASHTO Standard Specifications for Highway Bridges
- D. AASHTO/NSBA Steel Bridge Collaboration, Shop Detail Drawing Review/Approval Guidelines
- E. VTrans Project Development Process
- F. VTrans Project Scoping Manual
- G. AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaries and Traffic Signals
- H. AASHTO Roadside Design Guide
- I. American Railway Engineering Association Manual for Railway Engineering
- J. Highway Capacity Manual (TRB Special Report 209)
- K. VTrans Traffic Signal Installation Policy

**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

- L. VTrans Road Design Manual
- M. VTrans Structures Manual
- N. VTrans Level of Service Policy
- O. AASHTO Guide for Design of Pavement Structures
- P. Americans with Disabilities Act (Uniform Federal Accessibility Standards)
- Q. VTrans Bridge Rail Policy
- R. VTrans CADD Policy
- S. CADD Guidelines for VTrans Structure & Design Plans
- T. VTrans Route Survey Manual
- U. VTrans Hydrologic and Hydraulic Design Guidelines and Criteria
- V. VTrans Hydraulic Evaluation of Bridges
- W. VTrans Policy of Design Exceptions
- X. VTrans Policy for The Use of Guardrail
- Y. VTrans Specifications for Consulting Engineering Services. Where conflicts between the latest edition of the specifications and this Scope of Work arise the Scope of Work will govern.

#### 4. Specific Services

- A. Project Definition (Scoping)
  - i. Information Collection - It is assumed this task was completed by VTrans previously. DH will review existing VTrans files and copy any pertinent information. DH will perform a field review and solicit input from local officials and the VTrans DTA. It is assumed existing VTrans files will provide the following:
    1. Motor vehicle traffic and accident data
    2. Right-of-Way information
    3. Utility information
    4. Survey of the project area (as necessary)
    5. Hydraulic data
    6. Geotechnical information
    7. Town and Regional land use plan information



**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

8. Environmental and cultural resource data
9. Previous RPC and Town input
10. Other information, as appropriate
11. Coordination with VTrans District Administrator

ii. Local Concerns Meeting & Purpose and Need Statement Development

It is assumed this item was completed previously. Local Concerns Meeting minutes and a Purpose and Need Statement will be provided by VTrans. DH will request and review this information.

iii. Resource Team Review

It is assumed all resources have been identified, documented, delineated and mapped. All information, reports and electronic mappings will be provided by VTrans. DH will request and review this information. It is assumed existing information is sufficient for alternative evaluation and CE purposes. Attendance at a bi-monthly resource coordination meeting will not be required. DH will discuss the project with VTrans Environmental staff.

iv. Alternatives Development, Review & Acceptance

VTrans has completed the development and evaluation of a signalized alternative. The existing plans, profiles, critical cross sections, construction cost estimate, and evaluation will be provided. Using this as a basis, DH will develop three additional alternatives including:

- Roundabout at US Route 5/Sykes Avenue
- Roundabout at Ralph Lehman Drive/Sykes Avenue
- Roundabout at US 5/Sykes Avenue and Ralph Lehman Drive/Sykes Avenue

To develop these alternatives, DH will perform the following:

1. Design Criteria: Referencing VSS, AASHTO and VTrans Highway Design Manual and FHWA roundabout publication, DH will develop the project design criteria in tabular form. This will include minimum values for design speed, lane widths, clearances, clear zones, sight distances, etc.

**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

*Done*

*August 13<sup>th</sup>*

*Memo  
 w/ 3 Alt.*

*Ranking of  
 Pos. & Neg.*

*Comparison  
 of other Alt.  
 Computations*

2. Capacity Analysis: Using the provided VTrans Turning Movements volumes, DH will perform the roundabout capacity analysis for each intersection. The results will be summarized and provided for VTrans' review. This analysis will set the required geometry, lane requirements and lane storage requirements. It is assumed VTrans will provide the traffic analysis for the signalized alternative.
3. Layout Plans: DH will develop layout plans for the two intersections. These preliminary layouts will be the basis to initiate alternative discussions with local officials and property owners. DH will meet with interested parties to review the concept, its performance, and their initial concerns. With this input, DH will finalize the layouts to include approximate construction limits and resource impacts.
4. Profiles: With reviewed and final layouts, profiles will be developed.
5. Critical Cross Sections: Identified areas of impact such as steep drives, resources, or large variation in horizontal and vertical changes.
6. Construction Cost Estimate: DH will expand the existing VTrans alternative estimate to include the three additional alternatives.
7. Evaluation Matrix: DH will expand the existing VTrans evaluation matrix to include the three additional alternatives.
8. Alternatives Presentation Meeting: DH will arrange to present the alternatives to project stakeholders. The purpose of the meeting shall be to obtain the endorsement of a preferred alternative.
9. Scoping Report: After presenting the alternatives to the communities, DH will edit the existing scoping report by adding the additional alternatives by addendum (approximately 30 copies). DH will do the 502 presentation.

*No*

*Selectboard Mtg. of Town @  
 main public office*

It is assumed all section 4(f) evaluations, section 106 historic resource assessments and section 106 determinations of effect will be prepared by VTrans Technical Services Historic Preservation Coordinator.



**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

v. Resource Re-evaluation and Update

It is assumed this task consists of meeting with VTrans Resource representatives and confirming all resources, their impacts, and required permits and clearances.

vi. Conceptual Plans Development

Conceptual Plans will consist of the title page, roadway typical sheet, base plan and profile sheets showing the roadway centerline and approximate construction limits and existing right-of-way limits, environmental resource sheet (showing all sensitive resources, roadway/bridge and construction limits), grade line, cross sections with templates, pavement structure thickness design, conceptual traffic control plans, design parameter documentation, and a construction cost estimate.

vii. Categorical Exclusion Re-evaluation

DH will edit the existing CE environmental analysis sheet and all other appropriate back up documentation, including the cover letter. It will be submitted in standard format currently used by VTrans. Once approved, VTrans' Environmental Section will submit the CE to FHWA for their review and approval.

viii. Property Owner Meetings

DH will schedule and hold property owner visits with all affected property owners to explain project impacts, to complete the property owner report (TA PA 499), and to explain the right-of-way process. DH will provide this notification in the form of a letter sent Certified Mail. DH will prepare a report documenting any meetings with property owners and provide a copy to VTrans' Project Manager. This report should include any problems encountered as well as decisions which were made and note any items that need resolution.

ix. 502 Hearings

DH will conduct a 502 hearing. DH will prepare displays and handouts, and provide copies of all displays and handouts to VTrans for review and approval in advance of the hearing or meeting. DH will attend one practice session ("skull session") in Montpelier, prior to the hearing.

The VTrans Project Manager shall make all arrangements, including selection of a site, setting the date and time, notification, and hiring a recorder who will produce a transcript, for all necessary public hearings and meetings.



**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

DH will make the technical presentation at the public hearing or meeting.

x. 502 Hearing Comments

DH will compile comments and develop potential resolutions. These will be discussed with VTrans and finalized. DH will provide a memo summarizing the concurred resolutions. It is assumed no additional design revisions are required.

xi. Selectboard Approval

Using the 502 hearing display, DH will meet with the Hartford Selectboard and will present the planned improvements. Team members will solicit a motion endorsing the project.





**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT  
**Task / Labor Hour Schedule**

3/24/2003

Task	Principle/ Sr. Engr.	Proj. Mgr.	Planner / Proj. Eng.	Tech.	Clk.	Total
<b>1. Information Collection</b>						
a. Field review	2	4	4			10
b. Meet with stakeholders	2	4	4			10
c. Solicit and review existing VTrans information		4	8	8	2	22
<b>2. Local Concerns &amp; Purpose and Need Statement</b>						
a. Obtain and review information		1	2			3
<b>3. Resource Team Review</b>						
a. Solicit and review existing information		2	2			4
b. Meet with VTrans Environmental staff		4	4			8
<b>4. Alternatives Development Review and Acceptance</b>						
a. Establish design criteria		2	4			6
b. Perform capacity analysis (assume 2 roundabouts)	1	4	12		2	19
c. Develop layout plans and review with stakeholders	4	40	60	12		116
d. Finalize plan and geometry	2	16	40	16		74
e. Develop Profiles		4	16	4		24
f. Develop critical sections		4	16	2		22
g. Compile construction estimate	1	2	4	16		23
h. Develop evaluation matrix	1	2	8		2	13
i. Alternatives presentation						
- Prepare presentation graphics	2	4	8	24		38
- Arrange, attend and document presentation mtg	4	8	8			20
i. Prepare scoping report Addendum	4	24	40		8	76
<b>5. Resource Re-evaluation and Update</b>						
a. Meet with VTrans Resources staff		4				4
<b>6. Conceptual Plan Development</b>						
a. Develop plan set to include:						
- Title page		2		4		6
- Roadway typical		2		4		6
- Base plans		2	40	40		82
- Profiles		2	4	4		10
- Environmental resource sheet ( assume not req'd)						0
- Cross sections		4	16	40		60
- Pavement design (assume completed)						0
- Traffic control plans ( assume not required)						0
- Design parameter documentation		2	4			6
- Construction cost estimate	1	4	8	16		29
- Quality review	8	4				12
<b>7. Categorical Exclusion Re-evaluation</b>						
a. Complete analysis sheet and cover letter		4	8		2	14
b. Submit to VTrans			2			
<b>8. Property Owner Meetings</b>						
a. Schedule, attend and document meetings (assume 5)		16	16			32
b. Meet with stakeholder and resolve PO issues		4	8			12



**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

3/24/2003

Task	Principle/ Sr. Engr.	Proj. Mgr.	Planner/ Proj. Eng.	Tech	Cler.	Total
<b>9 502 Hearings</b>						
a. Prepare displays and handouts		8	4	16	2	30
b. Submit to VTrans for review			2			2
c. Attend skull session		4	4			8
d. Attend and document hearing		4	8			12
<b>10 502 Hearing Comments</b>						
a. Compile comments and propose resolutions	2	4	8			14
b. Meet with VTrans and resolve comments		4	4			8
c. Develop memo summarizing resolutions		2	8		2	12
<b>11 Selectboard Approval</b>						
a. Meet with Selectboard	4	4	8			16
Total Hours	38	209	392	206	20	863
Average Direct Hourly Rate	\$44	\$32	\$24	\$18	\$13	
Total Direct Labor Costs	\$1,672	\$6,688	\$9,408	\$3,708	\$260	\$21,736
					Overhead (156%)	\$33,908
					Expenses	\$800
					Fixed Fee	\$5,564
					Subtotal	\$62,009
					<b>Subconsultants</b>	
					GeoArch (WBE)	\$0
					Daly & Associates (WBE)	\$0
					Wm. D. Countryman	\$0
					<b>TOTAL PROJECT COST</b>	<b>\$62,009</b>

**SCOPE OF WORK**

# US Route 5 / Sykes Avenue Improvements

Hartford, Vermont

March 10, 2003



*Presented to:*  
Mr. Robert White  
VTrans Location Transportation Facilities  
National Life Building, Drawer 33  
Montpelier, VT 05633-5001



*Presented by:*  
Dufresne-Henry, Inc.  
55 Green Mountain Drive, P.O. Box 2246  
South Burlington, VT 05407



March 10, 2003

Robert White  
VTrans Local Transportation Facilities  
National Life Building  
Drawer 33  
Montpelier, VT 05633-5001

**RE: US Route 5 / Sykes Avenue Improvements  
Hartford, Vermont  
DH Project No. 6310013.SA**

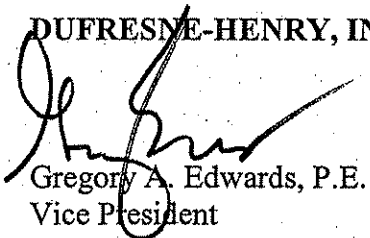
Dear Mr. White:

As requested, we have developed the attached Scope and Fee for the above-referenced project. It is based on limited discussions with VTrans and the VTrans Scope of Services provided with our General Engineering Services Contract. We have included numerous assumptions to quantify the needed effort.

Since this is our interpretation of the required Scope, we welcome the opportunity to discuss specifics in detail and would be happy to meet at your convenience. We look forward to the opportunity to work with the LTF on it and continue our working relationship with you. I will follow up with you this week to see how we could help.

Sincerely,

**DUFRESNE-HENRY, INC.**



Gregory A. Edwards, P.E.  
Vice President

GAE:jf/mak

Attachment

K:\1-DH Proposals\TRANSPORTATION PROPOSALS\1-6310013.SA-14 - US5-Sykes Ave Roundabout\Cover ltr.doc



# SCOPE OF SERVICES

## 1. Introduction

Due to capacity and safety concerns, improvements to the US Route 5 and Sykes Avenue intersection have been developed by the Vermont Agency of Transportation (VTrans). An Alternatives Analysis, Scoping Report, and Conceptual Plans were completed. The preferred alternative consisted of additional lanes, pedestrian facilities, access management, and new signal equipment. Upon completion of conceptual plans, the Transportation Board requested a roundabout alternative be considered for this intersection. The following describes Dufresne-Henry's (DH) Scope of Services to accomplish the development of the roundabout alternative. This proposed approach uses much of the existing information and expands it to include the following alternatives:

1. A roundabout at the US Route 5/Sykes Avenue intersection.
2. A roundabout at the Ralph Lemam Drive/Sykes Avenue intersection.
3. A roundabout at both locations.

The same DH team members proposed for the Hartford Bike/Pedestrian study in this project area are proposed for this project. This will provide a potential for combining efforts, allowing coordination and economizing costs to VTrans.

## 2. Information Provided by VTrans

VTrans will make available to DH any existing information relating to the project. The following is a list of those materials to be provided to DH by VTrans:

- A. Traffic data and accident data, including projected design year turning movements and traffic analysis for signalized alternatives.
- B. Existing electronic conceptual plans in MicroStation.
- C. Existing highway Right-of-Way in electronic format.
- D. Survey control points
- E. Electronic CADD files in MicroStation and Intergraph Inroads format, including previously proposed alternatives. It is assumed previous alternatives will include 3-D files with limits of work
- F. Design parameter documentation forms
- G. Typical sections
- H. Standard details
- I. Copies of applicable supplemental specifications



- J. Environmental resource plots in electronic format
- K. Archaeological and historic investigations (reports and resource limits in electronic format)
- L. Ground survey in electronic format
- M. Preliminary subsurface information
- N. Pavement design
- O. Public hearing / meeting notification and display plan as previously developed. Assume can be used unedited for future meetings
- P. Utilities - assume all existing utilities are provided in 3-D electronic format
- Q. Previously completed VTrans Scoping Report.

### **3. Design Standards, Criteria & Guidelines**

DH shall comply with all VTrans design standards, specifications and policies, to include (but not limited to) the latest approved editions of the following:

- A. Vermont State Standards for the Design of Transportation Construction, Reconstruction, and Rehabilitation on Freeways, Roads and Streets
- B. AASHTO A Policy of Geometric Design of Highways and Streets
- C. AASHTO Standard Specifications for Highway Bridges
- D. AASHTO/NSBA Steel Bridge Collaboration, Shop Detail Drawing Review/Approval Guidelines
- E. VTrans Project Development Process
- F. VTrans Project Scoping Manual
- G. AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaries and Traffic Signals
- H. AASHTO Roadside Design Guide
- I. American Railway Engineering Association Manual for Railway Engineering
- J. Highway Capacity Manual (TRB Special Report 209)
- K. VTrans Traffic Signal Installation Policy

- L. VTrans Road Design Manual
- M. VTrans Structures Manual
- N. VTrans Level of Service Policy
- O. AASHTO Guide for Design of Pavement Structures
- P. Americans with Disabilities Act (Uniform Federal Accessibility Standards)
- Q. VTrans Bridge Rail Policy
- R. VTrans CADD Policy
- S. CADD Guidelines for VTrans Structure & Design Plans
- T. VTrans Route Survey Manual
- U. VTrans Hydrologic and Hydraulic Design Guidelines and Criteria
- V. VTrans Hydraulic Evaluation of Bridges
- W. VTrans Policy of Design Exceptions
- X. VTrans Policy for The Use of Guardrail
- Y. VTrans Specifications for Consulting Engineering Services. Where conflicts between the latest edition of the specifications and this Scope of Work arise the Scope of Work will govern.

#### **4. Specific Services**

##### **A. Project Definition (Scoping)**

- i. Information Collection - It is assumed this task was completed by VTrans previously. DH will review existing VTrans files and copy any pertinent information. DH will perform a field review and solicit input from local officials and the VTrans DTA. It is assumed existing VTrans files will provide the following:

1. Motor vehicle traffic and accident data
2. Right-of-Way information
3. Utility information
4. Survey of the project area (as necessary)
5. Hydraulic data
6. Geotechnical information
7. Town and Regional land use plan information

**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

8. Environmental and cultural resource data
9. Previous RPC and Town input
10. Other information, as appropriate
11. Coordination with VTrans District Administrator

ii. Local Concerns Meeting & Purpose and Need Statement Development

It is assumed this item was completed previously. Local Concerns Meeting minutes and a Purpose and Need Statement will be provided by VTrans. DH will request and review this information.

iii. Resource Team Review

It is assumed all resources have been identified, documented, delineated and mapped. All information, reports and electronic mappings will be provided by VTrans. DH will request and review this information. It is assumed existing information is sufficient for alternative evaluation and CE purposes. Attendance at a bi-monthly resource coordination meeting will not be required. DH will discuss the project with VTrans Environmental staff.

iv. Alternatives Development, Review & Acceptance

VTrans has completed the development and evaluation of a signalized alternative. The existing plans, profiles, critical cross sections, construction cost estimate, and evaluation will be provided. Using this as a basis, DH will develop three additional alternatives including:

- Roundabout at US Route 5/Sykes Avenue
- Roundabout at Ralph Lehman Drive/Sykes Avenue
- Roundabout at US 5/Sykes Avenue and Ralph Lehman Drive/Sykes Avenue

To develop these alternatives, DH will perform the following:

1. Design Criteria: Referencing VSS, AASHTO and VTrans Highway Design Manual and FHWA roundabout publication, DH will develop the project design criteria in tabular form. This will include minimum values for design speed, lane widths, clearances, clear zones, sight distances, etc.



**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

2. Capacity Analysis: Using the provided VTrans Turning Movements volumes, DH will perform the roundabout capacity analysis for each intersection. The results will be summarized and provided for VTrans' review. This analysis will set the required geometry, lane requirements and lane storage requirements. It is assumed VTrans will provide the traffic analysis for the signalized alternative.
3. Layout Plans: DH will develop layout plans for the two intersections. These preliminary layouts will be the basis to initiate alternative discussions with local officials and property owners. DH will meet with interested parties to review the concept, its performance, and their initial concerns. With this input, DH will finalize the layouts to include approximate construction limits and resource impacts.
4. Profiles: With reviewed and final layouts, profiles will be developed.
5. Critical Cross Sections: Identified areas of impact such as steep drives, resources, or large variation in horizontal and vertical changes.
6. Construction Cost Estimate: DH will expand the existing VTrans alternative estimate to include the three additional alternatives.
7. Evaluation Matrix: DH will expand the existing VTrans evaluation matrix to include the three additional alternatives.
8. Alternatives Presentation Meeting: DH will arrange to present the alternatives at a joint selectboard meeting in one of the affected communities. The purpose of the meeting shall be to obtain the endorsement of the communities for a preferred alternative. It is assume DH will facilitate one discussion meeting with project stakeholders, subsequent to the Alternatives Presentation Meeting.
9. Scoping Report: After presenting the alternatives to the communities, DH will edit the existing scoping report by adding the additional alternatives by addendum (approximately 30 copies), and present the recommended alternative to the Agency's Project Definition Team (PDT).



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It is assumed all section 4(f) evaluations, section 106 historic resource assessments and section 106 determinations of effect will be prepared by VTrans Technical Services Historic Preservation Coordinator.

10. Project Definition Team: DH will present the scoping report to the PDT.

v. Resource Re-evaluation and Update

It is assumed this task consists of meeting with VTrans Resource representatives and confirming all resources, their impacts, and required permits and clearances.

vi. Conceptual Plans Development

Conceptual Plans will consist of the title page, roadway typical sheet, base plan and profile sheets showing the roadway centerline and approximate construction limits and existing right-of-way limits, environmental resource sheet (showing all sensitive resources, roadway/bridge and construction limits), grade line, cross sections with templates, pavement structure thickness design, conceptual traffic control plans, design parameter documentation, and a construction cost estimate.

vii. Categorical Exclusion Re-evaluation

DH will edit the existing CE environmental analysis sheet and all other appropriate back up documentation, including the cover letter. It will be submitted in standard format currently used by VTrans. Once approved, VTrans' Environmental Section will submit the CE to FHWA for their review and approval.

viii. Property Owner Meetings

DH will schedule and hold property owner visits with all affected property owners to explain project impacts, to complete the property owner report (TA PA 499), and to explain the right-of-way process. DH will provide this notification in the form of a letter sent Certified Mail. DH will prepare a report documenting any meetings with property owners and provide a copy to VTrans' Project Manager. This report should include any problems encountered as well as decisions which were made and note any items that need resolution.

**VTRANS**  
**US ROUTE 5 / SYKES AVENUE IMPROVEMENTS**

ix. 502 Hearings

DH will conduct a 502 hearing. DH will prepare displays and handouts, and provide copies of all displays and handouts to VTrans for review and approval in advance of the hearing or meeting. DH will attend one practice session ("skull session") in Montpelier, prior to the hearing.

The VTrans Project Manager shall make all arrangements, including selection of a site, setting the date and time, notification, and hiring a recorder who will produce a transcript, for all necessary public hearings and meetings.

VTrans shall decide whether DH or VTrans' Project Manager will make the technical presentation at the public hearing or meeting.

x. 502 Hearing Comments

DH will compile comments and develop potential resolutions. These will be discussed with VTrans and finalized. DH will provide a memo summarizing the concurred resolutions. It is assumed no additional design revisions are required.

xi. Selectboard Approval

Using the 502 hearing display, DH will meet with the Hartford Selectboard and will present the planned improvements. Team members will solicit a motion endorsing the project.







**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

3/10/2003

Task	Principle/ Sr. Engr.	Proj. Mgr.	Planner/ Proj. Eng.	Tech.	Cler.	Total
<b>1 Information Collection</b>						
a. Field review	2	4	4			10
b. Meet with stakeholders	2	4	4			10
c. Solicit and review existing VTrans information		4	8	8	2	22
<b>2 Local Concerns &amp; Purpose and Need Statement</b>						
a. Obtain and review information		1	2			3
<b>3 Resource Team Review</b>						
a. Solicit and review existing information		2	2			4
b. Meet with VTrans Environmental staff		4	4			8
<b>4 Alternatives Development Review and Acceptance</b>						
a. Establish design criteria		2	4			6
b. Perform capacity analysis (assume 2 roundabouts)	1	4	12		2	19
c. Develop layout plans and review with stakeholders	4	40	60	12		116
d. Finalize plan and geometry	2	16	40	16		74
d. Develop Profiles		4	16	4		24
e. Develop critical sections		4	16	2		22
f. Compile construction estimate	1	2	4	16		23
g. Develop evaluation matrix	1	2	8		2	13
h. Alternatives presentation						
- Prepare presentation graphics	2	4	8	24		38
- Arrange, attend and document presentation mtg	4	8	8			20
- Meet with stakeholders and resolve issues	4	8	8			20
i. Prepare scoping report Addendum	4	24	40		8	76
j. Schedule, prepare and attend PDT meeting	4	6	8			18
<b>5 Resource Re-evaluation and Update</b>						
a. Meet with VTrans Resources staff		4				4
<b>6 Conceptual Plan Development</b>						
a. Develop plan set to include:						
- Title page		2		4		6
- Roadway typical		2		4		6
- Base plans		2	40	40		82
- Profiles		2	4	4		10
- Environmental resource sheet ( assume not req'd)						0
- Cross sections		4	16	40		60
- Pavement design (assume completed)						0
- Traffic control plans ( assume not required)						0
- Design parameter documentation		2	4			6
- Construction cost estimate	1	4	8	16		29
- Quality review	8	4				12
<b>7 Categorical Exclusion Re-evaluation</b>						
a. Complete analysis sheet and cover letter		4	8		2	14
b. Submit to VTrans			2			
<b>8 Property Owner Meetings</b>						
a. Schedule, attend and document meetings (assume 5)		16	16			32
b. Meet with stakeholder and resolve PO issues		4	8			12





**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

3/10/2003

Task	Principle/ Sr. Engr.	Proj. Mgr.	Planner/ Proj. Eng.	Tech.	Clor.	Total
<b>9. 502 Hearings</b>						
a. Prepare displays and handouts		8	4	16	2	30
b. Submit to VTrans for review			2			2
c. Attend skull session		4	4			8
d. Attend and document hearing		4	8			12
<b>10. 502 Hearing Comments</b>						
a. Compile comments and propose resolutions	2	4	8			14
b. Meet with VTrans and resolve comments		4	4			8
c. Develop memo summarizing resolutions		2	8		2	12
<b>11. Selectboard Approval</b>						
a. Meet with Selectboard	4	4	8			16
<b>Total Hours</b>	<b>46</b>	<b>223</b>	<b>408</b>	<b>206</b>	<b>20</b>	<b>901</b>
<b>Average Direct Hourly Rate</b>	<b>\$44</b>	<b>\$32</b>	<b>\$24</b>	<b>\$18</b>	<b>\$13</b>	
<b>Total Direct Labor Costs</b>	<b>\$2,024</b>	<b>\$7,136</b>	<b>\$9,792</b>	<b>\$3,708</b>	<b>\$260</b>	<b>\$22,920</b>
					Overhead (156%)	\$35,755
					Expenses	\$800
					Fixed Fee	\$5,868
					<b>Subtotal</b>	<b>\$65,343</b>
					<b>Subconsultants</b>	
					GeoArch (WBE)	\$0
					Daly & Associates (WBE)	\$0
					Wm. D. Countryman	\$0
					<b>TOTAL PROJECT COST</b>	<b>\$65,343</b>

62012  
Edit 1 Screen

Project ID #: 6310013. ~~SA~~ (14) Short Name (≤ 15 ch.): VTrans Hartford Round

Long Name (≤ 40 ch.): VTrans Hartford. Sykes Ave/RT 5

Client ID #: Client Name: VTrans - LTF

Billing Address

Address 1: VTrans - Program Development Office

Address 2: National Life Bldg. Drmer 33

City, ST, Zip: Montpelier, VT 05633-5001

Contact 1: Rob White Contact 2:

Telephone #: 828-2583 FAX #:

Project Address or Owner's Name & Address

Address:

City, ST, Zip:

Division #: 68 Project Mgr. Empl #: 621042

Edit 3 Screen

Invoice Note 1: Please setup invoicing 5th year to

Invoice Note 2: 6310013.04

Invoice Note 3:

Invoice Note 4:

Note 5:

Note 6:

User Definable Fields

Mileage Rate: Prop. Due: 3 / 5 / 103 Inv. Option (circle below) Prob. (Circle One) G L

Unit Qty.: S C L Prob. Year: 03

Unit Rate: (Above for Fixed Rate invoice type) Limit of Liability: Y or N Prob. Qtr.: 2<sup>nd</sup>

Client Type: Next Inv: Circle 1 for a Sequence # to appear or FINAL to apply retainer to the final invoice

Pt. Charlotte Use: Discipline: TRANS

Proj. Mgr. Init.: CSF

Edit 2 Screen

Status (Circle One) P  A  I  
 Invoice Date: Project Type: 1 & 3  
 Invoice Type: H2A

Time Level (Circle One) 1 2  3  
 Expense Level (Circle One) 1 2  3

Default Multipliers

Direct Per Exp (DPE) 1.0000

Overhead (OH) 3.1000 2.56

Profit (PR) 1.0000 1.10

Consultant (CNS) 1.0000

Reimbursable (RMB) 1.0000

Retainage: (Circle One) Y or  N

Accum. Retainage:

Retainage Max.:

Retainage %:

Edit 2 Screen

Billing Schedule (Multiplier): 3.10 or project multiplier  
 Or attach a separate sheet with hourly or set rates

Contract Amount Budget Amount

Total: 62,009 22,536

Fee: 62,209 21,736

Cons:

Reim: 800 800

Non R:

Please complete the Contract Information on Reverse Side

Items in red added 4-30-03 by CSF  
 # proceed per attached NTP dated 4-22-03

AK

**Contract Information:**

Estimated cost given to client: Yes  No   
 Contract signed/received in accounting: Authorized  Pending   
 Work is: Yes  No   
 Client is: New  Prior   
 Credit check completed: Yes  No   
 Payment Experience is: Good  Bad   
 Retainer Required: Yes  No   
 Type of Contract: Short Form  Letter  Amount   
 Date Sent to Client: 1  Standard  No Contract   
 Received: 1

Prepared By: Ced  
 Reviewed By: \_\_\_\_\_  
 Approved By: \_\_\_\_\_  
 Explanation: NTP received 4-15-03, part of VTrans General Services Contract

DISCIPLINE	SEMA4 ENTRY	INVOICE TYPES available to date:	PROJECT TYPES SEMA4 ENTRY	CLIENT TYPES	SEMA4 ENTRY
Airport	AIRPORT	H1A - Hourly to Level 1	Municipal 1	Architect	ARCH
Building Engineering	BLDG ENG	H2A - Hourly to Level 2 by Long Name	Regional 2	Federal	FED
Civil/Environmental	CIV/ENV	H2B - Hourly to Level 2 by Staff Type	State 3	Industry	IND
Contract Operations	CON OPS	P1A - Percent Complete to Level 1	Federal 4	Military	MIL
LA/Civil	LA/CIV	P2A - Percent Complete to Level 2	Military 5	Municipal	MUN
Miscellaneous	MISC	P3A - Percent Complete to Level 3	Business 6	Private	PRIV
Solid Waste	SOL WAS	F1A - Fixed Rate to Level 1	Industrial 7	Regional	REG
Testing	TESTING	F2A - Fixed Rate to Level 2	Architect 8	State	ST
Transportation	TRANS	F3A - Fixed Rate to Level 3	Medical 9		
Waste Management	WASTE	L2A - Mixed Types to Level 2	Education 10		
Water	WATER		Recreation 11		
			Other 12		
			Airport 13		
			Private 14		

**USER DEFINABLE FIELD DEFINITIONS:**

**Mileage Rate:** Please fill in if different from the company standard of 35¢.  
**Unit Quantity:** Is used when preparing a Fixed Rate invoice design.  
**Unit Rate:** Is used when preparing a Fixed Rate invoice design.  
**Prop. Due:** Represents the date a proposal is due to be submitted.  
**Client Type:** Is selected from the client type chart above.  
**Pt. Char. Use:** Is a field used by Port Charlotte in developing a project database.  
**Discipline:** Is selected from the discipline chart above.  
**Inv. Option:** Each position of the field is used independently during invoicing:  
 - S prints an a/r summary on the invoice  
 - C prints the contract amount on the invoice  
 - L handles the project as Limiting Sum

**Limit of Liab:** Is there an Indemnification Clause in the contract?  
**Next Inv.:** Either circle the number 1 or write in the word FINAL.  
 - A number in the field will print on the invoice as next sequence number  
 - The word FINAL in this field will apply the retainer to the final invoice  
**Prob. G/L:** Is the probability of a win Greater or Less than 75%  
**Prob. Year:** What year do we expect to win the job.  
**Prob. Qtr.:** What quarter do we expect to win the job.  
**Proj. Mgr.:** Please enter the project manager's initials.

# Marketing Set-Up Form

Project Description (including firm responsibility and any unique aspects):

Evaluation of infrastructure alternatives including Roundabouts for the Route 5 / Sykes Mountain Area intersection in Montford VT. Effort to include alternatives analysis. Conceptual plans & 50% hearing process.

Principal In Charge: GAE

Project Manager: Col

Project Team & In-House Search Codes:

Team Member	Code
MAS	1418
GAGA	1408

Project In-House Search Codes (Select as many as applicable): 1418, 1408

Circle one:  Prime  Subconsultant  Joint Venture

Project Funding Source: Fed / State

Construction Completion Date (Estimate): 2008

Project Construction Cost (Estimate): \$1,000,000

Referable:  Yes  No

Revised: 08/12/99

Federal Profile Codes (Circle one):

- 005-Airports
- 010-Barracks; Dormitories
- 011-Bridges
- 017-Commercial Buildings; Shopping Centers
- 025-Dams; Dikes; Levees
- 027-Dining Halls; Clubs; Restaurants
- 029-Educational Facilities; Classrooms
- 035-Field Houses; Gyms; Stadiums
- 039-Garages; Parking Decks
- 042-Harbors; Jetties; Piers, Ship Terminal Facilities
- 046-Highways; Streets; Parking Lots
- 048-Hospital and Medical Facilities
- 050-Housing
- 052-Industrial Buildings; Manufacturing Plants
- 054-Industrial Waste Treatment
- 072-Office Buildings; Industrial Parks
- 076-Petroleum and Fuel
- 083-Power Generation, Transmission, Distribution
- 084-Prisons & Correctional Facilities
- 088-Recreational Facilities (Parks, Marinas, etc.)
- 090-Resource Recovery; Recycling
- 092-Rivers, Canals; Waterways; Flood Control
- 096-Sewage Collection, Treatment and Disposal
- 099-Solid Wastes; Incineration; Land Fill
- 104-Stormwater Handling
- 110-Urban Renewals; Community Development
- 114-Water Resources, Hydrology
- 115-Water Supply, Treatment, Distribution

**AVIATION**

- 1101 - Airfield Pavements/Maintenance
- 1102 - Airfield pavement Rehabilitation Reconstruction
- 1103 - Airfield Pavements/New Design-Expansion
- 1104 - Airfield Lighting (HIRLS, REILS, TRSLS, MITLS, Airport Beacon, MALSR)
- 1105 - Airfield Navigation Systems (PAPI, ILS, NDB)
- 1106 - Fuel Management Systems
- 1107 - Airport Planning
- 1108 - Airport Environmental Studies
- 1109 - Airport Obstruction Studies
- 1110 - Terminal, Hangars, SRE, Maintenance Facilities
- 1111 - Security Fence Installation
- 1112 - Land Acquisition (Fee, Easement, Eminent Domain)
- 1113 - Misc. Airport Planning/Feasibility Studies, Site Selection
- 1114 - Airport Equipment Purchases
- 1120 - Local, State and Federal Permitting
- 1121 - Value Engineering
- 1122 - Funding Administration

**BUILDING SERVICES**

- 1201 - Commercial Buildings
- 1202 - Educational Facilities
- 1203 - Industrial Buildings
- 1204 - Health Care/Hospital
- 1205 - Airports
- 1206 - Federal Contracts
- 1207 - Water Systems
- 1208 - Wastewater Systems
- 1209 - Utilities
- 1210 - Instrumentation & Controls
- 1211 - Forensic Engineering
- 1212 - Recreational Facilities

**LANDSCAPE ARCHITECTURE AND PLANNING**

- 1301 - Waterfront Planning and Design
- 1302 - Urban & Community Planning and Design
- 1303 - Parks and Recreation Planning and Design
- 1304 - Resort Planning and Design
- 1305 - Public Participation
- 1306 - Natural/Cultural/Historic Resource Planning
- 1307 - Transportation Planning and Design (Multi-Modal)
- 1308 - Utility Planning and Design
- 1309 - Commercial Planning and Design
- 1310 - Residential Planning and Design
- 1311 - School and Institutional Planning and Design
- 1312 - Visual Resource Management

**CIVIL/TRANSPORTATION**

- 401 - Conceptual Design
- 402 - Commercial Site Development
- 403 - Industrial Site Development
- 404 - Residential Site Development
- 405 - Institutional (Churches; Schools)
- 406 - Recreational
- 407 - Utility Layout
- 408 - Roadway Design
- 409 - Grading Design

- 1410 - Bike Paths and Routes, Greenspace
- 1411 - Downtown Rehabilitation
- 1412 - Soils and Geotechnical Studies, Foundations
- 1413 - Geotechnical Investigation(pre-construction)
- 1414 - Soils and Concrete Testing (construction)
- 1415 - Surveying, Platting, Mapping
- 1416 - Boundary, Topographic & Location
- 1417 - Construction Stake Out
- 1418 - Traffic Engineering/Planning
- 1419 - Storm Water Handling & Facilities
- 1420 - Flood Plain Management
- 1421 - Construction Management
- 1422 - Bridges
- 1423 - Railroad, Rapid Transit
- 1424 - Subdivision Review
- 1430 - Local, State and Federal Permitting
- 1431 - Value Engineering
- 1432 - Funding Administration

**SOLID WASTE**

- 1501 - Solid Waste Management Plans
- 1502 - Sanitary Landfills - Closures
- 1503 - Sanitary Landfills - New and Expansions
- 1504 - Hazardous Landfills - Closures
- 1505 - Hazardous Landfills - New and Expansions
- 1506 - Leachate Management & Treatment
- 1507 - Transfer Station/Recycling
- 1508 - Monitoring
- 1509 - Construction Services
- 1520 - Local, State and Federal Permitting
- 1521 - Value Engineering
- 1522 - Funding Administration
- 1523 - Groundwater Monitoring

**ENVIRONMENTAL**

- 1601 - Acoustics, Noise Abatement
- 1602 - Air Pollution
- 1603 - Ecological & Archaeological Studies
- 1604 - Environmental Impact Studies, Assessments or Statements
- 1605 - Contamination Assessments
- 1606 - Remediation System Design
- 1607 - Groundwater Monitoring
- 1608 - Hydrology
- 1609 - UST Studies/Removal/Replacement
- 1610 - Property Site Assessments
- 1611 - Water Quality and Soil Sampling
- 1612 - Geologic Analysis and Mapping
- 1613 - Hydrogeologic Investigation
- 1614 - Dam Evaluation and Design
- 1615 - Asbestos Removal
- 1616 - Local/State/Federal Permitting
- 1617 - Wetland Delineation/Permitting

**WASTE MANAGEMENT**

- 1701 - Wastewater Treatment
- 1702 - Industrial Wastewater Treatment
- 1703 - Combined Sewer Overflow
- 1704 - Biosolids Management
- 1705 - Storm Water Management
- 1706 - Wastewater Collection System
- 1707 - Infiltration/Inflow/SSES
- 1708 - Odor Control
- 1709 - Septage Management
- 1710 - Contract Operations
- 1711 - Construction Services
- 1712 - Design/Build
- 1720 - Local, State and Federal Permitting
- 1721 - Value Engineering
- 1722 - Funding Administration
- 1723 - WWTF Evaluation
- 1724 - Industrial Pretreatment

**WATER**

- 1801 - Water Rate Analysis
- 1802 - Water Regulation Compliance
- 1803 - Surface Water Treatment
- 1804 - Groundwater Treatment
- 1805 - Water Distribution Systems
- 1806 - Water Storage Facilities
- 1807 - Water Source Development
- 1808 - Wells and Pumping Stations
- 1809 - Water System Planning and Analysis
- 1810 - Hydrogeologic Studies
- 1811 - Contract Operations
- 1813 - Construction Resident Inspection
- 1814 - Design/Build
- 1815 - Pilot Water Treatment
- 1820 - Local, State and Federal Permitting
- 1821 - Value Engineering
- 1822 - Funding Administration

6310013.14



State of Vermont  
Agency of Transportation  
National Life Building  
Drawer 33  
Montpelier, VT  
05633-5001

# VT Trans

*Working to Get You There*

April 22, 2003

**RECEIVED**

APR 28 2003

DUFRESNE - HENRY  
SOUTH BURLINGTON, VT

Mr. Gregory A. Edwards, P.E.  
Vice President  
Dufresne Henry, Inc.  
P.O. Box 2246  
South Burlington, VT 05407

Re: Hartford STP 0113(59)S  
Authorization No. DH-2001-11 - Contract Number 0284315

Dear Mr. Edwards:

You are hereby notified that you are being awarded the work under the Program Development Engineering Services Contract for the above-referenced project. The official start date is April 14, 2003. Please sign and return this letter to the Agency. Per your cost estimate dated March 24, 2003, the work shall be done at a cost not to exceed \$62,009.00. Work shall be done in accordance with our Agreement dated September 27, 2001.

On your invoices for this project, please reference your contract number, 0284315, the project name and number, Hartford STP 0113(59)S and the EA number, 0113059-100. If you have any questions concerning this assignment, please do not hesitate to contact me at (802) 828-3413. We look forward to working with you on this project.

Sincerely,

Dan Peterson  
Project Manager

DP:tlh

Dufresne Henry, Inc.  
South Burlington, Vermont

By:   
Title: Vice President  
Date: 4/29/03

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Hartford

Budget/Codes

Level		Task	Budget	
2	3		Hours	\$-Direct
A		Information Collection		
	A	Info Collect.	42	\$1114
	B	Review P&N	3	\$80
	C	Resource Team Coord.	12	\$336
B		Alternatives		
	A	Alternatives Dev't	431	11,028
	B	Resource Reeval.	4	128
C		Conceptual Concept Plans		
	A	Concept Plans	211	4,772
	B	CE	16	394
D		Row & 502		
	A	Prep. Own. Mtgs	44	1216
	B	502 Hearing	52	1258
	C	502 Comments	34	914
	D	Selectboard Approval	16	496
			865	\$21,736



**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

4/30/2003

Task	Principle Sr. Engr.	Proj. Mgr.	Planner/ Proj. Eng.	Tech.	Clk.	Total
<b>Information Collection</b>						
<b>1 Information Collection</b>						
a. Field review	2	4	4			10
b. Meet with stakeholders	2	4	4			10
c. Solicit and review existing VTrans information		4	8	8	2	22
Hours	4	12	16	8	2	42
Cost	\$176	\$384	\$384	\$144	\$26	\$ 1,114
<b>2 Local Concerns &amp; Purpose and Need Statement</b>						
a. Obtain and review information		1	2			3
Hours	0	1	2	0	0	3
Cost	\$0	\$32	\$48	\$0	\$0	\$ 80
<b>3 Resource Team Review</b>						
a. Solicit and review existing information		2	2			4
b. Meet with VTrans Environmental staff		4	4			8
Hours	0	6	6	0	0	12
Cost	\$0	\$192	\$144	\$0	\$0	\$ 336
<b>Alternatives</b>						
<b>4 Alternatives Development Review and Acceptance</b>						
a. Establish design criteria		2	4			6
b. Perform capacity analysis (assume 2 roundabouts)	1	4	12		2	19
c. Develop layout plans and review with stakeholders	4	40	60	12		116
d. Finalize plan and geometry	2	16	40	16		74
d. Develop Profiles		4	16	4		24
e. Develop critical sections		4	16	2		22
f. Compile construction estimate	1	2	4	16		23
g. Develop evaluation matrix	1	2	8		2	13
h. Alternatives presentation						
- Prepare presentation graphics	2	4	8	24		38
- Arrange, attend and document presentation mtg	4	8	8			20
i. Prepare scoping report Addendum	4	24	40		8	76
Hours	19	110	216	74	12	431
Cost	\$836	\$3,520	\$5,184	\$1,332	\$156	\$ 11,028
<b>5 Resource Re-evaluation and Update</b>						
a. Meet with VTrans Resources staff		4				4
Hours	0	4	0	0	0	4
Cost	\$0	\$128	\$0	\$0	\$0	\$ 128
<b>Conceptual</b>						
<b>6 Conceptual Plan Development</b>						
a. Develop plan set to include:						
- Title page		2		4		6
- Roadway typical		2		4		6
- Base plans		2	40	40		82
- Profiles		2	4	4		10
- Environmental resource sheet ( assume not req'd)						0
- Cross sections		4	16	40		60
- Pavement design (assume completed)						0
- Traffic control plans ( assume not required)						0
- Design parameter documentation		2	4			6
- Construction cost estimate	1	4	8	16		29
- Quality review	8	4				12
Hours	9	22	72	108	0	211
Cost	\$396	\$704	\$1,728	\$1,944	\$0	\$ 4,772





**Vermont Agency of Transportation**  
 Sykes Mountain Avenue / Route 5  
 STP 0113(59)S  
 Hartford, VT

**Task / Labor Hour Schedule**

4/30/2003

Task	Principle Sr. Engr.	Prof. Mgr.	Planner Prof. Engr.	Techl.	Cler.	Total
<b>7. Categorical Exclusion Re-evaluation</b>						
a. Complete analysis sheet and cover letter		4	8		2	14
b. Submit to VTrans			2			2
Hours	0	4	10	0	2	16
Cost	\$0	\$128	\$240	\$0	\$26	\$ 394
<b>ROW &amp; 502</b>						
<b>8. Property Owner Meetings</b>						
a. Schedule, attend and document meetings (assume 5)		16	16			32
b. Meet with stakeholder and resolve PO issues		4	8			12
Hours	0	20	24	0	0	44
Cost	\$0	\$640	\$576	\$0	\$0	\$ 1,216
<b>9. 502 Hearings</b>						
a. Prepare displays and handouts		8	4	16	2	30
b. Submit to VTrans for review			2			2
c. Attend skull session		4	4			8
d. Attend and document hearing		4	8			12
Hours	0	16	18	16	2	52
Cost	\$0	\$512	\$432	\$288	\$26	\$ 1,258
<b>10. 502 Hearing Comments</b>						
a. Compile comments and propose resolutions	2	4	8			14
b. Meet with VTrans and resolve comments		4	4			8
c. Develop memo summarizing resolutions		2	8		2	12
Hours	2	10	20	0	2	34
Cost	\$88	\$320	\$480	\$0	\$26	\$ 914
<b>11. Selectboard Approval</b>						
a. Meet with Selectboard	4	4	8			16
Hours	4	4	8	0	0	16
Cost	\$176	\$128	\$192	\$0	\$0	\$ 496
<b>Total Hours</b>	<b>38</b>	<b>209</b>	<b>392</b>	<b>206</b>	<b>20</b>	<b>865</b>
<b>Average Direct Hourly Rate</b>	<b>\$44</b>	<b>\$32</b>	<b>\$24</b>	<b>\$18</b>	<b>\$13</b>	
<b>Total Direct Labor Costs</b>	<b>\$1,672</b>	<b>\$6,688</b>	<b>\$9,408</b>	<b>\$3,708</b>	<b>\$260</b>	<b>\$21,736</b>
					Overhead (156%)	\$33,908
					Expenses	\$800
					Fixed Fee	\$5,564
					Subtotal	\$62,009
					<b>Subconsultants</b>	
					GeoArch (WBE)	\$0
					Daly & Associates (WBE)	\$0
					Wm. D. Countryman	\$0
					<b>TOTAL PROJECT COST</b>	<b>\$62,009</b>