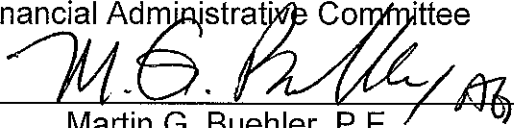


Peterson Road from US Rte. 45 to West of IL Rte. 83
LCDOT Change Order No. 2

TO: Public Works and Transportation Committee
Financial Administrative Committee

FROM:


Martin G. Buehler, P.E.
County Engineer

Committee Action Meeting Date

DATE: March 2nd, 2011

DATE: March 2nd, 2011

SUBJECT: Change Order No. 2
Section No. 07-00098-17-WR

Joint committee action item approving Change Order No. 2 consisting of an increase of \$79,737.50 for revisions to the design engineering services for the Peterson Road improvement from US Rte. 45 to West of IL Rte. 83 and designated as Section 07-00098-17-WR.

- Peterson Road from US Rte. 45 to IL Rte. 83, Design Engineering Services: LCDOT Change Order No. 2
- Change orders need to be approved by the standing committees for cumulative net increases over 10%.
- The Peterson Road project is under contract for design originally totaling \$541,066.39.
- Change Order 1 was the addition of the design of the intersection of IL 83 at Peterson Rd, formerly to be designed by the Village of Grayslake, into the County's project. (\$399,636.76).
- A preliminary engineering phase was not utilized on this project since a corridor plat is on file; however, some items, normally handled in the preliminary engineering phase, now have to be addressed.
- This Change Order No. 2 is for the design engineering services work associated with centerline and plat of highway changes and the addition of corridor landscaping extending the project limits (\$79,737.50).

Summary:

Original awarded contract	\$541,066.39	(Engineering Services)
Change Order No. 1	\$399,636.76	
Change Order No. 2	\$79,737.50	
Sum of all changes	\$1,020,440.65	

ILLINOIS DEPARTMENT OF TRANSPORTATION

Request for Approval
of Change in Consultant Contract

Date: 02/15/2011

Local Agency: LAKE COUNTY

Request: No. 2

Name: Peterson Rd - USH 45 to IL Route 83:
Phase I/II Engineering

To: Department of Transportation
LCDOT / SCHAUMBURG

Section: 07-00098-17-WR

Consultant: Christopher B. Burke Engineering Ltd.

I recommend that an addition be made to the above consultant contract.

The estimated work is listed below

Original contract amount for services described:	\$541,066.39
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Sum of all previous contract change orders:	\$399,636.76
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Item #	Description	Additions	Deductions
1	Centerline and Plat of Highway changes	\$22,731.02	
2	Addition of Corridor Landscaping	\$22,734.05	
3	Project Additions: infiltration ditches, soil investigation, freeway signing, extended project limits on Midlothian Road	\$34,272.43	
TOTALS		\$79,737.50	\$0.00
NET CHANGE		\$79,737.50	\$0.00

Net ADDITION change to date \$479,374.26 which is 88.60 % of the original contract amount for services described

State fully the nature and reason for change:

Please see attached.

Revised contract amount for services described:	\$1,020,440.65
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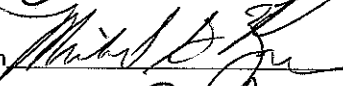
When the net increase or decrease in the cost of the contract is \$10,000 or more, or the time of completion is increased or decreased by 30 days or more, one of the following statements shall be checked.

The undersigned determined that the circumstances which necessitated this change were not reasonably foreseeable at the time the contract was signed.

The undersigned determined that the circumstances which necessitated this change were not within the contemplation of the contract as signed.

The undersigned determined that this change is in the best interest of the local agency and is authorized by law.

Project Engineer  Date 2/15/11

Engineer of Design  Date 2/16/11

Approval Recommended  Date 2/22/11
County Engineer

SCOPE OF SERVICES

Peterson Road Improvements

February 14, 2011

PHASE II – DESIGN ENGINEERING SERVICES

Christopher B. Burke Engineering, Ltd. (CBBEL) is preparing Phase II construction documents for the improvement of Peterson Road from IL Route 83 to Franklin Boulevard. Through the development of these Phase II construction documents, several work items have been identified as being out of the original scope of services for this project. These work items include:

- revising the record stationing of the Peterson Road platted alignment to follow the survey/engineering standard of increasing stationing to the east,
- additional geotechnical investigations to cover increased project limits along IL Route 83 due to IDOT coordination,
- the addition of corridor landscaping,
- the design and implementation of potential infiltration ditches for water quality benefits,
- revisions to the plats and legals to reduce proposed right-of-way impacts through coordination with key economic development stakeholders.
- Addition of freeway signing to Peterson Road.
- additional project management due to extended project schedule.

A detailed scope of services for these items is provided below.

Task 19 - Centerline Change

CBBEL developed preliminary plans based on the record stationing from the existing Plat of Highways which was stationed from the east to the west, contrary to surveying/engineering standards. In consideration of other projects along this corridor, LCDOT decided this would be the appropriate time to correct the direction of stationing and set continuous stationing from IL Route 60 to US Route 45 to unify this key economic development corridor. This revision has been made to the alignment which is shown in the approved Plat of Highway and current pre-final plans. 129.5 hours were spent to date to accomplish this. (\$16,224.84 spent, \$15,000 was estimated)

Task 20 – Corridor Landscaping

CBBEL is preparing options for the landscape development of the medians that occur within the Peterson Road Improvement project. Sub-tasks include:

Task – 20.1 CBBEL meet with staff and review the constraints, requirements, maintenance abilities and appearance that they want to achieve in the medians.

Task – 20.2 CBBEL developed two conceptual options for the landscape of the medians. The concept plans will include tentative plant material list, photos of the plants and perspective illustrations of some aspects of the proposed landscape. Pre-cast or cast-in-place medians will not be proposed. The proposed landscapes will not require irrigation. An outline of required maintenance requirements will be prepared and presented with the plan.

Task – 20.3 Based upon comments received CBBEL will develop a final landscape plan, illustrations and cost estimates and present them to the staff and other concerned parties.

Task – 20.4 If needed the plan will be revised again to correspond to any comments received during the previous presentation. CBBEL will prepare a bid plan that will include quantities, specifications and cost estimates. A detailed outline of maintenance requirements will be prepared and delivered to the owner.

136 hours have been spent to date (\$17,423.29) and 36 hours are estimated to complete this task.

Task 21 – Revisions to the Plats and Legals

Through coordination with the proposed development along Peterson Road west of IL Route 83, it was determined that all compensatory storage and detention storage required for the Mill Creek Watershed would be provided within the development with agreements that the additional impacts to undeveloped property would be acceptable until development happens. This allowed reduction to the propose right-of-way to minimize land acquisition costs. The previously approved Plat of Highway has been updated accordingly. 48.75 hours have been spent (\$6,459.16) to complete this task.

Task 22 – Infiltration Ditches

CBBEL understands LCDOT would like to implement infiltration ditches where practical on this project as a pilot project to reduce runoff and improved water quality with the potential for Lake County Stormwater Management Commission to take over monitoring and evaluation of the system. CBBEL will develop details to be added to the construction document for the implementation of these infiltration ditches as Best Management Practices. Two typical details will be developed: one for modifying the soil with organics and sand to increase infiltration, and one to loosen the existing ground by means of deep tilling or tinning. These details will be implemented at various locations independently and combined for future evaluations. The locations will be chosen based on infiltration testing of the existing ground by TSC, handout notes from the University of Wisconsin "Using Bio/Infiltration to Improve Stormwater Management" Course #L269 dated December 7-8, 2009, and information from LCSMC Technical

Advisory Committee. Infiltration testing has been completed by TSC at a cost of \$3,160 and 32 hours are estimated to complete this task.

Task 23 – Additional Geotechnical Investigations

The limits of improvements along IL Route 83 have increased from what was originally scoped out based on coordination with IDOT. Additional geotechnical investigations were required. \$3,000 of additional effort has been estimated by Testing Services Corporation (TSC) to complete this work which covers additional field work, laboratory testing, and engineering/CAD time.

Task 24 – Freeway Signing

Freeway signing along Peterson Road will be added to the construction documents. This will include a route junction sign and a directional sign on the east and west approaches to IL Route 83 and Midlothian Road and the east approach to US Route 45. Each different sign will be detailed on a separate sheet similar to the Washington Street example provided. There will be 3 different route junction signs and 5 different directional signs for a total of 8 different signs. The freeway signs will also be identified on the Pavement Marking/Signing sheets and also shown in cross sections. The east approach to US Route 45 is outside of the project survey limits. A schematic plan sheet will be developed to show the location of the junction and directional signs for this location. It is estimated that 64 hours will be required to complete this work.

In addition to these out-of scope items, additional effort was required in Pre-Final Plans, Specs & Cost Estimate that was not anticipated in the original manhour estimate.

Task 13 – Pre-Final Plans, Specs & Cost Estimate

Through coordination with IDOT, the proposed profiles through the intersection of Peterson Road at IL Route 83 changed significantly from preliminary design. IDOT required that the proposed superelevation for IL Route 83 be maintained through the intersection with a planar surface through the intersection itself. The planar surface required the development of two different profile grade lines (PGL) along IL Route 83 through the intersection. In addition to changes to the IL Route 83 PGL, the proposed intersection grading made significant changes to the Peterson Road PGL, both east and west of IL Route 83, which required a profile/cross section study for Peterson Road to minimize the negative effect of maintain the superelevation through the intersection of IL Route 83.

The proposed intersection grading had significant differences between proposed and existing elevations which significantly complicated the maintenance of traffic. Three sub-stages were required to be

developed for the intersection paving to facilitate the change from Stage I to Stage II. In addition to complex sub-stage development, a detour plan was developed for the sub-staging.

The south leg of Midlothian Road at the intersection of Peterson Road also changed significantly between preliminary and pre-final plans due to the lengthening of the turn lane storage. This added additional typical sections, MOT sheets, existing conditions sheets, plan & profile sheets, and cross sections.

CBBEL is requesting reimbursement for 120 hours additional hours spent completing this task.

**PAYROLL ESCALATION TABLE
FIXED RAISES**

FIRM NAME
PRIME/SUPPLEMENT

Christopher B. Burke Engineering, Ltd.

DATE 01/28/11
PTB NO. _____

CONTRACT TERM
START DATE 01/01/11 MONTHS 6
RAISE DATE 01/02/12

OVERHEAD RATE 136.60%
COMPLEXITY FACTOR 0
% OF RAISE 3.00%

ESCALATION PER YEAR

1/1/2011 - 6/30/2011
6
6

= 100.00%
= 1.0000

The total escalation for this project would be:

0.00%

PAYROLL RATES

FIRM NAME
PRIME/SUPPLEMENT
PTB NO.

Christopher B. Burke Engineering, Ltd

DATE 01/28/11

ESCALATION FACTOR

0.00%

CLASSIFICATION	CURRENT RATE	ESCALATED RATE
Principal	\$70.00	\$70.00
Engineer VI	\$70.00	\$70.00
Engineer V	\$57.69	\$57.69
Engineer IV	\$46.86	\$46.86
Engineer III	\$38.31	\$38.31
Engineer I/II	\$31.01	\$31.01
Env. Res. Spec. V	\$58.50	\$58.50
Env. Res. Spec. IV	\$45.75	\$45.75
Env. Res. Spec. III	\$39.10	\$39.10
Env. Res. Spec. II	\$30.75	\$30.75
Env. Res. Technician	\$31.75	\$31.75
Landscape Architect	\$46.00	\$46.00
Survey V	\$68.50	\$68.50
Survey IV	\$49.25	\$49.25
Survey III	\$47.00	\$47.00
Survey II	\$31.33	\$31.33
Survey I	\$27.33	\$27.33
Cad Manager	\$48.50	\$48.50
Asst. Cad Manager	\$43.25	\$43.25
Cad II	\$40.16	\$40.16
Cad I	\$30.00	\$30.00
Engineering Tech IV	\$46.17	\$46.17
Engineering Tech III	\$40.62	\$40.62
Engineering Tech I/II	\$27.68	\$27.68
GIS Specialist III	\$38.00	\$38.00
GIS Specialist I/II	\$21.50	\$21.50
Administrative	\$28.03	\$28.03

Cost Estimate of
Consultant Services
(CPFF)

Client Lake County Division of Transportation
 Firm Christopher B. Burke Engineering, Ltd.
 Route Peterson Road
 Section 07-00098-17-WR
 County Lake
 Job No. _____
 PTB & Item _____

Date 02/14/11
 Overhead Rate 136.60%
 Complexity Factor 0

Item	Manhours	Payroll	Overhead & Fringe Benefits	In-House Direct Costs	Fixed Fee	Outside Direct Costs	Services By Others	Total	% of Grand Total
Task 19 - Centerline Change	129.5	\$5,999.61	\$8,195.46		\$2,087.86			\$16,282.93	20.42%
Task 20 - Corridor Landscape	172	\$8,281.08	\$11,311.96		\$2,881.82	\$259.20		\$22,734.05	28.51%
Task 21 - Plat Revisions	48.75	\$2,316.97	\$3,164.98		\$806.30	\$159.84		\$6,448.09	8.09%
Task 22 - Infiltration Ditches	32	\$1,654.68	\$2,260.29		\$575.83		\$3,160.00	\$7,650.80	9.59%
Task 23 - Additional Geotech	0.25	\$14.42	\$19.70		\$5.02		\$3,000.00	\$3,039.14	3.81%
Task 24 - Freeway Signing	64	\$3,080.00	\$4,207.28		\$1,071.84			\$8,359.12	10.48%
Task 13 - Additional Pre-Final PS&E	120	\$5,609.20	\$7,662.17		\$1,952.00			\$15,223.37	19.09%
TOTALS	567	\$26,955.96	\$36,821.83	\$0.00	\$9,380.67	\$419.04	\$6,160.00	\$79,737.50	100.00%

Client Lake County Division of Transportation

Average Hourly Project Rates

Route Peterson Road
 Section 07-000988-17-WR
 County Lake
 Job No. _____
 PTB/Item _____

Consultant Christopher B. Burke Engineering, Ltd.

Date 02/14/11

Sheet 1 OF 2

Payroll Classification	Avg Hourly Rates	Total Project Rates			Task 19 - Centerline Change			Task 20 - Corridor Landscape			Task 21 - Plat Revisions			Task 22 - Infiltration Ditches			Task 23 - Additional Geotech		
		Hours	%	Wgtd Avg	Hours	%	Wgtd Avg	Hours	%	Wgtd Avg	Hours	%	Wgtd Avg	Hours	%	Wgtd Avg	Hours	%	Wgtd Avg
Principal	70.00	0																	
Engineer VI	70.00	0																	
Engineer V	57.69	80.25	15.97%	9.21	6	4.63%	2.67	32	18.60%	10.73									
Engineer IV	46.86	0																	
Engineer III	38.31	6	1.19%	0.46	6	4.63%	1.77												
Engineer II/II	31.01	0																	
Env. Res. Spec. V	58.50	4	0.80%	0.47															
Env. Res. Spec. IV	45.75	0																	
Env. Res. Spec. III	39.10	4	0.80%	0.31															
Env. Res. Spec. II	30.75	0																	
Env. Res. Technician	31.75	0																	
Landscape Architect	46.00	104	20.70%	9.52															
Survey V	68.50	10	1.99%	1.36	4	3.09%	2.12	100	58.14%	26.74									
Survey IV	49.25	14	2.79%	1.37	14	10.81%	5.32												
Survey III	47.00	0																	
Survey II	31.33	9.75	1.94%	0.61															
Survey I	27.33	0																	
Cad Manager	48.50	121	24.08%	11.68	40	30.89%	14.98	20	11.63%	5.64									
Asst. Cad Manager	43.25	106	21.09%	9.12	56	43.24%	18.70	20	11.63%	5.03									
Cad II	40.16	30	5.97%	2.40															
Cad I	30.00	0																	
Engineering Tech IV	46.17	0																	
Engineering Tech III	40.62	10	1.99%	0.81															
Engineering Tech II/II	27.68	0																	
GIS Specialist III	38.00	0																	
GIS Specialist II/I	21.50	0																	
Administrative	28.03	3.5	0.70%	0.20	3.5	2.70%	0.76												
		0																	
		0																	
		0																	
		0																	
		0																	
TOTALS		502.5	100%	\$47.51	129.5	100%	\$46.33	172	100%	\$48.15	48.75	100%	\$47.53	32	100%	\$51.71	0.25	100%	\$57.69

Client Lake County Division of Transportation

Average Hourly Project Rates

Route Peterson Road
 Section _____
 County Lake
 Job No. _____
 PTB/Item _____

Consultant Christopher B. Burke Engineering, Ltd.

Date 02/14/11

Sheet 2 OF 2

Payroll Classification	Avg Hourly Rates	Task 24 - Freeway Signaling			Task 13 - Additional Pre-Final PS&E			Task 12 - [Blank]			Task 11 - [Blank]			Task 10 - [Blank]		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00															
Engineer VI	70.00															
Engineer V	57.69	24	37.50%	21.63	30	25.00%	14.42									
Engineer IV	46.86															
Engineer III	38.31	24	37.50%	14.37												
Engineer I/II	31.01															
Env. Res. Spec. V	58.50															
Env. Res. Spec. IV	45.75															
Env. Res. Spec. III	39.10															
Env. Res. Spec. II	30.75															
Env. Res. Technician	31.75															
Landscape Architect	46.00															
Survey V	68.50															
Survey IV	49.25															
Survey III	47.00															
Survey II	31.33															
Survey I	27.33															
Cad Manager	48.50	16	25.00%	12.13	20	16.67%	8.08									
Asst. Cad Manager	43.25				30	25.00%	10.81									
Cad II	40.16				30	25.00%	10.04									
Cad I	30.00															
Engineering Tech IV	46.17															
Engineering Tech III	40.62				10	8.33%	3.39									
Engineering Tech I/II	27.68															
GIS Specialist III	38.00															
GIS Specialist I/II	21.50															
Administrative	28.03															
TOTALS		64	100%	\$48.13	120	100%	\$46.74	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00

DIRECT COSTS

Task 3 – Corridor Landscaping

Oversize Color Printing

6 x 18 s.f. x \$2.40/s.f.

= \$ 259.20

Task 5 – Revisions to Plat of Highway

Mylar Reproduction (Est.)

1 set x 12 sheets x 6 s.f./sheet x \$1.95/s.f.

= \$ 140.40

Oversize Reproduction

2 x 12 sheets (est.) x 6 s.f. x \$0.135/s.f.

= \$ 19.44

TOTAL = \$ 419.04