



April 1, 2015

TO: Lorena Eng, Northwest Region
Dan Sarles, North Central Region
Kevin Dayton, Olympic Region
Don Wagner, Southwest Region
Don Whitehouse, South Central Region
Keith Metcalf, Eastern Region
Todd Trepanier, AWW
Julie Meredith, SR 520

FROM: Linea Laird
Chief Engineer
360-705-7032

SUBJECT: Reporting Engineering Errors on Highway Contracts

This Memorandum provides requirements for the reporting of engineering errors on highway construction projects that are in excess of five hundred thousand dollars (\$500,000). In 2014 the Washington legislature passed Engrossed Substitute Senate Bill (ESSB) 6001 and Section 603 requires WSDOT to submit a report to the transportation committees of the legislature detailing engineering errors.

The public expects and deserves a return on the investment they have made in our transportation system. WSDOT will continue to be transparent and accountable by reporting on the results of the services it provides. The reporting of engineering errors provides this transparency and accountability to the legislature from project launch through completion. Additionally, it provides the opportunity for WSDOT to improve our business model by identifying opportunities to avoid these errors in the future.

The responsibility for the reporting of engineering errors is assigned to the appointing authority of the office responsible for the error. The report shall be in compliance with the attached instructions and template.

LL:de

Attachments: ESSB 6001 Section 603

Memo: Appointing Authority to Chief Engineer
Reporting Engineering Errors Instructions
Appointing Authority Signature Form
Engineering Error Reporting Template

cc: Chris Christopher, Jeff Carpenter

CERTIFICATION OF ENROLLMENT

ENGROSSED SUBSTITUTE SENATE BILL 6001

Chapter 222, Laws of 2014

(partial veto)

63rd Legislature
2014 Regular Session

TRANSPORTATION BUDGET--SUPPLEMENTAL

EFFECTIVE DATE: 4/4/14 - Except for Section 701, which is contingent.

Passed by the Senate March 12, 2014
YEAS 44 NAYS 4

BRAD OWEN

President of the Senate

Passed by the House March 11, 2014
YEAS 65 NAYS 33

FRANK CHOPP

Speaker of the House of Representatives

CERTIFICATE

I, Hunter G. Goodman, Secretary of the Senate of the State of Washington, do hereby certify that the attached is **ENGROSSED SUBSTITUTE SENATE BILL 6001** as passed by the Senate and the House of Representatives on the dates hereon set forth.

HUNTER G. GOODMAN

Secretary

Approved April 4, 2014, 10:38 a.m., with the exception of Sections 201(5); 205 (8); 206; 207(8); 208(13); 208(16); 213 (7); 306(24); and 310(7)(a) and (b), page 66, line 29 through page 67, line 16, which are vetoed.

FILED

April 4, 2014

JAY INSLEE

Governor of the State of Washington

**Secretary of State
State of Washington**

ENGROSSED SUBSTITUTE SENATE BILL 6001

AS AMENDED BY THE
HOUSE

Passed Legislature - 2014 Regular Session

State of Washington
Session

63rd Legislature

2014 Regular

By Senate Transportation (originally sponsored by Senators Eide and King; by request of Governor Inslee)

READ FIRST TIME 02/27/14.

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13

2013-2015 FISCAL BIENNIUM
GENERAL GOVERNMENT AGENCIES--OPERATING

<deleted section 101 through 602>

20 NEW SECTION. **Sec. 603.** A new section is added to 2013 c 306
21 (uncodified) to read as follows:

22 **FOR THE DEPARTMENT OF TRANSPORTATION**

23 (1) The department shall submit a report to the transportation
24 committees of the legislature detailing engineering errors on highway
25 construction projects resulting in project cost increases in excess of
26 five hundred thousand dollars. The department must submit a full
27 report within ninety days of the negotiated change order resulting from
28 the engineering error.

29 (2) The department's full report must include an assessment and
30 review of:

31 (a) How the engineering error happened;

32 (b) The department of the employee or employees responsible for the
33 engineering error, without disclosing the name of the employee or
34 employees;

35 (c) What corrective action was taken;

1 (d) The estimated total cost of the engineering error and how the
2 department plans to mitigate that cost;

3 (e) Whether the cost of the engineering error will impact the
4 overall project financial plan; and

5 (f) What action the secretary has recommended to avoid similar
6 engineering errors in the future.

<deleted section 701 through end of ESSB 6001>



DatePlaceholder

TO: Appointing Authority Placeholder
MailStop Placeholder

FROM: Linea Laird
Chief Engineer
360-705-7032

SUBJECT: Engineering Error
Contract < number >
Change Order < number >

A change order for an engineering error in excess of \$500,000 has been executed and the engineering error has been determined to have occurred under your authority. You are hereby directed to submit a report within sixty days of change order execution.

Typist'sInitialsPlaceholder

Attachment: Reporting Engineering Errors Instructions
Appointing Authority Signature Form
Engineering Error Reporting Template

cc: Craig McDaniel
Project Engineer Placeholder

REPORTING ENGINEERING ERRORS

INSTRUCTIONS

The 2014 Legislature passed Engrossed Substitute Senate Bill (ESSB) 6001; Transportation Budget—Supplemental. Section 603 of ESSB 6001 mandates a new requirement to WSDOT for the reporting of engineering errors on contracts. All engineering errors resulting in project cost increases in excess of five hundred thousand dollars are now required to be reported to the transportation committees within ninety days of the negotiated change order.

ESSB 6001, Section 603 may be read at the following web page:

<http://apps.leg.wa.gov/documents/billdocs/2013-14/Pdf/Bills/Session%20Laws/Senate/6001-S.SL.pdf>

These instructions are provided for complying with the Chief Engineer's requirements for reporting engineering errors. The Chief Engineer will make the determination on any borderline cases.

Procedures:

1. The process for reporting an engineering error is initiated when there is a determination that a change order or any combination of change orders has a value greater than \$500,000 that was due to an engineering error.
2. The PEO will submit the attached "Engineering Error" memo as part of the change order submittal package identifying the Appointing Authority that will be responsible for reporting the engineering error.
3. The ASCE will contact the Appointing Authority prior to execution to alert them to the change order, and to gain concurrence in the engineering error designation and change order coding.
4. When the change order is executed the ASCE will forward the "Engineering Error" memo to the Chief Engineer for signature. The memo will then be routed to the appointing authority responsible for completion of the engineering error report.

Submittal Timeline:

1. The appointing authority will sign the report and submit to the Chief Engineer within sixty days following execution of the change order. A copy of the report will be sent to the Deputy State Construction Engineer and the Development Division Director.
 2. The Deputy State Construction Engineer and the Development Division Director will review the report and provide a recommendation to the Director of the Construction Division within seventy-five days following execution of the change order.
 3. The Chief Engineer will submit the report to the transportation committees within ninety days following execution of the change order.
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Engineering Error Report:

The following reporting instructions provide responsibility and accountability for reporting engineering errors. In the interest of transparency I am directing you to tend towards reporting rather than avoidance.

The Engineering Error report will answer the following six questions:

1. How did the Engineering Error happen?

- *Provide a full account of the error including the genesis, evolution and resolution of the change order.*
- *Identify if the error was the result of a failure to follow WSDOT policy in the development or administration of the contract.*
- *Describe extenuating circumstances, if any.*
- *Describe the applicable quality control process and whether it was followed.*

2. Disclose the department of the Employee(s) Responsible for the engineering error, without disclosing the name of the employee or employees.

- *“The department” might be the project engineering office, or any of the support offices that assisted in administration of the construction contract or developing the contract.*
- *Disclose the department that is directly responsible for the error and whether any additional departments played a role.*
- *Are any consultants involved? Is it appropriate to claim the impacts under the errors and omission insurance?*

3. Describe the process used to determine if Corrective Action is determined to be appropriate. If it is determined to be appropriate, describe the nature and timing of the action.

- *For each department listed in question 2; a corrective action will be considered. There must be at least one corrective action that will be implemented.*
- *A corrective action may include a change in process; modifying a policy for administering contracts; personnel action; etc.*

4. Estimate the Total Cost impact of the engineering error and describe how the department has Mitigated the cost.

- *These are the costs directly associated with the error; other costs that may be included within the same change order shall be noted.*
 - *The cost of the error is the increase in cost over the cost had the error not been made. For example the cost of leaving work out of a contract would be the cost of the change order and the increased cost of the work. Typically a negotiated price is greater than a competitively bid price.*
 - *In the case of an engineering error resulting in multiple change orders a report will be written for each change order once the cumulative costs exceed \$500,000. Subsequent reports will be identified as an updated report.*
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5. Describe the impact to the overall Financial Plan of the project.

- *How was the change order funded? Did the monies come out of the contingencies or were other projects delayed or canceled because monies needed to be transferred in to cover the cost?*

6. Recommend what Action should be taken to avoid similar engineering errors in the future.

- *This typically includes lessons learned at the team or section level, office level, region level and statewide level as applicable.*
- *If the recommendation is a change that applies statewide, describe the proposed change in policy or guidance and include the implementation plan for the change.*

Identification of an engineering error is required at the time a change approval is requested from the Assistant State Construction Engineer (ASCE). The requester shall be prepared to suggest the correct change order code to be entered into CCIS as part of the change order. The following change order codes are applicable to engineering errors but this is not an all-inclusive list. All change orders in excess of five hundred thousand dollars are required to be evaluated for reporting.

EE CONSTRUCTION ENGINEER ERROR

A state employee made a mistake that created a need for a repair, modification or cost adjustment.

PI PLAN ERROR-INFO.

Plans contain a mistake that resulted from the designer working with insufficient information

PM PLAN ERROR-MISTAKE

Plans contain a mistake that, given the information available to the designer, should not have been made.

SU DESIGN SURVEY OR BASE MAP ERROR

Initiated to pay for extra costs resulting from contracting agency survey or base map error.

UP UTILITY PLAN ERRORS

Initiate to correct omission or conflict on plans related to utilities.

Engineering Error Highway Construction Project

Project Title:

Change Order Number:

APPOINTING AUTHORITY SIGNATURE

The Appointing Authority responsible for the office will provide the report as described. This will typically be the Regional Administrator, Division Director or equivalent.

As indicated by my signature below, I attest that to the best of my knowledge the enclosed report is an accurate accounting of the described events and the actions taken are appropriate given the circumstances.

Region Administrator or Division Director

Date

By (printed name)

Title

Signature



**Washington State
Department of Transportation**

**Engineering Error
Highway Construction Project**

**Report to Transportation Committees
2014 ESSB 6001, Section 603**

Region:

Project Title:

Change Order Number:

Change Order Execution Date:

**Linea Laird, P.E.
Chief Engineer**

Date

1. How did the Engineering Error happen?

 2. Disclose the department of the Employee(s) Responsible for the engineering error, without disclosing the name of the employee or employees.

 3. Describe the process used to determine if Corrective Action is determined to be appropriate. If it is determined to be appropriate, describe the nature and timing of the action.

 4. Estimate the Total Cost impact of the engineering error and describe how the department has Mitigated the cost.

 5. Describe the impact to the overall Financial Plan of the project.

 6. Recommend what Action should be taken to avoid similar engineering errors in the future.
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