DESIGN BULLETIN No. 33/2012

DRAWING SUBMISSION AND AUTHENTICATION REQUIREMENTS ON TRANSPORTATION PROJECTS


SUMMARY

Alberta Transportation (Department) has recently reviewed engineering drawing submission requirements in the following documents:

- "Engineering Consultant Guidelines for Highway and Bridge Projects - Volume 1 - Design and Tender" (ECG Vol. 1),
- "Engineering Consultant Guidelines for Highway and Bridge Projects - Volume 2 - Construction Contract Administration" (ECG Vol. 2), and
- "Engineering Drafting Guidelines for Highway and Bridge Projects".
- "Design Bulletin 33 – Drawing Submission Requirements on Transportation Projects (Revised March, 2008)"

In conjunction with the Consulting Engineers of Alberta (CEA) and the Association of Professional Engineers, Geologists, Geophysicists of Alberta (APEGGA), a new set of guidelines for submitting and authenticating documents has been developed. The goal of these guidelines is to make the Department's document authentication requirements consistent with APEGGA's Practice Standard for Authenticating Professional Documents (V2.0 - April, 2002), while simultaneously meeting the Department's requirements of obtaining design assurances and accurate construction drawings.

Definitions for important terms are as follows:

- Designer – the APEGGA professional member who takes professional responsibility for the Design Drawings
- Checker – the APEGGA professional member who conducts an independent check of the Design Drawings
- Field Review Engineer – the APEGGA professional member who takes professional responsibility for assuring that the finished construction substantially complies with the Design Drawings and the contract specifications.
- Design Drawings – drawings that encompass any original designs or design changes. These drawings shall be authenticated by both the Designer and Checker indicating that the design has been prepared in accordance with all appropriate engineering and Departmental standards. These drawings are designated as "P-Drawings".
- Record Drawings – drawings that represent the completed constructed project. Record drawings shall be authenticated by the Field Review Engineer indicating that the constructed product substantially complies with the Design Drawings and all appropriate Contract Plans and Specifications. These drawings are designated as "C-Drawings".

The approved process is as follows:

1. The Consultant shall submit Design Drawings (P-Drawings) to the Department as part of the project tender submission requirements. The submission shall include 3 mil Mylar
film sheets and electronic MicroStation digital CAD files. Both the Designer and an independent Checker shall authenticate these documents by stamping and signing each drawing, as well as affixing the firm's permit to practice stamp or permit number.

2. Within 2-weeks of the Contract Award, the Consultant shall provide six full-size sets of Design Drawings (four to the Contractor and two to the Project Sponsor) for construction purposes as per Section 11.1.7 of the ECG Vol.1. These drawings shall be accompanied by a letter to the Contractor and Project Sponsor indicating the revision number and/or date of the appropriate set of Design Drawings for use at the commencement of construction. Where significant changes have not been made during the tender period through addenda, the Consultant may refer to the set previously used for the tender package.

3. Any changes to the design shall be reflected on Design Drawing revisions clearly showing where the changes have been made. These revised drawings shall be given sequential revision numbers and dated appropriately. Updated Design Drawings shall be authenticated by both the Designer and independent Checker responsible for the revisions indicating that the changes (and any effects that the changes may have on the remainder of the design) have been appropriately designed and independently checked.

4. After all construction work has been completed, as part of the Final Details Submission, the Consultant shall submit Record Drawings (C-Drawings) to the Department electronically and on 3 mil Mylar film sheets as per ECG Vol.2. The Record Drawings shall provide an accurate representation of the completed construction project, and shall be authenticated by the Field Review Engineer indicating that the construction substantially complies with the Design Drawings and all appropriate Contract Plans and Specifications. Professional members should establish necessary quality management processes for their practices, including but not limited to an adequate amount of field reviews of projects during construction, to verify that the drawings represent actual on-site conditions.

IMPLEMENTATION OF BULLETIN

The new recommended practices as indicated within this Bulletin are effective immediately on all projects currently tendered or awaiting tender.

CONTACT

Comments with regard to this Design Bulletin should be directed to Alberta Transportation's Professional Services Section.

Recommended:

Neil Kjelland
Director, Professional Services
Date: 2012/02/28

Approved:

Ranjit Tharmalingam
Executive Director, Program Management Branch
Date: 2012/02/28.
Government of Alberta • Transportation

LITTLE PADDLE RIVER
ON HWY 2, 5 km NW OF RED DEER
GENERAL LAYOUT

PERMIT TO PRACTICE
XYZ ENGINEERING LIMITED
Signature
Date
PERMIT NUMBER: P-123
The Association of Professional Engineers, Geoscientists and Geomaticians of Alberta

DATE: 2010-01-14

LITTLE PADDLE RIVER
SW24-24-9-5
567:08
9876NSR
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23456-P

2011-07-19 RECORD DRAWING
JL
2010-01-14
LITTLE PADDLE RIVER
SW24-24-9-5
567:08
9876NSR
30 of 35
23456-C

"THIS RECORD DRAWING INDICATES THAT THE CONSTRUCTED PRODUCT SUBSTANTIALLY COMPLIES WITH THE DESIGN DRAWINGS AND ALL APPROPRIATE CONTRACT PLANS AND SPECIFICATIONS."

PERMIT TO PRACTICE
ABC CONSULTING LIMITED
Signature
Date
PERMIT NUMBER: P-456
The Association of Professional Engineers, Geoscientists and Geomaticians of Alberta

DATE: 2010-01-14

LITTLE PADDLE RIVER
SW24-24-9-5
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