

2.0 CODES, STANDARDS, AND REFERENCES

The following codes, standards, and references, listed by their respective organization or author, have either been referred to in this document or are particularly relevant to the design of the Province's water control structures. Many of these documents are updated by the appropriate organization on an ongoing basis; therefore the user should confirm the details and applicability of the latest update.

These organizations publish many other documents that may be useful in addressing other aspects related to water control structures. In many instances, additional pertinent information can be obtained from their respective Internet sites.

Alberta Environment

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Eastern Irrigation District, Main Canals Rehabilitation Guidelines, Design Criteria, August 1988.

St. Mary Main Canal Rehabilitation Guidelines, Volume IV Structure Design Criteria, June 1985.

Alberta Transportation

Specifications for Bridge Construction, 2000.

Bridge Size Culverts, Design and Drafting Guidelines, 1995.

Guidelines on Flood Frequency Analysis, April 2001.

Guidelines on Extreme Flood Analysis, November 2004.

Alberta Agriculture

Engineering Standards for Design and Construction of Projects Funded Under the Irrigation Rehabilitation and Expansion Program, October 1991.

Canadian Dam Association (CDA)

Dam Safety Guidelines, January 1999.

Canadian Standards Association (CSA)

CAN/CSA-A3000-00, Cementitious Materials Compendium.

CAN/CSA-A23.1-00, Concrete Materials and Methods of Concrete Construction.

CAN/CSA-A23.2-00, Methods of Test for Concrete.

CSA-A23.3-94, Design of Concrete Structures.

CSA-B182.2-02, PVC Sewer Pipe and Fittings (PSM Type).

CSA-B137.3-99, Rigid Poly (Vinyl Chloride) (PVC) Pipe for Pressure Applications.

CAN/CSA-G30.18-M92 (Reaffirmed 1998), Billet-Steel Bars for Concrete Reinforcement.

CSA-G40.21-M92, Structural Quality Steels.

CAN/CSA-G164-M81, Hot Dip Galvanizing of Irregularly Shaped Articles.

CSA-G401-01, Corrugated Steel Pipe Products.

CSA-O80-97, Wood Preservation.

CSA-O86.1-01, Engineering Design in Wood.

CAN/CSA-S6-00, Canadian Highway Bridge Design Code.

CAN/CSA-S6.1-00, Commentary on CAN/CSA-S6-00, Canadian Highway Design Code.

CAN/CSA-S16.1-94, Limit States Design of Steel Structures.

CAN3-S157-M83 (Reaffirmed 2001), Strength Design in Aluminium.

Canadian Electric Code.

Canadian General Standards Board (CGSB)

37.2-M88, Emulsified Asphalt, Mineral Colloid Type, Unfilled for Damp Proofing and Waterproofing and for Roof Coatings.

51.20-M87, Thermal Insulation, Polystyrene, Boards and Pipe Covering.

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Handbook of Steel Drainage & Highway Construction Products, Second Canadian Edition, First Printing, June 2002.

National Research Council of Canada (NRCC)

Alberta Building Code, 1997.

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Manual of Concrete Practice, 2000.

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Concrete Pipe Design Manual, Thirteenth Printing (Revised), June 2000.

American Society of Civil Engineers (ASCE)

Design, Construction, and Maintenance of Relief Wells, 1993.

American Society for Testing and Materials (ASTM)

A276-04, Specification for Stainless Steel Bars and Shapes.

A384/A384M-02, Standard Practice for Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies.

A722/A722M-98(2003), Specification for Uncoated High Strength Steel Bar for Prestressing Concrete.

A775/A775M-04a, Specification for Epoxy-Coated Reinforcing Steel Bars.

C33-03, Specification for Concrete Aggregates.

C76-03, Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.

C361-03, Specification for Reinforced Low-Head Pressure Pipe.

C478-03, Specification for Precast Reinforced Concrete Manhole Sections.

C655-02, Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe.

C1103-03, Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines.

D1755-92(2001), Specification for Poly (Vinyl Chloride) Resins.

D3034-04, Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

D3035-03a, Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter.

D3350-02a, Specification for Polyethylene Plastics Pipe and Fitting Materials.

D3786-01, Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method.

D4253-00, Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.

D4491-99a, Standard Test Method for Water Permeability of Geotextiles by Permittivity.

D4533-91 (1996), Standard Test Method for Trapezoidal Tearing Strength of Geotextiles.

D4632-91 (1996), Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.

D4751-99a, Standard Test Method for Determining Apparent Opening Size of a Geotextile.

D4833-00, Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.

F714-03, Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter.

American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

ASHRAE Fundamentals Handbook, 1993.

American Hot Dip Galvanizers Association (AHDGA)

Hot Dip Galvanizing for Corrosion Protection of Steel Products.

The Design of Products to be Hot Dip Galvanized After Fabrication.

American Water Works Association (AWWA)

C300-04, Reinforced Concrete Pressure Pipe, Steel-Cylinder Type.

C301-99, Prestressed Concrete Pressure Pipe, Steel-Cylinder Type.

C302-04, Reinforced Concrete Pressure Pipe, Non-Cylinder Type.

C513-97, Open-Channel, Fabricated-Metal Slide Gates.

C560-00, Cast-Iron Slide Gates.

C561-04, Fabricated Stainless Steel Slide Gates.

C562-04, Fabricated Aluminum Slide Gates.

National Association of Corrosion Engineers (NACE)

RP0178-95, Fabrication Details, Surface Finish Requirements, and Proper Design Considerations for Tanks and Vessels to be Lined for Immersion Service.

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EM 1110-2-2105, Design of Hydraulic Steel Structures, March 31, 1993.

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