

TECHNICAL MANUALS
MASTER PLAN

10th Edition - October 1978

July 81



Indian and
Northern Affairs

Affaires indiennes
et du Nord

Engineering and
Architecture

Génie et
architecture

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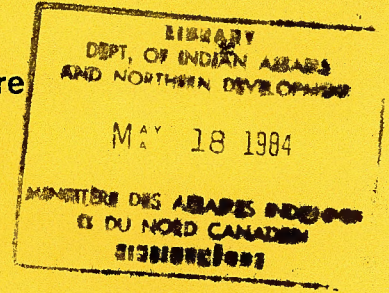
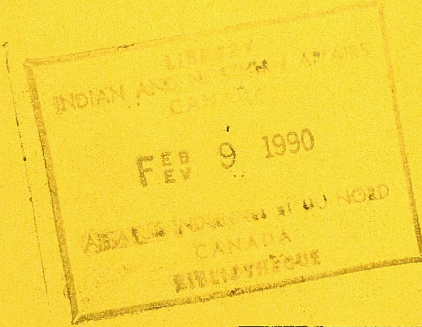


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REPORT

For Discussion Only

RAPPORT

Pour discussion seulement

TECHNICAL MANUALS
MASTER PLAN

10th Edition - October 1978

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Co-ordination Services Division
Policy and Planning Division

Executive Summary

This document lists all those "Manuals" presently envisaged in the Branch Manual Work Program.

For each "Manual" listed a brief outline or synopsis is provided of its intended contents. Each synopsis is, in turn, supported by a comprehensive list of the components of each "Manual", the man-day requirements to complete their development, and the status of each publication as noted below.

For convenience of reference, the "Manuals", Synopses and Tables of Contents are listed by Divisional responsibility

This document will be updated and re-issued approximately every three months. All revisions will be subject to established approval procedures.

Note 1: To Help users find all available information on a particular subject, some publication titles are also referred to in tables of contents of "Manuals" others than the one where it is published. Titles so referenced are preceded by an asterisk and include the reference number where they may be found.

Note 2: The letter placed after publication denotes the following status:

- A - Published
- B - Available in Final Draft
- C - Final Draft available by March 31, 1979
- D - Final Draft available beyond March 31, 1979

ENGINEERING AND ARCHITECTURE BRANCH

Manuals Summary by Division

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
<u>Environmental Services Division</u>		2
DRM 10-7/3	Branch Graphics	3
59	Environmental Impact Assessment	4
60	Site Development (Environmental Approach)	5
61	Departmental Signs	6
62	Day-Use and Recreation Facilities Areas	7
67	Miscellaneous Publications (Environmental Services)	8
68	Wastewater Collection and Disposal	9
69	Power Generation and Distribution	10
70	Solid Waste Collection and Disposal	11
71	Water Supply and Distribution	12
<u>Restoration Services Division</u>		15
DRM 10-7/126	Conservation Technology - Project Procedure	16
128	Conservation Technology - Architecture, Engineering and Site Analysis	18
129	Conservation Technology - Conservation of Building Materials	23
130	Conservation Technology - Conservation of Finishes and Decorative Materials	26
131	Conservation Technology - Period Construction Technology	29
132	Conservation Technology - Conservation and Reconstruction of Historic Structures	34
133	Conservation Technology - Conservation Maintenance	38
138	Conservation Training - Study Guides	39

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
<u>Buildings and Services Division</u>		42
DRM 10-7/43	Fire Prevention and Protection - General	44
44	Fire Prevention and Protection - Indian and Inuit Affairs	46
45	Fire Prevention and Protection - Parks Canada	47
46	Fire Prevention and Protection - Northern Affairs	48
47	Safety	49
76	Administration of the Building Design Process	50
77	Estimating, Cost Data, Bills of Quantities for Building Projects	52
78	Building Projects Site Acquisition, Investigations and Development	53
79	Building Design - General	54
80	Building Design - Indian and Inuit Affairs	55
81	Building Design - Parks Canada	56
82	Building Design - Northern Affairs	57
83	School Design and Construction Standards - Indian and Inuit Affairs	58
84	Structural Design for Contemporary Buildings	60
85	Building Materials and Architectural Technology	61
86	Plumbing Services in Buildings	63
87	Space Conditioning in Buildings	64
88	Electrical Systems in Buildings	65
89	Special Building Systems	66
90	Maintenance and Operation of Building Facilities	67
94	Miscellaneous Publications (Buildings and Services)	69

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
<u>Canals Engineering Division</u>		71
DRM 10-7/113	Canal Locks	72
114	Bridges (Canals)	73
115	Docks and Walls (Canals)	75
116	Channels (Canals)	76
117	Dams (Canals)	77
121	Miscellaneous Publications (Canals)	79
<u>Transportation Division</u>		81
DRM 10-7/96	Transportation Planning	82
97	Road Development - Design	84
98	Road Construction	86
99	Road Maintenance	87
100	Winter Roads	88
101	Traffic Control Devices - Parks Canada	89
102	Traffic Control Devices - Indian and Inuit Affairs	90
106	Miscellaneous Publications (Transportation)	91
108	Radio Equipment	92
109	Mobile Construction and Maintenance Equipment and Passenger Vehicles	93
<u>Policy and Planning Division</u>		95
DRM 10-7/10	E&A Resource Standards	96
<u>Technological Development Division</u>		98
DRM 10-7/21	Technical Development Function	99
22	Standard Practices for System Development	100
24	Departmental Asset Inventory System	101
25	Maintenance Management	102
26	Engineering Cost Analysis	103

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
<u>Technological Development Division (Cont'd)</u>		
27	Network Planning and Analysis	104
28	Functional Review and Evaluation	105
29	Miscellaneous Publications (Technological Development)	106
<u>Co-ordination Services Division</u>		
DRM 10-7/2	Branch Publications	108
9	E&A Human Resources	109
14	Emergency Planning	110
15	Energy Conservation —	111
16	Metric Conversion —	112
<u>Contracts and Capital Program Division</u>		
DRM 10-7/34	Project Management	116
35	Construction Contract Management	117
36	Contracts (Non-Construction)	118
37	Contracting Guidelines for Band Councils	119
38	Master and Guideline Specifications in DIAND	120
42	Miscellaneous Publications (Contracts and Capital Program)	122
<u>Technical Data Services Division</u>		
DRM 10-7/4	Technical Documents Management System	125
51	Aerial Photography/Photogrammetry Services	126
52	Control Surveys Services	127
53	Large Scale Topographical Mapping Services	128
54	Air Photo Interpretation Services	129
123	Heritage Recording	130
124	Infotheque, Data Storage and Retrieval	131
		132

ENVIRONMENTAL SERVICES DIVISION

DIVISIONAL MANUALS WORK PLAN

ENVIRONMENTAL SERVICES DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/3	Branch Graphics
59	Environmental Impact Assessment
60	Site Development (Environmental Approach)
61	Departmental Signs
62	Day-use and Recreation Facilities Areas
67	Miscellaneous Publications (Environmental Services)
68	Wastewater Collection and Disposal
69	Power Generation and Distribution
70	Solid Waste Collection Disposal
71	Water Supply and Distribution

DRM 10-7/3 - Branch Graphics Manual

This manual describes procedures, methods of production, specifications and technical details for sketches, drawings, illustrations, photographs and typography to be used in Branch publications and presentations.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/3.1.	Management Summary	C
3.2.	Development of Graphics	D
3.3.	Graphics for Printing (Illustrations)	C
3.4.	Reproduction of Photographs	D
3.5.	Typography	D
3.6.	Specifications	D
3.7.	Artwork for Audio-Visual Presentation	D
3.8.	Procedures	D

DRM 10-7/59 - Environmental Impact Assessment

This manual outlines a proposal for a comprehensive and flexible approach to environmental impact assessment within the context of a broad variety of activities carried out by the Department, the objective being to facilitate the implementation of the Environmental Assessment and Review Process (EARP) Policy. Specific chapters deal with discrete subject areas germane to environmental evaluations, e.g., impacts and mitigation measures related to highways and roads and legislation related to environmental impact assessment.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/59.1.	Management Summary	D
59.2.	Technical Guidelines for the Implementation of the Environmental Assessment and Review Process (EARP) and the E&A Function	C
59.3.	Impacts and Mitigation Measures Related to Highways and Roads	D
59.4.	Federal, Provincial and Territorial Legislation Related to Environmental Impact Assessment	D

DRM 10-7/60 - Site Development (Environmental Approach)

This manual provides guidelines for design and field staff engaged in site development projects on a Departmental basis. It outlines present policy implications, planning and design criteria, procedures and techniques for solving site development problems (i.e., Park facilities, Indian Community Developments and Northern facilities). Emphasis will be placed on a sound environmental approach for site development projects.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/60.1.	Management Summary	D
60.2.	Introduction and Relevant Policy	D
60.3.	Definitions	D
60.4.	Environmental Considerations	D
60.5.	Physical Planning and Design Criteria	D
60.6.	Site Analysis	D
60.7.	Outdoor Spaces	D
60.8.	Circulation	D
60.9.	Grading and Drainage	D
60.10.	Natural Landscape Elements	D
60.11.	Problem Areas	D
60.12.	Basic Rehabilitation	D
60.13.	Technical Guides	
	1. Design Practice in Site Development	D
	2. Metric Considerations in Site Development	C
	3. Physical Planning Considerations	C
60.14.	Bibliography	D

DRM 10-7/61 - Departmental Signs

This manual summarizes Federal Identity Program policies and guidelines pertaining to signage. It provides details of sign layout, sizes, materials and maintenance procedures.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/61.1.	Management Summary	D
61.2.	Federal Identity Program - Technical Application	D
61.3.	Identification Signs	D
61.4.	Project Site Signs	C
61.5.	Graphic Symbols for Public Information	D
61.6.	Interior Signs	C
61.7.	Guide Signs	D
61.8.	Highway and Related Signs	D
61.9.	Industrial and Safety Signs	D
61.10.	Community Signs	D
61.11.	Sign Maintenance Procedures	D

DRM 10-7/62 - Day-Use and Recreation Facilities Areas

This manual provides design guidelines for the development of day-use areas on a Departmental basis. It will identify relevant and established policy for day-use areas/activities, including levels of service with capital and maintenance costs implications, planning and design criteria, and finally the facility design guidelines for each major activity.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/62.1.	Management Summary	D
62.2.	Introduction and Relevant Policy	C
62.3.	Definitions	D
62.4.	Environmental Considerations	D
62.5.	Planning and Design Criteria	D
62.6.	Levels of Service	D
62.7.	Day-use Activities and Facilities	
	1. Summer Facilities	C
62.8.	Technical Guides	D
62.9.	Bibliography	D

DRM 10-7/67 - Miscellaneous Publications (Environmental
Services)

This manual will cover technical publications for a variety of activities that do not logically fall into other manuals. At the present time, ten publications have been identified, but, as the need arises, others will be added.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/67.1.	Technical Practices of Record Photography	C
67.2.	Record Photography for Facilities Inventory	C
67.3.	Infrastructure Standards for Indian Housing	C
*	Containing Oil Spills in Fuel Storage Installations (see 47.9)	
*	Campground Manual - Parks Canada (see PRM 40.4)	
*	Trail Manual - Parks Canada (see PRM 40.3)	

Contribution to DRM 10-7/24, Capital Assets
Inventory System.

DRM 10-7/68 - Wastewater Collection and Disposal

This manual sets out the various parameters for wastewater systems which are used to collect, treat and dispose of wastewater in a manner which is acceptable to the Department.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/68.1.	Management Summary	D
68.2.	Policies, Standards and Practices	
	1. Effluent Quality and Wastewater Treatment Standards for Indian Reserves	C
68.3.	Environmental Considerations	D
68.4.	Engineering-Reports, Plans and Specifications	D
68.5.	Design	
	1. Design Standards for Domestic Wastewater Treatment Ponds for Indian Reserves	B
68.6.	Construction	D
68.7.	Operation	D
68.8.	Maintenance	
	1. Maintenance Quality Standards for Wastewater Systems	D
68.9.	Management	D

DRM 10-7/69 - Power Generation and Distribution

This manual sets out the various parameters for the electrical power generation and distribution systems which are used to provide electrical energy for Indian communities and Departmental facilities.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/69.1.	Management Summary	D
69.2.	Power Supply	C
69.3.	Power Generation	D
69.5.	Testing Equipment	D
69.6.	Outdoor Lighting	D

DRM 10-7/70 - Solid Waste Collection and Disposal

This manual sets out the various parameters for domestic solid waste collection and disposal systems which are used to collect, process and treat and dispose of the solid wastes from domestic type buildings in a manner which is acceptable to the Department.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/70.1.	Management Summary	C
70.2.	Policies, Standards and Practices	C
70.3.	Environmental Considerations	C
70.4.	Engineering-Reports, Plans and Specifications	C
70.5.	Design	C
70.6.	Construction	C
70.7.	Operation	C
70.8.	Maintenance	C
70.9.	Management 1. Day Labour 2. Contract	C C

DRM 10-7/71 - Water Supply and Distribution

This manual sets out the various parameters for domestic water supply and distribution systems which are used to acquire, treat, and distribute water to consumers in a manner which is acceptable to the Department.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/71.1.	Management Summary	D
71.2.	Policies, Standards and Practices	D
71.3.	Environmental Considerations	D
71.4.	Engineering-Reports, Plans and Specifications	D
71.5.	Design	C
71.6.	Construction	D
71.7.	Operation	D
71.8.	Maintenance 1. Maintenance Quality Standards: Water Systems	D
71.9.	Management	D

RESTORATION SERVICES DIVISION

DIVISIONAL MANUALS WORK PLAN

RESTORATION SERVICES DIVISION

General Work Program

Phase I. (1978-1981)

- a. Concept developed
- b. Preliminary research completed
- c. Methodology developed
- d. Content identified
- e. Priority publications produced

Total of 26 man-years.

Phase II.

- a. Concepts refined
- b. Applied research completed
- c. 90% of publications developed to E&A Branch approval stage
- d. Selected priority publications produced

Total of 29 man-years.

Phase III.

- a. Balance of publications developed to E&A Branch approval stage
- b. All publications and manuals developed to Departmental approval level
- c. Reference documentation and bibliography developed
- d. Cross-referencing of material by object and procedure completed

Total of 26 man-years.

RESTORATION SERVICES DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/126	Conservation Technology - Project Procedure
128	Conservation Technology - Architecture, Engineering and Site Analysis
129	Conservation Technology - Conservation of Building Materials
130	Conservation Technology - Conservation of Finishes and Decorative Materials
131	Conservation Technology - Period Construction Technology
132	Conservation Technology - Conservation and Reconstruction of Historic Structures
133	Conservation Technology - Conservation Maintenance
138	Conservation Training - Study Guides

DRM 10-7/126 - Conservation Technology - Project Procedure

This manual is intended to rationalize the process of commemoration and conservation and establish a standard procedure as a guide for management responsible for the logical selection, stabilization, conservation and continuing preservation of historic sites, structures and artifacts.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/126.1.	Overview	C
126.2.	Phase I - Conservation Commitment	
	1. Initial Representations	D
	2. Briefing Studies	D
	3. Agenda Paper	D
	4. Ministerial Approval	D
126.3.	Phase II - Initial Conservation	
	1. Initiation of the Conservation Project	D
	2. Interim Maintenance Program	D
	3. Themes and Objectives Paper	D
	4. Approval	D
126.4.	Phase III - Property Research	
	1. Investigation of Physical Features	D
	2. Investigation of Record	D
	3. Investigation of Environment	D
	4. Development Concept Report	D
	5. Approval	D
126.5.	Phase IV - Conservation Project Brief	
	1. Interpretation Brief	D
	2. Conservation Brief (Requirements for a Conservation Brief for Historic Structures)	D
	3. Approval	D

STATUS

126.6.	Phase V - Conservation Project Design	
	1. Graphic and Narrative Reconstruction	D
	2. Preliminary Design	D
	3. Presentation for Client Approval	D
	4. Final Conservation Design	D
	5. Approval	D
126.7.	Phase VI - Conservation Project Implementation	
	1. Scheduling	D
	2. Execution	D
	3. Recording in Progress	D
	4. Inspection and Approvals	D
	5. Handover to client	D
	6. Conservation Report (Requirements of a Conservation Report for Historic Structures)	D
126.8.	Phase VII - Continuing Conservation (Presentation)	
	1. Monitoring Program	D
	2. Housekeeping Program	D
	3. Maintenance Program	D
	4. Minor Works Program	D
	5. Emergency Action Program	D
126.9.	References	

Phase I - 100%

DRM 10-7/128 - Conservation Technology - Architecture,
Engineering and Site Analysis

This manual is intended to provide a reference guide for engineers, architects and technologists engaged in investigating and analysing historic sites and structures. It identifies procedures for analysing the appearance, the condition and the construction detailing of existing fabric, to provide adequate reference information for the preparation of conservation designs; it also outlines the principles of comparative study, the synthesis and presentation of material, and the updating of information.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/128.1.	General consideration	
	1. Analysis of Historic Sites and Structures: Definition and Purpose	C
	2. Technical Policy: Physical Investigation Phases	D
128.2.	Technical Management	
	1. Determination of Scope	C
	2. Coordination of Investigations and Analysis: The Team Approach	D
	3. Use of Consultants	C
	4. Information Management	D
	5. Safety and Security	D

STATUS

128.3.

- Architectural Analysis
1. Preparing an Architectural Investigation
 1. Establishing Terms of Reference C
 2. Special Considerations C
 3. Investigation of Comparative Sources C
 2. Conducting an Architectural Investigation of a Building
 1. Setting D
 2. General Assessment D
 3. Conducting an Architectural Investigation of Principal Building Components
 1. Foundations D
 2. Walls D
 3. Floors C
 4. Roof D
 5. Openings: doors and Windows D
 4. Conducting an Architectural Investigation of Building Elements
 1. Sheathing D
 2. Hardware D
 3. Glazing D
 4. Metal Work D
 5. Fasteners D
 6. Mouldings D
 5. Conducting an Architectural Investigation of Finishes and Materials
 1. Wood D
 2. Masonry D
 3. Mortar, Stucco, and Plaster D
 4. Paint D
 5. Wallpaper D
 6. Conducting an Architectural Investigation of other Work
 1. Ruins D
 2. Engineering Works D
 7. Architectural Analysis: Synthesis and Presentation.

128.4

- Engineering Analysis
1. Preparing an Engineering Investigation
 1. Establishing Terms of Reference C
 2. Special Considerations D
 3. Investigation of comparative Sources D

STATUS

- 2. Conducting an Engineering Investigation of a Building or Engineering Work
 - 1. General Assessment: Building D
 - 2. General Assessment: Engineering Work C
- 3. Conducting an Engineering Investigation of Principal Components
 - 1. Soils D
 - 2. Foundations D
 - 3. Load Bearing Walls D
 - 4. Floors D
 - 5. Roof Structure D
- 4. Conducting an Engineering Investigation of Elements
 - 1. Sheathing D
 - 2. Flashing and Dampe Proofing D
 - 3. Gutters and Leaders D
 - 4. Vents D
- 5. Conducting an Engineering Investigation of Finishes and Materials
 - 1. Wood D
 - 2. Masonry D
 - 3. Mortar, Stucco and Plaster D
 - 4. Metals D
- 6. Engineering Analysis: Synthesis and Presentation
- 128.5. Mechanical Services Analysis
 - 1. Establishing a Terms of Reference: Points to Consider D
 - 2. Investigation of a Site
 - 1. Site Utilities D
 - 2. Site Services D
 - 3. Investigation of a Building
 - 1. Domestic Water and Fixtures D
 - 2. Sewage and Waste Disposal D
 - 3. Gas Service and Fixtures D
 - 4. Electrical Service and Fixtures D

		<u>STATUS</u>
	5. Heating and Ventilating	D
	6. Fire Detection, Suppression and Lightning Arresters	D
	7. Telephone and Other Communication Systems	D
	8. Elevators, Hoists, etc.	D
	4. Investigation of an Engineering Work	D
	5. Comparative Study	D
	6. Synthesis and Presentation	D
128.6.	Machines and Vessels Analysis	
	1. Establishing a Terms of Reference	D
	2. Investigation of a Machine	D
	1. (Machine components, as required)	D
	3. Investigation of a Vessel	
	1. Hull	D
	2. Superstructure	D
	3. Upper decks	D
	4. Rigging	D
	5. Engine and boiler	D
	6. (Other features, as required)	D
	4. Comparative Study	D
	5. Testing Methods	D
	6. Synthesis and Presentation	D
128.7.	Landscape and Gardens Analysis	
	1. Establishing a Terms of Reference	D
	2. Investigation of a Site	D
	3. Investigation of site Features	
	1. Gardens	D
	2. Yards	D
	3. Walkways	D
	4. Fences and Ancillary Works	D
	4. Comparative Study	D
	5. Synthesis and Presentation	D

		<u>STATUS</u>
128.8.	Environmental Analysis	
	1. Establishing a Terms of Reference	D
	2. Investigation of the Physical Environment	D
	3. Investigation of the Socio-economic Environment	D
	4. Climatic Analysis	D
	1. Macro	
	2. Micro	
	5. Special Environmental Problems	D
	6. Synthesis and Presentation	D
128.9.	Special Investigation Techniques	
	1. Selecting Special Investigation Techniques	D
	2. Moisture Content Analysis	D
	3. Taking Samples	D
	4. Colour Analysis	D
	5. Chemical Analysis	D
	6. Deformation and Movement Analysis	D
	7. Photographic Analysis	
	1. Infra-red	D
	2. Ultra-violet	D
	3. X-ray	D
	8. Tracers	
	1. Dyes	D
	2. Radioactive	D
	9. (Other special techniques to be added as required)	D
128.10	References, Glossaries and Bibliography	
	1. Index of Reference	D
	2. Glossary of Terms	D
	3. Selected Bibliography	D

Phase I - 30% = 1242 man-days

DRM 10-7/129 - Conservation Technology - Conservation of
Building Materials

This manual describes the composition and structure of the materials, the forms in which they are usually encountered in Canada, how they deteriorate and how that deterioration can be arrested and the materials themselves conserved.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/129.1.	Wood	
	1. Structure and Properties of Wood	
	1. Anatomy	C
	2. Properties and Characteristics	C
	2. Deterioration and Defects	
	1. Growth, Conversion and Seasoning Defects	C
	2. Effects of Weathering on Wood	D
	3. Chemical Degradation of Wood	D
	4. Botanical Degradation of Wood	D
	5. Fungal Decay and Staining in Wood	C
	6. Insects and Marine Borers in Wood	C
	7. Mechanical Degradation of Wood	D
	8. Effects from Heat and Fire	D
	3. Consolidation and Repair	
	1. General Considerations	D
	2. Techniques for Increasing Structural Capacity	D
	3. Replacement of Deteriorated Sections of Structural Wood	D
	4. Consolidation of Structural Wood	D
	5. Cosmetic Repair Techniques	D
	6. Cleaning Historic Wood	D

	<u>STATUS</u>
7. Chemical Preservative Treatments for Wood in Historic Structures	B
8. Chemical Fire Protective Treatments	D
9. Protective Coatings	D
10. Special Techniques	D
4. References	
1. Glossary	D
2. Bibliography	D
129.2 Masonry (stone, brick, mortar)	
1. Structure and Properties of Masonry Materials	
1. Introduction to Masonry Materials	C
2. Mortar	D
3. Brick	D
4. Stone	D
2. Deterioration and Defects	
1. Deterioration Due to Water	D
2. Deterioration Due to Structural Loading	D
3. Surface Deposits and Stains	D
4. Effects of Improper Maintenance	D
5. Inherent Defects	D
6. Deterioration Due to Materials	D
7. Deterioration Due to Biological Agents	D
8. Deterioration Due to Physical Agents	D
3. Consolidation and Repair	
1. General Considerations	D
2. Techniques for Replacing Masonry Elements	D
3. Techniques for Repair of Broken Stones and Bricks	D
4. Techniques for Consolidation of Friable Stone or Brick	D
5. Cosmetic Repair	D
6. Cleaning Historic Masonry	D
7. Repointing Historic Masonry	D
8. Protective Coatings	D
9. Techniques for Eradicating Plants and Fungi	D
10. Special Techniques	D
4. References	
1. Glossary	D
2. Bibliography	D

		<u>STATUS</u>
129.3.	Concrete	
	1. Composition and Properties of Concrete	D
	2. Deterioration and Defects	D
	3. Consolidation and Repair	D
	4. References	D
129.4.	Metals	
	1. Structure and Properties of Architectural Metals	D
	2. Structural Cast Iron	D
	3. Structural Wrought Iron	D
	4. Structural Steel	D
	5. Consolidation and Repair of structural Iron and Steel	D
	6. Exterior Sheet Metals (use, deterioration, repair)	D
	7. References	D
129.5.	Plaster	
	1. Composition and Properties of Plaster Renders	D
	2. Application and Use	D
	3. Deterioration and Defects	D
	4. Consolidation, Repair, Replacement	D
	5. References	D
129.6.	Other Materials	D

Phase I - 30% = 684 man-days

DRM 10-7/130 - Conservation Technology - Conservation of
Finishes and Decorative Materials

This manual is concerned with the conservation of the materials which are applied to a structure to provide decoration or a protective coating. Every material has characteristics, strengths and weaknesses peculiar to itself. Because of this the conservation of every structure needs to consider each of the component materials and its properties.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/130.1.	Wallpaper	
	1. Materials and Characteristics	C
	2. Deterioration and Change	D
	3. Conservation Options	
	1. General Considerations	D
	2. Techniques for Conservation In-situ	D
	3. Techniques for Removal of Wallpaper	D
	4. Other Techniques	D
	4. References	
	1. Glossary	D
	2. Bibliography	D
130.2.	Paint and Other Coatings	
	1. Painting Materials	
	1. Composition and Properties of Oil-based Paints	C
	2. Composition and Properties of Whitewash, Distemper, Calcimine	D
	3. Composition and Properties of Varnishes, Oils, Waxes and Stains	D

STATUS

- 2. Deterioration and Change
 - 1. Deterioration Due to Exterior Forces D
 - 2. Chemical Degradation and Change D
 - 3. Deterioration Due to Faulty materials and Workmanship D
 - 3. Conservation Options
 - 1. General Considerations D
 - 2. Techniques for Removal of Paint Layers D
 - 3. Techniques for In-situ Conservation D
 - 4. Reproducing the Appearance of Historic Paints D
 - 5. Reproducing the Appearance of Historic Whitewash Distemper, Calcimine D
 - 6. Techniques for vation of Stencilled Patterns D
 - 7. Special Techniques D
 - 4. References
 - 1. Glossary D
 - 2. Bibliography D
- 130.3. Woodwork
- 1. Finishing and Working Characteristics C
 - 2. Deterioration and Reflects D
 - 3. Consolidation and Repair
 - 1. General Considerations D
 - 2. Techniques for conservation of Exterior Decorative Workwork D
 - 3. Techniques for Conservation of Carved Work, Molding, and Built-up Features D
 - 4. Techniques for Paint Removal and Cleaning D
 - 5. Special Techniques D
 - 4. References
 - 1. Glossary D
 - 2. Bibliography D
- 130.4 Plaster
- 1. Composition and Properties of Plaster D
 - 2. Application and Use D
 - 3. Deterioration and Defects D
 - 4. Consolidation, Repair, Replacement D
 - 5. References D

		<u>STATUS</u>
130.5	Metal	
	1. Galvanized iron - use, Deterioration, Con- servation	D
	2. Wrought Iron	D
	3. Cast Iron	D
	4. Lead	D
	5. Brass	D
	6. Copper	D
	7. Steel	D
	8. References	D
130.6	Other Materials	D

Phase I - 30% = 546 man-days.

DRM 10-7/131 - Conservation Technology - Period
Construction Technology

This manual is intended to serve as a reference document by providing information on the traditional processes of building assemblage and site development, including not only the techniques of execution, but also the tools and equipment, the varieties of detailing, the terminology and sample specifications.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/131.1.	Period Construction in Canada	
	1. Technical Development	D
	2. Organizational Development	D
131.2.	Sitework	
	1. Clearing	D
	2. Moving/Demolition	D
	3. Laying Out	D
	4. Earthwork	D
	5. Piling	D
	6. Site Drainage	D
	7. Paving and Surfacing	D
131.3.	Period Concrete Work	
	1. Mass Concrete Work	D
	2. Reinforced Concrete Work	D
	3. Precast Concrete Work	D
	4. Blockwork	D
131.4.	Period Masonry	
	1. Period Trade Terminology and Usage	D
	2. Period Tools and Equipment	D
	3. Rough Stone Work	
	1. Footings	C
	2. Walling	C
	3. Pier and Buttress Work	C
	4. Cut Stone Work	
	1. Walling	D
	2. Arch Work	D
	3. Vault and Dome Work	D
	4. Ornamental Work	D
	5. Stair Work	D
	6. Paving Work	D

		<u>STATUS</u>
131.5.	Period Bricklaying and Tiling	
	1. Period Trade Terminology and Usage	D
	2. Period Tools and Equipment	D
	3. Plain Brick Work	
	1. Footings	C
	2. Walling	C
	3. Pier and Buttress Work	C
	4. Arch Work	D
	5. Vault and Dome Work	D
	6. Fireplace and Chimney Work	D
	7. Paving	D
	4. Ornamental Brick Work	
	1. Facings	D
	5. Hollow Tile Work	
	1. Wall, Wall Backing and Furring Work	D
	2. Column and Girder Covering	D
	3. Combination Slab Floor and Roof Work	D
	6. Architectural Terracotta Work	
	1. Facings	D
	7. Tile Work	
	1. Wall and Ceiling Work	D
	2. Paving	D
131.6.	Period Metal Work	
	1. Structural Iron/Steel Work	D
	2. Miscellaneous Iron/Steel Work	D
	3. Ornamental Metal Work	D
	4. Exterior Sheet Metal Work	D
	5. Interior Sheet Metal Work	D
131.7.	Period Carpentry	
	1. Period Trade Terminology and Usage	D
	2. Period Tools and Equipment	D

STATUS

	3.	Log Building and Timber Framing	
	1.	Palisade and Horizontal Timber Construction	C
	2.	Half-timber Framing	C
	3.	Heavy Timber Framing	D
	4.	Light Timber Framing	D
	5.	Log-Butt/Stove-wood Construction	D
	4.	"Beam Filling" and Insulating	D
	5.	Sheathing and Siding	D
	6.	Under-flooring	D
131.8.		Period Joinery	
	1.	Period Trade Terminology and Usage	D
	2.	Period Tools and Equipment	D
	3.	Exterior and Interior Trimmings	C
	4.	Door Work	C
	5.	Window Work	D
	6.	Finished Flooring	D
	7.	Wall and Ceiling Panelling	D
	8.	Stair Building	D
	9.	Fittings	D
	10.	Carved Work	D
131.9.		Period Roofing	
	1.	Composition Roofing	D
	2.	Canvas Roofing	D
	3.	Shingle Roofing	D
	4.	Tile Roofing	D
	5.	Slate Roofing	D
	6.	Asbestos Roofing	D
	7.	Tin or Terne Plate Roofing	D
	8.	Black Sheet Iron Roofing	D
	9.	Galvanized Sheet Iron/Steel Roofing	D
	10.	Copper Roofing	D
	11.	Sheet Lead Roofing	D
	12.	Sheet Zinc Roofing	D
	13.	Glass Roofing	D
	14.	Thatching	D
	15.	Sod Roofing	D
	16.	Bark Roofing	D
	17.	Board Roofing	D
	18.	"Scoop" Roofing	D
131.10		Period Glazing	
	1.	Window Glazing	D
	2.	Lead Frame and Stained Wood Work	D
	3.	Structural Glass Work	D

STATUS

131.11	Period Plastering	
	1. Plain Plastering	D
	2. Ornamental Plastering	D
	3. Modelling/Cast Work	D
	4. Stucco Work	D
	5. Artificial Stone/Marble Work	D
	6. Sgraffito	D
131.12	Period Painting and Varnishing	
	1. Period Trade Terminology and Usage	D
	2. Period Tools and Equipment	D
	3. Oil Painting and Enameling	D
	1. Exterior Surfaces	
	2. Interior Surfaces	
	4. Distemping, White-washing and Calcimining	D
	5. Waxing, Oiling and Varnishing	D
	6. Graining, Marbling, Sanding and Other Imitations	D
	7. Staining, Dying, Fuming and Bleaching	D
	8. Frescoing, Stencilling, Gilding and Other Decorative Painting	D
	9. Sign Painting and Gilding	D
131.13	Period Interior Decoration	
	1. Wall Decorating	
	1. Period Trade Terminology and Usage	D
	2. Period Tools and Equipment	D
	3. Paper Hanging	
	a. Side-wall, Border, Frieze and Dado Work	D
	b. Ceiling Work	D
	c. Panel Work	D
	4. Textile and Leather Hanging	
	a. Sidewall, Border, Frieze and Dado Work	D
	2. Floor Covering	D
	3. Upholstering	D
	4. Window and Doorway Hangings	D
	5. Window Blind/Shade Work	D
	6. Furnishing	D

		<u>STATUS</u>
131.14	Period Servicing	
	1. Plumbing and Drainage	D
	2. Heating and Ventilating	D
	3. Lighting	D
	4. Refrigeration and Cooling	D
	5. Telephone	D
	6. Conveying	D
	7. Bell Ringing	D
	8. Fire Alarm and Extinguishing Protection	D
	9. Lightning Protection	D
131.15	Period landscaping and Gardening	
	1. Soil Structure and Chemistry Work	D
	2. Land Sculpturing and Water Channeling	D
	3. Tree, Shrub and Hedge Planting	D
	4. Ground Cover Planting	D
	5. Perennial, Annual and Bulb Planting	D
	6. Vegetable Garden, Tilled Field and Orchard Planting	D
	7. Architectural Work	D
	8. Water Work	D
	9. Paving and Road Making	D
	10. Recreational and Ceremonial Facility Work	D
	11. Fence and Trellis Work	D
	12. Garden Furnishing	D
	13. Sculptured/Cast Ornamental Work	D
	14. Window Gardening and other House Planting	D

Phase I - 30% = 912 man-days.

DRM 10-7/132 - Conservation Technology - Conservation and
Reconstruction of Historic Structures

This manual is intended to provide procedural and technical reference material for the design and implementation phases of the conservation process.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/132.1.	General Considerations	
	1. Definition and Scope	
	1. Conservation	C
	Design: Categories of Intervention	
	2. Conservation Terminology	D
	2. Technical Policy: Design and Implementation Phases	D
132.2.	Technical Management	
	1. Determination of Design Strategy	D
	2. Project Scheduling and Coordination	D
	3. Use of Consultants	
	1. Identification of Work Phases for Contract	C
	2. Briefs, Terms of Reference and Payment Schedules	C
	3. Consultant Selection, Supervision and Evaluation	D
	4. Information Management	D
	5. Safety and Security	
	1. Personnel Safety	D
	2. Building Security	D
	3. Protection of Historic Fabric	C
132.3.	Conservation Techniques: Short Term	
	1. General Considerations	C
	2. Structural Consolidation	
	1. External Bracing	C
	2. Internal Reinforcement and Consolidation	D

STATUS

- 3. Environmental Control
 - 1. Interim Heating and Ventilating C
 - 2. Full and Partial Mothballing D
- 4. Building Security
 - 1. Interim Fire Protection D
 - 2. Vandalism Protection D
- 5. Landscape Conservation and Control
 - 1. Interim Protection of Landscape Features D
 - 2. Interim Flora and Fauna Control D

132.4.

- Conservation Techniques:
 - Preservation and Consolidation
 - 1. General Considerations D
 - 2. Area Conservation D
 - 3. Archaeological Remains
 - 1. Stabilization of Exposed Elements D
 - 2. Re-interment D
 - 4. Buildings
 - 1. Foundations
 - a. Preliminary Excavation and Access D
 - b. Consolidation: Masonry D
 - c. Consolidation: Earth D
 - d. Consolidation: Wood D
 - 2. Masonry Walls and Infrastructures
 - a. External Bracing D
 - b. Internal Reinforcement and Consolidation D
 - c. Chemical Treatments and Cleaning D
 - d. Individual Stone/Brick Replacement D
 - e. Dismantling and Reconstruction D
 - 3. Wood Walls and Infrastructures
 - a. External Bracing D
 - b. Internal Reinforcement and Consolidation D

STATUS

- c. Chemical Treatments D
 - d. Partial Replacement and Splicing C
 - e. Dismantling and Reassembly C
 - 4. Roof Structures
 - a. In-situ Consolidation D
 - b. Dismantling and Reconstruction D
 - 5. Exterior Finishes and Decorative Structures
 - a. Masonry D
 - b. Wood D
 - c. Metal D
 - d. Plaster D
 - 6. Interior Finishes and Decorative Features
 - a. Masonry D
 - b. Wood D
 - c. Metal D
 - d. Plaster D
 - 7. Windows D
 - 8. Doors D
 - 9. Hardware D
 - 10. Mechanical Services
 - a. Plumbing D
 - b. Heating and Ventilating D
 - c. Lighting D
 - 5. Engineering Structures D
 - 6. Machines and Vessels D
 - 7. Landscape and Gardens D
- 132.5
- Conservation Techniques:
Adaptive Modification
- 1. General Considerations D
 - 2. Energy Conservation D
 - 3. Fire Safety and Protection C
 - 4. Structural modifications and Other Code Applications D
 - 5. New Mechanical Services
 - 1. Plumbing D
 - 2. Heating, Ventilating and Air Conditioning D
 - 3. Lighting D
 - 6. Visitor Use Requirements and Provisions
 - 1. Introduction of Visitor Service Facilities D
 - 2. Protection of Historic Fabric against Visitor Wear D
 - 7. Functional Adaptation
 - 1. Interpretive Restoration
 - a. Removals and Stripping D

		<u>STATUS</u>
	b. Recovery of Structural Organization and Detailing	D
	c. Recovery of Spatial Organizations and Layout	D
	d. Recovering of Material Finishes and Decorative Elements	D
	2. Adaptive Re-use	D
132.6	Conservation Techniques: Reconstruction and Replication	
	1. Scales of Intervention	D
	2. Technical Control	
	1. Research	D
	2. Specifications	D
	3. Evaluation	D
	3. Materials and Components	
	1. Identification and Preparation of Traditional Materials, Finishes and Components	D
	2. Use of Substitutes	D
	4. Craft and Construction Techniques	
	1. Identification and Incorporation of Traditional Crafts	D
	2. Use of Substitute Process and Technologies	D
	5. Special Applications	D
132.7	Special Applications	
	1. Protection of Ruins and Archaeological Sites	D
	2. Moving of Historic Structures	D
132.8	References	D

Phase I - 30% = 774 man-days.

DRM 10-7/133 - Conservation Technology - Conservation
Maintenance

This manual provides guidance in the continuing conservation of historic structures and assistance to Regional Offices of Parks Canada who have the responsibility for operation and maintenance of historic buildings, structures and sites.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/133.1.	Pre-development Maintenance	C
133.2.	Post-development Maintenance	
	1. Housekeeping Program	D
	2. Seasonal Maintenance Program	D
	3. Periodic Works Program	D
	4. Emergency Works Program	C
133.3.	References	D

Phase I - 100%

DRM 10-7/138 - Conservation Training - Study Guides

This manual is a collection of study guides mainly based upon annotated bibliographies, materials and source guides. The intended users will be professionals and technologists engaged in the technical aspects of preserving historic structures in Canada.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/138.1.	Preserving Historic Structures in Canada: Wood	D
138.2.	Historic Timber Structural Systems - North America and European Antecedents	D
138.3.	Preserving Historic Structures in Canada: Stone	D
138.4.	Historic Stone Structural Systems - North American and European Antecedents	D
138.5.	Preserving Historic Structures in Canada: Brick	D
138.6.	Historic Brick Structural Systems - North America and European Antecedents	D
138.7.	Preserving Historic Structures in Canada: Concrete and Mortar: Part I and II	D
138.8.	Preserving Historic Structures in Canada: Architectural Metalwork:	D
138.9.	Preserving Historic Structures in Canada: Decorative Materials and Finishes - Part I	D

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
138.10.	Preserving Historic Structures in Canada: Decorative Materials and Finishes - Part II	D
138.11.	Conservation Philosophy in Canada	D
138.12.	Conservation Legislation and Administration in Canada	D
138.13.	Conservation of Historic Landscape and Gardens	D
138.14.	Environmental Planning for Historic Conservation	D
138.15.	Conservation of Historic Urban Centres in Canada	D
138.16.	Studies in Canadian Architectural and Engineering History: Technology and Period Building Crafts - Part I	D
138.17.	Studies in Canadian Architectural and Engineering History: Technology and Period Building Crafts - Part II	D
138.18.	Historic Structures and Sites Maintenance - Part I	D
138.19.	Historic Structures and Sites Maintenance - Part II	D
138.20.	Recording Historic Monuments and Sites	D
138.21.	Architectural Analysis and Investigation: Archaeology Above the Ground	D
138.22.	The Conservation of Structures	D

BUILDINGS AND SERVICES DIVISION

DIVISIONAL MANUALS WORK PLAN

BUILDINGS AND SERVICES DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/43	Fire Prevention and Protection - General
44	Fire Prevention and Protection - Indian and Inuit Affairs
45	Fire Prevention and Protection - Parks Canada
46	Fire Prevention and Protection - Northern Affairs
47	Safety
76	Administration of the Design Process
77	Estimating, Cost Data, Bills of Quantities for Building Projects
78	Building Projects Site Acquisition, Investigations and Development
79	Building Design - General
80	Building Design - Indian and Inuit Affairs
81	Building Design - Parks Canada
82	Building Design - Northern Affairs
83	School Design and Construction Standards - Indian and Inuit Affairs
84	Structural Design for Contemporary Buildings
85	Building Materials and Architectural Technology
86	Plumbing Services in Buildings

NUMBER

TITLE

- | | |
|----|--|
| 87 | Space Conditioning in
Buildings |
| 88 | Electrical Systems in
Buildings |
| 89 | Special Building Systems |
| 90 | Maintenance and Operation
of Building Facilities |
| 94 | Miscellaneous
Publications
(Buildings and
Services) |

DRM 10-7/43 - Fire Prevention and Protection - General

This manual is a collection of publications from manuals 44, 45 and 46 which are applicable to at least two of the Operational Programs. It has been created to eliminate the necessity of republishing the same publications under two or more different numbers.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/43.1.	Management Summary	D
43.2.	Fire Prevention (General)	D
43.3.	Fire Protection (General)	
	1. Spare	
	2. Fire Exposure Protection	D
	3. Fire Hazard Abatement in Outdoor Tanks Above Ground	D
43.4.	Systems and Equipment (General)	
	1. Fittings for Portable Fire Pumps	C
	2. Portable Generators for Fire Service	D
	3. Fire Extinguishing Systems - Testing and Maintenance	D
	4. Fire Alarm and Detection System - Testing and Maintenance	D
	5. Fire Hydrant Maintenance, Testing and Record System	D

NUMBERSECTIONSTATUS

	6. Maintenance and Testing of Stationary Fire Pumps	D
	7. Standpipe Hose Equipment	D
	8. Fire Hose and Connection Threads	D
43.5.	Administration (General)	
	1. Spare	
	* Reporting of Fires (see DRM 10-6 D/D 96)	
	2. Property Inspection for Fire Prevention and Protection	D
	3. Training Volunteer Fire Fighters	D
	4. Fire Protection Staff Training	D
	5. Emergency Services by Volunteer Fire Brigades	D
	6. Workmen's Compensation for Volunteer Fire-fighters	D

DRM 10-7/44 - Fire Prevention and Protection - Indian and
Inuit Affairs

This manual includes technical publications covering a wide variety of subjects aimed at providing adequate coverage in the areas of Fire Prevention, Fire Protection, Systems and Equipment and Administration with respect to Indian Communities on Reserves.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/44.1.	Management Summary	C
44.2.	Fire Prevention	
	1. Fire Prevention on Indian Reserves	C
	2. Native Housing Fire Safety Standards	C
44.3.	Fire Protection (see 43.3)	
	1. Catalogue of Films for Community Fire Protection	D
	2. Fire Protection Building Codes for Indian Reserves	D
	3. Fire Protection Program for Schools	B
	4. Fire Protection Standards in Child Care Facilities on Indian Reserves	C
	* Fire Exposure Protection (see 43.3.3)	
	* Fire Hazard Abatement in Outdoor Tanks Above Ground (see 43.3.3)	
44.4.	Systems and Equipment (see 43.4)	
44.5.	Administration (see 43.5)	

DRM 10-7/45 - Fire Prevention and Protection - Parks Canada

The aim of this manual is to provide technical publications covering the requirements for Fire Prevention in National Parks and National Historic Parks and Sites, with respect to safety of the visiting public and Parks Canada staff.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/45.1.	Management Summary	D
45.2.	Fire Prevention	
	1. Fire Prevention in National Parks	D
	2. Fire Prevention on Historic Sites	C
45.3.	Fire Protection (see 43.3)	
	1. Spare	
	2. Spare	
	3. Spare	
	4. Lightning Protection of Fire Alarm Systems in Historic Buildings	D
45.4.	Systems and Equipment (see 43.4)	
45.5	Administration (see 43.5)	

DRM 10-7/46 - Fire Prevention and Protection - Northern
Affairs

This manual comprises technical publications covering a wide variety of subjects aimed at providing coverage in the areas of Fire Prevention, Fire Protection, Systems and Equipment and Administration with respect to the Northern Affairs Program.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/46.1.	Management Summary	C
46.2.	Fire Prevention (see 43.2)	
46.3.	Fire Protection	D
46.4.	Systems and Equipment (see 43.4)	
46.5.	Administration (see 43.5)	

DRM 10-7/47 - Safety

The purpose of this manual is to provide a number of technical papers covering the safety of Indians residing on Reserves. It also covers construction safety for day-labour projects carried out on the Reserves as well as the public's safety in National Parks.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/47.1.	Management Summary	C
47.2.	Construction Safety - Projects Executed by Contract	C
47.3.	Construction Safety - Day-labour Projects	D
47.4.	Public Safety in Parks	D
47.5.	Home Safety - Indian Reserves	C
47.6. *	(Spare) Native Housing Fire Safety Standards (see 80.9.4.9)	
47.7.	Electrical Facilities Safe Practices Standards	B
47.8.	Guidelines for Hazardous Confined Spaces	B
47.9.	Containing Oil Spills in Fuel Storage Installation	C
47.10.	Use of Ground Fault Circuit Interrupters with Portable Power Tools	D

This manual covers the techniques and procedures involved in the design of a building project, from conception; development of requirements; retaining and briefing a consultant; reviewing and evaluating his work.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/76.1.	Management Summary	C
76.2.	Internal Design Procedures	
	1. Preparation of a Project Plan for Design and Construction (PPDC) for Building Projects	B
	2. Checklist for Pre-design Data for Building Projects	C
	3. The Preparation of a Building Project Design Brief for Contemporary Structures	C
	4. Incorporation of Artwork/Use of Native Artists in Building Projects	D
76.3.	External (DPW and Consultants) Design Procedures	
	1. Criteria and Procedures for Retaining Consultants	C
	2. Review of Submissions - Preliminary Design and Outline Specifications for Building Projects	C
	3. Review of Submissions - Working Drawings and Outline Specifications for Building Projects	C

NUMBER

SECTION

STATUS

76.4

- | | |
|--|---|
| 4. General Requirements
for Structural Plans
and Specifications
for Building Projects | D |
| 5. Post Evaluation of
Consultants'
Performance | D |
| 6. Consultants' Expenses | D |
| General Procedures | |
| 1. General Design and
Construction Procedures
for Building Projects | C |

DRM 10-7/77 - Estimating, Cost Data, Bills of Quantities
for Building Projects

This manual will develop methods and procedures for the preparation of Bills of Quantities and the preparation of Cost Estimates from them, and, as well, identify alternate methods of the preparation of Cost Estimates by other means. These would include methods based on general surface areas of proposed buildings, volume of buildings and on number of users.

The manual will not attempt to reproduce text books for student use on the subject in ultimate detail.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/77.1.	Management Summary	C
77.2.	Preparing Bills of Quantities (Building Projects)	C
77.3.	Use of Bills of Quantities	D
77.4.	Preparing Cost Estimates for Building Projects	C
77.5.	Life Cycle Costing for Building Projects	D
77.6.	Extraction and Production of Cost Data Bank on Building Projects	D
77.7.	Use of Cost Data Bank in Preparing Annual Estimates and Five-year Forecasts for Building Projects	D
77.8.	Capital Project Reporting System (Buildings)	D

DRM 10-7/78 - Building Projects Site Acquisition,
Investigation and Development

This manual provides technical advice on the criteria and data involved in selecting (or rejecting as unsuitable) sites; the subsequent investigation and obtaining of necessary data regarding site conditions and services required to proceed with design and construction of a building project.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/78.1.	Management Summary	D
78.2.	Environmental Considerations	C
78.3.	Criteria for Building Site Selection	D
78.4.	Investigation of Building Sites	D
78.5.	Geotechnical Surveys and Investigation	D

DRM 10-7/79 - Building Design - General

This manual consists of a collection of publications contained in manuals 80, 81 and 82 which are applicable to at least two of the Operational Programs. It has been created to eliminate the necessity of republishing the same publication under two or more different numbers.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/79.1.	Management Summary	D
79.2.	General Applications	
	1. Environmental Considerations for Buildings	C
	2. The National Building Code	B
	* Life Cycle Costing (see 77.5)	
	3. (Spare)	
	4. Energy Conservation in Buildings	C
	5. Design Feedback Systems (Post Evaluation of Buildings Projects)	D
	6. Building Design for Minimum Maintenance	D
	7. Design Criteria for Buildings Projects	C
	8. Effect on Using Day Labour Construction on Design of Building Projects	D
	9. Optimum Building Design for Fire Protection	D
	10. Design Standards for Northern and Remote Buildings	D
	11. Staff Housing (Space Standards)	C
	12. Staff Housing (Design Standards)	D

DRM 10-7/80 - Building Design - Indian and Inuit Affairs

The purpose of this manual is to provide Indian Bands and field officers with a Comprehensive Housing and Community Design resource document which will assist them in dealing with all aspects in the development of the Physical Community.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/80.1.	Management Summary	D
80.2.	General Applications (see 79.2)	
80.3.	Specific Applications	
	1. Community Buildings Space Standards	D
	2. Community Buildings Cost Data	D
	3. Community Buildings Design Standards	D
	4. Native Housing and Community Design Standards	D
	1. Introduction	C
	2. Guideline for the Planning and Physical Design Process for the Native Community	C
	3. Native Housing Design Criteria Based on Design Zones	C
	4. Native Housing Space Accommodation Standards	C
	5. Native Housing Construction Standards	C
	6. "House Designs" Volumes 1 to 5	C
	7. Housing Construction Methods and Optional Factory Component Systems	C
	8. Capital Costs of Housing	C
	9. Native Housing Fire Safety Standards	D
	5. Source List of Publications on Housing and Community Facilities	D

DRM 10-7/81 - Building Design - Parks Canada

This manual contains a series of papers dealing with the technical requirements and principles for designing DIAND buildings in general, plus some specific requirements for buildings in National Parks.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/81.1.	Management Summary	D
81.2.	General Applications (see 79.2)	
81.3.	Specific Applications	
	1. Preparation of Facility Appearance Guidelines for National Parks	B
	2. Design Criteria for Parks Canada Buildings	D
	3. Design Standards for Campground Buildings	D

DRM 10-7/82 - Building Design - Northern Affairs

This manual contains a series of papers dealing with the technical requirements and principles for designing DIAND buildings in general, plus some specific requirements and procedures for those in the North.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/82.1.	Management Summary	D
82.2.	General Applications (see 79.2)	
82.3.	Specific Applications	
	1. The Building Code for the North	C
	2. Procedures for Building Projects Development - Northern Affairs	D
	3. Design Guidelines for Northern Warehouse/ Garage	C
	* Foundation Design for Building in the North (see 84.3)	

DRM 10-7/83 - School Design and Construction Standards -
Indian and Inuit Affairs

This manual deals with technical criteria, requirements and procedures pertaining specifically to the design of Indian schools.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/83.1.	Management Summary	D
83.2. *	(Spare) Environmental Consideration for Buildings (see 79.2.1)	
83.3.	Project Definition, Standards and Guidelines for Design and Construction of Indian Schools	
	1. Term and Conditions for the Transfer of Education Capital Funds to Indian Bands	D
	2. (Spare)	
	3. Space Accommodation Standards for Schools	C
	4. School Design and Construction Standards	B
	5. Guideline Architectural Layouts for Schools	B
	6. Cost Indices for School Construction	C
83.4.	(Spare)	
83.5	Use of Provincial Standards for Schools	D
83.6	Site Development Planning for Schools	C

NUMBER

SECTION

STATUS

83.7.

Systems and Materials for
Schools

- | | |
|--|---|
| 1. Construction Systems
for Schools | C |
| 2. Use of Pre-engineered
Buildings for
Schools | C |
| 3. Selection of Gymnasium
Flooring Materials | B |
| 4. New Trends in Classroom
Lighting | D |
| 5. Intercom and Audio
Systems for Schools | D |

DRM 10-7/84 - Structural Design for Contemporary Buildings

This manual establishes the standard of structural design for Departmental contemporary building projects which include new buildings, alterations, renovations and additions. It also draws attention to the special conditions of construction in remote and isolated areas.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/84.1.	Management Summary	D
84.2.	Building Structure Design	C
84.3.	Foundation Design for Buildings in the North	D
84.4.	Foundation Design for Buildings	D
84.5.	General Requirements for Structural Plans and Specifications for Buildings	D

DRM 10-7/85 - Building Materials and Architectural
Technology

This manual deals with various types of groups of building materials in terms of their use for various purposes, their evaluation and assessment as to meeting technical requirements. It also deals with ways of combining various types of material to meet existing and new requirements, e.g., the new energy conservation standards.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/85.1.	Management Summary	D
85.2.	Building Materials	
	1. Building Materials and Components for Minimum Maintenance	D
	2. (Spare)	
	* Building Design for Minimum Maintenance (see 79.2.6)	
	3. (Spare)	
	* Design Feedback System (Post Evaluation of Building Projects) (see 79.2.5)	
	4. Building Finishes Guide	D
	5. Painting and Protective Coatings for Buildings	D
	6. (Spare)	
	* Selection of Gymnasium Flooring Materials (see 83.7.3)	
	7. Foamed Insulation (Special Considerations)	C
	8. Maintenance of Built-up Roofing	C
	9. Selection and Maintenance of Asphalt Shingles	D
	10. Selection of Flagpoles	C
	11. Non-combustible and Fire Retardant Fabrics	C

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
85.3.	Quality Assurance	
	1. (Spare)	
	* The National Building Code (see 79.2.2)	
	2. Industry Standards for Building Materials	B
	3. Qualified Products Lists (Building Products)	C
85.4.	Architectural Technology	
	1. Wall and Roof Construction for New Energy Conservation Standards	D
	2. Inverted Roofing	C
	* Construction Systems - Schools (see 83.7.1)	
	3. Acoustics in Buildings	

DRM 10-7/86 - Plumbing Services in Buildings

This manual sets the Branch's technical requirements for the quality, level and application of plumbing services installed in Departmental buildings. It relates these requirements to provincial, federal and municipal codes and regulations and graphically illustrates special applications indigenous to Departmental activities.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/86.1.	Management Summary	D
86.2.	Site Considerations (Plumbing)	C
86.3.	Source List of Plumbing Design, Construction and Maintenance	D
86.4.	Special Applications	
	1. Plumbing Venting System	C
	2. Self-Contained In-House Sewage and Waste Disposal Units	C
	3. (Spare)	
	4. Thawing Frozen Water Pipes with Electricity	C

DRM 10-7/87 - Space Conditioning in Buildings

This manual establishes a design logic system with step-by-step procedures to be followed by the engineer in the design of all environmental systems for Departmental buildings. It ensures (when followed) the selection of the most suitable and economic environmental systems by the design engineer after due consideration of all influencing factors.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/87.1.	Management Summary	D
87.2.	General	
	1. Environmental Considerations (HVAC)	D
	2. Life Cycle Costing	D
	3. Energy Conservation in Buildings	D
	4. Thermographic Investigation of Buildings	D
	5. Space Conditioning Systems for Buildings	C
87.3.	Heating	
	1. Choosing the Heating Fuel	C
	2. Instrumentation for Performance Evaluation of Environmental Systems for Buildings	D
	3. Space conditioning Systems for Special Building Types	D
87.4.	Ventilation	D
	1. Ventilation of Buildings for Human Occupancy	
87.5.	Cooling, Air Conditioning	D
	1. Humidification in Buildings	
87.6	Special Applications	
	1. Solar Heating - State of the Art	D
	2. Anti-Freeze in Heating Systems	D

DRM 10-7/88 - Electrical Systems in Buildings

This manual provides guidelines relating to building electrical and associated systems and assure good quality of design, consistent with function, enhance energy conservation and safety in the operation and maintenance of electrical facilities.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/88.1.	Management Summary	D
88.2.	Electrical and Lighting Systems - General	
	1. Energy Conservation - Electrical Systems in Buildings	C
	2. Standard Specification for Electrical Wiring in Small Residential Buildings	C
	3. (Space)	
	* Electrical Facilities Safe Practices Standards	
88.3.	Special Applications	
	1. (Spare)	
	* Lightning Protection of Fire Alarm Systems in Historic Buildings (see 43.3.4)	
	2. Intercom and Audio Systems	D
	* New Trends in Classroom Lighting (see 83.7.4)	

DRM 10-7/89 - Special Building Systems

This manual deals with a series of non-conventional types of complete or partial building systems which are applicable, or could be applicable, to the needs of DIAND. It describes and assesses the suitability of these systems.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/89.1.	Management Summary	D
89.2.	Guidelines for Selection of Temporary Buildings	B
89.3	Use of Pre-engineered Buildings - General	C
*	Use of Pre-engineered Buildings for Schools (see 83.7.2)	
89.4	(Spare)	
89.5.	Air-inflated Structures	D
89.6.	Prefabricated Wood Buildings	D
89.7.	Fibre Reinforced Plastic Building Systems	D
89.8.	Wood Basements for Housing	C

DRM 10-7/90 - Maintenance and Operation of Building
Facilities

This manual is comprised of papers dealing with the maintenance and operational aspects of building facilities and services. Individual papers under the headings of: maintenance management; maintenance and operation - general, mechanical systems, electrical systems, and fire prevention and protection systems will provide: requirements for design and maintenance; training material, policies, procedures, and practices for planning, scheduling, performing, and controlling related maintenance activities.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/90.1.	Management Summary	D
90.2.	Maintenance Management	
	1. (Spare)	
	2. Maintenance Operations	D
	3. Building Maintenance Management	D
	4. Custodial Management of Buildings	D
	5. Maintenance Quality Standards for Buildings	C
	6. Vandalism Prevention in Buildings	C
90.3.	Maintenance and Operation - General	
	1. Preventive Maintenance Inspection Procedures for Buildings	C
	2. Glue-laminated Timber Structures - Annual Routine Inspection	B
	3. Recommendations for Repainting Buildings	D
	4. (Spare)	
	5. (Spare)	
	* Maintenance of Built-up Roofing (see 85.2.8)	
	* Selection and Maintenance of Asphalt Shingles (see 85.2.9)	
	6. Housing Maintenance	C
	7. Maintenance and Operation of Non-conventional Waste Disposal Systems	C

DRM 10-7/94 - Miscellaneous Publications (Buildings and
Services)

TABLE OF CONTENTS

<u>NUMBER</u>		<u>SECTION</u>	<u>STATUS</u>
	*	Containing Oil Spills in Fuel Storage Installations (see 47.9)	
	*	Use of Ground Fault Circuit Interrupters with Portable Power Tools (see 47.10)	

CANALS ENGINEERING DIVISION

DIVISIONAL MANUALS WORK PLAN

CANALS ENGINEERING DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/113	Canal Locks
114	Bridges (Canals)
115	Docks and Walls (Canals)
116	Channels (Canals)
117	Dams (Canals)
118	Miscellaneous Publications (Canals)

DRM 10-7/113 - Canal Locks

This manual covers lock installations on the recreational canals and sets out in detail some of the more important engineering requirements in terms of the planning, operation and maintenance of these installations. They will serve the Regional staff and consultants as a guide in their work, and provide them with reference literature that is very specific in the area of canals engineering.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/113.1.	General	D
113.2.	Policies	D
113.3.	Engineering and Design	
	1. Painting of Steel in Canal Structures & Equipment	B
	2. Quality Control of Concrete Structures	C
	3. Quality Control of Steel Structures	D
	4. Lighting	D
	5. Grouting Methods and Materials	D
	6. Design Criteria for Canal Equipment	D
113.4.	Maintenance	
	1. Repainting of Steel in Canal Structures and Equipment	B
	2. Navigation Lock Operating Equipment	D
	3. Lubricants for Use in Canal Machinery	C
	4. Servicing of Canal Machinery	C
	5. Servicing of Canal Electrical Equipment	B
	6. Inspection and Use of Timber in Marine Structures	C
	7. Surface Repairs of Concrete Marine Structures	C

DRM 10-7/114 - Bridges (Canals)

This manual covers bridge installations on the recreational canals and sets out in detail some of the more important engineering requirements in terms of the planning, operation and maintenance of these installations. They will serve the Regional staff and consultants as a guide in their work, and provide them with reference literature that is very specific in the area of canals engineering.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/114.1.	General	D
114.2.	Policies	D
114.3.	Engineering and Design	
	* Painting of Steel (see 113.3.1)	
	* Quality Control of Concrete Structures (see 113.3.2)	
	* Quality Control of Steel Structures (see 113.3.3)	
	* Grouting Methods and Materials (see 113.3.5)	
	* Design Criteria for Canal Equipment (see 113.3.6)	
114.4.	Maintenance	
	1. (Spare)	
	* Repainting of Steel in Canal Structures and Equipment (see 113.4.1)	
	2. Maintenance of	D
	Operating Equipment for Movable Bridges	
	* Lubricants for Use in Canal Machinery (see 113.4.3)	
	* Servicing of Canal Machinery (see 113.4.4)	

NUMBER

SECTION

STATUS

- * Servicing of Canal
Electrical Equipment
(see 113.4.5)
- * Surface Repairs of
Concrete Marine
Structures
(see 113.4.7)

DRM 10-7/115 - Docks and Walls (Canals)

This manual covers dock/wall installations on the recreational canals and sets out in detail some of the more important engineering requirements in terms of the planning, building, operation and maintenance of these installations. They will serve the Regional staff and consultants as a guide in their work, and provide them with reference literature that is very specific in the area of canals engineering.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/115.1.	General	D
115.2.	Policies	D
115.3.	Engineering and Design	
	* Quality Control of Concrete Structures (see 13.3.2)	
	* Grouting Methods and Procedures (see 113.3.5)	
115.4.	Maintenance	
	1. (Spare)	
	* Inspection and Use of Timber in Marine Structures (see 113.4.6)	
	2. Inspection of Canal Banks	D

DRM 10-7/116 - Channels (Canals)

This manual covers channel installations on the recreational canals and sets out in detail some of the more important engineering requirements in terms of the planning, building, operation and maintenance of these installations. They will serve the Regional staff and consultants as a guide in their work, and provide them with reference literature that is very specific in the area of canals engineering.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/116.1.	General	D
116.2.	Policies	D
116.3.	Engineering and Design * Quality Control of Concrete Structures (see 113.3.2)	
116.4.	Maintenance * Inspection of Canal Banks (see 113.4.6) * Grouting Methods and Materials (see 113.3.6)	

DRM 10-7/117 - Dams (Canals)

This manual covers dam installations on the recreational canals and sets out in detail some of the more important engineering requirements in terms of the planning, building, operation and maintenance of these installations. They will serve the Regional staff and consultants as a guide in their work, and provide them with reference literature that is very specific in the area of canals engineering.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/117.1.	General	D
117.2.	Policies	D
117.3.	Engineering and Design	
	1. (Spare)	
	* Painting of Steel in Canal Structures & Equipment (see 113.3.1)	
	2. (Spare)	
	* Quality Control of Concrete Structures (see 113.3.2)	
	3. (Spare)	
	* Quality Control of Steel Structures (see 113.3.3)	
	4. Heating for Sluice Gates	C
	* Lighting at Locks and Dams (see 113.3.4)	
	* Grouting Methods and Materials (see 113.3.5)	
	* Design Criteria for Canal Equipment (see 113.3.6)	
117.4.	Maintenance	
	1. (Spare)	
	* Repainting of Steel in Canal Structures and Equipment (see 113.4.1)	
	2. Maintenance of Operating Equipment for Dams	D

NUMBER

SECTION

STATUS

- * Lubricants for Use in
Canal Machinery
(see 113.4.3)
- * Servicing of Canal
Machinery
(see 113.4.4)
- * Servicing of Canal
Electrical Equipment
(see 113.4.5)
- * Inspection and Use of
Timber in Canal
Structures
(see 113.4.6)
- * Surface Repairs of
Marine Concrete
Structures
(see 113.4.7)

DRM 10-7/121 - Miscellaneous Publications (Canals)

This manual will cover technical publications for a variety of activities that do not logically fall into other manuals. At the present time, only four publications have been identified but as the need arises, others will be added.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/121.1.	Guidelines for Restoration Intervention in Canals Work	D
	Evaluation of Capital Assets - Locks	D
	Evaluation of Capital Assets - Dams	D
	Evaluation of Capital Assets - Movable Bridges	D

TRANSPORTATION DIVISION

DIVISIONAL MANUALS WORK PLAN

TRANSPORTATION DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/96	Transportation Planning
97	Road Development - Design
98	Road Construction
99	Road Maintenance
100	Winter Roads
101	Traffic Control Devices - Parks Canada
102	Traffic Control Devices - Indian and Inuit Affairs
106	Miscellaneous Publications
108	Radio Equipment
109	Mobile Construction and Maintenance Equipment and Passenger Vehicles

DRM 10-7/96 - Transportation Planning

This manual provides a summary of the principles, objectives and procedures of transportation planning. It will provide the engineer, planner and responsible work-crew with a good comprehension of the planning, analyzing and decision-making processes. It will be used as a guide in the analysis of projects and the monitoring of development plans.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/96.1.	Management Summary	D
96.2.	Transportation Planning Process	
	1. General	C
	2. Indian and Inuit Affairs	C
	3. Parks Canada	C
	4. Northern Affairs	C
96.3.	Data Collection	
	1. General	C
	2. Indian and Inuit Affairs	C
	3. Parks Canada	C
	4. Northern Affairs	C
96.4.	Transportation Demand	
	1. General	D
	2. Indian and Inuit Affairs	D
	3. Parks Canada	D
	4. Northern Affairs	D
96.5.	Transportation Alternatives	
	1. General	D
	2. Indian and Inuit Affairs	D
	3. Parks Canada	D
	4. Northern Affairs	D

NUMBER

SECTION

STATUS

96.6.

Performance Measurements

- | | |
|--------------------------------|---|
| 1. General | D |
| 2. Indian and Inuit
Affairs | D |
| 3. Parks Canada | D |
| 4. Northern Affairs | D |

DRM 10-7/97 - Road Development - Design

This manual contains road planning and design principles, standards and guidelines and is intended for the use of departmental administrators, planners and design engineers involved in road development and design. It describes the planning, classification, inventory and detail project design of the Northern, Parks and Indian Reserve Roads.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/97.1.	Management Summary	D
97.2.	Planning and Design of Transportation Facilities	
	1. Transportation Facility Development Sequence	C
	2. Road Design Requirements	C
97.3.	Classification System & Geometric Design Standards	
	1. Indian Reserve Roads Classification System and Geometric Design Standards	B
	2. Parks Roads Classifi- cation System and Geometric Design Standards	B
	3. Northern Development Roads Classification System and Geometric Design Standards	B
	4. Design Standards	
	1. Roadway Detail Design	
	2. Structural Design	
	a. Road Pavement Structural Design	C
97.4.	Inventory and Evaluation	
	1. Indian and Inuit Affairs	C
	2. Parks Canada	C
	3. Northern Affairs	C
97.5.	Project Design Guidelines	
	1. Air-photo Interp/ Mapping	D
	2. Geotechnical Surveys and Investigations	C
	3. (Spare)	

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
	4. Selection of Pavement Types	C
	5. Highway Drainage Design	D
	6. Railway Crossings	D
	7. Relocation of Utilities	D
	8. Roadside Safety	C
	9. Roadside Treatment	D
	10. Cost Estimation	D
	11. Review of Roadway Design	D
	12. Parking Areas	D
97.6.	Quantity Computation for	D
97.7.	Materials	D
97.8.	Sundry Construction	D
97.9.	Special Provisions	D
97.10.	Technical Aspects of Contract Documents	D
97.11.	Contract Drawings	D
97.12.	Appendices	
	1. Simulated 3 Dimensional Computer Graphics for Highways	C
	2. Road Design, Construction, Maintenance in SI (Metric) Units	B
	3. Electronic Computations	D
	4. Tables	D
	5. Abbreviations	D
	6. Bibliography	D

DRM 10-7/98 - Road Construction

This manual is issued as an aid to personnel for carrying out supervision of road construction. It is intended to fulfill the need for general guidelines in the field of road construction and serve as a consolidated source of reference material.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/98.1.	Management Summary	D
98.2.	Organization and Functions	C
98.3.	Construction Survey and Layout	C
98.4.	Quality Control and Duties	C
98.5.	Records and Control	C
98.6.	Progress/Final Measurements	D
98.7.	Preparation/Submission of Progress Claim	D
	Appendices	D

DRM 10-7/99 - Road Maintenance

This manual is intended for the use of Maintenance supervisors in Parks Canada and Indian and Inuit Programs. It identifies road maintenance tasks and the accepted method of fulfilling them.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/99.1.	General	D
99.2.	Indian and Inuit Affairs	D
99.3.	Parks Canada 1. Maintenance Quality Standards for Roads	D
99.4.	Northern Affairs	D

DRM 10-7/100 - Winter Roads

This manual is intended for the use of administrators, engineers and planners, primarily in the Indian and Inuit Program. It will provide guidelines for the construction and maintenance of winter roads.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/100.1.	Management Summary	D
100.2.	Design	D
100.3.	Construction	D
100.4.	Maintenance	D

DRM 10-7/101 - Traffic Control Devices - Parks Canada

This manual provides information, standards and design procedures for establishing traffic control devices on transportation facilities, to control and regulate vehicular and pedestrian traffic within National Parks.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/101.1.	Management Summary	D
101.2.	Control Devices	D
101.3.	Traffic Signs	D
101.4.	Markings	D
101.5.	Traffic Signals	D
101.6.	Signs-Construction and Maintenance	D

DRM 10-7/102 - Traffic Control Devices - Indian and Inuit
Affairs

This manual provides information and standards for erecting traffic control devices to regulate vehicular traffic on roads with Indian Reserves.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/102.1.	Management Summary	D
102.2.	Control Devices	D

DRM 10-7/106 - Miscellaneous Publications (Transportation)

This manual deals with miscellaneous publications which are not easily placed in other manuals.

"Recall Notices" deals with equipment engineering deficiencies subject to correction by manufacturers' dealers.

The "Rust Prevention" publication will instruct operating staff on necessary treatments to combat rust and extend equipment life.

The "Battery Charging" publication covers construction and equipment of battery-charging facilities. It includes charging safety precautions.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/106.1.	Recall Notices	D
106.2.	Rust Prevention	C
106.3.	Battery Charging Facilities	C

DRM 10-7/108 - Radio Equipment

This manual provides guidance for the responsibility managers and technical staff in our National and Historic Parks regarding the purchase, supply, installation, maintenance and operation of their radio communication systems.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/108.1.	Management Summary	D
108.2.	Regulations	B
108.3.	General Technical	D
108.4.	Design	D
108.5.	Installation	D
108.6.	Operations	D
108.7.	Maintenance	C

DRM 10-7/109 - Mobile Construction and Maintenance
Equipment and Passenger Vehicles

This manual covers all aspects of administration and operations and gives general direction in the areas of maintenance and safety. The contents apply to all departmental personnel who control, administer, operate, repair or use equipment.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/109.1.	Management Summary	D
109.2.	Criteria for Supply	D
109.3.	Operation/Maintenance	D
109.4.	Equipment Management Manual	B
*	Motor Vehicle Policy (D/D 38)	

POLICY AND PLANNING DIVISION

DIVISIONAL MANUALS WORK PLAN

POLICY AND PLANNING DIVISION

Manual Summary

IDENTIFICATION

NUMBER
DRM 10-7/10

TITLE
E&A Resource
Standards

DRM 10-7/10 - E&A Resource Standards

This manual is a planning tool to assist managers to identify, quantify and justify the human resources required to carry out a given capital and maintenance program.

It will contain charts and graphs showing salary dollars and man-years needed to deliver the various stages and types of capital and non-capital work.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/10.1.	Management Summary	C
10.2.	Definitions	C
10.3.	Regional Standards and Guidelines	C
10.4.	Program Standards and Guidelines	C
10.5.	National Standards and Guidelines	C

TECHNOLOGICAL DEVELOPMENT DIVISION

DIVISIONAL MANUALS WORK PLAN

TECHNOLOGICAL DEVELOPMENT DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/21	Technical Development Function
22	Standard Practices for System Development
24	Departmental Asset Inventory System
25	Maintenance Management
26	Engineering Cost Analysis
27	Network Planning and Analysis
28	Functional Review and Evaluation
29	Miscellaneous Publications (Technological Development)

DRM 10-7/21 - Technical Development Function

The role of the technical development function is to provide specialized assistance to technical specialists within the department who are seeking solutions to unique problems. The manual will provide the potential user with descriptions of the services provided and how to use them.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/21.	1.0 Scope	B
	2.0 Technical Information Service	B
	3.0 Bulletin	B
	4.0 Technical Assistance Service	B

DRM 10-7/22 - Standard Practices for Systems Development

The most commonly found weakness in system development assignments, particularly lengthy assignments involving many people, is a lack of understanding of the essential phases of the system development process and the work content of each. The objective of this document is to define the process, the terminology and the responsibilities of all parties involved in it.

In recognition of this problem, but quite independent of this Branch, Management Systems Branch retained a system consultant for this very reason. The output of this contract was a document entitled the System Life Cycle which, with some modification will meet E&A needs.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/22.	1.0 Management Summary	C
	2.0 Application of the System Life Cycle to Systems Development	C
	3.0 System Life Cycle	C
	4.0 Glossary of Terms	C

DRM 10-7/24 - Departmental Asset Inventory System

Some months ago a management decision was taken to establish an inventory of the capital assets owned and leased by the Department. The inventory system manual will document all procedures associated with the operation and maintenance of the system itself. With documentation of this nature, users in the Regions will be able to make use of the system as required, and to maintain their own inventory records independently of E&A Headquarters and the other user Regions.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/24.	1.0 Management Summary	C
	2.0 Definitions	C
	3.0 Authority and Responsibility	C
	4.0 System Description	C
	5.0 Inputs	C
	6.0 Processing	C
	7.0 Reporting	C
	8.0 Special Retrievals	C
	9.0 System Operating Instructions	C
	10.0 Trouble Shooting	C
	Appendices - Description of Each Asset Classification	C

DRM 10-7/25 - Maintenance Management Manual

This manual is intended for use as a reference document for those concerned with the operation and maintenance of Departmental capital assets. The manual contains a comprehensive description of the system to be used for planning, scheduling, controlling and reporting on preventive and emergency maintenance of assets. The maintenance management system and its component sub-systems are discussed in detail as are levels of service, average production standards, work programming, budgeting and forms applicable.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/25.1.	Management Summary	C
25.2.	Definitions	C
25.3.	Identifications of Significant Main- tenance Activities	C
25.4.	Maintenance Management System	C
25.5.	Maintenance Standards	C
25.6.	Parks Canada Program	C
25.7.	Indian and Inuit Affairs Program	C
25.8.	Northern Affairs Program	C

*Contract man-days from outside consultants.

DRM 10-7/26 - Engineering Cost Analysis

The objectives of the Engineering Cost Manual are to provide:

1. Senior management with the necessary cost data for verifying estimates, establishing priority, and more generally for assisting in the investment decision process;
2. Project managers and financial planners with a readily-useable cost data base from which planning estimates and cost benefit analyses of future projects can be made;
3. The Native People with a simple tool for assisting in the evaluation of community planning options; and,
4. Provide the Treasury Board with cost-estimating information.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/26.1.	Departmental Summary	C
26.2.	Indian-Inuit Affairs Program	C
26.3.	Parks Canada Program	C
26.4.	Northern Affairs Program	C
	(Semi-Annual Additions to the Cost Analysis Manual Plus Updates to 26.1 to 26.4)	

NOTE: The index for each section (1-4) will follow the DAIS coding system for items pertaining to each specific program.

DRM 10-7/27 - Network Planning and Analysis

The purpose of this manual is to provide departmental managers with an introduction and guide to network planning. It outlines the concepts, objectives, and mechanics of the network planning system, and also includes brief discussions of the project types that can most benefit from its use, the various networking techniques in common use and the steps involved in the networking process. The primary intent of the manual is to provide a useful tool for planning, monitoring, reporting and evaluating the physical and financial status of those projects the nature of which demands the application of more than the simpler planning and scheduling techniques.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/27.	1.0 Management Summary	B
	2.0 Identification of the Need for Network Analysis	B
	3.0 Types of Network Techniques	B
	4.0 The Network Planning and Analysis Process	B
	5.0 Recommended Reading	B

DRM 10-7/28 - Functional Review and Evaluation

One of the responsibilities of E&A Branch is to establish technical policy, standards and guidelines pertaining to capital projects, procurement, development and maintenance within DIAND. The objectives of functional review and evaluation are twofold: to assess the suitability and effectiveness of the policy, standards and guidelines and to estimate the extent to which they are adhered in the Regions. The manual describes the manner in which these objectives will be met. Specifically it contains the policy, objectives and philosophy of review and evaluation, and details the methods in which they will be implemented.

TABLE OF CONTENTS

<u>NUMBER</u>		<u>STATUS</u>
DRM 10-7/28.	1.0 Management Summary	B
	2.0 Introduction	B
	3.0 Definition of Functional Review	B
	4.0 Policy	B
	5.0 Procedures	B
	6.0 Program for Policies and Standards	B
	7.0 Functional Review of Technical Activities	B
	8.0 Functional Review of Facilities	B

DRM 10-7/29 - Miscellaneous Publications

Time allocated for the preparation of publications which were not identifiable at the time the Work Plan was compiled. A portion of these man-days will also be devoted to assisting other Divisions in the preparation of their assigned manuals.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/29		

CO-ORDINATION SERVICES DIVISION

DIVISIONAL MANUALS WORK PLAN

CO-ORDINATION SERVICES DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/2	Branch Publications
9	E&A Human Resources
14	Emergency Planning
15	Energy Conservation
16	Metric Conversion

DRM 10-7/2 - Branch Publications

This manual sets out the detailed responsibilities and procedures for the development of Branch publications from initiation of preliminary drafts through to promulgation. It establishes the Branch identity and physical characteristics of publications (i.e., size, colour, formats and numbering systems).

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/2.1.	Management Summary	C
2.2.	Identification System for Branch Publications	B
2.3.	Procedures for Maintaining the Technical Manuals Master Plan	B
2.4.	Developing Publications - Part I - Policy, Standards and Guidelines	B
2.5.	Developing Publications - Part II - Reports	B
2.6.	Translation	B
2.7.	Printing	B
2.8.	Distribution	B
2.9.	Up-dating of Publications	C
2.10.	Use of SI (Metric) in all E&A Branch Publications and Correspondence	B
2.11.	Authors' Credit Lines in E&A Branch Publications	D

DRM 10-7/9 - E&A Human Resources

The manual covers a variety of subjects related to the management, development and utilization of technical human resources within the Department.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/9.1.	Management Summary	C
9.2.	Technical Training Program	
	1. Outline of the technical training Program	C
	2. Guidelines for Conference Co-ordinators	B
	3. Guidelines for Course Co-ordinators	C
9.3.	(Spare)	
9.4.	(Spare)	
9.5.	Resource Utilization Reporting System	B
9.6.	(Spare)	
9.7.	Technical Resources Inventory	B
9.8.	Professional and Technical Advisory Services	B

DRM 10-7/14 - Emergency Planning

This manual defines and establishes the role that DIAND will play in support of crisis handling within the federal government. It will contain guidelines for the development of contingency plans by the Programs (H.Q. and Regions) and guidance on levels and percentages of shared Federal/Provincial emergency financial assistance.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/14.1.	Management Summary	D
14.2.	Policy	C
14.3.	Emergency Planning Guidelines	C
14.4.	Guidelines on Levels and Percentage of Shared Federal/ Provincial Funding	C

DRM 10-7/15 - Energy Conservation

This manual establishes the Department's position with respect to energy conservation within the Federal Government. It contains the accumulation of energy conservation policy statements as issued by Parliament, Treasury Board, EMR and DIAND. The manual sets out the identity, objectives, responsibilities and functions of short- and long-term energy consumption reporting systems. A number of technical publications relating to energy conservation are also cross-referenced in the Table of Contents.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/15.1.	Management Summary	D
15.2.	Departmental Policy - In-house Energy Conservation Program	B
15.3.	Energy Conservation - Buildings	
	1. (Spare)	
	* Energy Conservation in Buildings (see 79.2.4)	
	2. Energy Conservation in New Building Design	C
	* Life Cycle Costing for Buildings (see 77.5)	
	* Wall and Roof Construc- tion for New Energy Conservation Standards (see 85.4.1)	
	* Solar Heating - State of Art (see 87.6.1)	
	* Energy Conservation - Electrical Systems in Buildings (see 88.2.1)	
	3. Specification: Energy Conservation for Departmental Buildings	D
15.4.	Energy Conservation - Equipment	
15.5.	(Spare)	
15.6.	Short-term Energy Consump- tion Reporting System	C

STATUS

15.7.	Long-term Energy Consumption Reporting System	C
15.8.	Spare	
15.9.	Energy Consumption Budgeting and Control (Energy Consumption Management)	
	1. Theoretical Energy Requirements for Buildings	D
	2. Performance Measurement	D
15.10.	Energy Conservation Catalogue (State of the Art)	D

DRM 10-7/16 - Metric Conversion

This manual establishes the Department's policy regarding metric conversion and sets out a Departmental plan for the conversion of its activities. A number of technical publications relating to metric conversion are also cross-referenced in the Table of Contents.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/16.1.	Management Summary	C
16.2.	Metric Conversion (Departmental Plan)	B
16.3.	Materials and Equipment in SI (Metric) Sizes	C
*	Metric Consideration in Site Development (see 60.13.2)	
*	Conversion to the Inter- national System of Units for the Recording of Historic Sites and Structures (see 123.8)	
*	Use of SI (Metric) in all E&A Branch Publications and Correspondence (see 2.10)	

CONTRACTS AND CAPITAL PROGRAM DIVISION

DIVISIONAL MANUALS WORK PLAN

CONTRACTS AND CAPITAL PROGRAM DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/34	Project Management
35	Construction Contract Management
36	Contracting (Non-construction)
37	Contracting Guidelines for Band Councils
38	Master and Guideline Specifications in DIAND
42	Miscellaneous Publications (Contracts and Capital Program)

DRM 10-7/34 - Project Management

This manual is designed to give a general understanding of project management to all departmental staff who have an interest or involvement in the Capital Program. As well, the manual provides more detailed information on project development and specific systems for those officers directly concerned with a particular project.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/34.	1.0 Introduction	B
	2.0 The Project Development Process	B
	3.0 Systems	B

DRM 10-7/35 - Construction Contract Management

This manual is a guideline for departmental contracting authorities carrying out construction by contract. Its purpose is to acquaint departmental employees with the ethical and common practices of the construction industry and to assist them in planning, preparing, supervising and administering construction contracts which protect the contractor's interests as well as those of Her Majesty, both of which must be protected to effect a good contract.

The manual is divided into three parts:

- Phase I - Contract Administration
- Phase II - Construction Phase, Contract Method
- Phase III - Day Labour Construction

The appendices at the end of each part consist of samples of applicable approved forms pertaining to each section. As these forms are examples only, they may have to be modified to cover specific situations. All forms included in the appendices are listed in the Table of Contents preceding each stage.

Contracting should ensure that public monies are spent fairly. These procedures allow the contracting authority to get the best value for funds spent.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/35.1.	Phase I - Contract	C
35.2.	Administration	
	Phase II - Construction	C
35.3.	Phase, Contract Method	
	Phase III - Day Labour	C
*	General Design and Construction Procedures for Building Projects (see 76.4.1)	

DRM 10-7/36 - Contracts (Non-Construction)

This manual is being prepared to incorporate guidelines which will acquaint employees with the ethical and effective practices and methods involved in planning, preparing and administering contracts relating to such non-construction contracts as:

- Cost-sharing and Grant Arrangements
- Consulting Contracts
- Non-consulting Service Contracts

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/36.1.	Management Summary	D
36.2.	Policy	D
36.3.	Engineering and Architectural Consulting Contracts	C
36.4.	Non-Consulting Service Contracts	C
36.5.	Expert Services Contracts	D
36.6.	Service Contracts	D
36.7.	Cost-sharing and Grants	C
36.8.	Revenue Contracts	D

DRM 10-7/37 - Contracting Guidelines for Band Councils

The purpose of this manual is to acquaint Band Councils with the ethnical and common practice generally followed in the design and construction industry. It is the intention of this document to assist Band Councils in arranging design and construction contracts, in which not only are their interests properly protected but also the interests of the contractor, both of which are essential in reaching a good contractual arrangement.

In addition to the guidelines, Appendix "A" found at the end contains examples of various forms used in the contracting process. The Band may wish to use all or any of these documents. On the other hand, they may choose to prepare their own forms and if preparing contract forms, it is recommended legal assistance be obtained.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/37.	1.0 Interpretation	B
	2.0 Contract	B
	3.0 Pre-tender Considerations	B
	4.0 Tender Call	B
	5.0 Tender Documents	B
	6.0 Tender and Contract Security	B
	7.0 Insurance Requirements	B
	8.0 Amendments During Tender Call	B
	9.0 Receipt and Retention of Tenders and Amendments	B
	10.0 Return of Tenders	B
	11.0 Tender Opening	B
	12.0 Evaluation and Technical Assessment of Tenders	B

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
13.0	Conflict of Interest	B
14.0	Award of Contract	B
15.0	Failure to Sign a Contract	B
16.0	Changes in the Work	B
17.0	Progress Payments	B
18.0	Performance of Contracts	B
19.0	Warranty	B
20.0	Delays in Completion	B
21.0	Default by Contractors	B
22.0	Remedial Action - Non- performance Taking the Work Out of the Contractor's Hands	B
23.0	Contract Termination	B
24.0	Records	B
Appendix 37-1	List of Applicable Documents	

DRM 10-7/38 - Master and Guideline Specification in DIAND

This manual will be designed to incorporate guidelines outlining the proper and effective use of the Canadian Government Master Specifications in the various DIAND Capital Programs.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/38.1.	System Description	D

DRM 10-7/42 - Miscellaneous Publications (Contracts and
Capital Program)

This manual will cover technical guidelines for a variety of activities that do not logically fall into other manuals. At the present time only four guidelines have been identified, but as the need arises, others will be added.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/42.1.	Guidelines for Construction Management by Band Councils	C
42.2.	Guidelines for Construction Inspection by Band Councils	C
42.3.	Guidelines for Use of Bill of Quantities in Ordering Materials	C
42.4.	Guidelines for Use of Contract Management Manuals (Construction) by Band Councils	D
42.5.	Delegation of Contracting Authority	B
42.6. *	(Spare) Procedure for Review and Processing of Treasury Board Submissions (see 8.2)	
42.7.	Guideline for Preparation of Project Completion Report	D

TECHNICAL DATA SERVICES DIVISION

DIVISIONAL MANUALS WORK PLAN

TECHNICAL DATA SERVICES DIVISION

Manual Summary

IDENTIFICATION

<u>NUMBER</u>	<u>TITLE</u>
DRM 10-7/4	Technical Documents Management System
51	Aerial Photography/ Photogrammetry Services
52	Control Surveys Services
53	Large Scale Topo- graphical Mapping Services
54	Air Photo Interpretation Services
123	Heritage Recording
124	Infotheque, Data Storage and Retrieval

DRM 10-7/4 - Technical Documents Management System

This manual details the procedures and guidelines for the management of Branch technical documents from document identification through document reproduction. The system includes: coding, microfilming requirements, standards, storage and retrieval and reproduction methods.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/4.1.	Management Summary & Policy	C
4.2.	Drawing and Related Technical Documents Identification System	C
4.3.	Standards for Drawings	C
	1. Drawing Format	B
	2. Half Size	C
	3. Symbols	C
4.4.	Microfilming	C
4.5.	Storage and Retrieval	
	1. Archival Storage	C
4.6.	Reproduction	C

DRM 10-7/51 - Aerial Photography/Photogrammetry Service

This manual sets out the detailed responsibilities and procedures for the acquisition of existing or new aerial photography, mosaics and photo maps, and photogrammetry.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/51.1.	Management Summary	C
51.2.	Existing Aerial Photography	C
51.3.	New Photography	C
51.4.	Mosaics and Photo Maps	C
51.5.	Photogrammetry	C

DRM 10-7/52 - Control Surveys Services

This manual sets out the detailed responsibilities and procedures for the acquisition of survey control for the production of large scale topographical mapping.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/52.1.	Management Summary	C
52.2.	Planning the Survey Network	C
52.3.	Field Work	C
52.4.	Field Data Reduction	C
52.5.	Co-ordinate Systems and Map Projections	C
52.6.	Application of Control Surveys.	C

DRM 10-7/53 - Large Scale Topographical Mapping Service
Manual

This manual sets out the detailed responsibilities and procedures for the acquisition of large scale topographical mapping for Parks, Indian Reserves or settlements in the North.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/53.1.	Management Summary	C
53.2.	Policy	C
53.3.	Specifications	C
53.4.	Contract Negotiations	C
53.5.	Monitoring	C
53.6.	Receipt, Payment, Delivery	C

DRM 10-7/54 - Air Photo Interpretation Service Manual

This manual sets out the detailed responsibilities and procedures for the acquisition of Photo Interpretation studies of areas in Parks, Indian Reserves or Northern Settlements.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/54.1.	Management Summary	C
54.2.	Policy	C
54.3.	Specifications	C
54.4.	Contract Negotiations	C
54.5.	Monitoring	C
54.6.	Receipt, Payment, Delivery	C

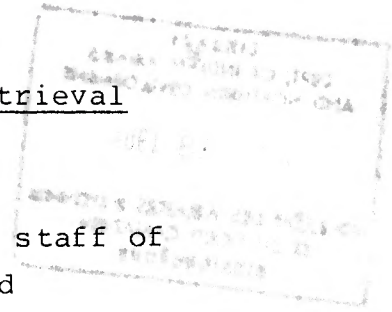
DRM 10-7/123 - Heritage Recording

This manual will cover most aspects of Extant Recording of historical sites and structures that have been dealt with by E&A Branch since 1968. It will provide Headquarters and Regional Extant Recorders with standards and guidelines as a basis for current recording projects and for future development in this field of work. It should also provide specialists involved in the "Conservation Process" with a detailed understanding of the present Departmental recording service.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/123.1.	Introduction	B
123.2.	Scope of Work	D
123.3.	Recording Techniques	D
123.4.	Types of Heritage Records	C
123.5.	Future Heritage Recording Requirements	D
123.6.	Request for Heritage Recording Services	D
123.7.	Documents Control (Up-dating 1980/81)	C
123.8.	Conversion to the International System of Units for the Recording of Historic Sites and Structures	C

DRM 10-7/124 - Infotheque, Data Storage and Retrieval



This manual is designed to instruct interested staff of the E&A Branch in the operation of computerized information storage and retrieval system called Infotheque.

TABLE OF CONTENTS

<u>NUMBER</u>	<u>SECTION</u>	<u>STATUS</u>
DRM 10-7/124.1.	Infotheque Guide	C
124.2.	Technical Reference Library	D