

SECTION 3 - GUIDELINES FOR ROADWAY PROJECTS

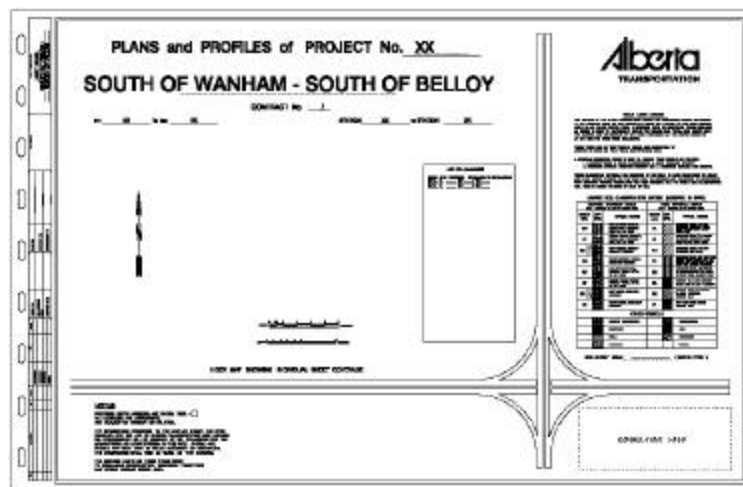
3.1 GENERAL

- The use of tables is encouraged where items can be listed in one area rather than having them scattered all over the drawing (e.g., culvert tables with plan-profiles, 3 centre curve tables on intersection plans).
- The tops of the text used for legal land description should always face North. The tops of all other words, figures, text, labels, etc., should face the direction of increasing chainage which is generally North or East on highways in Alberta.

3.2 PLAN SHEET FORMAT

- All plans shall have appropriate sheet surrounds and title blocks. The current standard sheets are located on the ftp site. Information within title blocks should be centred and balanced.

3.2.1 TITLE SHEET (CELL NAME: AC-TITLE)



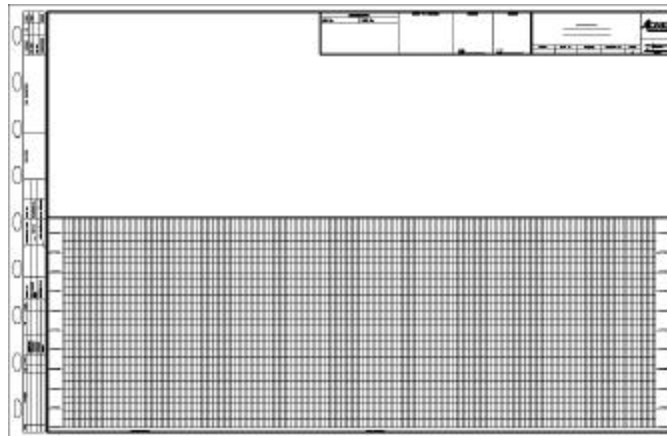
- Title sheets are to be prepared for all projects that have more than two plan-profile sheets. The following information shall be included on the title sheet:
 - Project Number (Highway and Control Section)
 - Geographic Location (Name place as per contract description)
 - km to km
 - Station to Station

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

- Index map showing individual sheet coverage or a location map. Map must show section, township and range information as well as area of construction, grading limits/km posts, surrounding topographical features and highway number(s)
- Bar scale and north arrow.
- List of drawings
- Notes regarding proposed borrow pits, disclaimer, grading limits, soils logs legend, soil survey taken date
- If project is done by a consultant, the company logo shall be placed in the bottom right corner
- Contract Number (Needs to be added to the Title Sheet)
- Since mosaic plan-profiles and overhaul diagrams pertain to grading and earthwork, identify limits of permanent construction by using GRADING LIMIT. This wording appears to be the most suitable and flexible for the many situations encountered. If "Grading Limit" is used to define the limits of any numbered roadway, the station and km information will be included with it. If "Grading Limit" is used to define limits on minor unnumbered roadways, only the station information need be attached. In addition the following general note will appear on all mosaic plan-profile title sheets:

THE GRADING LIMITS SHOWN ON THESE PLANS
REFERS TO PERMANENT CONSTRUCTION.
TEMPORARY TRANSITIONS MAY EXTEND BEYOND THESE LIMITS.

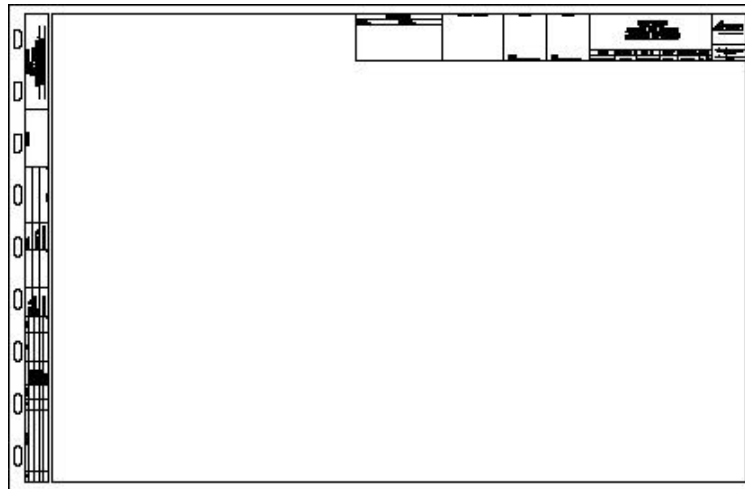
3.2.2 PLAN PROFILE (CELL NAME: MS5000 FOR 1:5000 SCALE) (CELL NAME: MS2000 FOR 1:2000)



SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

- Plan-Profiles are to be prepared by utilizing the top half of the sheet for the plan view while the bottom half is used with a grid for all profile details. It should be noted that the grid sheet used for 1:5000 scale profiles is not suitable for 1:2000 or 1:1000 scale profiles and the appropriate grid shall be used. The horizontal scale for the profile and the plan view should be the same. See [Section 5.1](#) for a Plan Profile Check List.
- The “As-Tendered” and “As-Built” mylars must have all the horizontal grid lines and the .5m and 1m vertical grid lines plotted.
- Alberta Transportation will supply mosaics (aerial photography images) if they are available . If new mosaics are required, refer to Terms of Reference Schedule 1 Mosaic Production in [Section 5.3](#).
- If mosaic images are used, the image may be turned off before any 11" x 17" (one half size) pdf plots are produced for tendering purposes. The fine grid lines on the profile portion may also be turned off when creating pdf plots for tendering.

3.2.3 CROSS-SECTIONS/MASS HAUL/MISCELLANEOUS (CELL NAME: MS22X34)



- As many typical (or specific) cross-sections should be drafted as necessary for a given project. If only one or two cross-sections are required, they can be placed in a blank area on a plan-profile sheet; if more are required a separate sheet should be used to show all cross-sections. Typical should be representative of the project and take into consideration such things as the old road, special ditches, etc. All typicals should show cut and fill details. If typicals are not drafted to scale, (1:200 horizontal, 1:100 vertical), they should at least be proportional. The “PROFILE GRADE” point is to be shown and labeled. Plan-profiles deal mainly with subgrade construction, therefore details of

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

surfacing can be kept to a minimum. (Surfacing details are shown on small plans that accompany the contract map in the tender document).

- Mass haul diagrams shall be prepared when required, showing free-haul (300 m) information and km posts. Since the length of projects and the material quantities vary, there are no set horizontal and vertical scales, however some recognizable scales should be utilized and their values noted on the bar scales.
- Special detail plans may be required on some projects. This sheet can be utilized to show any number of items that can not be placed on the plan-profile sheets. Examples are unique borrow pit areas, modified drainage structures, geotechnical sites, landscaping details, clearing and timber salvage areas, stream diversions, drainage ditches, etc.
- Soils logs and/or muskeg probes may be plotted on separate sheets if there is not enough room on the main plan-profile sheets. The logs should be placed in the same direction as the plan profile sheets in order of increasing chainage. The vertical scale shall be the same as the profiles.

3.2.4 CULVERT TABLES (CELL NAME: MSCSP)

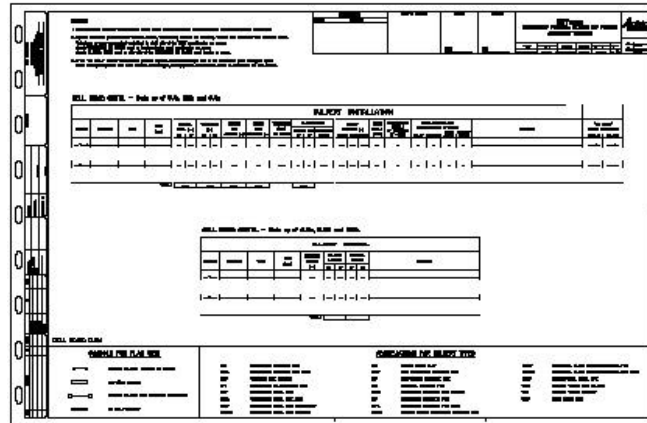
CULVERT TABLE - 1000 TO 1000000					
CHAINAGE	CULVERT TYPE	LENGTH	DEPTH	DRAINAGE	REMARKS

CULVERT TABLE - 1000 TO 1000000					
CHAINAGE	CULVERT TYPE	LENGTH	DEPTH	DRAINAGE	REMARKS

- Culvert tables shall be used on all projects over 5 kilometres in length. The plan view on the plan-profile sheet should only show the appropriate symbol and station. The balance of the information, including any remarks necessary to clarify details, should be shown in the tables.
- On projects that are less than 5 kilometres in length, all notes referring to culverts may be put directly on the plan view of the plan-profile sheet.

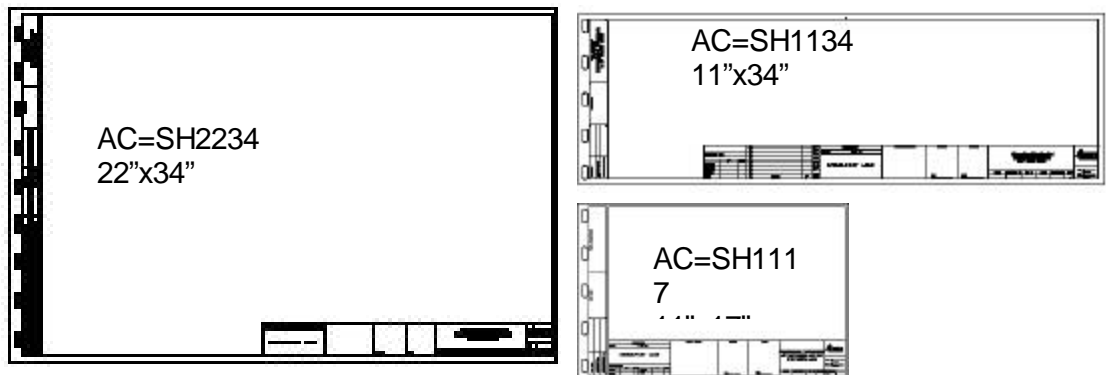
SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

3.2.5 STORM SEWER TABLES (CELL NAME: MSSTRM)



- Storm sewer tables should be utilized on any project where storm sewer work is proposed. Only the necessary symbols and item numbers need to be shown on the plan view.

3.2.6 INTERSECTIONAL TREATMENT PLAN (CELL NAME: SH2234, SH1134, OR SH1117 DEPENDING ON THE SIZE REQUIREMENTS FOR THE DRAWING) CAN BE USED FOR ANY OF THE FOLLOWING PLAN TYPES



- Intersectional treatment plans are required on the majority of highway projects. Plans are generally drafted to a scale of 1:1000; however, plans of 1:500 and 1:2000 are not uncommon. The digital base from this plan can also be used for the following types of plans: plan-profiles, painting, signing, signalization, lighting, railway crossing and utility. Only one intersectional treatment per sheet is permitted. For the purpose of plotting 2 – 11 x 34 drawings can be plotted as one sheet as long as each intersection plan has its own complete sheet surround so they can be separated and filed upon receipt at Alberta Transportation. In the case of an Intersectional treatment revision or upgrade the entire intersection must be included in the new plan with all geometry information shown. Finished pavement widths to be shown.

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

- Interchange Plans - The notes above apply, however, interchanges require more detail. It is desirable to draft the entire interchange as one complete plan, then clip it into sections for plotting on 22" x 34" sheets. In the case of a revision to an existing interchange the new plan should show the entire interchange with references to new construction. The consultant should request a copy of the existing digital CAD file to use as a base to facilitate showing the entire interchange easily.

The grade separation necessitates the inclusion of profiles for the ramps. Plan profiles for interchange ramps are to be shown on plan profile sheets and included in the plan set with IN- numbering. Cross-section and other plans pertaining to the interchange shall also be included in this plan set. Interchange plans used for base and paving or paving will have construction limits defined by using "SURFACING LIMIT" as required.
- Signing plans and pavement marking plans may be required for unique intersections or special areas that are not covered by standard drawings in the "Traffic Control Standards" or "Pavement Marking Guide. Diagrams showing the location of overhead sign structures may be required, however, the design of the structure itself is handled by Bridge Engineering staff.
- Signalization plans are required for all locations where lights are to be placed. This includes, but is not limited to, traffic signals at intersections/interchanges, pedestrian crosswalk signals, and advance warning signals at railway crossings. Plans or sketches may also be required for showing locations of flashing amber lights on median ends, flashing red lights at intersections, etc.
- Overhead lighting plans for streets, intersections, interchanges, etc. will be prepared by the appropriate power company. On many projects they will request our digital plan files and use them for their plan base.
- Railway crossing plans are required wherever roadwork is to be done at an existing or new crossing. The format for the plans and the information required is set out by the National Transport Agency. All survey and plan information should be submitted a minimum of 4 months prior to the start of construction, as sufficient time is required to obtain Board Order Approval.
- Utility crossing drawings are to be prepared for each utility that is crossed within a project. Plans are necessary for utility relocation or adjustment and to form agreements with utility companies to perform such work. The plan is to be prepared showing the horizontal and vertical locations by chainage and elevations respectively. A copy of the plan is to be submitted to Technical Standards or Highway Geomatics.
- Overall utility drawings, plan view only, may be required when projects fall within urban areas such as towns and villages. These plans provide an overview of all

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

utilities in the vicinity and make contractors aware of their approximate locations. A legend with the necessary symbols should be included on these plans.

- Temporary transition plans are required only if a non-standard transition is to be utilized.
- Temporary detour plans are required on primary highway projects where traffic is to be disrupted for a period of time. Profiles for detours are optional.

3.3 NUMBERING OF PLANS

- Plan Profiles or mosaic plan-profiles are referenced by control section and geographic land description (e.g., 2:70 Rycroft to E of Woking). When requesting plan-profile numbers the following information must be supplied by the consultant: drawing title, contract number, and sheet number. A typical set of plan-profiles and related sheets would be laid out as follows:

DRAWING TYPE	SHEET NUMBER	ALBERTA TRANSPORTATION PLAN NUMBER
Title Sheet	0	RD-10385-P
Plan Profile Sheet	1 of 9	RD-10386-P
Plan Profile Sheet	2 of 9	RD-10387-P
Plan Profile Sheet	3 of 9	RD-10388-P
Service Road Plan Profile Sheet	4 of 9	RD-10389-P
Typical Cross Sections	5 of 9	RD-10390-P
Typical Intersection Treatment	6 of 9	RD-10391-P
Culvert Removal Table	7 of 9	RD-10392-P
Culvert Installation Table	8 of 9	RD-10393-P
Details	9 of 9	RD-10394-P
Mass Haul Diagram	1 of 1	RD-10395-P

- The following plans also belong to the project, but are referenced to the miscellaneous plan database. When requesting these plan numbers the following information must be supplied by the consultant: drawing title, contract number, sheet number and CAD format.

DRAWING TYPE	SHEET NUMBER	ALBERTA TRANSPORTATION PLAN NUMBER
Railway Crossing Plan	1 of 1	2:70-33-P
Overall Utility Plan	1 of 1	2:70-34-P
Pipeline Crossing Plan	1 of 1	2:70-35-P
Waterline Crossing Plan	1 of 1	2:70-36-P

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

- The following plans belong to the project but are referenced to the intersection database. When requesting an intersection plan number the following information must be provided by the consultant: drawing title, contract number, sheet number, legal land description.

DRAWING TYPE	SHEET NUMBER	ALBERTA TRANSPORTATION PLAN NUMBER
Intersection plan at 2:70 and SH 677	1 of 3	IN-0679-1-P
Signing plan at 2:70 and SH 677	2 of 3	IN-0679-2-P
Pavement Marking at 2:70 and SH 677	3 of 3	IN-0679-3-P
Intersection plan at 2:70 and 49:04	1 of 3	IN-0429A-1-P
Signalization plan at 2:70 and 49:04	2 of 3	IN-0429A-2-P
Lighting plan at 2:70 and 49:04	3 of 3	IN-0429A-3-P

3.4 STANDARD DRAWINGS

- Standard drawings to be used in conjunction with the Department's written specifications are found in CB6 Standards Manual. Type of drawings include:
 - Intersection Treatments
 - Standard Cross Sections
 - Manholes, Inlets and Catch Basins
 - Fencing
 - Livestock Guards
 - Metal Bin Retaining Wall
 - Ditch Barrier
 - Storm Sewer Installation
 - Plastic Culvert Liner Installation
 - Base Course, Pavement and Seal Coat-Asphalt and Concrete Curbs, Medians, Islands
 - Corrugated Steel and Concrete Pipe
 - Crack Routing and Sealing
- Complete CB-6 Standards Manuals may be purchased in hardcopy format from the Department. These files are available to download in pdf format from the Alberta Transportation website.
- Standard drawings may be printed and used in tender packages thereby eliminating the need to re-draft items. Plans should only show the necessary symbols with a reference to the appropriate standard drawing. If, at some time,

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

all contractors have a copy of the CB-6 Manual, hard copies will not have to be made for tendering or construction purposes.

3.5 METRIC SCALE REQUIREMENTS

- It is preferable to show the scales of all plans by using bar scales rather than by specifying ratios. Bar scales should always be placed in the vicinity of the title block.

PLAN-PROFILES	HORIZONTAL	VERTICAL
Standard	1:5000	1:100
Rough Topography & 4 Lane	1:5000	1:200
Towns, Villages, Congested Areas	1:2000	1:100
Interchange, Loops, Connectors Etc.	1:2000	1:100

BRIDGE SITE SURVEYS	HORIZONTAL / VERTICAL	
Site Plan	1:500	
Horizontal Alignment	1:5000	
Highway Profile	1:5000	1:100
Streamed Profile	1:1000	1:100
Natural Scale Profile	1:100 (1:200 If Necessary)	

RAILWAY CROSSING SURVEYS	HORIZONTAL / VERTICAL	
Plan View	1:1000	
Profile Along Highway	1:2000	1:200
Profile Along Railway	1:2000	1:100

PIPELINE CROSSING SURVEYS	HORIZONTAL / VERTICAL	
Site Plan	1:2000 (Or 1:5000)	
Profile Along Pipe	1:200	1:100

3.6 LEVEL DEFINITIONS

- The following Level Definition is a departure from the existing level definitions that have been in use within the department since the early days of computer-aided drafting. An attempt has been made to decrease the number of levels used and to group the levels based on usage. Therefore, levels 60-63 are used for standard sheet information, levels 50-59 for legal and base information and levels 1-19 for design information.

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

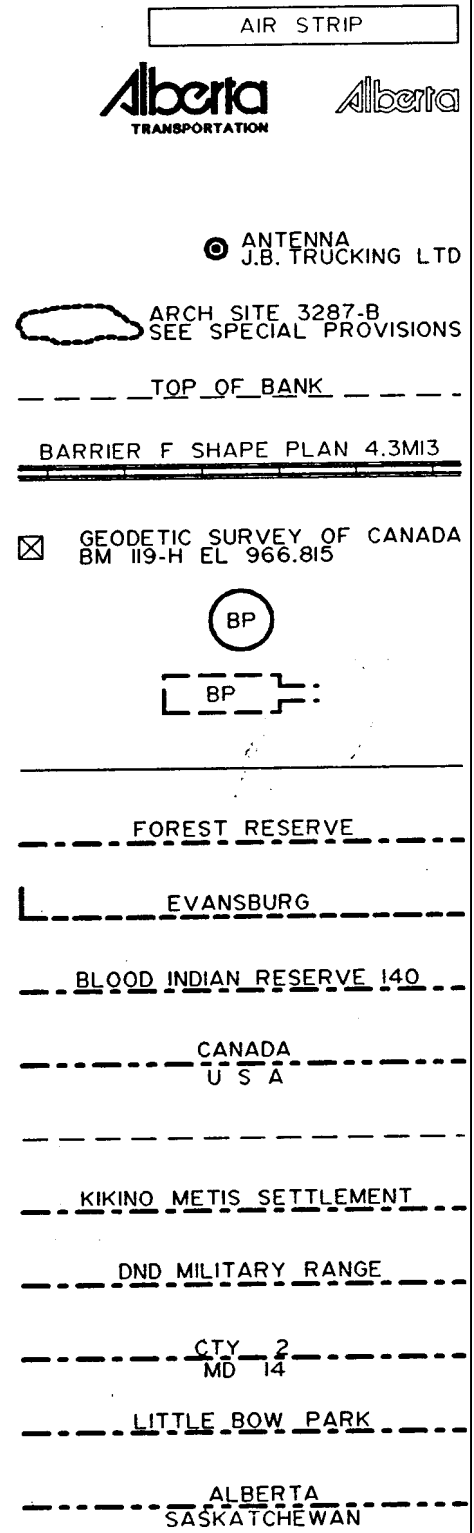
- Linework and annotation for the linework will occupy the same level; e.g. lot lines and lot numbers will appear on level 51.
- Prior to submission to Alberta Transportation all work levels and extraneous information shall be deleted so that the file contains only those elements required to produce the completed drawing.
- See [Section 1.13](#) for Table.

3.7 STANDARD SYMBOLS





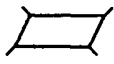

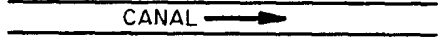

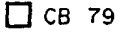


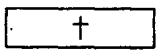
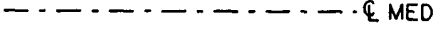
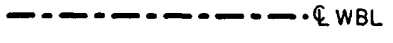
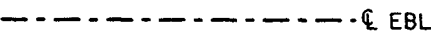


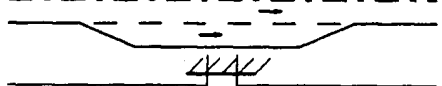
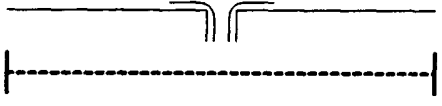

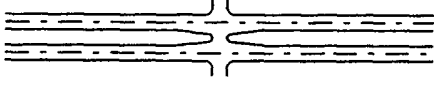

- Standard symbols are shown in alphabetical order. Where applicable weights and line codes are shown, however, they may not be appropriate for all scales. Drafting experience and judgement should prevail in determining the appropriate weights and line codes for specific drawings.
- Cell names are included if they exist in the Alberta Transportation Cell Library, DESENG2.cel.

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS




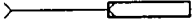

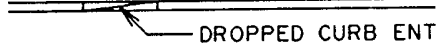
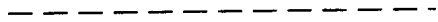
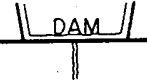
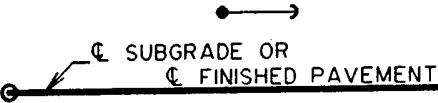











<u>Description</u>	<u>Weight</u>	<u>Line code</u>
AIR STRIP / AIR FIELD	1	0
ALBERTA LOGOS (AC=ATLOGO/ABOPLO)	0	0
ANCHOR / GUY WIRE	3	0
ANTENNA	3	0
ARCHEOLOGICAL SITE	4	1
BANK – TOP OF	1	3
BARRIER	2	0
BENCH MARK (AC=BM)	1	0
BORROW PIT – APPROX LOCATION	3	0
BORROW PIT – DEFINED AREA (DTS)	3	3
BOUNDARY – BLOCK, C OF T, LOT	1	0
BOUNDARY – FOREST RESERVE	4	4
BOUNDARY – INCORPORATED	4	7
BOUNDARY – INDIAN RESERVATION	4	4
BOUNDARY – INTERNATIONAL	4	6
BOUNDARY – LEGAL SUBDIVISION	2	3
BOUNDARY – METIS SETTLEMENT	4	4
BOUNDARY – MILITARY RANGE	4	4
BOUNDARY – MUNICIPALITY	4	4
BOUNDARY – PARK, WILDERNESS AREA	4	4
BOUNDARY – PROVINCIAL	4	0



SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
BOUNDARY-QUARTER SECTION LINE (LARGE SCALE)	1	0	
BOUNDARY-QUARTER SECTION LINE (SMALL SCALE)	1	1	
BOUNDARY –SECTION LINE	1	1	
BOUNDARY-THIRD SYSTEM UNSURVEYED	1	3	
BRIDGE STRUCTURE (DTS)	2	0	
BUILDINGS (ANNOTATE) (DTS)	1	0	
CANAL CHANNEL (ANNOTATE)	2	0	
CATCH BASIN (AC=ECB)	0	0	
CATCH BASIN – PROPOSED, CB NO. (AC=PCB)	0	0	
CATTLE PASS – EXISTING, SHOW CHAINAGE	1	0	
CATTLE PASS – PROPOSED, SHOW CHAINAGE	1	0	
CEMETERY (DTS)	1	0	
CENTER LINE OF MEDIAN (ANNOTATE)	1	4	
CENTER LINE-PROPOSED CONSTRUCTION (ANNOTATE)	4	4	
CENTER LINE – SEPARATE ROADWA (ANNOTATE)	2	4	
CHIMNEY / BURNER – (ANNOTATE)	1	0	
CHURCH (DTS)	1	0	
CLIMBING LANE (DTS)			
CLOSURE OF ROAD OR R/W (AC=RDCLOS)			
CONDUIT – PROPOSEDED, INSTSTALL BY PUSH METHOD)			
CONDUIT – PROPOSEDED, INSTSTALL BY TRANCH METHOD)			
CROSSOVER - DIVIDED HIGHWAY			

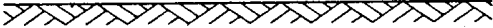

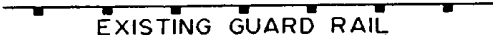
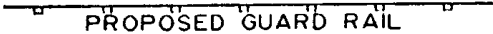








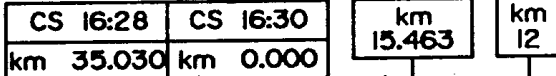


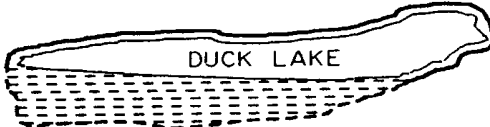






SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>		
CULVERT- AS BUILT (LENGTH TO SCALE)	1	0		19.201
CULVERT- EXISTING	1	1		18.660.5
CULVERT- PROPOSED (LENGTH TO SCALE)	1	1		10.020
CULVERT- PROPOSED EXTENSION	1	3		5.060.5
CURB, CURB AND GUTTER - EXISTING	2	0		
CURB, CURB AND GUTTER - PROPOSED	1	0		
CUT LINE	2	0		
DAM (ANNOTATE) (DTS)	0	0		
DESDMAN POLE – WIRE-ANCHOR	0	0		
DESIGN – GRADE LINE (PROFILE)	1	0		
DESIGN – LEFT AND RIGHT DITCH (PROFILE)	1	0		
DESIGN – LEFT DITCH (PROFILE)	1	0		
DESIGN – MEDIAN DITCH (PROFILE)	1	4		
DESIGN – RIGHT DITCH (PROFILE)	4	4		
DITCH BARRIERS – STRAW BALES (SPECIFY BY NOTE)	2	4	E) STA TO STA, INTERVALS, ETC.	
DITCH BLOCK – (SPECIFY BY NOTE)	1	0	18.291 CONST DITCH BLOCK RT 	
DRAIN INLET - EXISTING	1	0	 DI 33	
DRAIN INLET – PROPOSED, DI NO.				
DRAINAGE DITCH – EXISTING (ANNOTATE)				
DRAINAGE DITCH – PROPOSED				
DROP INLET – EXISTING			 DI 33	
DROP INLET – PROPOSED, DI NO.				

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
DUGOUT- (ANNOTATE) (DTS)	1	0	
DYKE or DIKE - (ANNOTATE) (DTS)	1	1	
ENTRANCE- ELIMATE, SHOW CHAINAGE	1	1	
ENTRANCE- PROPOSED, SHOW CHAINAGE	1	3	
ENTRANCE- RETAIN, SHOW CHAINAGE	2	0	
FENCE AND GATE – (ANNOTATE)	1	0	
FENCE – BARBED WIRE (SPECIFY CLASS)	2	0	
FENCE – CHAIN LINK (ANNOTATE)	0	0	
FENCE – PAIGE WIRE (SPECIFY CLASS)	0	0	
FENCE – (ANNOTATE)	1	0	
FIRE HYDRANT (ANNOTATE)	1	0	
FLAG PERSON	1	0	
FLAG POLE (ANNOTATE)	1	4	
FOOTBRIDGE (ANNOTATE)	4	4	
FORD –ROAD	2	4	
FOUNDATION OR RUINS (DTS) (ANNOTATE)	1	0	
GRADE LINE – CENTRE LINE FINISHED PAVEMENT (ANNOTATE)	1	0	
GRADE LINE – CENTRE LINE FINISHED PAVEMENT (ANNOTATE)			
GROUND LINE – CENTRE LINE (PROFILE)			
GROUND LINE – LEFT SOD (PROFILE)			
GROUND LINE – MUSKEG DEPTH (PROFILE)			
GROUND LINE – RIGHT SODE (PROFILE)			

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
GROUND, ORIGINAL (X-SEC)	1	0	
GROUND, PROPOSED (X-SEC)	1	1	
GUARD RAIL - EXISTING (ANNOTATE)	1	1	 EXISTING GUARD RAIL
GUARD RAIL- PROPOSED (ANNOTATE)	1	3	 PROPOSED GUARD RAIL
HELIPAD (ANNOTATE) (DTS)	2	0	 HELIPAD
HISTORICAL SITE – (ANNOTATE)	1	0	 VICTORIA SETTLEMENT
HORIZONTAL CONTROL POINT or HUB 2	0		 PI 23+001.550
IRON POST (FROM LEGAL PLAN)	0	0	
IRON POST (FOUND, FIP NO.) (LARGE SCALE)	0	0	 FIP R11
IRON POST (WITH PITS-FOUND, FIP NO.) (SMALL SCALE)	1	0	 FIPP R13A
IRRIGATION CANAL – EXISTING (ANNOTATE) (DTS)	1	0	 IRR CANAL
IRRIGATION DITCHES – EXISTING (DTS)	1	0	
KILOMERE POST - DOUBLE	1	4	
KILOMERE POST – GRADING LIMIT	4	4	
KILOMERE POST - SINGLE	2	4	
LAGOON - SEWAGE (ANNOTATE)	1	0	<input type="checkbox"/> SEWAGE <input type="checkbox"/> LAGOONS
LAKE (IDENTIFY)	1	0	 DUCK LAKE
LAKE (INTERMITTENT)			
LANDFILL SITE– (ANNOTATE) (DTS)			 LANDFILL SITE
LIGHT - NAVIGATION			
LIGHT POLE – EXISTING/PROPOSED (ANNOTATE NO).			 12  15  12  15

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
LIMIT OF CONSTRUCTION - CUT	1	0	
LIMIT OF CONSTRUCTION - FILL	1	1	
LIVESTOCK GUARD - (TEXAS GATE), GIVE DETAILS	1	1	2-049 ENT RT INSTALL LIVESTOCK G SEE PLAN CB6 - 2.131
MANHOLE - EXISTING	1	3	● MH 49
MANHOLE – PROPOSED, MH NO.	2	0	○ MH 27
METER (ANNOTATE)	1	0	⊗ WM
MONUMENT – HISTORICAL	2	0	12 FOOT DAVIS MONI
MONUMENT – SURVEY (IDENTIFY)	0	0	▲ ASCM 637-8.2
MUSKEG, MARSH, BOG, SLOUGH	0	0	
OBLITERATION OF EXISTING ROAD (ANNOTATE)1	1	0	OBLITERATE ROAD
OVERHAUL ARROW - (PROFILE) HAUL AWAY	1	0	↔
OVERHAUL ARROW - (PROFILE) HAUL TO	1	0	→
OVERHAUL ARROW - HAUL AWAY BORROW	1	4	← EARTH BORROW L DH 50m 10000m ³
PARKING AREA (PAVED/UNPAVED) (DTS)	4	4	PARKING PARKING
PARKING MARKING - DIVIDING LINE	2	4	
PARKING MARKING - CONTINUITY LINE	1	0	
PARKING MARKING - SOLID LINE	1	0	
PARKING MARKING - STOP BAR			
PARKING MARKING - TEX OR NUMBERS			A B C
PARKING MARKING - ARROWS			
PILE – (SPECIFY MATERIAL) (DTS)			GRAVEL PILE
PIPELINE – GAS (EXISTING/PROPOSED)			

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

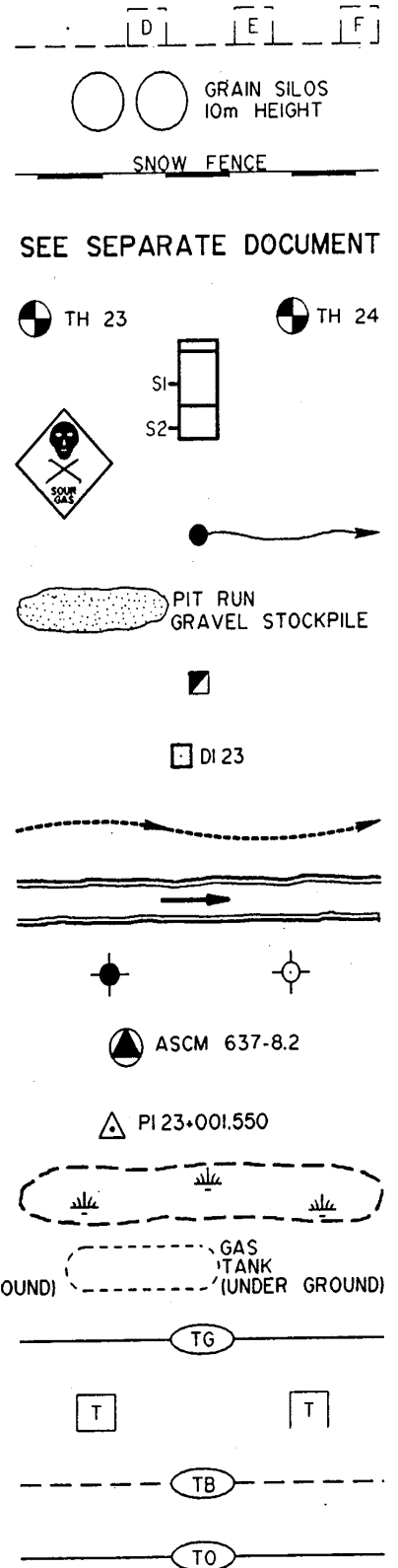
<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
PIPELINE – OIL (EXISTING PROPOSED)	1	0	
PIPELINE – SALT WATER INJECTION (EXISTING/PROPOSED)	1	1	
PIPELINE – WATER (EXISTING/PROPOSED)	1	1	
PIT (SPECIFY MATERIAL) (DTS)	1	3	
POINT OF INTERSECTION	2	0	
POND or POOL (DTS)	1	0	
POWER GUY POLE – (EXISTING/PROPOSED)	2	0	
POWER LINE – BURIED (EXISTING)	0	0	
POWER LINE – OVERHEAD (EXISTING)	0	0	
POWER LINE – TOWER (EXISTING/PROPOSED)	1	0	
POWER LINE – EXISTING/PROPOSED	1	0	
PUMP ISLAND (DTS)	1	0	
QUARRY (SPECIFY MATERIAL)(DTS)	1	4	
RAILROAD – ABANDONED	4	4	
RAILWAY CROSSING SIGHT LINES	2	4	
RAILWAY LINE - (LARGE SCALE)	1	0	
RAILWAY LINE - (SMALL SCALE)	1	0	
RESERVOIR (ANNOTATE) (DTS)			
RETAINING WALL – (ANNOTATE) (DTS)			
RETAINING WALL – PROPOSED (ANNOTATE) (DTS)			
RIGHT OF WAY – EXISTING (ANNOTATE) (DTS)			
RIGHT OF WAY – EXISTING (ANNOTATE) (DTS)			

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
RIP-RAP	1	0	
RIVER – (IDENTIFY) (DTS)	1	1	
ROADWAY CENTRE LINE PROPOSED CONSTRUCTION (ANNOTATE)	1	1	
ROADWAY CENTRE LINE MEDIAN (IDENTIFY)	1	3	
ROADWAY DRIVING LANE (SPECIFY WIDTH)	2	0	
ROADWAY SHOULDER - EXISTING	1	0	
ROADWAY SHOULDER – PROPOSED	2	0	
SAND BAR/GRAVEL BAR (DTS)	0	0	
SEISMIC LINES	0	0	
SEWER LINE – SANITARY, EXISTING	1	0	
SEWER LINE – STORM, EXISTING	1	0	
SEWER LINE – STORM, PROPOSED	1	0	
SHORE LINE	1	4	
SIDEWALK (ANNOTATE)	4	4	
SIDEWALK WITH CURB AND GUTTER	2	4	
SIGN - SINGLE POST	1	0	
SIGN - DOUBLE POST	1	0	
SIGN - OVERHEAD			
SIGN - BARRICADE			
SIGNAL CONTROL BOX			
SIGNAL LIGHT – MAST ARM MOUNTED			
SIGNAL LIGHT – POST MOUNTED			

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS



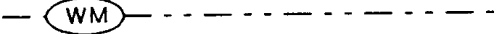

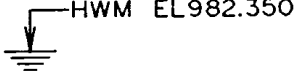



<u>Description</u>	<u>Line code</u>	<u>Weight</u>
SIGNAL LIGHT – DETECTOR LOOP SENSORS	1	0
SILO OR STORAGE BIN – (ANNOTATE)(DTS)	1	1
SNOW FENCE PERMANENT – (ANNOTATE)(DTS)	1	1
SOILS CLASSIFICATION SYMBOLS	1	3
SOILS LOGS (PLAN), TH No.	2	0
SOILS LOGS (PROFILE)	1	0
SOUR GAS WARNING	2	0
SPRING	0	0
STOCKPILE SITE (SPECIFY MATERIAL)(DTS)	0	0
STORM DRAIN INLET EXISTING	1	0
STORM DRAIN INLET PROPOSED DI No.	1	0
STREAM – NARROW OR INTERMITTENT	1	0
STREAM – WIDE (DTS)	1	4
STREET LIGHT (EXISTING/PROPOSED)	4	4
SURVEY CONTROL MONUMENT (IDENTIFY)	2	4
SURVEY REFERENCE POINT OR HUB	1	0
SWAMP (DTS)	1	0
TANKS (ANNOTATE) (DTS)		
TELEGRAPH LINE - OVERHEAD		
TELEPHONE BOOTH or KIOSK		
TELEPHONE LINE - BURIED		



SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
TELEPHONE – PEDESTAL (ANNOTATE)	1	0	■ PED
TELEPHONE – POLE (EXISTING/PROPOSED)	1	1	● ○
TELEVISION CABLE – BURIED	1	1	--- (TVB) ---
TELEVISION CABLE – OVERHEAD	1	3	— (TVO) —
TEST HOLE (PLAN VIEW), TH No.	2	0	⊗ TH 23 ⊗ TH 24
TRAFFIC DIRECTION ARROW	1	0	→
TRAFFIC CONE OR DELINEATOR	2	0	●
TRAIL (ANNOTATE)	0	0	--- TRAIL ---
TREE – CONIFEROUS	0	0	✕
TREE – DECIDUOUS	1	0	☁ ☁ ☁
TREE OR BRUSH AREA	1	0	~~~~~
TREES – GROVE OR ORCHARD	1	0	☁ ☁ ☁ ☁ ☁ ☁
TREES - HEDGE	1	4	— H — H —
TREES – SHRUBBERY	4	4	☁ ☁ ☁ ☁ SHRUBS
TUNNEL (DTS)	2	4	[---] [---]
VALVE (ANNOTATE)	1	0	⊗ GV ⊗ WV ⊗ QV
VENT PIPE/BREATHER	1	0	⌋ VENT PIPE 697.137
VERTICAL CONTROL POINT (PROFILE)			○
WATER - EDGE			~~~~~
WATER FALLS			~~~~~
WATER FLOW ARROW			→
			⊗ WM

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

<u>Description</u>	<u>Line code</u>	<u>Weight</u>	
WATER – RAPIDS	1	0	
WATER SPRING	1	1	
WATERMAIN – EXISTING	1	1	
WATERMAIN - PROPOSED	1	3	
WATERMARK – HIGH (PROFILE)	2	0	
WELLS (ANNOTATE)	1		 WATER WELL  OIL WELL  GAS WELL

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

3.8 SOIL LOGS

- All preliminary soils information must be plotted on the appropriate plan-profile sheets.
- Longitudinal section of test holes must be plotted to the same vertical scale as the profile, which is normally 1:100 or 1:200.
- Test hole log symbols must be in accordance with the unified soil classification system. Refer to Unified Soil Classification System for symbol specifications.
- Water table elevations must be shown on test hole logs.
- All standard penetration tests (depths and n-values) must be shown.
- The location (station and offset) must be shown for each test hole log or penetration test.
- The depth at which each sample was taken must be shown as should each of the layers of different materials.
- If test holes overlap on the drawings (e.g., same station – different offset) the test hole logs may be lowered as long as the proper station is maintained. On projects where there is a large number of test holes, a separate “Soils Information Sheet” is to be utilized.
- Font size for all soils test logs and lab results shall be equivalent to a 3 mm on a full size drawing.
- The month and year that the soils survey was done is to be inserted on the plan-profile title sheet.

SECTION 3 – GUIDELINES FOR ROADWAY PROJECTS

3.9 UNIFIED SOIL CLASSIFICATION SYSTEM (MODIFIED BY PFRA)

SOILS LOGS LEGEND

THE RESULTS OF THE ALGER BORINGS MADE DURING THE PRELIMINARY SURVEY ARE SHOWN IN THE PICTORIAL FORM ON THE PROFILE. THE HOLES ARE PLOTTED TO THE SAME VERTICAL SCALE AS ALL OTHER PROFILE PLOTS. A STANDARD FORM OF SYMBOLIZED CROSS HATCHING AS SHOWN IS USED TO GRAPHICALLY DISPLAY THE VARIOUS SOIL TYPES. ALSO SHOWN WITH THE BORINGS, ARE THE RESULTS OF THE TESTS PERFORMED ON THE SAMPLE SUBMITTED AT THE TIME THE HOLES WERE DRILLED/DUG.

A STANDARD NUMERICAL ORDER IS USED TO RECORD THESE RESULTS AS FOLLOWS:
 1. PLASTICITY INDEX, 2. SOILS CLASSIFICATION, 3. FIELD MOISTURE CONTENT,
 4. ESTIMATED OPTIMUM MOISTURE CONTENT AND 5. ESTIMATED MAXIMUM DRY DENSITY.

WHERE THERE ARE NO TEST RESULTS SHOWN, THE DESCRIPTION OF SAMPLES IS BASED ON FIELD VISUAL IDENTIFICATION ONLY.

WHERE SUBSURFACE MATERIALS ARE IDENTIFIED IN THE FIELD AS ROCK (SANDSTONE OR SHALE) AND ALSO SHOWN AS ROCK ON THE TEST LOGS, THE SAMPLES ARE PULVERISED IN ACCORDANCE WITH STANDARD TESTING PROCEDURES FOR TEST PURPOSES AND THE BROAD SOIL CLASSIFICATION WILL THUS BE SHOWN AS SAND OR CLAY OR SILT.

UNIFIED SOIL CLASSIFICATION SYSTEM (MODIFIED BY PFRA)

COARSE GRAINED SOILS <small>50%+ RETAINED ON AN 80 MICRON SIEVE</small>			FINE GRAINED SOILS <small>50%+ PASSING AN 80 MICRON SIEVE</small>		
GROUP SYM.	LOG SYM.	TYPICAL NAMES	GROUP SYM.	LOG SYM.	TYPICAL NAMES
GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	CL		INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	CI		INORGANIC CLAYS OF MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS
GM	<div style="display: flex; flex-direction: column; align-items: center;"> d </div> <div style="display: flex; flex-direction: column; align-items: center; margin-top: 5px;"> u </div>	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
GC		CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
SW		WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
SP		POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	OL		ORGANIC SILTS AND ORGANIC SILTY CLAYS OR LOW PLASTICITY
SM	<div style="display: flex; flex-direction: column; align-items: center;"> d </div> <div style="display: flex; flex-direction: column; align-items: center; margin-top: 5px;"> u </div>	SILTY SANDS: SAND-SILT MIXTURES	OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
SC		CLAYEY SANDS, SAND-CLAY MIXTURES	Pt		PEAT AND OTHER HIGHLY ORGANIC SOILS
OTHER SYMBOLS					
	BEDROCK (UNCLASSIFIED)			CONGLOMERATE	
	SANDSTONE			COAL	
	SHALE			OVERBURDEN	
	LIMESTONE			TOPSOIL	

SOIL SURVEY TAKEN { MONTH / YEAR }

3.10 SAMPLE DRAWINGS

- TITLE SHEET SAMPLE
- PLAN PROFILE SAMPLE
- CROSS SECTION SAMPLE
- MASS HAUL PLAN SAMPLE
- CULVERT TABLE PLAN SAMPLE
- INTERSECTION PLAN SAMPLE
- INTERSECTION SIGNING PLAN SAMPLE
- INTERSECTION PAVEMENT MARKING SAMPLE
- INTERSECTION SIGNAL PLAN SAMPLE
- INTERSECTION LIGHTING SAMPLE
- UTILITY PLAN SAMPLE.PDF
- TYPICAL INTERSECTION PLAN SAMPLE