

APPENDIX B

Highway Construction Administration Forms

The latest versions of these forms can be found on Alberta Transportation's website: <https://www.transportation.alberta.ca/919.htm>

**SUMMARY TABLE - APPENDIX B
HIGHWAY CONSTRUCTION ADMINISTRATION FORMS
(TESTING REQUIREMENTS AND REPORTING FORMS)**

Form No.	Form Name	Designation
B.01	Minimum QA Testing Requirements - ACP - Managed QA	MQA/12 (2 Pages)
B.02	Minimum QA Testing Requirements - ACP - Superpave	SMQA/12 (2 Pages)
B.03	Minimum QA Testing Requirements - ACP – Hot In-Place Recycle	HIRQA/12 (2 Pages)
B.04	Minimum QA Testing Requirements – Cold In-Place Recycling	1 CIRQA/12
B.05	Minimum QA Testing - Subgrade Prep & Grading	SUBGQA/12
B.06	Minimum QA Testing Requirements – Granular Base Course and Full Depth Reclamation	GBCQA/12
B.07	Asphalt Mix Design and Job Mix Formula Summary Sheet	ACPJMF/12
B.08	Superpave Mix Design and Job Mix Formula Summary Sheet	SUPJMF/12
B.09	Lot Paving Report	MAT 6-78/12
B.10	Superpave Lot Paving Report	MAT 6-78S/12
B.11	Hot In-Place Lot Paving Report	MAT 6-78H/12
B.12	Daily Compaction Report - Grading and Subgrade Projects	MAT 6-1/12
B.13	Daily Report - Granular Base Course (Used also for FDR Compaction)	MAT 6-60/12
B.14	Daily Compaction Report - Cold In-Place Recycling	CIR1/12
B.15	Appeal Initialization Form	MAT 6-92A/11
B.16	Appeal Testing	MAT 6-92/11
B.17	Segregation Worksheet	MAT 6 – 95/12
B.18	Segregation Summary Report	MAT 6 – 95s/12
B.19	Profilograph Index Report	MAT 6-73/12
B.20	Ride Quality Summary and Areas of Localized Roughness Summary	Excel Format
QA Testing and Reporting Requirements for Cutback Asphalt Mixes, Emulsified Asphalt Mixes and Cement Stabilized Base Course are inactive and not included here. If needed, contact Technical Standards Branch.		

**MINIMUM QUALITY ASSURANCE TESTING REQUIREMENTS ASPHALT CONCRETE
PAVEMENT - EPS SPEC 3.50, MANAGED QA**

MQA/12	TEST	STANDARD	MINIMUM FREQUENCY	ATT- DATA SHEETS
SAMPLING				
1.	Mix	ATT-37	¹ Five per each Lot (full Production)	
2.	Cores (Obtained by Contractor) Stratified Random Test Sites for ACP Projects Coring (Monitor Contractor's Coring)	ATT-56 ATT-5	Each Lot One per Segment	MAT 6-82
3.	Aggregate	ATT-38	As required for Correction Factor	
MIX TESTING				
1.	Asphalt Content	ATT-12 Part II or ATT-74	² One per Segment for each QA Acceptance Lot	MAT 6-79 MAT 6-98 MAT 6-99 MAT 6-100 MAT 6-101 MAT 6-75
2.	Correction Factor, Extracted Asphalt Content	ATT-12 Part III	As specified in ATT-12 Part III	MAT 6-75
3.	Correction Factor, Ignition Asphalt Content	ATT-74	As specified in ATT-74 Part II	MAT 6-99
4.	Mix Moisture Content	ATT-15	¹ Five tests per Lot (Full Production)	MAT 6-80
5.	Field Formed Marshall Briquettes	ATT-13	¹ Five tests per Lot (Full Production)	MAT 6-80
AGGREGATE TESTING				
1.	Extraction or Ignition Sieve Analysis	ATT-26	Each sample, QA Acceptance Lot	MAT 6-80
2.	Correction Factor Aggregate Sieve Analysis	ATT-26	As required	MAT 6-75 MAT 6-25
OTHER RELATED TESTING				
1.	Density Immersion Method, Saturated Surface Dry	ATT-7	Each core or formed specimen	MAT 6-80
2.	Voids Calculations, Cores or Formed Specimens	ATT-36	Each core or formed specimen	MAT 6-80 MAT 6-79
3.	Percent Compaction, Asphalt Concrete Pavement	ATT-67	One per Segment	MAT 6-79
PAVEMENT SURFACE				
1.	Smoothness ³	ATT-59	Each Sublot	MAT 6-73
2.	Segregation	Paving Guidelines & Segregation Rating Manual	Each Lane.Km	MAT 6-95

<p>REPORTING</p> <p>1. All Approved Asphalt Mix Designs and Changes in Job Mix Formula</p>	<p>Email completed Asphalt Mix Design & JMF Summary Sheet to Project Sponsor and Surface Engineering & Aggregates Section at trans.constructqa@gov.ab.ca. Provide written documentation to Contractor for approved designs and JMF changes. Included copies of all mix designs and JMF approvals in Final Details.</p>
<p>2. Lot Paving Report</p>	<p>Complete MAT 6-78 Lot Paving Report. Submit on a weekly basis to Project Sponsor and to trans.constructqa@gov.ab.ca</p>
<p>3. Profilograph & Segregation</p>	<p>Include MAT 6-73 and MAT 6-95s in Final Details as outlined in Engineering Consultant Guidelines for Highway and Bridge Projects - Volume 2, Construction Contract Administration. Email early submission copy of Final Details ACP EPS or Final Details IRI ACP – EPS form to trans.constructqa@gov.ab.ca within one month of paving completion.</p>
<p>¹ Note: One sample for the first two hours of production; one immediately after, remaining samples at random over the rest of the day. Full production is considered when a Lot has more than eight hours of plant production.</p> <p>² Note: On QC Acceptance Lots a minimum of one asphalt content on loose mix using test procedures specified in Table 3.50.4. TEST METHODS ON MANAGED QA PROJECTS</p> <p>³ Note: California Profilograph method or International Roughness Index method using inertial profilers (testing provided by the Contractor) as outlined in contract.</p>	

Testing requirements as per MQA specifications are briefly summarized as follows:

- Consultant to sample loose mix from behind the paver and form Marshall briquettes.
- Contractor to obtain all core samples at site locations determined by the Consultant.
- Materials processing and QA testing is to done in a laboratory facility (mobile or stationary) that is no further than one hour from the project.
- Contractor quality control test results for asphalt content and gradation will be used for conditional acceptance of most Lots. For these QC Acceptance Lots the Consultant is do a minimum of one asphalt content test per Lot on loose mix using the specified test procedures. For QA Acceptance Lots report only the QA test results on the Lot Paving Report. For QC Acceptance Lots report all available QA results and the QC test results for asphalt content and gradation. Indicate on the Lot Paving Report which are QC and which are QA.
- On QC Acceptance Lots the Target Asphalt Content is to be used to determine air voids.
- The minimum number of QA Lots in which full QA testing is completed is outlined in section 3.50.1.2 Definitions of Specification 3.50 ACP-EPS.
- At time of publication the Department is transitioning to the use of inertial profilers and International Roughness Index (IRI) criteria for pavement smoothness. Reporting requirements are still to be finalized and will be released in the form of a Construction Bulletin or other means.

**MINIMUM QUALITY ASSURANCE TESTING REQUIREMENTS ASPHALT CONCRETE
PAVEMENT - SUPERPAVE SPEC 3.53, MANAGED QA**

SMQA/12	TEST	STANDARD	MINIMUM FREQUENCY	ATT- DATA SHEETS
	SAMPLING			
1.	Mix	ATT-37	¹ Five per each Lot (full Production)	
2.	Cores (Obtained by Contractor) Stratified Random Test Sites for ACP Projects	ATT-56	Each Lot	MAT 6-82
3.	Coring (Monitor Contractor's Coring)	ATT-5	One per Segment	
4.	Aggregate	ATT-38	As required for Correction Factor	
	MIX TESTING			
1.	Asphalt Content	ATT-12 Part II or ATT-74	² One per Segment for each QA Acceptance Lot	MAT 6-79 MAT 6-98 MAT 6-99 MAT 6-100 MAT 6-101 MAT 6-75
2.	Correction Factor, Extracted Asphalt Content	ATT-12 Part III	As specified in ATT-12 Part III	MAT 6-75
3.	Correction Factor, Ignition Asphalt Content	ATT-74	As specified in ATT-74 Part II	MAT 6-99
4.	Mix Moisture Content	ATT-15	¹ Five tests per Lot (Full Production)	MAT 6-80s
5.	Field Formed Gyrotory Specimens(N design)	AASHTO T 312	¹ Five tests per Lot (Full Production)	MAT 6-80s
	AGGREGATE TESTING			
1.	Extraction or Ignition Sieve Analysis	ATT-26	Each sample, QA Acceptance Lot	MAT 6-75
2.	Correction Factor Aggregate Sieve Analysis	ATT-26	As required	MAT 6-25
	OTHER RELATED TESTING			
1.	Density Immersion Method, Saturated Surface Dry	ATT-7	Each core or formed specimen	MAT 6-80
2.	Voids Calculations, Cores or Formed Specimens using Maximum Specific Gravity(Gmm)	TLT-309	Each core or formed specimen	MAT 6-80s MAT 6-79
3.	Percent Compaction, Asphalt Concrete Pavement (% of Gmm)	TLT-309	One per Segment	MAT 6-79
4.	Maximum Specific Gravity of Bituminous Mixes (Gmm)	ASTM D2041	¹ Five tests per Lot (Full Production)	
	PAVEMENT SURFACE			
1.	Smoothness ³	ATT-59	Each Sublot	MAT 6-73
2.	Segregation	Paving Guidelines & Segregation Rating Manual	Each Lane.Km	MAT 6-95

<p>REPORTING</p> <p>1. All Approved Asphalt Mix Designs and Changes in Job Mix Formula</p>	<p>Email completed Superpave Mix Design & JMF Summary Sheet to Project Sponsor and Surface Engineering & Aggregates Section at trans.constructqa@gov.ab.ca. Provide written documentation to Contractor for approved designs and JMF changes. Included copies of all mix designs and JMF approvals in Final Details.</p>
<p>2. Superpave Lot Paving Report</p>	<p>Complete MAT 6-78s Superpave Lot Paving Report. Submit on a weekly basis to the Project Sponsor and email to trans.constructqa@gov.ab.ca.</p>
<p>3. Profilograph & Segregation</p>	<p>MAT 6-73 and MAT 6-95s to be included in Final Details as outlined in Engineering Consultant Guidelines for Highway and Bridge Projects - Volume 2, Construction Contract Administration. Fax early submission copy of Final Details ACP EPS or Final Details IRI ACP – EPS form to 422-2846 or email to trans.constructqa@gov.ab.ca within one month of paving completion.</p>
<p>¹ Note: One sample for the first two hours of production; one immediately after, remaining samples at random over the rest of the day. Full production is considered when a Lot has more than eight hours of plant production.</p> <p>² Note: On QC Acceptance Lots a minimum of one asphalt content on loose mix using test procedures specified in Table 3.53.4. Test Methods on Superpave Managed QA Projects.</p> <p>³ Note: California Profilograph method or International Roughness Index method using inertial profilers (testing provided by the Contractor) as outlined in contract.</p>	

Testing requirements as per MQA specifications for Superpave are briefly summarized as follows:

- Consultant to sample loose mix from behind the paver for the formation of Gyrotory specimen (to Ndesign) and determination of Maximum Specific Gravity (Gmm).
- Contractor to obtain all core samples at site locations determined by the Consultant.
- Materials processing and QA testing is to done in a laboratory facility (mobile or stationary) that is no further than one hour from the project.
- Contractor quality control test results for asphalt content and gradation will be used for conditional acceptance of most Lots. For these QC Acceptance Lots the Consultant is do a minimum of one asphalt content test per Lot on loose mix using the specified test procedures.
- For QA Acceptance Lots report only the QA test results on the Lot Paving Report. For QC Acceptance Lots report all available QA results and the QC test results for asphalt content and gradation. Indicate on the Lot Paving Report which are QC and which are QA.
- On QC Acceptance Lots the Target Asphalt Content is to be used to determine air voids.
- The minimum number of QA Lots in which full QA testing is completed is outlined in section 3.53.1.2 Definitions of Specification 3.53 Superpave-EPS.
- At time of publication the Department is transitioning to the use of inertial profilers and International Roughness Index (IRI) criteria for pavement smoothness. Reporting requirements are still to be finalized and will be released in the form of a Construction Bulletin or other means.

**MINIMUM QUALITY ASSURANCE TESTING REQUIREMENTS
HOT IN-PLACE RECYCLED ASPHALT CONCRETE PAVEMENT (HIR)**

HIRQA/12 TEST	STANDARD	MINIMUM FREQUENCY	ATT- DATA SHEETS
SAMPLING 1. Mix 2. Cores (Obtained by Contractor) Stratified Random Test Sites for ACP Projects provided by Consultant Consultant Monitors Contractor's Coring	ATT-37 ATT-56 ATT-5	¹ Five per Lot (full Production) Each Lot One per Segment	 MAT 6-82
MIX TESTING 1. Asphalt Recovery by Abson or Evaporator 2. Standard Penetration of Recovered Asphalt 3. Asphalt Content 4. Mix Moisture Content 5. Field Formed Marshall Briquettes	ASTM D1856 or ASTM 5404 ASTM D5 ATT-12 Part II ATT-15 ATT-13	One 5 000 g sample per typical Lot ² One per Asphalt Recovery ² One per Asphalt Recovery. Each Mix Sample Each Mix Sample	 MAT 6-79 MAT 6-80 MAT 6-80
AGGREGATE TESTING 1. Extraction Sieve Analysis	ATT-26	One per Asphalt Recovery	MAT 6-80
OTHER RELATED TESTING 1. Density Immersion Method, Saturated Surface Dry 2. Voids Calculations, Cores or Formed Specimens 3. Maximum Specific Gravity of Bituminous mix(Gmm) 4. Percent Compaction, ACP (% of Gmm)	ATT-7 ASTM D3203 ASTM D2041	Each core or formed specimen ⁴ Each core or formed specimen Each mix sample ³ One per Segment	MAT 6-80 MAT 6-80 MAT 6-79 MAT 6-79
PAVEMENT SURFACE 1. Smoothness ⁵ 2. Segregation	ATT-59 Paving Guidelines & Segregation Rating Manual	Top Lift Top Lift	MAT 6-73 MAT 6-95
REPORTING 1. HIR Lot Paving Report 2. Profilograph & Segregation	Complete MAT 6-78H HIR Lot Paving Report. Submit to the Project Sponsor on a weekly basis and email to trans.constructqa@gov.ab.ca. Include MAT 6-73 and MAT 6-95s in Final Details as outlined in Engineering Consultant Guidelines for Highway and Bridge Projects - Volume 2, Construction Contract Administration. Sent early submission copy to Surface Engineering & Aggregates Section by email to trans.constructqa@gov.ab.ca within one month of paving completion.		

¹ Note: One sample for the first 0.5 lane kilometres of equipment operation; the second sample shortly thereafter; remaining samples at random over the remainder of the day(s). Full production is considered when a Lot is approximately 3 lane kilometres of equipment operation. For each sampling instance two duplicate 5000 gram samples shall be bagged, identified and stored. One of the duplicate samples will be used for possible penetration testing of the recovered asphalt. The second duplicate sample is to be available for possible appeal testing for Marshall air voids.

² Note: Up to five per Lot if penetration results of the first sample is in price reduction/rejection range.

³ Note: Frequency refers to Stratified Random Testing. Non-Random test frequency shall be 5 tests per Lot. (See Specification 3.50.4.4.2.4, Exclusions to Random Sampling)

⁴ Note: Requires the determination of the mixture's Theoretical Maximum Specific Gravity for each mix sample.

⁵ Note: California Profilograph method or International Roughness Index method using inertial profilers (testing provided by the Contractor) as outlined in contract.

QA testing requirements as per HIR specifications are briefly summarized as follows:

- Contractor to obtain all core samples at site locations determined by the Consultant.
- Core densities for all Lots are to be determined by the Consultant.
- Consultant to sample loose mix from behind the paver to form Marshall briquettes and determine Maximum Specific Gravities (Five each per Lot under full production). All of these tests are to be done in an on-site lab (i.e. located within one hour of the project). For each sampling of loose mix the consultant is to bag, identify and store two 5,000 grams.
- Asphalt recovery and penetration testing of the recovered asphalt shall be completed for each Lot on one of the duplicate loose mix samples collected. No further asphalt testing is required for that Lot if the first test result does not fall within a penalty or reject assessment. If the first test result does fall within the range of penalty or reject then the remaining split samples for that Lot shall be tested for assessment purposes. If the test results for asphalt penetration are within the limits of Figure 1 of the HIR specification amendment for three consecutive Lots, the testing frequency may be reduced to one per five Lots of HIR production.
- Contractor quality control test results for asphalt content and gradation are to be reported on the HIR Lot Paving Report for all Lots.
- Actual testing requirements may be modified by contract special provisions.
- At time of publication the Department is transitioning to the use of inertial profilers and International Roughness Index (IRI) criteria for pavement smoothness. Reporting requirements are still to be finalized and will be released in the form of a Construction Bulletin or other means.

**MINIMUM QUALITY ASSURANCE TESTING REQUIREMENTS
COLD IN-PLACE RECYCLED (CIR)**

CIRQA/12 TEST	STANDARD	MINIMUM FREQUENCY	
SAMPLING & FORMING MARSHALL BRIQUETTES <ol style="list-style-type: none"> 1. Loose CIR Mix (Sampled by the Contractor) 2. 150 mm by 150 mm Slabs or 150 mm diameter cores (Obtained by Contractor) Stratified random locations provided by the Consultant. 	<p align="center">ATT-37</p> <p align="center">ATT-56</p> <p align="center">ATT-5</p>	<p align="center">Three per Lot</p> <p align="center">Each Lot</p> <p align="center">One per Segment</p>	<p align="center">Daily Compaction Report - CIR</p>
MATERIAL TESTING <ol style="list-style-type: none"> 1. Field formed Marshall briquettes (Performed by the Contractor) 2. CIR Mix Moisture Content (Determined by the Contractor) 3. Slab/Core Moisture Content (by Consultant) 4. Bulk Density of Marshall briquettes (Determined by the Contractor) 5. Bulk Density of Slab/Core Samples (by Consultant) 6. Percent Compaction of CIR Mat (Determined by the Consultant) 	<p align="center">ATT-13 75 blows at room temperature</p> <p align="center">ATT-15, Part II</p> <p align="center">ATT-15, Part II</p> <p align="center">ASTM D1188 ASTM D6752</p> <p align="center">ATT-67</p>	<p align="center">Each CIR Mix Sample</p> <p align="center">Each CIR mix sample</p> <p align="center">Each Core/Slab sample</p> <p align="center">Each formed specimen Each slab or core specimen</p> <p align="center">One per Segment</p>	<p align="center">QC Marshall densities and CIR mix moisture results are to be provided to the Consultant.</p> <p align="center">All QC and QA results to be reported on the Daily Compaction Report - CIR</p>
CIR SURFACE <ol style="list-style-type: none"> 1. Smoothness (Three metre straightedge to be provided by the Contractor) 		<p align="center">Check for surface deviations in excess of specification limits.</p>	
REPORTING <ol style="list-style-type: none"> 1. CIR Mix Designs 2. Daily Inspection Report 3. Densities, Percent Compaction and Moisture Contents. 	<p>Submit verified CIR mix designs to Project Sponsor and email to trans.constructqa@gov.ab.ca</p> <p>Completed by the Contractor as per section 3.56.6 Quality Control of Specification 3.56 Cold In-Place Recycling. Include as part of the Final Details submission.</p> <p>Complete Daily Compaction Report - CIR. Submit to Project Sponsor along with other construction weeklies. Email to Surface Engineering & Aggregates section at trans.constructqa@gov.ab.ca.</p>		

**MINIMUM QUALITY ASSURANCE TESTING REQUIREMENTS FOR
GRANULAR BASE COURSE AND FULL DEPTH RECLAMATION (COMPACTION ONLY)**

TEST GBCQA/12	STANDARD	FREQUENCY (Minimum)	ATT DATA SHEET(S)
SAMPLING, Gravel and Sand	ATT-38	As required in ATT-38 (3 to 5 per Lot)	
SIEVE ANALYSIS	ATT 25 or 26	As required in ATT-38 (1 to 5 per Lot)	MAT 6-25 or MAT 6-27
PERCENT FRACTURE	ATT-50		MAT 6-26 or MAT 6-28
DENSITY, Control Strip Method ¹	ATT 58	400 m Density Test Sections established every 1000 m.	MAT 6-45 MAT 6-46 & MAT 6- 47
RANDOM TEST SITE LOCATIONS	ATT-56		
MOISTURE CONTENT, Oven Method, Soil and Gravel	ATT-15		MAT 6-24
REPORTING	Submit to the Project Sponsor on a weekly basis.		
1. Gradation and Fractures	Complete MAT 6 - 60 Daily Report - Granular Base Course		
2. Density	Complete MAT 6 - 60 Daily Report - Granular Base Course		

NOTES

¹ For Full Depth Reclamation (FDR) projects, compaction testing is to follow the Control Strip Method with modifications as listed in Specification 3.4 Full Depth Reclamation. Compaction results to be reported on the DAILY REPORT – GRANULAR BASE COURSE form.

**Alberta Transportation
ASPHALT MIX DESIGN AND JOB MIX FORMULA SUMMARY SHEET**

SECTION A

Project Identification Information

Contract No.:		Highway: Hw XX:xx		Region:	Contractor:
Project From:		Project To:		Mix Design Consultant:	QA Review Consultant:
Pit Name and Location:			Blend Sand Pit Name and Location:		
Marshall Design No.:	Specified Mix Type:	Date Submitted:	(dd-mmm-year)	RAP Source and Location:	

SECTION B

Mix Design Properties

Combined Aggregate Properties		Design Recommendations	
Bulk Specific Gravity		Virgin Asphalt Content (%)	
% Asphalt Absorption		Total Asphalt Content (%)	
% Manufactured Fines (in -5000 Portion)		Marshall Density (kg/m ³)	
% Two Face Fractures		Air Voids (%)	
% One Face Fractures		V.M.A (%)	
% Detrimental Matter Content		V.F.A. (%)	
Plasticity Index		Theoretical Film Thickness	
Fine Aggregate Angularity		Stability (N)	
Asphalt Properties		Flow (mm)	
Asphalt Grade		Tensile Strength Ratio (no anti-strip)	
Supplier		T.S.R. (with anti-strip) (if applicable)	
Specific Gravity		Liquid Anti-Strip Additive (%)	

SECTION C

use drop-down bar here to select either **1. Job Mix Formula** or **2. Change in Job Mix Formula**

Agg. Gradation	% Passing	Aggregate Proportions (%)			
25 000		Coarse (16.0mm)		Natural Fines	
20 000		Coarse (12.5mm)		Additive _____	
16 000		Manufactured Fines		Chips _____	
12 500		Blend Sand		RAP	
10 000		<i>New Target A.C.</i>		<i>New Film Thick.*</i>	
5 000		* Value calculated based upon new JMF aggregate gradation and target asphalt content with other information included in the original mix design (<i>must meet design criteria</i>)			
2 500 (Film Thick.)		Reviewed by :		First Lot No. For Change:	
1 250		Signature:		Date: (dd-mmm-year)	
630					
315					
160					
80					

Remarks:

Note: Complete entire form for mix design submissions.

For a change in JMF, comment on what change occurred.

List in the remarks the product name for any Warm Mix Asphalt or anti-strip additives.

Email completed copy to the Project Sponsor and to the Technical Standards Branch at "trans.constructqa@gov.ab.ca"

**Alberta Transportation
ASPHALT MIX DESIGN AND JOB MIX FORMULA SUMMARY SHEET**

SECTION A

Project Identification Information

Contract No.: XXXXXX		Highway: Hw XX:xx		Region:	Contractor:
Project From:		Project To:		Mix Design Consultant:	QA Review Consultant:
Pit Name and Location:			Blend Sand Pit Name and Location:		
Marshall Design No.:	Specified Mix Type: M1	Date Submitted:	(dd-mmm-year)	RAP Source and Location:	

SECTION B

Mix Design Properties

Combined Aggregate Properties		Design Recommendations	
Bulk Specific Gravity	2.603	Virgin Asphalt Content (%)	4.8%
% Asphalt Absorption	0.97	Total Asphalt Content (%)	5.2%
% Manufactured Fines (in -5000 Portion)	50.2	Marshall Density (kg/m ³)	2368
% Two Face Fractures	79.0	Air Voids (%)	3.6
% One Face Fractures		V.M.A (%)	13.5
% Detrimental Matter Content	1.40	V.F.A. (%)	73.2
Plasticity Index	NP	Theoretical Film Thickness	6.40
Fine Aggregate Angularity	43.1	Stability (N)	12,800
Asphalt Properties		Flow (mm)	2.3
Asphalt Grade	PG 52-34	Tensile Strength Ratio (no anti-strip)	82.4
Supplier	Montana	T.S.R. (with anti-strip, if applicable)	--
Specific Gravity	0.9620	Liquid Anti-Strip Additive (%)	0.4%

SECTION C

Job Mix Formula

Agg. Gradation	% Passing	Aggregate Proportions (%)			
25 000	100	Coarse (16.0mm)	0	Natural Fines	16
20 000	100	Coarse (12.5mm)	37	Additive	
16 000	100	Manufactured Fines	24	Chips	
12 500	99	Blend Sand	13	RAP	10
10 000	87	<i>New Target A.C.</i>		<i>New Film Thick.*</i>	
5 000	60	* Value calculated based upon new JMF aggregate gradation and target asphalt content with other information included in the original mix design (<i>must meet design criteria</i>)			
2 500 (Film Thick.)	51	Reviewed by :		First Lot No. For Change:	
1 250	42			1	
630	34	Signature:		Date: (dd-mmm-year)	
315	18			1-Jan-2013	
160	10				
80	7.0				

Remarks: Redicote liquid anti-strip additive used.
Contractor to use a plant based foaming for Warm Mix Asphalt

Note: Complete entire form for mix design submissions.

For a change in JMF, comment on what change occurred.

List in the remarks the product name for any Warm Mix Asphalt or anti-strip additives.

Email completed copy to the Project Sponsor and to the Technical Standards Branch at "trans.constructqa@gov.ab.ca"

**Alberta Transportation
SUPERPAVE MIX DESIGN AND JOB MIX FORMULA SUMMARY SHEET**

SECTION A Project Identification Information			
Contract No.:	Highway:	Region:	Contractor:
Project From:	Project To:	Mix Design Consultant:	QA Review Consultant:
Pit Name and Location:		Blend Sand Pit Name and Location:	
Marshall Design No.:	Specified Mix Type:	Date Submitted: (dd-mmm-year)	RAP Source and Location:

SECTION B Mix Design Properties			
Combined Aggregate Properties		Design Recommendations	
Bulk Specific Gravity		Total Asphalt Content (%)	
Clay Content, %		Gyratory Density (kg/m ³)	
Fine Aggregate Angularity, %		% Asphalt Absorption	
% Two Face Fractures		Gmm	
% One Face Fractures		Cini (%) @Nini _____ Gyration	
% Elongated Particles		Cdes (%) @Ndes _____ Gyration	
% Detrimental Matter Content		Cmax(%) @Nmax _____ Gyration	
Plasticity Index		VMA (%)	
Asphalt Properties		Flow (%)	
Asphalt Grade		Fines / Asphalt Ratio	
Supplier		Tensile Strength Ratio (no anti-strip)	
Specific Gravity		T.S.R. (with anti-strip) (if applicable)	
		Liquid Anti-Strip Additive (%)	

SECTION C Job Mix Formula				
Agg. Gradation	% Passing	Aggregate Proportions (%)		
25 000		Coarse (16.0mm)		Natural Fines
20 000		Coarse (12.5mm)		Additive _____
16 000		Manufactured Fines		Chips _____
12 500		Blend Sand		RAP _____
10 000		<i>New Target A.C.</i>		<i>Fines / Asp. Ratio*</i>
5 000		* Value calculated based upon new JMF aggregate gradation and target asphalt content with other information included in the original mix design (<i>must meet design criteria</i>)		
2 500 (Film Thick.)		Reviewed by :	First Lot No. For Change:	
1 250		Signature:	Date: (dd-mmm-year)	
630				
315				
160				
80				

Remarks:	
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Note: Complete entire form for mix design submissions.
For a change in JMF, comment on what change occurred.
List in the remarks, the product name for any Warm Mix Asphalt or anti-strip additives.

Email completed copy to the Project Sponsor and to the Technical Standards Branch at "trans.constructqa@gov.ab.ca"

SUPJMF/12

**Alberta Transportation
SUPERPAVE MIX DESIGN AND JOB MIX FORMULA SUMMARY SHEET**

SECTION A					
Project Identification Information					
Contract No.: 12345		Highway: Hwy XX:xx		Region: Southern	Contractor: ABC
Project From: Jct. Hwy. XX		Project To: Jct. Hwy. XXX		Mix Design Consultant: XYZ	QA Review Consultant: DBC
Pit Name and Location: Rocky Pit 1 NE-29-025-02-05			Blend Sand Pit Name and Location: Rocky Pit 2 SW-04-028-26-04		
Marshall Design No.: 12345-S1	Specified Mix Type: 20-F-12.5	Date Submitted: (dd-mmm-year) 29-Sep-2013		RAP Source and Location: N/A	
SECTION B					
Mix Design Properties					
Combined Aggregate Properties			Design Recommendations		
Bulk Specific Gravity	2.384	Total Asphalt Content (%)	5.3		
Clay Content, %	64.10	Gyratory Density (kg/m ³)	2383		
Fine Aggregate Angularity, %	45.7	% Asphalt Absorption	0.75		
% Two Face Fractures	97.0	Gmm	2.500		
% One Face Fractures	99.0	Cini (%) @Nini _____ Gyration	88.2		
% Elongated Particles	2.40	Cdes (%) @Ndes _____ Gyration	96.0		
% Detrimental Matter Content	1.40	Cmax(%) @Nmax _____ Gyration	97.40		
Plasticity Index	NP	VMA (%)	14.0		
Asphalt Properties			Flow (%)	71.4	
Asphalt Grade	PG 64-34	Fines / Asphalt Ratio	1.00		
Supplier	Husky	Tensile Strength Ratio (no anti-strip)	60.0		
Specific Gravity	1.0240	T.S.R. (with anti-strip) (if applicable)	90.0		
		Liquid Anti-Strip Additive (%)	0.4%		
SECTION C					
Change in Job Mix Formula					
Agg. Gradation	% Passing	Aggregate Proportions (%)			
25 000	100	Coarse (16.0mm)	41	Natural Fines	
20 000	100	Coarse (12.5mm)	45	Additive	
16 000	100	Manufactured Fines	14	Chips	
12 500	96	Blend Sand		RAP	
10 000	84	<i>New Target A.C.</i>		<i>Fines / Asp. Ratio*</i>	1.12
5 000	60	* Value calculated based upon new JMF aggregate gradation and target asphalt content with other information included in the original mix design (<i>must meet design criteria</i>)			
2 500 (Film Thick.)	41	Reviewed by:		First Lot No. For Change:	
1 250	29	<i>Mr. X, Project Manager</i>		7	
630	22	Signature:		Date: (dd-mmm-year)	
315	13				
160					
80	5.1			2-Oct-2013	
Remarks:	Target gradation for the 80µm sieve increased to 5.1%. Redicote liquid anti-strip additive used.				
<p>Note: Complete entire form for mix design submissions. For a change in JMF, comment on what change occurred. List in the remarks, the product name for any Warm Mix Asphalt or anti-strip additives.</p> <p>Email completed copy to the Project Sponsor and to the Technical Standards Branch at "trans.constructqa@gov.ab.ca" SUPJMF/12</p>					

LOT PAVING REPORT

 MAT 6-78/12	CONTRACT NO.			PROJECT NO.				PROJECT FROM				LOT NO.	MST DESIGN NO.		DESIGN DENSITY (kg/m ³)	DESIGN AIR VOIDS (%)	
	WEEK ENDING			CL	NO.	A	CS	PROJECT TO				MIX TYPE	PIT NAME		DESIGN ASPHALT CONTENT (%)	DESIGN VMA (%)	
	YY	MM	DD												TARGET ASPHALT CONTENT (%)		
PAVING CONTRACTOR							QA CONSULTANT				DESIGN ASPHALT CONTENT (%)		DESIGN LIFT THICKNESS (mm)				

DATE LAID (dd-mm-yyyy)	LOT AGGREGATE PROPORTIONS				FORMED MARSHALL SPECIMENS				ASPHALT CONTENT			LOT PAVEMENT AND COMPACTION DATA																
	COARSE AGGREGATE 12.5mm %	MANUFACTURED FINES %	BLEND SAND %		DENSITY (kg/m ³)	* AIR VOIDS (%)	* V.M.A. (%)	MIX MOISTURE CONTENT (%)	SAMPLE SOURCE	SEGMENT CORRECTED ASPHALT CONTENT (%)	TEST METHOD	SEGMENT #	STATION (00+000)	+ OR -	LOCATION	LANE	LIFT	CORE THICKNESS (mm)	DENSITY (kg/m ³)	AIR VOIDS (%)	** COMPACTION (%)	CORE MOISTURE (%)						
												1																
LOT PAVING LIMITS (km)												2																
FROM	TO	LANE	MAT									3																
												4																
												5																
												LOT MEAN																

ADDITIVE		MAT		For QC Lots: calculate air voids using target AC		* Use Lot Mean Corrected asphalt content to calculate Marshall Air Voids & V.M.A. ** Lot Mean % Compaction = (100 X Lot Mean Density) / (Lot Mean Marshall Density)																		
RA Reclaim	R Right	CF Coarse Fines	L Left	BS Blend Sand	C Centerline	C 2nd Coarse	RS Right Shoulder	OR Other	LS Left Shoulder															
TEST METHOD		LANE		TEST NO.		SAMPLE SOURCE		GRADATION										LOT TONNAGE						
FE Filterless Extraction	NU Nuclear	RE Reflux	FC Filter Centrifuge	IG Ignition	OR Other	1	2	3	4	5	SIEVE ANALYSIS - % PASSING (µm)										ASPHALT CONTENT CORRECTION FACTOR (%)			
												25,000	20,000	16,000	12,500	10,000	5,000	1,250	630	315	160	80	MQA (QA or QC ACCEPTANCE LOT)	
																						COMMENTS		
																						TECHNOLOGISTS :		
																						CONSULTANT :		
																						PROJECT MANAGER :		
																						RECEIVED BY :		
																						*** Contractor's Representative		
																						DATE RECEIVED _____ TIME _____		
																						*** Signature indicates receipt of data on the date and time indicated		

LOT MEAN																															
JOB MIX FORMULA																															
TOLERANCES FOR THE LOT MEAN FROM JOB MIX FORMULA												± 5	± 5	± 5	± 5	± 5	± 3	± 2	± 2	± 1.5	± 1.5										
MAXIMUM RANGE BETWEEN INDIVIDUAL TEST RESULTS IN A LOT												10	10	10	10	10	6	5	4	3	3										

LOT PAVING REPORT

<p style="font-size: small;">MAT 6-78/12</p>	CONTRACT NO. XXXXXX			PROJECT NO.				PROJECT FROM				LOT NO. 1	MST DESIGN NO.			DESIGN DENSITY (kg/m ³) 2370	DESIGN AIR VOIDS (%) 3.5											
	WEEK ENDING			CL	NO.	A	CS	PROJECT TO				MIX TYPE M1	PIT NAME			DESIGN ASPHALT CONTENT (%) 5.4	DESIGN VMA (%) 13.5											
	YY	MM	DD					PAVING CONTRACTOR				QA CONSULTANT			TARGET ASPHALT CONTENT (%) 5.4	DESIGN LIFT THICKNESS (mm) 50												
	yy	mm	dd	HW	XX		XX																					
DATE LAID (dd-mm-yyyy)	LOT AGGREGATE PROPORTIONS				FORMED MARSHALL SPECIMENS				ASPHALT CONTENT				LOT PAVEMENT AND COMPACTION DATA															
	COARSE AGGREGATE 12.5mm %	MANUFACTURED FINES %	BLEND SAND %		DENSITY (kg/m ³)	* AIR VOIDS (%)	* V.M.A. (%)	MIX MOISTURE CONTENT (%)	SAMPLE SOURCE	SEGMENT CORRECTED ASPHALT CONTENT (%)	TEST METHOD	SEGMENT #	STATION (00+000)	+ OR -	LOCATION	LANE	LIFT	CORE THICKNESS (mm)	DENSITY (kg/m ³)	AIR VOIDS (%)	* COMPACTION (%)	CORE MOISTURE (%)						
1-Jan-2013	80	15	5		2359	3.8	14.0	0.05	BP	5.53	IG	1	7+861	-	4.3	S	B	45	2275	7.2	96.0	0.61						
LOT PAVING LIMITS (km)					2381	2.9	13.2	0.04	BP	6.01	IG	2	2+255	-	2.0	S	B	50	2290	6.6	96.6	0.44						
FROM	TO	LANE	MAT		2375	3.2	13.5	0.07	BP	5.60	IG	3	9+872	-	0.7	S	B	52	2282	6.9	96.2	0.63						
7+183	13+239	E	R		2369	3.4	13.7	0.05	BP	5.28	IG	4	11+543	-	4.4	S	B	48	2350	4.2	99.1	0.35						
					2371	3.3	13.6	0.04	BP	5.38	IG	5	12+767	-	2.5	S	B	47	2298	6.3	96.9	0.33						
					2371	3.3	13.6	0.05		5.56			LOT MEAN				48	2299	6.2	97.0	0.47							
ADDITIVE		MAT		For QC Lots: calculate air voids using target AC		3.5	13.5	* Use Lot Mean Corrected asphalt content to calculate Marshall Air Voids & V.M.A. ** Lot Mean % Compaction = (100 X Lot Mean Density) / (Lot Mean Marshall Density)										6.4										
RA Reclaim	CF Coarse Fines	BS Blend Sand	C 2nd Coarse	OR Other	R Right	L Left	C Centerline	RS Right Shoulder	LS Left Shoulder	GRADATION												LOT TONNAGE 1725.40						
TEST METHOD					SIEVE ANALYSIS - % PASSING (µm)					ASPHALT CONTENT CORRECTION FACTOR (%) -0.86		MQA (QA or QC ACCEPTANCE LOT) QC		COMMENTS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - EDITION 14, 2010 QA Asphalt Content on loose mix from Behind Paver = 5.48 %														
FE Filterless Extraction	NU Nuclear	RE Reflux	FC Filter Centrifuge	IG Ignition	OR Other	N Northbound	S Southbound	W Westbound	E Eastbound	TEST NO.	SAMPLE SOURCE	25,000	20,000						16,000	12,500	10,000	5,000	1,250	630	315	160	80	
SAMPLE SOURCE CODE					LIFT					1	BP	100	100						100	98	89	63	32	23	13	8.4	5.2	
CO Core	BP Behind Paver	CF Cold Feed	OR Other	B Bottom Lift	T Top Lift	O Other Lifts	2	BP	100	100	100	99	91						61	32	24	15	9.5	6.2				
LOT MEAN					3	BP	100	100	100	98	89	58	30						23	14	9.2	6.0						
JOB MIX FORMULA					4	BP	100	100	100	98	88	59	30						23	14	8.9	5.7						
TOLERANCES FOR THE LOT MEAN FROM JOB MIX FORMULA					5	BP	100	100	100	98	88	57	29	21	12	8.3	5.2											
MAXIMUM RANGE BETWEEN INDIVIDUAL TEST RESULTS IN A LOT					QA1	BP	100	100	100	98	86	57	29	21	12	8.3	5.2	TECHNOLOGISTS : CONSULTANT : PROJECT MANAGER : RECEIVED BY :										
					QA2	BP	100	100	100	98	88	59	31	23	14	8.7	5.6											
					1-5	100	100	100	98	88	59	30	23	14	8.9	5.7	DATE RECEIVED _____ TIME _____ *** Contractor's Representative *** Signature indicates receipt of data on the date and time indicated											
					QA	100	100	100	98	87	58	30	22	13	8.5	5.4												

LOT PAVING REPORT

 MAT 6-78/12	CONTRACT NO. XXXXXX			PROJECT NO.				PROJECT FROM				LOT NO. 1	MST DESIGN NO.		DESIGN DENSITY (kg/m ³) 2370	DESIGN AIR VOIDS (%) 3.5	
	WEEK ENDING			CL	NO.	A	CS	PROJECT TO				MIX TYPE M1	PIT NAME		DESIGN ASPHALT CONTENT (%) 5.4	DESIGN VMA (%) 13.5	
	YY	MM	DD					PAVING CONTRACTOR				QA CONSULTANT		TARGET ASPHALT CONTENT (%) 5.4	DESIGN LIFT THICKNESS (mm) 50		
	yy	mm	dd	HW	XX		XX										

DATE LAID (dd-mm-yyyy)	LOT AGGREGATE PROPORTIONS				FORMED MARSHALL SPECIMENS				ASPHALT CONTENT			LOT PAVEMENT AND COMPACTION DATA										
	COARSE AGGREGATE 12.5mm %	MANUFACTURED FINES %	BLEND SAND %		DENSITY (kg/m ³)	* AIR VOIDS (%)	* V.M.A. (%)	MIX MOISTURE CONTENT (%)	SAMPLE SOURCE	SEGMENT CORRECTED ASPHALT CONTENT (%)	TEST METHOD	SEGMENT #	STATION (00+000)	+ OR -	LOCATION	LANE	LIFT	CORE THICKNESS (mm)	DENSITY (kg/m ³)	AIR VOIDS (%)	* COMPACTION (%)	CORE MOISTURE (%)
1-Jan-2013	80	15	5		2359	3.8	14.0	0.05	CO	5.53	IG	1	7+861	-	4.3	S	B	45	2275	7.2	96.0	0.61
LOT PAVING LIMITS (km)					2381	2.9	13.2	0.04	CO	6.01	IG	2	2+255	-	2.0	S	B	50	2290	6.6	96.6	0.44
FROM	TO	LANE	MAT		2375	3.2	13.5	0.07	CO	5.60	IG	3	9+872	-	0.7	S	B	52	2282	6.9	96.2	0.63
7+183	13+239	E	R		2369	3.4	13.7	0.05	CO	5.28	IG	4	11+543	-	4.4	S	B	48	2350	4.2	99.1	0.35
					2371	3.3	13.6	0.04	CO	5.38	IG	5	12+767	-	2.5	S	B	47	2298	6.3	96.9	0.33
					2371	3.3	13.6	0.05		5.56		LOT MEAN					48	2299	6.2	97.0	0.47	

ADDITIVE RA Reclaim CF Coarse Fines BS Blend Sand C 2nd Coarse OR Other		MAT R Right L Left C Centerline RS Right Shoulder LS Left Shoulder		For QC Lots: calculate air voids using target AC				* Use Lot Mean Corrected asphalt content to calculate Marshall Air Voids & V.M.A. ** Lot Mean % Compaction = (100 X Lot Mean Density) / (Lot Mean Marshall Density)											
TEST METHOD FE Filterless Extraction NU Nuclear RE Reflux FC Filter Centrifuge IG Ignition OR Other		LANE N Northbound S Southbound W Westbound E Eastbound		TEST NO.	SAMPLE SOURCE	GRADATION												LOT TONNAGE	
SAMPLE SOURCE CODE CO Core BP Behind Paver CF Cold Feed OR Other		LIFT B Bottom Lift T Top Lift O Other Lifts				SIEVE ANALYSIS - % PASSING (µm)												1725.40	
						25,000	20,000	16,000	12,500	10,000	5,000	1,250	630	315	160	80	ASPHALT CONTENT CORRECTION FACTOR (%)		
				1	CO	100	100	100	98	89	63	32	23	13	8.4	5.2	MQA (QA or QC ACCEPTANCE LOT)		
				2	CO	100	100	100	99	91	61	32	24	15	9.5	6.2	QA		
				3	CO	100	100	100	98	89	58	30	23	14	9.2	6.0	COMMENTS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - EDITION 14, 2010		
				4	CO	100	100	100	97	84	53	26	20	13	8.3	5.3			
				5	CO	100	100	100	98	89	62	32	24	15	9.2	6.0			
LOT MEAN				1-5	CO	100	100	100	98	88	59	30	23	14	8.9	5.7	TECHNOLOGISTS : CONSULTANT : PROJECT MANAGER : RECEIVED BY :		
JOB MIX FORMULA						100	100	100	98	88	60	31	23	14	9.5	6.4	*** Contractor's Representative		
TOLERANCES FOR THE LOT MEAN FROM JOB MIX FORMULA						± 5	± 5	± 5	± 5	± 5	± 3	± 2	± 2	± 1.5	± 1.5	DATE RECEIVED _____ TIME _____			
MAXIMUM RANGE BETWEEN INDIVIDUAL TEST RESULTS IN A LOT						10	10	10	10	10	6	5	4	3	3	*** Signature indicates receipt of data on the date and time indicated			

HIR LOT PAVING REPORT

 MAT 6-78H/12	CONTRACT NO.			PROJECT NO.				PROJECT FROM			LOT NO.	MST DESIGN NO.	DESIGN DENSITY (kg/m ³)	DESIGN AIR VOIDS (%)
	WEEK ENDING			CL	NO.	A	CS	PROJECT TO			MIX TYPE	PIT NAME	DESIGN ASPHALT CONTENT (%)	DESIGN VMA (%)
	YY	MM	DD										TARGET ASPHALT CONTENT (%)	DESIGN LIFT THICKNESS (mm)
PAVING CONTRACTOR							QA CONSULTANT							

DATE LAID (dd-mm-yyyy)	ADDITIVES			MIX CHARACTERISTICS						LOT PAVEMENT AND COMPACTION DATA										
	ADMIX		REJUV. AGENT TYPE XX	MAXIMUM SPECIFIC GRAVITY (G _{mm})	MARSHALL DENSITY (kg/m ³)	* AIR VOIDS (%)	MIX MOISTURE CONTENT (%)	ASPHALT CONTENT (%)	RECOVERED ASPHALT PEN. (dmm)	SEGMENT #	STATION (00+000)	+ OR -	LOCATION	LANE	LIFT	CORE THICKNESS (mm)	DENSITY (kg/m ³)	AIR VOIDS (%)	* COMPACTION (%)	CORE MOISTURE (%)
	% Added	Coating %	Rejuv. %																	
										1										
LOT PAVING LIMITS (km)										2										
FROM	TO	LANE	MAT							3										
										4										
										5										
										LOT MEAN										

* Use Maximum Specific Gravity and Marshall Density to calculate Air Voids.

** % Compaction = (Road Dry Density) / (Lot Mean Maximum Specific Gravity / 10)

REJUVINATING AGENT CY Cyclogen "L" Blend RE Rejuvoil "1" OR Other _____				GRADATION										LOT SQUARE METERS			
TEST METHOD FE Filterless Extraction NU Nuclear RE Reflux FC Filter Centrifuge IG Ignition OR Other _____	MAT R Right L Left C Centerline RS Right Shoulder LS Left Shoulder	TEST NO.	SAMPLE SOURCE	SIEVE ANALYSIS - % PASSING (µm)										COMMENTS			
SAMPLE SOURCE CODE CO Core BP Behind Paver CF Cold Feed OR Other _____	LANE N Northbound S Southbound W Westbound E Eastbound			25,000	20,000	16,000	12,500	10,000	5,000	1,250	630	315	160			80	
		1															
		2															
		3															
		4															
		5															
LOT MEAN			1-5														
JOB MIX FORMULA														TECHNOLOGISTS :			
														CONSULTANT :			
														PROJECT MANAGER :			
														RECEIVED BY :			
														*** Contractor's Representative			
MAXIMUM PERMISSABLE VARIATION FROM THE JOB MIX FORMULA (+/-)				ENTER AS SPECIFIED IN THE CONTRACT						±6	±5	±4	±3.5	±3.0	±2.5	DATE RECEIVED _____ TIME _____	
															*** Signature indicates receipt of data on the date and time indicated		

HIR LOT PAVING REPORT

	CONTRACT NO. xxxxxx			PROJECT NO.				PROJECT FROM			LOT NO. 10	MST DESIGN NO. 5578-2	DESIGN DENSITY (kg/m ³) 2350	DESIGN AIR VOIDS (%) 2.6						
	WEEK ENDING			CL	NO.	A	CS	PROJECT TO			MIX TYPE HR1	PIT NAME Winding River #2	DESIGN ASPHALT CONTENT (%) 5.7	DESIGN VMA (%) 13.5						
	YY	MM	DD										TARGET ASPHALT CONTENT (%) 5.7	DESIGN LIFT THICKNESS (mm) 50						
MAT 6-78H/12			yy	mm	dd	HW	XX	xx	PAVING CONTRACTOR			QA CONSULTANT								
DATE LAID (dd-mm-yyyy)	ADDITIVES			MIX CHARACTERISTICS						LOT PAVEMENT AND COMPACTION DATA										
	ADMIX		REJUV. AGENT TYPE CY	MAXIMUM SPECIFIC GRAVITY (G _{mm})	MARSHALL DENSITY (kg/m ³)	* AIR VOIDS (%)	MIX MOISTURE CONTENT (%)	ASPHALT CONTENT (%)	RECOVERED ASPHALT PEN. (dmm)	SEGMENT #	STATION (00+000)	+ OR -	LOCATION	LANE	LIFT	CORE THICKNESS (mm)	DENSITY (kg/m ³)	AIR VOIDS (%)	* COMPACTION (%)	CORE MOISTURE (%)
1-Jan-2013	10	4.00	0.30	2.430	2367	2.6	0.01	5.74		1	5+190	+	2.2	E	1	54	2300	5.3	94.9	0.91
LOT PAVING LIMITS (km)				2.425	2350	3.1	0.02	5.71	83	2	6+390	+	2.5	E	1	53	2289	5.6	94.4	0.78
FROM	TO	LANE	MAT	2.432	2355	3.2	0.01	5.81		3	6+990	+	3.0	E	1	48	2294	5.7	94.6	0.91
5+120	8+230	E	R	2.419	2346	3.0	0.03	5.66		4	7+400	+	0.9	E	1	51	2299	5.0	94.8	1.01
				2.415	2360	2.3	0.01	5.71		5	8+005	+	1.3	E	1	51	2310	4.3	95.3	1.10
				2.424	2356	2.8	0.02	5.73	83	LOT MEAN			51	2298	5.2	94.8	0.94			

* Use Maximum Specific Gravity and Marshall Density to calculate Air Voids.

** % Compaction = (Road Dry Density) / (Lot Mean Maximum Specific Gravity / 10)

REJUVINATING AGENT CY Cyclogen "L" Blend RE Rejuvoil "1" OR Other _____		TEST NO.	SAMPLE SOURCE	GRADATION										LOT SQUARE METERS		11,510	
TEST METHOD FE Filterless Extraction NU Nuclear RE Reflux FC Filter Centrifuge IG Ignition OR Other _____				SIEVE ANALYSIS - % PASSING (µm)													
MAT R Right L Left C Centerline RS Right Shoulder LS Left Shoulder		1	CO	100	100	100	100	88	66	43	36	28	18.0	9.9	COMMENTS Recovered asphalt penetration is for Lot 5. Testing now reduced to one test per five Lots.		
SAMPLE SOURCE CODE CO Core BP Behind Paver CF Cold Feed OR Other _____		2	CO	100	100	100	98	87	68	44	38	26	17.0	10.0			
LANE N Northbound S Southbound W Westbound E Eastbound		3	CO	100	100	100	99	89	70	42	38	27	16.0	10.5			
		4	CO	100	100	100	99	87	65	40	39	24	19.0	10.1			
		5	CO	100	100	100	100	82	69	41	35	28	19.0	9.3			
LOT MEAN		1-5		100	100	100	99	87	68	42	37	27	17.8	10.0	TECHNOLOGISTS :		
JOB MIX FORMULA				100	100	100	99	85	65	39	34	25	15.0	8.9	CONSULTANT :		
MAXIMUM PERMISSABLE VARIATION FROM THE JOB MIX FORMULA (+/-)		ENTER AS SPECIFIED IN THE CONTRACT						±6	±5	±4	±3.5	±3.0	±2.5	PROJECT MANAGER :			
														RECEIVED BY :			
														DATE RECEIVED _____ TIME _____			
														*** Contractor's Representative			
														*** Signature indicates receipt of data on the date and time indicated			



MAT 6-1/12

DAILY COMPACTION REPORT - GRADING AND SUBGRADE PROJECTS

CONTRACT NO. :	XXXXXX	% COMPLETED :	10%	QA CONSULTANT :	
PROJECT :	Hwy XX:xx	PROJECT FROM :		PROJECT TO :	
DATE TESTED :	1-Jan-2013	CONTRACTOR :		PRIME CONSULTANT :	

DEPTH BELOW GRADE (m)	STATION 00+000	LOCATION	UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)	PROCTOR		CONSTRUCTED		COMPACTION %	MODE	MODE - NUCLEAR "N" BALLOON "B" SAND "S" if "N" NUCLEAR CORRECTION FACTORS (ATT 48) DENSITY CORRECTION FACTOR _____ kg/m ³ MOISTURE CORRECTION FACTOR _____ kg/m ³	
				DENSITY kg/m ³	MOISTURE %	DENSITY kg/m ³	MOISTURE %			REMARKS	
0.00	22+620	cl	Cl	1938	11.7	1972	12.0	101.8	B		
0.00	22+875	4 m Rt		1938	11.7	1960	12.1	101.1	B	These densities are re-tests after weeks of rain.	
0.00	23+245	3 m Rt		1938	11.7	1950	11.5	100.6	B		
0.00	20+520	1.5 m Rt		1938	11.7	1945	12.2	100.4	B	Contractor has been ripping, discing, drying and	
0.00	20+810	cl		1938	11.7	1940	11.8	100.1	B	recompacting roadtop as well as finishing ditches	
0.00	21+100	2m Lt		1938	11.7	1940	11.0	100.1	B	and slopes.	
0.00	18+960	3m Lt		1938	11.7	1935	11.9	99.8	B		
0.00	19+260	2m Lt		1938	11.7	1930	12.0	99.6	B		
0.00	19+580	2m Lt		1938	11.7	1930	12.5	99.6	B		
0.00	19+870	cl	Cl	1766	15.0	1756	15.4	99.4	B		
0.00	20+250	2m Rt	Cl	1938	11.7	1959	12.0	101.1	B		
0.00	21+470	2m Lt		1938	11.7	1944	12.1	100.3	B	REQUIRED COMPACTION = 100%	
0.00	21+740	2m Lt		1938	11.7	1925	11.7	99.3	B		
0.00	22+010	3m Lt	Cl	1804	15.3	1786	15.5	99.0	B		
								AVERAGE COMPACTION	100.2		

COMMENTS :

Very heavy compaction equipment on this project (826 Cat and 4 padfoot drums).
Contractor will be ripping the top 100 mm and incorporating Des 4-40 into the subgrade.

Layer and Density Requirements (Specification 2.3 Grading, 2.3.4.7.5.1) : compacted layers not to exceed 0.15m in depth

0.0 to 0.30m - minimum average of 100% compaction (with no tests <97%) below 0.30m - compacted to 95%

TECHNOLOGISTS			
PROJECT MANAGER			
RECEIVED BY	*** Contractor's Representative		
DATE RECEIVED	2-Jan-2013	TIME	14:30
*** Signature indicates receipt of data on the date and time indicated			



DAILY REPORT - GRANULAR BASE COURSE
USE ALSO FOR REPORTING FULL DEPTH RECLAMATION COMPACTION

CONTRACT NO.	PROJECT	CONTRACTOR	PRIME CONSULTANT
PROJECT FROM	PROJECT TO	DES. CLASS	QA CONSULTANT

¹COMPACTION - CONTROL STRIP METHOD

DATE TESTED	TEST SECTION NO.	LIFT	LIFT THICKNESS	TEST SECTION LIMITS		CONTROL		TEST SECTION		AVERAGE PERCENT CONTROL DENSITY	NO. OF TESTS		TEST SECTION RE-TEST
				FROM	TO	DRY DENSITY kg/m ³	MOISTURE %	DRY DENSITY kg/m ³	MOISTURE %		TOTAL NO.	BELOW 95%	

²GRADATION and FRACTURES

DATE SAMPLED	LOT NO.	TEST NO.	LIFT	LOT LIMITS		PERCENT FRACTURE BY WEIGHT (2 FACES)	SIEVE ANALYSIS - % PASSING (µm)													
				FROM	TO		50 000	40 000	25 000	20 000	16 000	10 000	5 000	1250	630	315	160	80		
LOT MEAN																				
SPECIFICATION LIMITS (Table 3.2.3.1)					Upper Limit															
					Lower Limit															

1. Test Section Frequency Outlined in ATT 58.
 2. Windrow Sampling and Frequency Outlined in ATT 38.

MAT 6 - 60 / 12

COMMENTS

LOT TONNAGE _____ t

TECHNOLOGISTS _____

PROJECT MANAGER _____

RECEIVED BY _____
 *** Contractor's Representative

DATE RECEIVED _____ TIME _____

*** Signature indicates receipt of data on the date and time indicated



DAILY COMPACTION REPORT - Cold In-Place Recycling (CIR)

CONTRACT NO.	PROJECT NO.	CONTRACTOR	PRIME CONSULTANT
PROJECT FROM	PROJECT TO	DESIGN PROCTOR kg/m³	QA CONSULTANT

CIR1/12

CIR MIX				CIR PAVEMENT							
DATE SAMPLED	LOT NO.	DENSITY kg/m ³	MOISTURE CONTENT %	DATE SAMPLED	LOT NO.	LANE	STATION	OFFSET m	SLAB DENSITY kg/m ³	SLAB MOISTURE %	COMPACTION %
Lot Average											

COMMENTS:	Lot No.	Lane	From	To	Area (m ²)	TECHNOLOGISTS: _____ PROJECT MANAGER: _____ RECEIVED BY: _____ <div style="text-align: right; font-size: small;">*** Contractors Representative</div> DATE RECEIVED: _____ TIME: _____ <div style="text-align: right; font-size: x-small;">*** Signature indicates receipt of data on the date and time indicated</div>
			TYPE	AMOUNT %		
	BITUMINOUS STABILIZING ADDITIVE					
	CEMENT ADDITIVE					

APPEAL INITIALIZATION FORM

MAT 6 - 92A/11

PRIME CONSULTANT:	CONTACT NAME:	PHONE No.:	Email:
DATE SUBMITTED:	APPEAL TYPE:	APPEAL CONSULTANT:	
LOT NO.	APPEAL NO.:	PROJECT IDENTIFIER:	

CORRECTION FACTOR INFORMATION

(Fill this area out only for asphalt content appeals)

DESIGN or VIRGIN (if RAP) GRADATION		DESIGN or TARGET AGGREGATE PROPORTIONS %	
SIEVE SIZE (μm)	PERCENT PASSING (%)		
25 000		COARSE AGGREGATE (12.5mm)	
20 000		NATURAL FINES	
16 000		MANUFACTURED FINES	
12 500		BLEND SAND	
10 000		COARSE AGGREGATE (20mm)	
5 000		COARSE AGGREGATE (25mm)	
1250		OTHER _____	
630			
315			
160			
80			
ASPHALT CEMENT GRADE AND SUPPLIER		% PASSING 5000 μm SIEVE IN COARSE	

APPEAL TYPES
Asphalt Content
ACP Gradation
ACP Density
GBC Gradation
GBC Fractures
L.A. Abrasion
Detrimental Matter
HIR MTD

SHADED AREAS - COMPLETED BY PRIME CONSULTANT - HEADER INFORMATION COMPLETED FOR ALL APPEALS

CORRECTION FACTOR INFORMATION NEEDED FOR ASPHALT CONTENT APPEALS ONLY

COPY SUBMITTED WITH SAMPLES AND SENT TO AN APPROVED APPEAL CONSULTANT (AS SPECIFIED IN ATT-68)

For procedures and test methods used for the appeal of acceptance test results see ATT-68 APPEAL TESTING

SEND COMPLETED COPIES OF THIS FORM TO: 1. THE SURFACE ENGINEERING AND AGGREGATES SECTION (email to trans.constructqa@gov.ab.ca)

2. PROJECT SPONSOR

REMARKS: *The Project Identifier in the header is useful in the case where more than one appeal is sent in by the same consultant for different jobs.*

For asphalt content appeals, the Contractor supplies a minimum of 15 kg of representative aggregate for each split, and a 4 ℓ sample of project asphalt cement for the appealed Lot. The materials and the design gradation are shipped to the Appeal Testing Consultant.

For core asphalt content or gradation appeals, sufficient cores are taken at the same location to provide the Appeal Testing Lab with a minimum 2000 g extraction sample.

NOTE : Contract specific information is **NOT** to be included on this form.

APPEAL INITIALIZATION FORM

MAT 6 - 92A/11

PRIME CONSULTANT:	CONTACT NAME:	PHONE No.:	Email:
DATE SUBMITTED: 1-Jan-2013	APPEAL TYPE:	APPEAL CONSULTANT:	
LOT NO.	APPEAL NO.:	PROJECT IDENTIFIER:	XXX

APPEAL TYPES
Asphalt Content
ACP Gradation
ACP Density
GBC Gradation
GBC Fractures
L.A. Abrasion
Detrimental Matter
HIR MTD

CORRECTION FACTOR INFORMATION (Fill this area out only for asphalt content appeals)			
DESIGN or VIRGIN (if RAP) GRADATION		DESIGN or TARGET AGGREGATE PROPORTIONS %	
SIEVE SIZE (µm)	PERCENT PASSING (%)		
25 000		COARSE AGGREGATE (12.5mm)	75
20 000		NATURAL FINES	10
16 000	100	MANUFACTURED FINES	
12 500	100	BLEND SAND	15
10 000	97	COARSE AGGREGATE (20mm)	
5 000	71	COARSE AGGREGATE (25mm)	
1250	43	OTHER _____	
630	32		
315	19		
160	11.6		
80	7.5		
ASPHALT CEMENT GRADE AND SUPPLIER	PG 52-34 HUSKY	% PASSING 5000µm SIEVE IN COARSE	45

SHADED AREAS - COMPLETED BY PRIME CONSULTANT - HEADER INFORMATION COMPLETED FOR ALL APPEALS

CORRECTION FACTOR INFORMATION NEEDED FOR ASPHALT CONTENT APPEALS ONLY

COPY SUBMITTED WITH SAMPLES AND SENT TO AN APPROVED APPEAL CONSULTANT (AS SPECIFIED IN ATT-68)

For procedures and test methods used for the appeal of acceptance test results see ATT-68 APPEAL TESTING

SEND COMPLETED COPIES OF THIS FORM TO: 1. THE SURFACE ENGINEERING AND AGGREGATES SECTION (email to trans.constructqa@gov.ab.ca)

2. PROJECT SPONSOR

REMARKS: *The Project Identifier in the header is useful in the case where more than one appeal is sent in by the same consultant for different jobs.*

For asphalt content appeals, the Contractor supplies a minimum of 15 kg of representative aggregate for each split, and a 4ℓ sample of project asphalt cement for the appealed Lot. The materials and the design gradation are shipped to the Appeal Testing Consultant.

For core asphalt content or gradation appeals, sufficient cores are taken at the same location to provide the Appeal Testing Lab with a minimum 2000 g extraction sample.

NOTE: Contract specific information is **NOT** to be included on this form.



Transportation

MAT 6 - 92 / 11

APPEAL TEST RESULTS

APPEAL TYPE & NO:

PROJECT:	CONTRACT:	DATE LAID:	DATE CORED:
FROM:	LOT NO.:	CONTRACTOR:	PRIME CONSULTANT
TO:	PROJECT MANAGER:	APPEAL CONSULTANT	

SEGMENT OR SAMPLE NUMBER	1	2	3	4	5
STATION OF SEGMENT TEST SITE					
LOCATION FROM CENTERLINE					

DENSITY							
A LOT AVERAGE MARSHALL DRY DENSITY						B TOTAL	AVERAGE
CORE DRY DENSITY (kg/m ³)							

ASPHALT CONTENT							
EXTRACTION CORRECTION FACTOR						C TOTAL	AVERAGE
CORRECTED EXTRACTION ASPHALT CONTENT (%)							

GRADATION OF EXTRACTED CORES or GRANULAR BASE COURSE SAMPLES							
SIEVE SIZE (µm)	PERCENT PASSING (%)					AVERAGE	JOB MIX FORMULA
40 000							
25 000							
20 000							
16 000							
12 500							
10 000							
5 000							
1 250							
630							
315							
160							
80							
% FRACTURES - GBC							

LOT ASPHALT CONTENT or DENSITY CALCULATIONS			
the single high and single low test results from the original Lot will be rejected	D	E	F
THREE REMAINING DENSITY TESTS			
THREE REMAINING LOT ASPHALT CONTENT TESTS			
G ¹ . FINAL LOT DENSITY RESULTS	(D + E + F + B) / 8	kg / m ³	
G ² . FINAL LOT ASPHALT CONTENT RESULTS	(D + E + F + C) / 8	%	
H. LOT TARGET ASPHALT CONTENT		%	
I. DEVIATION FROM TARGET ASPHALT CONTENT	H - G	%	
J. FINAL LOT % COMPACTION	(100 G / A)	%	
K. LOT UNIT PRICE ADJUSTMENT FOR DENSITY or ASPHALT CONTENT	(TABLE 3.50 A OR B)	\$ / t	
L. LOT TONNES OF MIX		t	
M. APPEAL LOT ADJUSTMENT	K x L	\$	

SHADED AREAS - COMPLETED BY THE PRIME CONSULTANT AFTER RECEIVING THE RESULTS FROM THE APPEAL CONSULTANT

SEND COMPLETED COPIES OF THIS FORM TO: 1. THE SURFACE ENGINEERING AND AGGREGATES SECTION (email to trans.constructqa@gov.ab.ca) 2. PROJECT SPONSOR

REMARKS:

MAT 6 - 92 / 11

PROJECT MANAGER _____ CONTRACTOR _____ APPEAL CONSULTANT _____



Transportation

MAT 6 - 92 / 11

APPEAL TEST RESULTS

APPEAL TYPE & NO: ACP Density No. 2

PROJECT:	HWY XX:xx	CONTRACT:	XXXXXX	DATE LAID:	1-Jan-2013	DATE CORED:	5-Jan-2013
FROM:		LOT NO.:		CONTRACTOR:		PRIME CONSULTANT	
TO:		PROJECT MANAGER:				APPEAL CONSULTANT	

SEGMENT OR SAMPLE NUMBER	1	2	3	4	5
STATION OF SEGMENT TEST SITE	12+100	12+650	13+002	13+122	13+450
LOCATION FROM CENTERLINE	2.0 m Rt	2.3 m Rt	0.5 m Rt	4.1 m Rt	3.1 m Rt

DENSITY							
A LOT AVERAGE MARSHALL DRY DENSITY	2383					B TOTAL	AVERAGE
CORE DRY DENSITY (kg/m ³)	2282	2241	2256	2291	2289	11359	2272

ASPHALT CONTENT							
EXTRACTION CORRECTION FACTOR						C TOTAL	AVERAGE
CORRECTED EXTRACTION ASPHALT CONTENT (%)							

GRADATION OF EXTRACTED CORES or GRANULAR BASE COURSE SAMPLES							
SIEVE SIZE (µm)	PERCENT PASSING (%)					AVERAGE	JOB MIX FORMULA
40 000							
25 000							
20 000							
16 000							
12 500							
10 000							
5 000							
1 250							
630							
315							
160							
80							
% FRACTURES - GBC							

LOT ASPHALT CONTENT or DENSITY CALCULATIONS			
the single high and single low test results from the original Lot will be rejected	D	E	F
THREE REMAINING DENSITY TESTS	2280	2291	2333
G ¹ . FINAL LOT DENSITY RESULTS	(D + E + F + B) / 8		kg / m ³ 2283
G ² . FINAL LOT ASPHALT CONTENT RESULTS	(D + E + F + C) / 8		%
H. LOT TARGET ASPHALT CONTENT			%
I. DEVIATION FROM TARGET ASPHALT CONTENT	H - G		%
J. FINAL LOT % COMPACTION	(100 G / A)		% 95.8
K. LOT UNIT PRICE ADJUSTMENT FOR DENSITY or ASPHALT CONTENT	(TABLE 3.50 A OR B)		\$ / t (\$2.40)
L. LOT TONNES OF MIX			t 3140.2
M. APPEAL LOT ADJUSTMENT	K x L		\$ (\$7,536.48)

SHADED AREAS - COMPLETED BY THE PRIME CONSULTANT AFTER RECEIVING THE RESULTS FROM THE APPEAL CONSULTANT

SEND COMPLETED COPIES OF THIS FORM TO: 1. THE SURFACE ENGINEERING AND AGGREGATES SECTION (email to trans.constructqa@gov.ab.ca) 2. PROJECT SPONSOR

REMARKS:

MAT 6 - 92 / 11

PROJECT MANAGER	CONTRACTOR	APPEAL CONSULTANT
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Transportation

MAT 6 - 92 / 11

APPEAL TEST RESULTS

APPEAL TYPE & NO: Asphalt Content No. 1

PROJECT:	HWY XX:xx	CONTRACT:	XXXXXX	DATE LAID:	1-Jan-2013	DATE CORED:	5-Jan-2013
FROM:		LOT NO.:		CONTRACTOR:		PRIME CONSULTANT	
TO:		PROJECT MANAGER:				APPEAL CONSULTANT	

SEGMENT OR SAMPLE NUMBER	1	2	3	4	5
STATION OF SEGMENT TEST SITE	12+100	12+650	13+002	13+122	13+450
LOCATION FROM CENTERLINE	2.0 m Rt	2.3 m Rt	0.5 m Rt	4.1 m Rt	3.1 m Rt

DENSITY							
A LOT AVERAGE MARSHALL DRY DENSITY						B TOTAL	AVERAGE
CORE DRY DENSITY (kg/m ³)							

ASPHALT CONTENT							
EXTRACTION CORRECTION FACTOR	0.02%					C TOTAL	AVERAGE
CORRECTED EXTRACTION ASPHALT CONTENT (%)	5.71	5.58	5.42	5.52	5.33	27.56	5.51

GRADATION OF EXTRACTED CORES or GRANULAR BASE COURSE SAMPLES							
SIEVE SIZE (µm)	PERCENT PASSING (%)					AVERAGE	JOB MIX FORMULA
40 000							100
25 000							100
20 000							100
16 000	100	100	100	100	100	100	98
12 500	90	89	90	91	90	90	88
10 000	79	81	80	79	80	80	80
5 000	65	65	60	63	62	63	61
1 250	39	37	35	36	32	36	37
630	27	29	28	27	27	28	28
315	17	18	17	18	17	17	17
160	9.9	10.7	10.2	10.1	10.2	10.2	9.8
80	6.4	6.8	6.5	6.4	6.4	6.5	6.4
% FRACTURES - GBC	62	61	60	60	62	61	

LOT ASPHALT CONTENT or DENSITY CALCULATIONS			
the single high and single low test results from the original Lot will be rejected	D	E	F
THREE REMAINING LOT ASPHALT CONTENT TESTS	4.98	5.35	5.37
G ¹ . FINAL LOT DENSITY RESULTS	$(D + E + F + B) / 8$		kg / m ³
G ² . FINAL LOT ASPHALT CONTENT RESULTS	$(D + E + F + C) / 8$		% 5.41
H. LOT TARGET ASPHALT CONTENT			% 5.80
I. DEVIATION FROM TARGET ASPHALT CONTENT	H - G		% 0.39
J. FINAL LOT % COMPACTION	$(100 G / A)$		%
K. LOT UNIT PRICE ADJUSTMENT FOR DENSITY or ASPHALT CONTENT	$(TABLE 3.50 A OR B)$		\$ / t (\$2.00)
L. LOT TONNES OF MIX			t 3140.2
M. APPEAL LOT ADJUSTMENT	K x L		\$ (\$6,280.40)

SHADED AREAS - COMPLETED BY THE PRIME CONSULTANT AFTER RECEIVING THE RESULTS FROM THE APPEAL CONSULTANT

SEND COMPLETED COPIES OF THIS FORM TO: 1. THE SURFACE ENGINEERING AND AGGREGATES SECTION (email to trans.constructqa@gov.ab.ca) 2. PROJECT SPONSOR

REMARKS: *Example shown here tries to capture all appeals for illustration; asphalt content, gradation and fractures. For gradation appeals, all tests from the old Lot will be retained and averaged with the new appeal tests.*

MAT 6 - 92 / 11

PROJECT MANAGER _____ CONTRACTOR _____ APPEAL CONSULTANT _____



SEGREGATION WORKSHEET

SHEET 1 of 2

CONTRACT NO. 999908	PROJECT NO. Hw 99:99	CONTRACTOR Good Road Builder	CONSULTANT Better Rater
PROJECT FROM Lido Creek		PROJECT TO Pedicot Junction	INSPECTIONS BY THE CONSULTANT 1. During Construction

MAT 6 - 95/12

DATE INSPECTED	STATION	LOCATION	LANE	MAT	SEGREGATED AREAS			Center of Paver Length (m)	OBVIOUS DEFECT	COMMENTS
					SLIGHT	MODERATE	SEVERE			
22-Jul-2008	3+215	2.9m Rt	W	R	✓					
	3+321	3.8m Rt	W	R	✓					
	3+330	2.0m Rt	W	R		✓		216		Requires slurry or hot mix patch
	3+340	3.0m Rt	W	R		✓				Requires slurry or hot mix patch
	3+380	2.7m Rt	W	R		✓				Requires slurry or hot mix patch
	3+720	1.7m Rt	W	R	✓					
	4+123	2.2m Rt	W	R		✓				Requires slurry or hot mix patch
	4+250	cl							MJ	From 4+250 to 4+390
	4+288	2.3m Rt	W	R	✓					
	4+430	3.0m Rt	W	R		✓				Requires slurry or hot mix patch
	4+600	2.9m Rt	W	R		✓				Requires slurry or hot mix patch
	4+621	1.5m Rt	W	R	✓					
	4+680	2.9m Rt	W	R		✓				Requires slurry or hot mix patch
	4+721	2.5m Rt	W	R	✓					
	5+181	3.9m Rt	W	R					SL	Requires slurry or hot mix patch
	5+201	3.3m Rt	W	R	✓					
	5+280	2.85m Rt	W	R				592		From 5+280 to 5+872 (Rated as slight, no repair req'd)
	5+320	3.6m Rt	W	R	✓					
	5+402	3.1m Rt	W	R	✓					
	5+872	2.85m Rt	W	R				40		From 5+872 to 5+912 (Rated as moderate, slurry or hot mix patch req'd)
	6+057	1.8m Rt	W	R	✓					
	6+100	2.85m Rt	W	R				540		From 6+100 to 6+640 (Rated as slight, no repair req'd)
	6+177	0.6m Rt	W	R					CH	Core holes need topping up
	6+680								AP	Mod. Seg on Approach (not subject to adjustments)

OBVIOUS DEFECT CODES

- SG Segregation(<0.1 m²)
- EA Excess Asphalt
- SL Sample Location
- MJ Imp. Matching Joint
- CR Cracking
- CH Imp. Rep. Core Holes
- CP Centre-of-Paver Streaks less than 1 m in length
- RM Roller Mark
- TM Tire Mark
- TR Roller Tears
- HC Hairline Cracking
- AP Approach Seg.
- OH Other

INSPECTED BY: Harry Cotter, Orantheil Crusher
 RECEIVED BY: Bob Roadbulder
 *** Contractor's Representative
 DATE RECEIVED 6-Aug-2008 TIME 6:00 PM

*** Signature indicates receipt of data on the date and time indicated



SEGREGATION SUMMARY REPORT

SHEET 1 of 1

CONTRACT NO. XXXXXX	PROJECT NO. Hwy XX:xx	CONTRACTOR	CONSULTANT
PROJECT FROM		PROJECT TO	PROJECT LANE.KMS 68.20

MAT 6 - 95s/12

LANE.KM					TOTALS NUMBER				SEGREGATION ADJUSTMENTS (+ / - \$)	
LIMITS		LANE	MAT	LENGTH (km)	SEGREGATED AREAS			Length of Centre of Paver Streaks (m)		OBVIOUS DEFECTS
FROM	TO				SLIGHT	MODERATE	SEVERE			
3.200	4.000	N	R	0.800	3	3			0	(\$1,600.00)
4.000	5.000	N	R	1.000	3	4			1	(\$2,000.00)
5.000	6.000	N	R	1.000	3			632	0	(\$1,048.00)
6.000	7.000	N	R	1.000	1	1		640	2	(\$1,460.00)
7.000	8.000	N	R	1.000	1	2			0	(\$1,000.00)
8.000	9.000	N	R	1.000	2				3	\$500.00
9.000	10.000	N	R	1.000		1		20	3	(\$530.00)
10.000	11.000	N	R	1.000	1	1	1		3	(\$1,000.00)
11.000	12.000	N	R	1.000		5			3	(\$2,000.00)
12.000	13.000	N	R	1.000	3				3	(\$100.00)
13.000	14.000	N	R	1.000	4	3			3	(\$1,700.00)
14.000	15.000	N	R	1.000	3				3	(\$100.00)
15.000	16.000	N	R	1.000					3	\$1,000.00
16.000	17.000	N	R	1.000	1				3	\$500.00
17.000	18.000	N	R	1.000		1			3	(\$500.00)
18.000	19.000	N	R	1.000		1			3	(\$500.00)
19.000	20.000	N	R	1.000	1				3	\$500.00
20.000	21.000	N	R	1.000	2				3	\$500.00
21.000	22.000	N	R	1.000	3				3	(\$100.00)
22.000	23.000	N	R	1.000		1			3	(\$500.00)
23.000	24.000	N	R	1.000					3	\$1,000.00
24.000	25.000	N	R	1.000					3	\$1,000.00
25.000	26.000	N	R	1.000	3				3	(\$100.00)
26.000	27.000	N	R	1.000		1			3	(\$500.00)
27.000	28.000	N	R	1.000		1			3	(\$500.00)
28.000	29.000	N	R	1.000					3	\$1,000.00
29.000	30.000	N	R	1.000					3	\$1,000.00
30.000	31.000	N	R	1.000	3				3	(\$100.00)
31.000	32.000	N	R	1.000					3	\$1,000.00
32.000	33.000	N	R	1.000	2				3	\$500.00
33.000	34.300	N	R	1.300	4				3	(\$130.00)
Total(s)				31.100	43	25	1	1292	81	(\$6,968.00)

COMMENTS: **This summary is for the Northbound lane, right mat.**

CERTIFIED CORRECT: _____ POSITION: _____

These values used in calc. Pen Bonus

Lane kilometres subject to \$500 bonus	5.000	Lane kms
Lane kilometres subject to \$1000 bonus	6.000	Lane kms
TOTAL \$500 & \$1000 BONUSES	\$8,500.00	(\$)
Total Penalty for Segregation and Centre-of-Paver Streaks	(\$15,468.00)	(-\$)
Total Length of Centre-of-Paver Streaks (m)	1292	metres
TOTAL SEGREGATION ADJUSTMENT	(\$6,968.00)	(+ or - \$)



PROFILOGRAPH INDEX REPORT

SHEET ___ of ___

PROJECT		CONTRACT NO.	
FROM		TYPE OF CONSTRUCTION	
TO		LIFT	

MAT 6 - 73/12

PROFILOGRAPH	TYPE :		PROFILOGRAPH CONSULTANT	
	OPERATOR :			

DATE TESTED dd/mm/year	TOTAL kms TESTED	BONUS SECTIONS	% IN BONUS	NUMBER OF SECTIONS	CONTROL SECTION (kilometers)	
					FROM	TO

SECT. NO.	RE-TEST	TYPE of CONSTR. (C1, C2, C3)	LANE	MAT	SUBLOT LIMITS		COUNTS		PROFILE INDEX mm / 0.1 km	PRI ASSESSMENT		BUMP and/or DIP			BUMP/DIP ASSESSMENT PENALTY(\$)
					FROM 0+000	TO 0+000	1 ¹ W/P	OWP		BONUS \$	PENALTY (\$)	Bump or Dip	SIZE mm	Location 0+000	
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															

COMMENTS:		TOTAL(S)	\$ -	\$ -	TOTAL(S)	\$ -
					TOTAL NUMBER OF REJECTS	

PRI ASSESSMENT		BUMP / DIP ASSESSMENT		Multi-Lift - # of Sublots (PRI > 10mm)
# OF SUBLOTS WITH 0 mm PRI		Multi-Lift (BUMPS & DIPS):		Single-Lift - # of Sublots (PRI > 15mm)
BONUS ASSESSMENT FOR PRI		Single-Lift (BUMPS & DIPS):		Curb & Gutter - # of Sublots (PRI > 22mm)
		TOTAL BUMP/DIP PENALTIES		DECREASED ASSESSMENT FOR PRI
TOTAL (Bonus Assessment for PRI + Total Bump/Dip Penalties + Decreased Assessment for PRI)				



PROFILOGRAPH INDEX REPORT

SHEET 1 of 1

MAT 6 - 73/12

PROJECT	Hwy XX:xx	CONTRACT NO.	XXXXXX
FROM		TYPE OF CONSTRUCTION	Multi-Lift
TO		LIFT	Final

PROFILOGRAPH	TYPE : CALIFORNIA	PROFILOGRAPH CONSULTANT	IRIS ENGINEERING
	OPERATOR : Very Good		

DATE TESTED dd/mm/year 11-Oct-2013	TOTAL kms TESTED 16.10	BONUS SECTIONS 3	% IN BONUS 11%	NUMBER OF SECTIONS 28	CONTROL SECTION (kilometers)			
					FROM	7+200	TO	10+000
						30+000		30+000

SECT. NO.	RE-TEST	TYPE of CONSTR. (C1, C2, C3)	LANE	MAT	SUBLOT LIMITS		COUNTS		PROFILE INDEX mm / 0.1 km	PRI ASSESSMENT		BUMP and/or DIP			BUMP/DIP ASSESSMENT PENALTY(\$)
					FROM 0+000	TO 0+000	¹ IWP	OWP		BONUS \$	PENALTY (\$)	Bump or Dip	SIZE mm	Location 0+000	
1		C1	W	L	10+000	9+900		0.00	0	\$ 30.00					
2		C1	W	L	9+900	9+800		5.00	5	\$ -					
3		C1	W	L	9+800	9+700		10.00	10	\$ -					
4		C1	W	L	9+700	9+600		11.00	11	\$ (40.00)					
5		C1	W	L	9+600	9+500		12.00	12	\$ (70.00)					
6		C1	W	L	9+500	9+400		13.00	13	\$ (100.00)					
7		C1	W	L	9+400	9+300		14.00	14	\$ (130.00)	Bump	9	9+330	\$ (300.00)	
8		C1	W	L	9+300	9+200		15.00	15	\$ (170.00)					
9		C1	W	L	9+200	9+100		16.00	16	\$ (200.00)					
10		C1	W	L	9+100	9+000		17.00	17	\$ (230.00)					
11		C2	E	R	9+000	8+900		0.00	0	\$ 30.00					
12		C2	E	R	8+900	8+800		10.00	10	\$ -					
13		C2	E	R	8+800	8+700		15.00	15	\$ -					
14		C2	E	R	8+700	8+600		16.00	16	\$ (40.00)					
15		C2	E	R	8+600	8+500		18.00	18	\$ (120.00)					
16		C2	E	R	8+500	8+400		20.00	20	\$ (200.00)	Dip	9	8+553	\$ (100.00)	
17		C2	E	R	8+400	8+300		21.00	21	\$ (240.00)					
18		C2	E	R	8+300	8+200		22.00	22	\$ (280.00)					
19		C2	E	R	8+200	8+100		23.00	23	\$ (320.00)	Bump	12	8+123	\$ (100.00)	
20		C2	E	R	8+100	8+000		24.00	24	REJECT					
21		C3	N	RS	8+000	7+900		0.00	0	\$ 30.00					
22		C3	N	RS	7+900	7+800		10.00	10	\$ -					
23		C3	N	RS	7+800	7+700		20.00	20	\$ -					
24		C3	N	RS	7+700	7+600		23.00	23	\$ (10.00)					
25		C3	N	RS	7+600	7+500		25.00	25	\$ (70.00)					
26		C3	N	RS	7+500	7+400		27.00	27	\$ (130.00)					
27		C3	N	RS	7+400	7+300		29.00	29	\$ (190.00)	Bump	11	7+350	\$ (100.00)	
28		C3	N	RS	7+300	7+200		31.00	31	REJECT					
29															
30															

COMMENTS: 9+000 to 9+100 Re-tested after bump rolled. 8+600 to 8+700 Re-tested after bump rolled.	TOTAL(S)	\$ 90.00	\$ (2,540.00)	TOTAL(S)	\$ (600.00)
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TOTAL NUMBER OF REJECTS	2
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PRI ASSESSMENT		BUMP / DIP ASSESSMENT			Multi-Lift - # of Sublots (PRI > 10mm)	
# OF SUBLOTS WITH 0 mm PRI	3	Multi-Lift (BUMPS & DIPS):	1	(\$300.00)	Single-Lift - # of Sublots (PRI > 15mm)	6
BONUS ASSESSMENT FOR PRI	\$90.00	Single-Lift (BUMPS & DIPS):	3	(\$300.00)	Curb & Gutter - # of Sublots (PRI > 22mm)	4
		TOTAL BUMP/DIP PENALTIES	(\$600.00)		DECREASED ASSESSMENT FOR PRI	(\$2,540.00)
TOTAL (Bonus Assessment for PRI + Total Bump/Dip Penalties + Decreased Assessment for PRI)					(\$3,050.00)	

FAMILIARIZE YOURSELF WITH THE FOLLOWING INSTRUCTIONS PRIOR TO USING THE PROGRAM.

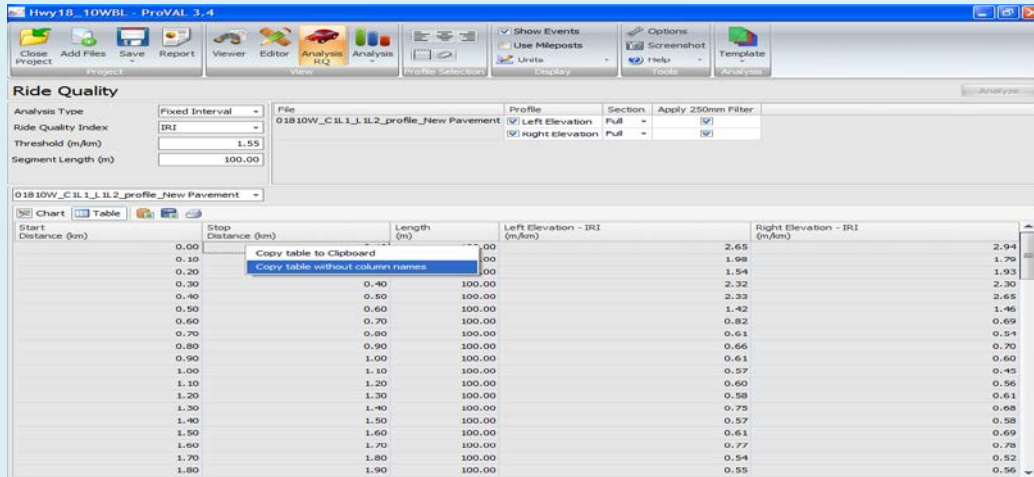
1. Macro and ProVAL

This spreadsheet has a macro to calculate the bonus/penalty adjustments for Ride Quality and ALR. This program is designed to use ProVAL 3.4 version data. If you're using a 3.3 version or lower, it is suggested you update your ProVAL. It is recommended that under File - Properties you select the Read Only option.

2. Steps for Ride Quality Reporting

The following provides guidance on how to produce an IRI report.

a) while doing ride quality analysis in ProVAL, as in the screen shot shown below, copy IRI table to the clipboard without column names.

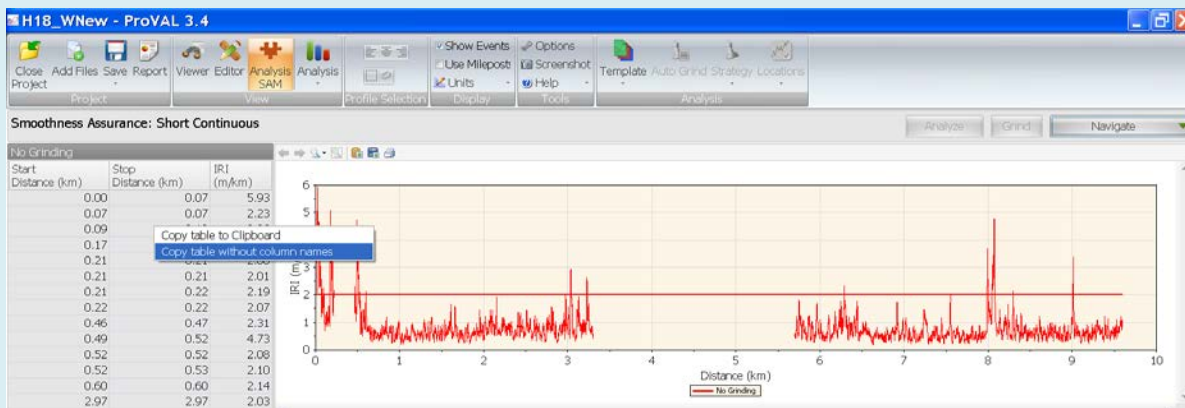


- b) Click cell B11 on worksheet "IRI", and paste data in the clipboard.
- c) Make sure all fields under Excluded Areas(column H) and Construction type (column I) are filled out.
- d) Complete report header information (contract No. etc...). Add comments if needed.
- e) click "Complete and Format Form" button located near the top right corner of the form. Wait for the analysis to complete.
- f) Check form and make sure the information entered is correct and check calculation if you wish.
- g) If for any reason you need to revise information under H "Excluded Area" or I "Type of Construction" you may do so and hit refresh to redo the analysis. if an subplot encompasses two construction types, select the construction type with higher number (e.g. both SI and SII types are in one subplot, chose SII for that subplot).
- h) If you would like to preview the print out of the form, click "Print Preview" button.
- i) If you're only doing IRI reporting, you can exit now and Excel will remind you to save (since this template is read-only).

3. Steps for Areas of Localized Roughness Reporting

The following provides instructions on how to produce ALR report.

a) while doing Smooth Assurance analysis in ProVal 3.4, as in the screen shot shown below, copy table to the clipboard without column names.



- b) Click cell A10 on the ALR worksheet, and paste data in there from the clipboard.
- c) Make sure all fields under column E,F,G and the report header are completed
- d) Check report header information (contract No. etc...). Add comments if needed.
- e) Check form and make sure the information entered is correct and check calculation if you wish.
- f) click "Format and Print Preview" button located near the top right corner of the form to see a print preview.
- h) This template is read-only. YOU MUST SAVE YOUR WORK AS A SEPARATE FILE PRIOR TO EXIT. You'll be prompted when closing the excel workbook.
- i) You can exit now and Excel will remind you to save (since this template is read-only).

4. Report Submissions

On day of testing submit the unfiltered profile data in .erd or .ppf format. Also submit to the Consultant paper reports for Ride Quality and ALR (short continuous analysis) that are generated by either ProVAL or the software associated with the inertial profiler.

After remedial work, if required, retest and re-submit the profile data and smoothness reports.

Within five days of testing submit the payment adjustment spreadsheet to the Consultant in .xlsx and .pdf formats and paper copies for Ride Quality and ALR as generated by ProVAL (if not already submitted earlier).

The Consultant is to review the spreadsheets for accuracy and is to forward the electronic profile data and EXCEL spreadsheets (.xlsx format) to Technical Standards Branch - trans.constructqa@gov.ab.ca. The spreadsheet (.pdf) is also to be forwarded to the Project Sponsor or Administrator.

Note that for interim saves, the spreadsheet can be saved in ".xlsm" format in order to retain the "payment adjustment" Macro functionality.

5. Reporting Problems

This Excel is tested under Windows XP operating system and Microsoft Excel 2010 environment. This program may not function properly on other systems.

To report any problem with the template, contact the Construction Standards Specialist at jim.gavin@gov.ab.ca.

Disclaimer: Alberta Transportation does not warrant the functions contained in this Template will meet your requirements or that the operation of the program will be uninterrupted or error-free.

It is the user's sole responsibility to check the correctness and accuracy of the data and contents contained in the report.

In no event will Alberta Transportation or its staff be liable for any loss, expense, damage, of any type or nature arising out of the use of ,

or liability to use this excel program, including, but not limited to any lost profit, lost of productivity or any other incidental or consequential damage.

Revised on

April, 2014

Naming Convention

The following naming rules apply to this EXCEL file and all other files (Erd, Ppf...) submitted to AT.

Report files shall be named in the following standardized format:

CN(_RT)_HwyN_CS1(_CS2)_Lane_TTN

- CN: contract number for the project as shown on the cover page of the contract document. It shall contain only numbers and no slash;
- RT: roadway type in abbreviation, use UAR for Urban Approach Roads, PAR for Park Access Roads. The preceding underscore and RT shall be omitted and deleted when testing a Highway.
- HwyN: highway number on which roughness test was performed. It shall contain a three-digit number (with leading zeros) followed by a letter if required;
- CS1: control section number where roughness test started, in two digits, include leading zero;
- CS2: control section number where roughness test ended, in two digits, include leading zero. If IP roughness test starts and ends in the same control section, the CS2 and preceding underscore shall be omitted and deleted;
- Lane: location details for the lane tested, which indicates right/left location and sequence number in relation to the yellow line.

Left/right is defined as left/right side with respect to the yellow line as viewed up chainage (increasing chainage). The lane immediately left/right to the yellow line is the first lane and for lanes further from the yellowline, the sequence number increases accordingly.

- TTN: roughness test type and test number. Omit this if it's initial test, "R" for re-test and "V" for verification test. Succeed test type abbreviation with a one-digit number to indicate test number of occurrence. Use 1 for 1st time, and increase number accordingly for subsequent tests.

The following provides typical examples of naming ERD files:

1. A verification test was performed on Hwy 18 from Control Section 10 to 12 eastbound driving lane for the construction of Contract 131088. The stationing number increases eastbound. The roughness data from IP shall be named as follows:

131088_018_CS10_CS12_R1_V1.xlsx or erd or ppf

2. A roughness test was performed by the Contractor on Hwy 16 from Control Section 26 to 24 westbound passing lane for the construction of Contract 131099. The stationing number increases eastbound. The roughness data from IP shall be named as follows:

131099_016_CS26_CS24_L1.xlsx or erd or ppf

Areas of Localized Roughness Report



Contract No:	0	Type of Test:	
Hwy Number	0	Contractor:	0
Control Section	0	IP Operator:	0
Lane:	0	Test Date: (mm/dd/yyyy)	1/0/1900
Direction:	0	Comments:	

Appendix B20.b

Areas of Localized Roughness Summary						
Station (km)		IRI (m/km)	Length (m)	Excluded Area? Yes or No	Type of Cons. SI, SII, or SIII	Penalty Assessment \$
Start	End					
paste here				no		



Contract No:	12378	Type of Test:	Acceptance
Hwy Number:	998	Contractor:	XYZ
Control Section:	10	IP Operator:	John Turner
Lane:	R1	Test Date: (mm/dd/yyyy)	6/6/2014
Direction:	NB		

Ride Quality Bonus/Penalty Summary

Appendix B20.a

Sublot Number	Station (km)		Length (m)	IRI (m/km)		MIRI (m/km)	Excluded Area? Yes or No	Type of Cons. SI, SII, or SIII	Sublot Payment Assessment (\$)
	Start	End		Left	Right				
1	0.000	0.100	100	0.61	0.64	0.63	no	SI	30.00
2	0.100	0.200	100	0.52	0.48	0.50	no	SI	50.00
3	0.200	0.300	100	0.53	0.59	0.56	no	SI	30.00
4	0.300	0.400	100	0.58	0.57	0.57	no	SI	30.00
5	0.400	0.500	100	1.59	1.61	1.60	yes	SI	Excluded Area
5	0.400	0.500	100	1.40	1.33	1.37	no	SI	-273.80
6	0.500	0.600	100	0.59	0.71	0.65	no	SI	30.00
7	0.600	0.700	100	0.57	0.68	0.62	no	SI	30.00
8	0.700	0.800	100	0.73	0.76	0.75	no	SI	0.00
9	0.800	0.900	100	0.59	0.59	0.59	no	SI	30.00
10	0.900	1.000	100	0.54	0.60	0.57	no	SI	30.00
11	1.000	1.100	100	0.63	0.69	0.66	no	SI	30.00
12	1.100	1.200	100	0.64	0.75	0.70	no	SI	30.00
13	1.200	1.300	100	0.68	0.69	0.69	no	SI	30.00
14	1.300	1.400	100	0.68	0.65	0.67	no	SI	30.00
15	1.400	1.500	100	0.66	0.67	0.67	no	SI	30.00
16	1.500	1.600	100	0.67	0.67	0.67	no	SI	30.00
17	1.600	1.700	100	0.59	0.59	0.59	no	SI	30.00
18	1.700	1.746	46	1.23	1.27	1.25	yes	SI	Excluded Area
19	1.746	1.846	100	0.72	0.73	0.73	no	SI	0.00
20	1.846	1.880	34	1.10	1.06	1.08	no	SI	0.00
Total Assessment									196.20

Comments: Sublot number 5 from km 0.400 to km 0.500 was repaired and retested. Sublot 18 from km 1.700 to 1.746 was excluded for railway tracks.



Contract No:	12498	Type of Test:	Acceptance
Hwy Number	877	Contractor:	ABC
Control Section	16	IP Operator:	John Turner
Lane:	R1	Test Date: (mm/dd/yyyy)	6/6/2014
Direction:	NB		

Appendix B20.b

Areas of Localized Roughness Summary						
Station (km)		IRI (m/km)	Length (m)	Excluded Area? Yes or No	Type of Cons. SI,SII,or SIII	Penalty Assessment \$
Start	End					
27.564	27.567	2.71	3	no	SI	-\$120.00
27.585	27.594	3.64	9	yes	SI	Excluded Area
27.685	27.692	3.18	7	no	SI	-\$280.00
Total Assessment						-\$400.00

Comments: Excluded area beginning at km 27.585 was due to railway tracks. Other Areas of Localized Roughness were judged not to require repair as ride quality was not excessively effected.