

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION & INFRASTRUCTURE
SOUTHERN INTERIOR REGION

PROJECT NO. 21675 CROWSNEST HIGHWAY NO. 3

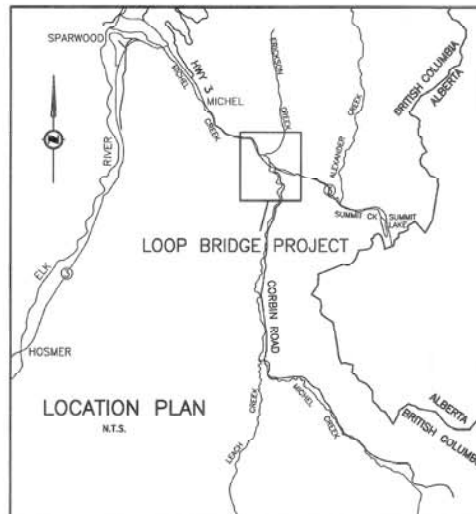
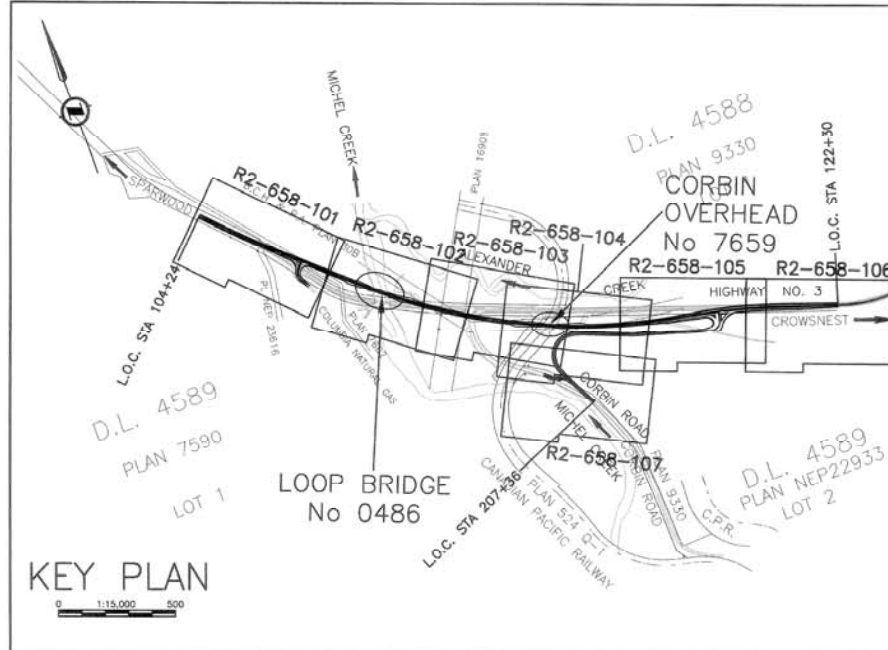
ELKO - ALBERTA SECTION

LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES

BRIDGE, GRADING AND PAVING CONTRACT

STA. 104+24 TO STA. 122+30 (1.806 km)

LANDMARK KILOMETRE INVENTORY
SEGMENT 1395 (km 71.1 TO km 72.9)



DRAWING INDEX

BRIDGE DRAWING No.

LOOP BRIDGE
0486-101
0486-102
0486-103
0486-104
0486-105
0486-106
0486-107, 108
0486-109
0486-110
0486-111
0486-112 TO 115

CORBIN OVERHEAD

7659-02
7659-03
7659-04
7659-05
7659-06
7659-07
7659-08, 09, & 10
7659-11
7659-12
7659-13, 14

DESCRIPTION

SITE PLAN
GENERAL ARRANGEMENT
WEST ABUTMENT
EAST ABUTMENT
PIER
GIRDER LAYOUT
GIRDER DETAILS
DECK
DECK SECTIONS & DETAILS
MISCELLANEOUS DETAILS
BOREHOLE LOGS

SITE PLAN
GENERAL ARRANGEMENT
WEST ABUTMENT
EAST ABUTMENT
PIER 1 & 2
GIRDER LAYOUT & DETAILS
CONCRETE BOX GIRDERS
DECK OVERLAY PLAN
MISCELLANEOUS DETAILS
BOREHOLE LOGS

ROAD DRAWING No.

R2-658-001
R2-658-002
R2-658-101 TO 107
R2-658-201 TO 203
R2-658-301
R2-658-302
R2-658-303
R2-658-401 TO 403
R2-658-404
R2-658-601 TO 607
R2-658-1004 TO 1005

DESCRIPTION

KEY PLAN & INDEX
LEGEND
PLANS
PROFILES
TYPICAL SECTIONS
DRAINAGE & PAVEMENT DETAILS
CONCRETE BARRIER DETAILS
GEOMETRICS AND LANING
SPOT ELEVATIONS - CORBIN ROAD INTERSECTION
SIGNING AND PAVEMENT MARKING
ENVIRONMENTAL DRAWINGS

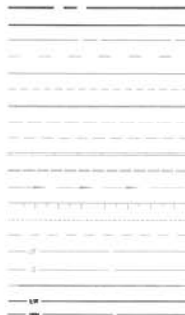
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: MAY 7, 2009

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: MAY 7, 2009
R2-658-001

LEGEND

EXISTING

DISTRICT LOT LINE
PARCEL BOUNDARY
CENTRE LINE
WHITE PAINTLINE
PAVEMENT EDGE
SHOULDER EDGE
ASPHALT CURB
GRAVEL ROAD
DIRT ROAD
ROADSIDE BARRIER
CULVERT
DITCH
TOP OF BANK
BOTTOM OF SLOPE
SOLID ROCK
UNDERGROUND TELEPHONE
GAS LINE
RAILWAY
EDGE OF WATER
HIGH WATER MARK



ROAD SIGN
DELINEATOR POST
TELEPHONE POLE
POWER POLE
POWER POLE & TRANSFORMER
GUY WIRE
BENCH MARK
STANDARD IRON PIN
CONCRETE POST MONUMENT
BRASS CAP MONUMENT
REFERENCE HUB
TEST HOLE/AUGER HOLE
UNDERGROUND MARKER
BREATHING/VENT PIPE
UNDERGROUND ELECTRIC
JUNCTION BOX
TRAFFIC SIGNAL
BC TEL PEDESTAL
RIPRAP
TEST PIT

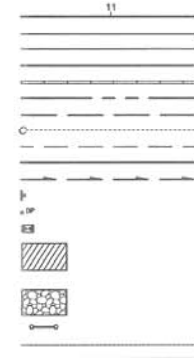


PROPOSED

CENTRE LINE
LANE EDGE
PAVEMENT EDGE
ASPHALT CURB (3-SP226)
ROADSIDE BARRIER
HIGHWAY R/W
CLEARING & GRUBBING
CUT & FILL LIMITS
WORKING EASEMENT
CULVERT
DITCH
ROAD SIGN
DELINEATOR POST
ASPHALT SPILLWAY (5-SP226)
MILL EXISTING ASPHALT

RIPRAP

GATE
GRAVEL ROAD



GEOTECHNICAL TESTING

1999 TEST HOLE
1999 TEST PIT



NEW 2004 TEST PIT
NEW 2004 BECKER HOLE
NEW 2004 PAVEMENT HOLE



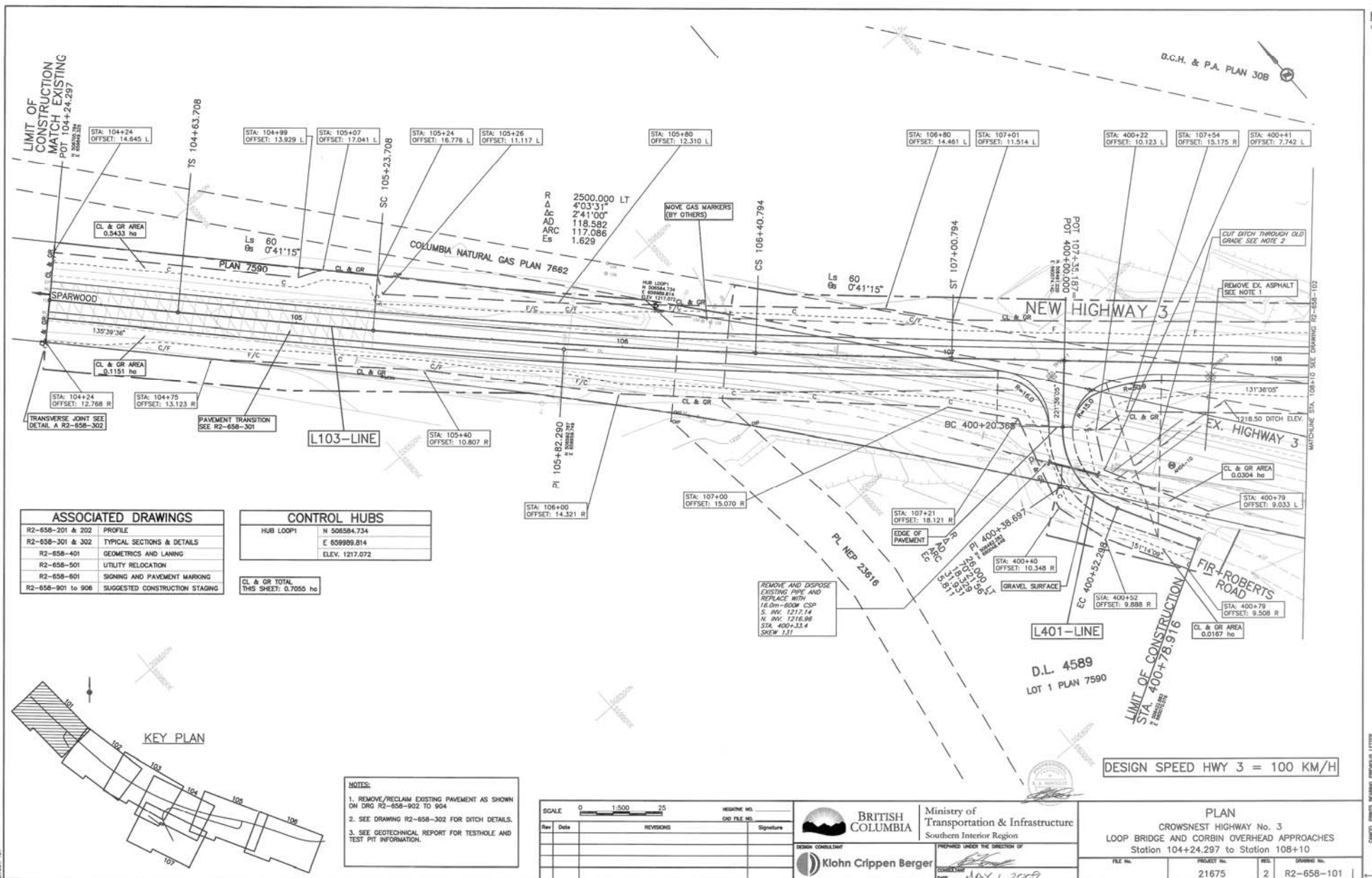
SCALE AS NOTED		REVISIONS	
Rev	Date	Revisions	Signature

BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE MAY 1, 2009

LEGEND			
CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 104+24.297 to Station 122+30.000			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-002

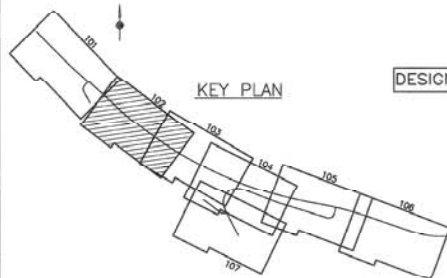
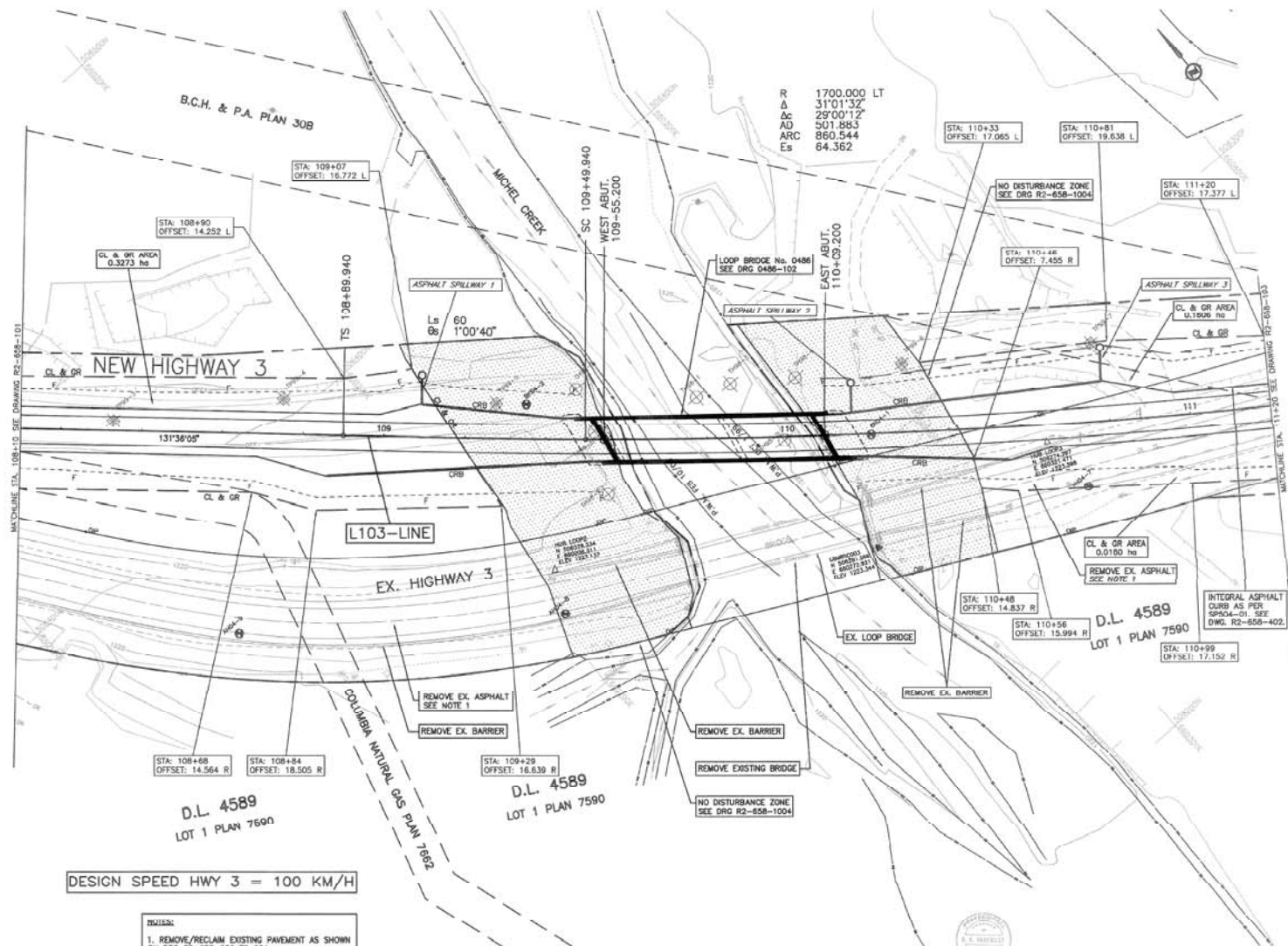


ASSOCIATED DRAWINGS	
R2-658-201	PROFILE
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-401 to 402	GEOMETRICS AND LANE
R2-658-501 to 502	UTILITY RELOCATION
R2-658-602	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING
R2-658-1004, 1005	ENVIRONMENTAL DRAWINGS
0486-102	LOOP BRIDGE No. 0486

CONTROL HUBS	
HUB LOOP2	N 506329.334 E 660208.311 ELEV. 1223.137
HUB LOOP3	N 506274.297 E 660321.471 ELEV. 1223.398
GBM5C003	N 506281.366 E 660272.921 ELEV. 1223.344

ASPHALT SPILLWAY DATA	
ASPHALT SPILLWAY 1	STA 109+08.5 11.0m - 200M HOPE C/W 100G RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 2	STA 110+76.1 12.0m - 200M HOPE C/W 100G RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 3	STA 110+76.1 8.0m - 200M HOPE C/W 100G RIPRAP SPLASH PAD SP504-02 AND SP504-03

CL & GR TOTAL
THIS SHEET: 0.5039 ha



DESIGN SPEED HWY 3 = 100 KM/H

- REVISIONS:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-302 TO 304.
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

Rev	Date	REVISIONS	Signature



DESIGN CONSULTANT
Klohn Crippen Berger

Ministry of Transportation & Infrastructure
Southern Interior Region

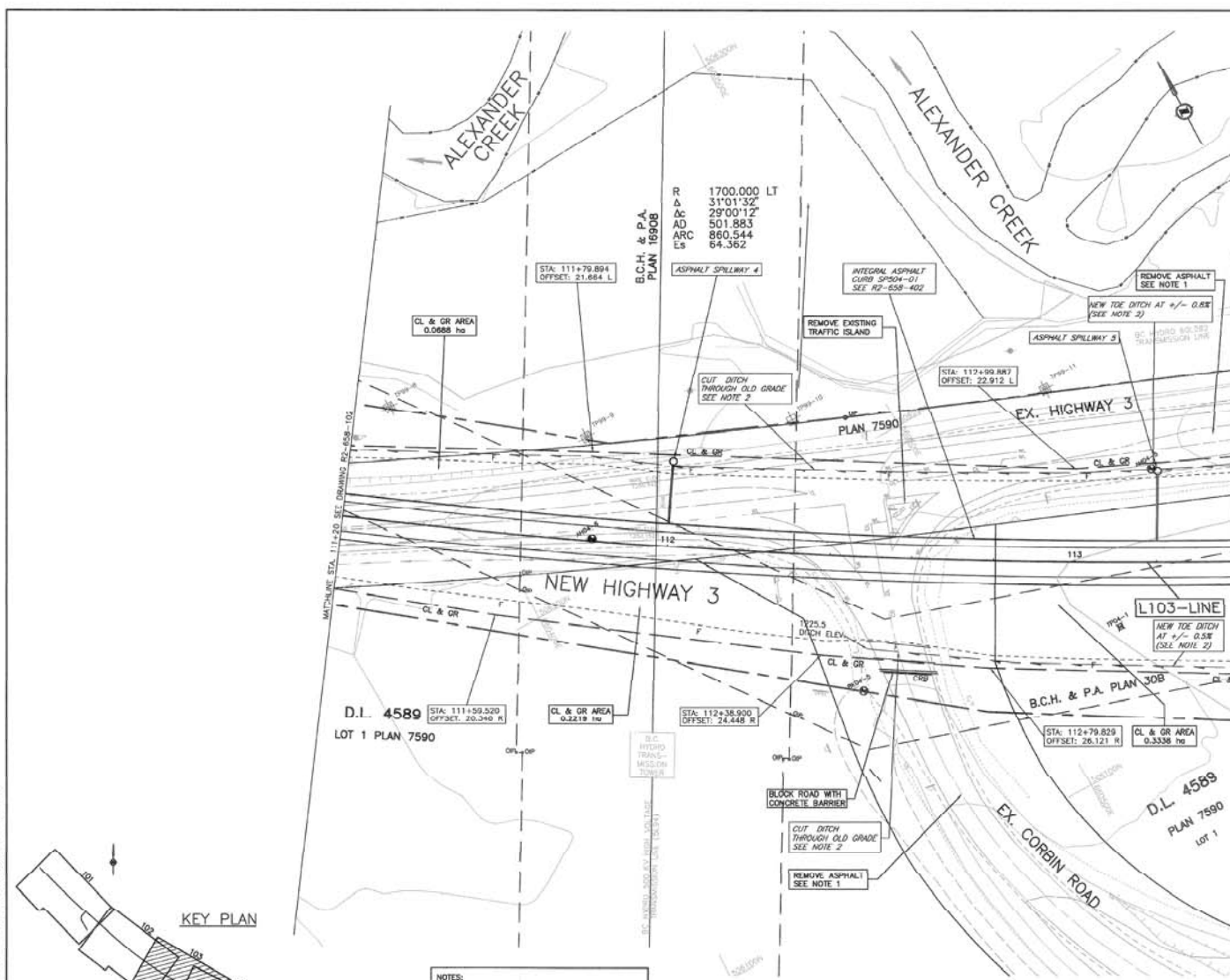
PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

PLAN			
CROWNSNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 108+10 to Station 111+20			
FILE No.	PROJECT No.	REV.	DRAWING No.
	21675	2	R2-658-102

ASSOCIATED DRAWINGS	
R2-658-201	PROFILE
R2-658-301 to 302	TYPICAL SECTIONS & DETAILS
R2-658-402	GEOMETRICS AND LANDING
R2-658-502	UTILITY RELOCATION
R2-658-603	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

ASPHALT SPILLWAY DATA	
ASPHALT SPILLWAY 4	STA 112+00 25.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 5	STA 113+20 25.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03

CL & GR TOTAL
THIS SHEET: 0.6345 ha



- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-302 TO 304.
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

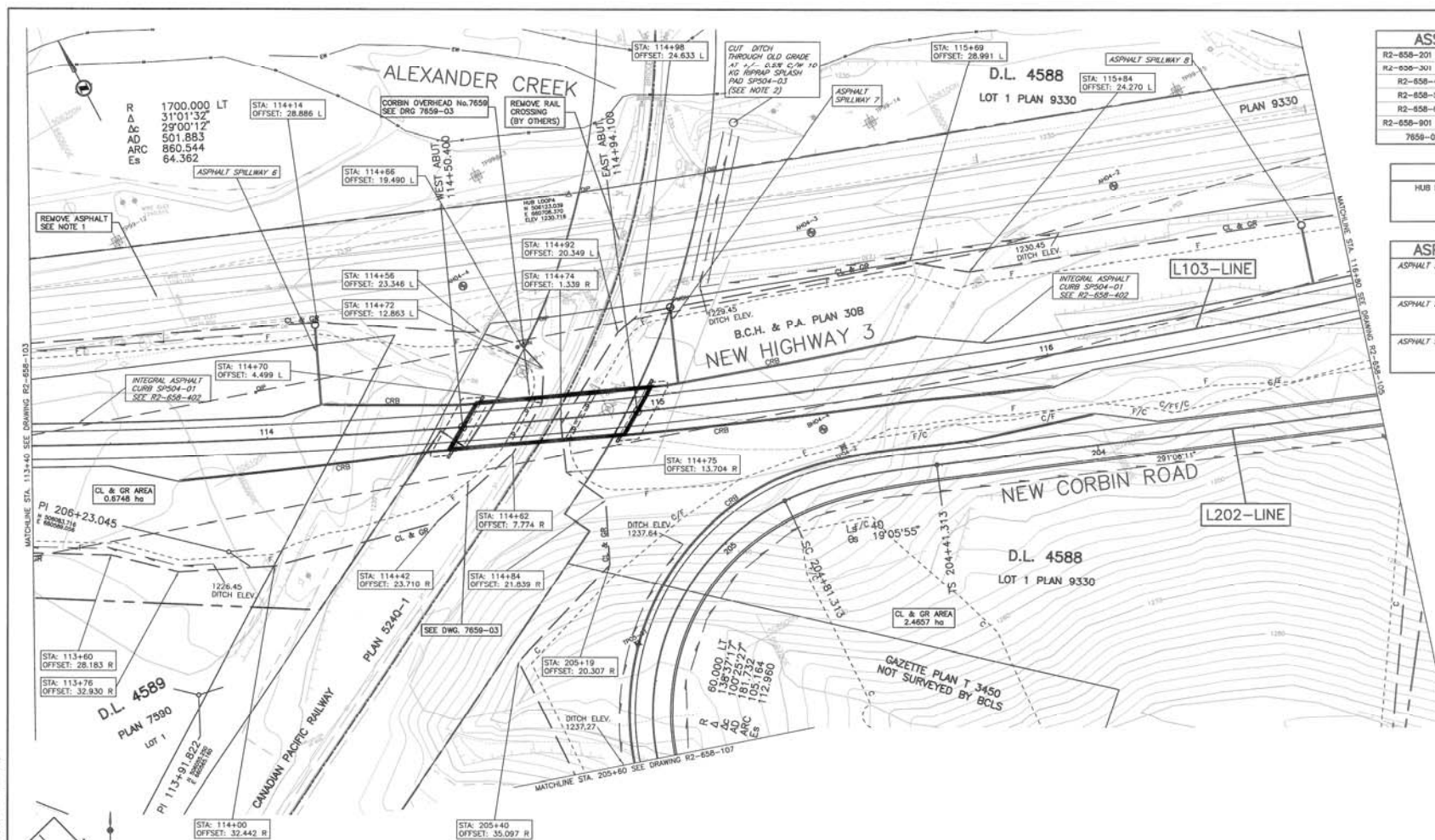
SCALE	0 1:500 25	HIGHWAY NO.	
Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

PLAN CROWNSHAW HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 111+20 to Station 113+40			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	216/5	2	R2-658-103



ASSOCIATED DRAWINGS	
R2-658-201 to 203	PROFILE
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-402	GEOMETRICS AND LANDING
R2-658-502	UTILITY RELOCATION
R2-658-604	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING
7859-02	CORBIN OVERHEAD

CONTROL HUBS	
HUB LOOP4	N 506123.039
	E 860708.370
	ELEV. 1230.716

ASPHALT SPILLWAY DATA	
ASPHALT SPILLWAY 6	STA 114+16 34.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 7	STA 115+05 33.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 8	STA 116+70 25.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03

CL & GR TOTAL
THIS SHEET: 3,1405 ha

KEY PLAN

- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-902 TO 904
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

DESIGN SPEED HWY 3 = 100 KM/H

DESIGN SPEED CORBIN ROAD = 40 KM/H

SCALE		REVISIONS	
0	1:500	25	
Rev	Date	REVISIONS	Signature



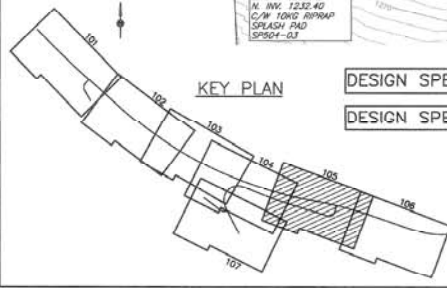
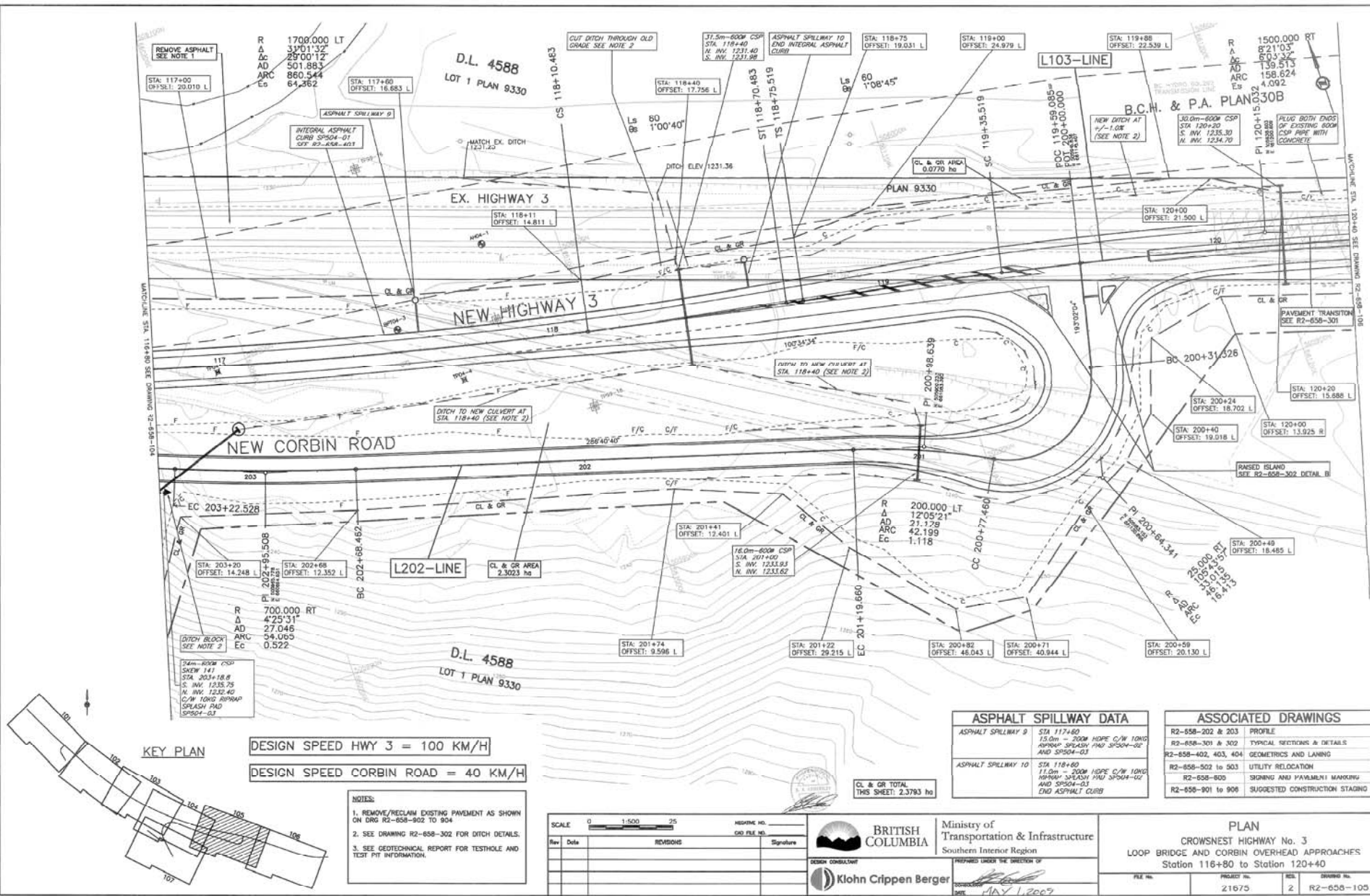
Ministry of
Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Kohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
CONSOLE
DATE: MAY 1, 2007

PLAN CROWNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 113+40 to Station 116+80			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
21675	21675	2	R2-658-104

DATE: 2008-04-22 10:42 AM
 DRAWN BY: J. C. C. (JCC) CHECKED BY: J. C. C. (JCC)
 PROJECT: Crowsnest Highway No. 3, Loop Bridge and Corbin Overhead Approaches
 DRAWING: R2-658-100



DESIGN SPEED HWY 3 = 100 KM/H
 DESIGN SPEED CORBIN ROAD = 40 KM/H

NOTES:
 1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-902 TO 904
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA
 Ministry of Transportation & Infrastructure
 Southern Interior Region
 Kohn Crippen Berger

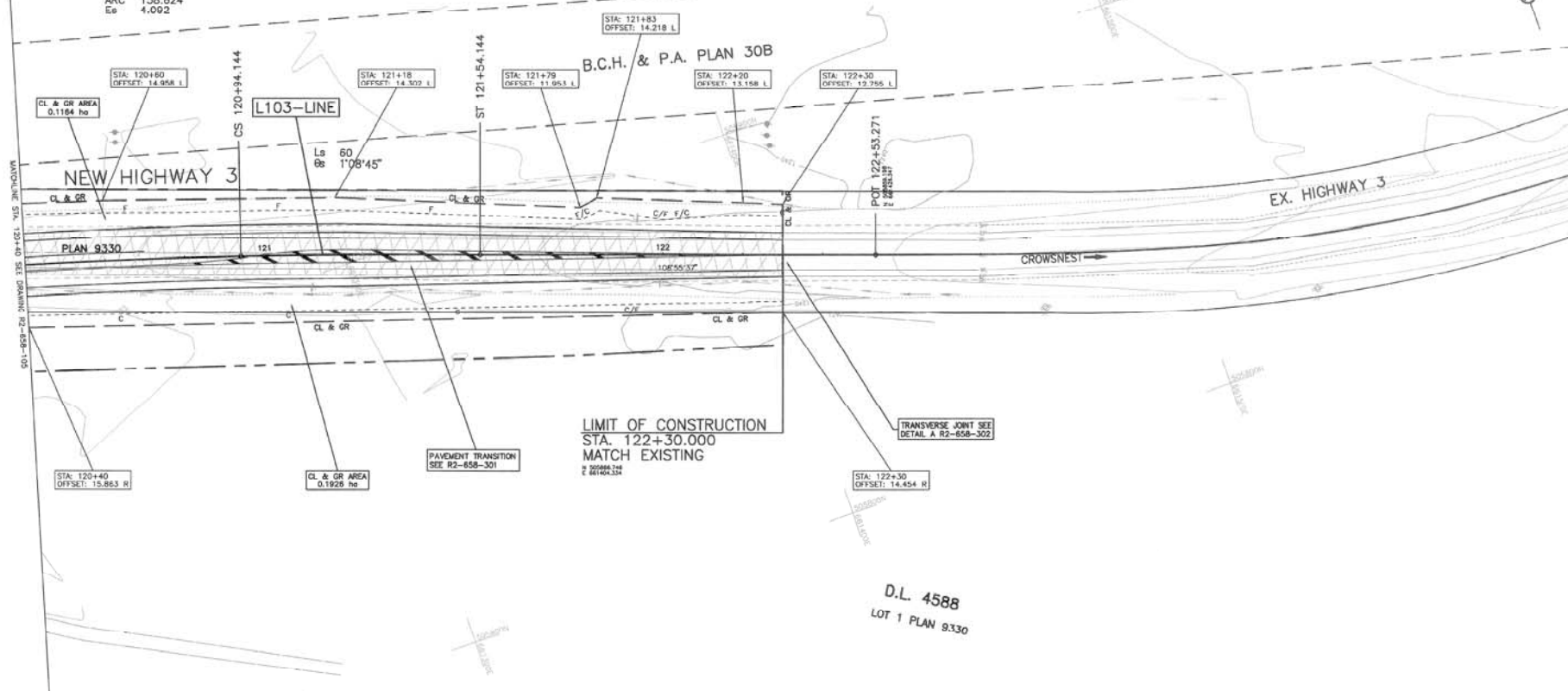
ASPHALT SPILLWAY DATA
ASPHALT SPILLWAY 9 STA 117+40 15.0m - 600m HOPE C/W 10% APPROX. SPILLWAY AND SP504-02 AND SP504-03
ASPHALT SPILLWAY 10 STA 118+80 11.0m - 200m HOPE C/W 10% APPROX. SPILLWAY AND SP504-02 AND SP504-03

ASSOCIATED DRAWINGS
R2-658-202 & 203 PROFILE
R2-658-301 & 302 TYPICAL SECTIONS & DETAILS
R2-658-402, 403, 404 GEOMETRICS AND LANNING
R2-658-502 TO 503 UTILITY RELOCATION
R2-658-600 SIGNING AND PARAMOUNT MARKING
R2-658-901 TO 909 SUGGESTED CONSTRUCTION STAGING

PLAN
CROWSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 116+80 to Station 120+40
FILE NO. 21675
REVISION NO. 2
DRAWING NO. R2-658-100

R 1500.000 RT
 Δ 8'21'03"
 Δc 6'03'32"
 AD 139.513
 ARC 158.624
 Ea 4.002

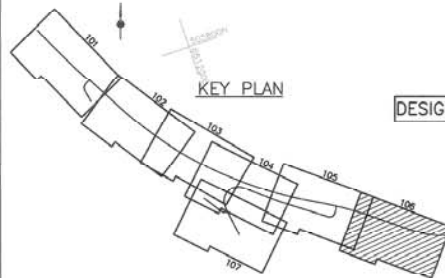
D.L. 4588
 LOT 1 PLAN 9330



NEW HIGHWAY 3
 PLAN 9330

LIMIT OF CONSTRUCTION
 STA. 122+30.000
 MATCH EXISTING

D.L. 4588
 LOT 1 PLAN 9330



DESIGN SPEED HWY 3 = 100 KM/H

NOTES:

1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-902 TO 904.
2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

SCALE 0 1:500 25

Rev	Date	REVISIONS	Signature



DESIGN CONSULTANT
 Klohn Crippen Berger

Ministry of Transportation & Infrastructure
 Southern Interior Region

PREPARED UNDER THE DIRECTION OF
 DATE MAY 9, 2009

CL & GR TOTAL
 THIS SHEET: 0.3090 ha

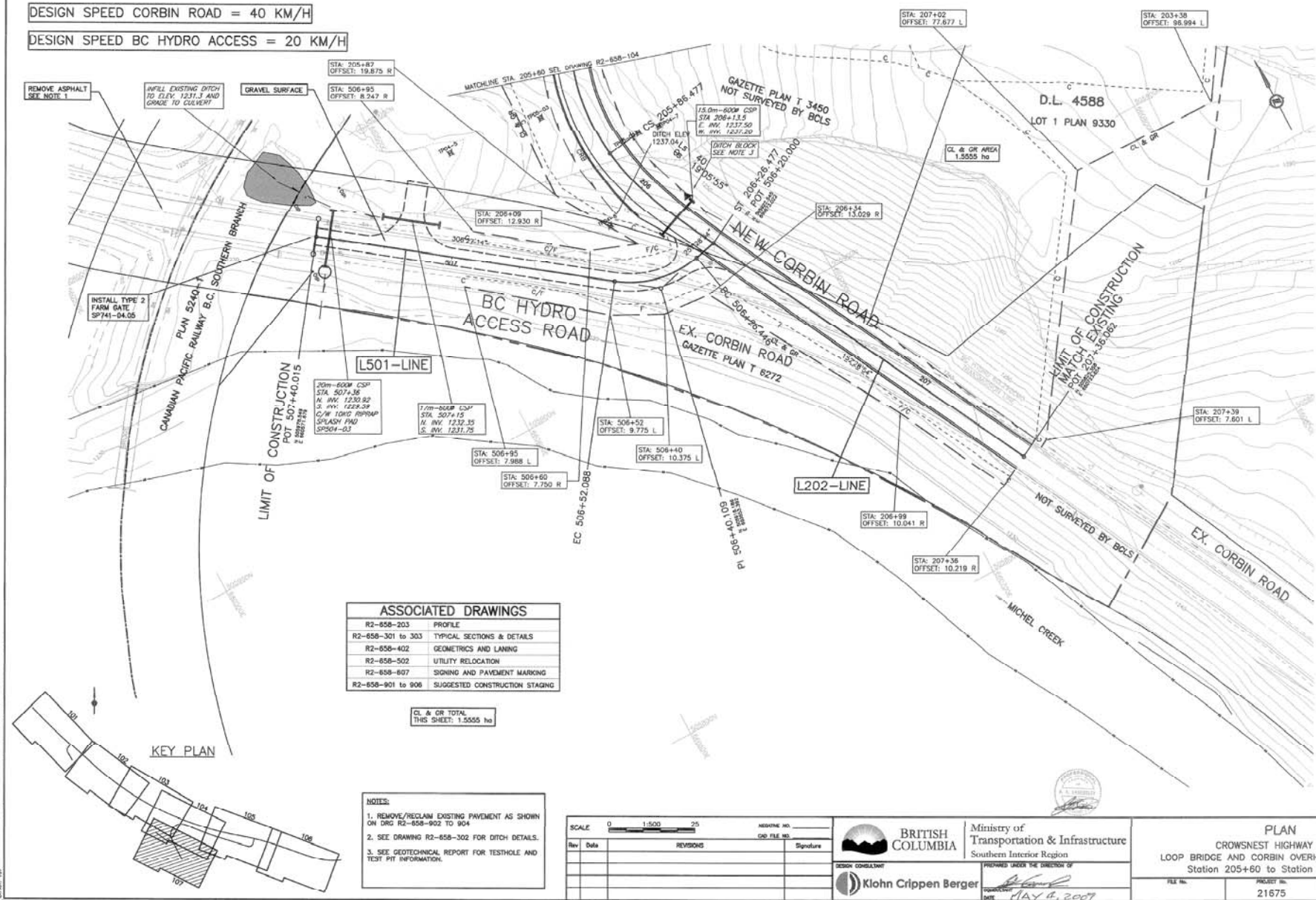
ASSOCIATED DRAWINGS	
R2-658-202	PROFILE
R2-658-301 & 302	TYPICAL SECTIONS & DETAILS
R2-658-403	GEOMETRICS AND LAYOUT
R2-658-503	UTILITY RELOCATION
R2-658-606	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

PLAN
 CROWNSNEST HIGHWAY No. 3
 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
 Station 120+40 to Station 123+00

FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-106

DESIGN SPEED CORBIN ROAD = 40 KM/H

DESIGN SPEED BC HYDRO ACCESS = 20 KM/H



ASSOCIATED DRAWINGS	
R2-658-203	PROFILE
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-402	GEOMETRICS AND LANNING
R2-658-502	UTILITY RELOCATION
R2-658-607	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

CL & OR TOTAL
THIS SHEET: 1.5555 ha

KEY PLAN

- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON ORG R2-658-802 TO 904.
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA

Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
 Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF

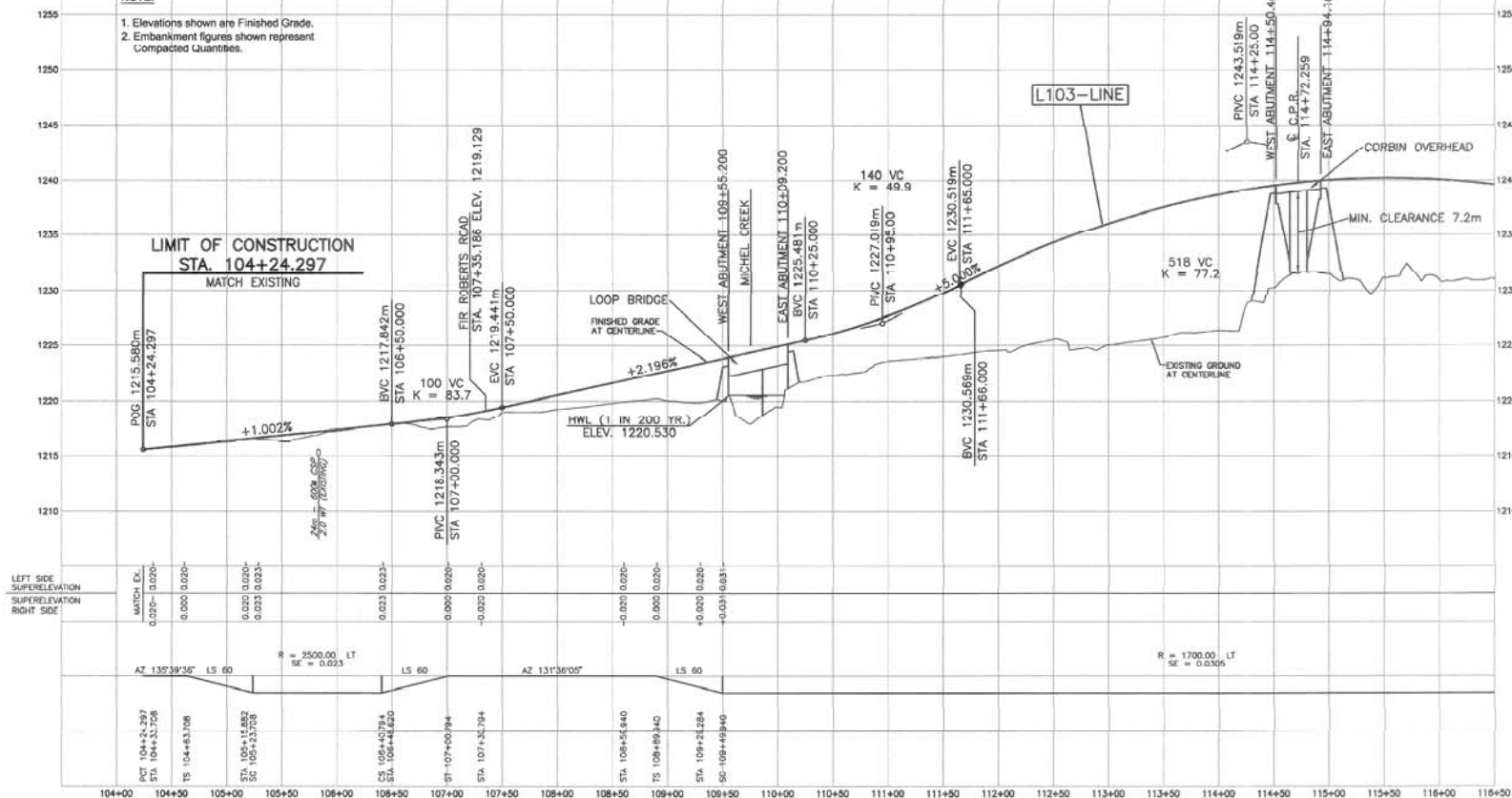
DATE: MAY 4, 2007

PLAN			
CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 205+60 to Station 207+40.581			
FILE No.	PROJECT No.	REV.	DRAWING No.
	21675	2	R2-658-107

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NOTE:

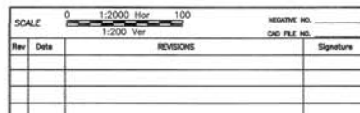
1. Elevations shown are Finished Grade.
2. Embankment figures shown represent Compacted Quantities.



ASSOCIATED DRAWINGS

R2-658-101 to 104	PLANE
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-401 to 402	GEOMETRICS AND LANDING
0486-102	LOOP BRIDGE No. 0486
7350-02	CORBIN OVERHEAD

DESIGN SPEED HWY 3 = 100 KM/H



Ministry of
Transportation & Infrastructure
Southern Interior Region

 **Klohn Crippen Berger**

PREPARED UNDER THE DIRECTION OF

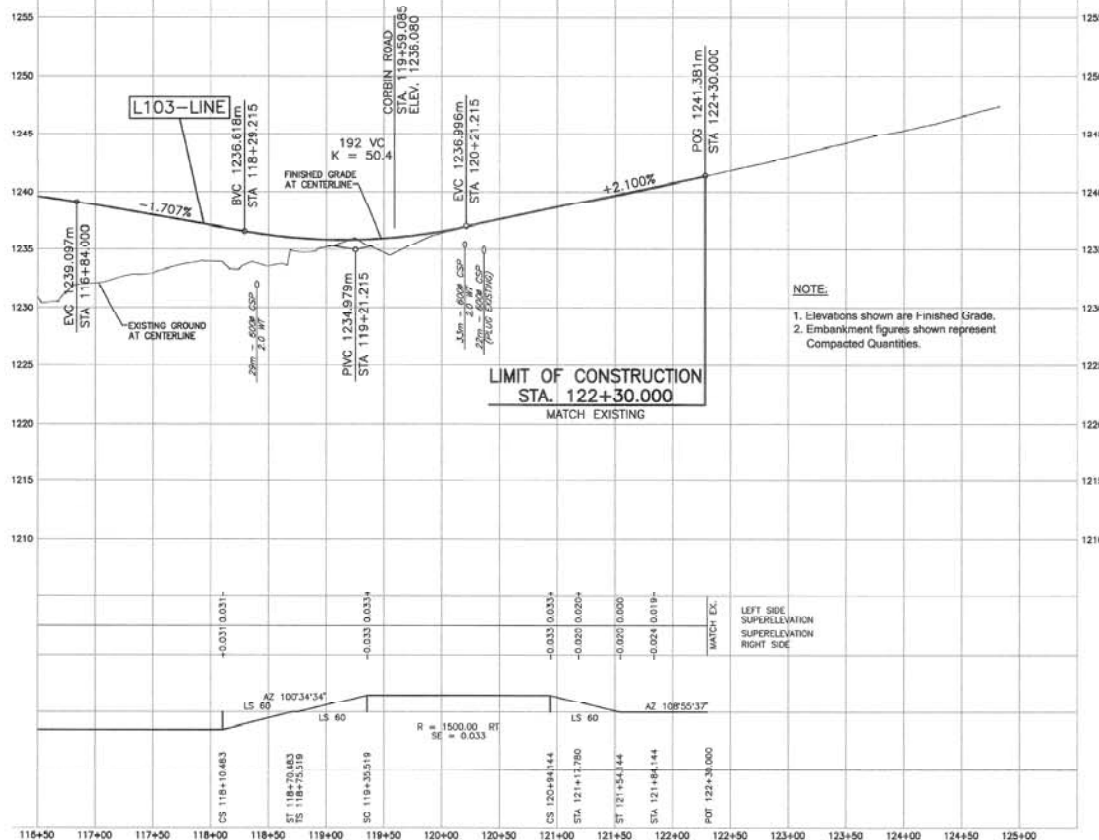
DATE MAY 1, 2009

PROFILE

CROWSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 104+24.297 to Station 116+50

FILE No.	PROJECT No.	REG.	DIVISION No.
	21675	2	R2-858-20

TYPE D EXCAVATION (m3)		NIL				1.857					TOTAL 2.611
EMBANKMENT (m3)					27.421						TOTAL 167,090
ORGANIC STRIPPING (m3)					3000						TOTAL 10.432
S.G.S.B. DEPTH (mm)						300mm					
BRIDGE END FILL (m3)						NIL					TOTAL 0.017



L-103 LINE - HIGHWAY 3

ASSOCIATED DRAWINGS	
R2-658-105 & 106	PLANS
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-401 to 403	GEOMETRICS AND LANDING

DESIGN SPEED HWY 3 = 100 KM/H

[illegible]

Ministry of
Transportation & Infrastructure
Southern Interior Region

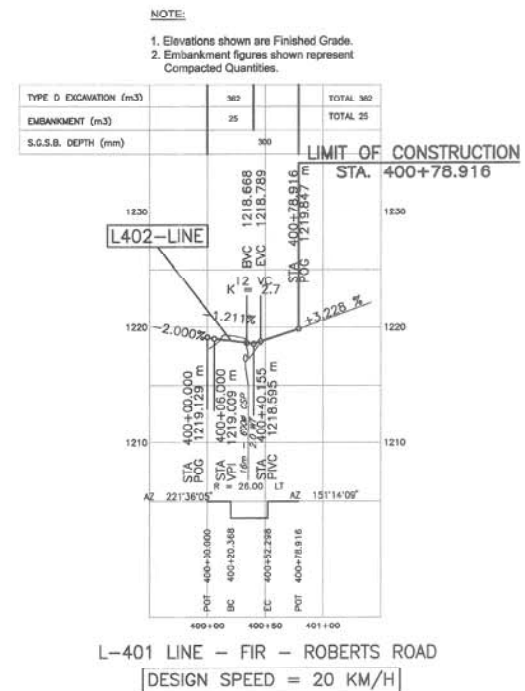

Klohn Crippen Berger

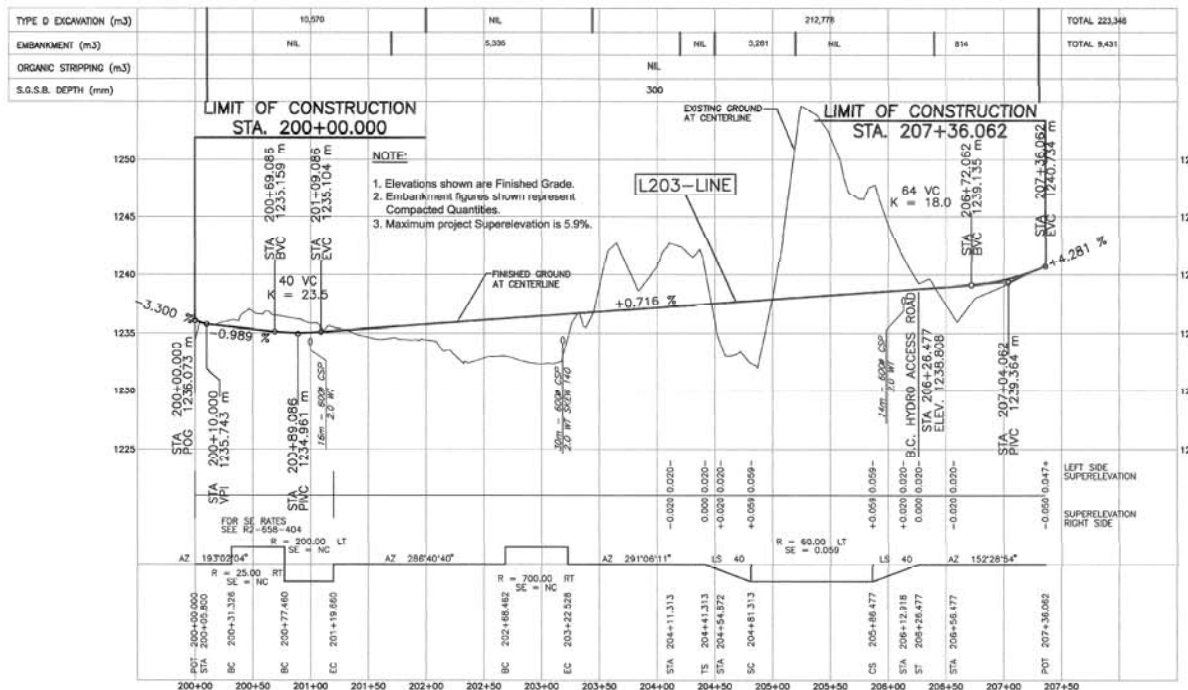
PREPARED UNDER THE DIRECTION OF
FOODS, DRUGS, AND COSMETICS
MAY 1, 1964
DATE

PROFILE

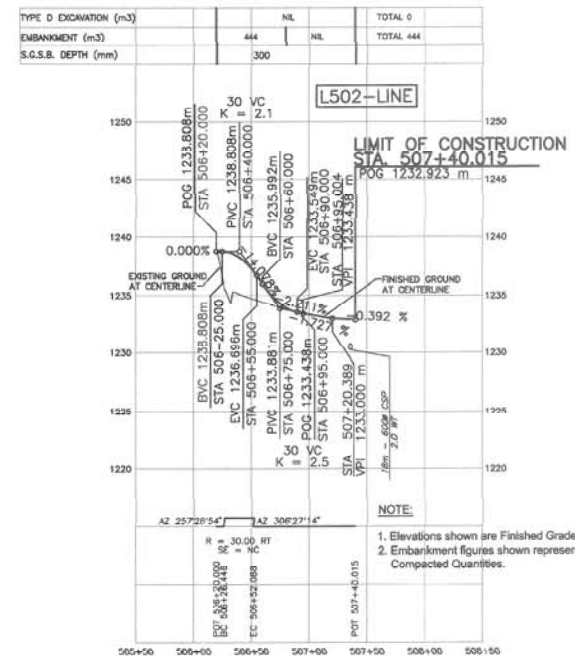
CROWSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORRIN OVERHEAD APPROACHES
Station 116+50 to Station 122+30.000

FILE No.	PROJECT No.	REQ.	SPENDING No.
	21675	2	R2-658-20





L-202 LINE - CORBIN ROAD
DESIGN SPEED CORBIN ROAD = 40 KM/H



L-501 LINE - B.C. HYDRO ACCESS ROAD
DESIGN SPEED = 20 KM/H

ASSOCIATED DRAWINGS

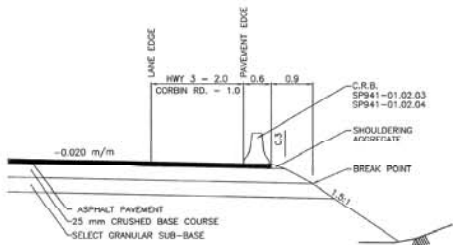
R2-658-105 & 107	PLANS
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-402 to 403	GEOMETRICS AND LANSING

SCALE	0 1:2000 Hor 100	MEASURING NO.	
Rev	Date	REVISIONS	Signature



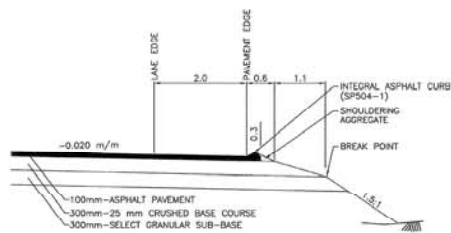
Ministry of Transportation & Infrastructure
 Southern Interior Region
 PREPARED UNDER THE DIRECTION OF
 PROJECT MANAGER
 DATE: MAY 4, 2007

PROFILE			
CROWNSNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 200+00 to Station 207+36.393			
FILE NO.	PROJECT NO.	REL.	DRAWING NO.
	21675	2	R2-658-203



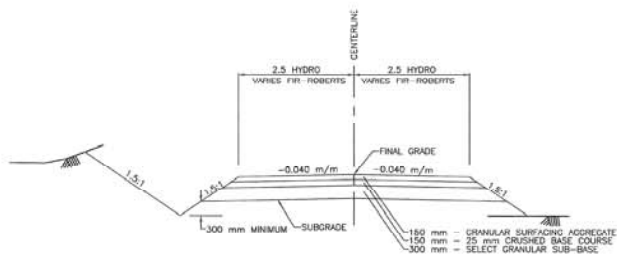
SHOULDER DETAIL WITH ROADSIDE BARRIER
HIGHWAY No. 3

STA. 108+81.918 TO STA. 109+54.000 RIGHT SIDE
STA. 110+17.000 TO STA. 110+56.783 RIGHT SIDE
STA. 113+76.664 TO STA. 114+46.000 RIGHT SIDE
STA. 114+90.000 TO STA. 116+00.000 RIGHT SIDE
STA. 109+07.326 TO STA. 109+49.000 LEFT SIDE
STA. 110+11.000 TO STA. 110+50.716 LEFT SIDE
STA. 114+14.187 TO STA. 114+54.000 LEFT SIDE
STA. 114+98.000 TO STA. 115+68.000 LEFT SIDE
CORBIN ROAD
STA. 204+00.000 TO STA. 206+04.830 RIGHT SIDE

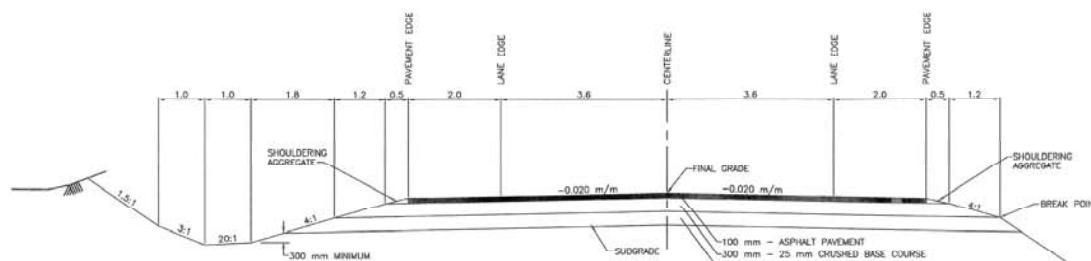


SHOULDER DETAIL WITH INTEGRAL ASPHALT CURB
HIGHWAY No. 3

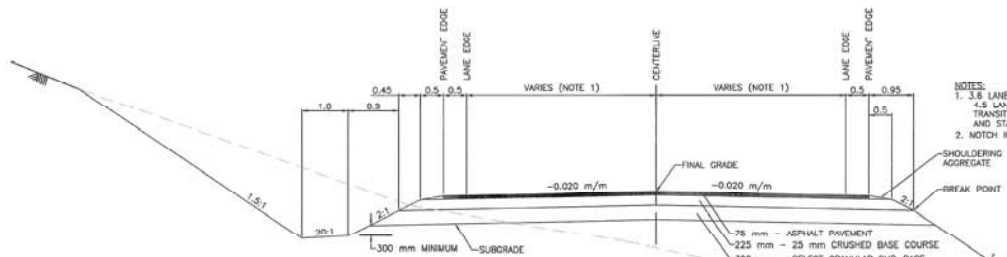
STA. 110+80.7 TO STA. 114+14.2 LEFT SIDE
STA. 115+68.0 TO STA. 118+60.0 LEFT SIDE



TYPICAL CUT AND FILL SECTION
BC HYDRO ACCESS AND FIR-ROBERTS ROAD

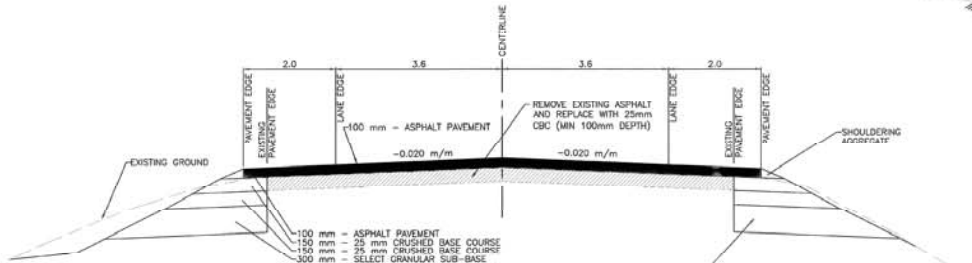


TYPICAL CUT AND FILL SECTION
HIGHWAY No. 3



TYPICAL CUT AND FILL SECTION
CORBIN ROAD

NOTES:
1. 3.6 LANE TYPICAL
2.5 LANE STA. 204+75.644 TO STA. 205+80.808
TRANSITION VARIES STA. 204+35.644 TO STA. 204+75.644
AND STA. 205+80.808 TO STA. 206+20.808
3. MATCH INTO EXISTING EMBANKMENT (1.5m WIDE X 0.4m DEEP)



PAVEMENT TRANSITION DETAIL

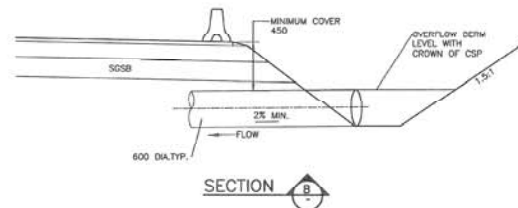
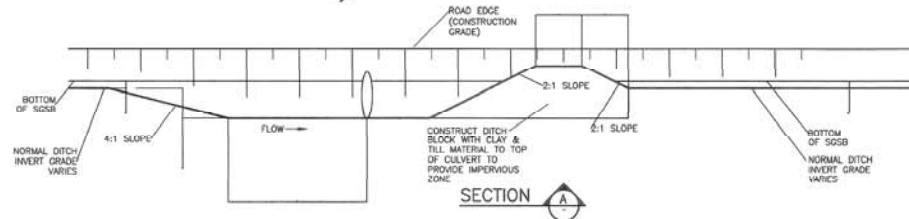
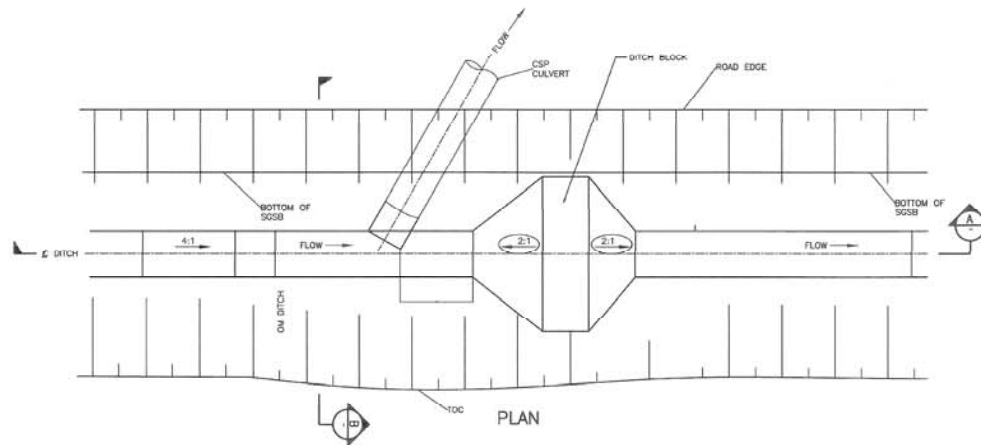
STA. 104+24 TO STA. 106+23.708
STA. 120+00 TO STA. 122+30
SCALE H 1:50; V 1:25

Rev	Date	REVISIONS	Signature

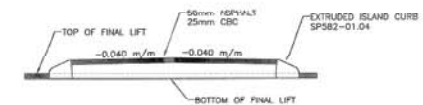
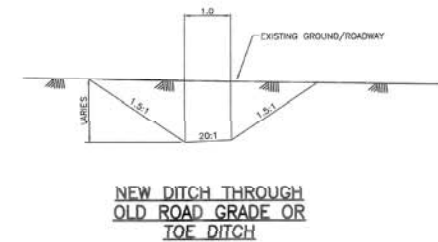
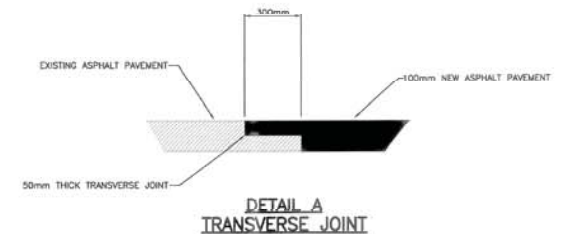


Ministry of Transportation & Infrastructure
Southern Interior Region
DESIGNED BY: Kohn Crippen Berger
CHECKED BY: [Signature]
DATE: MAY 4, 2007

TYPICAL SECTIONS CROWNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-301



**CULVERT INLET AND
DITCH BLOCK IN OM DITCH**



**DETAIL B
RAISED ISLAND DETAIL**

Rev	Date	REVISIONS	Signature



Ministry of
Transportation & Infrastructure
Southern Interior Region
PREPARED UNDER THE DIRECTION OF
DATE MAY 1, 2009

DRAINAGE AND PAVEMENT DETAILS
CROWNSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES

FILE No.	PROJECT No.	REV.	GOVERNED No.
21675	2	R2-658-302	



FILE No.	PROJECT No.	REQ.	OFFERING No.
	21675	2	R2-658-303

CURVE DATA		
(A)	(B)	(C)
R 16,000 RT	Rc 15,000 RT	R 50,000 RT
Δ 91°37'04"	Δ 72°21'56"	Δ 19°47'35"
AD 18.45	AD 10.870	AD 8.723
ARC 25.584	ARC 18.843	ARC 17.573
Ec 6.954	Ec 3.583	Ec 0.755
BC 107+14.993	BC 400+21.343	BC -
EC 400+50.170	EC -	EC 107+65.044

NOTES:

1. SEE DRG R2-658-303 FOR BARRIER FLARE DETAILS.

KEY PLAN

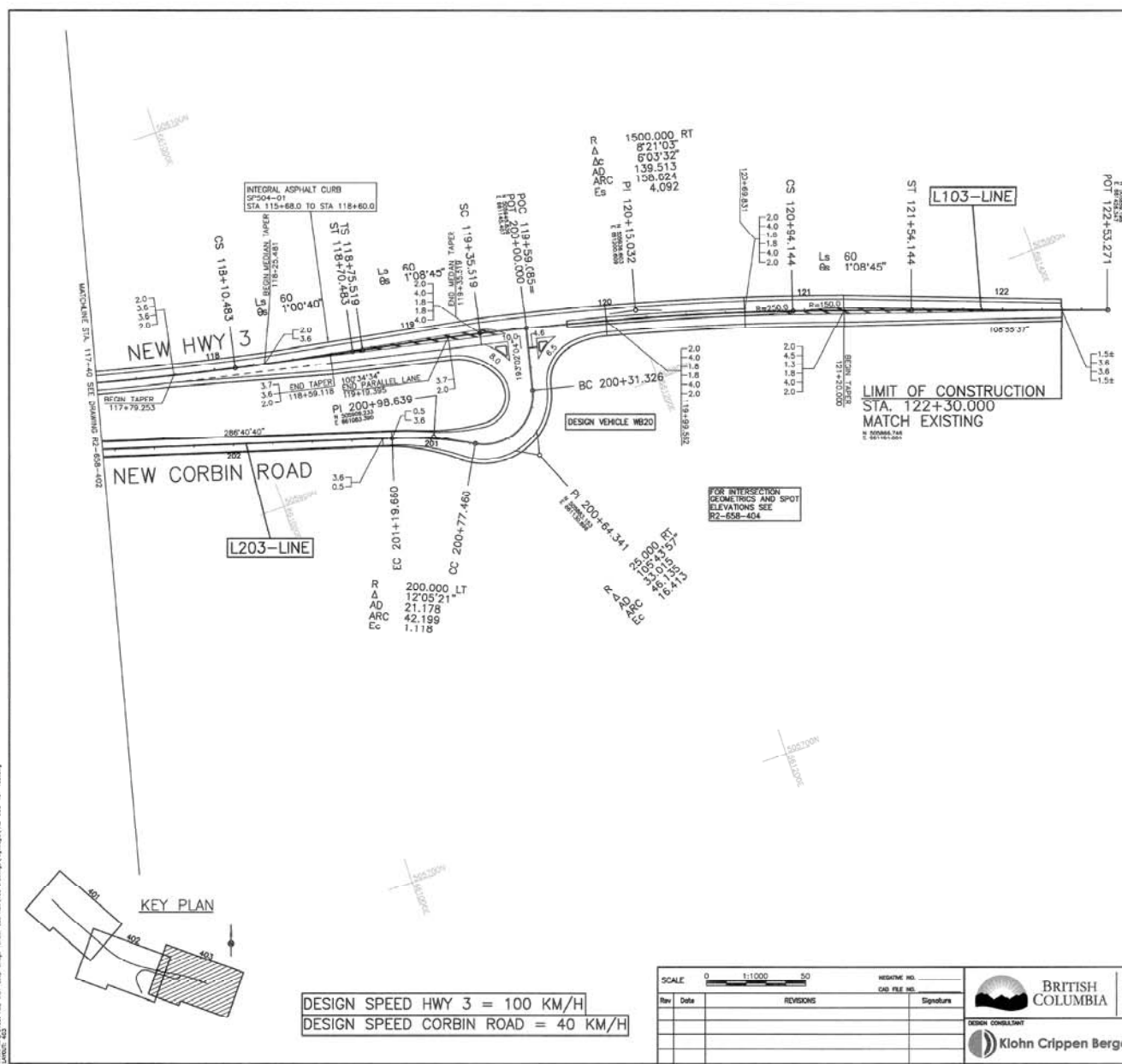
DESIGN SPEED HWY 3 = 100 KM/H

SCALE 0 1:1000 50		REVISIONS	SIGNATURE
Rev	Date		



Ministry of Transportation & Infrastructure
Southern Interior Region
PREPARED UNDER THE DIRECTION OF
DATE MAY 1, 2007

GEOMETRICS AND LANEING			
CROWNSHAW HIGHWAY No. 3			
LOOP BRIDGE AND CORNER OVERHEAD APPROACHES			
Station 104+24.297 to Station 110+80			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-401



ASSOCIATED DRAWINGS	
R2-658-105, 106	PLANS
R2-658-201 & 202	PROFILES
R2-658-VH-101	TYPICAL SECTIONS & DETAILS

DESIGN SPEED HWY 3 = 100 KM/H
DESIGN SPEED CORBIN ROAD = 40 KM/H

Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA

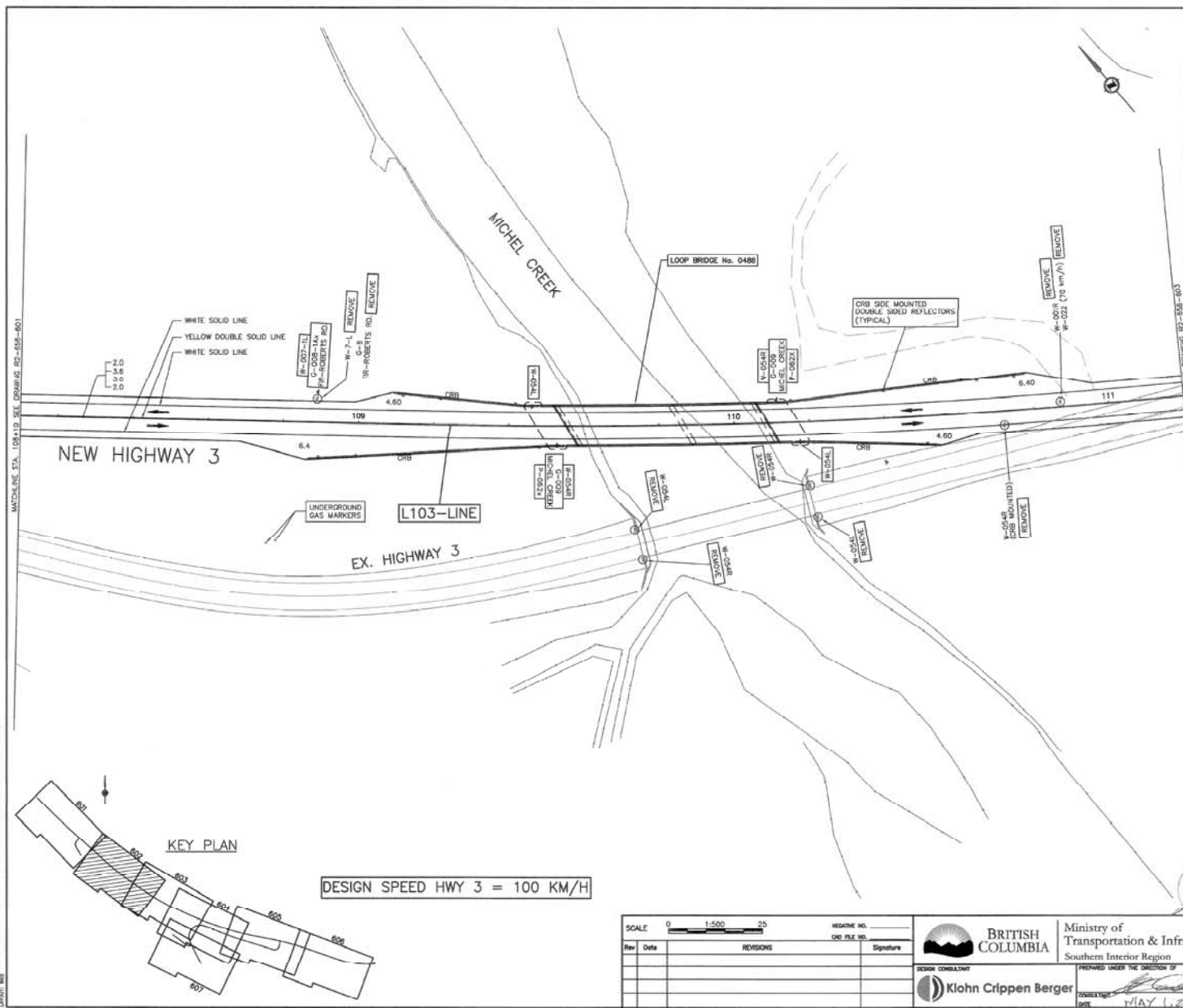
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

GEOMETRICS AND LANDING			
CROWNSNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 117+40 to Station 122+30.000			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-403





SIGNS & POSTS ASSOCIATED WITH THIS DRAWING				
SIGN REMOVALS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-7L	CONCEALED RD.	1	1	STA. 108+90 (LL)
G-8	ROAD NAME	1	1	STA. 108+90 (LL)
W-054L	OBJECT MARKER	1	1	STA. 109+73 (RL)
W-054R	OBJECT MARKER	1	1	STA. 109+75 (RL)
W-054R	OBJECT MARKER	1	1	STA. 110+20 (RL)
W-054L	OBJECT MARKER	1	1	STA. 110+22 (RL)
W-054R	OBJECT MARKER	1	1	STA. 110+71 (RL)
W-022	70 km/h	1	1	STA. 110+87 (RL)
W-001R	CURVE RIGHT	1	1	STA. 110+87 (RL)
NEW SIGNS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-007-L	CONCEALED ROAD	1	1	STA. 108+90 (LL)
G-008-1/2	STREET NAME	1	1	STA. 108+90 (LL)
W-054L	OBJECT MARKER	1	1	STA. 109+45.8 (LL)
W-054R	OBJECT MARKER	1	1	STA. 109+53.3 (RL)
G-009	CREEK NAME	1	1	STA. 109+53.3 (RL)
W-054L	NO STOPPING	1	1	STA. 109+48.8 (RL)
W-054R	OBJECT MARKER	1	1	STA. 110+11.3 (LL)
G-009	CREEK NAME	1	1	STA. 110+11.3 (LL)
W-054L	NO STOPPING	1	1	STA. 110+16.6 (LL)
W-054R	OBJECT MARKER	1	1	STA. 110+17.3 (RL)
TOTAL SIGNS REMOVED = 9 (2 POSTS)				
NEW SIGNS = 10 (5 POSTS)				
CRB SIDE MOUNTED DOUBLE-SIDED REFLECTORS REQUIRED THIS SHEET: 14				

- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
 2. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
 3. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNING & PAVEMENT MARKINGS LEGEND	
100mm	LANE EDGE PAINT LINES
150mm	LANE PAINT LINES
⊙	EXISTING SIGN TO BE REMOVED
⊙	NEW SIGN
+	CRB SIDE MOUNTED REFLECTORS

ASSOCIATED DRAWINGS	
R2-658-102	PLAN
0486-102	LOOP BRIDGE No. 0486

SCALE 0 1:500 25

REV. DATE REVISIONS

DESIGNER NO. 000 FILE NO.

SIGNATURE

BRITISH COLUMBIA

Ministry of Transportation & Infrastructure

Southern Interior Region

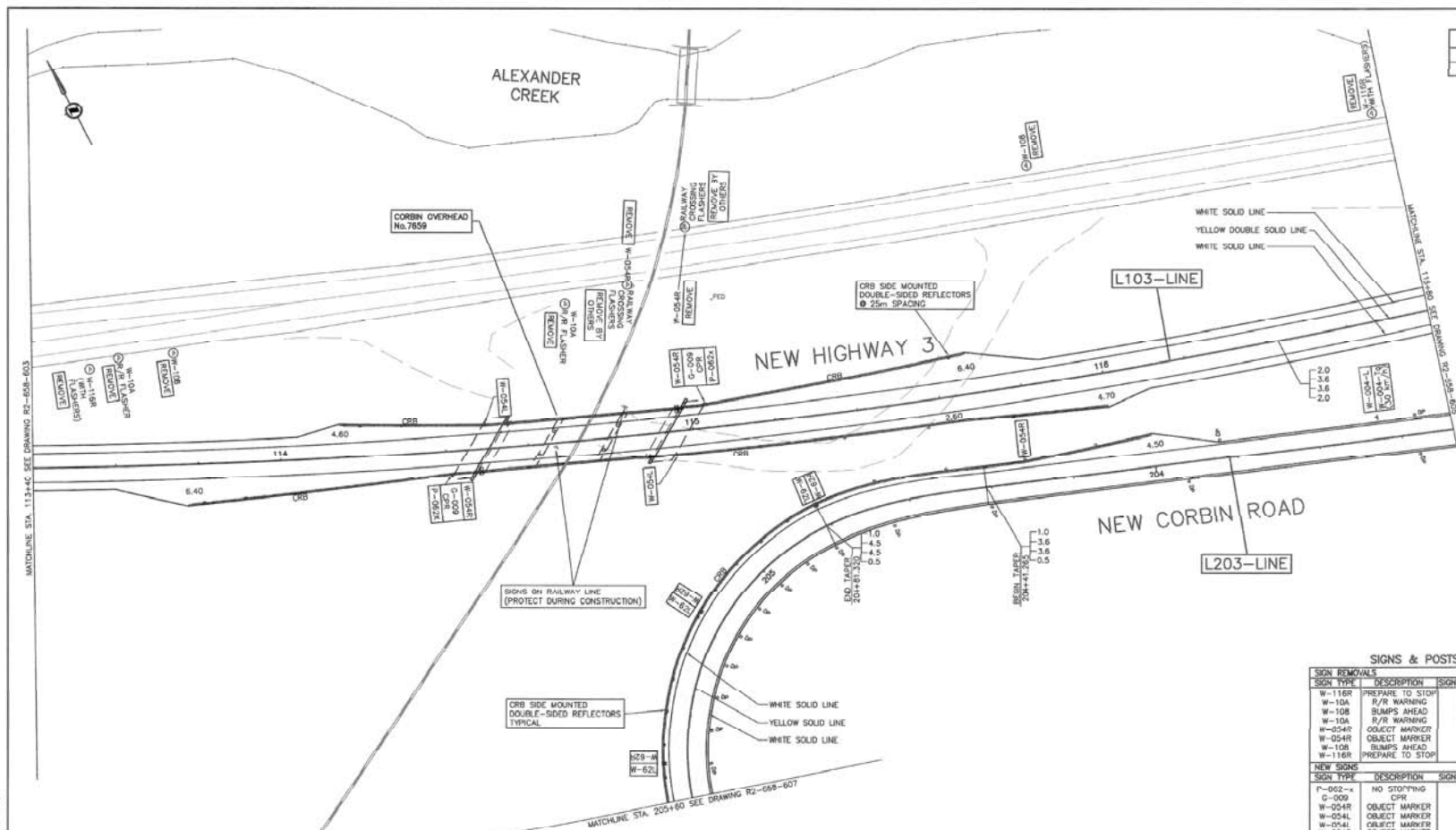
DESIGN CONSULTANT

Klohn Crippen Berger

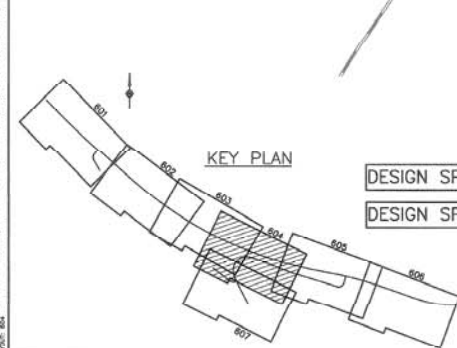
PREPARED UNDER THE DIRECTION OF

DATE MAY 1, 2008

SIGNING AND PAVEMENT MARKING			
CROWNSNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 108+10 to Station 111+20			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-602



ASSOCIATED DRAWINGS	
R2-656-104	PLAN
7659-02	CORBIN OVERHEAD



DESIGN SPEED HWY 3 = 100 KM/H
DESIGN SPEED CORBIN ROAD = 40 KM/H

NOTES:

1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
2. W-55 POST MOUNTED REFLECTORS AS PER BC M.T. MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS AND B.C.M.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2009 EDITION (M.C. SP-15-3.10.1).
3. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
4. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNING & PAVEMENT MARKINGS LEGEND

- 100mm - LANE EDGE PAINT LINES
- 100mm - LANE PAINT LINES
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- POST MOUNTED REFLECTORS (W-55)
- CRB SIDE MOUNTED REFLECTORS

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-116R	PREPARE TO STOP	1	1	STA. 113+54.3 (LL)
W-104	R/Y WARNING	1	1	STA. 113+61.3 (LL)
W-108	BUMPS AHEAD	1	1	STA. 113+75.0 (LL)
W-104	R/Y WARNING	1	1	STA. 114+62.0 (LL)
W-054R	OBJECT MARKER	1	1	STA. 114+87.2 (LL)
W-054R	OBJECT MARKER	1	1	STA. 115+03.2 (LL)
W-108	BUMPS AHEAD	1	1	STA. 115+89.6 (LL)
W-116R	PREPARE TO STOP	1	1	STA. 116+76.6 (LL)
P-062+	NO STOPPING	1	1	STA. 111+48.0 (RL)
C-009	CPR	1	1	STA. 114+47.0 (RL)
W-054R	OBJECT MARKER	1	1	STA. 114+47.0 (RL)
W-054R	OBJECT MARKER	1	1	STA. 114+55.6 (LL)
W-054R	OBJECT MARKER	1	1	STA. 114+79.0 (RL)
W-054R	OBJECT MARKER	1	1	STA. 114+86.0 (LL)
C-009	CPR	1	1	STA. 114+86.0 (LL)
P-062+	NO STOPPING	1	1	STA. 114+86.5 (LL)
W-004-L	CURVE LEFT	1	1	STA. 203+45.7 (RL)
W-004-R	CURVE RIGHT	1	1	STA. 203+45.7 (RL)
W-054R	OBJECT MARKER	1	1	STA. 204+32.0 (RL)
W-62L	CHEVRON LEFT	1	1	STA. 204+81.3 (RL)
W-62R	CHEVRON RIGHT	1	1	STA. 204+81.3 (RL)
W-62L	CHEVRON LEFT	1	1	STA. 205+15.4 (RL)
W-62R	CHEVRON RIGHT	1	1	STA. 205+15.4 (RL)
W-62L	CHEVRON LEFT	1	1	STA. 205+15.4 (RL)
W-62R	CHEVRON RIGHT	1	1	STA. 205+15.4 (RL)

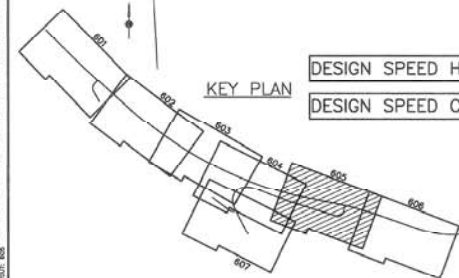
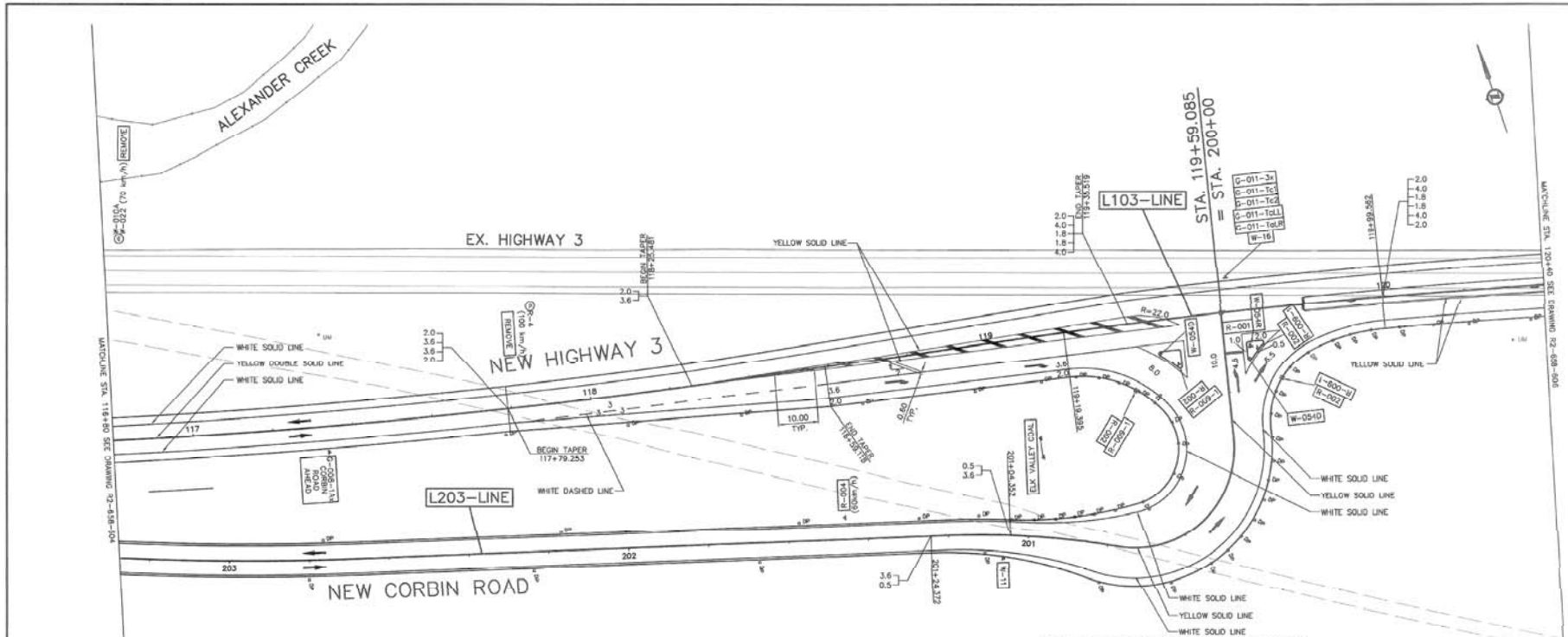
TOTAL SIGNS REMOVED = 8 (8 POSTS)
NEW SIGNS = 17 (8 POSTS)
W-55 REFLECTOR POSTS REQUIRED THIS SHEET: 15
CRB SIDE MOUNTED DOUBLE-SIDED REFLECTORS REQUIRED THIS SHEET: 32

Rev	Date	REVISIONS	Signature



Ministry of Transportation & Infrastructure
Southern Interior Region
PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

SIGNING AND PAVEMENT MARKING			
CROWNSNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 113+40 to Station 116+80			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-656-004



DESIGN SPEED HWY 3 = 100 KM/H
DESIGN SPEED CORBIN ROAD = 40 KM/H

- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
 2. W-55 POST MOUNTED REFLECTORS AS PER BC MAT MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS AND B.C.M.A.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2009 EDITION DWG. SP635-3.10.1.
 3. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
 4. ARROWS INDICATE DIRECTION OF TRAVEL.
 5. RUMBLE STRIPS SHALL BE CONSTRUCTED ALONG HIGHWAY 3 AS DIRECTED BY THE MINISTRY REPRESENTATIVE.

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN REMOVALS			
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS LOCATION
W-010A	RR CROSSING	1	1 STA. 116+84.1 (LL)
W-022	70 km/h	1	1 STA. 116+84.1 (LL)
R-4	100 km/h	1	1 STA. 117+87.5 (LL)
NEW SIGNS			
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS LOCATION
R-002	STREET NAME	1	1 STA. 117+33.8 (RL)
R-009-1	YIELD	1	1 STA. 119+35.0 (RL)
W-054D	DO NOT ENTER	1	1 STA. 119+35.0 (RL)
R-002	OBJECT MARKER	1	1 STA. 119+42.5 (RL)
R-009-1	YIELD	1	1 STA. 119+42.5 (RL)
W-16	DO NOT ENTER	1	1 STA. 119+42.5 (RL)
G-011-3K	CHECKERBOARD	1	1 STA. 119+61.0 (LL)
G-011-3K	HWY 3	1	1 STA. 119+61.0 (LL)
G-011-3K	CAST	1	1 STA. 119+61.0 (LL)
G-011-3K	WEST	1	1 STA. 119+61.0 (LL)
G-011-3K	LEFT ARROW	1	1 STA. 119+61.0 (LL)
G-011-3K	RIGHT ARROW	1	1 STA. 119+61.0 (LL)
R-009-1	DO NOT ENTER	1	1 STA. 119+84.1 (RL)
R-001	STOP	1	1 STA. 200+05.0 (LL)
W-054D	OBJECT MARKER	1	1 STA. 200+05.0 (LL)
R-002	YIELD	1	1 STA. 200+08.8 (LL)
R-009-1	DO NOT ENTER	1	1 STA. 200+08.8 (LL)
W-054D	OBJECT MARKER	1	1 STA. 200+10.0 (LL)
W-11	STOP AHEAD	1	1 STA. 201+00.0 (LL)
R-004	60 km/h	1	1 STA. 201+42.0 (RL)
TOTAL SIGNS REMOVED = 3 (2 POSTS)			
NEW SIGNS = 21 (11 POSTS)			
W-55 REFLECTOR POSTS REQUIRED THIS SHEET: 51			

SIGNING & PAVEMENT MARKINGS LEGEND	
— 100mm —	LANE EDGE PAINT LINES
— 100mm —	LANE PAINT LINES
⊙	EXISTING SIGN TO BE REMOVED
+	NEW SIGN
⊙	POST MOUNTED REFLECTORS (W-55)
+	CRB SIDE MOUNTED REFLECTORS

ASSOCIATED DRAWINGS
R2-658-105 PLAN

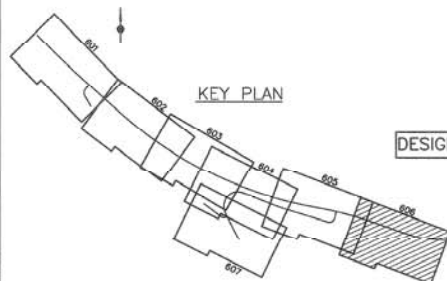
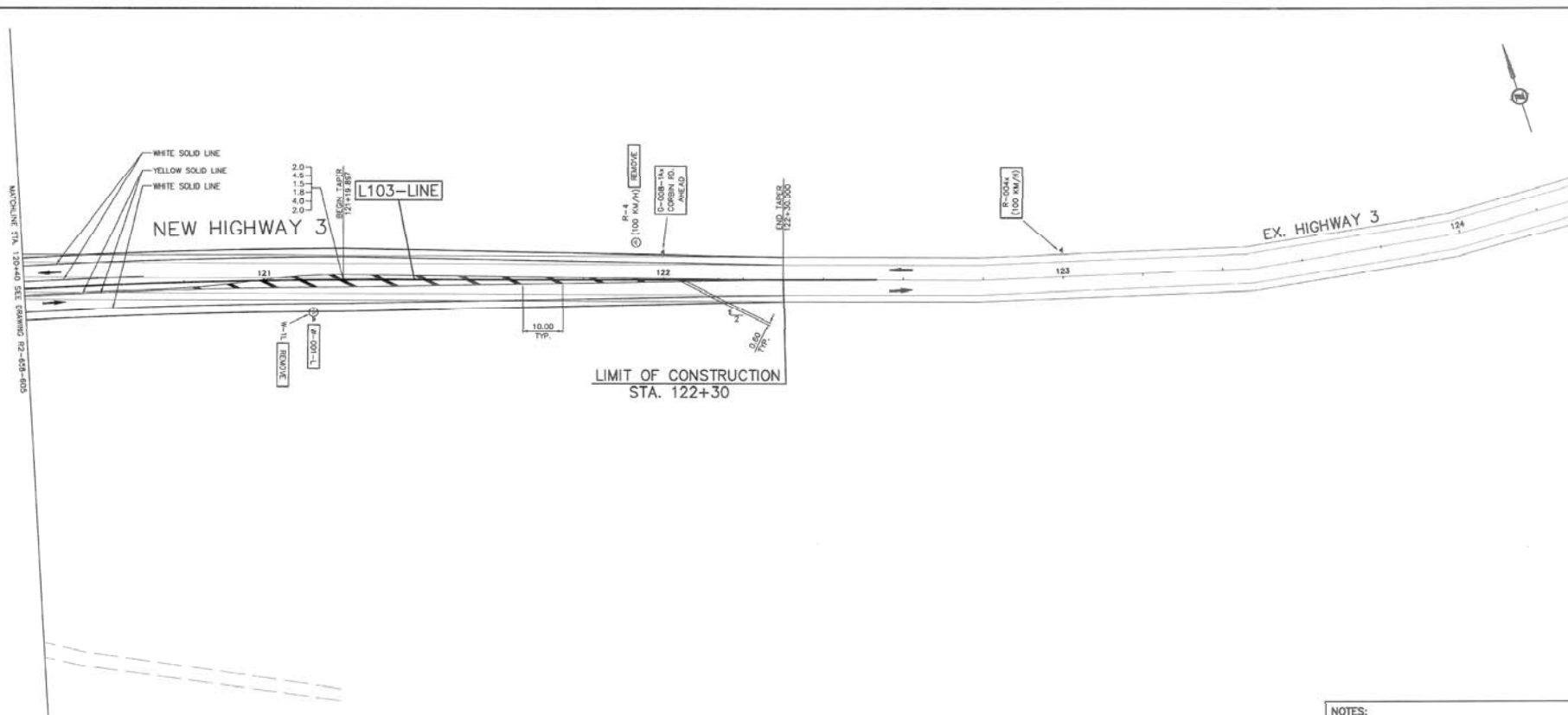
Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
PROJECT MANAGER
DATE: MAY 1, 2009

SIGNING AND PAVEMENT MARKING			
CROWNSNEST HIGHWAY NO. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 116+80 to Station 120+40			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-605



DESIGN SPEED HWY 3 = 100 KM/H

- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
 2. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
 3. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNING & PAVEMENT MARKINGS LEGEND

100mm	-	LANE EDGE PAINT LINES
100mm	-	LANE PAINT LINES
⓪		EXISTING SIGN TO BE REMOVED
Ⓢ		NEW SIGN
Ⓜ		CRS SIDE MOUNTED REFLECTORS

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN REMOVALS				
SIGN TYPE	DESCRIPTION	SIGN FACES/POSTS	LOCATION	
W-1L	CURVE LEFT	1	1	STA. 121+12.5 (R)
R-4	100 km/h	1	1	STA. 121+93.0 (LL)
NEW SIGNS				
SIGN TYPE	DESCRIPTION	SIGN FACES/POSTS	LOCATION	
W-001-L	CURVE LEFT	1	1	STA. 121+12.5 (R)
G-008-1A	STREET NAME	1	1	STA. 122+00.0 (LL)
R-004-v	100 km/h	1	1	STA. 123+00.0 (LL)
TOTAL SIGNS REMOVED = 2 (2 POST)				
NEW SIGNS = 3 (3 POST)				

ASSOCIATED DRAWINGS

R2-658-106	PLAN
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SCALE 0 1:500 25

Rev	Date	REVISIONS	REVISION NO.	SIGNATURE



Ministry of Transportation & Infrastructure
Southern Interior Region
PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

SIGNING AND PAVEMENT MARKING
CROWNSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 120+40 to Station 123+00

FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-606

DESIGN SPEED CORBIN ROAD = 40 KM/H

DESIGN SPEED BC HYDRO ACCESS = 20 KM/H

ASSOCIATED DRAWINGS

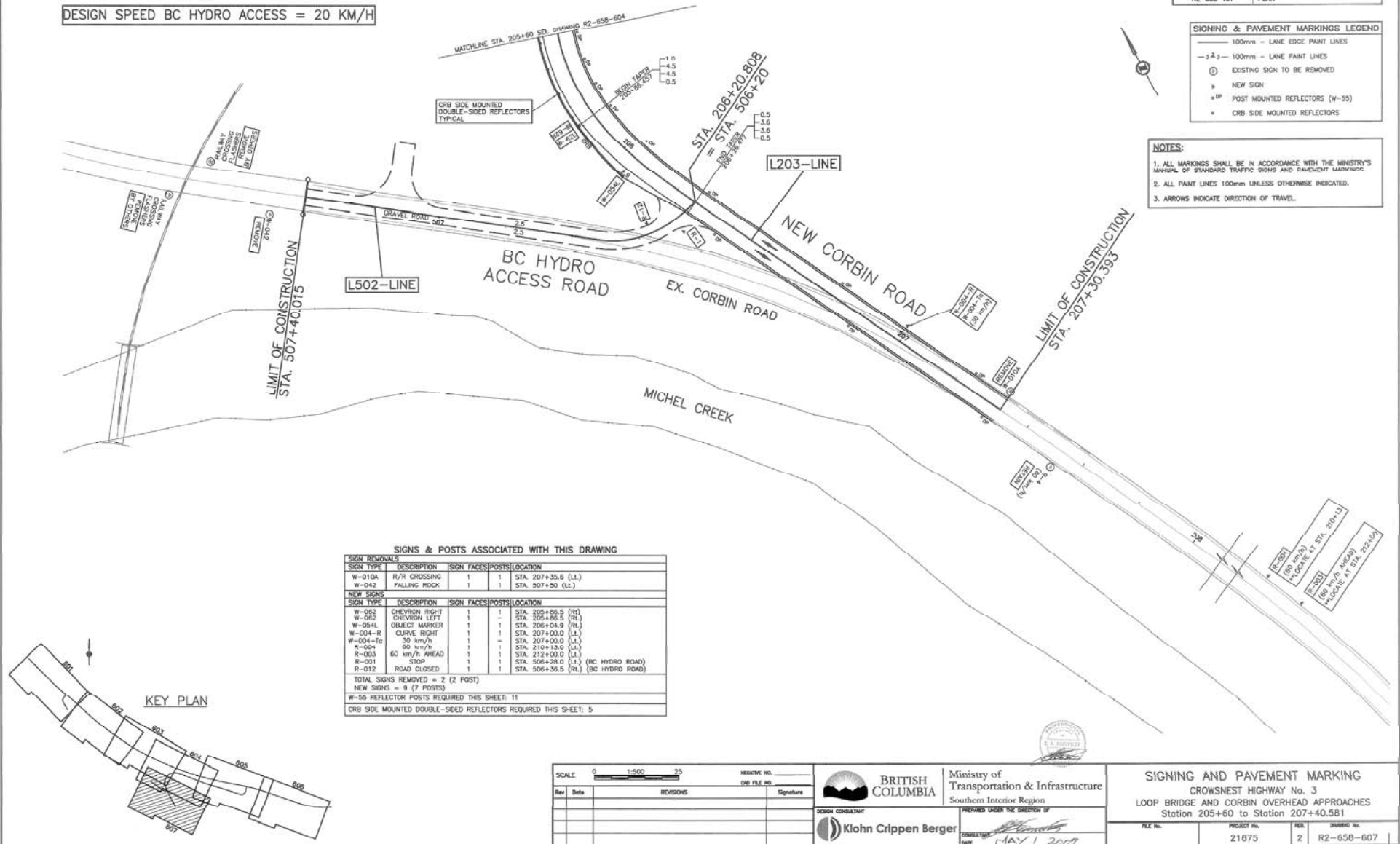
R2-606-107 PLAN

SIGNING & PAVEMENT MARKINGS LEGEND

- 100mm - LANE EDGE PAINT LINES
- 100mm - LANE PAINT LINES
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- POST MOUNTED REFLECTORS (W-55)
- CORNER MOUNTED REFLECTORS

NOTES:

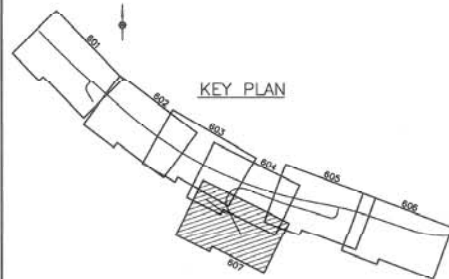
- ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS
- ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
- ARROWS INDICATE DIRECTION OF TRAVEL.



SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN REMOVALS			
SIGN TYPE	DESCRIPTION	SIGN FACES/POSTS	LOCATION
W-010A	R/R CROSSING	1	STA. 207+35.6 (L.I.)
W-042	FALLING ROCK	1	STA. 207+30 (L.I.)
NEW SIGNS			
SIGN TYPE	DESCRIPTION	SIGN FACES/POSTS	LOCATION
W-062	CHEVRON RIGHT	1	STA. 205+86.5 (R.I.)
W-062	CHEVRON LEFT	1	STA. 205+86.5 (R.I.)
W-044	OBJECT MARKER	1	STA. 206+04.9 (R.I.)
W-044-R	CURVE RIGHT	1	STA. 207+00.0 (L.I.)
W-044-L	CURVE LEFT	1	STA. 207+00.0 (L.I.)
W-044-TS	30 km/h	1	STA. 207+00.0 (L.I.)
R-004	60 km/h	1	STA. 210+13.0 (L.I.)
R-003	60 km/h AHEAD	1	STA. 212+00.0 (L.I.)
R-001	STOP	1	STA. 206+28.0 (L.I.) (BC HYDRO ROAD)
R-012	ROAD CLOSED	1	STA. 206+36.5 (R.I.) (BC HYDRO ROAD)
TOTAL SIGNS REMOVED = 2 (2 POSTS)			
NEW SIGNS = 9 (7 POSTS)			
W-55 REFLECTOR POSTS REQUIRED THIS SHEET: 11			
CORNER MOUNTED DOUBLE-SIDED REFLECTORS REQUIRED THIS SHEET: 5			

KEY PLAN



Rev	Date	REVISIONS	Signature



BRITISH COLUMBIA
Klohn Crippen Berger

Ministry of Transportation & Infrastructure
Southern Interior Region

PREPARED UNDER THE DIRECTION OF
DATE MAY 1, 2009

SIGNING AND PAVEMENT MARKING
CROWNSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 205+60 to Station 207+40.581

FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-606-607



BRITISH
COLUMBIA

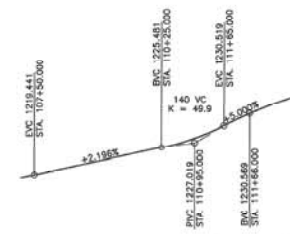
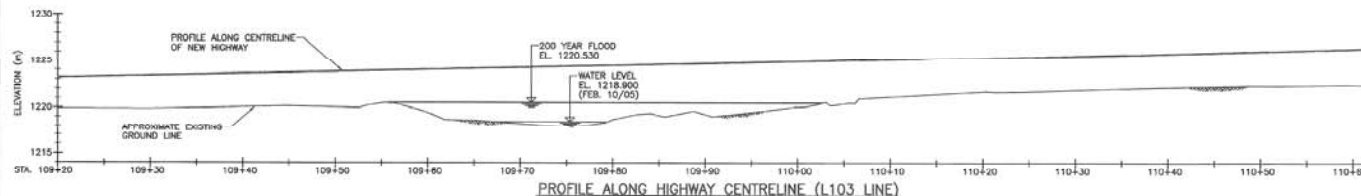
Ministry of Transportation & Infrastructure

Bridge Project

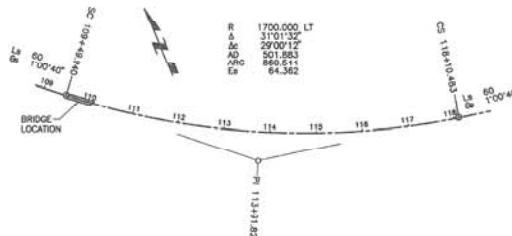
21675-0000

Loop Bridge No. 0486

Crowsnest Highway #3



PROFILE OF NEW HIGHWAY (L103 LINE)
N.T.S.



PLAN OF NEW HIGHWAY (L103 LINE)
N.T.S.

NOTES:

1. SURVEY BY: PENNCO ENGINEERING LTD, FEBRUARY 2005.
2. DATUM: GEODETIC.
3. BENCHMARKS: HUB LOOP2 N 508329.334 E 660208.311 EL. 1223.137
HUB LOOP3 N 508274.297 E 660321.471 EL. 1223.398
GBM850003 N 508281.366 E 660272.921 EL. 1223.344
4. FOR BOREHOLE DATA SEE DRAWING 0486-112 TO 115.
REFERENCE: FINAL GEOTECHNICAL REPORT BY KLOHN CRIPPEN.



DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
0486-101	SITE PLAN
0486-102	GENERAL ARRANGEMENT
0486-103	WEST ABUTMENT
0486-104	EAST ABUTMENT
0486-105	PIER
0486-106	PIER LAYOUT
0486-107	GIRDERS DETAILS - SHEET 1
0486-108	GIRDERS DETAILS - SHEET 2
0486-109	DECK
0486-110	DECK SECTIONS & DETAILS
0486-111	MISCELLANEOUS DETAILS
0486-112 to 115	BOREHOLE LOGS

REFERENCE DRAWINGS

DRAWING NUMBER	DRAWING TITLE
R2-658-001	KEY PLAN & INDEX
R2-658-102	PLAN
R2-658-201	PROFILE
R2-658-301	TYPICAL SECTIONS
R2-658-302	DRAINAGE DETAILS
R2-658-303	CONCRETE BARRIER DETAILS
R2-658-401	GEOTECHNICAL & LANDING
R2-658-1005	HABITAT RESTORATION

STANDARD DRAWINGS

DRAWING NUMBER	DRAWING TITLE
2784-1, Rev. R	STANDARD BRIDGE PARAPET 810mm HIGH
2785-2, Rev. C	STANDARD BRIDGE PARAPET STEEL RAILING (1995)



Rev	Date	Description	By

REVISIONS



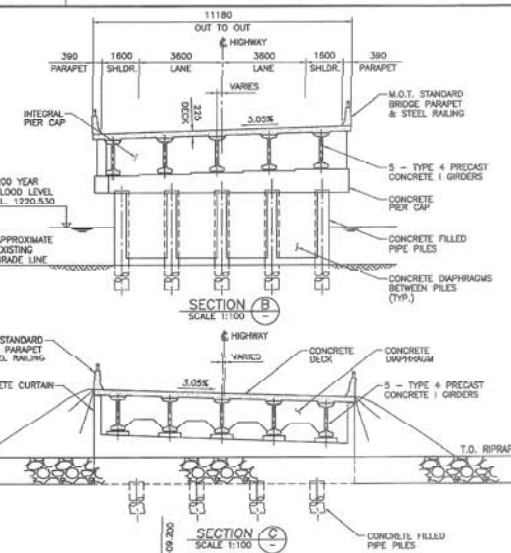
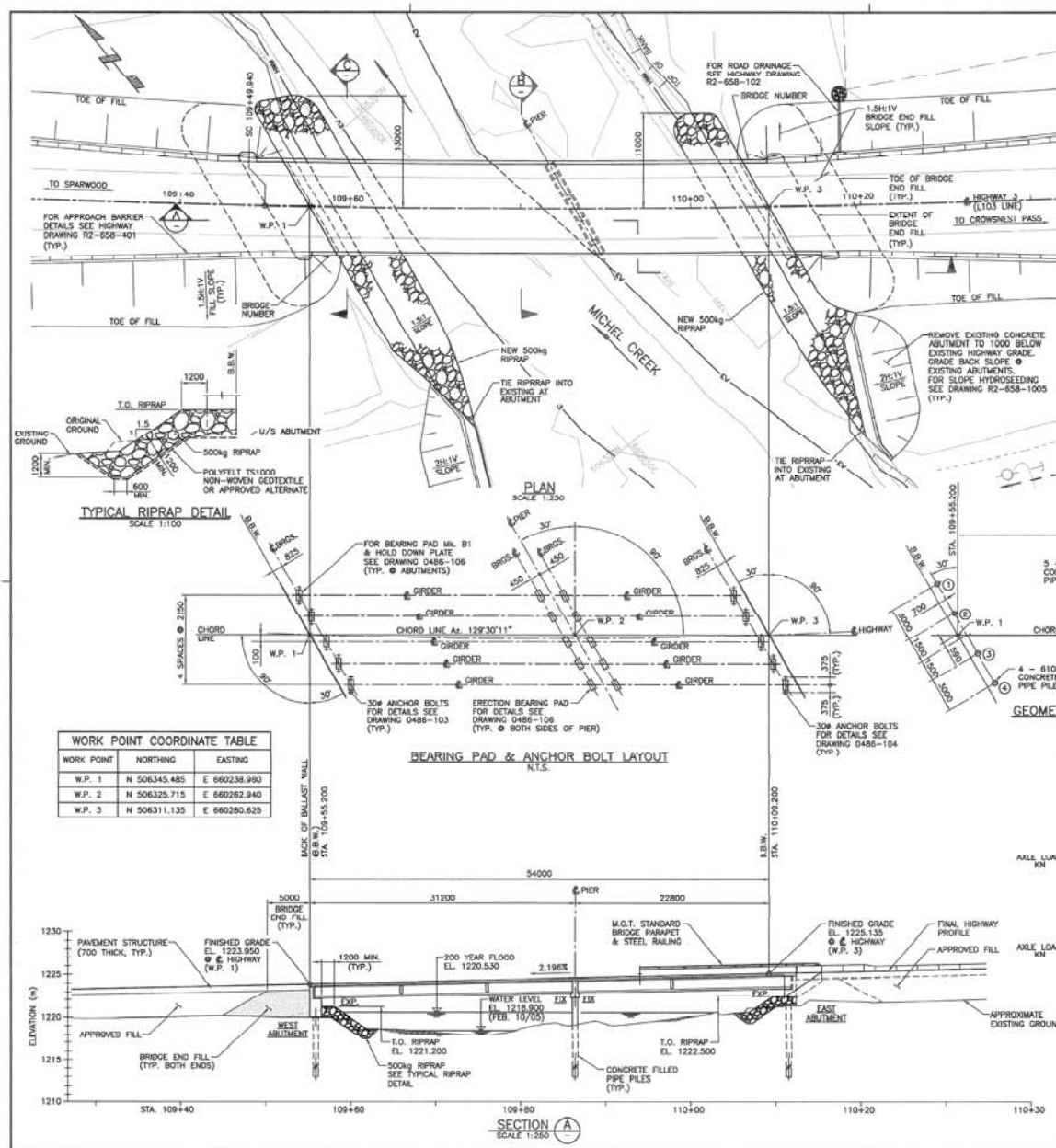
BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
LOOP BRIDGE No. 0486
SITE PLAN

DESIGNED BY: S.H.	DATE: JUNE 2005
CHECKED BY: S.H.	DATE: JULY 2005
DRAWN BY: S.H.	DATE: JUNE 2005
SCALE: 1:250 U/N	
REVISION No.	
PROJECT No. 21675	DRAWING No. 0486-101

CANCELLED PREVIOUS EDITION

TRA-2011-00287



Klohn Crippen Berger

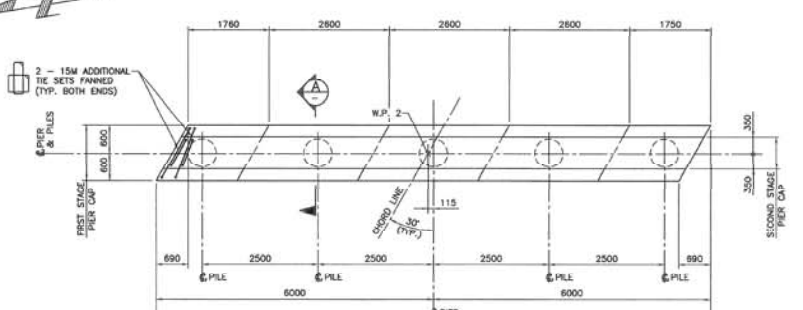
Date	Description	Int

REVISIONS

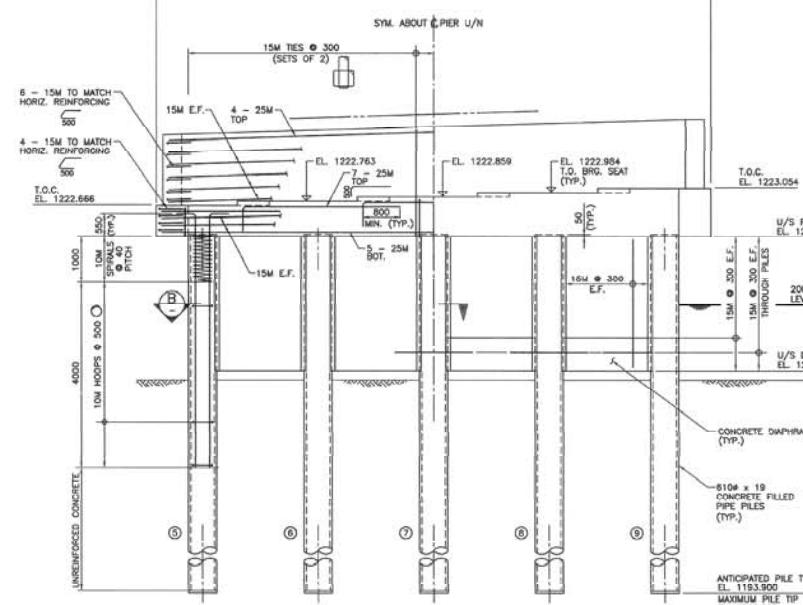
BRITISH COLUMBIA Ministry of Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
LOOP BRIDGE No. 0486
GENERAL ARRANGEMENT

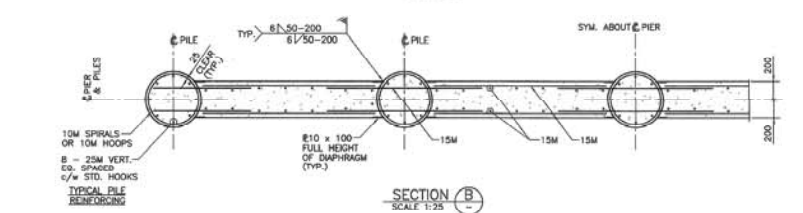
PREPARED UNDER THE DIRECTION OF: [Signature]
CHECKED: [Signature]
DRAWN: [Signature]
SCALE: AS NOTED
DATE: MAY 1, 2009
PROJECT No. 21675
DRAWING No. 0486-102



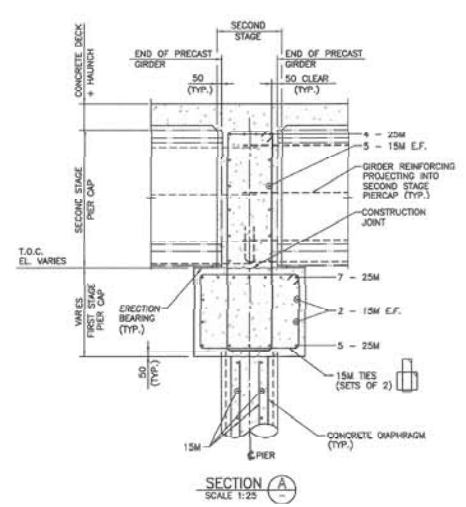
PLAN - PIER CAP



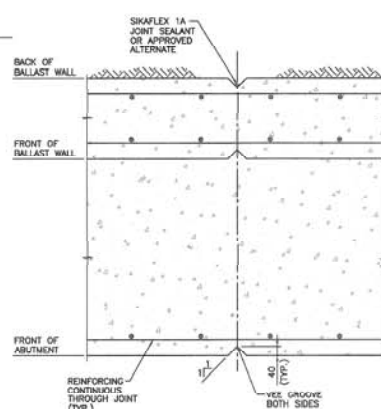
ELEVATION
LOOKING EAST



SECTION B
SCALE 1:25



SECTION A
SCALE 1:25



TYPICAL CONTROL JOINT DETAIL
SCALE 1:10

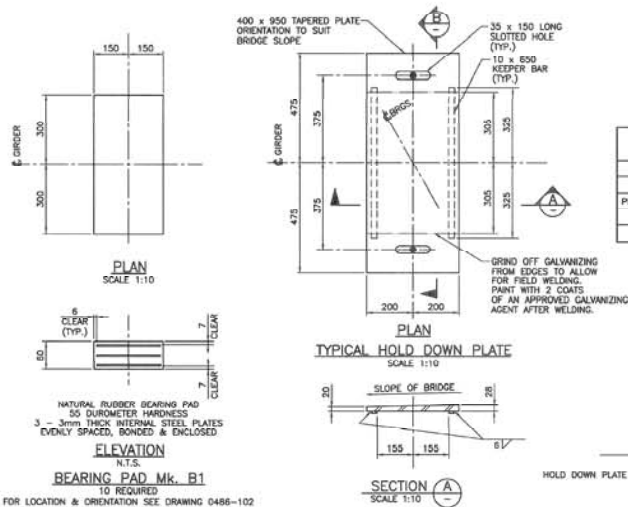
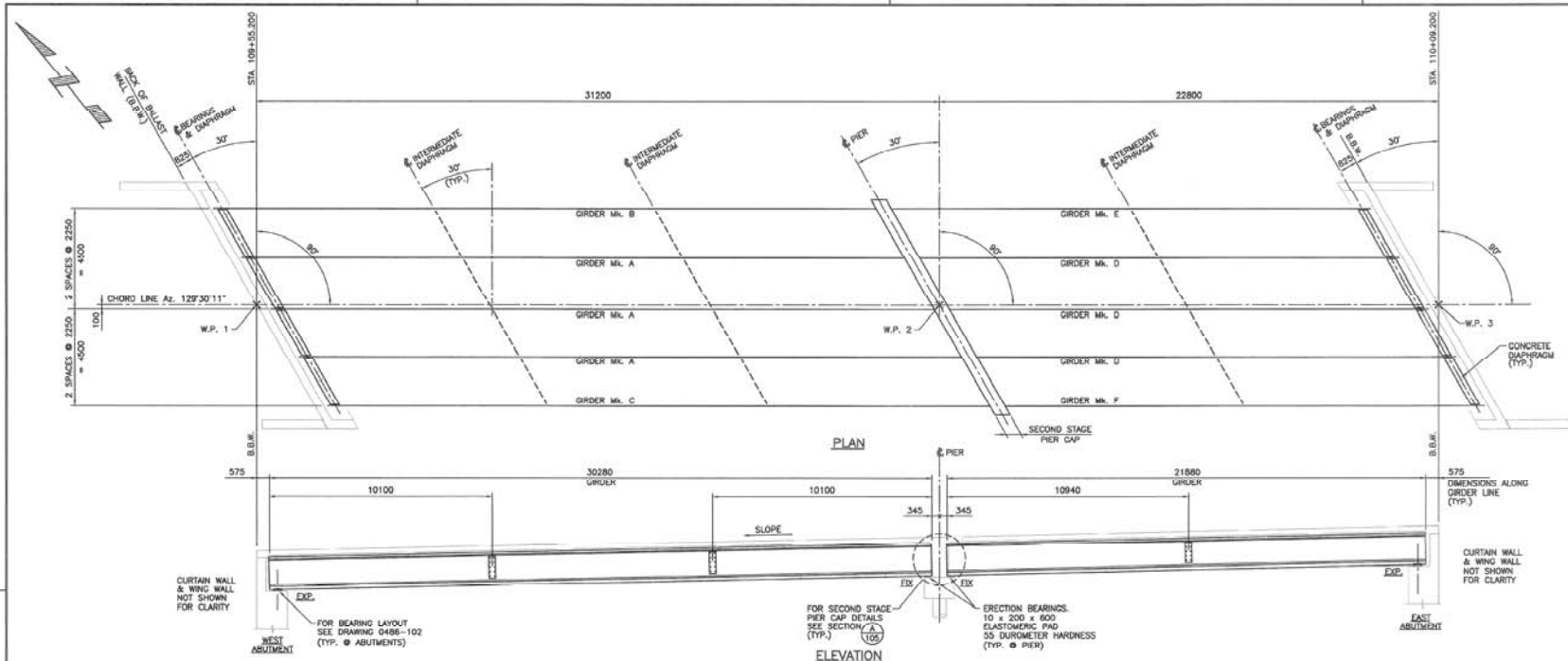
NOTES:

1. FOR GENERAL SUBSTRUCTURE NOTES SEE DRAWING 0486-103.
2. FOR PILE SPLICE AND TIP DETAIL SEE DRAWING 0486-104.

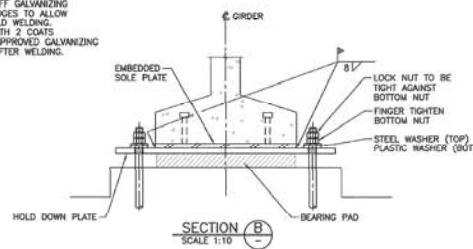
PILE SERVICE LOADS:

DEAD LOAD: 925 kN
LIVE LOAD: 520 kN
TOTAL: 1485 kN

Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 PIER			
PREPARED UNDER THE DIRECTION OF		DESIGNED: S.B. DATE: APR. 2005	
CHECKED: S.B. DATE: JULY 2005		DRAWN: S.B. DATE: APR. 2005	
SCALE: 1:50 U/N		NEGATIVE: N/A	
PROJECT No. 21675		DRAWING No. 0486-105	



BEARING DESIGN DATA SLS1 - COMB. 1		
	WEST ABUTMENT	EAST ABUTMENT
BEARING SIZE	60 x 600 x 300	60 x 600 x 300
PERMANENT LOADS	492 kN	354 kN
TOTAL LOADS	972 kN	1053 kN
MOVEMENT	24.6 mm	18 mm



GIRDER NOTES:

- FOR GENERAL NOTES SEE DRAWING 0486-102.
- GIRDERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 415 OF THE M.O.T. STANDARD SPECIFICATIONS.
- PRESTRESSING STRANDS SHALL BE 13 mm² (7 WIRE) UNCOATED LOW RELAXATION STRANDS, CSA G270W-1982, 1982 MPa MINIMUM ULTIMATE TENSILE STRENGTH = 184 kN/STRAND, STRAND TENSION IMMEDIATELY BEFORE RELEASE = 136 kN/STRAND.
- CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF:
 - 40 MPa AT THE TIME OF RELEASE OF STRANDS
 - 55 MPa AT 28 DAYS
- BOTTOM EDGES OF ALL GIRDERS SHALL BE CHAMFERED 25mm.
- REINFORCING STEEL SHALL CONFORM TO CAN/CSA G30.18, GRADE 400R.
- ALL REINFORCING STEEL SHALL HAVE 25mm COVER, UNLESS NOTED OTHERWISE.
- ALL LAPS OF REINFORCING BARS FOR SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

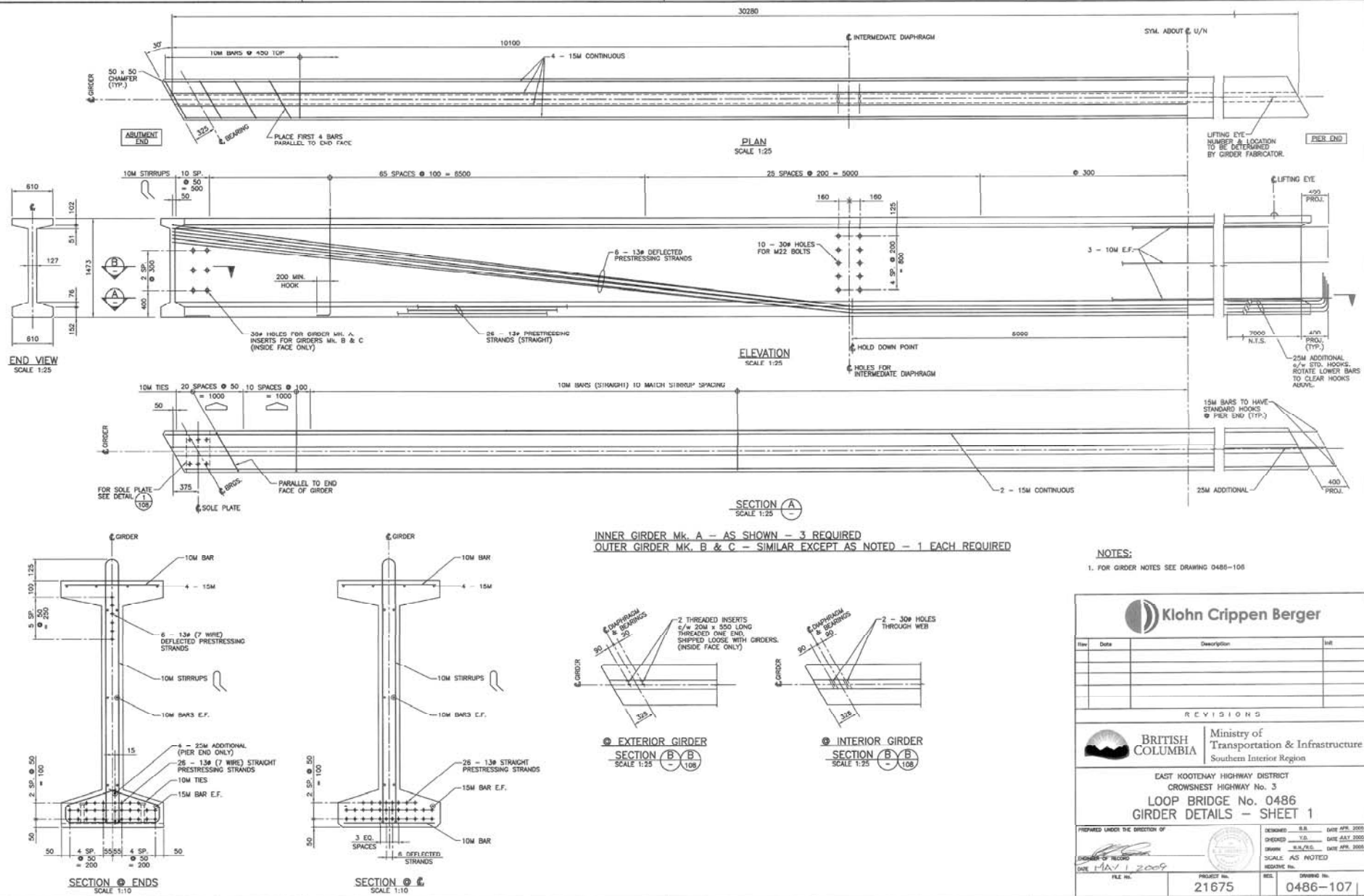
UNCOATED	
10M	240
15M	480

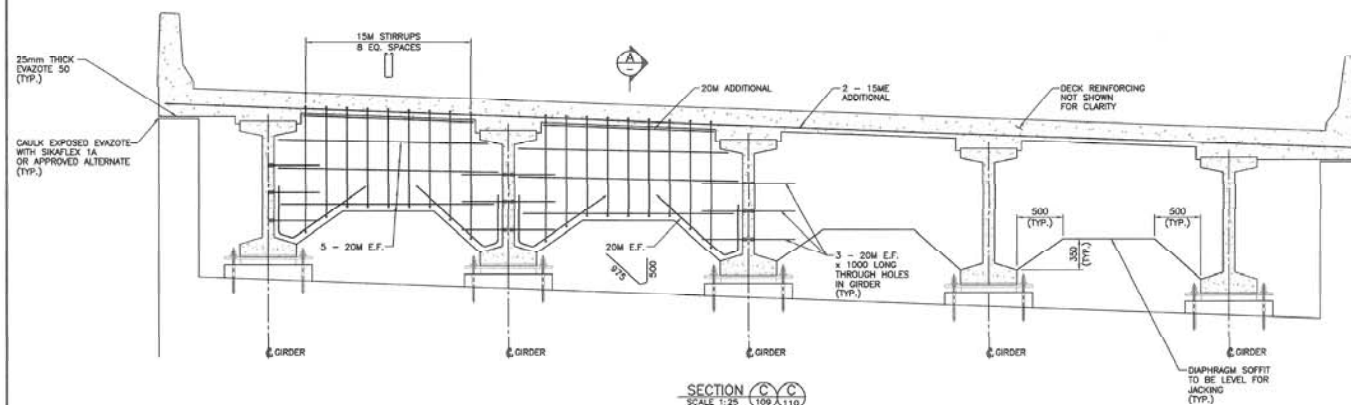
SPLICES SHALL BE STAGGERED.

- LIFTING DEVICES SATISFACTORY TO THE MINISTRY REPRESENTATIVE SHALL BE PROVIDED OVER THE BEARINGS. ONLY VERTICAL LIFTS SHALL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT SUDDEN IMPACT LOADS ON THE GIRDERS.
- AT ABUTMENT ENDS, COAT ENDS OF GIRDERS WITH A MINIMUM 3mm COATING OF THIXOTROPIC EPOXY APPLIED IN STRICT ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.
- AT PIER ENDS, ENDS OF GIRDERS PRESTRESSING STRANDS SHALL BE PAINTED WITH 2 COATS OF A MINISTRY APPROVED GALVANIZING AGENT.
- TOP SURFACE OF ALL GIRDERS SHALL BE ROUGHENED IN ACCORDANCE WITH SECTION 415 OF THE STANDARD SPECIFICATIONS.
- STEEL PLATE SHALL CONFORM TO CSA SPECIFICATION CAN 3-040.214 GRADE 300W. BEARING SHIM PLATES SHALL BE GRADE 280W.
- ALL MISCELLANEOUS STEEL SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH CSA SPECIFICATION G104, TABLE 1.
- SHEAR CONNECTORS SHALL CONFORM TO ASTM A108 GRADE 1020.
- ALL WELDING SHALL CONFORM TO CSA W59-W.

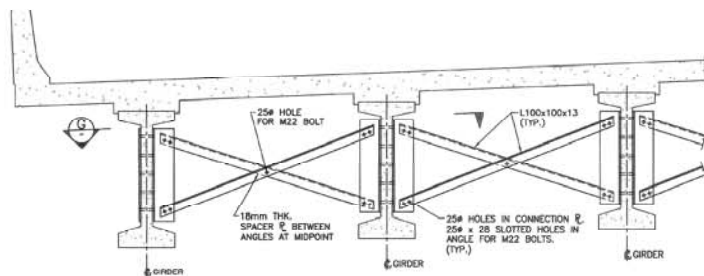
Rev	Date	Description	By
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 GIRDER LAYOUT			
PREPARED UNDER THE DIRECTION OF ENGINEER OF RECORD DATE: MAY 1, 2007 FILE NO.		DESIGNED: S.B. DATE: APRIL 2005 CHECKED: J.S. DATE: JULY 2005 DRAWN: P.S. DATE: APRIL 2005 SCALE: 1:100 U/N REVISION NO.	
PROJECT NO. 21675		SHEET NO. 0486-106	

CANCELLED BY REFERENCE TO PREVIOUS LETTER

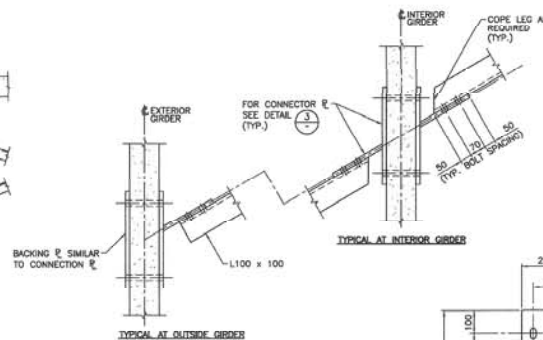




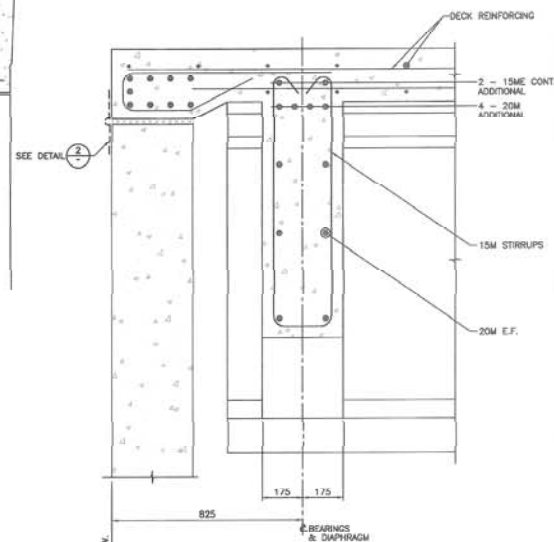
SECTION C-C
SCALE 1:25



SECTION F-F
SCALE 1:25



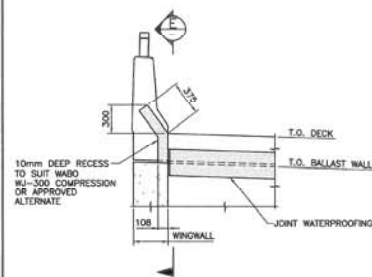
SECTION G-G
SCALE 1:10



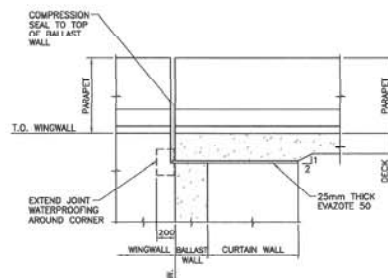
SECTION A-A
SCALE 1:25

NOTES:

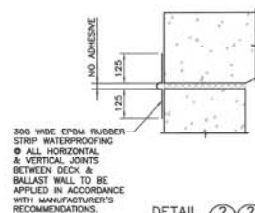
- FOR GENERAL DECK NOTES SEE DRAWING 0400-109.
- STRUCTURAL STEEL TO BE GRADE 300W TO CSA G40.20 AND G40.21.
- ALL INTERMEDIATE DIAPHRAGM STEEL TO BE HOT DIP GALVANIZED TO CAN/CSA-G154 TABLE 1.
- BOLTS TO BE GALVANIZED HIGH STRENGTH STRUCTURAL BOLTS CONFORMING TO ASTM A325 TYPE 1.



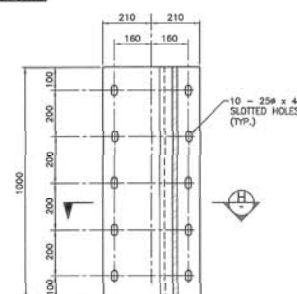
SECTION D-D
SCALE 1:25



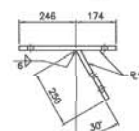
SECTION E-E
SCALE 1:25



DETAIL 2-2
SCALE 1:10

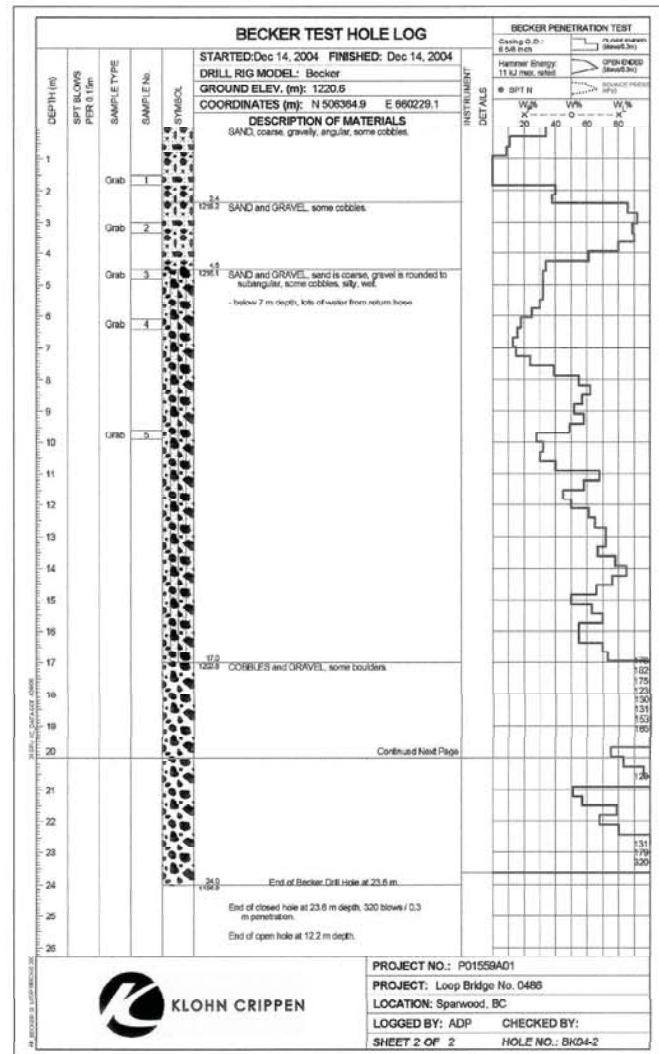
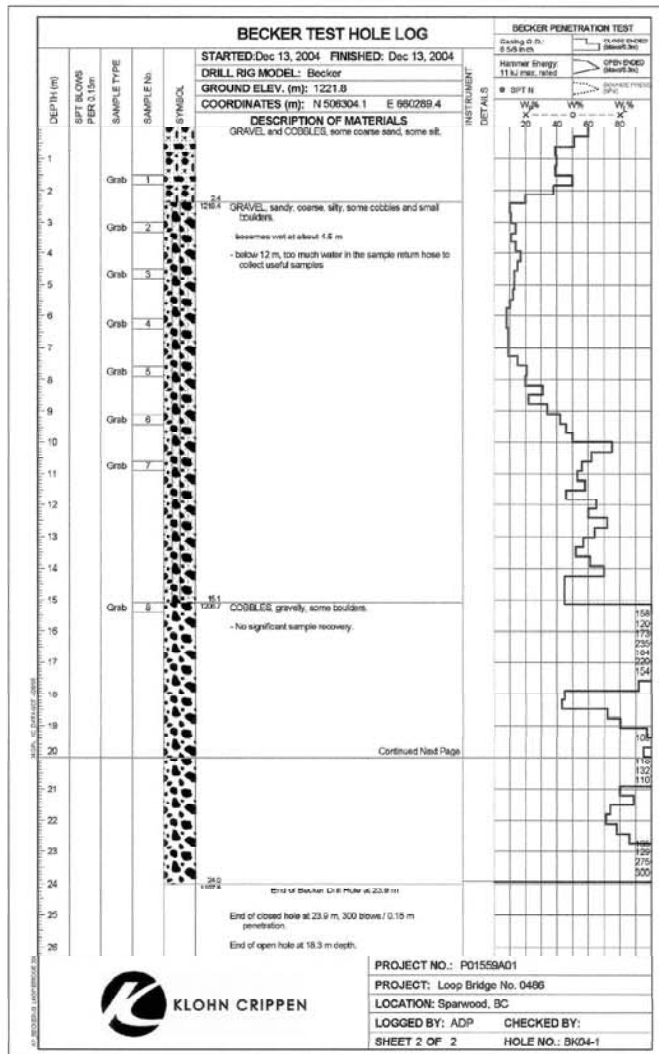


DETAIL 3-3
SCALE 1:10



SECTION H-H
SCALE 1:10

Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 MISCELLANEOUS DETAILS			
PREPARED UNDER THE DIRECTION OF		DESIGNED: S.B. DATE: MAY 2009 CHECKED: R.A.L. DATE: MAY 2009 DRAWN: S.B. DATE: MAY 2009 SCALE: AS NOTED REVISION: 11	
PROJECT No. 21675		DRAWING No. 0486-111	



NOTES:
 1. FOR BOREHOLE LOCATIONS SEE DRAWING 0486-101.

			
Rev	Date	Description	By
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNSHAW HIGHWAY No. 3 LOOP BRIDGE No. 0486 BOREHOLE LOGS			
PREPARED UNDER THE DIRECTION OF  CHIEF OF RECORD DATE: March 1, 2009 FILE NO.		DESIGNED: A.D.P. DATE: DEC. 2004 CHECKED: S.W.S. DATE: MAY 2005 DRAWN: J.D. DATE: JULY 2005 SCALE: N/A REVISION NO.	
PROJECT NO.: 21675		DRAWING NO.: 0486-112	

SUMMARY LOG									
Project: LOOP BRIDGE (EAST ABUTMENT)					TEST HOLE No. 98-4				
Location: 1004.32N - 2023.56E SEE REPORT					Elevation: 300.17				
Method: BECKER HAMMER-OPEN END					Date: 98/10/01				
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Soil	Grain Size	Index Properties	Description	Other Tests			
1	2	3	4	5	6	7			
1	0.00				loose, gray, GRAVEL some sand, trace silt, damp				
2	0.00					1.5M			
3	0.00				loose, brown, GRAVEL some silt, trace silt, damp				
4	0.00					4.57M			
5	0.00				compact, continuous COBBLES (max. 100mm)	6.09			
6	0.00				compact, brown, GRAVEL some silt, trace sand, damp	7.31M			
7	0.00					9.4M			
8	0.00				loose, gray, SAND trace silt, damp				
9	0.00					9.4M			
10	0.00								
11	0.00				compact, brown, GRAVEL some silt, trace sand damp				
12	0.00					14.02M			
13	0.00								
14	0.00								
15	0.00								
16	0.00				compact, continuous COBBLES (max. 150mm)	16.15M			
17	0.00								

SAMPLE TYPE: A - Auger, B - Core, C - Split Spoon, D - Shallow Tube, E - Wash

SHEAR STRENGTH kPa: U - Unconfined Compression, C - Cohesion, L - Lab Value, F - Field Value, S - Standard Penetration Test (ASTM 1586)

TESTS: M - Mechanical Analysis, G.S. - Gradation, C - Consolidation, D - Direct Shear, L.P. - Liquid Plastic Limits, W - Moisture Content

FILE No. 0000

PREPARED BY: 0000

SHEET OF 01 02

SUMMARY LOG									
Project: LOOP BRIDGE (EAST ABUTMENT)					TEST HOLE No. 98-4				
Location: 1004.32N - 2023.56E SEE REPORT					Elevation: 300.17				
Method: BECKER HAMMER-OPEN END					Date: 98/10/01				
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Soil	Grain Size	Index Properties	Description	Other Tests			
1	2	3	4	5	6	7			
19	0.00				compact, continuous COBBLES (max. 150mm)	19.8M			
20	0.00								
21	0.00				loose, gray, GRAVEL some silt, trace sand damp				
22	0.00					24.9M			
23	0.00								
24	0.00				compact, continuous COBBLES (max. 200mm)	26.3M			
25	0.00								
26	0.00				compact, continuous COBBLES (max. 200mm)	28.3M			
27	0.00								
28	0.00				compact to dense, continuous BOULDERS (max. 1.0M)	30.1M			
29	0.00								
30	0.00				ENCOUNTERED WATER AT 7.6M Open End Bit				
31	0.00								
32	0.00								
33	0.00								
34	0.00								
35	0.00								

SAMPLE TYPE: A - Auger, B - Core, C - Split Spoon, D - Shallow Tube, E - Wash

SHEAR STRENGTH kPa: U - Unconfined Compression, C - Cohesion, L - Lab Value, F - Field Value, S - Standard Penetration Test (ASTM 1586)

TESTS: M - Mechanical Analysis, G.S. - Gradation, C - Consolidation, D - Direct Shear, L.P. - Liquid Plastic Limits, W - Moisture Content

FILE No. 0000

PREPARED BY: 0000

SHEET OF 02 02

SUMMARY LOG									
Project: LOOP BRIDGE (WEST ABUT. NORTH CORNER)					TEST HOLE No. 98-5				
Location: 1057.74N - 2023.88N SEE REPORT					Elevation: 299.21				
Method: BECKER HAMMER-OPEN END					Date: 98/09/29				
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Soil	Grain Size	Index Properties	Description	Other Tests			
1	2	3	4	5	6	7			
1	0.00				compact, brown, GRAVEL some sand, trace silt damp				
2	0.00					2.74M			
3	0.00				compact, continuous COBBLES (max. 150mm)	3.65M			
4	0.00								
5	0.00				loose to compact, brown, GRAVEL trace sand, trace silt damp				
6	0.00					6.70M			
7	0.00								
8	0.00								
9	0.00								
10	0.00								
11	0.00				loose to compact, gray, GRAVEL trace sand, trace silt damp				
12	0.00								
13	0.00								
14	0.00								
15	0.00								
16	0.00				compact, brown, GRAVEL trace sand, trace silt damp				
17	0.00								

SAMPLE TYPE: A - Auger, B - Core, C - Split Spoon, D - Shallow Tube, E - Wash

SHEAR STRENGTH kPa: U - Unconfined Compression, C - Cohesion, L - Lab Value, F - Field Value, S - Standard Penetration Test (ASTM 1586)

TESTS: M - Mechanical Analysis, G.S. - Gradation, C - Consolidation, D - Direct Shear, L.P. - Liquid Plastic Limits, W - Moisture Content

FILE No. 0000

PREPARED BY: 0000

SHEET OF 01 02

SUMMARY LOG									
Project: LOOP BRIDGE (WEST ABUT. NORTH CORNER)					TEST HOLE No. 98-5				
Location: 1057.74N - 2023.88N SEE REPORT					Elevation: 299.21				
Method: BECKER HAMMER-OPEN END					Date: 98/09/29				
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Soil	Grain Size	Index Properties	Description	Other Tests			
1	2	3	4	5	6	7			
19	0.00				compact, brown, GRAVEL trace sand, trace silt, damp	19.59M			
20	0.00				compact, continuous COBBLES (max. 150mm)	21.0M			
21	0.00								
22	0.00				loose, gray, SAND trace silt, damp				
23	0.00					22.8M			
24	0.00								
25	0.00					24.6M			
26	0.00								
27	0.00				dense, continuous BOULDERS (max. 800mm)				
28	0.00					28.04M			
29	0.00				compact, brown, GRAVEL some silt, trace sand damp				
30	0.00					30.2M			
31	0.00				compact, gray, SAND trace silt, damp				
32	0.00								
33	0.00								
34	0.00								
35	0.00				ENCOUNTERED WATER AT 4.87M				

SAMPLE TYPE: A - Auger, B - Core, C - Split Spoon, D - Shallow Tube, E - Wash

SHEAR STRENGTH kPa: U - Unconfined Compression, C - Cohesion, L - Lab Value, F - Field Value, S - Standard Penetration Test (ASTM 1586)

TESTS: M - Mechanical Analysis, G.S. - Gradation, C - Consolidation, D - Direct Shear, L.P. - Liquid Plastic Limits, W - Moisture Content

FILE No. 0000

PREPARED BY: 0000

SHEET OF 02 02

SUMMARY LOG									
Project: LOOP BRIDGE (WEST ABUTMENT)					TEST HOLE No. 98-6				
Location: 1055.92N - 2022.61E SEE REPORT					Elevation: 298.43				
Method: BECKER HAMMER-OPEN END					Date: 98/09/29				
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Soil	Grain Size	Index Properties	Description	Other Tests			
1	2	3	4	5	6	7			
1	0.00				loose, brown, GRAVEL some silt, some sand, damp				
2	0.00					1.5M			
3	0.00				compact, continuous COBBLES (max. 100mm)	3.0M			
4	0.00								
5	0.00				loose to compact, gray, GRAVEL some sand, some silt damp				
6	0.00								
7	0.00					7.92M			
8	0.00								
9	0.00								
10	0.00								
11	0.00				loose, gray, GRAVEL some cobbles (max. 100mm) some sand, trace silt damp				
12	0.00								
13	0.00								
14	0.00					14.32M			
15	0.00				compact, continuous COBBLES (max. 150mm)				
16	0.00					16.45M			
17	0.00				compact, gray, GRAVEL some sand, trace silt, damp	17.06M			

SAMPLE TYPE: A - Auger, B - Core, C - Split Spoon, D - Shallow Tube, E - Wash

SHEAR STRENGTH kPa: U - Unconfined Compression, C - Cohesion, L - Lab Value, F - Field Value, S - Standard Penetration Test (ASTM 1586)

TESTS: M - Mechanical Analysis, G.S. - Gradation, C - Consolidation, D - Direct Shear, L.P. - Liquid Plastic Limits, W - Moisture Content

FILE No. 0000

PREPARED BY: 0000

SHEET OF 01 02

Ministry of Transportation										Geotechnical and Materials Branch										TEST HOLE No. 98-6	
Project: LOOP BRIDGE (WEST ABUTMENT)														Elevation: 298.43							
Location: 1055.92N - 2022.61E SEE REPORT														Date: 98/09/29							
Method: BECKER HAMMER-OPEN END																					
SPT Blows Per 150 mm Corrected for 60% Energy		Depth (m)		Soil		Grain Size		Index Properties		Description											



BRITISH
COLUMBIA

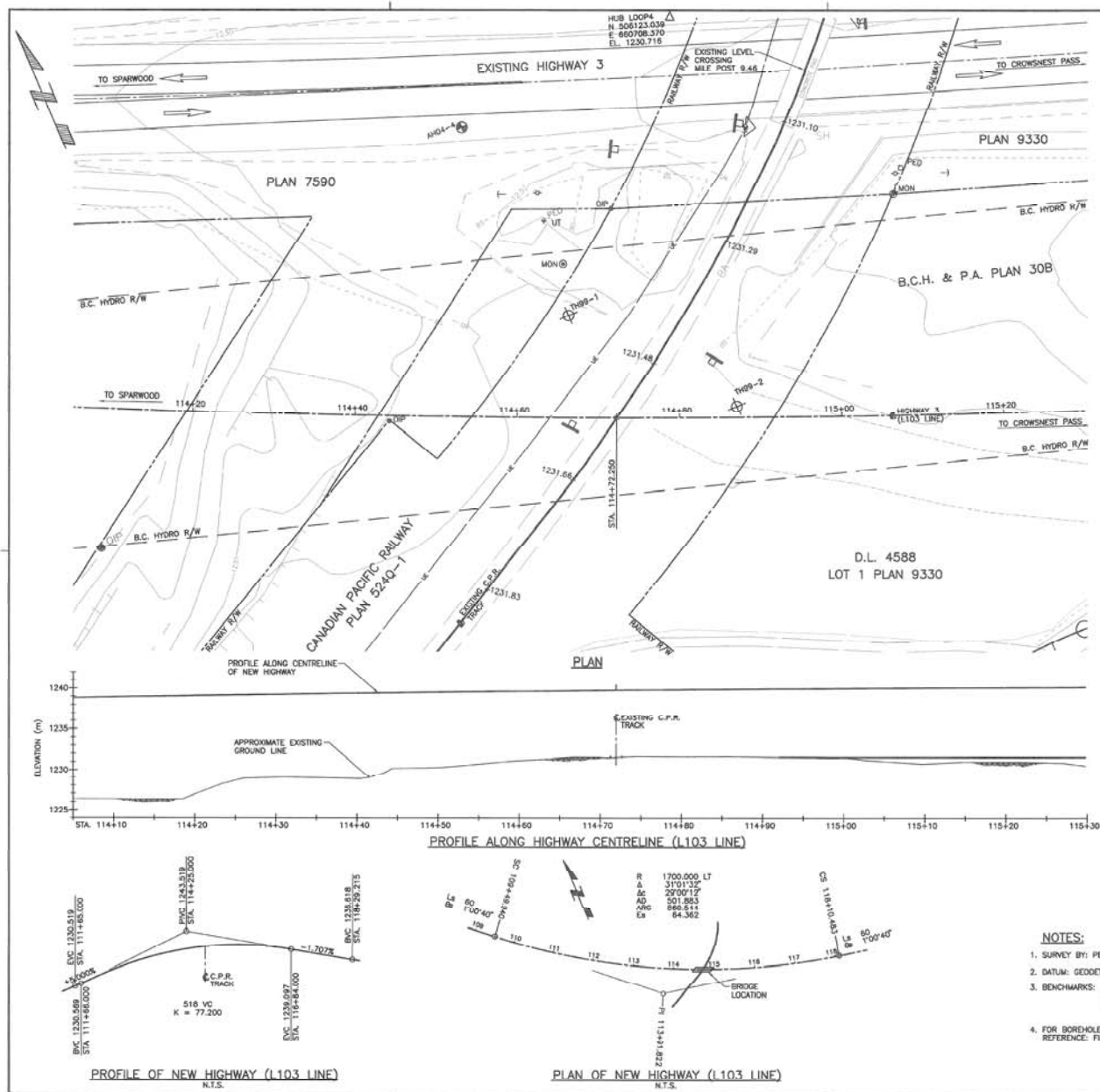
Ministry of Transportation & Infrastructure

Bridge Project

21675-0000

Corbin Overhead No. 7659

Crowsnest Highway #3



DRAWING INDEX	
DRAWING NUMBER	DRAWING TITLE
7659-02	SITE PLAN
7659-03	GENERAL ARRANGEMENT
7659-04	WEST ABUTMENT
7659-05	EAST ABUTMENT
7659-06	PIER 1 & 2
7659-07	GIRDER LAYOUT & DETAILS
7659-08	CONCRETE BOX GIRDERS - SHEET 1
7659-09	CONCRETE BOX GIRDERS - SHEET 2
7659-10	CONCRETE BOX GIRDERS - SHEET 3
7659-11	DECK OVERLAY PLAN
7659-12	MISCELLANEOUS DETAILS
7659-13	BOREHOLE LOGS
7659-14	BOREHOLE LOGS

REFERENCE DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
R2-658-001	KEY PLAN & INDEX
R2-658-104	PLAN
R2-658-201	PROFILE
R2-658-301	TYPICAL SECTIONS
R2-658-302	DRAINAGE DETAILS
R2-658-303	CONCRETE BARRIER DETAILS
R2-658-402	GEOMETRICS & LANNING

STANDARD DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
2784-1, Rev. R	STANDARD BRIDGE PARAPET 810mm HIGH
2785-2, Rev. C	STANDARD BRIDGE PARAPET STEEL RAILING (1995)

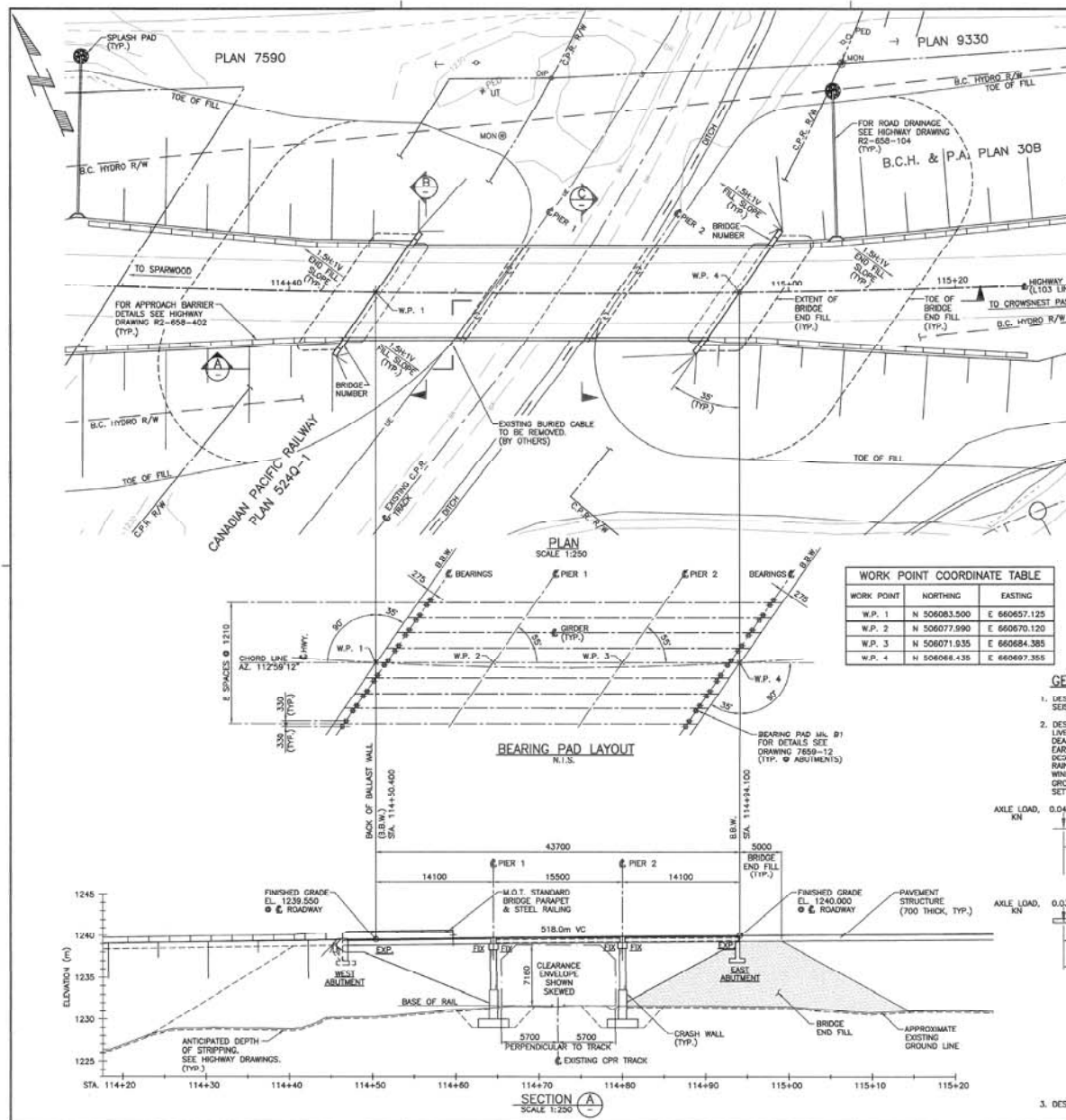
Klohn Crippen Berger			
Rev	Date	Description	By

REVISIONS	

BRITISH COLUMBIA Ministry of Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROWNSNEST HIGHWAY No. 3
CORBIN OVERHEAD
SITE PLAN

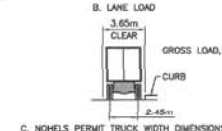
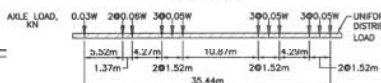
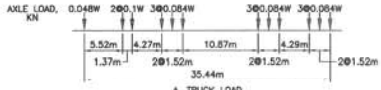
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DRAWN BY: <i>[Signature]</i> DATE: MAY 2005	SCALE: 1:250 U/M
PROJECT NO.: 21675	DRAWING NO.: 7659-02



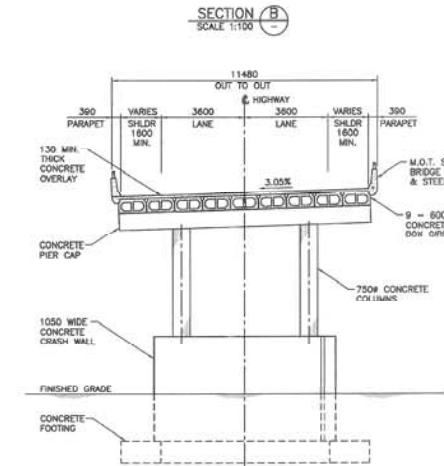
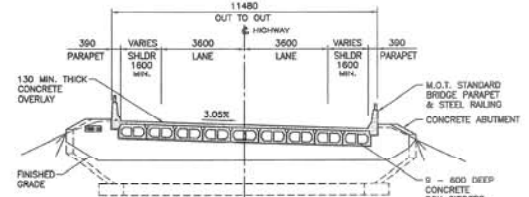
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W.P. 1	N 506083.500	E 660657.125
W.P. 2	N 506077.990	E 660670.120
W.P. 3	N 506071.935	E 660684.385
W.P. 4	N 506068.435	E 660697.355

GENERAL NOTES:

- DESIGN SPECIFICATIONS: CAN/CMA-38-08, SEISMIC DESIGN IMPORTANCE CATEGORY "OTHER BRIDGE".
- DESIGN LOADS:
LIVE LOAD: BCL-625 + NOHLS PERMIT VEHICLE
DEAD LOAD: INCLUDES PROVISION FOR FUTURE 30mm OVERLAY.
EARTHQUAKE ACCELERATION COEFFICIENT: A = 0.05
DESIGN TEMPERATURE RANGE: -42°C MIN. / 17°C MAX.
RAINFALL: 13mm/15 MINUTES
WIND LOAD: 1/100 YEAR REFERENCE = 0.55 kPa
GROUND SNOW LOAD: S_s = 4.1 kPa, S_r = 0.2 kPa
SETTLEMENT: DESIGNED FOR 15mm AT ABUTMENTS AND PIERS.



- DESIGN SPEED: 100 km/h



Klohn Crippen Berger

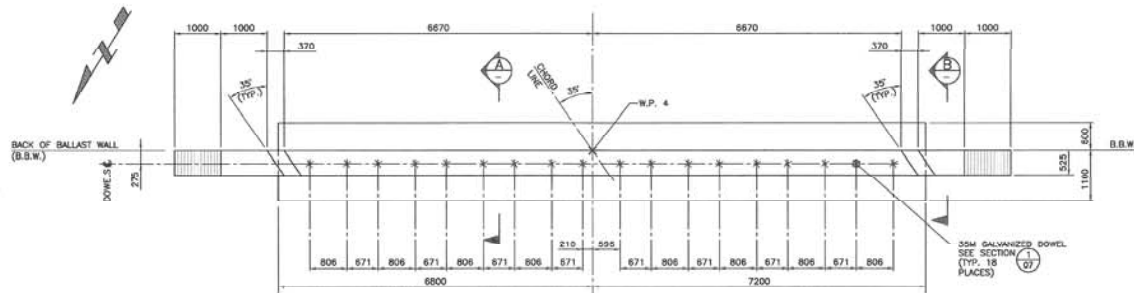
Rev	Date	Description	By

BRITISH COLUMBIA

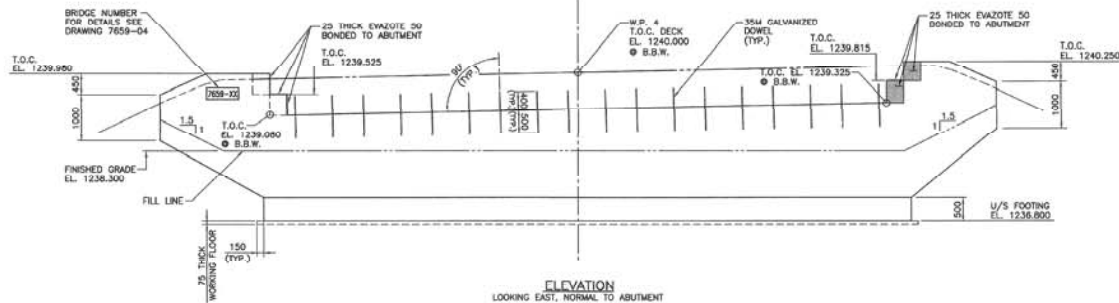
Ministry of Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
**CORBIN OVERHEAD
GENERAL ARRANGEMENT**

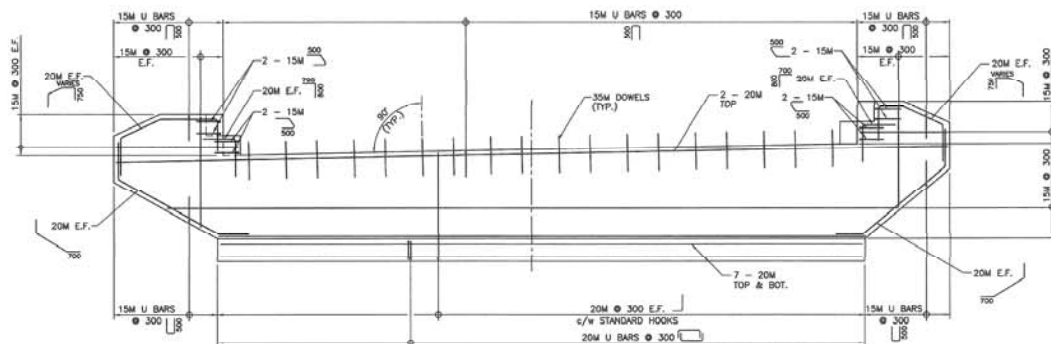
PREPARED UNDER THE DIRECTION OF ENGINEER OF RECORD DATE: <i>May 1, 2009</i>	DESIGNED: S.H. DATE: APRIL 2009 CHECKED: S.B. DATE: JULY 2009 DRAWN: S.B. DATE: APRIL 2009 SCALE: AS NOTED REVISION: N/A
PROJECT No. 21675	DRAWING No. 7659-03



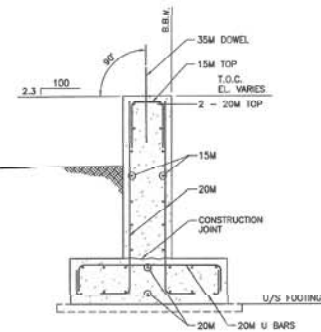
PLAN



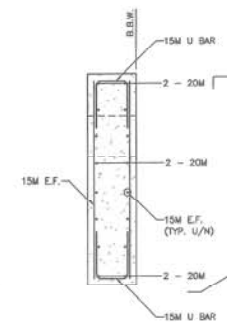
ELEVATION
LOOKING EAST, NORMAL TO ABUTMENT



ELEVATION - REINFORCING



SECTION A-A
SCALE 1:25

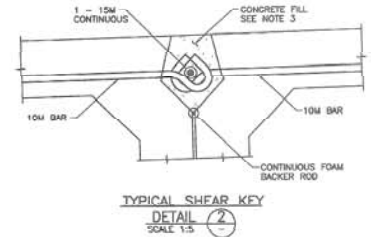
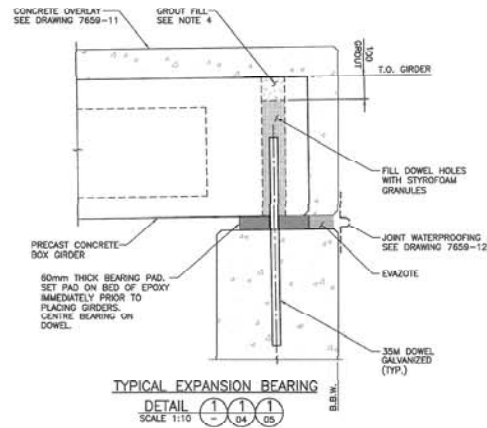
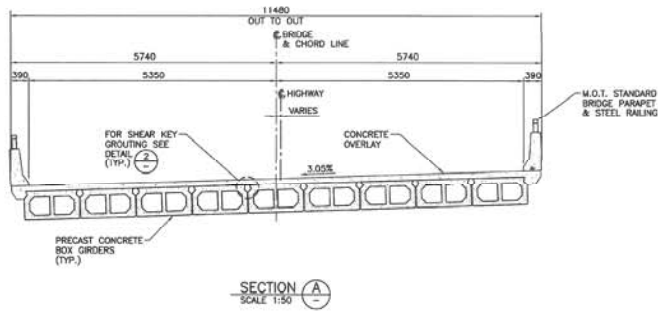
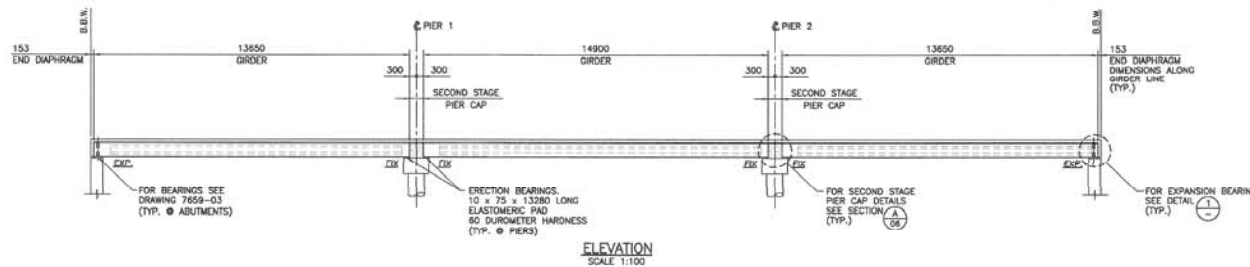
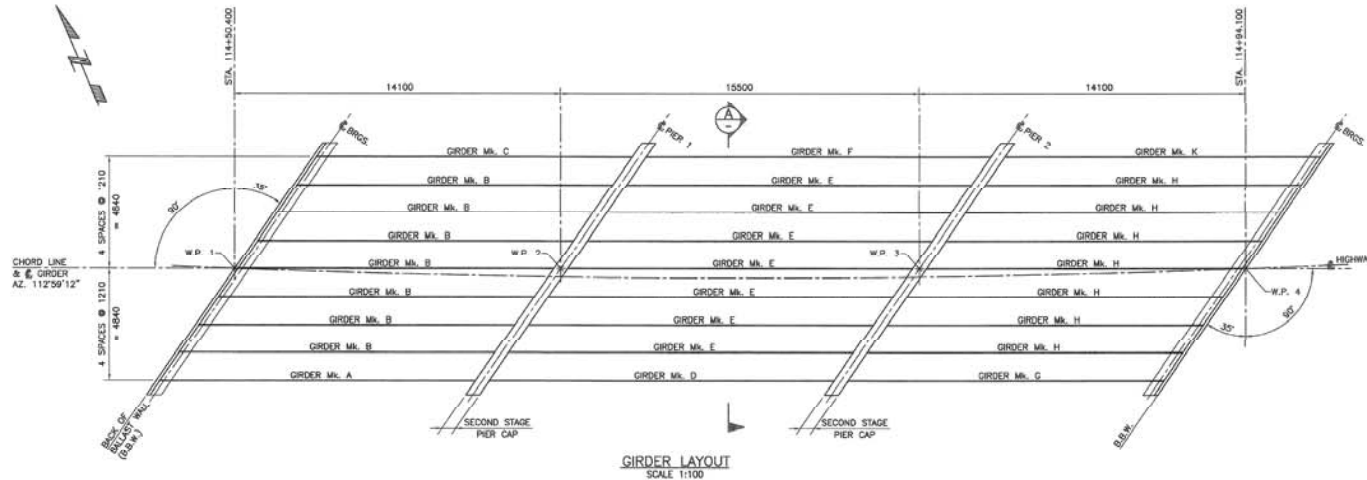


SECTION B-B
SCALE 1:25

NOTES:

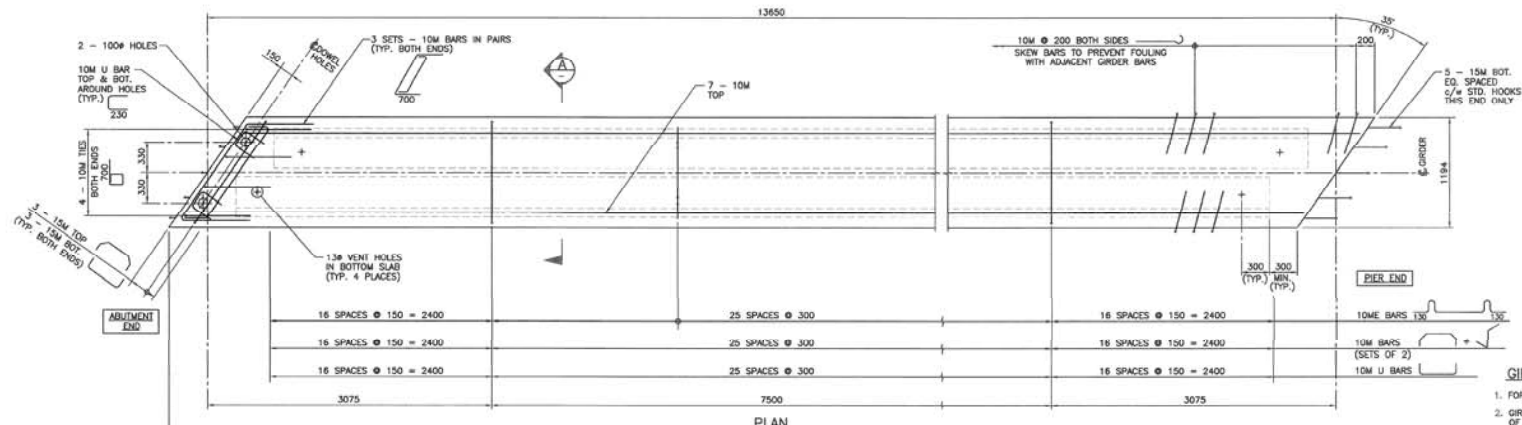
1. FOR GENERAL SUBSTRUCTURE NOTES SEE DRAWING 7659-04.

Rev.	Date	Description	Iss.
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNSNEST HIGHWAY No. 3 CORBIN OVERHEAD EAST ABUTMENT			
PREPARED UNDER THE DIRECTION OF 		DESIGNED: S.B. DATE: APR. 2000 CHECKED: R.H.M./A.S. DATE: JULY 2000 DRAWN: S.B. DATE: APR. 2000 SCALE: 1:50 U/H REVISION: No.	
PROJECT NO.	21675	REV.	7659-05

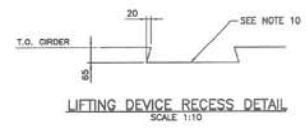


- NOTES:**
1. FOR GENERAL NOTES SEE DRAWING 7659-03.
 2. FOR GIRDER NOTES SEE DRAWING 7659-08.
 3. SHEAR KEYS BETWEEN ADJACENT GIRDERS SHALL BE FILLED WITH 14mm AGGREGATE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 35MPa AT 28 DAYS.
 4. GROUT FOR DOWEL HOLES SHALL BE A HIGH-STRENGTH, CEMENTITIOUS GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 35MPa AT 28 DAYS.

Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD GIRDER LAYOUT & DETAILS			
PREPARED UNDER THE DIRECTION OF 	DESIGNED: R.J. DATE: 07/01/2000 CHECKED: T.B./J.S. DATE: JULY 2000 DRAWN: R.J. DATE: APRIL 2000 SCALE: AS NOTED REVISION: No.	PROJECT No. 21675	DRAWING No. 7659-07



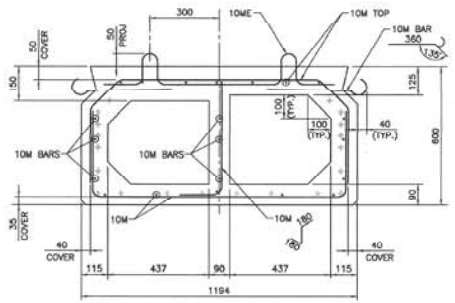
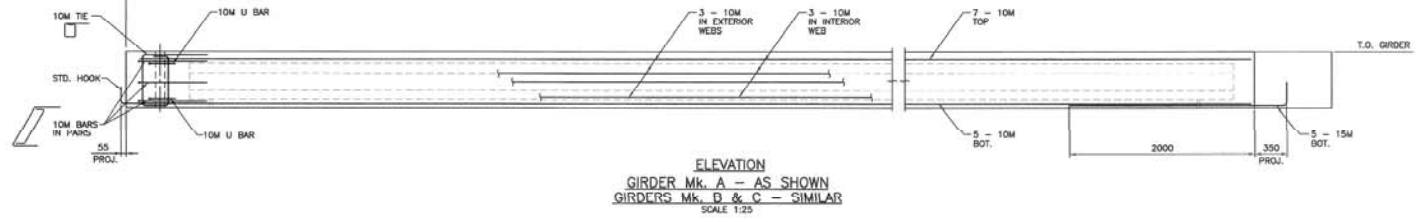
ESTIMATED GIRDER MASS	
GIRDER Mk. A	14610 kg
GIRDER Mk. B	14260 kg
GIRDER Mk. C	14610 kg



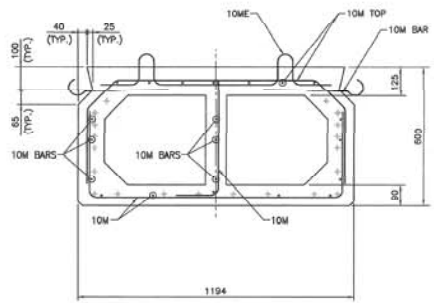
GIRDER NOTES:

- FOR GENERAL NOTES SEE DRAWING 7559-03.
- GIRDERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 415 OF THE M.O.T. STANDARD SPECIFICATIONS.
- PRESTRESSING STRANDS SHALL BE 13 mm (7 WIRE) UNCOATED LOW RELAXATION STRANDS, CSA G2709-1982, 1862 MPa OR EQUIVALENT. MINIMUM ULTIMATE TENSILE STRENGTH = 184 kN/STRAND. STRAND TENSION IMMEDIATELY BEFORE RELEASE = 136 kN/STRAND.
- CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF:
 - 35 MPa AT THE TIME OF RELEASE OF STRANDS
 - 45 MPa AT 28 DAYS
- BOTTOM EDGES OF ALL GIRDERS SHALL BE CHAMFERED 20 mm.
- REINFORCING STEEL SHALL CONFORM TO CAN/CSA G30.18, GRADE 400R.
- ALL REINFORCING MARKED "ME" IS COATED WITH PRIMER AND EPOXY.
- LAP SPLICES SHALL BE STAGGERED WITH MINIMUM LAP LENGTH AS FOLLOWS:

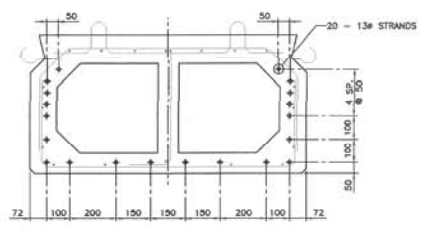
	UNCOATED	EPOXY COATED
10M	340	630
- LIFTING DEVICES SATISFACTORY TO THE MINISTRY REPRESENTATIVE, SHALL BE PROVIDED OVER THE BEARINGS. ONLY VERTICAL LIFTS SHALL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT RUBBING WEAR LOADS ON THE GIRDERS.
- THE CONCRETE IMMEDIATELY SURROUNDING ALL LIFTING DEVICES SHALL HAVE A FORMED RECESS, 65mm DEEP. THE RECESS SHALL BE THOROUGHLY SAND BLASTED IN THE SHOP, AFTER ERECTION. THE LIFTING DEVICE SHALL BE BURNED OFF AT THE BOTTOM OF THE RECESS AND THE RECESS SHALL BE PATCHED WITH AN APPROVED NON-SHRINK GROUT.
- ENDS OF GIRDER PRESTRESSING STRANDS SHALL BE PAINTED WITH A MINISTRY APPROVED GALVANIZING AGENT.
- TOP SURFACE OF ALL BOX GIRDERS SHALL BE ROUGH SCREENED BY WOOD FLOATING AND EXPOSED USING CHEMICAL RETARDER AND WATER BLASTING, IN ACCORDANCE WITH SECTION 415.41 OF THE STANDARD SPECIFICATIONS.



GIRDER Mk. A
GIRDER Mk. C - OPPOSITE HAND
SECTION A-A
SCALE 1:10



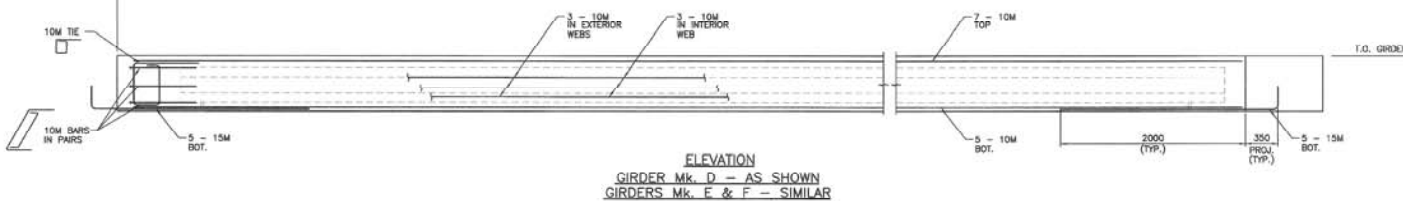
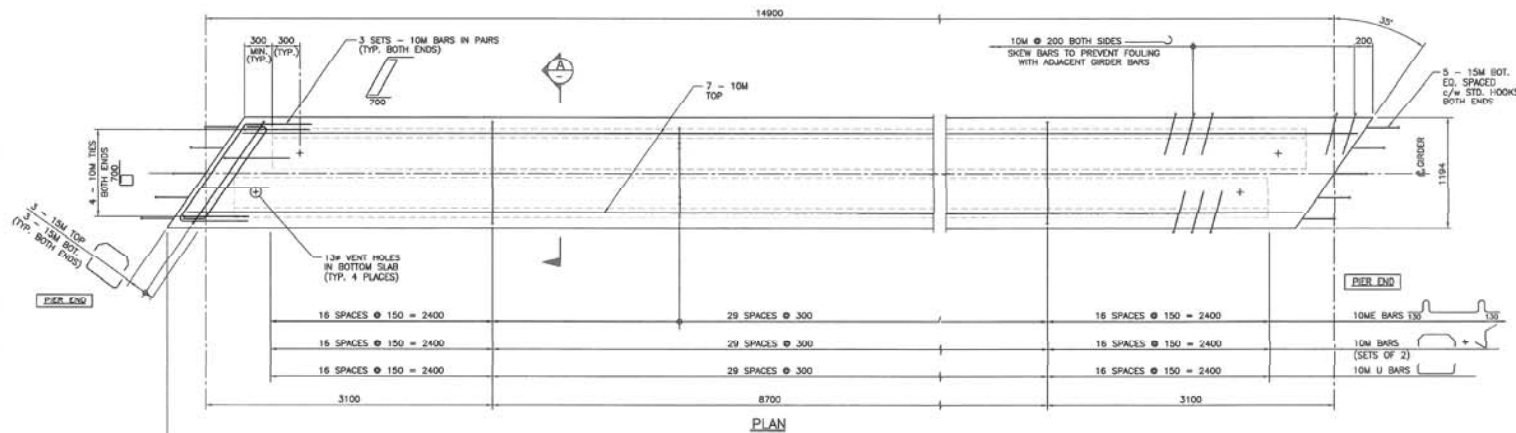
GIRDER Mk. B
DETAILS AS GIRDER Mk. A
UNLESS NOTED OTHERWISE
SECTION B-B
SCALE 1:10



PRESTRESSING STRAND LAYOUT
SCALE 1:10

Rev	Date	Description	Int
BRITISH COLUMBIA Ministry of Transportation & Infrastructure Southern Interior Region EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD CONCRETE BOX GIRDERS - SHEET 1			
PREPARED UNDER THE DIRECTION OF OWNER OF RECORD DATE MAY 1, 2007 FILE No.		DESIGNED R.S. DATE 07/01/2005 CHECKED T.O./A.E. DATE MAY 2005 DRAWN R.S. DATE 07/01/2005 SCALE AS NOTED PROJECT No. 21675 REVISION No. 7659-08	

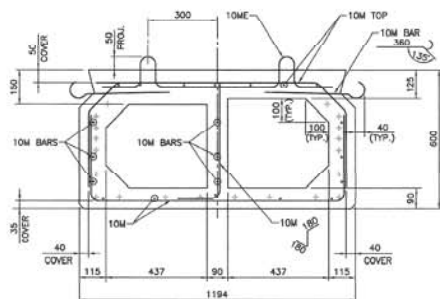
ESTIMATED GIRDER MASS	
GIRDER Mk. D	15630 kg
GIRDER Mk. E	15460 kg
GIRDER Mk. F	15630 kg



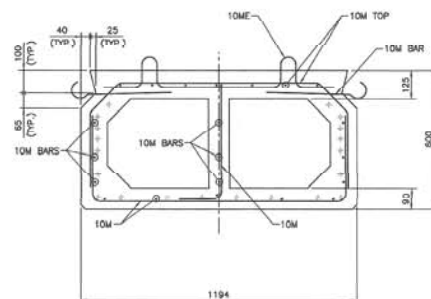
ELEVATION
GIRDER Mk. D - AS SHOWN
GIRDERS Mk. E & F - SIMILAR

NOTES:

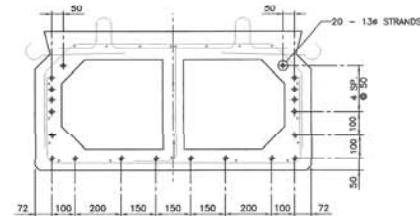
1. FOR GENERAL NOTES SEE DRAWING 7659-03.
2. FOR GIRDER NOTES SEE DRAWING 7659-08.



GIRDER Mk. D
GIRDER Mk. F - OPPOSITE HAND
SECTION A-A
SCALE 1:10

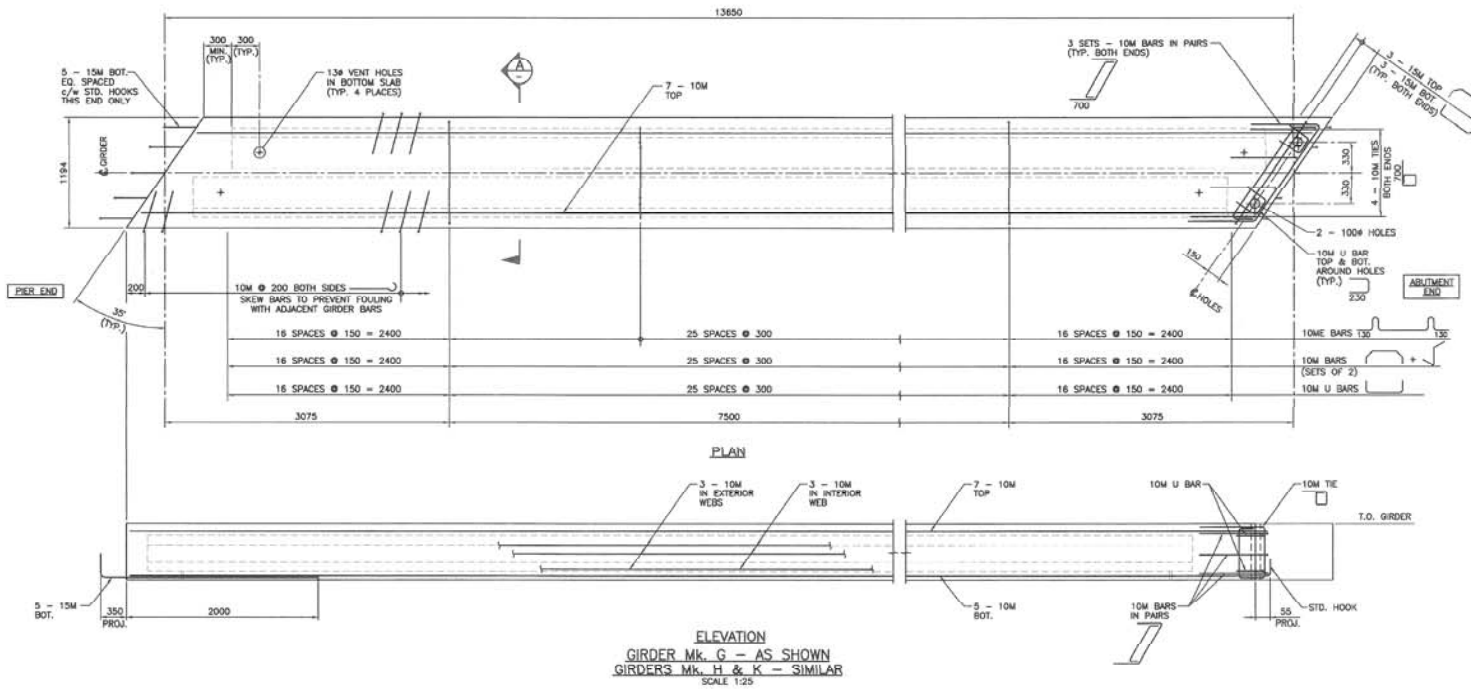


GIRDER Mk. F
DETAILS AS GIRDER Mk. D
UNLESS NOTED OTHERWISE
SECTION A-A
SCALE 1:10



PRESTRESSING STRAND LAYOUT
SCALE 1:10

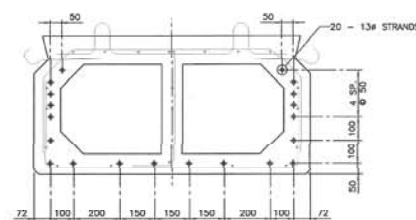
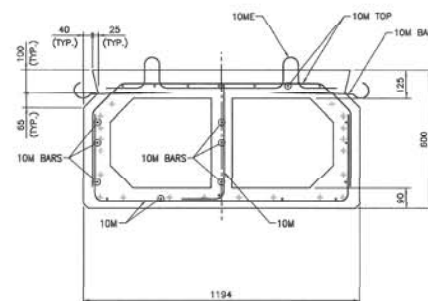
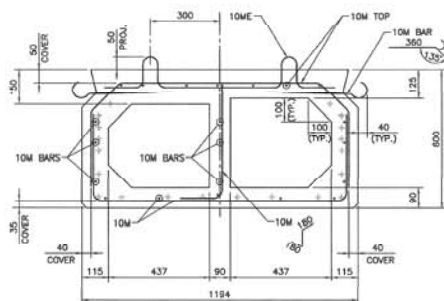
Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNSHED HIGHWAY No. 3 CORBIN OVERHEAD CONCRETE BOX GIRDERS - SHEET 2			
PREPARED UNDER THE DIRECTION OF 		DESIGNED: S.B. DATE: APRIL 2000 CHECKED: T.B./S.S. DATE: JULY 2000 DRAWN: S.S. DATE: APRIL 2000 SCALE: 1:25 U/N NEGATIVE: N/A	
PROJECT No. 21675		DRAWING No. 7659-09	



ESTIMATED GIRDER MASS	
GIRDER Mk. G	14610 kg
GIRDER Mk. H	14260 kg
GIRDER Mk. K	14610 kg

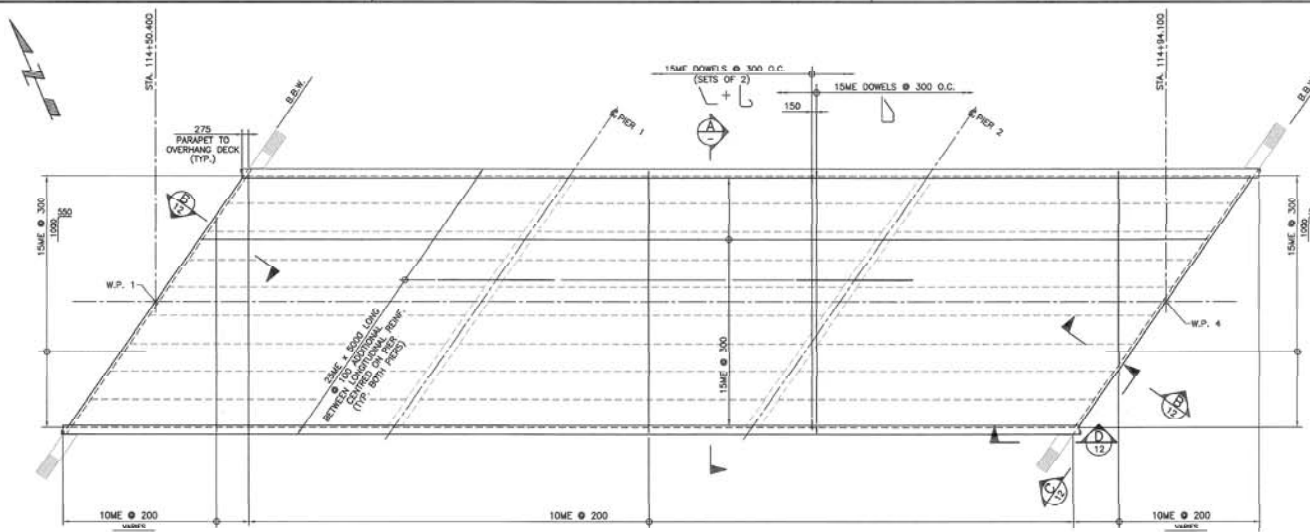
NOTES:

1. FOR GENERAL NOTES SEE DRAWING 7659-01.
2. FOR GIRDER NOTES SEE DRAWING 7659-06.

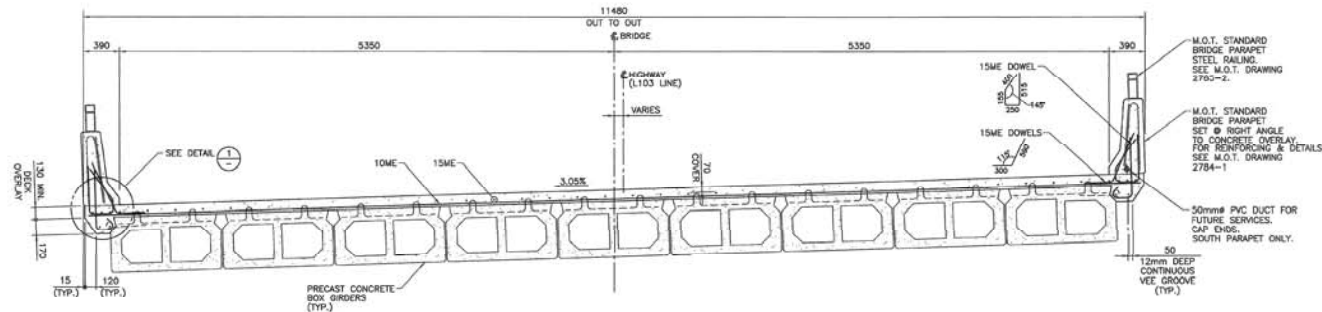


Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD CONCRETE BOX GIRDERS - SHEET 3			
PREPARED UNDER THE DIRECTION OF DESIGNER OF RECORD DATE MAY 1, 2009		DESIGNED: S.B. DATE 07/01/2000 CHECKED: V.B./S.B. DATE 04/17/2000 DRAWN: P.S. DATE 04/17/2000 SCALE: AS NOTED REVISION: PROJECT No. 21675 DRAWING No. 7659-10	

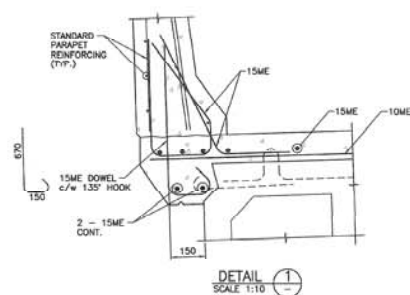
CHANGER PREVIOUS REVISION PREVIOUS LETTER



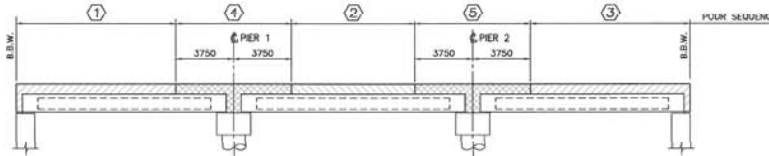
PLAN
SCALE 1:100



SECTION (A)
SCALE 1:20



DETAIL 1
SCALE 1:10



DECK OVERLAY & SECOND STAGE PIER CAP
PLACING SEQUENCE
SCALE N.T.S.

GENERAL DECK OVERLAY NOTES:

1. ALL CONCRETE FOR THE DECK OVERLAY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 35 MPa AT 28 DAYS.
2. ALL EXPOSED EDGES OF CONCRETE TO BE CHAMFERED 20 mm.
3. REINFORCING STEEL SHALL CONFORM TO CAN/CSA-G30.18 GRADE 400R.
4. ALL REINFORCING STEEL SHALL HAVE 50mm COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
5. ALL REINFORCING MATERIALS "ME" IS COATED WITH PRIMER AND EPOXY.
6. LAP SPICES SHALL HAVE A MINIMUM LAP LENGTH AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

	UNCOATED	UNCOATED TOP BARS *	EPOXY COATED
10M	340	480	630
15M	480	680	890
20M	560	820	1 070
25M	900	1 260	1 640
30M	1 260	1 770	2 300

* HORIZONTAL REINFORCEMENT WITH MORE THAN 300mm OF CONCRETE CAST BELOW BARS.

7. SPACES SHALL BE STAGGERED SO THAT NOT MORE THAN EVERY THIRD BAR IS SPULCED AT ANY CROSS SECTION OF THE DECK.
8. PARAPETS TO BE FORMED AND CONCRETE PLACED AFTER ALL DECK OVERLAY CONCRETE HAS BEEN PLACED AND THE OVERLAY CONCRETE HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa.
9. DEFLECTION AND DIFFERENCE IN CAMBER SHALL BE ACCOMMODATED BY DECK SCORED ELEVATIONS PROVIDED BY THE MINISTRY REPRESENTATIVE. OVERLAY THICKNESS SHALL BE VARIED TO MAINTAIN A UNIFORM GRADE.
10. CONCRETE FOR EACH DECK SECTION SHALL BE PLACED IN ONE CONTINUOUS OPERATION.



File	Date	Description	Init

REVISIONS

BRITISH
COLUMBIA

Ministry of
Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROMBIEST HIGHWAY No. 3

CORBIN OVERHEAD
DECK OVERLAY PLAN

PREPARED UNDER THE DIRECTION OF

CHIEF OF RECORD
DATE MAY 1 2005

DESIGNED E.B. DATE MAY 2008

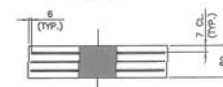
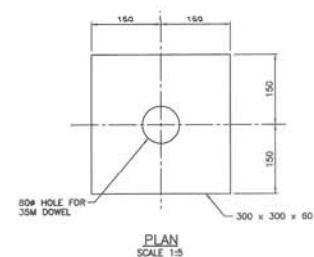
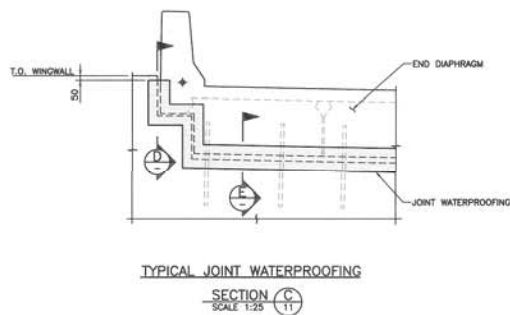
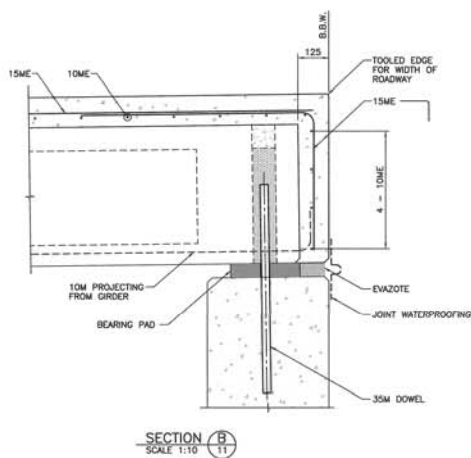
CHECKED Y.B./K.E. DATE AAJ 2008

GRAPH R.C. DATE MAY 2000
SCALE AS NOTED

NEGATIVE No.

PROJECT No.
21675

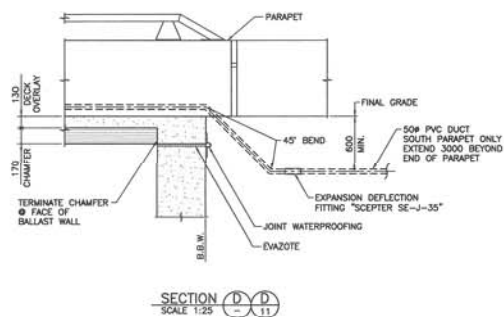
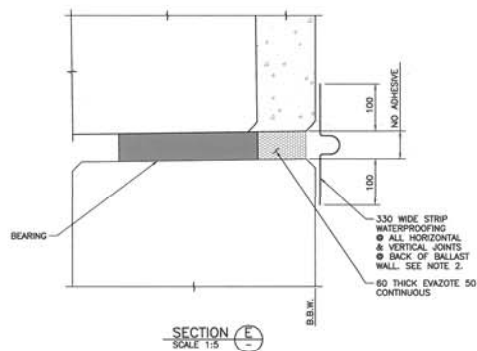
DRAWING No.
7659-11



NATURAL RUBBER BEARING PAD
55 DUROMETER HARDNESS
3 - 3mm THICK INTERNAL STEEL PLATES
EVENLY SPACED, BONDED & ENCLOSED
BEARING PAD Mk. B1
(36 REQUIRED)
FOR LOCATION SEE DRAWING 7659-03

BEARING DESIGN DATA SLS1 - COMB. 1		
	WEST ABUTMENT	EAST ABUTMENT
BEARING SIZE	60 x 300 x 300	60 x 300 x 300
PERMANENT LOADS	96 kN	96 kN
TOTAL LOADS	215 kN	215 kN
MOVEMENT	16.4 mm	16.4 mm

- NOTES:
- FOR GENERAL NOTES SEE DRAWING 7659-03.
 - JOINT WATERPROOFING AT BACK OF ABUTMENTS SHALL BE STAFST 1.14 (45 MIL) EPDM RUBBER MEMBRANE OR APPROVED ALTERNATE. APPLY IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



BRITISH COLUMBIA Ministry of Transportation & Infrastructure Southern Interior Region			
EAST KOOTENAY HIGHWAY DISTRICT CROWNSNEST HIGHWAY No. 3 CORBIN OVERHEAD MISCELLANEOUS DETAILS			
PREPARED UNDER THE DIRECTION OF DATE: MAY 1, 2009 FILE NO.	DESIGNED: B.M. CHECKED: B.B./N.S. DRAWN: B.B. SCALE: AS NOTED REVISION:	DATE: MAY 2003 DATE: MAY 2003 DATE: MAY 2003	21675 7659-12

NOTES:
 1. FOR TEST PIT LOCATION SEE DRAWING 7659-02.


Klohn Crippen Berger

Rev	Date	Description	vth

REVISIONS



BRITISH COLUMBIA

Ministry of
Transportation & Infrastructure
Southern Interior Region

**EAST KOOTENAY HIGHWAY DISTRICT
 CROWNSNEST HIGHWAY No. 3
 CORRIN OVERHEAD
 BOREHOLE LOGS**

PREPARED UNDER THE DIRECTION OF

Andrew Duff

CHIEF OF RECORDS

DATE *May 1, 2009*



DESIGNED - *A.D.P.* DATE *DEC. 2004*

DRAWN - *A.B.* DATE *DEC. 2000*

CHECKED - *A.B.* DATE *JULY 2000*

SCALE *N/A*

NEGATIVE (in.)

FILE NO.

PROJECT NO.

21675

REC.

DRAWING NO.

7659-13

SUMMARY LOG										Geotechnical and Materials Branch		TEST HOLE No. 99-1						
Project Location		CORBIN OVERHEAD 506088.800N-660676.650E				FOUNDRY DRILLING				Method		BECKER HAMMER		Elevation		1231.2234		
Project Location		Driller				Soils				Index				Description		Date		99/11/07
S.P.T. Blows Per 150mm		Depth (m)		Soils		Index		Description		Classification		Description		Date		99/11/07		
1		0.00		(45)(40)(15)		-		loose, brown, GRAVEL and SAND, trace silt, some cobbles (max. 100mm), loose silt, damp		-		2.74M		-		-		
2		0.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		3.65M		-		-		
3		0.60		(45)(40)(15)		-		compact, brown, GRAVEL and SAND some cobbles (max. 80mm), some silt, damp		-		5.79M		-		-		
4		0.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		8.83M		-		-		
5		1.20		(45)(40)(15)		-		compact, brown, GRAVEL and SAND some cobbles (max. 80mm), trace silt, damp		-		11.88M		-		-		
6		1.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		14.6M		-		-		
7		1.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		17.4m		-		-		
8		2.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
9		2.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
10		2.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
11		3.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
12		3.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
13		3.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
14		3.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
15		4.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
16		4.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
17		4.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
18		5.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
19		5.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
20		5.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
21		6.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
22		6.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
23		6.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
24		6.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
25		7.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
26		7.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
27		7.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
28		8.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
29		8.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
30		8.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
31		9.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
32		9.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
33		9.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
34		9.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
35		10.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
36		10.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
37		10.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
38		11.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
39		11.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
40		11.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
41		12.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
42		12.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
43		12.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
44		12.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
45		13.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
46		13.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
47		13.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
48		14.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
49		14.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
50		14.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
51		15.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
52		15.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
53		15.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
54		15.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
55		16.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
56		16.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
57		16.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
58		17.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
59		17.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
60		17.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
61		18.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
62		18.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
63		18.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
64		18.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
65		19.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
66		19.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
67		19.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
68		20.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
69		20.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
70		20.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
71		21.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
72		21.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
73		21.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
74		21.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
75		22.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
76		22.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
77		22.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
78		23.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
79		23.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
80		23.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
81		24.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
82		24.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
83		24.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
84		24.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
85		25.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
86		25.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
87		25.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
88		26.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
89		26.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
90		26.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
91		27.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
92		27.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
93		27.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
94		27.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
95		28.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
96		28.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
97		28.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
98		29.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
99		29.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
100		29.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
101		30.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
102		30.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
103		30.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
104		30.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
105		31.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
106		31.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
107		31.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
108		32.10		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
109		32.40		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
110		32.70		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
111		33.00		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
112		33.30		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
113		33.60		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
114		33.90		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
115		34.20		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
116		34.50		(80)(32)(8)		GP-GM		dense, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
117		34.80		(45)(40)(15)		-		compact, brown, sandy GRAVEL, trace silt, damp		-		-		-		-		
118		35.10		(80)(32)(8)		GP-GM		dense, brown, sandy										

Summary of Transportation										Geotechnical and Materials Branch		TEST HOLE No. 99-1	
Project Location CORBIN OVERHEAD 506088.800N-660676.650E				Method FOUNDRY DRILLING				Index BECKER HAMMER		Elevation 1231.2234		Date 99/11/06	
S.P.T. (blow Per 150mm)		Depth (ft)		Soil Sample Interval		Soil Moisture (%)		Grain Size		Index Properties		Description	
								Grain Size		Index Properties			
								Grain Size		Index Properties			
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								Grain Size		Index Properties			

SUMMARY LOG										Geotechnical and Materials Branch		TEST HOLE NO. 99-2	
Project Location		COROSIN OVERHEAD								Elevation		1231.7224	
Order		506070.4114N-660691.4362E								Dates		98/11/08	
Driller		FOUNDRY DRILLING				Method BECKER HAMMER							
S.P.T. Blows Per 150mm		Depth (m)		Soil Type		Soil Description		Index Properties		Classification		Description	
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁₅ F ₂₀ F ₃₀			
		Type		Blow Range (m)		Blow Range (m)		Gravel %		F ₁			

SUMMARY LOG										Geotechnical and Materials Branch	TEST HOLE 99-2		
Project Location CORBIN OVERHEAD 506070.4114N-660691.4362E										Elevation 1231.7224			
Drill Location FOUNDRY DRILLING										Method BECKER HAMMER		Dates 99/11/08	
SPT Blows Per 150mm	Depth (m)	Sample Type	Rock Blow/ Recovery (%)	Blow Strength (kPa)	Gravel Content (%)	Sand Content (%)	Fines (%)	Index Properties			Classification	Description	
								PL	PP	F			
19	1.9				(0) (96) (4)						(SP)	compact, brown, SAND, some cobbles (max. 100mm), trace silty clay	
20	2.0											18.5M	
21	2.1				(94) (0) (4)						(GP)	compact, brown, GRAVEL, some cobbles (max. 100mm), trace silty clay	
22	2.2											21.03M	
23	2.3											End Of Hole	
24	2.4											Encountered Water at 8.83 Meters	
25	2.5												
26	2.6												
27	2.7												
28	2.8												
29	2.9												
30	3.0												
31	3.1												
32	3.2												
33	3.3												
34	3.4												
35	3.5												

SAMPLE TYPE				TESTS				FILE No.
U	Aggr.	U	SHAKE STRENGTH	MP	Moisture	MP	Moisture	PREPARED BY 0.00 SHEET 01
FC	Core	FC	Unconsolidated Compression	UCS	Unsat. Compress.	UCS	Unsat. Compress.	
FL	Field	FL	Field Vane	FL	Field Vane	FL	Field Vane	
SL	Lab	SL	Lab Vane	SL	Lab Vane	SL	Lab Vane	
EL	Electron	EL	Electron	EL	Electron	EL	Electron	
W	Water	W	Water	W	Water	W	Water	
GR	Gravel	GR	Gravel	GR	Gravel	GR	Gravel	
SP	Specimen	SP	Specimen	SP	Specimen	SP	Specimen	
Beaker Blows/Blows Not Corrected For Energy w/ H								
0 Denotes Drillers Estimate								
Remarks - Standard Penetration Test (ASTM D1586)								

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION & INFRASTRUCTURE
SOUTHERN INTERIOR REGION

PROJECT NO. 21675 CROWSNEST HIGHWAY NO. 3

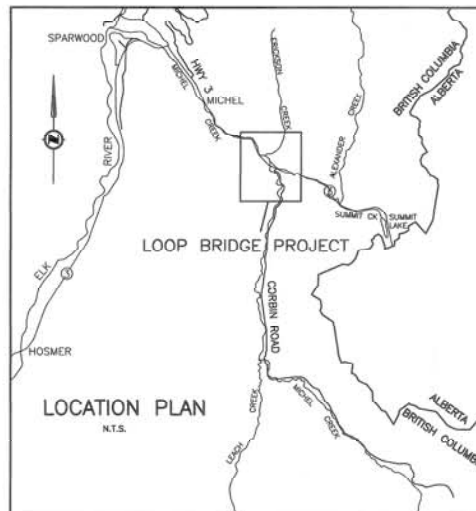
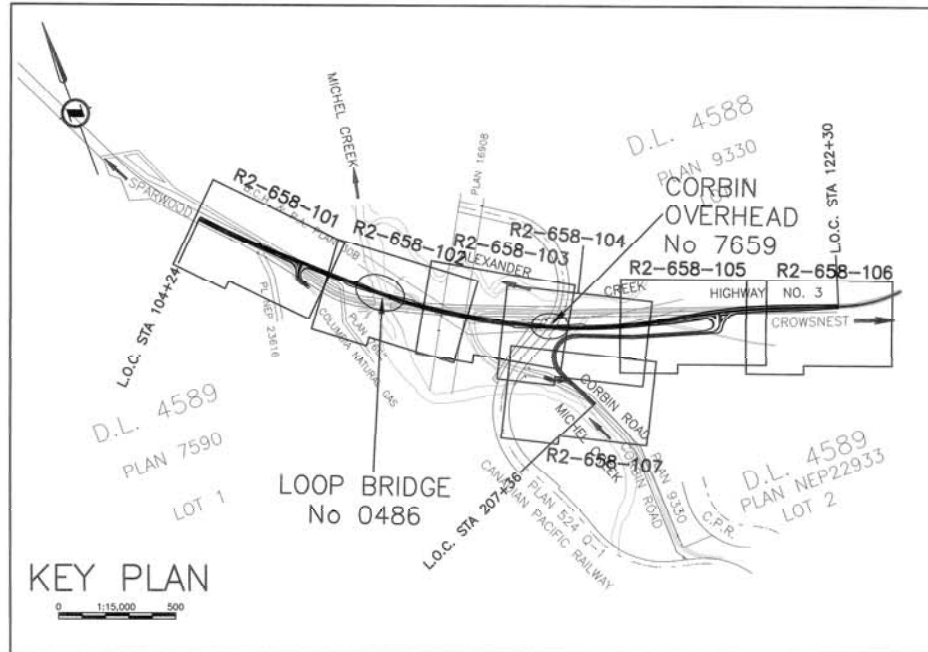
ELKO - ALBERTA SECTION

LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES

BRIDGE, GRADING AND PAVING CONTRACT

STA. 104+24 TO STA. 122+30 (1.806 km)

LANDMARK KILOMETRE INVENTORY
SEGMENT 1395 (km 71.1 TO km 72.9)



BRIDGE DRAWING No.

LOOP BRIDGE
0486-101
0486-102
0486-103
0486-104
0486-105
0486-106
0486-107, 108
0486-109
0486-110
0486-111
0486-112 TO 115

CORBIN OVERHEAD

7659-02
7659-03
7659-04
7659-05
7659-06
7659-07
7659-08, 09, & 10
7659-11
7659-12
7659-13, 14

DESCRIPTION

SITE PLAN
GENERAL ARRANGEMENT
WEST ABUTMENT
EAST ABUTMENT
PIER
GIRDER LAYOUT
GIRDER DETAILS
DECK
DECK SECTIONS & DETAILS
MISCELLANEOUS DETAILS
BOREHOLE LOGS

SITE PLAN
GENERAL ARRANGEMENT
WEST ABUTMENT
EAST ABUTMENT
PIER 1 & 2
GIRDER LAYOUT & DETAILS
CONCRETE BOX GIRDERS
DECK OVERLAY PLAN
MISCELLANEOUS DETAILS
BOREHOLE LOGS

ROAD DRAWING No.

R2-658-001
R2-658-002
R2-658-101 TO 107
R2-658-201 TO 203
R2-658-301
R2-658-302
R2-658-303
R2-658-401 TO 403
R2-658-404
R2-658-601 TO 607
R2-658-1004 TO 1005

DESCRIPTION

KEY PLAN & INDEX
LEGEND
PLANS
PROFILES
TYPICAL SECTIONS
DRAINAGE & PAVEMENT DETAILS
CONCRETE BARRIER DETAILS
GEOMETRICS AND LANEING
SPOT ELEVATIONS - CORBIN ROAD INTERSECTION
SIGNING AND PAVEMENT MARKING
ENVIRONMENTAL DRAWINGS

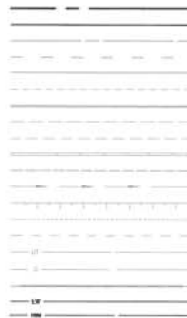
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: 7, 2009

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: MAY 7 2009
R2-658-001

LEGEND

EXISTING

DISTRICT LOT LINE
PARCEL BOUNDARY
CENTRE LINE
WHITE PAINTLINE
PAVEMENT EDGE
SHOULDER EDGE
ASPHALT CURB
GRAVEL ROAD
DIRT ROAD
ROADSIDE BARRIER
CULVERT
DITCH
TOP OF BANK
BOTTOM OF SLOPE
SOLID ROCK
UNDERGROUND TELEPHONE
GAS LINE
RAILWAY
EDGE OF WATER
HIGH WATER MARK

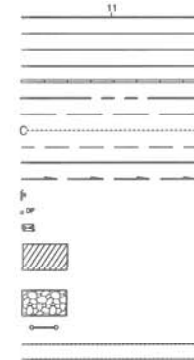


ROAD SIGN
DELINEATOR POST
TELEPHONE POLE
POWER POLE
POWER POLE & TRANSFORMER
GUY WIRE
BENCH MARK
STANDARD IRON PIN
CONCRETE POST MONUMENT
BRASS CAP MONUMENT
REFERENCE HUB
TEST HOLE/AUGER HOLE
UNDERGROUND MARKER
BREATHING/VENT PIPE
UNDERGROUND ELECTRIC
JUNCTION BOX
TRAFFIC SIGNAL
BC TEL PEDESTAL
RIPRAP
TEST PIT



PROPOSED

CENTRE LINE
LANE EDGE
PAVEMENT EDGE
ASPHALT CURB (3-SP226)
ROADSIDE BARRIER
HIGHWAY R/W
CLEARING & CRUDDING
CUT & FILL LIMITS
WORKING EASEMENT
CULVERT
DITCH
ROAD SIGN
DELINEATOR POST
ASPHALT SPILLWAY (5-SP226)
MILL EXISTING ASPHALT
RIPRAP
GATE
GRAVEL ROAD



GEOTECHNICAL TESTING

1999 TEST HOLE
1999 TEST PIT



NEW 2004 TEST PIT
NEW 2004 BECKER HOLE
NEW 2004 PAVEMENT HOLE



SCALE: AS NOTED		REVISIONS		SIGNATURE	
Rev	Date	REVISIONS		SIGNATURE	

BRITISH COLUMBIA

Ministry of Transportation & Infrastructure
Southern Interior Region

Klohn Crippen Berger

DESIGN CONSULTANT

PREPARED UNDER THE DIRECTION OF

CONSULTANT

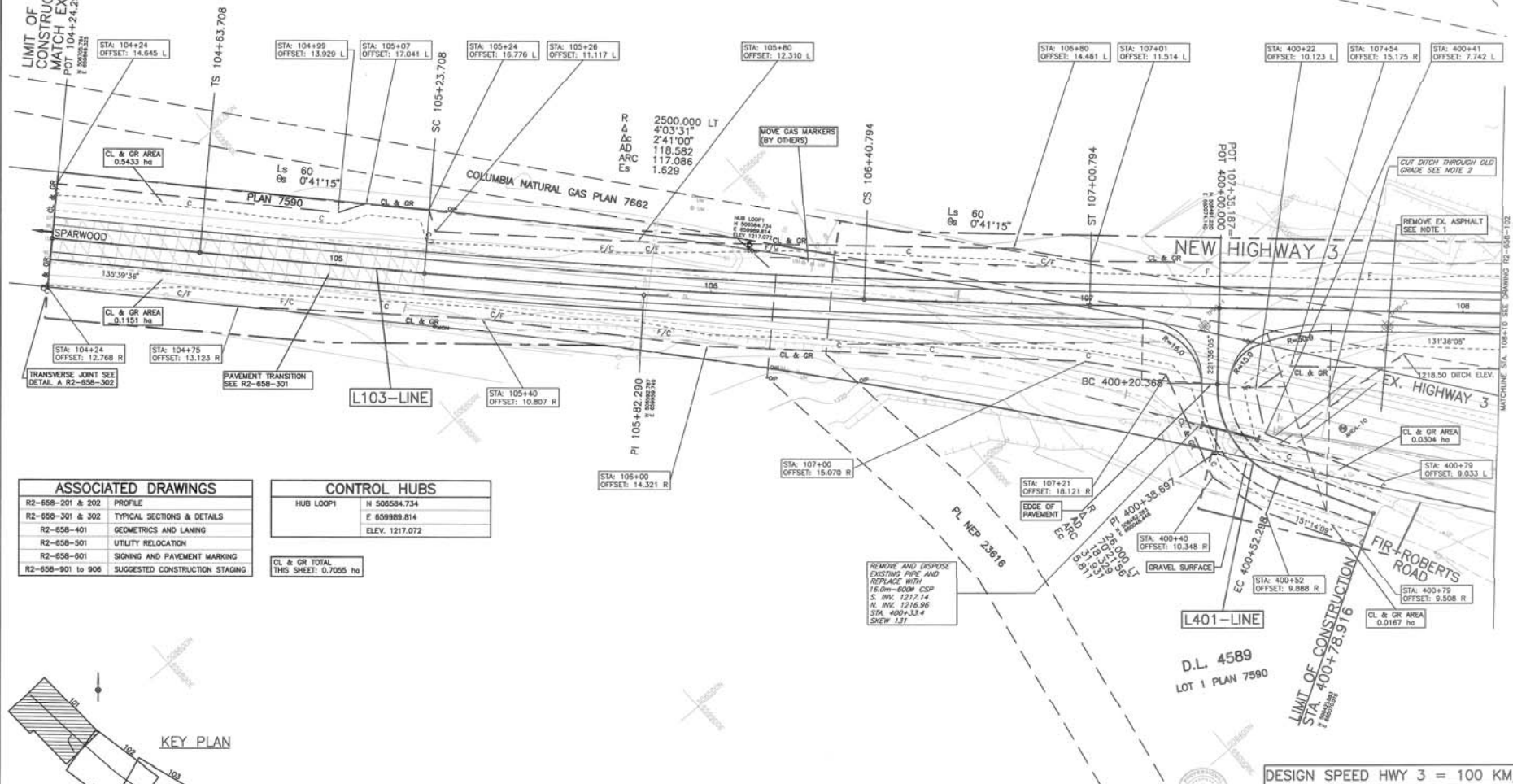
DATE: MAY 1, 2009

FILE NO. 21675

LEGEND			
CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 104+24.297 to Station 122+30.000			
FILE NO.	REVISION NO.	REV.	APPROVED BY
21675	2	R2-658-002	

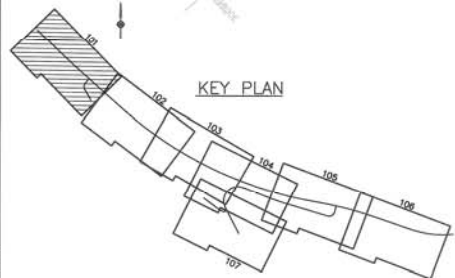
LIMIT OF
CONSTRUCTION
MATCH EXISTING
POT 104+24.297

B.C.H. & P.A. PLAN 308



ASSOCIATED DRAWINGS	
R2-658-201 & 202	PROFILE
R2-658-301 & 302	TYPICAL SECTIONS & DETAILS
R2-658-401	GEOMETRICS AND LANNING
R2-658-501	UTILITY RELOCATION
R2-658-601	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

CONTROL HUBS	
HUB LOOP1	N 506584.734
	E 609989.814
	ELEV. 1217.072
CL & GR TOTAL	THIS SHEET: 0.7055 ha



- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-902 TO 904
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

Rev	Date	REVISIONS	Signature

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Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

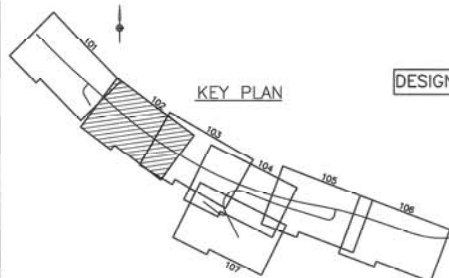
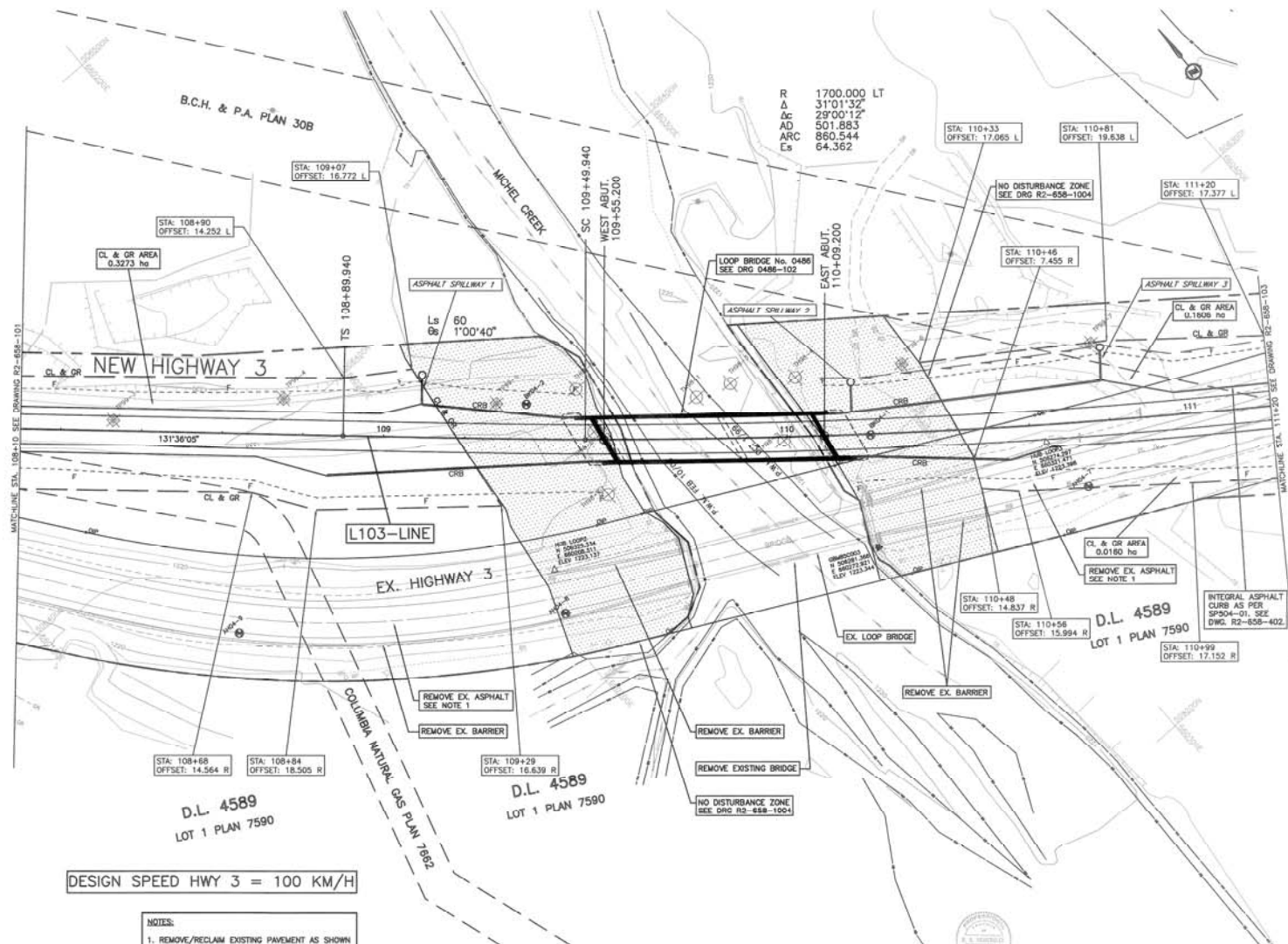
PLAN CROWSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 104+24.297 to Station 108+10			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-101

ASSOCIATED DRAWINGS	
R2-658-201	PROFILE
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-401 to 402	GEOMETRICS AND LANDING
R2-658-501 to 502	UTILITY RELOCATION
R2-658-602	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING
R2-658-1004, 1005	ENVIRONMENTAL DRAWINGS
0486-102	LOOP BRIDGE No. 0486

CONTROL HUBS	
HUB LOOP2	N 506329.334 E 660208.311 ELEV. 1223.137
HUB LOOP3	N 506274.297 E 660321.471 ELEV. 1223.398
GBM5C003	N 506281.366 E 660272.921 ELEV. 1223.344

ASPHALT SPILLWAY DATA	
ASPHALT SPILLWAY 1	STA 109+09.5 11.0m - 200M HOPE C/W 10KG RIBBON SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 2	STA 110+16.1 12.0m - 200M HOPE C/W 10KG RIBBON SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 3	STA 110+28.1 8.0m - 200M HOPE C/W 10KG RIBBON SPLASH PAD SP504-02 AND SP504-03

CL & GR TOTAL
THIS SHEET: 0.5039 ha



DESIGN SPEED HWY 3 = 100 KM/H

- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DWS R2-658-902 TO 904
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

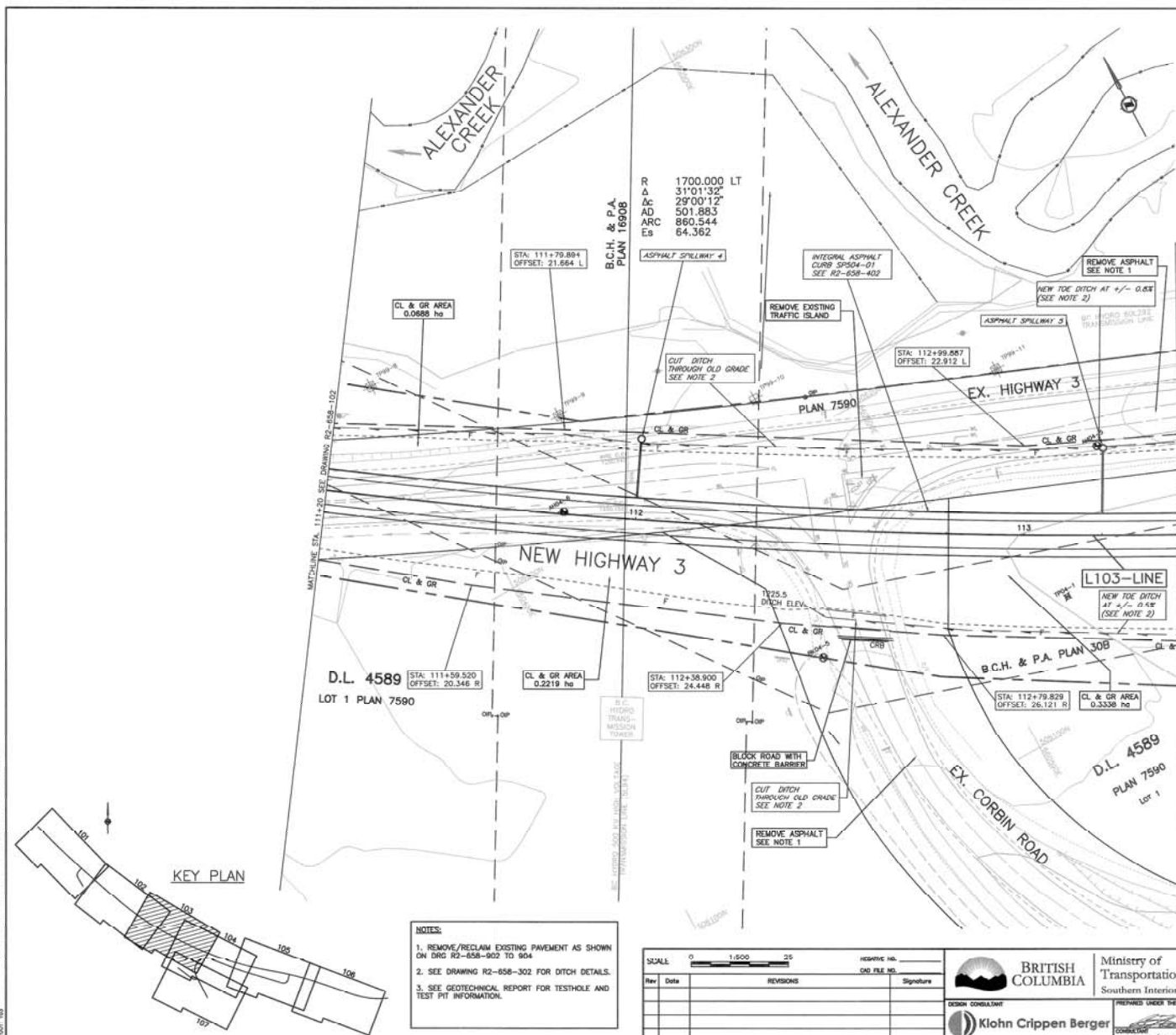
PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2007

PLAN CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORDIN OVERHEAD APPROACHES Station 108+10 to Station 111+20			
FILE No.	PROJECT No.	REV.	DRAWING No.
	21675	2	R2-658-102

ASSOCIATED DRAWINGS	
R2-658-201	PROFILE
R2-658-301 to 302	TYPICAL SECTIONS & DETAILS
R2-658-402	GEOMETRICS AND LANDING
R2-658-502	UTILITY RELOCATION
R2-658-603	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

ASPHALT SPILLWAY DATA	
ASPHALT SPILLWAY 4	STA 112+00 25.0m - 200m HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 5	STA 113+20 25.0m - 200m HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03

CL & GR TOTAL
THIS SHEET: 0.6345 ha



DESIGN SPEED HWY 3 = 100 KM/H

Rev	Date	REVISIONS	Signature

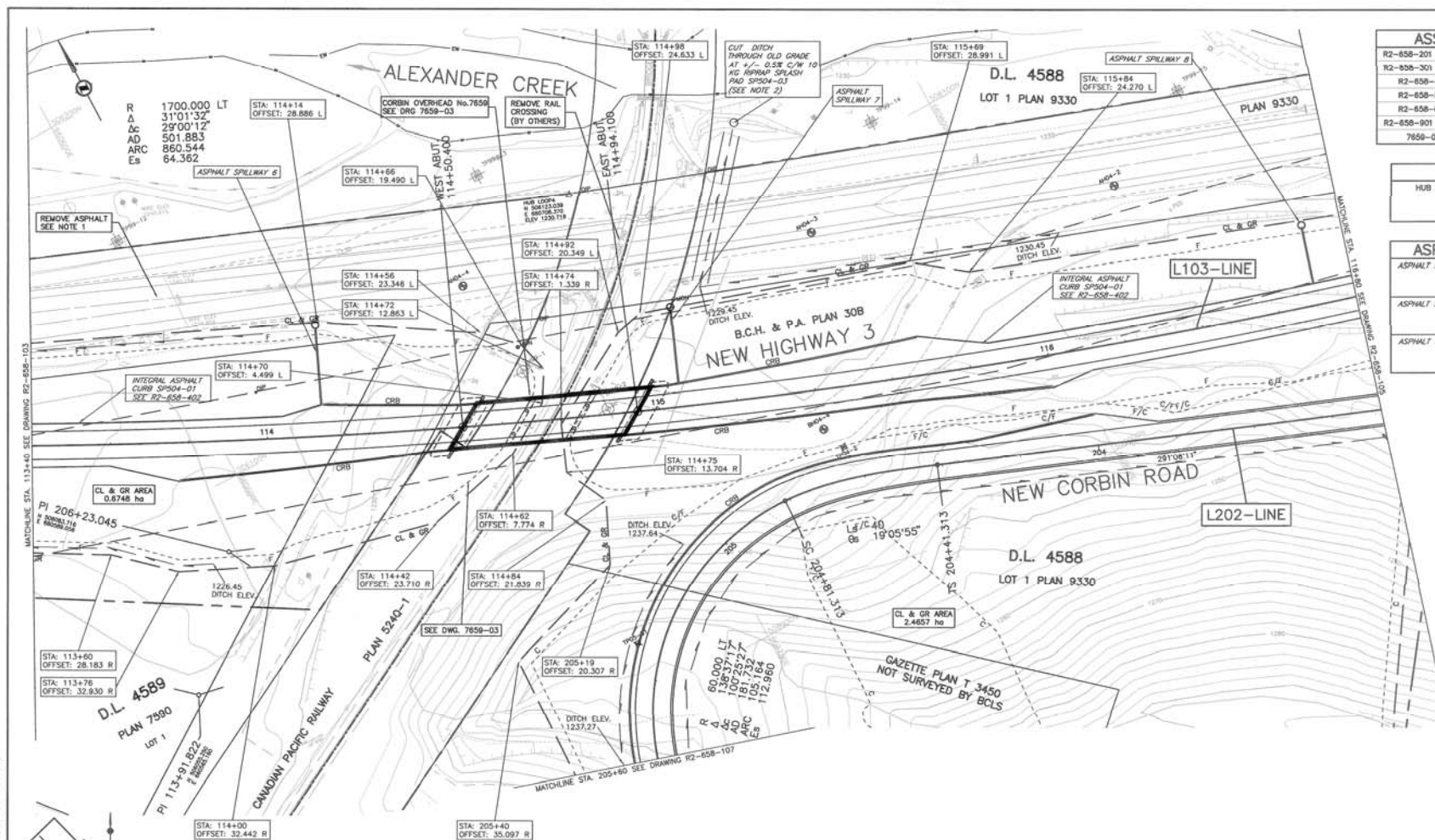
BRITISH COLUMBIA

Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
[Signature]
DATE: MAY 1, 2009

PLAN			
CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 111+20 to Station 113+40			
FILE NO.	PROJECT NO.	REL.	DRAWING NO.
	21675	2	R2-658-103



ASSOCIATED DRAWINGS		
R2-658-201 to 203	PROFILE	
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS	
R2-658-402	GEOMETRICS AND LANING	
R2-658-502	UTILITY RELOCATION	
R2-658-604	SIGNING AND PAVEMENT MARKING	
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING	
7859-02	CORBIN OVERHEAD	

CONTROL HUBS	
HUB LOOP#4	N 506123.039 E 660708.370 ELEV. 1230.716

ASPHALT SPILLWAY DATA	
ASPHALT SPILLWAY 6	STA 114+16 34.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 7	STA 115+05 33.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03
ASPHALT SPILLWAY 8	STA 116+70 25.0m - 200M HOPE C/W 10% RIPRAP SPLASH PAD SP504-02 AND SP504-03

CL & GR TOTAL
THIS SHEET: 3.1405 ha

KEY PLAN

- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-902 TO 904
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

DESIGN SPEED HWY 3 = 100 KM/H
DESIGN SPEED CORBIN ROAD = 40 KM/H

Rev	Date	REVISIONS	Signature

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Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2007

PLAN CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 113+40 to Station 116+80			
FILE NO.	PROJECT NO.	REL.	DRAWING NO.
	21675	2	R2-658-104

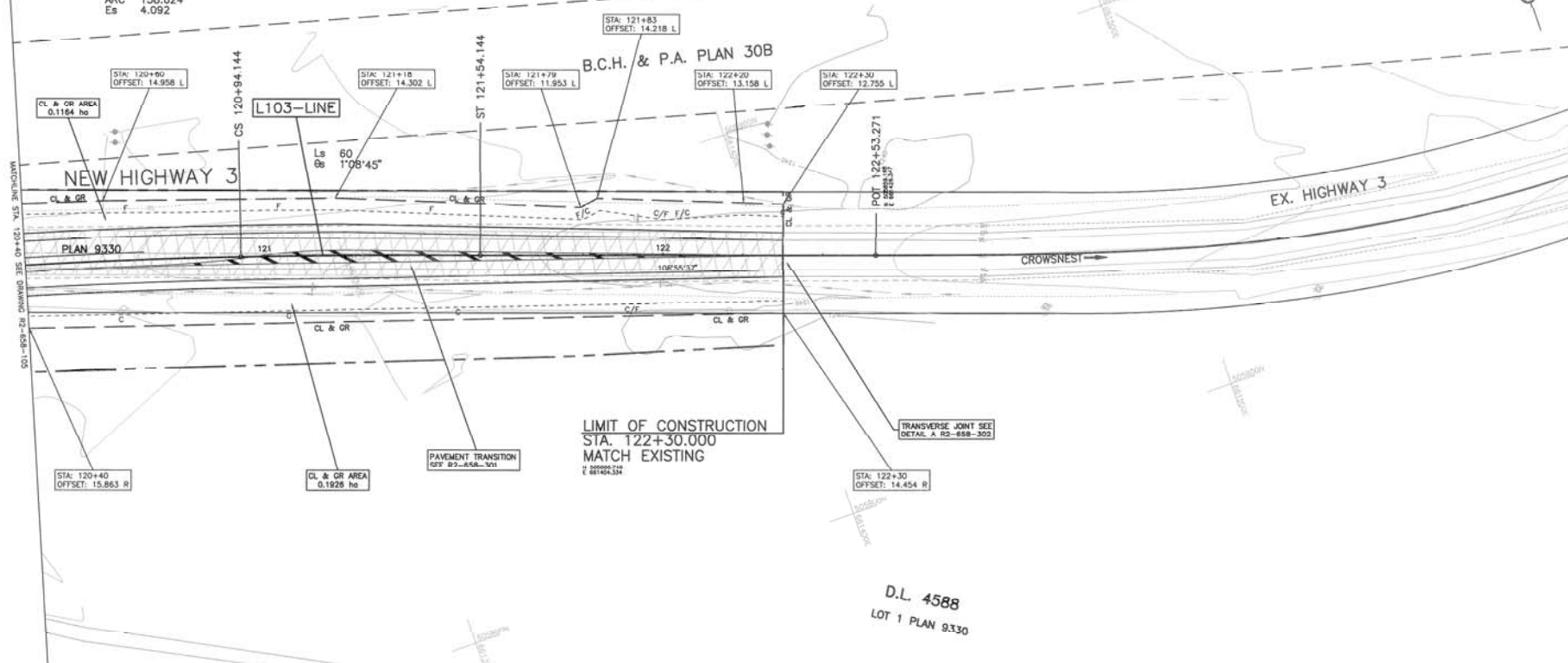
DATE: 05/01/07
 DRAWN BY: J. B. B. / J. B. B.
 CHECKED BY: J. B. B. / J. B. B.
 SCALE: 1:1000
 SHEET: 104

CHANCE: 100%
 DESIGN: 100%
 CONSTRUCTION: 100%



R 1500.000 RT
 Δ 8°21'03"
 ΔC 6'03.32"
 AD 139.513
 ARC 158.624
 Es 4.092

D.L. 4588
 LOT 1 PLAN 9330



KEY PLAN

DESIGN SPEED HWY 3 = 100 KM/H

NOTES:

1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DMS R2-658-602 TO S14.
2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

Rev	Date	REVISIONS	Signature



Ministry of Transportation & Infrastructure
 Southern Interior Region
 PREPARED UNDER THE DIRECTION OF
 DATE: MAY 4, 2009

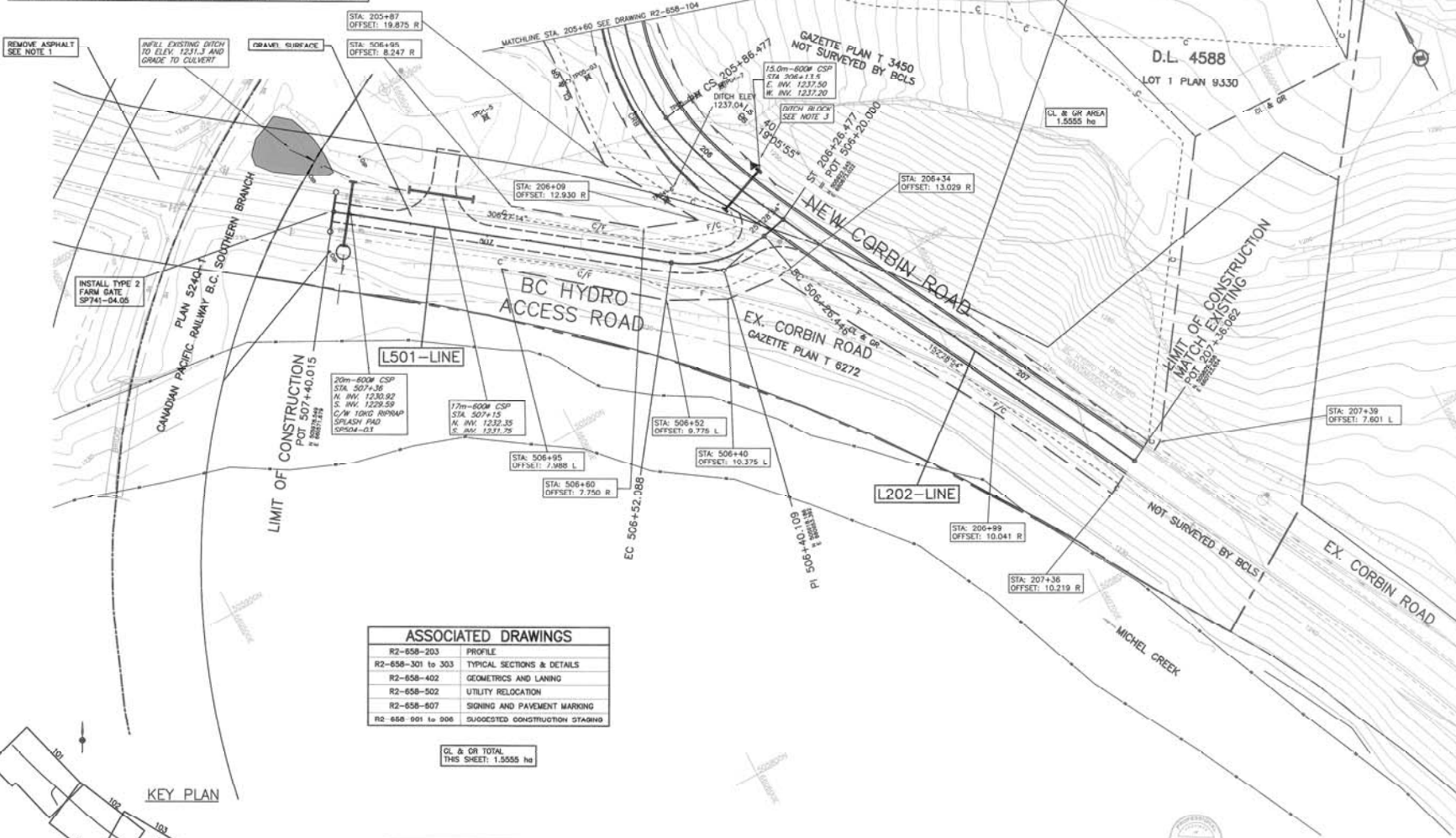
ASSOCIATED DRAWINGS	
R2-658-202	PROFILE
R2-658-301 & 302	TYPICAL SECTIONS & DETAILS
R2-658-403	GEOMETRICS AND LANEING
R2-658-503	UTILITY RELOCATION
R2-658-606	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

CL & GR TOTAL
 THIS SHEET: 0.3090 ha

PLAN			
CROWNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 120+40 to Station 123+00			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-106

DESIGN SPEED CORBIN ROAD = 40 KM/H

DESIGN SPEED BC HYDRO ACCESS = 20 KM/H



ASSOCIATED DRAWINGS	
R2-658-203	PROFILE
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-402	GEOMETRICS AND LANNING
R2-658-502	UTILITY RELOCATION
R2-658-607	SIGNING AND PAVEMENT MARKING
R2-658-901 to 906	SUGGESTED CONSTRUCTION STAGING

CL & CR TOTAL
THIS SHEET: 1.5555 ha

- NOTES:
1. REMOVE/RECLAIM EXISTING PAVEMENT AS SHOWN ON DRG R2-658-802 TO 804.
 2. SEE DRAWING R2-658-302 FOR DITCH DETAILS.
 3. SEE GEOTECHNICAL REPORT FOR TESTHOLE AND TEST PIT INFORMATION.

SCALE	DATE	REVISIONS	DESIGNED BY	CHECKED BY	SIGNATURE
1:1000					

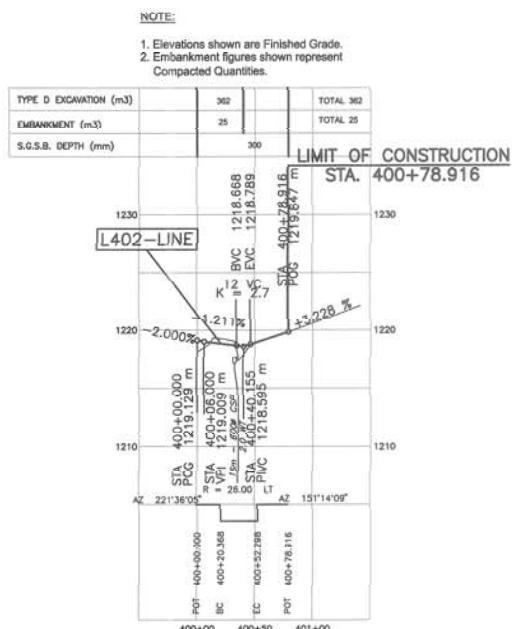
BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE: MAY 4, 2007

PLAN			
CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 205+60 to Station 207+40.581			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-107

TYPE D EXCAVATION (m3)	362			TOTAL 362
EMBANKMENT (m3)	25			TOTAL 25
S.G.S.B. DEPTH (mm)		300		LIMIT OF



L-401 LINE - FIR - ROBERTS ROAD
DESIGN SPEED = 20 KM/H

NOTE:

1. Elevations shown are Finished Grade.
2. Embankment figures shown represent Compacted Quantities.

NOTE:

1. Elevations shown are Finished Grade.
2. Embankment figures shown represent Compacted Quantities.

L-103 LINE - HIGHWAY 3

ASSOCIATED DRAWINGS	
R2-658-105 & 106	PLANS
R2-658-301 to 303	TYPICAL SECTIONS & DETAILS
R2-658-401 to 403	GEOMETRICS AND LANEING

SCALE		0 1:2000 Hdr 100 1:200 Ver	MEASURE NO. _____ C&D FILE NO. _____
Rev	Date	REVISIONS	Signature



Ministry of
Transportation & Infrastructure
Southern Interior Region

ger	PREPARED UNDER THE DIRECTION OF
	 MAY 4, 2009
	CONSULTANT
	DATE

PROFILE
CROWSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORDON OVERHEAD APPROACHES
Station 116+50 to Station 122+30.000

FILE No.	PROJECT No.	RES.	DRAWING No.
	21675	2	R2-658-202

DESIGN SPEED HWY 3 = 100 KM/H

DESIGN SPEED CORBIN ROAD = 40 KM/H

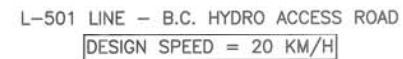
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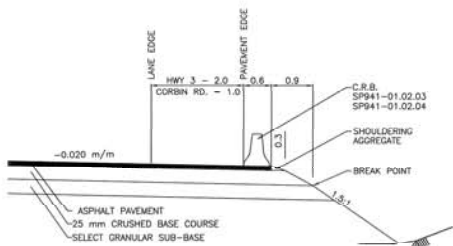
Ministry of
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Southern Interior Region

PREPARED UNDER THE DIRECTION OF
CONSULTANT
DATE MAY 6

CROWSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 200+00 to Station 207+36.393

FILE No.	PROJECT No.	REC.	DRAWING No.
	21675	2	R2-658-20



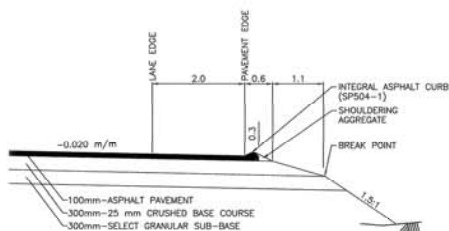


SHOULDER DETAIL WITH ROADSIDE BARRIER
HIGHWAY No. 3

STA. 108+83.918 TO STA. 109+84.000 RIGHT SIDE STA. 109+87.536 TO STA. 109+88.000 LEFT SIDE
STA. 110+17.000 TO STA. 110+56.783 RIGHT SIDE STA. 110+11.000 TO STA. 110+80.716 LEFT SIDE
STA. 113+76.664 TO STA. 114+46.000 RIGHT SIDE STA. 114+14.187 TO STA. 114+54.000 LEFT SIDE
STA. 114+90.000 TO STA. 116+00.000 RIGHT SIDE STA. 114+98.000 TO STA. 115+68.000 LEFT SIDE

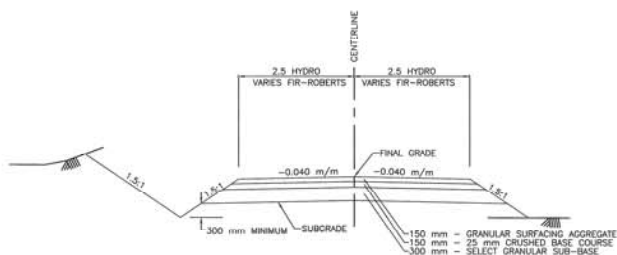
CORBIN ROAD

STA. 204+00.000 TO STA. 206+04.830 RIGHT SIDE

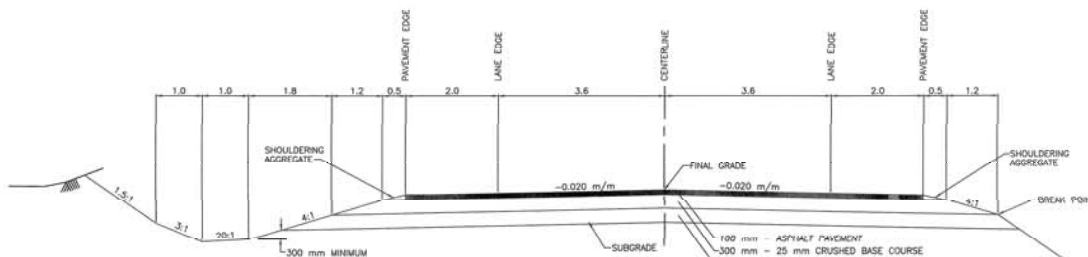


SHOULDER DETAIL WITH INTEGRAL ASPHALT CURB
HIGHWAY No. 3

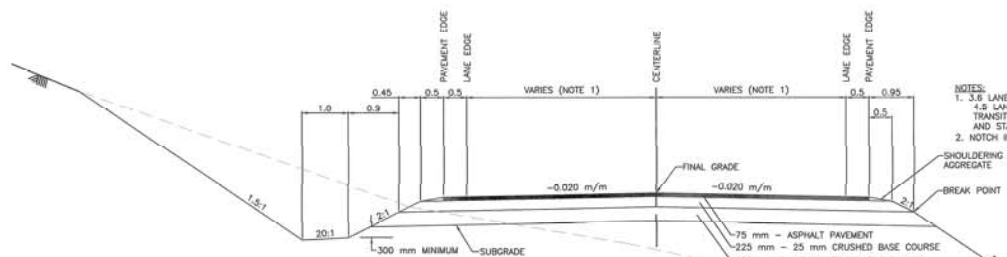
STA. 110+80.7 TO STA. 114+14.2 LEFT SIDE
STA. 115+68.0 TO STA. 118+60.0 LEFT SIDE



TYPICAL CUT AND FILL SECTION
BC HYDRO ACCESS AND FIR-ROBERTS ROAD

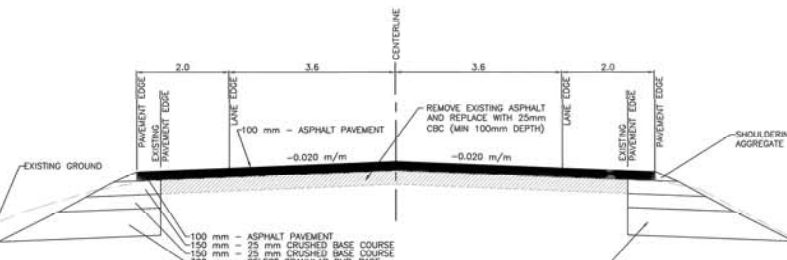


TYPICAL CUT AND FILL SECTION
HIGHWAY No. 3



TYPICAL CUT AND FILL SECTION
CORBIN ROAD

- NOTES:
1. 3.6 LANE TYPICAL
1.5 LANE STA. 204+75.644 TO STA. 205+80.808
TRANSITION VARIES STA. 204+35.644 TO STA. 204+75.644
AND STA. 205+80.808 TO STA. 206+20.808
2. NOTCH INTO EXISTING EMBANKMENT (1.5m WIDE X 0.4m DEEP)



PAVEMENT TRANSITION DETAIL

STA. 104+24 TO STA. 105+23.708
STA. 120+00 TO STA. 122+30
SCALE H 1:50; V 1:25

Rev	Date	REVISIONS	Signature



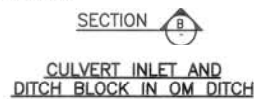
DESIGN CONSULTANT
Klohn Crippen Berger

Ministry of
Transportation & Infrastructure
Southern Interior Region

PREPARED UNDER THE DIRECTION OF
COMMISSIONER
DATE: 14 MAY 2007

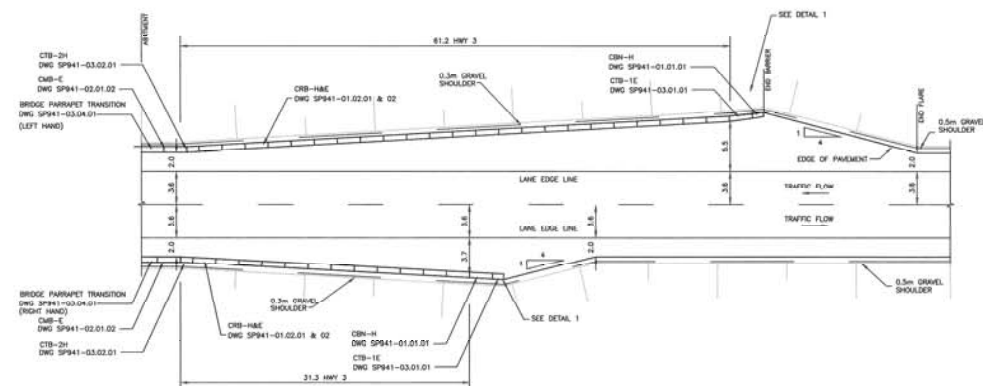
TYPICAL SECTIONS
CROWNSHED HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES

FILE No.	PROJECT No.	REV.	DRAWING No.
	21675	2	R2-658-301

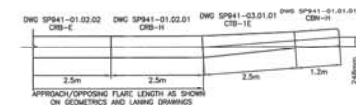




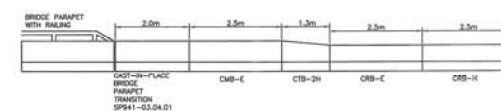
TYPICAL CRB FLARE DETAILS - CORBIN ROAD
(SKEW NOT SHOWN)
NTS



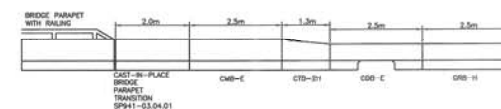
TYPICAL CRB BRIDGE END FLARE DETAILS - HWY 3
(SKEW NOT SHOWN)
NTS



DETAIL 1 - STANDARD CRB TERMINAL
NTS



BRIDGE PARAPET TRANSITION (NO DRAINAGE OUTLET)
NTS



BRIDGE PARAPET TRANSITION (WITH DRAINAGE OUTLET)
NTS

SCALE		REVISIONS		DATE	BY
Rev	Date				

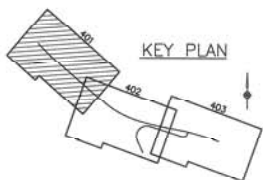


Ministry of
Transportation & Infrastructure
Southern Interior Region
PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2007

CONCRETE BARRIER DETAILS			
CROWNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
FILE No.	PROJECT No.	REV.	DRAWING No.
	21675	2	R2-658-303

CURVE DATA		
(A)	(B)	(C)
R 16,000 RT	Rc 15,000 RT	R 50,000 RT
Δ 91°37'04"	Δ 72°21'20"	Δ 19°47'35"
AD 18.458	AD 10.970	AD 8.723
ARC 25.584	ARC 18.943	ARC 17.273
Ec 6.954	Ec 3.583	Ec 0.755
BC 107+14.993	BC 400+21.343	BC -
EC 400+20.170	EC -	EC 107+65.044

NOTES:
1. SEE DRG R2-658-303 FOR BARRIER FLARE DETAILS.



DESIGN SPEED HWY 3 = 100 KM/H

Rev	Date	REVISIONS	Signature

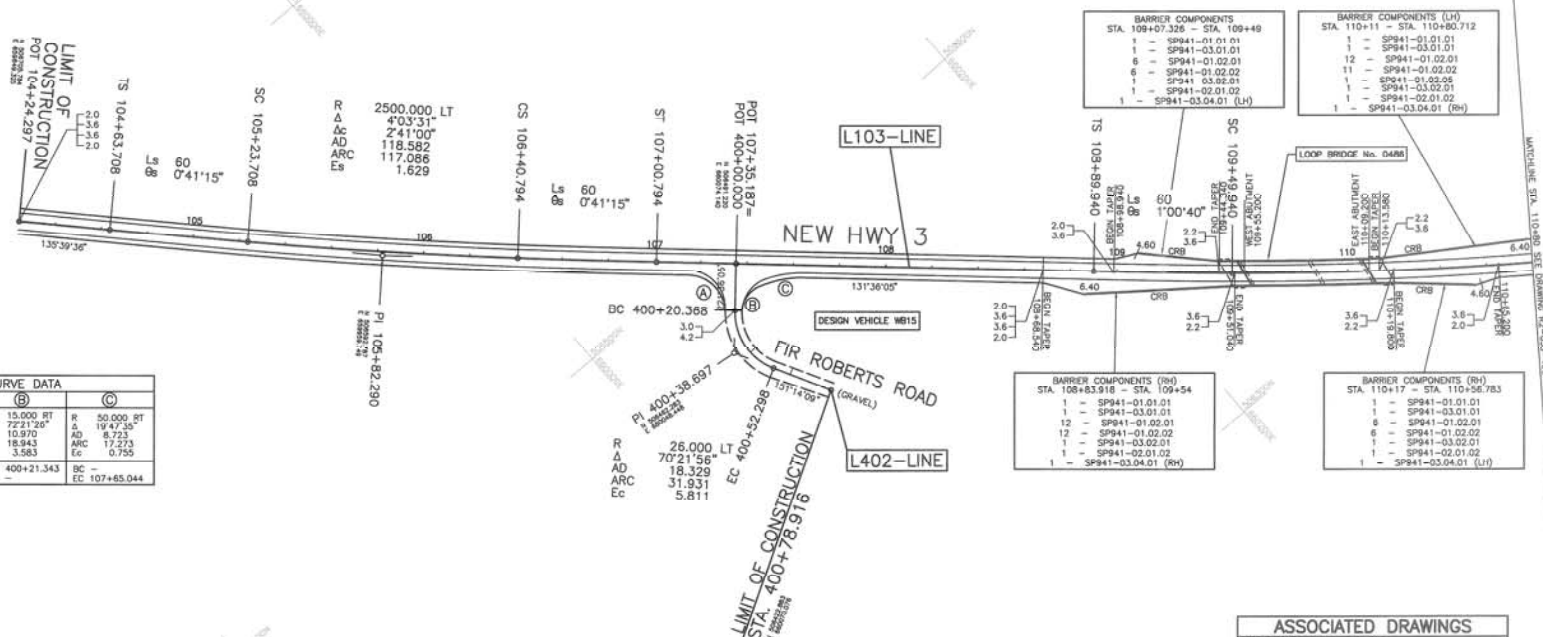


Ministry of
Transportation & Infrastructure
Southern Interior Region

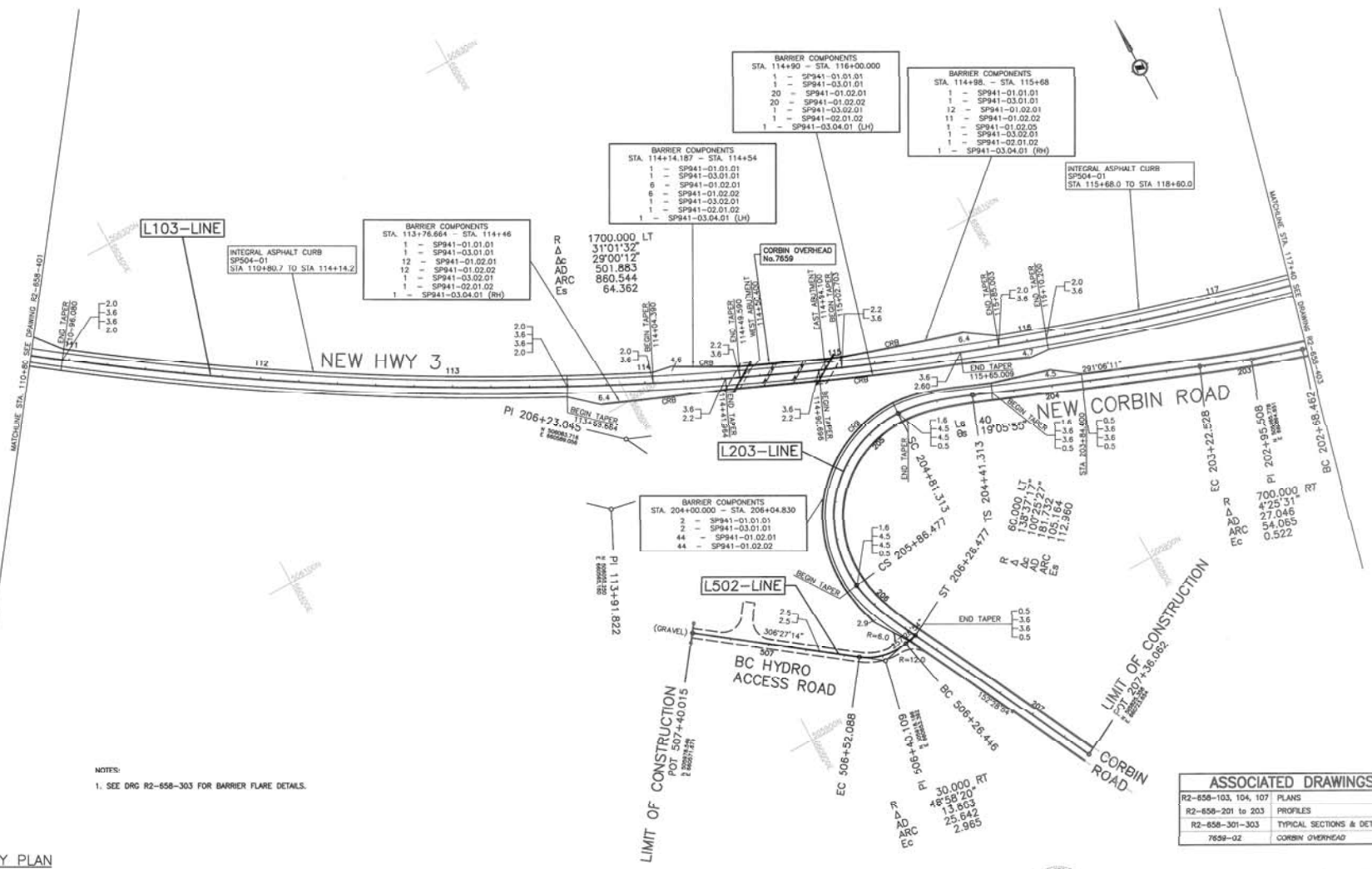
GEOMETRICS AND LANEING
CROW'S NEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 104+24.297 to Station 110+80

ASSOCIATED DRAWINGS	
R2-658-101 & 102	PLANS
R2-658-201, 202	PROFILES
R2-658-301-303	TYPICAL SECTIONS & DETAILS
0406-102	LOOP BRIDGE No. 0406

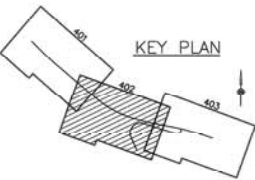
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-401



CHIEF ENGINEER: BRADLEY PROSSER, L.L.B.



NOTES:
1. SEE DRG R2-658-303 FOR BARRIER FLARE DETAILS.



DESIGN SPEED HWY 3 = 100 KM/H
DESIGN SPEED CORBIN ROAD = 40 KM/H
DESIGN SPEED BC HYDRO ACCESS = 20 KM/H

ASSOCIATED DRAWINGS	
R2-658-103, 104, 107	PLANS
R2-658-201 to 203	PROFILES
R2-658-301-303	TYPICAL SECTIONS & DETAILS
7659-02	CORBIN OVERHEAD

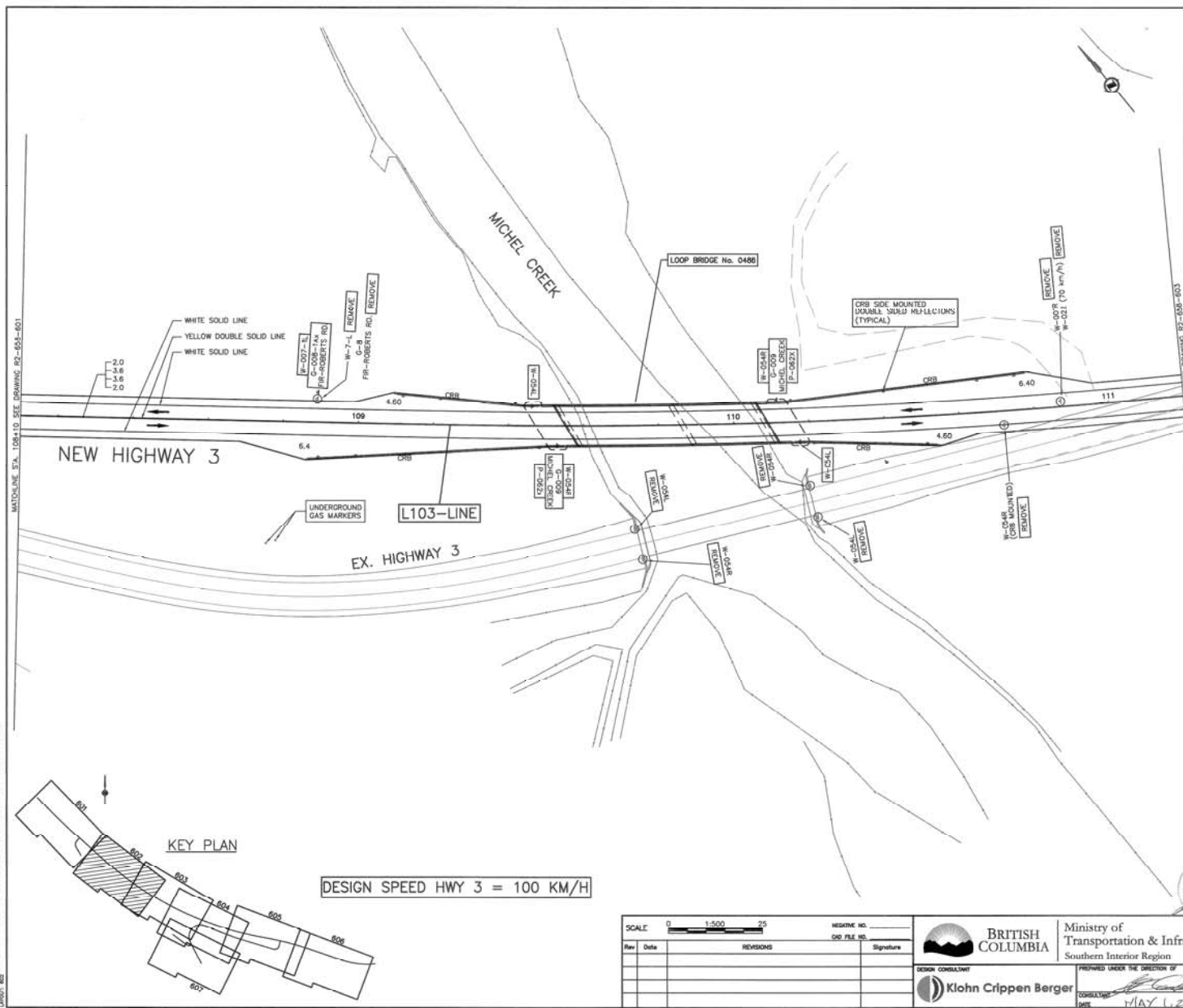
Rev	Date	REVISIONS	Signature

BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region
DESIGN CONSULTANT
Klohn Crippen Berger
PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

GEOMETRICS AND LANING			
CROWNSNEST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 110+80 to Station 117+40			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-402

K:\Projects\2009\05\11\110+80 to 117+40\Drawings\110+80 to 117+40.dwg
 DATE: 05/01/2009 11:00 AM
 USER: KCB
 PLOT: 05/01/2009 11:00 AM
 PLOTTER: HP DesignJet T1100





SIGNS & POSTS ASSOCIATED WITH THIS DRAWING				
SIGN REMOVALS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-7L	CONCEALED RD.	1	1	STA. 108+90 (LL)
G-8	ROAD NAME	1	1	STA. 108+90 (LL)
W-054L	OBJECT MARKER	1	1	STA. 109+73 (RL)
W-054R	OBJECT MARKER	1	1	STA. 109+75 (RL)
W-054L	OBJECT MARKER	1	1	STA. 110+50 (RL)
W-054R	OBJECT MARKER	1	1	STA. 110+22 (RL)
W-054L	OBJECT MARKER	1	1	STA. 110+71 (RL)
W-022	70 km/h	1	1	STA. 110+87 (RL)
W-001R	CURVE RIGHT	1	1	STA. 110+87 (RL)
NEW SIGNS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-007-1L	CONCEALED ROAD	1	1	STA. 108+90 (LL)
G-008-1A	STREET NAME	1	1	STA. 108+90 (LL)
W-054L	OBJECT MARKER	1	1	STA. 109+45.8 (LL)
W-054R	OBJECT MARKER	1	1	STA. 109+53.3 (RL)
G-009	CREEK NAME	1	1	STA. 109+53.3 (RL)
W-062x	NO STOPPING	1	1	STA. 109+46.8 (RL)
W-054R	OBJECT MARKER	1	1	STA. 110+11.3 (LL)
G-009	CREEK NAME	1	1	STA. 110+11.3 (LL)
W-062x	NO STOPPING	1	1	STA. 110+12.0 (LL)
W-054L	OBJECT MARKER	1	1	STA. 110+17.3 (RL)
TOTAL SIGNS REMOVED = 9 (2 POSTS)				
NEW SIGNS = 10 (3 POSTS)				
CRB SIDE MOUNTED DOUBLE-SIDED REFLECTORS REQUIRED THIS SHEET: 14				

- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
 2. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
 3. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNING & PAVEMENT MARKINGS LEGEND	
— 100mm —	LANE EDGE PAINT LINES
- - - 100mm - - -	LANE PAINT LINES
⊙	EXISTING SIGN TO BE REMOVED
●	NEW SIGN
+	CRB SIDE MOUNTED REFLECTORS

ASSOCIATED DRAWINGS	
R2-858-102	PLAN
0486-102	LOOP BRIDGE No. 0486

SIGNING AND PAVEMENT MARKING			
CROWNSNEST HIGHWAY No. 3			
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES			
Station 108+10 to Station 111+20			
FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-858-602

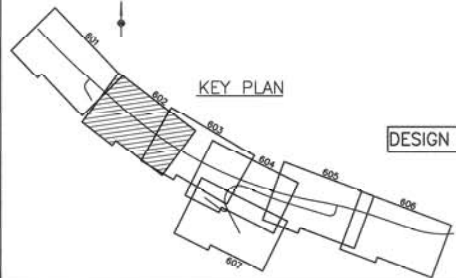
Rev	Date	REVISIONS	DESIGNER NO.	CHK FILE NO.	Signature

BRITISH COLUMBIA

Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
CONSULTANT
DATE: MAY 1, 2008



DESIGN SPEED HWY 3 = 100 KM/H

DATE: 05/01/08 BY: [Signature] CHECKED: [Signature] DESIGNED: [Signature] DRAWING NO.: R2-858-602
 FILE NO.: 21675 PROJECT NO.: 21675 REV.: 2 DRAWING NO.: R2-858-602

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

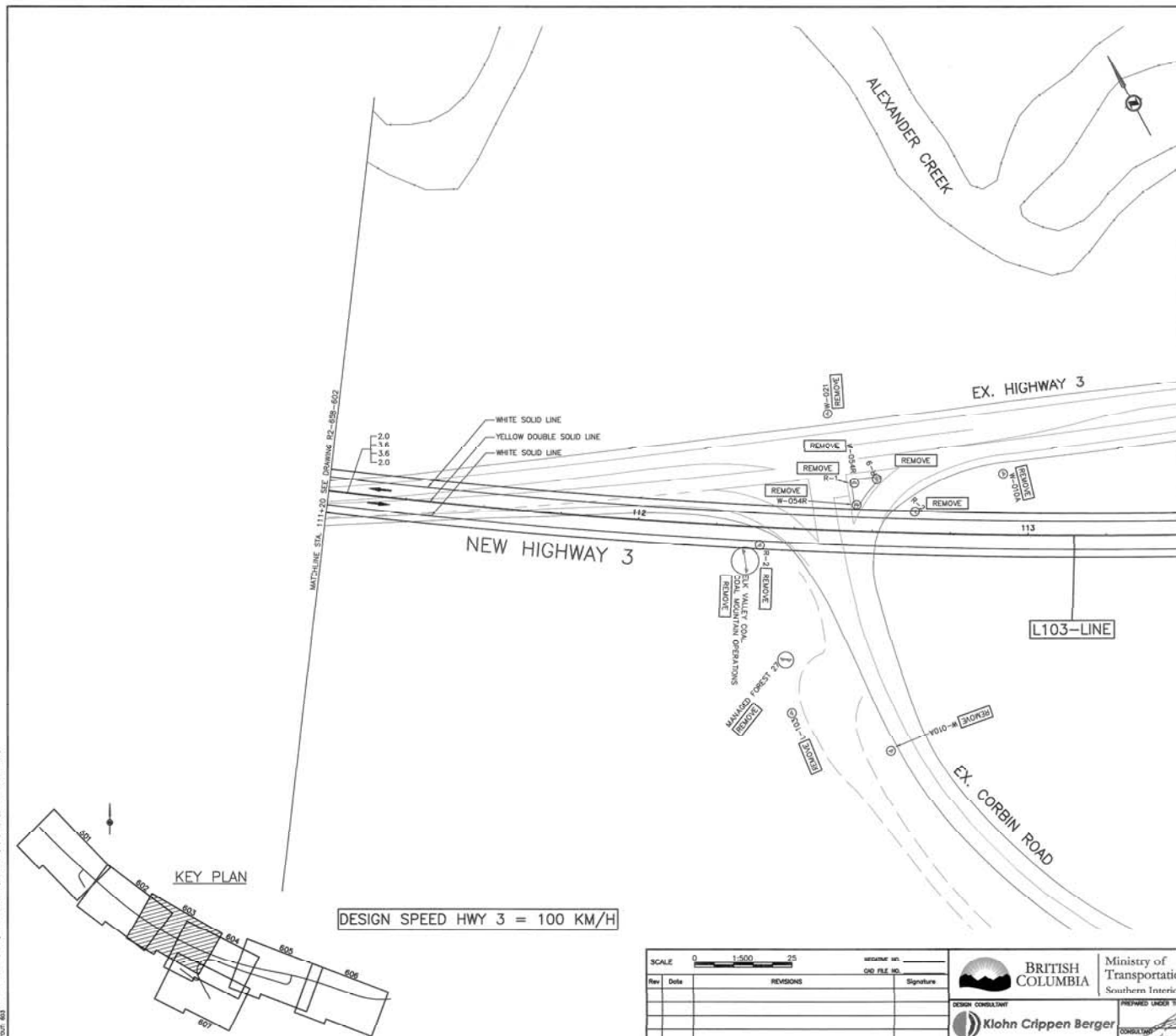
SIGN REMOVALS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
R-2	ELK VALLEY COAL YIELD	2	2	STA. 112+25.0 (RL)
L-103	MANAGED FOREST	1	1	STA. 112+30.0 (RL)
W-021	LITTER BARREL	1	2	STA. 112+39.2 (RL)
R1	SLOW	1	1	STA. 112+41.3 (RL)
W-054R	STOP	1	1	STA. 112+47.1 (LL)
W-054R	OBJECT MARKER	1	1	STA. 112+48.0 (LL)
W-054R	OBJECT MARKER	1	1	STA. 112+48.1 (LL)
R-9	NO ENTRY	1	1	STA. 112+60.0 (LL)
W-010A	RR CROSSING	1	1	STA. 112+66.4 (RL)
R-2	YIELD	1	1	STA. 112+66.4 (LL)
W-010A	RR CROSSING	1	1	STA. 112+93.4 (LL)
TOTAL SIGNS REMOVED = 13 (13 POSTS)				

NOTES:

1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
2. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
3. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNING & PAVEMENT MARKINGS LEGEND

- 100mm - LAKE EDGE PAINT LINES
- 100mm - LAKE PAINT LINES
- EXISTING SIGN TO BE REMOVED
- NEW SIGN
- CRB SIDE MOUNTED REFLECTORS



ASSOCIATED DRAWINGS

R2-658-103 PLAN

SIGNING AND PAVEMENT MARKING
CROWNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 111+20 to Station 113+40

Rev	Date	REVISIONS	Signature



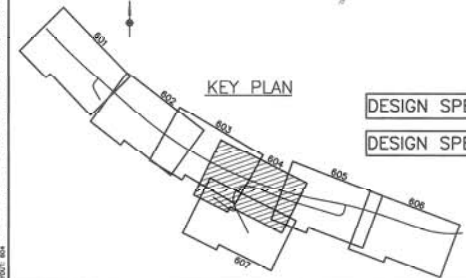
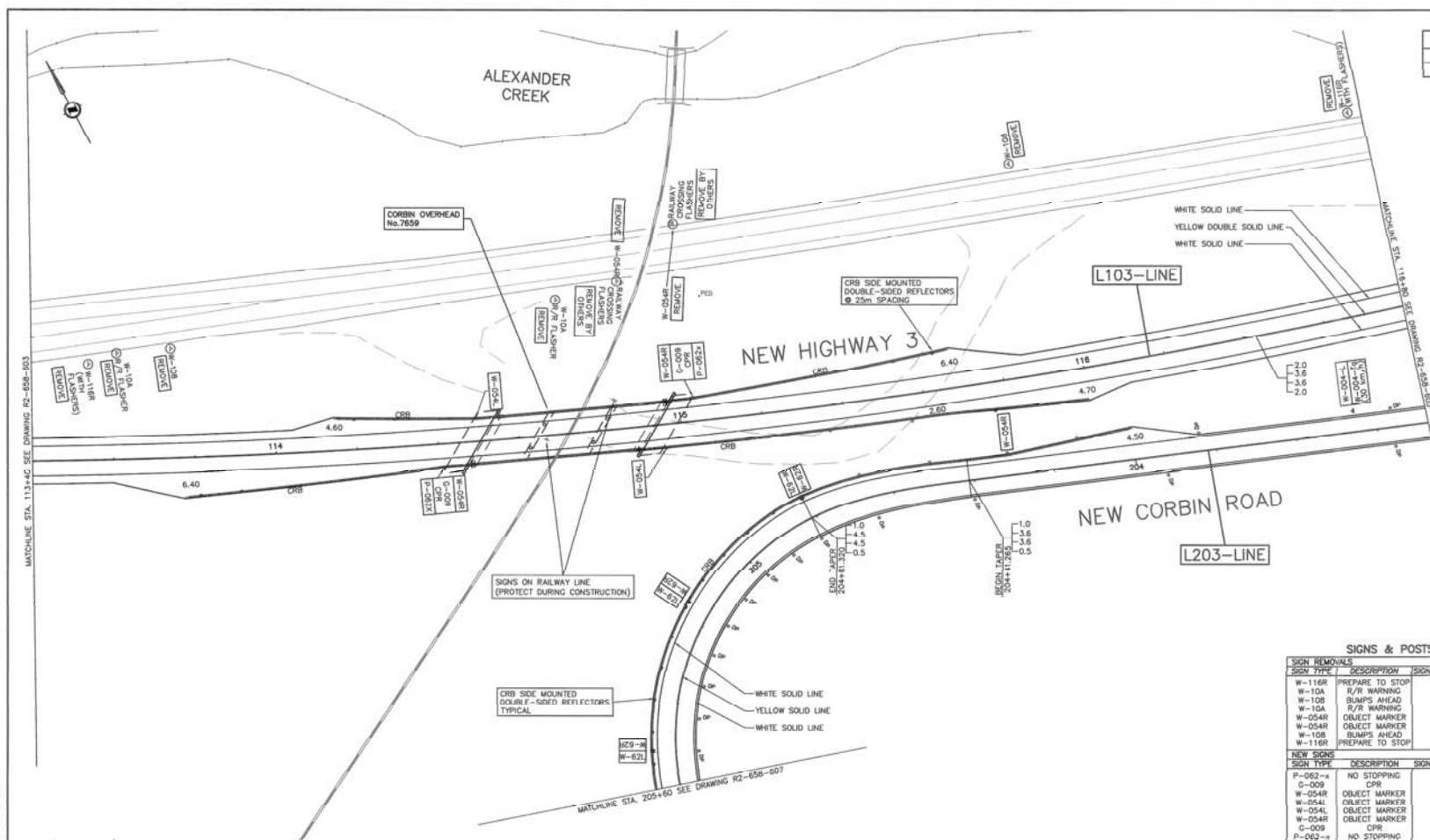
DESIGN CONSULTANT
Klohn Crippen Berger

Ministry of Transportation & Infrastructure
Southern Interior Region

PREPARED UNDER THE DIRECTION OF
CONSULTANT
DATE: 11/1/2009

FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-603

ASSOCIATED DRAWINGS	
R2-658-104	PLAN
7659-02	CORBIN OVERHEAD



NOTES:

1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
2. W-55 POST MOUNTED REFLECTORS AS PER BC M&T MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS AND B.C.M&T, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2009 EDITION (CNC, SP-35-3.10.1).
3. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
4. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNING & PAVEMENT MARKINGS LEGEND

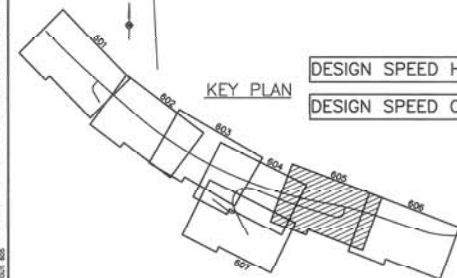
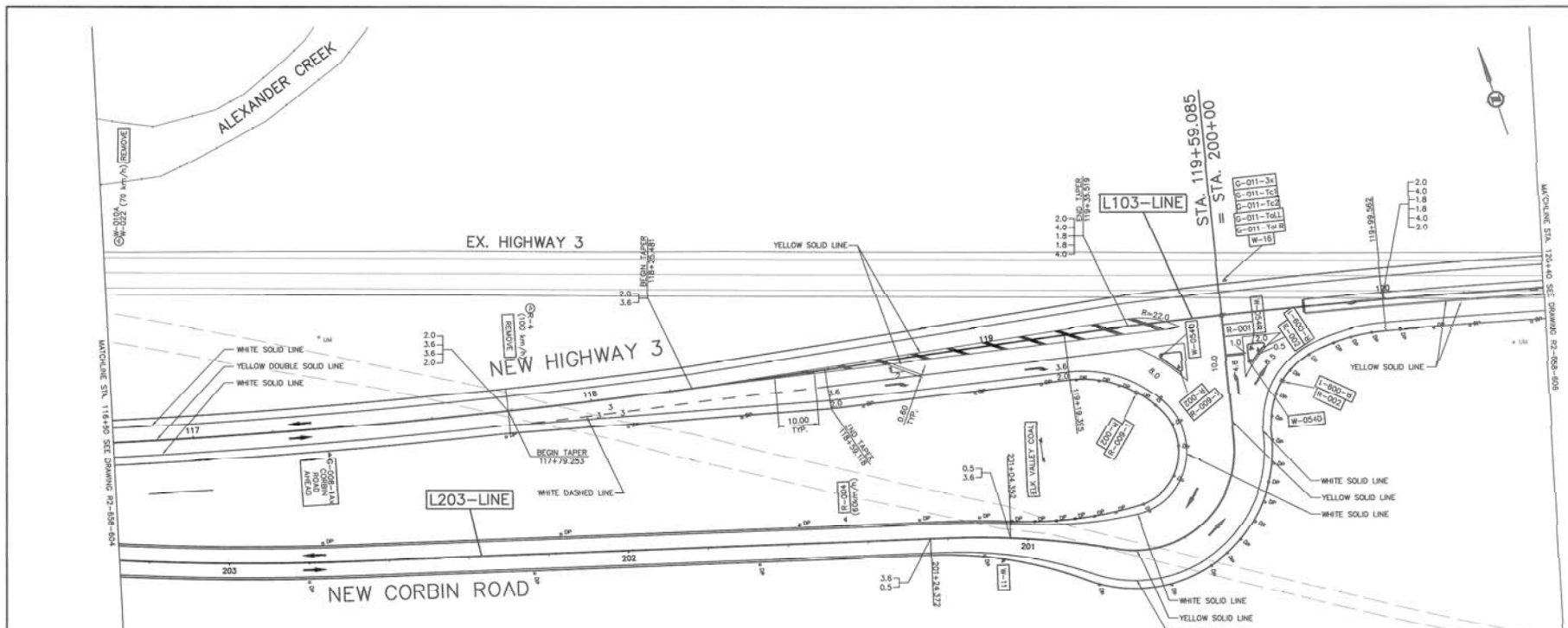
100mm	LAKE EDGE PAINT LINES
100mm	LAKE PAINT LINES
100mm	EXISTING SIGN TO BE REMOVED
NEW SIGN	
POST MOUNTED REFLECTORS (W-55)	
CRB SIDE MOUNTED REFLECTORS	

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-116R	PREPARE TO STOP	1	1	STA. 113+54.3 (LL)
W-10A	R/R WARNING	1	1	STA. 113+61.3 (LL)
W-10B	BUMPS AHEAD	1	1	STA. 113+75.0 (LL)
W-10A	R/R WARNING	1	1	STA. 114+62.0 (LL)
W-054R	OBJECT MARKER	1	1	STA. 114+87.7 (LL)
W-054R	OBJECT MARKER	1	1	STA. 115+03.2 (LL)
W-10B	BUMPS AHEAD	1	1	STA. 115+89.6 (LL)
W-116R	PREPARE TO STOP	1	1	STA. 116+78.6 (LL)
P-062	NO STOPPING	1	1	STA. 114+46.0 (RL)
G-009	CRB	1	1	STA. 114+47.0 (RL)
W-054R	OBJECT MARKER	1	1	STA. 114+47.0 (RL)
W-054R	OBJECT MARKER	1	1	STA. 114+55.6 (LL)
W-054R	OBJECT MARKER	1	1	STA. 114+79.0 (RL)
W-054R	OBJECT MARKER	1	1	STA. 114+88.0 (LL)
G-009	CRB	1	1	STA. 114+88.0 (LL)
P-062	NO STOPPING	1	1	STA. 114+88.0 (LL)
W-004-L	CURVE LEFT	1	1	STA. 203+45.7 (RL)
W-004-R	SPEED ADVISORY	1	1	STA. 203+45.7 (RL)
W-054R	OBJECT MARKER	1	1	STA. 204+328 (RL)
W-62L	CHEVRON RIGHT	1	1	STA. 204+81.3 (RL)
W-62L	CHEVRON LEFT	1	1	STA. 204+81.3 (RL)
W-62R	CHEVRON RIGHT	1	1	STA. 205+18.4 (RL)
W-62L	CHEVRON LEFT	1	1	STA. 205+18.4 (RL)
W-62R	CHEVRON RIGHT	1	1	STA. 205+51.4 (RL)
W-62L	CHEVRON LEFT	1	1	STA. 205+51.4 (RL)

TOTAL SIGNS REMOVED = 8 (8 POSTS)
NEW SIGNS = 17 (8 POSTS)
W-55 REFLECTOR POSTS REQUIRED THIS SHEET: 15
CRB SIDE MOUNTED DOUBLE-SIDED REFLECTORS REQUIRED THIS SHEET: 32

SCALE: 0 1:500 25 Rev Date REVISIONS Signature	BRITISH COLUMBIA Ministry of Transportation & Infrastructure Southern Interior Region Kohn Crippen Berger	SIGNING AND PAVEMENT MARKING CROWNST HIGHWAY No. 3 LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES Station 113+40 to Station 116+80 FILE NO. 21675 PROJECT NO. 2 DRAWING NO. R2-658-604
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DESIGN SPEED HWY 3 = 100 KM/H
DESIGN SPEED CORBIN ROAD = 40 KM/H

- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
 2. W-55 POST MOUNTED REFLECTORS AS PER BC MOT MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS AND B.C.M.A.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2009 EDITION DWG. SP835-3.10.1.
 3. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
 4. ARROWS INDICATE DIRECTION OF TRAVEL.
 5. RUMBLE STRIPS SHALL BE CONSTRUCTED ALONG HIGHWAY 3 AS DIRECTED BY THE MINISTRY REPRESENTATIVE.

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN REMOVALS			
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS LOCATION
W-010A	RR CROSSING	1	1 STA. 116+84.1 (LL)
W-022	75 km/h	1	1 STA. 116+84.1 (LL)
R-4	100 km/h	1	1 STA. 117+87.5 (LL)
NEW SIGNS			
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS LOCATION
R-002	STREET NAME	1	1 STA. 117+33.8 (RL)
R-009-1	YIELD	1	1 STA. 119+35.0 (RL)
W-054D	DO NOT ENTER	1	1 STA. 119+35.0 (RL)
R-002	OBJECT MARKER	1	1 STA. 119+42.6 (RL)
R-009-1	YIELD	1	1 STA. 119+42.6 (RL)
R-009-1	DO NOT ENTER	1	1 STA. 119+42.6 (RL)
W-16	CHECKERBOARD	1	1 STA. 119+61.0 (LL)
G-011-3V	WAVE 3	1	1 STA. 119+61.0 (LL)
G-011-Tc1	EAST	1	1 STA. 119+61.0 (LL)
G-011-Tc2	WEST	1	1 STA. 119+61.0 (LL)
G-011-Tc4R	LEFT ARROW	1	1 STA. 119+61.0 (LL)
G-011-Tc4L	RIGHT ARROW	1	1 STA. 119+61.0 (LL)
R-002	YIELD	1	1 STA. 119+84.1 (RL)
R-009-1	DO NOT ENTER	1	1 STA. 119+84.1 (RL)
R-001	STOP	1	1 STA. 200+05.0 (LL)
W-054R	OBJECT MARKER	1	1 STA. 200+05.0 (LL)
R-002	YIELD	1	1 STA. 200+08.8 (LL)
R-009-1	DO NOT ENTER	1	1 STA. 200+08.8 (LL)
W-054D	OBJECT MARKER	1	1 STA. 200+10.0 (LL)
W-11	STOP AHEAD	1	1 STA. 201+06.0 (LL)
R-004	60 km/h	1	1 STA. 201+42.0 (RL)
TOTAL SIGNS REMOVED = 3 (2 POSTS)			
NEW SIGNS = 21 (11 POSTS)			
W-55 REFLECTOR POSTS REQUIRED THIS SHEET: 51			

SIGNING & PAVEMENT MARKINGS LEGEND

100mm -	LANE EDGE PAINT LINES
300mm -	LANE PAINT LINES
⊙	EXISTING SIGN TO BE REMOVED
+	NEW SIGN
⬆	POST MOUNTED REFLECTORS (W-33)
*	CRB SIDE MOUNTED REFLECTORS

ASSOCIATED DRAWINGS

R2-658-105	PLAN
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SCALE 0 1:500 25

Rev	Date	REVISIONS	Signature

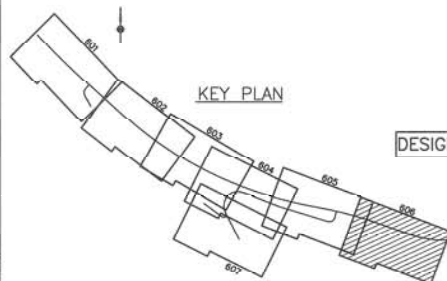
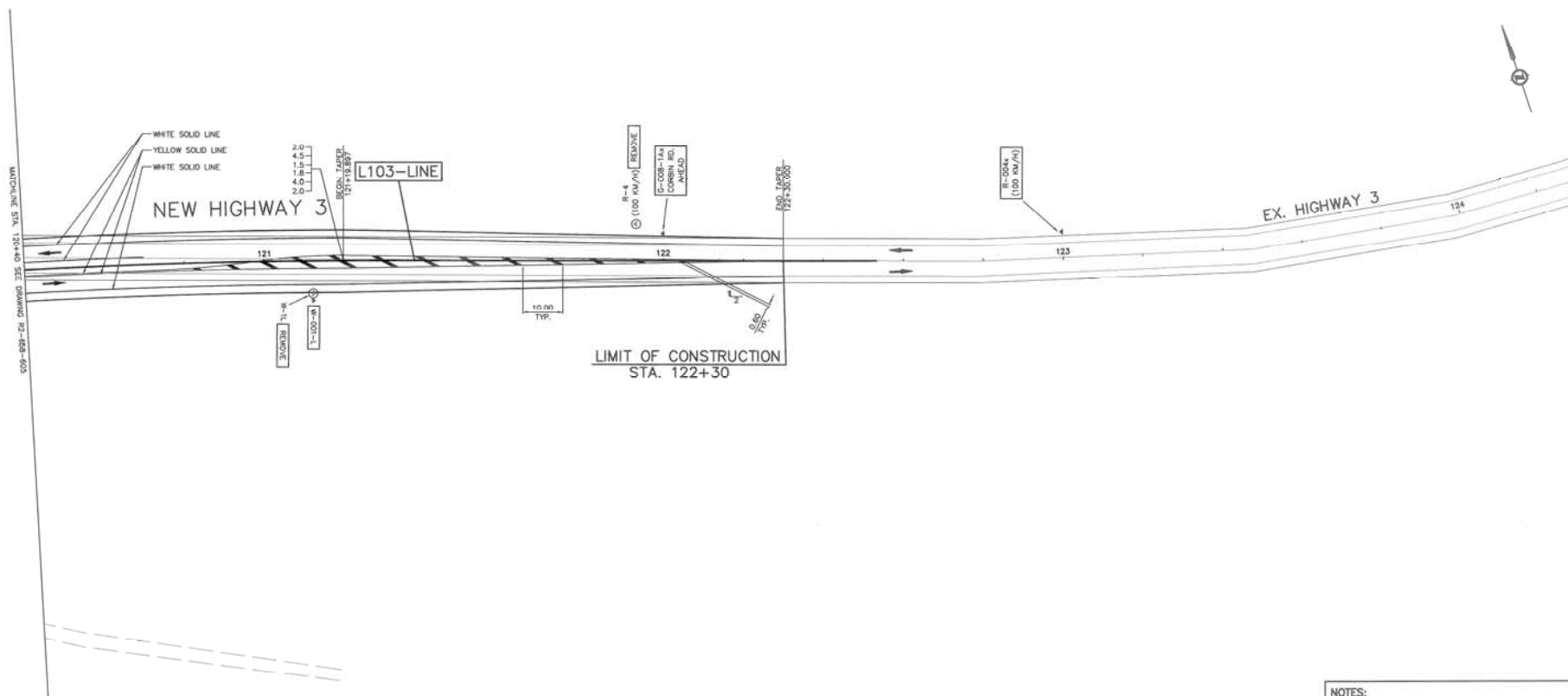
BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

DESIGN CONSULTANT
Klohn Crippen Berger

PREPARED UNDER THE DIRECTION OF
DATE: MAY 1, 2009

SIGNING AND PAVEMENT MARKING
CROWNSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 116+80 to Station 120+40

FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-605



DESIGN SPEED HWY 3 = 100 KM/H

- NOTES:**
1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
 2. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
 3. ARROWS INDICATE DIRECTION OF TRAVEL.

SIGNS & POSTS ASSOCIATED WITH THIS DRAWING

SIGN REMOVALS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-1L	CURVE LEFT	1	1	STA. 121+12.5 (RL)
R-4	100 km/h	1	1	STA. 121+93.0 (LL)
NEW SIGNS				
SIGN TYPE	DESCRIPTION	SIGN FACES	POSTS	LOCATION
W-001-L	CURVE LEFT	1	1	STA. 121+12.5 (RL)
G-008-1A	STREET NAME	1	1	STA. 122+00.0 (LL)
R-004-x	100 km/h	1	1	STA. 123+00.0 (LL)
TOTAL SIGNS REMOVED = 2 (2 POST)				
NEW SIGNS = 3 (3 POST)				

SIGNING & PAVEMENT MARKINGS LEGEND

100mm	-	LANE EDGE PAINT LINES
100mm	-	LANE PAINT LINES
⊙		EXISTING SIGN TO BE REMOVED
+		NEW SIGN
•		CRS SIDE MOUNTED REFLECTORS

ASSOCIATED DRAWINGS

R2-658-106 | PLAN

Rev	Date	REVISIONS	Signature



DESIGN CONSULTANT
Klohn Crippen Berger

Ministry of Transportation & Infrastructure
Southern Interior Region

PREPARED UNDER THE DIRECTION OF
CORRECTED BY: *MACT 200*
DATE: *11/1/200*

SIGNING AND PAVEMENT MARKING
CROWNSNEST HIGHWAY No. 3
LOOP BRIDGE AND CORBIN OVERHEAD APPROACHES
Station 120+40 to Station 123+00

FILE NO.	PROJECT NO.	REV.	DRAWING NO.
	21675	2	R2-658-606

DRAWN BY: [Name] CHECKED BY: [Name] DATE: [Date] SCALE: 1:500 PROJECT: [Name] DRAWING: [Name] REVISIONS: [Name]

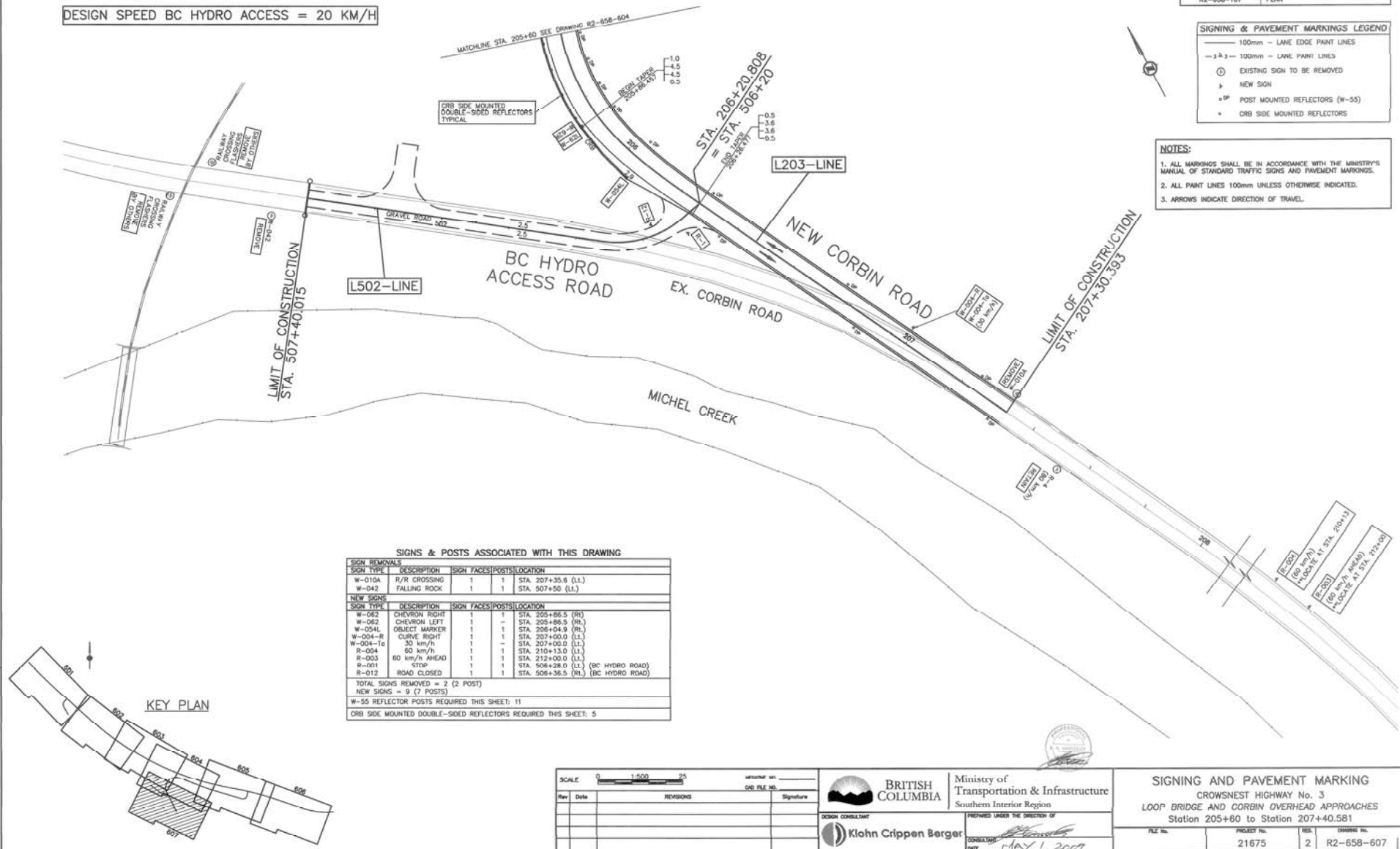
DESIGN SPEED BC HYDRO ACCESS = 20 KM/H

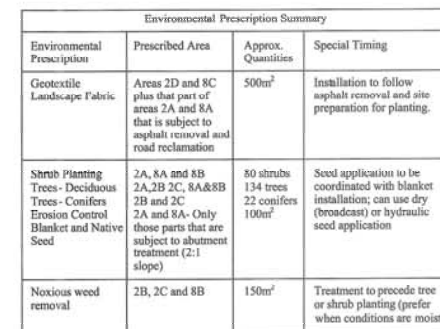
R2-658-107	PLAN
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———— 100mm – LANE EDGE PAINT LINES

- 100mm — LANE EDGE PAINT LINES
- - - 100mm - LANE PAINT LINES
- Ⓢ EXISTING SIGN TO BE REMOVED
- NEW SIGN
- DP POST MOUNTED REFLECTORS (W-55)
- CRB SIDE MOUNTED REFLECTORS

1. ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MINISTRY'S MANUAL OF STANDARD TRAFFIC SIGNS AND PAVEMENT MARKINGS.
2. ALL PAINT LINES 100mm UNLESS OTHERWISE INDICATED.
3. ARROWS INDICATE DIRECTION OF TRAVEL.



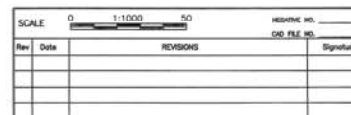


GEOTEXTILE LANDSCAPE
FABRIC AREA

LEGEND	
PERMANENT LOSS	MITIGATION AREAS
FOOTPRINT (WEST)-1117m ²	2A-923m ²
FOOTPRINT (EAST)-1005m ²	2B-282m ²
	2C-453m ²
	8A-556m ²
	8B-528m ²

ASSOCIATED DRAWINGS

R2-658-102	PLANS
0486-102	LOOP BRIDGE No. 0486


Klohn Crippen Berger

Ministry of
Transportation & Infrastructure
Southern Interior Region

PREPARED UNDER THE DIRECTION OF

CONSULTANT *[Signature]*
-10/1 2000

HABITAT RESTORATION
CROWSNEST HIGHWAY No. 3
LOOP BRIDGE REPLACEMENT
AT MICHEL CREEK

FILE No.	PROJECT No.	REG.	DRAWING No.
	21675	2	R2-658-1005



BRITISH
COLUMBIA

Ministry of Transportation & Infrastructure

Bridge Project

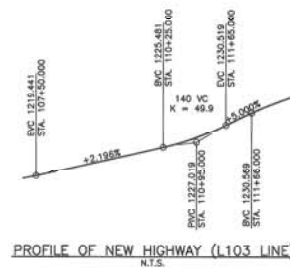
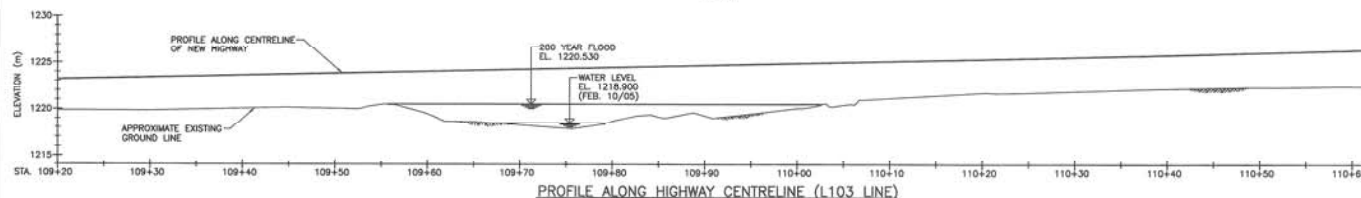
21675-0000

Loop Bridge No. 0486

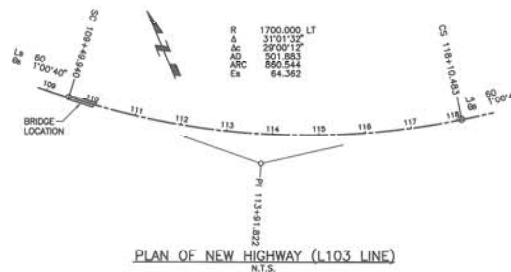
Crowsnest Highway #3



PLAN



PROFILE OF NEW HIGHWAY (L103 LINE) N.T.S.



PLAN OF NEW HIGHWAY (L103 LINE) N.T.S.

NOTES:

1. SURVEY BY: PENNCO ENGINEERING LTD, FEBRUARY 2005.
2. DATUM: GEODETIC.
3. BENCHMARKS: HUB LOOP2 N 506329.334 E 660208.311 EL. 1223.137 HUB LOOP3 N 506274.297 E 660321.471 EL. 1223.398 GWM85C003 N 506281.366 E 660272.921 EL. 1223.344
4. FOR BOREHOLE DATA SEE DRAWING 0486-112 TO 115. REFERENCE: FINAL GEOTECHNICAL REPORT BY KLOHN CRIPPEN.



DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
0486-101	SITE PLAN
0486-102	GENERAL ARRANGEMENT
0486-103	WEST ABUTMENT
0486-104	EAST ABUTMENT
0486-105	PIER
0486-106	GIRDER LAYOUT
0486-107	GIRDERS DETAILS - SHEET 1
0486-108	GIRDERS DETAILS - SHEET 2
0486-109	DECK
0486-110	DECK SECTIONS & DETAILS
0486-111	MISCELLANEOUS DETAILS
0486-112 to 115	BOREHOLE LOGS

REFERENCE DRAWINGS

DRAWING NUMBER	DRAWING TITLE
R2-658-001	KEY PLAN & INDEX
R2-658-102	PLAN
R2-658-201	PROFILE
R2-658-301	TYPICAL SECTIONS
R2-658-302	DRAINAGE DETAILS
R2-658-303	CONCRETE BARRIER DETAILS
R2-658-401	GEOMETRICS & LANEING
R2-658-1005	HABITAT RESTORATION

STANDARD DRAWINGS

DRAWING NUMBER	DRAWING TITLE
2784-1, Rev. R	STANDARD BRIDGE PARAPET 810mm HIGH
2785-2, Rev. G	STANDARD BRIDGE PARAPET STEEL RAILING (1995)



Rev	Date	Description	By

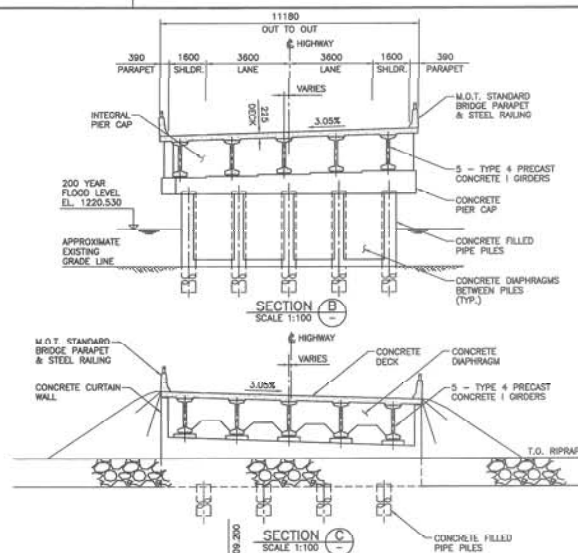
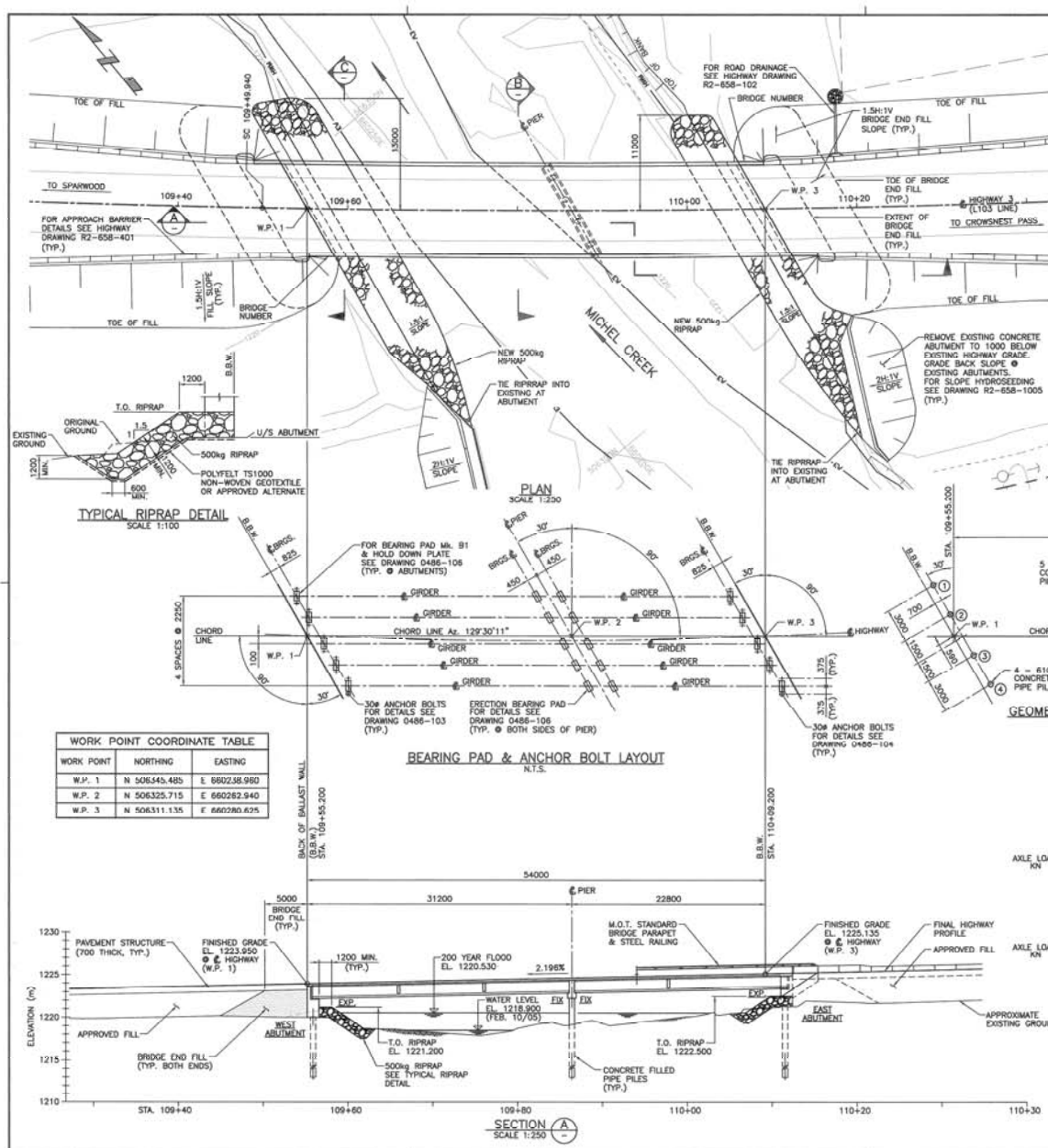
REVISIONS



EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
LOOP BRIDGE No. 0486
SITE PLAN

DESIGNED BY: S.H. DATE: JUNE 2005	CHECKED BY: S.H. DATE: JULY 2005
DRAWN BY: S.H. DATE: JUNE 2005	SCALE: 1:250 U/N
DATE: MAY 1, 2007	PROJECT No.: 21675
DRAWING No.: 0486-101	

CANCEL PRINTS BEARING PREVIOUS LETTERS



Date	Description	Init

REVISIONS

BRITISH COLUMBIA Ministry of Transportation & Infrastructure
Southern Interior Region

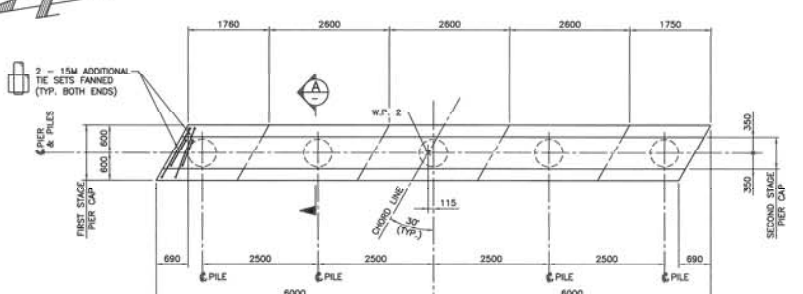
EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
LOOP BRIDGE No. 0486
GENERAL ARRANGEMENT

PREPARED UNDER THE DIRECTION OF: *[Signature]* DATE: 07/10/2009
CHECKED: R.A.L. DATE: 07/10/2009
DRAWN: R.S. DATE: 07/10/2009
SCALE: AS NOTED
NEGATIVE: No.

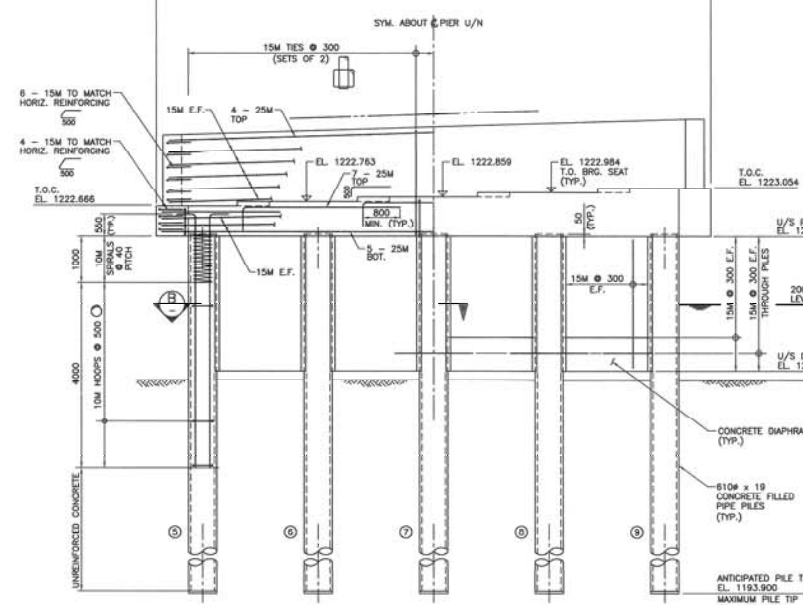
PROJECT No. 21675
DRAWING No. 0486-102

CANCEL PRINTS BEARING PREVIOUS LETTER

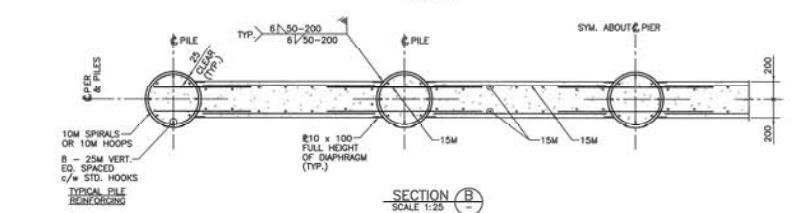




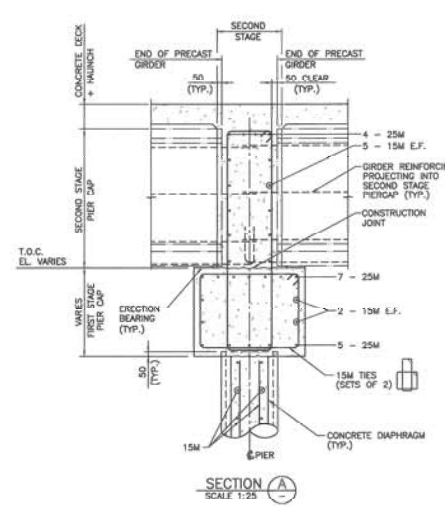
PLAN - PIER CAP



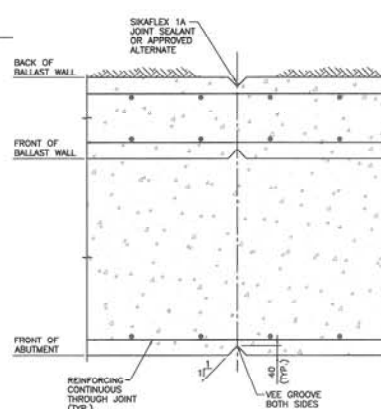
ELEVATION
LOOKING EAST



SECTION B-B
SCALE 1:25



SECTION A-A
SCALE 1:25



TYPICAL CONTROL JOINT DETAIL
SCALE 1:10

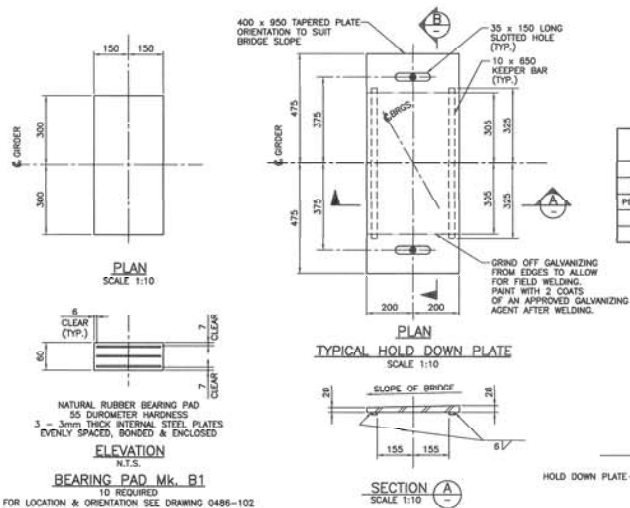
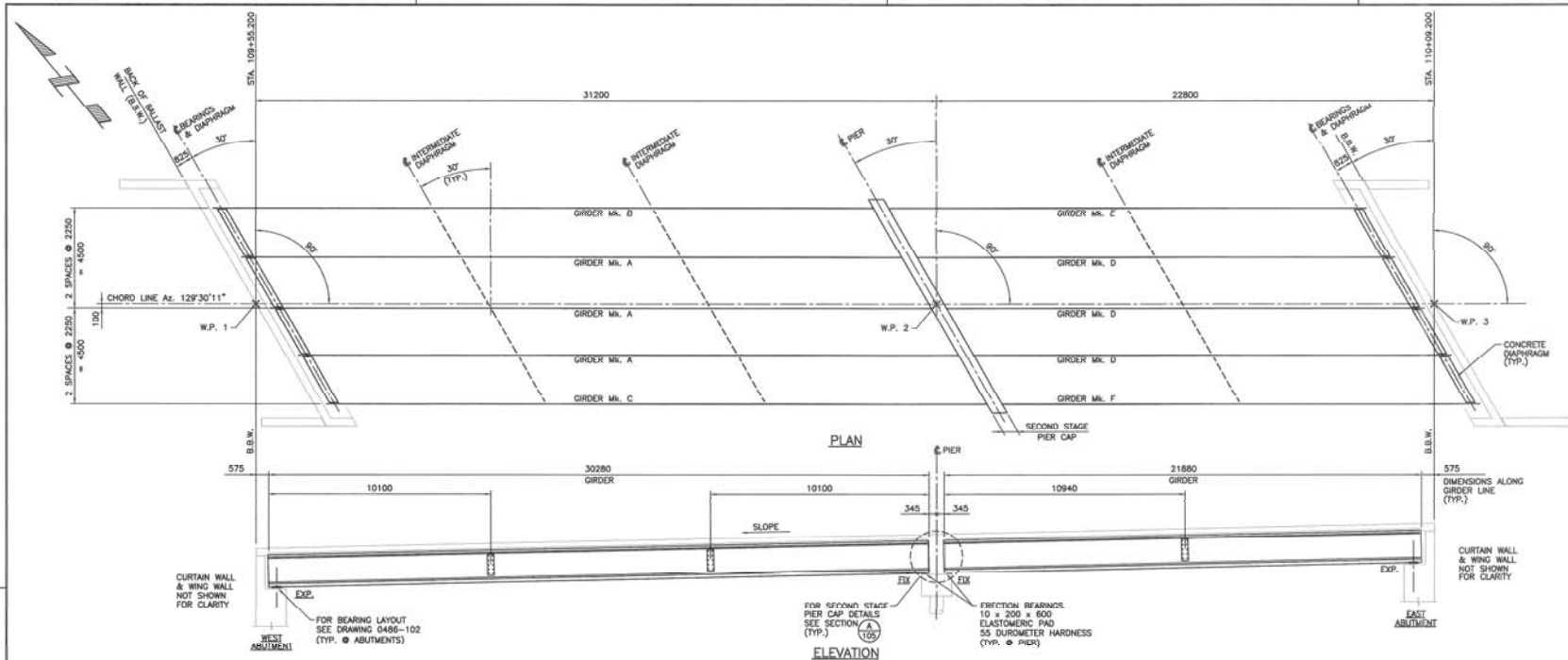
NOTES:

1. FOR GENERAL SUBSTRUCTURE NOTES SEE DRAWING 0486-103.
2. FOR PILE SPICE AND TIP DETAIL SEE DRAWING 0486-104.

PILE SERVICE LOADS:

DEAD LOAD: 925 kN
LIVE LOAD: 520 kN
TOTAL: 1495 kN

Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 PIER			
PREPARED UNDER THE DIRECTION OF		DRAWN: R.B. DATE: APR. 2005	
CHECKED: R.B. DATE: JULY 2005		SCALE: 1:50 U/N	
PROJECT No. 21675		DRAWING No. 0486-105	



BEARING DESIGN DATA SLS1 - COMB. 1		
	WEST ABUTMENT	EAST ABUTMENT
BEARING SIZE	60 x 600 x 300	60 x 600 x 300
PERMANENT LOADS	192 kN	324 kN
TOTAL LOADS	972 kN	1053 kN
MOVEMENT	24.6 mm	18 mm

GIRDER NOTES:

- FOR GENERAL NOTES SEE DRAWING 0486-102.
- GIRDERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 415 OF THE M.O.T. STANDARD SPECIFICATIONS.
- PRESTRESSING STRANDS SHALL BE 13 mm (7 WIRE) UNCOATED LOW RELAXATION STRANDS, CSA G2794-1982, 1982, 1982 MPa MINIMUM ULTIMATE TENSILE STRENGTH = 184 kN/STRAND, STRAND TENSION IMMEDIATELY BEFORE RELEASE = 136 kN/STRAND.
- CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF:
 - 40 MPa AT THE TIME OF RELEASE OF STRANDS
 - 55 MPa AT 28 DAYS
- BOTTOM EDGES OF ALL GIRDERS SHALL BE CHAMFERED 25mm.
- REINFORCING STEEL SHALL CONFORM TO CAN/CSA G30.18, GRADE 400R.
- ALL REINFORCING STEEL SHALL HAVE 25mm COVER, UNLESS NOTED OTHERWISE.
- ALL LAPS OF REINFORCING BARS FOR SPLICES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

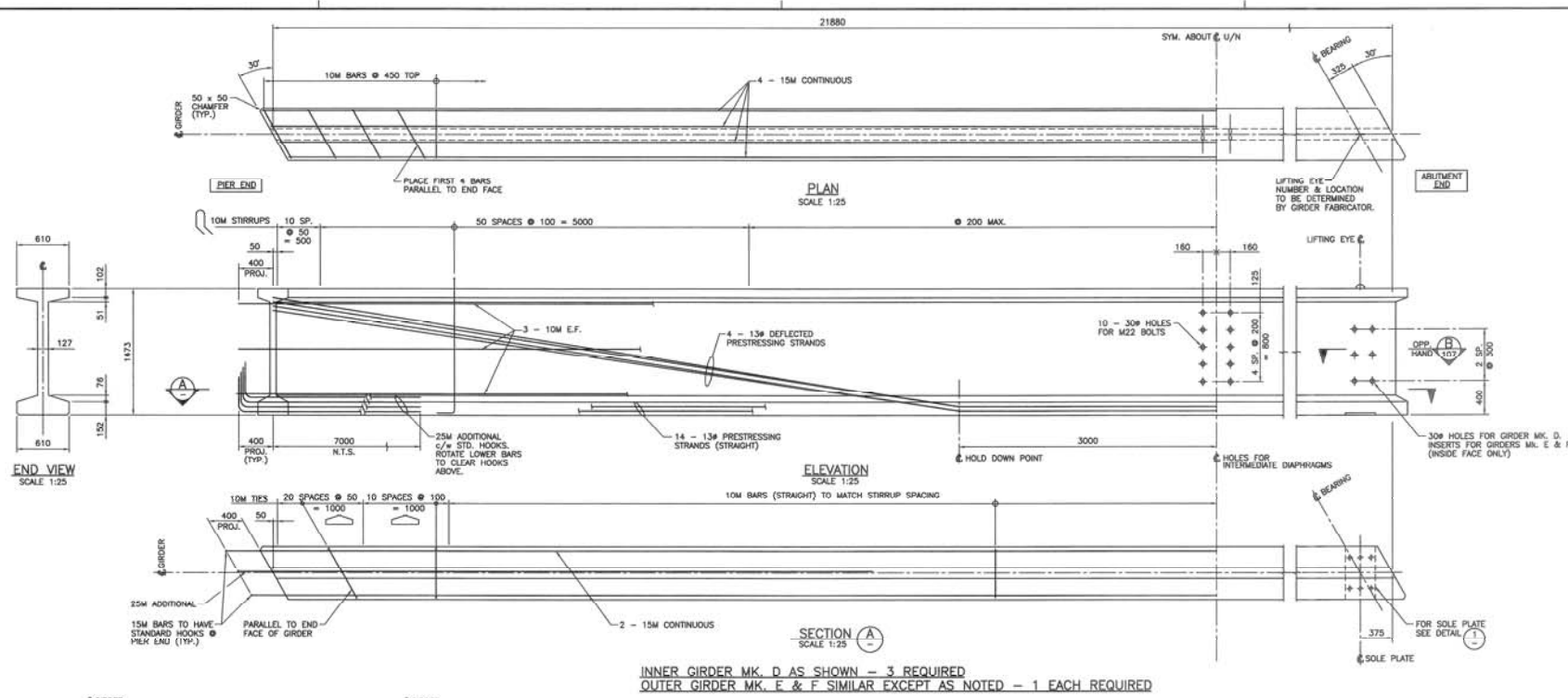
UNCOATED	
10M	340
15M	450

SPLICES SHALL BE STAGGERED.

- LIFTING DEVICES SATISFACTORY TO THE MINISTRY REPRESENTATIVE SHALL BE PROVIDED OVER THE BEARINGS. ONLY VERTICAL LIFTS SHALL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT SUDDEN IMPACT LOADS ON THE GIRDERS.
- AT ABUTMENT ENDS, COAT ENDS OF GIRDERS WITH A MINIMUM 3mm COATING OF THEOTROPIC EPOXY APPLIED IN STRICT ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS.
- AT PIER ENDS, ENDS OF GIRDERS PRESTRESSING STRANDS SHALL BE PAINTED WITH 3 COATS OF A MINISTRY APPROVED GALVANIZING AGENT.
- TOP SURFACE OF ALL GIRDERS SHALL BE ROUGHENED IN ACCORDANCE WITH SECTION 415 OF THE STANDARD SPECIFICATIONS.
- STEEL PLATE SHALL CONFORM TO CSA SPECIFICATION CAN 3-G40.21M GRADE 300W. BEARING SHM PLATES SHALL BE GRADE 260W.
- ALL MISCELLANEOUS STEEL SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH CSA SPECIFICATION G184, TABLE 1.
- SHEAR CONNECTORS SHALL CONFORM TO ASTM A108 GRADE 1020.
- ALL WELDING SHALL CONFORM TO CSA W59-M.

Rev.	Date	Description	By
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 GIRDER LAYOUT			
PREPARED UNDER THE DIRECTION OF ENGINEER OF RECORD DATE: 11/17/2007 FILE NO.		DESIGNED: S.B. DATE: 07/09/2005 CHECKED: J.S. DATE: JULY 2005 DRAWN: S.B. DATE: 07/09/2005 SCALE: 1:100 U/N RECORDING NO. PROJECT NO. 21675 DESIGNED NO. 0486-106	
CANCEL, PRINTING BEARING PREVIOUS LETTER			

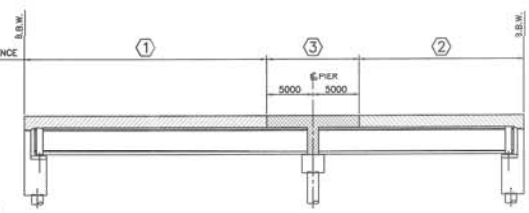
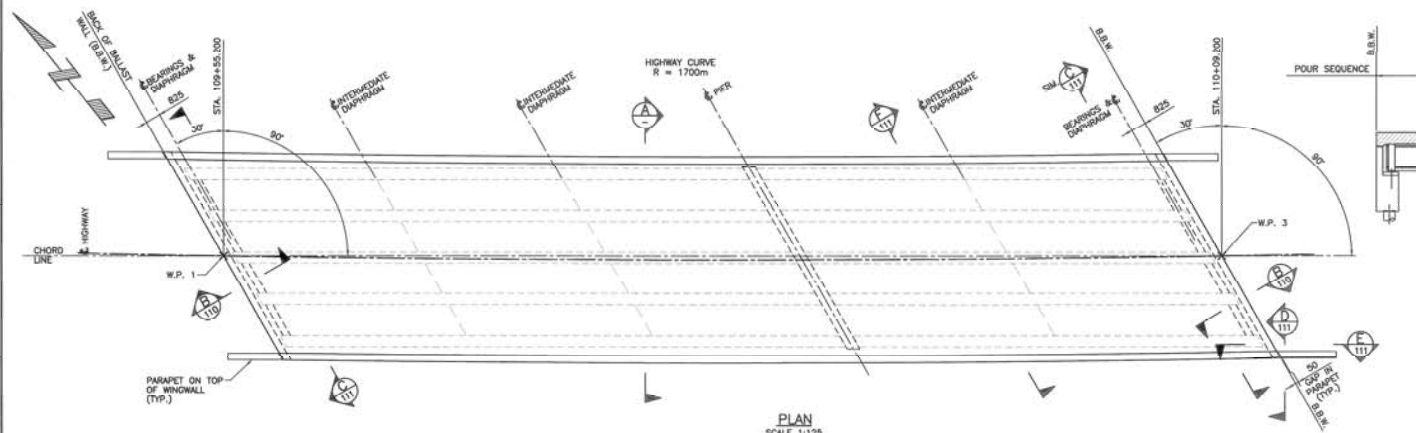




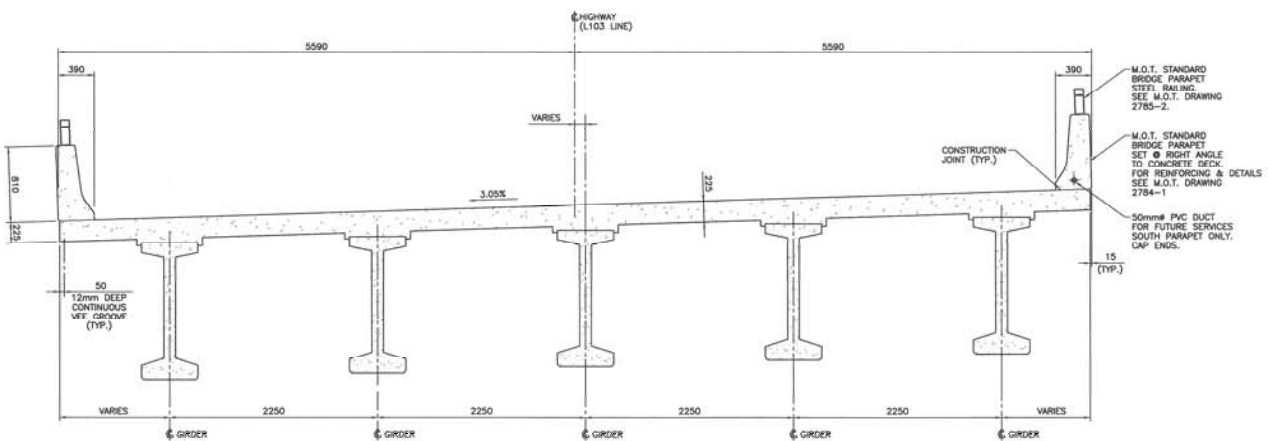
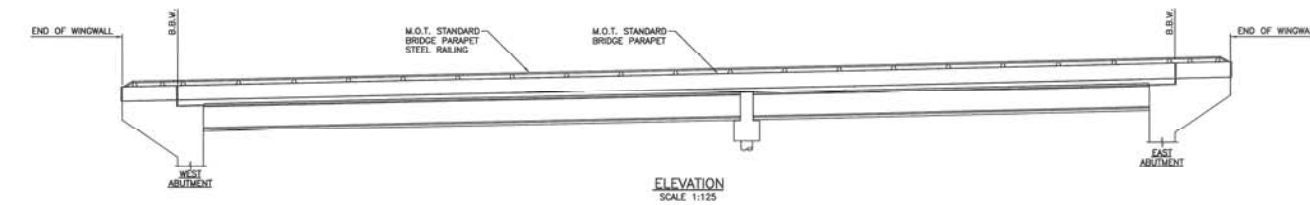
INNER GIRDER MK. D AS SHOWN - 3 REQUIRED
OUTER GIRDER MK. E & F SIMILAR EXCEPT AS NOTED - 1 EACH REQUIRED

NOTES:
1. FOR GIRDER NOTES SEE DRAWING 0486-105.

Rev	Date	Description	Int
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNSHAW HIGHWAY No. 3 LOOP BRIDGE No. 0486 GIRDER DETAILS - SHEET 2			
PREPARED UNDER THE DIRECTION OF PROJECT ENGINEER DATE: MAY 1, 2009 FILE NO.		DESIGNED: S.B. DATE: APR 2005 CHECKED: Y.B. DATE: JUL 2005 DRAWN: S.B./S.E. DATE: APR 2005 SCALE: AS NOTED NEGATIVE NO. PROJECT NO. 21675 REV. 0486-108	
CANCEL PRINTS BEARING PREVIOUS LETTER			



- GENERAL DECK NOTES:**
1. ALL CONCRETE FOR THE DECK AND DIAPHRAGMS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 35 MPa AT 28 DAYS.
 2. ALL EXPOSED EDGES OF CONCRETE TO BE CHAMFERED 20 mm UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 3. REINFORCING STEEL SHALL CONFORM TO CAN/CSA-G30.18 GRADE 400R.
 4. ALL REINFORCING STEEL SHALL HAVE 50mm COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 5. ALL REINFORCING MARKED "ME" IS COATED WITH PRIMER AND EPOXY.
 6. LAP SPICES SHALL HAVE A MINIMUM LAP LENGTH AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
- | | UNCOATED | UNCOATED TOP BARS | EPOXY COATED |
|-----|----------|-------------------|--------------|
| 10M | 340 | 480 | 630 |
| 15M | 480 | 660 | 880 |
| 20M | 590 | 820 | 1 070 |
| 25M | 800 | 1 260 | 1 640 |
| 30M | 1 200 | 1 770 | 2 500 |
| 35M | 1 800 | 2 520 | 3 200 |
- * HORIZONTAL REINFORCEMENT WITH MORE THAN 300mm OF CONCRETE CAST BELOW DWGS.
7. SPICES SHALL BE STAGGERED SO THAT NOT MORE THAN EVERY THIRD BAR IS SPICED AT ANY CROSS SECTION OF THE DECK. SPICING OF TRANSVERSE BARS IS NOT PERMITTED.
 8. PARAPETS TO BE FORMED AND CONCRETE PLACED AFTER ALL DECK HAS BEEN PLACED AND THE DECK CONCRETE HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 28 MPa.
 9. DEFLECTION AND DIFFERENCE IN CAMBER WILL BE ACCOMMODATED BY DECK SCREED ELEVATIONS PROVIDED BY THE MINISTRY REPRESENTATIVE. HAUNCH HEIGHTS WILL VARY AS REQUIRED TO MAINTAIN A CONSTANT DECK SLAB THICKNESS BETWEEN GIRDERS.
 10. CONCRETE FOR EACH DECK SECTION SHALL BE PLACED IN ONE CONTINUOUS OPERATION.



Klohn Crippen Berger

Rev	Date	Description	Iss

REVISIONS

BRITISH COLUMBIA

Ministry of
Transportation & Infrastructure
Southern Interior Region

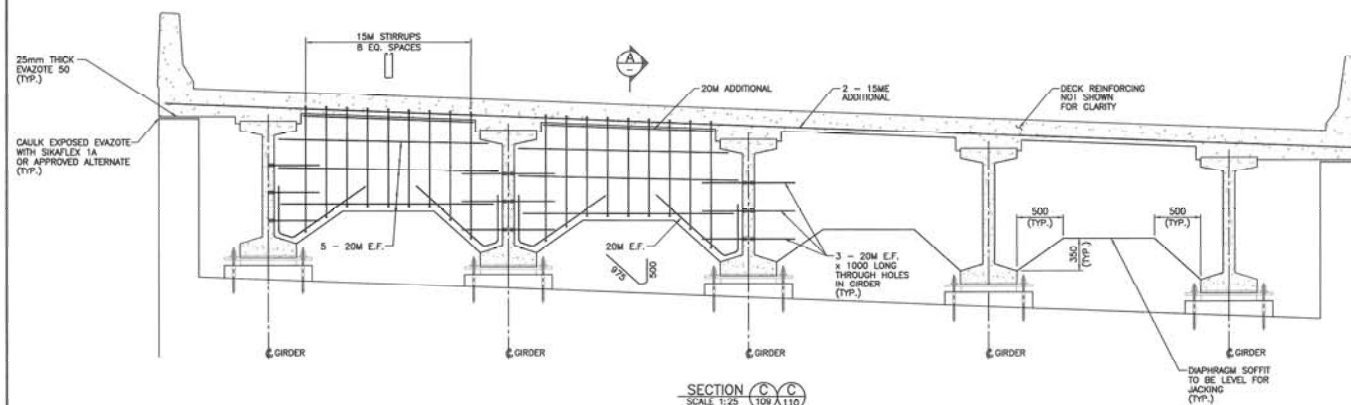
EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
LOOP BRIDGE No. 0486
DECK

PREPARED UNDER THE DIRECTION OF		CHECKED		DESIGNED	
DATE	FILE	DATE	FILE	DATE	FILE
16/1/2009	21675	16/1/2009	21675	16/1/2009	21675

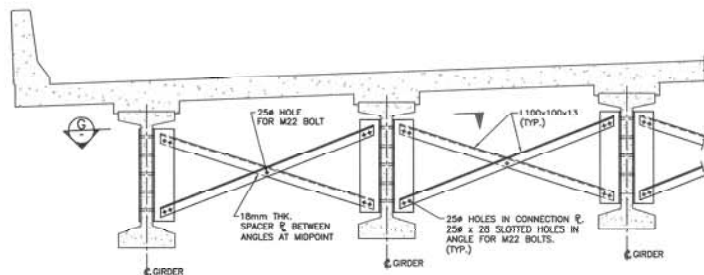
SCALE AS NOTED

PROJECT No. 21675 DRAWING No. 0486-109

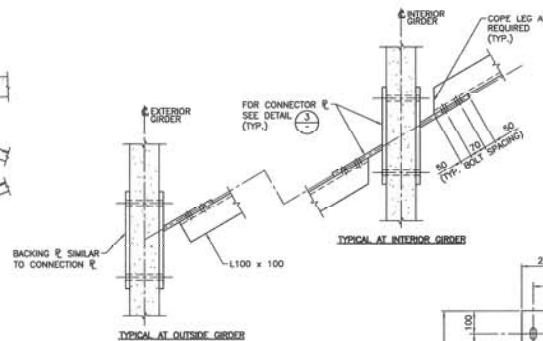
CANCEL PRINTS BEARING PREVIOUS LETTER



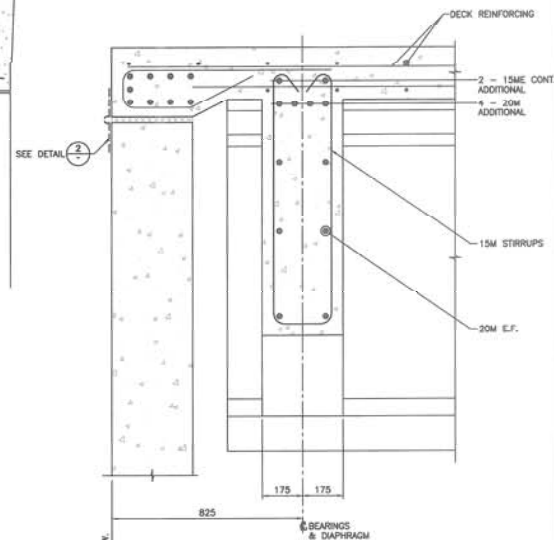
SECTION C-C
SCALE 1:25



NOTE: SKEW NOT SHOWN FOR CLARITY
SECTION F-F
SCALE 1:25



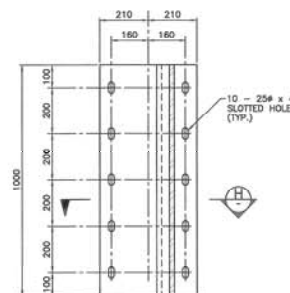
SECTION G-G
SCALE 1:10



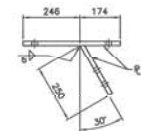
SECTION A-A
SCALE 1:25

NOTES:

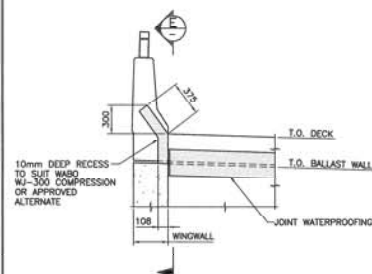
- FOR GENERAL DECK NOTES SEE DRAWING 0486-109.
- STRUCTURAL STEEL TO BE GRADE 300W TO CSA G40.20 AND G40.21.
- ALL INTERMEDIATE DAPHRAGM STEEL TO BE HOT DIP GALVANIZED TO CAN/CSA-G164 TABLE 1.
- BOLTS TO BE GALVANIZED HIGH STRENGTH STRUCTURAL BOLTS CONFORMING TO ASTM A325 TYPE 1.



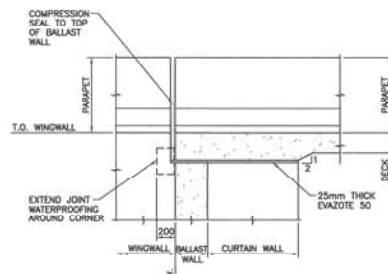
DETAIL 3
SCALE 1:10



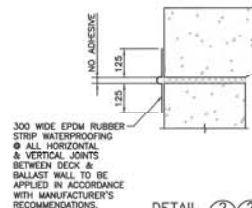
SECTION H-H
SCALE 1:10



SECTION D-D
SCALE 1:25

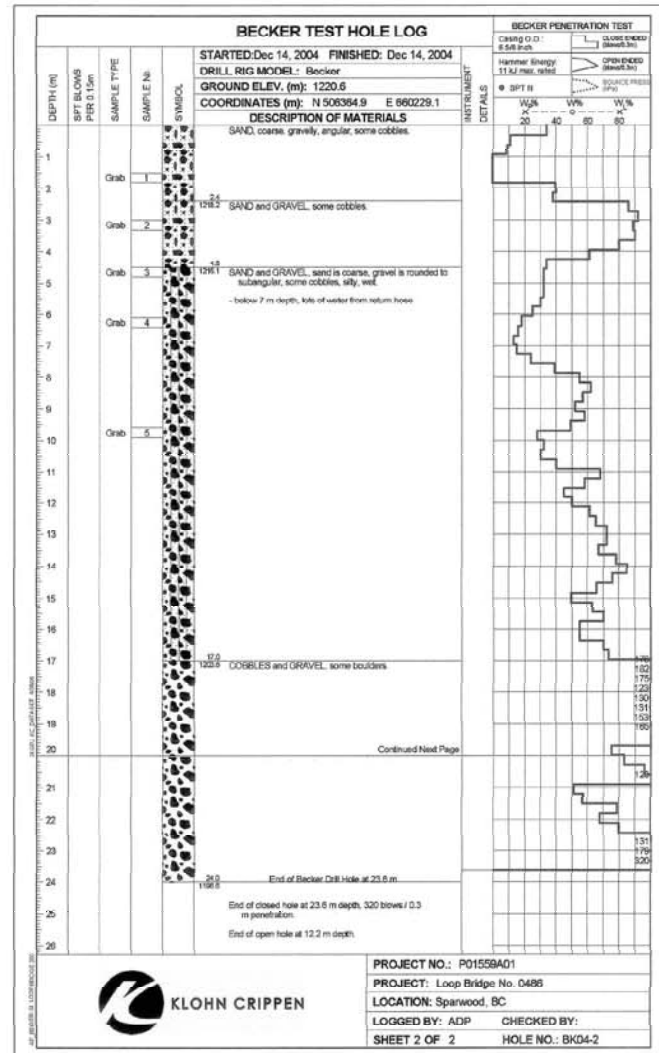
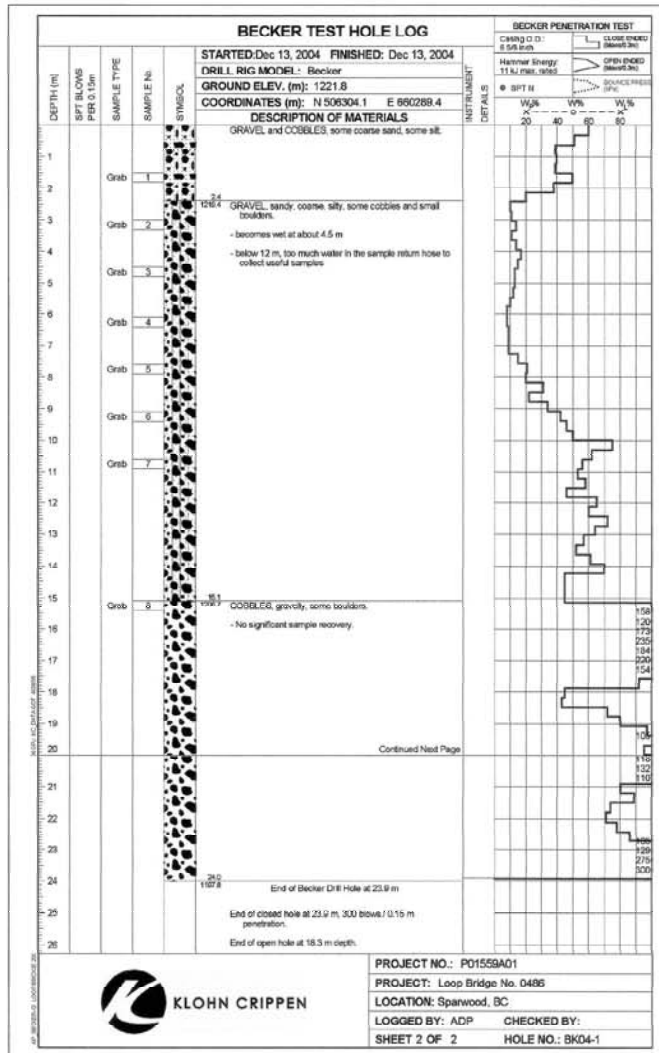


SECTION E-E
SCALE 1:25



DETAIL 2-2
SCALE 1:10

Rev	Date	Description	Int
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 MISCELLANEOUS DETAILS			
PREPARED UNDER THE DIRECTION OF CHECKED BY: DATE: MAY 1, 2008 PROJECT No. 21675		DESIGNED BY: DATE: MAY 2008 SCALE AS NOTED DRAWING No. 0486-111	
CANCEL PRINTS BEARING PREVIOUS LETTER			



NOTES:
 1. FOR BOREHOLE LOCATIONS SEE DRAWING 0486-101.

Rev	Date	Description	Init
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 LOOP BRIDGE No. 0486 BOREHOLE LOGS			
PREPARED UNDER THE DIRECTION OF ENGINEER OF RECORD DATE: Dec 14, 2004 FILE NO.		CHECKED: A.D.P. DATE DEC 14, 2004 CHECKED: S.W.S. DATE AUG 2005 DRAWN: J.S. DATE JULY 2005 SCALE: N/A REVISION:	
PROJECT NO. 21675		DRAWING NO. 0486-112	

SUMMARY LOG															TEST HOLE No. 98-1	
Project: LOOP BRIDGE (EAST ABUT. NORTH CORNER)															Location: 1029.23N - 2024.75E	
Driller: O.C.O.															Elevation: 296.80	
Method: BECKER HAMMER-OPEN END															Date: 98/09/20	
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Sample Type	Recovery (%)	Grain Size (%)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Description	
1	0.0														loose, continuous COBBLES (max. 150mm)	
2	0.3														2.13M	
3	0.6														(S)	
4	0.9														(GP-QM)	
5	1.2														(80)(10)(10)	
6	1.5														(GP-QM)	
7	1.8														(80)(10)(10)	
8	2.1														(GP-QM)	
9	2.4														(80)(10)(10)	
10	2.7														(GP-QM)	
11	3.0														(80)(10)(10)	
12	3.3														(GP)	
13	3.6														(85)(11)(4)	
14	3.9														(GP)	
15	4.2														(85)(11)(4)	
16	4.5														(GP)	
17	4.8														(85)(11)(4)	
SAMPLE TYPE: 1 - Core 2 - Split 3 - Split 4 - Split 5 - Split 6 - Split 7 - Split 8 - Split 9 - Split 10 - Split 11 - Split 12 - Split 13 - Split 14 - Split 15 - Split 16 - Split 17 - Split															SHEAR STRENGTH: 1 - Direct 2 - Triaxial 3 - Triaxial 4 - Triaxial 5 - Triaxial 6 - Triaxial 7 - Triaxial 8 - Triaxial 9 - Triaxial 10 - Triaxial 11 - Triaxial 12 - Triaxial 13 - Triaxial 14 - Triaxial 15 - Triaxial 16 - Triaxial 17 - Triaxial	
TESTS: 1 - Unconfined Compression 2 - Unconfined Compression 3 - Unconfined Compression 4 - Unconfined Compression 5 - Unconfined Compression 6 - Unconfined Compression 7 - Unconfined Compression 8 - Unconfined Compression 9 - Unconfined Compression 10 - Unconfined Compression 11 - Unconfined Compression 12 - Unconfined Compression 13 - Unconfined Compression 14 - Unconfined Compression 15 - Unconfined Compression 16 - Unconfined Compression 17 - Unconfined Compression															FILE No. PREPARED BY: SHEET 01 OF 02	

SUMMARY LOG															TEST HOLE No. 98-1	
Project: LOOP BRIDGE (EAST ABUT. NORTH CORNER)															Location: 1029.23N - 2024.75E	
Driller: O.C.O.															Elevation: 296.80	
Method: BECKER HAMMER-OPEN END															Date: 98/09/20	
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Sample Type	Recovery (%)	Grain Size (%)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Description	
1	0.0														compact, gray, GRAVEL	
2	0.3														(85)(11)(4)	
3	0.6														(GP)	
4	0.9														(85)(11)(4)	
5	1.2														(GP)	
6	1.5														(85)(11)(4)	
7	1.8														(GP)	
8	2.1														(85)(11)(4)	
9	2.4														(GP)	
10	2.7														(85)(11)(4)	
11	3.0														(GP)	
12	3.3														(85)(11)(4)	
13	3.6														(GP)	
14	3.9														(85)(11)(4)	
15	4.2														(GP)	
16	4.5														(85)(11)(4)	
17	4.8														(GP)	
SAMPLE TYPE: 1 - Core 2 - Split 3 - Split 4 - Split 5 - Split 6 - Split 7 - Split 8 - Split 9 - Split 10 - Split 11 - Split 12 - Split 13 - Split 14 - Split 15 - Split 16 - Split 17 - Split															SHEAR STRENGTH: 1 - Direct 2 - Triaxial 3 - Triaxial 4 - Triaxial 5 - Triaxial 6 - Triaxial 7 - Triaxial 8 - Triaxial 9 - Triaxial 10 - Triaxial 11 - Triaxial 12 - Triaxial 13 - Triaxial 14 - Triaxial 15 - Triaxial 16 - Triaxial 17 - Triaxial	
TESTS: 1 - Unconfined Compression 2 - Unconfined Compression 3 - Unconfined Compression 4 - Unconfined Compression 5 - Unconfined Compression 6 - Unconfined Compression 7 - Unconfined Compression 8 - Unconfined Compression 9 - Unconfined Compression 10 - Unconfined Compression 11 - Unconfined Compression 12 - Unconfined Compression 13 - Unconfined Compression 14 - Unconfined Compression 15 - Unconfined Compression 16 - Unconfined Compression 17 - Unconfined Compression															FILE No. PREPARED BY: SHEET 02 OF 02	

SUMMARY LOG															TEST HOLE No. 98-2	
Project: LOOP BRIDGE (EAST ABUT. SOUTH CORNER)															Location: 1010.75N - 2009.10E	
Driller: O.C.O.															Elevation: 298.14	
Method: BECKER HAMMER-OPEN END															Date: 98/09/20	
SPT Blows Per 150 mm Corrected for 60% Energy	Depth (m)	Sample Type	Recovery (%)	Grain Size (%)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Description	
1	0.0														loose, continuous COBBLES (max. 150mm)	
2	0.3														2.74M	
3	0.6														(S)	
4	0.9														(GP-QM)	
5	1.2														(75)(10)(15)	
6	1.5														(GP-QM)	
7	1.8														(75)(10)(15)	
8	2.1														(GP-QM)	
9	2.4														(75)(10)(15)	
10	2.7														(GP-QM)	
11	3.0														(75)(10)(15)	
12	3.3														(GP-QM)	
13	3.6														(75)(10)(15)	
14	3.9														(GP-QM)	
15	4.2														(75)(10)(15)	
16	4.5														(GP-QM)	
17	4.8														(75)(10)(15)	
SAMPLE TYPE: 1 - Core 2 - Split 3 - Split 4 - Split 5 - Split 6 - Split 7 - Split 8 - Split 9 - Split 10 - Split 11 - Split 12 - Split 13 - Split 14 - Split 15 - Split 16 - Split 17 - Split															SHEAR STRENGTH: 1 - Direct 2 - Triaxial 3 - Triaxial 4 - Triaxial 5 - Triaxial 6 - Triaxial 7 - Triaxial 8 - Triaxial 9 - Triaxial 10 - Triaxial 11 - Triaxial 12 - Triaxial 13 - Triaxial 14 - Triaxial 15 - Triaxial 16 - Triaxial 17 - Triaxial	
TESTS: 1 - Unconfined Compression 2 - Unconfined Compression 3 - Unconfined Compression 4 - Unconfined Compression 5 - Unconfined Compression 6 - Unconfined Compression 7 - Unconfined Compression 8 - Unconfined Compression 9 - Unconfined Compression 10 - Unconfined Compression 11 - Unconfined Compression 12 - Unconfined Compression 13 - Unconfined Compression 14 - Unconfined Compression 15 - Unconfined Compression 16 - Unconfined Compression 17 - Unconfined Compression															FILE No. PREPARED BY: SHEET 01 OF 02	

SUMMARY LOG											Geotechnical and Materials Branch		TEST HOLE No. 98-2																																																																																																																																																																																																																																																																																										
Project LOOP BRIDGE (EAST ABUT. SOUTH CORNER)											Location 1010.75N - 2009.10E SEE REPORT			Elevation 298.14																																																																																																																																																																																																																																																																																									
Driller O.C.O.											Method BECKER HAMMER-OPEN END			Date 98/09/20																																																																																																																																																																																																																																																																																									
SPT Blows Per 150 mm Corrected For 60% Energy	Depth (m)	Sample Type	Recovery (%)	Shale Recovery (%)	Grain Size (%)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)	Grain Size (mm)

Geotechnical and Materials Branch										TEST NO. MC-98-7									
SUMMARY LOG																			
Project Location LOOP BRIDGE (WEST ABUT. SOUTH CORNER) 1056.244+ - 2006.63E SEE REPORT										Division 298.61									
Order D.O.C.C.										Order 98/09/30									
SPT Blows Per 10' or Corrected for 60% Energy										Depth (ft) Sample Type Soils (Blows/ft) Accuracy (in) Shear Capacity (kPa) Friction (kPa) Cone Resistance (kPa) Friction Index Properties Classification Description Remarks									
19										(0) (1) (4) - - - (GP) compact, gray, GWELL some sand trace silt damp 19.50M									
20										(30) - - - (30) compact, continuous COBBLES 19.50M									
21										(0) (1) (4) - - - (GP) compact, gray, GWELL some sand trace silt damp 20.71M									
22										(30) - - - (GP) compact, continuous COBBLES 20.71M									
23										(0) (1) (4) - - - (GP) loose to compact, gray, GWELL some sand trace silt damp 22.85M									
24										(30) - - - (30) loose, continuous COBBLES 22.85M									
25										(0) (1) (4) - - - (GP) loose to compact, gray, GWELL some sand trace silt damp 25.29M									
26																			
27										(0) (3) (4) - - - (GP)									
28																			
29																			
30										(0) (3) (4) - - - (GP) loose to compact, gray, SAND trace silt, damp 33.22M									
31																			
32																			
33																			
34										ENCOUNTERED WATER AT 2.43M Open End BE (1) = (max. 150mm)									
35																			

SHEAR STRENGTH AFS										TESTS									
= Undrained Compression FV = Vane Value = Soil Value = Residual = Deviator Stress estimate Shear Stress Corrected to 3.3 M Energy Standard Penetration Test (SPT) (150)										G.A.T. = Borehole Analyte = Triaxial Compression = Consolidation = Unconfined, Plastic Limits = Moisture Content									
SAMPLE TYPE = Core = Split = Split, Specimen = Split = Block										FILE NO. 98-7 PREPARED BY 01/01/98 CHECKED BY									

INFORMATION NOTES

NOTE 1 Information provided herein is intended to be used by the Ministry of Transportation in conjunction with all other data relevant to the site. The soil and ground water conditions shown are representative of the best knowledge available at the time the data were collected. Conditions are subject to change with time. The Ministry of Transportation shall not be held liable for any claims or actions arising from the use or interpretation of the data herein provided.

NOTE 2 Field logs and laboratory test results are available for viewing from Geotechnical and Materials Engineering in Nelson.
(Phone No. (250) 354-6494)

NOTE 3 Gradation and classification of soil are based on a visual estimate unless otherwise noted under "other tests".

NOTE 4 Cobble and boulder sizes are drilled's estimate of the dimension encountered.

NOTE 5 BR = Bedrock
Blast Rock Strength (See Canadian Foundation Manual, 3rd Edition, Page 28)

	BRITISH COLUMBIA	Ministry of Transportation Southern Interior Region
EAST KOOTENAY HIGHWAY DISTRICT CROWNST HIGHTWAY No. 3 LOOP BRIDGE No. 0486 BOREHOLE LOGS SHEET 3		
PREPARED UNDER THE DIRECTION OF <i>David Gifford</i> ENGINEER OF RECORD DATE <i>April 28, 2009</i>		 DESIGNED _____ DATE _____ CHECKED _____ DATE _____ DRAWN BY _____ DATE _____ SCALE AS NOTED REVISION NIL PROJ. NO. _____ SHEET _____ DRAWING NO. 486-115
(Seal of the Province of British Columbia)		(Seal of the Ministry of Transportation)



BRITISH
COLUMBIA

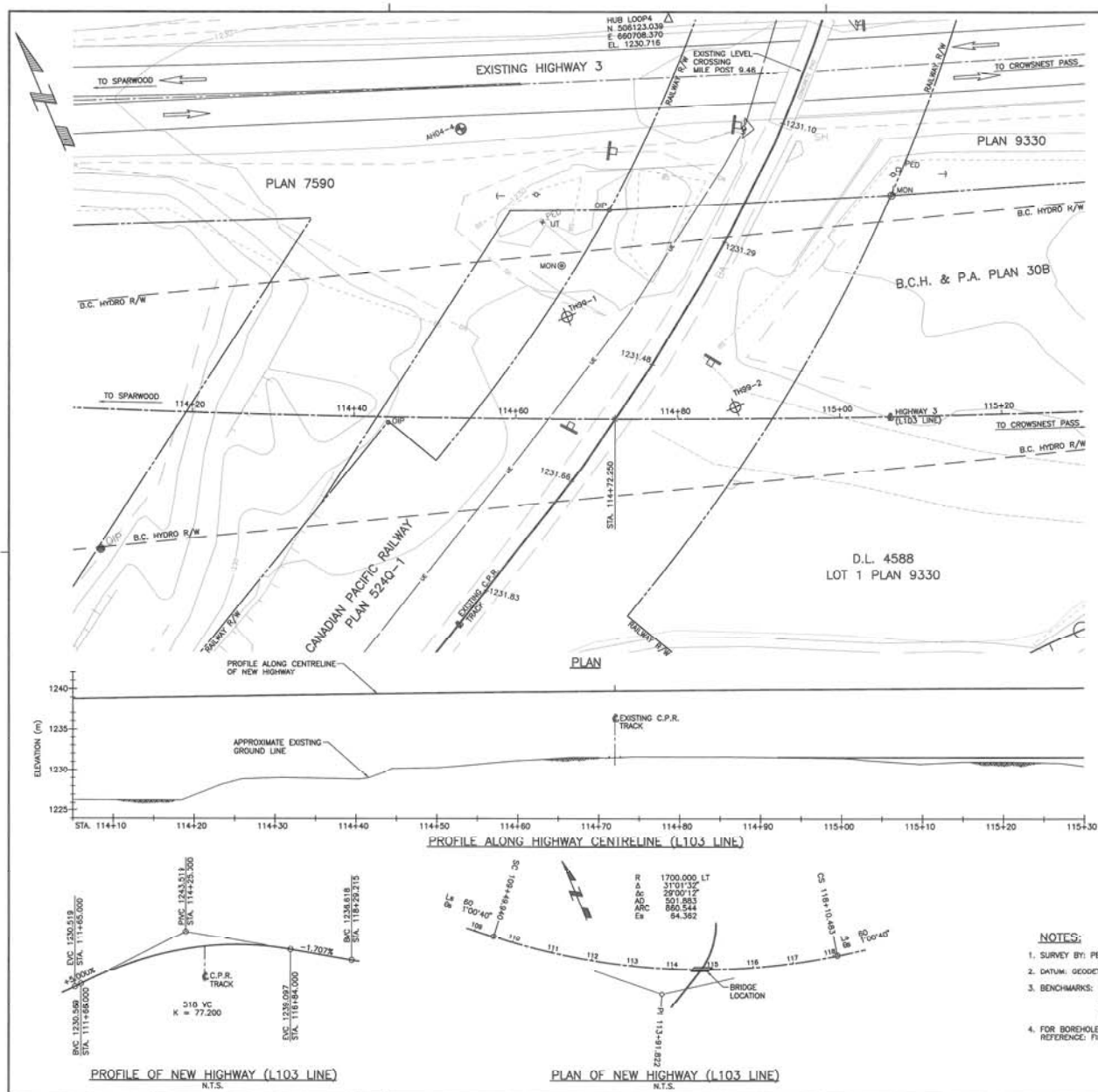
Ministry of Transportation & Infrastructure

Bridge Project

21675-0000

Corbin Overhead No. 7659

Crowsnest Highway #3



DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE
7659-02	SITE PLAN
7659-03	GENERAL ARRANGEMENT
7659-04	WEST ABUTMENT
7659-05	EAST ABUTMENT
7659-06	PIER 1 & 2
7659-07	GIRDER LAYOUT & DETAILS
7659-08	CONCRETE BOX GIRDERS - SHEET 1
7659-09	CONCRETE BOX GIRDERS - SHEET 2
7659-10	CONCRETE BOX GIRDERS - SHEET 3
7659-11	DECK OVERLAY PLAN
7659-12	MISCELLANEOUS DETAILS
7659-13	BOREHOLE LOGS
7659-14	BOREHOLE LOGS

REFERENCE DRAWINGS

DRAWING NUMBER	DRAWING TITLE
R2-658-001	KEY PLAN & INDEX
R2-658-104	PLAN
R2-658-201	PROFILE
R2-658-301	TYPICAL SECTIONS
R2-658-302	DRAINAGE DETAILS
R2-658-303	CONCRETE BARRIER DETAILS
R2-658-402	GEOMETRICS & LANNING

STANDARD DRAWINGS

DRAWING NUMBER	DRAWING TITLE
2784-1, Rev. R	STANDARD BRIDGE PARAPET 810mm HIGH
2785-2, Rev. C	STANDARD BRIDGE PARAPET STEEL RAILING (1995)



Rev	Date	Description	By

REVISIONS



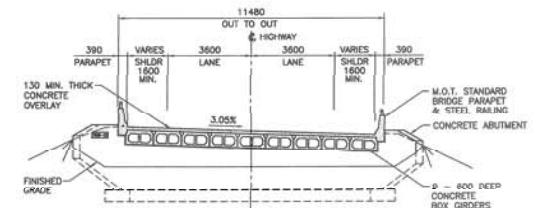
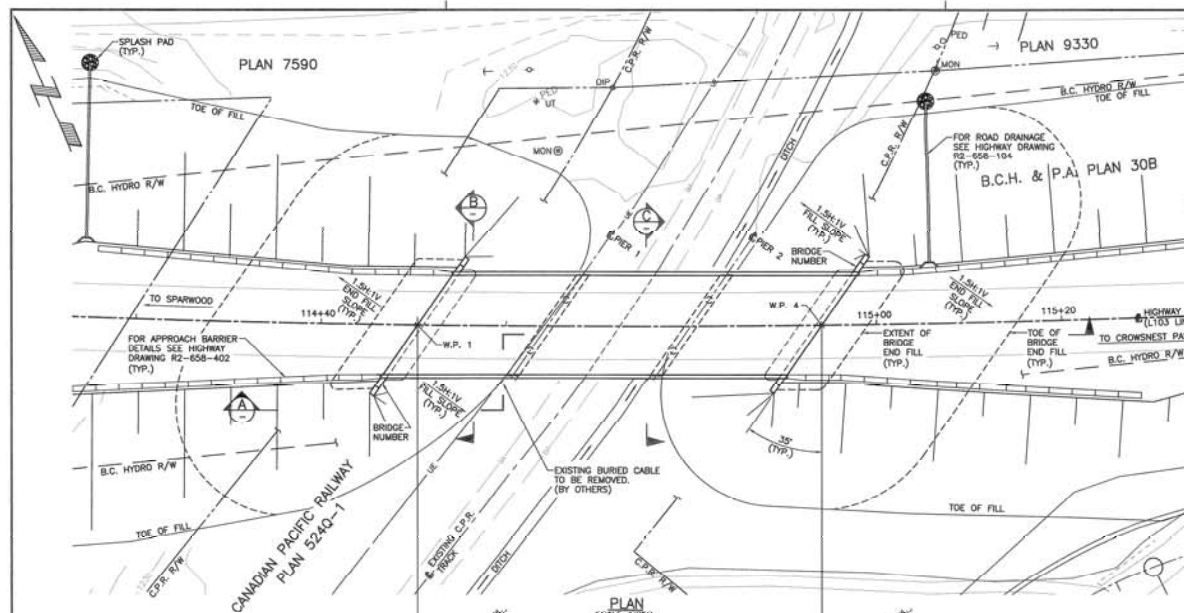
BRITISH COLUMBIA

Ministry of
Transportation & Infrastructure
Southern Interior Region

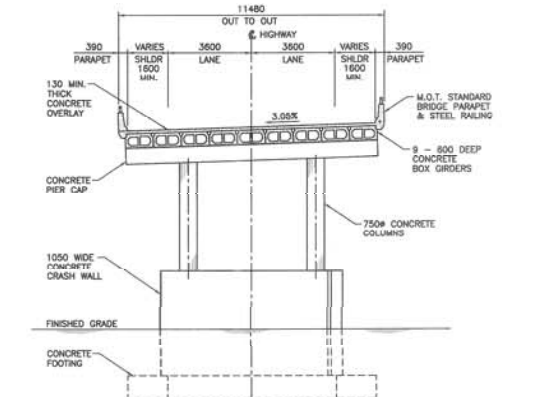
EAST KOOTENAY HIGHWAY DISTRICT
CROWSTEST HIGHWAY No. 3
CORBIN OVERHEAD
SITE PLAN

PREPARED UNDER THE DIRECTION OF	DESIGNED: S.H. DATE: MAY 2005
CHECKED: S.H. DATE: MAY 2005	DRAWN: S.H. DATE: MAY 2005
ENGINEER OF RECORD	SCALE: 1:250 U/N
DATE: MAY 1, 2007	REVISION No.
FILE No.	PROJECT No. 21675
	DRAWING No. 7659-02

CANCEL: PRINTED BEARING PREVIOUS LETTER



SECTION B
SCALE 1:100

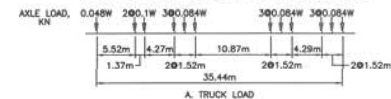


SECTION C
SCALE 1:100

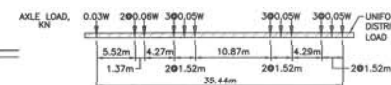
WORK POINT	NORTHING	EASTING
W.P. 1	N 506083.500	E 660657.125
W.P. 2	N 506077.990	E 660670.120
W.P. 3	N 506071.935	E 660684.385
W.P. 4	N 506066.435	E 660697.355

GENERAL NOTES:

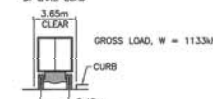
- DESIGN SPECIFICATIONS: CAN/CSA-S8-06, SEISMIC DESIGN IMPORTANCE CATEGORY "OTHER BRIDGE".
- DESIGN LOADS:
LIVE LOAD: BCL-625 + NOHLS PERMIT VEHICLE
DEAD LOAD: INCLUDES PROVISION FOR FUTURE 50mm OVERLAY.
EARTHQUAKE ACCELERATION COEFFICIENT: A = 0.05
DESIGN TEMPERATURE RANGE: -42°C MIN./13°C MAX.
RAINFALL: 13mm/15 MINUTES
WIND LOAD: 1/100 YEAR REFERENCE = 0.55 kPa
GROUND SNOW LOAD: S_e = 4.1 kPa, S_r = 0.2 kPa
SETTLEMENT: DESIGNED FOR 15mm AT ABUTMENTS AND PIERS.



A. TRUCK LOAD

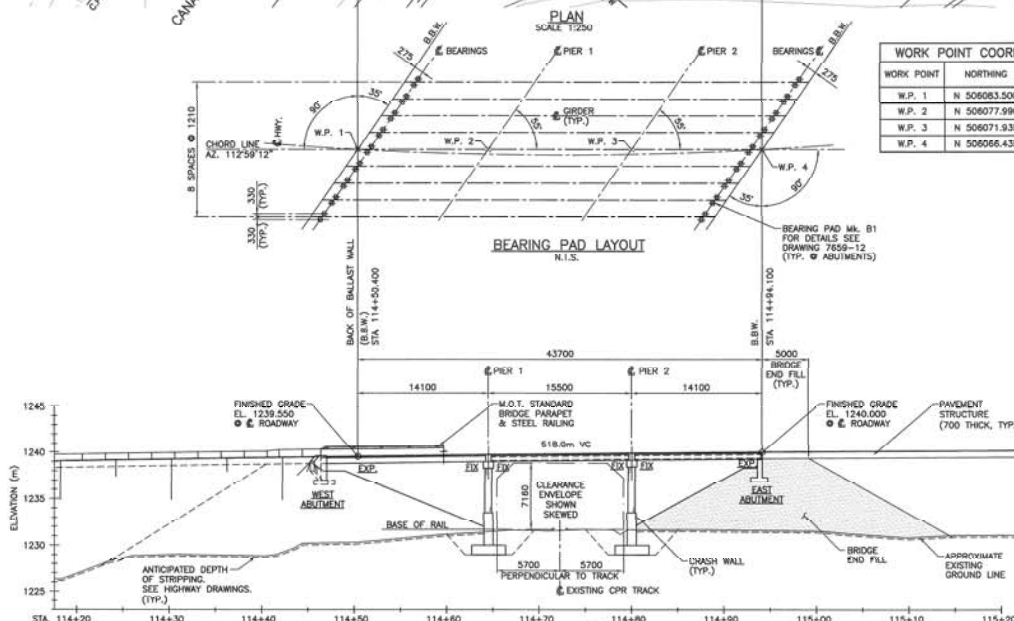


B. LANE LOAD



C. NOHLS PERMIT TRUCK WIDTH DIMENSIONS

- DESIGN SPEED: 100 km/h

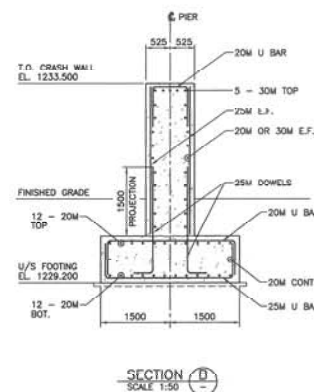
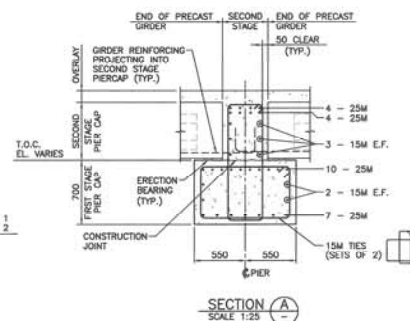


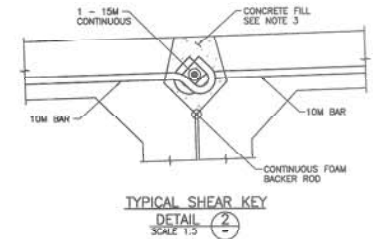
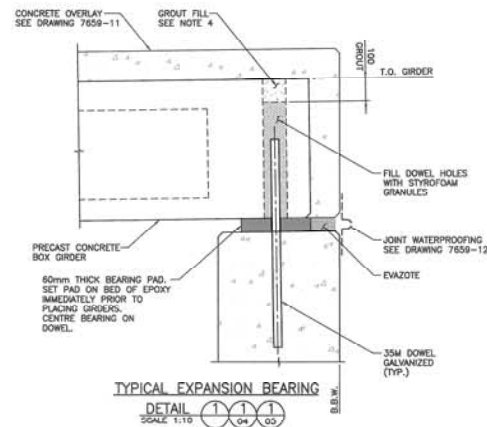
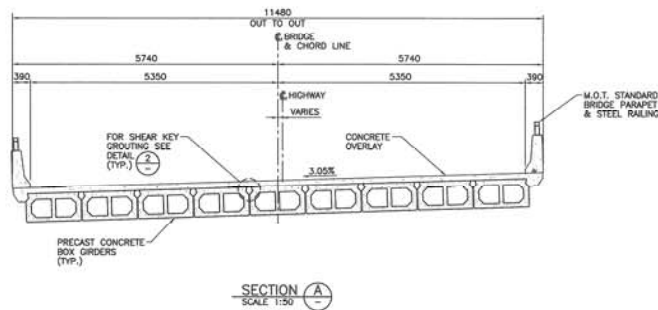
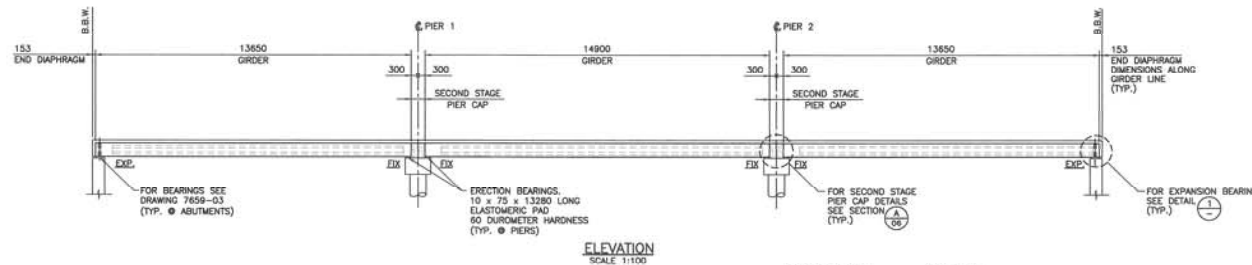
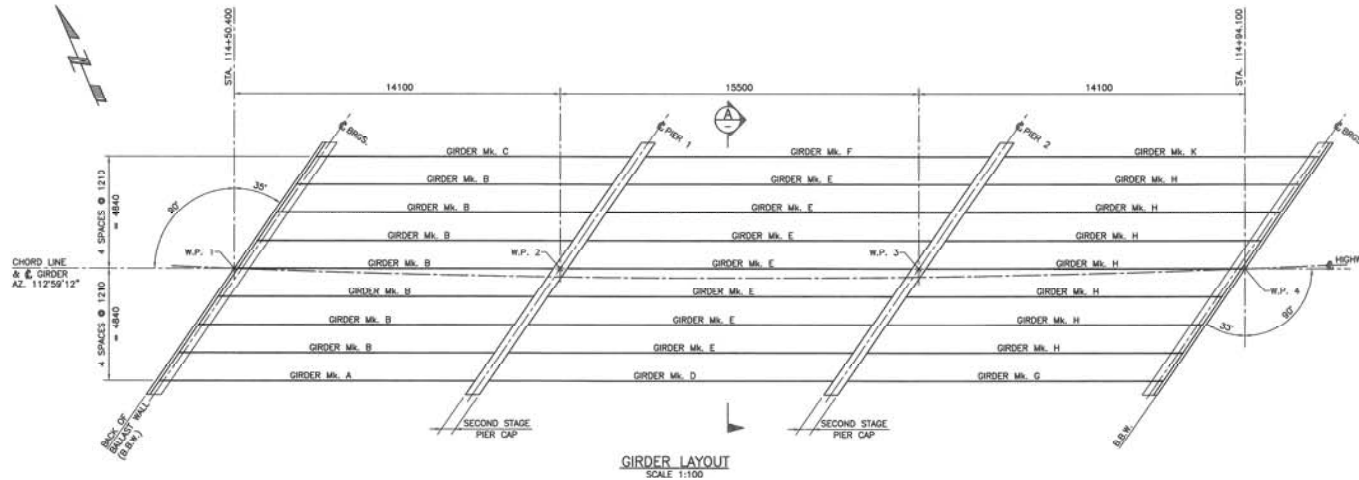
BEARING PAD LAYOUT
N.I.S.

SECTION A
SCALE 1:250

Klohn Crippen Berger			
Rev	Date	Description	Int

BRITISH COLUMBIA		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD GENERAL ARRANGEMENT			
PREPARED UNDER THE DIRECTION OF ENGINEER OF RECORD DATE: 14 JUL 2009 FILE NO.		DESIGNED: B.S. CHECKED: B.S. DRAWN: B.S. SCALE: AS NOTED NEGATIVE NO. PROJECT NO.: 21675 REV.: 7659-03	

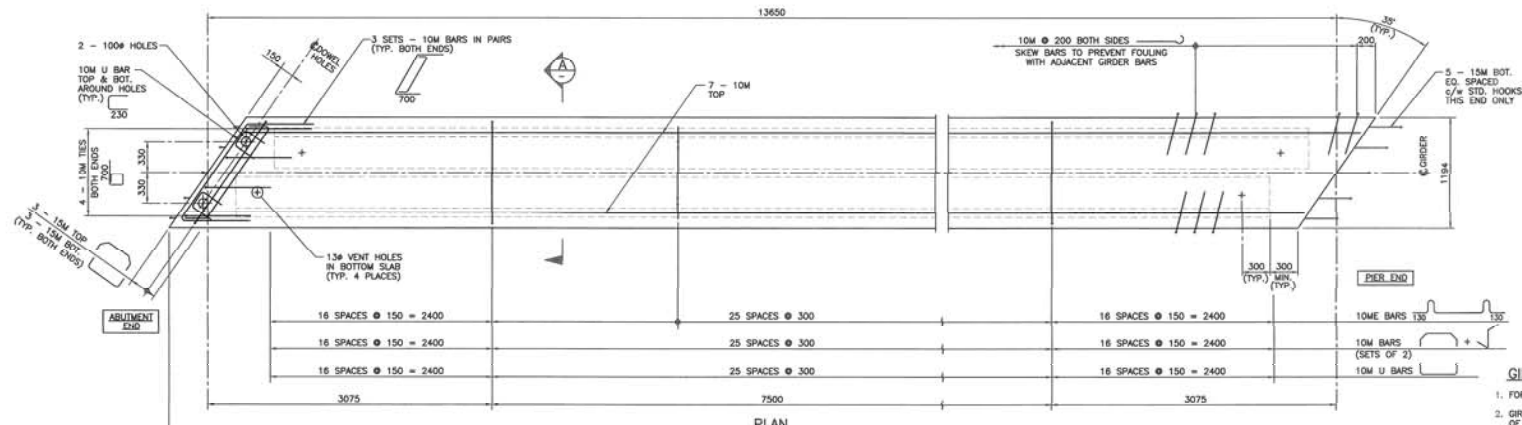




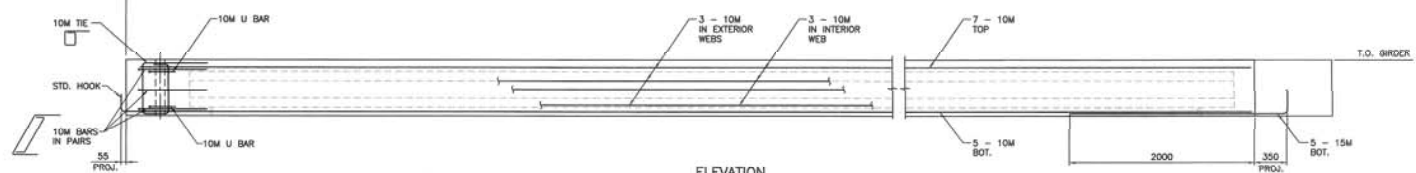
NOTES:

1. FOR GENERAL NOTES SEE DRAWING 7659-03.
2. FOR GIRDER NOTES SEE DRAWING 7659-08.
3. SHEAR KEYS BETWEEN ADJACENT GIRDERS SHALL BE FILLED WITH 14mm AGGREGATE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 35MPa AT 28 DAYS.
4. GROUT FOR DOWEL HOLES SHALL BE A NON-SHRINK, CEMENTITIOUS GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 35MPa AT 28 DAYS.

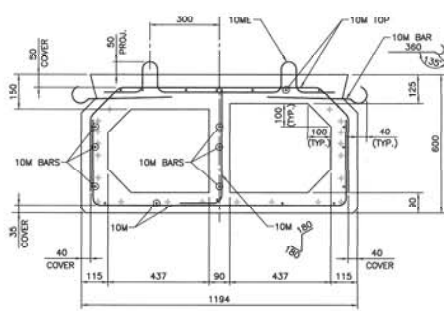
		Rev. Date Description Iss.	
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD GIRDER LAYOUT & DETAILS			
PREPARED UNDER THE DIRECTION OF DATE: 14/01/2009		DESIGNED: B.H. DATE: 09/01/2009 CHECKED: T.D. DATE: 09/01/2009 DRAWN: S.G. DATE: 09/01/2009 SCALE: AS NOTED REVISION: No.	
21675		7659-07	
CANCEL PRINTS BEARING PREVIOUS LETTER			



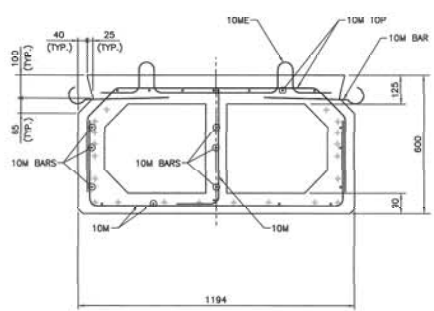
PLAN



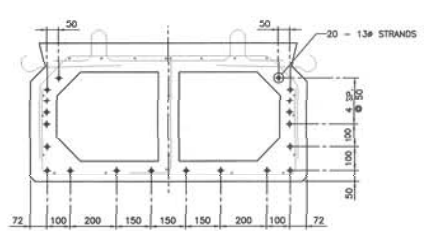
ELEVATION
GIRDER MK. A - AS SHOWN
GIRDERS MK. B & C - SIMILAR
SCALE 1:25



GIRDER MK. A
GIRDER MK. C - OPPOSITE HAND
SECTION (A)
SCALE 1:10

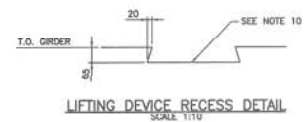


GIRDER MK. B
DETAILS AS GIRDER MK. A
UNLESS NOTED OTHERWISE
SECTION (A)
SCALE 1:10



PRESTRESSING STRAND LAYOUT
SCALE 1:10

ESTIMATED GIRDER MASS	
GIRDER MK. A	14810 kg
GIRDER MK. B	14260 kg
GIRDER MK. C	14810 kg



LIFTING DEVICE RECESS DETAIL
SCALE 1:10

GIRDER NOTES:

- FOR GENERAL NOTES SEE DRAWING 7659-03.
- GIRDERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 415 OF THE M.O.T. STANDARD SPECIFICATIONS.
- PRESTRESSING STRANDS SHALL BE 13 mm (7 WIRE) UNCOATED LOW RELAXATION STRANDS, CSA G279M-1982, 1862 MPa OR EQUIVALENT. MINIMUM ULTIMATE TENSILE STRENGTH = 184 kN/STRAND. STRAND TENSION IMMEDIATELY BEFORE RELEASE = 136 kN/STRAND.
- CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF: - 35 MPa AT THE TIME OF RELEASE OF STRANDS - 45 MPa AT 28 DAYS.
- BOTTOM EDGES OF ALL GIRDERS SHALL BE CHAMFERED 20 mm.
- REINFORCING STEEL SHALL CONFORM TO CAN/CSA G30.18, GRADE 400R.
- ALL REINFORCING MARKED "ME" IS COATED WITH PRIMER AND EPOXY.
- LAP SPICES SHALL BE STAGGERED WITH MINIMUM LAP LENGTH AS FOLLOWS:

	UNCOATED	EPOXY COATED
10M	340	630
- LIFTING DEVICES SATISFACTORY TO THE MINISTRY REPRESENTATIVE, SHALL BE PROVIDED OVER THE BEARINGS. ONLY VERTICAL LIFTS SHALL BE PERMITTED. CARE SHALL BE TAKEN TO PREVENT EXCESSIVE WEIGHT LOADS ON THE GIRDERS.
- THE CONCRETE IMMEDIATELY SURROUNDING ALL LIFTING DEVICES SHALL HAVE A FORMED RECESS, 65mm DEEP. THE RECESS SHALL BE THOROUGHLY SAND-BLASTED IN THE SHOP AFTER ERECTION. THE LIFTING DEVICE SHALL BE BURNED OFF AT THE BOTTOM OF THE RECESS AND THE RECESS SHALL BE PATCHED WITH AN APPROVED NON-SHRINK GROUT.
- FINISH OF GIRDER PRESTRESSING STRANDS SHALL BE PAINTED WITH A MINISTRY APPROVED GALVANIZING AGENT.
- TOP SURFACE OF ALL BOX GIRDERS SHALL BE ROUGH SCREENED BY WOOD FLOATING AND FURNISH WITH CHEMICAL RETARDER AND WATER-BLASTING IN ACCORDANCE WITH SECTION 415.41 OF THE STANDARD SPECIFICATIONS.

Klohn Crippen Berger

Rev	Date	Description	Iss

REVISIONS

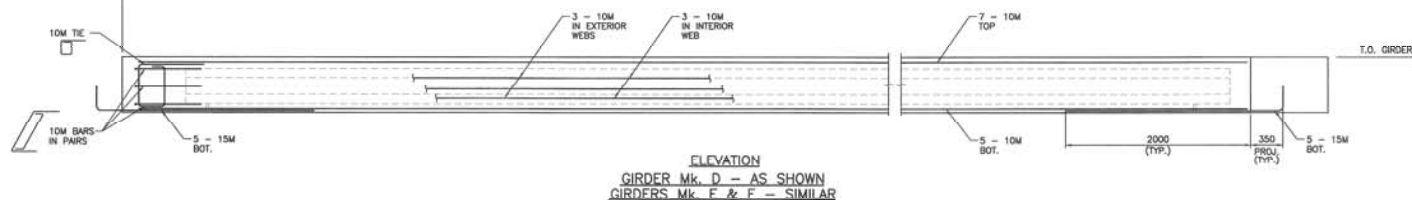
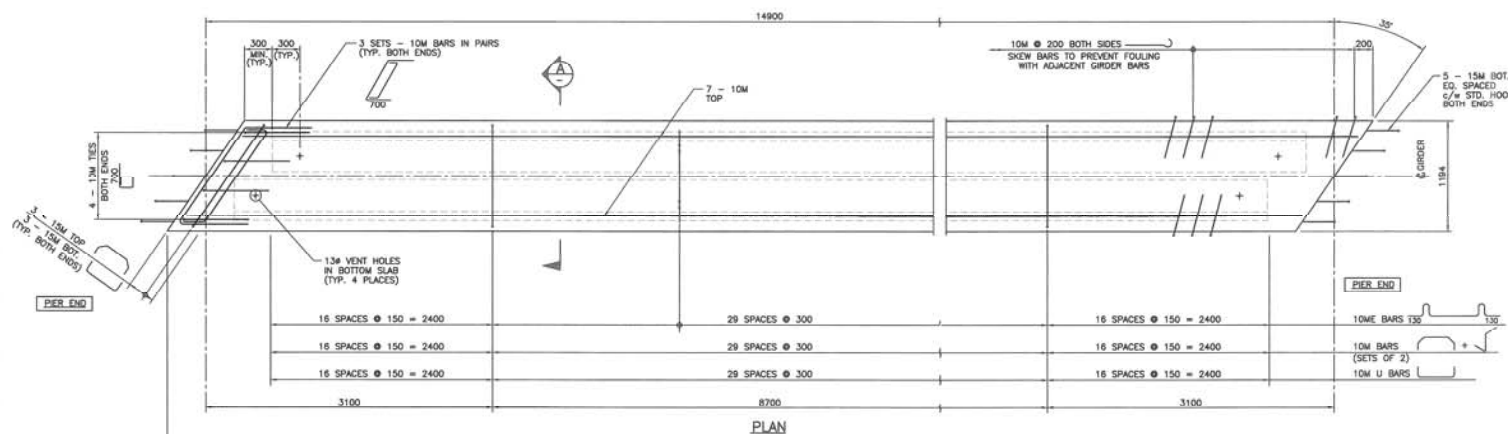
BRITISH COLUMBIA

Ministry of
Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
CORBIN OVERHEAD
CONCRETE BOX GIRDERS - SHEET 1

PREPARED UNDER THE DIRECTION OF		DESIGNED BY B.B. DATE 07/01/2005	
CHECKED BY V.D./A.S. DATE 08/17/2005		DRAWN BY R.C. DATE 07/01/2005	
PROJECT NO. 21675		SCALE AS NOTED	
DATE MAY 1, 2007		REV. 08	

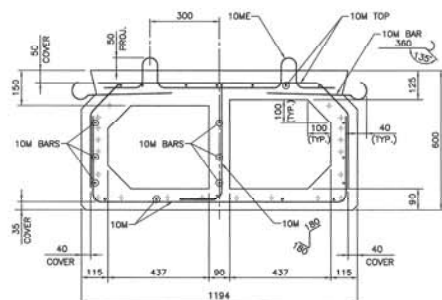
ESTIMATED GIRDER MASS	
GIRDER Mk. D	15830 kg
GIRDER Mk. E	15460 kg
GIRDER Mk. F	15630 kg



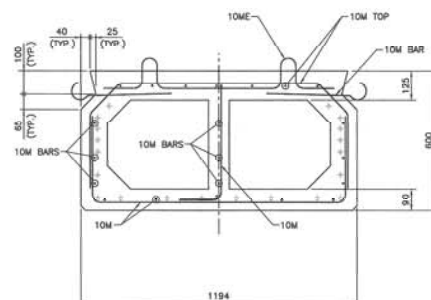
ELEVATION
GIRDER Mk. D - AS SHOWN
GIRDERS Mk. E & F - SIMILAR

NOTES:

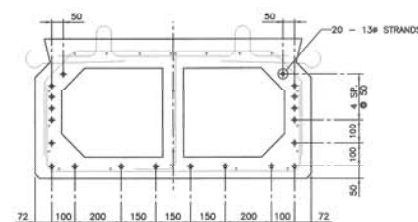
1. FOR GENERAL NOTES SEE DRAWING 7659-03.
2. FOR GIRDER NOTES SEE DRAWING 7659-08.



GIRDER Mk. D
GIRDER Mk. F - OPPOSITE HAND
SECTION (A)
SCALE 1:10



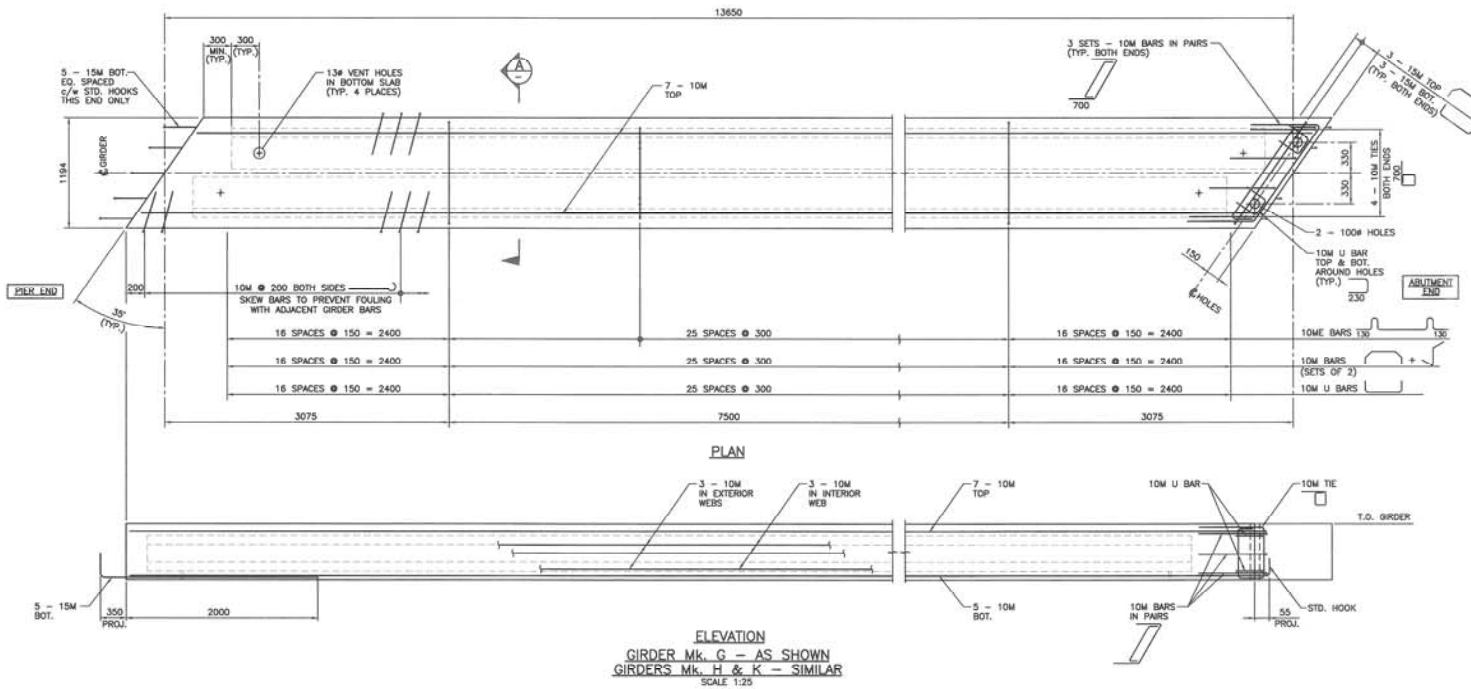
GIRDER Mk. F
DETAILS AS GIRDER Mk. D
UNLESS NOTED OTHERWISE
SECTION (A)
SCALE 1:10



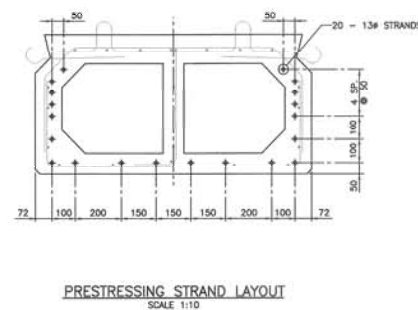
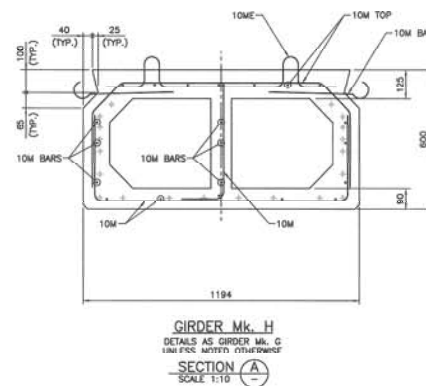
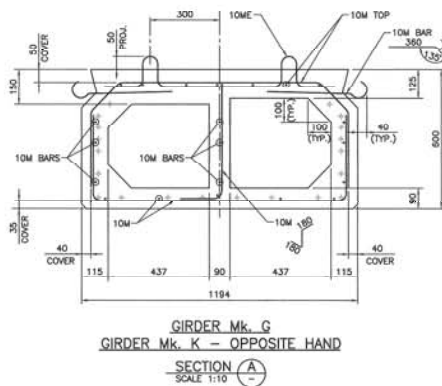
PRESTRESSING STRAND LAYOUT
SCALE 1:10

Rev	Date	Description	Iss
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD CONCRETE BOX GIRDERS - SHEET 2			
PREPARED UNDER THE DIRECTION OF		DESIGNED: S.B. DATE: 07/01/2009	
CHECKED: T.B./S.S. DATE: 07/01/2009		DRAWN: S.S. DATE: 07/01/2009	
SCALE 1:25 U/N		NEGATIVE No.	
OWNER OF RECORD DATE: 11/01/2009		PROJECT No. 21675	
DRAWING No. 7659-09			

CANCEL PRINTS BEARING PREVIOUS LETTER



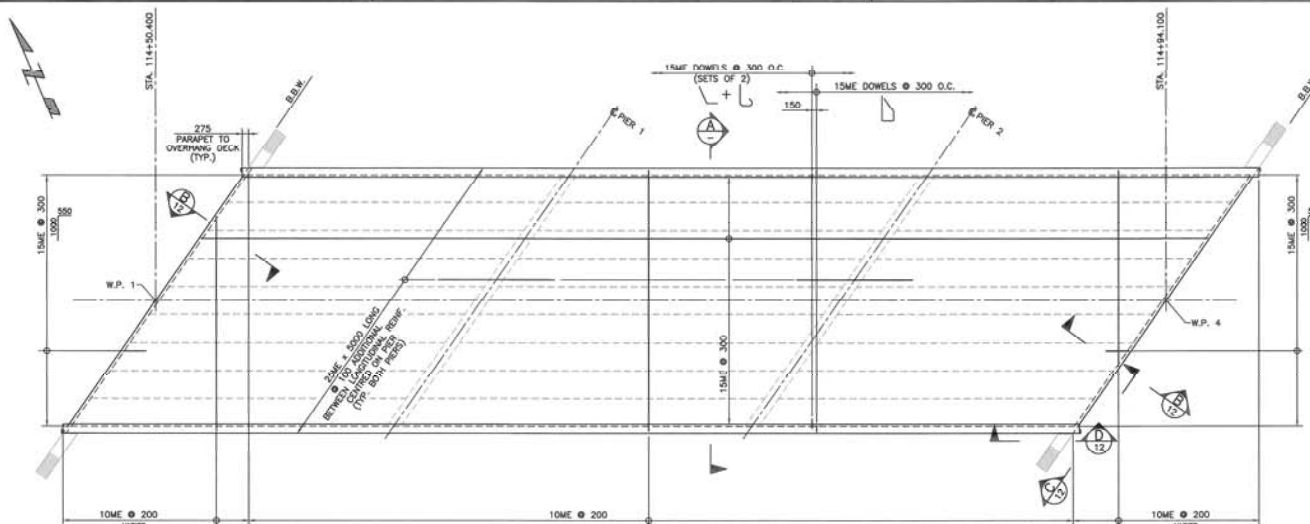
ESTIMATED GIRDER MASS	
GIRDER Mk. G	14610 kg
GIRDER Mk. H	14260 kg
GIRDER Mk. K	14610 kg



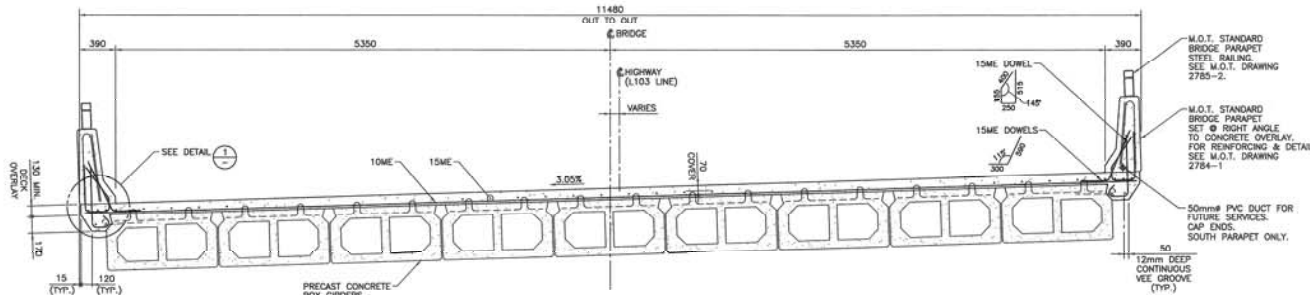
NOTES:

1. FOR GENERAL NOTES SEE DRAWING 7659-03.
2. FOR GIRDER NOTES SEE DRAWING 7659-06.

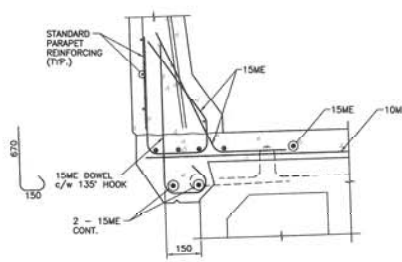
Rev	Date	Description	Vol
REVISIONS			
		Ministry of Transportation & Infrastructure Southern Interior Region	
EAST KOOTENAY HIGHWAY DISTRICT CROWNEST HIGHWAY No. 3 CORBIN OVERHEAD CONCRETE BOX GIRDERS - SHEET 3			
DESIGNED: B.B. DATE: 07/01/2009 CHECKED: T.S./N.G. DATE: 08/11/2009 DRAWN: R.G. DATE: 08/11/2009		SCALE: AS NOTED DATE: MAY 1, 2009 PROJECT No.: 21675 SHEET: 7659-10	
CANCEL PRINTS BEARING PREVIOUS LETTER			



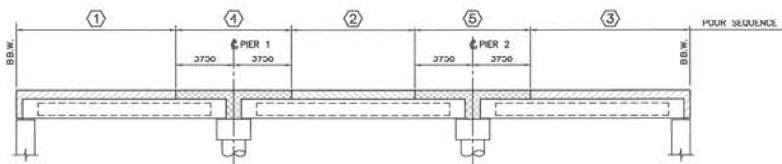
PLAN
SCALE 1:100



SECTION A-A
SCALE 1:25



DETAIL 1
SCALE 1:10



DECK OVERLAY & SECOND STAGE PIER CAP
PLACING SEQUENCE
SCALE N.T.S.

GENERAL DECK OVERLAY NOTES:

1. ALL CONCRETE FOR THE DECK OVERLAY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 35 MPa AT 28 DAYS.
2. ALL EXPOSED EDGES OF CONCRETE TO BE CHAMFERED 20 mm.
3. REINFORCING STEEL SHALL CONFORM TO CAN/CSA-030.18 GRADE 400R.
4. ALL REINFORCING STEEL SHALL HAVE 50mm COVER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
5. ALL REINFORCING MARKED 'ME' IS COATED WITH PRIMER AND EPOXY.
6. LAP SPICES SHALL HAVE A MINIMUM LAP LENGTH AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

	UNCOATED	UNCOATED TOP BARS	EPOXY COATED
10M	340	480	630
15M	480	680	890
20M	590	820	1 070
25M	900	1 260	1 640
30M	1 260	1 770	2 300

* HORIZONTAL REINFORCEMENT WITHIN 150mm FROM 300mm OF CONCRETE CAST BELOW BARS.

7. SPICES SHALL BE STAGGERED SO THAT NOT MORE THAN EVERY THIRD BAR IS SPICED AT ANY CROSS SECTION OF THE DECK.
8. PARAPETS TO BE FORMED AND CONCRETE PLACED AFTER ALL DECK OVERLAY CONCRETE HAS BEEN PLACED AND THE OVERLAY CONCRETE HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa.
9. DEFLECTION AND DIFFERENCE IN CAMBER SHALL BE ACCOMMODATED BY DECK SCORED ELEVATIONS PROVIDED BY THE MINISTRY REPRESENTATIVE. OVERLAY THICKNESS SHALL BE VARIED TO MAINTAIN A UNIFORM GRADE.
10. CONCRETE FOR EACH DECK SECTION SHALL BE PLACED IN ONE CONTINUOUS OPERATION.



Rev	Date	Description	Iss

REVISIONS

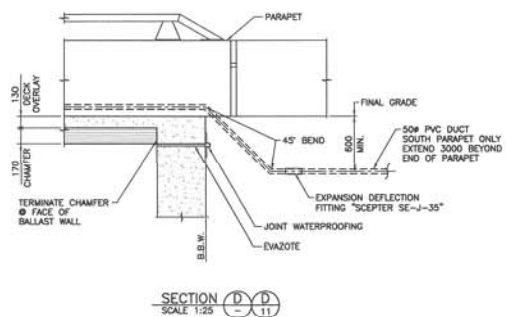
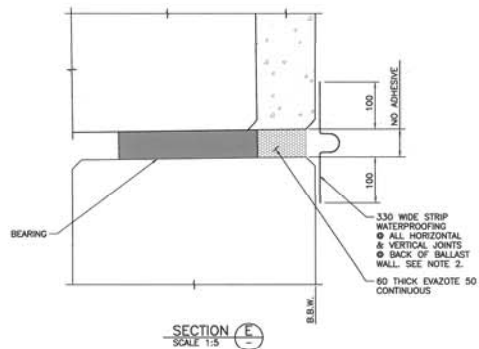


BRITISH COLUMBIA
Ministry of Transportation & Infrastructure
Southern Interior Region

EAST KOOTENAY HIGHWAY DISTRICT
CROWNEST HIGHWAY No. 3
CORBIN OVERHEAD
DECK OVERLAY PLAN

PREPARED UNDER THE DIRECTION OF DATE: MAY 1, 2009	DESIGNED: S.B. DATE: SEP 2005 CHECKED: T.B./S.S. DATE: JUL 2006 DRAWN: S.S. DATE: SEP 2005 SCALE: AS NOTED NEGATIVE: No.
PROJECT No. 21675	DRAWING No. 7659-11

CANCEL PRINTS BEARING PREVIOUS LETTER



BEARING DESIGN DATA		
SL1 - COMB. 1		
	WEST ABUTMENT	EAST ABUTMENT
BEARING SIZE	60 x 300 x 300	60 x 300 x 300
PERMANENT LOADS	96 kN	96 kN
TOTAL LOADS	215 kN	215 kN
MOVEMENT	16.4 mm	16.4 mm

1. FOR GENERAL NOTES SEE DRAWING 7659-03.
2. JOINT WATERPROOFING AT BACK OF ABUTMENTS SHALL BE STAFST 1.14 (45 MIL) EPDM RUBBER MEMBRANE OR APPROVED ALTERNATE.
APPLY IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

[illegible]

TEST PIT LOG				Su - kPa		
DEPTH (m)	SAMPLE TYPE	SAMPLE No	SYMBOL	STARTED: 12/17/2004	FINISHED: 12/17/2004	INSTRUMENT DETAILS
				EXCAVATOR TYPE:		VANE FIELD LAB PEAK REMOILD * % FINES
				GROUND ELEV. (m): 1231.0		▲ UC/2 ▲ P/10ENR2
				COORDINATES (m): N 500115.20 E 000073.59		W% W% W% X - - - X
				DESCRIPTION OF MATERIALS		20 40 60 80
0.5			1230.9 Asphalt			
1.0			Sand and Gravel, some cobbles, some hard layers			
1.5			Sample G1 at 1.2m			
2.0			Sample G2 at 2.5m			
2.5						
3.0			3.00			
3.5			1228.0 Sand and Gravel, easier to auger than upper part of hole			
4.0						
4.5			4.50			
5.0			1226.5			
5.5						
6.0						
6.5						
7.0						
7.5						
8.0						
8.5						
9.0						
9.5						
10.0						



KLOHN CRIPPEN

PROJECT NO.: P01559 A01

PROJECT: Loop Bridge No. 0486 - Replacement

LOCATION: Spanwood, BC

LOGGED BY: AP CHECKED BY:

SHEET 1 OF 1 HOLE NO.: AH04-4

NOTES:
1. FOR TEST PIT LOCATION SEE DRAWING 7659-02.

Klohn Crippen Berger			
Rev	Date	Description	Init

BRITISH COLUMBIA

EAST KOOTENAY HIGHWAY DISTRICT
CROWSNEST HIGHWAY No. 3
CORBIN OVERHEAD
BOREHOLE LOGS

Ministry of Transportation & Infrastructure
Southern Interior Region

PREPARED UNDER THE DIRECTION OF <i>Angela Poir</i> DATE: <i>March 1, 2009</i>	DESIGNED: A.D.P. DATE DEC. 2004 CHECKED: C.W.S. DATE AUG. 2005 DRAWN: J.D. DATE MAY 2005 SCALE: N/A NEGATIVE: No.	PROJECT No. 21675 HOLE No. 7659-13
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