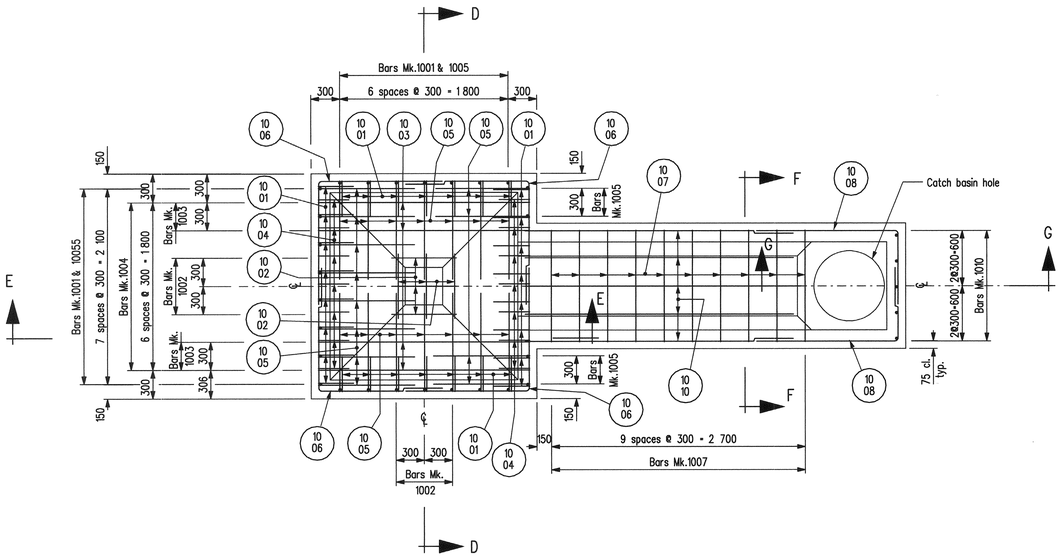
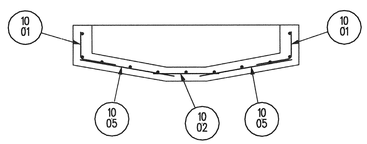
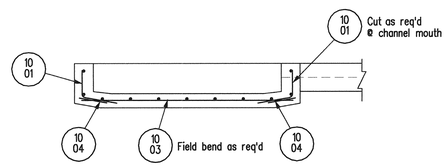


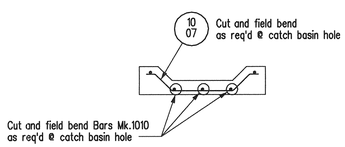
PLAN



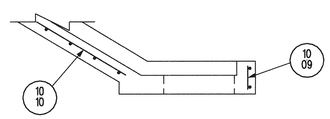
SECTION D-D



SECTION E-E



SECTION F-F



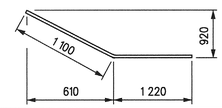
SECTION G-G

DRAIN PAD REINFORCING DETAILS

North drainage
Scale 1:30

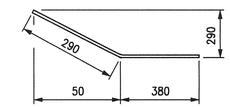
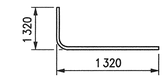
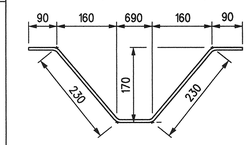
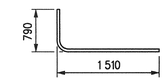
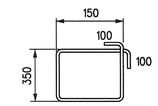
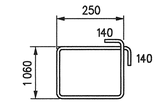
BILL OF REINFORCING
FOR DRAIN PAD AND SLOPE PROTECTION

SITE 2924-00

MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
1505	BENT	90	2 320	55	200.33	

BILL OF REINFORCING
FOR DRAIN PAD AND SLOPE PROTECTION

SITE 2924-00

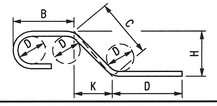
MARK	TYPE	PIN DIAMETER	LENGTH	No.	MASS	BENDING DIAGRAM
1001	BENT	60	670	60	31.56	
1002	STR		690	12	6.50	
1003	STR		2 250	8	14.13	
1004	STR		380	28	8.35	
1005	STR		1 080	52	44.09	
1006	BENT	60	2 640	8	16.58	
1007	BENT	60	1 330	20	20.88	
1008	BENT	60	2 300	4	7.22	
1009	STR		250	10	1.96	
1010	STR		2 850	10	22.37	
1011	BENT	45	1 200	30	28.26	
1012	STR		10 000	15	117.75	
1013	STR		6 250	15	73.59	
1014	STR		4 370	52	178.38	
1501	BENT	65	2 900	55	250.41	
1502	STR		4 370	8	54.89	
1503	STR		10 000	6	94.20	
1504	STR		6 430	6	60.57	

Total mass of reinforcing steel 1 232.66 kg

Total volume of structural concrete Drain pads 4.61 m³ and slope protection 19.18 = Total of 23.79 m³

NOTES:

1. All dimensions given in bending diagram are out to out, except radii and extensions on 90°, 135° & 180° hooks. Extensions on 90°, 135° & 180° hooks are the "A" or "G" dimensions for the standard 90°, 135° & 180° hooks referenced from the RSIC "Manual of Standard Practice". Radii are inside dimensions. All reinforcing steel bends and hooks shall conform to Clause 6.6.2 of C.S.A. A23.1-04, unless noted otherwise in the BILL OF REINFORCING STEEL.
2. All reinforcing steel shall be deformed steel, unless noted otherwise in the BILL OF REINFORCING STEEL.
3. All reinforcing steel shall conform to CSA G30.18-M92 "Billet Steel Bars for Concrete Reinforcement" Grade 400W, unless noted otherwise in the BILL OF REINFORCING STEEL.
4. Like bars shall be bundled, securely tied and identified as to Mark and Site No. by appropriate means. All other items to be identified in a similar fashion.
5. All bars shall be bent in accordance with the following detail:



NOTES:

1. Exterior dimensions will be finalized by the Engineer to suit filed conditions with maximum dimensions shown.
2. Reinforcing bars shall be cut and bent as required to suit field verified dimensions.
2 Concrete cover shall be 75 clearance unless noted otherwise.
3. Minimum lap length 15M bars = 550
10M bars = 390

REVISIONS		
DATE	BY	DESCRIPTION

PROVINCE OF MANITOBA
March 15/10
S.S RIHAL
REGISTERED PROFESSIONAL ENGINEER

DRAIN PAD AND SLOPE PROTECTION REINFORCING DETAILS

RECONSTRUCTION AND STRENGTHENING OF EXISTING BRIDGE
OVER ASSINIBOINE RIVER - CONTRACT THREE
ON P.T.H. No. 100 IN R.L.'S 72, 73 & 94
PARISH OF ST. CHARLES

CITY OF WINNIPEG

Manitoba
Infrastructure and Transportation
Water Control & Structures

RELEASED FOR CONSTRUCTION BY:
DIRECTOR / DATE
STRUCTURES DESIGN AND CONSTRUCTION BRANCH

DESIGN	BY: M.B.C.	SCALE: As Shown
	CHECKED: S.S.R.	SHEET No. 119
DETAILS	BY: N.J.	
	CHECKED: S.S.R./J.J.	SITE No. 2924-00

...\292400_Catch basins and concrete pipe.dgn 2010-03-12 3:35:47 PM