

The Government of the Province of British Columbia  
 Department of Environment  
 Water Resources Service

Canada - British Columbia  
 Fraser River Flood Control 1968 Agreement  
 Project No. 3 The Township of Richmond

Contract No. 12

North Dyke Improvements  
 No. 8 Road to Boundary Road

**DRAWING LIST**

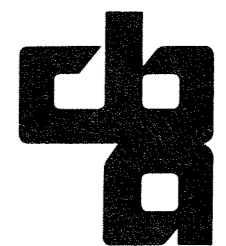
CONTRACT DRAWINGS

4795-12-1 GENERAL PLAN  
 4795-12-2 ALIGNMENT PLAN  
 CHAINAGE 648+40 to 664+74  
 4795-12-3 ALIGNMENT PLAN  
 CHAINAGE 664+74 to 724+00  
 4795-12-4 ALIGNMENT PLAN  
 CHAINAGE 724+00 to 785+00  
 4795-12-5 ALIGNMENT PLAN  
 CHAINAGE 785+00 to 829+50  
 4795-12-6 TYPICAL DYKE SECTIONS  
 SHEET 1 of 5  
 4795-12-7 TYPICAL DYKE SECTIONS  
 SHEET 2 of 5  
 4795-12-8 TYPICAL DYKE SECTIONS  
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 4795-12-9 TYPICAL DYKE SECTIONS  
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 4795-12-10 TYPICAL DYKE SECTIONS  
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 4795-12-11 MISCELLANEOUS DETAILS  
 SHEET 1 of 3  
 4795-12-12 MISCELLANEOUS DETAILS  
 SHEET 2 of 3  
 4795-12-13 MISCELLANEOUS DETAILS  
 SHEET 3 of 3

REFERENCE DRAWINGS

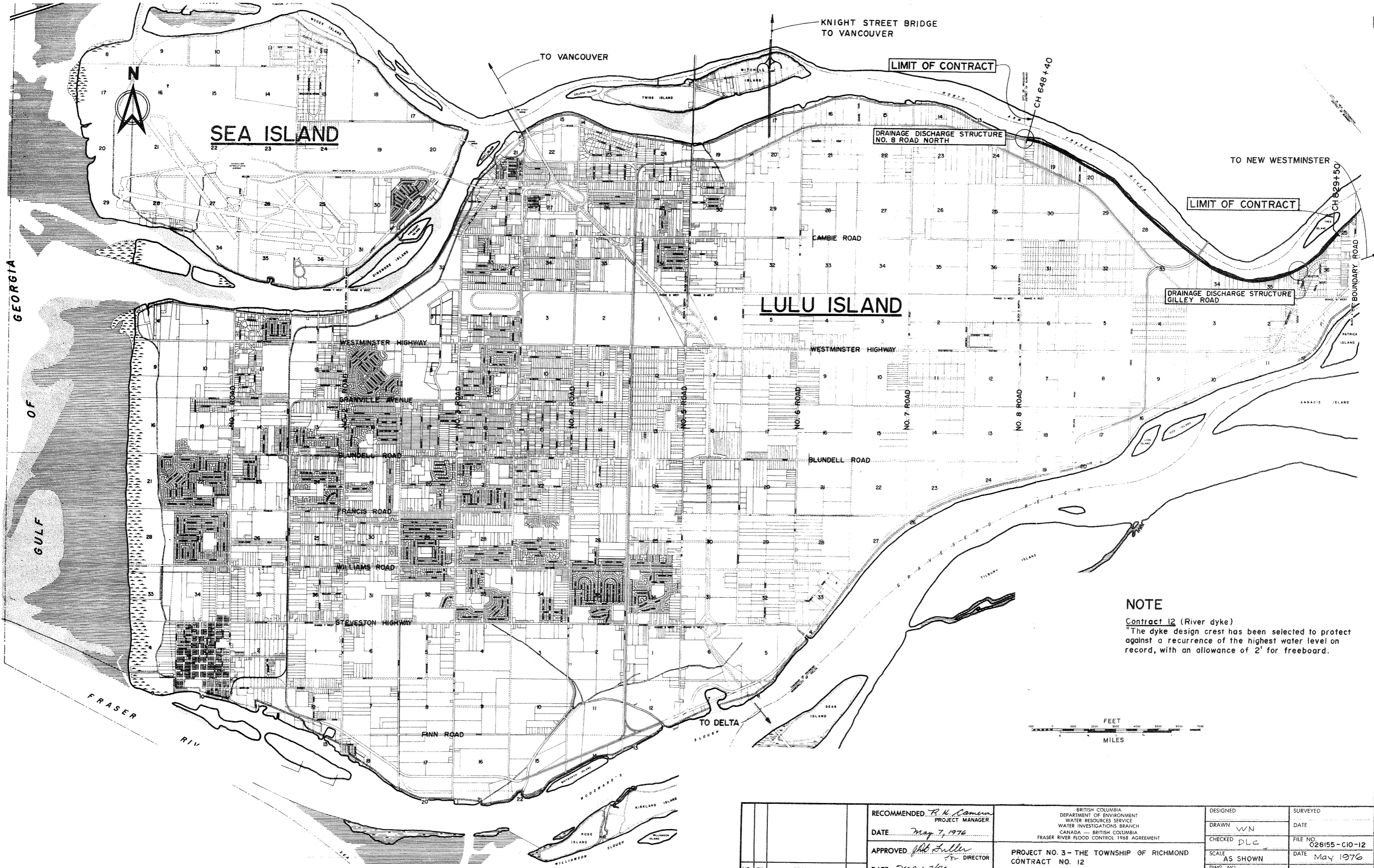
4795-12-14 DITCH CROSSING DETAILS  
 SHEET 1 of 4  
 4795-12-15 DITCH CROSSING DETAILS  
 SHEET 2 of 4  
 4795-12-16 DITCH CROSSING DETAILS  
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 4795-12-17 DITCH CROSSING DETAILS  
 SHEET 4 of 4  
 4795-12-18 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 1 of 7  
 4795-12-19 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 2 of 7  
 4795-12-20 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 3 of 7  
 4795-12-21 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 4 of 7  
 4795-12-22 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 5 of 7  
 4795-12-23 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 6 of 7  
 4795-12-24 TREE REMOVAL, CLEARING, GRUBBING  
 AND DITCH CROSSINGS  
 SHEET 7 of 7

4795-12-25 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 1 of 7  
 4795-12-26 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 2 of 7  
 4795-12-27 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 3 of 7  
 4795-12-28 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 4 of 7  
 4795-12-29 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 5 of 7  
 4795-12-30 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 6 of 7  
 4795-12-31 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
 EXISTING SURVEY MARKERS & UTILITIES  
 SHEET 7 of 7



CBA ENGINEERING LTD

Consulting Engineers  
 Vancouver, Canada



**SEA ISLAND**

**LULU ISLAND**

KNIGHT STREET BRIDGE TO VANCOUVER

LIMIT OF CONTRACT

DRAINAGE DISCHARGE STRUCTURE NO. 8 ROAD NORTH

LIMIT OF CONTRACT

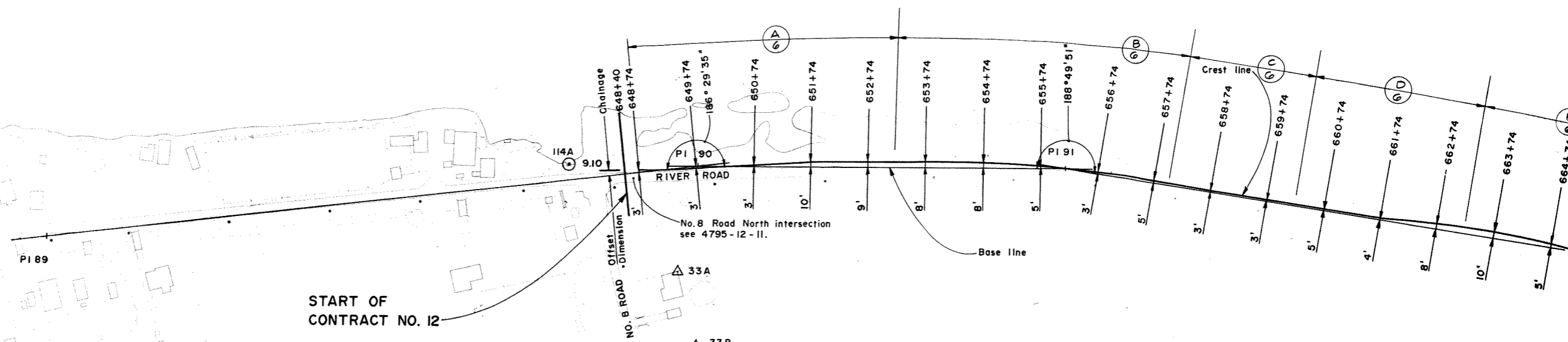
DRAINAGE DISCHARGE STRUCTURE GILLEY ROAD

**NOTE**

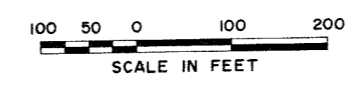
Contract 12 (River dyke)  
 The dyke design crest has been selected to protect against a recurrence of the highest water level on record, with an allowance of 2' for freeboard.



NO.	BY	REVISIONS	DATE	RECOMMENDED <i>P. H. Cameron</i> PROJECT MANAGER	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED	SURVEYED
				DATE <i>May 7, 1976</i>		DRAWN <i>WN</i>	DATE
				APPROVED <i>J. B. Fuller</i> DIRECTOR	PROJECT NO. 3 — THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 GENERAL PLAN	CHECKED <i>DLC</i>	FILE NO. <i>028155-C10-12</i>
				DATE <i>May 7/76</i>		SCALE <i>AS SHOWN</i>	DATE <i>May 1976</i>
						DWG. NO. <i>4795-12-1</i>	SHEET OF SHEETS



START OF CONTRACT NO. 12



BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
89	S 81° 49' 16" E	638 + 36.83	1139.96	16 039.37	61 641.36
90	S 75° 19' 41" E	649 + 76.79	641.33	15 877.22	62 769.55
91	S 66° 29' 50" E	656 + 18.12	908.28	15 714.81	63 389.84
92		665 + 26.40		15 352.72	64 222.50

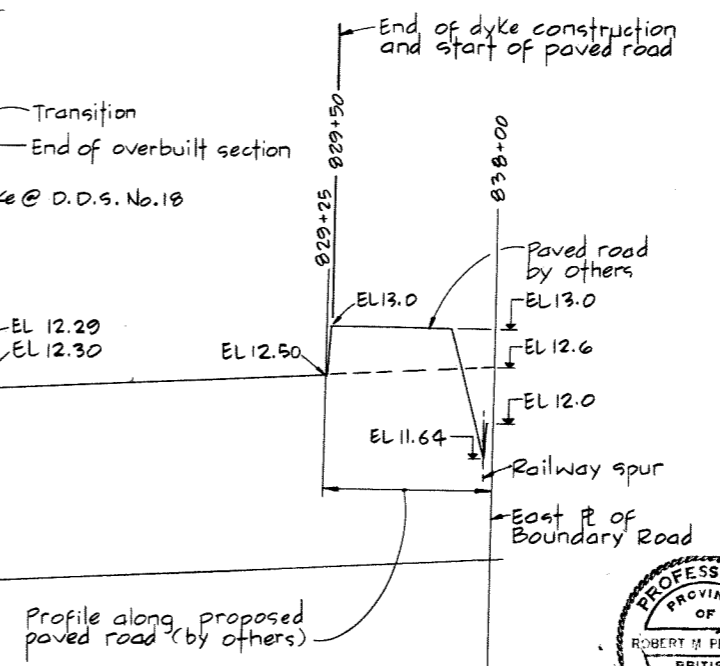
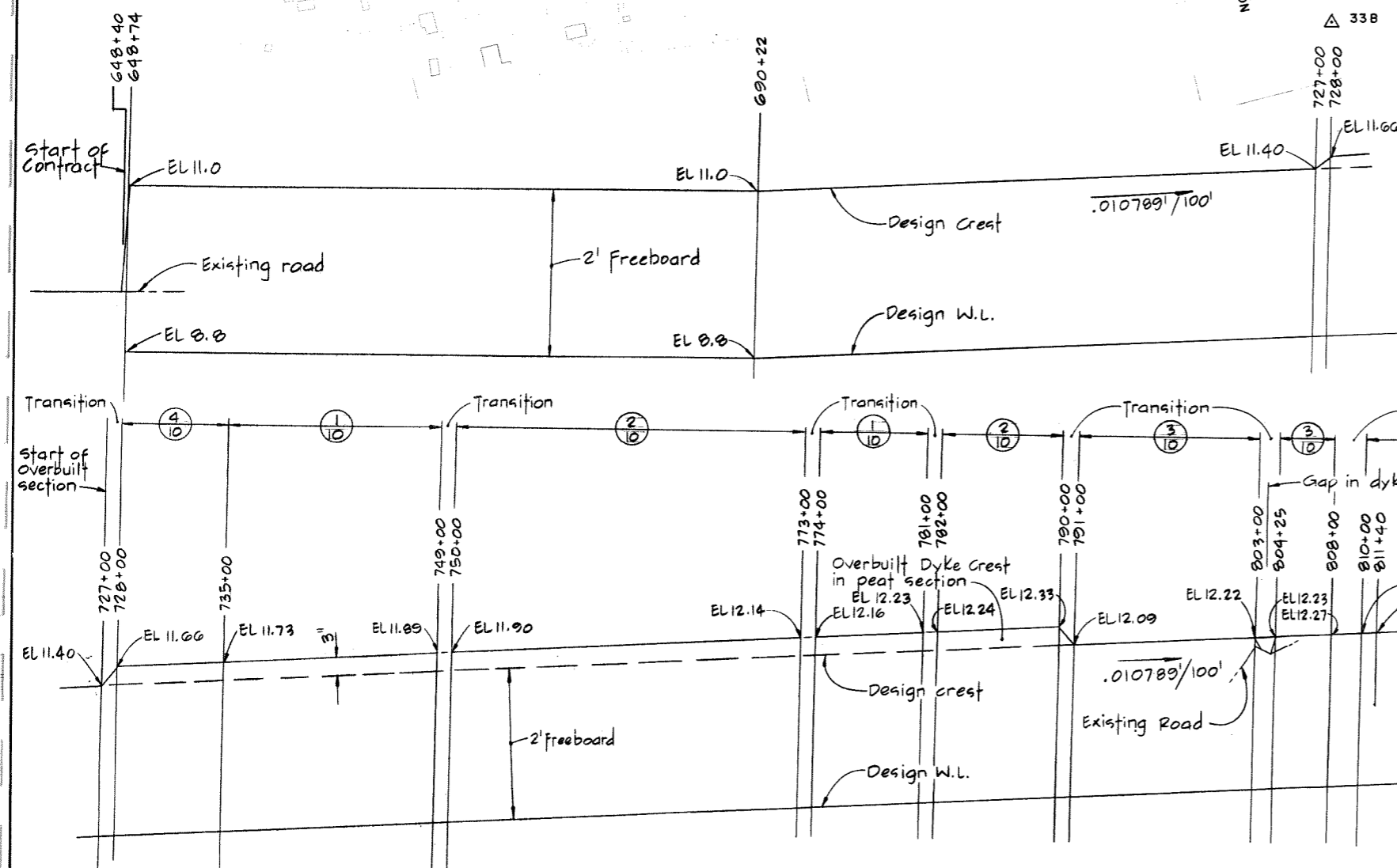
SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATE	
		NORTH	EAST
33A	PIPE IN CONCRETE	15,707.90	62,692.04
33B	DITTO	15,574.03	62,691.61

**NOTES:**  
For descriptive location of monuments & bench marks see specifications.

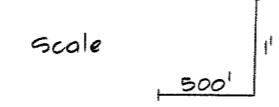
- LEGEND**
- △ 20A Survey monuments
  - BS00112A Bench mark & Geodetic elevation
  - ① Detail identification number.
  - ⑩ Dwg No. on which the detail is drawn (ie 4795-12-[10])
  - Ⓐ Section identification letter
  - Ⓔ Dwg No. on which the section is drawn (ie 4795-12-[6])

**NOTES**

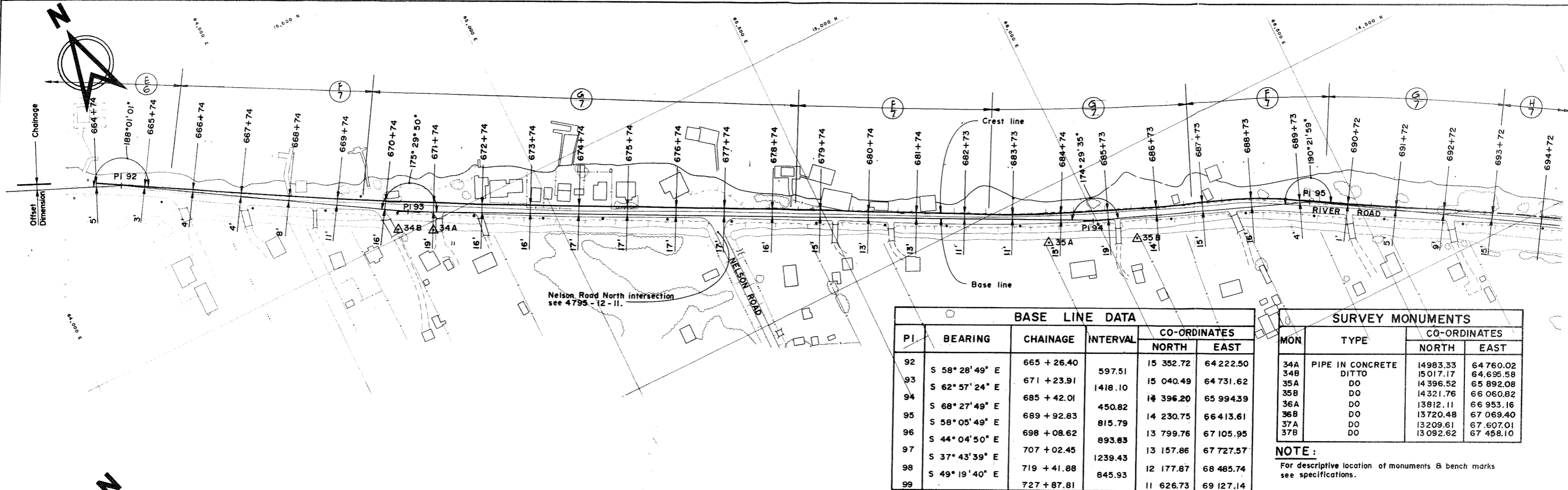
- Elevations refer to the Geodetic Survey of Canada.
- A smooth alignment should be maintained over the entire length of the dyke.
- Offset distances from base line to crest line are taken at the design crest elevation.
- The angle of offset is 90° to base line unless otherwise indicated.
- The line defined as the crest line is the river side shoulder of the dyke.
- Terminal parts of the work shall be constructed to blend with the existing ground



PROFILE ALONG & OF ROADWAY OR & OF DYKE CREST SHOWING RELATIONSHIP OF DYKE DESIGN CREST TO DESIGN WATER LEVEL



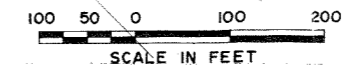
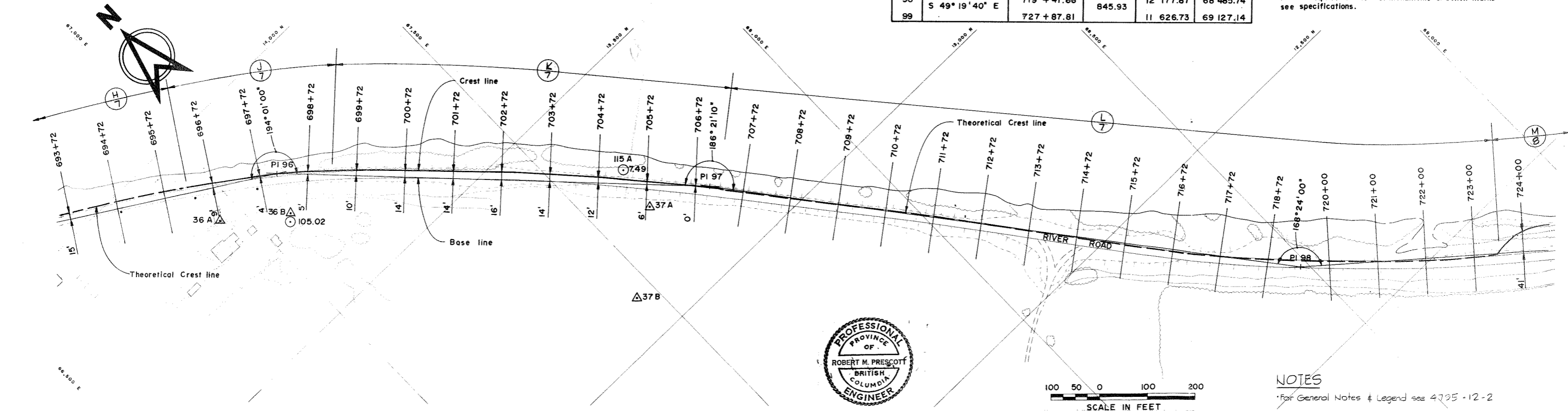
RECOMMENDED <i>T. R. Cameron</i> PROJECT MANAGER	DATE <i>May 7, 1979</i>	APPROVED <i>[Signature]</i> DIRECTOR	DATE <i>May 7/79</i>	DESIGNED <i>DLC</i>	SURVEYED
				DRAWN <i>Wn</i>	DATE
BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT				CHECKED <i>DLC</i>	FILE NO. <i>0281550-C10-12</i>
CONTRACT NO. 12 ALIGNMENT PLAN CH 648 + 40 TO CH 664 + 74				SCALE <i>AS SHOWN</i>	DATE <i>May 1976</i>
NO. BY REVISIONS DATE				DWG. NO. <i>4795-12-2</i>	SHEET OF SHEETS



BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
92	S 58° 28' 49" E	665 + 26.40	597.51	15 352.72	64 222.50
93	S 62° 57' 24" E	671 + 23.91	1418.10	15 040.49	64 731.62
94	S 68° 27' 49" E	685 + 42.01	450.82	14 396.20	65 994.39
95	S 58° 05' 49" E	689 + 92.83	815.79	14 230.75	66 413.61
96	S 44° 04' 50" E	698 + 08.62	893.83	13 799.76	67 105.95
97	S 37° 43' 39" E	707 + 02.45	1239.43	13 157.86	67 727.57
98	S 49° 19' 40" E	719 + 41.88	845.93	12 177.87	68 485.74
99		727 + 87.81		11 626.73	69 127.14

SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
34A	PIPE IN CONCRETE	14983.33	64 760.02
34B	DITTO	15 017.17	64 695.58
35A	DO	14 396.52	65 892.08
35B	DO	14 321.76	66 060.82
36A	DO	13 812.11	66 953.16
36B	DO	13 720.48	67 069.40
37A	DO	13 209.61	67 607.01
37B	DO	13 092.62	67 458.10

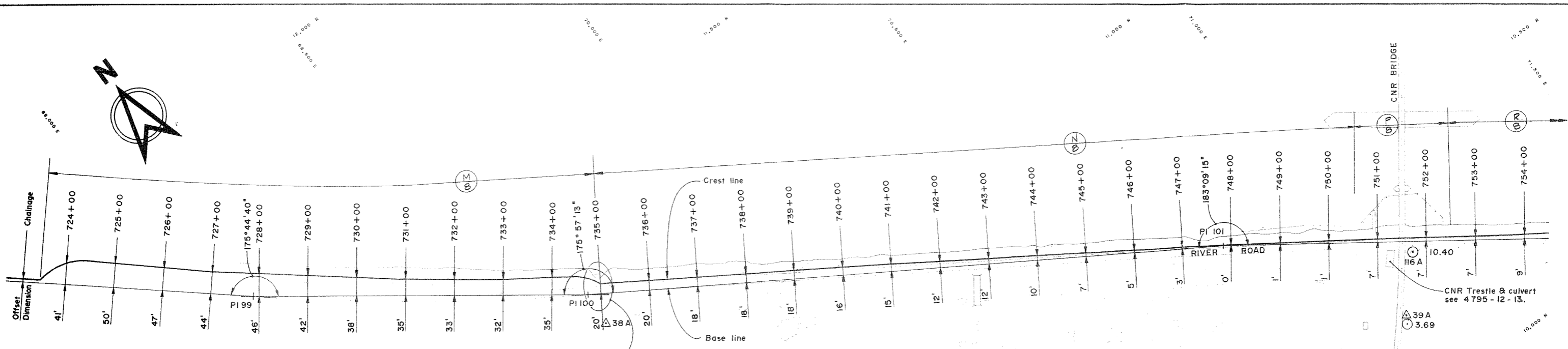
**NOTE:**  
For descriptive location of monuments & bench marks see specifications.



**NOTES**  
For General Notes & Legend see 4795-12-2

DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
	REFERENCES												

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED <i>R. N. Cameron</i> PROJECT MANAGER		ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE	
DATE <i>May 7, 1976</i>		MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
APPROVED <i>W. J. Fuller</i> for DIRECTOR		STR		CONTRACT NO. 12 ALIGNMENT PLAN CH 664 + 74 TO CH 724 + 00	
DATE <i>May 11, 1976</i>		DES DLC	DR Wn	CH DLC	FILE NO. 0281550-C10-12
		SCALE As Shown			DWG NO. 4795-12-3
		ORIG ISSUE May 1976			REV

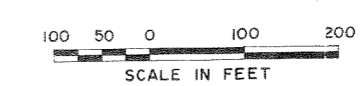
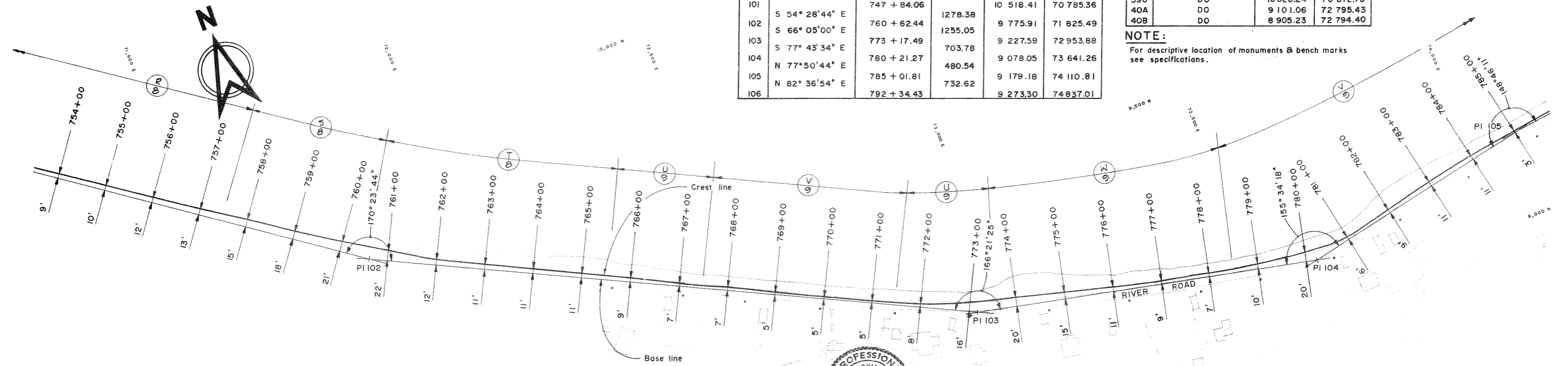


Drainage Discharge Structure  
No. 17 see 4795-12-12

BASE LINE DATA				CO-ORDINATES	
PI	BEARING	CHAINAGE	INTERVAL	NORTH	EAST
99	S 53° 34' 59" E	727 + 87.81		11 626.73	69 127.14
100	S 57° 37' 59" E	734 + 73.60	685.79	11 219.73	69 678.83
101	S 54° 28' 44" E	747 + 84.06	1310.46	10 518.41	70 785.36
102	S 66° 05' 00" E	760 + 62.44	1278.38	9 775.91	71 825.49
103	S 77° 43' 34" E	773 + 17.49	1255.05	9 227.59	72 953.88
104	N 77° 50' 44" E	780 + 21.27	703.78	9 078.05	73 641.26
105	N 82° 36' 54" E	785 + 01.81	480.54	9 179.18	74 110.81
106		792 + 34.43	732.62	9 273.30	74 837.01

SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
38A	PIPE IN CONCRETE	11 148.49	69 673.54
38B	DITTO	10942.55	69 658.30
39A	DO	10177.13	71 001.06
39B	DO	10028.24	70 872.70
40A	DO	9 101.06	72 795.43
40B	DO	8 905.23	72 794.40

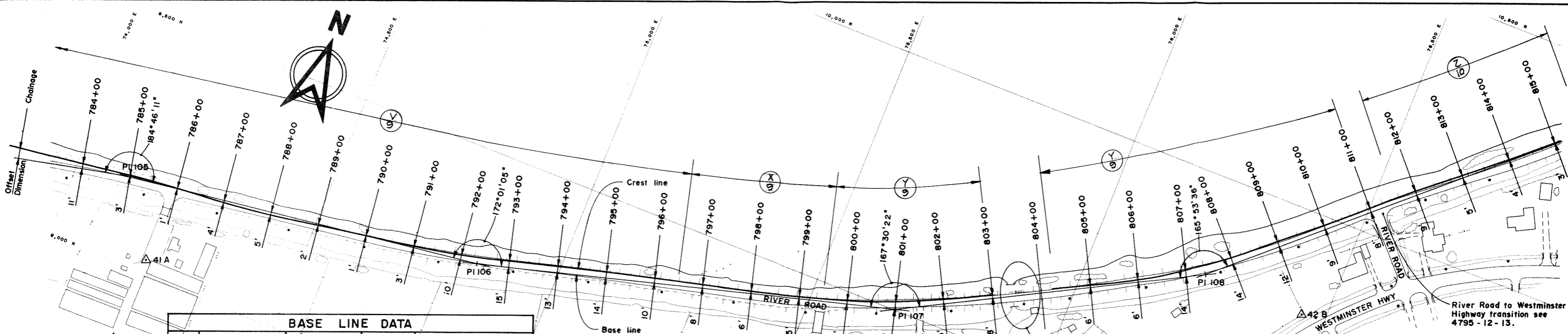
**NOTE:**  
For descriptive location of monuments & bench marks see specifications.



**NOTES**  
For General Notes & Legend see 4795-12-2

<b>C. B. A. ENGINEERING LTD.</b> CONSULTING ENGINEERS VANCOUVER, B.C., CANADA																			
RECOMMENDED PROJECT MANAGER <i>R. W. Cameron</i> DATE: May 7, 1976					ELEC MECH STR					THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND									
APPROVED: <i>[Signature]</i> DIRECTOR					DES: DLC DR: Wn CH: DLC					CONTRACT NO. 12 ALIGNMENT PLAN CH 724 + 00 TO CH 785 + 00									
DATE: May 7, 1976					SCALE: AS SHOWN ORIG ISSUE: May 1976					FILE NO. 0281550-C10-12 DWG NO. 4795-12-4									
<b>REFERENCES</b>										<b>REVISIONS</b>									
NO. DESCRIPTION BY CH APPD ISSUED NO. DESCRIPTION BY CH APPD ISSUED										NO. DESCRIPTION BY CH APPD ISSUED NO. DESCRIPTION BY CH APPD ISSUED									

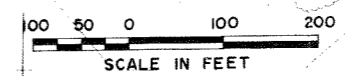
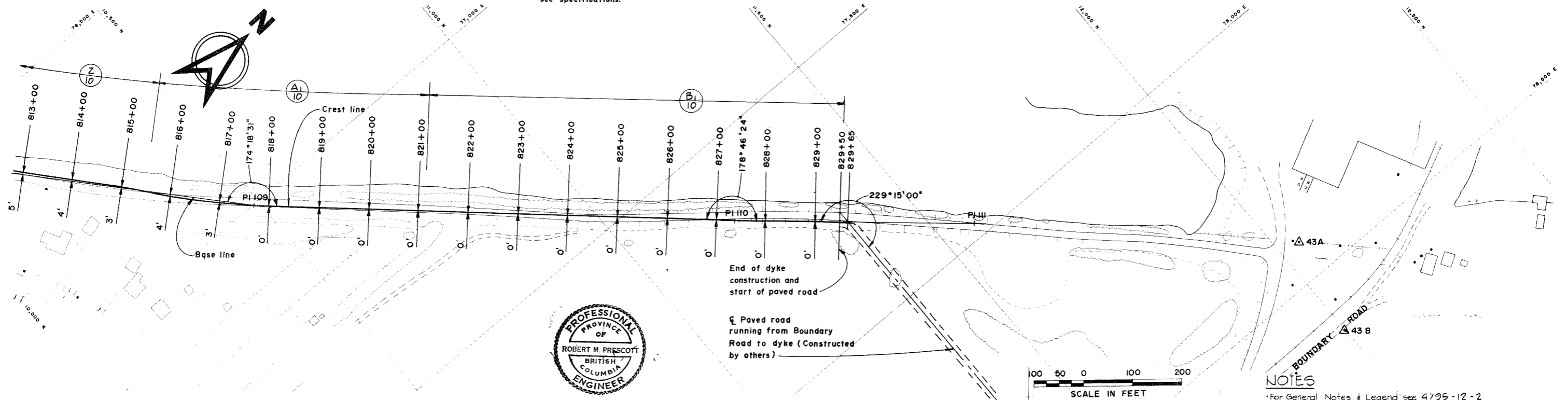




BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
105	N 82° 36' 54" E	785 + 01.81	732.62	9 179.18	74 110.81
106	N 74° 38' 00" E	792 + 34.43	867.78	9 273.30	74 837.01
107	N 62° 08' 22" E	801 + 02.21	638.73	9 503.16	75 673.40
108	N 48° 01' 57" E	807 + 40.94	1028.91	9 801.54	76 237.89
109	N 42° 20' 48" E	817 + 69.85	966.67	10 489.44	77 002.75
110	N 41° 07' 55" E	827 + 36.52	485.29	11 203.84	77 653.74
111		832 + 21.81		11 569.28	77 972.89

SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
41A	PIPE IN CONCRETE	9 032.66	74 203.73
41B	DITTO	8 859.12	74 202.45
42A	DO	9 601.55	76 322.84
42B	DO	9 797.81	76 452.20
43A	DO	12041.84	78 425.27
43B	DO	11998.54	78 620.75

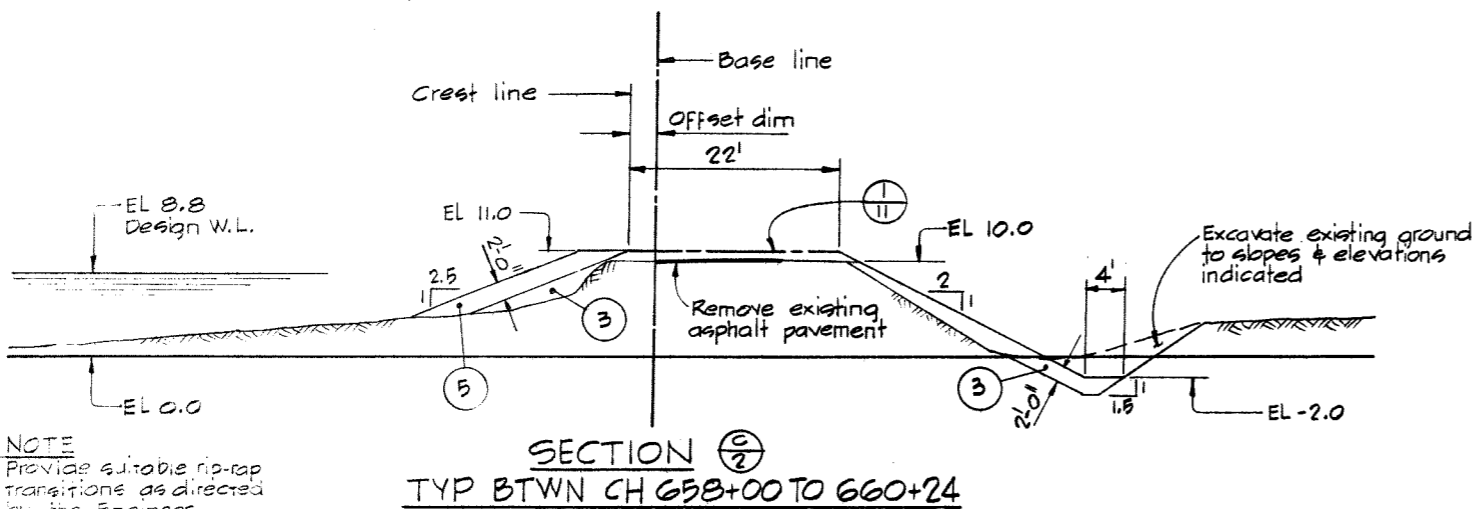
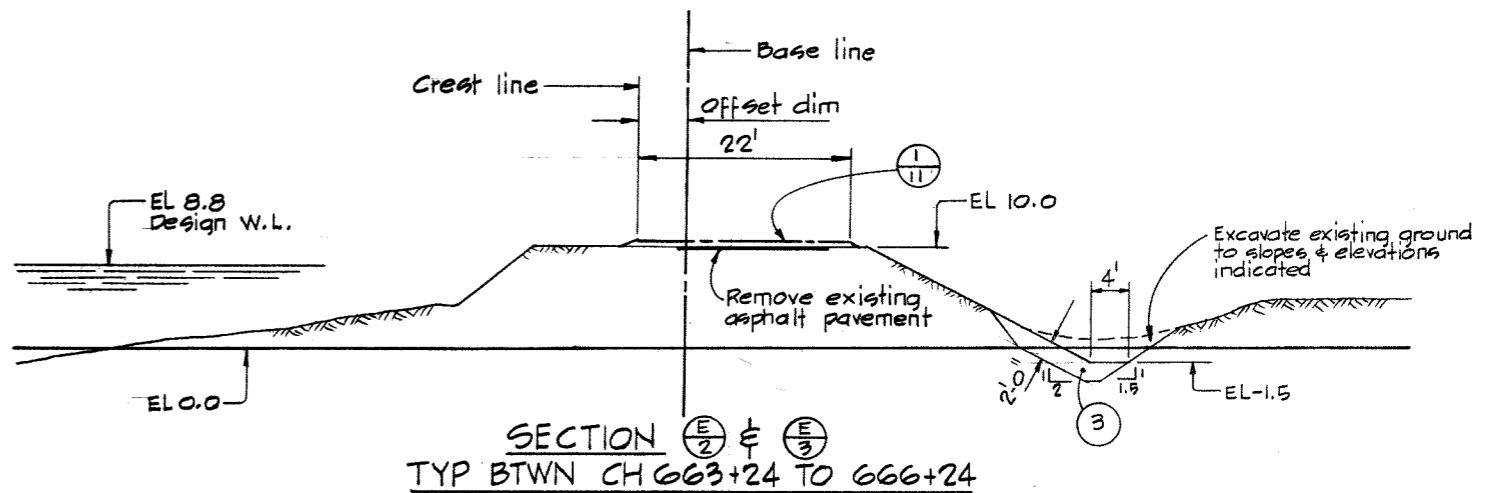
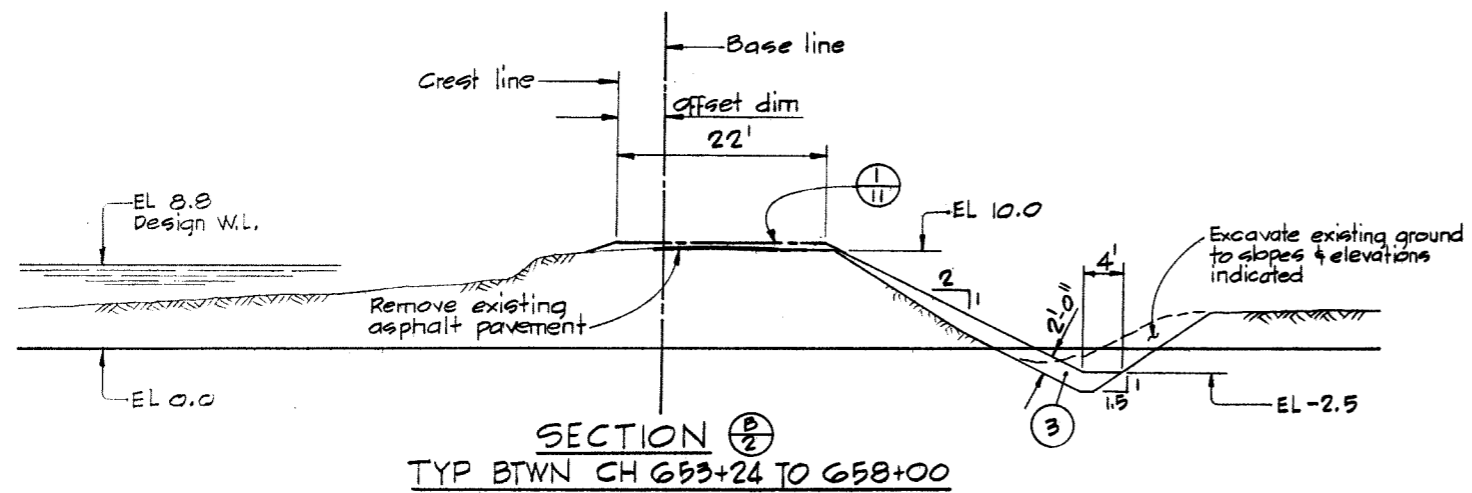
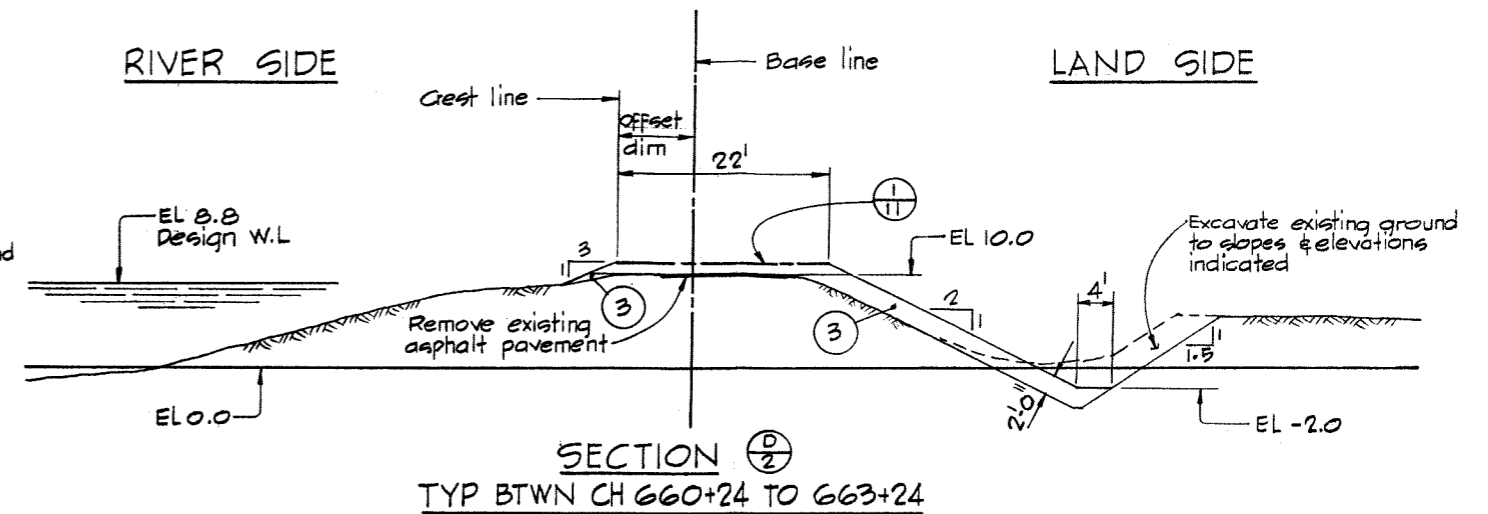
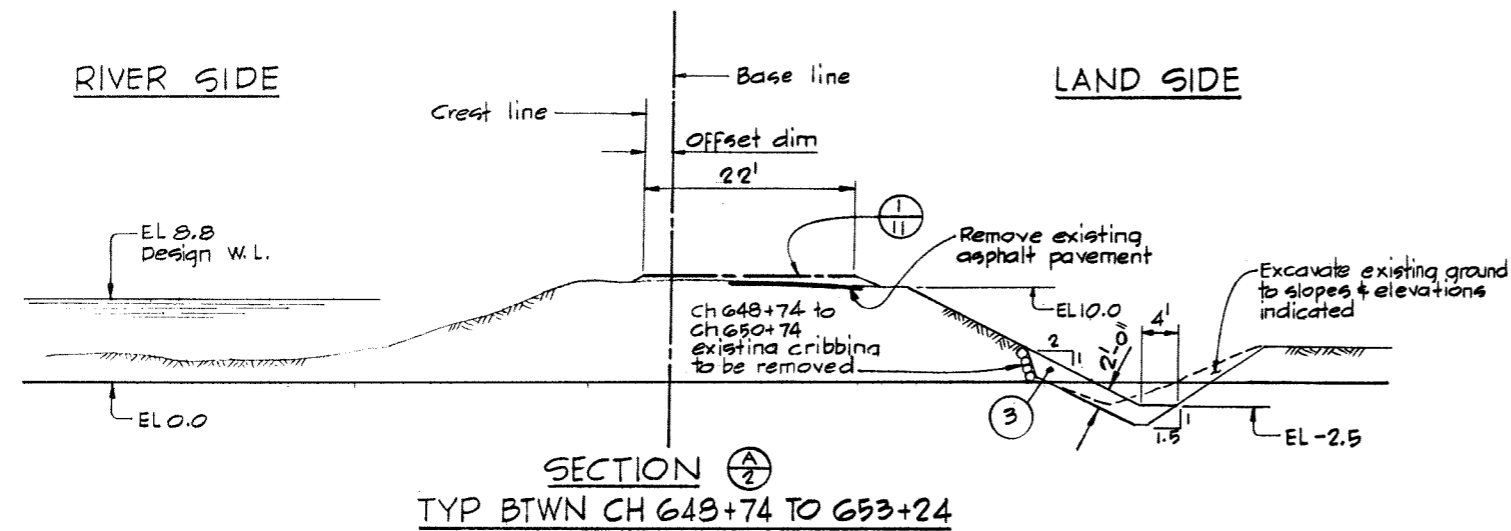
**NOTE:**  
For descriptive location of monuments & bench marks see specifications.



**NOTES**  
For General Notes & Legend see 4795-12-2

DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
<b>REVISIONS</b>													

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
<i>R. S. Comau</i> PROJECT MANAGER DATE: <i>May 3, 1976</i>		ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE	
APPROVED: <i>[Signature]</i> DIRECTOR DATE: <i>May 21, 1976</i>		MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 THE TOWNSHIP OF RICHMOND	
SCALE: AS SHOWN ORIG ISSUE: May 1976		STR		CONTRACT NO. 12 ALIGNMENT PLAN CH 785+00' TO 829+50'	
		DES: DLC	DR: Wn	CH: DLC	FILE NO. 0281550-C-10-12 DWG NO. 4795-12-5



**MATERIALS LEGEND**

- ① Silt - Clay
- ② Sand
- ③ Sand gravel & cobbles
- ④ Crushed gravel
- ⑤ Light rip-rap

**NOTES**

- Elevations refer to the Geodetic Survey of Canada.
- Offset distances from base line to crest line are taken at the design crest elevation.
- Terminal parts of the work shall be constructed to blend with the existing bank.
- For Design Crest Elevation see Profile on 4795-12-2

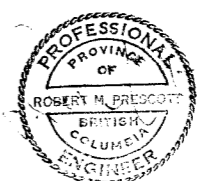
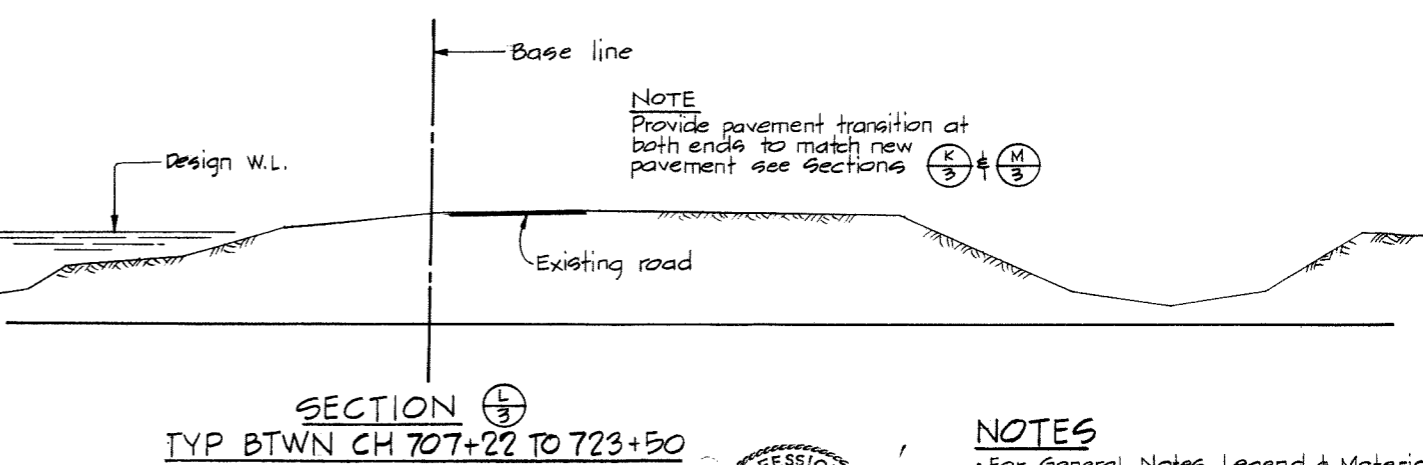
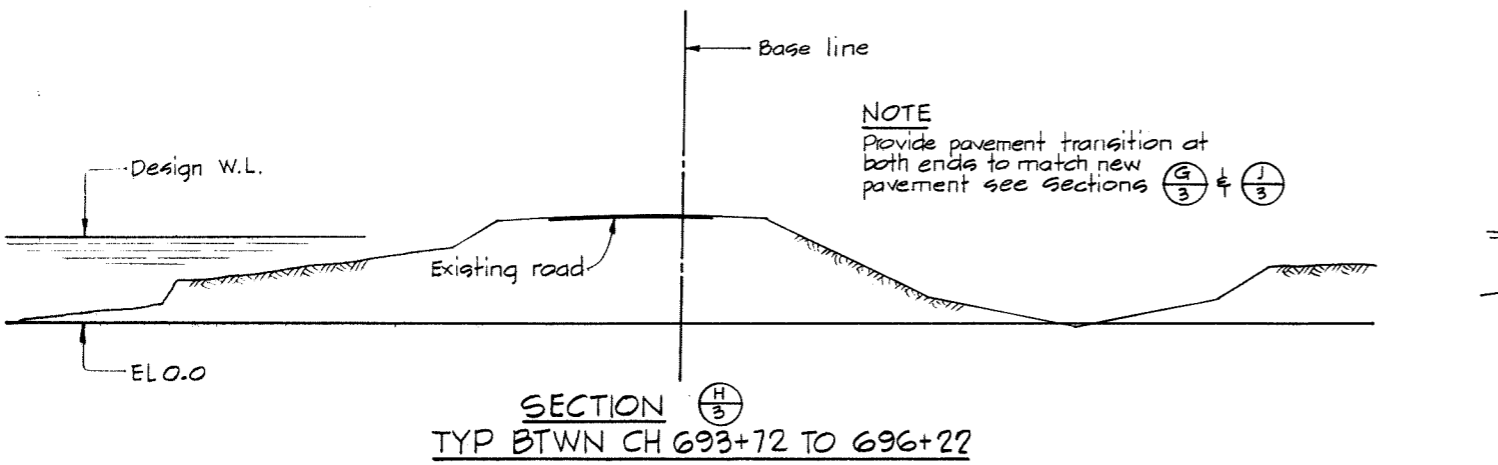
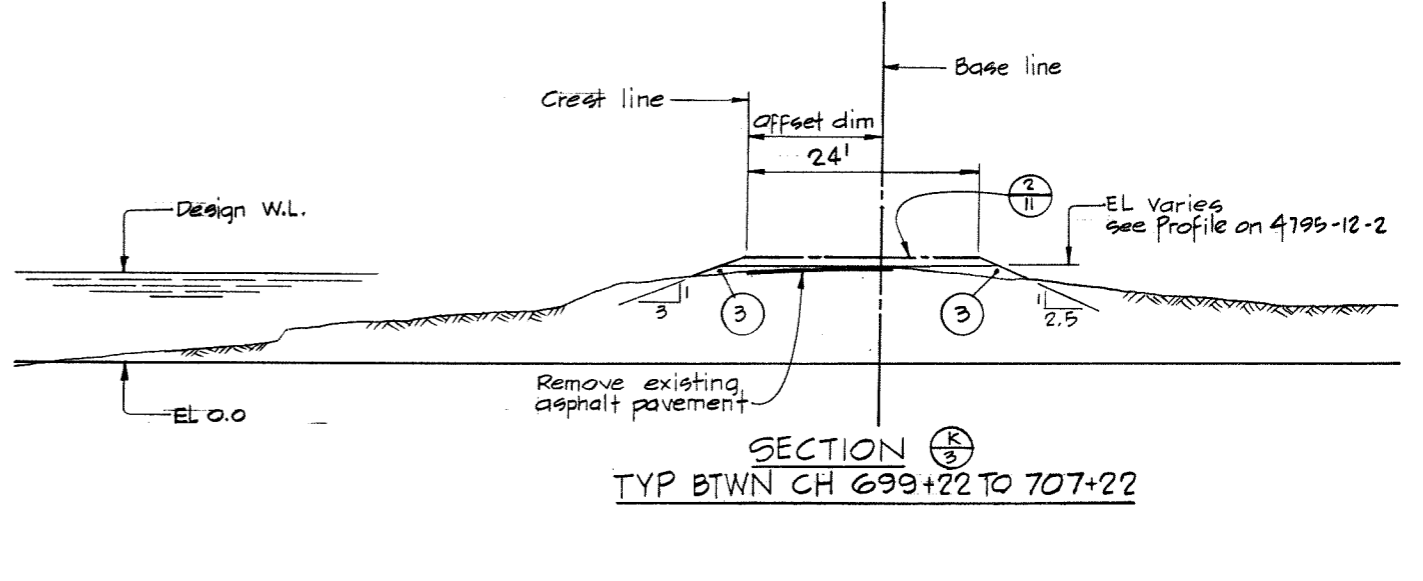
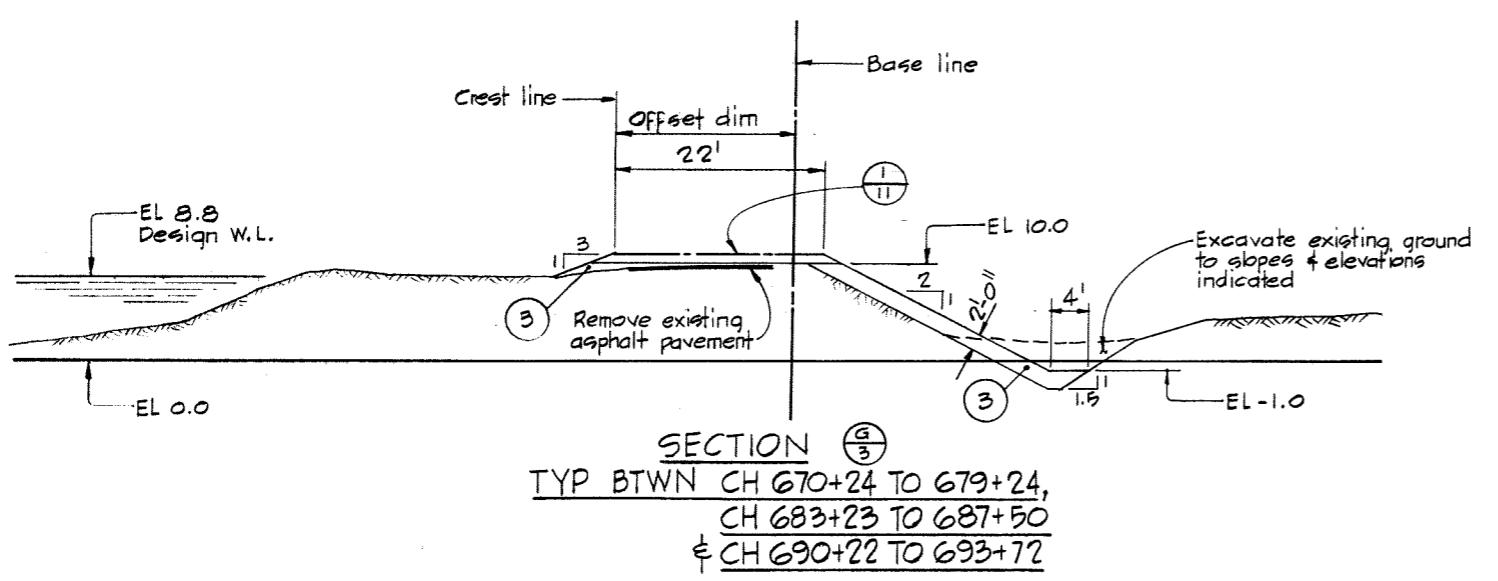
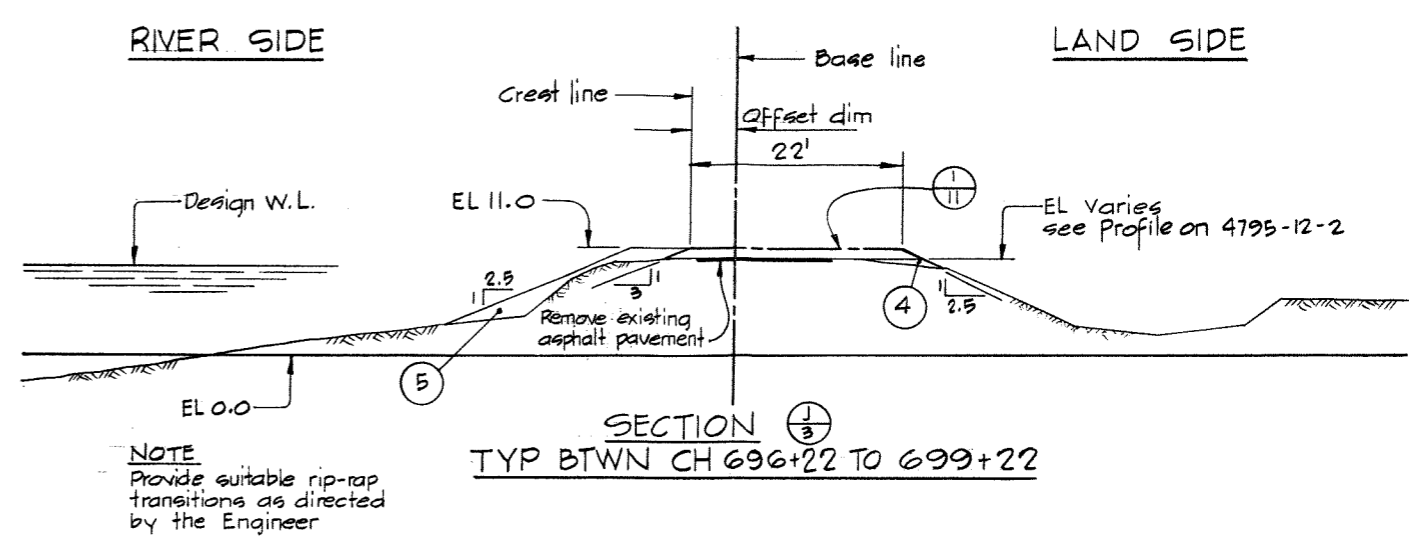
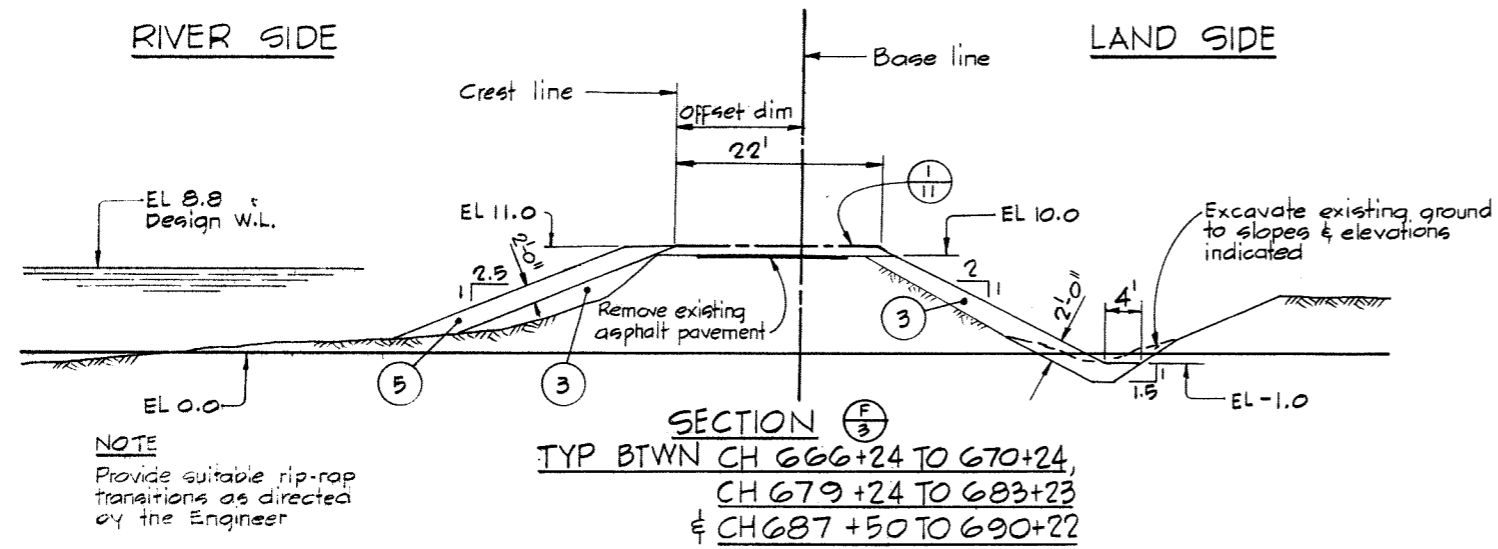
**LEGEND**

- Existing ground
- F — Section identification letter
- 3 — Drawing No. on which section is located (ie 4795-12-(3))
- 2 — Detail identification number
- 9 — Drawing No. on which detail is located (ie 4795-12-(9))

NOTE  
Provide suitable rip-rap transitions as directed by the Engineer



<p><b>CBA ENGINEERING LTD.</b> CONSULTING ENGINEERS - VANCOUVER - CANADA</p>	<p>NO. BY REVISIONS DATE</p>	<p>RECOMMENDED <i>R. L. Cameron</i> PROJECT MANAGER</p>	<p>BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT</p>	<p>DESIGNED <i>EMH &amp; DLC</i></p>	<p>SURVEYED <i>ES</i></p>
		<p>DATE <i>May 7, 1976</i></p>		<p>DRAWN <i>WZ</i></p>	<p>DATE <i>1969</i></p>
		<p>APPROVED <i>John Fuller</i> DIRECTOR</p>	<p>PROJECT NO. 3 THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 TYPICAL DYKE SECTIONS</p>	<p>CHECKED <i>DLC</i></p>	<p>FILE NO. <i>0281550-C10-12</i></p>
		<p>DATE <i>May 7/76</i></p>		<p>SCALE <i>AS SHOWN</i></p>	<p>DATE <i>May 1976</i></p>
				<p>DWG. NO. <i>4795-12-6</i></p>	<p>SHEET <i>1</i> OF <i>5</i> SHEETS</p>



**NOTES**  
 For General Notes, Legend & Material Legend see 4795-12-6.



**CBA ENGINEERING LTD.**  
 CONSULTING ENGINEERS - VANCOUVER - CANADA

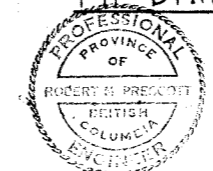
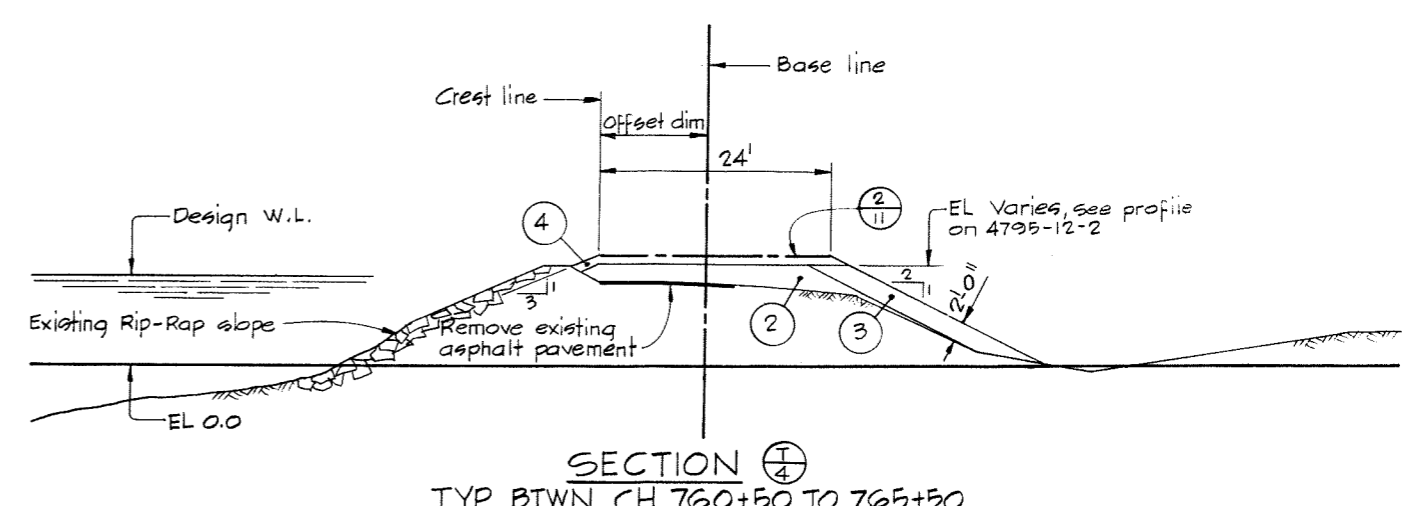
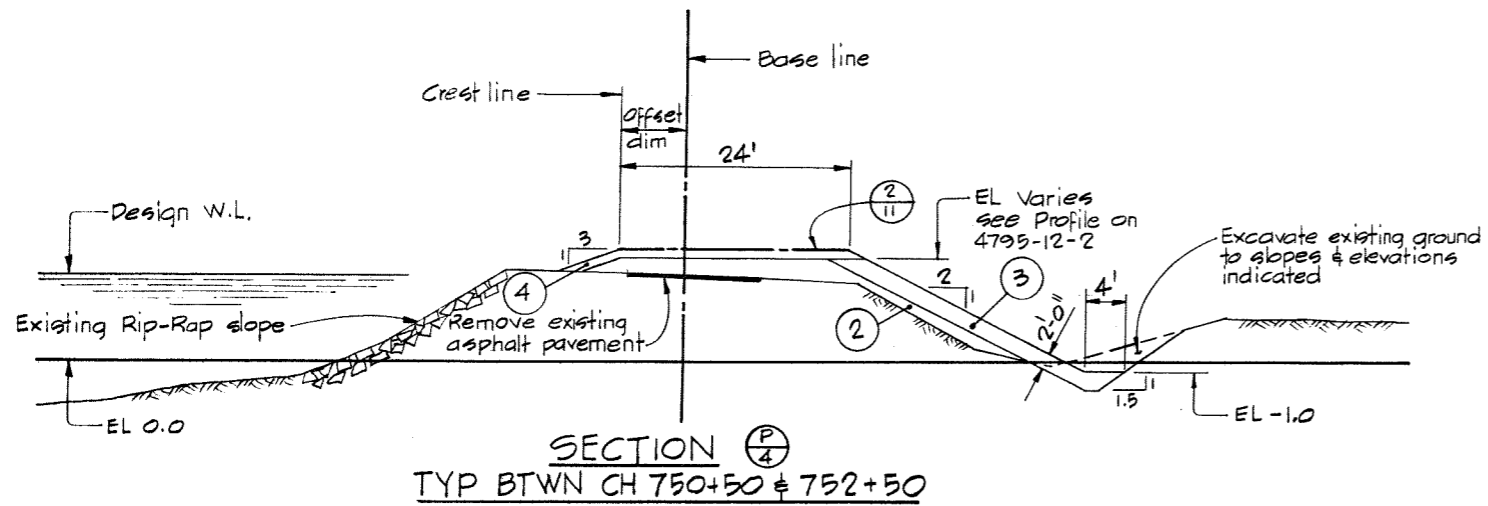
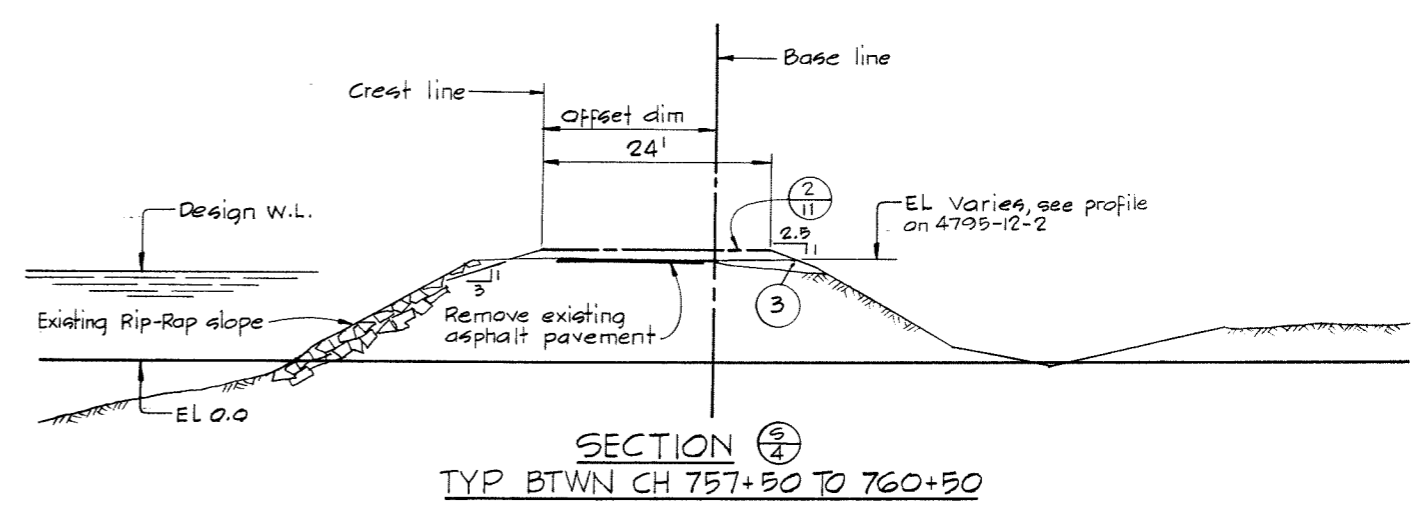
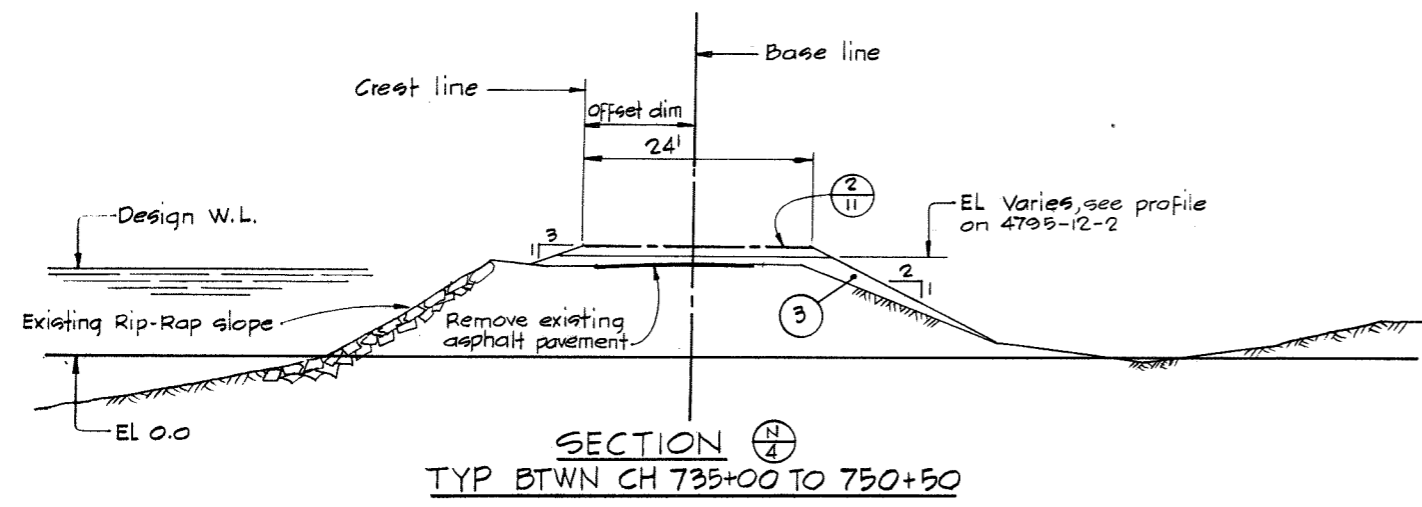
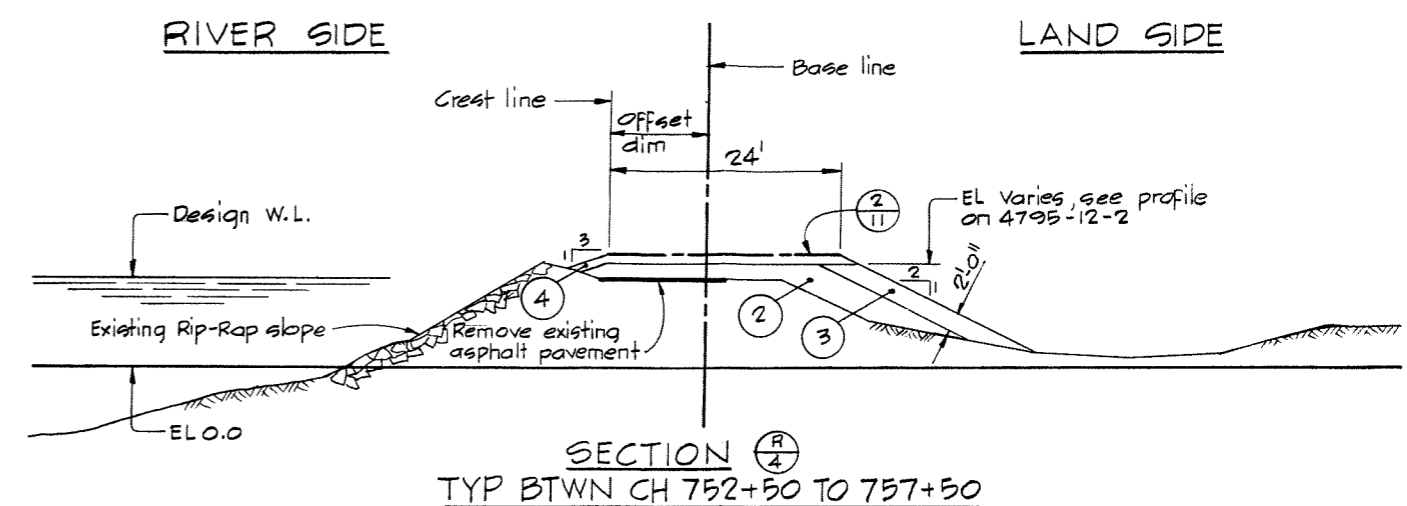
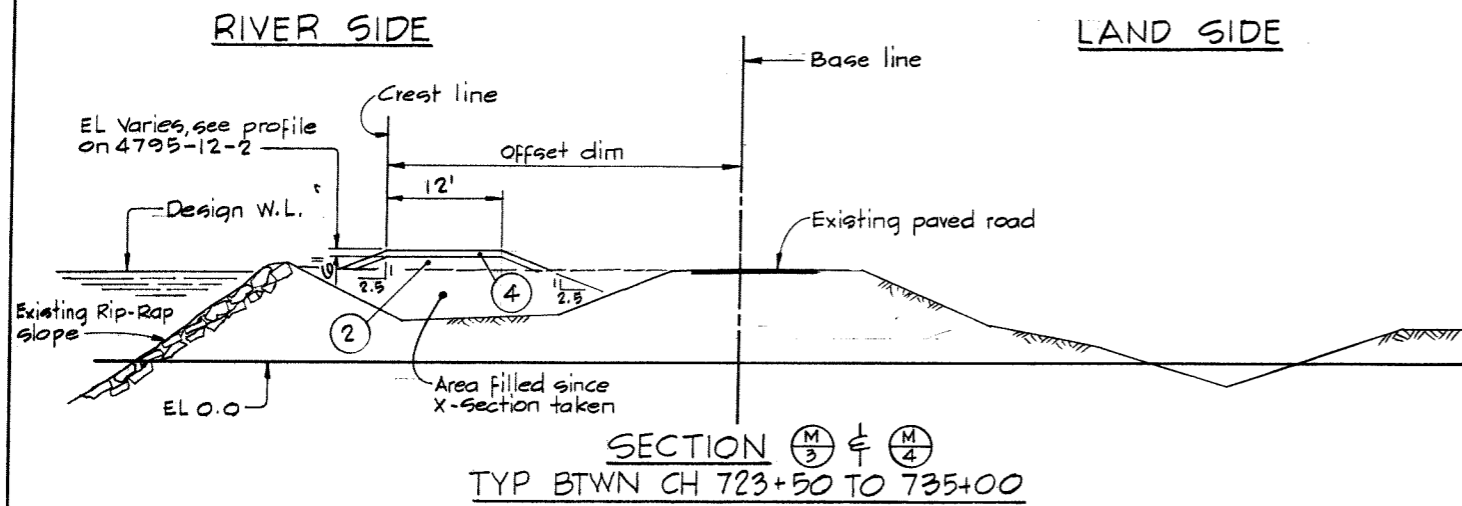
RECOMMENDED <i>R.H. Cameron</i> PROJECT MANAGER	DATE <i>May 7, 1976</i>		
APPROVED <i>Rob Fuller</i> for DIRECTOR	DATE <i>May 7/76</i>		
NO.	BY	REVISIONS	DATE

BRITISH COLUMBIA  
 DEPARTMENT OF ENVIRONMENT  
 WATER RESOURCES SERVICE  
 WATER INVESTIGATIONS BRANCH  
 CANADA - BRITISH COLUMBIA  
 FRASER RIVER FLOOD CONTROL 1968 AGREEMENT

PROJECT NO. 3 THE TOWNSHIP OF RICHMOND  
 CONTRACT NO. 12  
 TYPICAL DYKE SECTIONS

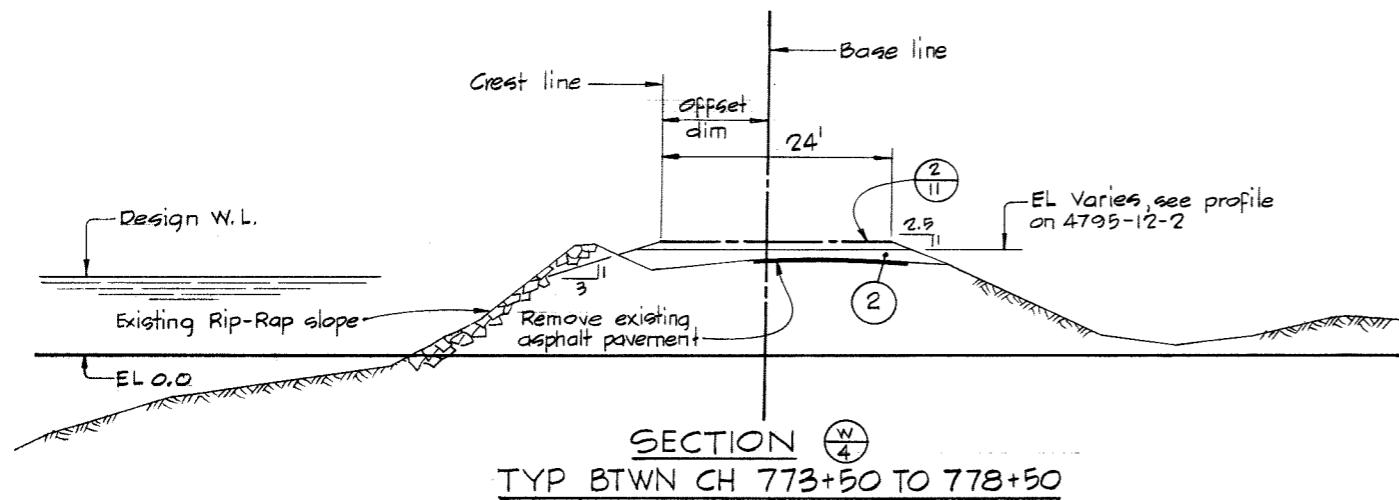
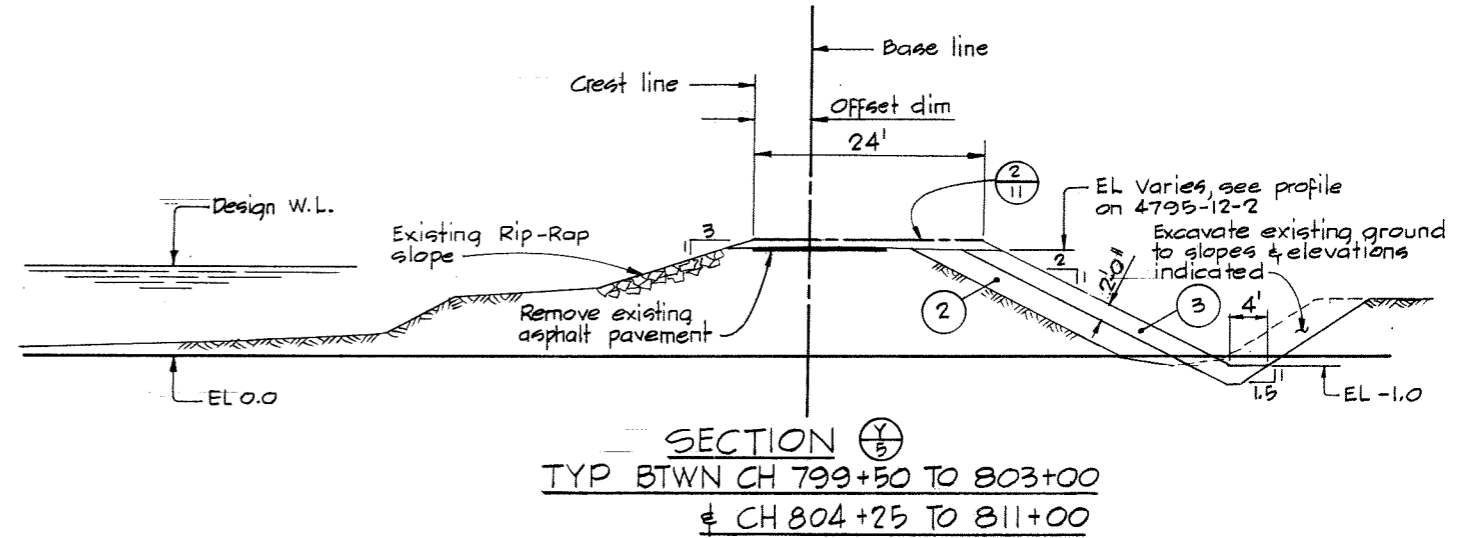
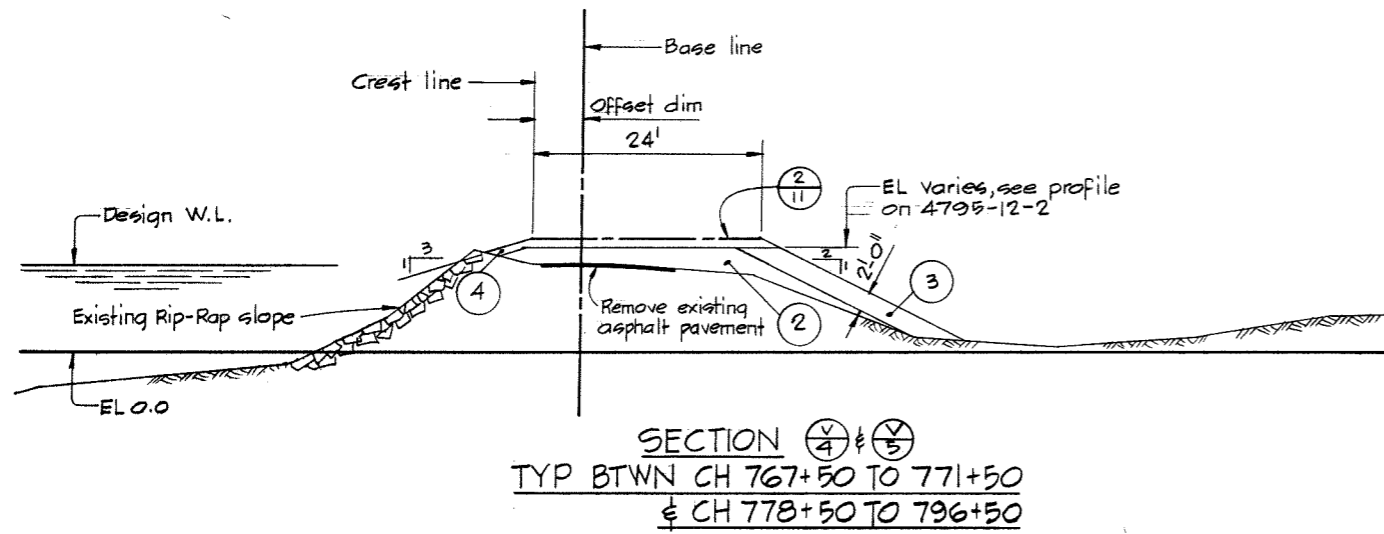
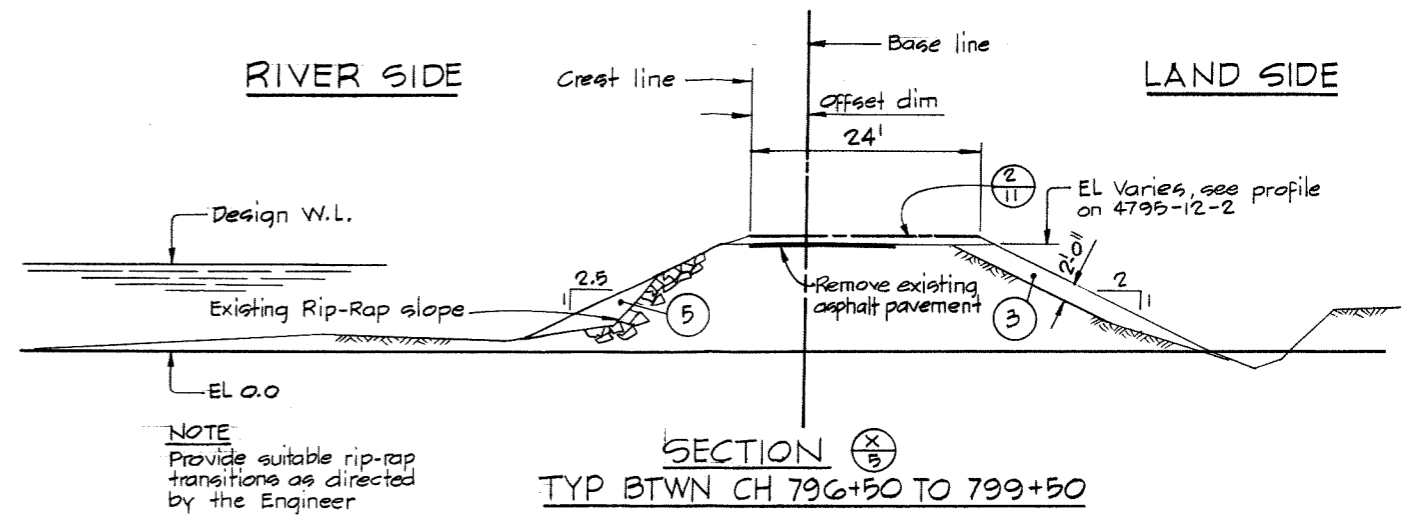
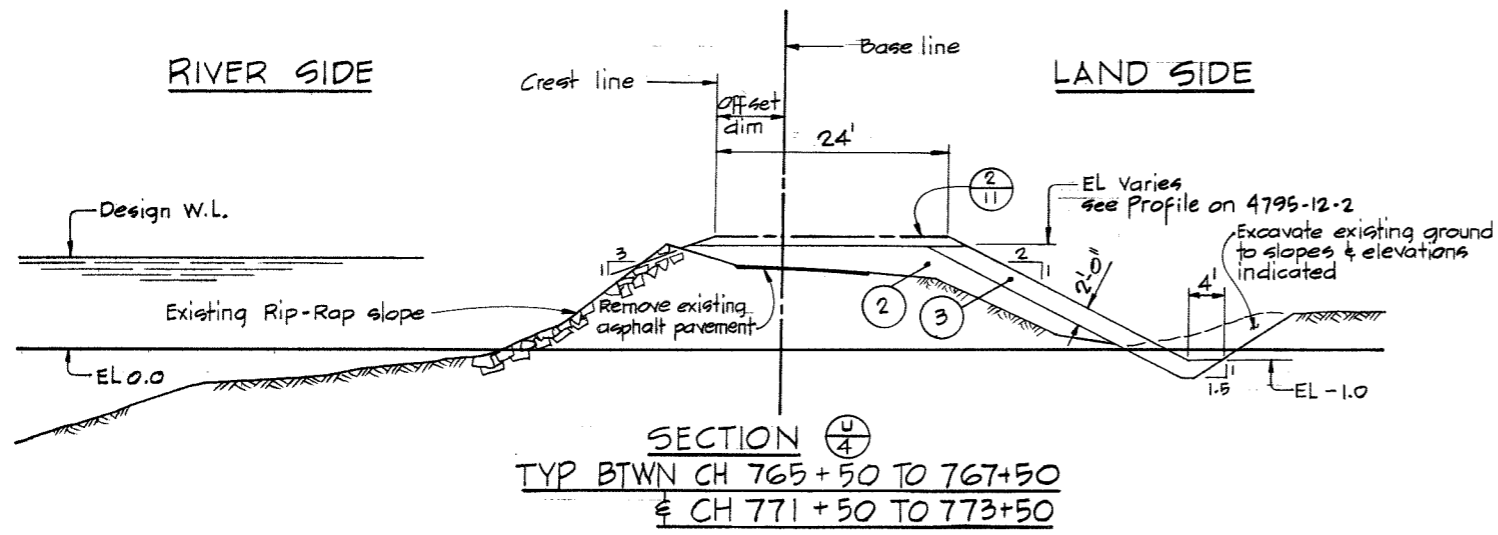
DESIGNED <i>EMH &amp; DLC</i>	SURVEYED <i>ES</i>
DRAWN <i>WZ</i>	DATE <i>1969</i>
CHECKED <i>DLC</i>	FILE NO. <i>0281550-C10-12</i>
SCALE <i>AS SHOWN</i>	DATE <i>May 1976</i>
DWG. NO. <i>4795-12-7</i>	SHEET <i>2</i> OF <i>5</i> SHEETS





- NOTES**
- For General Notes, Legend & Material Legend see 4795-12-6
  - For settlement markers see detail on 4795-12-10

<p><b>CBA ENGINEERING LTD.</b> CONSULTING ENGINEERS - VANCOUVER - CANADA</p>	RECOMMENDED <i>R. d. Cameron</i> PROJECT MANAGER DATE <i>May 3, 1976</i>	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <i>EMH &amp; DLC</i> DRAWN <i>WZ</i> CHECKED <i>DLC</i> SCALE AS SHOWN DWG. NO. 4795-12-8	SURVEYED <i>ES</i> DATE <i>1969</i> FILE NO. 0281550-C10-12 DATE <i>May 1976</i> SHEET 3 OF 5 SHEETS
	APPROVED <i>[Signature]</i> for DIRECTOR DATE <i>May 7/76</i>	PROJECT NO. 3 THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 TYPICAL DYKE SECTIONS		



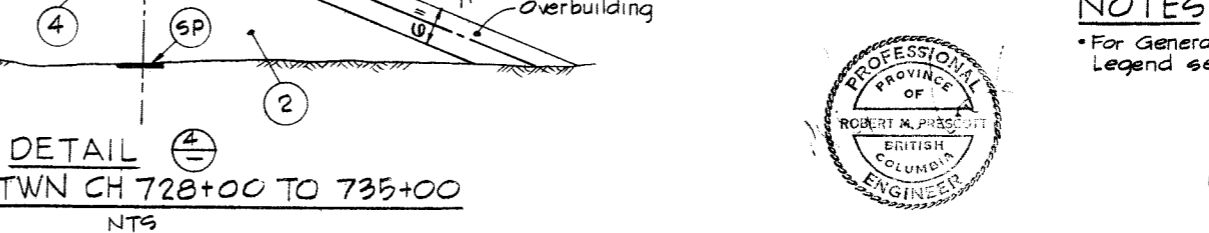
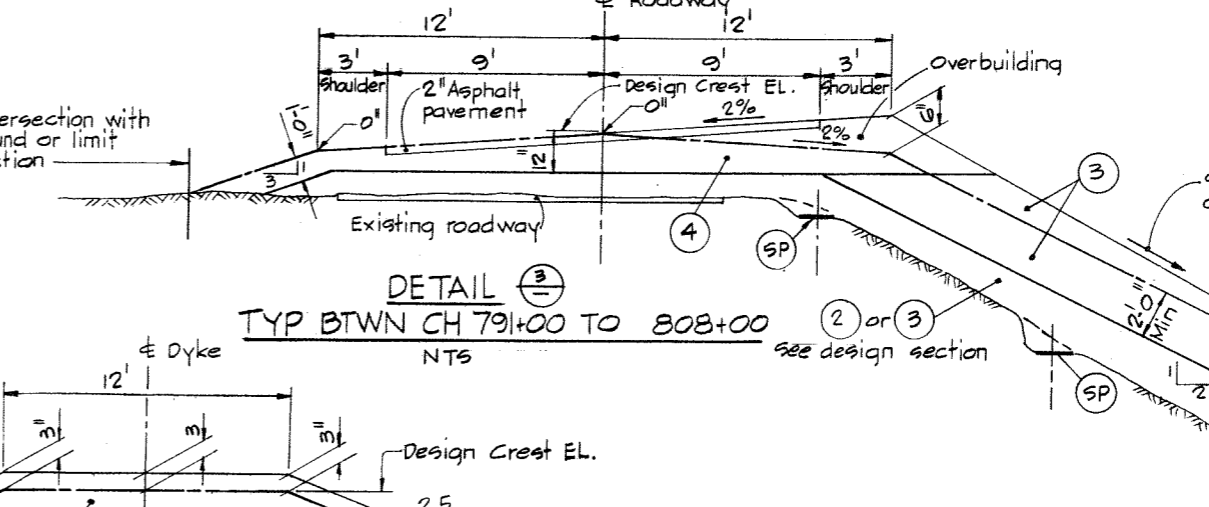
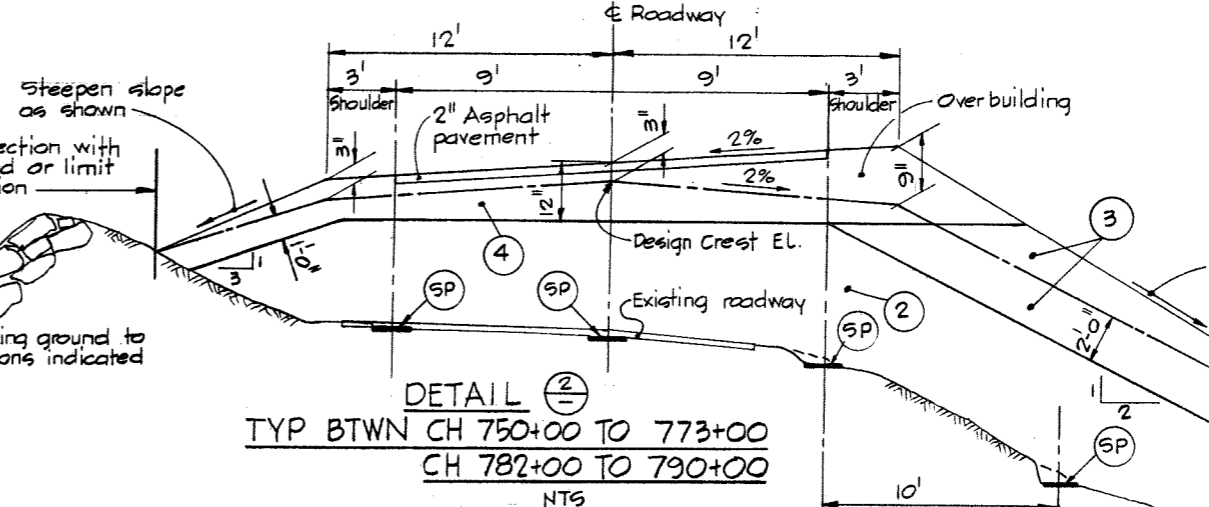
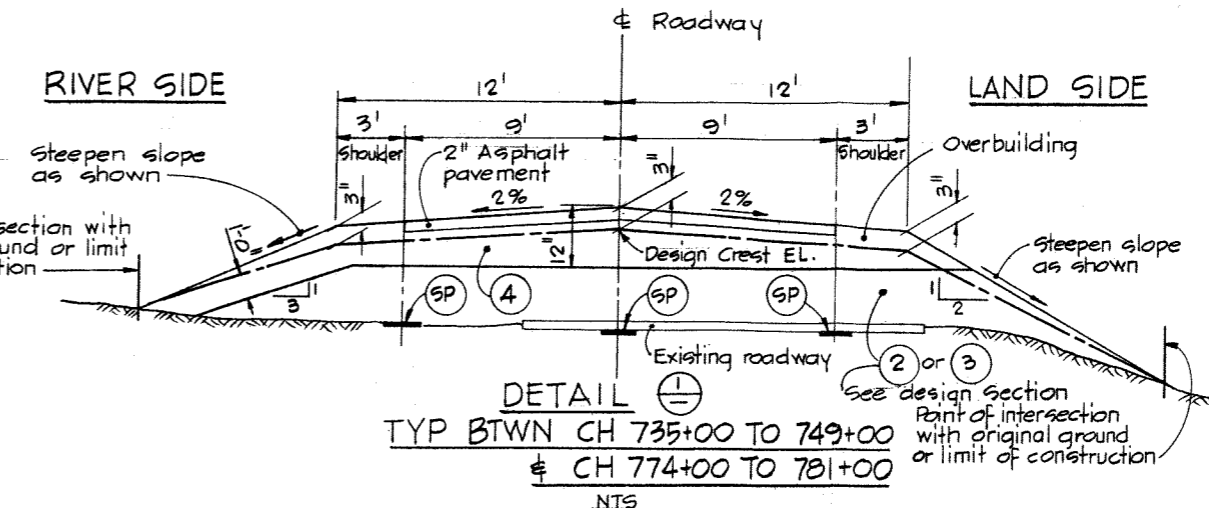
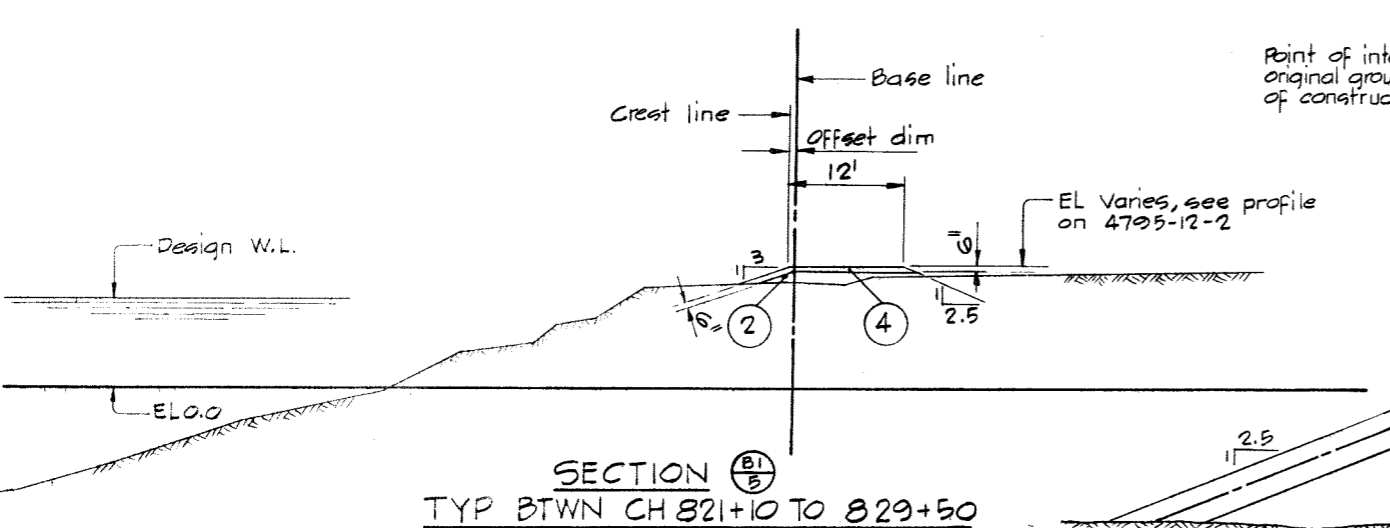
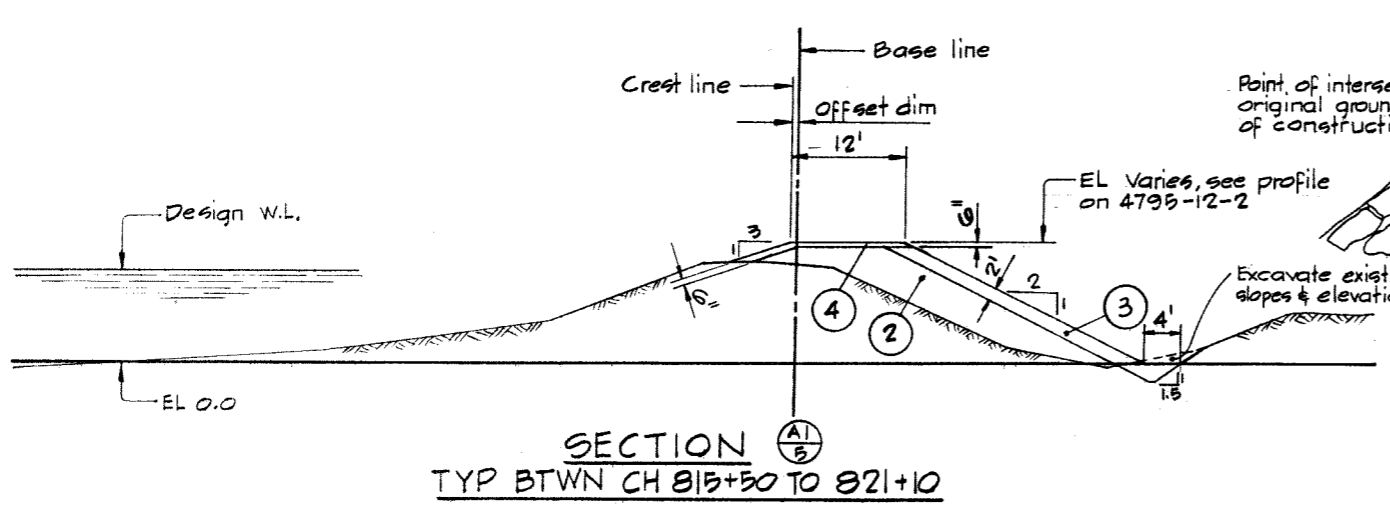
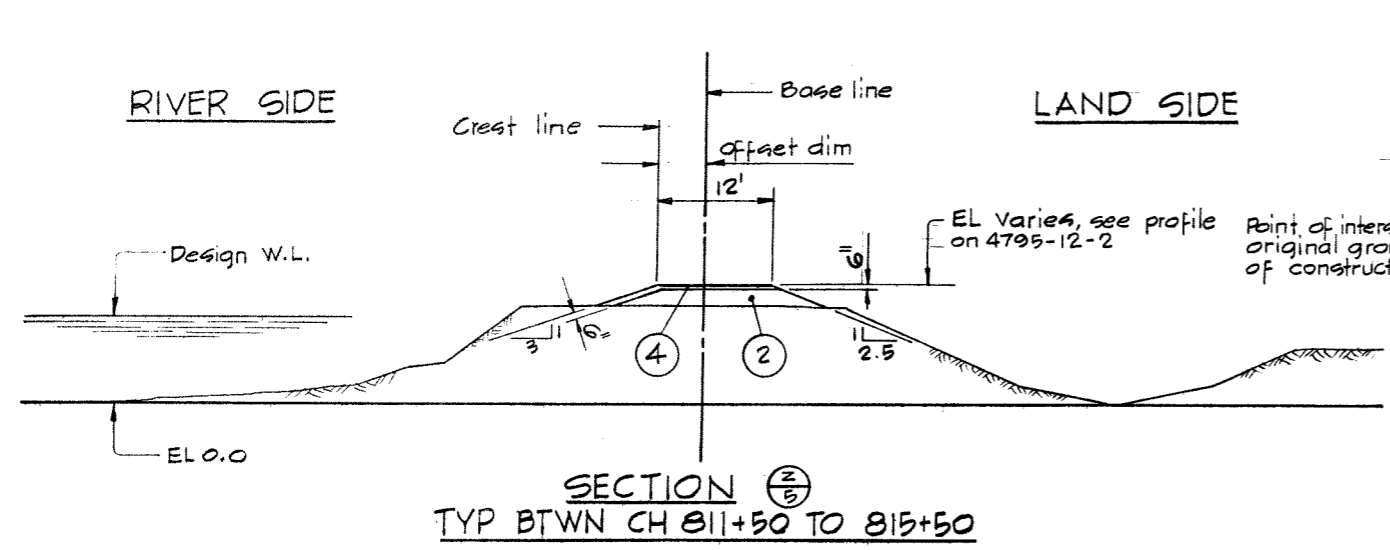
**NOTES**

- For General Notes, Legend & Material Legend see 4795-12-6
- For settlement markers see detail on 4795-12-10



**CBA ENGINEERING LTD.**  
CONSULTING ENGINEERS - VANCOUVER - CANADA

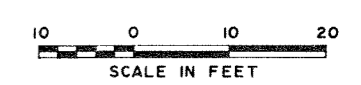
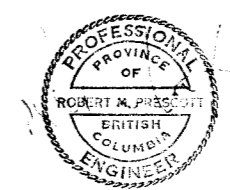
NO.	BY	REVISIONS	DATE	RECOMMENDED <i>P.R. Cameron</i> PROJECT MANAGER.	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <i>EMH &amp; DLC</i>	SURVEYED <i>ES</i>
				DATE <i>May 7, 1976</i>		DRAWN <i>WZ</i>	DATE <i>1969</i>
				APPROVED <i>Rob. Presley</i> for DIRECTOR	PROJECT NO. 3 THE TOWNSHIP OF RICHMOND	CHECKED <i>DLC</i>	FILE NO. <i>0281550-C10-12</i>
				DATE <i>May 7/76</i>	CONTRACT NO. 12	SCALE <i>AS SHOWN</i>	DATE <i>May 1976</i>
					TYPICAL DYKE SECTIONS	DWG. NO. <i>4795-12-9</i>	SHEET <i>4</i> OF <i>5</i> SHEETS



LOCATION OF SETTLEMENT MARKERS		
CHAINAGE	DETAIL NO.	NO. OF PLATES/SECTION
776+00 779+00	$\frac{1}{5}$	3
751+00 756+00 762+00 767+00 772+00 783+00 788+00	$\frac{2}{5}$	4
792+00 794+00 802+00 806+00	$\frac{3}{5}$	2
729+00 733+00	$\frac{4}{5}$	1

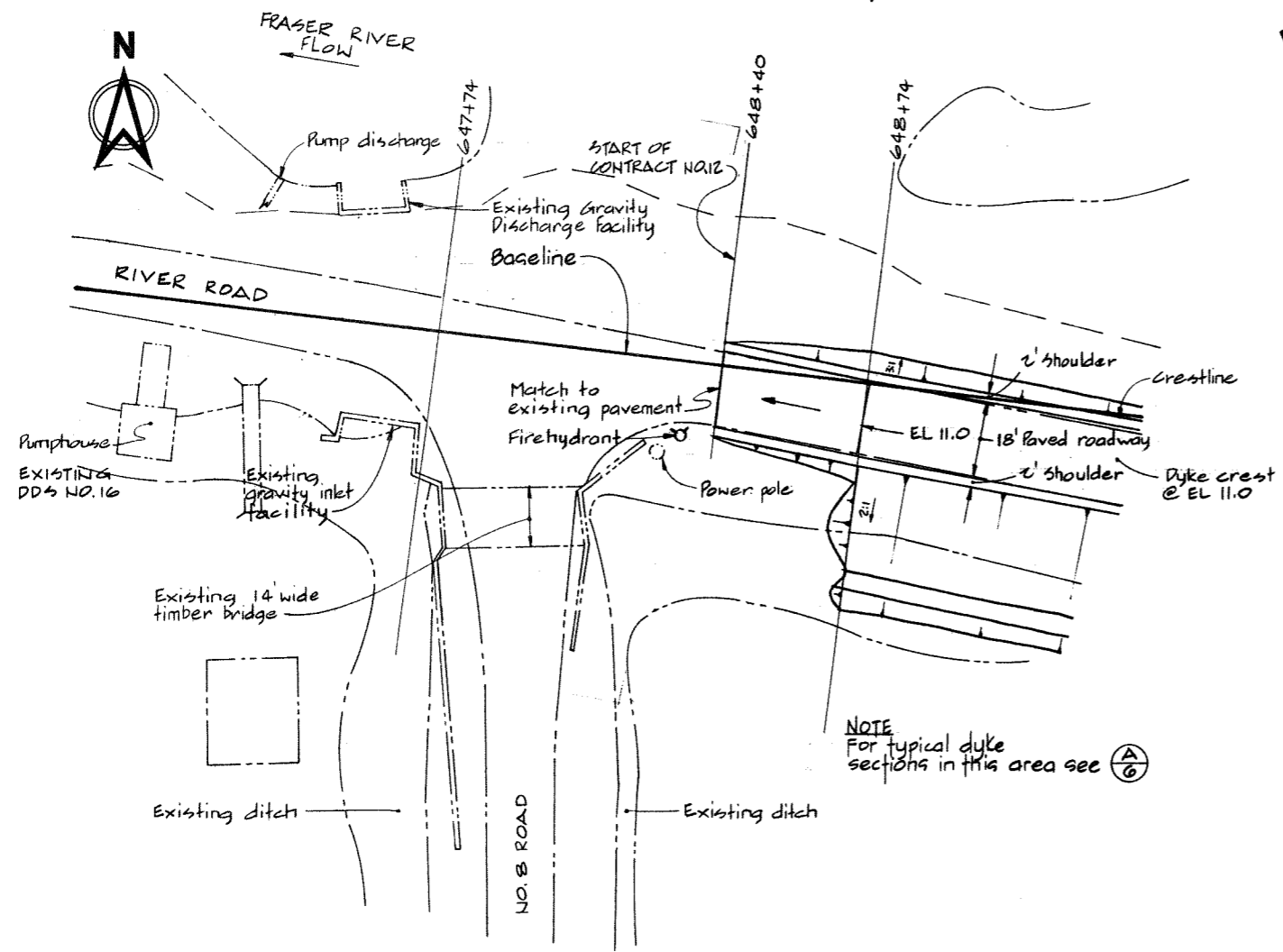
SP Settlement marker plate (10x10x1/4 steel plate)

**NOTES**  
• For General Notes, Legend & Material Legend see 4795-12-6

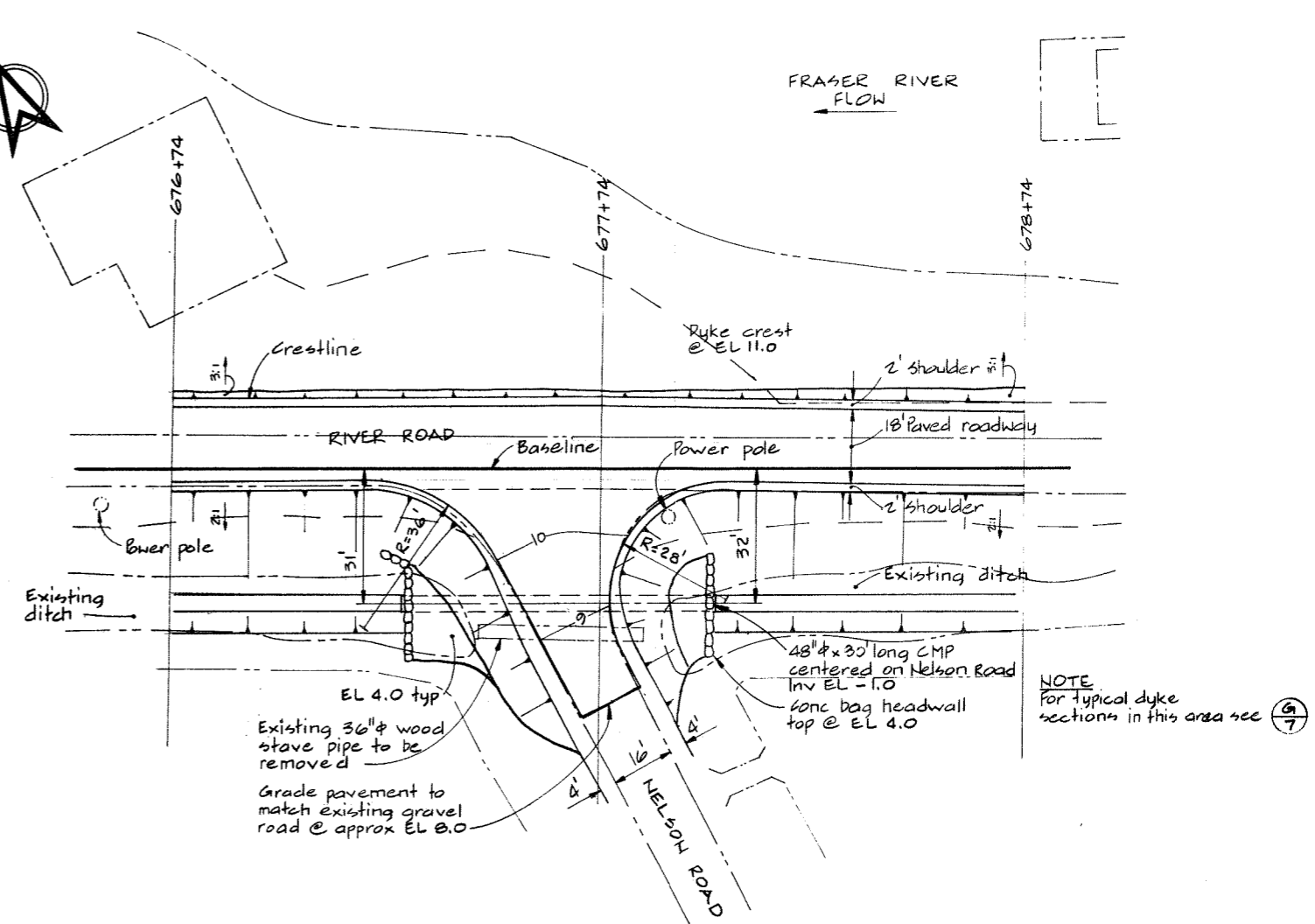
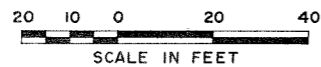


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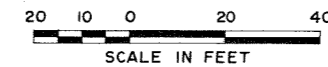
RECOMMENDED <i>P. H. Cameron</i> PROJECT MANAGER.	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <b>EMH &amp; DLC</b>	SURVEYED <b>ES</b>
DATE <i>May 7, 1976</i>	PROJECT NO. 3 THE TOWNSHIP OF RICHMOND	DRAWN <b>WZ</b>	DATE <b>1969</b>
APPROVED <i>Rob Fuller</i> DIRECTOR	CONTRACT NO. 12	CHECKED <b>DLC</b>	FILE NO. <b>0281550-C10-12</b>
DATE <i>May 7/76</i>	TYPICAL DYKE SECTIONS	SCALE <b>AS SHOWN</b>	DATE <b>May 1976</b>
NO. BY	REVISIONS	DWG. NO. <b>4795-12-10</b>	SHEET <b>5</b> OF <b>5</b> SHEETS



NO. 8 ROAD NORTH

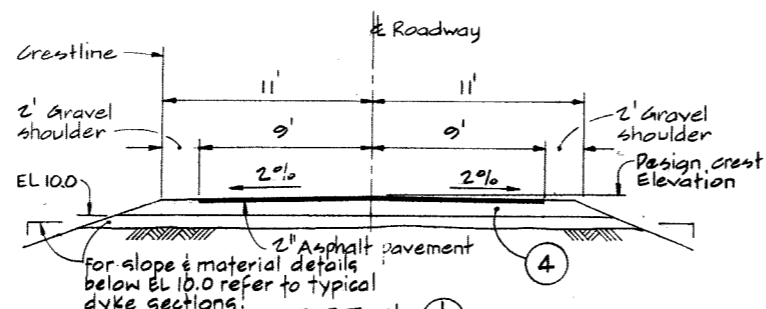


NELSON ROAD NORTH



NOTE  
For typical dyke sections in this area see (A) (G)

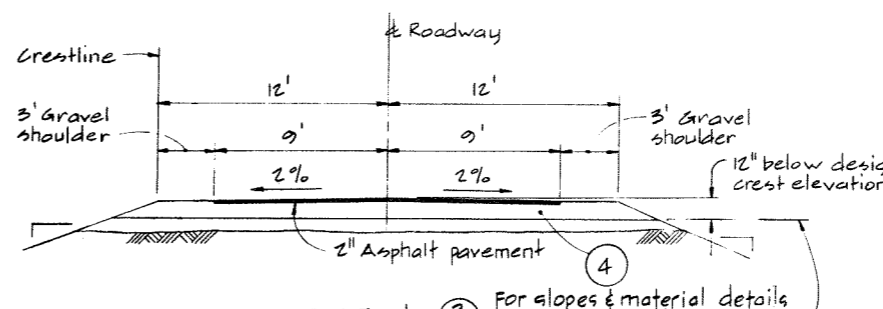
NOTE  
For typical dyke sections in this area see (A) (7)



NOTE  
Transition in gravel shoulder width to take place between CH 699+00 to 700+00

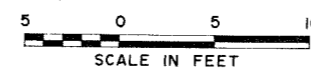
DETAIL (1)

PAVED ROAD TYP BTWN  
CH 648+40 TO 699+72 &  
CH 699+72 TO 700+00



DETAIL (2)

PAVED ROAD TYP BTWN CH 700+00 TO 701+22



MATERIAL LEGEND

- (1) Silt-clay
- (2) Sand
- (3) Sand, gravel cobbles
- (4) Crushed gravel
- (5) Light rip-rap

LEGEND

- Existing ground surface (section)
- Existing ground & structures (plan)
- (A) - section identification letter
- (7) - Drawing No. on which the section is drawn (ie) 4795-12-[7]
- (2) - detail identification number
- (7) - Drawing No. on which the detail is drawn (ie) 4795-12-[7]

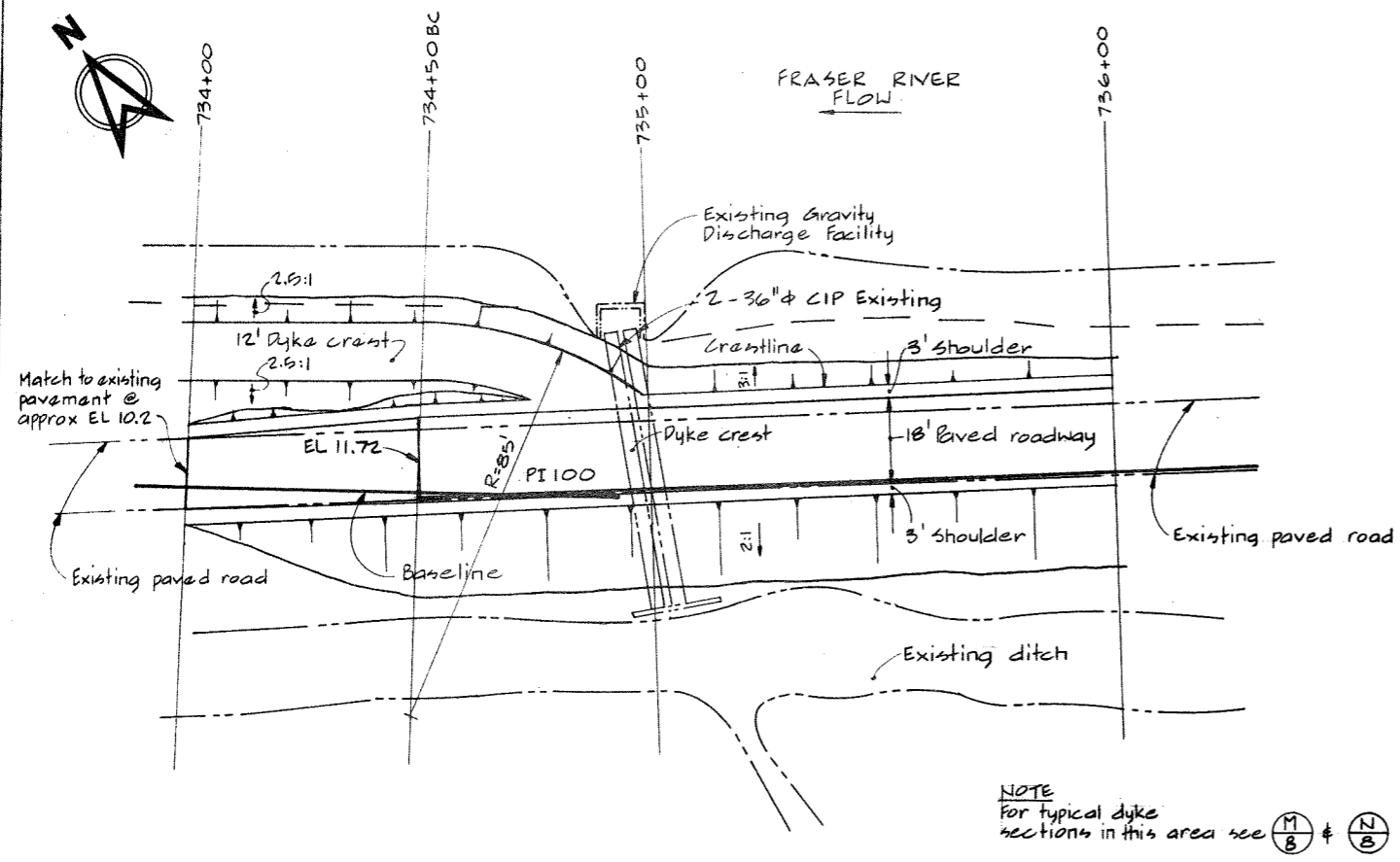
NOTES

- Elevations refer to the Geodetic Survey of Canada.
- For offset dimensions see appropriate chainage on Alignment Plans.
- Offset distances from base line to crest line are taken at design crest elevation.
- Design crest elevation varies see profile on 4795-12-2.

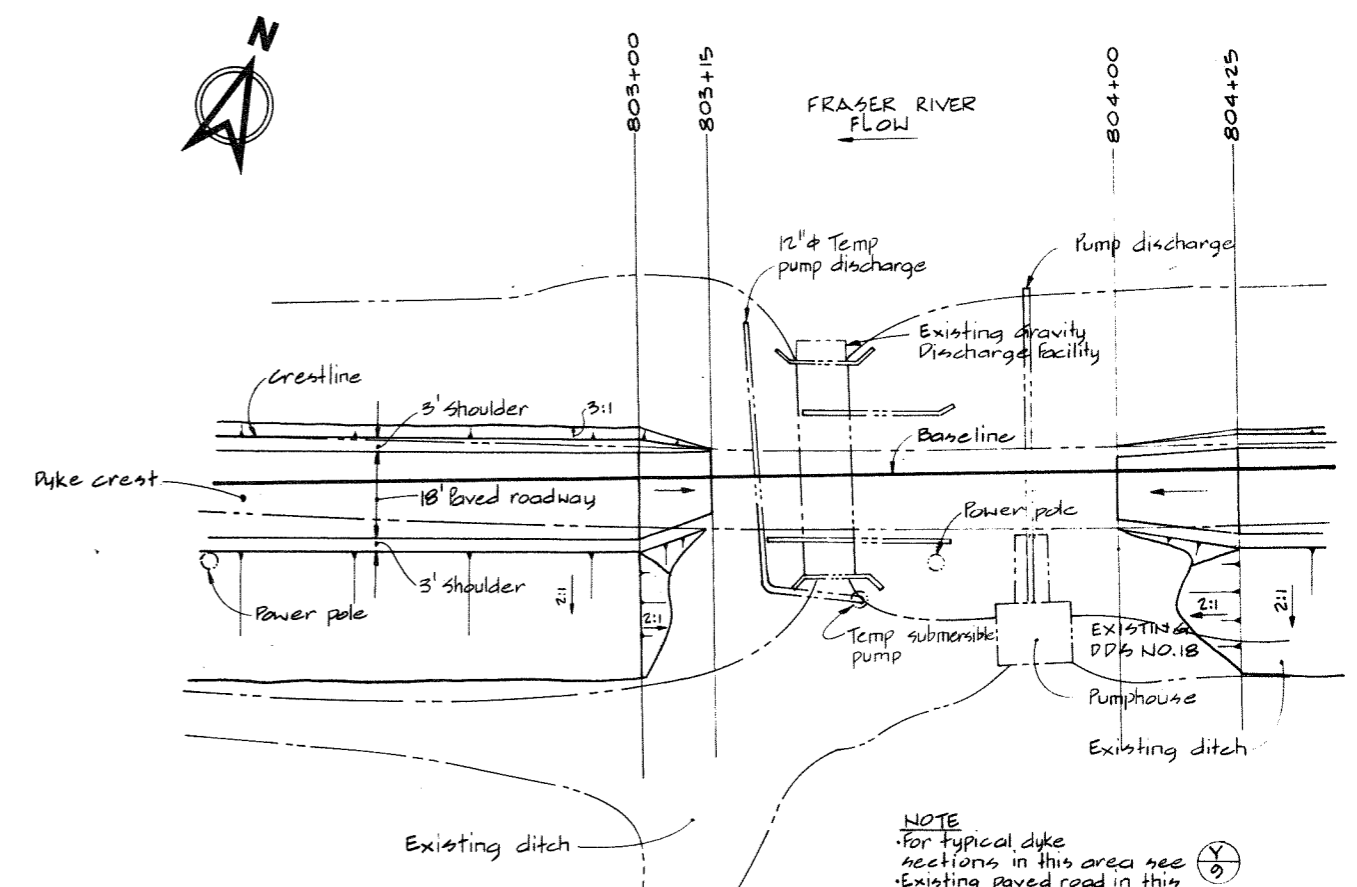
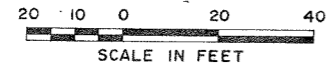


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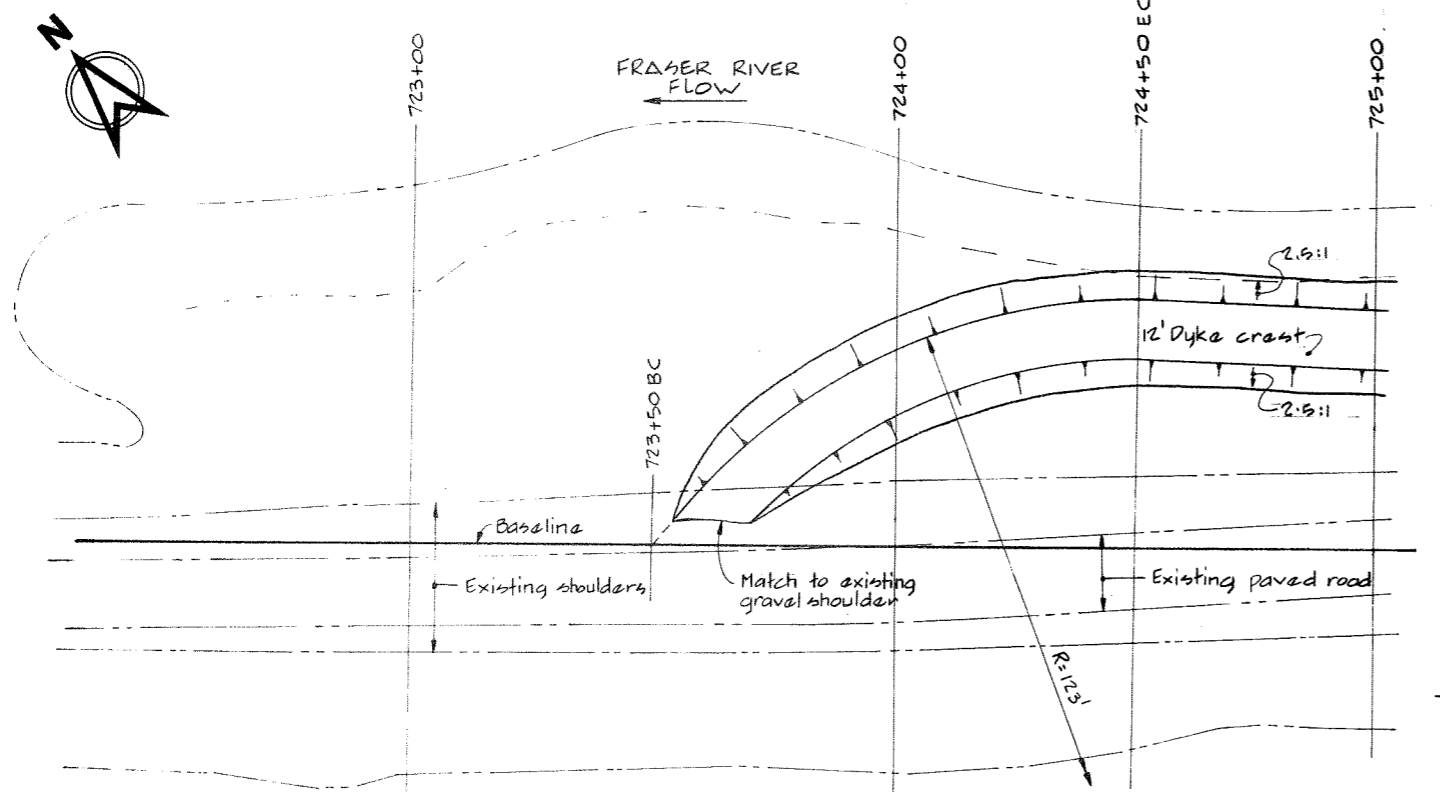
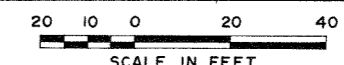
RECOMMENDED R. L. Cameron PROJECT MANAGER	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED DLC	SURVEYED CBA FIELD
DATE May 7, 1976	PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 MISCELLANEOUS DETAILS	DRAWN AR	DATE 1975
APPROVED J. L. Fuller DIRECTOR		CHECKED DLC	FILE NO. 0281550-C10-12
DATE May 7/76		SCALE AS SHOWN	DATE May 24 1976
		DWG. NO. 4795-12-11	SHEET 1 OF 3 SHEETS



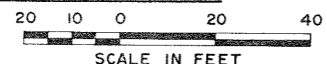
DRAINAGE DISCHARGE STRUCTURE NO. 17



DRAINAGE DISCHARGE STRUCTURE NO. 18



DYKE TO ROAD TRANSITION @ CH 723+50



NOTE  
For typical dyke sections in this area see  $\frac{M}{8}$  &  $\frac{N}{8}$

NOTE  
For typical dyke sections in this area see  $\frac{Y}{9}$   
Existing paved road in this area extremely narrow (13'). Pavement should be widened to maximum practicable width to meet new 18' wide pavement.

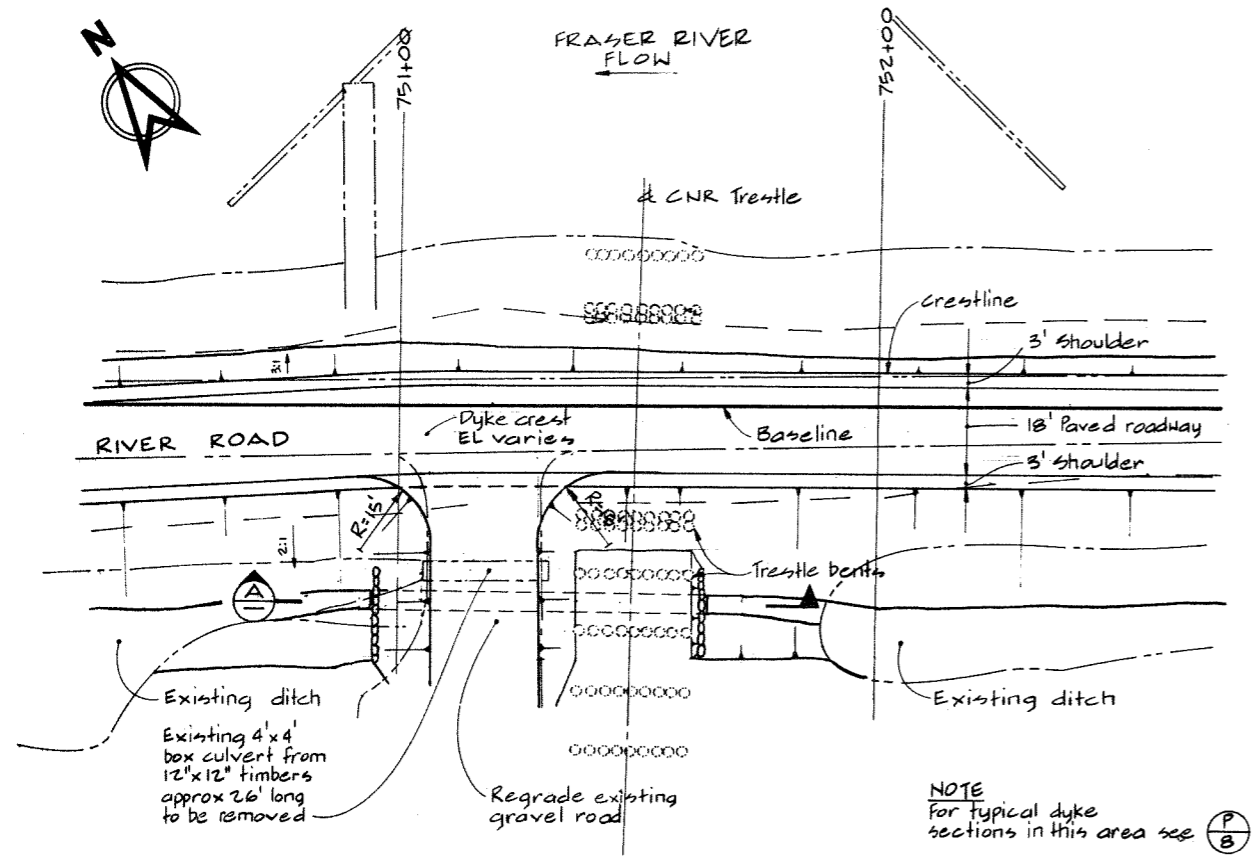
NOTE  
For typical dyke sections in this area see  $\frac{L}{7}$  &  $\frac{M}{8}$

NOTES  
For Notes, Material Legend & Legend see 4795-12-11

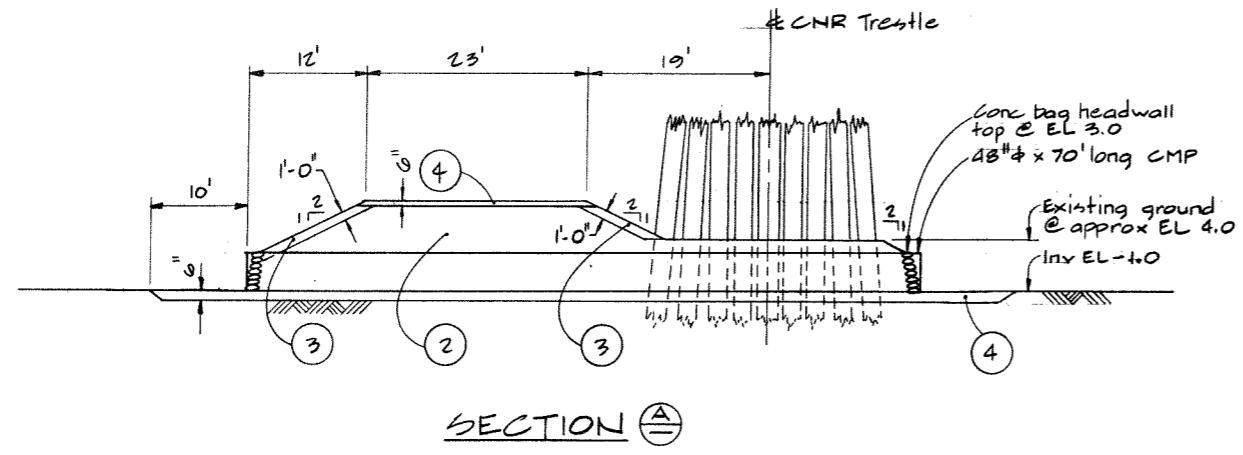
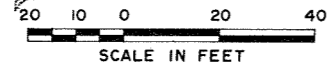


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CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED <i>B. K. Cameron</i> PROJECT MANAGER.	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <b>DLC</b>	SURVEYED <b>CBA FIELD</b>
DATE <i>May 7, 1976</i>	PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND	DRAWN <b>AR</b>	DATE <b>1975</b>
APPROVED <i>[Signature]</i> DIRECTOR	CONTRACT NO. 12	CHECKED <b>DLC</b>	FILE NO. <b>0281550-C10-12</b>
DATE <i>May 7/76</i>	MISCELLANEOUS DETAILS	SCALE <b>AS SHOWN</b>	DATE <b>May 1976</b>
NO. BY	REVISIONS	DWG. NO. <b>4795-12-12</b>	SHEET <b>2</b> OF <b>3</b> SHEETS

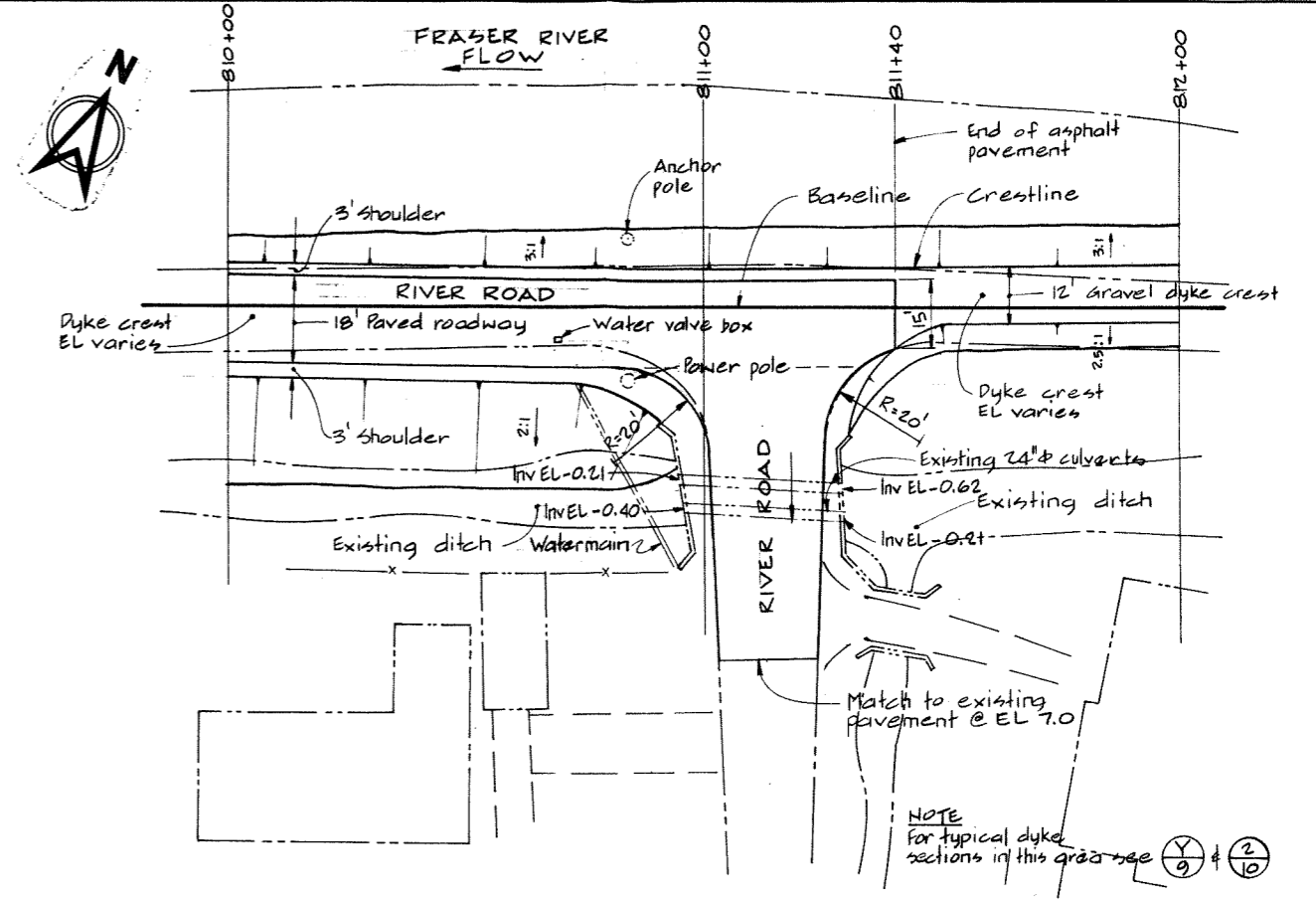


DITCH CROSSING NO. 20  
CULVERT @ CNR TRESTLE



SECTION A

NOTE  
For typical dyke sections in this area see (P/B)



JUNCTION RIVER ROAD TO WESTMINSTER HWY  
TRANSITION SECTION



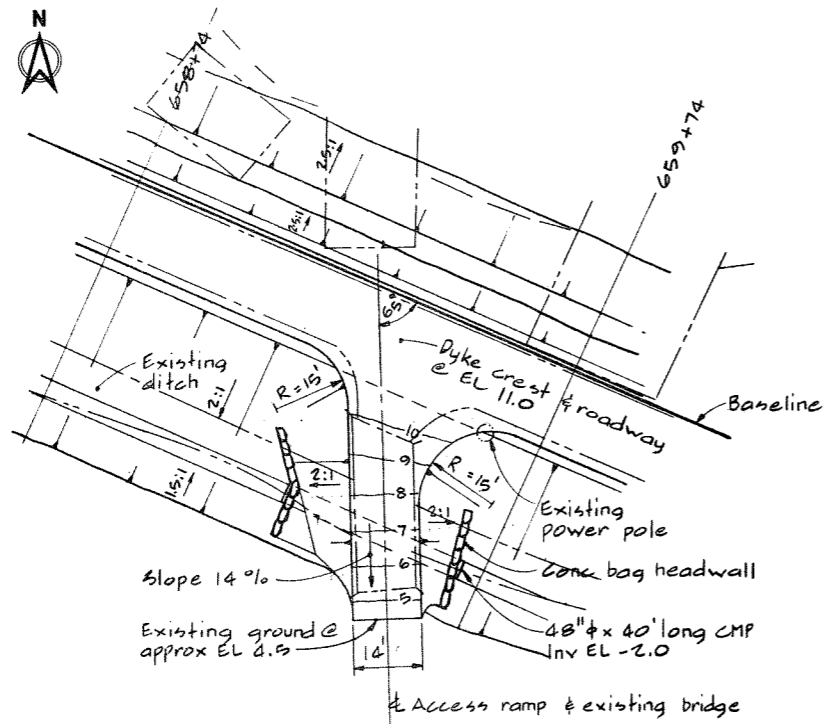
NOTE  
For typical dyke sections in this area see (Y/9) & (Z/10)

NOTES  
• For Notes, Material Legend & Legend see 4795-12-11



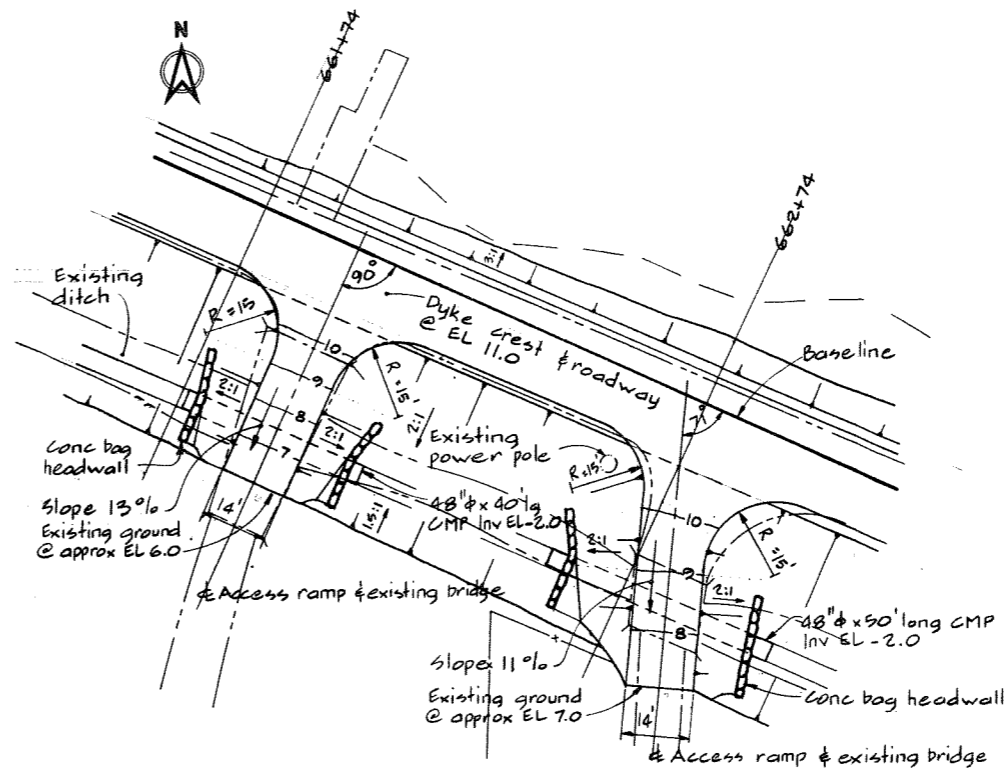
<p><b>CBA ENGINEERING LTD.</b> CONSULTING ENGINEERS - VANCOUVER - CANADA</p>	RECOMMENDED <i>R. R. Coomson</i> PROJECT MANAGER DATE <i>May 7, 1976</i>	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT  PROJECT NO. 3 — THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 MISCELLANEOUS DETAILS	DESIGNED <i>DLC</i> DRAWN <i>AR</i> CHECKED <i>DLC</i> SCALE AS SHOWN DWG. NO. 4795-12-13	SURVEYED <i>EBA FIELD</i> DATE 1975 FILE NO. 0281550-C10-12 DATE <i>May 1976</i> SHEET 3 OF 3 SHEETS
	APPROVED <i>[Signature]</i> DIRECTOR DATE <i>May 7/76</i>		NO. BY REVISIONS DATE	





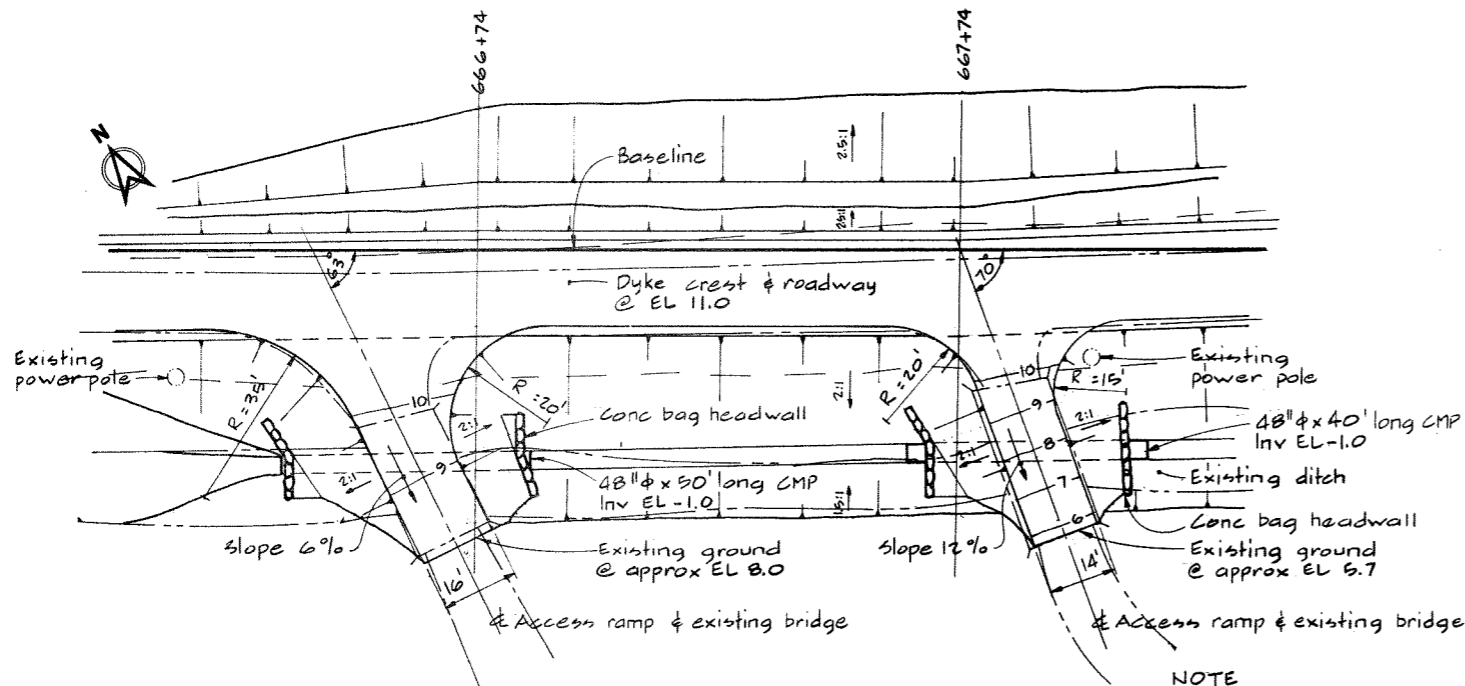
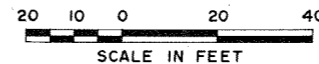
NOTE  
For typical dyke sections in this area see  $\textcircled{C}$

DITCH CROSSING NO. 2



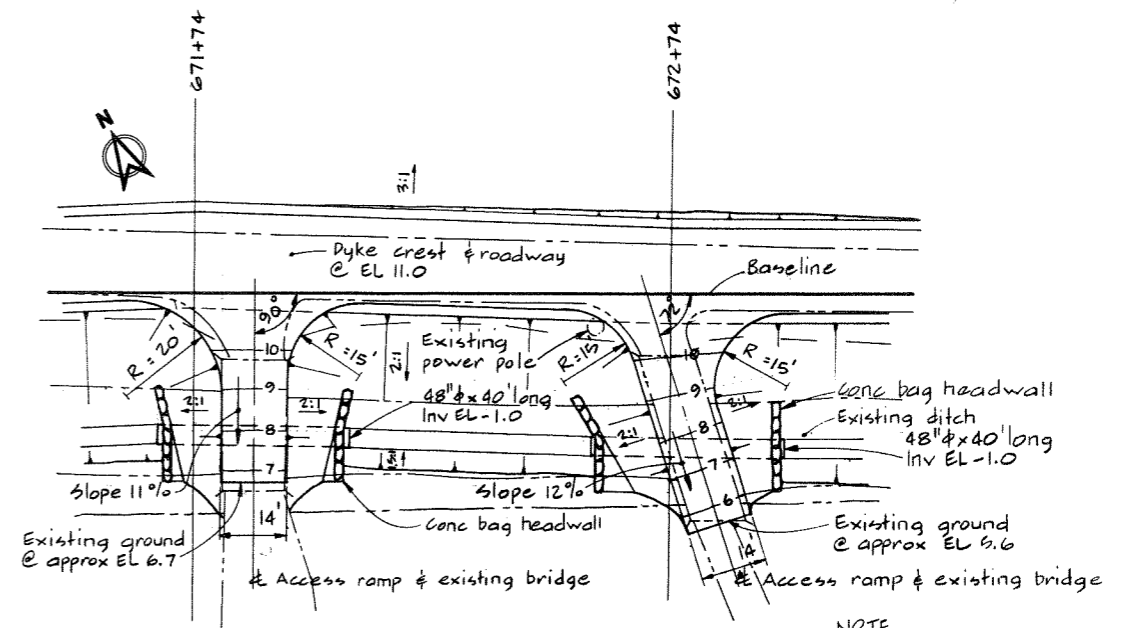
NOTE  
For typical dyke sections in this area see  $\textcircled{D}$

DITCH CROSSING NO. 4 & 5



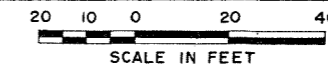
NOTE  
For typical dyke sections in this area see  $\textcircled{F}$

DITCH CROSSING NO. 6 & 7



NOTE  
For typical dyke sections in this area see  $\textcircled{G}$

DITCH CROSSING NO. 10 & 11



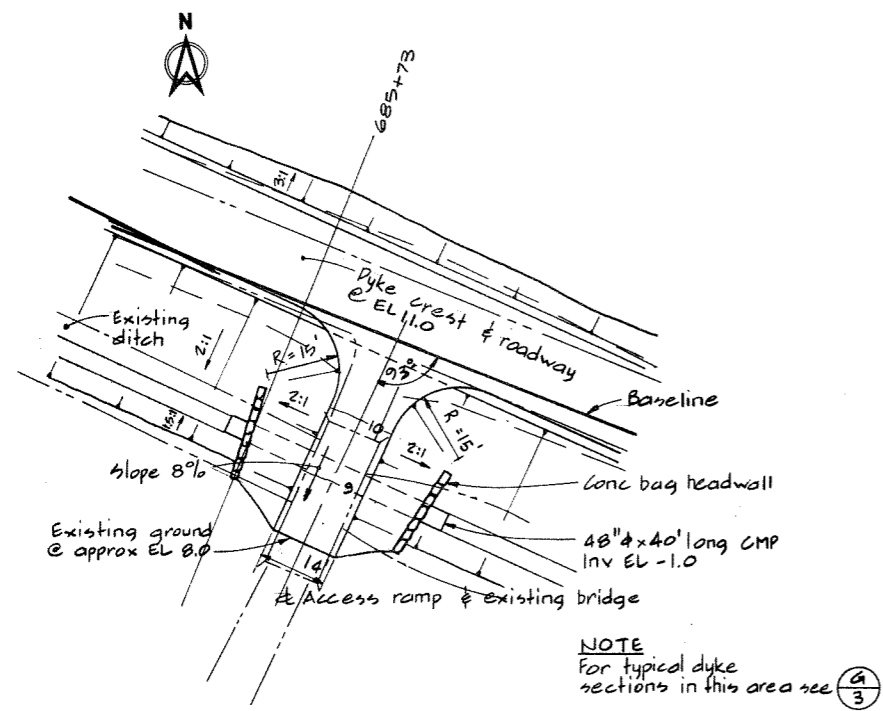
NOTES

- \*For Notes, Material Legend & Legend see 4795-12-6.
- \*For typical ditch crossing section see 4795-12-17.
- \*For location of ditch crossings see 4795-12-18 to 24 incl



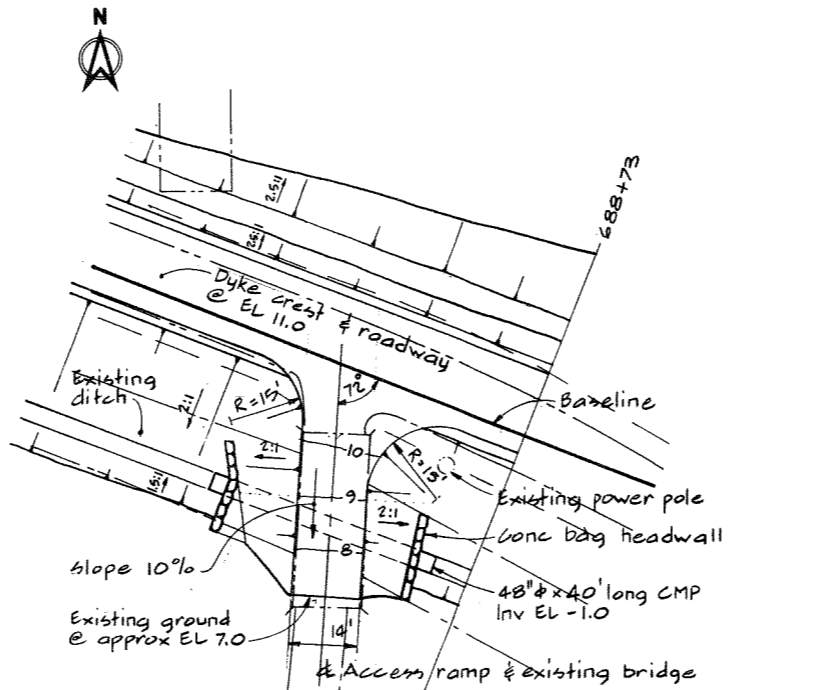
CBA ENGINEERING LTD.  
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED PROJECT MANAGER DATE May 7, 1976	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED EMH	SURVEYED CBA FIELD
APPROVED DIRECTOR DATE May 7/76	PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 DITCH CROSSING DETAILS	DRAWN AR	DATE 1975
		CHECKED DLC	FILE NO. 0281550-C10-12
		SCALE AS SHOWN	DATE May 1976
		DWG. NO. 4795-12-14	SHEET 1 OF 4 SHEETS



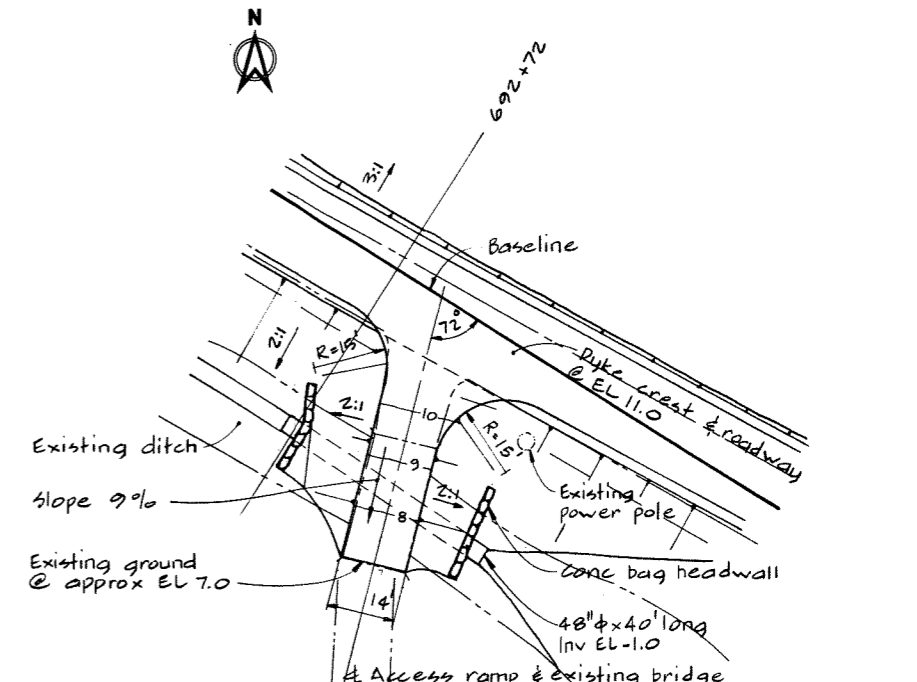
**DITCH CROSSING NO. 14**  
 20 10 0 20 40  
 SCALE IN FEET

NOTE  
 For typical dyke sections in this area see (A/3)



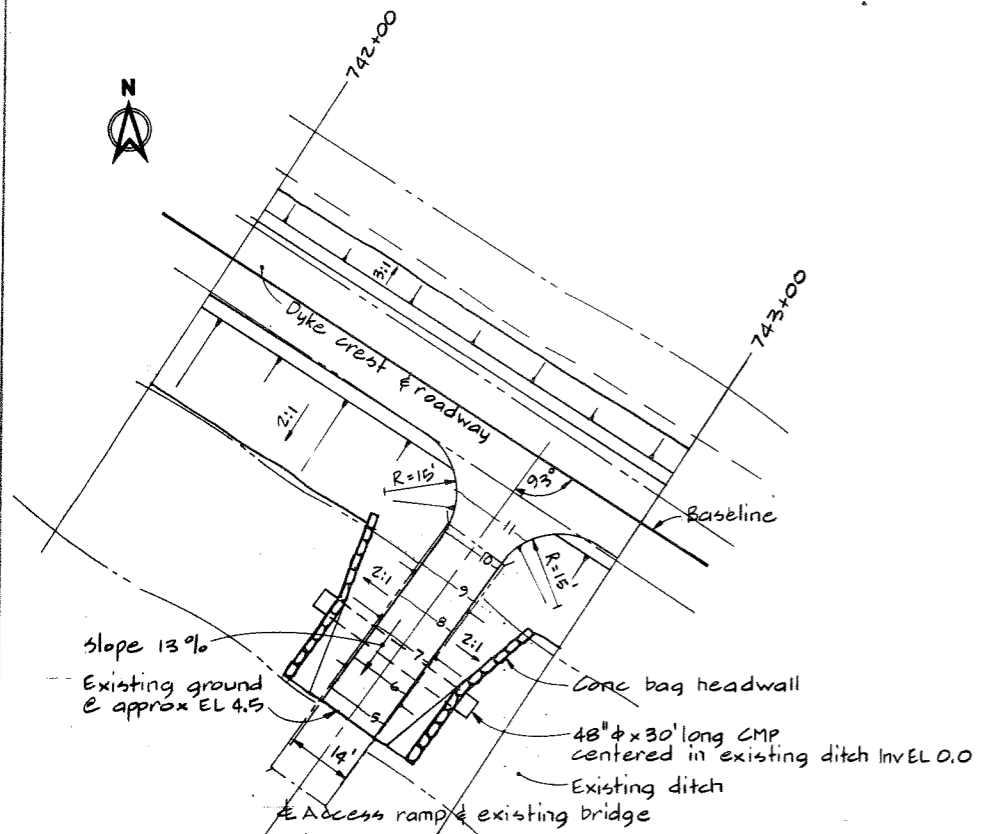
**DITCH CROSSING NO. 15**  
 20 10 0 20 40  
 SCALE IN FEET

NOTE  
 For typical dyke sections in this area see (F/7)



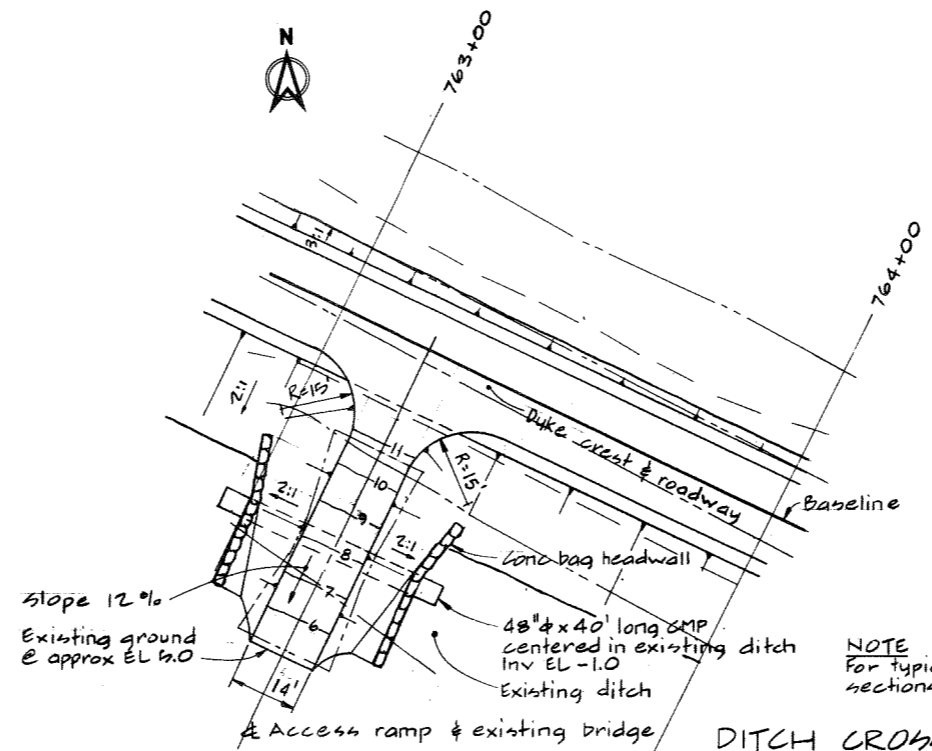
**DITCH CROSSING NO. 17**  
 20 10 0 20 40  
 SCALE IN FEET

NOTE  
 For typical dyke sections in this area see (G/7)



**DITCH CROSSING NO. 19**  
 20 10 0 20 40  
 SCALE IN FEET

NOTE  
 For typical dyke sections in this area see (N/8)



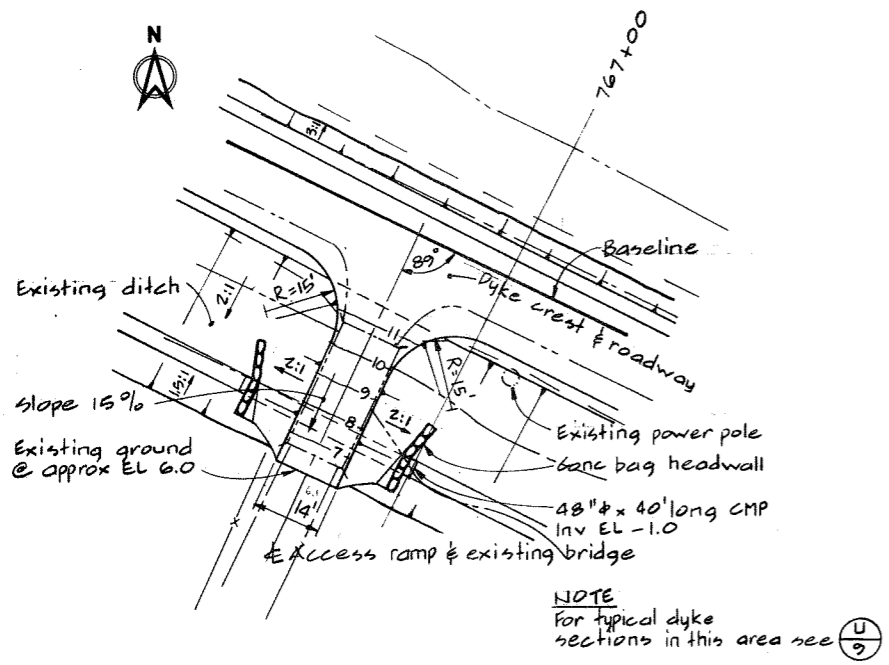
**DITCH CROSSING NO. 22**  
 20 10 0 20 40  
 SCALE IN FEET

NOTE  
 For typical dyke sections in this area see (T/8)

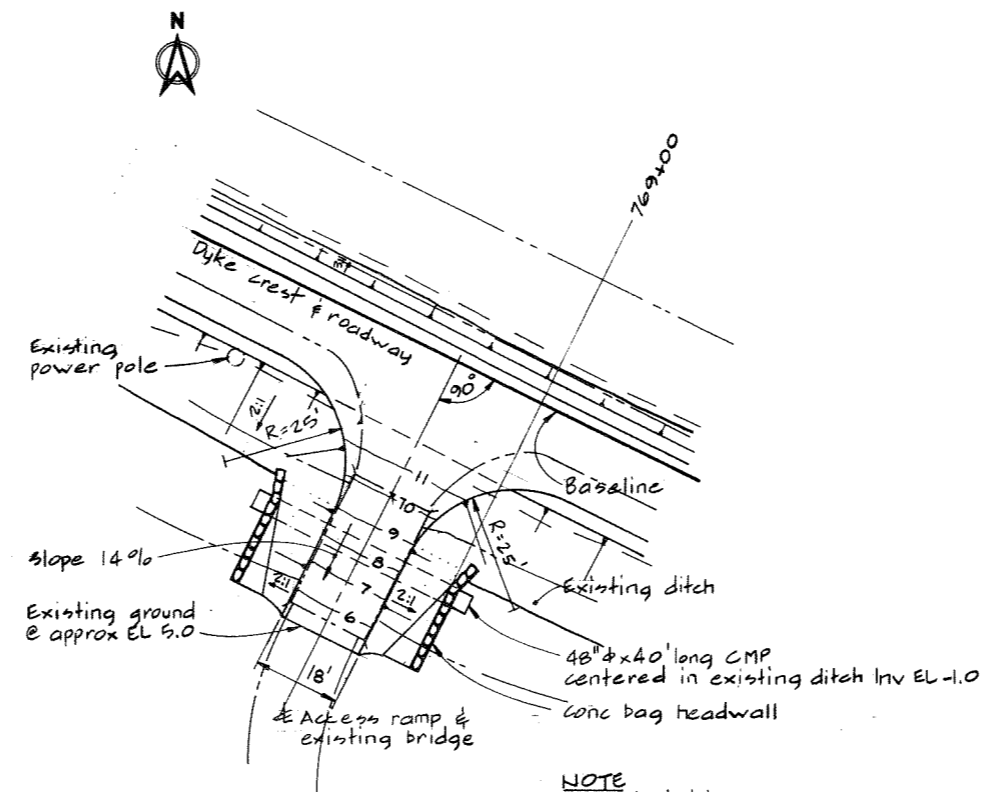


**NOTES**  
 • For Notes, Material Legend & Legend see 4795-12-6.  
 • For typical ditch crossing section see 4795-12-17.  
 • For location of ditch crossings see 4795-12-18 to 24 incl.

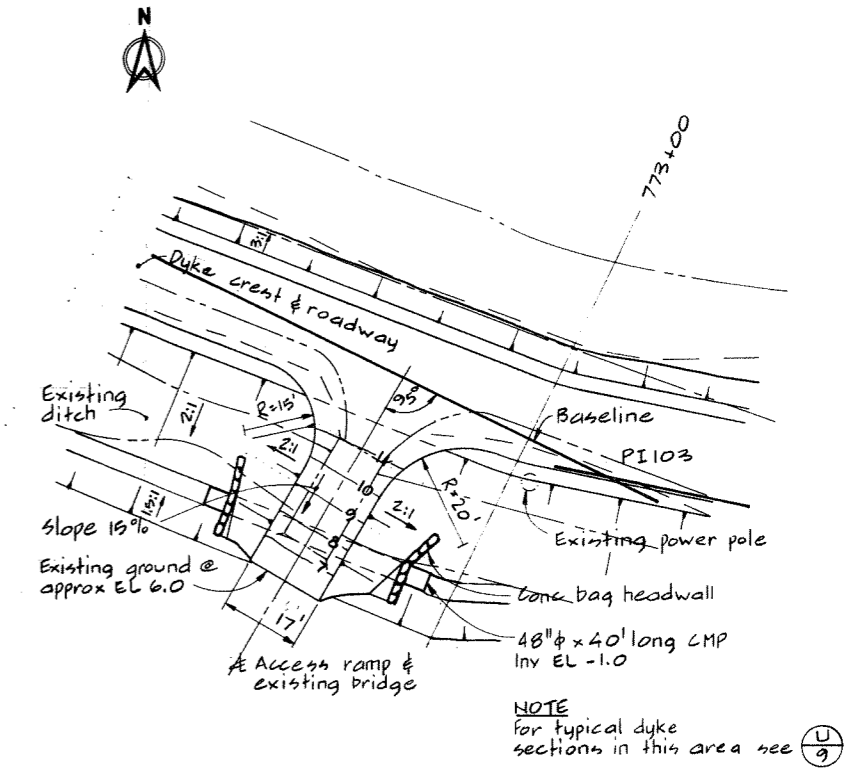
<b>CBA ENGINEERING LTD.</b> CONSULTING ENGINEERS - VANCOUVER - CANADA	RECOMMENDED <i>R. H. Cameron</i> PROJECT MANAGER. DATE <i>May 7, 1976</i>	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 DITCH CROSSING DETAILS	DESIGNED <b>EMH</b> DRAWN <b>AR</b> CHECKED <b>DLC</b> SCALE <b>AS SHOWN</b> DWG. NO. <b>4795-12-15</b>	SURVEYED <b>CBA FIELD</b> DATE <b>1975</b> FILE NO. <b>0281550-C10-12</b> DATE <b>May 1976</b> SHEET <b>2</b> OF <b>4</b> SHEETS
	APPROVED <i>[Signature]</i> DIRECTOR DATE <i>May 7/76</i>		PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 DITCH CROSSING DETAILS	DWG. NO. <b>4795-12-15</b>



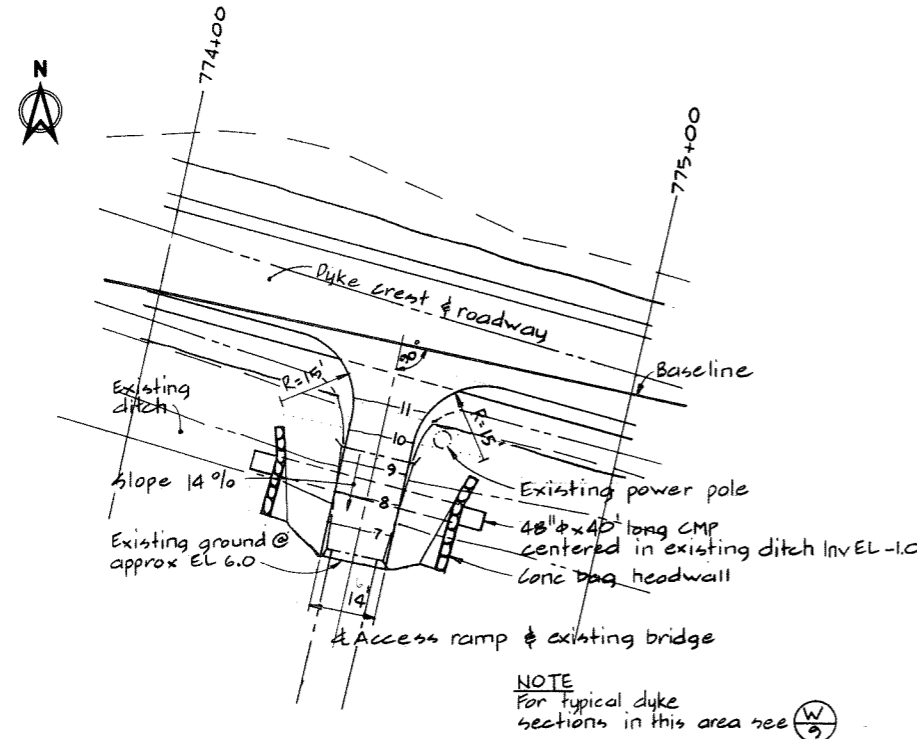
DITCH CROSSING NO. 23  
 20 10 0 20 40  
 SCALE IN FEET



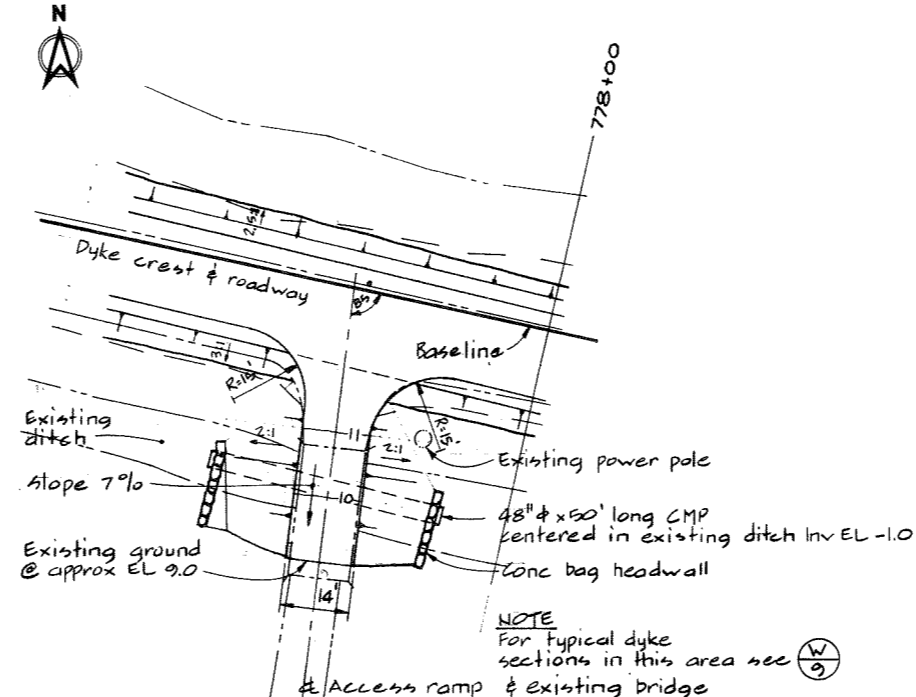
DITCH CROSSING NO. 24  
 20 10 0 20 40  
 SCALE IN FEET



DITCH CROSSING NO. 27  
 20 10 0 20 40  
 SCALE IN FEET



DITCH CROSSING NO. 28  
 20 10 0 20 40  
 SCALE IN FEET



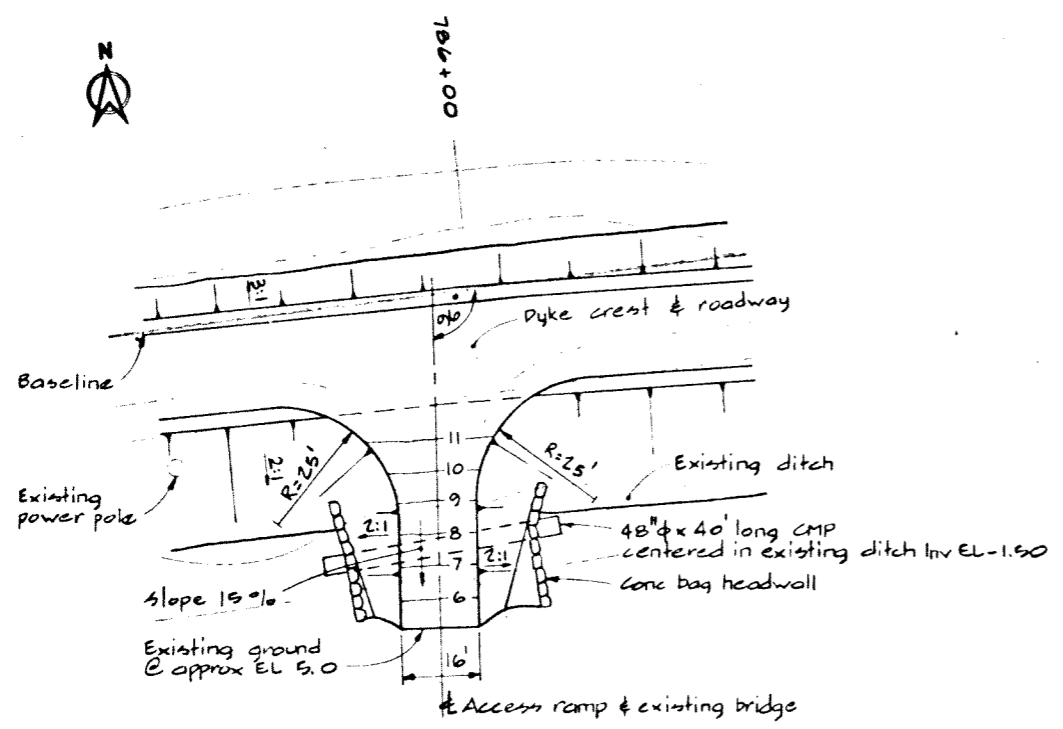
DITCH CROSSING NO. 29  
 20 10 0 20 40  
 SCALE IN FEET

**NOTES**

- For Notes, Material Legend & Legend see 4795-12-6.
- For typical ditch crossing section see 4795-12-17.
- For location of ditch crossings see 4795-12-18 to 24 incl.

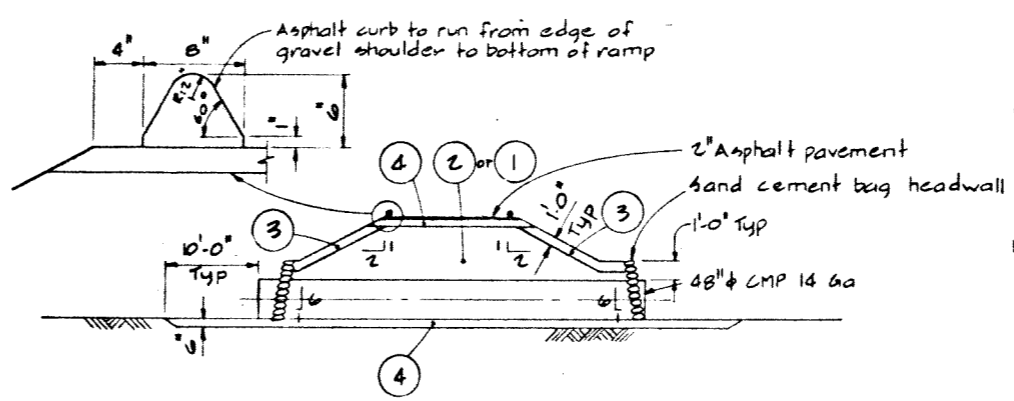


<p><b>CBA ENGINEERING LTD.</b> CONSULTING ENGINEERS - VANCOUVER - CANADA</p>	RECOMMENDED <i>R. K. Cameron</i> PROJECT MANAGER DATE <i>May 7, 1976</i>	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT  PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 DITCH CROSSING DETAILS	DESIGNED <b>EMH</b> DRAWN <b>AR</b> CHECKED <b>DLC</b> SCALE AS SHOWN DWG. NO. <b>4795-12-16</b>	SURVEYED <b>CBA FIELD</b> DATE <b>1975</b> FILE NO. <b>0281550-C10-12</b> DATE <b>May 1976</b> SHEET <b>3</b> OF <b>4</b> SHEETS
	APPROVED <i>John Fuller</i> DIRECTOR DATE <i>May 7/76</i>		NO. BY REVISIONS DATE	

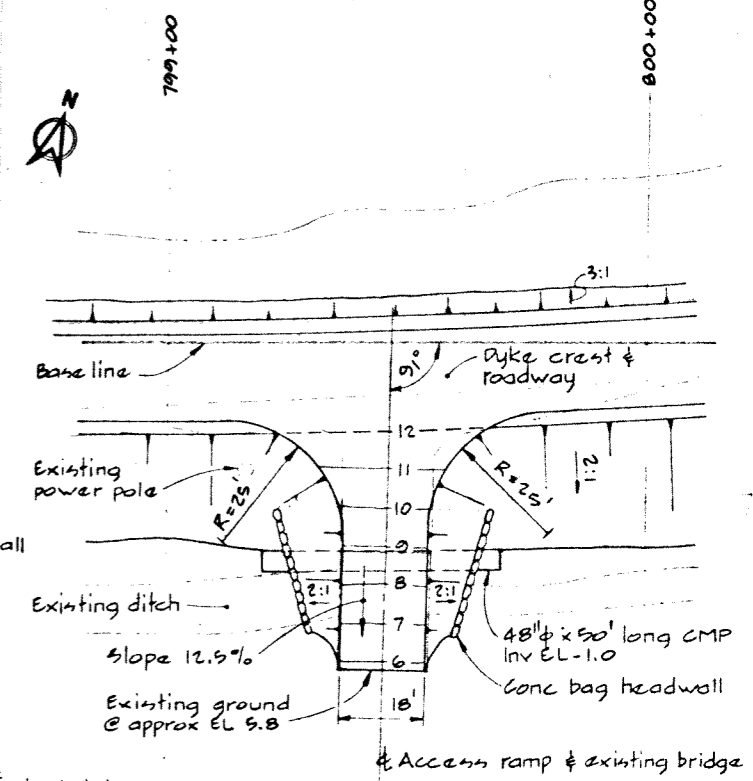


NOTE  
For typical dyke  
sections in this area see (V9)

DITCH CROSSING NO. 32

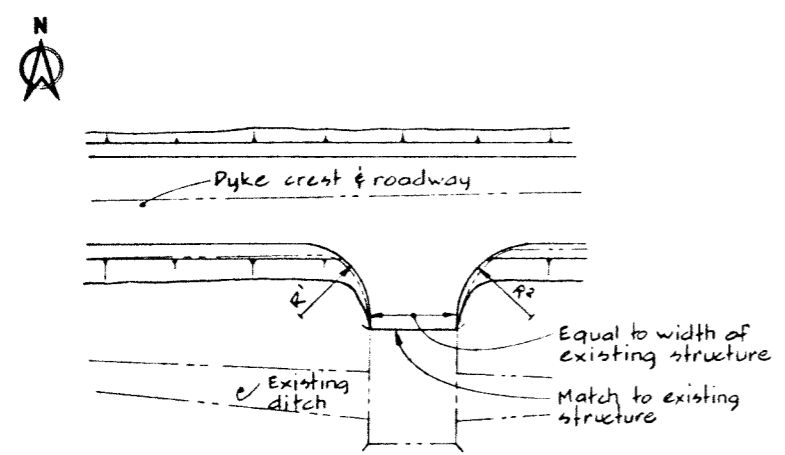
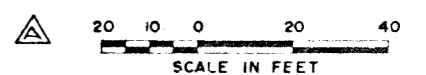


TYP DITCH CROSSING SECTION  
NTS

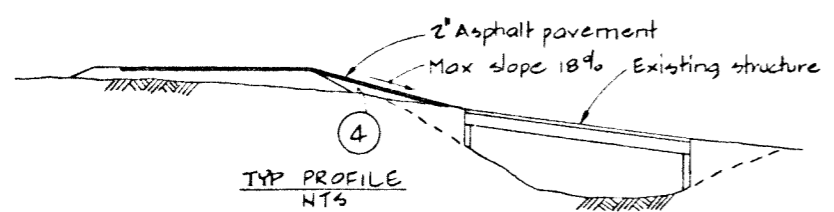


NOTE  
For typical dyke  
section in this area see (X9) (V9)

DITCH CROSSING NO. 35



TYP PLAN  
NTS

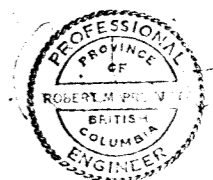


TYP PROFILE  
NTS

REGRAIDING OF APPROACHES TO EXISTING STRUCTURES			
Structure No.	Approx chainage	R'	R2
1	667+25	15'	15'
9	670+74	25'	15'
12	680+00	15'	15'
16	690+72	15'	15'
18	696+70	15'	15'
21	756+40	15'	15'
30	781+50	15'	15'
31	781+80	15'	25'
33	797+10	15'	15'
34	798+90	15'	15'
35	799+30	15'	15'

REGRAIDING OF APPROACHES  
TO EXISTING STRUCTURES

NOTES  
• For Notes, Material Legend & Legend see 4795-12-6.  
• For Location of ditch crossings see 4795-12-1B to 24 incl.

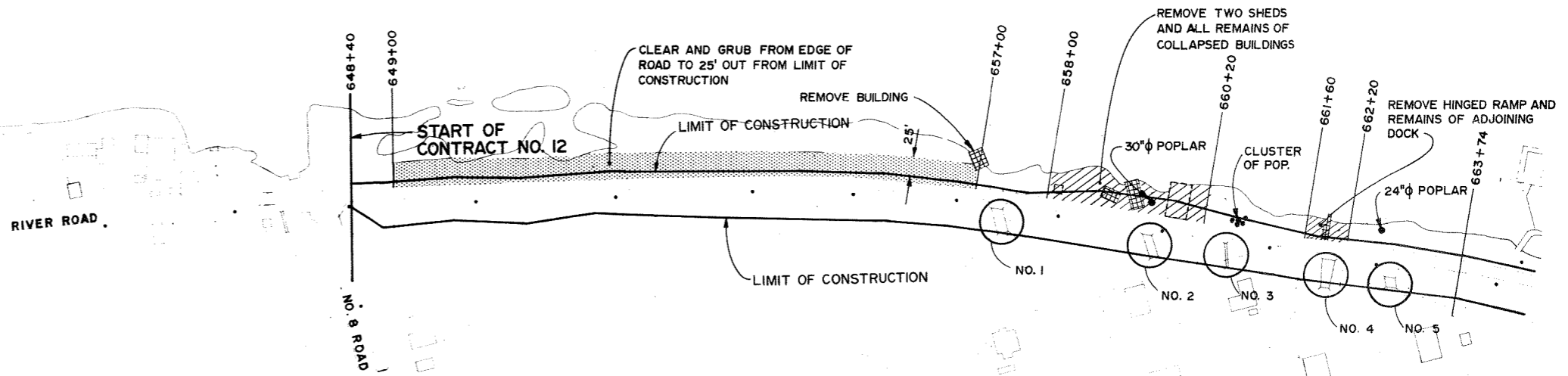


AUG 22 1977

<p><b>CBA ENGINEERING LTD.</b> CONSULTING ENGINEERS - VANCOUVER - CANADA</p>	<p>RECOMMENDED <i>R. M. Cameron</i> PROJECT MANAGER</p>	<p>BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT</p>	<p>DESIGNED EMH</p>	<p>SURVEYED CBA FIELD</p>
	<p>DATE <i>May 7, 1976</i></p>		<p>DATE 1975</p>	
<p>APPROVED <i>W. J. Fuller</i> DIRECTOR</p>	<p>PROJECT NO 3 - THE TOWNSHIP OF RICHMOND</p>	<p>CHECKED DLC</p>	<p>FILE NO 0281550-C10-12</p>	<p>DATE <i>May 1976</i></p>
<p>NO. BY REVISIONS DATE</p>	<p>CONTRACT NO 12</p>	<p>SCALE AS SHOWN</p>	<p>DWG. NO 4795-12-17</p>	<p>SHEET 4 OF 4 SHEETS</p>



# NORTH ARM FRASER RIVER



### LEGEND

- Tree to be removed
- NO. 3 location of ditch crossing.
- ▨ Areas to be cleared and grubbed.
- ▧ Areas on foreshore requiring debris removal
- ▩ Building or structure to be removed

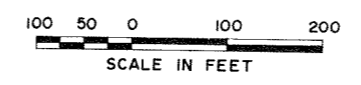
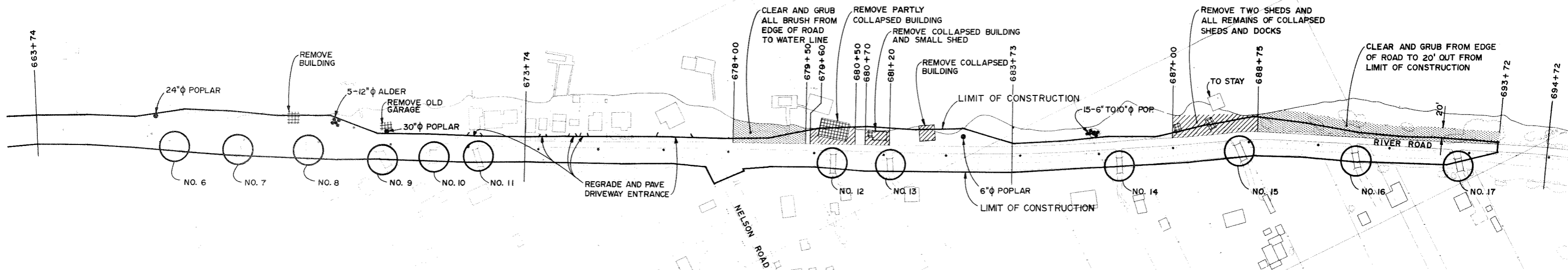
### NOTES

For details of ditch crossings see 4795-12-14, 15, 16 & 17.



		<b>C. B. A. ENGINEERING LTD.</b> CONSULTING ENGINEERS VANCOUVER, B.C., CANADA											
		RECOMMENDED <i>R. A. Cameron</i> PROJECT MANAGER		ELEC		HYD		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE					
DATE <i>May 3, 1976</i>		MECH		SOILS		CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 THE TOWNSHIP OF RICHMOND							
APPROVED <i>[Signature]</i> DIRECTOR		DES EMH		DR Wn		CH DLC		CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 1 OF 7					
DATE <i>May 7, 1976</i>		SCALE AS SHOWN		ORIG ISSUE May 1976		FILE NO. 0281550-C10-12		DWG NO. 4795-12-18		REV			
DWG NO.	TITLE	REFERENCES											
NO.		DESCRIPTION		BY		CH		APPD		ISSUED			
NO.		DESCRIPTION		BY		CH		APPD		ISSUED			

# NORTH ARM FRASER RIVER



**NOTE**  
For Notes and Legend see 4795-12-18



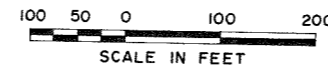
NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

<b>C. B. A. ENGINEERING LTD.</b>				CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED <i>R. K. Canam</i> PROJECT MANAGER DATE: <i>May 7, 1976</i>		ELEC MECH STR		HYD SOILS		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE	
APPROVED <i>Phil A. Mc...</i> DIRECTOR DATE: <i>May 7, 1976</i>		DES EMH    DR    CH Wn      DLc		SCALE AS SHOWN ORIG ISSUE May 1976		CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
DWG NO. _____ TITLE _____ REFERENCES _____		CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 2 OF 7		FILE NO. 0281550-C10-12		C.B.A. DWG NO. 4795-12-19	





# NORTH ARM FRASER RIVER



**NOTE**  
 For Notes and Legend see 4795-12-18



**C. B. A. ENGINEERING LTD.** CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

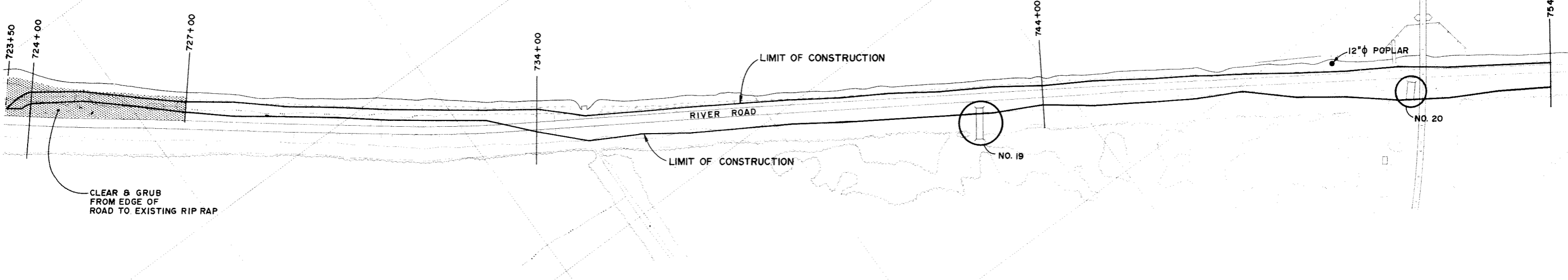
RECOMMENDED <i>H. R. Collins</i> PROJECT MANAGER DATE <i>May 3, 1976</i>	ELEC MECH STR	HYD SOILS	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND
APPROVED <i>[Signature]</i> DIRECTOR	DES EMH    DR    CH Wn    DLG	SCALE AS SHOWN	CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 3 OF 7
DATE <i>May 4/76</i>	ORG ISSUE May 1976	FILE NO. 0281550-C10-12	C.B.A. DWG NO. 4795-12-20    REV

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS						REVISIONS					

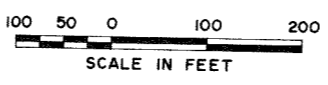
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	REFERENCES



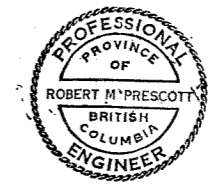
NORTH ARM FRASER RIVER



CLEAR & GRUB FROM EDGE OF ROAD TO EXISTING RIP RAP



**NOTE**  
 For Notes and Legend see 4795-12-18

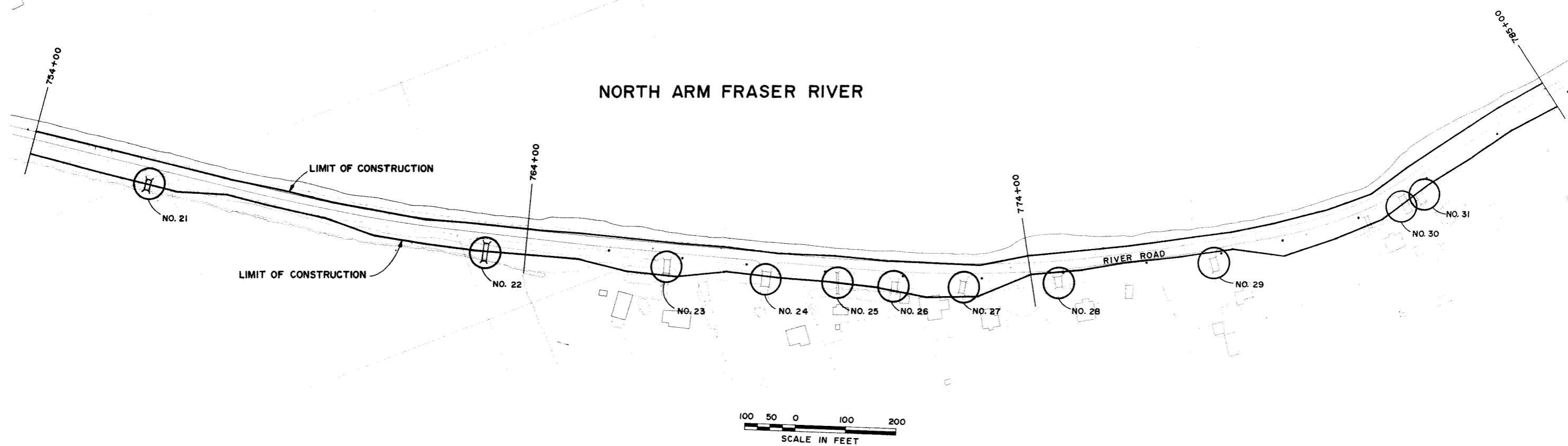


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REFERENCES		REVISIONS											

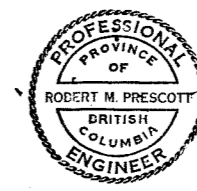
<b>C. B. A. ENGINEERING LTD.</b>				CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA		
RECOMMENDED <i>R. K. Cameron</i> PROJECT MANAGER DATE <i>May 7, 1976</i>		ELEC	HYD	MECH	SOILS	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
APPROVED <i>W. J. H.</i> DIRECTOR DATE <i>May 7/76</i>		DES	DR	CH	DLC	CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 4 OF 7		
SCALE AS SHOWN		STR	ORIG ISSUE		May 1976	FILE NO. 0281550-C10-12	C.B.A. DWG NO. 4795-12-21	REV



# NORTH ARM FRASER RIVER



**NOTE**  
For Notes and Legend see 4795-12-18

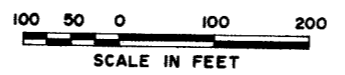
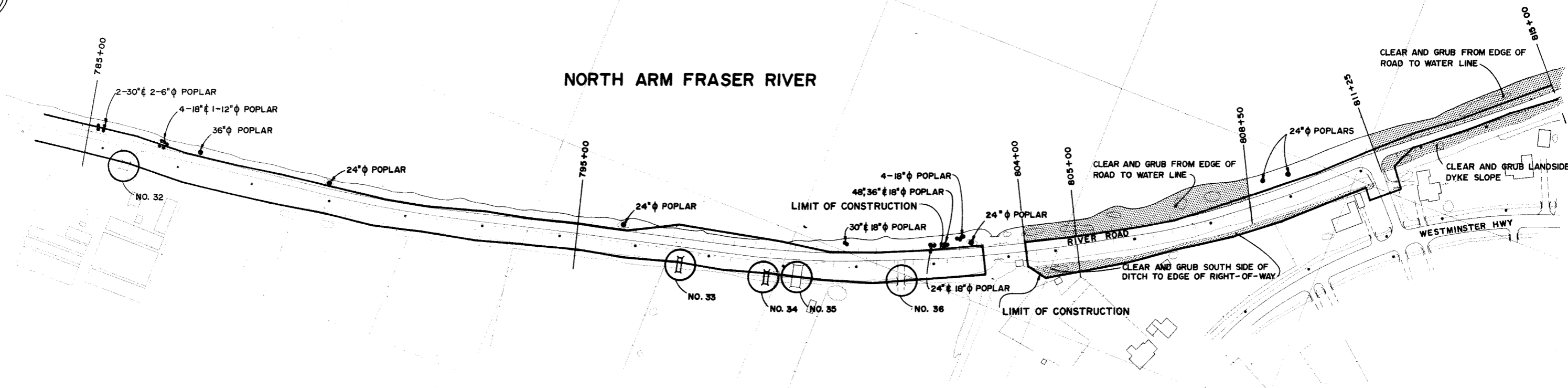


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REFERENCES		REVISIONS											

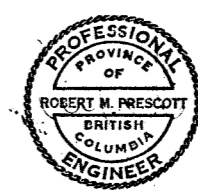
<b>C. B. A. ENGINEERING LTD.</b>				CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
<i>R. L. Collins</i> RECOMMENDED PROJECT MANAGER DATE <i>May 1976</i>		ELEC MECH STR DES EMH SCALE AS SHOWN ORIG ISSUE May 1976		HYD SOILS CH DR Wn CH DLc		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 5 OF 7	
APPROVED <i>[Signature]</i> DIRECTOR DATE <i>May 1976</i>		FILE NO. 0281550-C10-12		C.B.A. DWG NO. 4795-12-22		REV	



# NORTH ARM FRASER RIVER



**NOTE**  
For Notes and Legend see 4795-12-18

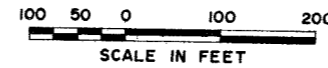
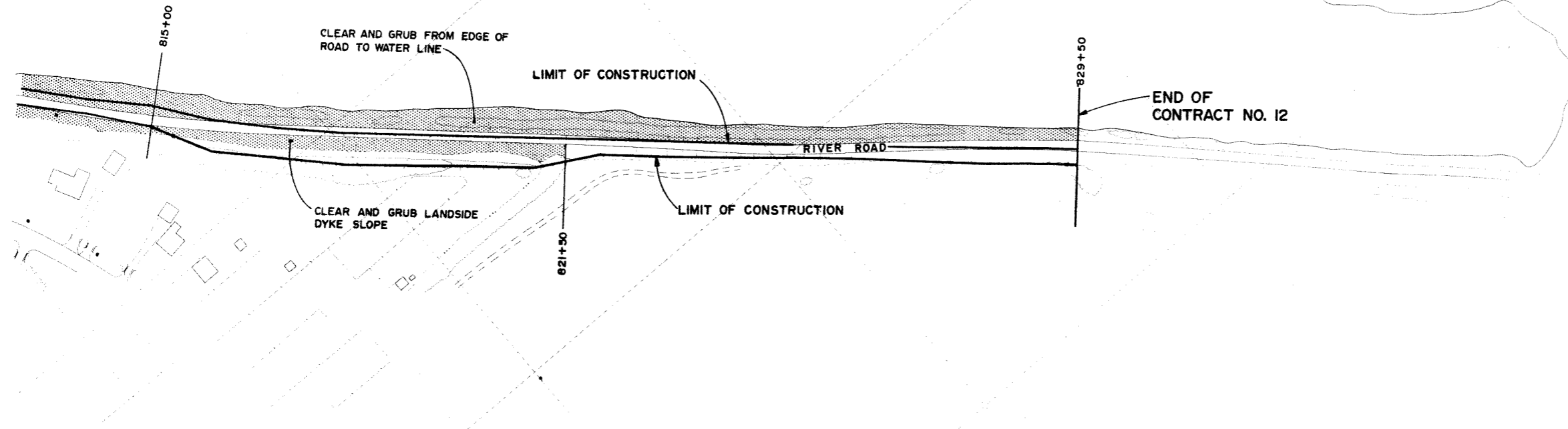


<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
RECOMMENDED PROJECT MANAGER: <i>R. L. Cameron</i>	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND
DATE: <i>May 7, 1976</i>	MECH	SOILS	
APPROVED: <i>[Signature]</i> DIRECTOR	DES	STR	
DATE: <i>May 7, 1976</i>	EMH	DR Wn	CH DLC
	SCALE: AS SHOWN		CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 6 OF 7
	ORIG ISSUE	May 1976	FILE NO. 0281550-C10-12
			C.B.A. DWG NO. 4795-12-23
			REV

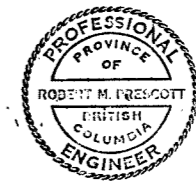
DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
<b>REVISIONS</b>													
<b>REFERENCES</b>													



NORTH ARM FRASER RIVER



NOTE  
For Notes and Legend see 4795-12-1B



DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REFERENCES		REVISIONS				REVISIONS							

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED PROJECT MANAGER <i>F. S. Cameron</i>	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE		
DATE <i>May 2, 1976</i>	MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
APPROVED DIRECTOR <i>[Signature]</i>	DES EMH	DR Wn	CH DLC	CONTRACT NO. 12 TREE REMOVAL, CLEARING, GRUBBING AND DITCH CROSSINGS SHEET 7 OF 7	
DATE <i>May 1976</i>	SCALE AS SHOWN	STR	ORIG ISSUE May 1976	FILE NO. 0281550-C10-12	C.B.A. DWG NO. 4975-12-24
				REV	



# NORTH ARM FRASER RIVER

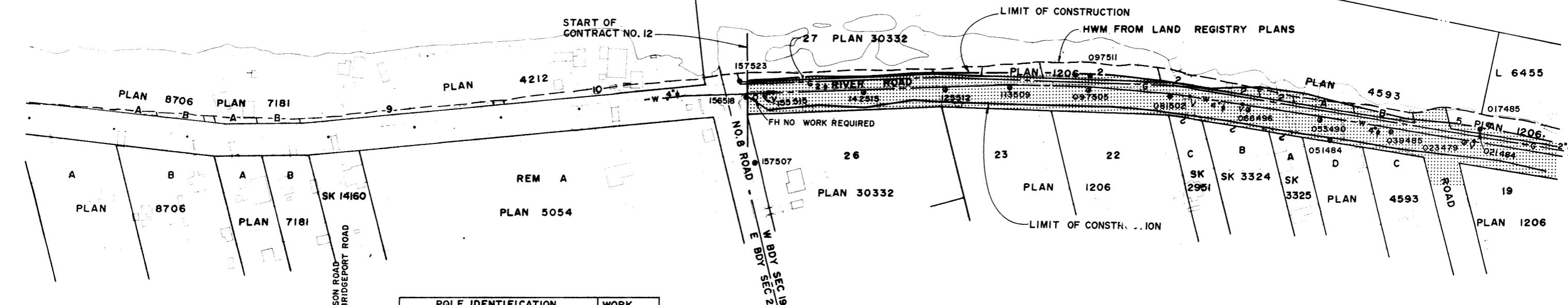
L 5957

HARBOUR HEAD LINE

START OF CONTRACT NO. 12

LIMIT OF CONSTRUCTION

HWM FROM LAND REGISTRY PLANS



SEC 24  
B5N, R5W

SEC 19  
B5N, R4W

POLE IDENTIFICATION NUMBER & OWNER	WORK REQUIRED
155 515	JOINT N
157 523	JOINT N
156 518	JOINT N
142 515	JOINT N
125 512	JOINT N
113-509	JOINT N
097 505	JOINT N
097 511	JOINT N
081 502	JOINT N
066 496	JOINT N
053 490	JOINT N
051 484	JOINT N
039 485	JOINT N
023 479	JOINT N
021 484	JOINT N
017 485	JOINT N
009 473	JOINT N
394 466	JOINT N
378 458	JOINT N
NO TAG	
364 451	JOINT N
348 444	JOINT N
335 437	JOINT N
327 430	JOINT N
306 423	JOINT N
287 414	JOINT N
271 407	JOINT N
256 401	JOINT N
242 394	JOINT N
226 388	JOINT N
211 382	JOINT N
197 377	JOINT N
184 372	JOINT N
168 363	JOINT N
153 356	JOINT N

POLE IDENTIFICATION NUMBER & OWNER	WORK REQUIRED
140 350	JOINT N
129 344	JOINT N
119 339	JOINT N
108 333	B.C. HYDRO R
191 040	JOINT N
164 022	JOINT N
137 006	JOINT N
110 596	JOINT N
094 583	JOINT N
090 582	JOINT N
061 562	JOINT N
035 543	JOINT N
029 540	JOINT N
013 530	JOINT N
392 519	JOINT N
377 512	JOINT N
362 504	JOINT N
348 497	JOINT N
330 488	JOINT N
313 482	JOINT N
297 477	JOINT N
287 476	JOINT N
270 472	JOINT N
254 469	JOINT N
238 467	JOINT N
224 470	JOINT N
210 473	JOINT N
194 476	JOINT N
177 478	JOINT N
161 480	JOINT N
144 482	JOINT N
127 486	JOINT N
110 490	JOINT N
094 494	JOINT N
077 498	JOINT N
062 502	JOINT N
047 507	JOINT N
030 514	JOINT N
014 522	JOINT N
008 530	JOINT N
005 528	JOINT N
391 535	JOINT N
377 544	JOINT N
366 546	JOINT N
353 559	JOINT N
344 567	B.C. HYDRO N
356 562	B.C. HYDRO R

### PROPERTY LEGEND

Right-of-way which province will make available to contractor

### SURVEY LEGEND

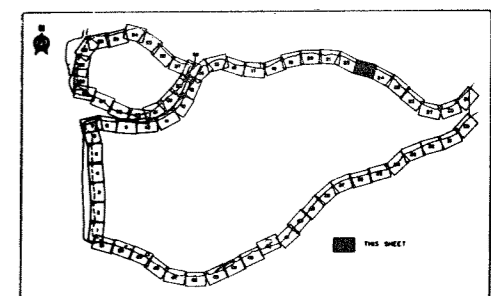
Iron pin found or set during legal survey by Matson, Peck & Toplis Surveyors & Engineers

### SERVICES LEGEND

- W — Watermain
- G — Gas main
- S — Sanitary sewer
- D — Storm sewer
- UE — Underground electrical cables
- H- -H- Underground Tel cables
- F- -F- Underground Hydro
- 094 556 Hydro pole & pole No.
- 097 679 Joint pole with Hydro & B.C. Tel services & pole No.
- 096 365 B.C. Tel pole & pole No.
- Manhole
- Catchbasin
- FH Firehydrant
- ▽-W Valve

### LEGEND

- N- NO WORK REQUIRED
- R- POLE TO BE RELOCATED
- \*- DETAILED CONSTRUCTION SURVEY REQUIRED BEFORE IT CAN BE DETERMINED WHETHER OR NOT POLE SHOULD BE RELOCATED



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.

DATA COMPILED IN 1970

- North Fraser Harbour Commission Harbour Head Line Plan-5h 14 & 15
- Municipality of Richmond 1"=200' Section Property Maps
- Section 19 B5N R4W
- Section 24 B5N R5W

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
 RECOMMENDED PROJECT MANAGER DATE: May 7, 1976		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
APPROVED: for DIRECTOR DATE: May 7/76		CONTRACT NO. 12 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY EXISTING SURVEY MARKERS & UTILITIES SHEET 1 OF 7	
SCALE: AS SHOWN ORIG ISSUE: May 1976		FILE NO. 02B1550-C10-12 DWG NO. 4795-12-25 REV	

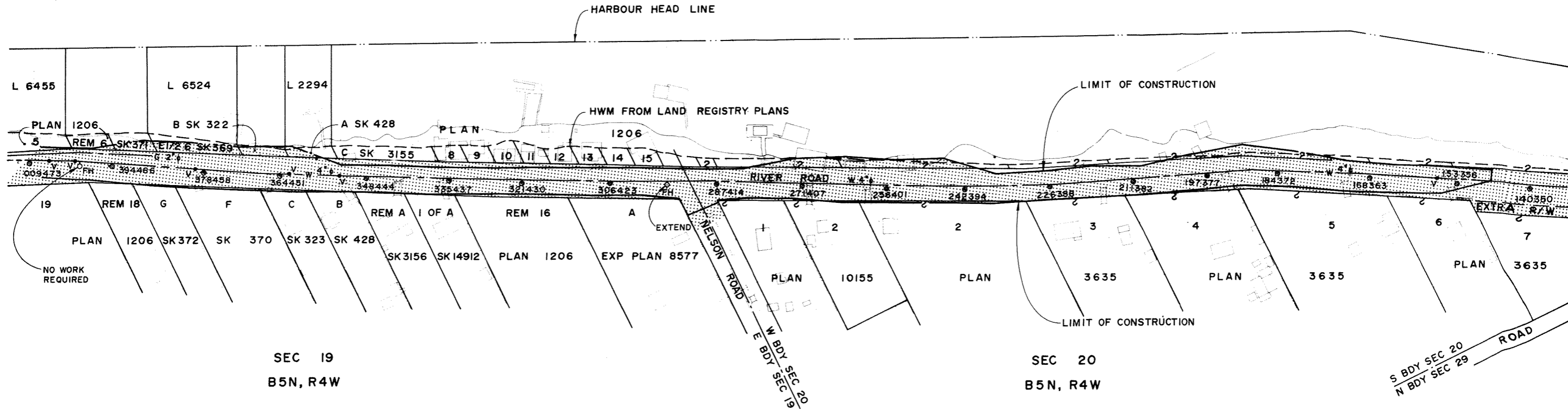
DWG NO.	TITLE
	REFERENCES

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

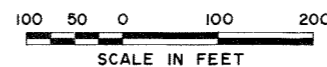
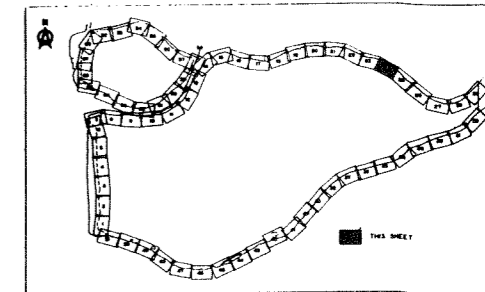




# NORTH ARM FRASER RIVER



**NOTE**  
For Legends see 4795-12-25



DATA COMPILED IN 1970

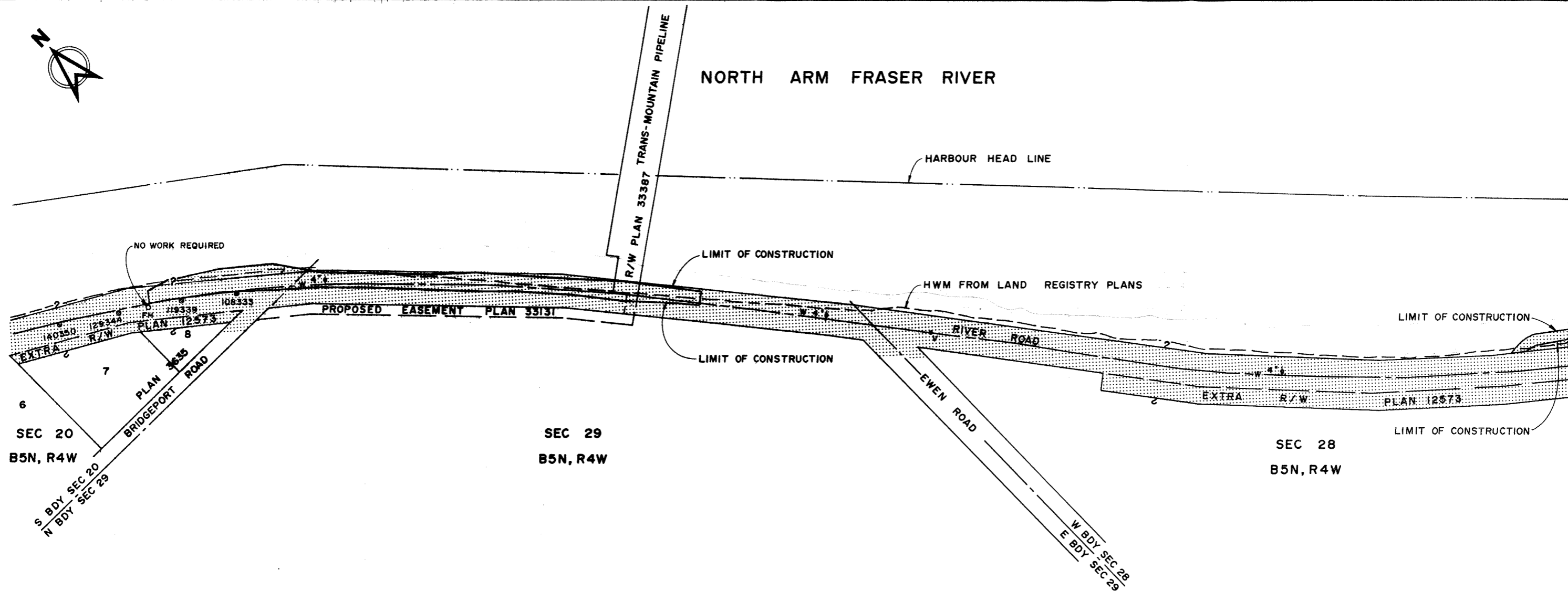
• North Fraser Harbour Commission  
Harbour Head Line Plan - Sh. 15  
• Municipality of Richmond 1"=200'  
Section Property Maps  
- Section 19 B5N R4W  
- Section 20 B5N R4W

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED <i>R. L. Cameron</i> PROJECT MANAGER		ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE	
DATE <i>May 3, 1976</i>		MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
APPROVED <i>John Fuller</i> DIRECTOR		DES	DR Wn	CH DLC	CONTRACT NO. 12 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY EXISTING SURVEY MARKERS & UTILITIES SHEET 2 OF 7
DATE <i>May 7/76</i>		SCALE AS SHOWN		FILE NO. 0281550-C10-12	
		ORIG ISSUE May 1976		DWG NO. 4795-12-26	

DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REFERENCES		REVISIONS						REVISIONS					

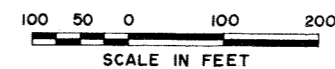
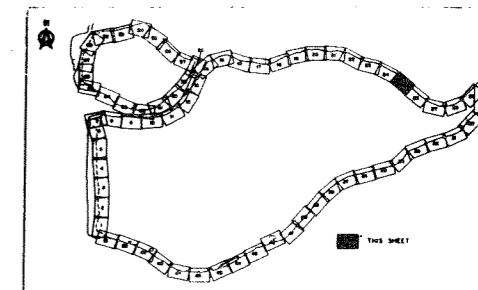


NORTH ARM FRASER RIVER



NOTE

For legends see 4795-12-25



DATA COMPILED IN 1970

Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.

- North Fraser Harbour Commission Harbour Head Line Plan 15 & 16
- Municipality of Richmond 1" = 200' Section Property Maps
- Section 20 B5N R4W
- Section 28 B5N R4W
- Section 29 B5N R4W

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED  
PROJECT MANAGER  
DATE May 3, 1976

ELEC  
MECH  
STR  
DES  
SCALE  
AS SHOWN  
ORIG ISSUE  
May 1976

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA  
DEPARTMENT OF ENVIRONMENT  
WATER RESOURCES SERVICE  
CANADA - BRITISH COLUMBIA  
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT  
PROJECT No. 3 THE TOWNSHIP OF RICHMOND

APPROVED  
DIRECTOR  
DATE May 7/76

DR Wn CH DLC  
SCALE AS SHOWN  
ORIG ISSUE May 1976

CONTRACT NO. 12  
PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY  
EXISTING SURVEY MARKERS & UTILITIES  
SHEET 3 OF 7  
FILE NO. 0281550-C10-12 DWG NO. 4795-12-27 REV

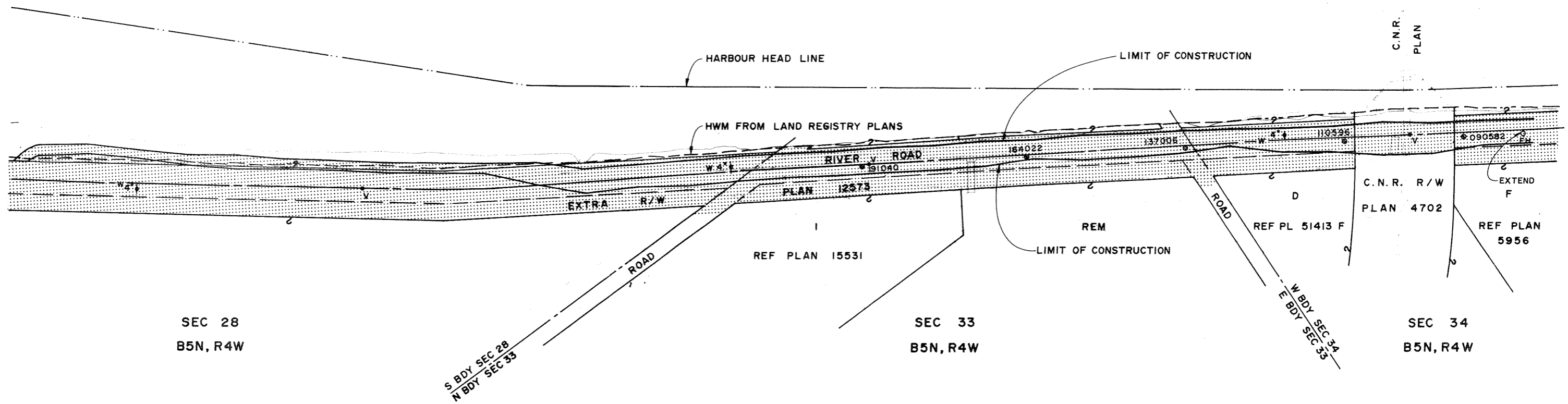
DWG NO.	TITLE
	REFERENCES

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											



# NORTH ARM FRASER RIVER

C.N.R. BRIDGE  
PLAN 2862



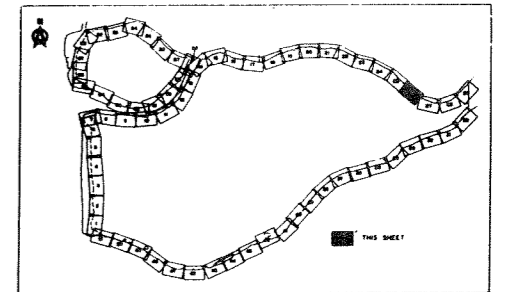
SEC 28  
B5N, R4W

S BDY SEC 28  
N BDY SEC 33

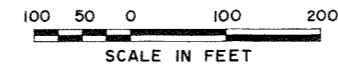
SEC 33  
B5N, R4W

SEC 34  
B5N, R4W

**NOTE**  
For legends see 4795-12-25



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.



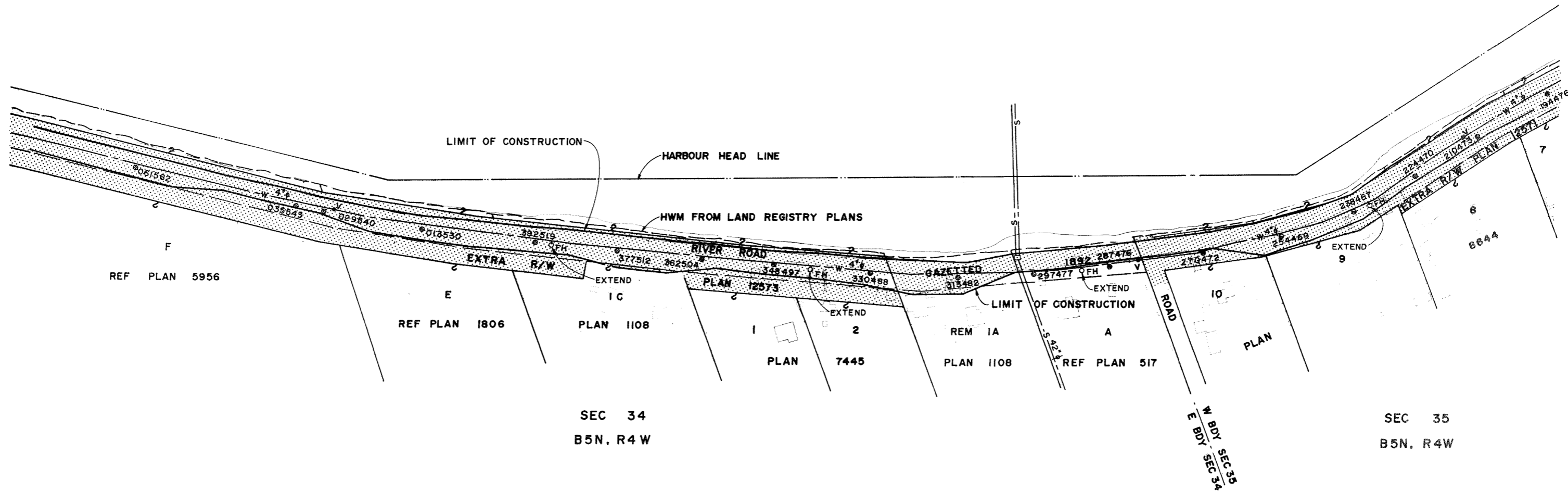
DATA COMPILED IN 1970

- North Fraser Harbour Commission Harbour Head Line Plan - Sh 16
- Municipality of Richmond 1"=200' Section Property Maps
- Section 28 B5N R4W
- Section 33 B5N R4W
- Section 34 B5N R4W

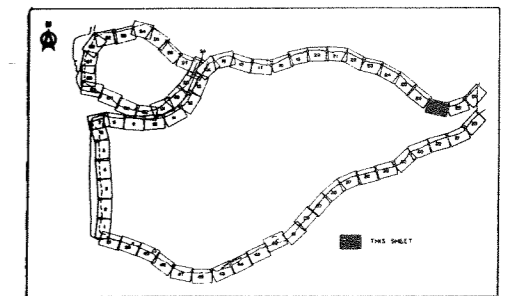
<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
<i>A.R. Cameron</i> RECOMMENDED PROJECT MANAGER		ELRC	HYD
DATE <i>May 7, 1976</i>		MECH	SOILS
APPROVED <i>[Signature]</i> for DIRECTOR		STR	
DATE <i>May 7/76</i>		DES	DR Wn CH DLC
SCALE AS SHOWN		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
ORIG ISSUE May 1976			
REFERENCES		CONTRACT NO. 12 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY EXISTING SURVEY MARKERS & UTILITIES SHEET 4 OF 7	
REVISIONS		FILE NO. 0281550 - C10 - 12	
REVISIONS		DWG NO. 4795-12-28	
REVISIONS		REV	



# NORTH ARM FRASER RIVER



**NOTE**  
For Legends see 4795-12-25



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**DATA COMPILED IN 1970**

325-D-1000

- Sheet index
- North Fraser Harbour Commission Harbour Head Line Plan - sh 16 e17
- Municipality of Richmond 1"=200' Section Property Maps
- Section 34 B5N R4W
- Section 35 B5N R4W

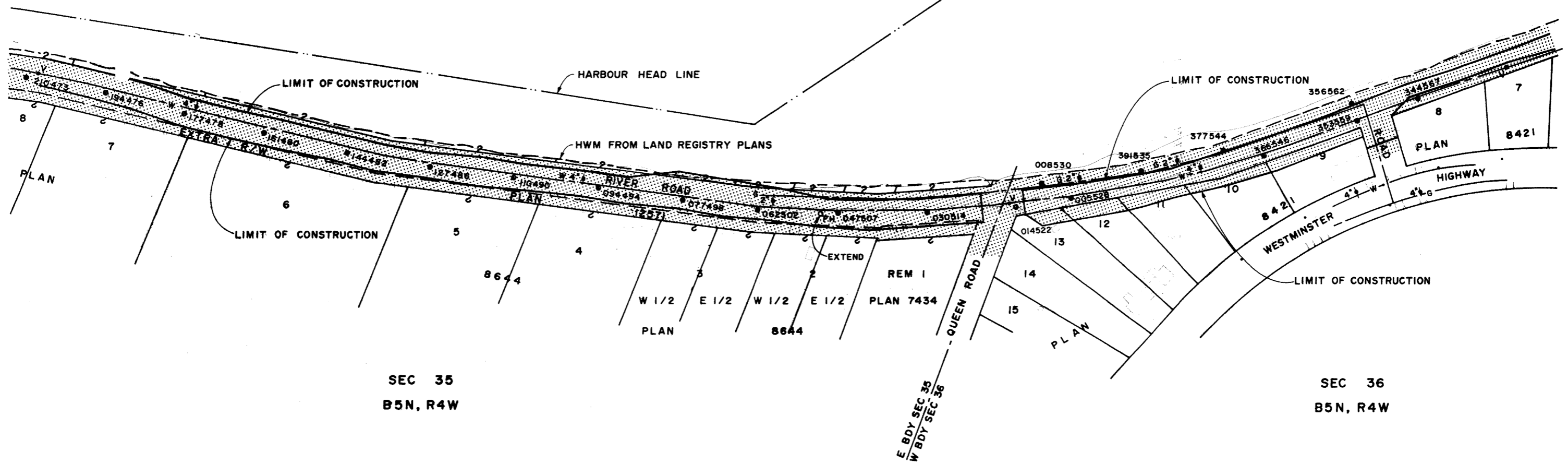
DWG NO.	TITLE
REFERENCES	

NO.	DESCRIPTION
REVISIONS	

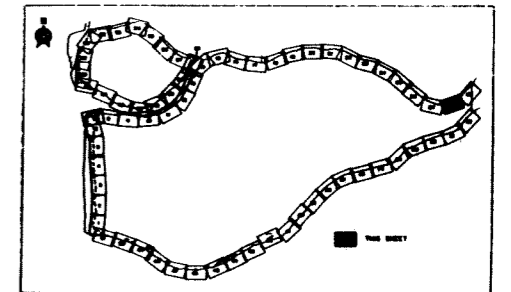
<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA
RECOMMENDED <i>A. R. Cameron</i> PROJECT MANAGER DATE: <i>May 7, 1976</i>	ELEC MECH STR	HYD SOILS
APPROVED <i>[Signature]</i> for DIRECTOR DATE: <i>May 7/76</i>	DES SCALE AS SHOWN ORG ISSUE May 1976	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY EXISTING SURVEY MARKERS & UTILITIES SHEET 5 OF 7
FILE NO. 0261550-C10-12		C.B.A. DWG NO. 4795-12-29



# NORTH ARM FRASER RIVER



**NOTE**  
 For Legends see 4795-12-25



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.

DATA COMPILED IN 1970

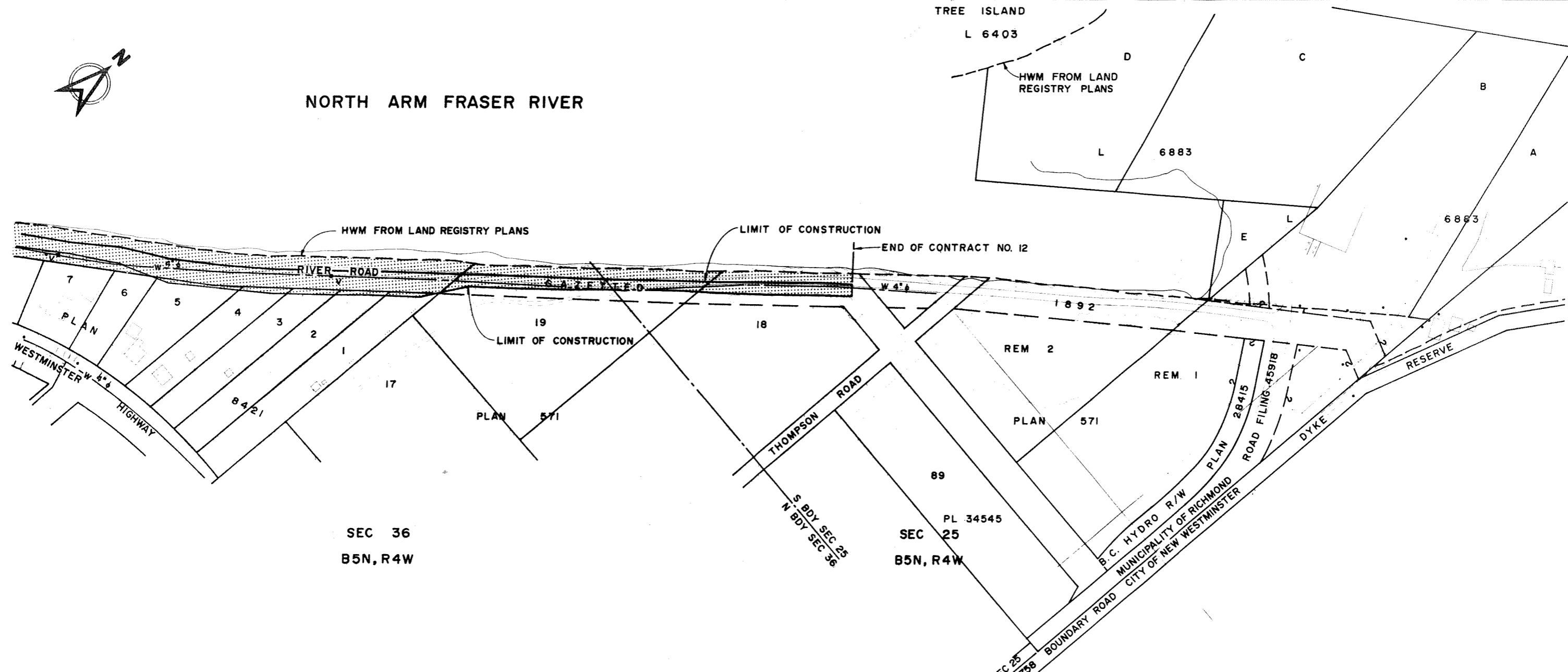
• North Fraser Harbour Commission  
 Harbour Head Line Plan - Sh 17  
 • Municipality of Richmond 1"=200'  
 Section Property Maps  
 - Section 35 B5N R4W  
 - Section 36 B5N R4W

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
<i>R. L. Cameron</i> RECOMMENDED PROJECT MANAGER		BLRC	HYD
DATE <i>May 7, 1976</i>		MECH	SOILS
APPROVED <i>[Signature]</i> for DIRECTOR		DES	DR Wn CH DLC
DATE <i>May 7/76</i>		SCALE AS SHOWN	
		ORIG ISSUE May 1976	
		FILE NO. 0281550-C10-12	
		DWG NO. 4795-12-30	
		REV	

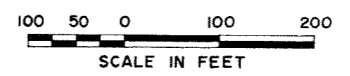
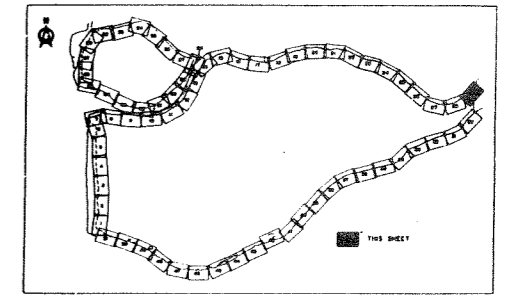
THIS ISSUE SUPERSEDES ALL ISSUES WITH LETTERS PREVIOUS TO \_\_\_\_\_



NORTH ARM FRASER RIVER



**NOTE**  
 For Legends see 4795-12-25



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.

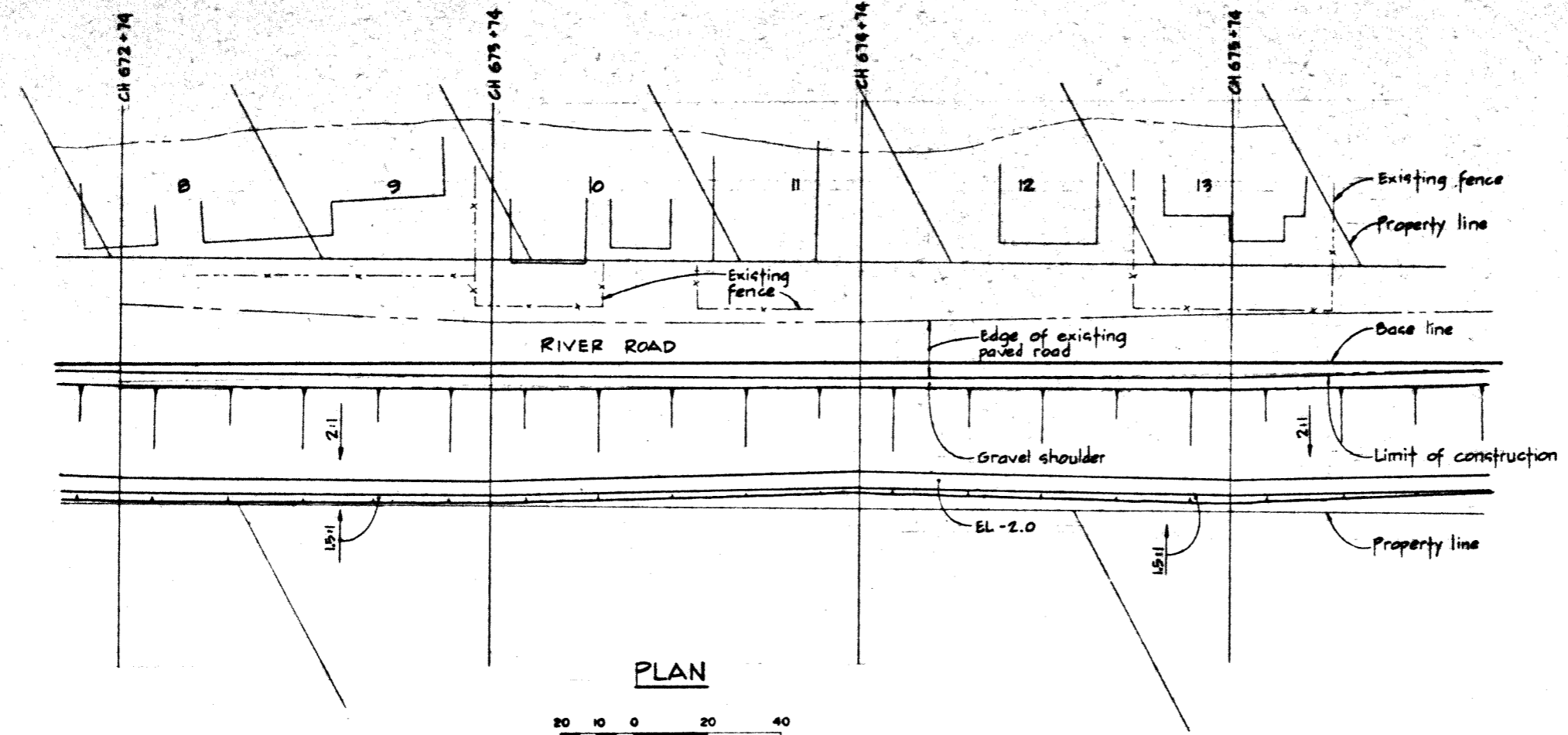
DATA COMPILED IN 1970

- North Fraser Harbour Commission Harbour Head Line Plan - Sh 17 & 18
- Municipality of Richmond 1"=200' Section Property Maps
- Section 25 B5N R4W
- Section 36 B5N R4W

<b>C. B. A. ENGINEERING LTD.</b>		CONSULTING ENGINEERS	VANCOUVER, B.C., CANADA
RECOMMENDED PROJECT MANAGER <i>A. N. Cameron</i> DATE <i>May 21 1976</i>		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	CONTRACT NO. 12 PLAN SHOWING LOCATION OF DYKE RIGHT-OF-WAY EXISTING SURVEY MARKERS & UTILITIES SHEET 7 OF 7
APPROVED <i>[Signature]</i> FOR DIRECTOR DATE <i>May 7/76</i>		DES DR Wn CH DLC SCALE AS SHOWN ORIG ISSUE May 1976	FILE NO. 0281550-C10-12 DWG NO. 4795-12-31 REV

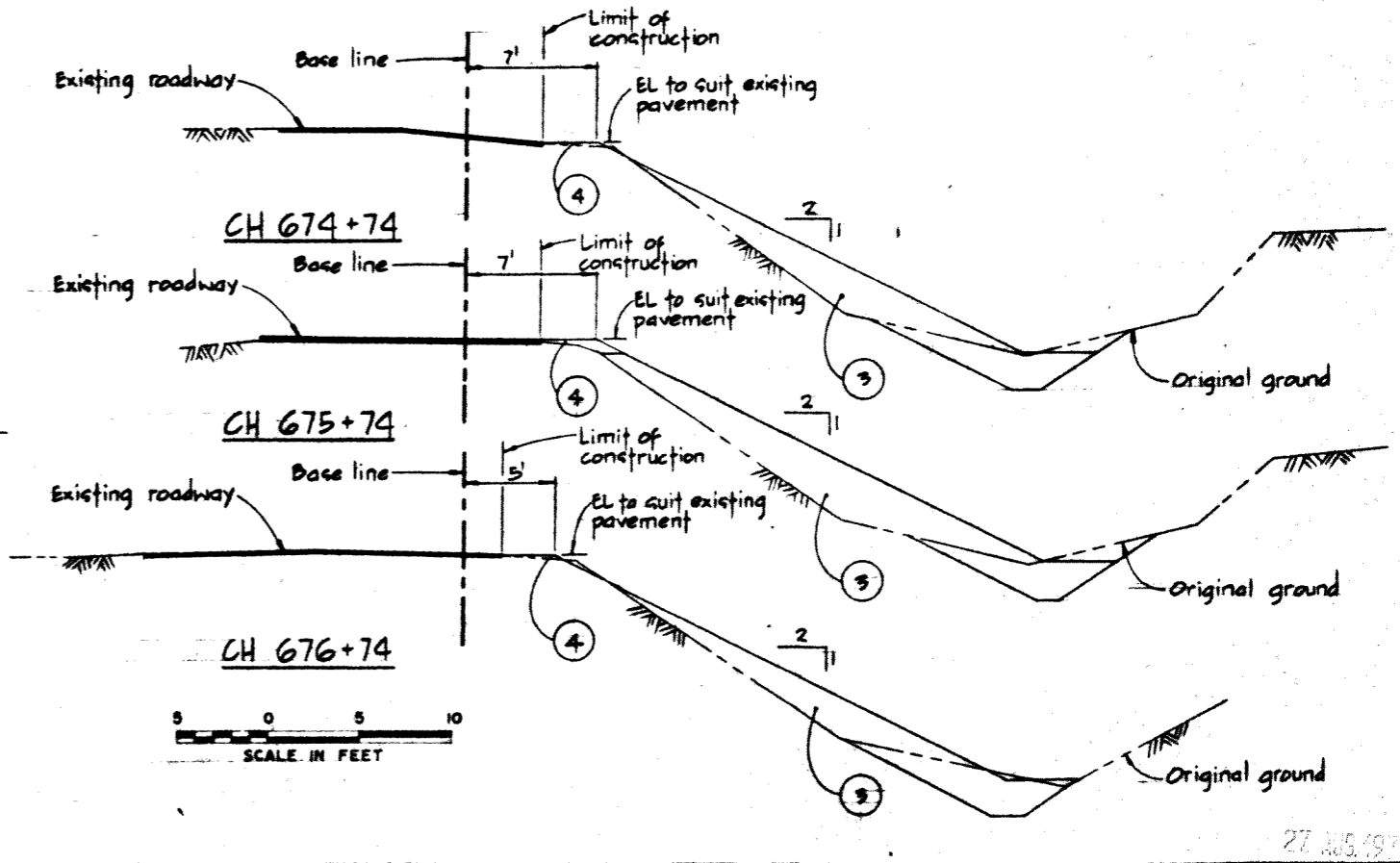
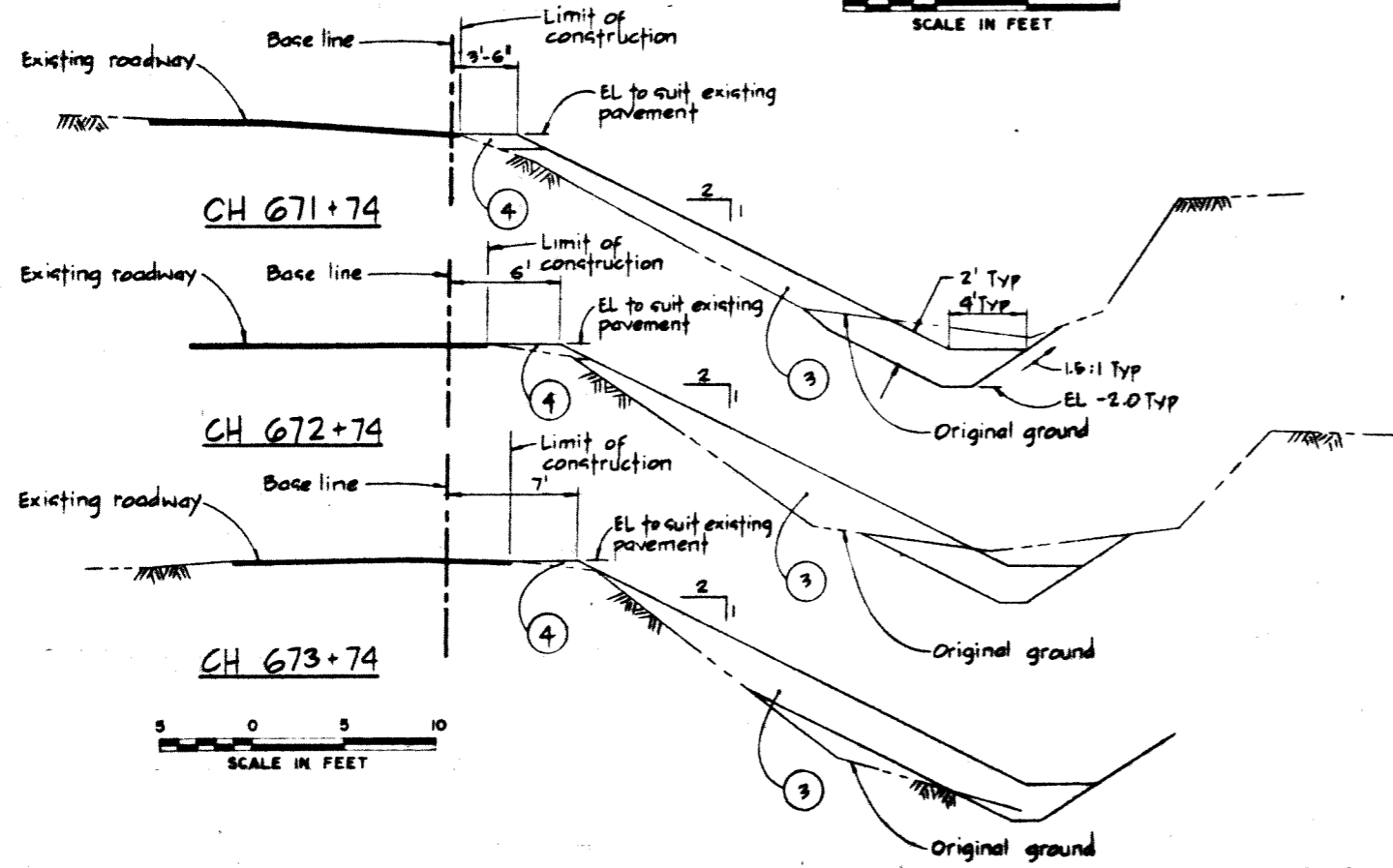
DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REFERENCES		REVISIONS											





PLAN

20 10 0 20 40  
SCALE IN FEET



**CBA ENGINEERING LTD.**  
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE	RECOMMENDED	PROJECT MANAGER	BRITISH COLUMBIA DEPARTMENT OF ENVIRONMENT WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1983 AGREEMENT	DESIGNED	SURVEYED
				DATE			DATE	DRAWN Wn CHECKED DLC SCALE AS SHOWN DWG. NO. 4795-12-32
				APPROVED	DIRECTOR	PROJECT NO. 3 THE TOWNSHIP OF RICHMOND CONTRACT NO. 12 REVISED DYKE SECTIONS CH 671+74 TO 676+74		

27 AUG 1976