

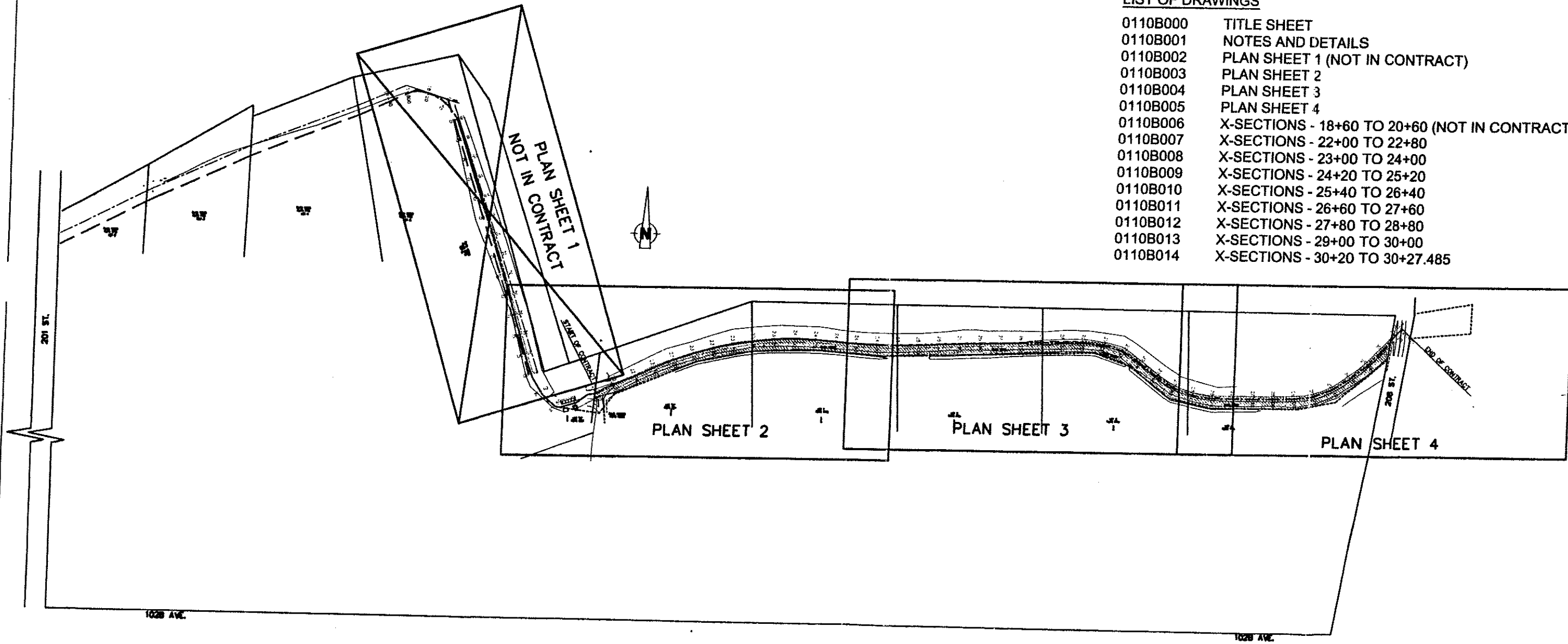
# WEST LANGLEY DYKE UPGRADE

## TOWNSHIP FILE No. 3630-D12

### Contract No. FT-141

#### LIST OF DRAWINGS

0110B000	TITLE SHEET
0110B001	NOTES AND DETAILS
0110B002	PLAN SHEET 1 (NOT IN CONTRACT)
0110B003	PLAN SHEET 2
0110B004	PLAN SHEET 3
0110B005	PLAN SHEET 4
0110B006	X-SECTIONS - 18+60 TO 20+60 (NOT IN CONTRACT)
0110B007	X-SECTIONS - 22+00 TO 22+80
0110B008	X-SECTIONS - 23+00 TO 24+00
0110B009	X-SECTIONS - 24+20 TO 25+20
0110B010	X-SECTIONS - 25+40 TO 26+40
0110B011	X-SECTIONS - 26+60 TO 27+60
0110B012	X-SECTIONS - 27+80 TO 28+80
0110B013	X-SECTIONS - 29+00 TO 30+00
0110B014	X-SECTIONS - 30+20 TO 30+27.485



CERTIFIED RECORD DRAWING

Waterworks	W
Sanitary	S
Storm Drains	SD
Ditches	D
Misc. Utilities	MU
Poles	P

BENCHMARK
-----------

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
150-12791 Clave Place Tel: 604 278-1411  
Nanaimo, B.C. Fax: 604 278-1943  
FILE No. 801-0197-01

SEAL

**NOTES**

**UTILITIES AND APPURTENANCES**

CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

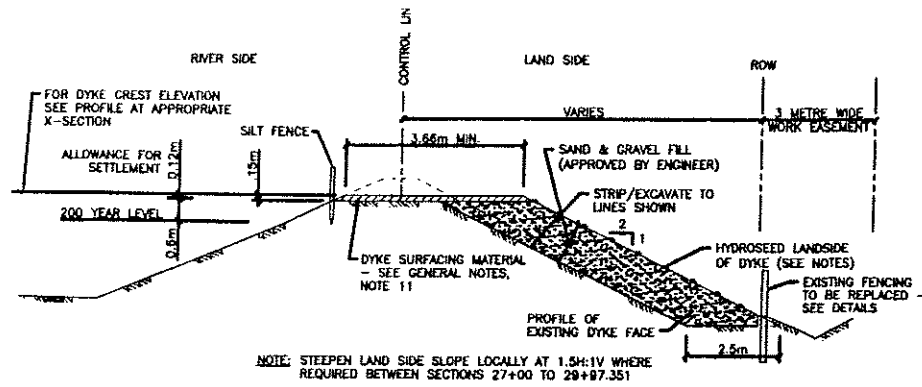
No	Date	REVISIONS
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2	06/12/01	ISSUED FOR APPROVAL
3	06/20/01	ISSUED FOR APPROVAL
4	11/01/01	ISSUED FOR CONSTRUCTION
5	11/08/01	RECORD DRAWING ISSUE

SCALE	1:2000
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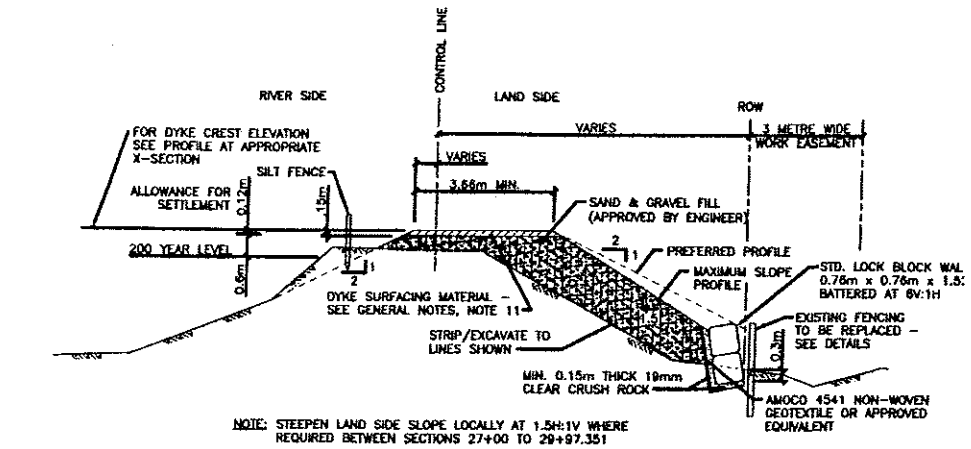
The Corporation of the Township of Langley

WEST LANGLEY DYKE UPGRADE  
TITLE SHEET

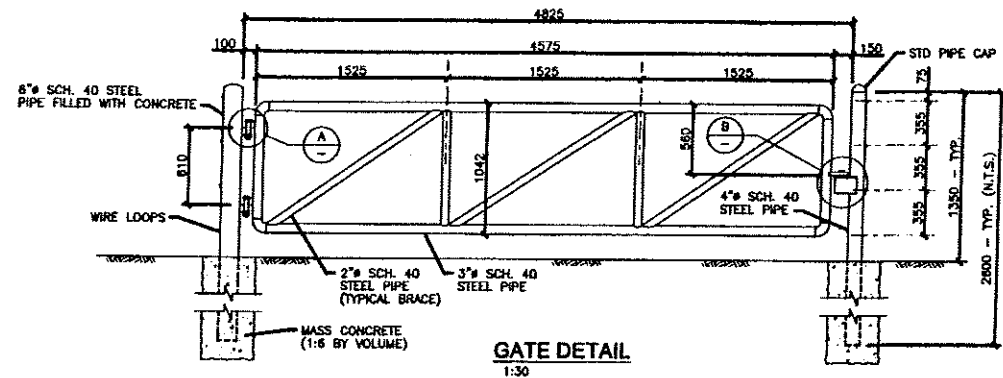
PLAN 020980017 SHEET NO. SHEET 1 OF 15 REV. 4



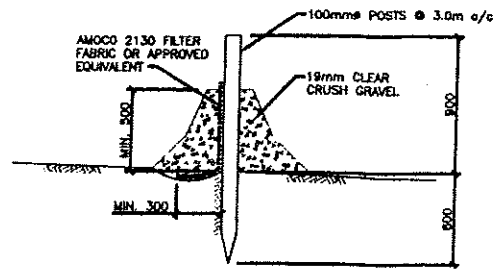
TYPICAL SECTION - CUT & FILL  
N.T.S.



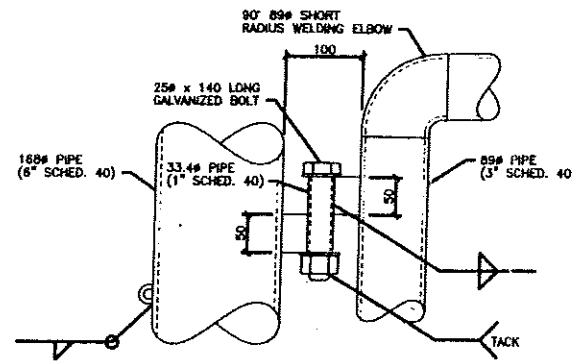
TYPICAL SECTION WITH RETAINING WALL  
N.T.S.



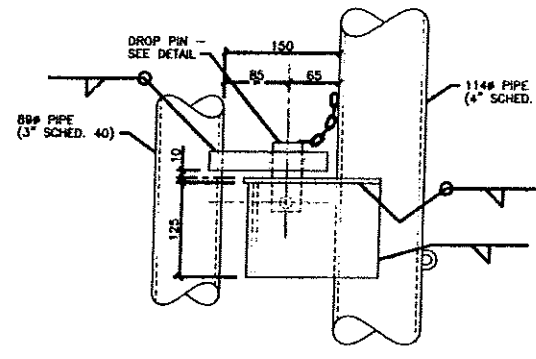
GATE DETAIL  
1:30



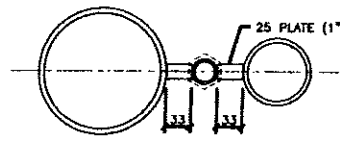
SILT FENCE DETAIL  
N.T.S.



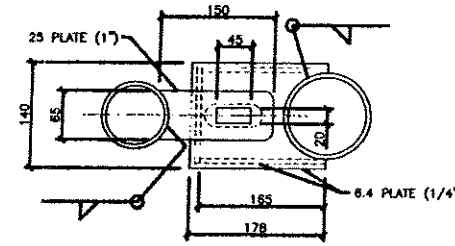
DETAIL A  
1:5



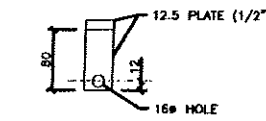
DETAIL B  
1:5



PLAN DETAIL A  
1:5

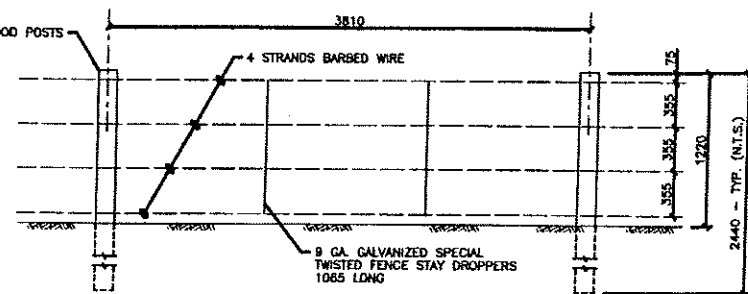


PLAN DETAIL B  
1:5

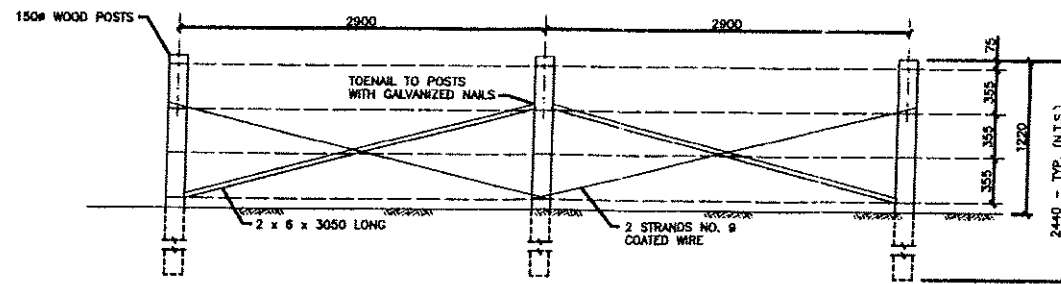


DROP PIN DETAIL

- THE CONTRACTOR WILL CONSTRUCT THE SILT CONTROL FENCE AS PER THE DETAIL PRIOR TO EXCAVATION AND/OR FILL WORK.
- WHILE SITE CONSTRUCTION IS ONGOING, THE CONTRACTOR IS TO BE RESPONSIBLE FOR ENSURING SEDIMENT CONTROL FACILITIES ARE MAINTAINED AND WORKING ADEQUATELY TO CONTROL ALL DISCHARGES FROM THE SITE. MAINTENANCE SHALL INCLUDE VACUUM SWEEPING OF ALL PAVED ROADS, FLUSHING OF THE ROADS IS NOT PERMITTED. ALL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR ON A WEEKLY BASIS TO ENSURE PROPER OPERATION UNTIL REMOVAL.
- SILT FENCE IS TO BE AMOCO 2130 OR AS APPROVED BY THE ENGINEER AS PER DETAIL.
- ANY IRREGULARITIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- CONTRACTOR TO PLACE FIRST AND SECOND STAGE FILL MATERIAL IN 0.5m LIFTS OR AS APPROVED BY THE ENGINEER OR HIS REPRESENTATIVE. LIFTS TO BE LIMITED TO 0.3m THICKNESS WHERE THE HEIGHT OF NEW DYKE CONSTRUCTION EXCEEDS THE HEIGHT OF THE EXISTING TOP OF DYKE. FILL MATERIAL TO BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DRY DENSITY OR AS APPROVED BY THE ENGINEER OR HIS REPRESENTATIVE.
- TEMPORARY SWALES AND DITCH SECTION TO BE CONSTRUCTED TO MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION. FINAL DITCH CONSTRUCTION IS TO BE COMPLETED AFTER THE FINAL LIFT OF FILL IS PLACED ON THE DYKE.
- CONTRACTOR SHALL COORDINATE THE ACCEPTANCE OF ANY IMPORTED FILL MATERIAL WITH THE ENGINEERING INSPECTORS AND THE GEOTECHNICAL INSPECTORS BASED ON MATERIAL SUITABILITY, CONSTRUCTION SCHEDULE, CONSTRUCTION SEASON, AND WEATHER CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSESSING THE IMPORTED FILL MATERIALS DELIVERED TO THE SITE AREA WITH THE ENGINEER AND ASSIST IN DETERMINING IF ANY OF THE MATERIAL IS SUITABLE FOR PLACEMENT, WHERE THE MATERIAL IS TO BE PLACED, WHICH STOCK-PILE IS TO RECEIVE THE MATERIAL, OR IF THE MATERIAL IS TO BE REJECTED.
- THE CONTRACTOR SHALL MAINTAIN ALL HAUL ROUTES ALONG THE DYKES AND ALL HAUL ROADS TO THE DYKES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL ENSURE THE HAUL ROUTES ALONG THE DYKES AND TO THE DYKES ARE WELL GRADED WITH PROPER DRAINAGE. GRAVEL ACCESS TO ALL ROADWAY RIGHTS-OF-WAY AND GRAVEL ACCESS ROADS TO BE CONSTRUCTED AND MAINTAINED BY CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE ONSITE CONSTRUCTION TRAFFIC. THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION VEHICLES CAN TRAVEL THROUGH THE SITE UNIMPDED, WITH MINIMAL DELAYS. FOR HAUL ROUTES ALONG THE DYKE EMBANKMENT, THE CONTRACTOR SHALL CONSTRUCT TURN-OUTS AS APPROVED BY THE ENGINEER TO MAINTAIN UNIMPDED TRUCK TRAFFIC THROUGH THE SITE.
- TEMPORARY HAUL ROADS ESTABLISHED BY THE CONTRACTOR WILL BE REQUIRED TO BE DECOMMISSIONED, AND ALL RELATED MATERIAL FOR THE HAUL ROAD INSTALLATION SHALL BE REMOVED FROM THE SITE AT THE END OF THE DYKE CONSTRUCTION CONTRACT. THE TEMPORARY HAUL ROAD AREAS SHALL BE REINSTATED TO PRECONSTRUCTION CONDITIONS.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL SITE ACCESS GATES AND NO POST BARRIER PLACEMENTS REQUIRED DURING CONSTRUCTION. THE CONTRACTOR IS TO ENSURE ACCESS GATES ARE CLOSED AND NO POST BARRIERS ARE IN PLACE WHERE CONSTRUCTION IS NOT REQUIRED AND DURING NON-CONSTRUCTION HOURS.
- THE CONTRACTOR SHALL MAINTAIN THE STOCK PILE SITES, AND ACCESS TO THE STOCK PILE SITES AT ALL TIMES. THE CONTRACTOR SHALL STRIP THE TOPSOIL FROM THE STOCK PILE SITES AND THE CONTRACTOR SHALL STORE AND PROTECT THE TOPSOIL FROM EROSION ON THE SAME PROPERTY BEING USED AS A STOCK PILE SITE. THE CONTRACTOR IS TO ENSURE THE STOCK PILE SITES AND THE RESPECTIVE ACCESS ROADS ARE WELL GRADED ENSURING ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES.
- CONTRACTOR TO STRIP TOPSOIL AND UNSUITABLE SOILS TO EXPOSE NATIVE SILTY CLAY. GEOTECHNICAL ENGINEER TO REVIEW STRIPPED SUBGRADE PRIOR TO FILL PLACEMENT.
- DYKE SURFACING MATERIAL TO CONSIST OF 19mm CRUSHED GRAVEL BASE, 150mm THICK CONFORMING TO MASTER MUNICIPAL SPECIFICATION FOR GRANULAR BASE MATERIAL, SECTION 02226. MATERIAL TO BE COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY AS PER ASTM D1557.
- THE CONTRACTOR SHALL MAINTAIN AND CLEAN TOWNSHIP STREETS DAILY.
- REFER TO LEVELTON ENGINEERING GEOTECHNICAL REPORT DATED NOV. 23, 2001, FILE NO. 801-0197, FOR FILL REQUIREMENTS.
- FENCES AND EXISTING STRUCTURES WHICH ARE REMOVED FOR CONSTRUCTION SHALL BE REINSTATED TO ORIGINAL CONFIGURATION FOLLOWING COMPLETION OF THE WORK.
- FOLLOWING COMPLETION OF FILL WORKS, LANDSIDE FACE OF DYKE IS TO BE HYDRAULICALLY SEEDED IN GENERAL CONFORMANCE WITH THE "MASTER MUNICIPAL CONSTRUCTION DOCUMENTS 2000", SECTION 02934.



TYPICAL FENCE  
1:30



FENCE END DETAIL  
1:30

CERTIFIED RECORD DRAWING

Waterworks	W
Sanitary	S
Storm Drains	SD
Ditches	D
Misc. Utilities	MU
Poles	P

**BENCHMARK**  
MONUMENT 88H5666 LOCATED AT 205 ST. AND 102B AVE  
ELEVATION = 8.504  
MONUMENT 88H4584 LOCATED AT 203 ST AND 102 B AVE  
ELEVATION = 3.53  
MONUMENT 84H9718 LOCATED AT 208 ST AND 102 B AVE  
ELEVATION = 3.354

**LEVELTON**  
Engineering Solutions  
Levelton Engineering Ltd.  
138-127th Street  
Richmond, B.C.  
Tel: 604 278-1411  
Fax: 604 278-1462  
File No. 801-0197-01

SEAL

**NOTES**  
UTILITIES AND APPURTENANCES  
CONTRACTOR TO CONTACT TELUS B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

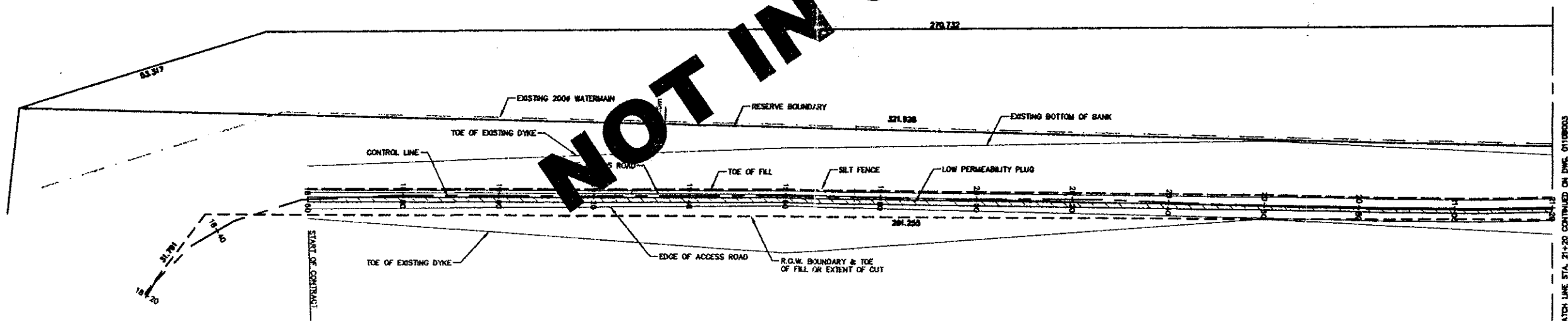
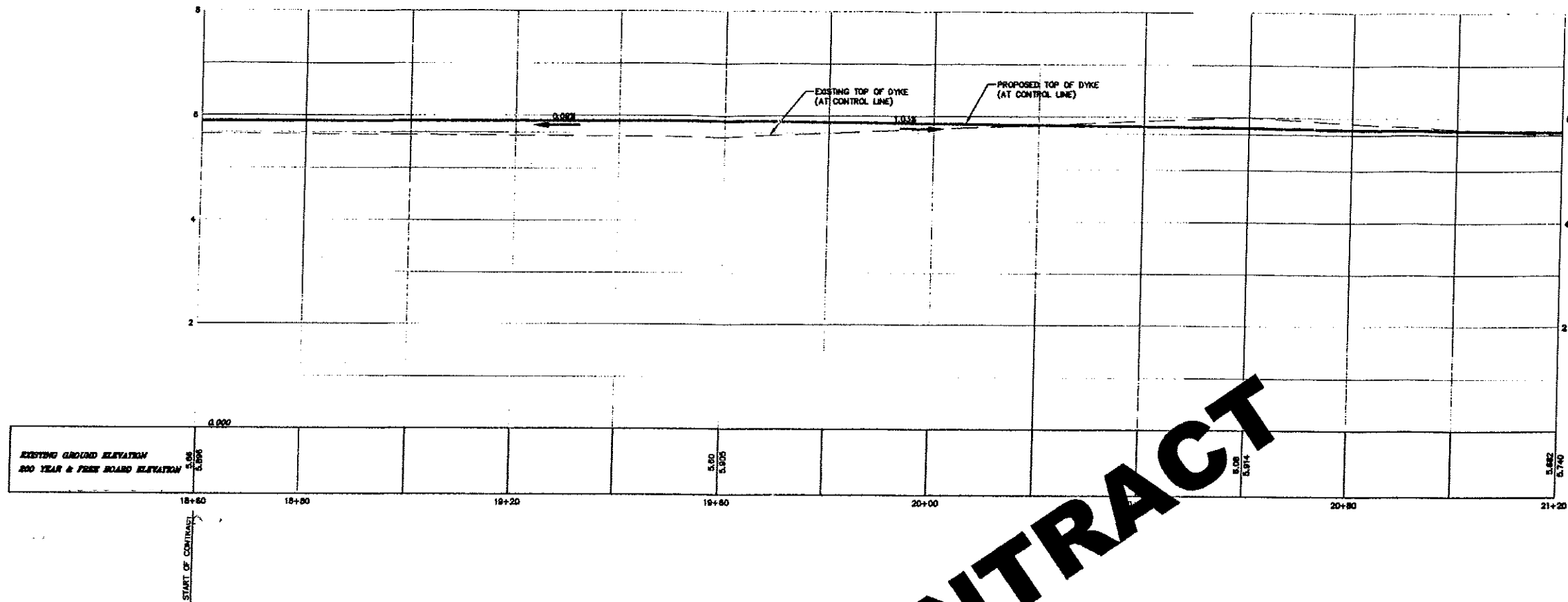
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1	14/06/02	RECORD DRAWING ISSUE
2	20/11/04	ISSUED FOR TENDER
3	20/12/04	ISSUED FOR APPROVAL
4	04/01/05	REMOVED FOR APPROVAL
5	11/01/05	ISSUED FOR CONSTRUCTION
6	14/01/05	RETAINING WALL DETAIL ADDED, ISSUED FOR CONSTRUCTION

DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
STATUS	SHOWN

**The Corporation of the Township of Langley**

WEST LANGLEY DYKE UPGRADE  
NOTES AND DETAILS

PLAN 0209B018 SHEET NO. SHEET 2 OF 15 REV. 5



NOT IN CONTRACT

PLAN 13810  
PLAN 1115  
LOT 5

MATCH LINE STA. 21+20 CONTINUED ON DWG. 0118003



LEGEND	
Waterworks	
Sanitary	
Storm Drains	
Ditches	
Misc. Utilities	
Poles	

BENCHMARK	
MONUMENT 8815666	LOCATED AT 205 ST. AND 1028 AVE. ELEVATION = 8.504
MONUMENT 8814564	LOCATED AT 203 ST AND 102 B AVE. ELEVATION = 3.53
MONUMENT 8410718	LOCATED AT 206 ST AND 102 B AVE. ELEVATION = 3.364

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
150-1771 Clark Place  
Richmond, B.C.  
Tel: 604 278-1411  
Fax: 604 278-1952  
FILE No. 981-0187-02

SEAL

NOTES	
<b>UTILITIES AND APPURTENANCES</b>	
CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT	

No	Date	REVISIONS
0	08/11/01	ISSUED FOR TENDER
1	20/12/01	ISSUED FOR APPROVAL
2	01/01/02	REBID FOR APPROVAL
3	11/01/02	ISSUED FOR CONSTRUCTION
4	14/02/02	ISSUE DRAWING ISSUE

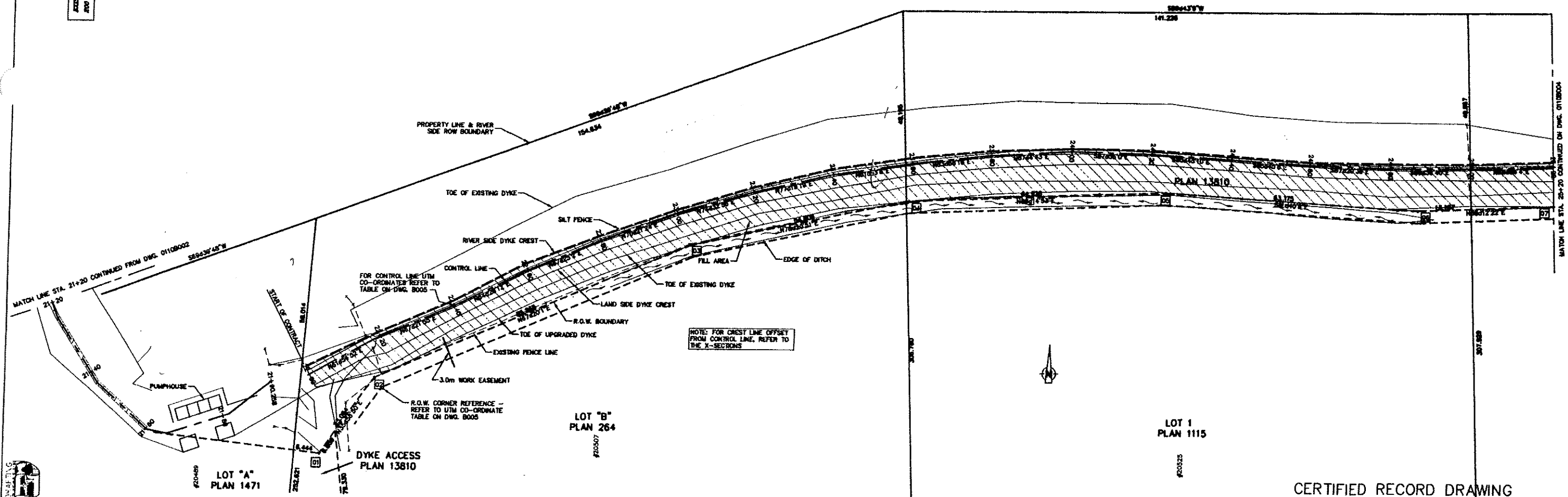
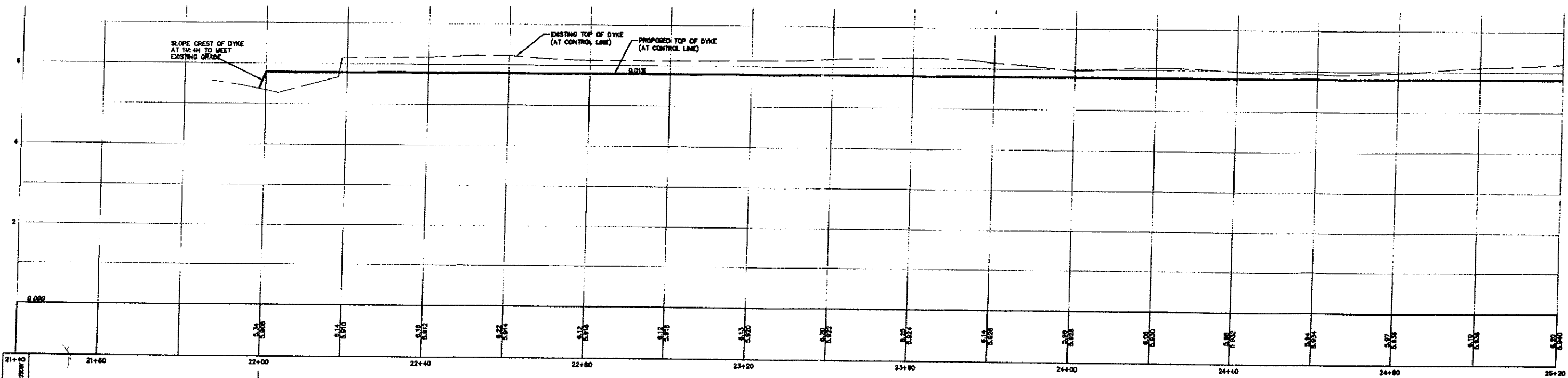
PLAN	
DATE	PRE
DATE	DLB
DATE	MG
DATE	NOV. 2001
HORIZ.	1:500
VERT.	1:50

The Corporation of the Township of Langley

Township of Langley

**WEST LANGLEY DYKE UPGRADE**  
PLAN SHEET 1

PLAN 02098019 SHEET NO. SHEET 3 OF 15 REV. 3



CERTIFIED RECORD DRAWING

SYMBOL	DESCRIPTION
	Waterworks
	Sanitary
	Storm Drains
	Ditches
	Misc. Utilities
	Poles

BENCHMARK	
MONUMENT B845668	LOCATED AT 205 ST. AND 102B AVE ELEVATION = 6.204
MONUMENT B845664	LOCATED AT 203 ST AND 102 B AVE ELEVATION = 3.53
MONUMENT B849718	LOCATED AT 208 ST AND 102 B AVE ELEVATION = 3.364

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
130-12791 Clark Place Tel: 604 278-1411  
Richmond, B.C. Fax: 604 278-1482  
P.E. No. 891-912-91

SEAL

**NOTES**

**UTILITIES AND APPURTENANCES**

CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

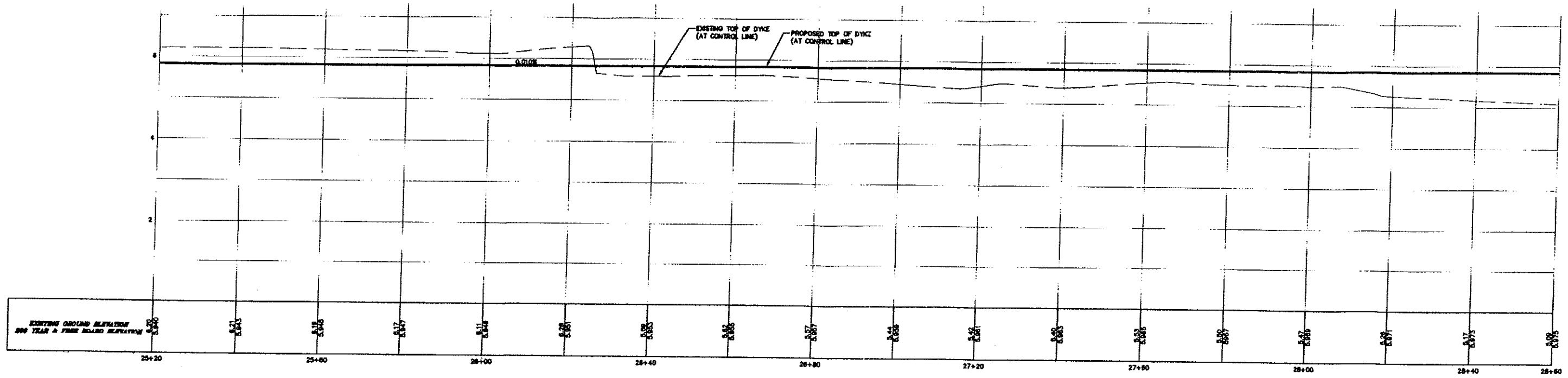
No	Date	REVISIONS
1	11/11/00	ISSUED FOR TENDER
2	01/12/01	ISSUED FOR APPROVAL
3	03/01/02	REVISION FOR APPROVAL
4	11/01/02	ISSUED FOR CONSTRUCTION
5	11/01/02	REVISION REVISION, ISSUED FOR CONSTRUCTION

DATE	BY	DESCRIPTION
11/11/00	DLB	PRELIMINARY
01/12/01	DLB	FOR APPROVAL
03/01/02	DLB	FOR APPROVAL
11/01/02	DLB	FOR CONSTRUCTION
11/01/02	DLB	FOR CONSTRUCTION

**The Corporation of the Township of Langley**

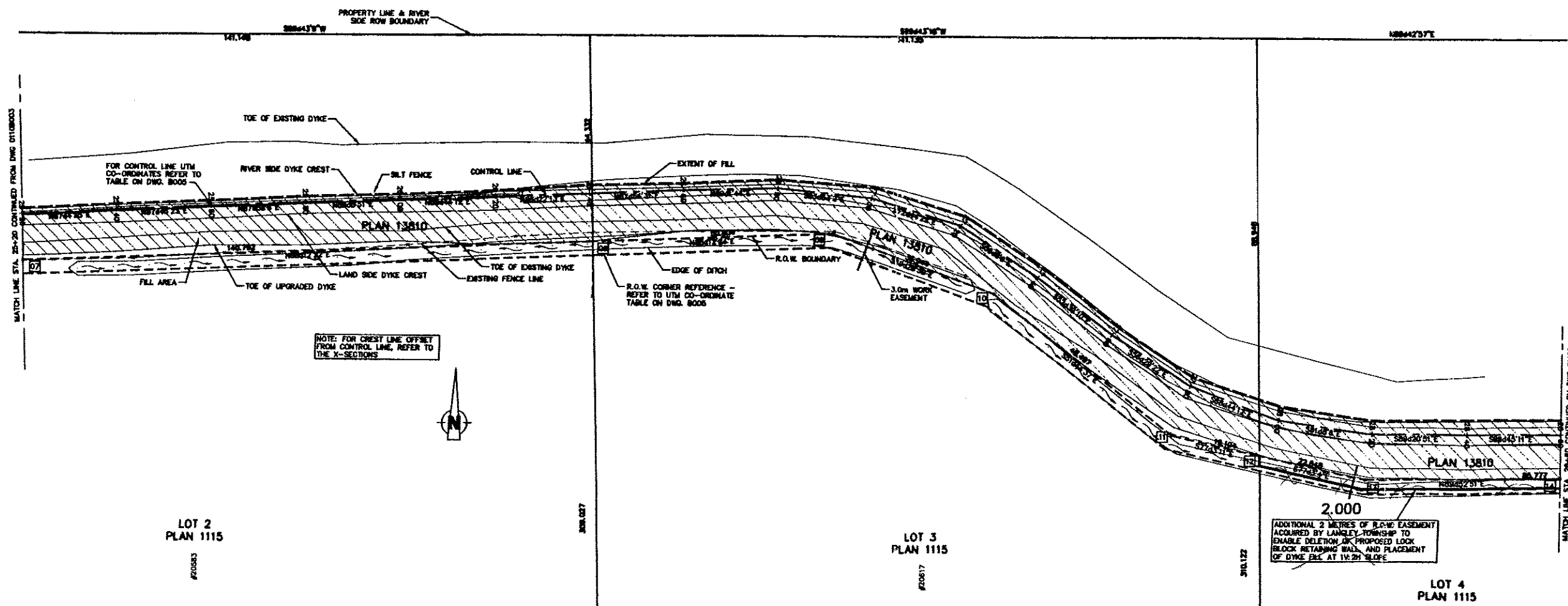
WEST LANGLEY DYKE UPGRADE  
PLAN SHEET 2

PLAN 02098020 SHEET NO. SHEET 4 OF 15



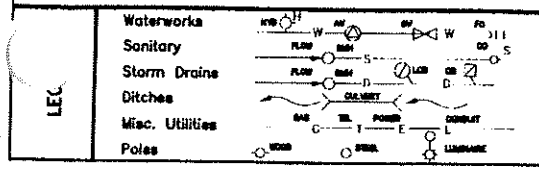
EXISTING ORIGIN ELEVATION AND YEAR & FINISH BOARD ELEVATION

Station	Year	Finish Board Elevation
25+20	2002	6.504
25+40	2002	6.504
25+60	2002	6.504
25+80	2002	6.504
26+00	2002	6.504
26+20	2002	6.504
26+40	2002	6.504
26+60	2002	6.504
26+80	2002	6.504
27+00	2002	6.504
27+20	2002	6.504
27+40	2002	6.504
27+60	2002	6.504
27+80	2002	6.504
28+00	2002	6.504
28+20	2002	6.504
28+40	2002	6.504
28+60	2002	6.504



2,000  
 ADDITIONAL 2 METRES OF R.O.W. EASEMENT ACQUIRED BY LANSLEY TOWNSHIP TO ENABLE DELETION OF PROPOSED LOCK BLOCK RETAINING WALL, AND PLACEMENT OF DYKE BEL AT 1V:2H SLOPE

LOT 4  
 PLAN 1115  
 CERTIFIED RECORD DRAWING



**BENCHMARK**  
 MONUMENT 8845666 LOCATED AT 205 ST. AND 102B AVE ELEVATION = 6.504  
 MONUMENT 8845664 LOCATED AT 203 ST AND 102 B AVE ELEVATION = 3.333  
 MONUMENT 8846718 LOCATED AT 206 ST AND 102 B AVE ELEVATION = 3.364

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 158-12791 Clarks Place Tel: 604 278-1111  
 Burnaby, B.C. Fax: 604 278-1042  
 FLS No. 201-9187-01

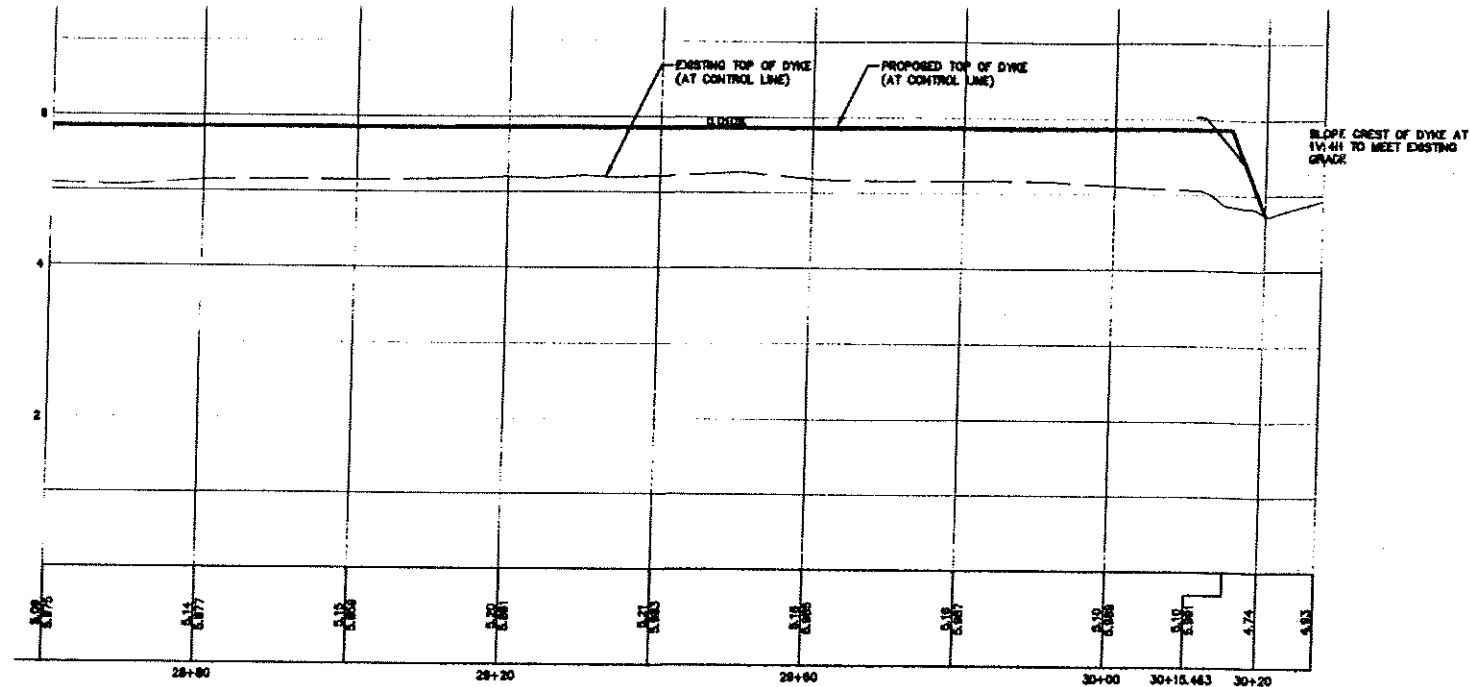
SEAL

**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
1	14/06/02	ISSUE DRAWING DATE
2	14/06/02	ADDITIONAL R.O.W. EASEMENT ACQUIRED FROM LOT 4
3	20/11/02	ISSUED FOR TENDER
4	20/12/02	ISSUED FOR APPROVAL
5	02/01/03	ISSUED FOR APPROVAL
6	11/01/03	ISSUED FOR CONSTRUCTION
7	14/01/03	ISSUED REVISED

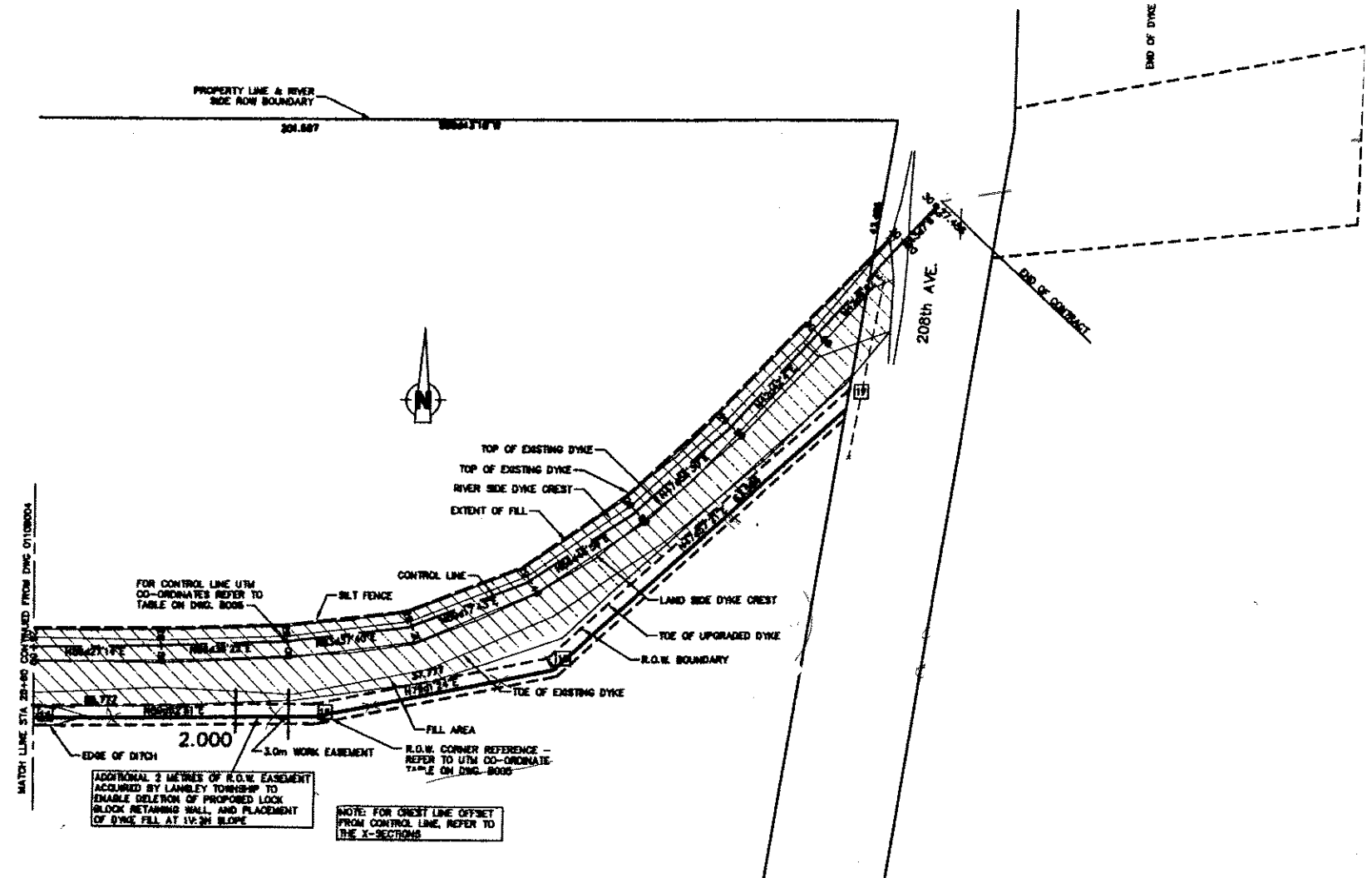
PREPARED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
HORIZ.	1:500
VERT.	1:50

The Corporation of the Township of Langley  
 Township of Langley  
**WEST LANSLEY DYKE UPGRADE**  
 PLAN SHEET 3  
 PLAN 02098021 SHEET NO. SHEET 5 OF 15 BOX 6



22+20	525351.548	5450833.407	02	525350.914	5450823.254
22+40	525370.007	5450841.104	03	525428.983	5450856.112
22+60	525388.054	5450848.724	04	525482.888	5450869.181
22+80	525408.917	5450857.403	05	525547.587	5450884.186
23+00	525423.353	5450864.128	06	525610.781	5450894.380
23+20	525444.827	5450868.463	07	525644.107	5450905.425
23+40	525464.137	5450873.842	08	525784.585	5450908.198
23+60	525483.832	5450878.865	09	525813.384	5450970.788
23+80	525503.818	5450878.785	10	525849.984	5450887.836
24+00	525523.783	5450878.784	11	525888.046	5450827.807
24+20	525543.783	5450878.007	12	525908.685	5450823.527
24+40	525563.706	5450877.578	13	525928.932	5450818.407
24+60	525583.831	5450878.094	14	525970.310	5450818.483
24+80	525603.827	5450875.187	15	526014.708	5450818.585
25+00	525623.825	5450875.032	16	526051.801	5450825.778
25+20	525643.820	5450876.404		526098.007	5450888.348
25+40	525663.583	5450878.424			
25+60	525683.677	5450877.206			
25+80	525703.565	5450877.918			
26+00	525723.354	5450878.682			
26+20	525743.548	5450878.003			
26+40	525763.541	5450878.572			
26+60	525783.828	5450880.302			
26+80	525803.824	5450880.840			
27+00	525823.345	5450878.517			
27+20	525842.311	5450872.823			
27+40	525860.863	5450861.502			
27+60	525874.782	5450848.370			
27+80	525881.427	5450838.348			
28+00	525810.618	5450831.118			
28+20	525828.711	5450828.043			
28+40	525846.709	5450827.815			
28+60	525868.708	5450827.729			
28+80	525888.707	5450827.920			
29+00	525908.701	5450828.408			
29+20	525928.587	5450830.825			
29+40	525948.218	5450837.874			
29+60	525968.918	5450848.810			
29+80	525978.755	5450861.885			
30+00	525983.318	5450878.882			
30+20	526108.728	5450891.527			

UTM REFERENCE MONUMENT 848718 LOCATED AT 208 ST AND 102 B AVE  
 N 526064.818m  
 E 5450690.488m  
 ELEVATION = 3.364m



LEGAL

Waterworks	Symbol
Sanitary	Symbol
Storm Drains	Symbol
Ditches	Symbol
Misc. Utilities	Symbol
Poles	Symbol

**BENCHMARK**  
 MONUMENT 848566 LOCATED AT 205 ST AND 102B AVE  
 ELEVATION = 8.504  
 MONUMENT 848564 LOCATED AT 203 ST AND 102 B AVE  
 ELEVATION = 3.53  
 MONUMENT 848718 LOCATED AT 208 ST AND 102 B AVE  
 ELEVATION = 3.364

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 180-12791 Clarks Place  
 Richmond, B.C. Tel: 604 278-1411  
 Fax: 604 278-1442  
 P.E. No. 881-047-91

SEAL

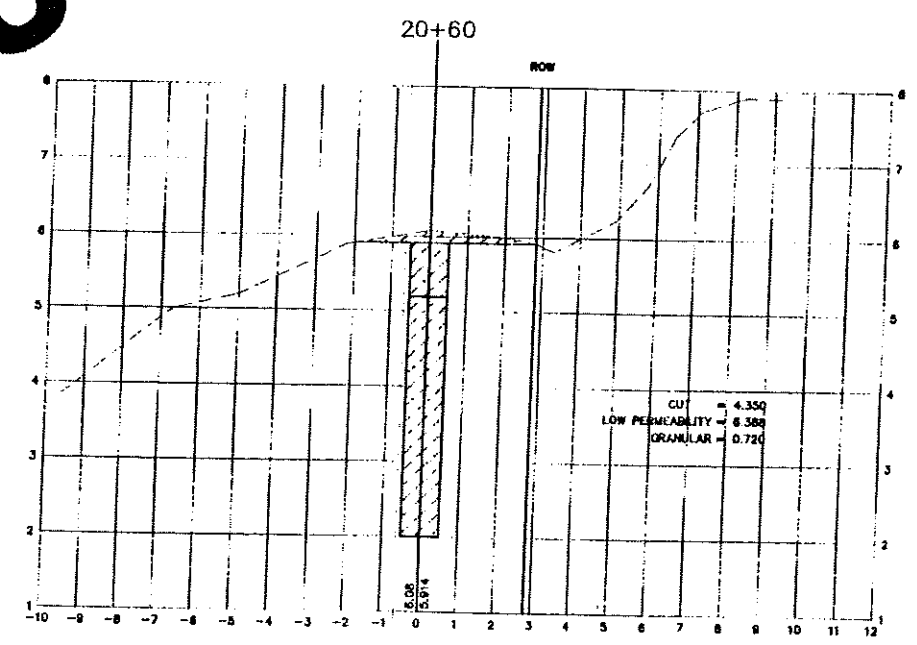
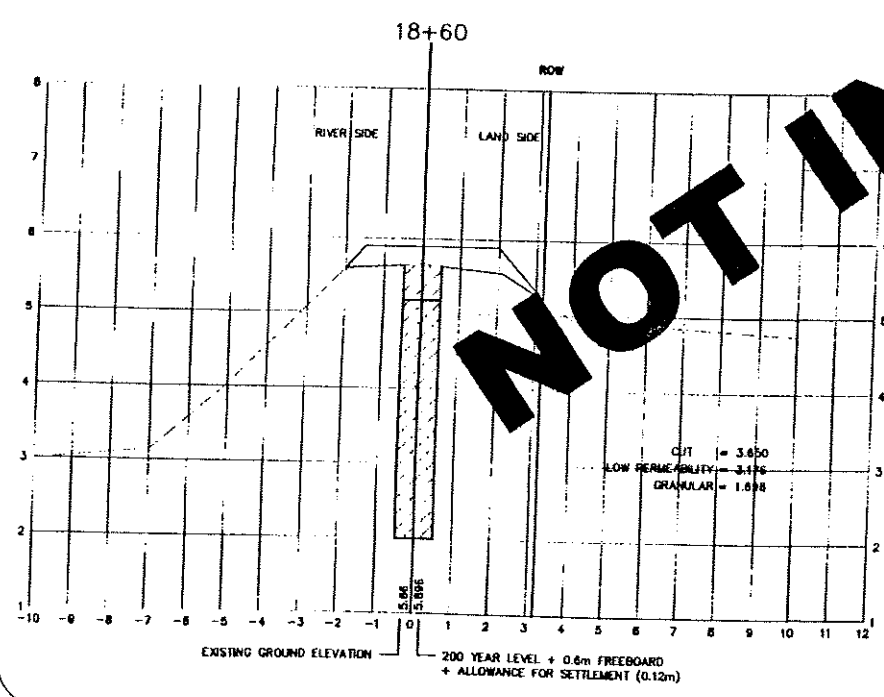
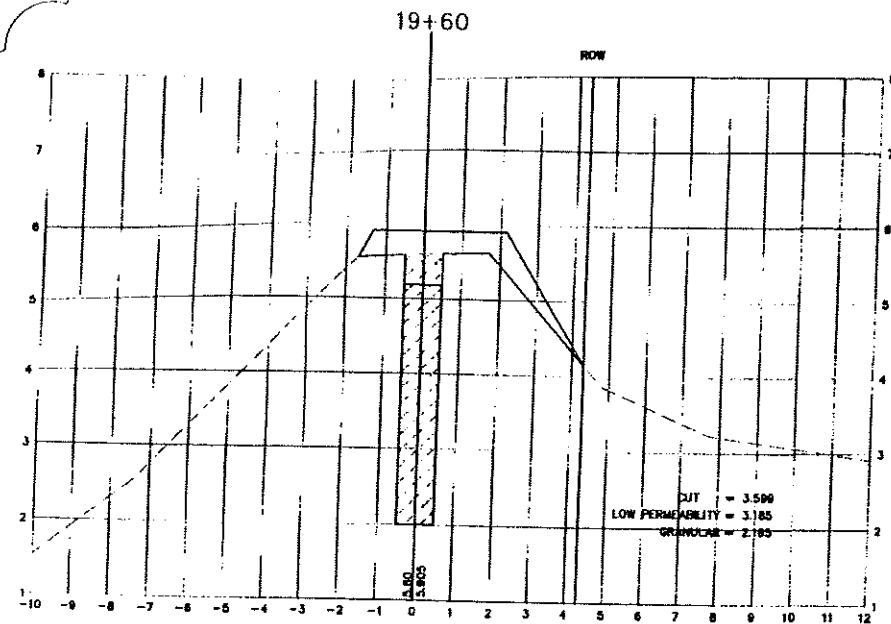
**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No.	Date	REVISIONS
1	14/06/00	SECOND DRAINING BIBLE
2	14/06/00	ADDITIONAL 2.0M EASEMENT ACQUIRED FROM LOT 4
3	25/11/00	ISSUED FOR TENDER
4	25/12/00	ISSUED FOR APPROVAL
5	25/01/01	ISSUED FOR APPROVAL
6	11/01/01	ISSUED FOR CONSTRUCTION
7	14/01/01	REVISIONS & UTM COORDINATES REVISION, REVISED SHALL APPLY

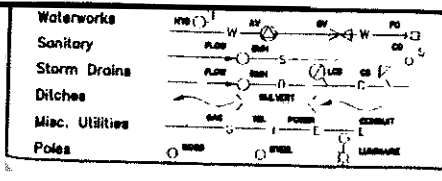
CERTIFIED RECORD DRAWING

The Corporation of the Township of Langley  
 Township of Langley  
**WEST LANGLEY DYKE UPGRADE**  
 PLAN SHEET 4  
 PLAN 02096022 SHEET NO. SHEET 6 OF 15 REV. 6

NOT IN CONTRACT



CERTIFIED RECORD DRAWING



**BENCHMARK**  
 MONUMENT BBH5866 LOCATED AT 205 ST. AND 102B AVE  
 ELEVATION = 6.904  
 MONUMENT BBH4564 LOCATED AT 203 ST AND 102 B AVE  
 ELEVATION = 3.53  
 MONUMENT BBH5718 LOCATED AT 208 ST AND 102 B AVE  
 ELEVATION = 3.364

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 226-12701 Clark Road Richmond, B.C.  
 Tel: 604 278-1911 Fax: 604 278-1902  
 File No. 01-100-01

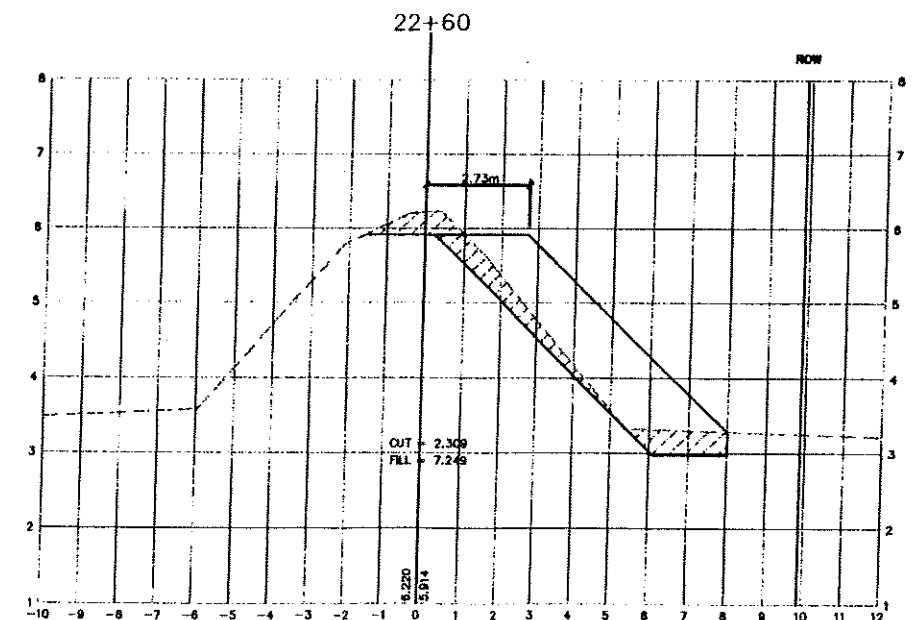
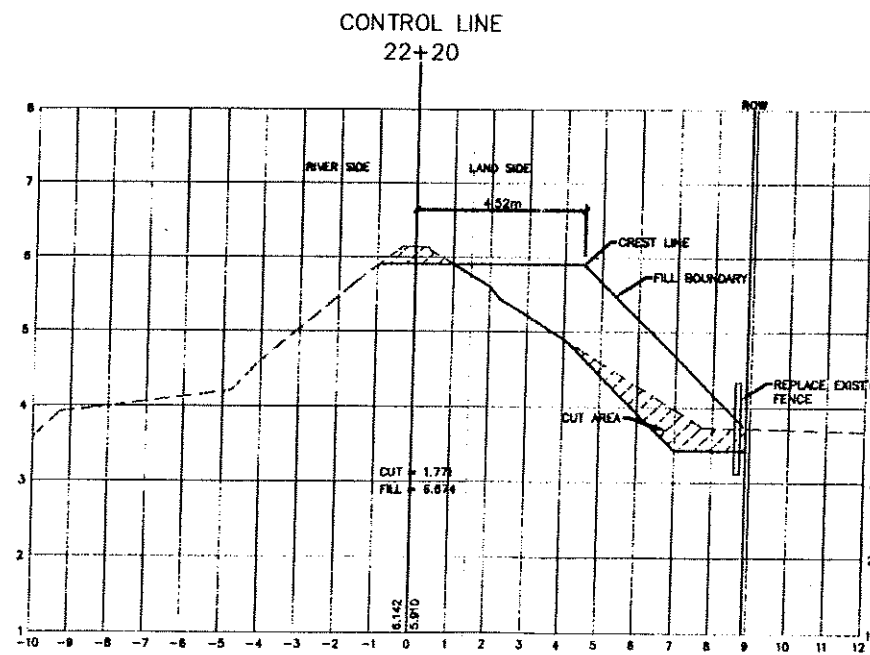
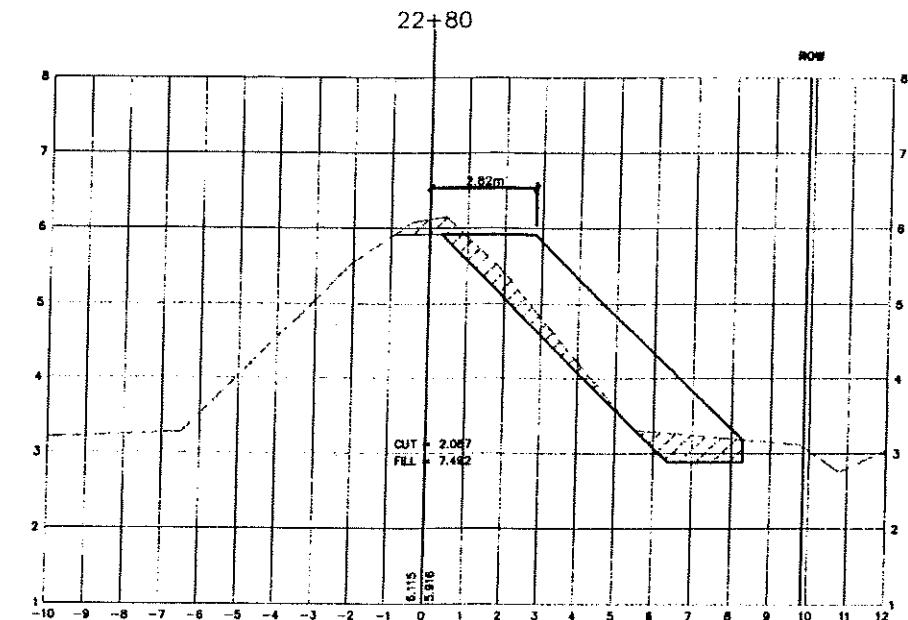
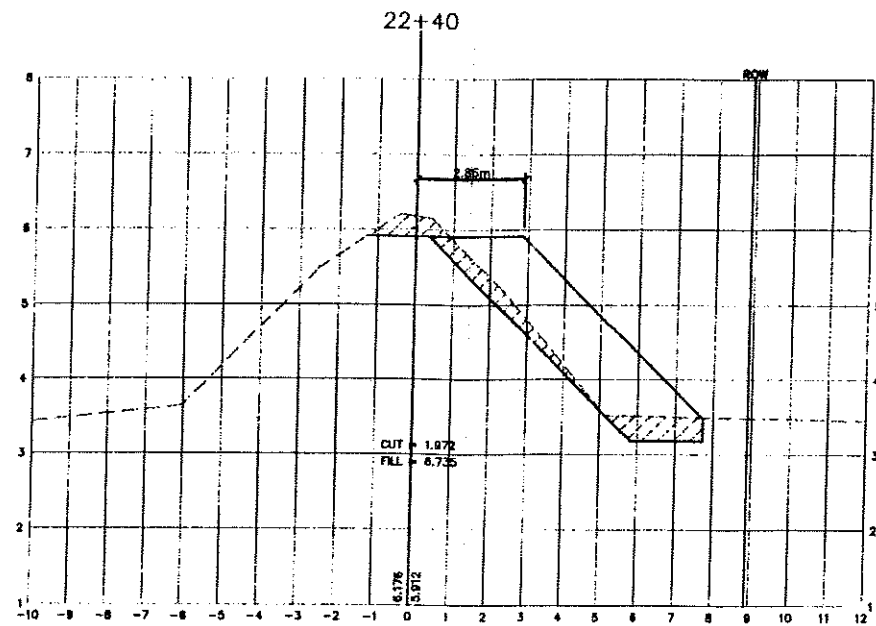
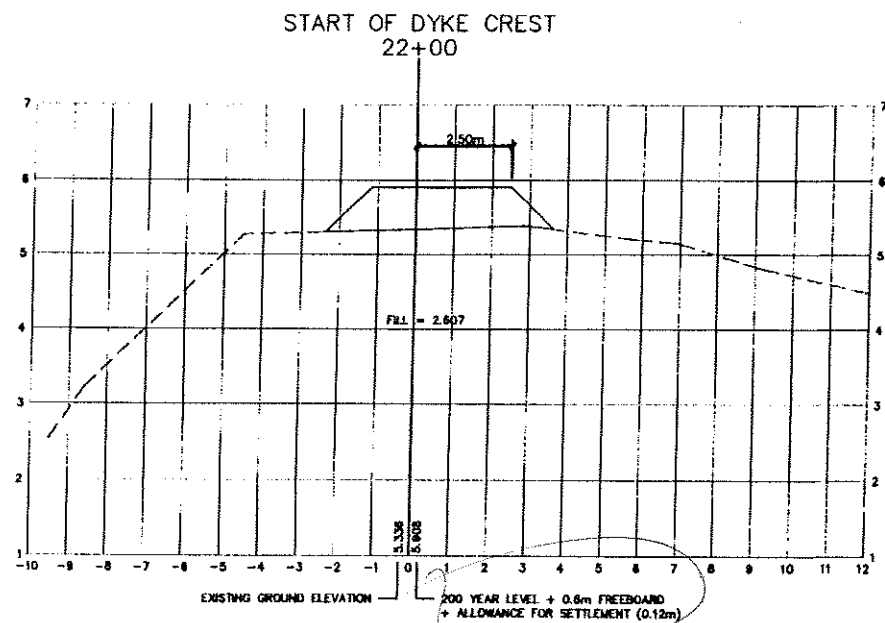
SEAL

**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
0	08/11/01	ISSUED FOR TENDER
1	08/12/01	ISSUED FOR APPROVAL
2	08/14/01	ISSUED FOR APPROVAL
3	11/01/01	ISSUED FOR CONSTRUCTION
4	11/01/01	ISSUED GRADING BIDD

DESIGNED BY	PFE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
SCALE	HORIZ. 1:100 VERT. 1:50

The Corporation of the Township of Langley  
  
**WEST LANGLEY DYKE UPGRADE**  
 X-SECTIONS - 18+60 TO 20+60  
 PLAN 02098023 SHEET NO. SHEET 7 OF 15



CERTIFIED RECORD DRAWING



Waterworks	
Sanitary	
Storm Drains	
Ditches	
Misc. Utilities	
Poles	

**BENCHMARK**  
 MONUMENT 8845664 LOCATED AT 208 ST. AND 102B AVE  
 ELEVATION = 6.504  
 MONUMENT 8844864 LOCATED AT 203 ST AND 102 B AVE  
 ELEVATION = 3.83  
 MONUMENT 8445718 LOCATED AT 208 ST AND 102 B AVE  
 ELEVATION = 3.364

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
 180-12241 Gladys Place Tel: 604 278-1411  
 Richmond, B.C. Fax: 604 278-1046  
 P.E. No. 801-212-11

SEAL

**NOTES**  
**UTILITIES AND APPLICANCES**  
 CONTRACTOR TO CONTACT TELUS, P.C. HYDRO AND  
 B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS  
 OF UTILITIES AND APPLICANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
1	24/11/01	ISSUED FOR TENDER
2	28/12/01	ISSUED FOR APPROVAL
3	04/01/02	ISSUED FOR APPROVAL
4	11/01/02	ISSUED FOR CONSTRUCTION
5	14/05/02	ISSUED REVISIONS

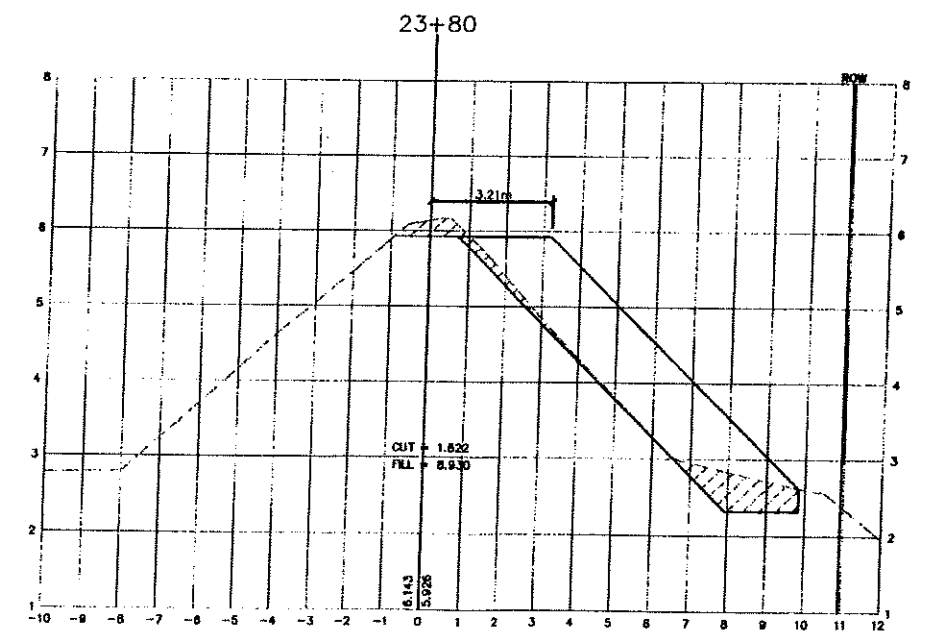
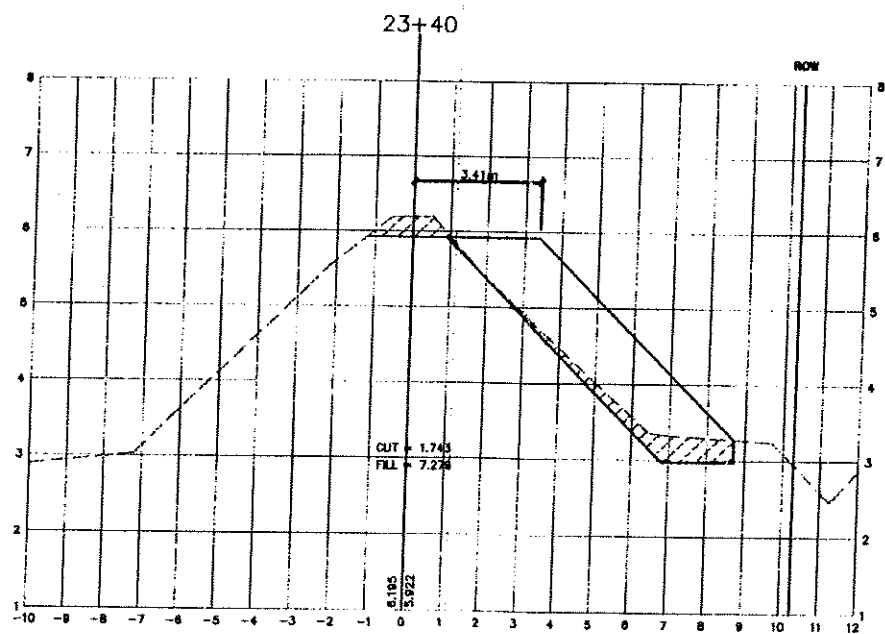
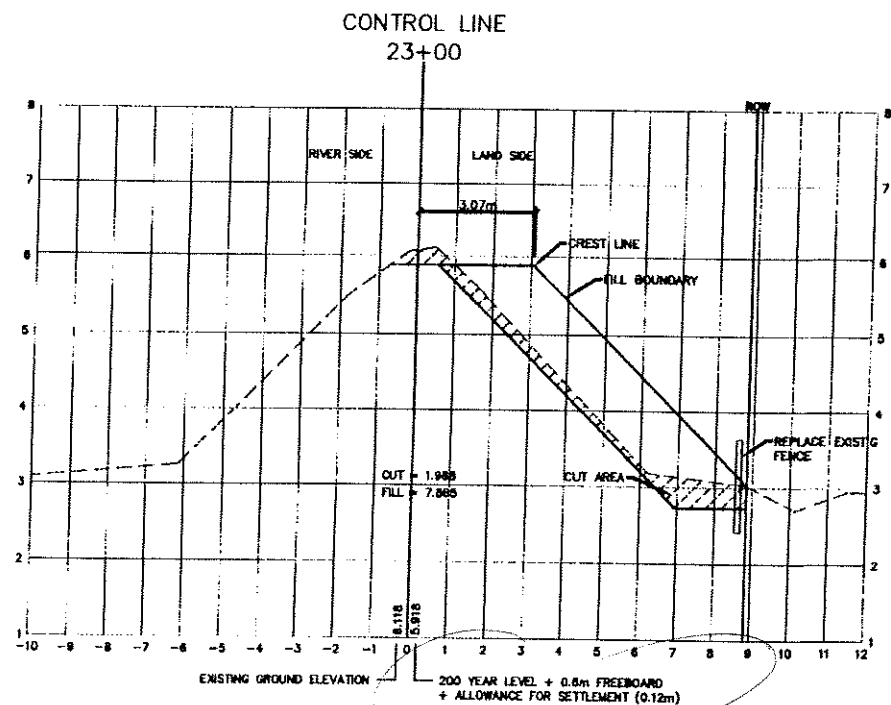
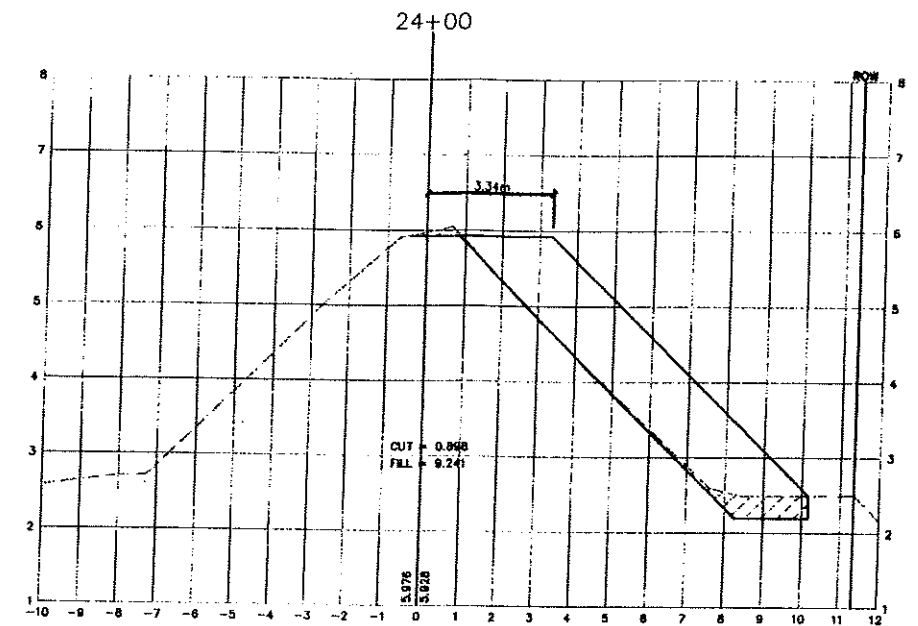
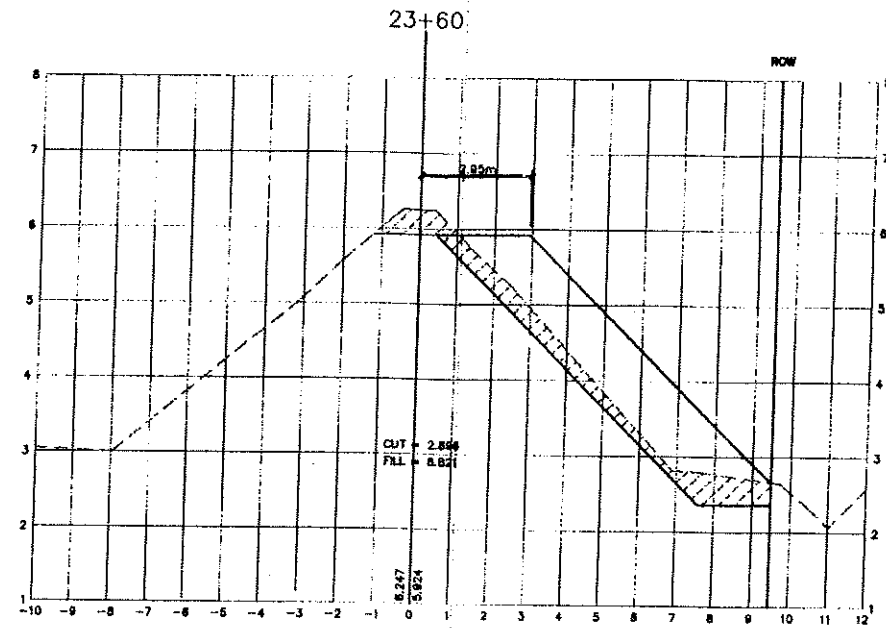
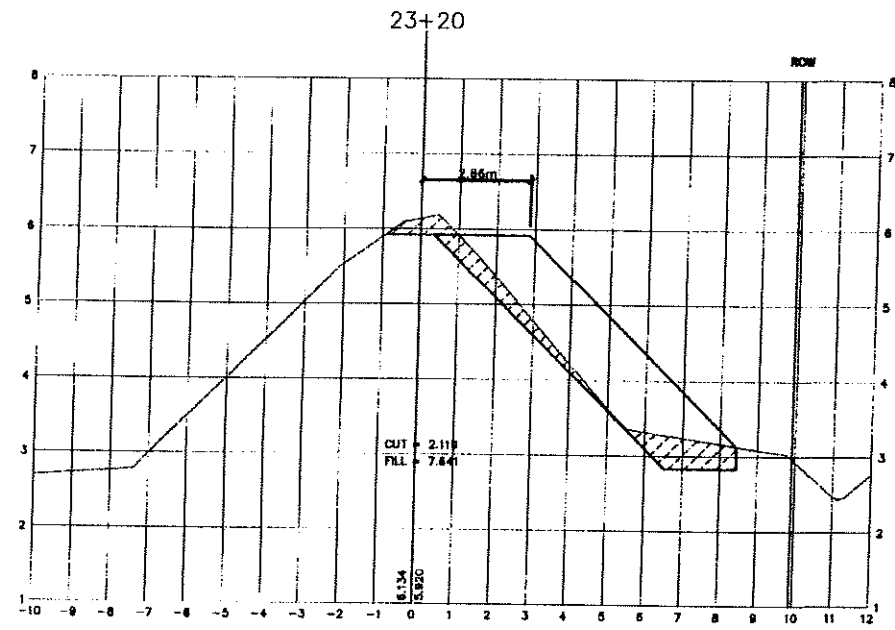
DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
SCALE	HORIZ. 1:100 VERT. 1:50

**The Corporation of the Township of Langley**

WEST LANGLEY DYKE UPGRADE  
 X-SECTIONS - 22+00 TO 22+80

PLAN 02098024 SHEET NO. SHEET 8 OF 15





CERTIFIED RECORD DRAWING



Waterworks	W
Sanitary	S
Storm Drains	SD
Ditches	D
Misc. Utilities	MU
Poles	P

**BENCHMARK**  
 MONUMENT 8816688 LOCATED AT 208 ST. AND 102B AVE  
 ELEVATION = 8.304  
 MONUMENT 8814864 LOCATED AT 203 ST AND 102 B AVE  
 ELEVATION = 3.353  
 MONUMENT 8448718 LOCATED AT 208 ST AND 102 B AVE  
 ELEVATION = 3.384

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 168-1274 Gordo Place  
 Richmond, B.C.  
 Tel: 604 278-1411  
 Fax: 604 278-1942  
 File No. 801-212-41

SEAL

**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND  
 B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS  
 OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

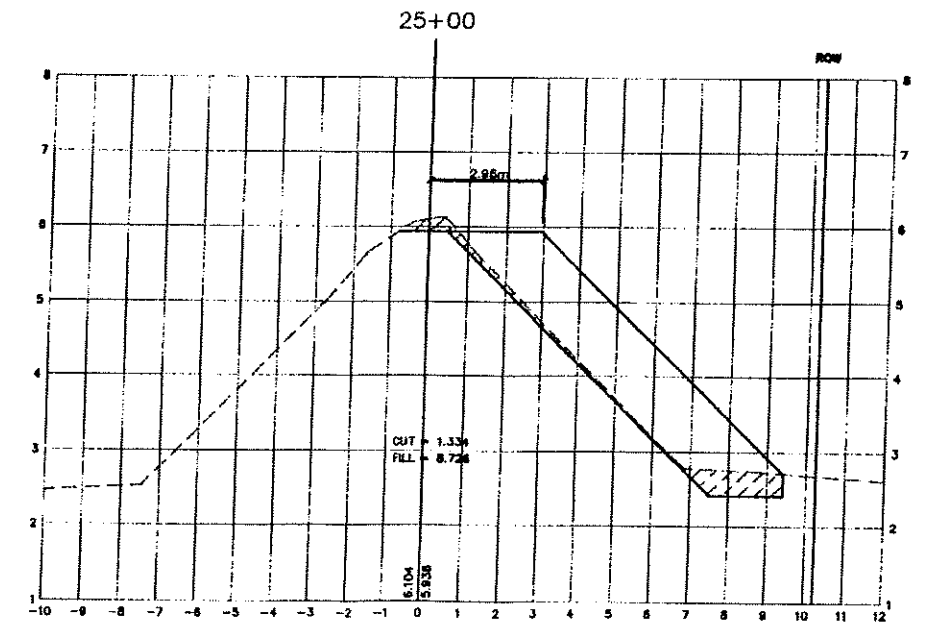
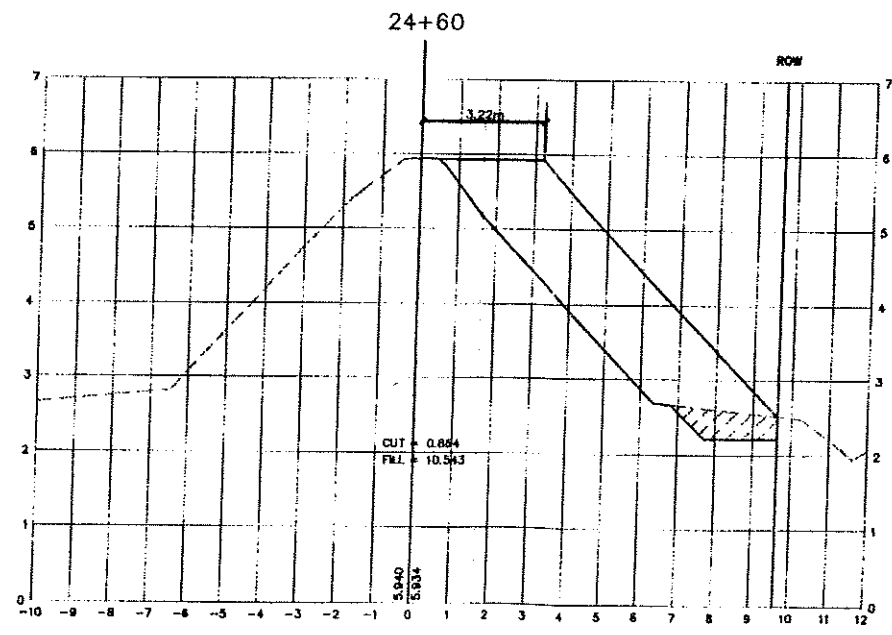
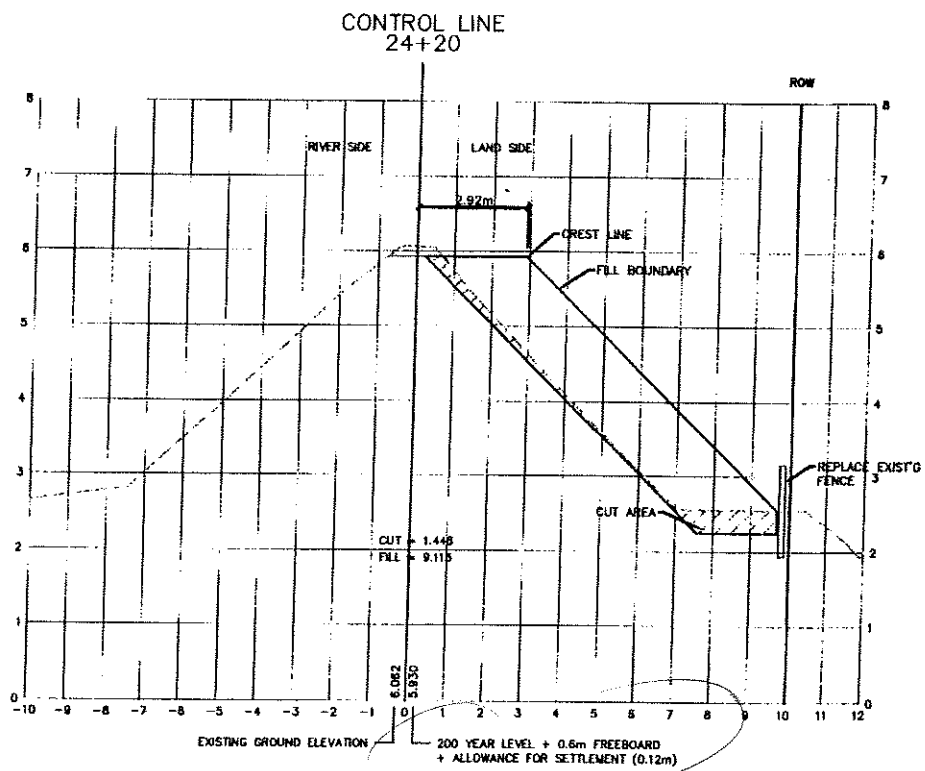
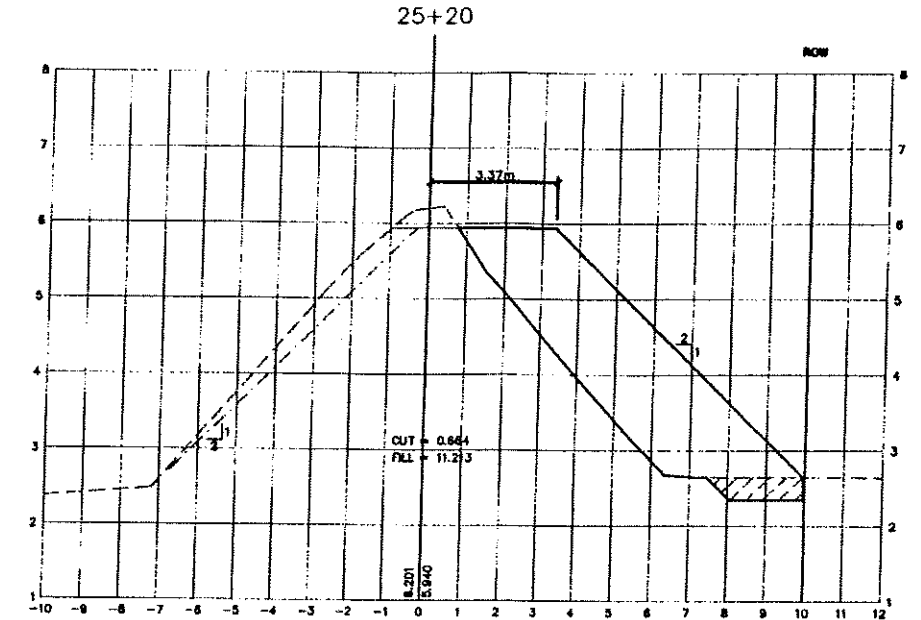
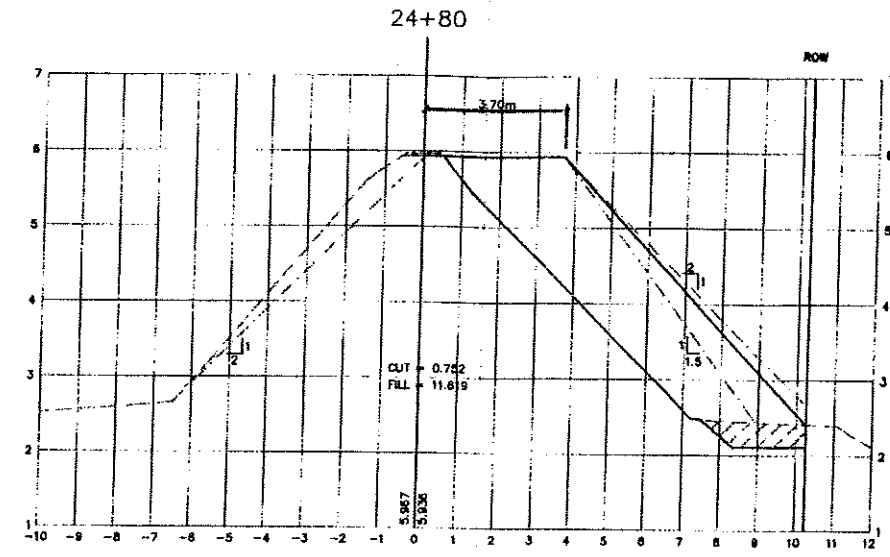
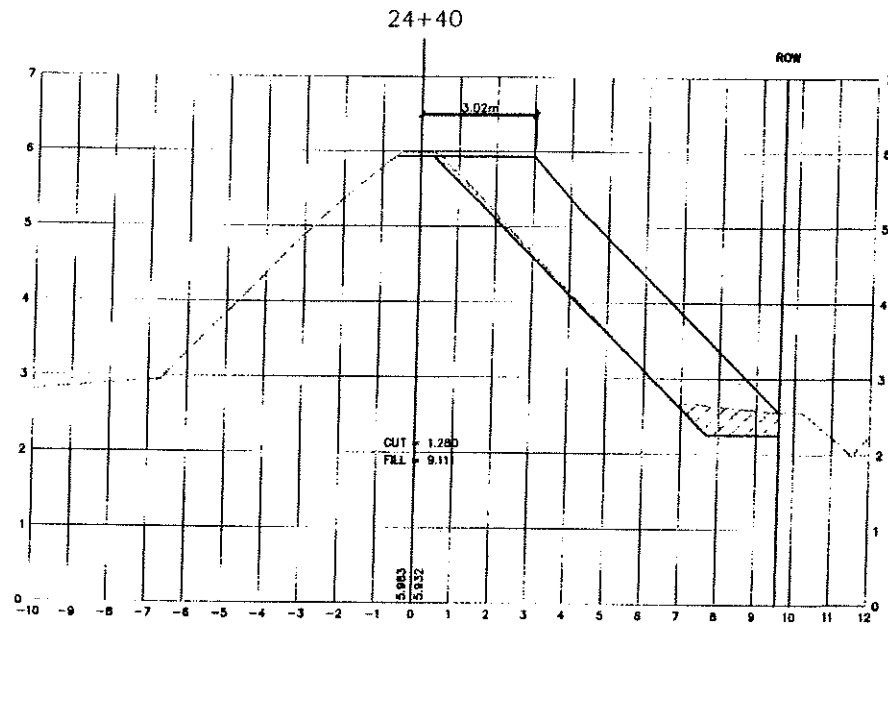
No	Date	REVISIONS
1	04/14/01	ISSUED FOR TENDER
2	04/19/01	ISSUED FOR APPROVAL
3	04/19/01	REVISED FOR APPROVAL
4	11/01/02	ISSUED FOR CONSTRUCTION
5	11/01/02	ISSUED RECORD DRAWING

DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
SCALE	
HORIZ.	1:100
VERT.	1:50

The Corporation of the Township of Langley

WEST LANGLEY DYKE UPGRADE  
 X-SECTIONS - 23+00 TO 24+00

PLAN 02098025 SHEET 9 OF 15



NOTE: STEEPEN LAND SIDE SLOPE LOCALLY WHERE NOTED ON THE SECTIONS

CERTIFIED RECORD DRAWING

Waterworks	W
Sanitary	S
Storm Drains	SD
Ditches	D
Misc. Utilities	MU
Poles	P

BENCHMARK	
MONUMENT 8815886 LOCATED AT 205 ST. AND 1028 AVE ELEVATION = 8.504	
MONUMENT 8814584 LOCATED AT 203 ST AND 102 B AVE ELEVATION = 3.53	
MONUMENT 8419718 LOCATED AT 208 ST AND 102 B AVE ELEVATION = 3.364	

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
155-12791 Clute Place Tel: 604 278-1411  
Richmond, B.C. Fax: 604 278-1942  
P.O. Box 901-858-01

SEAL

**NOTES**  
**UTILITIES AND APPURTENANCES**  
CONTRACTOR TO CONTACT TELUS B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

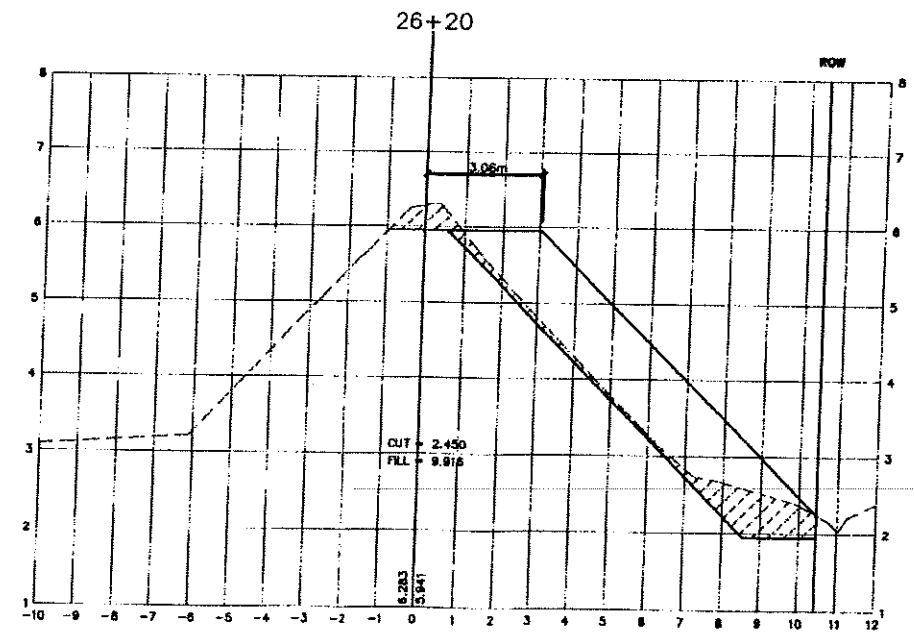
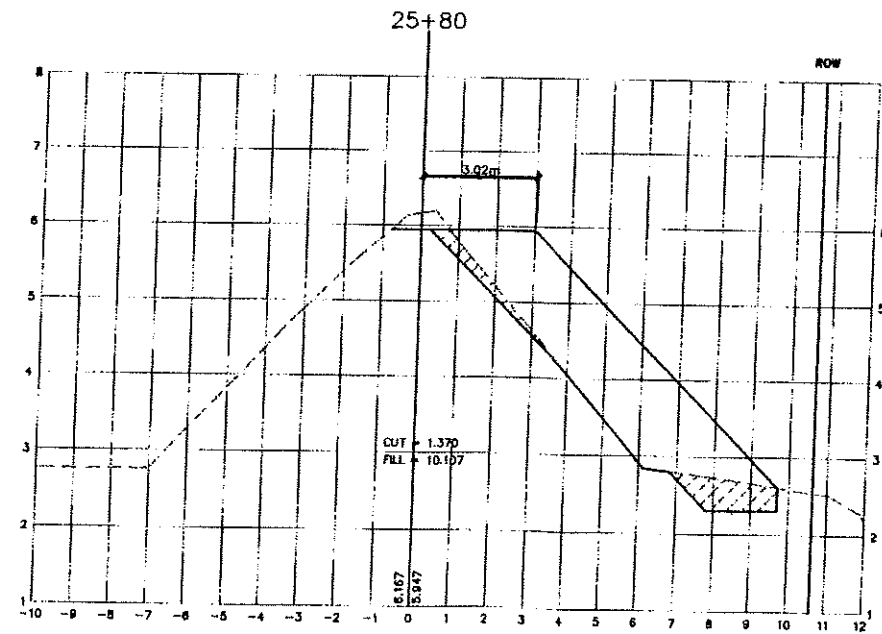
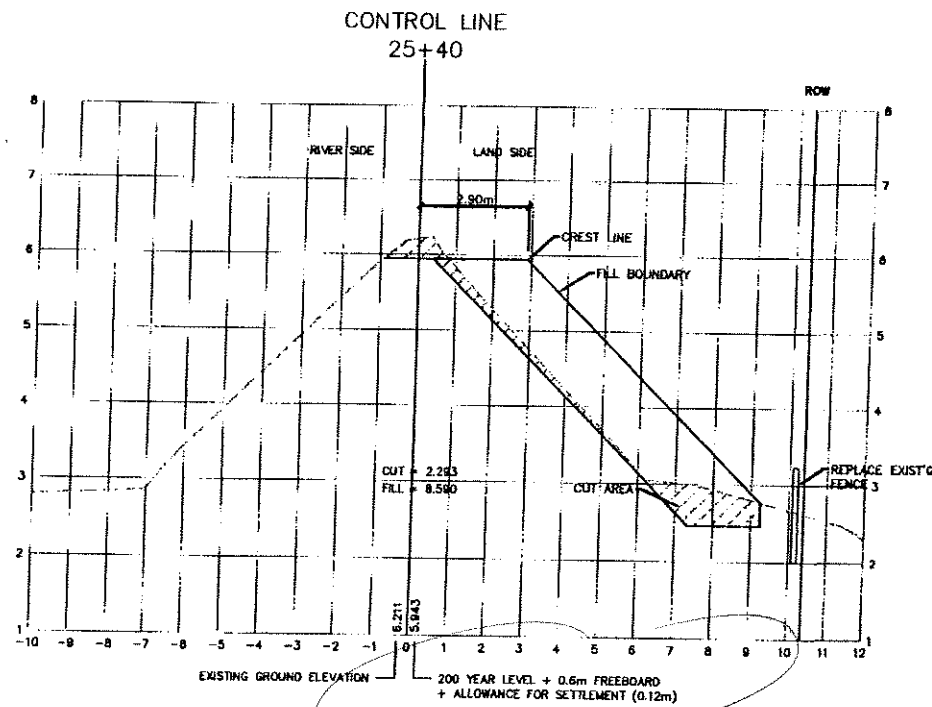
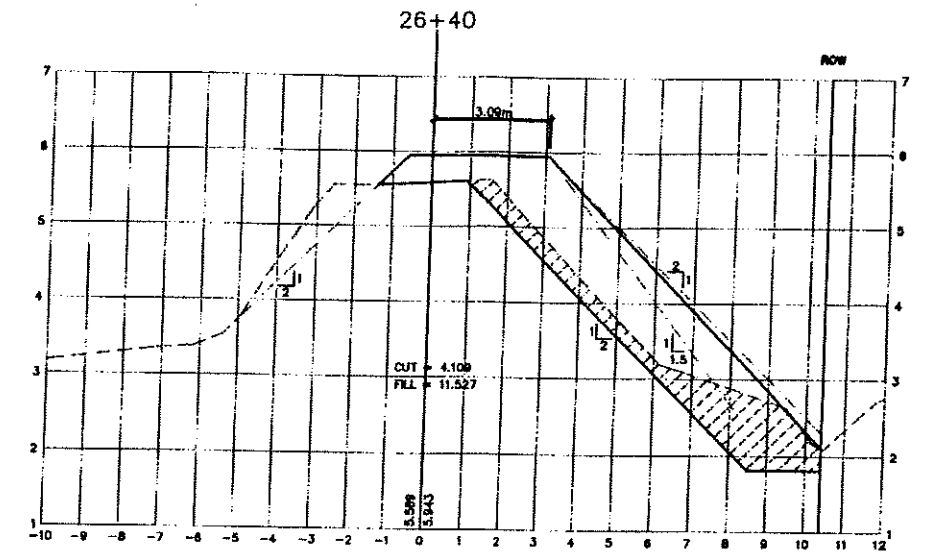
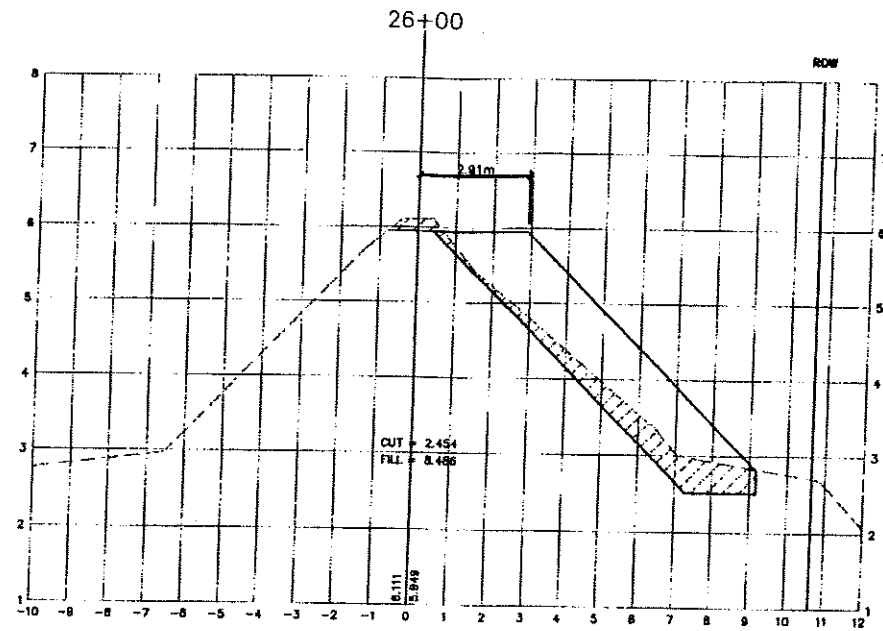
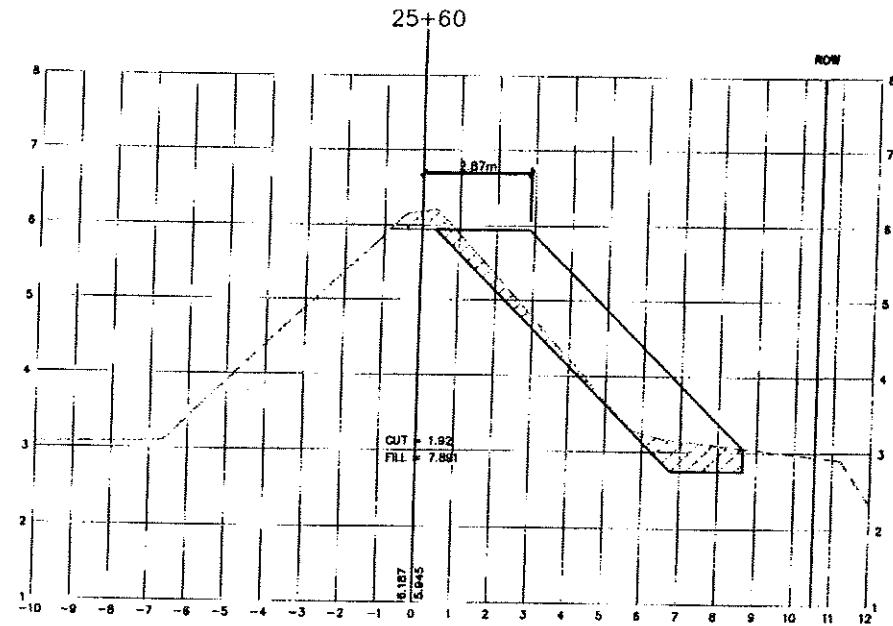
No	Date	REVISIONS
1	14/08/03	RECORD DRAWING
2	26/11/03	ISSUED FOR TENDER
3	26/11/03	ISSUED FOR APPROVAL
4	05/01/04	ISSUED FOR APPROVAL
5	11/01/03	ISSUED FOR CONSTRUCTION
6	14/01/04	TEMPLATE BOARD, ISSUED FOR CONSTRUCTION

DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MC
DATE	NOV. 2001
HORIZ.	1:100
VERT.	1:50

The Corporation of the Township of Langley

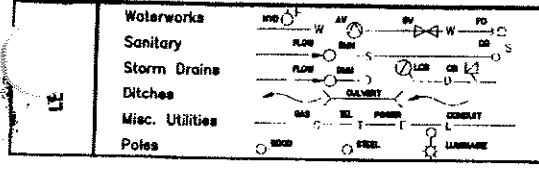
WEST LANGLEY DYKE UPGRADE  
X-SECTIONS - 24+20 TO 25+20

PLAN 02098026 SHEET NO. SHEET 10 OF 15



NOTE: STEEPEN BANK SIDE SLOPE LOCALLY WHERE NOTED ON THE SECTIONS

CERTIFIED RECORD DRAWING



**BENCHMARK**  
 MONUMENT BM45684 LOCATED AT 205 ST. AND 102B AVE ELEVATION = 8.504  
 MONUMENT BM45684 LOCATED AT 203 ST AND 102 B AVE ELEVATION = 3.333  
 MONUMENT BM49718 LOCATED AT 208 ST AND 102 B AVE ELEVATION = 3.364

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 130-127th Street, Langley, B.C. Tel: 604 278-1411  
 604 278-1411 Fax: 604 278-1402  
 FILE NO. 201-2107-01

SEAL

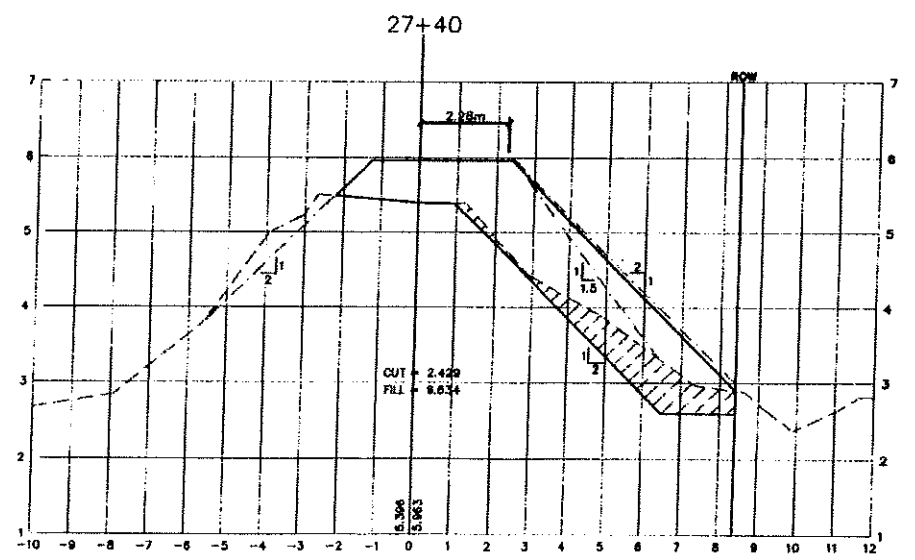
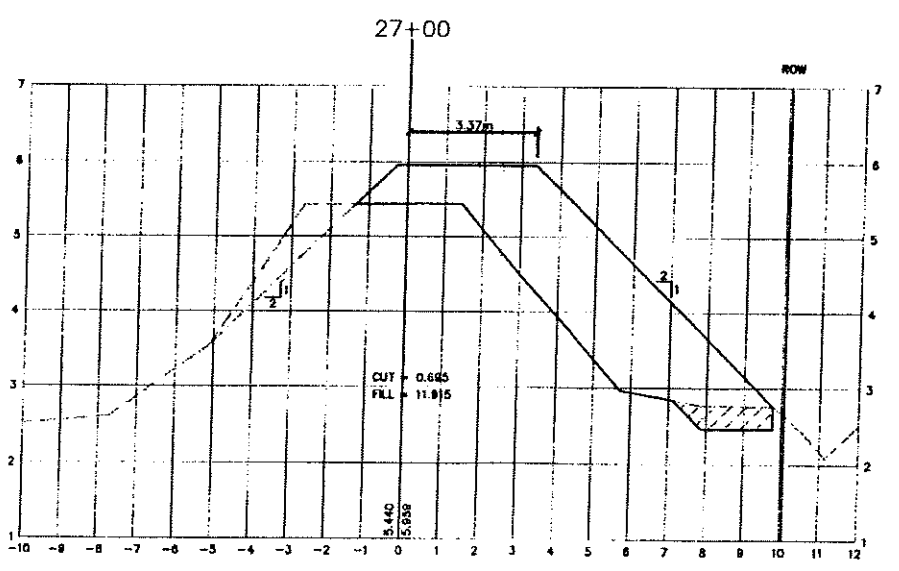
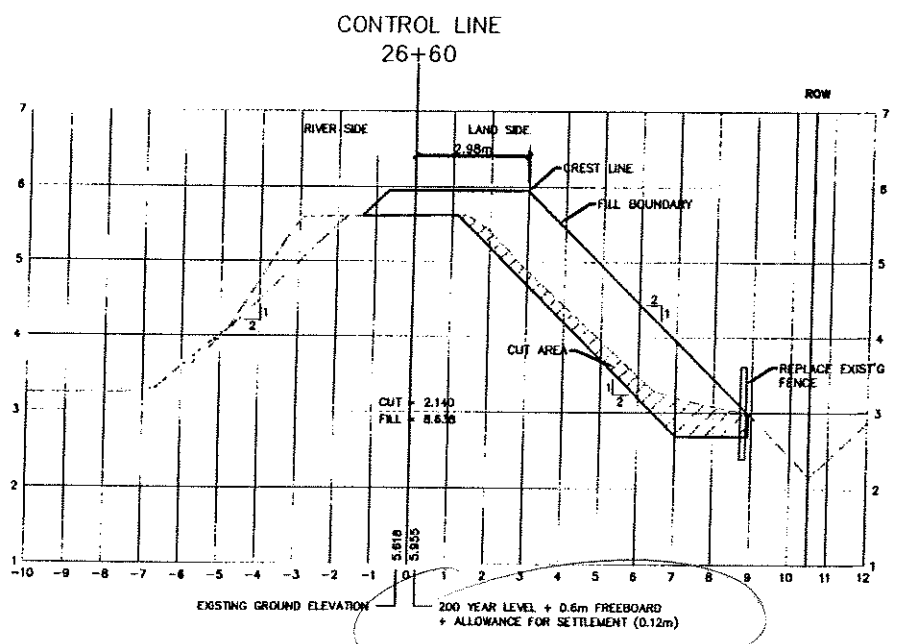
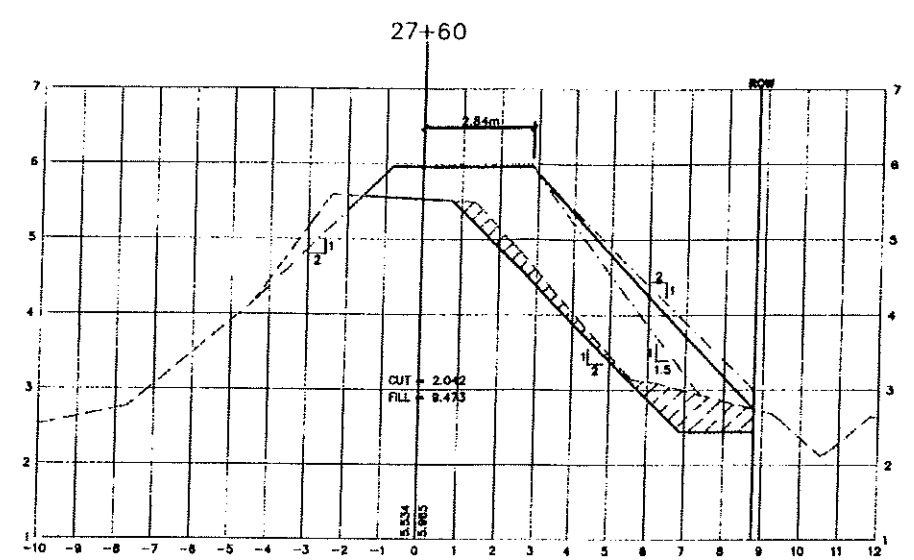
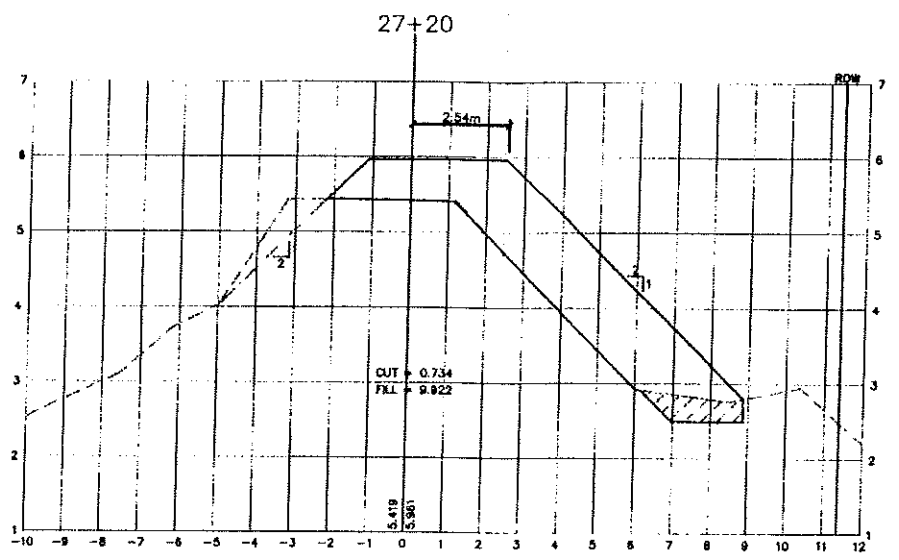
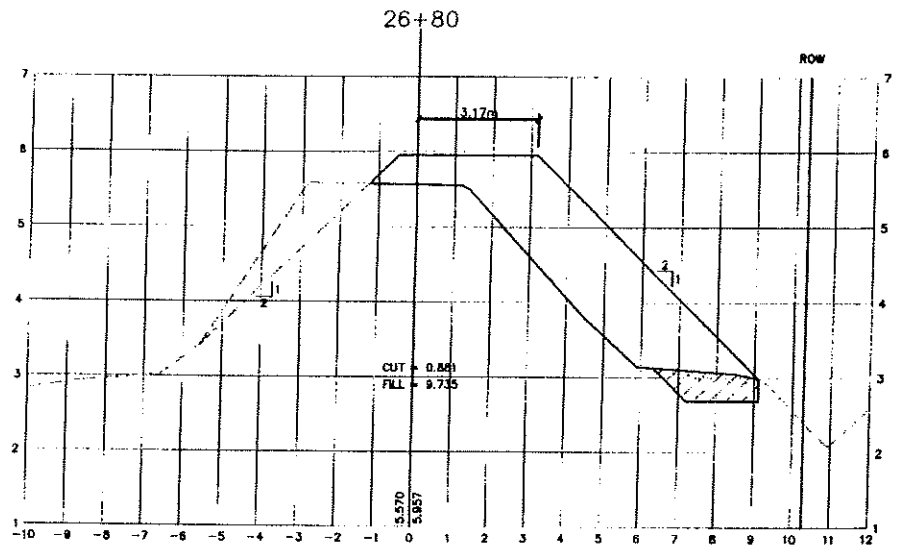
**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
1	28/11/02	ISSUED FOR TENDER
2	20/12/02	REVISED FOR APPROVAL
3	04/01/03	REVISED FOR APPROVAL
4	14/01/03	ISSUED FOR CONSTRUCTION
5	14/01/03	RECORD DRAWING ISSUE

PLAN

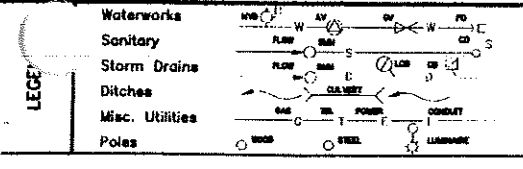
DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
SCALE	HORIZ. 1:100 VERT. 1:50

**The Corporation of the Township of Langley**  
 WEST LANGLEY DYKE UPGRADE  
 X-SECTIONS - 25+40 TO 26+40  
 PLAN 02098027 SHEET NO. SHEET 11 OF 15



NOTE: STEEPEN LAND SIDE-SLOPE LOCALLY AT 1.5H:1V WHERE REQUIRED BETWEEN SECTIONS 27+00 TO 29+97.351

CERTIFIED RECORD DRAWING



**BENCHMARK**  
 MONUMENT 88H5666 LOCATED AT 205 ST. AND 102B AVE  
 ELEVATION = 8.504  
 MONUMENT 88H4584 LOCATED AT 203 ST AND 102 B AVE  
 ELEVATION = 3.53  
 MONUMENT 84H9718 LOCATED AT 208 ST AND 102 B AVE  
 ELEVATION = 3.364

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 138-12791 Goble Place Tel: 604 238-1411  
 Richmond, B.C. Fax: 604 278-1942  
 P.E. No. 88-1187-01

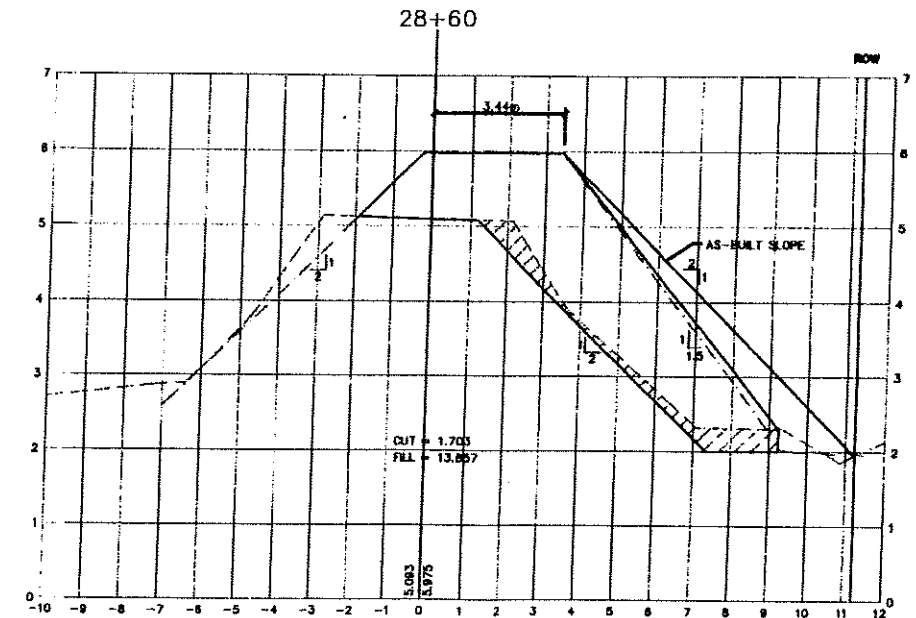
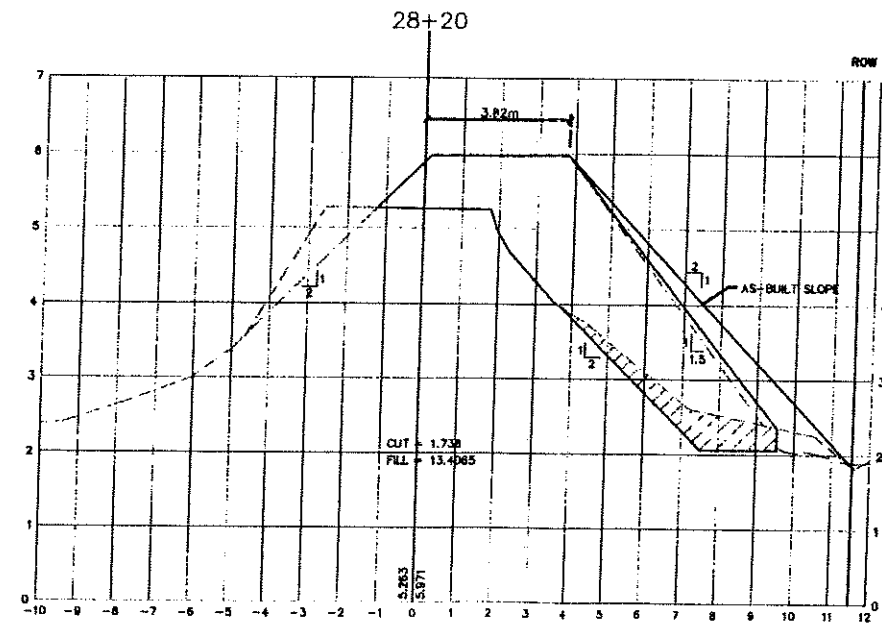
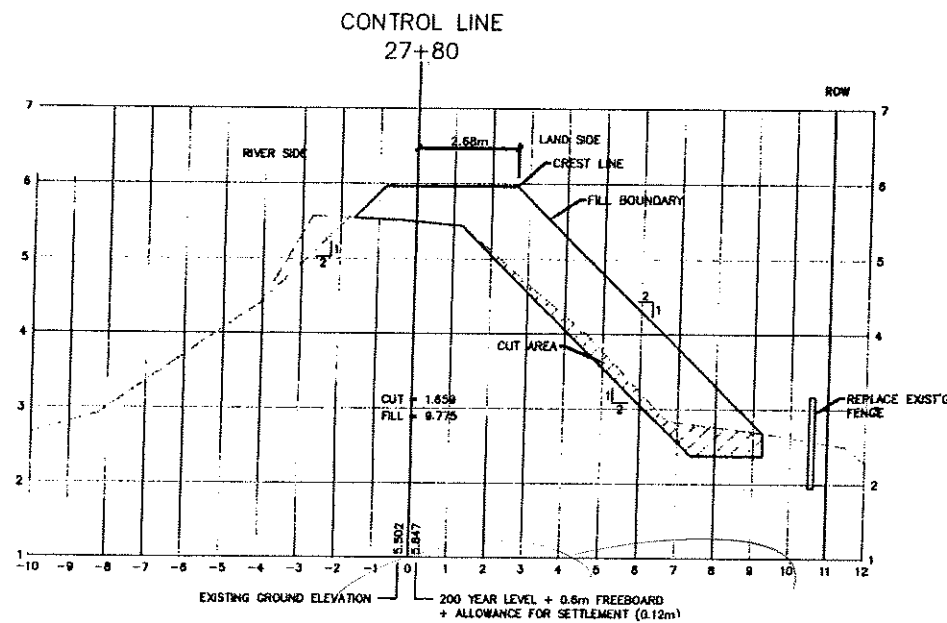
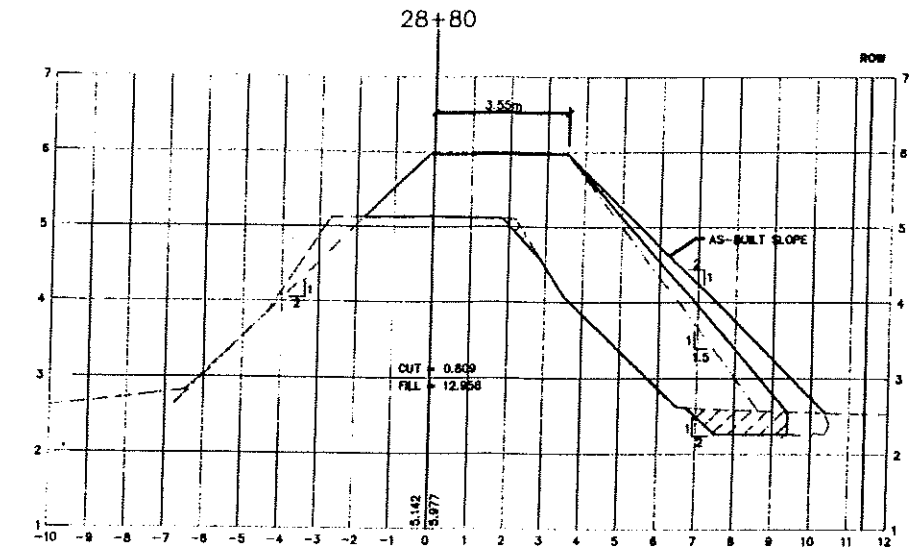
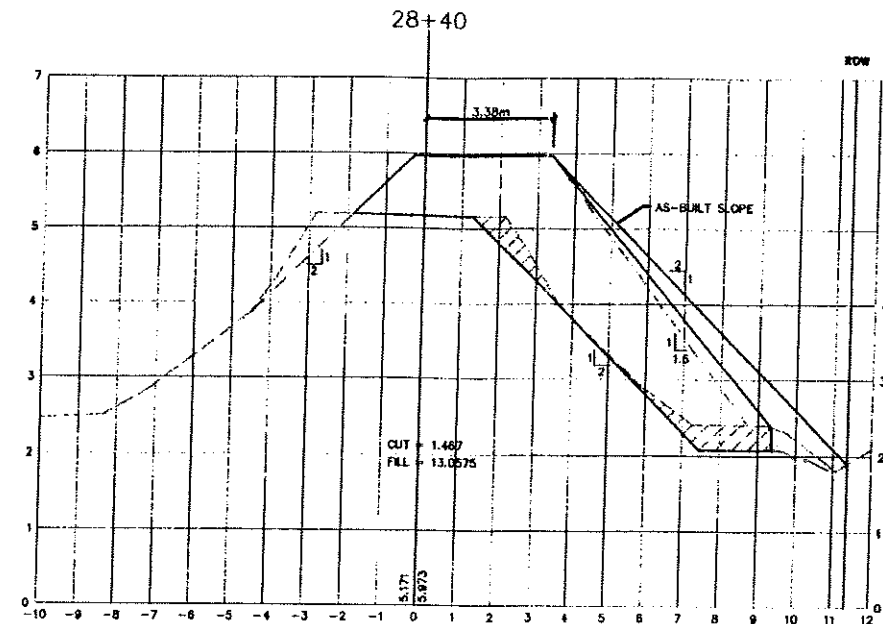
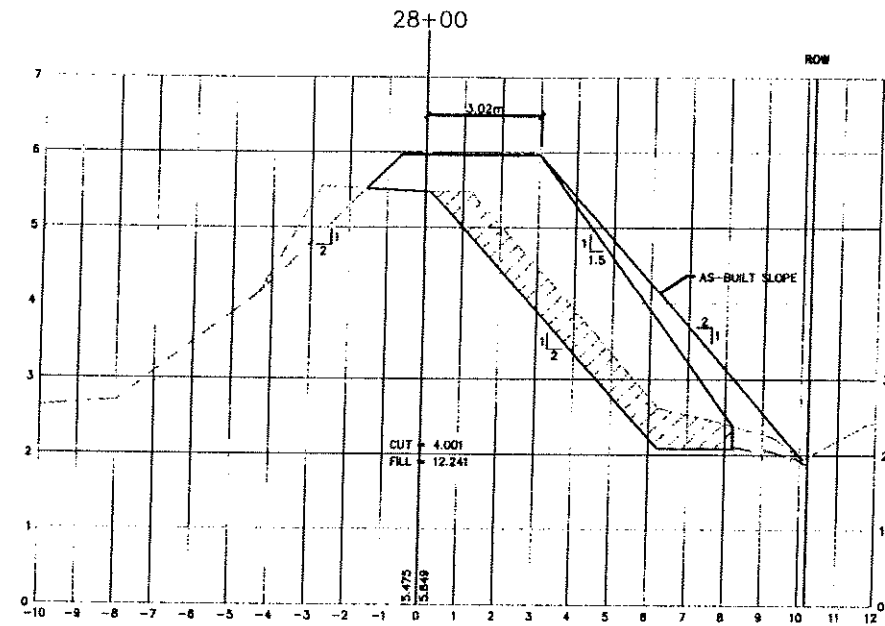
SEAL

**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO OBTAIN LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
1	14/04/00	RECORD DRAWING SHEET
2	26/11/00	ISSUED FOR TENDER
3	26/11/00	ISSUED FOR APPROVAL
4	08/08/00	ISSUED FOR APPROVAL
5	11/09/00	ISSUED FOR CONSTRUCTION
6	16/01/00	TEMPLATE REVISED, ISSUED FOR CONSTRUCTION

PLAN  
 PREPARED BY: PRE  
 DRAWN BY: DLS  
 CHECKED BY: MG  
 DATE: NOV. 2004  
 SCALE: HORIZ. 1:100  
 VERT. 1:50

**The Corporation of the Township of Langley**  
 Township of Langley  
**WEST LANGLEY DYKE UPGRADE**  
 X-SECTIONS - 26+60 TO 27+60  
 PLAN 02098028 SHEET NO. SHEET 12 OF 15 REV. 5



NOTE: STEEPEN LAND SIDE SLOPE LOCALLY AT 1:5H:1V WHERE REQUIRED BETWEEN SECTIONS 27+00 TO 29+97.351

AS CONSTRUCTED NOTES:

ADDITIONAL 2 METRES OF R.O.W. EASEMENT ACQUIRED BY LANGLEY TOWNSHIP FROM STA. 28+00 TO STA. 29+97.351 TO ENABLE THE PLACEMENT OF DYKE FILL AT 1V:2H SLOPE AND THE DELETION OF THE PROPOSED LOCK BLOCK RETAINING WALL.



Waterworks	
Sanitary	
Storm Drains	
Ditches	
Misc. Utilities	
Poles	

**BENCHMARK**  
 MONUMENT 88H5666 LOCATED AT 205 ST. AND 102B AVE ELEVATION = 8.504  
 MONUMENT 88H4564 LOCATED AT 203 ST AND 102 B AVE ELEVATION = 3.53  
 MONUMENT 84H9718 LOCATED AT 208 ST AND 102 B AVE ELEVATION = 3.364

**LEVELTON**  
 Engineering Solutions  
 Levelton Engineering Ltd.  
 110-12791 Clovis Place Tel: 604 278-1411  
 Steveston, B.C. Fax: 604 278-1042  
 P.E. No. 881-0197-01

SEAL

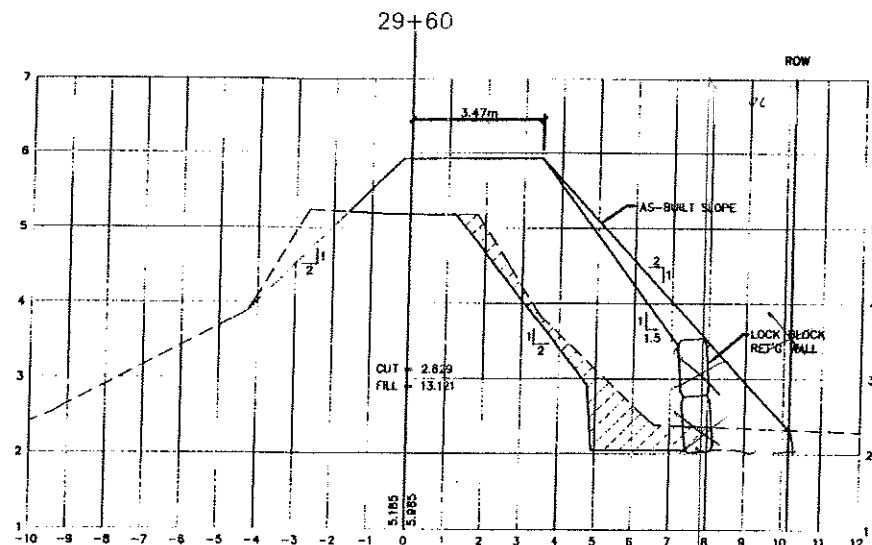
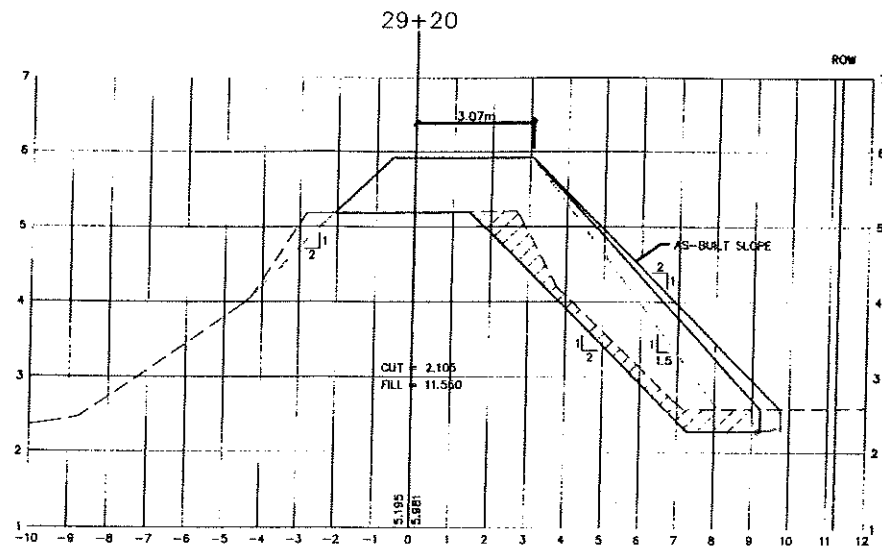
**NOTES**  
**UTILITIES AND APPURTENANCES**  
 CONTRACTOR TO CONTACT TELUS B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
1	14/04/02	RECORD DRAWING ISSUE
2	14/05/02	BASEMENT REDDED, SLOPE FLATTENED
3	26/11/04	ISSUED FOR TENDER
4	28/12/04	ISSUED FOR APPROVAL
5	04/04/05	ISSUED FOR APPROVAL
6	11/04/05	ISSUED FOR CONSTRUCTION
7	14/04/05	TEMPLATE REDDED, ISSUED FOR CONSTRUCTION

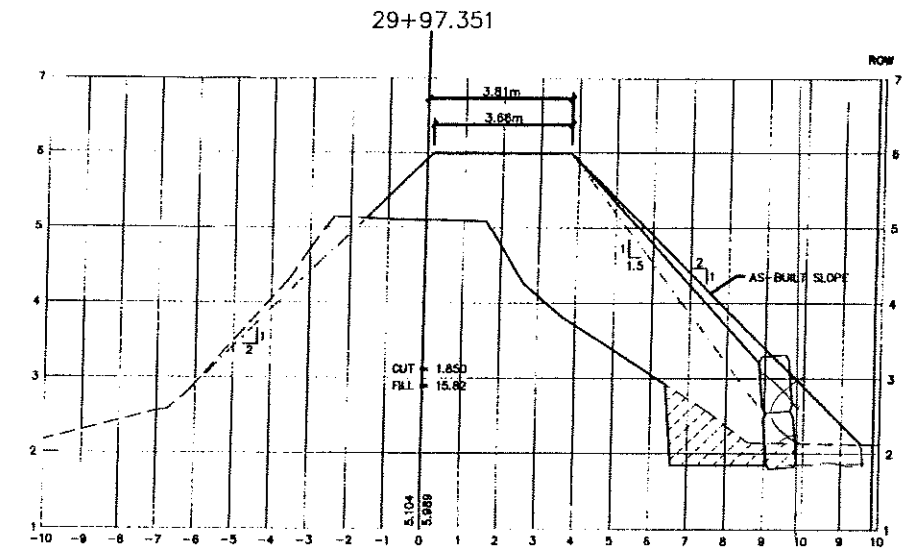
DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
HORIZ.	1:100
VERT.	1:50

CERTIFIED RECORD DRAWING

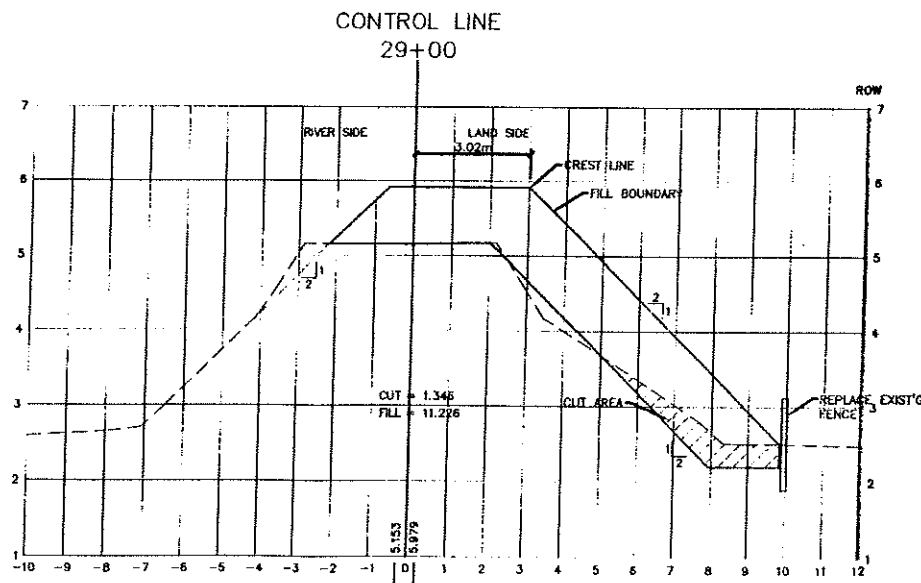
**The Corporation of the Township of Langley**  
 Township of Langley  
**WEST LANGLEY DYKE UPGRADE**  
 X-SECTIONS - 27+80 TO 28+80  
 PLAN 02098029 SHEET NO. SHEET 13 OF 15



LOCK BLOCK WALL NOT CONSTRUCTED



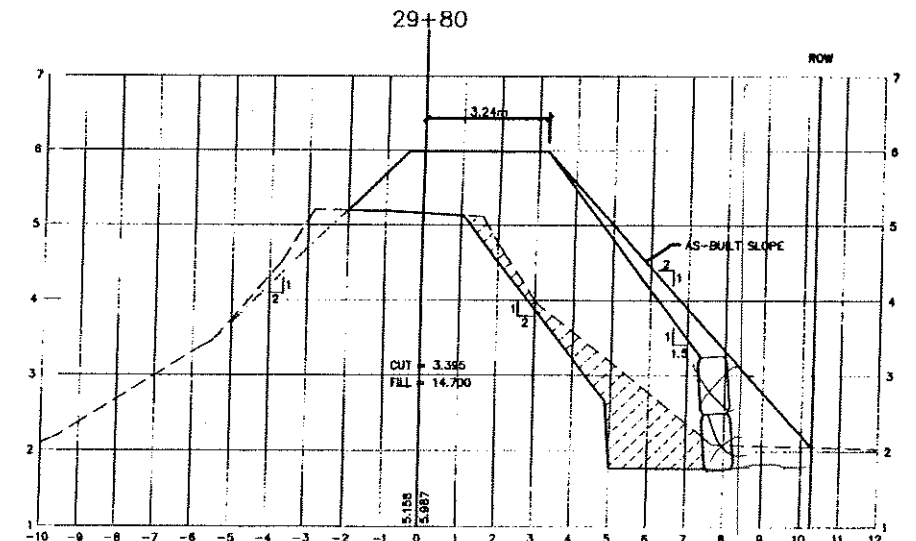
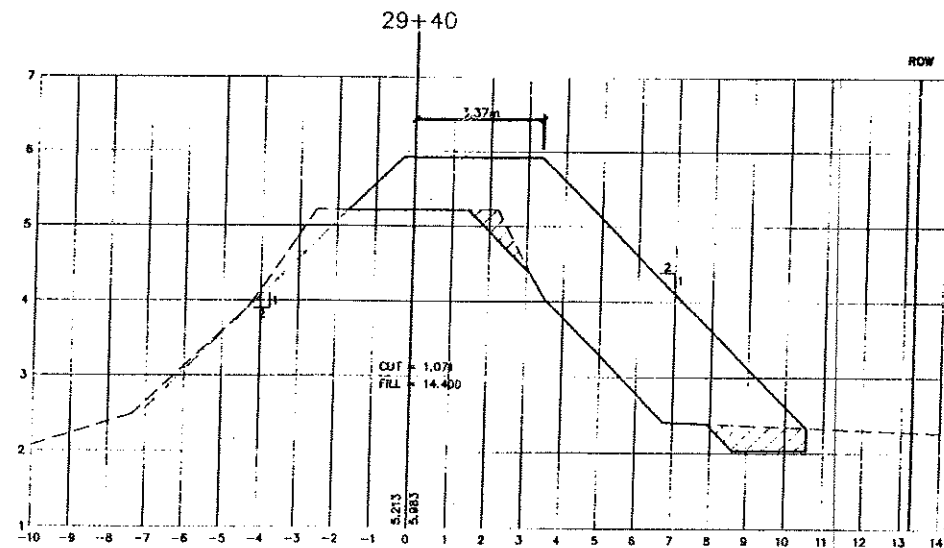
LOCK BLOCK WALL NOT CONSTRUCTED



EXISTING GROUND ELEVATION → 200 YEAR LEVEL + 0.6m FREEBOARD + ALLOWANCE FOR SETTLEMENT (0.12m)

NOTE: STEEPEN LAND SIDE SLOPE LOCALLY AT 1.5H:1V WHERE REQUIRED BETWEEN SECTIONS 27+00 TO 29+97.351

AS CONSTRUCTED NOTES:  
ADDITIONAL 2 METRES OF R.O.W. EASEMENT ACQUIRED BY LANGLEY TOWNSHIP FROM STA. 28+00 TO STA. 29+97.351 TO ENABLE THE PLACEMENT OF DYKE FILL AT 1V:2H SLOPE AND THE DELETION OF THE PROPOSED LOCK BLOCK RETAINING WALL.



LOCK BLOCK WALL NOT CONSTRUCTED

CERTIFIED RECORD DRAWING



LEGEND	
Waterworks	Sanitary
Storm Drain	Ditches
Misc. Utilities	Poles

BENCHMARK	
MONUMENT 88H5608	LOCATED AT 205 ST. AND 102B AVE ELEVATION = 8.504
MONUMENT 88H4564	LOCATED AT 203 ST AND 102 B AVE ELEVATION = 3.33
MONUMENT 84H9718	LOCATED AT 208 ST AND 102 B AVE ELEVATION = 3.364

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
150-12791 Clarke Place, Richmond, B.C. Tel: 604 278-1411 Fax: 604 278-1042

SEAL

NOTES

**UTILITIES AND APPURTENANCES**

CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

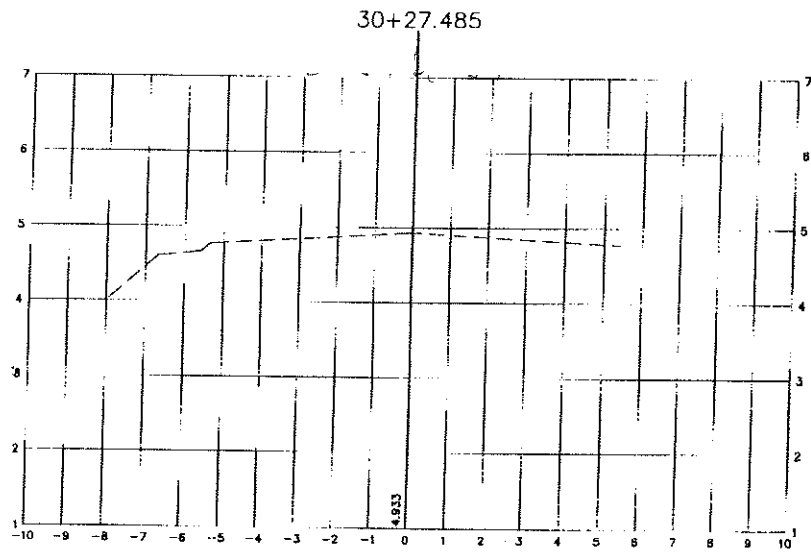
No	Date	REVISIONS
1	11/11/02	ISSUED FOR TENDER
2	02/12/04	ISSUED FOR APPROVAL
3	04/01/05	ISSUED FOR APPROVAL
4	11/01/05	ISSUED FOR CONSTRUCTION
5	04/01/07	REPLACE REVISION 4 ISSUED FOR CONSTRUCTION

DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
SCALE	HORIZ. 1:100 VERT. 1:50

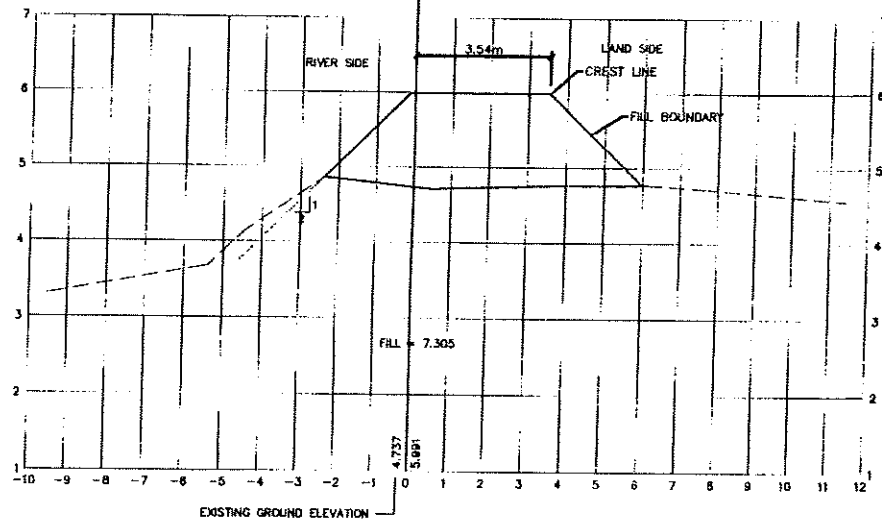
The Corporation of the Township of Langley

WEST LANGLEY DYKE UPGRADE  
X-SECTIONS - 29+00 TO 30+00

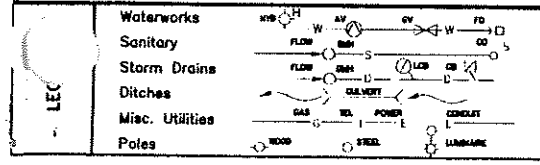
PLAN 0209030 SHEET NO. SHEET 14 OF 15 REV. 4



CONTROL LINE  
END OF DYKE CREST  
30+15.463



CERTIFIED RECORD DRAWING



**BENCHMARK**  
MONUMENT 88H5666 LOCATED AT 205 ST. AND 102B AVE  
ELEVATION = 6.504  
MONUMENT 88H4564 LOCATED AT 203 ST AND 102 B AVE  
ELEVATION = 3.53  
MONUMENT 84H9718 LOCATED AT 208 ST AND 102 B AVE  
ELEVATION = 3.364

**LEVELTON**  
Engineering Solutions

Levelton Engineering Ltd.  
120-17781 Clark Place Tel: 604 278-1411  
Richmond, B.C. Fax: 604 278-1049  
P.E. No. 001-9787-01

SEAL

**NOTES**

**UTILITIES AND APPURTENANCES**  
CONTRACTOR TO CONTACT TELUS, B.C. HYDRO AND  
B.C. GAS PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS  
OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT

No	Date	REVISIONS
0	26/11/04	ISSUED FOR TENDER
1	26/12/04	ISSUED FOR APPROVAL
2	06/01/05	ISSUED FOR APPROVAL
3	11/01/05	ISSUED FOR CONSTRUCTION
4	18/01/05	TEMPLATE NUMBER ISSUED FOR CONSTRUCTION

DESIGNED BY	PRE
DRAWN BY	DLB
CHECKED BY	MG
DATE	NOV. 2001
SCALE	HORIZ. 1:100 VERT. 1:50

The Corporation of the Township of Langley



WEST LANGLEY DYKE UPGRADE  
X-SECTIONS - 30+20 TO 30+27.485

PLAN 02098031 SHEET NO. SHEET 15 OF 15 REV. 5