McElhanney Cover D - 2019-04-01

CLIENT

CITY OF FERNIE

ADDRESS / CONTACT INFO.

501 - 3RD AVE, BOX 190, FERNIE, BC V0B 1M0

PROJECT NAME

ANNEX DIKE IMPROVEMENTS

McELHANNEY PROJECT

2441 - 01170- 00

STATUS

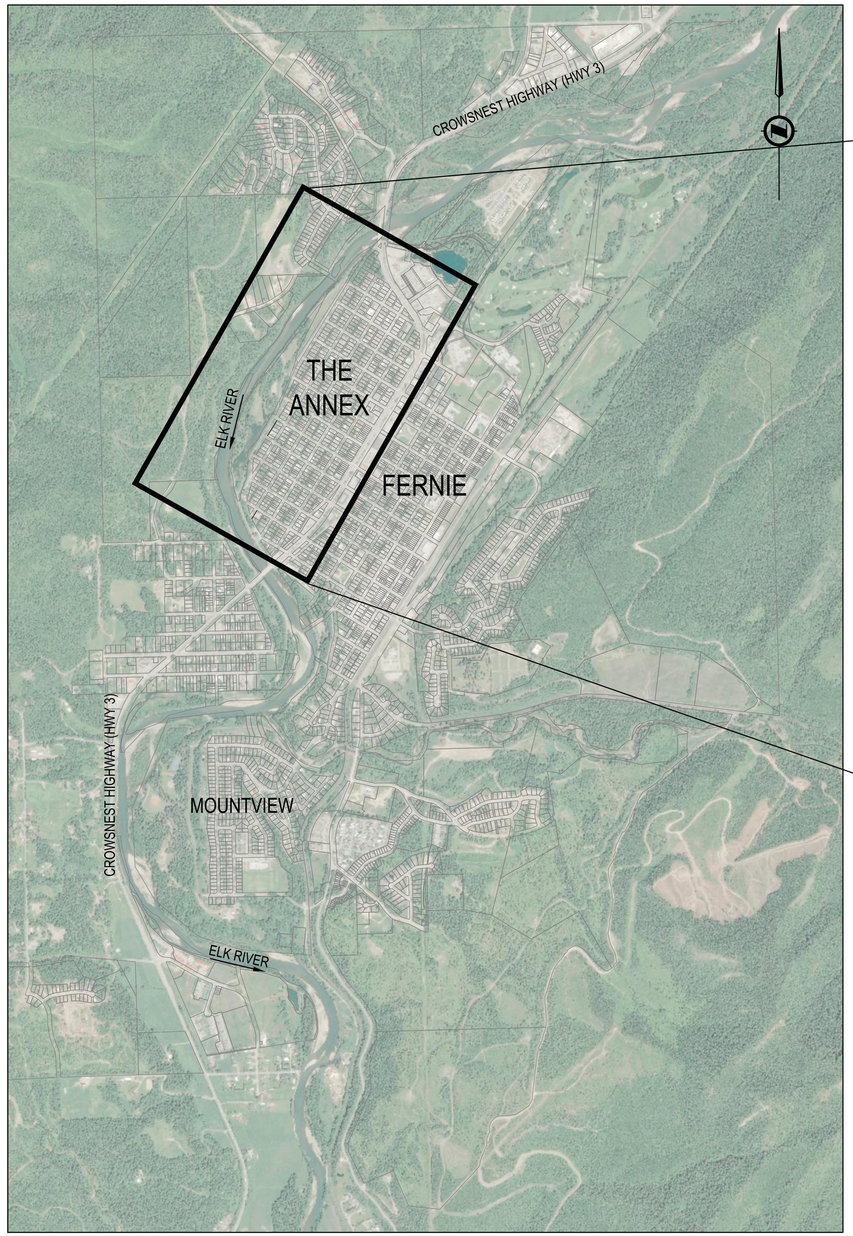
ISSUED FOR CONSTRUCTION

McElhanney

402C Hwy 3
PO Box 1505
Fernie BC
V0B 1M0
T 250 425 0158

DATE: 2022-06-14, 14:34 FILE: C:\Users\ADykstra\OneDrive - McElhanney Group\Documents\Working\Annex Dike\Drawings\10.3 Sheet Files\01170-C0-000.dwg

McElhanney ANSI D - 2039-09-01



A LOCATION PLAN
SCALE 1:15,000



B SITE PLAN
SCALE 1:5000

DRAWING INDEX	
SHEET #	DWG NAME
C-000	COVER SHEET
C-001	SITE LOCATION PLAN AND DRAWING INDEX
C-002	GENERAL NOTES AND LEGEND
C-101	EXISTING SITE PLAN
C-201	PROPOSED SITE PLAN
C-301	PLAN PROFILE, STA 0+070 TO STA 0+420
C-302	PLAN PROFILE, STA 0+420 TO STA 0+770
C-303	PLAN PROFILE, STA 0+770 TO STA 1+120
C-304	PLAN PROFILE, STA 1+120 TO STA 1+470
C-305	PLAN PROFILE, STA 1+470 TO STA 1+820
C-306	PLAN PROFILE, STA 1+820 TO STA 1+930
C-401	PLAN DETAILS
C-402	RETAINING WALL DETAIL
C-403	UTILITY SERVICE PROFILE
C-404	POND OUTFALL DETAIL
C-406	OFFSETTING PLAN
C-501	TYPICAL SECTIONS

Rev	Date	Description	Drawn	Design	App'd
G	2022/06/14	ISSUED FOR CONSTRUCTION	AD	KM	KM
F	2022/04/27	ISSUED FOR TENDER	AD	KM	KM
E	2022/02/15	ISSUED FOR APPROVALS	DP	KM	KM
D	2021/11/26	ISSUED FOR APPROVAL	SS	KM	KM
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

0 1:5,000 250

0 1:15,000 600

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PERMIT NUMBER: 1003299
Engineers and Geoscientists of BC

PROFESSIONAL ENGINEER
K. N. MOHR
44838
PROVINCE OF BRITISH COLUMBIA
2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

SITE LOCATION PLAN AND DRAWING INDEX

Drawing No.
C-001

Project Number
2441-01170-00

Rev.
G

DESTROY ALL PRINTS BEARING PREVIOUS REVISION.

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GENERAL INSTRUCTIONS TO CONTRACTOR

1. THE LOCATION AND SIZE OF EXISTING UTILITIES AND SERVICES, AS SHOWN ON THE DRAWINGS IS APPROXIMATE ONLY. PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL EXPOSE AND VERIFY THE EXACT LOCATION AND SIZE OF THESE INSTALLATIONS AND SHALL NOTIFY THE CONSULTANT OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS.

2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SERVICES. ANY DAMAGES SUFFERED BY THESE UTILITIES, WHICH MAY BE ATTRIBUTED TO THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.

3. WHEN WORKING ON EXISTING PAVEMENT WHICH WILL BE RETAINED FOR FUTURE USE, THE CONTRACTOR SHALL EXERCISE CARE NOT TO CAUSE ANY DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR TO EQUIVALENT CONDITION TO THAT EXISTING PREVIOUS AT HIS EXPENSE AND TO THE SATISFACTION OF THE CONSULTANT.

4. THE CONTRACTOR SHALL USE ONLY NEW AND APPROVED MATERIALS AND SHALL NOT SUBSTITUTE ANY MATERIALS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CONSULTANT.

5. ALL SURVEY MONUMENTS, PROPERTY PINS AND PROJECT PRIMARY SURVEY CONTROL PINS, SHALL BE PROTECTED DURING ALL STAGES OF CONSTRUCTION. ANY DAMAGE SUFFERED BY THE MONUMENTS OR PINS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

6. EXISTING PARKING AREAS, ON-SITE AND OFF-SITE ROADS MUST BE KEPT CLEAN. STREET, ROAD AND PARKING AREA CLEANING SHALL BE DONE BY THE CONTRACTOR AT HIS EXPENSE.

7. DISTURBANCE TO EXISTING LANDSCAPING OR SURFACE IMPROVEMENT, ATTRIBUTABLE TO THE CONTRACTOR'S OPERATION SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE. SUCH REPAIR SHALL BE CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT AND THE CITY OF FERNIE.

8. THE CONTRACTOR SHALL NOT ENTER UPON ADJACENT PROPERTIES DURING THE COURSE OF CONSTRUCTION WITHOUT THE PRIOR APPROVAL OF THE PROPERTY OWNER. IF THE CONTRACTOR DOES CAUSE DAMAGE TO ADJOINING PROPERTY HE SHALL IMMEDIATELY REPAIR IT TO THE SATISFACTION OF THE OWNER. HE SHALL OBTAIN A LETTER OF CLEARANCE FROM THE OWNER AND SUBMIT IT TO THE CONSULTANT. SUBSTANTIAL COMPLETION SHALL NOT BE GRANTED UNTIL ALL SUCH LETTERS HAVE BEEN RECEIVED BY THE CONSULTANT.

9. CONSTRUCTION AND EXCAVATION WASTES, OVERBURDEN, SOIL, OR OTHER SUBSTANCES DELETERIOUS TO AQUATIC LIFE SHALL BE DISPOSED OF OR PLACED IN SUCH A MANNER SO AS TO PREVENT THEIR ENTRY INTO ANY WATERCOURSE, RAVINE OR STORM SEWER SYSTEM.

10. ALL WORK SHALL BE UNDERTAKEN IN A MANNER THAT PREVENTS THE RELEASE OF SEDIMENT-LADEN WATER INTO ANY DITCH, WATERCOURSE OR STORM SEWER.

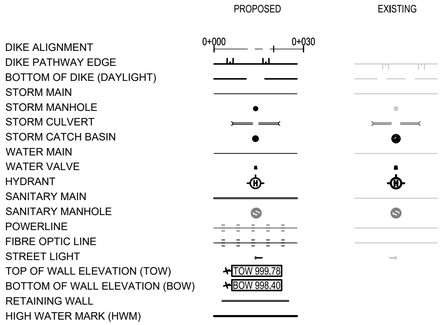
SURVEY

1. GEODETIC INFORMATION IS IN UTM ZONE 11 CVD2013.

2. CONSTRUCTION LAYOUT SURVEY IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

3. SURVEY CONTROL BENCHMARKS WILL BE PROVIDED BY THE CONSULTANT FOR THE CONTRACTOR'S USE.

LEGEND



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A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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2022-06-29

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FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

GENERAL NOTES AND LEGEND

Drawing No.
C-002

Project Number
2441-01170-00

Rev.
G

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McElhanney ANSI D - 2020-01-01



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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

EXISTING SITE PLAN

Drawing No.
C-101

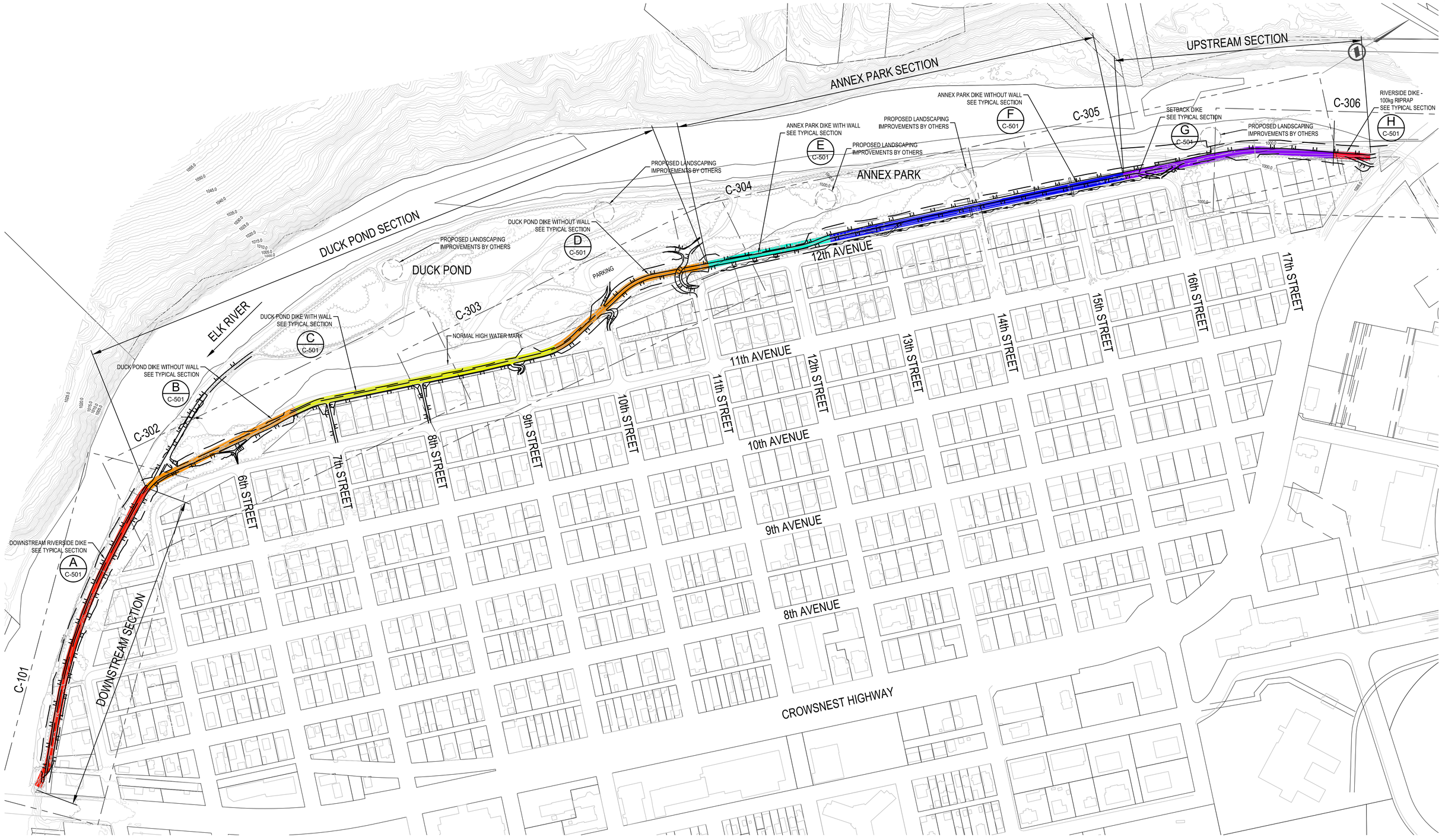
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0 1:2,000 100

ORIGINAL DWG SIZE: ANSI D (22" x 34")

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2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS PROPOSED SITE PLAN AND KEY PLAN

Drawing No.
C-201

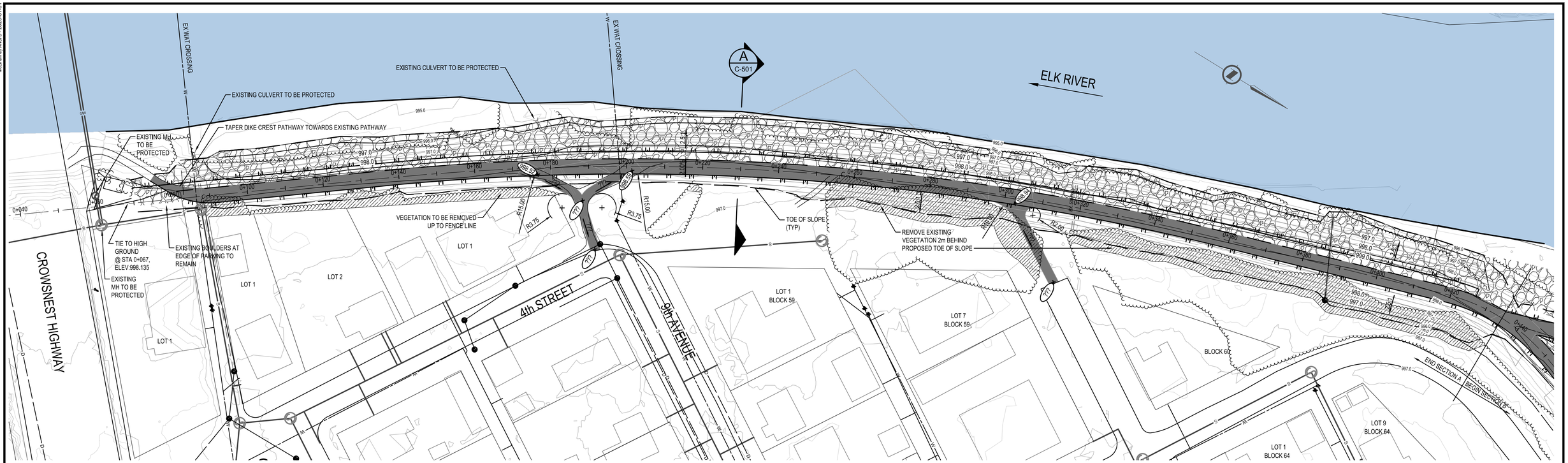
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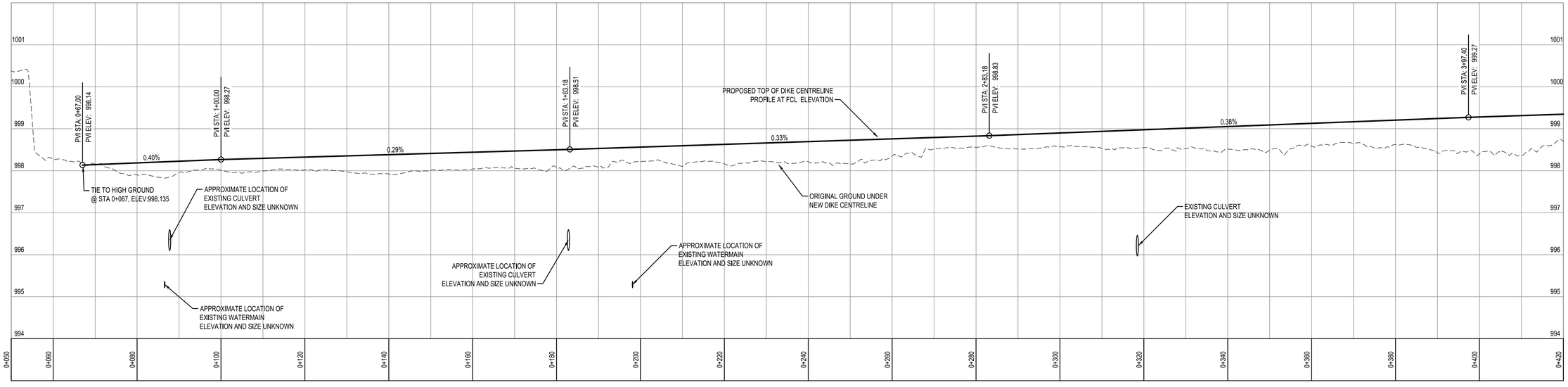
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0 1:500 25

ORIGINAL DWG SIZE: ANSI D (22" x 34")

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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA K. N. MOHR # 44838 2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS PLAN PROFILE STA 0+070 TO STA 0+420 DOWNSTREAM SECTION

Drawing No.
C-301

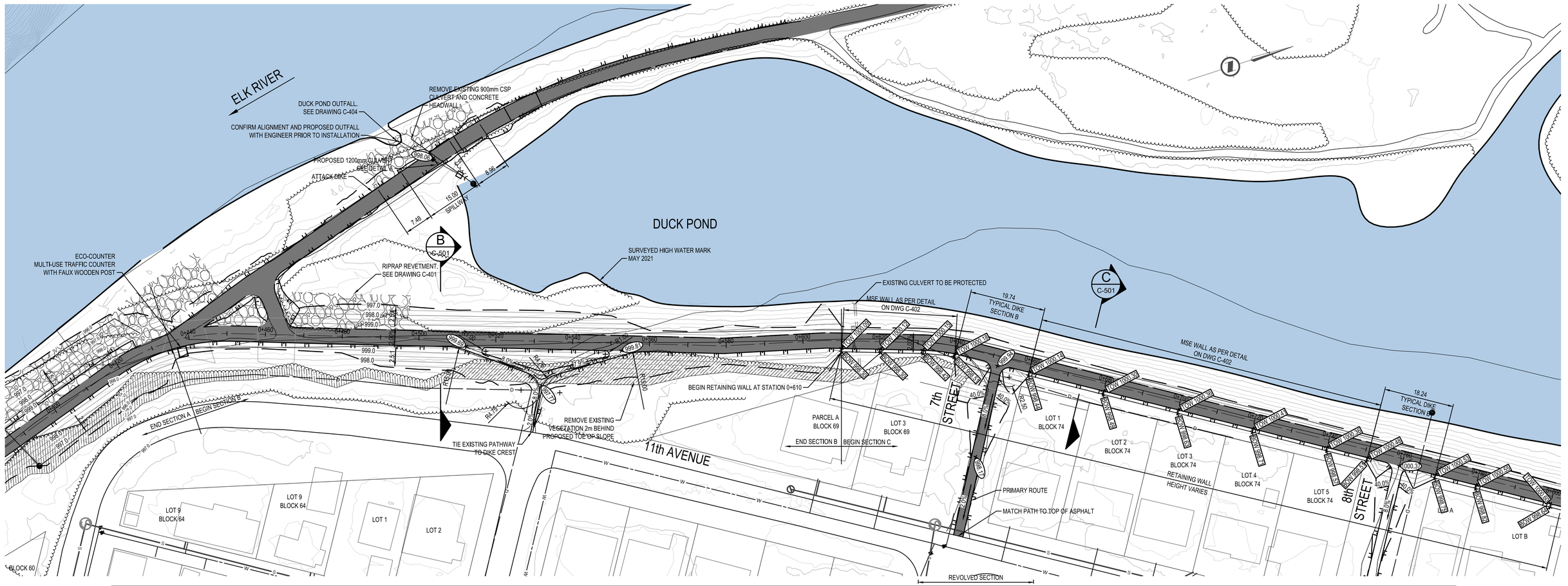
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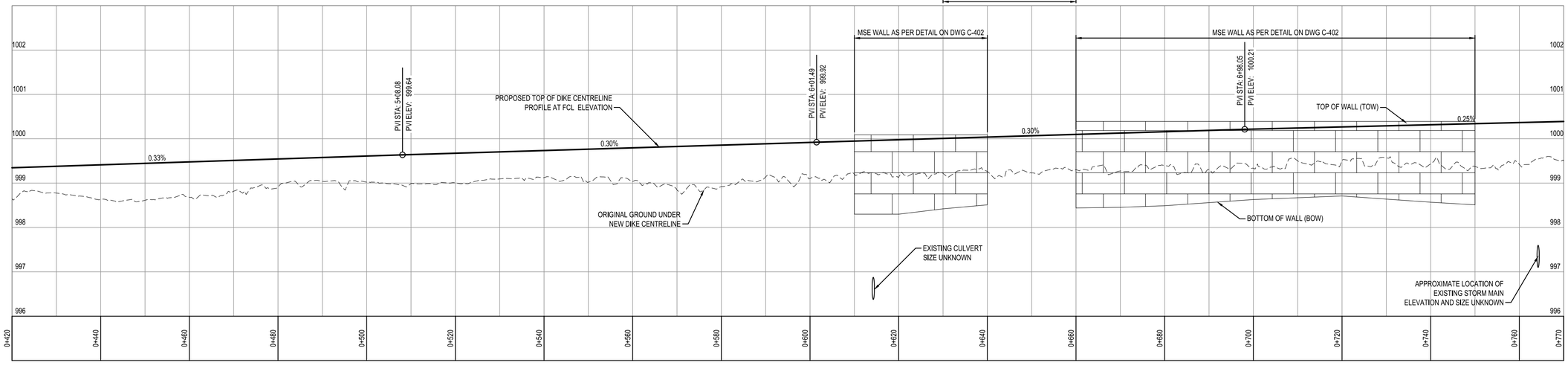
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0 1:500 25

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Engineers and Geoscientists of BC

PROFESSIONAL ENGINEER K. N. MOHR # 44036 BRITISH COLUMBIA 2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 0+420 TO STA 0+770
DUCK POND SECTION

Drawing No. C-302

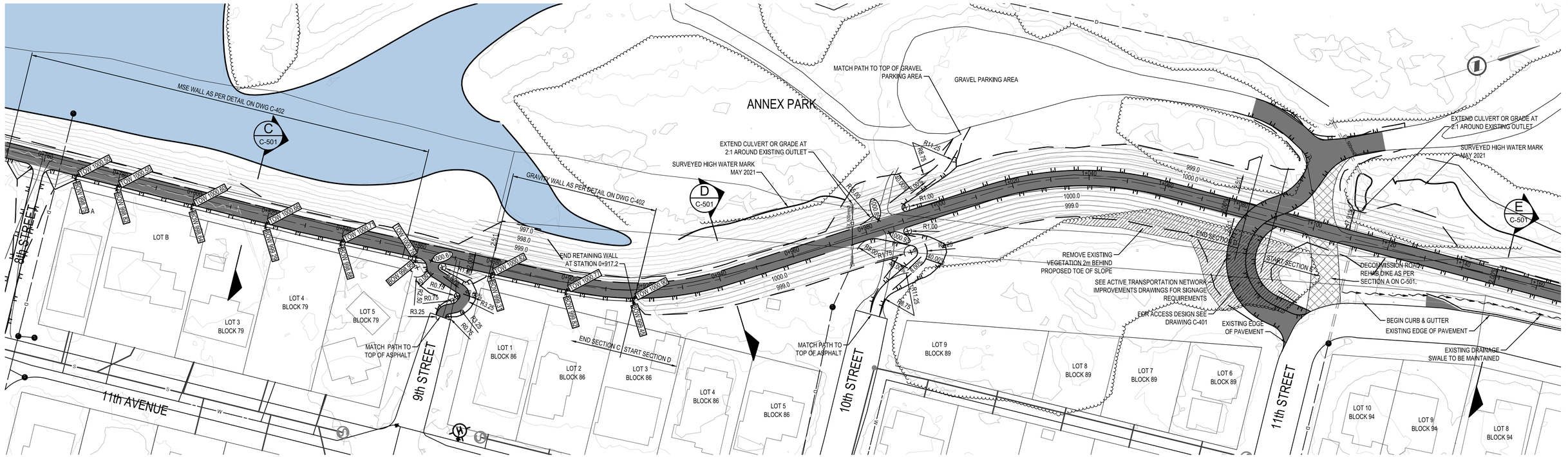
Project Number 2441-01170-00

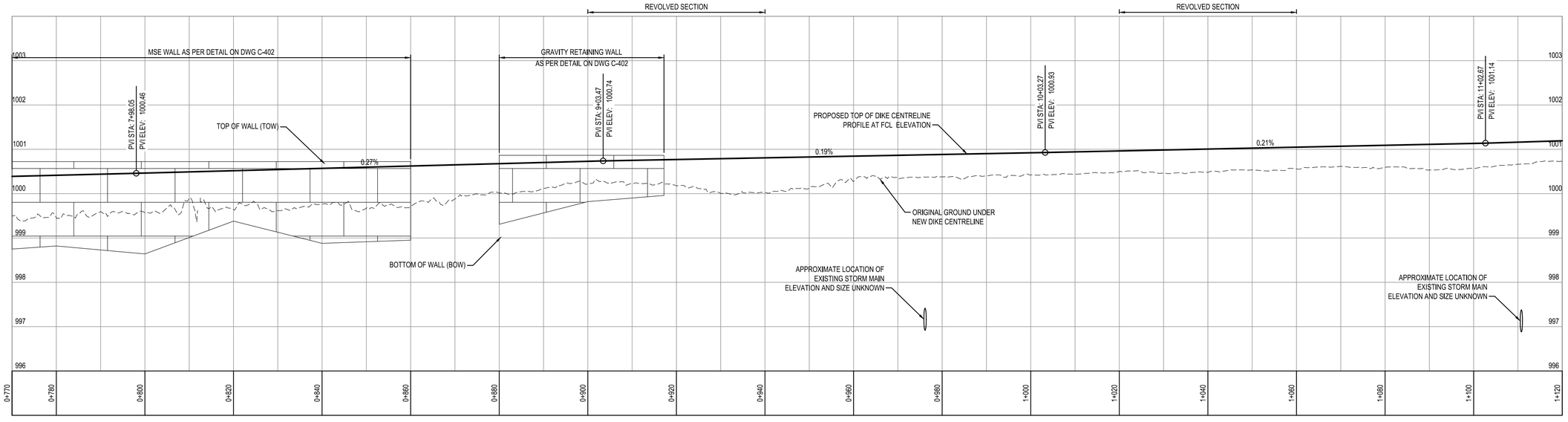
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E	2022/02/15	ISSUED FOR APPROVALS	DP	KM	KM
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C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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0 1:500 25

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K. N. MOHR
44535
PROVINCE OF BRITISH COLUMBIA
2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 0+770 TO STA 1+120
DUCK POND AND ANNEX PARK SECTION

Drawing No.
C-303

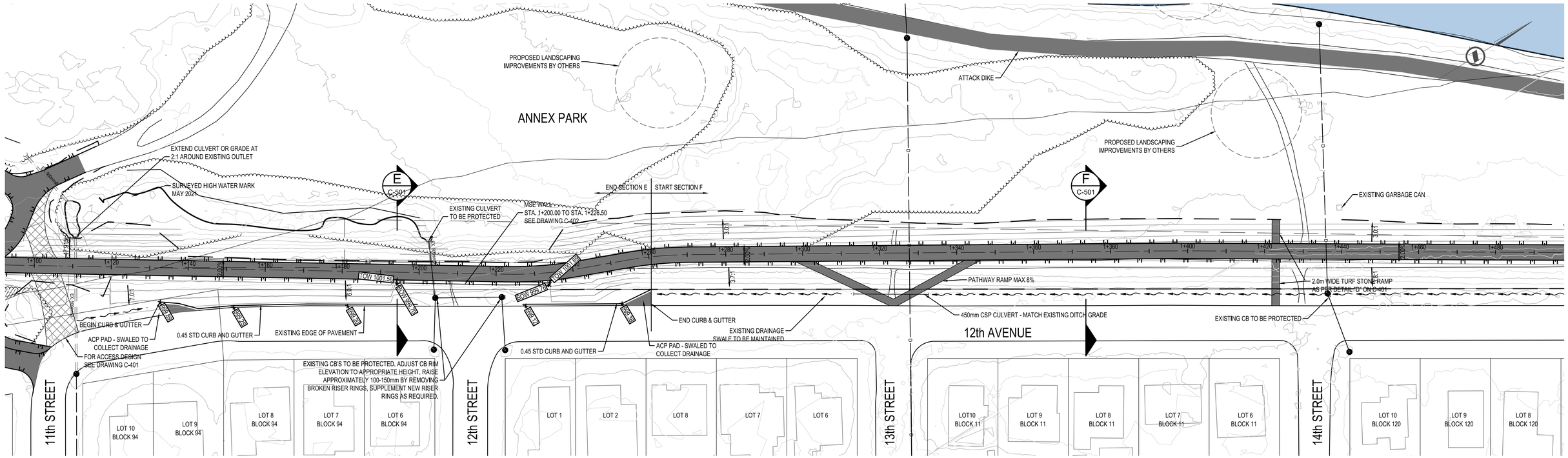
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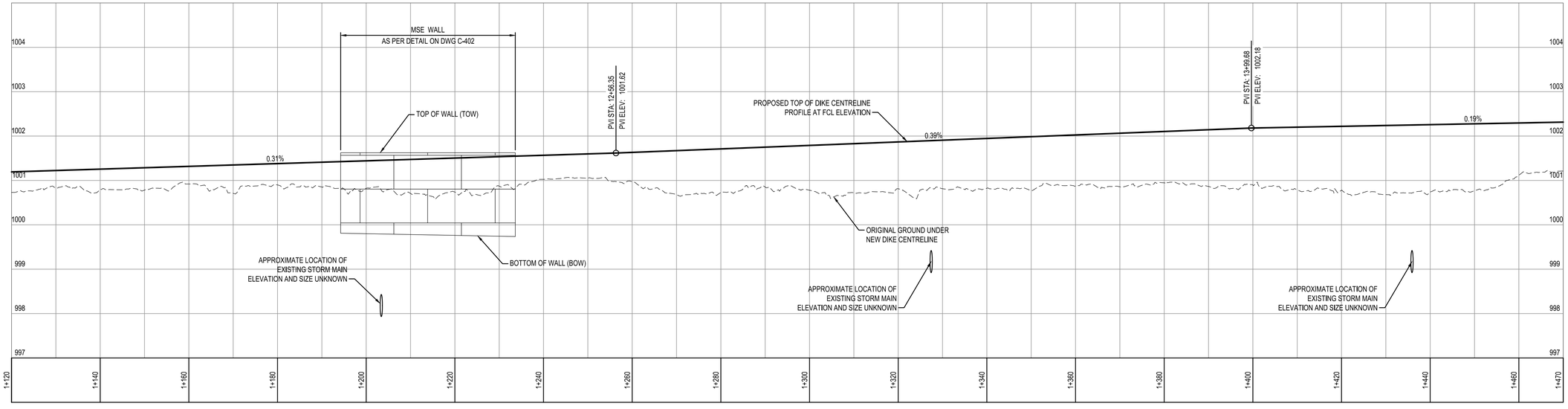
Rev.
G

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DATE: 2022-06-14, 14:36 FILE: C:\Users\ADykstra\OneDrive - McElhanney Group\Documents\Working\Annex Dike\Drawings\10.3 Sheet Files\01170-C0-303.dwg

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E	2022/02/15	ISSUED FOR APPROVALS	DP	KM	KM
D	2021/11/26	ISSUED FOR APPROVAL	SS	KM	KM
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
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A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS PLAN PROFILE STA 1+120 TO STA 1+470 ANNEX PARK SECTION

Drawing No.
C-304

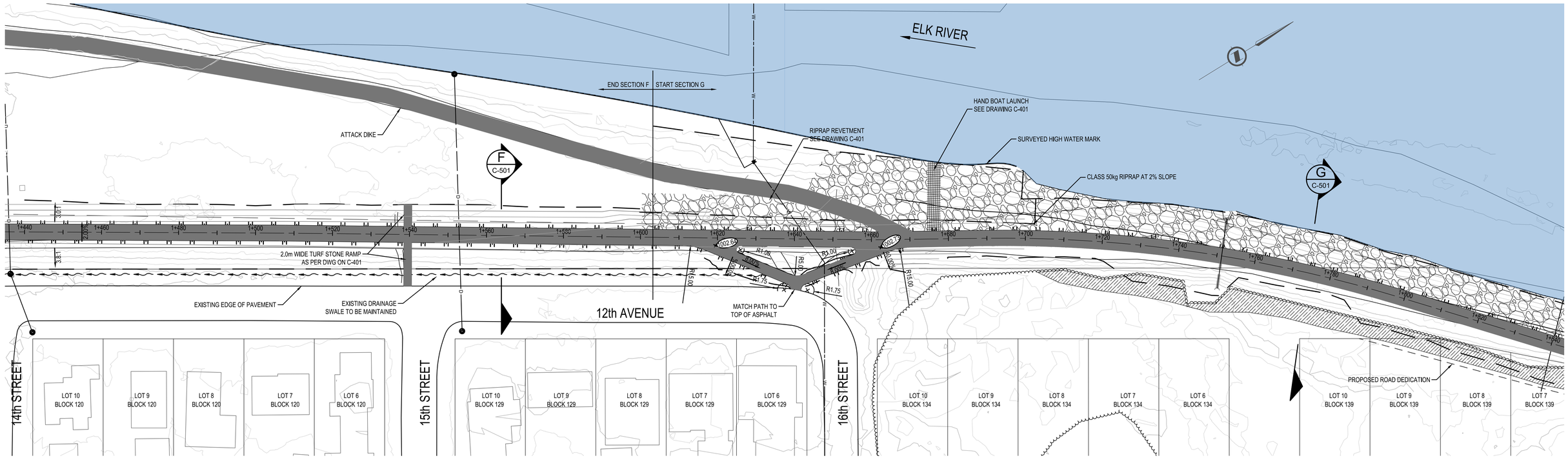
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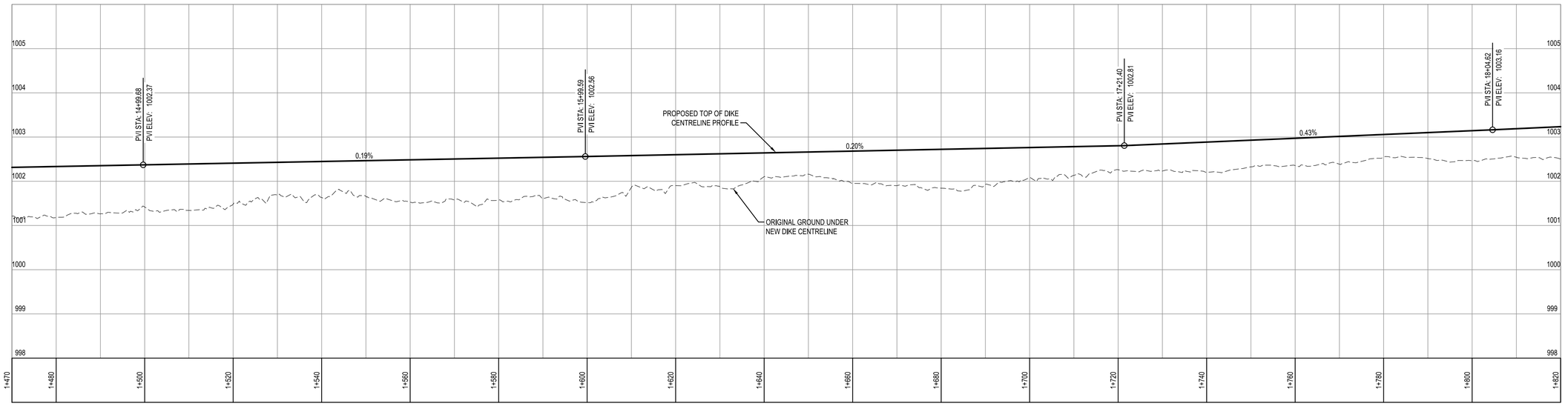
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DATE: 2022-06-14, 14:36 FILE: C:\Users\ADykstra\OneDrive - McElhanney Group\Documents\Working\Annex Dike\Drawings\10.3 Sheet Files\01170-C0-304.dwg

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2022-06-29

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FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 1+470 TO STA 1+820
ANNEX PARK AND UPSTREAM SECTION

Drawing No.
C-305

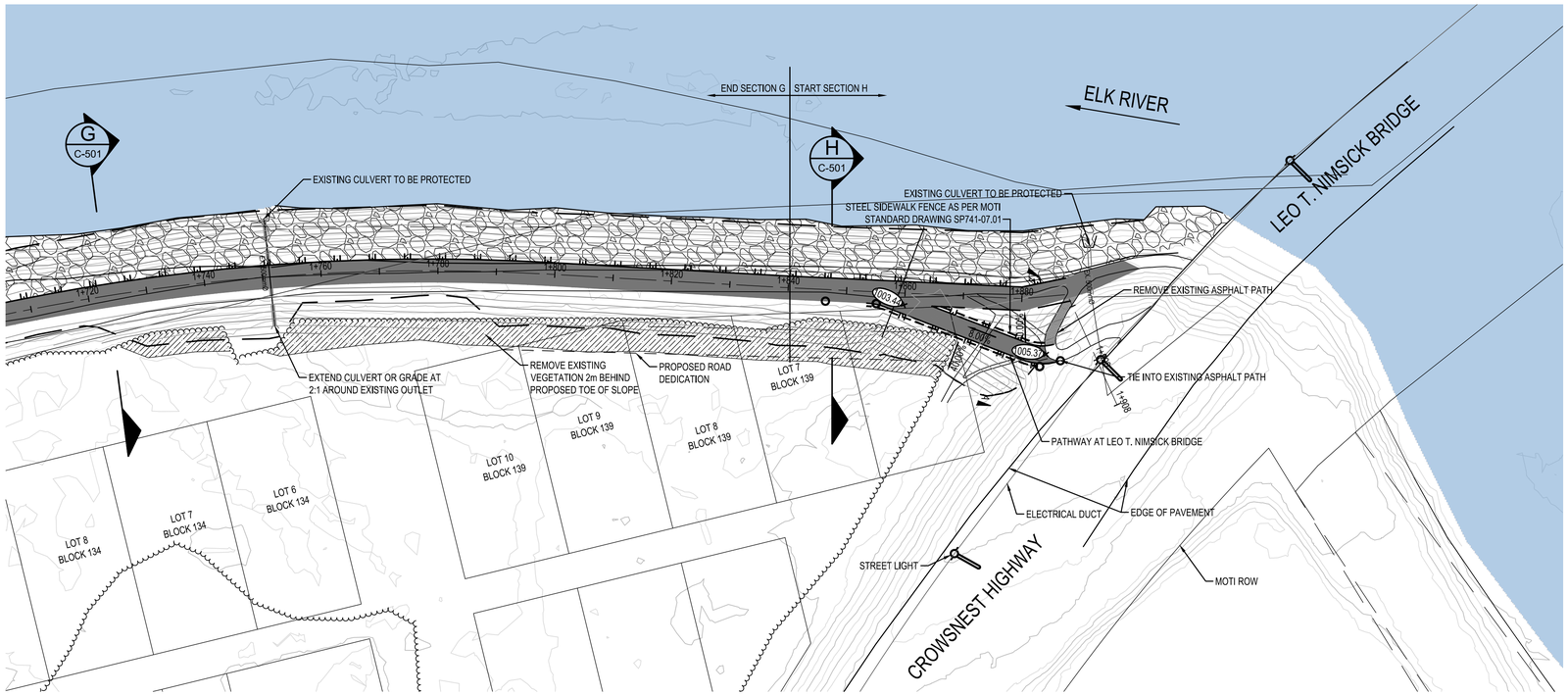
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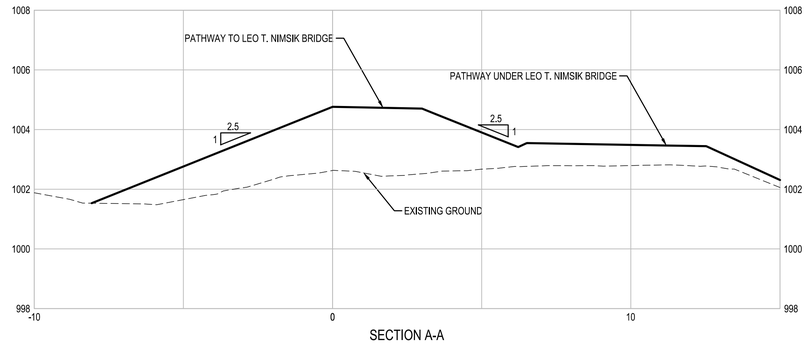
Rev.
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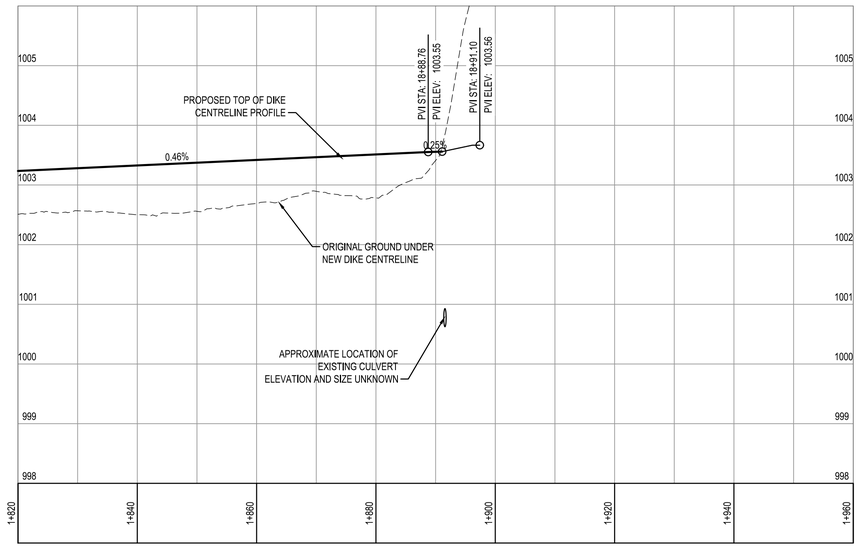
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E	2022/02/15	ISSUED FOR APPROVALS	DP	KM	KM
D	2021/11/26	ISSUED FOR APPROVAL	SS	KM	KM
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
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0 1:500 25

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44838
2022-06-29

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FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 1+820 TO STA 1+930
UPSTREAM SECTION

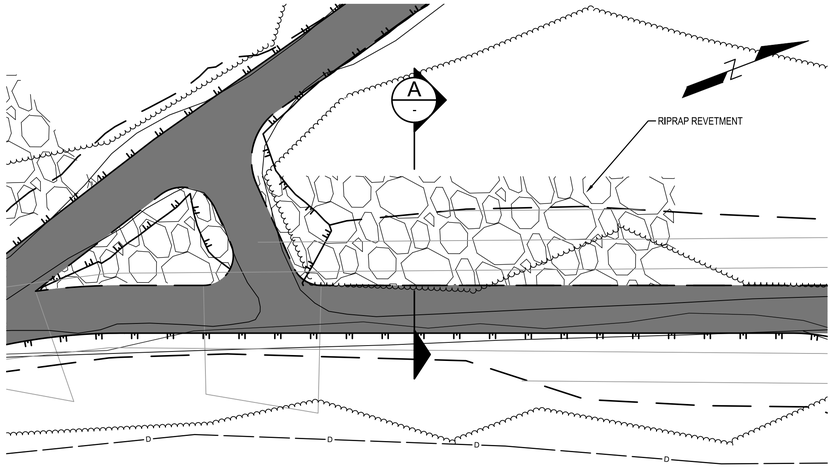
Drawing No.
C-306

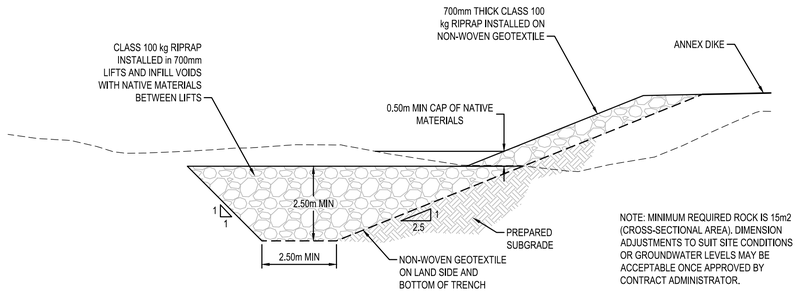
Project Number
2441-01170-00

Rev.
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DESTROY ALL PRINTS BEARING PREVIOUS REVISION

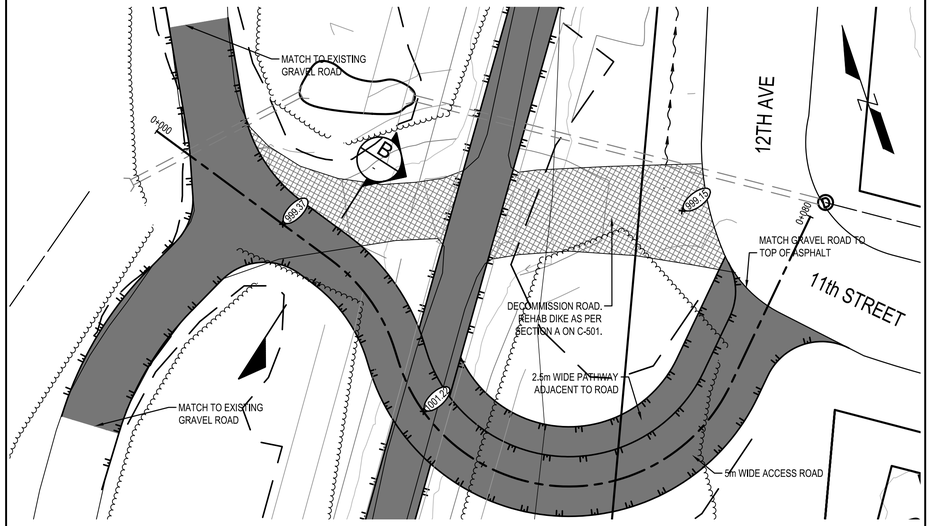
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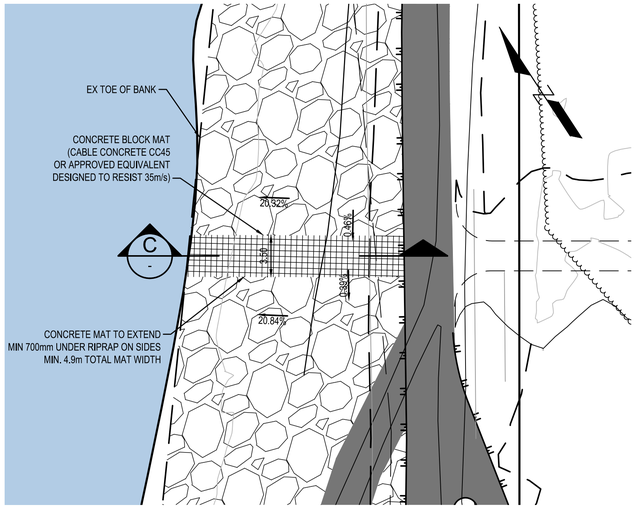


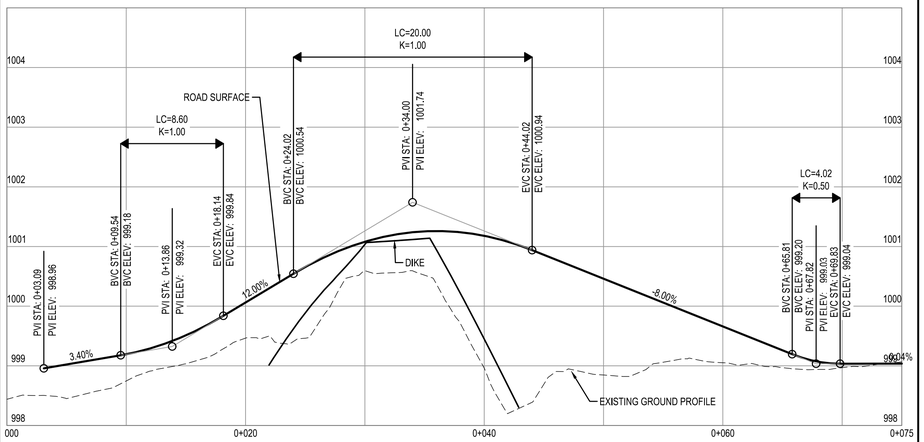


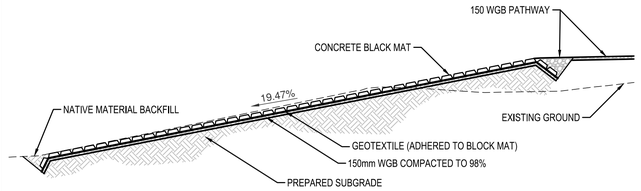
NOTE: MINIMUM REQUIRED ROCK IS 15m2 (CROSS-SECTIONAL AREA). DIMENSION ADJUSTMENTS TO SUIT SITE CONDITIONS OR GROUNDWATER LEVELS MAY BE ACCEPTABLE ONCE APPROVED BY CONTRACT ADMINISTRATOR.

A - TYPICAL REVETMENT SECTION
H SCALE 1:100

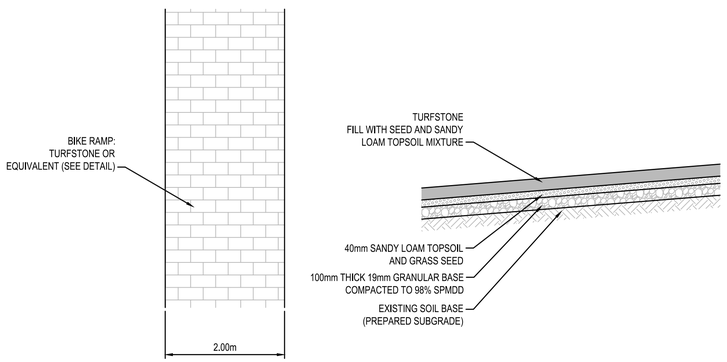




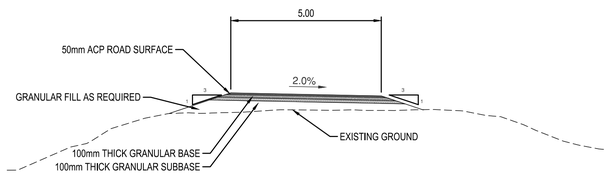




C - BOAT LAUNCH SECTION
H SCALE 1:100



D - TYPICAL 2m WIDE PATHWAY
H SCALE 1:100



B - TYPICAL ROAD SECTION
H SCALE 1:100

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0 1:250 10

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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

PLAN DETAILS

Drawing No. C-401

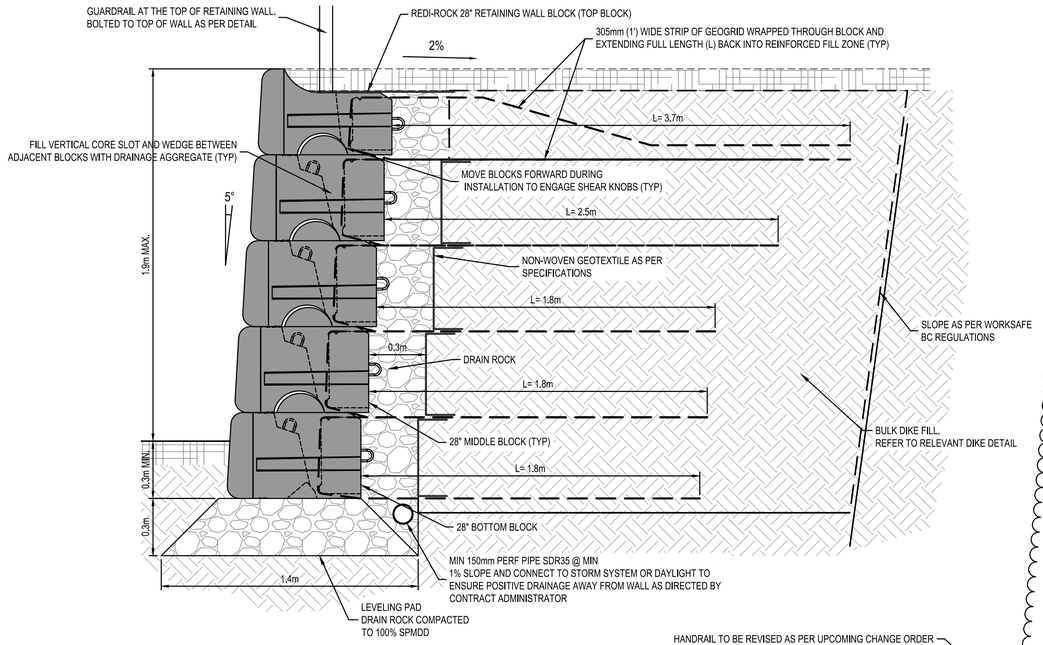
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Rev. G

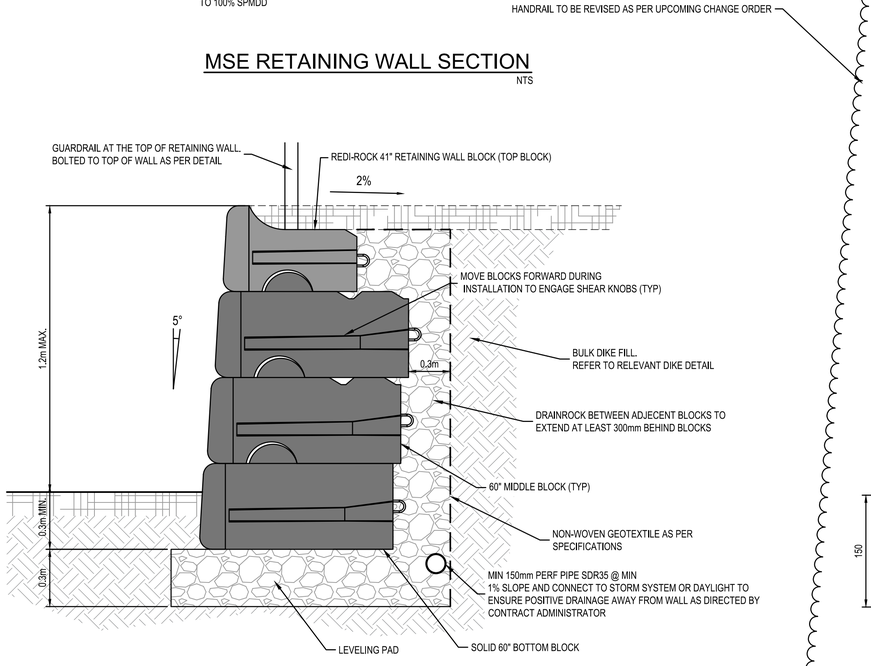
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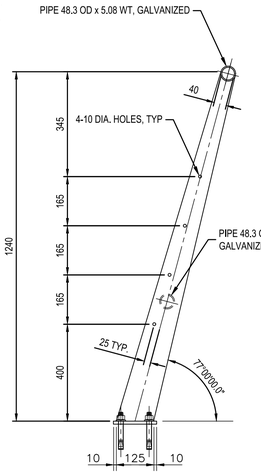
McElhanney ANSI D - 2020-01-01



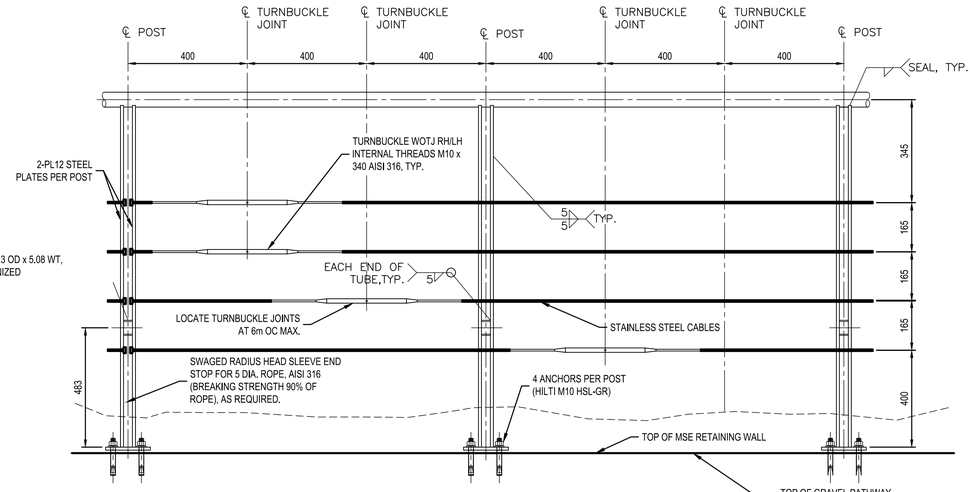
MSE RETAINING WALL SECTION
NTS



GRAVITY RETAINING WALL SECTION
NTS



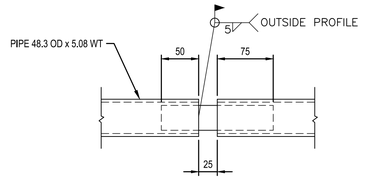
SIDE ELEVATION



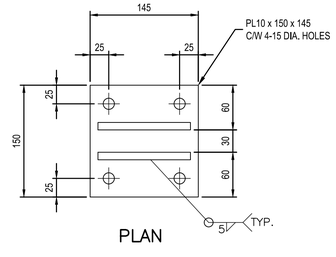
FRONT ELEVATION FROM SIDEWALK

GUARDRAIL DETAILS
NTS

HANDRAIL TO BE REVISED AS PER UPCOMING CHANGE ORDER

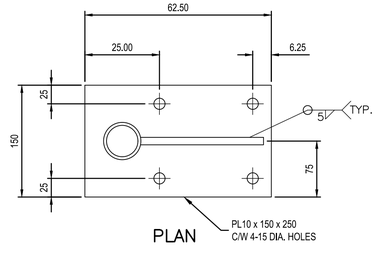


TYPICAL HANDRAIL EXPANSION JOINT
NTS



PLAN

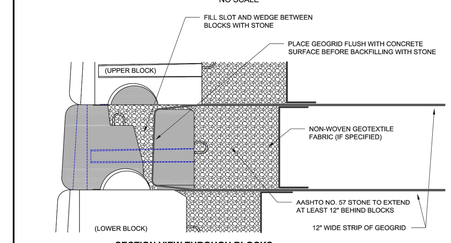
TYPICAL BASEPLATE DETAIL
NTS



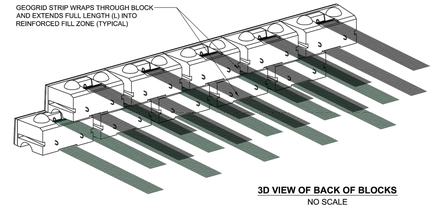
PLAN

GATE BASEPLATE DETAIL
NTS

POSITIVE CONNECTION (PC) DETAILS
NO SCALE



SECTION VIEW THROUGH BLOCKS
NO SCALE



3D VIEW OF BACK OF BLOCKS
NO SCALE

DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Positive Connection Detail
FILE:	1 Positive Connection Detail 062215.dwg

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D	2021/11/26	ISSUED FOR APPROVAL	SS	KM	KM
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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0 1:250 10

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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. N. MOHR # 44838 ENGINEER 2022-06-29

CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

RETAINING WALL DETAIL

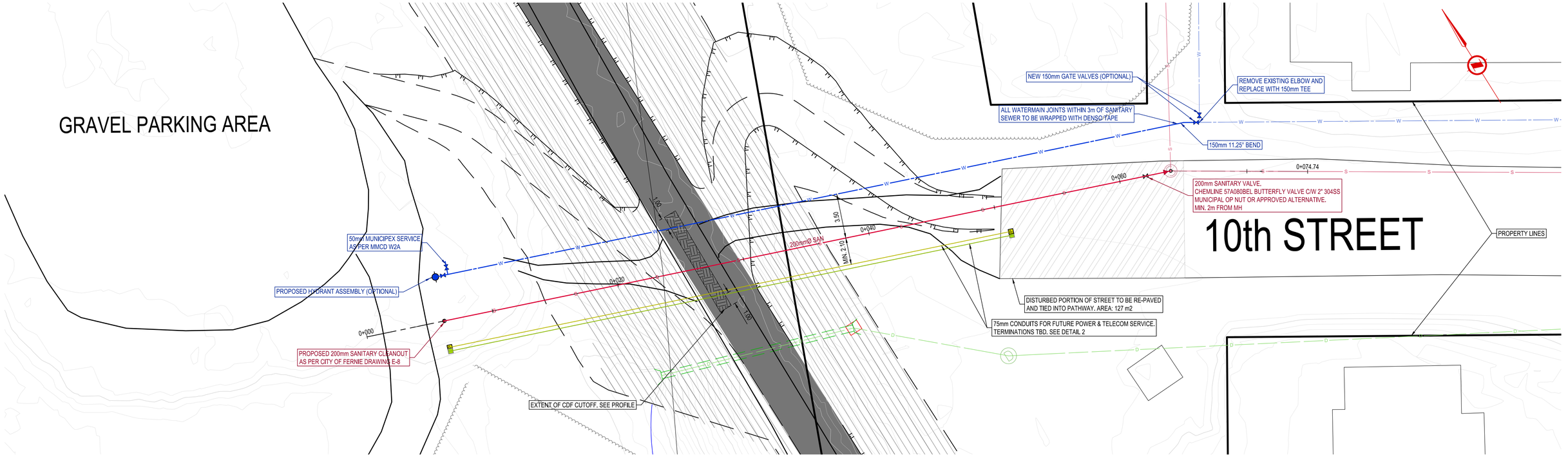
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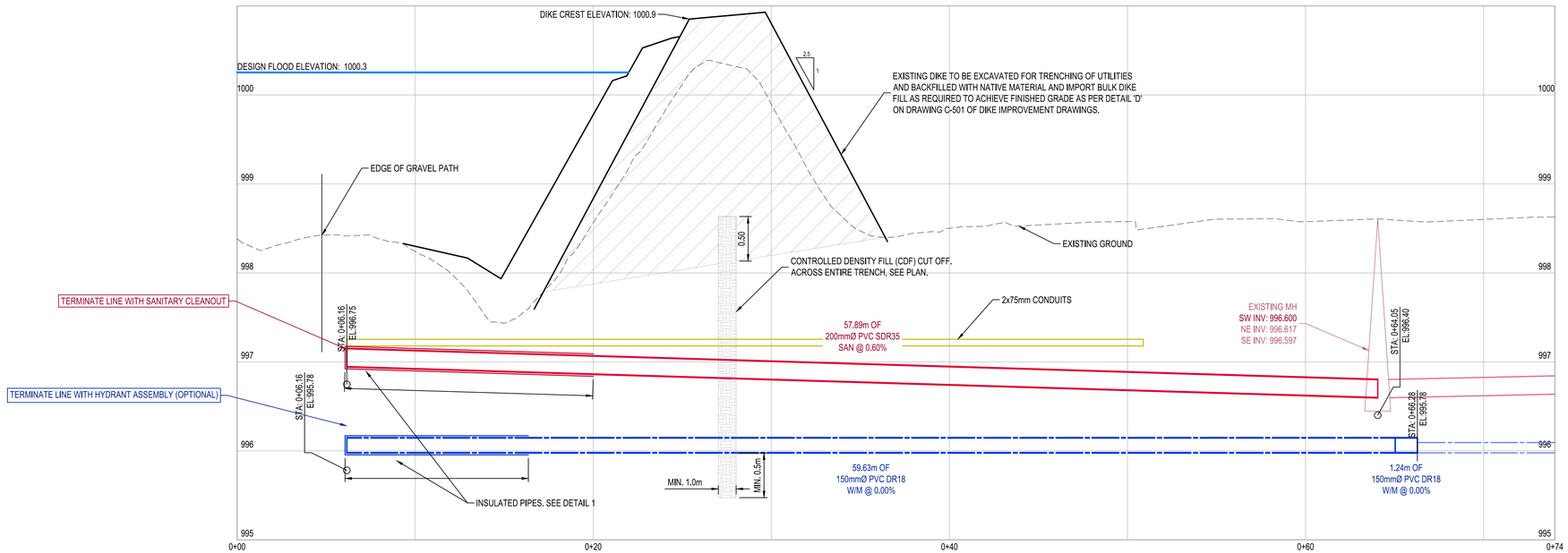
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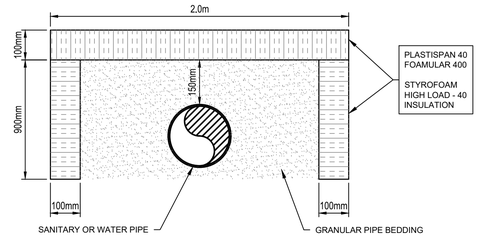
Rev. G

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

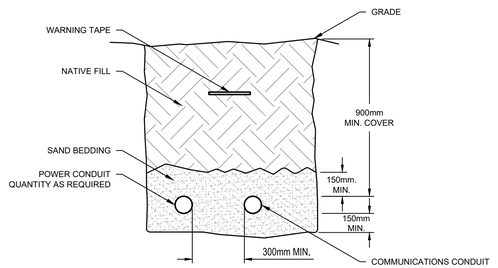
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DETAIL 1 - BURIED PIPE INSULATION
SCALE: NTS



NOTE:
UNLESS OTHERWISE NOTED MAINTAIN A MINIMUM OF 300mm SPACING FROM ALL OTHER BURIED UTILITIES.

DETAIL 2 - SHALLOW UTILITIES TRENCH
SCALE: NTS

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G	2022/06/14	ISSUED FOR CONSTRUCTION	AD	KB	KM
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HORIZONTAL SCALE: 0 1:150 6
VERTICAL SCALE: 0 1:30 1.5
ORIGINAL DWG SIZE: ANSI D (22" x 34")

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FERNIE, BRITISH COLUMBIA

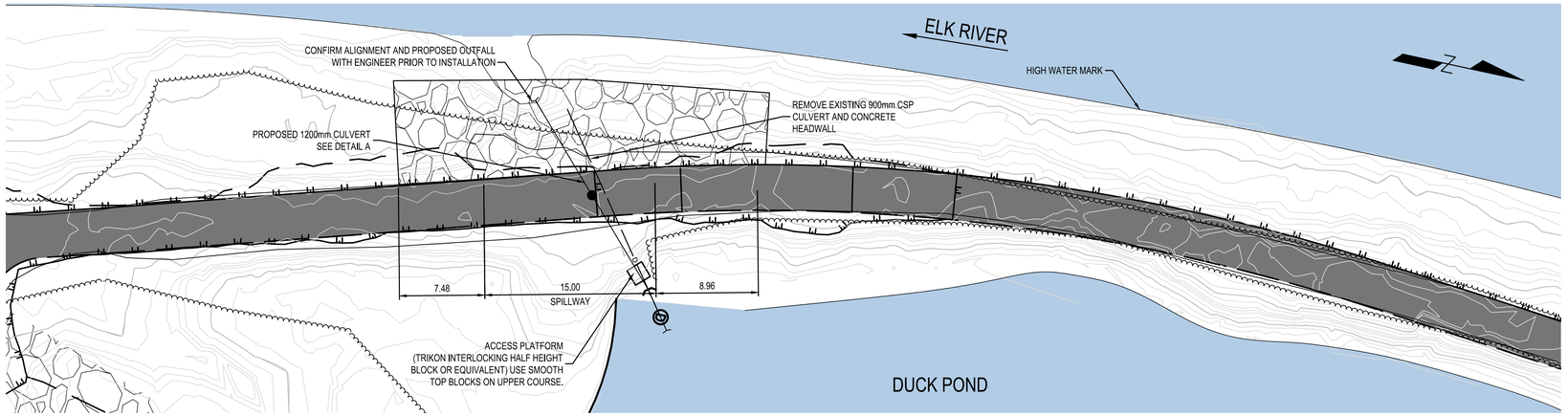
ANNEX DIKE IMPROVEMENTS
UTILITY SERVICE PROFILE

Drawing No. C-403

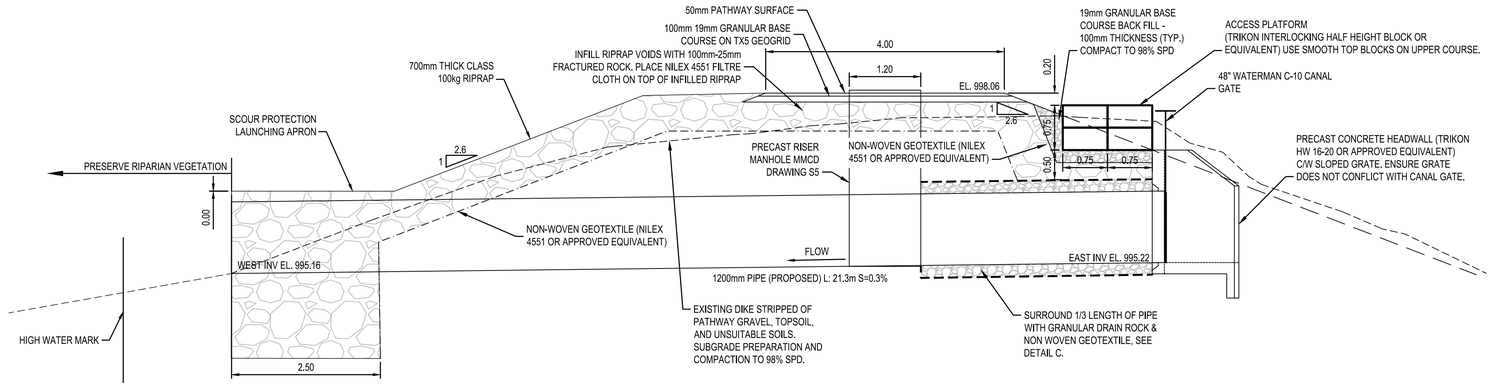
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Rev. G

DATE: 2022-06-14, 14:40 FILE: C:\Users\MyUsers\OneDrive - McElhanney Group\Documents\Working\Annex Dike\Drawings\103.3 Sheet Files\01170-C0-403.dwg

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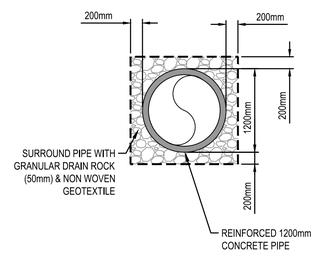
A ATTACK DIKE OUTLET - PLAN



B ATTACK DIKE OUTLET - DETAIL

NOTES:

1. GRANULAR FILTER TO BE PLACED IN 200mm (MAX) LIFTS AND COMPACTED TO 98% SPD.
2. NON-WOVEN GEOTEXTILE (NILEX 4551 OR APPROVED EQUIVALENT)
3. TIGHTLY WRAP GEOTEXTILE AROUND ALL SIDES OF GRANULAR FILTER WITH A MINIMUM 0.5m OVERLAP AT ANY SEAMS.
4. ALL SEAMS TO BE TIGHTLY TAPED.



C CULVERT BACKFILL

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G	2022/06/14	ISSUED FOR CONSTRUCTION	AD	KM	KM
F	2022/05/19	ISSUED FOR TENDER	AD	KM	KM
E	2022/02/15	ISSUED FOR APPROVALS	DP	KM	KM
D	2021/11/26	ISSUED FOR APPROVAL	SS	KM	KM
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
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0 1:50 2.5

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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

POND OUTLET DETAILS

Drawing No. C-404

Project Number 2441-01170-00

Rev. G

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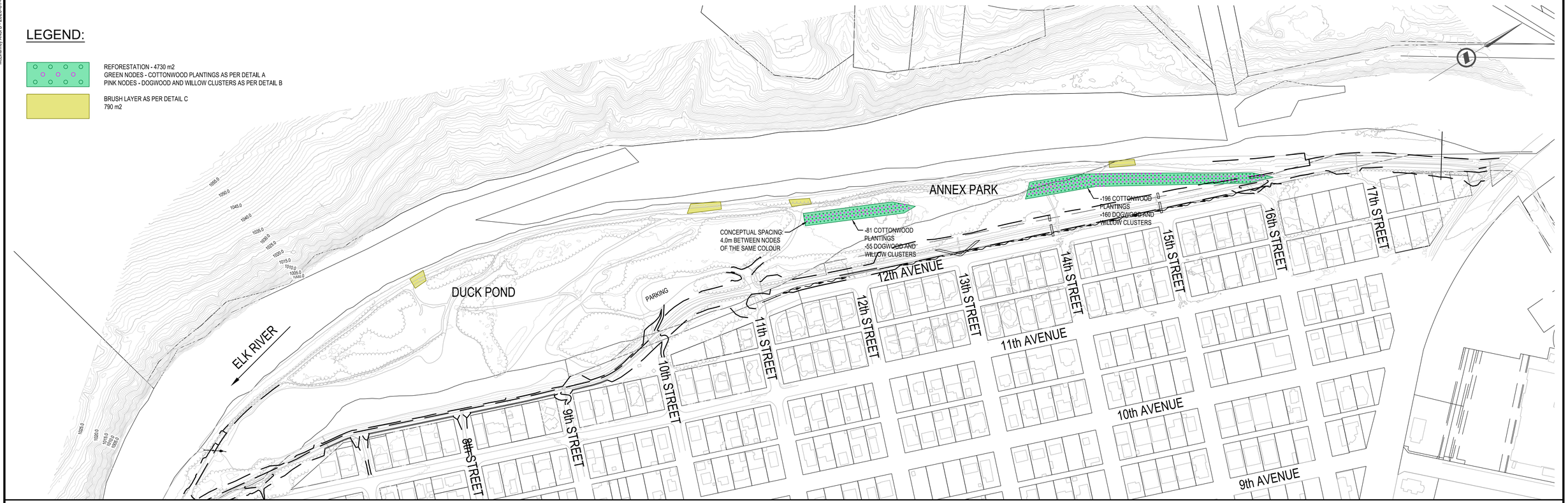
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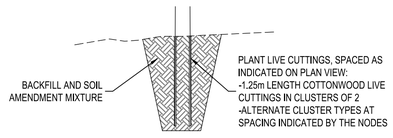
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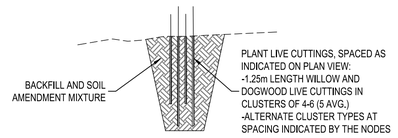
REFORESTATION - 4730 m2
GREEN NODES - COTTONWOOD PLANTINGS AS PER DETAIL A
PINK NODES - DOGWOOD AND WILLOW CLUSTERS AS PER DETAIL B

BRUSH LAYER AS PER DETAIL C
790 m2

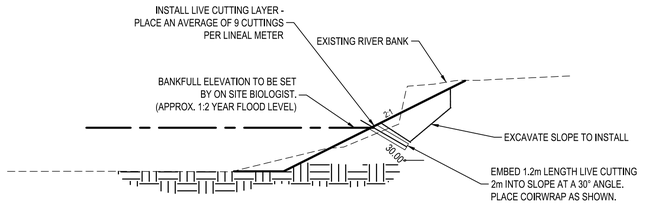




A - REFORESTATION DETAIL - GREEN NODES
NTS



B - REFORESTATION DETAIL - PINK NODES
NTS



C - BRUSH LAYER DETAIL
NTS

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C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
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2022-06-29

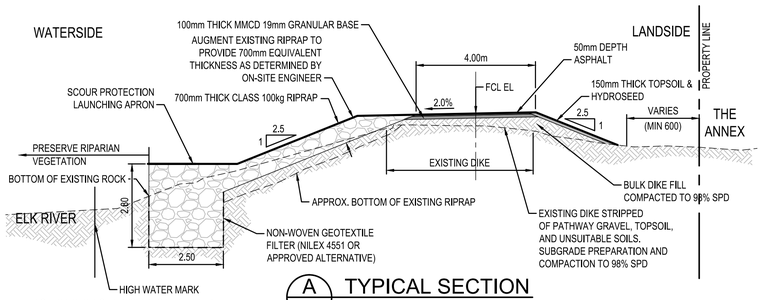
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FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS PROPOSED SITE PLAN ENVIRONMENTAL OFFSETING PLAN AND DETAILS

Drawing No. C-406
Project Number 2441-01170-00
Rev. G

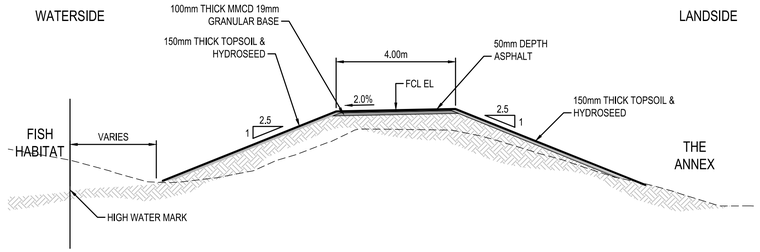
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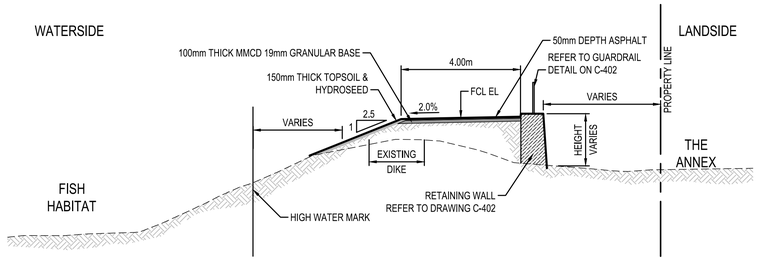


NOTE: MINIMUM REQUIRED ROCK BELOW HIGH WATER MARK IS 3.5 m2 (CROSS SECTIONAL AREA). FIELD ADJUSTMENTS TO RIPRAP LAUNCHING APRON DIMENSIONS MAY BE APPROVED BY CONTRACT ADMINISTRATOR TO SUIT SITE CONDITIONS.

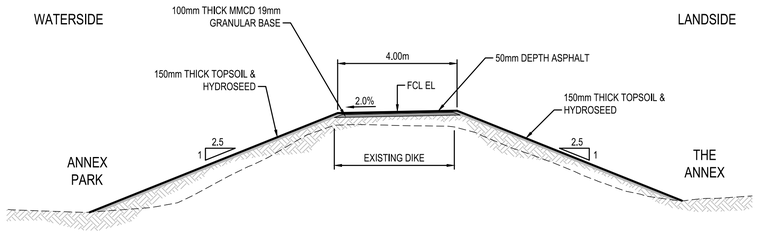
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DOWNSTREAM DIKE RAISE w/ EROSION PROTECTION — SCALE 1:100



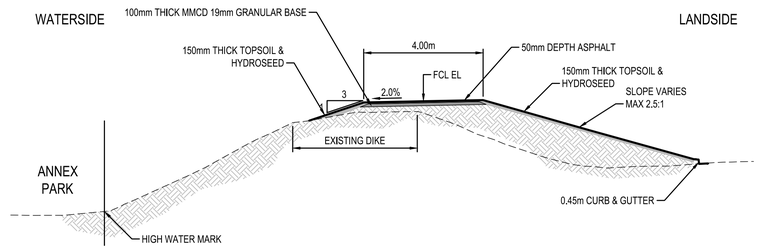
B C-201 **TYPICAL SECTION**
DUCK POND DIKE RAISE — SCALE 1:100



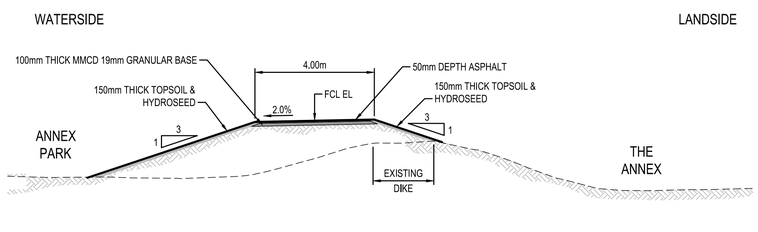
C C-201 **TYPICAL SECTION**
DUCK POND DIKE RAISE w/ RETAINING WALL — SCALE 1:100



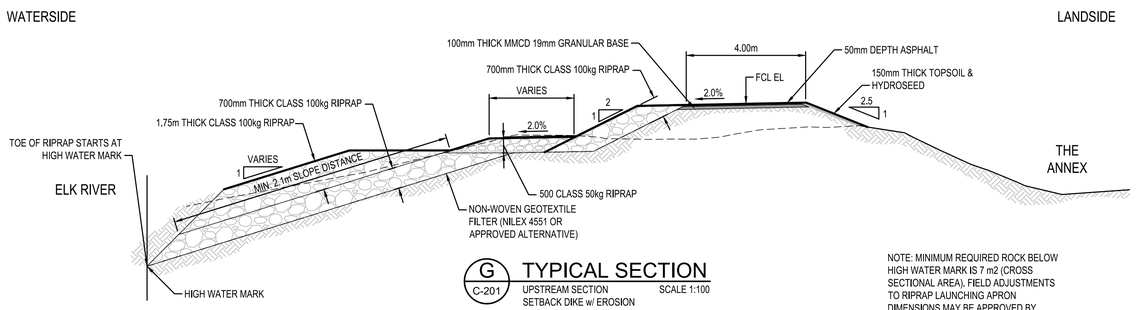
D C-201 **TYPICAL SECTION**
ANNEX PARK DIKE RAISE — SCALE 1:100



E C-201 **TYPICAL SECTION**
ANNEX PARK DIKE RAISE w/ RETAINING WALL — SCALE 1:100

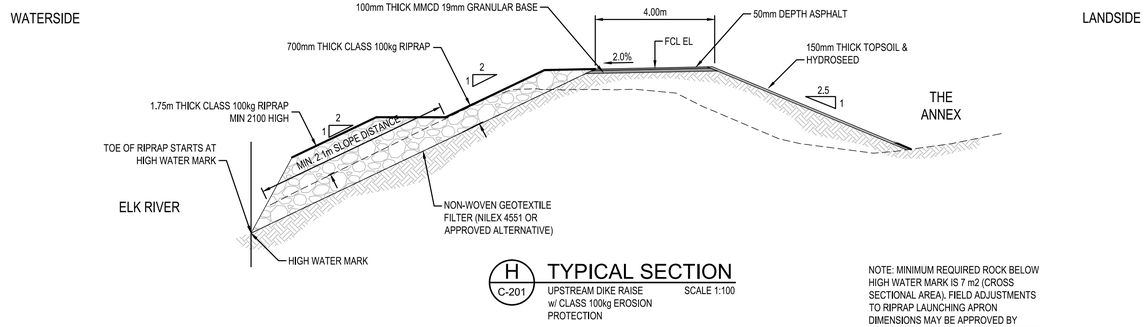


F C-201 **TYPICAL SECTION**
ANNEX PARK DIKE RAISE — SCALE 1:100



G C-201 **TYPICAL SECTION**
UPSTREAM SECTION SETBACK DIKE w/ EROSION PROTECTION — SCALE 1:100

NOTE: MINIMUM REQUIRED ROCK BELOW HIGH WATER MARK IS 7 m2 (CROSS SECTIONAL AREA). FIELD ADJUSTMENTS TO RIPRAP LAUNCHING APRON DIMENSIONS MAY BE APPROVED BY CONTRACT ADMINISTRATOR TO SUIT SITE CONDITIONS.



H C-201 **TYPICAL SECTION**
UPSTREAM DIKE RAISE w/ CLASS 100kg EROSION PROTECTION — SCALE 1:100

NOTE: MINIMUM REQUIRED ROCK BELOW HIGH WATER MARK IS 7 m2 (CROSS SECTIONAL AREA). FIELD ADJUSTMENTS TO RIPRAP LAUNCHING APRON DIMENSIONS MAY BE APPROVED BY CONTRACT ADMINISTRATOR TO SUIT SITE CONDITIONS.

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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

TYPICAL SECTIONS

Drawing No. C-501
Project Number 2441-01170-00
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DATE: 2022-06-14, 14:41 FILE: C:\Users\ADykstra\OneDrive - McElhanney Group\Documents\Working\Annex Dike\Drawings\10.3 Sheet Files\01170-C0-501.dwg