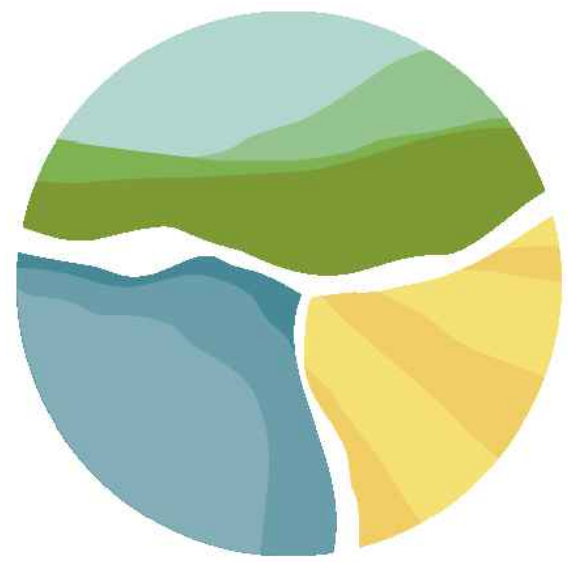
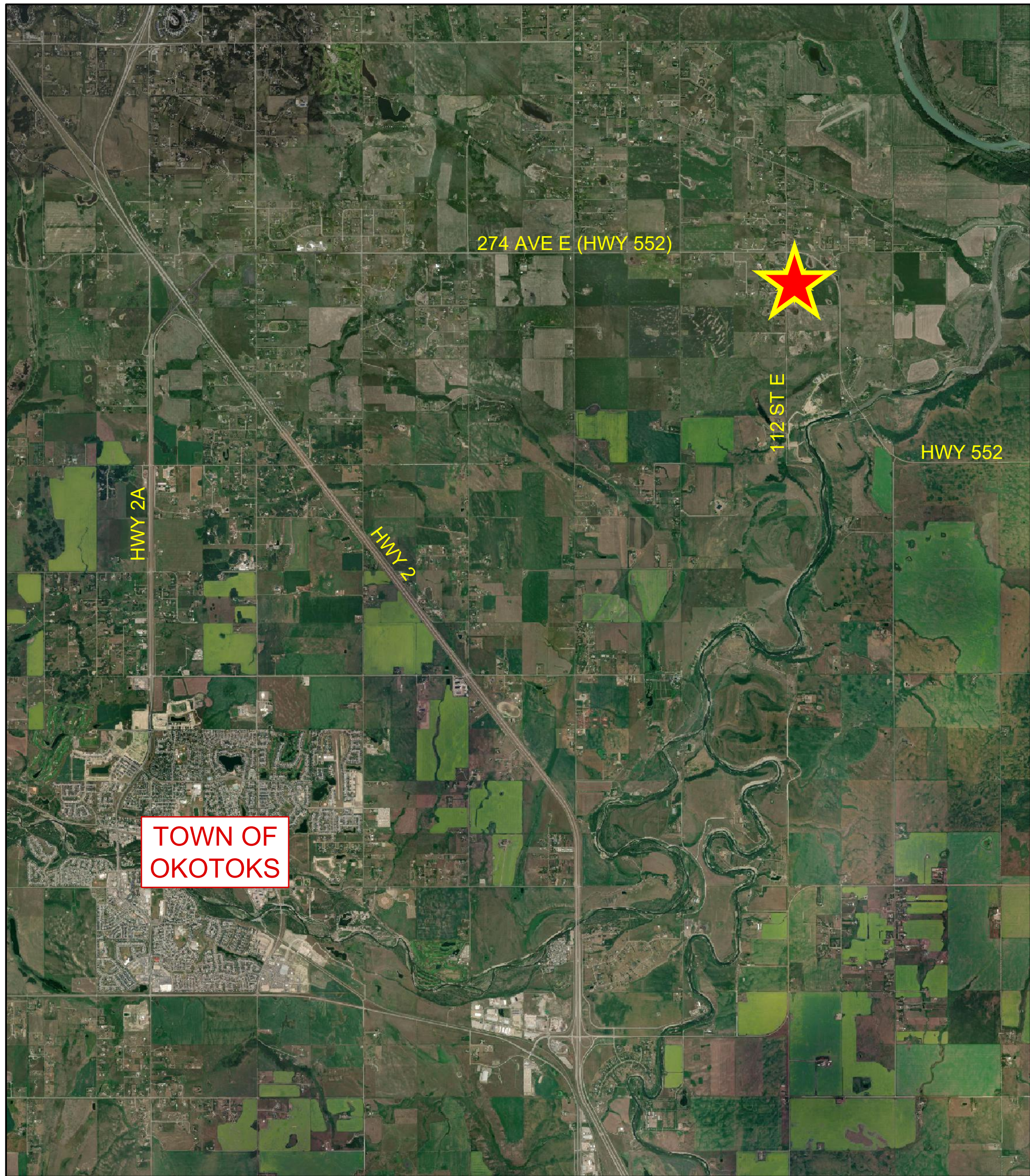




FOOTHILLS OKOTOKS
REGIONAL WATER

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT (FORWP) PHASE 1 RAW WATER RESERVOIR DESIGN DRAWINGS

ISSUED FOR
RFP
MAY 21, 2026
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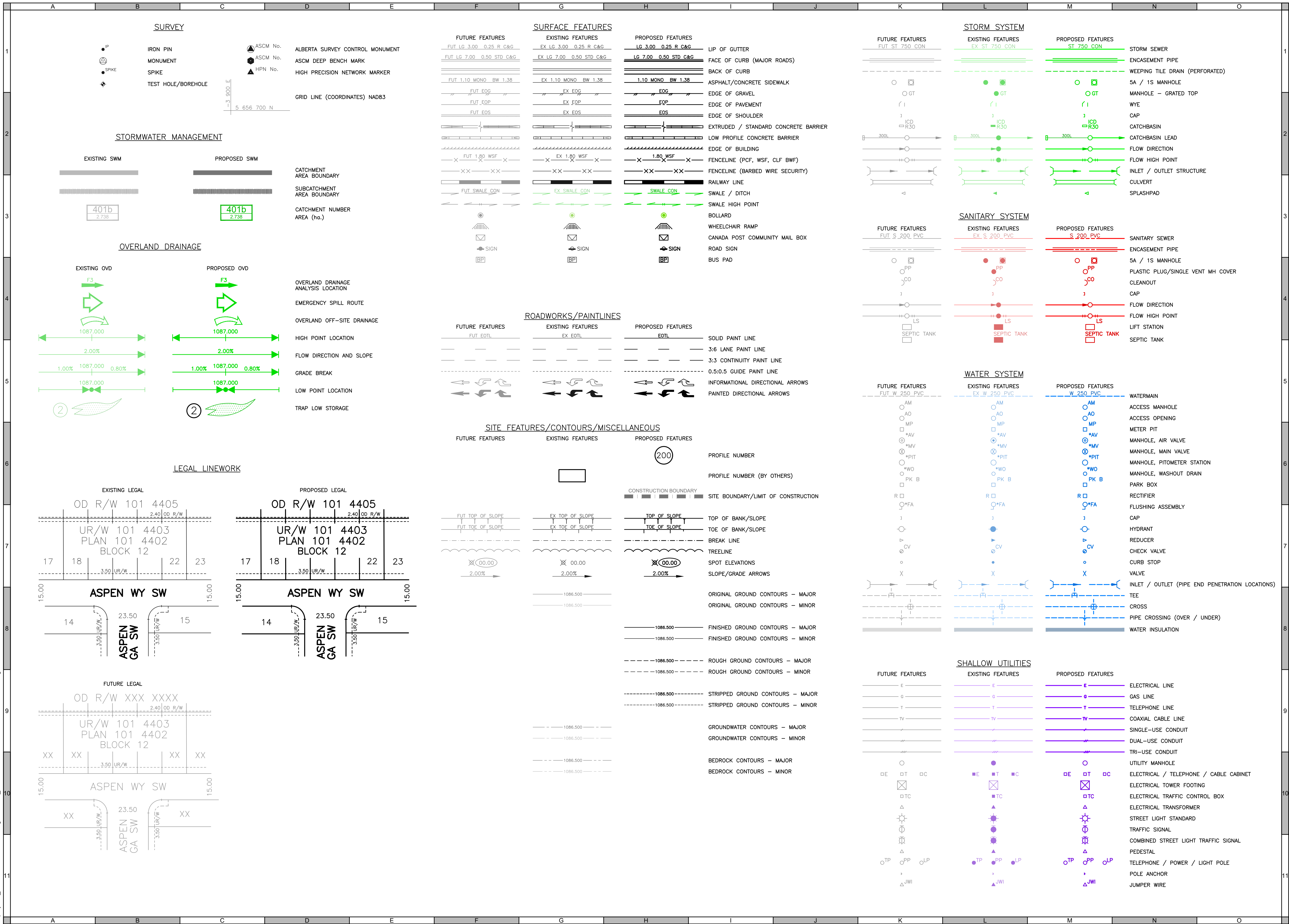
SITE LOCATION
NOT TO SCALE

List of Drawings

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002-02	SITE LAYOUT & GRADING KEY PLAN
002-03	SITE GRADING PLAN 1
002-04	SITE GRADING PLAN 2
002-05	SITE GRADING PLAN 3
002-06	CROSS SECTIONS
002-07	CROSS SECTIONS
003-01	SITE LAYOUT & UTILITY PIPING LAYOUT KEY PLAN
003-02	BERM & INLET PIPES PLAN PROFILE
003-03	WEST INLET PLAN PROFILE
003-04	EAST INLET PLAN PROFILE
003-05	EQUALIZATION PLAN PROFILE
003-06	PHASE 1 RESERVOIR - PUMP STATION INTAKE PIPE PLAN PROFILE
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009-05	DETAILS 5
	<u>FOR REFERENCE ONLY</u>
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007-03	CUT & FILL PLAN (PHASE 1 & 2)
009-02	DETAILS 2
009-03	DETAILS 3



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Compilation Date: APRIL 2024

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Professional Seals ID# 90237
2026-05-22

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URBAN SYSTEMS LTD.
Signature
Date 2026-05-22
ID 58661
PERMIT NUMBER: P 3836
The Association of Professional Engineers
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#	Date	Issue / Revision	App

FOOTHILLS OKOTOKS REGIONAL WATER

URBAN systems

Scale

Quality Control by
Designed by
Drawn by

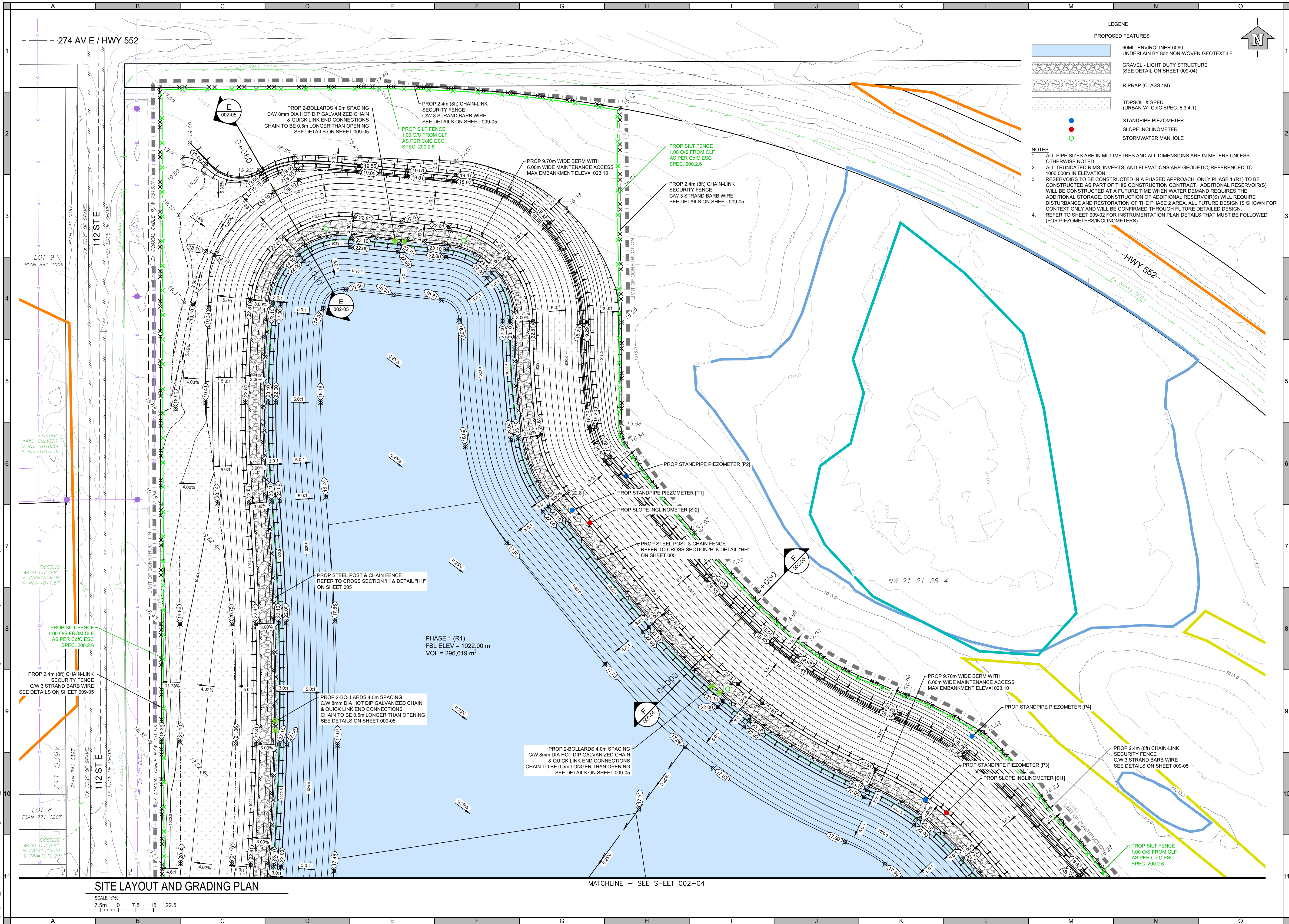
DN
DN/TL
TL

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
LEGEND

Sheet Number	- of 26
Project Number	Drawing Number
1306.0120.06	001
	Revision

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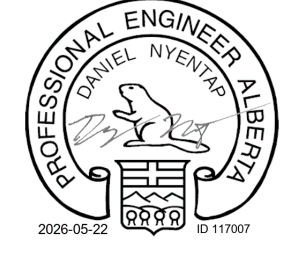
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Prepared by: URBAN SYSTEMS SURVEY INC.
Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

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MAY 21, 2026
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#	Date	Issue / Revision	App
3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN

 **FOOTHILLS OKOTOKS
REGIONAL WATER**

**URBAN
systems**

Scale
1:750
7.5m 0 7.5 15 22.5

Quality Control by: DN
Designed by: DNTL
Drawn by: TL

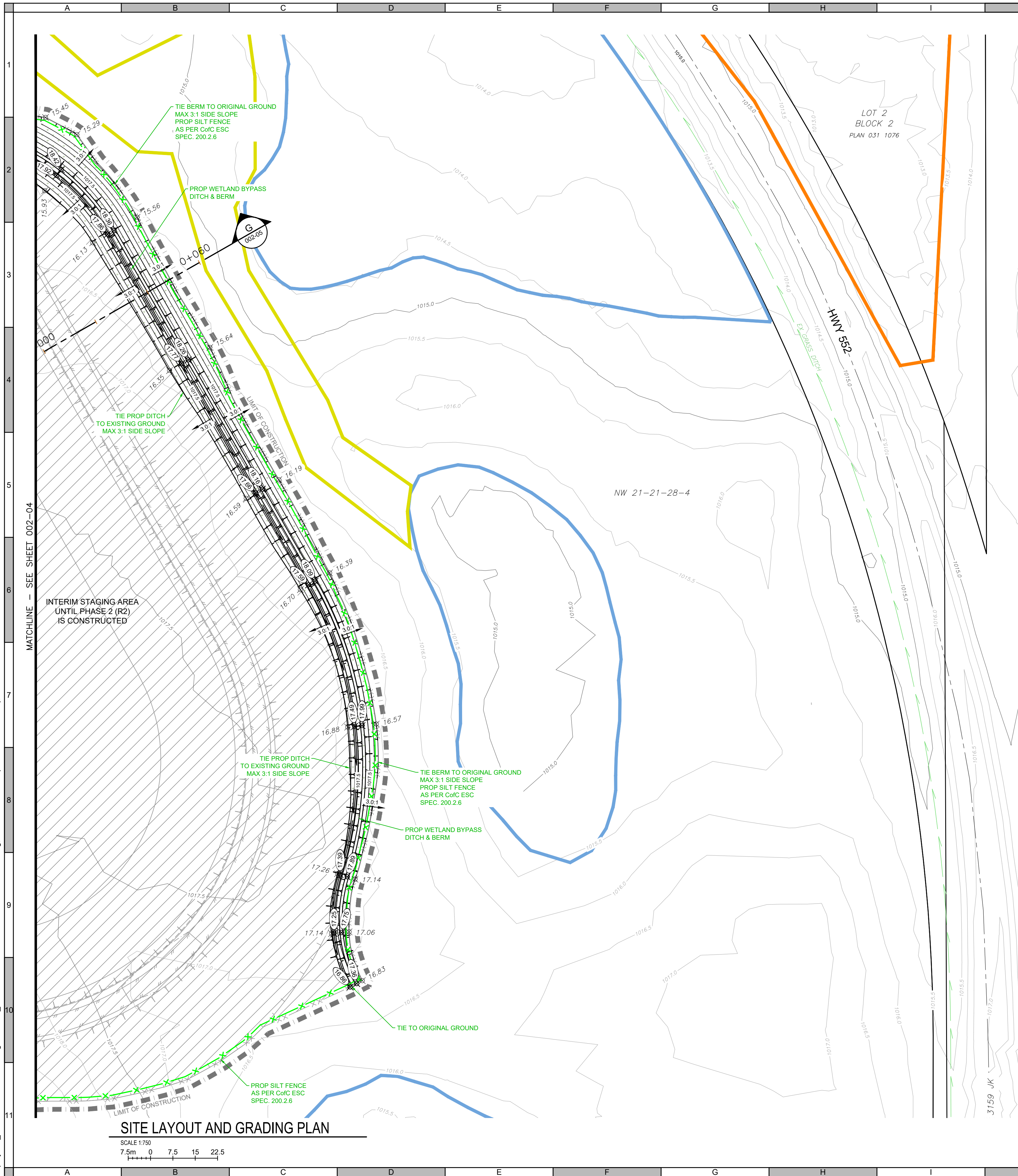
**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT**
PHASE 1 RESERVOIR
SITE GRADING PLAN 1

Sheet Number: 3 of 26
Project Number: 1306.0120.06
Drawing Number: 002-03
Revision: 5

ISSUED FOR PRICING

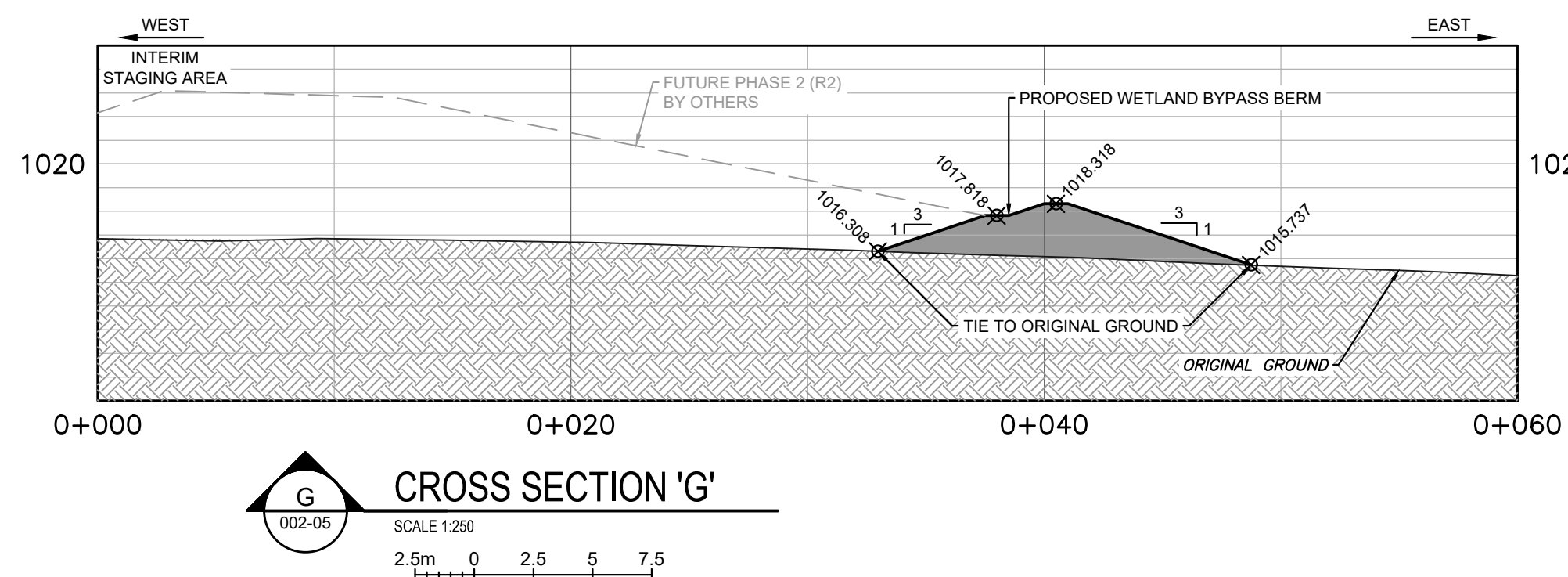
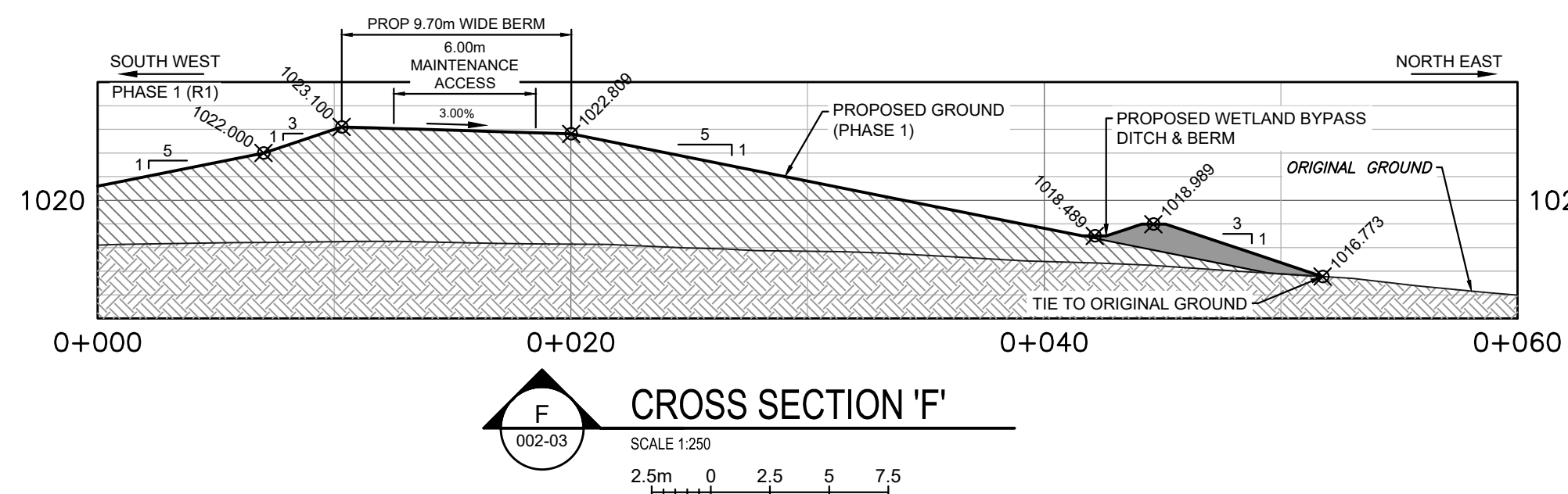
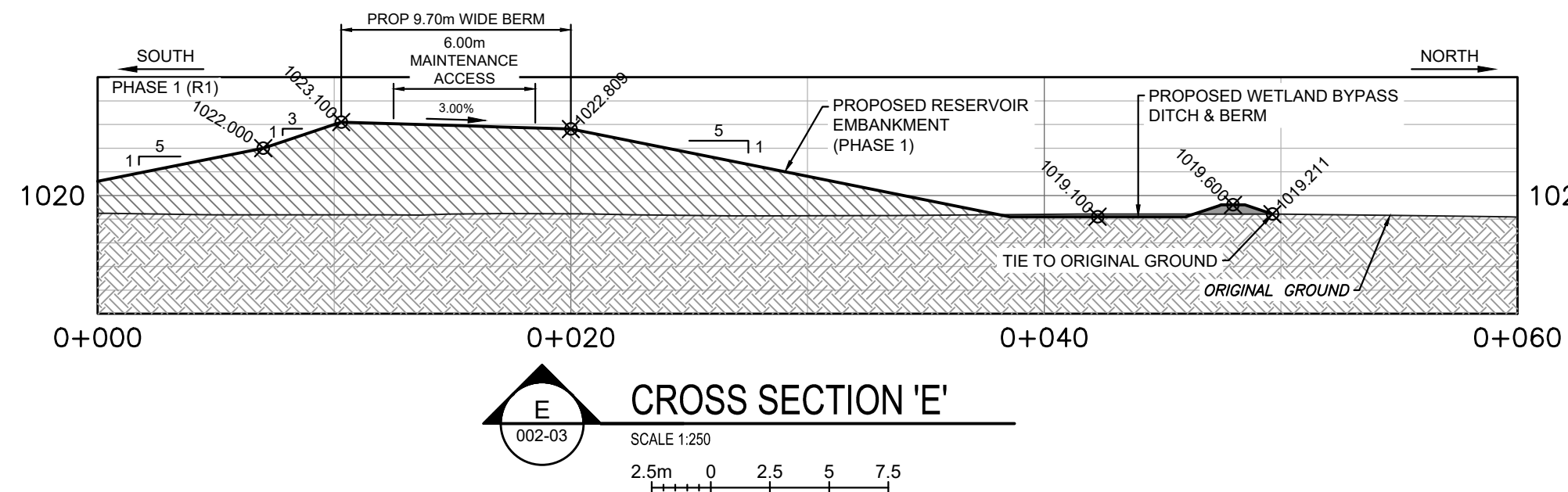
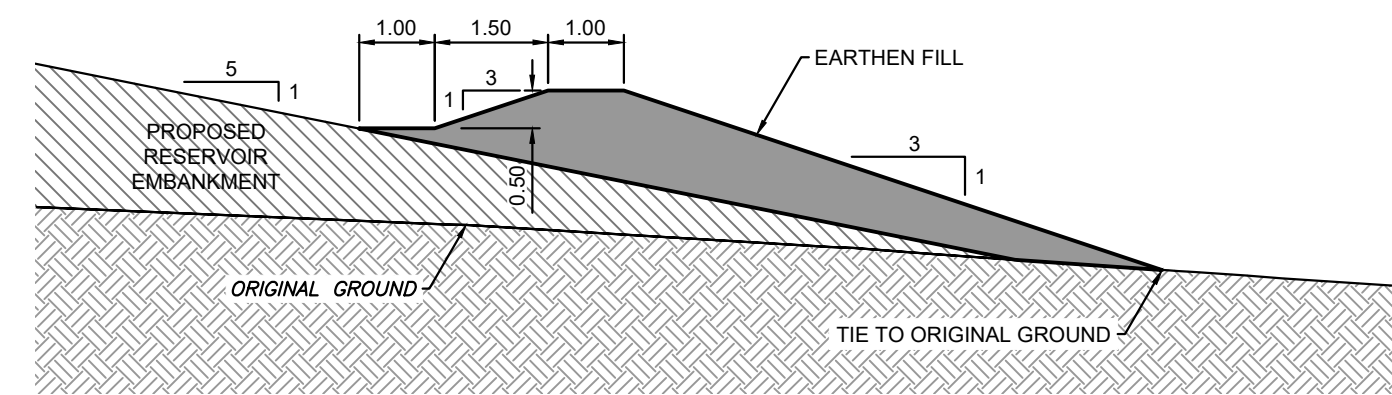
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- LEGEND**
- PROPOSED FEATURES**
- 60MIL ENVIROLINER 6060 UNDERLAIN BY 8oz NON-WOVEN GEOTEXTILE
 - GRAVEL - LIGHT DUTY STRUCTURE (SEE DETAIL ON SHEET 009-04)
 - RIPRAP (CLASS 1M)
 - TOPSOIL & SEED (URBAN 'A' Co/C SPEC: 5.3.4.1)
 - STANDPIPE PIEZOMETER
 - SLOPE INCLINOMETER
 - STORMWATER MANHOLE

- NOTES:**
- ALL PIPE SIZES ARE IN MILLIMETRES AND ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
 - ALL TRUNCATED RIMS, INVERTS, AND ELEVATIONS ARE GEODETIC, REFERENCED TO 1000.000m IN ELEVATION.
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 - REFER TO SHEET 009-02 FOR INSTRUMENTATION PLAN DETAILS THAT MUST BE FOLLOWED (FOR PIEZOMETERS/INCLINOMETERS).

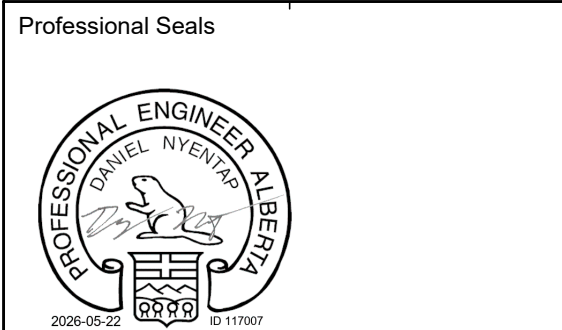


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Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

ISSUED FOR RFP
MAY 21, 2026
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URBAN SYSTEMS LTD.

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ID 58661
PERMIT NUMBER: P 3836
The Association of Professional Engineers and Geoscientists of Alberta

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3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



URBAN systems

Scale: AS SHOWN

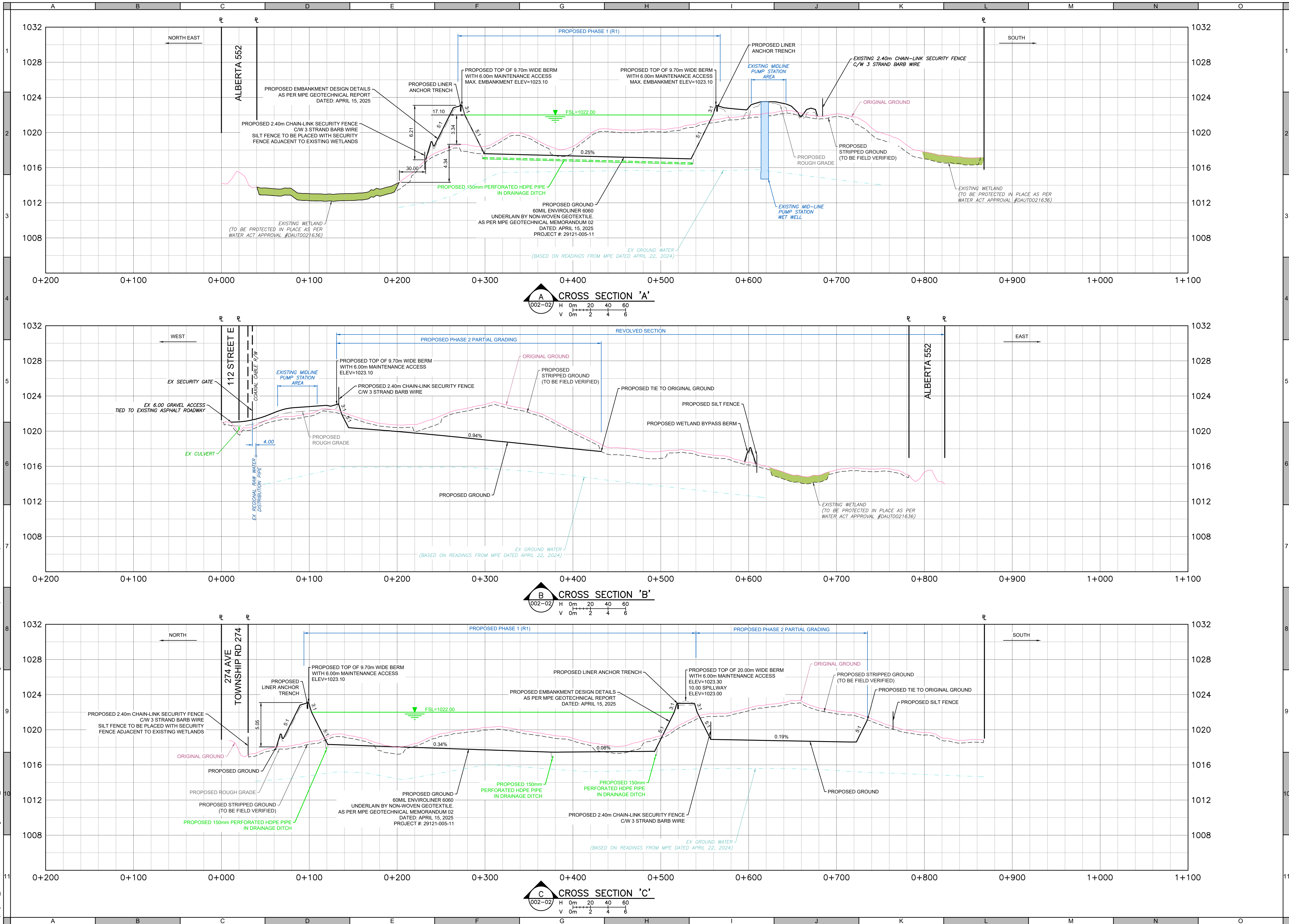
Quality Control by: DN
Designed by: DN/TL
Drawn by: TL

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT
PHASE 1 RESERVOIR SITE GRADING PLAN 3

Sheet Number: 5 of 26
Project Number: 1306.0120.06
Drawing Number: 002-05
Revision: 5

ISSUED FOR PRICING

U:\projects_cal\1306\0120\06\Design\CAD\20_PROD\Phase1\FORWP-02-C-XS-002-03.dwg, 002-06-CROSS SEC (34x22-VERT PLAN), 2026-05-22 10:53 am lham

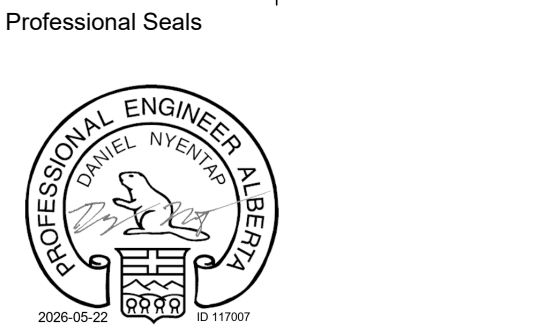


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Compilation Date: APRIL 2024

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ID 58661
PERMIT NUMBER: P 3836
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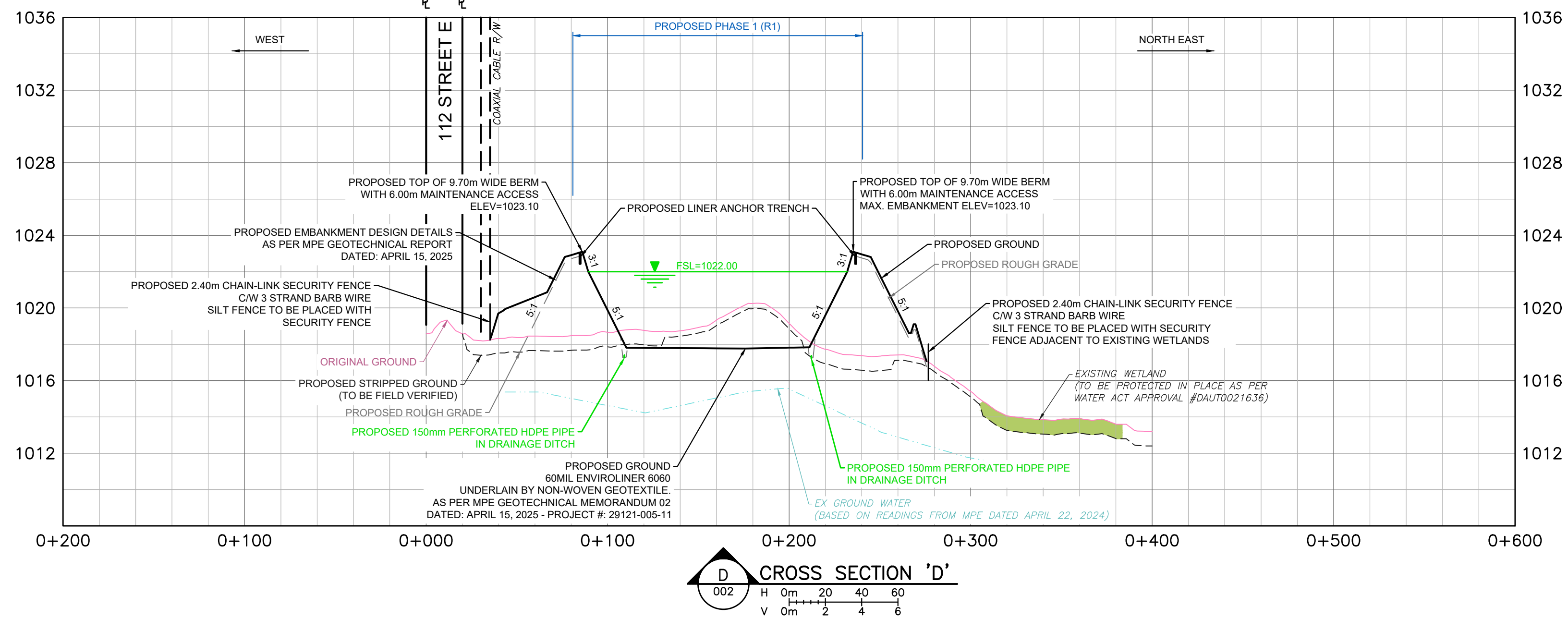
#	Date	Issue / Revision	App
3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



**URBAN
systems**
Scale: AS SHOWN
Quality Control by: DN
Designed by: DNTL
Drawn by: TL

**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT**
PHASE 1 RESERVOIR
CROSS SECTIONS
Sheet Number: 6 of 26
Project Number: 1306.0120.06
Drawing Number: 002-06
Revision: 5

ISSUED FOR PRICING



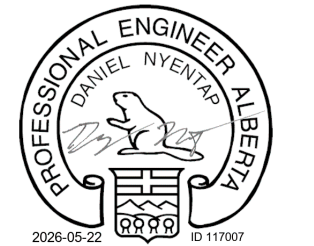
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Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

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Date 2026-05-22
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5	2026-05-21	ISSUED FOR RFP	DN



URBAN
systems

Scale AS SHOWN

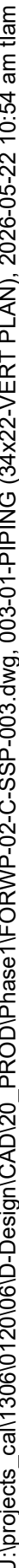
Quality Control by	DN
Designed by	DN/TL
Drawn by	TL

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
CROSS SECTIONS

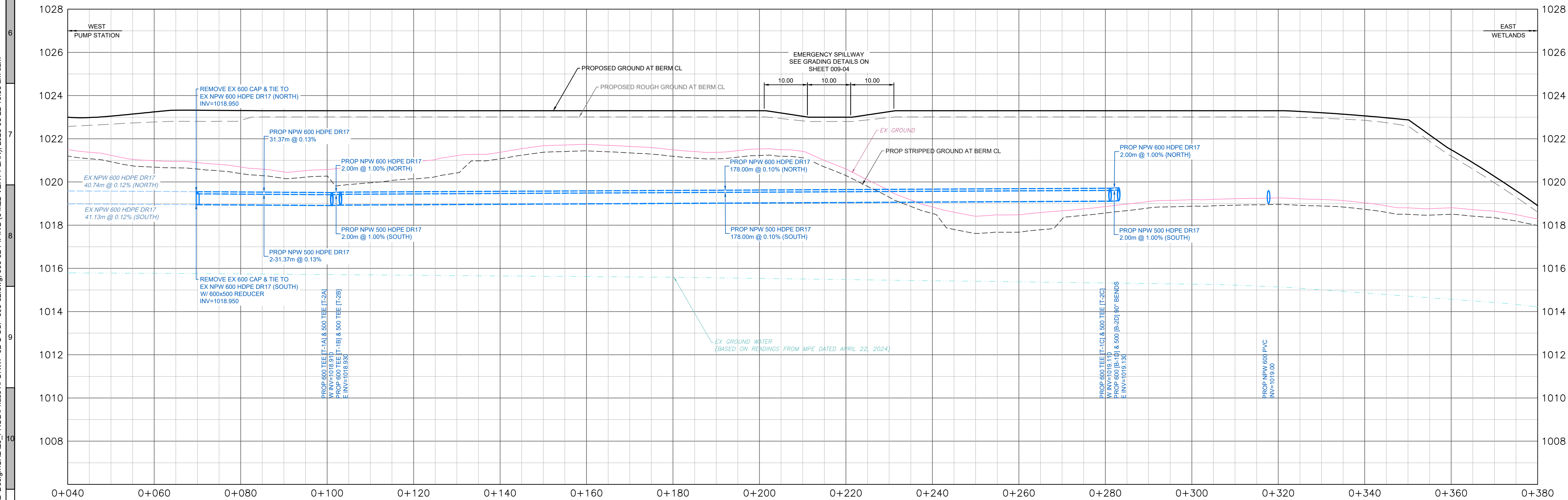
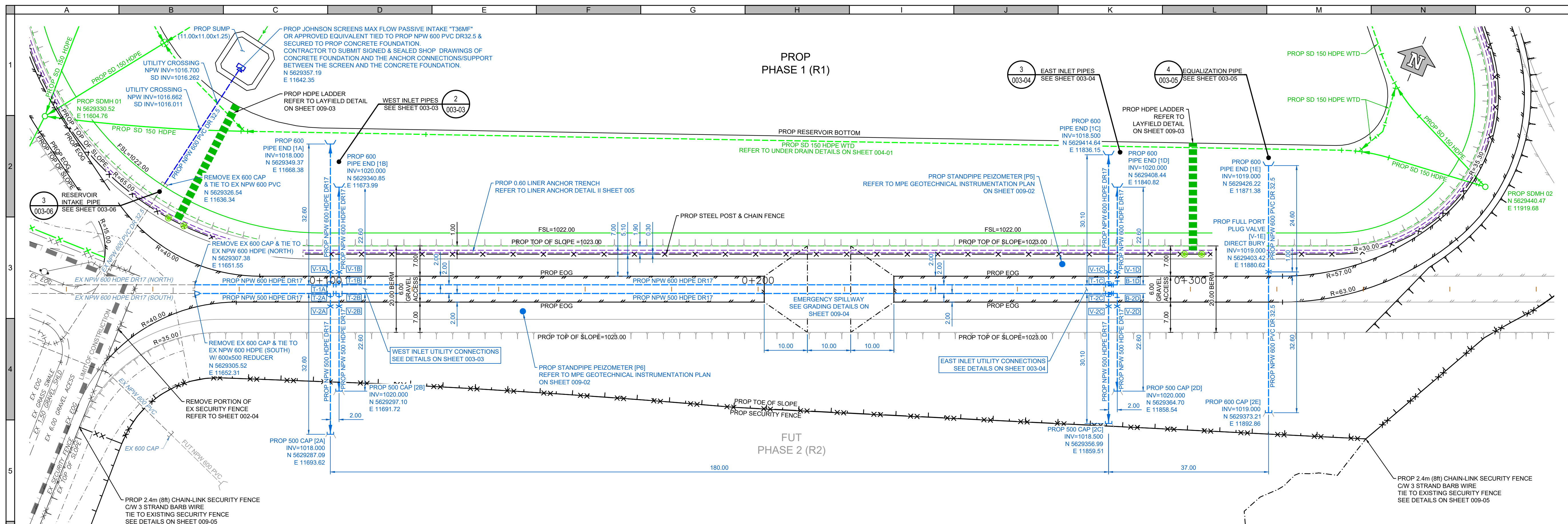
Sheet Number		7 of 26
Project Number	Drawing Number	Revision
1306.0120.06	002-07	5

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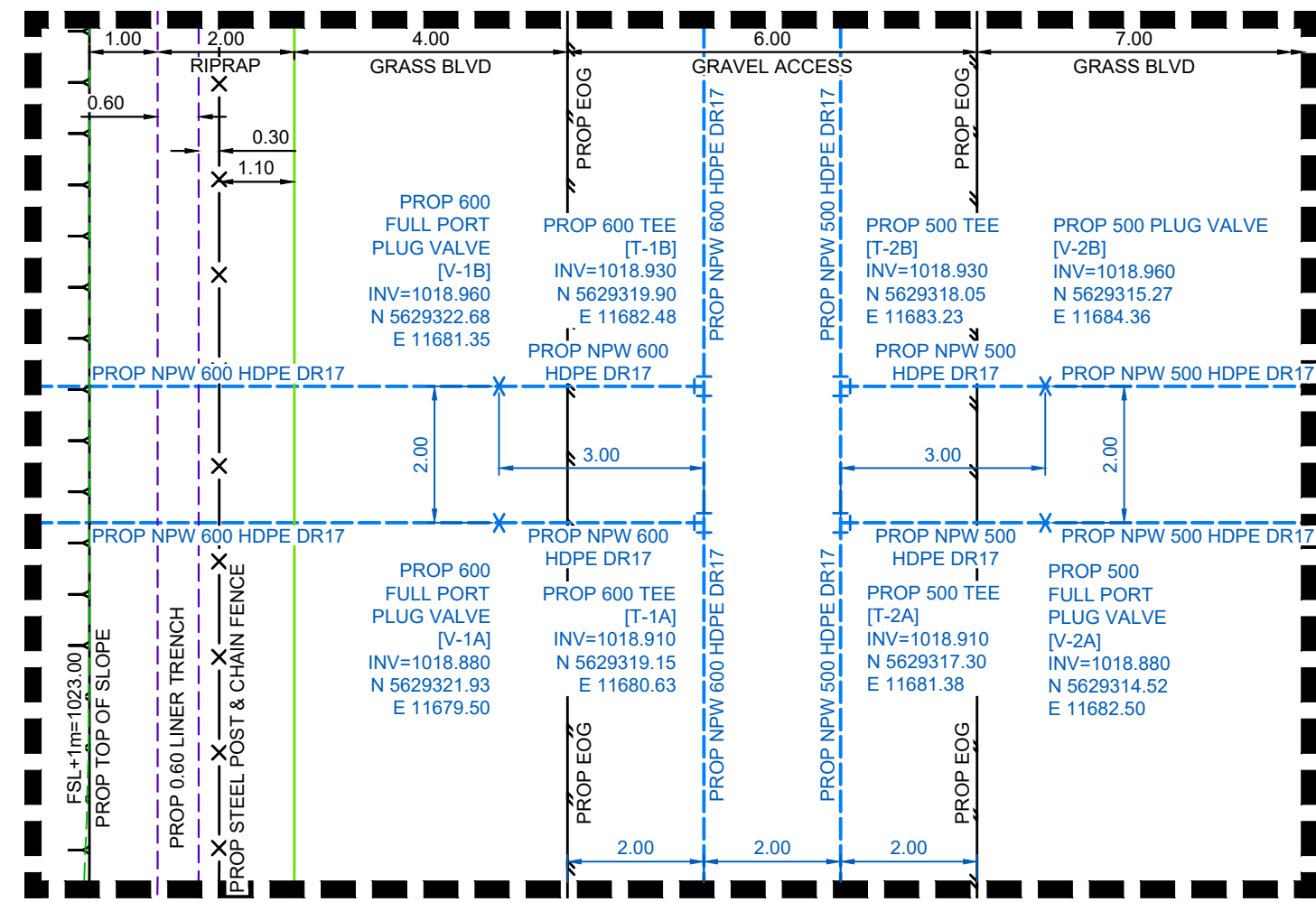
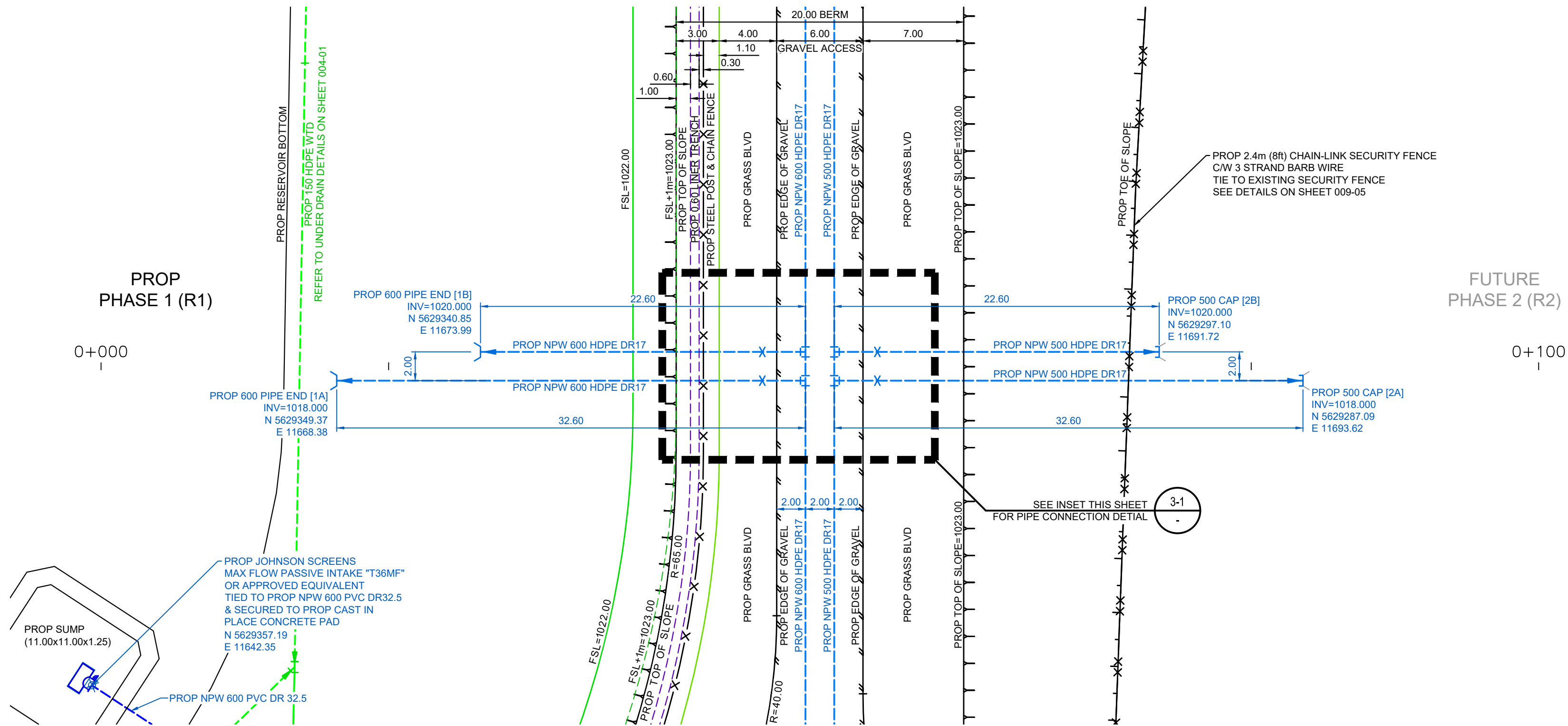
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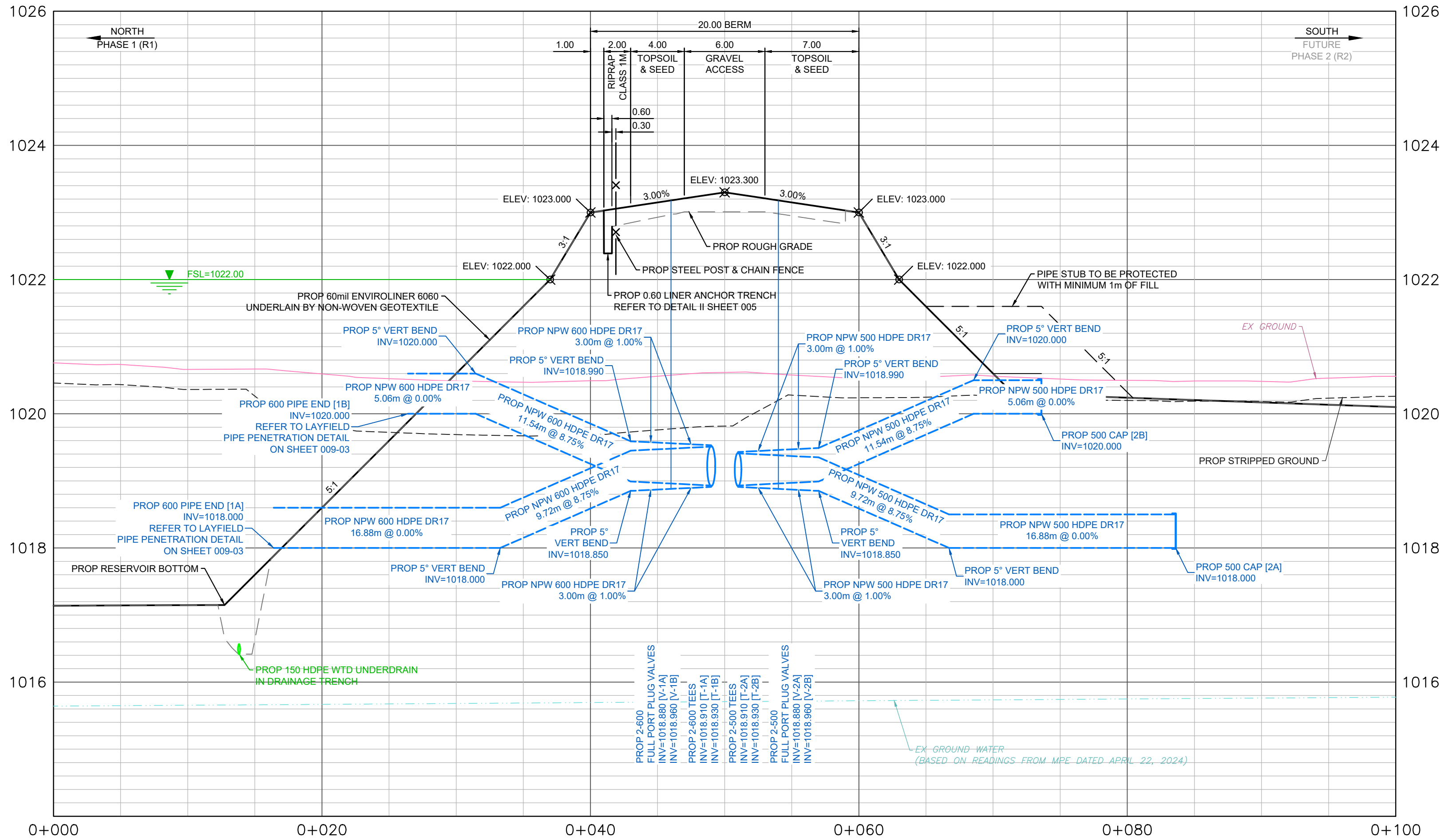
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- NOTES:
1. ALL PIPE SIZES ARE IN MILLIMETRES AND ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
 2. ALL TRUNCATED RIMS, INVERTS, AND ELEVATIONS ARE GEODETIC, REFERENCED TO 1000.000m IN ELEVATION.
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 4. REFER TO SHEET 009-02 FOR INSTRUMENTATION PLAN DETAILS THAT MUST BE FOLLOWED (FOR PIEZOMETERS/INCLINOMETERS).
 5. REFER TO SHEET 009-04 FOR THRUST BLOCK DETAILS.
 6. ALL VALVES TO BE FULL PORT PLUG VALVES, NORMALLY CLOSED UNTIL FUTURE RESERVOIR CELL IS IN OPERATION.



3
-
WEST INLET PLAN PROFILE
SCALE H=1:250 / V=1:50
H 2.5m 0 2.5 5 7.5
V 0.5m 0 0.5 1 1.5

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Coordinate System: 3TM-NAD83-114
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3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



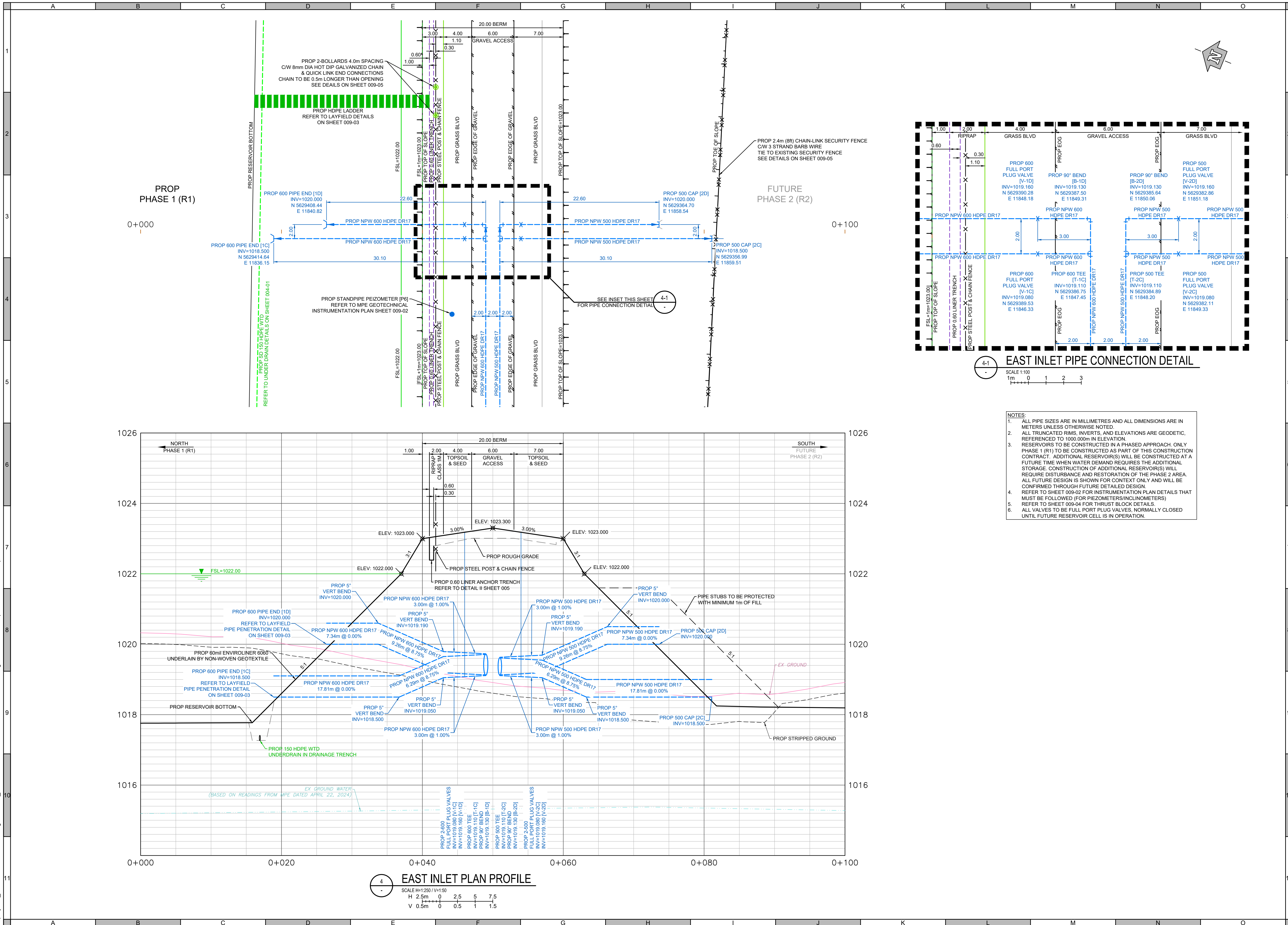
URBAN
systems
Scale
AS SHOWN
Quality Control by
Designed by
Drawn by

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
WEST INLET PLAN PROFILE

Sheet Number 10 of 26
Project Number 1306.0120.06
Drawing Number 003-03
Revision 5

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4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



URBAN
systems

Scale
AS SHOWN

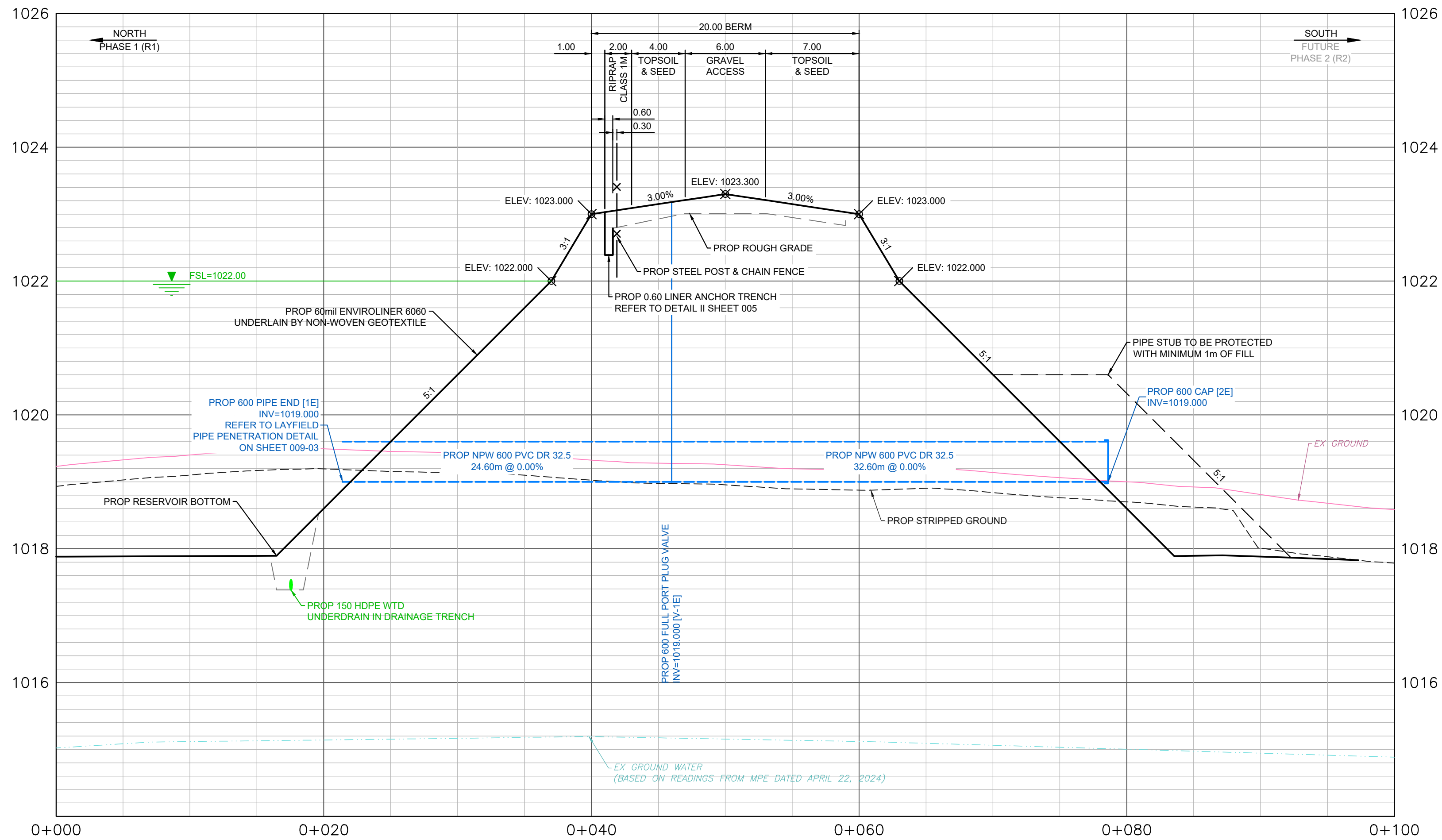
Quality Control by _____ DN
Designed by _____ DNTL
Drawn by _____ TL

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
EAST INLET PLAN PROFILE

Sheet Number 11 of 26
Project Number 1306.0120.06
Drawing Number 003-04
Revision 5

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5
-
EQUALIZATION PIPE PLAN PROFILE
SCALE H=1:250 / V=1:50
H 2.5m 0 2.5 5 7.5
V 0.5m 0 0.5 1 1.5

- NOTES:
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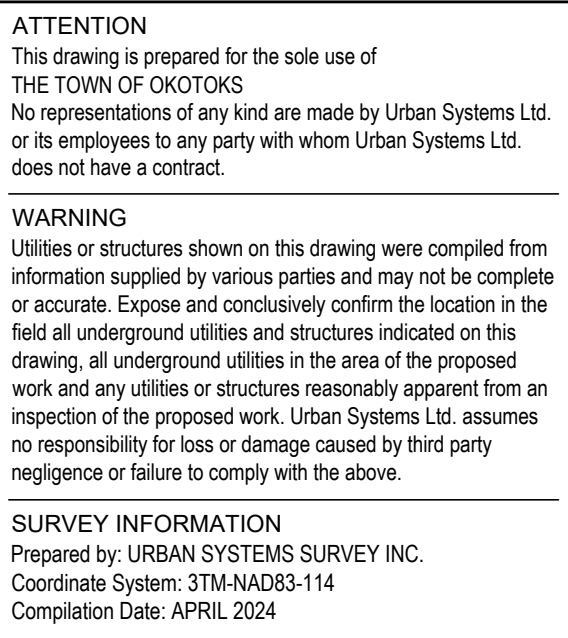
#	Date	Issue / Revision	App
3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



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systems
Scale AS SHOWN
Quality Control by DN
Designed by DNTL
Drawn by TL

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
EQUALIZATION PIPE PLAN PROFILE
Sheet Number 12 of 26
Project Number 1306.0120.06
Drawing Number 003-05
Revision 5

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Professional Seals

ID# 90237



2026-05-22

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Date 2026-05-22

ID 58661

PERMIT NUMBER: P 3836

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#	Date	Issue / Revision	App
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5	2026-05-21	ISSUED FOR RFP	DN



URBAN
systems

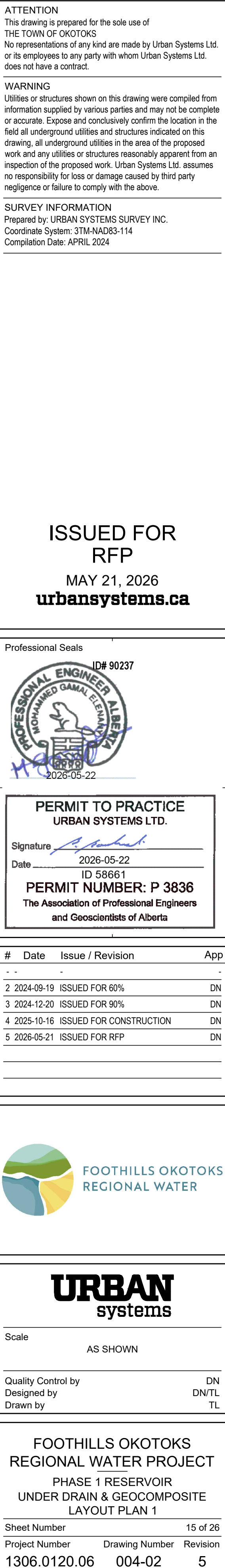
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Quality Control by	DN
Designed by	DN/TL
Drawn by	TL

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT

PHASE 1 RESERVOIR UNDER DRAIN & GEOCOMPOSITE KEY PLAN

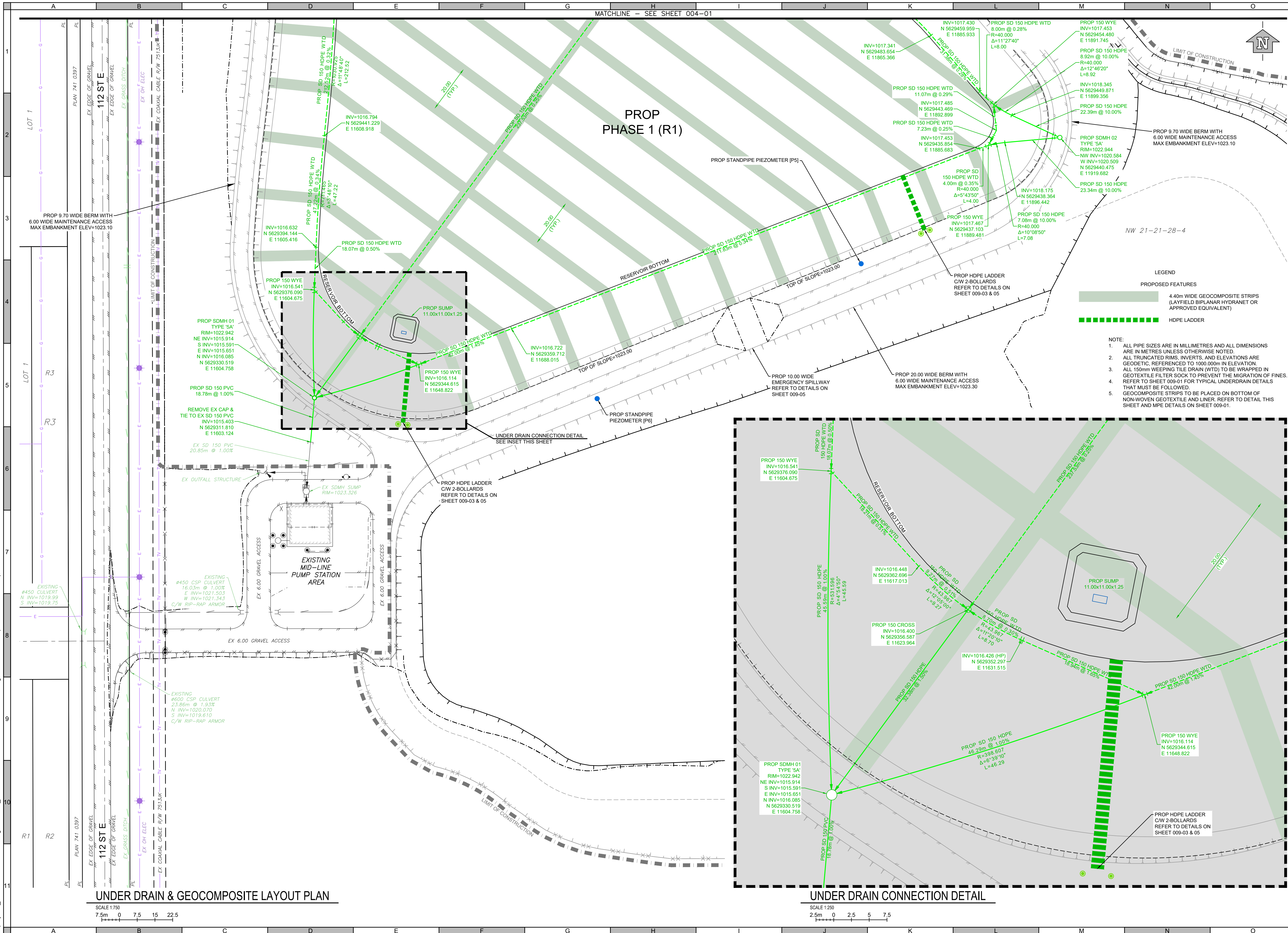
Sheet Number	Drawing Number	Revision
1306.0120.06	004-01	5

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SURVEY INFORMATION
Prepared by: URBAN SYSTEMS SURVEY INC.
Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

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5	2026-05-21	ISSUED FOR RFP	DN

**FOOTHILLS OKOTOKS
REGIONAL WATER**

**URBAN
systems**

Scale AS SHOWN

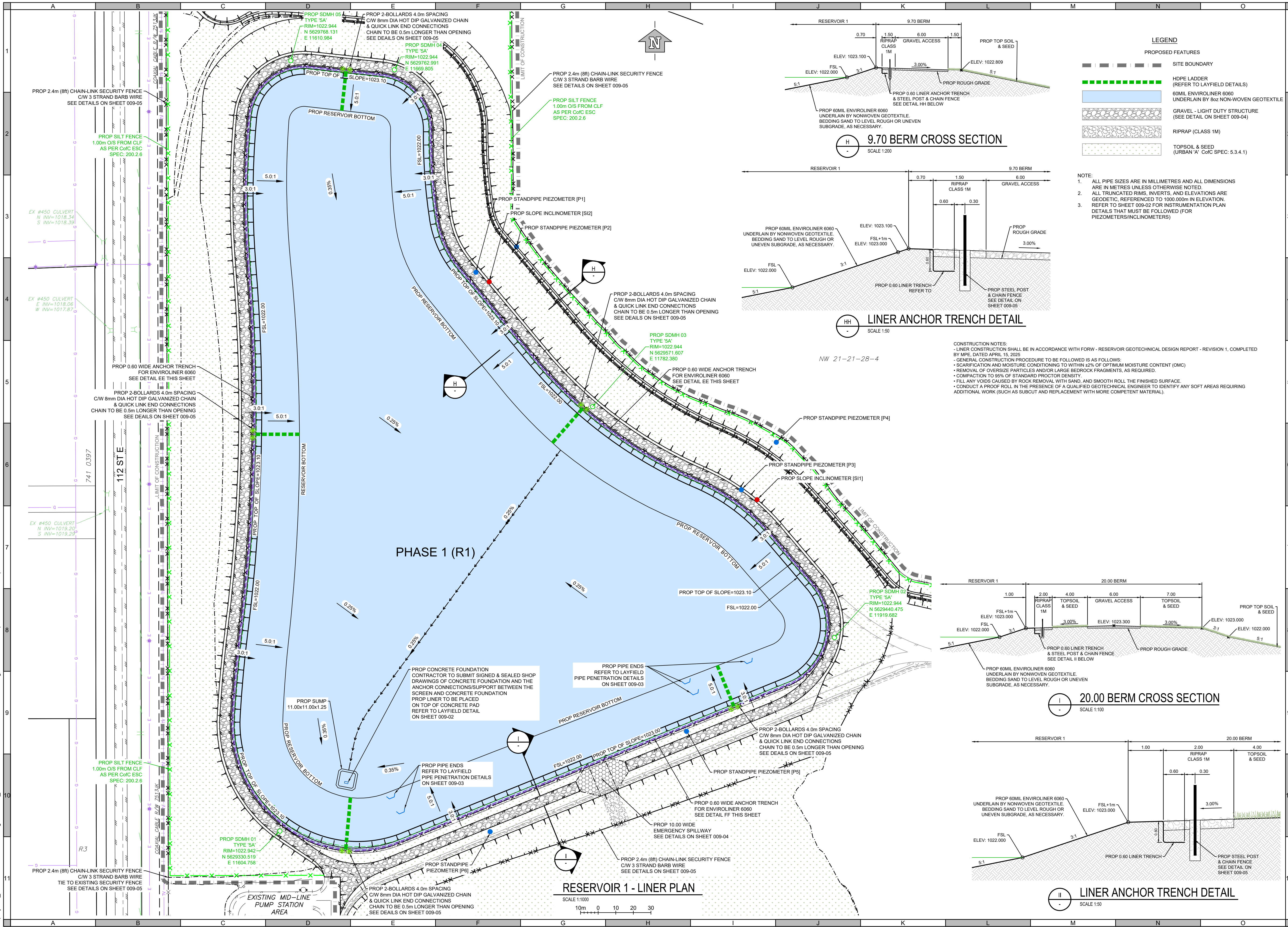
Quality Control by DN
Designed by DNTL
Drawn by TL

**FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT**
PHASE 1 RESERVOIR
UNDER DRAIN & GEOCOMPOSITE
LAYOUT PLAN 2

Sheet Number 16 of 26
Project Number 1306.0120.06 Drawing Number 004-03 Revision 5

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U:\projects_cal\1306101206\IDesign\CAD\20_PROJ\Phase1\FORWP-02-C-LNR-005.dwg, 003-01-LINER (34x22-VERT PLAN), 2025-05-22 11:15 am Item

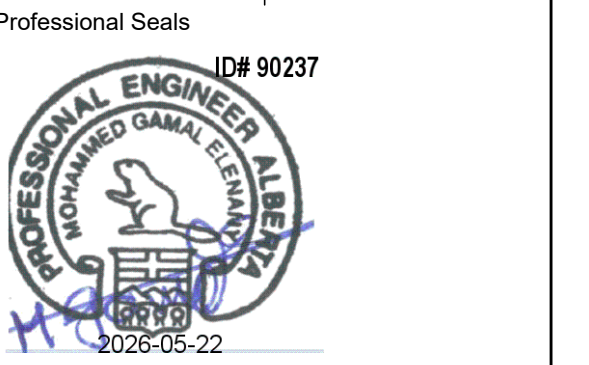


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Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

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MAY 21, 2026
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ID 58661
PERMIT NUMBER: P 3836
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#	Date	Issue / Revision	App
2	2024-09-19	ISSUED FOR 60%	DN
3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



URBAN systems

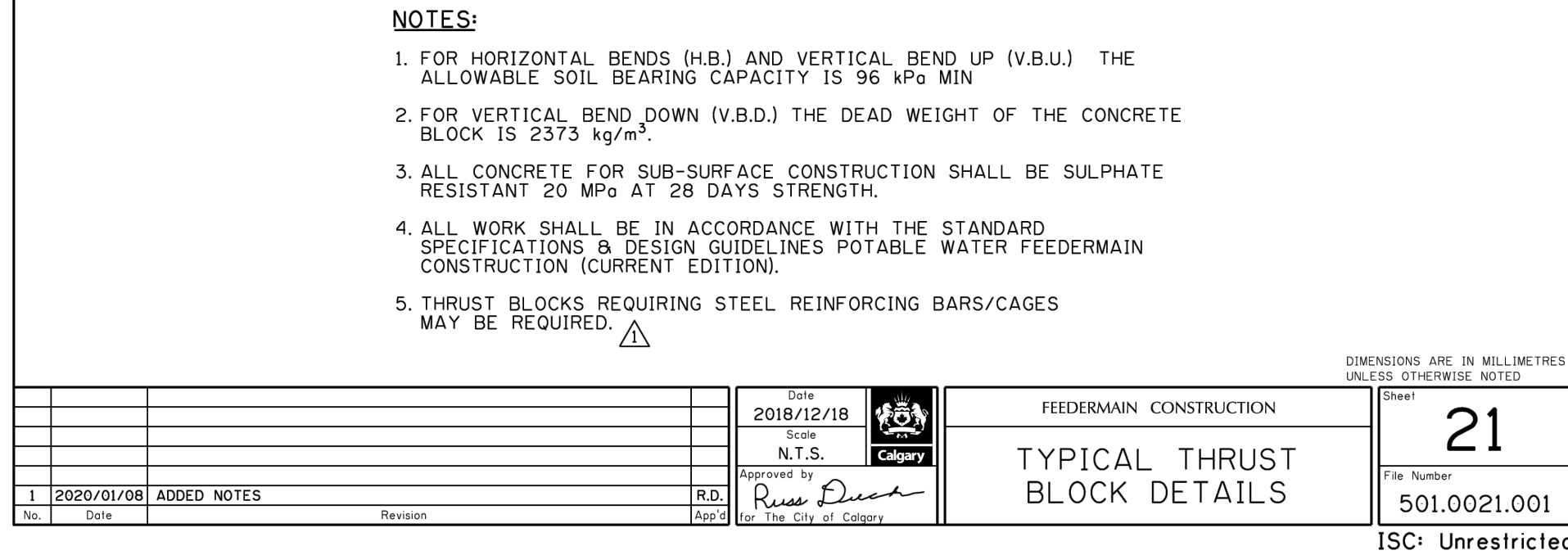
Scale: AS SHOWN

Quality Control by: DN
Designed by: DN/TL
Drawn by: TL

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT
PHASE 1 RESERVOIR LINER LAYOUT PLAN

Sheet Number: 17 of 26
Project Number: 1306.0120.06
Drawing Number: 005
Revision: 5

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STRUCTURES AS PER FORW RESERVOIR
GEOTECHNICAL DESIGN REPORT - REVISION 1,
COMPLETED BY MPE, APRIL 15, 2025

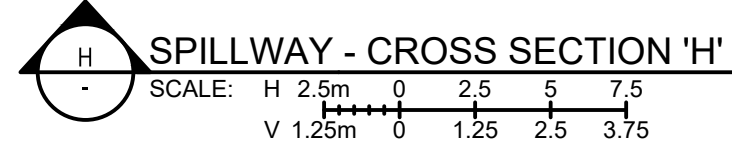
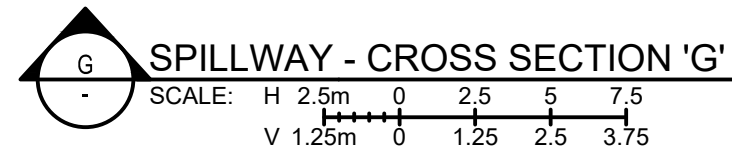


- NOTES:**
1. COMPACT BACKFILL AROUND MANHOLE LID AND PIPE TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
 2. ALL FITTINGS AND PIPE TO HAVE MINIMUM 160 PSI RATED OPERATING PRESSURE.
 3. ALL COMPRESSION FITTINGS TO BE COMPLETE WITH STAINLESS STEEL PIPE INSERTS.
 4. ALL METALLIC FITTINGS TO HAVE CATHODIC PROTECTION-REFER TO CATHODIC PROTECTION



SCALE: 2.5m 0 2.5 5 7.5

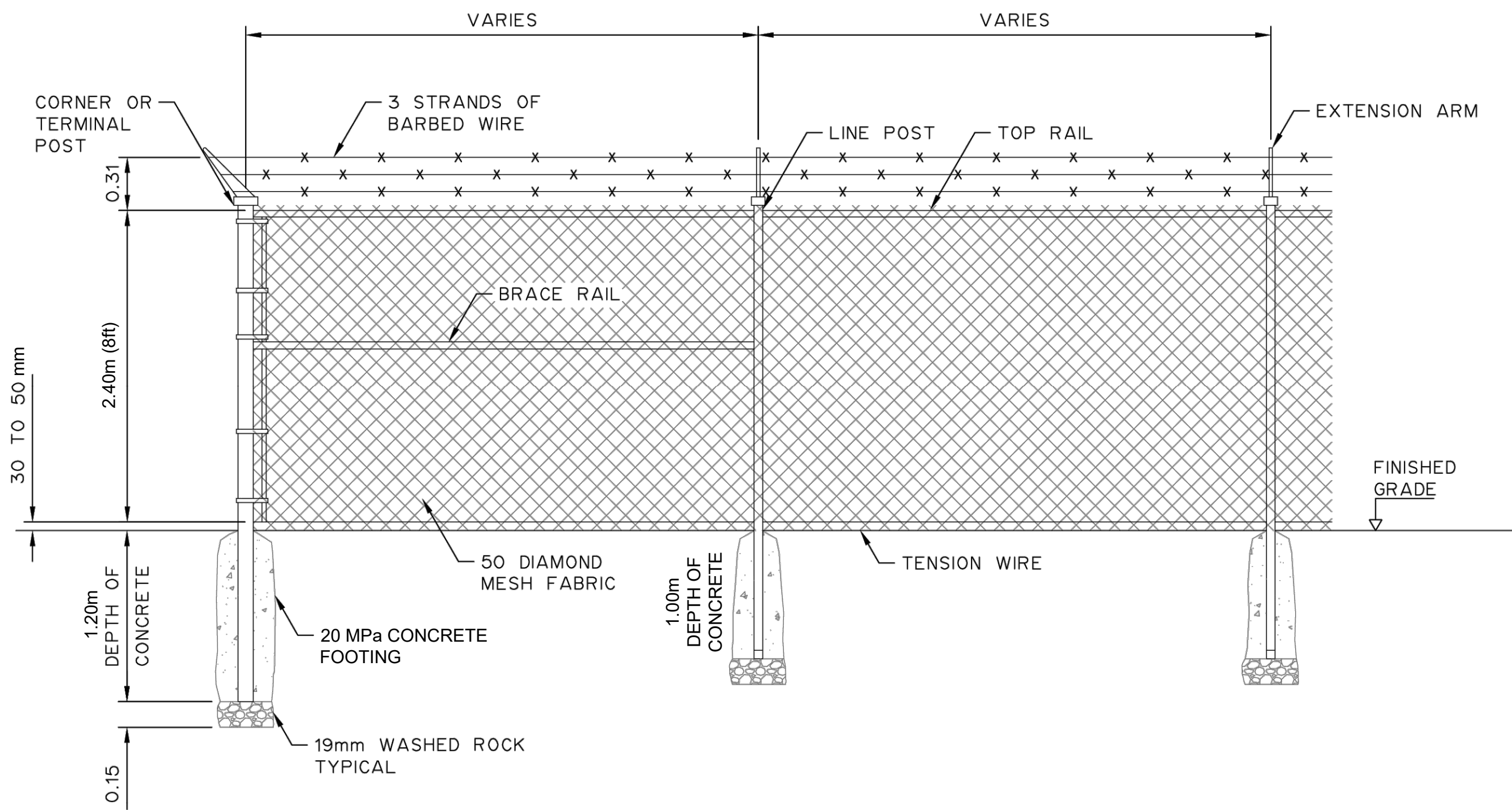
- NOTE:
1. ALL PIPE SIZES ARE IN MILLIMETRES AND ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 2. ALL TRUNCATED RIMS, INVERTS, AND ELEVATIONS ARE GEODETIC, REFERENCED TO 1000.000m IN ELEVATION.



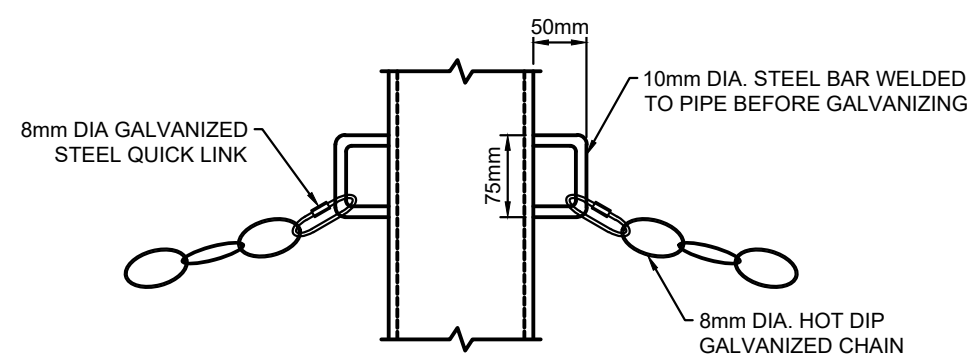
Sheet Number	21 of 26	
Project Number	Drawing Number	Revision
1306.0120.06	009-04	5

ISSUED FOR PRICING

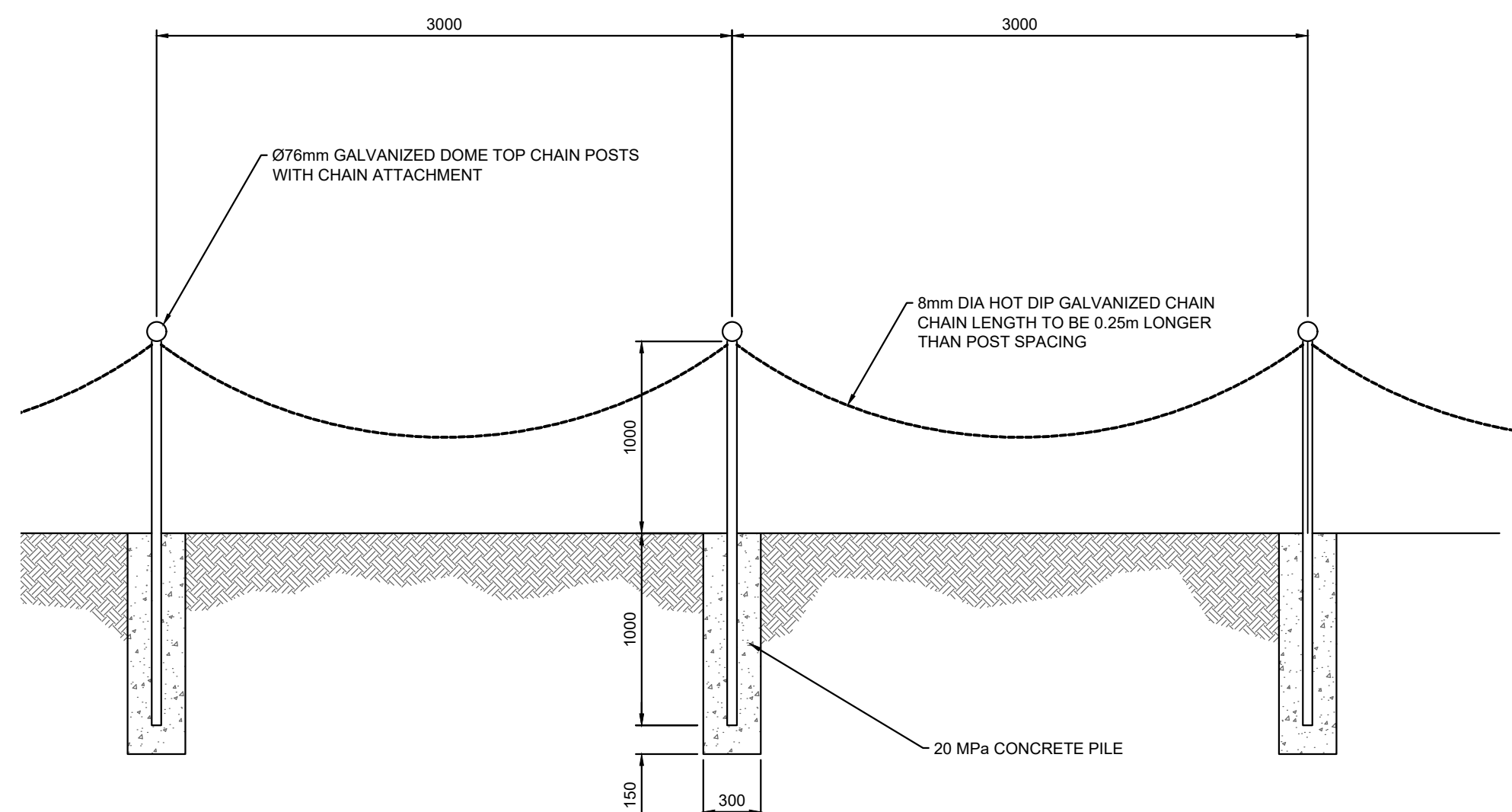
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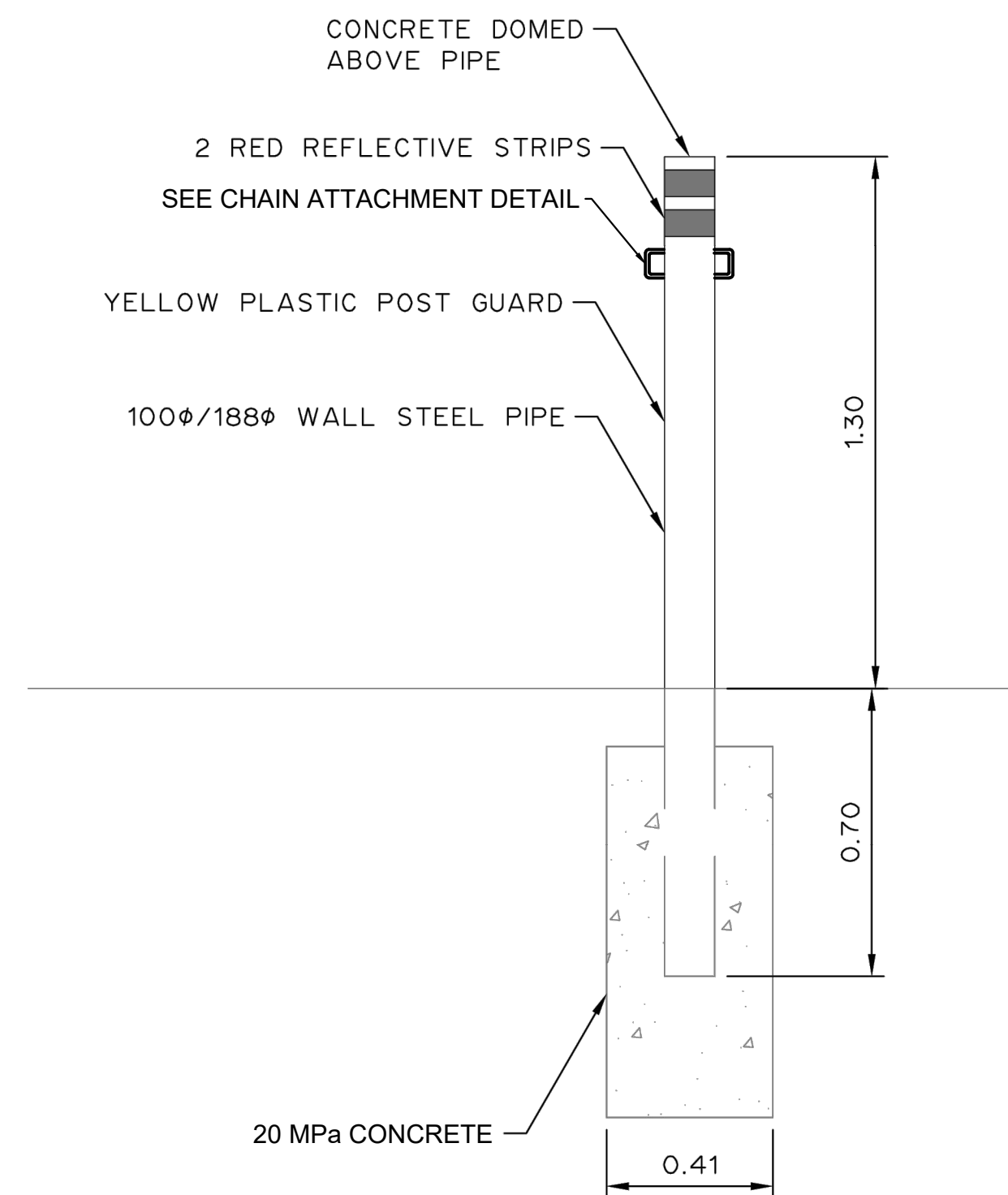
CHAIN LINK FENCE WITH SECURITY TOP
N.T.S



CHAIN ATTACHMENT DETAIL
N.T.S



STEEL POST & FENCE
NOT TO SCALE



TYPICAL BOLLARD DETAIL
N.T.S

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Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

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RFP
MAY 21, 2026
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ID# 90237

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Signature *[Signature]*
Date 2026-05-22
ID 58661
PERMIT NUMBER: P 3836
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#	Date	Issue / Revision	App
3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR CONSTRUCTION	DN
5	2026-05-21	ISSUED FOR RFP	DN



URBAN
systems

Scale AS SHOWN

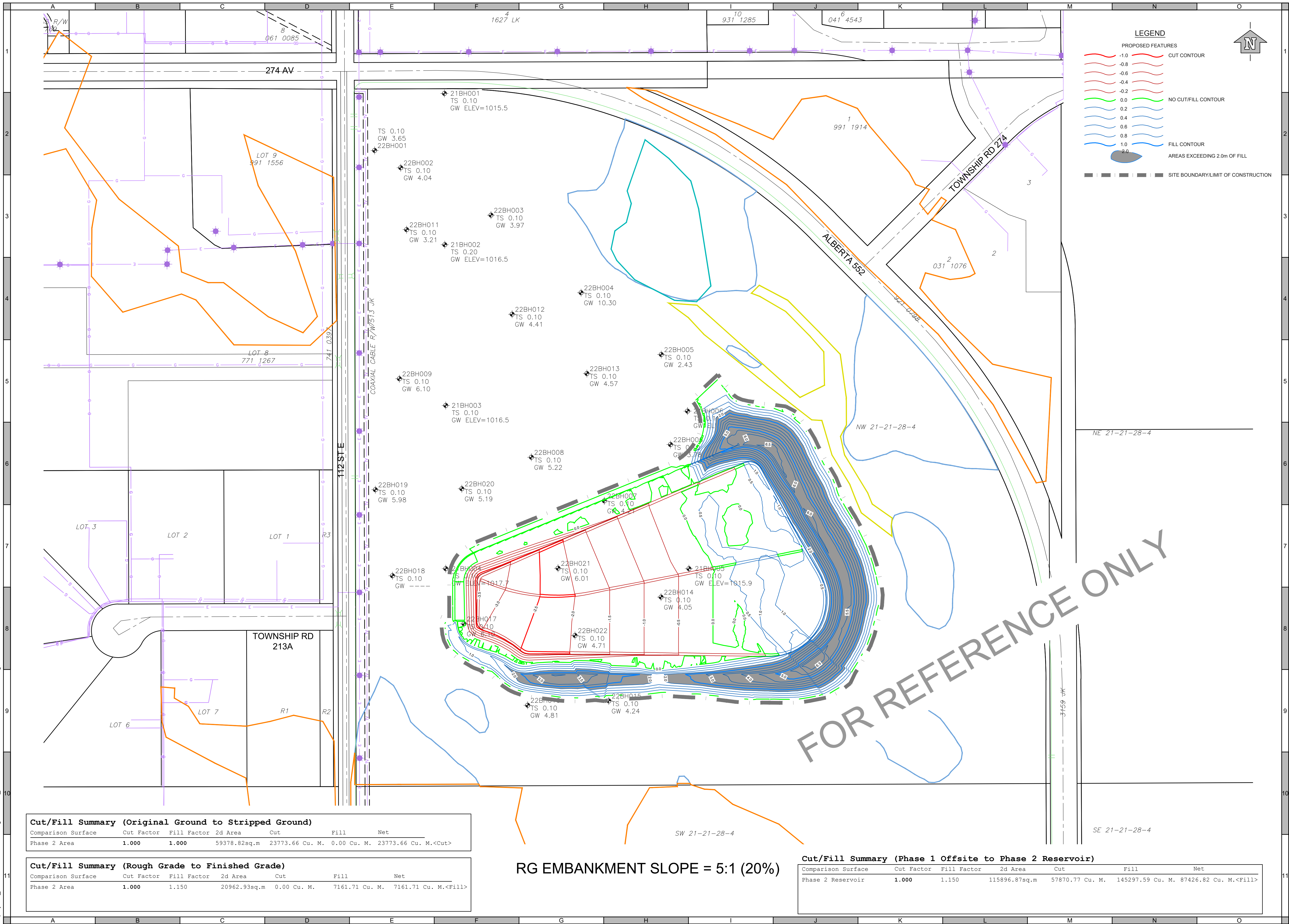
Quality Control by DN
Designed by DN/TL
Drawn by TL

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
DETAILS 5

Sheet Number 22 of 26
Project Number 1306.0120.06
Drawing Number 009-05
Revision 5

ISSUED FOR PRICING

U:\projects\cal\1306\0120\06\Design\CAD\20_PROD\Phase1\FORWP-02-CF-007-02.dwg, 007-02-Cut Fill-Ph 2, 2026-05-22 11:29 am tlam



Cut/Fill Summary (Original Ground to Stripped Ground)						
Comparison Surface	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Phase 2 Area	1.000	1.000	59378.82sq.m	23773.66 Cu. M.	0.00 Cu. M.	23773.66 Cu. M.<Cut>

Cut/Fill Summary (Rough Grade to Finished Grade)						
Comparison Surface	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Phase 2 Area	1.000	1.150	20962.93sq.m	0.00 Cu. M.	7161.71 Cu. M.	7161.71 Cu. M.<Fill>

RG EMBANKMENT SLOPE = 5:1 (20%)

Cut/Fill Summary (Phase 1 Offsite to Phase 2 Reservoir)						
Comparison Surface	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Phase 2 Reservoir	1.000	1.150	115896.87sq.m	57870.77 Cu. M.	145297.59 Cu. M.	87426.82 Cu. M.<Fill>

LEGEND

PROPOSED FEATURES

-1.0

-0.8

-0.6

-0.4

-0.2

0.0

0.2

0.4

0.6

0.8

1.0

2.0

CUT CONTOUR

NO CUT/FILL CONTOUR

FILL CONTOUR

AREAS EXCEEDING 2.0m OF FILL

---|---|---|---|---|

SITE BOUNDARY/LIMIT OF CONSTRUCTION

N

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Coordinate System: 31M-NAD83-114
Compilation Date: APRIL 2024

ISSUED FOR REFERENCE

MAY 21, 2026

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#	Date	Issue / Revision	App
3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR REFERENCE	DN

FOOTHILLS OKOTOKS REGIONAL WATER

URBAN systems

Scale 1:2000 20m 0 20 40 60

Quality Control by DN
Designed by DN/TL
Drawn by TL

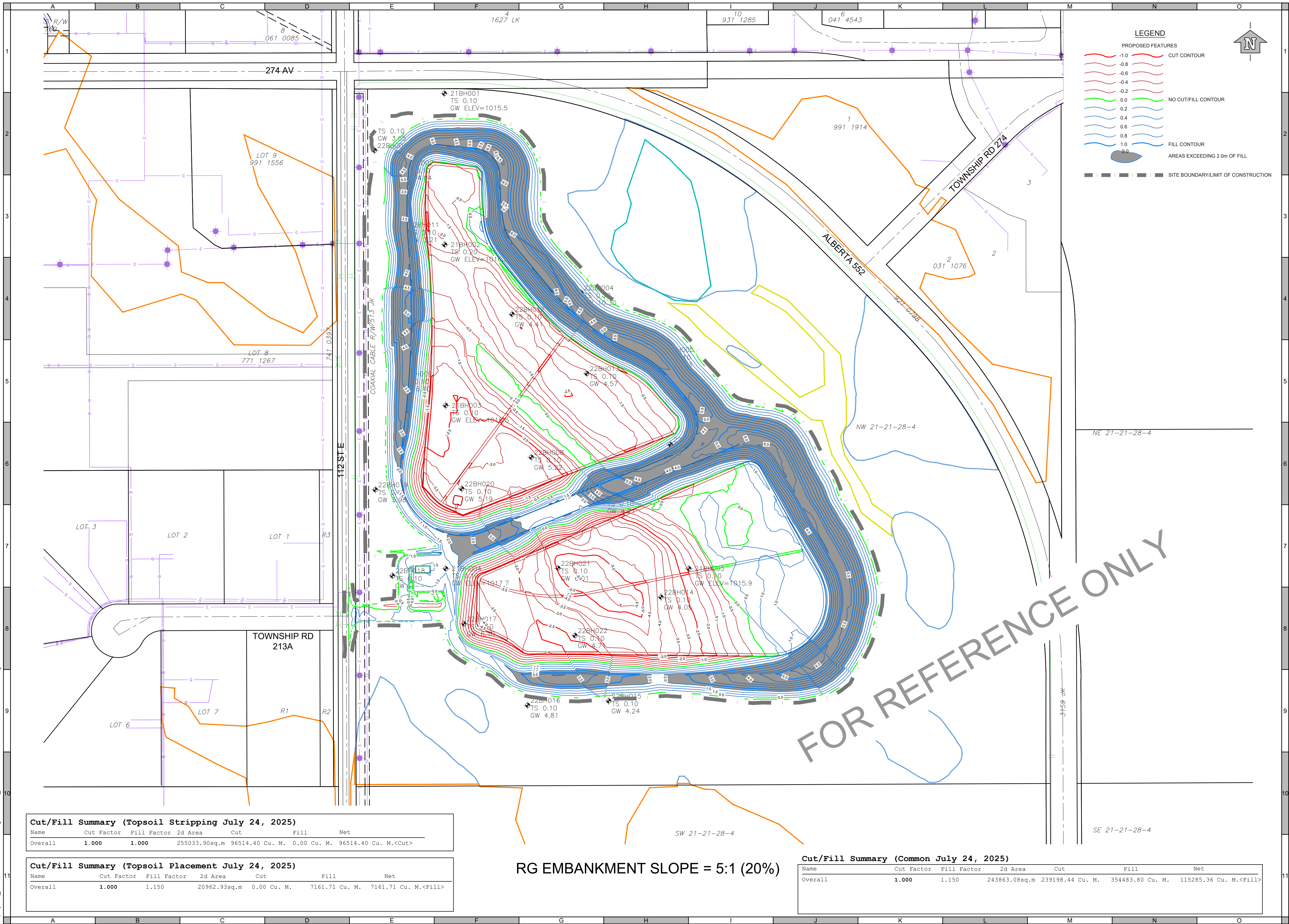
FOOTHILLS OKOTOKS REGIONAL WATER PROJECT

PHASE 2 RESERVOIR CUT FILL PLAN (RG EMBANKMENT at 5:1)

Sheet Number 23 of 26
Project Number 1306.0120.06
Drawing Number 007-02
Revision 4

ISSUED FOR PRICING

U:\projects\cal\1306\0120\06\Design\CAD\20_PROD\Phase1\FORWP-02-CF-07-03.dwg, 007-03-Cut Fill-OVERALL, 2026-05-22 11:32 am Item



Cut/Fill Summary (Topsoil Stripping July 24, 2025)						
Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Overall	1.000	1.000	255033.90sq.m	96514.40 Cu. M.	0.00 Cu. M.	96514.40 Cu. M.<Cut>

Cut/Fill Summary (Topsoil Placement July 24, 2025)						
Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Overall	1.000	1.150	20962.93sq.m	0.00 Cu. M.	7161.71 Cu. M.	7161.71 Cu. M.<Fill>

RG EMBANKMENT SLOPE = 5:1 (20%)

Cut/Fill Summary (Common July 24, 2025)						
Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Overall	1.000	1.150	243863.08sq.m	239198.44 Cu. M.	354483.80 Cu. M.	115285.36 Cu. M.<Fill>

LEGEND

PROPOSED FEATURES

-1.0

-0.8

-0.6

-0.4

-0.2

0.0

0.2

0.4

0.6

0.8

1.0

2.0

CUT CONTOUR

NO CUT/FILL CONTOUR

FILL CONTOUR

AREAS EXCEEDING 2.0m OF FILL

SITE BOUNDARY/LIMIT OF CONSTRUCTION

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Date Issue / Revision App

3 2024-12-20 ISSUED FOR 90% DN

4 2025-10-16 ISSUED FOR REFERENCE DN

FOOTHILLS OKOTOKS REGIONAL WATER

URBAN systems

Scale 1:2000 20m 0 20 40 60

Quality Control by DN
Designed by DN/TL
Drawn by TL

FOOTHILLS OKOTOKS REGIONAL WATER PROJECT

PHASE 1+2 RESERVOIRS & PS CUT FILL PLAN

(RG EMBANKMENT at 5:1)

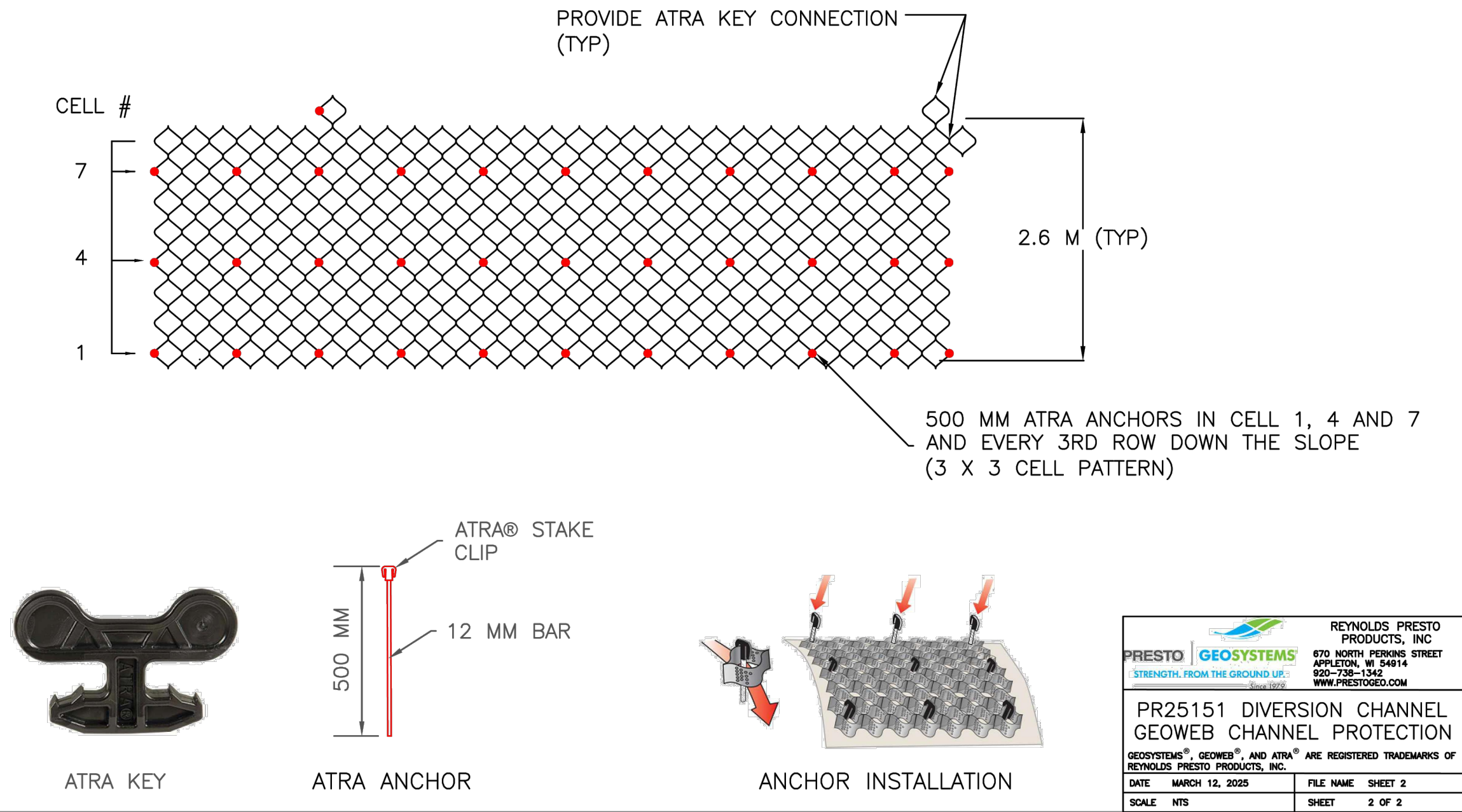
Sheet Number 24 of 26

Project Number 1306.0120.06 Drawing Number 007-03 Revision 4

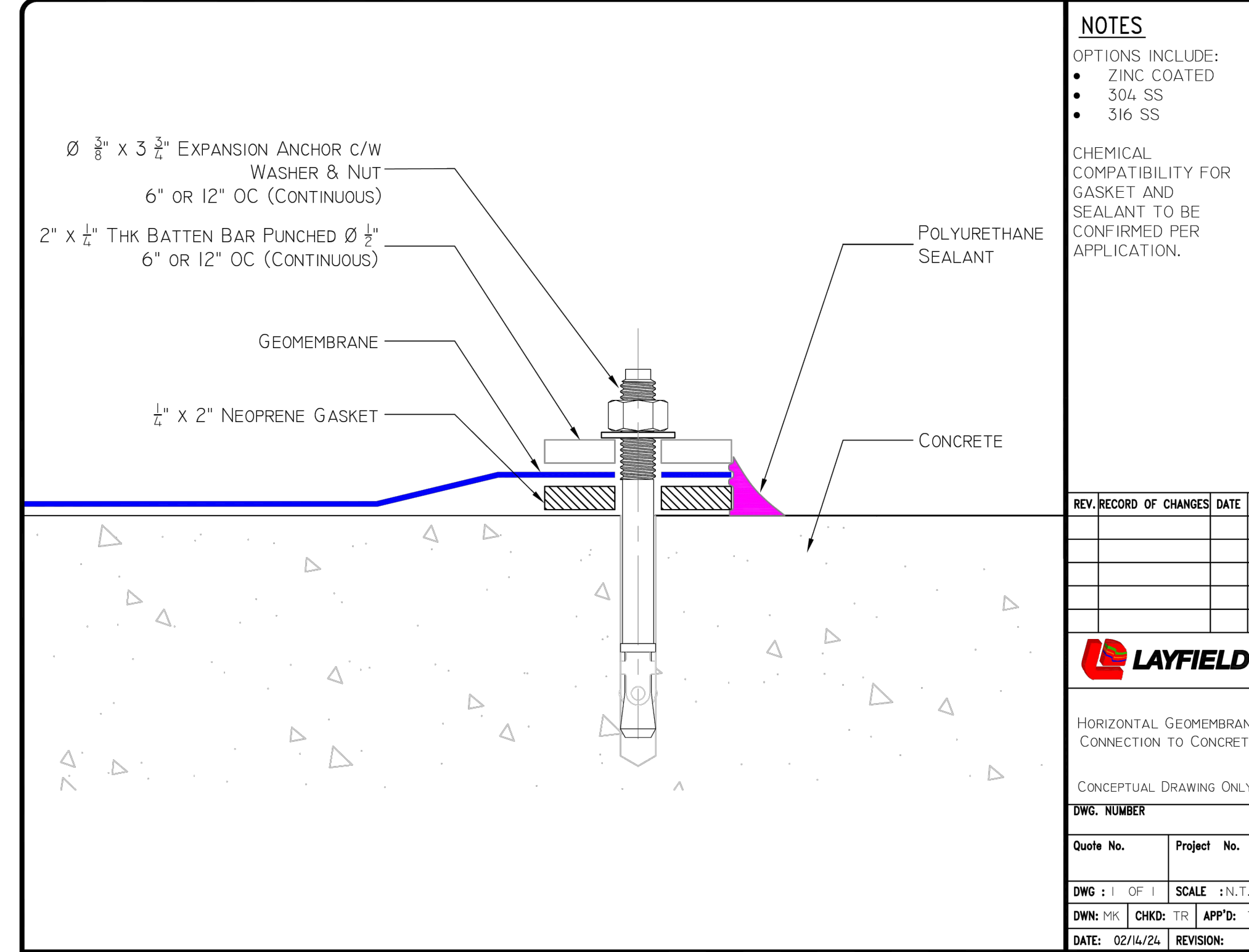
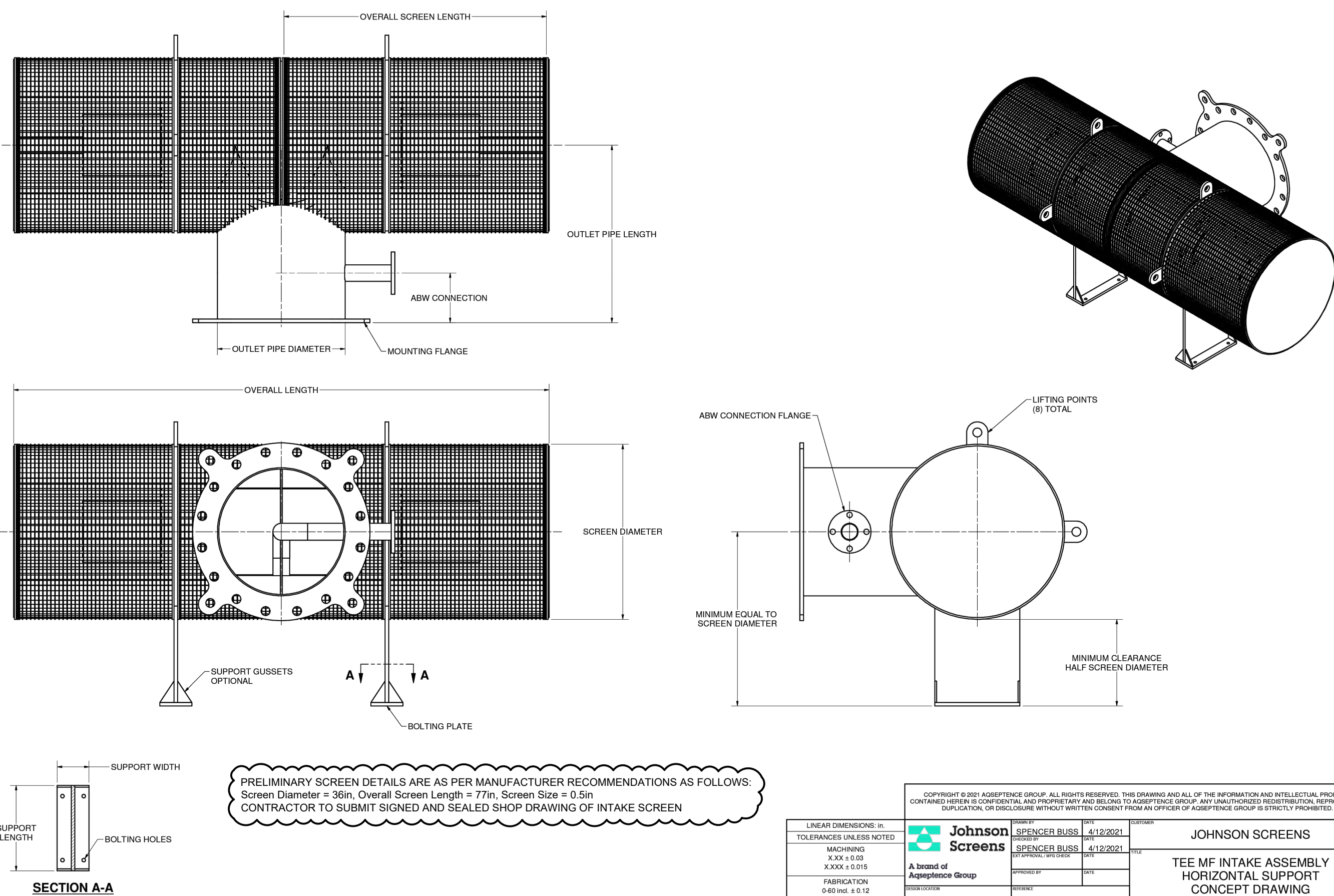
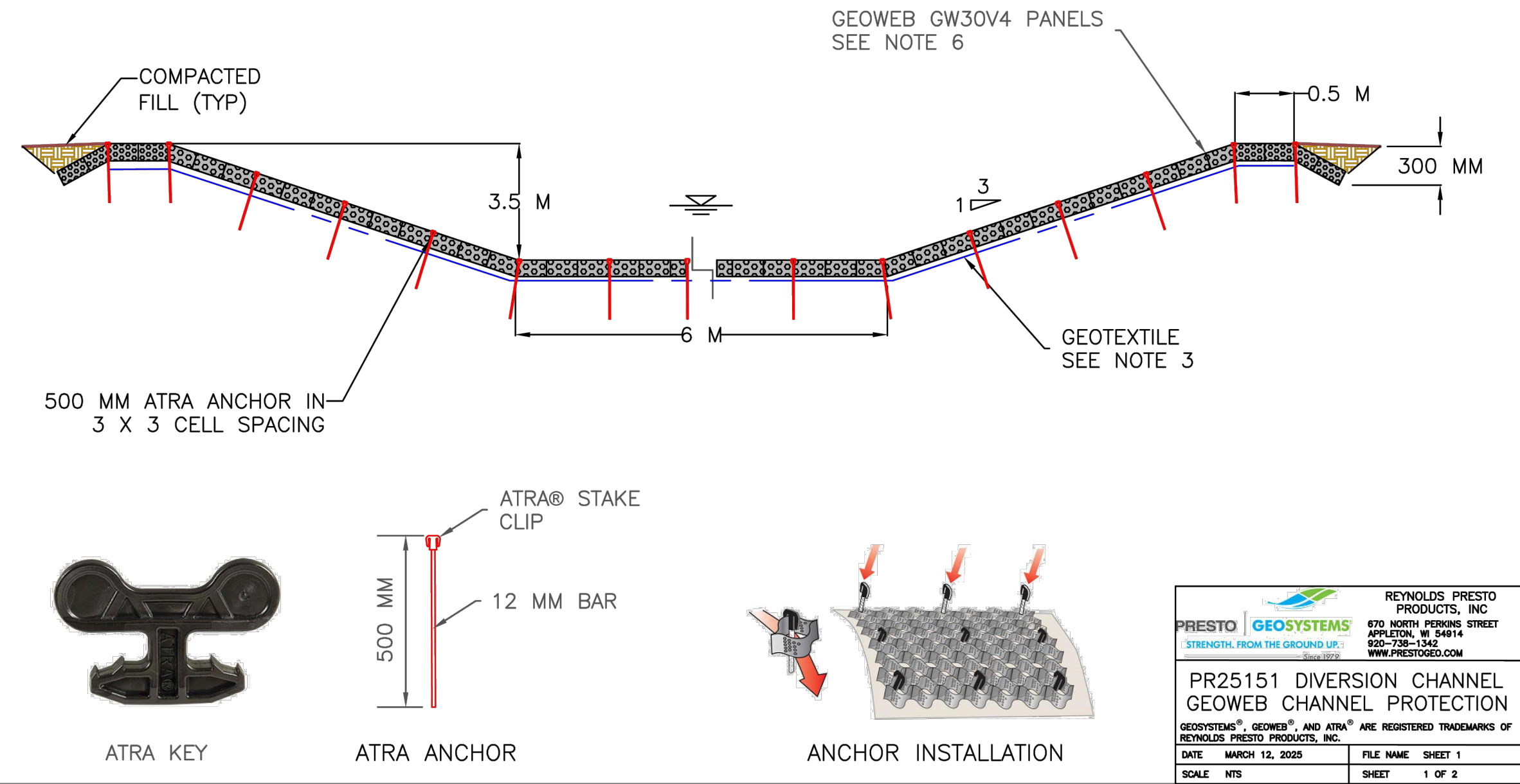
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U:\projects_cal\1306\0120\06\ID-Design\CAD\20_PROD\Phase1\FORWP-02-C-DET-009.dwg, 009-02-DET 2 (34x22-VERT PLAN), 2026-05-22 11:33 am lham

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 3. Provide a non-woven geotextile separation layer and install per Manufacturer recommendations including overlaps.
 4. The GEOWEB panels shall be connected with ATRA® keys at each interleaf and end to end connection.
 5. Provide ATRA Anchors in the recommended anchorage pattern for stability.
 6. GEOWEB infill shall be 35 mm crushed aggregate. If turbulent flow is expected, provide a high-flow, low-strength cement grout over the filled GEOWEB panels to prevent stone washout. Limit the drop of infill to prevent panel distortion.
 7. Refer to the GEOWEB Channel Protection [Installation Guide](#) for installation procedures.



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Coordinate System: 3TM-NAD83-114
Compilation Date: APRIL 2024

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3	2024-12-20	ISSUED FOR 90%	DN
4	2025-10-16	ISSUED FOR REFERENCE	DN



URBAN
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AS SHOWN

Quality Control by
Designed by
Drawn by

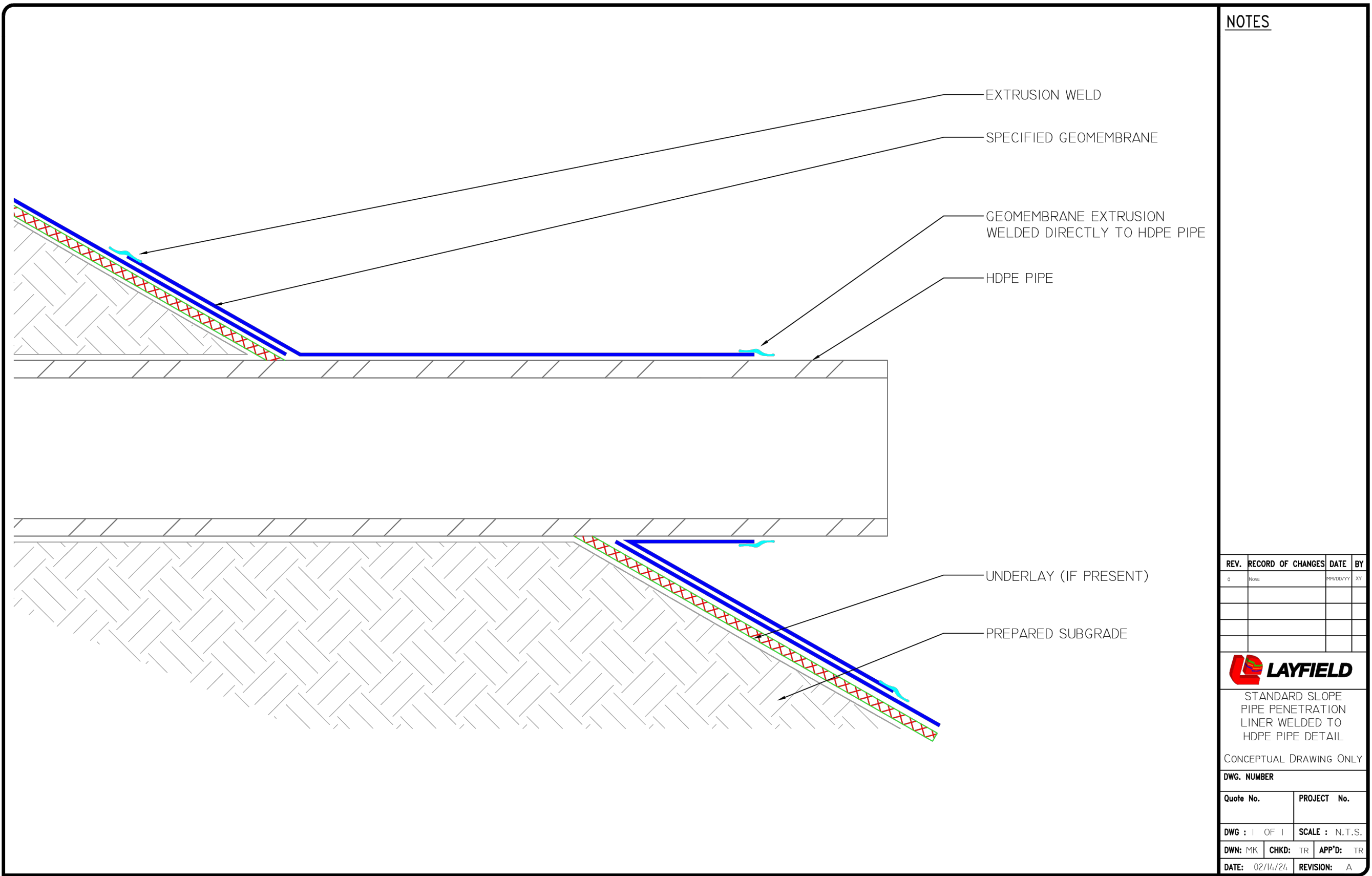
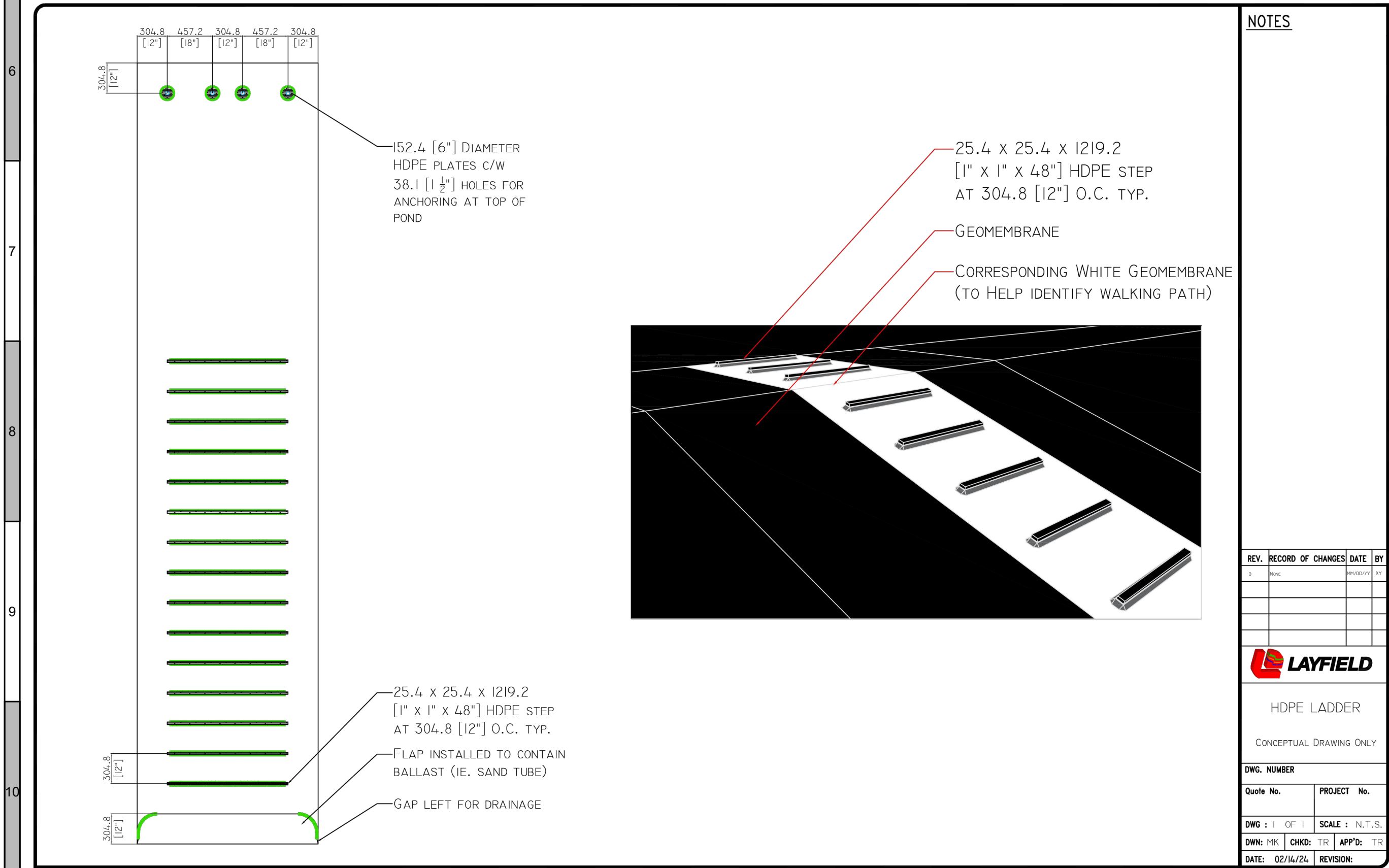
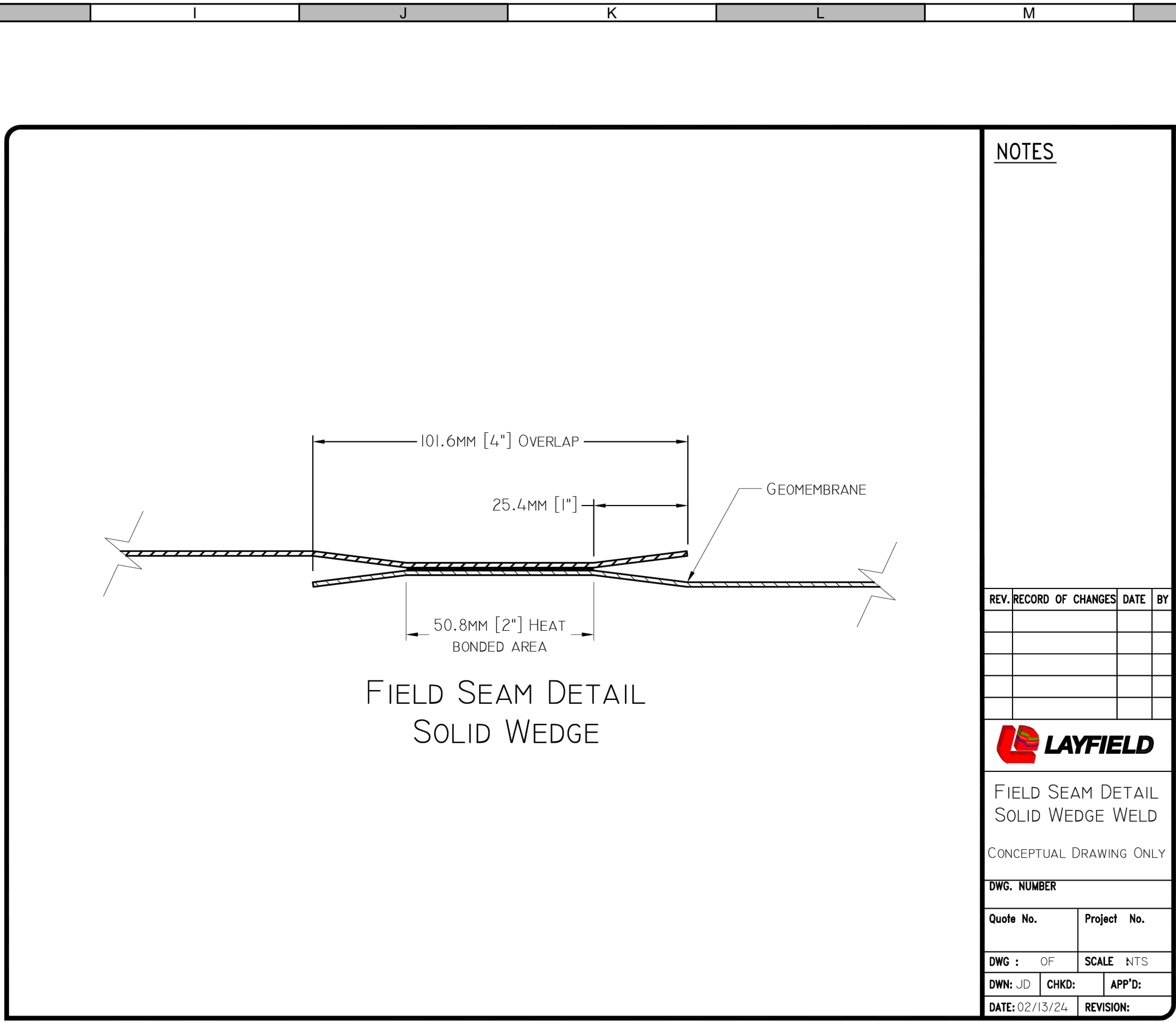
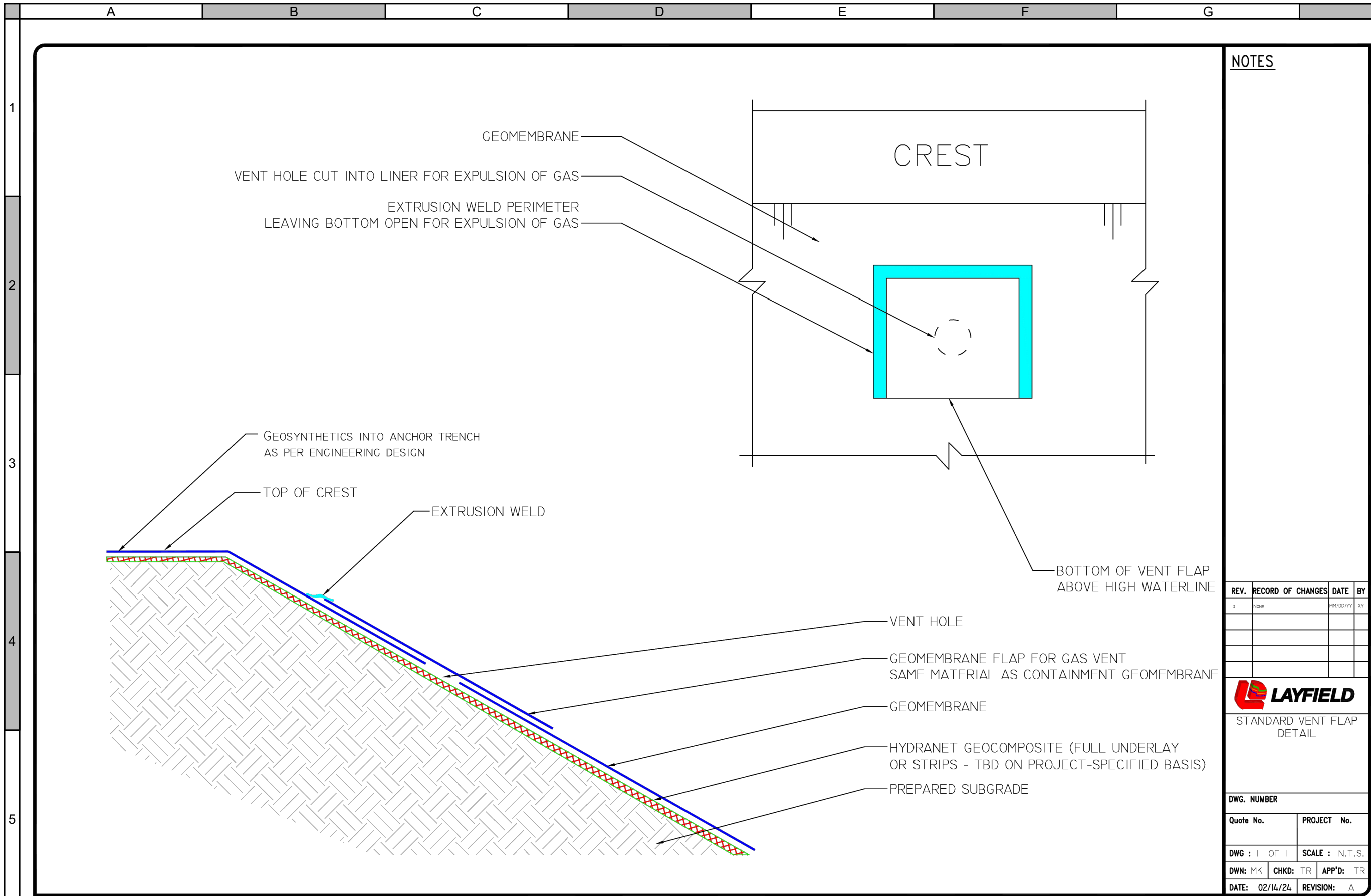
DN
DN/TL
TL

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
DETAILS 2

Sheet Number 25 of 26
Project Number 1306.0120.06
Drawing Number 009-02
Revision 4

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Scale
AS SHOWN

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Designed by
Drawn by

DN
DN/TL
TL

FOOTHILLS OKOTOKS
REGIONAL WATER PROJECT
PHASE 1 RESERVOIR
DETAILS 3

Sheet Number 26 of 26
Project Number Drawing Number Revision
1306.0120.06 009-03 4

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