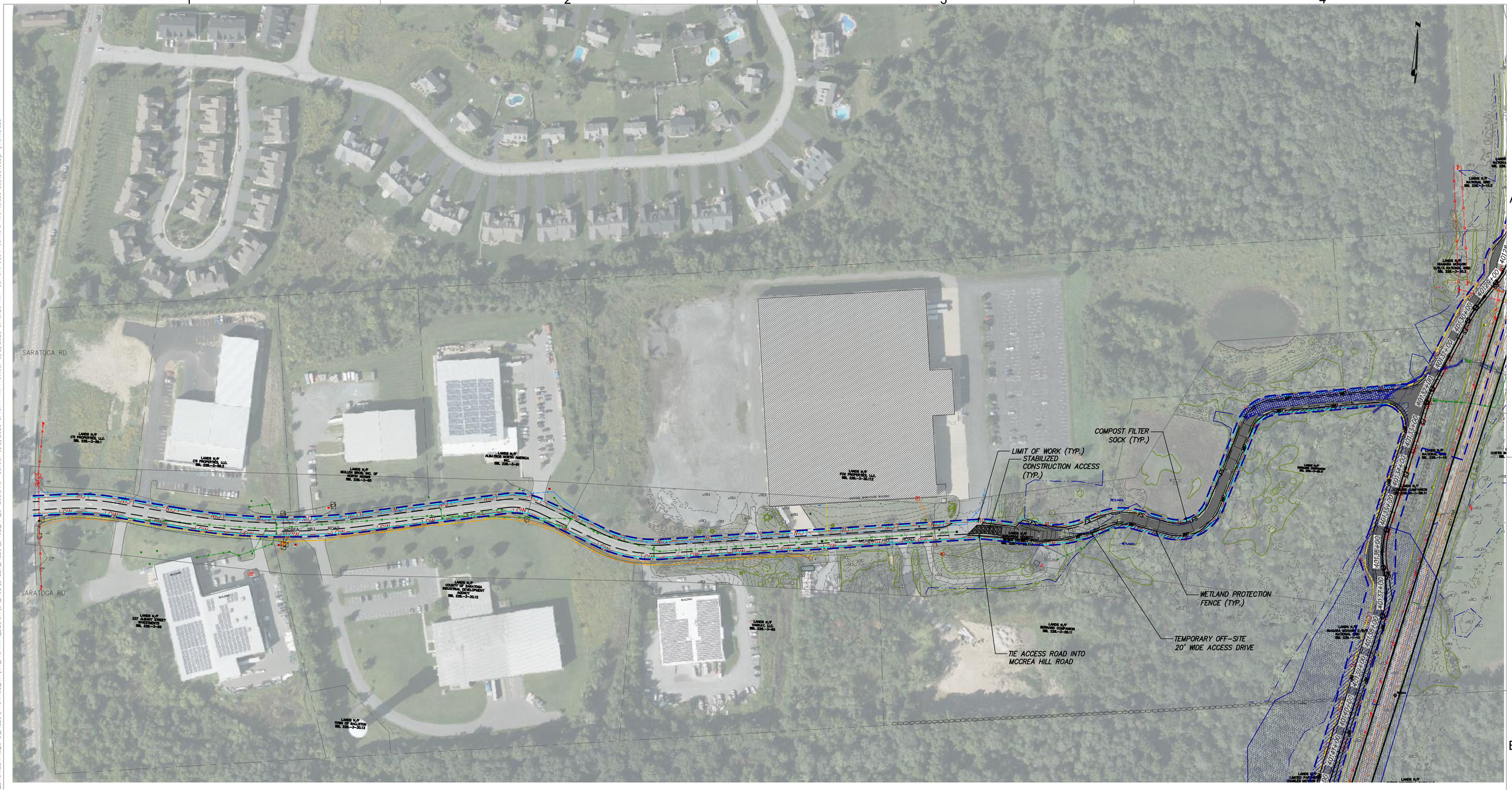
SARATOGA RD
SARATOGA RD
MCCREA HILL ROAD
LIMIT OF WORK (TYP.)
STABILIZED CONSTRUCTION ACCESS (TYP.)
COMPOST FILTER SOCK (TYP.)
WETLAND PROTECTION FENCE (TYP.)
TEMPORARY OFF-SITE 20' WIDE ACCESS DRIVE
TIE ACCESS ROAD INTO MCCREA HILL ROAD
LANDS N/F CT PROPERTIES, LLC. SBL 228-3-36.1
LANDS N/F CT PROPERTIES, LLC. SBL 228-3-36.2
LANDS N/F MULLER BROS. INC. OF NORTH ADAMS SBL 228-3-40
LANDS N/F ALBATROSS NORTH AMERICA INC. SBL 228-3-41
LANDS N/F FOX PROPERTIES, LLC. SBL 228-3-35.112
LANDS N/F COUNTY OF SARATOGA INDUSTRIAL DEVELOPMENT AGENCY SBL 228-3-30.12
LANDS N/F 337 ALBANY STREET INVESTMENTS SBL 228-3-39
LANDS N/F TOWN OF BALLSTON SBL 228-3-30.13
LANDS N/F TWAVAL LLC SBL 228-3-35
LANDS N/F BERNARD COMPANION SBL 228-3-35.11
LANDS N/F NATIONAL GRID SBL 228-3-13.2
LANDS N/F NIAGARA MOHAWK D/B/A NATIONAL GRID SBL 228-3-13.3
LANDS N/F NIAGARA MOHAWK D/B/A NATIONAL GRID SBL 228-3-13.4
LANDS N/F CHARLES MOSER SBL 228-3-13.5
LANDS N/F
401+00
401+50
402+00
402+50
403+00
403+50
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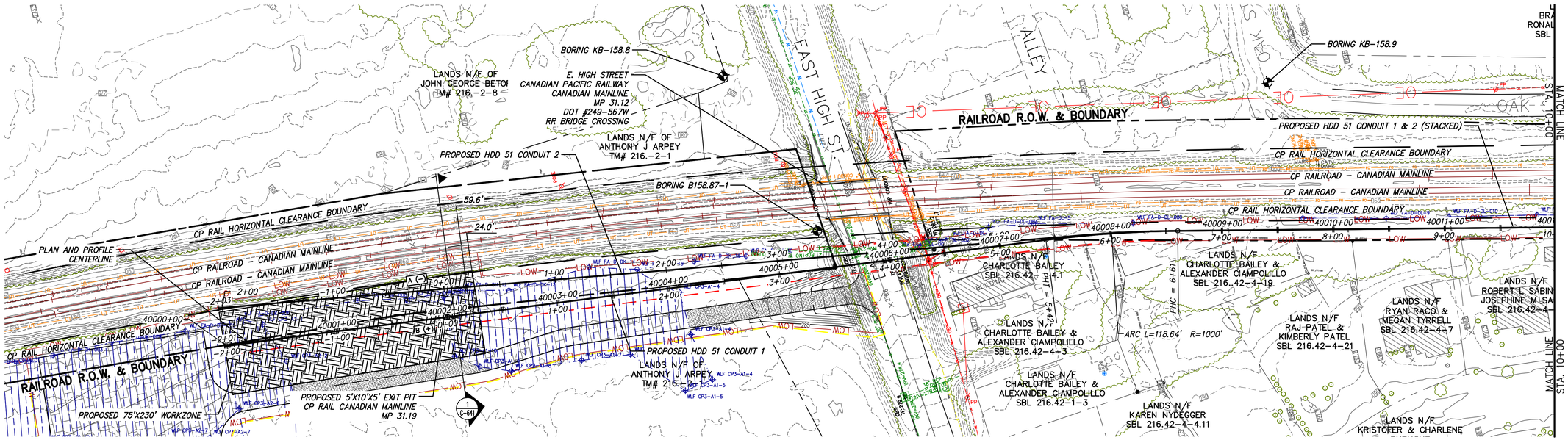
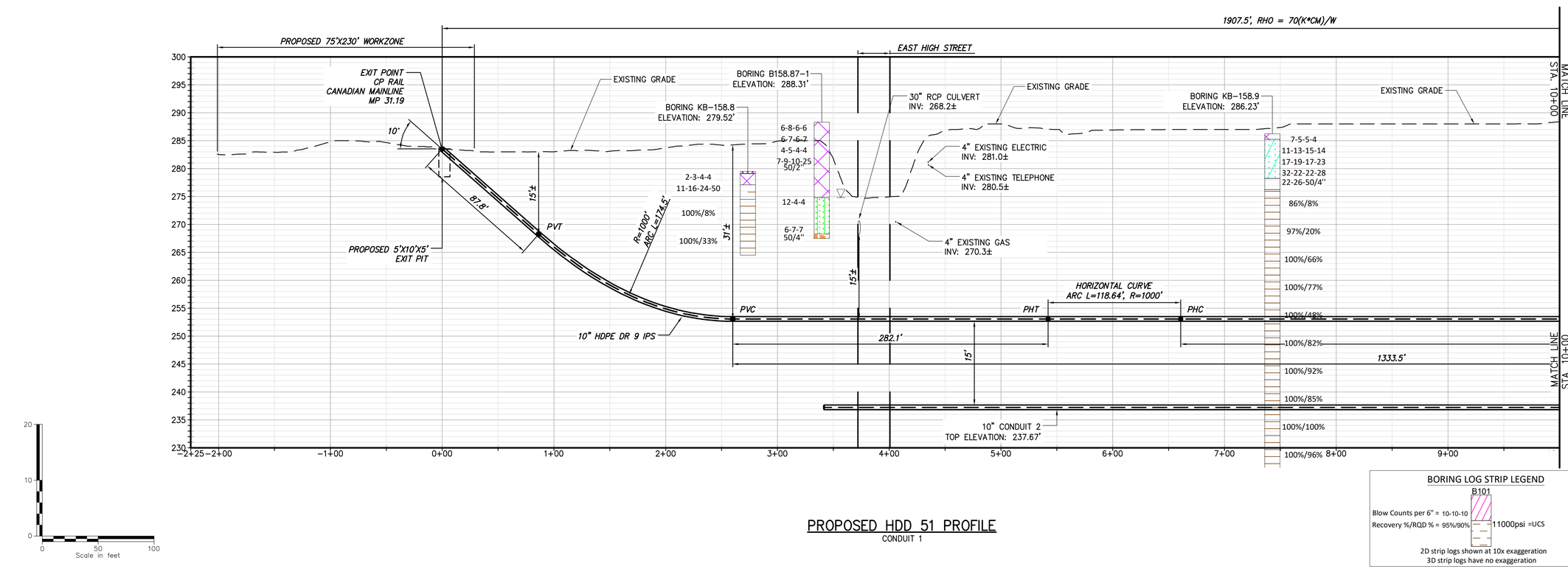


PROPOSED HDD 51 PLAN VIEW

CONDUIT 1



PROPOSED HDD 51 PROFILE

CONDUIT 1

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Legend		
	ASPHALT	Asphalt
	Bedrock	Bedrock
	Boulder	Boulder
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
	CL	Lean CLAY
	CL-ML	SILTY CLAY
	CONCRETE	Concrete
	Fill	Fill
	GC	CLAYEY GRAVEL
	GC-GM	SILTY CLAYEY GRAVEL
	GM	SILTY GRAVEL
	GP	Poorly Graded GRAVEL
	GP-GC	Poorly Graded Gravel with CLAY
	GP-GM	Poorly Graded GRAVEL with SILT
	GW	Well Graded GRAVEL
	GW-GC	Well Graded GRAVEL with CLAY
	GW-GM	Well Graded GRAVEL with SILT
	Limestone	Limestone
	MH	Elastic SILT
	ML	SILT
	OH	ORGANIC Fat CLAY
	OL	ORGANIC Lean CLAY
	OL/OH	ORGANIC SOIL
	PT	PEAT
	Rock	Rock
	Sandstone	Sandstone
	SC	CLAYEY SAND
	SC-SM	SILT, CLAYEY SAND
	SHALE	Shale
	SILTSTONE	Siltstone
	SM	SILTY SAND
	SP	Poorly Graded SAND
	SP-SC	Poorly Graded SAND with CLAY
	SP-SM	Poorly Graded SAND with SILT
	SW	Well graded SAND
	SW-SC	Well Graded SAND with CLAY
	SW-SM	Well Graded SAND with SILT
	Topsoil	Topsoil
	USGS 601	Gravel or Conglomerate 1
	USGS 654	Subgraywacke
	USGS 670	Interbedded Sandstone and Shale
	USGS 702	Quartzite
	USGS 705	Schist
	USGS 705	Schist
	USGS 708	Gneiss
	USGS 708	Gneiss
	USGS 718	Granite 1
	Void	Void
	Water	Water
	Weathered Rock	Undefined
▼	Water Table	Water Table during drilling
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE

PLAN AND PROFILE - HDD 51, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-301

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 8/03/2023 | SH.NO.

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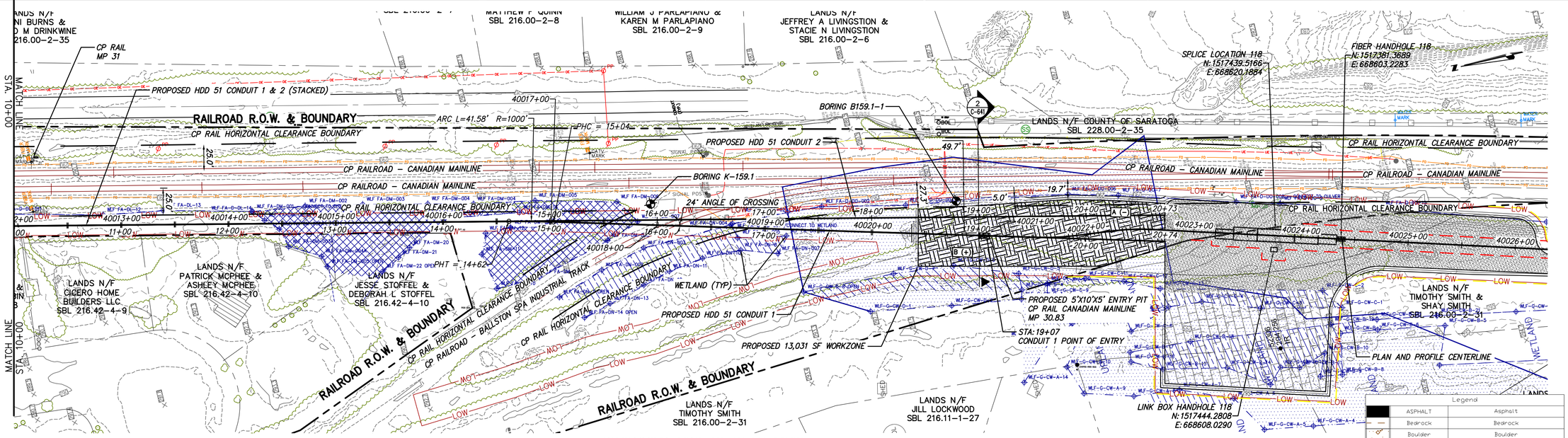
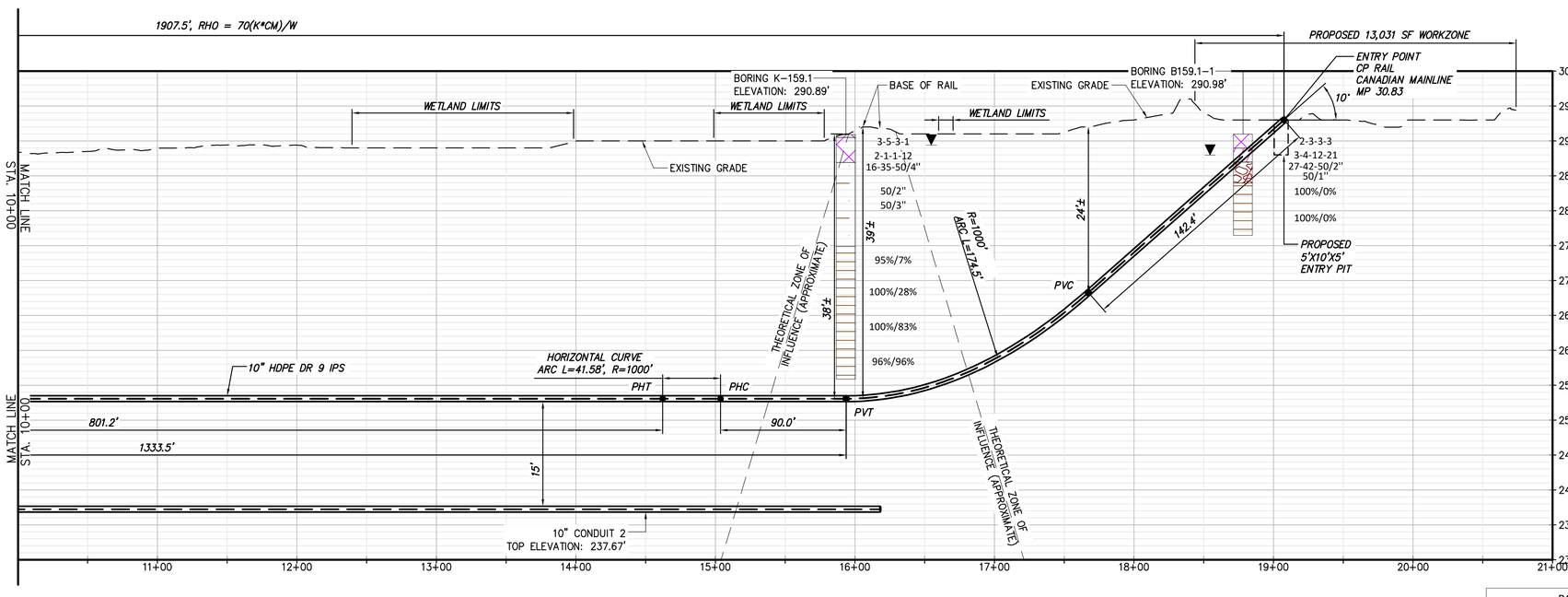


PROPOSED HDD 51 PLAN VIEW

CONDUIT 1



PROPOSED HDD 51 PROFILE

CONDUIT 1

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

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Legend	
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Bedrock	Bedrock
Boulder	Boulder
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CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
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GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
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GP-GM	Poorly Graded GRAVEL with SILT
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OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
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SHALE	Shale
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USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
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USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 51, CONDUIT 1

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-301.1**

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. 1 | SH.NO.

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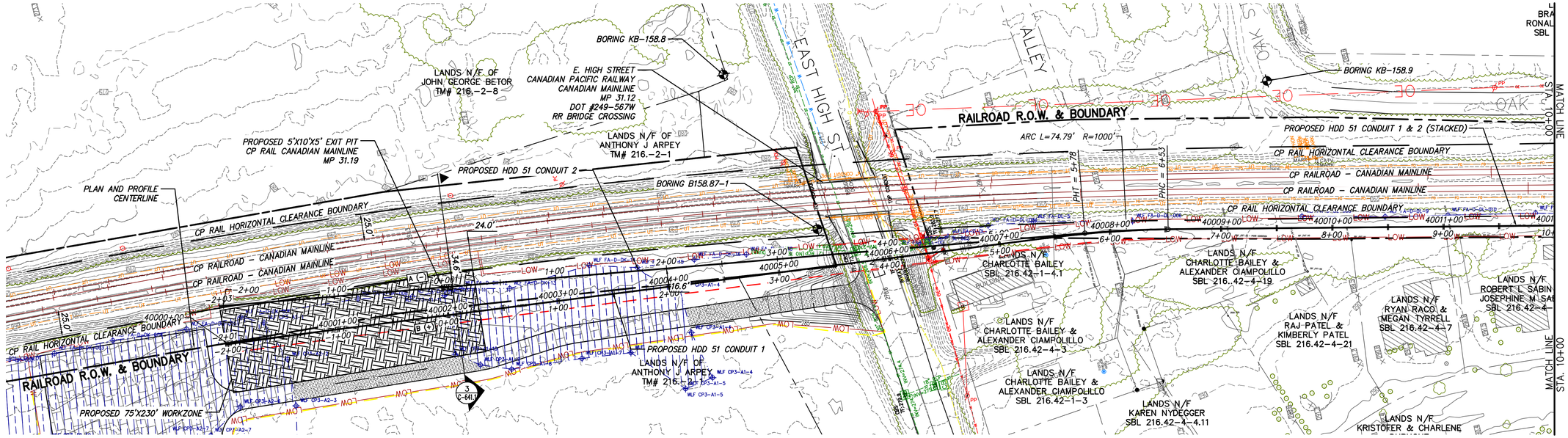
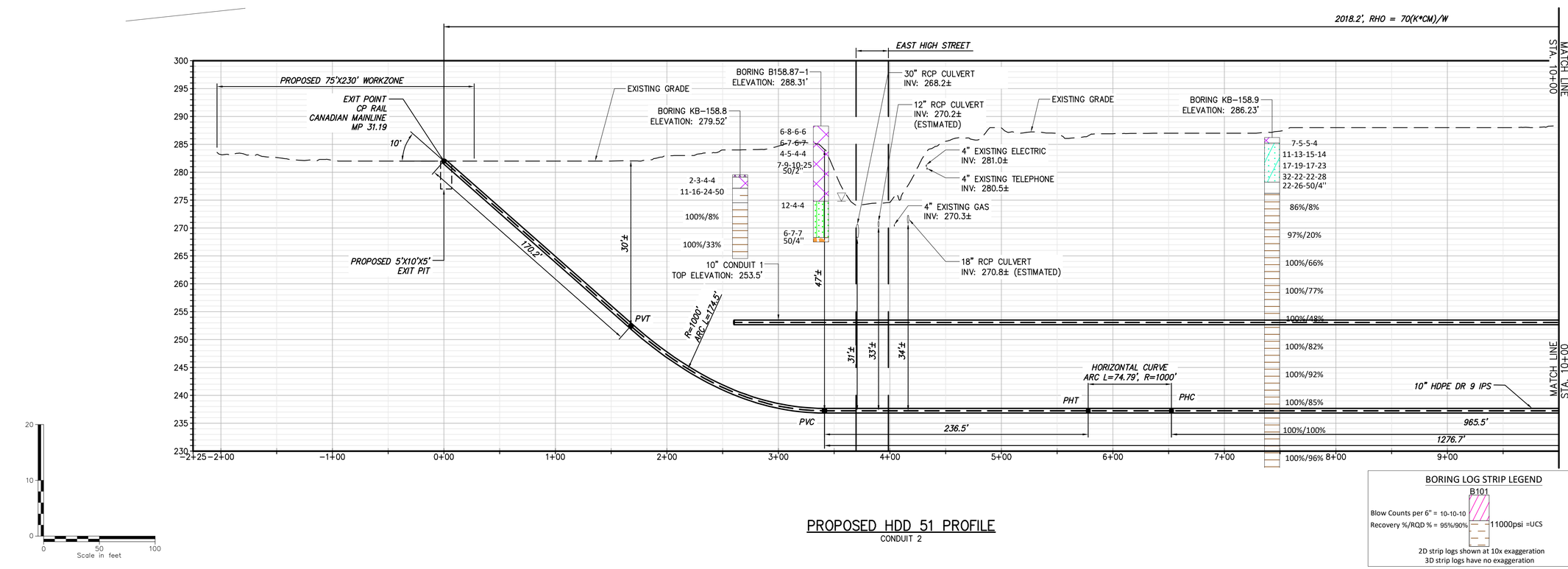


PROPOSED HDD 51 PLAN VIEW

CONDUIT 2



PROPOSED HDD 51 PROFILE

CONDUIT 2

Legend		
	ASPHALT	Asphalt
	Bedrock	Bedrock
	Boulder	Boulder
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
	CL	Lean CLAY
	CL-ML	SILTY CLAY
	CONCRETE	Concrete
	Fill	Fill
	GC	CLAYEY GRAVEL
	GC-GM	SILTY CLAYEY GRAVEL
	GM	SILTY GRAVEL
	GP	Poorly Graded GRAVEL
	GP-GC	Poorly Graded Gravel with CLAY
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	GW-GC	Well Graded GRAVEL with CLAY
	GW-GM	Well Graded GRAVEL with SILT
	Limestone	Limestone
	MH	Elastic SILT
	ML	SILT
	OH	ORGANIC Fat CLAY
	OL	ORGANIC Lean CLAY
	OL/OH	ORGANIC SOIL
	PT	PEAT
	Rock	Rock
	Sandstone	Sandstone
	SC	CLAYEY SAND
	SC-SM	SILT, CLAYEY SAND
	SHALE	Shale
	SILTSTONE	Siltstone
	SM	SILTY SAND
	SP	Poorly Graded SAND
	SP-SC	Poorly Graded SAND with CLAY
	SP-SM	Poorly Graded SAND with SILT
	SW	Well graded SAND
	SW-SC	Well Graded SAND with CLAY
	SW-SM	Well Graded SAND with SILT
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	USGS 702	Quartzite
	USGS 705	Schist
	USGS 705	Schist
	USGS 708	Gneiss
	USGS 708	Gneiss
	USGS 718	Granite 1
	Void	Void
	Water	Water
	Weathered Rock	Undefined
▼	Water Table	Water Table during drilling
▽	Delayed Water Table	Water Table after drilling

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE

PLAN AND PROFILE - HDD 51, CONDUIT 2

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-301A**

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

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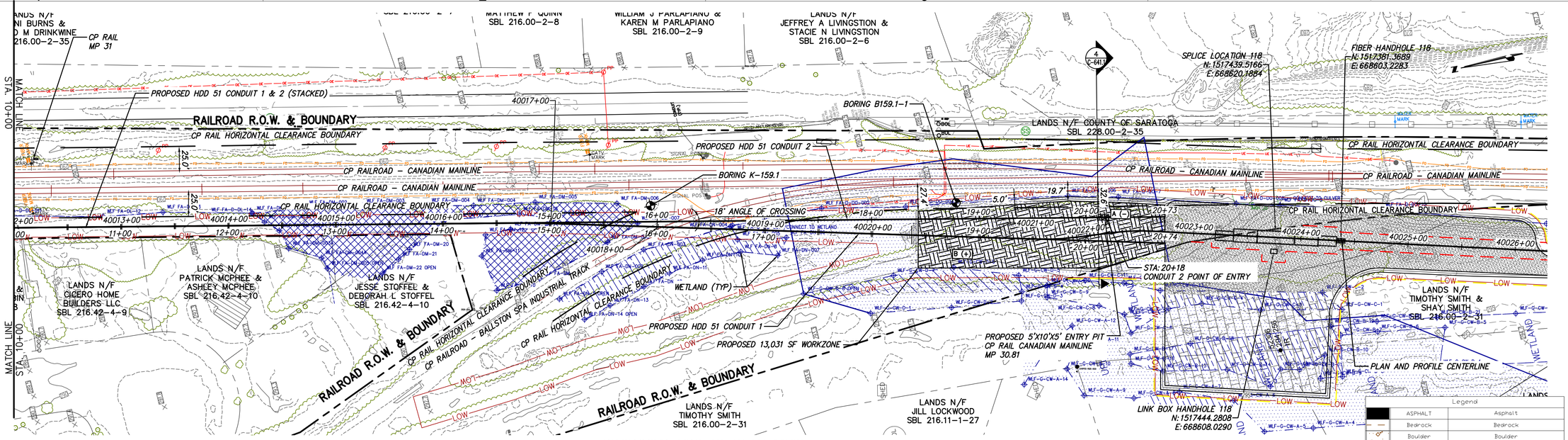
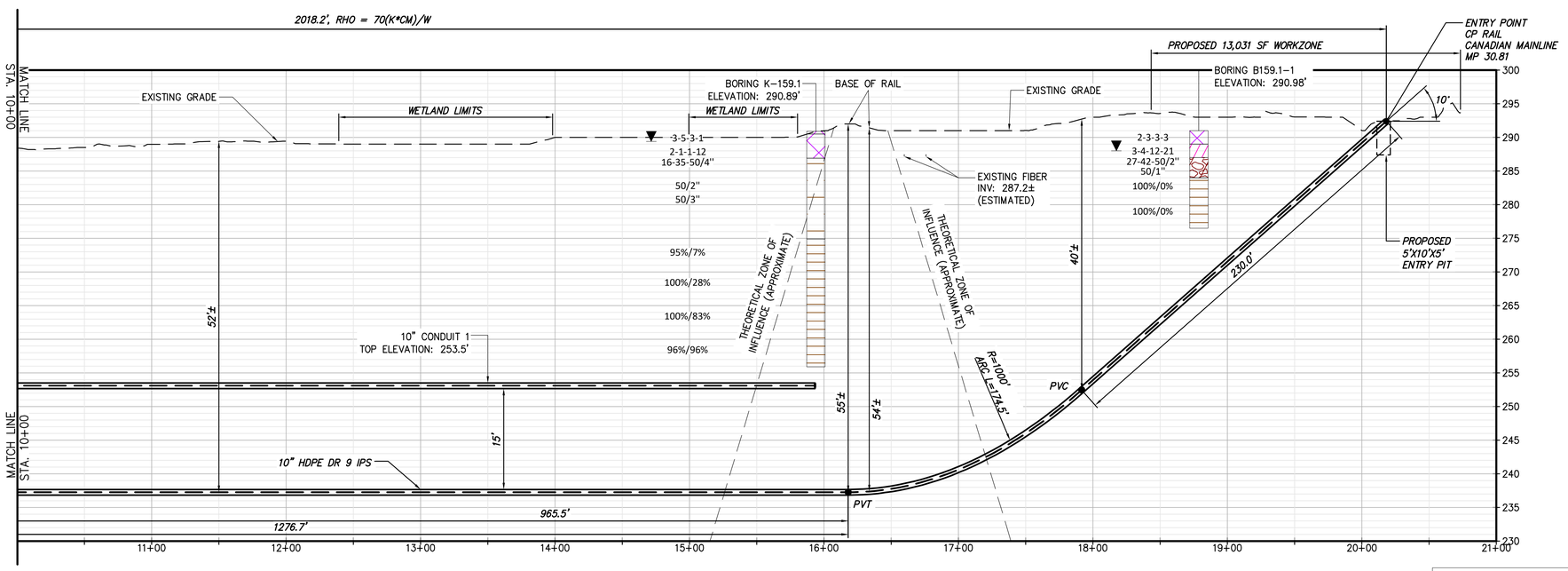


PROPOSED HDD 51 PLAN VIEW

CONDUIT 2



PROPOSED HDD 51 PROFILE

CONDUIT 2

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Legend

ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
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GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
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ML	SILT
OH	ORGANIC Fat CLAY
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OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
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SHALE	Shale
SILTSTONE	Siltstone
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SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
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USGS 702	Quartzite
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USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
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Water Table	Water Table during drilling
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 51, CONDUIT 2

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-301A.1**

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

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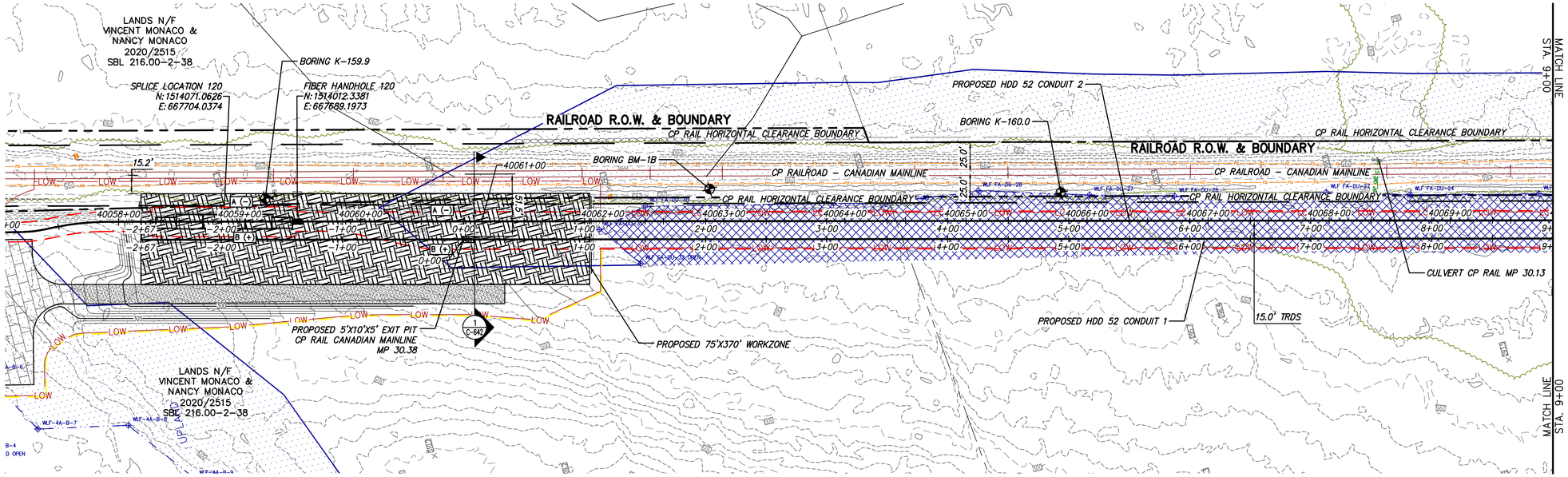
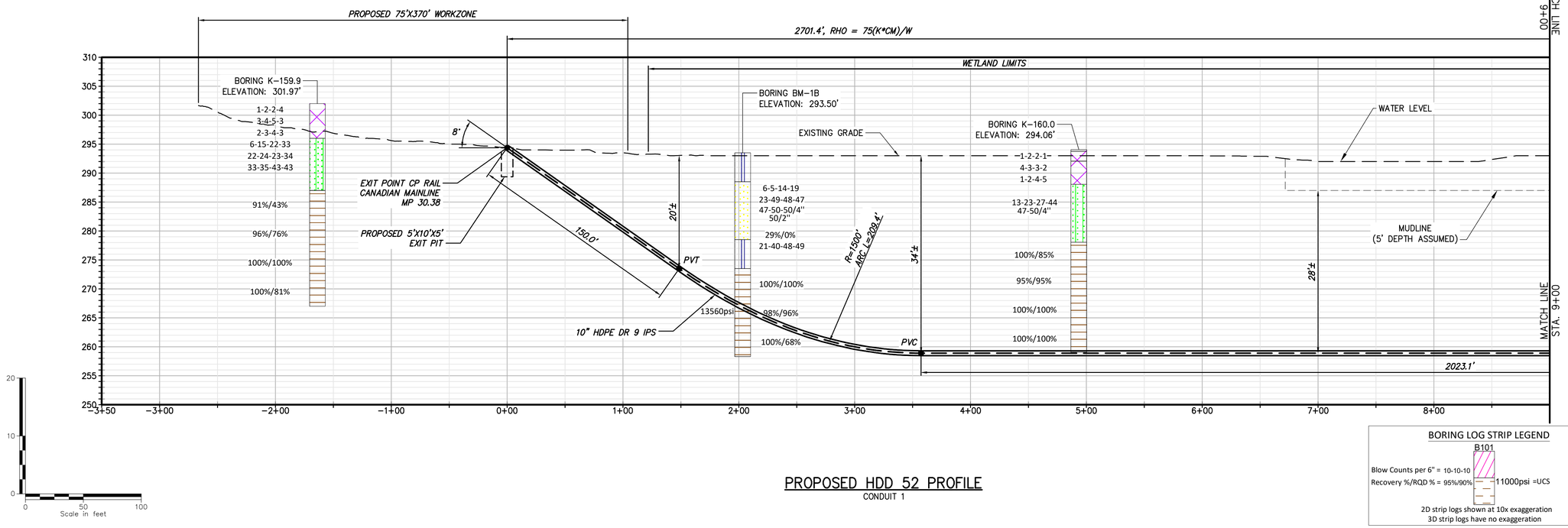


PROPOSED HDD 52 PLAN VIEW

CONDUIT 1



PROPOSED HDD 52 PROFILE

CONDUIT 1

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

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Legend	
ASPHALT	Asphalt
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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	08/03/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 52, CONDUIT 1

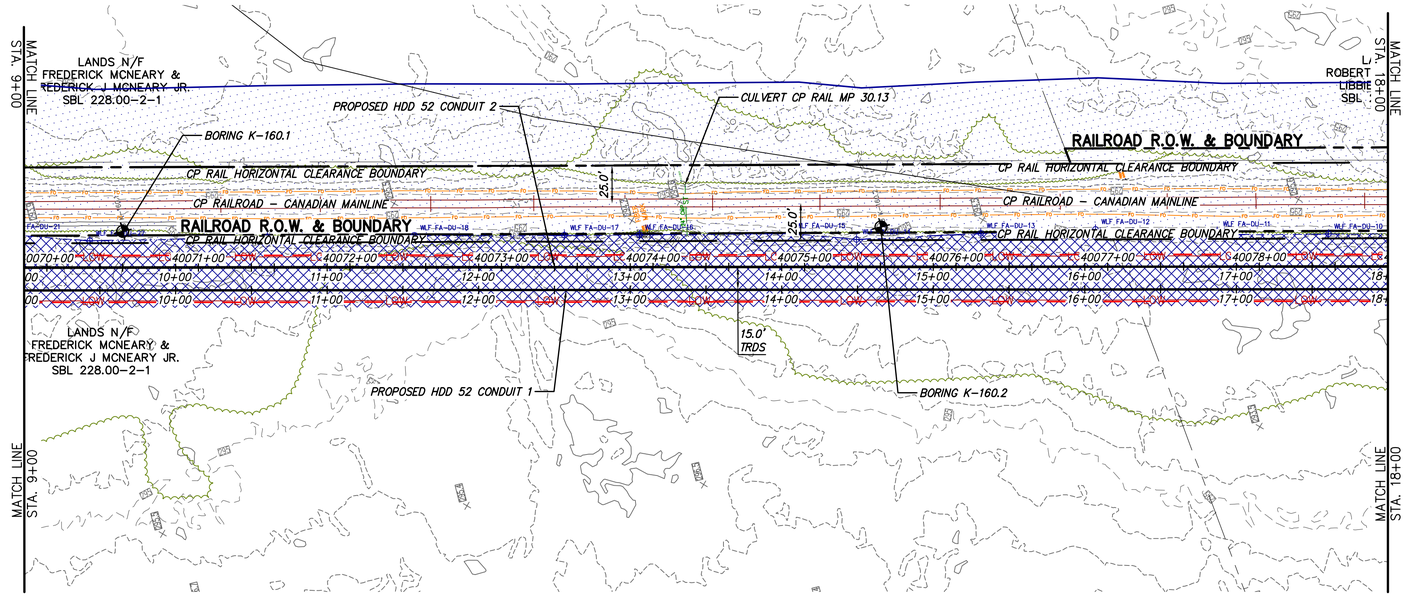
KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-302**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

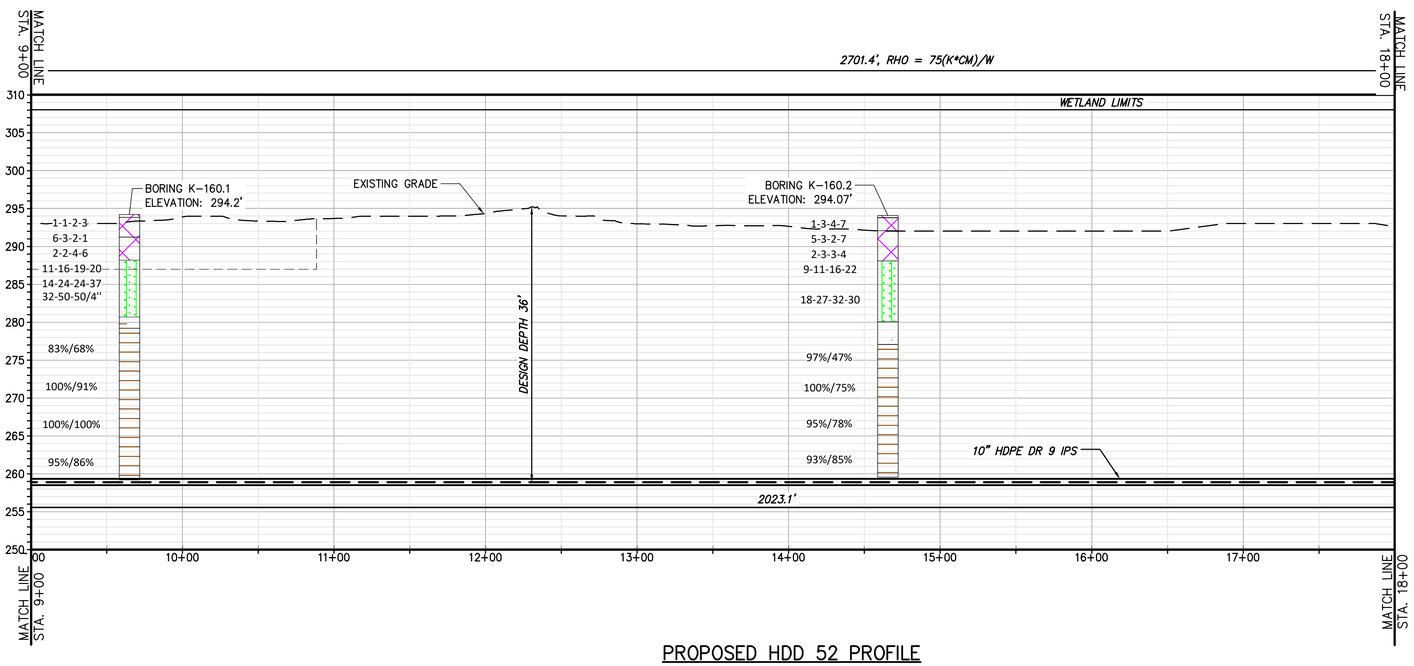
File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 4\DESIGN PACKAGE 4A\066076_4A - C-302_C-302A.2.DWG Saved: 8/1/2023 12:53:43 PM Plotted: 8/1/2023 1:02:25 PM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 52 PLAN VIEW

CONDUIT 1

0 50 100
Scale in feet



PROPOSED HDD 52 PROFILE

CONDUIT 1

0 50 100
Scale in feet

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Legend	
ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
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USGS 601	Gravel or Conglomerate 1
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Void	Void
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CHPE Champlain Hudson Power Express

Kiewit

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE

PLAN AND PROFILE - HDD 52, CONDUIT 1

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-302.1**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

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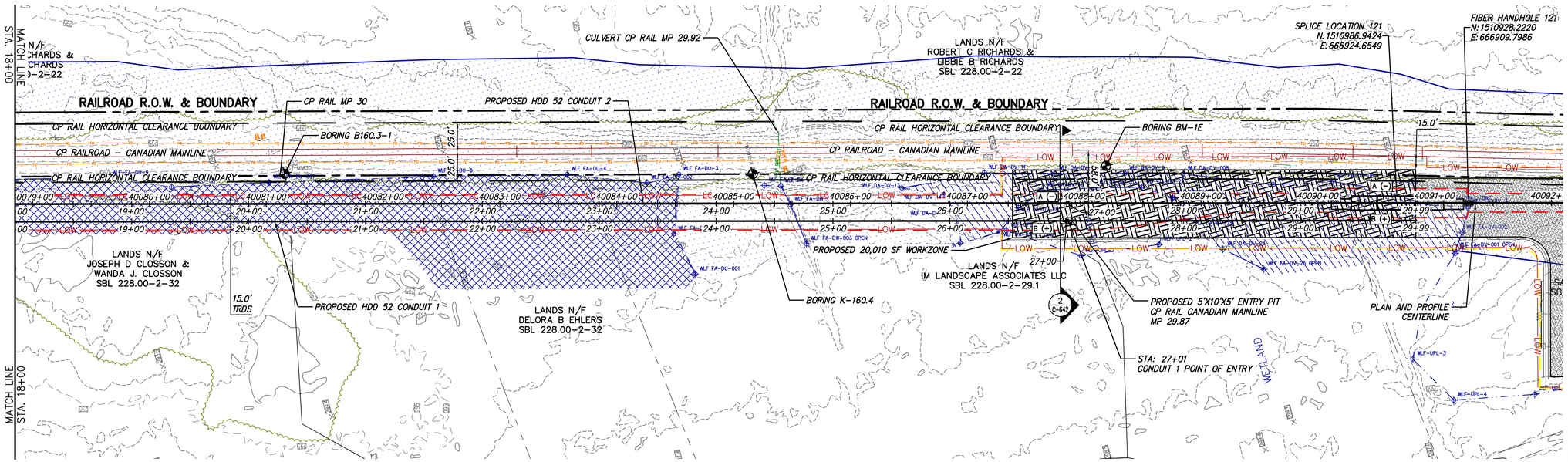
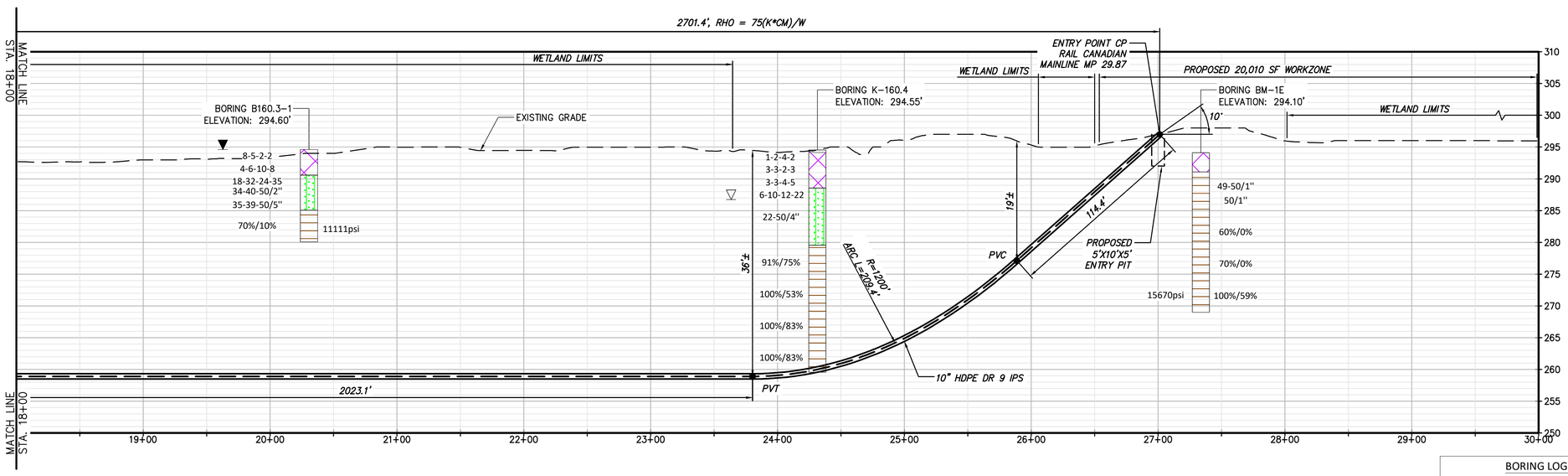


PROPOSED HDD 52 PLAN VIEW

CONDUIT 1



PROPOSED HDD 52 PROFILE

CONDUIT 1

BORING LOG STRIP LEGEND

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 52, CONDUIT 1

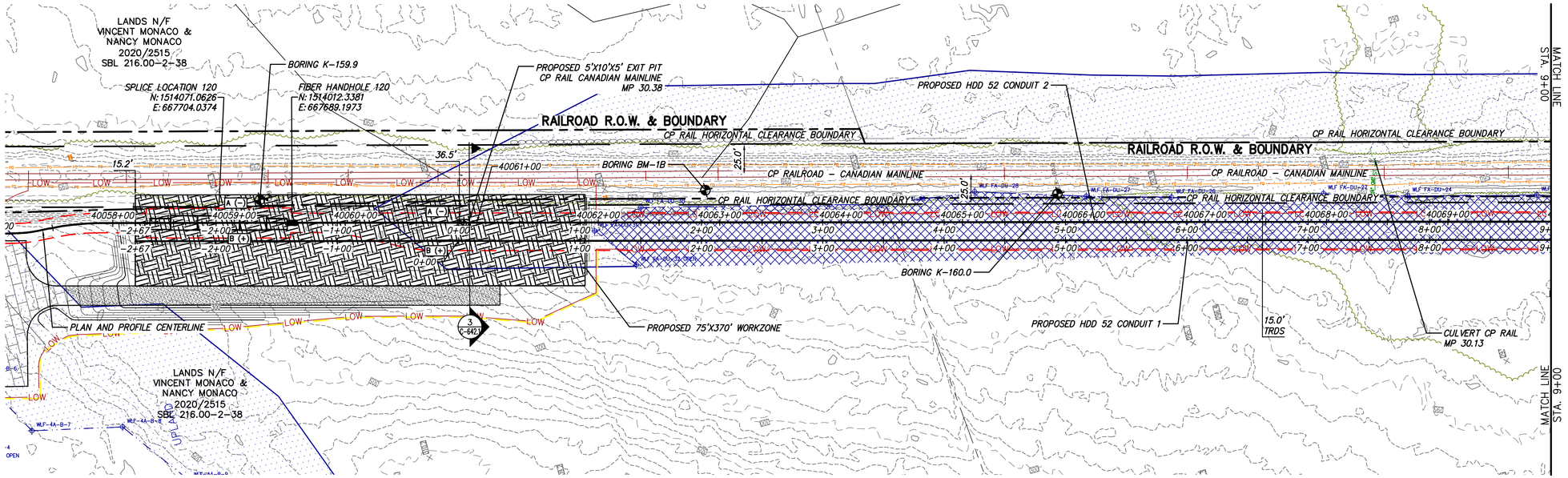
KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-302.2**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 8/03/2023 | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 4\DESIGN PACKAGE 4\066076_4A - C-302_C-302A.2.DWG Saved: 8/1/2023 12:53:43 PM Plotted: 8/1/2023 1:03:56 PM Current User: Snyder, Morgan LastSavedBy: 6043



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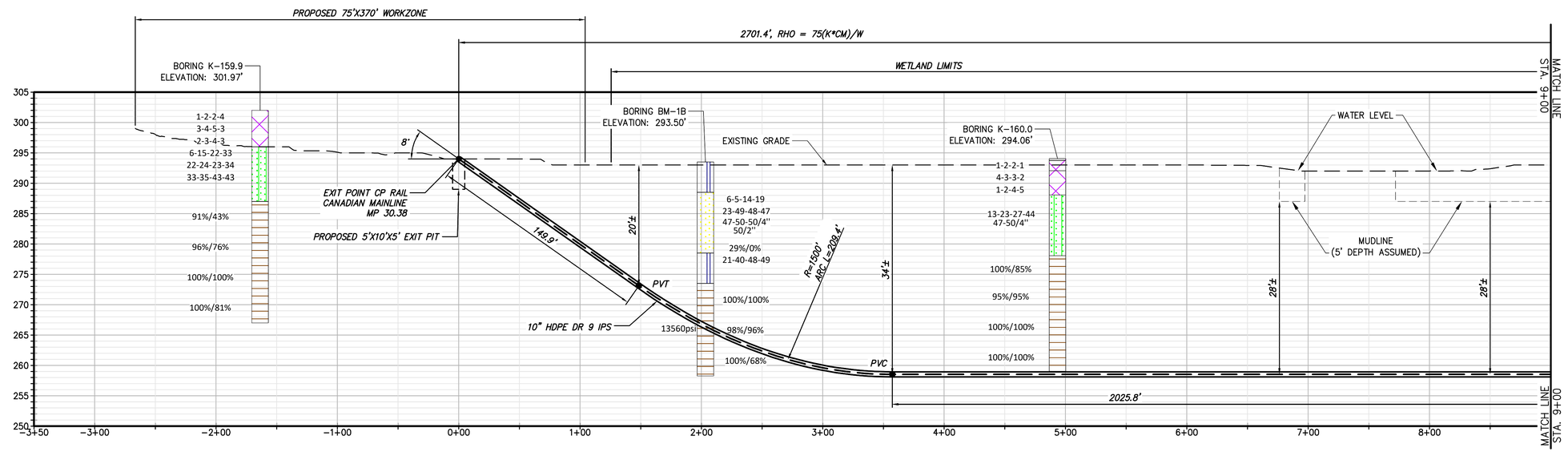
Scale in feet

PROPOSED HDD 52 PLAN VIEW

CONDUIT 2



0 50 100
Scale in feet

PROPOSED HDD 52 PROFILE

CONDUIT 2

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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11000psi =UCS

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 52, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-302A**

DRAWN BY: CJL DESIGNED BY: CJL APPROVED BY: JEO SCALE AS NOTED DATE 8/03/2023 REV. NO. X SH.NO.

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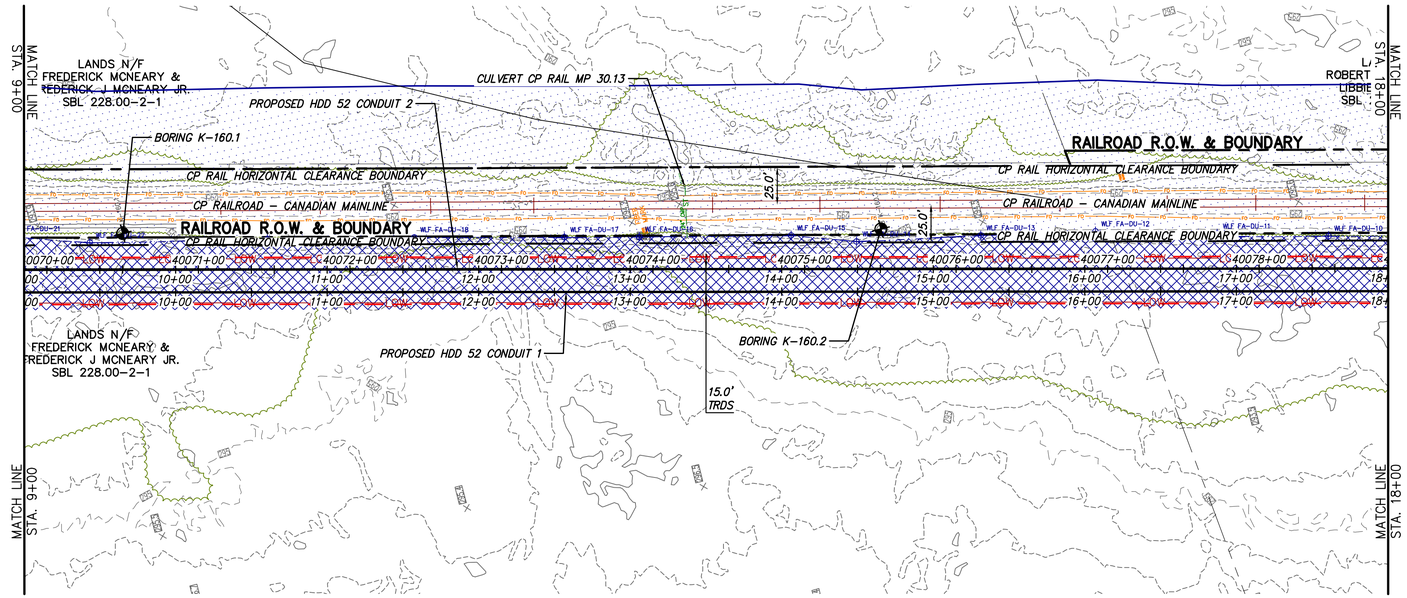
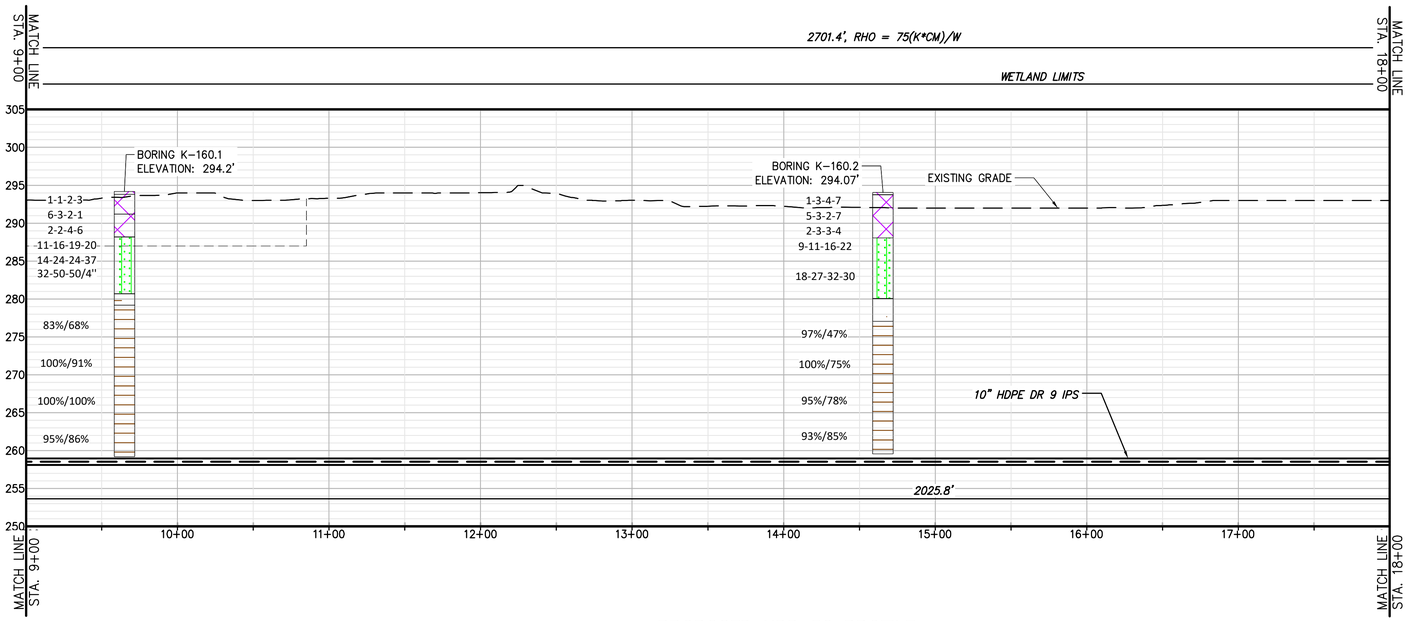


PROPOSED HDD 52 PLAN VIEW

CONDUIT 2



PROPOSED HDD 52 PROFILE

CONDUIT 2

BORING LOG STRIP LEGEND

B101

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0 50 100
Scale in feet

0 50 100
Scale in feet

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Kiewit

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SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 52, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-302A.1**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 8/03/2023 | SH.NO.

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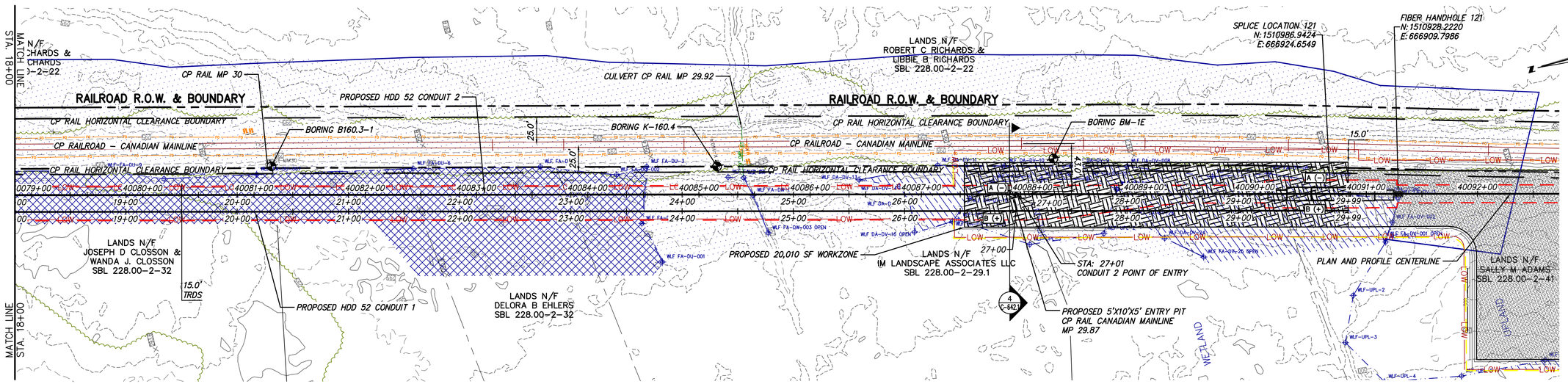
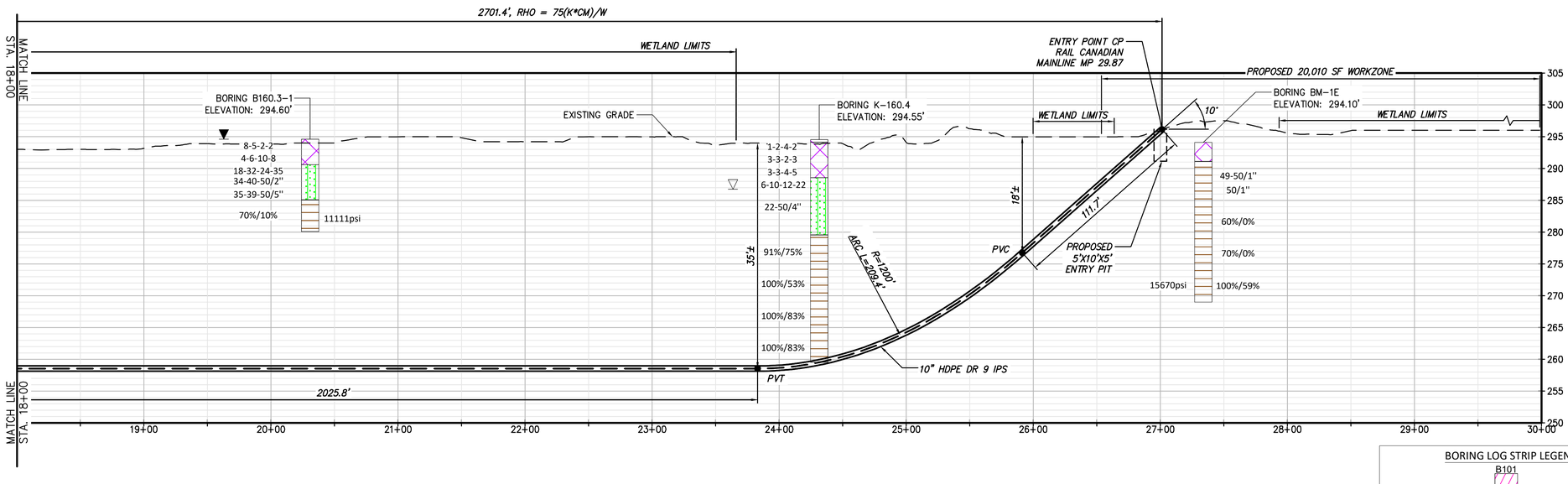


0 50 100
Scale in feet

PROPOSED HDD 52 PLAN VIEW
CONDUIT 2



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CONDUIT 2

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PLAN AND PROFILE - HDD 52, CONDUIT 2

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DRAWING NO. **C-302A.2**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

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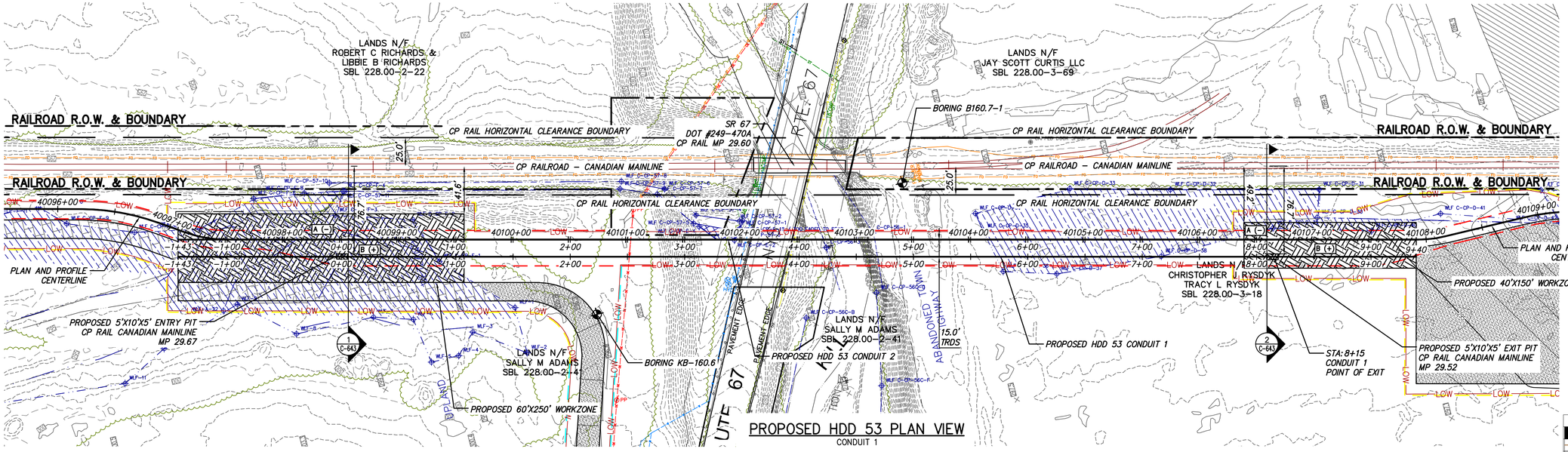
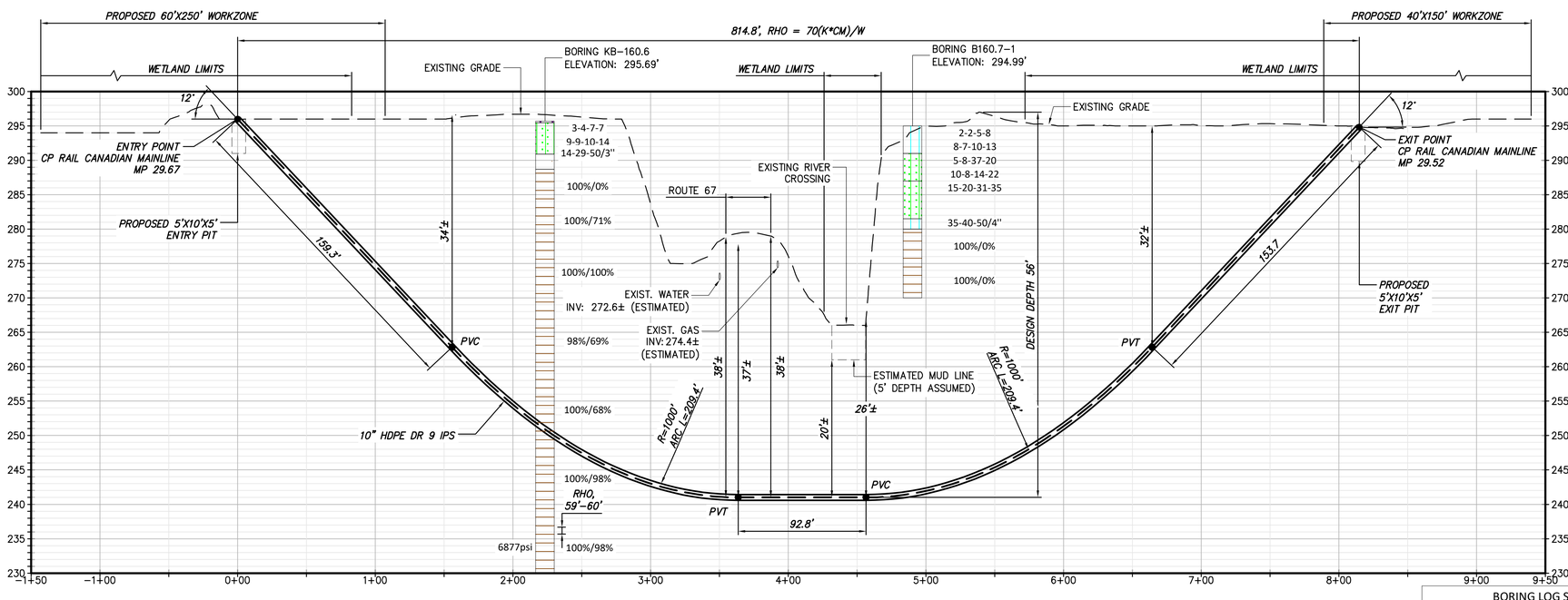


PROPOSED HDD 53 PLAN VIEW

CONDUIT 1

0 50 100
Scale in feet



PROPOSED HDD 53 PROFILE

CONDUIT 1

0 50 100
Scale in feet

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10
Recovery %/RQD % = 95%/90%
11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

Legend

	ASPHALT	Asphalt
	Bedrock	Bedrock
	Boulder	Boulder
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
	CL	Lean CLAY
	CL-ML	SILTY CLAY
	CONCRETE	Concrete
	Fill	Fill
	GC	CLAYEY GRAVEL
	GC-GM	SILTY CLAYEY GRAVEL
	GM	SILTY GRAVEL
	GP	Poorly Graded GRAVEL
	GP-GC	Poorly Graded Gravel with CLAY
	GP-GM	Poorly Graded GRAVEL with SILT
	GW	Well Graded GRAVEL
	GW-GC	Well Graded GRAVEL with CLAY
	GW-GM	Well Graded GRAVEL with SILT
	Limestone	Limestone
	MH	Elastic SILT
	ML	SILT
	OH	ORGANIC Fat CLAY
	OL	ORGANIC Lean CLAY
	OL/OH	ORGANIC SOIL
	PT	PEAT
	Rock	Rock
	Sandstone	Sandstone
	SC	CLAYEY SAND
	SC-SM	SILT, CLAYEY SAND
	SHALE	Shale
	SILTSTONE	Siltstone
	SM	SILTY SAND
	SP	Poorly Graded SAND
	SP-SC	Poorly Graded SAND with CLAY
	SP-SM	Poorly Graded SAND with SILT
	SW	Well graded SAND
	SW-SC	Well Graded SAND with CLAY
	SW-SM	Well Graded SAND with SILT
	Topsoil	Topsoil
	USGS 601	Gravel or Conglomerate 1
	USGS 654	Subgraywacke
	USGS 670	Interbedded Sandstone and Shale
	USGS 702	Quartzite
	USGS 705	Schist
	USGS 705	Schist
	USGS 708	Gneiss
	USGS 708	Gneiss
	USGS 718	Granite 1
	Void	Void
	Water	Water
	Weathered Rock	Undefined
▼	Water Table	Water Table during drilling
▽	Delayed Water Table	Water Table after drilling

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	08/03/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 53, CONDUIT 1

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-303**

DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

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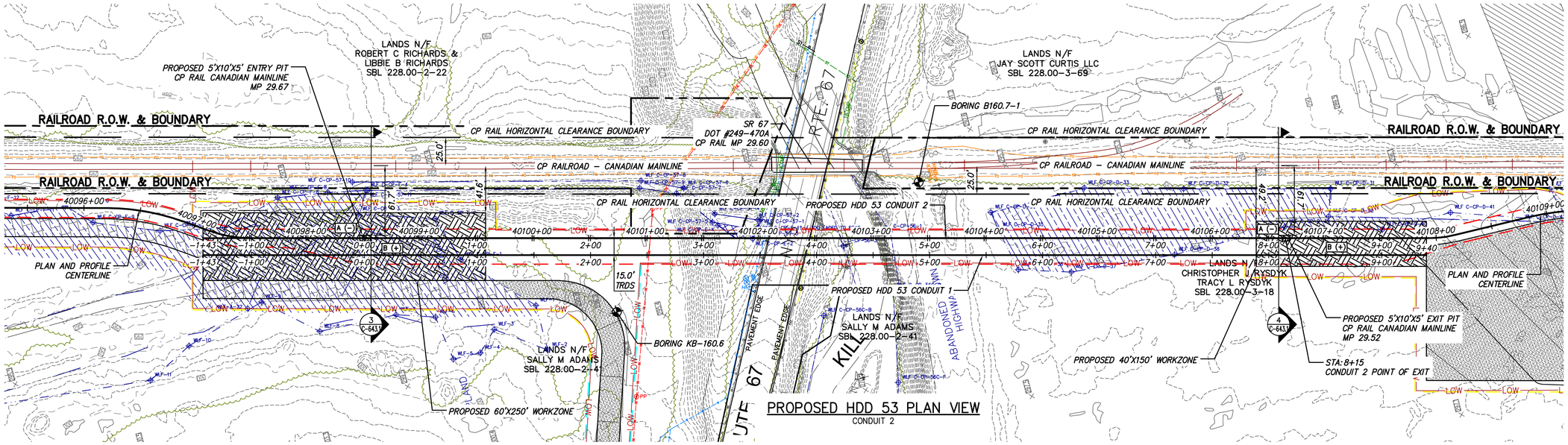
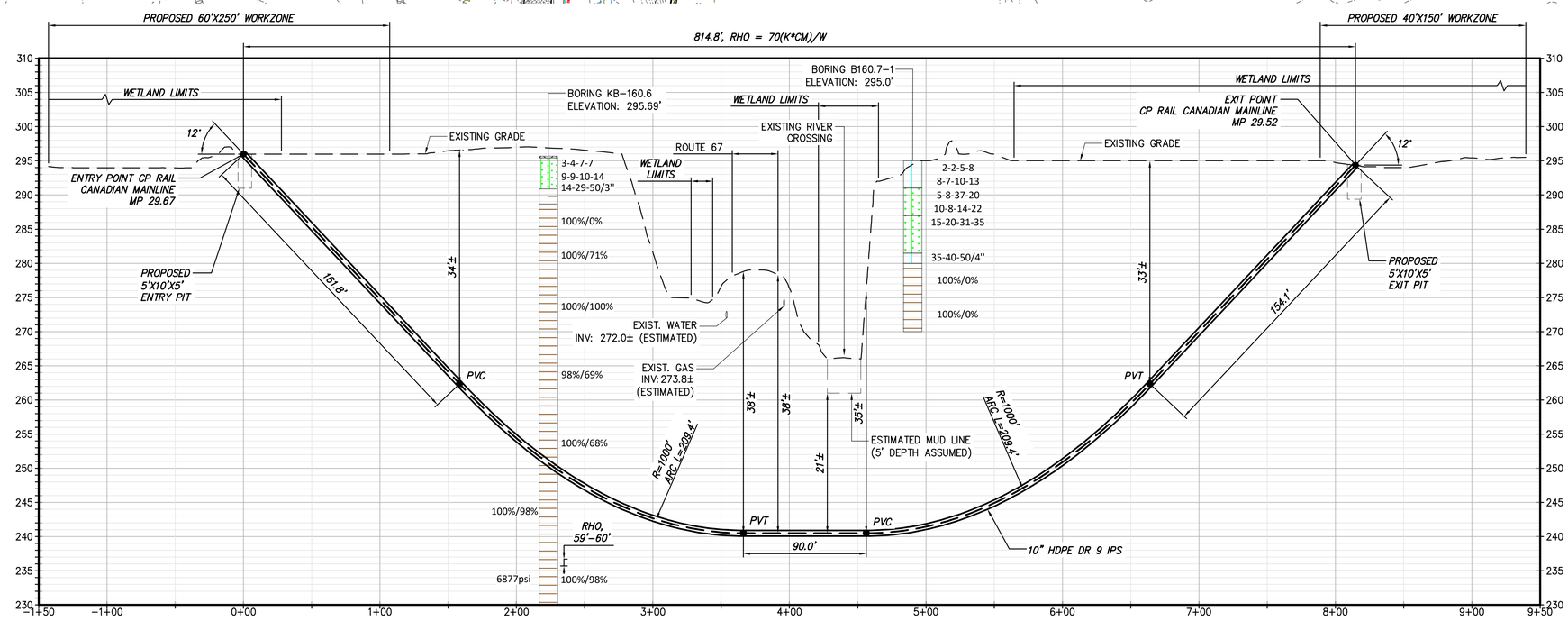


PROPOSED HDD 53 PLAN VIEW

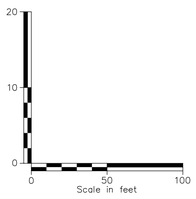
CONDUIT 2

0 50 100
Scale in feet



PROPOSED HDD 53 PROFILE

CONDUIT 2



BORING LOG STRIP LEGEND

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	ML	SILT
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	PT	PEAT
	Rock	Rock
	Sandstone	Sandstone
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	SC-SM	SILT, CLAYEY SAND
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	USGS 670	Interbedded Sandstone and Shale
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	USGS 705	Schist
	USGS 705	Schist
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 53, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-303A**

DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 8/03/2023 | SH.NO.

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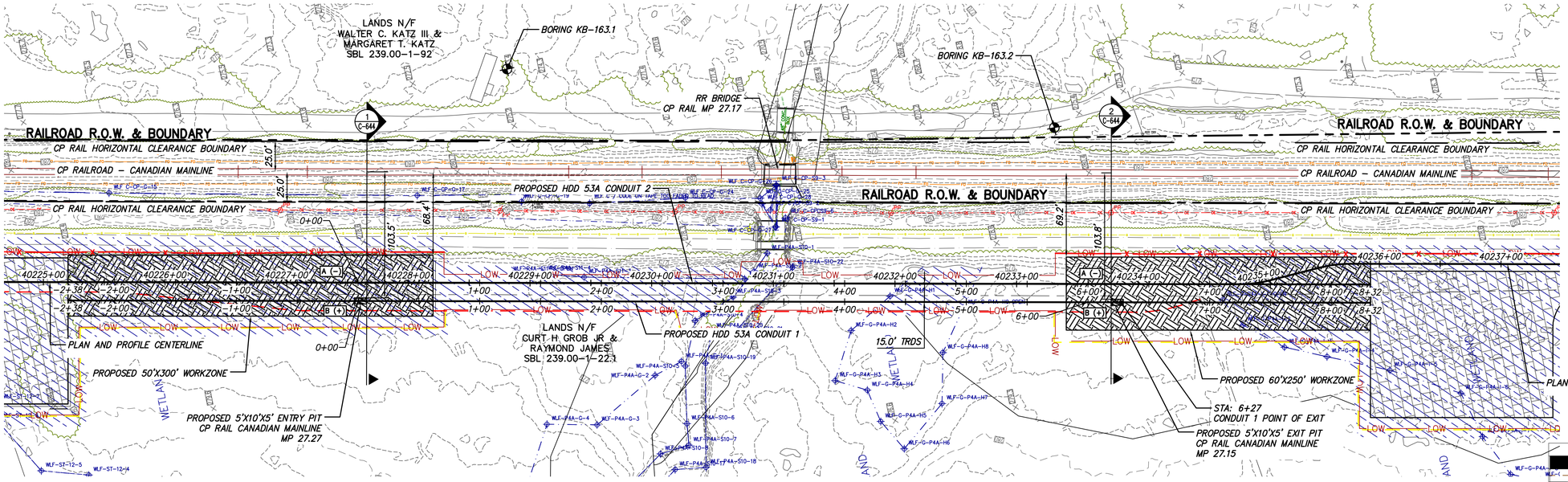
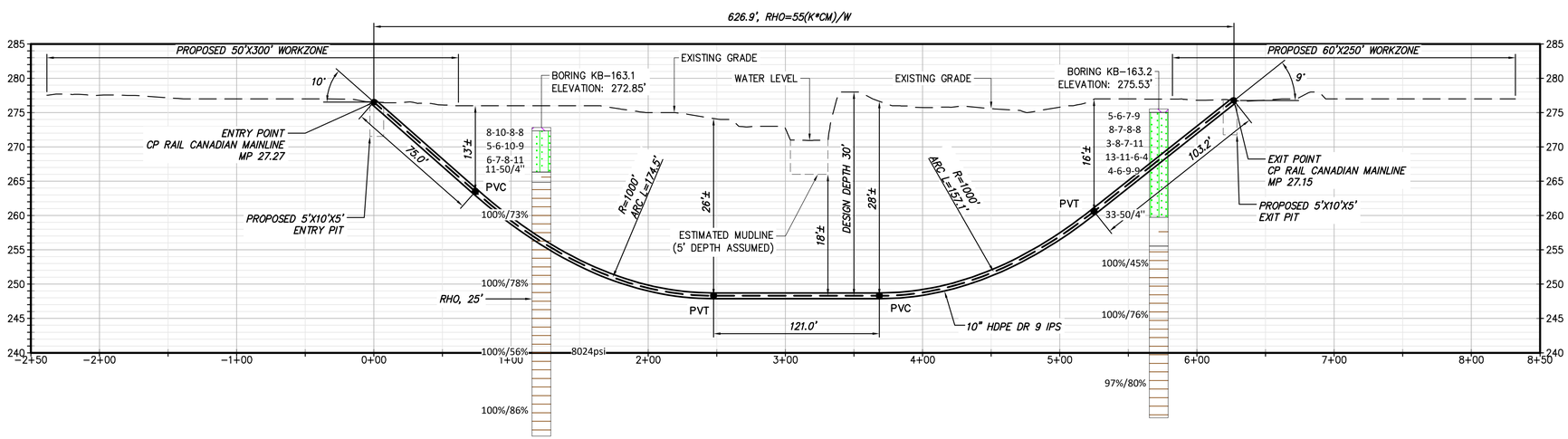


PROPOSED HDD 53A PLAN VIEW

CONDUIT 1



PROPOSED HDD 53A PROFILE

CONDUIT 1

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

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3D strip logs have no exaggeration

Legend

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Bedrock	Bedrock
Boulder	Boulder
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CH-MH	SILTY Fat CLAY
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CL-ML	SILTY CLAY
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ML	SILT
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USGS 708	Gneiss
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 53A, CONDUIT 1

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-304**

DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 8/03/2023 | SH.NO. XXX

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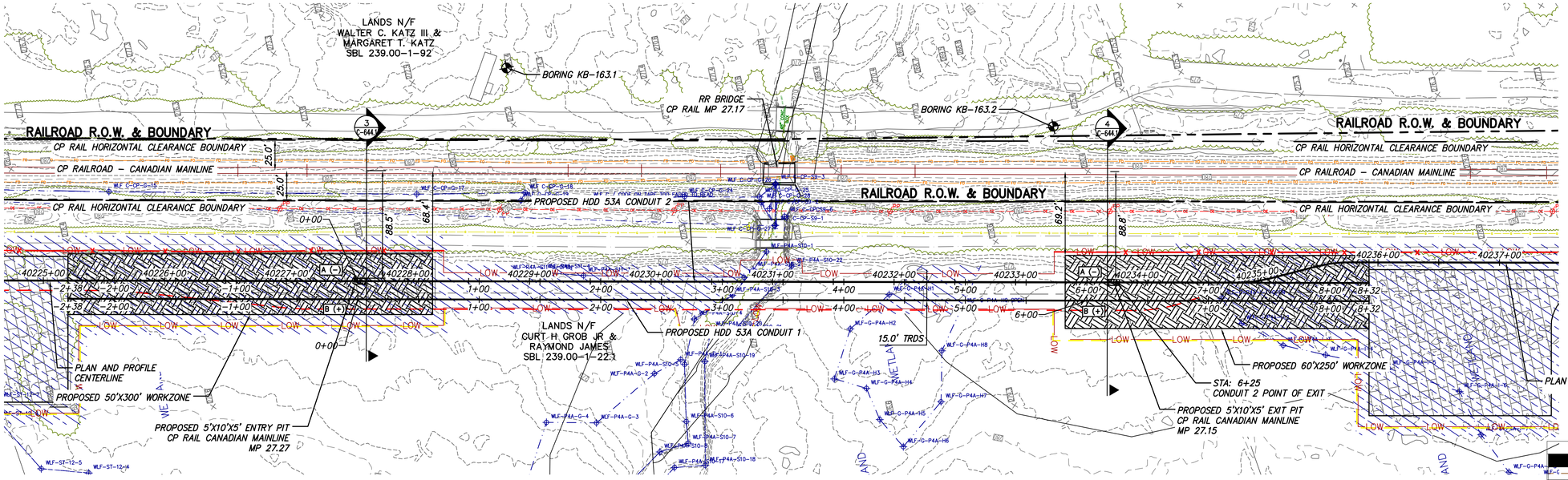
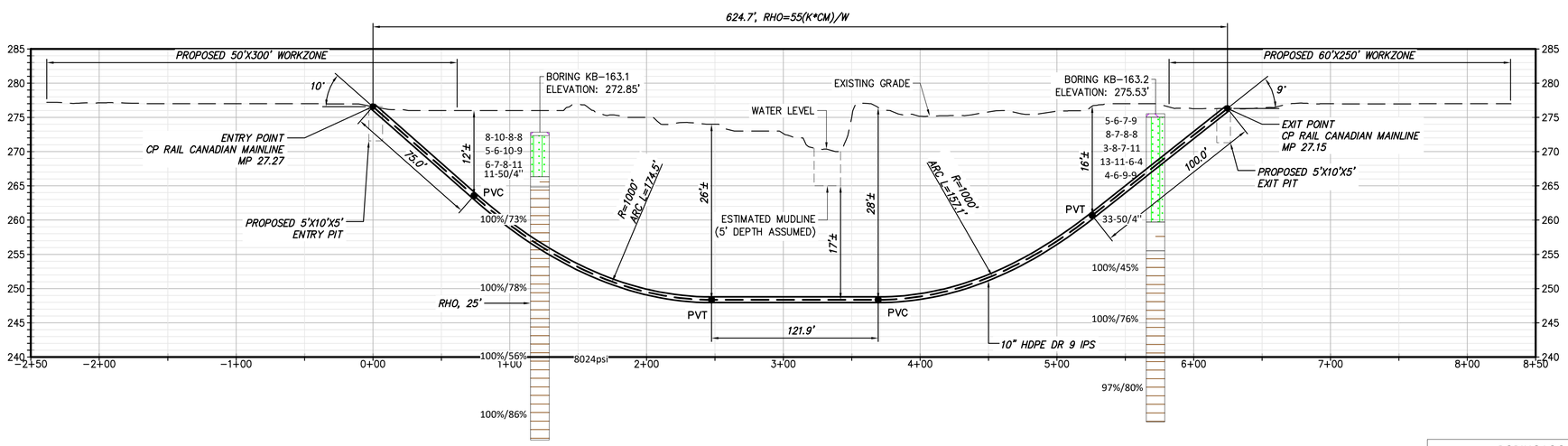


0 50 100
Scale in feet

PROPOSED HDD 53A PLAN VIEW
CONDUIT 2



PROPOSED HDD 53A PROFILE
CONDUIT 2

20 10 0
0 50 100
Scale in feet

BORING LOG STRIP LEGEND

B101

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SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
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USGS 708	Gneiss
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Void	Void
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Weathered Rock	Undefined
Water Table	Water Table during drilling
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 53A, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-304A**

DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 8/03/2023 | SH.NO.

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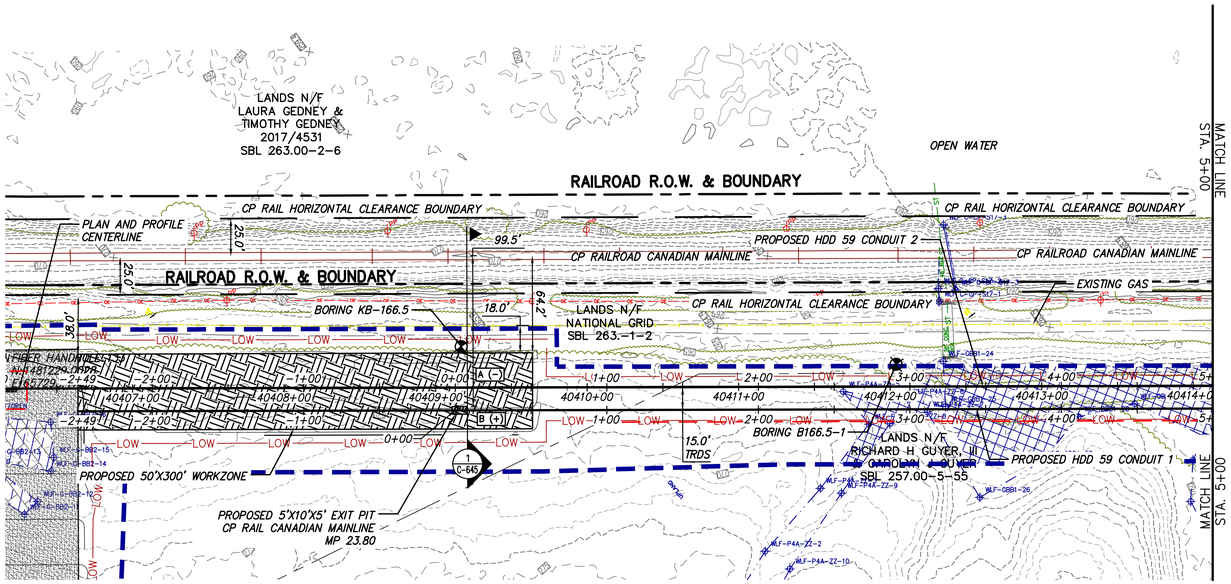
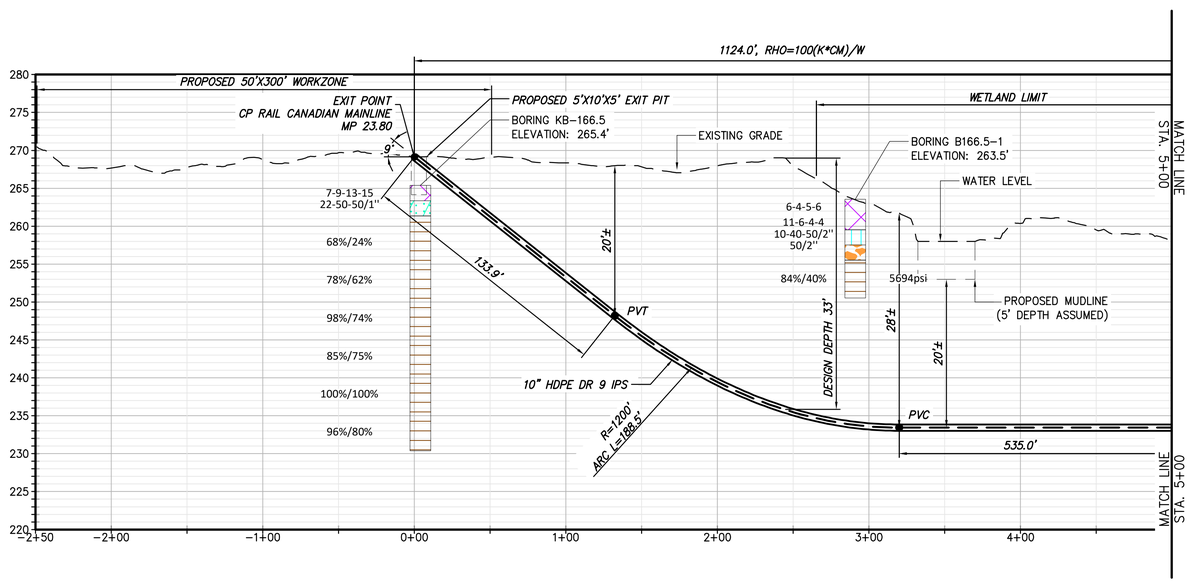


0 50 100
Scale in feet

PROPOSED HDD 59 PLAN VIEW

CONDUIT 1



PROPOSED HDD 59 PROFILE

CONDUIT 1

0 50 100
Scale in feet

Legend		
	ASPHALT	Asphalt
	Bedrock	Bedrock
	Boulder	Boulder
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
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	USGS 708	Gneiss
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	Weathered Rock	Undefined
▼	Water Table	Water Table during drilling
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59, CONDUIT 1

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-305**

DRAWN BY: CJL DESIGNED BY: CJL APPROVED BY: JEO SCALE AS NOTED DATE 8/03/2023 REV. NO. X SH.NO.

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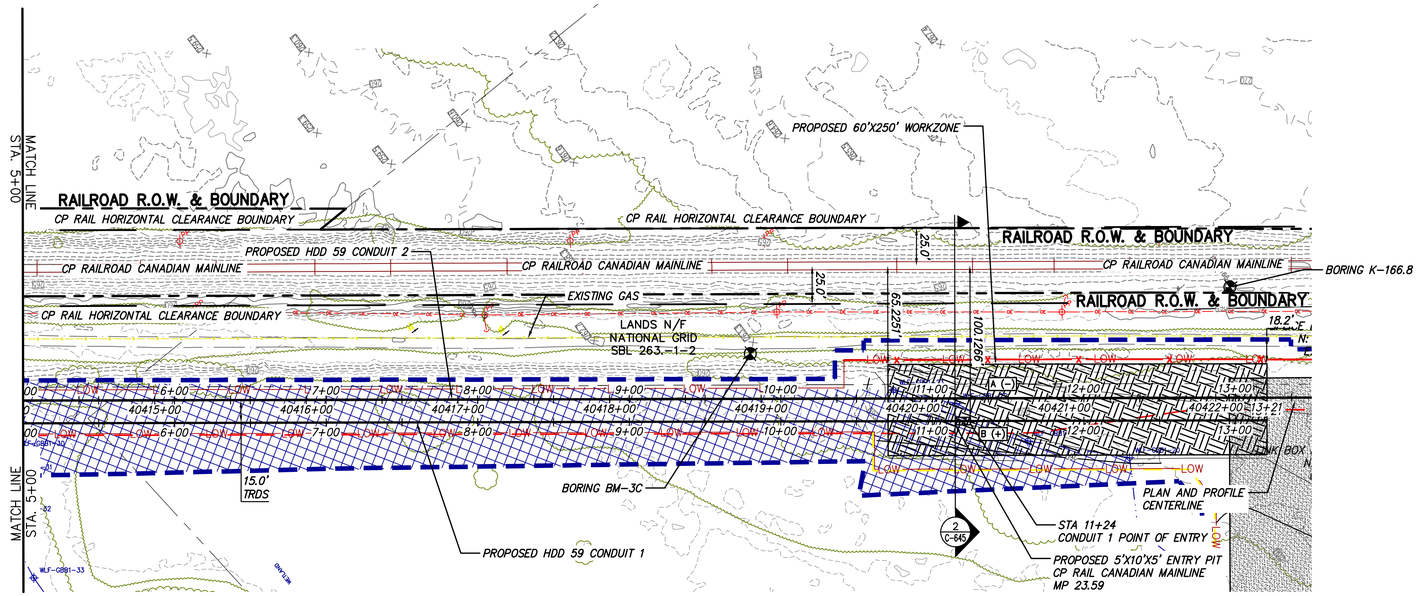
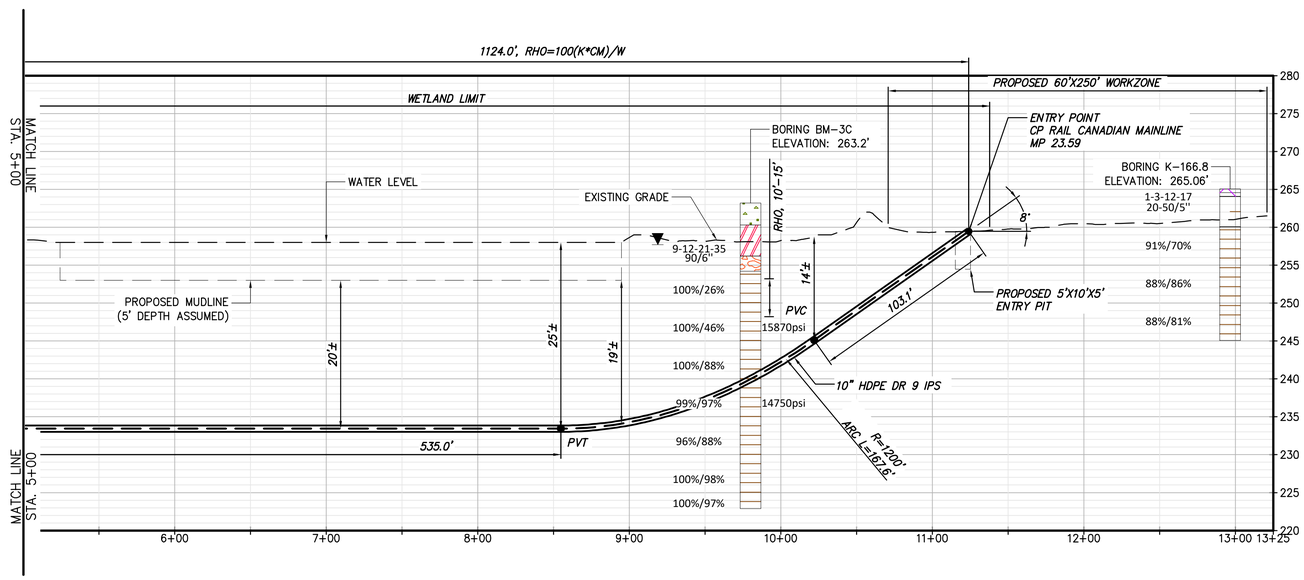


PROPOSED HDD 59 PLAN VIEW

CONDUIT 1

0 50 100
Scale in feet



PROPOSED HDD 59 PROFILE

CONDUIT 1

20
10
0
0 50 100
Scale in feet

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10
Recovery %/RQD % = 95%/90%
11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

Legend

	ASPHALT	Asphalt
	Bedrock	Bedrock
	Boulder	Boulder
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
	CL	Lean CLAY
	CL-ML	SILTY CLAY
	CONCRETE	Concrete
	Fill	Fill
	GC	CLAYEY GRAVEL
	GC-GM	SILTY CLAYEY GRAVEL
	GM	SILTY GRAVEL
	GP	Poorly Graded GRAVEL
	GP-GC	Poorly Graded Gravel with CLAY
	GP-GM	Poorly Graded GRAVEL with SILT
	GW	Well Graded GRAVEL
	GW-GC	Well Graded GRAVEL with CLAY
	GW-GM	Well Graded GRAVEL with SILT
	Limestone	Limestone
	MH	Elastic SILT
	ML	SILT
	OH	ORGANIC Fat CLAY
	OL	ORGANIC Lean CLAY
	OL/OH	ORGANIC SOIL
	PT	PEAT
	Rock	Rock
	Sandstone	Sandstone
	SC	CLAYEY SAND
	SC-SM	SILT, CLAYEY SAND
	SHALE	Shale
	SILTSTONE	Siltstone
	SM	SILTY SAND
	SP	Poorly Graded SAND
	SP-SC	Poorly Graded SAND with CLAY
	SP-SM	Poorly Graded SAND with SILT
	SW	Well graded SAND
	SW-SC	Well Graded SAND with CLAY
	SW-SM	Well Graded SAND with SILT
	Topsoil	Topsoil
	USGS 601	Gravel or Conglomerate 1
	USGS 654	Subgraywacke
	USGS 670	Interbedded Sandstone and Shale
	USGS 702	Quartzite
	USGS 705	Schist
	USGS 705	Schist
	USGS 708	Gneiss
	USGS 708	Gneiss
	USGS 718	Granite 1
	Void	Void
	Water	Water
	Weathered Rock	Undefined
▼	Water Table	Water Table during drilling
▽	Delayed Water Table	Water Table after drilling

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	08/03/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59, CONDUIT 1

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-305.1**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 8/03/2023 | SH.NO.

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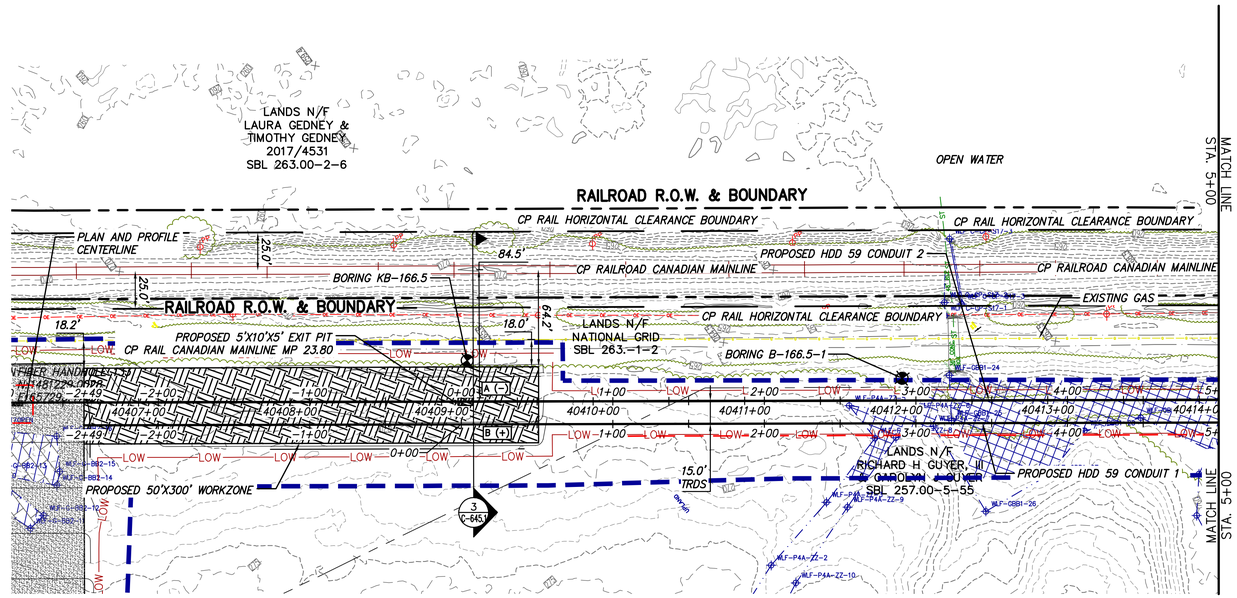
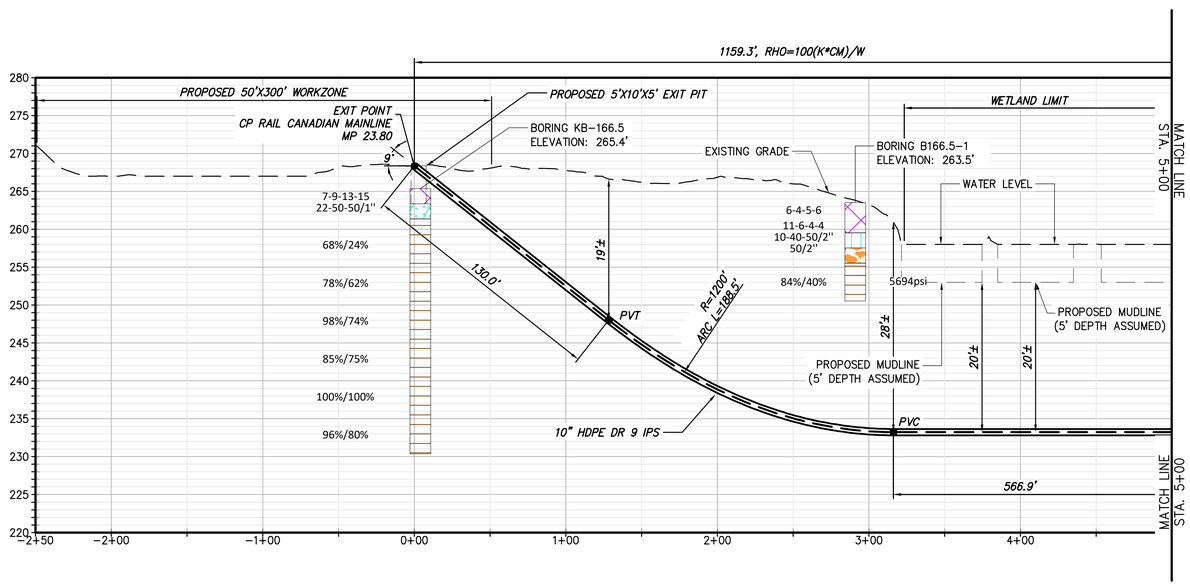


0 50 100
Scale in feet

PROPOSED HDD 59 PLAN VIEW

CONDUIT 2



0 10 20
0 50 100
Scale in feet

PROPOSED HDD 59 PROFILE

CONDUIT 2

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Legend

ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
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Topsoil	Topsoil
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USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-305A**

DRAWN BY: CJL DESIGNED BY: CJL APPROVED BY: JEO SCALE AS NOTED DATE 8/03/2023 REV. NO. X SH.NO.

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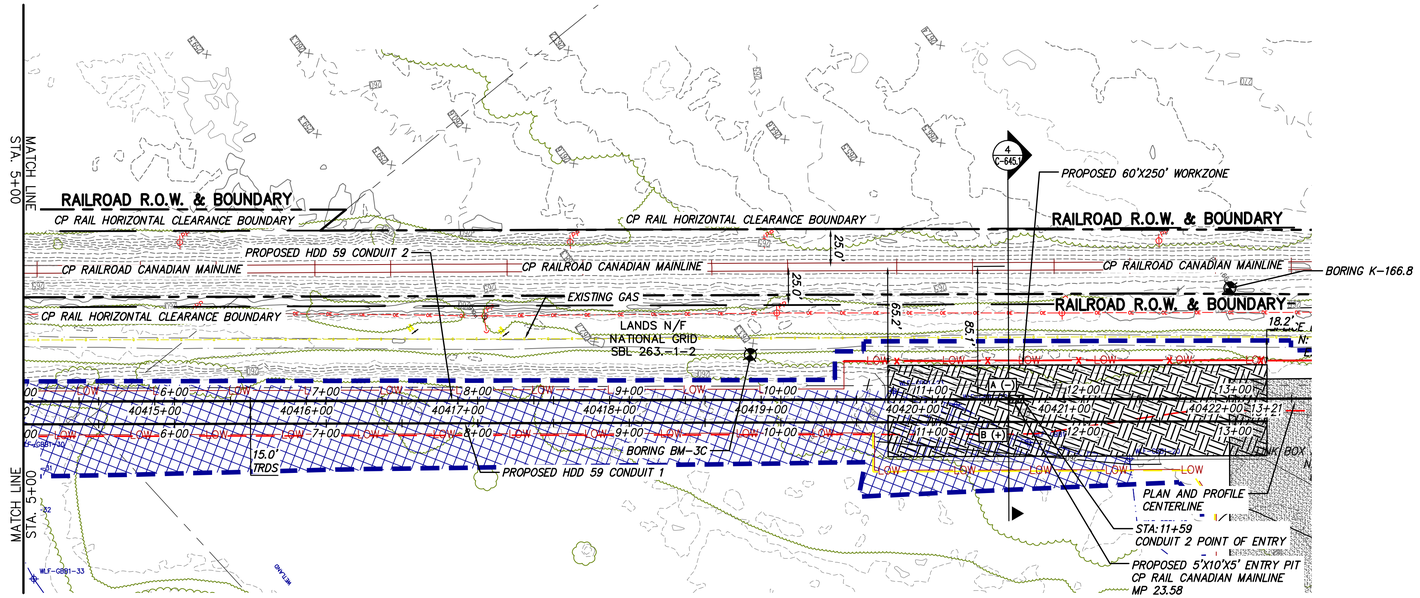
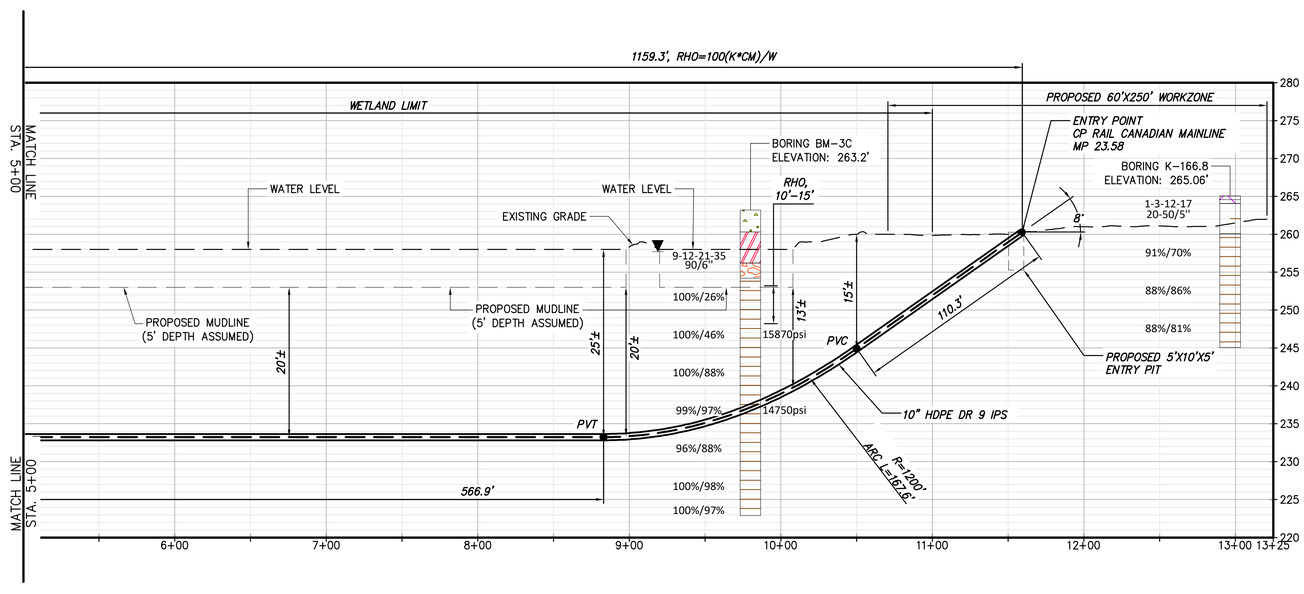


PROPOSED HDD 59 PLAN VIEW

CONDUIT 2



PROPOSED HDD 59 PROFILE

CONDUIT 2

0 50 100
Scale in feet

20 10 0
0 50 100
Scale in feet

Legend		
	ASPHALT	Asphalt
	Bedrock	Bedrock
	Boulder	Boulder
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
	CL	Lean CLAY
	CL-ML	SILTY CLAY
	CONCRETE	Concrete
	Fill	Fill
	GC	CLAYEY GRAVEL
	GC-GM	SILTY CLAYEY GRAVEL
	GM	SILTY GRAVEL
	GP	Poorly Graded GRAVEL
	GP-GC	Poorly Graded Gravel with CLAY
	GP-GM	Poorly Graded GRAVEL with SILT
	GW	Well Graded GRAVEL
	GW-GC	Well Graded GRAVEL with CLAY
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	Limestone	Limestone
	MH	Elastic SILT
	ML	SILT
	OH	ORGANIC Fat CLAY
	OL	ORGANIC Lean CLAY
	OL/OH	ORGANIC SOIL
	PT	PEAT
	Rock	Rock
	Sandstone	Sandstone
	SC	CLAYEY SAND
	SC-SM	SILT, CLAYEY SAND
	SHALE	Shale
	SILTSTONE	Siltstone
	SM	SILTY SAND
	SP	Poorly Graded SAND
	SP-SC	Poorly Graded SAND with CLAY
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	SW-SM	Well Graded SAND with SILT
	Topsoil	Topsoil
	USGS 601	Gravel or Conglomerate 1
	USGS 654	Subgraywacke
	USGS 670	Interbedded Sandstone and Shale
	USGS 702	Quartzite
	USGS 705	Schist
	USGS 705	Schist
	USGS 708	Gneiss
	USGS 708	Gneiss
	USGS 718	Granite 1
	Void	Void
	Water	Water
	Weathered Rock	Undefined
▼	Water Table	Water Table during drilling
▽	Delayed Water Table	Water Table after drilling

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-305A.1**

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

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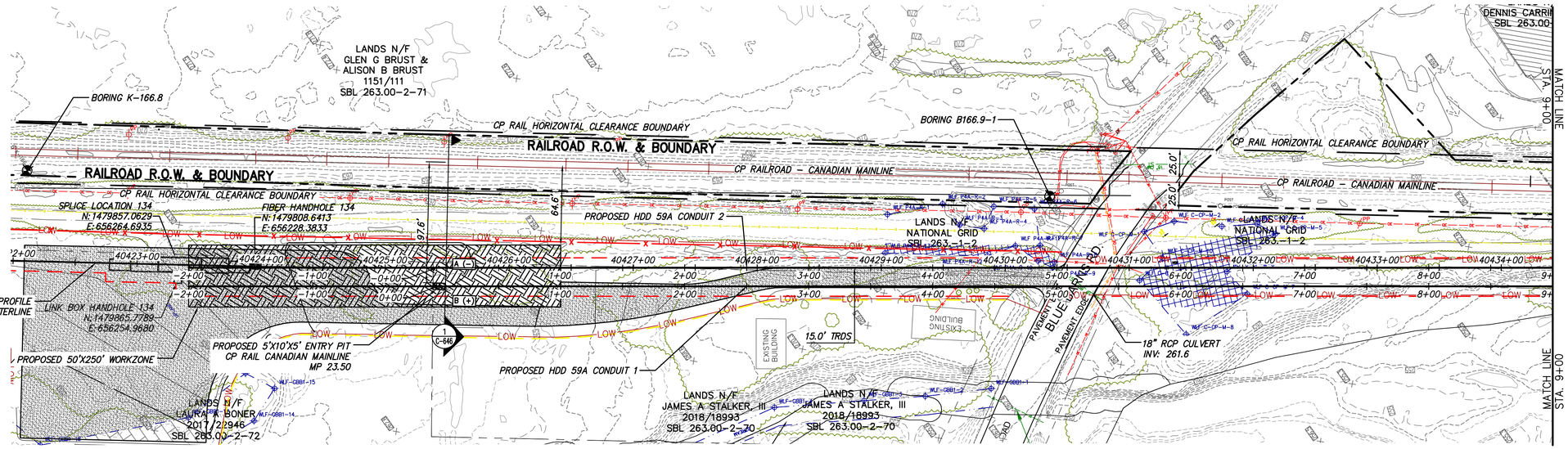
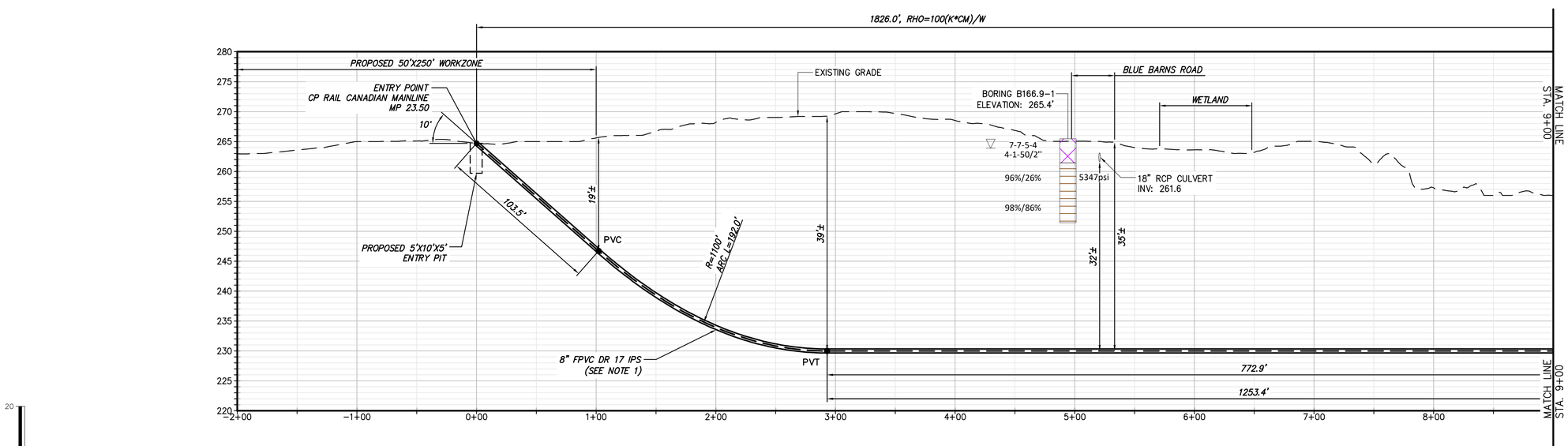


PROPOSED HDD 59A PLAN VIEW

CONDUIT 1



PROPOSED HDD 59A PROFILE

CONDUIT 1

NOTES:

1. BORES WILL REQUIRE 8-INCH FPVC, DR 17, IPS, CONDUIT AND 3-INCH HDPE, DR 7, IPS, COMMUNICATION CONDUIT WHEN BUNDLED FOR PULLBACK.
2. BALLASTING WITH WATER WILL LIKELY BE REQUIRED AND IS RECOMMENDED TO MANAGE PULL BACK FORCES AND RESULTANT STRESSES.
3. ROLLER WILL ALSO LIKELY BE REQUIRED AND IS RECOMMENDED TO MANAGE PULL BACK FORCES AND RESULTANT STRESSES IN ADDITION TO BALLAST.
4. THE COMMUNICATION CONDUIT OF HDD #59A NEEDS TO BE SPECIFIED AS PE GRADE 4710 HDPE DUE TO THE ELEVATED STRESSES ENCOUNTERED IN THE BORE AID ANALYSIS IN ADDITION TO BALLASTING AND ROLLER CONSIDERATIONS.

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Legend

ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
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GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
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USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
Delayed Water Table	Water Table after drilling

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59A, CONDUIT 1

DRAWN BY: KDL DESIGNED BY: SPB APPROVED BY: JEO

SCALE AS NOTED

REV. NO. 1

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. C-306

DATE 8/03/2023

SH.NO.

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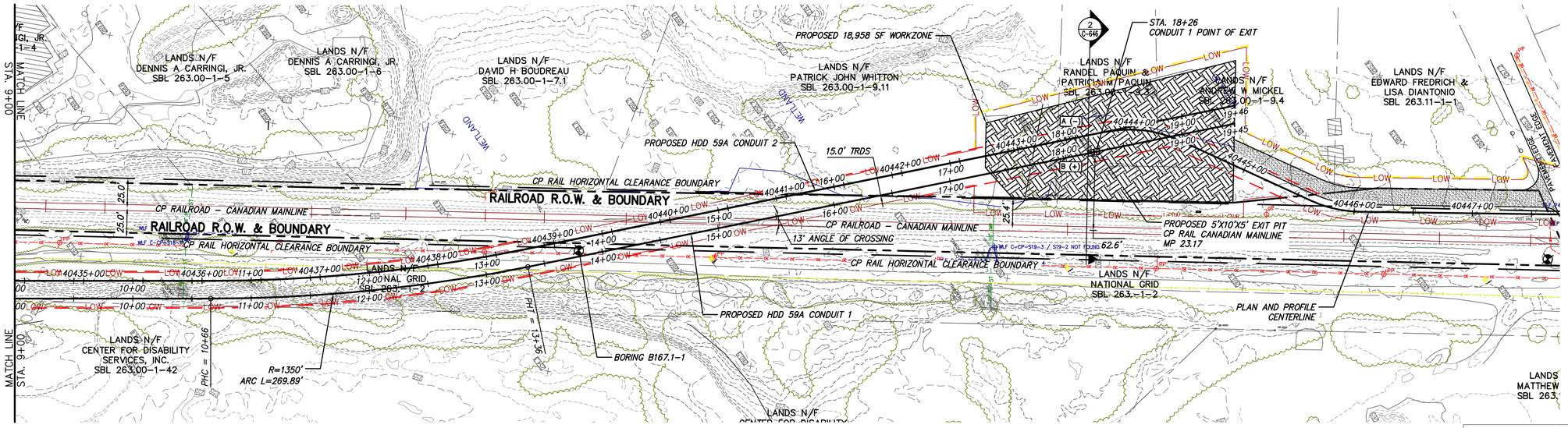
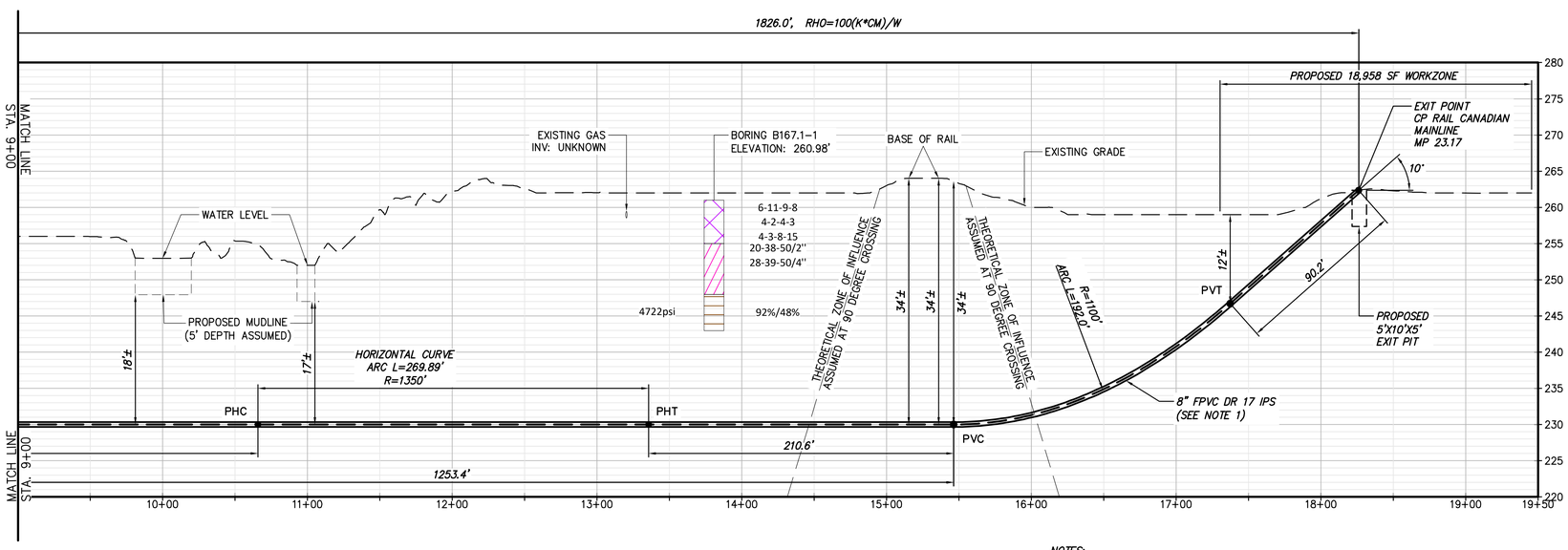


PROPOSED HDD 59A PLAN VIEW

CONDUIT 1

Scale in feet: 0 50 100



PROPOSED HDD 59A PROFILE

CONDUIT 1

Scale in feet: 0 50 100 (vertical: 0 10 20)

NOTES:

1. BORES WILL REQUIRE 8-INCH FPVC, DR 17, IPS, CONDUIT AND 3-INCH HDPE, DR 7, IPS, COMMUNICATION CONDUIT WHEN BUNDLED FOR PULLBACK.
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BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
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USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
USGS 705	Schist
USGS 708	Gneiss
USGS 708	Gneiss
USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59A, CONDUIT 1

DRAWN BY: KDL DESIGNED BY: SPB APPROVED BY: JEO

SCALE AS NOTED REV. NO. 1

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

DRAWING NO. **C-306.1**

DATE 8/03/2023 SH.NO.

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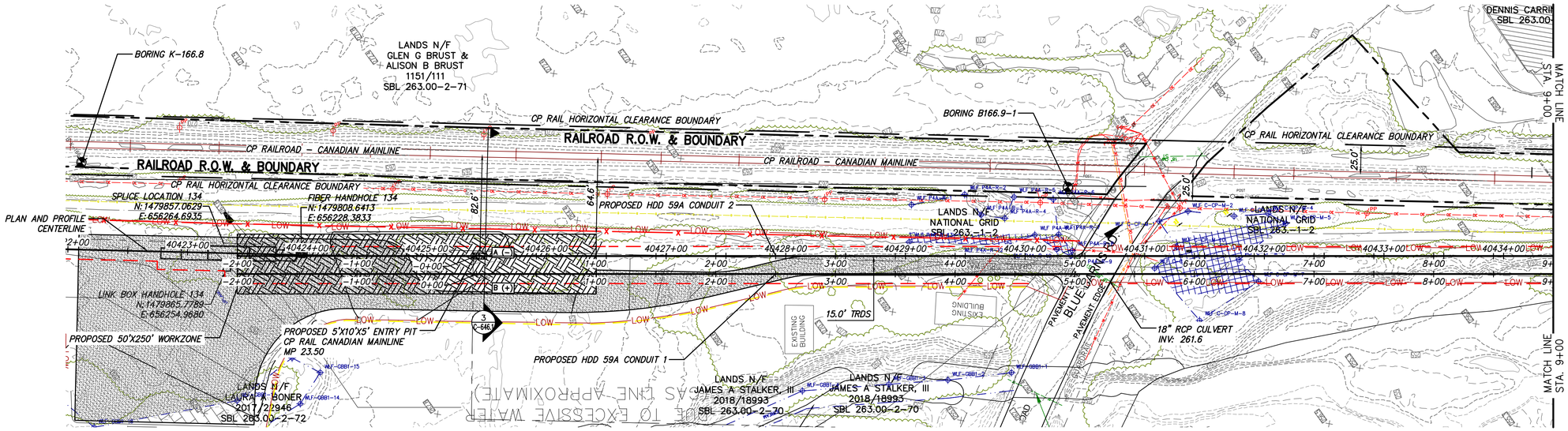

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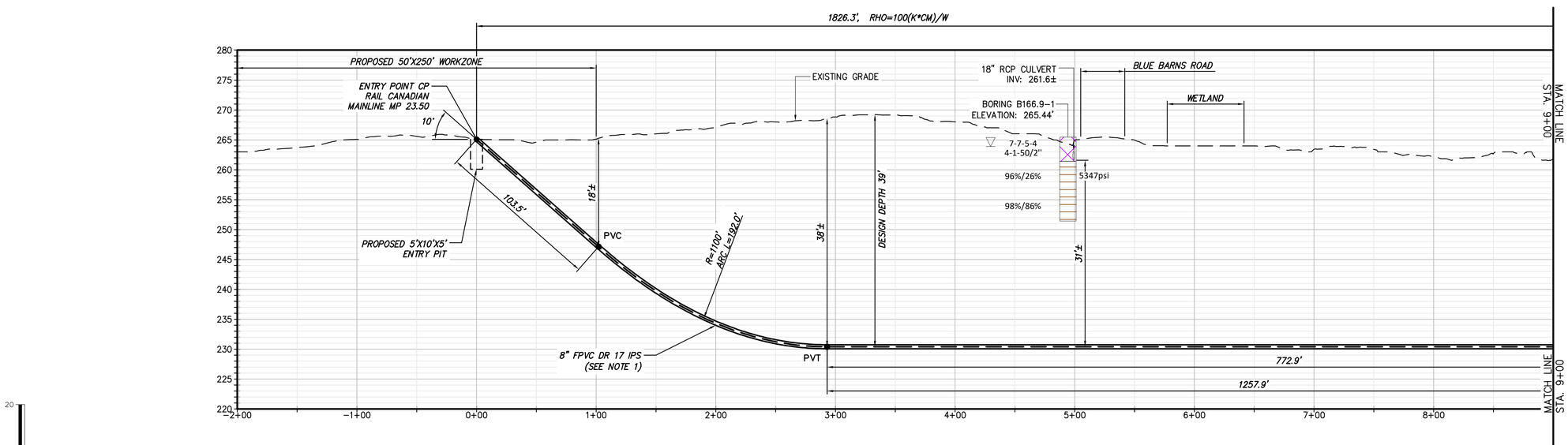
Scale in feet

PROPOSED HDD 59A PLAN VIEW
CONDUIT 2



0 50 100
Scale in feet

PROPOSED HDD 59A PROFILE
CONDUIT 2

NOTES:
1. BORES WILL REQUIRE 8-INCH FPVC, DR 17, IPS, CONDUIT AND 3-INCH HDPE, DR 7, IPS, COMMUNICATION CONDUIT WHEN BUNDLED FOR PULLBACK.
2. BALLASTING WITH WATER WILL LIKELY BE REQUIRED AND IS RECOMMENDED TO MANAGE PULL BACK FORCES AND RESULTANT STRESSES.
3. ROLLER WILL ALSO LIKELY BE REQUIRED AND IS RECOMMENDED TO MANAGE PULL BACK FORCES AND RESULTANT STRESSES IN ADDITION TO BALLAST.
4. THE COMMUNICATION CONDUIT OF HDD #59A NEEDS TO BE SPECIFIED AS PE GRADE 4710 HDPE DUE TO THE ELEVATED STRESSES ENCOUNTERED IN THE BORE AID ANALYSIS IN ADDITION TO BALLASTING AND ROLLER CONSIDERATIONS.

BORING LOG STRIP LEGEND
B101
Blow Counts per 6" = 10-10-10
Recovery %/RQD % = 95%/90%
11000psi =UCS
2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration

Legend

ASPHALT	Asphalt
Bedrock	Bedrock
Boulder	Boulder
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GC-GM	SILTY CLAYEY GRAVEL
GM	SILTY GRAVEL
GP	Poorly Graded GRAVEL
GP-GC	Poorly Graded Gravel with CLAY
GP-GM	Poorly Graded GRAVEL with SILT
GW	Well Graded GRAVEL
GW-GC	Well Graded GRAVEL with CLAY
GW-GM	Well Graded GRAVEL with SILT
Limestone	Limestone
MH	Elastic SILT
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
PT	PEAT
Rock	Rock
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SILTSTONE	Siltstone
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SC	Poorly Graded SAND with CLAY
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
SW-SC	Well Graded SAND with CLAY
SW-SM	Well Graded SAND with SILT
Topsoil	Topsoil
USGS 601	Gravel or Conglomerate 1
USGS 654	Subgraywacke
USGS 670	Interbedded Sandstone and Shale
USGS 702	Quartzite
USGS 705	Schist
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USGS 708	Gneiss
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USGS 718	Granite 1
Void	Void
Water	Water
Weathered Rock	Undefined
Water Table	Water Table during drilling
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CHPE Champlain Hudson Power Express

Kiewit

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59A, CONDUIT 2

DRAWN BY: KDL DESIGNED BY: SPB APPROVED BY: JEO

SCALE AS NOTED
REV. NO. 1

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-306A**
DATE 8/03/2023
SH.NO.

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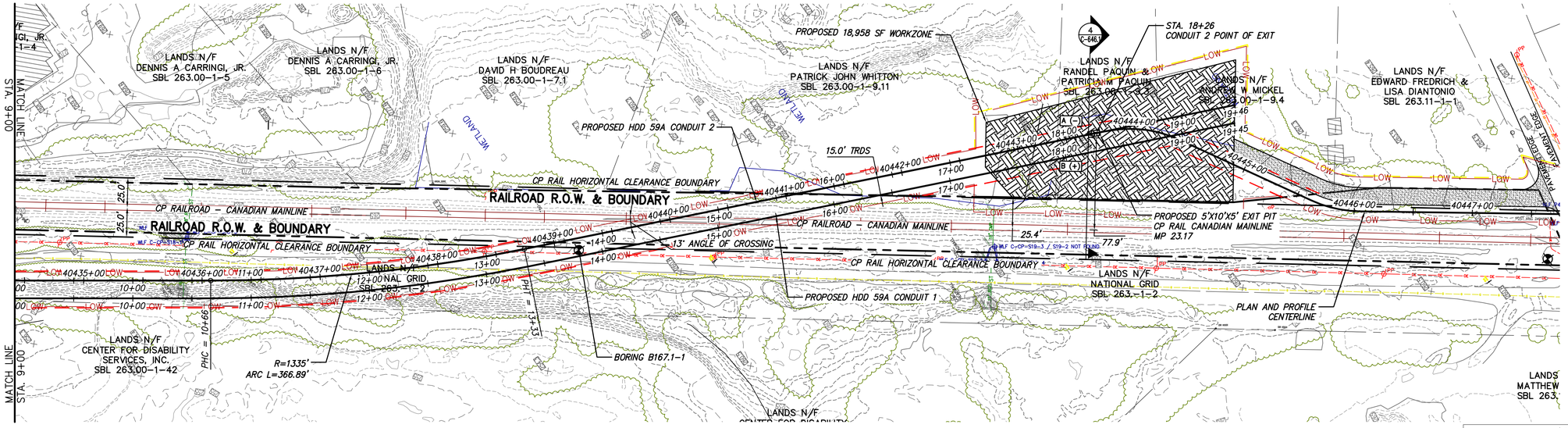

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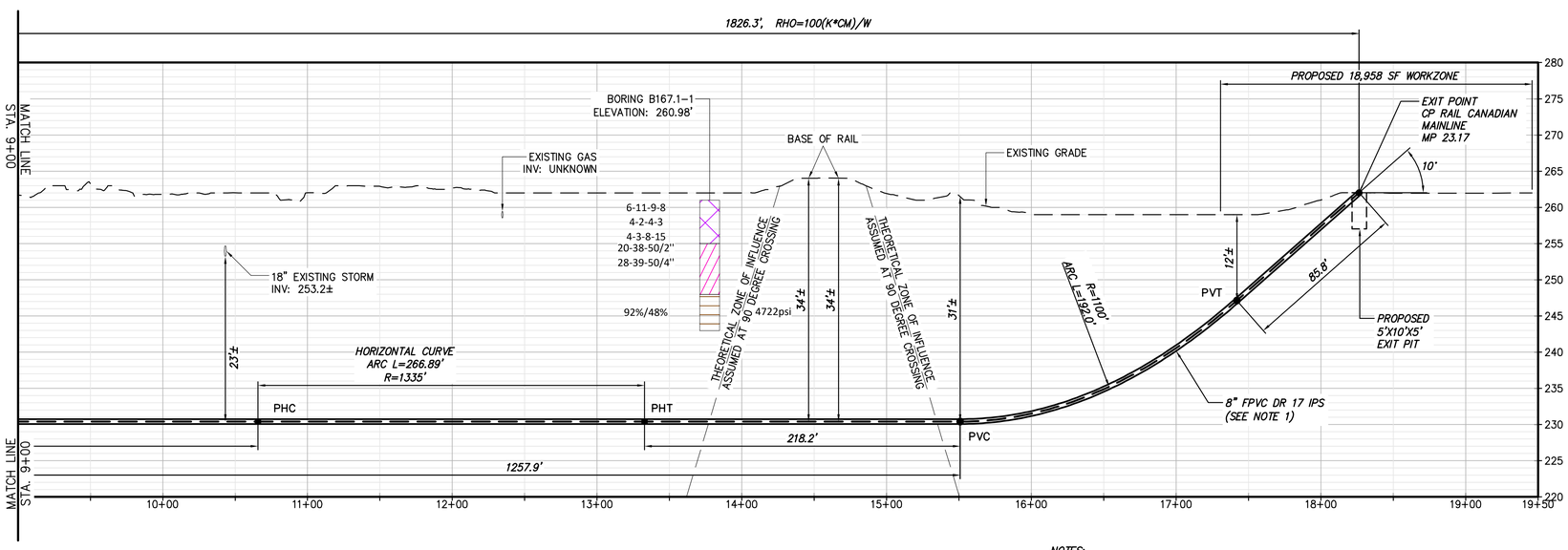
Scale in feet

PROPOSED HDD 59A PLAN VIEW
CONDUIT 2



PROPOSED HDD 59A PROFILE
CONDUIT 2

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Scale in feet

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59A, CONDUIT 2

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. C-306A.1

DRAWN BY: KDL DESIGNED BY: SPB APPROVED BY: JEO SCALE AS NOTED DATE 8/03/2023 REV. NO. 1 SH.NO.

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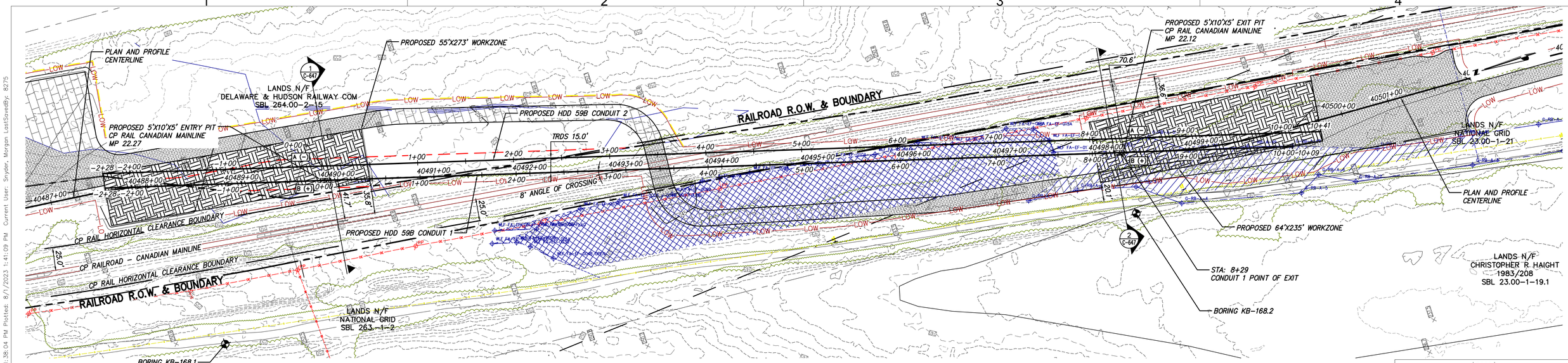

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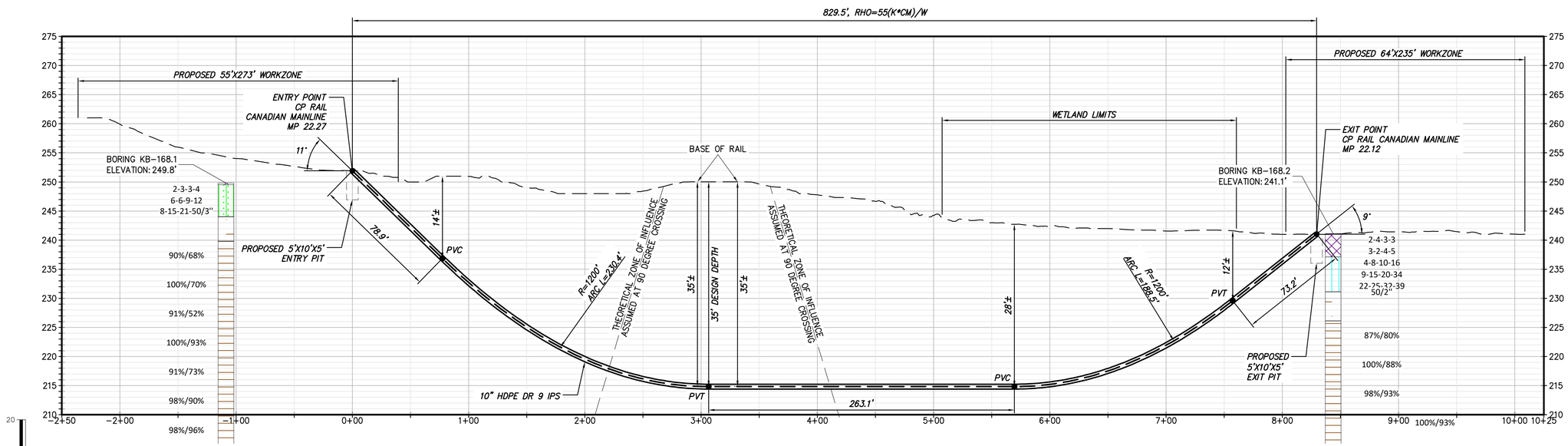
Scale in feet

PROPOSED HDD 59B PLAN VIEW

CONDUIT 1



0 50 100
Scale in feet

PROPOSED HDD 59B PROFILE

CONDUIT 1

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B101

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59B, CONDUIT 1

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-307**

DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 8/03/2023 | SH.NO.

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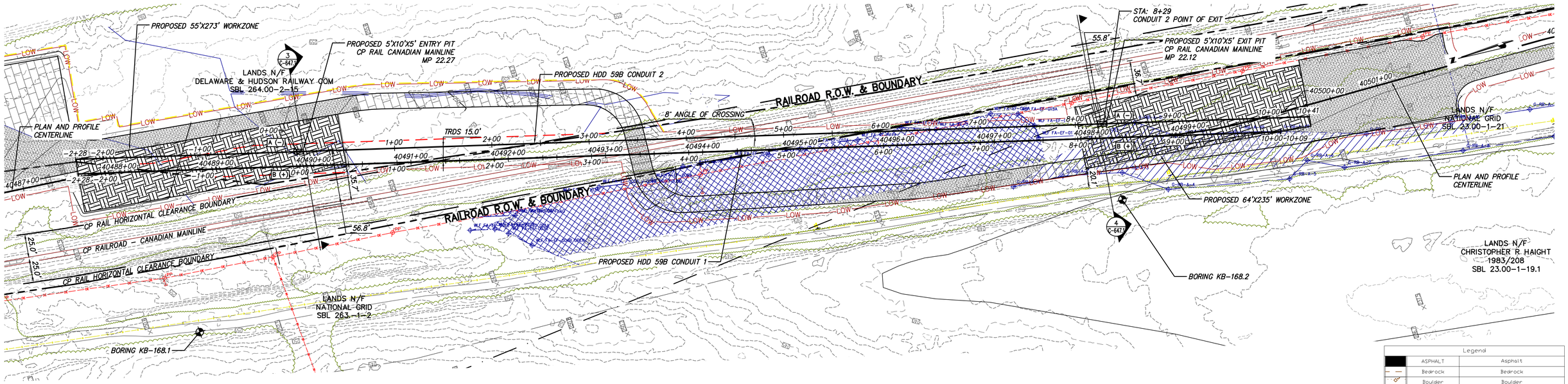
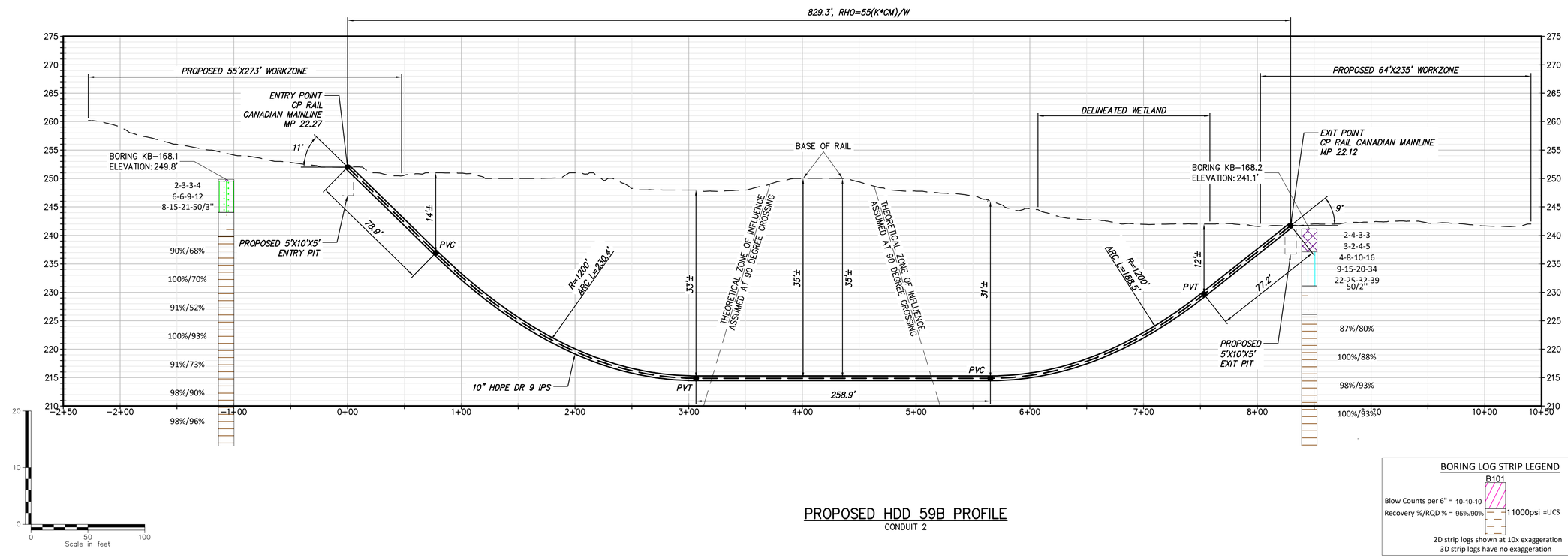


PROPOSED HDD 59B PLAN VIEW

CONDUIT 2



PROPOSED HDD 59B PROFILE

CONDUIT 2

BORING LOG STRIP LEGEND

B101

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3D strip logs have no exaggeration

Legend

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SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 59B, CONDUIT 2

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CHA PROJECT NO. 066076
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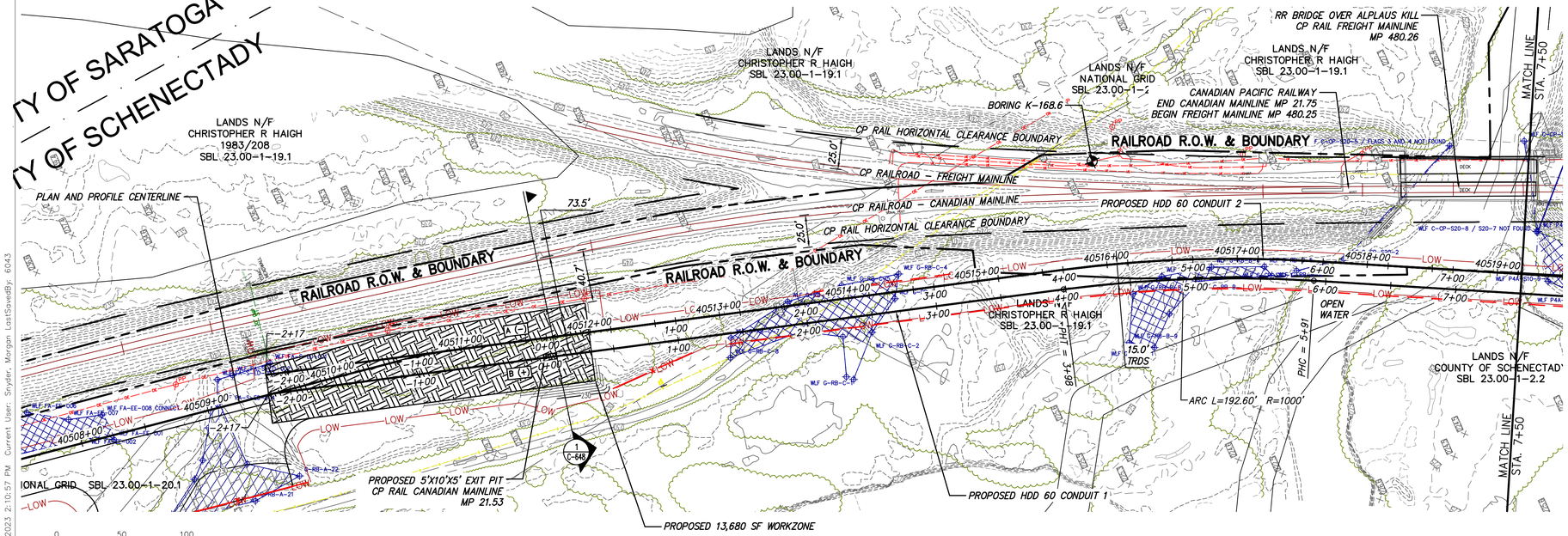
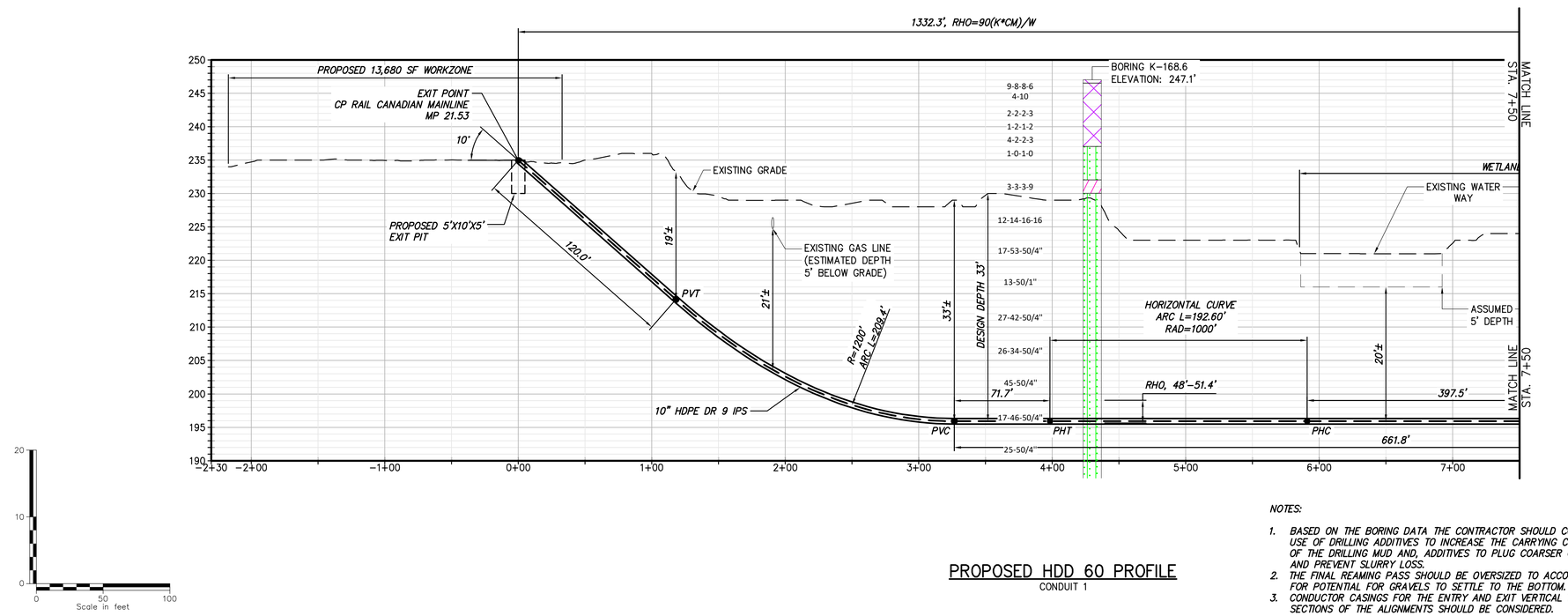


PROPOSED HDD 60 PLAN VIEW

CONDUIT 1



PROPOSED HDD 60 PROFILE

CONDUIT 1

NOTES:

1. BASED ON THE BORING DATA THE CONTRACTOR SHOULD CONSIDER USE OF DRILLING ADDITIVES TO INCREASE THE CARRYING CAPACITY OF THE DRILLING MUD AND, ADDITIVES TO PLUG COARSER GRAVELS AND PREVENT SLURRY LOSS.
2. THE FINAL REAMING PASS SHOULD BE OVERSIZED TO ACCOUNT FOR POTENTIAL FOR GRAVELS TO SETTLE TO THE BOTTOM.
3. CONDUCTOR CASINGS FOR THE ENTRY AND EXIT VERTICAL TANGENT SECTIONS OF THE ALIGNMENTS SHOULD BE CONSIDERED.

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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	08/03/2023	ISSUED FOR CONSTRUCTION SUBMISSION	SPB	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 6 (PACKAGE 4A) - CP: BALLSTON TO GLENVILLE
PLAN AND PROFILE - HDD 60, CONDUIT 1

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-308**

DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE AS NOTED | DATE 8/03/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 4\DESIGN PACKAGE 4\066076_4A - C-308-C308A.1.DWG Saved: 8/1/2023 9:23:45 AM Plotted: 8/1/2023 2:10:57 PM Current User: Snyder, Morgan LastSavedBy: 6043