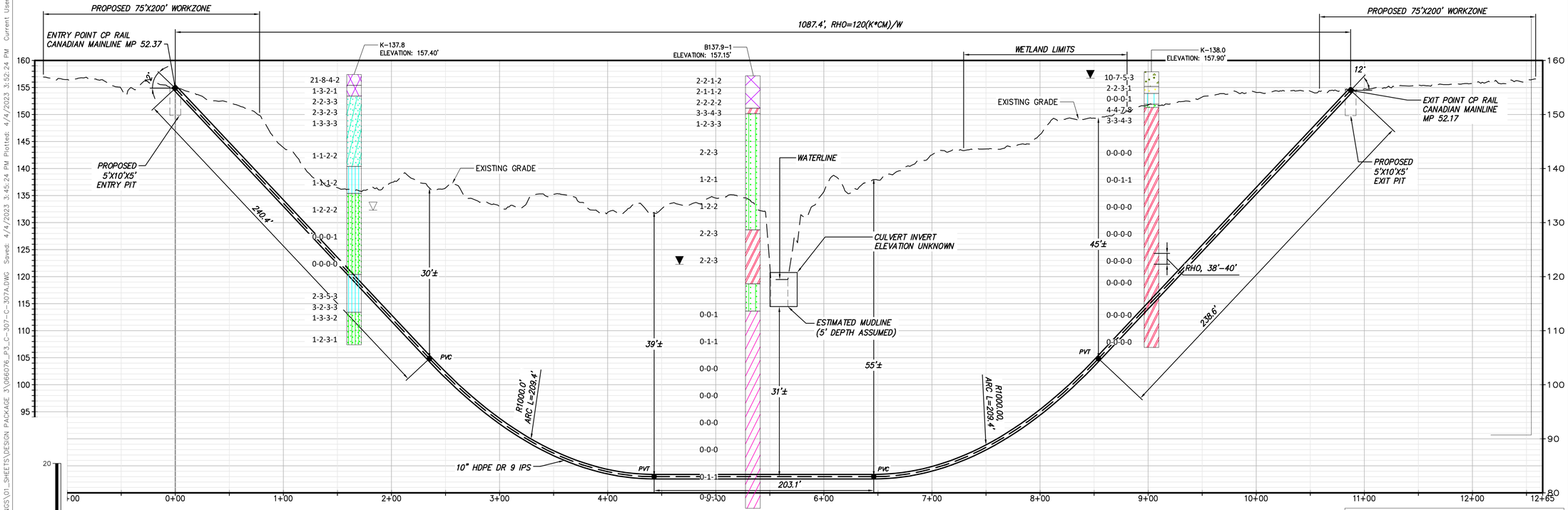


PROPOSED HDD 27 PLAN VIEW
CONDUIT 1



PROPOSED HDD 27 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASES OF DRILLING FLUIDS

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

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

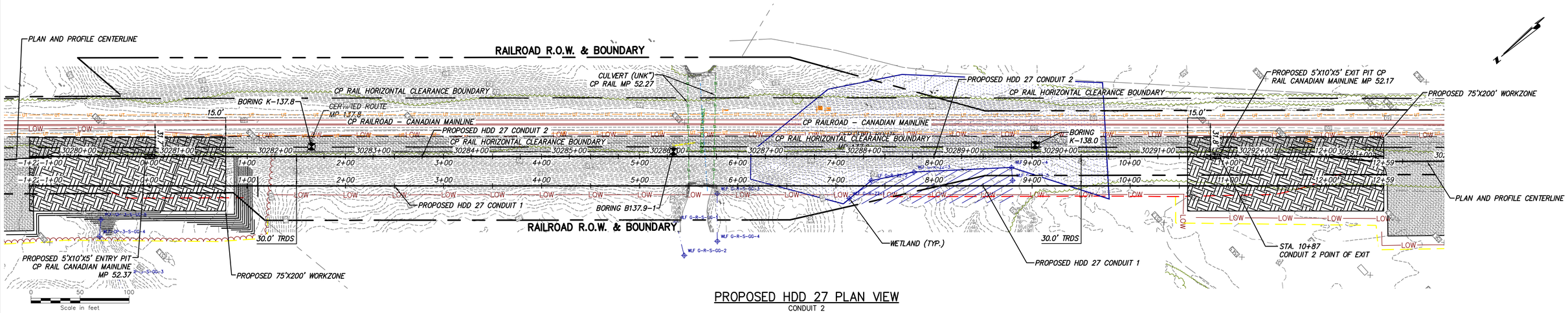
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 27, CONDUIT 1

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

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 04/05/2023 | SH.NO.

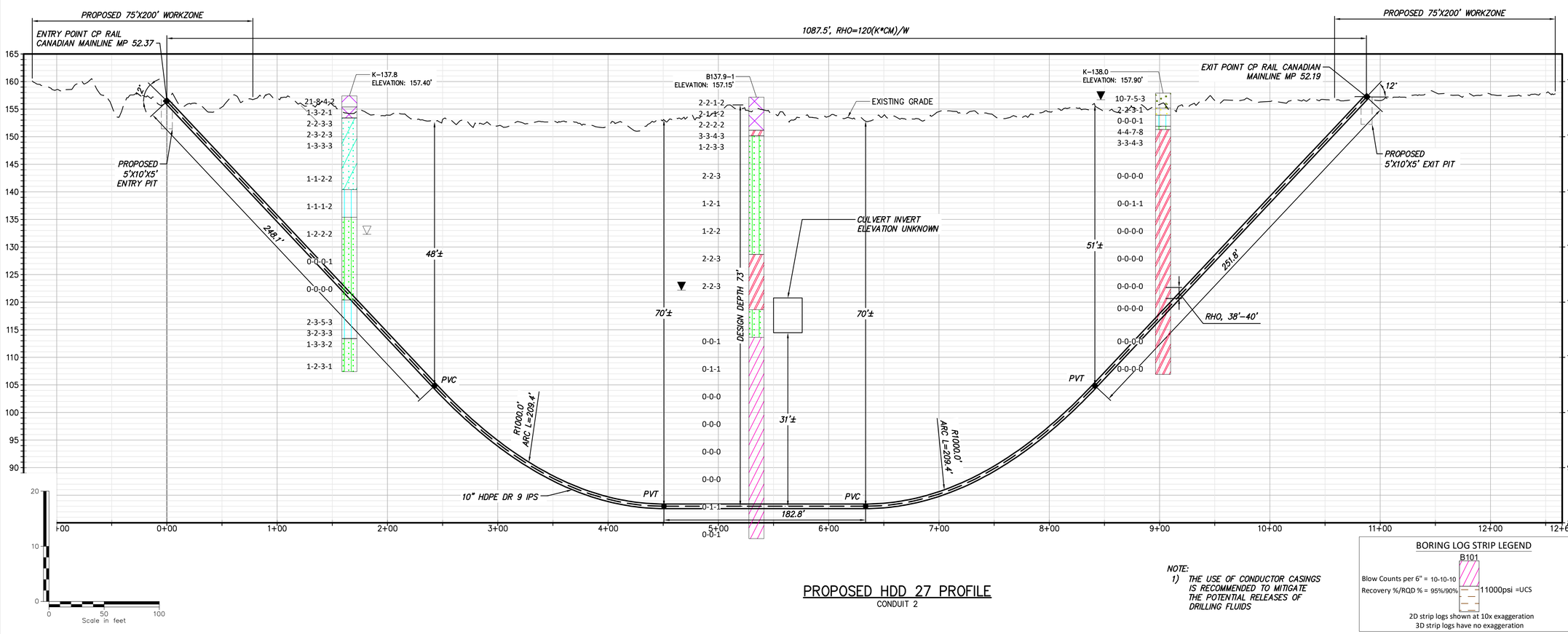
CHPE Champlain Hudson Power Express
Kiewit
CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-307-C-307A.DWG Saved: 4/4/2023 3:45:24 PM Plotted: 4/4/2023 3:52:24 PM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 27 PLAN VIEW

CONDUIT 2



PROPOSED HDD 27 PROFILE

CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASES OF DRILLING FLUIDS

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 : www.chacompanies.com

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS

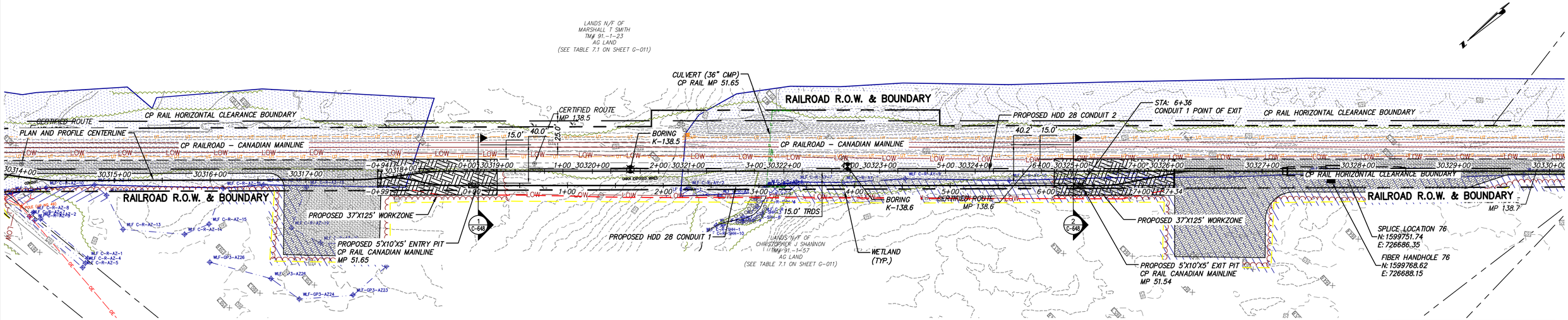
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON

PLAN AND PROFILE - HDD 27, CONDUIT 2

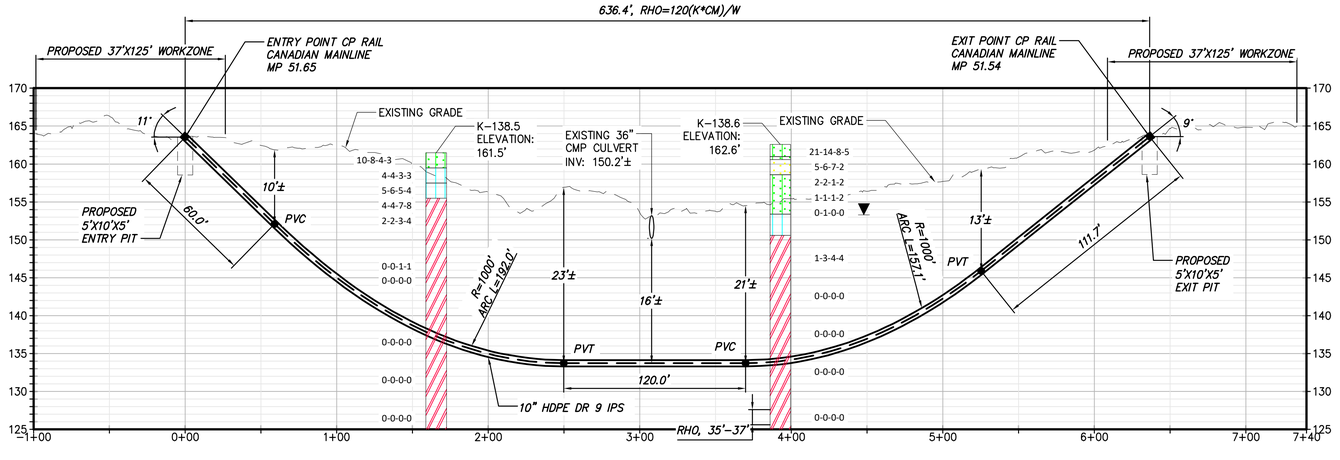
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-307A

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-307-C-307A.DWG Saved: 4/4/2023 3:45:24 PM Current User: Snyder, Morgan LastSavedBy: 6043
Plotted: 4/4/2023 3:53:41 PM



PROPOSED HDD 28 PLAN VIEW
CONDUIT 1



PROPOSED HDD 28 PROFILE
CONDUIT 1

0
10
20
0
50
100
Scale in feet

NOTE:
1) IT IS EXPECTED THAT A CONDUCTOR CASING AT THE EXIT END OF THE BORE WILL BE NEEDED TO REDUCE THE RISK OF INADVERTENT RETURNS IN THAT AREA.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

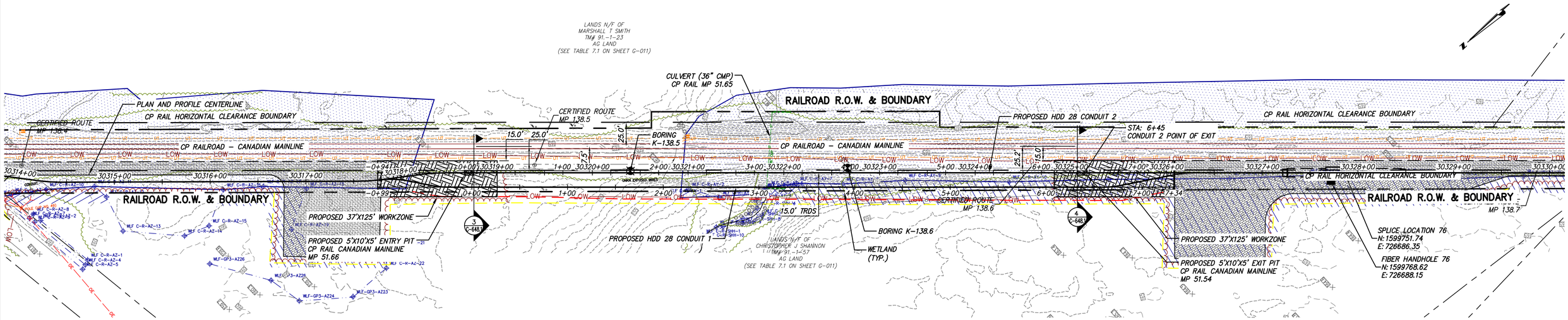
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 28, CONDUIT 1

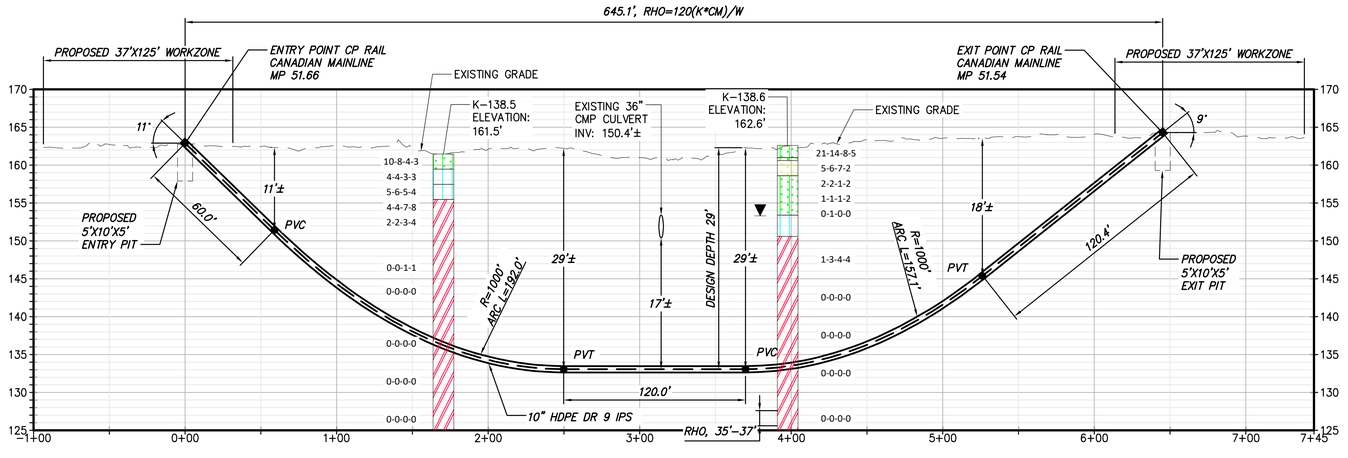
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-308

DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-308-C-308A.DWG Saved: 4/3/2023 5:25:31 PM Plotted: 4/4/2023 3:20:53 PM Current User: Snyder, Morgan LastSavedBy: 8275



PROPOSED HDD 28 PLAN VIEW
CONDUIT 2



PROPOSED HDD 28 PROFILE
CONDUIT 2

0
10
20
0
50
100
Scale in feet

NOTE:
1) IT IS EXPECTED THAT A CONDUCTOR CASING AT THE EXIT END OF THE BORE WILL BE NEEDED TO REDUCE THE RISK OF INADVERTENT RETURNS IN THAT AREA.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

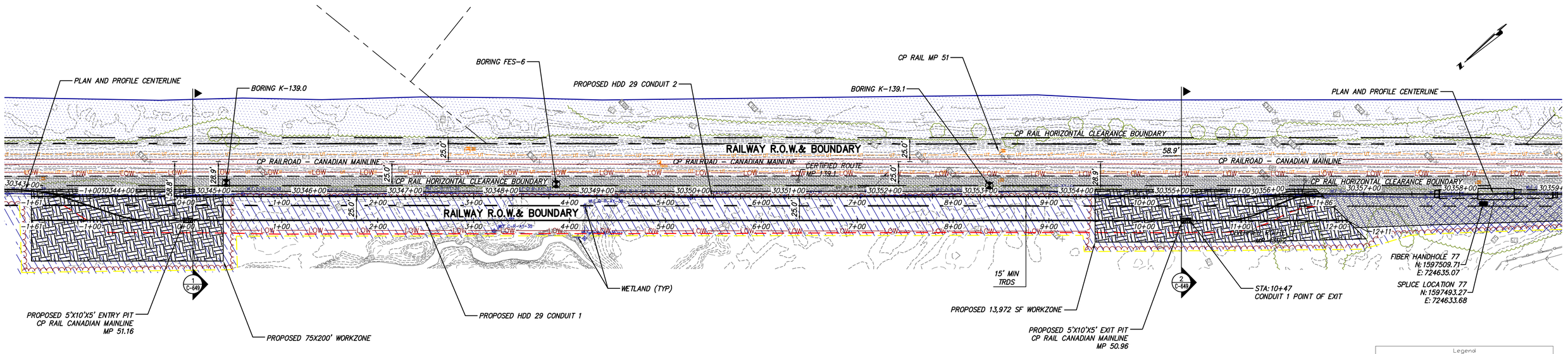
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 28, CONDUIT 2

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

DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 04/05/2023 | SH.NO.

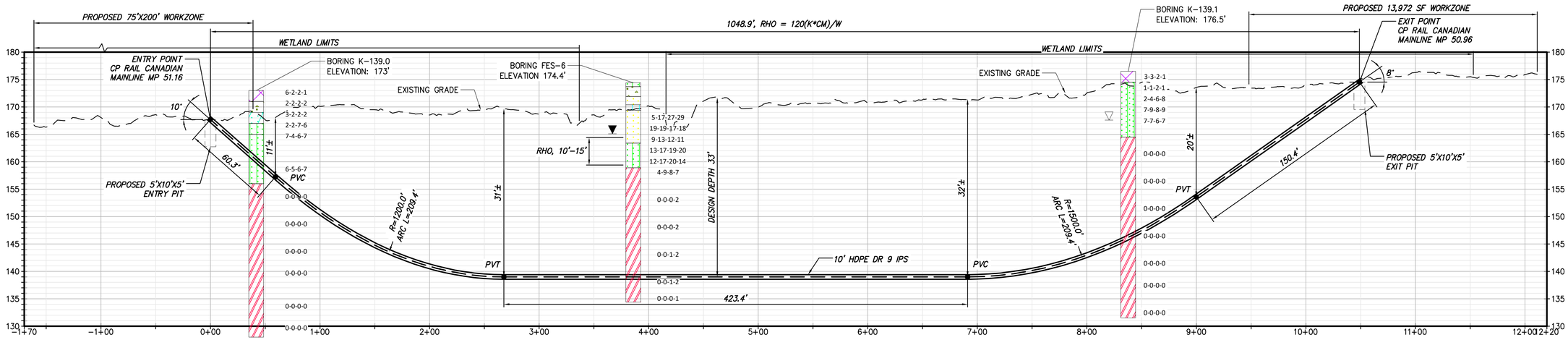
File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-308-C-308A.DWG Saved: 4/3/2023 5:25:31 PM Plotted: 4/4/2023 3:22:27 PM Current User: Snyder, Morgan LastSavedBy: BJ75

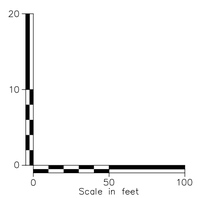
File: V:\PROJECTS\ANY\KE\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-309-C-309A.DWG Saved: 4/3/2023 5:09:54 PM Plotted: 4/4/2023 3:25:34 PM Current User: Snyder, Morgan LastSavedBy: 8275



0 50 100
Scale in feet

PROPOSED HDD 29 PLAN VIEW
CONDUIT 1





PROPOSED HDD 29 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 : www.chacompanies.com

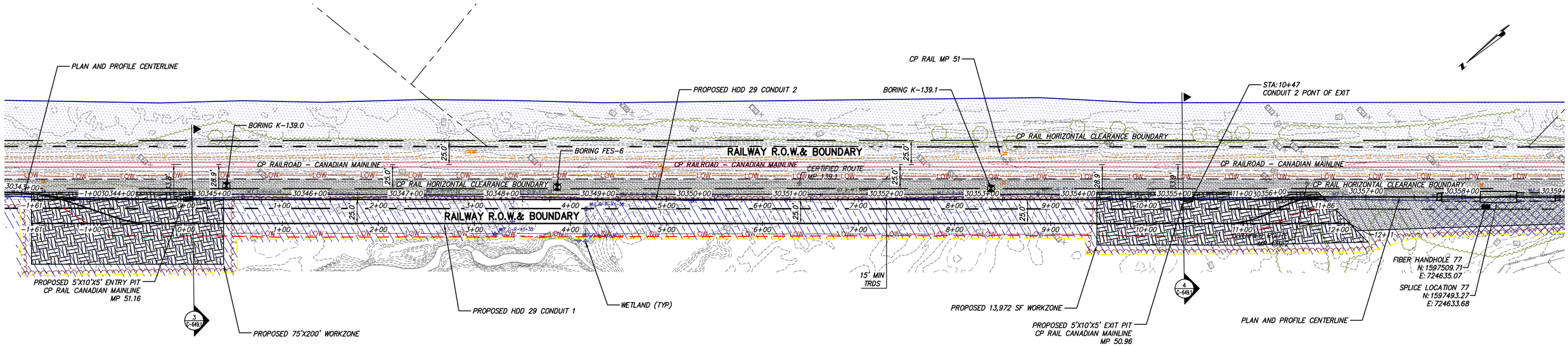
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE 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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

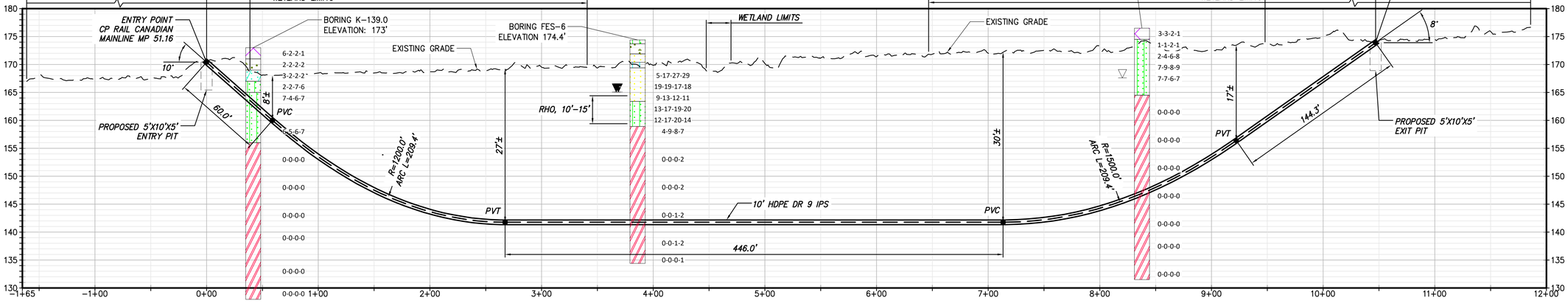
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 29, CONDUIT 1

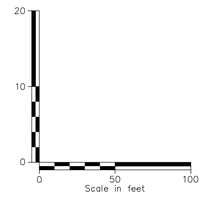
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-309

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.



PROPOSED HDD 29 PLAN VIEW
CONDUIT 2





PROPOSED HDD 29 PROFILE
CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

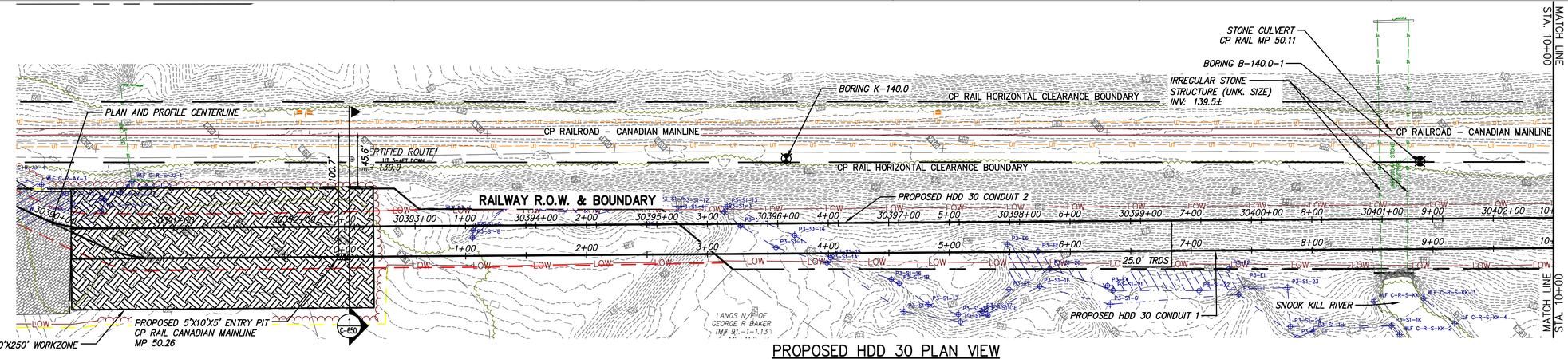
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 29, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-309A

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. 1 | SH.NO.

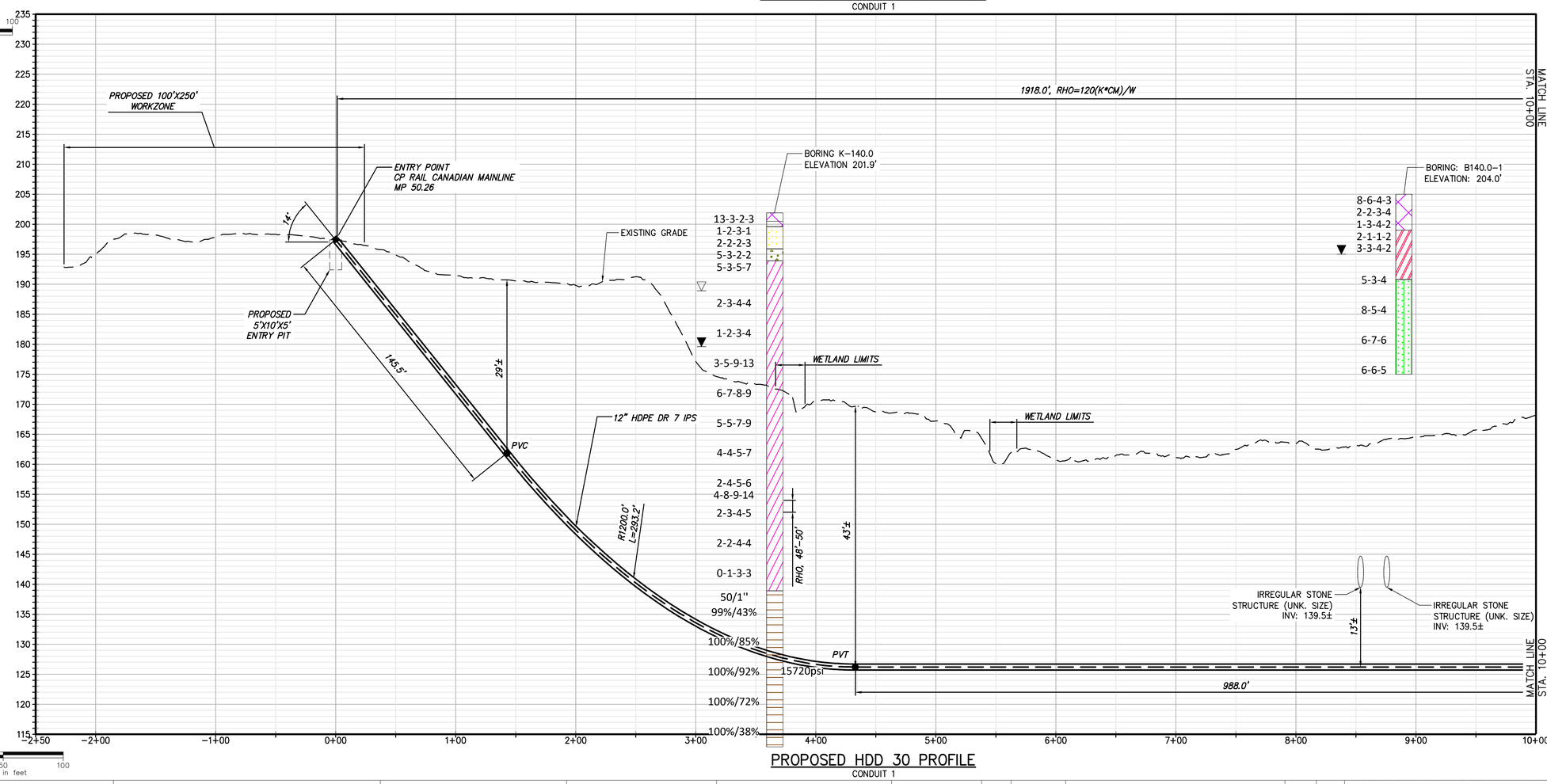
File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-309-C-309A.DWG Saved: 4/5/2023 5:09:54 PM Plotted: 4/4/2023 3:26:35 PM Current User: Snyder, Morgan LastSavedBy: 8275



NOTE:
1) EACH HDD CONSISTS OF A PAIR OF (2) HVDC ELECTRICAL TRANSMISSION CABLES HOUSED IN INDIVIDUAL 12" DIAMETER CASINGS/CONDUITS, HDPE DR7, AND A THIRD 3" DIAMETER CASING/CONDUIT, HDPE DR7, WILL BE BUNDLED IN PULLBACK WITH ONE OF THE 12" CASINGS/CONDUITS FOR A TELECOMMUNICATION LINE.
2) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

PROPOSED HDD 30 PLAN VIEW
CONDUIT 1

0 50 100 Scale in feet



0 50 100 Scale in feet

PROPOSED HDD 30 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
Delayed Water Table	Water Table after drilling

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 · www.chacompanies.com

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.

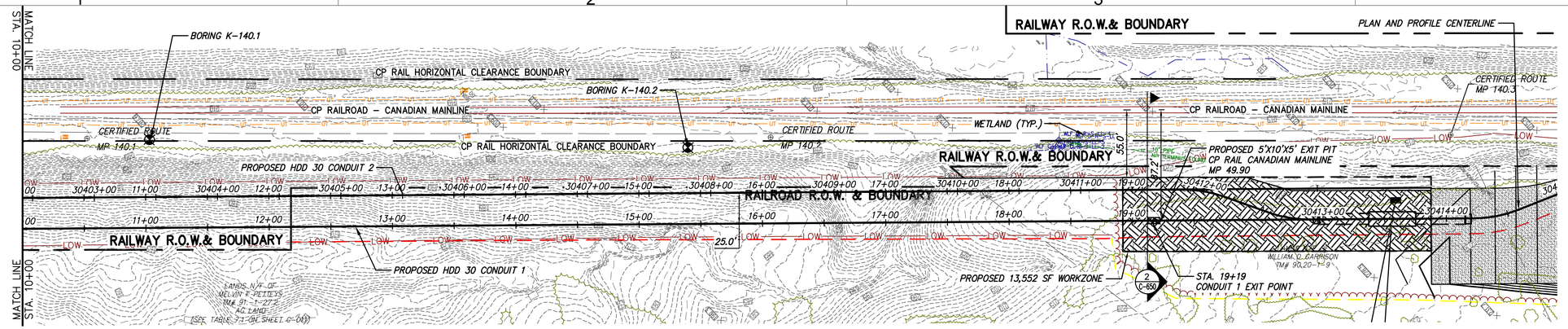
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 30, CONDUIT 1

DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO

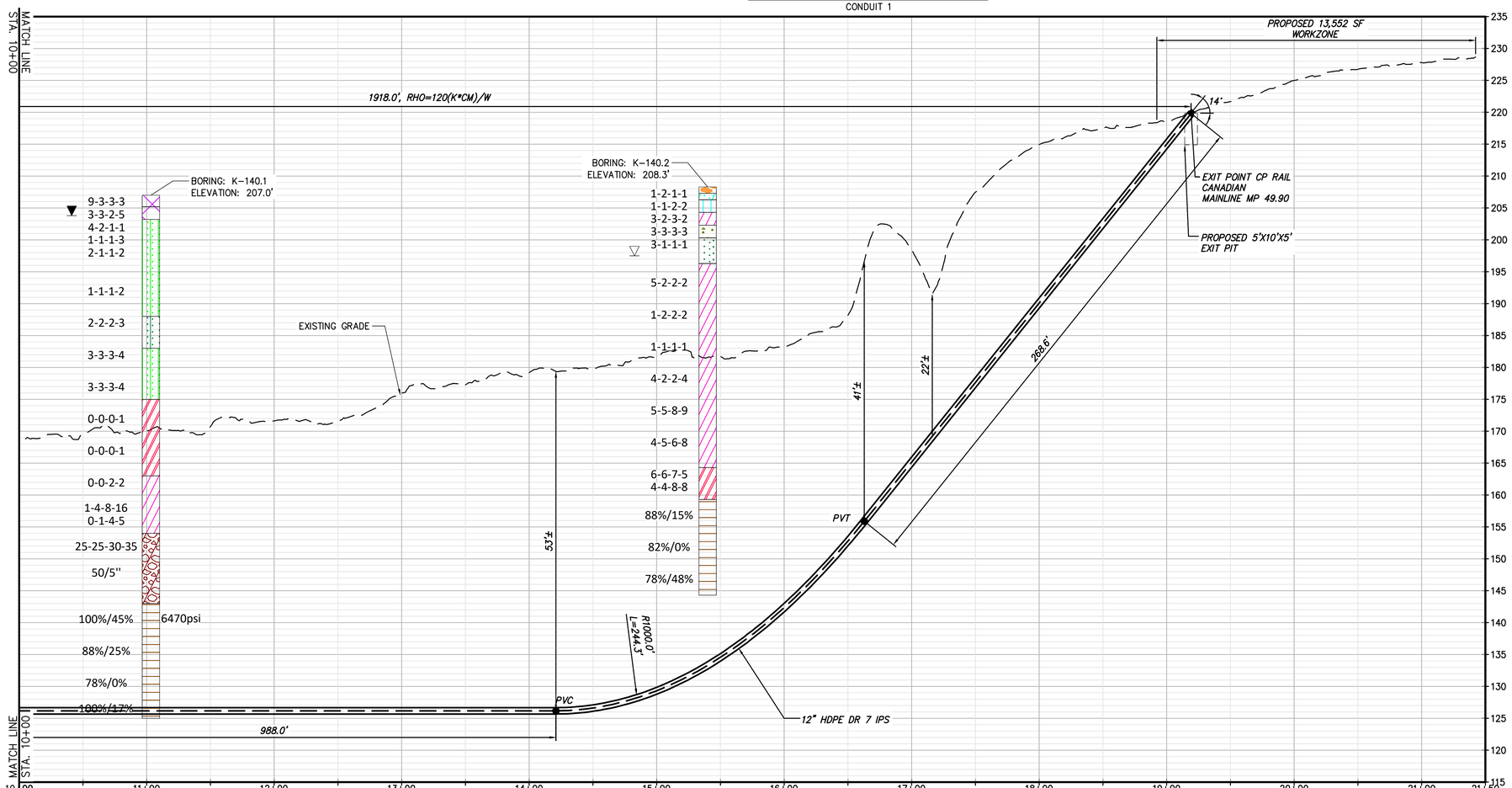
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-310
SCALE	AS NOTED
DATE	04/05/2023
REV. NO.	X
SH.NO.	

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-310-C-310A.DWG Saved: 4/4/2023 10:06:45 AM Plotted: 4/4/2023 4:04:32 PM Current User: Snyder, Morgan LastSavedBy: 6043



0 50 100
Scale in feet

PROPOSED HDD 30 PLAN VIEW
CONDUIT 1



PROPOSED HDD 30 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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

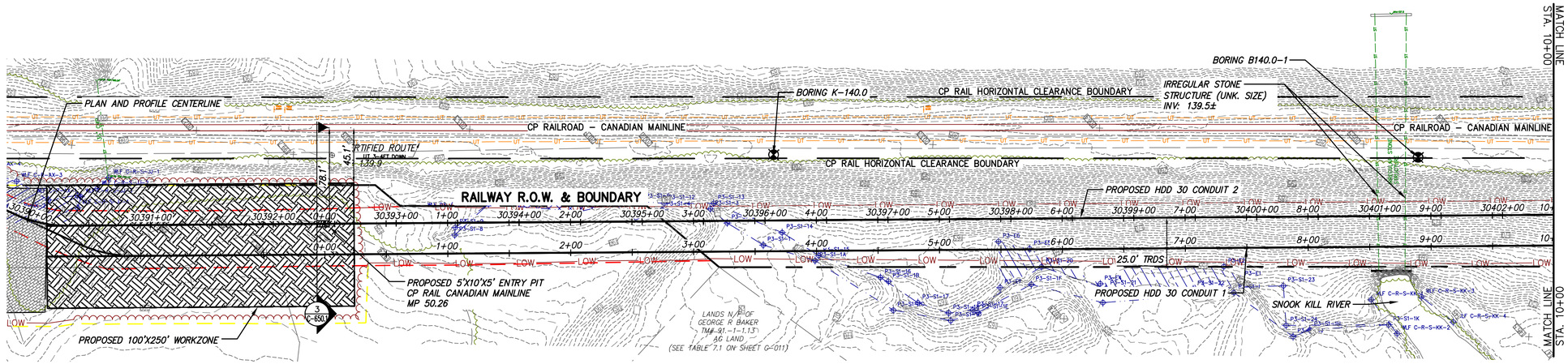
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 30, CONDUIT 1

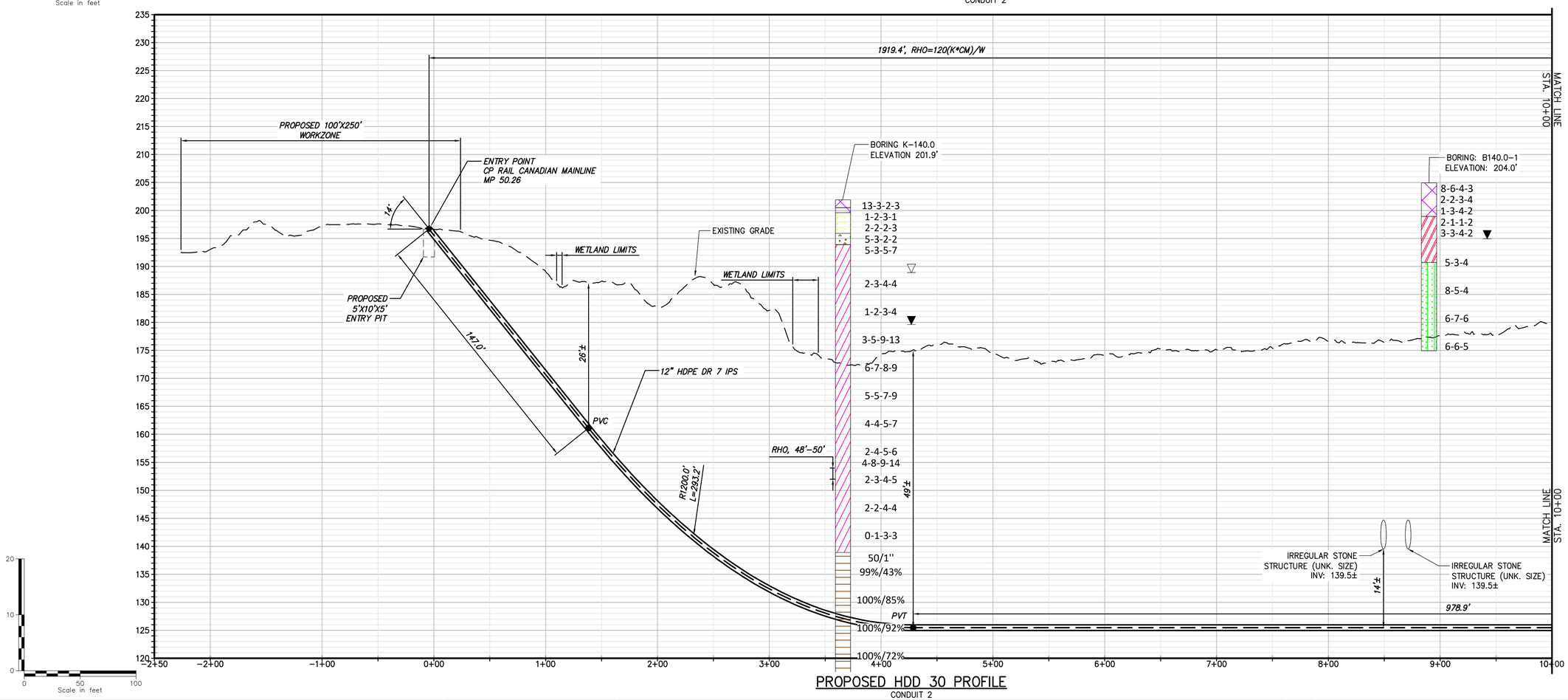
DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-310.1
SCALE	AS NOTED
DATE	04/05/2023
REV. NO.	X
SH.NO.	

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-310-C-310A.DWG Saved: 4/4/2023 10:06:45 AM Plotted: 4/4/2023 3:32:08 PM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 30 PLAN VIEW
CONDUIT 2



PROPOSED HDD 30 PROFILE
CONDUIT 2

NOTE:
1) EACH HDD CONSISTS OF A PAIR OF (2) HVDC ELECTRICAL TRANSMISSION CABLES HOUSED IN INDIVIDUAL 12"DIAMETER CASINGS/CONDUITS, HDPE DR7, AND A THIRD 3"DIAMETER CASING/CONDUIT, HDPE DR7, WILL BE BUNDLED IN PULLBACK WITH ONE OF THE 12"CASINGS/CONDUITS FOR A TELECOMMUNICATION LINE.
2) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 : www.chacompanies.com

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

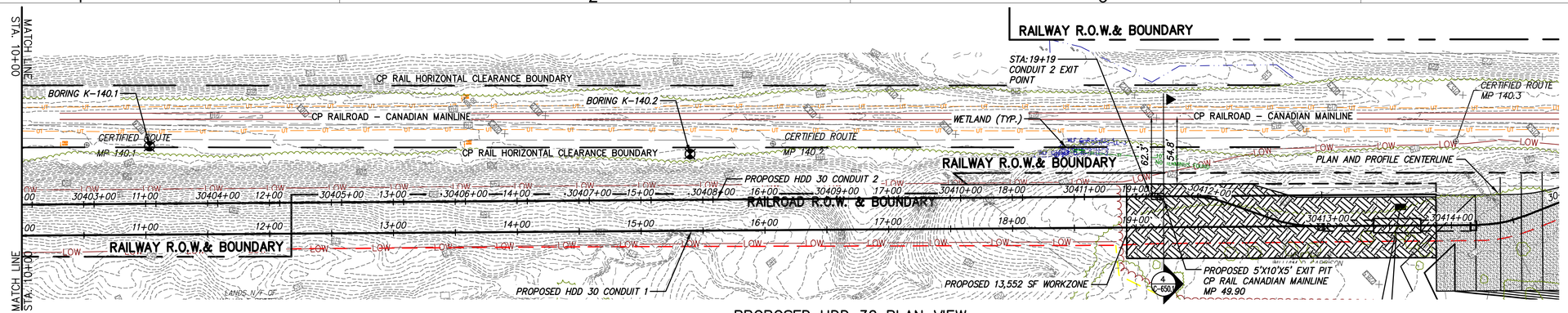
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 30, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-310A

DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO

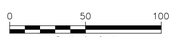
SCALE AS NOTED | DATE 04/05/2023
REV. NO. X | SH.NO.

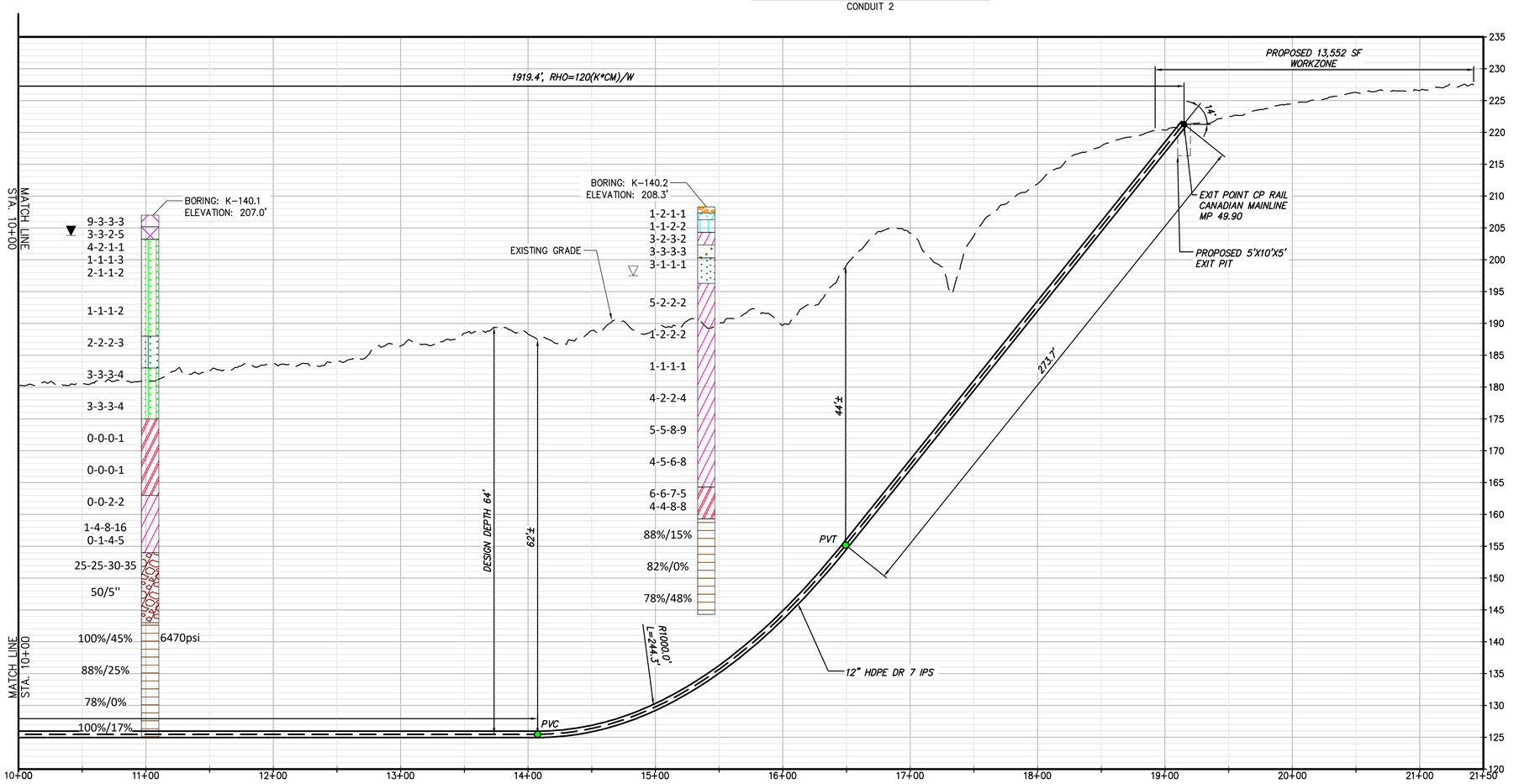
File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-310-C-310A.DWG Saved: 4/4/2023 10:06:45 AM Plotted: 4/4/2023 3:34:01 PM Current User: Snyder, Morgan LastSavedBy: 6043

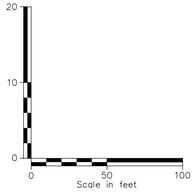


PROPOSED HDD 30 PLAN VIEW
CONDUIT 2

NOTE:
1) EACH HDD CONSISTS OF A PAIR OF (2) HVDC ELECTRICAL TRANSMISSION CABLES HOUSED IN INDIVIDUAL 12"DIAMETER CASINGS/CONDUITS, HDPE DR7, AND A THIRD 3"DIAMETER CASING/CONDUIT, HDPE DR7, WILL BE BUNDLED IN PULLBACK WITH ONE OF THE 12"CASINGS/CONDUITS FOR A TELECOMMUNICATION LINE.
2) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

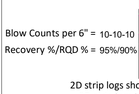






PROPOSED HDD 30 PROFILE
CONDUIT 2

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

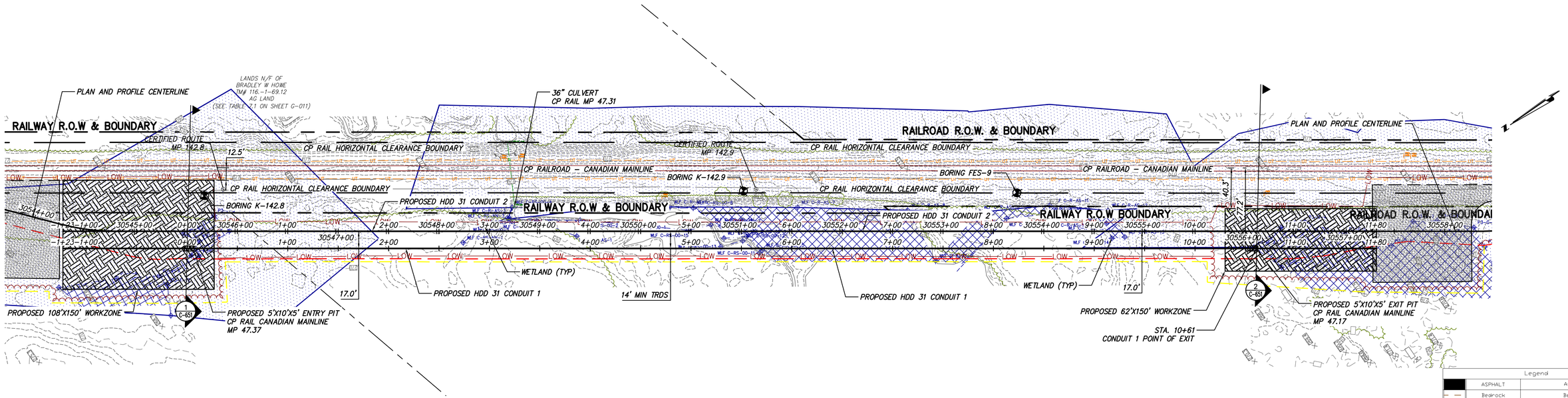
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 30, CONDUIT 2

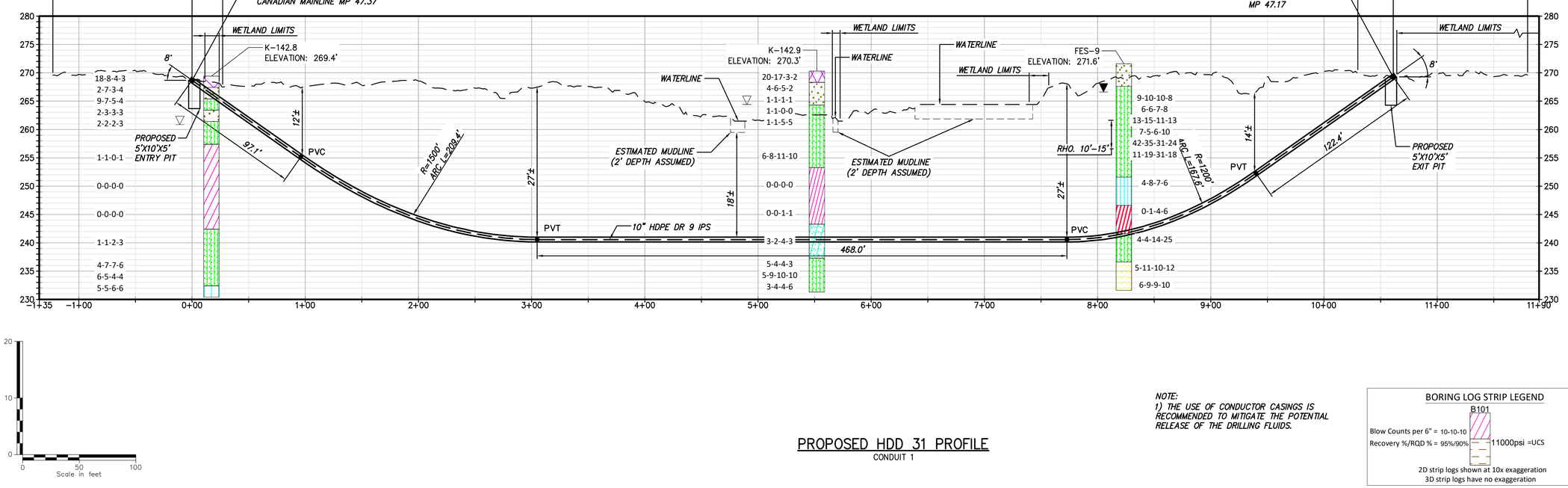
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	**C-310A.1**

DRAWN BY: ZH | DESIGNED BY: ZH | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-310-C-310A.DWG Saved: 4/4/2023 10:06:45 AM Plotted: 4/4/2023 3:35:50 PM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 31 PLAN VIEW
CONDUIT 1



PROPOSED HDD 31 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

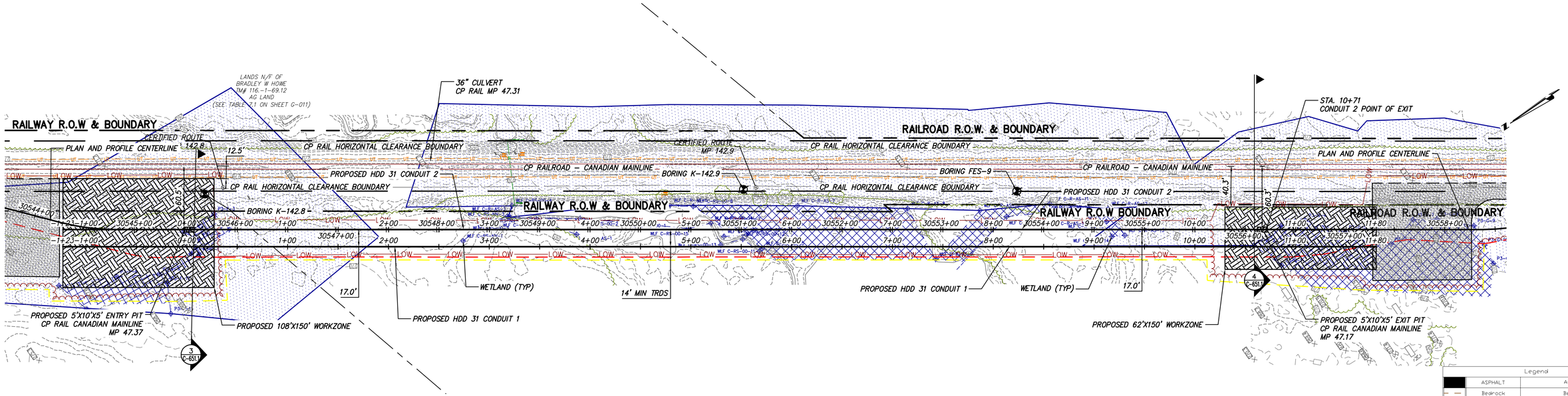
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 31, CONDUIT 1

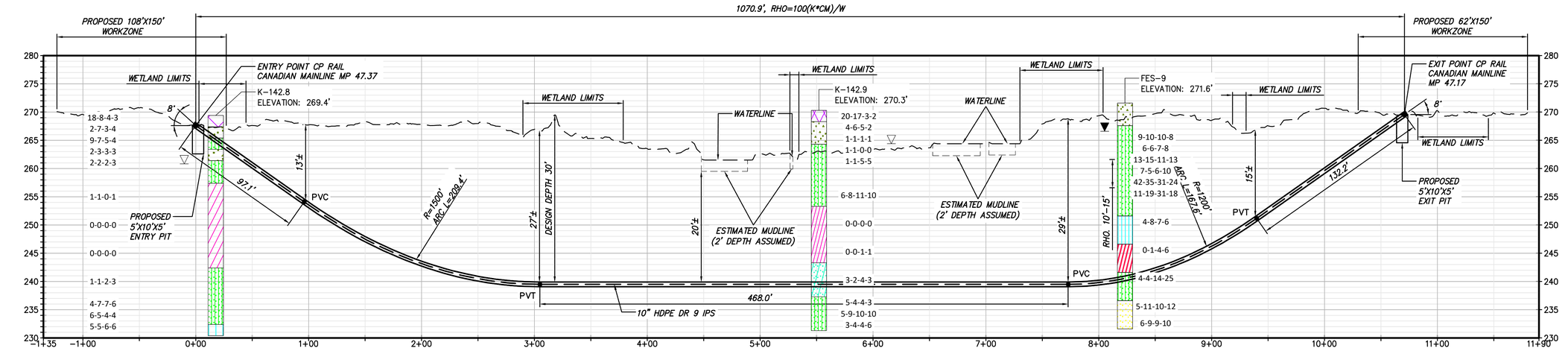
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311

DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE: AS NOTED | DATE: 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-311-C-311A.DWG Saved: 3/28/2023 9:03:05 AM Plotted: 4/4/2023 3:15:10 PM Current User: Snyder, Morgan LastSavedBy: 6759



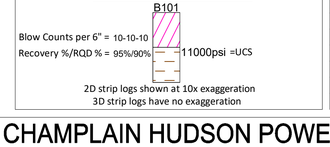
PROPOSED HDD 31 PLAN VIEW
CONDUIT 2



PROPOSED HDD 31 PROFILE
CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit (KIEWIT PKS SINCE 1885)

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

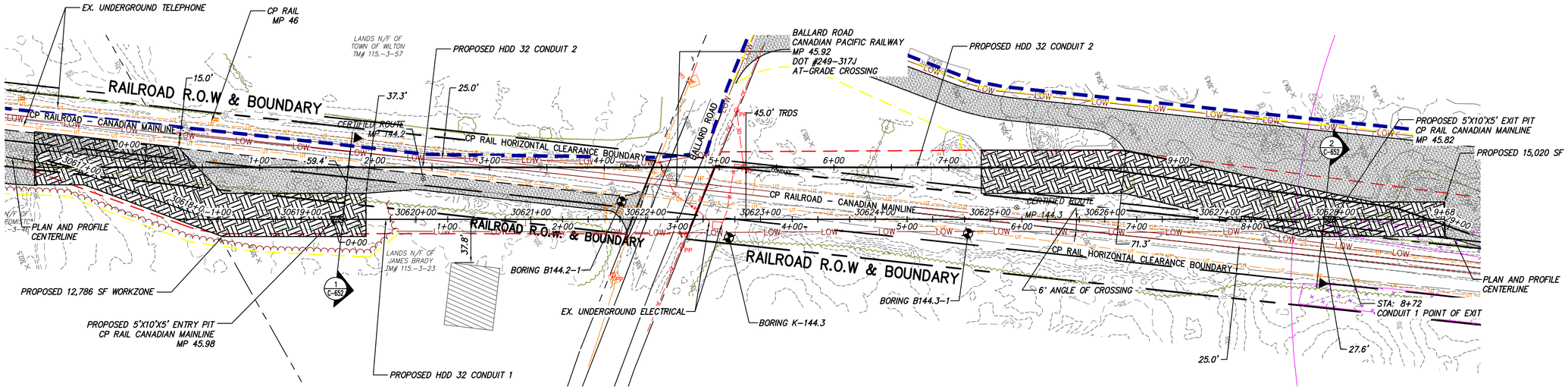
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 31, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-311A

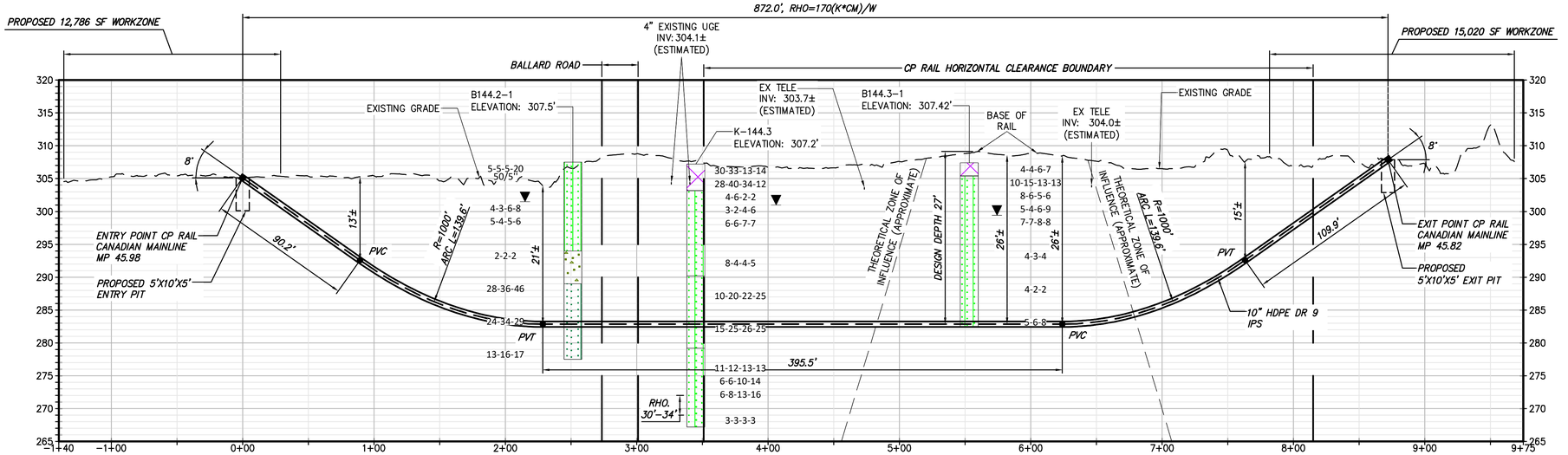
DRAWN BY: CKZ | DESIGNED BY: CKZ | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-311-C-311A.DWG Saved: 3/28/2023 9:03:05 AM Plotted: 4/4/2023 3:16:41 PM Current User: Snyder, Morgan LastSavedBy: 6759



PROPOSED HDD 32 PLAN VIEW
CONDUIT 1

0 50 100
Scale in feet



PROPOSED HDD 32 PROFILE
CONDUIT 1

0 50 100
Scale in feet

20 10 0

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

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 : www.chacompanies.com

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.

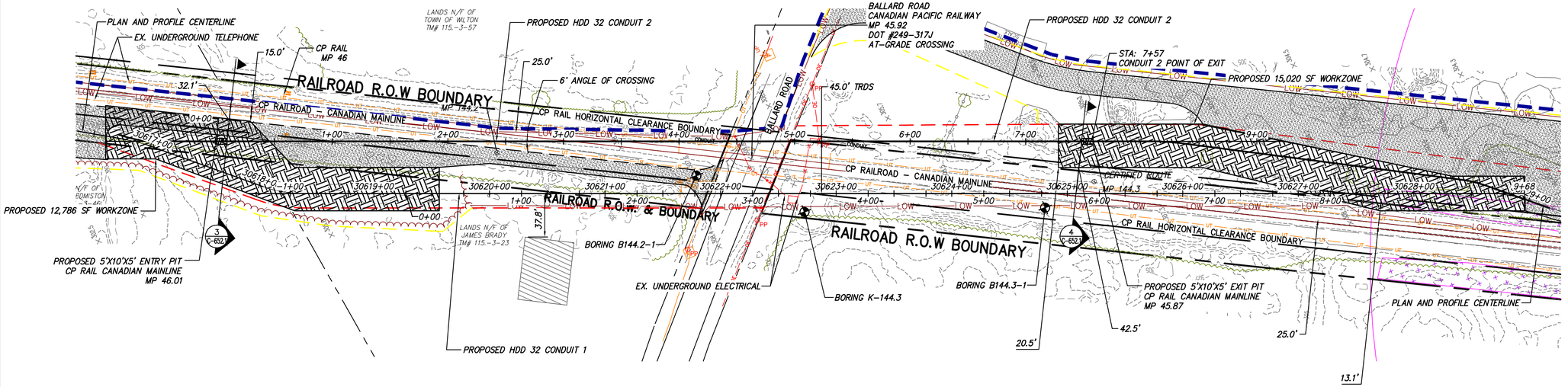
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 32, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-312

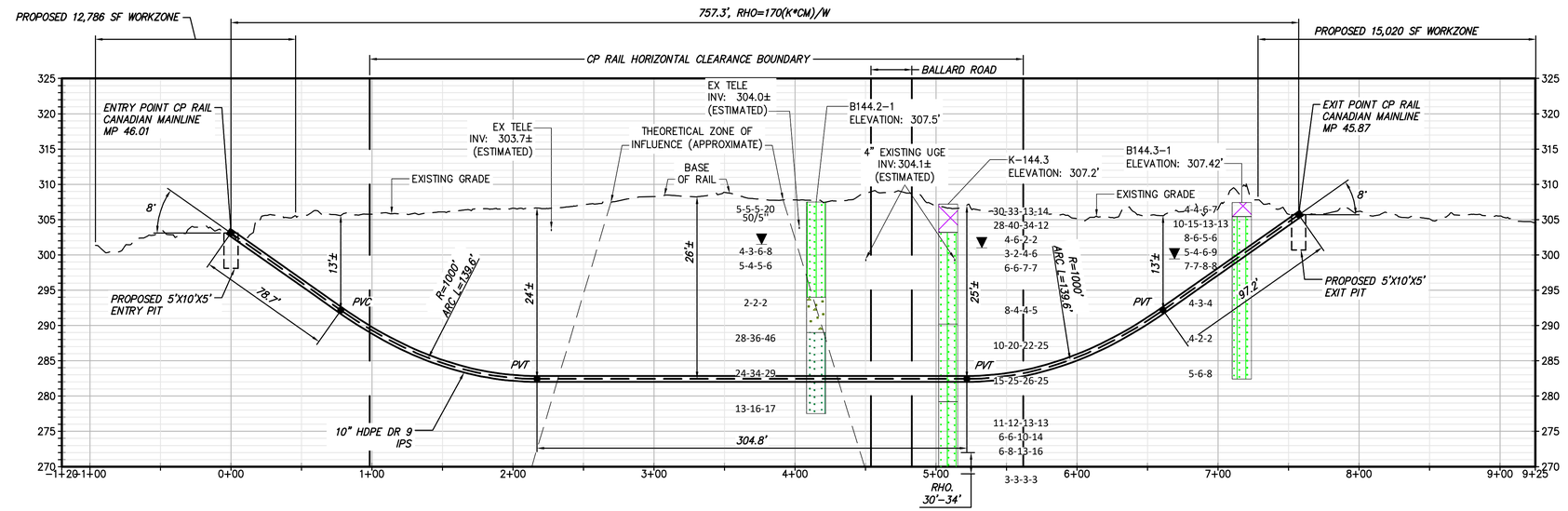
DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-312-C-312A.DWG Saved: 4/3/2023 4:32:22 PM Plotted: 4/4/2023 3:20:21 PM Current User: Snyder, Morgan LastSavedBy: 8275



PROPOSED HDD 32 PLAN VIEW
CONDUIT 2

0 50 100
Scale in feet



PROPOSED HDD 32 PROFILE
CONDUIT 2

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 : www.chacompanies.com

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.

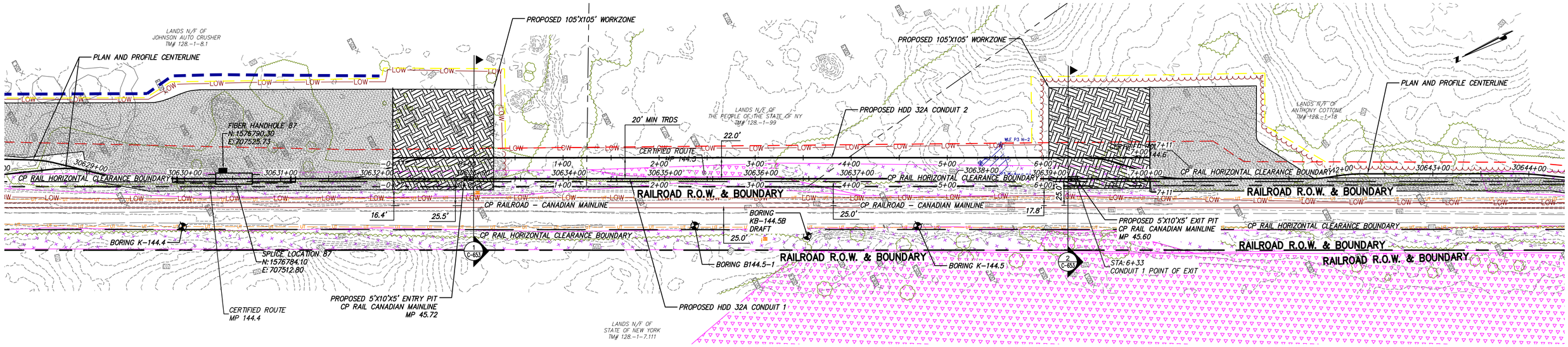
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 32, CONDUIT 2

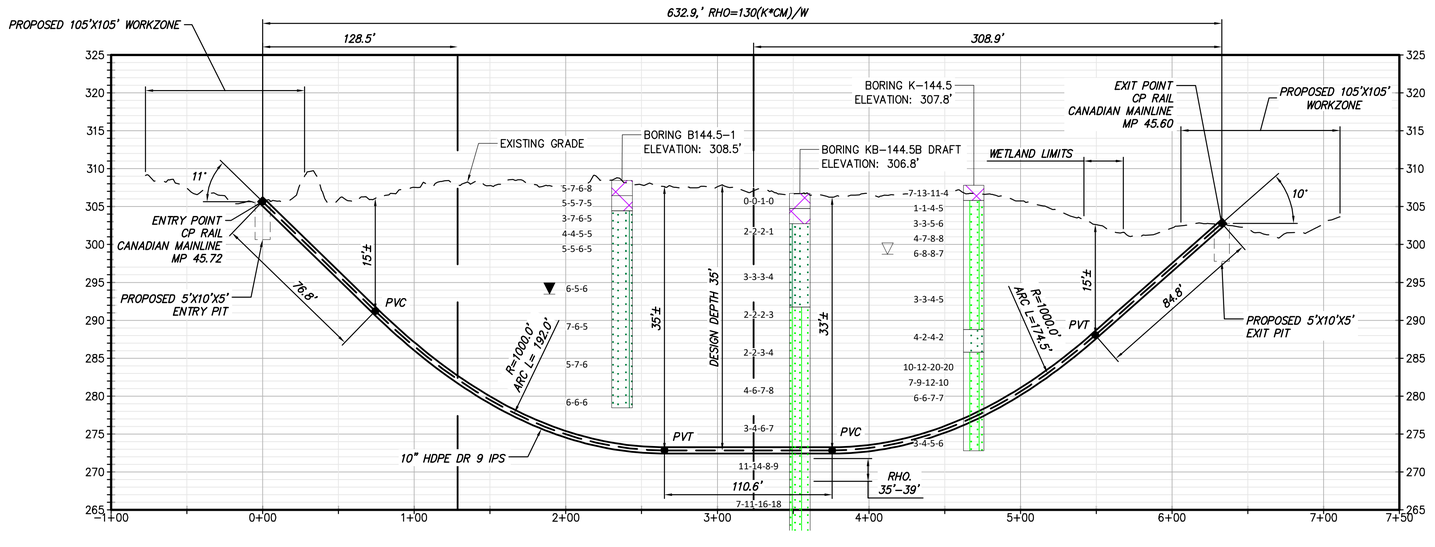
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-312A

DRAWN BY: JDL | DESIGNED BY: JDL | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. X | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-312-C-312A.DWG Saved: 4/3/2023 4:32:22 PM Plotted: 4/4/2023 3:21:46 PM Current User: Snyder, Morgan LastSavedBy: 8275



PROPOSED HDD 32A PLAN VIEW
CONDUIT 1



PROPOSED HDD 32A PROFILE
CONDUIT 1

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
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

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

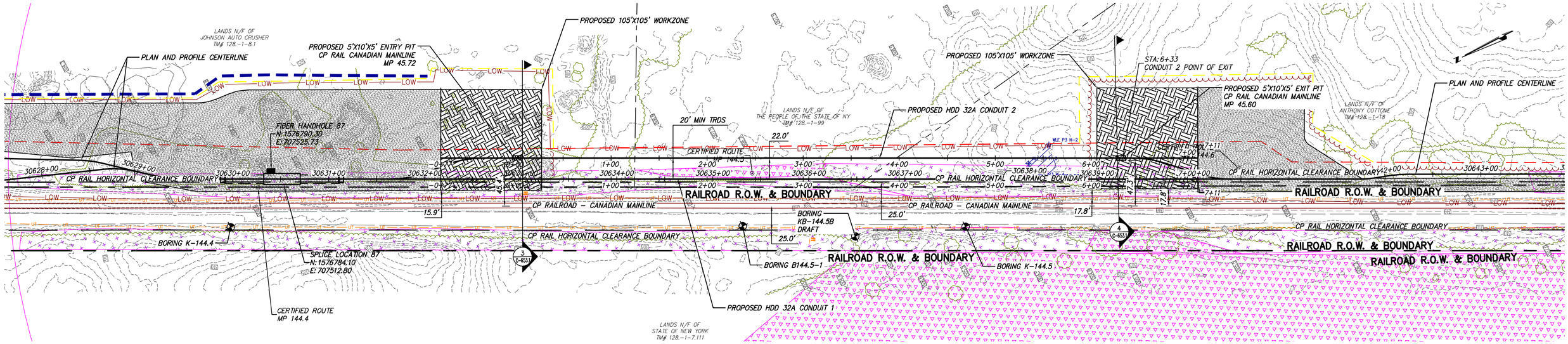
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 32A, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-313

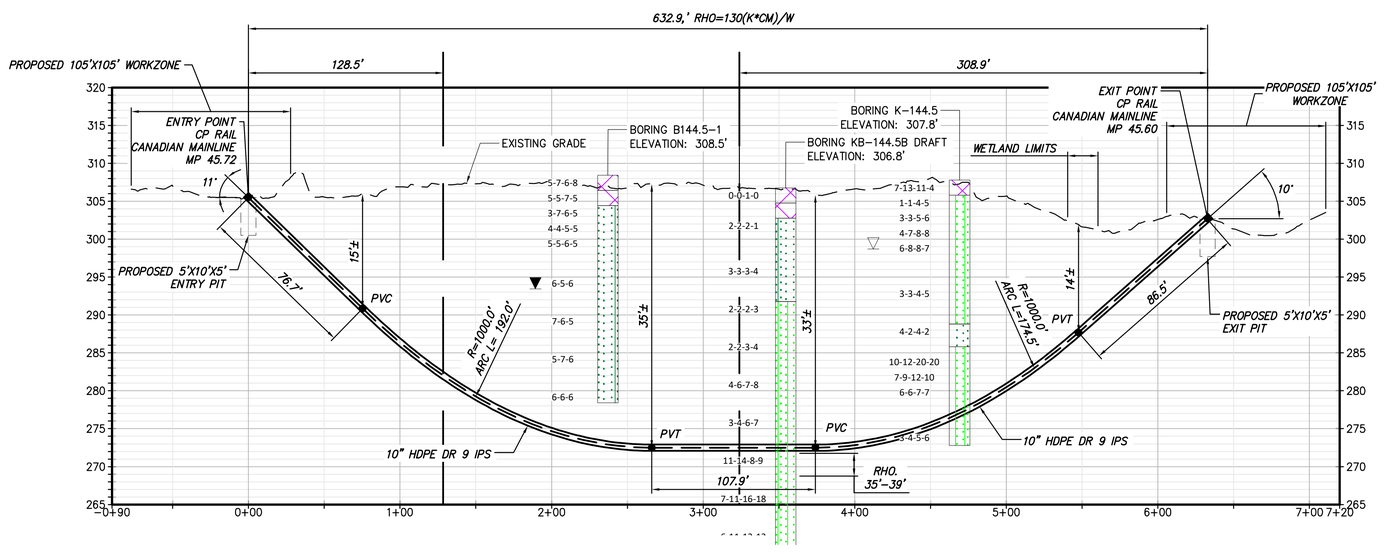
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-313-C-313A.DWG Saved: 4/12/2023 7:52:46 AM Plotted: 4/12/2023 9:24:18 AM Current User: Snyder, Morgan LastSavedBy: 6043



0 50 100
Scale in feet

PROPOSED HDD 32A PLAN VIEW
CONDUIT 2



PROPOSED HDD 32A PROFILE
CONDUIT 2

0 30 60
Scale in feet

12
6
0

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

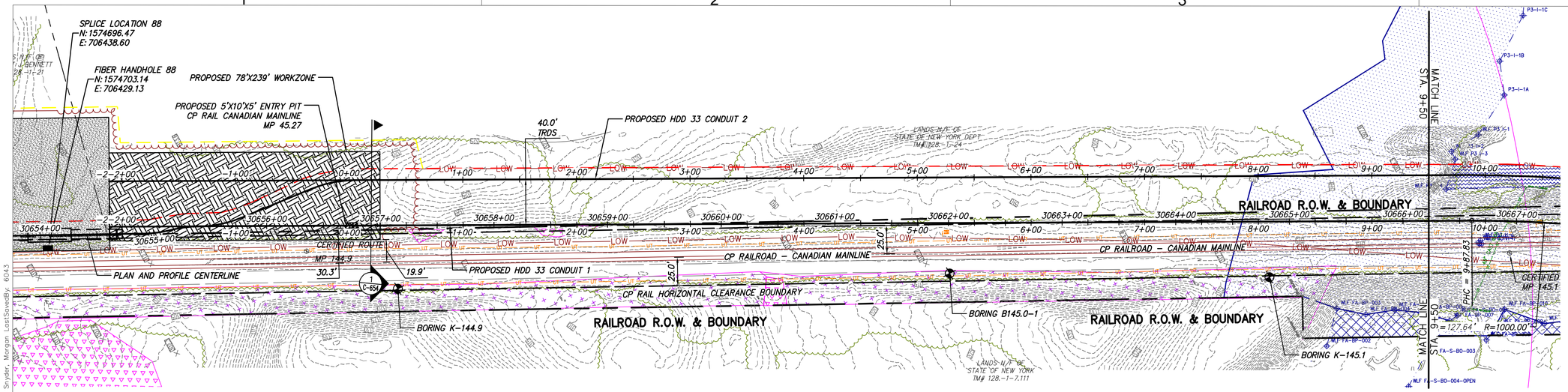
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 32A, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-313A

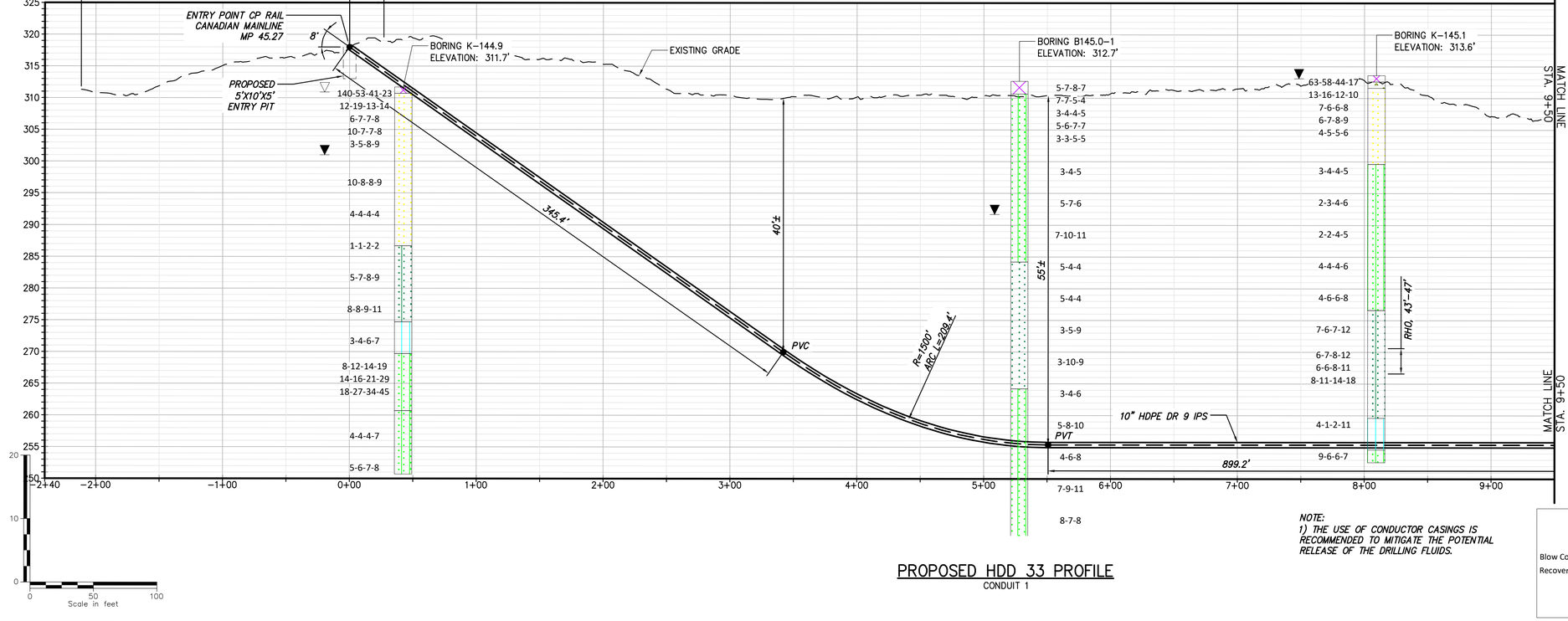
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.

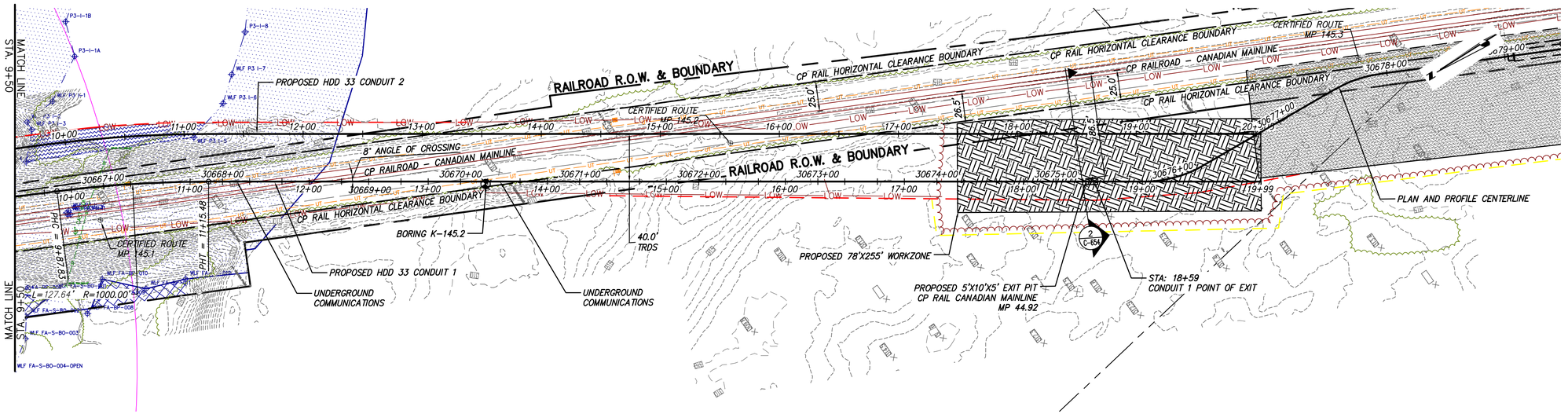
File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-313-C-313A.DWG Saved: 4/12/2023 7:52:46 AM Plotted: 4/12/2023 9:25:11 AM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 33 PLAN VIEW
CONDUIT 1

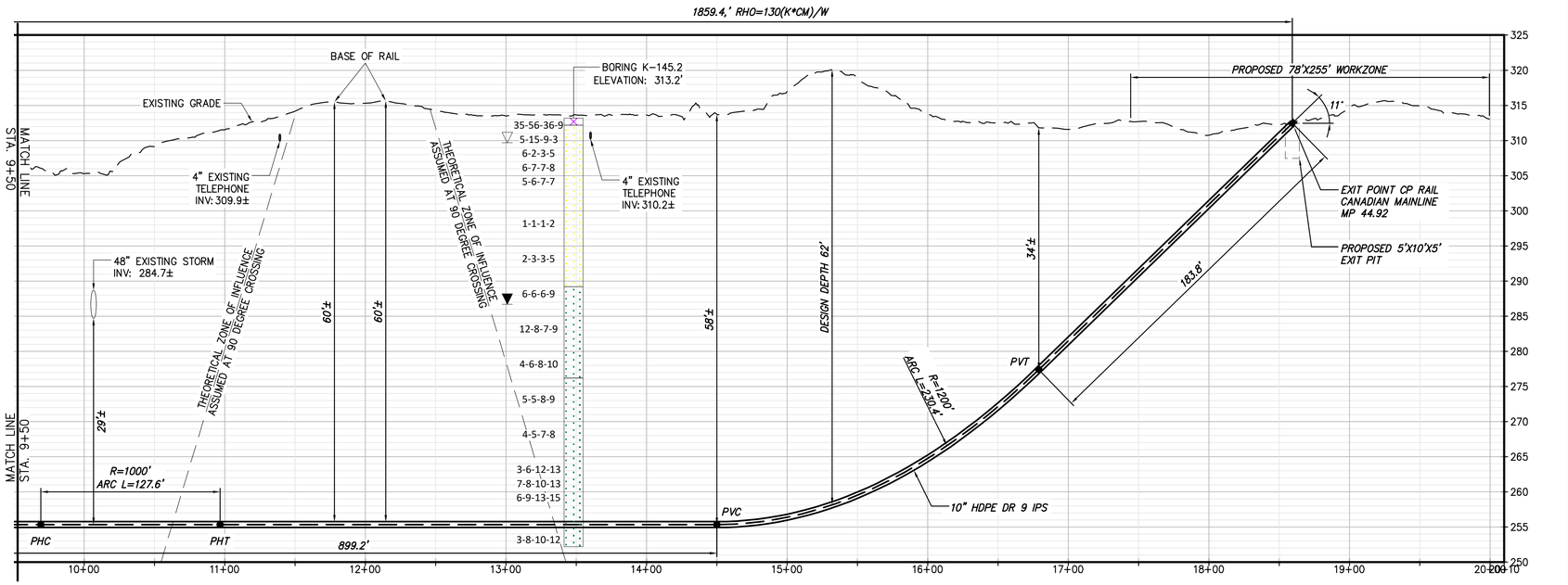
0 50 100
Scale in feet


1859.4,' RHO=130(K*CM)/W
PROPOSED 78'X239' WORKZONE
ENTRY POINT CP RAIL CANADIAN MAINLINE MP 45.27
8°
PROPOSED 5'X10'X5' ENTRY PIT
BORING K–144.9
ELEVATION: 311.7'
EXISTING GRADE
BORING B145.0–1
ELEVATION: 312.7'
BORING K–145.1
ELEVATION: 313.6'
MATCH LINE STA. 9+50
MATCH LINE STA. 9+50
140-53-41-23
12-19-13-14
6-7-7-8
10-7-7-8
3-5-8-9
10-8-8-9
4-4-4-4
1-1-2-2
5-7-8-9
8-8-9-11
3-4-6-7
8-12-14-19
14-16-21-29
18-27-34-45
4-4-4-7
5-6-7-8
345.4'
40'±
55'±
PVC
PVT
R=1500'
ARC L=209.4'
10" HDPE DR 9 IPS
899.2'
RHO, 43'-47'
5-7-8-7
7-7-5-4
3-4-4-5
5-6-7-7
3-3-5-5
3-4-5
5-7-6
7-10-11
5-4-4
5-4-4
3-5-9
3-10-9
3-4-6
5-8-10
4-6-8
7-9-11
8-7-8
63-58-44-17
13-16-12-10
7-6-6-8
6-7-8-9
4-5-5-6
3-4-4-5
2-3-4-6
2-2-4-5
4-4-4-6
4-6-6-8
7-6-7-12
6-7-8-12
6-6-8-11
8-11-14-18
4-1-2-11
9-6-6-7
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
3400
3450
3500
3550
3600
3650
3700
3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250
4300
4350
4400
4450
4500
4550
4600
4650
4700
4750
4800
4850
4900
4950
5000
5050
5100
5150
5200
5250
5300
5350
5400
5450
5500
5550
5600
5650
5700
5750
5800
5850
5900
5950
6000
6050
6100
6150
6200
6250
6300
6350
6400
6450
6500
6550
6600
6650
6700
6750
6800
6850
6900
6950
7000
7050
7100
7150
7200
7250
7300
7350
7400
7450
7500
7550
7600
7650
7700
7750
7800
7850
7900
7950
8000
8050
8100
8150
8200
8250
8300
8350
8400
8450
8500
8550
8600
8650
8700
8750
8800
8850
8900
8950
9000
9050
9100
9150
9200
9250
9300
9350
9400
9450
9500
9550
9600
9650
9700
9750
9800
9850
9900
9950
10000
10050
10100
10150
10200
10250
10300
10350
10400
10450
10500
10550
10600
10650
10700
10750
10800
10850
10900
10950
11000
11050
11100
11150
11200
11250
11300
11350
11400
11450
11500
11550
11600
11650
11700
11750
11800
11850
11900
11950
12000
12050
12100
12150
12200
12250
12300
12350
12400
12450
12500
12550
12600
12650
12700
12750
12800
12850
12900
12950
13000
13050
13100
13150
13200
13250
13300
13350
13400
13450
13500
13550
13600
13650
13700
13750
13800
13850
13900
13950
14000
14050
14100
14150
14200
14250
14300
14350
14400
14450
14500
14550
14600
14650
14700
14750
14800
14850
14900
14950
15000
15050
15100
15150
15200
15250
15300
15350
15400
15450
15500
15550
15600
15650
15700
15750
15800
15850
15900
15950
16000
16050
16100
16150
16200
16250
16300
16350
16400
16450
16500
16550
16600
16650
16700
16750
16800
16850
16900
16950
17000
17050
17100
17150
17200
17250
17300
17350
17400
17450
17500
17550
17600
17650
17700
17750
17800
17850
17900
17950
18000
18050
18100
18150
18200
18250
18300
18350
18400
18450
18500
18550
18600
18650
18700
18750
18800
18850
18900
18950
19000
19050
19100
19150
19200
19250
19300
19350
19400
19450
19500
19550
19600
19650
19700
19750
19800
19850
19900
19950
20000
20050
20100
20150
20200
20250
20300
20350
20400
20450
20500
20550
20600
20650
20700
20750
20800
20850
20900
20950
21000
21050
21100
21150
21200
21250
21300
21350
21400
21450
21500
21550
21600
21650
21700
21750
21800
21850
21900
21950
22000
22050
22100
22150
22200
22250
22300
22350
22400
22450
22500
22550
22600
22650
22700
22750
22800
22850
22900
22950
23000
23050
23100
23150
23200
23250
23300
23350
23400
23450
23500
23550
23600
23650
23700
23750
23800
23850
23900
23950
24000
24050
24100
24150
24200
24250
24300
24350
24400
24450
24500
24550
24600
24650
24700
24750
24800
24850
24900
24950
25000
25050
25100
25150
25200
25250
25300
25350
25400
25450
25500
25550
25600
25650
25700
25750
25800
25850
25900
25950
26000
26050
26100
26150
26200
26250
26300
26350
26400
26450
26500
26550
26600
26650
26700
26750
26800
26850
26900
26950
27000
27050
27100
27150
27200
27250
27300
27350
27400
27450
27500
27550
27600
27650
27700
27750
27800
27850
27900
27950
28000
28050
28100
28150
28200
28250
28300
28350
28400
28450
28500
28550
28600
28650
28700
28750
28800
28850
28900
28950
29000
29050
29100
29150
29200
29250
29300
29350
29400
29450
29500
29550
29600
29650
29700
29750
29800
29850
29900
29950
30000
30050
30100
30150
30200
30250
30300
30350
30400
30450
30500
30550
30600
30650
30700
30750
30800
30850
30900
30950
31000
31050
31100
31150
31200
31250
31300
31350
31400
31450
31500
31550
31600
31650
31700
31750
31800
31850
31900
31950
32000
32050
32100
32150
32200
32250
32300
32350
32400
32450
32500
32550
32600
32650
32700
32750
32800
32850
32900
32950
33000
33050
33100
33150
33200
33250
33300
33350
33400
33450
33500
33550
33600
33650
33700
33750
33800
33850
33900
33950
34000
34050
34100
34150
34200
34250
34300
34350
34400
34450
34500
34550
34600
34650
34700
34750
34800
34850
34900
34950
35000
35050
35100
35150
35200
35250
35300
35350
35400
35450
35500
35550
35600
35650
35700
35750
35800
35850
35900
35950
36000
36050
36100
36150
36200
36250
36300
36350
36400
36450
36500
36550
36600
36650
36700
36750
36800
36850
36900
36950
37000
37050
37100
37150
37200
37250
37300
37350
37400
37450
37500
37550
37600
37650
37700
37750
37800
37850
37900
37950
38000
38050
38100
38150
38200
38250
38300
38350
38400
38450
38500
38550
38600
38650
38700
38750
38800
38850
38900
38950
39000
39050
39100
39150
39200
39250
39300
39350
39400
39450
39500
39550
39600
39650
39700
39750
39800
39850
39900
39950
40000
40050
40100
40150
40200
40250
40300
40350
40400
40450
40500
40550
40600
40650
40700
40750
40800
40850
40900
40950
41000
41050
41100
41150
41200
41250
41300
41350
41400
41450
41500
41550
41600
41650
41700
41750
41800
41850
41900
41950
42000
42050
42100
42150
42200
42250
42300
42350
42400
42450
42500
42550
42600
42650
42700
42750
42800
42850
42900
42950
43000
43050
43100
43150
43200
43250
43300
43350
43400
43450
43500
43550
43600
43650
43700
43750
43800
43850
43900
43950
44000
44050
44100
44150
44200
44250
44300
44350
44400
44450
44500
44550
44600
44650
44700
44750
44800
44850
44900
44950
45000
45050
45100
45150
45200
45250
45300
45350
45400
45450
45500
45550
45600
45650
45700
45750
45800
45850
45900
45950
46000
46050
46100
46150
46200
46250
46300
46350
46400
46450
46500
46550
46600
46650
46700
46750
46800
46850
46900
46950
47000
47050
47100
47150
47200
47250
47300
47350
47400
47450
47500
47550
47600
47650
47700
47750
47800
47850
47900
47950
48000
48050
48100
48150
48200
48250
48300
48350
48400
48450
48500
48550
48600
48650
48700
48750
48800
48850
48900
48950
49000
49050
49100
49150
49200
49250
49300
49350
49400
49450
49500
49550
49600
49650
49700
49750
49800
49850
49900
49950
50000
50050
50100
50150
50200
50250
50300
50350
50400
50450
50500
50550
50600
50650
50700
50750
50800
50850
50900
50950
51000
51050
51100
51150
51200
51250
51300
51350
51400
51450
51500
51550
51600
51650
51700
51750
51800
51850
51900
51950
52000
52050
52100
52150
52200
52250
52300
52350
52400
52450
52500
52550
52600
52650
52700
52750
52800
52850
52900
52950
53000
53050
53100
53150
53200
53250
53300
53350
53400
53450
53500
53550
53600
53650
53700
53750
53800
53850
53900
53950
54000
54050
54100
54150
54200
54250
54300
54350
54400
54450
54500
54550
54600
54650
54700
54750
54800
54850
54900
54950
55000
55050
55100
55150
55200
55250
55300
55350
55400
55450
55500
55550
55600
55650
55700
55750
55800
55850
55900
55950
56000
56050
56100
56150
56200
56250
56300
56350
56400
56450
56500
56550
56600
56650
56700
56750
56800
56850
56900
56950
57000
57050
57100
57150
57200
57250
57300
57350
57400
57450
57500
57550
57600
57650
57700
57750
57800
57850
57900
57950
58000
58050
58100
58150
58200
58250
58300
58350
58400
58450
58500
58550
58600
58650
58700
58750
58800
58850
58900
58950
59000
59050
59100
59150
59200
59250
59300
59350
59400
59450
59500
59550
59600
59650
59700
59750
59800
59850
59900
59950
60000
60050
60100
60150
60200
60250
60300
60350
60400
60450
60500
60550
60600
60650
60700
60750
60800
60850
60900
60950
61000
61050
61100
61150
61200
61250
61300
61350
61400
61450
61500
61550
61600
61650
61700
61750
61800
61850
61900
61950
62000
62050
62100
62150
62200
62250
62300
62350
62400
62450
62500
62550
62600
62650
62700
62750
62800
62850
62900
62950
63000
63050
63100
63150
63200
63250
63300
63350
63400
63450
63500
63550
63600
63650
63700
63750
63800
63850
63900
63950
64000
64050
64100
64150
64200
64250
64300
64350
64400
64450
64500
64550
64600
64650
64700
64750
64800
64850
64900
64950
65000
65050
65100
65150
65200
65250
65300
65350
65400
65450
65500
65550
65600
65650
65700
65750
65800
65850
65900
65950
66000
66050
66100
66150
66200
66250
66300
66350
66400
66450
66500
66550
66600
66650
66700
66750
66800
66850
66900
66950
67000
67050
67100
67150
67200
67250
67300
67350
67400
67450
67500
67550
67600
67650
67700
67750
67800
67850
67900
67950
68000
68050
68100
68150
68200
68250
68300
68350
68400
68450
68500
68550
68600
68650
68700
68750
68800
68850
68900
68950
69000
69050
69100
69150
69200
69250
69300
69350
69400
69450
69500
69550
69600
69650
69700
69750
69800
69850
69900
69950
70000
70050
70100
70150
70200
70250
70300
70350
70400
70450
70500
70550
70600
70650
70700
70750
70800
70850
70900
70950
71000
71050
71100
71150
71200
71250
71300
71350
71400
71450
71500
71550
71600
71650
71700
71750
71800
71850
71900
71950
72000
72050
72100
72150
72200
72250
72300
72350
72400
72450
72500
72550
72600
72650
72700
72750
72800
72850
72900
72950
73000
73050
73100
73150
73200
73250
73300
73350
73400
73450
73500
73550
73600
73650
73700
73750
73800
73850
73900
73950
74000
74050
74100
74150
74200
74250
74300
74350
74400
74450
74500
74550
74600
74650
74700
74750
74800
74850
74900
74950
75000
75050
75100
75150
75200
75250
75300
75350
75400
75450
75



0 50 100
Scale in feet

PROPOSED HDD 33 PLAN VIEW
CONDUIT 1

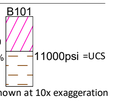


20 10 0
0 50 100
Scale in feet

PROPOSED HDD 33 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

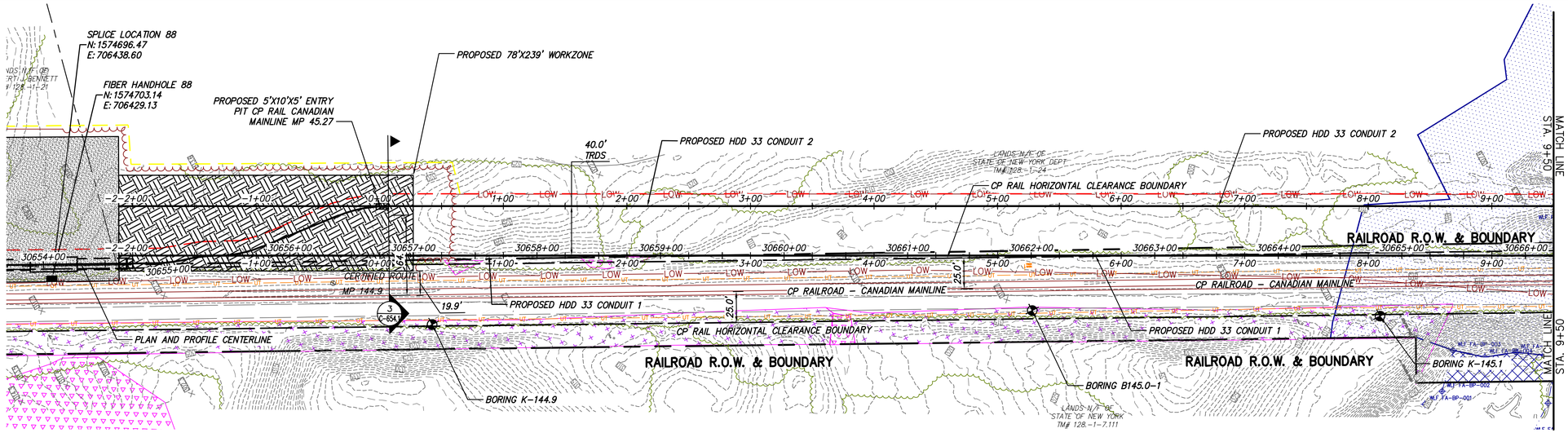
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 33, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-314.1

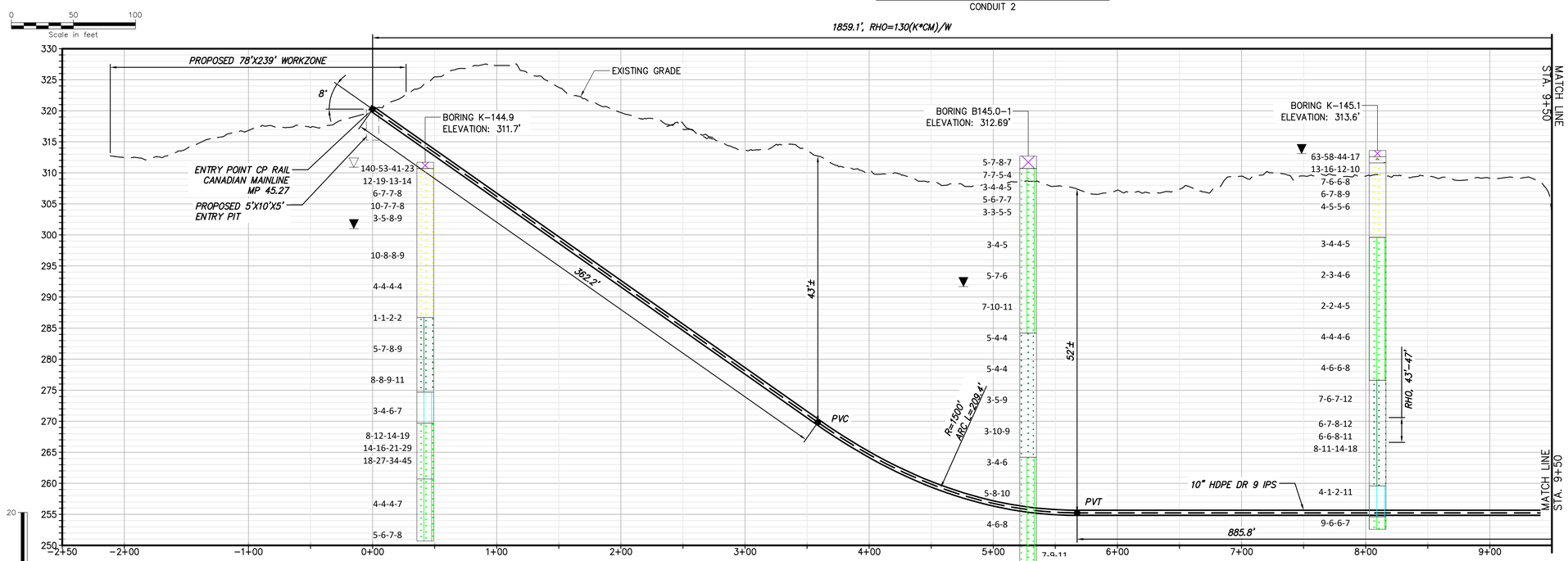
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-314 – C314A (HDD 33).DWG Saved: 4/12/2023 9:52:06 AM Plotted: 4/12/2023 9:58:41 AM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 33 PLAN VIEW

CONDUIT 2



PROPOSED HDD 33 PROFILE

CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS

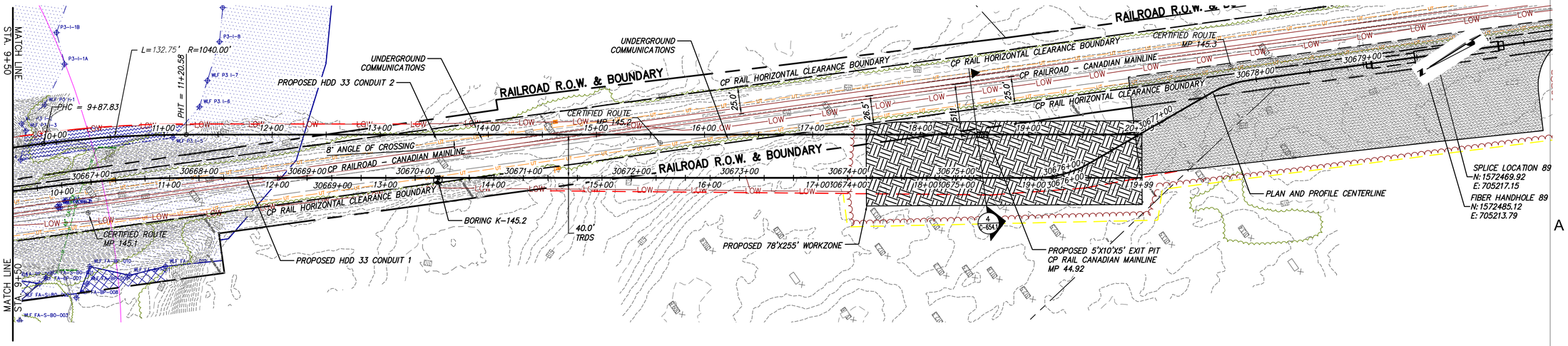
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON

PLAN AND PROFILE - HDD 33, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-314A

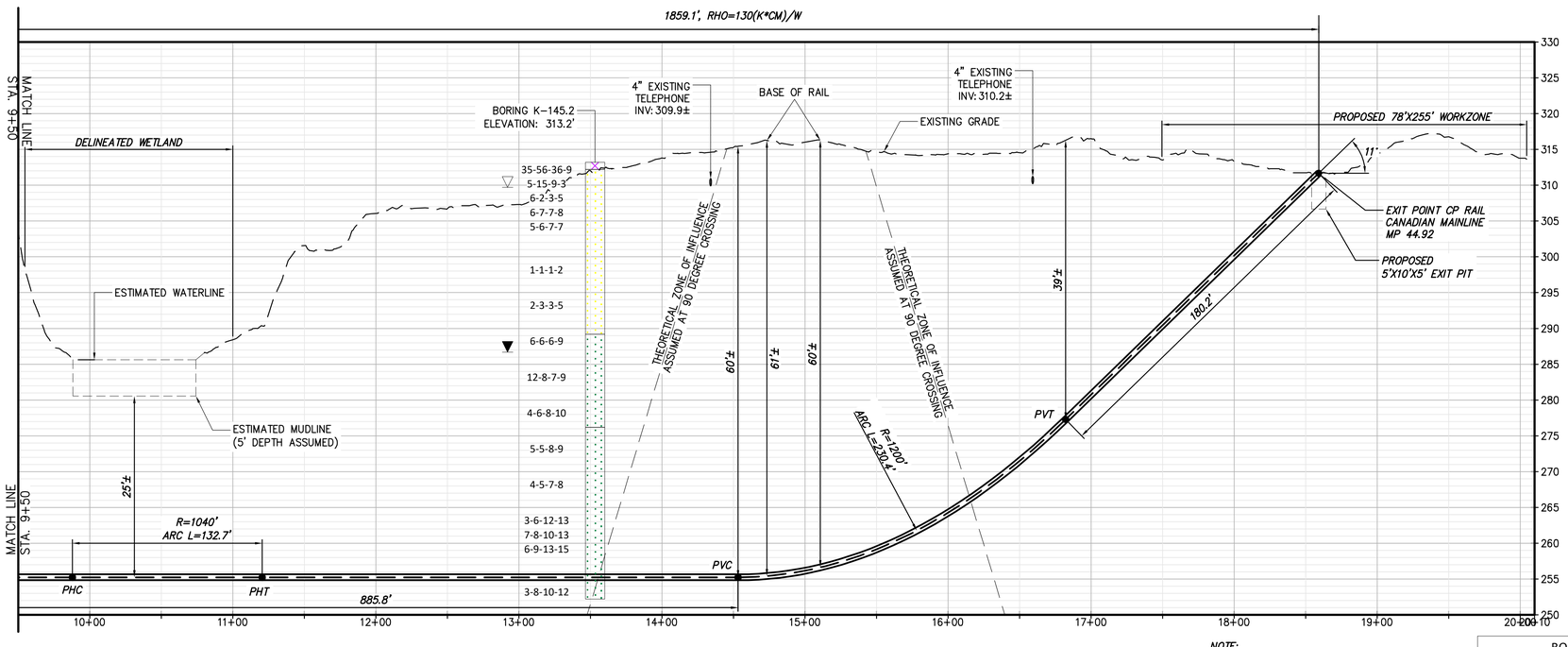
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-314 – C314A (HDD 33).DWG Saved: 4/12/2023 9:52:06 AM Current User: Snyder, Morgan LastSavedBy: 6043
Plotted: 4/12/2023 10:00:04 AM



0 50 100
Scale in feet

PROPOSED HDD 33 PLAN VIEW
CONDUIT 2



20
10
0
0 50 100
Scale in feet

PROPOSED HDD 33 PROFILE
CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 | www.chacompanies.com

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

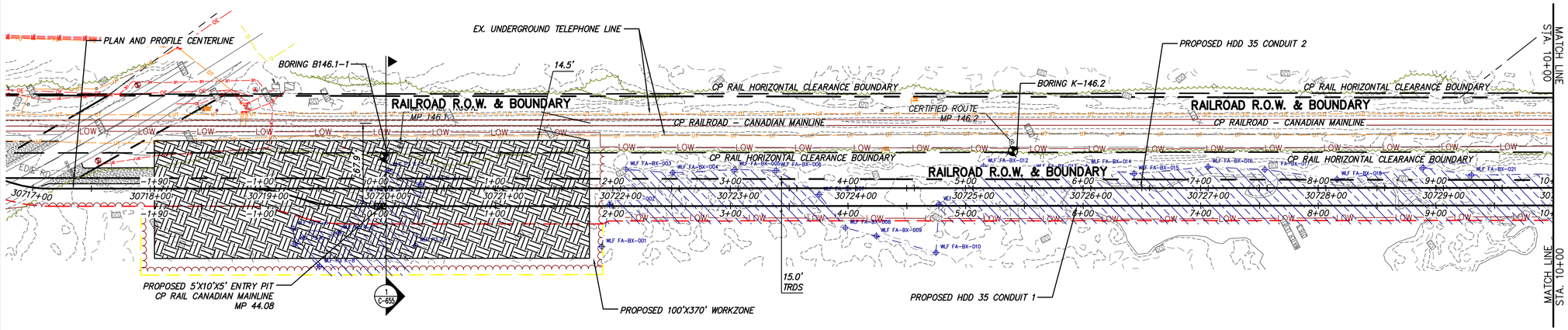
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 33, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-314A.1

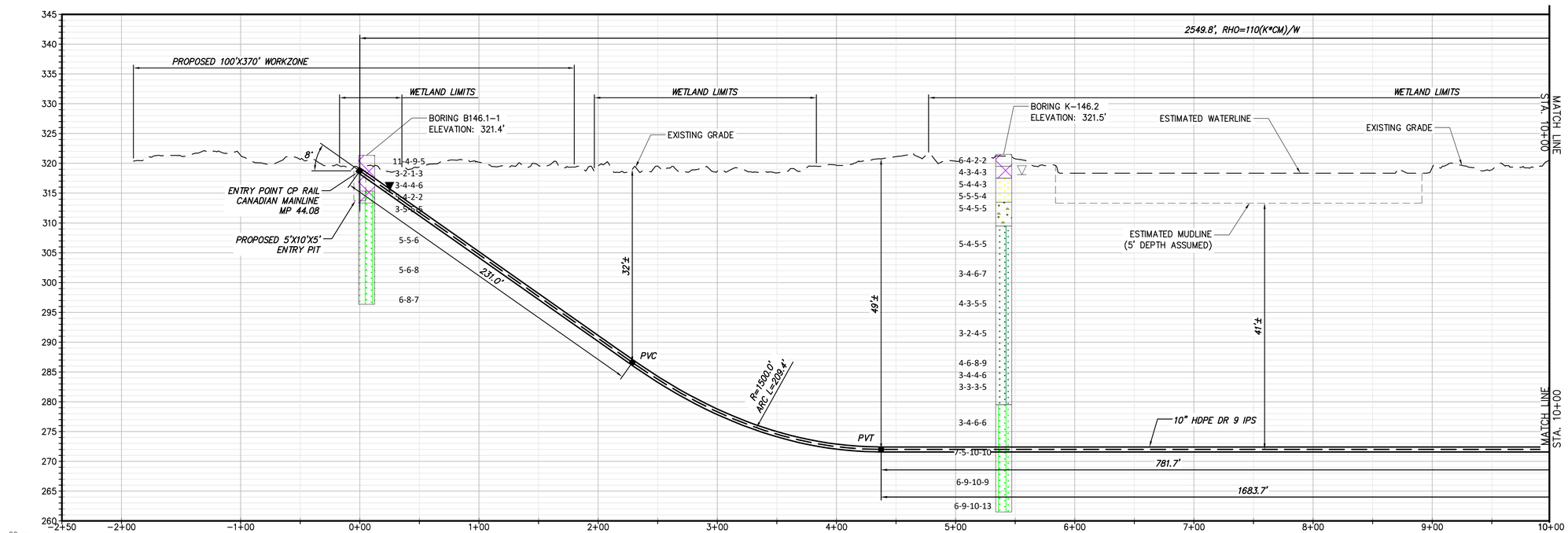
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. 1 | SH.NO.

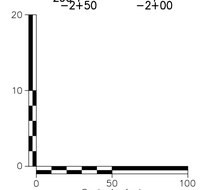
B

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-314 – C314A (HDD 33).DWG Saved: 4/12/2023 9:52:06 AM Plotted: 4/12/2023 10:01:18 AM Current User: Snyder, Morgan LastSavedBy: 6043



PROPOSED HDD 35 PLAN VIEW
CONDUIT 1





PROPOSED HDD 35 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 : www.chacompanies.com

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.

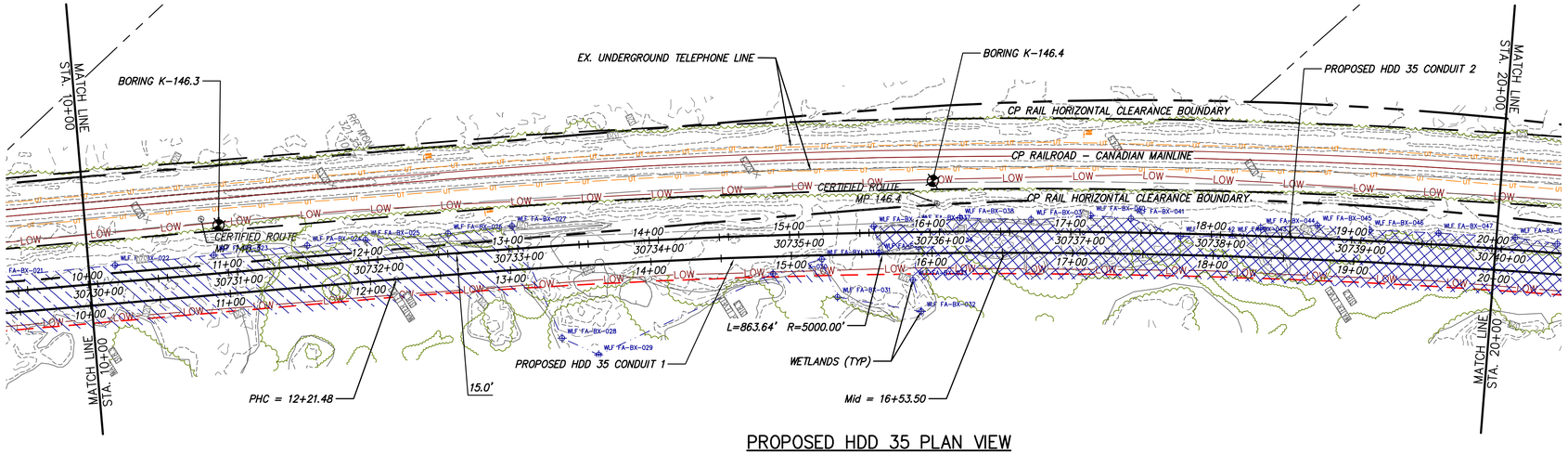
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 35, CONDUIT 1

DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.

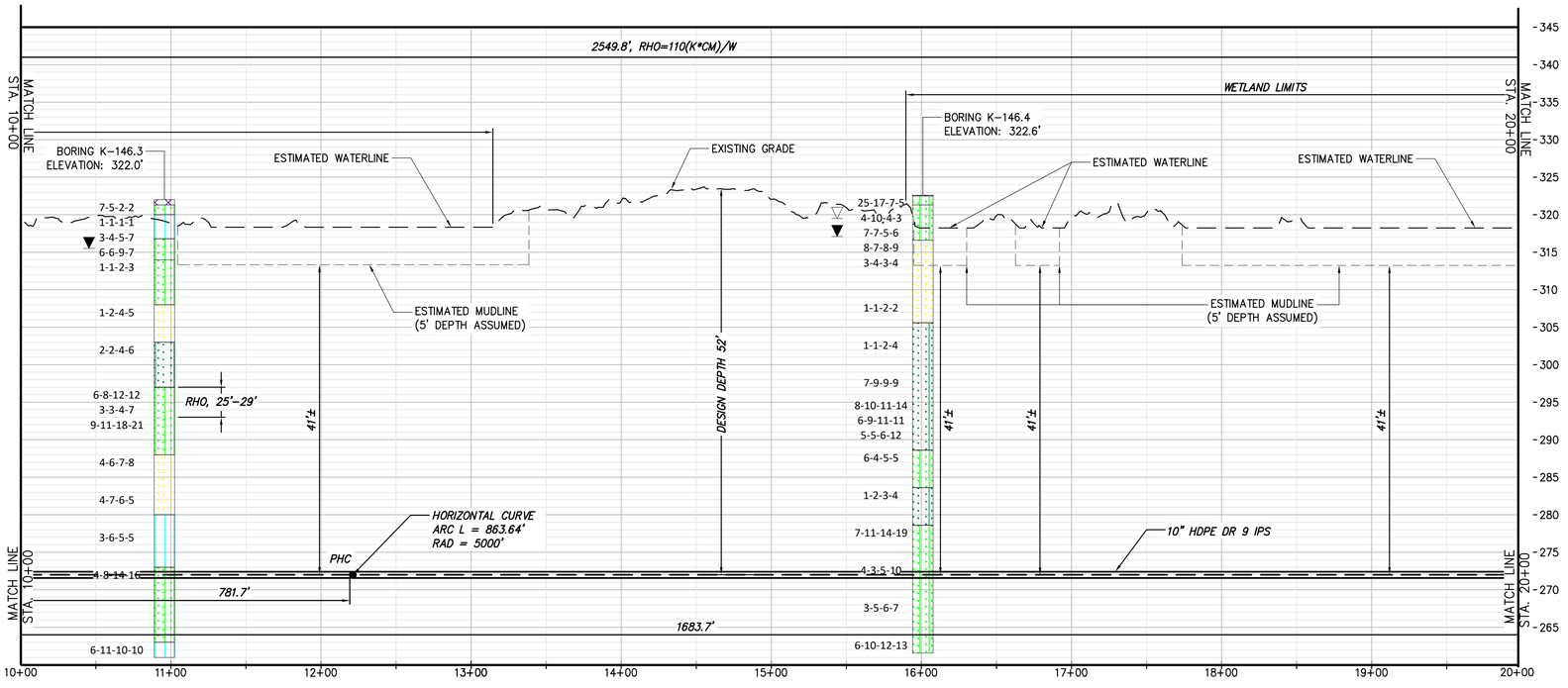
KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-315**

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-316 – C316A.DWG Saved: 4/3/2023 4:18:10 PM Plotted: 4/4/2023 3:38:29 PM Current User: Snyder, Morgan LastSavedBy: 8275



0 50 100
Scale in feet

PROPOSED HDD 35 PLAN VIEW
CONDUIT 1



20 10 0
0 50 100
Scale in feet

PROPOSED HDD 35 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

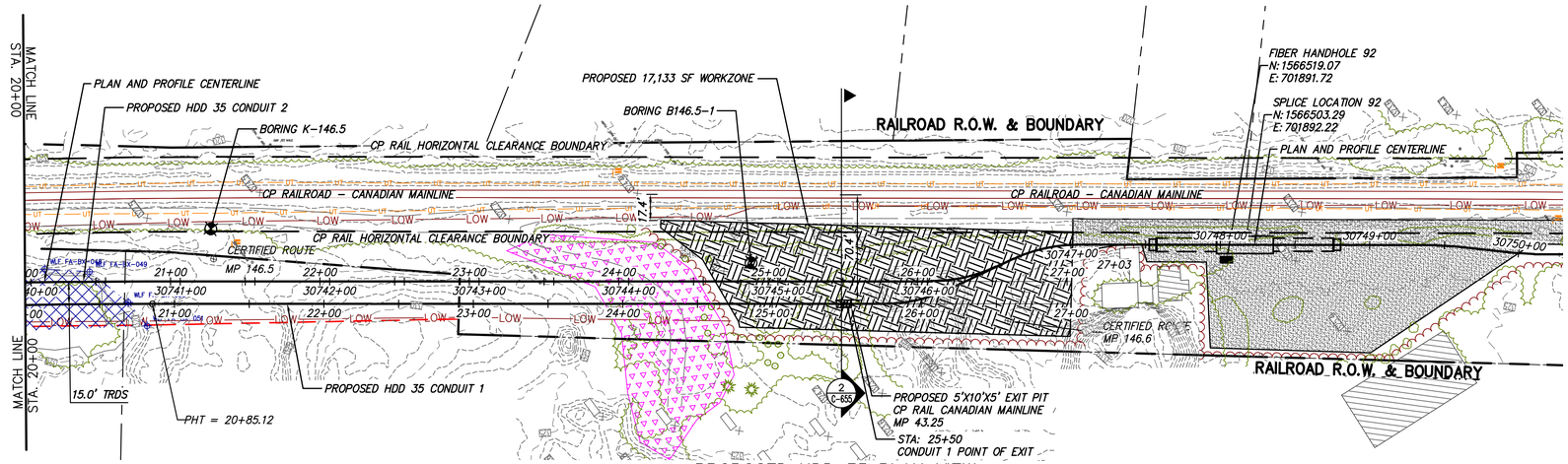
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 35, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-315.1

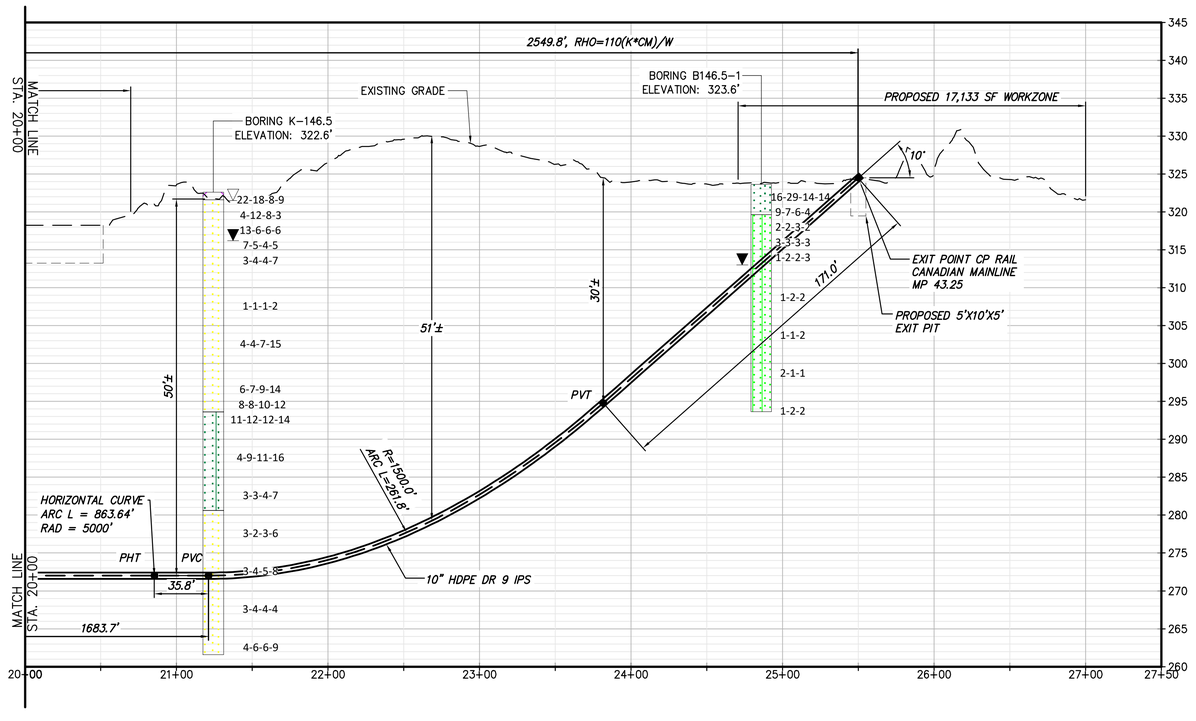
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE: AS NOTED | DATE: 04/05/2023 | REV. NO. 1 | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-316 - C316A.DWG Saved: 4/3/2023 4:18:10 PM Plotted: 4/4/2023 3:40:22 PM Current User: Snyder, Morgan LastSavedBy: 8275



0 50 100
Scale in feet

PROPOSED HDD 35 PLAN VIEW
CONDUIT 1



20 10 0
0 50 100
Scale in feet

PROPOSED HDD 35 PROFILE
CONDUIT 1

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

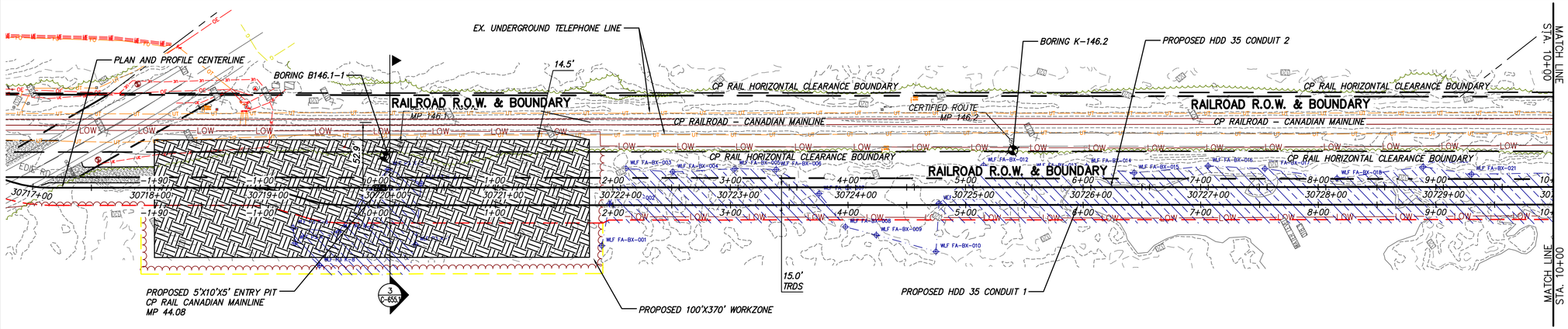
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 35, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-315.2

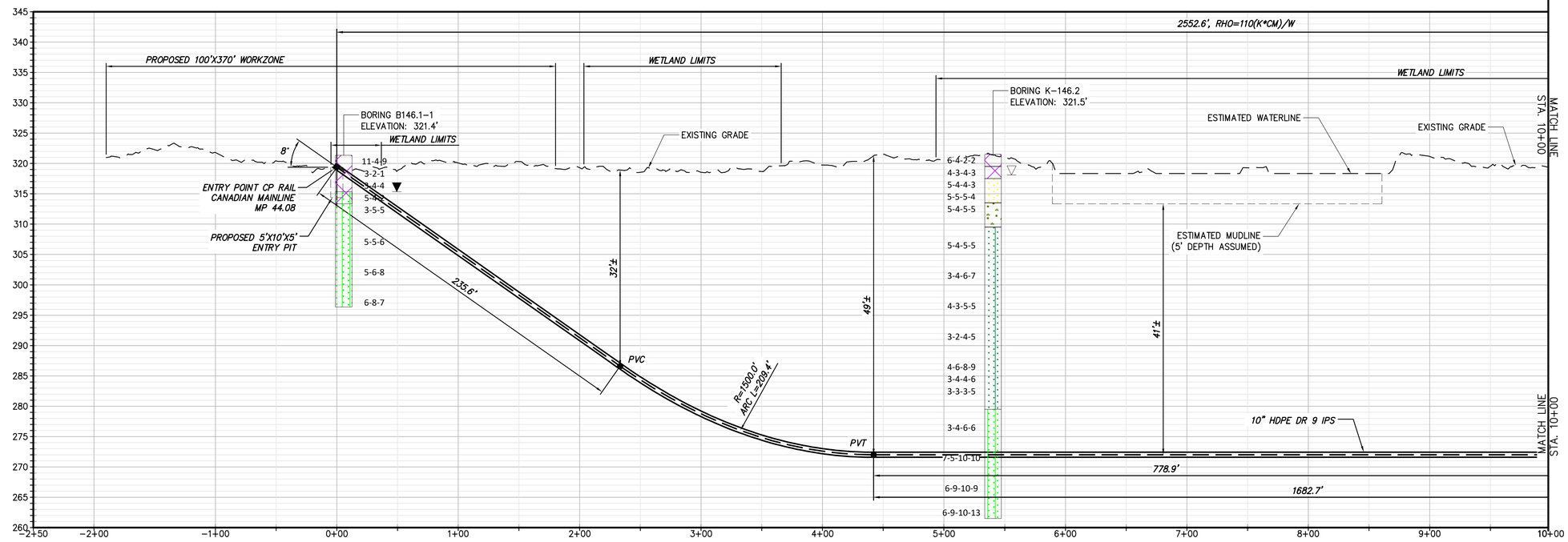
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. 1 | DATE 04/05/2023 | SH.NO.

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-316 – C316A.DWG Saved: 4/3/2023 4:18:10 PM Plotted: 4/4/2023 3:41:46 PM Current User: Snyder, Morgan LastSavedBy: 8275



0 50 100
Scale in feet

PROPOSED HDD 35 PLAN VIEW
CONDUIT 2

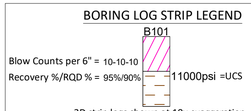


20
10
0
0 50 100
Scale in feet

PROPOSED HDD 35 PROFILE
CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

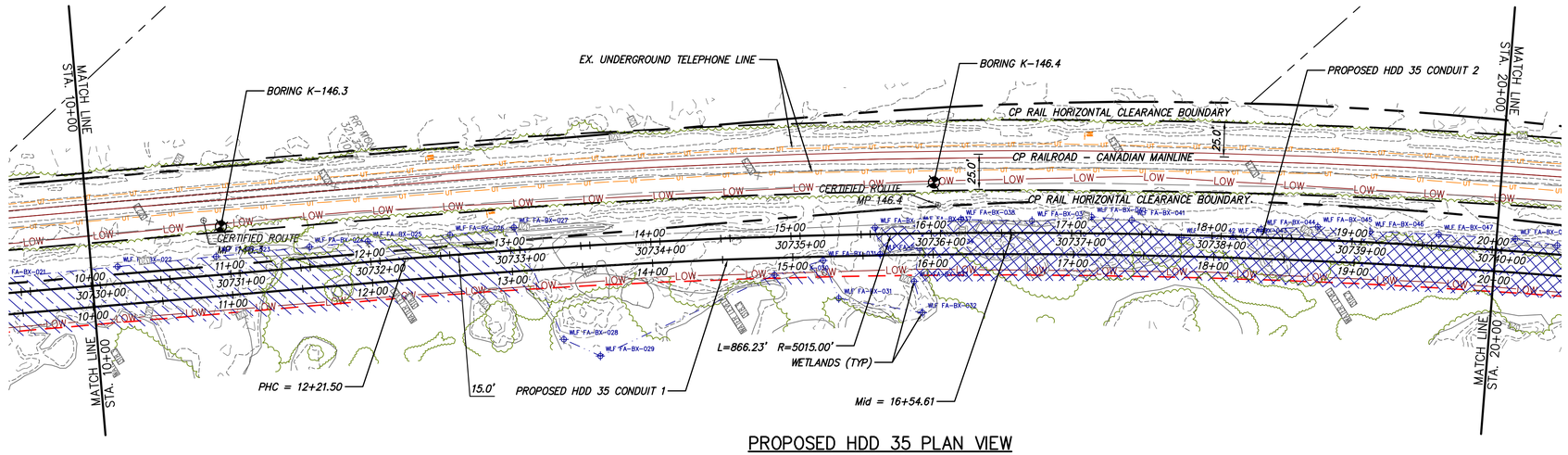
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 35, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-315A

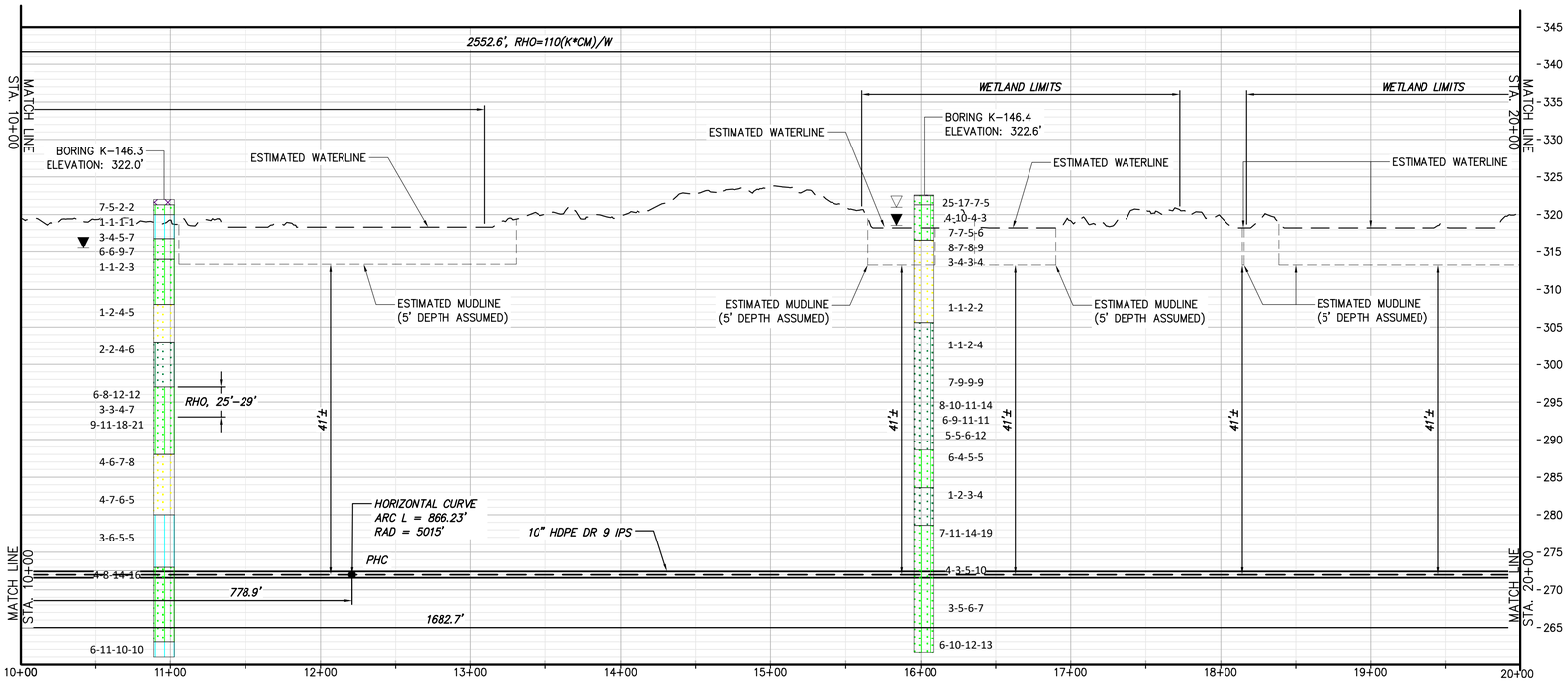
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. 1 | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-316 – C316A.DWG Saved: 4/3/2023 4:18:10 PM Plotted: 4/4/2023 3:43:32 PM Current User: Snyder, Morgan LastSavedBy: 8275



0 50 100
Scale in feet

PROPOSED HDD 35 PLAN VIEW
CONDUIT 2

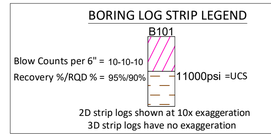


20
10
0
0 50 100
Scale in feet

PROPOSED HDD 35 PROFILE
CONDUIT 2

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

BORING LOG STRIP LEGEND



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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

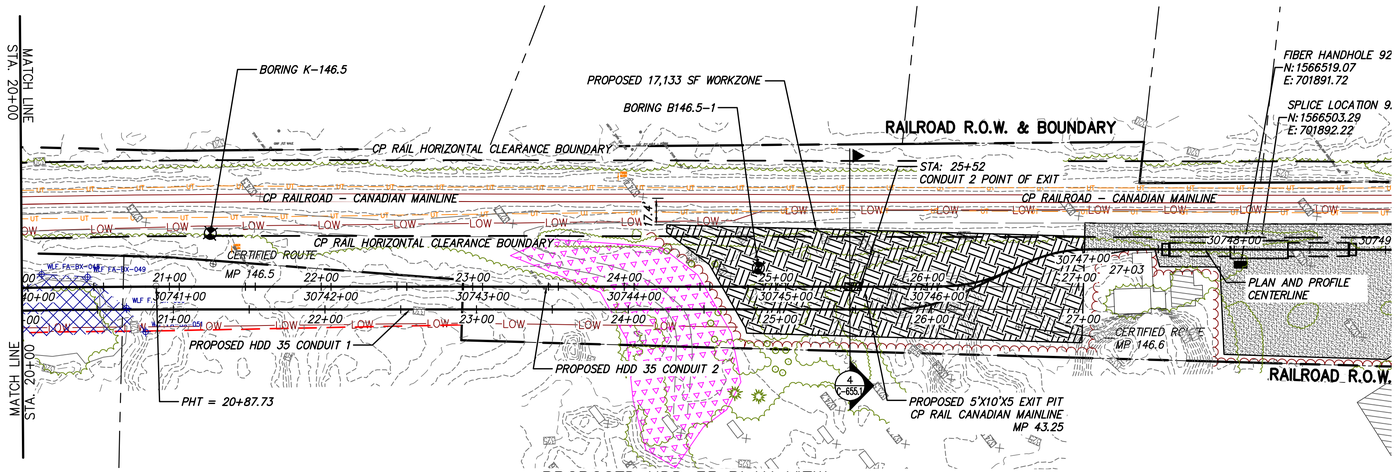
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 35, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	**C-315A.1**

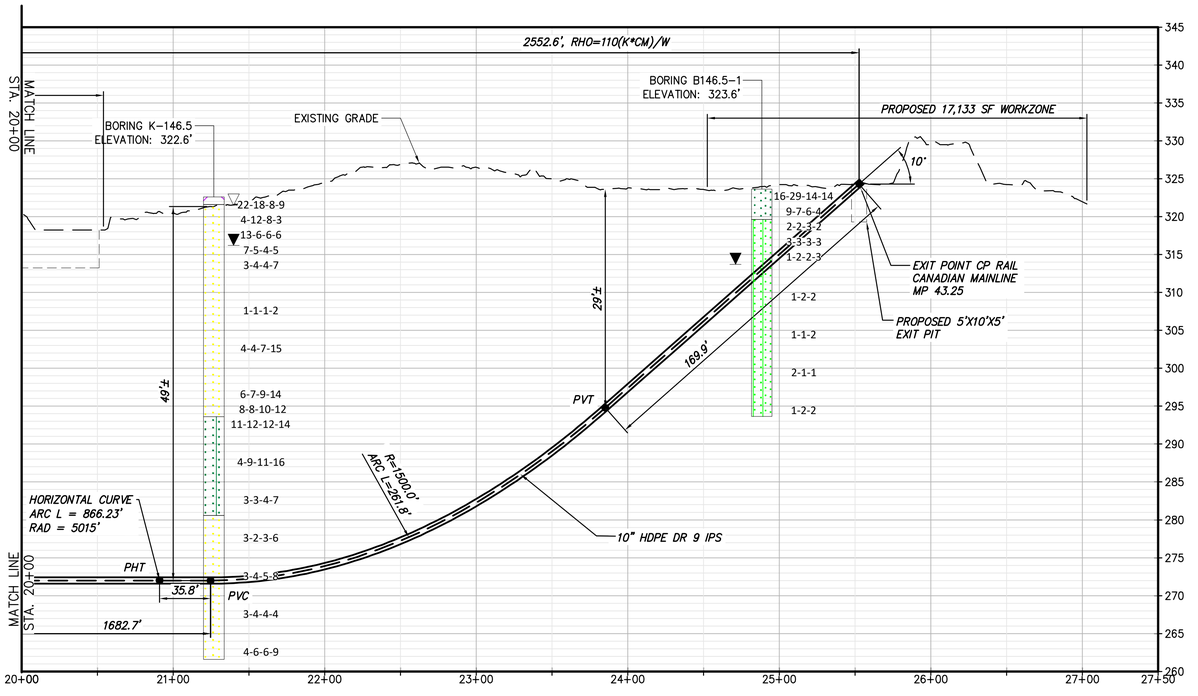
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. 1 | SH.NO.

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-316 - C316A.DWG Saved: 4/3/2023 4:18:10 PM Plotted: 4/4/2023 3:45:33 PM Current User: Snyder, Morgan LastSavedBy: 8275



PROPOSED HDD 35 PLAN VIEW
CONDUIT 2

0 50 100
Scale in feet



PROPOSED HDD 35 PROFILE
CONDUIT 2

20
10
0
0 50 100
Scale in feet

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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.

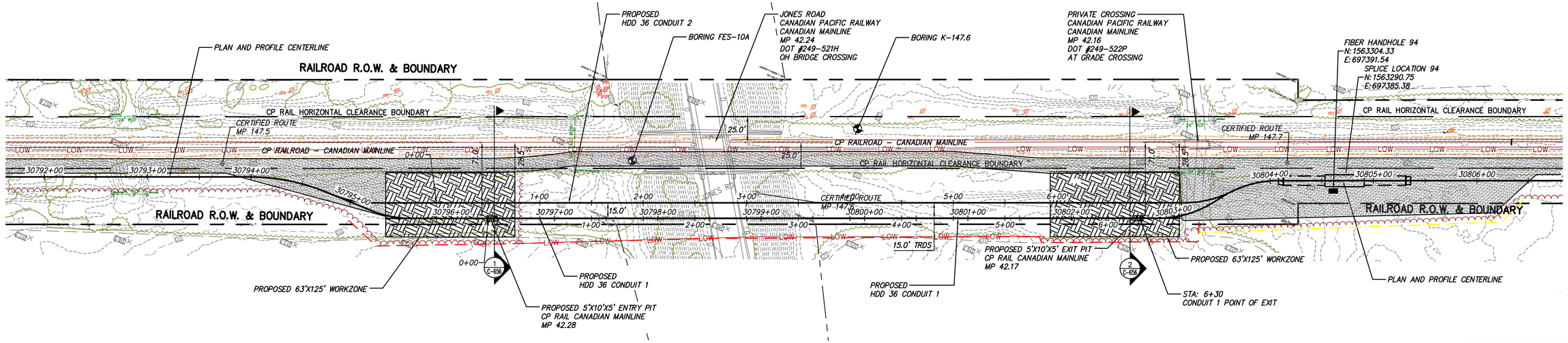
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON
PLAN AND PROFILE - HDD 35, CONDUIT 2

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-315A.2

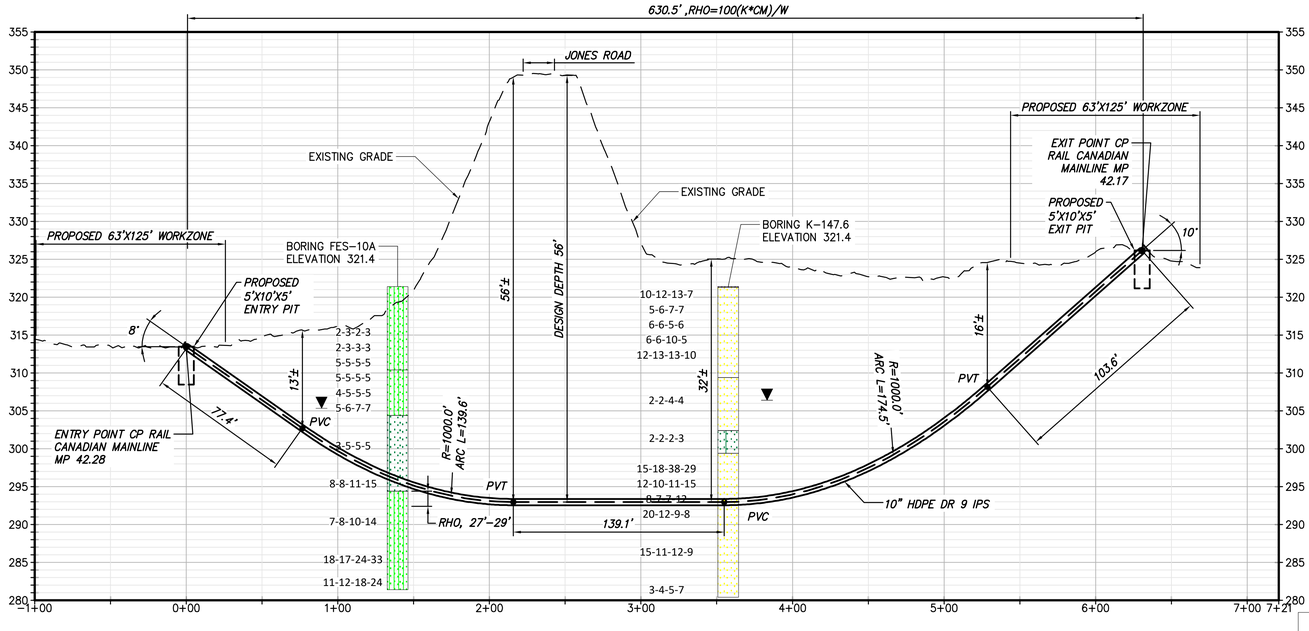
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 04/05/2023 | REV. NO. 1 | SH.NO.

File: V:\PROJECTS\ANY\66\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-316 - C316A.DWG Saved: 4/3/2023 4:18:10 PM Plotted: 4/4/2023 3:46:56 PM Current User: Snyder, Morgan LastSavedBy: 8275



PROPOSED HDD 36 PLAN VIEW

CONDUIT 1



PROPOSED HDD 36 PROFILE

CONDUIT 1

0 50 100 Scale in feet

20 10 0

NOTE:
1) THE USE OF CONDUCTOR CASINGS IS RECOMMENDED TO MITIGATE THE POTENTIAL RELEASE OF THE DRILLING FLUIDS.

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

CHPE Champlain Hudson Power Express

Kiewit

CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

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	04/05/2023	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENTS 4 & 5 (PACKAGE 3) - CP: FORT EDWARD TO MILTON

PLAN AND PROFILE - HDD 36, CONDUIT 1

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-316

DRAWN BY: RAC | DESIGNED BY: RAC | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. X | DATE 04/05/2023 | SH.NO.

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 3\066076_P3_C-317 – C317A.DWG Saved: 4/4/2023 4:39:43 PM Plotted: 4/4/2023 4:44:18 PM Current User: Snyder, Morgan LastSavedBy: 6043