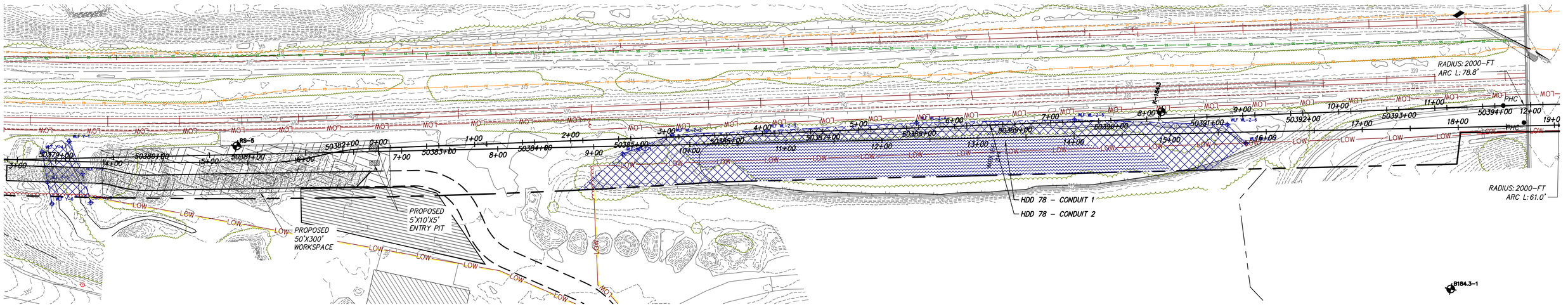
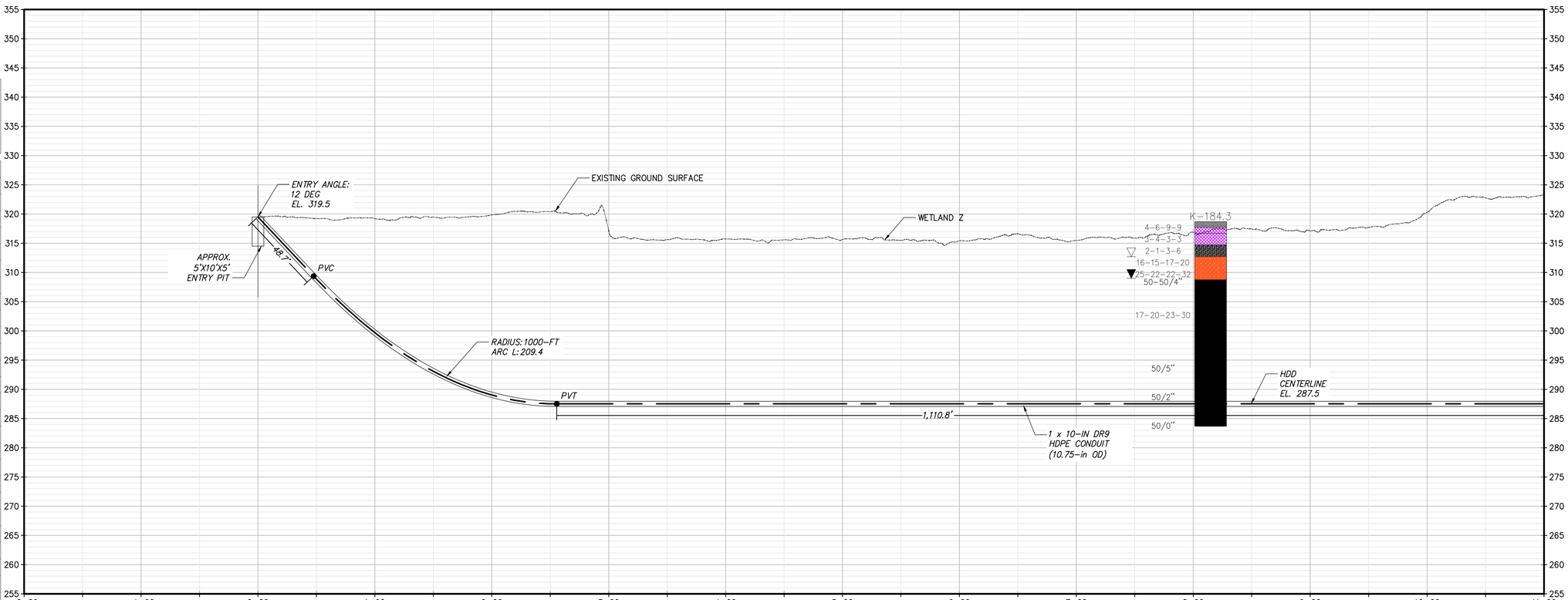
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Last Saved By: bconnelly



PROPOSED HDD 78, CONDUIT 2 – PLAN
SCALE: 1" = 50'



PROPOSED HDD 78, CONDUIT 2 – PROFILE
SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" =10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
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PHONE: 617.714.5784

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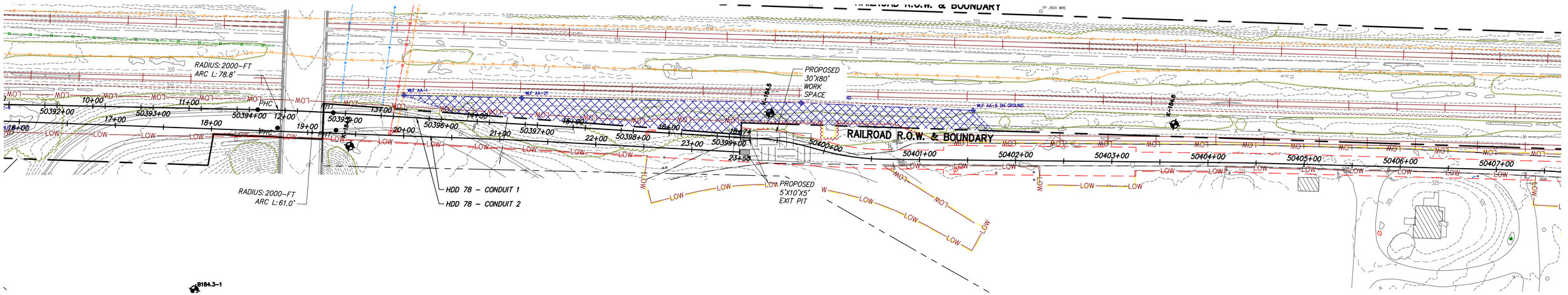
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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 78
STATE ROUTE 146 CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-333

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

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PROPOSED HDD 78, CONDUIT 2 – PLAN

SCALE: 1" = 50'

PROPOSED HDD 78, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
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CH-MH	SILTY Fat CLAY
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Fill	Fill
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GP	Poorly Graded GRAVEL
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OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

0 50 100 Scale in feet

0 10 20 Scale in feet

CHPE Champlain Hudson Power Express

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM

CHAMPLAIN HUDSON POWER EXPRESS

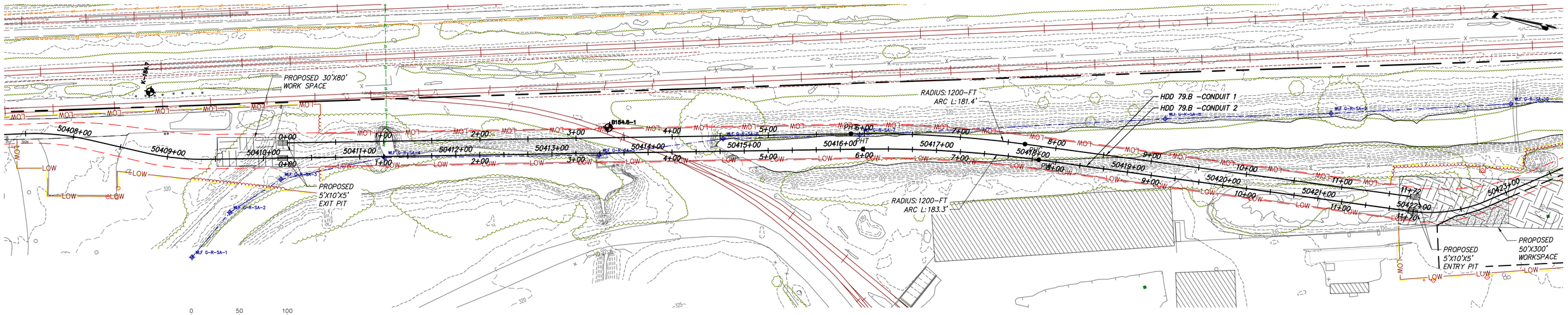
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 78

STATE ROUTE 146 HDD CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-334
SCALE	AS SHOWN
DATE	12/16/2022
REV. NO.	E
SH.NO.	XX OF 189



THERMAL RESISTIVITY VALUE: 0.75 K-M/W

PROPOSED HDD 79B, CONDUIT 1 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

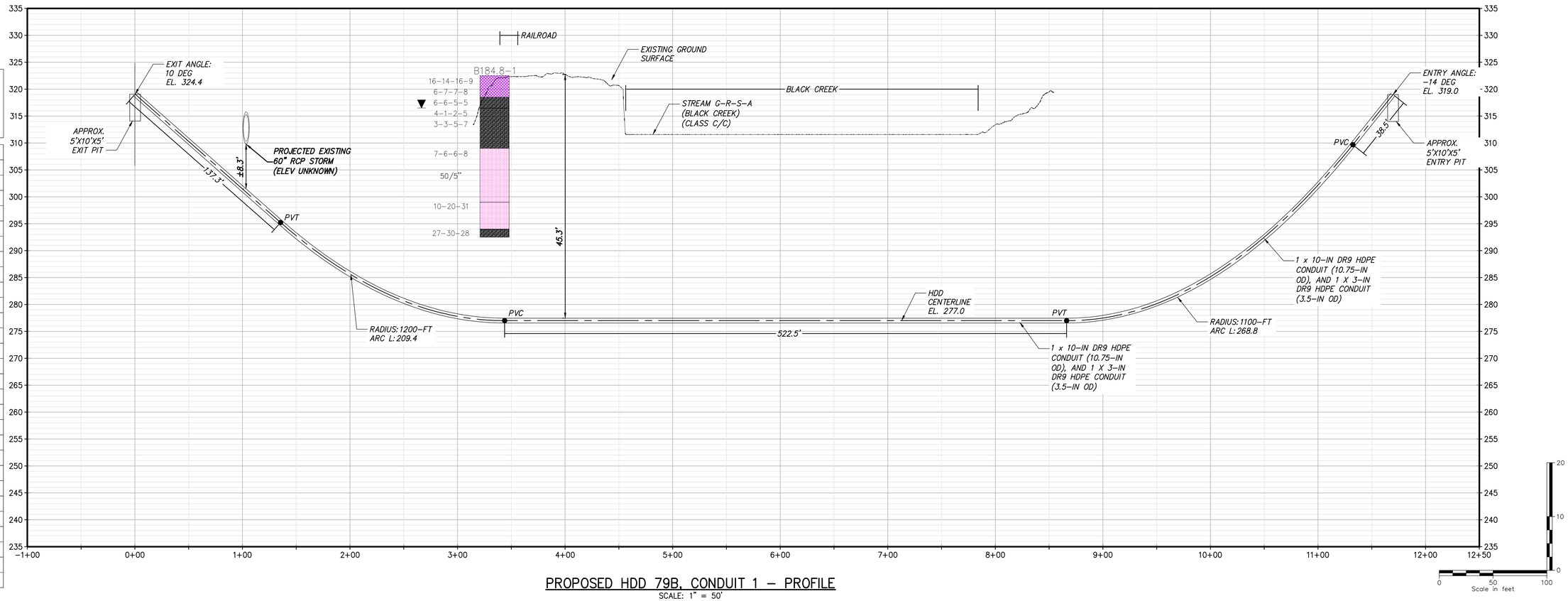
B101

Blow Counts per 6" =10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
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CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



PROPOSED HDD 79B, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 79B

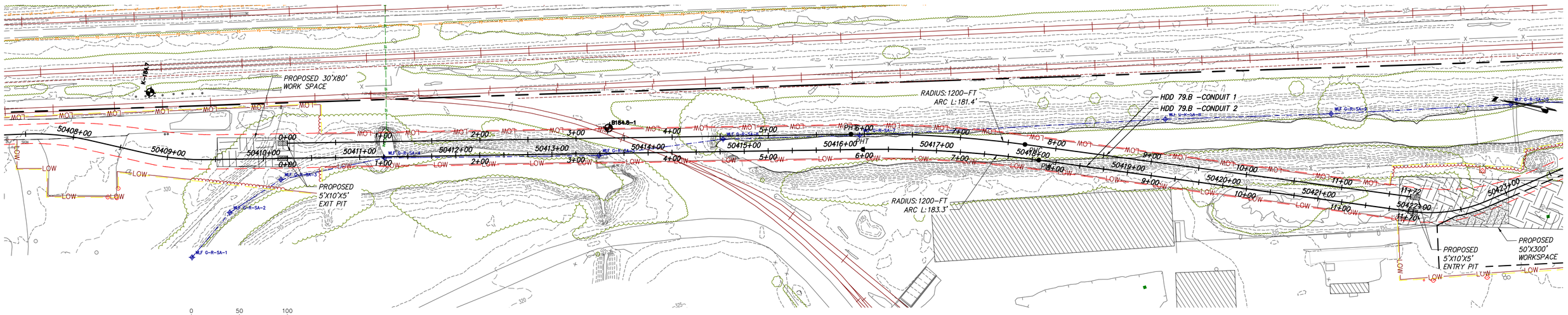
BLACK CREEK CROSSING 1, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-335

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | DATE 12/16/2022 | REV. NO. E | SH.NO. XX OF 189

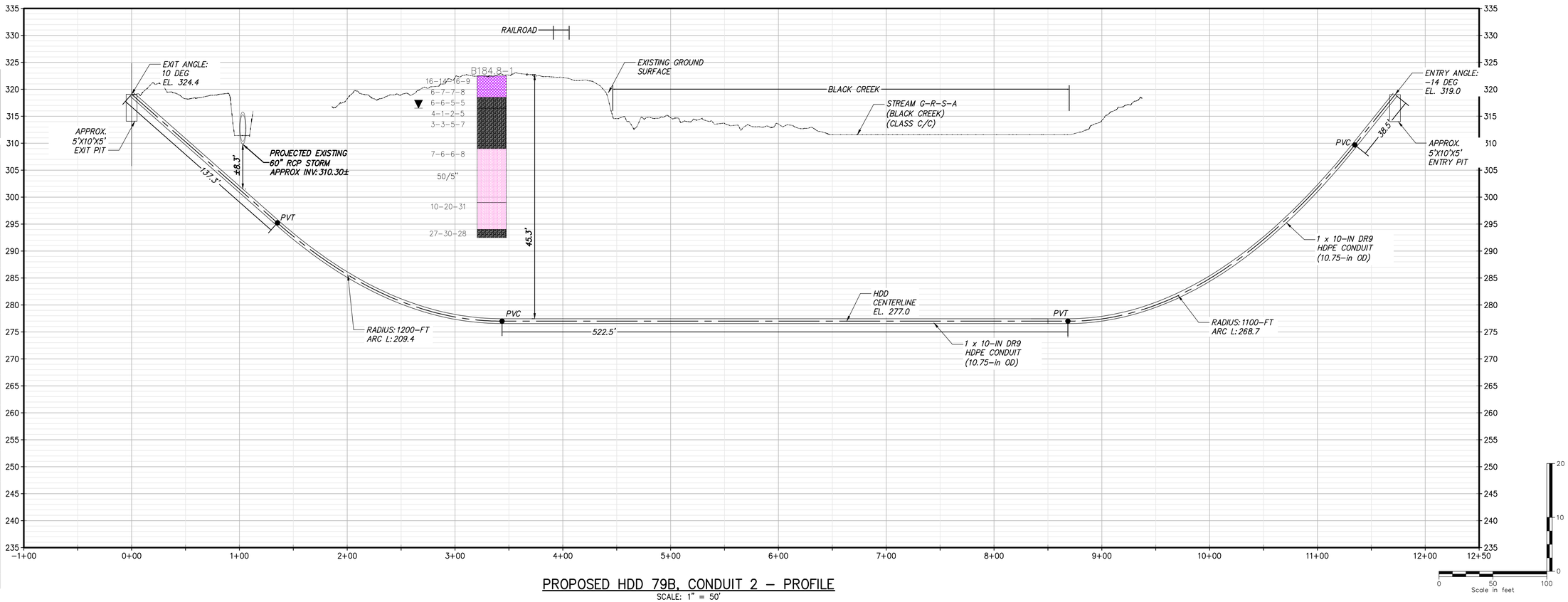
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K M/W

PROPOSED HDD 79B, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 79B, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
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OH	ORGANIC Fat CLAY
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OL/OH	ORGANIC SOIL
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Sandstone	Sandstone
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SHALE	Shale
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SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 79B

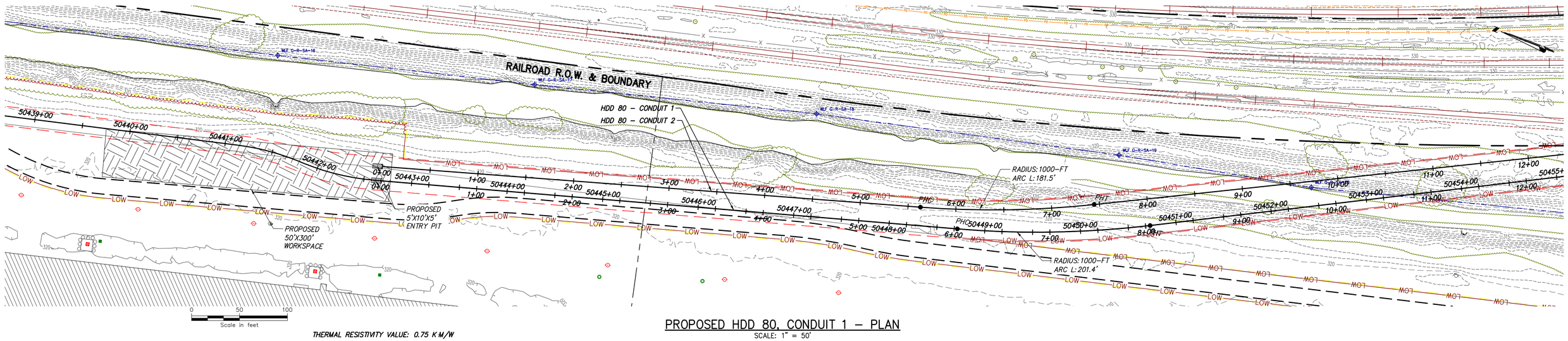
BLACK CREEK CROSSING 1, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-336

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

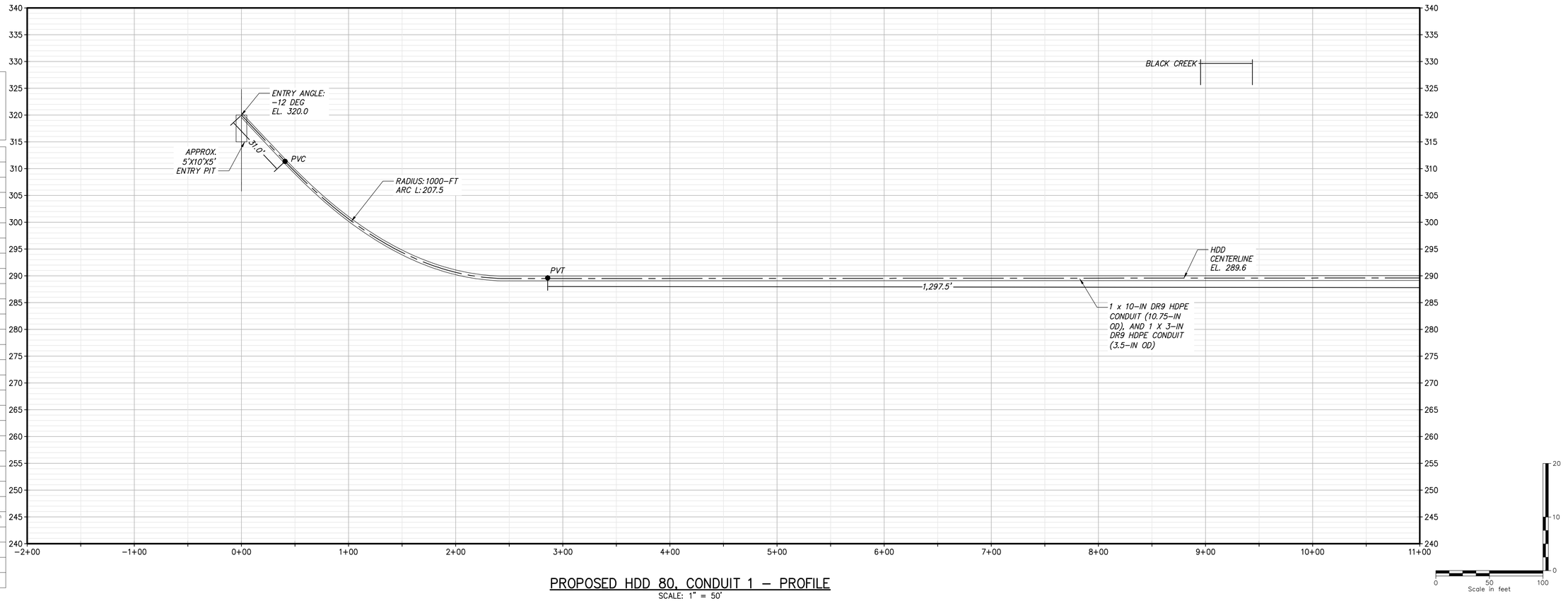
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K M/W

PROPOSED HDD 80, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 80, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
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CL-ML	SILTY CLAY
CONCRETE	Concrete
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CHPE Champlain Hudson Power Express

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 80

BLACK CREEK CROSSING 2, CONDUIT 1

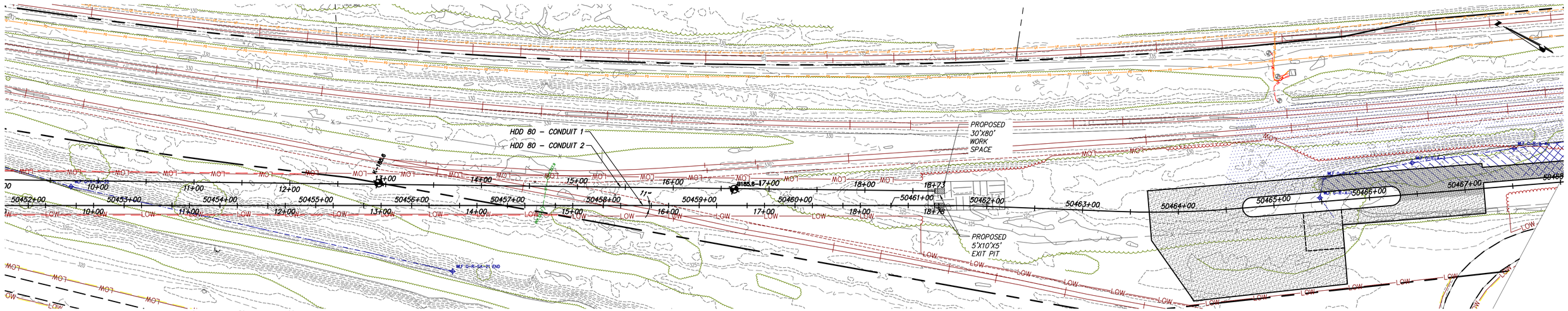
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-337

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

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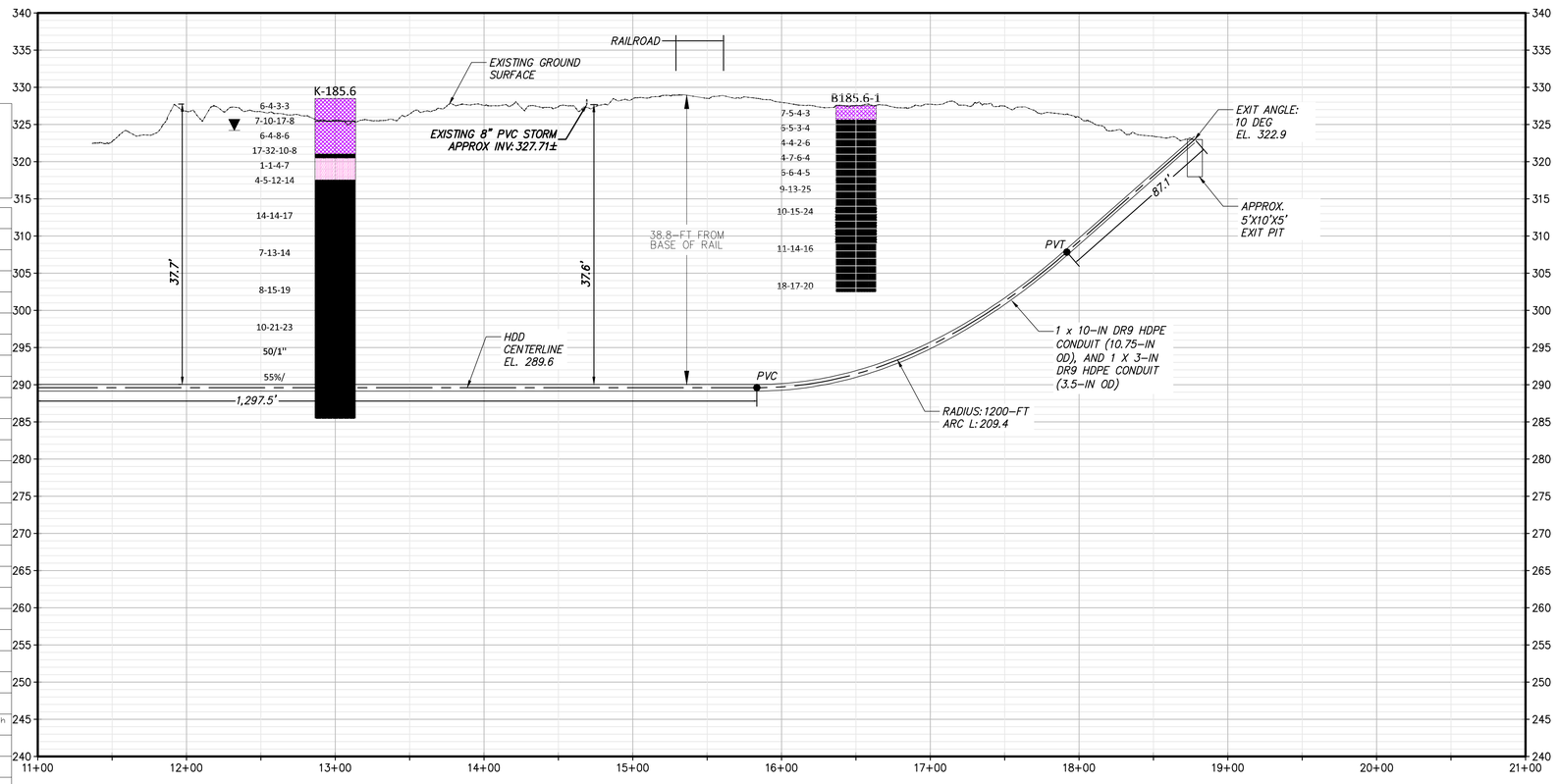
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THERMAL RESISTIVITY VALUE: 0.75 K·M/W

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SCALE: 1" = 50'



PROPOSED HDD 80, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

0 50 100
Scale in feet

20 10 0

CHPE Champlain Hudson Power Express

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

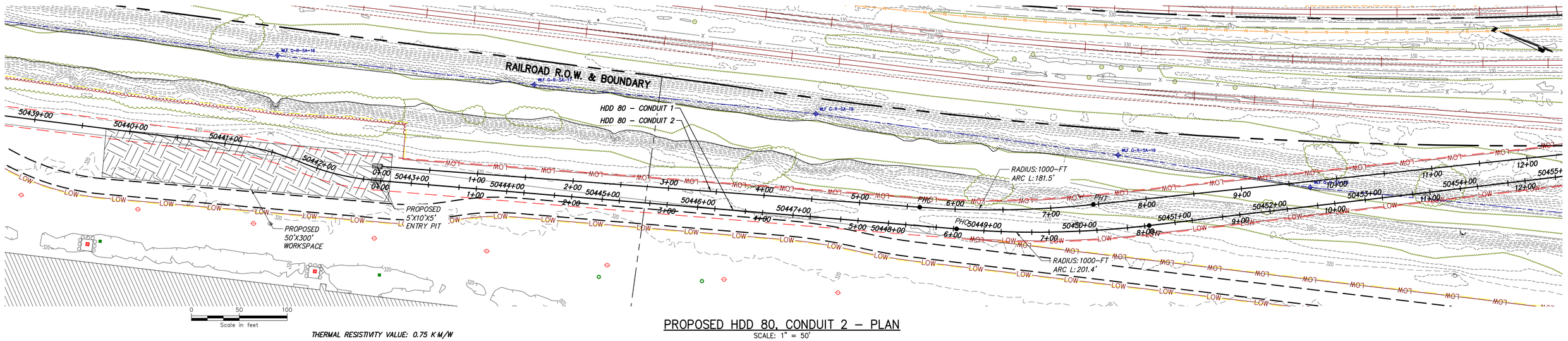
PROPOSED PLAN AND PROFILE - HDD 80

BLACK CREEK CROSSING 2, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-338

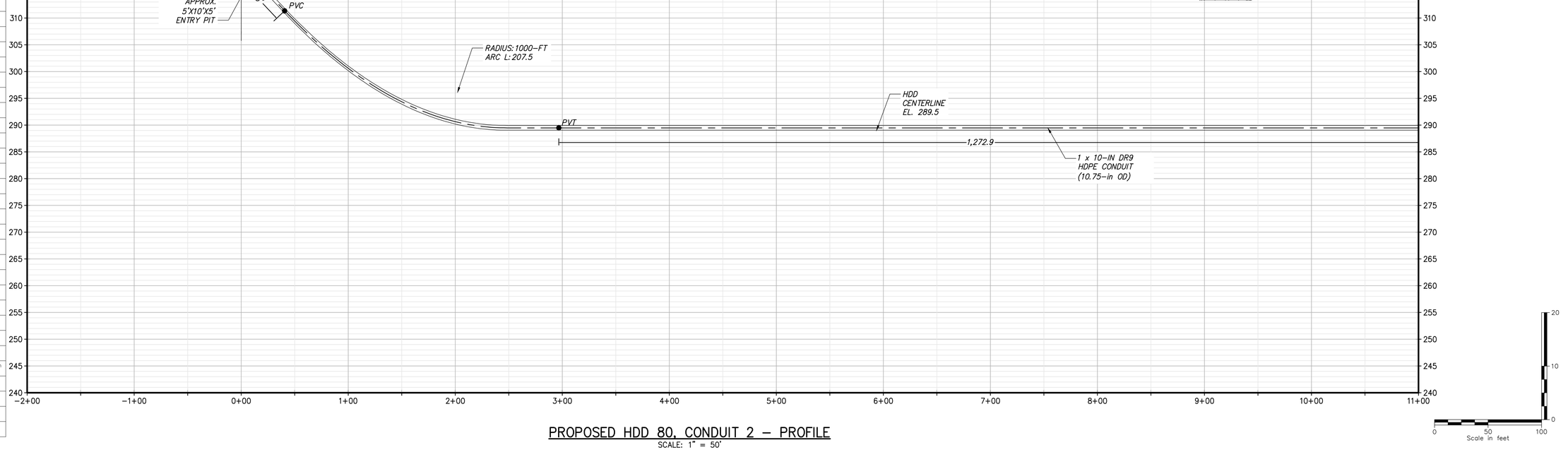
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THERMAL RESISTIVITY VALUE: 0.75 K-M/W

PROPOSED HDD 80, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 80, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

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B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 80

BLACK CREEK CROSSING 2, CONDUIT 2

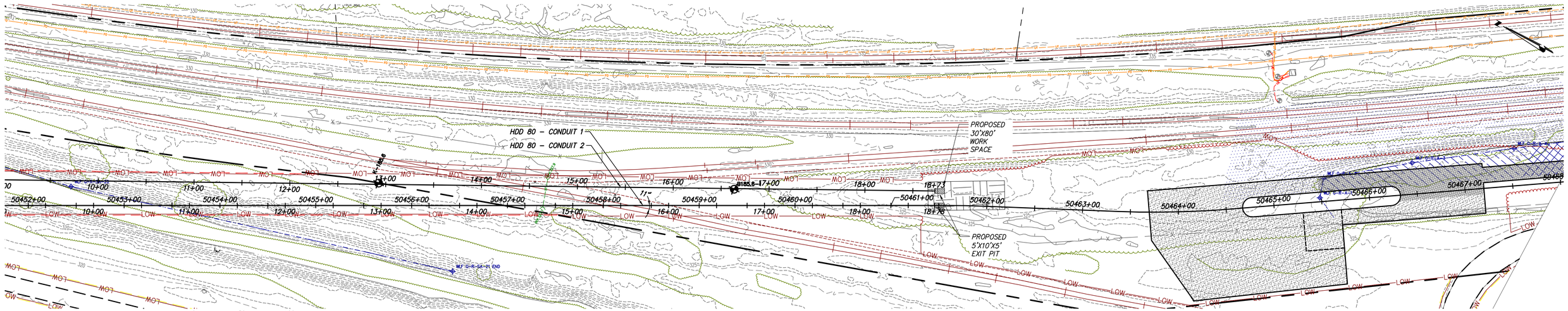
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-339

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LastSavedBy: bconnelly

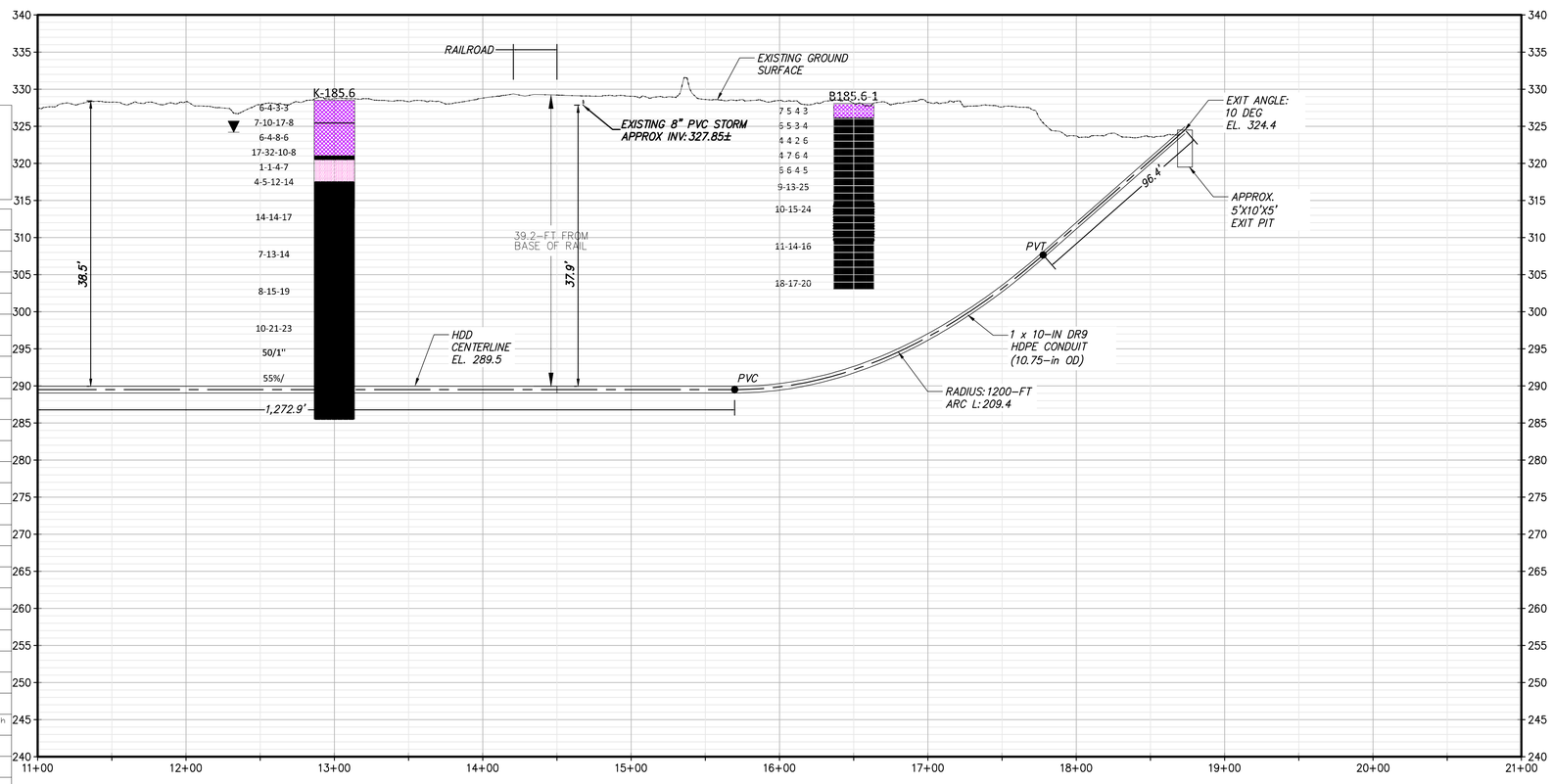
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THERMAL RESISTIVITY VALUE: 0.75 K M/W

PROPOSED HDD 80, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 80, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
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OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

0 50 100
Scale in feet

0 10 20
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

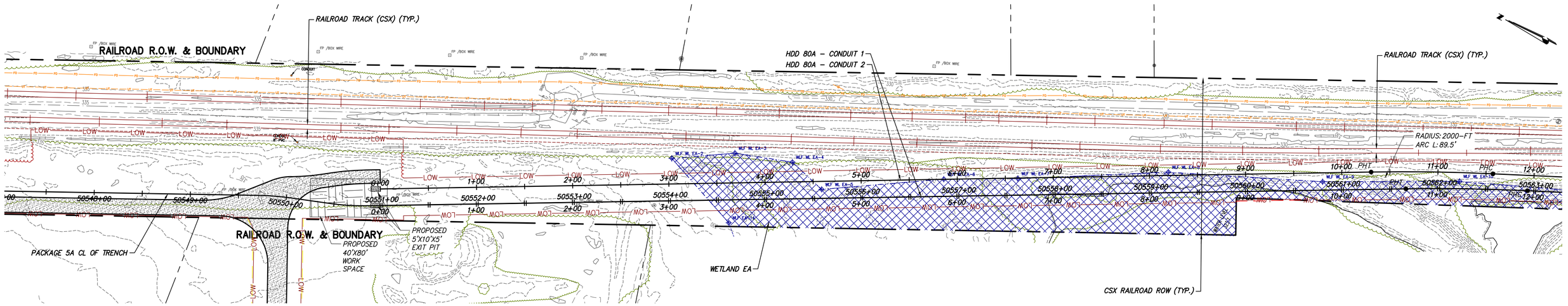
PROPOSED PLAN AND PROFILE - HDD 80

BLACK CREEK CROSSING 2, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-340

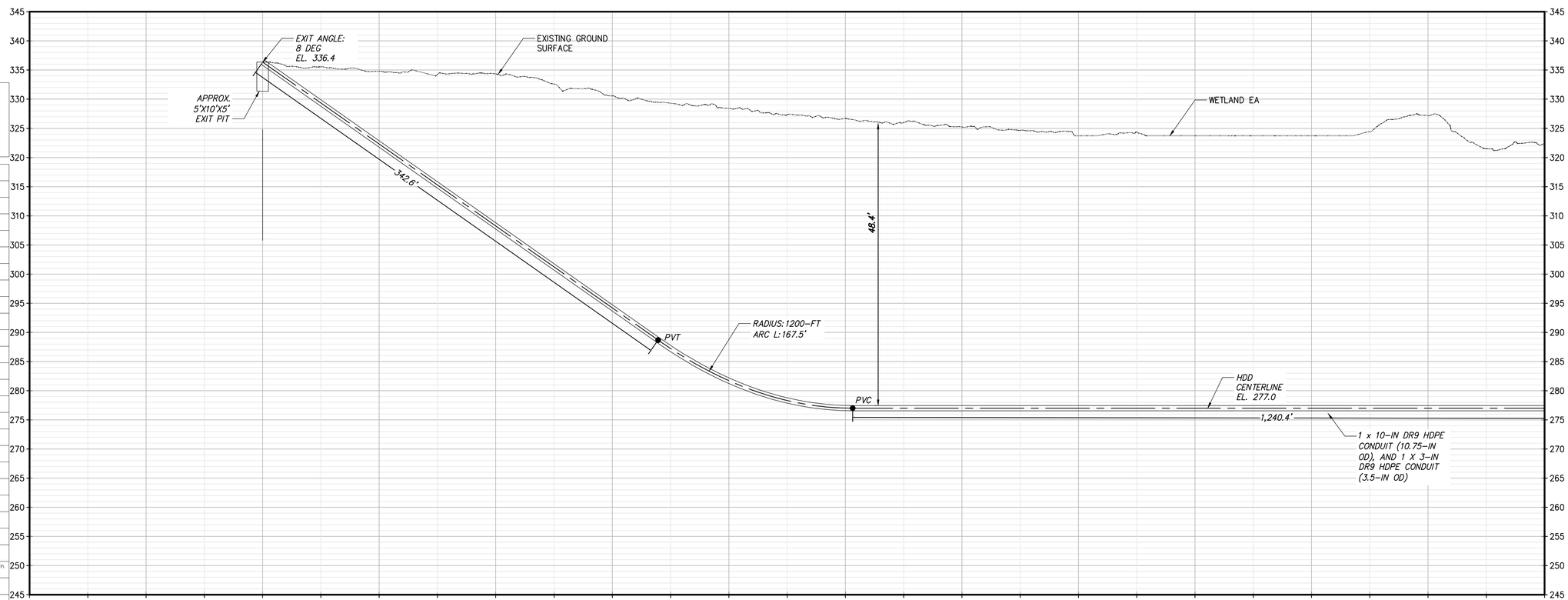
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THERMAL RESISTIVITY VALUE: 0.80 K·M/W

PROPOSED HDD 80A, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 80A, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
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SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

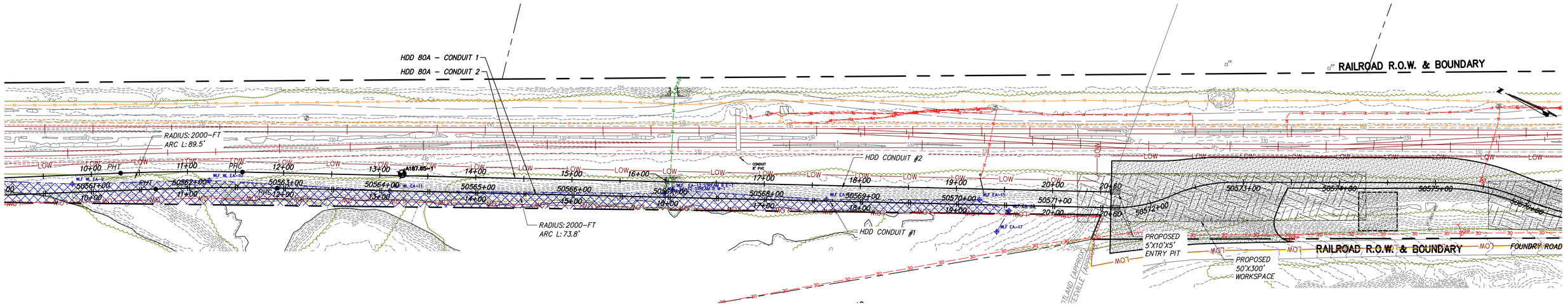
PROPOSED PLAN AND PROFILE - HDD 80A
WETLAND CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-341

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

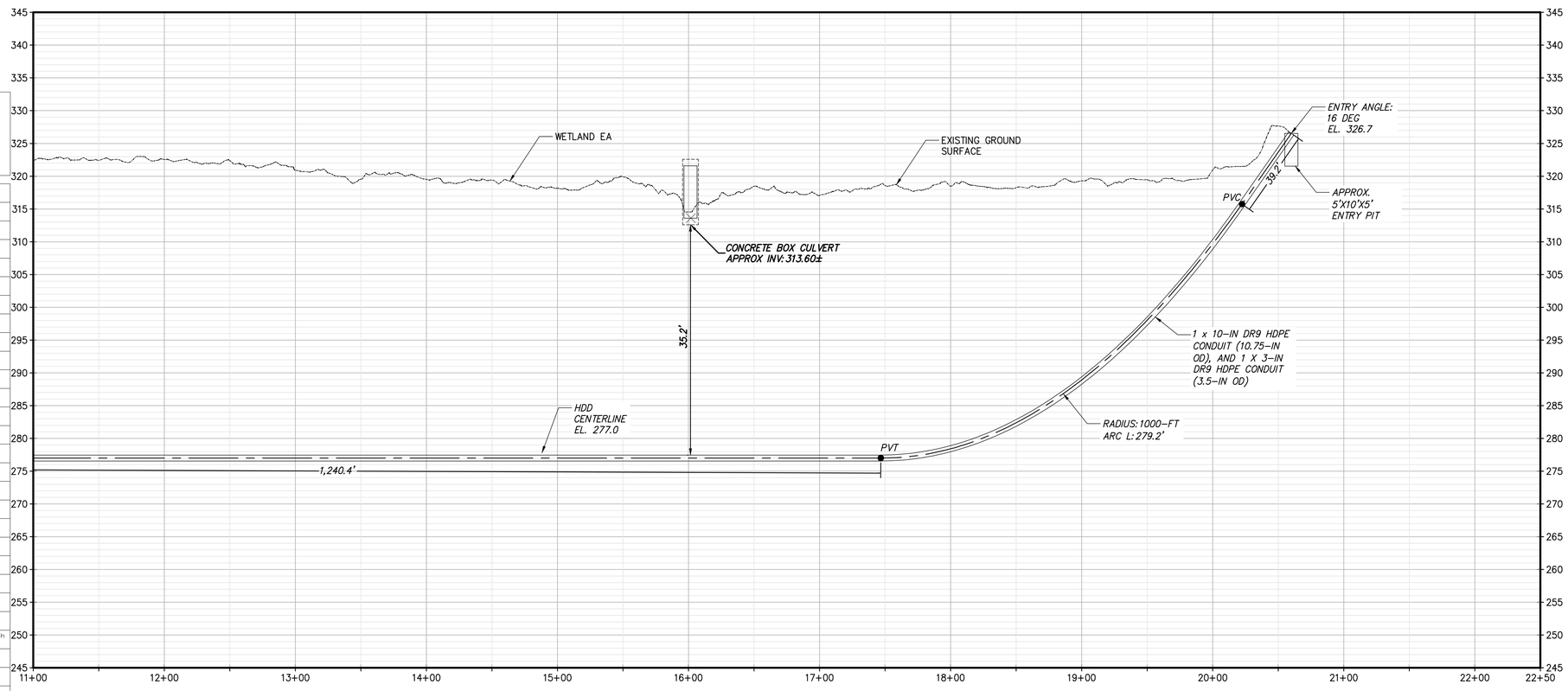
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Last Saved By: bconnelly

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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.80 K·M/W

PROPOSED HDD 80A, CONDUIT 1 – PLAN
SCALE: 1" = 50'



PROPOSED HDD 80A, CONDUIT 1 – PROFILE
SCALE: 1" = 50'

BORING LOG STRIP LEGEND



Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
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OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

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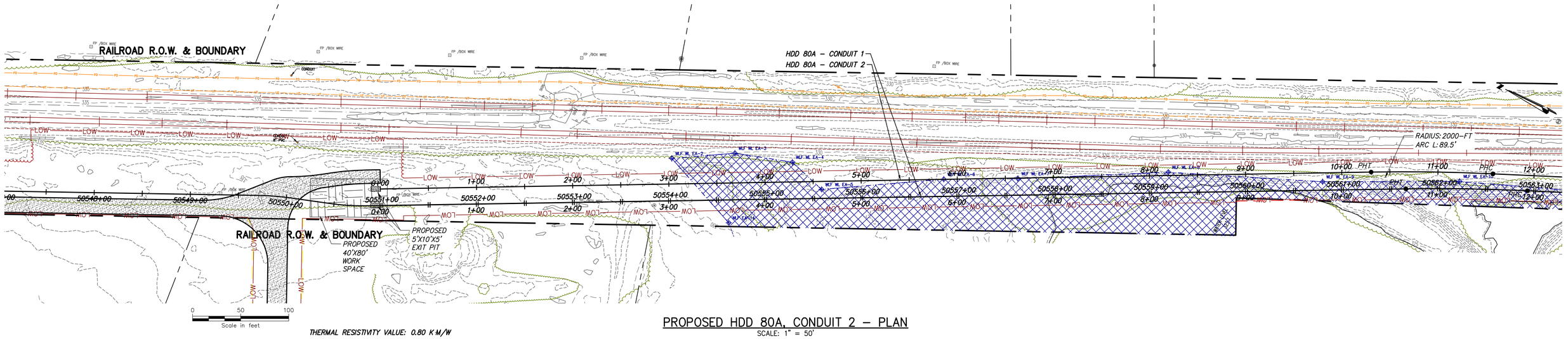
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 80A
WETLAND CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-342

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 0.80 K·M/W

PROPOSED HDD 80A, CONDUIT 2 – PLAN

SCALE: 1" = 50'

PROPOSED HDD 80A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
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SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 710	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 80A

WETLAND CROSSING, CONDUIT 2

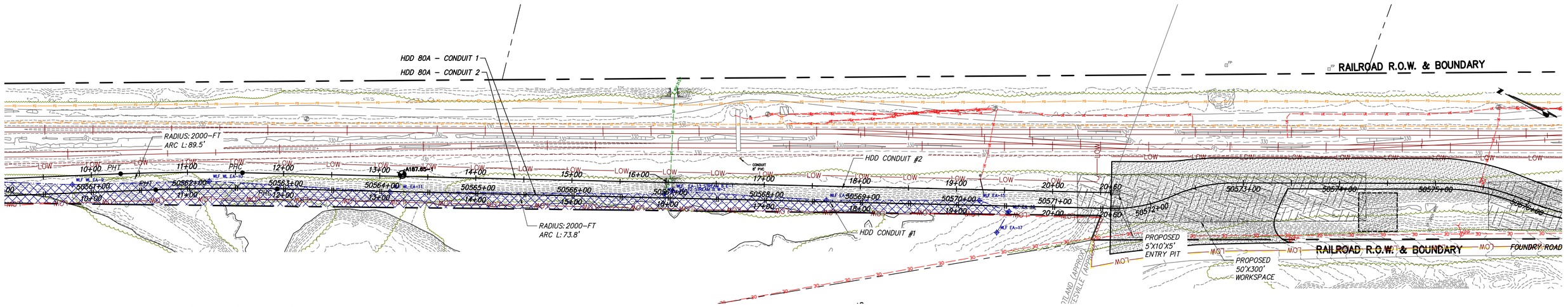
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
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DRAWING NO.	C-343

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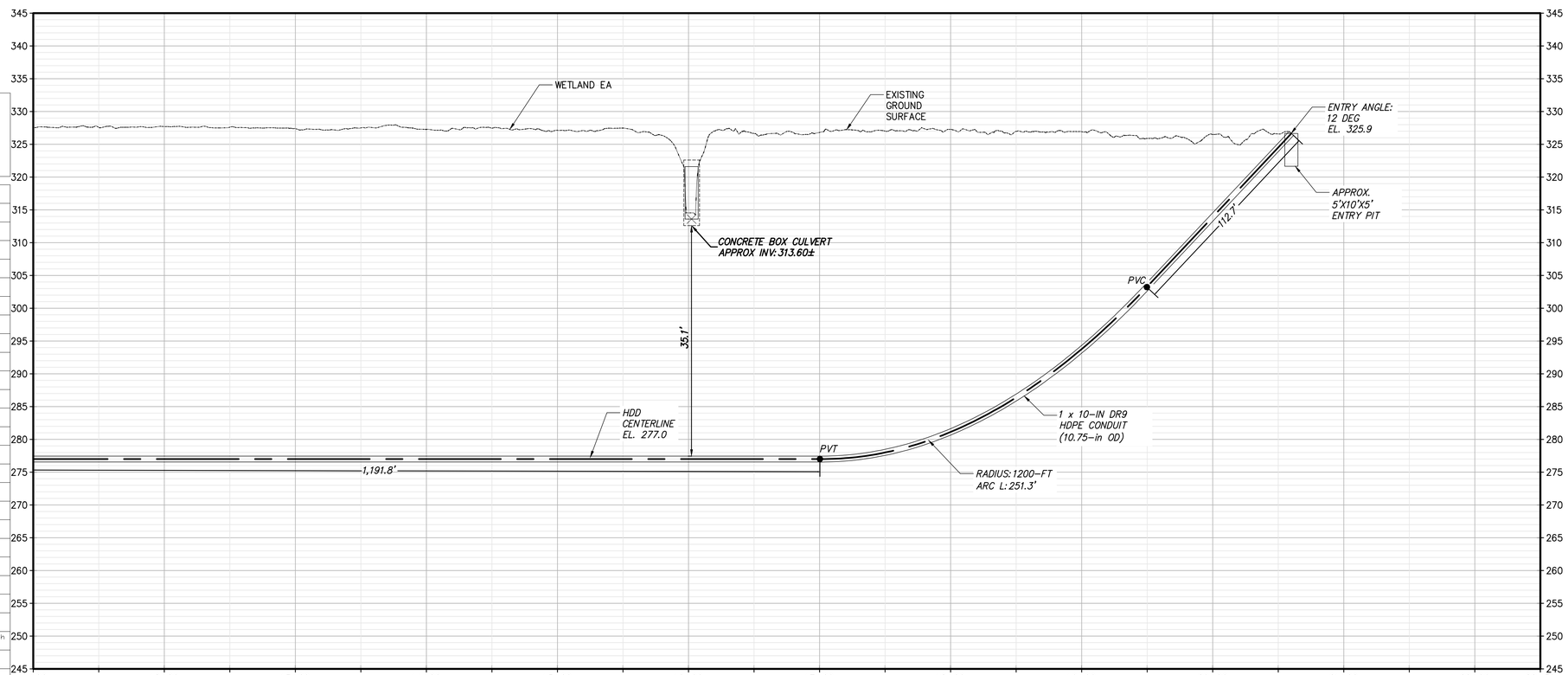
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THERMAL RESISTIVITY VALUE: 0.80 K·M/W

PROPOSED HDD 80A, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 80A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

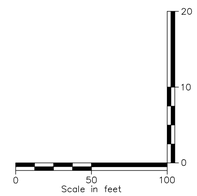
BORING LOG STRIP LEGEND

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

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SC-SM	SILT, CLAYEY SAND
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SP-SM	Poorly Graded SAND with SILT
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Topsoil	Topsoil
USGS 708	Gneiss
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

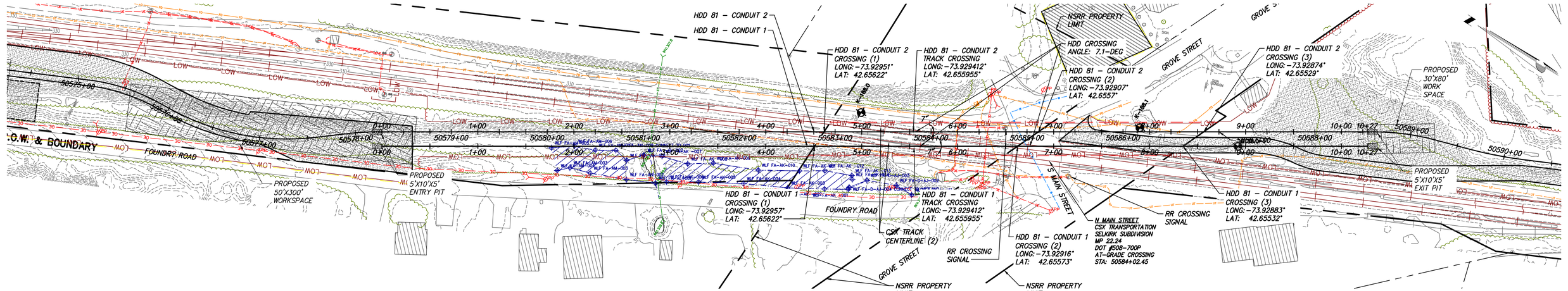
PROPOSED PLAN AND PROFILE - HDD 80A

WETLAND CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-344

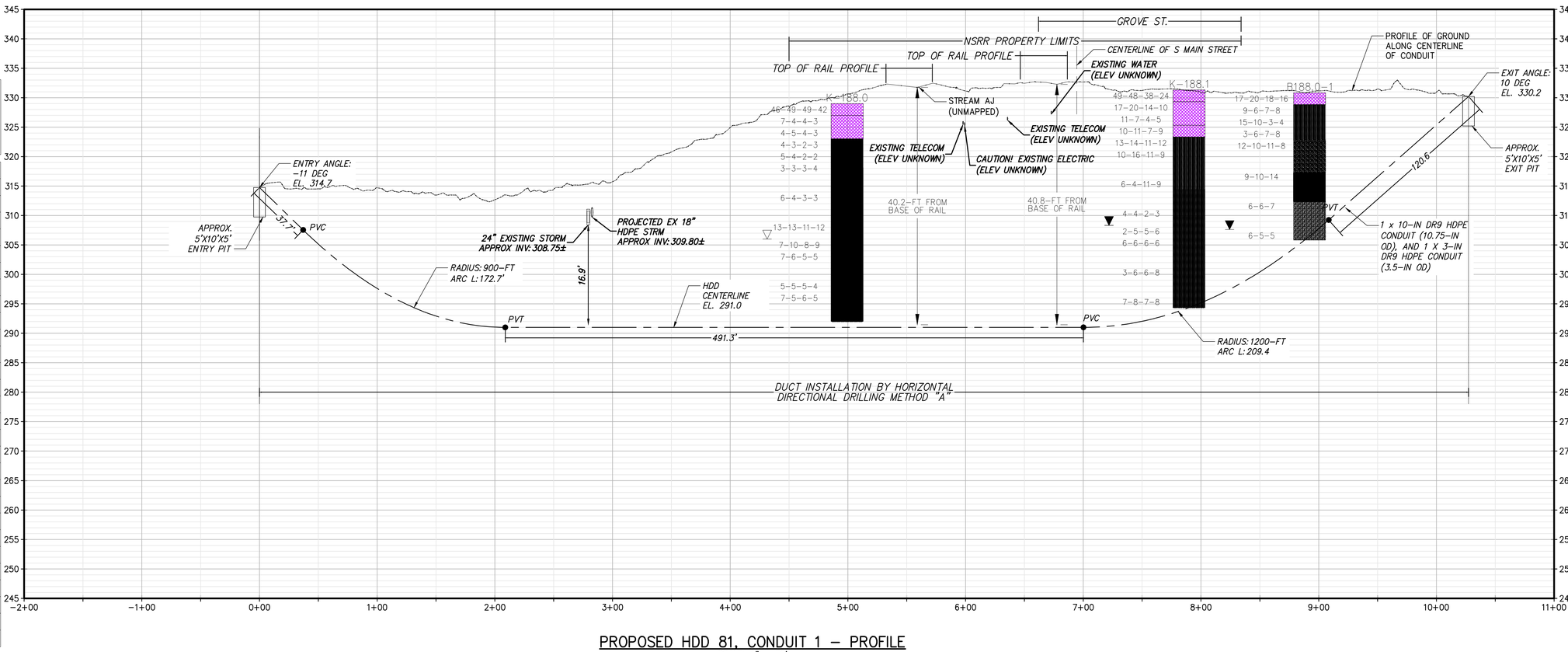
DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

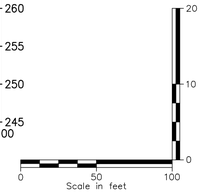
PROPOSED HDD 81, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 81, CONDUIT 1 – PROFILE

SCALE: 1" = 50'



BORING LOG STRIP LEGEND

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
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PHONE: 617.714.5784

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 81

CSX RAILROAD CROSSING, CONDUIT 1

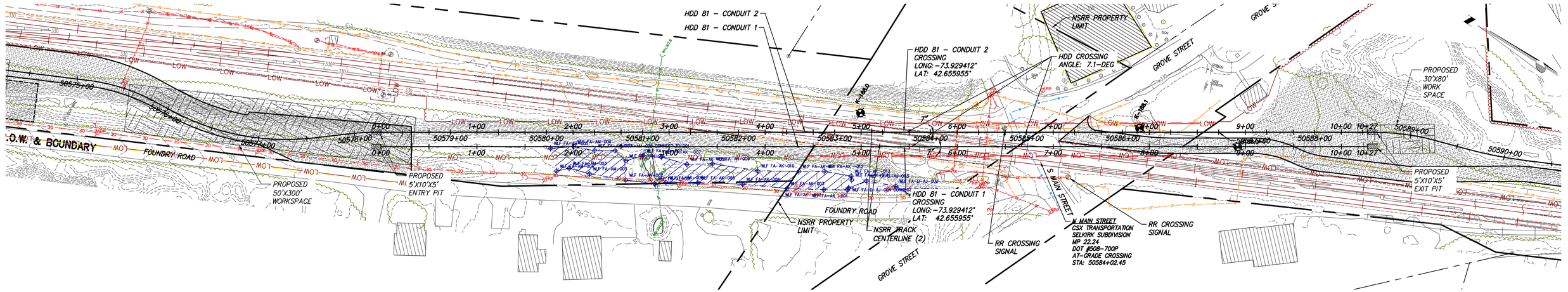
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-345

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | DATE 12/16/2022 | REV. NO. E | SH.NO. XX OF 189

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LastSavedBy: bconnelly

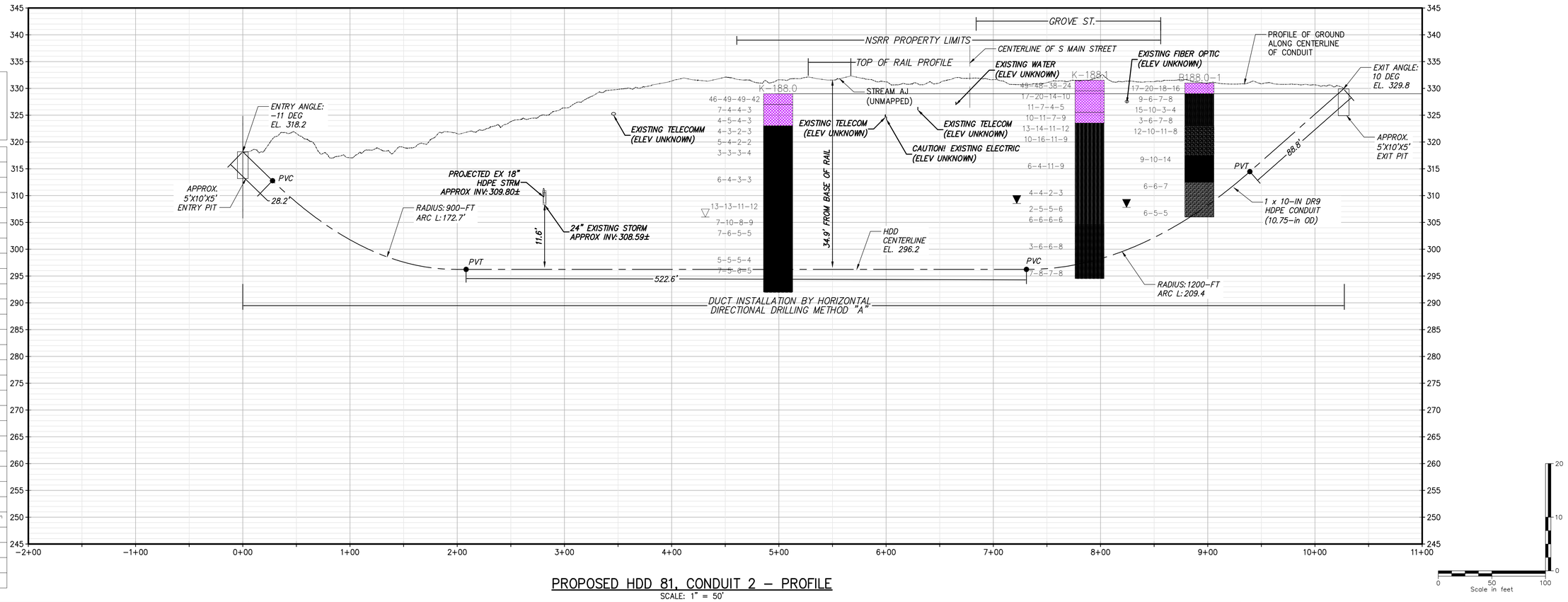
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 81, CONDUIT 2 – PLAN

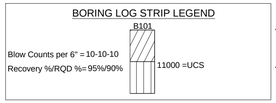
SCALE: 1" = 50'



PROPOSED HDD 81, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND



Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 81

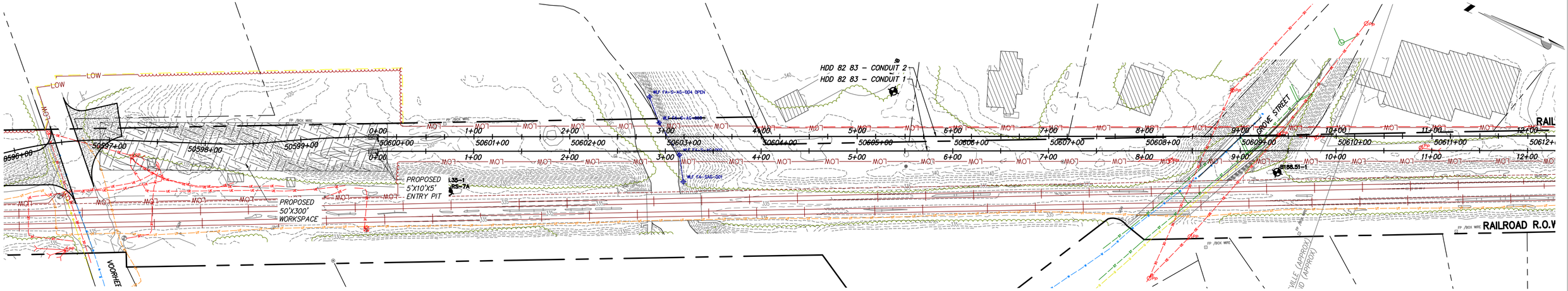
CSX RAILROAD CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-346

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

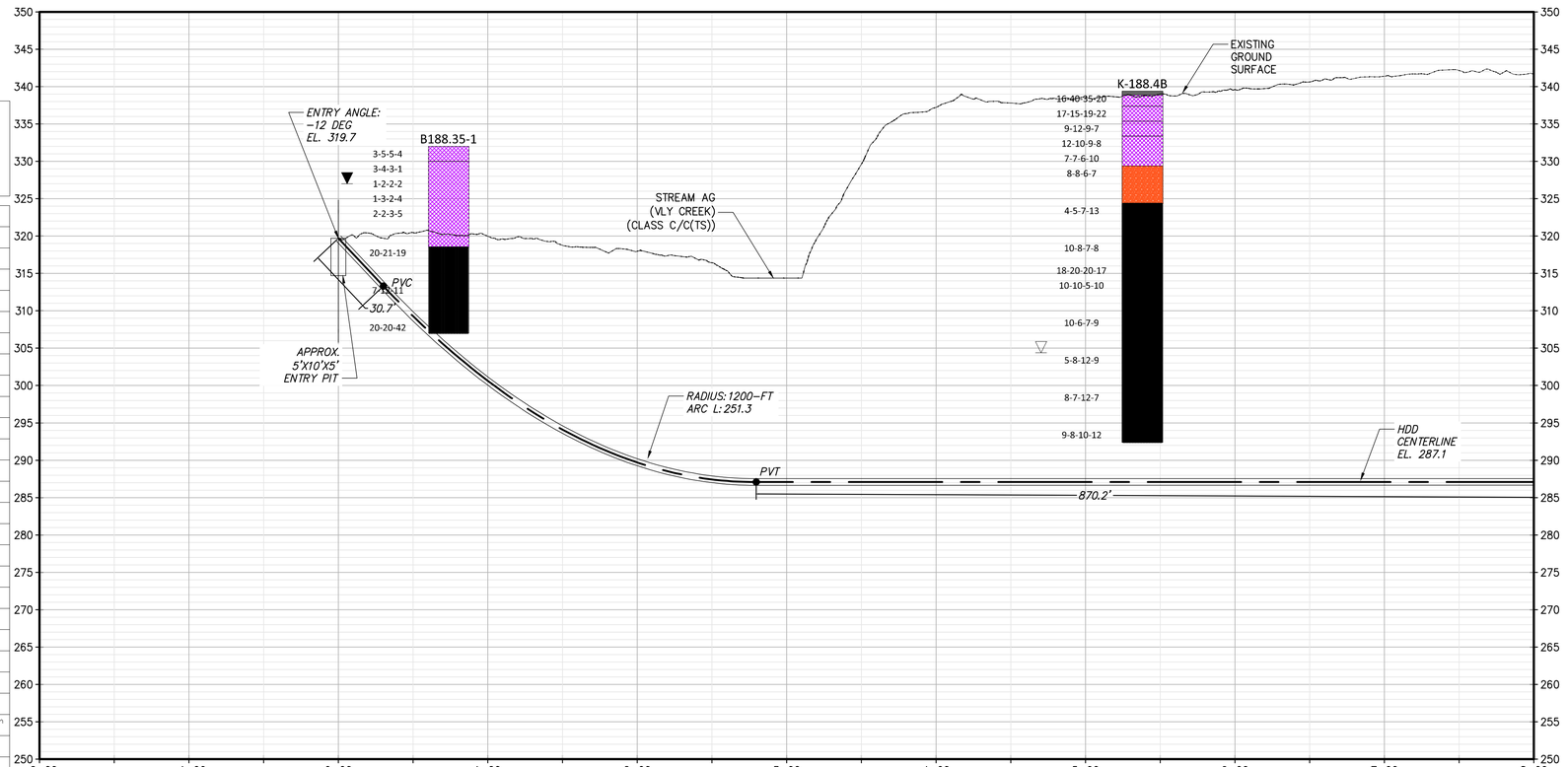
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 82, 83, CONDUIT 1 – PLAN

SCALE: 1" = 50'



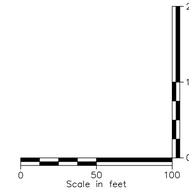
PROPOSED HDD 82, 83, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND



Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



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Kiewit

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

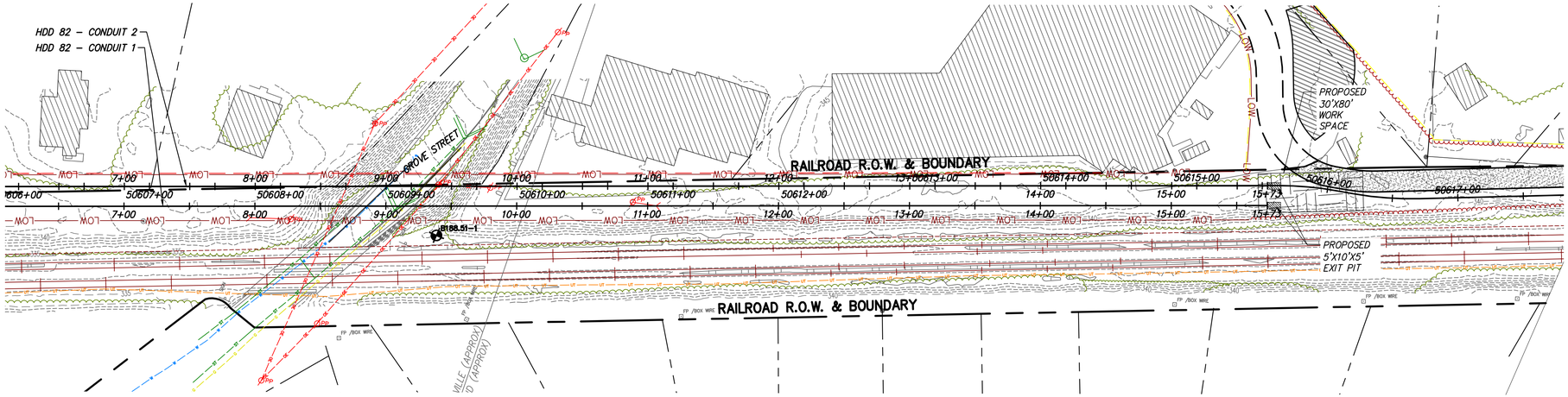
PROPOSED PLAN AND PROFILE - HDD 82 83

VLY CREEK/ GROVE STREET CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-347

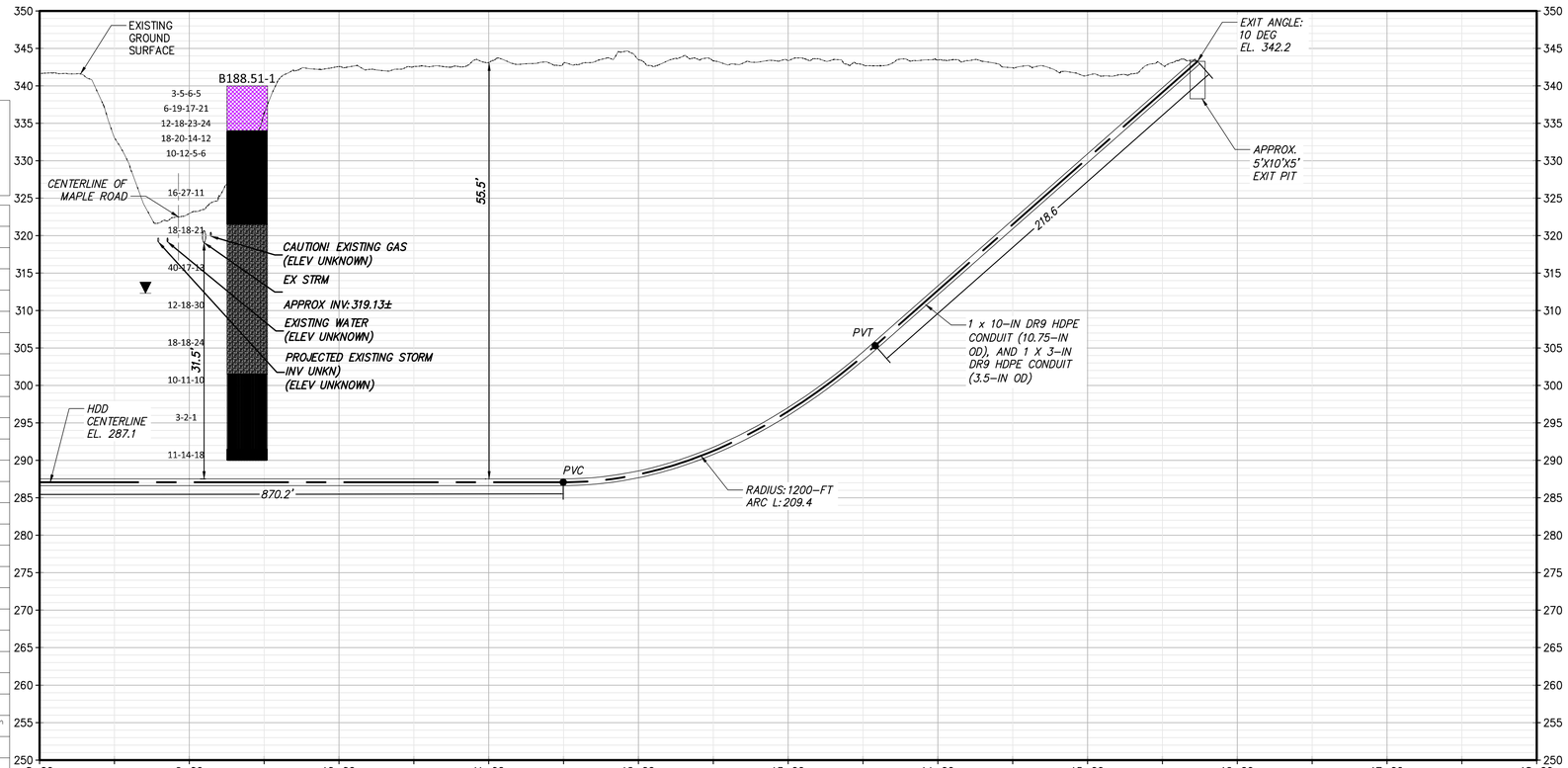
DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 82, 83, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 82, 83, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

0 50 100
Scale in feet

20 10 0
0 50 100
Scale in feet

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 82 83

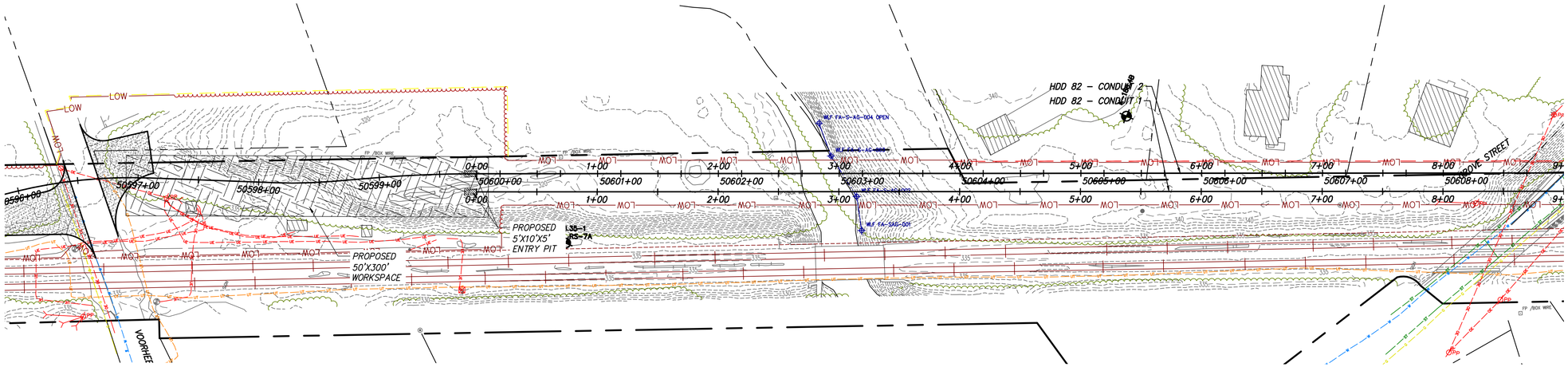
VLY CREEK/ GROVE STREET CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-348

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

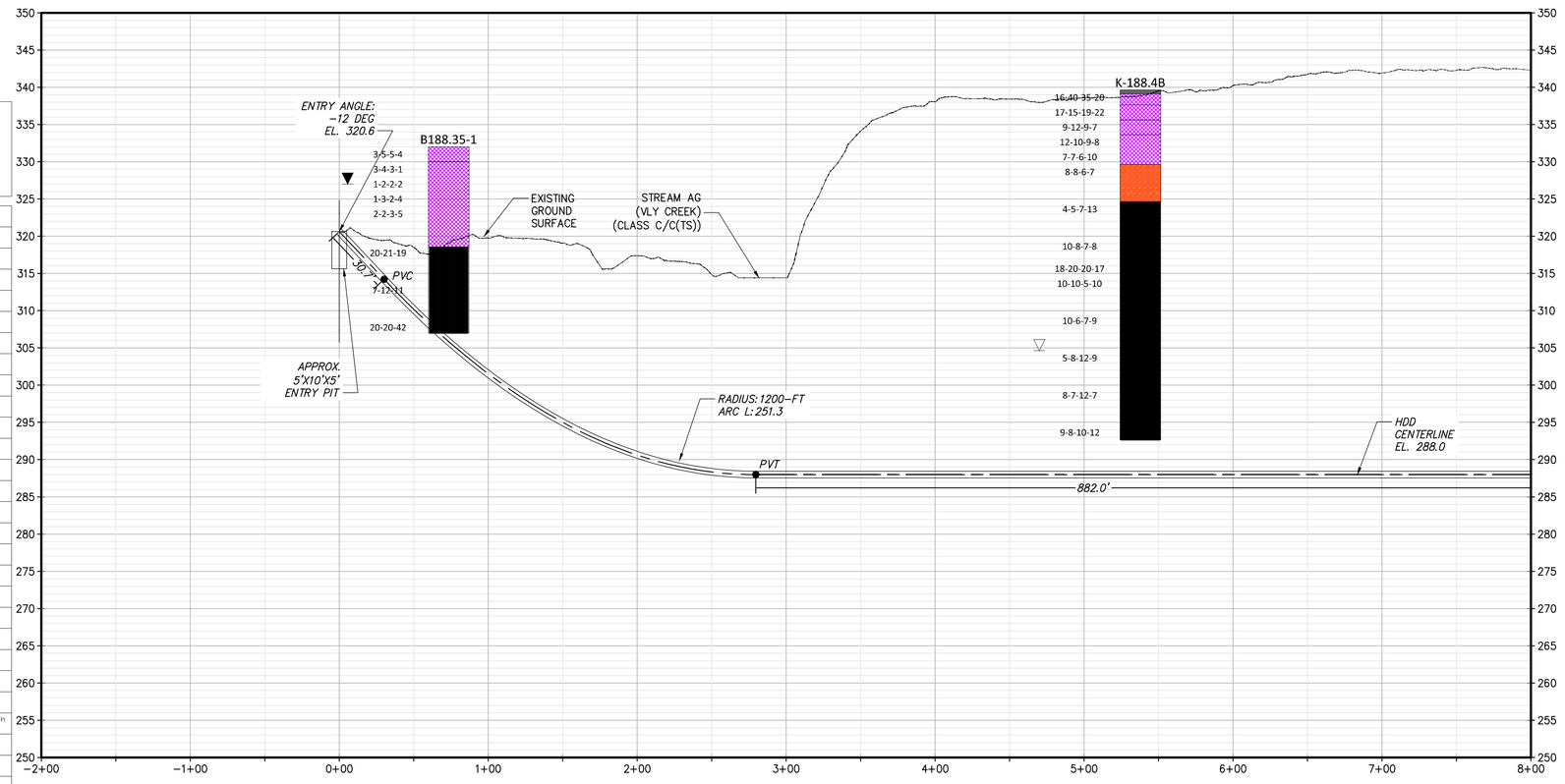
File: C:\USERS\BCONNELL\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_343-352.DWG Saved: 12/14/2022 12:21:37 AM Plotted: 12/15/2022 10:02:33 AM Current User: Brian Connelly
LastSavedBy: bconnelly



0 50 100
Scale in feet

THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 82 83, CONDUIT 2 – PLAN
SCALE: 1" = 50'

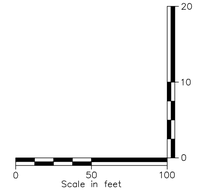


PROPOSED HDD 82 83, CONDUIT 2 – PROFILE
SCALE: 1" = 50'

BORING LOG STRIP LEGEND



Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
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OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
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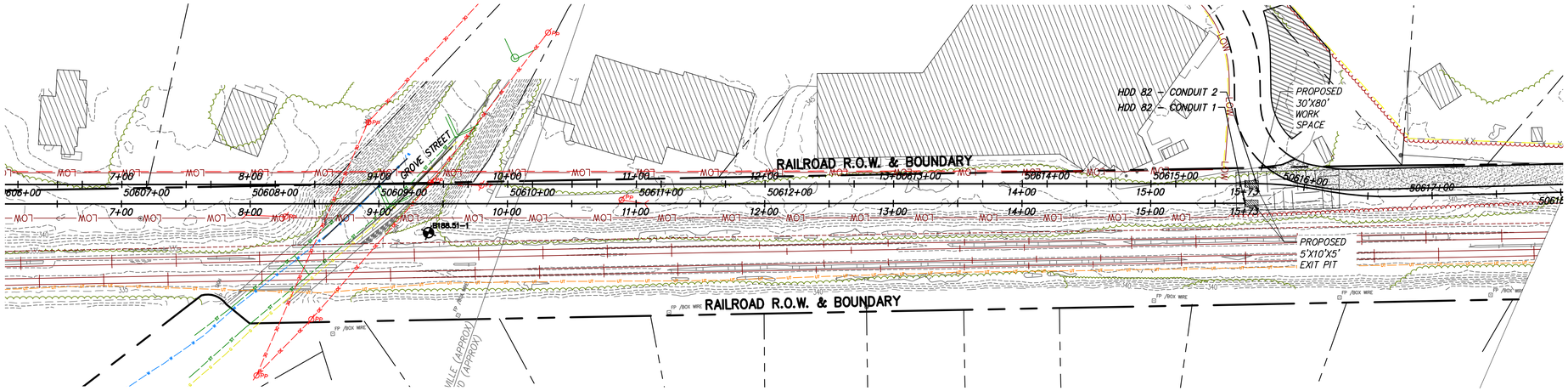
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 82 83
VLY CREEK/GROVE CREEK CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-349

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | DATE 12/16/2022 | REV. NO. E | SH.NO. XX OF 189

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CIVIL SHEETS\CHPE_5A_C_343-352.DWG Saved: 12/14/2022 12:21:37 AM Plotted: 12/15/2022 10:03:13 AM Current User: Brian Connelly

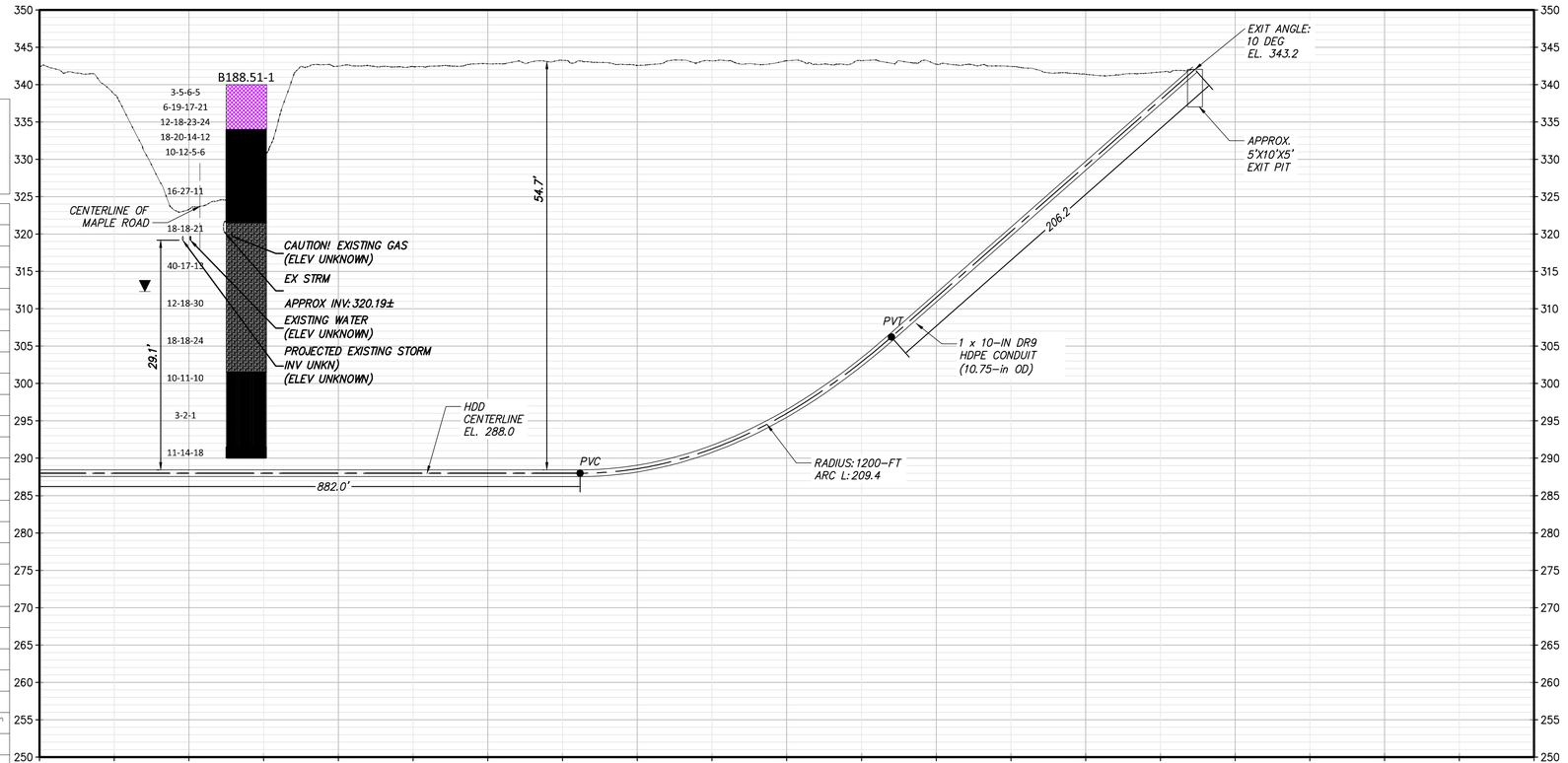
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Last Saved By: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 82 83, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 82 83, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
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GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

0 20 10 0
0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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FOR EMCP REVIEW
NOT FOR CONSTRUCTION

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
E	12/16/2022	FINAL SUBMISSION	BC	AM
D	11/11/2022	DRAFT FINAL SUBMISSION	BC	AM
C	6/6/2022	60% DESIGN SUBMISSION	BC	AM
B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 82 83

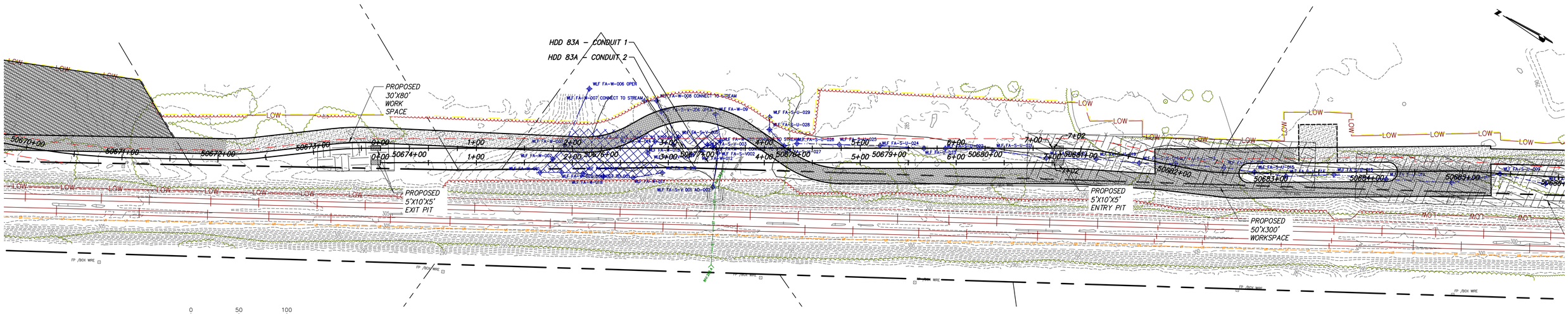
VLY CREEK/ GROVE STREET CROSSING, CONDUIT 2

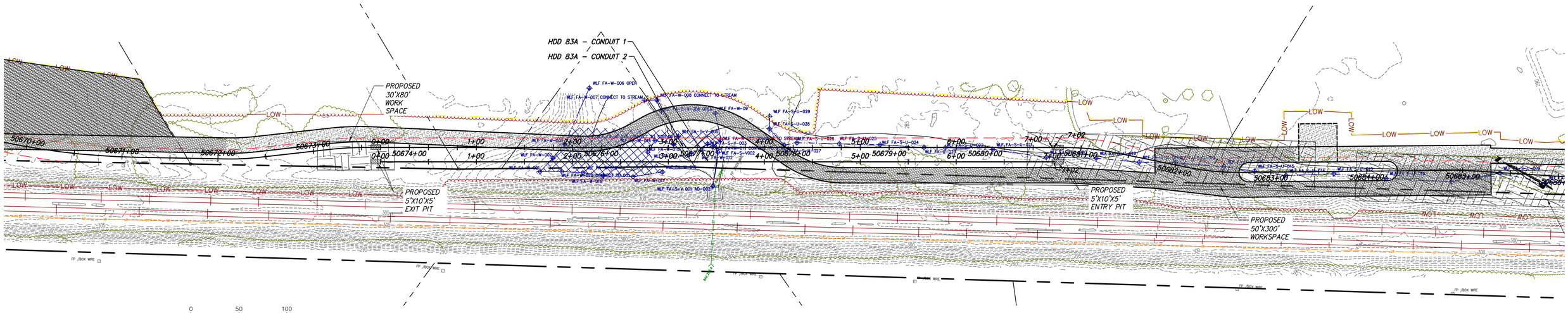
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-350

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_353-358.DWG Saved: 12/15/2022 4:30:15 PM Plotted: 12/15/2022 5:06:48 PM Current User: Brian Connelly
LastSavedBy: bconnelly

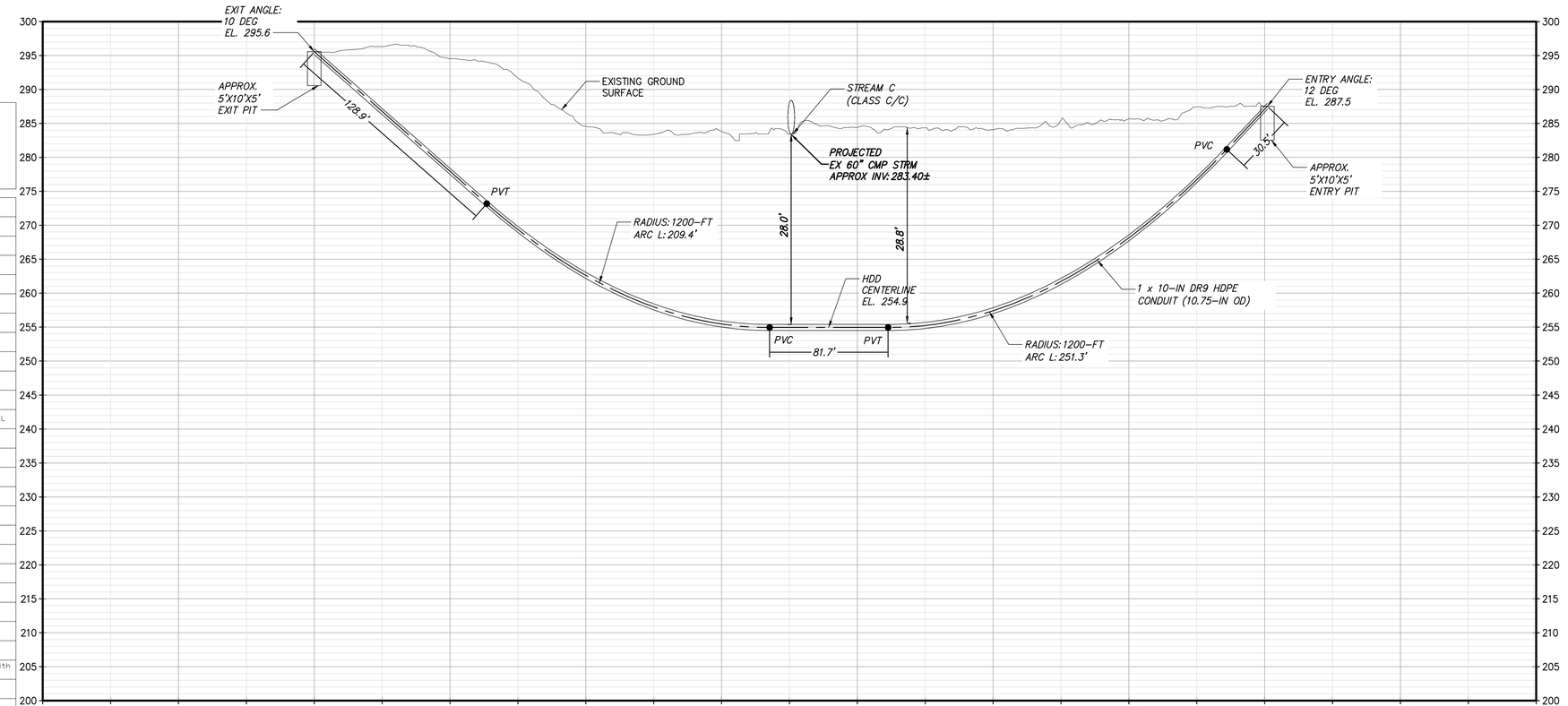

HDD 83A – CONDUIT 1
HDD 83A – CONDUIT 2
PROPOSED 30'X80' WORK SPACE
PROPOSED 5'X10'X5' EXIT PIT
PROPOSED 5'X10'X5' ENTRY PIT
PROPOSED 50'X300' WORKSPACE
WLF FA-W-006 OPEN
WLF FA-W-007 CONNECT TO STREAM
WLF FA-W-008 CONNECT TO STREAM
WLF FA-W-009
WLF FA-S-U-029
WLF FA-S-U-028
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WLF FA-S-V 001 AD-889



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 83A, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 83A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" = 10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

0 50 100
Scale in feet

0 10 20
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

FOR EMCP REVIEW
NOT FOR CONSTRUCTION

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
E	12/16/2022	FINAL SUBMISSION	BC	AM
D	11/11/2022	DRAFT FINAL SUBMISSION	BC	AM
C	6/6/2022	60% DESIGN SUBMISSION	BC	AM
B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 83A

WETLAND FA CROSSING, CONDUIT 1

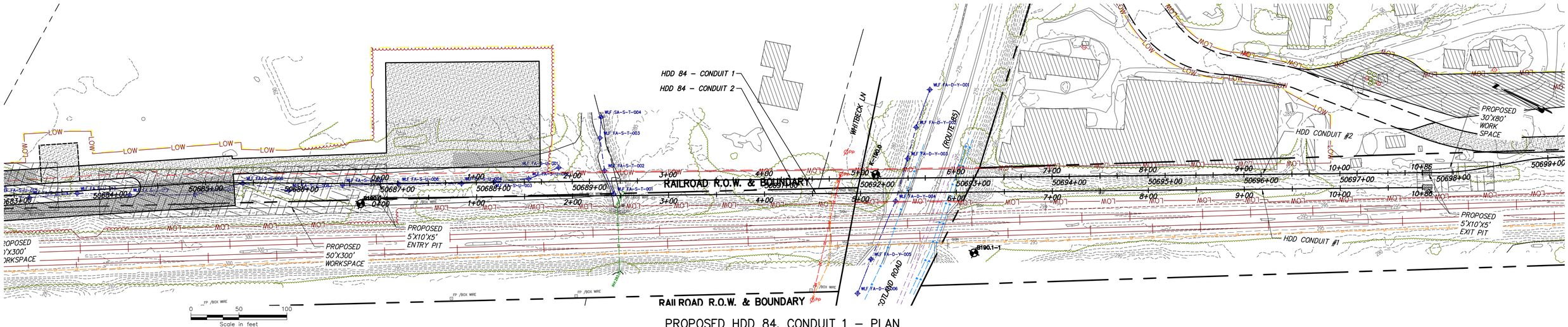
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-352

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_353-358.DWG Saved: 12/15/2022 4:30:15 PM Plotted: 12/15/2022 5:07:17 PM Current User: Brian Connelly
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.60 K·M/W

PROPOSED HDD 84, CONDUIT 1 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

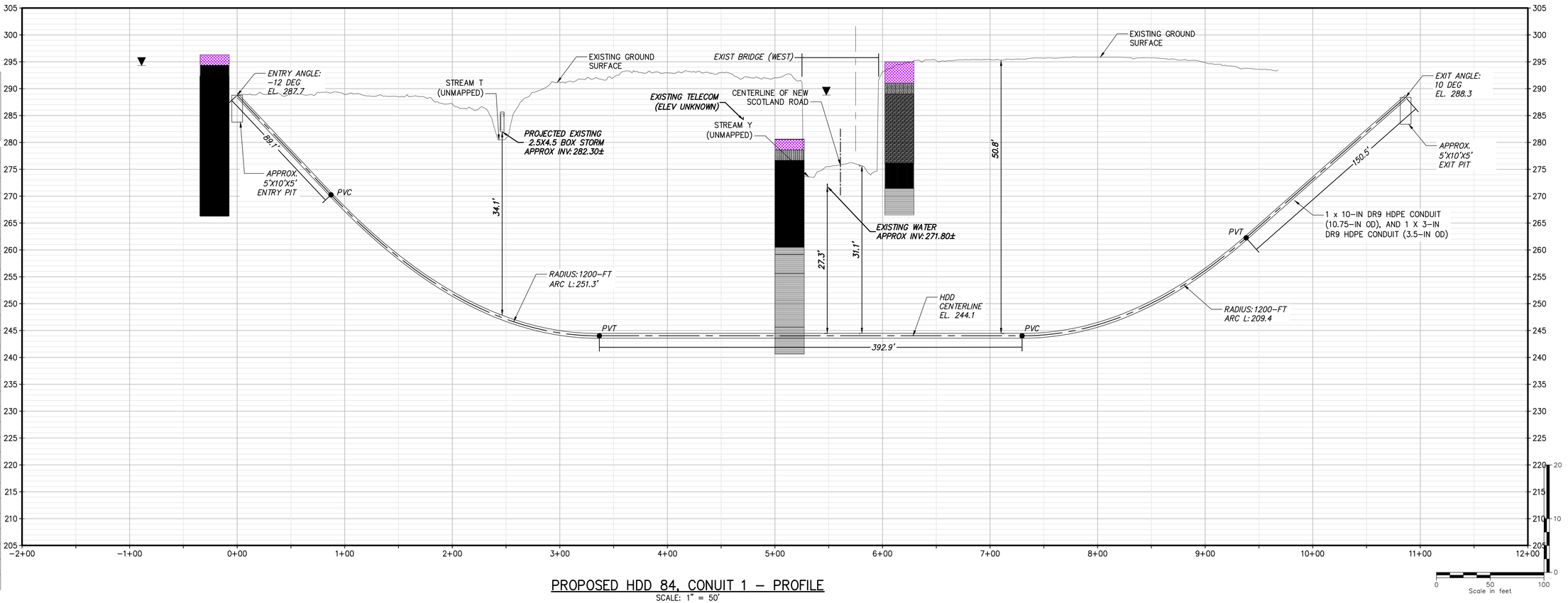
B101

Blow Counts per 6" =10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



PROPOSED HDD 84, CONUIT 1 – PROFILE

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

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C	6/6/2022	60% DESIGN SUBMISSION	BC	AM
B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

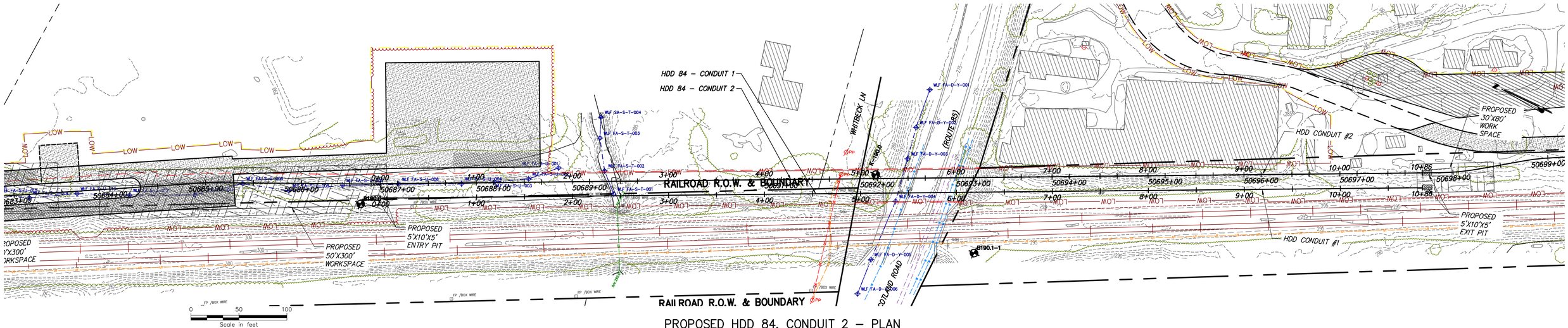
PROPOSED PLAN AND PROFILE - HDD 84

NEW SCOTLAND ROAD CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-353

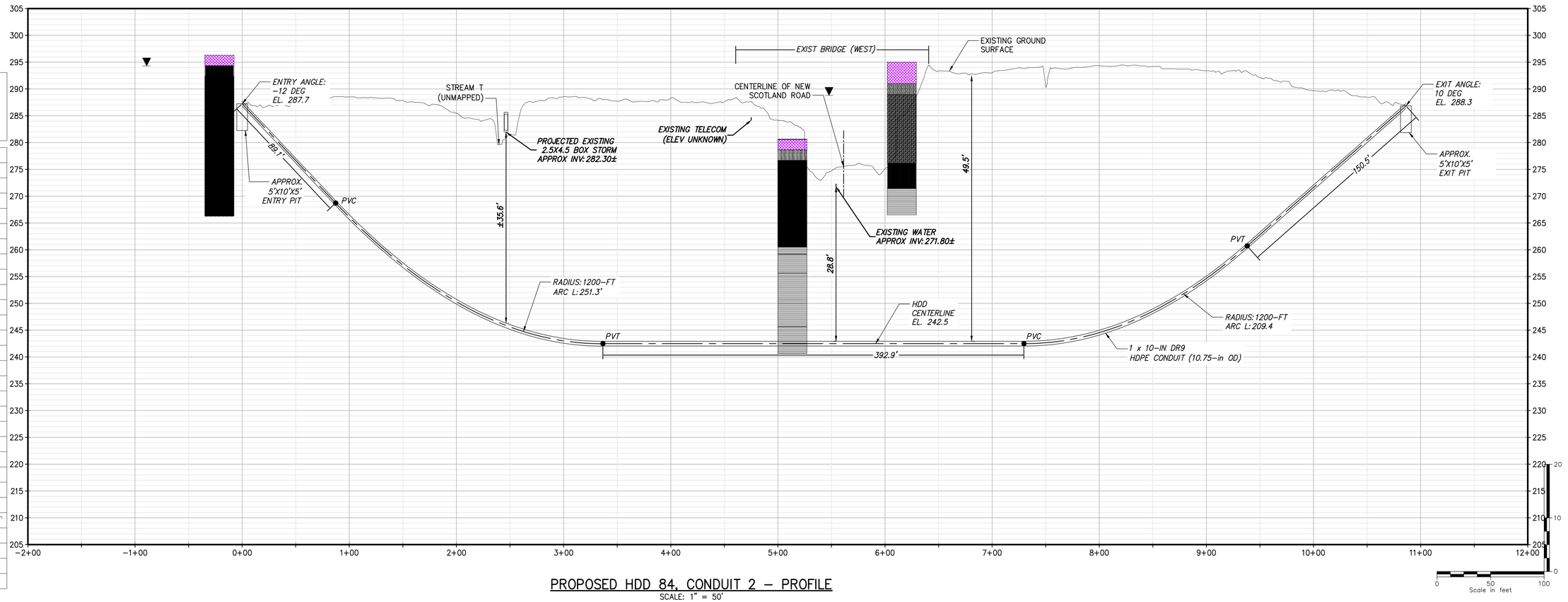
DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 0.60 K M/W

PROPOSED HDD 84, CONDUIT 2 – PLAN

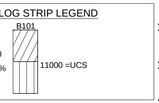
SCALE: 1" = 50'



PROPOSED HDD 84, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND



Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 70B	Gneiss
USGS 71B	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

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B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 84

NEW SCOTLAND ROAD CROSSING, CONDUIT 2

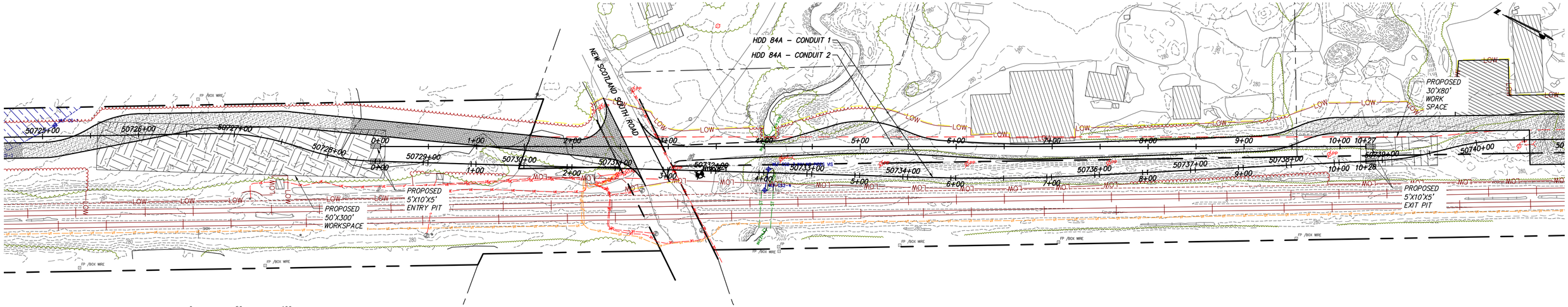
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-354

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

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LastSavedBy: bconnelly

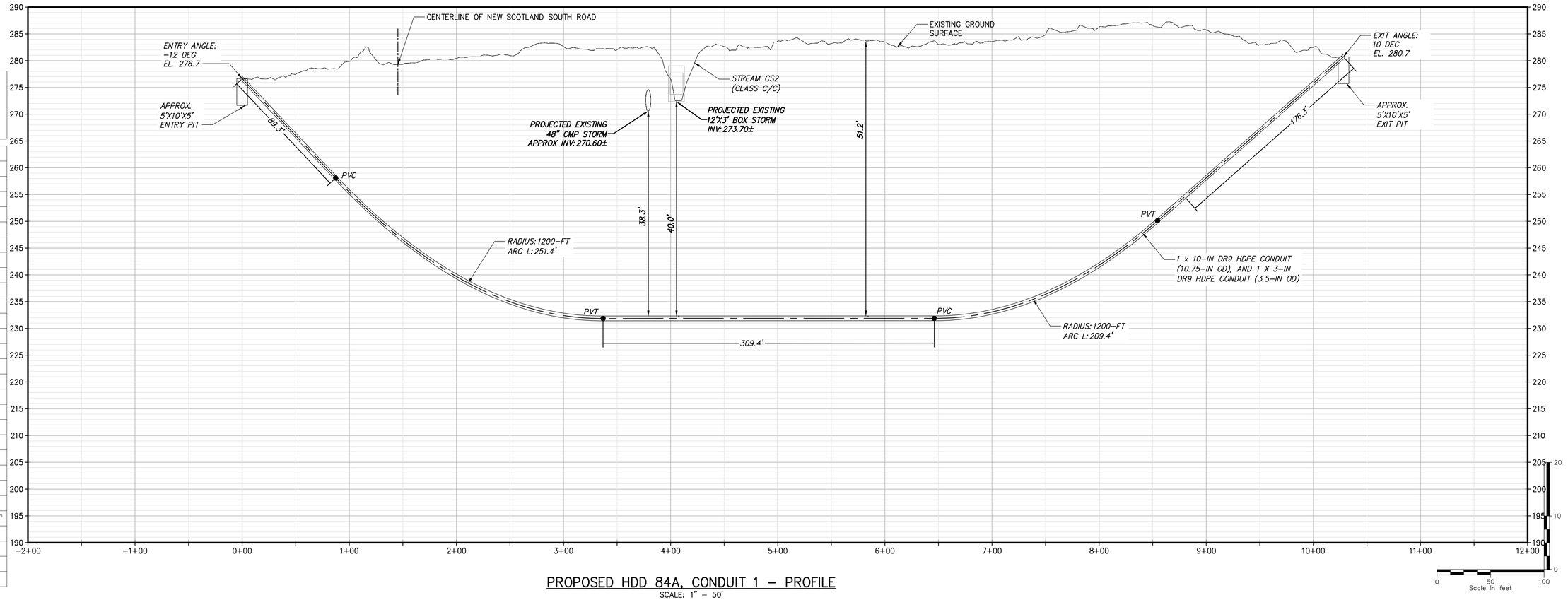
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Last Saved By: bconnelly



THERMAL RESISTIVITY VALUE: 0.60 K·M/W

PROPOSED HDD 84A, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 84A, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

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PHONE: 617.714.5784

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B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 84A

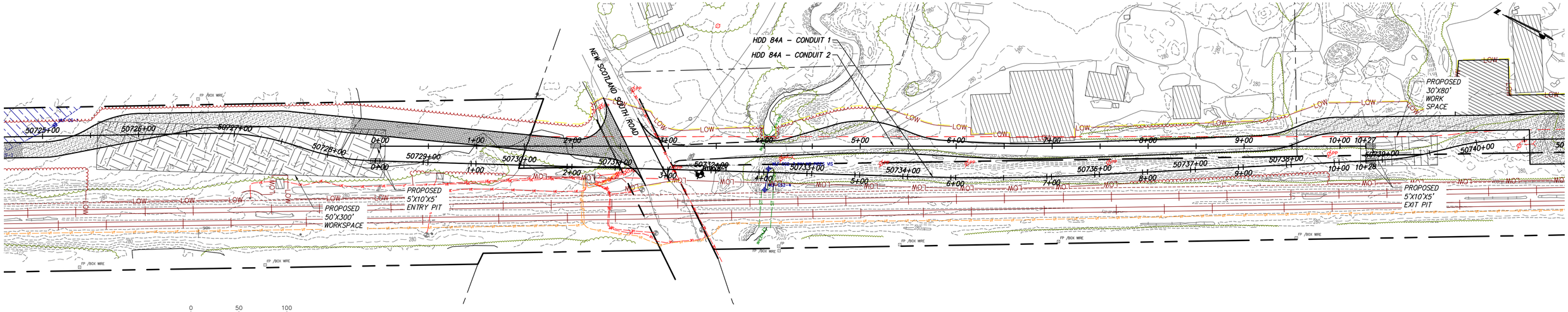
NEW SCOTLAND SOUTH ROAD CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-355

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

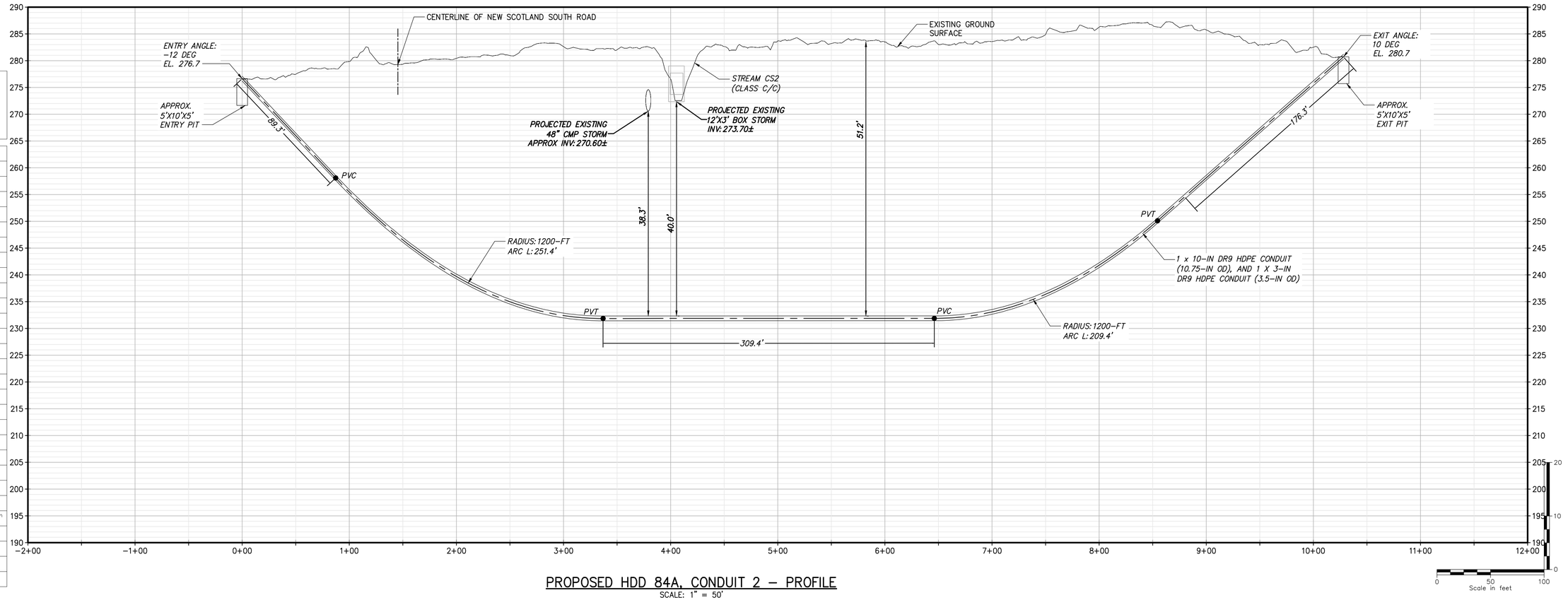
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Last Saved By: bconnelly



THERMAL RESISTIVITY VALUE: 0.60 K·M/W

PROPOSED HDD 84A, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 84A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

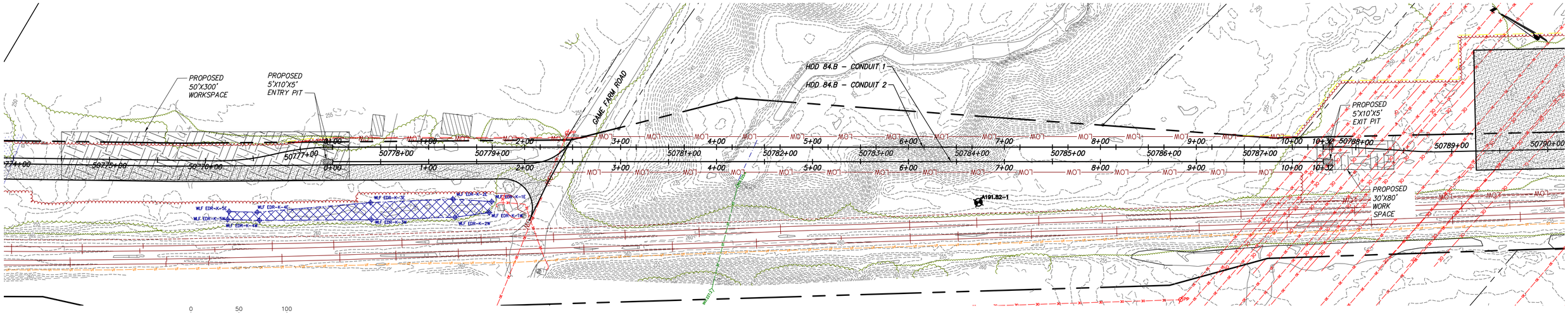
PROPOSED PLAN AND PROFILE - HDD 84A

NEW SCOTLAND SOUTH ROAD CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-356

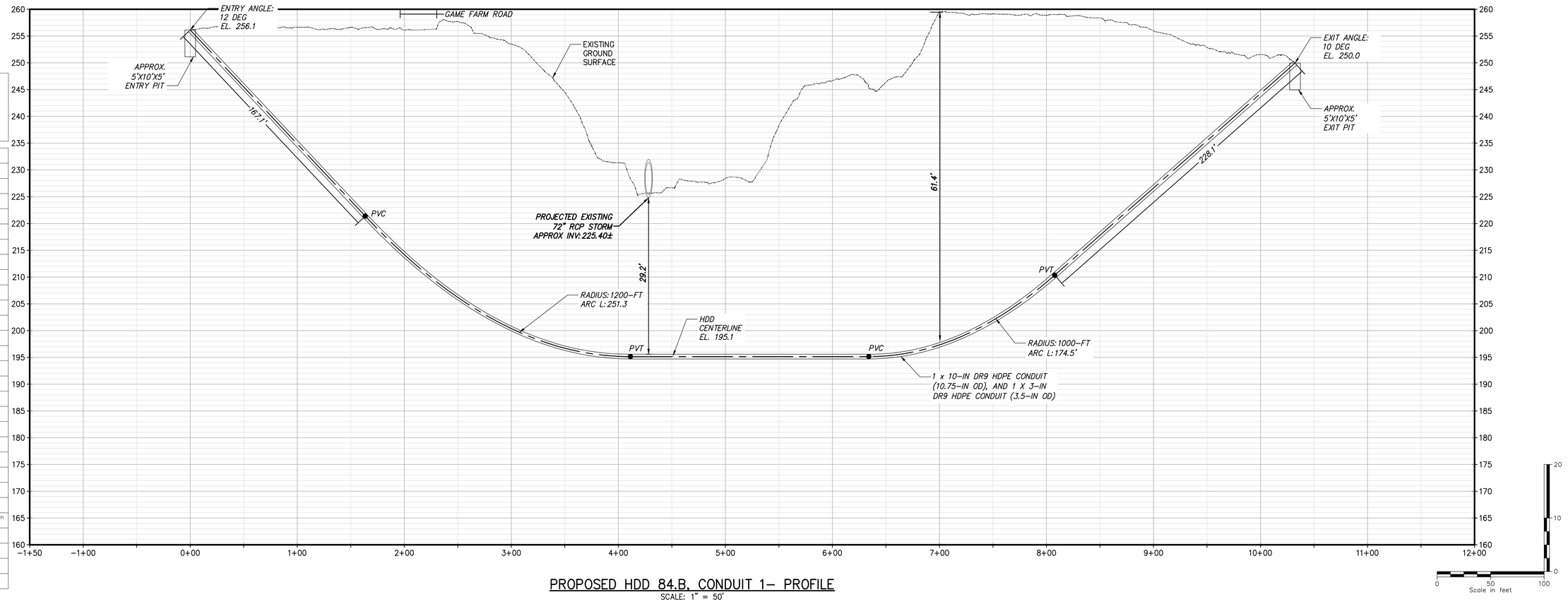
DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 0.60 K·M/W

PROPOSED HDD 84.B, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 84.B, CONDUIT 1– PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" =10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 84B

GAME FARM ROAD CROSSING, CONDUIT 1

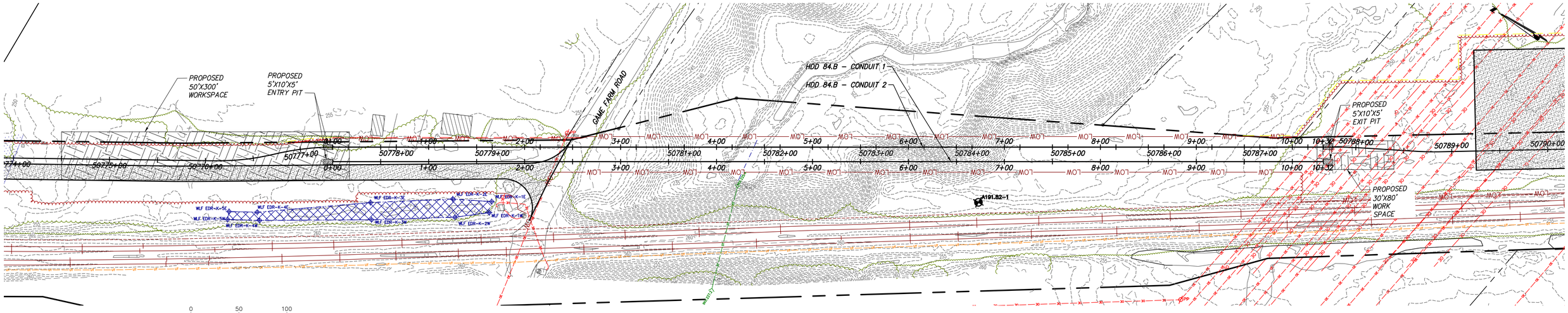
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-357

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_359-364.DWG Saved: 12/15/2022 4:39:43 PM Plotted: 12/15/2022 5:10:38 PM Current User: Brian Connelly
LastSavedBy: bconnelly

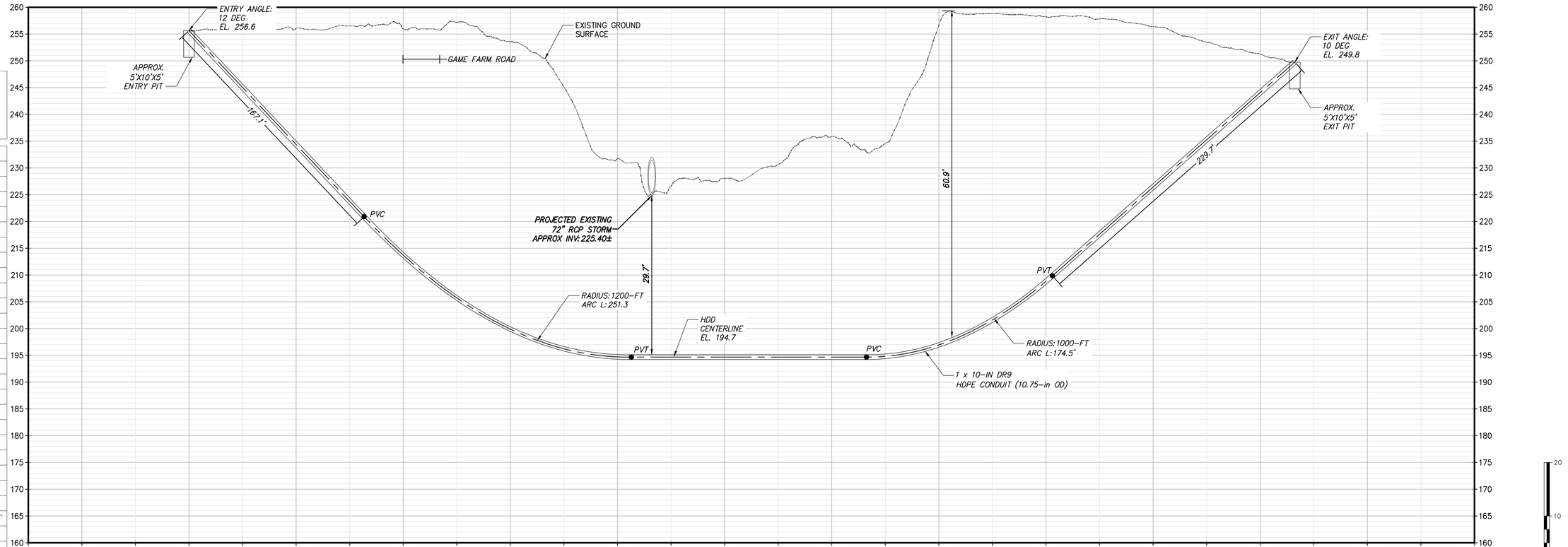
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.60 K M/W

PROPOSED HDD 84.B, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 84.B, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" =10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
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SC-SM	SILT, CLAYEY SAND
SHALE	Shale
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SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 84B

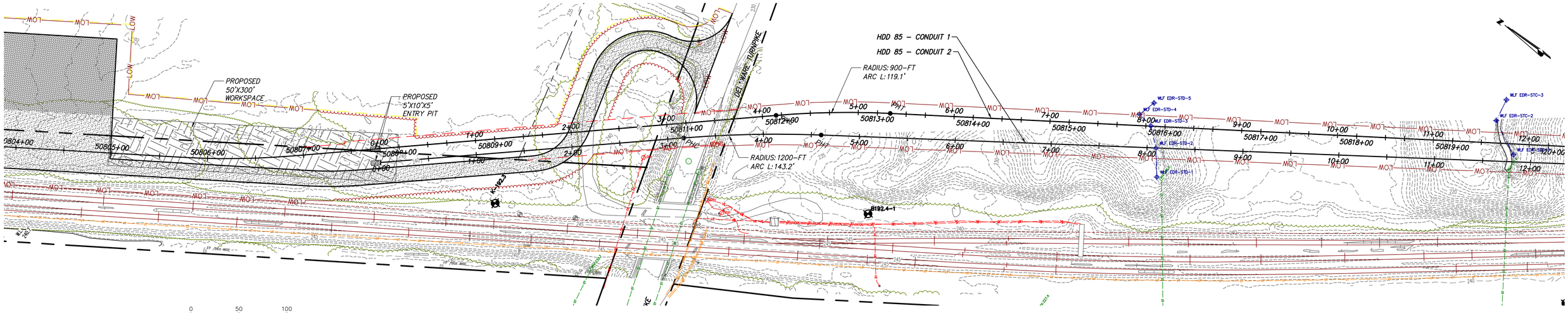
GAME FARM ROAD CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-358

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

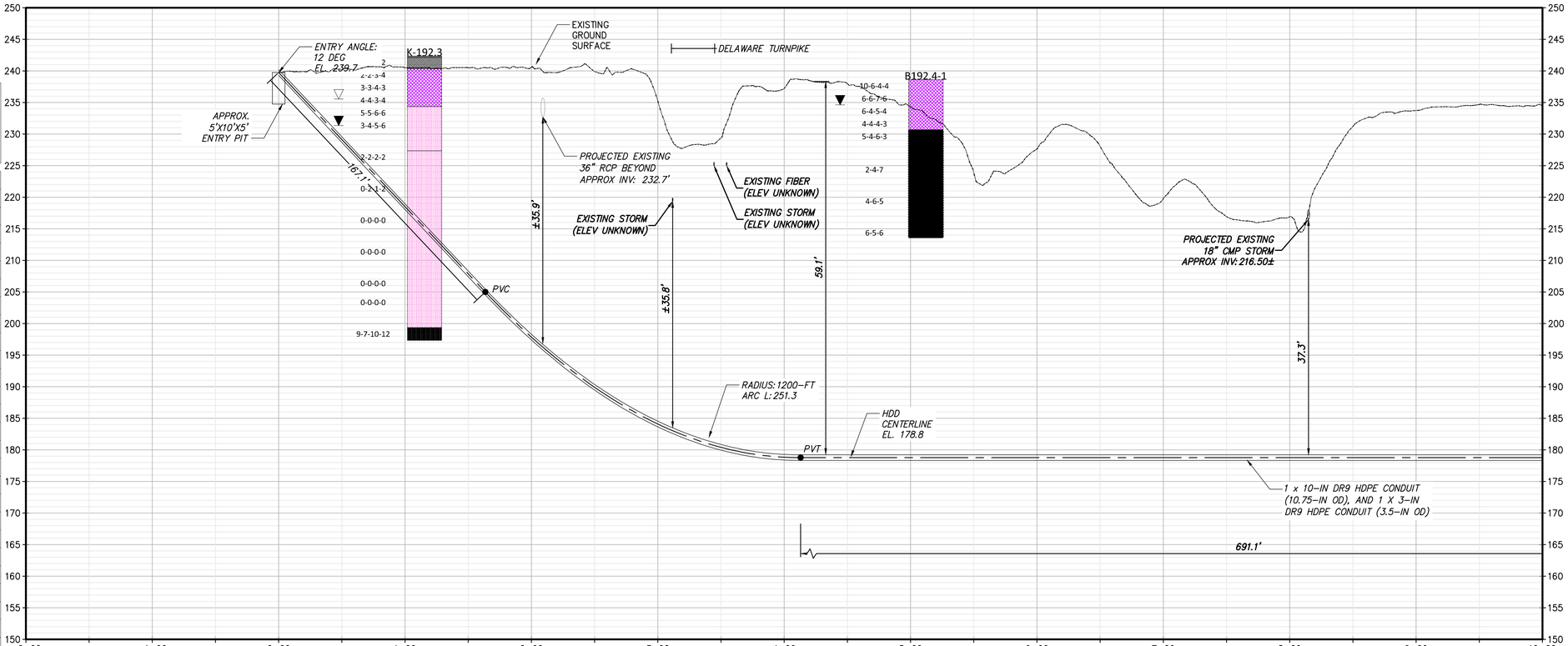
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 85, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 85, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" =10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

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C	6/6/2022	60% DESIGN SUBMISSION	BC	AM
B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

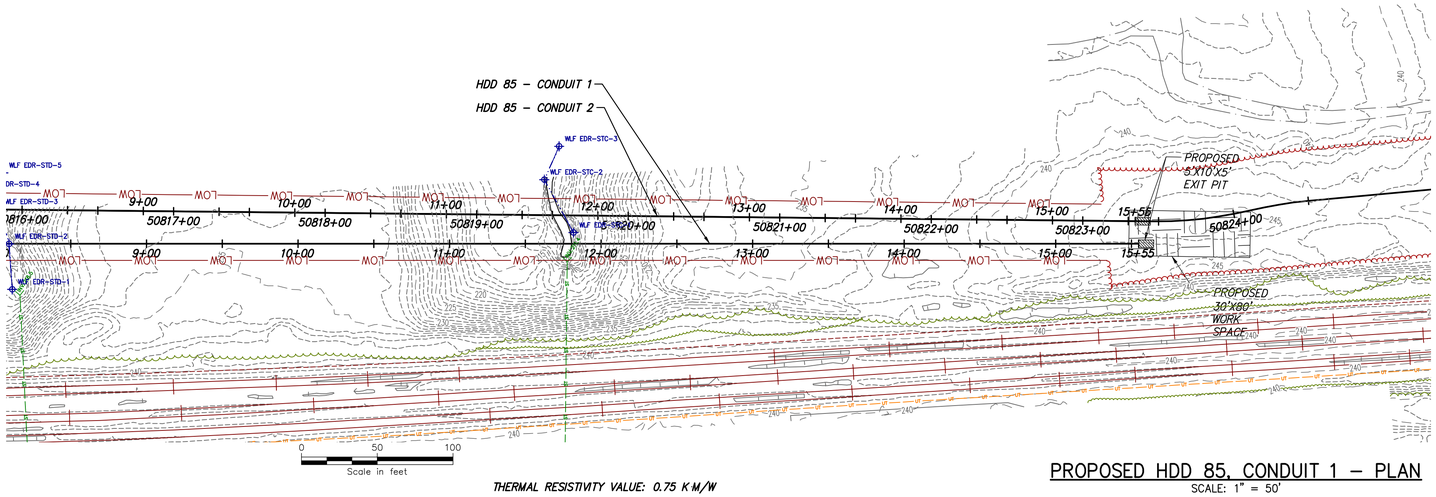
PROPOSED PLAN AND PROFILE - HDD 85

DELAWARE TURNPIKE CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-359

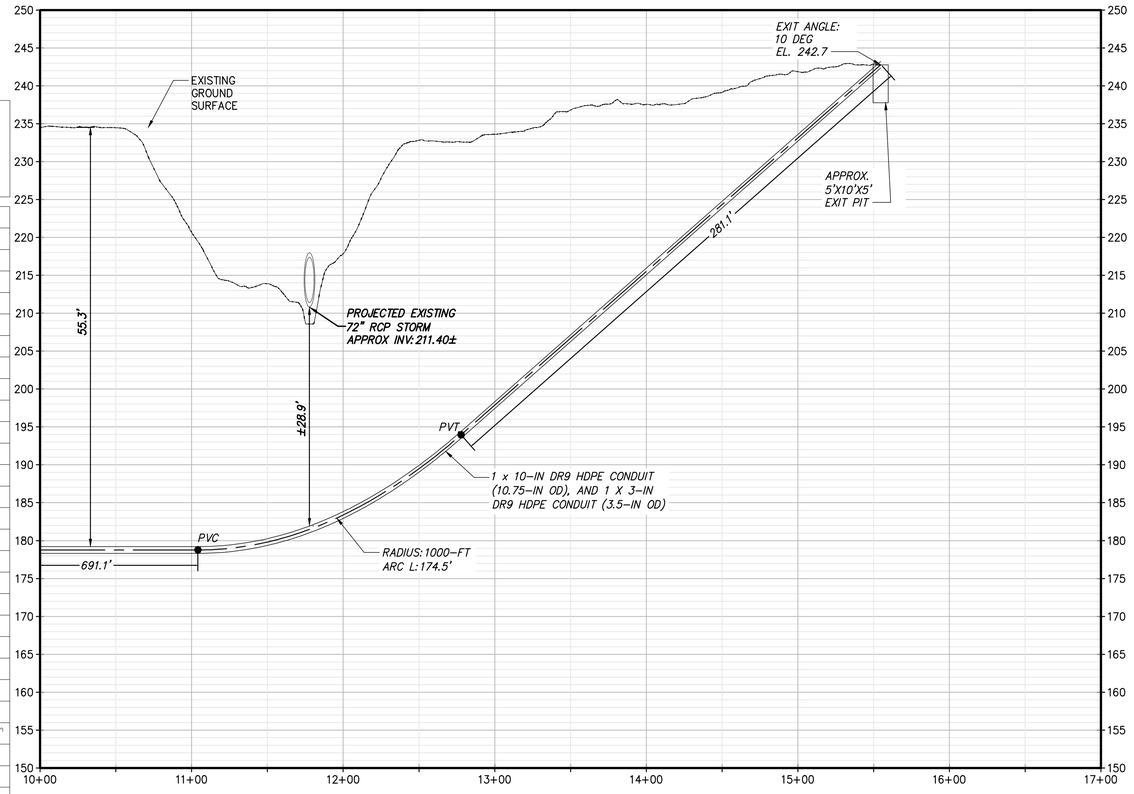
DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 0.75 K·M/W

PROPOSED HDD 85, CONDUIT 1 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 85, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

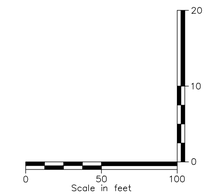
B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD %= 95%/90%

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



CHPE Champlain Hudson Power Express

Kiewit

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PHONE: 617.714.5784

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B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 85

DELAWARE TURNPIKE CROSSING, CONDUIT 1

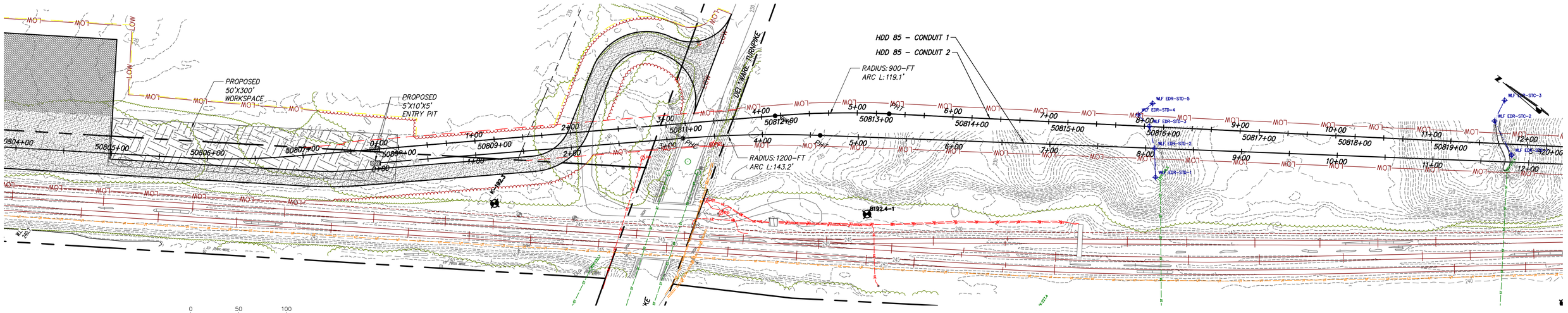
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-360

DRAWN BY: BBC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

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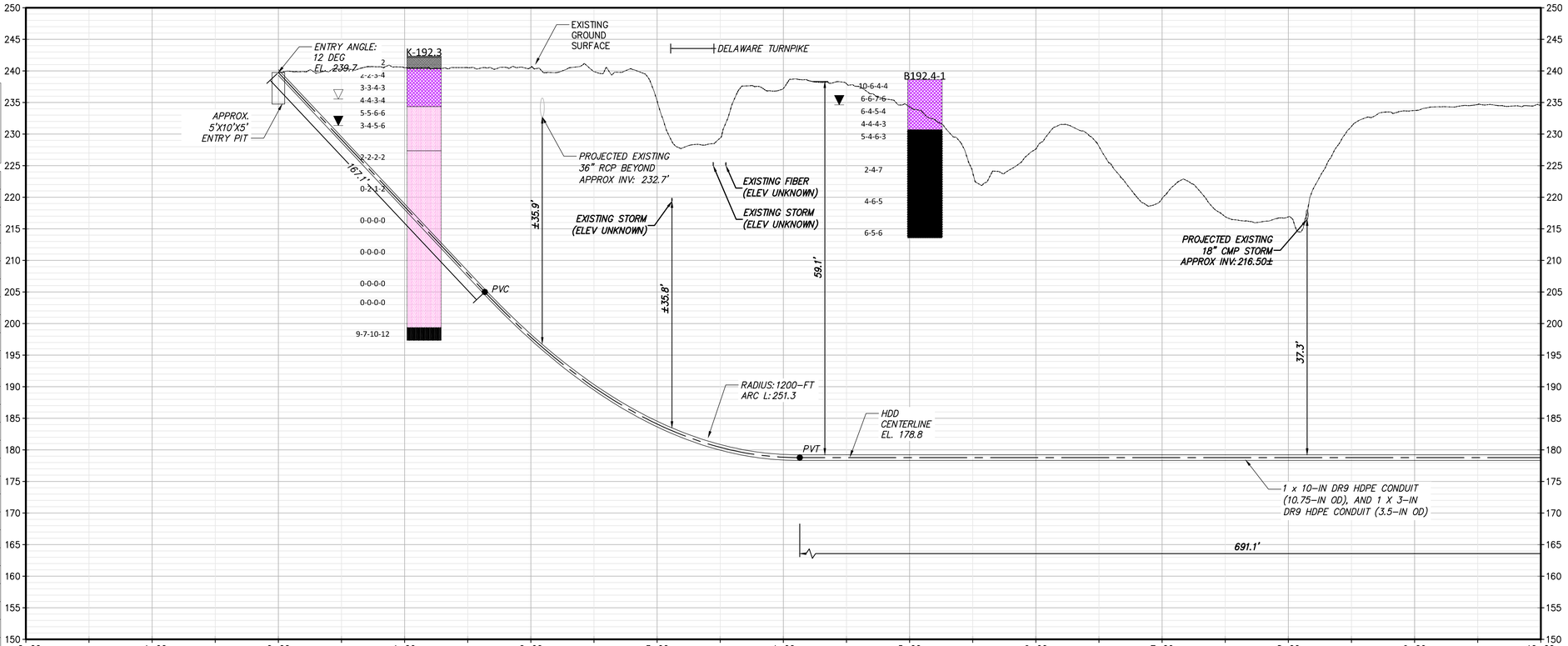
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K M/W

PROPOSED HDD 85, CONDUIT 2 – PLAN

SCALE: 1" = 50'



PROPOSED HDD 85, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

0 50 100
Scale in feet

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" =10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1

CHPE Champlain Hudson Power Express

Kiewit

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A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

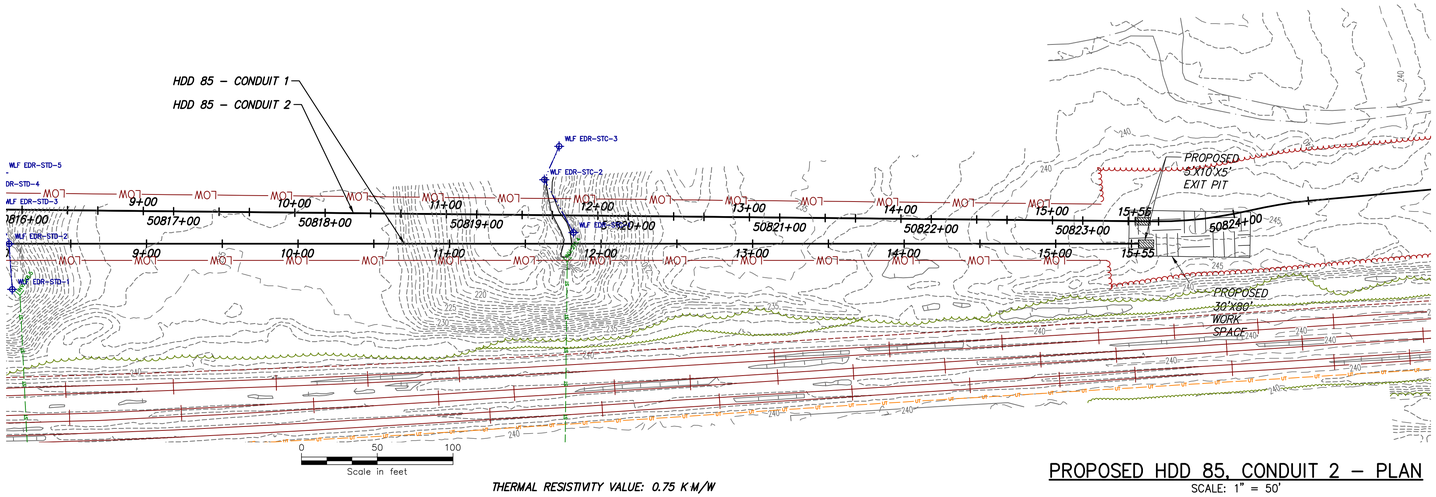
CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 85
DELAWARE TURNPIKE CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-361

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

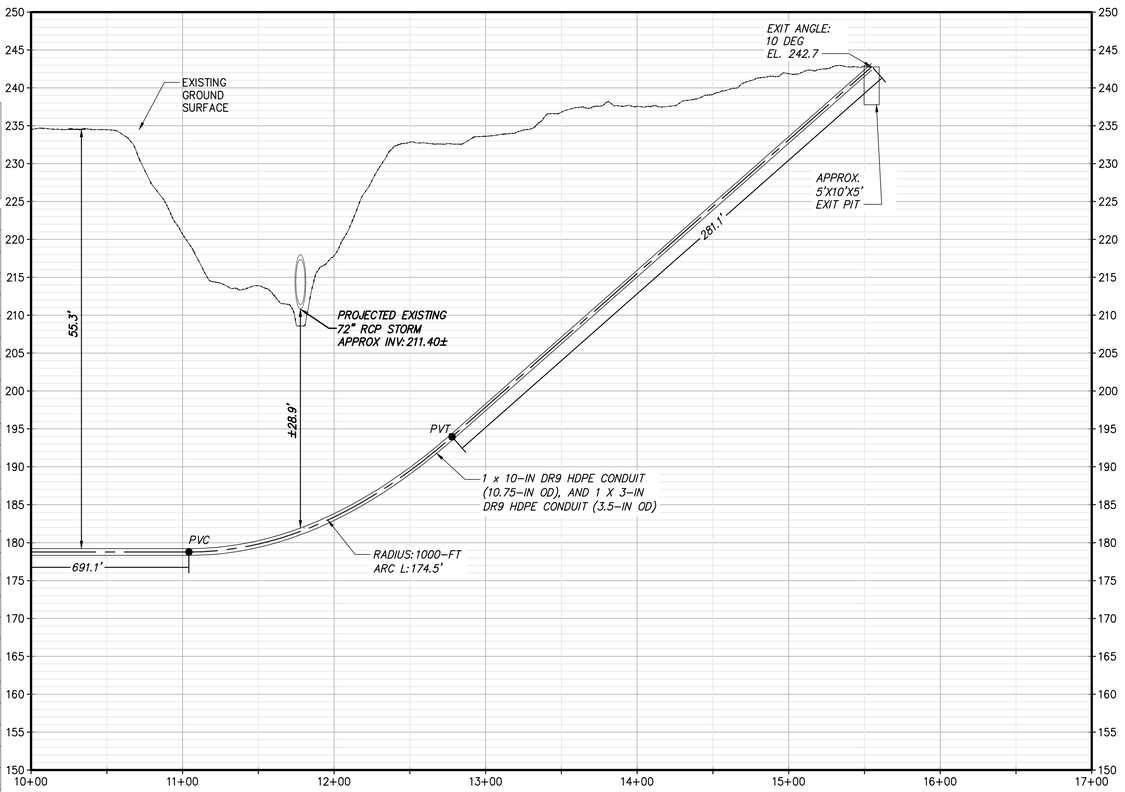
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LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 0.75 K M/W

PROPOSED HDD 85, CONDUIT 2 – PLAN

SCALE: 1" = 50'



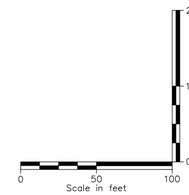
PROPOSED HDD 85, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" = 10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

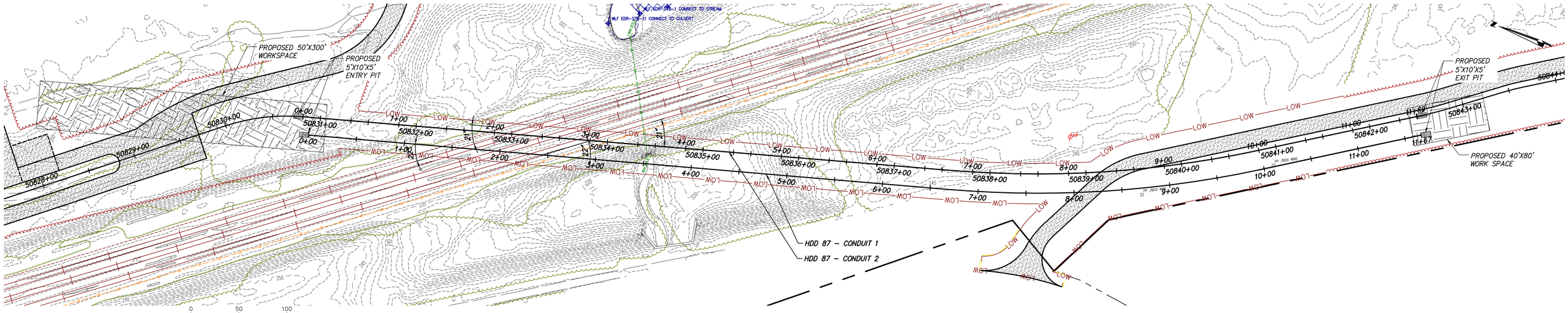
PROPOSED PLAN AND PROFILE - HDD 85

DELAWARE TURNPIKE CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-362

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189



THERMAL RESISTIVITY VALUE: 1.05 K M/W

PROPOSED HDD 87, CONDUIT 1 – PLAN

SCALE: 1" = 50'

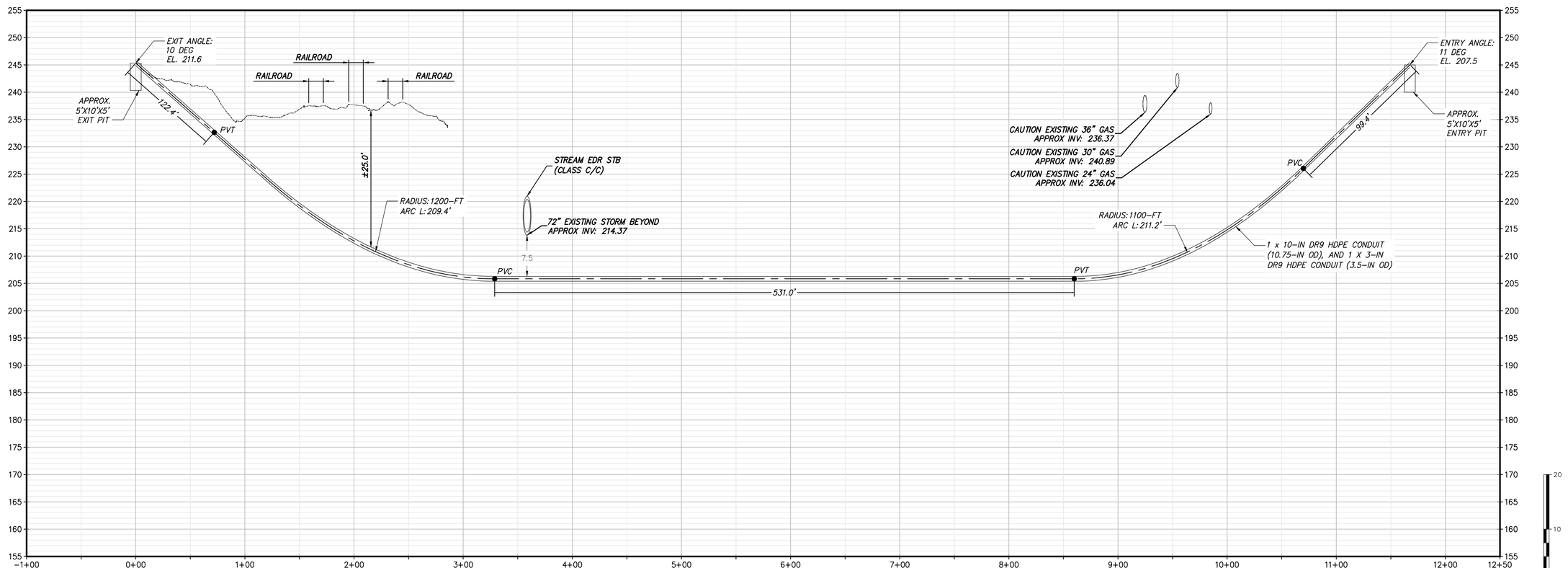
BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
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OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



PROPOSED HDD 87, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

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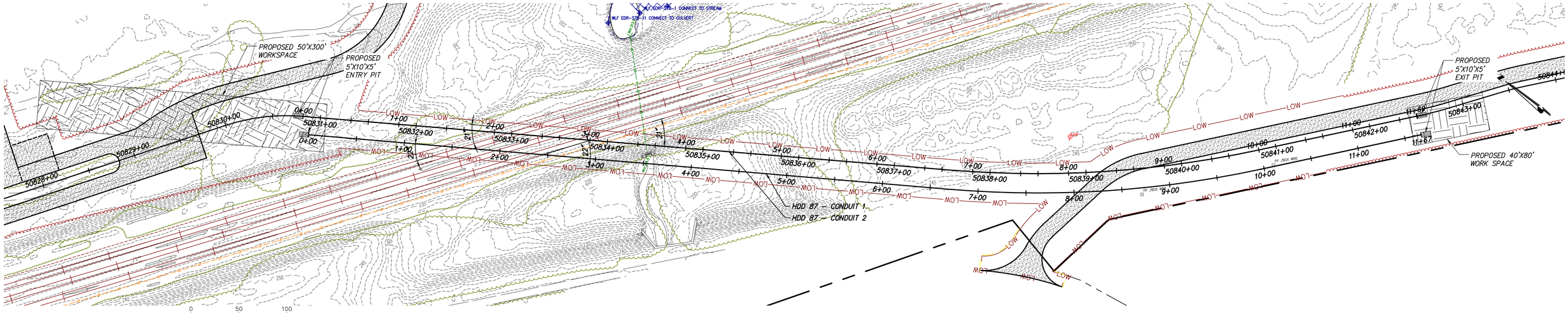
CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 87
CSX RAILROAD/ EXISTING STORM CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-363

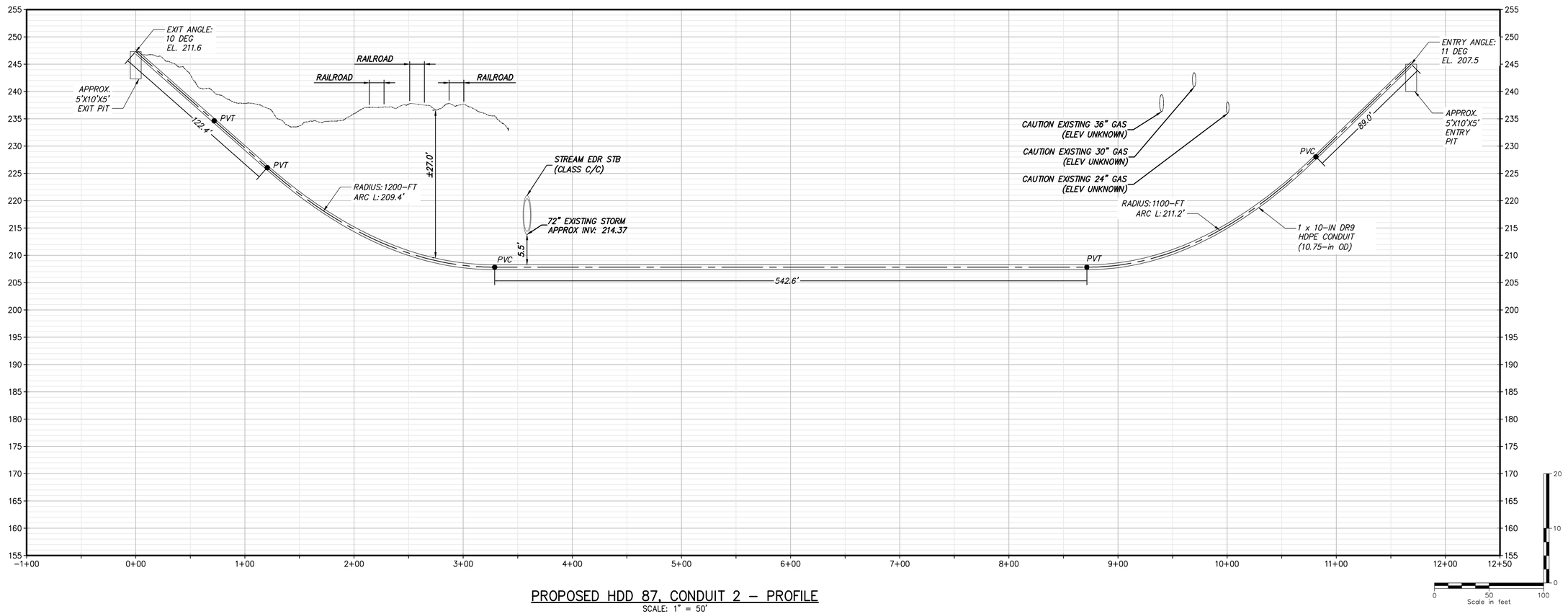
DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_365-368.DWG Saved: 12/15/2022 4:51:34 PM Plotted: 12/15/2022 5:15:21 PM Current User: Brian Connelly
LastSavedBy: bconnelly



THERMAL RESISTIVITY VALUE: 1.05 K M/W

PROPOSED HDD 87, CONDUIT 2 – PLAN
SCALE: 1" = 50'



PROPOSED HDD 87, CONDUIT 2 – PROFILE
SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101
Blow Counts per 6" =10-10-10
Recovery %/RQD %= 95%/90%
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
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SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 710	Granite 1

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HDD 87 CIRCUIT #2 PROFILE

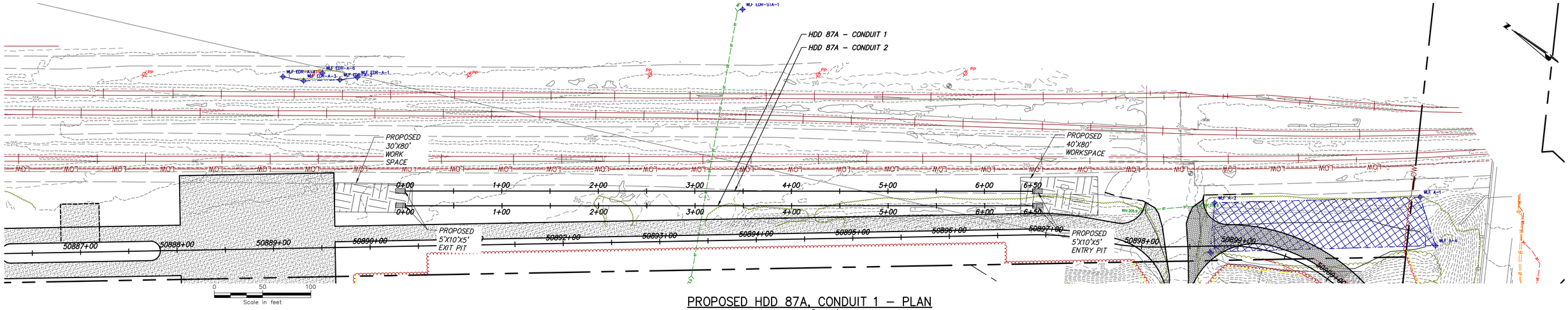
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B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 87
CSX RAILROAD / EXISITNG STORM CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-364

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_365-368.DWG Saved: 12/15/2022 4:51:34 PM Plotted: 12/15/2022 5:15:57 PM Current User: Brian Connelly
LastSavedBy: bconnelly



PROPOSED HDD 87A, CONDUIT 1 – PLAN

SCALE: 1" = 50'

THERMAL RESISTIVITY VALUE: 1.10 K M/W

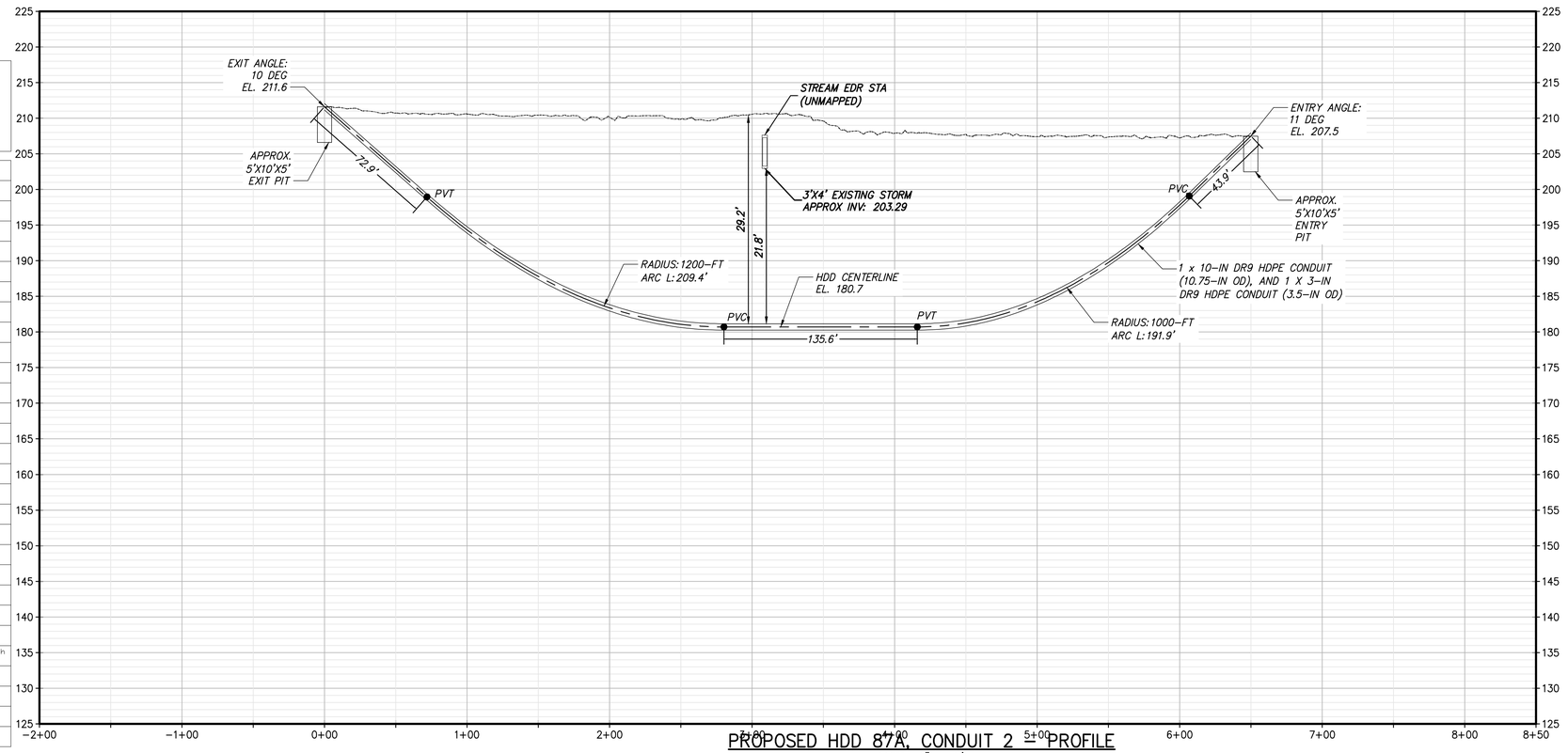
BORING LOG STRIP LEGEND

B101

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

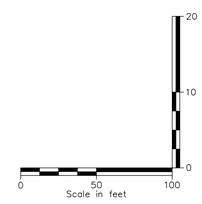
11000 =UCS

Legend	
ASPHALT	Asphalt
CH	Fat CLAY
CH-MH	SILTY Fat CLAY
CL	Lean CLAY
CL-ML	SILTY CLAY
CONCRETE	Concrete
Fill	Fill
GC	CLAYEY GRAVEL
GM	SILTY GRAVEL
Gneiss	Undefined
GP	Poorly Graded GRAVEL
GW	Well Graded GRAVEL
ML	SILT
OH	ORGANIC Fat CLAY
OL	ORGANIC Lean CLAY
OL/OH	ORGANIC SOIL
Rock	Undefined
Sandstone	Sandstone
SC	CLAYEY SAND
SC-SM	SILT, CLAYEY SAND
SHALE	Shale
SM	SILTY SAND
SP	Poorly Graded SAND
SP-SM	Poorly Graded SAND with SILT
SW	Well graded SAND
Topsoil	Topsoil
USGS 708	Gneiss
USGS 718	Granite 1



PROPOSED HDD 87A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'



CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
26 Smith Pl, Ste 2, Cambridge, MA 02138
PHONE: 617.714.5784

FOR EMCP REVIEW
NOT FOR CONSTRUCTION

HDD 87A CIRCUIT #1 PROFILE

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
E	12/16/2022	FINAL SUBMISSION	BC	AM
D	11/11/2022	DRAFT FINAL SUBMISSION	BC	AM
C	6/6/2022	60% DESIGN SUBMISSION	BC	AM
B	2/11/2022	PRELIMINARY DESIGN DEVELOPMENT	BC	AM
A	1/24/2022	PRELIMINARY PROGRESS	BC	AM

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 87.A.A

EXISTING STORM LINE CROSSING, CONDUIT 1

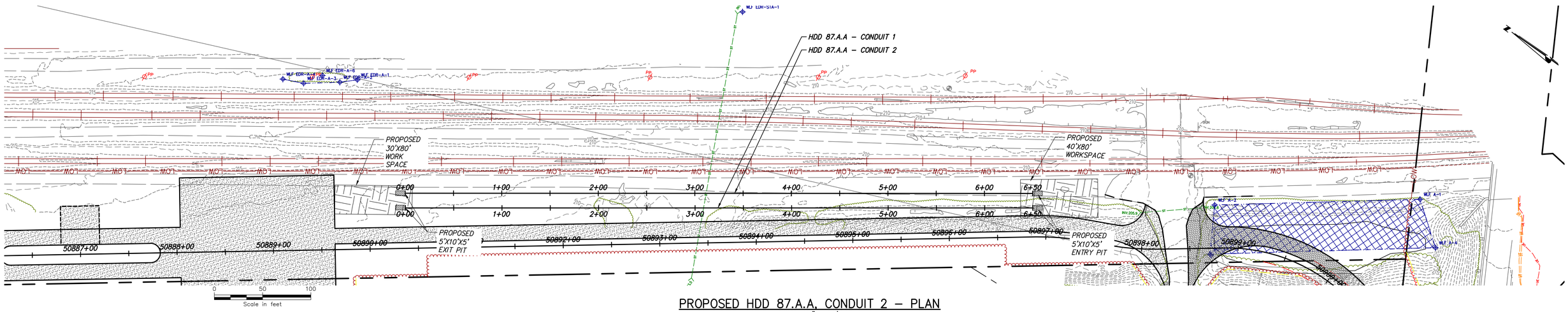
SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-365

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | DATE 12/16/2022 | REV. NO. E | SH.NO. XX OF 189

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LastSavedBy: bconnelly

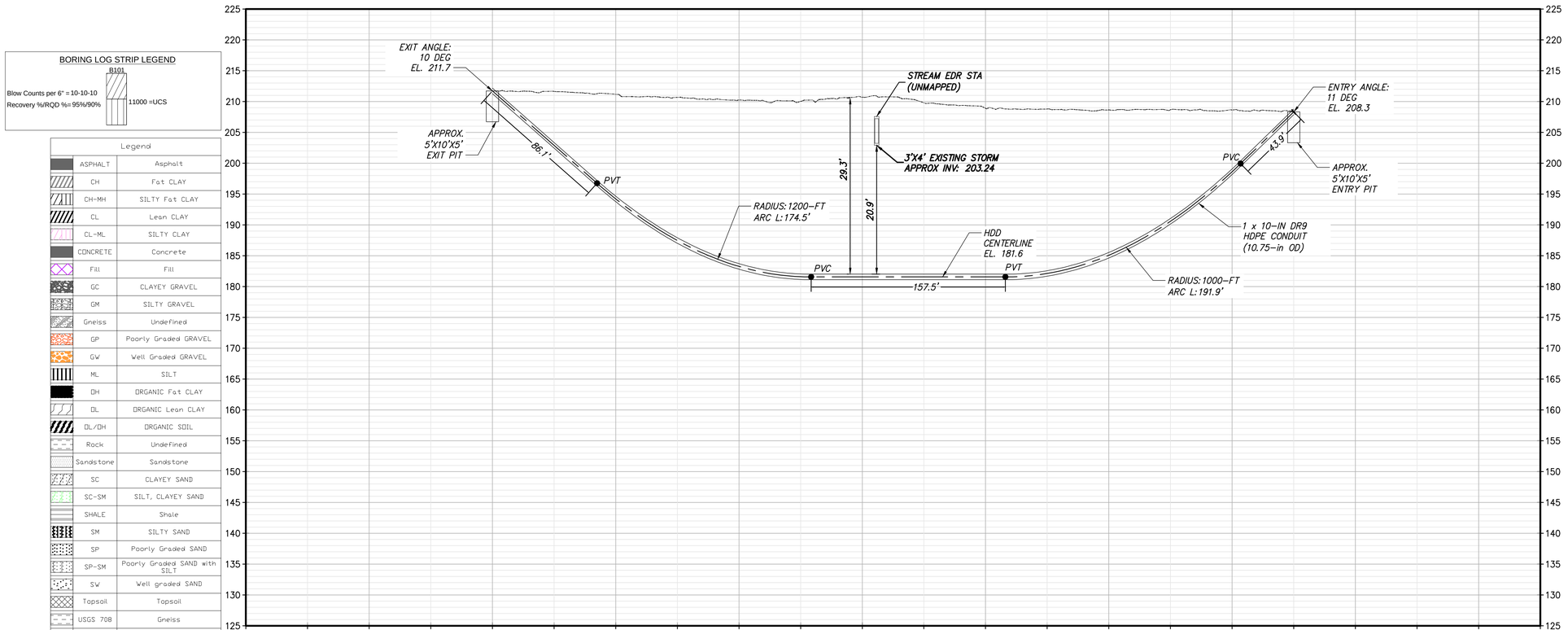
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LastSavedBy: bconnelly



PROPOSED HDD 87.A.A, CONDUIT 2 – PLAN

SCALE: 1" = 50'

THERMAL RESISTIVITY VALUE: 1.10 K M/W



PROPOSED HDD 87.A.A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

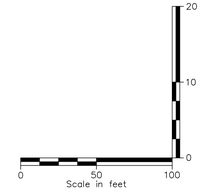
BORING LOG STRIP LEGEND

B101

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

11000 =UCS

Legend		
	ASPHALT	Asphalt
	CH	Fat CLAY
	CH-MH	SILTY Fat CLAY
	CL	Lean CLAY
	CL-ML	SILTY CLAY
	CONCRETE	Concrete
	Fill	Fill
	GC	CLAYEY GRAVEL
	GM	SILTY GRAVEL
	Gneiss	Undefined
	GP	Poorly Graded GRAVEL
	GW	Well Graded GRAVEL
	ML	SILT
	OH	ORGANIC Fat CLAY
	OL	ORGANIC Lean CLAY
	OL/OH	ORGANIC SOIL
	Rock	Undefined
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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 87.A.A

EXISTING STORM LINE CROSSING, CONDUIT 2

SCHENECTADY COUNTY, NY

KIEWIT PROJECT NO.	21162
BRIERLEY PROJECT NO.	322004-000
DRAWING NO.	C-366

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: AM | SCALE AS SHOWN | REV. NO. E | DATE 12/16/2022 | SH.NO. XX OF 189

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E&SC KEY PLAN
SCALE: 1" = 2000'

CHPE Champlain Hudson Power Express

Kiewit

Engineering and Land Surveying, P.C.

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A	12/16/2022	FINAL SUBMISSION	MK	NH

CHAMPLAIN HUDSON POWER EXPRESS

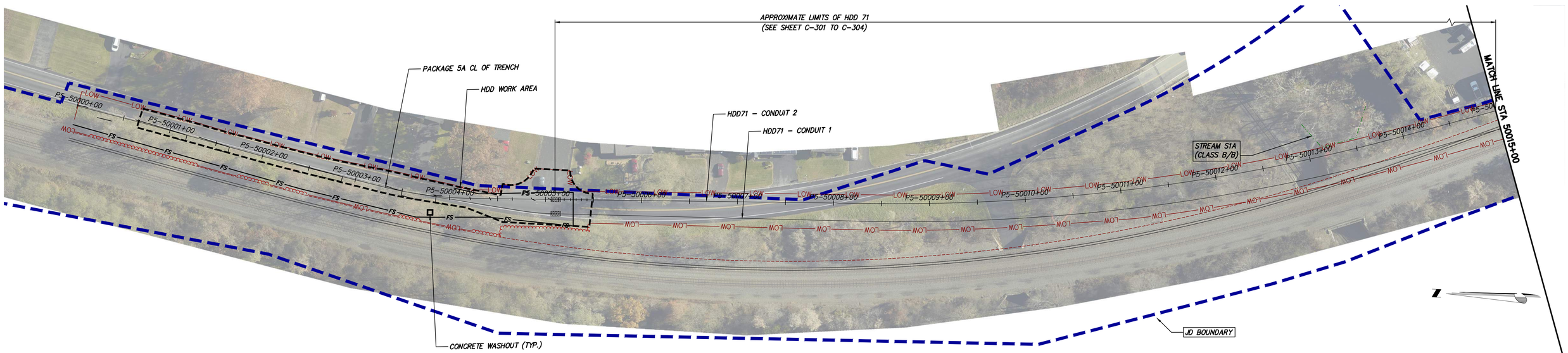
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM - BETHLEHEM

E&SC KEY PLAN

DRAWN BY: | DESIGNED BY: MK | APPROVED BY: NH | SCALE AS SHOWN | REV. NO. A | DATE 12/16/2022 | SH.NO. OF

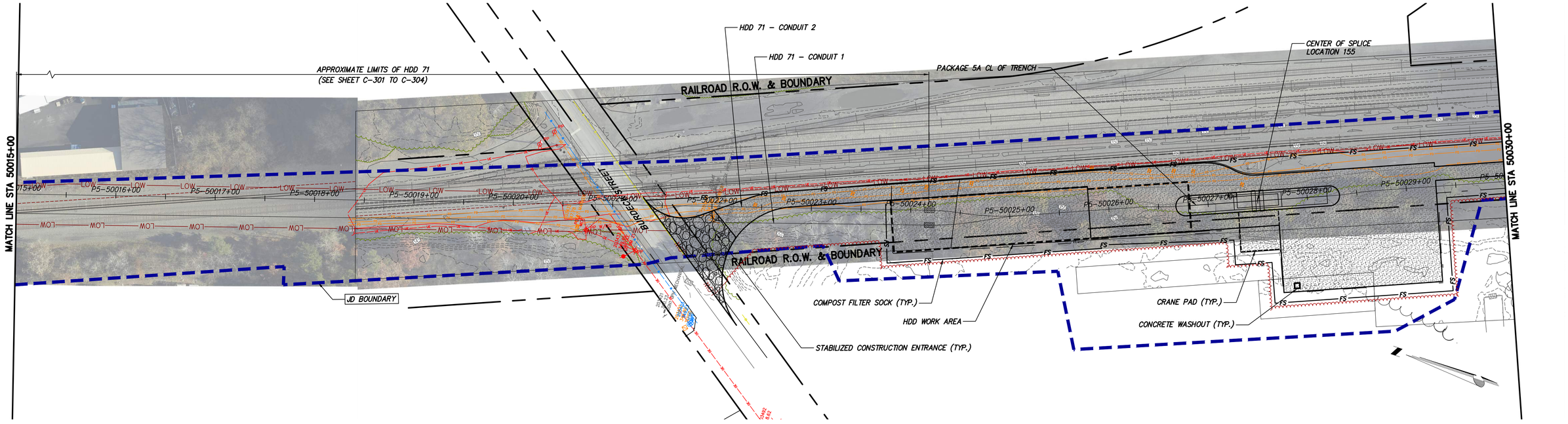
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KC PROJECT NO.	120174
DRAWING NO.	C-400

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STA. 50000+00 TO STA. 50015+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet



STA. 50015+00 TO STA. 50030+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

Engineering and Land Surveying, P.C.

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A	12/16/2022	FINAL SUBMISSION	KR	NH

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM - BETHLEHEM

EROSION AND SEDIMENT CONTROL PLAN
STA. 50000+00 TO STA. 50030+00

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	**C-401**

DRAWN BY: KR | DESIGNED BY: MK | APPROVED BY: NH | SCALE AS SHOWN | REV. NO. A | DATE 12/16/2022 | SH.NO. OF