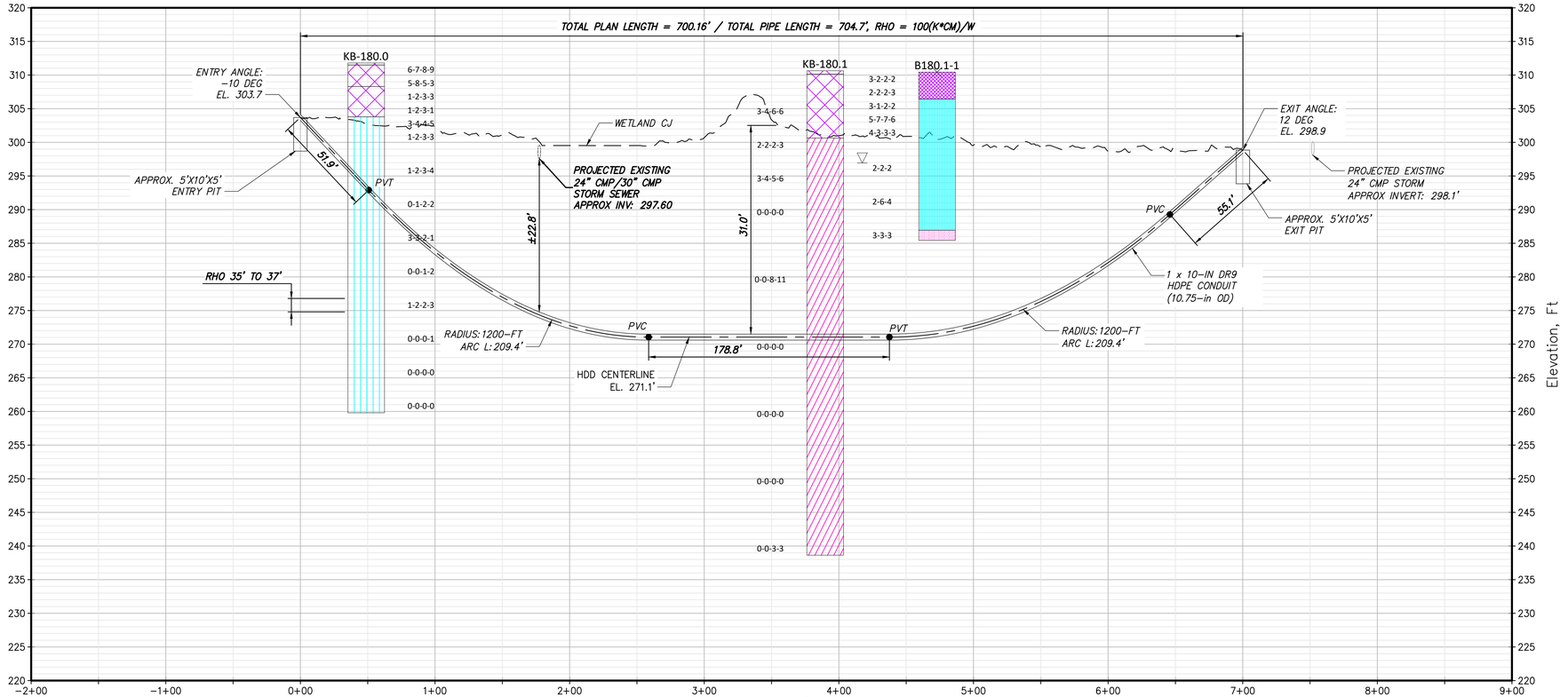


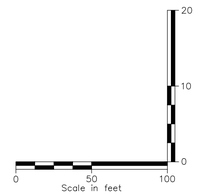

## PROPOSED HDD 75.A.A, CONDUIT 2 – PLAN

SCALE: 1" = 50'




## PROPOSED HDD 75.A.A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'




### 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

Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| 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

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PHONE: 617.714.5784

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

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

### PROPOSED PLAN AND PROFILE - HDD 75.A.A

### WETLAND CROSSING, CONDUIT 2

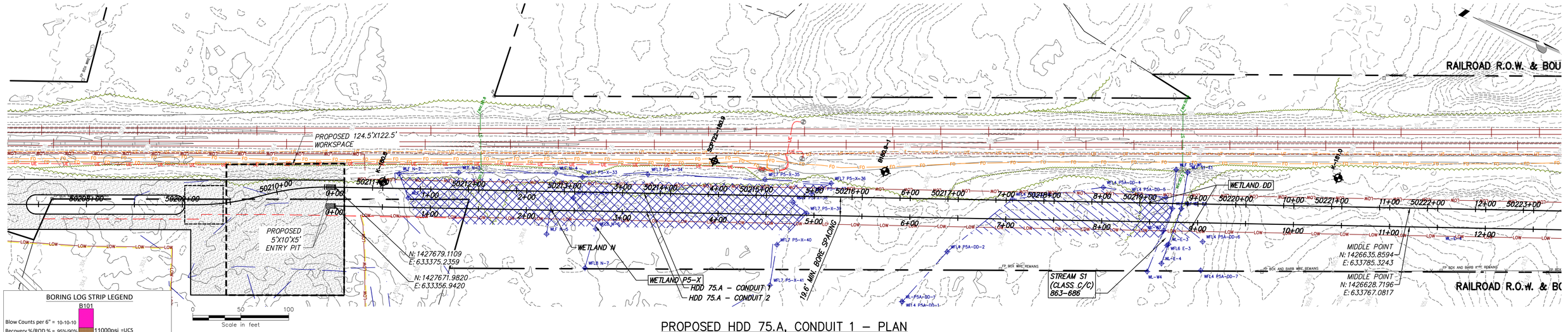
### SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-316 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. EGEN | DATE 06/09/2023 | SH.NO. XX OF 189



File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_315-320.DWG Saved: 5/16/2023 1:35:44 PM Plotted: 6/7/2023 7:41:45 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 75.A, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

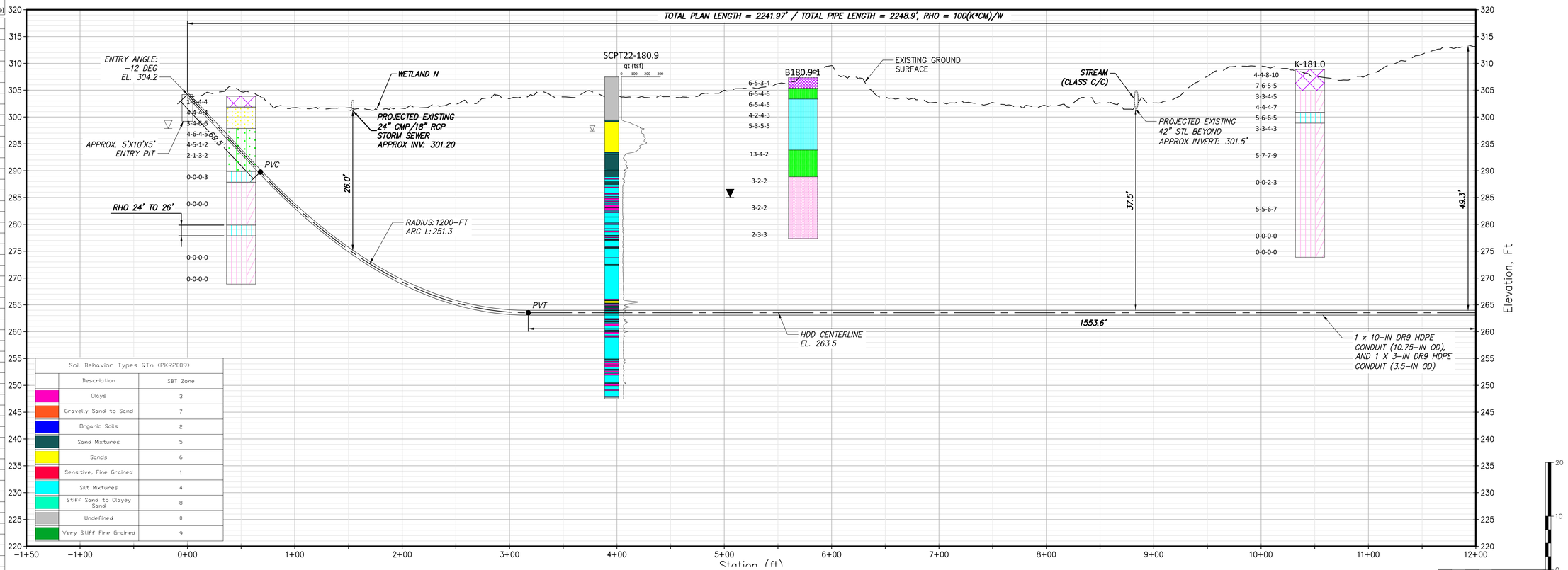
11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| Legend | |
|---|---|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
| CH–MH | SILTY Fat CLAY |
| CL | Lean CLAY |
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| PT | PEAT |
| Rock | Rock |
| Sandstone | Sandstone |
| SC | CLAYEY SAND |
| SC–SM | SILT, CLAYEY SAND |
| SHALE | Shale |
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| USGS 702 | Quartzite |
| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |




| Soil Behavior Types QTn (PKR2009) | | |
|---|---|---|
| | Description | SBT Zone |
| | Clays | 3 |
| | Gravelly Sand to Sand | 7 |
| | Organic Soils | 2 |
| | Sand Mixtures | 5 |
| | Sands | 6 |
| | Sensitive, Fine Grained | 1 |
| | Silt Mixtures | 4 |
| | Stiff Sand to Clayey Sand | 8 |
| | Undefined | 0 |
| | Very Stiff Fine Grained | 9 |

## PROPOSED HDD 75.A, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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26 Smith Pl, Ste 2, Cambridge, MA 02138
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6/7/2023

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|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

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

PROPOSED PLAN AND PROFILE - HDD 75A

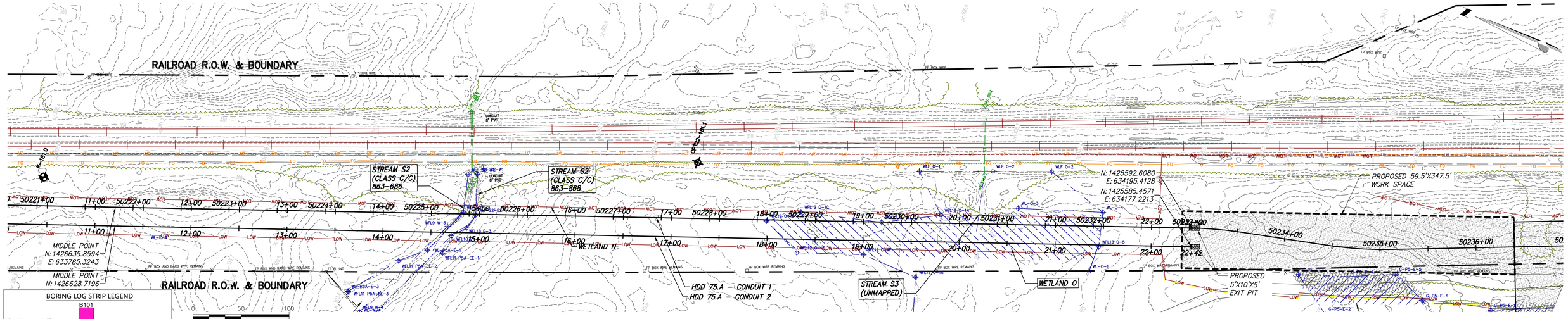
STREAM CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-317 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DCV\ACDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_315-320.DWG Saved: 5/16/2023 1:35:44 PM Plotted: 6/7/2023 7:42:50 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 75.A, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

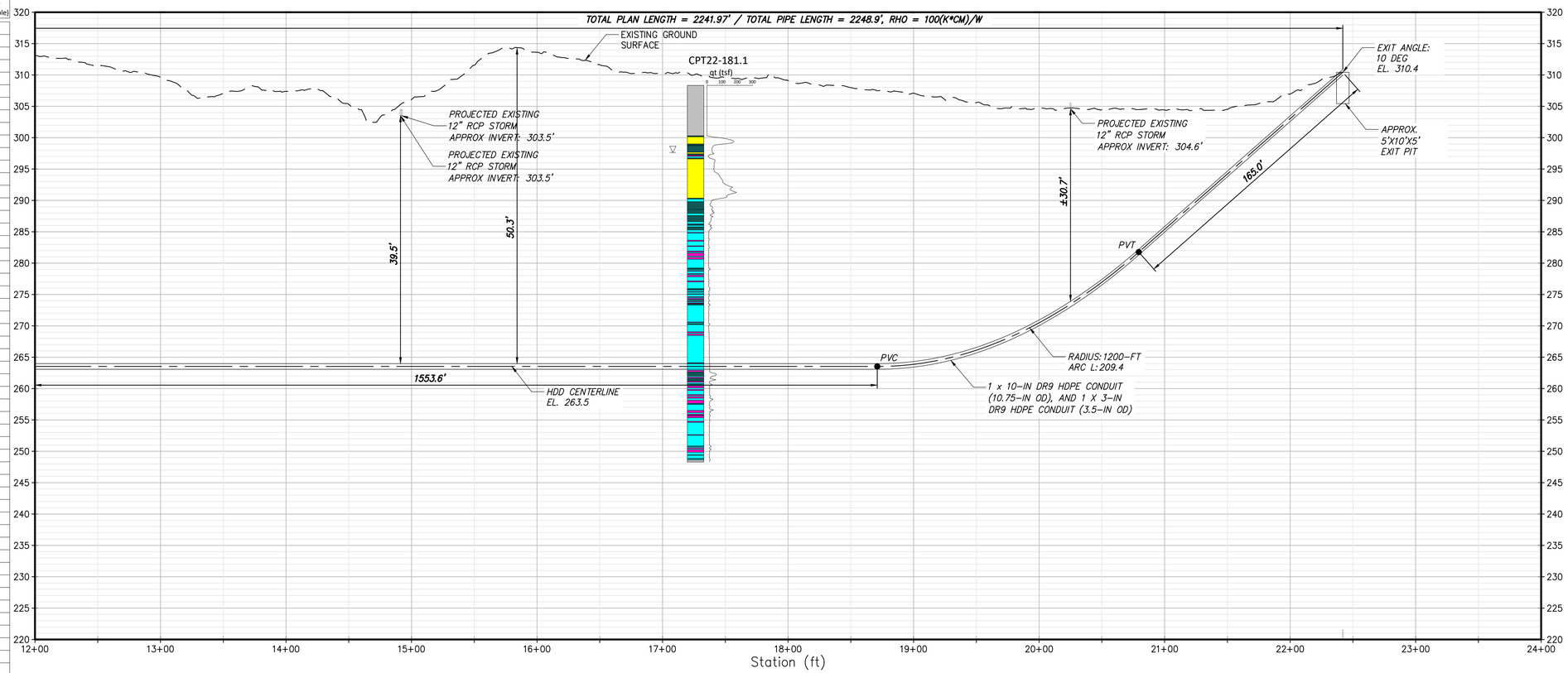
Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

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3D strip logs have no exaggeration
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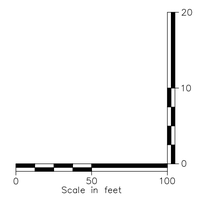
| Legend | |
|---|---|
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| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
| CH-MH | SILTY Fat CLAY |
| CL | Lean CLAY |
| CL-ML | SILTY CLAY |
| CONCRETE | Concrete |
| Fill | Fill |
| GC | CLAYEY GRAVEL |
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| GP | Poorly Graded GRAVEL |
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| OL/OH | ORGANIC SOIL |
| PT | PEAT |
| Rock | Rock |
| Sandstone | Sandstone |
| SC | CLAYEY SAND |
| SC-SM | SILT, CLAYEY SAND |
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| SILTSTONE | Siltstone |
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| USGS 654 | Subgraywacke |
| USGS 670 | Interbedded Sandstone and Shale |
| USGS 702 | Quartzite |
| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |




## PROPOSED HDD 75.A, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

| Soil Behavior Types QTn (PKR2009) | |
|---|---|
| Description | SBT Zone |
| Clays | 3 |
| Gravelly Sand to Sand | 7 |
| Organic Soils | 2 |
| Sand Mixtures | 5 |
| Sands | 6 |
| Sensitive, Fine Grained | 1 |
| Silt Mixtures | 4 |
| Stiff Sand to Clayey Sand | 8 |
| Undefined | 0 |
| Very Stiff Fine Grained | 9 |




CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
Creating Space Underground
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PHONE: 617.714.5784

6/7/2023

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|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

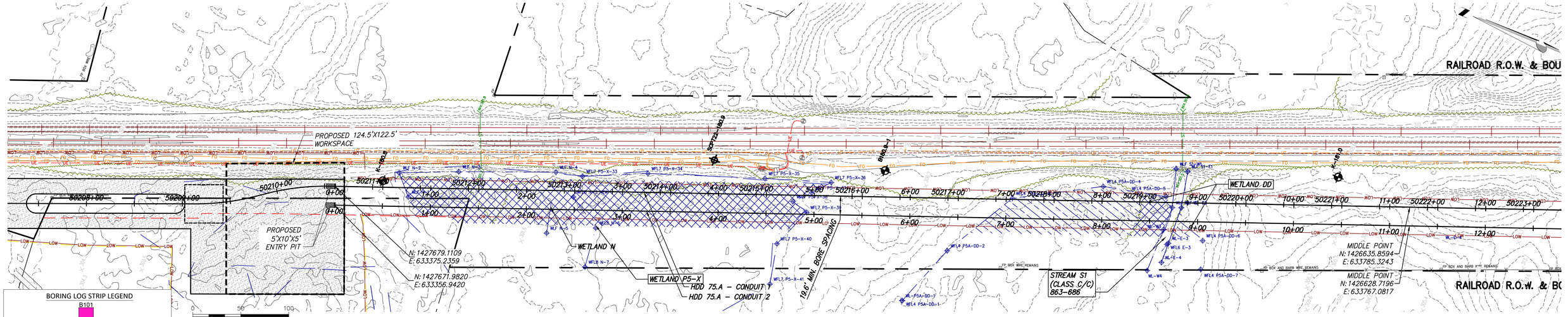
## SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

## PROPOSED PLAN AND PROFILE - HDD 75A STREAM CROSSING, CONDUIT 1 SCHENECTADY COUNTY, NY

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

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | **C-318** |
| SCALE | AS SHOWN |
| DATE | 06/09/2023 |
| REV. NO. | 0 |
| SH.NO. | XX OF 189 |

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Last Saved By: bconnelly




## PROPOSED HDD 75.A, CONDUIT 2 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

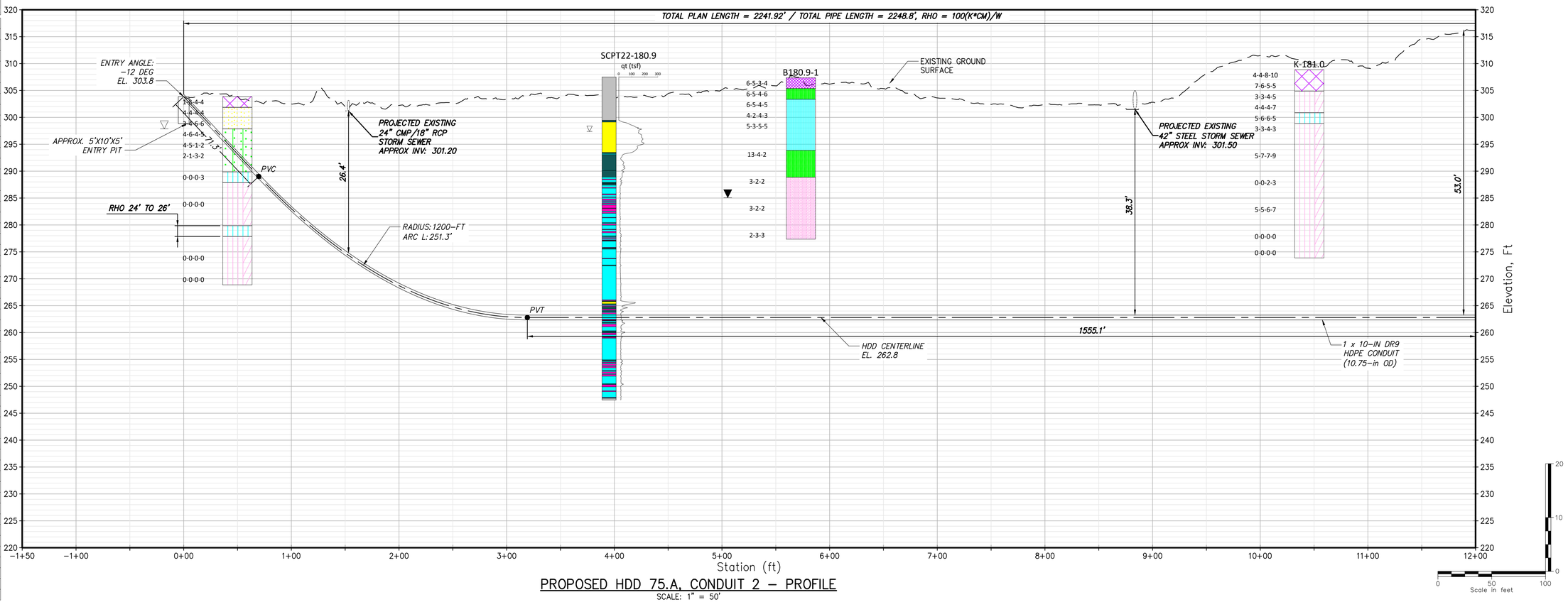
Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

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2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
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| Legend | |
|---|---|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
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| SC | CLAYEY SAND |
| SC–SM | SILT, CLAYEY SAND |
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| USGS 705 | Schist |
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## PROPOSED HDD 75.A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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|---|---|---|---|---|
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# CHAMPLAIN HUDSON POWER EXPRESS

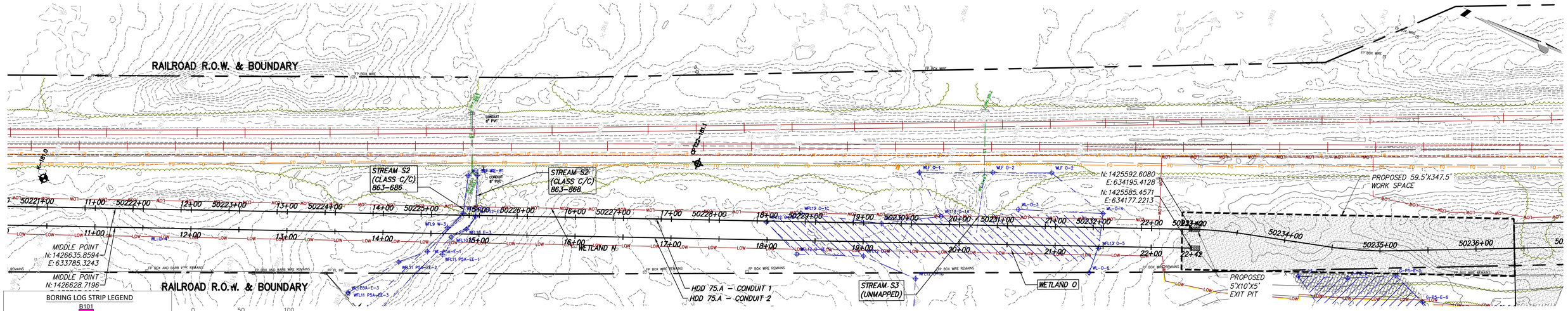
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 75A
STREAM CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | **C-319** |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE: AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_315-320.DWG Saved: 5/16/2023 1:35:44 PM Plotted: 6/7/2023 7:44:59 PM Current User: Brian Connelly
LastSavedBy: bconnelly

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LastSavedBy: bconnelly




## PROPOSED HDD 75.A, CONDUIT 2 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

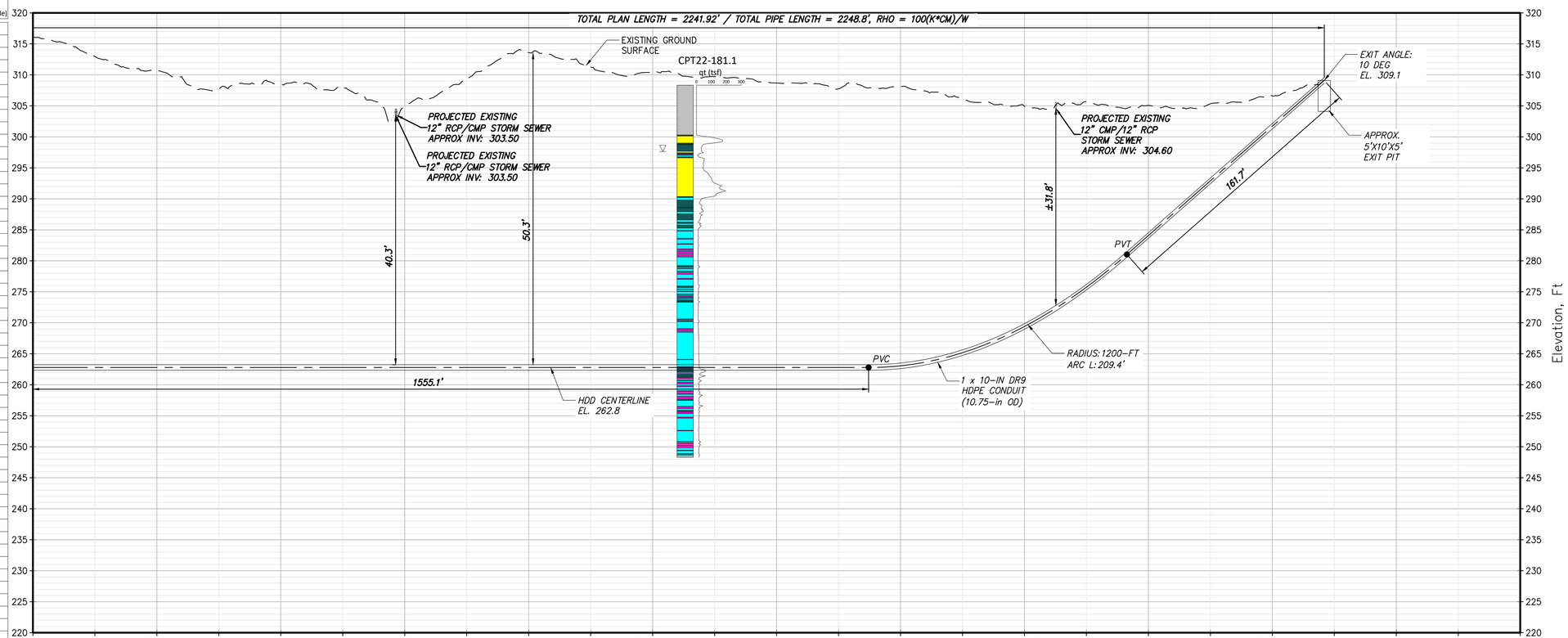
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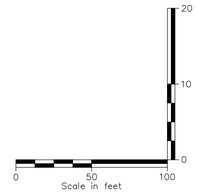
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| CL | Lean CLAY |
| CL–ML | SILTY CLAY |
| CONCRETE | Concrete |
| Fill | Fill |
| GC | CLAYEY GRAVEL |
| GC–GM | SILTY CLAYEY GRAVEL |
| GM | SILTY GRAVEL |
| GP | Poorly Graded GRAVEL |
| GP–GC | Poorly Graded Gravel with CLAY |
| GP–GM | Poorly 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 |




## PROPOSED HDD 75.A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

| Soil Behavior Types QTn (PKR2009) | |
|---|---|
| Description | SBT Zone |
| Clays | 3 |
| Gravelly Sand to Sand | 7 |
| Organic Soils | 2 |
| Sand Mixtures | 5 |
| Sands | 6 |
| Sensitive, Fine Grained | 1 |
| Silt Mixtures | 4 |
| Stiff Sand to Clayey Sand | 8 |
| Undefined | 0 |
| Very Stiff Fine Grained | 9 |




CHPE Champlain Hudson Power Express

Kiewit

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

6/7/2023

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

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

## PROPOSED PLAN AND PROFILE - HDD 75A

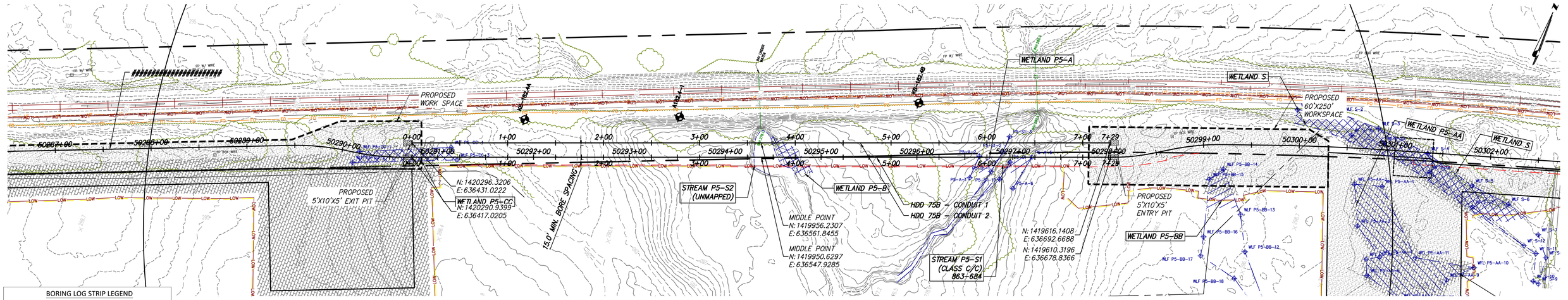
## STREAM CROSSING, CONDUIT 2

## SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-320 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

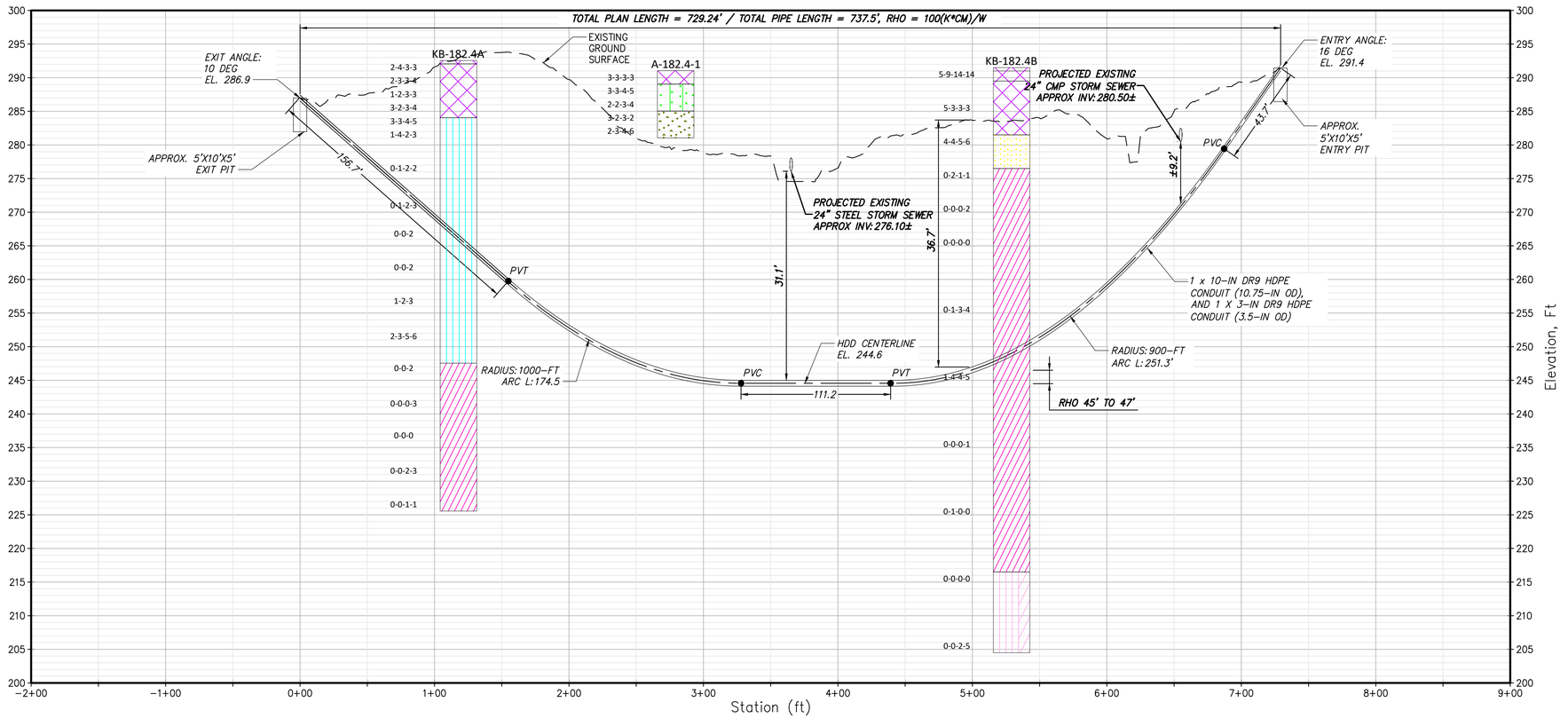
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LastSavedBy: bconnelly




0 50 100
Scale in feet

## PROPOSED HDD 75B, CONDUIT 1 – PLAN

SCALE: 1" = 50'




## PROPOSED HDD 75B, CONDUIT 1 – 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%
11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| Legend | |
|---|---|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
| CH-MH | SILTY Fat CLAY |
| CL | Lean CLAY |
| CL-ML | SILTY CLAY |
| CONCRETE | Concrete |
| Fill | Fill |
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| GC-GM | SILTY CLAYEY GRAVEL |
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| 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 |
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| USGS 601 | Gravel or Conglomerate 1 |
| USGS 654 | Subgraywacke |
| USGS 670 | Interbedded Sandstone and Shale |
| USGS 702 | Quartzite |
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| USGS 705 | Schist |
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| USGS 708 | Gneiss |
| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
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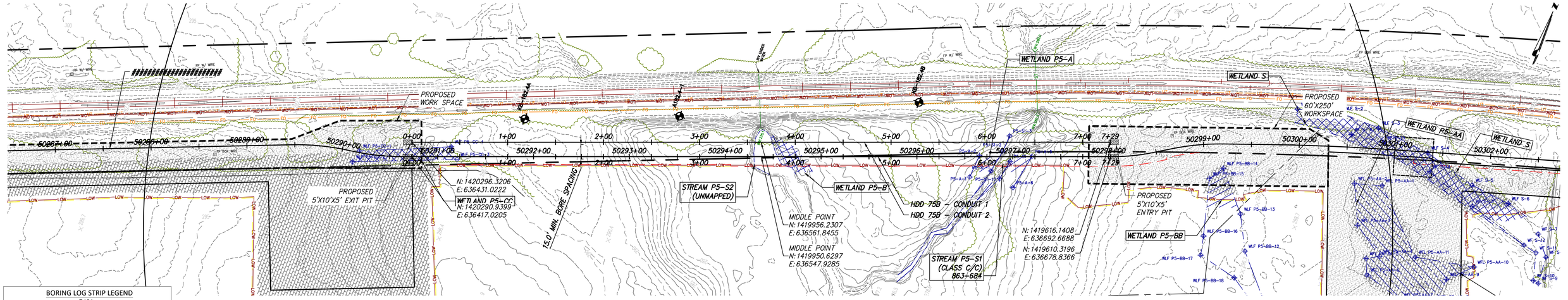
| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 75B
STREAM CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-321 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189




0 50 100
Scale in feet

## PROPOSED HDD 75B, CONDUIT 2 – PLAN

SCALE: 1" = 50'

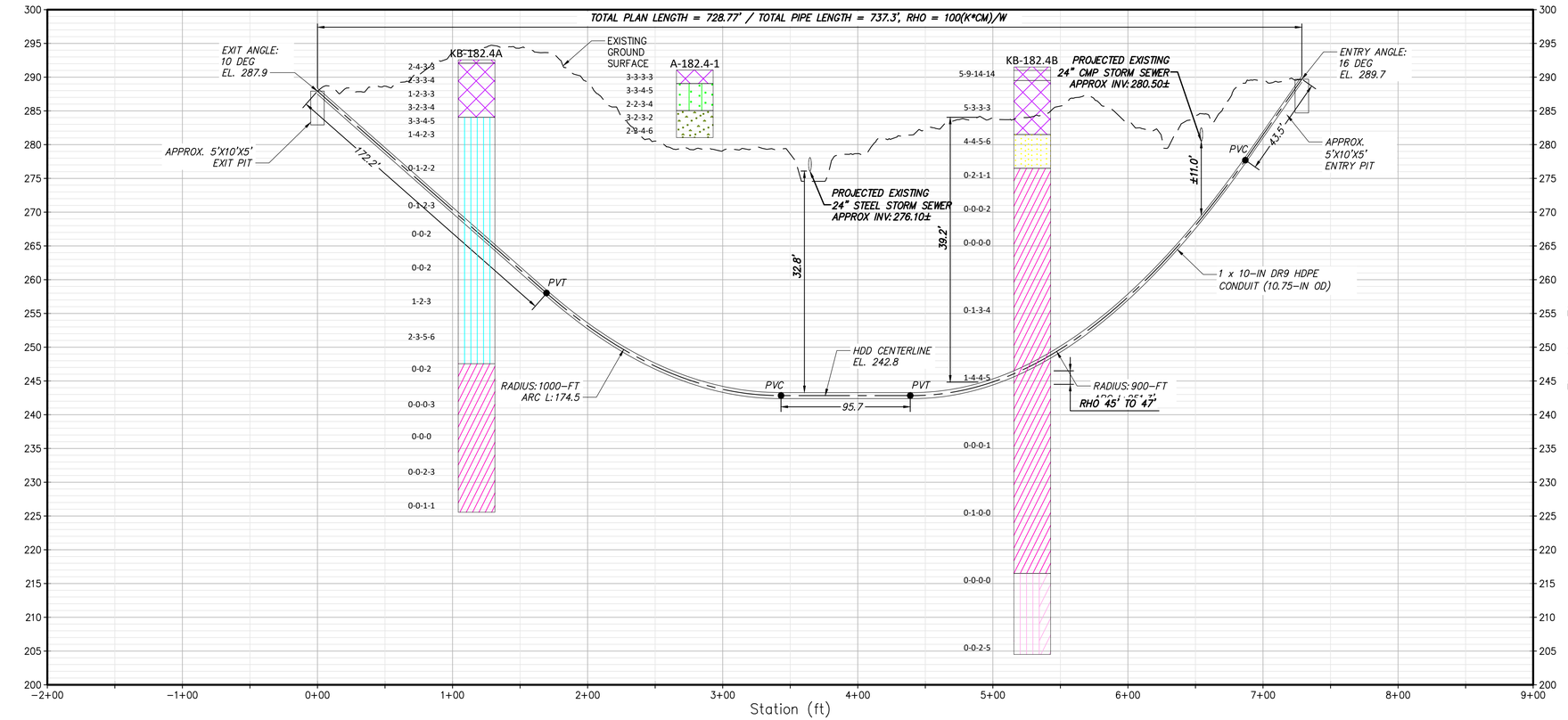
### BORING LOG STRIP LEGEND

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
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| 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 |
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| Limestone | Limestone |
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| ML | SILT |
| OH | ORGANIC Fat CLAY |
| OL | ORGANIC Lean CLAY |
| OL/OH | ORGANIC SOIL |
| PT | PEAT |
| Rock | Rock |
| Sandstone | Sandstone |
| SC | CLAYEY SAND |
| SC-SM | SILT, CLAYEY SAND |
| SHALE | Shale |
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| 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 |




## PROPOSED HDD 75B, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

0 50 100
Scale in feet

**CHPE** Champlain Hudson Power Express

**Kiewit**

**BRIERLEY ASSOCIATES**
*Creating Space Underground*
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PHONE: 617.714.5784

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

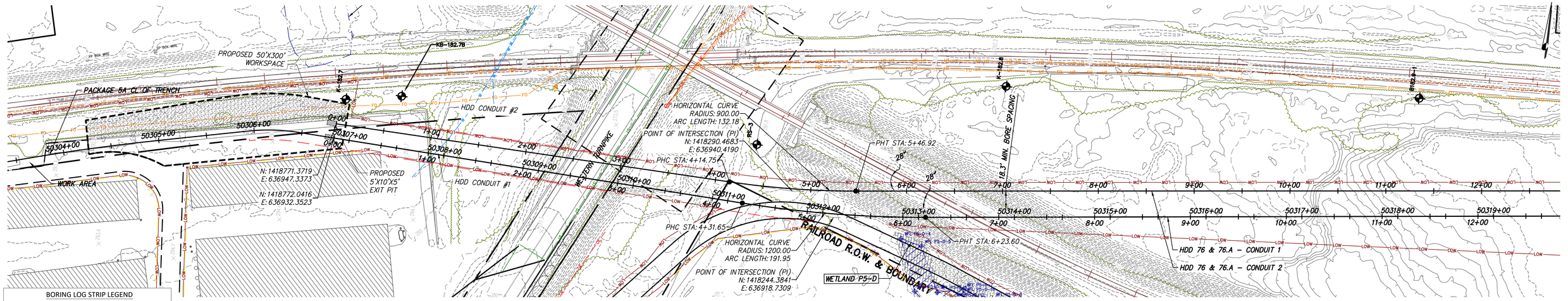
## SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 75B
STREAM CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

| KIEWIT PROJECT NO. |
|---|
| 21162 |
| BRIERLEY PROJECT NO. |
| 322004-000 |
| DRAWING NO. |
| **C-322** |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DCV\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_321-322.DWG Saved: 6/7/2023 1:20:03 PM Plotted: 6/7/2023 7:53:43 PM Current User: Brian Connelly
LastSavedBy: bconnelly




0 50 100
Scale in feet

## PROPOSED HDD 76 76A, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

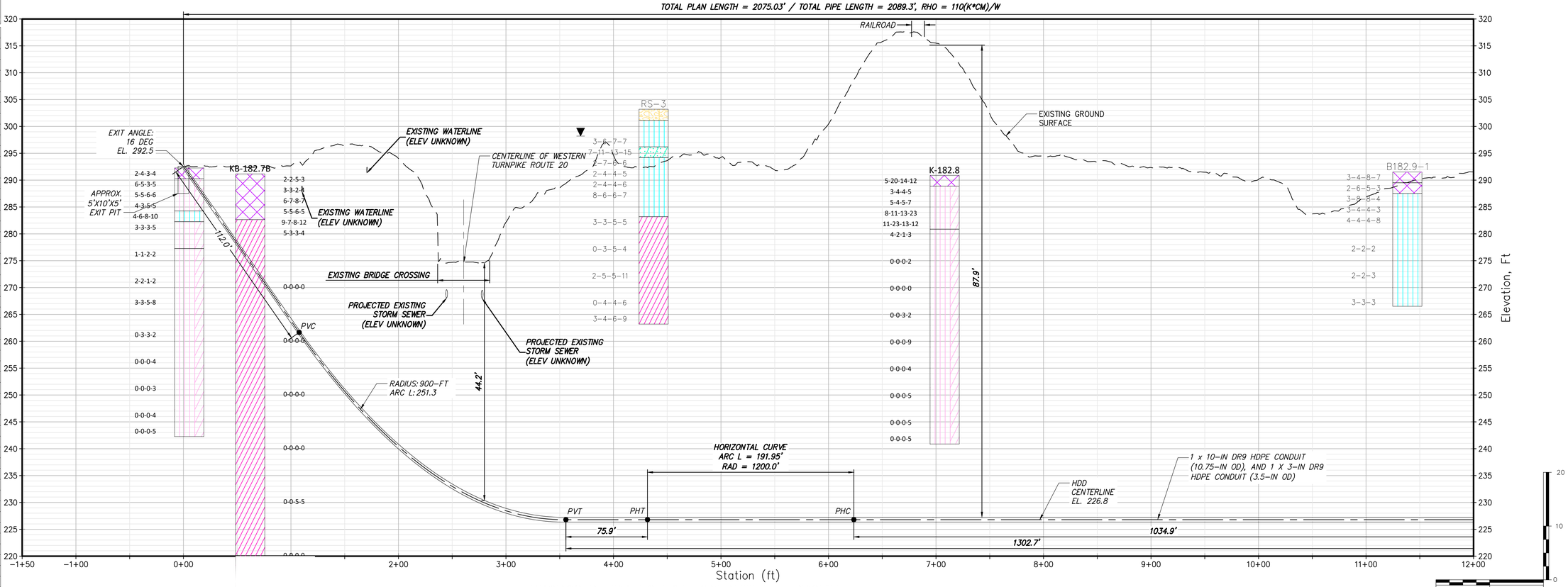
Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| Legend | |
|---|---|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
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| CL–ML | SILTY CLAY |
| CONCRETE | Concrete |
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| GW–GM | Well Graded GRAVEL with SILT |
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| PT | PEAT |
| Rock | Rock |
| Sandstone | Sandstone |
| SC | CLAYEY SAND |
| SC–SM | SILT, CLAYEY SAND |
| SHALE | Shale |
| SILTSTONE | Siltstone |
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| USGS 702 | Quartzite |
| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |

TOTAL PLAN LENGTH = 2075.03' / TOTAL PIPE LENGTH = 2089.3', RHO = 110(K*CM)/W




0 50 100
Scale in feet

## PROPOSED HDD 76 76A, CONDUIT 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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| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

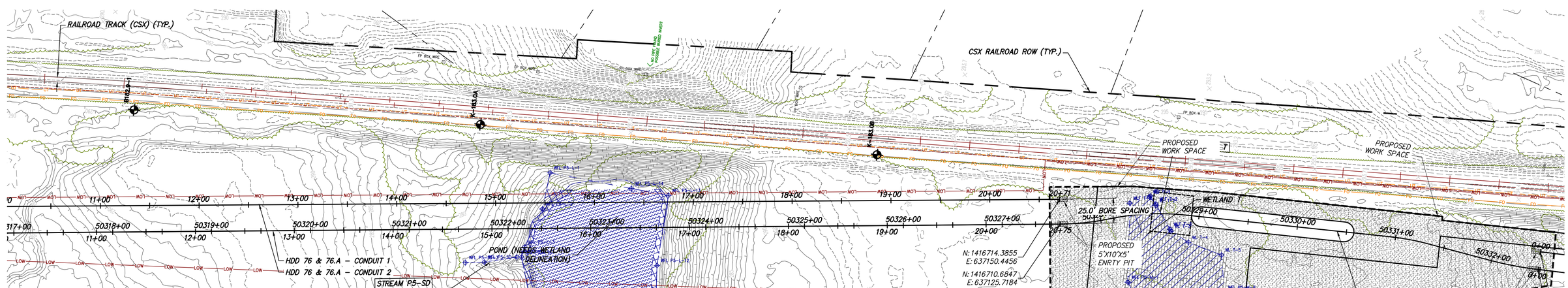
SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 76 76A
WESTERN TURNPIKE, CSX RAILROAD CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-323 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE: AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 7:59:42 PM Current User: Brian Connelly
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File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 8:03:48 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 76 76A, CONDUIT 1 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

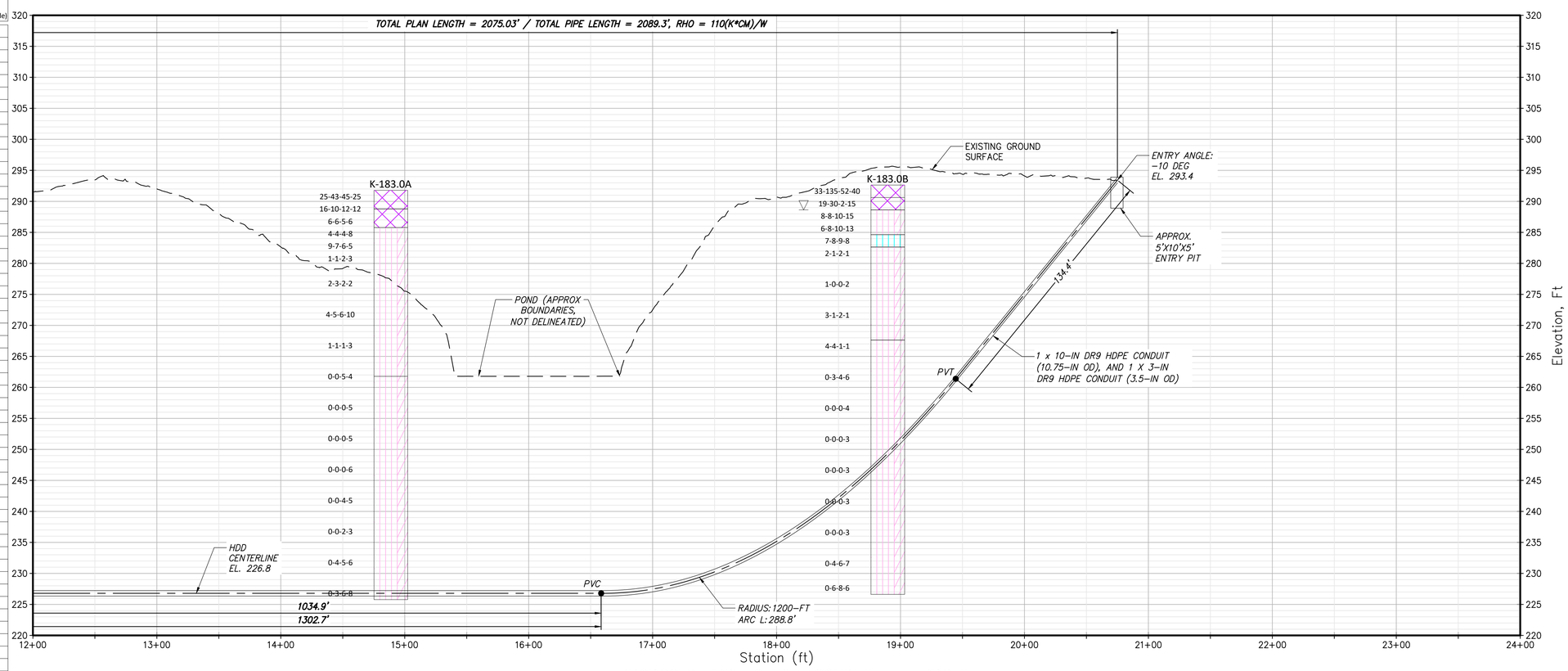
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| SILTSTONE | Siltstone |
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| USGS 601 | Gravel or Conglomerate 1 |
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| USGS 670 | Interbedded Sandstone and Shale |
| USGS 702 | Quartzite |
| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |




## PROPOSED HDD 76 76A, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

0 50 100
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

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

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

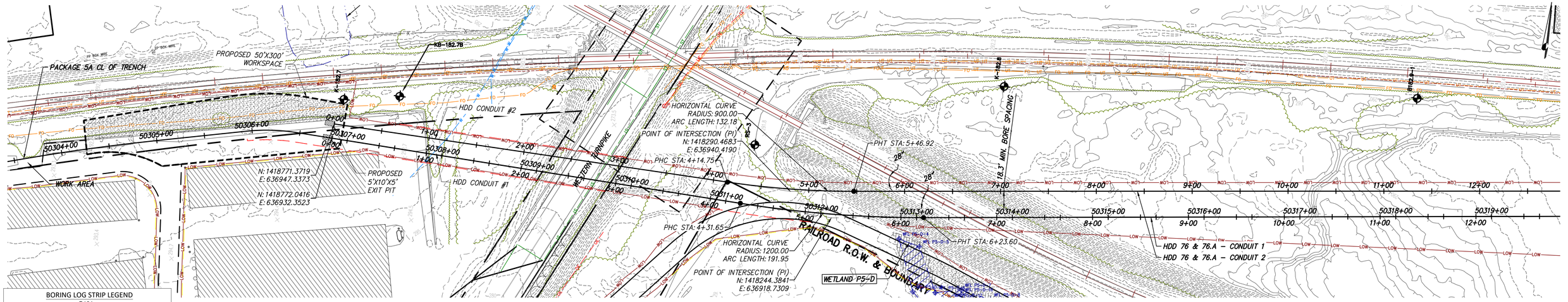
PROPOSED PLAN AND PROFILE - HDD 76 76A

WESTERN TURNPIKE, CSX RAILROAD CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-324 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189




## BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

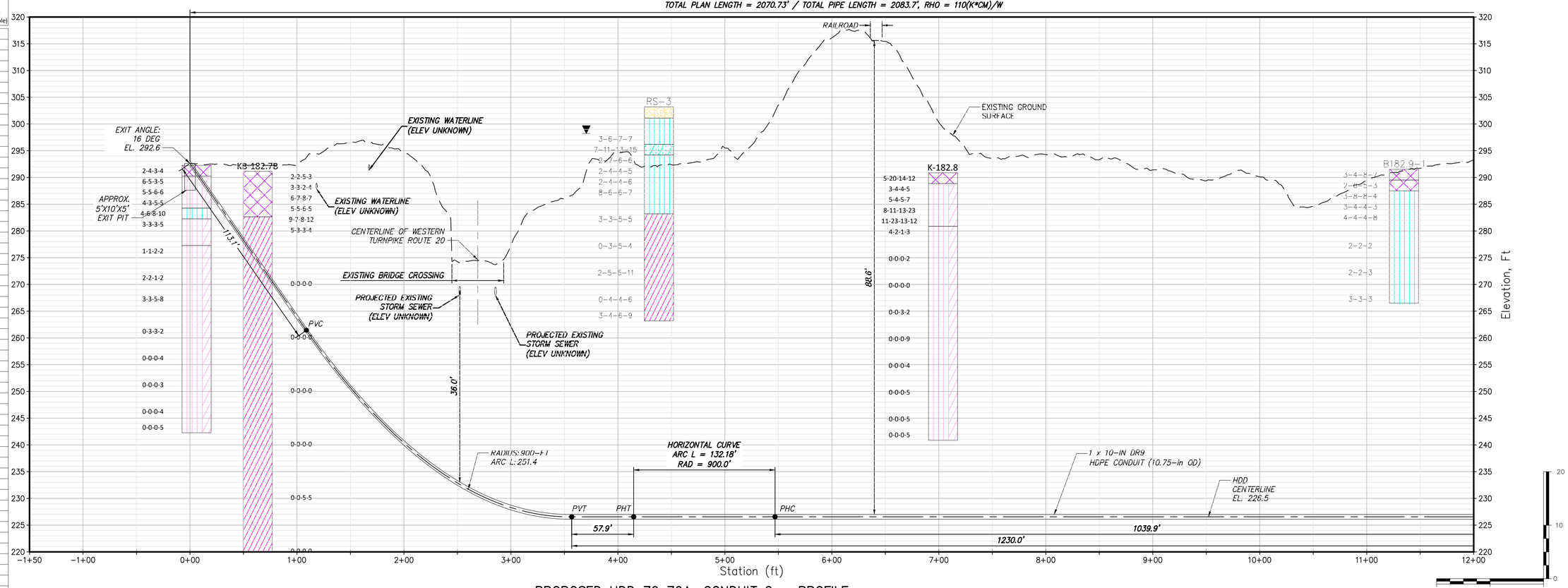
11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| 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 |

## PROPOSED HDD 76 76A, CONDUIT 2 – PLAN

SCALE: 1" = 50'




## PROPOSED HDD 76 76A, 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

6/7/2023

STATE OF NEW YORK · BRIAN C DORIAN · 080342 · LICENSED PROFESSIONAL ENGINEER

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | | |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

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

PROPOSED PLAN AND PROFILE - HDD 76 76A

WESTERN TURNPIKE, CSX RAILROAD CROSSING, CONDUIT 2

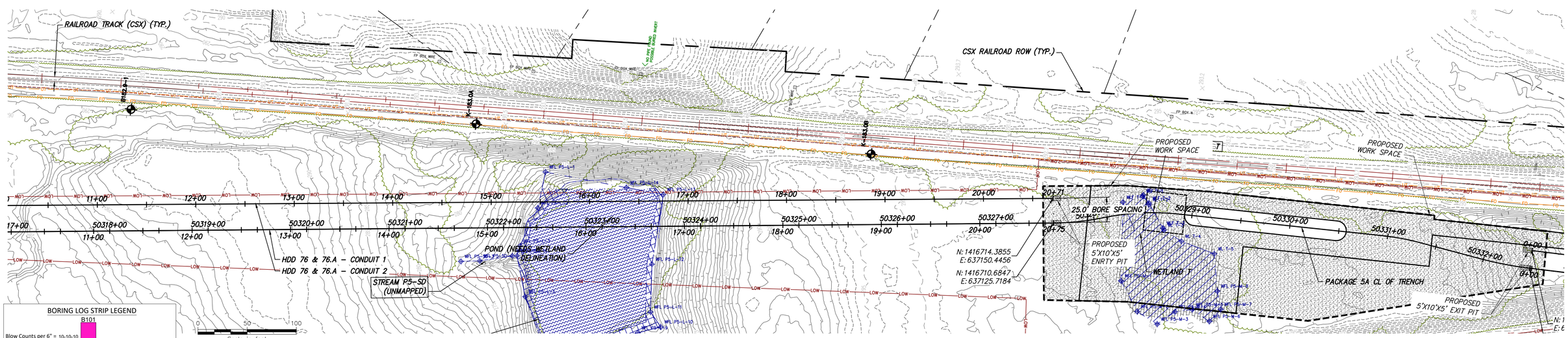
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-325 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 8:08:00 PM Current User: Brian Connelly
LastSavedBy: bconnelly

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LastSavedBy: bconnelly




## PROPOSED HDD 76 76A, CONDUIT 2 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

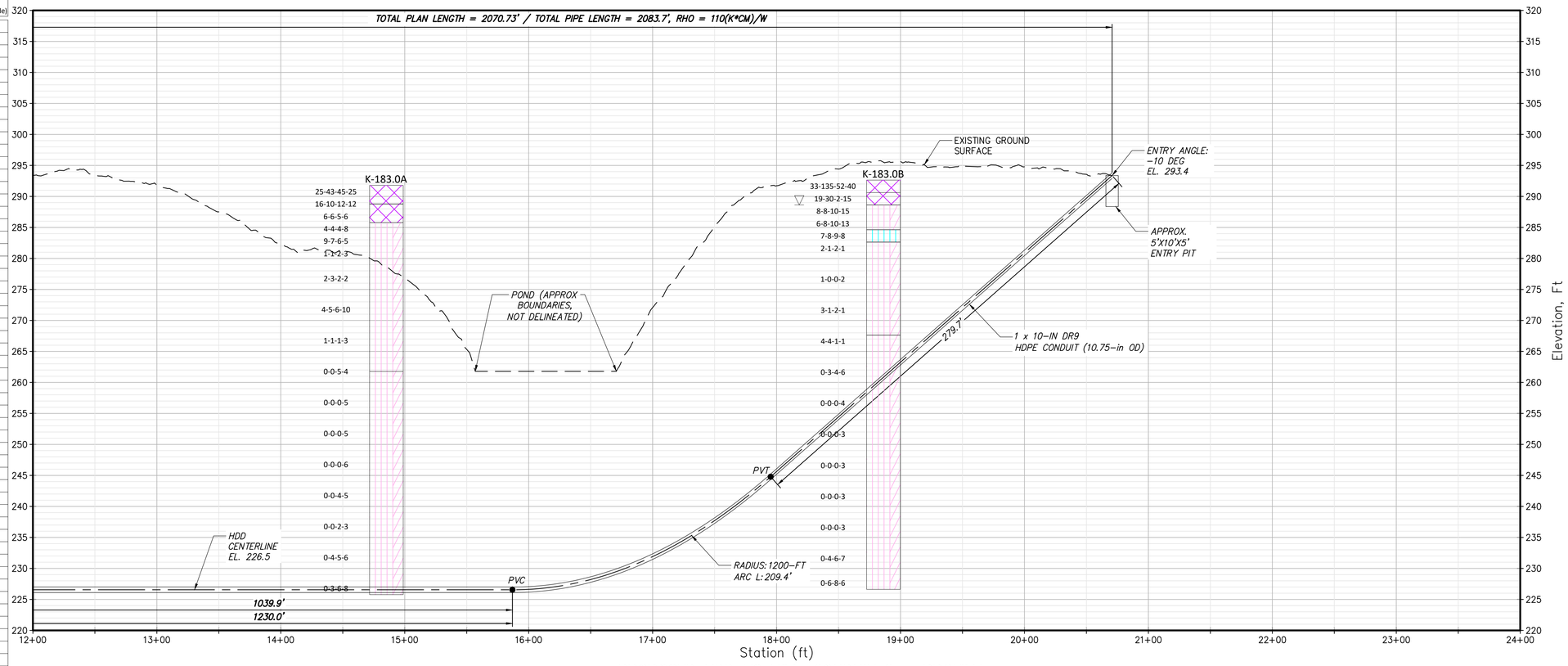
Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

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| Boulder | Boulder |
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| CL–ML | SILTY CLAY |
| CONCRETE | Concrete |
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| 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 |
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| 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 |




## PROPOSED HDD 76 76A, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

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

6/7/2023

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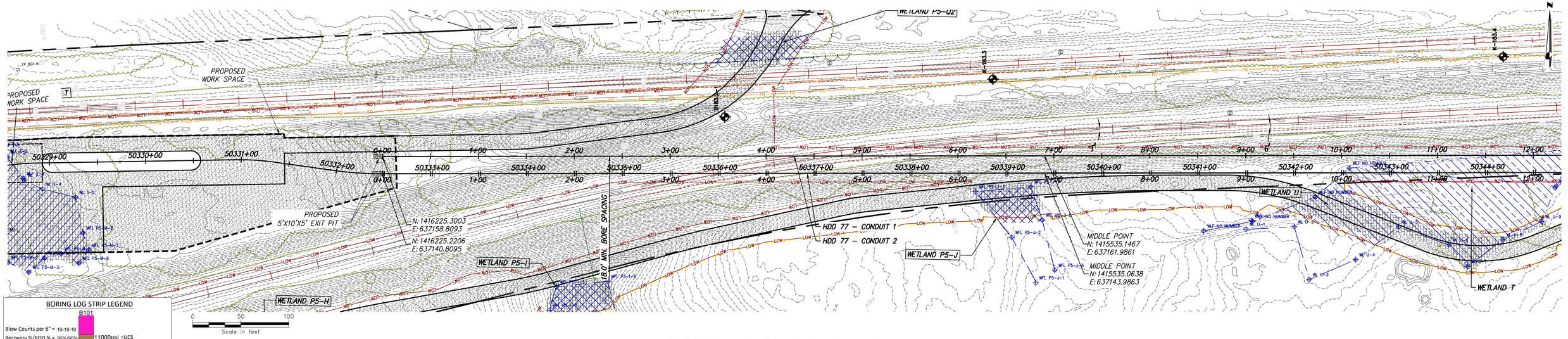
| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 76 76A
WESTERN TURNPIKE, CSX RAILROAD CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | **C-326** |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189




## PROPOSED HDD 77, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

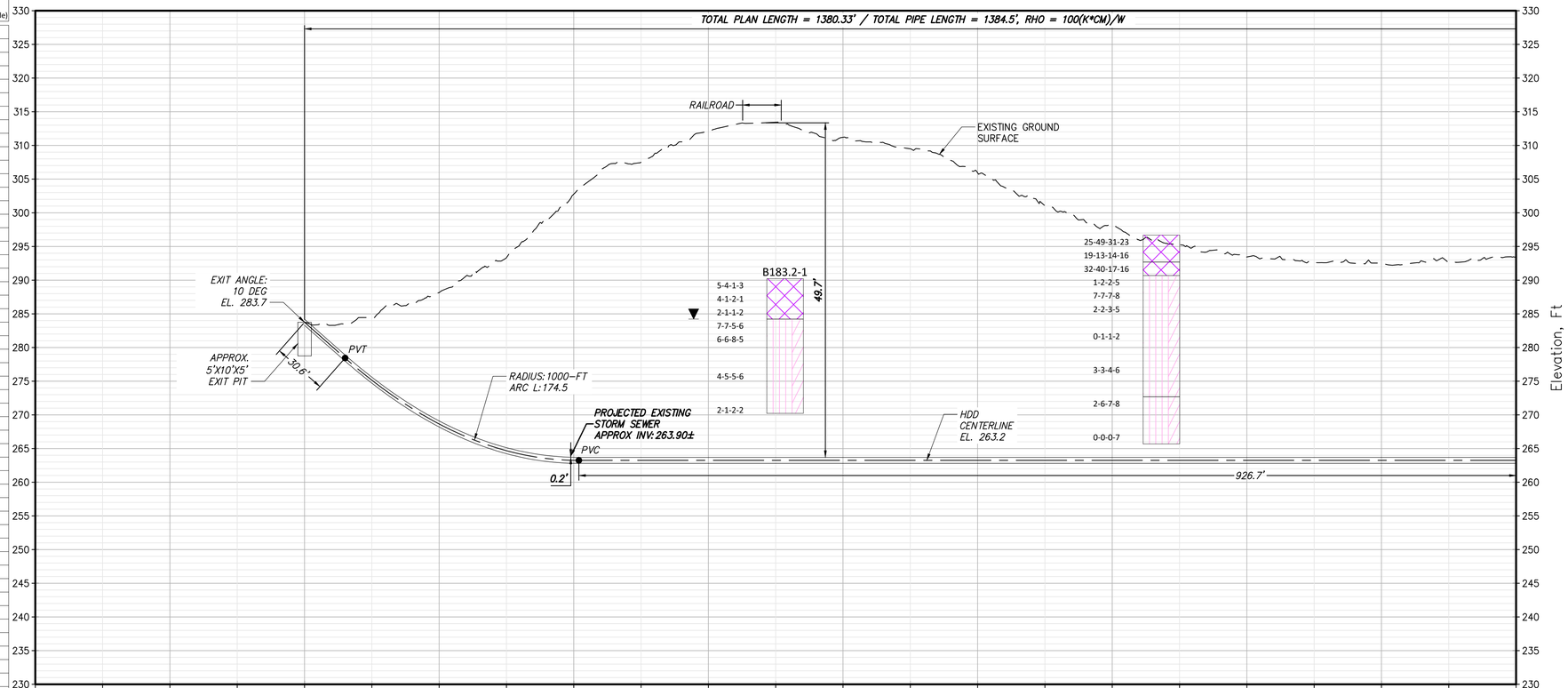
Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
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Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| Legend | |
|---|---|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
| CH–MH | SILTY Fat CLAY |
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| CONCRETE | Concrete |
| Fill | Fill |
| GC | CLAYEY GRAVEL |
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| 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 |
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| 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 |




## PROPOSED HDD 77, CONDUIT 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

6/7/2023
STATE OF NEW YORK · BRIAN C DORWART · 080342 · LICENSED PROFESSIONAL ENGINEER

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

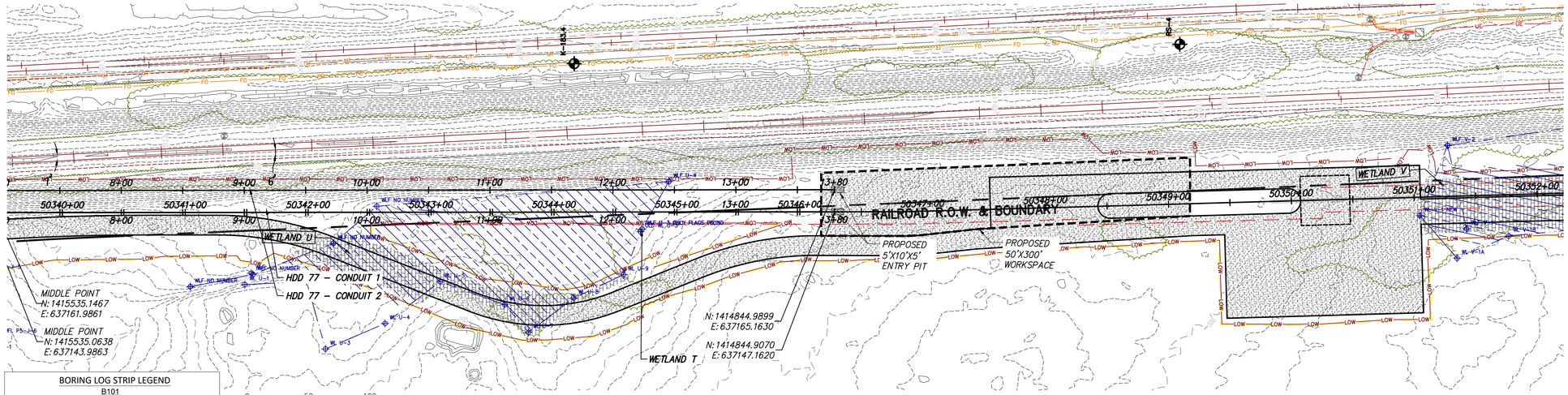
# CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM
PROPOSED PLAN AND PROFILE - HDD 77
WESTERN TURNPIKE CROSSING, CONDUIT 1
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | **C-327** |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DCV\ACDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 8:16:19 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 77, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

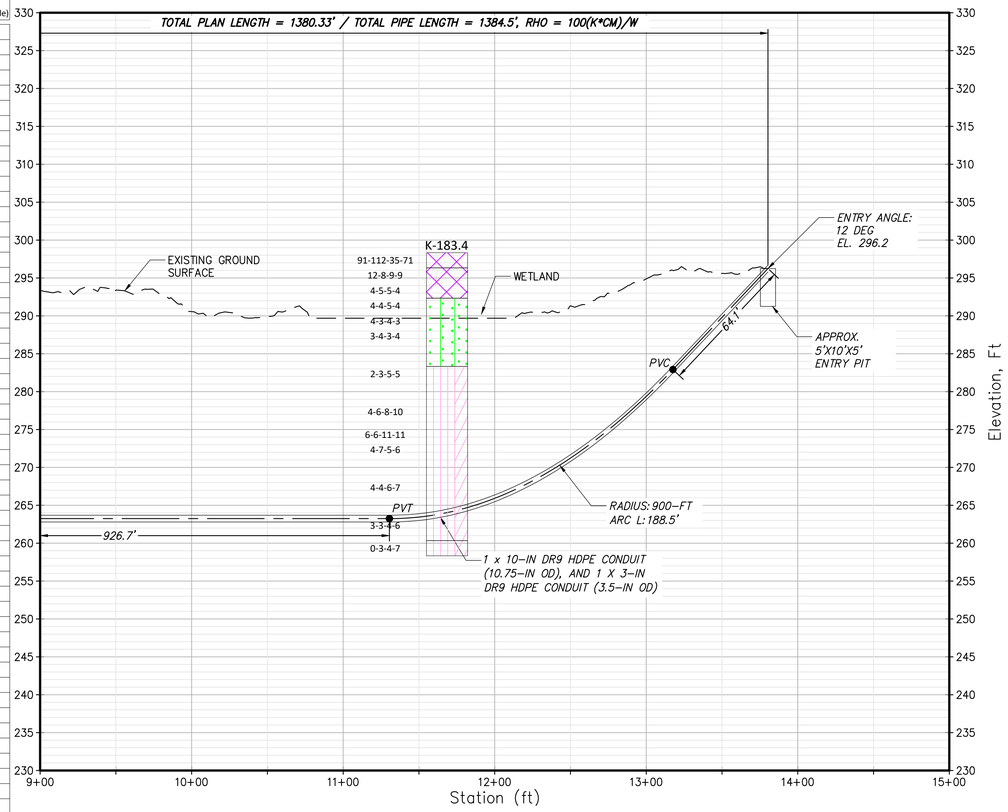
Blow Counts per 6" = 10-10-10

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11000psi =UCS

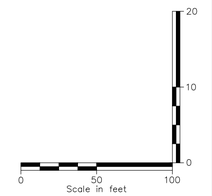
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3D strip logs have no exaggeration
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| Legend | |
|---|---|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
| CH–MH | SILTY Fat CLAY |
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| CL–ML | SILTY CLAY |
| CONCRETE | Concrete |
| Fill | Fill |
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## PROPOSED HDD 77, CONDUIT 1 – PROFILE

SCALE: 1" = 50'




CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
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PHONE: 617.714.5784

6/7/2023

STATE OF NEW YORK * BRIAN C DORIWART * 080342 LICENSED PROFESSIONAL ENGINEER

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| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

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

## PROPOSED PLAN AND PROFILE - HDD 77

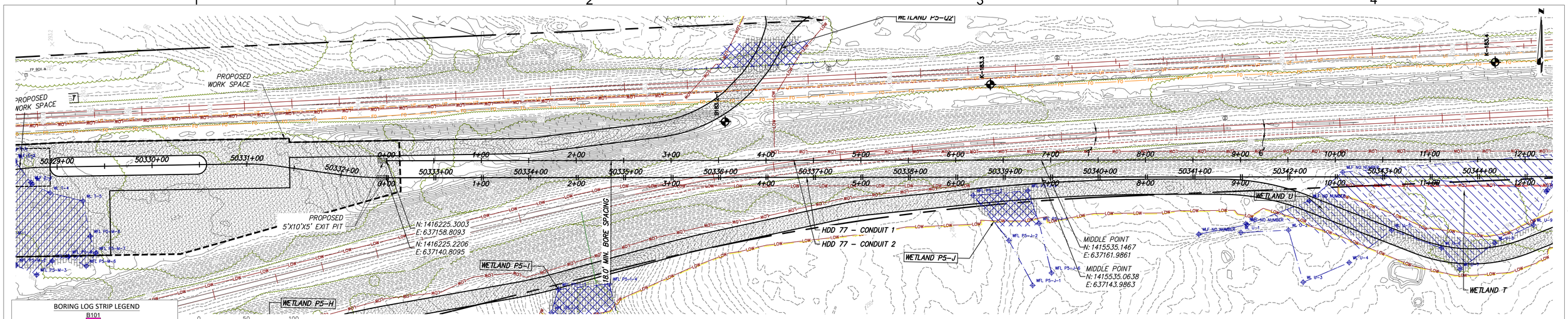
## WESTERN TURNPIKE CROSSING, CONDUIT 1

## SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-328 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELL\YDCV\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 8:20:31 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 77, CONDUIT 2 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

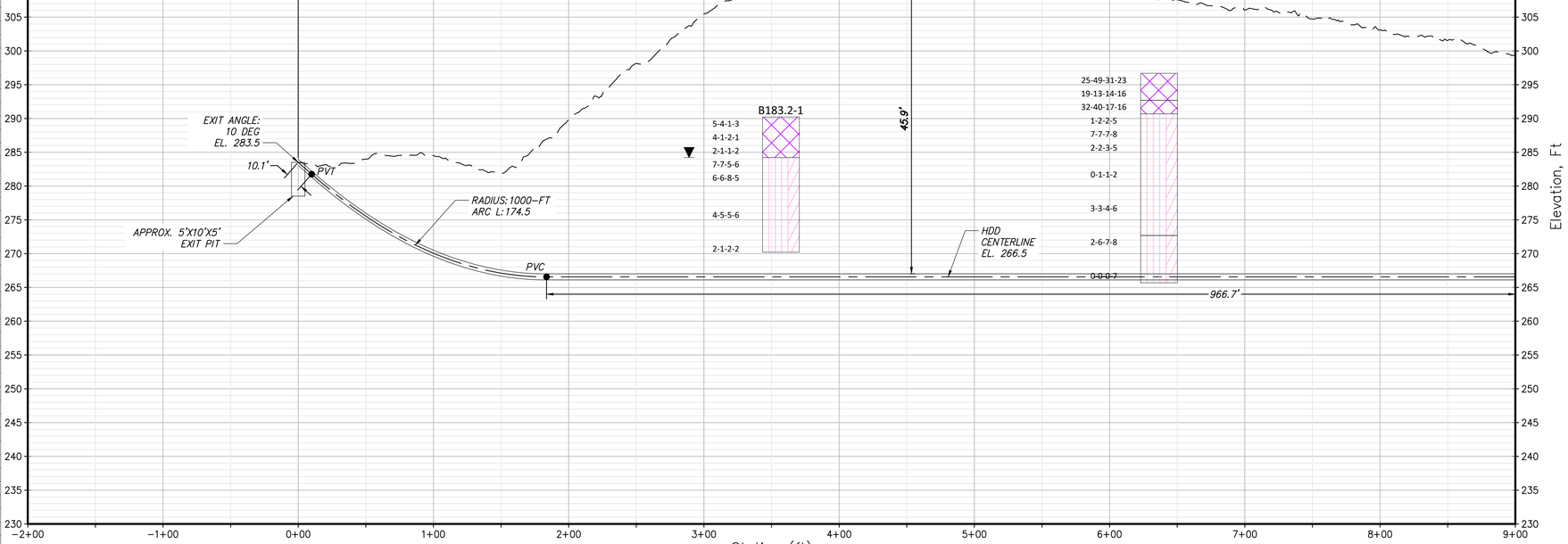
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| PT | PEAT |
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| SC | CLAYEY SAND |
| SC–SM | SILT, CLAYEY SAND |
| SHALE | Shale |
| SILTSTONE | Siltstone |
| SM | SILTY SAND |
| SP | Poorly Graded SAND |
| SP–SC | Poorly Graded SAND with CLAY |
| 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 |




## PROPOSED HDD 77, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

0 50 100
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

6/7/2023
STATE OF NEW YORK · BRIAN C DORWART · 080342 · LICENSED PROFESSIONAL ENGINEER

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| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|---|---|---|---|---|
| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

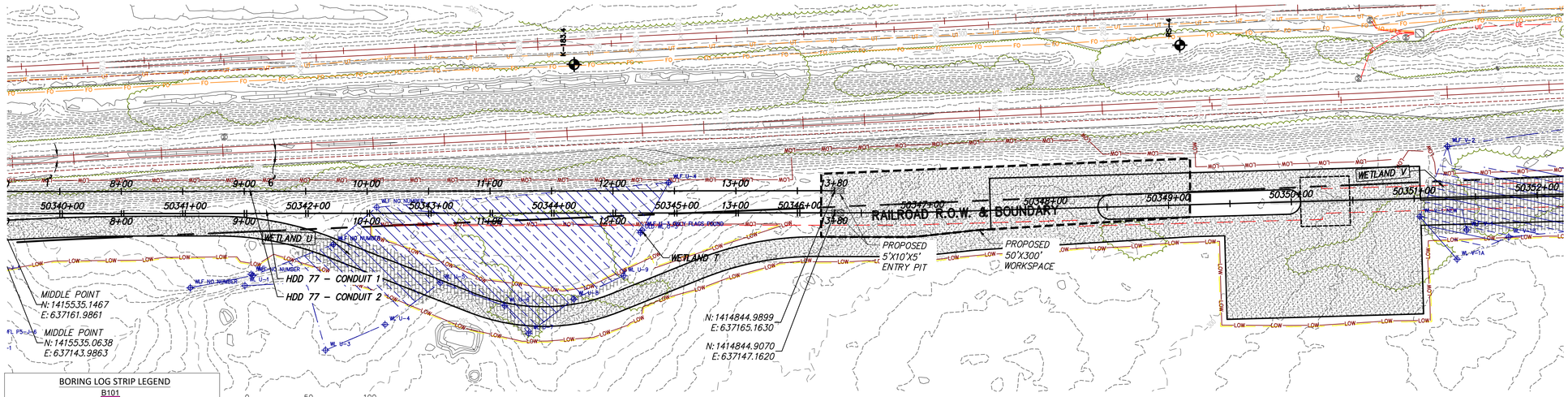
## SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 77
WESTERN TURNPIKE CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0

KIEWIT PROJECT NO. 21162
BRIERLEY PROJECT NO. 322004-000
DRAWING NO. **C-329**
DATE 06/09/2023
SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 8:24:42 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 77, CONDUIT 2 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

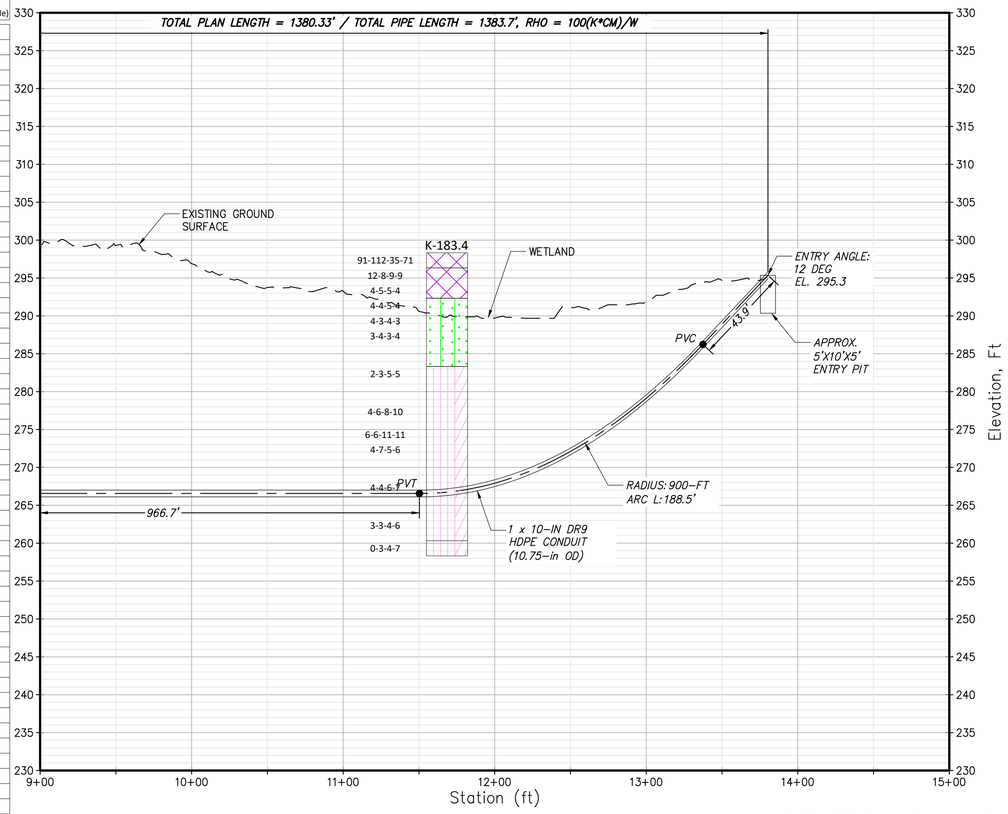
Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| 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 |
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| OL/OH | ORGANIC SOIL |
| PT | PEAT |
| Rock | Rock |
| Sandstone | Sandstone |
| SC | CLAYEY SAND |
| SC–SM | SILT, CLAYEY SAND |
| SHALE | Shale |
| SILTSTONE | Siltstone |
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| USGS 601 | Gravel or Conglomerate 1 |
| USGS 654 | Subgraywacke |
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| USGS 702 | Quartzite |
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| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |




## PROPOSED HDD 77, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

0 50 100
Scale in feet

20 10 0

CHPE Champlain Hudson Power Express

Kiewit

BRIERLEY ASSOCIATES
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6/7/2023

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| 0 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# CHAMPLAIN HUDSON POWER EXPRESS

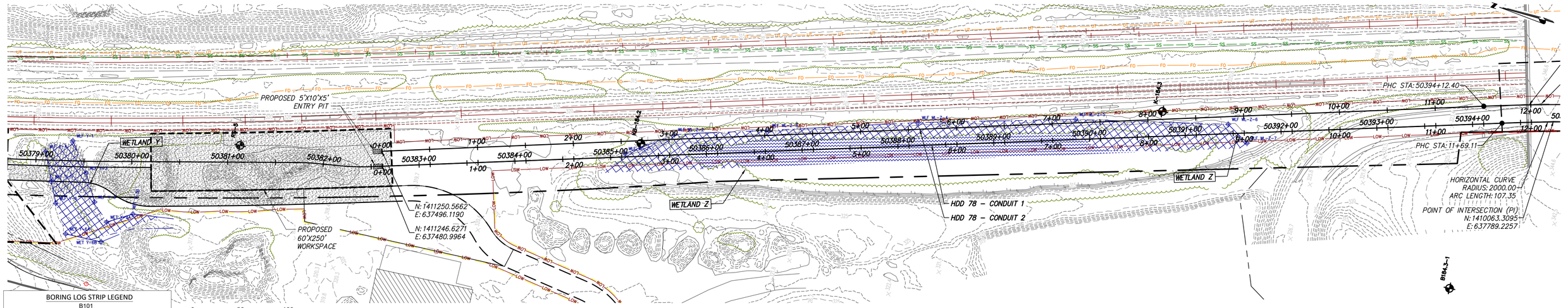
## SEGMENT 8 (PACKAGE 5A) - CSX: ROTTERDAM TO BETHLEHEM

PROPOSED PLAN AND PROFILE - HDD 77
WESTERN TURNPIKE CROSSING, CONDUIT 2
SCHENECTADY COUNTY, NY

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

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-330 |
| SCALE | AS SHOWN |
| DATE | 06/09/2023 |
| REV. NO. | 0 |
| SH.NO. | XX OF 189 |

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_323-330.DWG Saved: 5/20/2023 8:32:37 AM Plotted: 6/7/2023 8:29:00 PM Current User: Brian Connelly
LastSavedBy: bconnelly




## PROPOSED HDD 78, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

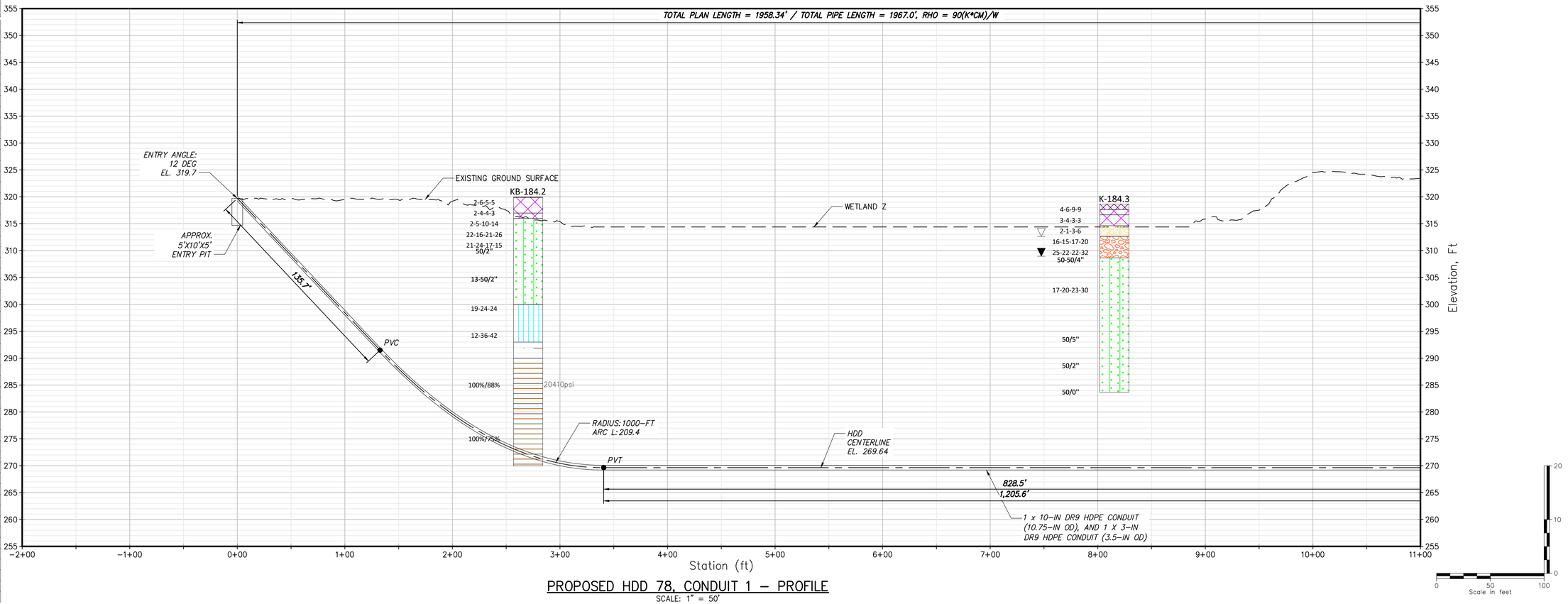
Blow Counts per 6" = 10-10-10

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2D strip logs shown at 10x exaggeration
3D strip logs have no exaggeration
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| Legend | |
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| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CH | Fat CLAY |
| CH–MH | SILTY Fat CLAY |
| CL | Lean CLAY |
| CL–ML | SILTY CLAY |
| CONCRETE | Concrete |
| Fill | Fill |
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| USGS 705 | Schist |
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| USGS 718 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
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## PROPOSED HDD 78, CONDUIT 1 – PROFILE

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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PHONE: 617.714.5784

6/7/2023

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# CHAMPLAIN HUDSON POWER EXPRESS

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

PROPOSED PLAN AND PROFILE - HDD 78

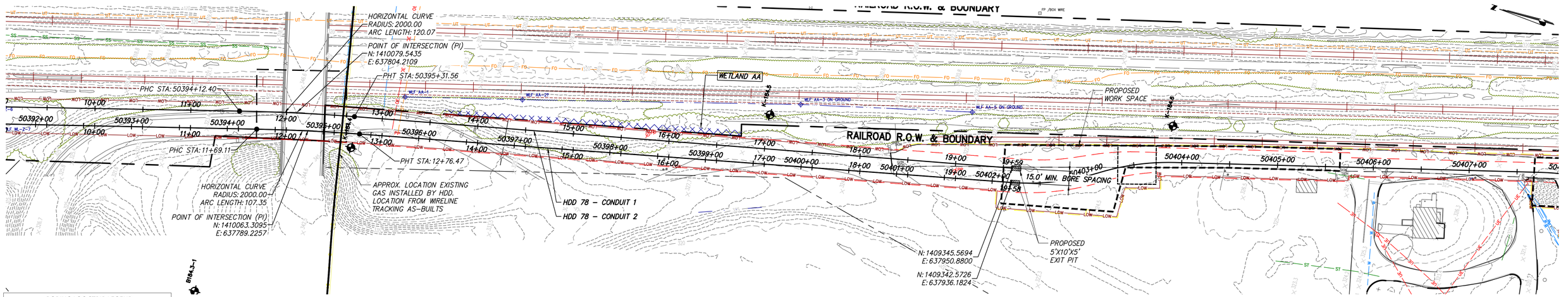
STATE ROUTE 146 HDD CROSSING, CONDUIT 1

SCHENECTADY COUNTY, NY

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-331 |
| DATE | 06/09/2023 |
| SH.NO. | XX OF 189 |

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_332-334.DWG Saved: 5/16/2023 2:56:42 PM Plotted: 6/7/2023 8:31:29 PM Current User: Brian Connelly
Last Saved By: bconnelly




## PROPOSED HDD 78, CONDUIT 1 – PLAN

SCALE: 1" = 50'

### BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

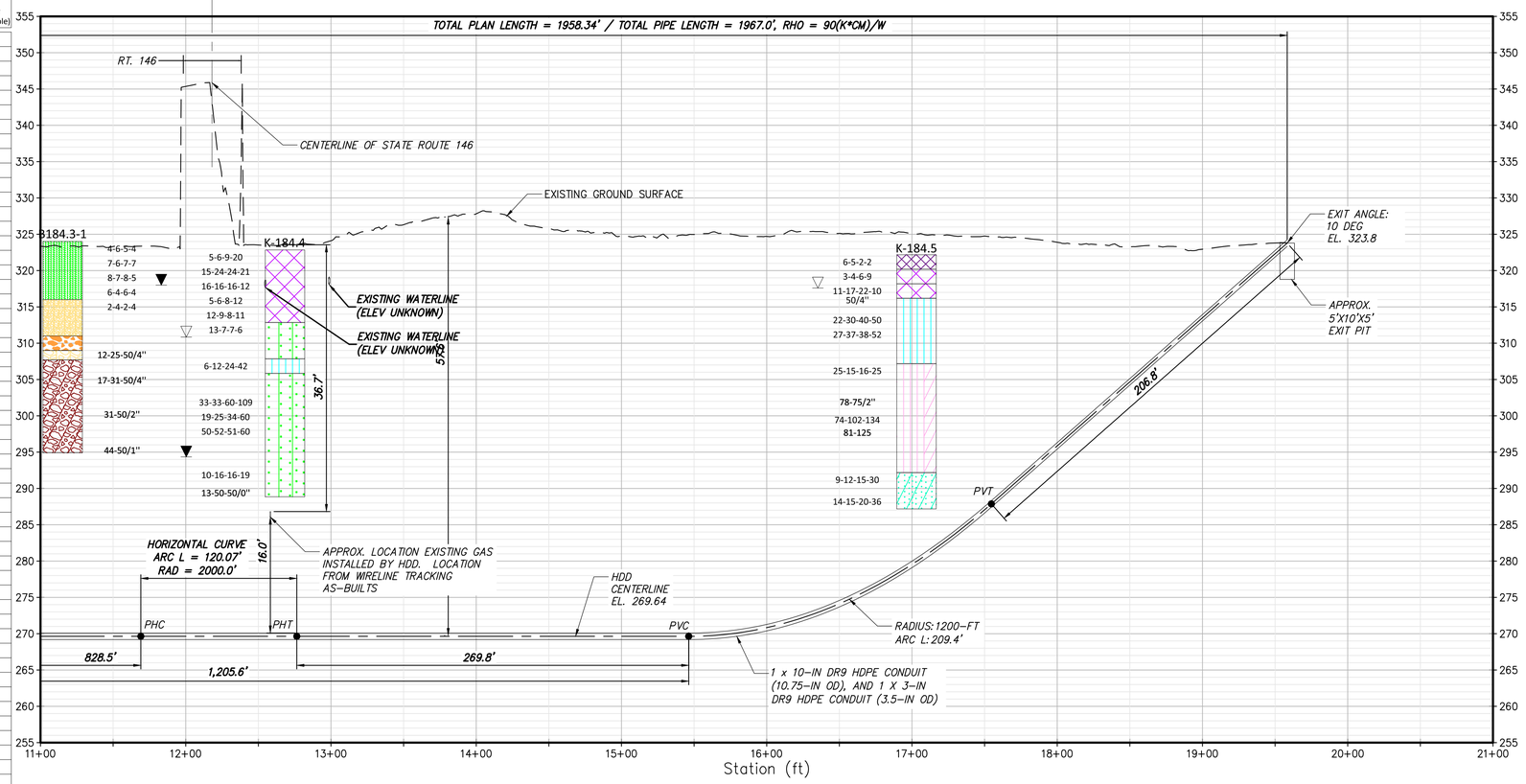
11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

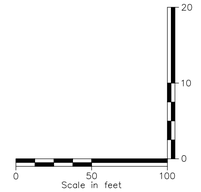
Boring ground elevations are from survey data and topo maps (or approximated from Google Earth when topo or survey aren't available)

| Legend | |
|---|---|
| ASPHALT | Asphalt |
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| CH | Fat CLAY |
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| USGS 718 | Granite 1 |
| Void | Void |
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## PROPOSED HDD 78, CONDUIT 1 – PROFILE

SCALE: 1" = 50'




CHPE
Champlain Hudson Power Express

Kiewit

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6/7/2023

STATE OF NEW YORK
BRIAN C DORWART
080342
LICENSED PROFESSIONAL ENGINEER

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# CHAMPLAIN HUDSON POWER EXPRESS

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

PROPOSED PLAN AND PROFILE - HDD 78

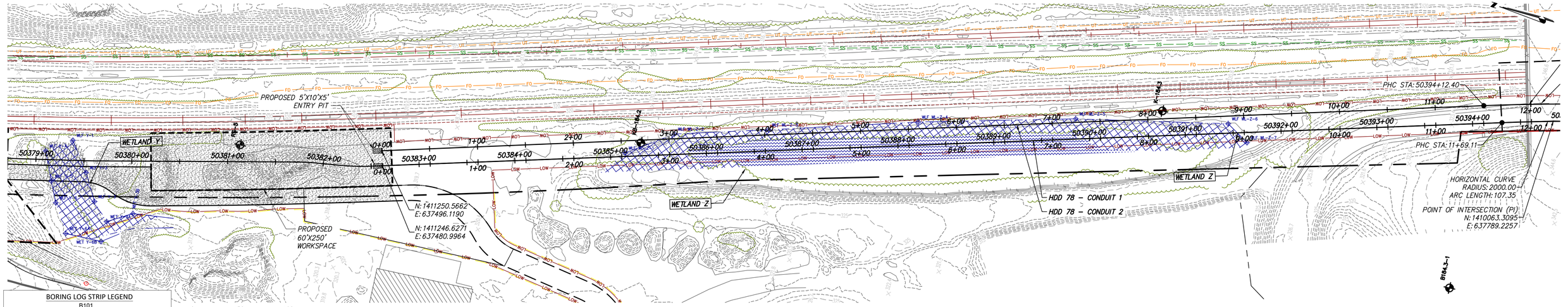
STATE ROUTE 146 HDD CROSSING, CONDUIT 1

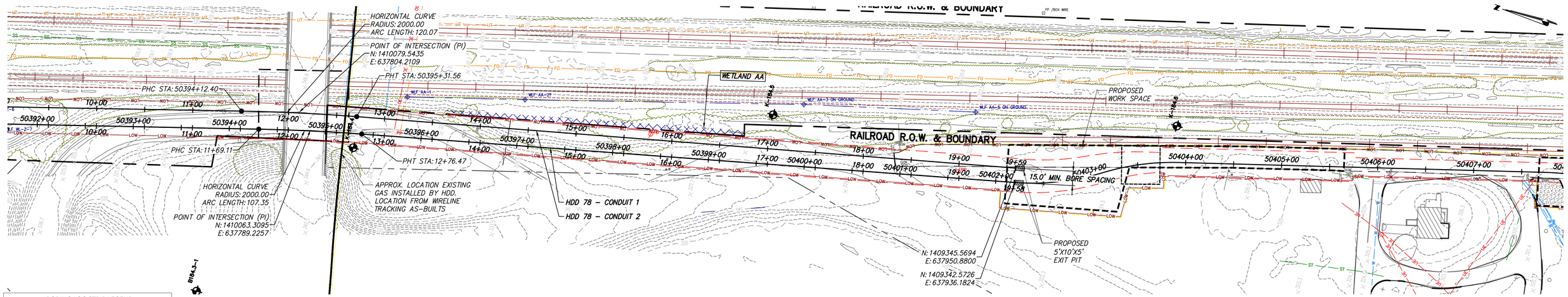
SCHENECTADY COUNTY, NY

| | |
|---|---|
| KIEWIT PROJECT NO. | 21162 |
| BRIERLEY PROJECT NO. | 322004-000 |
| DRAWING NO. | C-332 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_332_334.DWG Saved: 5/16/2023 2:56:42 PM Plotted: 6/7/2023 8:32:45 PM Current User: Brian Connelly
LastSavedBy: bconnelly


PROPOSED 5'X10'X5' ENTRY PIT
PROPOSED 60'X250' WORKSPACE
N: 1411250.5662
E: 637496.1190
N: 1411246.6271
E: 637480.9964
WETLAND Y
WETLAND Z
WETLAND Z
HDD 78 – CONDUIT 1
HDD 78 – CONDUIT 2
PHC STA: 50394+12.40
PHC STA: 11+69.11
HORIZONTAL CURVE
RADIUS: 2000.00
ARC LENGTH: 107.35
POINT OF INTERSECTION (PI)
N: 1410063.3095
E: 637789.2257
B101
B102
B103
B104
B105
B106
B107
B108
B109
B110
B111
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B140




PROPOSED HDD 78, CONDUIT 2 – PLAN

SCALE: 1" = 50'

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

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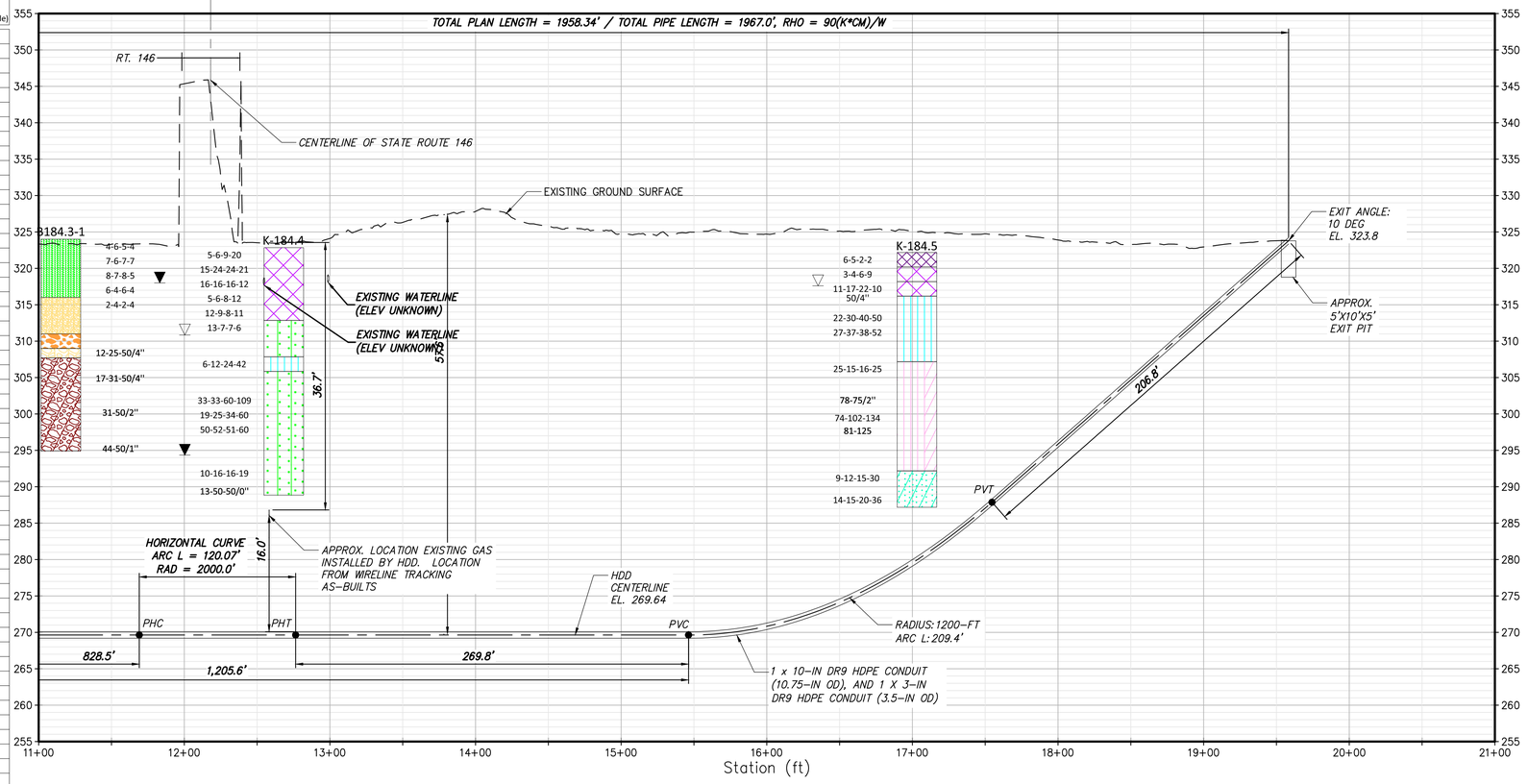
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PROPOSED HDD 78, CONDUIT 2 – PROFILE

SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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6/7/2023

STATE OF NEW YORK · BRIAN C DORWART · 080342 · LICENSED PROFESSIONAL ENGINEER

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 | 06/09/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | NS | BD |

# 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 |

DRAWN BY: BC | DESIGNED BY: NS | APPROVED BY: BD | SCALE AS SHOWN | REV. NO. 0 | DATE 06/09/2023 | SH.NO. XX OF 189

File: C:\USERS\BCONNELLY\DC\ACCDOCS\BRIERLEY ASSOCIATES\322004-000 CHAMPLAIN HUDSON POWER EXPRESS\PROJECT FILES\40 DESIGN ENG\PACKAGE 5\5A_BA-HDD CIVIL SHEETS\CHPE_5A_C_332-334.DWG Saved: 5/16/2023 2:56:42 PM Plotted: 6/7/2023 8:35:15 PM Current User: Brian Connelly
LastSavedBy: bconnelly