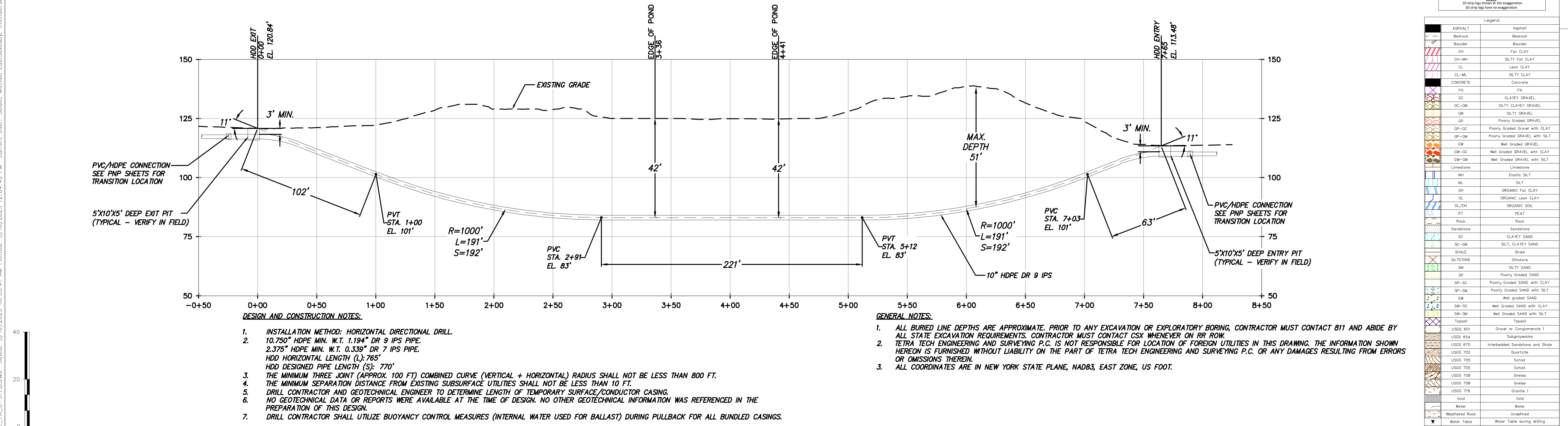


HDD 111.B PLAN VIEW
CONDUIT 1

Scale in feet when printed on 22x34



HDD 111.B PROFILE VIEW
CONDUIT 1

Scale in feet when printed on 22x34

Scale in feet when printed on 22x34

DESIGN AND CONSTRUCTION NOTES:

1. INSTALLATION METHOD: HORIZONTAL DIRECTIONAL DRILL.
2. 10.750" HDPE MIN. W.T. 1.194" DR 9 IPS PIPE.
3. 2.375" HDPE MIN. W.T. 0.339" DR 7 IPS PIPE.
4. HDD HORIZONTAL LENGTH (L): 765'
5. HDD DESIGNED PIPE LENGTH (S): 770'
6. THE MINIMUM THREE JOINT (APPROX. 100 FT) COMBINED CURVE (VERTICAL + HORIZONTAL) RADIUS SHALL NOT BE LESS THAN 800 FT.
7. THE MINIMUM SEPARATION DISTANCE FROM EXISTING SUBSURFACE UTILITIES SHALL NOT BE LESS THAN 10 FT.
8. DRILL CONTRACTOR AND GEOTECHNICAL ENGINEER TO DETERMINE LENGTH OF TEMPORARY SURFACE/CONDUCTOR CASING.
9. NO GEOTECHNICAL DATA OR REPORTS WERE AVAILABLE AT THE TIME OF DESIGN. NO OTHER GEOTECHNICAL INFORMATION WAS REFERENCED IN THE PREPARATION OF THIS DESIGN.
10. DRILL CONTRACTOR SHALL UTILIZE BUOYANCY CONTROL MEASURES (INTERNAL WATER USED FOR BALLAST) DURING PULLBACK FOR ALL BUNDLED CASINGS.

GENERAL NOTES:

1. ALL BURIED LINE DEPTHS ARE APPROXIMATE. PRIOR TO ANY EXCAVATION OR EXPLORATORY BORING, CONTRACTOR MUST CONTACT 811 AND ABIDE BY ALL STATE EXCAVATION REQUIREMENTS. CONTRACTOR MUST CONTACT CSX WHENEVER ON RR ROW.
2. TETRA TECH ENGINEERING AND SURVEYING P.C. IS NOT RESPONSIBLE FOR LOCATION OF FOREIGN UTILITIES IN THIS DRAWING. THE INFORMATION SHOWN HEREON IS FURNISHED WITHOUT LIABILITY ON THE PART OF TETRA TECH ENGINEERING AND SURVEYING P.C. OR ANY DAMAGES RESULTING FROM ERRORS OR OMISSIONS THEREIN.
3. ALL COORDINATES ARE IN NEW YORK STATE PLANE, NAD83, EAST ZONE, US FOOT.

BORING LOG STRIP LEGEND

Blow Counts per 6" = 10-10-10
Recovery %/RQD % = 80%/80%

11000psi - UCS

3D strip logs show 10x exaggeration
3D strip logs have no exaggeration

Legend

| | |
|---------------------|---------------------------------|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CL | Fat CLAY |
| CL-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 |
| Topsoll | Topsoll |
| USGS 601 | Gravel or Conglomerate 1 |
| USGS 654 | Subgrayswacke |
| USGS 670 | Interbedded Sandstone and Shale |
| USGS 702 | Quartzite |
| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 716 | Granite 1 |
| Void | Void |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |



TETRA TECH ENGINEERING AND SURVEYING P.C.
(A NEW YORK PROFESSIONAL CORPORATION)

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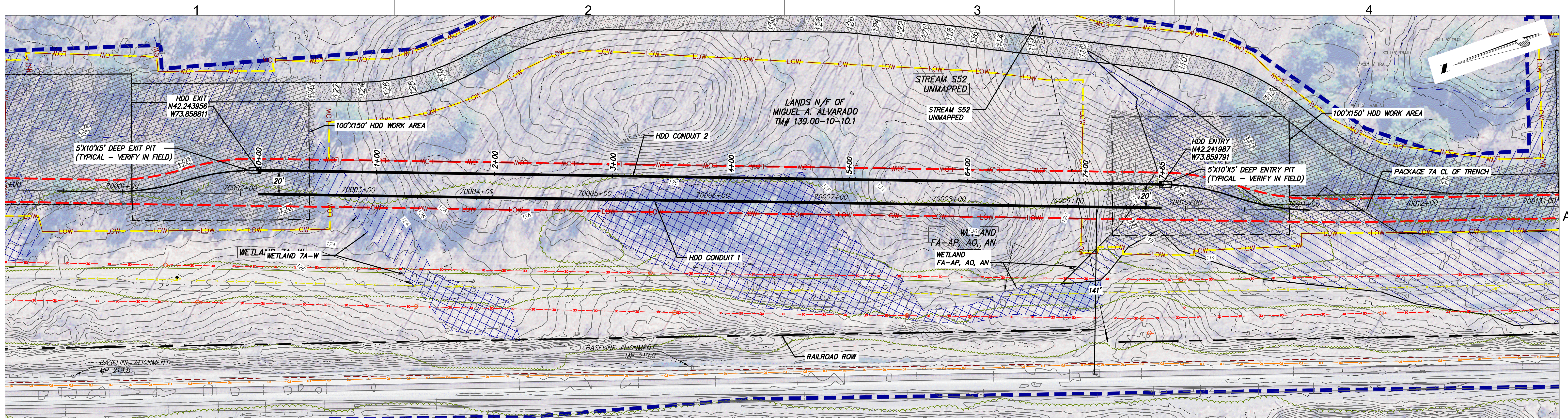
ISSUED FOR PERMITTING

| | | | | |
|-----|------------|----------------------------------|-----|-----|
| B | 03/17/2023 | FINAL SUBMISSION | MRS | EJK |
| A | 01/24/2023 | DRAFT FINAL SUBMISSION | MRS | EJK |
| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
PLAN AND PROFILE - HDD 111.B
POND CROSSING - CONDUIT 1
GREENE COUNTY, NY

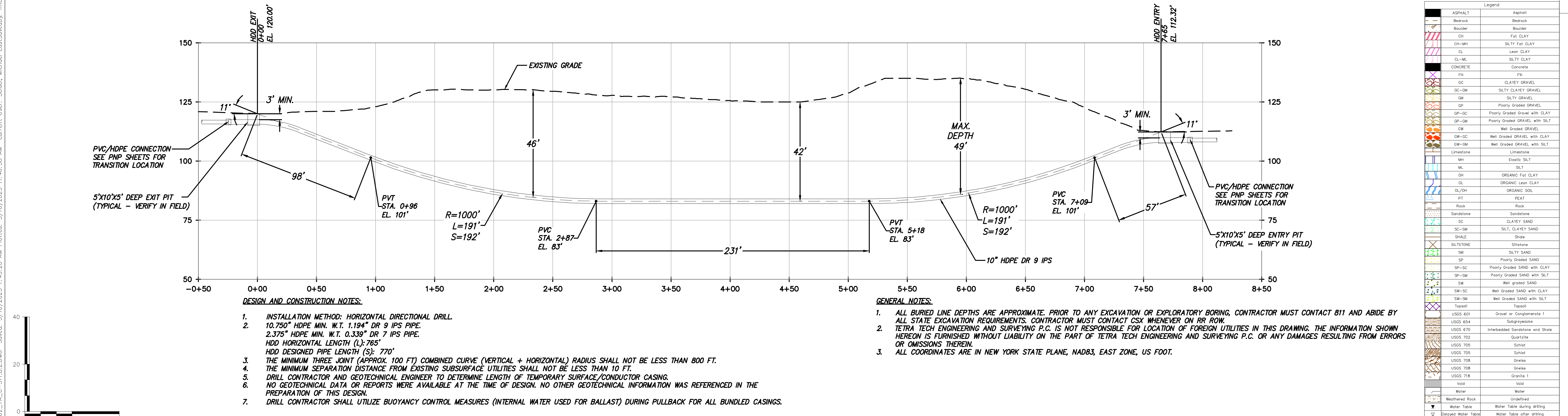
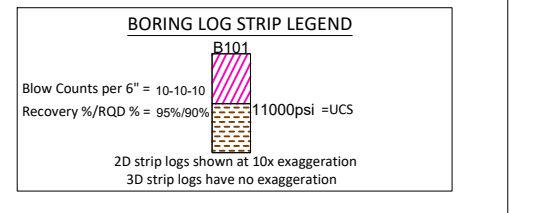
KIEWIT PROJECT NO. 21162
TT PROJECT NO. 204-3701
DRAWING NO. C-311.B

| | | | | | | | | | |
|-----------|-----|--------------|-----|--------------|-----|-------|----------|---------|------------|
| DRAWN BY: | MRS | DESIGNED BY: | AMC | APPROVED BY: | EJK | SCALE | AS SHOWN | DATE | 03/17/2023 |
| REV. NO. | | | | | | | | SH. NO. | 1 OF 1 |



HDD 111.B PLAN VIEW
CONDUIT 2

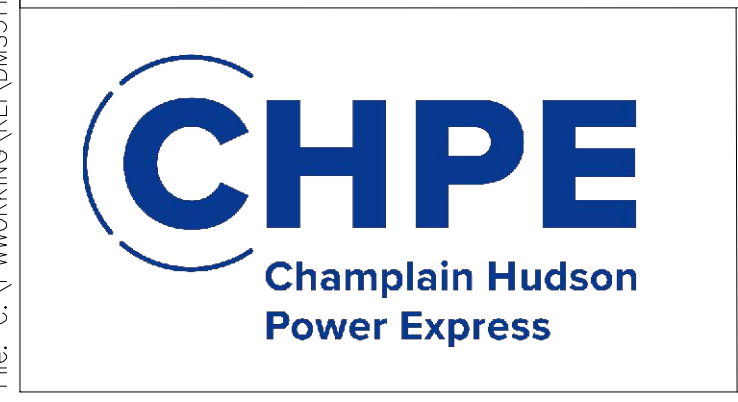
Scale in feet when printed on 22x34



HDD 111.B PROFILE VIEW
CONDUIT 2

Scale in feet when printed on 22x34

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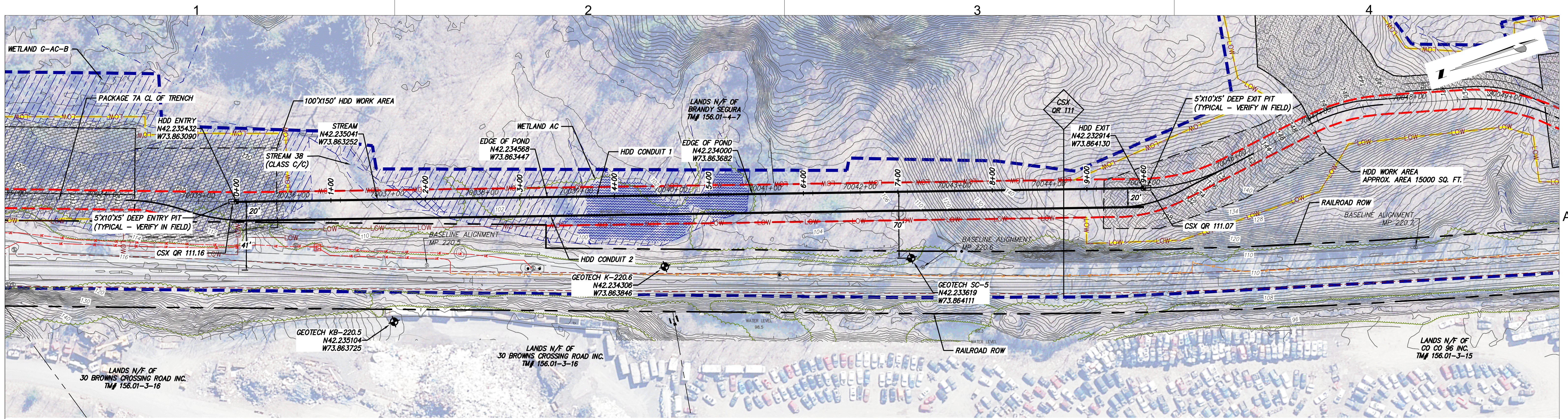
ISSUED FOR PERMITTING

| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|-----|------------|----------------------------------|-----|-----|
| B | 03/17/2023 | FINAL SUBMISSION | MRS | EJK |
| A | 01/24/2023 | DRAFT FINAL SUBMISSION | MRS | EJK |

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
PLAN AND PROFILE - HDD 111.B
POND CROSSING - CONDUIT 2
GREENE COUNTY, NY

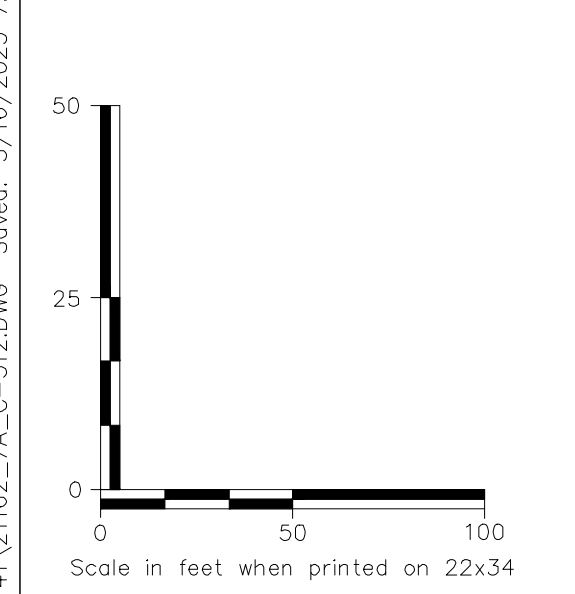
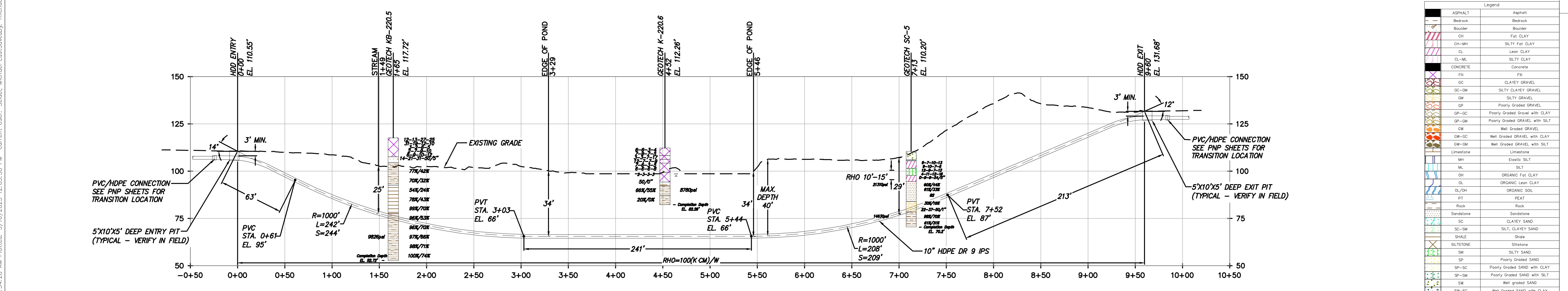
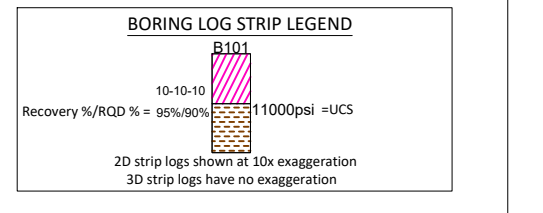
KIEWIT PROJECT NO. 21162
 TT PROJECT NO. 204-3701
 DRAWING NO. **C-311.B.2**

DRAWN BY: MRS DESIGNED BY: AMC APPROVED BY: EJK SCALE AS SHOWN DATE 03/17/2023
 REV. NO. B SH. NO. 1 OF 1



HDD 112 PLAN VIEW
CONDUIT 1

Scale in feet when printed on 22x34



DESIGN AND CONSTRUCTION NOTES:

1. INSTALLATION METHOD: HORIZONTAL DIRECTIONAL DRILL.
2. 10.750" HDPE MIN. W.T. 1.194" DR 9 IPS PIPE.
- 2.375" HDPE MIN. W.T. 0.339" DR 7 IPS PIPE.
- HDD HORIZONTAL LENGTH (L): 960'
- HDD DESIGNED PIPE LENGTH (S): 970'
- THE MINIMUM THREE JOINT (APPROX. 100 FT) COMBINED CURVE (VERTICAL + HORIZONTAL) RADIUS SHALL NOT BE LESS THAN 800 FT.
- THE MINIMUM SEPARATION DISTANCE FROM EXISTING SUBSURFACE UTILITIES SHALL NOT BE LESS THAN 10 FT.
- DRILL CONTRACTOR AND GEOTECHNICAL ENGINEER TO DETERMINE LENGTH OF TEMPORARY SURFACE/CONDUCTOR CASING.
- SPT N-VALUES SHOWN ON THIS DRAWING ARE NOT CORRECTED FOR SAMPLER SIZE OR HAMMER ENERGY. REFERENCE BORING LOGS AND GEOTECHNICAL REPORTS FOR ADDITIONAL SOIL INFORMATION.
- DRILL CONTRACTOR SHALL UTILIZE BUOYANCY CONTROL MEASURES (INTERNAL WATER USED FOR BALLAST) DURING PULLBACK FOR ALL BUNDLED CASINGS.

GENERAL NOTES:

1. ALL BURIED LINE DEPTHS ARE APPROXIMATE. PRIOR TO ANY EXCAVATION OR EXPLORATORY BORING, CONTRACTOR MUST CONTACT 811 AND ABIDE BY ALL STATE EXCAVATION REQUIREMENTS. CONTRACTOR MUST CONTACT CSX WHENEVER ON RR ROW.
2. TETRA TECH ENGINEERING AND SURVEYING P.C. IS NOT RESPONSIBLE FOR LOCATION OF FOREIGN UTILITIES IN THIS DRAWING. THE INFORMATION SHOWN HEREON IS FURNISHED WITHOUT LIABILITY ON THE PART OF TETRA TECH ENGINEERING AND SURVEYING P.C. OR ANY DAMAGES RESULTING FROM ERRORS OR OMISSIONS THEREIN.
3. ALL COORDINATES ARE IN NEW YORK STATE PLANE, NAD83, EAST ZONE, US FOOT.

HDD 112 PROFILE VIEW
CONDUIT 1

| Legend | |
|---------------------|---------------------------------|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CL | Fat CLAY |
| CL-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 | Subgravel |
| USGS 670 | Interbedded Sandstone and Shale |
| USGS 702 | Quartzite |
| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
| USGS 708 | Gneiss |
| USGS 716 | Granite 1 |
| SP | Sand |
| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |



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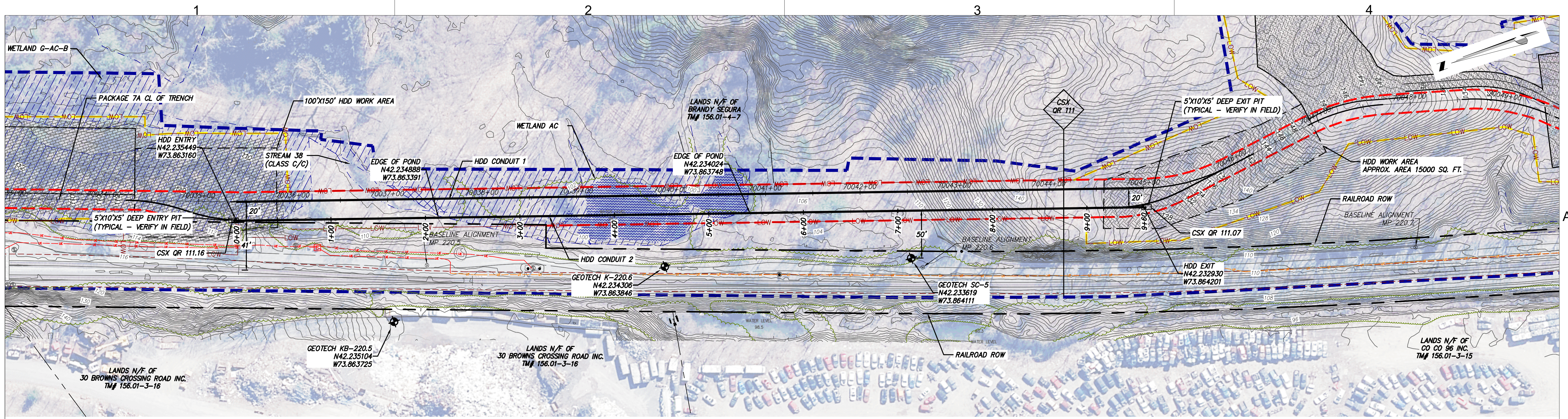
ISSUED FOR PERMITTING

| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
|-----|------------|------------------------------------|-----|-----|
| D | 03/17/2023 | FINAL SUBMISSION | MRS | EJK |
| C | 01/24/2023 | DRAFT FINAL SUBMISSION | MRS | EJK |
| B | 11/16/2022 | PRELIMINARY DRAFT FINAL SUBMISSION | MRS | EJK |
| A | 04/29/2022 | 60% DESIGN SUBMISSION | MRS | EJK |

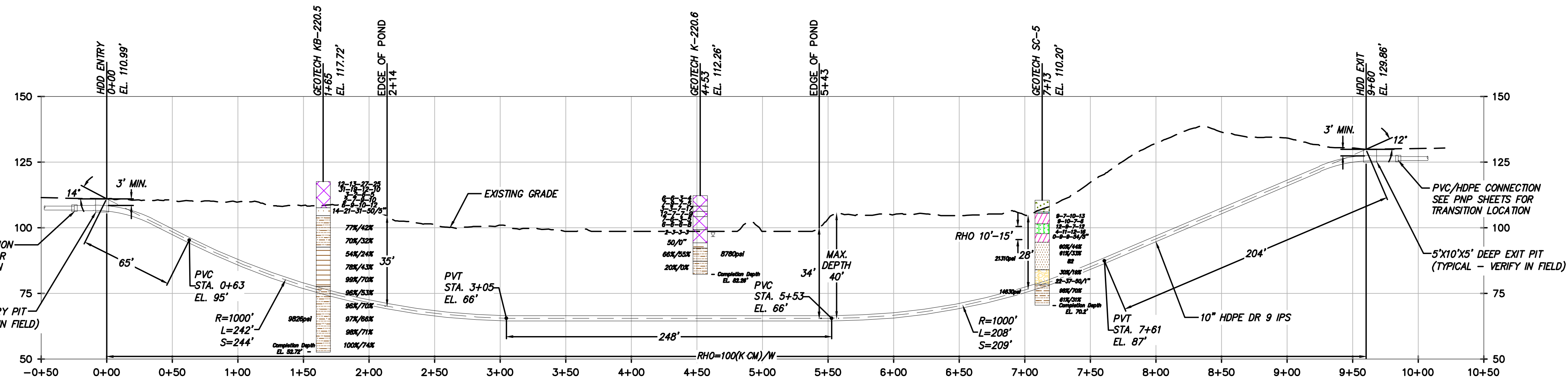
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
PLAN AND PROFILE - HDD 112
POND CROSSING - CONDUIT 1
GREENE COUNTY, NY

KIEWIT PROJECT NO. 21162
TT PROJECT NO. 204-3701
DRAWING NO. C-312

| DRAWN BY: | DESIGNED BY: | APPROVED BY: | SCALE | AS SHOWN | DATE |
|-----------|--------------|--------------|----------|----------|------------|
| MRS | AMC | EJK | REV. NO. | DATE | 03/17/2023 |



HDD 112 PLAN VIEW
CONDUIT 2



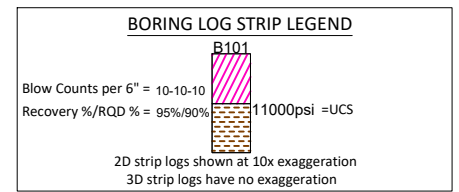
DESIGN AND CONSTRUCTION NOTES:

1. INSTALLATION METHOD: HORIZONTAL DIRECTIONAL DRILL.
2. 10.750" HDPE MIN. W.T. 1.194" DR 9 IPS PIPE.
2.375" HDPE MIN. W.T. 0.339" DR 7 IPS PIPE.
HDD HORIZONTAL LENGTH (L): 960'
HDD DESIGNED PIPE LENGTH (S): 970'
3. THE MINIMUM THREE JOINT (APPROX. 100 FT) COMBINED CURVE (VERTICAL + HORIZONTAL) RADIUS SHALL NOT BE LESS THAN 800 FT.
4. THE MINIMUM SEPARATION DISTANCE FROM EXISTING SUBSURFACE UTILITIES SHALL NOT BE LESS THAN 10 FT.
5. DRILL CONTRACTOR AND GEOTECHNICAL ENGINEER TO DETERMINE LENGTH OF TEMPORARY SURFACE/CONDUCTOR CASING.
6. SPT N-VALUES SHOWN ON THIS DRAWING ARE NOT CORRECTED FOR SAMPLER SIZE OR HAMMER ENERGY. REFERENCE BORING LOGS AND GEOTECHNICAL REPORTS FOR ADDITIONAL SOIL INFORMATION.
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GENERAL NOTES:

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3. ALL COORDINATES ARE IN NEW YORK STATE PLANE, NAD83, EAST ZONE, US FOOT.

HDD 112 PROFILE VIEW
CONDUIT 2



| Legend | |
|---------------------|---------------------------------|
| ASPHALT | Asphalt |
| Bedrock | Bedrock |
| Boulder | Boulder |
| CL | Fat CLAY |
| CL-MH | SILTY Fat CLAY |
| CL | Lean CLAY |
| CL-ML | SILTY CLAY |
| CONCRETE | Concrete |
| Fill | Fill |
| GC | CLAYEY GRAVEL |
| GC-GM | SILTY CLAYEY GRAVEL |
| GM | SILTY GRAVEL |
| GP | Poorly Graded GRAVEL |
| GP-GC | Poorly Graded Gravel with CLAY |
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| Limestone | Limestone |
| MH | Elastic SILT |
| ML | SILT |
| OH | ORGANIC Fat CLAY |
| OL | ORGANIC Lean CLAY |
| OL/OH | ORGANIC SOIL |
| PT | PEAT |
| Rock | Rock |
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| SC | CLAYEY SAND |
| SC-SM | SILT, CLAYEY SAND |
| SHALE | Shale |
| SILTSTONE | Siltstone |
| SM | SILTY SAND |
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| USGS 705 | Schist |
| USGS 705 | Schist |
| USGS 708 | Gneiss |
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| Water | Water |
| Weathered Rock | Undefined |
| Water Table | Water Table during drilling |
| Delayed Water Table | Water Table after drilling |



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ISSUED FOR PERMITTING

| No. | DATE | SUBMITTAL / REVISION DESCRIPTION | DB | APP |
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| C | 01/24/2023 | DRAFT FINAL SUBMISSION | MRS | EJK |
| B | 11/16/2022 | PRELIMINARY DRAFT FINAL SUBMISSION | MRS | EJK |
| A | 04/29/2022 | 60% DESIGN SUBMISSION | MRS | EJK |

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
PLAN AND PROFILE - HDD 112
POND CROSSING - CONDUIT 2
GREENE COUNTY, NY

| | |
|--------------------|------------|
| KIEWIT PROJECT NO. | 21162 |
| TT PROJECT NO. | 204-3701 |
| DRAWING NO. | C-312.2 |
| SCALE | AS SHOWN |
| DATE | 03/17/2023 |
| SH.NO. | 1 OF 1 |