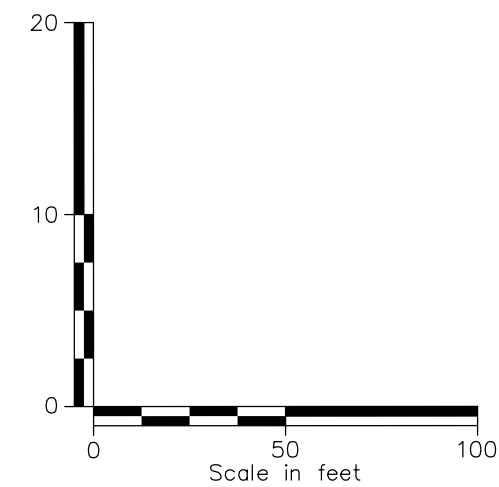
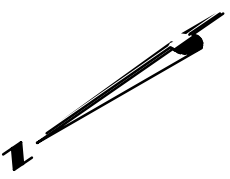




NOTE:  
1) THE USE OF CONDUCTOR CASINGS IS  
RECOMMENDED TO MITIGATE THE POTENTIAL  
RELEASES OF DRILLING FLUIDS.

|                                                                                       | Legend              |
|---------------------------------------------------------------------------------------|---------------------|
|    | ASPHALT             |
|    | Bedrock             |
|    | Boulder             |
|    | CH                  |
|    | CH-MH               |
|    | CL                  |
|    | CL-ML               |
|    | CONCRETE            |
|    | FILL                |
|    | GC                  |
|   | GC-GM               |
|  | GM                  |
|  | GP                  |
|  | GP-GC               |
|  | GP-GM               |
|  | GW                  |
|  | GW-GC               |
|  | GW-GM               |
|  | Limestone           |
|  | MH                  |
|  | ML                  |
|  | OH                  |
|  | OL                  |
|  | OL/OH               |
|  | PT                  |
|  | Rock                |
|  | Sandstone           |
|  | SC                  |
|  | SC-SM               |
|  | SHALE               |
|  | SILTSTONE           |
|  | SM                  |
|  | SP                  |
|  | SP-SC               |
|  | SP-SM               |
|  | SW                  |
|  | SW-SC               |
|  | SW-SM               |
|  | Topsoil             |
|  | USGS 601            |
|  | USGS 654            |
|  | USGS 670            |
|  | USGS 702            |
|  | USGS 705            |
|  | USGS 705            |
|  | USGS 708            |
|  | USGS 708            |
|  | USGS 718            |
|  | Void                |
|  | Water               |
|  | Weathered Rock      |
|  | Water Table         |
|  | Delayed Water Table |

### BORING LOG STRIP LEGEND

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%



B101

11000psi =UCS

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

|                    |
|--------------------|
| KIEWIT PROJECT NO. |
| 21162              |
| CHA PROJECT NO.    |
| 066076             |
| DRAWING NO.        |

**C-315A.1**

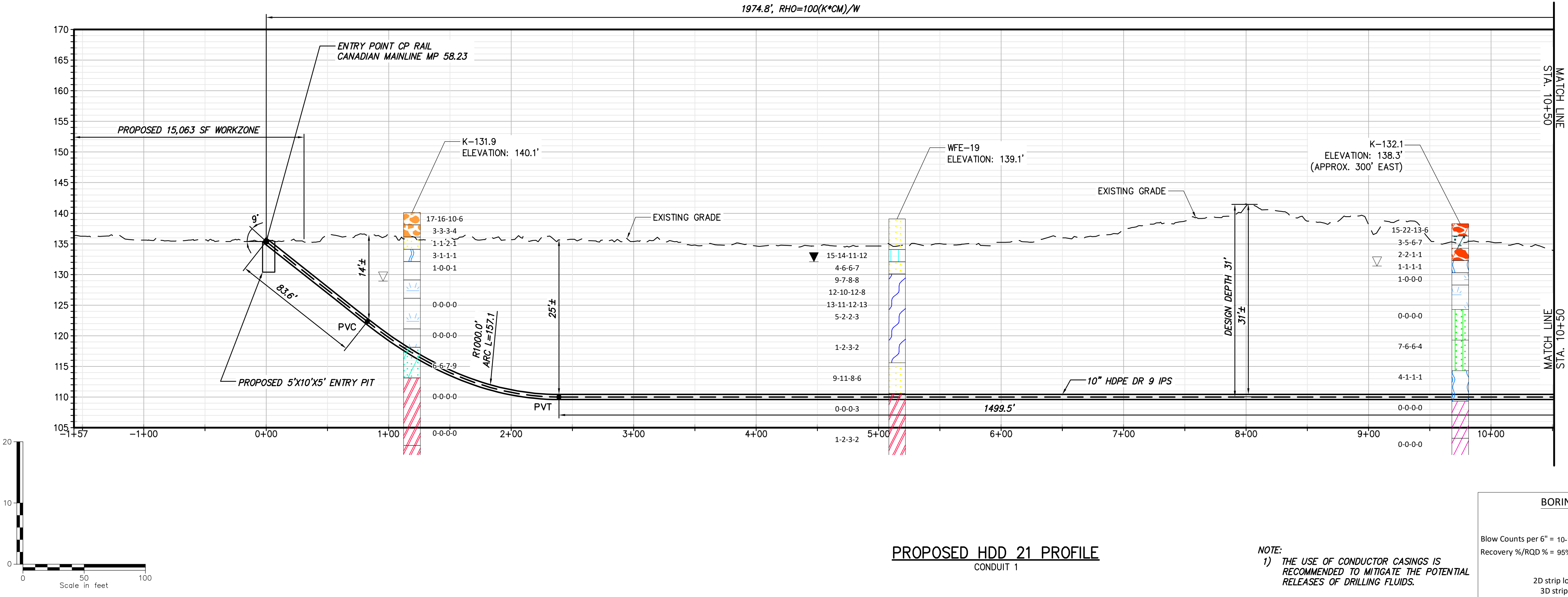
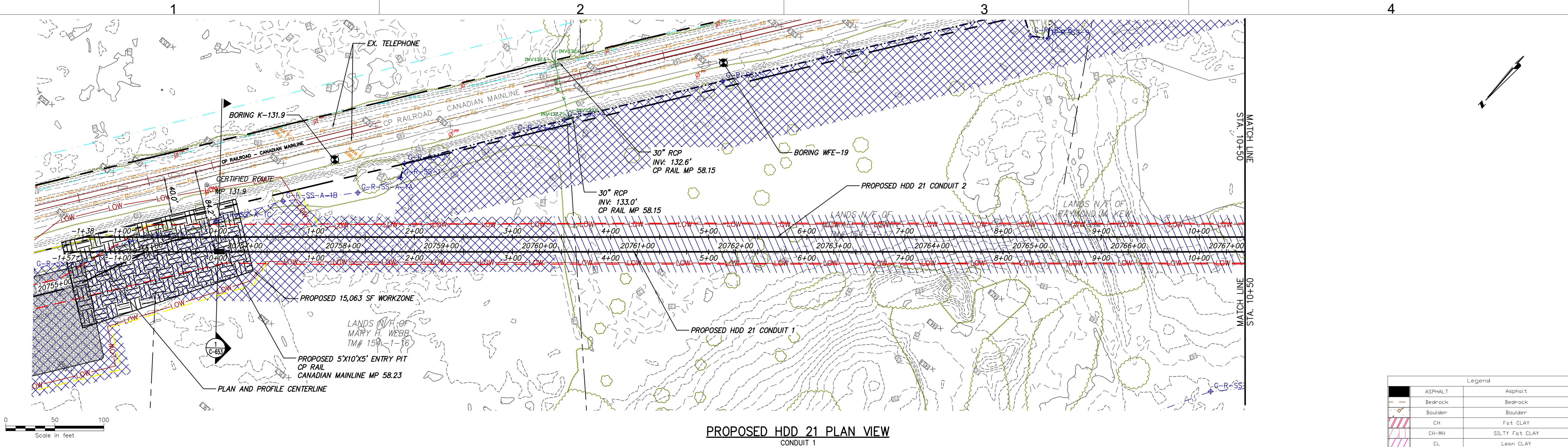
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| 0   | 03/22/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | MCS | JEO |                 |                    |                  |                   |               |
| No. | DATE       | SUBMITTAL / REVISION DESCRIPTION   | DB  | APP | DRAWN BY: C.J.L | DESIGNED BY: C.J.L | APPROVED BY: JEO | SCALE<br>REV. NO. | AS NOTED<br>X |



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.



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| 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      |
|        | Topsail             | Topsail                         |
|        | USGS 601            | Gravel or Conglomerate 1        |
|        | USGS 654            | Subgraywacke                    |
|        | USGS 670            | Interbedded Sandstone and Shale |
|        | USGS 702            | Quartzite                       |
|        | USGS 705            | Schist                          |
|        | USGS 705            | Schist                          |
|        | USGS 708            | Gneiss                          |
|        | USGS 708            | Gneiss                          |
|        | USGS 718            | Granite 1                       |
|        | Void                | Void                            |
|        | Water               | Water                           |
|        | Weathered Rock      | Undefined                       |
|        | Water Table         | Water Table during drilling     |
|        | Delayed Water Table | Water Table after drilling      |

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

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



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|     |            |                                    |     |     |
|-----|------------|------------------------------------|-----|-----|
| 0   | 03/22/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | MCS | JEO |
| No. | DATE       | SUBMITTAL / REVISION DESCRIPTION   | DB  | APP |

CHAMPLAIN HUDSON POWER EXPRESS  
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY  
PLAN AND PROFILE - HDD 21, CONDUIT 1

DRAWN BY: ES DESIGNED BY: ES APPROVED BY: JEO SCALE AS NOTED DATE 03/22/2023

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



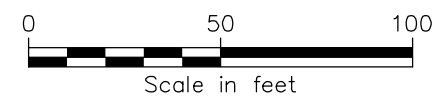
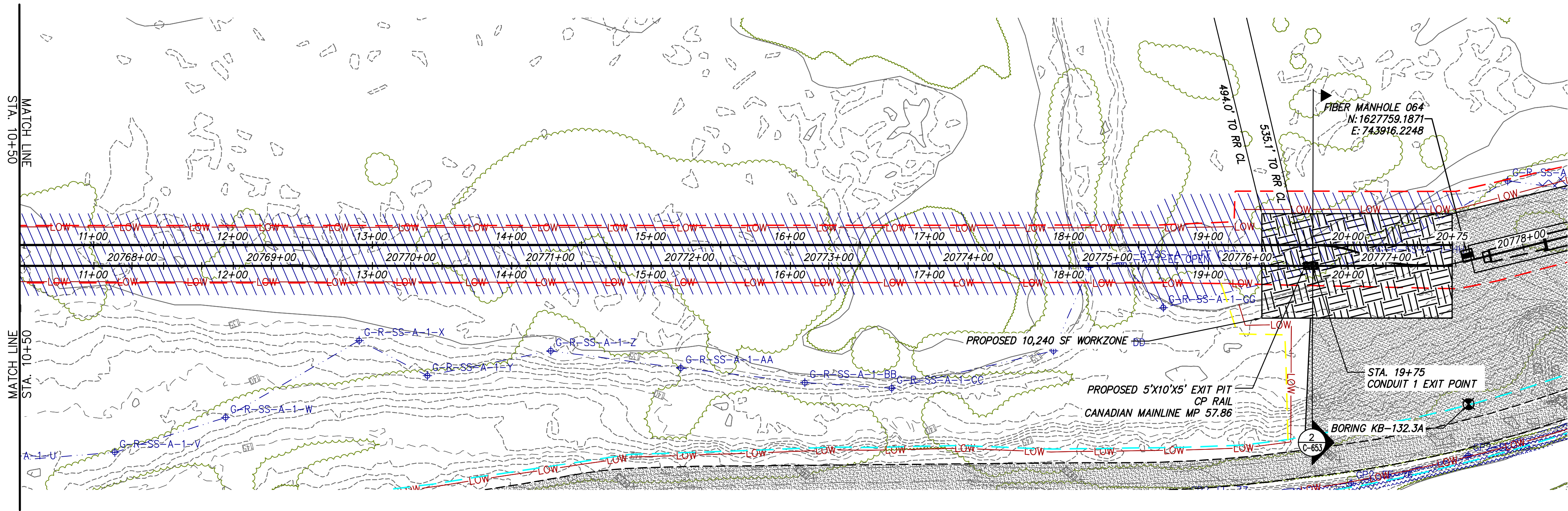
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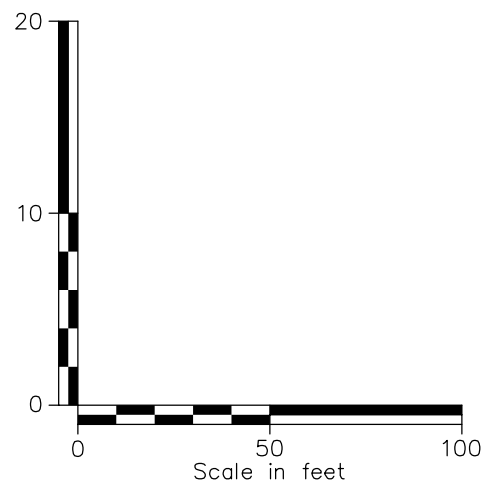
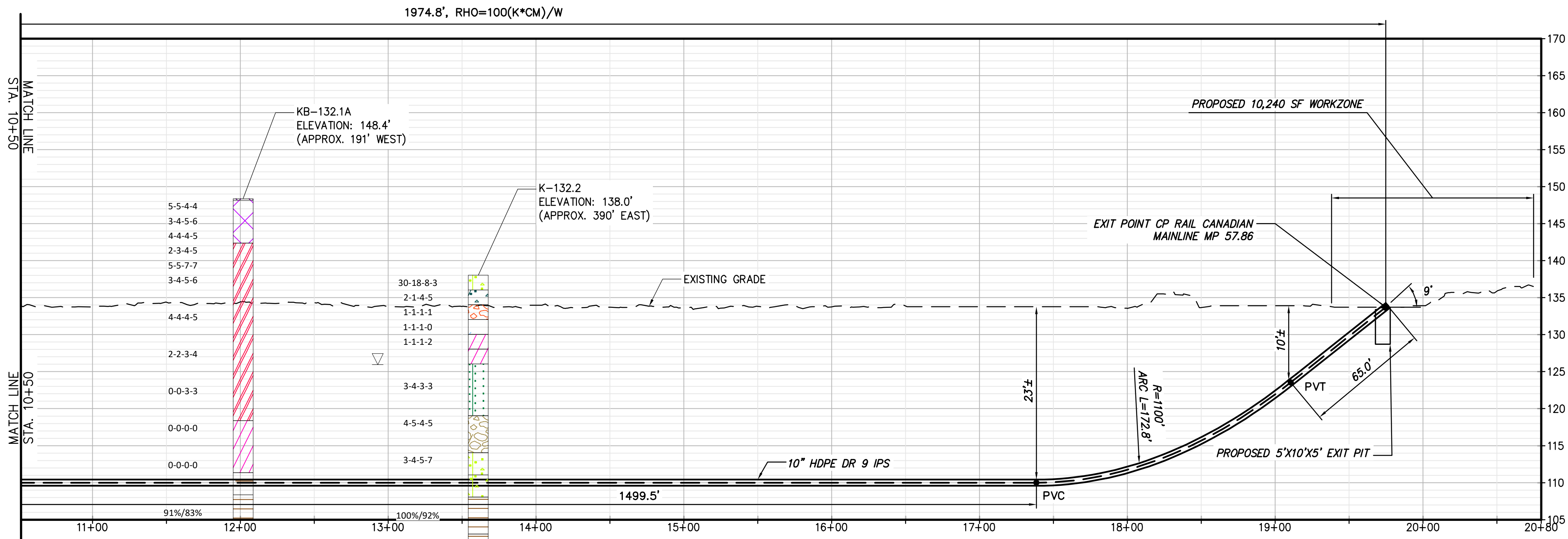
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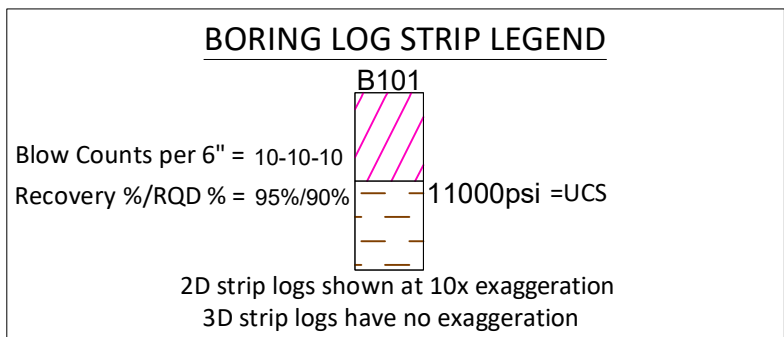


PROPOSED HDD 21 PLAN VIEW  
CONDUIT 1



PROPOSED HDD 21 PROFILE  
CONDUIT 1

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



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



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| No. | DATE       | SUBMITTAL / REVISION DESCRIPTION   | DB  | APP |

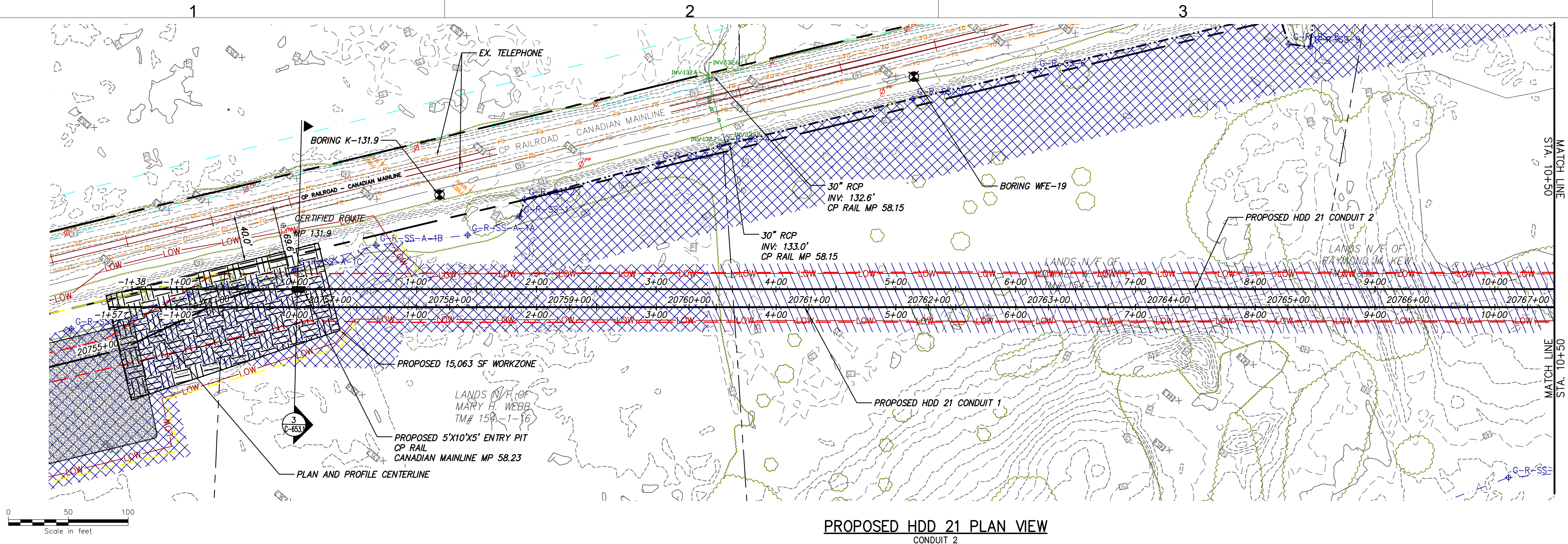
CHAMPLAIN HUDSON POWER EXPRESS  
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY  
PLAN AND PROFILE - HDD 21, CONDUIT 1

DRAWN BY: ES DESIGNED BY: ES APPROVED BY: JEO SCALE AS NOTED DATE 03/22/2023

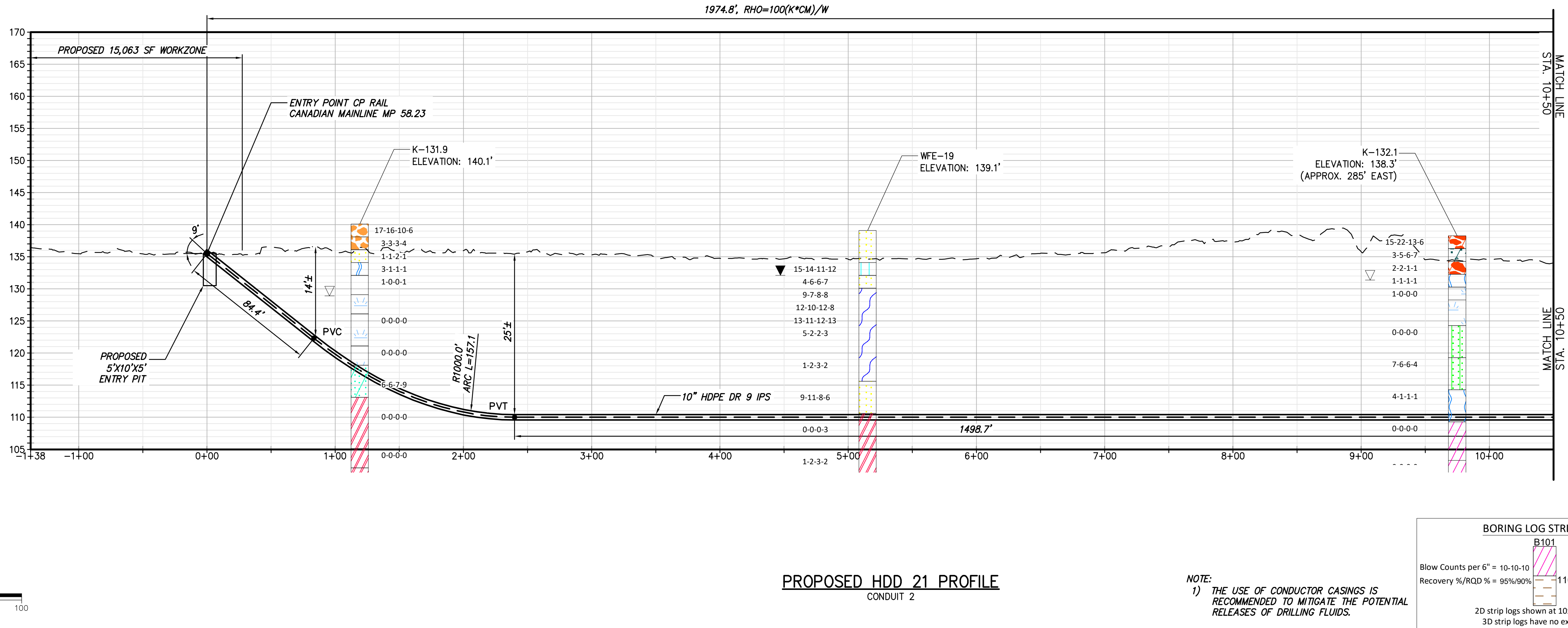
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CHA PROJECT NO. 066076  
DRAWING NO. C-316.1



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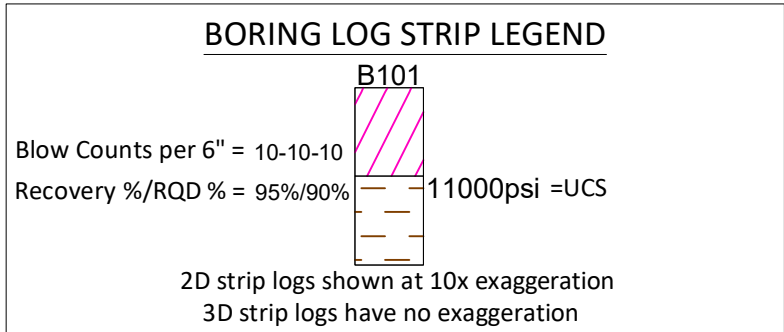


PROPOSED HDD 21 PLAN VIEW  
CONDUIT 2



PROPOSED HDD 21 PROFILE  
CONDUIT 2

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



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



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| 0   | 03/22/2023 | ISSUED FOR CONSTRUCTION SUBMISSION | MCS | JEO |
| No. | DATE       | SUBMITTAL / REVISION DESCRIPTION   | DB  | APP |

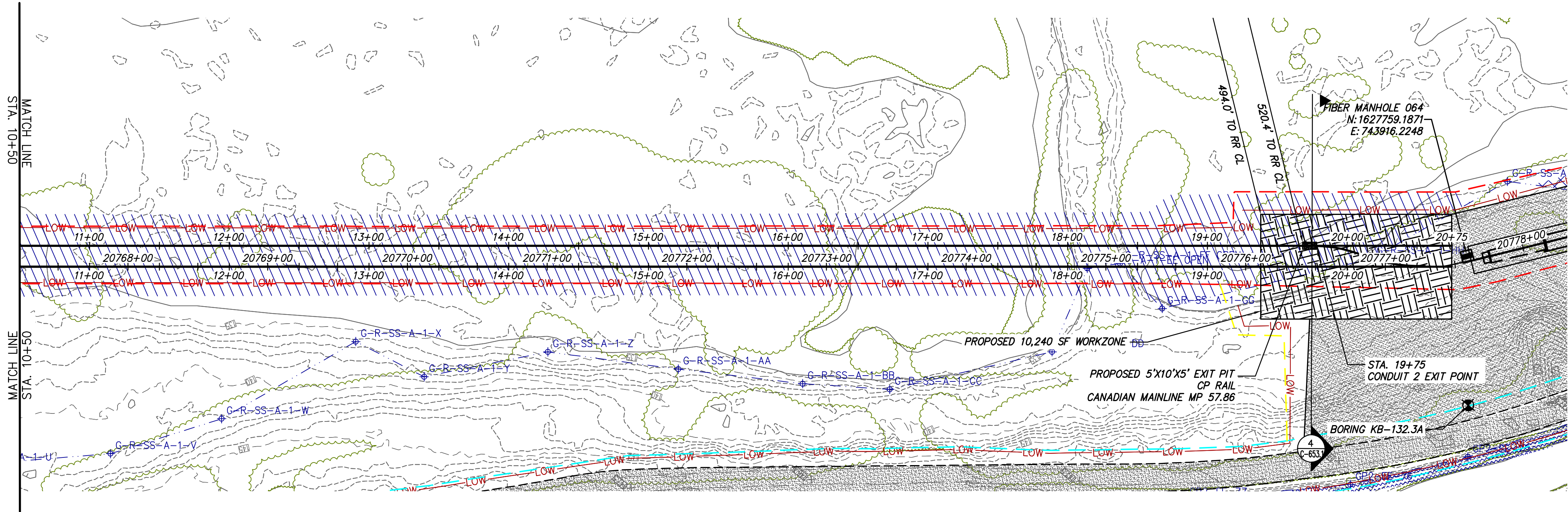
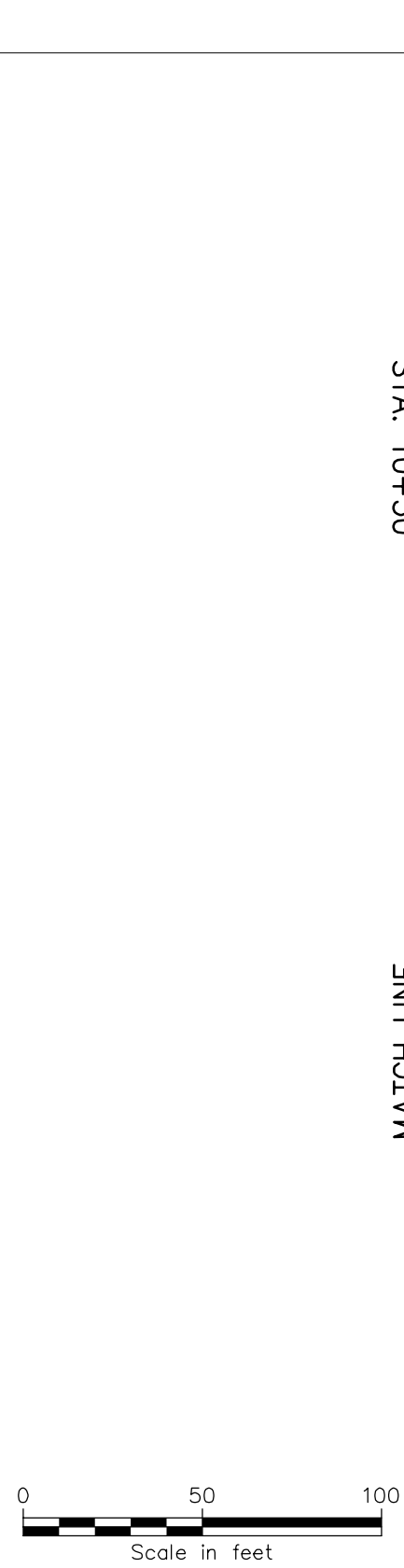
CHAMPLAIN HUDSON POWER EXPRESS  
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY  
PLAN AND PROFILE - HDD 21, CONDUIT 2

DRAWN BY: ES DESIGNED BY: ES APPROVED BY: JEO SCALE AS NOTED DATE 03/22/2023

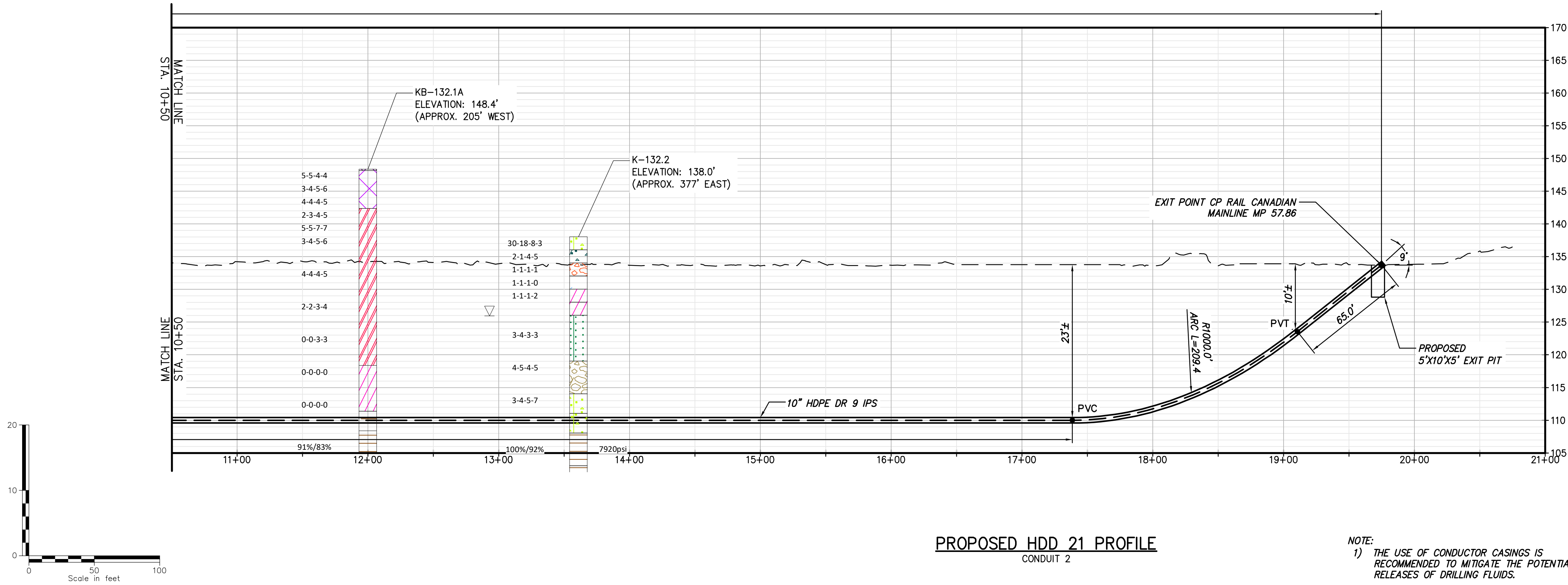
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| KIEWIT PROJECT NO. | 21162  |
| CHA PROJECT NO.    | 066076 |
| DRAWING NO.        | C-316A |



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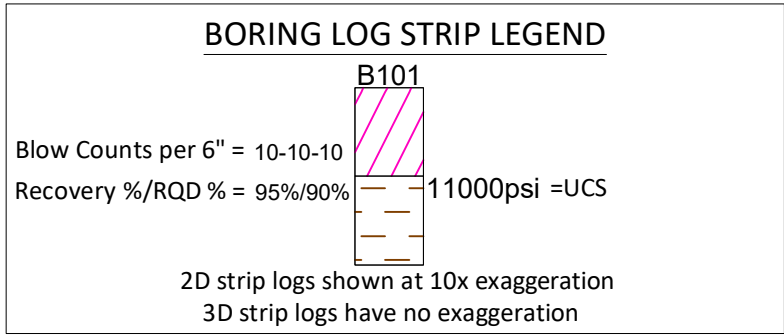


PROPOSED HDD 21 PLAN VIEW  
CONDUIT 2



PROPOSED HDD 21 PROFILE  
CONDUIT 2

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



| 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      |
|        | Topsail             | Topsail                         |
|        | USGS 601            | Gravel or Conglomerate 1        |
|        | USGS 654            | Subgraywacke                    |
|        | USGS 670            | Interbedded Sandstone and Shale |
|        | USGS 702            | Quartzite                       |
|        | USGS 705            | Schist                          |
|        | USGS 705            | Schist                          |
|        | USGS 708            | Gneiss                          |
|        | USGS 708            | Gneiss                          |
|        | USGS 718            | Granite 1                       |
|        | Void                | Void                            |
|        | Water               | Water                           |
|        | Weathered Rock      | Undefined                       |
|        | Water Table         | Water Table during drilling     |
|        | Delayed Water Table | Water Table after drilling      |



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| No. | DATE       | SUBMITTAL / REVISION DESCRIPTION   | DB  | APP |

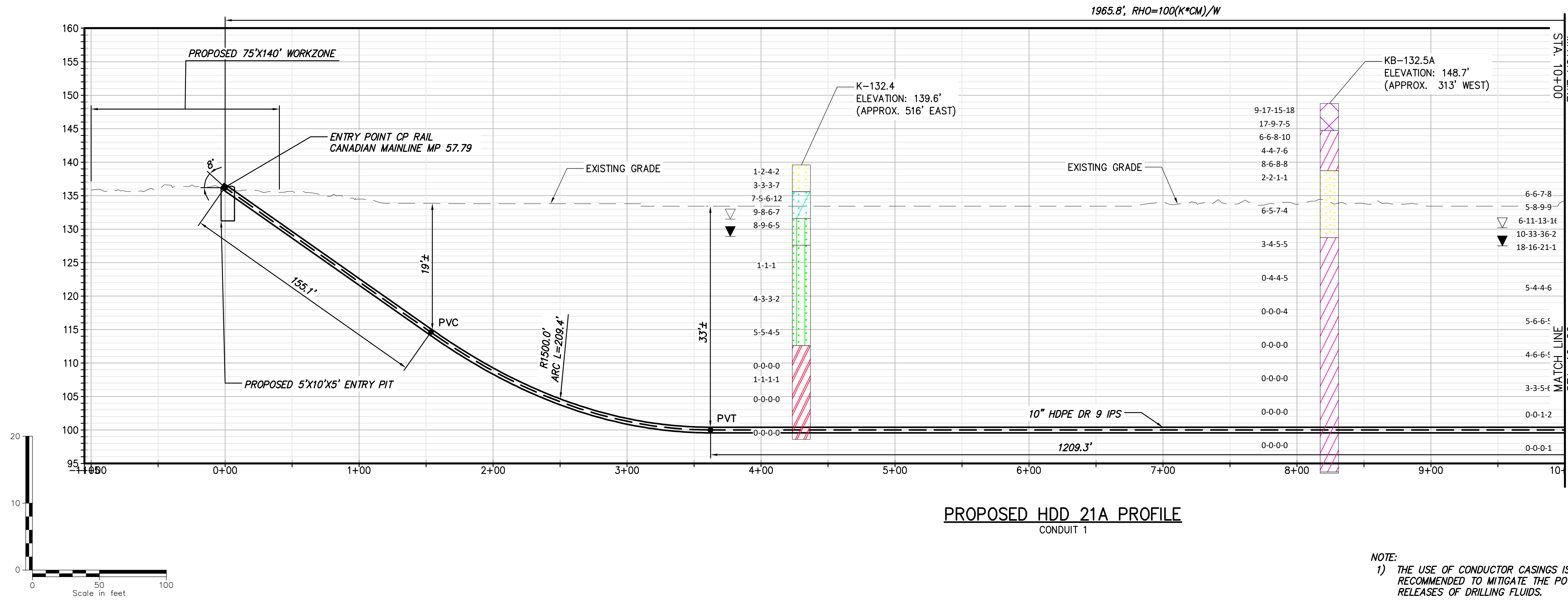
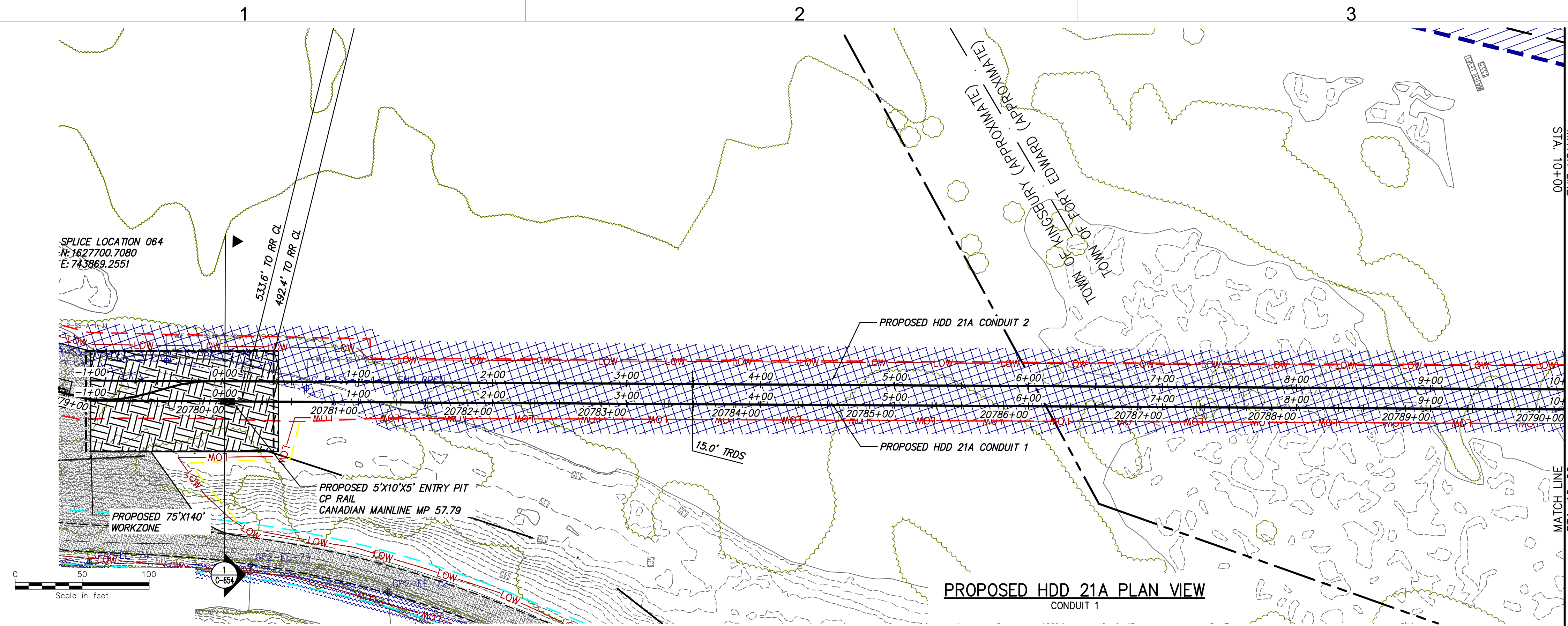
CHAMPLAIN HUDSON POWER EXPRESS  
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY  
PLAN AND PROFILE - HDD 21, CONDUIT 2

DRAWN BY: ES DESIGNED BY: ES APPROVED BY: JEO SCALE AS NOTED DATE 03/22/2023

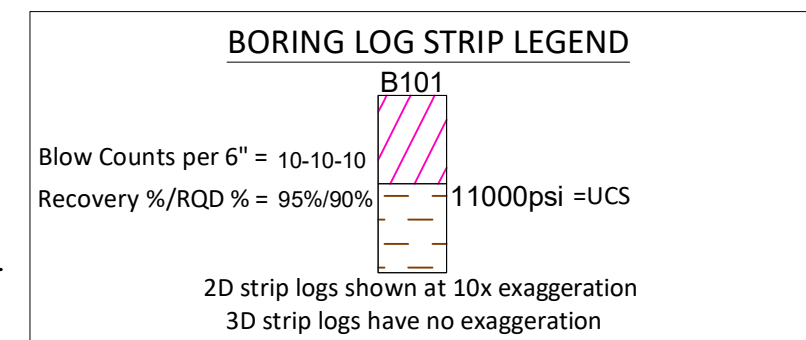
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| KIEWIT PROJECT NO. | 21162      |
| CHA PROJECT NO.    | 066076     |
| DRAWING NO.        | C-316A.1   |
| DATE               | 03/22/2023 |



File: V:\PROJECTS\ANY\K6\066076.00\09\_DESIGN\DRAWINGS\01\_SHEETS\DESIGN PACKAGE 2\ARCHIVE\316 HDD 21A PLAN AND PROFILE - CONDUIT 1 - ARCHIVE TEST.DWG Saved: 3/15/2023 12:07:29 PM Plotted: 3/17/2023 9:58:57 AM Current User: Snyder, Morgan LastSavedBy: 6043



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



| 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      |
| Topsail             | Topsail                         |
| USGS 601            | Gravel or Conglomerate 1        |
| USGS 654            | Subgraywacke                    |
| USGS 670            | Interbedded Sandstone and Shale |
| USGS 702            | Quartzite                       |
| USGS 705            | Schist                          |
| USGS 705            | Schist                          |
| USGS 708            | Gneiss                          |
| USGS 708            | Gneiss                          |
| USGS 718            | Granite 1                       |
| Void                | Void                            |
| Water               | Water                           |
| Weathered Rock      | Undefined                       |
| Water Table         | Water Table during drilling     |
| Delayed Water Table | Water Table after drilling      |



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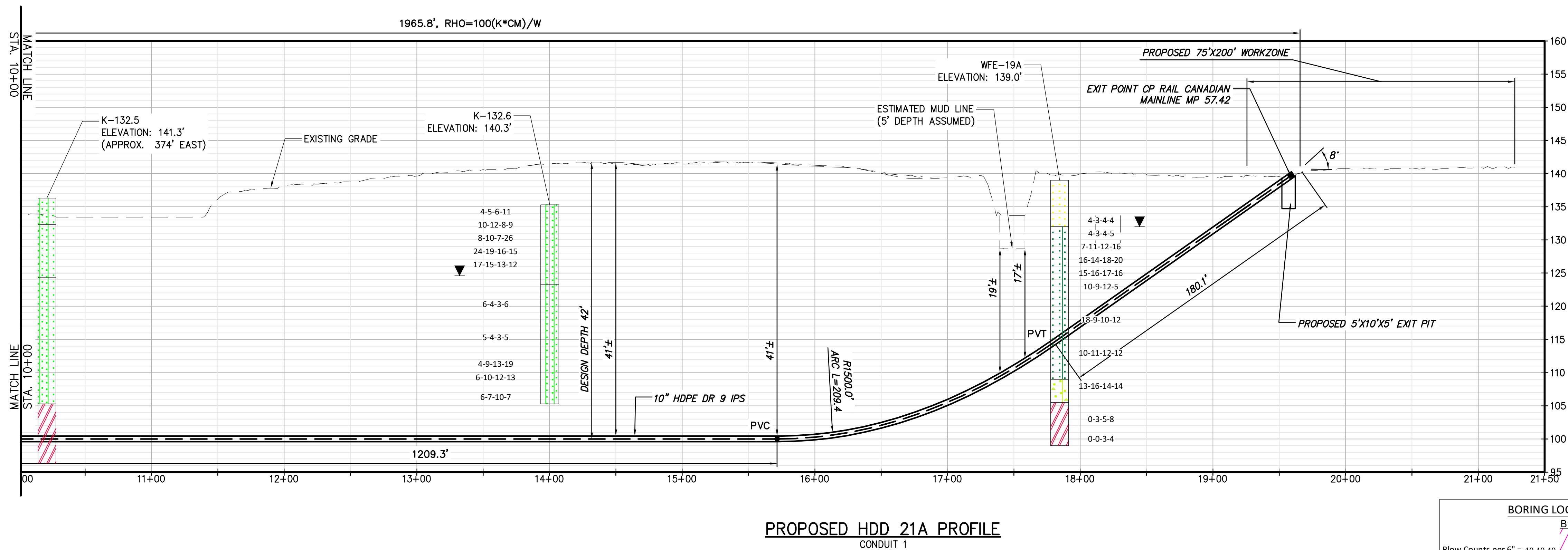
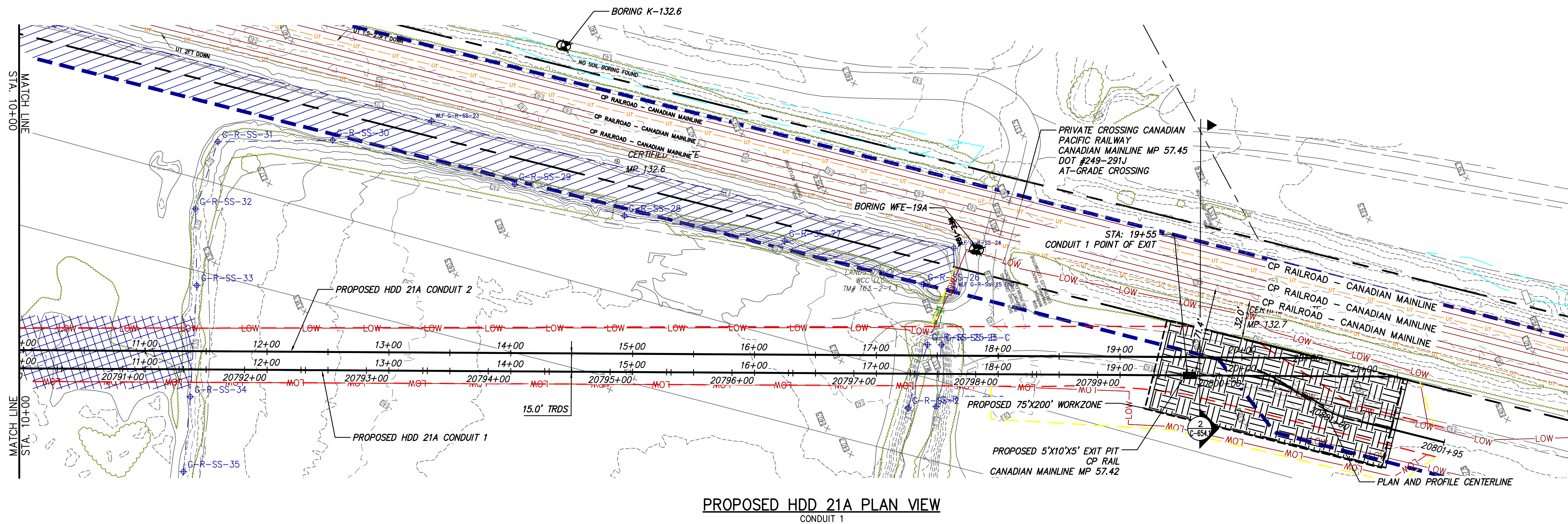
CHAMPLAIN HUDSON POWER EXPRESS  
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY  
PLAN AND PROFILE - HDD 21A, CONDUIT 1

DRAWN BY: ES DESIGNED BY: ES APPROVED BY: JEO SCALE AS NOTED REV. NO. X

KIEWIT PROJECT NO. 21162  
CHA PROJECT NO. 066076  
DRAWING NO. C-317

DATE 03/22/2023





| 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                            |
|        | DH                  | ORGANIC Fat CLAY                |
|        | DL                  | ORGANIC Lean CLAY               |
|        | DL/DH               | ORGANIC SOIL                    |
|        | PT                  | PEAT                            |
|        | Rock                | Rock                            |
|        | Sandstone           | Sandstone                       |
|        | SC                  | CLAYEY SAND                     |
|        | SC-SM               | SILT, CLAYEY SAND               |
|        | SHALE               | Shale                           |
|        | SILTSTONE           | Siltstone                       |
|        | SM                  | SILTY SAND                      |
|        | SP                  | Poorly Graded SAND              |
|        | SP-SC               | Poorly Graded SAND with CLAY    |
|        | SP-SM               | Poorly Graded SAND with SILT    |
|        | SW                  | Well graded SAND                |
|        | SW-SC               | Well Graded SAND with CLAY      |
|        | SW-SM               | Well Graded SAND with SILT      |
|        | Topsoil             | Topsoil                         |
|        | USGS 601            | Gravel or Conglomerate 1        |
|        | USGS 654            | Subgraywacke                    |
|        | USGS 670            | Interbedded Sandstone and Shale |
|        | USGS 702            | Quartzite                       |
|        | USGS 705            | Schist                          |
|        | USGS 705            | Schist                          |
|        | USGS 708            | Gneiss                          |
|        | USGS 708            | Gneiss                          |
|        | USGS 718            | Granite 1                       |
|        | Void                | Void                            |
|        | Water               | Water                           |
|        | Weathered Rock      | Undefined                       |
|        | Water Table         | Water Table during drilling     |
|        | Delayed Water Table | Water Table after drilling      |



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| No. | DATE       | SUBMITTAL / REVISION DESCRIPTION   | DB  | APP |

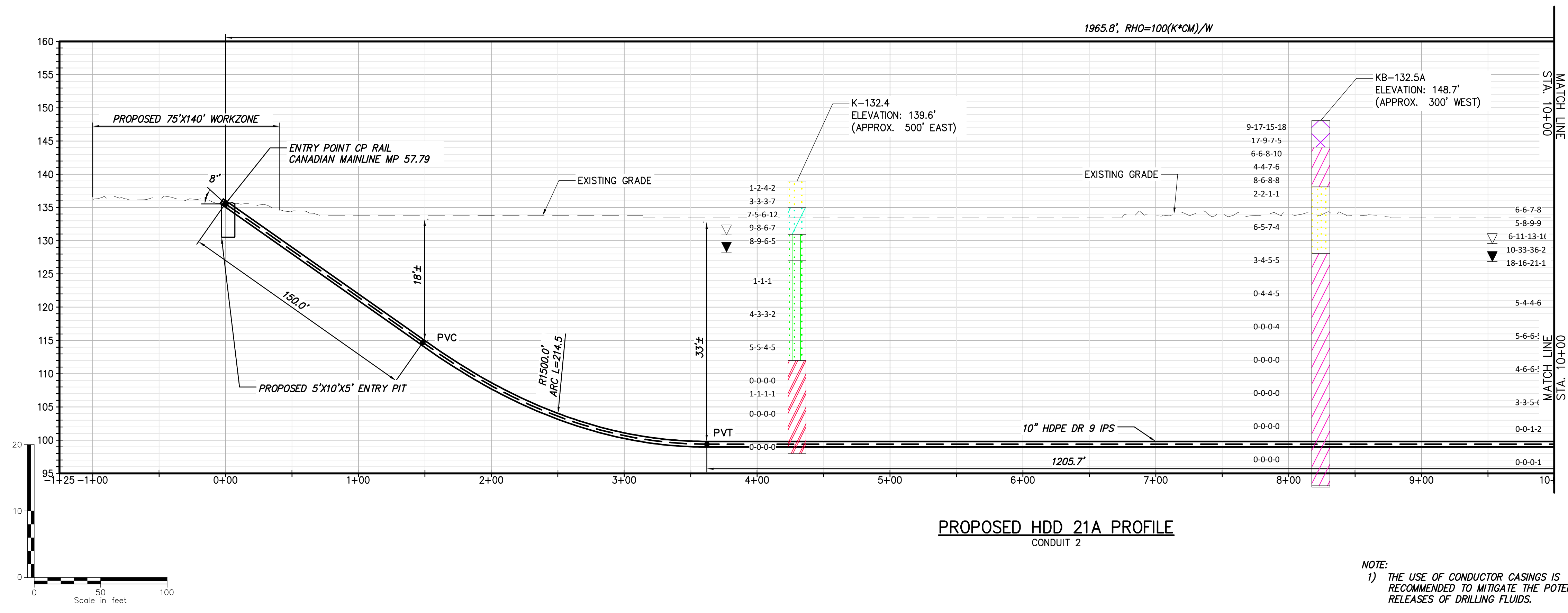
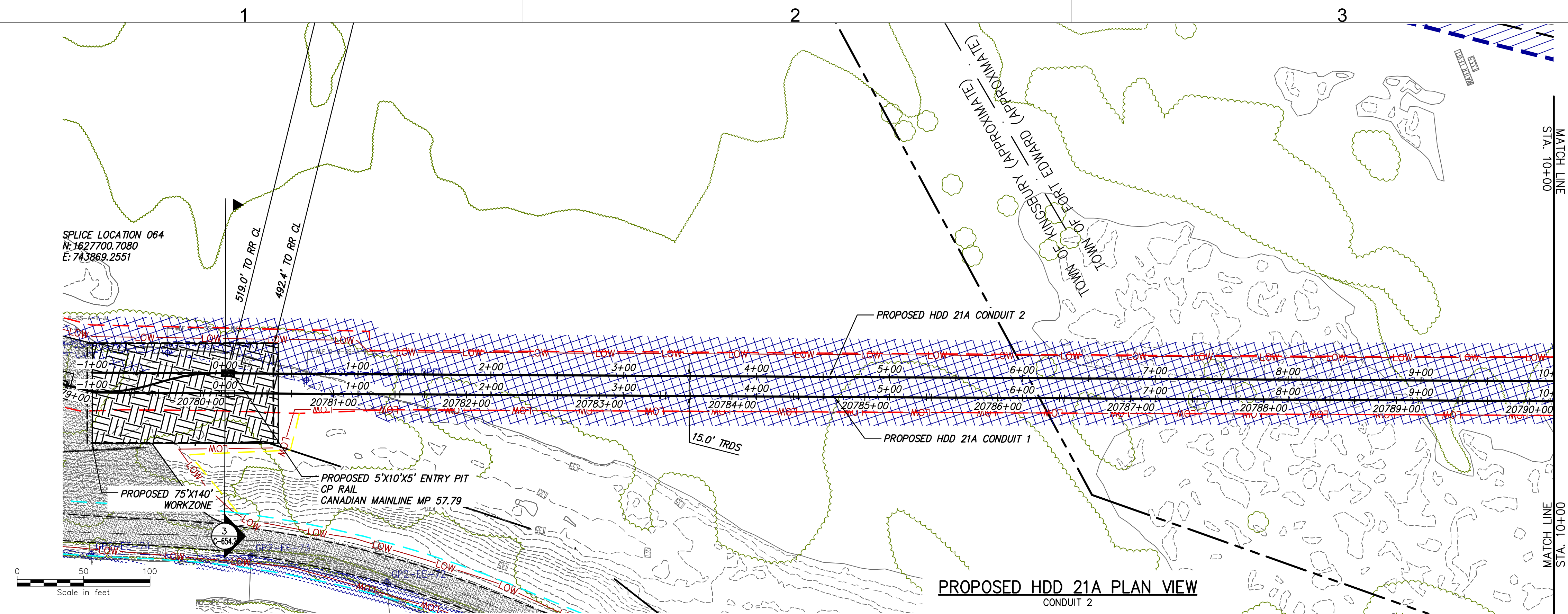
**CHAMPLAIN HUDSON POWER EXPRESS**  
**SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY**  
**PLAN AND PROFILE - HDD 21A, CONDUIT 1**

|                    |
|--------------------|
| KIEWIT PROJECT NO. |
| 21162              |
| CHA PROJECT NO.    |
| 066076             |
| DRAWING NO.        |

**C-317.1**

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| P | DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO | SCALE AS NOTED | DATE 03/22/20 |
|   |              |                 |                  | REV. NO. Y     |               |





|  |                | 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       | Subgroyssacke                   |
|  | 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     |
|  | Water Table    | Water Table after drilling      |



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**CHAMPLAIN HUDSON POWER EXPRESS**  
**SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY**  
**PLAN AND PROFILE - HDD 21A, CONDUIT 2**

|                    |
|--------------------|
| KIEWIT PROJECT NO. |
| 21162              |
| CHA PROJECT NO.    |
| 066076             |
| DRAWING NO.        |

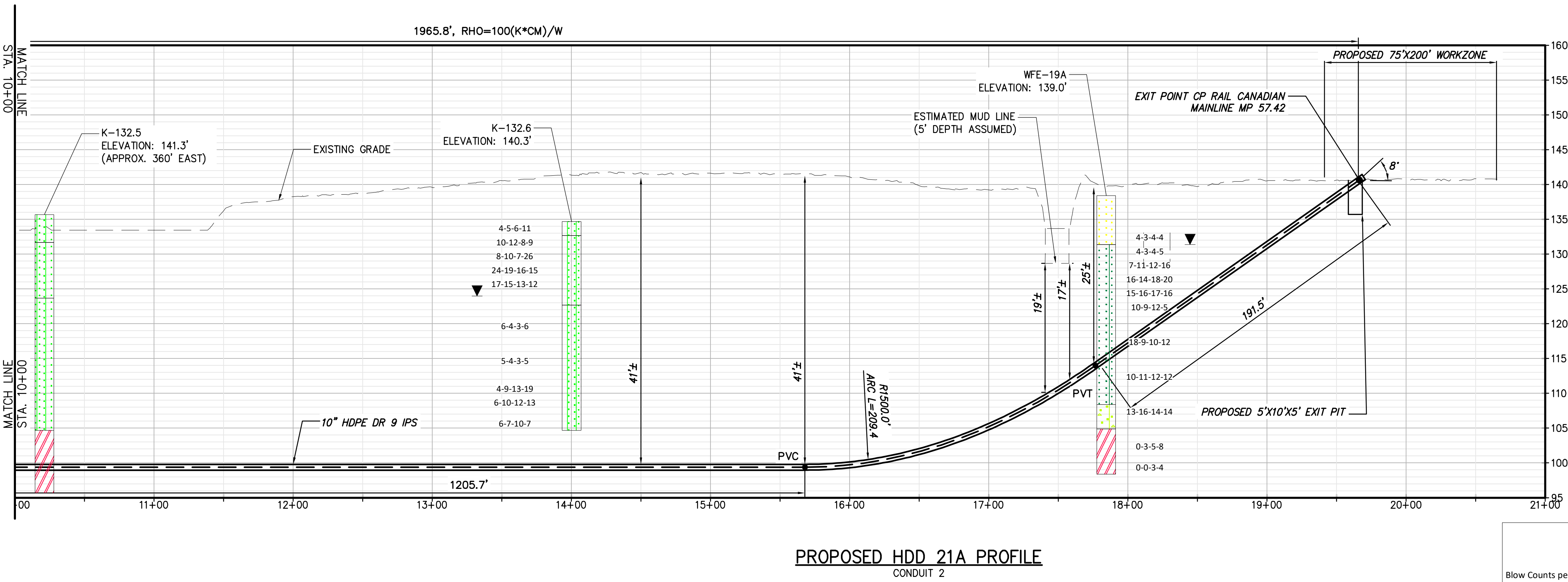
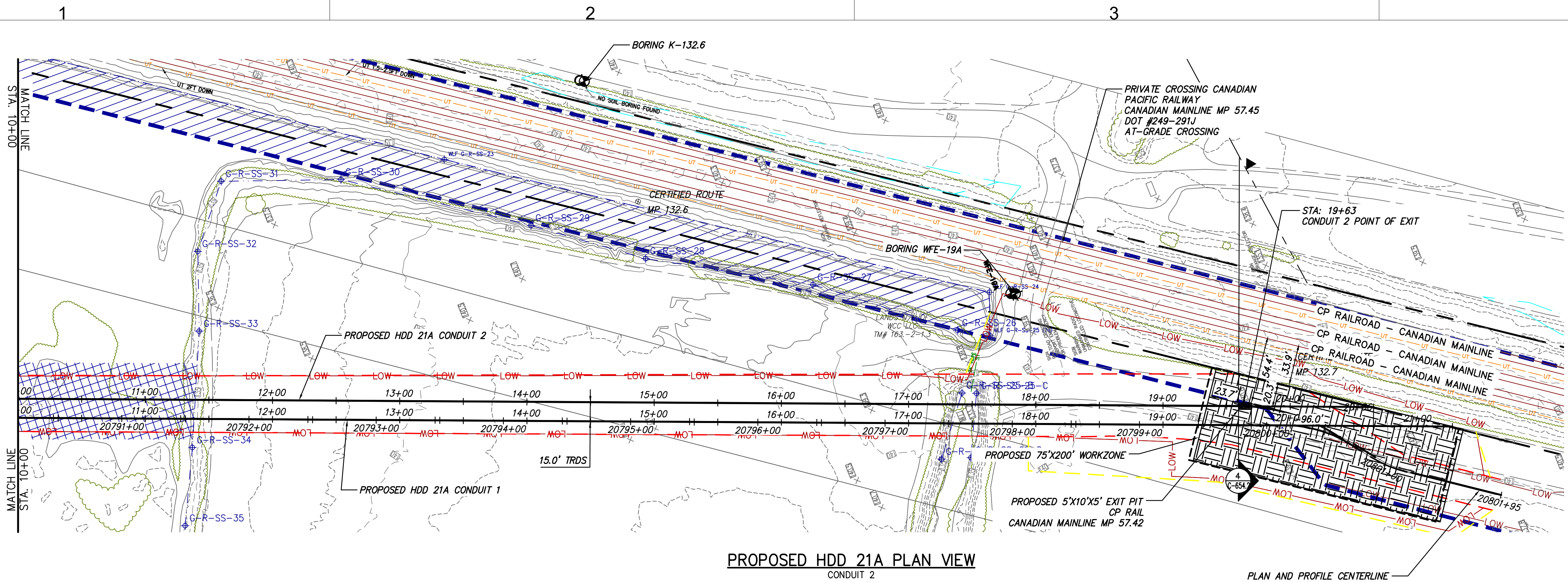
**C-317A**

DATE 03/22

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| DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEQ | SCALE    | AS NOT |
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| Legend |                                 |
|--------|---------------------------------|
|        | Asphalt                         |
|        | Bedrock                         |
|        | Boulder                         |
|        | Fat CLAY                        |
|        | SILTY Fat CLAY                  |
|        | Lean CLAY                       |
|        | SILTY CLAY                      |
|        | Concrete                        |
|        | FILL                            |
|        | CLAYEY GRAVEL                   |
|        | SILTY CLAYEY GRAVEL             |
|        | SILTY GRAVEL                    |
|        | Poorly Graded GRAVEL            |
|        | Poorly Graded Gravel with CLAY  |
|        | Poorly Graded GRAVEL with SILT  |
|        | Well Graded GRAVEL              |
|        | Well Graded GRAVEL with CLAY    |
|        | Well Graded GRAVEL with SILT    |
|        | Limestone                       |
|        | Elastic SILT                    |
|        | SILT                            |
|        | ORGANIC Fat CLAY                |
|        | ORGANIC Lean CLAY               |
|        | ORGANIC SOIL                    |
|        | PEAT                            |
|        | Rock                            |
|        | Sandstone                       |
|        | CLAYEY SAND                     |
|        | SILT, CLAYEY SAND               |
|        | Shale                           |
|        | Siltstone                       |
|        | SILTY SAND                      |
|        | Poorly Graded SAND              |
|        | Poorly Graded SAND with CLAY    |
|        | Poorly Graded SAND with SILT    |
|        | Well graded SAND                |
|        | Well Graded SAND with CLAY      |
|        | Well Graded SAND with SILT      |
|        | Topsoil                         |
|        | Gravel or Conglomerate 1        |
|        | Subgraywacke                    |
|        | Interbedded Sandstone and Shale |
|        | Quartzite                       |
|        | Schist                          |
|        | Schist                          |
|        | Gneiss                          |
|        | Gneiss                          |
|        | Granite 1                       |
|        | Void                            |
|        | Water                           |
|        | Undefined                       |
|        | Water Table during drilling     |
|        | Water Table after drilling      |

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

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



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CHAMPLAIN HUDSON POWER EXPRESS  
SEGMENT 3 - PACKAGE 2 - FORT ANN TO KINGSBURY  
PLAN AND PROFILE - HDD 21A, CONDUIT 2

|                    |            |
|--------------------|------------|
| KIEWIT PROJECT NO. | 21162      |
| CHA PROJECT NO.    | 066076     |
| DRAWING NO.        | C-317A.1   |
| DATE               | 03/22/2023 |

DRAWN BY: ES DESIGNED BY: ES APPROVED BY: JEO SCALE AS NOTED DATE



## Appendix F

### Proposed Soil Properties for CHPE Segment 3 – Package 2 HDDs



Proposed Soil Properties for CHPE Segment 3 – Package 2 HDDs

| Soil Type                             | N     | Wet unit wgt, pcf | Dry unit wgt, pcf | Bouyant unit wgt, pcf | $\Phi$ , ° | Undrained Shear strength, su, psf | Maximum Shear Modulus, psi* |
|---------------------------------------|-------|-------------------|-------------------|-----------------------|------------|-----------------------------------|-----------------------------|
| Loose Sand                            | 4-10  | 115               | 105               | 53                    | 30         | ---                               | 200                         |
| Med. Dense Sand                       | 10-30 | 125               | 110               | 63                    | 34         | ---                               | 500                         |
| V Soft to Soft clay                   | 0-4   | 100               | 70                | 38                    | ---        | 450                               | 200                         |
| Med Stiff Clay (approx. 40 feet deep) | 4-8   | 110               | 80                | 48                    | ---        | 800                               | 300                         |
| Stiff Clay (approx. 80 ft deep)       | 8-16  | 120               | 100               | 58                    | ---        | 1200                              | 400                         |
| Loose Silt                            | 4-10  | 100               | 80                | 38                    | 28         | ---                               | 50                          |
| Med Dense Silt                        | 10-30 | 110               | 90                | 48                    | 32         | ---                               | 100                         |
| Rock Fill/Highly Weather Rock         | >50   | 140               | 120               | 80                    | 37         | ---                               | 1000                        |
| Jointed Rock Mass – Shale             | ---   | 170               | 160               | 110                   | 37         | 3000 psi                          | 2000 psi                    |

- where BoreAid default values are less than these shear moduli, can use the default values, but may tend to be overly conservative.



## Appendix G

### Bridge As-Builts



ALAN

CROSS SECTION

۱۰۰ / جلد ہفتم

of improved Con

Pesin Brook 112

Tying Section of Prison between  
Halfway Creek and Fort Smith Bridge  
showing Wash nail section West side

روزنامہ خبریں

PROFIL

‘ $\nabla \cdot \mathbf{v} = 0$ ’

See Masonry Plan See 69-25636

Exclusions on this plan refer to Barge &  
Canada Return.

APPROPRIATION

DE LAWARE & HUDSON CO

SARATOGA DIVISION.

## PROPOSED CHANGES

at Old Canal Crossing.

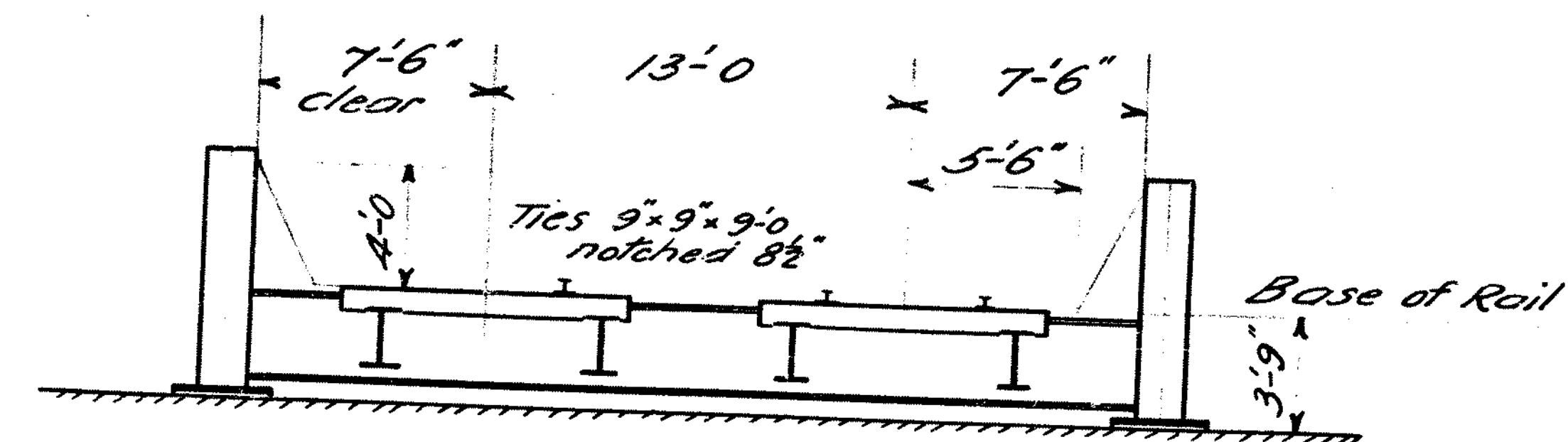
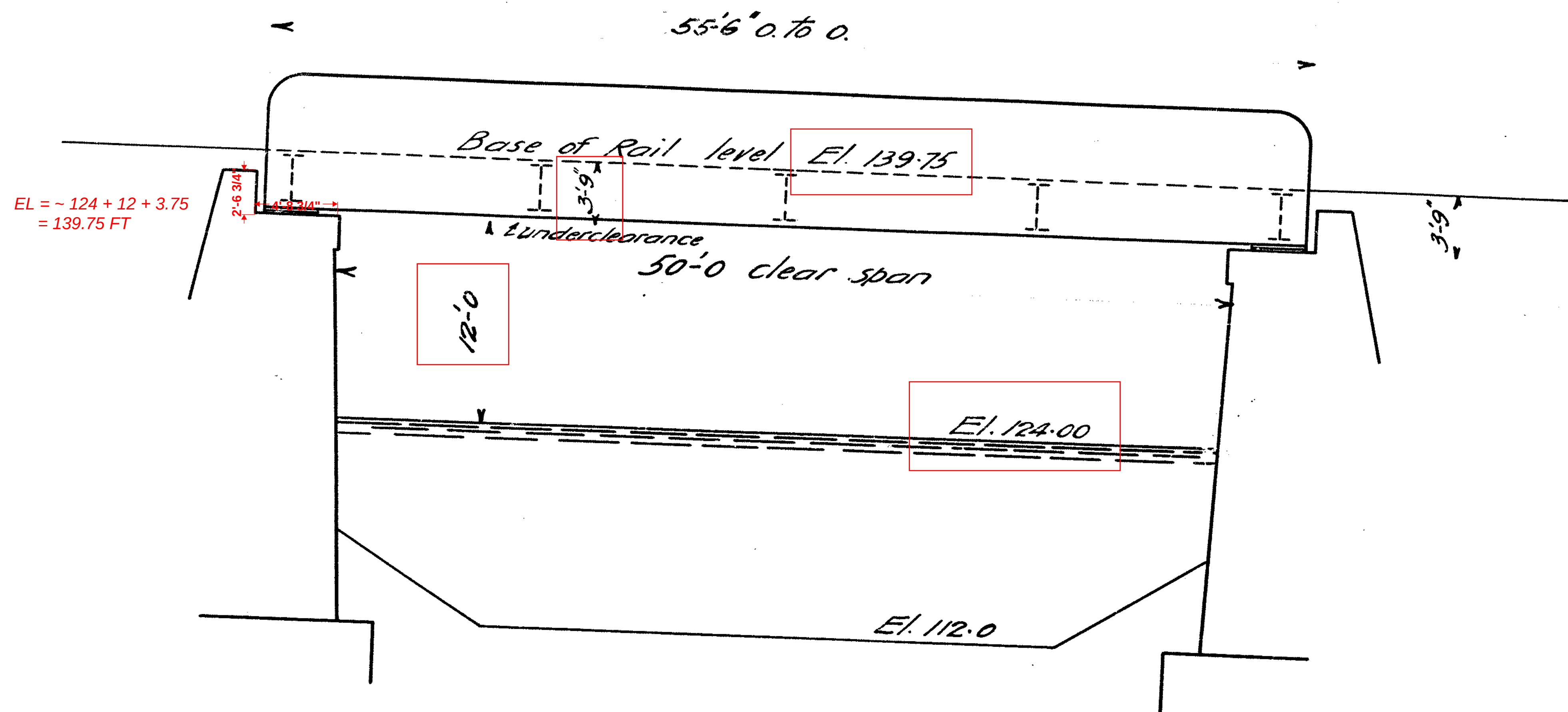
FORT ANN, N.Y.

2.500 00 Chief Engineer Grade 155  
A. J. V. N. 1 Dec. 31 '91

|    |       |
|----|-------|
| 90 | 25076 |
|----|-------|

100-443887-100





End View showing clearances

Live load Cooper's E.60.

Impact  $1 = 5 \left( \frac{300}{L + 300} \right)$

U.S. Tension Dead & Live 16000\* per # net sec.  
" Compression " " 16000-70% but not over 15000 per #"

Max End shear including impact 10000\* per #

Rivets { Shearing 10,000\* per #  
Bearing 20,000

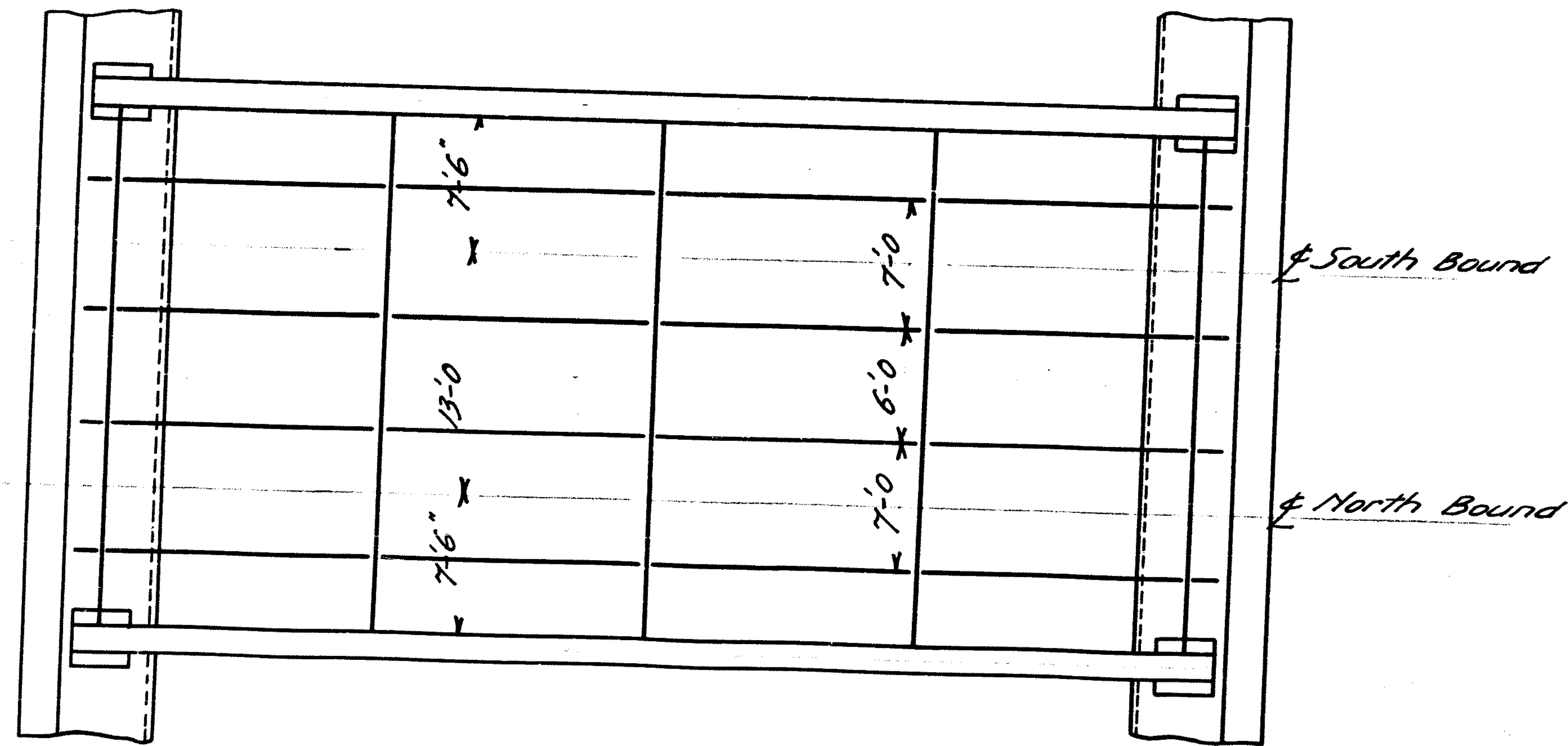
Field Rivets reduced 20%

Bearing on Masonry 600\* per #

Material and Workmanship in accordance with D. and H. Co's specification 1904.

One Shop Coat of Oil

Ship to D. and H. Co. % Jas. MacMartin  
Chief Engineer  
Whitehall N.Y.



BR 67.13

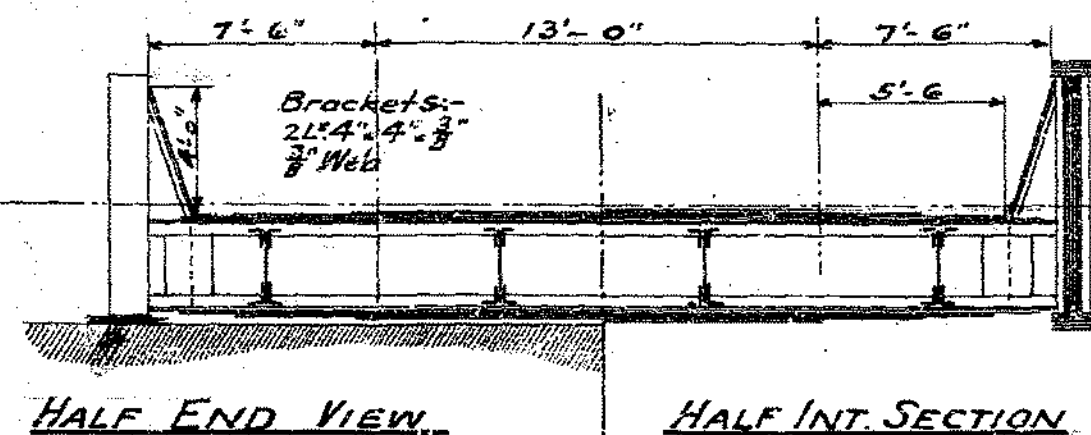
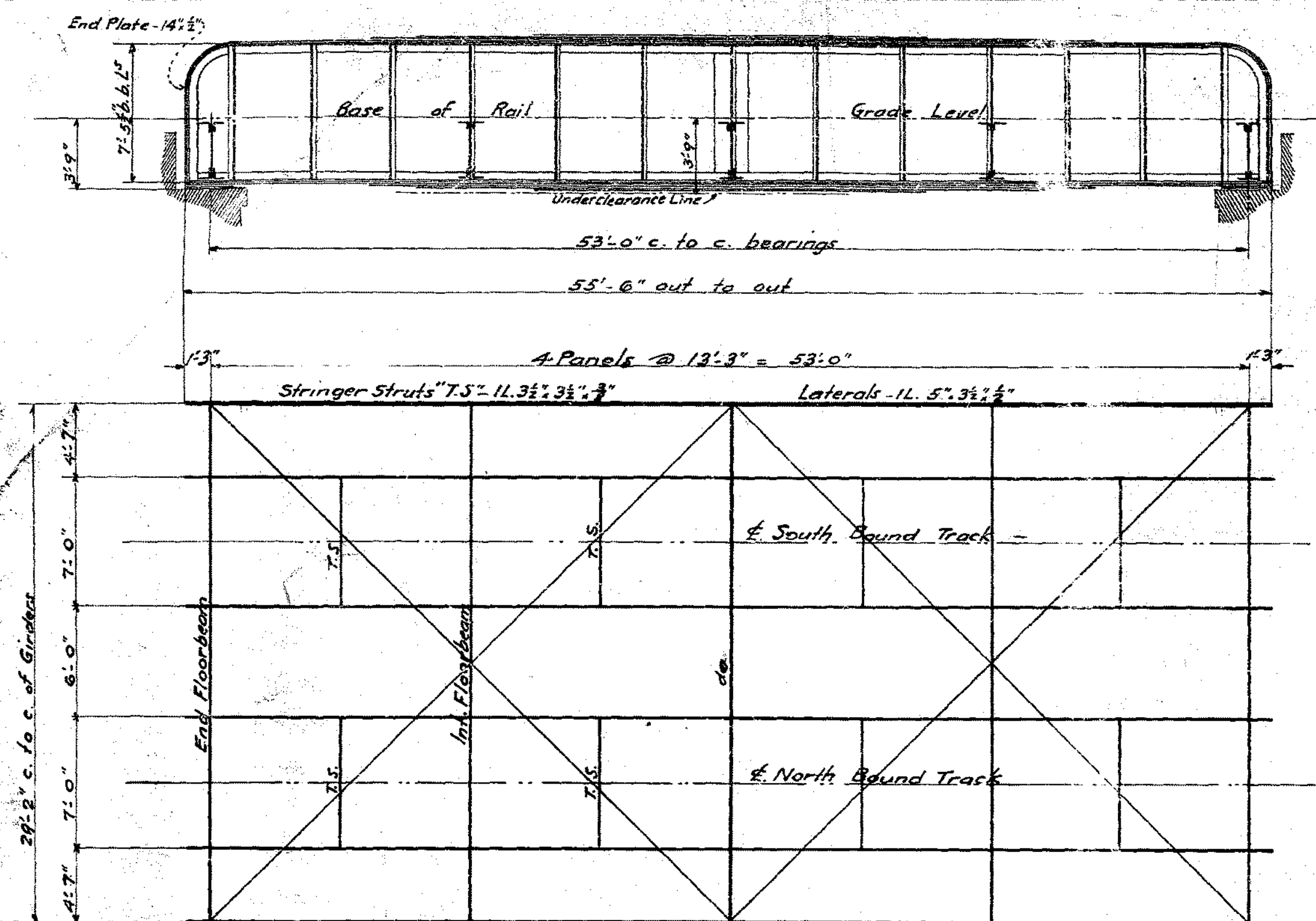
**DELAWARE & HUDSON CO.**  
SARATOGA DIVISION  
**SPAN DIAGRAM**  
BRIDGE 63. 0.22 MILES NORTH  
**FORT ANN N.Y.**

Office of Chief Engineer  
Albany N.Y. Scale 1/8" = 1'-0"  
Oct. 3. 1913.

129

24831





**Reaction:** D = 48 900\*  
L = 270 700\*  
I = 200 400\*  
320 000

**MAIN GIRDERS:-**  
**Shear** D = 37 300\*  
L = 183 800\*  
I = 136 000\*  
357 100\*  
@ 10 000 = 35.7"  
Web 8 7/8" x 1/2" = 38.9"  
**End Stiffeners:-**  
2 1/2" x 6" x 3/8" Curved  
2 1/2" x 5" x 3/8" Fills  
**Int. Stiffeners:-**  
2 1/2" x 5" x 3/8" Fills

**Moment** D = 7 110 000\*  
L = 37 750 000\*  
I = 27 920 000\*  
72 780 000\*  
@ 89.5 = 813 000\*  
@ 16 000 = 50.8"  
Web = 4.90"  
2 1/2" x 6" x 3/8" = 16.9" = 13.9" net  
1 Cov. 14" x 1/2" = 9.6" = 8.25" - Full length Top and Bottom  
1 " 14" x 1/2" = 9.6" = 8.25" - 37' Top and Bottom  
1 " 14" x 1/2" = 9.6" = 8.25" - 32' "  
1 " 14" x 1/2" = 8.8" = 7.5" - 20' "  
51.05" net

**STRINGERS:-**  
**Shear** D = 2 100\*  
L = 56 000\*  
I = 53 600\*  
117 700\*  
@ 10 000 = 11.2"  
Web 3 1/2" x 1/2" = 13.6"  
(No Int. Stiffeners)

**Moment** D = 80 000\*  
L = 1 780 000\*  
I = 1 700 000\*  
3 380 000\*  
@ 27.4 = 130 000\*  
@ 16 000 = 8.1"  
Web = 1.7"  
2 1/2" x 4" x 3/8" = 9.5" = 8.5" net  
(6' leg vertical) 10.2" net

**END FLOORBEAMS:-**  
**Shear** D = 10 900\*  
L = 129 000\*  
I = 117 700\*  
237 600\*  
@ 10 000 = 23.8"  
Web 3 1/2" x 1/2" = 27.0"

**Moment** D = 1 010 000\*  
L = 12 530 000\*  
I = 11 430 000\*  
24 970 000\*  
@ 36.5 = 684 000\*  
@ 16 000 = 42.8"  
Web = 3.4"  
2 1/2" x 6" x 3/8" = 16.9" = 13.9" net  
1 Cov. 14" x 1/2" = 10.5" = 9.0" - 25' Top and Bottom  
1 " 14" x 1/2" = 9.6" = 8.25" - 22' "  
1 " 14" x 1/2" = 9.6" = 8.25" - 15' "  
42.8" net

**INT. FLOORBEAMS:-**  
**Shear** D = 14 800\*  
L = 150 000\*  
I = 127 800\*  
292 300\*  
@ 10 000 = 29.2"  
Web 3 1/2" x 1/2" = 29.3"

**Moment** D = 1 390 000\*  
L = 14 580 000\*  
I = 12 400 000\*  
28 370 000\*  
@ 36.5 = 777 000\*  
@ 16 000 = 48.6"  
Web = 3.7"  
2 1/2" x 6" x 3/8" = 16.9" = 13.9" net  
1 Cov. 14" x 1/2" = 9.6" = 8.25" - 26' Top and Bottom  
1 " 14" x 1/2" = 9.6" = 8.25" - 23' "  
1 " 14" x 1/2" = 8.8" = 7.5" - 19' "  
1 " 14" x 1/2" = 8.8" = 7.5" - 13' "  
49.1" net

**ASSUMED DEAD LOAD:-**  
Girders = 1140\*  
Floor = 1430\*  
Track = 800\*  
3370\* per lin. ft.

**ASSUMED LIVE LOAD:- E 60**

**SPECIFICATIONS:-** D & H. 1904, modified May 29, 1913  
**MATERIAL:-** Soft Medium O. H. Steel  
**REFER TO:-** Purchaser's Span Diagram 129124831  
**TIES:-** 9" x 9" notched to 8"

APPROVED  
Oct. 16, 1914.

BR 6713  
**DELAWARE & HUDSON CO.**  
**SARATOGA DIVISION**  
**BRIDGE No 63 - 0.22 MI. NORTH, FORT ANN, N.Y.**  
**I-D.T. Thro. Pl. Girder Span, 55'-6" o. to o.**

**STRESS SHEET**  
Scale 1/4" = 1'-0"

**Inquiry No E 77961**  
**Order No E 850**

Revised Oct. 13, 1914

**American Bridge Company**  
New York Office  
30 Church St. Sept. 23, 1914  
**DRAWING No B 5729**



