STA. 15030+00 TO STA. 15045+00 PLAN VIEW

SCALE: 1" = 50'

STA. 15045+00 TO STA. 15060+00 PLAN VIEW

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15030+00 TO STA. 15060+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. C-402

DRAWN BY: JJE DESIGNED BY: JTM APPROVED BY: JPR
SCALE AS NOTED
REV. NO. X
DATE 12/16/2022

1 2 3 4

LANDS N/F OF
GEORGE ALTIMORE
&
STEPHANIE SAFKA
TM# 60.13-2-2

LANDS N/F OF
DELAWARE & HUDSON RAILWAY CORP.
TM# 68.-1-10.1

LANDS N/F OF
ROSS CHEVROLET-OLDS INC
TM# 60.09-2-8.5

LANDS N/F OF
ROSS CHEVROLET-OLDS INC
TM# 60.13-1-13

RAILROAD R.O.W. & BOUNDARY

RAILROAD R.O.W. & BOUNDARY

COMPOST FILTER SOCK (TYP.)

MATCH LINE STA. 15060+00

MATCH LINE STA. 15075+00

APPROXIMATE LIMITS OF HDD #3

FIBER MANHOLE 032
N: 1716696.97
E: 782149.87

SPLICE LOCATION 032
N: 1716624.94
E: 782144.15

WETLAND PROTECTION (TYP.)

LIMIT OF CLEARING (TYP.)

LIMIT OF DISTURBANCE AT HDD WORK ZONE

A

STA. 15060+00 TO STA. 15075+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet

MATCH LINE STA. 15075+00

MATCH LINE STA. 15090+00

APPROXIMATE LIMITS OF HDD #3

B

STA. 15075+00 TO STA. 15090+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15060+00 TO STA. 15090+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-403

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | DATE: 12/16/2022 | REV. NO. X

STA. 15090+00 TO STA. 15105+00 PLAN VIEW
SCALE: 1" = 50'

STA. 15105+00 TO STA. 15120+00 PLAN VIEW
SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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

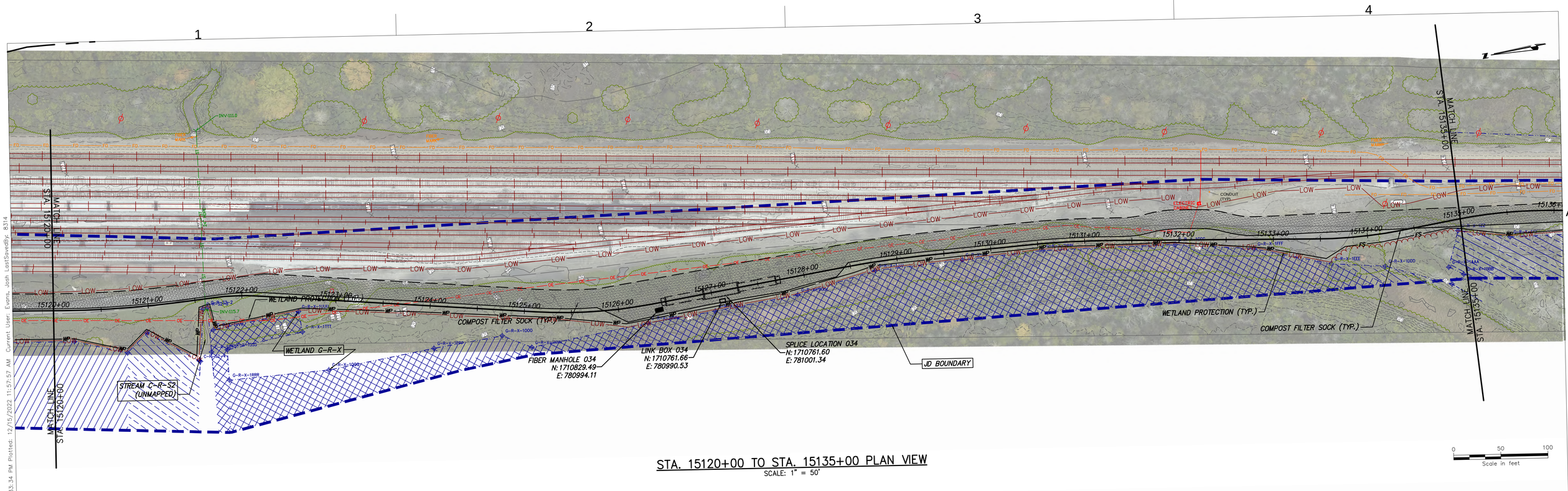
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15090+00 TO STA. 15120+00 EROSION AND SEDIMENT CONTROL PLAN

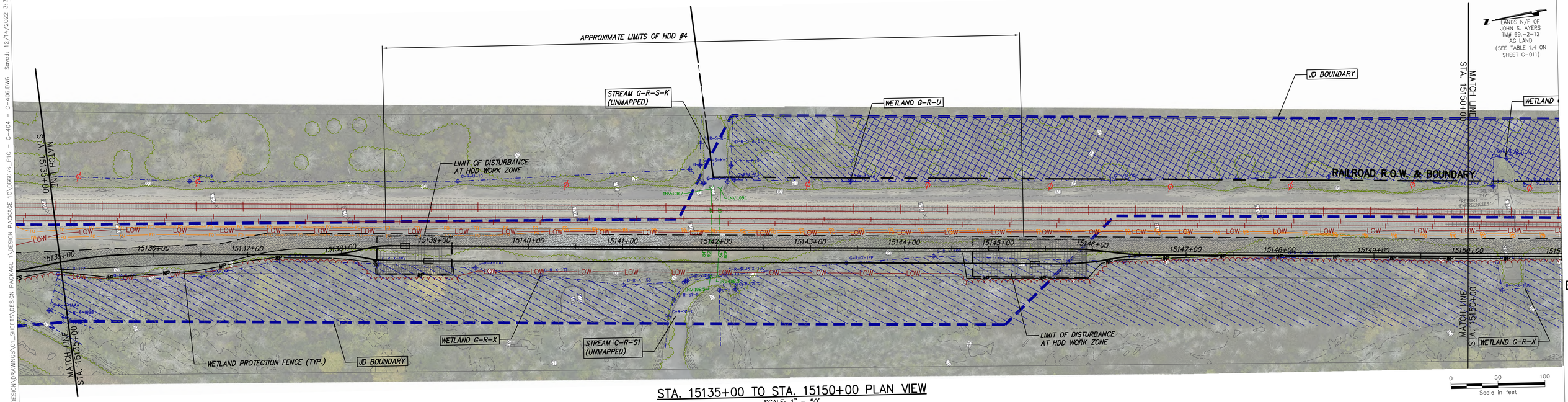
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-404

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022

File: v:\PROJECTS\NY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_PTC - C-404 - C-406.DWG Saved: 12/14/2022 3:33:34 PM Plotted: 12/15/2022 11:57:09 AM Current User: Evans, Josh LastSavedBy: 8314



STA. 15120+00 TO STA. 15135+00 PLAN VIEW
SCALE: 1" = 50'



STA. 15135+00 TO STA. 15150+00 PLAN VIEW
SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15120+00 TO STA. 15150+00 EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X

KIEWIT PROJECT NO.
21162
CHA PROJECT NO.
066076
DRAWING NO.
C-405
DATE 12/16/2022

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_P1C - C-404 - C-406.DWG Saved: 12/14/2022 3:33:34 PM Plotted: 12/15/2022 11:57:57 AM Current User: Evans, Josh LastSavedBy: 8314

LANDS N/F OF
JOHN S. AYERS
TM# 69.-2-12
AG LAND
(SEE TABLE 1.4 ON
SHEET G-011)

MATCH LINE
STA. 15150+00

WETLAND G-R-U

JD BOUNDARY

WETLAND PROTECTION

MATCH LINE
STA. 15165+00

CONCRETE
WASHOUT
(TYP.)

LIMIT OF WORK (TYP.)

COMPOST FILTER SOCK (TYP.)

LIMIT OF CLEARING (TYP.)

SPLICE LOCATION 035
N:1707573.09
E:780449.96

FIBER MANHOLE 035
N:1707506.31
E:780429.00

LIMIT OF DISTURBANCE
AT HDD WORK ZONE

WETLAND G-R-X

RAILROAD R.O.W. & BOUNDARY

APPROXIMATE LIMITS OF HDD #4A

STA. 15150+00 TO STA. 15165+00 PLAN VIEW

SCALE: 1" = 50'

0 50 100
Scale in feet

APPROXIMATE LIMITS OF HDD #5

STREAM G-R-S-L
(CHAMPLAIN CANAL, CLASS C/C)

MATCH LINE
STA. 15180+00

LIMIT OF DISTURBANCE
AT HDD WORK ZONE

LANDS N/F OF
MELANIE CHAPLIN
TM# 69.-2-11

APPROXIMATE LIMITS OF HDD 4A

APPROXIMATE WETLAND
BASED ON AERIAL MAPPING

APPROXIMATE MAPPED NYSDEC
CLASS C/ STANDARD C STREAM
BASED ON AERIAL MAPPING

STA. 15165+00 TO STA. 15180+00 PLAN VIEW

SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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

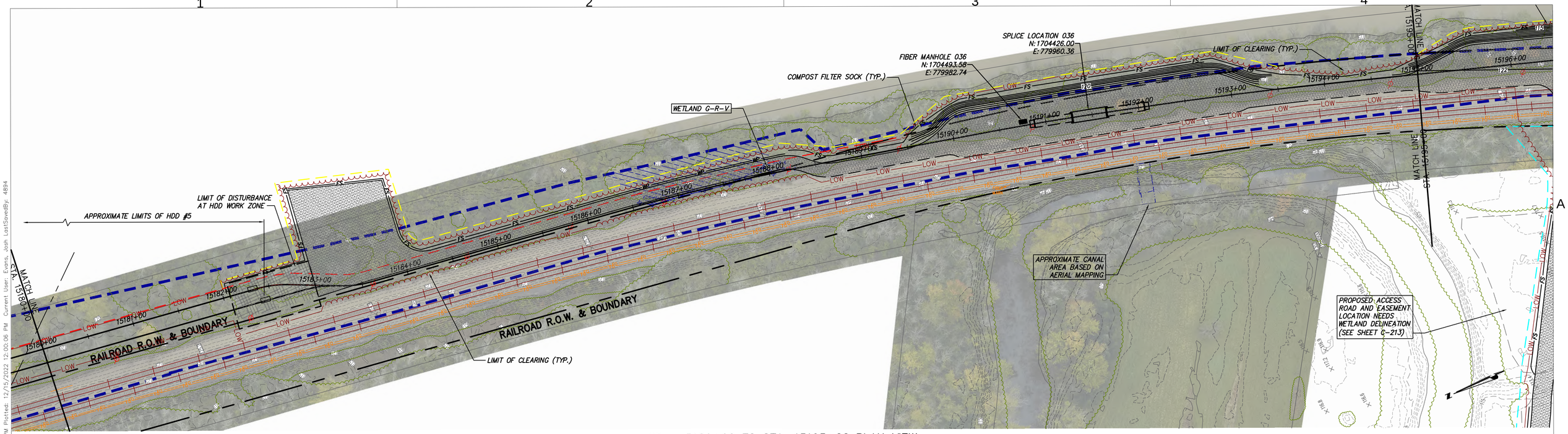
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15150+00 TO STA. 15180+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-406

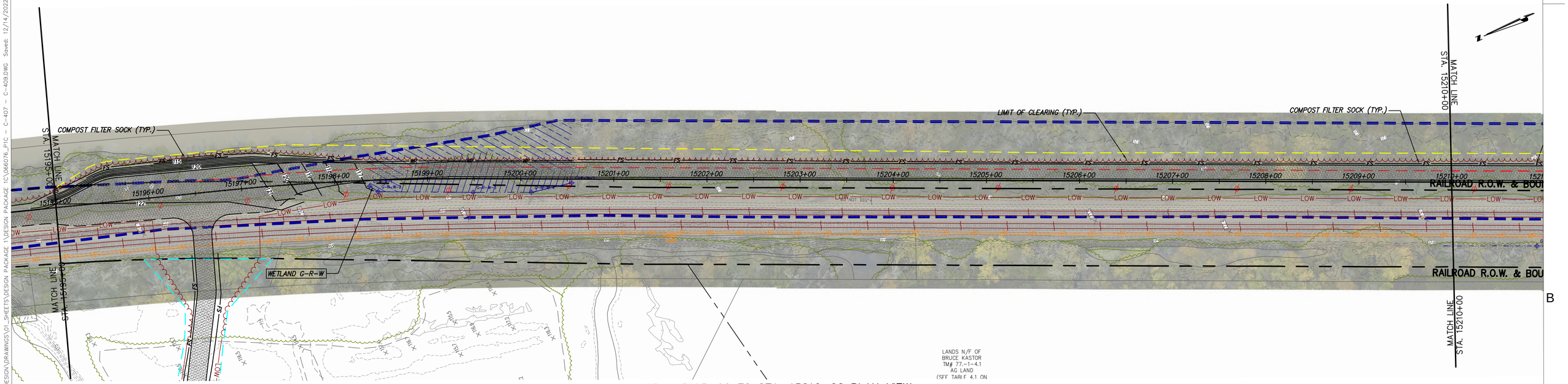
DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_PIG - C-404 - C-406.DWG Saved: 12/14/2022 3:33:34 PM Plotted: 12/15/2022 11:58:38 AM Current User: Evans, Josh LastSavedBy: 8314



STA. 15180+00 TO STA. 15195+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet



STA. 15195+00 TO STA. 15210+00 PLAN VIEW
SCALE: 1" = 50'

0 50 100
Scale in feet

CHPE Champlain Hudson Power Express

Kiewit

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

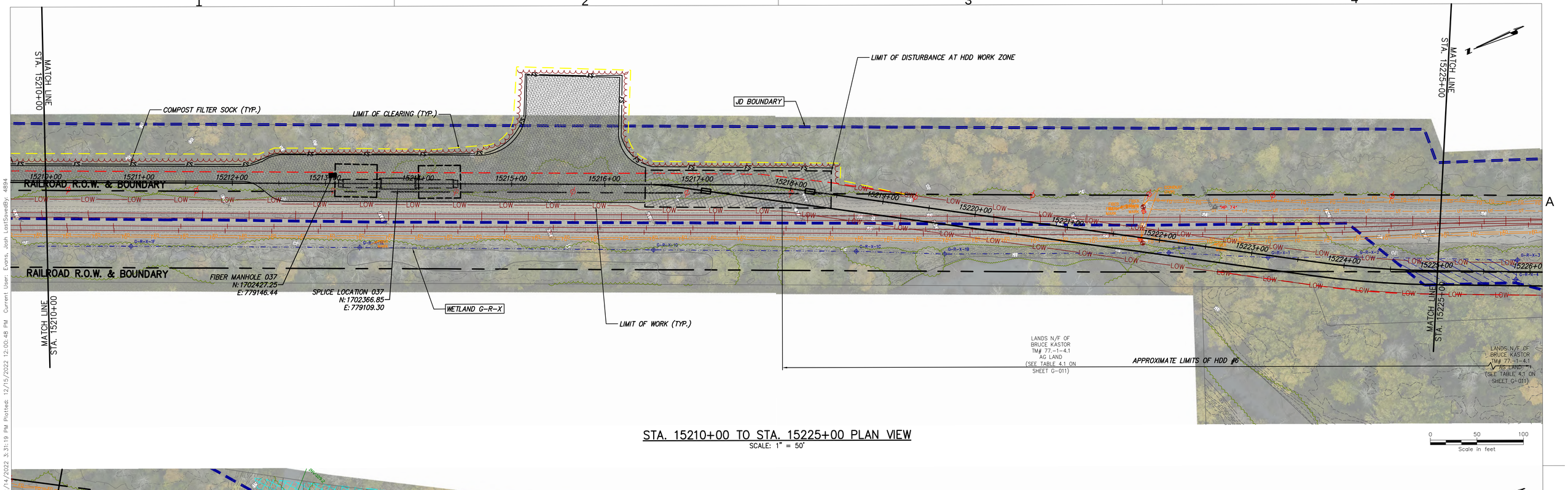
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15180+00 TO STA. 15210+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-407

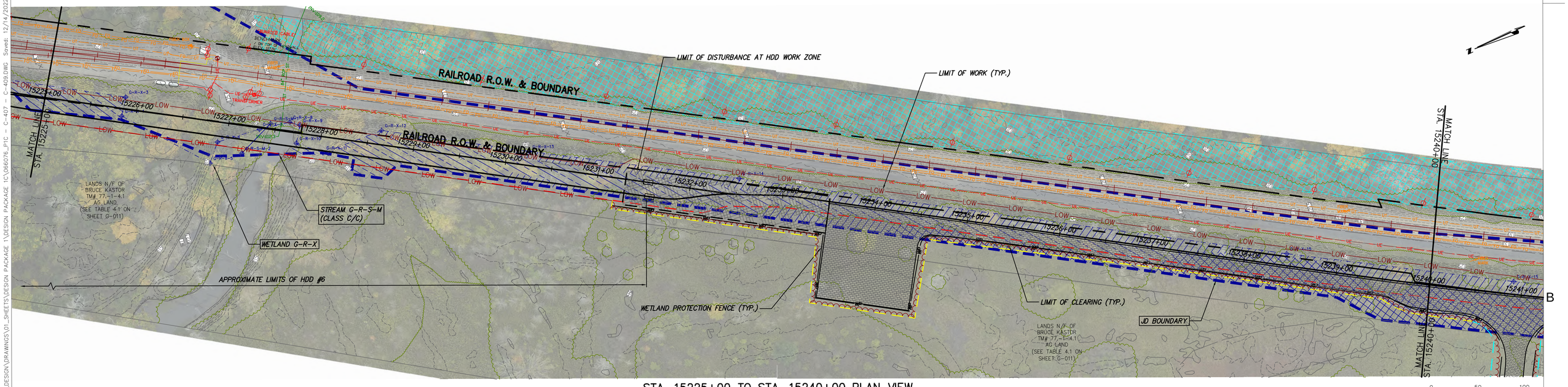
DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_PIC - C-407 - C-409.DWG Saved: 12/14/2022 3:31:19 PM Plotted: 12/15/2022 12:00:06 PM Current User: Evans, Josh LastSavedBy: 4894



STA. 15210+00 TO STA. 15225+00 PLAN VIEW

SCALE: 1" = 50'



STA. 15225+00 TO STA. 15240+00 PLAN VIEW

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

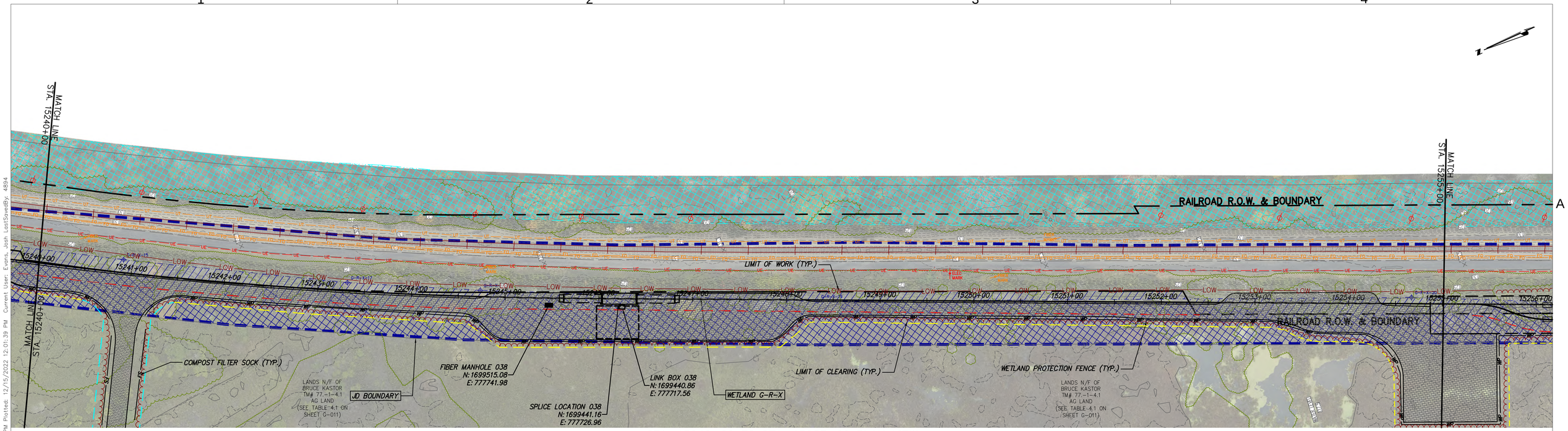
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

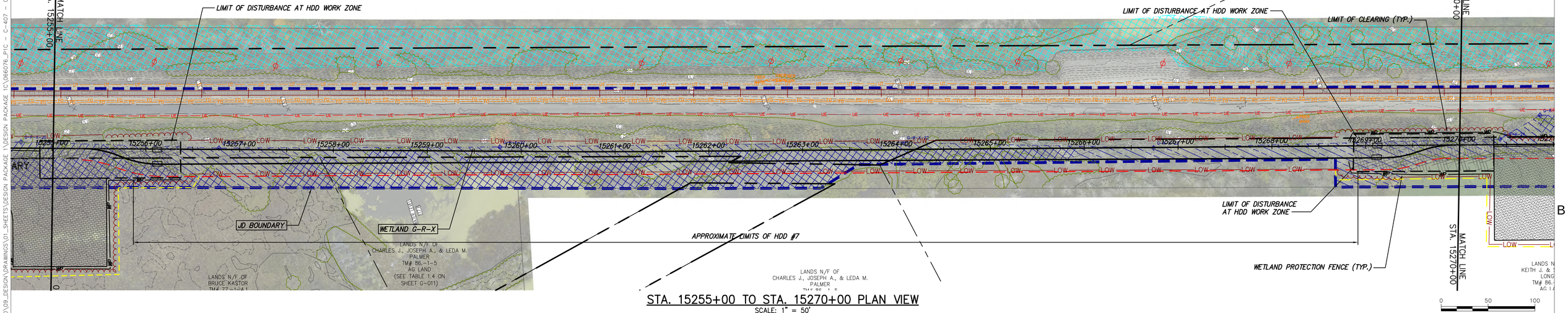
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15210+00 TO STA. 15240+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-408

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022



STA. 15240+00 TO STA. 15255+00 PLAN VIEW
SCALE: 1" = 50'



STA. 15255+00 TO STA. 15270+00 PLAN VIEW
SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

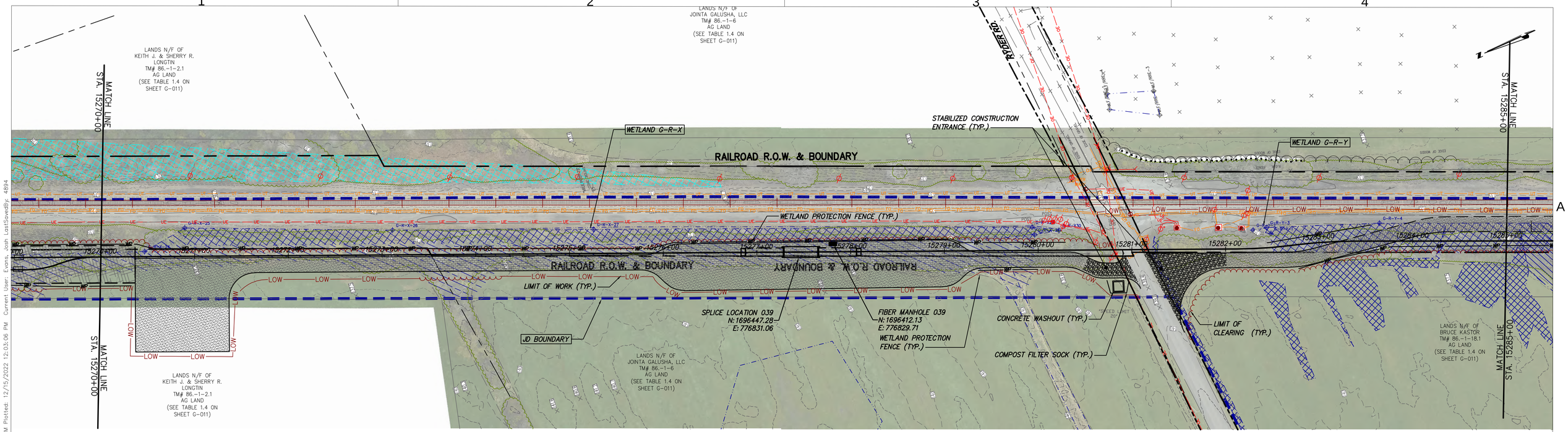
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15240+00 TO STA. 15270+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-409

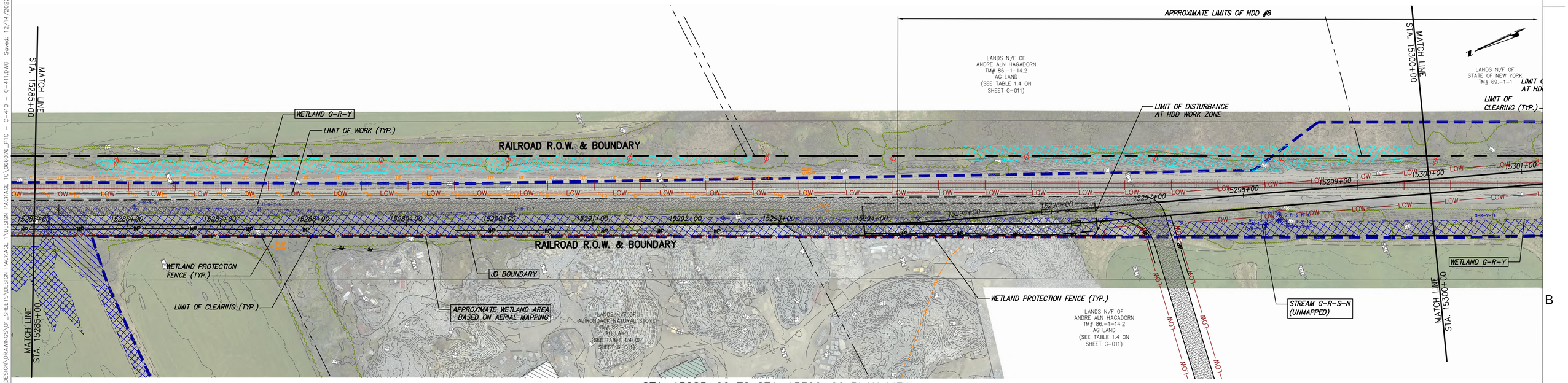
DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | REV. NO.: X | DATE: 12/16/2022



STA. 15270+00 TO STA. 15285+00 PLAN VIEW

SCALE: 1" = 50'

0 50 100
Scale in feet



STA. 15285+00 TO STA. 15300+00 PLAN VIEW

SCALE: 1" = 50'

0 50 100
Scale in feet

Champlain Hudson Power Express

Kiewit

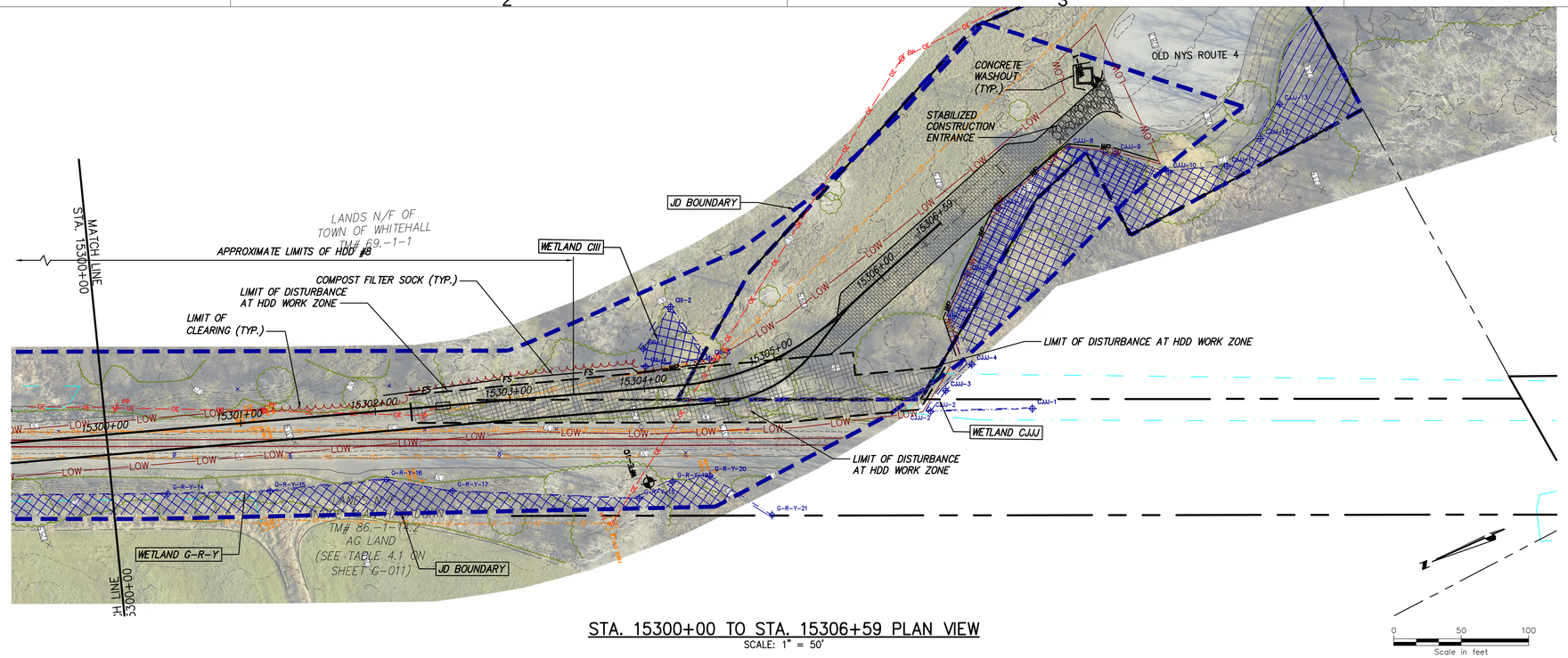
CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 • www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
STA. 15270+00 TO STA. 15300+00 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-410

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE: AS NOTED | REV. NO. X | DATE: 12/16/2022



STA. 15300+00 TO STA. 15306+59 PLAN VIEW

SCALE: 1" = 50'

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN

STA. 15300+00 TO STA. 15306+56 EROSION AND SEDIMENT CONTROL PLAN

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-411

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_P1C - C-410 - C-411.DWG Saved: 12/14/2022 3:18:12 PM Plotted: 12/15/2022 12:03:29 PM Current User: Evans, Josh LastSavedBy: 4894

DESIGN SEGMENT 3 PACKAGE 1C WORK ZONE TRAFFIC CONTROL MAIN STAGES

MAIN STAGE	STA. START	STA. END	ROUTE(S)	CLOSURE TYPE	PLAN SHEET	WORK NOTES
1	15000+00	15001+00	LOWER BELLAMY ST	LANE CLOSURE WITH ALTERNATING ONE WAY TRAFFIC	C-502	TRENCHING & CONDUIT INSTALLATION
2	15001+00	15002+70	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
3	15002+70	15003+10	CLINTON AVE	ONE WAY OPERATION, PEDESTRIAN DETOUR, WESTBOUND DETOUR	C-503/C-504	TRENCHING & CONDUIT INSTALLATION
4	15003+10	15015+50	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
5	15015+50	15074+35	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
6	15017+40		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
7	15036+10		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
8	15067+20		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
9	15074+35	15093+30	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
10	15093+30	15138+60	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
11	15095+30		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
12	15127+10		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
13	15138+60	15144+90	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
14	15144+90	15163+00	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
15	15159+50		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
16	15163+00	15172+00	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
17	15172+00	15175+15	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
18	15175+15	15182+25	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
19	15182+25	15218+10	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
20	15191+40		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
21	15213+75		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
22	15218+10	15231+50	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
23	15231+50	15256+00	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
24	15246+20		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
25	15256+00	15269+05	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
26	15269+05	15280+75	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
27	15277+45		CP RAIL R.O.W.			SPLICE VAULT INTSALLATION
28	15280+75	15281+25	CP RAIL/RYDER RD	LANE CLOSURE WITH ALTERNATING ONE WAY TRAFFIC	C-502	TRENCHING & CONDUIT INSTALLATION
29	15281+25	15295+90	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION
30	15295+90	15304+15	CP RAIL R.O.W.			HORIZONTAL DIRECTIONAL DRILLING INSTALLATION
31	15304+15	15306+55	CP RAIL R.O.W.			TRENCHING & CONDUIT INSTALLATION

NOTES:

1. ALL TRAFFIC CONTROL AND WORK AREA PROTECTION DEVICES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, LATEST EDITION, EXCEPT AS NOTED.
2. ALL TEMPORARY TRAFFIC CONTROL AND WORK AREA PROTECTION DEVICES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS AND APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK.
3. ALL MAINTENANCE AND PROTECTION OF TRAFFIC WORK SHALL CONFORM TO THE CONTRACT DRAWINGS. MAINTENANCE AND PROTECTION OF TRAFFIC SCHEMES SHOWN ON THE CONTRACT DRAWINGS SHALL NOT BE CHANGED BY THE CONTRACTOR WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.
4. THE TEMPORARY MAINTENANCE OF TRAFFIC AND WORK AREA PROTECTION DEVICE LOCATIONS SHOWN ON THE CONTRACT DRAWINGS ARE SCHEMATIC EXCEPT AS NOTED. LOCATION OF TRAFFIC CONTROL DEVICES MAY BE MODIFIED TO MEET FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
5. ALL CLOSURES SHALL BE COORDINATED WITH THE ENGINEER. A SCHEDULE OF WORK SHALL BE SUBMITTED AT LEAST TWO WEEKS IN ADVANCE FOR APPROVAL BY THE ENGINEER.
6. THERE MAY BE ONGOING CONSTRUCTION CONTRACTS WITHIN THE VICINITY OF THE WORK AREA. DO NOT MOVE, MODIFY, OR RELOCATE ANY ITEM ASSOCIATED WITH THESE CONTRACTS WITHOUT PROPER APPROVAL OF AND COORDINATION WITH THE ENGINEER.
7. PERFORM WORK IN SUCH A MANNER AND SEQUENCE AS TO INTERFERE AS LITTLE AS POSSIBLE WITH THE PASSAGE OF VEHICLES, PEDESTRIANS, AND OTHER KINDS OF PUBLIC TRAFFIC.
8. ALL TEMPORARY MAINTENANCE OF TRAFFIC AND WORK AREA PROTECTION SIGN SUPPORTS AND MOUNTINGS SHALL BE IN CONFORMANCE WITH NYSDOT STANDARD SHEETS AND STANDARD SPECIFICATIONS.
9. ALL CONSTRUCTION SIGNS SHALL BE COVERED WITH THICK PLASTIC WHEN THE WORK THEY ARE INTENDED FOR IS NOT IN PROGRESS.
10. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF THE WORK TO WHICH THEY APPLY, AND SHALL BE MAINTAINED BY THE CONTRACTOR THEREAFTER. THE DEVICES SHALL REMAIN IN PLACE AS LONG AS THEY ARE APPLICABLE.
11. TRAFFIC CONTROL DEVICES SHALL NOT BE PLACED AT ANY LOCATIONS WHERE THEY MAY OBSCURE OR INTERFERE WITH THE MOTORIST'S VIEW OF APPROACHING, MERGING, OR INTERSECTING TRAFFIC; OBSTRUCT OTHER TEMPORARY OR PERMANENT TRAFFIC CONTROL DEVICES WHICH ARE STILL APPLICABLE TO ROADWAY CONDITIONS; MISLEAD OR MISDIRECT MOTORISTS, OR ARE BLOCKED BY OTHER TEMPORARY OR PERMANENT OBJECTS.
12. ALL EXISTING ROADWAY ITEMS SUCH AS GUIDE RAILS, PAVEMENT MARKINGS, CURBS, SIGNALS AND SIGNS DAMAGED BY THE CONTRACTOR SHALL BE RESTORED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST.
13. TRAFFIC LANES AND OTHER AREAS CLOSED BY THE CONTRACTOR DURING PERMITTED WORK HOURS SHALL BE CLEARED OF ALL MATERIAL, EQUIPMENT, AND DEBRIS, AND SAFELY REOPENED TO TRAFFIC BY THE END OF THE WORK PERIOD UNLESS OTHERWISE INDICATED ON THE CONTRACT DRAWINGS.
14. IF THE CONTRACTOR REQUIRES A LANE CLOSURE TO PERFORM OPERATIONS, THEY MAY DO SO WITH THE APPROVAL OF THE ENGINEER. ANY LANE CLOSURES WILL BE SHORT TERM AND IN ACCORDANCE WITH NYS STANDARD SHEETS UNLESS OTHERWISE SHOWN IN CONTRACT PLANS.
15. NO WORK ACTIVITY OR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIAL SHOULD OCCUR WITHIN A BUFFER SPACE.
16. CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 20' IN THE ACTIVE WORK SPACE.
17. ALL OPEN TRENCH EXCAVATIONS SHALL BE BACKFILLED OR COVERED BY A STEEL PLATE (HS-20 LOAD RATED) AT THE END OF EACH WORK DAY, OR AS DIRECTED BY THE ENGINEER.
18. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL COORDINATE WITH CP RAILROAD FOR RAILROAD FLAGGING FOR ALL WORK IN THE VICINITY OF ANY RAILROAD GRADE CROSSING AND WHENEVER WITHIN THE RAILROAD ROW.
19. ALL ADDITIONAL TEMPORARY SIGNAGE, NOT COVERED IN FHWA MUTCD, SHALL COMPLY WITH NYS SUPPLEMENT TO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
20. DURING NON-WORK HOURS, LEAVE DRUMS AND TCB IN PLACE, OR AS DIRECTED AT THE ENGINEER.
21. DURING WINTER MORATORIUM, COVER EXCAVATIONS WITH TEMPORARY ASPHALT AND OPEN ALL LANES TO TRAFFIC.
22. THE WZTC DETAILS CONTAINED IN THE CONTRACT PLANS SUPPLEMENT THE CURRENT NYSDOT STANDARD SHEETS. REFERENCE SHALL BE MADE TO THE APPLICABLE NYSDOT STANDARD SHEETS FOR ALL NOTES AND TABLES. THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY NYSDOT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEET(S) UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
23. MAINTAIN SAFE AND ADEQUATE ACCESS FOR INTERSECTING ROADWAYS, HOMES, AND BUSINESSES, AT ALL TIMES, TO THE SATISFACTION OF THE ENGINEER.
24. ACCESS TO RESIDENTIAL AND COMMERCIAL DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. UNLESS OTHER AGREEMENTS SUITABLE TO THE PROPERTY OWNERS CAN BE MADE, PROPERTY OWNERS WHOSE DRIVEWAYS WILL BE MADE INACCESSIBLE SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST 24 HOURS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. THE CONTRACTOR SHALL MAINTAIN ACCESS TO COMMERCIAL DRIVEWAYS AT ALL TIMES WHEN A FACILITY IS IN USE. FOR MULTIPLE ACCESS PROPERTIES, ONLY ONE DRIVEWAY MAY BE CLOSED AT ANY ONE TIME. ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE, OR AS DIRECTED BY THE ENGINEER.
25. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE FOLLOWING HOLIDAY WORK RESTRICTIONS ARE APPLICABLE TO THIS PROJECT. DURING THESE HOLIDAY PERIODS, THE CONTRACTOR WILL NOT BE ALLOWED TO PERFORM ANY WORK THAT WILL BE DISRUPTIVE TO TRAFFIC, INCLUDING BUT NOT LIMITED TO LANE CLOSURES. LANE CLOSURES WILL NOT BE PERMITTED DURING THE FOLLOWING STATE RECOGNIZED HOLIDAYS:

    1) CHRISTMAS DAY - SUNDAY, DECEMBER 25, 2022
    2) NEW YEAR'S DAY - SUNDAY, JANUARY 1, 2023
    3) MEMORIAL DAY - MONDAY, MAY 29, 2023
    4) INDEPENDENCE DAY - TUESDAY, JULY 4, 2023
    5) LABOR DAY - MONDAY, SEPTEMBER 4, 2023
    6) THANKSGIVING DAY - THURSDAY, NOVEMBER 23, 2023
    7) CHRISTMAS DAY - MONDAY, DECEMBER 25, 2023

    8) NEW YEAR'S DAY - MONDAY, JANUARY 1, 2024
    9) MEMORIAL DAY - MONDAY, MAY 27, 2024
    10) INDEPENDENCE DAY - THURSDAY, JULY 4, 2024
    11) LABOR DAY - MONDAY, SEPTEMBER 2, 2024
    12) THANKSGIVING DAY - THURSDAY, NOVEMBER 28, 2024
    13) CHRISTMAS DAY - WEDNESDAY, DECEMBER 25, 2024

    14) NEW YEAR'S DAY - WEDNESDAY, JANUARY 1, 2025
    15) MEMORIAL DAY - MONDAY, MAY 26, 2025
    16) INDEPENDENCE DAY - FRIDAY, JULY 4, 2025
    17) LABOR DAY - MONDAY, SEPTEMBER 1, 2025
    18) THANKSGIVING DAY - THURSDAY, NOVEMBER 27, 2025
    19) CHRISTMAS DAY - THURSDAY, DECEMBER 25, 2025

26. LANE CLOSURES SHALL BE SUSPENDED AS FOLLOWS:

    - BEGINNING 6AM, FRIDAY DECEMBER 23, 2022 AND ENDING 6AM, MONDAY DECEMBER 26, 2022
    - BEGINNING 6AM, FRIDAY DECEMBER 30, 2022 AND ENDING 6AM, TUESDAY JANUARY 3, 2023
    - BEGINNING 6AM, FRIDAY MAY 26, 2023 AND ENDING 6AM, TUESDAY MAY 30, 2023
    - BEGINNING 6AM, SATURDAY JULY 1, 2023 AND ENDING 6AM, WEDNESDAY JULY 5, 2023
    - BEGINNING 6AM, FRIDAY SEPTEMBER 1, 2023 AND ENDING 6AM, TUESDAY SEPTEMBER 5, 2023
    - BEGINNING 6AM, WEDNESDAY NOVEMBER 22, 2023 AND ENDING 6AM, MONDAY NOVEMBER 27, 2023
    - BEGINNING 6AM, FRIDAY DECEMBER 22, 2023 AND ENDING 6AM, TUESDAY DECEMBER 26, 2023

    - BEGINNING 6AM, FRIDAY DECEMBER 29, 2023 AND ENDING 6AM, TUESDAY JANUARY 2, 2024
    - BEGINNING 6AM, FRIDAY MAY 24, 2024 AND ENDING 6AM, TUESDAY MAY 28, 2024
    - BEGINNING 6AM, WEDNESDAY JULY 3, 2024 AND ENDING 6AM, MONDAY JULY 8, 2024
    - BEGINNING 6AM, FRIDAY AUGUST 30, 2024 AND ENDING 6AM, TUESDAY SEPTEMBER 3, 2024
    - BEGINNING 6AM, WEDNESDAY NOVEMBER 27, 2024 AND ENDING 6AM, MONDAY DECEMBER 2, 2024
    - BEGINNING 6AM, TUESDAY DECEMBER 24, 2024 AND ENDING 6AM, MONDAY DECEMBER 30, 2024

    - BEGINNING 6AM, TUESDAY DECEMBER 30, 2024 AND ENDING 6AM, FRIDAY JANUARY 3, 2025
    - BEGINNING 6AM, FRIDAY MAY 23, 2025 AND ENDING 6AM, TUESDAY MAY 27, 2025
    - BEGINNING 6AM, THURSDAY JULY 3, 2025 AND ENDING 6AM, MONDAY JULY 7, 2025
    - BEGINNING 6AM, FRIDAY AUGUST 29, 2025 AND ENDING 6AM, TUESDAY SEPTEMBER 2, 2025
    - BEGINNING 6AM, WEDNESDAY NOVEMBER 26, 2025 AND ENDING 6AM, MONDAY DECEMBER 1, 2025
    - BEGINNING 6AM, WEDNESDAY DECEMBER 24, 2025 AND ENDING 6AM, MONDAY DECEMBER 29, 2025

27. DURING WINTER STORM EVENTS, NO WORK WITHIN THE ROAD RIGHT-OF-WAY IS PERMITTED TO ALLOW FOR SNOW REMOVAL AND PLOWING ACTIVITIES.
28. ANY EARTHWORK DONE BETWEEN NOVEMBER 1ST AND APRIL 1ST MUST CONFORM TO NYSDOT STANDARD SPECIFICATION SECTION 203-1.01 P.

LEGEND

- TEMPORARY SIGN
- WORK ZONE
- DRUM
- TEMPORARY CONCRETE BARRIER (TCB)
- FLAGGER
- TYPE III BARRICADE
- TEMPORARY TRAFFIC FLOW ARROW

ABBREVIATIONS

FASU	FLASHING ARROW SIGN UNIT
FHWA	FEDERAL HIGHWAY ADMINISTRATION
MIN.	MINIMUM
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NYS	NEW YORK STATE
NYSDOT	NEW YORK STATE DEPARTMENT OF TRANSPORTATION
STA.	STATION

CHPE Champlain Hudson Power Express

Kiewit

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

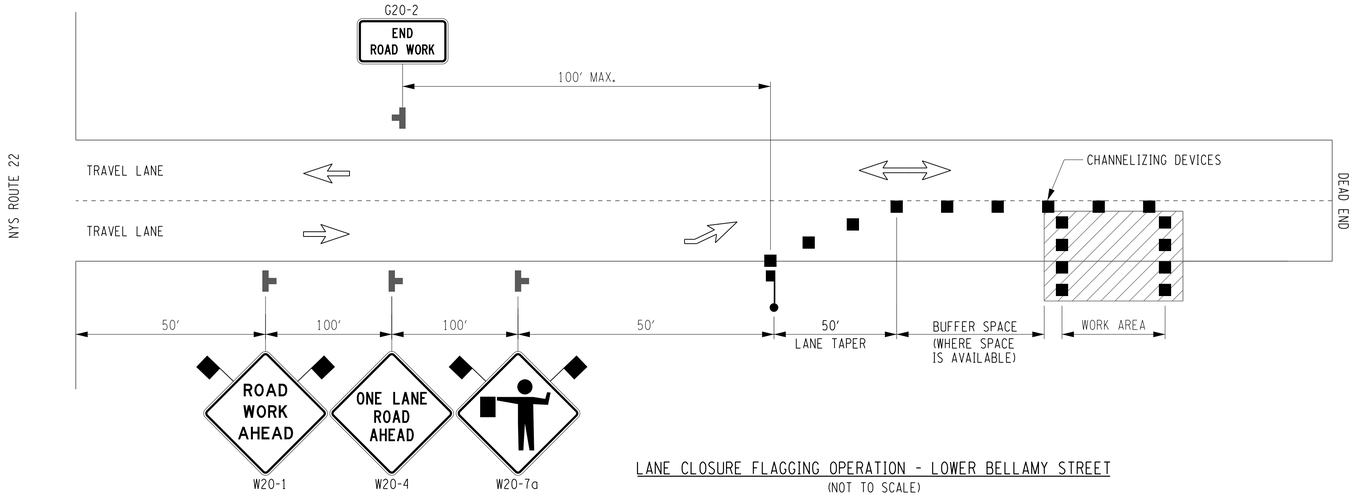
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JS	MH

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN

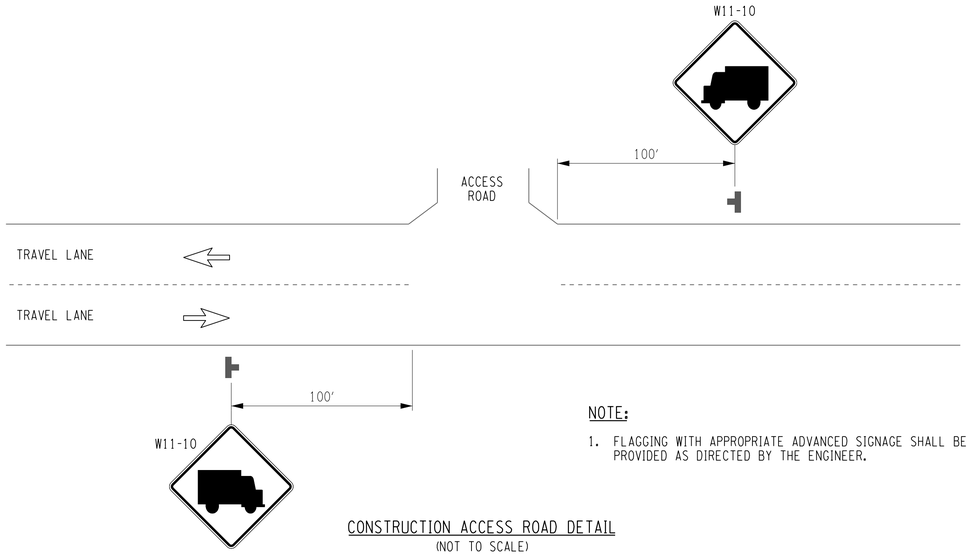
WORK ZONE TRAFFIC CONTROL NOTES
LEGEND AND ABBREVIATIONS

KIEWIT PROJECT NO. 21162
CHA PROJECT NO. 066076
DRAWING NO. **C-501**

DRAWN BY: JAH | DESIGNED BY: JPS | APPROVED BY: MDH | SCALE AS SHOWN | REV. NO. | DATE 12/16/2022



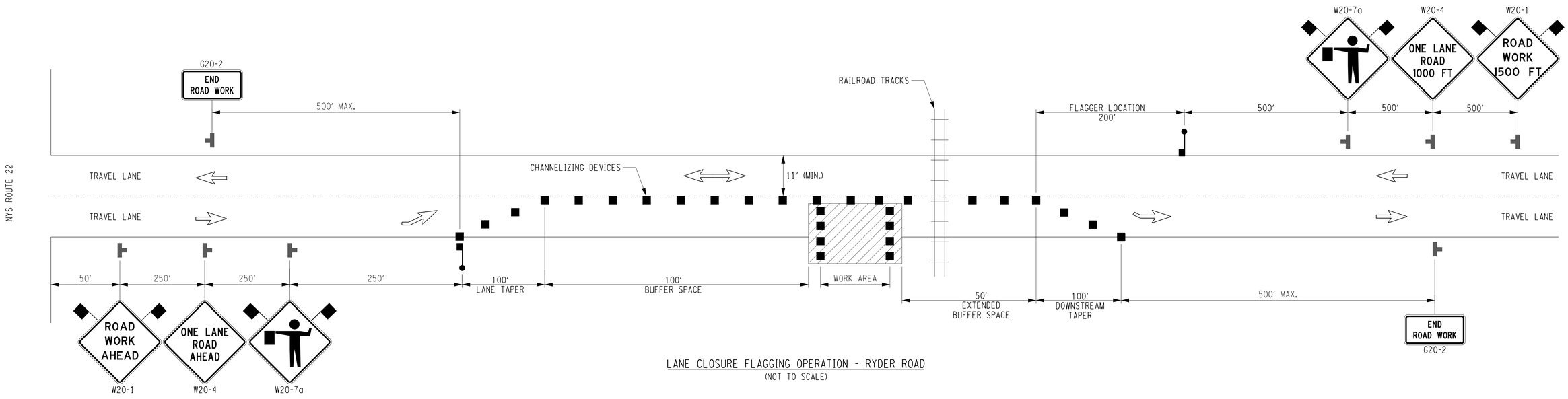
LANE CLOSURE FLAGGING OPERATION - LOWER BELLAMY STREET
(NOT TO SCALE)



NOTE:

1. FLAGGING WITH APPROPRIATE ADVANCED SIGNAGE SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.

CONSTRUCTION ACCESS ROAD DETAIL
(NOT TO SCALE)



LANE CLOSURE FLAGGING OPERATION - RYDER ROAD
(NOT TO SCALE)

FILE NAME = V:\Projects\AMY\KS\066076.000\09_Design\Drawings\Hwy\Segment 3\PIC\G66076_cph_s3_plc_wztc_02.dgn

CHPE Champlain Hudson Power Express

Kiewit

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

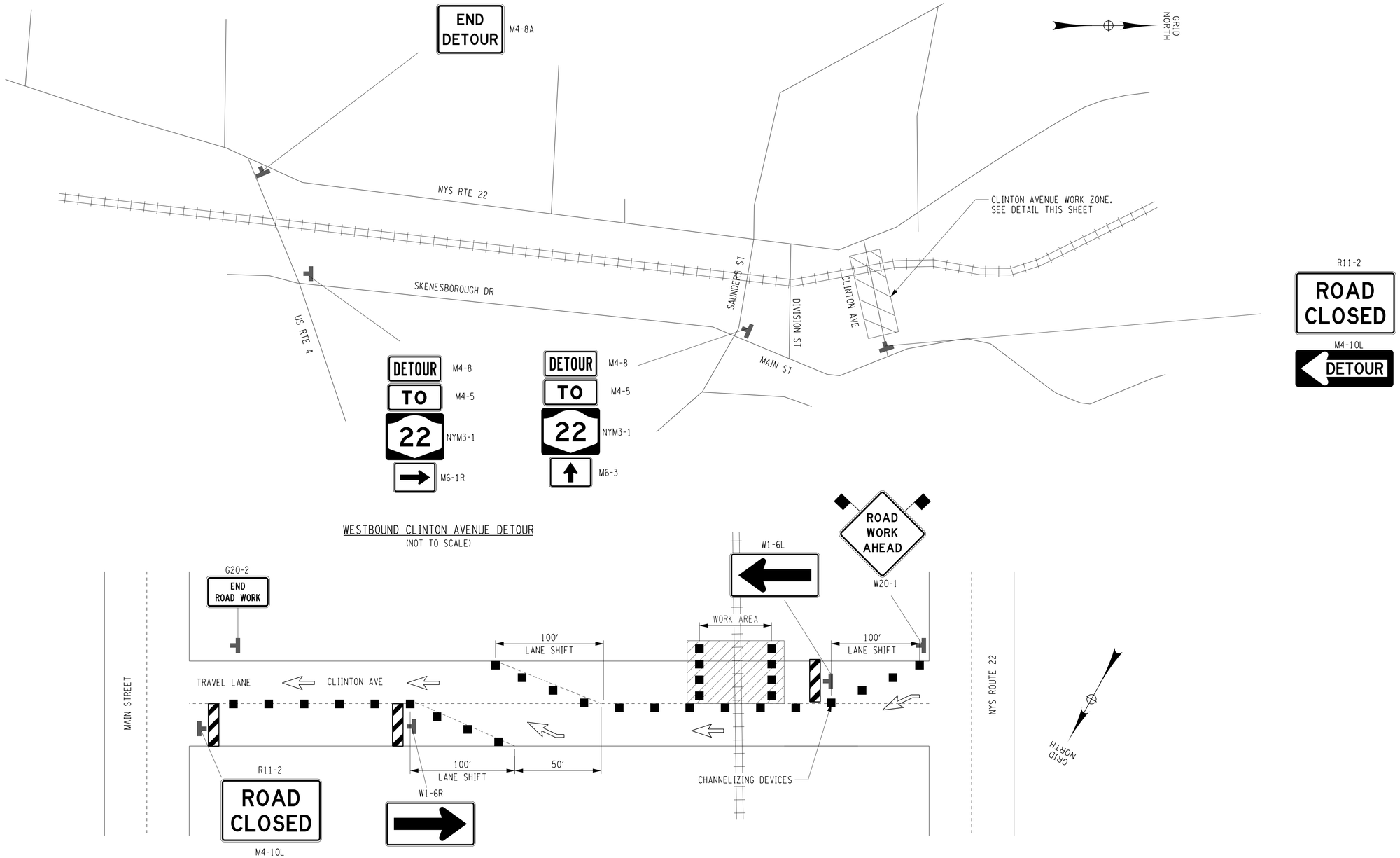
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JS	MH

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN

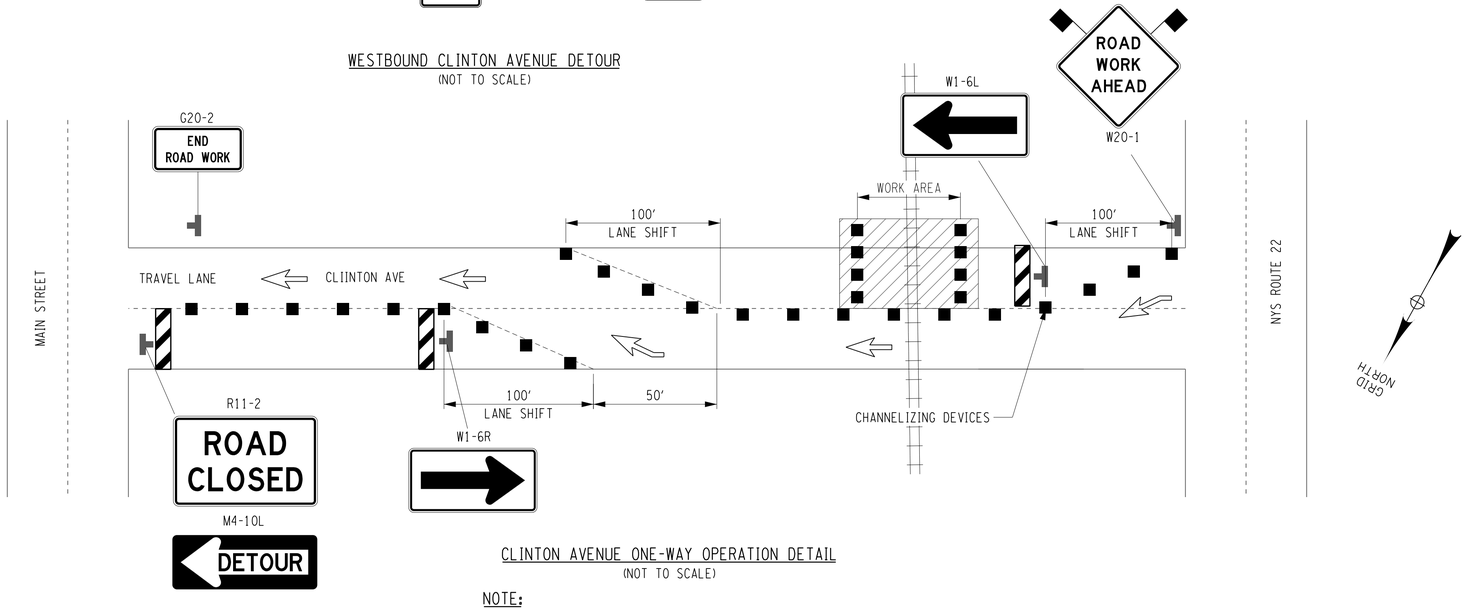
WORK ZONE TRAFFIC CONTROL DETAILS
SHEET 1 OF 3

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-502

DRAWN BY: JAH | DESIGNED BY: JPS | APPROVED BY: MDH | SCALE AS SHOWN | REV. NO. | DATE 12/16/2022



WESTBOUND CLINTON AVENUE DETOUR
(NOT TO SCALE)



CLINTON AVENUE ONE-WAY OPERATION DETAIL
(NOT TO SCALE)

NOTE:

1. DETAIL SHOWS WORK ZONE AND CLOSURE ON SOUTH SIDE OF CLINTON AVENUE. REPOSITION TRAFFIC CONTROL DEVICES AS NECESSARY FOR NORTH SIDE CLOSURE.
2. SEE C-504 FOR PEDESTRIAN DETOUR PLAN.

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JS	MH

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN

WORK ZONE TRAFFIC CONTROL DETAILS
SHEET 2 OF 3

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-503

DRAWN BY: JAH | DESIGNED BY: JPS | APPROVED BY: MDH | SCALE AS SHOWN | REV. NO. | DATE 12/16/2022

FILE NAME = V:\Projects\ANY\KG\066076.0000\09_Design\Drawings\Hwy\Segment 3\PIC\066076_cph_s3_plc_wztc_03.dgn

CLINTON AVE PEDESTRIAN DETOUR PLAN
(NOT TO SCALE)

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JS	MH

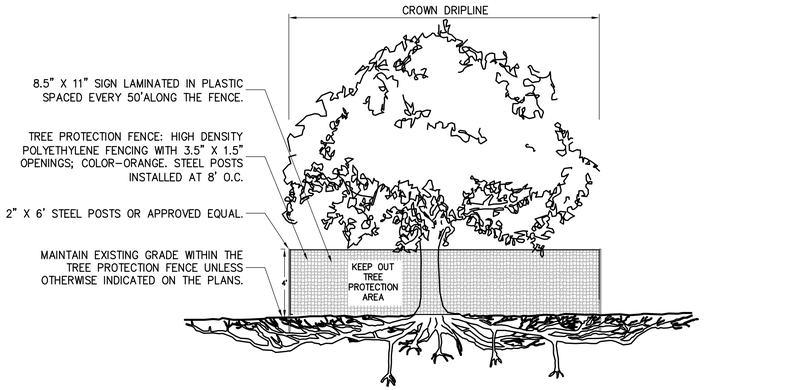
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN

WORK ZONE TRAFFIC CONTROL DETAILS
SHEET 3 OF 3

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-504

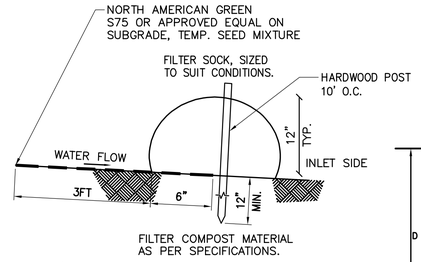
DRAWN BY: JAH | DESIGNED BY: JPS | APPROVED BY: MDH | SCALE AS SHOWN | REV. NO. | DATE 12/16/2022

FILE NAME = V:\Projects\ANY\K6\066076.000\09_Design\Drawings\Hwy\Segment 3\PlC\66076_cph_s3_plc_wztc_04.dgn



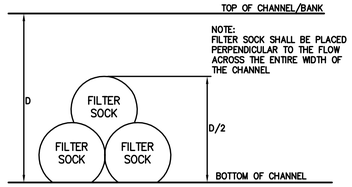
NOTES:
1. CONTRACTOR TO MAINTAIN INTEGRITY OF CONSTRUCTION FENCE FOR DURATION OF PROJECT.
2. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
3. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
4. SEE EROSION CONTROL PLANS FOR LOCATIONS OF TREE PROTECTION AREAS.

1 TREE PROTECTION
NOT TO SCALE



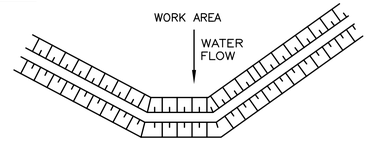
FILTER COMPOST MATERIAL AS PER SPECIFICATIONS.

NOTES:
1. ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS.
2. ALL FILTER SOCKS SHALL BE 12" DIAMETER OR LARGER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
4. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE OWNERS.
6. THE COMPOST FILTER BERM WILL BE REMOVED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE OWNERS.
7. INSTALL PERPENDICULAR TO FLOW.



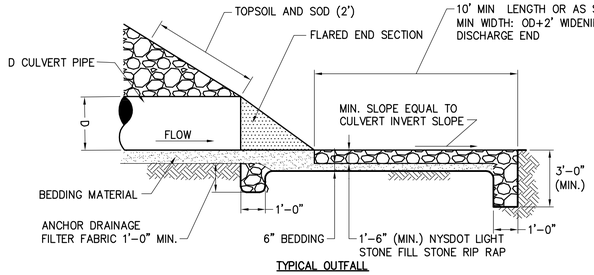
CHANNEL PLACEMENT

MAINTENANCE NOTES:
1. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
2. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES $\frac{1}{3}$ OF THE EXPOSED HEIGHT OF THE PRACTICE AND DISPOSED OF IN ACCORDANCE WITH THE SWPPP.
3. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED IN THE MANNER REQUIRED BY THE MANUFACTURER OR REPLACED WITHIN 24 HOURS OF INSPECTION NOTIFICATION.
4. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTO–DEGRADABLE FILTER SOCKS AFTER 1 YEAR. POLY–PROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
5. UPON STABILIZATION OF THE AREA CONTRIBUTORY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK SHALL BE REMOVED. FOR REMOVAL THE MESH CAN BE CUT AND COMPOST SPREAD AS AN ADDITIONAL MULCH TO ACT AS A SOIL SUPPLEMENT.

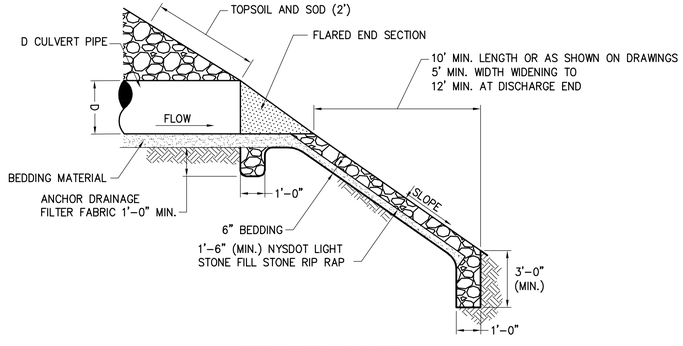


AT GRADE PLACEMENT

2 COMPOST FILTER SOCK DETAIL
SCALE: N.T.S.

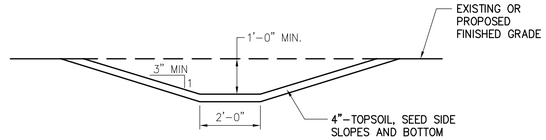


TYPICAL OUTFALL

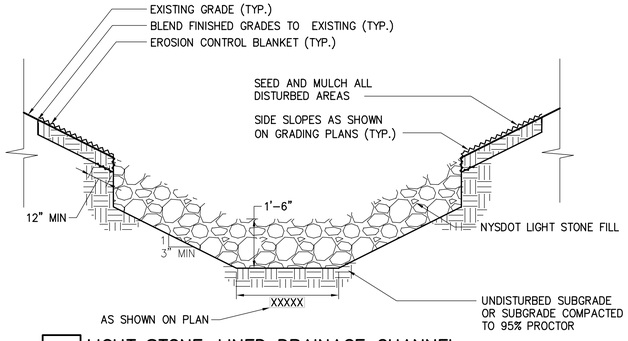


TYPICAL OUTFALL ON SLOPE

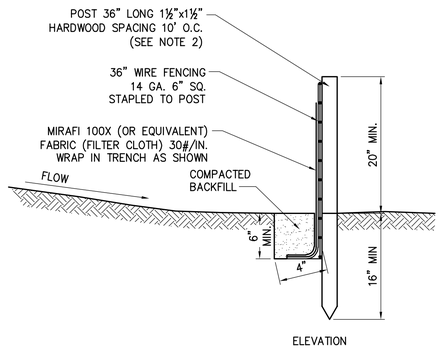
4 TYPICAL CULVERT OUTFALL RIP RAP
SCALE: N.T.S.



5 TYPICAL GRASS DRAINAGE SWALE
SCALE: N.T.S.



6 LIGHT STONE–LINED DRAINAGE CHANNEL
SCALE: N.T.S.



ELEVATION

NOTES:

1. TIE FABRIC TO WIRE FENCE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. IF EXTRA STRENGTH FABRIC (GREATER THAN 50#/INCH) IS USED, WIRE CAN BE DELETED IF POST SPACING IS REDUCED TO 6' O.C.
3. AT THE ENDS OF THE FENCING THE FIRST 20' SHALL BE TURNED UP THE SLOPE 2'.
4. POSTS SHOULD BE INCLINED TOWARD THE DIRECTION FLOW CAME FROM.
5. OVERLAP FABRIC A MINIMUM OF 6" AND FOLDED AT JOINTS. ATTACH FILTER FABRIC TO STAKES ALLOWING EXTENSION INTO TRENCH AS SHOWN; SECURE TO STAKES AS NOTED.
6. THE MAXIMUM AREA OF RUNOFF PER 100LF. OF FENCE SHALL NOT EXCEED 0.25 ACRES.
7. MAINTENANCE SHALL BE PERFORMED AS NECESSARY. THE FENCING SHALL BE CHECKED AFTER EVERY STORM TO ENSURE THEIR PROPER FUNCTIONING.
8. WHEN FENCE IS NO LONGER NEEDED, THE ACCUMULATED SILT, THE POSTS AND FABRIC SHALL BE REMOVED AND TRENCH BACK FILLED WITH TOPSOIL AND SEEDED.
9. FENCING SHOULD BE PLACED AS SHOWN ON THE DRAWING OR IF NOT SHOWN, 10' BEYOND THE TOE OF THE SLOPE AND AT A SPACING IN ACCORDANCE WITH THE TABLE.
10. EXCAVATE TRENCH AS PER DETAIL AND SET POSTS AT 10' O.C.
11. BACKFILL WITH COMPACTED, EXCAVATED SOIL FROM TRENCH.

3 SILT FENCE
SCALE: N.T.S.

CHPE Champlain Hudson Power Express

Kiewit

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

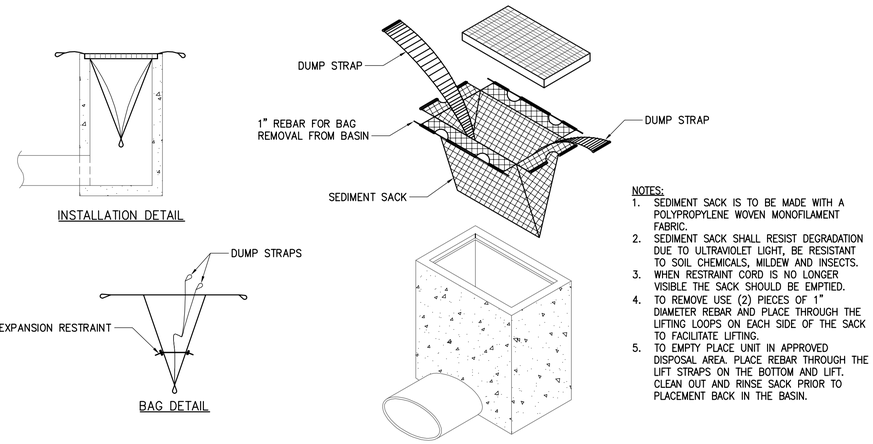
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
EROSION AND SEDIMENT CONTROL DETAILS

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-601

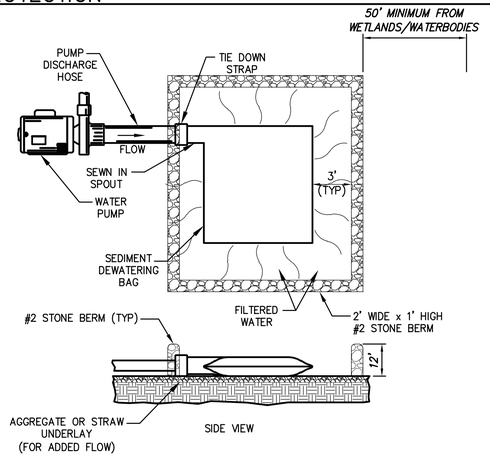
DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | DATE 12/16/2022 | REV. NO. X

File: V:\PROJECTS\ANY\V6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_PH1C – C-601.DWG Saved: 10/5/2022 5:15:03 PM Plotted: 12/15/2022 1:29:20 PM Current User: Evans, Josh LastSavedBy: 3042



NOTES:
1. SEDIMENT SACK IS TO BE MADE WITH A POLYPROPYLENE WOVEN MONOFILAMENT FABRIC.
2. SEDIMENT SACK SHALL RESIST DEGRADATION DUE TO ULTRAVIOLET LIGHT, BE RESISTANT TO SOIL CHEMICALS, MILDEW AND INSECTS.
3. WHEN RESTRAINT CORD IS NO LONGER VISIBLE THE SACK SHOULD BE EMPTIED.
4. TO REMOVE USE (2) PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE LIFTING.
5. TO EMPTY PLACE UNIT IN APPROVED DISPOSAL AREA. PLACE REBAR THROUGH THE LIFT STRAPS ON THE BOTTOM AND LIFT. CLEAN OUT AND RINSE SACK PRIOR TO PLACEMENT BACK IN THE BASIN.

1 INLET PROTECTION
SCALE: N.T.S.

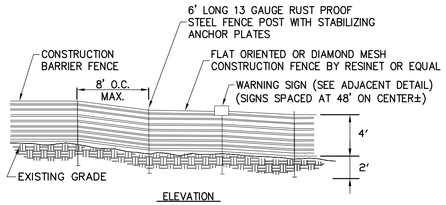


NOTE: THE SEDIMENT DEWATERING BAG WILL BE MANUFACTURED IN THE U.S.A. FROM A NONWOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

SEDIMENT DEWATERING BAG SPECIFICATIONS

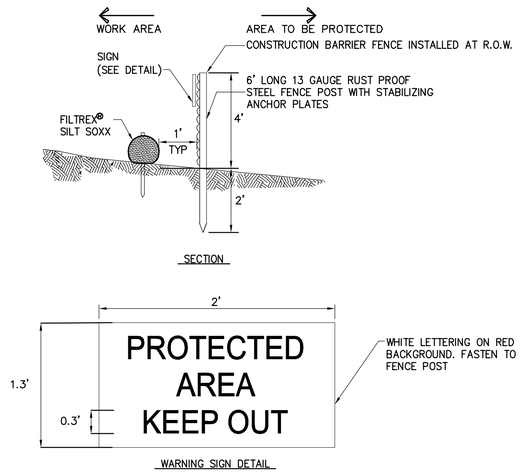
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205) x 0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50 x 50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80) X 0.36 (80)
UV Resistence	ASTM D 4355	%	70
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.180 (80)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	3866 (95)
Permittivity	ASTM D 4491	Sec⁻¹	1.2

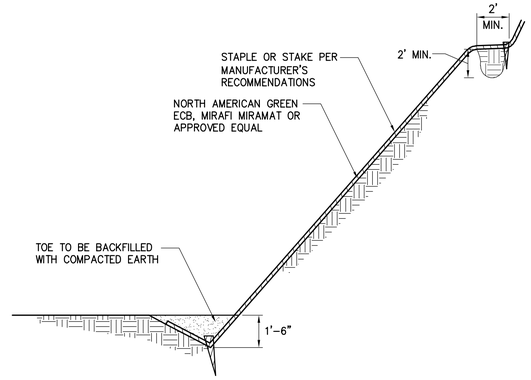
4 SEDIMENT DEWATERING BAG
SCALE: N.T.S.



1. CONSTRUCTION BARRIER FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS PRIOR TO BEGINNING ANY WORK ADJACENT TO THESE AREAS.
2. THE CONTRACTOR SHALL INSTALL AT THE BEGINNING OF THE CONTRACT, AND MAINTAIN THROUGHOUT ITS DURATION.
3. SET BOTTOM OF CONSTRUCTION BARRIER FENCE FLUSH WITH EXISTING GRADE.
4. CONSTRUCTION BARRIER FENCE SHALL HAVE A MINIMUM TENSILE STRENGTH OF 2000 PSI.

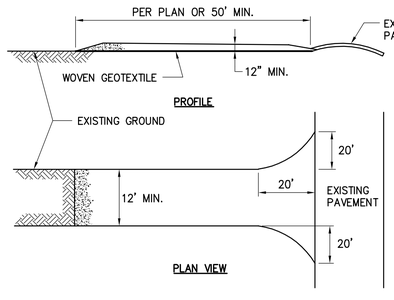
2 WETLAND PROTECTION FENCE
SCALE: N.T.S.





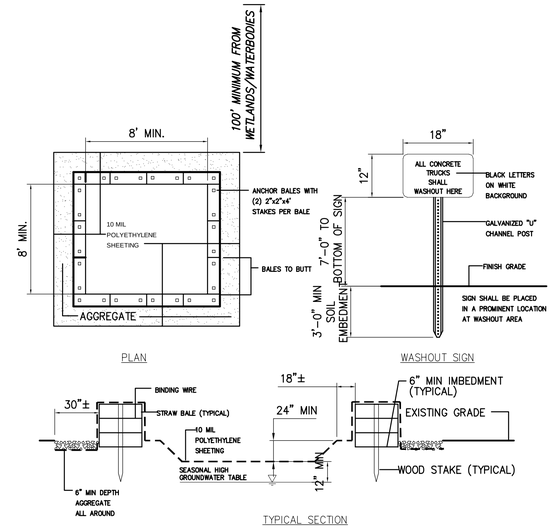
NOTE:
EROSION CONTROL BLANKETS TO BE INSTALLED ON SLOPES 3:1 OR GREATER (TYP.)

3 EROSION CONTROL BANK STABILIZATION DETAIL
SCALE: N.T.S.



1. STONE SIZE–USE AASHTO M43 SIZE 3 COARSE AGGREGATE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN 12".
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY–FOUR (24) FOOT IF SINGLE ACCESS TO SITE.
5. WOVEN GEOTEXTILE FABRIC WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. EXISTING ROAD SIDE DRAINAGE SHALL BE MAINTAINED.
7. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
8. MAINTENANCE–THE ACCESS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT OR STONE SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
9. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
10. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

5 STABILIZED CONSTRUCTION ACCESS
SCALE: N.T.S.



MAINTENANCE NOTES:
1. ALL CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING FACILITATES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. EXCESS RAINWATER THAT HAS ACCUMULATED OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA SUCH AS A GRASS FILTER STRIP.
2. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE STRUCTURE IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE.
3. DISPOSAL OF THE HARDENED MATERIAL SHALL BE OFF–SITE IN A CONSTRUCTION/DEMOLITION LANDFILL.
4. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.
5. INSPECT THE PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON–DESIGNATED AREAS.
6. LOCATION(S) TO BE DETERMINED IN THE FIELD BY THE OWNER'S REPRESENTATIVE
7. CONCRETE WASHOUTS SHALL NOT BE LOCATED WITHIN 200' OF ANY KNOWN WELL.

6 CONCRETE WASHOUT AREA
SCALE: N.T.S.

Champlain Hudson Power Express

Kiewit

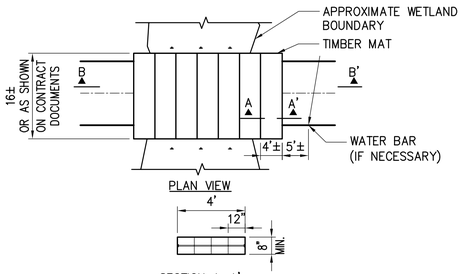
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
EROSION AND SEDIMENT CONTROL DETAILS

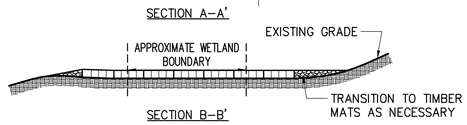
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-602

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | DATE 12/16/2022 | REV. NO. X



PLAN VIEW

SECTION A–A'

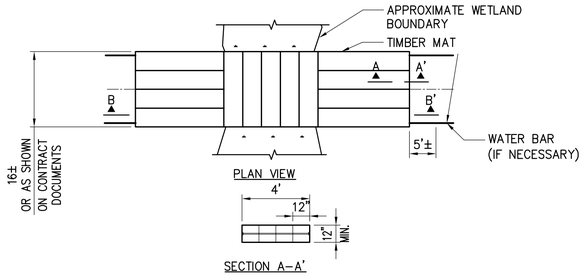


SECTION B–B'

NOTES:
1. TIMBER MATS SHOULD BE INSTALLED IN WETLANDS AND OTHER AREAS IF NECESSARY TO PREVENT RUTTING.
2. BASED ON ACTUAL SITE CONDITIONS, MULTIPLE LAYERS OF TIMBER MATS MAY BE REQUIRED.
3. TIMBER MAT SURFACE SHOULD BE LEVEL TO PREVENT EQUIPMENT AND VEHICLES FROM SLIDING OFF DURING MUDDY OR ICING CONDITIONS, AND PREVENT TIMBERS FROM BREAKING.
4. SEDIMENT TRACKED ONTO TIMBER MATTING SHOULD BE REMOVED AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING WETLAND DURING RAIN EVENTS. SEDIMENT SHOULD BE REMOVED TO A STABILIZED SOIL STOCKPILE OR OTHER APPROVED LOCATION.
5. PERIMETER EROSION AND SEDIMENT CONTROLS ARE REQUIRED TO BE INSTALLED PRIOR TO PLACING TIMBER MATTING.
6. UNLESS PERMITTED FROM REMOVAL, STUMPS WITHIN THE WETLAND SHOULD REMAIN. THIS MAY REQUIRE ADDITIONAL TIMBERS TO BRIDGE ABOVE.
7. UPON REMOVAL OF TIMBER MATTING ALL SPLINTERED WOOD SHOULD BE REMOVED. IF EXPOSED SOILS ARE PRESENT STRAW MULCH SHOULD BE APPLIED.

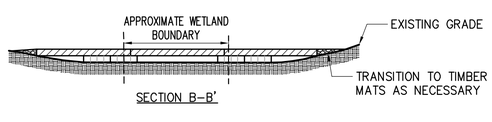
NOTE: GEOTEXTILE FABRIC TO BE INSTALLED UNDER MATTING (TYP)

OPTION "A"
NOT TO SCALE



PLAN VIEW

SECTION A–A'

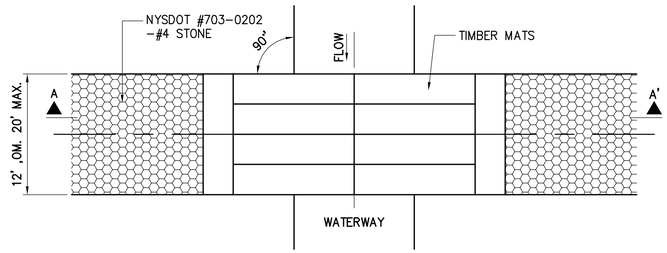


SECTION B–B'

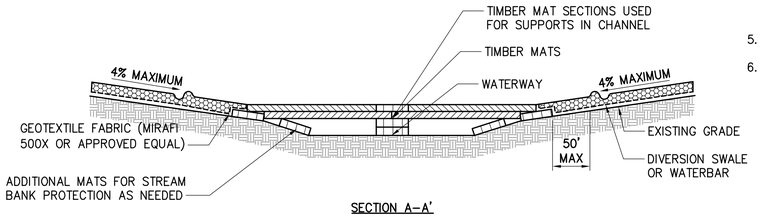
NOTES:
1. TIMBER MATS SHOULD BE INSTALLED IN WETLANDS AND OTHER AREAS IF NECESSARY TO PREVENT RUTTING.
2. BASED ON ACTUAL SITE CONDITIONS, MULTIPLE LAYERS OF TIMBER MATS MAY BE REQUIRED.
3. TIMBER MAT SURFACE SHOULD BE LEVEL TO PREVENT EQUIPMENT AND VEHICLES FROM SLIDING OFF DURING MUDDY OR ICING CONDITIONS, AND PREVENT TIMBERS FROM BREAKING.
4. SEDIMENT TRACKED ONTO TIMBER MATTING SHOULD BE REMOVED AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING WETLAND DURING RAIN EVENTS. SEDIMENT SHOULD BE REMOVED TO A STABILIZED SOIL STOCKPILE OR OTHER APPROVED LOCATION.
5. PERIMETER EROSION AND SEDIMENT CONTROLS ARE REQUIRED TO BE INSTALLED PRIOR TO PLACING TIMBER MATTING.
6. UNLESS PERMITTED FROM REMOVAL, STUMPS WITHIN THE WETLAND SHOULD REMAIN. THIS MAY REQUIRE ADDITIONAL TIMBERS TO BRIDGE ABOVE.
7. UPON REMOVAL OF TIMBER MATTING ALL SPLINTERED WOOD SHOULD BE REMOVED. IF EXPOSED SOILS ARE PRESENT STRAW MULCH SHOULD BE APPLIED.

NOTE: GEOTEXTILE FABRIC TO BE INSTALLED UNDER MATTING (TYP)

OPTION "B"
NOT TO SCALE



PLAN



SECTION A–A'

NOTES:
1. IN–STREAM EXCAVATION SHOULD BE COMPLETED IN ACCORDANCE WITH "TEMPORARY ACCESS WATERWAY CROSSING" ON PAGE 2.32 OF THE 2016 NYSDEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (OR NEWEST VERSION) AND THE CERTIFICATE.
2. THE CONSTRUCTION OF ANY CROSSING SHOULD NOT CAUSE A SIGNIFICANT WATER LEVEL DIFFERENCE BETWEEN THE UPSTREAM AND DOWNSTREAM WATER SURFACE ELEVATIONS. IN–STREAM WORK WILL BE PROHIBITED WITHIN COLD WATER TROUT FISHERIES FROM OCTOBER 1 TO MAY 31.
3. ALL FILL MATERIALS ASSOCIATED WITH THE ROADWAY APPROACH SHOULD BE LIMITED TO A MAXIMUM HEIGHT OF 2 FEET ABOVE THE EXISTING FLOOD PLAIN ELEVATION.
4. A WATER DIVERTING STRUCTURE SUCH AS A SWALE OR WATER BAR SHOULD BE CONSTRUCTED (ACROSS THE ROADWAY ON BOTH ROADWAY APPROACHES) 50 FEET (MAXIMUM) ON EITHER SIDE OF THE WATERWAY CROSSING. THIS WILL PREVENT ROADWAY SURFACE RUNOFF FROM DIRECTLY ENTERING THE WATERWAY. THE 50 FEET MEASURED IS MEASURED FROM THE TOP OF THE WATERWAY BANK. IF THE ROADWAY APPROACH IS CONSTRUCTED WITH A REVERSE GRADE AWAY FROM THE WATERWAY, A SEPARATE DIVERTING STRUCTURE IS NOT REQUIRED.
5. ALL CROSSINGS SHOULD HAVE ONE TRAFFIC LANE. THE MINIMUM WIDTH SHOULD BE 12 FEET WITH A MAXIMUM WIDTH OF 20 FEET.
6. ANCHORS: TIMBER MATS SHOULD BE SECURELY ANCHORED AT ONLY ONE END, USING STEEL CABLE OR CHAIN. ANCHORING AT ONLY ONE END WILL PREVENT CHANNEL OBSTRUCTION IN THE EVENT THAT FLOODWATERS FLOAT THE BRIDGE. ACCEPTABLE ANCHORS ARE LARGE TREES, LARGE BOULDERS, OR DRIVEN STEEL ANCHORS. ANCHORING SHOULD BE SUFFICIENT TO PREVENT THE TIMBER MATS FROM FLOATING DOWNSTREAM AND POSSIBLY CAUSING AN OBSTRUCTION TO THE FLOW.

OPTION "C"
NOT TO SCALE

1 TIMBER MATTING
SCALE: N.T.S.

CHPE Champlain Hudson Power Express

Kiewit

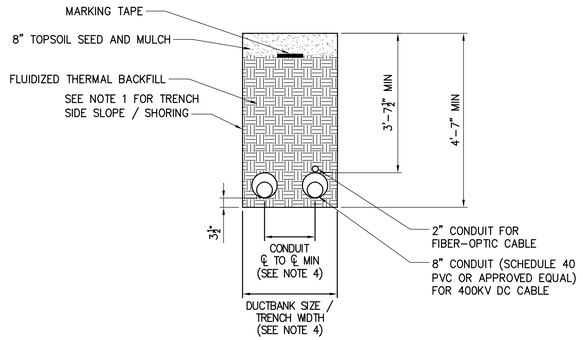
CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

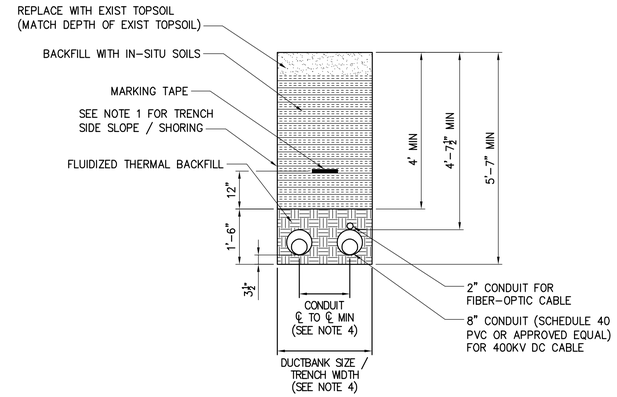
DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
WETLAND CROSSING DETAILS

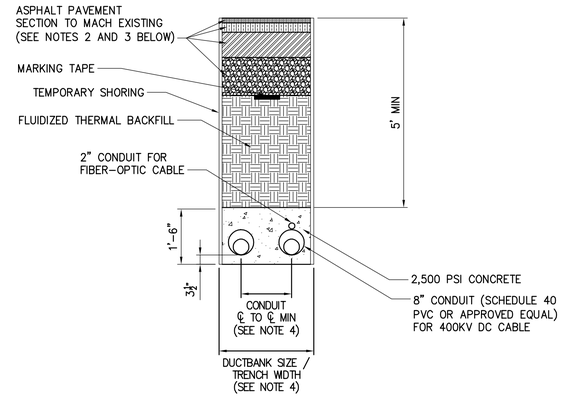
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-611



OPEN TRENCH



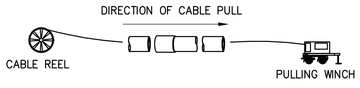
OPEN TRENCH WITHIN AGRICULTURAL LANDS

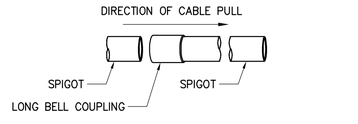


DUCTBANK IN ROADWAY

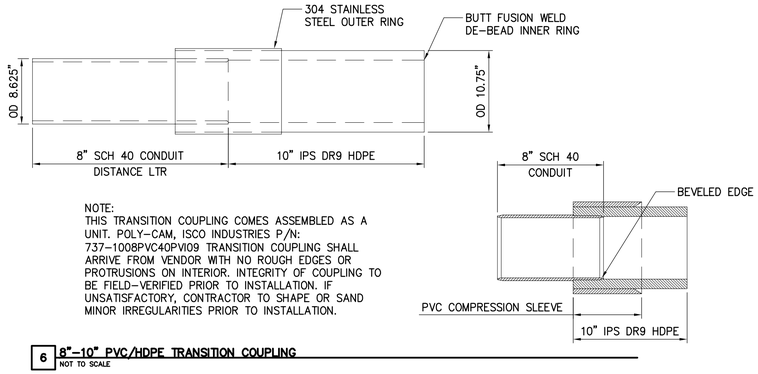
NOTES:
1. SLOPING, BENCHING, OR SHORING SHALL BE IN ACCORDANCE WITH OSHA EXCAVATION STANDARDS, 29 CFR PART 1926, SUBPART P. AT LOCATIONS WHERE THE TRENCH IS NOT SHORED, SLOPING AND/OR BENCHING WILL DEPEND ON TYPE OF SOILS ENCOUNTERED ON SITE. SLOPE FROM EDGE OF ROADWAY TO BOTTOM OF EXCAVATIONS MAY BE FLATTER THAN 2:1 (H:V) FOR AASHTO HS-20 LOADING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EVALUATING SLOPE STABILITY BASED ON ACTUAL EQUIPMENT FOR SITE OPERATIONS AS DETERMINED BY A GEOTECHNICAL ENGINEER.
2. SEE DETAIL 4 ON DETAIL SHEET C-631 FOR PAVEMENT TRANSITION DETAIL.
3. SEE SHEET C-631 FOR SURFACE RESTORATION DETAILS.
4. SEE PLAN AND PROFILE SHEETS FOR CONDUIT ℄ TO ℄ AND DUCTBANK SIZE TRENCH WIDTH (NOTE ABOVE PROFILE VIEW).

1 TYPICAL TRENCHING DETAILS
NOT TO SCALE





5 TYPICAL COUPLING DIRECTION OF PULL DETAIL
NOT TO SCALE



NOTE:
THIS TRANSITION COUPLING COMES ASSEMBLED AS A UNIT. POLY-CAM, ISCO INDUSTRIES P/N: 737-1008PVC40PVI09 TRANSITION COUPLING SHALL ARRIVE FROM VENDOR WITH NO ROUGH EDGES OR PROTRUSIONS ON INTERIOR. INTEGRITY OF COUPLING TO BE FIELD-VERIFIED PRIOR TO INSTALLATION. IF UNSATISFACTORY, CONTRACTOR TO SHAPE OR SAND MINOR IRREGULARITIES PRIOR TO INSTALLATION.

6 8"-10" PVC/HDPE TRANSITION COUPLING
NOT TO SCALE

CHPE Champlain Hudson Power Express

Kiewit

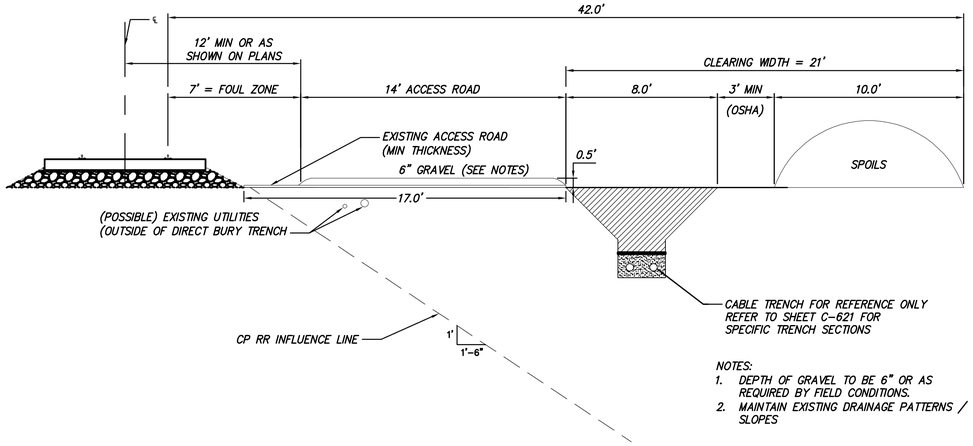
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 · www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
TRENCHING DETAILS

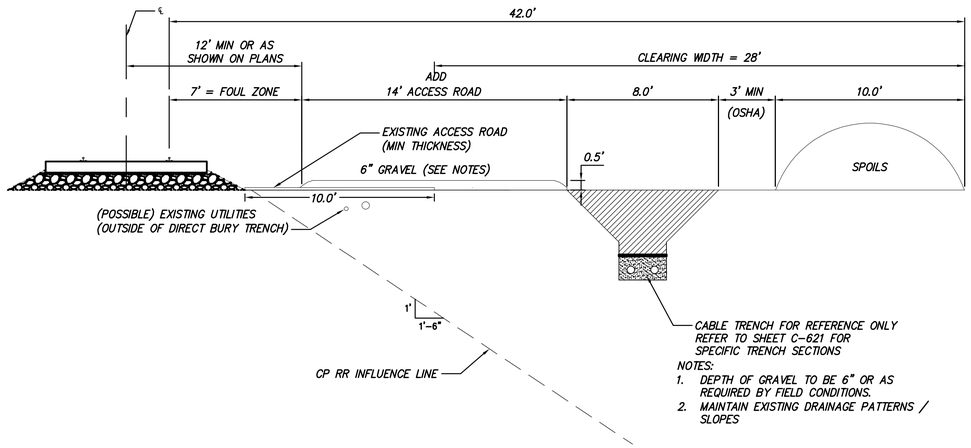
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-621

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022



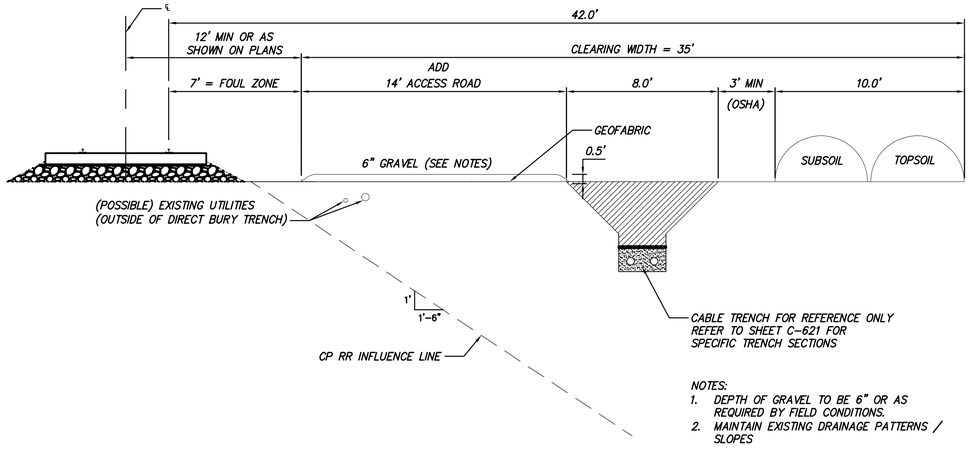
NOTES:
1. DEPTH OF GRAVEL TO BE 6" OR AS REQUIRED BY FIELD CONDITIONS.
2. MAINTAIN EXISTING DRAINAGE PATTERNS / SLOPES

TYPE 1
EXISTING, MINOR REFURBISHMENT



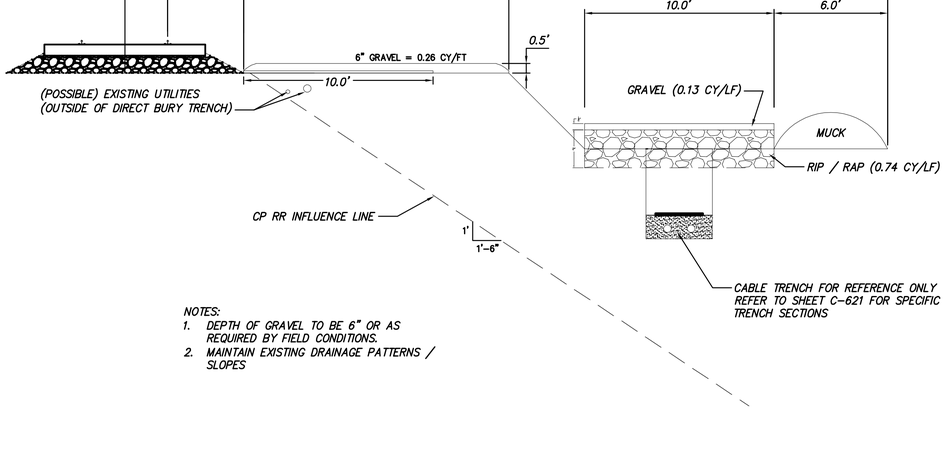
NOTES:
1. DEPTH OF GRAVEL TO BE 6" OR AS REQUIRED BY FIELD CONDITIONS.
2. MAINTAIN EXISTING DRAINAGE PATTERNS / SLOPES

TYPE 2
EXISTING, MAJOR REFURBISHMENT



NOTES:
1. DEPTH OF GRAVEL TO BE 6" OR AS REQUIRED BY FIELD CONDITIONS.
2. MAINTAIN EXISTING DRAINAGE PATTERNS / SLOPES

TYPE 3
BUILD NEW



NOTES:
1. DEPTH OF GRAVEL TO BE 6" OR AS REQUIRED BY FIELD CONDITIONS.
2. MAINTAIN EXISTING DRAINAGE PATTERNS / SLOPES

TYPE 4A
WETLAND

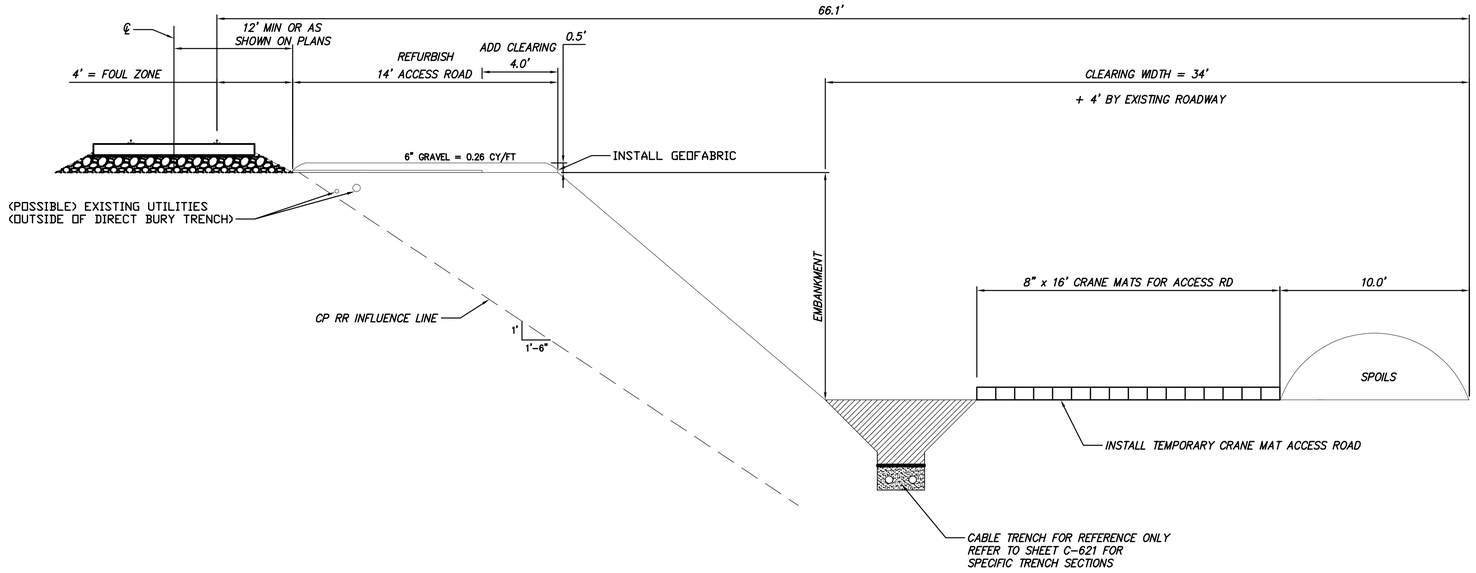
CHPE Champlain Hudson Power Express
Kiewit
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
TYPICAL ACCESS ROAD CROSS SECTIONS

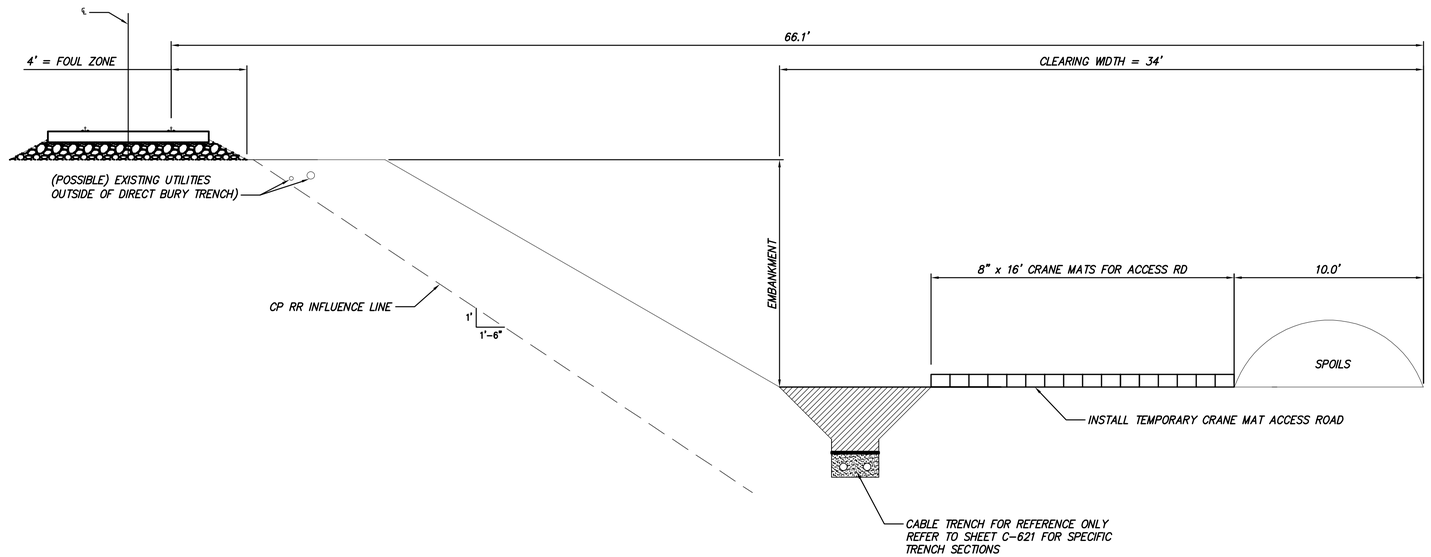
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-622

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | DATE 12/16/2022 | REV. NO. X



TYPE 4

REFURBISH ACCESS NEXT TO RAIL. BUILD TEMP ACCESS AT TOE OF SLOPE



TYPE 5

BUILD TEMP ACCESS AT TOE OF SLOPE

CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

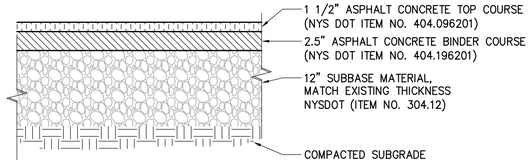
CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN

TYPICAL ACCESS ROAD CROSS SECTIONS

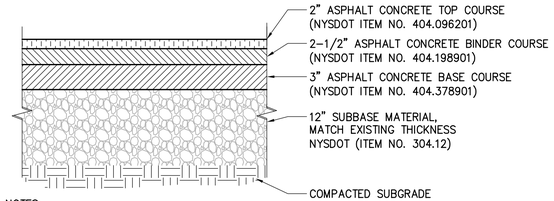
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-623

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022



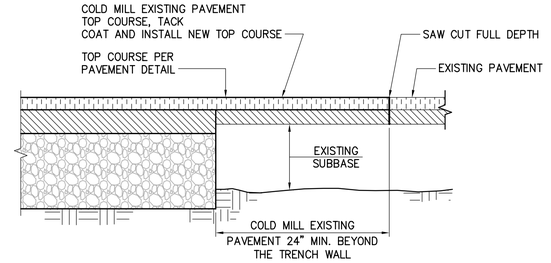
NOTES:
1. ABOVE SECTION IS THE MINIMUM FOR INSTALLATION. MATCH EXISTING SECTION IF EXISTING THICKNESS IS GREATER
2. ALL MATERIALS TO MEET NYSDOT STANDARD SPECIFICATIONS.
3. APPLY STRAIGHT TACK COAT BETWEEN PAVEMENT SECTIONS NYSDOT ITEM NO.407.0103
4. PRIVATE COMMERCIAL DRIVEWAYS TO UTILIZE COMMERCIAL DRIVEWAY SPECIFICATIONS AS SHOWN ON THE NYSDOT STANDARD SHEETS.

1 ASPHALT CONCRETE PAVEMENT DETAIL (PRIVATE DRIVEWAY)
SCALE: N.T.S.



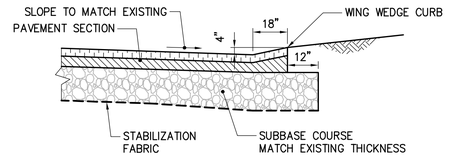
NOTES:
1. ABOVE SECTION IS THE MINIMUM FOR INSTALLATION. MATCH EXISTING SECTION IF EXISTING THICKNESS IS GREATER
2. ALL MATERIALS TO MEET NYSDOT STANDARD SPECIFICATIONS
3. APPLY STRAIGHT TACK COAT TO BETWEEN PAVEMENT SECTIONS NYSDOT ITEM NO.407.0103

2 ASPHALT CONCRETE PAVEMENT (WITHIN COUNTY OR TOWN ROADWAYS)
SCALE: N.T.S.



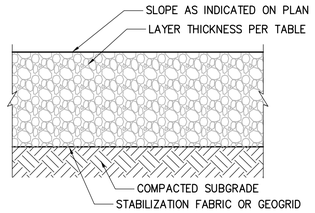
NOTE:
1. ALL MATERIALS TO MEET NYSDOT STANDARD SPECIFICATIONS

3 PAVEMENT TRANSITION DETAIL
SCALE: N.T.S.



NOTE:
1. ALL MATERIALS TO MEET NYSDOT STANDARD SPECIFICATIONS

4 WING WEDGE CURB DETAIL
SCALE: N.T.S.



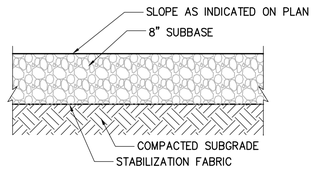
TEMPORARY ACCESS ROAD SECTION

CBR	180N GEOTEXTILE	BX1200 GEOGRID[2]	RD580I GEOTEXTILE
0.5	24 INCH RIP RAP[3] + 6 INCH AGGREGATE[4]	--	24 INCH RIP RAP + 4 INCH AGGREGATE
1.0	20 INCH AGGREGATE	12 INCH AGGREGATE	9 INCH AGGREGATE
1.5	15 INCH AGGREGATE	9 INCH AGGREGATE	--
2.0	12 INCH AGGREGATE	6 INCH AGGREGATE	--
3.0+	9 INCH AGGREGATE	6 INCH AGGREGATE	--

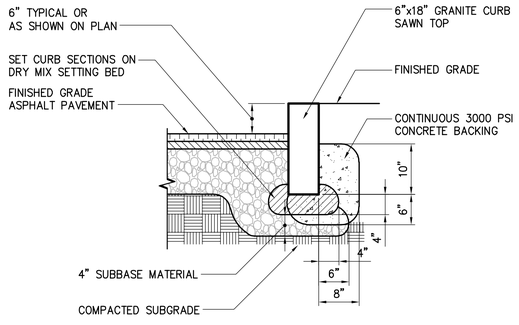
NOTES:
[1] ESTIMATE CBR IN THE FIELD USING A DYNAMIC CONE PENETROMETER.
[2] SEPARATOR GEOTEXTILE FABRIC SUCH AS MIRAFI 140N SHALL BE INCLUDED BENEATH GEOGRID LAYER ON COHESIVE SUBGRADE
[3] RIP RAP TO BE NYSDOT LIGHT STONE FILL
[4] A LAYER OF #57 STONE MAY BE REQUIRED ON TOP OF GEOTEXTILE TO PREVENT DAMAGING OR PUNCHING OF THE FABRIC.
[5] GEOGRID AND GEOTEXTILES SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATION INCLUDING OVERLAP AND EDGE DETAILS

NOTE:
ACCESS ROAD SECTIONS PER KIEWIT GEOTECHNICAL

5 TEMPORARY ACCESS ROAD
SCALE: N.T.S.

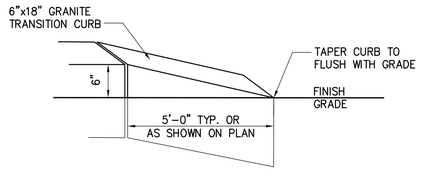


6 GRAVEL PAVEMENT
SCALE: N.T.S.



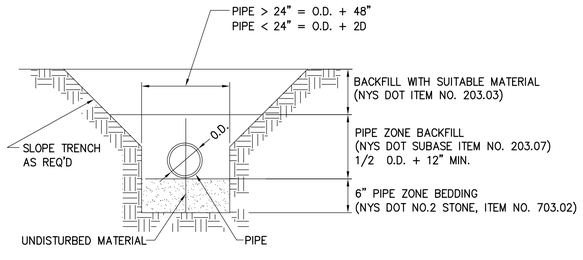
NOTE: CURB JOINTS TO BE POINTED WITH MORTAR.

7 GRANITE CURB DETAIL
SCALE: N.T.S.



NOTE: SEE ADJACENT GRANITE CURB DETAIL

8 GRANITE CURB TERMINATION DETAIL
SCALE: N.T.S.



NOTES:
1. WHERE IDENTIFIED ON PLANS, CULVERT REPLACEMENTS AND/OR REPAIR TO BE COMPLETED IN ACCORDANCE WITH NYSDOT STANDARD SHEETS (NYSDOT STANDARD SHEET GROUP 603 CULVERTS AND STORM DRAINS AND NYSDOT BRIDGE DETAIL SHEETS BD-CB1 THRU BD-CB13)

9 CULVERT REPLACEMENT
SCALE: N.T.S.

CHPE Champlain Hudson Power Express

Kiewit

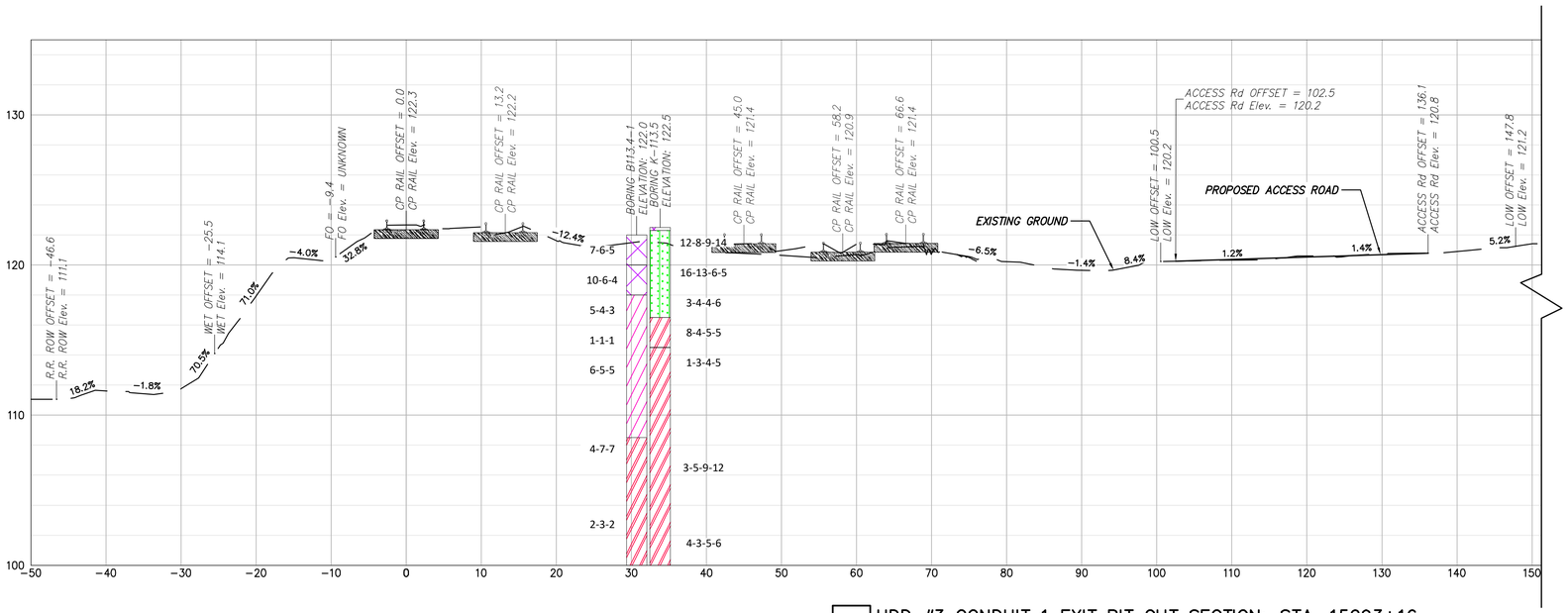
CHA
III Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 , www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	JTM	JPR

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
SURFACE RESTORATION DETAILS

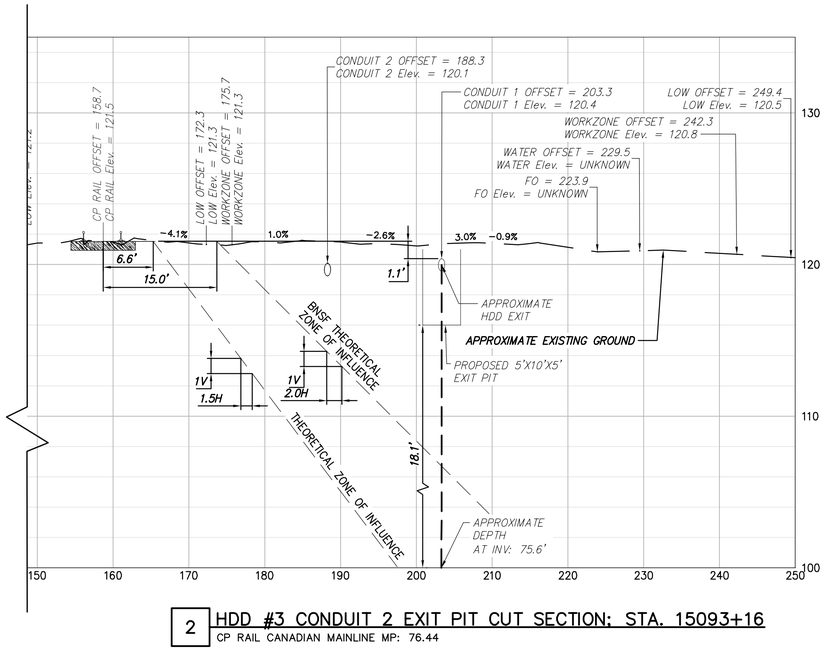
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-631

DRAWN BY: JJE | DESIGNED BY: JTM | APPROVED BY: JPR | SCALE AS NOTED | REV. NO. X | DATE 12/16/2022



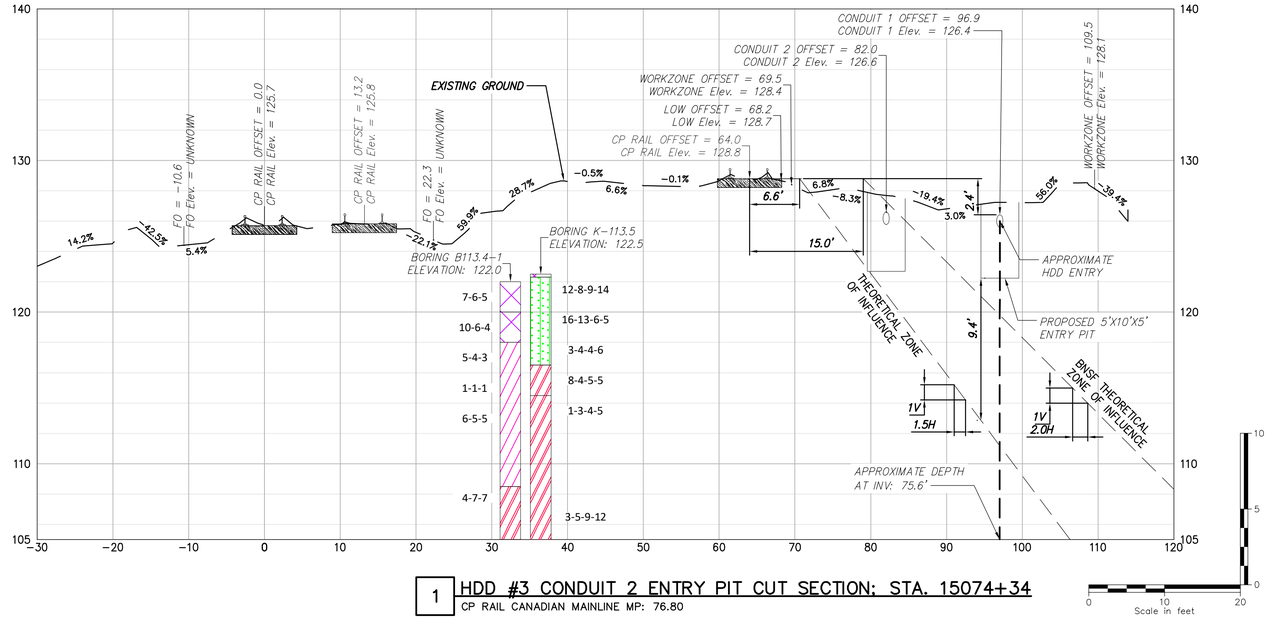
2 HDD #3 CONDUIT 1 EXIT PIT CUT SECTION; STA. 15093+16

CP RAIL CANADIAN MAINLINE MP: 76.44



2 HDD #3 CONDUIT 2 EXIT PIT CUT SECTION; STA. 15093+16

CP RAIL CANADIAN MAINLINE MP: 76.44



1 HDD #3 CONDUIT 2 ENTRY PIT CUT SECTION; STA. 15074+34

CP RAIL CANADIAN MAINLINE MP: 76.80

BORING LOG STRIP LEGEND

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

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

CHPE Champlain Hudson Power Express

Kiewit

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

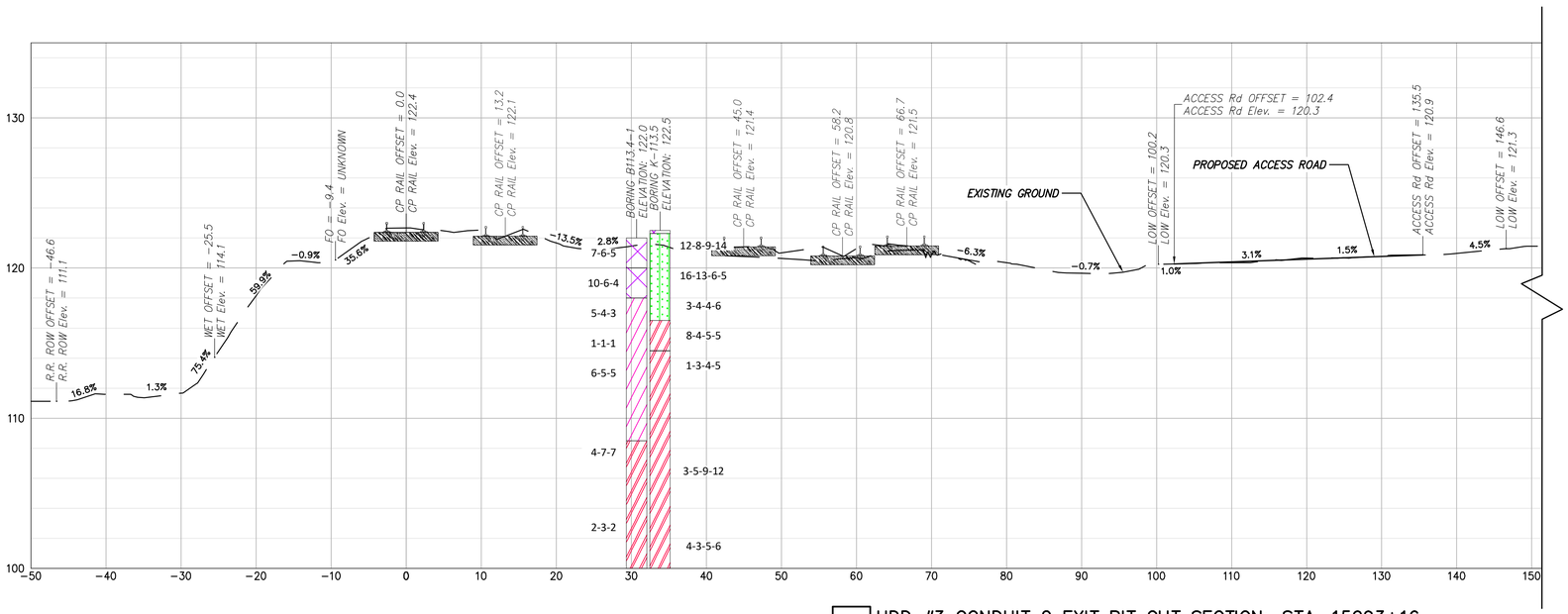
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 3

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-641

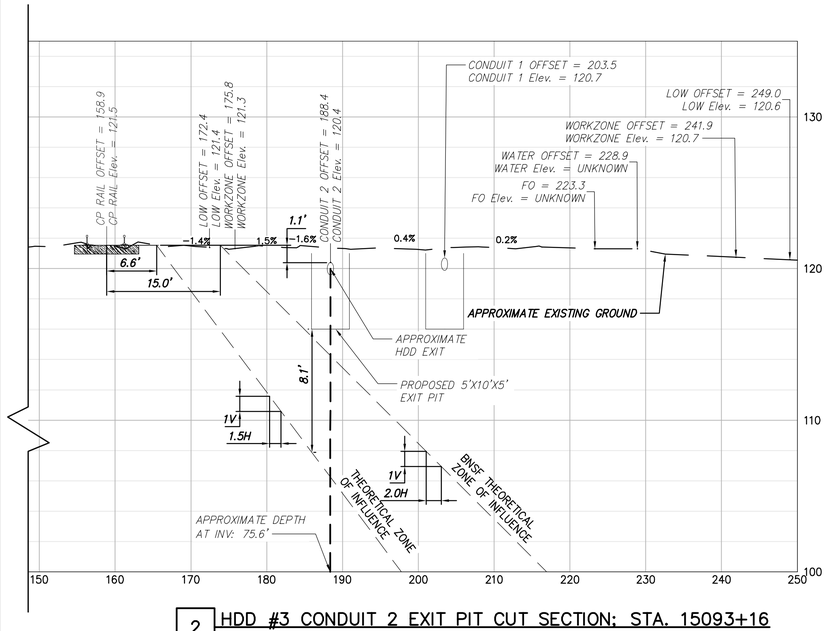
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 12/16/2022 | REV. NO. C

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_PIC_C-301 - C-301A.DWG Saved: 12/15/2022 2:51:36 PM Plotted: 12/15/2022 4:26:20 PM Current User: Snyder, Morgan LastSavedBy: 1619



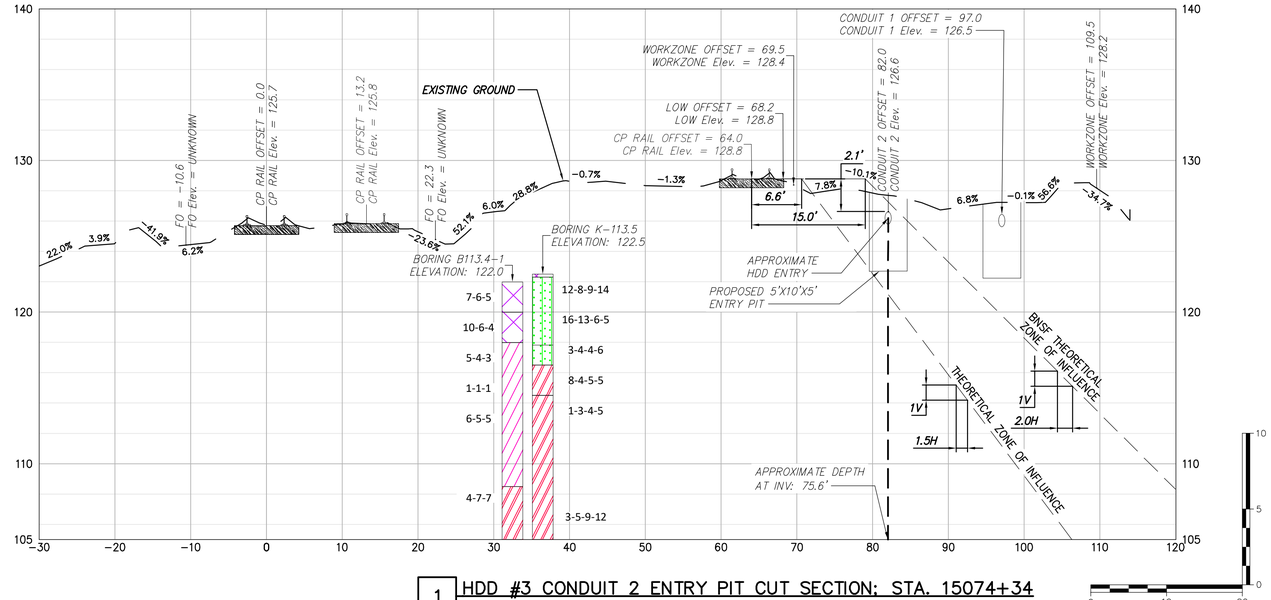
2 HDD #3 CONDUIT 2 EXIT PIT CUT SECTION; STA. 15093+16

CP RAIL CANADIAN MAINLINE MP: 76.44



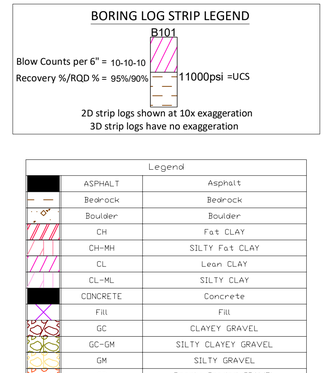
2 HDD #3 CONDUIT 2 EXIT PIT CUT SECTION; STA. 15093+16

CP RAIL CANADIAN MAINLINE MP: 76.44



1 HDD #3 CONDUIT 2 ENTRY PIT CUT SECTION; STA. 15074+34

CP RAIL CANADIAN MAINLINE MP: 76.80



BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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

CHPE Champlain Hudson Power Express

Kiewit (Since 1884)

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 3

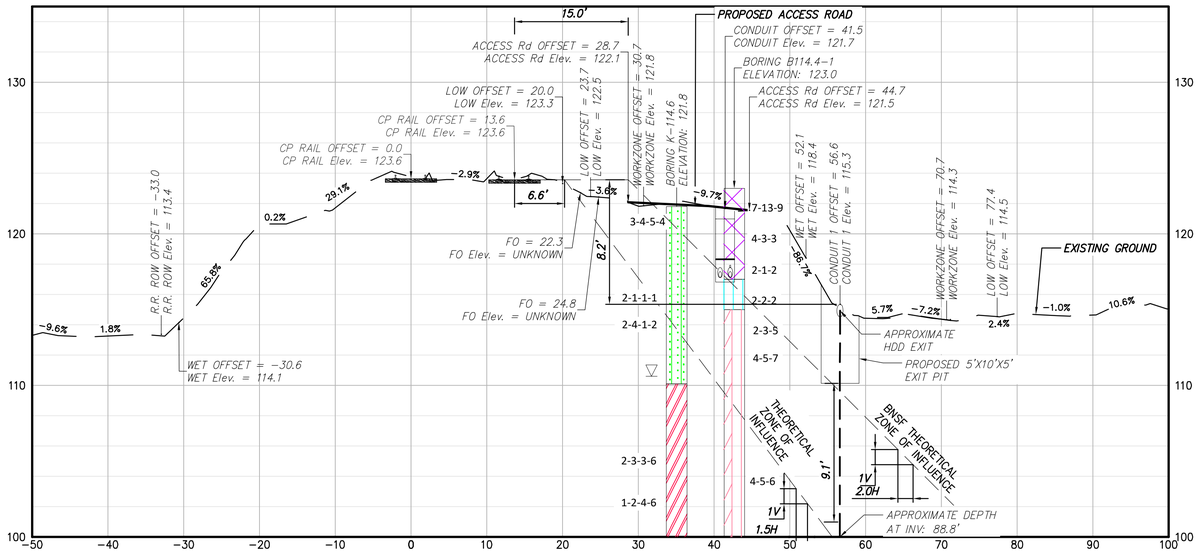
DRAWN BY: JAS | DESIGNED BY: JAS | APPROVED BY: JEO | SCALE AS NOTED | DATE 12/16/2022 | REV. NO. C

KIEWIT PROJECT NO. 21162

CHA PROJECT NO. 066076

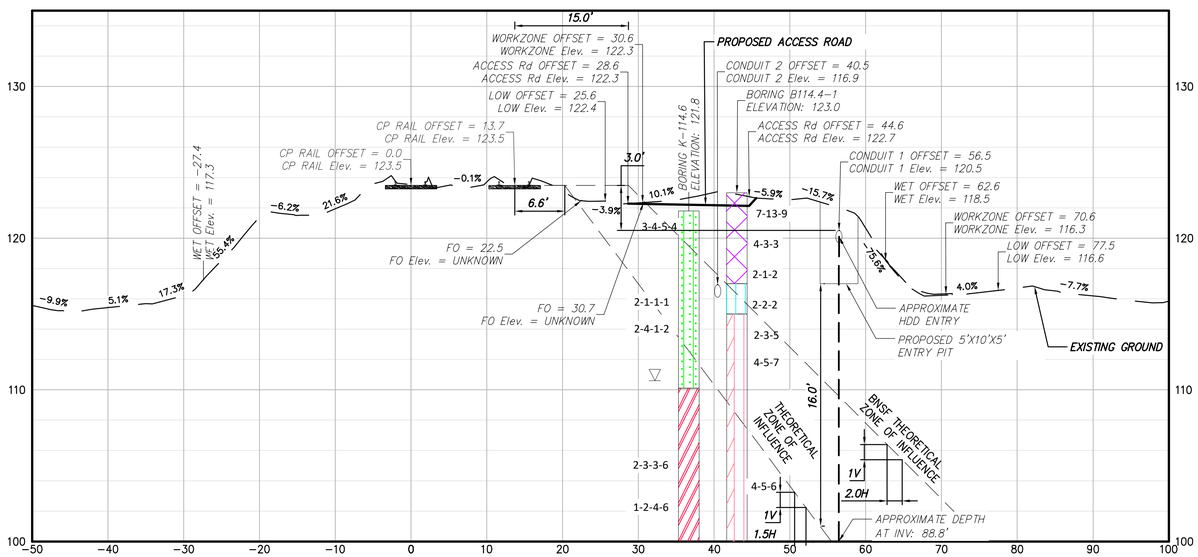
DRAWING NO. **C-641.1**

File: V:\PROJECTS\ANY\66\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_PIC_C-301 - C-301A.DWG Saved: 12/15/2022 2:51:36 PM Plotted: 12/15/2022 4:27:09 PM Current User: Snyder, Morgan LastSavedBy: 1619



2 HDD #4 CONDUIT 1 EXIT PIT CUT SECTION; STA. 15145+25

CP RAIL CANADIAN MAINLINE MP: 75.46



1 HDD #4 CONDUIT 1 ENTRY PIT CUT SECTION; STA. 15138+89

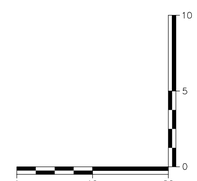
CP RAIL CANADIAN MAINLINE MP: 75.58

BORING LOG STRIP LEGEND

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

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

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



CHPE Champlain Hudson Power Express

Kiewit

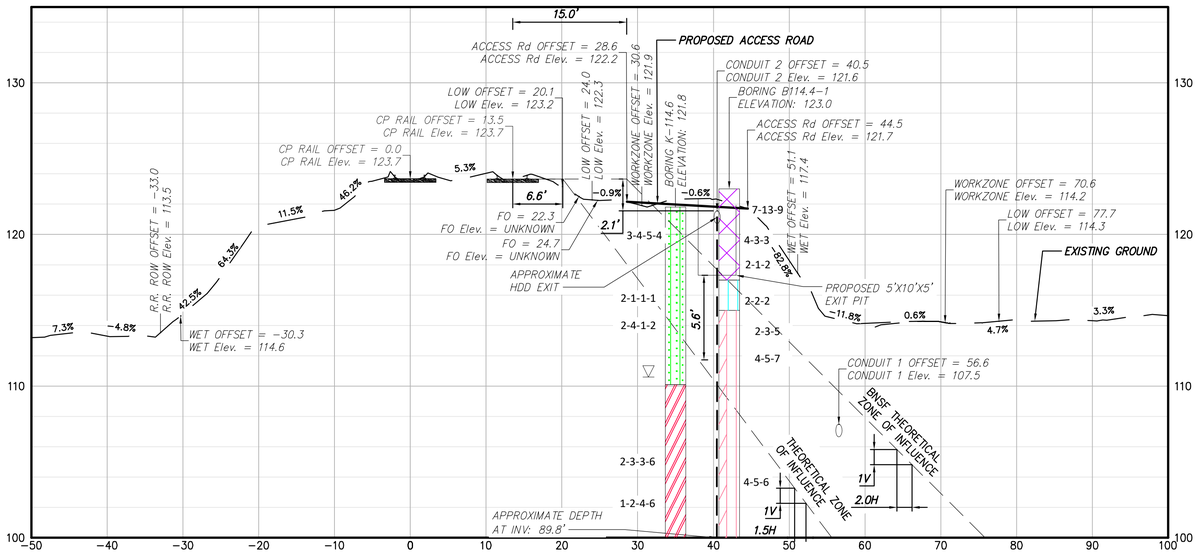
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 4

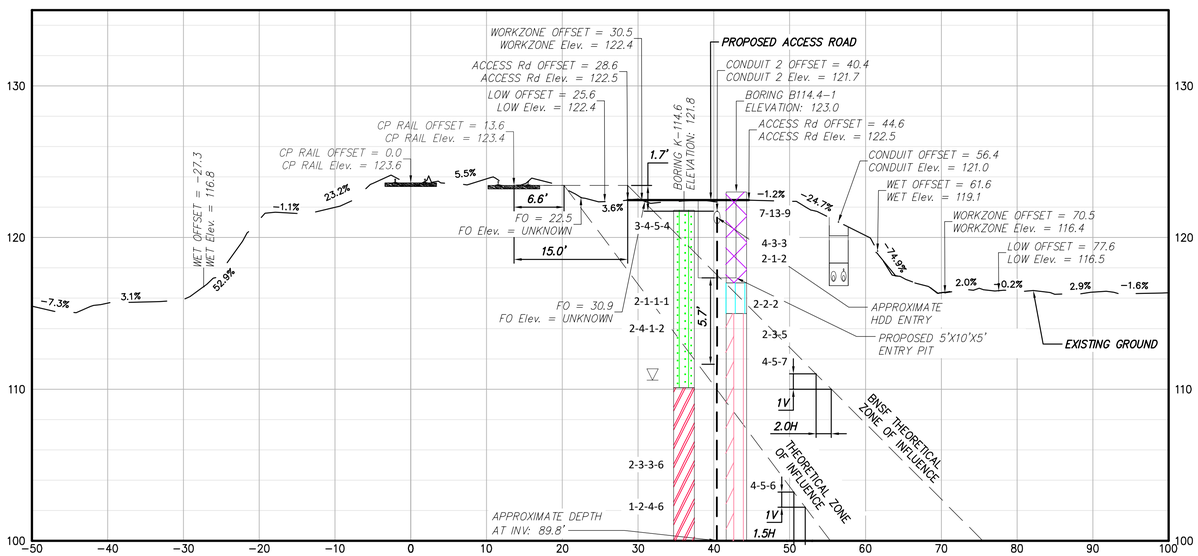
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-642

DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. C | DATE 12/16/2022



2 HDD #4 CONDUIT 2 EXIT PIT CUT SECTION; STA. 15144+81

CP RAIL CANADIAN MAINLINE MP: 75.47



1 HDD #4 CONDUIT 2 ENTRY PIT CUT SECTION; STA. 15138+64

CP RAIL CANADIAN MAINLINE MP: 75.58

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

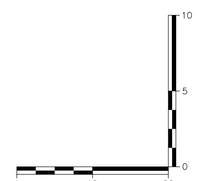
Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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



CHPE Champlain Hudson Power Express

Kiewit

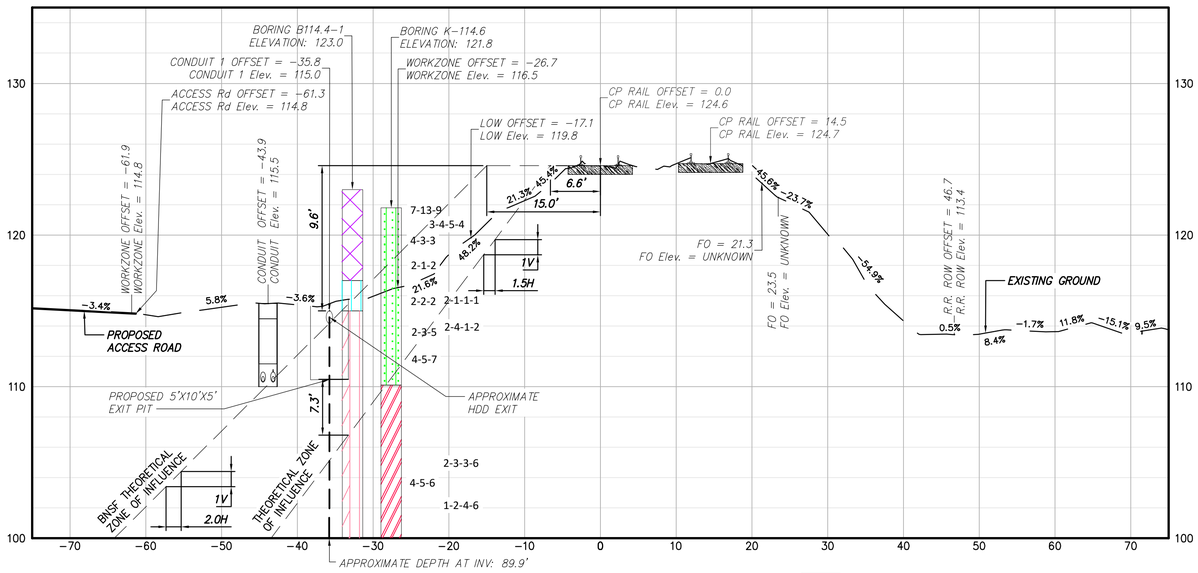
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 4

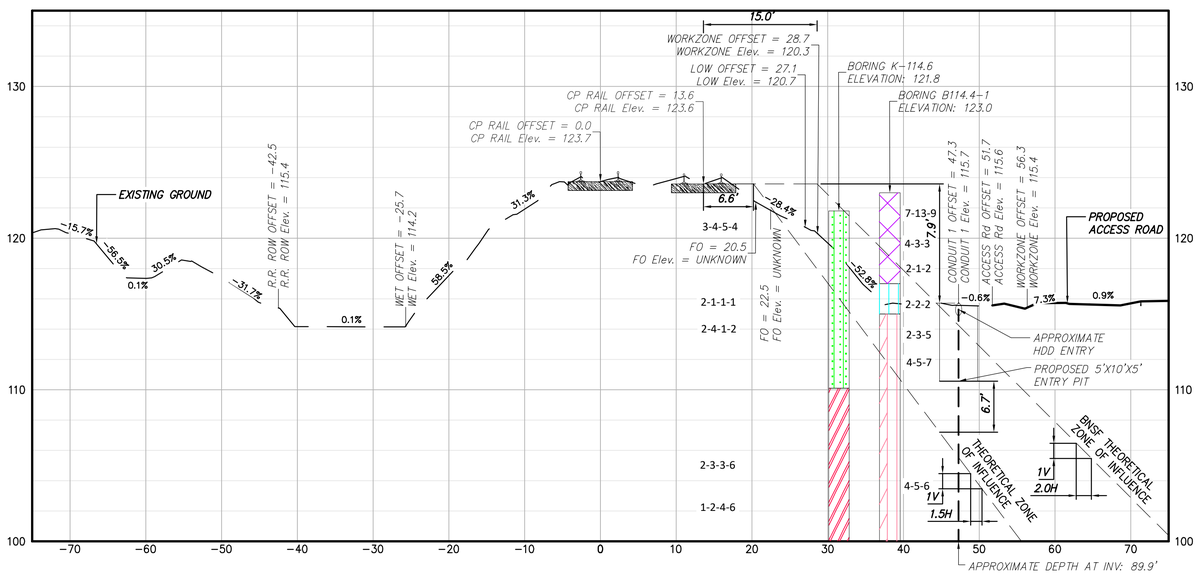
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-642.1

DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. C | DATE 12/16/2022



2 HDD #4A CONDUIT 1 EXIT PIT CUT SECTION; STA. 15172+00

CP RAIL CANADIAN MAINLINE MP: 74.96



1 HDD #4A CONDUIT 1 ENTRY PIT CUT SECTION; STA. 15164+48

CP RAIL CANADIAN MAINLINE MP: 75.09

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

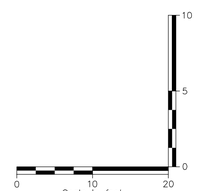
Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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



CHPE Champlain Hudson Power Express

Kiewit

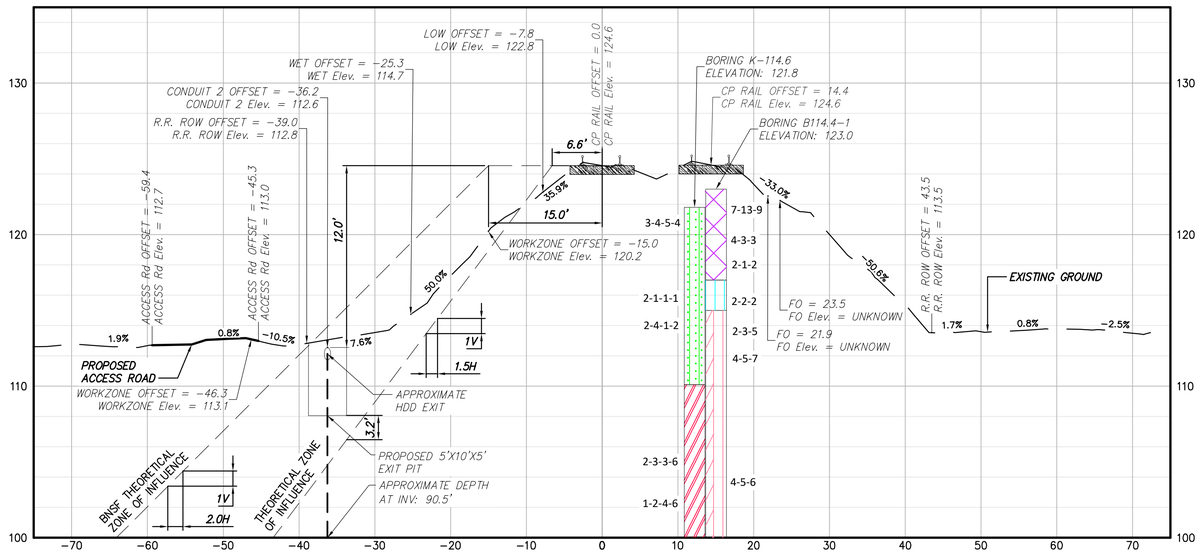
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 4A

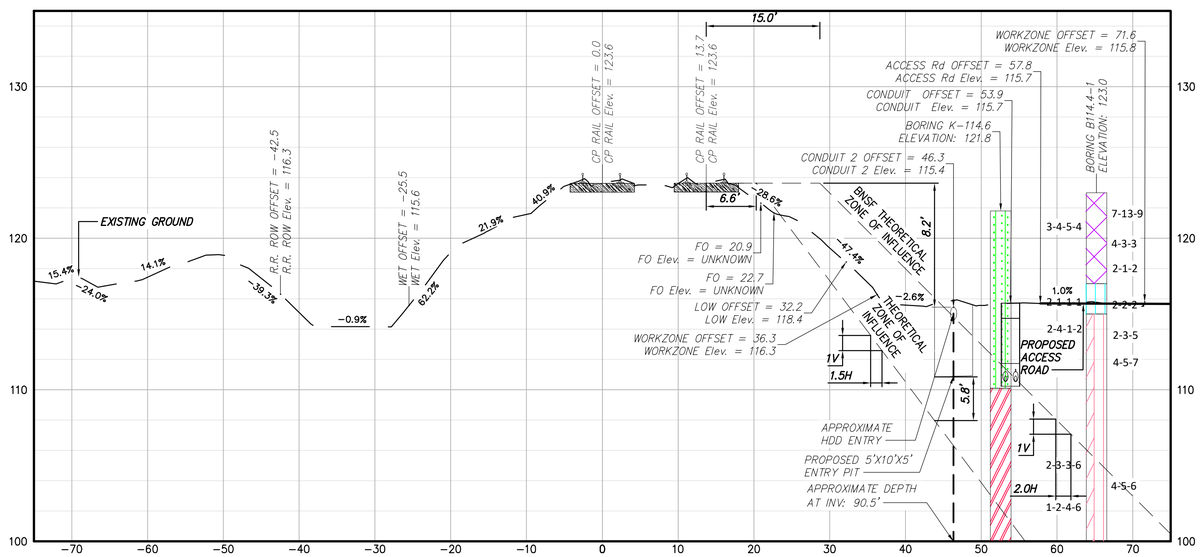
DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-643
SCALE	AS NOTED
REV. NO.	C
DATE	12/16/2022



2 HDD #4A CONDUIT 2 EXIT PIT CUT SECTION; STA. 15170+43

CP RAIL CANADIAN MAINLINE MP: 74.99



1 HDD #4A CONDUIT 2 ENTRY PIT CUT SECTION; STA. 15163+19

CP RAIL CANADIAN MAINLINE MP: 75.12

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

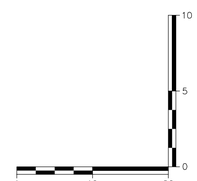
Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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



CHPE Champlain Hudson Power Express

Kiewit

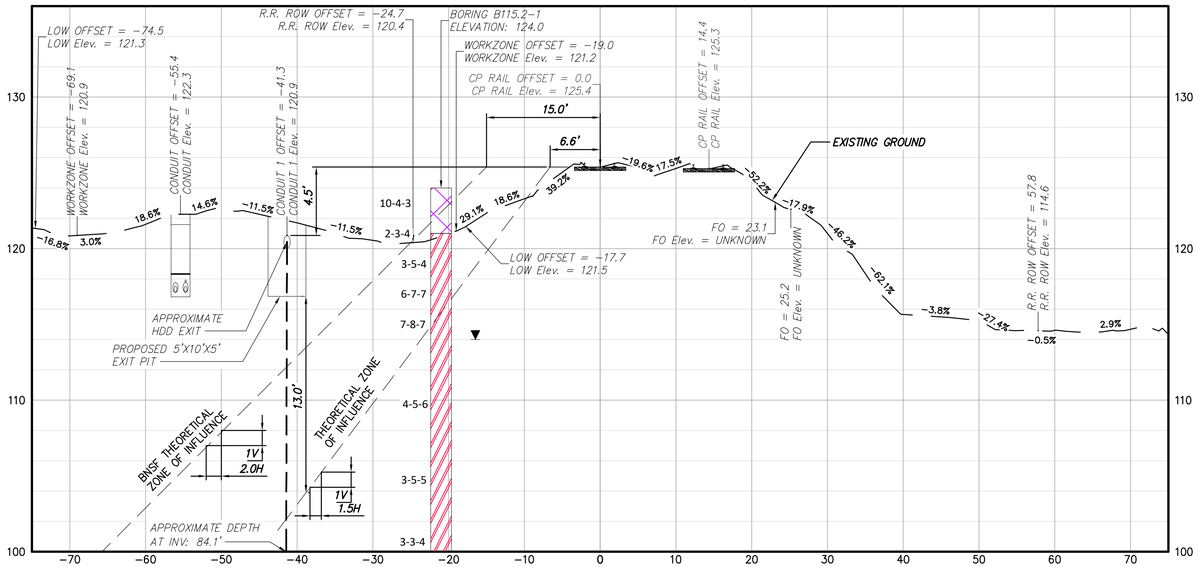
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 4A

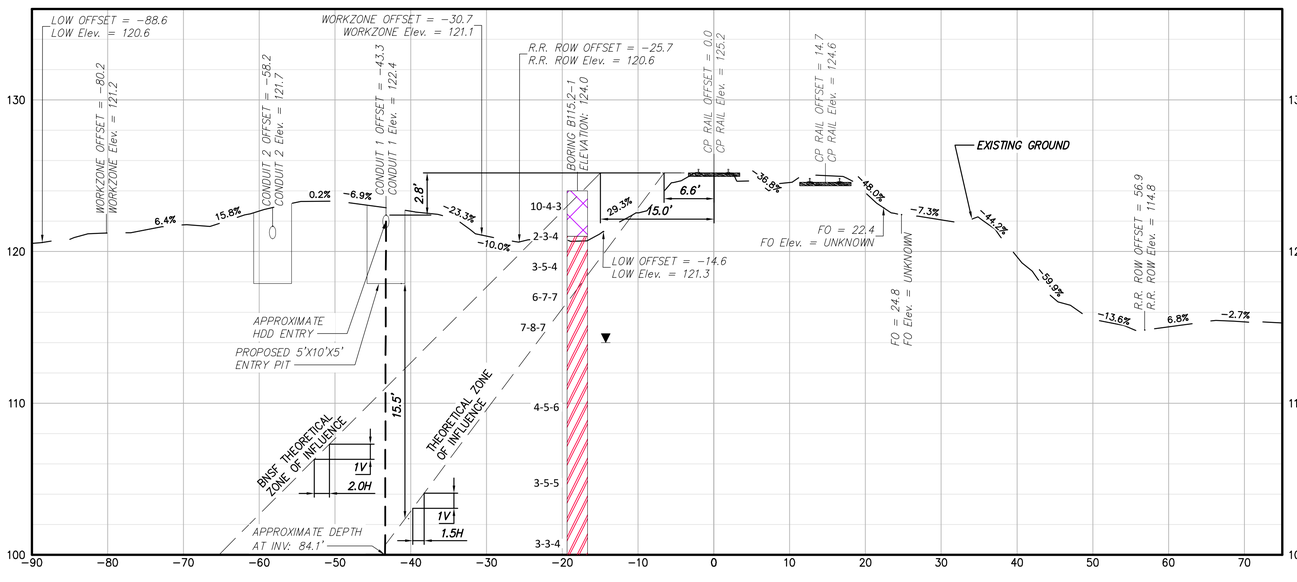
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-643.1

DRAWN BY: ES | DESIGNED BY: ES | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. C | DATE 12/16/2022



2 HDD #5 CONDUIT 1 EXIT PIT CUT SECTION; STA. 15182+35

CP RAIL CANADIAN MAINLINE MP: 74.76



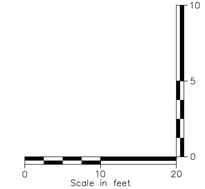
1 HDD #5 CONDUIT 1 ENTRY PIT CUT SECTION; STA. 15175+25

CP RAIL CANADIAN MAINLINE MP: 74.89

BORING LOG STRIP LEGEND

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

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



CHPE Champlain Hudson Power Express

Kiewit

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

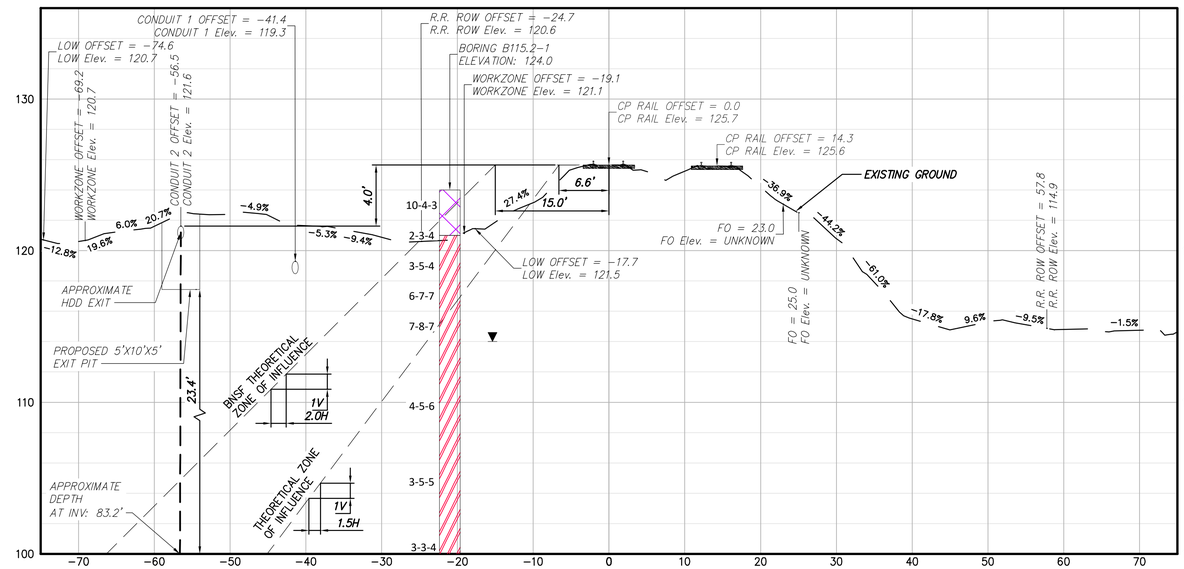
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 5

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-644

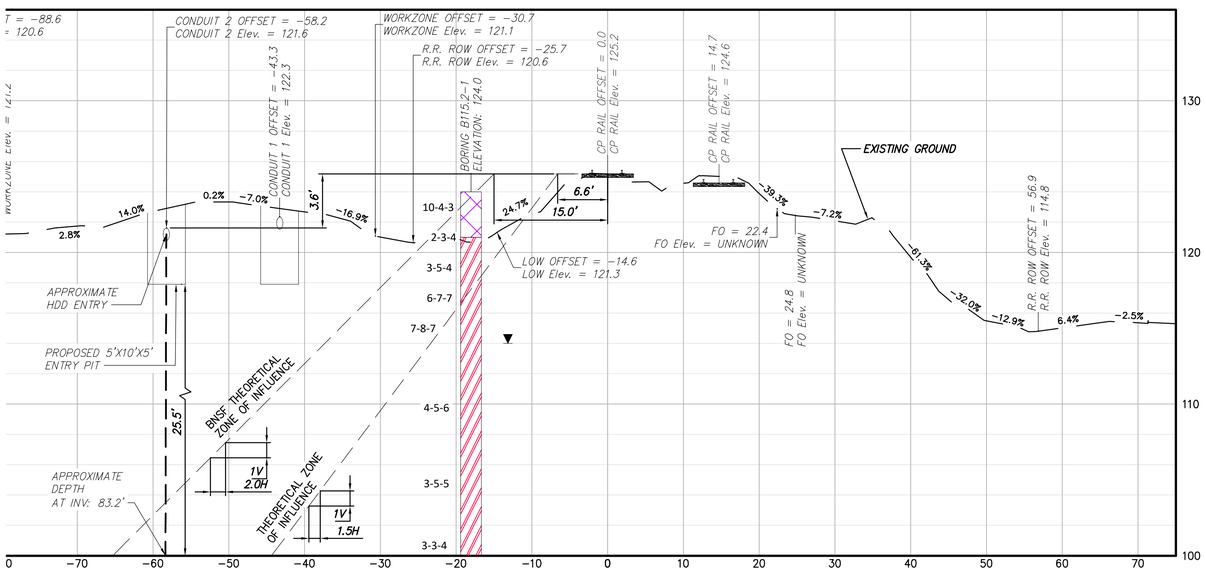
DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. C | DATE 12/16/2022

File: V:\PROJECTS\ANY\K6\066076.000\09_DESIGN\DRAWINGS\01_SHEETS\DESIGN PACKAGE 1\DESIGN PACKAGE 1C\066076_P1C_C-304 - C-304A.DWG Saved: 12/15/2022 2:33:36 PM Plotted: 12/15/2022 4:36:06 PM Current User: Snyder, Morgan LastSavedBy: 1619



2 HDD #5 CONDUIT 2 EXIT PIT CUT SECTION; STA. 15182+25

CP RAIL CANADIAN MAINLINE MP: 74.76



1 HDD #5 CONDUIT 2 ENTRY PIT CUT SECTION; STA. 15174+79

CP RAIL CANADIAN MAINLINE MP: 74.89

BORING LOG STRIP LEGEND

B101

Blow Counts per 6" = 10-10-10

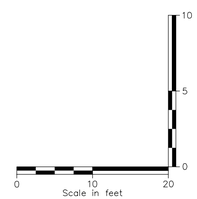
Recovery %/RQD % = 95%/90%

11000psi =UCS

2D strip logs shown at 10x exaggeration

3D strip logs have no exaggeration

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



CHPE Champlain Hudson Power Express

Kiewit

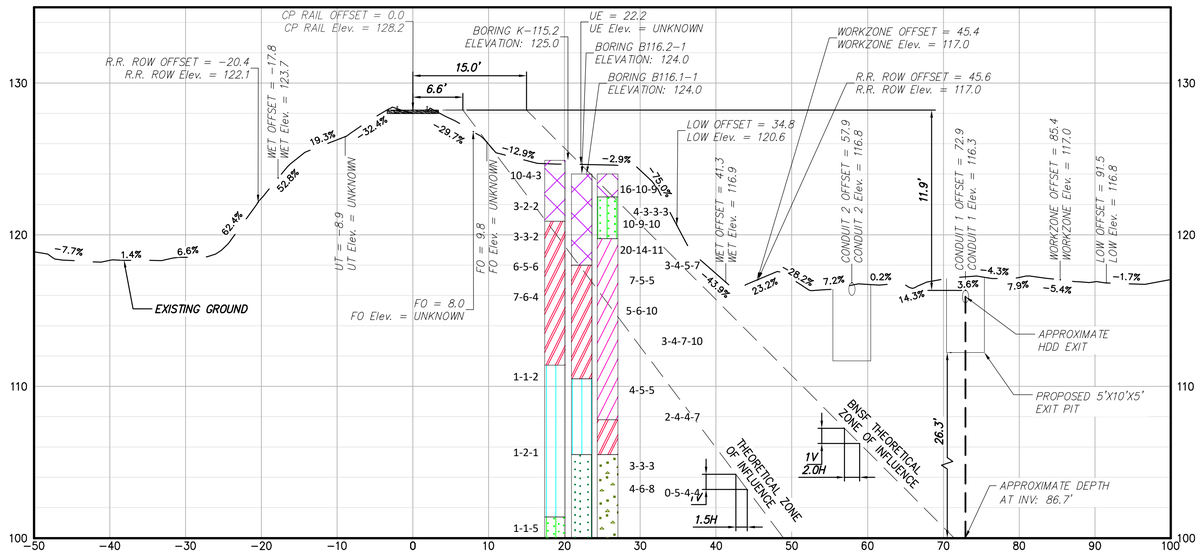
CHA
111 Winners Circle, PO Box 5269
Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 5

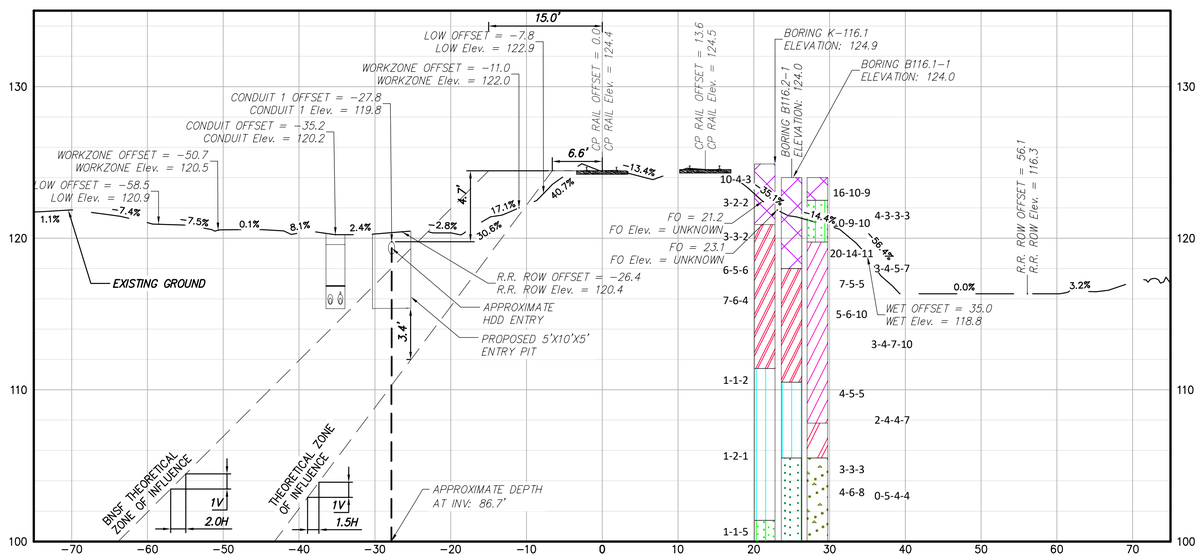
KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-644.1

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. C | DATE 12/16/2022



2 HDD #6 CONDUIT 1 EXIT PIT CUT SECTION; STA. 15231+53

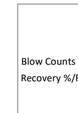
CP RAIL CANADIAN MAINLINE MP: 73.83



1 HDD #6 CONDUIT 1 ENTRY PIT CUT SECTION; STA. 15217+14

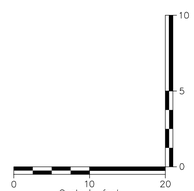
CP RAIL CANADIAN MAINLINE MP: 74.10

BORING LOG STRIP LEGEND



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

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



CHPE Champlain Hudson Power Express

Kiewit

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

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
0	12/16/2022	FINAL EM&CP SUBMISSION	MCS	JEO

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 3 (PACKAGE 1C) WHITEHALL TO FORT ANN
RAIL CROSS SECTION DETAILS HDD 6

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-645

DRAWN BY: CJL | DESIGNED BY: CJL | APPROVED BY: JEO | SCALE AS NOTED | REV. NO. C | DATE 12/16/2022