Attachment 4c

Breakneck Connector and Bridge Project

Breakneck Bridge Drawings

HUDSON HIGHLANDS FJORD TRAIL BREAKNECK BRIDGE



© GRAY ORGANSCHI ARCHITECTURE

| SHEET NUMBER | DRAWING SHEET LIST (BNB) DRAWING TITLE |
|-------------------------|--|
| BNB-G-001 | COVER SHEET |
| BNB-G-010 | EXISTING CONDITIONS |
| BNB-G-100 | PARCELS AND EASEMENTS |
| | |
| BNB-C-001 BNB-C-002 | CIVIL NOTES 1 OF 2 CIVIL NOTES 2 OF 2 |
| BNB-C-100 | SITE PROTECTION & REMOVALS PLAN |
| BNB-C-200 | SOIL EROSION & SEDIMENT CONTROL PLAN 1 |
| BNB-C-201 | SOIL EROSION & SEDIMENT CONTROL PLAN 2 |
| BNB-C-251 BNB-C-300 | SUL EMBANKMENT PLAN SITE GRADING & DRAINAGE PLAN 1 |
| BNB-C-301 | SITE GRADING & DRAINAGE PLAN 2 |
| BNB-C-302 BNB-C-400 | TEMPORARY PAVEMENT PLAN 1 |
| BNB-C-401 | TEMPORARY PAVEMENT PLAN 2 |
| BNB-C-500 BNB-C-501 | CIVIL DETAILS 1 CIVIL DETAILS 2 |
| BNB-C-502 | CIVIL DETAILS-REINFORCED SOIL SLOPE SECTIONS A&B |
| BNB-C-503 BNB-C-504 | CIVIL DETAILS-REINFORCED SOIL SLOPE SECTIONS C&D |
| BNB-C-505 | CIVIL DETAILS-REINFORCED SOIL SLOPE SECTIONS G&H |
| BNB-C-506 LANDSCAPE | CIVIL DETAILS-REINFORCED SOIL SLOPE DETAILS |
| BNB-L-001 | LANDSCAPE NOTES |
| BNB-L-100 BNB-L-101 | MATERIALS PLAN |
| BNB-L-200 | LAYOUT PLAN |
| BNB-L-201 BNB-L-401 | LAYOUT PLAN PLANTNG PLAN |
| BNB-L-402 | PLANTING SCHEDULE |
| BNB-L-500 BNB-L-501 | SOILS PLAN SOILS PLAN |
| BNB-L-700 | BRIDGE LANDING ENLARGEMENT |
| BNB-L-800 BNB-L-801 | SECTIONS |
| BNB-L-900 | DETAILS - PAVEMENT |
| BNB-L-901 BNB-L-902 | DETAILS - 9D ROADSIDE DETAILS - FENCES |
| BNB-L-903 | DETAILS - SHOTCRETE |
| BNB-L-904 ELECTRICAI | DETAILS - SOILS AND PLANTING |
| BNB-E-001 | ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| BNB-E-002 BNB-E-101 | ELECTRICAL SCHEDULES |
| BNB-E-301 | ELECTRICAL RISER DIAGRAM |
| BNB-E-401 | ELECTRICAL LIGTHING PLAN SHEET 1 |
| BNB-E-403 | ELECTRICAL LIGTHING PLAN SHEET 3 |
| BNB-E-501 | ELECTRICAL POWER PLAN SHEET 1 |
| BNB-E-503 | ELECTRICAL POWER PLAN SHEET 3 |
| BNB-E-504 | ELECTRICAL POWER PLAN SHEET 4 |
| BNB-E-802 | ELECTRICAL DETAILS SHEET 1 |
| BNB-E-803 | ELECTRICAL DETAILS SHEET 3 |
| BNB-S-101 | GENERAL NOTES SHEET 1 |
| BNB-S-102 | GENERAL NOTES SHEET 2 |
| BNB-S-111 | GENERAL ARRANGEMENT OVERALL PLAN GENERAL ARRANGEMENT DEVELOPED ELEVATION |
| BNB-S-120 | GENERAL ARRANGEMENT TYPICAL SECTIONS SHEET 1 |
| BNB-S-121 BNB-S-130 | SETTING OUT SHEET 1 |
| BNB-S-131 | SETTING OUT SHEET 2 |
| BNB-S-132 BNB-S-135 | MNR CLEARANCE DIAGRAM |
| BNB-S-210 | FOUNDATION PLAN SHEET 1 |
| вNB-S-211 BNB-S-212 | FOUNDATION PLAN SHEET 2 FOUNDATION PLAN SHEET 3 |
| BNB-S-220 | PILING DETAILS SHEET 1 |
| вив-S-300 BNB-S-301 | ABUTMENT #1 LAYOUT SHEET 1 ABUTMENT #1 LAYOUT SHEET 2 |
| BNB-S-310 | ROUTE 9D RETAINING WALL LAYOUT SHEET 1 |
| אום -3-311 BNB-S-320 | PIERS #2 TO #5 LAYOUT SHEET 1 |
| BNB-S-321 | PIERS #2 TO #5 LAYOUT SHEET 2 |
| вив-S-322 BNB-S-330 | ABUTMENT #6 LAYOUT SHEET 1 |
| BNB-S-331 | ABUTMENT #6 LAYOUT SHEET 2 |
| BNB-S-340 BNB-S-400 | STEEL FRAMING PLAN - REFLECTED SOFFIT VIEW SHEET 1 |
| BNB-S-401 | STEEL FRAMING PLAN - REFLECTED SOFFIT VIEW SHEET 2 |
| вNB-S-402 BNB-S-402I | STEEL FRAMING PLAN - REFLECTED SOFFIT VIEW SHEET 3 |
| BNB-S-406 | STEEL GIRDER ELEVATION AND PLATE SCHEDULES SHEET 1 |
| BNB-S-407 BNB-S-408 | STEEL GIRDER ELEVATION AND PLATE SCHEDULES SHEET 2 STEEL GIRDER ELEVATION AND PLATE SCHEDULES SHEFT 3 |
| BNB-S-410 | STEEL GIRDER SECTIONS SHEET 1 |
| BNB-S-411 BNB-S-420 | SIEEL GIRDER SECTIONS SHEET 2 STEEL GIRDER DETAILS SHEFT 1 |
| BNB-S-421 | STEEL GIRDER DETAILS SHEET 2 |
| BNB-S-422 BNB-S-500 | STEEL GIRDER DETAILS SHEET 3 DECK PLAN SHEET 1 |
| BNB-S-501 | DECK PLAN SHEET 2 |
| BNB-S-502 BNB-S-510 | DECK PLAN SHEET 3 GLT DECK DETAILS SHEFT 1 |
| BNB-S-511 | GLT DECK DETAILS SHEET 2 |
| BNB-S-520 | RAILING AND ENCLOSURE DETAILS SHEET 1 |
| BNB-S-610 | BEARING DETAILS |
| BNB-S-620 | MOVEMENT JOINT DETAILS |
| BNR-9 661 | ACCESS AND MAINTENANCE SHEET 2 |
| 00-0-01 | |
| BNB-S-660 BNB-S_700 | TUNED MASS DAMPER PLAN AND DETAILS |





| | LIMIT OF WORK | Euro | EXISTING HEDGES |
|------------------------|--|-------------|--|
| ooo | EXISTING HIGHWAY GUIDERAIL TO BE PROTECTED AND REMAIN | | EXISTING TREE LINE |
| <u> </u> | EXISTING 8' HT. MNR FENCE | | |
| | EXISTING OVERHEAD UTILITY | E G 3 | EXISTING TREE (6" CALIPER & ABOVE), SEE CIVIL PLANS FOR TREE PROTECTION AND REMOVALS |
| —— Е —— Е —— Е —— Е —— | ELECTRICAL LINE | UB. | EXISTING UTILITY BOX |
| ======== | EXISTING DOT ROAD STRIPING | | EXISTING SIGN (SMALL) |
| | EXISTING METRO NORTH RAILROAD TRACKS | 90 | EXISTING SIGN (LARGE) |
| XX | EXISTING CONTOUR LINE, SEE GRADING PLANS | ¢ | EXISTING UTILITY POLE |
| _Х 10.7 | EXISTING SPOT ELEVATION | | EXISTING ROCK OUTCROP |

| W | |
|------------------|--|
| OE | |
| E | |
| | |
| | |
| | |
| | |
| | |
| | |
| 38 | |
| x ^{8.2} | |

| | TOWN/COUNTY LINE |
|-------------|---|
| | LIMIT OF WORK |
| | BREAKNECK CONNECTOR PROJECT LIMIT OF WORK (NOT IN CONTRACT) |
| _ · · · · · | UPPER OVERLOOK PROJECT L OF WORK (NOT IN CONTRACT) |
| | ROUTE 9D RIGHT OF WAY |
| | MTA RAIL OFFSET |

| WATER SERVICE |
|----------------------------------|
| ABOVE GROUND ELECTRIC SERVICE |
| UNDERGROUND ELECTRIC SERVICE |
| PVC DRY LINE |
| STORM PIPE |
| SWALE |
| EXTENT OF SLOPE STABILIZATION |
| |

1. NO PRUNING SHALL BE PERFORMED EXCEPT BY AN APPROVED CERTIFIED ARBORIST. 2. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.

| PLANT SC | HED | ULE | | | | | |
|--|------|----------|-------------------------|---------------------------|----------|----------------|---|
| SHRUBS | CODE | QTY | BOTANICAL NAME | COMMON NAME | SIZE | SPACING I | REMARKS |
| | As | 7 | AMELANCHIER SPICATA | DWARF SERVICEBERRY | #3 CONT. | AS SHOWN | FULL SPECIMEN. 2" CAL. |
| | Cr | 8 | CORNUS RACEMOSA | GRAY DOGWOOD | #3 CONT. | AS SHOWN | FULL SPECIMEN |
| | DI | 60 | DIERVILLA LONICERA | NORTHERN BUSH HONEYSUCKLE | #3 CONT. | AS SHOWN | FULL SPECIMEN. |
| | Rt | 54 | RHUS TYPHINA | STAGHORN SUMAC | #3 CONT. | AS SHOWN | FULL SPECIMEN |
| | Sc | 11 | SAMBUCUS CANADENSIS | AMERICAN ELDERBERRY | #3 CONT. | AS SHOWN | FULL SPECIMEN |
| SHRUB AREAS | CODE | QTY | BOTANICAL NAME | COMMON NAME | SIZE | | · |
| | | 2,254 SF | HONEYSUCKLE MIX | | | | |
| | са | 564 SF | CAREX APPALACHIA | APPALACHIAN SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | cd | 564 SF | CAREX PEDUNCULATA | LONG-STALKED SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | ср | 564 SF | CAREX PENSYLVANICA | PENNSYLVANIA SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | cr2 | 564 SF | CAREX ROSEA | ROSY SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | DI1 | 586 | DIERVILLA LONICERA | NORTHERN BUSH HONEYSUCKLE | #3 CONT. | 24" o.c. | FULL SPECIMEN |
| GROUND COVERS | CODE | QTY | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | |
| | | 682 SF | GOLDENROD MIX | | | | |
| | SS | 89 | SCHIZACHYRIUM SCOPARIUM | LITTLE BLUESTEM | PLUG | 50% @ 24" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | sf | 32 | SOLIDAGO FLEXICAULIS | ZIGZAG GOLDENROD | PLUG | 10% @ 18" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | sj | 48 | SOLIDAGO JUNCEA | EARLY GOLDENROD | PLUG | 15% @ 18" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | sn | 32 | SOLIDAGO NEMORALIS | GRAY GOLDENROD | PLUG | 10% @ 18" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | ss2 | 48 | SOLIDAGO SPECIOSA | SHOWY GOLDENROD | PLUG | 15% @ 18" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | | 541 SF | PURPLE IRONWEED MIX | | | | |
| | ер | 75 | EUTROCHIUM PURPUREUM | JOE PYE WEED | PLUG | 30% @ 18" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | SS | 29 | SCHIZACHYRIUM SCOPARIUM | LITTLE BLUESTEM | PLUG | 20% @ 24" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| | vn | 125 | VERNONIA NOVEBORACENSIS | COMMON IRONWEED | PLUG | 50% @ 18" o.c. | FULL PLANTS EVENLY DISTRIBUTED. |
| $\begin{array}{cccc} & \downarrow & \downarrow & \downarrow \\ & \downarrow & \downarrow & \downarrow \\ & \downarrow & \downarrow & \downarrow$ | | 2,717 SF | CAREX MIX | | | | |
| | са | 679 SF | CAREX APPALACHIA | APPALACHIAN SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | cd | 679 SF | CAREX PEDUNCULATA | LONG-STALKED SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | ср | 679 SF | CAREX PENSYLVANICA | PENNSYLVANIA SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | cr2 | 679 SF | CAREX ROSEA | ROSY SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | | 8,678 SF | BLUESTEM MIX | | | | |
| | ср | 868 SF | CAREX PENSYLVANICA | PENNSYLVANIA SEDGE | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | mf | 1,736 SF | MONARDA FISTULOSA | BERGAMOT | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |
| | ss1 | 6,075 SF | SCHIZACHYRIUM SCOPARIUM | LITTLE BLUESTEM | SEED | | LB OF P.L.S. SEED AT 20 LBS / ACRE PER SPECIFICATIONS. |

| 25.00 | 2+30.00 | 2+31.88 | 2+33.38 | 2+34.88 | 2+35.00 | 2+40.00 | 2+45.00 | 2+50.00 | 2+55.00 | 2+60.00 | 2+65.00 | 2+70.00 | 2+75.00 | 2+80.00 | 2+85.00 | 2+90.00 | 2+95.00 | 3+00.00 | 3+05.00 | 3+10.00 | 3+15.00 | 3+20.00 | 3+25.00 | 3+30.00 | 3+35.00 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1.67 | 31.89 | 31.99 | 32.05 | 32.12 | 32.13 | 32.36 | 32.60 | 32.84 | 33.08 | 33.31 | 33.55 | 33.79 | 34.03 | 34.27 | 34.51 | 34.75 | 34.98 | 35.11 | 35.13 | 35.11 | 34.98 | 34.77 | 34.55 | 34.33 | 34.12 |
| 0.69 | 30.91 | 31.01 | 31.07 | 31.14 | 31.15 | 31.38 | 31.62 | 31.86 | 32.10 | 32.33 | 32.57 | 32.81 | 33.05 | 33.29 | 33.53 | 33.77 | 34.00 | 34.13 | 34.15 | 34.13 | 34.00 | 33.79 | 33.57 | 33.35 | 33.14 |
| 4.30 | 22.45 | 21.43 | 21.43 | 21.43 | 21.53 | 24.08 | 26.04 | 27.55 | 28.70 | 29.52 | 30.20 | 30.70 | 31.06 | 31.36 | 31.62 | 31.83 | 31.99 | 32.11 | 32.18 | 32.18 | 32.11 | 31.94 | 31.72 | 31.40 | 30.93 |
| 9.18 | 9.24 | 9.12 | 9.34 | 9.55 | 9.30 | 9.33 | 9.63 | 9.90 | 10.13 | 10.34 | 10.53 | 10.69 | 10.79 | 10.85 | 10.89 | 10.88 | 10.81 | 10.79 | 10.82 | 10.82 | 10.87 | 10.94 | 10.93 | 10.83 | 10.67 |
| 1.15 | 4.62 | 4.93 | 5.60 | 6.16 | 6.18 | 6.81 | 7.45 | 8.10 | 8.74 | 9.33 | 9.82 | 10.20 | 10.46 | 10.62 | 10.72 | 10.77 | 10.74 | 10.73 | 10.76 | 10.74 | 10.78 | 10.83 | 10.84 | 10.82 | 10.79 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

| 95.00 | 4+00.00 | 4+05.00 | 4+10.00 | 4+15.00 | 4+20.00 | 4+25.00 | 4+30.00 | 4+35.00 | 4+40.00 | 4+45.00 | 4+50.00 | 4+51.40 | 4+52.90 | 4+54.40 | 4+55.00 | 4+60.00 | 4+65.00 | 4+70.00 | 4+75.00 | 4+80.00 | 4+85.00 | 4+90.00 | 4+95.00 | 5+00.00 | 5+05.00 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1.63 | 31.22 | 30.81 | 30.40 | 29.99 | 29.70 | 29.51 | 29.11 | 28.70 | 28.30 | 27.90 | 27.50 | 27.40 | 27.29 | 27.24 | 27.22 | 27.03 | 26.63 | 26.23 | 25.83 | 25.43 | 25.06 | 24.96 | 24.56 | 24.15 | 23.74 |
| 0.62 | 30.25 | 29.84 | 29.43 | 29.02 | 28.68 | 28.42 | 28.14 | 27.73 | 27.33 | 26.93 | 26.53 | 26.43 | 26.32 | 26.23 | 26.19 | 25.93 | 25.66 | 25.26 | 24.86 | 24.45 | 24.07 | 23.81 | 23.55 | 23.17 | 22.76 |
| 7.89 | 27.98 | 27.90 | 27.68 | 27.34 | 26.94 | 26.38 | 25.62 | 24.57 | 23.15 | 21.17 | 18.37 | 17.54 | 17.54 | 17.54 | 17.92 | 19.64 | 20.82 | 21.60 | 22.05 | 22.24 | 22.23 | 22.07 | 21.80 | 21.47 | 21.06 |
| 1.44 | 4.19 | 4.02 | 3.96 | 3.95 | 3.84 | 3.64 | 3.67 | 3.71 | 3.74 | 3.78 | 3.82 | 3.83 | 3.93 | 3.96 | 3.91 | 3.73 | 3.77 | 3.82 | 3.86 | 3.91 | 3.93 | 3.67 | 3.72 | 3.77 | 3.83 |
| 9.22 | 8.95 | 8.61 | 8.19 | 7.76 | 7.25 | 6.65 | 6.31 | 5.99 | 5.70 | 5.44 | 5.21 | 5.16 | 5.02 | 4.80 | 4.70 | 4.33 | 4.20 | 4.11 | 4.04 | 4.01 | 3.97 | 3.69 | 3.75 | 3.81 | 3.87 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

| -65.00 | 5+70.00 | 5+75.00 | 5+80.00 | 5+81.72 |
|--------|---------|---------|---------|---------|
| L9.55 | 19.14 | 18.72 | 18.31 | 18.21 |
| L8.57 | 18.15 | 17.74 | 17.33 | 17.22 |
| L6.56 | 16.36 | 16.05 | 15.64 | 15.54 |
| 3.86 | 3.92 | 3.98 | 4.04 | 4.05 |
| 3.82 | 3.88 | 3.95 | 4.01 | 4.04 |

1 CRANE OPERATION PLAN - SPAN 2

| \bigcirc | SECTION AT BARGE | |
|------------|------------------|--|
| 2 | | |

| NOTES: 1. FOR GENERAL NOTES, REFER TO BNB-S-S101 AND BNB-S-102. 2. VIABILITY OF BARGE CONSTRUCTION HAS BEEN VERIFIED BY TMS | Governor Kathy Hochul | Commissioner Erik Kulleseid |
|--|--|--|
| WATERFRONT AS PART OF THE SEQRA PROCESS AND IS SUMMARIZED IN HHFT - MARINE | IT IS A VIOLATION OF STATE EDUCATION LAW FOR LICENSED ARCHITECT/ENGINEER TO ALTER THIS D SEAL AFFIXED ALONG WITH A DESCRIPTION OF TH | ANY PERSON, UNLESS UNDER THE DIRECTION OF A OCUMENT IN ANY WAY. ALTERATIONS MUST HAVE THE E ALTERATIONS, DATE AND ARCHITECT'S/ENGINEER'S |
| LOGISTICS MEMO. THE DIAGRAMS ON THIS PAGE HAVE BEEN PRODUCED BY TMS WATERFRONT IN SUPPORT OF THE MEMO AND ARE INCLUDED IN THE BRIDGE SET FOR REFERENCE. | SIGNATURE. COPYRIGHT © 2015 Client HUDSON HIGHLANDS FJORD TRAIL 85 CIVIC CENTER PLAZA, SUITE 300 POUGHKEEPSIE, NY 12601 | Hudson Highlands Fjord Trail |
| AT MHW. NAVD88 -10 (11.72) WATER DEPTH AT MHW. 4. A RAILROAD SAFETY FACTOR OF 1.5 WAS MAINTAINED AS PART OF VERIFICATION. | Client Representative ABOUT THE WORK 40 EXCHANGE PLACE, SUITE 1405, N | IEW YORK, NY 10005 |
| 5. VIABILITY OF SWINGING SEGMENT 1 AND 2 AT EXTENDED RADIUS OF 260 FT WAS PRELIMINARILY VERIFIED BY TMS WATERFRONT AND FOUND TO BE FEASIBLE. | Structural & Electrical Engineer of Record ARUP US, INC. 77 WATER ST, NEW YORK, NEW YOR | ARUP |
| | SCAPE LANDSCAPE ARCHITECTURE | |
| | Survey BADEY & WATSON | |
| 0 | <i>Architect</i> <i>GRAY ORGANSCHI ARCHITECTURE</i> | |
| | 35 CROWN STREET, NEW HAVEN, C | |
| | LANGAN 360 WEST 31ST STREET, 8TH FL, NE | W YORK, NY 10001 |
| | Structural Scheme Desig FAST + EPP 411 EAST 11TH STREET, 11TH FLOO | n Fast+Epp R, NEW YORK, NY 10003 |
| | Project Title: | THE BREAKNECK BRIDGE |
| | Name of Region: | Dutchess County New York |
| ÷ | Project Location: | Town of Fishkill Dutchess County New York |
| | Cornwall-On-Hudson | |
| 81' - 4" | Roe Park | Hudson Highlands |
| | State Park | $\langle \rangle \rangle = \langle $ |
| | Contract Numbers GC Contract Number: HVAC Contract Number: Plumbing Contract Number Electrical Contract Numbers | D- D- D- D- D- |
| | REVI | SIONS |
| | Rev. No Desc | cription Date |
| | 2 60% CONSTRUC | TION DOCUMENTS 01/26/2023 |
| | Drawn By: MP | Seal and Signature |
| | Design By: KW | |
| | Checked By: SP | NOTFOR |
| | Approved By: MC | CONSTRUC |
| | Date: | - |
| | U I/20/23 Sheet Title: | Drawing Number: |
| | CONSTRUCTION SEQUENCE SHEET 2 | BNB-S-701 |
| | Project Number: | Scale: |
| | 288206 | AS INDICATED |

Attachment 4d

Breakneck Connector and Bridge Project

Marine Logistics Drawings

SILT CURTAIN/CONTAINMENT BOOM NOTES

- MEASURES SHALL BE TAKEN TO PREVENT HARBOR DRIFT INCLUDING:
- PROTECTION
- - MARKER LIGHTS AT 100' O.C.
- - SKIRT REEFING LINES AT 8' O.C.
- 3" DIA. GALVANIZED BALLAST CHAIN, AS REQUIRED

GENERAL NOTES

- UPDATED 29 JULY 2021.
- MEAN HIGH WATER ELEVATION CONTOUR IS TAKEN FROM SURVEY.
- 4. OF WORK
- STANDARDS AND MNR REQUIREMENTS.
- FIELD OBSERVATIONS.
- BY THE CONTRACTOR.
- SUBMISSION

LEGEND

| NAVD88 EL | WATER DEPTH | |
|-----------|-------------|--|
| -2 | 0.53 Ft | |
| -3 | 1.53 Ft | |
| -4 | 2.53 Ft | |
| -5 | 3.53 Ft | |
| -8 | 6.53 Ft | |
| -10 | 8.53 Ft | |
| | | |

1. THE DISCARDING OF ANY MATERIAL INTO THE WATERWAY IS PROHIBITED. NO HARBOR DRIFT IS ALLOWED. APPROPRIATE

A. INSTALLING AND MAINTAIN FLOATING BOOMS TO PREVENT THE ESCAPE OF FLOATING MATERIALS FROM THE SITE AND NETTING, FLOAT STAGES WITH CURBS AND ANY OTHER TEMPORARY STRUCTURES USED TO PREVENT SOIL, STONE, CONCRETE, METALS AND OTHER NON-FLOATING DEBRIS FROM ENTERING THE WATERWAY AND REQUIRED TO PROVIDE

B. THE BOOM SYSTEM SHALL BE DESIGNED FOR THE WAVE HEIGHT AND CURRENTS ANTICIPATED IN THE WORK AREA. SUBMIT A PLAN AND DETAILS WITH THE MANUFACTURER'S LITERATURE FOR THE SELECTED BOOM SYSTEM. THE FLOATING BOOM TURBIDITY BARRIER SHALL BE A FULL DEPTH SILT BOOM CONTAINMENT BARRIER MONOFILAMENT TYPE, WITH PVC COATED POLYESTER FLOAT COVER, CLOSED CELL PE FOAM FLOATATION (12" DIA. MIN.), FULL DEPTH PVC GEOMEMBRANE SKIRT, LACING GROMMET END CONNECTIONS, BALLAST CHAIN AND ALL OTHER ACCESSORIES. C. TEMPORARY SILT CURTAIN/CONTAINMENT BOOM, AS NEEDED AND REQUIRED BY PERMIT, SHALL BE SILT AND TURBIDITY BARRIER, SUCH AS SILTMÁX TYPE II DOT BY ELASTEC, OR APPROVED EQUAL. ANCHOR AS REQUIRED TO FULLY RESTRAIN FROM MOVEMENT. SILT CURTAIN/CONTAINMENT BOOM SHALL INCLUDE, AS A MINIMUM:

- REINFORCED ANCHOR POINTS AT 25' O.C. FOR WIRE ATTACHMENT TO TEMPORARY PILES OR OTHER PURPOSES

- HORIZONTAL CARGO WEBBING, AS REQUIRED, WITH 2" DIA. SUPPORT RINGS ON EACH SIDE AT 25' O.C.

1. SURVEY TAKEN FROM "HUDSON HIGHLANDS FJORD TRAIN (BREAKNECK TUNNEL TO BREAKNECK STATION) PROPERTY LINE AND TOPOGRAPHIC SURVEY" PREPARED BY BADEY & WATSON SURVEYING & ENGINEERING, P.C., DATED 26 JUNE 2020;

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

METRO NORTH RAILROAD (MNR) STRUCTURES LOCATION AND DETAILS ARE BASED UPON THE TOPOGRAPHIC SURVEY. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO CRANE ERECTIONS, BRIDGE ERECTION, AND COMMENCEMENT

EXISTING CONDITIONS ARE BASED ON AVAILABLE INFORMATION AND SURVEY REPORTS WHICH MAY NOT COMPLETELY AND ACCURATELY DEPICT CONDITIONS AT THE TIME OF CONSTRUCTION. TOPOGRAPHIC AND BATHYMETRIC SURVEY INFORMATION SHOWN IS ONLY REPRESENTATIVE OF THE CONDITIONS EXISTING AT THE RESPECTIVE TIMES OF THE SURVEYS. ACTUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL BASE BID ON THEIR OWN RECONNAISSANCE OF THE SITE AND FIELD VERIFY CONDITIONS INDICATED, PRIOR TO PREPARING SHOP DRAWINGS, ORDERING MATERIALS OR PERFORMING THE WORK. NO EXTRA WORK COMPENSATION WOULD

BE CONSIDERED FOR CONDITIONS WHICH COULD BE KNOWN BEFORE CONSTRUCTION. 6. DRAWINGS DO NOT ADDRESS SITE SAFETY ISSUES RELATED TO THE WORK SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY AND PROVIDE A SITE SAFETY PLAN CONFORMING TO OSHA STANDARDS, NEW YORK STATE

7. THE CONTRACTOR SHALL TAKE ALL CARE NECESSARY TO AVOID DAMAGE TO THE MNR TRACKS, EXISTING ADJACENT BUILDINGS AND ALL OTHER STRUCTURES OR UTILITIES TO REMAIN AND BE PROTECTED. ANY DAMAGES SHALL BE REPAIRED TO THE SATISFACTION OF THE DAMAGED STRUCTURE'S OWNER AT THE SOLE EXPENSE OF THE CONTRACTOR. 8. DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES AND/OR UTILITIES TO REMAIN AND BE PROTECTED ARE APPROXIMATE. CONTRACTOR TO NOTIFY THE OWNER IMMEDIATELY OF DISCREPANCIES BETWEEN THE PLANS AND ACTUAL

TEMPORARY UTILITIES, AS REQUIRED FOR THE COMPLETION OF THE WORK, SHALL BE OBTAINED, PERMITTED AND PAID FOR

10. CONTRACTOR SHALL SUBMIT THE FOLLOWING TO THE OWNER FOR REVIEW PRIOR TO COMMENCING THE WORK: SAFETY PLANS; CRANE CRITICAL LIFT PLANS, CRANE BEARING PRESSURE AND GROUND PRESSURE CALCULATIONS AND CERTIFICATIONS, CRANE INSPECTIONS, INSTALLATION SEQUENCE PLANS; AND OTHER RELATED INFORMATION REQUIRING

11. CONTRACTOR IS DIRECTED NOT TO PLACE EQUIPMENT BELOW MHW OR SEAWARD OF MHW. 12. FOR EACH SEQUENCE AND MOVE, CONTRACTOR IS TO SUBMIT BARGE DIMENSIONS, DRAFTS AND VESSELS DRAFT FOR EACH SEQUENCE. KEEL AND PROPELLER CLEARANCES ARE NO LESS THAN 2 FEET TO THE MUDLINE, AT NO TIME SHALL ANY VESSELS OR BARGES GROUND OUT OR IMPACT THE MUDLINE.

13. ALL BARGE CRANES TO HAVE CERTIFIED USCG STABILITY AND LIFT LETTER WITH CURRENT INSPECTION.

— TURBIDITY CURTAIN

| | PLAZA, STE 200 NY 12601 XXX XXX | SHEET TTILE: STAGE I - MOBILIZE, CLEAR & GRUB | ISSUE DATE: 01.23.2023 DRAWN BY: JK SCALE: 1"=60'-0" DRAWING NO: | PROJECT NO: 22065 CHECKED BY: ST SHEET NO: 1 OF 10 MR-1.0 |
|--|--|---|--|---|
|--|--|---|--|---|

HUDSON RIVER

ROCKLAND COUNTY

| XXX STAGE II - GRADING XXX AND SITE PREP AND SITE PREP DRAWING NO: MR-2.0 | PLAZA, STE 200 NY 12601 XXX XXX | SHEET TITLE: STAGE II - GRADING AND SITE PREP | ISSUE DATE: 01.23.2023 DRAWN BY: JK SCALE: <u>AS NOTED</u> DRAWING NO: | PROJECT NO: 22065 CHECKED BY: ST SHEET NO: 2 OF 10 MR-2 0 |
|--|--|---|--|---|
|--|--|---|--|---|

HUDSON RIVER

ROCKLAND COUNTY

| | SHEET TITLE: | ISSUE DATE: 01 23 2023 | PROJECT NO: 22065 |
|----------------------------|-------------------|---------------------------|--------------------------|
| PLAZA, STE 200 NY 12601 | STACE III BID BAD | DRAWN BY: | CHECKED BY: |
| XXX XXX | SHORELINE | JK SCALE: | SHEET NO: |
| | | AS NOTED DRAWING NO: | <u>3 OF 10</u> MR-3.0 |

ROCKLAND COUNTY

HUDSON RIVER

| ACED IN THE EXCLUSION ZONE. | | | | | | |
|--|---|---|---|--|--|--|
| PLAZA, STE 200 NY 12601 XXX XXX | SHEET TITLE: STAGE IV - RIP RAP SHORELINE | ISSUE DATE: 01.23.2023 DRAWN BY: JK SCALE: AS NOTED DRAWING NO: | PROJECT NO: 22065 CHECKED BY: ST SHEET NO: 4 OF 10 MR-4.0 | | | |

C. CREW TRANSFER DOCKS ARE FOR SAVE MOVEMENT OF PERSONNEL FROM THE CREW BOATS TO THE BARGE. THESE ARE TIMBER OR ALUMINUM FLOATING DOCKS 8-FT WIDE BY 40-FT LONG THAT ARE TIED TO THE BARGE, NOT ANCHORED. D. THE NYCDEP WATER TUNNEL INFLUENCE EXCLUSIONS ZONE EXTENDS 25-FT TO EITHER SIDE OF THE LIMITS. NO ANCHORING, MOORING, SPUDDING OR EQUIPMENT SHOULD BE PLACED IN THE EXCLUSION ZONE.

B. THE CREW BOAT/SAFETY BOAT WILL HAVE VARIOUS SIZES AVAILABLE. THE BOAT IS USED TO TRANSPORT PERSONNEL TO SITE DAILY AND WILL BE HOME PORTED OFFSITE OVERNIGHT AT A MARINA.

NOTE(S): A. RO-RO RAMP OVER WATER COVERAGE: 1350 SF

---- CONSTRUCTION FENCE

LEGEND

NOTES: (A) HULL MAINTAIN 2 FT CLEAR AT ALL TIMES

B RAMP COVERAGE OVER WATER - 743.75 SF

| | SHEET TITLE: | ISSUE DATE: | PROJECT NO: |
|----------------|---------------------|-------------|-------------|
| DIAZA CTE 000 | | 01.23.2023 | 22065 |
| PLAZA, STE 200 | | DRAWN BY: | CHECKED BY: |
| XXX | SECTION AT BARGE AT | ЈК | ST |
| XXX | MLLW | SCALE: | SHEET NO: |
| | | AS NOTED | 5 OF 10 |
| | | DRAWING NO: | MR-4.1 |

| <u>SEGMENTATION</u> SEGMENT WEIGHT | 3 24T | 4 12T | 5 22T | 6 12T | 7 24T |
|--|----------|----------|----------|----------|----------|
| COMBINATIONS | | | | | |
| A) 4, 5, 6 | | | 46T | | |
| B 3, 4, 5, 6, 7 | | | 94T | | |
| - | | | | | |

NOTE(S): A. THE NYCDEP WATER TUNNEL INFLUENCE EXCLUSIONS ZONE EXTENDS 25-FT TO EITHER SIDE OF THE LIMITS. NO ANCHORING, MOORING, SPUDDING OR EQUIPMENT SHOULD BE PLACED IN THE EXCLUSION ZONE.

| | SHEET TITLE: | ISSUE DATE: | PROJECT NO: |
|----------------------------|-----------------------|-------------|-------------|
| PLAZA, STE 200 NY 12601 | | 01.23.2023 | 22065 |
| | | DRAWN BY: | CHECKED BY: |
| | STAGE V - CENTER SPAN | јк | ST |
| | ERECTION BY WATER | SCALE: | SHEET NO: |
| | | AS NOTED | 6 OF 10 |
| | | DRAWING NO: | MR-5.0 |

| INTATION INT 8 T 2: | 9 2T 24T | 10 22T | 11 23T | 12 12T | |
|---|--|---|------------------------------------|--|---|
| NATIONS 9 [2 | 46T | 22T | 23T | [12T] | |
| <u>S):</u> E NYCDEP WA INE EXTENDS 2: ANCHORING, IOULD BE PLACE | TER TUNNEL 5-FT TO EITHE MOORING, SPU D IN THE EXCL | INFLUENCE IR SIDE OF JDDING OR USION ZONE. | EXCLUSION THE LIMIT EQUIPMEN | S S. T | |
| LAZA, STE 200 NY 12601 | SHEET TITLE: STAGE V SECTI | /III - ERE0 ONS 10/1 | CTION 1/12 | ISSUE DATE: 01.23.2023 DRAWN BY: JK SCALE: AS NOTED | PROJECT NO: 22065 CHECKED BY: ST SHEET NO: 9 OF 10 |
| | | | | DRAWING NO: | MR-8.0 |

| PLAZA, STE 200 NY 12601 | SHEET TITLE: STAGE IX - DEMOBILIZATION | ISSUE DATE: 01.23.2023 DRAWN BY: JK SCALE: | PROJECT NO: 22065 CHECKED BY: ST SHEET NO: |
|----------------------------|--|--|--|
| | | AS NOTED DRAWING NO: | 10 OF 10 MR-9.0 |

NOTE(S)/SEQUENCE; 1. ABCD 2. ABCD 3. ABCD

----- TURBIDITY CURTAIN