# STATE OF MAINE
# DEPARTMENT OF TRANSPORTATION

## SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Eighth Edition 2017.

## DESIGN LOADING

Live Load ..... HL - 93 Modified for Strength 1

## TRAFFIC DATA

| | I-295 NB | I-295 SB | Veranda St. |
|---|---|---|---|
| Current (2019) AADT | 27,320 | 26,230 | 15,390 |
| Future (2039) AADT | 32,780 | 31,480 | 16,930 |
| DHV - % of AADT | 12% | 13% | 10% |
| Design Hour Volume | 3934 | 4092 | 1693 |
| Heavy Trucks (% of AADT) | 6% | 8% | 2% |
| Heavy Trucks (% of DHV) | 3% | 4% | 0.5% |
| Directional Distribution (% of DHV) | 100% | 100% | 60% |
| 18 kip Equivalent P 2.0 | 2573 | 3083 | 113 |
| 18 kip Equivalent P 2.5 | 2452 | 2937 | 108 |
| Design Speed (mph) | 50 | 50 | 35 |

## MATERIALS

Concrete:
- Permanent Barrier ..... Class "LP"
- Precast Approach Slabs and Sleeper Slabs ..... Class "P"
- All Other ..... Class "A"

Reinforcing Steel:
- Plain Reinforcing Steel ..... ASTM A 615, Grade 60
- Stainless Reinforcing Steel ..... ASTM A 955, Grade 75

Structural Steel:
- All Material (except as noted) ..... ASTM A 709, Grade 50 (metallized)
- High Strength Bolts ..... ASTM F 3125, Grade A325, Type 1 (galvanized)

## BASIC DESIGN STRESSES

| | |
|---|---|
| Concrete, Class "A" | f 'c = 4,000 psi |
| Concrete, Class "LP" | f 'c = 5,000 psi |
| Concrete, Class "P" | f 'c = 4,000 psi |
| Plain Reinforcing Steel | f y = 60,000 psi |
| Stainless Reinforcing Steel | f y = 75,000 psi |
| Structural Steel: | |
| ASTM A 709, Grade 50 | F y = 50,000 psi |
| ASTM F 3125, Grade A325, Type 1 | F u = 120,000 psi |

# PORTLAND
# CUMBERLAND COUNTY
# INTERSTATE 295
## OVER
# VERANDA STREET

## INTERSTATE 295
## FEDERAL AID PROJECT NO. NHPP-2174(500)
## PROJECT LENGTH 0.050 mi. I-295
## PROJECT LENGTH 0.208 mi. VERANDA ST.
## BRIDGE NO. 5933

## LIST OF DRAWINGS


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## UTILITIES

| | |
|---|---|
| Central Maine Power | Firstlight |
| City of Portland | Portland Water District |
| Consolidated Communications | Unitil |

## MAINTENANCE OF TRAFFIC

I-295 - Maintain all lanes of traffic for the duration of the project except for one weekend closure and periodic nightly lane closures.

Veranda Street - Maintain two way traffic for the duration of the project except for a five day closure and periodic daily lane closures controlled by flaggers.

| | |
|---|---|
| PROJECT LOCATION: | I-295 over Veranda Street located 0.42 miles southeast of Martin's Point Bridge, Latitude 43°41'09" N, Longitude 70°15'08" W |
| PROGRAM AREA: | Bridge |
| OUTLINE OF WORK: | Bridge Replacement |

HNTB

WIN 021745.00

NHPP-2174(500)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

| | | DATE |
|---|---|---|
| APPROVED | COMMISSIONER: | 10-5-2020 |
| | CHIEF ENGINEER: | 10-5-2020 |

STATE OF MAINE TIMOTHY R. COTE No. 10671 LICENSED PROFESSIONAL ENGINEER

| | SIGNATURE | P.E. NUMBER | DATE |
|---|---|---|---|
| | | 10671 | 09/24/2020 |

PROJECT INFORMATION

| | |
|---|---|
| PROGRAM | BRIDGE |
| PROJECT MANAGER | DEVAN EATON |
| DESIGNER | TIM COTE |
| CONSULTANT | HNTB |
| PROJECT RESIDENT | |
| CONTRACTOR | |
| PROJECT COMPLETION DATE | |

PORTLAND
VERANDA STREET BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 220

Date:9/24/2020
Username:
Division:
Filename:001_Title.dgn

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 201.23 | Removing Single Tree Top Only | 9 | EA |
| 201.24 | Removing Stump | 9 | EA |
| 202.19 | Removing Existing Bridge (620 CY, 288 Tons) | 1 | LS |
| 202.15 | Removing Existing Manhole or Catch Basin | 17 | EA |
| 202.202 | Removing Pavement Surface | 7,200 | SY |
| 203.20 | Common Excavation | 14,500 | CY |
| 203.24 | Common Borrow | 3,050 | CY |
| 203.25 | Granular Borrow | 4,180 | CY |
| 203.4339 | Geofoam Lightweight Fill | 9,100 | CY |
| 203.4539 | Leveling Sand | 580 | CY |
| 206.082 | Structural Earth Excavation - Major Structures, Plan Quantity | 1,550 | CY |
| | | | |
| 304.10 | Aggregate Subbase Course-Gravel | 9,950 | CY |
| | | | |
| 403.207 | Hot Mix Asphalt, 19.0 mm Nominal Maximum Size | 430 | TON |
| 403.2081 | Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (Polymer Modified) | 1,565 | TON |
| 403.209 | Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands, and incidentals) | 460 | TON |
| 403.211 | Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming) | 50 | TON |
| 403.213 | Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course) | 1,700 | TON |
| 403.2131 | Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course, Polymer Modified) | 1,315 | TON |
| 409.15 | Bituminous Tack Coat, Applied | 1,497 | GAL |
| 461.131 | Temporary Pavement | 290 | TON |
| | | | |
| 501.222 | Micropiles | 2,320 | LF |
| 501.2221 | Abandoned Micropiles | 210 | LF |
| 501.231 | Dynamic Loading Test | 4 | EA |
| 501.2331 | Micropile Verification Load Test | 2 | EA |
| 501.2341 | Micropile Proof Load Test | 2 | EA |
| 501.50 | Steel H-beam Piles 89 lb/ft, delivered | 3,850 | LF |
| 501.501 | Steel H-beam Piles 89 lb/ft, in place | 3,850 | LF |
| 501.804 | Drilling Equipment Mobilization - Micropiles | 1 | LS |
| 501.90 | Pile Tips | 35 | EA |
| 501.91 | Pile Splices | 111 | EA |
| 501.92 | Pile Driving Equipment Mobilization | 1 | LS |
| 502.219 | Structural Concrete, Abutments and Retaining Walls (1,293 CY) | 1 | LS |
| 502.26 | Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (280 CY) | 1 | LS |
| 503.12 | Reinforcing Steel, Fabricated and Delivered | 28,000 | LB |
| 503.13 | Reinforcing Steel, Placing | 28,000 | LB |
| 503.17 | Mechanical/Welded Splice | 1,062 | EA |
| 503.26 | Stainless Steel Reinforcement, Fabricated and Delivered | 231,000 | LB |
| 503.27 | Stainless Steel Reinforcement, Placing | 231,000 | LB |
| 504.702 | Structural steel fabricated and delivered, welded (194,000 lbs) | 1 | LS |
| 504.71 | Structural steel erection (194,000 lbs) | 1 | LS |
| 505.08 | Shear Connectors (4,644 EA) | 1 | LS |
| 506.9104 | Thermal Spray Coating (Shop Applied) (194,000 lbs) | 1 | LS |
| 508.14 | High Performance Waterproofing Membrane (780 SY) | 1 | LS |
| 515.21 | Protective Coating for Concrete Surfaces (1,200 SY) | 1 | LS |
| 519.60 | Expansion Device - Asphaltic Plug Joint | 102 | LF |
| 520.223 | Armorless Bridge Joint | 1 | LS |
| 523.52 | Bearing Installation | 24 | EA |
| 523.5401 | Laminated Elastomeric Bearings, Fixed | 12 | EA |
| 523.5402 | Laminated Elastomeric Bearings, Expansion | 12 | EA |
| 524.301 | Temporary Structural Support | 1 | LS |
| 524.302 | Bridge Movement System | 1 | LS |
| 524.303 | Temporary Structural Support, Abutments | 1 | LS |
| 524.40 | Protective Shield - Steel Girders (920 SY) | 1 | LS |
| 526.301 | Temporary Concrete Barrier, Type I (1,280 LF) | 1 | LS |
| 526.306 | Temporary Concrete Barrier, To Remain (300 LF) | 1 | LS |
| 526.3311 | Single Slope Concrete Traffic Barrier (330 LF) | 1 | LS |
| 526.502 | Precast Concrete Median Barrier (210 LF) | 1 | LS |
| 527.34 | Work Zone Crash Cushions | 5 | UNIT |
| 534.7601 | Precast Approach Slab (190 CY) | 1 | LS |
| 534.7611 | Precast Sleeper Slab (40 CY) | 1 | LS |
| | | | |
| 602.302 | Lightweight Foam Concrete Fill (3,060 CY) | 1 | LS |
| 602.303 | Lightweight Foam Concrete Distribution Slab (800 CY) | 1 | LS |
| 603.151 | 12 inch Corrugated Metal Pipe | 8 | LF |
| 603.155 | 12 inch Reinforced Concrete Pipe Class III | 72 | LF |
| 603.159 | 12 inch Culvert Pipe Option III | 225 | LF |
| 603.169 | 15 inch Culvert Pipe Option III | 69 | LF |
| 603.175 | 18 inch Reinforced Concrete Pipe Class III | 48 | LF |
| 603.179 | 18 inch Culvert Pipe Option III | 230 | LF |
| 603.195 | 24 inch Reinforced Concrete Pipe Class III | 44 | LF |
| 603.199 | 24 inch Culvert Pipe Option III | 10 | LF |
| 603.209 | 30 inch Culvert Pipe Option III | 180 | LF |
| 604.071 | Catch Basin Type AI-P | 18 | EA |
| 604.072 | Catch Basin Type AI-C | 2 | EA |
| 604.076 | 60" Catch Basin Type AI-C | 4 | EA |
| 604.0761 | 60" Catch Basin Type AI-P | 3 | EA |
| 604.0771 | 72" Catch Basin Type AI-P | 2 | EA |
| 604.091 | Catch Basin Type BI-P | 7 | EA |
| 604.15 | Manhole | 2 | EA |
| 604.16 | Altering Catch Basin to Manhole | 1 | EA |
| 604.164 | Rebuilding Catch Basin | 1 | EA |
| 604.18 | Adjusting Manhole or Catch Basin to Grade | 12 | EA |

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 604.221 | 18 Inch Storm Water Check Valve | 2 | EA |
| 604.223 | 30 Inch Storm Water Check Valve | 1 | EA |
| 604.2402 | Behind Curb Catch Basin | 5 | EA |
| 604.2403 | Catch Basin Inlet Assembly | 2 | EA |
| 604.2491 | Catch Basin Type F7 | 1 | EA |
| 605.09 | 6 inch Underdrain Type B | 1,750 | LF |
| 605.11 | 12 inch Underdrain Type C | 790 | LF |
| 605.12 | 15 inch Underdrain Type C | 45 | LF |
| 605.13 | 18 inch Underdrain Type C | 120 | LF |
| 605.15 | 24 inch Underdrain Type C | 350 | LF |
| 605.17 | 30 inch Underdrain Type C | 130 | LF |
| 606.1301 | 31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced) | 1,400 | LF |
| 606.1307 | Bridge Transition (Asymmetrical) - Type I | 4 | EA |
| 606.1309 | 31" W-Beam Guardrail - Mid-Way Splice (8' Steel Post, 8" Offset Blocks, Single Faced) | 180 | LF |
| 606.2593 | Anchorage Assembly - Mid-Way Splice | 1 | EA |
| 606.353 | Reflectorized Flexible Guardrail Marker | 1 | EA |
| 606.356 | Underdrain Delineator Post | 6 | EA |
| 607.173 | Chain Link Fence - 6 foot - PVC Coated | 480 | LF |
| 607.35 | Bracing Assembly Chain Link Fence - PVC Coated | 10 | EA |
| 608.08 | Reinforced Concrete Sidewalk | 140 | SY |
| 608.26 | Curb Ramp Detectable Warning Field | 230 | SF |
| 609.11 | Vertical Curb Type I | 2,600 | LF |
| 609.12 | Vertical Curb Type I - Circular | 220 | LF |
| 609.23 | Terminal Curb Type I | 73 | EA |
| 609.31 | Curb Type 3 | 600 | LF |
| 609.38 | Reset Curb Type I | 550 | LF |
| 610.08 | Plain Riprap | 34 | CY |
| 610.18 | Stone Ditch Protection | 35 | CY |
| 613.319 | Erosion Control Blanket | 6,350 | SY |
| 615.07 | Loam | 1,020 | CY |
| 615.086 | Loam/Compost | 200 | CY |
| 615.27 | Underdrained Soil Filter | 1 | LS |
| 618.13 | Seeding Method Number 1 | 25 | UNIT |
| 618.14 | Seeding Method Number 2 | 99 | UNIT |
| 618.143 | Special Seeding - Wetland Seed Mix - Moist | 8 | UNIT |
| 618.143 | Special Seeding - Wildflower Polinators | 10 | UNIT |
| 619.12 | Mulch | 131 | UNIT |
| 619.13 | Bark Mulch | 25 | CY |
| 619.14 | Erosion Control Mix | 50 | CY |
| 620.58 | Erosion Control Geotextile | 170 | SY |
| 620.6012 | HDPE Geomembrane | 4,300 | SY |
| 620.66 | Drainage Geocomposite | 810 | SY |
| 621.019 | Evergreen Tree 2' - 3' A | 36 | EA |
| 621.02 | Evergreen Tree 2' - 3' B | 12 | EA |
| 621.025 | Evergreen Tree 3' - 4' A | 6 | EA |
| 621.026 | Evergreen Tree 3' - 4' B | 12 | EA |
| 621.027 | Evergreen Tree 3' - 4' C | 12 | EA |
| 621.032 | Evergreen Tree 4' - 5' B | 12 | EA |
| 621.033 | Evergreen Tree 4' - 5' C | 12 | EA |
| 621.038 | Evergreen Tree 5' - 6' B | 40 | EA |
| 621.039 | Evergreen Tree 5' - 6' C | 20 | EA |
| 621.044 | Evergreen Tree 6' - 8' B | 18 | EA |
| 621.110 | Small Decid. Tr. 3' - 4' A | 35 | EA |
| 621.111 | Small Decid. Tr. 3' - 4' B | 36 | EA |
| 621.112 | Small Decid. Tr. 4' - 5' A | 40 | EA |
| 621.1121 | Small Decid. Tr. 4' - 5' B | 36 | EA |
| 621.12 | Small Decid. Tr. 5' - 6' A | 24 | EA |
| 621.121 | Small Decid. Tr. 5' - 6' B | 12 | EA |
| 621.178 | Med. Decid. Tr. 6' - 8' A | 12 | EA |
| 621.179 | Med. Decid. Tr. 6' - 8' B | 24 | EA |
| 621.18 | Med. Decid. Tr. 6' - 8' C | 7 | EA |
| 621.186 | Med. Decid. Tr. 8' - 10' C | 24 | EA |
| 621.195 | Med. Decid Tr. I 3/4"-2" A | 3 | EA |
| 621.197 | Med. DecidTr. I 3/4"-2" C | 10 | EA |
| 621.389 | Dw. Everg. 15"-18" GP. A | 36 | EA |
| 621.424 | Evergr. Shrub 4' - 5' B | 8 | EA |
| 621.450 | Evergr. Shrub 5' - 6' A | 50 | EA |
| 621.451 | Evergr. Shrub 5' -6' B | 36 | EA |
| 621.5351 | Deciduous Shrubs 15"-18" GP A | 24 | EA |
| 621.54 | Deciduous Shrubs 18"-24" GP A | 54 | EA |
| 621.546 | Deciduous Shrubs 2'-3' GP A | 24 | EA |
| 621.554 | Deciduous Shrubs 3'-4' GP C | 12 | EA |
| 621.558 | Deciduous Shrubs 4'-5' GP A | 50 | EA |
| 621.80 | Establishment Period Bond | 1 | LS |
| 626.11 | Precast Concrete Junction Box | 22 | EA |
| 626.21 | Metallic Conduit | 80 | LF |
| 626.22 | Non-metallic Conduit | 2,150 | LF |
| 626.251 | Non-Metallic Under Pavement Conduit (Schedule 80 or greater rating) | 150 | LF |
| 626.411 | 18 inch Diameter Foundation | 48 | LF |
| 626.43 | 30-inch Diameter Foundation | 96 | LF |
| 626.46 | 48-inch Diameter Foundation | 16 | LF |
| 626.48 | 60-inch Diameter Foundation | 15 | LF |
| 626.35 | Controller Cabinet Foundation | 1 | EA |
| 626.36 | Remove or Modify Concrete Foundation | 2 | EA |
| 627.733 | 4" White or Yellow Painted Pavement Marking Line | 9,500 | LF |

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON |
|---|---|
| DESIGN-DETAILED | EJD |
| CHECKED-REVIEWED | RWH |
| DESIGN2-DETAILED2 | |
| DESIGN3-DETAILED3 | |

| REVISION | BY | DATE |
|---|---|---|
| REVISIONS 1 | CDH | 10/20 |
| REVISIONS 2 | LZD | 10/20 |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

ESTIMATED QUANTITIES

SHEET NUMBER

2

OF 220

Filename: 002_Estimated Quantities.dgn Division: Username: Date:10/2/2020

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 627.744 | 6" White or Yellow Painted Pavement Marking Line | 6,400 | LF |
| 627.75 | White or Yellow Pavement & Curb Marking | 2,350 | SF |
| 627.77 | Removing Existing Pavement Marking | 1,400 | SF |
| 627.78 | Temporary Pavement Marking Line, White or Yellow | 8,400 | LF |
| 629.05 | Hand Labor, Straight Time | 200 | HR |
| 631.10 | Air Compressor (including operator) | 60 | HR |
| 631.11 | Air Tool (including operator) | 60 | HR |
| 631.12 | All Purpose Excavator (including operator) | 200 | HR |
| 631.14 | Grader (including operator) | 60 | HR |
| 631.172 | Truck-large (including operator) | 200 | HR |
| 631.22 | Front End Loader (including operator) | 60 | HR |
| 631.32 | Culvert Cleaner (including operators) | 30 | HR |
| 634.160 | Highway Lighting | 1 | LS |
| 634.2042 | LED Luminaires | 10 | EA |
| 634.210 | Conventional Light Standard | 8 | EA |
| 639.18 | Field Office, Type A | 1 | EA |
| 643.62 | Rectangular Rapid Flashing Beacon | 4 | EA |
| 643.71 | Traffic Signal Modification: Veranda St./Marine Hospital Road | 1 | LS |
| 643.72 | Temporary Traffic Signal at: Route 9/Lunt Road | 1 | LS |
| 643.77 | Dynamic Speed Feedback Signs | 1 | EA |
| 643.80 | Traffic Signals at: Veranda St./Wordsworth/On Ramp/Off Ramp | 1 | LS |
| 643.83 | Video Detection System Veranda St./Wordsworth/On Ramp/Off Ramp | 1 | LS |
| 643.90 | Interconnect Wire Between: 12 - Strand Fiber Optic Cable (2000 LF) | 1 | LS |
| 643.91 | Mast Arm Pole 45' Mast Arm | 1 | EA |
| 643.92 | Pedestal Pole | 8 | EA |
| 643.93 | Strain Pole (Stub Pole) | 1 | EA |
| 643.94 | Dual Purpose Pole - 55' Mast Arm and Luminaire Arm | 1 | EA |
| 645.103 | Demount Guide Sign | 28 | EA |
| 645.106 | Demount Regulatory, Warning, Confirmation and Route Marker Assembly Sign | 79 | EA |
| 645.108 | Demount Pole | 44 | EA |
| 645.113 | Reinstall Guide Sign | 26 | EA |
| 645.116 | Reinstall Regulatory, Warning, Confirmation and Route Marker Assembly Sign | 31 | EA |
| 645.118 | Reinstall Pole | 17 | EA |
| 645.292 | Regulatory, Warning, Confirmation and Route Marker Assembly Signs Type II | 120 | SF |
| 652.30 | Flashing Arrow | 3 | EA |
| 652.312 | Type III Barricades | 21 | EA |
| 652.313 | Temporary Pedestrian Barricade, ADA Compliant | 350 | LF |
| 652.33 | Drum | 310 | EA |
| 652.34 | Cone | 100 | EA |
| 652.35 | Construction Signs | 1,550 | SF |
| 652.361 | Maintenance Of Traffic Control Devices (885 CD) | 1 | LS |
| 652.38 | Flaggers | 7,100 | HR |
| 652.381 | Traffic Officer | 400 | HR |
| 652.41 | Portable-Changeable Message Sign | 11 | EA |
| 656.75 | Temporary Soil Erosion and Water Pollution Control | 1 | LS |
| 659.10 | Mobilization | 1 | LS |
| 660.21 | On-The-Job Training | 1000 | HR |
| | | | |
| 803.01 | Test Pits | 12 | EA |

## CITY OF PORTLAND

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 202.15 | Removing Existing Manhole or Catch Basin | 7 | EA |
| 203.20 | Common Excavation | 1,150 | CY |
| 603.159 | 12 inch Culvert Pipe Option III | 45 | LF |
| 604.244 | Catch Basin Type F4 | 2 | EA |
| 615.07 | Loam | 150 | CY |
| 618.14 | Seeding Method Number 2 | 24 | UNIT |
| 619.12 | Mulch | 24 | UNIT |
| 626.11 | Precast Concrete Junction Box | 8 | EA |
| 626.22 | Non-metallic Conduit | 750 | LF |

## CENTRAL MAINE POWER

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 910.301 | Special Work - Utility Conduit - Concrete Duct Bank | 1 | LS |

## PORTLAND WATER DISTRICT

| ITEM NO. | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 203.25 | Granular Borrow | CY | 300 |
| | | | |
| 625.01 | Water Line System - Temporary | LS | 1 |
| 629.05 | Hand Labor, Straight Time | HR | 10 |
| 631.12 | All Purpose Excavator (including operator) | HR | 10 |
| 631.172 | Truck-large (including operator) | HR | 10 |
| 631.22 | Front End Loader (including operator) | HR | 10 |
| 652.38 | Flaggers | HR | 1,500 |
| 652.381 | Traffic Officer | HR | 100 |
| 653.22 | 2" Extruded Polystyrene Insulation | SY | 27 |
| | | | |
| 812.162 | Adjust Sewer Manhole to Grade | EA | 11 |
| 822.3225 | 6" CL 52 DI Pipe Push On Joint | LF | 50 |
| 822.3405 | 8" CL 52 DI Pipe Push On Joint | LF | 230 |
| 822.3605 | 12" CL 52 DI Pipe Push On Joint | LF | 1,675 |
| 823.31 | 12" Gate Valve | EA | 4 |
| 823.3101 | 12" Gate Valve MJ Cut-In | EA | 1 |
| 823.3250 | 8" Gate Valve MJ Cut-In | EA | 1 |
| 823.325 | 8" Gate Valve | EA | 7 |
| 823.3254 | 8" Gate Valve - Insertion | EA | 1 |
| 823.3310 | 6" Gate Valve MJ Cut-In | EA | 2 |
| 823.341 | Air Release Valve - 1" | EA | 4 |
| 824.30 | Fire Hydrant | EA | 3 |
| 824.31 | Remove Fire Hydrant | EA | 2 |
| 825.335 | 1-in Copper Service - Short Side | EA | 2 |
| 825.4341 | 1-in Copper Service - Long Side | EA | 9 |
| 825.55 | Reconnect 2" Copper Service | EA | 1 |

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EOD | CDH | 10/20 |
| CHECKED-REVIEWED | RWH | LZD | 10/20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ESTIMATED QUANTITIES

SHEET NUMBER

3

OF 220

Filename: 003_Estimated Quantities 2.dgn Division: Username: Date:10/2/2020

Username:
Division:
Filename: 004_GeneralNotes.dgn
Date:3/29/2020

# GENERAL CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

2. The location of utilities shown are approximate and should be verified in the field by the Contractor.

3. During construction, I-295 and Veranda Street may be closed to traffic for the time periods specified in the Special Provisions.

4. For easements, construction limits and right of way lines, refer to Right of Way Maps.

5. Seeding Method No. 1 shall be utilized on all lawn and developed areas. Seeding Method No. 2 shall be utilized on all other areas, including the Open Space, unless otherwise noted or directed.

6. Place a 24 in. wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of riprap and behind the wingwalls.

7. Two Reflectorized Flexible Guardrail Markers shall be installed at each guardrail end.

8. Clearing limits shall be 10 feet beyond and parallel to the construction slope lines or as shown on the Plans unless otherwise authorized by the Resident.

9. All clearing shall be considered incidental to the Contract and no separate payment will be made. The actual lines for clearing shall be established in the field by the Contractor as indicated on the Plans and approved by the Resident.

10. Single trees and stump removal within the clearing limits as shown on the plans, shall be considered clearing. Single trees and stumps outside of the clearing limits shown on the plans shall be paid for under Items 201.23 & 201.24.

11. Loam shall be placed to a nominal depth of 4 inches in lawn areas and 2 inches in all other areas, including the Open Space, unless otherwise noted or directed by the Resident.

12. At the connection of proposed and existing guardrail, a 9'-4.5" section of rail shall be used and the proposed guardrail height shall transition to meet the existing guardrail height over 25 feet. Payment shall be made under Item 606.1301.

13. A MASH Compliant guardrail end treatment shall be installed concurrently with the placement of each section of end beam guardrail.

14. Extended Use Erosion Control Blankets, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be made under the appropriate Contract Items.

15. Protective Coating for Concrete Surfaces shall be applied to the following areas:

    All exposed surfaces of concrete barriers.
    Fascias down to the drip notch.
    All exposed surfaces of Concrete Transition Barriers.
    Face of breastwalls to one foot below roadway grade
    Backwall top and roadway face and back side to one foot below top of the roadway.
    Wingwalls top face and roadway face to one foot below final grade.

16. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Item Number 619.14, Erosion Control Mix.

17. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/contractors/.

18. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

19. The project geotechnical report titled: Geotechnical Design Report for the Replacement of I-295 over Veranda Street may be accessed at the MaineDOT web address.

20. Geotechnical information furnished or referred to in this Plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidder's or Contractor's interpretations or conclusions drawn from the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between boring locations.

21. The existing bridge shall be removed by and become the property of the Contractor. Bridge removal shall be to the limits shown on the Plans. The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed, the Contractor is solely responsible for the care, custody and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of the existing bridge will be considered incidental to the bridge removal Pay Item.

22. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 30 business days prior to the start of demolition work. This plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until the MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

23. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from MaineDOT provided estimated quantities, except as follows:

    a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items will take precedence.

    b. If other Contract Documents specifically allow a change in payment for Lump Sum pay item, those requirements will be followed.

    c. If a design change results in changes to estimated quantities for Lump Sum pay items, price and adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

24. No existing drainage shall be abandoned, removed, or plugged without prior approval of the Resident.

25. Any necessary cutting of existing pipes to fit in areas of proposed catch basins will not be paid for separately and will be considered incidental to Standard Specifications Section 604 Manholes, Inlets, and Catch Basins.

26. Any necessary cutting of existing catch basins to allow for proposed pipe connections will not be paid for separately and will be considered incidental to Standard Specifications Section 603 Pipe Culverts and Storm Drains or SP Section 605 Underdrains.

27. Existing culverts and catch basins will be cleaned as directed by the Resident under the appropriate pay items.

28. Existing culverts to be removed that are beyond the limits of subgrade or proposed culvert excavation shall be paid for under item 203.20 Common Excavation.

29. Residential paved entrances shall be constructed with 2 inches of hot mix asphalt and 12 inches of aggregate subbase course gravel.

30. Commercial paved entrances shall be constructed with 3 inches of hot mix asphalt and 11 inches of aggregate subbase course gravel.

31. Driveways at Sta. 107+34, 109+21, and 109+53 shall have final locations and orientations of turnarounds determined in the field by the Resident.

32. All paved walkways to be constructed with 2 inches of hot mix asphalt and 12 inches of aggregate subbase course gravel, unless otherwise noted on the Plans or directed by the Resident.

33. Where called for on the Plans, where new pavement joins existing pavement, the existing pavement shall be sawcut along a smooth line to a neat, even, vertical joint as directed by the Resident. Broken or raveled edges will not be permitted. All work necessary for the preparation of this joint will be considered incidental to the related contract items.

34. In order to maintain access to the entrances at Sta. 103+52 Lt. and 106+42 Lt., Common Excavation, Aggregate Subbase Course - Gravel, Loam, Seeding Method No. 1, and Temporary Pavement is anticipated. Payment shall be made using appropriate contract items.

35. Where called for on the plans, all temporary driveways shall be constructed with: 2" hot mix asphalt and 12" aggregate subbase course gravel. All temporary roadways shall be constructed with: 4" hot mix asphalt and 12" aggregate subbase course gravel. Upon project completion, all temporary facilities shall be removed and reestablished to their existing condition, unless within the limits of proposed construction.

36. The Contractor shall place temporary pavement ramps at the transition between existing pavement grade and proposed base pavement on I-295. See Special Provision 461 Temporary Pavement for additional information.

37. Prior to the placement of surface pavement on I-295, the Contractor shall shim the portions of the roadway, within the limits of the existing bridge, to compensate for post-construction settlement occurring between the original bridge abutments and piers.

38. Type I Terminal Curbs vary in length. All Type I Terminal Curbs shall be measured for payment under Item 609.23 Terminal Curb Type I per Each, regardless of length.

39. Existing non-circular Type I Curb in good condition shall be reset as directed by the Resident. Quantities have assumed 25% of the existing non-circular Type I Curb to be Reset Curb Type I.

40. Payment for removing and resetting existing fence for contractor access shall be incidental to related contract items.

41. Earthwork Quantities were developed based on the following sequencing:

    I-295 is raised and widened requiring 3050 CY of Common Borrow

    Veranda Street and I-295 Ramps are realigned resulting in 7100 CY of surplus material with approximately 4850 CY being reusable excavation and 2250 CY of waste.

    Open Space is rough graded based on grading plan. Resulting in 1150 CY of Common Borrow being required which shall come from available reusable excavation from Veranda Street or I-295 Ramps. For the Open Space, stockpiled material placed in its final location shall be paid for as 203.20 Common Excavation.

42. The Department plans to install and operate two time lapse cameras to document construction of the project. To support these efforts the Contractor shall install, maintain, and remove two 40-foot-tall temporary utility poles at the approximate locations shown on the plans. The Contractor shall supply the Department with access and equipment (e.g. bucket truck or lift) necessary for the installation, maintenance and removal of the cameras and associated equipment. The Contractor shall also be responsible for providing electrical and Internet (minimum 10 Mbps) service at each pole location. The Contractor shall be responsible for the installation of temporary barrier or other measures necessary to maintain the safe passage of traffic near the pole, and to prevent the pole from being struck or damaged by equipment during construction. This work will not be measured for payment separately, but shall be incidental to the related contract items. Time lapse cameras will be provided, installed, and operated by others.

43. Temporary adjustments will be made to existing traffic signal timing along the detour routes during the Interstate 295 and Veranda Street closure period. These adjustments will be made by the Department. The Contractor shall assist the Department with access (lane closures) and equipment (boom truck or similar) as necessary to complete these adjustments. This work will not be measured for payment separately, but shall be incidental to the related contract items.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

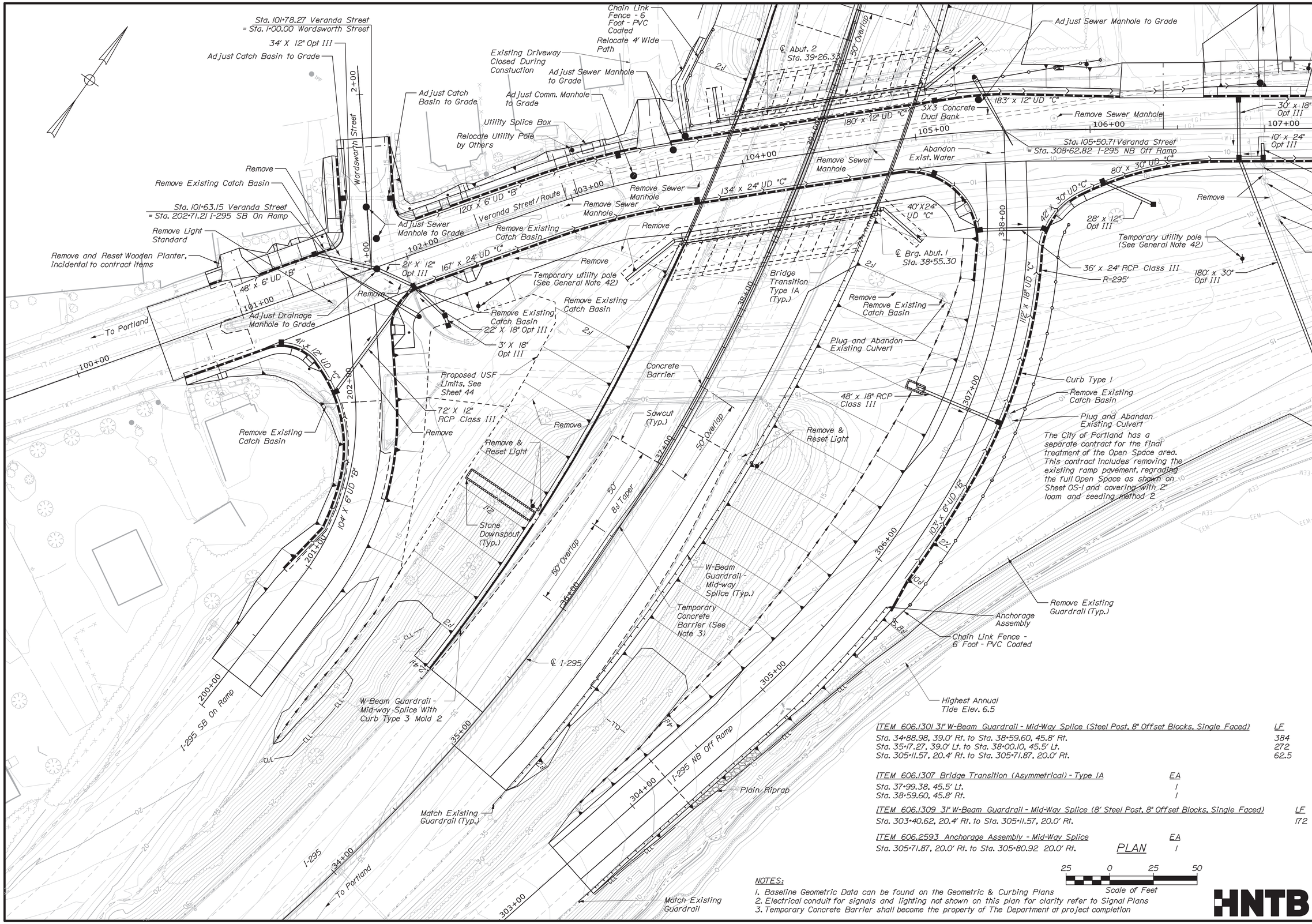
GENERAL NOTES

SHEET NUMBER

4

OF 220

Filename: 005_BDPlan_01.dgn Division: Username: Date:3/3/2020




| ITEM 606.1301 3I" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced) | LF |
|---|---|
| Sta. 34+88.98, 39.0' Rt. to Sta. 38+59.60, 45.8' Rt. | 384 |
| Sta. 35+17.27, 39.0' Lt. to Sta. 38+00.10, 45.5' Lt. | 272 |
| Sta. 305+11.57, 20.4' Rt. to Sta. 305+71.87, 20.0' Rt. | 62.5 |

| ITEM 606.1307 Bridge Transition (Asymmetrical) - Type IA | EA |
|---|---|
| Sta. 37+99.38, 45.5' Lt. | 1 |
| Sta. 38+59.60, 45.8' Rt. | 1 |

| ITEM 606.1309 3I" W-Beam Guardrail - Mid-Way Splice (8' Steel Post, 8" Offset Blocks, Single Faced) | LF |
|---|---|
| Sta. 303+40.62, 20.4' Rt. to Sta. 305+11.57, 20.0' Rt. | 172 |

| ITEM 606.2593 Anchorage Assembly - Mid-Way Splice | EA |
|---|---|
| Sta. 305+71.87, 20.0' Rt. to Sta. 305+80.92 20.0' Rt. | 1 |

PLAN

25 0 25 50
Scale of Feet

NOTES:
1. Baseline Geometric Data can be found on the Geometric & Curbing Plans
2. Electrical conduit for signals and lighting not shown on this plan for clarity refer to Signal Plans
3. Temporary Concrete Barrier shall become the property of The Department at project completion

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE PLANS

BRIDGE NO.5933

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| PROJ. MANAGER | D. EATON | | | |
| DESIGN-DETAILED | EDD | BY | DATE | |
| CHECKED-REVIEWED | RWH | LZD | 2\20 | |
| DESIGN2-DETAILED2 | EDD | LZD | 2\20 | |
| DESIGN3-DETAILED3 | | | | |
| REVISIONS 1 | | | | |
| REVISIONS 2 | | | | |
| REVISIONS 3 | | | | |
| REVISIONS 4 | | | | |
| FIELD CHANGES | | | | |

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DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GENERAL PLAN 1

SHEET NUMBER

5

OF 220

Filename: 006_BDPlan_02.dgn Username: Division: Date:3/3/2020

## PLAN

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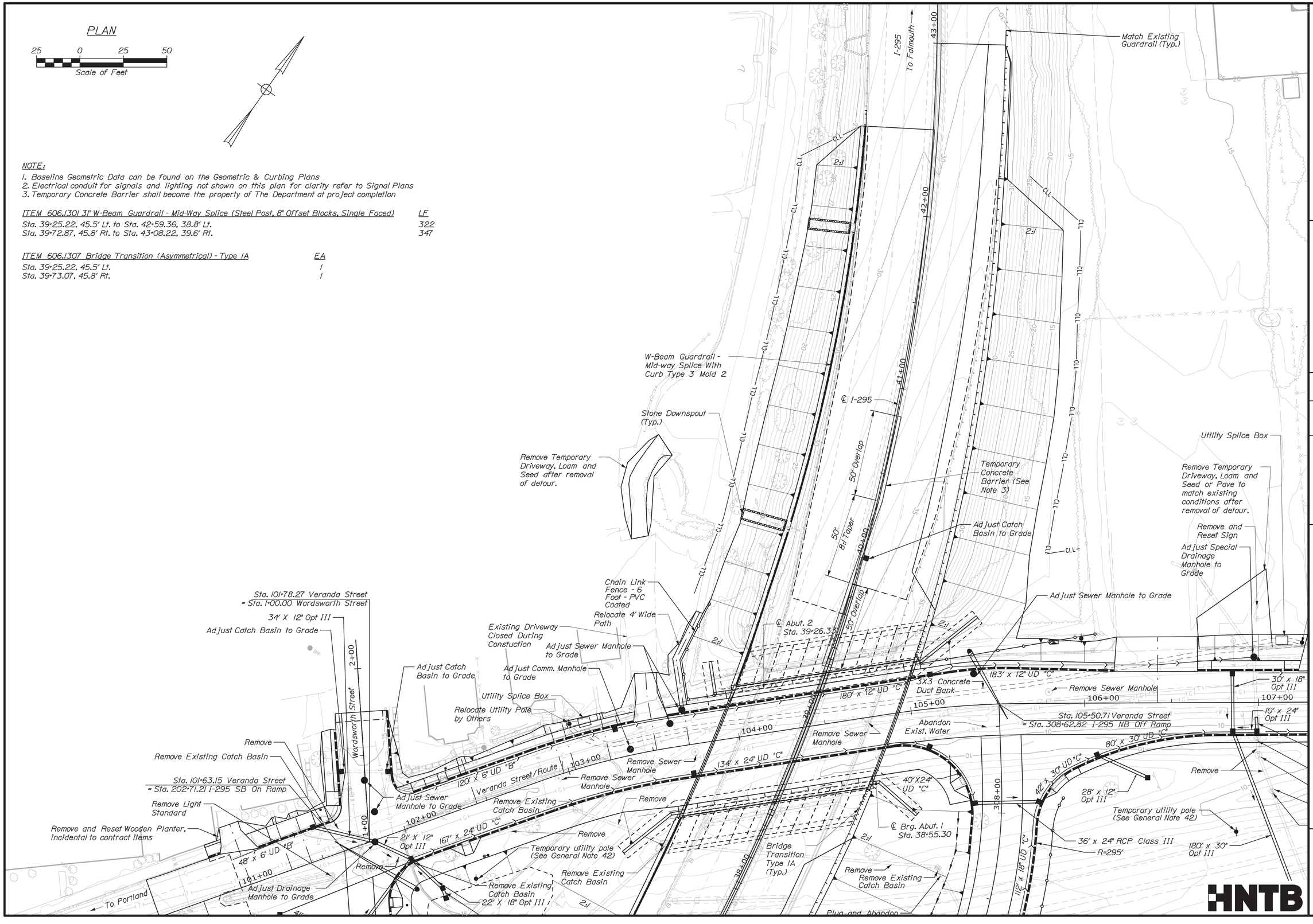
Scale of Feet

NOTE:

1. Baseline Geometric Data can be found on the Geometric & Curbing Plans
2. Electrical conduit for signals and lighting not shown on this plan for clarity refer to Signal Plans
3. Temporary Concrete Barrier shall become the property of The Department at project completion

| ITEM 606.1301 31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced) | LF |
|---|---|
| Sta. 39+25.22, 45.5' Lt. to Sta. 42+59.36, 38.8' Lt. | 322 |
| Sta. 39+72.87, 45.8' Rt. to Sta. 43+08.22, 39.6' Rt. | 347 |

| ITEM 606.1307 Bridge Transition (Asymmetrical) - Type 1A | EA |
|---|---|
| Sta. 39+25.22, 45.5' Lt. | 1 |
| Sta. 39+73.07, 45.8' Rt. | 1 |




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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
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| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | CDH | 2\20 |
| DESIGN3-DETAILED3 | LZD | 2\20 |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GENERAL PLAN 2

SHEET NUMBER

6

OF 220

Filename: 007_BDPlan_03.dgn Username: Division: Date:3/3/2020

Utility Splice Box
Remove Temporary Driveway, Loam and Seed or Pave to match existing conditions after removal of detour.
Remove and Reset Sign
Adjust Special Drainage Manhole to Grade
Relocate Utility Pole by Others
Sta. 108+54.98 Veranda Street = Sta. 3+00.00 Olympia Street
6" UD "B" (By Others)
Olympia Street
4+00
3+00
38' x 15" Opt III
Adjust Catch Basin to Grade
18' x 12" Opt III
22' x 15" Opt III
3' x 12" Opt III
Plug and Abandon Existing Culvert
Remove Existing Manhole
Plug and Abandon Existing Culvert
Remove Existing Catch Basin
Remove Existing Catch Basin
Adjust Sewer Manhole to Grade
Remove Sewer Manhole
Adjust Sewer Manhole to Grade
Sta. 113+33.64 Veranda Street = Sta. 5+00.00 Oregon Street
Oregon Street
6+00
5+00
Adjust Sewer Manhole to Grade
Adjust Comm. Manhole to Grade
Adjust Catch Basin to Grade
Remove Existing Storm Drain Manhole
21' x 12" Opt III
Adjust Sewer Manhole to Grade
9' x 15" Opt III
2' x 12" Opt III
30' x 18" Opt III
124' x 6" UD "B"
Remove Existing Sewer Manhole
45' x 15" UD "C"
34' x 12" UD "C"
43' x 12" UD "C"
49' x 12" UD "C"
76' x 12" UD "C"
148' x 6" UD "B"
107+00
108+00
109+00
110+00
111+00
112+00
113+00
44' x 12" Opt III
254' x 6" UD "B"
10' x 24" Opt III
Abandon Exist. Water
196' x 6" UD "B"
Plug and Abandon Existing Culvert
Adjust Comm. Manhole to Grade
Plug and Abandon Existing Culvert
42' x 18" Opt III
Plug and Abandon Existing Culvert
34' x 12" UD "C"
40' x 12" UD "C"
105' x 12" UD "C"
216' x 6" UD "B"
17' x 12" Opt III
8' x 24" RCP Connect to Existing
Remove
Remove Existing Catch Basin
Remove Existing Manhole
Remove Existing Catch Basin
Plug and Abandon Existing Culvert
pole 42)
180' x 30" Opt III
The City of Portland has a separate contract for the final treatment of the Open Space area. This contract includes removing the existing ramp pavement, regrading the full Open Space as shown on Sheet OS-1 and covering with 2" loam and seeding method 2
81' x 18" Opt III
Highest Annual Tide Elev. 6.5
Remove Existing Guardrail (Typ.)
Remove Exposed Portion of Existing Culvert
18 Inch Storm Water Check Valve
Riprap Outlet Protection
Riprap Outlet Protection
30 Inch Storm Water Check Valve
Remove Existing Catch Basin
Plug and Abandon Existing Culvert
45' x 18" Opt III
18 Inch Storm Water Check Valve

PLAN
25 0 25 50
Scale of Feet

NOTE:
1. Baseline Geometric Data can be found on the Geometric & Curbing Plans
2. Electrical conduit for signals and lighting not shown on this plan for clarity refer to Signal Plans

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP-2174(500)
WIN 021745.00
BRIDGE NO.5933
BRIDGE PLANS

| | NAME | DATE |
|---|---|---|
| PROJ. MANAGER | | |
| DESIGN-DETAILED | D. EATON | 2\20 |
| CHECKED-REVIEWED | EDD | 2\20 |
| DESIGN2-DETAILED2 | RWH | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
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| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE
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DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GENERAL PLAN 3

SHEET NUMBER
7
OF 220

Sta. 113+33.64 Veranda Street
= Sta. 5+00.00 Oregon Street

Oregon Street

Adjust Sewer Manhole to Grade
Adjust Comm. Manhole to Grade
Adjust Catch Basin to Grade
Remove Existing Storm Drain Manhole
21' x 12" Opt III
Tree to Remain
220' x 6" UD "B"
44' x 12" Opt III
254' x 6" UD "B"
Remove Existing Catch Basin
Plug and Abandon Existing Culvert
45' x 18" Opt III
18 Inch Storm Water Check Valve
Highest Annual Tide Elev. 6.5
Adjust Sewer Manhole to Grade
Junction Box
22' x 12" Opt III
Remove
Adjust Comm. Manhole to Grade
Stone Downspout See Note 1
Remove Existing Catch Basin
33' x 12" Opt III
98' x 6" UD "B"
5' x 12" Opt III
Alter Catch Basin to Manhole
Curb Type 1 (Typ.)
Sawcut (Typ.)
8' x 12" CMP Connect to Existing
19' x 12" Opt III
Rebuild Catch Basin to Type B-I-P

113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00
5+00 6+00

NOTES:
1. Limits of Work at This Drainage Outfall Are Approximate. Actual Limits of Clearing, Riprap, and Fill Shall be Confirmed by the Resident
2. Baseline Geometric Data can be found on the Geometric & Curbing Plans
3. Electrical conduit for signals and lighting not shown on this plan for clarity refer to Signal Plans

PLAN
25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
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| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
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| FIELD CHANGES | | |

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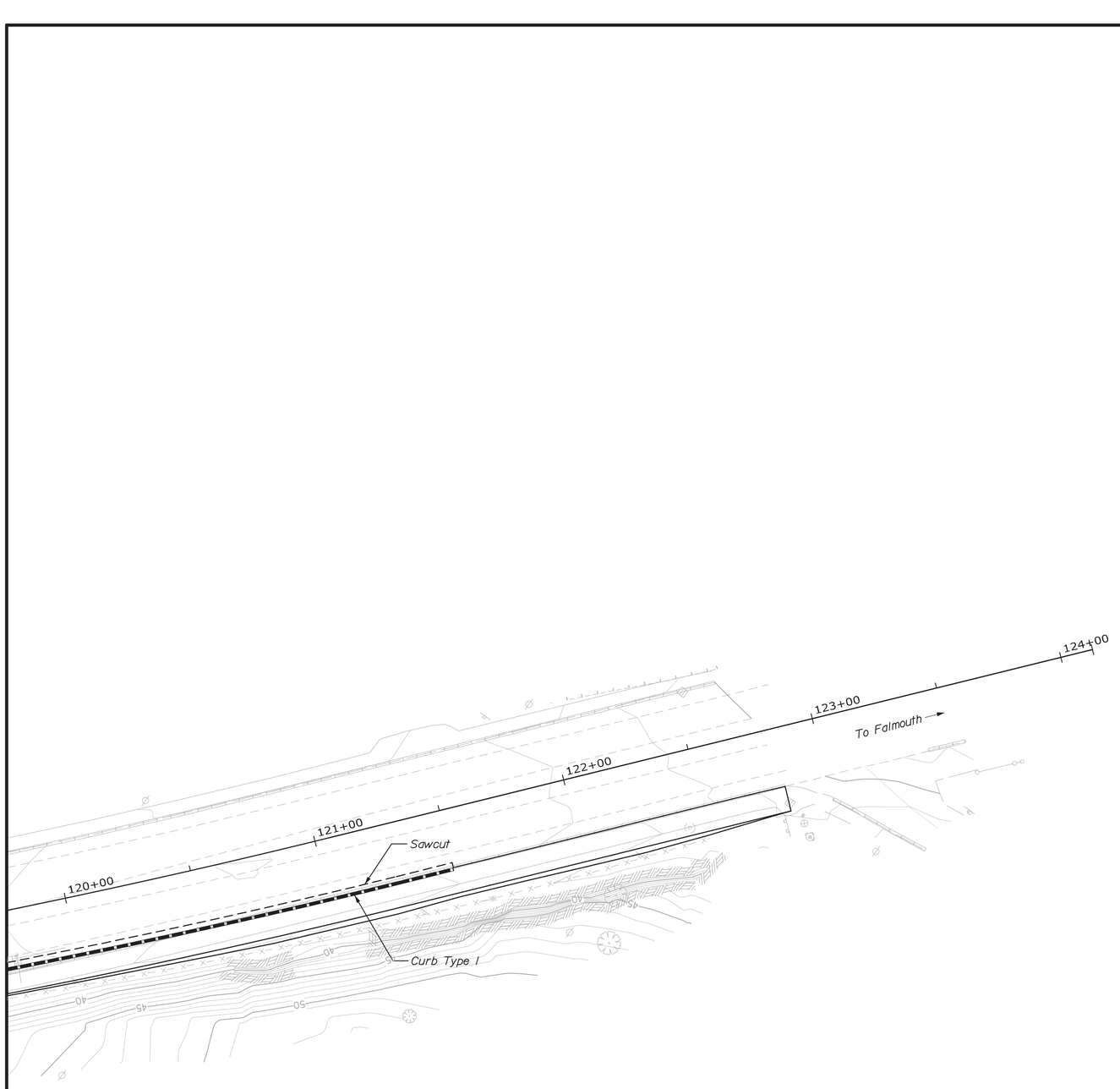
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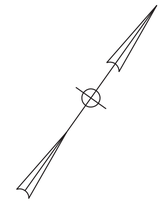
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GENERAL PLAN 4

SHEET NUMBER
8
OF 220

Username:
Division:
Date:3/3/2020
Filename: 008_BDPlan_04.dgn



NOTE:
Baseline Geometric Data can be found on the Geometric & Curbing Plans

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933 BRIDGE PLANS

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| PROJ. MANAGER | D. EATON | | |
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| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
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| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

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P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GENERAL PLAN 5

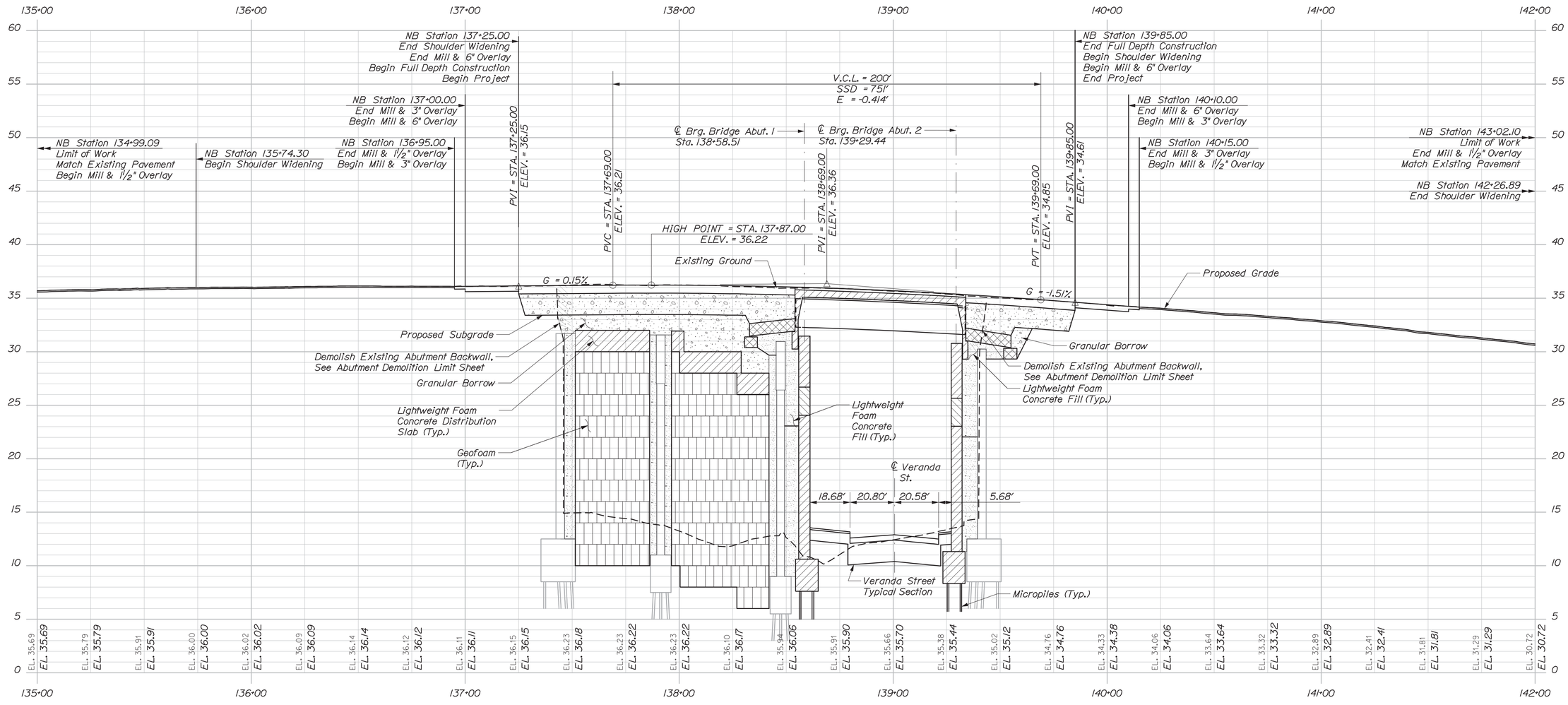
SHEET NUMBER

9

OF 220

Filename: 009_BDPlan_05.dgn Division: Username: Date:3/3/2020

Username:
Division:
Filename: 010_I-295 Profile.dgn
Date:3/3/2020




NB PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

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| PROJ. MANAGER | D. EATON | | | |
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| DESIGN2-DETAILED2 | | | | |
| DESIGN3-DETAILED3 | | | | |
| REVISIONS 1 | | | | |
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| FIELD CHANGES | | | | |

SIGNATURE

P.E. NUMBER

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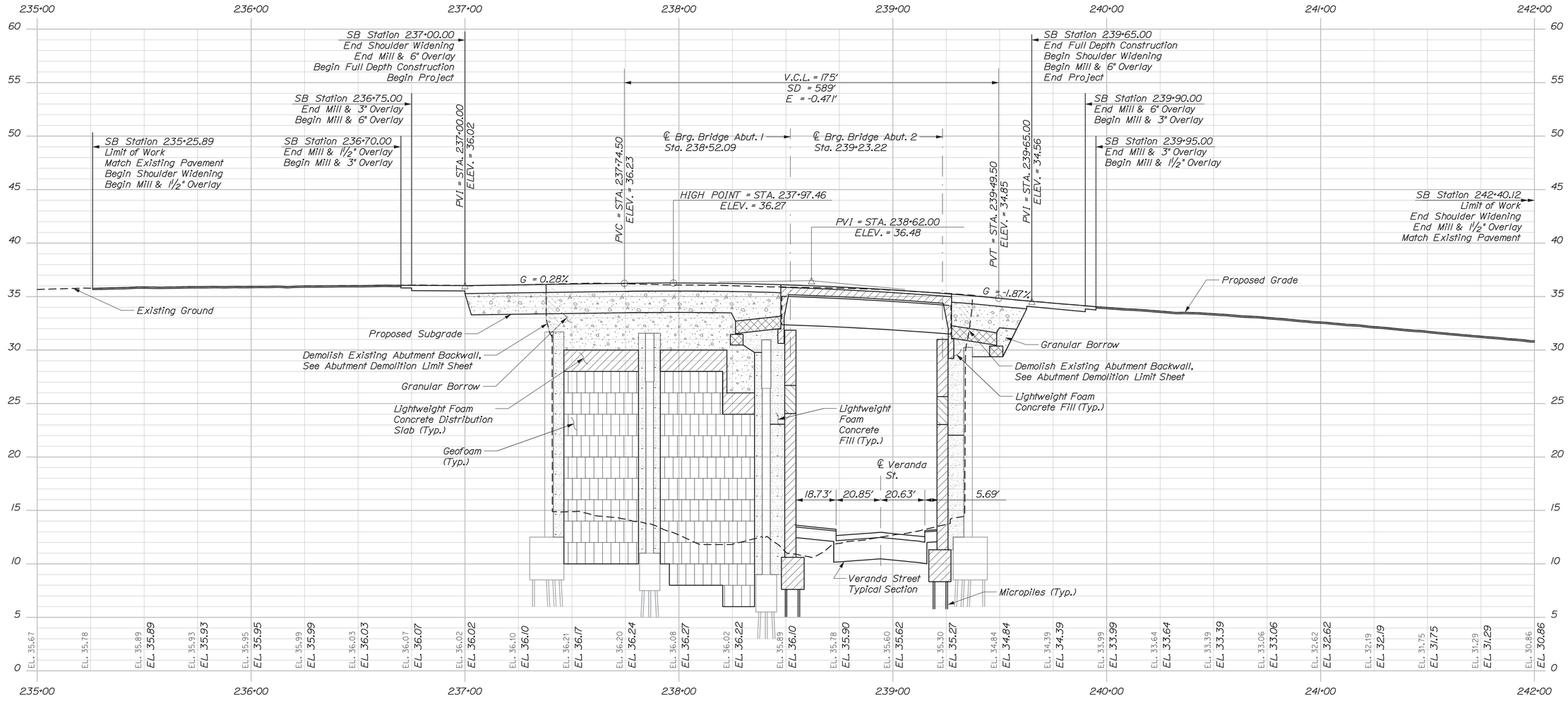
INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

PROFILE
I-295 NORTHBOUND

SHEET NUMBER

10

OF 220




## SB PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

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| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
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| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
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| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# PROFILE
# I-295 SOUTHBOUND

SHEET NUMBER

11

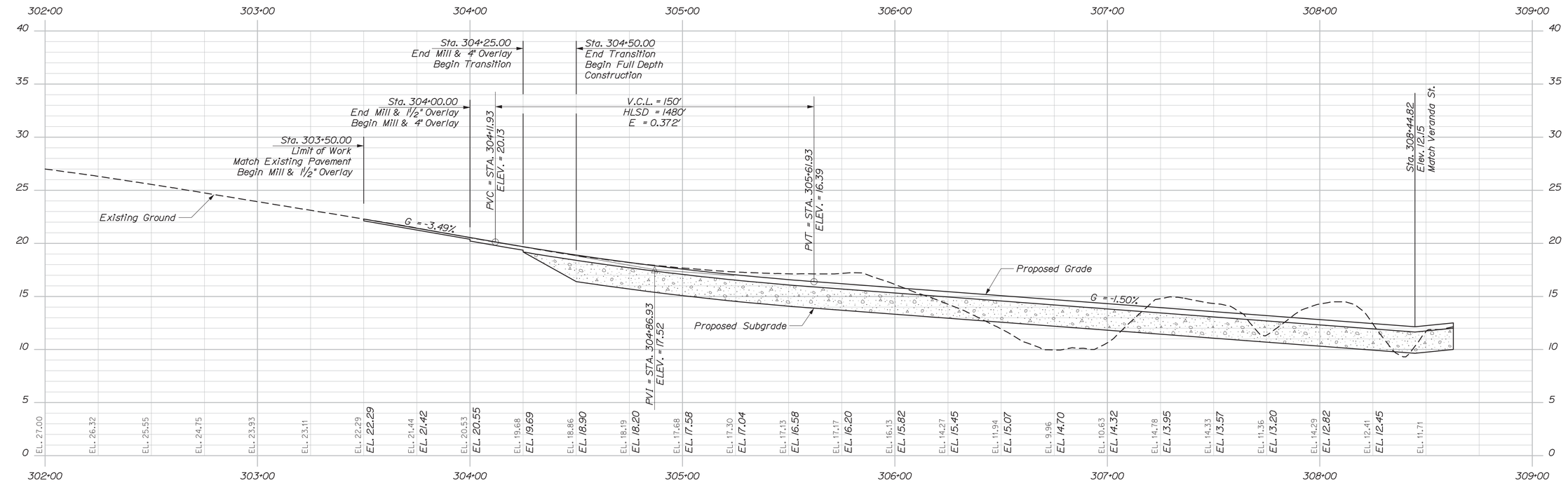
OF 220

Username:

Division:

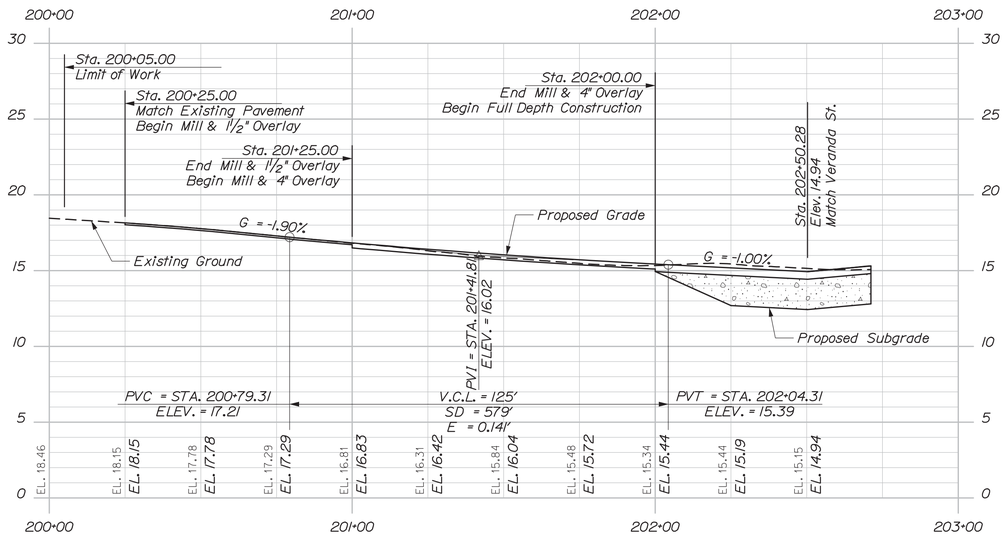
Date:3/3/2020

Filename: 011_I-295 Profile_2.dgn




## I-295 NB OFF RAMP PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet




## I-295 SB ON RAMP PROFILE

Horiz. 25 0 25 50
Vert. 5 0 5 10
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

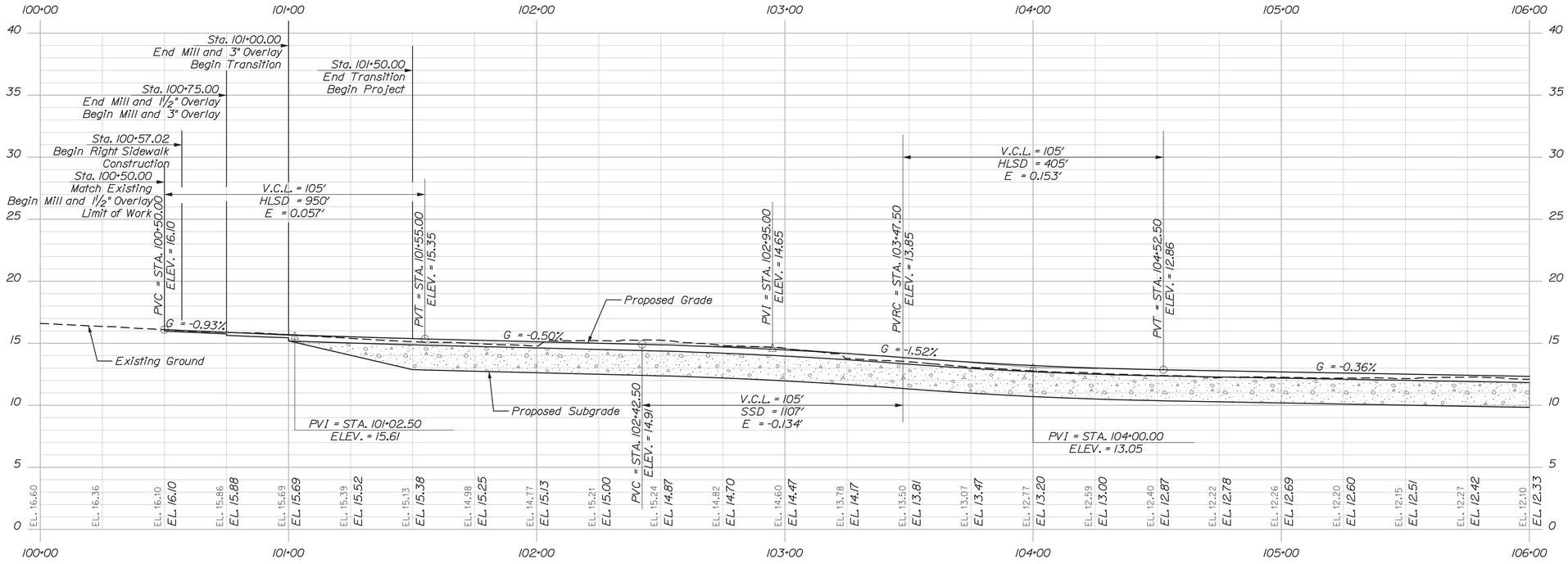
DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

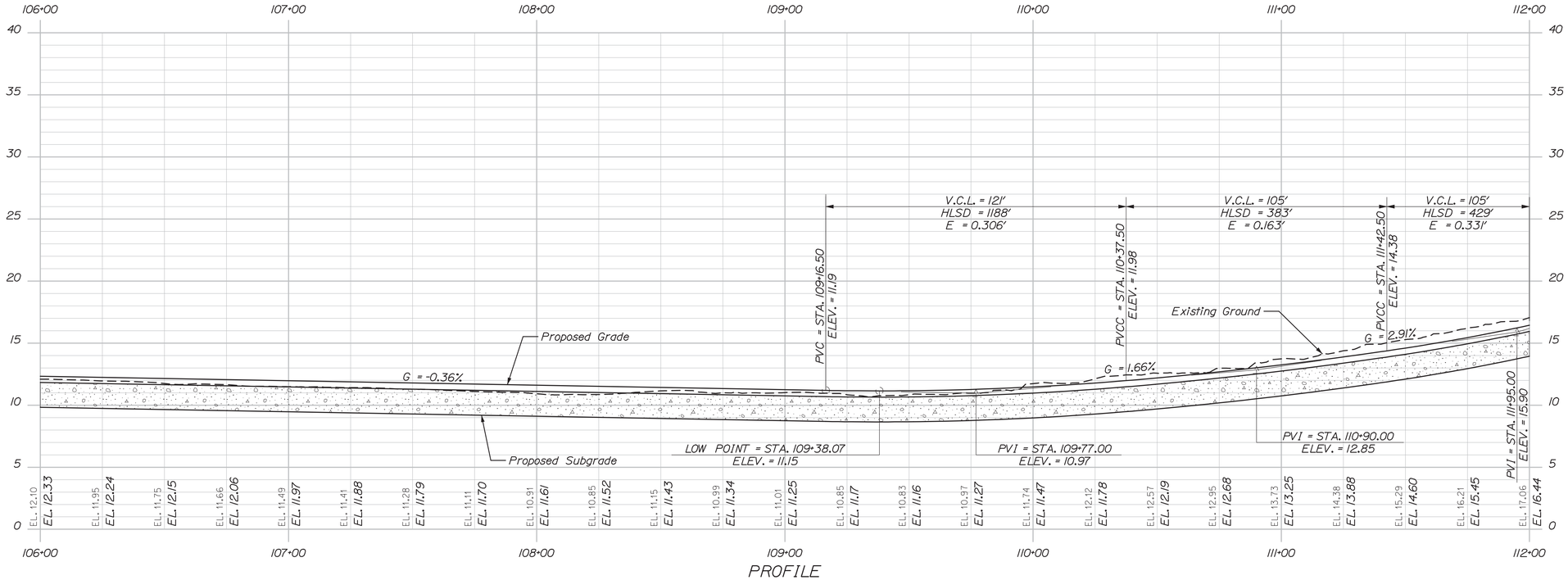
PROFILE
I-295 RAMPS

SHEET NUMBER
12
OF 220

Username:
Date:3/3/2020
Division:
Filename: 012_I-295 Ramp Profiles.dgn




PROFILE




PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

PROFILE
VERANDA STREET 1

SHEET NUMBER

13

OF 220

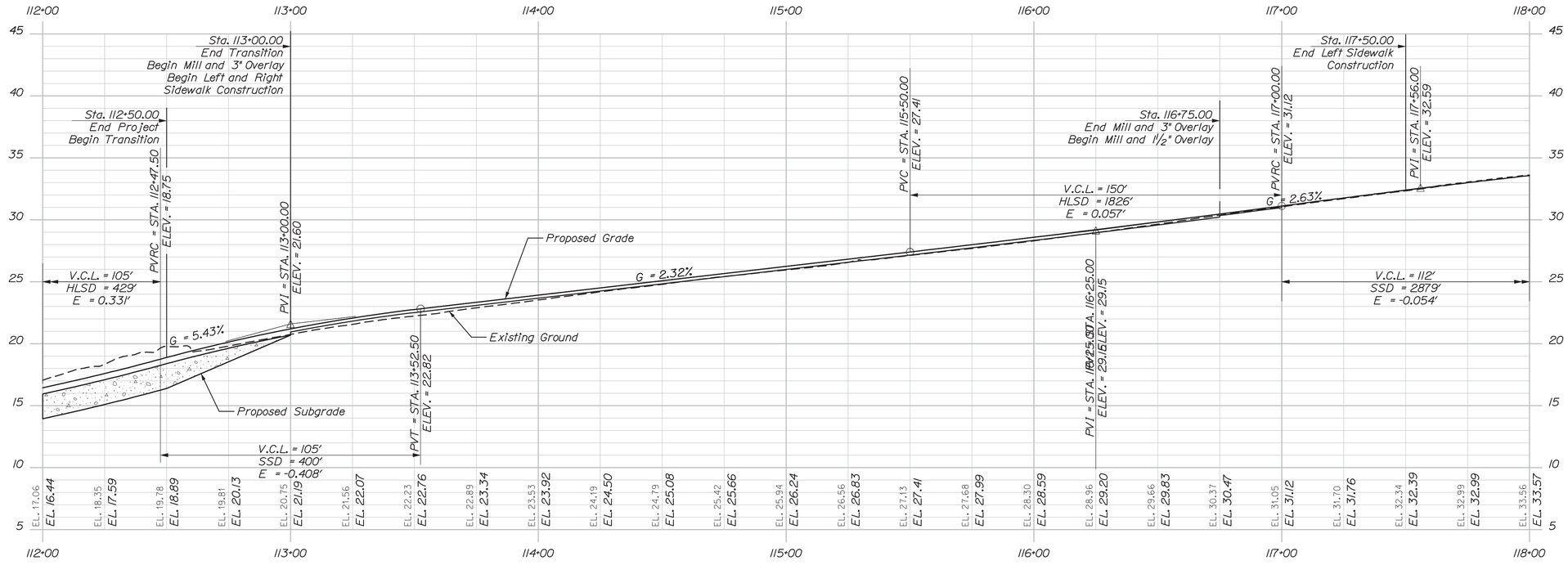
Username:

Date:3/3/2020

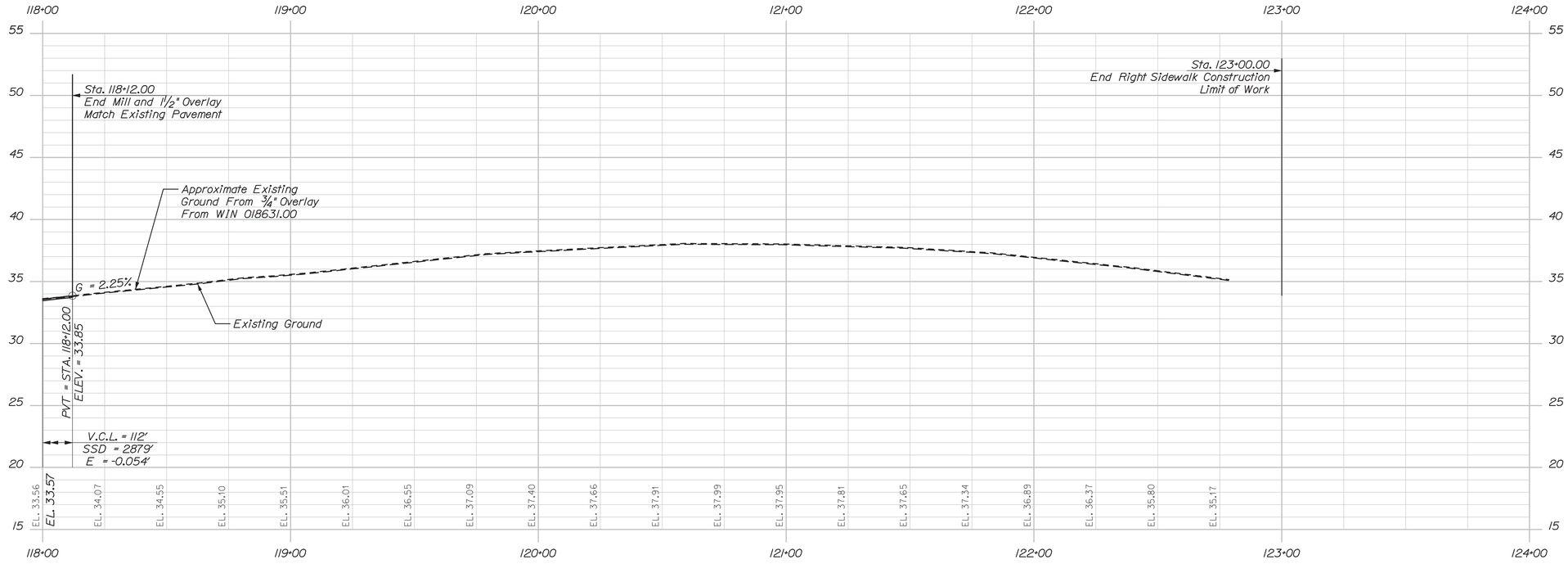
Division:

Filename: 013_Profile_Veranda_01.dgn

Username:
Division:
Filename: 014_Profile_Veranda_02.dgn
Date:3/3/2020




PROFILE




PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

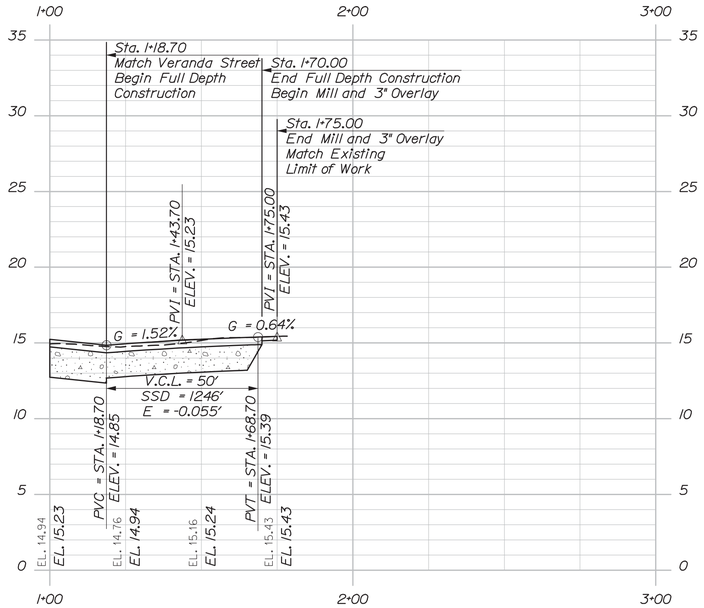
INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

PROFILE
VERANDA STREET 2

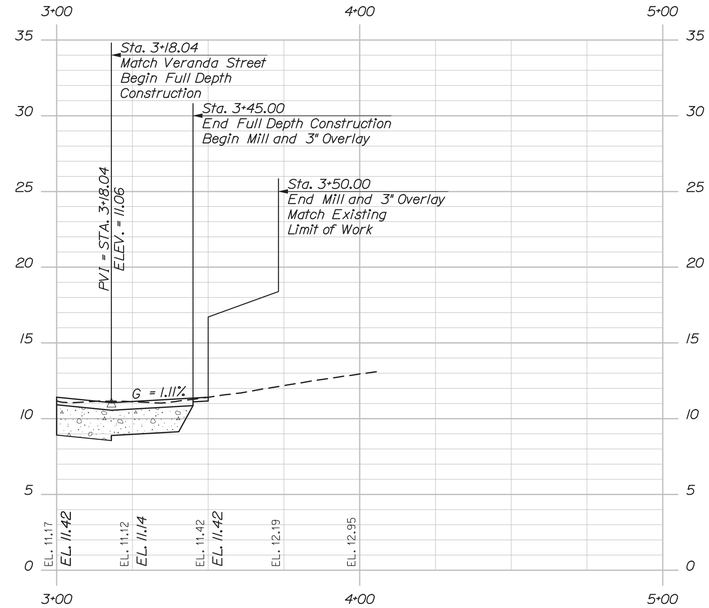
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14

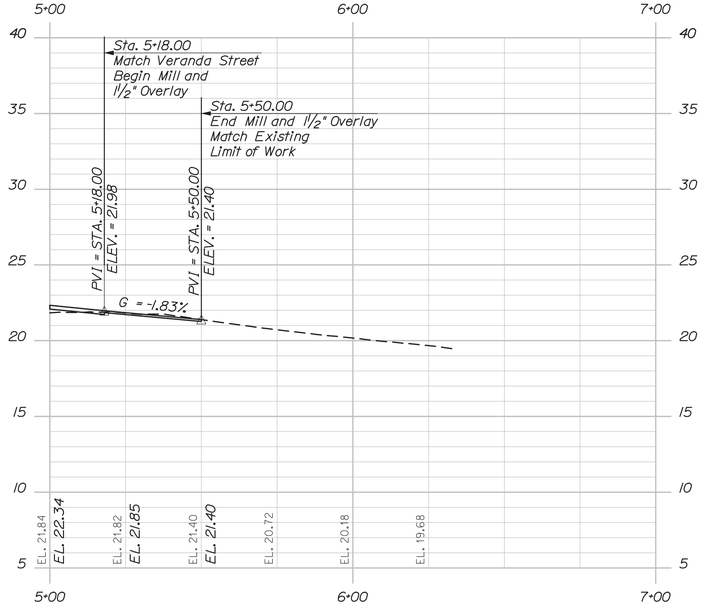
OF 220




WORDSWORTH STREET PROFILE




OLYMPIA STREET PROFILE




OREGON STREET PROFILE

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | EDD | CDH 2\20 |
| DESIGN-DETAILED | RWH | LZD 2\20 |
| CHECKED-REVIEWED | | |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

PROFILE
SIDE ROADS

SHEET NUMBER

15

OF 220

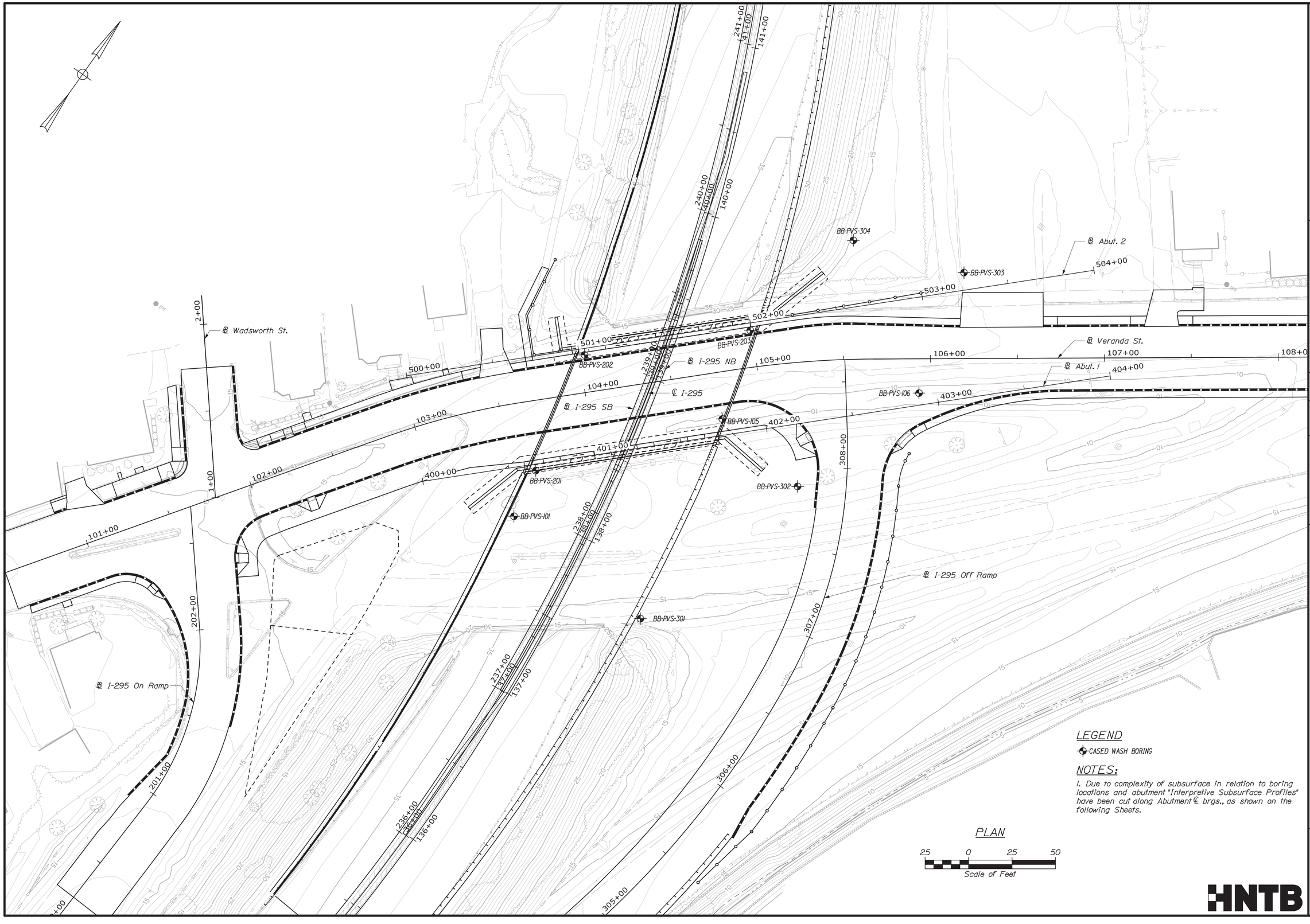
Filename: 015_Profile_Sideroads.dgn Division: Username: Date:3/3/2020

Username:

Date:3/3/2020

Division:

Filename: 016_Boring Location Plan.dgn




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| P.E. NUMBER | | | |
| DATE | | | |
| SIGNATURE | | | |
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | PEB | 2\20 |
| CHECKED-REVIEWED | KEB | JMB | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

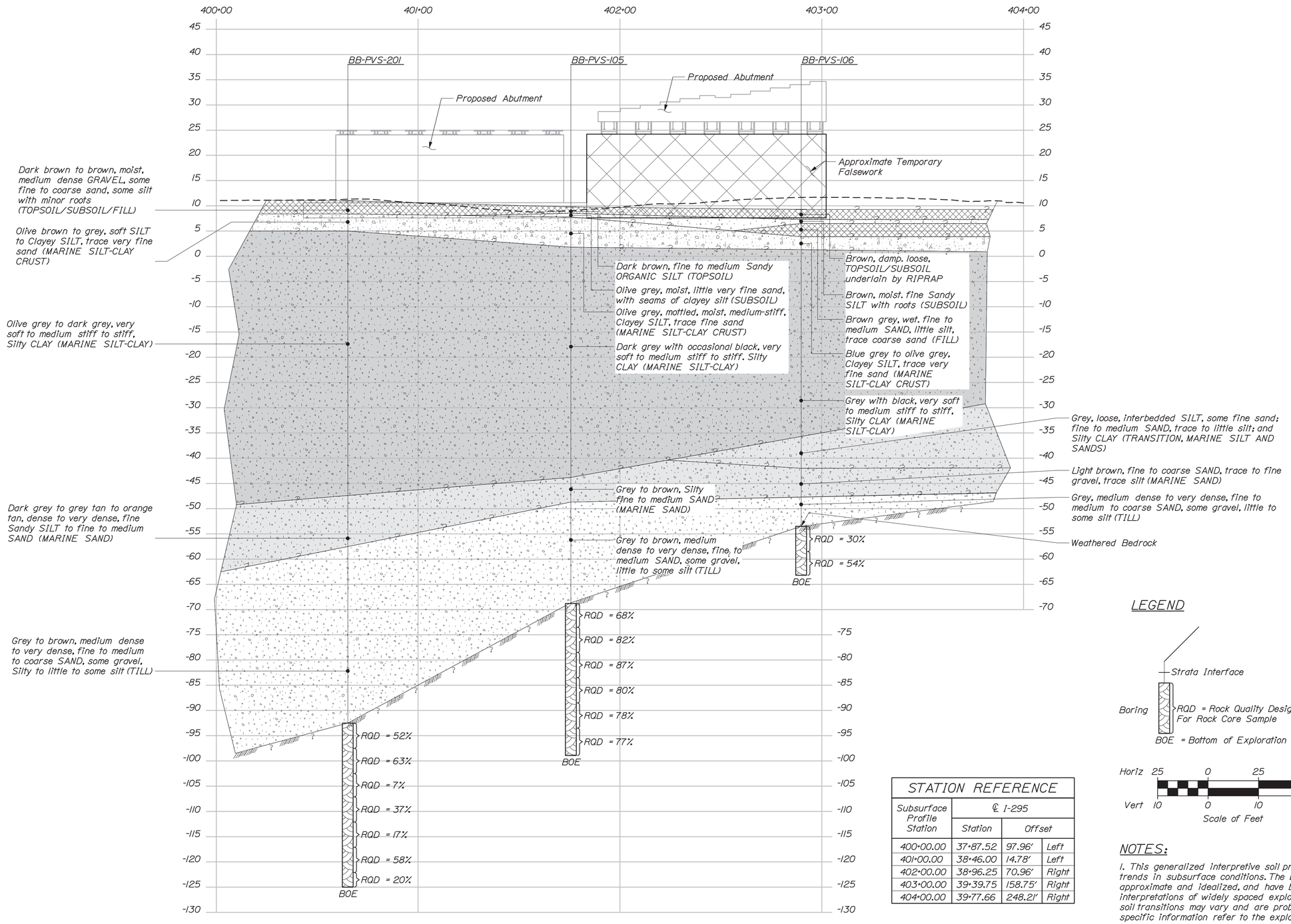
# BORING LOCATION PLAN

SHEET NUMBER

16

OF 220

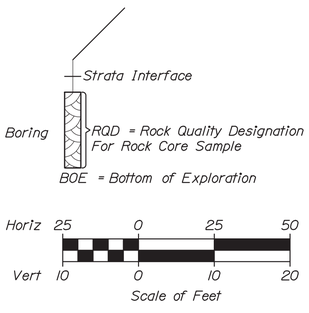
HNTB




PROFILE
(Along ℄ Abut. 1), Looking Upstation I-295

| STATION REFERENCE | | | |
|---|---|---|---|
| Subsurface Profile Station | ℄ I-295 | | |
| | Station | Offset | |
| 400+00.00 | 37+87.52 | 97.96′ | Left |
| 401+00.00 | 38+46.00 | 14.78′ | Left |
| 402+00.00 | 38+96.25 | 70.96′ | Right |
| 403+00.00 | 39+39.75 | 158.75′ | Right |
| 404+00.00 | 39+77.66 | 248.21′ | Right |

## LEGEND




## NOTES:

1. This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

2. Abutment linework shown screened for clarity.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | PEB | 2\20 | |
| CHECKED-REVIEWED | HJW | | |
| DESIGN2-DETAILED2 | KEB | 2\20 | |
| DESIGN3-DETAILED3 | JMB | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

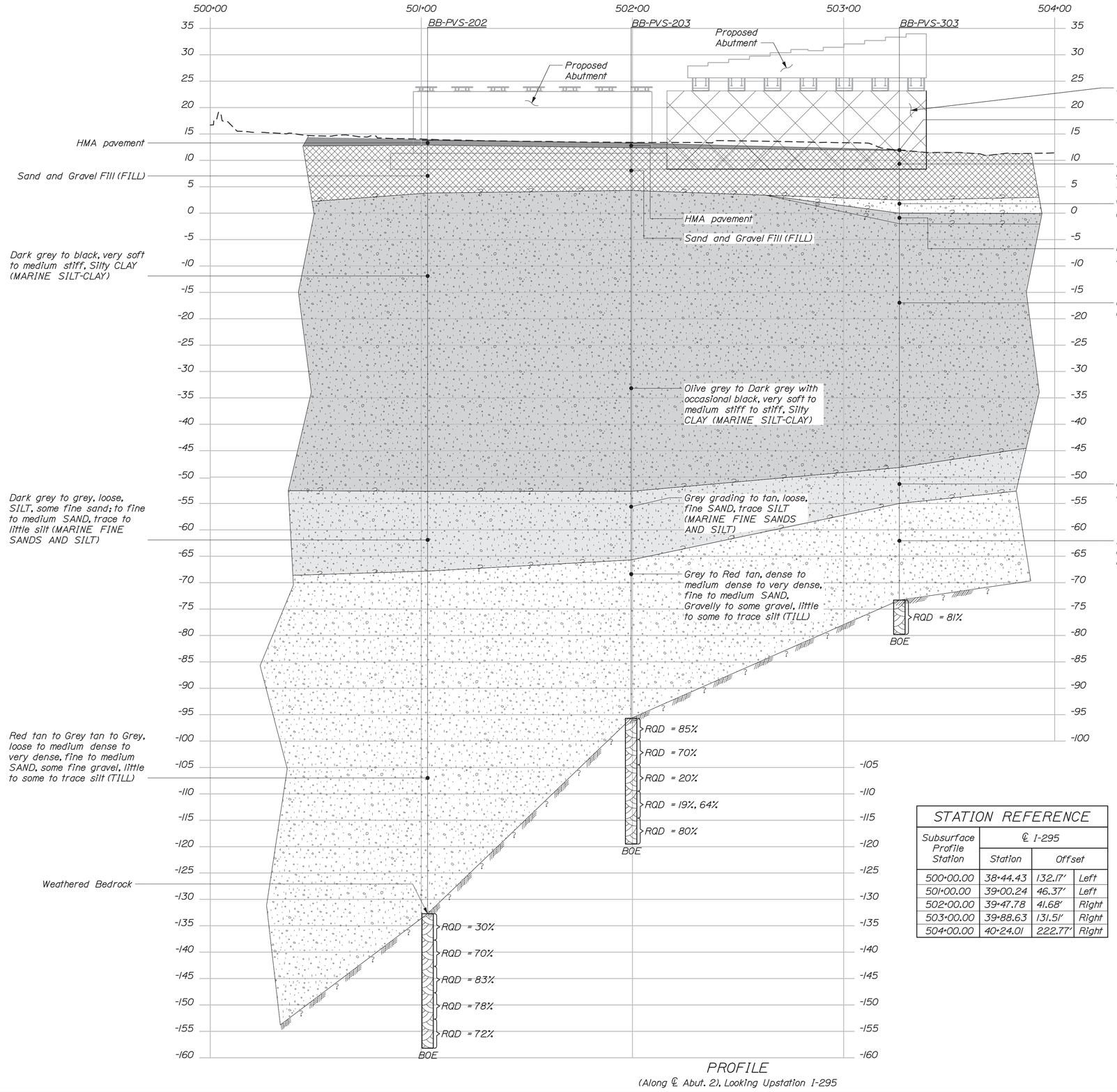
DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

INTERPRETIVE SUBSURFACE PROFILE ALONG ABUT. 1

SHEET NUMBER
17
OF 220

Date:3/3/2020
Username:
Filename: 017_Interpretive Subsurface Profile A1.dgn
Division:

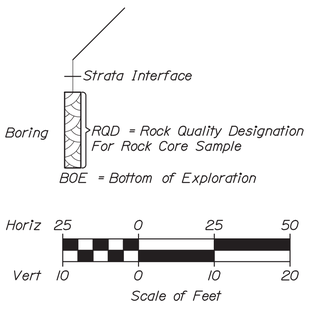



PROFILE
(Along ℄ Abut. 2), Looking Upstation 1-295

## STATION REFERENCE

| Subsurface Profile Station | ℄ I-295 Station | Offset | |
|---|---|---|---|
| 500+00.00 | 38+44.43 | 132.17' | Left |
| 501+00.00 | 39+00.24 | 46.37' | Left |
| 502+00.00 | 39+47.78 | 41.68' | Right |
| 503+00.00 | 39+88.63 | 131.51' | Right |
| 504+00.00 | 40+24.01 | 222.77' | Right |

## LEGEND




## NOTES:

1. This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

2. Abutment linework shown screened for clarity.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | PEB | 2\20 |
| CHECKED-REVIEWED | KEB | JMB | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

INTERPRETIVE SUBSURFACE PROFILE ALONG ABUT. 2

SHEET NUMBER
18
OF 220

Filename: 018_Interpretive Subsurface Profile A2.dgn
Division:
Username:
Date:3/3/2020

Username:

Division:

Filename: 019_Boring Logs 1.dgn

Date:3/3/2020

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-101
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.) | 10.8 ft |
| Operator: | Schaefer / Titus | Datum | NAVD88 |
| Logged By: | Schonewald | Rig Type | Mobile Drill B-53 ATV |
| Date Start/Finish: | 7/26/18& 1205-7/27/18& 1510 | Drilling Method: | cased wash boring |
| Boring Location: | N 310609.0, E 1016701.2 | Casing ID/OD: | HW (4/4.5") NW (3/3.5") |
| Hammer Efficiency Factors 0.60 | | Hammer Type: | Automatic ☐ Hydraulic ☐ Rope & Cathead ☒ |
| Auger ID/OD: | SSA (--/4.5") | Sampler: | standard split-spoon |
| Hammer Wt./Fall: | 140 lbs / 30 inches | Core Barrel: | n/a |
| Water Level*: | below 6 ft BGS | | |

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
W = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test; PP = Pocket Penetrometer
WOH/C = Weight of Rods or Casing
Yes = Hammer Efficiency Factor=90% Unencountered
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
$N_{60}$ = SPT N-uncorrected Corrected for Hammer Efficiency
$S_u$ = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
$q_p$ = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
No = Hammer Efficiency Factor=60%Unencountered
$T_p$ = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | SSA | 10.1 | | ASPHALT | |
| | | | | | | | | | | 0.7 | |
| | 1D | 24/19 | 2.0 - 4.0 | 2-3-4-5 | 7 | 7 | | | | Olive brown, moist, medium stiff, Silt- Clay Fill (FILL) | |
| | 2D | 24/22 | 4.0 - 6.0 | 2-2-3-4 | 5 | 5 | | | | Olive brown, moist, medium stiff, Silt- Clay Fill (FILL) | |
| 5 | 3D | 24/19 | 6.0 - 8.0 | 2-3-3-4 | 6 | 6 | PUSH HW | | | Olive brown, moist, medium stiff, Silt- Clay Fill (FILL) | |
| | | | | | | | | 3.4 | | 7.4 | |
| | 4D | 24/21 | 8.0 - 10.0 | 1-2-3-3 | 5 | 5 | | | | <30 cont' ob Possible transition to native MARINE SILT-CLAY CRUST at 7.4 ft. Olive brown, slightly mottled, medium stiff, Clayey SILT, with few pockets- partings- and inclusions of silty fine sand. (MARINE SILT-CLAY CRUST) | |
| | 5D | 24/21 | 10.0 - 12.0 | 1-2-2-3 | 4 | 4 | | | | Soft, olive brown, slightly mottled, Clayey SILT grading to olive grey, Clayey SILT. (MARINE SILT-CLAY CRUST) | |
| | | | | | | | | -1.2 | | 12.0 | |
| 15 | 6D | 24/24 | 15.0 - 17.0 | WOH/18"-2 | -- | | | | | Dark olive grey with black, very soft, Silty CLAY. (MARINE SILT-CLAY) | |
| 20 | 7D<br>V1 | 24/10 | 20.0 - 22.0<br>20+0 | push thru vane<br>Su=647/172 psf | | | | | | Dark grey, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | GTXm#73553<br>WC=50%<br>LL=45<br>PL=22<br>PI=23 |
| | V2 | | 21.6 - 22.0 | Su=915/156 psf | | | | | | V1: 14.5 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | V2: 20.5 / 3.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | U1 | 12/12 | 25.0 - 26.0 | HYD PUSH | | | | | | Sampler not extend past 26 fts saved sample. | |
| | 8D | 24/24 | 26.0 - 28.0 | WOH/12"-1-2 | 1 | 1 | | | | Dark grey with occasional black, Silty CLAY. (MARINE SILT-CLAY) Sandy gravel observed in top of sample. | |
| 30 | 9D<br>V3 | 24/24 | 30.0 - 32.0<br>30+0 | push thru vane<br>Su=1,027/179 psf | | | | | | Dark grey with occasional black, medium stiff to stiff, Silty CLAY. (MARINE SILT-CLAY) V3: 23 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V4 | | 31.6 - 32.0 | Su=982/179 psf | | | | | | V4: 22 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 35 | U2 | 24/24 | 35.0 - 37.0 | HYD PUSH | | | | | | Dark grey with black, Silty CLAY; bottom of sample blocky break, gritty. (MARINE SILT-CLAY) | GTXwIP-6<br>CONSOL<br>(Cv, Cr):<br>GTXm#73547<br>WC=35%<br>LL=40<br>PL=20<br>PI=20 |
| 40 | 10D<br>V5 | 24/24 | 40.0 - 42.0<br>40+0 | push thru vane<br>Su=1,139/178 psf | | | | | | Dark grey with black, stiff, Silty CLAY, trace very fine Sand. (MARINE SILT-CLAY) V5: 25.5 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V6 | | 41.6 - 42.0 | Su=1,362/268 psf | | | | | | V6: 30.5 / 6 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 45 | 11D<br>V7 | 24/24 | 45.0 - 47.0<br>45+0 | push thru vane<br>Su=1,362/223 psf | | | | | | Dark grey with occasional black, stiff, Silty CLAY. (MARINE SILT-CLAY) V7: 30 / 5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V8 | | 46.0 - 47.0 | Su=1,362/246 psf | | | | | | V8: 30.5 / 5.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 50 | 12D<br>V9 | 24/24 | 50.0 - 52.0<br>50+0 | push thru vane<br>Su=1,496/220 psf | | | | | | Dark grey with occasional black, Silty CLAY with three 1-inch seams fine sandy silt in lower part of the sample. (MARINE SILT-CLAY) | |
| | V10 | | 51.0 - 52.0 | Su=1,496/223 psf | | | | -41.4 | | V9: 33.5 / 6.5 ft-lbs (55 mm x 110 mm vane row torque readings) V10: 33.5 / 5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | -- | | | 52.2 | |
| 55 | | | | | | | 78 | | | Brown, dense, fine to medium SAND, little to some silt; silt content varies in layers. (MARINE SAND) | |
| | 13D | 24/15 | 55.0 - 57.0 | 18-17-16-14 | 33 | 33 | 98 | | | | |
| | | | | | | | 92 | | | | |
| | | | | | | | 85 | | | | |
| | | | | | | | 102 | -47.7 | | 58.5 | |
| 60 | 14D | 24/11 | 60.0 - 62.0 | 20-28-16-14 | 44 | 44 | 135<br>RC | | | Grey, dense, fine to medium SAND, some silt, some fine gravel, trace coarse sand. (TILL) | |
| 65 | | | | | | | | | | | |
| 70 | | | | | | | | | | | |

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-101
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.) | 10.8 ft |
| Operator: | Schaefer / Titus | Datum | NAVD88 |
| Logged By: | Schonewald | Rig Type | Mobile Drill B-53 ATV |
| Date Start/Finish: | 7/26/18& 1205-7/27/18& 1510 | Drilling Method: | cased wash boring |
| Boring Location: | N 310609.0, E 1016701.2 | Casing ID/OD: | HW (4/4.5") NW (3/3.5") |
| Hammer Efficiency Factors 0.60 | | Hammer Type: | Automatic ☐ Hydraulic ☐ Rope & Cathead ☒ |
| Auger ID/OD: | SSA (--/4.5") | Sampler: | standard split-spoon |
| Hammer Wt./Fall: | 140 lbs / 30 inches | Core Barrel: | n/a |
| Water Level*: | below 6 ft BGS | | |

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
W = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test; PP = Pocket Penetrometer
WOH/C = Weight of Rods or Casing
Yes = Hammer Efficiency Factor=90% Unencountered
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
$N_{60}$ = SPT N-uncorrected Corrected for Hammer Efficiency
$S_u$ = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
$q_p$ = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
No = Hammer Efficiency Factor=60%Unencountered
$T_p$ = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 80 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 85 | | | | | | | | | | | |
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| 90 | | | | | | | | | | | |
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| 95 | | | | | | | | | | | |
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| 100 | | | | | | | | | | | |
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| 105 | | | | | | | | | | | |
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| 110 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 115 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 120 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 125 | | | | | | | | | | | |

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-105
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.) | 9.8 ft |
| Operator: | Schaefer / Titus | Datum | NAVD88 |
| Logged By: | Schonewald | Rig Type | Mobile Drill B-53 ATV |
| Date Start/Finish: | 7/19/18& 1015-7/24/18& 1405 | Drilling Method: | cased wash boring |
| Boring Location: | N 310724.1, E 1016766.4 | Casing ID/OD: | HW (4/4.5" NW (3/3.5") |
| Hammer Efficiency Factors 0.60 | | Hammer Type: | Automatic ☐ Hydraulic ☐ Rope & Cathead ☒ |
| Auger ID/OD: | SSA (--/4.5") | Sampler: | standard split-spoon |
| Hammer Wt./Fall: | 140 lbs / 30 inches | Core Barrel: | N02 (wireline) |
| Water Level*: | below 6 ft BGS | | |

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
W = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test; PP = Pocket Penetrometer
WOH/C = Weight of Rods or Casing
Yes = Hammer Efficiency Factor=90% Unencountered
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
$N_{60}$ = SPT N-uncorrected Corrected for Hammer Efficiency
$S_u$ = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
$q_p$ = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
No = Hammer Efficiency Factor=60%Unencountered
$T_p$ = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1D | 24/17 | 0.0 - 2.0 | 1-1-2-4 | 3 | 3 | SSA | | | Dark brown, fine to medium Sandy ORGANIC SILT (TOPSOIL) thoroughly dri 1.3 ft tot | |
| | | | | | | | | 8.5 | | 1.3 | |
| | 2D | 24/21 | 2.0 - 4.0 | 2-2-3-2 | 5 | 5 | | 7.8 | | (1D) Olive grey, moist, SILT, little very fine sand, with 2 seams clayey silt. (SUBSOIL) 2.0 Olive grey, mottled, moist, medium stiff, Clayey SILT, trace fine sand as partings and one 1-inch seam olive grey, silty fine sand. (MARINE SILT-CLAY CRUST) | |
| 5 | 3D | 24/16 | 4.0 - 6.0 | 1-1-1/12" | 2 | 2 | PUSH HW | | | Olive grey, slightly mottled to 5 ft, moist, soft, Clayey SILT grading to Silty CLAY with occasional partings silty fine sand. (MARINE SILT-CLAY CRUST) | GTXw-n/a<br>Resistivity, on<br>GTXw-n/a<br>Resistivity, pH<br>Sulfates, Chlorides |
| | 4D | 24/24 | 6.0 - 8.0 | WOH/18"-1 | -- | | | 1.8 | | Olive grey, wet (saturated), very soft, Silty CLAY, trace very fine sand, with few pockets of olive brown, fine sandy silt. (MARINE SILT-CLAY) 8.0 | |
| | 5D | 24/24 | 8.0 - 10.0 | WOH/24" | -- | | | | | Dark grey with occasional black, very soft, Silty CLAY. (MARINE SILT-CLAY) | |
| 10 | 6D | 24/24 | 10.0 - 12.0 | WOH/18"-1 | -- | | | | | Dark grey with occasional black, very soft, Silty CLAY. (MARINE SILT-CLAY) | |
| 15 | 7D<br>V1 | 24/24 | 15.0 - 17.0<br>15+0 | push thru vane<br>Su= 724 psf | | | | | | Dark grey with occasional black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) V1: 26 / 4.5 ft-lbs (65 mm x 130 mm vane row torque readings) | GTXm#73554<br>WC=43%<br>LL=45<br>PL=25<br>PI=25 |
| | V2 | | 16.6 - 17.0 | Su= 700/ 110 psf | | | | | | V2: 25.5 / 4 ft-lbs (65 mm x 130 mm vane row torque readings) | |
| | MU | 24/0 | 20.0 - 22.0 | HYD PUSH | | | | | | Collect split-spoon sample from 20 to 22 ft; Dark grey with occasional black, Silty CLAY; sandy partings not observed. (MARINE SILT-CLAY) | |
| | U1 | 24/24 | 25.0 - 27.0 | HYD PUSH | | | | | | Dark grey, Silty CLAY. (MARINE SILT- CLAY) | GTXwIP-5<br>CONSOL<br>(Cv, Cr)<br>GTXm#73548<br>WC=41%<br>LL=45<br>PL=25<br>PI=19 |
| 30 | 8D<br>V3 | 24/24 | 30.0 - 32.0<br>30+0 | push thru vane<br>Su=1,007/192 psf | | | | | | Dark grey, medium stiff to stiff, Silty CLAY. (MARINE SILT- CLAY) V3: 24 / 7.5 ft-lbs (65 mm x 130 mm vane row torque readings) | |
| | V4 | | 31.6 - 32.0 | Su=1,044/192 psf | | | | | | V4: 38 / 7 ft-lbs (65 mm x 130 mm vane row torque readings) | |
| 35 | U2 | 24/24 | 35.0 - 37.0 | HYD PUSH | | | | | | Dark grey, Silty CLAY. (MARINE SILT-CLAY) | |
| 40 | 9D<br>V5 | 24/24 | 40.0 - 42.0<br>40+0 | push thru vane<br>Su=1,183/192 psf | | | | | | Dark grey with black, stiff, Silty CLAY. (MARINE SILT-CLAY) V5: 42.5 / 7 ft-lbs (65 mm x 130 mm vane row torque readings) | |
| | V6 | | 41.6 - 42.0 | Su=1,140/137 psf | | | | | | V6: 41.5 / 5 ft-lbs (65 mm x 130 mm vane row torque readings) | |
| 45 | U3 | 24/22 | 45.0 - 47.0 | HYD PUSH | | | | | | Dark grey, Silty CLAY, trace very fine sand (possibly shell fragments). (MARINE SILT-CLAY) | |
| 50 | 10D<br>V7 | 24/24 | 50.0 - 52.0<br>50+0 | push thru vane<br>Su=1,183/313 psf | | | | | | Dark grey with black, stiff, Silty CLAY, trace very fine sand, with two partings and one 1/8-inch seam fine sandy silt. (MARINE SILT-CLAY) V7: 35 / 7 ft-lbs (55 mm x 110 mm vane row torque readings) Unable to push past 51.0 ft. | |
| | MV | | 51.0 - 51.0 | | | | | | | | |
| | | | | | | | | -44.2 | | 54.0 | |
| 55 | 11D | 24/16 | 55.0 - 57.0 | 5-7-14-21 | 21 | 21 | 58<br>RC | | | Grey, Silty fine SAND grading to fine to medium SAND, little silt; changing at 56 ft to Brown, fine to medium SAND, trace to little silt. (MARINE SAND) | |
| | | | | | | | | -48.7 | | 58.5 | |
| 60 | 12D | 24/11 | 60.0 - 62.0 | 12-28-28-18 | 56 | 56 | | | | Brown, very dense, fine to medium SAND, some gravel, little to some silt, trace coarse sand. (TILL) 60.5 fts Telescope NW (3-inch) casing. | |
| 65 | 13D | 24/8 | 65.0 - 67.0 | 7-41-19-19 | 60 | 60 | | | | Tan with 2-inch layer rust, very dense, fine to coarse SAND, little to some silt, little gravel. Dark grey, Silty fine to medium SAND in tip of spoon. (TILL) (blowing sands) controlled with head of water) | |
| 70 | 14D | 24/11 | 70.0 - 72.0 | 13-14-10-7 | 24 | 24 | 18<br>25<br>28<br>65<br>58 | | | Grey, medium dense, fine to medium SAND, some silt, little fine gravel, trace coarse sand. (TILL) | |

Remarks:

Moved approximately 10 ft south of plan location to avoid water main.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-105
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.) | 9.8 ft |
| Operator: | Schaefer / Titus | Datum | NAVD88 |
| Logged By: | Schonewald | Rig Type | Mobile Drill B-53 ATV |
| Date Start/Finish: | 7/19/18& 1015-7/24/18& 1405 | Drilling Method: | cased wash boring |
| Boring Location: | N 310724.1, E 1016766.4 | Casing ID/OD: | HW (4/4.5" NW (3/3.5") |
| Hammer Efficiency Factors 0.60 | | Hammer Type: | Automatic ☐ Hydraulic ☐ Rope & Cathead ☒ |
| Auger ID/OD: | SSA (--/4.5") | Sampler: | standard split-spoon |
| Hammer Wt./Fall: | 140 lbs / 30 inches | Core Barrel: | N02 (wireline) |
| Water Level*: | below 6 ft BGS | | |

Definitions:
D = Split Spoon Sample
WD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
W = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test; PP = Pocket Penetrometer
WOH/C = Weight of Rods or Casing
Yes = Hammer Efficiency Factor=90% Unencountered
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140 lb. Hammer
$N_{60}$ = SPT N-uncorrected Corrected for Hammer Efficiency
$S_u$ = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
$q_p$ = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
No = Hammer Efficiency Factor=60%Unencountered
$T_p$ = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | 15D | 24/12 | 75.0 - 77.0 | 47-18-19-20 | 37 | 37 | 64 | | | Grey, dense, fine to medium SAND, some silt, little to some fine gravel, trace coarse sand. (TILL) | |
| | | | | | | | 62 | | | | |
| | | | | | | | 72 | | | | |
| | | | | | | | 65/7" | -68.8 | | 78.6 | |
| 80 | R1 | 56/56 | 79.0 - 83.7 | RQD: 38" = 68%<br>sample 79.5-79.9 | | | N02 | | | Top of Bedrock at Elev. -68.8 ft. Bedrock: Medium grey, aphanitic to fine grained, METALITE, with remnant bedding visible over-lies from high to low angled occasionally highly undulating, occasional healed fractures- and numerous calcite filled veins typically cross-bedding and cross-healed fractures-, thin, typically fresh, Low-angle and moderately dipping, close to moderately spaced breaks; some with coloring- shiny- fresh to discolored, and open with occasional mud infilling. (ELIOT FORMATION) Core times: 2:15/ 2:00/ 2:15/ 2:30/ - minsec/ft RQI Similar to R1: 3:10/ 2:15/ 2:05/ 1:55/ 2:10 minsec/ft ROCK QUALITY = GOOD | |
| | R2 | 60/60 | 83.7 - 88.7 | RQD: 49" = 82% | | | | | | | |
| 85 | R3 | 60/60 | 88.7 - 93.7 | RQD: 52" = 87%<br>sample 89.3-89.9 | | | | | | R3: Similar to R1. Core times: 2:45/ 2:35/ 2:10/ 1:50/ 2:15 minsec/ft ROCK QUALITY = GOOD | GTXw n/a qp=121 ksf |
| 90 | R4 | 60/60 | 93.7 - 98.7 | RQD: 48" = 80% | | | | | | R4: Similar to R1. Core times: 2:05/ 2:10/ 1:55/ 2:15 minsec/ft ROCK QUALITY = GOOD | |
| 95 | R5 | 60/60 | 98.7 - 103.7 | RQD: 47" = 78%<br>sample 98.9-99.4 | | | | | | R5: Similar to R1. Core times: 2:20/ 2:30/ 2:20/ 2:00 minsec/ft ROCK QUALITY = GOOD | GTXw n/a qp=455 ksf |
| 100 | R6 | 60/60 | 103.7 - 108.7 | RQD: 46" = 77% | | | | -98.9 | | R6: Similar to R1. Core times: 2:20/ 1:55/ 1:55/ 2:10/ 2:10 minsec/ft ROCK QUALITY = GOOD | |
| 105 | | | | | | | | | | | |
| 110 | | | | | | | | | | | |
| 115 | | | | | | | | | | | |
| 120 | | | | | | | | | | | |
| 125 | | | | | | | | | | Bottom of Exploration at 108.7 feet below ground surface. 108.7 | |

Remarks:

Moved approximately 10 ft south of plan location to avoid water main.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D.EATON | BY | DATE |
| DESIGN-DETAILED | EDD | | 2\20 |
| CHECKED-REVIEWED | RWH | | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BORING LOGS 1

SHEET NUMBER
19
OF 220

Username:

Division:

Filename: 020_Boring Logs 2.dgn

Date:3/3/2020

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-106
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 9.3 ft | Auger ID/OD: SSA (---/4.5")
Operator: Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schonewald | Rig Type: Mobile Drill B-53 ATV | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 7/24/18 1430-7/26/18 1050 | Drilling Method: cased wash boring | Core Barrel: NQ2 (wireline)
Boring Location: N 310801.8, E 1016850.0 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: below 6 ft BGS
Hammer Efficiency Factor: 0.60 | Hammer Type: Automatic ☐ Hydraulic ☐ Rope & Cathead ☒

Definitions:
D = Split Spoon Sample — SSA = Solid Stem Auger — HSA = Hollow Stem Auger
WD = Unsuccessful Split Spoon Sample Attempt — RC = Roller Cone
U = Thin Wall Tube Sample — WOH = Weight of 140 lbs. Hammer
W = Unsuccessful Thin Wall Tube Sample Attempt — Hammer Efficiency Factor = Rig Specific Annual Calibration Value
V = Field Vane Shear Test - FP = Pocket Penetrometer — WOR/C = Weight of Rods or Casing
(W) = Unsuccessful Field Vane Shear Test Attempt — WOR = Weight of Rods Per Foot
R = Rock Core Sample — $N_{uncorrected}$ = SPT Uncorrected Corrected for Hammer Efficiency
$S_{u(UBC)}$ = Lab Vane Undrained Shear Strength (psf) — $N_{corrected}$ = Raw Field SPT N-value
$q_p$ = Pocket Penetrometer Unconfined Compressive Strength (tsf) — $N_{uncorrected}$ = Raw Field SPT N-value
$q_u$ = Unconfined Compressive Strength (tsf) — Casing Advance Ratio=50%=unsupported
$I_p$ = Pocket Torvane Shear Strength (psf) — WC = Water Content, percent
LL = Liquid Limit — PL = Plastic Limit
PI = Plasticity Index — $N_{60}$ = Annual Calibration Value Corrected for Hammer Efficiency
G = Grain Size Analysis — C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Seated Drive Resistance (per 0.5 ft) | $N_{uncorrected}$ | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1D | 24/10 | 0.0 - 2.0 | 1-3-3-16 | 6 | 6 | SSA | | | Brown, damp, loose, TOPSOIL/SUBSOIL underlain by RIPRAP. | |
| | | | | | | | | 7.3 | | ---------- 2.0 | |
| | 2D | 24/14 | 2.0 - 4.0 | 1-1-1-2 | 2 | 2 | | 6.5 | | Brown, moist, fine Sandy SILT with roots (SUBSOIL); changing at 2.8 ft to: | |
| | | | | | | | | | | ---------- 2.8 | |
| 5 | 3D | 24/15 | 4.0 - 6.0 | 2-2-1-1 | 3 | 3 | | | | (2D) Brown/grey, wet, fine to medium SAND, little silt, trace coarse sand (TILL) | |
| | | | | | | | | | | Brown, wet, fine to medium SAND, trace to little silt, trace coarse sand (FILL); changing at 5.4 ft to: | |
| | | | | | | | | | | ---------- 5.4 | |
| | | | | | | | | | | (3D) Blue grey, Clayey SILT, trace very fine sand. (MARINE SILT-CLAY CRUST) | |
| | 4D | 24/12 | 6.0 - 8.0 | 1-1-1-2 | 2 | 2 | PUSH HW | | | Olive grey, soft, slightly mottled, Clayey SILT. (MARINE SILT-CLAY CRUST) | |
| | | | | | | | | | | ---------- 8.0 | |
| | 5D | 24/24 | 8.0 - 10.0 | WOH/18"-2 | -- | | | 3.9 | | Olive grey, very soft, Silty CLAY, trace very fine Sand as partings. (MARINE SILT-CLAY) | |
| 10 | 6D | 24/24 | 10.0 - 12.0 | WOH/18"-2 | -- | | | | | Olive grey grading to grey with occasional black, very soft, Silty CLAY. (MARINE SILT-CLAY) | |
| | 7D | 24/24 | 15.0 - 17.0 | WOH/18"-2 | -- | | | | | Grey with occasional black, very soft. Silty CLAY. (MARINE SILT-CLAY) | |
| 20 | 8D V3 | 24/24 | 20.0 - 22.0 | push thru vane Su=581/61 psf | | | | | | Grey with occasional black, medium stiff to stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V2 | | 20+0 - 21+0 | Su=1,027/223 psf | | | | | | V1: 18 / 3.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 21+0 - 22.0 | | | | | | | V2: 23 / 5 ft-lbs (55 mm x 110 mm vane row torque readings ) | |
| 25 | U1 | 24/24 | 25.0 - 27.0 | HYD PUSH | | | | | | Grey with black. Silty CLAY. (MARINE SILT-CLAY) | |
| 30 | 9D V3 | 24/24 | 30.0 - 32.0 | push thru vane Su=1,350/223 psf | | | | | | Dark grey with black, stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V4 | | 30+0 - 31.4 | Su=1,206/223 psf | | | | | | V3: 27 / 5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 31.4 - 32.0 | | | | | | | V4: 27 / 5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 35 | 10D V5 | 24/24 | 35.0 - 37.0 | push thru vane Su=1,250/223 psf | | | | | | Dark grey with occasional black, stiff, Silty CLAY; possible shell fragments. (MARINE SILT-CLAY) | |
| | V6 | | 36+0 - 36.4 | Su=1,116/179 psf | | | | | | V5: 25 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 36.4 - 37.0 | | | | | | | V6: 25 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 40 | 11D V7 | 24/24 | 40.0 - 42.0 | push thru vane Su=1,340/268 psf | | | | | | Grey with occasional black, stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V8 | | 40+0 - 41.0 | Su=1,429/268 psf | | | | | | V7: 30 / 6 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 41.0 - 42.0 | | | | | | | V8: 32 / 6 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 45 | 12D | 24/22 | 45.0 - 47.0 | 7-3-5-15 | 8 | 8 | 60 | 35.7 | | 44.7 ft: Ware difficult to push casing. ---------- 45.0 | |
| | | | | | | | 58 | | | Grey, loose, interbedded SILT, some fine sands fine to medium SAND, trace to little silts and Silty CLAY. (INTERBEDDED MARINE SILT AND SANDS (TRANSITION)) | |
| | | | | | | | 67 | | | | |
| | | | | | | | 65 | | | | |
| 50 | 13D | 24/14 | 50.0 - 52.0 | 9-12-13-24 | 25 | 25 | 65 | | | | |
| | | | | | | | 15 | -42.0 | | Grey grading to rust, fine to medium SAND, little to some silts changing at 51.3 ft to: | |
| | | | | | | | 27 | | | 50.5 ft: Telescope NW (3-inch) casing. ---------- 51.3 | |
| | | | | | | | 55 | | | (13D) Light brown, fine to coarse SAND, trace to little fine gravel, trace silt. (MARINE SAND) | |
| | | | | | | | 60 | | | | |
| 55 | | | | | | | 48 | | | | |
| | | | | | | | RC | | | 55 ft: Casing refusal: roller cone ahead; break through at 57 ft. | |
| | | | | | | | RC | | | | |
| | 14D | 24/8 | 57.0 - 59.0 | 7-8-6-8 | 14 | 14 | 27 | -47.7 | | Grey, medium dense, fine to coarse SAND, some fine gravel, little to some silt. (TILL) ---------- 57.0 | |
| | | | | | | | 15 | | | | |
| | | | | | | | 18 | | | | |
| 60 | 15D | 24/11 | 60.0 - 62.0 | 19-8-7-9 | 15 | 15 | RC | | | Grey, medium dense, fine to medium SAND, some fine gravel, little to some silt, trace coarse sand. (TILL) | |
| | R1 | 60/60 | 62.8 - 67.8 | RQD: 21" = 30% | | | 100 | -52.5 -53.5 | | 62.5 ft: Possible weathered rock. ---------- 62.8 | |
| | | | | sample 62.9-63.3 | | | | | | Top of Bedrock at Elev. -62.8 ft. | GTX# n/a qp=412 ksf |
| 65 | | | | | | | | | | R1: Bedrock: Grey, aphanitic to fine grained, PHYLLITE, with remnant bedding visible (undulating, typically moderately sloping), occasional healed fractures, and numerous calcsilicate veins, hard, typically fresh. Moderately sloping, typically close breaks; undulating, rough, shiny, fresh to discolored, and open. Highly fractured 64.8 to 65.3 ft. (ELIOT FORMATION) Core times: 3:10/ 2:25/ 2:10/ 1:55/ 2:25 ROCK QUALITY = POOR R2: Similar to R1. Open fracture 68.8 to 69.0 ft. Core times: 3:35/ 3:05/ 2:15/ 2:00/ - ROCK QUALITY = FAIR | |
| | R2 | 56/55 | 67.8 - 72.5 | RQD: 30" = 54% | | | | | | | |
| 70 | | | | | | | | -63.2 | | Bottom of Exploration at 72.5 feet below ground surface. ---------- 72.5 | |

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PVS-106

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-201
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 11.0 ft | Auger ID/OD: SSA (---/4.5")
Operator: Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schonewald | Rig Type: MOBILE DRILL B-53 ATV (NUBS #D-19) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 9/11/18 1005 - 9/14/18 1330 | Drilling Method: cased wash boring | Core Barrel: NQ2 (wireline)
Boring Location: N 310637.7, E 1016696.2 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 1.2 ft (open)
Hammer Efficiency Factor: 0.712 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample — SSA = Solid Stem Auger — HSA = Hollow Stem Auger
WD = Unsuccessful Split Spoon Sample Attempt — RC = Roller Cone
U = Thin Wall Tube Sample — WOH = Weight of 140 lb. Hammer
W = Unsuccessful Thin Wall Tube Sample Attempt — Hammer Efficiency Factor = Rig Specific Annual Calibration Value
V = Field Vane Shear Test - FP = Pocket Penetrometer — WOR/C = Weight of Rods or Casing
(W) = Unsuccessful Field Vane Shear Test Attempt — WOR = Weight of Rods Per Foot
R = Rock Core Sample — $N_{uncorrected}$ = SPT Uncorrected Corrected for Hammer Efficiency
$S_{u(UBC)}$ = Lab Vane Undrained Shear Strength (psf) — $N_{corrected}$ = Raw Field SPT N-value
$q_p$ = Pocket Penetrometer Unconfined Compressive Strength (tsf) — $N_{uncorrected}$ = Raw Field SPT N-value
$q_u$ = Unconfined Compressive Strength (tsf) — Casing Advance Ratio=50%=unsupported
$I_p$ = Pocket Torvane Shear Strength (psf) — WC = Water Content, percent
LL = Liquid Limit — PL = Plastic Limit
PI = Plasticity Index — $N_{60}$ = Annual Calibration Value Corrected for Hammer Efficiency
G = Grain Size Analysis — C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Seated Drive Resistance (per 0.5 ft) | $N_{uncorrected}$ | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1D | 24/7 | 0.0 - 2.0 | 3-5-6-4 | 11 | 13 | SSA | | | Dark brown grading to brown, moist, medium dense, GRAVEL, some fine to coarse sand, some silt with minor roots. (TOPSOIL/SUBSOIL/FILL) | |
| | | | | | | | | 8.4 | | ---------- 2.6 | |
| | 2D | 24/18 | 2.0 - 4.0 | WOH-3-8-5 | 11 | 13 | | | | Upper 2 inches of sample: Brown, wet, fine to coarse SAND, trace Silt. (FILL); changing at 2.6 ft to: | |
| | | | | | | | | | | ---------- 3.6 | |
| 5 | 3D | 24/21 | 4.0 - 6.0 | WOH-2-2-1 | 4 | 5 | PUSH HW | | | (2D) Olive brown, SILT, some clay, trace to little fine sand with highly mottled fine sandy zone from 3.0 to 3.4 ft; grading to Clayey SILT, trace very fine sand at 3.5 ft. (MARINE SILT-CLAY CRUST) Olive brown grading to grey, soft, Clayey SILT, trace very fine sand with layers of fine sandy silt. (MARINE SILT- CLAY CRUST) | |
| | | | | | | | | 5.0 | | ---------- 6.0 | GTX#473561 HYDROMETER A-7-6(23) CL =#200=99.5% |
| | 4D | 24/12 | 6.0 - 8.0 | WOR/12"-WOH/12" | -- | | | | | Olive grey, very soft, Silty CLAY, trace very fine sand. (MARINE SILT-CLAY) | GTX#473555 WC=48% LL=42 PL=21 PI=21 |
| | 5D | 24/24 | 8.0 - 10.0 | WOR/12"-WOH/12" | -- | | | | | Dark olive grey with occasional black, very soft, Silty CLAY. (MARINE SILT-CLAY) | GTX#473562 HYDROMETER A-7-6(25) CL =#200=99.4% |
| 10 | 6D | 24/24 | 10.0 - 12.0 | WOR-WOH/18" | -- | | | | | Dark olive grey with occasional black, very soft, Silty CLAY, trace very fine sand. (MARINE SILT-CLAY) | GTX#473556 WC=41% LL=44 PL=21 PI=23 |
| | 7D V1 | 24/20 | 15.0 - 17.0 | push thru vane Su=581/61 psf | | | | | | Dark grey with occasional black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | GTX#473557 WC=45% LL=47 PL=23 PI=24 |
| | V2 | | 16+0 - 17.0 | Su=625/89 psf | | | | | | V1: 13 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | V2: 14 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 20 | 8D V3 | 24/24 | 20.0 - 22.0 | push thru vane Su=583/61 psf | | | | | | Dark grey with occasional black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | GTX#473558 WC=45% LL=41 PL=22 PI=21 |
| | V4 | | 20+0 - 21+0 | Su=670/89 psf | | | | | | V3: 20 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 21+0 - 22.0 | | | | | | | V4: 21 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 25 | U1 | 24/23 | 25.0 - 27.0 | HYD PUSH | | | | | | Dark grey. Silty CLAY. (MARINE SILT-CLAY) | GTX#IP-1 CONSOL (Cv, Cr) GTX#473549 WC=44% LL=43 PL=25 PI=18 |
| 30 | 9D V3 | 24/24 | 30.0 - 32.0 | push thru vane Su=604/172 psf | | | | | | Dark grey, medium stiff to stiff, Silty CLAY. (MARINE SILT-CLAY) | GTX#473559 WC=44% LL=45 PL=23 PI=22 |
| | V4 | | 30+0 - 31.4 | Su=1,005/179 psf | | | | | | V3: 18 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 31.4 - 32.0 | | | | | | | V4: 22.5 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 35 | U2 | 24/24 | 35.0 - 37.0 | HYD PUSH | | | | | | Dark grey. Silty CLAY. (MARINE SILT- CLAY) | GTX#IP-2 CONSOL (Cv, Cr) GTX#473550 WC=41% LL=42 PL=25 PI=17 |
| 40 | 11D V7 | 24/24 | 40.0 - 42.0 | push thru vane Su=737/68 psf | | | | | | Dark grey with black, medium stiff, Silty CLAY with few shell fragments. (MARINE SILT-CLAY) | GTX#473560 WC=38% LL=38 PL=18 PI=20 |
| | V8 | | 40+0 - 41.0 | Su=804/67 psf | | | | | | V7: 16.5 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 41.0 - 42.0 | | | | | | | V8: 18 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 45 | U3 | 24/24 | 45.0 - 47.0 | HYD PUSH | | | | | | Dark grey with black. Silty CLAY. (MARINE SILT-CLAY) | GTX#IP-3 CONSOL (Cv, Cr) GTX#473551 WC=39% LL=41 PL=23 PI=18 |
| 50 | 13D V9 | 24/24 | 50.0 - 52.0 | push thru vane Su=882/134 psf | | | | | | Dark grey with occasional black, medium stiff to stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V10 | | 51+0 - 52.0 | Sun1,116/134 psf | | | | | | V9: 23 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | V10: 25 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 55 | U4 | 24/23 | 55.0 - 57.0 | HYD PUSH | | | | | | Dark grey. Silty CLAY. (MARINE SILT-CLAY) | GTX#IP-4 CONSOL (Cv, Cr) GTX#473552 WC=34% LL=38 PL=20 PI=18 |
| | | | | | | | | -47.4 | | 58.4 ft: Unable to push HW casing past 58.4 ft; likely stratum change. | |
| 60 | 12D | 24/21 | 60.0 - 62.0 | 7-11-20-24 | 31 | 37 | 54 | | | Dark grey, dense, fine Sandy SILT, grading to fine SAND, some silt. (MARINE FINE SANDS AND SILT) | |
| | | | | | | | 49 | | | | |
| | | | | | | | 50 | | | | |
| | | | | | | | 50 | | | | |
| | | | | | | | 62 | | | | |
| 65 | 13D | 22/10 | 65.5 - 67.3 | 20-33-38-50/4" | 71 | 84 | RC | -57.5 | | Grey tan grading to orange tan, very dense, fine to medium SAND, little silt, trace coarse sand. (MARINE FINE SANDS AND SILT) | |
| | | | | | | | | | | ---------- 68.5 | |
| 70 | 14D | 24/13 | 70.0 - 72.0 | 31-28-25-21 | 53 | 63 | | | | Grey, very dense, fine to coarse SAND, some silt, little fine gravel. (TILL) 70.5 ft: Telescope NW (3-inch) casing. | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 75 | 15D | 24/12 | 74.0 - 76.0 | 25-31-48-66 | 79 | 94 | 20 | | | Grey, very dense, fine to medium SAND, some silt, little fine gravel, trace coarse sand. (TILL) | |

Remarks:

NEBC Rig #D-19 automatic hammer calibrated on 7/3/2018.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2
Boring No.: BB-PVS-201

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-201
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 11.0 ft | Auger ID/OD: SSA (---/4.5")
Operator: Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schonewald | Rig Type: MOBILE DRILL B-53 ATV (NUBS #D-19) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 9/11/18 1005 - 9/14/18 1330 | Drilling Method: cased wash boring | Core Barrel: NQ2 (wireline)
Boring Location: N 310637.7, E 1016696.2 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 1.2 ft (open)
Hammer Efficiency Factor: 0.712 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample — SSA = Solid Stem Auger — HSA = Hollow Stem Auger
WD = Unsuccessful Split Spoon Sample Attempt — RC = Roller Cone
U = Thin Wall Tube Sample — WOH = Weight of 140 lb. Hammer
W = Unsuccessful Thin Wall Tube Sample Attempt — Hammer Efficiency Factor = Rig Specific Annual Calibration Value
V = Field Vane Shear Test - FP = Pocket Penetrometer — WOR/C = Weight of Rods or Casing
(W) = Unsuccessful Field Vane Shear Test Attempt — WOR = Weight of Rods Per Foot
R = Rock Core Sample — $N_{uncorrected}$ = SPT Uncorrected Corrected for Hammer Efficiency
$S_{u(UBC)}$ = Lab Vane Undrained Shear Strength (psf) — $N_{corrected}$ = Raw Field SPT N-value
$q_p$ = Pocket Penetrometer Unconfined Compressive Strength (tsf) — $N_{uncorrected}$ = Raw Field SPT N-value
$q_u$ = Unconfined Compressive Strength (tsf) — Casing Advance Ratio=50%=unsupported
$I_p$ = Pocket Torvane Shear Strength (psf) — WC = Water Content, percent
LL = Liquid Limit — PL = Plastic Limit
PI = Plasticity Index — $N_{60}$ = Annual Calibration Value Corrected for Hammer Efficiency
G = Grain Size Analysis — C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Seated Drive Resistance (per 0.5 ft) | $N_{uncorrected}$ | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | | | | | | | 27 | | | | |
| | | | | | | | 56 | | | | |
| | | | | | | | 54 | | | | |
| | | | | | | | 49 | | | | |
| 80 | 16D | 24/14 | 79.0 - 81.0 | 14-14-26-23 | 40 | 47 | 26 | | | Grey, dense, Silty fine to medium SAND, some gravel, trace coarse sand. (TILL) | |
| | | | | | | | 43 | | | | |
| | | | | | | | 82 | | | | |
| | | | | | | | 84 | | | | |
| 85 | | | | | | | 63 | | | | |
| | | | | | | | -- | | | 84.2 ft: Roller cone refusal; telescope NW casing. 84.4 ft: NW casing refusal; commence coring; pop through boulder at 85.4 ft. | |
| | | | | | | | 31 | | | | |
| | | | | | | | 42 | | | | |
| | | | | | | | 37 | | | | |
| | | | | | | | 64 | | | | |
| 90 | 17D | 24/21 | 89.0 - 91.0 | 39-45-39-36 | 84 | 100 | 59 | | | Grey, very dense, Silty fine to coarse SAND, some fine gravel. (TILL) | |
| | | | | | | | 69 | | | | |
| | | | | | | | 89 | | | | |
| | | | | | | | 92 | | | | |
| 95 | | | | | | | 90 | | | | |
| | | | | | | | 80 | | | | |
| | | | | | | | -- | | | | |
| 100 | 18D | 24/24 | 99.5 - 101.5 | WOH/12"-10-8 | 10 | 12 | 12 | | | Grey, medium dense, fine to medium Sandy SILT, some gravel, trace coarse sand; apparent plasticity. (TILL) | |
| | | | | | | | 15 | | | | |
| | | | | | | | 14 | | | | |
| | | | | | | | 21 | | | | |
| | R1 | 60/56 | 103.5 - 108.5 | RQD: 31"=52% | | | -- NQ2 | -92.5 | | 103.3 ft: Roller cone refusal; drive NW casing to 103.5 ft. | |
| 105 | | | | | | | | | | Top of Bedrock at Elev. -92.5 ft. | |
| | | | | | | | | | | R1: Bedrock: Light green grey, aphanitic to fine grained, PHYLLITE with highly undulating, typically low angle remnant beddings appears as though calcsilicate veins have weathered, hard, slightly to moderately weathered, typically low angle, close, breaks/ undulating, rough, typically discolored to decomposed, and open with mud infillings/ shiny. Highly fractured (very close spacing) from 104.3 to 104.9 and 106.8 to 107.6 ft. (ELIOT FORMATION) Core times: 2:35/ 1:55/ 1:40/ 1:40/ 1:45 minsec/ft ROCK QUALITY = FAIR R2: 108.5-111.5 ft: Similar to R1, except typically fresh with occasional high angle calcsilicate veins/ close to moderately spaced breaks, fresh to discolored. | GTX# n/a qp=700 ksf |
| 110 | R2 | 60/58 | 108.5 - 113.5 | RQD: 38"=63% smp: 108.6-109.1 | | | | | | | |
| | | | | | | | | | | R2a (111.5 to 113.5): Similar to R1, except less visible bedding and more high angle calcsilicate veins/ very close to close breaks Core times (R2 and R2a): 1:40/ 1:35/ 1:40/ 1:35/ 1:35 minsec/ft ROCK QUALITY = FAIR | |
| | R3 | 55/51 | 113.5 - 118.1 | RQD: 4"=7% | | | | | | R3: Similar to R2a, except low to high angle breaks. Core times: 1:40/ 2:15/ 2:15/ 2:10/ -- minsec/ft ROCK QUALITY = VERY POOR | |
| 115 | | | | | | | | | | | |
| | | | | | | | | | | R4 (118.1-120.4 ft): Similar to R2a, except low to high angle breaks. (Appears that most material lost in this zone (open and/or decomposed fractures)). | |
| | R4 | 60/60 | 118.1 - 123.1 | RQD: 22"=37% | | | | | | | |
| 120 | | | | | | | | | | R4a (120.4-123.1 ft): Similar to R2a, except significant calcsilicate veins (some weathered) close to moderately spaced, typically low angle breaks. Core times (R4 and R4a): 1:25/ 2:05/ 2:15/ 2:45 minsec/ft ROCK QUALITY = POOR | GTX# n/a qp=930 ksf |
| | | | | | | | | | | | |
| | R5 | 60/60 | 123.1 - 128.1 | RQD: 10"=17% | | | | | | R5: Similar to R4a, Highly fractured and decomposed from 123.3 to 124.6 ft; near vertical break along significant calcsilicate vein from 124.6 to 126.9 ft. Core times: 1:40/ 1:30/ 1:35/ 1:55/ 2:40 minsec/ft ROCK QUALITY = VERY POOR | |
| 125 | | | | | | | | | | | |
| | | | | | | | | | | R6: Similar to R4a. Start of near vertical fracture along calcsilicate vein at 132.5 ft. Core times: 1:55/ 1:40/ 2:00/ 1:45/ 1:30 minsec/ft ROCK QUALITY = FAIR | |
| | R6 | 60/60 | 128.1 - 133.1 | RQD: 35"=58% smp: 128.2-129.1 | | | | | | | GTX# n/a qp=903 ksf |
| 130 | | | | | | | | | | | |
| | | | | | | | | | | R7: Similar to R4a, except very close breaks from 133.1 to 134.0 and 135.0 to 135.5 ft. Core times: 1:55/ 1:20/ -- minsec/ft ROCK QUALITY = VERY POOR | |
| | R7 | 35/35 | 133.1 - 136.0 | RQD: 7"=20% | | | | | | | |
| 135 | | | | | | | | | | | |
| | | | | | | | | -125.0 | | 136.0 Bottom of Exploration at 136.0 feet below ground surface. | |
| 140 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 145 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 150 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 155 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 160 | | | | | | | | | | | |

Remarks:

NEBC Rig #D-19 automatic hammer calibrated on 7/3/2018.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 2 of 2
Boring No.: BB-PVS-201

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-202
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 13.8 ft | Auger ID/OD: n/a (via excavation to 7.5 ft)
Operator: Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schonewald | Rig Type: MOBILE DRILL B-53 HYDR. (NUBS #D-24) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 10/11/18 1155 - 10/23/18 1500 | Drilling Method: cased wash boring | Core Barrel: NQ2 (wireline)
Boring Location: N 310708.2, E 1016680.5 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 7.5 ft (open)
Hammer Efficiency Factor: 0.937 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample — SSA = Solid Stem Auger — HSA = Hollow Stem Auger
WD = Unsuccessful Split Spoon Sample Attempt — RC = Roller Cone
U = Thin Wall Tube Sample — WOH = Weight of 140 lb. Hammer
W = Unsuccessful Thin Wall Tube Sample Attempt — Hammer Efficiency Factor = Rig Specific Annual Calibration Value
V = Field Vane Shear Test - FP = Pocket Penetrometer — WOR/C = Weight of Rods or Casing
(W) = Unsuccessful Field Vane Shear Test Attempt — WOR = Weight of Rods Per Foot
R = Rock Core Sample — $N_{uncorrected}$ = SPT Uncorrected Corrected for Hammer Efficiency
$S_{u(UBC)}$ = Lab Vane Undrained Shear Strength (psf) — $N_{corrected}$ = Raw Field SPT N-value
$q_p$ = Pocket Penetrometer Unconfined Compressive Strength (tsf) — $N_{uncorrected}$ = Raw Field SPT N-value
$q_u$ = Unconfined Compressive Strength (tsf) — Casing Advance Ratio=50%=unsupported
$I_p$ = Pocket Torvane Shear Strength (psf) — WC = Water Content, percent
LL = Liquid Limit — PL = Plastic Limit
PI = Plasticity Index — $N_{60}$ = Annual Calibration Value Corrected for Hammer Efficiency
G = Grain Size Analysis — C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Seated Drive Resistance (per 0.5 ft) | $N_{uncorrected}$ | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | VAC | | | 0.9 ft HMA | |
| | | | | | | | | 12.9 | | 0.9 | |
| | | | | | | | | | | 0.9 to 7.5 ft: Sand and Gravel Fill: throughout vacuum excavation depth. (FILL) | |
| | | | | | | | | | | | |
| | | | | | | | -- | | | | |
| | | | | | | | -- | | | | |
| | | | | | | | PUSH HW | 3.8 | | ---------- 10.0 | |
| 10 | 1D | 24/24 | 15.0 - 17.0 | WOR-WOH/18" | -- | | | | | Dark grey black, very soft, Silty CLAY. (MARINE SILT-CLAY) | GTX#489632 WC=47% LL=47 PL=24 PI=23 |
| 20 | 2D V1 | 24/24 | 20.0 - 22.0 | push thru vane Su=737/89 psf | | | | | | Dark grey black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | GTX#489635 WC=44% LL=48 PL=24 PI=24 |
| | V2 | | 20+0 - 21+0 | Su=737/89 psf | | | | | | V1: 16 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 21+0 - 22.0 | | | | | | | V2: 16.5 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 30 | 3D V3 | 24/17 | 25.0 - 27.0 | push thru vane Su=753/132 psf | | | | | | Dark grey with occasional black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | GTX#489634 WC=43% LL=43 PL=23 PI=20 |
| | V4 | | 26+0 - 27.0 | Su=714/112 psf | | | | | | V3: 18.5 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | V4: 16 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | MU | 24/6 | 30.0 - 32.0 | HYD PUSH | | | | | | MU: Sample extruded and jarred. Dark grey with occasional black. Silty CLAY. (MARINE SILT-CLAY) | |
| 40 | 4D V5 | 24/22 | 35.0 - 37.0 | push thru vane Su=938/132 psf | | | | | | Dark grey, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V6 | | 36+0 - 36.8 | Su=826/89 psf | | | | | | V5: 21 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 36.8 - 37.0 | | | | | | | V6: 18.5 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | 46 | | | 37.7 ft: Casing fetches-up; shell fragments in wash water; possible ancient clam bed. | |
| | | | | | | | 47 | | | | |
| 50 | 5D V7 | 24/24 | 40.0 - 42.0 | push thru vane Su=826/67 psf | | | PUSH HW | | | Dark grey, medium stiff, Silty CLAY; minor shell fragments. (MARINE SILT-CLAY) | GTX#489635 WC=41% LL=40 PL=24 PI=16 |
| | V8 | | 41+0 - 41.8 | Su=893/67 psf | | | | | | V7: 18.5 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings); gritty layers noted. | |
| | | | 41.8 - 42.0 | | | | | | | V8: 20 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 60 | 6D | 24/24 | 45.0 - 47.0 | HYD PUSH | | | | | | Dark grey black. Silty CLAY with shell fragments. (MARINE SILT-CLAY) | |
| | 9D | 24/24 | 50.0 - 52.0 | push thru vane Su=1,094/22 psf | | | | | | Dark grey black, medium stiff to stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V10 | | 51+0 - 52.0 | Su=915/22 psf | | | | | | V10: 20.5 / 0.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 70 | 7D V11 | 24/24 | 55.0 - 57.0 | push thru vane Su=843/45 psf | | | | | | Dark grey, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| | V12 | | 56+0 - 57.0 | Su=871/45 psf | | | | | | V11: 19 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | V12: 19.5

Username:

Division:

Filename: 021_Boring Logs 3.dgn

Date:3/3/2020

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933, I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-202
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.): 13.8 ft | Auger ID/OD: N/A f.vac excavation to 7.5 ft |
| Operator: | Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon |
| Logged By: | Schanewald | Rig Type: MOBILE DRILL B-53 TRUCK MNBIL #M-241 | Hammer Wt./Fall: 140 lbs / 30 inches |
| Date Start/Finish: | 10/11/18: 1155 - 10/23/18: 1500 | Drilling Method: cased wash boring | Core Barrel: N02 (wireline) |
| Boring Location: | N 310708.2, E 1016680.5 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 7.5 ft (open) |
| Hammer Efficiency Factor: 0.937 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐ | | |

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; $q_p$ = Pocket Penetrometer Reading; LL = Liquid Limit
MD = Unsuccessful Thin Wall Tube Sample; HSA = Hollow Stem Auger; WOH = Weight of Hammer; PL = Plastic Limit
W = Unsuccessful Thin Wall Tube Sample Attempt; WOR = Weight of Rods or Casing; $N_{uncorrected}$ = SPT Uncorrected; PI = Plasticity Index
V = Field Vane Shear Test; CPT = Pocket Penetrometer; RQD = SPT Uncorrected Corrected for Hammer Efficiency; G = Grain Size Analysis
W = Unsuccessful Field Vane Shear Test Attempt; $N_{60}$ = $N_{uncorrected} \times$ Hammer Efficiency Factor/60; C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | | | | | | | | | | | |
| | 110 | 24/18 | 75.0 - 77.0 | 3-3-3-3 | 6 | 9 | 47 | | | Grey, loose, fine to medium SAND, trace to little silt. (MARINE FINE SANDS AND SILT) | |
| | | | | | | | 48 | | | | |
| | | | | | | | 48 | | | | |
| | | | | | | | 60 | | | | |
| | | | | | | | 62 | | | | |
| 80 | 120 | 24/12 | 80.0 - 82.0 | 4-9-23-26 | 32 | 50 | 51 | | | Grey tan, fine to medium SAND, trace to little silt. (MARINE FINE SANDS AND SILT) Changing at 81.6 ft to: | |
| | | | | | | | 131 | | | | |
| | | | | | | | 157 | -67.8 | | | |
| | | | | | | | 161 | | | (120) Red tan, fine to medium SAND, some fine gravel, little to some silt, trace coarse sand. (TILL) | |
| 85 | | | | | | | 158 | | | | |
| | | | | | | | RC | | | 85.5 ft: Telescope NW (3-inch) casing. | |
| | 130 | 24/13 | 86.0 - 88.0 | 8-6-7-9 | 13 | 20 | RC | | | Grey tan, medium dense, fine to medium SAND, little to some silt, trace fine gravel, trace coarse sand with one 1/2- inch seam rust fine sand, trace silt and zones of fine to medium sand, trace to little silt. (TILL) | GTX#489646 GRAIN SIZE A-2-4(0) SM -#200=19.1% |
| 90 | | | | | | | | | | | |
| | 140 | 24/11 | 90.0 - 92.0 | 19-34-37-18 | 71 | 111 | 48 | | | Tan grey, very dense, Gravelly fine to coarse SAND, little silt. (TILL) | |
| | | | | | | | 57 | | | | |
| | | | | | | | 54 | | | | |
| 95 | | | | | | | 52 | | | | |
| | | | | | | | 120 | | | | |
| | 150 | 3/3 | 95.0 - 95.3 | 50/3" | -- | | RC | | | Grey, fine to medium SAND, some silt, some fine gravel, trace coarse sand. (TILL) | |
| 100 | | | | | | | | | | | |
| | 160 | 24/15 | 100.0 - 102.0 | 41-45-51-62 | 96 | 150 | 54 | | | Grey, very dense, Gravelly fine to coarse SAND, some silt. (TILL) | |
| | | | | | | | 57 | | | | |
| | | | | | | | 114 | | | 102.5 to 145.5 ft: Loosely nested cobbles and boulders. | |
| 105 | | | | | | | 92 | | | | |
| | | | | | | | RC | | | | |
| | | | | | | | RC | | | | |
| | 170 | 24/13 | 106.0 - 108.0 | 26-27-23-20 | 50 | 78 | 40 | | | Grey, dense, fine to medium SAND, some gravel, some silt, trace coarse sand. (TILL) | |
| 110 | | | | | | | 44 | | | | |
| | | | | | | | 68 | | | | |
| | | | | | | | RC | | | | |
| | | | | | | | 38 | | | | |
| 115 | | | | | | | 44 | | | | |
| | | | | | | | RC | | | | |
| | | | | | | | RC | | | | |
| | | | | | | | RC | | | | |
| | 180 | 24/22 | 115.0 - 117.0 | 2-3-4-8 | 7 | 11 | PUSH | | | Grey, loose, Silty fine to medium SAND, little fine gravel (rounded), trace coarse sand. (TILL) | GTX#489647 GRAIN SIZE A-4(0) SM -#200=43.2% |
| 120 | | | | | | | RC | | | | |
| | | | | | | | RC | | | | |
| | | | | | | | RC | | | | |
| | | | | | | | 14 | | | | |
| | | | | | | | 21 | | | | |
| 125 | | | | | | | 22 | | | | |
| | | | | | | | 22 | | | | |
| | | | | | | | 26 | | | | |
| | | | | | | | RC | | | Cobble/boulder at 125.6 ft. | |
| | | | | | | | RC | | | | |
| | | | | | | | RC | | | Cobble/boulder at 127.5 ft. | |
| | | | | | | | RC | | | Cobble/boulder at 128.5 ft. | |
| 130 | | | | | | | RC | | | | |
| | 190 | 24/18 | 130.0 - 132.0 | 17-21-24-33 | 45 | 70 | RC | | | Grey, dense, Silty fine to medium SAND, little to some gravel (rounded), trace coarse sand. (TILL) | |
| 135 | | | | | | | | | | | |
| 140 | | | | | | | | | | | |
| | 200 | 24/24 | 140.0 - 142.0 | 14-9-12-7 | 21 | 33 | | | | Grey, dense, fine to medium Sandy SILT, little gravel (rounded), trace coarse sand; apparent plasticity. (TILL) | |
| 145 | | | | | | | | | | | |
| | | | | | | | | 131.7 | | -145.5- | |
| | | | | | | | | 132.7 | | -146.5- | |
| | R1 | 60/60 | 147.0 - 152.0 | RQD: 18"=30% | | | N02 | | | Top of Bedrock at Elev. -132.7 ft. R1: Medium grey, aphanitic to fine grained, PHYLLITE with low angle relic bedding, numerous weathered calcsilicate veins, and cracks: hard, slightly weathered. Low angle, very close to close breaks: undulating, rough, typically discolored to decomposed, and open with mud infilling. (ELLIOT FORMATION) | |
| 150 | | | | | | | | | | | |

Remarks:
NEBC Rig #B-24 automatic hammer calibrated on 7/3/2018.
Successfully vacuum excavate to 7.5 ft BGS1 terminated at observed groundwater.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933, I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-202
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.): 13.8 ft | Auger ID/OD: N/A f.vac excavation to 7.5 ft |
| Operator: | Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon |
| Logged By: | Schanewald | Rig Type: MOBILE DRILL B-53 TRUCK MNBIL #M-241 | Hammer Wt./Fall: 140 lbs / 30 inches |
| Date Start/Finish: | 10/11/18: 1155 - 10/23/18: 1500 | Drilling Method: cased wash boring | Core Barrel: N02 (wireline) |
| Boring Location: | N 310708.2, E 1016680.5 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 7.5 ft (open) |
| Hammer Efficiency Factor: 0.937 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐ | | |

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; $q_p$ = Pocket Penetrometer Reading; LL = Liquid Limit
MD = Unsuccessful Thin Wall Tube Sample; HSA = Hollow Stem Auger; WOH = Weight of Hammer; PL = Plastic Limit
W = Unsuccessful Thin Wall Tube Sample Attempt; WOR = Weight of Rods or Casing; $N_{uncorrected}$ = SPT Uncorrected; PI = Plasticity Index
V = Field Vane Shear Test; CPT = Pocket Penetrometer; RQD = SPT Uncorrected Corrected for Hammer Efficiency; G = Grain Size Analysis
W = Unsuccessful Field Vane Shear Test Attempt; $N_{60}$ = $N_{uncorrected} \times$ Hammer Efficiency Factor/60; C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 150 | | | | | | | | | | | |
| | | | | smpl 151.4-151.9 | | | | | | | GTX# n/a qp=877 ksf |
| | R2 | 60/60 | 152.0 - 157.0 | RQD: 42"=70% | | | | | | | |
| | | | | smpl 153.5-154.0 | | | | | | | GTX# n/a qp=1,269 ksf |
| 155 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | R3 | 60/60 | 157.0 - 162.0 | RQD: 50"=83% smpl: 157.2-157.6 | | | | | | | GTX# n/a qp=894 ksf |
| 160 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | R4 | 60/60 | 162.0 - 167.0 | RQD: 41"=78% | | | | | | | |
| 165 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | R5 | 60/59 | 167.0 - 172.0 | RQD: 43"=72% | | | | | | | |
| 170 | | | | | | | | | | | |
| | | | | | | | | 158.2 | | Bottom of Exploration at 172.0 feet below ground surface. | |
| 175 | | | | | | | | | | | |

Remarks:
NEBC Rig #B-24 automatic hammer calibrated on 7/3/2018.
Successfully vacuum excavate to 7.5 ft BGS1 terminated at observed groundwater.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933, I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-203
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.): 13.3 ft | Auger ID/OD: N/A f.vac excavation to 7.5 ft |
| Operator: | Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon |
| Logged By: | Schanewald | Rig Type: MOBILE DRILL B-53 TRUCK MNBIL #M-241 | Hammer Wt./Fall: 140 lbs / 30 inches |
| Date Start/Finish: | 10/3/18: 0810 - 10/11/18: 1145 | Drilling Method: cased wash boring | Core Barrel: N02 (wireline) |
| Boring Location: | N 310775.0, E 1016750.0 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 7.3 ft (open) |
| Hammer Efficiency Factor: 0.937 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐ | | |

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; $q_p$ = Pocket Penetrometer Reading; LL = Liquid Limit
MD = Unsuccessful Thin Wall Tube Sample; HSA = Hollow Stem Auger; WOH = Weight of Hammer; PL = Plastic Limit
W = Unsuccessful Thin Wall Tube Sample Attempt; WOR = Weight of Rods or Casing; $N_{uncorrected}$ = SPT Uncorrected; PI = Plasticity Index
V = Field Vane Shear Test; PP = Pocket Penetrometer; RQD = SPT Uncorrected Corrected for Hammer Efficiency; G = Grain Size Analysis
W = Unsuccessful Field Vane Shear Test Attempt; $N_{60}$ = $N_{uncorrected} \times$ Hammer Efficiency Factor/60; C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | V&C | 12.4 | | 0.9 ft HMA | |
| | | | | | | | | | | 0.9 to 7.5 ft: vacuum excavations predominately sand and gravel fill. | |
| | | | | | | | | | | -0.9- | |
| 5 | | | | | | | | 4.3 | | | |
| | | | | | | | | | | Olive grey with occasional black, very soft, Silty CLAY. (MARINE SILT-CLAY) | |
| | | | | | | | | | | -9.0- | |
| 10 | 10 | 24/16 | 10.0 - 12.0 | WOH/24" | -- | | | | | | GTX#489636 WC=44% LL=40 PL=20 PI=20 |
| | | | | | | | | | | Olive grey black, very soft, Silty CLAY. (MARINE SILT-CLAY) | |
| 15 | | | | | | | | | | | |
| | 20 | 24/24 | 15.0 - 17.0 | WOH/24" | -- | | | | | | GTX#489637 WC=44% LL=45 PL=25 PI=20 |
| | | | | | | | | | | Olive grey black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) | |
| 20 | | | | | | | | | | | |
| | 30 V1 | 24/24 | 20.0 - 22.0 | push thru vane Su=815/756 psf | | | | | | Vf1: 20.5 / 3.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V2 | | 21.0 - 22.0 | Su=781/134 psf | | | | | | | |
| | U1 | 24/19 | 25.0 - 27.0 | HYD PUSH | | | | | | | |
| 25 | | | | | | | | | | | |
| | | | | | | | | | | Dark grey, Silty CLAY. (MARINE SILT-CLAY) | GTX#JP-10 CONSOL (Cv, CT) GTX#489629 WC=38% LL=42 PL=24 PI=18 |
| | 40 V3 | 24/24 | 30.0 - 32.0 | push thru vane Su=853/134 psf | | | | | | Dark grey black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) Vf3: 20.7 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 30 | V4 | | 31.0 - 32.0 | Su=982/112 psf | | | | | | Vf4: 22 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | | |
| | 50 V5 | 24/24 | 35.0 - 37.0 | push thru vane Su=853/134 psf | | | | | | Dark grey, medium stiff, Silty CLAY. (MARINE SILT-CLAY) Vf5: 20 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 35 | V6 | | 36.0 - 37.0 | Su=960/134 psf | | | | | | Vf6: 21.5 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | | |
| | U2 | 24/16 | 40.0 - 42.0 | HYD PUSH | | | | | | Dark grey, Silty CLAY. (MARINE SILT-CLAY) | GTX#JP-7 CONSOL (Cv, CT) GTX#489630 WC=39% LL=40 PL=24 PI=16 |
| 40 | | | | | | | | | | | |
| | 60 V7 | 24/24 | 45.0 - 47.0 | push thru vane Su=759/45 psf | | | | | | Dark grey black, medium stiff, Silty CLAY, with nodules throughout and occasional shell fragments. (MARINE SILT-CLAY) Vf7: 17 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 45 | V8 | | 46.0 - 47.0 | Su=737/22 psf | | | | | | Vf8: 19.5 / 0.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | | |
| | U3 | 24/24 | 50.0 - 52.0 | HYD PUSH | | | | | | Dark grey black, Silty CLAY. (MARINE SILT-CLAY) | GTX#JP-8 CONSOL (Cv, CT) GTX#489631 WC=37% LL=37 PL=22 PI=15 |
| 50 | | | | | | | | | | | |
| | 70 V9 | 24/24 | 55.0 - 57.0 | push thru vane Su=815/81 psf | | | | | | Dark grey black, medium stiff, Silty CLAY. (MARINE SILT-CLAY) Vf9: 20.5 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 55 | V10 | | 56.0 - 57.0 | Su=848/67 psf | | | | | | Vf10: 19 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | | |
| | 80 V11 | 24/24 | 60.0 - 62.0 | push thru vane Su=852/83 psf | | | | | | Dark grey black, medium stiff to stiff, Silty CLAY with one 1-inch layer silty fine sand. Vf11: 22 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 60 | V12 | | 61.0 - 62.0 | Su=1,183/156 psf | | | | | | Vf12: 26.5 / 3.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | | | | | | | | | |
| | 90 V13 | 24/24 | 65.0 - 67.0 | (VANE/12")-6=3 Su=1,350/313 psf | | | | | | Dark grey, Silty CLAY; changing at 66.1 ft to: Vf13: 30 / 7 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 65 | WV | | 66.0 | | | | | -52.7 | | -66.0- Wv: Unable to push past 66.0 ft. | |
| | | | | | | | | | | 180: Grey, Silt: some fine sand grading to Silty fine SAND. (MARINE FINE SANDS AND SILT) | |
| 70 | 100 | 24/9 | 70.0 - 72.0 | 5-4-2-2 | 6 | 9 | 71 | | | Grey, loose, fine SAND, trace to little silt. (MARINE FINE SANDS AND SILT) | |
| | | | | | | | 65 | | | | |
| | | | | | | | 66 | | | | |
| 75 | | | | | | | 72 | | | | |
| | | | | | | | 75 | | | | |

Remarks:
NEBC Rig #B-24 automatic hammer calibrated on 7/3/2018.
Crown of corrugated metal pipe encountered at approximately 6 ft BGS in first vacuum excavations: move approximately 1.5 ft westerly and retry.
Successfully vacuum excavate to 7.5 ft BGS1 terminated at observed groundwater.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933, I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-203
WIN: 21745.00

| | | | |
|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.): 13.3 ft | Auger ID/OD: N/A f.vac excavation to 7.5 ft |
| Operator: | Schaefer / Titus | Datum: NAVD88 | Sampler: standard split-spoon |
| Logged By: | Schanewald | Rig Type: MOBILE DRILL B-53 TRUCK MNBIL #M-241 | Hammer Wt./Fall: 140 lbs / 30 inches |
| Date Start/Finish: | 10/3/18: 0810 - 10/11/18: 1145 | Drilling Method: cased wash boring | Core Barrel: N02 (wireline) |
| Boring Location: | N 310775.0, E 1016750.0 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 7.3 ft (open) |
| Hammer Efficiency Factor: 0.937 | Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐ | | |

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; RC = Roller Cone; $q_p$ = Pocket Penetrometer Reading; LL = Liquid Limit
MD = Unsuccessful Thin Wall Tube Sample; HSA = Hollow Stem Auger; WOH = Weight of Hammer; PL = Plastic Limit
W = Unsuccessful Thin Wall Tube Sample Attempt; WOR = Weight of Rods or Casing; $N_{uncorrected}$ = SPT Uncorrected; PI = Plasticity Index
V = Field Vane Shear Test; PP = Pocket Penetrometer; RQD = SPT Uncorrected Corrected for Hammer Efficiency; G = Grain Size Analysis
W = Unsuccessful Field Vane Shear Test Attempt; $N_{60}$ = $N_{uncorrected} \times$ Hammer Efficiency Factor/60; C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | $N_{60}$ | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | | | | | | | | | | | |
| | 110 | 24/8 | 75.0 - 77.0 | HAMMER ERROR | -- | | -- | | | Grey grading to tan, fine SAND, trace silt. (MARINE FINE SANDS AND SILT) | |
| | | | | | | | 66 | | | | |
| | | | | | | | 58 | | | | |
| | | | | | | | 115 | | | | |
| 80 | | | | | | | RC | -65.7 | | -79.0- | |
| | MD | 4/0 | 80.0 - 80.3 | 90/4" | -- | | RC | | | 80.5 ft: Telescope NW (3-inch) casing. | |
| | 120 | 24/8 | 81.0 - 83.0 | 30-27-23-34 | 50 | 78 | -- | | | Grey to grey tan, dense, Gravelly fine to coarse SAND, little silt. (TILL) | |
| 85 | | | | | | | 28 | | | | |
| | | | | | | | 37 | | | | |
| | 130 | 24/10 | 85.0 - 87.0 | 14-7-10-10 | 17 | 27 | 7 | | | Tan to red tan, medium dense, fine to medium SAND, little to some gravel, little silt, trace coarse sand. (TILL) Changing at 86.4 ft to: | |
| | | | | | | | 9 | | | | |
| 90 | | | | | | | 21 | | | (130) Grey, fine to medium SAND, some silt, little to some fine gravel, trace coarse sand. (TILL) | |
| | | | | | | | 31 | | | | |
| | | | | | | | 19 | | | | |
| | 140 | 24/11 | 90.0 - 92.0 | 6-7-7-11 | 14 | 22 | 15 | | | | |
| 95 | | | | | | | 10 | | | | |
| | | | | | | | 19 | | | | |
| | | | | | | | 30 | | | | |
| | | | | | | | 62 | | | | |
| | 150 | 24/14 | 95.0 - 97.0 | 20-22-24-19 | 46 | 72 | -- | | | Grey, dense, fine to medium SAND, little to some fine gravel, little to some silt, trace coarse sand. (TILL) | |
| 100 | | | | | | | -- | | | | |
| | | | | | | | -- | | | | |
| | | | | | | | -- | | | | |
| | 160 | 24/13 | 100.0 - 102.0 | 22-27-22-18 | 49 | 77 | -- | | | Grey, dense, fine to medium SAND, some silt, some gravel, trace coarse sand. (TILL) | |
| 105 | | | | | | | 19 | | | | |
| | | | | | | | 30 | | | | |
| | | | | | | | 84 | | | | |
| | | | | | | | 129 | | | | |
| | 170 | 24/13 | 105.0 - 107.0 | 65-35-32-45 | 67 | 105 | RC | | | Grey, very dense, fine to medium SAND, some silt, little to some gravel, trace coarse sand. (TILL) | |
| 110 | | | | | | | | | | | |
| | | | | | | | | -95.7 | | -109.0- | |
| | R1 | 48/48 | 109.0 - 113.0 | RQD: 41"=85% | | | N02 | | | Top of Bedrock at Elev. -95.7 ft. R1: Medium grey, aphanitic to fine grained, PHYLLITE with low angle relic bedding and occasional mini. cross-bedding calcsilicate veinsl hard, fresh. Low angle, close breaks: undulating, rough, typically fresh, and open with mud infilling typicall shiny. (ELLIOT FORMATION) Core times: 2125/ 3:30/ 2:45/ 1:55 min:sec/ft. ROCK QUALITY = GOOD | |
| | | | | smpl 111.1-111.8 | | | | | | | |
| 115 | R2 | 57/57 | 113.0 - 117.8 | RQD: 40"=70% | | | | | | R2: Medium grey, aphanitic to fine grained, PHYLLITE with moderately dipping and high angle relic bedding, numerous calcsilicate veins (thicker veins typically weathered), and occasional high angle cracks: hard, typically fresh. Moderately dipping, close breaks: undulating, rough, typically fresh, and open with mud infilling typicall shiny. (ELLIOT FORMATION) Core times: 1:55/ 2:05/ 1:50/ 2:00/ -- min:sec/ft. ROCK QUALITY = FAIR | |
| | | | | smpl 116.4-116.8 | | | | | | | |
| | R3 | 60/48 | 117.8 - 122.8 | RQD: 12"=20% | | | | | | | GTX# n/a qp=1,290 ksf |
| 120 | | | | | | | | | | R3: Similar to R2, except typically slightly to highly weathered. Where slightly weathered: close, low angle breaks. One 1-inch wide, mud infilled break at 123.3 ft. Highly weathered and fractured below 124.9 ft. Core times: 2:05/ 1:55/ 2:10/ 2:40/ 3:10 min:sec/ft. ROCK QUALITY = VERY POOR | |
| | R4 | 21/18 | 122.8 - 124.6 | RQD: 4"=19% | | | | | | | |
| 125 | R4A | 39/39 | 124.6 - 127.9 | RQD: 25"=64% | | | | | | R4 (122.8 to 124.6 ft): Similar rock to R3: moderately weathered and highly fractured. ROCK QUALITY = VERY POOR | |
| | | | | smpl 125.0-125.5 | | | | | | R4A (124.6 to 127.8 ft): Similar to R2. ROCK QUALITY = FAIR R4 AND R4A core times: 2:30/ 2:45/ 1:45/ 1:35/ 1:40 min:sec/ft. | GTX# n/a qp=1,678 ksf |
| | R5 | 60/60 | 127.8 - 132.8 | RQD: 48"=80% | | | | | | | |
| 130 | | | | | | | | | | R5: Similar to R2: notable fracture from 130.1 to 130.2 ft. Core times: 1:35/ 1:35/ 1:30/ 1:30/ 2:05 min:sec/ft. ROCK QUALITY = GOOD | |
| | | | | | | | | | | | |
| 135 | | | | | | | | | | | |
| | | | | | | | | | | | |
| 140 | | | | | | | | | | | |
| | | | | | | | | -119.5 | | -132.8- Bottom of Exploration at 132.8 feet below ground surface. | |
| 145 | | | | | | | | | | | |
| 150 | | | | | | | | | | | |

Remarks:
NEBC Rig #B-24 automatic hammer calibrated on 7/3/2018.
Crown of corrugated metal pipe encountered at approximately 6 ft BGS in first vacuum excavations: move approximately 1.5 ft westerly and retry.
Successfully vacuum excavate to 7.5 ft BGS1 terminated at observed groundwater.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | DATE |
|---|---|---|
| PROJ. MANAGER | D.EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BORING LOGS 3

SHEET NUMBER
21
OF 220

Filename: 022_Boring Logs 4.dgn Division: Username: Date:3/3/2020

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-301
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 15.1 | Auger ID/OD: SSA (---/4.5")
Operator: Enos/Maynard | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schaneveld | Rig Type: Mobile Drill B-53 (NEBC ATV Rig 23) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 7/18/19 1125-1610 | Drilling Method: cased wash boring | Core Barrel: not applicable
Boring Location: N 310603, E 1016795 | Casing ID/OD: HW (4/4.5") NW (3/3.5") | Water Level*: 11 ft +/- (Sample 601)
Hammer Efficiency Factors: .842 | Hammer Types: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; U = Thin Wall Tube Sample; RC = Roller Cone; W = Unsuccessful Thin Wall Tube Sample Attempt; WOH = Weight of 140lb. Hammer; WOR = Weight of Rods or Casing; Qu(qp) = Pocket Penetrometer Reading; Qu = Unconfined Compressive Strength (psf); Qp = Unconfined Pocket Penetrometer Strength (psf); Su = Peak/Remolded Field Vane Undrained Shear Strength (psf); Su(rec) = Lab Vane Undrained Shear Strength (psf); Sr = Hollow Stem Auger Spoon Sample; N = SPT N-value; Nuncorrected = Raw Field SPT N-value; Ncorrected = Raw Field SPT N-value Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; NCHVC = Weight of Rods or Casing Ncorrected for Hammer Efficiency; Nc = Dynamic Cone Penetrometer; Ty = Pocket Torvane Shear Strength (psf); WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

| Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Required to Drive Sampler (or WOR) or Pocket Pen. (tsf) | Nuncorrected | N60 | Casing Blows | Elevation (ft.) | Visual Description and Remarks | Laboratory Testing Results / AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 15.1 | Brown TOPSOIL with organics; one piece large gravel in tip of spoon. | |
| 1D | 24/6 | 0.0 - 2.0 | 4-9-10-10 | 19 | 27 | SSA | | Tan- damp, medium dense, fine to medium SAND, trace coarse sand, trace fine gravel, trace silt. GRANULAR FILL | |
| 2D | 24/10 | 2.0 - 4.0 | 8-9-8-9 | 17 | 24 | | | | |
| 3D | 24/16 | 4.0 - 6.0 | 3-7-10-9 | 17 | 24 | | | Tan- damp, medium dense, fine to coarse SAND, trace fine gravel, trace silt, with one 5-inch layer silty fine to medium sand. trace coarse sand. GRANULAR FILL | GTXM519173 WASH SIEVE A-1-b(0) =#200=5.5% GTXM519345 WC=4.8% |
| 4D | 24/17 | 6.0 - 8.0 | 7-11-13-13 | 24 | 34 | | | Tan- damp, medium dense, fine to medium SAND, trace coarse sand. trace fine gravel. trace silt. GRANULAR FILL | |
| 5D | 24/20 | 8.0 - 10.0 | 14-19-14-13 | 33 | 46 | | | Light brown, moist to molst. dense. fine to medium SAND. trace to little silt. trace coarse sand. trace fine gravel. GRANULAR FILL | |
| 6D | 24/20 | 10.0 - 12.0 | 4-3-2-2 | 5 | 7 | 25 | | Tan-brown, moist to wet. loose. fine to medium SAND., trace to little silt. trace coarse sand. trace fine gravel. GRANULAR FILL | GTXM519174 WASH SIEVE A-2-4(0) =#200=10.5% GTXM519345 WC=18.5% |
| | | | | | | 25 | | | |
| | | | | | | 18 | | | |
| | | | | | | 20 | 13.0 | | |
| 7D | 24/12 | 14.0 - 16.0 | 1-3-9-4 | 3*dia | 4 | HW PC | | Wx1 Unable to push vane deeper than 14.0 ft. Tan-brown, fine to coarse SAND., little silt, little fine gravelt over a 3-inch layer olive brown, SILTY, some clay) over a 7-inch layer (7D) brown-black, silty fine to coarse SAND., some gravel with strong organic odor. MISCELLANEOUS FILL | |
| | | | | | | | 15.4 | | |
| | | | | | | | 18.0 | Organic silt noted in wash water at approximately 17 feet. | |
| 1U | 24/19 | 19.0 - 21.0 | HYD PUSH | | | | | Olive grey. Clayey SILT. MARINE SILT-CLAY CRUST (Piston sampler not fully extend.) | GTXMP-11 CONSOL (Cv, Cr): GTXM519169 WC=34% LL=42 PL=22 PI=20 |
| 8D | 24/24 | 20.8 - 22.8 | WOH/12"-2-3 | 2 | 3 | | | Dark olive grey. Clayey SILT to Silty CLAY. MARINE SILT-CLAY CRUST to MARINE SILT-CLAY WITH SAND SEAMS | |
| | | | | | | | 21.8 | | |
| 9D V1 | 24/24 | 24.0 - 26.0 | (VANE/12")-WOH-2 Su=1,607/193 psf | -- | | | | Olive grey, stiff, Silty CLAY, with one 1/4-inch seam fine Sandy Silt and few concretions at approx. 25 ft. MARINE SILT-CLAY WITH SAND SEAMS. V1: 36 / 7 ft-lbs (55 mm x 110 mm vane row torque readings) Wx1 Unable to push vane deeper than 25.0 ft. | |
| | | 25.0 - 26.0 | | | | | | | |
| 2U | 24/24 | 26.5 - 28.5 | HYD PUSH | | | | | Olive brown grey. Silty CLAY; sand on bottom of sample. MARINE SILT-CLAY WITH SAND SEAMS | GTXMP-12 CONSOL (Cv, Cr): GTXM519170 WC=32% LL=38 PL=19 PI=19 |
| 10D | 24/24 | 28.5 - 30.5 | 2-6-3-5 | 9 | 13 | | | Wx1 Unable to push vane deeper than 28.5 ft. Olive grey, Silty CLAY, with multiple layers and seams fine Sandy SILT. MARINE SILT-CLAY WITH SAND SEAMS Changing at 29.3 ft to: | |
| | | | | | | | 29.3 | | |
| | | | | | | | 32.5 | Brown, fine Sandy SILT with one 3-inch layer fine sand, little to some silt. | |
| | | | | | | | 17.4 | 38.3 ft: Gravel layer noted. 38.5 ft Grinding on hard layer. Slowly advance roller cone to refusal at 41.6 ft. | |
| | | | | | | | 26.5 | | |
| | | | | | | | 41.6 | Bottom of Exploration at 41.6 feet below ground surface. | |

Remarks:
NEBC ATV Rig 23 automatic hammer calibrated on 7/8/2019.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PVS-301

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-302
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 13.7 | Auger ID/OD: SSA (---/4.5")
Operator: Enos/Maynard | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schaneveld | Rig Type: Mobile Drill B-53 (NEBC ATV Rig 23) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 7/17/19 1525- 7/18/19 1110 | Drilling Method: cased wash boring | Core Barrel: NQ2
Boring Location: N 310718, E 1016824 | Casing ID/OD: HW (4/4.5" NW (3/3.5") | Water Level*: 9 ft (open)
Hammer Efficiency Factors: .842 | Hammer Types: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; U = Thin Wall Tube Sample; RC = Roller Cone; W = Unsuccessful Thin Wall Tube Sample Attempt; WOH = Weight of 140lb. Hammer; WOR = Weight of Rods or Casing; Qu(qp) = Pocket Penetrometer Reading; Qu = Unconfined Compressive Strength (psf); Qp = Unconfined Pocket Penetrometer Strength (psf); Su = Peak/Remolded Field Vane Undrained Shear Strength (psf); Su(rec) = Lab Vane Undrained Shear Strength (psf); Sr = Hollow Stem Auger Spoon Sample; N = SPT N-value; Nuncorrected = Raw Field SPT N-value; Ncorrected = Raw Field SPT N-value Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; NCHVC = Weight of Rods or Casing Ncorrected for Hammer Efficiency; Nc = Dynamic Cone Penetrometer; Ty = Pocket Torvane Shear Strength (psf); WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

| Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Required to Drive Sampler (or WOR) or Pocket Pen. (tsf) | Nuncorrected | N60 | Casing Blows | Elevation (ft.) | Visual Description and Remarks | Laboratory Testing Results / AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 13.7 | 6-inch layer TOPSOIL with organics. underlain by TO: Light brown- damp, loose. fine to coarse SAND., little to some silt, little gravel. GRANULAR FILL | |
| 1D | 24/14 | 0.0 - 2.0 | 3-4-6-7 | 10 | 14 | SSA | | Brown- damp, loose. fine to coarse SAND., little silt, trace to little fine gravel. GRANULAR FILL | GTXM519175 WASH SIEVE A-2-4(0) =#200=10.9% GTXM519345 WC=6.1% |
| 2D | 24/12 | 2.0 - 4.0 | 5-5-5-7 | 10 | 14 | | | | |
| 3D | 24/14 | 4.0 - 6.0 | 6-6-8-16 | 14 | 20 | | | Light brown-tan- damp, medium dense. fine to medium SAND., trace to little silt. trace coarse sand. trace gravel. GRANULAR FILL | |
| 4D | 24/19 | 6.0 - 8.0 | 16-14-11-10 | 25 | 35 | | | Light brown-tan- damp to molst. medium dense. fine to medium SAND., trace to little silt. trace coarse sand. trace gravel. GRANULAR FILL | |
| 5D | 24/19 | 8.0 - 10.0 | 4-3-3-3 | 5 | 7 | 15 | | Light brown, moist to wet. loose. fine to medium SAND. trace to little silt. trace coarse sand. trace gravel. GRANULAR FILL | |
| 6D | 24/7 | 10.0 - 12.0 | 4-5-6-3 | 11 | 15 | 21 | | Light brown. medium dense. fine to medium SAND. little silt. trace gravel. trace coarse sand. GRANULAR FILL Changing at 11.6 ft to: | |
| | | | | | | 31 | 11.6 | | |
| | | | | | | 33 | | 6D: Dark grey brown. fine to medium SAND. some silt. trace to little gravel. trace coarse sand. with minor organics. ORIGINAL GROUND | |
| | | | | | | 39 | 13.0 | | |
| 7D | 24/22 | 14.0 - 16.0 | 1-2-2-3 | 4 | 6 | HW PC | | Olive brown grey. slightly mottled. soft. SILT. some clay to Clayey SILT. MARINE SILT-CLAY CRUST | GTXM519153 WC=35% LL=45 PL=22 PI=23 |
| | | | | | | | 16.3 | | |
| 8D V2 | 24/24 | 19.0 - 21.0 | WOR-1/18" | -- | | | | Olive brown Clayey SILT grading to olive grey with occasional black streaks. Silty CLAY. MARINE SILT-CLAY CRUST grading to MARINE SILT-CLAY | |
| | | | | | | | 20.0 | | |
| 9D V3 | 24/24 | 24.0 - 26.0 | push thru vane Su= 558/ 93 psf | | | | | Dark grey black. medium stiff. Silty CLAY with occasional seams of fine Sandy silt. MARINE SILT-CLAY WITH SAND SEAMS readings) V2: 17.5 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | GTXM519154 WC=35% LL=37 PL=19 PI=18 |
| | | 25.0 - 26.0 | Su= 781/ 112 psf | | | | | | |
| 10D V4 | 24/24 | 29.0 - 31.0 | push thru vane Su= 558/ 93 psf | | | | | Dark olive grey with occasional black streaks. medium stiff. Silty CLAY. MARINE SILT-CLAY V3: 19 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) V4: 21 / 35 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | 30.0 - 31.0 | Su= 938/ 134 psf | | | | | | |
| 11D V5 | 24/24 | 34.0 - 36.0 | push thru vane Su=1,205/223 psf | | | | | Dark grey with occasional black streaks. stiff. Silty CLAY. MARINE SILT-CLAY Grading through grey. SILT. some clay. some fine sand to | GTXM519155 WC=30% LL=36 PL=20 PI=16 |
| | | 35.0 - 36.0 | Su=1,340/268 psf | | | | | | |
| 12D | 24/20 | 39.0 - 41.0 | (vane)-4-4-9 | 8 | 11 | | | Unable to push vane deeper than 39.4 ft. Dark grey black. Silty CLAY. MARINE SILT-CLAY Grading through grey. SILT. some clay. some fine sand to | |
| | | | | | | | 26.7 | | |
| | | | | | | | 40.4 | Grading at 40.4 ft to 12D: Brown. fine Sandy SILTs with brown. fine sand trace silt in tip of spoon. MARINE SANDS AND SILT | |
| 13D | 24/9 | 44.0 - 46.0 | 4-10-11-12 | 21 | 29 | | | Brown. medium dense. fine to medium SAND. trace silt. trace coarse sands with silttier material in tip of spoon. MARINE SANDS AND SILT | |
| | | | | | | | 33.6 | | |
| | | | | | | | 47.3 | Top of Bedrock at Elev. -33.6 ft. 47.3 ft: Grinding on hard layer. Slowly advance roller cone to refusal at 49.4 ft. Set NW casing for rock coring. | |
| R1 | 60/60 | 49.4 - 54.4 | RQD: 35" = 58% | | | NQ2 | | R1: Bedrock: Grey. aphanitic to fine grained. PHYLLITE with moderately dipping remnant bedding and calcsilicate veinsl hard. typically fresh. Low angle to moderately dipping. closely spaced breaks! undulating. rough. typically fresh. and open with occasional mud infillings somewhat shiny. (ELLIOT FORMATION) Core times: 3:10/ 2:50/ 2:45/ 2:50/ 3:10 minisec/ft. ROCK QUALITY = FAIR | |
| | | | | | | | 40.7 | | |
| | | | | | | | 54.4 | Bottom of Exploration at 54.4 feet below ground surface. | |

Remarks:
NEBC ATV Rig 23 automatic hammer calibrated on 7/8/2019.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PVS-302

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-303
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 12.0 | Auger ID/OD: SSA (---/4.5")
Operator: Enos/Maynard | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schaneveld | Rig Type: Mobile Drill B-53 (NEBC ATV Rig 23) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 7/16/19 1415- 7/17/19 1430 | Drilling Method: cased wash boring | Core Barrel: NQ2
Boring Location: N 310873, E 1016831 | Casing ID/OD: HW (4/4.5" NW (3/3.5") | Water Level*: 8.4 ft (open)
Hammer Efficiency Factors: .842 | Hammer Types: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; U = Thin Wall Tube Sample; RC = Roller Cone; W = Unsuccessful Thin Wall Tube Sample Attempt; WOH = Weight of 140lb. Hammer; WOR = Weight of Rods or Casing; Qu(qp) = Pocket Penetrometer Reading; Qu = Unconfined Compressive Strength (psf); Qp = Unconfined Pocket Penetrometer Strength (psf); Su = Peak/Remolded Field Vane Undrained Shear Strength (psf); Su(rec) = Lab Vane Undrained Shear Strength (psf); Sr = Hollow Stem Auger Spoon Sample; N = SPT N-value; Nuncorrected = Raw Field SPT N-value; Ncorrected = Raw Field SPT N-value Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; NCHVC = Weight of Rods or Casing Ncorrected for Hammer Efficiency; Nc = Dynamic Cone Penetrometer; Ty = Pocket Torvane Shear Strength (psf); WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

| Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Required to Drive Sampler (or WOR) or Pocket Pen. (tsf) | Nuncorrected | N60 | Casing Blows | Elevation (ft.) | Visual Description and Remarks | Laboratory Testing Results / AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 12.0 | 1 inch HMA (parking lot) underlain by Brown-dark brown, damp- medium dense. fine to coarse SAND., some gravel. some silt. GRANULAR FILL | |
| 1D | 24/10 | 0.0 - 2.0 | 4-8-6-5 | 14 | 20 | SSA | | Grey brown. damp to molst. very loose. fine Sandy SILT. trace medium to coarse sand. FILL | |
| 2D | 24/17 | 2.0 - 4.0 | 1-1-1-2 | 2 | 3 | | | | |
| 3D | 24/17 | 4.0 - 6.0 | 1-2-3-2 | 5 | 7 | | | Olive brown grey. mottled. molst. loose. SILT. trace fine sand. FILL | GTXM519172 MATL PASSING #200 =#200=95.3% GTXM519156 WC=25% LL=31 PL=19 PI=12 |
| 4D | 24/19 | 6.0 - 8.0 | 3-4-4-4 | 8 | 11 | | | Olive brown grey. mottled. molst. SILT. some fine grading to SILT. some clay. little to some fine sand appears reworked. FILL | |
| 5D | 24/24 | 8.0 - 10.0 | WOH/12"-1-2 | 1 | 1 | | | Olive brown grey. mottled. wet. SILT. some clay to Clayey SILTs appears reworked. FILL | |
| | | | | | | | 9.5 | | |
| 6D | 24/24 | 10.0 - 12.0 | WOH/24" | -- | | HW PC | | Bottom 6 inches of sample (5D) very mottled with few pieces of gravel and minor roots. ORIGINAL GROUND | |
| | | | | | | | 10.0 | | |
| 7D V1 | 24/24 | 14.0 - 16.0 | push thru vane Su= 893/ 89 psf | | | | | Olive grey with occasional black streaks. soft to stiff. Silty CLAY. MARINE SILT-CLAY with occasional pockets silty fine sand. MARINE SILT-CLAY CRUST | GTXM519158 WC=44% LL=44 PL=23 PI=21 |
| V2 | | 15.0 - 15.6 - 16.0 | Su= 536/ 67 psf | | | | | Olive grey. slightly mottled. Clayey SILT with occasional pockets silty fine sand. MARINE SILT-CLAY CRUST readings) V2: 12" / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 8D V3 | 24/11 | 19.0 - 21.0 | push thru vane Su= 880/ 110 psf | | | | | Olive grey with occasional black streaks. medium stiff. Silty CLAY. MARINE SILT-CLAY CRUST grading to MARINE SILT-CLAY readings) V4: 15 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| V4 | | 20.0 - 20.6 - 21.0 | Su= 670/ 112 psf | | | | | | |
| 9D V5 | 24/24 | 24.0 - 26.0 | push thru vane Su= 714/ 85 psf | | | | | Olive grey. medium stiff. Silty CLAY. MARINE SILT-CLAY V5: 16 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) V6: 18 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | GTXM519159 WC=42% LL=41 PL=22 PI=21 |
| V6 | | 25.0 - 26.0 | Su= 804/ 134 psf | | | | | | |
| 10D V7 | 24/24 | 29.0 - 31.0 | push thru vane Su=1,072/179 psf | | | | | Olive grey. medium stiff to stiff. Silty CLAY. MARINE SILT-CLAY V7: 21.5 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) V8: 24 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| V8 | | 30.0 - 30.6 - 31.0 | Su=1,072/179 psf | | | | | | |
| 11D V9 | 24/24 | 34.0 - 36.0 | push thru vane Su=1,027/201 psf | | | | | Olive grey. stiff. Silty CLAY. MARINE SILT-CLAY V9: 24 / 4.5 ft-lbs (55 mm x 110 mm vane row torque readings) V10: 23 / 4.5 ft-lbs (55 mm x 110 mm vane row torque readings) | GTXM519160 WC=40% LL=45 PL=22 PI=23 |
| V10 | | 35.0 - 35.6 - 36.0 | Su=1,027/201 psf | | | | | | |
| 12D V11 | 24/24 | 39.0 - 41.0 | push thru vane Su=1,027/179 psf | | | | | Dark grey black. medium stiff. Silty CLAY. MARINE SILT-CLAY V11: 18.5 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) V12: 19 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| V12 | | 40.0 - 40.6 - 41.0 | Su= 848/ 134 psf | | | | | | |
| 13D V13 | 24/24 | 44.0 - 46.0 | push thru vane Su=1,250/201 psf | | | | | Olive grey with occasional black streaks. stiff. Silty CLAY. MARINE SILT-CLAY V13: 28 / 4.5 ft-lbs (55 mm x 110 mm vane row torque readings) V14: 25 / 3.5 ft-lbs (55 mm x 110 mm vane row torque readings) | GTXM519161 WC=40% LL=45 PL=22 PI=23 |
| V14 | | 45.0 - 45.6 - 46.0 | Su=1,116/156 psf | | | | | | |
| 14D V15 | 24/24 | 49.0 - 51.0 | push thru vane Su=1,027/179 psf | | | | | Olive grey with occasional black streaks. stiff. Silty CLAY. MARINE SILT-CLAY V15: 23 / 4 ft-lbs (55 mm x 110 mm vane row torque readings) V16: 23 / 3.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| V16 | | 50.0 - 50.6 - 51.0 | Su=1,027/156 psf | | | | | | |
| 15D V17 | 24/24 | 54.0 - 56.0 | (vane/12")-1-3 Su=1,295/201 psf | -- | | | | Dark grey black. stiff. Silty CLAY with occasional partings and one 1/2-inch seam silty fine sand. MARINE SILT-CLAY V17: 29 / 4.5 ft-lbs (55 mm x 110 mm vane row torque readings) Wx1 Unable to push vane deeper than 55.4 ft. | GTXM519162 WC=40% LL=34 PL=18 PI=16 |
| WV | | 55.0 | | | | | | | |
| 16D V18 | 24/17 | 59.0 - 61.0 | (vane/12")-8-11 Su=1,563/246 psf | -- | | | | Dark grey black. Silty CLAY with multiple seams and layers fine sandy silt. MARINE SILT-CLAY Changing at 60.2 ft to: V18: 35 / 5.5 ft-lbs: multiple sand seams noted. (55 mm x 110 mm vane row torque readings) Wx1 Unable to push vane deeper than 60.0 ft. 60.2 16D1 Grey. fine SAND. some silt. MARINE SANDS AND SILT | |
| WV | | 60.0 | | | | | | | |
| | | | | | | | 48.2 | | |
| 17D | 24/14 | 64.0 - 66.0 | 3-12-12-15 | 24 | 34 | | | Grey. medium dense. Silty fine to medium SAND. MARINE SANDS AND SILT | GTXM519172 MATL PASSING #200 =#200=92.9% GTXM519345 WC=18.3% |
| | | | | | | | 55.0 | | |
| | | | | | | | 67.0 | Brown with grey and rust layers. dense. fine to coarse SAND. little to some silts silt content variable in layers. TILL | |
| 18D | 24/11 | 69.0 - 71.0 | 14-17-17-17 | 34 | 48 | | | | |
| 19D | 24/12 | 74.0 - 76.0 | 19-12-11-12 | 23 | 32 | | | Grey. medium dense. fine to medium SAND. little to some silt. little fine gravel. trace coarse sand. TILL | |

Remarks:
NEBC ATV Rig 23 automatic hammer calibrated on 7/8/2019.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 2
Boring No.: BB-PVS-303

## Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933
I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-303
WIN: 21745.00

Driller: New England Boring Contractors | Elevation (ft.): 12.0 | Auger ID/OD: SSA (---/4.5")
Operator: Enos/Maynard | Datum: NAVD88 | Sampler: standard split-spoon
Logged By: Schaneveld | Rig Type: Mobile Drill B-53 (NEBC ATV Rig 23) | Hammer Wt./Fall: 140 lbs / 30 inches
Date Start/Finish: 7/16/19 1415- 7/17/19 1430 | Drilling Method: cased wash boring | Core Barrel: NQ2
Boring Location: N 310873, E 1016831 | Casing ID/OD: HW (4/4.5" NW (3/3.5") | Water Level*: 8.4 ft (open)
Hammer Efficiency Factors: .842 | Hammer Types: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐

Definitions:
D = Split Spoon Sample; SSA = Solid Stem Auger; R = Rock Core Sample; HSA = Hollow Stem Auger; U = Thin Wall Tube Sample; RC = Roller Cone; W = Unsuccessful Thin Wall Tube Sample Attempt; WOH = Weight of 140lb. Hammer; WOR = Weight of Rods or Casing; Qu(qp) = Pocket Penetrometer Reading; Qu = Unconfined Compressive Strength (psf); Qp = Unconfined Pocket Penetrometer Strength (psf); Su = Peak/Remolded Field Vane Undrained Shear Strength (psf); Su(rec) = Lab Vane Undrained Shear Strength (psf); Sr = Hollow Stem Auger Spoon Sample; N = SPT N-value; Nuncorrected = Raw Field SPT N-value; Ncorrected = Raw Field SPT N-value Corrected for Hammer Efficiency; Hammer Efficiency Factor = Rig Specific Annual Calibration Value; NCHVC = Weight of Rods or Casing Ncorrected for Hammer Efficiency; Nc = Dynamic Cone Penetrometer; Ty = Pocket Torvane Shear Strength (psf); WC = Water Content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

| Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. Required to Drive Sampler (or WOR) or Pocket Pen. (tsf) | Nuncorrected | N60 | Casing Blows | Elevation (ft.) | Visual Description and Remarks | Laboratory Testing Results / AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|
| 1D | 24/2 | 79.0 - 81.0 | 20-22-22-17 | 44 | 62 | | | Limited sample! Grey. dense. fine to coarse SAND. some silt. some gravel. TILL | |
| 2D | 15/2 | 84.0 - 85.3 | 24-28-70/3" | -- | | | | | |
| | | | | | | | 73.3 | | |
| R1 | 58/58 | 87.0 - 91.8 | RQD: 47" = 81% | | | NQ2 | | Grey. Silty GRAVEL. some fine to coarse sand crushed rock in tip of spoon. | |
| | | | | | | | 85.3 | Top of Bedrock at Elev. -73.3 ft. 85.3 ft: Grinding on hard layer. Slowly advance roller cone to refusal at 87.0 ft. Set NW casing for rock coring. R1: Bedrock: Grey. aphanitic to fine grained. PHYLLITE with moderately dipping remnant bedding and calcsilicate veinsl hard. typically fresh. Moderately dipping. moderately spaced breaks! undulating. rough. typically fresh. and open with occasional infillings somewhat shiny. (ELLIOT FORMATION) Core times: 3:30/ 4:15/ 3:50/ 4:05/ - minisec/ft. ROCK QUALITY = GOOD | |
| | | | | | | | 79.8 | | |
| | | | | | | | 91.8 | Bottom of Exploration at 91.8 feet below ground surface. | |

Remarks:
NEBC ATV Rig 23 automatic hammer calibrated on 7/8/2019.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 2 of 2
Boring No.: BB-PVS-303

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE PLANS

BRIDGE NO.5933

| PROJ. MANAGER | D. EATON | DATE |
|---|---|---|
| DESIGN-DETAILED | EDD | 2x20 |
| CHECKED-REVIEWED | RWH | 2x20 |
| DESIGN2-DETAILED2 | CDH | |
| DESIGN3-DETAILED3 | LZD | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BORING LOGS 4

SHEET NUMBER
22
OF 220

Filename: 023_Boring Logs 5.dgn Division: Username: Date:3/3/2020

# Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933, I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-304
WIN: 21745.00

| | | | | | |
|---|---|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.): | 14.4 | Auger ID/OD: | SSA (--/4.5") |
| Operator: | Enos/Maynard | Datum: | NAVD88 | Sampler: | standard split-spoon |
| Logged By: | Schonewald | Rig Type: | Mobile Drill B-53 (NEBC ATV Rig 23) | Hammer Wt./Fall: | 140 lbs / 30 inches |
| Date Start/Finish: | 7/11/19 1015- 7/16/19 1405 | Drilling Method: | cased wash boring | Core Barrel: | NQ2 |
| Boring Location: | N 310852, E 1016768 | Casing ID/OD: | HW (4/4.5") NW (3/3.5") | Water Level*: | 5.5 ft (open) |
| Hammer Efficiency Factors: | 0.842 | Hammer Type: | Automatic ☒ Hydraulic ☐ Rope & Cathead ☐ | | |

Definitions:
R = Rock Core Sample
D = Split Spoon Sample — SSA = Solid Stem Auger
WO = Unsuccessful Split Spoon Sample Attempt — HSA = Hollow Stem Auger
U = Thin Wall Tube Sample — RC = Roller Cone
UTW = Unsuccessful Thin Wall Tube Sample Attempt — WOH = Weight of Hoh
V = Field Vane Shear Test, PP = Pocket Penetrometer — WOR/C = Weight of Rods or Casing
WV = Unsuccessful Field Vane Shear Test Attempt — WOH = Weight of the Person
$S_u$ = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
$q_p$ = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
$N_{60}$ = SPT N-uncorrected Corrected for Hammer Efficiency
$N_{60}$ = Hammer Efficiency Factor(EF)*N-uncorrected
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | %Q | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | 55A | | | | |
| | 1D | 24/18 | 2.0 - 4.0 | 80-43-17-14 | 60 | 84 | | | | Brown, damp, Silty Urban Fill including brick and concrete. MISCELLANEOUS FILL | |
| 5 | 2D | 7/3 | 4.0 - 4.6 | 71-50/1" | - | | | | | Brown, damp, Silty fine to coarse SAND, some gravel (concrete). MISCELLANEOUS FILL | |
| | 3D | 24/10 | 5.0 - 7.0 | 4-8-64-7 | 72 | 101 | -- | | | White/red/brown, wet, Silty Urban Fill including brick and concrete. MISCELLANEOUS FILL | |
| | | | | | | | -- | 7.0 | | | |
| | 4D | 24/20 | 7.0 - 9.0 | 1/24" | - | | HW PUSH | 7.4 | | Olive grey, Clayey SILT, with multiple layers silty fine sand. MARINE SILT-CLAY CRUST | |
| 10 | 5D | 24/24 | 9.0 - 11.0 | WOH/18"-1 | - | | | | | | GTX#519163 WC=33% LL=28 PL=18 PI=10 |
| | | | | | | | | 1.9 | | | |
| | | | | | | | | -12.5 | | | |
| 15 | 6D V1 | 24/24 | 14.0 - 16.0 | push thru vane Sur 451/ 30 psf | | | HW RC | | | Olive grey, soft to medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V1: 11.7 / 0.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V2 | | 15.4 - 16.0 | Sur 536/ 45 psf | | | | | | V2: 12 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| 20 | 7D V3 | 24/20 | 19.0 - 21.0 | push thru vane Sur 625/ 45 psf | | | | | | Dark olive grey with occasional black streaks, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V3: 14 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | GTX#519164 WC=45% LL=49 PL=23 PI=26 |
| | V4 | | 20.0 - 20.4 | Sur 692/ 45 psf | | | | | | V4: 15.5 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 21.0 | | | | | | | | |
| 25 | 8D V5 | 24/24 | 24.0 - 26.0 | push thru vane Sur 536/ 61 psf | | | | | | Dark olive grey with occasional black streaks, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V5: 17.5 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V6 | | 25.4 - 26.0 | Sur 670/ 45 psf | | | | | | V6: 15 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 26.0 | | | | | | | | |
| 30 | 9D V7 | 24/24 | 29.0 - 31.0 | push thru vane Sur 781/ 61 psf | | | | | | Dark olive grey with occasional black streaks, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V7: 17.5 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | GTX#519165 WC=41% LL=46 PL=22 PI=24 |
| | V8 | | 30.0 - 30.4 | Sur 781/ 61 psf | | | | | | V8: 17.5 / 1.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 31.0 | | | | | | | | |
| 35 | 10D V9 | 24/24 | 34.0 - 36.0 | push thru vane Sur 871/ 89 psf | | | | | | Dark olive grey with occasional black streaks, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V9: 19.5 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V10 | | 35.4 - 36.0 | Sur 915/ 89 psf | | | | | | V10: 20.5 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 36.0 | | | | | | | | |
| 40 | 11D V11 | 24/24 | 39.0 - 41.0 | push thru vane Sur 804/ 134 psf | | | | | | Dark olive grey with occasional black streaks, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V11: 18 / 3 ft-lbs (55 mm x 110 mm vane row torque readings) | GTX#519166 WC=40% LL=43 PL=21 PI=22 |
| | V12 | | 40.0 - 40.4 | Sur 893/ 112 psf | | | | | | V12: 20 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 41.0 | | | | | | | | |
| 45 | 12D V13 | 24/24 | 44.0 - 46.0 | push thru vane Sur 714/ 45 psf | | | | | | Dark grey black, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V13: 16 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | V14 | | 45.0 - 46.0 | Sur 692/ 22 psf | | | | | | V14: 15.5 / 0.5 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 46.0 | | | | | | | | |
| 50 | 13D V15 | 24/24 | 49.0 - 51.0 | push thru vane Sur 582/ 45 psf | | | | | | Dark olive grey with occasional black streaks, medium stiff, Silty CLAY, MARINE SILT-CLAY<br>V15: 22 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | GTX#519167 WC=37% LL=43 PL=21 PI=22 |
| | V16 | | 50.0 - 50.8 | Sur 960/ 45 psf | | | | | | V16: 21.5 / 1 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 51.0 | | | | | | | | |
| 55 | MD V17 | 24/0 | 54.0 - 56.0 | push thru vane Sur 781/ 67 psf | | | | | | Possibly pushed a concretion.<br>V17: 17.5 / 1.5 ft-lbs: concretion noted (55 mm x 110 mm vane row torque readings) | |
| | V18 | | 55.0 - 55.6 | Sur 938/ 89 psf | | | | | | V18: 21 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 56.0 | | | | | | | | |
| 60 | 14D V19 | 24/23 | 59.0 - 61.0 | push thru vane Sur=1,139/112 psf | | | | | | Dark grey black, stiff, Silty CLAY with nodules throughout and occasional concretions, MARINE SILT-CLAY<br>V19: 25.5 / 2.5 ft-lbs (55 mm x 110 mm vane row torque readings) | GTX#519168 WC=38% LL=35 PL=19 PI=16 |
| | V20 | | 60.0 - 60.6 | Sur=1,161/ 89 psf | | | | | | V20: 26 / 2 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | | | 61.0 | | | | | | | | |
| 65 | 15D V21 | 24/20 | 64.0 - 66.0 | Vane/12"-9-10 Sur=1,585/313 psf | -- | | | | | Dark grey black, stiff, Silty CLAY with nodules and concretions, MARINE SILT-CLAY Changing at 65.3 ft tot<br>V18: 35.5 / 7 ft-lbs (55 mm x 110 mm vane row torque readings) | |
| | WV | | 65.0 | | | | | -50.9 | | Unable to push vane deeper than 65.0 ft. | |
| | | | | | | | | | | 15D: Grey, fine SAND, trace to little silt, MARINE SANDS AND SILT | |
| 70 | 16D | 24/14 | 69.0 - 71.0 | 8-11-16-13 | 27 | 38 | | | | Dark grey, medium dense, tight, fine to medium SAND, trace to little silt, MARINE SANDS AND SILT | |
| | | | | | | | | | | | |
| 75 | 17D | 24/13 | 74.0 - 76.0 | 7-13-21-14 | 34 | 48 | | | | Dark grey, dense, tight, fine to medium SAND, trace to little silt, MARINE SANDS AND SILT | |

Remarks:
NEBC ATV Rig 23 automatic hammer calibrated on 7/8/2019.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



# Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Bridge #5933, I-295 over Veranda Street
Location: Portland, ME

Boring No.: BB-PVS-304
WIN: 21745.00

| | | | | | |
|---|---|---|---|---|---|
| Driller: | New England Boring Contractors | Elevation (ft.): | 14.4 | Auger ID/OD: | SSA (--/4.5") |
| Operator: | Enos/Maynard | Datum: | NAVD88 | Sampler: | standard split-spoon |
| Logged By: | Schonewald | Rig Type: | Mobile Drill B-53 (NEBC ATV Rig 23) | Hammer Wt./Fall: | 140 lbs / 30 inches |
| Date Start/Finish: | 7/11/19 1015- 7/16/19 1405 | Drilling Method: | cased wash boring | Core Barrel: | NQ2 |
| Boring Location: | N 310852, E 1016768 | Casing ID/OD: | HW (4/4.5") NW (3/3.5") | Water Level*: | 5.5 ft (open) |
| Hammer Efficiency Factors: | 0.842 | Hammer Type: | Automatic ☒ Hydraulic ☐ Rope & Cathead ☐ | | |

Definitions:
R = Rock Core Sample
D = Split Spoon Sample — SSA = Solid Stem Auger
WO = Unsuccessful Split Spoon Sample Attempt — HSA = Hollow Stem Auger
U = Thin Wall Tube Sample — RC = Roller Cone
UTW = Unsuccessful Thin Wall Tube Sample Attempt — WOH = Weight of Hoh
V = Field Vane Shear Test, PP = Pocket Penetrometer — WOR/C = Weight of Rods or Casing
WV = Unsuccessful Field Vane Shear Test Attempt — WOH = Weight of the Person
$S_u$ = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
$q_p$ = Unconfined Compressive Strength (tsf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
$N_{60}$ = SPT N-uncorrected Corrected for Hammer Efficiency
$N_{60}$ = Hammer Efficiency Factor(EF)*N-uncorrected
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

| Depth (ft.) | Sample No. | Pen./Rec. (in.) | Sample Depth (ft.) | Blows / 6 in. or Shear Strength (psf) or RQD (%) | N-uncorrected | %Q | Casing Blows | Elevation (ft.) | Graphic Log | Visual Description and Remarks | Laboratory Testing Results/ AASHTO and Unified Class |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 | | | | | | | | | | | |
| | 18D | 24/9 | 79.0 - 81.0 | 15-15-14-19 | 29 | 41 | | | | Dark grey, medium dense, tight, fine to medium SAND, trace to little silt, MARINE SANDS AND SILT<br>Changing at 80.5 ft tot | |
| 80 | | | | | | | | -66.1 | | | |
| | | | | | | | | -80.5 | | 18D: Brown, fine to coarse SAND, some fine gravel, little silt, MARINE SAND | |
| 85 | 19D | 24/14 | 84.0 - 86.0 | 17-61-41-26 | 102 | 143 | | -70.4 | | Brown, fine to coarse SAND, some fine gravel, little silt, MARINE SAND<br>Changing at 85 ft tot | |
| | | | | | | | | -85.0 | | 19D: Brown tan, Gravelly fine to coarse SAND, some silt, TILL | |
| 90 | 20D | 24/10 | 89.0 - 91.0 | 16-13-23-16 | 36 | 51 | | | | Grey, dense, fine to coarse SAND, some gravel, some silt, TILL | |
| | | | | | | | HW RC | | | 92.9 ft: Roller cone refusal: flush borehole: set NW casing. | |
| 95 | | | | | | | | | | 94.0 ft: NW refusal: wash out: attempt core run. | |
| | | | | | | | | | | 95.5 ft: Pop through boulder: continue test boring. | |
| 100 | 21D | 24/15 | 99.0 - 101.0 | 23-27-24-22 | 51 | 72 | | | | Grey, very dense, fine to coarse SAND, some fine gravel, some silt, TILL | |
| 105 | 22D | 24/22 | 104.0 - 106.0 | 62-34-44-54 | 78 | 109 | | | | Grey, very dense, fine to coarse SAND, some fine gravel, some silt, TILL | |
| 110 | | | | | | | | | | | |
| 115 | 23D | 24/16 | 114.0 - 116.0 | 69-92-86-106 | 178 | 250 | | | | Grey, very dense, tight, Silty fine to medium SAND, trace to little fine gravel, trace coarse sand with one 4-inch layer fine to coarse sandy gravel, some silt, TILL | |
| 120 | | | | | | | | 105.8 | | 119.8 ft: Weathered rock based on drilling behavior and wash water. | |
| | | | | | | | | 120.2 | | Top of Bedrock at Elev. -105.8 ft.<br>120.2 ft: Grinding on hard layer. Slowly advance roller cone to refusal at 123.2 ft. | |
| 125 | R1 | 60/60 | 123.2 - 128.2 | RQD: 39* = 65% | | | NQ2 | | | R1: Bedrock: Grey, aphanitic to fine grained, PHYLLITE with moderately dipping remnant bedding, calcsilicate veins, and healed cracks (across beddingis hard, typically fresh. Moderately dipping, close to moderately spaced breaks) undulating, rough, typically fresh, and open with occasional infilling (sand, mud) somewhat shiny.<br>(ELIOT FORMATION)<br>Core times: 1:45/ 5:05/ 5:10/ 5:20/ 5:15 minsec/ft.<br>ROCK QUALITY = FAIR | |
| 130 | | | | | | | | 113.8 | | | |
| | | | | | | | | 128.2 | | Bottom of Exploration at 128.2 feet below ground surface. | |
| 135 | | | | | | | | | | | |
| 140 | | | | | | | | | | | |
| 145 | | | | | | | | | | | |
| 150 | | | | | | | | | | | |

Remarks:
NEBC ATV Rig 23 automatic hammer calibrated on 7/8/2019.

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | | |
| DESIGN2-DETAILED2 | LZD | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BORING LOGS 5

SHEET NUMBER
23
OF 220

VERANDA STREET
CURVE DATA #1
PI = 103+22.94
D = 13°28'52.9"
Δ = 10°55'56.5" Rt.
R = 425.00'
L = 81.09'
T = 40.67'
E = 1.94'

VERANDA STREET
CURVE DATA #2
PI = 105+26.63
D = 10°25'02.7"
Δ = 8°28'01.1" Rt.
R = 550.00'
L = 81.28'
T = 40.71'
E = 1.50'

Sta. 101+78.27 Veranda Street
= Sta. 1+00.00 Wordsworth Street

Wordsworth Street

Sta. 101+12.42, Lt. to
Sta. 1+66.20, Lt.
Install 83.2 SY
Reinforced Concrete
Sidewalk

Sta. 101+63.15 Veranda Street
= Sta. 202+71.21 I-295 SB On Ramp

Sta. 100+87.04, Lt. to
Sta. 100+97.74 Lt., Lt.
Install 6.3 SY
Reinforced Concrete
Sidewalk

Sta. 100+57.02, Rt. to
Sta. 101+32.74, Rt.
Install 46.5 SY
Reinforced Concrete
Sidewalk

Veranda Street
Curve #1

Veranda Street Curve #2
PT = STA. 105+67.19

PC = STA. 104+85.91

Sta. 105+50.71 Veranda Street
= Sta. 308+62.82 I-295 NB Off Ramp

PT = STA. 103+63.36

PT = STA. 202+02.31

PT = STA. 308+20.24

PC = STA. 202+02.27

I-295 NB Off Ramp
Curve #3

PCC = STA. 306+71.15

I-295 NB Off
Ramp Curve #2

PC = STA. 304+86.11

I-295 Southbound Curve #1

I-295 Centerline Curve #1

I-295 Northbound Curve #1

I-295 ON RAMP
CURVE DATA #1
PI = 201+49.91
D = 38°11'49.9"
Δ = 42°01'10.0" Lt.
R = 150.00'
L = 110.01'
T = 57.61'
E = 10.68'

PC = STA. 200+92.31

Item No. 609.12 Vertical Curb Type 1 - Circular

| Point | Length | Radius |
|---|---|---|
| 2002 to 2003 | 6.49′ | 25.00′ |
| 2004 to 2005 | 4.48′ | 25.00′ |
| 2026 to 2027 | 12.80′ | 25.00′ |
| 2037 to 2038 | 18.67′ | 40.00′ |
| 2039 to 2040 | 12.81′ | 40.00′ |
| 2044 to 2045 | 5.99′ | 40.00′ |
| 2056 to 2057 | 11.67′ | 40.00′ |

Item No. 609.11 Vertical Curb Type 1 - Flush

| Point | Length | Radius |
|---|---|---|
| 2024 to 2025 | 6.04′ | – |
| 2030 to 2031 | 5.00′ | – |

Item No. 609.12 Vertical Curb Type 1 - Circular - Flush

| Point | Length | Radius |
|---|---|---|
| 2006 to 2007 | 6.25′ | 25.00′ |
| 2041 to 2042 | 6.29′ | 40.00′ |
| 2059 to 2060 | 11.43′ | 40.00′ |

Item No. 609.23 Terminal Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 2000 to 2001 | 8.00′ | – |
| 2005 to 2006 | 10.00′ | 25.00′ |
| 2007 to 2008 | 8.00′ | 80.00′ |
| 2013 to 2014 | 4.00′ | – |
| 2020 to 2021 | 4.00′ | 173.00′ |
| 2023 to 2024 | 8.00′ | – |
| 2025 to 2026 | 11.40′ | 25.00′ |
| 2029 to 2030 | 8.00′ | – |
| 2031 to 2032 | 8.00′ | – |
| 2040 to 2041 | 10.00′ | 40.00′ |
| 2042 to 2043 | 9.20′ | 40.00′ |
| 2046 to 2047 | 4.00′ | – |
| 2050 to 2051 | 4.00′ | – |
| 2058 to 2059 | 8.00′ | 40.00′ |
| 2060 to 2061 | 7.09′ | 40.00′ |
| 2061 to 2062 | 1.91′ | 190.00′ |

Item No. 609.11 Vertical Curb Type 1
Or 609.38 Reset Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 2001 to 2002 | 41.85′ | – |
| 2008 to 2009 | 10.59′ | 80.00′ |
| 2010 to 2011 | 50.93′ | 80.00′ |
| 2011 to 2012 | 27.81′ | 146.00′ |
| 2012 to 2013 | 28.22′ | – |
| 2021 to 2022 | 56.33′ | 173.00′ |
| 2022 to 2023 | 26.36′ | – |
| 2028 to 2029 | 19.65′ | – |
| 2032 to 2033 | 41.70′ | – |
| 2033 to 2034 | 77.66′ | 407.00′ |
| 2034 to 2035 | 5.64′ | – |
| 2036 to 2037 | 113.95′ | – |
| 2045 to 2046 | 16.31′ | – |
| 2051 to 2052 | 16.05′ | – |
| 2052 to 2053 | 73.73′ | 570.00′ |
| 2053 to 2054 | 28.94′ | 295.00′ |
| 2055 to 2056 | 98.83′ | 295.00′ |
| 2062 to 2063 | 10.90′ | 190.00′ |
| 2064 to 2065 | 68.82′ | 190.00′ |
| 2065 to 2066 | 6.43′ | – |
| 2067 to 2068 | 9.84′ | – |

NOTES:
1. Unless otherwise noted, sidewalks shall consist of 2" HMA and 12" aggregate subbase course gravel (Type D).
2. For lengths and station/offset locations of curb type 3, refer to cross sections

I-295 CENTERLINE
CURVE DATA #1
PI = 37+39.88
D = 5°03'41.3"
Δ = 55°40'29.3" Lt.
R = 1132.00'
L = 1099.97'
T = 597.78'
E = 148.14'

I-295 NORTHBOUND
CURVE DATA #1
PI = 137+39.84
D = 5°02'29.1"
Δ = 55°40'29.3" Lt.
R = 1136.50'
L = 1104.35'
T = 600.16'
E = 148.73'

I-295 SOUTHBOUND
CURVE DATA #1
PI = 237+39.92
D = 5°04'54.0"
Δ = 55°40'29.3" Lt.
R = 1127.50'
L = 1095.60'
T = 595.40'
E = 147.55'

I-295 NB OFF RAMP
CURVE DATA #2
PI = 305+79.51
D = 10°25'02.7"
Δ = 19°16'34.5" Lt.
R = 550.00'
L = 185.04'
T = 93.40'
E = 7.87'

I-295 NB OFF RAMP
CURVE DATA #3
PI = 307+47.57
D = 20°50'05.4"
Δ = 31°03'45.9" Lt.
R = 275.00'
L = 149.09'
T = 76.43'
E = 10.42'

PLAN
25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE PLANS

BRIDGE NO.5933

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | 2\20 | |
| CHECKED-REVIEWED | RWH | 2\20 | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | 1 |
| REVISIONS 2 | | | 2 |
| REVISIONS 3 | | | 3 |
| REVISIONS 4 | | | 4 |
| FIELD CHANGES | | | 5 |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

GEOMETRIC & CURBING PLAN 1

SHEET NUMBER
24
OF 220

Username:
Division:
Filename: 024_Geometric Plan_01.dgn
Date:3/3/2020

| I-295 CENTERLINE CURVE DATA #1 | I-295 NORTHBOUND CURVE DATA #1 | I-295 SOUTHBOUND CURVE DATA #1 |
|---|---|---|
| PI = 37+39.88 | PI = 137+39.84 | PI = 237+39.92 |
| D = 5°03'41.3" | D = 5°02'29.1" | D = 5°04'54.0" |
| Δ = 55°40'29.3" Lt. | Δ = 55°40'29.3" Lt. | Δ = 55°40'29.3" Lt. |
| R = 1132.00' | R = 1136.50' | R = 1127.50' |
| L = 1099.97' | L = 1104.35' | L = 1095.60' |
| T = 597.78' | T = 600.16' | T = 595.40' |
| E = 148.14' | E = 148.73' | E = 147.55' |

| I-295 CENTERLINE CURVE DATA #2 | I-295 NORTHBOUND CURVE DATA #2 | I-295 SOUTHBOUND CURVE DATA #2 |
|---|---|---|
| PI = 43+63.96 | PI = 143+66.24 | PI = 243+61.68 |
| D = 3°23'25.0" | D = 3°22'52.6" | D = 3°23'57.6" |
| Δ = 8°15'00.0" Lt. | Δ = 8°15'00.0" Lt. | Δ = 8°15'00.0" Lt. |
| R = 1690.00' | R = 1694.50' | R = 1685.50' |
| L = 243.34' | L = 243.99' | L = 242.69' |
| T = 121.88' | T = 122.21' | T = 121.56' |
| E = 4.39' | E = 4.40' | E = 4.38' |

PLAN

25 0 25 50

Scale of Feet

Item No. 609.11 Vertical Curb Type 1
Or 609.38 Reset Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 1003 to 1004 | 23.39′ | – |
| 1008 to 1009 | 9.43′ | – |
| 1010 to 1011 | 22.16′ | – |
| 1020 to 1021 | 33.24′ | – |
| 1028 to 1029 | 41.44′ | – |
| 1029 to 1030 | 49.09′ | 443.00′ |
| 1035 to 1036 | 142.86′ | – |
| 1037 to 1038 | 9.15′ | – |
| 1038 to 1039 | 36.00′ | 203.45′ |
| 1039 to 1040 | 50.78′ | – |
| 1043 to 1044 | 10.00′ | – |
| 1045 to 1046 | 28.00′ | – |

Item No. 609.23 Terminal Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 1000 to 1001 | 7.00′ | – |
| 1002 to 1003 | 8.00′ | – |
| 1005 to 1006 | 8.00′ | – |
| 1007 to 1008 | 8.00′ | – |
| 1022 to 1023 | 8.43′ | 16.00′ |
| 1024 to 1025 | 8.00′ | – |
| 1025 to 1026 | 8.00′ | – |
| 1027 to 1028 | 8.00′ | – |
| 1031 to 1032 | 9.20′ | 443.00′ |
| 1033 to 1034 | 2.24′ | 443.00′ |
| 1034 to 1035 | 5.76′ | – |
| 1040 to 1041 | 8.00′ | – |
| 1042 to 1043 | 8.00′ | – |
| 1046 to 1047 | 8.00′ | – |

Item No. 609.12 Vertical Curb Type 1 - Circular - Flush

| Point | Length | Radius |
|---|---|---|
| 1006 to 1007 | 12.96′ | 10.00′ |
| 1023 to 1024 | 11.55′ | 10.00′ |

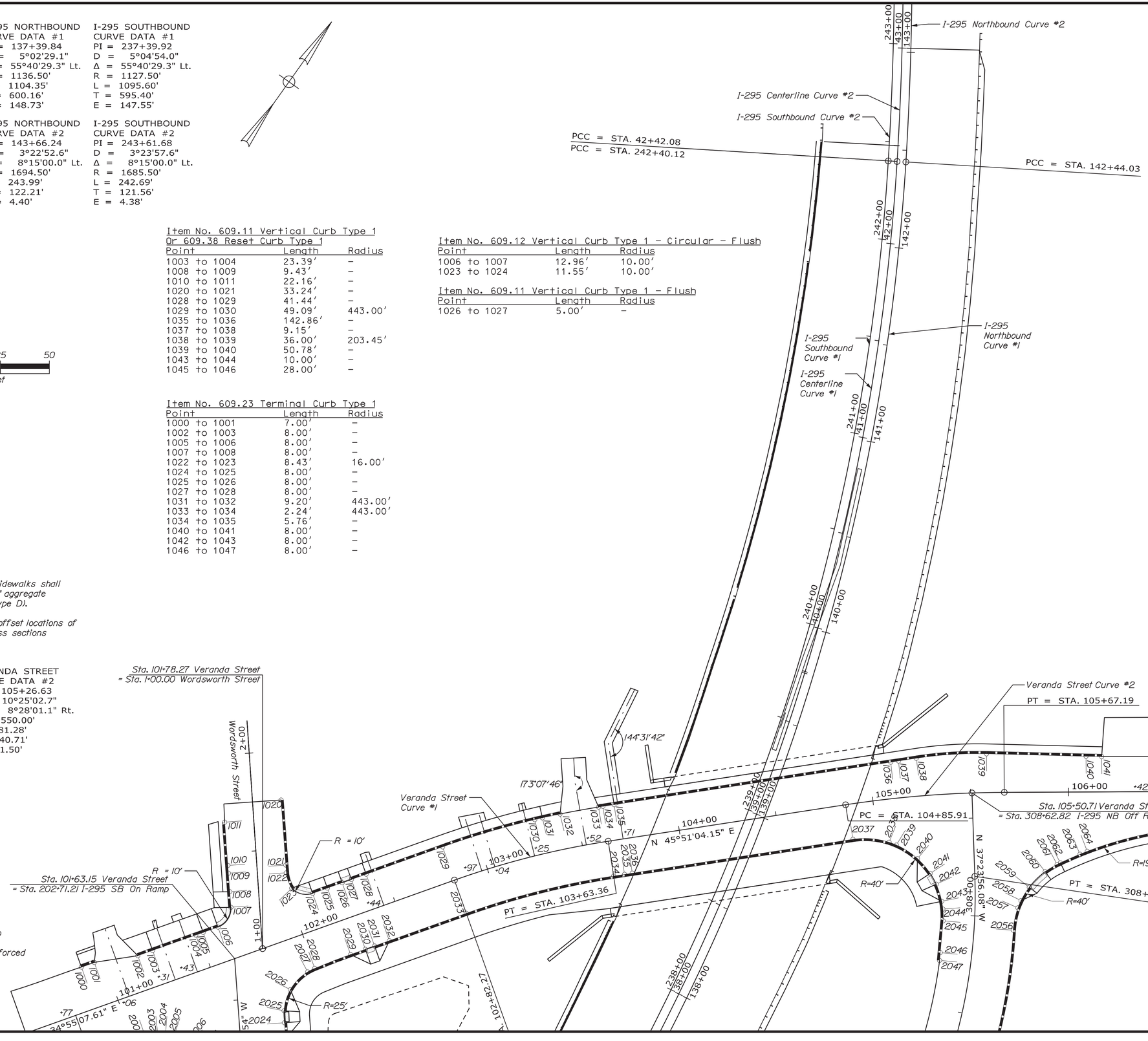
Item No. 609.11 Vertical Curb Type 1 - Flush

| Point | Length | Radius |
|---|---|---|
| 1026 to 1027 | 5.00′ | – |

*NOTES:*

1. *Unless otherwise noted, sidewalks shall consist of 2" HMA and 12" aggregate subbase course gravel (Type D).*
2. *For lengths and station/offset locations of curb type 3, refer to cross sections*

| VERANDA STREET CURVE DATA #1 | VERANDA STREET CURVE DATA #2 |
|---|---|
| PI = 103+22.94 | PI = 105+26.63 |
| D = 13°28'52.9" | D = 10°25'02.7" |
| Δ = 10°55'56.5" Rt. | Δ = 8°28'01.1" Rt. |
| R = 425.00' | R = 550.00' |
| L = 81.09' | L = 81.28' |
| T = 40.67' | T = 40.71' |
| E = 1.94' | E = 1.50' |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | NHPP-2174(500) | WIN 021745.00 | BRIDGE PLANS |
|---|---|---|---|
| | | BRIDGE NO.5933 | |

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET

PORTLAND CUMBERLAND COUNTY

# GEOMETRIC & CURBING PLAN 2

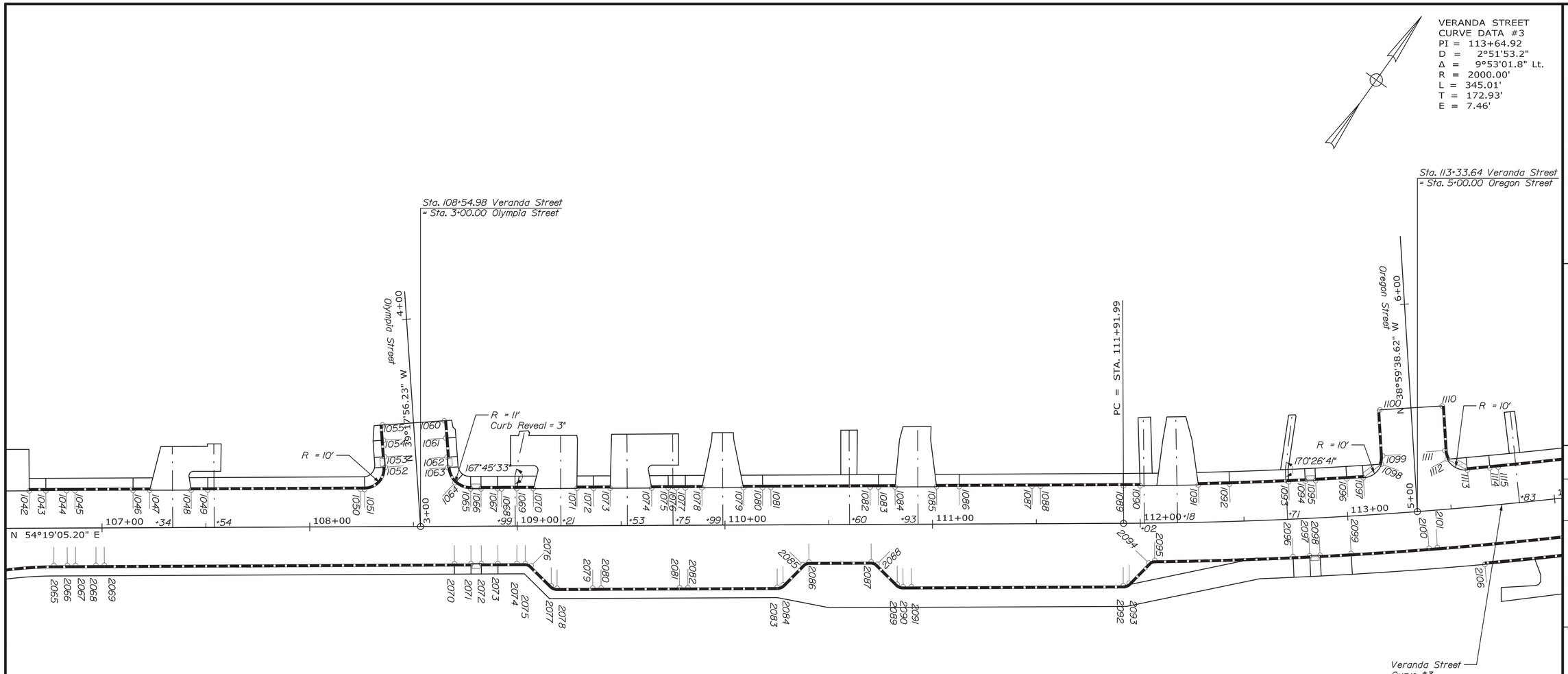
SHEET NUMBER

25

OF 220

HNTB

Filename: 025_Geometric Plan_02.dgn Division: Username: Date:3/3/2020




Item No. 609.11 Vertical Curb Type 1
Or 609.38 Reset Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 1049 to 1050 | 73.67′ | – |
| 1054 to 1055 | 7.36′ | – |
| 1060 to 1061 | 8.39′ | – |
| 1068 to 1069 | 7.30′ | – |
| 1076 to 1077 | 4.22′ | – |
| 1081 to 1082 | 47.80′ | – |
| 1086 to 1087 | 35.10′ | – |
| 1088 to 1089 | 39.99′ | – |
| 1092 to 1093 | 28.53′ | 1982.00′ |
| 1099 to 1100 | 22.16′ | – |
| 1110 to 1111 | 21.51′ | – |
| 2069 to 2070 | 168.60′ | – |
| 2073 to 2074 | 9.13′ | – |
| 2076 to 2077 | 13.66′ | – |
| 2078 to 2079 | 17.15′ | – |
| 2080 to 2081 | 37.84′ | – |
| 2082 to 2083 | 43.01′ | – |
| 2084 to 2085 | 13.66′ | – |
| 2086 to 2087 | 30.00′ | – |
| 2088 to 2089 | 13.66′ | – |
| 2091 to 2092 | 102.04′ | – |
| 2093 to 2094 | 13.58′ | – |
| 2095 to 2096 | 66.65′ | 2018.00′ |
| 2099 to 2100 | 37.65′ | 2018.00′ |

Item No. 609.23 Terminal Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 1048 to 1049 | 8.00′ | – |
| 1051 to 1052 | 16.34′ | 10.00′ |
| 1053 to 1054 | 8.00′ | – |
| 1061 to 1062 | 9.20′ | – |
| 1063 to 1064 | 8.29′ | 11.00′ |
| 1064 to 1065 | 8.29′ | 11.00′ |
| 1066 to 1067 | 8.00′ | – |
| 1069 to 1070 | 8.00′ | – |
| 1071 to 1072 | 8.00′ | – |
| 1072 to 1073 | 8.00′ | – |
| 1074 to 1075 | 8.00′ | – |
| 1077 to 1078 | 8.00′ | – |
| 1079 to 1080 | 9.20′ | – |
| 1083 to 1084 | 8.00′ | – |
| 1085 to 1086 | 10.90′ | – |
| 1089 to 1090 | 8.01′ | 1982.00′ |
| 1091 to 1092 | 15.00′ | 1982.00′ |
| 1093 to 1094 | 8.00′ | 1982.00′ |
| 1095 to 1096 | 15.00′ | 1982.00′ |
| 1096 to 1097 | 8.00′ | 1982.00′ |
| 1098 to 1099 | 4.10′ | 10.00′ |
| 1111 to 1112 | 4.35′ | 10.00′ |
| 1113 to 1114 | 10.90′ | 1982.00′ |
| 2070 to 2071 | 8.00′ | – |
| 2072 to 2073 | 8.00′ | – |
| 2096 to 2097 | 8.00′ | 2018.00′ |
| 2098 to 2099 | 15.00′ | 2018.00′ |

Item No. 609.12 Vertical Curb Type 1 – Circular

| Point | Length | Radius |
|---|---|---|
| 2075 to 2076 | 3.14′ | 4.00′ |
| 2077 to 2078 | 3.14′ | 4.00′ |
| 2083 to 2084 | 3.14′ | 4.00′ |
| 2085 to 2086 | 3.14′ | 4.00′ |
| 2087 to 2088 | 3.14′ | 4.00′ |
| 2089 to 2090 | 3.14′ | 4.00′ |
| 2092 to 2093 | 3.17′ | 4.00′ |
| 2094 to 2095 | 3.14′ | 4.00′ |

Item No. 609.12 Vertical Curb Type 1 – Circular – Flush

| Point | Length | Radius |
|---|---|---|
| 1097 to 1098 | 11.62′ | 10.00′ |
| 1112 to 1113 | 11.62′ | 10.00′ |

Item No. 609.11 Vertical Curb Type 1 – Flush

| Point | Length | Radius |
|---|---|---|
| 1052 to 1053 | 5.00′ | – |
| 1062 to 1063 | 5.00′ | – |
| 1065 to 1066 | 5.00′ | – |
| 1094 to 1095 | 5.00′ | 1982.00′ |
| 2071 to 2072 | 5.00′ | – |
| 2097 to 2098 | 5.00′ | 2018.00′ |

NOTE:
1. Unless otherwise noted, sidewalks shall consist of 2" HMA and 12" aggregate subbase course gravel (Type D).

PLAN

25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | | NAME | DATE |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

D. EATON

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOMETRIC & CURBING PLAN 3

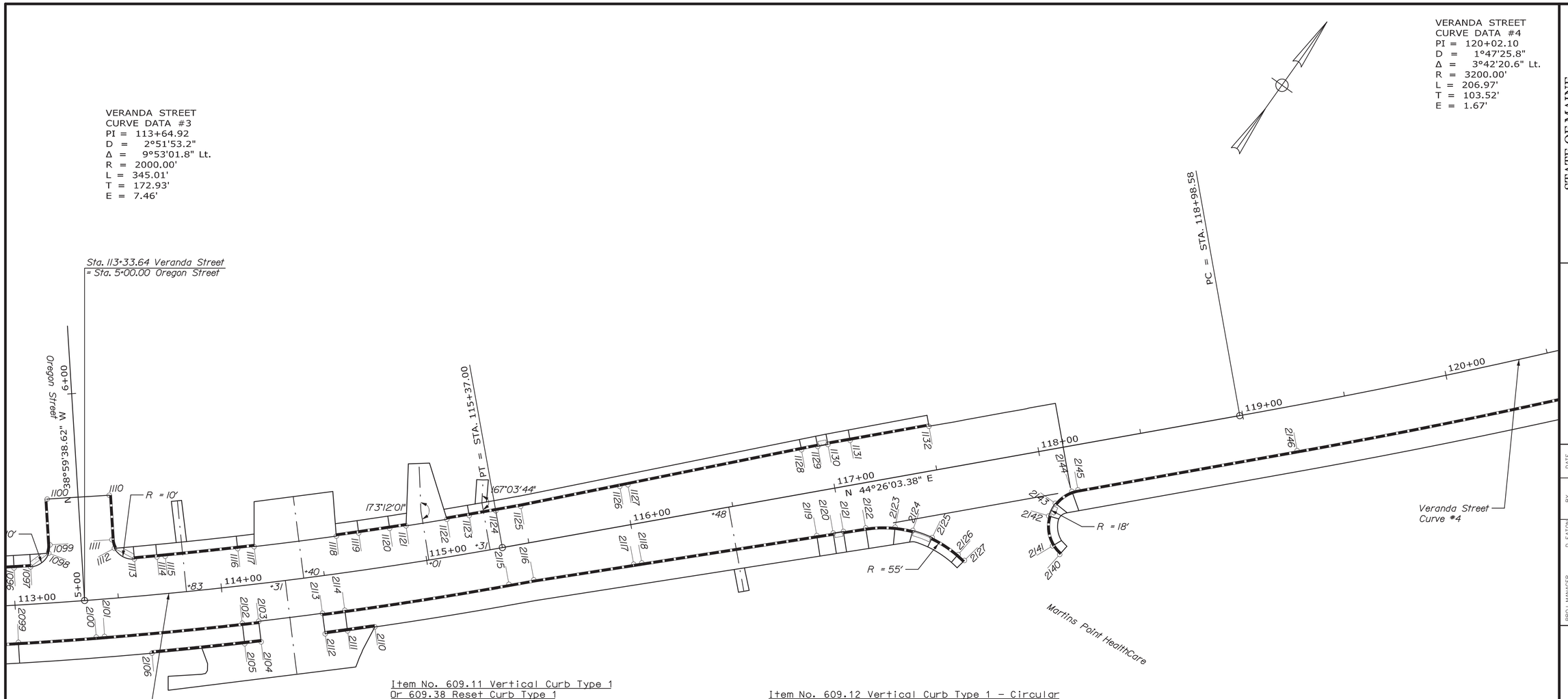
SHEET NUMBER
26
OF 220

Filename: 026_Geometric Plan_03.dgn Division: Username: Date:3/3/2020

Username:
Date:3/3/2020
Division:
Filename: 027_Geometric Plan_04.dgn

VERANDA STREET
CURVE DATA #3
PI = 113+64.92
D = 2°51'53.2"
Δ = 9°53'01.8" Lt.
R = 2000.00'
L = 345.01'
T = 172.93'
E = 7.46'

VERANDA STREET
CURVE DATA #4
PI = 120+02.10
D = 1°47'25.8"
Δ = 3°42'20.6" Lt.
R = 3200.00'
L = 206.97'
T = 103.52'
E = 1.67'




Item No. 609.11 Vertical Curb Type 1
Or 609.38 Reset Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 1115 to 1116 | 35.20′ | 1982.00′ |
| 1119 to 1120 | 15.10′ | 1982.00′ |
| 1123 to 1124 | 13.03′ | 1982.00′ |
| 1124 to 1125 | 12.19′ | – |
| 1125 to 1126 | 48.80′ | – |
| 1127 to 1128 | 85.48′ | – |
| 1131 to 1132 | 38.66′ | – |
| 2101 to 2102 | 66.81′ | 2018.00′ |
| 2106 to 2105 | 45.00′ | 2028.00′ |
| 2111 to 2110 | 13.31′ | 2028.00′ |
| 2114 to 2115 | 80.19′ | 2018.00′ |
| 2115 to 2116 | 12.19′ | – |
| 2116 to 2117 | 48.80′ | – |
| 2118 to 2119 | 85.48′ | – |
| 2145 to 2146 | 107.50′ | – |
| 2146 to 2147 | 206.17′ | 3187.75′ |

Item No. 609.12 Vertical Curb Type 1 - Circular - Flush

| Point | Length | Radius |
|---|---|---|
| 2124 to 2125 | 10.00′ | 55.00′ |
| 2142 to 2143 | 6.92′ | 18.00′ |

Item No. 609.11 Vertical Curb Type 1 - Flush

| Point | Length | Radius |
|---|---|---|
| 1129 to 1130 | 5.00′ | – |
| 2120 to 2121 | 5.00′ | – |

Item No. 609.12 Vertical Curb Type 1 - Circular

| Point | Length | Radius |
|---|---|---|
| 2122 to 2123 | 14.22′ | 55.00′ |
| 2126 to 2127 | 4.17′ | 55.00′ |
| 2140 to 2141 | 5.39′ | 18.00′ |
| 2144 to 2145 | 3.00′ | 18.00′ |

Item No. 609.23 Terminal Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 1116 to 1117 | 8.00′ | 1982.00′ |
| 1118 to 1119 | 10.90′ | 1982.00′ |
| 1120 to 1121 | 8.00′ | 1982.00′ |
| 1122 to 1123 | 10.90′ | 1982.00′ |
| 1128 to 1129 | 8.00′ | – |
| 1130 to 1131 | 10.90′ | – |
| 2102 to 2103 | 8.00′ | 2018.00′ |
| 2104 to 2105 | 8.00′ | 2028.00′ |
| 2111 to 2112 | 10.90′ | 2028.00′ |
| 2113 to 2114 | 10.90′ | 2018.00′ |
| 2119 to 2120 | 8.00′ | – |
| 2121 to 2122 | 10.90′ | – |
| 2123 to 2124 | 8.68′ | 55.00′ |
| 2125 to 2126 | 15.00′ | 55.00′ |
| 2141 to 2142 | 15.00′ | 18.00′ |
| 2143 to 2144 | 9.98′ | 18.00′ |

*NOTE:*
*1. Unless otherwise noted, sidewalks shall consist of 2" HMA and 12" aggregate subbase course gravel (Type D).*

PLAN
25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

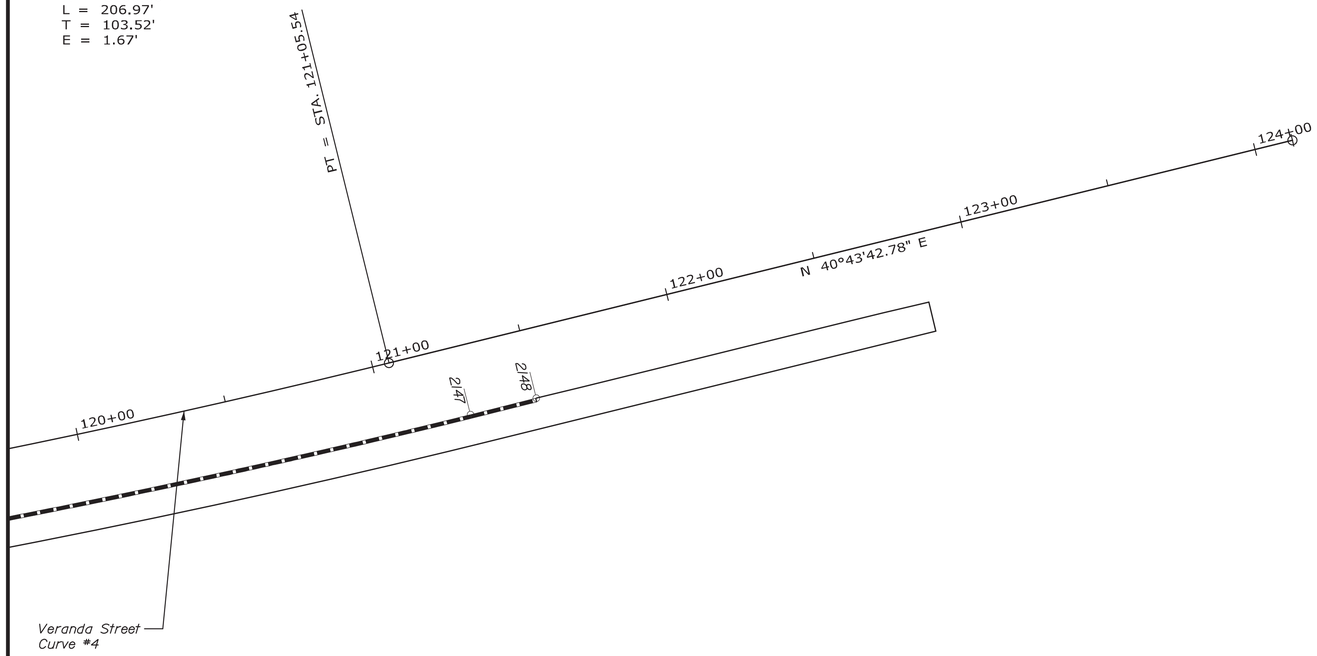
GEOMETRIC &
CURBING PLAN 4

SHEET NUMBER
27
OF 220

Item No. 609.11 Vertical Curb Type 1
Or 609.38 Reset Curb Type 1

| Point | Length | Radius |
|---|---|---|
| 2147 to 2148 | 22.39' | - |

VERANDA STREET
CURVE DATA #4
PI = 120+02.10
D = 1°47'25.8"
Δ = 3°42'20.6" Lt.
R = 3200.00'
L = 206.97'
T = 103.52'
E = 1.67'




NOTE:
1. Unless otherwise noted, sidewalks shall consist of 2" HMA and 12" aggregate subbase course gravel (Type D).

PLAN
25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | EJD | 2\20 |
| DESIGN-DETAILED | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | |
| DESIGN2-DETAILED2 | LZD | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOMETRIC & CURBING PLAN 5

SHEET NUMBER
28
OF 220

Filename: 028_Geometric Plan_05.dgn Division: Username: Date:3/3/2020

| CONTROL POINTS FOR CURBING – VERANDA ST. | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | X-COORD | Y-COORD |
| 1000 | 100+88.04 | 22.26′ LT. | 1016485.180 | 310456.954 |
| 1001 | 100+95.04 | 22.26′ LT. | 1016489.188 | 310462.693 |
| 1002 | 101+17.13 | 18.00′ LT. | 1016505.322 | 310478.368 |
| 1003 | 101+25.13 | 18.00′ LT. | 1016509.901 | 310484.928 |
| 1004 | 101+48.52 | 18.00′ LT. | 1016523.292 | 310504.109 |
| 1005 | 101+52.52 | 18.00′ LT. | 1016525.581 | 310507.389 |
| 1006 | 101+60.52 | 18.00′ LT. | 1016530.161 | 310513.949 |
| 1007 | 101+70.15 | 25.29′ LT. | 1016529.696 | 310526.011 |
| 1008 | 101+72.28 | 33.00′ LT. | 1016524.593 | 310532.176 |
| 1009 | 101+74.80 | 42.09′ LT. | 1016518.580 | 310539.442 |
| 1010 | 101+75.86 | 45.94′ LT. | 1016516.034 | 310542.518 |
| 1011 | 101+81.77 | 67.29′ LT. | 1016501.906 | 310559.588 |
| | | | | |
| 1020 | 102+12.67 | 68.23′ LT. | 1016518.826 | 310585.460 |
| 1021 | 102+03.83 | 36.19′ LT. | 1016540.040 | 310559.871 |
| 1022 | 102+02.77 | 32.33′ LT. | 1016542.592 | 310556.792 |
| 1023 | 102+02.72 | 24.00′ LT. | 1016549.397 | 310551.986 |
| 1024 | 102+11.83 | 18.00′ LT. | 1016559.529 | 310556.019 |
| 1025 | 102+19.83 | 18.00′ LT. | 1016564.109 | 310562.578 |
| 1026 | 102+27.83 | 18.00′ LT. | 1016568.688 | 310569.138 |
| 1027 | 102+32.83 | 18.00′ LT. | 1016571.550 | 310573.238 |
| 1028 | 102+40.83 | 18.00′ LT. | 1016576.129 | 310579.797 |
| 1029 | 102+82.27 | 18.00′ LT. | 1016599.849 | 310613.776 |
| 1030 | 103+29.36 | 18.00′ LT. | 1016630.118 | 310652.389 |
| 1031 | 103+33.19 | 18.00′ LT. | 1016632.755 | 310655.385 |
| 1032 | 103+42.03 | 18.00′ LT. | 1016638.971 | 310662.179 |
| 1033 | 103+61.21 | 18.00′ LT. | 1016652.931 | 310676.499 |
| 1034 | 103+63.36 | 18.00′ LT. | 1016654.533 | 310678.063 |
| 1035 | 103+69.12 | 18.00′ LT. | 1016658.667 | 310682.076 |
| 1036 | 105+11.14 | 18.60′ LT. | 1016761.176 | 310781.584 |
| 1037 | 105+15.00 | 18.80′ LT. | 1016764.046 | 310784.370 |
| 1038 | 105+23.83 | 19.35′ LT. | 1016770.613 | 310790.745 |
| 1039 | 105+58.56 | 19.79′ LT. | 1016798.526 | 310813.412 |
| 1040 | 106+09.00 | 18.23′ LT. | 1016840.617 | 310841.812 |
| 1041 | 106+17.00 | 18.00′ LT. | 1016847.248 | 310846.287 |
| 1042 | 106+65.00 | 18.00′ LT. | 1016886.237 | 310874.285 |
| 1043 | 106+73.00 | 18.00′ LT. | 1016892.735 | 310878.951 |
| 1044 | 106+83.00 | 18.00′ LT. | 1016900.858 | 310884.784 |
| 1045 | 106+87.00 | 18.00′ LT. | 1016904.107 | 310887.117 |
| 1046 | 107+15.00 | 18.00′ LT. | 1016926.850 | 310903.449 |
| 1047 | 107+23.00 | 18.00′ LT. | 1016933.348 | 310908.115 |
| 1048 | 107+43.00 | 18.00′ LT. | 1016949.594 | 310919.781 |
| 1049 | 107+51.00 | 18.00′ LT. | 1016956.092 | 310924.447 |
| 1050 | 108+24.67 | 18.00′ LT. | 1017015.935 | 310967.420 |
| 1051 | 108+26.55 | 18.00′ LT. | 1017017.462 | 310968.517 |
| 1052 | 108+36.54 | 28.63′ LT. | 1017019.372 | 310982.976 |
| 1053 | 108+36.22 | 33.62′ LT. | 1017016.205 | 310986.845 |
| 1054 | 108+35.72 | 41.60′ LT. | 1017011.138 | 310993.036 |
| 1055 | 108+35.25 | 48.95′ LT. | 1017006.474 | 310998.735 |
| | | | | |
| 1060 | 108+65.03 | 50.84′ LT. | 1017029.565 | 311017.634 |
| 1061 | 108+65.72 | 42.48′ LT. | 1017035.001 | 311011.246 |
| 1062 | 108+66.30 | 33.30′ LT. | 1017040.828 | 311004.127 |
| 1063 | 108+66.62 | 28.31′ LT. | 1017043.995 | 311000.258 |
| 1064 | 108+70.07 | 20.98′ LT. | 1017051.070 | 310996.319 |
| 1065 | 108+77.60 | 18.00′ LT. | 1017058.923 | 310998.290 |
| 1066 | 108+82.60 | 18.00′ LT. | 1017062.985 | 311001.206 |
| 1067 | 108+90.60 | 18.00′ LT. | 1017069.483 | 311005.873 |
| 1068 | 108+92.48 | 18.00′ LT. | 1017071.012 | 311006.970 |
| 1069 | 108+99.78 | 18.00′ LT. | 1017076.942 | 311011.229 |
| 1070 | 109+07.78 | 18.00′ LT. | 1017083.441 | 311015.895 |
| 1071 | 109+28.78 | 18.00′ LT. | 1017100.498 | 311028.144 |
| 1072 | 109+36.78 | 18.00′ LT. | 1017106.996 | 311032.811 |
| 1073 | 109+44.78 | 18.00′ LT. | 1017113.494 | 311037.477 |
| 1074 | 109+64.78 | 18.00′ LT. | 1017129.740 | 311049.143 |
| 1075 | 109+72.78 | 18.00′ LT. | 1017136.238 | 311053.809 |
| 1076 | 109+76.78 | 18.00′ LT. | 1017139.487 | 311056.142 |
| 1077 | 109+81.00 | 18.00′ LT. | 1017142.914 | 311058.603 |
| 1078 | 109+89.00 | 18.00′ LT. | 1017149.412 | 311063.269 |
| 1079 | 110+09.00 | 18.00′ LT. | 1017165.657 | 311074.935 |
| 1080 | 110+18.20 | 18.00′ LT. | 1017173.130 | 311080.301 |
| 1081 | 110+22.20 | 18.00′ LT. | 1017176.379 | 311082.634 |
| 1082 | 110+70.00 | 18.00′ LT. | 1017215.206 | 311110.515 |
| 1083 | 110+74.00 | 18.00′ LT. | 1017218.455 | 311112.848 |
| 1084 | 110+82.00 | 18.00′ LT. | 1017224.953 | 311117.514 |
| 1085 | 111+02.00 | 18.00′ LT. | 1017241.198 | 311129.180 |
| 1086 | 111+48.00 | 18.00′ LT. | 1017278.562 | 311156.011 |
| 1087 | 111+12.90 | 18.00′ LT. | 1017250.052 | 311135.538 |
| 1088 | 111+52.00 | 18.00′ LT. | 1017281.811 | 311158.344 |
| 1089 | 111+91.99 | 18.00′ LT. | 1017314.291 | 311181.668 |
| 1090 | 112+00.07 | 18.00′ LT. | 1017320.791 | 311186.355 |
| 1091 | 112+28.40 | 18.00′ LT. | 1017343.413 | 311202.985 |
| 1092 | 112+43.54 | 18.00′ LT. | 1017355.402 | 311212.000 |
| 1093 | 112+72.33 | 18.00′ LT. | 1017378.011 | 311229.393 |
| 1094 | 112+80.40 | 18.00′ LT. | 1017384.307 | 311234.239 |
| 1095 | 112+85.44 | 18.00′ LT. | 1017388.231 | 311237.427 |
| 1096 | 113+00.58 | 18.00′ LT. | 1017399.958 | 311246.781 |
| 1097 | 113+08.65 | 18.00′ LT. | 1017406.183 | 311251.805 |
| 1098 | 113+17.94 | 24.00′ LT. | 1017409.519 | 311262.260 |
| 1099 | 113+18.79 | 27.98′ LT. | 1017407.651 | 311265.876 |
| 1100 | 113+18.98 | 50.14′ LT. | 1017393.751 | 311283.130 |

| CONTROL POINTS FOR CURBING – VERANDA ST. | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | X-COORD | Y-COORD |
| 1110 | 113+49.74 | 49.74′ LT. | 1017417.068 | 311302.008 |
| 1111 | 113+49.23 | 28.23′ LT. | 1017430.560 | 311285.257 |
| 1112 | 113+50.08 | 24.00′ LT. | 1017433.936 | 311282.567 |
| 1113 | 113+59.37 | 18.00′ LT. | 1017444.823 | 311283.942 |
| 1114 | 113+70.37 | 18.00′ LT. | 1017453.095 | 311291.041 |
| 1115 | 113+74.40 | 18.00′ LT. | 1017456.121 | 311293.657 |
| 1116 | 114+09.93 | 18.00′ LT. | 1017482.520 | 311316.945 |
| 1117 | 114+18.00 | 18.00′ LT. | 1017488.462 | 311322.302 |
| 1118 | 114+58.36 | 18.00′ LT. | 1017517.841 | 311349.446 |
| 1119 | 114+69.36 | 18.00′ LT. | 1017525.752 | 311356.945 |
| 1120 | 114+84.60 | 18.00′ LT. | 1017536.642 | 311367.405 |
| 1121 | 114+92.67 | 18.00′ LT. | 1017542.379 | 311372.981 |
| 1122 | 115+12.85 | 18.00′ LT. | 1017556.623 | 311387.020 |
| 1123 | 115+23.85 | 18.00′ LT. | 1017564.326 | 311394.732 |
| 1124 | 115+37.00 | 18.00′ LT. | 1017573.477 | 311404.004 |
| 1125 | 115+49.19 | 18.00′ LT. | 1017582.013 | 311412.710 |
| 1126 | 115+97.98 | 19.07′ LT. | 1017615.405 | 311448.301 |
| 1127 | 116+01.98 | 19.16′ LT. | 1017618.142 | 311451.218 |
| 1128 | 116+87.44 | 21.04′ LT. | 1017676.629 | 311513.558 |
| 1129 | 116+95.44 | 21.22′ LT. | 1017682.103 | 311519.392 |
| 1130 | 117+00.44 | 21.32′ LT. | 1017685.531 | 311523.032 |
| 1131 | 117+11.34 | 21.32′ LT. | 1017693.161 | 311530.817 |
| 1132 | 117+50.00 | 21.32′ LT. | 1017720.223 | 311558.426 |
| | | | | |
| 2000 | 100+57.02 | 22.00′ RT. | 1016503.715 | 310406.187 |
| 2001 | 100+65.02 | 22.00′ RT. | 1016508.294 | 310412.747 |
| 2002 | 101+06.87 | 22.00′ RT. | 1016532.250 | 310447.062 |
| 2003 | 101+13.29 | 22.84′ RT. | 1016536.613 | 310451.847 |
| 2004 | 101+17.06 | 24.17′ RT. | 1016539.861 | 310454.174 |
| 2005 | 101+20.97 | 26.35′ RT. | 1016543.887 | 310456.129 |
| 2006 | 101+27.90 | 33.47′ RT. | 1016553.690 | 310457.734 |
| 2007 | 101+30.60 | 39.09′ RT. | 1016559.843 | 310456.731 |
| 2008 | 101+32.69 | 46.81′ RT. | 1016567.369 | 310454.026 |
| 2009 | 101+34.26 | 57.28′ RT. | 1016576.851 | 310449.320 |
| 2010 | 101+34.49 | 61.28′ RT. | 1016580.263 | 310447.220 |
| 2011 | 101+20.37 | 109.32′ RT. | 1016611.576 | 310408.146 |
| 2012 | 101+02.50 | 130.57′ RT. | 1016618.768 | 310381.328 |
| 2013 | 100+77.26 | 143.20′ RT. | 1016614.679 | 310353.406 |
| 2014 | 100+73.68 | 144.97′ RT. | 1016614.079 | 310349.451 |
| | | | | |
| 2020 | 101+41.15 | 126.74′ RT. | 1016637.755 | 310415.211 |
| 2021 | 101+43.42 | 123.44′ RT. | 1016636.351 | 310418.961 |
| 2022 | 101+66.94 | 72.53′ RT. | 1016608.069 | 310467.391 |
| 2023 | 101+73.97 | 47.12′ RT. | 1016591.259 | 310487.701 |
| 2024 | 101+76.11 | 39.41′ RT. | 1016586.158 | 310493.864 |
| 2025 | 101+77.95 | 33.60′ RT. | 1016582.446 | 310498.706 |
| 2026 | 101+84.59 | 24.52′ RT. | 1016578.807 | 310509.346 |
| 2027 | 101+95.96 | 18.94′ RT. | 1016580.741 | 310521.861 |
| 2028 | 101+99.93 | 18.47′ RT. | 1016582.619 | 310525.388 |
| 2029 | 102+19.57 | 18.00′ RT. | 1016593.477 | 310541.756 |
| 2030 | 102+27.57 | 18.00′ RT. | 1016598.056 | 310548.316 |
| 2031 | 102+32.57 | 18.00′ RT. | 1016600.918 | 310552.415 |
| 2032 | 102+40.57 | 18.00′ RT. | 1016605.498 | 310558.975 |
| 2033 | 102+82.27 | 18.00′ RT. | 1016629.368 | 310593.169 |
| 2034 | 103+63.36 | 18.00′ RT. | 1016679.608 | 310652.232 |
| 2035 | 103+69.00 | 18.00′ RT. | 1016683.655 | 310656.160 |
| 2036 | 103+73.00 | 18.00′ RT. | 1016686.525 | 310658.946 |
| 2037 | 104+86.98 | 18.00′ RT. | 1016768.287 | 310738.315 |
| 2038 | 105+05.75 | 21.93′ RT. | 1016784.183 | 310747.788 |
| 2039 | 105+09.45 | 23.77′ RT. | 1016788.057 | 310748.786 |
| 2040 | 105+19.94 | 31.74′ RT. | 1016800.796 | 310749.343 |
| 2041 | 105+26.19 | 39.82′ RT. | 1016810.480 | 310746.958 |
| 2042 | 105+29.04 | 45.53′ RT. | 1016816.155 | 310744.251 |
| 2043 | 105+31.46 | 54.44′ RT. | 1016823.525 | 310738.777 |
| 2044 | 105+31.82 | 58.43′ RT. | 1016826.300 | 310735.898 |
| 2045 | 105+31.51 | 64.41′ RT. | 1016829.884 | 310731.105 |
| 2046 | 105+28.47 | 80.51′ RT. | 1016838.100 | 310717.010 |
| 2047 | 105+27.69 | 84.45′ RT. | 1016840.114 | 310713.554 |
| | | | | |
| 2050 | 104+44.44 | 265.69′ RT. | 1016910.305 | 310530.978 |
| 2051 | 104+46.88 | 262.52′ RT. | 1016909.850 | 310534.953 |
| 2052 | 104+56.68 | 249.81′ RT. | 1016908.023 | 310550.901 |
| 2053 | 105+16.22 | 194.10′ RT. | 1016904.642 | 310624.504 |
| 2054 | 105+38.28 | 169.21′ RT. | 1016900.042 | 310653.070 |
| 2055 | 105+40.82 | 165.63′ RT. | 1016899.188 | 310656.975 |
| 2056 | 105+71.48 | 70.36′ RT. | 1016861.813 | 310747.962 |
| 2057 | 105+73.92 | 58.99′ RT. | 1016857.163 | 310758.619 |
| 2058 | 105+75.50 | 55.32′ RT. | 1016856.308 | 310762.525 |
| 2059 | 105+79.73 | 48.54′ RT. | 1016855.785 | 310770.495 |

| CONTROL POINTS FOR CURBING – VERANDA ST. | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | X-COORD | Y-COORD |
| 2060 | 105+87.90 | 40.61′ RT. | 1016857.794 | 310781.706 |
| 2061 | 105+93.97 | 36.97′ RT. | 1016860.606 | 310788.199 |
| 2062 | 105+95.70 | 36.15′ RT. | 1016861.528 | 310789.877 |
| 2063 | 106+05.69 | 31.78′ RT. | 1016867.097 | 310799.251 |
| 2064 | 106+09.41 | 30.33′ RT. | 1016869.274 | 310802.607 |
| 2065 | 106+76.74 | 18.00′ RT. | 1016916.767 | 310851.888 |
| 2066 | 106+83.16 | 18.00′ RT. | 1016921.987 | 310855.636 |
| 2067 | 106+87.16 | 18.00′ RT. | 1016925.236 | 310857.969 |
| 2068 | 106+97.00 | 18.00′ RT. | 1016933.228 | 310863.708 |
| 2069 | 107+01.00 | 18.00′ RT. | 1016936.477 | 310866.041 |
| 2070 | 108+69.60 | 18.00′ RT. | 1017073.423 | 310964.382 |
| 2071 | 108+77.60 | 18.00′ RT. | 1017079.922 | 310969.048 |
| 2072 | 108+82.60 | 18.00′ RT. | 1017083.983 | 310971.965 |
| 2073 | 108+90.60 | 18.00′ RT. | 1017090.481 | 310976.631 |
| 2074 | 108+99.73 | 18.00′ RT. | 1017097.900 | 310981.959 |
| 2075 | 109+03.73 | 18.00′ RT. | 1017101.149 | 310984.292 |
| 2076 | 109+06.56 | 19.17′ RT. | 1017104.130 | 310984.990 |
| 2077 | 109+16.22 | 28.83′ RT. | 1017117.607 | 310982.779 |
| 2078 | 109+19.05 | 30.00′ RT. | 1017120.588 | 310983.477 |
| 2079 | 109+36.20 | 30.00′ RT. | 1017134.522 | 310993.478 |
| 2080 | 109+40.20 | 30.00′ RT. | 1017137.771 | 310995.811 |
| 2081 | 109+78.03 | 30.00′ RT. | 1017168.503 | 311017.884 |
| 2082 | 109+82.03 | 30.00′ RT. | 1017171.752 | 311020.217 |
| 2083 | 110+25.05 | 30.00′ RT. | 1017206.688 | 311045.305 |
| 2084 | 110+27.87 | 28.83′ RT. | 1017208.302 | 311047.906 |
| 2085 | 110+37.53 | 19.17′ RT. | 1017210.513 | 311061.383 |
| 2086 | 110+40.36 | 18.00′ RT. | 1017212.128 | 311063.984 |
| 2087 | 110+70.36 | 18.00′ RT. | 1017236.496 | 311081.483 |
| 2088 | 110+73.19 | 19.17′ RT. | 1017239.476 | 311082.181 |
| 2089 | 110+82.84 | 28.83′ RT. | 1017252.953 | 311079.970 |
| 2090 | 110+85.67 | 30.00′ RT. | 1017255.934 | 311080.668 |
| 2091 | 110+89.67 | 30.00′ RT. | 1017259.183 | 311083.001 |
| 2092 | 111+91.71 | 30.00′ RT. | 1017342.064 | 311142.517 |
| 2093 | 111+94.52 | 28.81′ RT. | 1017343.682 | 311145.148 |
| 2094 | 112+03.97 | 19.17′ RT. | 1017345.781 | 311158.560 |
| 2095 | 112+06.77 | 18.00′ RT. | 1017347.376 | 311161.174 |
| 2096 | 112+72.83 | 18.00′ RT. | 1017400.567 | 311201.331 |
| 2097 | 112+80.76 | 18.00′ RT. | 1017406.862 | 311206.269 |
| 2098 | 112+85.71 | 18.00′ RT. | 1017410.786 | 311209.367 |
| 2099 | 113+00.58 | 18.00′ RT. | 1017422.512 | 311218.722 |
| 2100 | 113+37.89 | 18.00′ RT. | 1017451.632 | 311242.579 |
| 2101 | 113+41.85 | 18.00′ RT. | 1017454.700 | 311245.146 |
| 2102 | 114+08.07 | 18.00′ RT. | 1017505.180 | 311288.910 |
| 2103 | 114+16.00 | 18.00′ RT. | 1017511.127 | 311294.261 |
| 2104 | 114+16.00 | 28.00′ RT. | 1017517.831 | 311286.842 |
| 2105 | 114+08.11 | 28.00′ RT. | 1017511.884 | 311281.490 |
| 2106 | 113+63.73 | 28.00′ RT. | 1017478.046 | 311251.827 |
| | | | | |
| 2110 | 114+70.60 | 28.00′ RT. | 1017558.396 | 311324.513 |
| 2111 | 114+57.47 | 28.00′ RT. | 1017548.739 | 311315.357 |
| 2112 | 114+46.72 | 28.00′ RT. | 1017540.785 | 311307.904 |
| 2113 | 114+46.72 | 18.00′ RT. | 1017533.968 | 311315.220 |
| 2114 | 114+57.53 | 18.00′ RT. | 1017541.922 | 311322.673 |
| 2115 | 115+37.00 | 18.00′ RT. | 1017599.183 | 311378.800 |
| 2116 | 115+49.19 | 18.00′ RT. | 1017607.719 | 311387.507 |
| 2117 | 115+97.98 | 19.07′ RT. | 1017642.644 | 311421.595 |
| 2118 | 116+01.98 | 19.16′ RT. | 1017645.506 | 311424.389 |
| 2119 | 116+87.44 | 21.04′ RT. | 1017706.679 | 311484.096 |
| 2120 | 116+95.44 | 21.22′ RT. | 1017712.404 | 311489.684 |
| 2121 | 117+00.44 | 21.33′ RT. | 1017715.982 | 311493.176 |
| 2122 | 117+11.34 | 21.57′ RT. | 1017723.782 | 311500.790 |
| 2123 | 117+25.35 | 23.70′ RT. | 1017735.119 | 311509.302 |
| 2124 | 117+33.47 | 26.75′ RT. | 1017742.981 | 311512.963 |
| 2125 | 117+42.09 | 31.79′ RT. | 1017752.615 | 311515.589 |
| 2126 | 117+52.96 | 42.06′ RT. | 1017767.558 | 311516.169 |
| 2127 | 117+55.45 | 45.40′ RT. | 1017771.684 | 311515.606 |
| | | | | |
| 2140 | 118+01.25 | 50.64′ RT. | 1017807.490 | 311544.634 |
| 2141 | 117+98.59 | 45.98′ RT. | 1017802.296 | 311546.003 |
| 2142 | 117+99.29 | 31.42′ RT. | 1017792.400 | 311556.696 |
| 2143 | 118+03.50 | 25.98′ RT. | 1017791.456 | 311563.511 |
| 2144 | 118+12.40 | 21.75′ RT. | 1017794.663 | 311572.824 |
| 2145 | 118+15.38 | 21.50′ RT. | 1017796.576 | 311575.131 |
| 2146 | 119+22.71 | 21.59′ RT. | 1017871.833 | 311651.889 |
| 2147 | 121+27.61 | 23.00′ RT. | 1018011.313 | 311803.672 |
| 2148 | 121+50.00 | 22.90′ RT. | 1018025.843 | 311820.705 |

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| D. EATON | BY | DATE | |
| | | | |
| | | | |
| | |

Username:
Date:3/3/2020
Division:
Filename: 030_Signing and Striping Plan_01.dgn

(Remove & Reset)
SHARE THE ROAD
(Remove & Reset)
NO PARKING ANY TIME
(R7-IR)
(Remove)
KEEP RIGHT
(Remove)
STOP
(Remove)
WORDSWORTH ST
NOT A THROUGH STREET
(Remove & Reset)
TURNING VEHICLES TO
(RIO-I5L)
(Remove)
Chevrons Spaced @ 50' O.C. (Typ.)
(Remove & Reset) To Sta. 308+00, Lt. & Rt.
(Remove)
DO NOT ENTER
DO NOT ENTER
Wordsworth Street
2+00
1+00
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
SWL
SYL
SDYL
BWL
DWL
10.00'
10.00'
39.00'
38.00'
2.00
12.00
(Remove & Reset) To Sta. 106+99, 25' Rt.
(Remove & Reset)
BUS STOP
PORTLAND
GRAY
(Remove)
E
Welcome to Portland sign to be removed and stacked in a location directed by the Resident for the City of Portland to collect
SOUTH INTERSTATE 295
SOUTH 1
TO 26
(Remove & Reset) To Sta. 105+48, Lt.
(Remove)
CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY
(Remove)
(Remove & Reset)
(Remove)
DO NOT ENTER
(Reset) From Sta. 102+53, Rt.
308+00
307+00
306+00
305+00
304+00
303+00
302+00
301+00
300+00
41
40
51
50
TURNING VEHICLES TO
(RIO-I5R) (Front)
DO NOT ENTER
(Reset) (Back) From Sta. 102+68, Rt.
PEDESTRIANS BICYCLES MOTOR-DRIVEN CYCLES PROHIBITED
(R5-10a) (Back)
TURNING VEHICLES TO
(RIO-I5R)
FALMOUTH PORTLAND
NORTH 1
SOUTH 1
SOUTH INTERSTATE 295
(Remove & Reset)
Portland E
(Remove)
STOP
(Remove)
CROSS TRAFFIC DOES NOT STOP
(Remove)
STOP
(Remove & Reset) To Sta. 5+28 Lt.
(Remove)
(Remove & Reset)
Match Existing Striping (Typ.)
Stop Bar (Typ.)
200+00
201+00
202+00
15.76'
15.00'
I
10
20
21
22
23
24
25
26
27
28
30
31
35+00
34+00
ONLY ONLY
(R3-08) (Front)
WRONG WAY
(Reset) (Back)
ONLY ONLY
(R3-08) (Front)
WRONG WAY
(Reset) Back
(Remove) (Front)
WRONG WAY
(Remove & Reset) (Back)
PROHIBITED ON THIS HIGHWAY
(Remain)

Legend:
SWL - Solid White Line
SYL - Single Yellow Line
BWL - Broken White Line
DWL - Dashed White Line
SDYL - Solid Double Yellow Line

| Point | Station | Offset | Point | Station | Offset |
|---|---|---|---|---|---|
| I | 100+50.00 | 12.17' Lt. | 26 | 201+52.00 | 0.00' Rt. |
| 2 | 101+50.00 | 13.00' Lt. | 27 | 200+95.20 | 0.00' Rt. |
| 10 | 100+50.00 | 1.31' Rt. | 28 | 200+50.00 | 0.03' Lt. |
| 11 | 101+00.00 | 0.00' Rt. | 30 | 200+49.93 | 14.79' Rt. |
| 20 | 100+50.00 | 14.57' Rt. | 31 | 200+94.10 | 15.00' Rt. |
| 21 | 101+04.14 | 14.33' Rt. | 40 | 308+02.28 | 12.00' Lt. |
| 22 | 101+32.05 | 32.24' Rt. | 41 | 308+09.00 | 12.44' Lt. |
| 23 | 202+24.26 | 15.85' Lt. | 50 | 307+92.06 | 12.00' Rt. |
| 24 | 202+05.69 | 7.46' Lt. | 51 | 308+09.79 | 16.61' Rt. |
| 25 | 201+78.96 | 1.87' Lt. | | | |

PLAN
25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP-2174(500)
WIN 021745.00
BRIDGE NO.5933
BRIDGE PLANS

| | D. EATON | DATE |
|---|---|---|
| PROJ. MANAGER | | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE
P.E. NUMBER
DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY
SIGNING & STRIPING PLAN 1

SHEET NUMBER
30
OF 220

Filename: 031_Signing and Striping Plan_02.dgn Division: Username: Date:3/3/2020

PLAN

25 0 25 50

Scale of Feet

Legend:
SWL - Solid White Line
SYL - Single Yellow Line
BWL - Broken White Line
DWL - Dashed White Line
SDYL - Solid Double Yellow Line

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

SIGNING & STRIPING PLAN 2

SHEET NUMBER
31
OF 220

HNTB

(Reset) From Sta. 106+92, Rt.

(Remove & Reset) Business Sign

(Reset) From Sta. 106+06, Lt.

(M1-1)

SOUTH INTERSTATE 295 (M5-1)

TO 1 (M5-1)

SOUTH 26 (M5-1)

SPEED LIMIT 30

Portland E

(Remove & Reset)

(Remove & Reset) To Sta. 106+99.25' Rt.

PORTLAND GRAY

(Remove)

BUS STOP (Remove & Reset)

Welcome to Portland

TURNING VEHICLES TO (R10-15R)

(Remove & Reset)

NO PARKING ANY TIME

(Remove & Reset)

Chevrons Spaced @ 50' O.C. (Typ.)

(Remove & Reset) To Sta. 308+00, Lt. & Rt.

DO NOT ENTER (Remove)

DO NOT ENTER

(Remove)

(Remove & Reset)

SHARE THE ROAD (R7-1R)

(Remove & Reset)

NO PARKING ANY TIME

(Remove)

KEEP RIGHT

(Remove)

STOP (Remove)

WORDSWORTH ST

NOT A THROUGH STREET (Remove & Reset)

TURNING VEHICLES TO (R10-15L)

Wordsworth Street

(Remove & Reset)

DO NOT ENTER (Reset) From Sta. 102+53, Rt.

Stop Bar (Typ.)

SWL SYL BWL DWL SDYL

2.00 12.00

39.00'

100.00'

43+00 42+00 41+00 40+00 39+00 38+00 107+00 106+00 105+00 104+00 103+00 102+00 101+00 100+00

Legend:
SWL - Solid White Line
SYL - Single Yellow Line
BWL - Broken White Line
DWL - Dashed White Line
SDYL - Solid Double Yellow Line

(Remove & Reset) Business Sign

(Reset) From Sta. 106+06, Lt.

SPEED LIMIT 30

Portland E

OLYMPIA ST STOP (Remove & Reset)

JCT INTERSTATE 295 (Reset) From Sta. 108+80, Rt.

(Remove & Reset) BUS STOP

Stop Bar (Typ.)

4+00 Olympia Street

(Remove)

Chevrons Spaced @ 50' O.C. (Typ.)

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY (Remove)

(Remove)

Rectangular Rapid Flashing Beacon (Typ.)

OREGON ST (Remove & Reset)

STOP (Remove Existing) (Reset) From Sta. 201+78 RT. (Front)

(Remove Existing) (R5-2) (Back)

6+00 Oregon Street

5+00

107+00 108+00 109+00 110+00 111+00 112+00 113+00

100' TAPER

SWL DWL SDYL

20.00'

20.00' 22.00' (Typ.)

SWL (Typ.)

STOP (Remove)

SPEED LIMIT 35 (R2-1)

STOP (Remove)

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY (Remove)

1

(Remove & Reset)

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY (Remove)

ONE WAY (Remove)

STOP (Remove)

ONE WAY DO NOT ENTER (Remove)

JCT INTERSTATE 295 (Remove and Reset) To Sta. 107+65, Rt.

WII-2 & WI6-7p Mounted on Rectangular Rapid Flashing Beacon assembly.

ONE WAY (Remove)

DO NOT ENTER (Remove) (Back)

(Remove & Reset) (Front) Portland E

SINGLE LANE TRAFFIC

NO PARKING THIS SIDE OF STREET (Remove)

Demount Pole

WII-2 & WI6-7p Mounted on Rectangular Rapid Flashing Beacon assembly.

(Remove and Reset) (Front)

DO NOT ENTER (Remove) (Back)

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY (Remove)

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

SIGNING & STRIPING PLAN 3

SHEET NUMBER

32

OF 220

Date:3/3/2020

Username:

Filename: 032_Signing and Striping Plan_03.dgn Division:

Legend:
SWL - Solid White Line
SYL - Single Yellow Line
BWL - Broken White Line
DWL - Dashed White Line
SDYL - Solid Double Yellow Line

| Point | Station | Offset | Point | Station | Offset |
|---|---|---|---|---|---|
| 60 | 115+49.39 | 0.00' Rt. | 80 | 119+06.66 | 5.51' Rt. |
| 61 | 117+33.82 | 4.06' Lt. | 81 | 120+03.15 | 1.70' Lt. |
| 62 | 117+34.15 | 4.06' Rt. | 82 | 120+03.33 | 5.75' Rt. |
| 70 | 118+74.28 | 16.50' Lt. | 90 | 119+22.75 | 16.59' Rt. |
| 71 | 119+87.00 | 17.24' Lt. | 91 | 120+11.33 | 17.25' Rt. |

OREGON ST (Remove & Reset)

STOP (Remove Existing) (Reset) From Sta. 201+78 RT. (Front)

(Remove Existing) (R5-2) (Back)

SPEED LIMIT 35 (Remove and Reset) To Sta. 125+00±, Lt.

BUS STOP (Retain)

THIS SIDE (Retain)

Chevrons Spaced @ 50' O.C. (Typ.)

Stop Bar (Typ.)

Oregon Street

(Remove & Reset)
NO PARKING THIS SIDE OF STREET

BUS STOP

Martins Point HealthCare

TURNING VEHICLES TO (R10-15R)

TURNING TRAFFIC MUST YIELD TO PEDESTRIANS (Remove)

(Remove and Reset) (Front)

DO NOT ENTER (Remove) (Back)

CONTROLLED ACCESS HIGHWAY OFFICIAL HIGHWAY SIGNS ONLY (Remove)

PLAN

25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

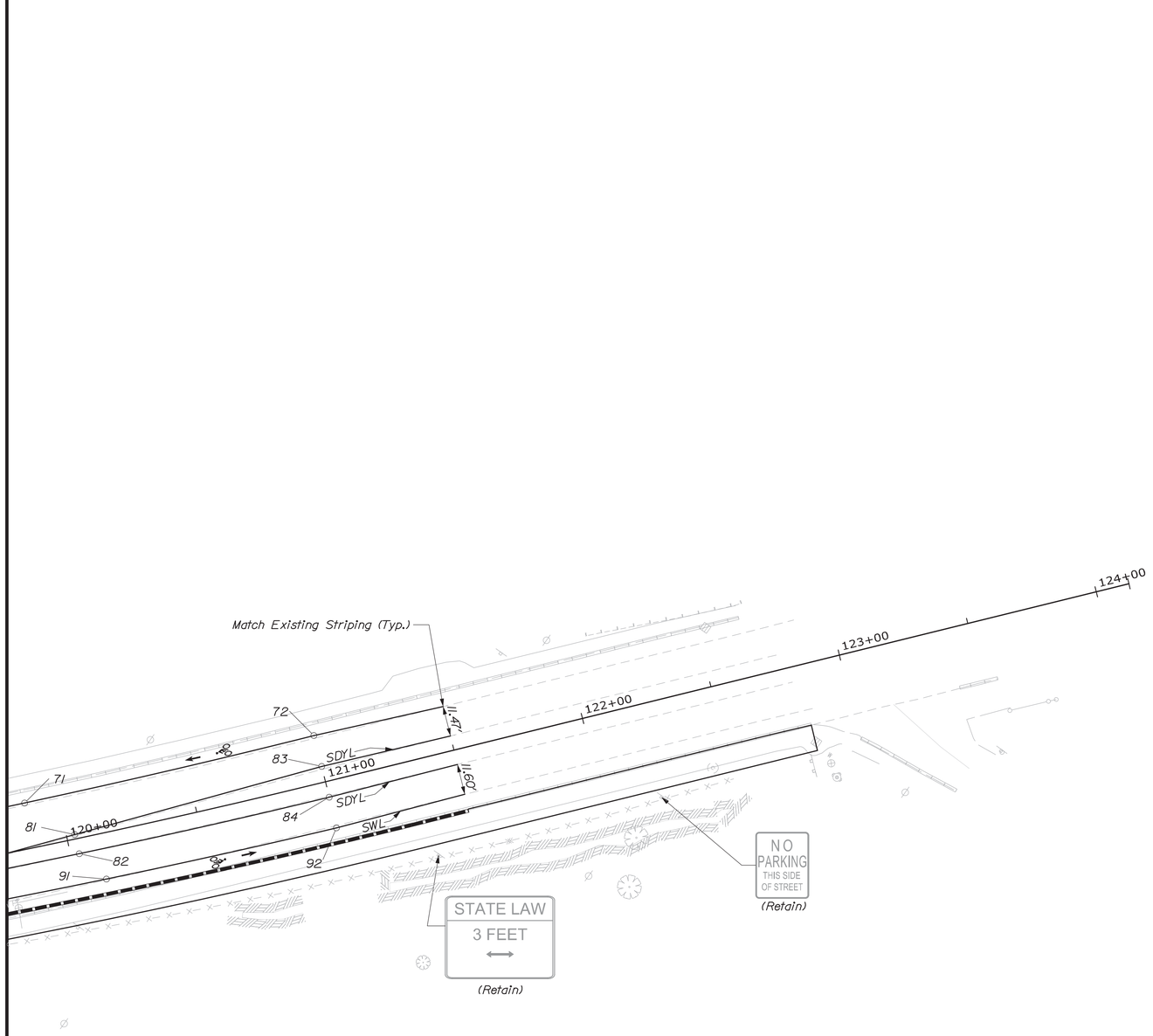
| | D. EATON | DATE |
|---|---|---|
| PROJ. MANAGER | | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

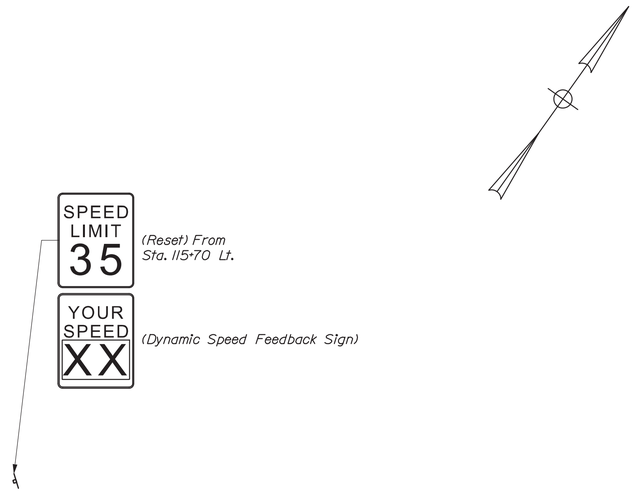
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

SIGNING & STRIPING PLAN 4

SHEET NUMBER
33
OF 220

Filename: 033_Signing and Striping Plan_04.dgn Division:
Username: Date:3/3/2020




*Legend:*
*SWL - Solid White Line*
*SYL - Single Yellow Line*
*BWL - Broken White Line*
*DWL - Dashed White Line*
*SDYL - Solid Double Yellow Line*

| Point | Station | Offset |
|---|---|---|
| 72 | 120+99.90 | 18.04' Lt. |
| 83 | 121+00.00 | 6.00 Lt. |
| 84 | 121+00.00 | 5.98' Rt. |
| 92 | 120+99.90 | 17.88' Rt. |

PLAN

25 0 25 50
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | EDD | | |
| CHECKED-REVIEWED | RWH | | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

| BY | DATE |
|---|---|
| CDH | 2\20 |
| LZD | 2\20 |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# SIGNING & STRIPING PLAN 5

SHEET NUMBER

34

OF 220

Filename: 034_Signing and Striping Plan_05.dgn Division: Username: Date:3/3/2020

# PROPOSED SIGN SUMMARY

| ITEM NUMBER | IDENTIFICATION NUMBER | SIZE OF SIGN WIDTH | SIZE OF SIGN HEIGHT | TEXT | TEXT DIMENSIONS (INCHES) LETTER HEIGHT | TEXT DIMENSIONS (INCHES) VERTICAL SPACING | TEXT DIMENSIONS (INCHES) ARROW RTE. MKR. | NUMBER OF SIGNS REQUIRED | COLOR BACKGROUND | COLOR LEGEND BORDER | TOTAL AREA IN SQUARE FEET | POST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 645.292 | R2-1 | 24" | 30" |  | TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | | 1 | COLORS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | 5.00 (5.00) | METAL POST |
| 645.292 | R3-8 | 30" | 30" |  | | | | 2 | | | 6.25 (12.50) | WOOD POST |
| 645.292 | R5-2 | 24" | 24" |  | | | | 1 | | | 4.00 (4.00) | METAL POST |
| 645.292 | R5-10a | 30" | 36" |  | | | | 1 | | | 7.50 (7.50) | WOOD POST |
| 645.292 | R7-1R | 12" | 18" |  | | | | 1 | | | 1.50 (1.50) | METAL POST |
| 645.292 | R10-3eL | 9" | 15" |  | | | | 6 | | | 0.94 (6.56) | MOUNT ABOVE APS PUSH BUTTON |
| 645.292 | R10-3eR | 9" | 15" |  | | | | 6 | | | 0.94 (6.56) | MOUNT ABOVE APS PUSH BUTTON |
| 645.292 | R10-15L | 30" | 30" |  | | | | 1 | | | 6.25 (6.25) | METAL POST |
| 645.292 | R10-15R | 30" | 30" |  | | | | 4 | | | 6.25 (25.00) | WOOD POST |
| 645.292 | M1-1 | 30" | 24" |  | | | | 1 | | | 5.00 (5.00) | WOOD POST |
| 645.292 | M5-1 | 21" | 15" |  | | | | 3 | | | 2.19 (6.56) | WOOD POST |
| 643.62 | W11-2 | 30" | 30" |  | | | | 4 | | | 6.25 (25.00) | RRFB ASSEMBLY |
| 643.62 | W16-7p | 24" | 12" |  | | | | 4 | | | 2.00 (8.00) | RRFB ASSEMBLY |
| 643.77 | - | 24" | 30" |  | | | | 1 | | | 5.00 (5.00) | WOOD POST |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

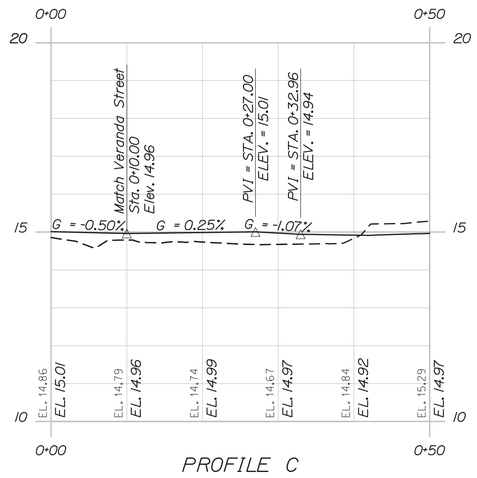
INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

SIGN SUMMARY

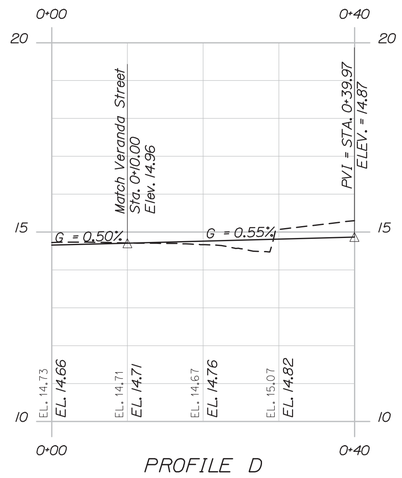
HNTB

SHEET NUMBER
35
OF 220

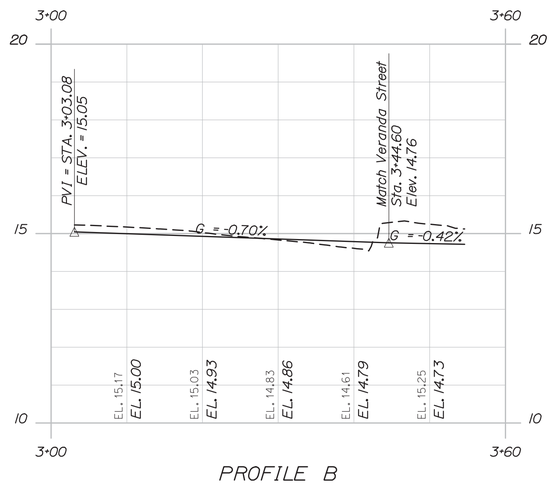
Username:
Date:3/3/2020
Division:
Filename: 035_Signing_Summary.dgn



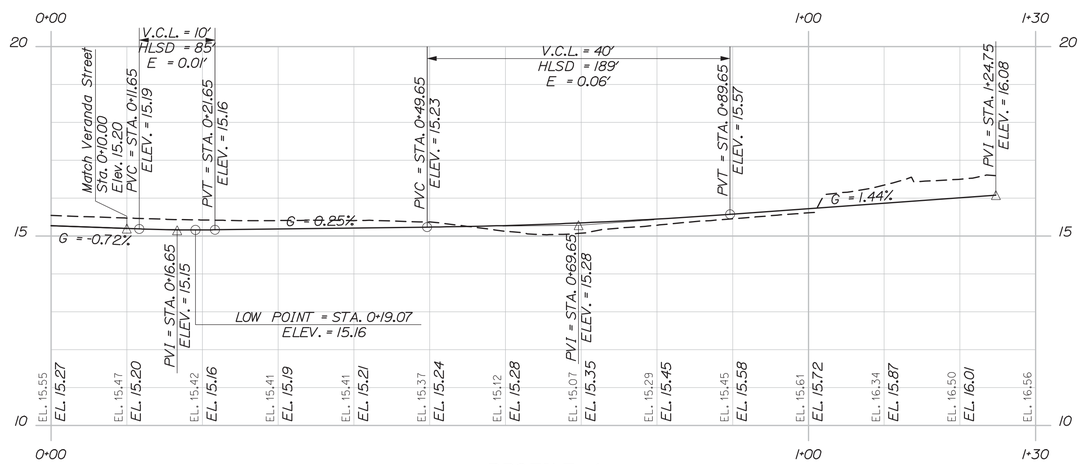

PROFILE C



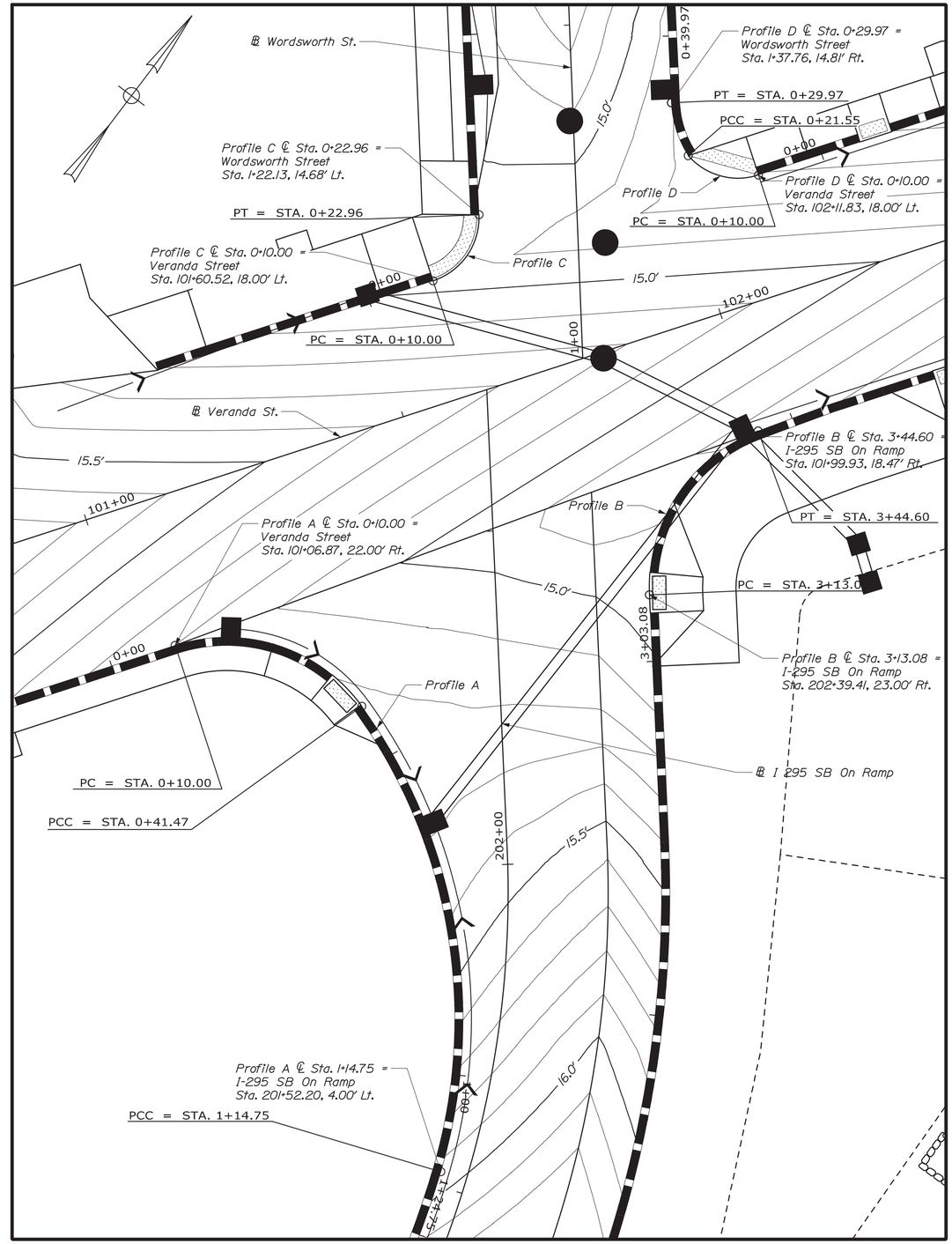

PROFILE D




PROFILE B




PROFILE A




Horiz. 10 0 10 20

Vert. 2 0 2 4

Scale of Feet

INTERSECTION OF I 295 SB ON RAMP/
VERANDA STREET/ WORDSWORTH STREET

Note: Contours are shown at 0.1 foot intervals

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

INTERSECTION GRADING PLAN
I-295 SB ON RAMP

SHEET NUMBER

36

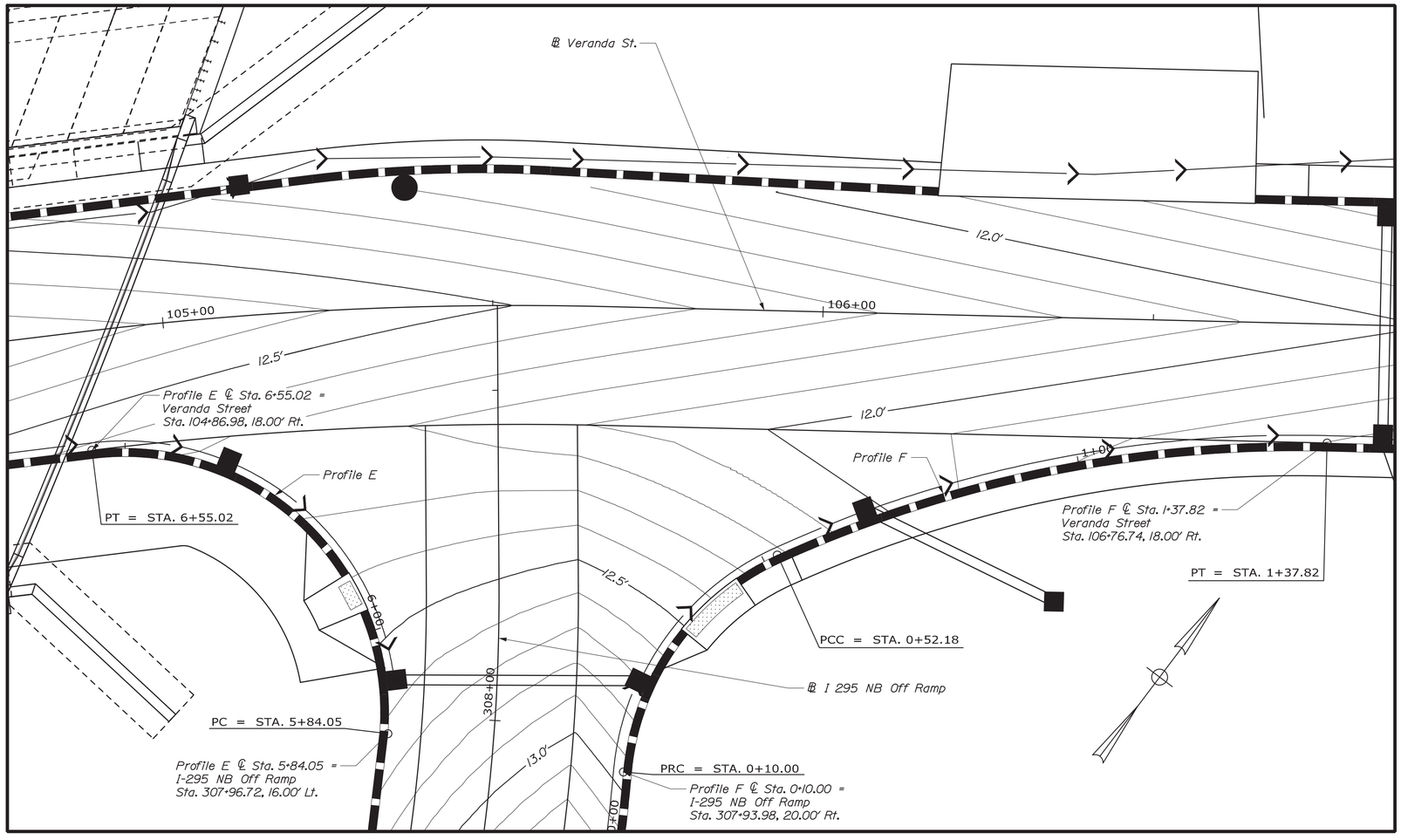
OF 220

Username: Division:

Date:3/3/2020

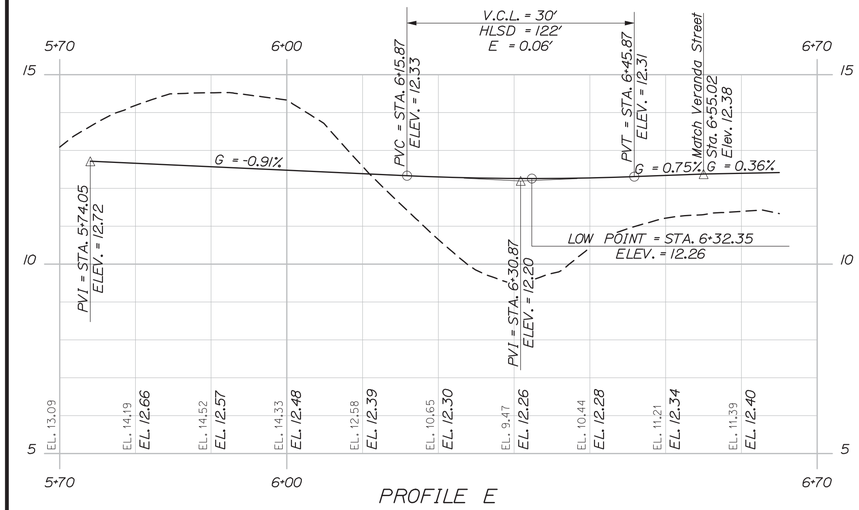
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Username:
Division:
Date:3/3/2020
Filename: 037_GradingPlan_02.dgn

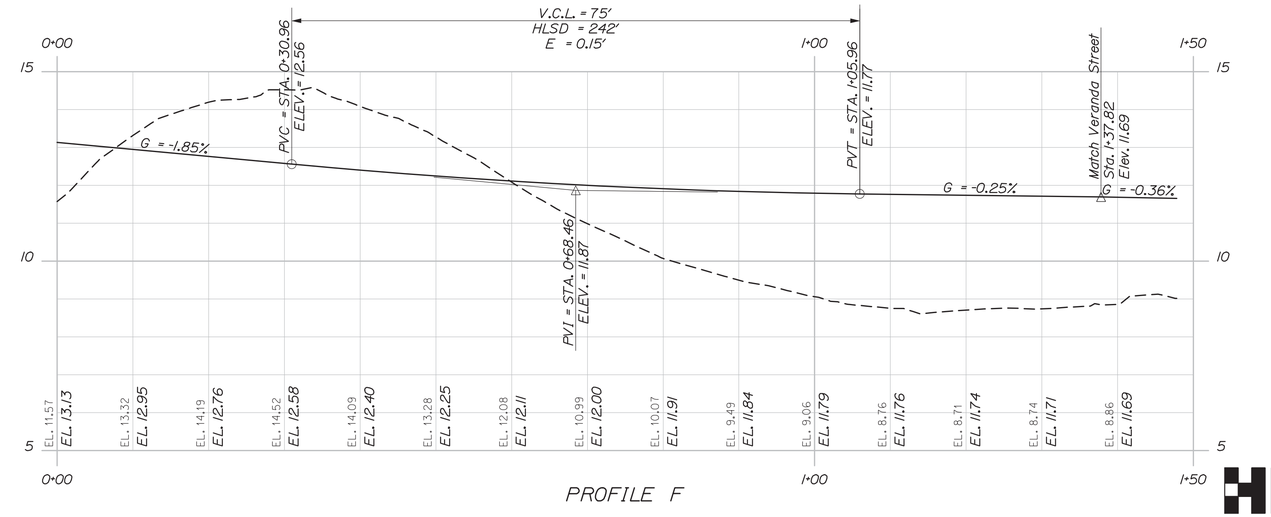



INTERSECTION OF I 295 NB OFF RAMP/
VERANDA STREET

Note: Contours are shown at 0.1 foot intervals.




PROFILE E




PROFILE F

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

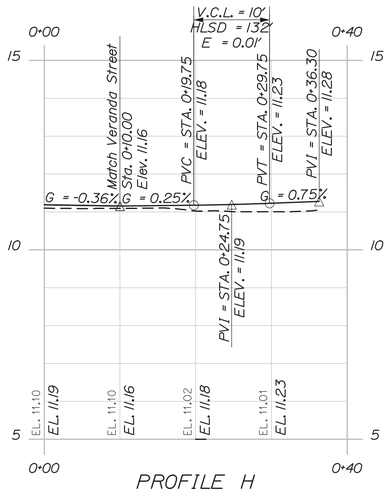
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# INTERSECTION GRADING PLAN I-295 NB OFF RAMP

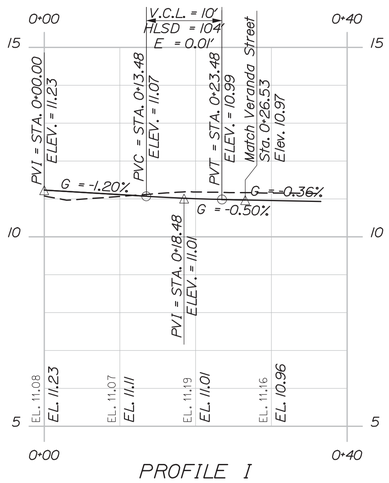
SHEET NUMBER

37

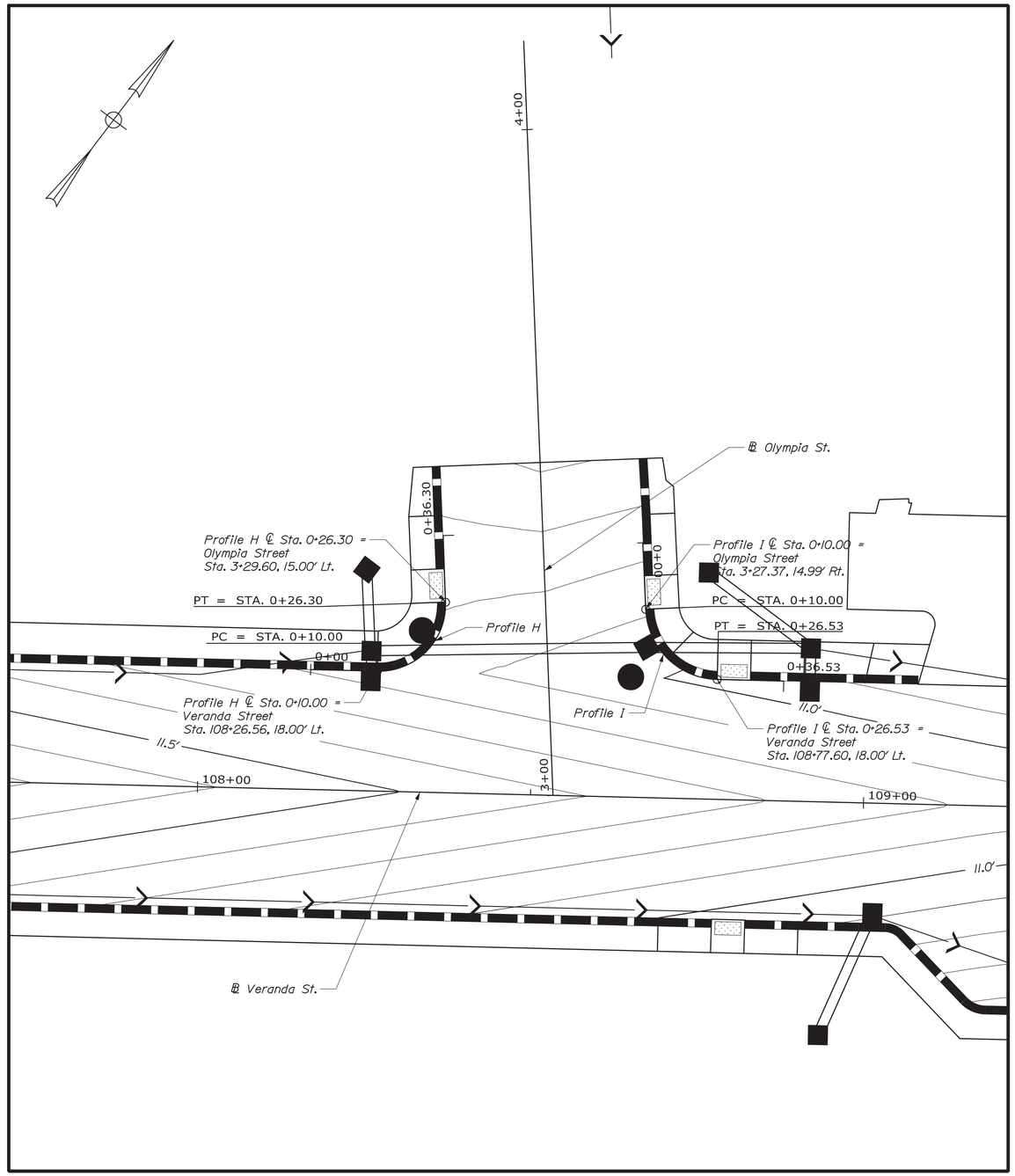
OF 220




PROFILE H




PROFILE I




INTERSECTION OF OLYMPIA STREET/
VERANDA STREET

Note: Contours are shown at 0.1 foot intervals

Horiz. 10 0 10 20
Vert. 2 0 2 4
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | LZD | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

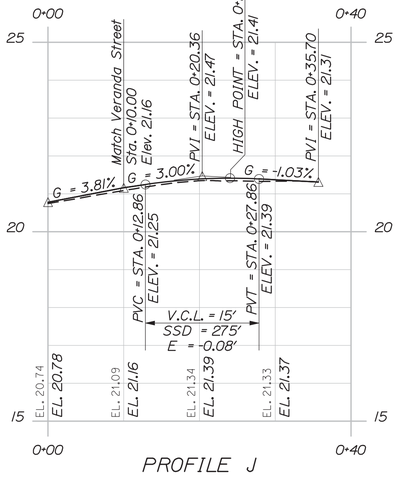
# INTERSECTION GRADING PLAN
# OLYMPIA STREET

SHEET NUMBER
38
OF 220

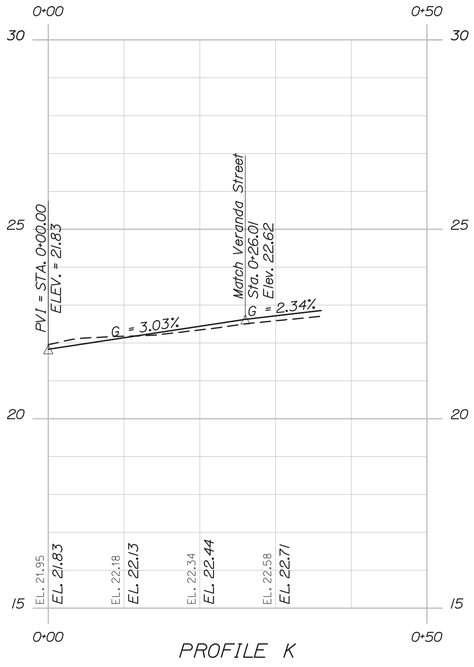
HNTB

Username: Date:3/3/2020
Division:
Filename: 038_GradingPlan_03.dgn

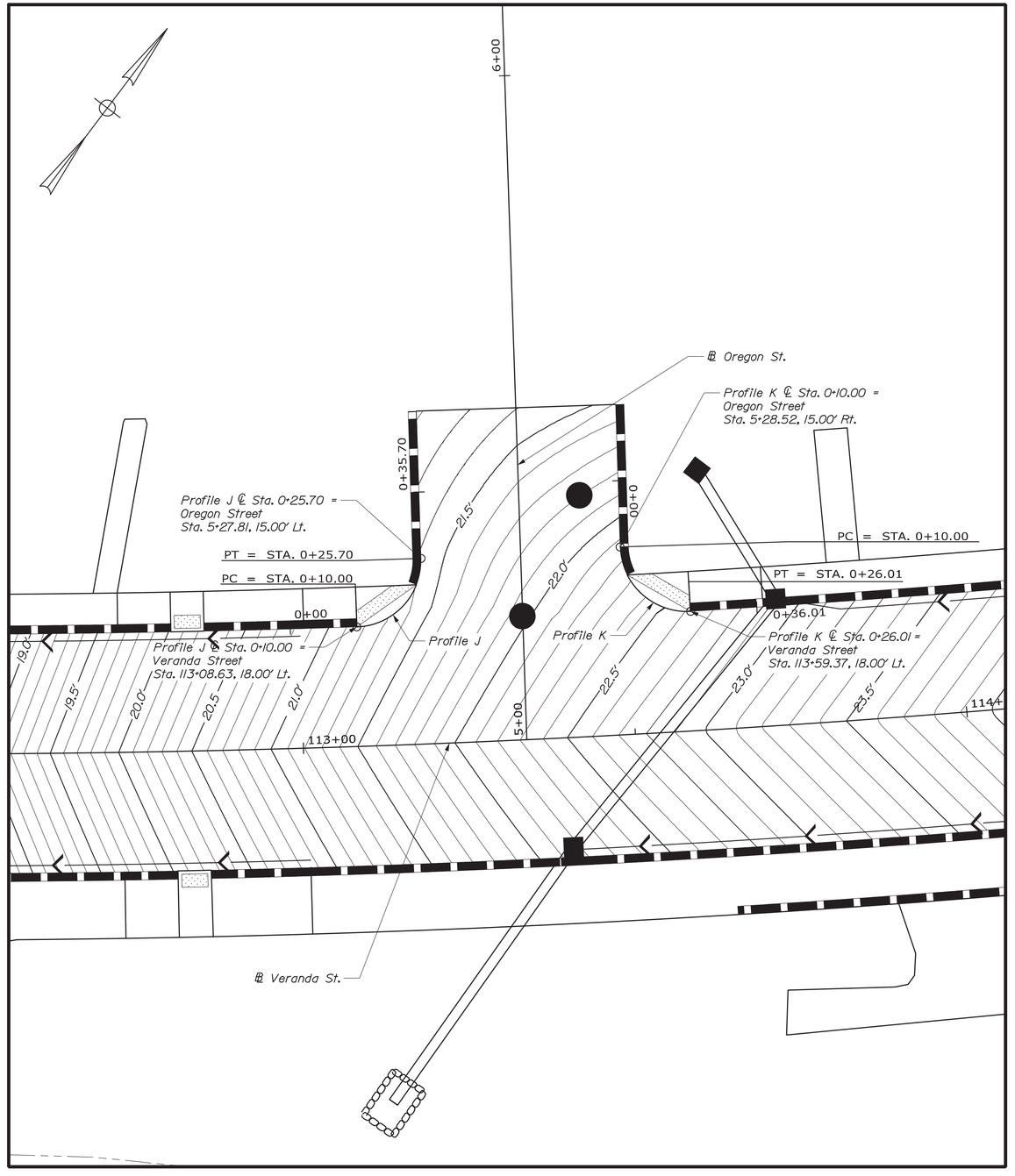
Username:
Division:
Date:3/3/2020
Filename: 039_GradingPlan_04.dgn




PROFILE J




PROFILE K




INTERSECTION OF OREGON STREET/
VERANDA STREET

Note: Contours are shown at 0.1 foot intervals

Horiz. 10 0 10 20
Vert. 2 0 2 4
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2/20 |
| CHECKED-REVIEWED | RWH | 2/20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

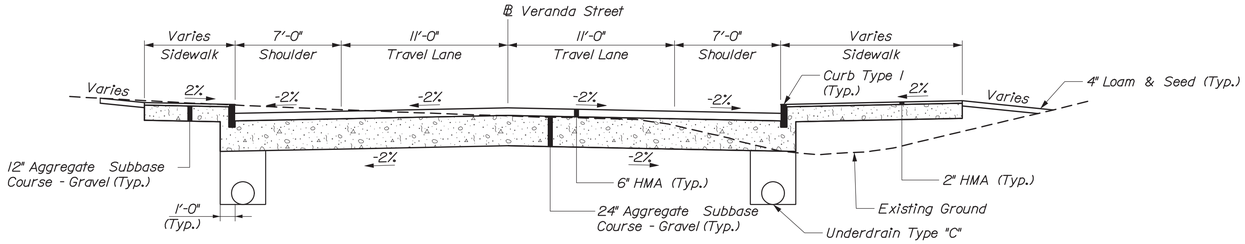
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# INTERSECTION GRADING PLAN OREGON STREET

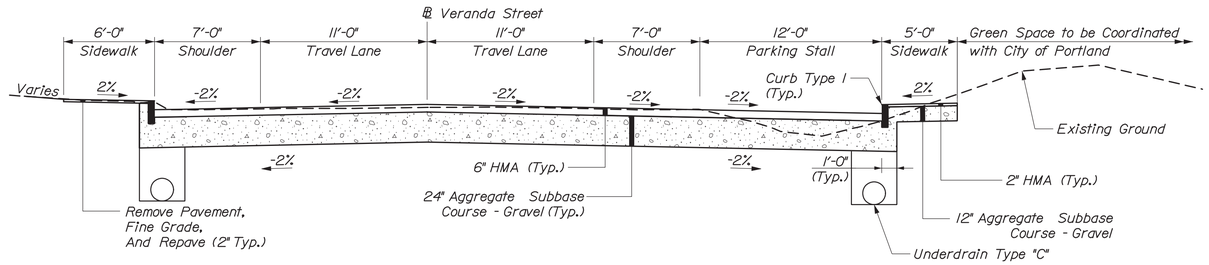
SHEET NUMBER

39

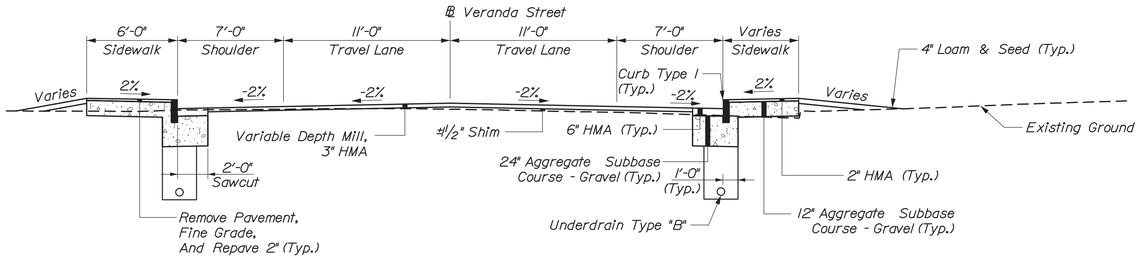
OF 220



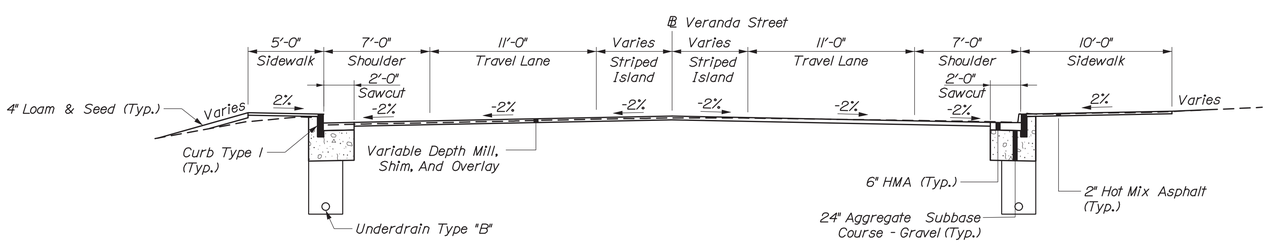

## VERANDA STREET - FULL DEPTH CONSTRUCTION




## VERANDA STREET - FULL DEPTH WITH PARKING STALL




## VERANDA STREET - MILL AND OVERLAY




## VERANDA STREET - 3 LANE SECTION

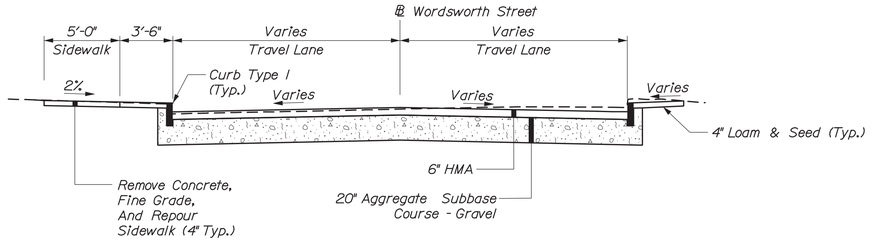
NOTES:

1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.

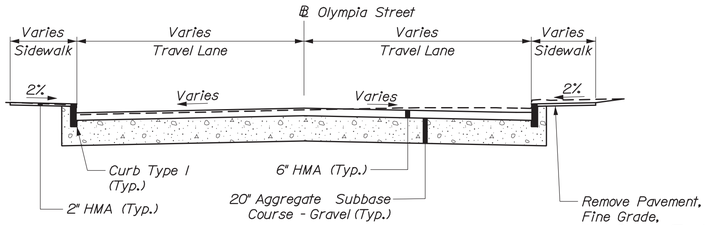
2. When superelevation exceeds the slope of the low side shoulder, the low side shoulder's pavement shall have the same cross slope as the travel way.

3. Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight, unless otherwise noted on the plans.

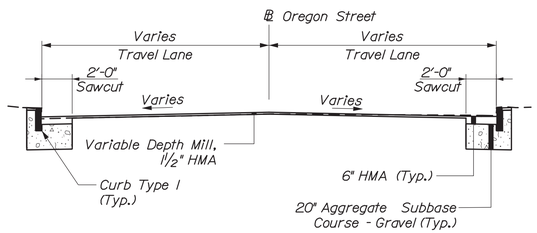
4. The algebraic difference between shoulder and travel lane cross slopes "rollover" shall not exceed 8%.



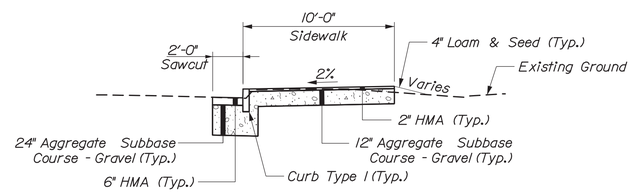

## WORDSWORTH STREET




## OLYMPIA STREET




## OREGON STREET




## VERANDA STREET - PATH WIDENING

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | CDH | 2.20 |
| CHECKED-REVIEWED | RWH | LZD | 2.20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

TYPICAL SECTION
VERANDA AND SIDE ROADS

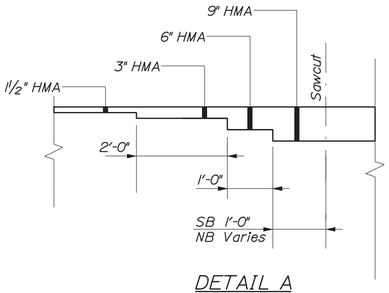
SHEET NUMBER

40

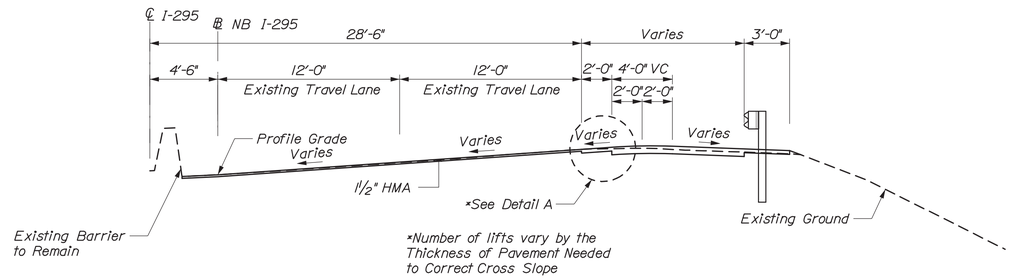
OF 220

HNTB

Filename: 040_Typ_01.dgn Username: Division: Date:3/3/2020



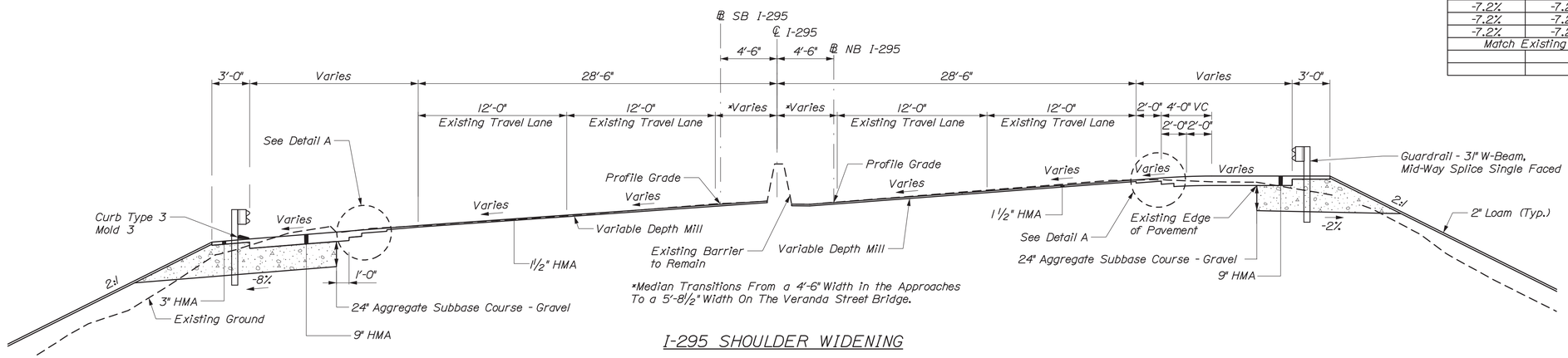

DETAIL A




*Number of lifts vary by the Thickness of Pavement Needed to Correct Cross Slope

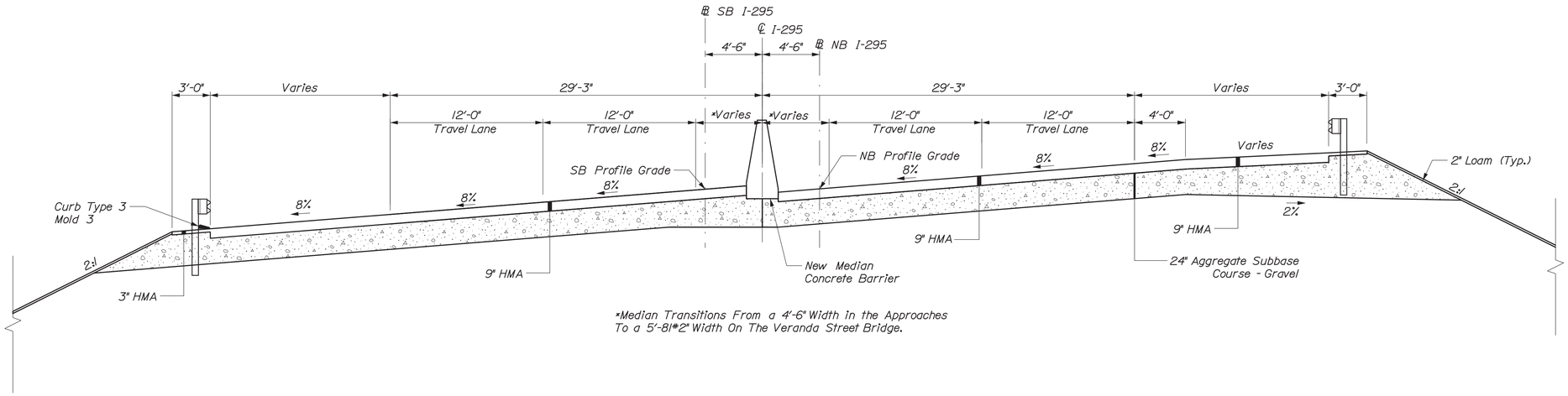
I-295 NB SHOULDER SLOPE CORRECTION

| I 295 Superelevation Table | | | | |
|---|---|---|---|---|
| SB Shoulder | SB Travelway | Station | NB Travelway | NB Shoulder |
| | | 35+00.00 | Match Existing | |
| Match Existing | | 35+25.00 | 7.6% | -4.9% |
| -8.7% | -8.0% | 35+50.00 | 7.6% | -4.0% |
| -8.0% | -8.0% | 35+75.00 | 7.6% | -3.0% |
| -8.0% | -8.0% | 36+00.00 | 7.6% | -2.0% |
| -7.5% | -7.5% | 36+25.00 | 7.6% | -1.0% |
| -7.5% | -7.5% | 36+50.00 | 7.8% | 0.0% |
| -7.5% | -7.5% | 36+75.00 | 8.0% | 1.0% |
| -7.5% | -7.5% | 37+00.00 | 8.0% | 2.0% |
| -8.0% | -8.0% | 37+25.00 | 8.0% | 3.0% |
| -8.0% | -8.0% | 37+50.00 | 8.0% | 4.0% |
| -8.0% | -8.0% | 37+75.00 | 8.0% | 5.0% |
| -8.0% | -8.0% | 38+00.00 | 8.0% | 6.0% |
| -8.0% | -8.0% | 38+25.00 | 8.0% | 7.0% |
| -8.0% | -8.0% | 38+50.00 | 8.0% | 8.0% |
| | | - | | |
| -8.0% | -8.0% | 39+50.00 | 8.0% | 8.0% |
| -7.5% | -7.5% | 39+75.00 | 8.0% | 8.0% |
| -7.5% | -7.5% | 40+00.00 | 7.5% | 7.0% |
| -7.5% | -7.5% | 40+25.00 | 7.0% | 6.0% |
| -7.5% | -7.5% | 40+50.00 | 7.0% | 5.0% |
| -7.5% | -7.5% | 40+75.00 | 7.0% | 4.0% |
| -7.2% | -7.2% | 41+00.00 | 7.0% | 3.0% |
| -7.2% | -7.2% | 41+25.00 | 7.3% | 2.0% |
| -7.2% | -7.2% | 41+50.00 | 7.3% | 1.0% |
| -7.2% | -7.2% | 41+75.00 | 7.3% | 0.0% |
| -7.2% | -7.2% | 42+00.00 | 7.3% | -1.0% |
| -7.2% | -7.2% | 42+25.00 | 7.3% | -2.0% |
| Match Existing | | 42+50.00 | 6.8% | -3.0% |
| | | 42+75.00 | 6.3% | -4.0% |
| | | 43+00.00 | Match Existing | |




*Median Transitions From a 4'-6" Width in the Approaches To a 5'-8½" Width On The Veranda Street Bridge.

I-295 SHOULDER WIDENING




*Median Transitions From a 4'-6" Width in the Approaches To a 5'-8l*2" Width On The Veranda Street Bridge.

I-295 FULL DEPTH CONSTRUCTION

NOTES:

1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.

2. When superelevation exceeds the slope of the low side shoulder, the low side shoulder's pavement shall have the same cross slope as the travel way.

3. Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight, unless otherwise noted on the plans.

4. The algebraic difference between shoulder and travel lane cross slopes "rollover" shall not exceed 8%. To maintain a shoulder rollover less than 8%, a 4' wide vertical curve shall be constructed between the travel lane slope and shoulder slope as shown on the cross sections.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

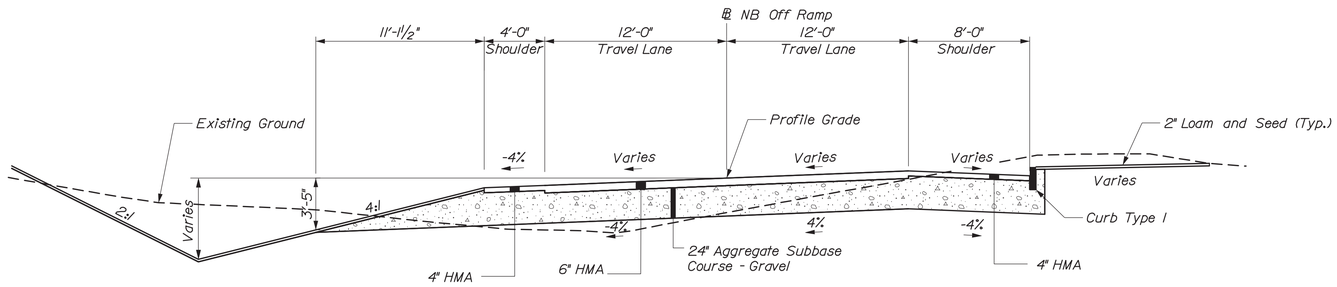
DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

TYPICAL SECTION
I-295

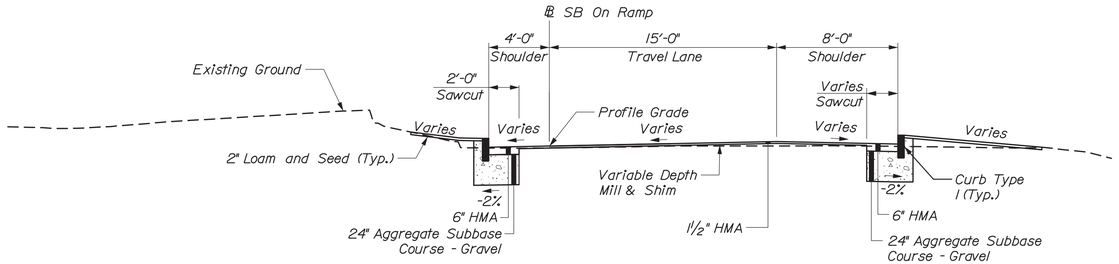
SHEET NUMBER
41
OF 220

Username:
Division:
Filename: 041_Typ_02.dgn
Date:3/3/2020



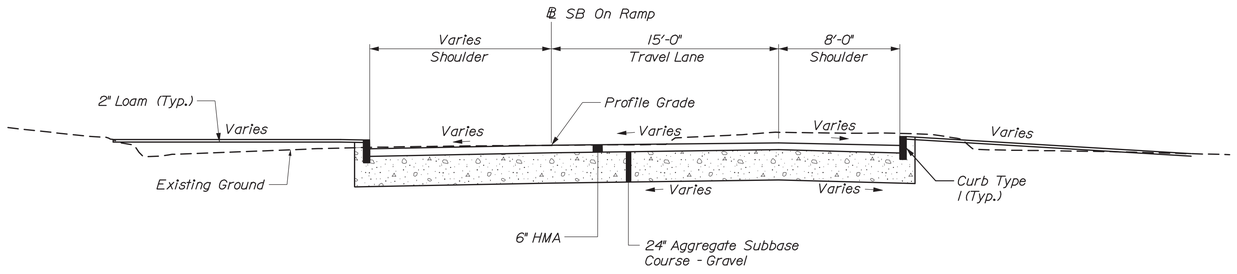

I-295 NB OFF RAMP - FULL CONSTRUCTION

| I 295 NB Off Ramp Superelevation Table | | | | |
|---|---|---|---|---|
| Left Shoulder | Left Travelway | Station | Right Travelway | Right Shoulder |
| Match Existing | | 303+50.00 | Match Existing | |
| -4.0% | -0.8% | 303+75.00 | -1.1% | -4.0% |
| -4.0% | -1.0% | 304+00.00 | -1.1% | -4.0% |
| -4.0% | -1.0% | 304+25.00 | -0.5% | -4.0% |
| -4.0% | -1.0% | 304+50.00 | 1.0% | -4.0% |
| -4.0% | -2.5% | 304+75.00 | 2.5% | -4.0% |
| -4.0% | -4.0% | 305+00.00 | 4.0% | -4.0% |
| | | - | | |
| -4.0% | -4.0% | 306+50.00 | 4.0% | -2.0% |
| -4.0% | -3.4% | 306+75.00 | 3.4% | -2.0% |
| | | - | | |
| -4.0% | -3.4% | 307+50.00 | 3.4% | -2.0% |
| -2.8% | -2.4% | 307+75.00 | 2.4% | -2.0% |
| -1.6% | -1.4% | 308+00.00 | 1.4% | -2.0% |
| -0.3% | -0.3% | 308+25.00 | 0.3% | -0.9% |




I-295 SB ON RAMP - MILL & OVERLAY

| I 295 NB On Ramp Superelevation Table | | | |
|---|---|---|---|
| Left Shoulder | Station | Travelway | Right Shoulder |
| Match Existing | 200+25.00 | Match Existing | Match Existing |
| -4.0% | 200+50.00 | 2.0% | 0.0% |
| -3.0% | 200+75.00 | 2.0% | -1.0% |
| -2.0% | 201+00.00 | 2.0% | -2.0% |
| -2.0% | 201+25.00 | 2.0% | -2.0% |
| -2.0% | 201+50.00 | 2.0% | -2.0% |
| -2.0% | 201+75.00 | 2.0% | -2.0% |
| -1.1% | 202+00.00 | 1.1% | -2.0% |
| 0.1% | 202+25.00 | -0.1% | -1.4% |
| 0.5% | 202+50.00 | -0.5% | -0.5% |




I-295 SB ON RAMP - FULL DEPTH CONSTRUCTION

NOTES:

1. The pavement, base and subbase depths as shown on the plans are intended to be nominal.

2. When superelevation exceeds the slope of the low side shoulder, the low side shoulder's pavement shall have the same cross slope as the travel way.

3. Crowns for both normal and superelevation sections for all courses of subbase and pavement shall be straight, unless otherwise noted on the plans.

4. The algebraic difference between shoulder and travel lane cross slopes "rollover" shall not exceed 8%. To maintain a shoulder rollover less than 8%, a 4' wide 0.0% break shall be constructed between the travel lane slope and shoulder slope as shown on the cross sections.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | |
|---|---|---|
| SIGNATURE | | |
| P.E. NUMBER | | |
| DATE | | |

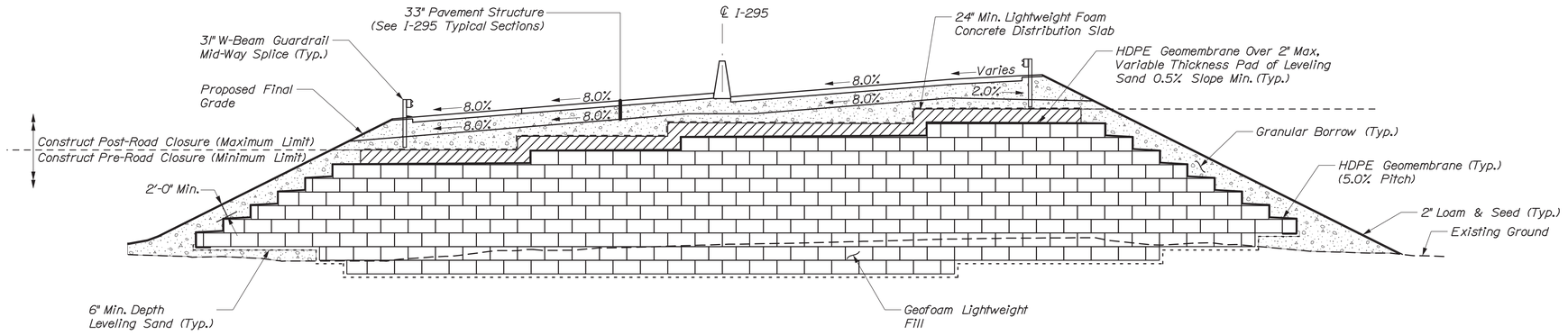
| | | |
|---|---|---|
| D. EATON | PROJ. MANAGER | |
| | DESIGN-DETAILED | CDH |
| | CHECKED-REVIEWED | EDD |
| | DESIGN2-DETAILED2 | RWH |
| | DESIGN3-DETAILED3 | |
| | REVISIONS 1 | 2\20 |
| | REVISIONS 2 | 2\20 |
| | REVISIONS 3 | |
| | REVISIONS 4 | |
| | FIELD CHANGES | |

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

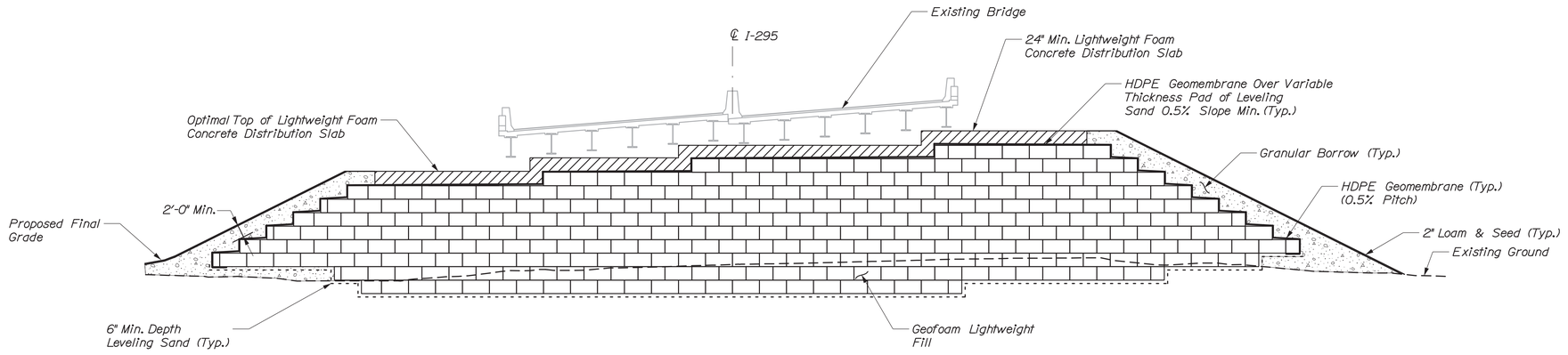
TYPICAL SECTION
I-295 RAMPS

SHEET NUMBER
42
OF 220

Filename: 042_Typ_03.dgn Division: Username: Date:3/3/2020




GEOFOAM TYPICAL SECTION - FINAL




GEOFOAM TYPICAL SECTION - PRE-CLOSURE

NOTES:

1. The Contractor shall be permitted to place a thicker layer of lightweight foam concrete distribution slab during the pre-road closure period to minimize fill placement during the road closure. The top of the lightweight foam concrete distribution slab shall not extend beyond the bottom of the existing bridge girders. Care shall be taken to prohibit adhesion between the foam concrete and the existing bridge girders.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

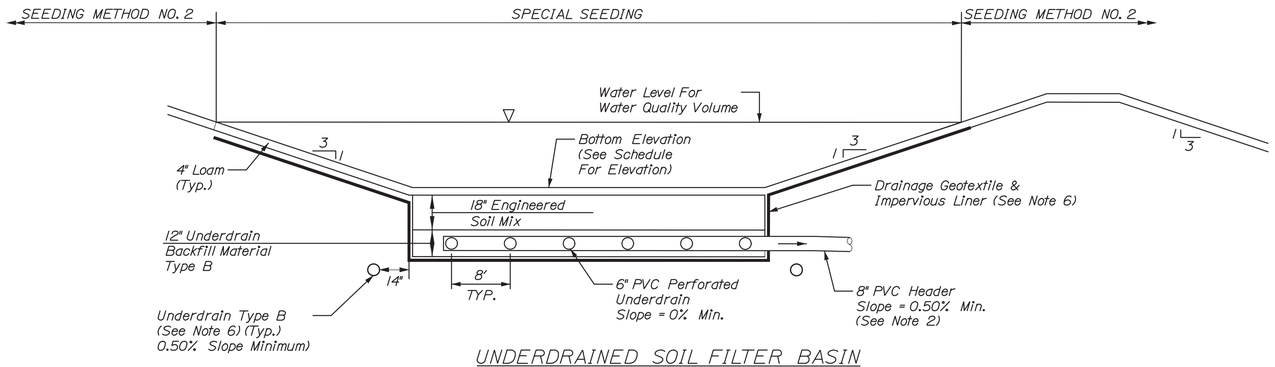
TYPICAL SECTION
GEOFOAM

SHEET NUMBER

43

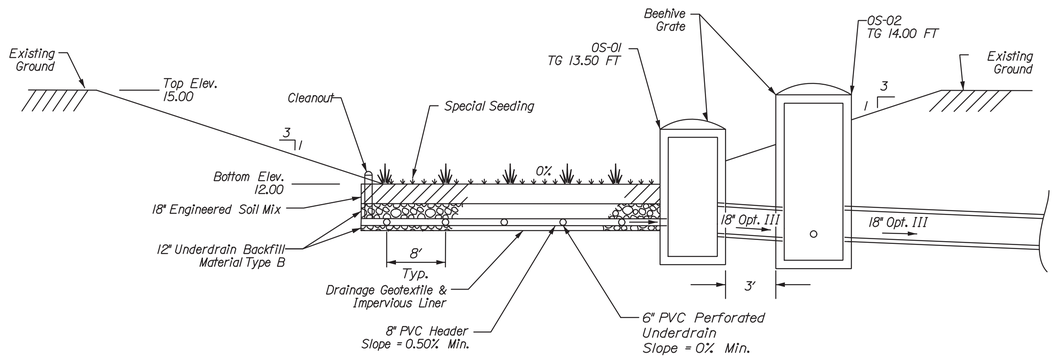
OF 220

Filename: 043_Geofoam Typical.dgn Division: Username: Date:3/3/2020




## UNDERDRAINED SOIL FILTER BASIN
## TYPICAL SECTION

Not To Scale




## OUTLET CONTROL DEVICE

Not To Scale

## OUTLET CONTROL DEVICE DATA

| Structure Id | Box | Rim Elev. | Inv. In | Inv. Out |
|---|---|---|---|---|
| OS-01 | Catch Basin Type B-I-P | 13.50 FT | 10.00 FT | 9.50 FT |
| OS-02 | Catch Basin Type B-I-P | 14.00 FT | 9.40 FT | 9.40 FT |

| USF BASIN SCHEDULE | | | | | |
|---|---|---|---|---|---|
| USF Basin | Basin Elevations | | Peak Water Surface Elevation | | |
| | Bottom | Top of Embankment | 2-year | 10-year | 25-year |
| | (feet) | (feet) | (feet) | (feet) | (feet) |
| #1 | 12.00 | 15.00 | 12.06 | 13.29 | 13.66 |

## NOTES:

1. 8" PVC Underdrain Header/Outlet Shall Not Be Slotted. 8" PVC Shall Outlet As Shown On Plans.

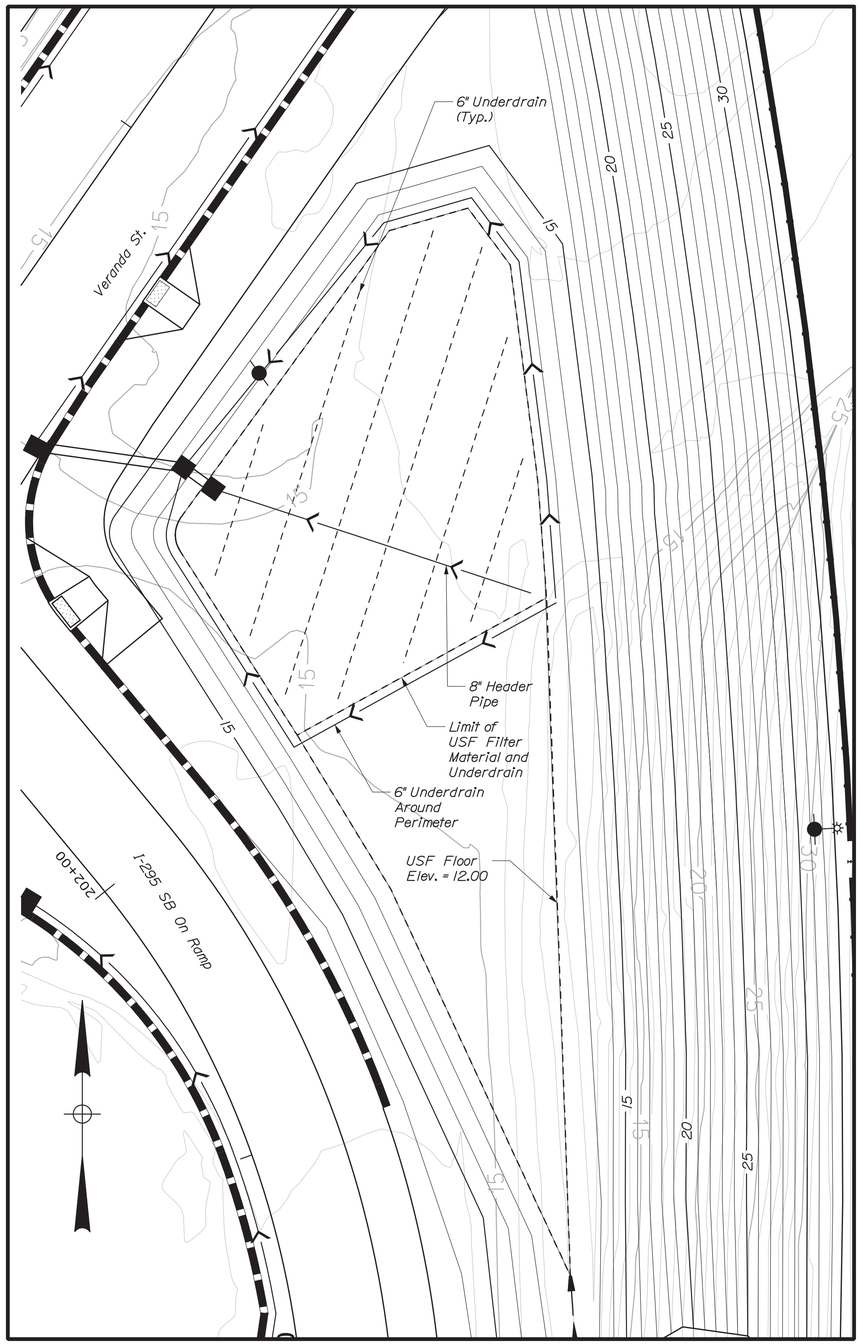
2. Surface of Soil Filter Shall Be Seeded With Special Seed As Specified In Section 618 Of The Specifications. Payment Shall Be Made Under Item 618.143 - Special Seeding.

3. The Underdrained Soil Filter Shall Be Constructed To the Limits And Details Shown On the Plans And Specifications Unless Otherwise Approved By the Resident.

4. The Filter Bed Material Shall Not Be Placed In USF Basins Until The Tributary Drainage Area Is Permanently Stabilized Against Erosion.

5. Erosion Control Blanket Shall Be Provided On All USF Basin Embankment Slopes, Interior, Exterior And On the Surface Of The Soil Filter. Payment Shall Be Incidental To 615.27 Underdrained Soil Filter.

6. An Impervious Liner Shall Be Installed Between Two Layers of Geotextile. Underdrain Type B Shall Be Installed Around The Perimeter of the Impervious Layer.




## UNDERDRAINED SOIL FILTER BASIN GRADING
## SCALE

12.5 0 12.5 25

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# UNDERDRAINED SOIL FILTER DETAILS

SHEET NUMBER

44

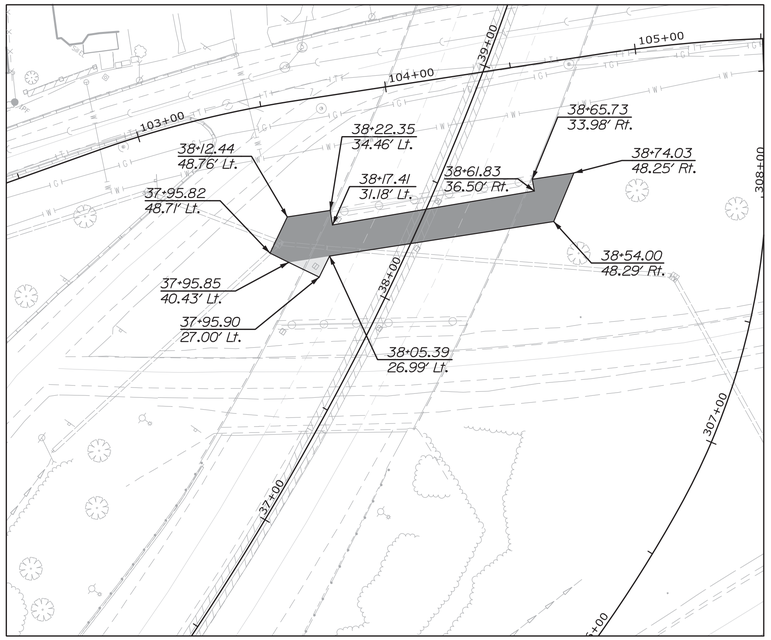
OF 220

Username:

Date:3/3/2020

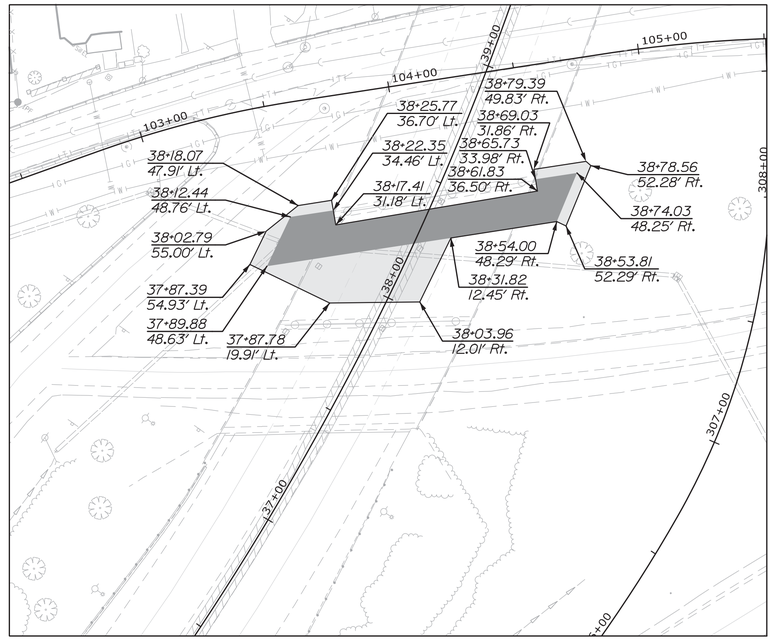
Division:

Filename: 044_USF Detail.dgn



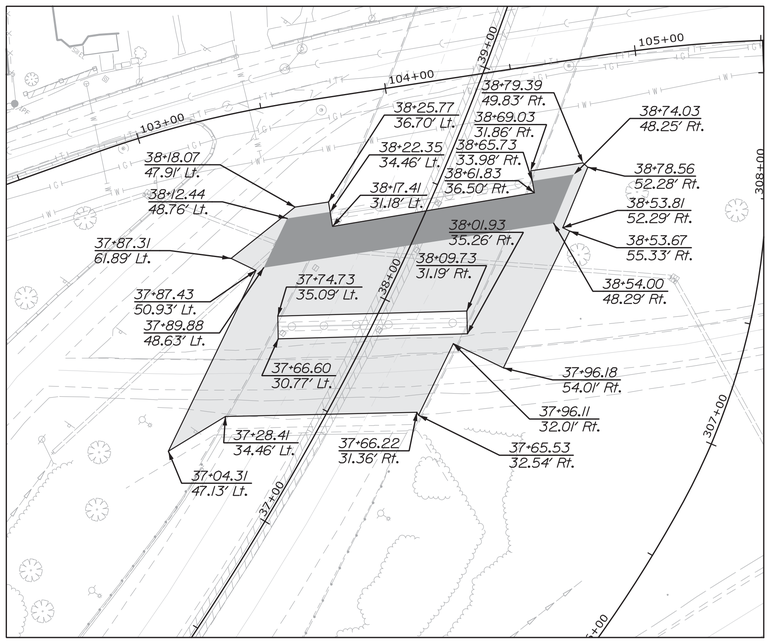

LAYER 1

BOTTOM ELEVATION - EL. 6
TOP ELEVATION - EL. 8




LAYER 2

BOTTOM ELEVATION - EL. 8
TOP ELEVATION - EL. 10




LAYER 3

BOTTOM ELEVATION - EL. 10
TOP ELEVATION - EL. 12

LEGEND:

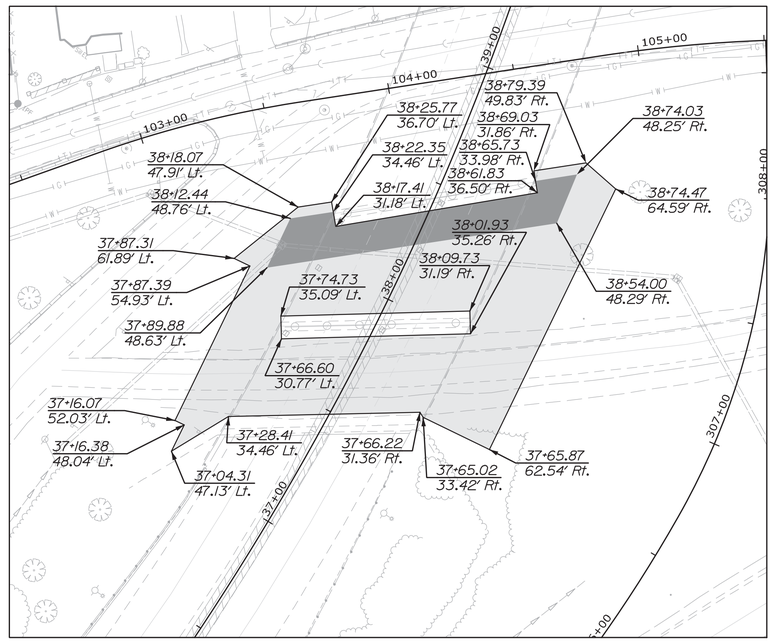
EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60

Scale of Feet




LAYER 4

BOTTOM ELEVATION - EL. 12
TOP ELEVATION - EL. 14

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
SOUTH APPROACH 1

SHEET NUMBER

45

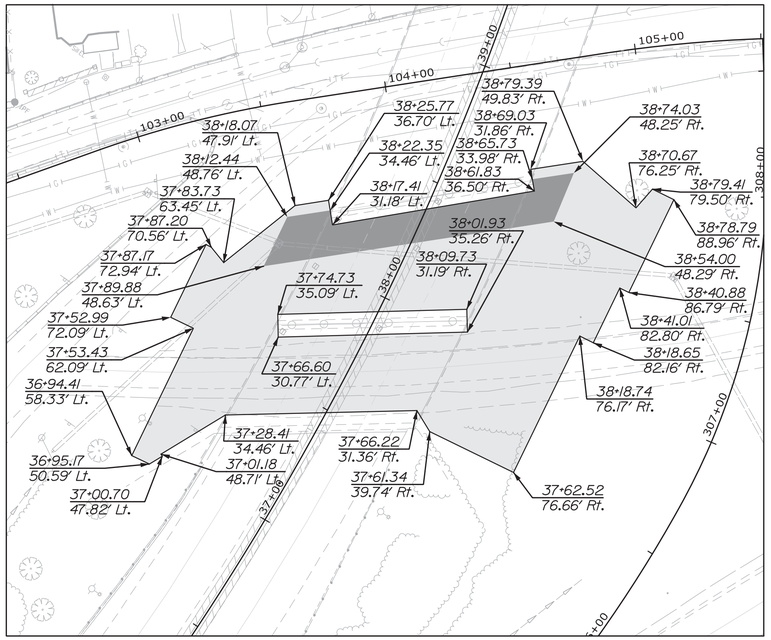
OF 220

Username:

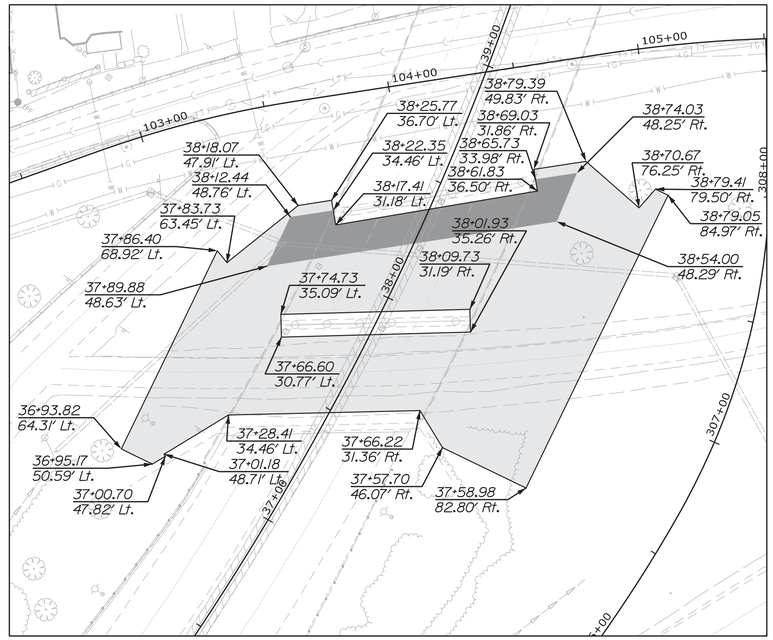
Date:3/3/2020

Division:

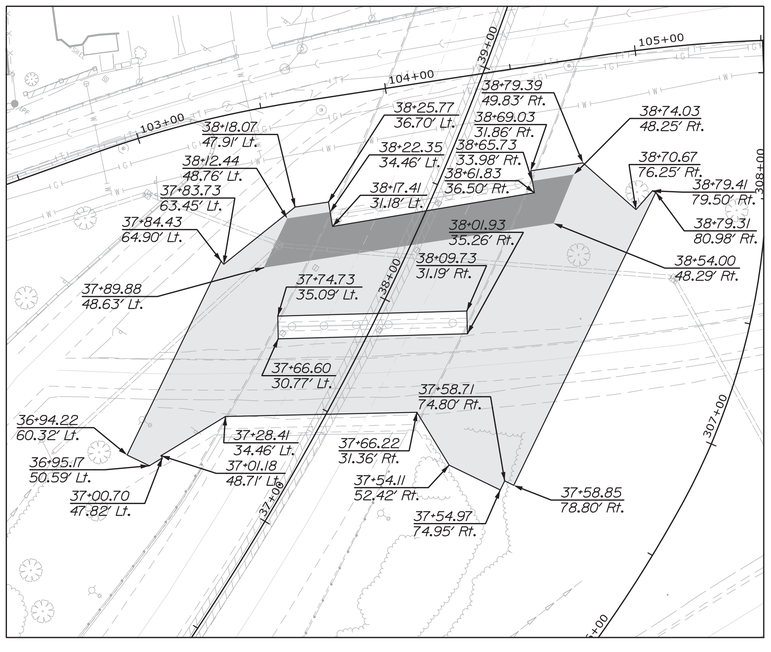
Filename: 045_GDPlan_S01.dgn




LAYER 5
BOTTOM ELEVATION - EL. 14
TOP ELEVATION - EL. 16




LAYER 6
BOTTOM ELEVATION - EL. 16
TOP ELEVATION - EL. 18




LAYER 7
BOTTOM ELEVATION - EL. 18
TOP ELEVATION - EL. 20

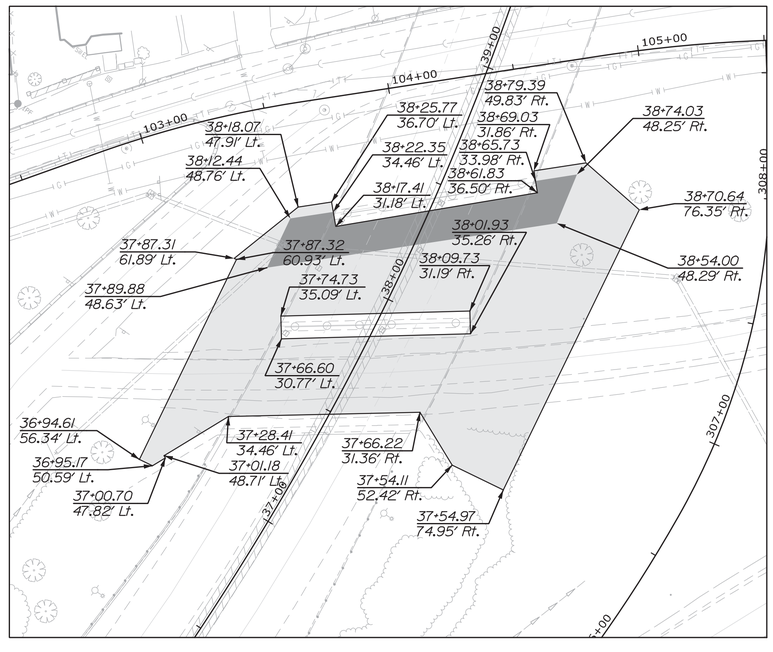
LEGEND:

EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60
Scale of Feet




LAYER 8
BOTTOM ELEVATION - EL. 20
TOP ELEVATION - EL. 22

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

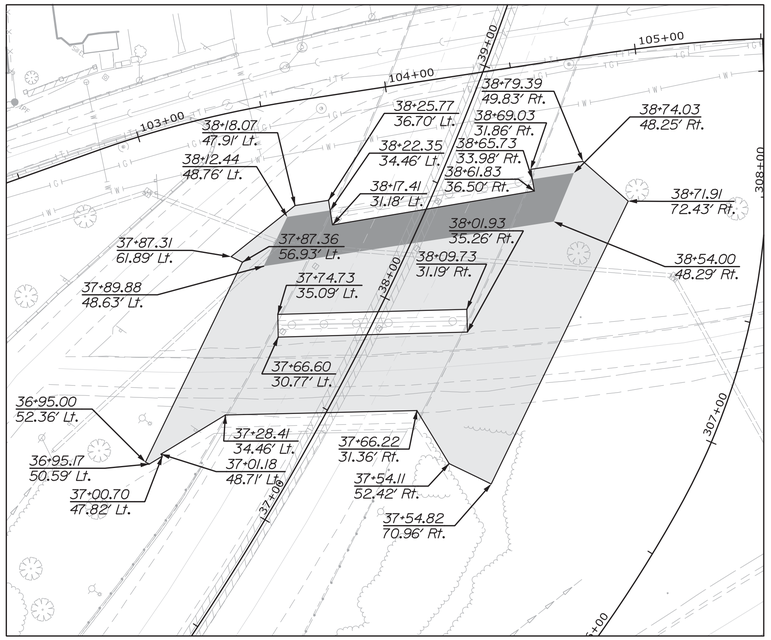
DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
SOUTH APPROACH 2

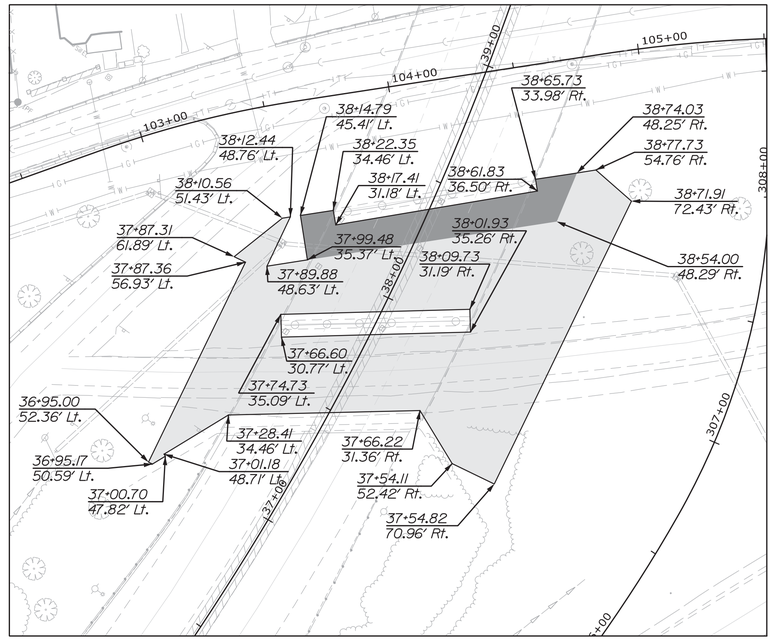
SHEET NUMBER
46
OF 220

Username:
Division:
Date:3/3/2020
Filename: 046_GDPlan_S02.dgn



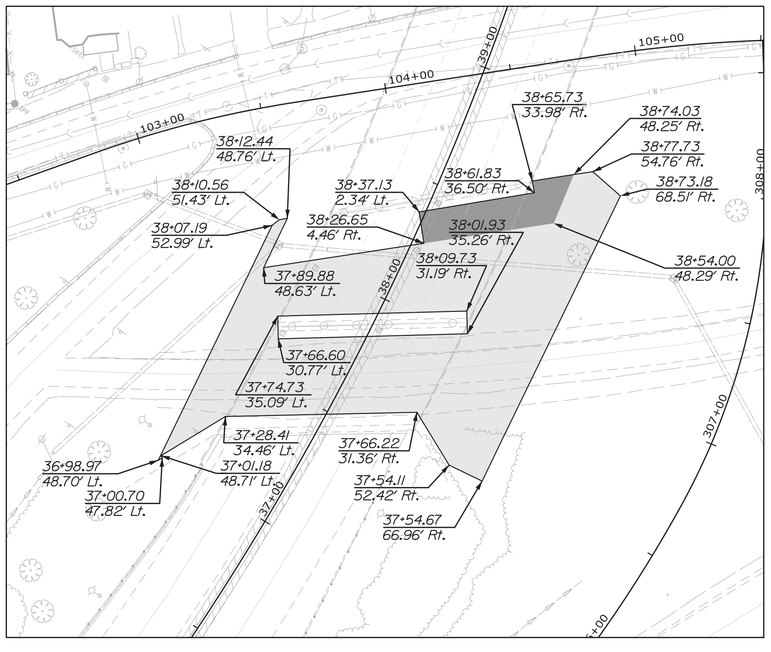

LAYER 9

BOTTOM ELEVATION - EL. 22
TOP ELEVATION - EL. 23




LAYER 10

BOTTOM ELEVATION - EL. 23
TOP ELEVATION - EL. 24




LAYER 11

BOTTOM ELEVATION - EL. 24
TOP ELEVATION - EL. 26

LEGEND:

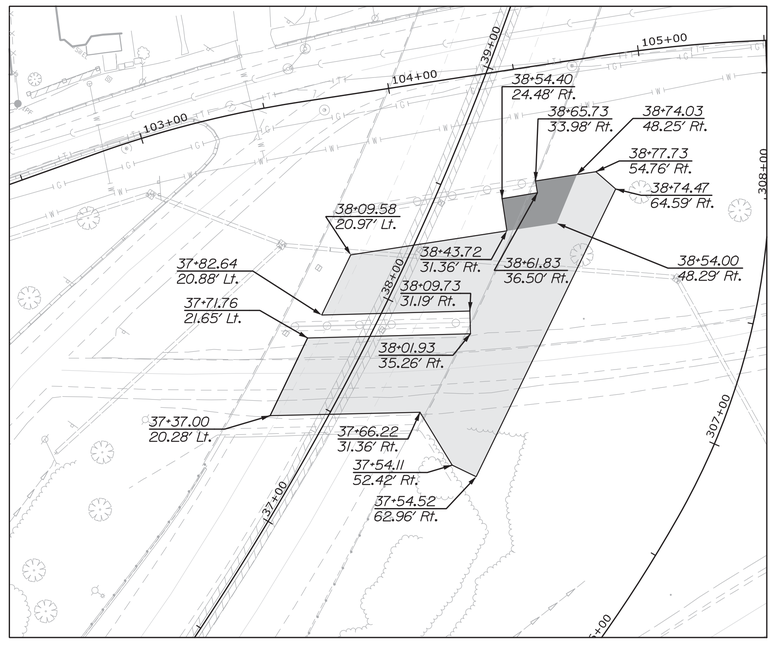
EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60

Scale of Feet




LAYER 12

BOTTOM ELEVATION - EL. 26
TOP ELEVATION - EL. 28

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
SOUTH APPROACH 3

SHEET NUMBER

47

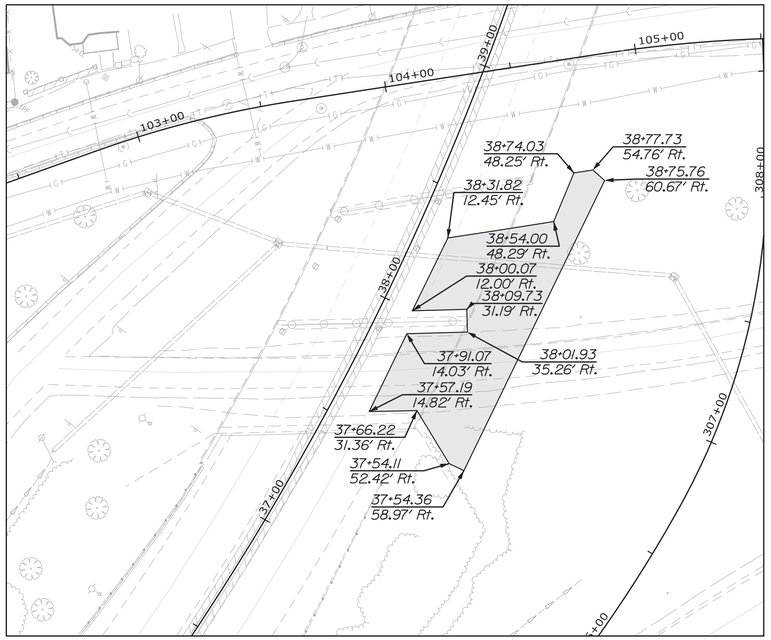
OF 220

Username:

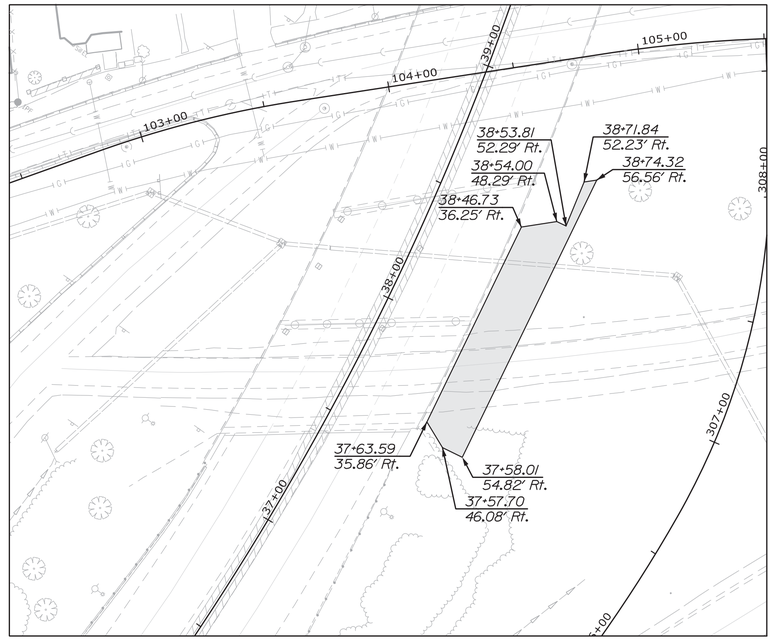
Division:

Date:3/3/2020

Filename: 047_GDPlan_S03.dgn




LAYER 13
BOTTOM ELEVATION - EL. 28
TOP ELEVATION - EL. 30




LAYER 14
BOTTOM ELEVATION - EL. 30
TOP ELEVATION - EL. 32

LEGEND:

EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
SOUTH APPROACH 4

SHEET NUMBER

48

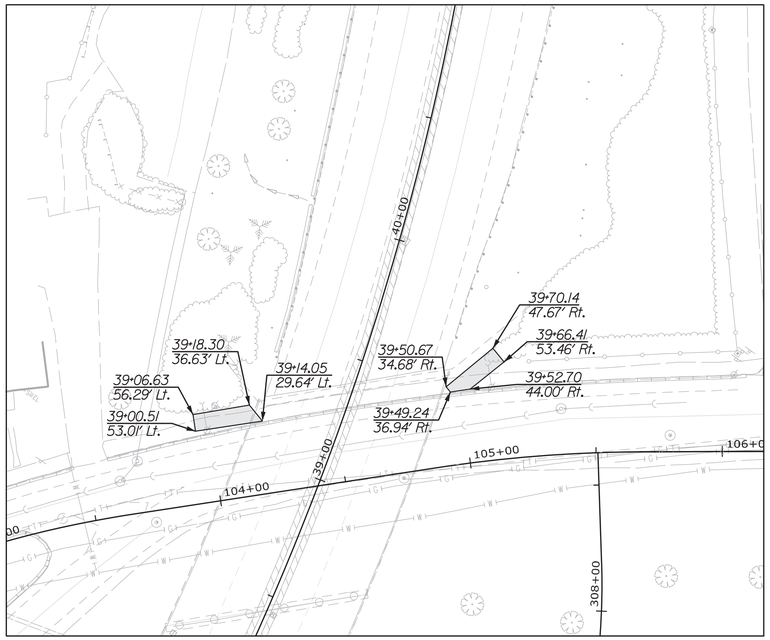
OF 220

Username:

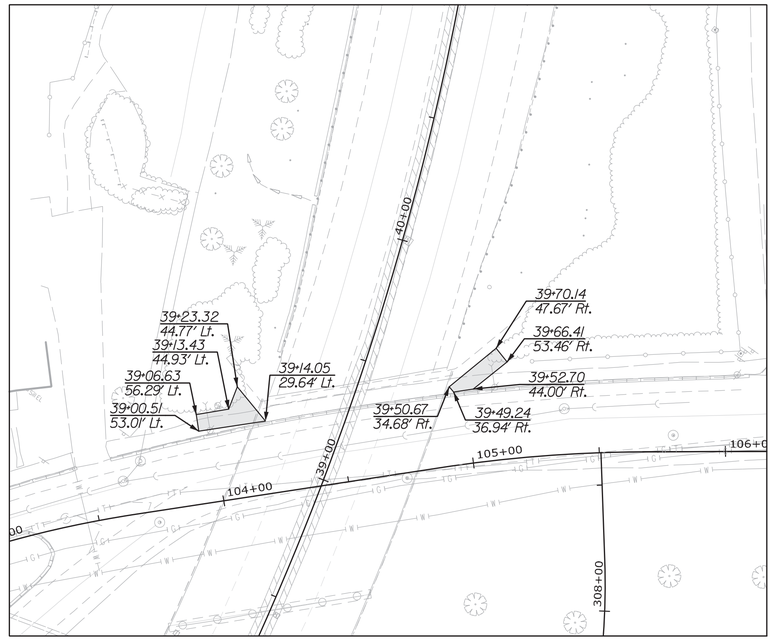
Division:

Filename: 048_GDPlan_S04.dgn

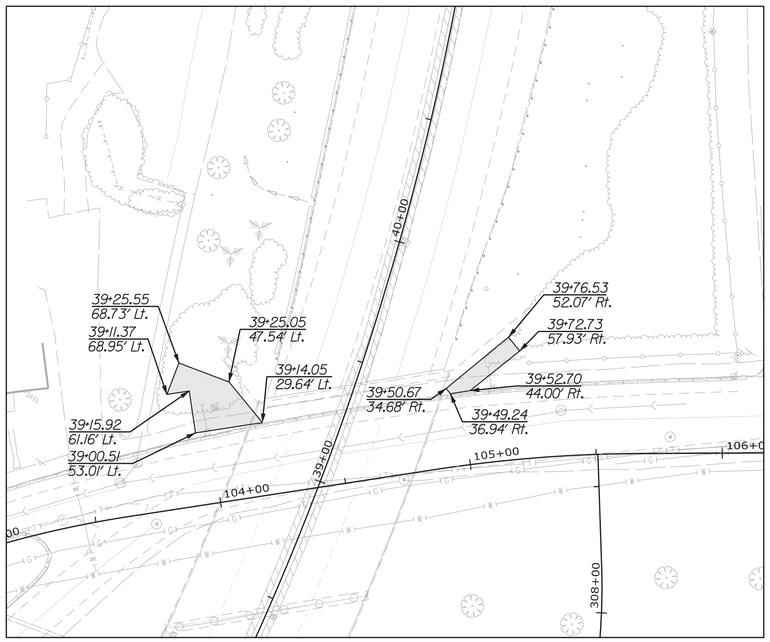
Date:3/3/2020




LAYER 1
BOTTOM ELEVATION - EL. 10
TOP ELEVATION - EL. 12




LAYER 2
BOTTOM ELEVATION - EL. 12
TOP ELEVATION - EL. 14




LAYER 3
BOTTOM ELEVATION - EL. 14
TOP ELEVATION - EL. 16

LEGEND:

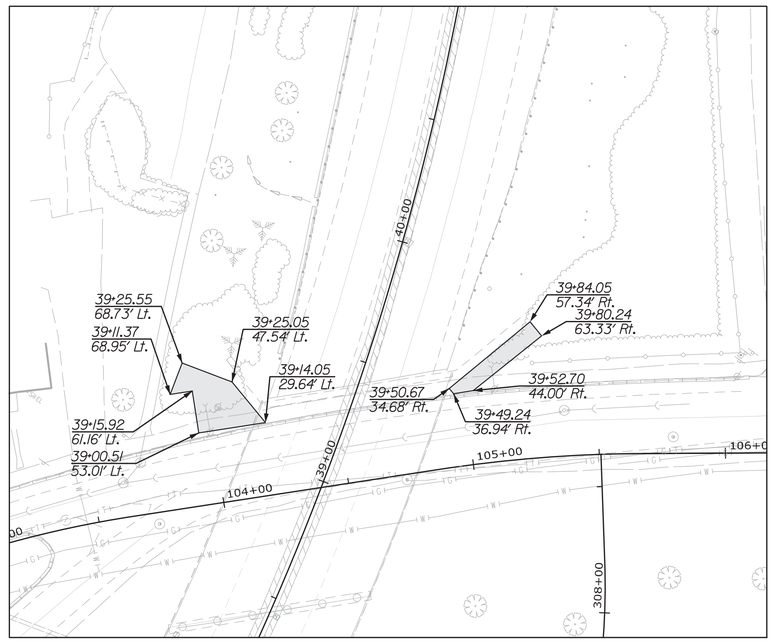
EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60

Scale of Feet




LAYER 4
BOTTOM ELEVATION - EL. 16
TOP ELEVATION - EL. 18

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
NORTH APPROACH 1

SHEET NUMBER

49

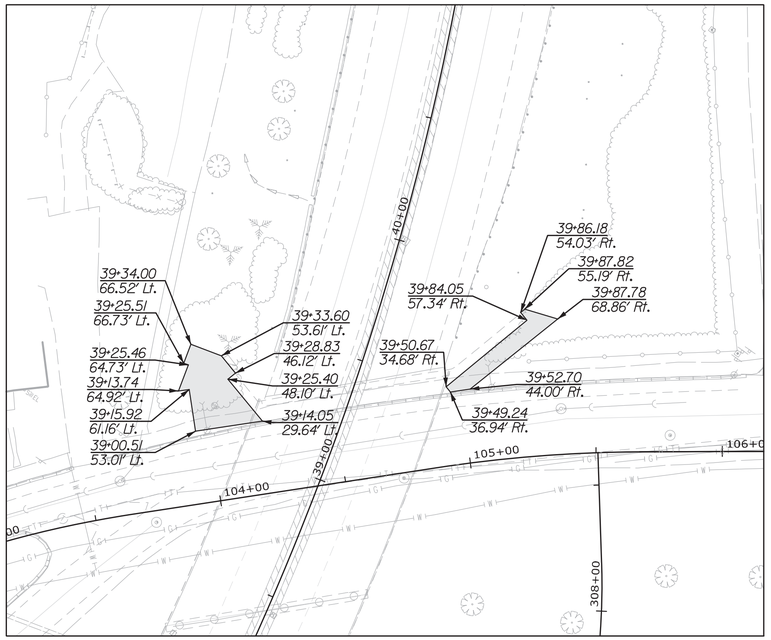
OF 220

Username:

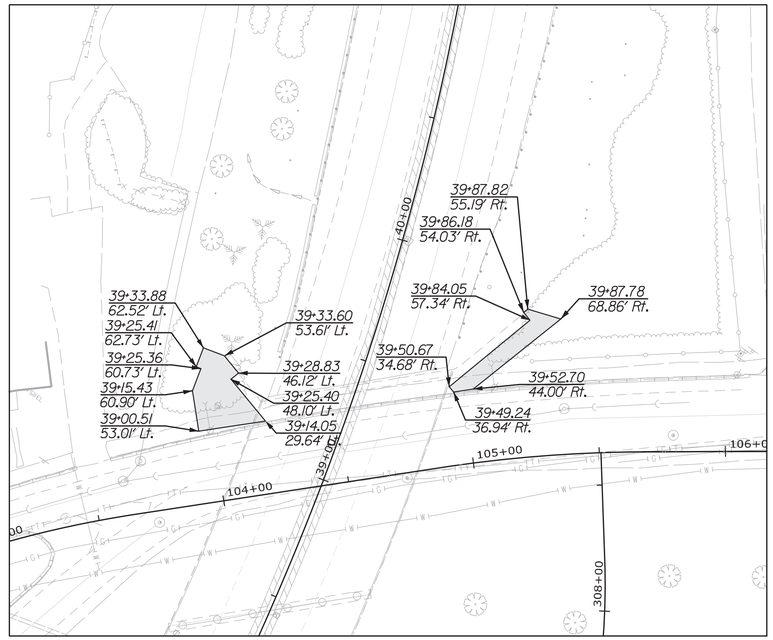
Date:3/3/2020

Division:

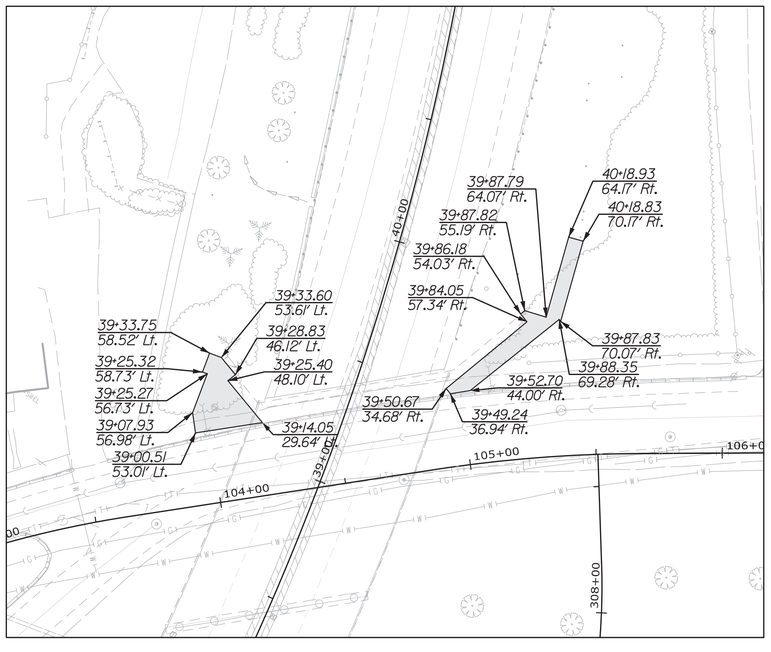
Filename: 049_GDPlan_N01.dgn




LAYER 5
BOTTOM ELEVATION - EL. 18
TOP ELEVATION - EL. 20




LAYER 6
BOTTOM ELEVATION - EL. 20
TOP ELEVATION - EL. 22




LAYER 7
BOTTOM ELEVATION - EL. 22
TOP ELEVATION - EL. 23

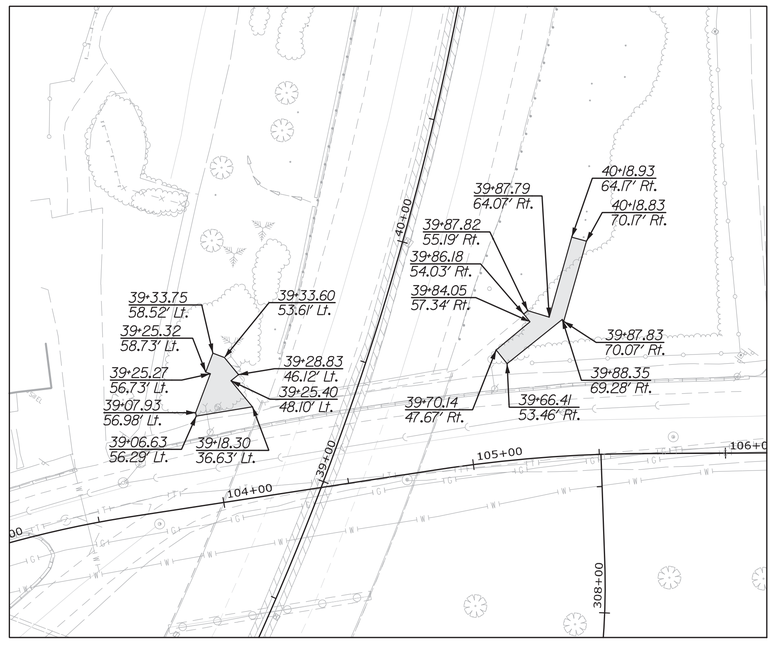
LEGEND:

EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60
Scale of Feet




LAYER 8
BOTTOM ELEVATION - EL. 23
TOP ELEVATION - EL. 24

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

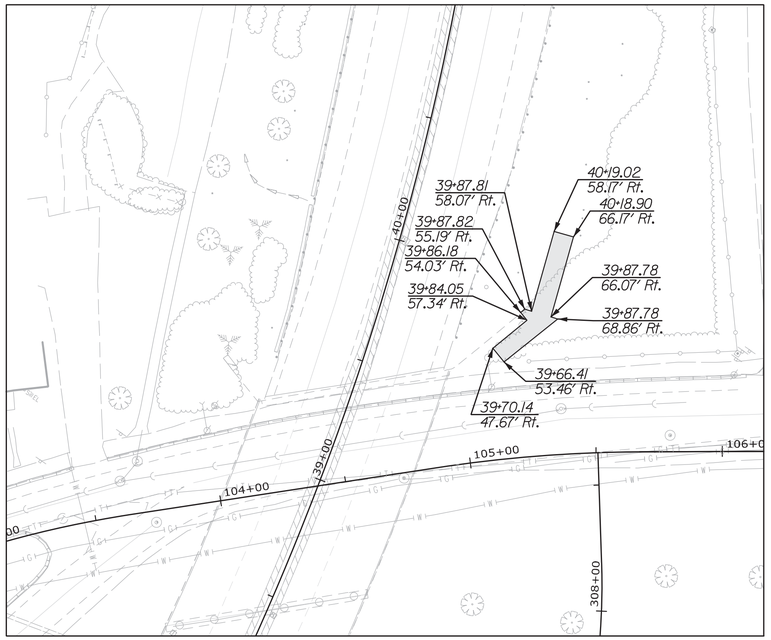
DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
NORTH APPROACH 2

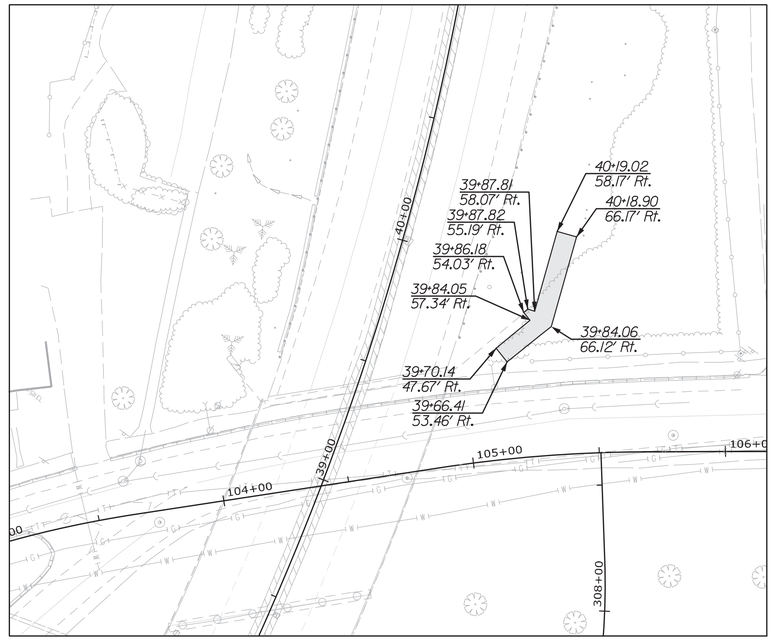
SHEET NUMBER
50
OF 220

Username:
Division:
Date:3/3/2020
Filename: 050_GDPlan_N02.dgn



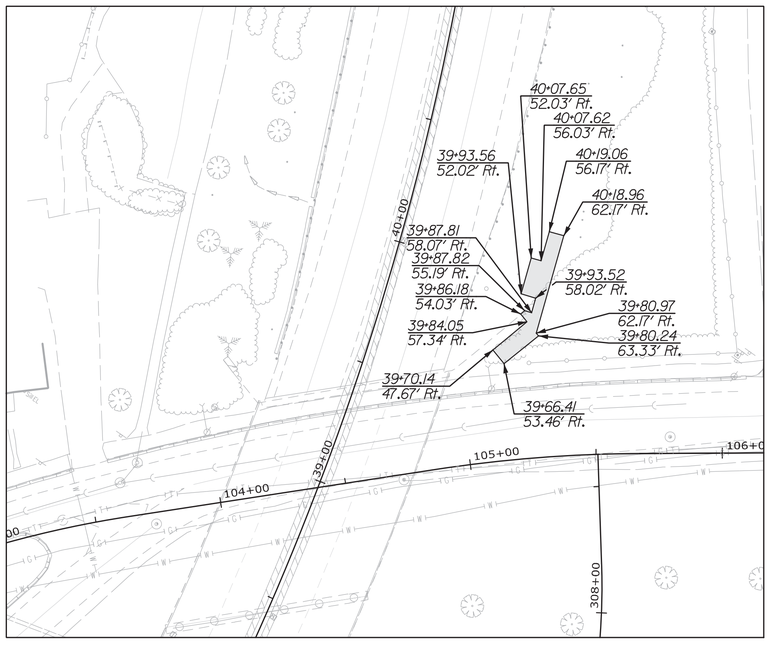

LAYER 9

BOTTOM ELEVATION - EL. 24
TOP ELEVATION - EL. 25




LAYER 10

BOTTOM ELEVATION - EL. 25
TOP ELEVATION - EL. 26




LAYER 11

BOTTOM ELEVATION - EL. 26
TOP ELEVATION - EL. 27

LEGEND:

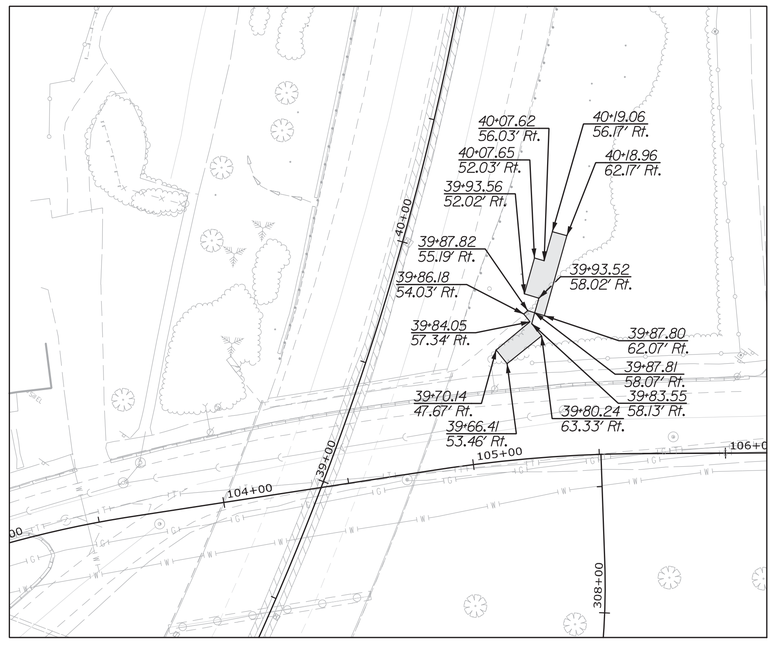
EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60

Scale of Feet




LAYER 12

BOTTOM ELEVATION - EL. 27
TOP ELEVATION - EL. 28

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
NORTH APPROACH 3

SHEET NUMBER

51

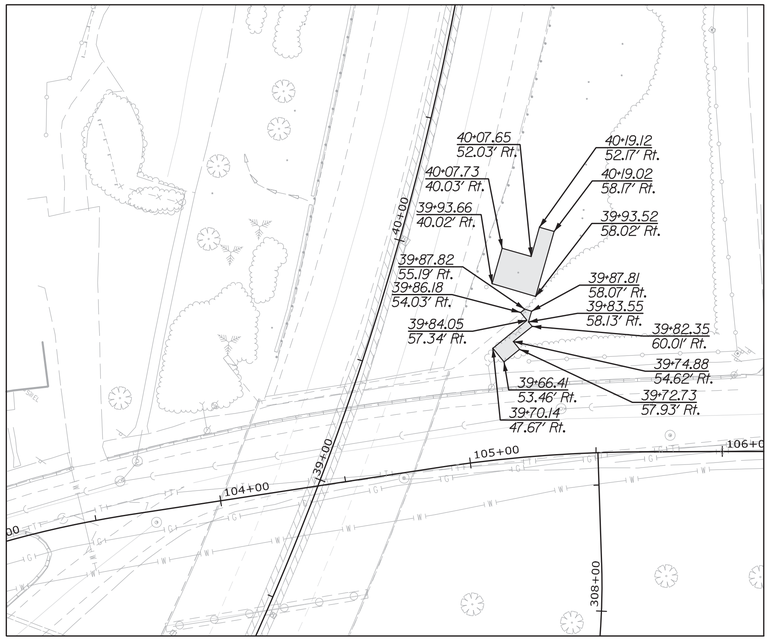
OF 220

Username:

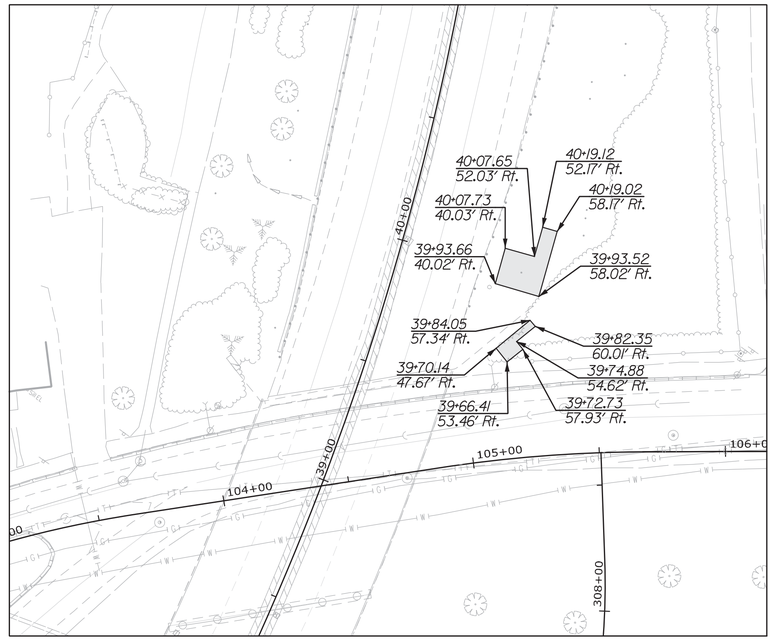
Date:3/3/2020

Division:

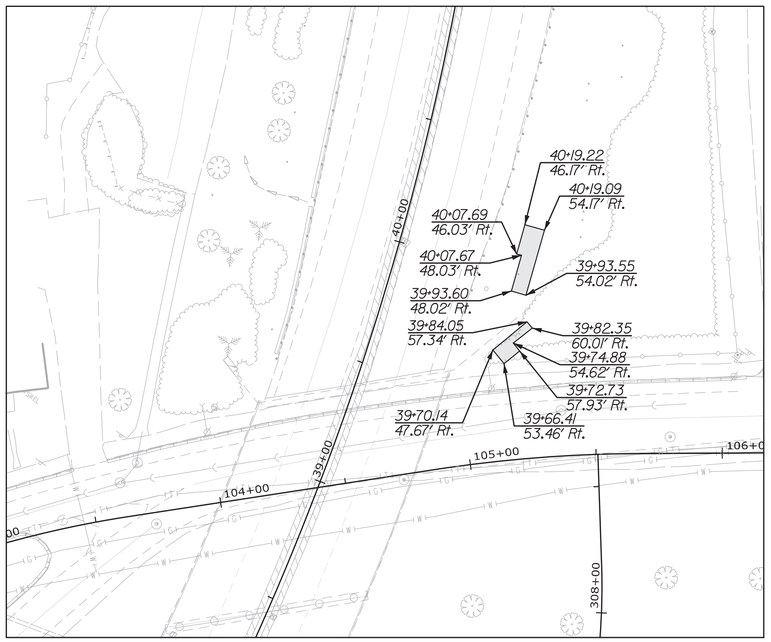
Filename: 051_GDPlan_N03.dgn




LAYER 13
BOTTOM ELEVATION - EL. 28
TOP ELEVATION - EL. 29




LAYER 14
BOTTOM ELEVATION - EL. 29
TOP ELEVATION - EL. 30




LAYER 15
BOTTOM ELEVATION - EL. 30
TOP ELEVATION - EL. 31

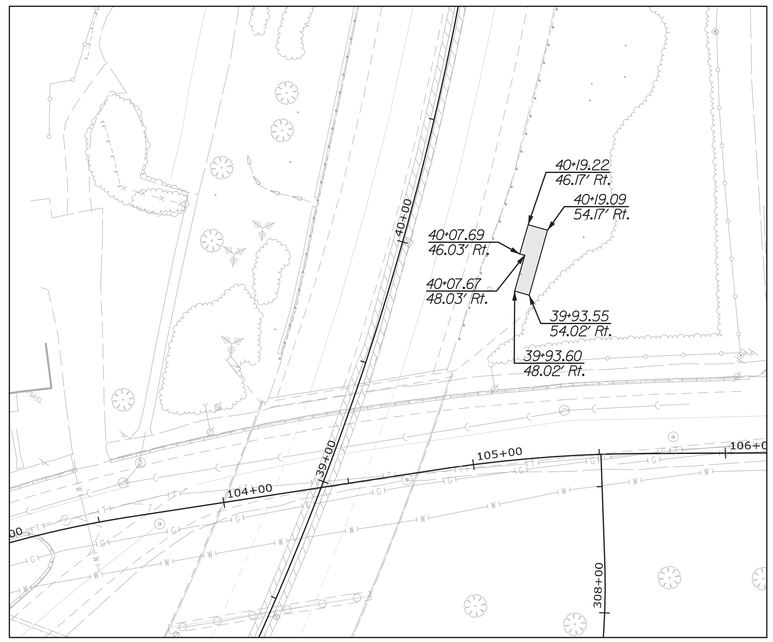
LEGEND:

EPS 22 Geofoam

Min. Limits of EPS 39 Geofoam

PLAN

30 0 30 60
Scale of Feet




LAYER 16
BOTTOM ELEVATION - EL. 31
TOP ELEVATION - EL. 32

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

GEOFOAM LAYOUT PLAN
NORTH APPROACH 4

SHEET NUMBER
52
OF 220

Username:
Division:
Date:3/3/2020
Filename: 052_GDPlan_N04.dgn

## LEGEND

EI. XX.XX = Top elevation of Lightweight Foam Concrete Distribution Slab

– – – – – – = Break in Bottom Elevation of Lightweight Foam Concrete Distribution Slab

——— = Break in Top Elevation of Lightweight Foam Concrete Distribution Slab

## NOTES

1. Stations and offsets measured from ℄ I-295.

2. Lightweight Foam Concrete Distribution Slab to be constructed directly on top of the HDPE Membrane encapsulating the Geofoam Lightweight Fill.

℄ Veranda St.

℄ SB

℄ I-295

℄ NB

237+00
37+00
137+00
238+00
38+00
138+00
239+00
39+00
139+00
240
40+
140
103+00
104+00
105+00

37+09.38 44.52' Lt.
37+28.41 34.46' Lt.
37+35.26 23.18' Lt.
37+66.60 30.77' Lt.
37+70.689 23.57' Lt.
37+74.73 35.09' Lt.
37+81.39 23.17' Lt.
37+89.88 48.63' Lt.
37+90.37 47.97' Lt.
37+98.31 37.00' Lt.
38+04.78 48.71' Lt.
38+07.71 23.67' Lt.
38+08.44 43.71' Lt.
38+36.02 4.01' Lt.
39+11.11 51.32' Lt.
39+21.13 33.73' Lt.
39+32.35 51.67' Lt.

EI. 28.25
EI. 25.25
EI. 26.25
EI. 30.25
EI. 32.25
EI. 34.25

37+55.29 11.41' Rt.
37+65.40 32.77' Rt.
37+66.22 31.36' Rt.
37+89.83 11.65' Rt.
37+99.18 10.26' Rt.
38+00.60 32.62' Rt.
38+01.93 35.26' Rt.
38+06.99 32.62' Rt.
38+09.73 31.19' Rt.
38+25.56 2.79' Rt.
38+30.39 10.22' Rt.
38+42.68 29.67' Rt.
38+44.69 32.94' Rt.
38+53.37 22.80' Rt.
38+53.90 50.34' Rt.
38+54.00 48.29' Rt.
38+68.91 48.22' Rt.
37+57.70 46.08' Rt.
37+57.84 49.82' Rt.
39+50.67 34.68' Rt.
39+57.35 48.39' Rt.
39+57.93 34.70' Rt.
39+65.87 54.31' Rt.
39+72.29 44.35' Rt.

EI. 28.25
EI. 32.25
EI. 30.25
EI. 34.25
EI. 25.25

## FOAM CONCRETE DISTRIBUTION SLAB PLAN

10 0 10 20
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | 2\20 | |
| CHECKED-REVIEWED | T.JP | 2\20 | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

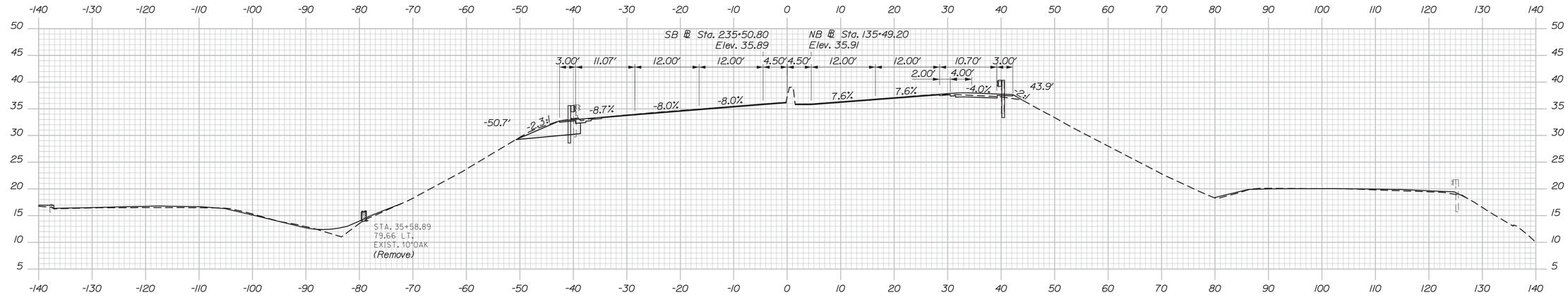
LIGHTWEIGHT FOAM CONCRETE DISTRIBUTION SLAB PLAN

SHEET NUMBER

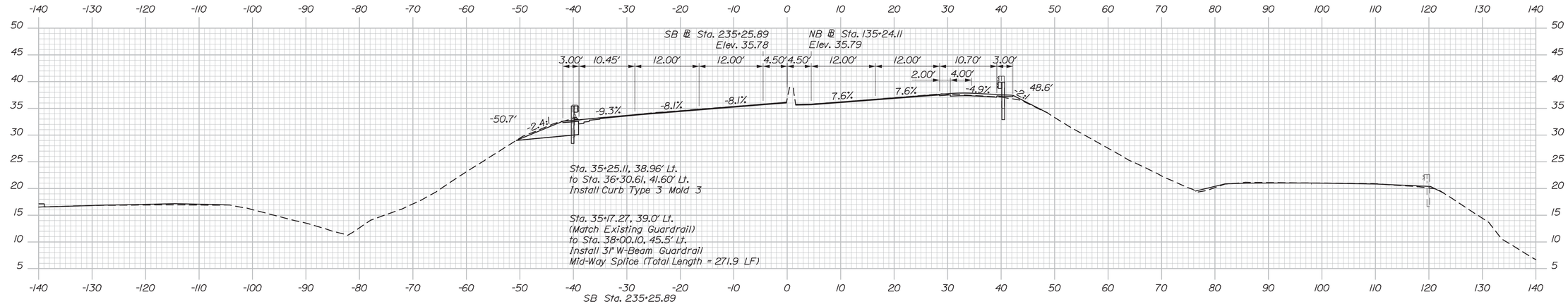
53

OF 220

Filename: 053_Foam Concrete Distribution Slab.dgn Division: Username: Date:3/3/2020

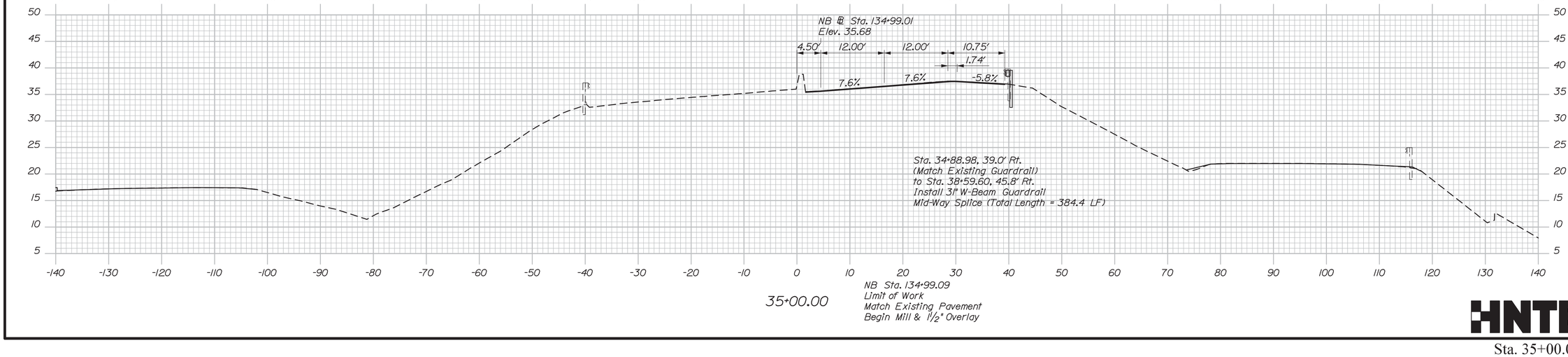



35+50.00




SB Sta. 235+25.89
Limit of Work
Match Existing Pavement
Begin Shoulder Widening
Begin Mill & 1½" Overlay

35+25.00




35+00.00

NB Sta. 134+99.09
Limit of Work
Match Existing Pavement
Begin Mill & 1½" Overlay

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE PLANS

BRIDGE NO.5933

SIGNATURE

P.E. NUMBER

DATE

| | D. EATON | DATE |
|---|---|---|
| PROJ. MANAGER | | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
I 295

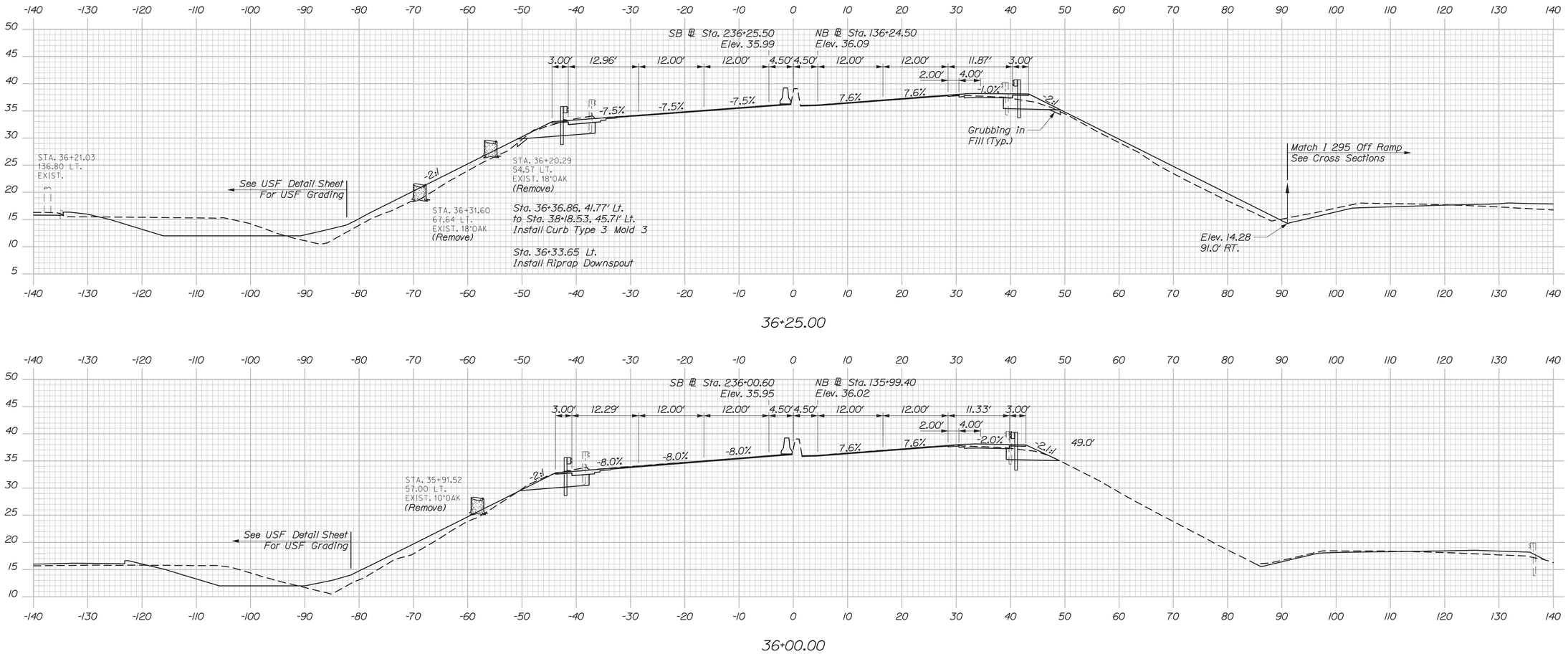
SHEET NUMBER

54

OF 220

Sta. 35+00.00 to Sta. 35+50.00

Username:
Division:
Date:3/3/2020
Filename: Xsect_295.dgn




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| PROJ. MANAGER | D. EATON |
|---|---|
| DESIGN-DETAILED | EDD |
| CHECKED-REVIEWED | RWH |
| DESIGN2-DETAILED2 | |
| DESIGN3-DETAILED3 | |

| | BY | DATE |
|---|---|---|
| REVISIONS 1 | CDH | 2\20 |
| REVISIONS 2 | LZD | 2\20 |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS I 295

SHEET NUMBER

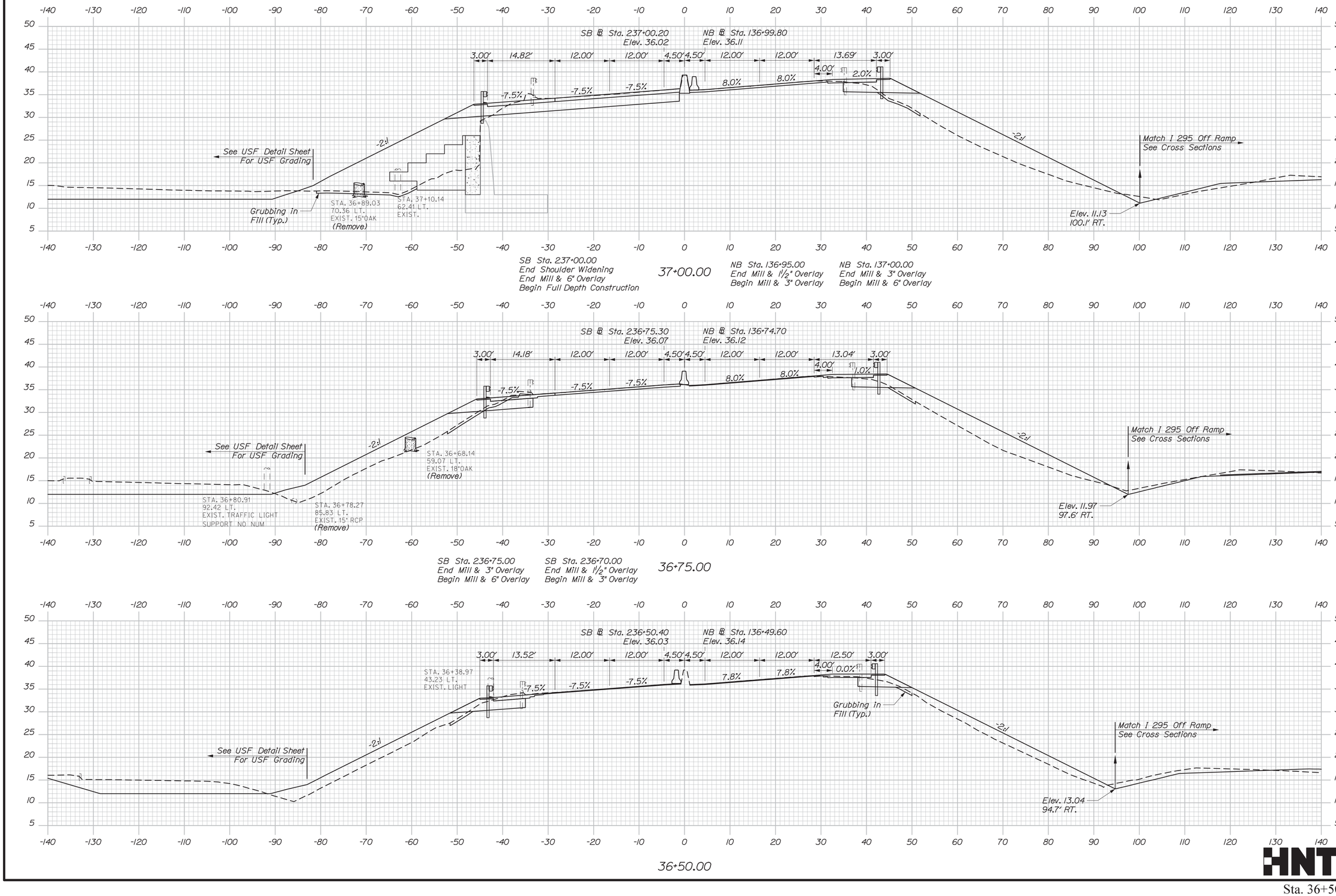
55

OF 220

HNTB

Sta. 35+75.00 to Sta. 36+25.00

Filename: Xsect_295.dgn Division: Username: Date:3/3/2020




Sta. 36+50.00 to Sta. 37+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

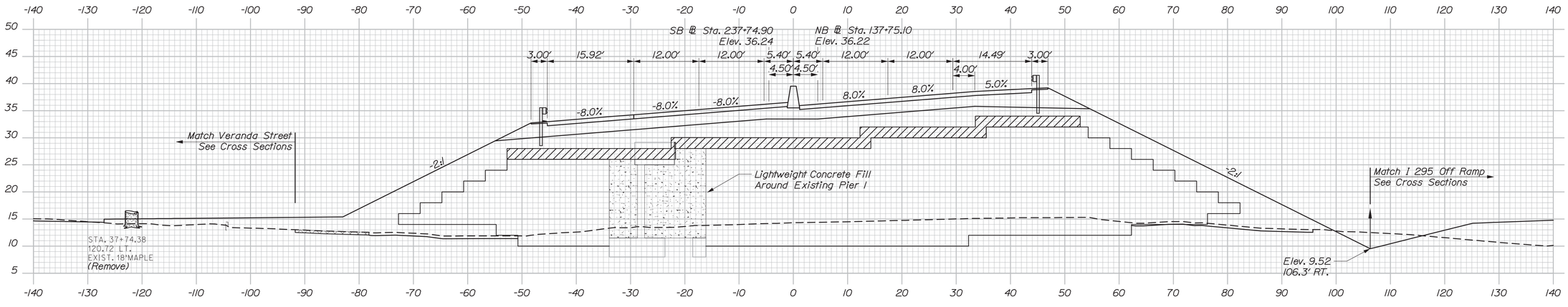
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
I 295

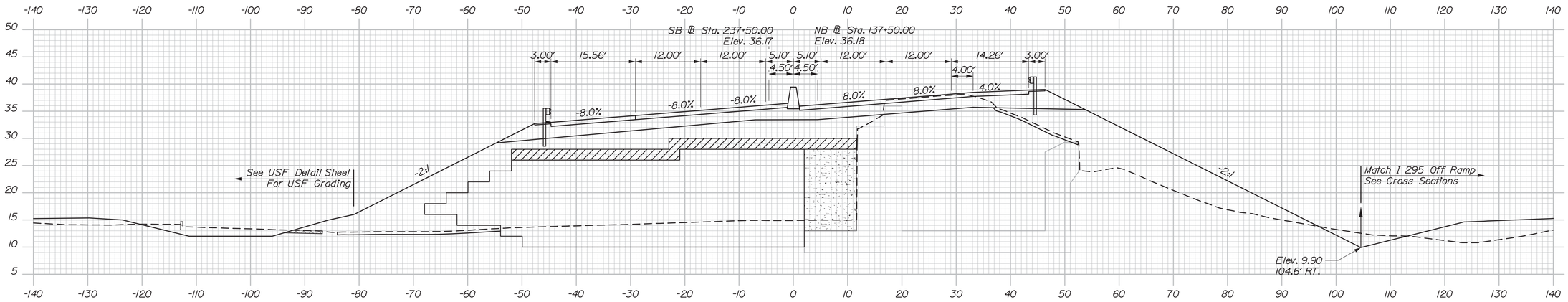
SHEET NUMBER
56
OF 220

HNTB

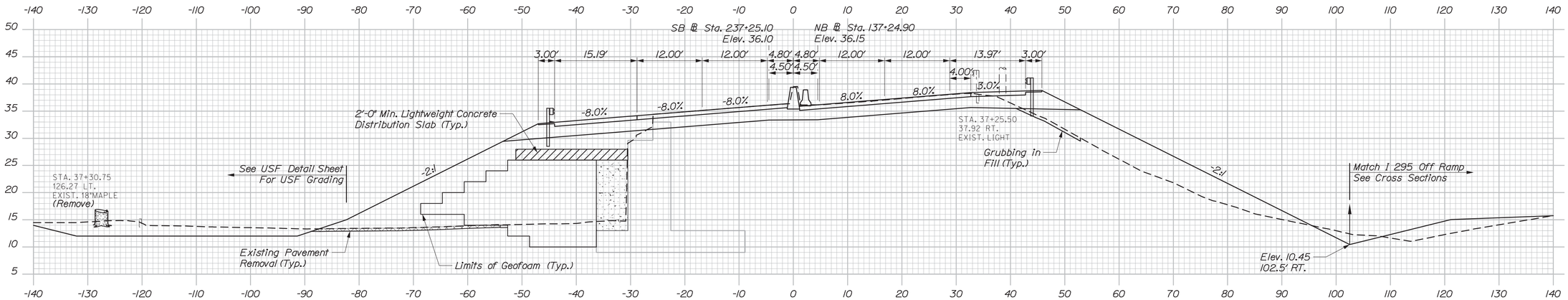
Username:
Division:
Filename: Xsect_295.dgn
Date:3/3/2020




37+75.00




37+50.00




37+25.00

NB Sta. 137+25.00
End Shoulder Widening
End Mill & 6" Overlay
Begin Full Depth Construction

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE PLANS

BRIDGE NO.5933

SIGNATURE

P.E. NUMBER

DATE

| | | DATE |
|---|---|---|
| D. EATON | | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| PROJ. MANAGER | BY | |
| REVISIONS 1 | CDH | |
| REVISIONS 2 | LZD | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS I 295

SHEET NUMBER

57

OF 220

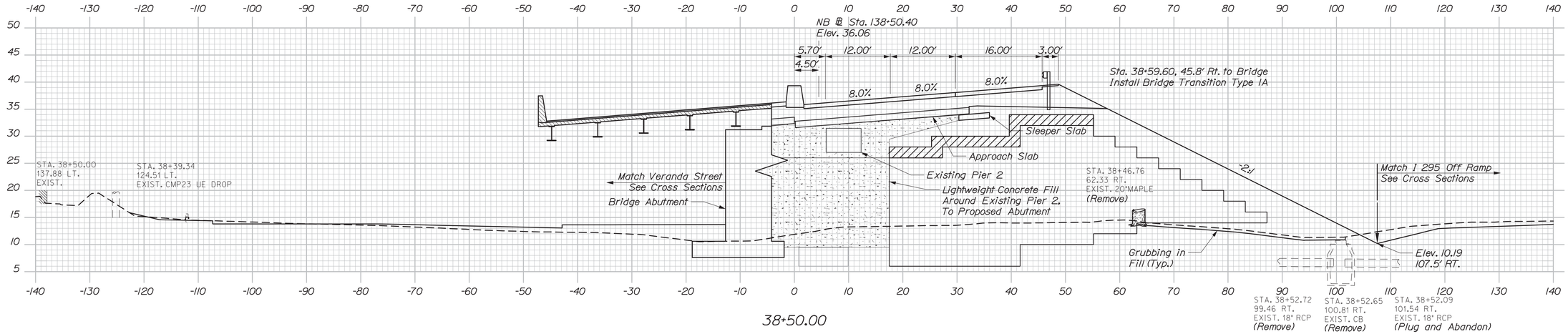
Sta. 37+25.00 to Sta. 37+75.00

Date:3/3/2020

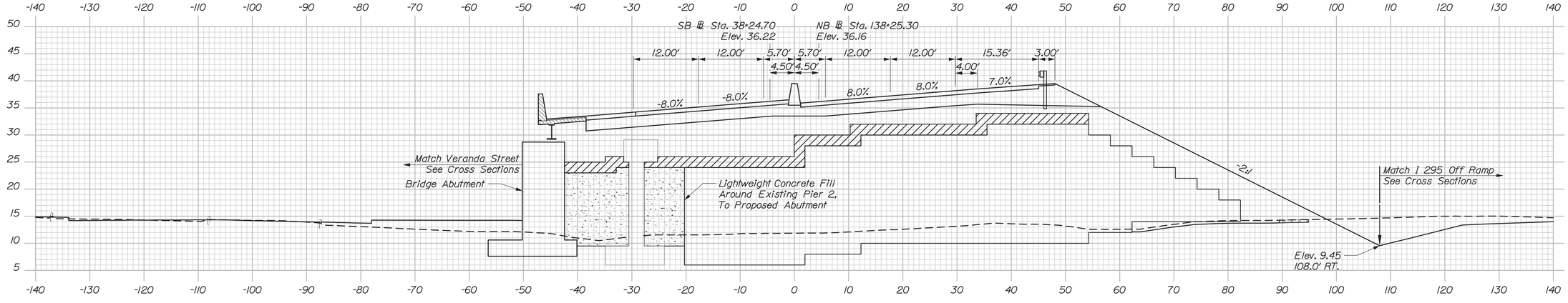
Username:

Division:

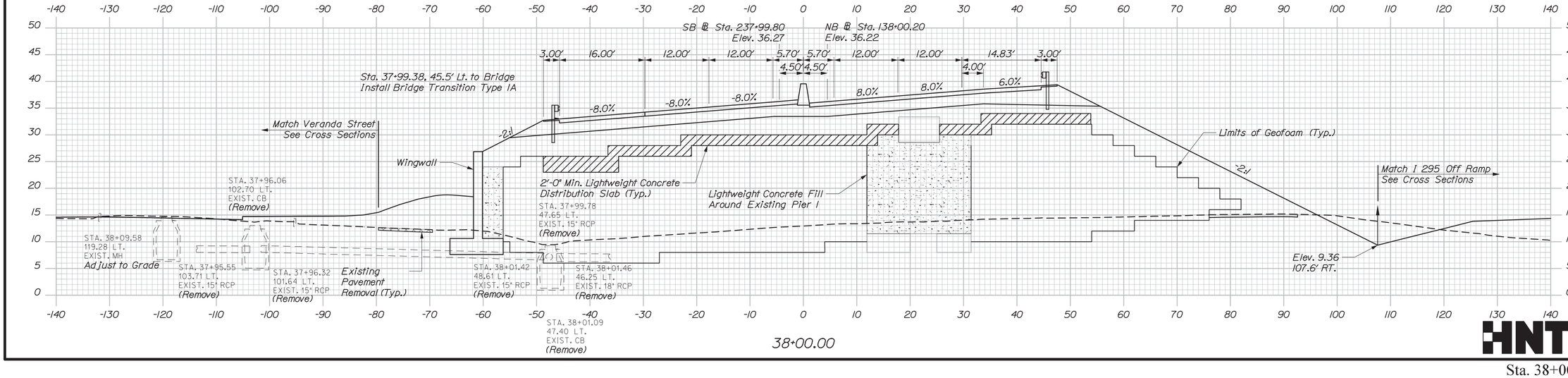
Filename: Xsect_295.dgn




38+50.00




38+25.00




38+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | EDD2 | |
| DESIGN3-DETAILED3 | EDD3 | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS I 295

SHEET NUMBER

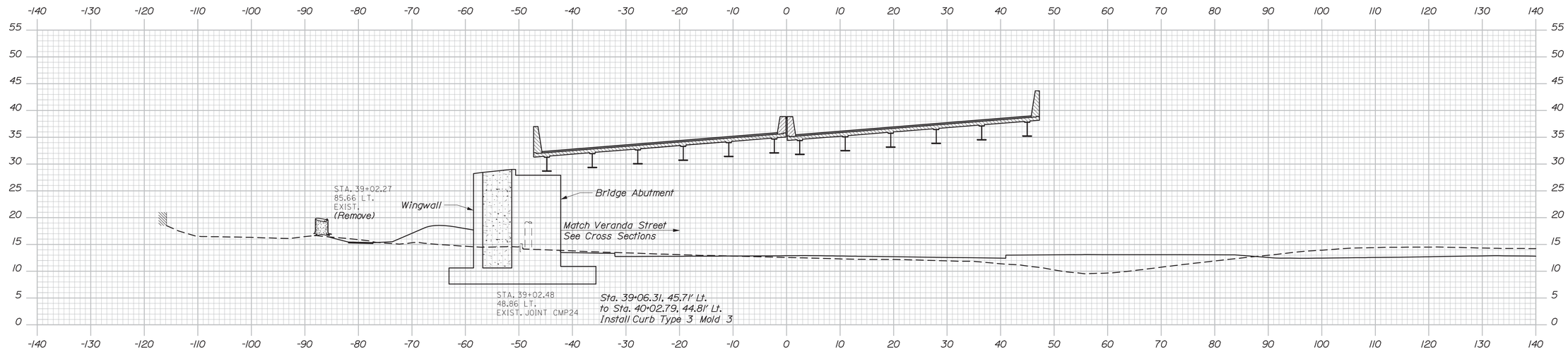
58

OF 220

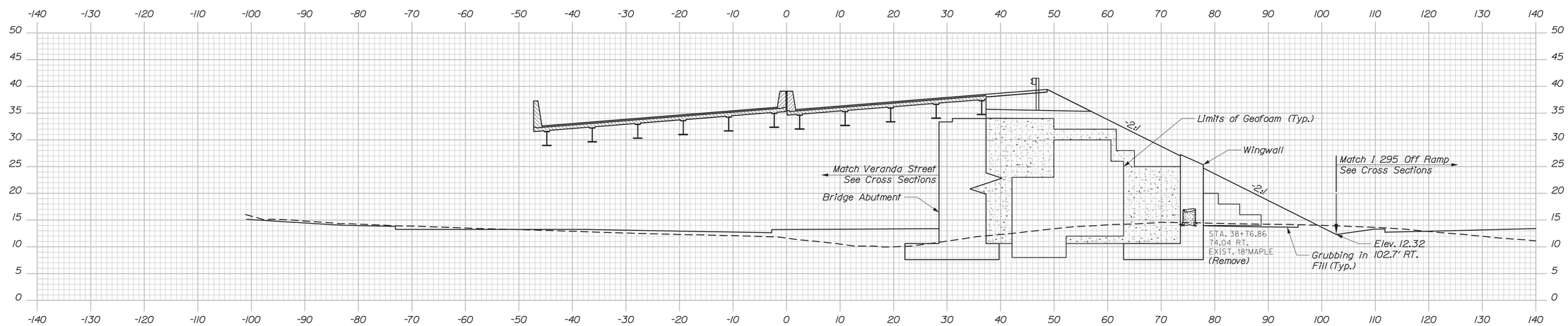
HNTB

Sta. 38+00.00 to Sta. 38+50.00

Filename: Xsect_295.dgn Division: Username: Date:3/3/2020




39+00.00




38+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | EDD | D. EATON | 2\20 |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295

SHEET NUMBER

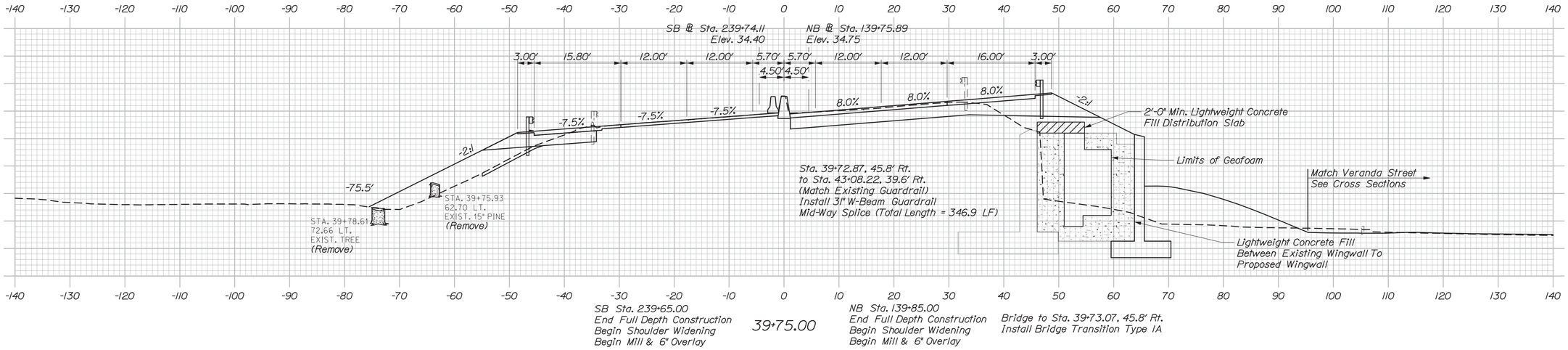
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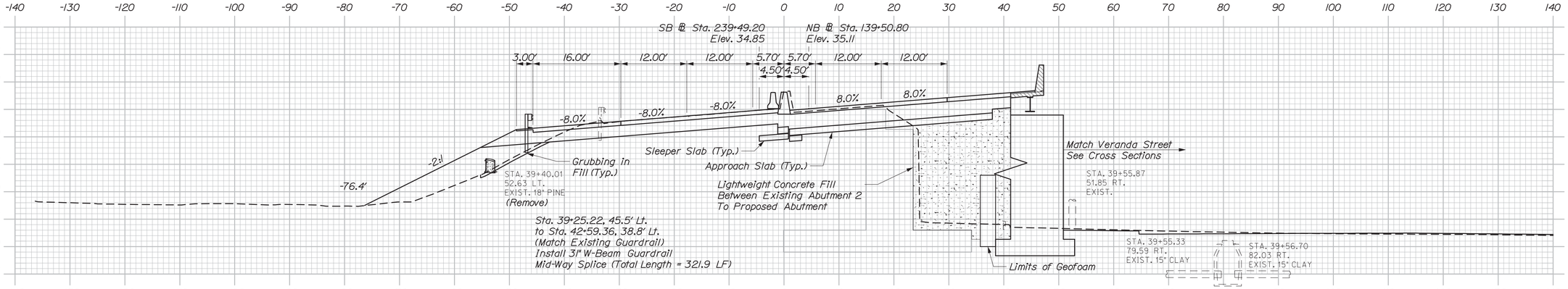
OF 220

HNTB

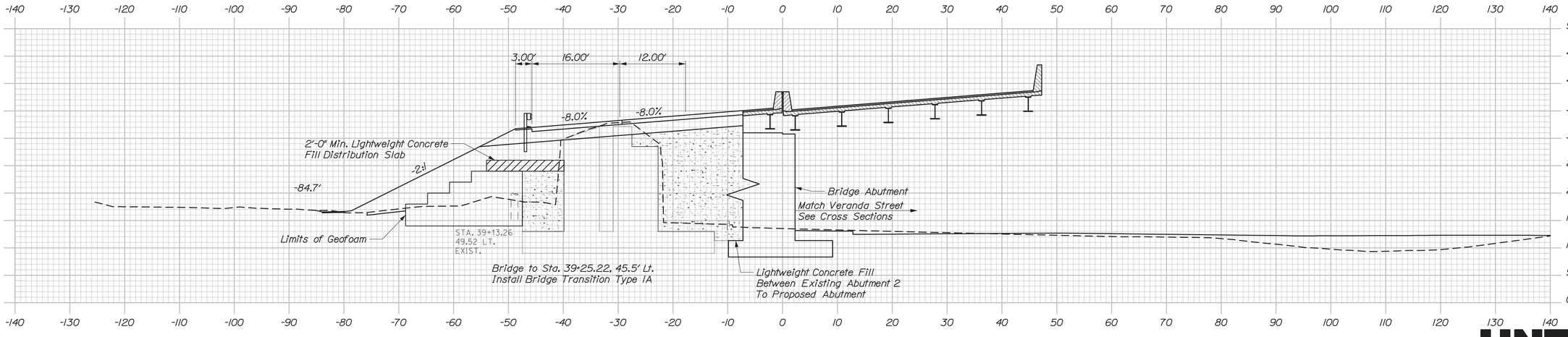
Sta. 38+75.00 to Sta. 39+00.00

Filename: Xsect_295.dgn Division: Username: Date:3/3/2020




39+50.00




39+25.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
I 295

SHEET NUMBER
60
OF 220

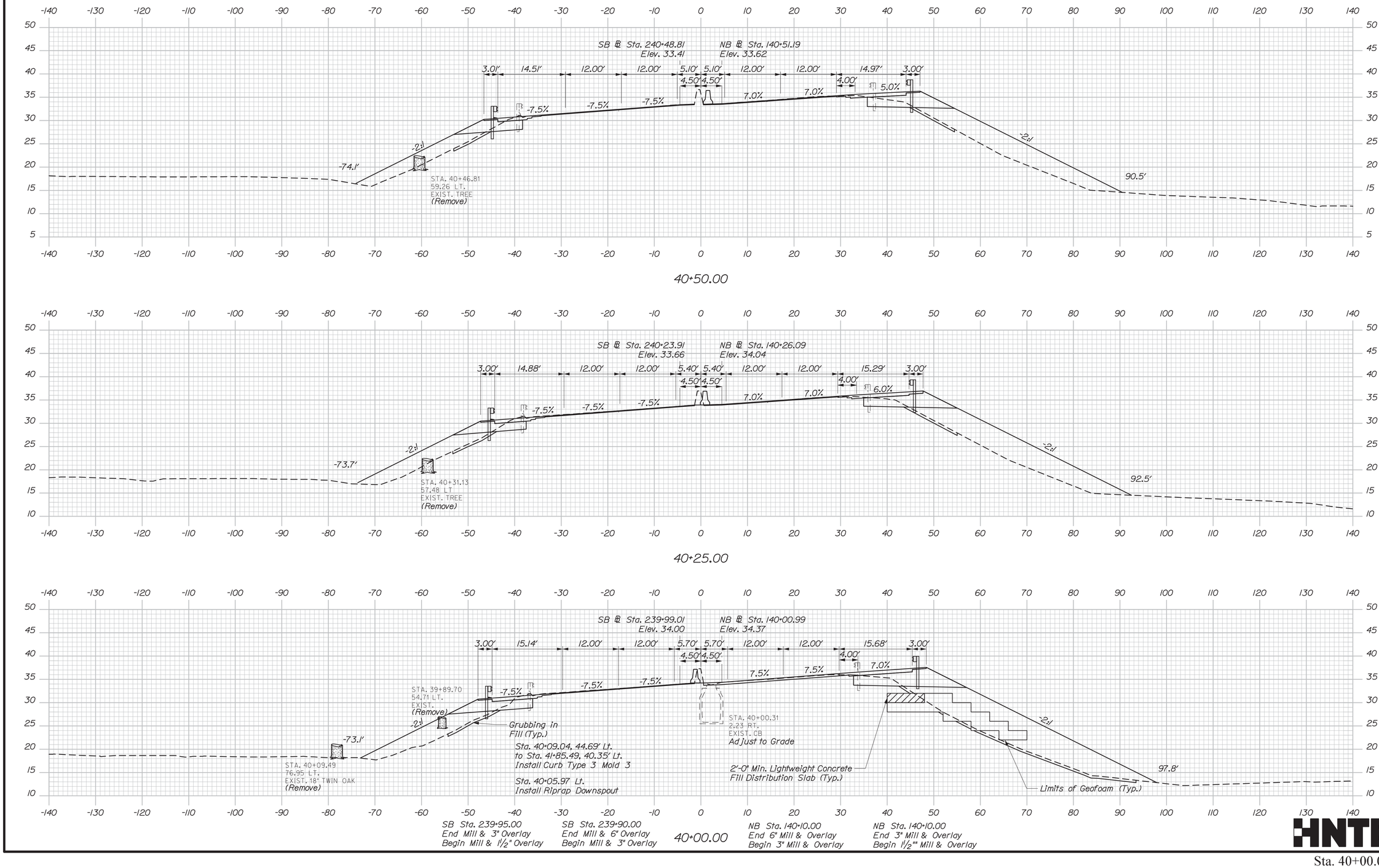
Username:

Division:

Filename: Xsect_295.dgn

Date:3/3/2020

Sta. 39+25.00 to Sta. 39+75.00




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

| PROJ. MANAGER | BY | DATE |
|---|---|---|
| DESIGN-DETAILED | EJD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

D. EATON — COH — LZD

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

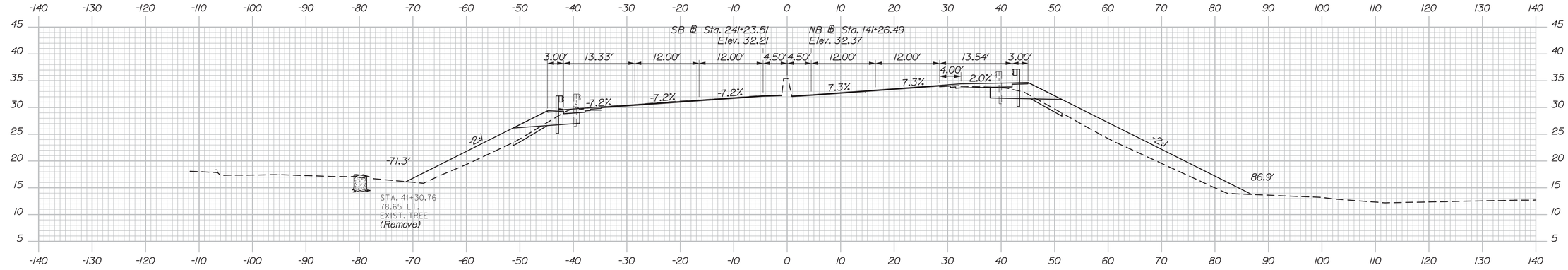
# CROSS SECTIONS
# I 295

SHEET NUMBER
61
OF 220

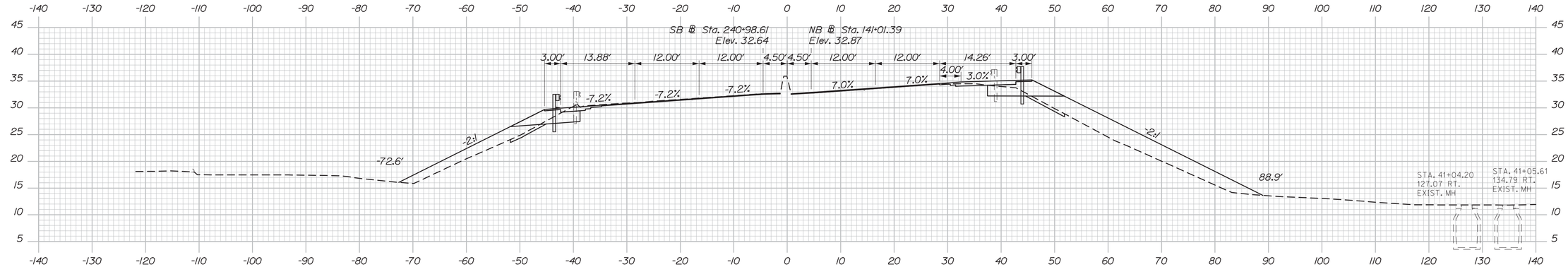
HNTB

Sta. 40+00.00 to Sta. 40+50.00

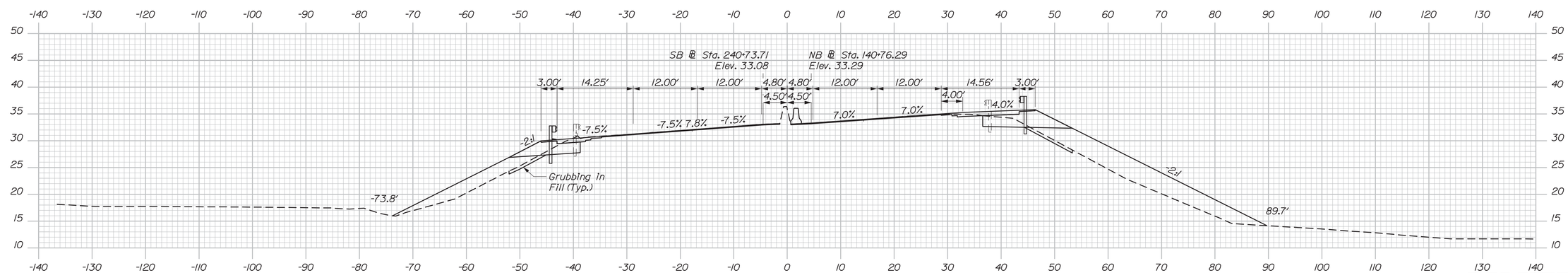
Date:3/3/2020
Username:
Division:
Filename: Xsect_295.dgn




41+25.00




41+00.00




40+75.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
I 295

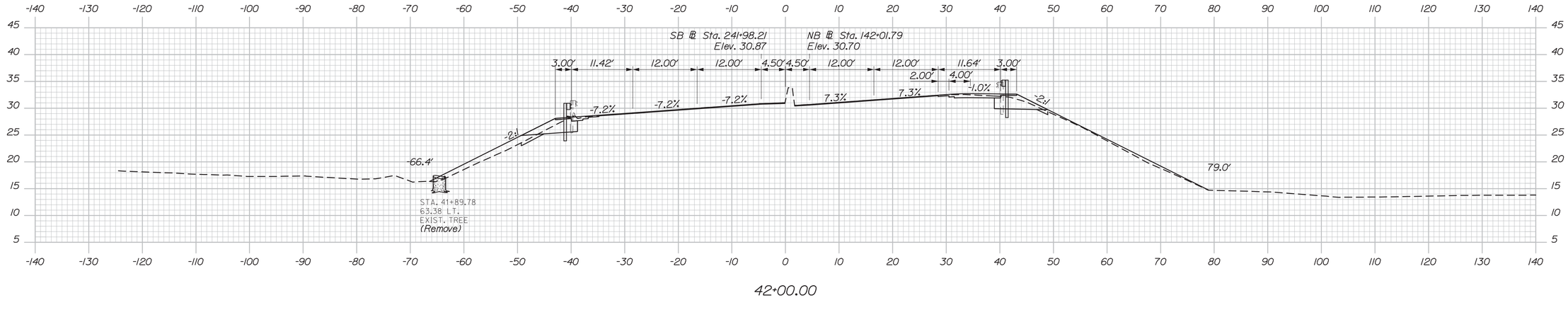
SHEET NUMBER

62

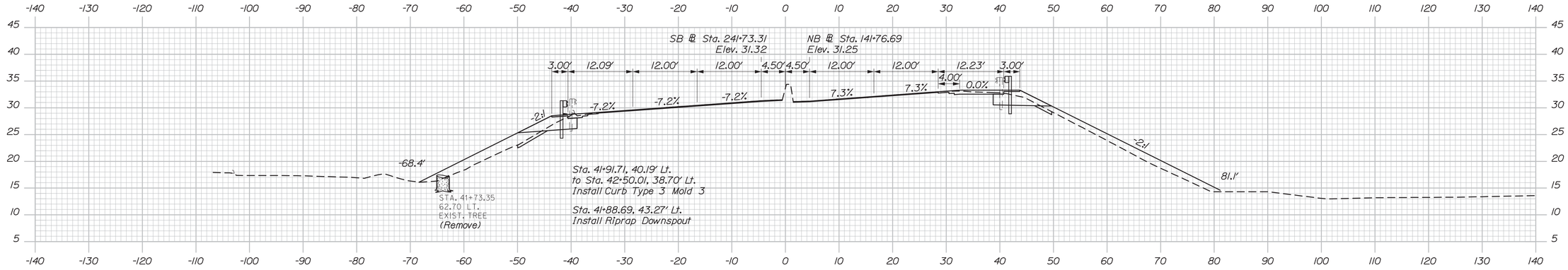
OF 220

Sta. 40+75.00 to Sta. 41+25.00

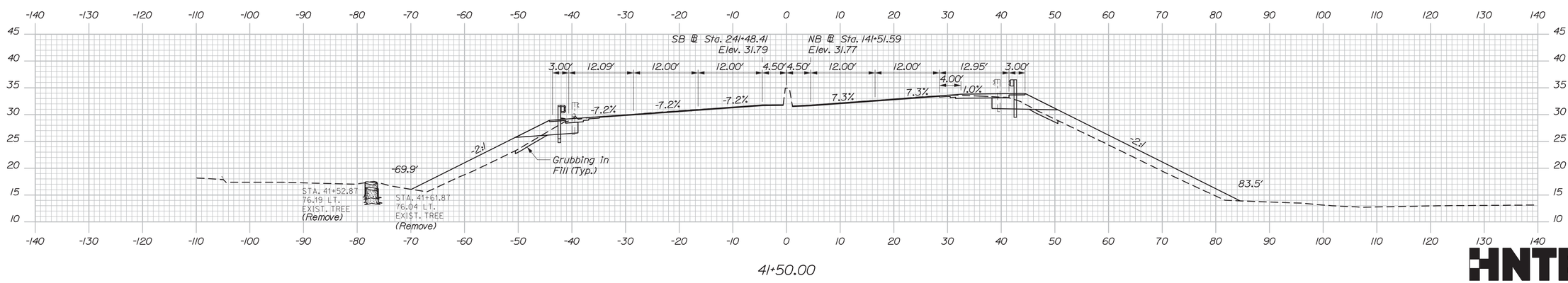
Filename: Xsect_295.dgn Division: Username: Date:3/3/2020




42+00.00




41+75.00




41+50.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS I 295

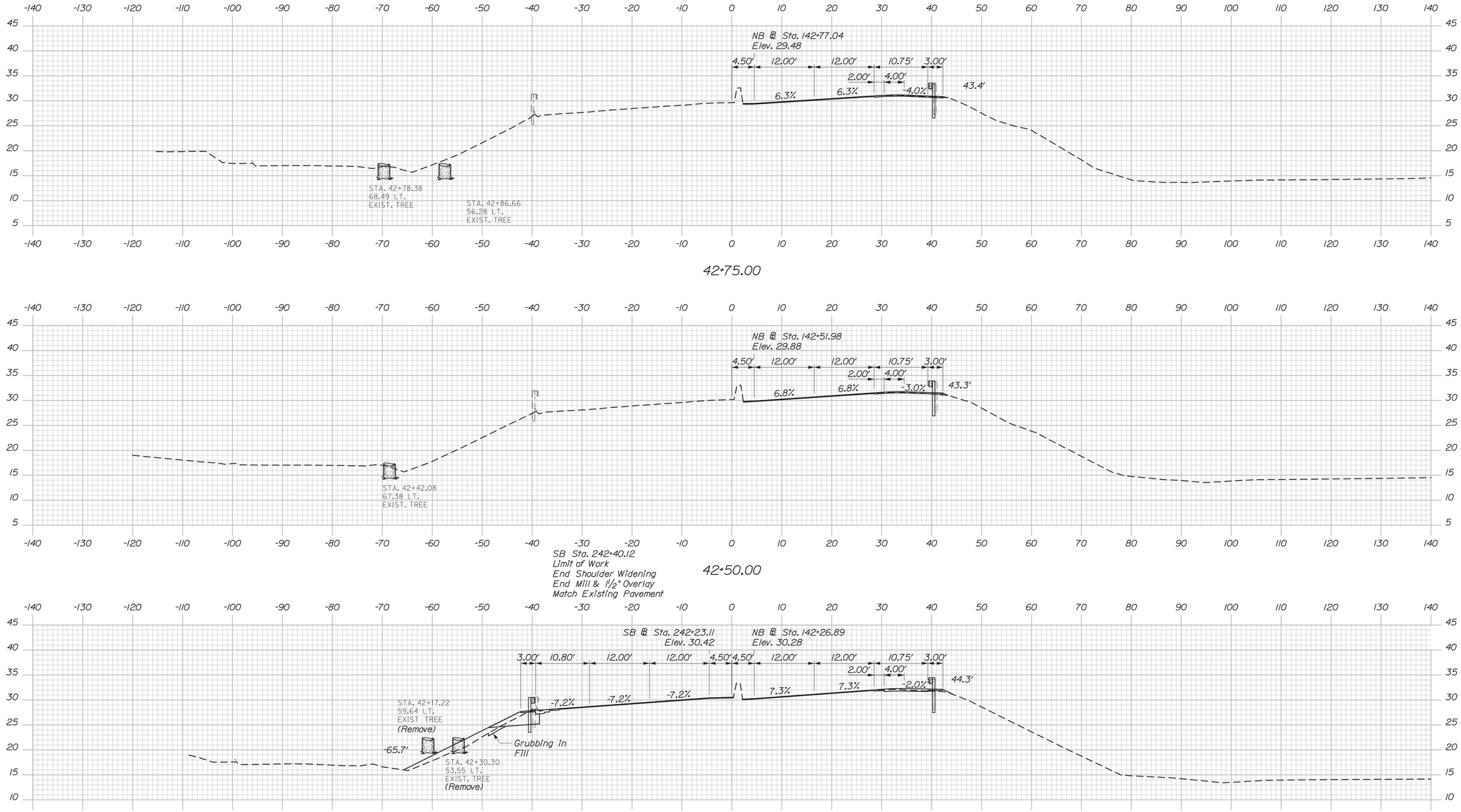
SHEET NUMBER

63

OF 220

Sta. 41+50.00 to Sta. 42+00.00

Username:
Division:
Filename: Xsect_295.dgn
Date:3/3/2020




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS I 295

SHEET NUMBER

64

OF 220

HNTB

Sta. 42+25.00 to Sta. 42+75.00

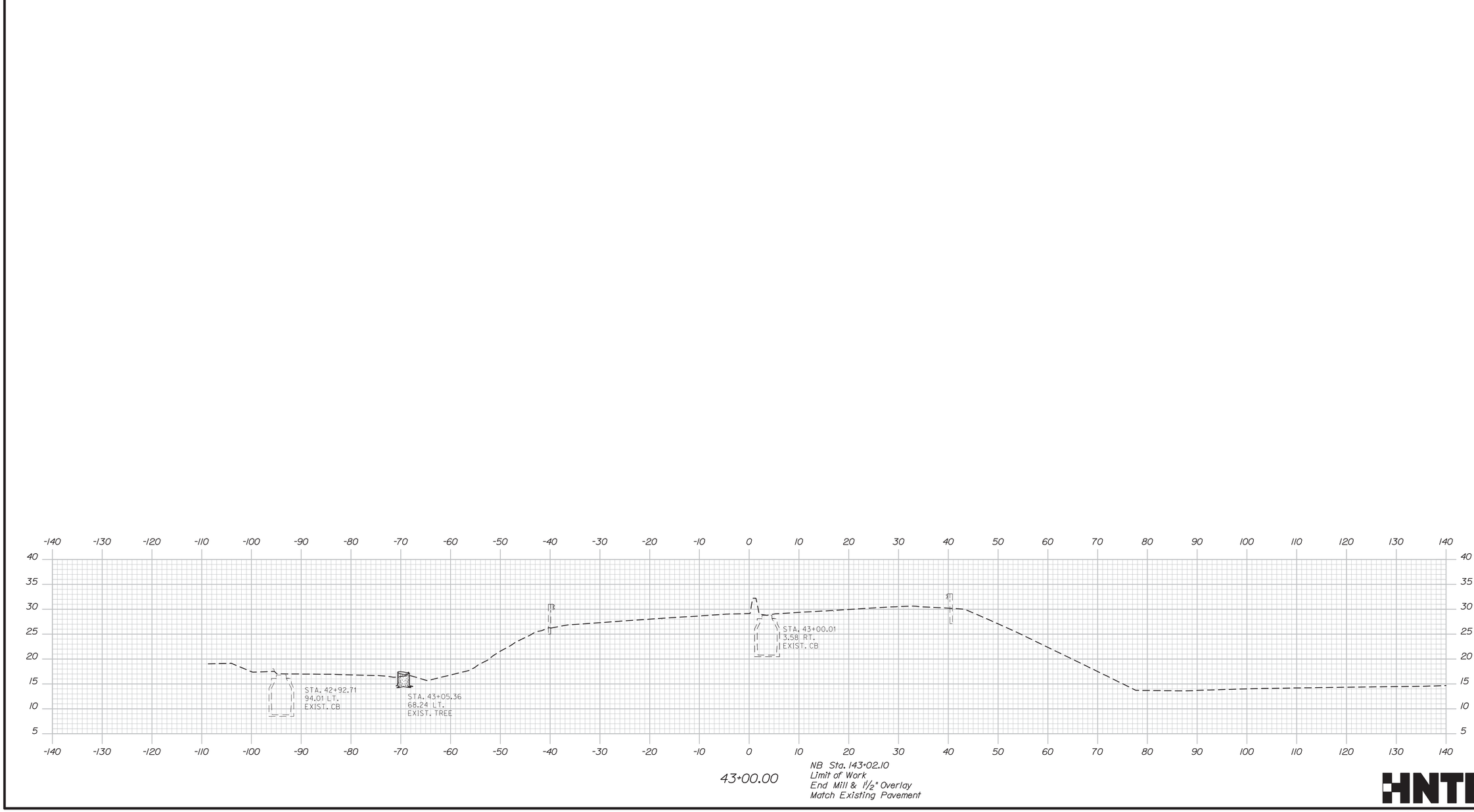
Filename: Xsect_295.dgn Division: Username: Date:3/3/2020

Username:

Date:3/3/2020

Division:

Filename: Xsect_295.dgn




| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295

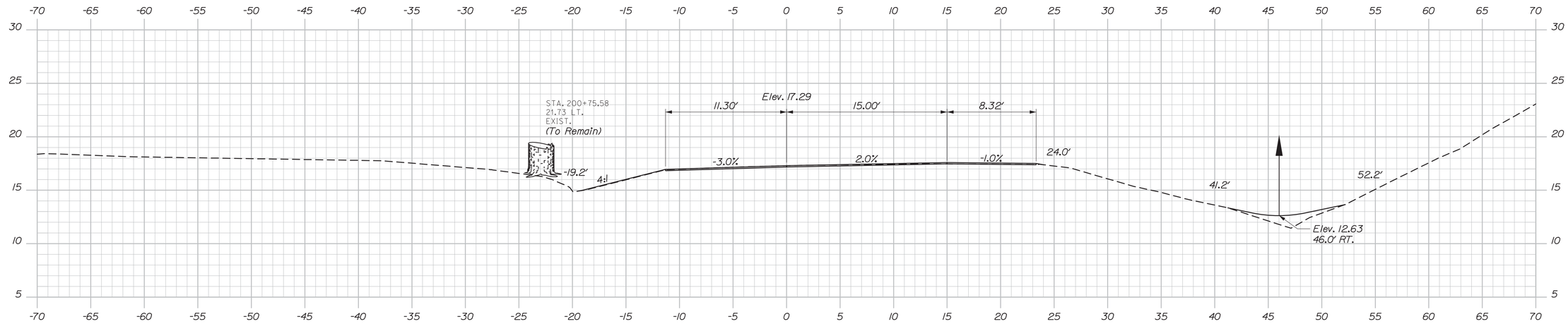
SHEET NUMBER

65

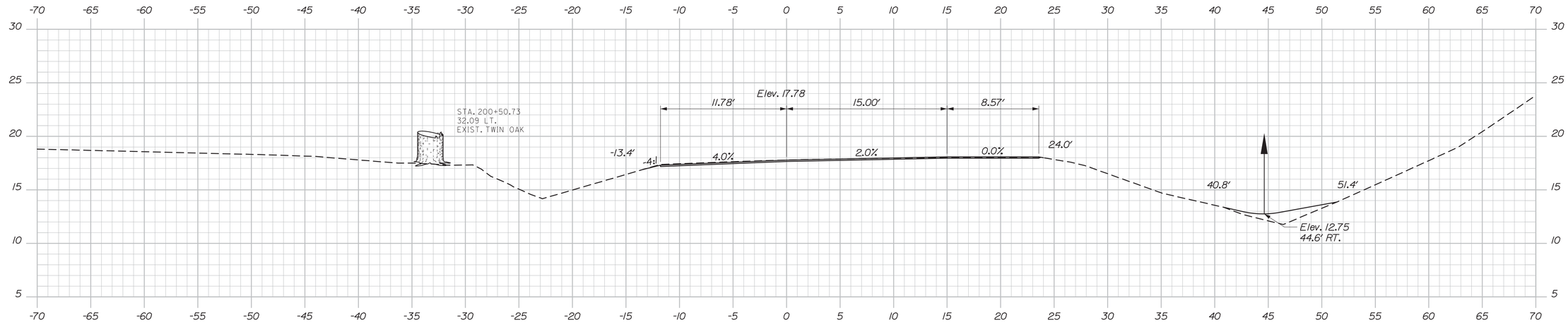
OF 220

HNTB

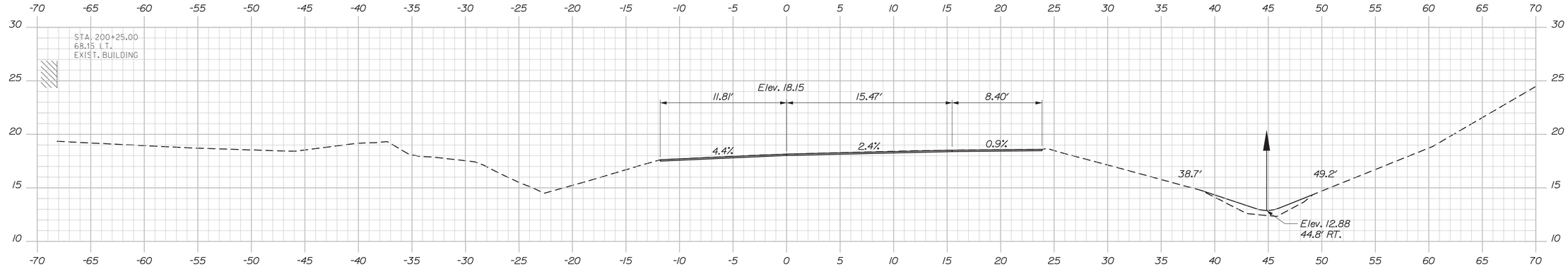
Sta. 43+00.00 to Sta. 43+00.00




200+75.00




200+50.00




200+25.00

Sta. 200+25.00
Match Existing Pavement
Begin Mill & 1½" Overlay

Sta. 200+05.00
Limit of Work

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

CROSS SECTIONS
I 295 SB ON RAMP

SHEET NUMBER

66

OF 220

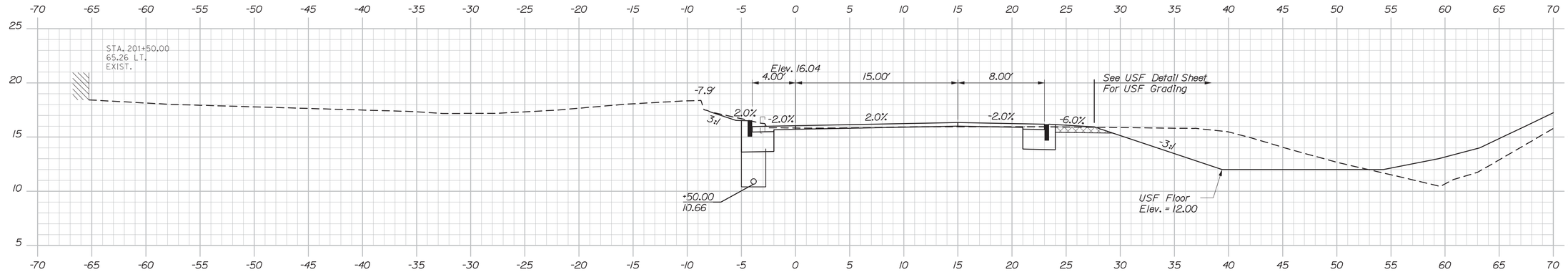
Sta. 200+25.00 to Sta. 200+75.00

Username:

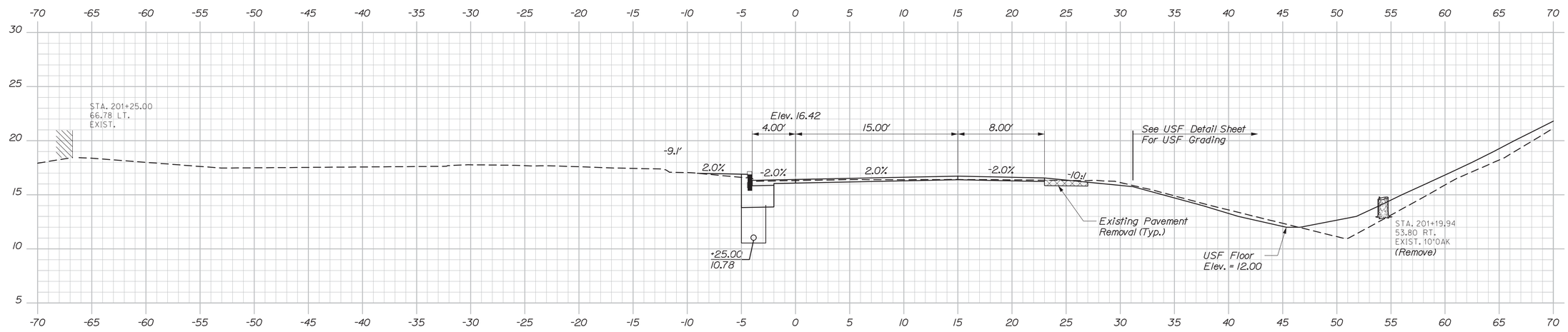
Division:

Date:3/3/2020

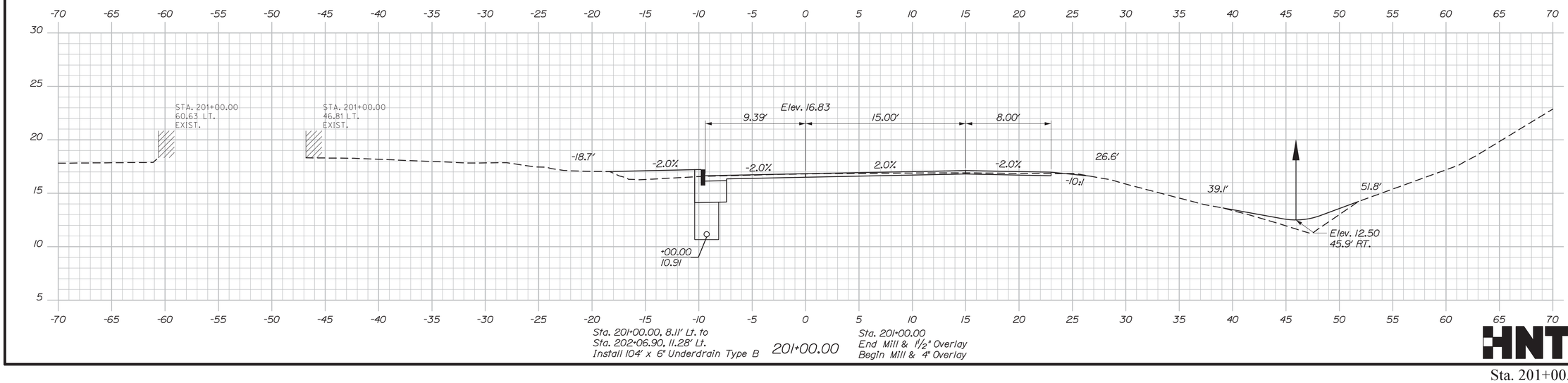
Filename: Xsect_295 On Ramp.dgn




201+50.00




201+25.00




Sta. 201+00.00, 8.11' Lt. to
Sta. 202+06.90, 11.28' Lt.
Install 104' x 6" Underdrain Type B

201+00.00

Sta. 201+00.00
End Mill & 1 1/2" Overlay
Begin Mill & 4" Overlay

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE PLANS

BRIDGE NO.5933

| | BY | DATE |
|---|---|---|
| D. EATON | CDH | 2\20 |
| | LZD | 2\20 |

| | |
|---|---|
| PROJ. MANAGER | |
| DESIGN-DETAILED | |
| CHECKED-REVIEWED | EJD |
| DESIGN2-DETAILED2 | RWH |
| DESIGN3-DETAILED3 | |
| REVISIONS 1 | |
| REVISIONS 2 | |
| REVISIONS 3 | |
| REVISIONS 4 | |
| FIELD CHANGES | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 SB ON RAMP

SHEET NUMBER

67

OF 220

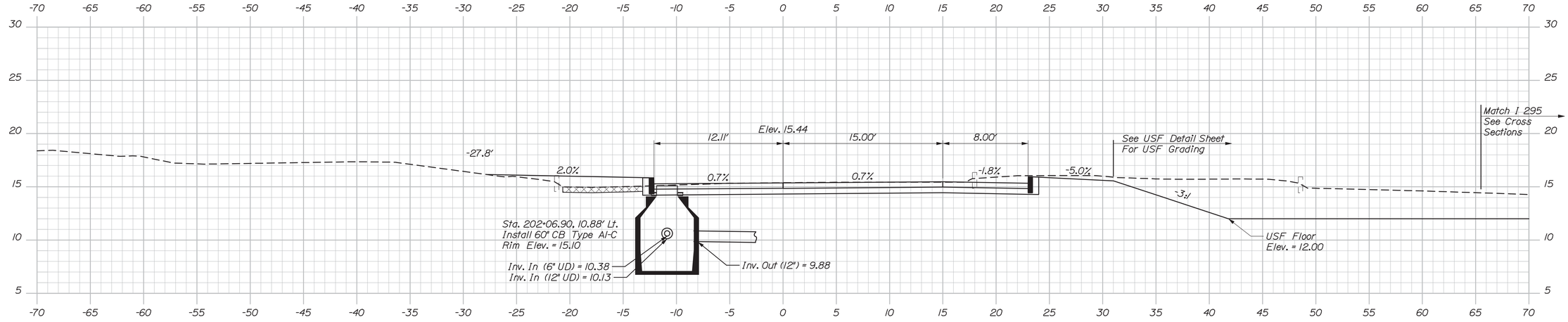
Date:3/3/2020

Username:

Division:

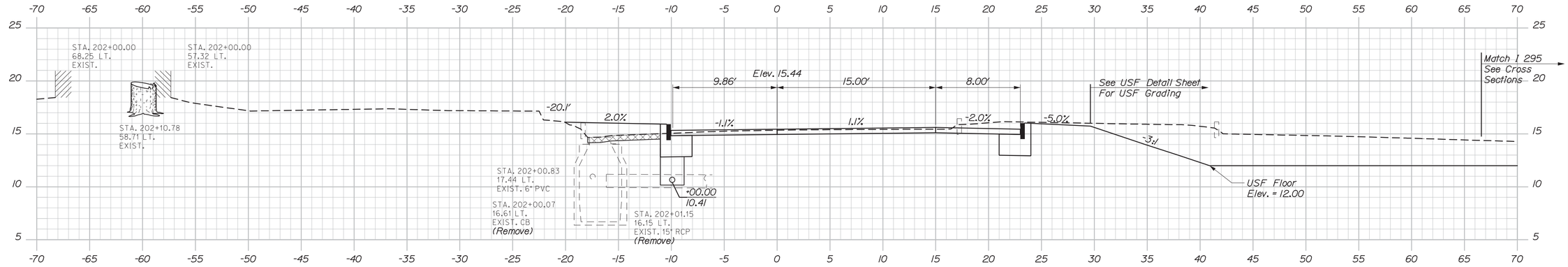
Filename: Xsect_295 On Ramp.dgn

Sta. 201+00.00 to Sta. 201+50.00



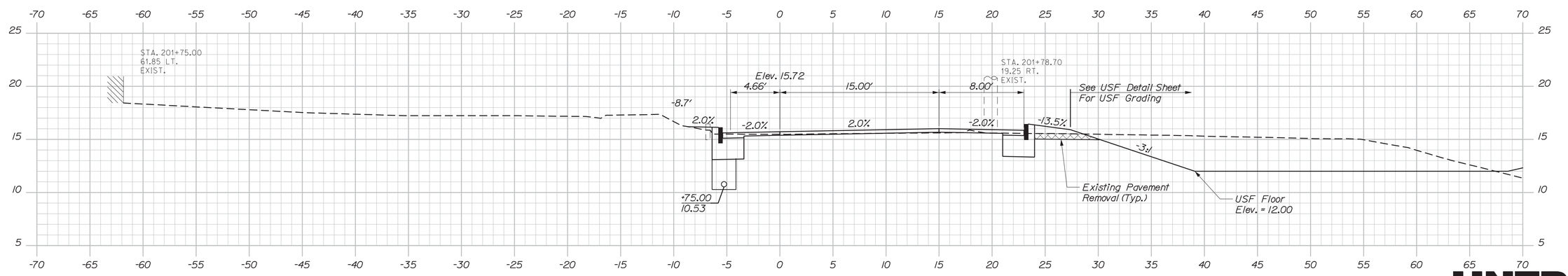

Sta. 202+06.90, 10.88' Lt. to
Sta. 101+97.84, 17.80' Rt.
Install 72' x 12" RCP Class III

202+06.90




202+00.00

Sta. 201+00.00
End Mill & 4" Overlay
Begin Full Depth Construction




201+75.00

Sta. 201+75.00 to Sta. 202+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

P.E. NUMBER

SIGNATURE

DATE

| PROJ. MANAGER | BY | DATE |
|---|---|---|
| DESIGN-DETAILED | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | EJD | |
| DESIGN3-DETAILED3 | LZD | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

D. EATON

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 SB ON RAMP

SHEET NUMBER

68

OF 220

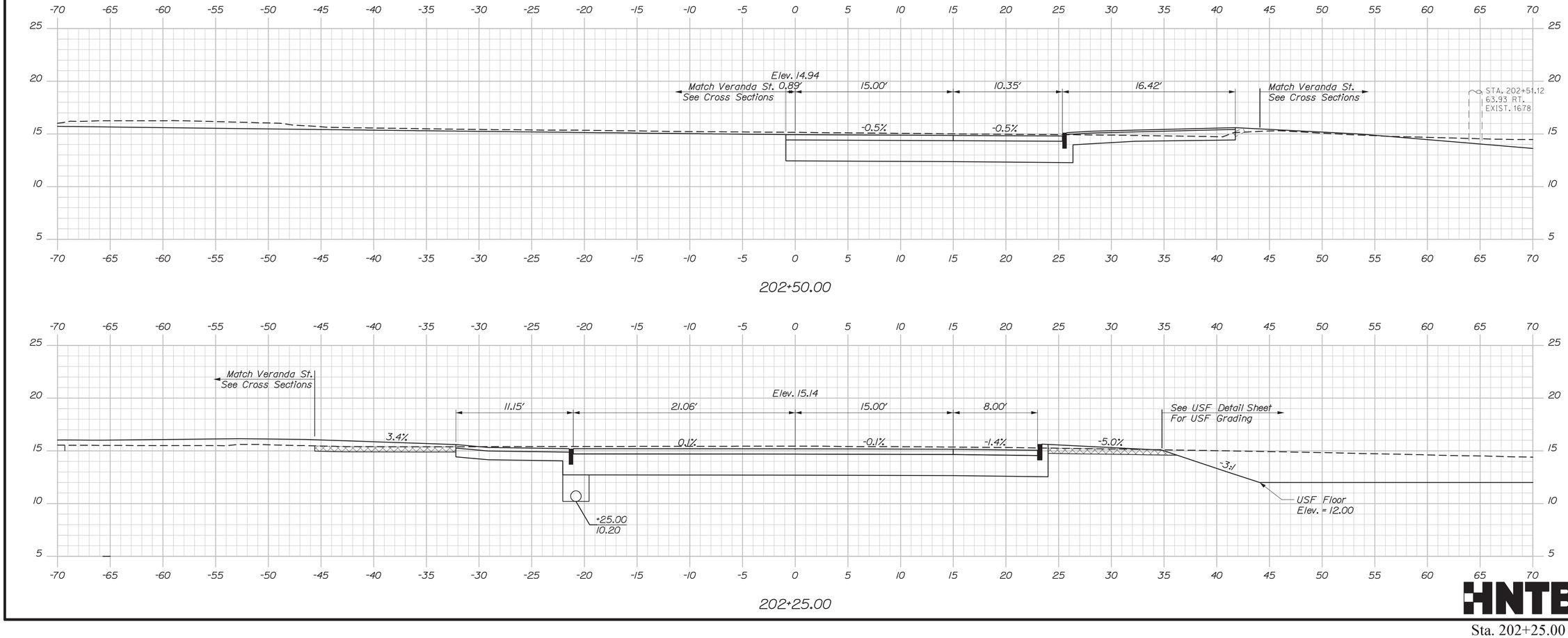
HNTB

Date:3/3/2020

Username:

Division:

Filename: Xsect_295 On Ramp.dgn




Sta. 202+25.00 to Sta. 202+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 SB ON RAMP

SHEET NUMBER

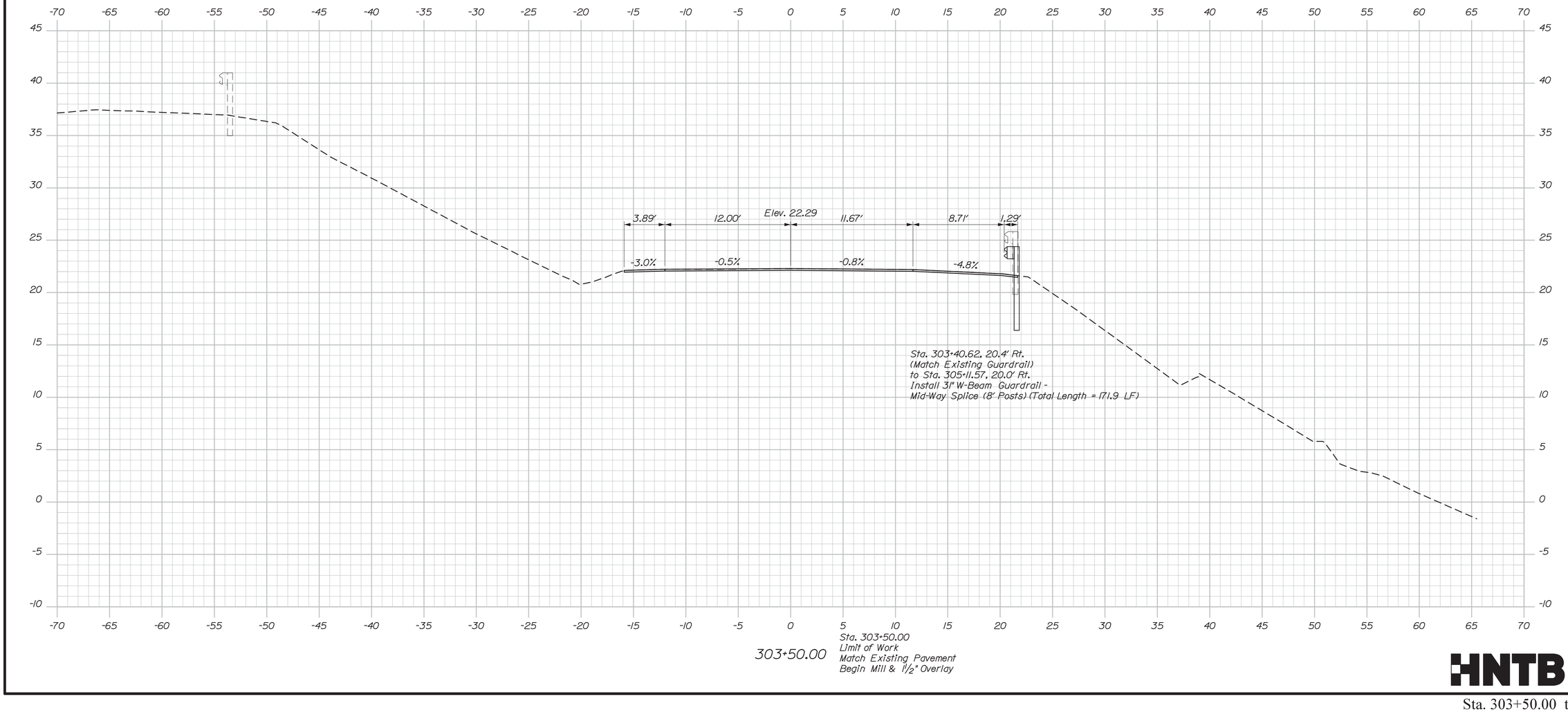
69

OF 220

HNTB

Filename: Xsect_295 On Ramp.dgn Division: Username: Date:3/3/2020

Filename: Xsect_295 Off Ramp.dgn Division: Username: Date:3/3/2020




HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

70

OF 220

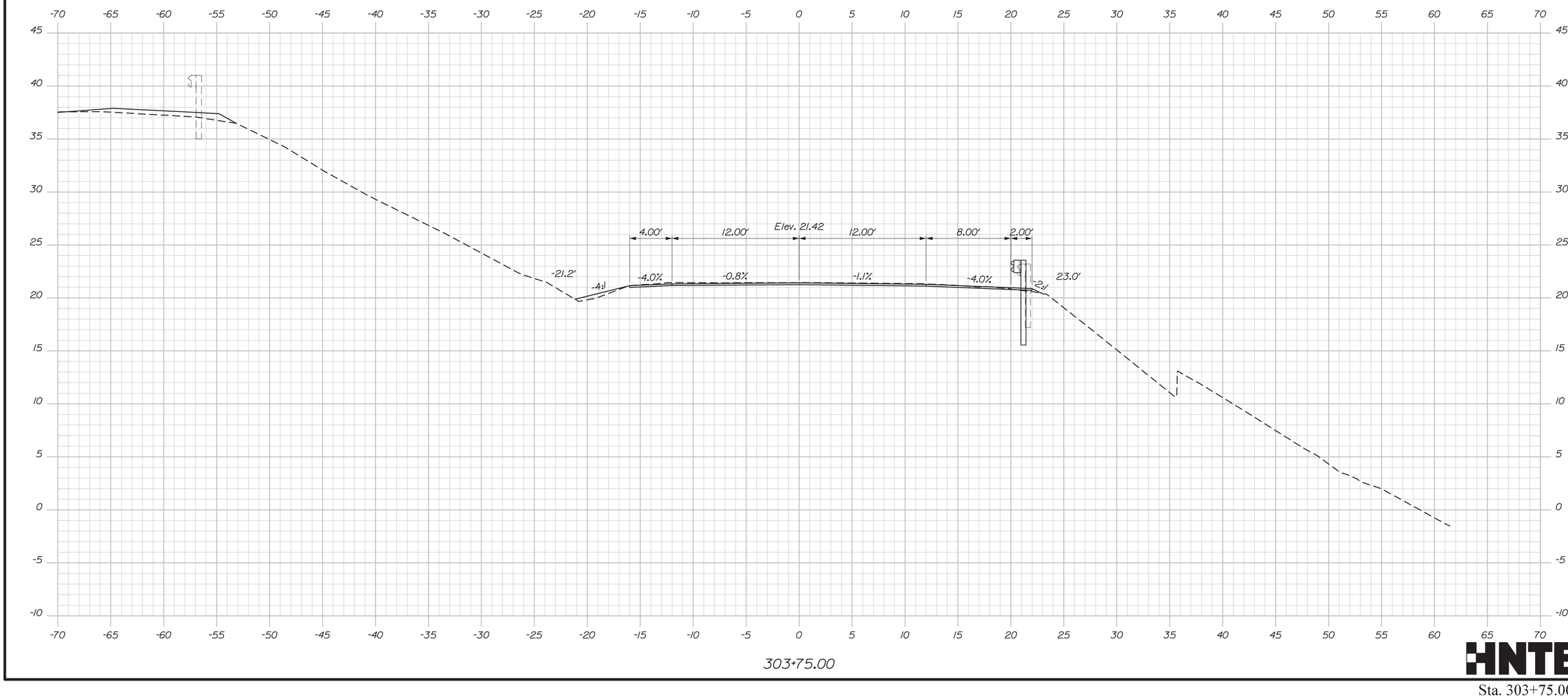
Sta. 303+50.00 to Sta. 303+50.00

Username:

Date:3/3/2020

Division:

Filename: Xsect_295 Off Ramp.dgn




HNTB

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

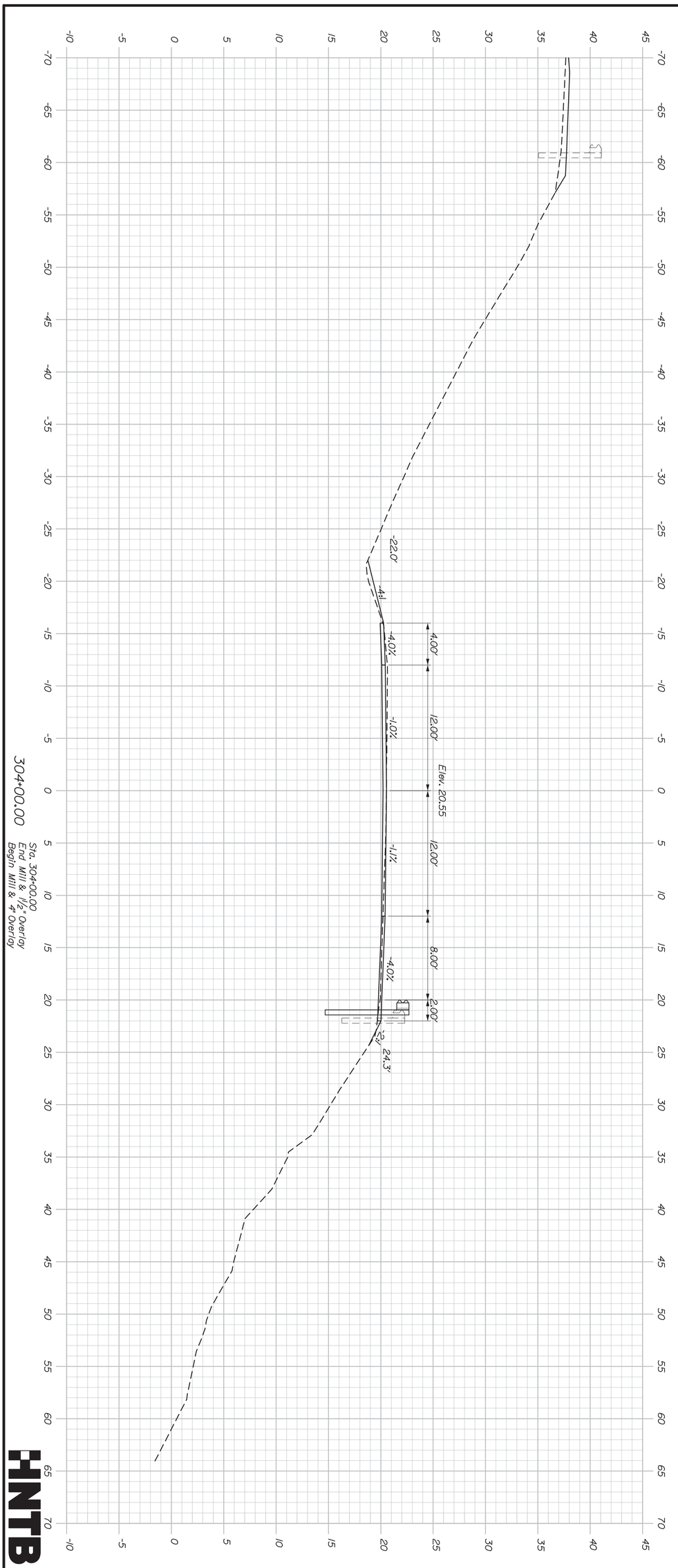
# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

71

OF 220

Sta. 303+75.00 to Sta. 303+75.00




HNTB

Sta. 304+00.00 to Sta. 304+00.00

SHEET NUMBER 27 OF 220

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

| | PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|---|
| | DESIGN-DETAILED | EDD | CDH | 2\20 |
| | CHECKED-REVIEWED | RWH | LZD | 2\20 |
| | DESIGN2-DETAILED2 | | | |
| | DESIGN3-DETAILED3 | | | |
| | REVISIONS 1 | | | |
| | REVISIONS 2 | | | |
| | REVISIONS 3 | | | |
| | REVISIONS 4 | | | |
| | FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

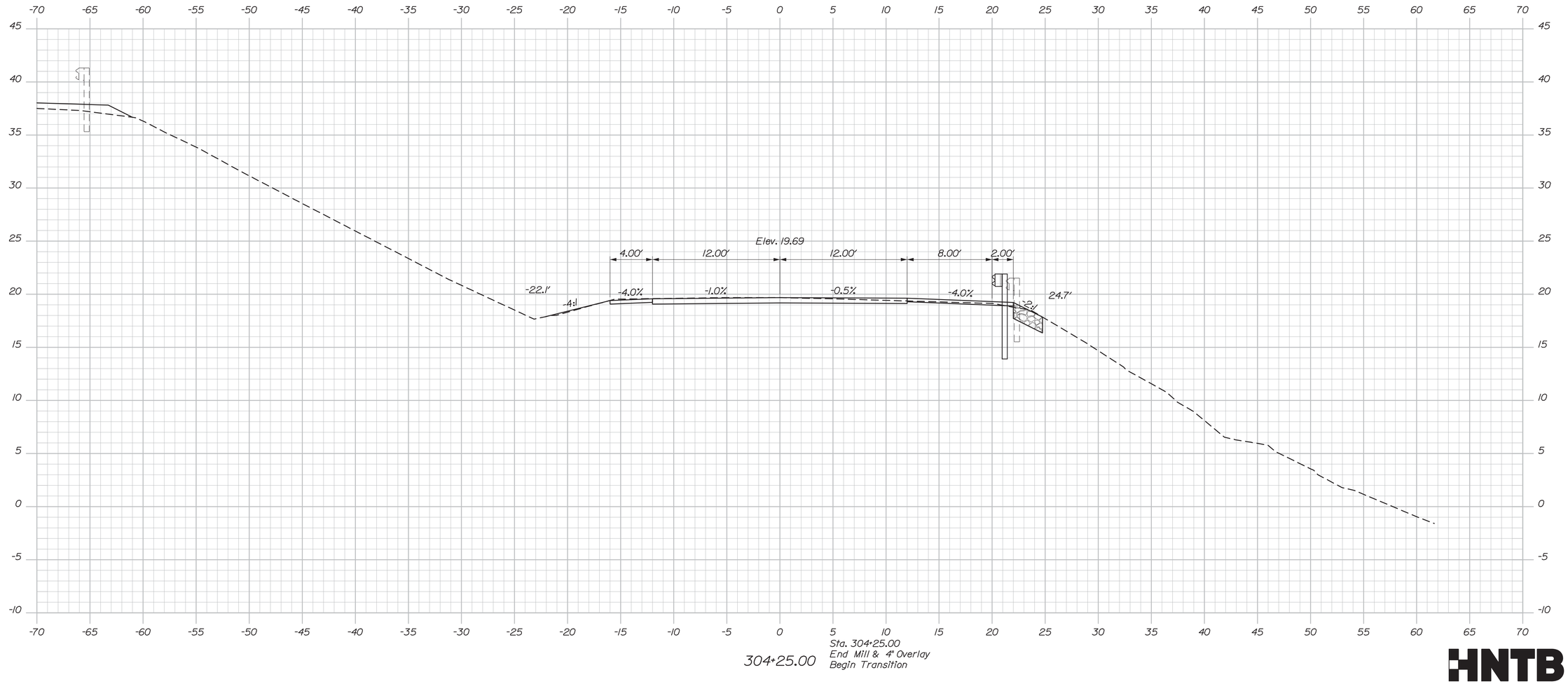
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

BRIDGE NO.5933 **WIN 021745.00** BRIDGE PLANS

Filename: Xsect_295 Off Ramp.dgn Division: Username: Date:3/3/2020




HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

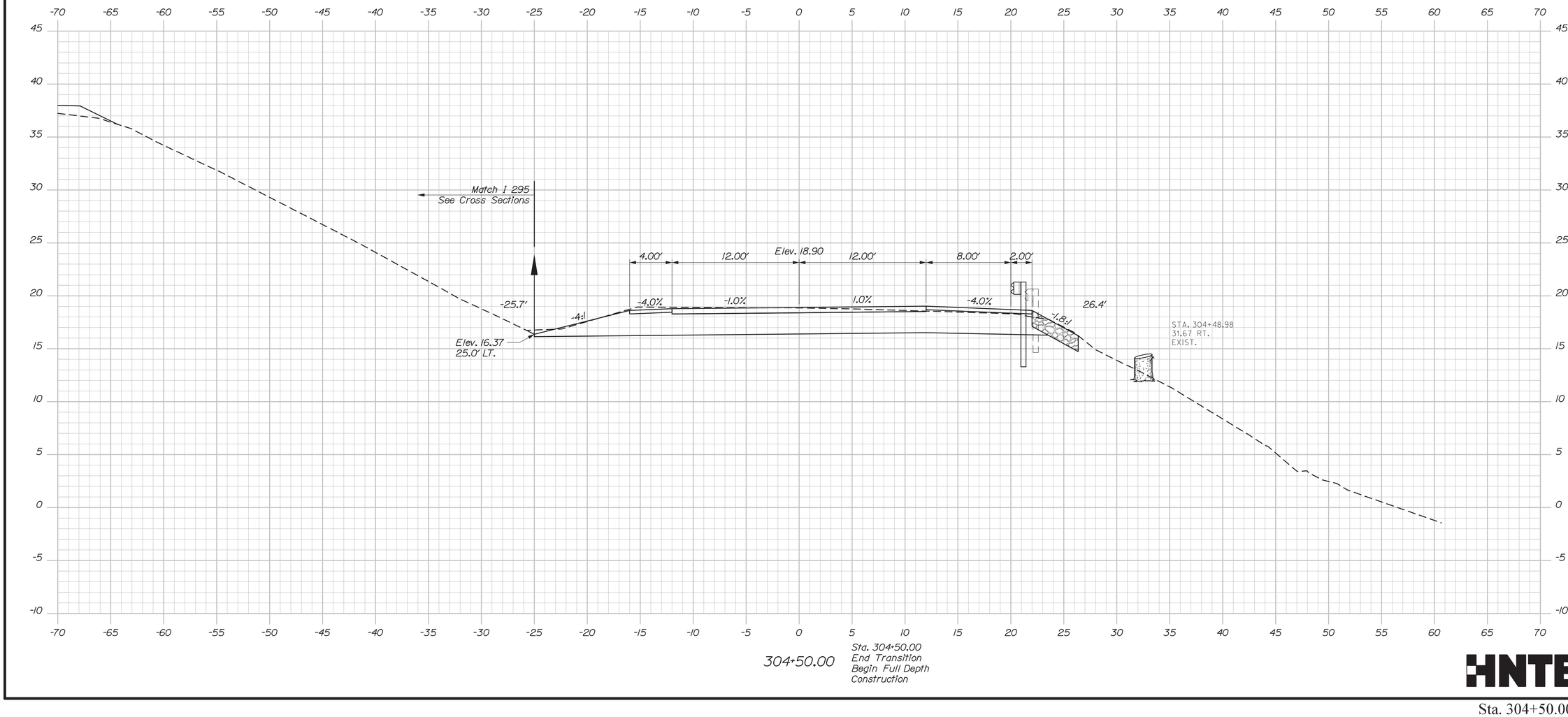
# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

73

OF 220

Sta. 304+25.00 to Sta. 304+25.00




HNTB

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | NHPP-2174(500) | WIN<br>021745.00 |
|---|---|---|
| | | BRIDGE NO.5933 BRIDGE PLANS |

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

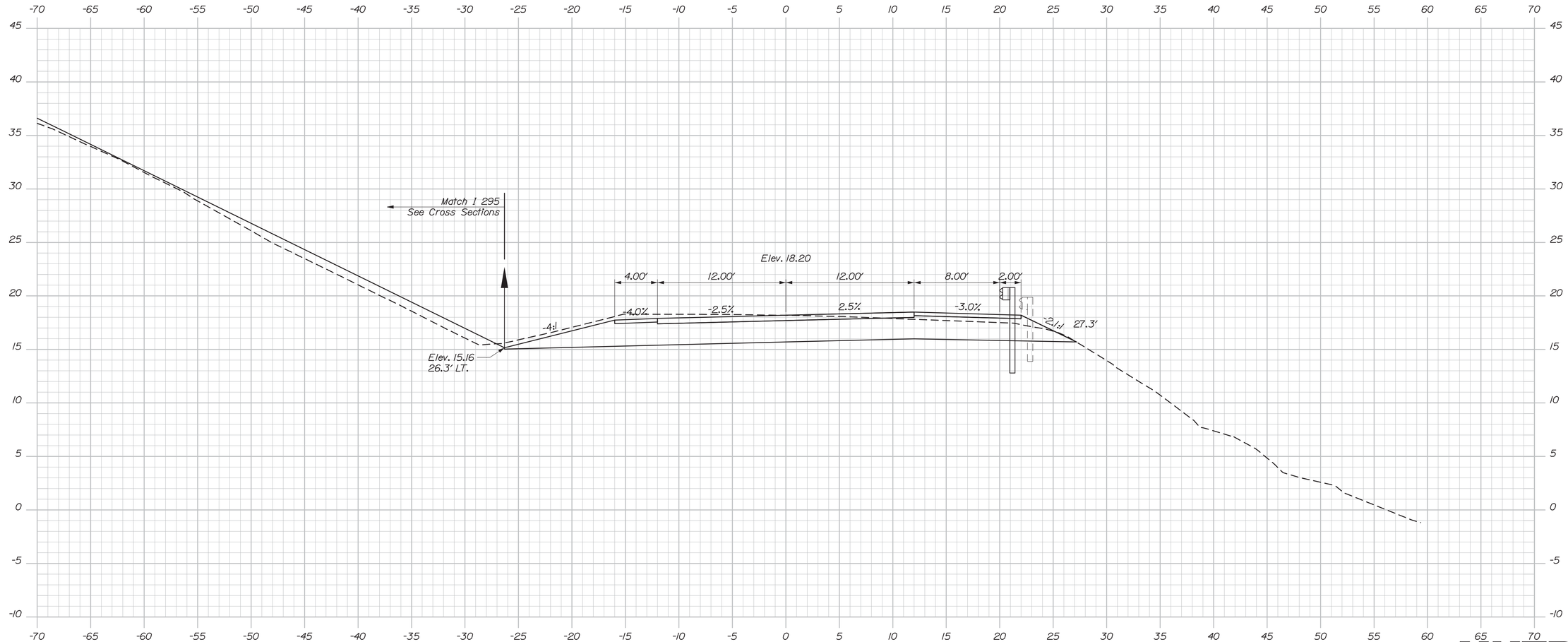
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OF 220

Filename: Xsect_295 Off Ramp.dgn Division: Username: Date:3/3/2020

Sta. 304+50.00 to Sta. 304+50.00

Filename: Xsect_295 Off Ramp.dgn Division: Username: Date:3/3/2020




HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

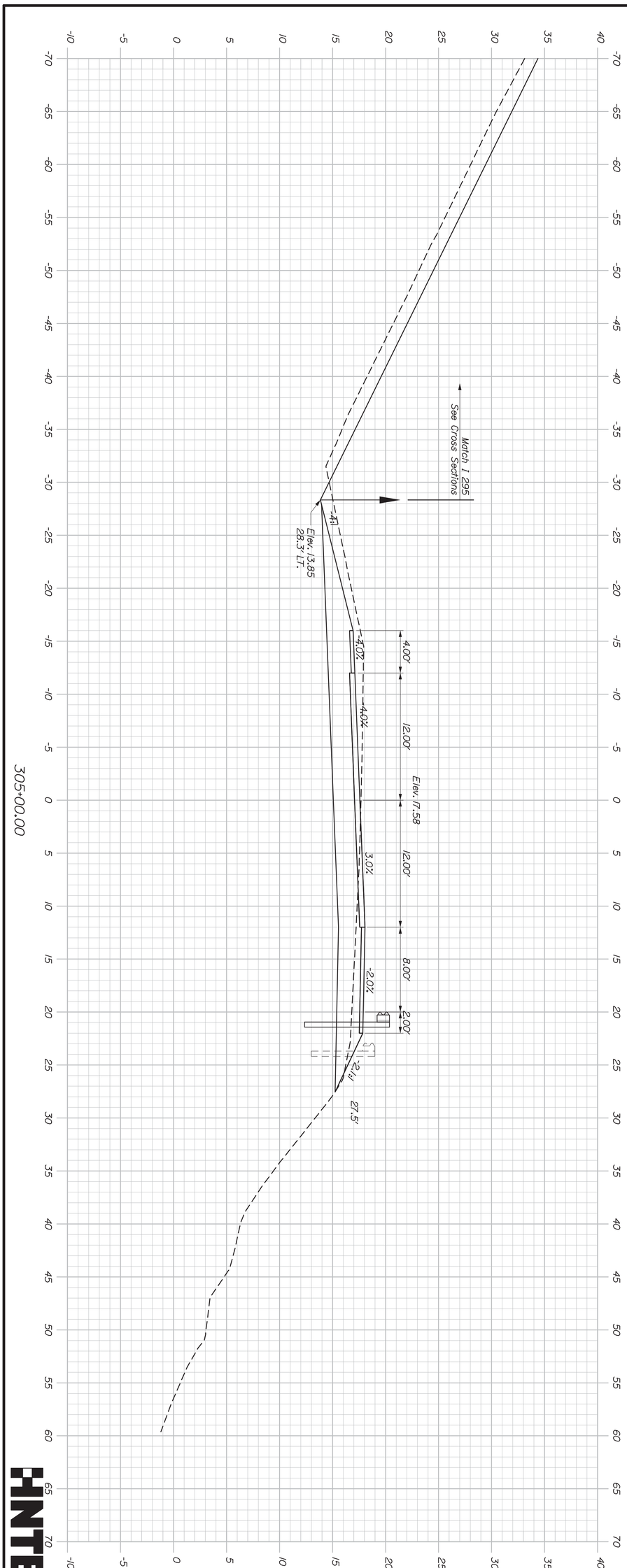
SHEET NUMBER

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OF 220

Sta. 304+75.00 to Sta. 304+75.00

Filename: Xsect_295 Off Ramp.dgn Division: Username: Date:3/3/2020




Sta. 305+00.00 to Sta. 305+00.00

HNTB

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER 76 OF 220

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

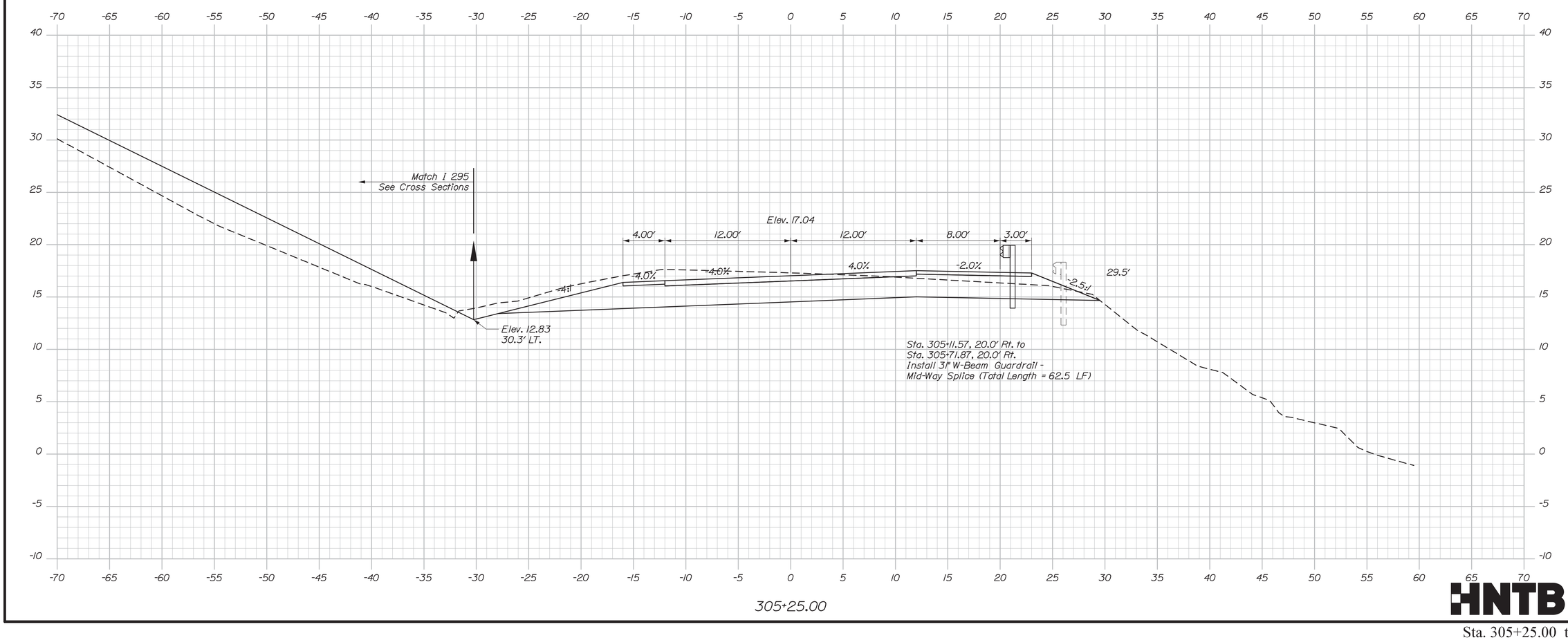
BRIDGE NO.5933 **WIN 021745.00** BRIDGE PLANS

Username:

Date:3/3/2020

Division:

Filename: Xsect_295 Off Ramp.dgn




| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | EJD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

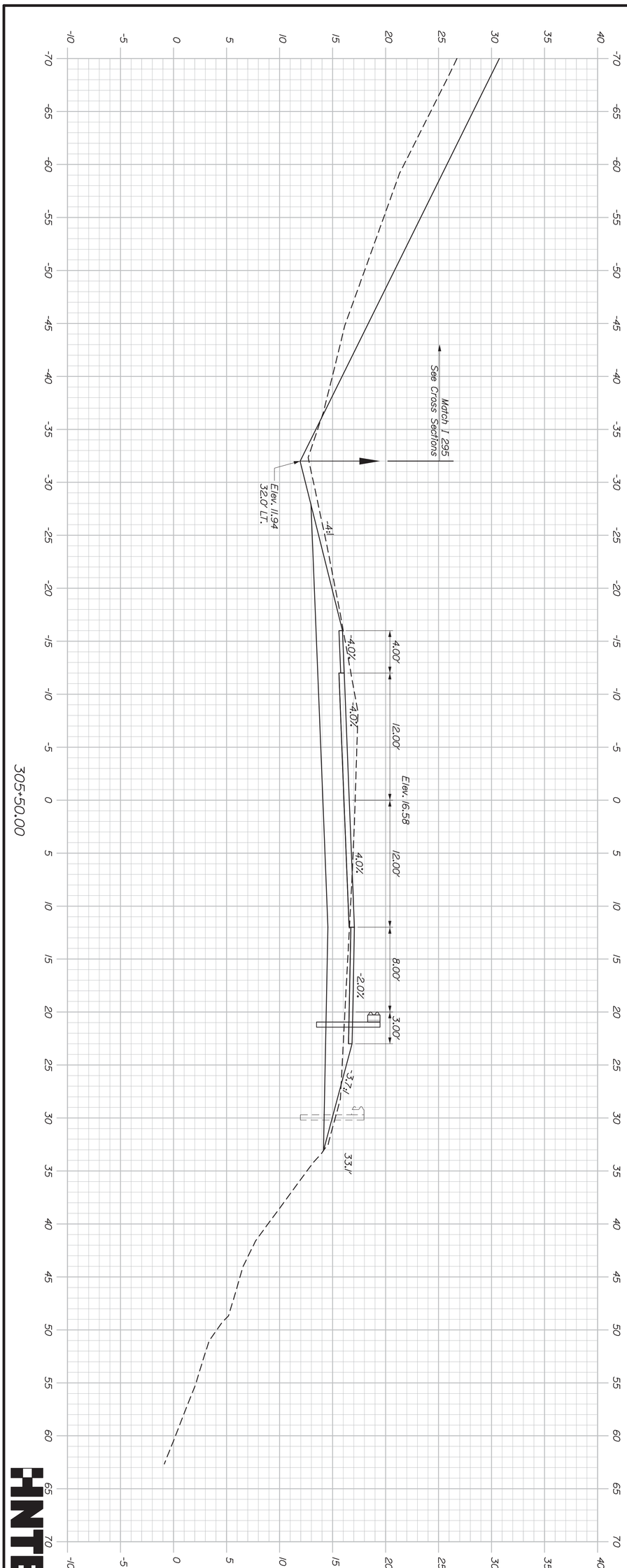
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OF 220

HNTB

Sta. 305+25.00 to Sta. 305+25.00

Filename: Xsect_295 Off Ramp.dgn Division: Username: Date:3/3/2020




Sta. 305+50.00 to Sta. 305+50.00

HNTB

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

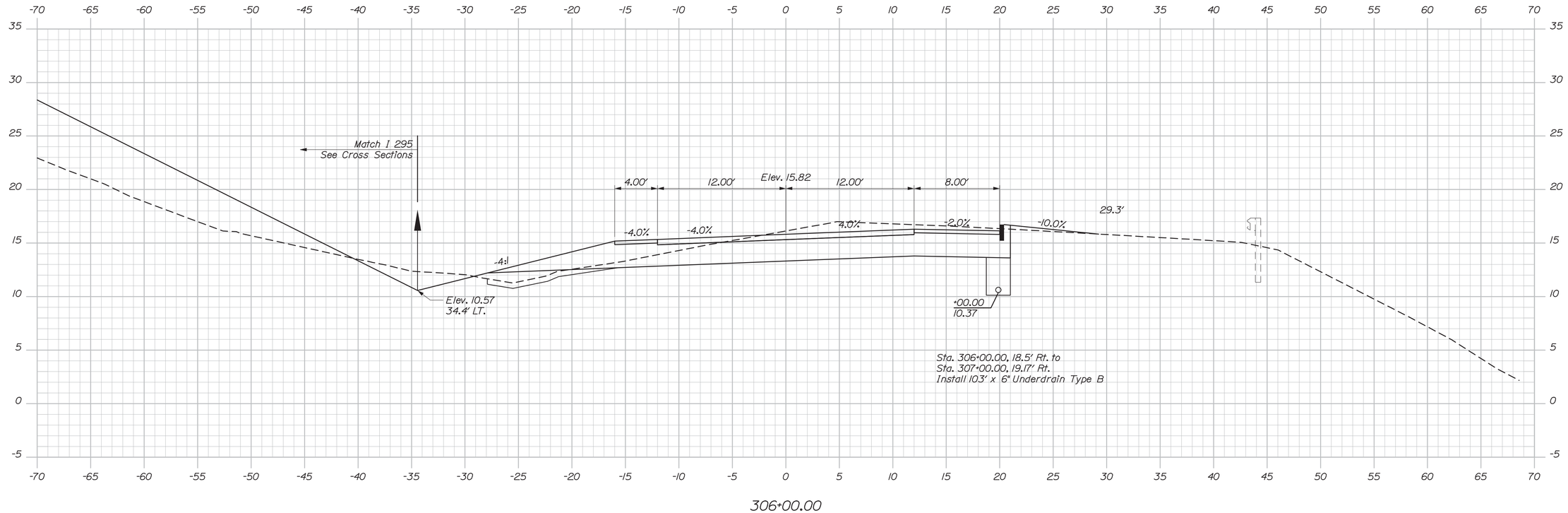
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

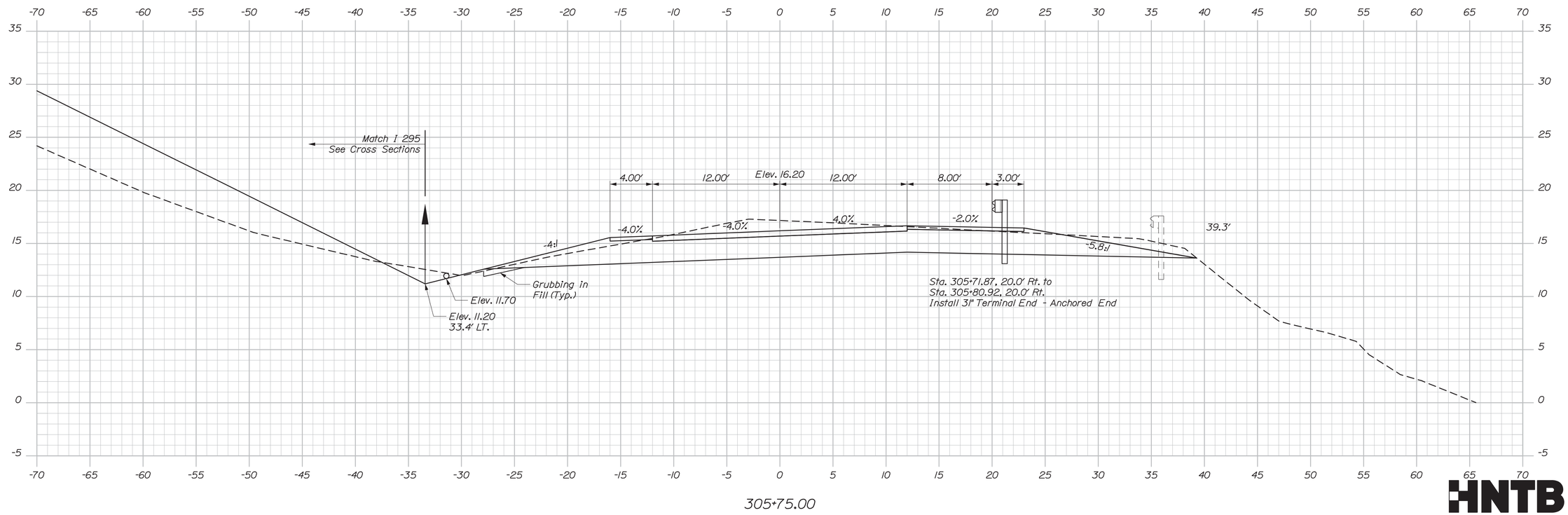
**NHPP-2174(500)**

BRIDGE NO.5933 **WIN 021745.00** BRIDGE PLANS

SHEET NUMBER 78 OF 220

Username:
Division:
Filename: Xsect_295 Off Ramp.dgn
Date:3/3/2020




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# CROSS SECTIONS
# I 295 NB OFF RAMP

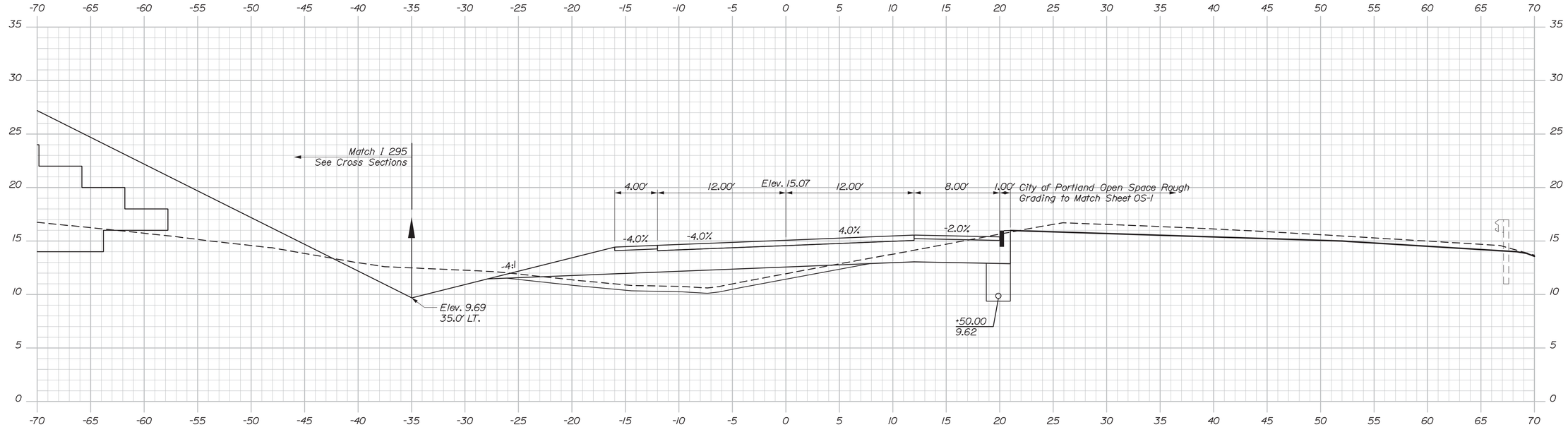
SHEET NUMBER

79

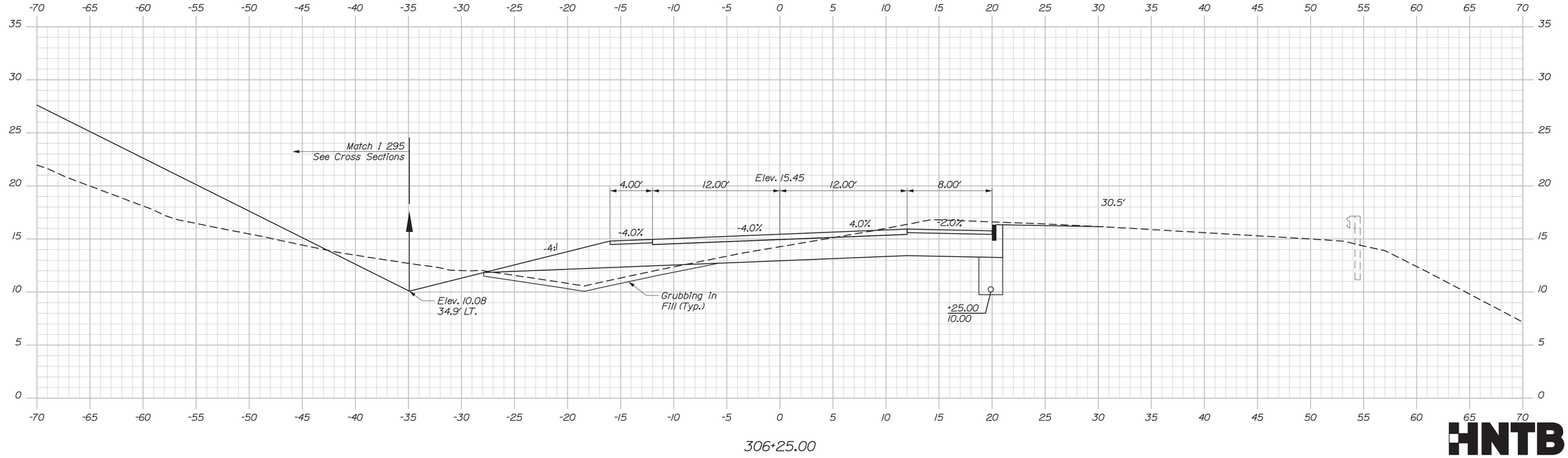
OF 220

HNTB

Sta. 305+75.00 to Sta. 306+00.00




306+50.00




306+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | | |
|---|---|---|---|---|
| PROJ. MANAGER | D. EATON | | | |
| DESIGN-DETAILED | EDD | COH | 2\20 | |
| CHECKED-REVIEWED | RWH | LZD | 2\20 | |
| DESIGN2-DETAILED2 | | | | |
| DESIGN3-DETAILED3 | | | | |
| REVISIONS 1 | | | | |
| REVISIONS 2 | | | | |
| REVISIONS 3 | | | | |
| REVISIONS 4 | | | | |
| FIELD CHANGES | | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

80

OF 220

HNTB

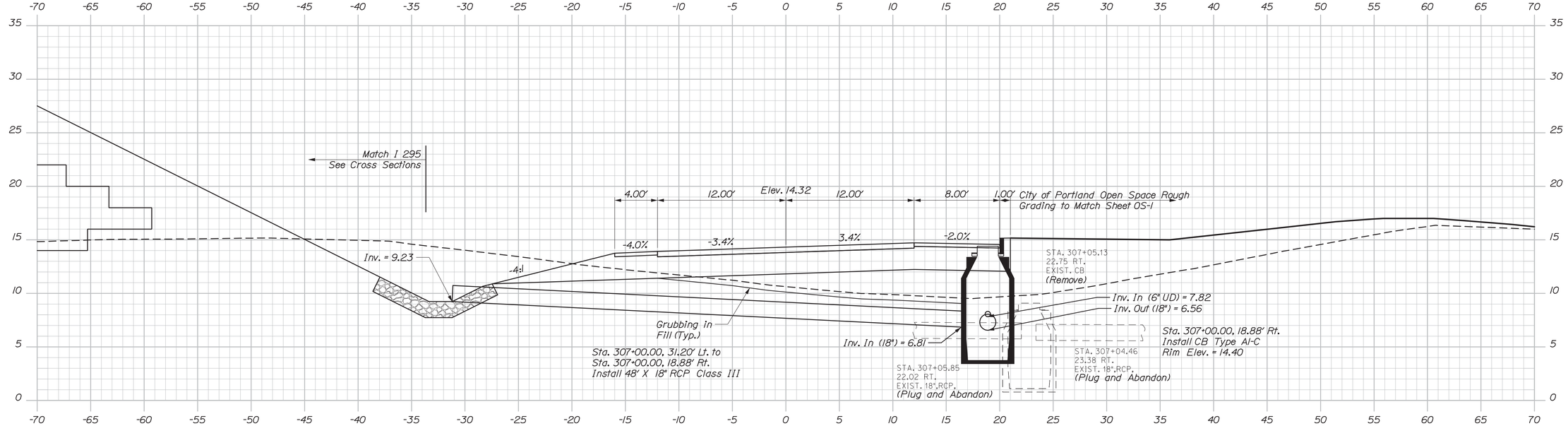
Sta. 306+25.00 to Sta. 306+50.00

Username:

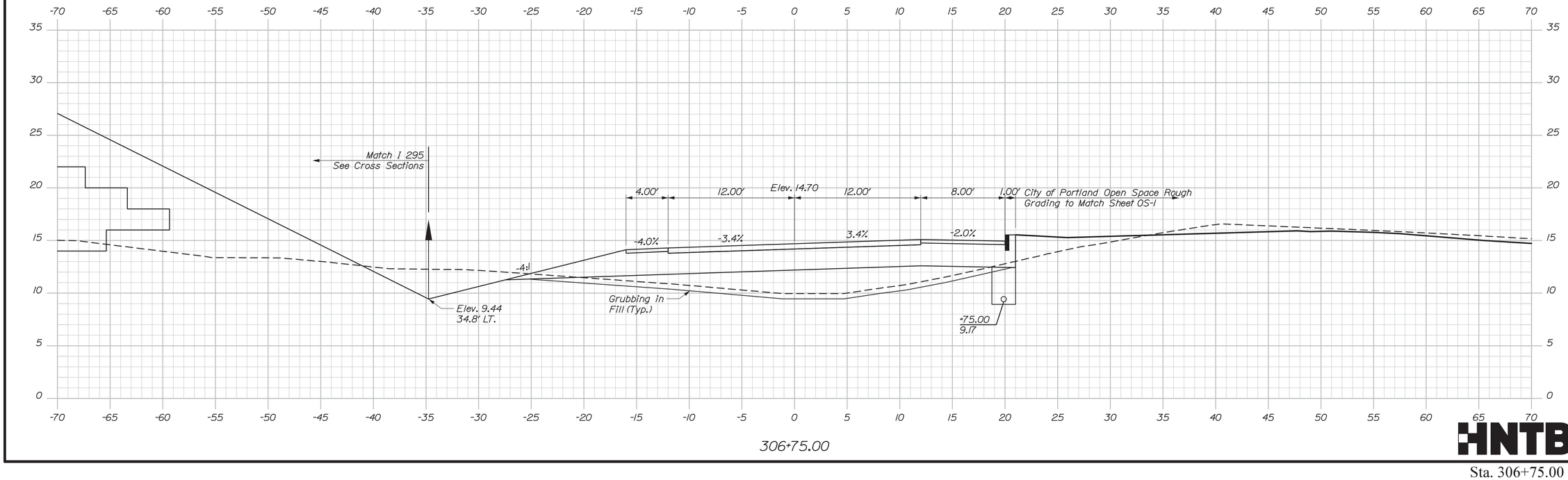
Division:

Date:3/3/2020

Filename: Xsect_295 Off Ramp.dgn




307+00.00




306+75.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EJD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

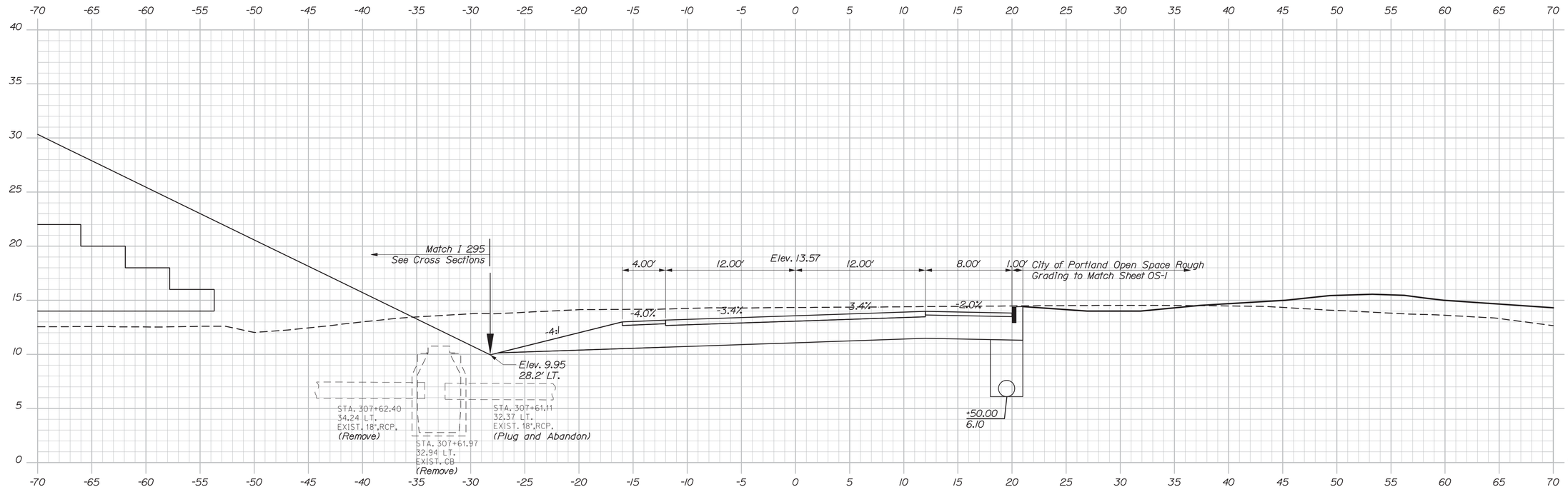
81

OF 220

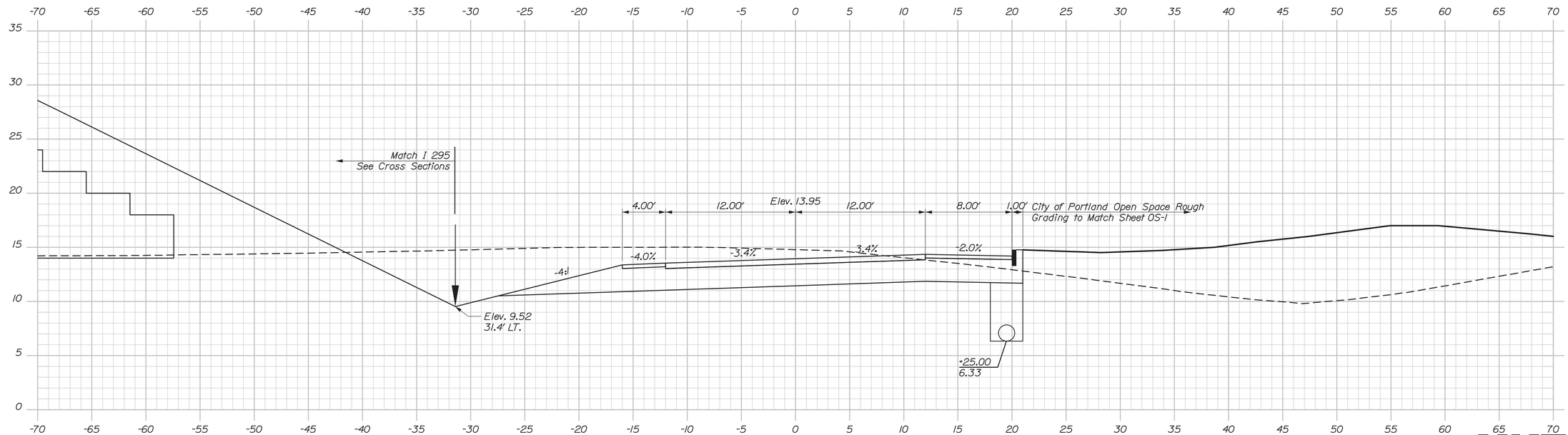
Sta. 306+75.00 to Sta. 307+00.00

Username:
Division:
Date:3/3/2020
Filename: Xsect_295 Off Ramp.dgn

Date:3/3/2020
Username:
Division:
Filename: Xsect_295 Off Ramp.dgn




307+50.00




307+25.00

Sta. 307+00.00, 18.88' Rt. to
Sta. 308+10.79, 23.85' Rt.
Install 112' X 18" Underdrain Type C

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | CDH 2\20 |
| CHECKED-REVIEWED | RWH | LZD 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

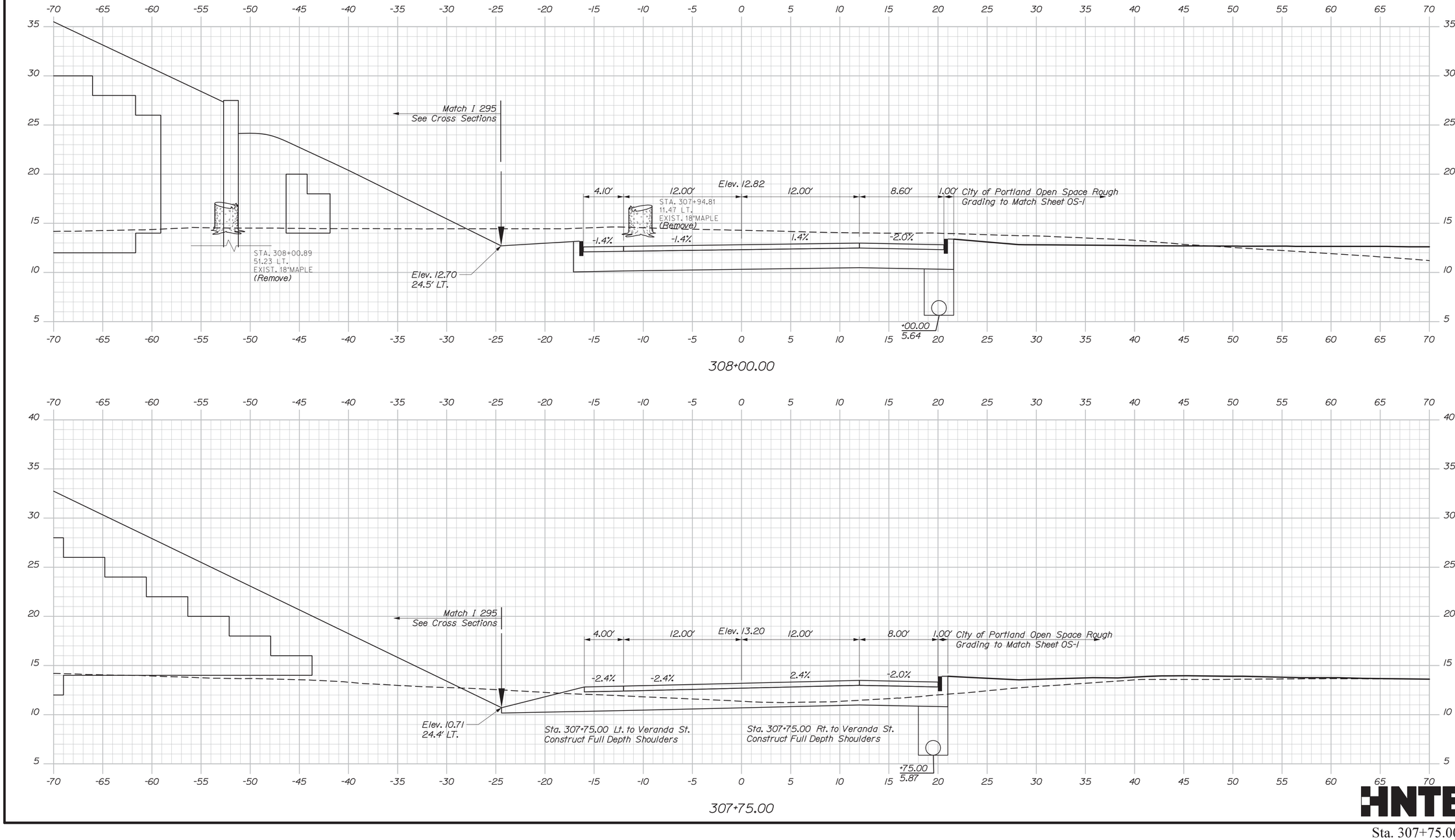
# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

82

OF 220

Sta. 307+25.00 to Sta. 307+50.00




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

83

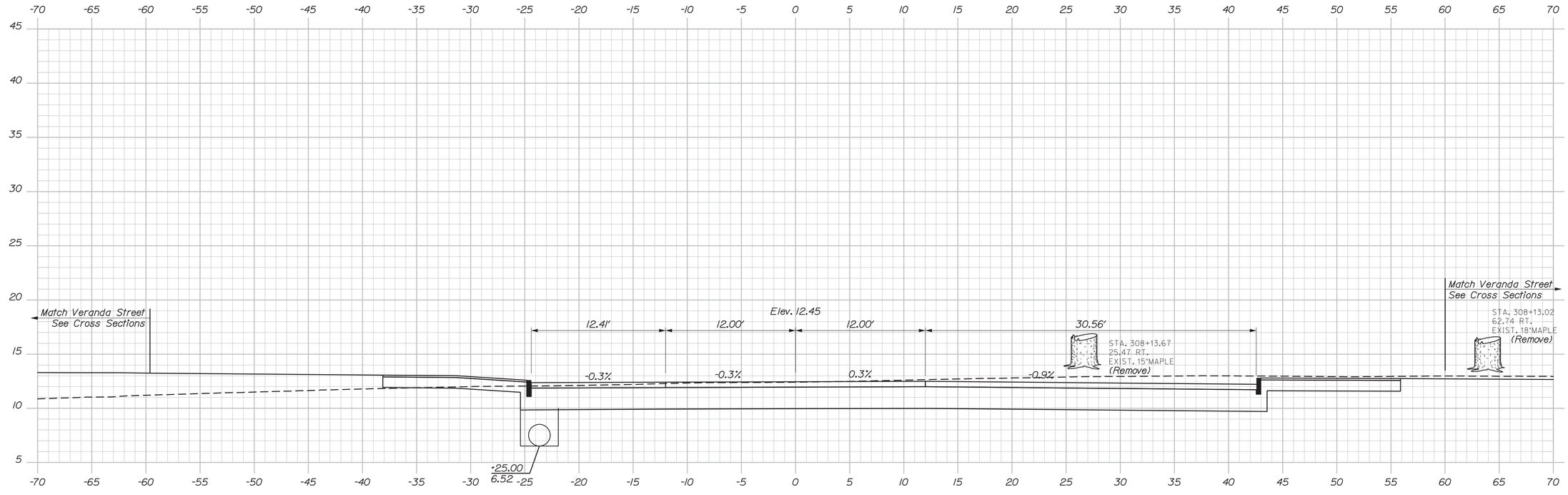
OF 220

HNTB

Sta. 307+75.00 to Sta. 308+00.00

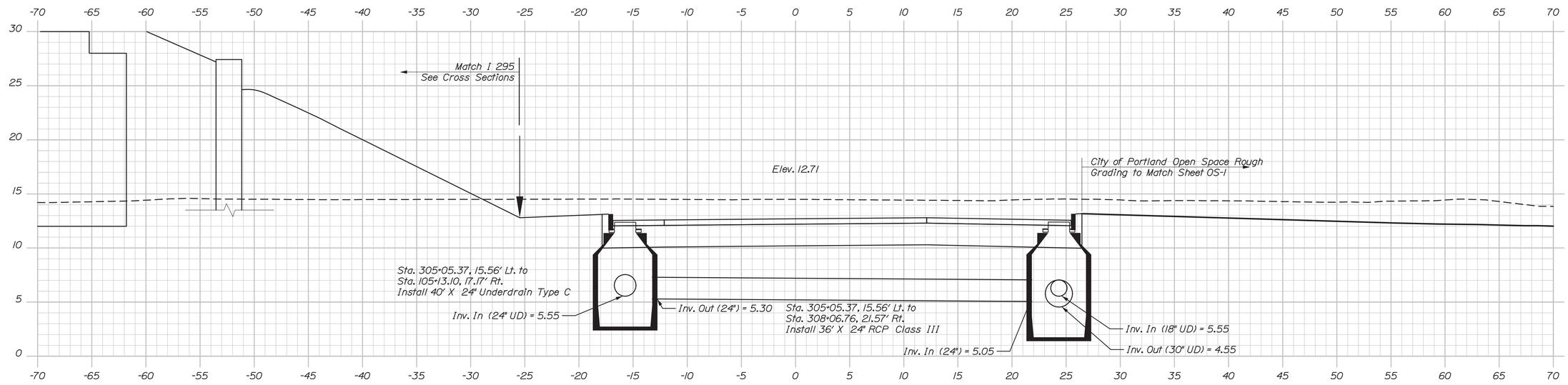
Username: Division: Date:3/3/2020

Filename: Xsect_295 Off Ramp.dgn




308+25.00

Sta. 308+06.76, 21.57' Rt. to
Sta. 106+07.00, 30.43' Rt.
Install 42' X 30" Underdrain Type C




308+07.73 (SKEWED)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| | | SIGNATURE | DATE |
| P.E. NUMBER | | | |
| DATE | | | |

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# I 295 NB OFF RAMP

SHEET NUMBER

84

OF 220

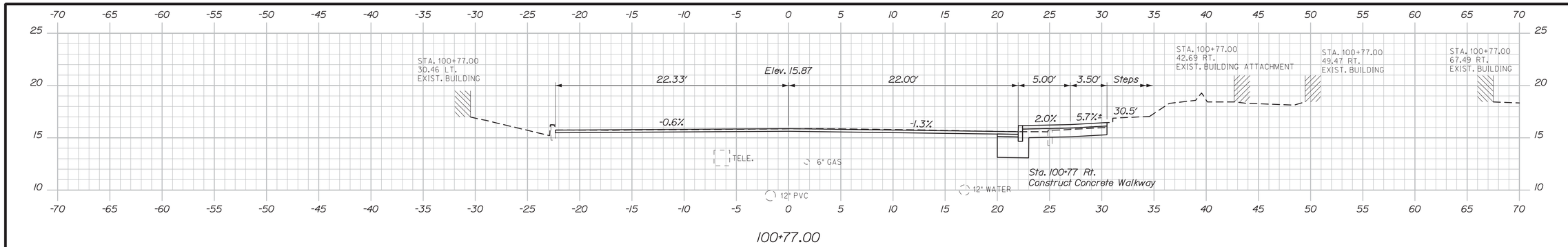
Sta. 308+25.00 to Sta. 308+35.33

Username:

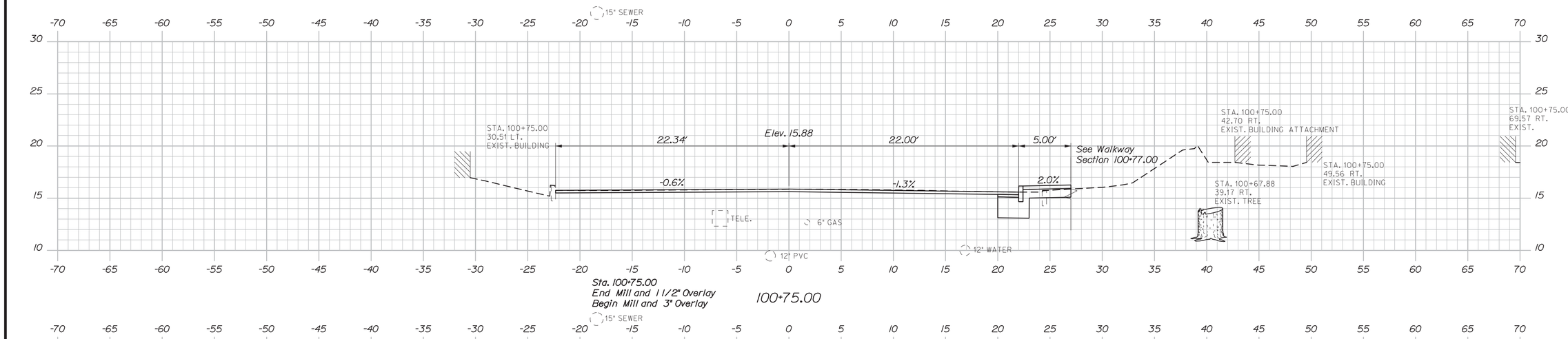
Date:3/3/2020

Division:

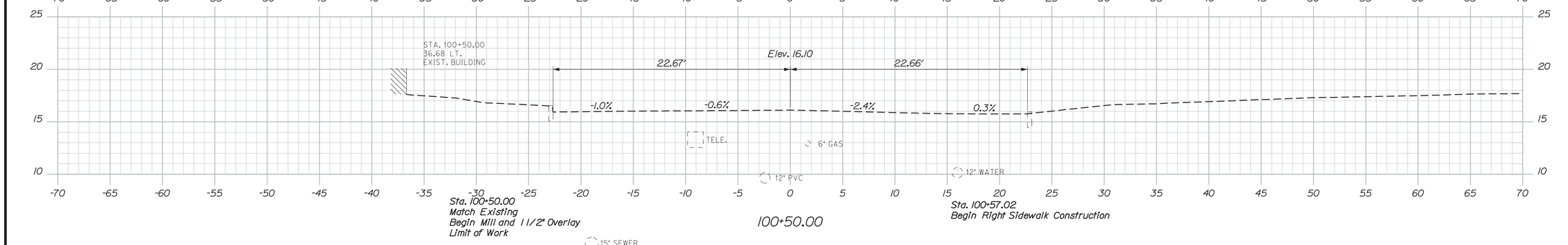
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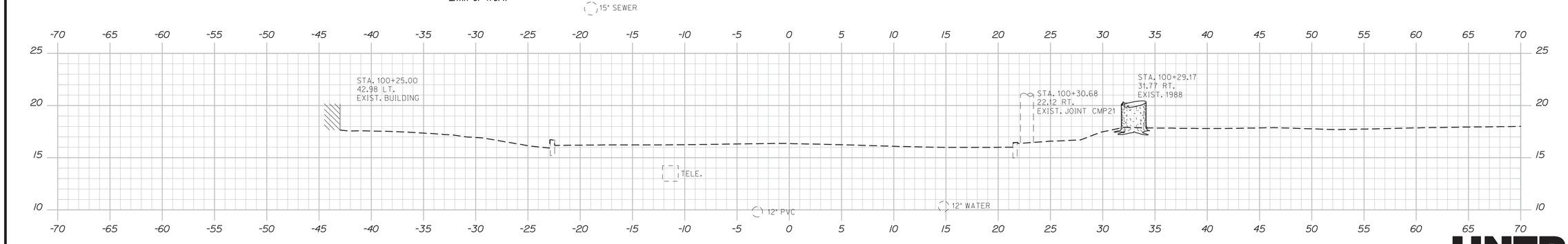

100+77.00




100+75.00




100+50.00




100+25.00

*Note:*
*Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.*

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

85

OF 220

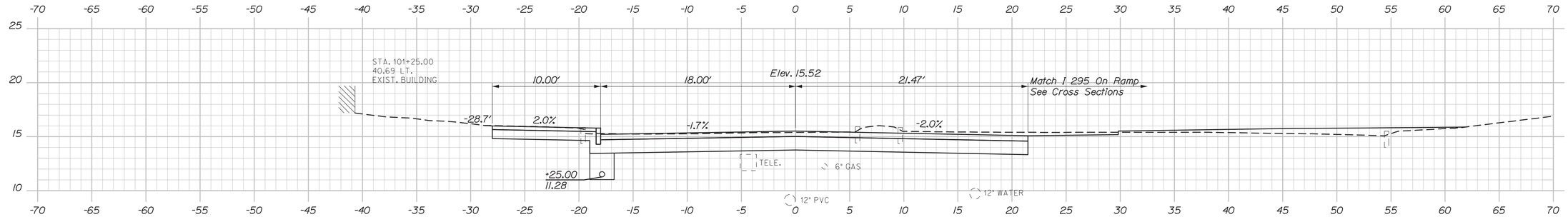
Sta. 100+25.00 to Sta. 100+77.00

Date:3/3/2020

Username:

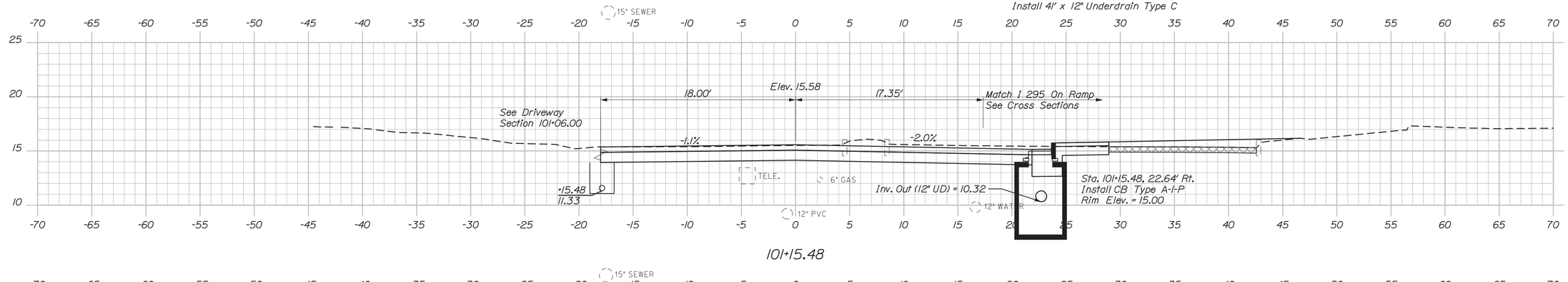
Division:

Filename: Xsect_Veranda.dgn

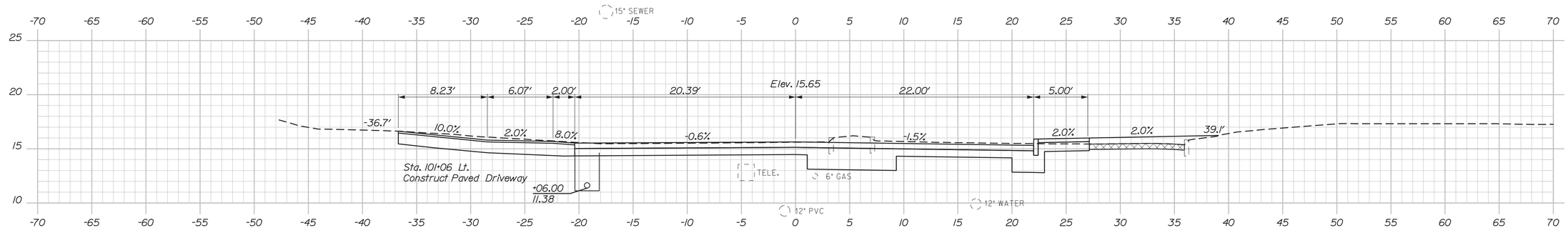



101+25.00

Sta. 101+15.48, 22.64' Rt. to
Sta. 202+06.90, 10.88' Lt.
Install 41' x 12" Underdrain Type C

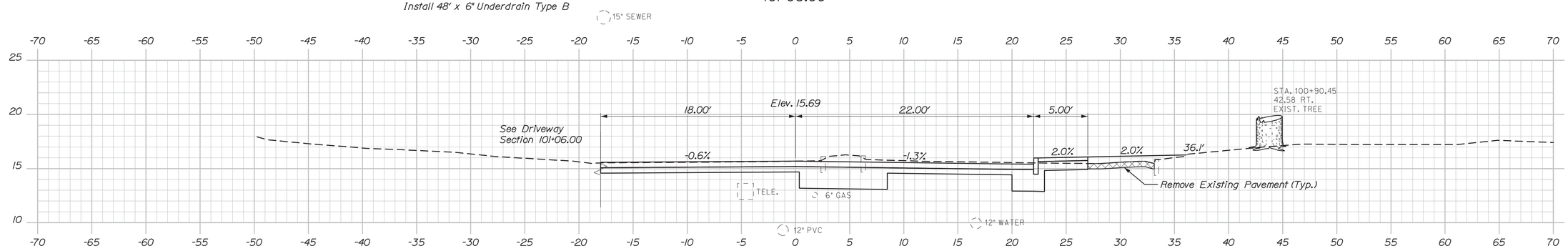



101+15.48




Sta. 101+01.00, 16.88' Lt. to
Sta. 101+50.52, 19.06' Lt.
Install 48' x 6" Underdrain Type B

101+06.00




Sta. 101+00.00
End Mill and 3" Overlay
Begin Transition

101+00.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE PLANS

BRIDGE NO.5933

SIGNATURE

P.E. NUMBER

DATE

| | | | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | | EDD | 2\20 |
| CHECKED-REVIEWED | | RWH | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

86

OF 220

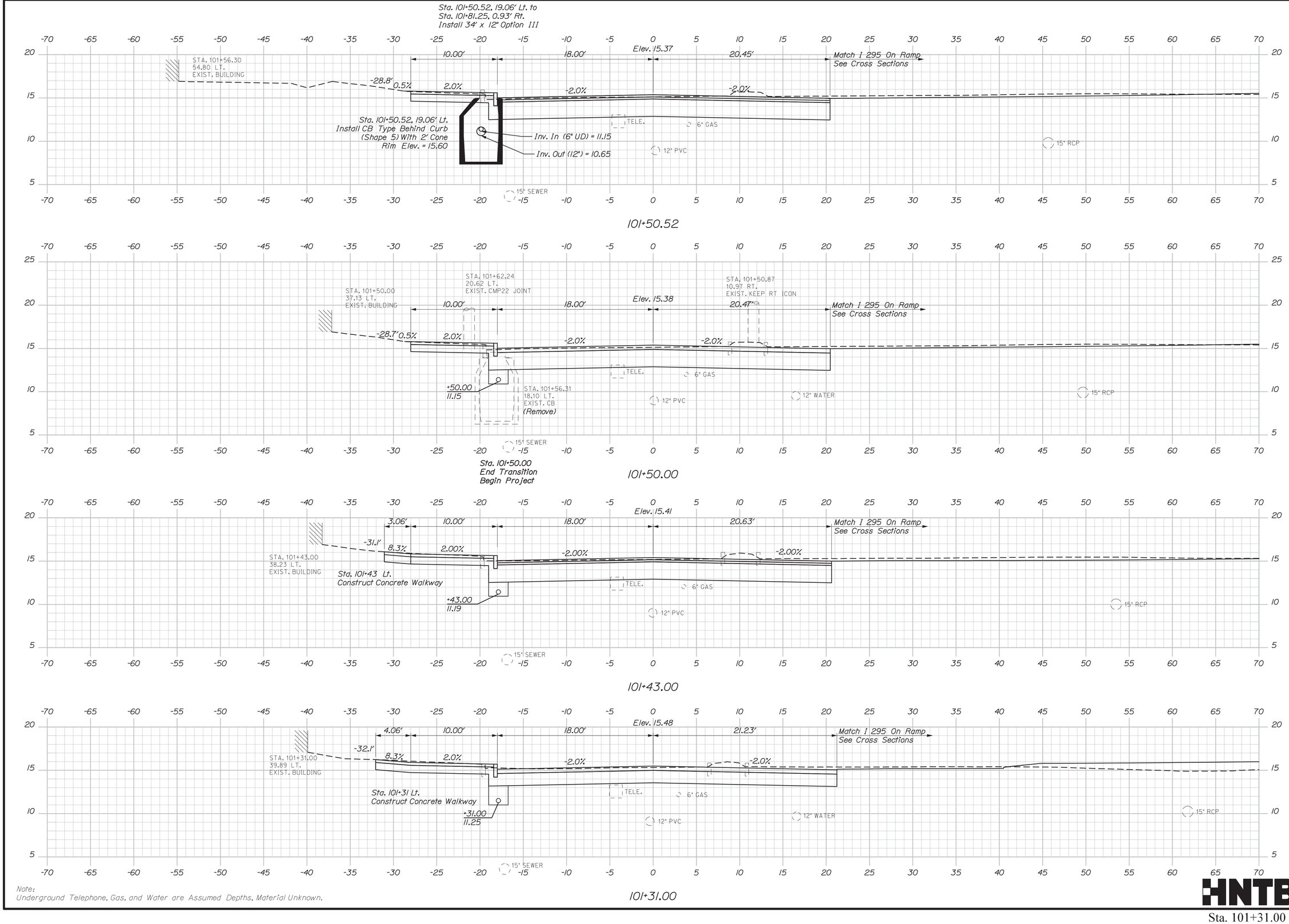
Sta. 101+00.00 to Sta. 101+25.00

Date:3/3/2020

Username:

Division:

Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE PLANS

BRIDGE NO.5933

| PROJ. MANAGER | D. EATON |
|---|---|
| DESIGN-DETAILED | EDD |
| CHECKED-REVIEWED | RWH |
| DESIGN2-DETAILED2 | |
| DESIGN3-DETAILED3 | |

| | BY | DATE |
|---|---|---|
| REVISIONS 1 | CDH | 2\20 |
| REVISIONS 2 | LZD | 2\20 |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

87

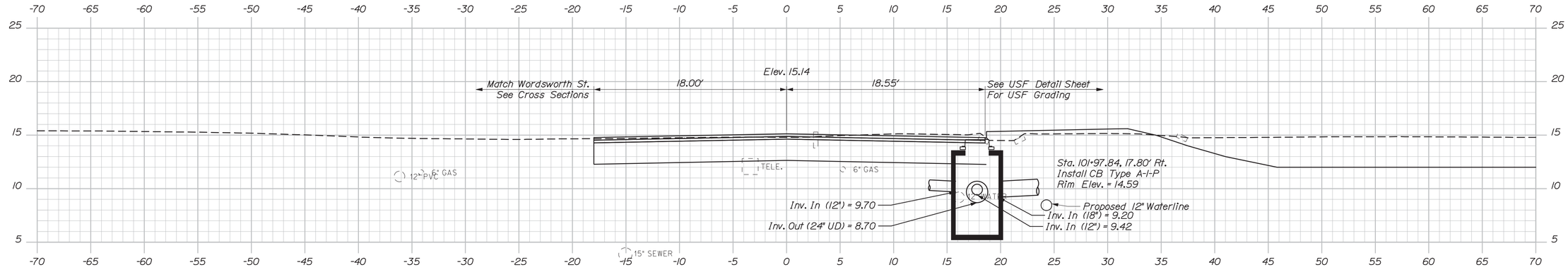
OF 220

Sta. 101+31.00 to Sta. 101+56.30

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

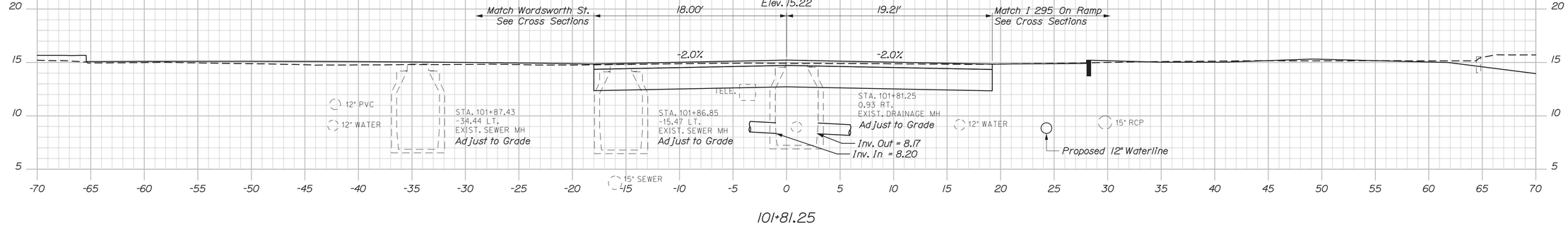
Sta. 101+97.84, 17.80' Rt. to
Sta. 103+71.00, 17.17' Rt.
Install 167' x 24" Underdrain Type C

Sta. 101+97.84, 17.80' Rt. to
Sta. 102+09.00, 39.20' Rt.
Install 21' x 18" Option III
Inlet Elev. = 10.00

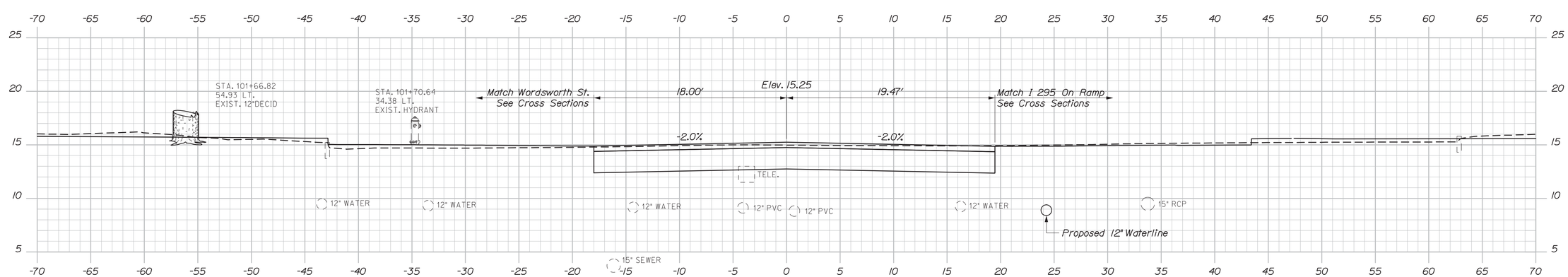



101+97.84

Sta. 101+81.25, 0.93' Rt. to
Sta. 101+97.84, 17.80' Rt.
Install 21' x 12" Option III




101+81.25




101+75.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

Sta. 101+75.00 to Sta. 101+97.49

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

P.E. NUMBER

SIGNATURE

DATE

| | BY | DATE |
|---|---|---|
| DESIGNED | CDH | 2\20 |
| DRAWN | LZD | 2\20 |
| CHECKED | | |
| QUALITY CHECK | | |
| APPROVED | | |

PROJ. MANAGER: D. EATON
DESIGN-DETAILED: EDD
CHECKED-REVIEWED: RWH
DESIGN2-DETAILED2:
DESIGN3-DETAILED3:
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER
88
OF 220

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| SIGNATURE | | | |
| P.E. NUMBER | | | |
| DATE | | | |

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | CDH |
| CHECKED-REVIEWED | RWH | DATE | 2\20 |
| DESIGN2-DETAILED2 | | BY | LZD |
| DESIGN3-DETAILED3 | | DATE | 2\20 |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

89

OF 220

Sta. 102+00.00 to Sta. 102+44.00

Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | COH |
| CHECKED-REVIEWED | RWH | | LZD |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | DATE | 2\20 |
| REVISIONS 4 | | | 2\20 |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

90

OF 220

Sta. 102+50.00 to Sta. 102+97.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

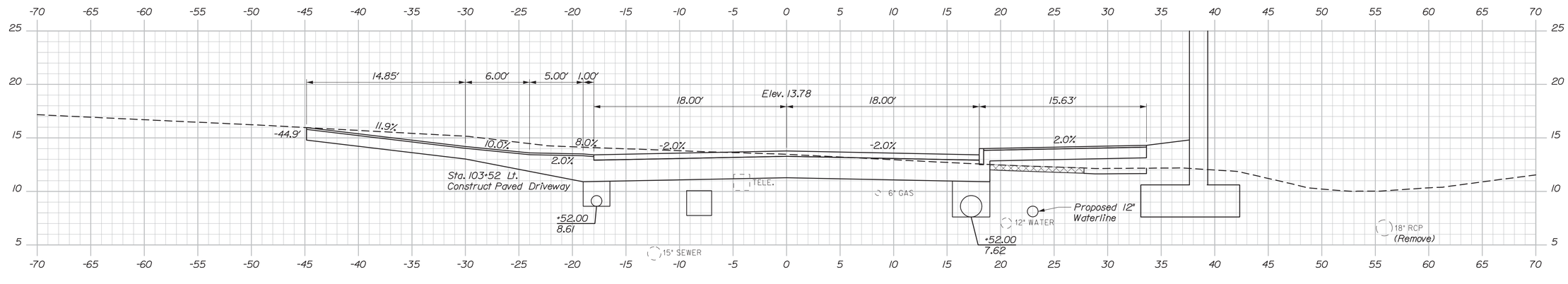
CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

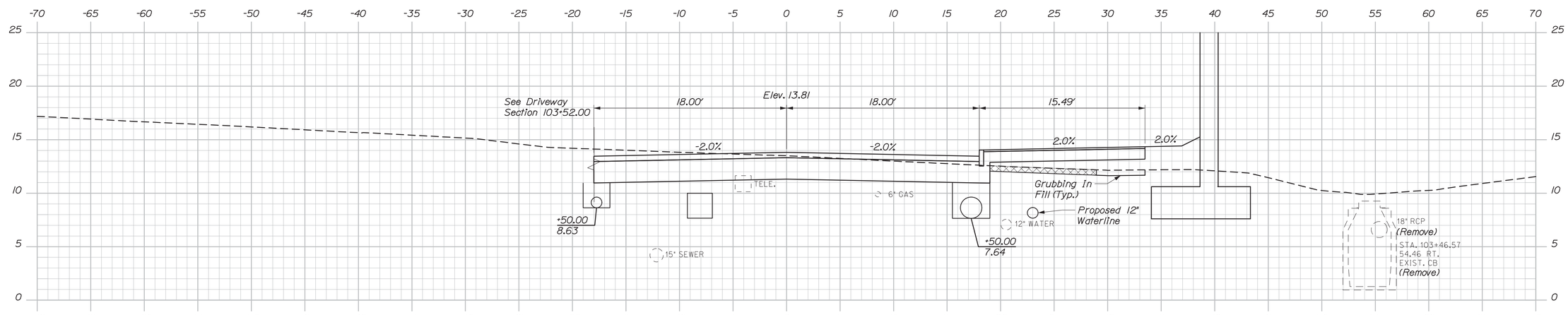
91

OF 220

Sta. 103+00.00 to Sta. 103+25.00

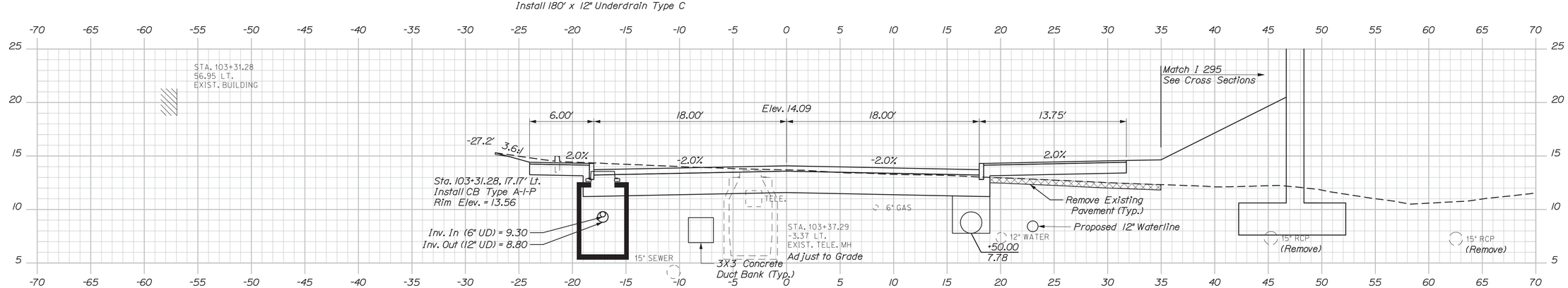



103+52.00




Sta. 103+31.28, 17.17' Lt. to
Sta. 105+13.10, 19.06' Lt.
Install 180' x 12" Underdrain Type C

103+50.00




103+31.28

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | 2\20 | CDH |
| CHECKED-REVIEWED | RWH | 2\20 | LZD |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

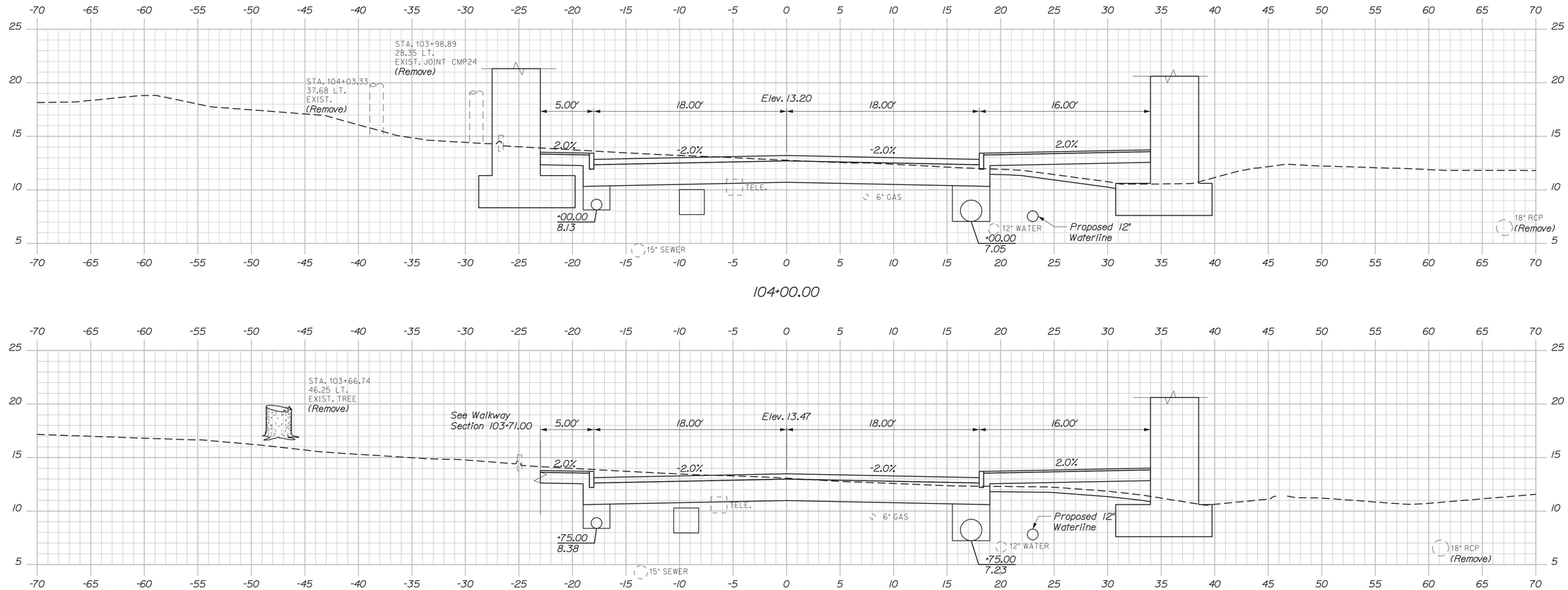
92

OF 220

HNTB

Sta. 103+31.28 to Sta. 103+52.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

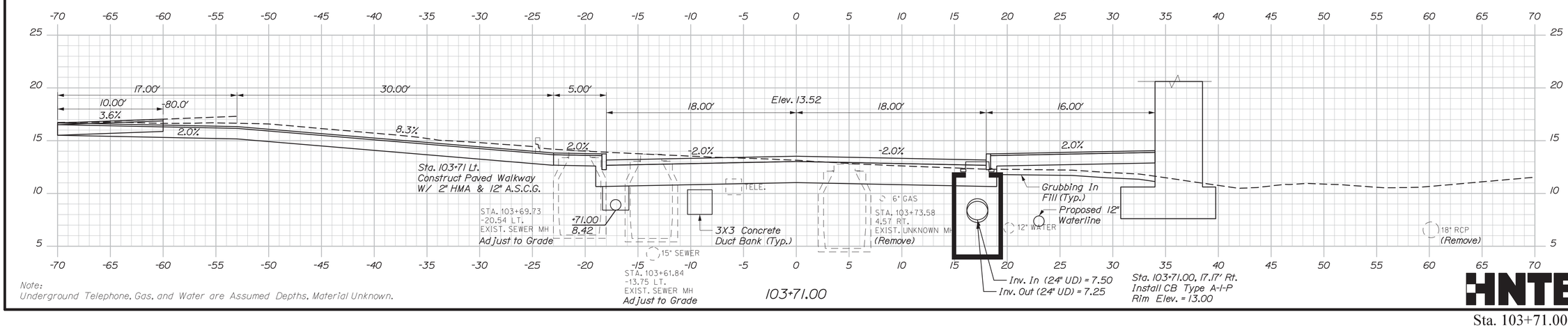



104+00.00




103+75.00

Sta. 103+71.00, 17.17' Rt. to
Sta. 105+08.01, 22.06' Rt.
Install 134' x 24" Underdrain Type C




103+71.00

Sta. 103+71.00, 17.17' Rt.
Install CB Type A-I-P
Rim Elev. = 13.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

Sta. 103+71.00 to Sta. 104+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | SIGNATURE | P.E. NUMBER | DATE |
|---|---|---|---|
| | | | |

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | CDH | 2\20 |
| DESIGN-DETAILED | LZD | 2\20 |
| CHECKED-REVIEWED | | |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

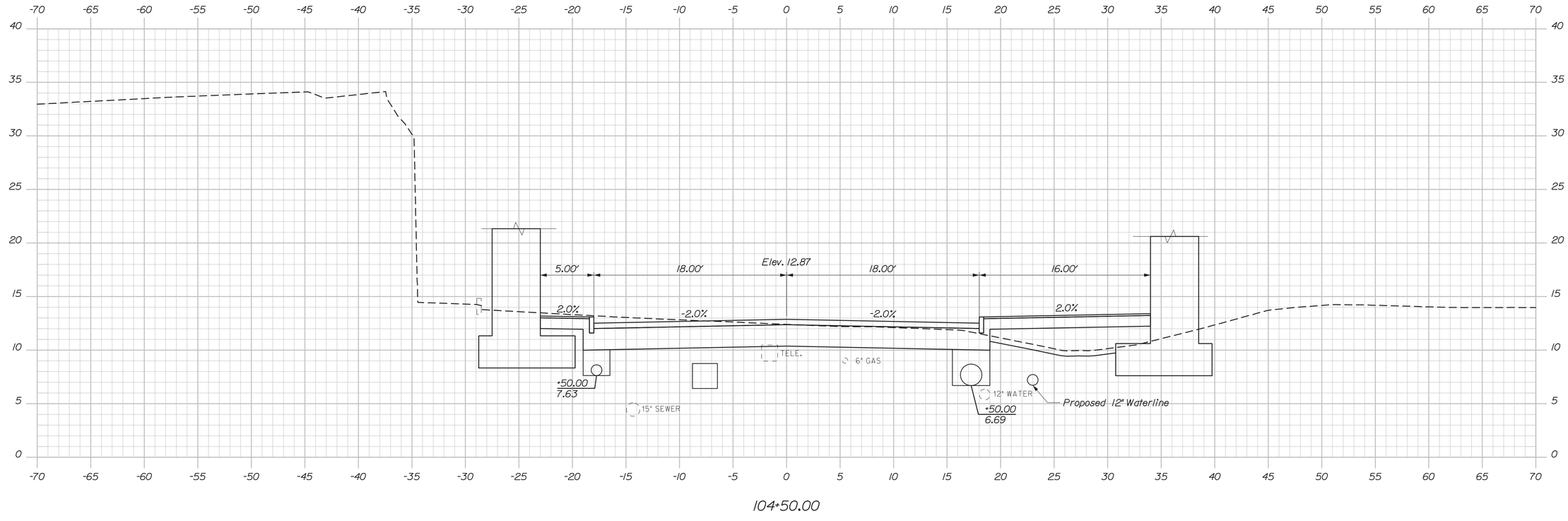
CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

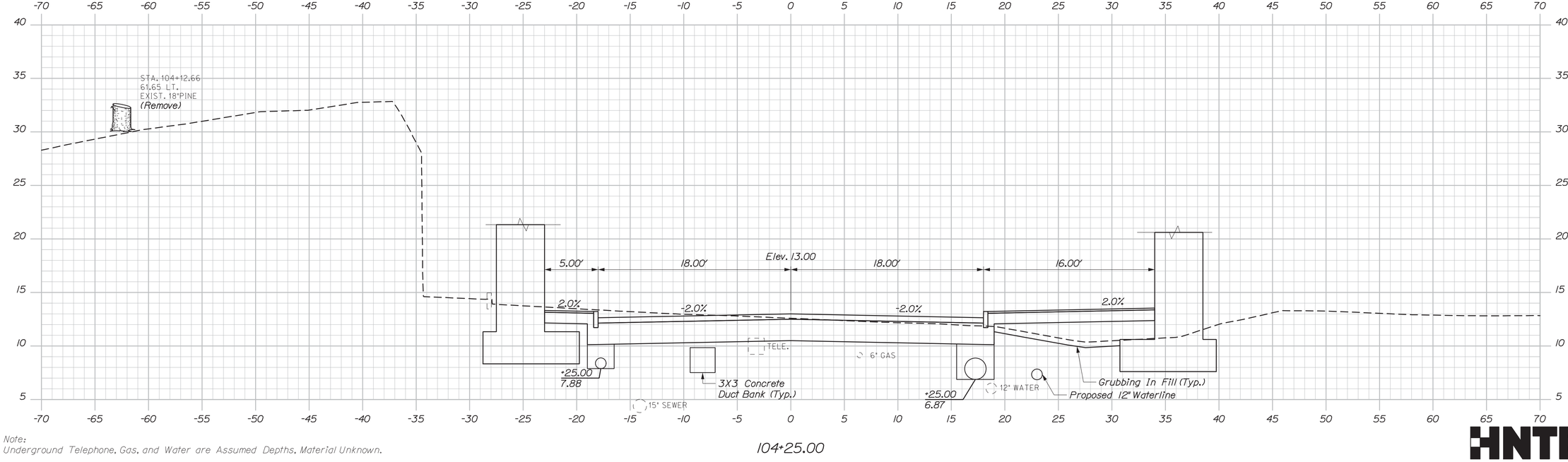
93

OF 220

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




104+50.00




104+25.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| P.E. NUMBER | | | |
| DATE | | | |

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

94

OF 220

Sta. 104+25.00 to Sta. 104+50.00

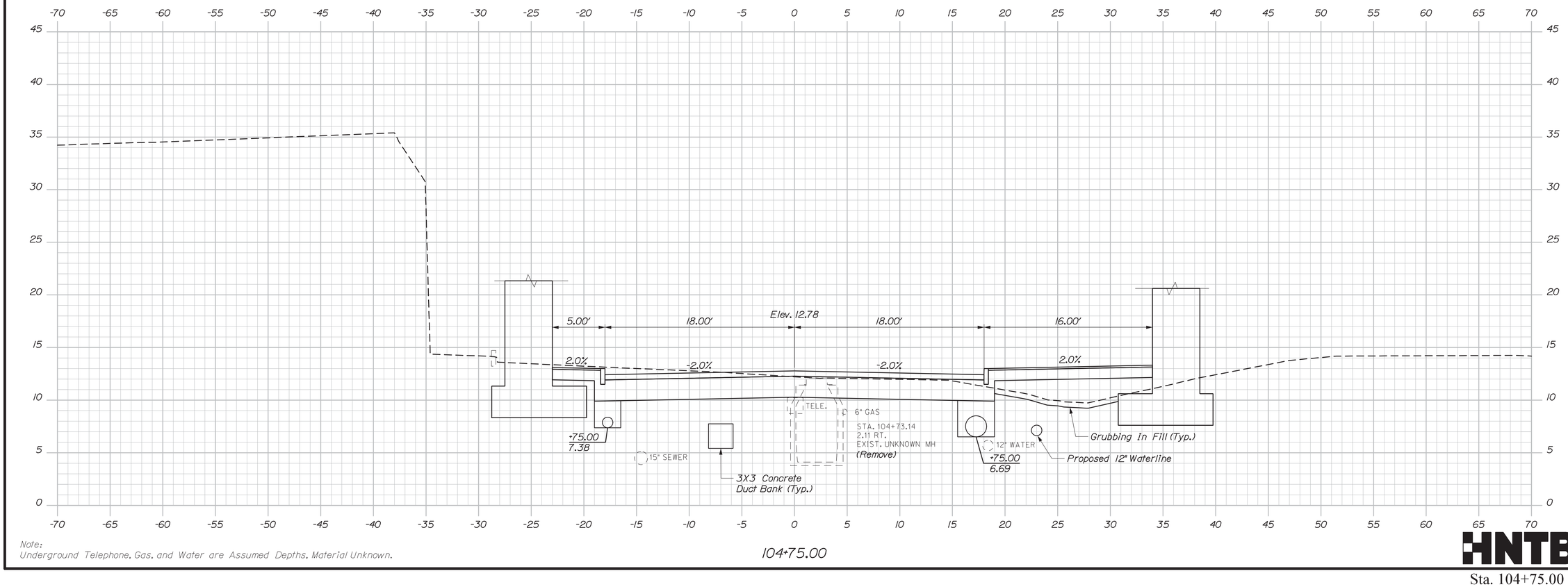
Username:
Date:3/3/2020
Division:
Filename: Xsect_Veranda.dgn

Username:

Date:3/3/2020

Division:

Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

104+75.00

HNTB

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SIGNATURE

P.E. NUMBER

DATE

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

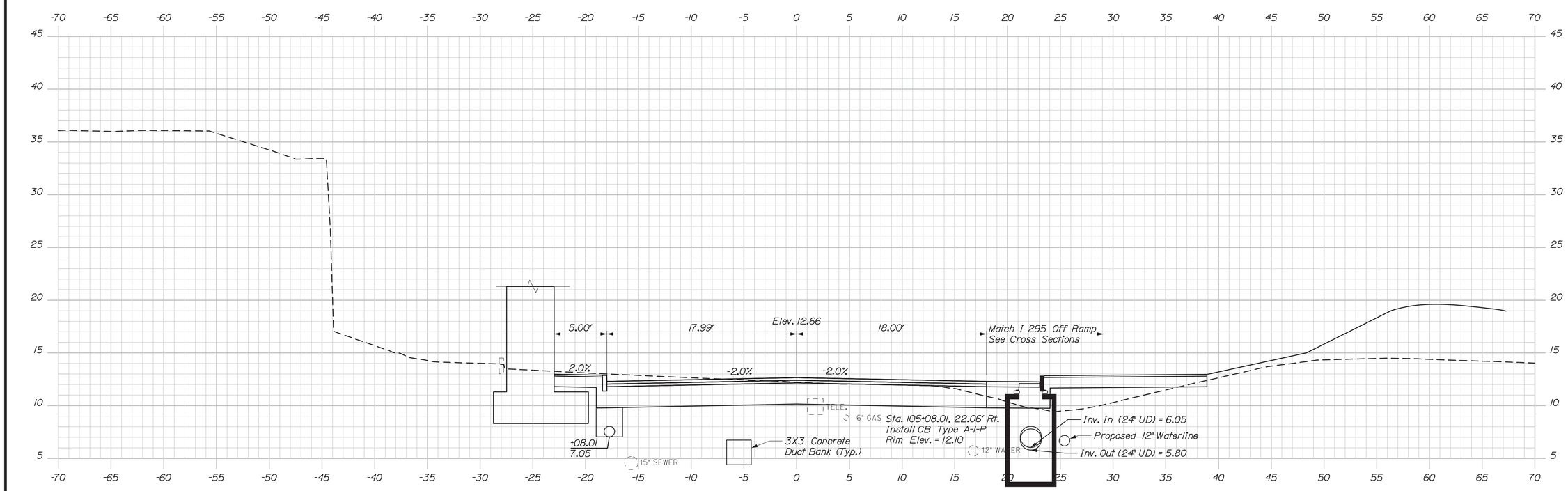
# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

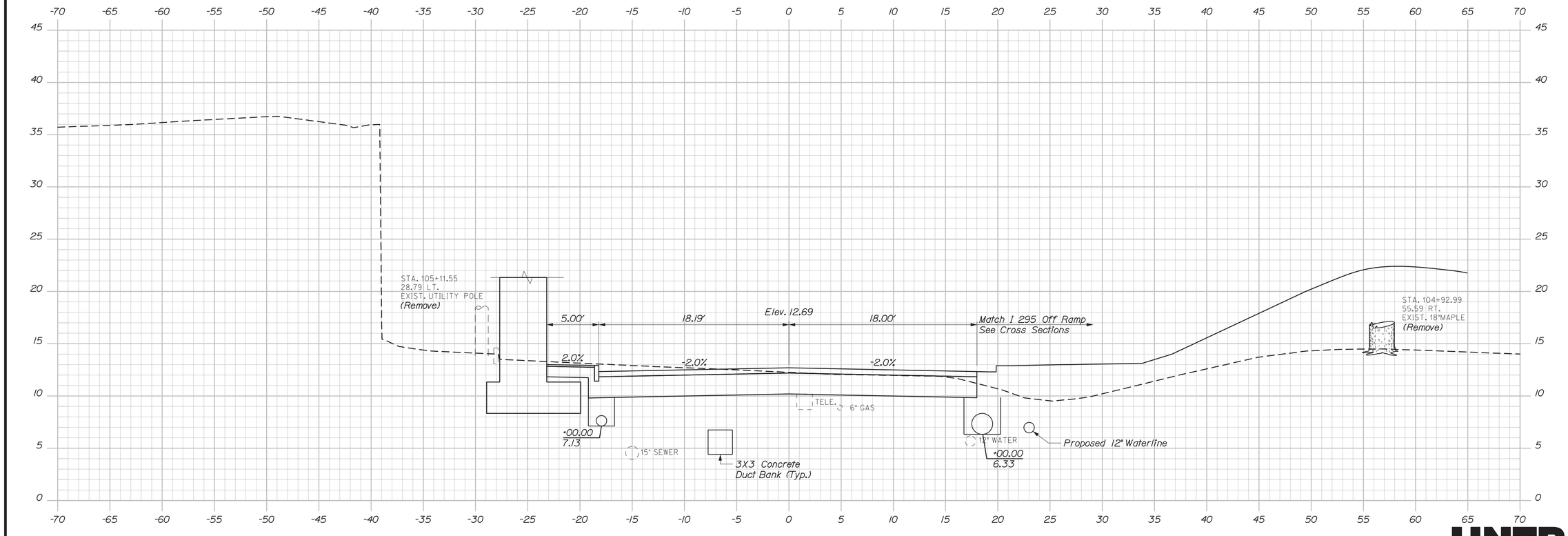
95

OF 220

Sta. 104+75.00 to Sta. 104+75.00




105+08.01




105+00.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

BY: CDH, LZD

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

96

OF 220

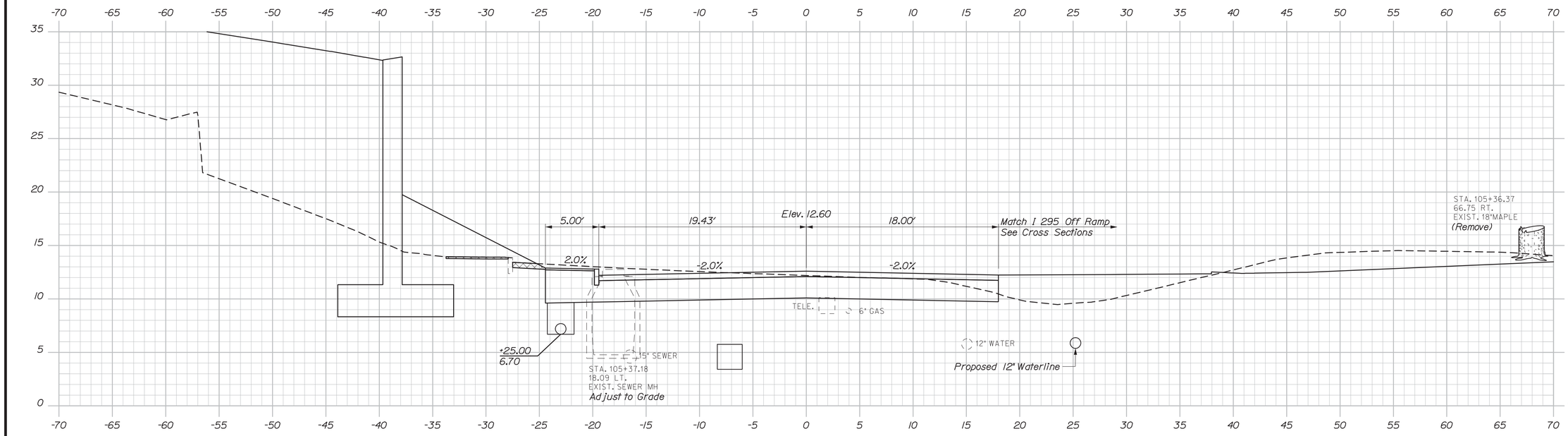
Sta. 105+00.00 to Sta. 105+08.01

Username:

Division:

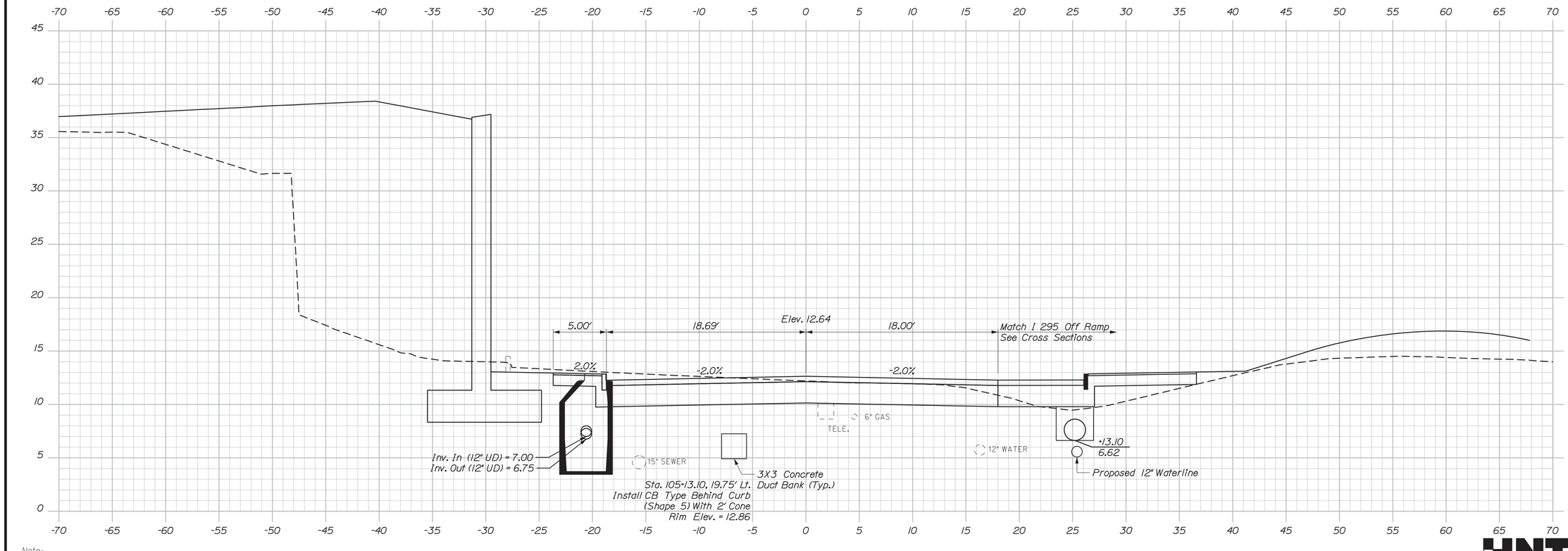
Filename: Xsect_Veranda.dgn

Date:3/3/2020




Sta. 105+13.10, 19.75' Lt. to
Sta. 106+99.00, 26.00' Lt.
Install 183' x 12" Underdrain Type C

105+25.00




Sta. 105+13.10, 19.75' Lt.
Install CB Type Behind Curb
(Shape 5) With 2' Cone
Rim Elev. = 12.86

105+13.10

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

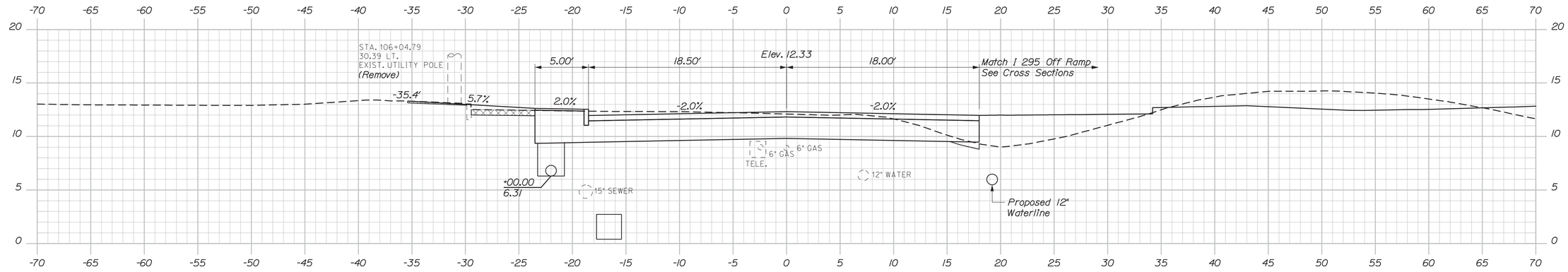
SHEET NUMBER

97

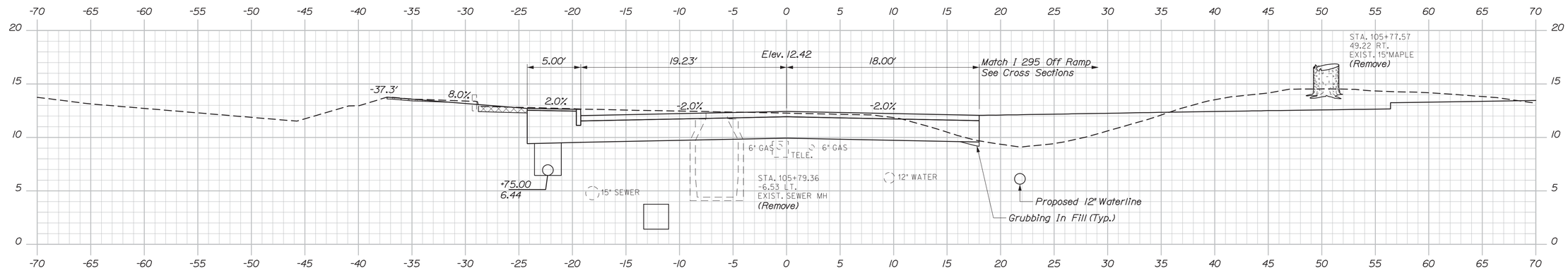
OF 220

Sta. 105+13.10 to Sta. 105+25.00

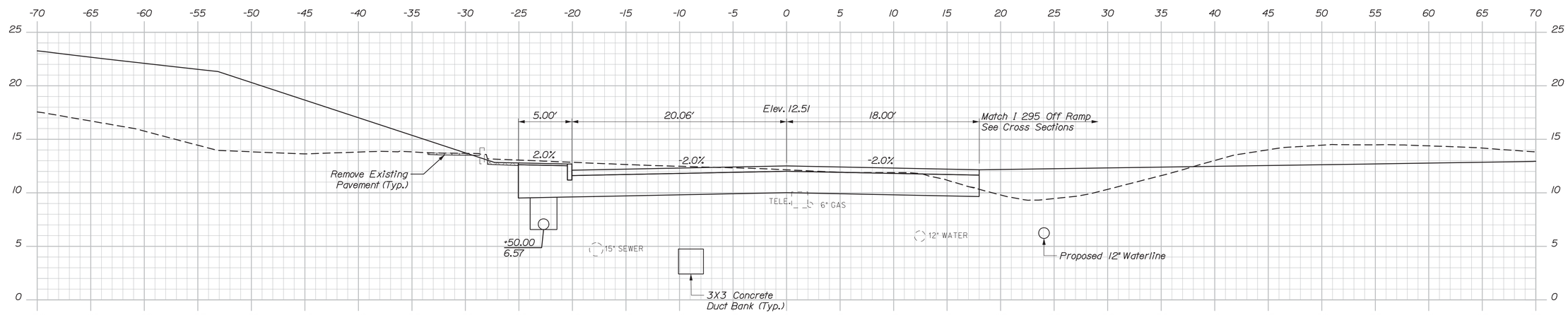
Username:
Division:
Filename: Xsect_Veranda.dgn
Date:3/3/2020




106+00.00




105+75.00




105+50.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# VERANDA STREET

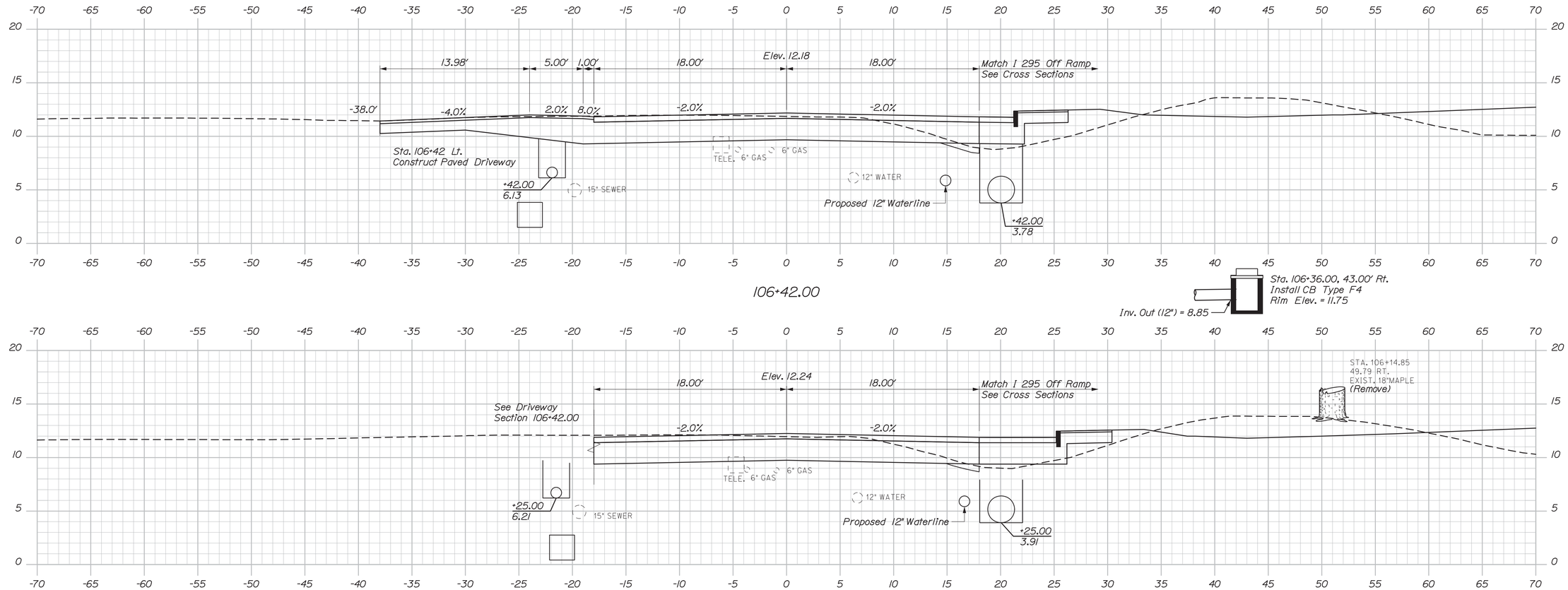
SHEET NUMBER

98

OF 220

Sta. 105+50.00 to Sta. 106+00.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

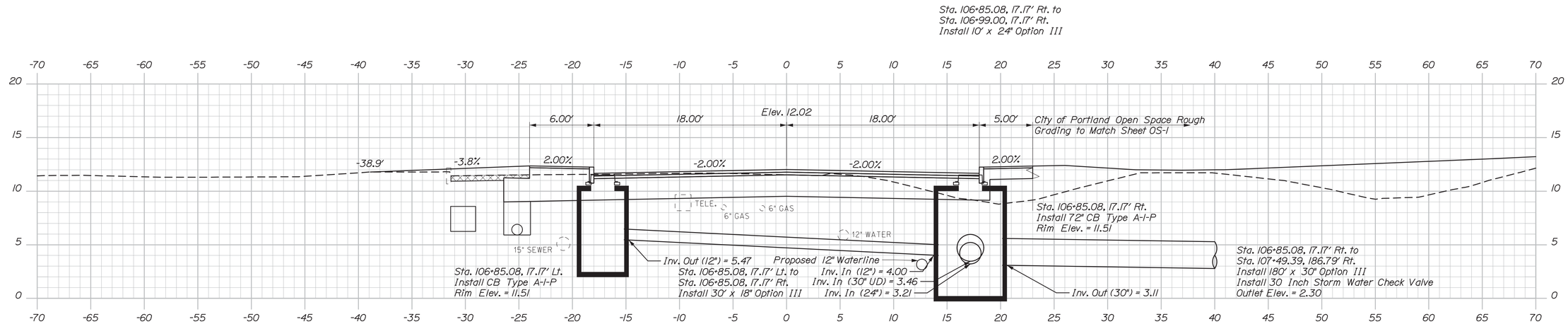
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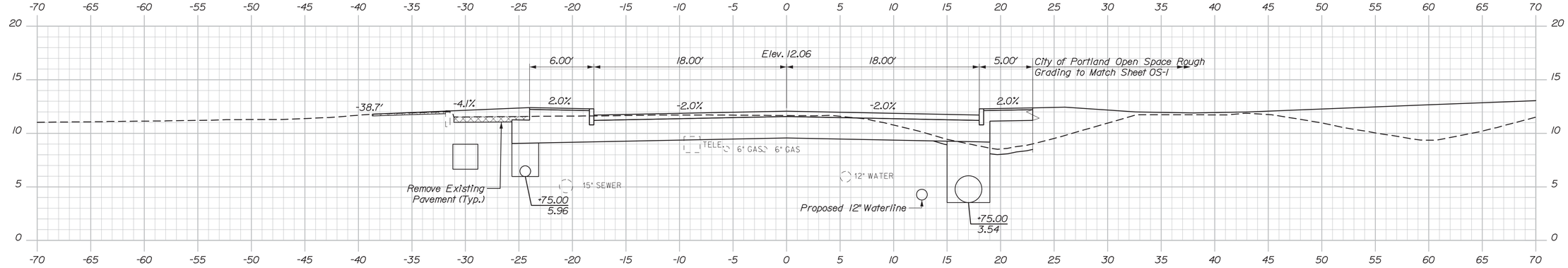
OF 220

Sta. 106+07.00 to Sta. 106+42.00

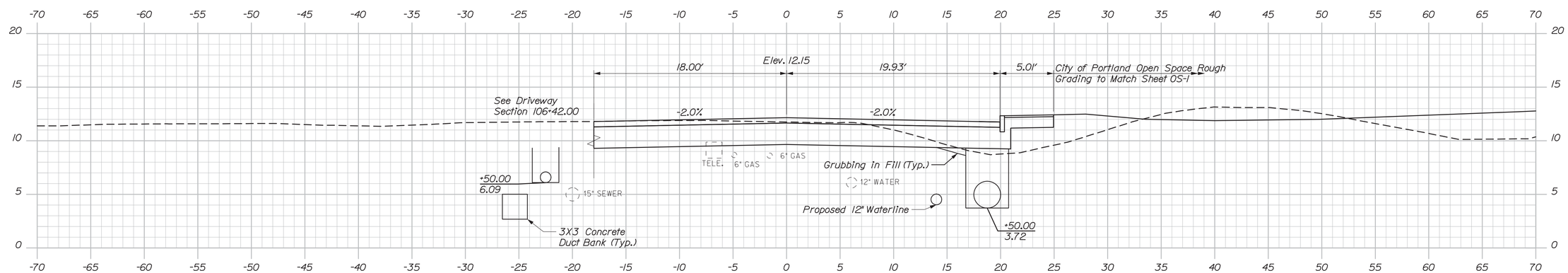
Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




106+85.08




106+75.00




106+50.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | DESIGN1-DETAILED | CDH |
| CHECKED-REVIEWED | RWH | DESIGN2-DETAILED2 | LZD |
| | | DESIGN3-DETAILED3 | |
| | | REVISIONS 1 | |
| | | REVISIONS 2 | |
| | | REVISIONS 3 | |
| | | REVISIONS 4 | |
| | | FIELD CHANGES | |

| | BY | DATE |
|---|---|---|
| | CDH | 2.'20 |
| | LZD | 2.'20 |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

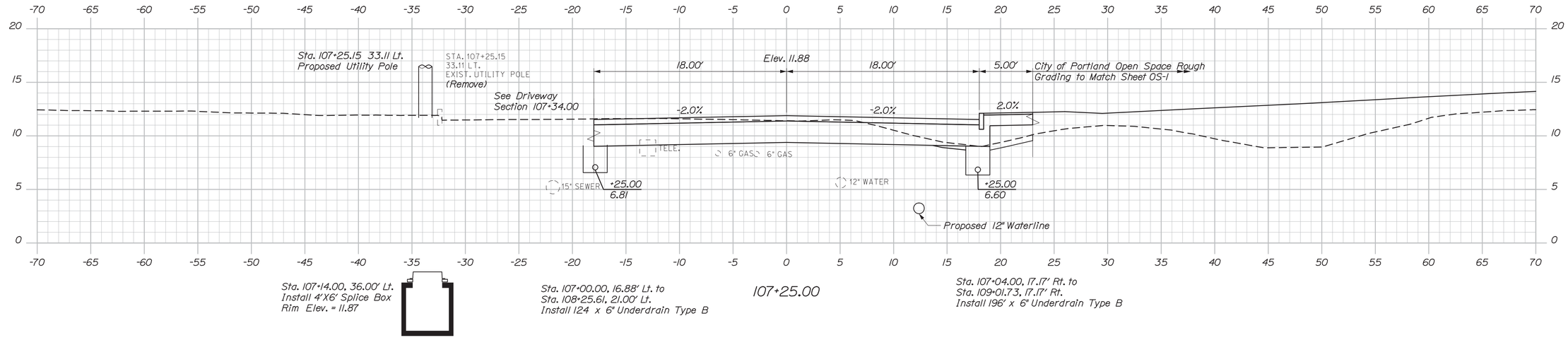
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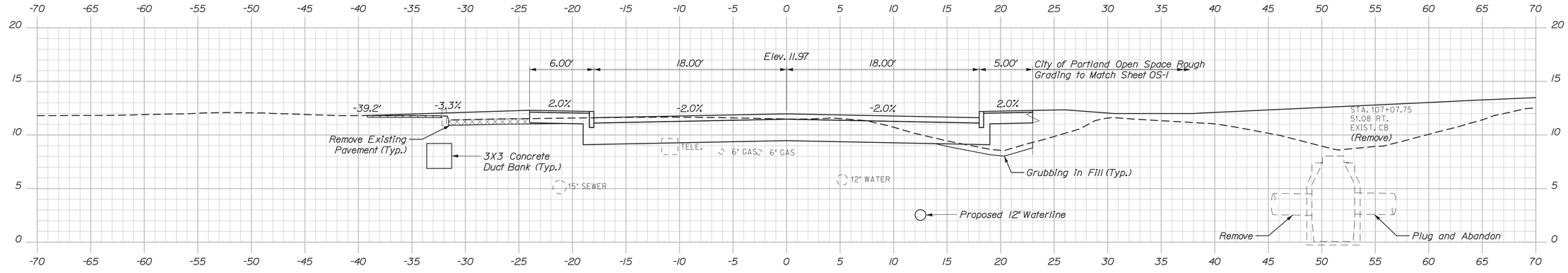
100

OF 220

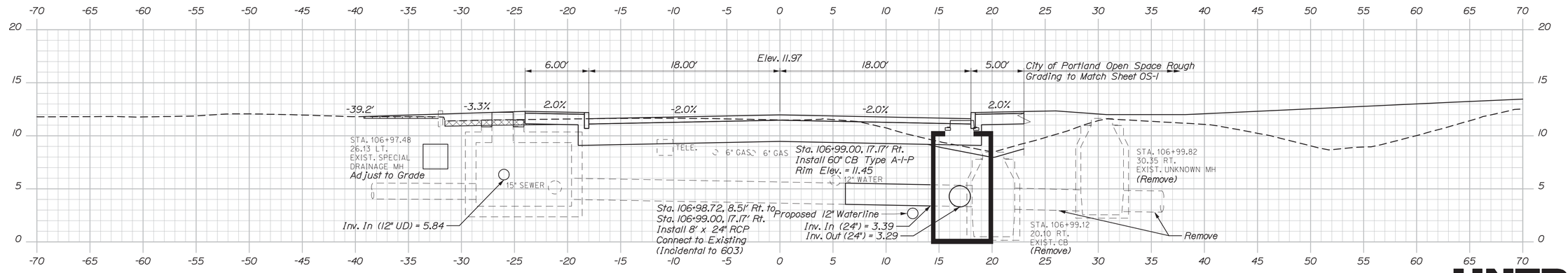
Sta. 106+50.00 to Sta. 106+99.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




107+00.00




106+99.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

101

OF 220

HNTB

Sta. 107+00.00 to Sta. 107+25.00

Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | SIGNATURE | P.E. NUMBER | DATE |
|---|---|---|---|
| | | | |

| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

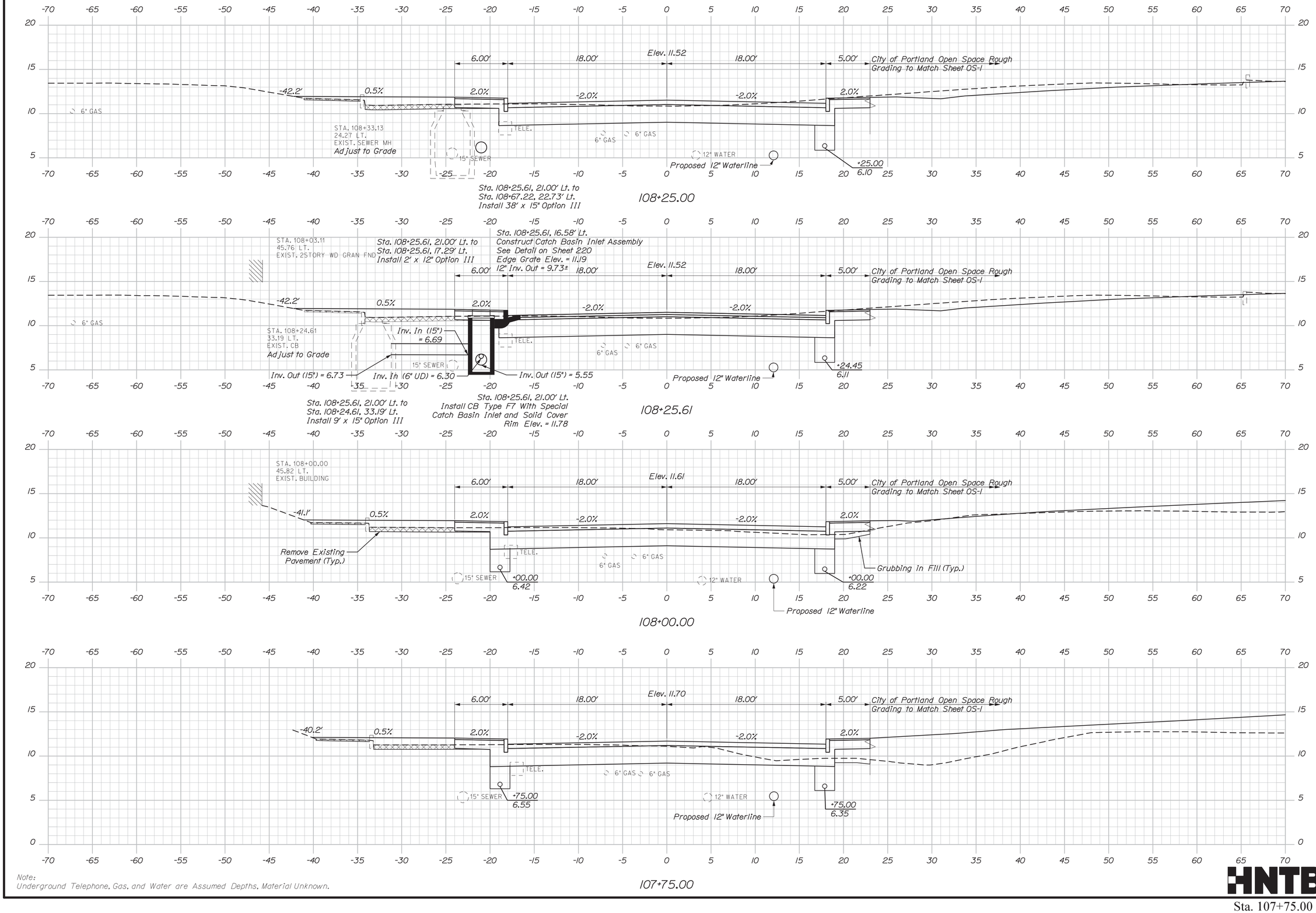
102

OF 220

HNTB

Sta. 107+34.00 to Sta. 107+54.00

Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

Sta. 107+75.00 to Sta. 108+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | SIGNATURE | DATE |
|---|---|---|
| P.E. NUMBER | | |

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| DESIGN-DETAILED | CDH | 2\20 |
| CHECKED-REVIEWED | LZD | 2\20 |
| DESIGN2-DETAILED2 | EJD | |
| DESIGN3-DETAILED3 | RWH | |
| PROJ. MANAGER | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

103

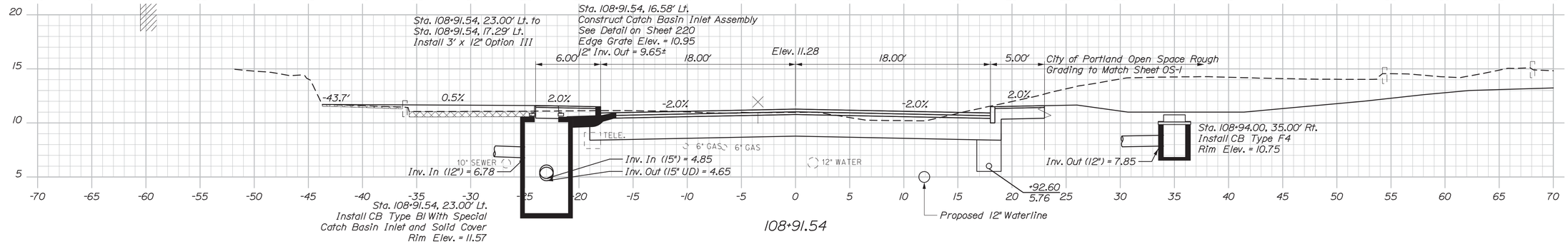
OF 220

HNTB

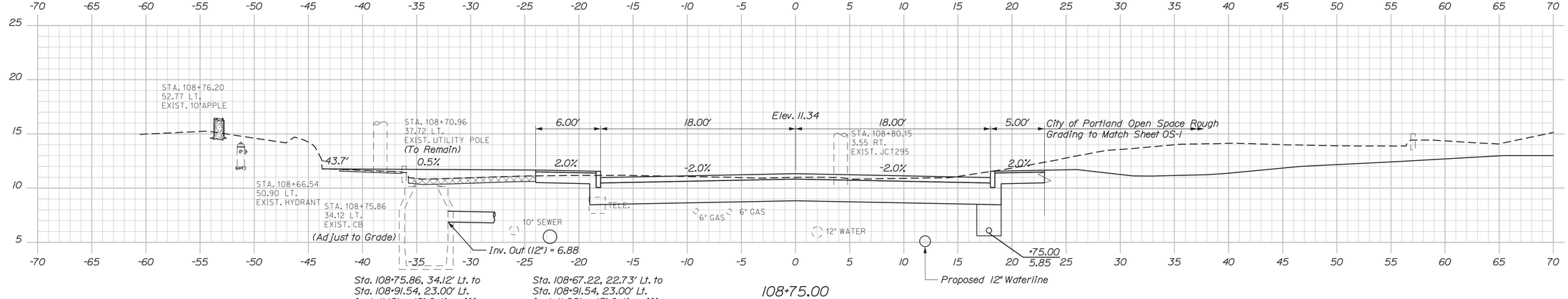
Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

Sta. 108+91.54, 23.00' Lt. to
Sta. 109+38.19, 16.88' Lt.
Install 45' x 15" Underdrain Type C

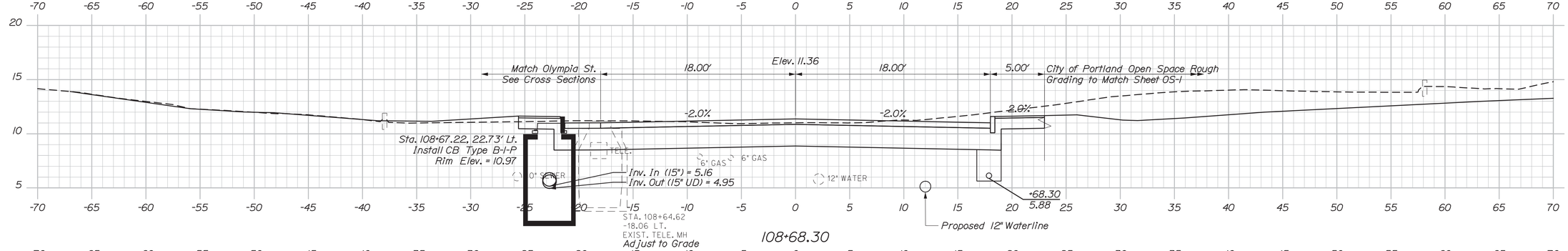
Sta. 108+94.00, 35.00' Rt. to
Sta. 109+01.73, 17.17' Rt.
Install 17' x 12" Option III



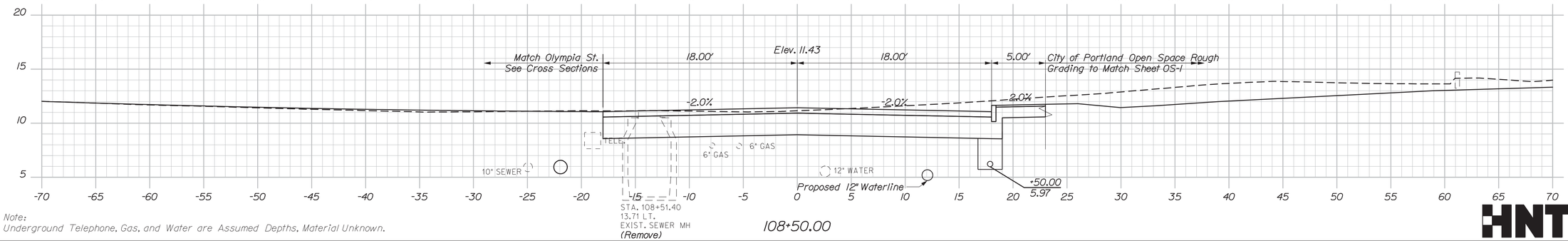

108+91.54




108+75.00




108+68.30




108+50.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

Sta. 108+50.00 to Sta. 108+92.60

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | | | |
|---|---|---|---|---|
| DESIGN-DETAILED | EDD | COH | 2\20 | |
| CHECKED-REVIEWED | RWH | LZD | 2\20 | |
| DESIGN2-DETAILED2 | | | | |
| DESIGN3-DETAILED3 | | | | |
| REVISIONS 1 | | | | |
| REVISIONS 2 | | | | |
| REVISIONS 3 | | | | |
| REVISIONS 4 | | | | |
| FIELD CHANGES | | | | |

SIGNATURE

P.E. NUMBER

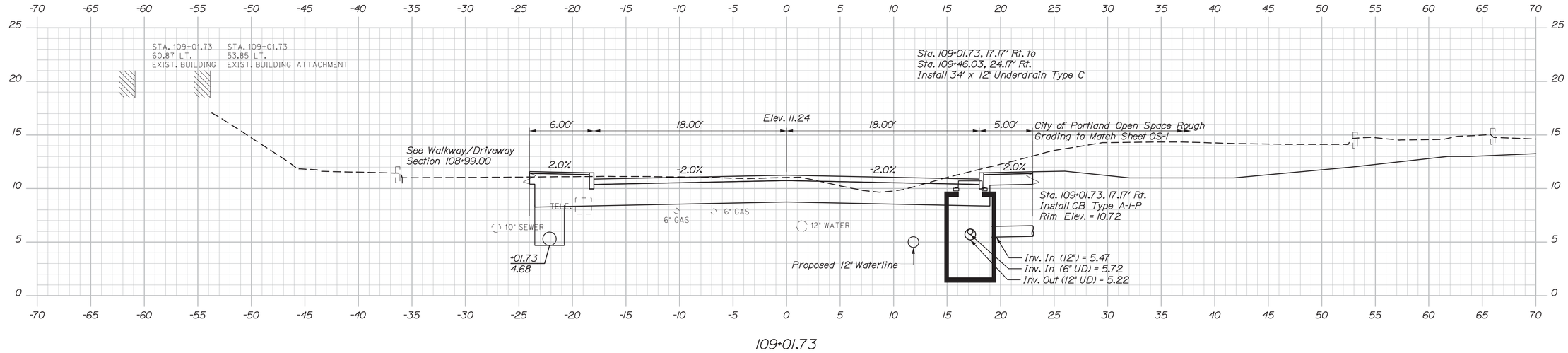
DATE

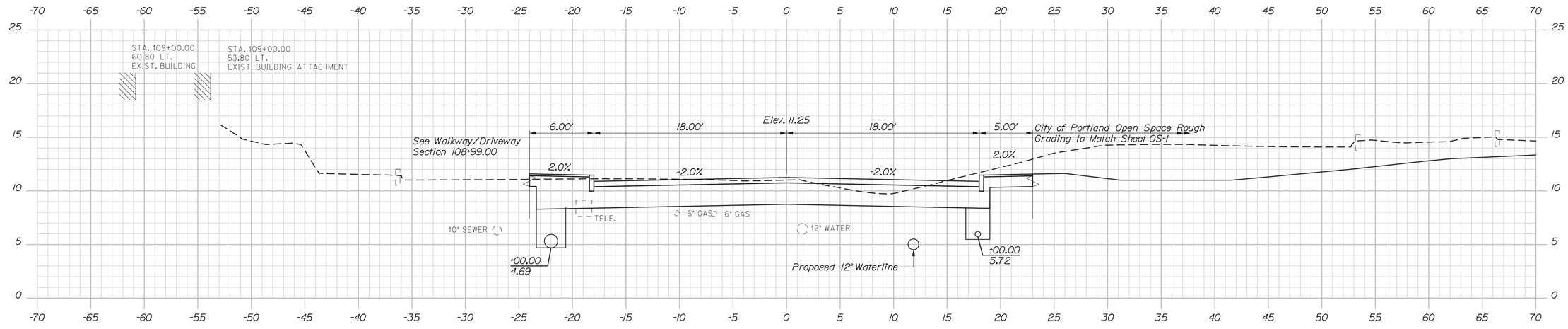
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

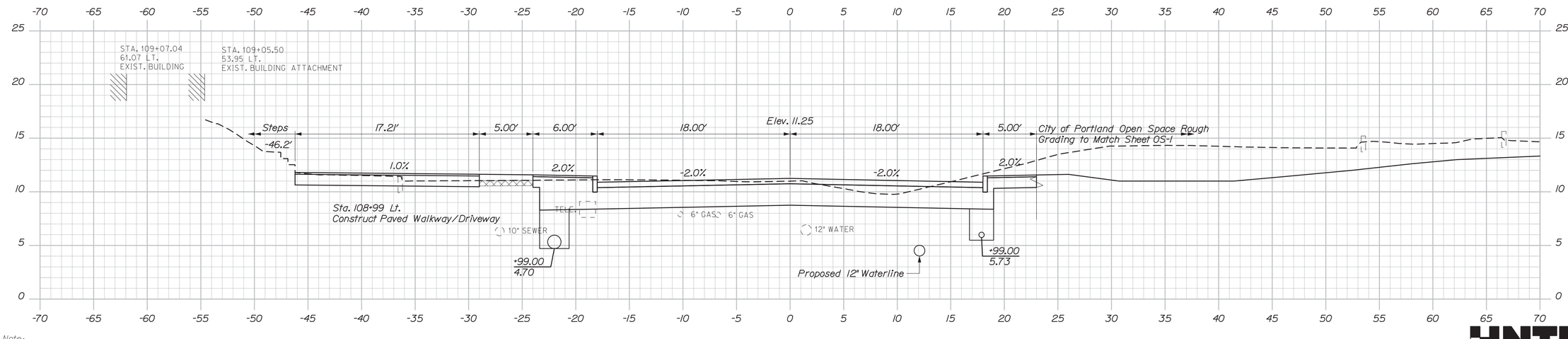
CROSS SECTIONS
VERANDA STREET

SHEET NUMBER
104
OF 220

Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE PLANS

BRIDGE NO.5933

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EJD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | LZD | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER
105
OF 220

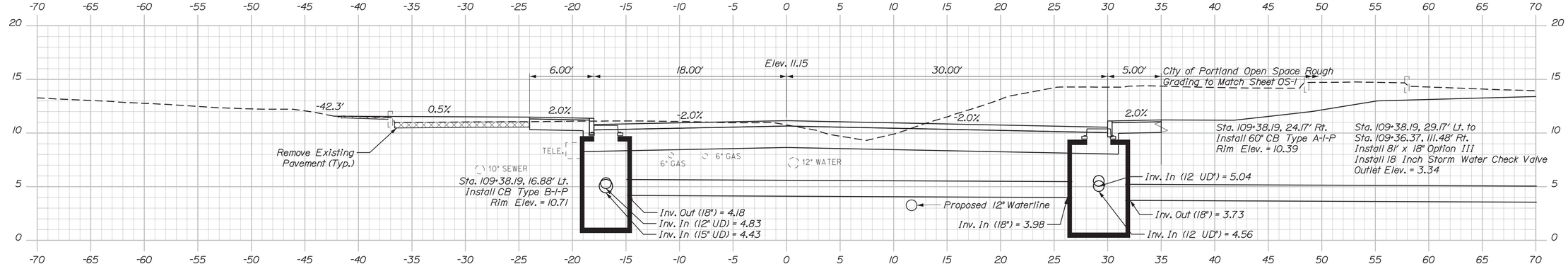
Sta. 108+99.00 to Sta. 109+01.73

Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn

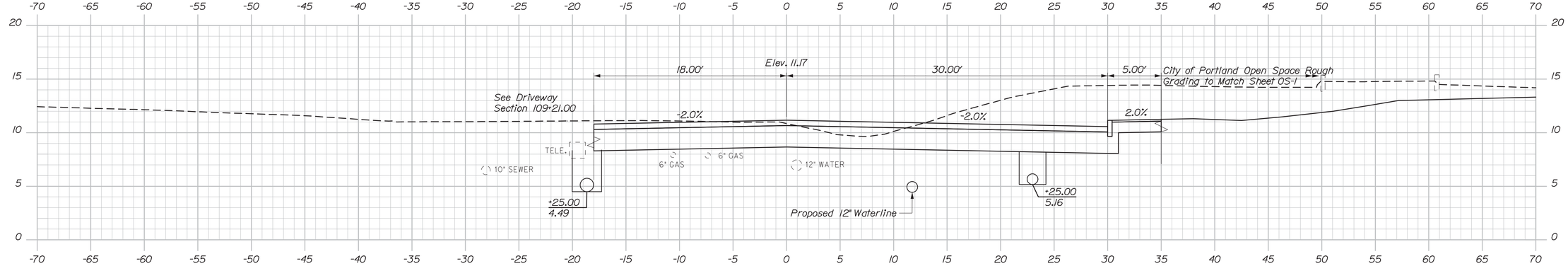
Sta. 109+38.19, 16.88' Lt. to
Sta. 109+74.78, 17.17' Lt.
Install 34' x 12" Underdrain Type C

Sta. 109+38.19, 17.17' Lt. to
Sta. 109+38.19, 29.17' Rt.
Install 42' x 18" Option III

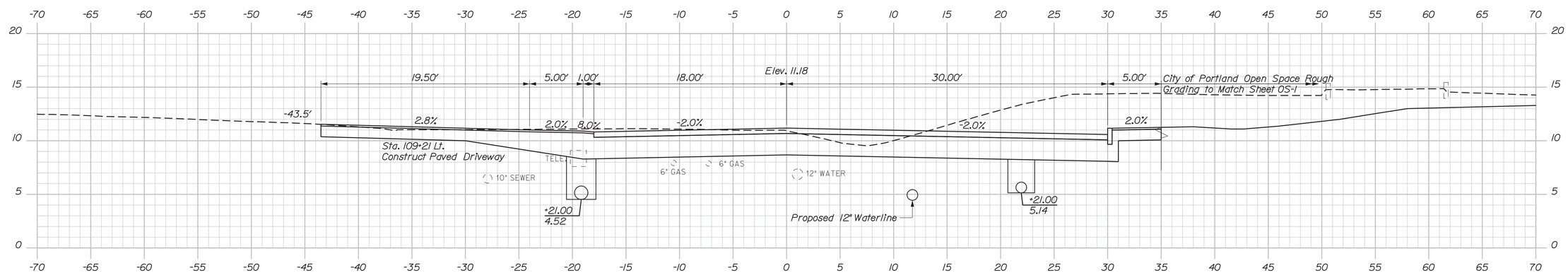
Sta. 109+38.19, 29.17' Rt. to
Sta. 109+80.03, 29.17' Rt.
Install 40' x 12" Underdrain Type C




109+38.19




109+25.00




109+21.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | EDD | D. EATON | 2\20 |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

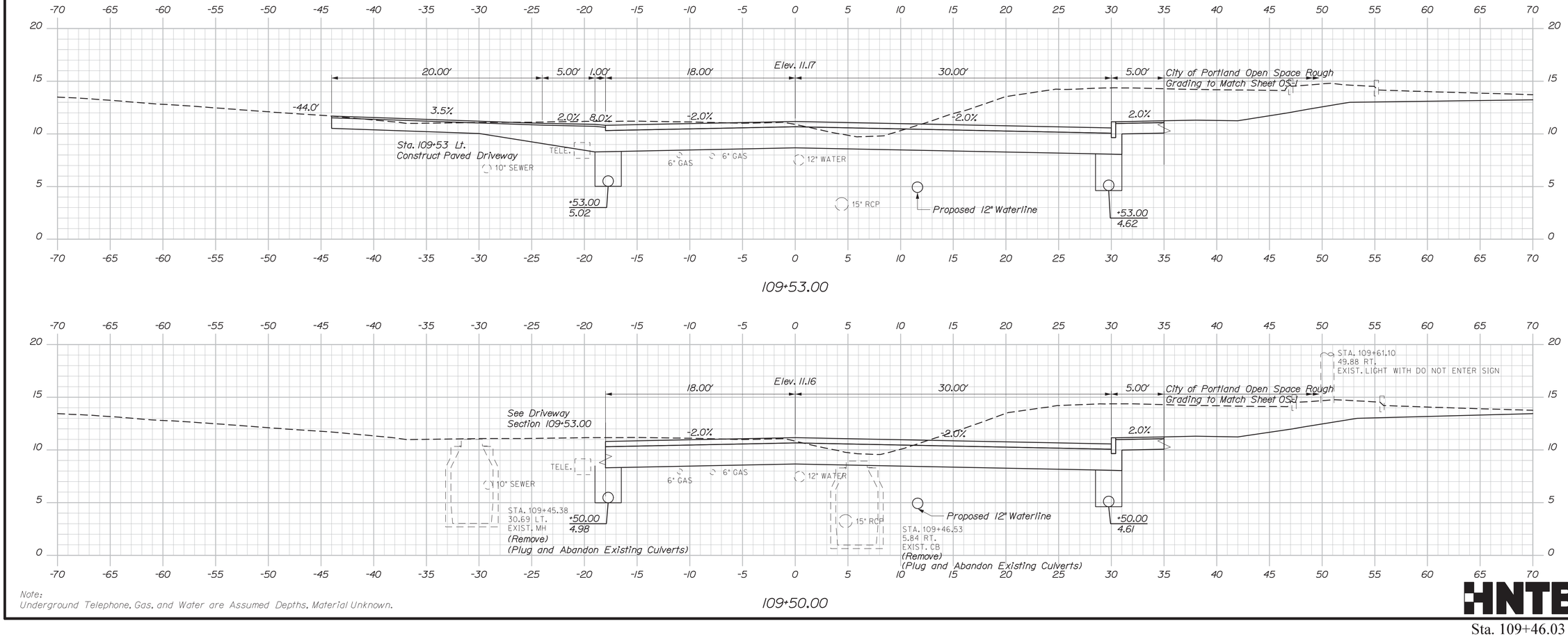
SHEET NUMBER

106

OF 220

Sta. 109+21.00 to Sta. 109+38.19

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

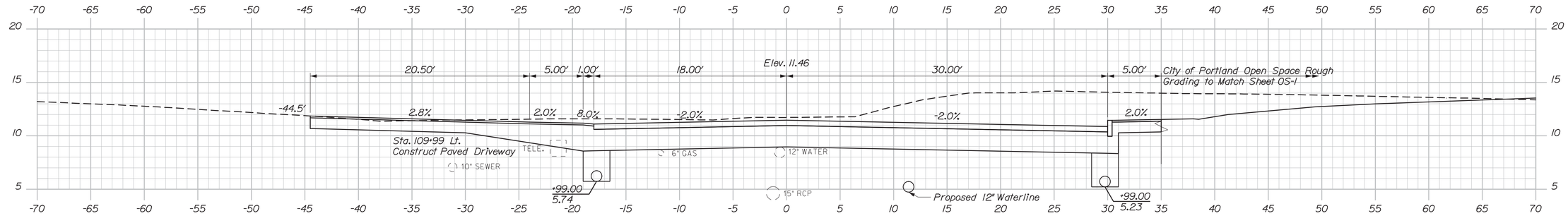
SHEET NUMBER

107

OF 220

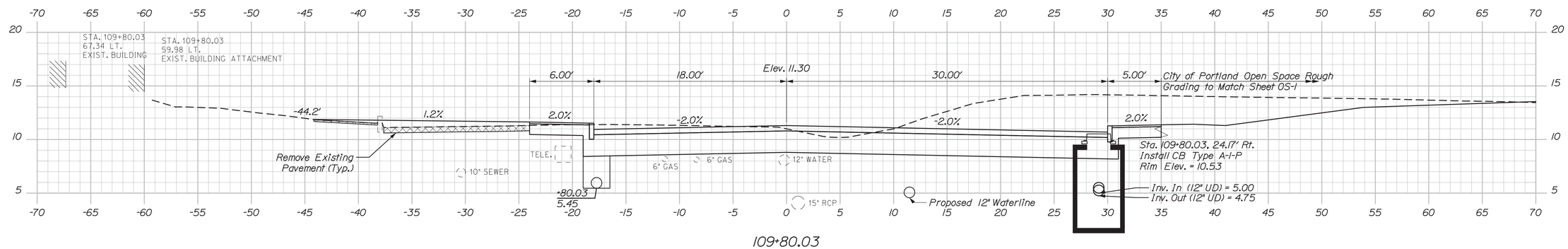
Sta. 109+46.03 to Sta. 109+53.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

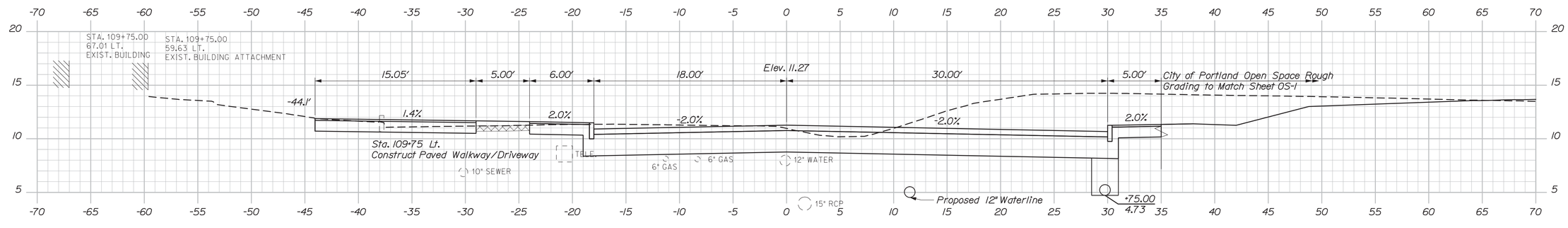



109+99.00

Sta. 109+80.03, 24.17′ Rt. to
Sta. 110+87.67, 24.17′ Rt.
Install 105′ x 12" Underdrain Type C

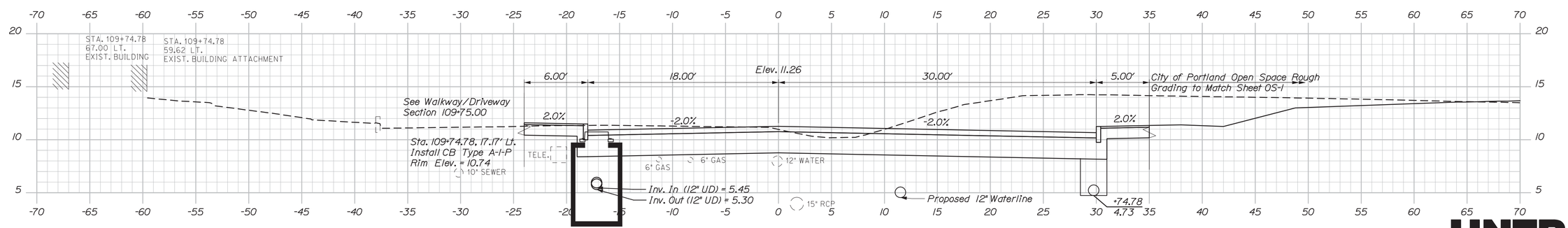



109+80.03




Sta. 109+74.78, 17.17′ Lt. to
Sta. 110+20.20, 17.17′ Lt.
Install 43′ x 12" Underdrain Type C

109+75.00




109+74.78

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE PLANS

BRIDGE NO.5933

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

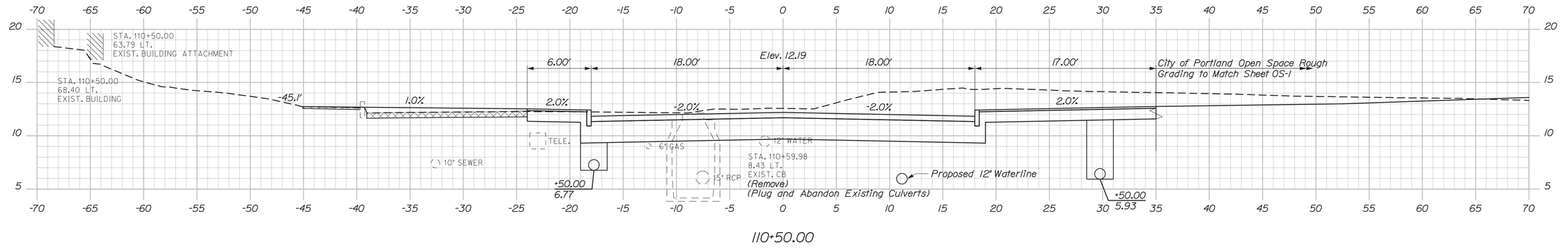
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

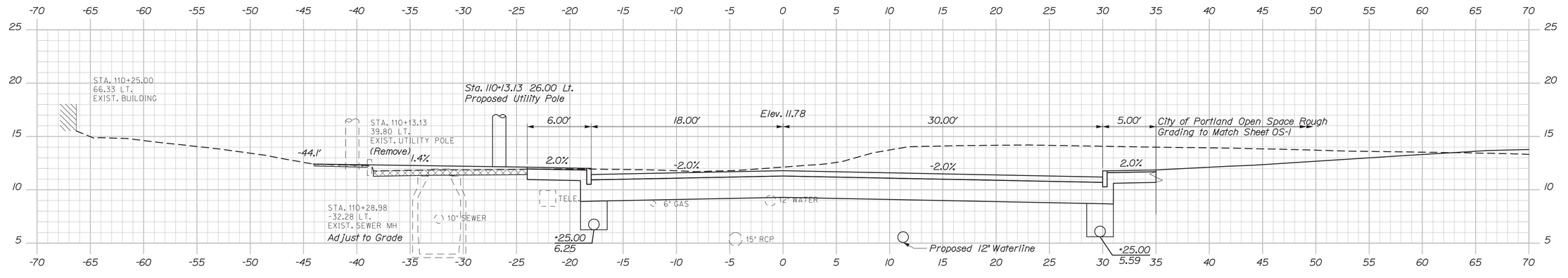
SHEET NUMBER
108
OF 220

Sta. 109+74.78 to Sta. 109+99.00

Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn

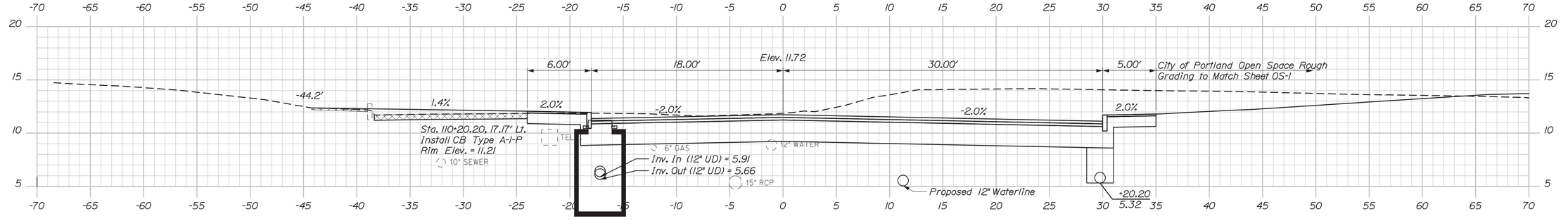



110+50.00

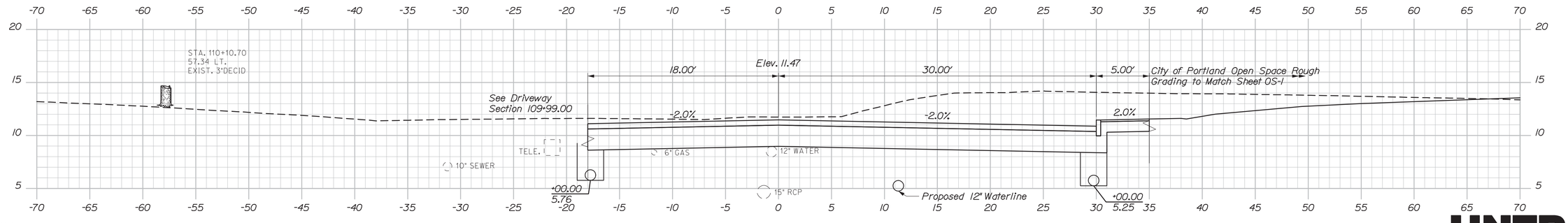



110+25.00

Sta. 110+20.20, 17.17' Lt. to
Sta. 110+72.00, 17.17' Lt.
Install 49' x 12" Underdrain Type C




110+20.20




110+00.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| P.E. NUMBER | | | |
| DATE | | | |
| SIGNATURE | | | |
| BY | CDH | LZD | |
| DATE | 2\20 | 2\20 | |
| D. EATON | | | |
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | EDD | | |
| CHECKED-REVIEWED | RWH | | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

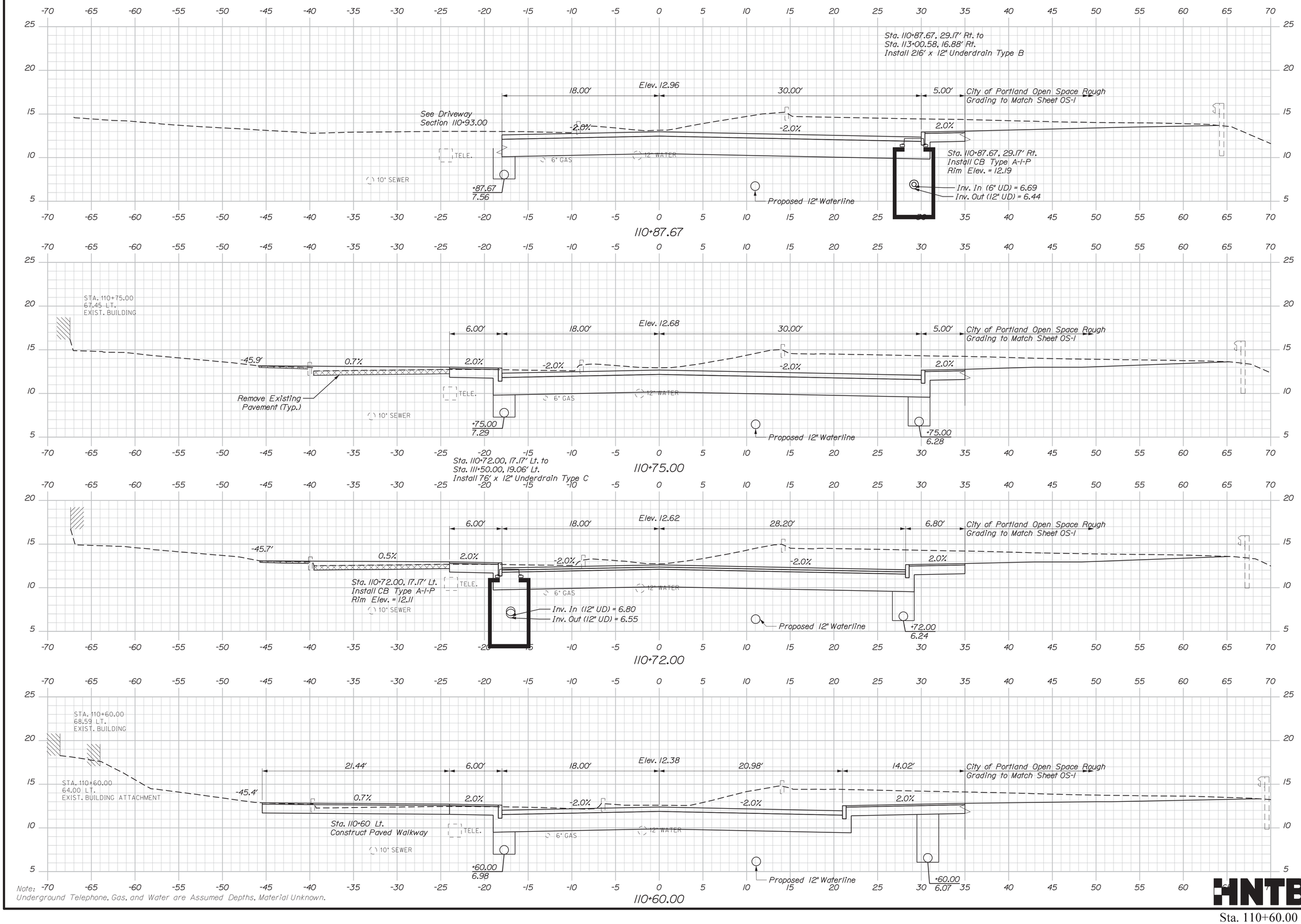
SHEET NUMBER

109

OF 220

Sta. 110+00.00 to Sta. 110+50.00

Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn




Note: Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | LED2 | | |
| DESIGN3-DETAILED3 | LED3 | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

110

OF 220

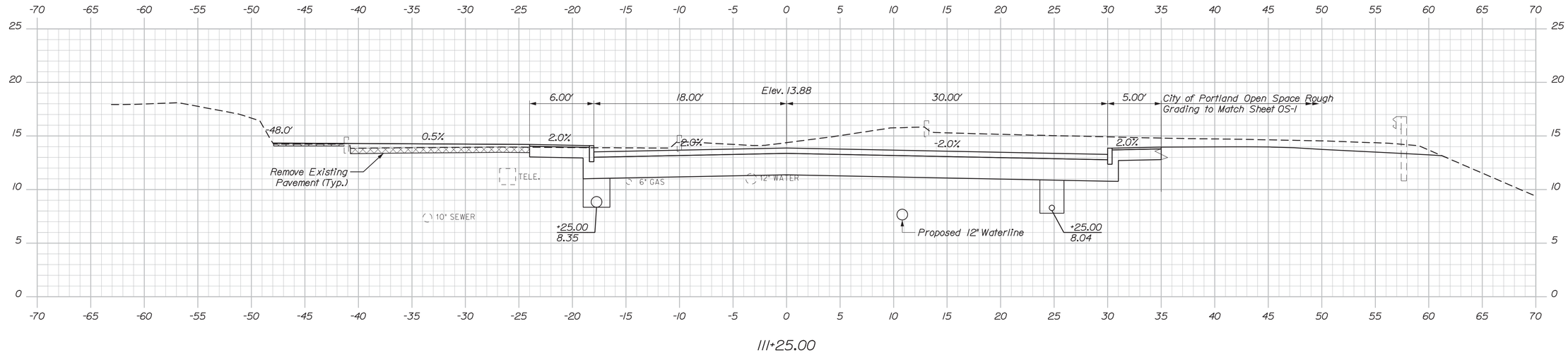
Date:3/3/2020

Username:

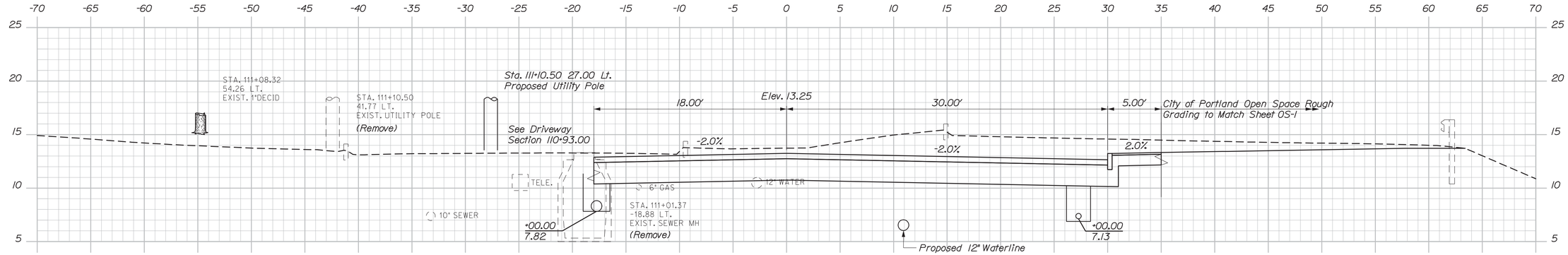
Division:

Filename: Xsect_Veranda.dgn

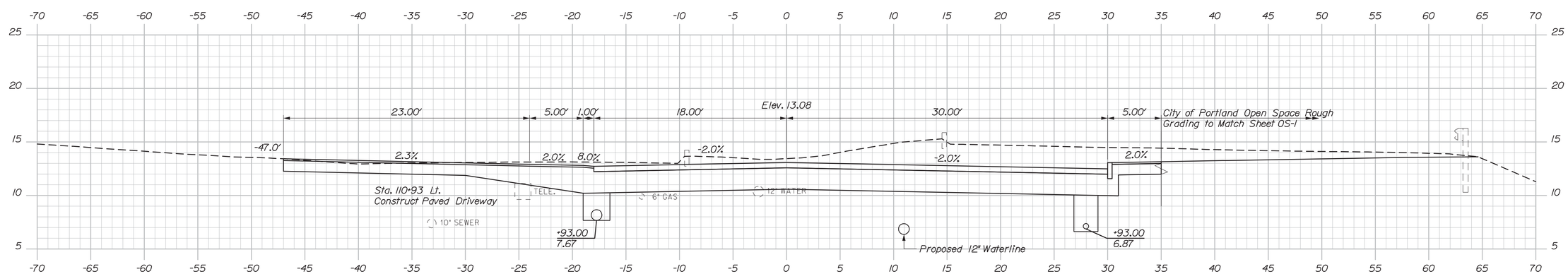
Sta. 110+60.00 to Sta. 110+87.67




111+25.00




111+00.00




110+93.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | DESIGN2-DETAILED2 | |
| CHECKED-REVIEWED | RWH | DESIGN3-DETAILED3 | |

| | BY | DATE |
|---|---|---|
| REVISIONS 1 | CDH | 2\20 |
| REVISIONS 2 | LZD | 2\20 |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

111

OF 220

Sta. 110+93.00 to Sta. 111+25.00

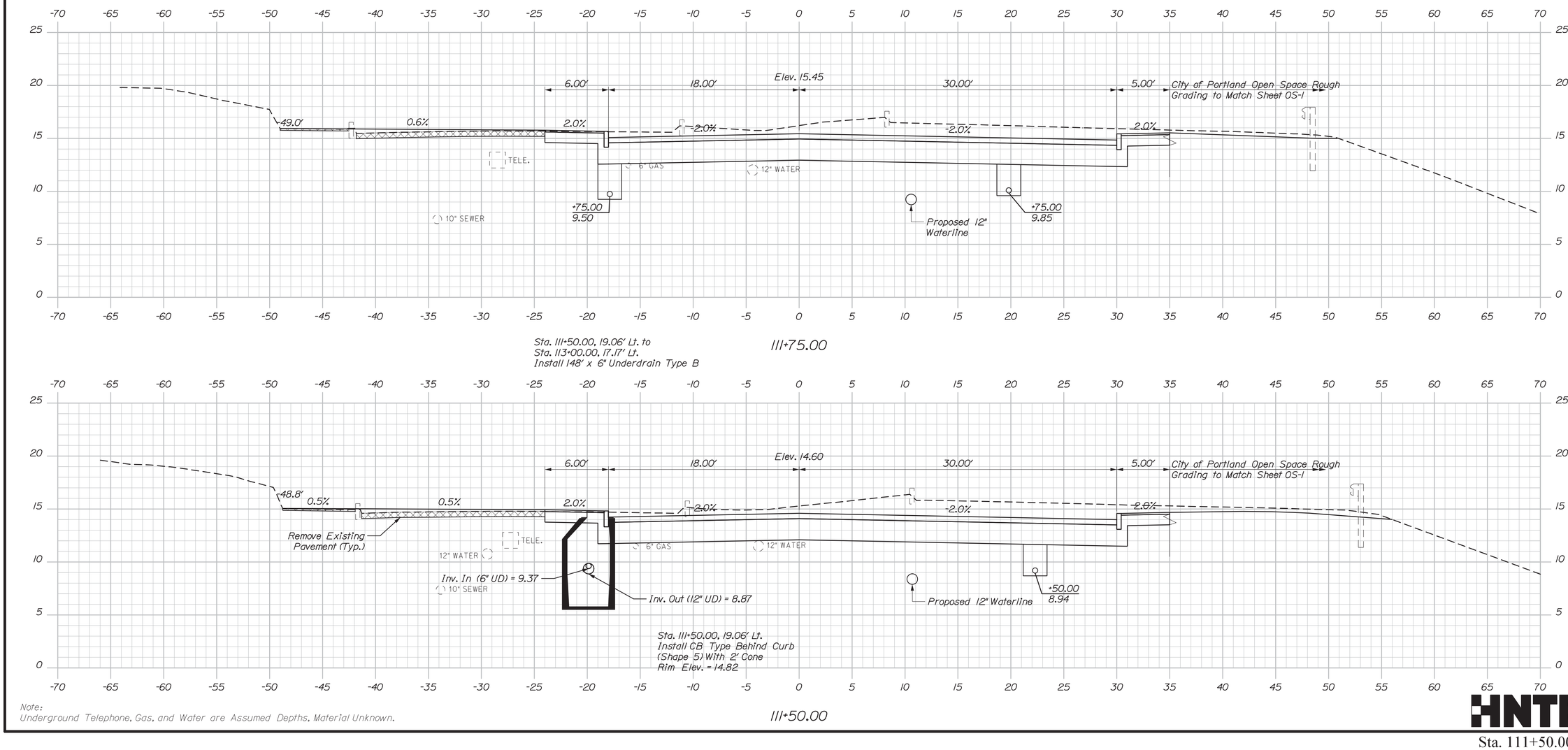
Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

Username:

Division:

Filename: Xsect_Veranda.dgn

Date:3/3/2020




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

112

OF 220

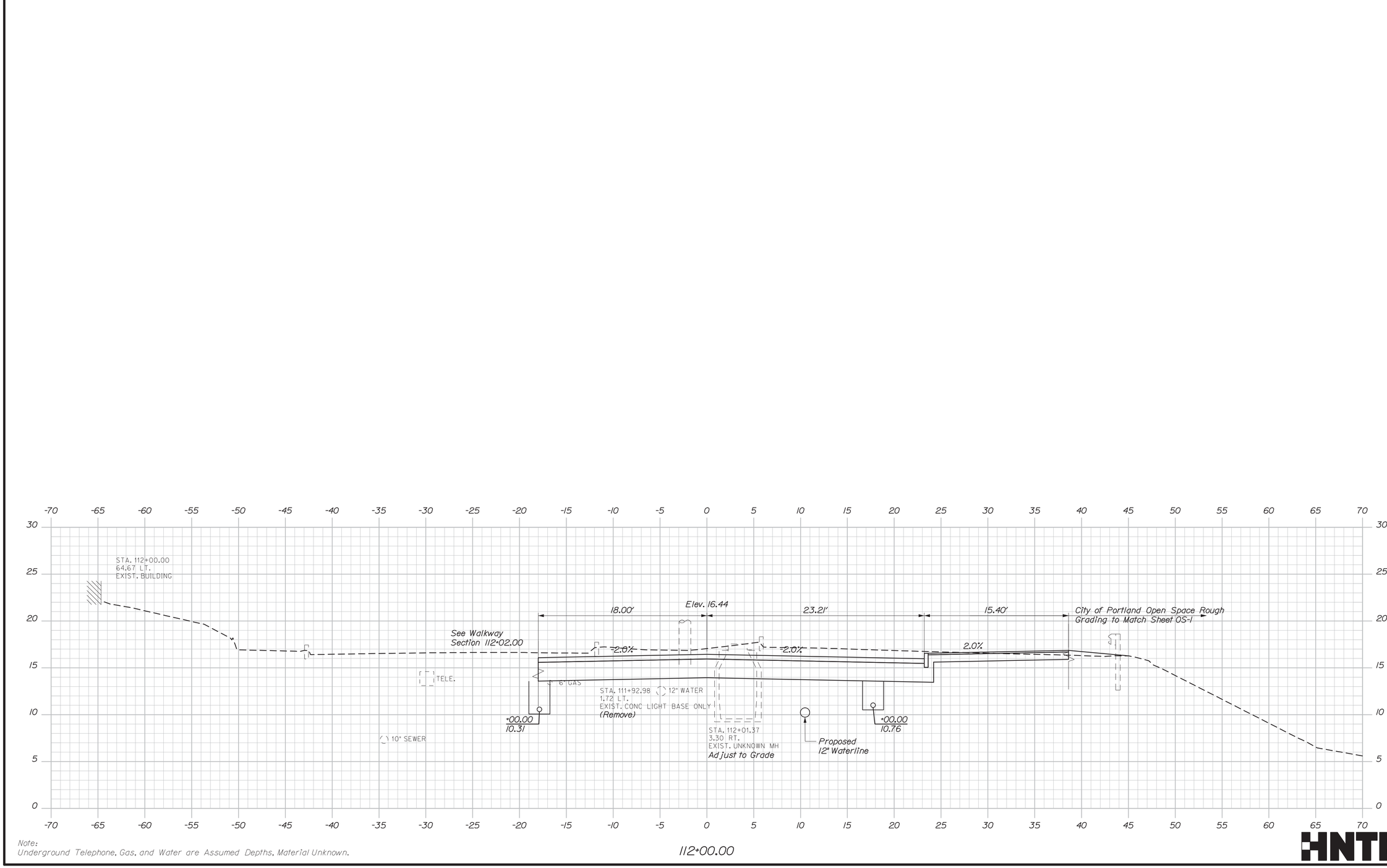
Sta. 111+50.00 to Sta. 111+75.00

Username:

Date:3/3/2020

Division:

Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SIGNATURE

P.E. NUMBER

DATE

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# VERANDA STREET

SHEET NUMBER

113

OF 220

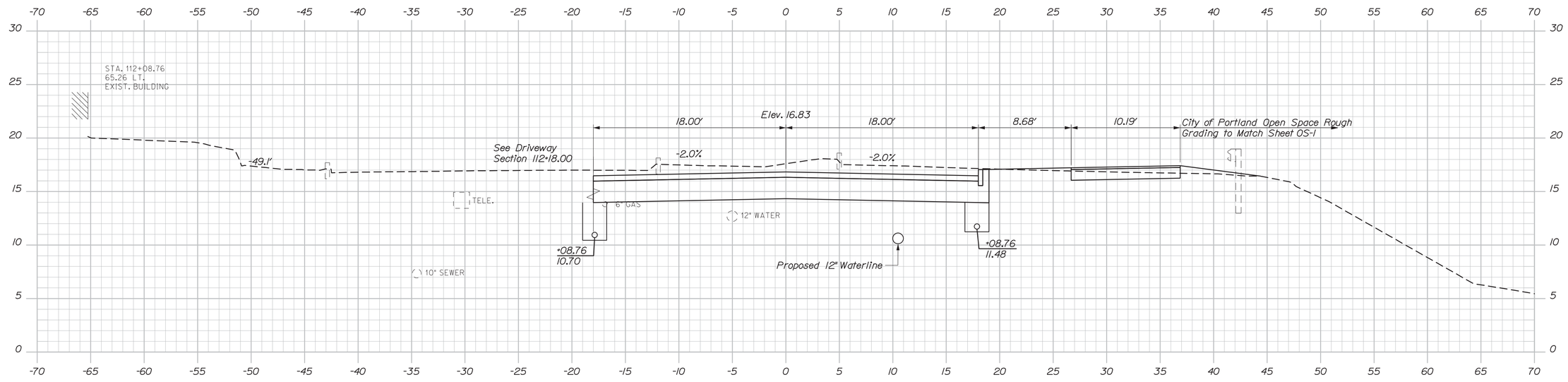
Sta. 111+89.99 to Sta. 112+00.00

Username:

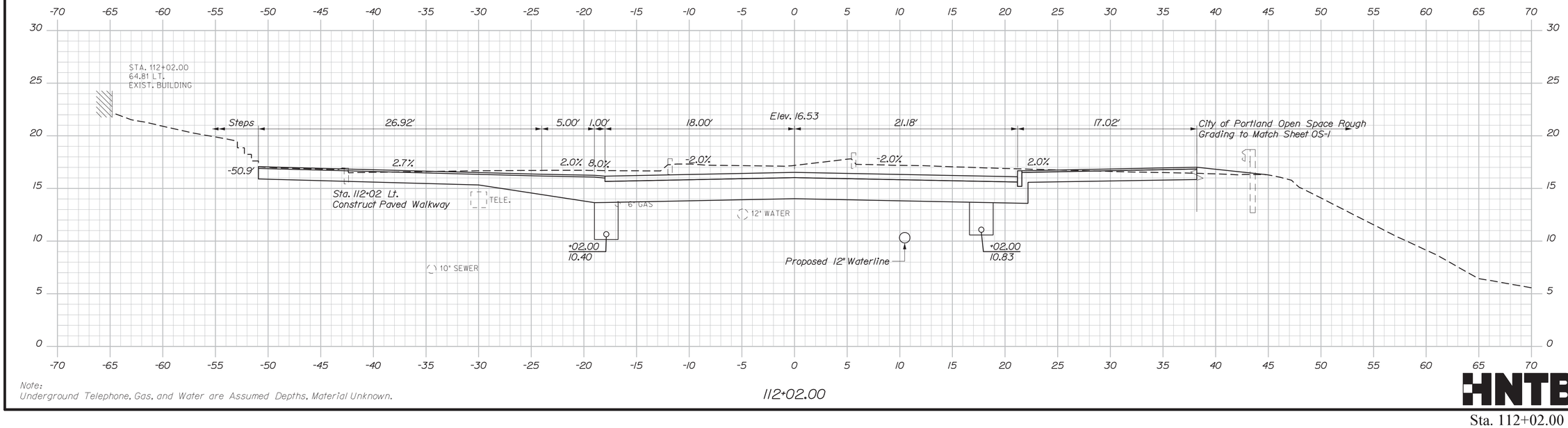
Division:

Date:3/3/2020

Filename: Xsect_Veranda.dgn




112+08.76




112+02.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

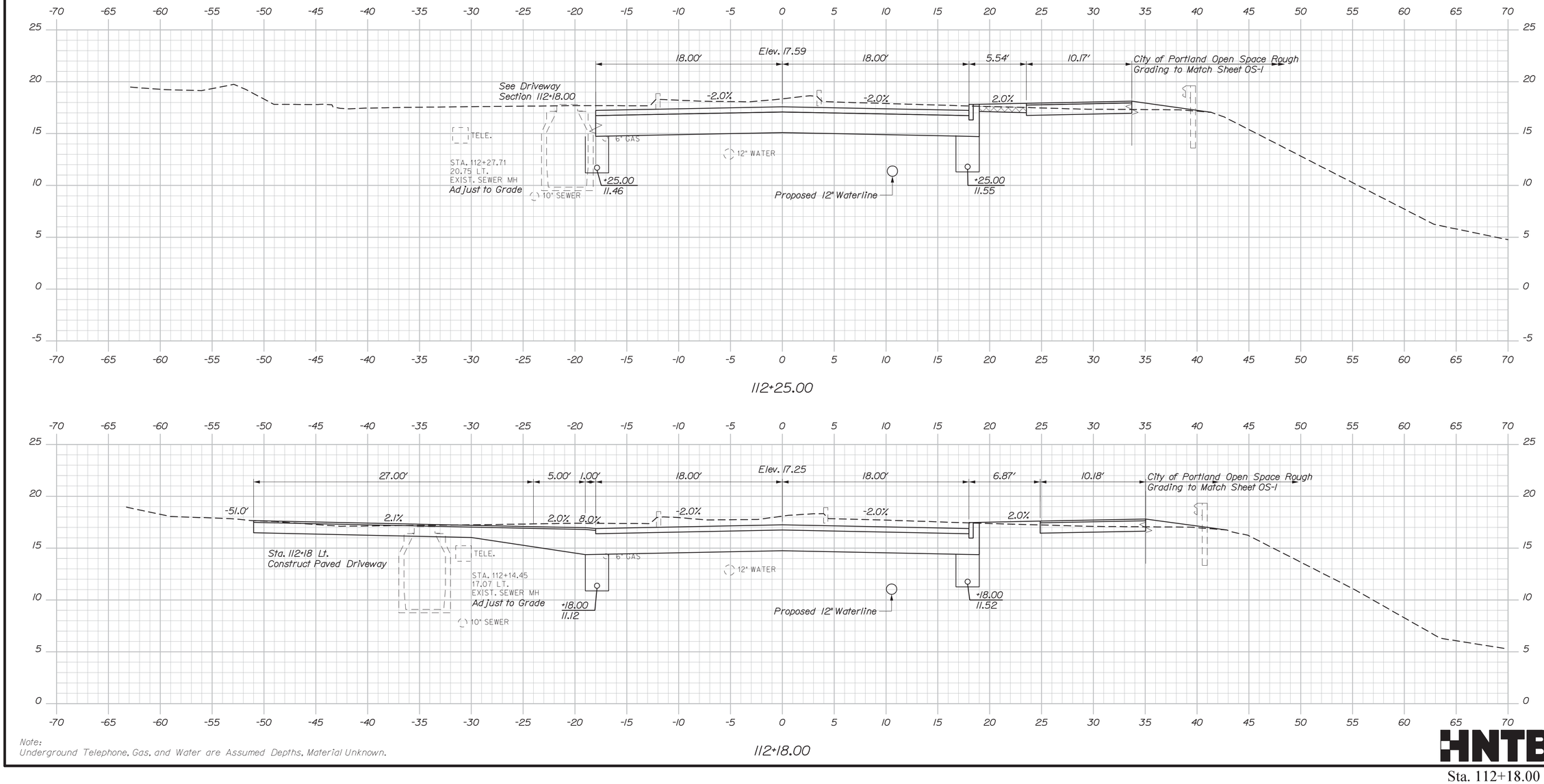
CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

114

OF 220

Sta. 112+02.00 to Sta. 112+08.76




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

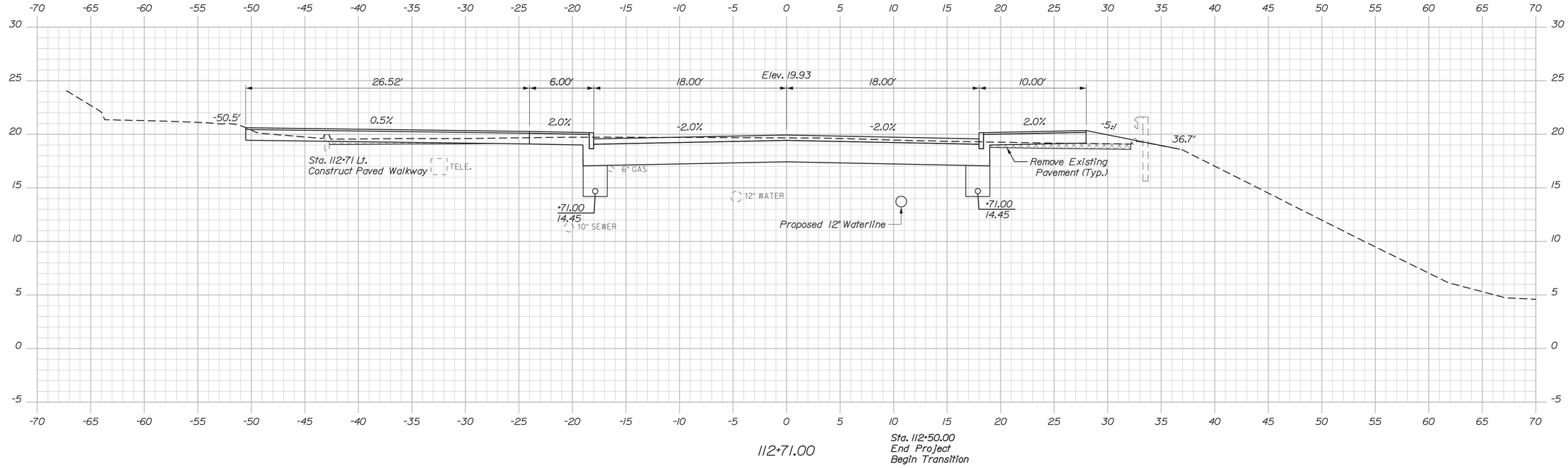
CROSS SECTIONS
VERANDA STREET

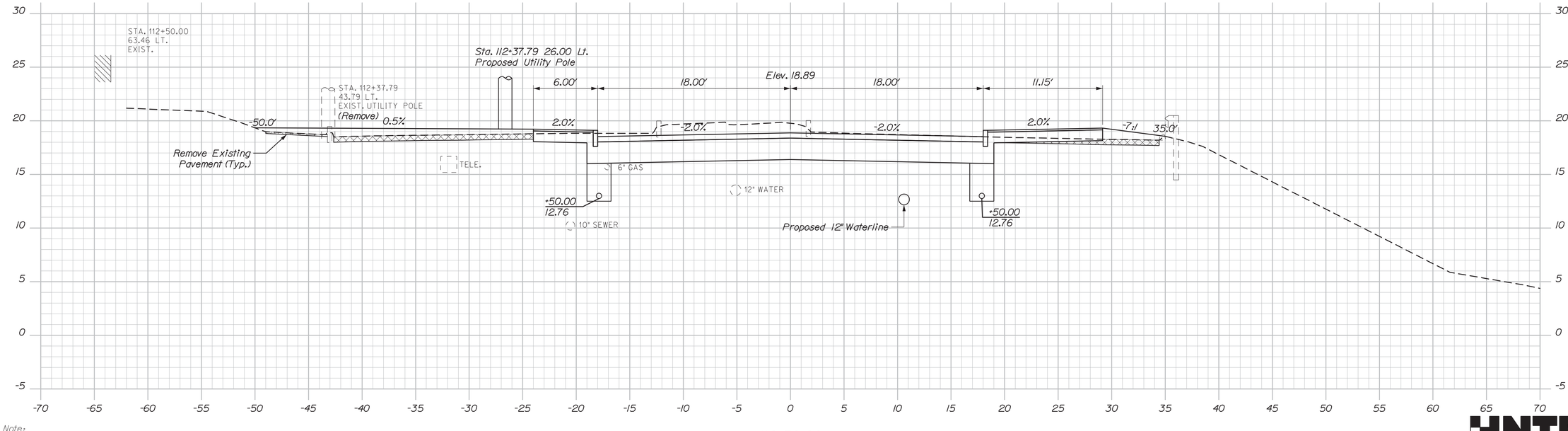
SHEET NUMBER
115
OF 220

Sta. 112+18.00 to Sta. 112+25.00

Username: Division: Date:3/3/2020

Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

116

OF 220

HNTB

Sta. 112+50.00 to Sta. 112+71.00

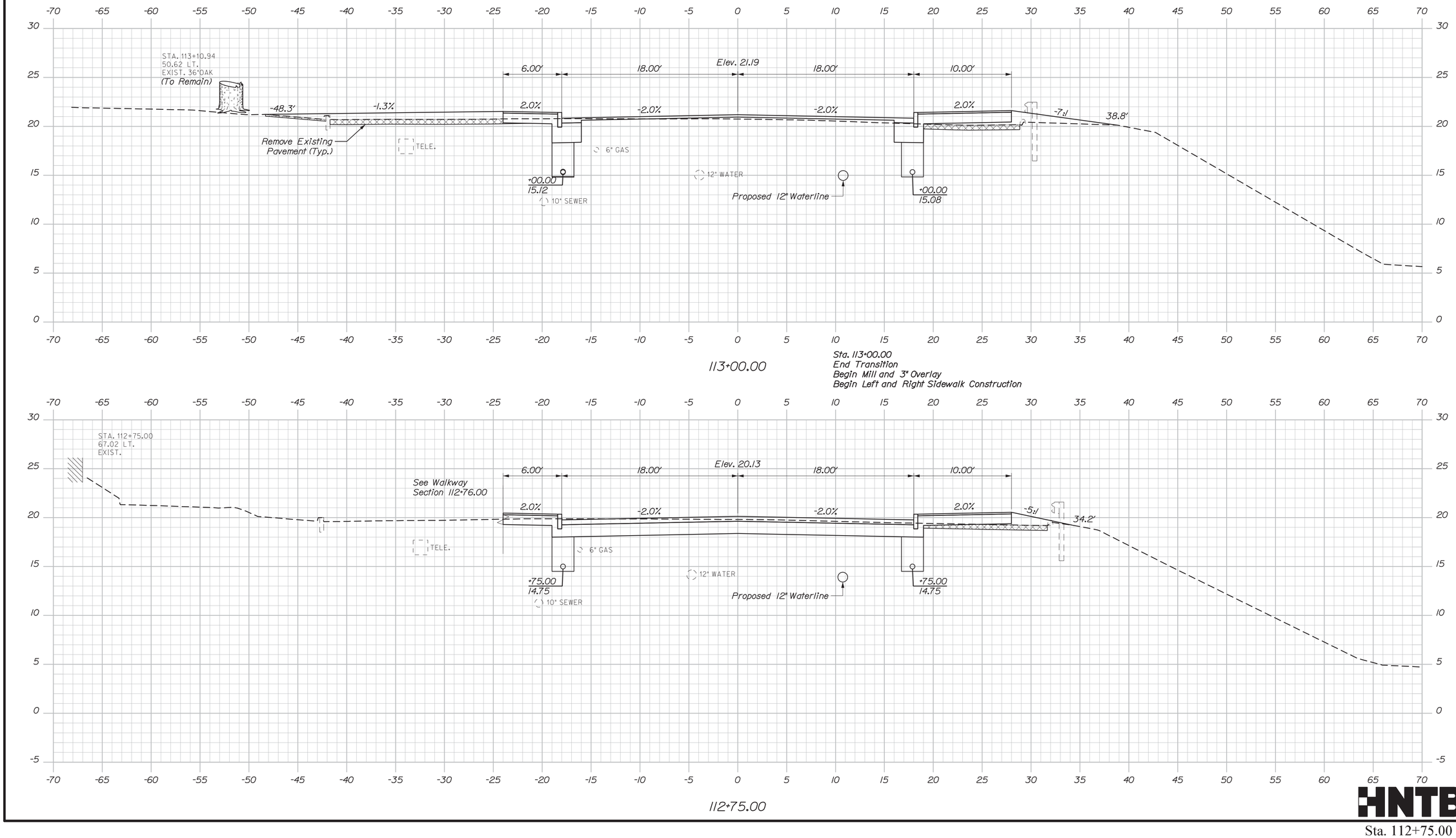
Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn

Username:

Division:

Date:3/3/2020

Filename: Xsect_Veranda.dgn




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

117

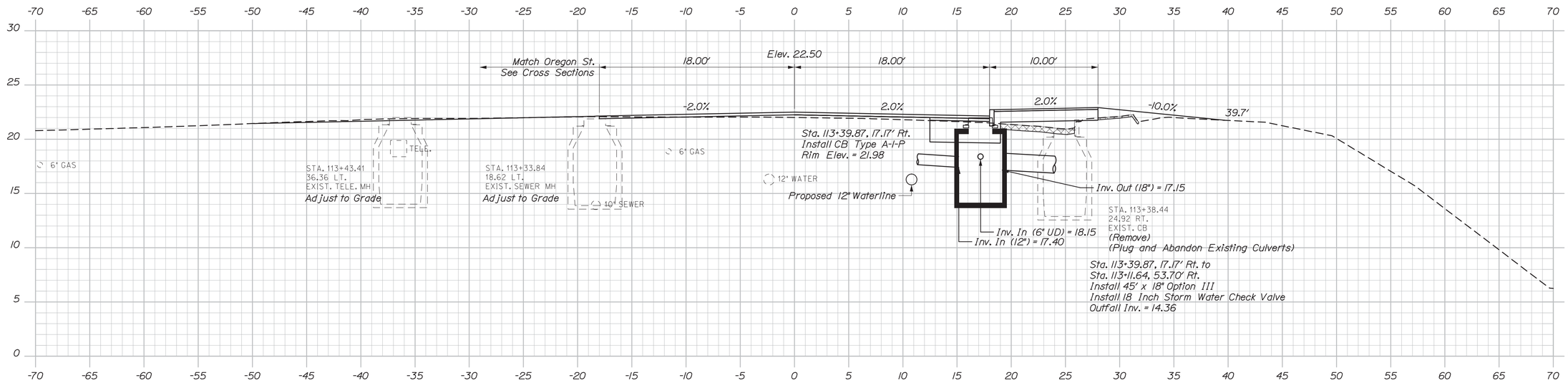
OF 220

HNTB

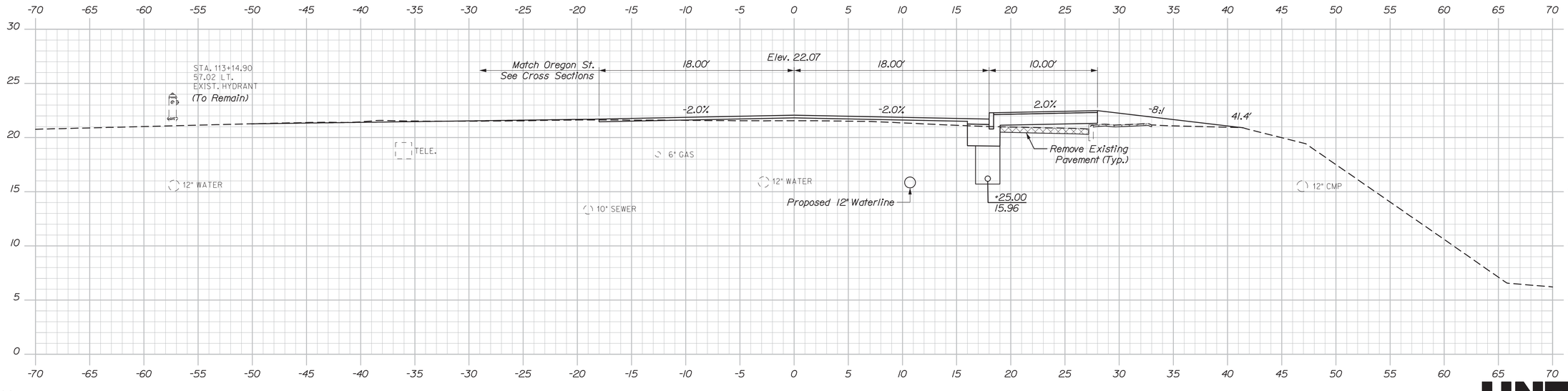
Sta. 112+75.00 to Sta. 113+00.00

Sta. 113+39.87, 17.17' Rt. to
Sta. 113+72.39, 19.06' Lt.
Install 44' x 12" Option III

Sta. 113+39.87, 17.17' Rt. to
Sta. 115+95.00, 17.17' Rt.
Install 254' x 6" Underdrain Type C




113+39.87




113+25.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | LZD | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

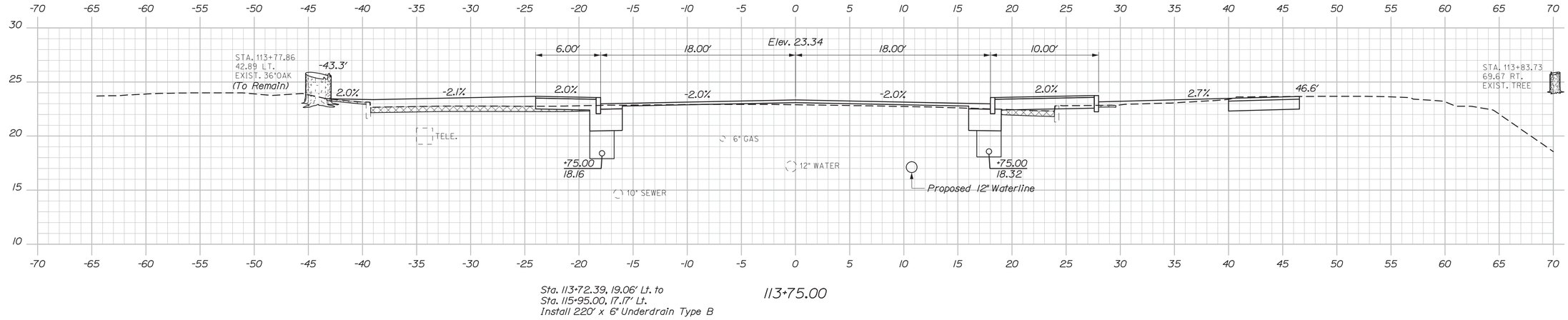
SHEET NUMBER

118

OF 220

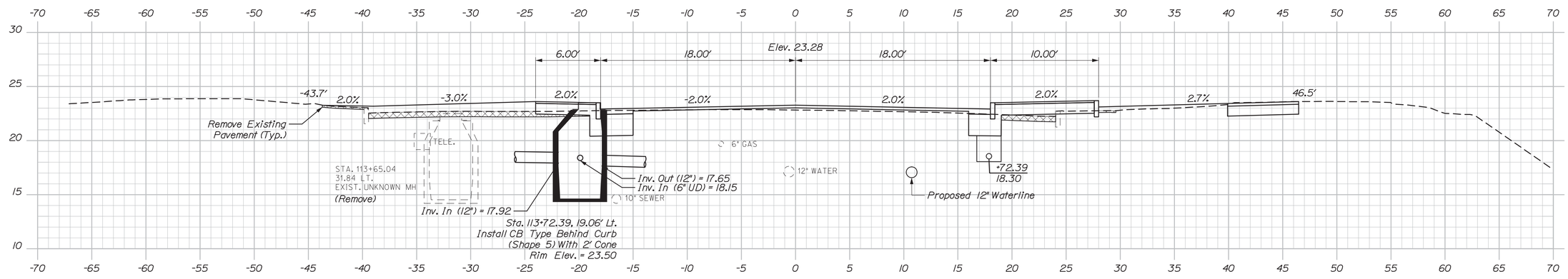
Sta. 113+25.00 to Sta. 113+39.87

Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn

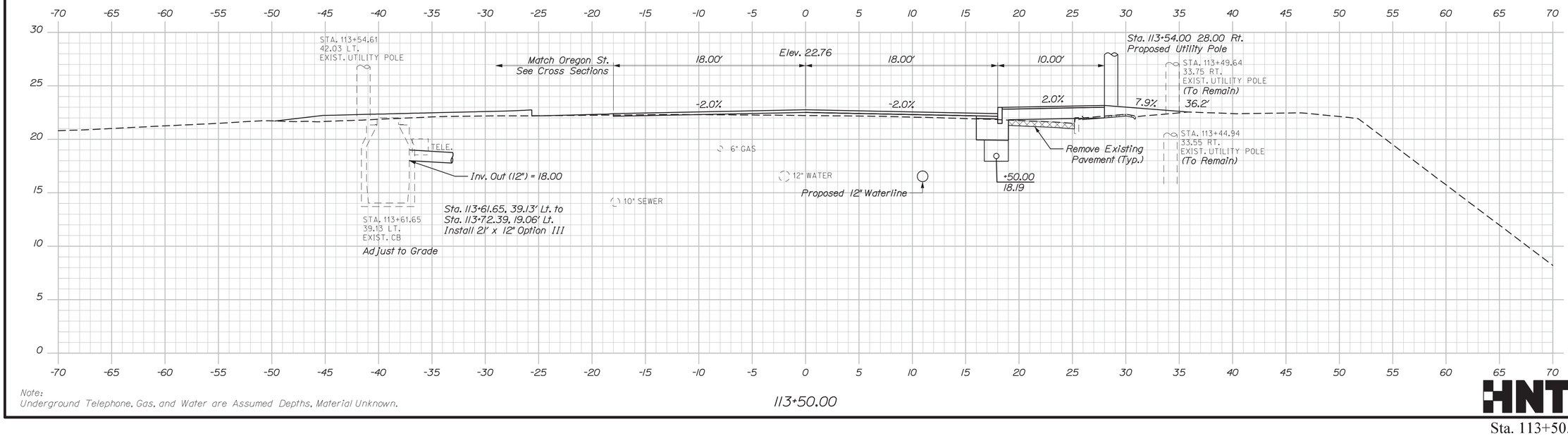



Sta. 113+72.39, 19.06' Lt. to
Sta. 115+95.00, 17.17' Lt.
Install 220' x 6" Underdrain Type B

113+75.00




113+72.39




113+50.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

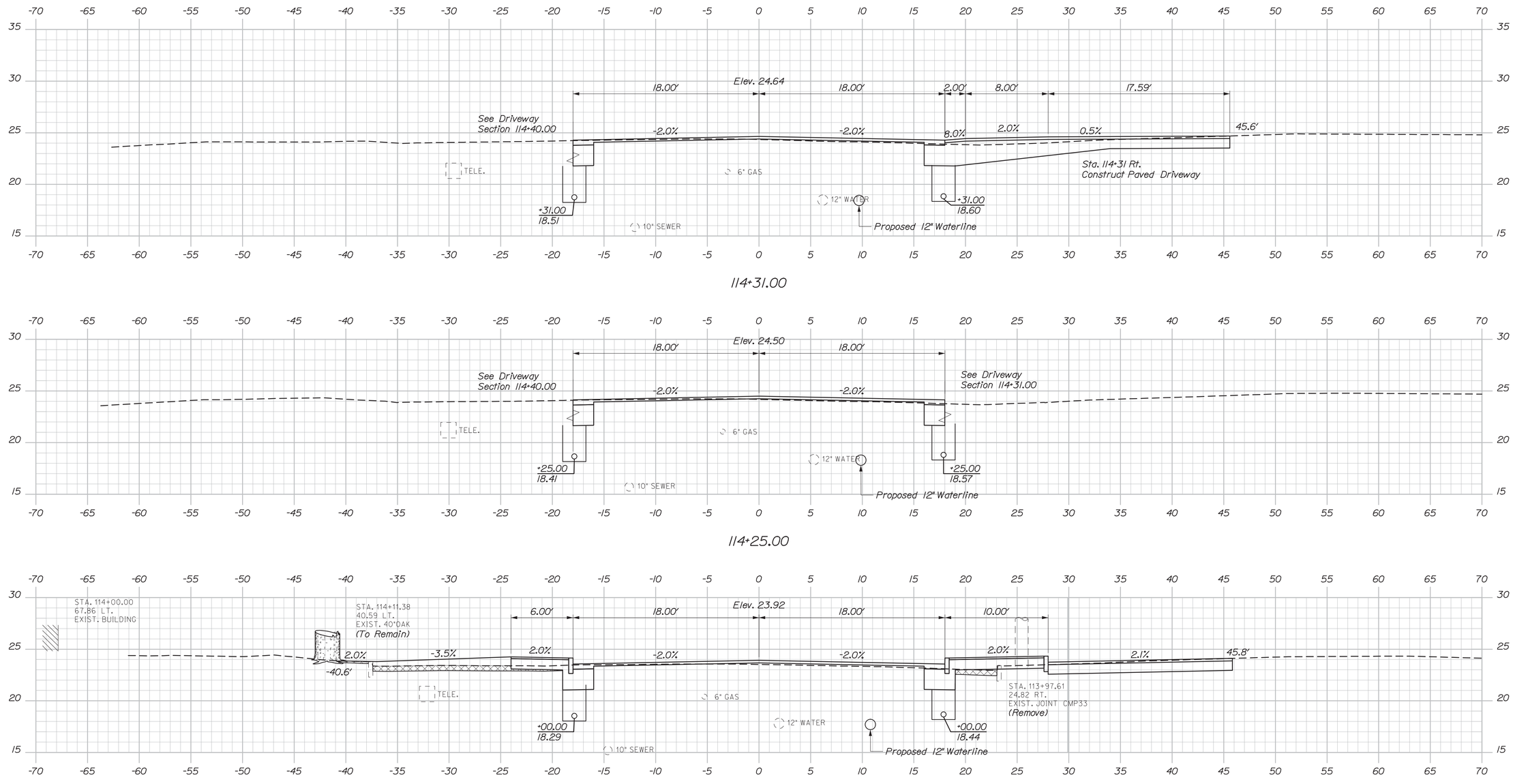
SHEET NUMBER

119

OF 220

Sta. 113+50.00 to Sta. 113+75.00

Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn



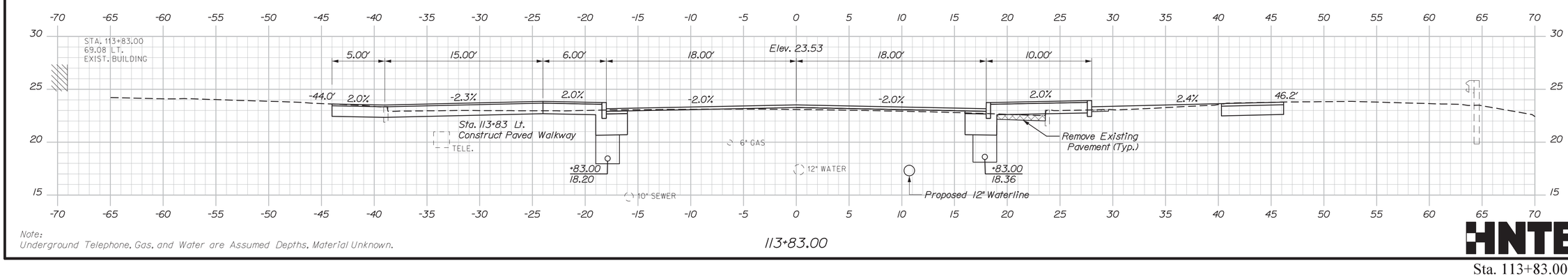

114+31.00




114+25.00




114+00.00




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

113+83.00

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE PLANS

BRIDGE NO.5933

| | D. EATON | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

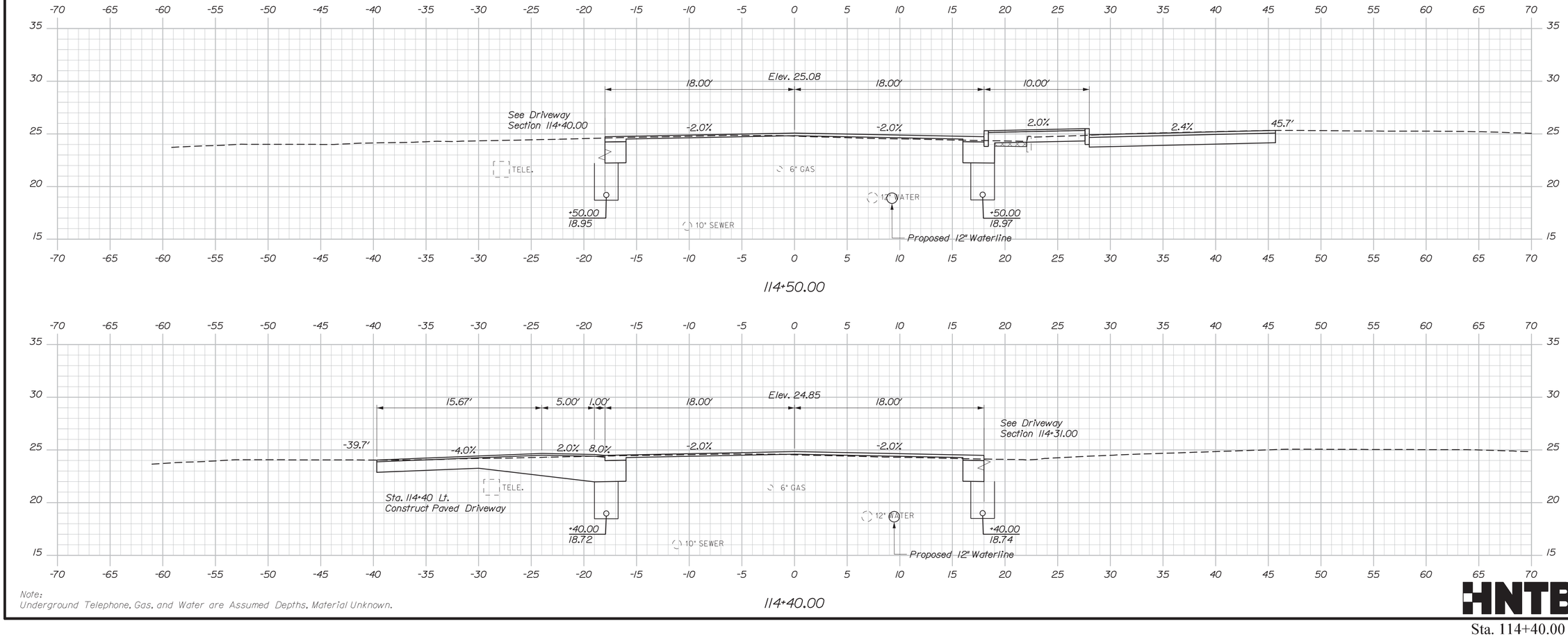
CROSS SECTIONS
VERANDA STREET

SHEET NUMBER
120
OF 220

Sta. 113+83.00 to Sta. 114+31.00

Username:
Date:3/3/2020
Division:
Filename: Xsect_Veranda.dgn

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




114+50.00




114+40.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

| PROJ. MANAGER | | | |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

D. EATON

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

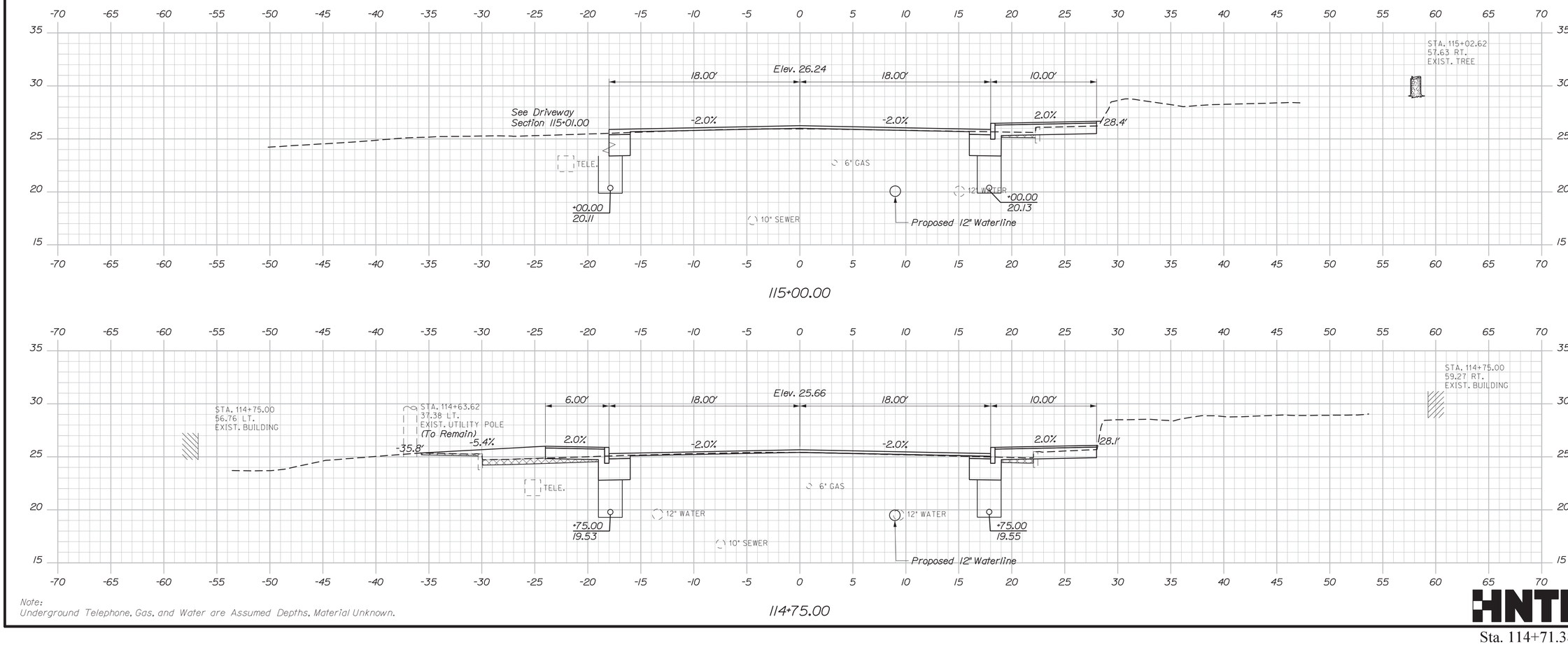
# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

121

OF 220

Sta. 114+40.00 to Sta. 114+59.51




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | EDD | 2.20 |
| DESIGN-DETAILED | CDH | 2.20 |
| CHECKED-REVIEWED | RWH | |
| DESIGN2-DETAILED2 | LZD | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

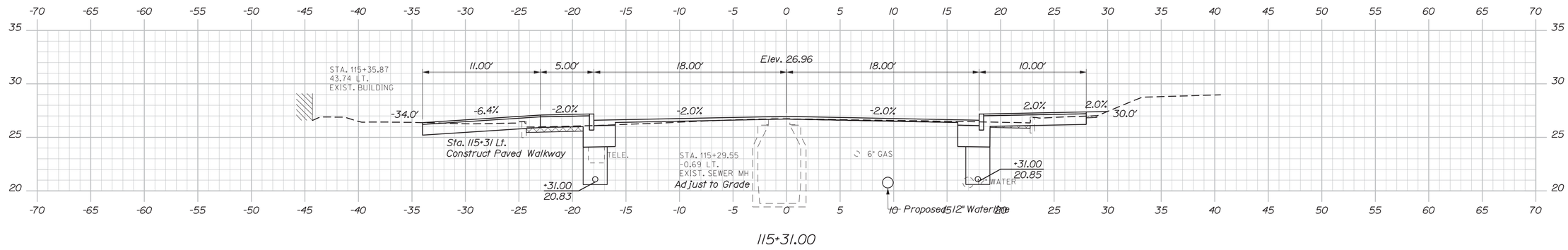
SHEET NUMBER

122

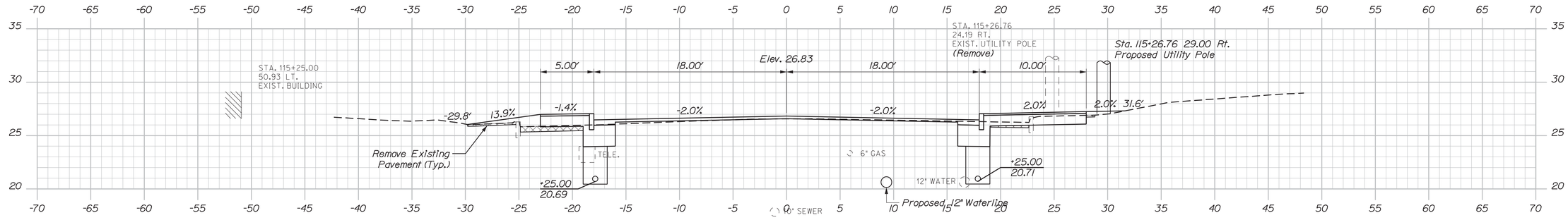
OF 220

Sta. 114+71.38 to Sta. 115+00.00

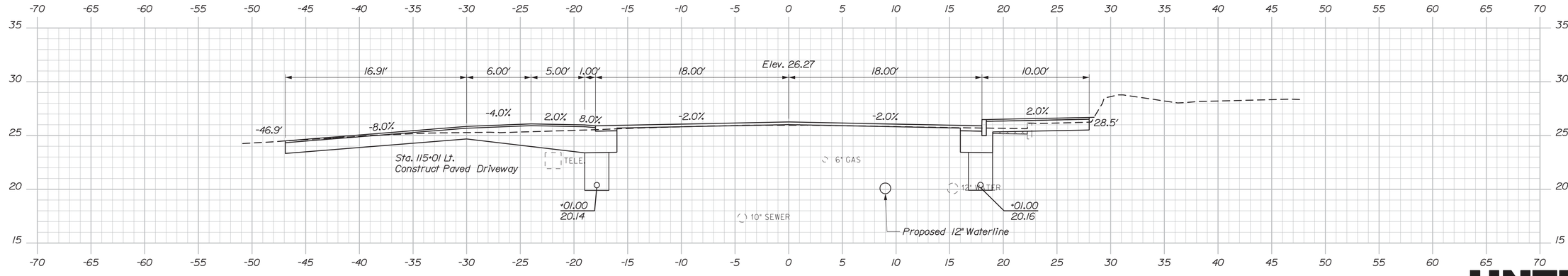
Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




115+31.00




115+25.00




115+01.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

123

OF 220

Sta. 115+01.00 to Sta. 115+31.00

Date:3/3/2020

Username:

Division:

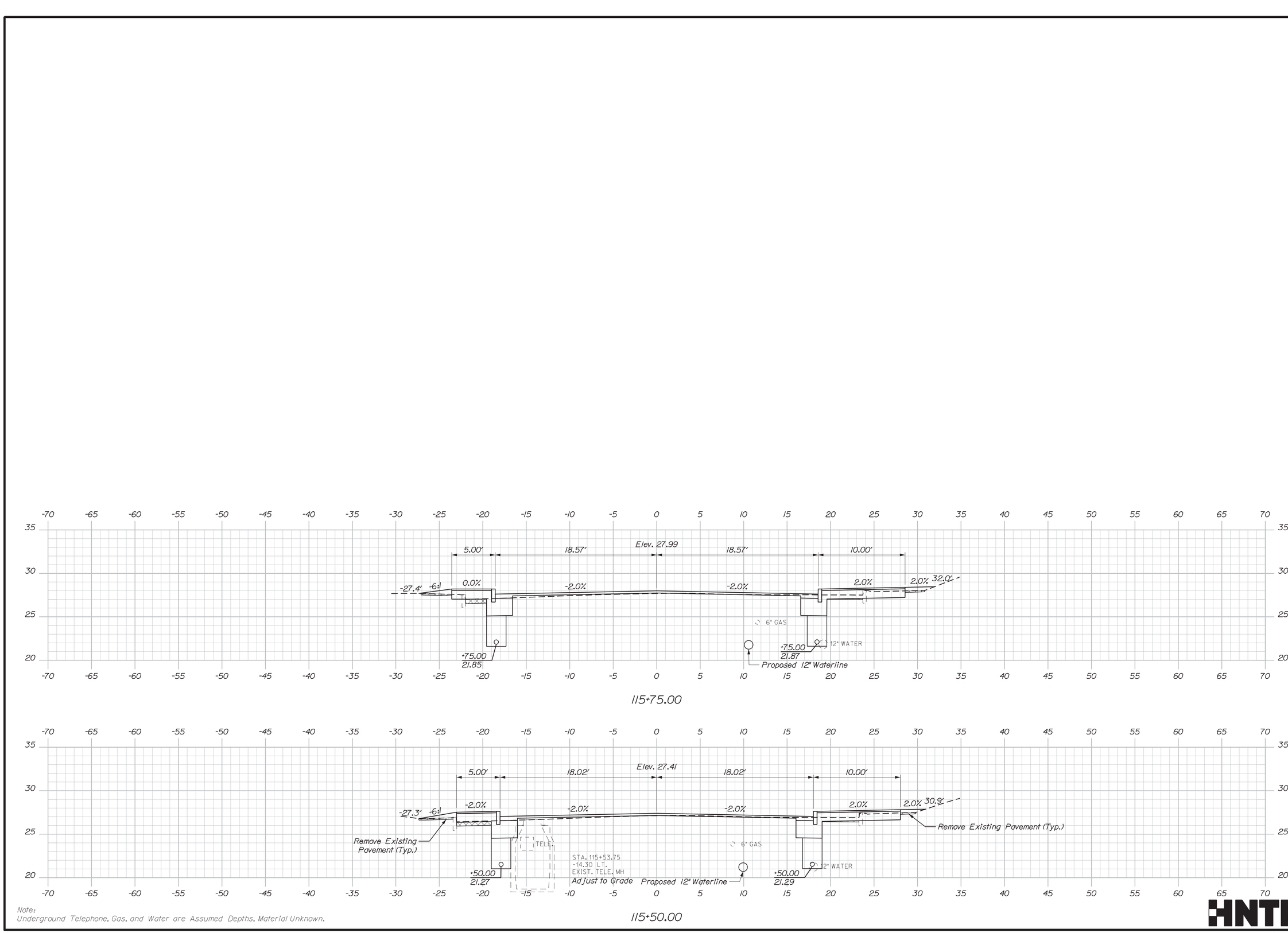
Filename: Xsect_Veranda.dgn

Username:

Date:3/3/2020

Division:

Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SIGNATURE

P.E. NUMBER

DATE

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

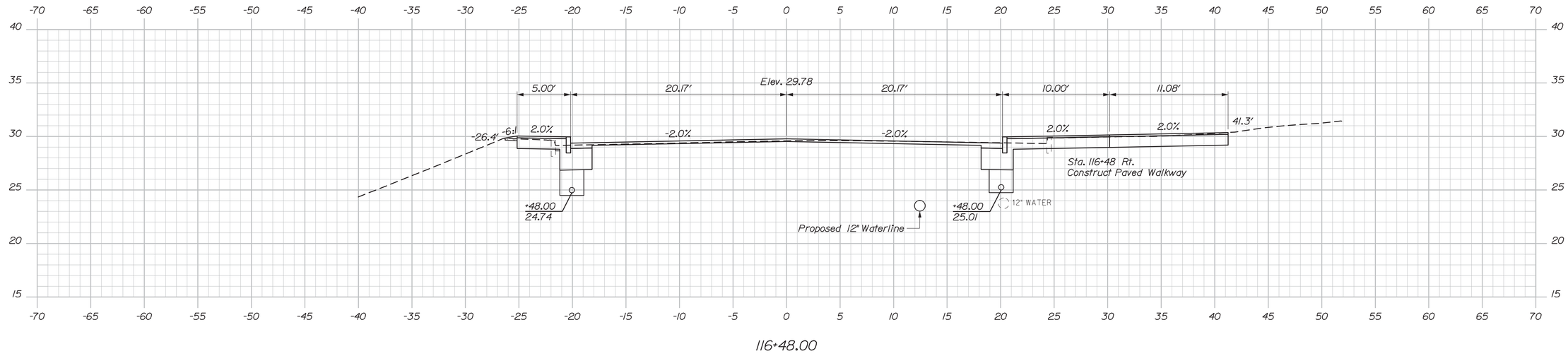
# CROSS SECTIONS
# VERANDA STREET

SHEET NUMBER

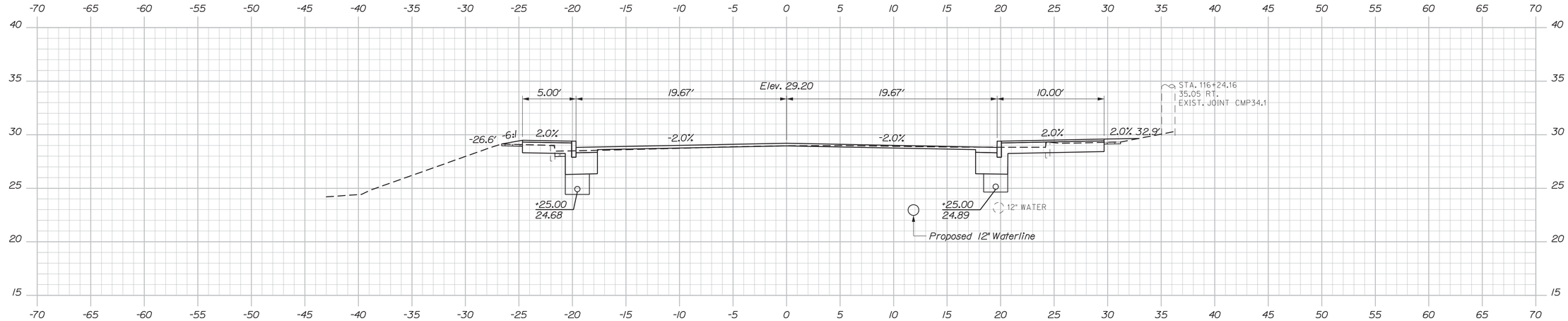
124

OF 220

Sta. 115+50.00 to Sta. 115+95.61



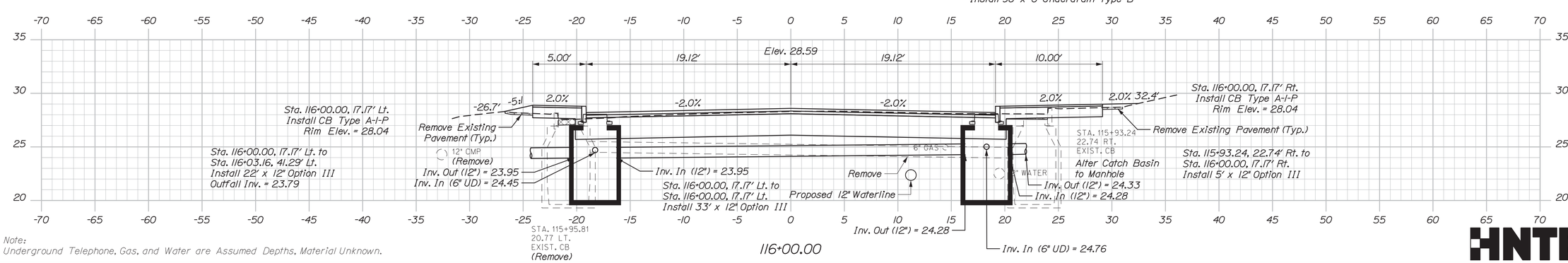

116+48.00




Sta. 116+00.00, 17.17' Lt. to
Sta. 117+00.00, 17.17' Lt.
Install 98' x 6" Underdrain Type B

116+25.00

Sta. 116+00.00, 17.17' Rt. to
Sta. 117+00.00, 21.19' Rt.
Install 98' x 6" Underdrain Type B




116+00.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | DATE | |
| CHECKED-REVIEWED | RWH | BY | |
| DESIGN2-DETAILED2 | | DATE | 2\20 |
| DESIGN3-DETAILED3 | | BY | CDH |
| REVISIONS 1 | | DATE | 2\20 |
| REVISIONS 2 | | BY | LZD |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

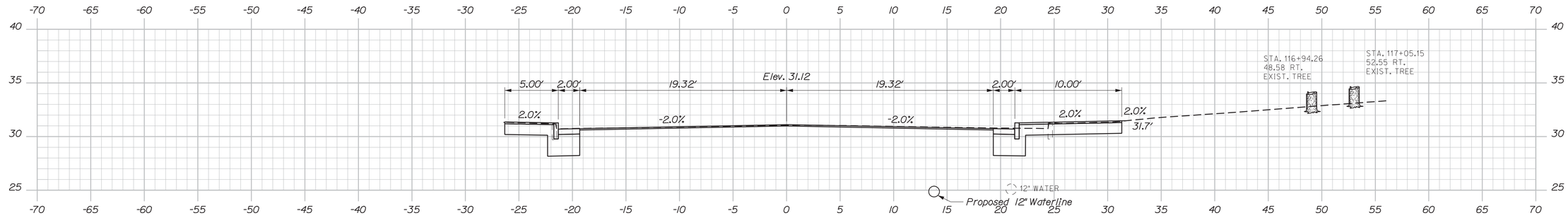
SHEET NUMBER

125

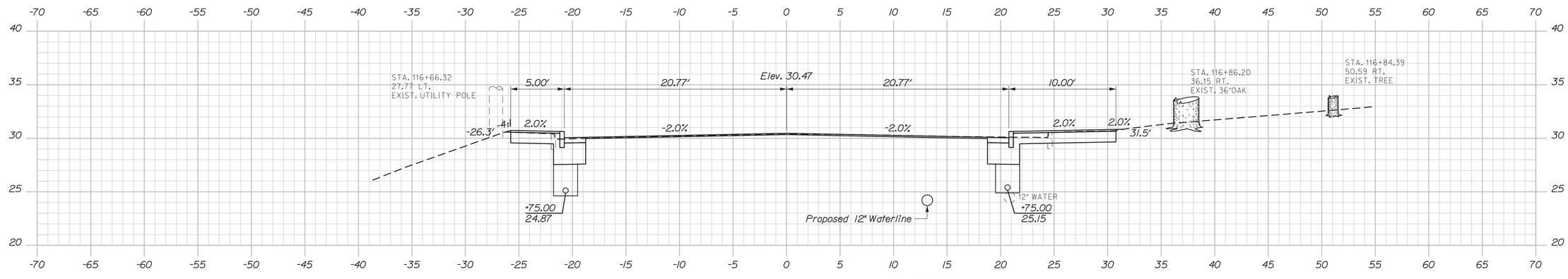
OF 220

Sta. 116+00.00 to Sta. 116+48.00

Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn

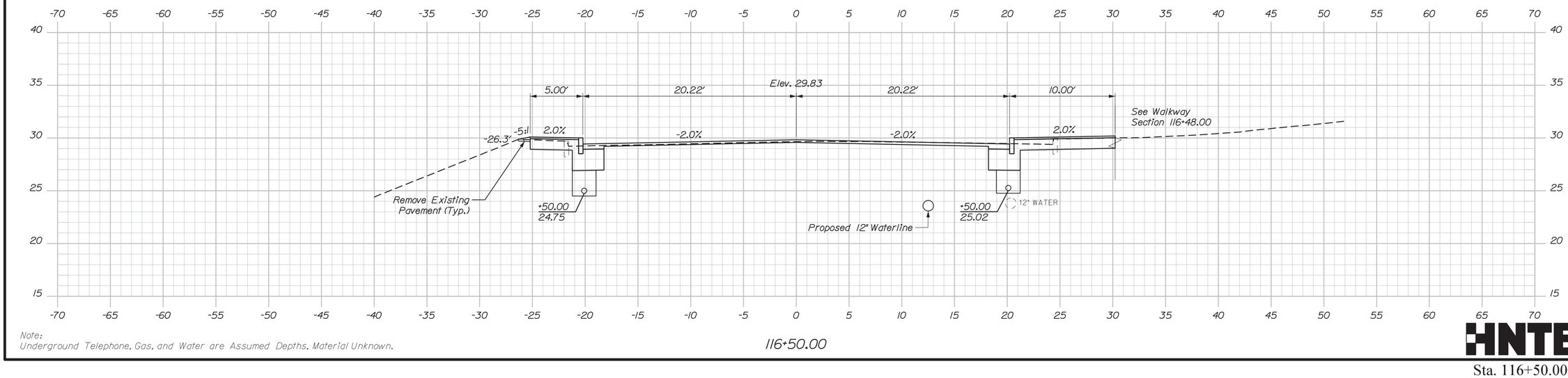



117+00.00




116+75.00

Sta. 116+75.00
End Mill and 3" Overlay
Begin Mill and 1 1/2" Overlay




116+50.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EJD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

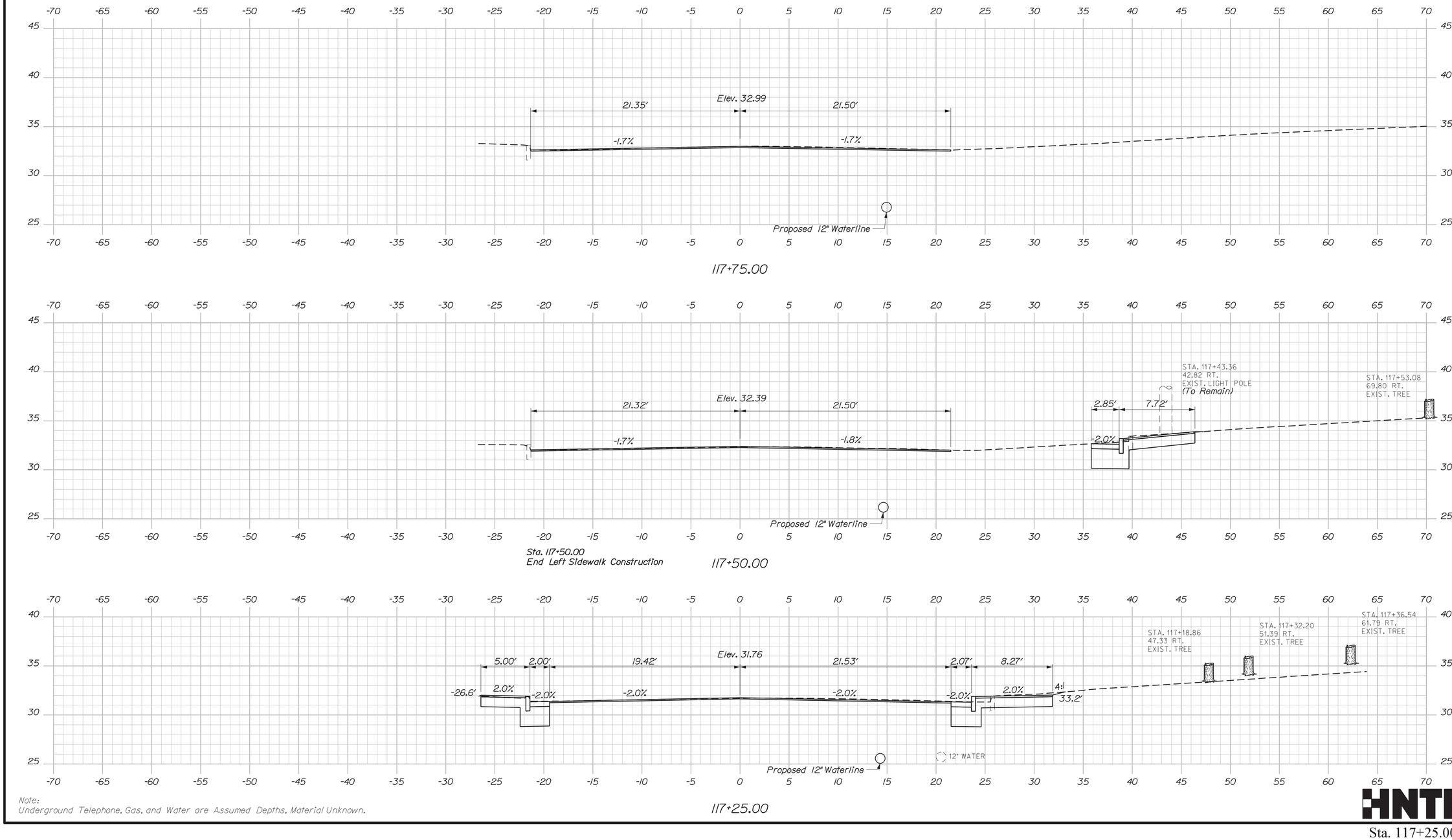
SHEET NUMBER

126

OF 220

Sta. 116+50.00 to Sta. 117+00.00

Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

127

OF 220

Sta. 117+25.00 to Sta. 117+75.00

Date:3/3/2020

Username:

Division:

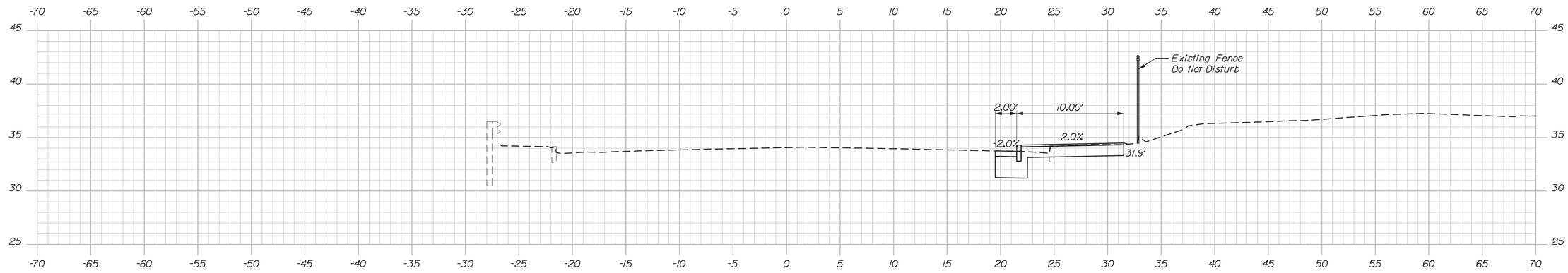
Filename: Xsect_Veranda.dgn

Username:

Division:

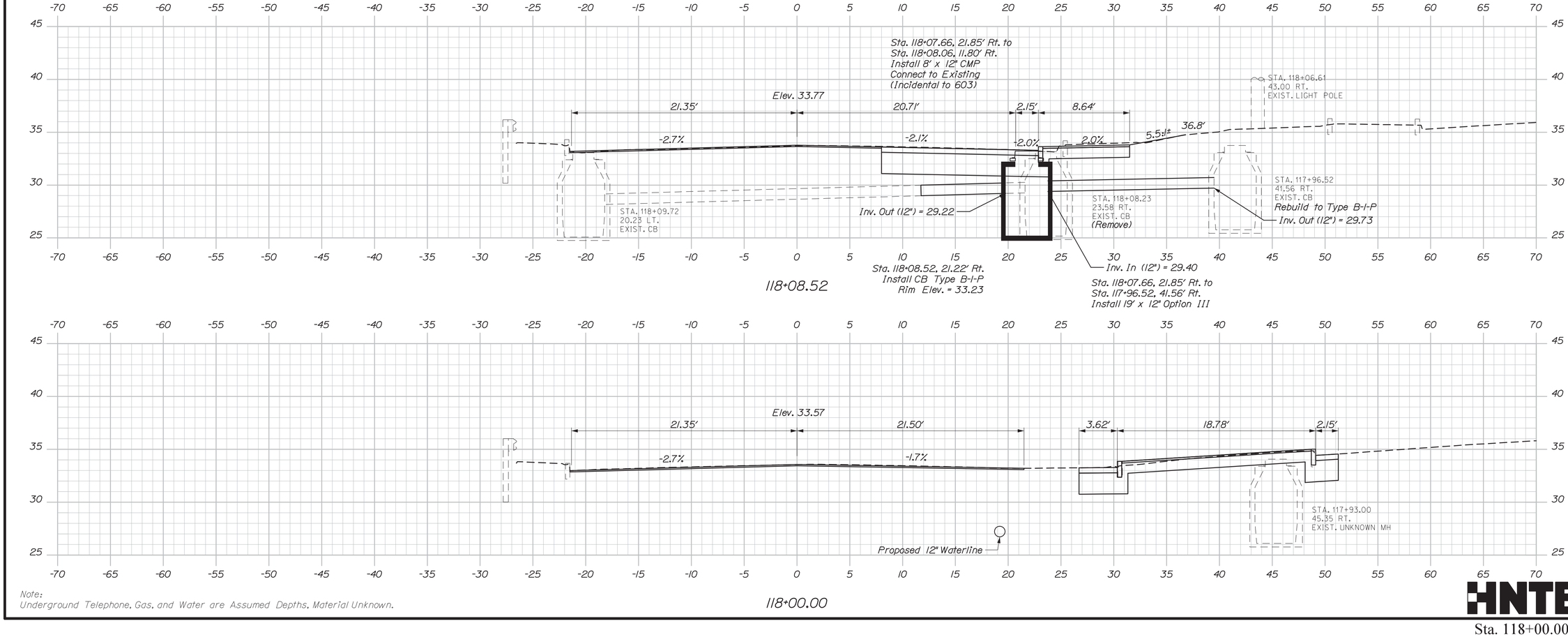
Filename: Xsect_Veranda.dgn

Date:3/3/2020




118+25.00

Sta. 118+12.00
End Mill and 1 1/2" Overlay
Match Existing Pavement




118+08.52




118+00.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | COH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

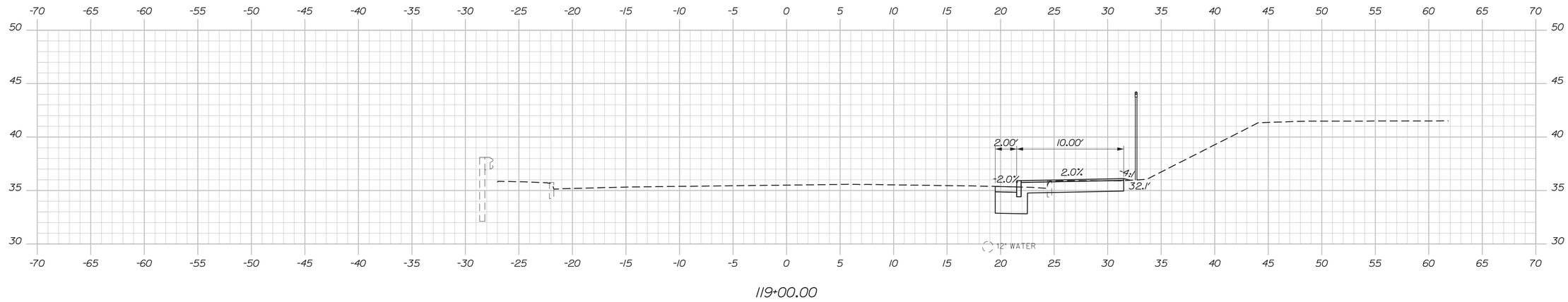
CROSS SECTIONS
VERANDA STREET

SHEET NUMBER

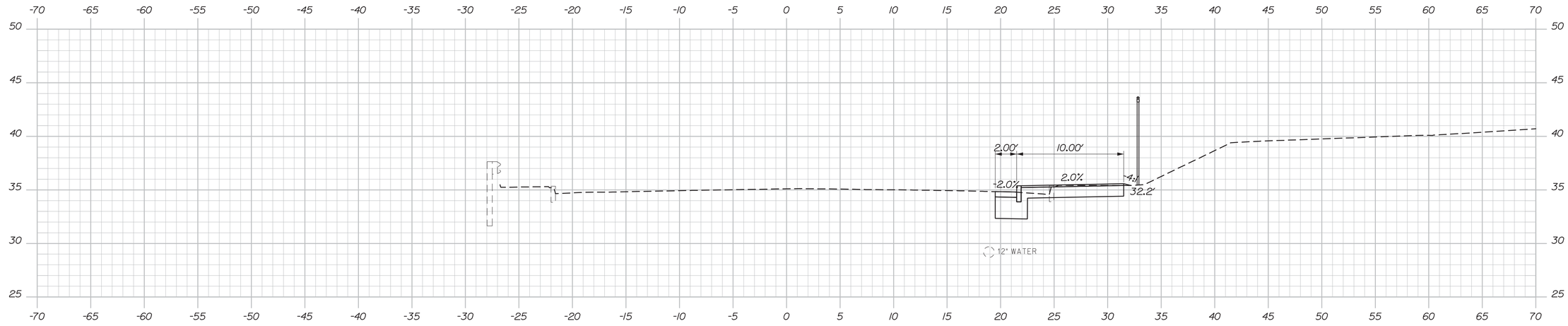
128

OF 220

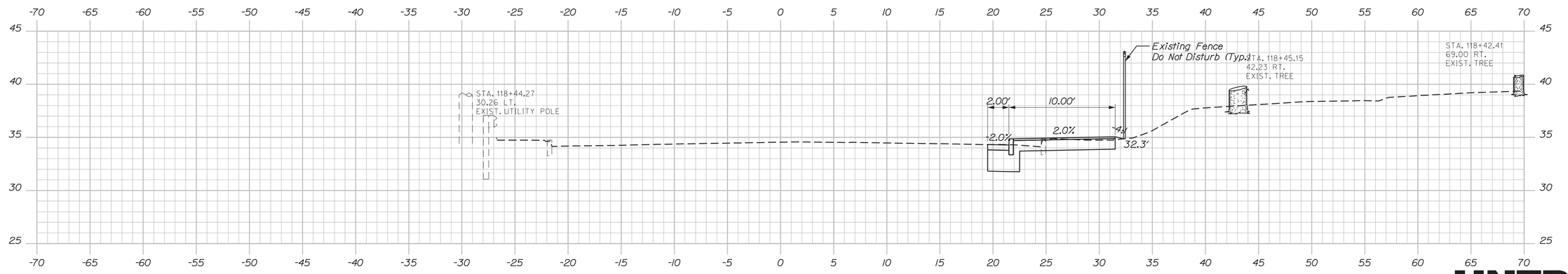
Sta. 118+00.00 to Sta. 118+25.00




119+00.00




118+75.00




118+50.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | SIGNATURE | P.E. NUMBER | DATE |
|---|---|---|---|
| | | | |

| PROJ. MANAGER | D. EATON |
|---|---|
| DESIGN-DETAILED | EJD |
| CHECKED-REVIEWED | RWH |
| DESIGN2-DETAILED2 | |
| DESIGN3-DETAILED3 | |

| BY | DATE |
|---|---|
| CDH | 2\20 |
| LZD | 2\20 |
| | |
| | |
| | |
| | |
| | |

| | |
|---|---|
| REVISIONS 1 | |
| REVISIONS 2 | |
| REVISIONS 3 | |
| REVISIONS 4 | |
| FIELD CHANGES | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

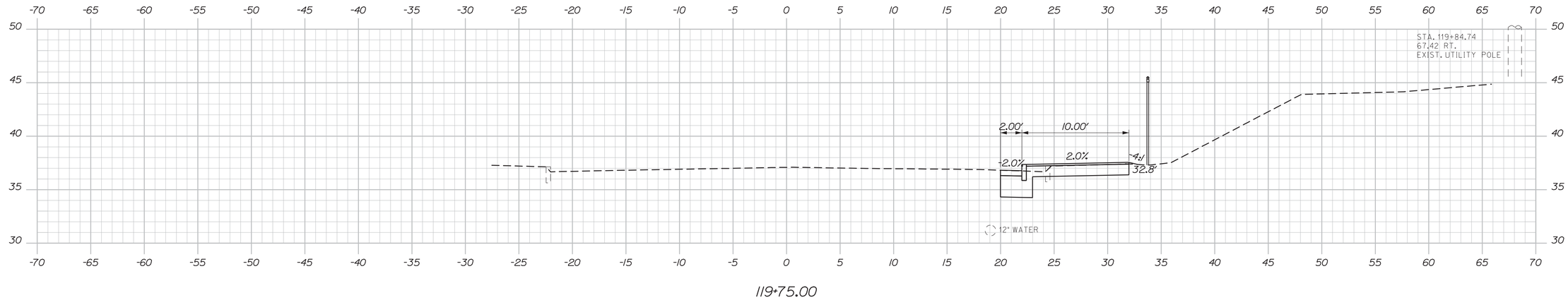
SHEET NUMBER

129

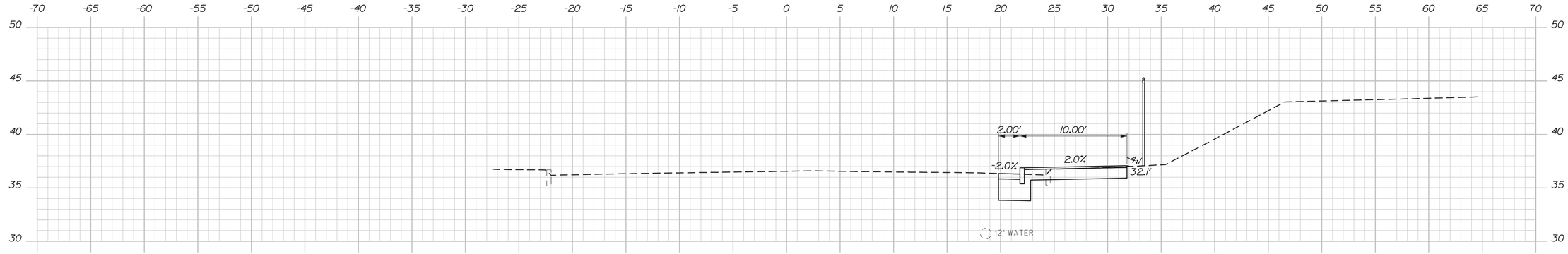
OF 220

Sta. 118+50.00 to Sta. 119+00.00

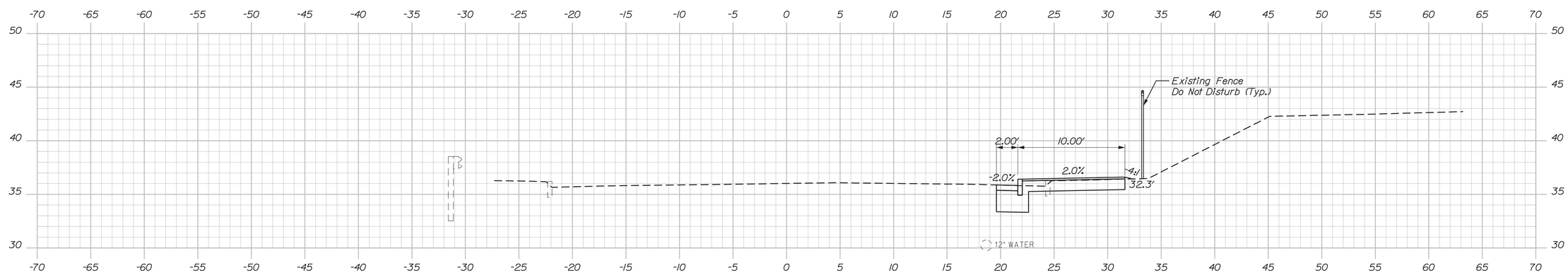
Date:3/3/2020
Username:
Division:
Filename: Xsect_Veranda.dgn




119+75.00




119+50.00




119+25.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# VERANDA STREET

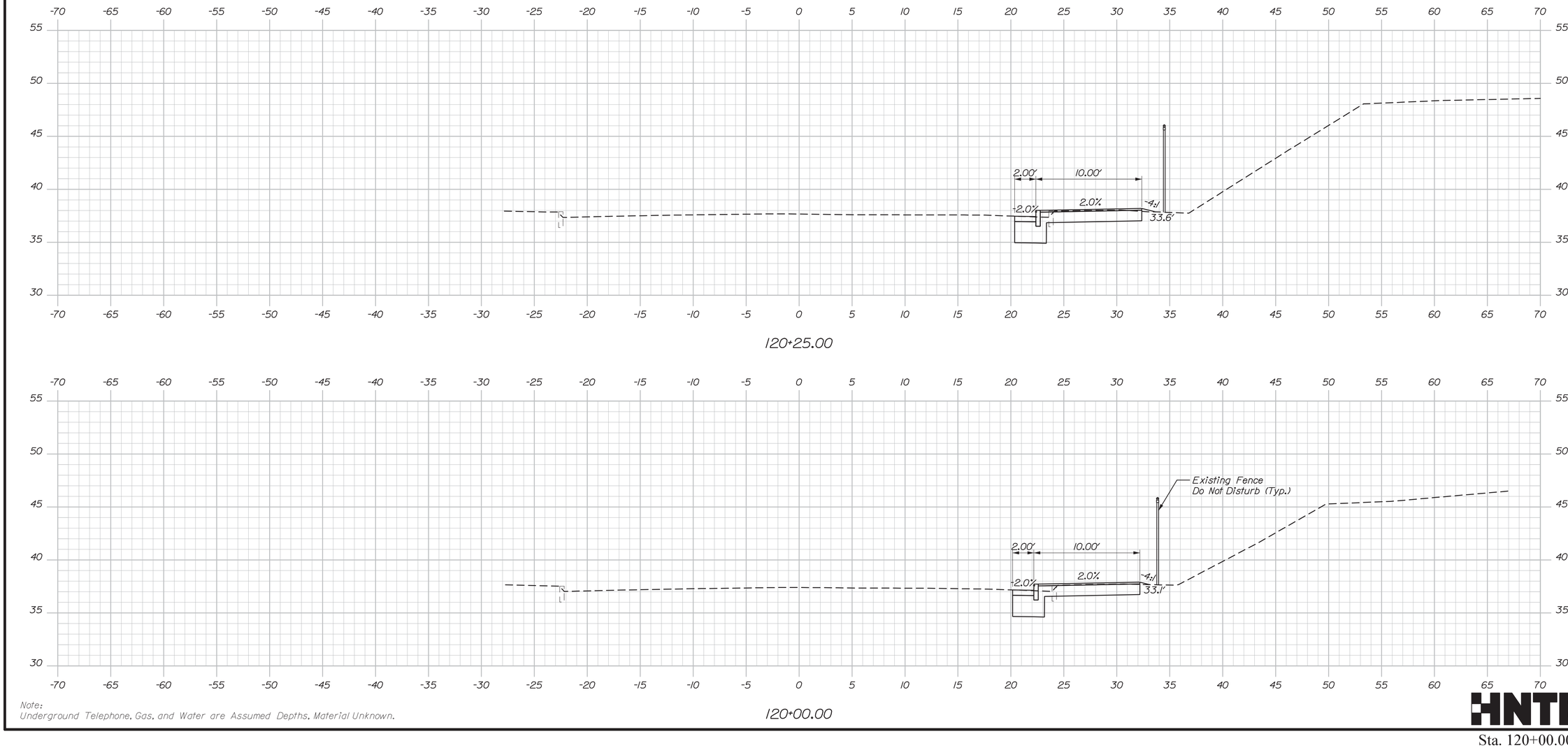
SHEET NUMBER

130

OF 220

Sta. 119+25.00 to Sta. 119+75.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | CDH | 2.20 |
| DESIGN-DETAILED | EJD | |
| CHECKED-REVIEWED | RWH | 2.20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | LZD | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

131

OF 220

Sta. 120+00.00 to Sta. 120+25.00

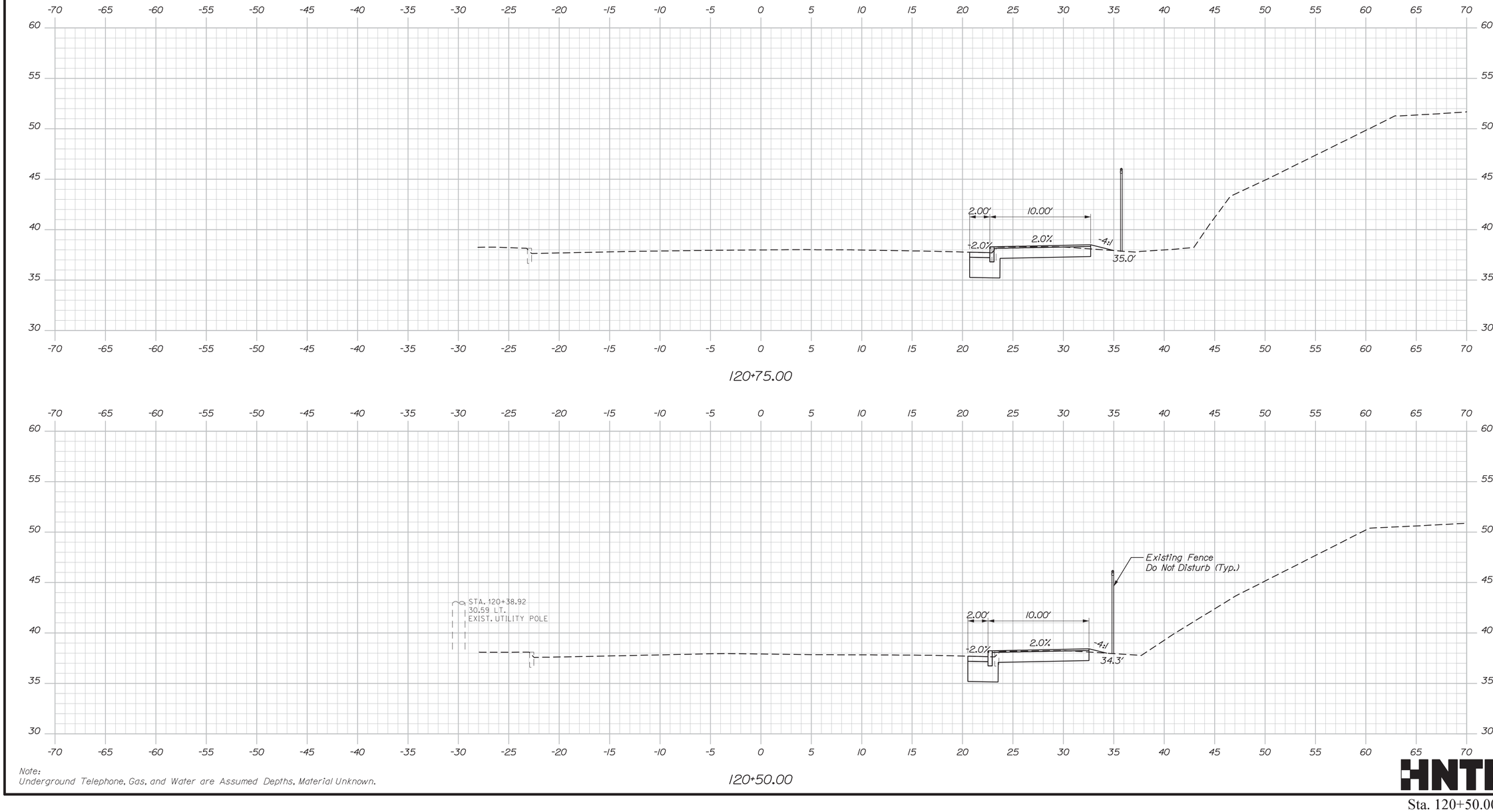
Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

Username:

Division:

Filename: Xsect_Veranda.dgn

Date:3/3/2020




*Note:*
*Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.*

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

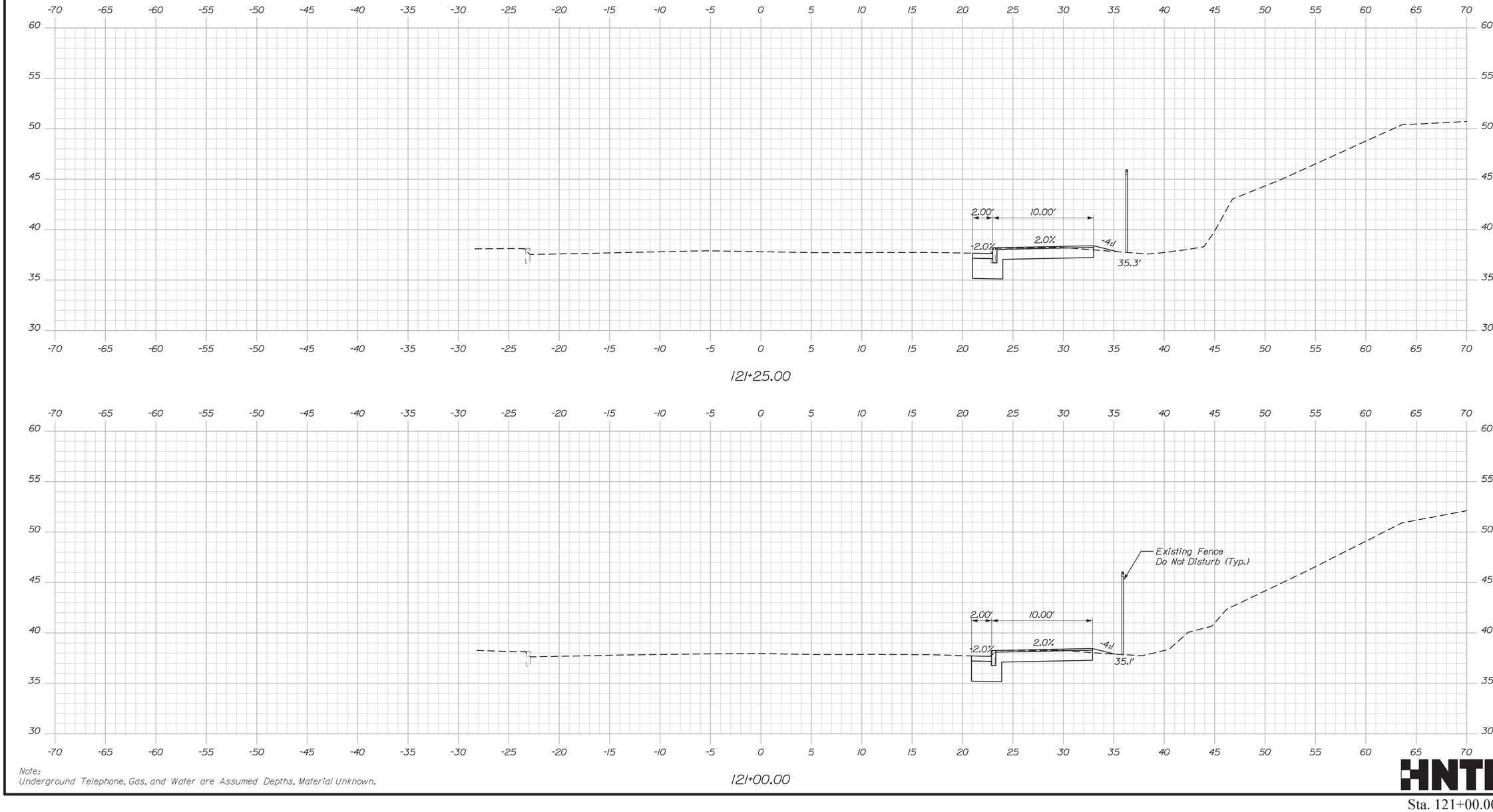
# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

132

OF 220

Sta. 120+50.00 to Sta. 120+75.00




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

Sta. 121+00.00 to Sta. 121+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2/20 |
| CHECKED-REVIEWED | RWH | LZD | 2/20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

133

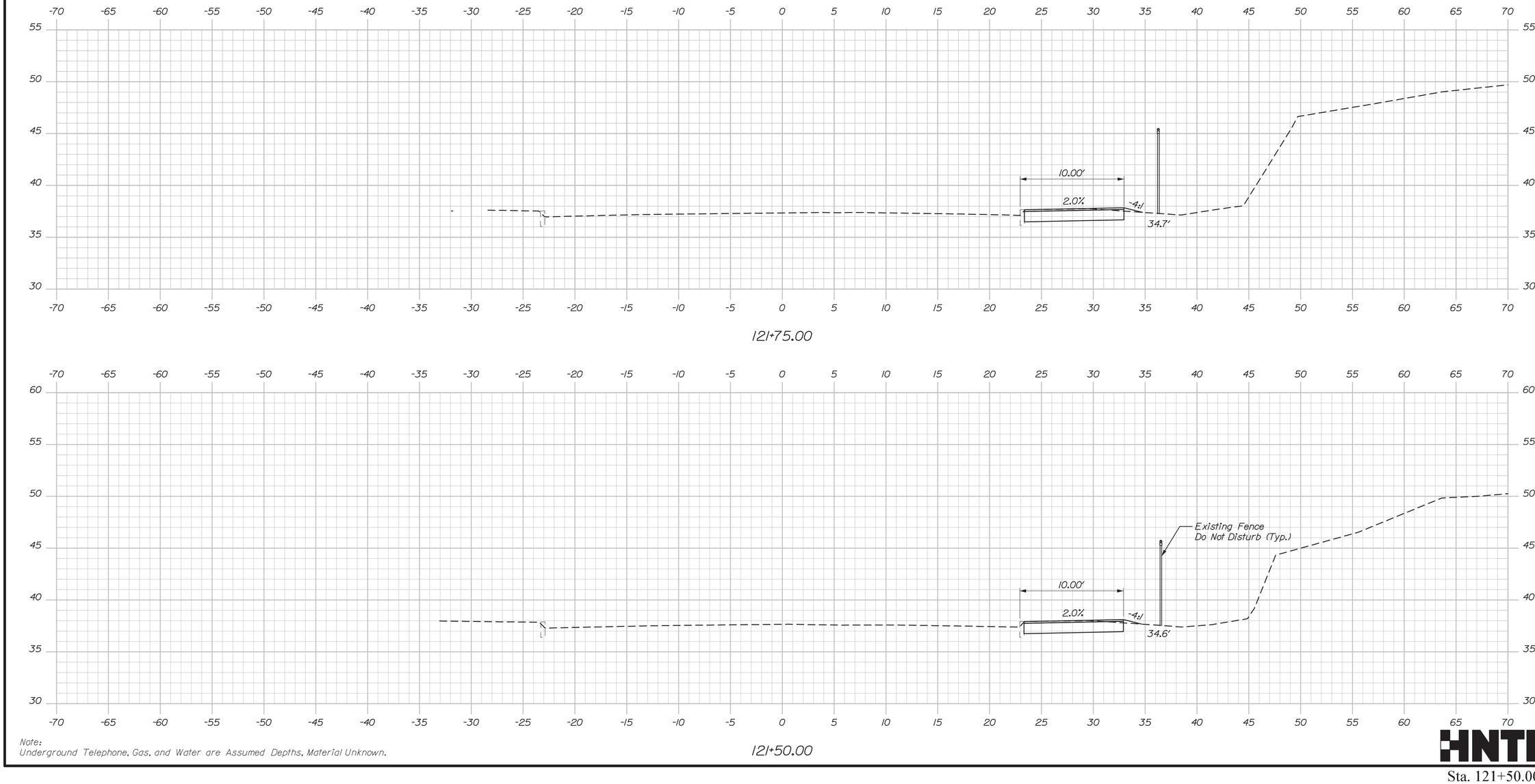
OF 220

Username:

Division:

Date:3/3/2020

Filename: Xsect_Veranda.dgn




Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EJD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

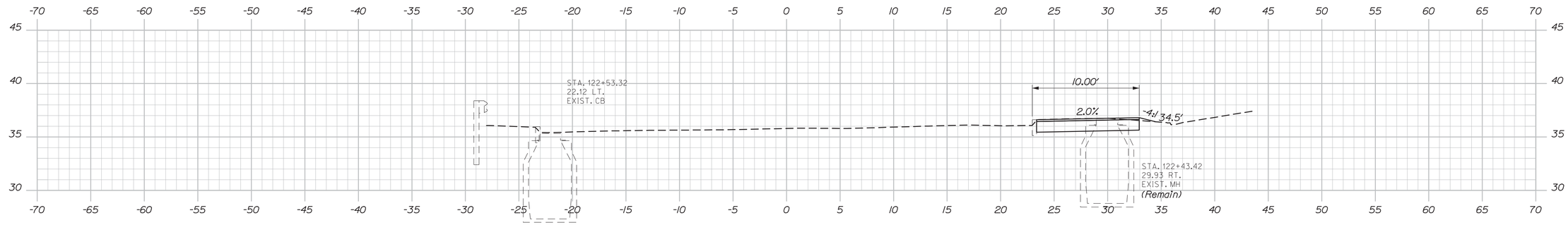
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

CROSS SECTIONS
VERANDA STREET

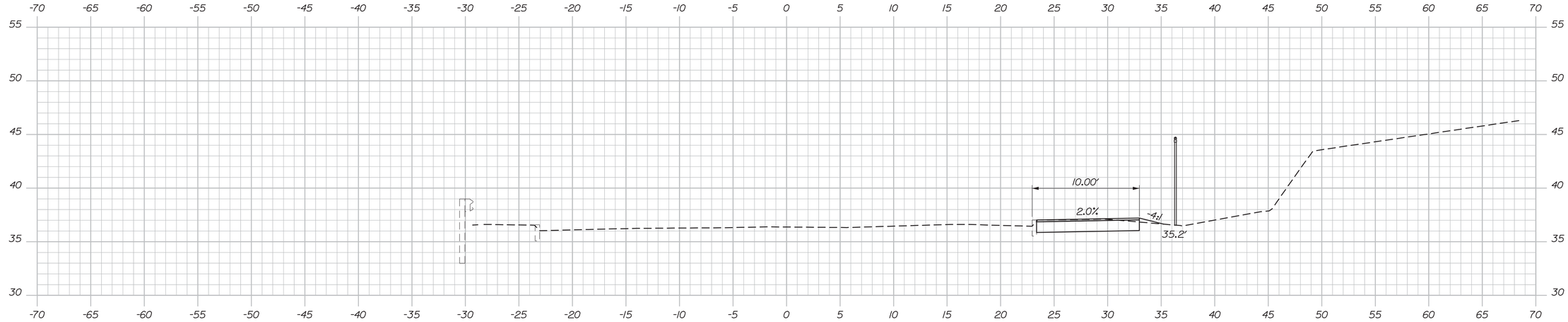
SHEET NUMBER
134
OF 220

Sta. 121+50.00 to Sta. 121+75.00

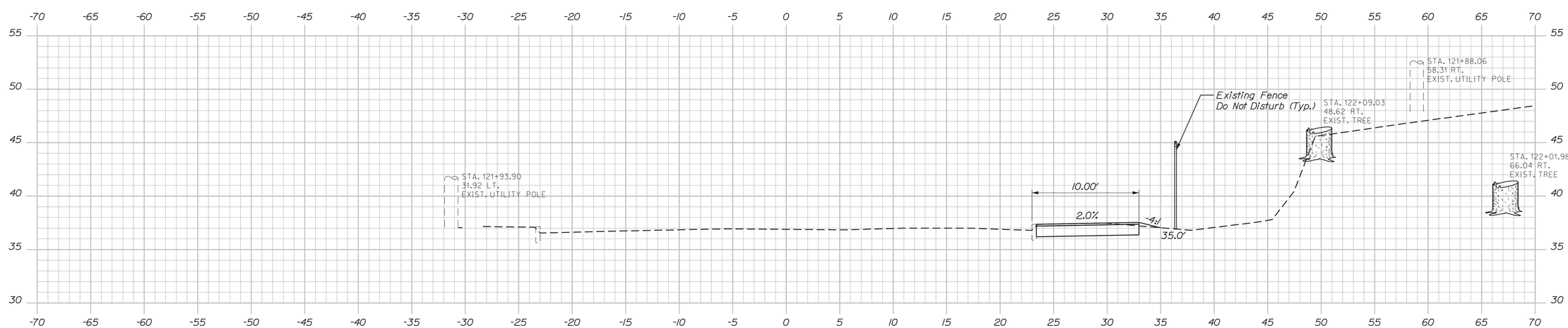
Username:
Division:
Date:3/3/2020
Filename: Xsect_Veranda.dgn




122+50.00




122+25.00




122+00.00

*Note:*
*Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.*

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | | |
| CHECKED-REVIEWED | RWH | | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

| | BY | DATE |
|---|---|---|
| | CDH | 2\20 |
| | LZD | 2\20 |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

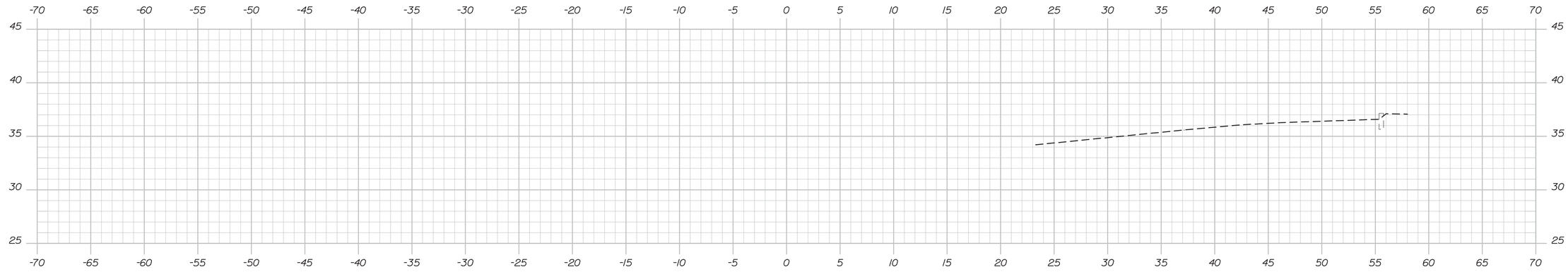
SHEET NUMBER

135

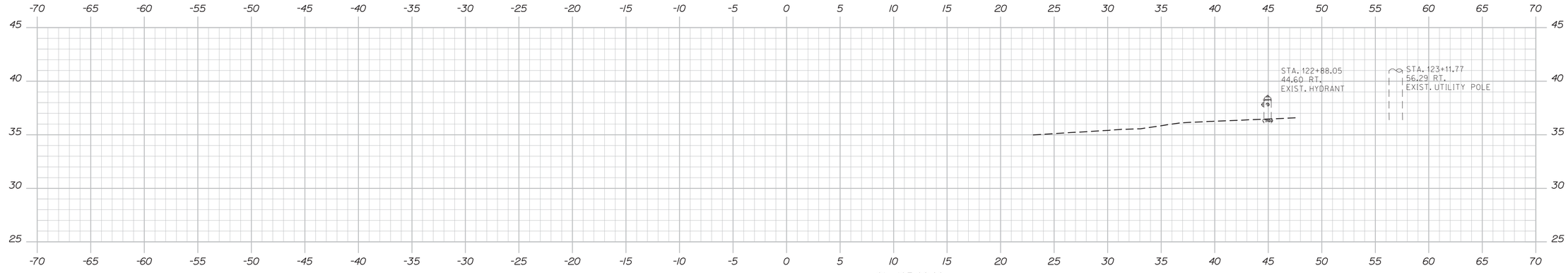
OF 220

Sta. 122+00.00 to Sta. 122+50.00

Filename: Xsect_Veranda.dgn Division: Username: Date:3/3/2020

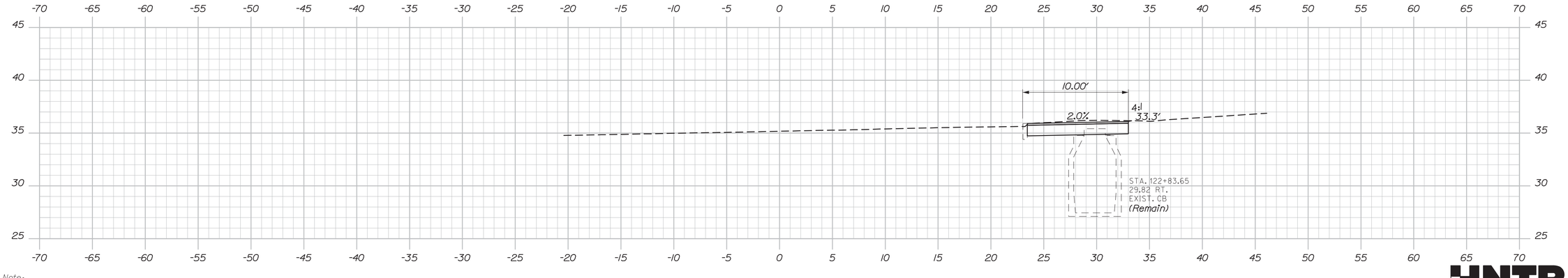



123+25.00




123+00.00

Sta. 123+00.00
End Right Sidewalk Construction
Limit of Work




122+75.00

Note:
Underground Telephone, Gas, and Water are Assumed Depths, Material Unknown.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS VERANDA STREET

SHEET NUMBER

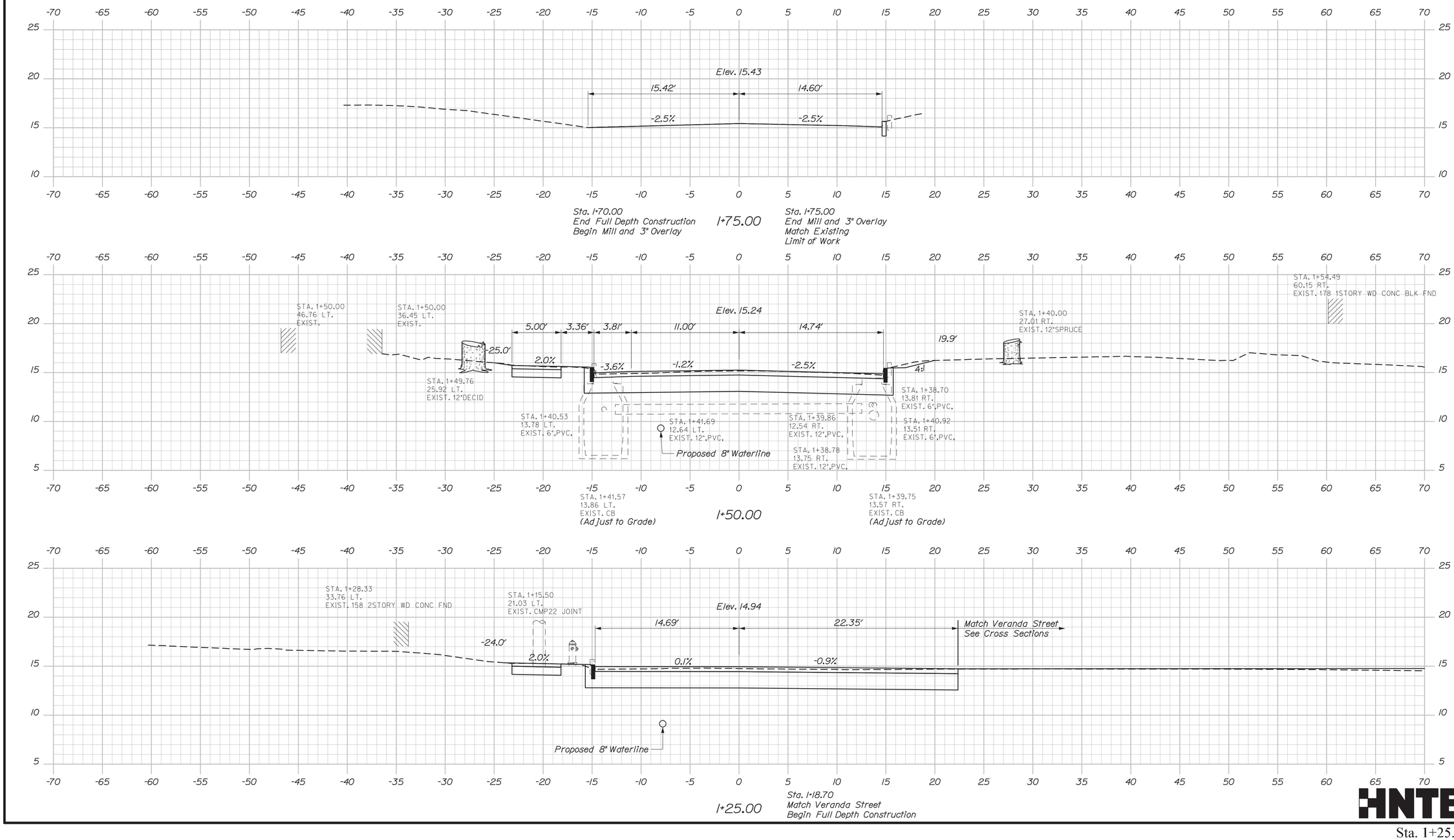
136

OF 220

Sta. 122+75.00 to Sta. 123+25.00

Username:
Division:
Filename: Xsect_Veranda.dgn
Date:3/3/2020

Filename: Xsect_Sideroads.dgn Division: Username: Date:3/3/2020




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 — BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | CDH | 2\20 |
| DESIGN-DETAILED | CDH | 2\20 |
| CHECKED-REVIEWED | LZD | |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS WORDSWORTH STREET

SHEET NUMBER

137

OF 220

HNTB

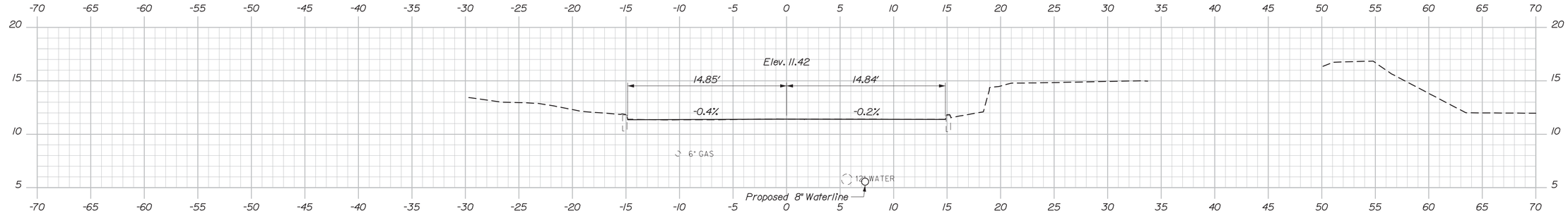
Sta. 1+25.00 to Sta. 1+75.00

Username:

Date:3/3/2020

Division:

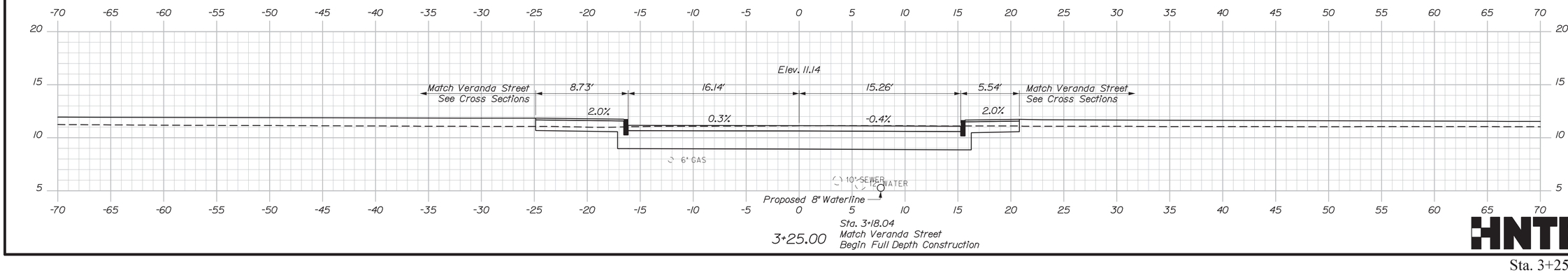
Filename: Xsect_Sideroads.dgn




3+50.00

Sta. 3+50.00
End Mill and 3" Overlay
Match Existing
Limit of Work

Sta. 3+45.00
End Full Depth Construction
Begin Mill and 3" Overlay




3+25.00

Sta. 3+18.04
Match Veranda Street
Begin Full Depth Construction

HNTB

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SIGNATURE

P.E. NUMBER

DATE

**NHPP-2174(500)**

**WIN**
**021745.00**

BRIDGE NO.5933

BRIDGE PLANS

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS
# OLYMPIA STREET

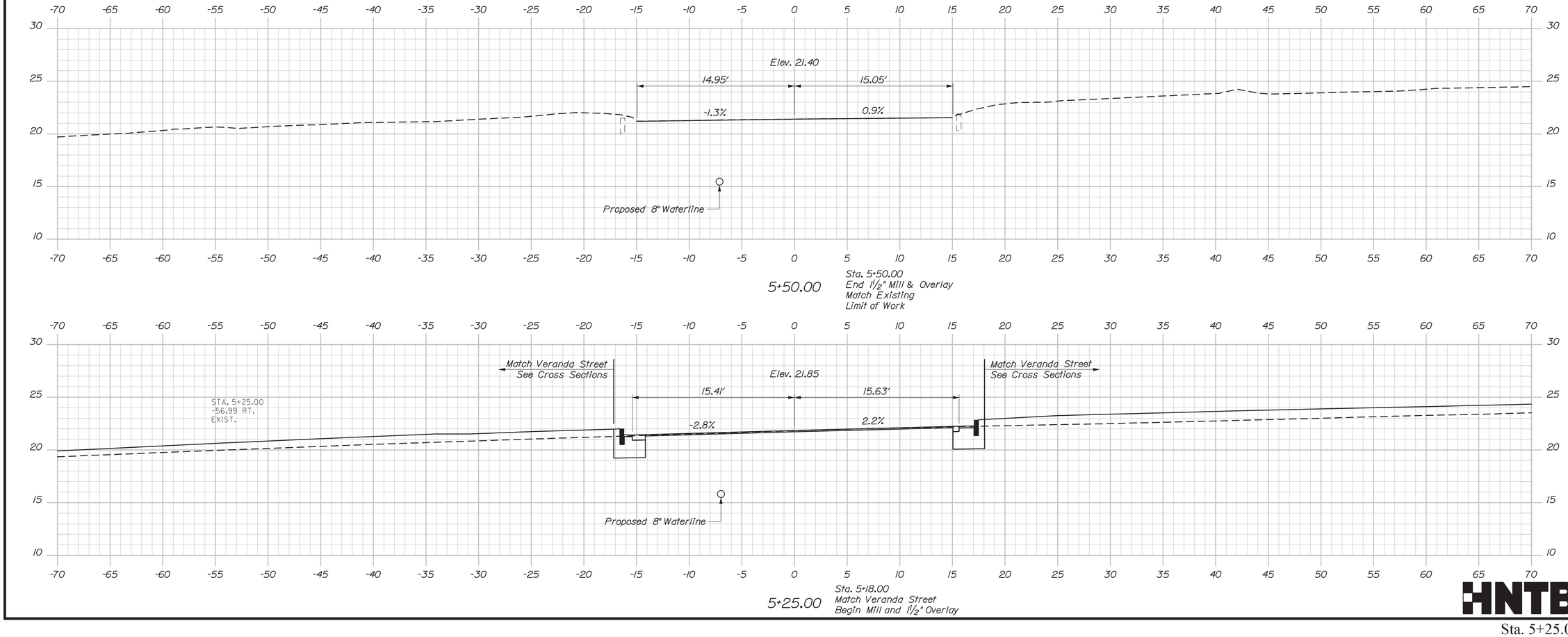
SHEET NUMBER

138

OF 220

Sta. 3+25.00 to Sta. 3+50.00

Filename: Xsect_Sideroads.dgn Division: Username: Date:3/3/2020




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# CROSS SECTIONS OREGON STREET

SHEET NUMBER

139

OF 220

HNTB

Sta. 5+25.00 to Sta. 5+50.00

Filename: 140_MOT Overview.dgn Division: Username: Date:3/3/2020

Westbrook

Falmouth

Portland

Scarborough

South Portland

Cape Elizabeth

See I 95 Exit 52 Plans

I 95 Exit 52

I 95 Exit 53

Falmouth Spur

See Detour Plan 2

3 Miles

I 295 Exit 11

I 295 Exit 10

See I 95 Exit 44 Plan

I 95 Exit 42

I 95 Exit 44

I 95 Exit 45

I 95 Exit 46

I 95 Exit 47

I 95 Exit 48

I 295 Exit 1

I 295 Exit 2

I 295 Exit 3

I 295 Exit 4

I 295 Exit 5

I 295 Exit 6

I 295 Exit 7

I 295 Exit 8

I 295 Exit 9

PCMS #1

PCMS #2

PCMS #3

PCMS #4

PCMS #5

PCMS #6

PCMS #7

PCMS #8

PCMS #9

PCMS #10

PCMS #11

See Route 1 SB Closure Plans

I 295 Over Veranda Street Bridge

See Detour Plan 1

DETOUR PLAN

0.5 0 0.5 1

Scale of Miles

## PCMS MESSAGES

| | ALL PCMS (1 WEEK PRIOR TO CLOSURE) | PCMS #1 | PCMS #2 & #3 | PCMS #4 Through # 11 |
|---|---|---|---|---|
| SCREEN 1 | I 295 OVER VERANDA ST | VERANDA ST. BRIDGE CLOSED | VERANDA ST. BRIDGE CLOSED | I 295 OVER VERANDA ST |
| SCREEN 2 | BRIDGE CLOSURE | POINTS NORTH OF I 295 EXIT 8 | VEHICLES MUST EXIT AHEAD | BRIDGE CLOSED |
| SCREEN 3 | XX/XX TO XX/XX | USE I 95 EXIT 52 | | SEEK ALTERNATE ROUTE |

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

HIGHWAY PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET

PORTLAND CUMBERLAND COUNTY

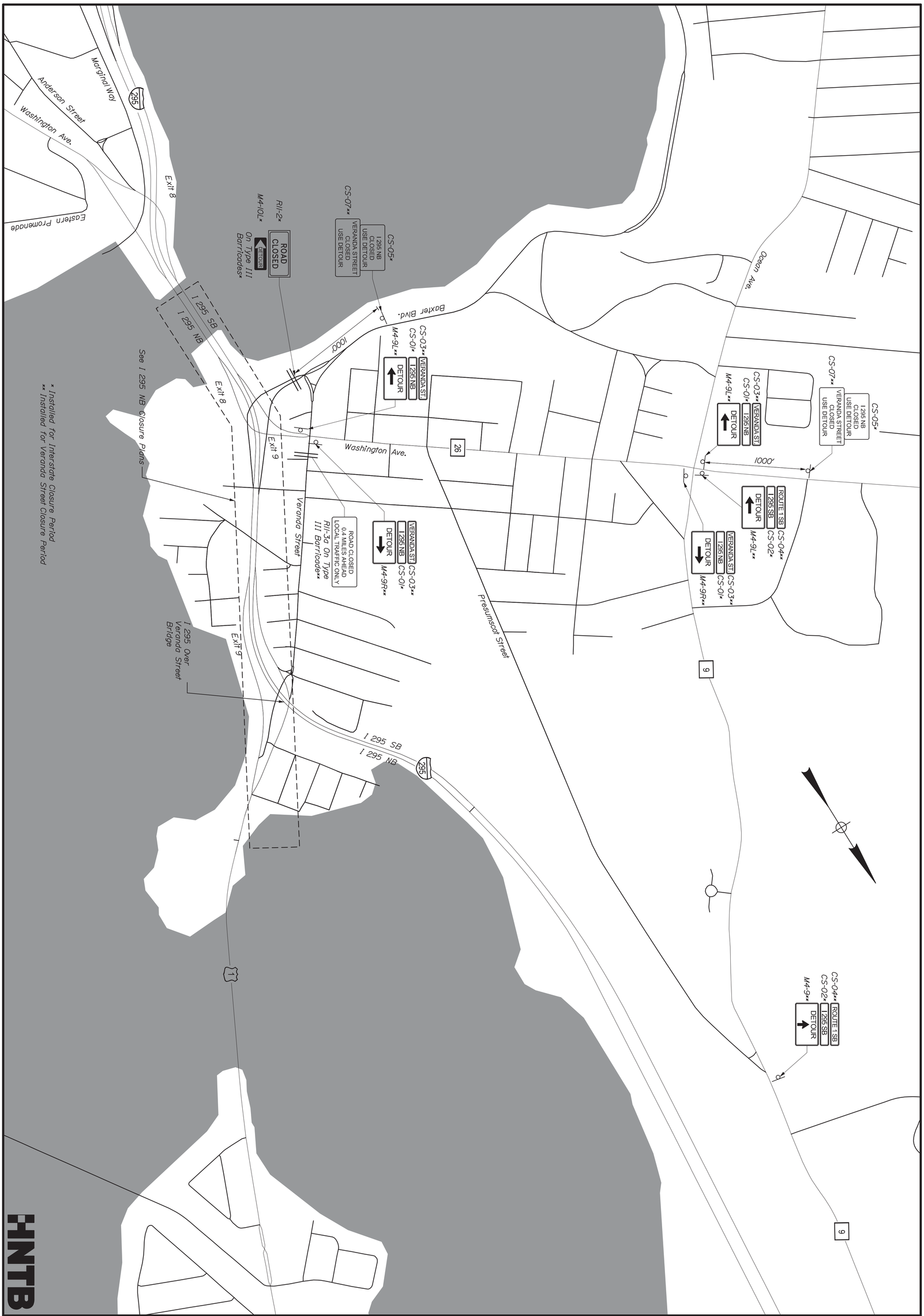
# MAINTENANCE OF TRAFFIC OVERVIEW

SHEET NUMBER

140

OF 220

Filename: 141_Detour Plan_1.dgn Division: Username: Date:3/3/2020




HNTB

SHEET NUMBER 141 OF 220

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC DETOUR PLAN 1

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

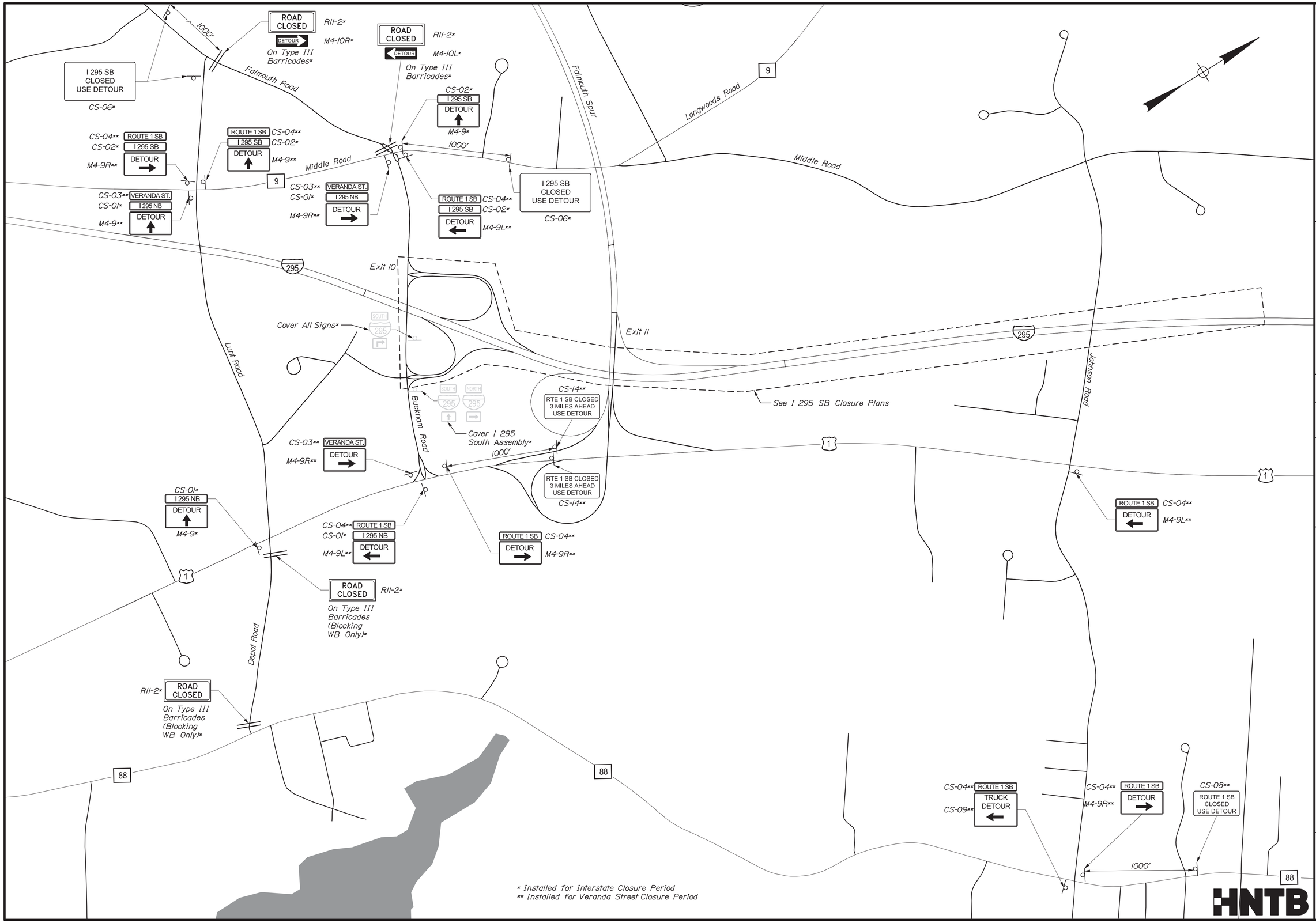
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

BRIDGE NO.5933 WIN 021745.00 BRIDGE PLANS




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

HIGHWAY PLANS

| PROJ. MANAGER | D. EATON |
|---|---|
| DESIGN-DETAILED | EDD |
| CHECKED-REVIEWED | RWH |
| DESIGN2-DETAILED2 | |
| DESIGN3-DETAILED3 | |

| | BY | DATE |
|---|---|---|
| REVISIONS 1 | CDH | 2\20 |
| REVISIONS 2 | LZD | 2\20 |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC DETOUR PLAN 2

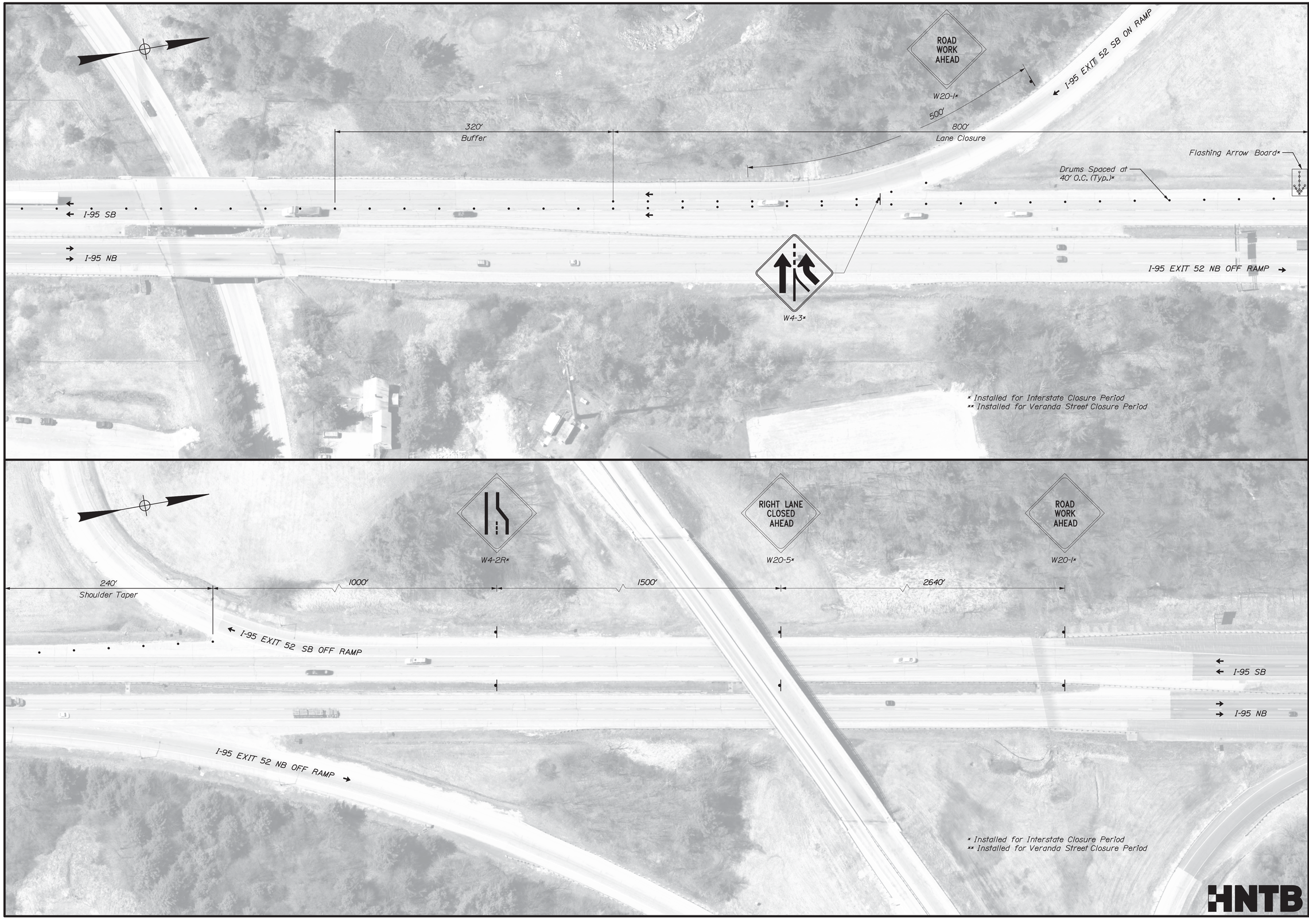
SHEET NUMBER

142

OF 220

HNTB

Filename: 142_Detour Plan_2.dgn Division: Username: Date:3/3/2020




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | EDD | COH |
| CHECKED-REVIEWED | RWH | LZD |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

DATE 2\20 2\20

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC I-95 EXIT 52

SHEET NUMBER

143

OF 220

HNTB

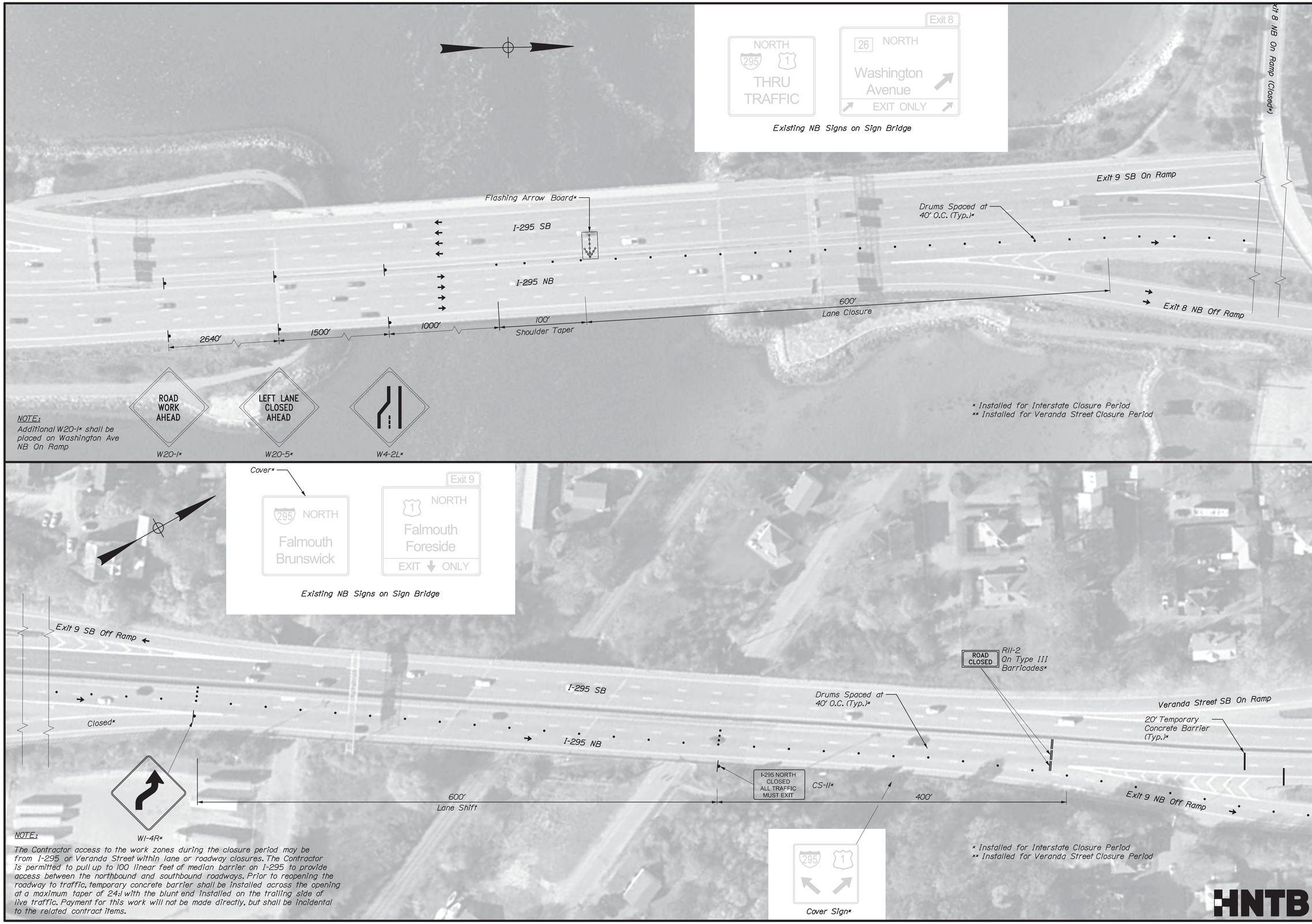
Username:

Division:

Date:3/3/2020

Filename: 143_95Exit 52.dgn

Username:
Division:
Filename: 144_295NBClosure.dgn
Date:3/3/2020




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC I-295 NB CLOSURE 1

SHEET NUMBER

144

OF 220

Username:

Division:

Date:3/3/2020

Filename: 145_295NBClosure2.dgn







HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

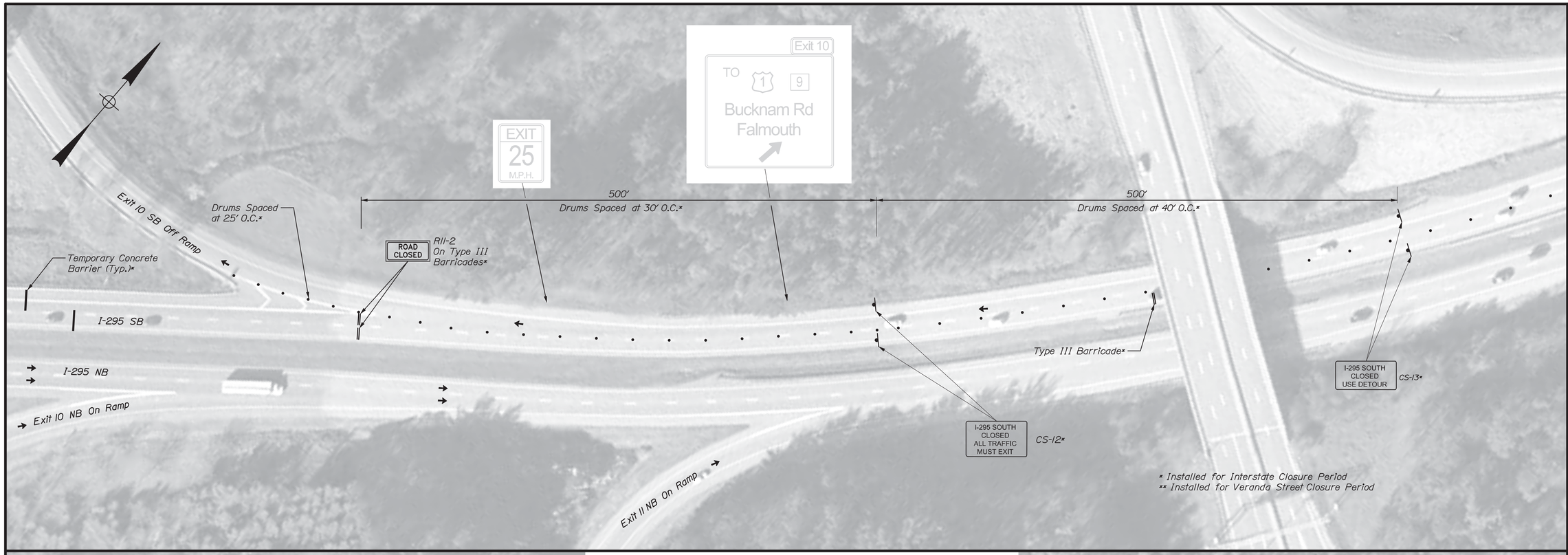
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

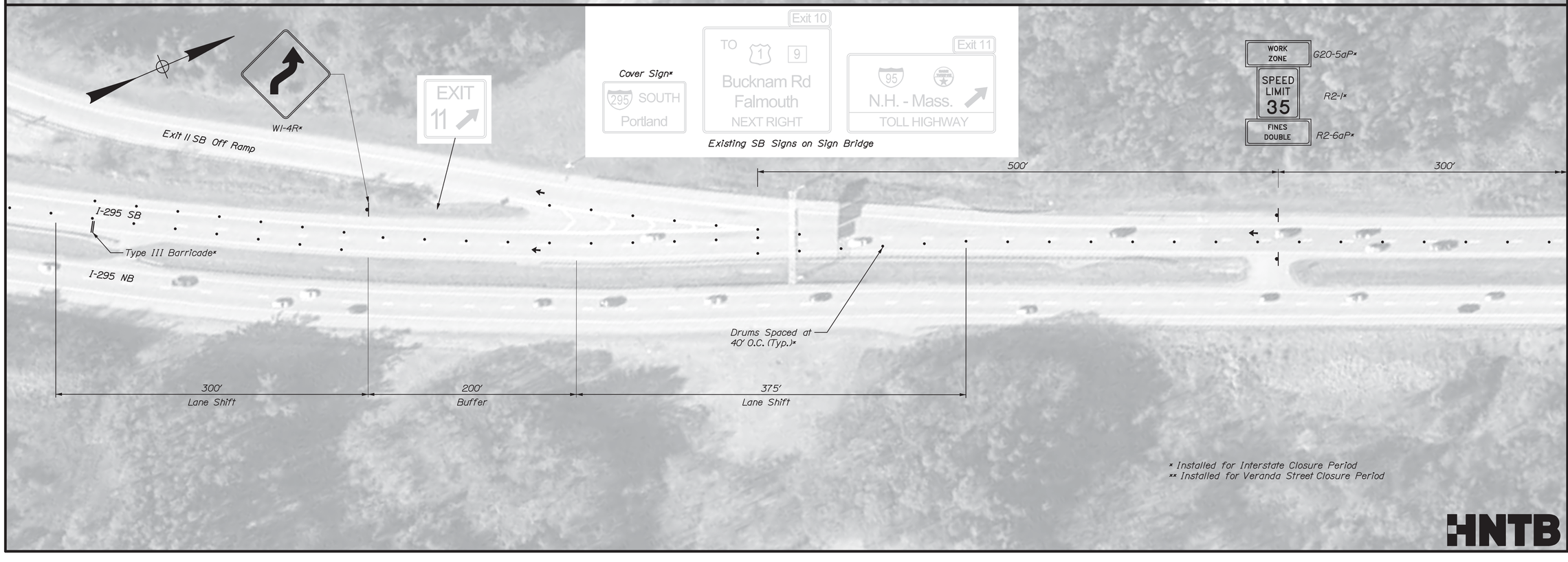
# MAINTENANCE OF TRAFFIC I-295 NB CLOSURE 2

SHEET NUMBER

145

OF 220




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| DESIGN-DETAILED | EDD | 2\20 |
| CHECKED-REVIEWED | RWH | 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| PROJ. MANAGER | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC
# I-295 SB CLOSURE 1

SHEET NUMBER

146

OF 220

HNTB

Date:3/3/2020

Username:

Division:

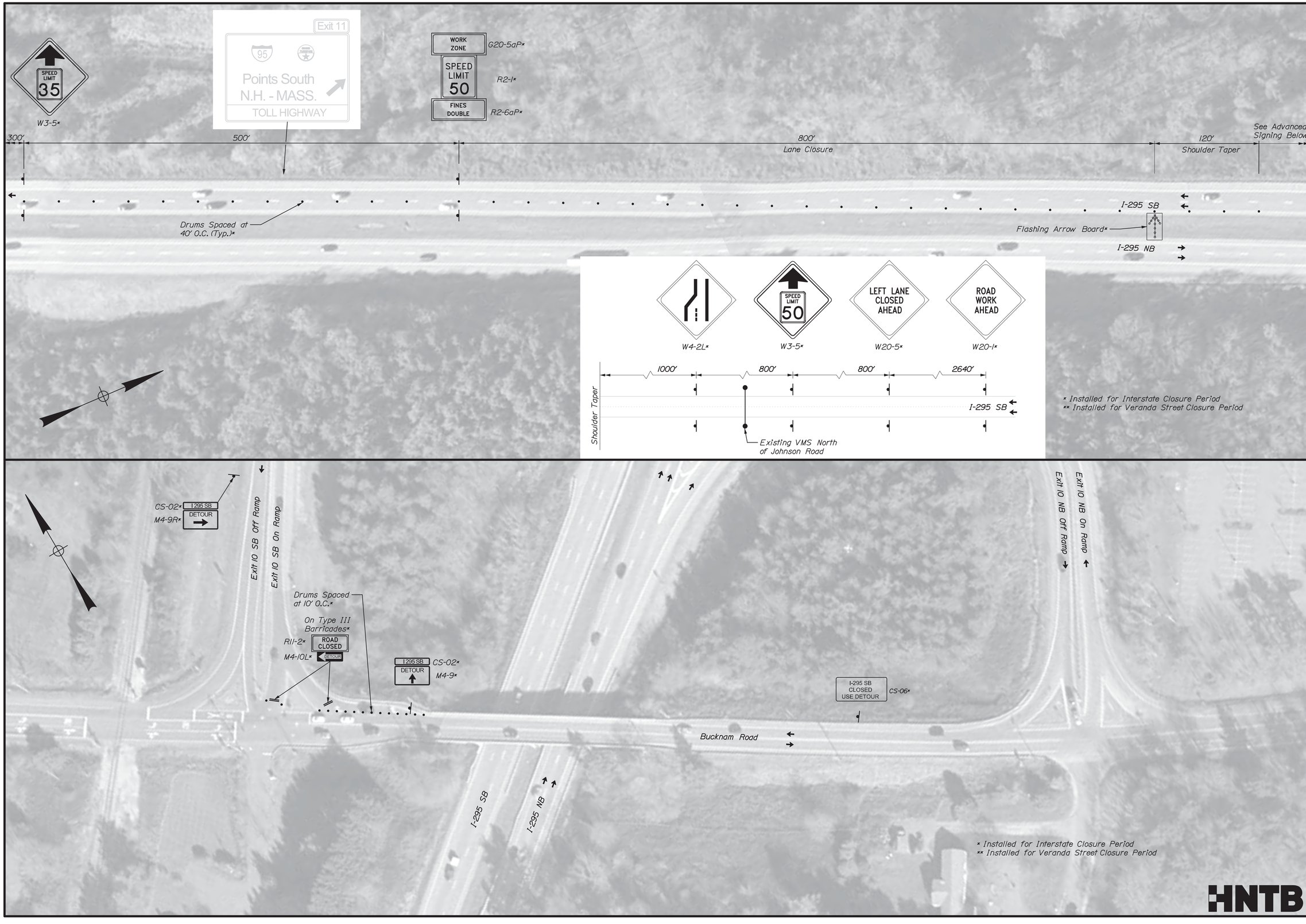
Filename: 146_295SBClosure1.dgn

Username:

Division:

Date:3/3/2020

Filename: 147_295SBClosure2.dgn




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | EDD | CDH 2\20 |
| DESIGN-DETAILED | EDD | WEG RWH 2\20 |
| CHECKED-REVIEWED | RWH | LZD |
| DESIGN2-DETAILED2 | LED2 | |
| DESIGN3-DETAILED3 | LED3 | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC I-295 SB CLOSURE 2

SHEET NUMBER

147

OF 220

HNTB

Filename: 148_Route1Route88.dgn Division: Username: Date:3/3/2020




HNTB

SHEET NUMBER 148 OF 220

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC
# ROUTE 1 SB CLOSURE

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

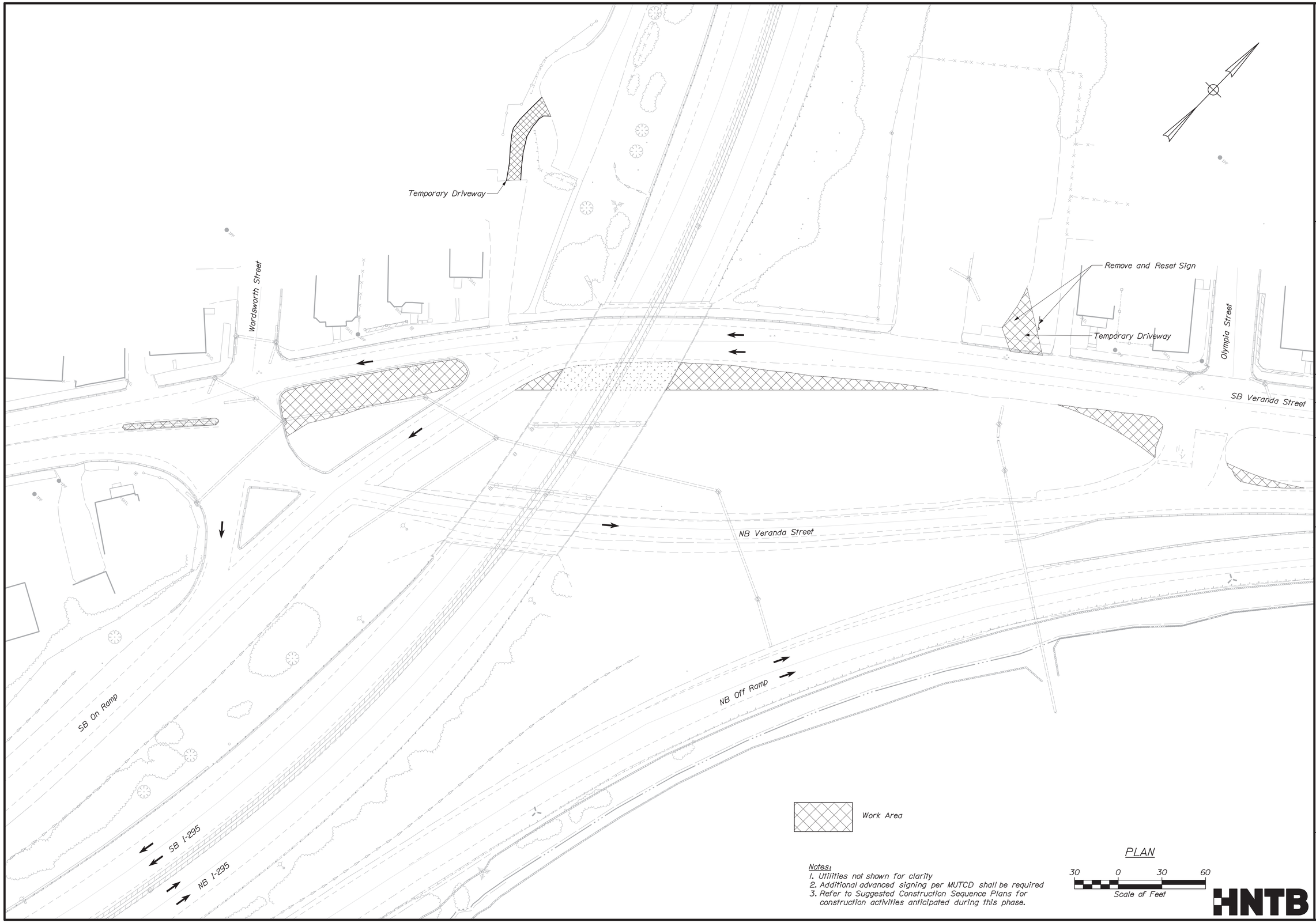
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

BRIDGE NO.5933 **WIN 021745.00** BRIDGE PLANS

Filename: 149_MOT_PhaseIA.dgn Division: Username: Date:3/3/2020




*Notes:*
1. Utilities not shown for clarity
2. Additional advanced signing per MUTCD shall be required
3. Refer to Suggested Construction Sequence Plans for construction activities anticipated during this phase.

PLAN

30 0 30 60

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | BY | DATE |
| CHECKED-REVIEWED | RWH | CDH | 2\20 |
| DESIGN2-DETAILED2 | | LZD | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

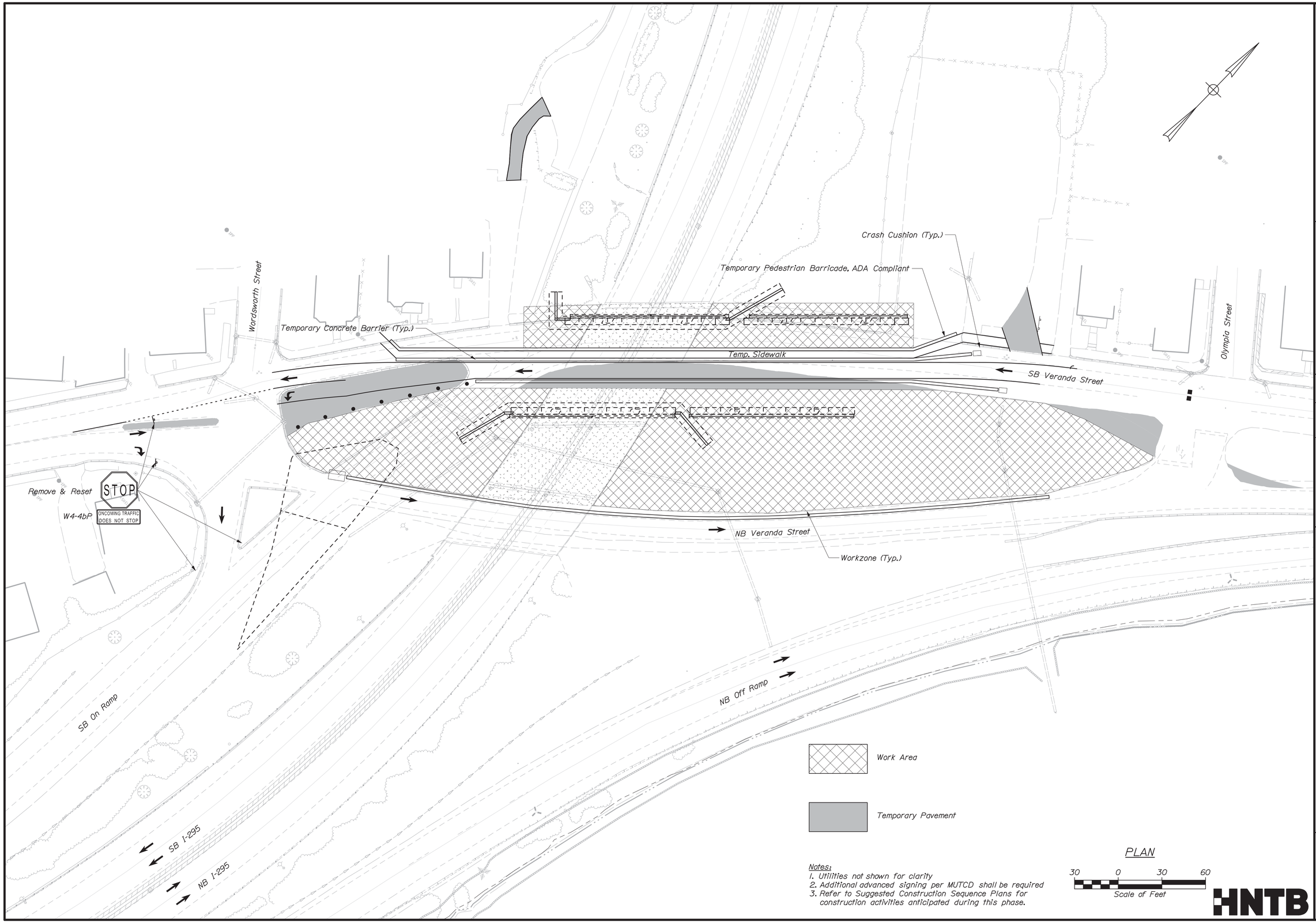
# MAINTENANCE OF TRAFFIC VERANDA ST PHASE 1A

SHEET NUMBER

149

OF 220

Filename: 150_MOT_PhaseIB.dgn Division: Username: Date:3/3/2020




*Notes:*
1. Utilities not shown for clarity
2. Additional advanced signing per MUTCD shall be required
3. Refer to Suggested Construction Sequence Plans for construction activities anticipated during this phase.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | D. EATON | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# MAINTENANCE OF TRAFFIC VERANDA ST PHASE 1B

SHEET NUMBER

150

OF 220

Filename: 151_MOT_Phase2.dgn Division: Username: Date:3/3/2020

ROAD CLOSED
RII-2
On Type III Barricades

Wordsworth Street

Temporary Concrete Barrier (Typ.)

Crash Cushion (Typ.)

Temporary Falsework for Bridge Superstructure

Temporary Pedestrian Barricade, ADA Compliant

WI-6

Olympia Street

Temp. Sidewalk

SB Veranda Street

NB Veranda Street

R = 200'

STOP
ONCOMING TRAFFIC DOES NOT STOP

Workzone (Typ.)

SB On Ramp

NB Off Ramp

SB I-295

NB I-295

Work Area

Temporary Pavement

Notes:
1. Utilities not shown for clarity
2. Additional advanced signing per MUTCD shall be required
3. Refer to Suggested Construction Sequence Plans for construction activities anticipated during this phase.
4. Limits of temporary pavement and roadway may be adjusted.

PLAN
30 0 30 60
Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | EDD | | |
| CHECKED-REVIEWED | RWH | | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | EDD | 2\20 | |
| REVISIONS 2 | CDH | 2\20 | |
| REVISIONS 3 | LZD | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

MAINTENANCE OF TRAFFIC
VERANDA ST PHASE 2

SHEET NUMBER
151
OF 220

# DETOUR SIGN SUMMARY

| IDENTIFICATION NUMBER | SIZE OF SIGN WIDTH | SIZE OF SIGN HEIGHT | TEXT | TEXT DIMENSIONS (INCHES) LETTER HEIGHT | TEXT DIMENSIONS (INCHES) VERTICAL SPACING | TEXT DIMENSIONS (INCHES) ARROW RTE. MKR. | NUMBER OF SIGNS REQUIRED | COLOR BACKGROUND | COLOR LEGEND BORDER | AREA IN SQUARE FEET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CS-01 | 30" | 12" | I 295 NB | 4"C | | | 11 | ORANGE | BLACK | 2.5 (27.5) | |
| CS-02 | 30" | 12" | I 295 SB | 4"C | | | 8 | ORANGE | BLACK | 2.5 (20) | |
| CS-03 | 30" | 12" | VERANDA ST | 4"C | | | 7 | ORANGE | BLACK | 2.5 (17.5) | |
| CS-04 | 30" | 12" | ROUTE 1 SB | 4"C | | | 11 | ORANGE | BLACK | 2.5 (27.5) | |
| CS-05 | 36" | 30" | I 295 NB<br>CLOSED<br>USE DETOUR | 4"C<br>4"C<br>4"C | 4"<br>4" | | 2 | ORANGE | BLACK | 7.5 (15) | |
| CS-06 | 36" | 30" | I 295 SB<br>CLOSED<br>USE DETOUR | 4"C<br>4"C<br>4"C | 4"<br>4" | | 6 | ORANGE | BLACK | 7.5 (45) | |
| CS-07 | 48" | 30" | VERANDA STREET<br>CLOSED<br>USE DETOUR | 4"C<br>4"C<br>4"C | 4"<br>4" | | 2 | ORANGE | BLACK | 10 (20) | |
| CS-08 | 36" | 30" | ROUTE 1 SB<br>CLOSED<br>USE DETOUR | 4"C<br>4"C<br>4"C | 4"<br>4" | | 1 | ORANGE | BLACK | 7.5 | |
| CS-09 | 30" | 36" | TRUCK<br>DETOUR ← | 4"C<br>4"C | 3" | 4.5"X18" | 1 | ORANGE | BLACK | 7.5 | |
| CS-10 | 30" | 36" | TRUCK<br>DETOUR ↑ | 4"C<br>4"C | 3" | 4.5"X12" | 1 | ORANGE | BLACK | 7.5 | |
| CS-11 | 66" | 60" | I-295 NORTH<br>CLOSED<br>ALL TRAFFIC<br>MUST EXIT | 8"D<br>8"D<br>8"D<br>8"D | 6"<br>6"<br>6" | | 1 | ORANGE | BLACK | 27.5 | |
| CS-12 | 66" | 60" | I-295 SOUTH<br>CLOSED<br>ALL TRAFFIC<br>MUST EXIT | 8"D<br>8"D<br>8"D<br>8"D | 6"<br>6"<br>6" | | 2 | ORANGE | BLACK | 27.5 (55) | |
| CS-13 | 66" | 42" | I-295 SOUTH<br>CLOSED<br>USE DETOUR | 8"D<br>8"D<br>8"D | 6"<br>6" | | 2 | ORANGE | BLACK | 19.25 (38.5) | |
| CS-14 | 54" | 30" | RTE 1 SB CLOSED<br>3 MILES AHEAD<br>USE DETOUR | 4"D<br>4"D<br>4"D | 3"<br>3" | | 2 | ORANGE | BLACK | 11.25 (22.5) | |
| G20-5aP | 48" | 24" | WORK<br>ZONE | TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | | 4 | SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | 8 (32) | |
| M4-9 | 30" | 24" | DETOUR ↑ | ↓ | ↓ | ↓ | 9 | ↓ | ↓ | 5 (45) | |

| IDENTIFICATION NUMBER | SIZE OF SIGN WIDTH | SIZE OF SIGN HEIGHT | TEXT | TEXT DIMENSIONS (INCHES) LETTER HEIGHT | TEXT DIMENSIONS (INCHES) VERTICAL SPACING | TEXT DIMENSIONS (INCHES) ARROW RTE. MKR. | NUMBER OF SIGNS REQUIRED | COLOR BACKGROUND | COLOR LEGEND BORDER | AREA IN SQUARE FEET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M4-9L | 30" | 24" | DETOUR ← | TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | | 7 | SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | 5 (35) | |
| M4-9R | 30" | 24" | DETOUR → | | | | 8 | | | 5 (40) | |
| M4-10L | 48" | 18" | DETOUR ← | | | | 5 | | | 6 (30) | |
| M4-10R | 48" | 18" | DETOUR → | | | | 2 | | | 6 (12) | |
| R2-1 (35) (50) | 48" | 60" | SPEED LIMIT XX | | | | 2<br>2 | | | 20 (40)<br>20 (40) | |
| R2-6aP | 48" | 36" | FINES<br>DOUBLE | | | | 4 | | | 12 (48) | |
| R3-1 | 24" | 24" | ⊘ | | | | 1 | | | 4 | |
| R11-2 | 48" | 30" | ROAD<br>CLOSED | | | | 17 | | | 10 (170) | |
| R11-3a (0.4) (1.7) | 60" | 30" | ROAD CLOSED<br>_._ MILES AHEAD<br>LOCAL TRAFFIC ONLY | | | | 1<br>2 | | | 12.5<br>12.5 (25) | |
| R11-4 | 60" | 30" | ROAD CLOSED<br>TO<br>THRU TRAFFIC | | | | 2 | | | 12.5 (25) | |
| W1-4R | 48" | 48" | ↱ | | | | 2 | | | 16 (32) | |
| W1-6 | 48" | 24" | → | | | | 1 | | | 8 | |
| W3-5 (35) (50) | 48"<br>48" | 48"<br>48" | SPEED LIMIT XX | | | | 2<br>2 | | | 16 (32)<br>16 (32) | |
| W4-2R | 48" | 48" | ⫽ | | | | 2 | | | 16 (48) | |
| W4-2L | 48" | 48" | ⫽ | | | | 4 | | | 16 (64) | |
| W4-3 | 48" | 48" | ⫽ | ↓ | ↓ | ↓ | 1 | ↓ | ↓ | 16 | |

NOTE:
1. Sign summary includes detour signs only.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| DESIGN-DETAILED | EDD | 2.20 |
| CHECKED-REVIEWED | RWH | 2.20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| PROJ. MANAGER | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

DETOUR SIGN SUMMARY

SHEET NUMBER
152
OF 220

Filename: 152_Detour_Sign_Summary.dgn Division: Username: Date:3/3/2020

# DETOUR SIGN SUMMARY

| IDENTIFICATION NUMBER | SIZE OF SIGN WIDTH | SIZE OF SIGN HEIGHT | TEXT | TEXT DIMENSIONS (INCHES) LETTER HEIGHT | TEXT DIMENSIONS (INCHES) VERTICAL SPACING | TEXT DIMENSIONS (INCHES) ARROW RTE. MKR. | NUMBER OF SIGNS REQUIRED | COLOR BACKGROUND | COLOR LEGEND BORDER | AREA IN SQUARE FEET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W4-4bP | 24" | 12" | ONCOMING TRAFFIC DOES NOT STOP | TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | | 1 | SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" | | 16 | |
| W20-1 | 48" | 48" | ROAD WORK AHEAD | | | | 7 | | | 16 (112) | |
| W20-3 (500) (1000) | 48"<br>48" | 48"<br>48" | ROAD CLOSED XX FT | | | | 2<br>2 | | | 16 (32)<br>16 (32) | |
| W20-5 (LEFT) (RIGHT) | 48"<br>48" | 48"<br>48" | _ LANE CLOSED AHEAD | | | | 4<br>2 | | | 16 (64)<br>16 (32) | |

NOTE:
1. Sign summary includes detour signs only.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | EDD | CDH | 2\20 |
| CHECKED-REVIEWED | RWH | LZD | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

DETOUR SIGN SUMMARY 2

SHEET NUMBER

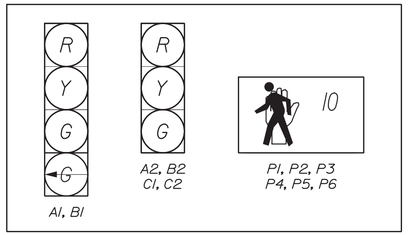
153

OF 220

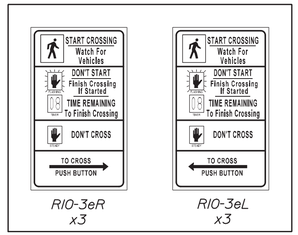
Filename: 153_Detour_Sign_Summary2.dgn Division: Username: Date:3/3/2020

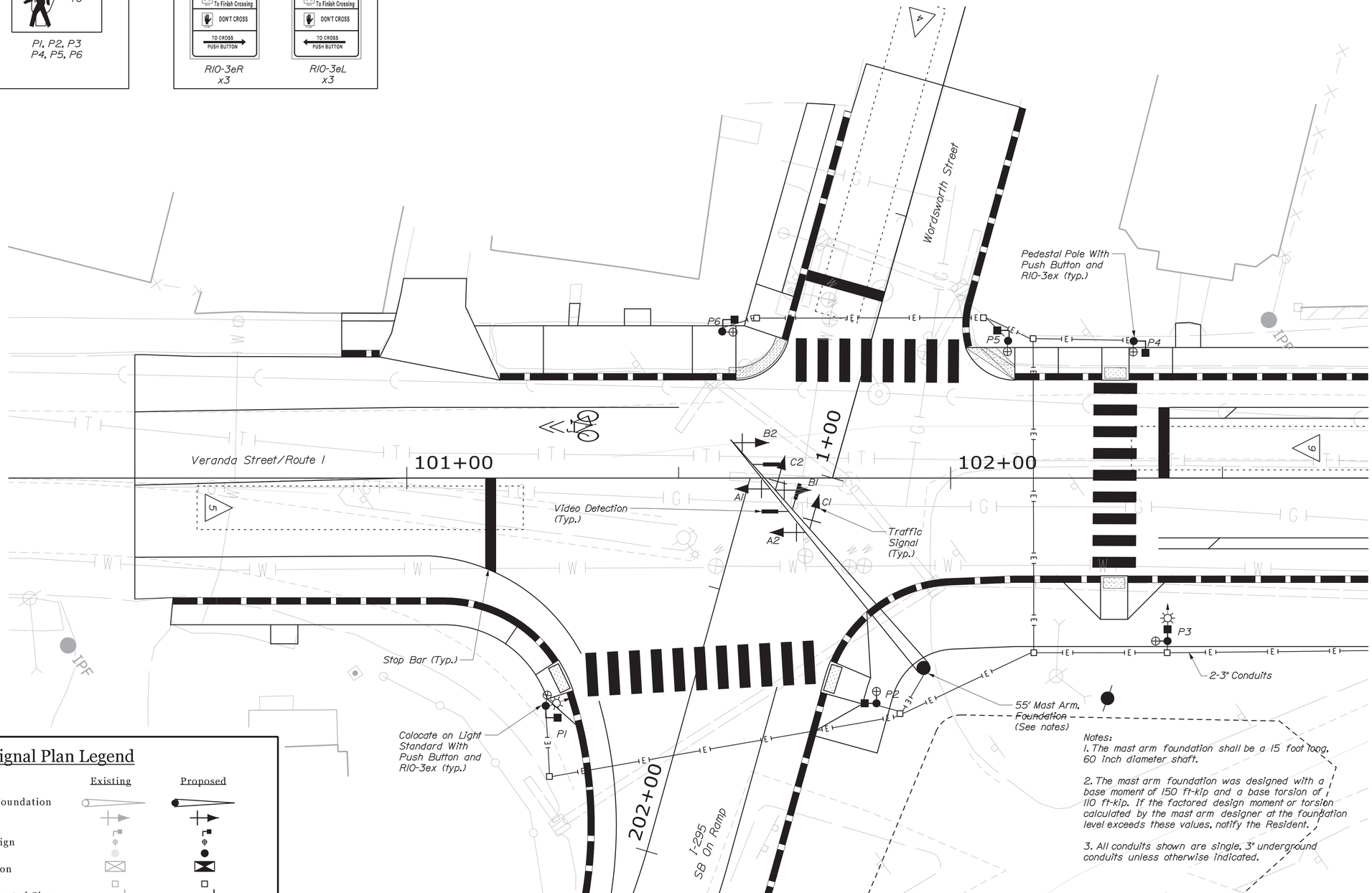
Filename: 154_Signal_SB_On_Ramp.dgn Username: Division: Date:4/24/2020

*Proposed Signals*




*Proposed Signs*




## Signal Plan Legend

| | Existing | Proposed |
|---|---|---|
| Mast Arm & Steel Pole On Foundation | | |
| Signal Head | | |
| Pedestrian Signal Head | | |
| Pedestrian Push Button & Sign | | |
| Pedestal Pole & Foundation | | |
| Control Cabinet & Foundation | | |
| Junction Box | | |
| Mast Arm Or Span Wire Mounted Sign | | |
| Detector Zone | | |
| Video Detector | | |
| 3" Underground Conduit | E | E |
| Interconnect | C | C |
| Video Dectector | # | # |

*Notes:*

*1. The mast arm foundation shall be a 15 foot long, 60 inch diameter shaft.*

*2. The mast arm foundation was designed with a base moment of 150 ft-kip and a base torsion of 110 ft-kip. If the factored design moment or torsion calculated by the mast arm designer at the foundation level exceeds these values, notify the Resident.*

*3. All conduits shown are single, 3" underground conduits unless otherwise indicated.*

*PLAN*

10 0 10 20

*Scale of Feet*

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | RBM | 2\20 |
| CHECKED-REVIEWED | ARG | 2\20 |
| DESIGN2-DETAILED2 | WAD | |
| DESIGN3-DETAILED3 | DSS | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

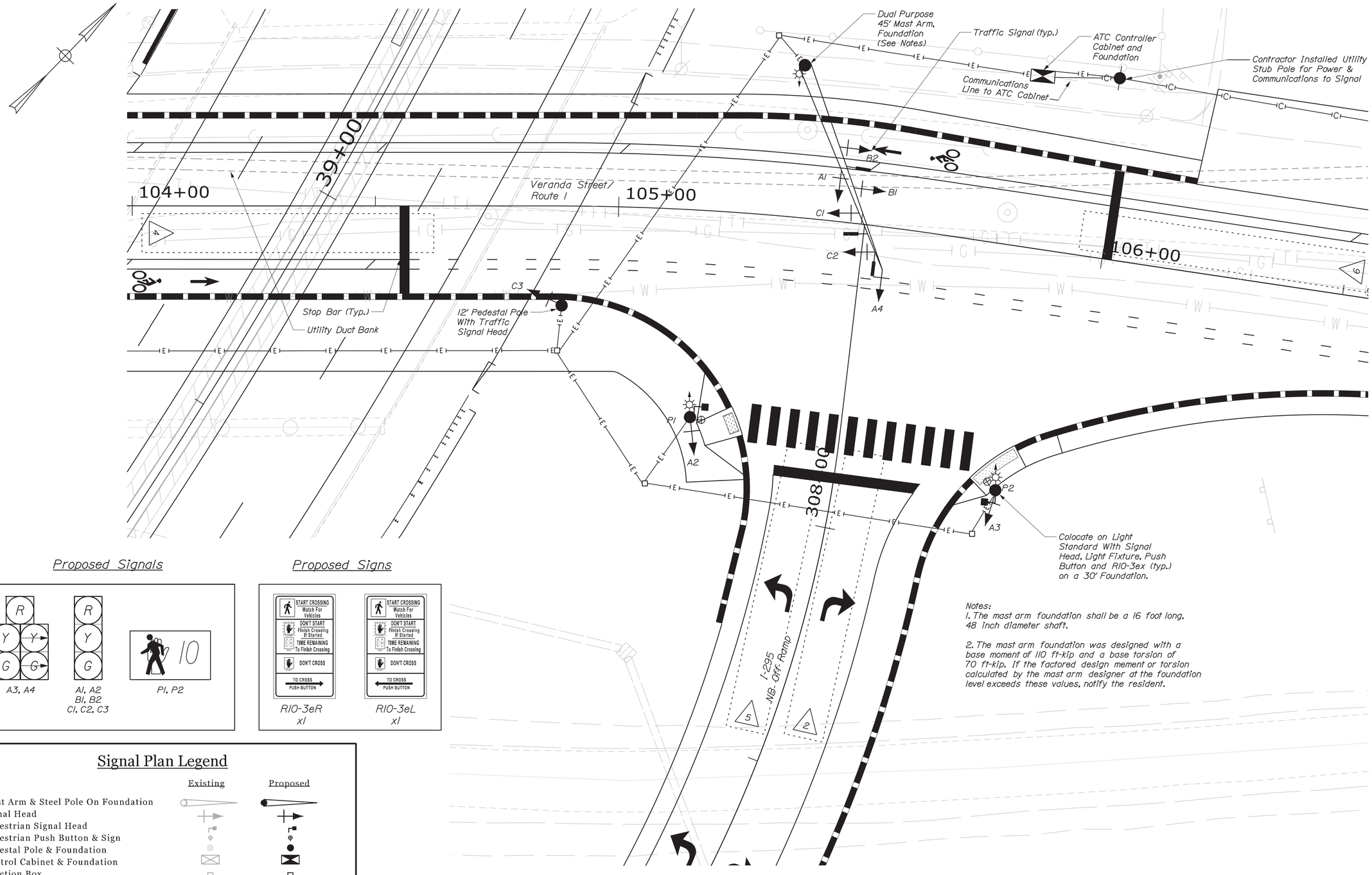
# SB ON RAMP SIGNAL PLANS

SHEET NUMBER

154

OF 220

Username:
Division:
Date:4/24/2020
Filename: 155_Signal_NB_Off_Ramp.dgn




Notes:
1. The mast arm foundation shall be a 16 foot long, 48 inch diameter shaft.

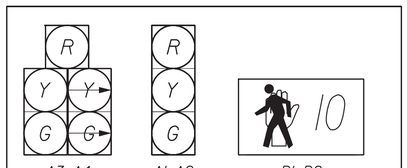
2. The mast arm foundation was designed with a base moment of 110 ft-kip and a base torsion of 70 ft-kip. If the factored design mement or torsion calculated by the mast arm designer at the foundation level exceeds these values, notify the resident.

PLAN

10 0 10 20

Scale of Feet

## Proposed Signals




## Proposed Signs




## Signal Plan Legend

| | Existing | Proposed |
|---|---|---|
| Mast Arm & Steel Pole On Foundation | | |
| Signal Head | | |
| Pedestrian Signal Head | | |
| Pedestrian Push Button & Sign | | |
| Pedestal Pole & Foundation | | |
| Control Cabinet & Foundation | | |
| Junction Box | | |
| Mast Arm Or Span Wire Mounted Sign | | |
| Detector Zone | | |
| Video Detector | | |
| 3" Underground Conduit | E I | E I |
| Interconnect | C I | C I |
| Video Dectector | # | # |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | RBM | WAD | 2\20 |
| CHECKED-REVIEWED | ARG | DSS | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

NB OFF RAMP SIGNAL PLAN

SHEET NUMBER

155

OF 220

HNTB

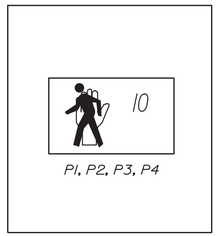
Username:

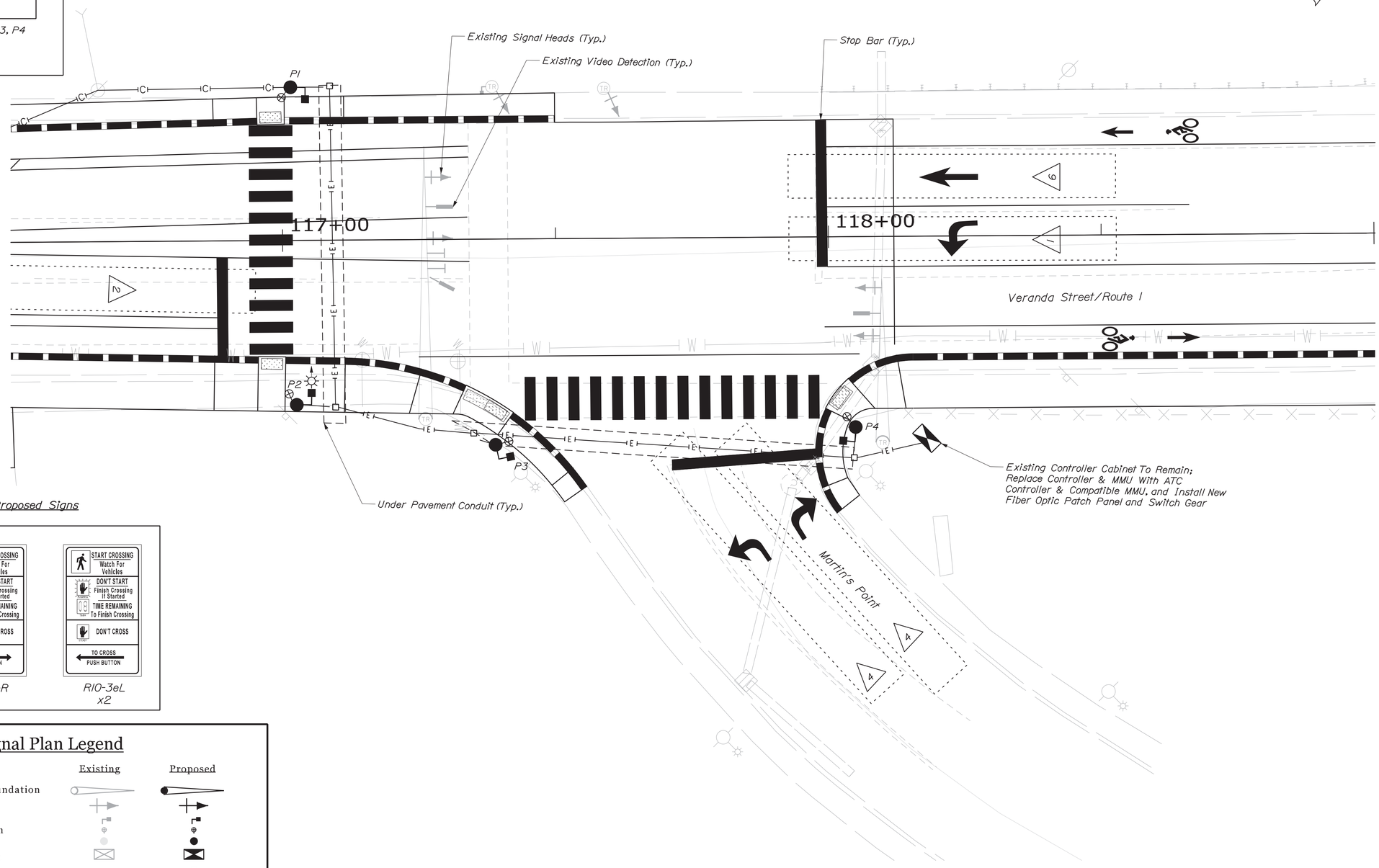
Date:3/3/2020

Division:

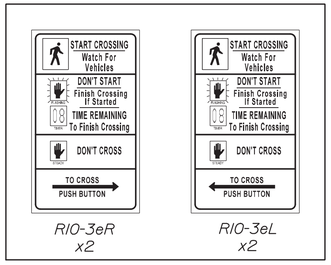
Filename: 156_Signal_Martins Point.dgn

## Proposed Signals

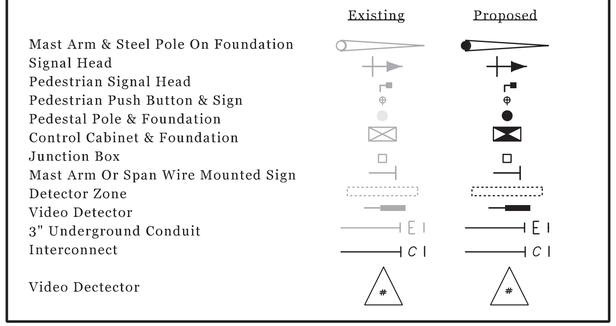



## Proposed Signs




## Signal Plan Legend




PLAN

10 0 10 20

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | RBM | WAD | 2\20 |
| CHECKED-REVIEWED | ARG | DSS | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

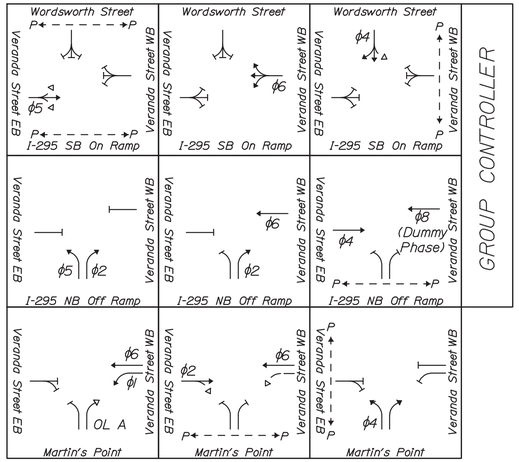
MARTIN'S POINT SIGNAL PLAN

SHEET NUMBER

156

OF 220

## SIGNAL PHASING SEQUENCE




* Pedestrian pre-emption will force Veranda Street EBL to a permissive movement.

## I-295 NB & SB RAMPS AND VERANDA STREET SIGNAL TIMING

| | PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 | PHASE 9 |
|---|---|---|---|---|---|---|---|---|---|
| MINIMUM GREEN | - | 5.0 | - | 5.0 | 5.0 | 5.0 | - | 5.0 | - |
| VEHICLE EXTENSION | | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | |
| MAXIMUM 1 | | 76.0 | | 22.0 | 23.0 | 47.0 | | 22.0 | |
| MAXIMUM 2 | | 66.0 | | 18.0 | 18.0 | 42.0 | | 18.0 | |
| MAXIMUM 3 | | 60.0 | | 18.0 | 18.0 | 36.0 | | 18.0 | |
| YELLOW | | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | |
| ALL RED | | 2.0 | | 2.0 | 2.0 | 2.0 | | 2.0 | |
| RECALL MODE | | Min | | None | None | Min | | None | |
| WALK | | | | 7 | 7 | | | | |
| PED CLEAR | | | | 11 | 15 | | | | |

Max 1 - AM Weekdays 7 AM to 9 AM
Max 2 - PM Weekdays 4 PM to 7 PM
Max 3 - Free All other

## MARTIN'S POINT & VERANDA STREET SIGNAL TIMING

| | PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 | PHASE 5 | PHASE 6 | PHASE 7 | PHASE 8 | PHASE 9 |
|---|---|---|---|---|---|---|---|---|---|
| MINIMUM GREEN | 5.0 | 5.0 | - | 5.0 | - | 5.0 | - | - | - |
| VEHICLE EXTENSION | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| MAXIMUM 1 | 5.0 | 70.0 | | 17.0 | | 81.0 | | | |
| MAXIMUM 2 | 5.0 | 51.0 | | 22.0 | | 62.0 | | | |
| MAXIMUM 3 | 5.0 | 45.0 | | 23.0 | | 57.0 | | | |
| YELLOW | 4.0 | 4.0 | | 4.0 | | 4.0 | | | |
| ALL RED | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| RECALL MODE | None | Min. | | None | | Min. | | | |
| WALK | | 7 | | 7 | | | | | |
| PED CLEAR | | 15 | | 12 | | | | | |

Max 1 - AM Weekdays 7 AM to 9 AM
Max 2 - PM Weekdays 4 PM to 7 PM
Max 3 - Free All other

## EQUIPMENT AND WORK ITEMS

| | Wordworth and Veranda Street/Route 1/SB on Ramp | Veranda Street/ Route 1 and I-295 NB off Ramp | Martins Point and Veranda Street/ Route 1 |
|---|---|---|---|
| FURNISH/INSTALL NEW ATC CONTROLLER CABINET W/FOUNDATION AND ALL ANCILLARY EQUIPMENT AND WIRING. (GROUP CONTROLLER) | 1/2 | 1/2 | - |
| FURNISH/INSTALL NEW ATC CONTROLLER AND MMU. | - | - | 1 |
| FURNISH/INSTALL 3-SECTION 12-INCH SIGNAL HEADS W/LED MODULES, TUNNEL VISORS AND REFLECTORIZED ALUMINUM LOUVERED BACKPLATES MOUNTED ON MAST ARMS OR PEDESTAL POLES W/NEW MOUNTING HARDWARE. | 4 | 7 | - |
| FURNISH/INSTALL 4-SECTION 12-INCH SIGNAL HEADS W/LED MODULES, TUNNEL VISORS AND REFLECTORIZED ALUMINUM LOUVERED BACKPLATES MOUNTED ON MAST ARMS OR PEDESTAL POLES W/NEW MOUNTING HARDWARE. | 2 | - | - |
| FURNISH/INSTALL 5-SECTION 12-INCH SIGNAL HEADS W/LED MODULES, TUNNEL VISORS AND REFLECTORIZED ALUMINUM LOUVERED BACKPLATES MOUNTED ON MAST ARMS OR PEDESTAL POLES W/NEW MOUNTING HARDWARE. | - | 2 | - |
| FURNISH/INSTALL PEDESTRIAN SIGNAL HEADS W/LED MODULES, TUNNEL VISORS AND REFLECTORIZED ALUMINUM LOUVERED BACKPLATES MOUNTED ON MAST ARMS OR PEDESTAL POLES W/NEW MOUNTING HARDWARE. | 6 | 2 | 4 |
| FURNISH/INSTALL PEDESTRIAN PUSH BUTTONS. | 6 | 2 | 4 |
| FURNISH/INSTALL NEW SIGNAL HEAD CABLE WIRING. WILL BE CONTINUOUS WIRING FROM CABINET TO MAST ARMS. | 1/2 | 1/2 | 1 |
| FURNISH/INSTALL UTILITY STUB POLE WITH POWER AND COMMUNICATIONS SERVICES AS SHOWN ON THE PLANS. | - | 1 | - |
| FURNISH/INSTALL VIDEO DETECTION SYSTEM. | 1/2 | 1/2 | - |
| FURNISH/INSTALL NON-METALLIC CONDUIT. (ITEM 626.22) | 530 LF | 530 LF | - |
| FURNISH/INSTALL NON-METALLIC UNDER PAVEMENT CONDUIT. (ITEM 626.251) | - | - | 150 LF |
| FURNISH/INSTALL DUAL PURPOSE POLE W/55 FOOT MAST ARM, 12 FOOT LUMINAIRE ARM AND FOUNDATION. | 1 | - | - |
| FURNISH/INSTALL POLE WITH 45 FOOT MAST ARM, 12 FOOT LUMINAIRE ARM AND FOUNDATION. | - | 1 | - |
| FURNISH/INSTALL PEDESTAL POLES WITH FOUNDATIONS. | 4 | 1 | 3 |
| FURNISH/INSTALL INTERCONNECT WIRE BETWEEN: 12-STRAND FIBER OPTIC CABLE. (2000 LF) | 1/4 | 1/4 | 1/2 |
| FURNISH/INSTALL FIBER OPTIC PATCH PANEL AND SWITCH GEAR | 1/2 | 1/2 | 1 |

## COORDINATION CYCLE/SPLIT/OFFSET SCHEDULE

| | Wordsworth and Veranda St/ Rte 1/I-295 SB on Ramp /I-295 NB off | | Martins Point and Veranda St/ Rte 1 | | |
|---|---|---|---|---|---|
| | PLAN 1 | PLAN 2 | PLAN 1 | PLAN 2 | |
| CYCLE LENGTH | 110 | 96 | 110 | 96 | COORDINATION MODE SET TO FIXED FORCE-OFF |
| OFFSET | 0 | 0 | 92 | 19 | |
| COORDINATED PHASE | 2 | 2 | 6 | 6 | |
| SPLIT TIME ϕ1 | -- | -- | 11 | 11 | |
| SPLIT TIME ϕ2 | 82 | 72 | 76 | 57 | |
| SPLIT TIME ϕ3 | -- | -- | -- | -- | |
| SPLIT TIME ϕ4 | 28 | 24 | 23 | 28 | |
| SPLIT TIME ϕ5 | 29 | 24 | -- | -- | |
| SPLIT TIME ϕ6 | 53 | 48 | 87 | 68 | |
| SPLIT TIME ϕ7 | -- | -- | -- | -- | |
| SPLIT TIME ϕ8 | 28 | 24 | -- | -- | |

1. Coordination reference offsets to end of green
2. Coordination applies to weekday
   Plan 1 AM Peak: 7-9am
   Plan 2 PM Peak: 4-7pm

## SIGNAL NOTES

1. Conduits installed on Utility Company owned poles will be installed by the respective utility. The conduit will be provided by the contractor.
2. The location of all signal equipment and related items shall be in conformity with 'Americans With Disabilities Act' (ADA) accessibility standards. Use of sidewalks and pedestrian ramps shall not be obstructed.
3. Traffic controller cabinet shall be MaineDOT 32/48 ATC Cabinet. The cabinet shall have an extension base and be mounted on a concrete pad foundation with a Trafficware Commander ATC Controller.
4. All new signal sections shall have led lenses 12 inches in diameter with 5" retroreflective back plates.
5. All splices will be made in the cabinets meeting MaineDOT specifications.
6. The bottom of the housing of new mast arm mounted signal faces shall be at least 17 feet but not more than 19 feet above the pavement grade at the center of the roadway.
7. For pole mounted signal heads, the bottom of the housing shall be mounted at least 8 feet but not more than 19 feet above the sidewalk, or above pavment grade at the high point of the road.
8. Two copies of as-built plans, signal timing, log book and controller manuals shall be left in the controller cabinet. In a sealed water proof bag with memory stick.
9. The Contractor is responsible for finding exact locations of utilities prior to construction. The contractor shall contact dig-safe and appropriate authorities prior to any subsurface activities.
10. Traffic signal work shall be completed in a manner and order that will cause the minimum disruption to traffic.
11. The Resident, MaineDOT, and City of Portland shall have the right and authority to determine the acceptability of work and materials in progress or completed and shall have the right to reject any work or materials which do not conform, in its sole opinion, to the plans or specifications.
12. The Contractor shall provide the resident and the City of Portland with a schedule of work for constructing the traffic improvements.
13. The Contractor shall prepare a material schedule. All schedules shall be verified in the field by the Resident prior to ordering materials or performing work.
14. The Contractor shall be responsible for submitting red-line as-built drawings of the final work to the Resident. Those drawings shall be a clean set of plans showing all changes, modifications, and elevations to the bid plans.
15. All underground conduit shall be PVC Schedule 80 conduit when placed under pavement and Schedule 40 beyond pavement limits.
16. The Contractor shall meet all utility requirements for the new service connection.
17. All pedestal poles shall be one-piece.
18. Contractor shall povide and install all junction boxes, all junction boxes shall be paid under item 626.11.
19. The Contractor shall refer to the special provisions for City of Portland specific signal requirements.
20. All pole bases, pull boxes, and other controller conduits shall be sealed to prevent access by rodents and other small animals.
21. All old signal equipment will be returned to the City of Portland.

## DETECTOR SCHEDULE

| DETECTOR | | | |
|---|---|---|---|
| | PLAN ID | STREET | DIRECTION |
| Wordsworth and Veranda St/Rte 1/ I-295 SB on Ramp | 4 | Wordsworth Street SB | SB LTR |
| | 5 | Veranda Street EB | EB LTR |
| | 6 | Veranda Street WB | WB LTR |
| Veranda St/ Rte 1 and I-295 NB off Ramp | 2 | I-295 NB off Ramp | NB R |
| | 4 | Veranda Street EB | EB T |
| | 5 | I-295 NB off Ramp | NB L |
| | 6 (DP) | Veranda Street WB | WB T |
| Martins Point and Veranda St/Rte 1 | 1 | Veranda Street WB | WB L |
| | 2 | Veranda Street EB | EB TR |
| | 4 | Martin's Point NB | NB LR* |
| | 6 | Veranda Street WB | WB LT |

* Indicates an 8 second delay for phase activation due to right turning vehicles.

## VIDEO DETECTION

1. Video detection shall consist of a thermal traffic sensor system per the City of Portland and MaineDOT. For additional information see Special Provisions-Trafisense 2.
2. The Resident reserves the right to direct the Contractor to field adjust the height, either lower or higher, of the video detector for local conditions identified during or after construction. No additional costs will be allowed for field adjusting the video detector.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

PIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | RBM | WAD | 2\20 |
| CHECKED-REVIEWED | ARG | DSS | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

VERANDA STREET SIGNAL NOTES

SHEET NUMBER
157
OF 220

Date:3/3/2020
Username:
Division:
Filename: 157_Signal_Notes.dgn

ATC Controller Cabinet and Foundation

Communications Line to ATC Cabinet

Contractor Installed Utility Stub Pole for Power & Communications to Signal

Traffic Signal (Typ.)

Stop Bar (Typ.)

105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00

3+00 4+00

P1 P2

308+00

Junction Box (Typ.)

Pedestal Pole With Push Button And RIO-3ex (typ.)

3" Conduit For Future Lighting

PLAN

25 0 25 50

Scale of Feet

112+00 113+00 114+00 115+00 116+00 117+00 118+00

5+00 6+00

P1 P2 P3 P4

Stop Bar (Typ.)

Directional Bore (Typ.)

Junction Box

3" Conduit For Future Lighting

Existing Controller Cabinet To Remain: Replace Controller & MMU With ATC Controller & Compatible MMU, and Install New Fiber Optic Patch Panel and Switch Gear

PLAN

25 0 25 50

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| D. EATON | | | |
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | RBM | WAD | 2\20 |
| CHECKED-REVIEWED | ARG | DSS | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER VERANDA STREET

PORTLAND CUMBERLAND COUNTY

INTERCONNECT PLAN

SHEET NUMBER

158

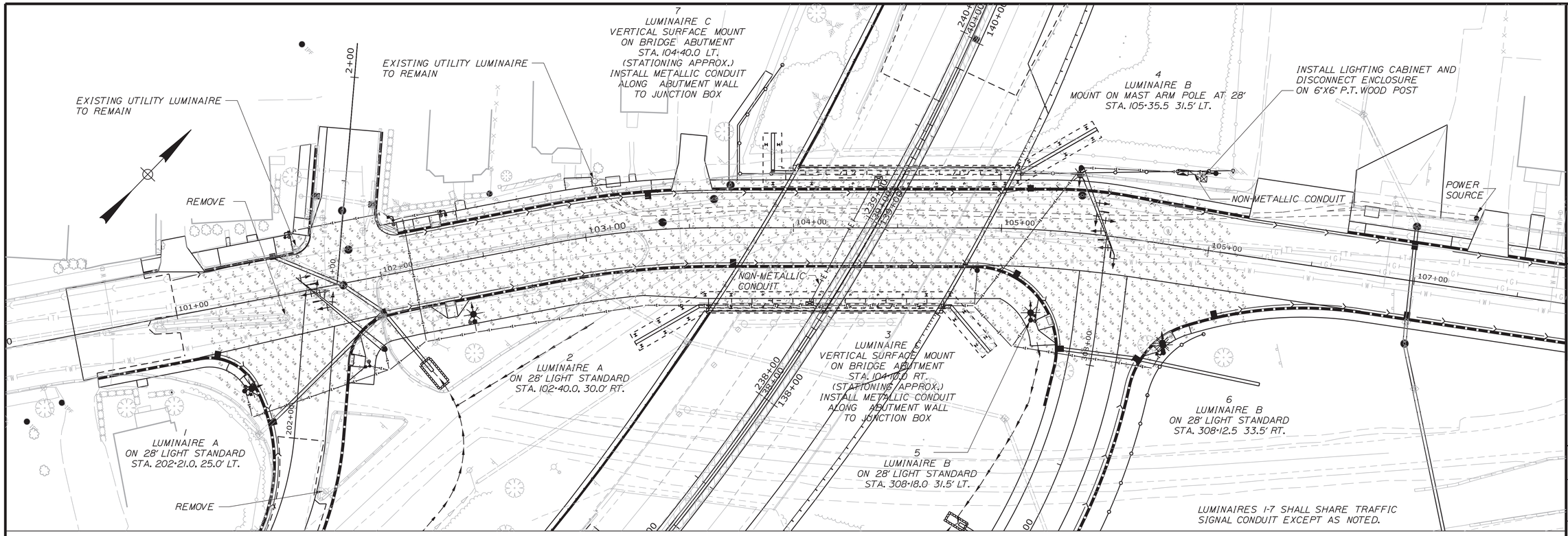
OF 220

Username:

Division:

Date:3/3/2020

Filename: 158_Interconnect_Plan.dgn




SCALE

25 0 25 50

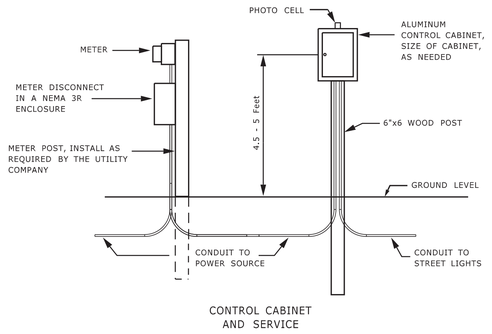
Scale of Feet

## Statistics

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| NB Off-Ramp Intersection | + | 0.7 fc | 1.3 fc | 0.3 fc | 4.3:1 | 2.3:1 |
| SB On-Ramp Intersection | + | 0.7 fc | 1.1 fc | 0.3 fc | 3.7:1 | 2.3:1 |
| Under-Bridge Lighting | + | 0.7 fc | 1.6 fc | 0.4 fc | 4.0:1 | 1.8:1 |
| Sta. 102+60 to Bridge (existing) | + | 0.5 fc | 0.9 fc | 0.2 fc | 4.5:1 | 2.5:1 |
| Olympia St. Intersection (existing) | + | 0.3 fc | 0.8 fc | 0.1 fc | 8.0:1 | 3.0:1 |
| Oregon St. Intersection (existing) | + | 0.1 fc | 0.2 fc | 0.0 fc | N/A | N/A |
| Martin's Point Intersection (existing) | + | 1.0 fc | 2.3 fc | 0.1 fc | 23.0:1 | 10.0:1 |

## Schedule

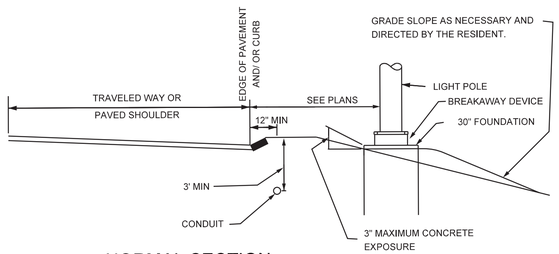
| Symbol | Label | Quantity | Manufacturer | Catalog Number | Description | Lamp | Number Lamps | Filename | Lumens Per Lamp | Light Loss Factor | Wattage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | 2 | American Electric Lighting | ATB0 20BLEDE53 MVOLT R3 4K BK X X UMR-XX AO | ATB0 SERIES LED 525MA TYPE 3 4000K CCT | LED Array | 1 | ATB0_20BLEDE53_XXXXX_R3_4K_5K.ies | 4704 | 0.85 | 36 |
| | B | 3 | American Electric Lighting | ATB0 20BLEDE53 MVOLT R2 4K BK X X UMR-XX AO | ATB0 SERIES LED 525MA TYPE 2 4000K CCT | LED Array | 1 | ATB0_20BLEDE53_XXXXX_R2_4K_5K.ies | 4638 | 0.85 | 36 |
| | C | 2 | Holophane | HLWPC2 P10 40K XX T2M BKSDP 70CRI AO DF TP | Wallpack Full Cutoff LED, Performance Package P10, 4000K CCT, Auto-Sensing Voltage, Type II Medium | LED | 1 | HLWPC2_P10_40K_XX_T2M.ies | 3110 | 0.85 | 28 |



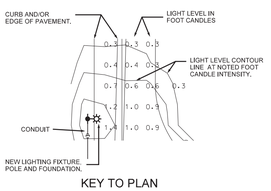

CONTROL CABINET AND SERVICE

LEGEND for LIGHTING

- Control Cabinet and Service
- Lighting Conduit
- JB Pull Box
- Light Fixture on a 28 Foot Pole and 30" Foundation
- Direction of Luminaire
- Existing Light Fixture on Wood Pole




NORMAL SECTION




KEY TO PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO. 5933

BRIDGE PLANS

ALBERT L GODFREY No. 4226 STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER

| | BY | DATE |
|---|---|---|
| SIGNATURE | JLE | 11-19 |
| 4226 | | 11-19 |
| P.E. NUMBER | | |
| 2/24/20 | | |
| DATE | | |

| | TRC |
|---|---|
| PROJ. MANAGER | |
| DESIGN-DETAILED | ALG |
| CHECKED-REVIEWED | ALG |
| DESIGNS-DETAILED5 | |
| REVISIONS 1 | |
| REVISIONS 2 | |
| REVISIONS 3 | |
| REVISIONS 4 | |
| FIELD CHANGES | |

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

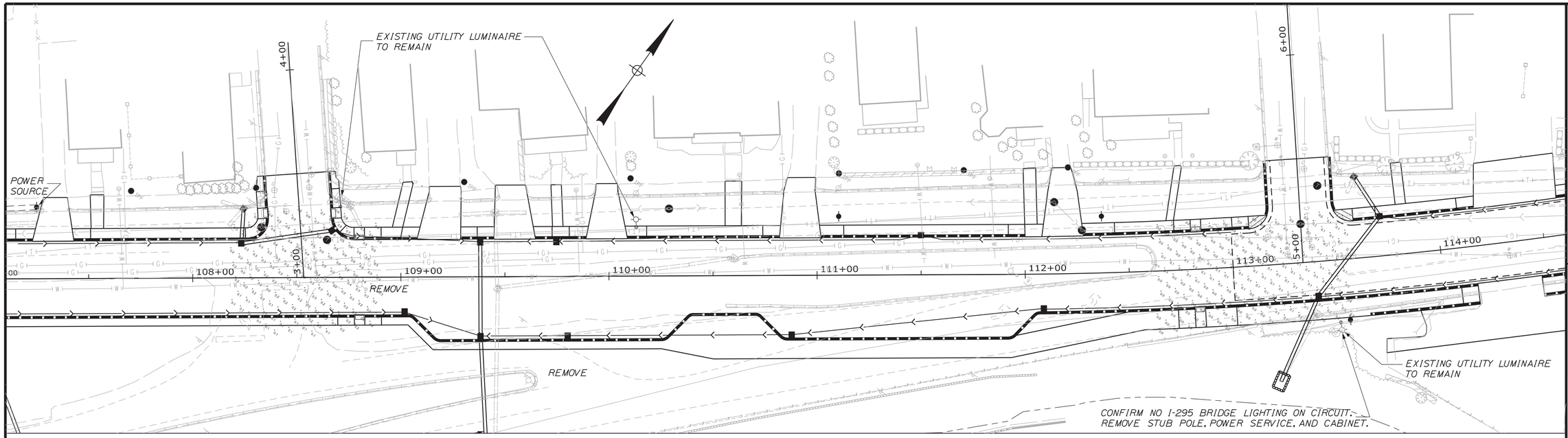
LIGHTING PLAN 1

SHEET NUMBER

159

OF 220

Filename: ...\159_LightingPlan_01.dgn Division: HIGHWAY Username: common Date:3/3/2020



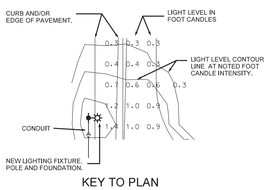

LEGEND for LIGHTING

- Control Cabinet and Service
- Lighting Conduit
- JB Pull Box
- Light Fixture on a 28 Foot Pole and 30" Foundation
  - Direction of Luminaire
- Existing Light Fixture on Wood Pole

SCALE

25 0 25 50

Scale of Feet




KEY TO PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO. 5933

BRIDGE PLANS

STATE OF MAINE — ALBERT L. GODFREY No. 4226 — REGISTERED PROFESSIONAL ENGINEER

SIGNATURE

4226 P.E. NUMBER

2/24/20 DATE

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | TRC | |
| DESIGN-DETAILED | JLE | 11-19 |
| CHECKED-REVIEWED | ALG | 11-19 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# LIGHTING PLAN 2

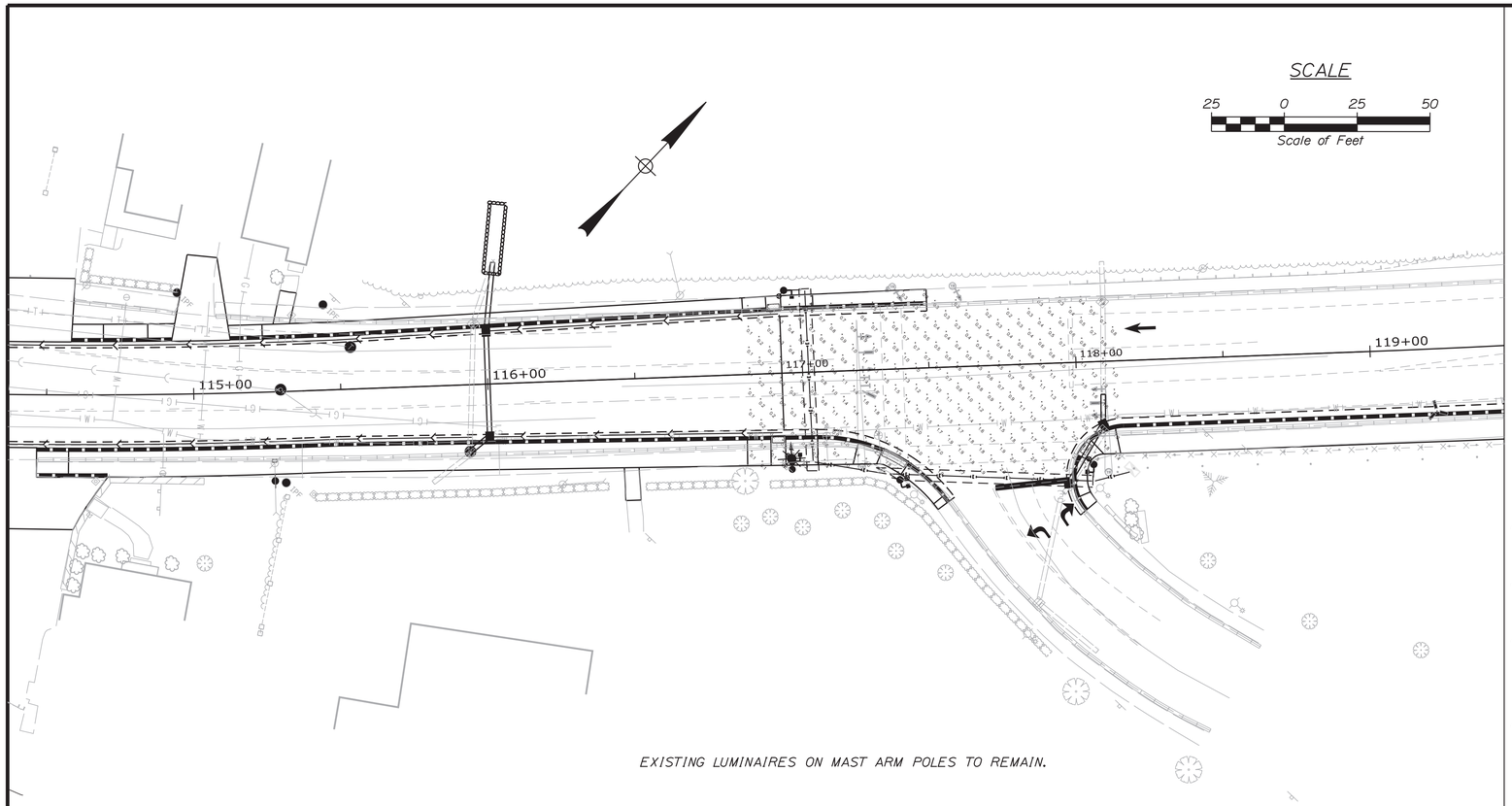
SHEET NUMBER

160

OF 220

Filename: ...\160_LightingPlan_02.dgn Division: HIGHWAY Username: common Date:3/3/2020

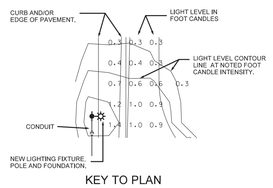
Filename: ...\161_LightingPlan_03.dgn Division: HIGHWAY Username: common Date:3/3/2020




EXISTING LUMINAIRES ON MAST ARM POLES TO REMAIN.

LEGEND for LIGHTING

- Control Cabinet and Service
- Lighting Conduit
- JB Pull Box
- Light Fixture on a 28 Foot Pole and 30" Foundation (Direction of Luminaire)
- Existing Light Fixture on Wood Pole




KEY TO PLAN

## VERANDA STREET LIGHTING GENERAL NOTES

1. SCOPE OF WORK - INSTALL LIGHTING AS SHOWN ON THESE PLANS. POWER SERVICE WILL BE SHARED WITH PROPOSED TRAFFIC AND PEDESTRIAN SIGNALS. INSTALL CONTROL CABINETS, CONDUIT, WIRING, FOUNDATIONS, POLES, L.E.D. LUMINAIRES AND RELATED HARDWARE.

2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO APPLICABLE PROVISIONS OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DETAILS, NATIONAL ELECTRICAL CODE AND ANY REQUIREMENTS OF THE POWER COMPANY.

3. THE CONTRACTOR SHALL FIELD VERIFY LIGHTING POLE LOCATIONS TO AVOID NATURAL AND BUILT SITE FEATURES THAT WOULD CONFLICT WITH PROPER INSTALLATION OF FOUNDATIONS.

4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO ENSURE AWARENESS OF SITE CONDITIONS THAT COULD AFFECT THE BID.

5. LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE PRESENCE OF UNDERGROUND UTILITY FACILITIES PRIOR TO COMMENCING ANY EXCAVATION WORK OR INSTALLATION OF POLES, FOUNDATIONS, CONDUIT, JUNCTION BOXES OR OTHER WORK INVOLVING SUBSURFACE DISTURBANCE AND SHALL NOTIFY UTILITIES OF PROPOSED WORK IN ACCORDANCE WITH MRSA TITLE 23 SECTION 3360-A, MAINE "DIG SAFE" SYSTEM. CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST THREE WORKING DAYS PRIOR TO THE BEGINNING OF EXCAVATION. ALL UTILITIES SHALL BE LOCATED BEFORE BEGINNING EXCAVATION.

6. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY OPERATIONS ARE CONDUCTED THAT POTENTIALLY COULD CONFLICT WITH AERIAL UTILITIES.

7. INSTALL LIGHTING CONTROL CABINET AT LOCATION SHOWN ON THE PLANS. CABINET AT STATION 105+93 LT SHALL BE A MULTI-CIRCUIT CABINET. LUMINAIRES 1 THROUGH 4 WILL BE ON CIRCUIT 1. LUMINAIRES 5 THROUGH 7 WILL BE ON CIRCUIT 2.

8. POWER SUPPLY TO LIGHTING CABINETS SHALL BE 120/240V, SINGLE-PHASE, THREE WIRE. THE CONTRACTOR SHALL INSTALL A METER DISCONNECT IN A SEPARATE NEMA 3R ENCLOSURE WITH LIGHTING CABINET. CABINET AND DISCONNECT ENCLOSURE SHALL BE LOCKABLE. EACH SHALL BE MARKED WITH ARC HAZARD TYPE 1, 2, 3 OR 4 AND THE APPROPRIATE PPE REQUIRED.

9. ALL LIGHTING CIRCUITS ARE TO BE PHOTOCELL ACTIVATED BY A PHOTOCELL MOUNTED ON LIGHTING CONTROL CABINET.

10. FIXTURE VOLTAGE SHALL BE 120 VOLTS.

11. CONDUIT NOT UNDER PAVEMENT SHALL BE 3 INCH MINIMUM. PVC SCHEDULE 40. CONDUIT UNDER PAVEMENT SHALL BE 3 INCH MINIMUM SCHEDULE 80 PVC AND SHALL BE INSTALLED BY DIRECTIONAL BORING. MINIMUM BURIAL DEPTH FOR CONDUIT SHALL BE 36". TOP 3 INCHES OF CONDUIT SHALL BE SEALED TO PREVENT ENTRY BY RODENTS.

12. ALL EXPOSED STEEL FITTINGS AND HARDWARE SHALL BE GALVANIZED, EXCEPT NON-CONDUCTIVE BUSHINGS SHALL BE USED FOR CONNECTION OF RIGID METAL CONDUIT TO ALUMINUM CABINETS.

13. PULL WIRE SHALL BE INSTALLED IN ALL CONDUIT.

14. ALL CONDUIT THREADS SHALL BE RED-HEADED.

15. THERE SHALL BE NO SPLICES OR JUNCTION BOXES FOR LIGHTING EXCEPT AS NOTED ON THE PROJECT PLANS OR APPROVED BY THE RESIDENT. JUNCTION BOXES ARE INTENDED FOR WIRE PULLING ACCESS ONLY. ESTIMATED QUANTITIES INCLUDE AN ALLOWANCE FOR INSTALLATION OF ITEM 626.11. PRECAST CONCRETE JUNCTION BOX, AT UNDETERMINED LOCATIONS.

16. JUNCTION BOX COVERS SHALL BE LABELED "TRAFFIC" AND SHALL BE GROUNDED.

17. ALL SECONDARY LIGHTING CIRCUIT WIRING SHALL BE #8 AWG OR LARGER XHHW-2 STRANDED COPPER.

18. FOUNDATIONS FOR LIGHT STANDARDS SHALL BE 30 INCHES IN DIAMETER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATION OF POLE BASE REACTIONS AT THE TOP OF FOUNDATION IN ACCORDANCE WITH THE LATEST REVISION OF AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AND THE LATEST REVISION OF MAINEDOT STANDARD SPECIFICATIONS SECTION 634. FOUNDATION LENGTHS SHALL BE DETERMINED FROM SECTION 626 CHARTS IN THE MAINEDOT STANDARD DETAILS BASED ON THE CALCULATED BASE REACTIONS FOR BENDING MOMENT AND TORSION AND ON SPECIFIED SOIL STRENGTH VALUES. FOR POLES 1 AND 2, SOIL SU SHALL BE ASSUMED TO BE 600 PSF. FOR ALL OTHER LIGHTING POLE FOUNDATIONS, SOIL SU SHALL BE ASSUMED TO BE 400 PSF.

19. ALL LIGHTING FOUNDATIONS SHALL HAVE A GROUND ROD LOCATED IN OR ADJACENT TO THE FOUNDATION THAT IS BONDED TO THE GROUNDING CONDUCTOR. PAYMENT FOR THE GROUND ROD SHALL BE INCLUDED IN ITEM 634.160, HIGHWAY LIGHTING.

20. ALL LIGHTING EQUIPMENT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

21. POLE OFFSETS STATED ON THE PLANS ARE TO THE CENTER OF FOUNDATIONS.

22. IF STRUCTURAL ROCK IS ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS, PAYMENT FOR EXCAVATION AND DOWELING REINFORCING INTO ROCK SHALL BE CONSIDERED INCIDENTAL TO FOUNDATION ITEMS.

23. LIGHT STANDARDS SHALL BE 28' ROUND TAPERED ALUMINUM 4-BOLT ANCHOR BASE POLES. POLE BASE DIAMETER SHALL BE 8 INCHES MINIMUM. TAPER RATE SHALL BE APPROXIMATELY 0.14 IN./FT. WALL THICKNESS SHALL BE DETERMINED BY THE MANUFACTURER, SUBJECT TO APPROVAL OF MAINEDOT, BASED ON CALCULATIONS DONE IN ACCORDANCE WITH THE LATEST REVISION OF AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS". LIGHT STANDARDS SHALL BE POLYESTER POWDER-COATED BLACK.

24. LIGHT STANDARDS SHALL HAVE DECORATIVE CAST ALUMINUM CLAMSHELL BASES, VALMONT 'HUNTINGTON ACI' STYLE, MODEL NUMBER HN24AC, OR APPROVED EQUAL. BASES SHALL BE POLYESTER POWDER-COATED BLACK.

25. ALL LIGHTING FIXTURES SHALL BE GASKETED, AND SHALL HAVE SURGE PROTECTION, A DOUBLE FUSE KIT, AND ADJUSTABLE OUTPUT. FIXTURES SHALL BE POLYESTER POWDER-COATED BLACK.

26. LIGHTING FIXTURES ON CONVENTIONAL LIGHT STANDARDS AND TRAFFIC SIGNAL MAST ARM POLES SHALL BE ATTACHED WITH A MINIMUM LENGTH HORIZONTAL TENON AT THE TOP OF LIGHT POLE OR MAST ARM POLE COLUMN. TENON SHALL BE 2 INCH NOMINAL DIAMETER. MOUNTING HEIGHT SHALL BE 29' ABOVE ROAD GRADE, UNLESS OTHERWISE NOTED. ORIENTATION SHALL BE AS INDICATED ON THE PLANS.

27. LUMINAIRES ON CONVENTIONAL LIGHT STANDARDS AND TRAFFIC SIGNAL MAST ARM POLES SHALL BE IES FULL CUTOFF LIGHT EMITTING DIODE (LED) FIXTURES, IES DISTRIBUTION TYPES 2 AND 3 AS NOTED ON THE PLANS. LED MODULES SHALL BE IP66 RATED. LUMINAIRES SHALL BE AMERICAN ELECTRIC LIGHTING 'AUTOBAHN' SERIES ATBO FIXTURES, DISTRIBUTION TYPES AS NOTED IN THE LUMINAIRE SCHEDULE. CATALOG NUMBERS: ATBO 20BLEDE53 MVOLT R2 4K BK X X UMR-XX AO AND ATBO 20BLEDE53 MVOLT R3 4K BK X X UMR-XX AO.

28. SECURELY ATTACH UNDER-BRIDGE WALL PACK LIGHTING UNITS TO STANDARD EXTERIOR WET LOCATION RATED WALL-MOUNT TYPE ELECTRICAL JUNCTION BOXES INSTALLED ON THE VERTICAL FACE OF THE BRIDGE ABUTMENT CLOSEST TO THE LOCATION STATED ON THE LIGHTING PLAN. MOUNTING HEIGHT 16'.

29. INSTALL PRECAST CONCRETE JUNCTION BOXES IN NEW SIDEWALK AT THE BASE OF THE BRIDGE ABUTMENT WALLS FOR WIRING TO THE UNDER-BRIDGE WALL PACK UNITS.

30. ABOVE-GROUND CONDUIT FOR WALL PACK UNITS SHALL BE 3/4" DIAMETER CONDUIT SECURELY ATTACHED TO THE FACE OF THE BRIDGE ABUTMENTS.

31. UNDER-BRIDGE LIGHTING WALL PACK UNITS SHALL BE HOLOPHANE WALLPACK FULL CUTOFF LED FIXTURES. CATALOG NUMBER HLWPC2 P10 40K X T2M BKSDP 70CRI AO DF TP OR APPROVED EQUAL.

32. UNDER-BRIDGE LIGHTING UNITS SHALL BE WET LOCATION LISTED. LIGHT ENGINE HOUSING SHALL BE IP66 RATED. UNITS SHALL BE RATED FOR -40 DEGREES FAHRENHEIT MINIMUM AMBIENT TEMPERATURE. LIGHTING COLOR TEMPERATURE SHALL BE 4000K. OPTICS SHALL BE TYPE 2 MEDIUM DISTRIBUTION. HOUSINGS SHALL HAVE BLACK THERMOSET POWDERCOAT FINISH AND HAVE TAMPER RESISTANT HARDWARE. UNITS SHALL BE DOUBLE FUSED. UNITS SHALL HAVE 20KV/10KA SURGE PROTECTION OR BETTER.

33. ALL FIELD WIRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT, LEGIBLE, WEATHERPROOF TAGS SECURELY ATTACHED TO EACH CABLE.

34. THE MAINTENANCE OF HIGHWAY LIGHTING SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY MAINEDOT.

35. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL FURNISH TO MAINEDOT A SET OF AS-BUILT LIGHTING PLANS FOR FUTURE REFERENCE AND SYSTEM MAINTENANCE.

36. PAYMENT UNDER ITEM 634.160, HIGHWAY LIGHTING WILL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PROVIDE A FULLY FUNCTIONING LIGHTING SYSTEM, EXCEPT THOSE ITEMS TO BE PAID UNDER OTHER RELATED BID ITEMS IN THE CONTRACT.

37. PAYMENT UNDER ITEM 634.210, CONVENTIONAL LIGHT STANDARD, WILL INCLUDE, BUT NOT BE LIMITED TO, THE POLE, DECORATIVE BASE, ANCHOR BOLTS, TENON FOR FIXTURE ATTACHMENT, BREAKAWAY BASE IF REQUIRED, AND ALL REQUIRED INCIDENTALS.

38. PAYMENT FOR THE UNDER-BRIDGE WALL PACK LIGHTING UNITS WILL BE MADE UNDER ITEM 634.2042 LED LUMINAIRE. PAYMENT FOR CONDUIT WILL BE MADE UNDER APPLICABLE SECTION 626 ITEMS. PAYMENT FOR PRECAST CONCRETE JUNCTION BOXES WILL BE MADE UNDER ITEM 626.11. PAYMENT FOR WIRING, SURFACE-MOUNT ELECTRICAL JUNCTION BOX, AND ALL WORK AND INCIDENTALS NECESSARY TO PROVIDE FULLY FUNCTIONING UNDER-BRIDGE LIGHTING, EXCEPT FOR WORK AND MATERIALS COVERED BY OTHER PAY ITEMS OF THE CONTRACT, WILL BE MADE UNDER ITEM 634.160 HIGHWAY LIGHTING.

39. REMOVAL OF EXISTING HIGHWAY LIGHTING WILL BE INCIDENTAL TO ITEM 634.160.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO. 5933

BRIDGE PLANS

STATE OF MAINE ALBERT L GODFREY No. 4226 REGISTERED PROFESSIONAL ENGINEER

| | | |
|---|---|---|
| | | SIGNATURE |
| | | 4226 |
| | | P.E. NUMBER |
| | | 2/24/20 |
| | | DATE |

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| PROJ. MANAGER | TRC | | |
| DESIGN-DETAILED | ALG | JLE | 11-19 |
| CHECKED-REVIEWED | ALG | | 11-19 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

LIGHTING PLAN 3

SHEET NUMBER
161
OF 220

Filename: 162_Bridge General Plan.dgn Division: Username: Date:3/3/2020

℄ Brg., Sleeper Slab 1 & Approach Slab 1 Sta. 38+30.30

℄ Brg., Abutment No. 1 Sta. 38+55.30 (Fixed)

℄ Veranda Street/Route 1

℄ Brg., Abutment No. 2 Sta. 39+26.33 (Expansion)

℄ Brg., Sleeper Slab 2 & Approach Slab 2 Sta. 39+51.15

120'-9½"

24'-4½" 71'-0⅛" 25'-4¾"

Measured along Working Line

Abutment No. 1 West Wingwall

Precast Approach Slab 1

Abutment No. 2 West Wingwall

Temporary Earth Structural Support

Precast Approach Slab 2

Precast Sleeper Slab 1

Precast Sleeper Slab 2

Precast Median Barrier

℄ I-295

℄ SB

℄ NB

237+00 37+00 137+00

238+00 38+00 138+00

239+00 39+00 139+00

240 40+ 140

103+00 104+00 105+00

SB NB

A B C D E F G H

30°0'0" Skew (Typ.)

Abutment No. 1 East Wingwall

Abutment No. 2 East Wingwall

℄ Brg., Existing Abutment No. 1

℄ Brg., Existing Pier No. 1

℄ Brg., Existing Pier No. 2

℄ Brg., Existing Abutment No. 2

GENERAL PLAN

10 0 10 20

Scale of Feet

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

P.E. NUMBER

DATE

SIGNATURE

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | HJW | 2\20 |
| DESIGN-DETAILED | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | |
| DESIGN2-DETAILED2 | TRC | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

INTERSTATE 295 OVER VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# BRIDGE GENERAL PLAN

SHEET NUMBER

162

OF 220

The following information is provided for the Contractor's reference. The notes, work items and construction sequencing presented are general in nature and intended only to convey the general scope and sequence of work. The development of a final construction approach, sequence and workflow will be the sole responsibility of the Contractor.

## A. GENERAL NOTES

A1. The existing bridge shall not be closed until the compressive test results for the structural concrete placed prior to the lateral slide demonstrate the concrete has reached the specified minimum values.

A2. The Contractor shall survey the top elevation of the abutments and clearly establishing working points, working lines, and benchmark elevations prior to performing the lateral slide.

A3. The superstructure shall be constructed on Temporary Abutment Falsework designed to fully support the superstructure under dead load, construction loading, snow and wind loads, and all other loadings anticipated prior to completion of the lateral slide. The falsework design shall include methods for adjusting the elevation of the slide surface to correct for settlement that may occur prior to the slide. See Special Provisions for additional information.

A4. The Temporary Abutment Falsework design and details shall be prepared by a Professional Engineer licensed in the State of Maine and shall be submitted for review no fewer than 45 calendar days prior to beginning erection of the Temporary Abutment Falsework.

A5. The connection between the Upper Portion of the proposed abutment and the Temporary Abutment Falsework shall be designed as a temporarily rotationally fixed connection. This connection shall be rotationally fixed at all times after placement of the Upper Abutment Portion except during the following times:

-The duration of the test lateral slide procedure.
-The duration of the permanent lateral slide procedure.

In advance of the above two procedures the bridge bearings shall be converted to their temporary rotationally fixed configuration immediately prior to releasing the rotational fixity between the Upper Portion of the proposed abutment and the Temporary Abutment Falsework.

A6. The closure of I-295 within the defined project limits is expected to last up to 60 hours to allow for the rapid demolition of the existing bridge, slide-in of the proposed structure, and completion of approach work. The closure of Veranda Street within the defined project limits is permitted to last up to five calendar days to allow for the mobilization of equipment and stockpiling of materials immediately prior to the lateral slide, completion of the lateral slide, and demobilization of equipment and removal of materials immediately following the lateral slide. See Special Provision 107 for additional information.

A7. Contractor shall provide a critical path method (CPM) schedule for all pre-closure, closure, and post-closure activities showing how the activities will be managed on the construction site. Many of the required construction activities can run concurrently to other activities. The Contractor is alerted that many construction activities will require overlapping access.

## B. PRE-CLOSURE CONSTRUCTION SEQUENCE

B1. The following is a generalized anticipated construction sequence for the pre-closure, closure, and post-closure activities.

B2. Remove existing Veranda Street drainage beneath proposed Abutment 1 and install temporary and\or permanent drainage measures required to maintain drainage during construction. Install temporary pavement required to accommodate construction phasing and maintenance of traffic on Veranda Street.

B3. Adjust Veranda Street traffic pattern and install temporary concrete barrier, as necessary, to accommodate Contractor's work zone.

B4. Install foundation piles and construct abutment foundations, lower portions of abutment, and wingwalls beneath existing bridge as shown on the plans.

B5. Construct Temporary Structural Supports to retain roadway embankment at existing Abutment No. 2 wingwalls and remove portions of existing Abutment 2 wingwalls to the limits shown on the plans.

B6. Erect Temporary Structural Supports (Temporary Abutment Falsework) east of the existing bridge. The temporary structural supports shall be of sufficient length to allow for the completion of a trial slide as specified in the project Special Provisions.

B7. Revise traffic patterns on Veranda Street to locate both bounds of traffic, and the sidewalk, beneath the northerly span of the existing bridge.

B8. Excavate for Geofoam Lightweight Fill under the two southern spans of the existing bridge. Place Geofoam Lightweight Fill, Leveling Sand, HDPE Geomembrane, Lightweight Foam Concrete Fill, and Lightweight Foam Concrete Distribution Slabs to the limits shown on the plans. Backfill behind the proposed substructures, and around the existing pier bents, with Lightweight Foam Concrete Fill to the specified elevations.

B9. Construct the upper portion of the abutments on the Temporary Structural Supports (Temporary Abutment Falsework), install bridge bearings and erect structural steel. Form and place the bridge deck, semi-integral backwall, and concrete barriers. Apply High Performance Waterproofing Membrane to the bridge deck.

B10. Conduct a trial slide as defined in the Special Provisions and return the superstructure to the pre-trial slide position.

B11. Install detour signage and mobilize PCMS boards and traffic control devices in advance of the roadway closure. Pre-program existing signal systems with temporary signal timings (provided by others) for activation during the roadway closure period.

## C. CLOSURE PERIOD CONSTRUCTION SEQUENCE

C1. Implement Veranda Street Detour and close Veranda Street. Mobilize equipment and stockpile materials necessary to complete the work. Install protective sheeting, matting or other materials over the Veranda Street Roadway to protect the pavement surface during demolition activities.

C2. Implement the I-295 Detour, activate temporary signal timing, and close I-295.

C3. Demolish the existing bridge superstructure, demolish portions of the existing substructure, remove existing median barrier, and excavate I-295 approaches to the limits shown on the plans.

C4. Laterally slide the proposed superstructure into its final position. Complete the bolted connection between the upper and lower portions of the abutments.

C5. Place and compact granular fill in the vicinity of the proposed sleeper slabs, fine grade and place the sleeper slabs. Install the precast sleeper slabs and the precast approach slabs.

C6. Release the bridge bearings from their temporarily fixed condition.

C7. Place Aggregate Subbase Course Gravel on the approaches to the bottom of pavement elevation.

C8. Place approach median barriers on I-295.

C9. Place base pavement on I-295 approaches and bridge.

C10. Install temporary concrete barrier and crash cushions on I-295 at interface between existing and proposed median barrier, and along approaches in place of permanent guardrail.

C11. Open I-295 and Veranda Street to traffic. At Contractor's option, Veranda Street may remain closed for an additional length of time as allowed in the Contract Specifications.

C12. Remove or cover Veranda Street and I-295 detour signage and PCMS boards. Deactivate the temporary signal timing.

## POST-CLOSURE CONSTRUCTION SEQUENCE

D1. Cast closure placement between upper and lower portions of the abutments. Remove temporary diaphragms.

D2. Construct wingwalls to final lengths and top elevations as required.

D3. Demolish temporary structural supports.

D4. Backfill behind the abutments, and beneath approach slabs, with Lightweight Foam Concrete Fill. Complete construction of I-295 embankments and install guardrail and bridge transitions. Remove temporary concrete barriers from all areas, except for within the I-295 median.

D5. Apply final lift of pavement along the I-295 approaches and bridge to meet the final profile after the waiting period specified in the Contract Specifications. Install Asphaltic Plug Joints.

D6. Finish reconstruction of Veranda Street and associated intersections and side street improvements.

## CLOSURE TIMEFRAME

Following is an estimated schedule for the work completed during the allowed roadway closure period. Note that some work activities occur simultaneously.

| Time | Activity Start | Anticipated Duration (hours) |
|---|---|---|
| 8:00 p.m. Friday | Close I-295 | - |
| 8:30 p.m. Friday | Begin demolition | 20 |
| 4:00 p.m. Saturday | Begin lateral slide | 7 |
| 8:00 p.m. Saturday | Begin placement of approach subbase and base gravel | 14 |
| 4:00 p.m. Saturday | Final grade and installation of sleeper slabs | 4 |
| 11:00 p.m. Saturday | Complete connection btwn. upper and lower abutments | 4 |
| 3:00 a.m. Sunday | Release temporary bearing fixity connection | 2 |
| 3:00 a.m. Sunday | Place approach slabs | 1 |
| 9:00 a.m. Sunday | Install median barrier | 5 |
| 1:00 p.m. Sunday | Place base pavement, temporary barrier, striping | 10 |
| 11:00 p.m. Sunday | Re-open I-295 | 1 |
| - | Schedule Float | 8 |

Time duration for individual activities may vary. However, total closure duration shall not exceed 58.5 hours.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | D. EATON | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | H.JW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
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| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

SUGGESTED
CONSTRUCTION SEQUENCE I

SHEET NUMBER
163
OF 220

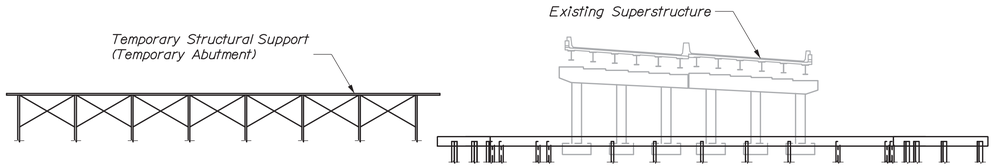
Filename: 163_Suggested Construction Sequence 1.dgn Division: Username: Date:3/3/2020

Filename: 164_Suggested Construction Sequence II.dgn Division: Username: Date:3/3/2020

## NOTES:

1. All sections are looking at the face of Abutment 1.

2. See Suggested Construction Sequence 1 Sheet for general construction sequence notes and additional information.

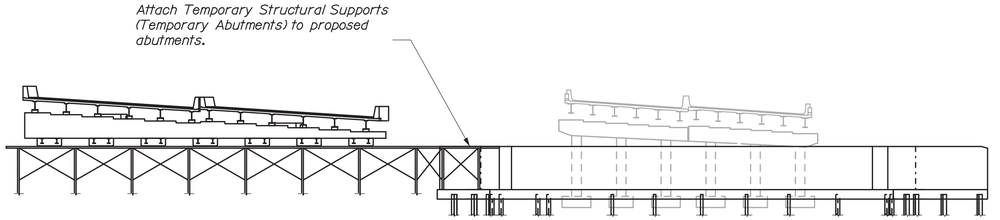



STAGE 1 (PRE-CLOSURE PERIOD)

### STAGE NOTES:

1. Install proposed piles and abutment footings.

2. Erect Temporary Structural Supports (Temporary Abutments) for superstructure east of existing bridge.

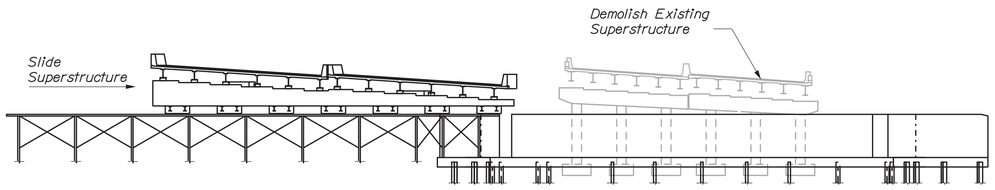



STAGE 2 (PRE-CLOSURE PERIOD)

### STAGE NOTES:

1. Construct proposed upper portions of abutments and superstructure on Temporary Structural Supports.

2. Construct lower portions of abutments and wingwalls up to the slide elevation, backfill to the specified elevations.




STAGE 3 (CLOSURE PERIOD)

### STAGE NOTES:

1. Detour traffic.

2. Demolish existing bridge superstructure and substructure to specified elevations.

3. Slide-in proposed superstructure.

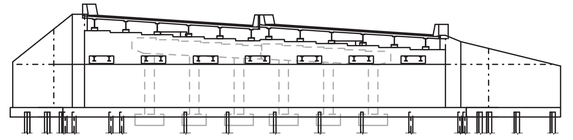
4. Connect upper and lower portions of abutments.

5. Place precast sleeper and approach slabs.

6. Remove temporary diaphragms and adjust bearing fixity to final condition.

7. Fill I-295 approaches and place base pavement.

8. Open I-295 to traffic.



STAGE 4 (POST-CLOSURE PERIOD)

### STAGE NOTES:

1. Cast concrete connection between upper and lower abutment portions.

2. Install wingwalls to final elevation.

3. Pump Lightweight Concrete Foam Fill behind abutments under approach slabs.

4. Demolish Temporary Structural Supports (Temporary Abutments).

5. Complete base paving, barrier placement, and joint installation.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

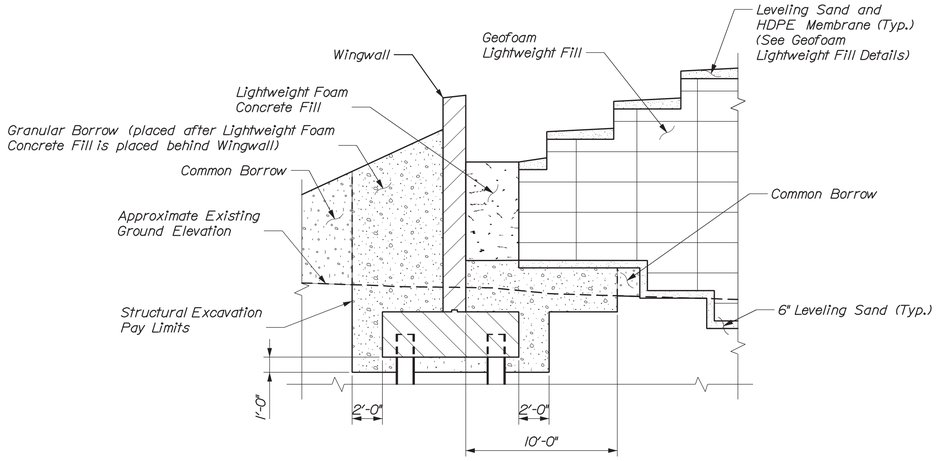
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# SUGGESTED CONSTRUCTION SEQUENCE II

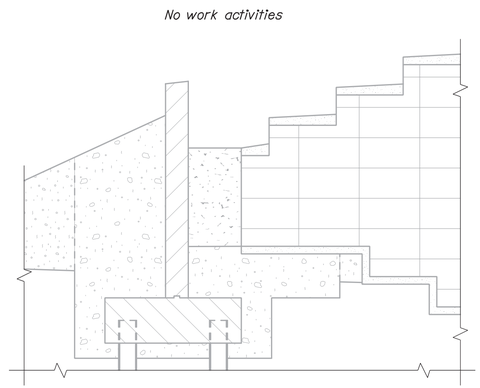
SHEET NUMBER

164

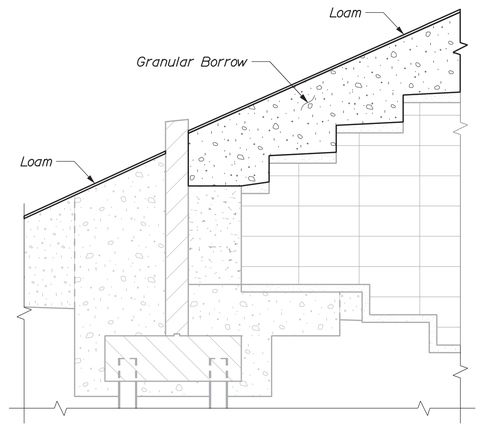
OF 220




SECTION A-A PRE-CLOSURE PERIOD




SECTION A-A CLOSURE PERIOD




SECTION A-A POST-CLOSURE PERIOD

HNTB

Filename: 165_Construction Sections I.dgn Division: Username: Date:3/3/2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.W | BY | DATE |
| CHECKED-REVIEWED | AES | ERB | 2\20 |
| DESIGN2-DETAILED2 | | TRC | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

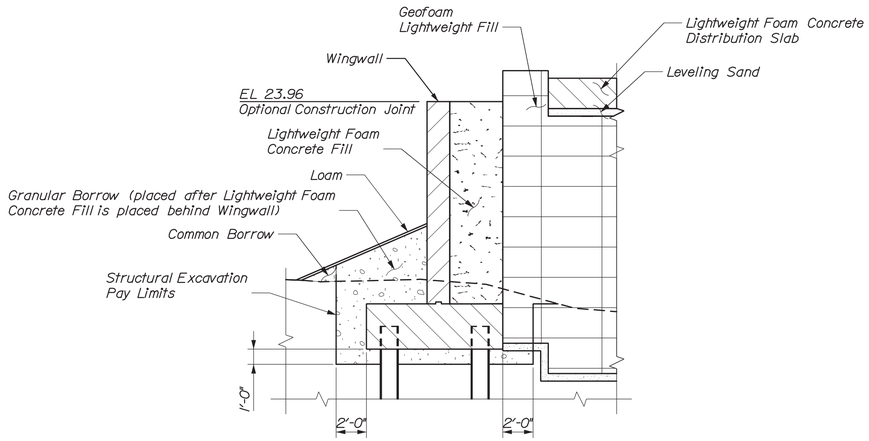
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT AND WINGWALL
SECTIONS I

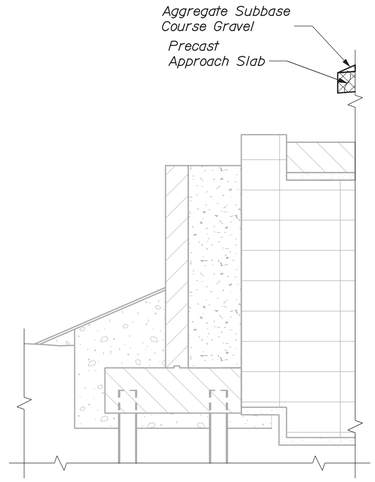
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165

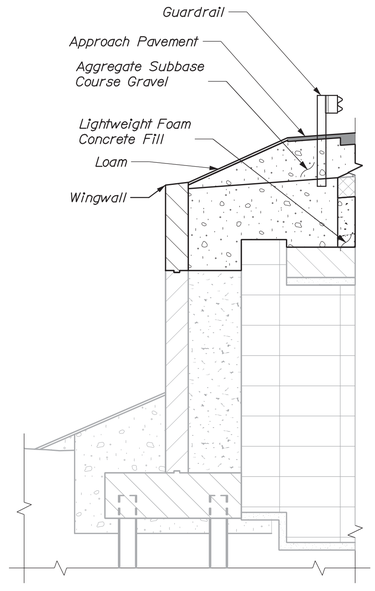
OF 220




SECTION B-B PRE-CLOSURE PERIOD




SECTION B-B ABC PERIOD




SECTION B-B POST-ABC PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.W | BY | DATE |
| CHECKED-REVIEWED | AES | ERB | 2\20 |
| DESIGN2-DETAILED2 | | TRC | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT AND WINGWALL SECTIONS II

SHEET NUMBER

166

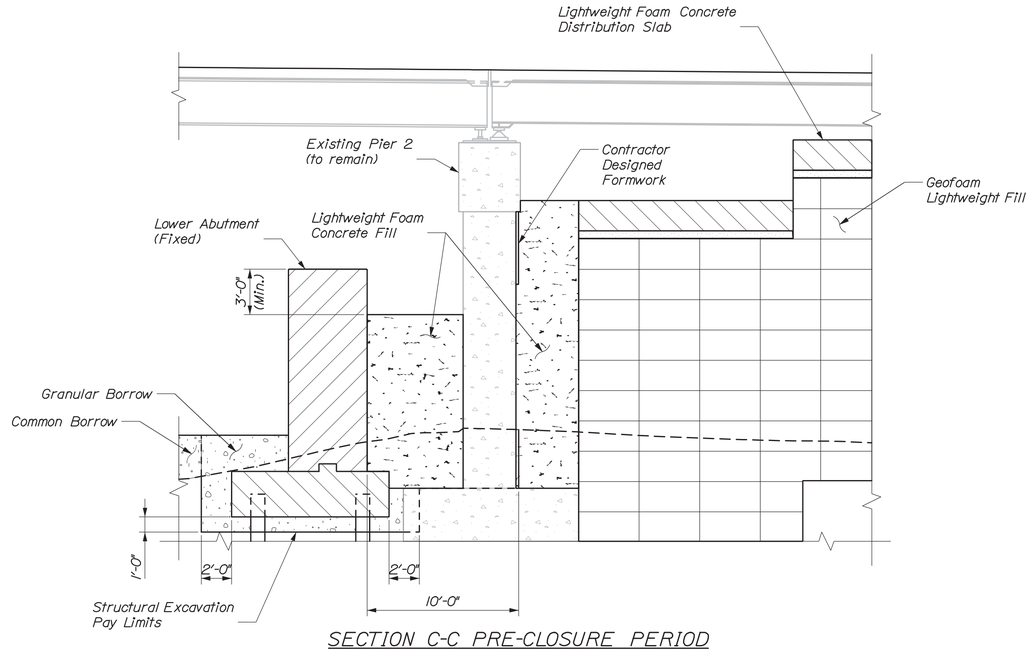
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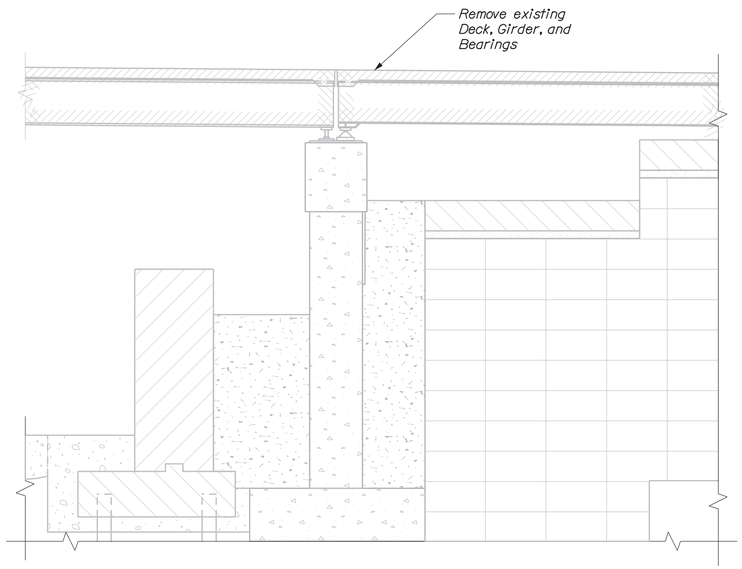
## NOTES:

1. Granular borrow material may be replaced with aggregate subbase course gravel.

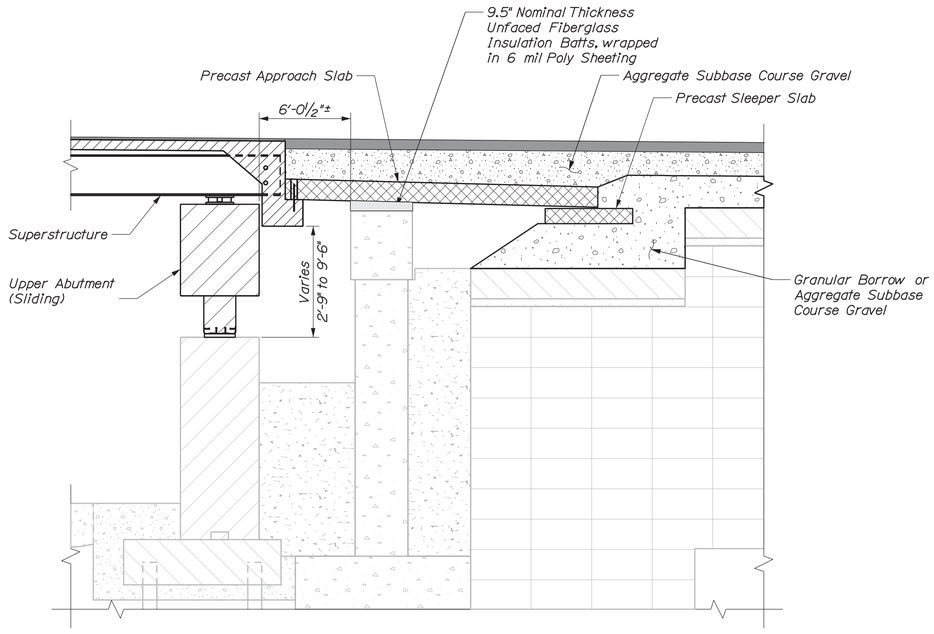
2. Unfaced Fiberglass Insulation Batts and Poly Sheeting placed over the existing pier will be incidental to Pay Item 534.7601 - Precast Approach Slab.



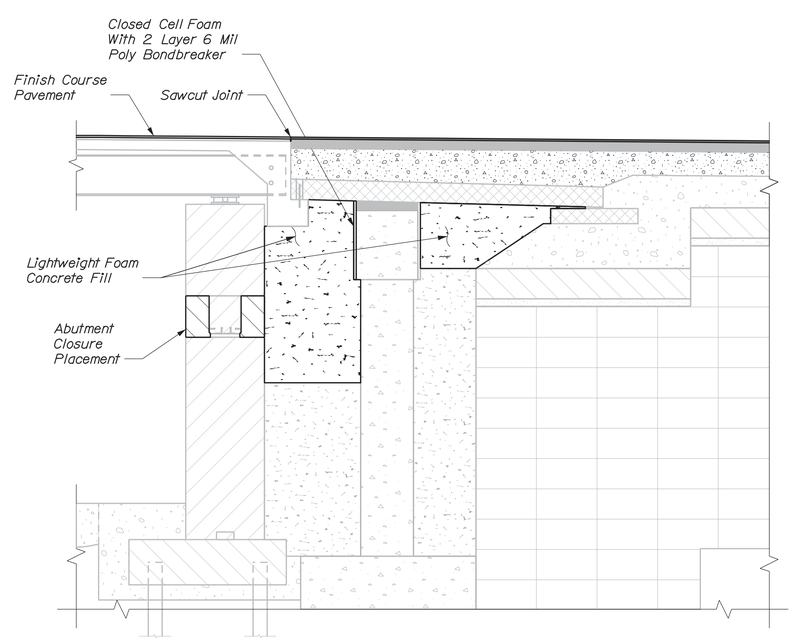

SECTION C-C PRE-CLOSURE PERIOD




SECTION C-C CLOSURE PERIOD, DEMOLITION




SECTION C-C CLOSURE PERIOD, AFTER DEMOLITION




SECTION C-C POST-CLOSURE PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | BY | |
| CHECKED-REVIEWED | H.W | 2\20 |
| DESIGN2-DETAILED2 | ERB | 2\20 |
| DESIGN3-DETAILED3 | AES | |
| REVISIONS 1 | TRC | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT AND WINGWALL SECTIONS III

SHEET NUMBER

167

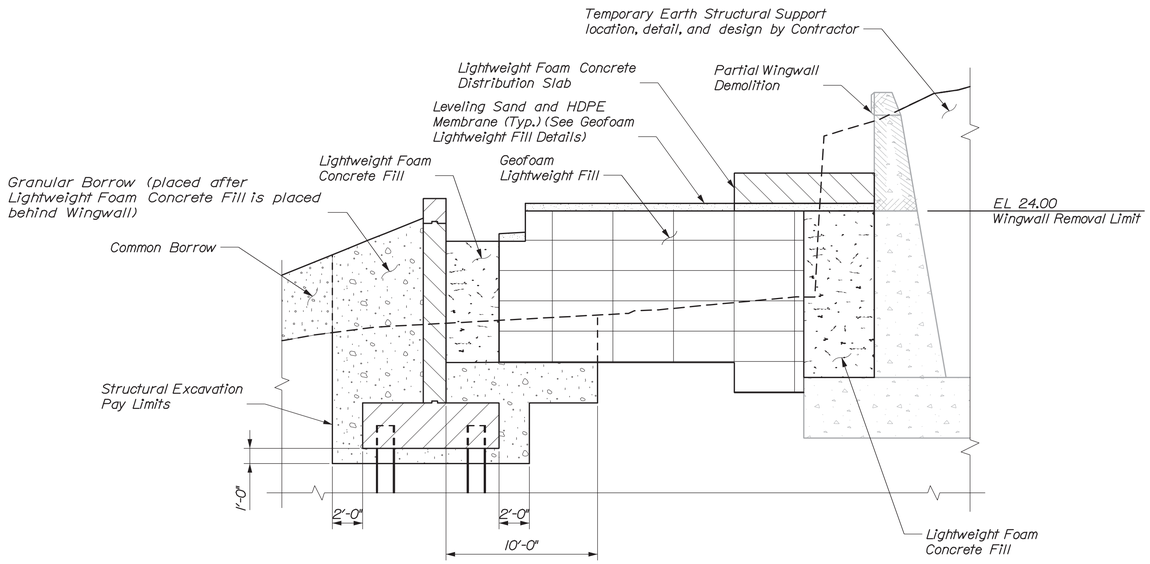
OF 220

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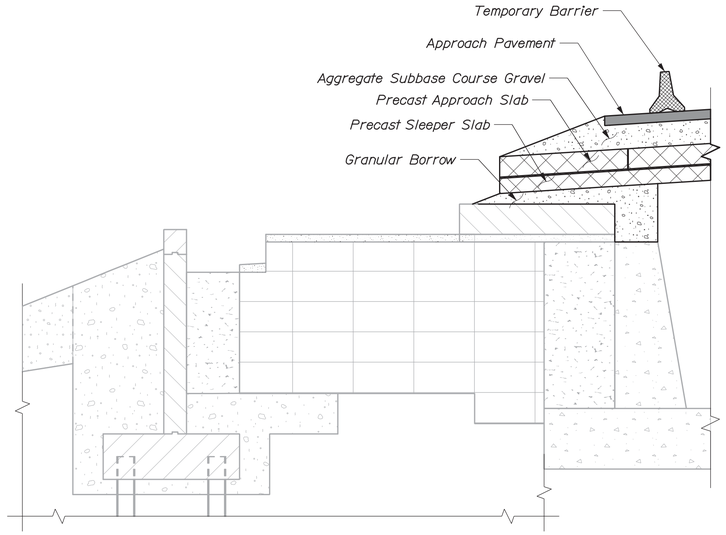
Date:3/3/2020

Division:

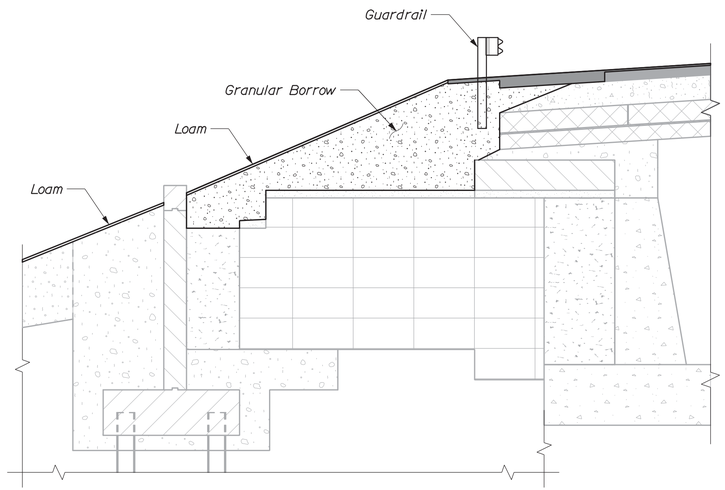
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SECTION D-D PRE-CLOSURE PERIOD




SECTION D-D CLOSURE PERIOD




SECTION D-D POST-CLOSURE PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.W | ERB | 2\20 |
| CHECKED-REVIEWED | AES | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

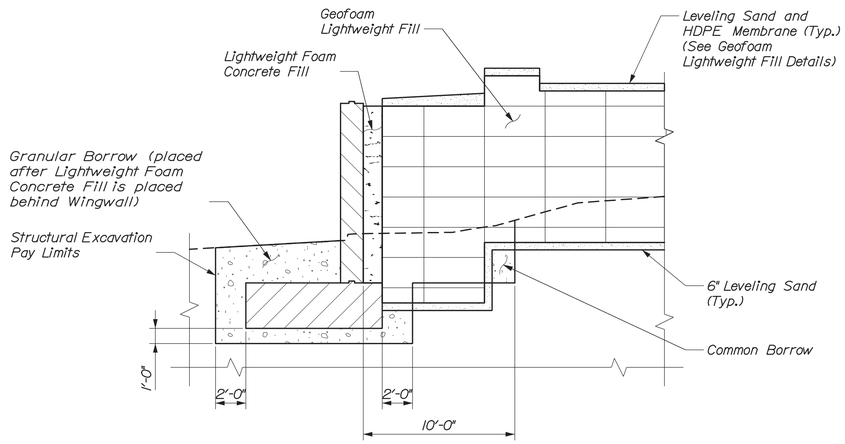
# ABUTMENT AND WINGWALL SECTIONS IV

SHEET NUMBER

168

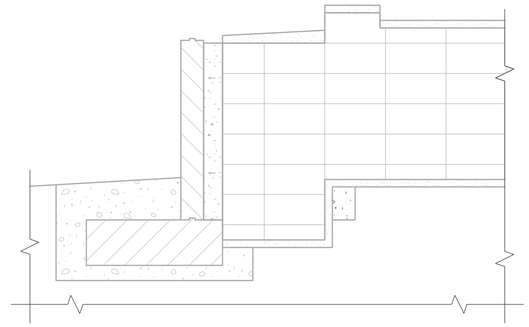
OF 220

Filename: 168_Construction Sections IV.dgn Division: Username: Date:3/3/2020

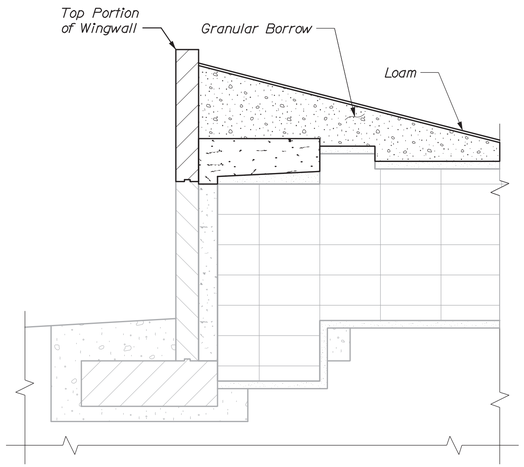



SECTION E-E PRE-CLOSURE PERIOD

No work activities



SECTION E-E CLOSURE PERIOD




SECTION E-E POST-CLOSURE PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.W | ERB | 2\20 |
| CHECKED-REVIEWED | AES | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT AND WINGWALL
SECTIONS V

SHEET NUMBER

169

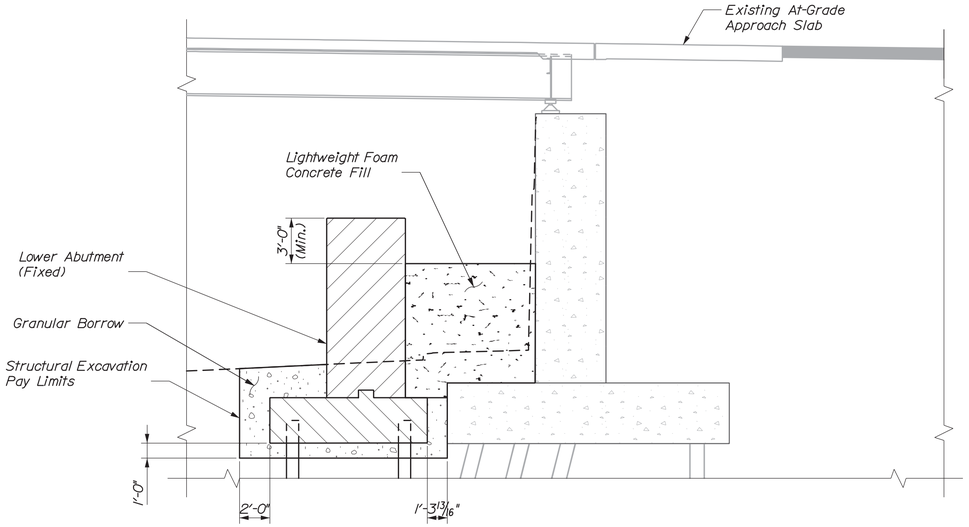
OF 220

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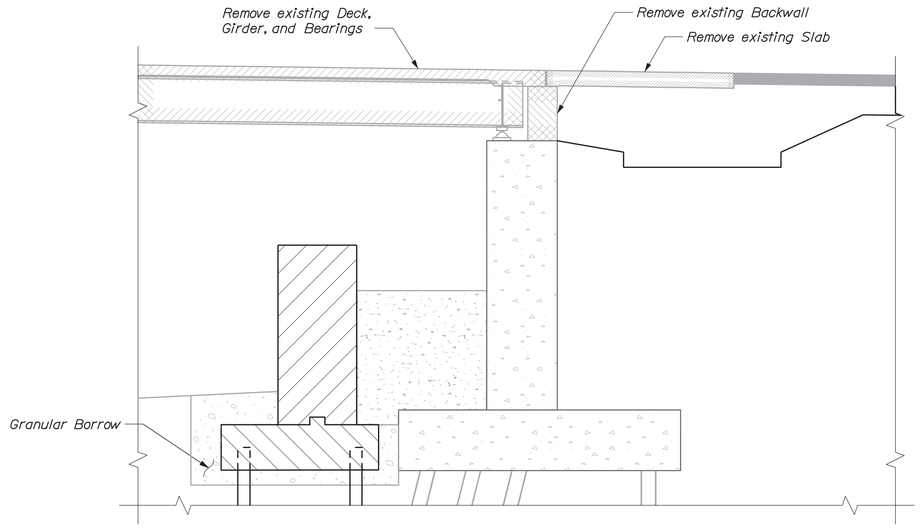
## NOTES:

1. Granular borrow material may be replaced with aggregate subbase course gravel.

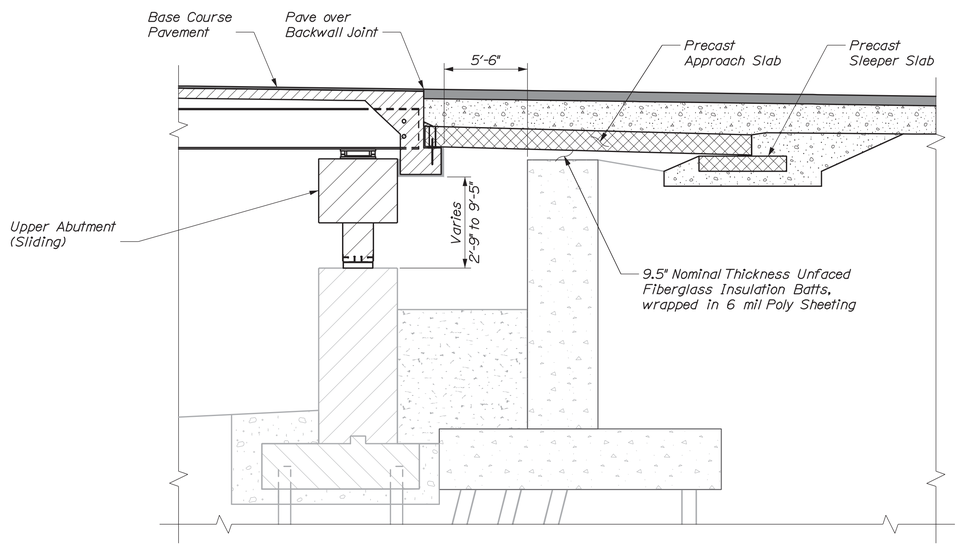
2. Unfaced Fiberglass Insulation Batts and Poly Sheeting placed over the existing abutment will be incidental to Pay Item 534.7601 - Precast Approach Slab.



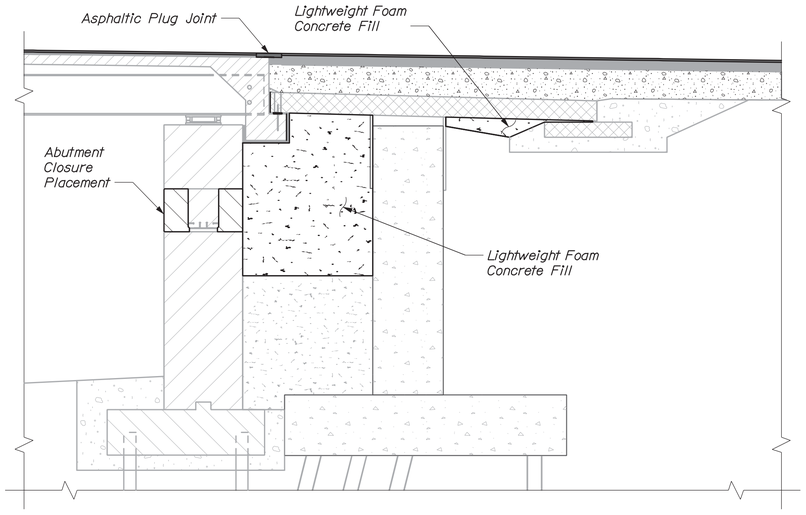

SECTION F-F PRE-CLOSURE PERIOD




SECTION F-F PRE-CLOSURE PERIOD, DEMOLITION




SECTION F-F CLOSURE PERIOD, AFTER DEMOLITION




SECTION F-F POST-CLOSURE PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.W | ERB | 2/20 |
| CHECKED-REVIEWED | AES | TRC | 2/20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT AND WINGWALL SECTIONS VI

SHEET NUMBER

170

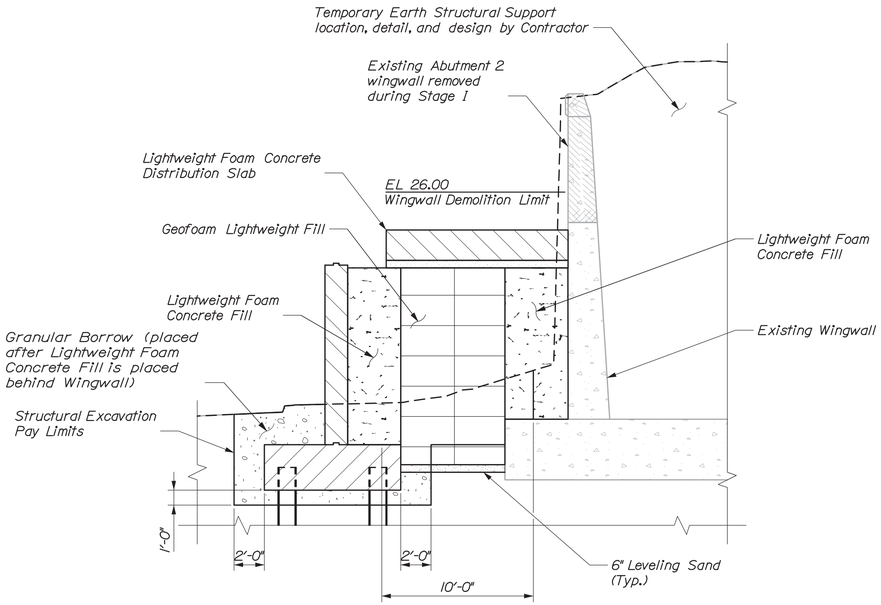
OF 220

Username:

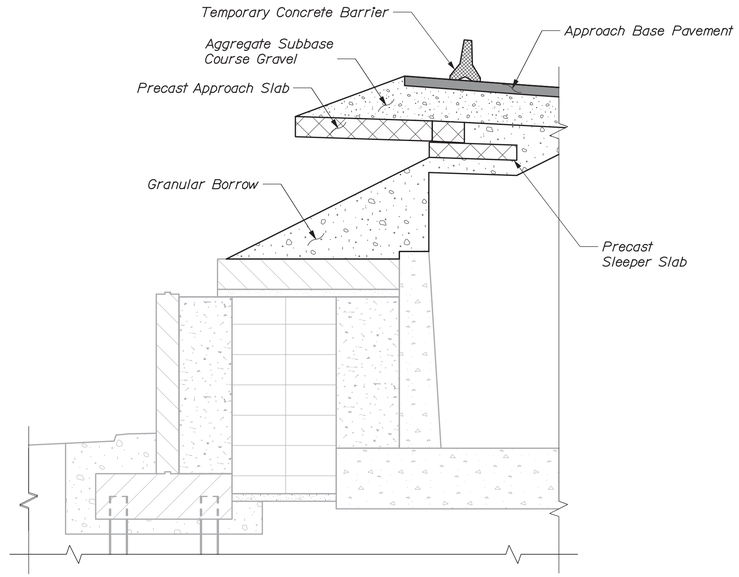
Date:3/3/2020

Division:

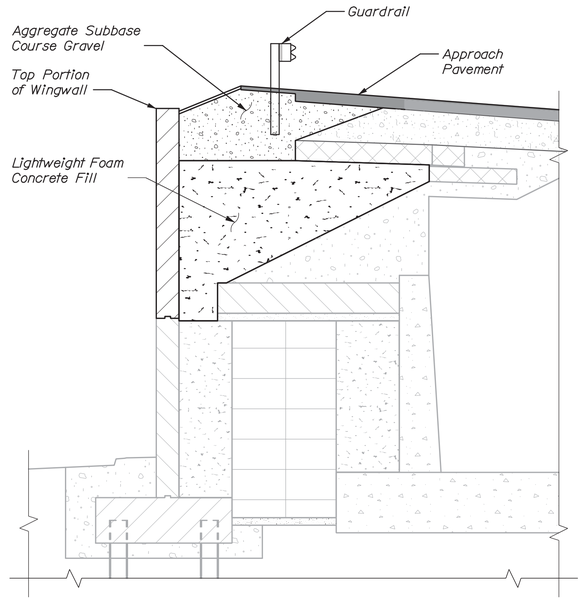
Filename: 170_Construction Sections VI.dgn




SECTION G-G PRE-CLOSURE PERIOD




SECTION G-G CLOSURE PERIOD




SECTION G-G POST-CLOSURE PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | ERB | 2\20 |
| CHECKED-REVIEWED | AES | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

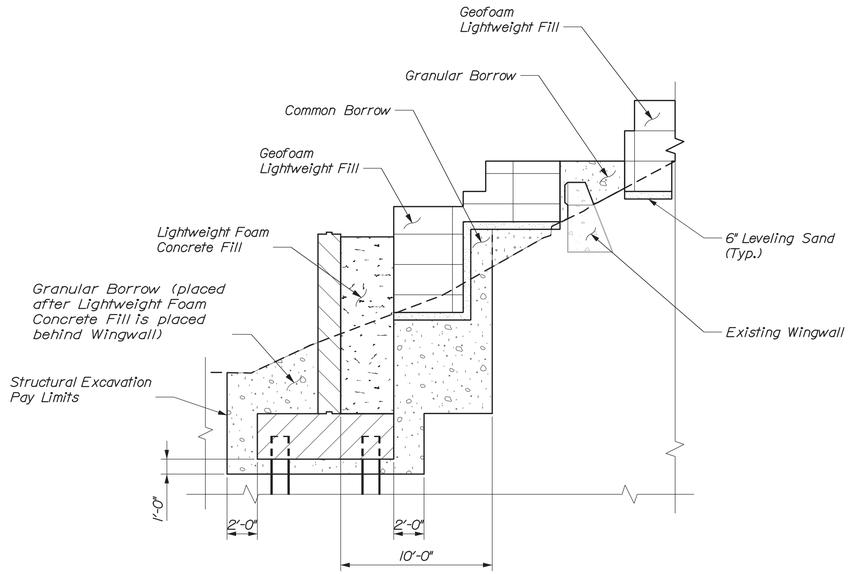
# ABUTMENT AND WINGWALL SECTIONS VII

SHEET NUMBER

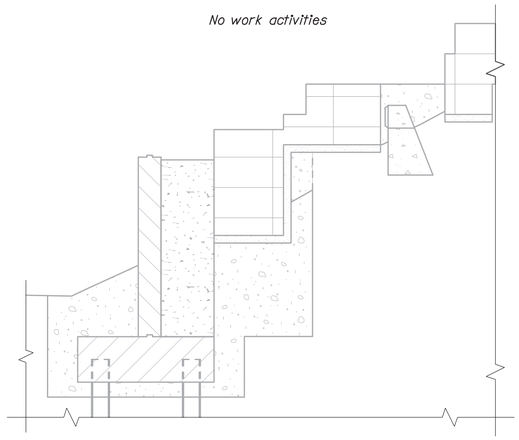
171

OF 220

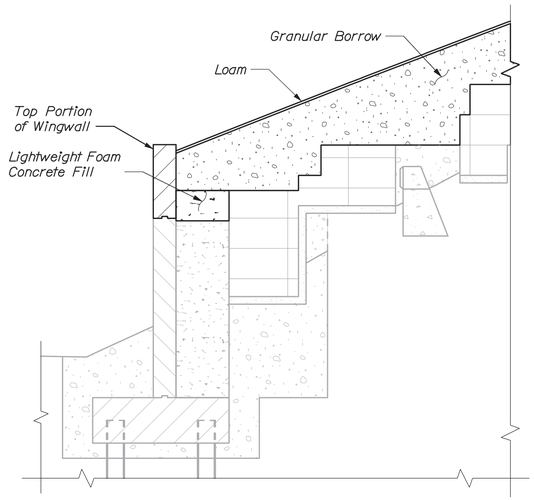
Filename: 171_Construction Sections VII.dgn Division: Username: Date:3/3/2020




SECTION H-H PRE-CLOSURE PERIOD




SECTION H-H CLOSURE PERIOD




SECTION H-H POST-CLOSURE PERIOD

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | H.W | ERB | 2\20 |
| CHECKED-REVIEWED | AES | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT AND WINGWALL SECTIONS VIII

SHEET NUMBER

172

OF 220

Filename: 172_Construction Sections VIII.dgn Division: Username: Date:3/3/2020

## LEGEND:

Minimum Demolition Limits During Closure Period

Minimum Demolition Limits Prior to Closure Period

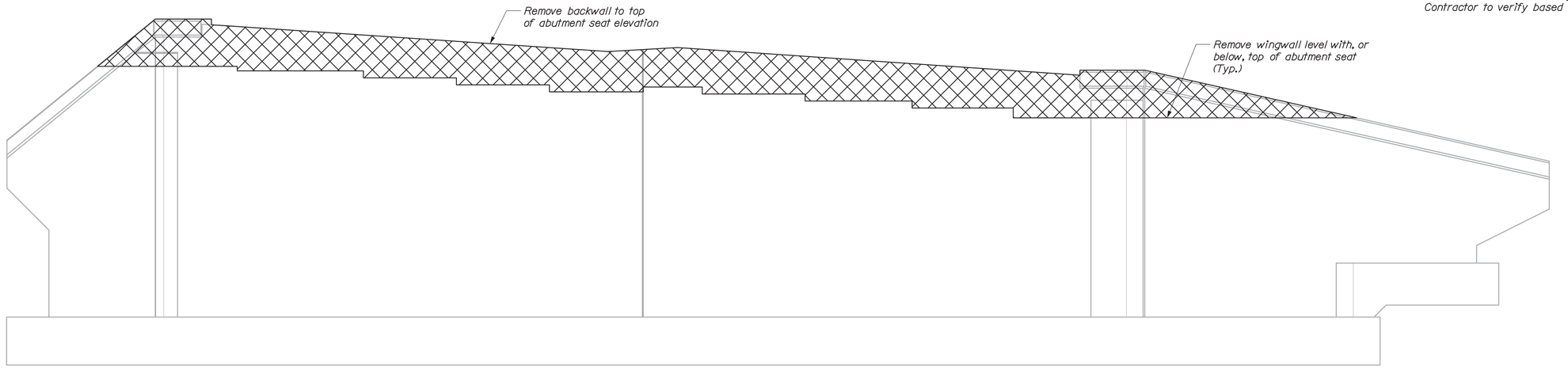
## NOTES:

1. The existing superstructure and bearings shall be removed from all substructure units. Anchor rods shall be cut flush to top of concrete.

2. Payment for any temporary structural support or earth support systems will be made under Item 524.301, Temporary Structural Support.

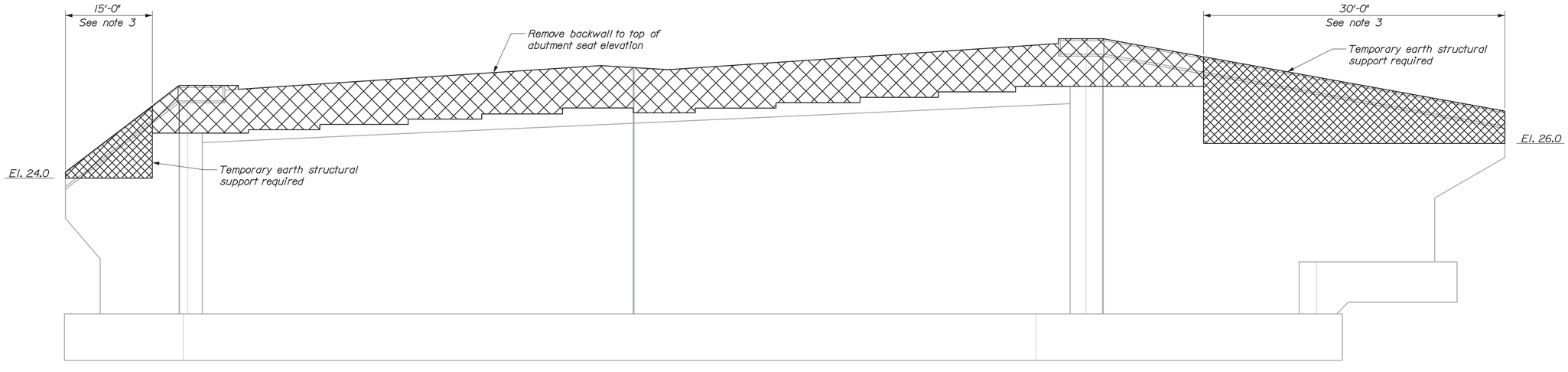
3. Wingwall demolition lengths measured along the length of the wingwall.

4. No demolition of existing piers is expected. Contractor to verify based on pier elevations.




EXISTING ABUTMENT 1 ELEVATION

(Looking Downstation)




EXISTING ABUTMENT 2 ELEVATION

(Looking Upstation)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| H.JW | ERB | 2\20 |
| AES | TRC | 11/19 |

SIGNATURE

P.E. NUMBER

DATE

| | |
|---|---|
| PROJ. MANAGER | D. EATON |
| DESIGN-DETAILED | H.JW |
| CHECKED-REVIEWED | AES |
| DESIGN2-DETAILED2 | |
| DESIGN3-DETAILED3 | |
| REVISIONS 1 | |
| REVISIONS 2 | |
| REVISIONS 3 | |
| REVISIONS 4 | |
| FIELD CHANGES | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT DEMOLITION LIMITS

SHEET NUMBER

173

OF 220

HNTB

Filename: 173_Abutment Demolition Limits.dgn Division: Username: Date:3/3/2020

℄ Brg., Abutment No. 1

℄ Veranda Street/Route 1

℄ Brg., Abutment No. 2

71'-0 1/8"

41'-10 1/4"

29'-1 7/8"

Measured along Working Line

Working Point West Wingwall Abutment No. 1

Working Point West Wingwall Abutment No. 2

Existing North Abutment Foundation (To Remain)

Existing Pier 2 Foundation (To Remain)

Existing Bridge Fascia (Typ.)

104+00

30°0'0" Skew (Typ.)

Sta. 238+52.09

Sta. 239+23.22

238+00

38+00

138+00

239+00

39+00

139+00

240+00

40+00

140+00

℄ SB

℄ I-295

Working Line

℄ NB

Working Point ℄ Abutment No. 1

Sta. 138+58.51

Sta. 38+97.48 I-295 = Sta. 104+38.98 Veranda St.

Working Point ℄ Abutment No. 2

Sta. 139+29.44

Micropile (Typ.)

Working Point East Wingwall Abutment No. 1

Working Point East Wingwall Abutment No. 2

105+00

H-Pile (Typ.)

| Working Point Table | | |
|---|---|---|
| Name | I-295 Station | Offset |
| West Wingwall Abutment No. 1 | 38+26.88 | 53.76L |
| ℄ Abutment No. 1 | 38+55.31 | 0.00 |
| East Wingwall Abutment No. 1 | 38+89.39 | 47.37R |
| West Wingwall Abutment No. 2 | 38+87.61 | 56.34L |
| ℄ Abutment No. 2 | 39+26.33 | 0.00 |
| East Wingwall Abutment No. 2 | 39+46.06 | 50.24R |

## FOUNDATION PLAN

NOTES:

1. Working line is defined as the Line that passes through ℄ I-295 and ℄ Brg. Abutment 1 and ℄ Brg. Abutment 2.

2. For Footing and Pile Layout dimensions see "Abutment Pile Layout" and "Footing Plan" sheets.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | HJW | 2\20 |
| CHECKED-REVIEWED | ERB | 2\20 |
| DESIGN2-DETAILED2 | TJP | |
| DESIGN3-DETAILED3 | TRC | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET

PORTLAND CUMBERLAND COUNTY

FOUNDATION PLAN

SHEET NUMBER

174

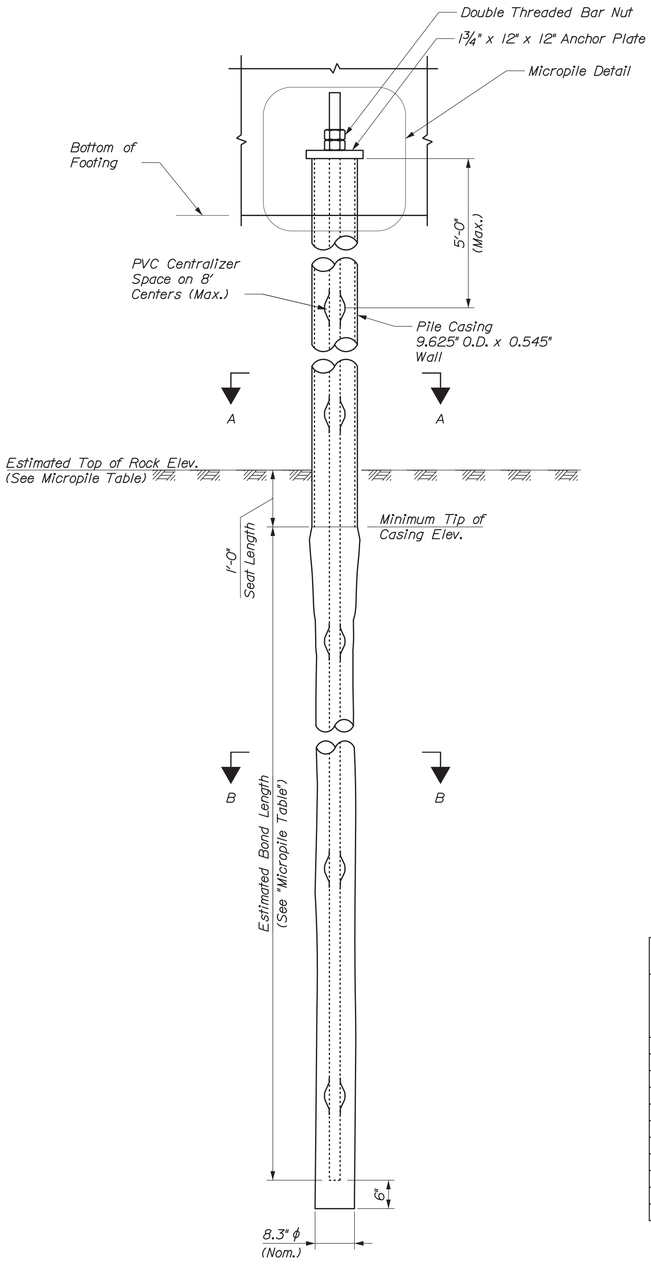
OF 220

Username:

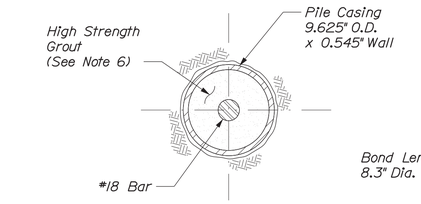
Date:3/3/2020

Division:

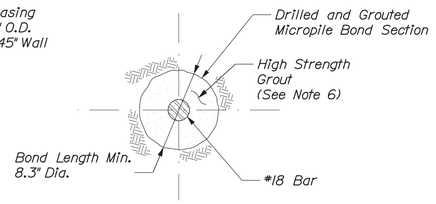
Filename: 174_Foundation Plan.dgn



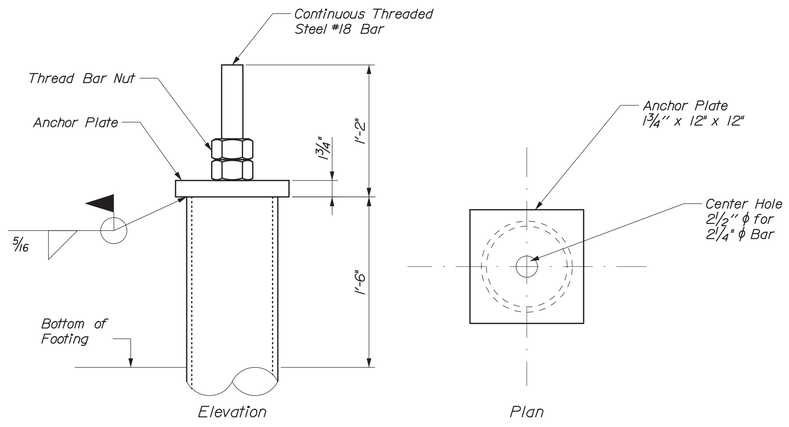

TYPICAL MICROPILE ELEVATION




SECTION A-A
(Cased Zone)




SECTION B-B
(Bond Zone in Bedrock)




MICROPILE DETAIL

| MICROPILE TABLE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Abutment | Micropiles | Required Nominal Resistance | | Factored Design Load (FDL) | | Bottom of Footing Elevation | Estimated Top of Rock Elevation | Estimated Bond Zone Length (ft.) |
| | | Compression | Tension | Compression | Tension | | | |
| 1 | MP 1-1A, 1-1B | 429 kips | 0 kips | 300 kips | 0 kips | 7.61 | -89 | 10.0 |
| 1 | MP 1-2A, 1-2B | 429 kips | 0 kips | 300 kips | 0 kips | 7.61 | -86 | 10.0 |
| 1 | MP 1-3A, 1-3B | 429 kips | 0 kips | 300 kips | 0 kips | 7.61 | -83 | 10.0 |
| 1 | MP 1-4A, 1-4B | 429 kips | 0 kips | 300 kips | 0 kips | 7.61 | -80 | 10.0 |
| 1 | MP 1-5A, 1-5B | 429 kips | 0 kips | 300 kips | 0 kips | 7.61 | -77 | 10.0 |
| 1 | MP 1-6A, 1-6B | 429 kips | 0 kips | 300 kips | 0 kips | 7.61 | -74 | 10.0 |
| 2 | MP 2-1A, 2-1B | 445 kips | 0 kips | 311 kips | 0 kips | 8.33 | -123 | 11.0 |
| 2 | MP 2-2A, 2-2B | 445 kips | 0 kips | 311 kips | 0 kips | 8.33 | -118 | 11.0 |
| 2 | MP 2-3A, 2-3B | 445 kips | 0 kips | 311 kips | 0 kips | 8.33 | -113 | 11.0 |
| 2 | MP 2-4A, 2-4B | 445 kips | 0 kips | 311 kips | 0 kips | 8.33 | -108 | 11.0 |
| 2 | MP 2-5A, 2-5B | 445 kips | 0 kips | 311 kips | 0 kips | 8.33 | -103 | 11.0 |

## NOTES:

1. Construct micropiles in accordance with Special Provision Section 501, Micropiles.

2. Bedrock bond zone lengths shall be confirmed by Contractor verification load tests on test piles in accordance with Special Provision Section 501, Micropiles.

3. Casing shall be API 5CT N80 pipe with a minimum yield strength of 80 ksi as approved by the Engineer.

4. Reinforcing bar shall be #18 Threaded Bar in accordance with ASTM A615 Grade 75. Reinforcing bars shall be galvanized in accordance with ASTM A153.

5. Anchor plate shall meet requirements of ASTM A709 Grade 50 and shall be galvanized per ASTM A123.

6. Grout shall have minimum 28 day compressive strength of 5,000 psi.

7. Micropile casing, threaded bar, anchor plates, and high strength grout shall be included in the unit bid price for Item 501.222, Micropiles.

8. Micropiles shall not be installed closer than 10 feet from an adjacent micropile, which has been grouted for a period of less than 24 hours.

9. If a micropile cannot be installed in the location indicated on the plans due to a conflict with existing piles, abandon the current micropile and offset a lateral distance determined by the Resident to avoid the current conflict. Payment for the abandoned micropile will be made under Item 501.2221 - Abandoned Micropile.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

MICROPILE DETAILS

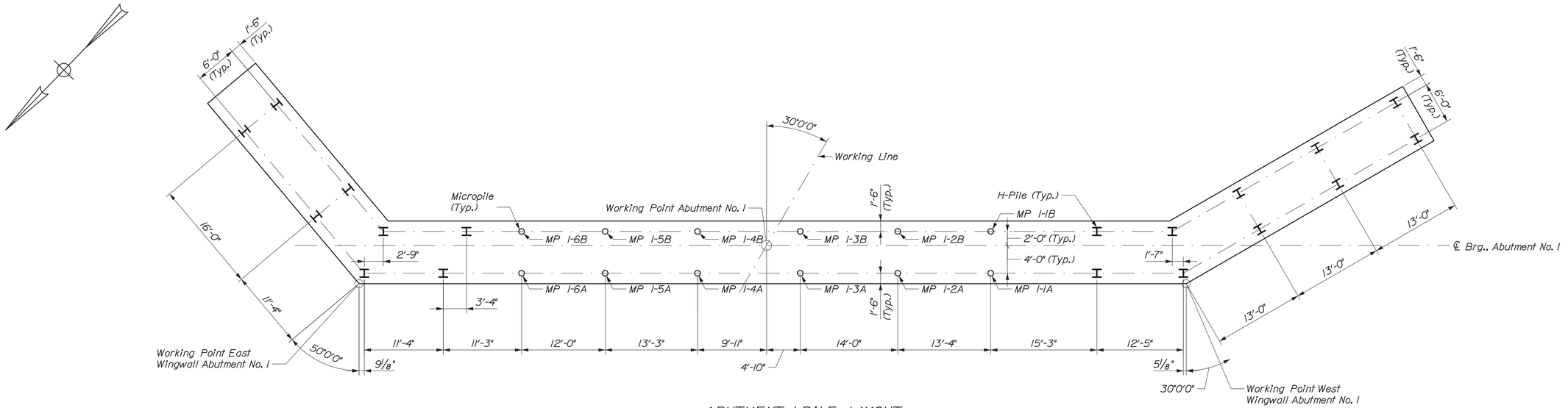
SHEET NUMBER

175

OF 220

HNTB

Filename: 175_Micropile Details.dgn Division: Username: Date:3/3/2020




ABUTMENT 1 PILE LAYOUT

## H-PILE NOTES:

1. The maximum axial factored pile load is 420 kips for Abutment 1 and 462 kips for Abutment 2 (Strength I Load Combination).

2. H-pile material shall be ASTM A572, Grade 50.

3. Estimate of H-piles Required, assuming driven to rock (includes 5 ft per pile as contingency):

   Abutment No. 1, Southbound: 10 - HP 14x89 @ 107 ft
   Abutment No. 1, Northbound: 8 - HP 14x89 @ 83 ft
   Abutment No. 2, Southbound: 6 - HP 14x89 @ 148 ft
   Abutment No. 2, Northbound: 11 - HP 14x89 @ 111 ft

4. All H-piles shall be equipped with a pile tip in accordance with Standard Specification Section 501.048, Prefabricated Pile Tips.

5. Install H-piles to achieve a nominal geotechnical compressive resistance of 647 kips for Abutment 1 and 711 kips for Abutment 2.

6. H-piles shall not be out of position shown be more than 2 inches in any direction. If the proposed H-pile conflicts with an existing pile the Contractor shall immediately notify the Resident before adjusting pile location.

7. The Contractor shall perform and submit four (4) wave equation analyses for driven H-piles, two at each abutment (one Northbound and one Southbound), for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times Fy. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system.

8. The Contractor shall perform four (4) dynamic load tests with 24-hour restrikes, one at each Northbound and Southbound end of Abutments, to confirm the nominal resistance of the H-piles. The required nominal resistance for the pile is the factored axial H-pile load divided by a resistance factor of 0.65 per LRFD Specifications. The dynamic tests shall be performed on the first production H-pile driven at each Northbound and Southbound end of Abutments.

9. For more information and notes on micropiles, see "Micropile Details" Sheet.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

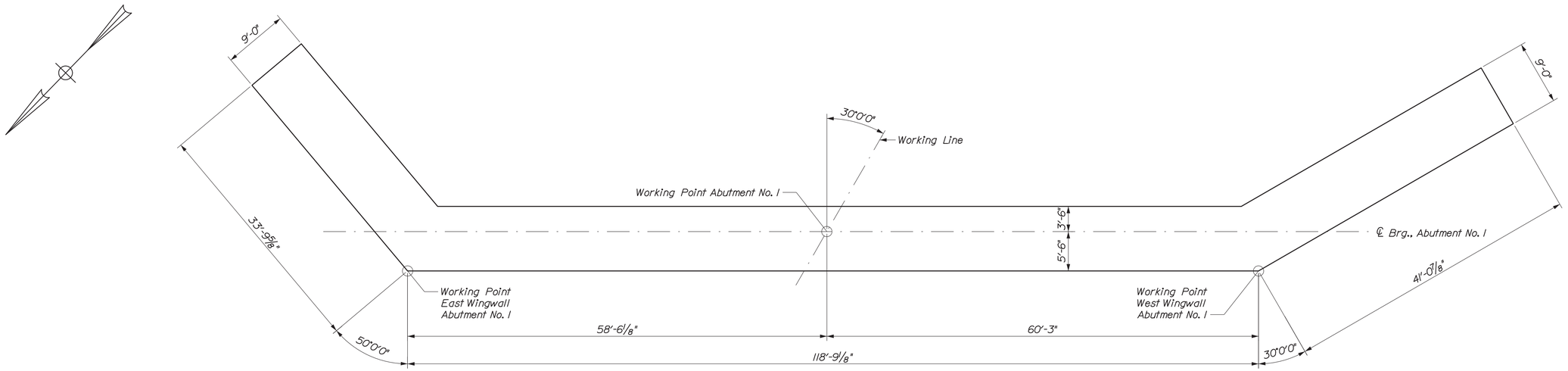
ABUTMENT 1 PILE LAYOUT

SHEET NUMBER

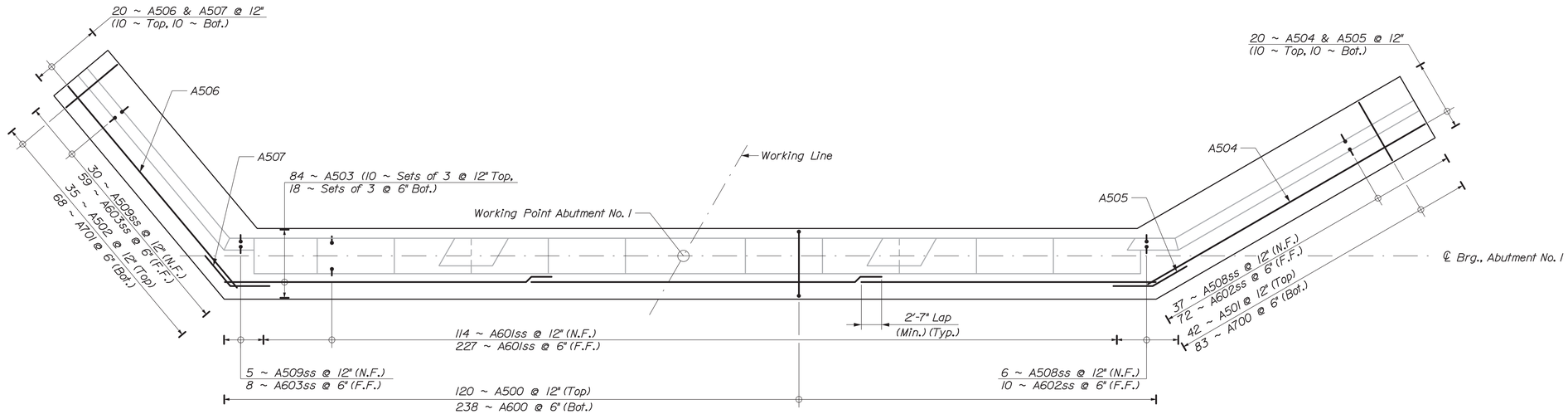
176

OF 220

Filename: 176_Abutment 1 Pile Layout.dgn Division: Username: Date:4/2/2020




ABUTMENT 1 FOOTING PLAN




ABUTMENT 1 FOOTING PLAN - REINFORCING

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

P.E. NUMBER

SIGNATURE

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 1
FOOTING PLAN

SHEET NUMBER

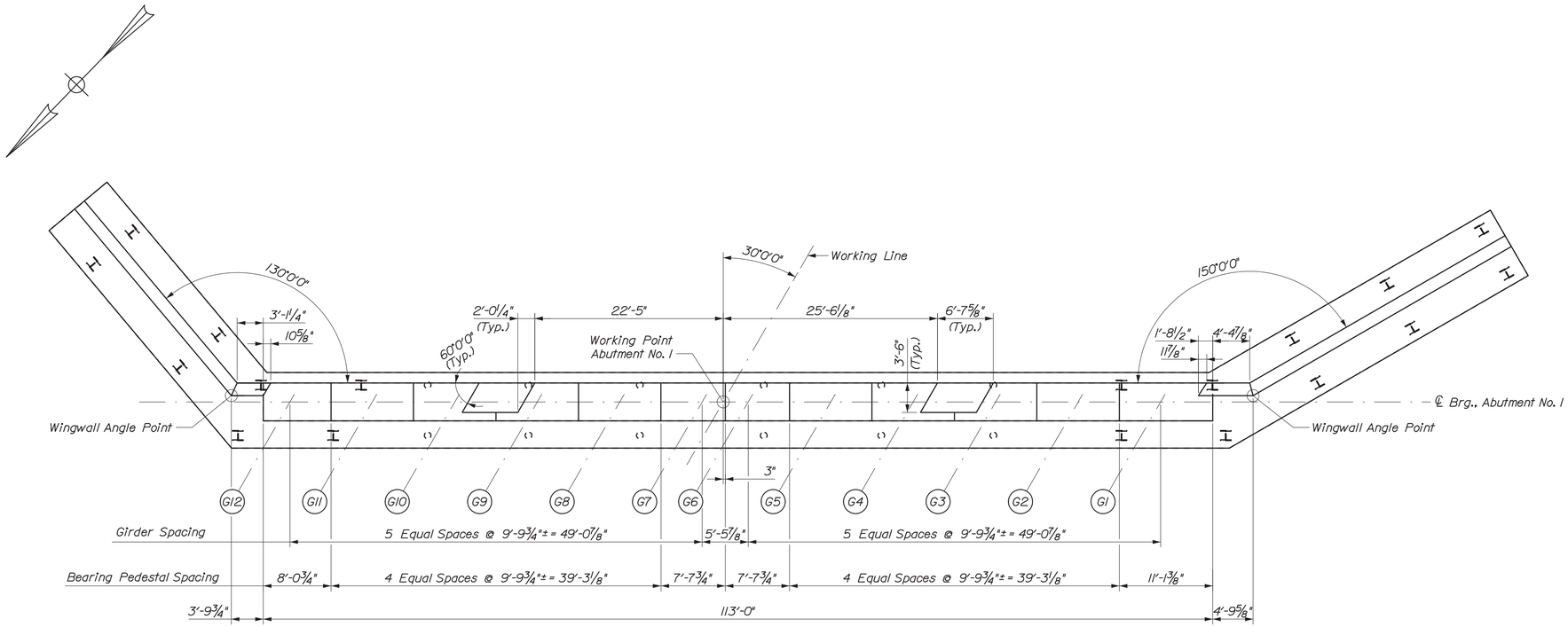
177

OF 220

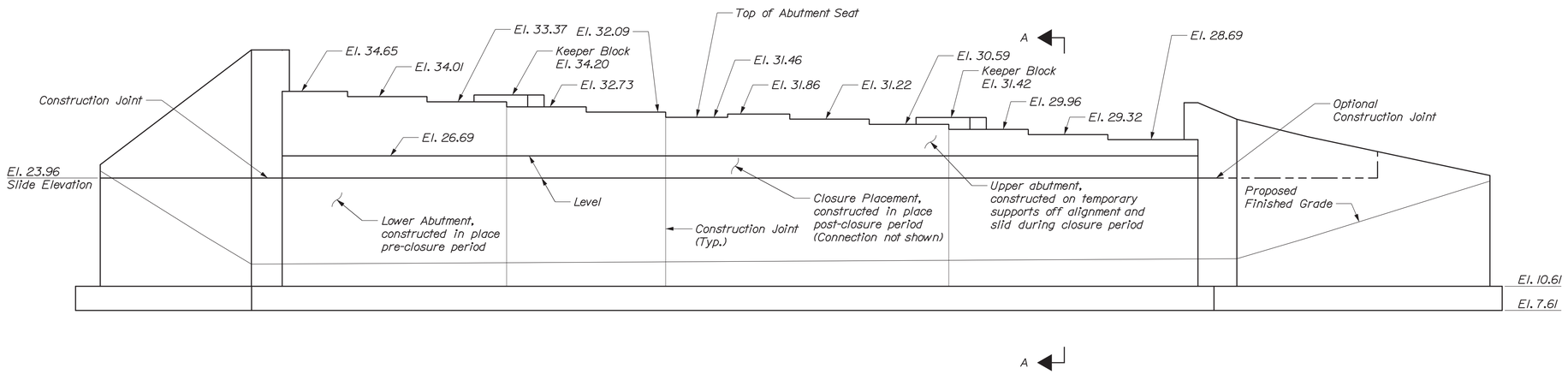
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Filename: 177_Abutment 1 Footing Plan.dgn Division: Username: Date:3/3/2020

Filename: 178_Abutment 1 Plan and Elevation.dgn Division: Username: Date:3/3/2020

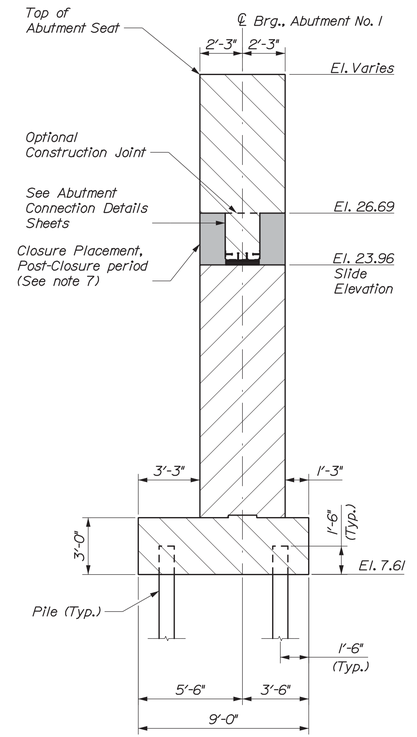



## ABUTMENT I PLAN




## ABUTMENT I ELEVATION

(Piles not shown)




## SECTION A-A

## ABUTMENT NOTES:

1. Reinforcing steel shall have a minimum cover of 2 inches in the walls and 3 inches in the footing unless otherwise noted.

2. Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.

3. Cover joints where waterstops are not required in accordance with Standard Detail 502(01).

4. Construct Drainage Geocomposite behind the abutments and wingwalls in accordance with Special Provision Section 620 Geotextiles - Drainage Geocomposite.

5. All elevations are provided at centerline of bearing unless otherwise noted.

6. For Abutment I wingwall geometry, see "Abutment I Wingwall Geometry" Sheet.

7. Closure pour concrete may be substituted with Non-shrink grout or Self Consolidated Concrete with a non-shrink additive as approved by the Resident.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | EJP | 2\20 |
| DESIGN-DETAILED | ERB | 2\20 |
| CHECKED-REVIEWED | TRC | |
| DESIGN2-DETAILED2 | KEB | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

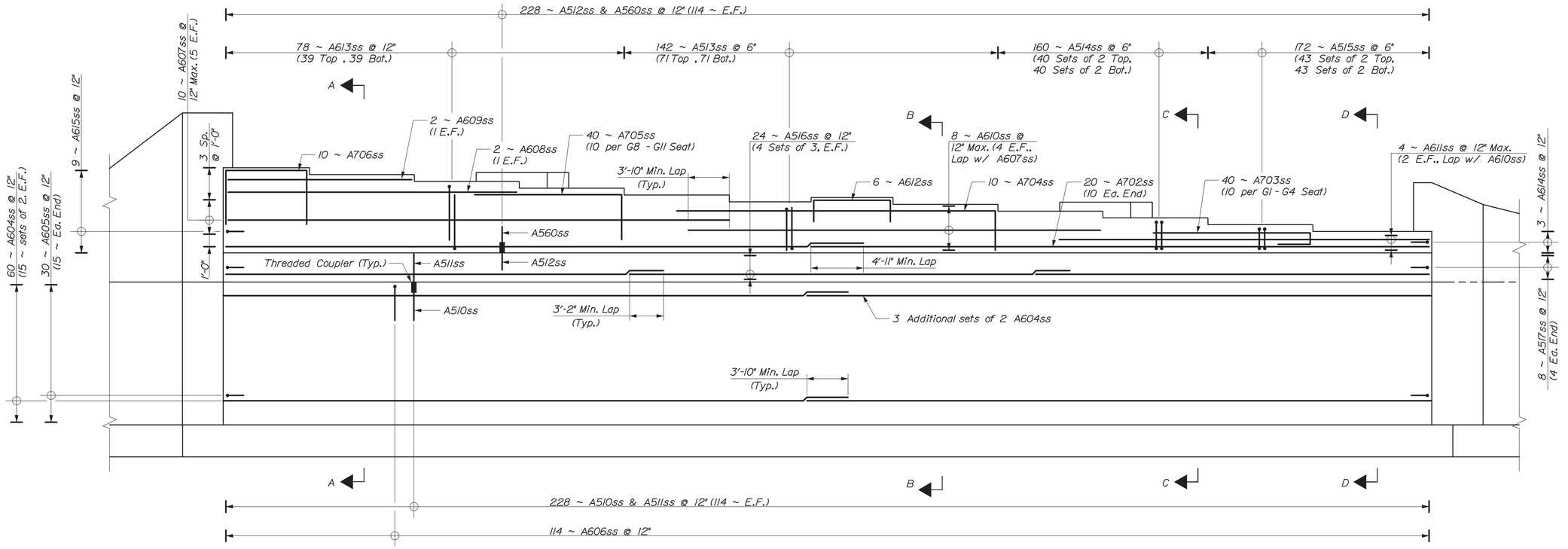
# ABUTMENT 1
# PLAN AND ELEVATION

SHEET NUMBER

178

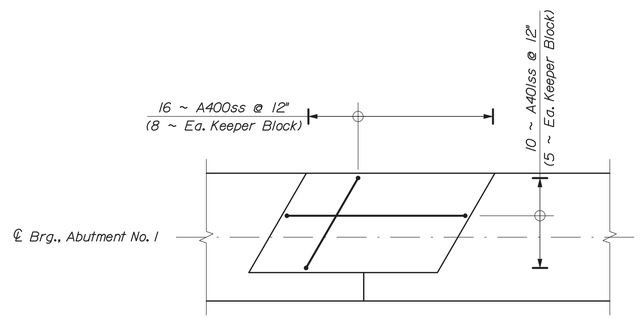
OF 220

HNTB




ABUTMENT 1 ELEVATION - REINFORCING

(Footing and Wingwall Reinforcing not shown for clarity)




KEEPER BLOCK PLAN

NOTE:

For sections A thru D see "Abutment 1 Reinforcing Sections" sheet.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | T.JP | 2\20 |
| CHECKED-REVIEWED | ERB | 2\20 |
| DESIGN2-DETAILED2 | KEB | |
| DESIGN3-DETAILED3 | TRC | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 1
REINFORCING

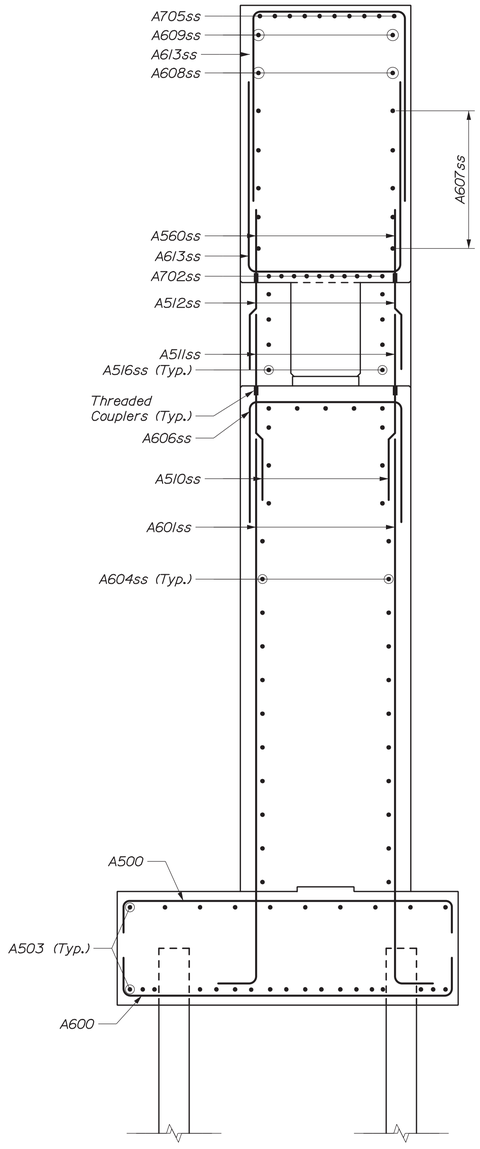
SHEET NUMBER

179

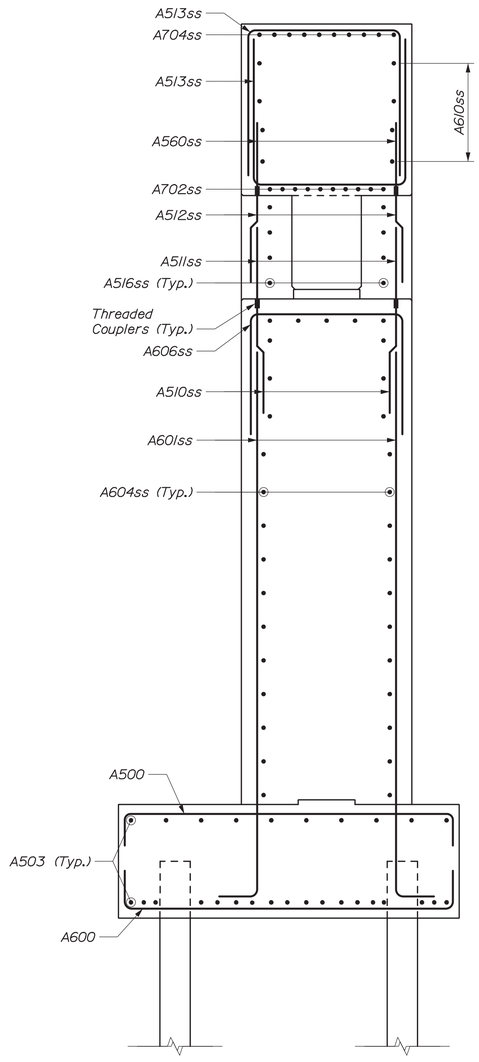
OF 220

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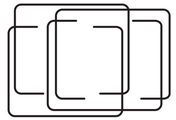
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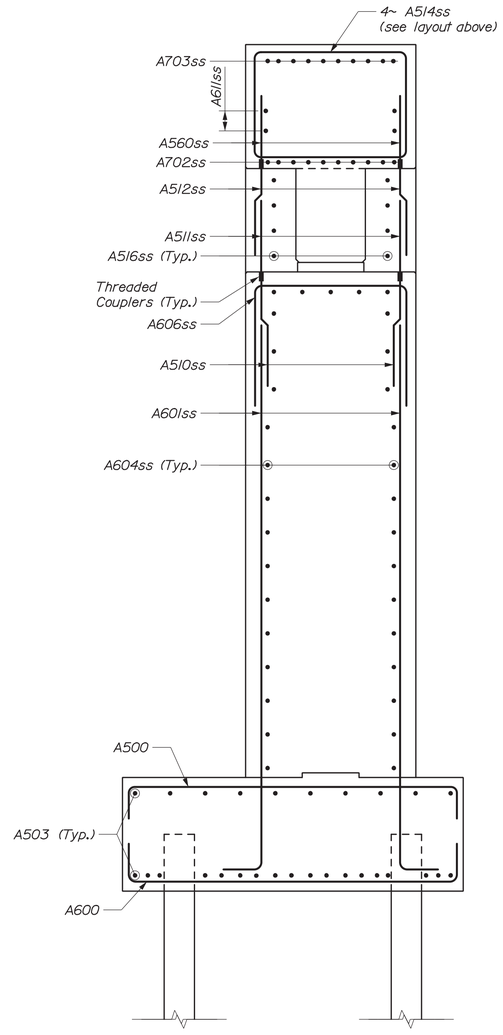

SECTION A-A



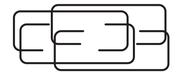

SECTION B-B



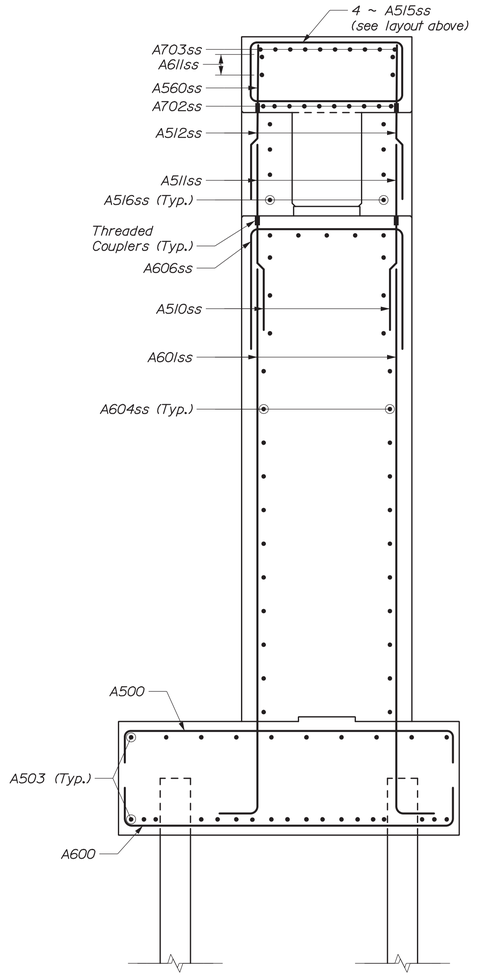
A514ss Layout




SECTION C-C



A515ss Layout




SECTION D-D

*NOTE:*
*Reinforcing in the slide shoe not shown for clarity, refer to "Abutment Connection Details IV" sheet.*

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | | | | |
|---|---|---|---|---|
| PROJ. MANAGER | D. EATON | | | |
| DESIGN-DETAILED | TJP | BY | DATE | SIGNATURE |
| CHECKED-REVIEWED | KEB | ERB | 2\20 | |
| DESIGN2-DETAILED2 | | TRC | 2\20 | |
| DESIGN3-DETAILED3 | | | | P.E. NUMBER |
| REVISIONS 1 | | | | DATE |
| REVISIONS 2 | | | | |
| REVISIONS 3 | | | | |
| REVISIONS 4 | | | | |
| FIELD CHANGES | | | | |

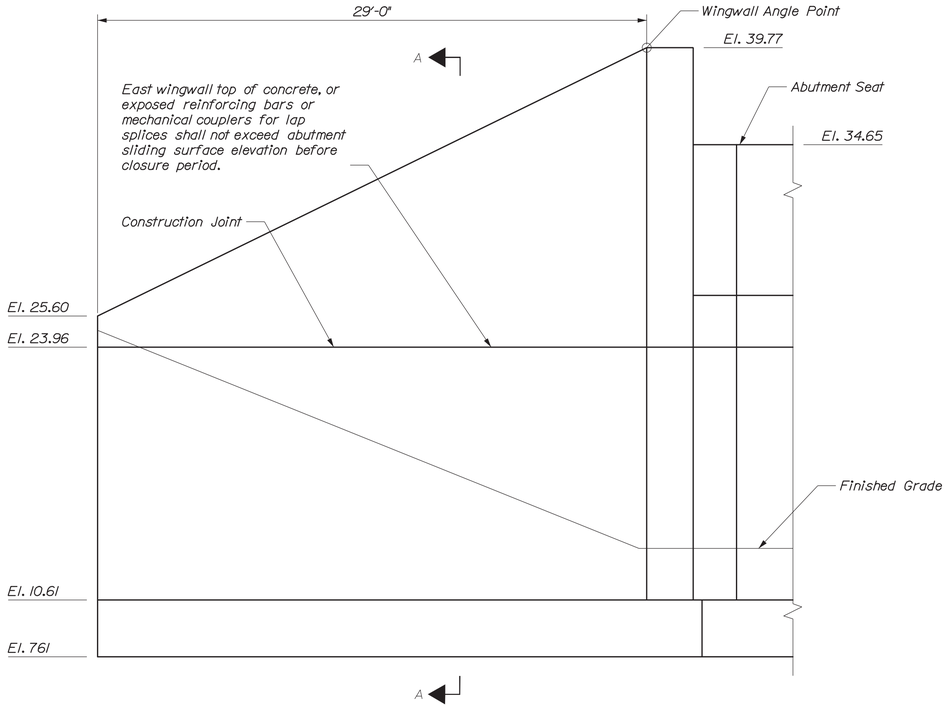
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT 1 REINFORCING SECTIONS

SHEET NUMBER

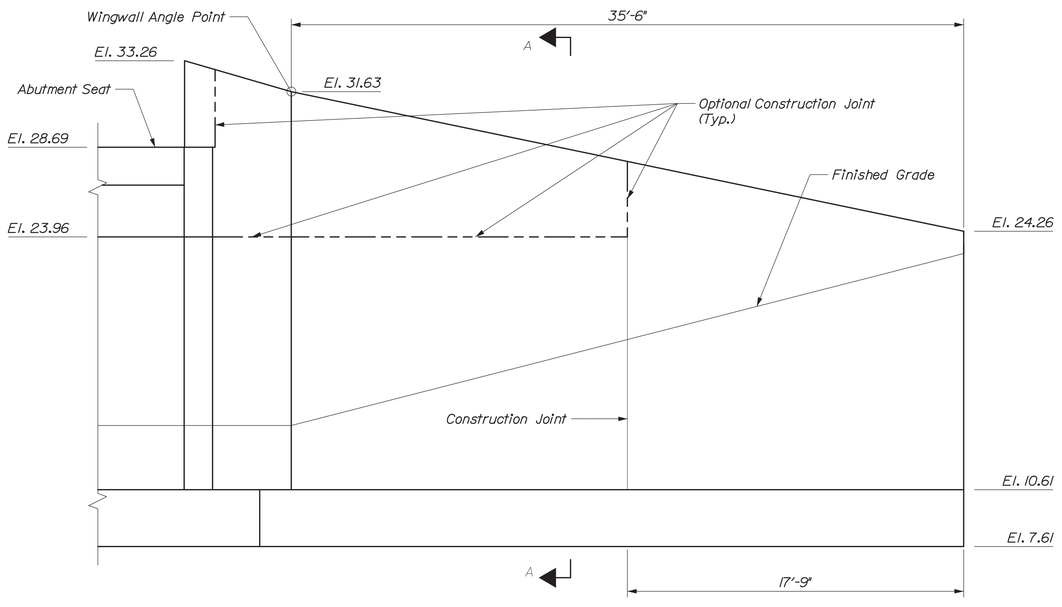
180

OF 220



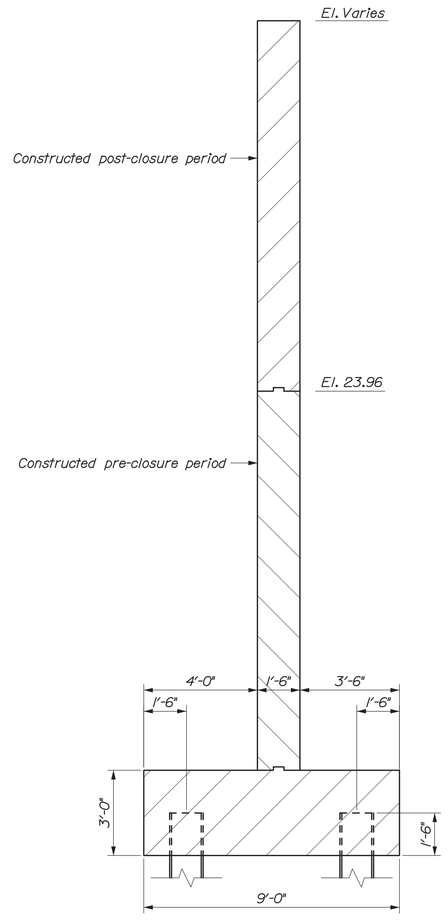

ABUTMENT 1 EAST WINGWALL ELEVATION

(Piles not shown)




ABUTMENT 1 WEST WINGWALL ELEVATION

(Piles not shown)




Section A-A

## NOTES:

1. Contractor may precast any portion of wingwalls. All connections between precast wingwall components shall be made with grouted splice couplers that develop 125% of the full tension strength of the spliced reinforcing bars.

2. For wingwall backfill details, see "Construction Sections I" through "Construction Sections VIII" Sheets.

3. Abutment west wingwall phasing determined by Contractor.

4. West wingwall construction joints may have protruding bars. Mechanical couplers may be used instead, at no additional cost to the Department.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | H.W | ERB | 2\20 |
| CHECKED-REVIEWED | T.JP | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 1
WINGWALL GEOMETRY

SHEET NUMBER

181

OF 220

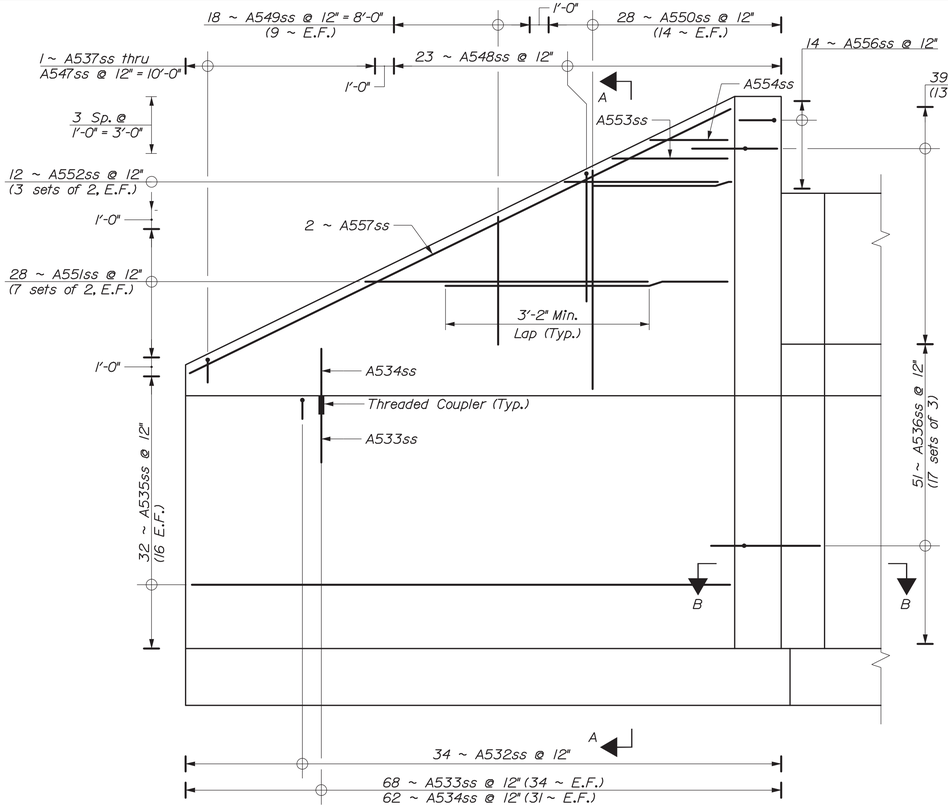
HNTB

Username:

Date:3/3/2020

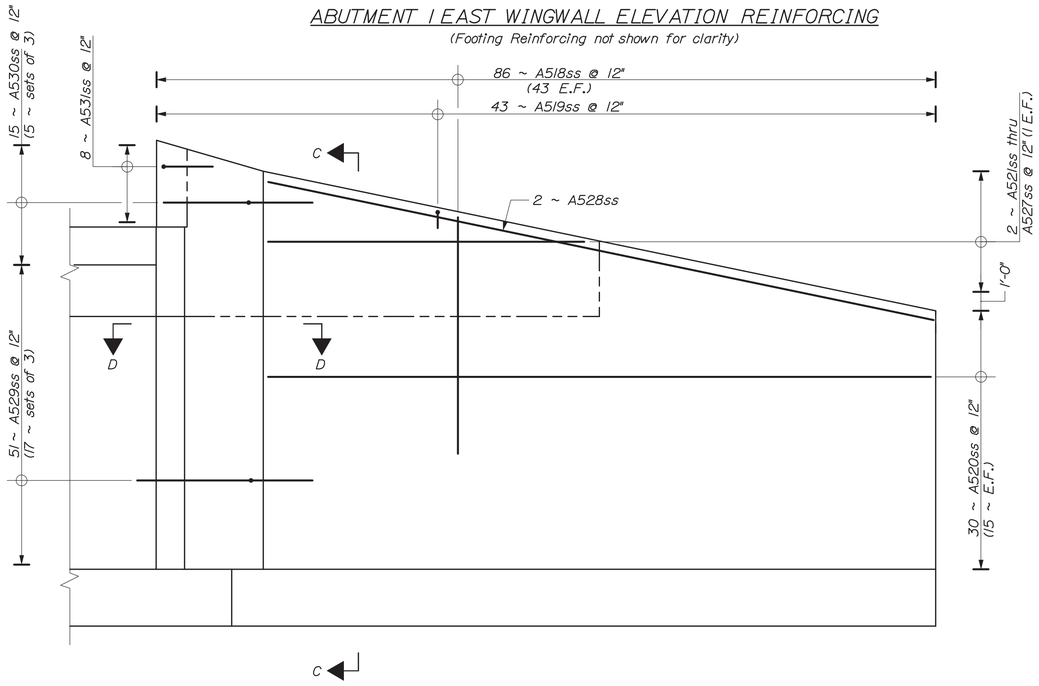
Division:

Filename: 181_Abutment 1 Wingwall Geometry.dgn



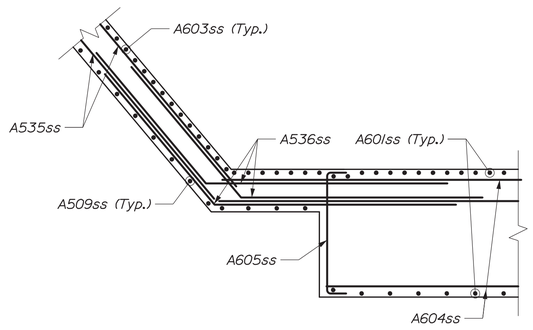

ABUTMENT 1 EAST WINGWALL ELEVATION REINFORCING

(Footing Reinforcing not shown for clarity)

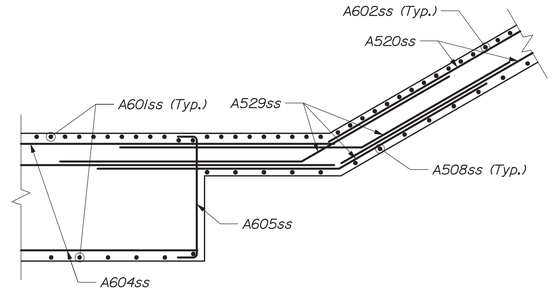



ABUTMENT 1 WEST WINGWALL ELEVATION REINFORCING

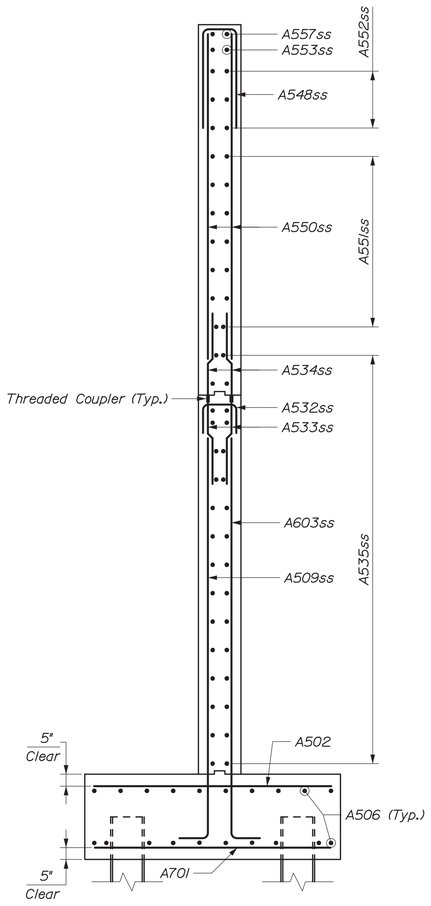
(Footing Reinforcing not shown for clarity)



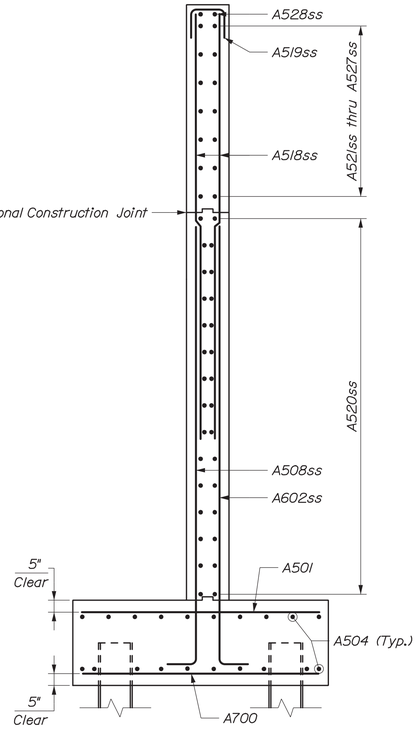

SECTION B-B




SECTION D-D




SECTION A-A




SECTION C-C

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 1
WINGWALL REINFORCING

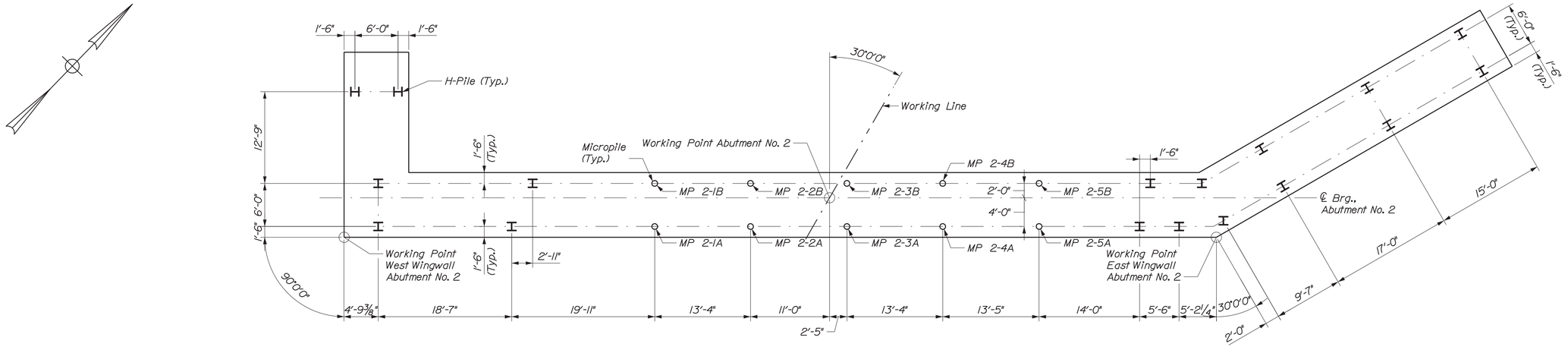
SHEET NUMBER

182

OF 220

HNTB

Filename: 182_Abutment 1 Wingwall Reinforcing.dgn Division: Username: Date:3/3/2020




ABUTMENT 2 PILE LAYOUT

NOTES:

1. For H-pile notes, see "Abutment 1 Pile Layout" Sheet.

2. For more information and notes on micropiles, see "Micropile Details" Sheet.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | H.W | ERB | 2\20 |
| CHECKED-REVIEWED | T.P | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

ABUTMENT 2
PILE LAYOUT

SHEET NUMBER

183

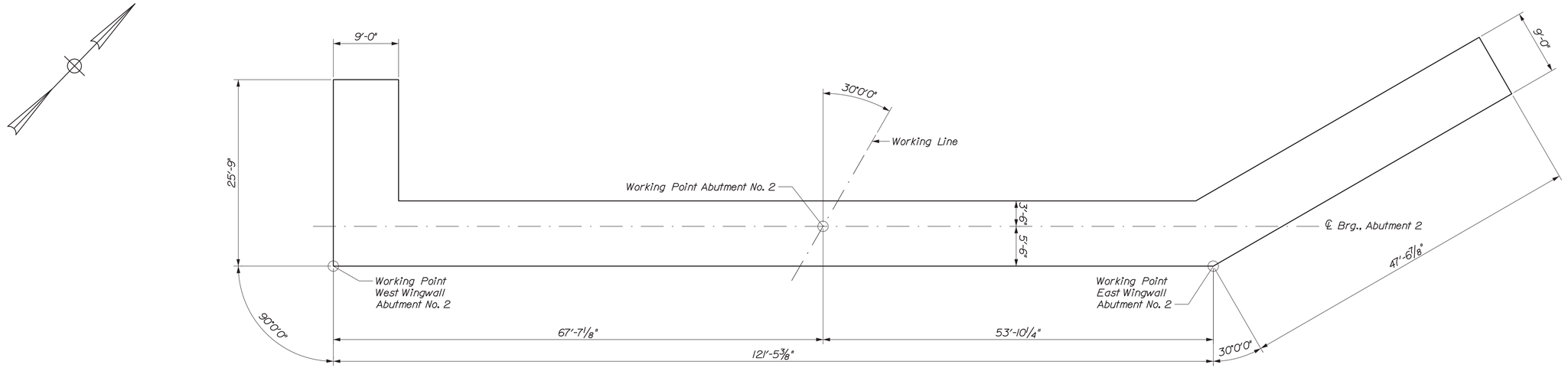
OF 220

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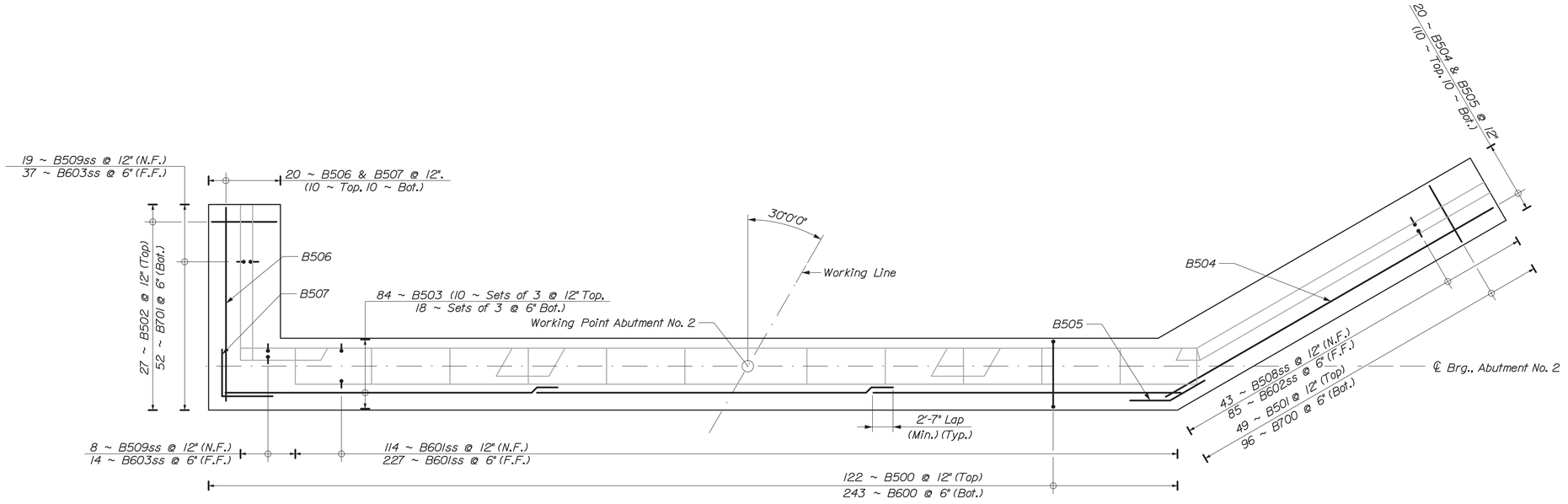
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Division:

Filename: 183_Abutment 2 Pile Layout.dgn




ABUTMENT 2 FOOTING PLAN




ABUTMENT 2 FOOTING PLAN - REINFORCING

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 2
FOOTING PLAN

SHEET NUMBER

184

OF 220

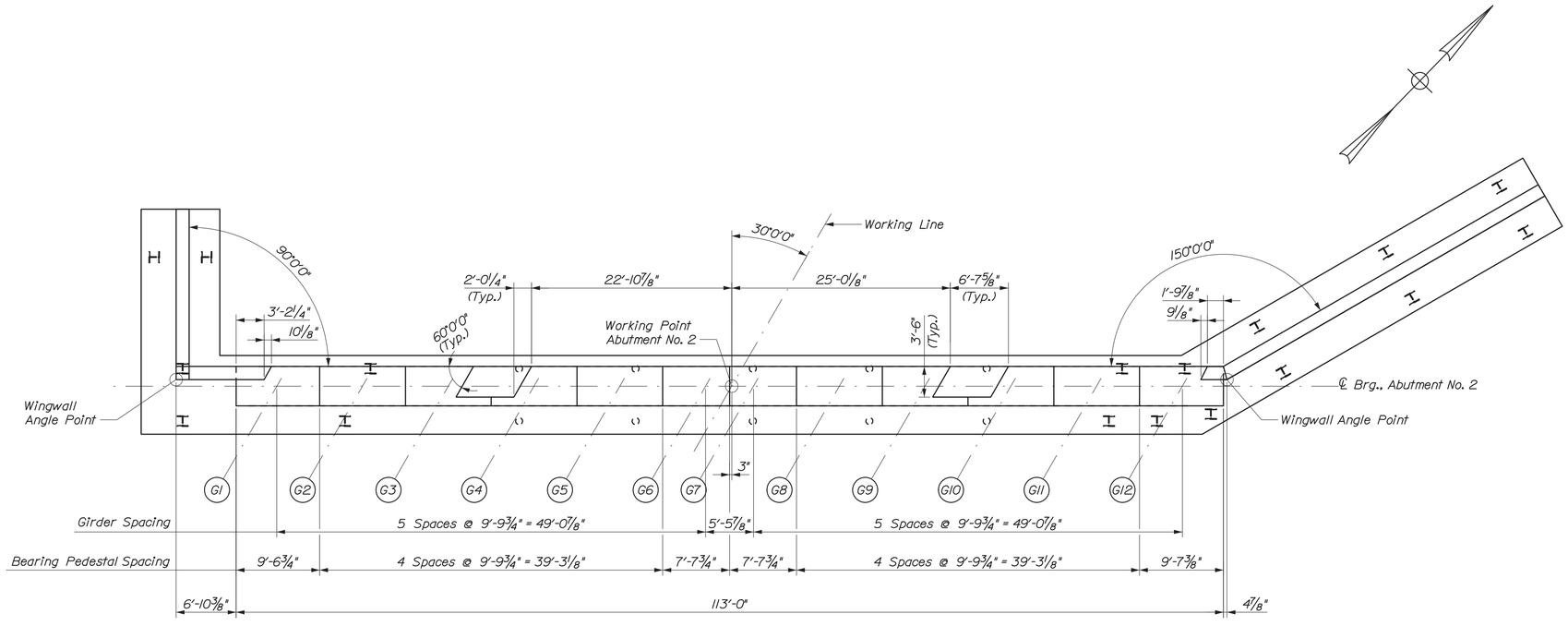
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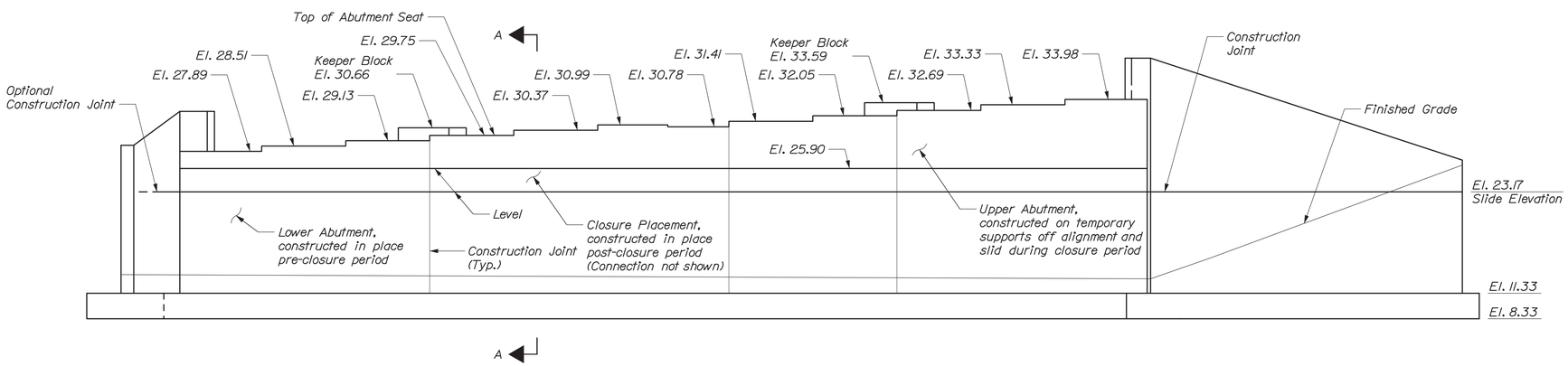
Date:3/3/2020

Division:

Filename: 184_Abutment 2 Footing Plan.dgn




ABUTMENT 2 PLAN

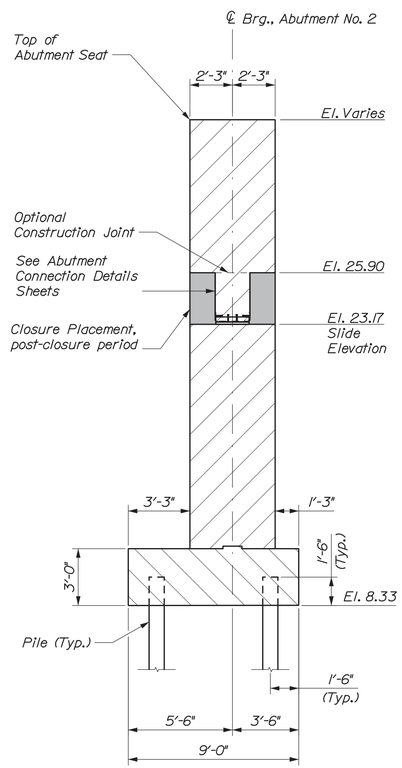



ABUTMENT 2 ELEVATION
(Piles not shown)

## ABUTMENT NOTES:

1. For abutment notes, see "Abutment 1 Plan and Elevation" Sheet.

2. For Abutment 2 wingwall geometry, see "Abutment 2 Wingwall Geometry" Sheet




SECTION A-A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | SIGNATURE | P.E. NUMBER | DATE |
|---|---|---|---|
| D. EATON | | | |
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | TJP | | |
| CHECKED-REVIEWED | KEB | | |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |

| BY | DATE |
|---|---|
| ERB | 2\20 |
| TRC | 2\20 |
| REVISIONS 1 | |
| REVISIONS 2 | |
| REVISIONS 3 | |
| REVISIONS 4 | |
| FIELD CHANGES | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT 2 PLAN AND ELEVATION

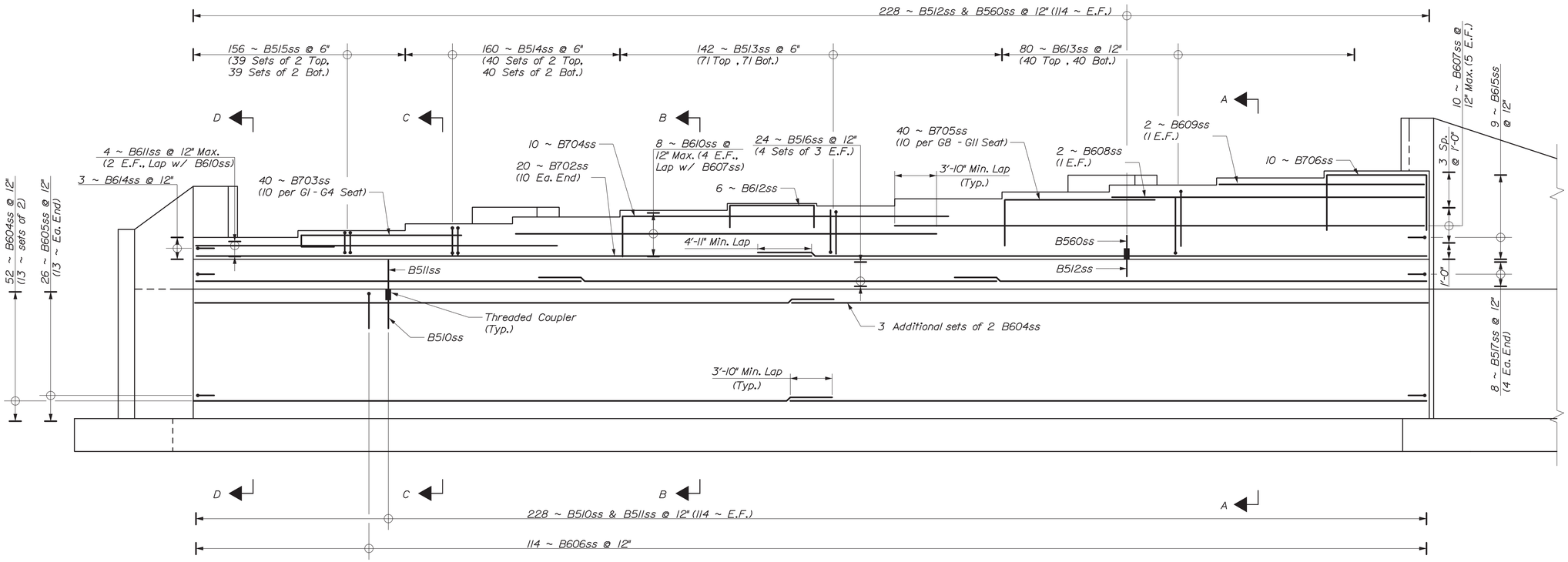
SHEET NUMBER

185

OF 220

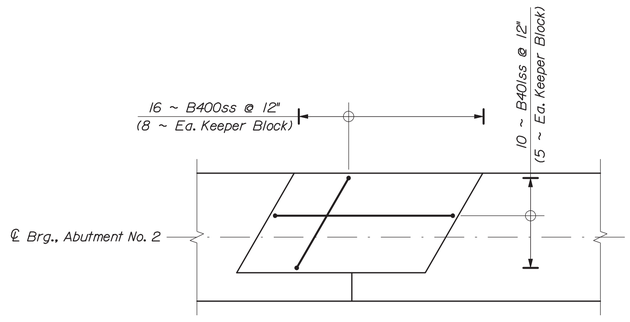
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ABUTMENT 2 ELEVATION - REINFORCING

(Footing and Wingwall Reinforcing not shown for clarity)




KEEPER BLOCK PLAN

NOTES:

1. For sections A thru D see "Abutment 2 Reinforcing Sections" sheet.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| DESIGN-DETAILED | TJP | 2\20 |
| CHECKED-REVIEWED | KEB | 2\20 |
| DESIGN2-DETAILED2 | TRC | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

D. EATON

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 2
REINFORCING

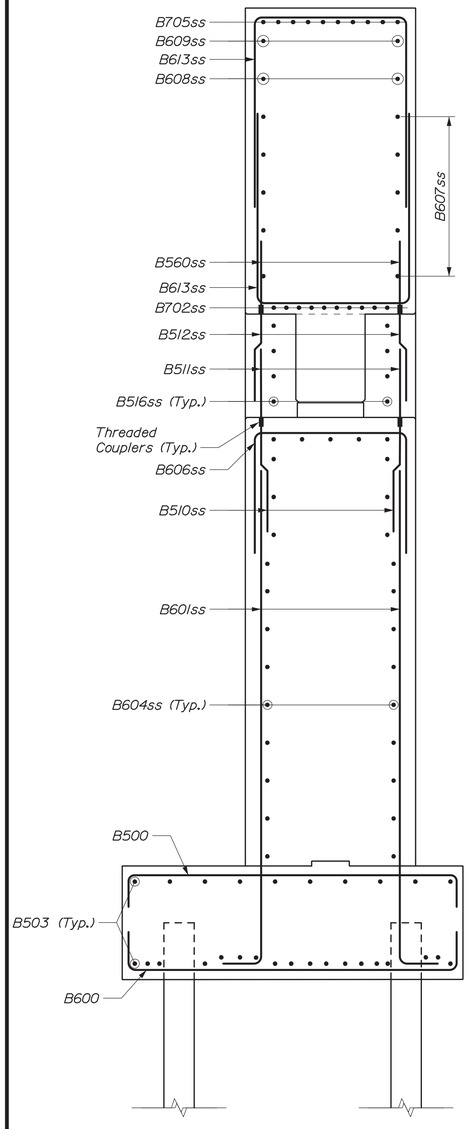
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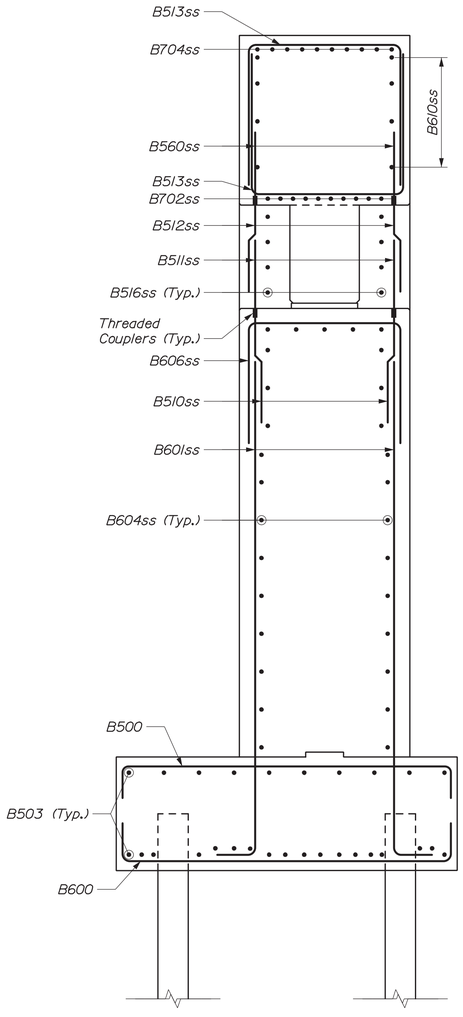
OF 220

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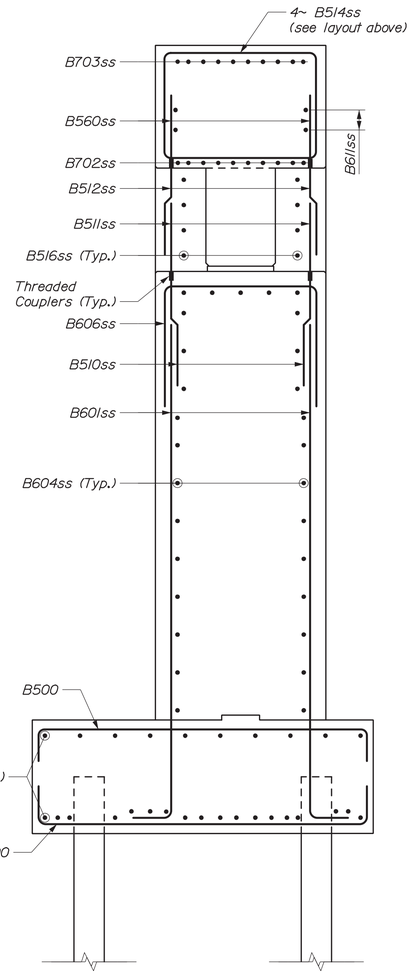



SECTION A-A



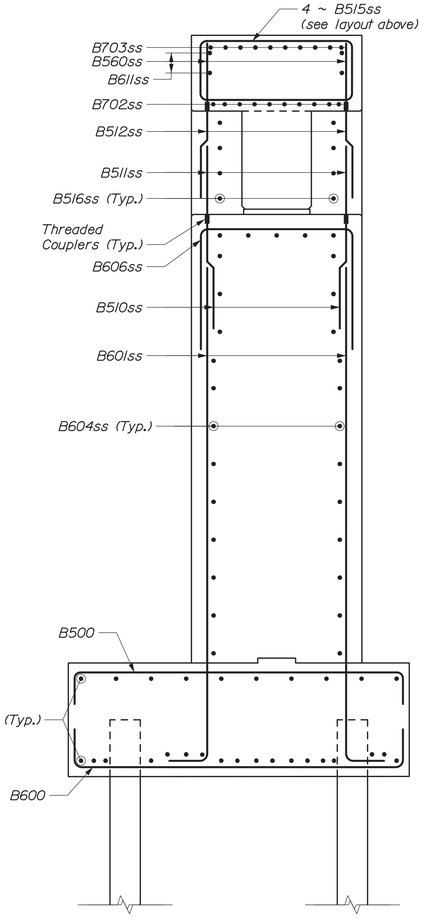

SECTION B-B

B514ss Layout




SECTION C-C

B515ss Layout




SECTION D-D

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

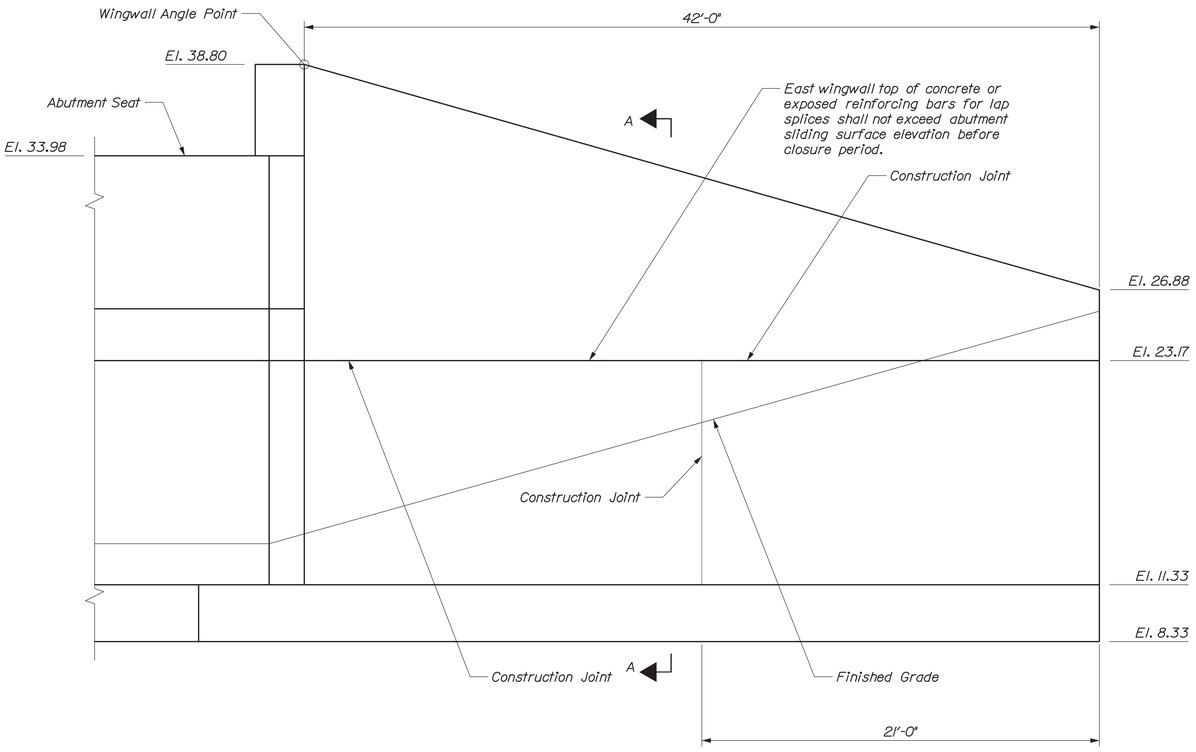
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT 2
# REINFORCING SECTIONS

SHEET NUMBER

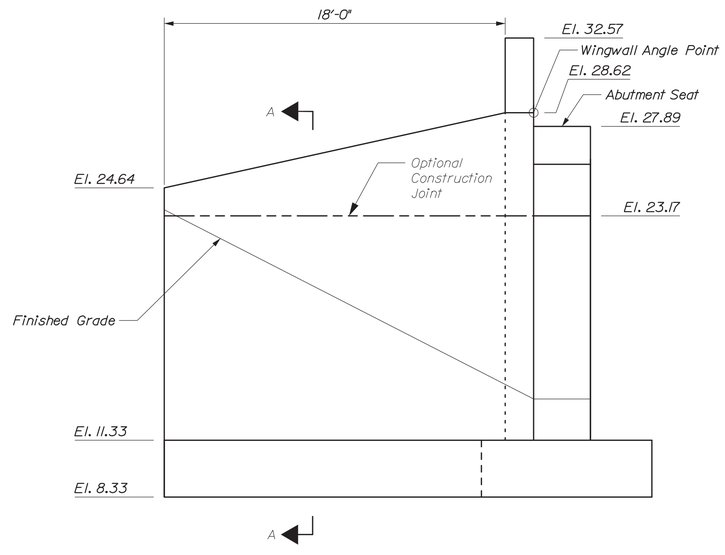
187

OF 220




ABUTMENT 2 EAST WINGWALL ELEVATION

(Piles not shown)

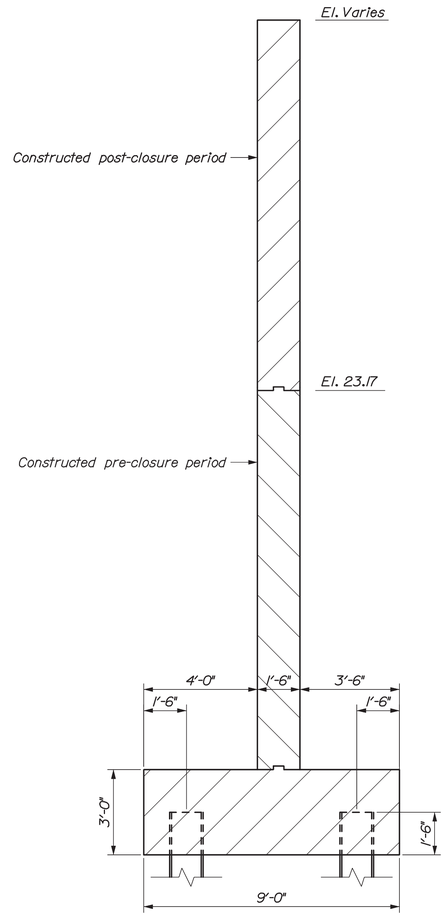



ABUTMENT 2 WEST WINGWALL ELEVATION

(Piles not shown)

NOTES:

1. For wingwall typical sections and wingwall notes, see Abutment I Wingwall Geometry Sheet.




Section A-A

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.W | ERB | 2\20 |
| CHECKED-REVIEWED | T.P | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 2
WINGWALL GEOMETRY

SHEET NUMBER

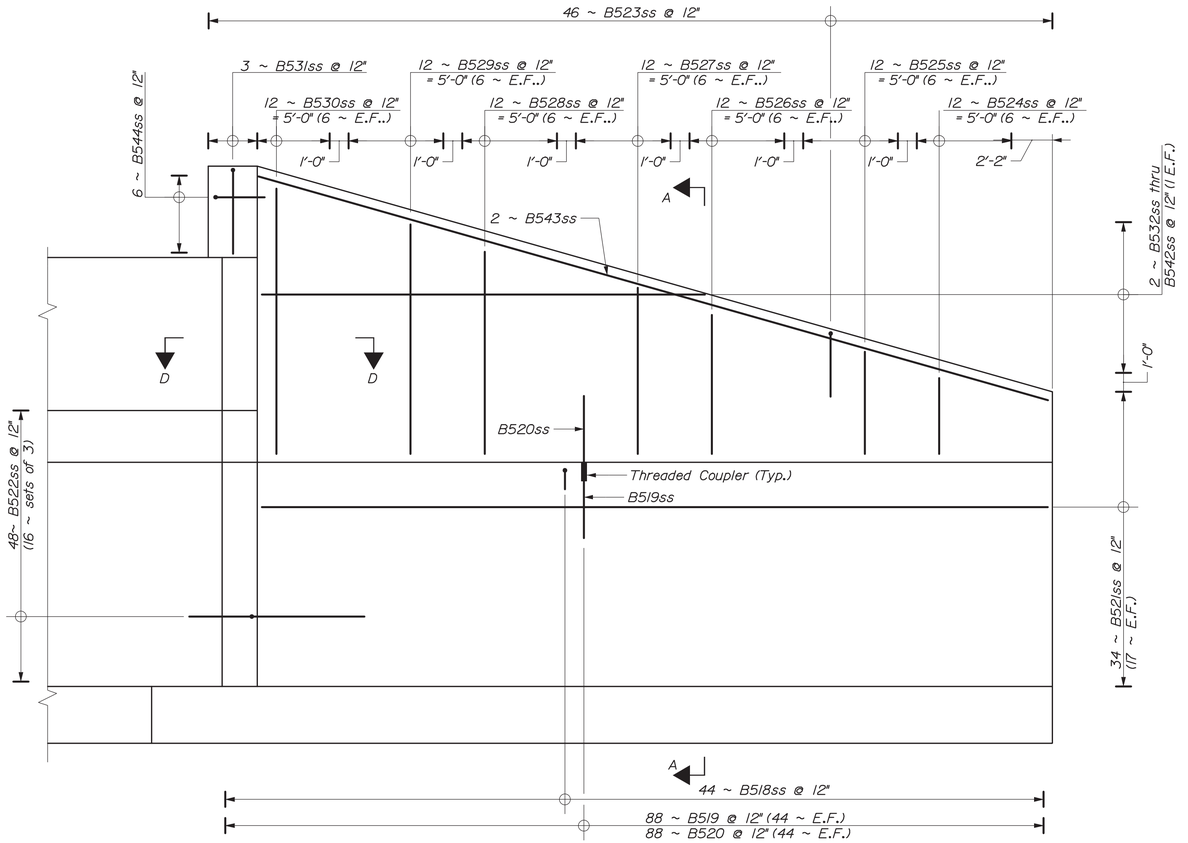
188

OF 220

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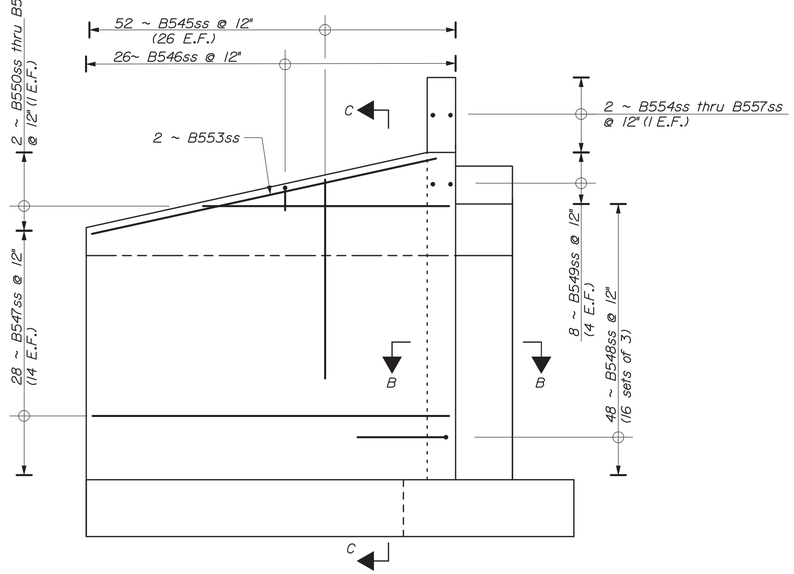
Date:3/3/2020

Filename: 188_ Abutment 2 Wingwall Geometry.dgn Division:



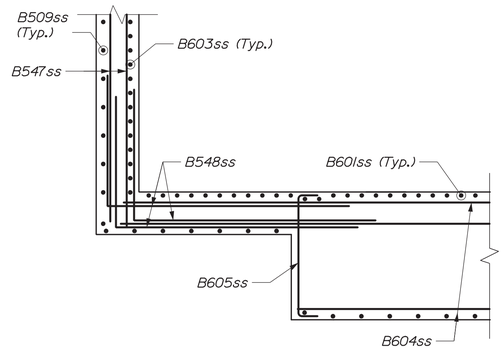

ABUTMENT 2 EAST WINGWALL ELEVATION REINFORCING

(Footing Reinforcing not shown for clarity)

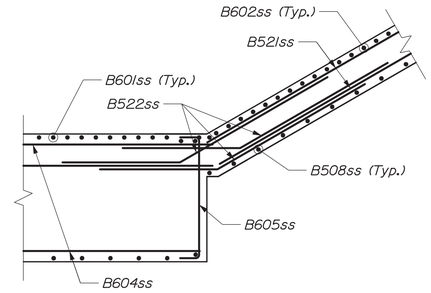



ABUTMENT 2 WEST WINGWALL ELEVATION REINFORCING

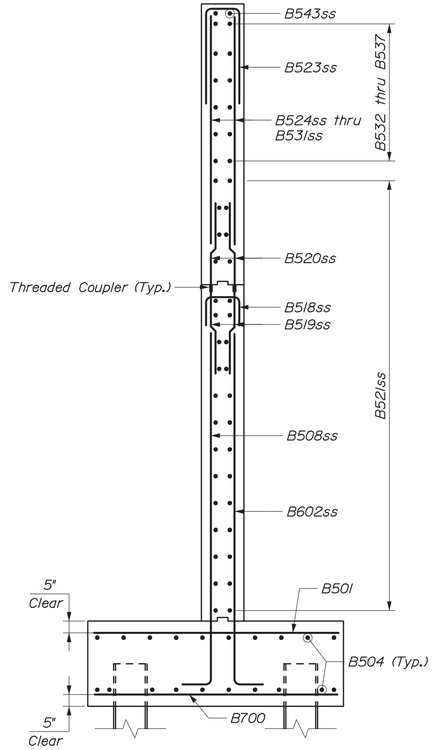
(Footing Reinforcing not shown for clarity)



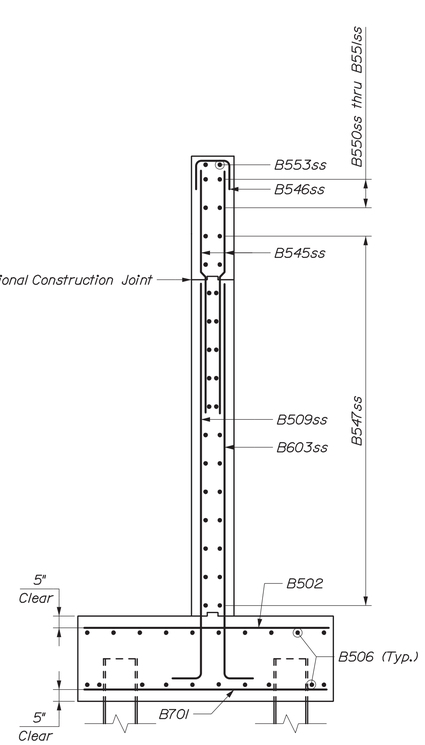

SECTION B-B




SECTION D-D




SECTION A-A




SECTION C-C

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | TJP | 2\20 |
| CHECKED-REVIEWED | KEB | 2\20 |
| DESIGN2-DETAILED2 | TRC | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

ABUTMENT 2
WINGWALL REINFORCING

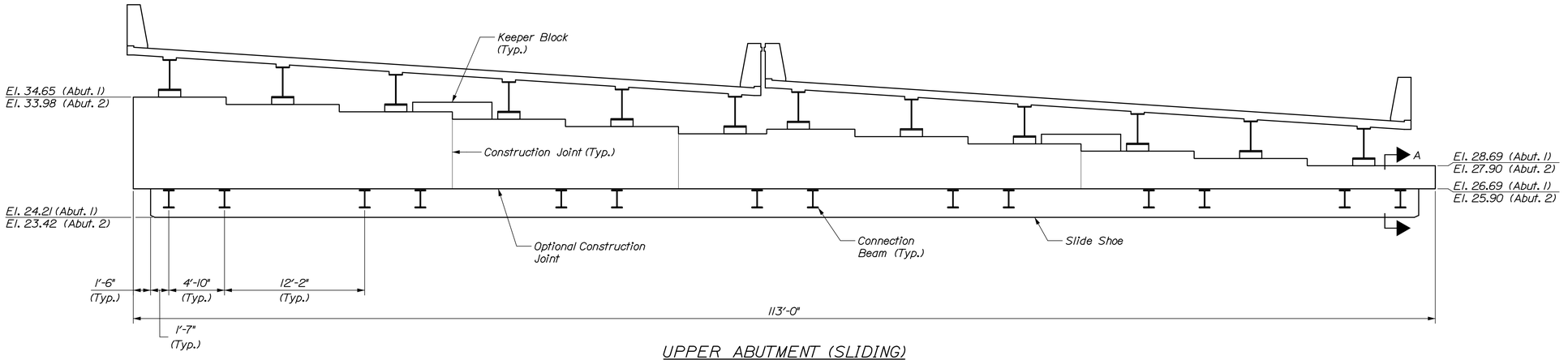
SHEET NUMBER

189

OF 220

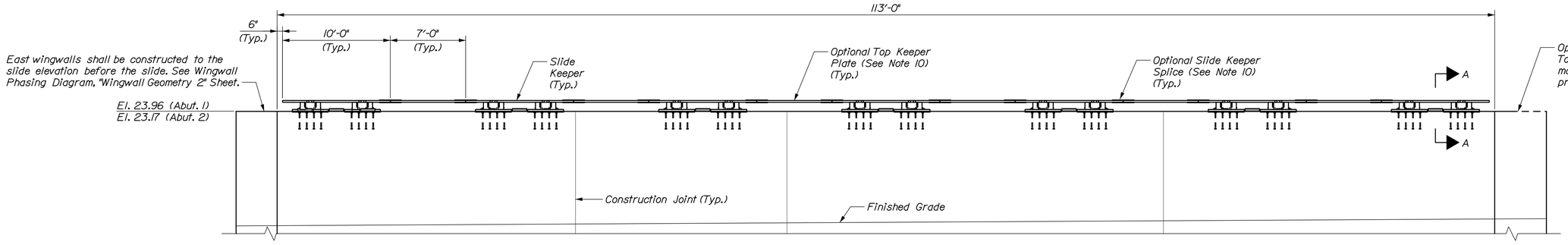
HNTB

Filename: 189_Abutment 2 Wingwall Reinforcing.dgn Division: Username: Date:3/3/2020




## UPPER ABUTMENT (SLIDING)

(Abutment 1 shown, Abutment 2 opposite hand)




## LOWER ABUTMENT (FIXED)

(Abutment 1 shown, Abutment 2 opposite hand)

## ABUTMENT CONNECTION NOTES:

1. All components for sliding the bridge, including slide bearings, stainless steel slide plates, connection beams, and slide keepers shall be paid for under lump sum Item 524.302, Bridge Movement System.

2. All rolled and plate steel components in the abutment shall conform to AASHTO M270 grade 50 and shall be hot dip galvanized. Fabrication and coating shall be in conformance with Standard Specification 504 and 506 respectively.

3. The faying surfaces between the Connection Beam and the Slide Keeper shall meet the requirements of an AASHTO Class B Surface for slip.

4. Rolled steel shapes for Connection Beams may be replaced with built-up plate sections matching the nominal rolled member depth, flange plate width, flange plate depth, and web thicknesses, rounded up to the nearest 1/8".

5. The Contractor shall drill 2 holes through the webs at each end of each Connection Beam web to allow for the placement of continuous transverse reinforcement. The holes shall be no larger than 1 1/2" diameter and located entirely within the flat portion of the web (not within the web to flange radius).

6. All Slide Keepers shall be set level to a tolerance of 1/16" over the 13" width of the Slide Keeper Top Plate.

7. The final design and details of the slide bearing system shall be the responsibility of the Contractor and shall be included in the slide system submittal. The plans detail the use of elastomeric slide bearings with a stainless steel lining on the slide shoe. The slide bearing details shown may be used, without the need for a bearing submittal by the Contractor, provided bearing fabrication is completed using 100% polychloroprene (neoprene) with durometer hardness of 50 and a shear modulus of the elastomer between 100 psi and 130 psi. The final design and detailing of alternate slide bearing systems, and required revisions to the abutment seat or slide shoe geometry, shall be the responsibility of the Contractor. Alternate bearing designs shall be capable of supporting a minimum service load of 260 kips per pair of connection beams.

8. The Contractor shall install shim packs of 5"x5" plate washers between the Connection Beam and Slide Keeper at each bolt location. The maximum gap between the Connection Beam and the Slide Keeper after shim installation, and prior to bolting, shall be 1/16". The quantity and thickness of shim plates shall be determined by the Contractor. Shim plates may be uncoated.

9. Following completion of the lateral slide, and before opening the bridge to live load, the Contractor shall complete the 28 bolted continuity connections per abutment located between the Connection Beams and Slide Keepers. The bolting sequence shall consist of 1) installing shim packs at all bolt locations, 2) installing bolts finger tight, and 3) torquing bolts in accordance with Standard Specification 504. A minimum of three bolts per continuity connection shall be installed and torqued prior to opening the bridge to live load. All remaining bolts shall be installed within 5 calendar days of opening the bridge to traffic, and before casting the abutment closure placement.

10. At the Contractor's option the Slide Keeper Extensions and Slide Keeper Splice Plates may be omitted in their entirety. The proposed details for the slide keeper extensions and splice plates may be modified by the Contractor. If the Slide Keeper Extensions are omitted the corners of the Slide Keeper Top Plate may be beveled or radiused to minimize snagging potential. No other changes to the Slide Keeper assemblies, except as noted on the plans, will be allowed without approval.

11. The slide keeper layout shown on the plans provides 1 1/4" clearance between each face of the slide shoe and the adjacent slide keeper. At the Contractors option, the Slide Keeper Top Plate may be increased in width to reduce clearance to the Slide Shoe. Any modifications to the Slide Keeper Top Plate shall be noted in the Contractor's working drawings.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 9/20 |
| CHECKED-REVIEWED | JDW | TRC | 9/20 |
| DESIGN2-DETAILED2 | JDW | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

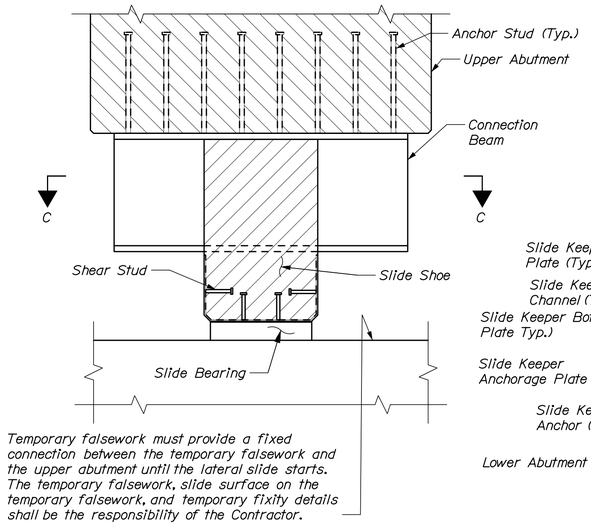
# ABUTMENT CONNECTION DETAILS 1

SHEET NUMBER

190

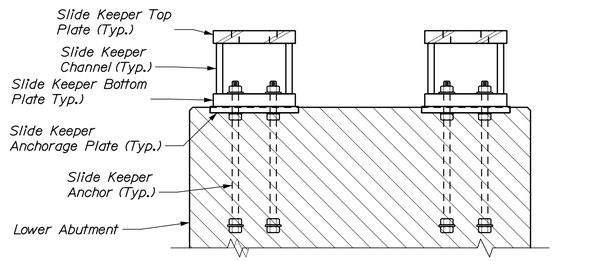
OF 220

Filename: 190_Abutment Connection Details 1.dgn Division: Username: Date:9/24/2020



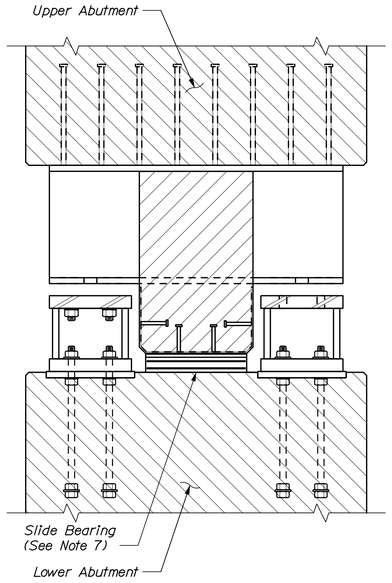

SECTION A-A

(Upper Abutment, Pre-Closure Period)



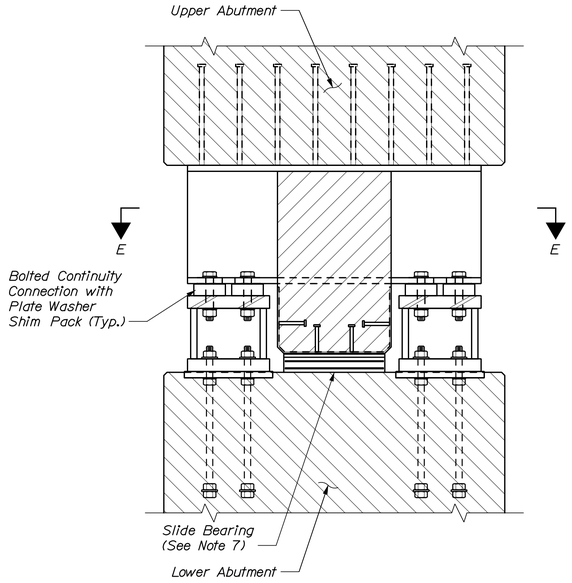

SECTION A-A

(Lower Abutment Pre-Closure Period)



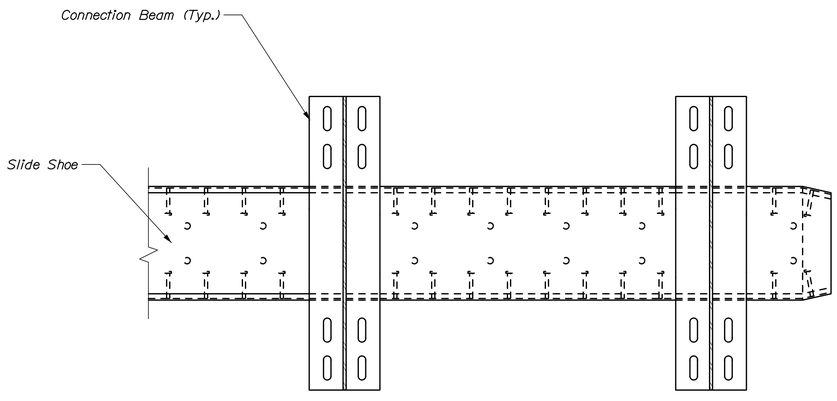

SECTION A-A

(During Slide)

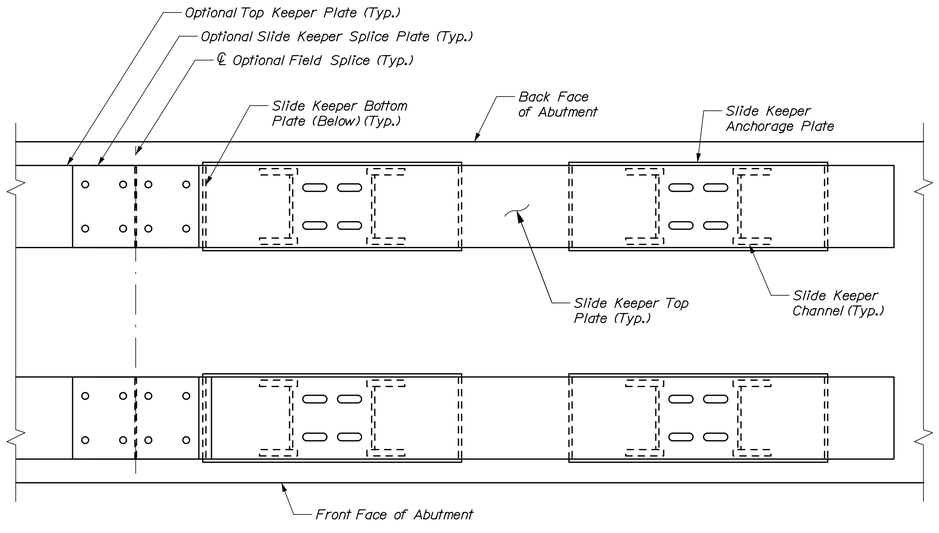



SECTION A-A

(After Slide and Prior to Roadway Opening)




SECTION C-C




SECTION D-D

NOTES:

1. For Section E-E, see "Abutment Connection Details III".

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 9\20 |
| CHECKED-REVIEWED | JDW | TRC | 9\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT CONNECTION DETAILS II

SHEET NUMBER

191

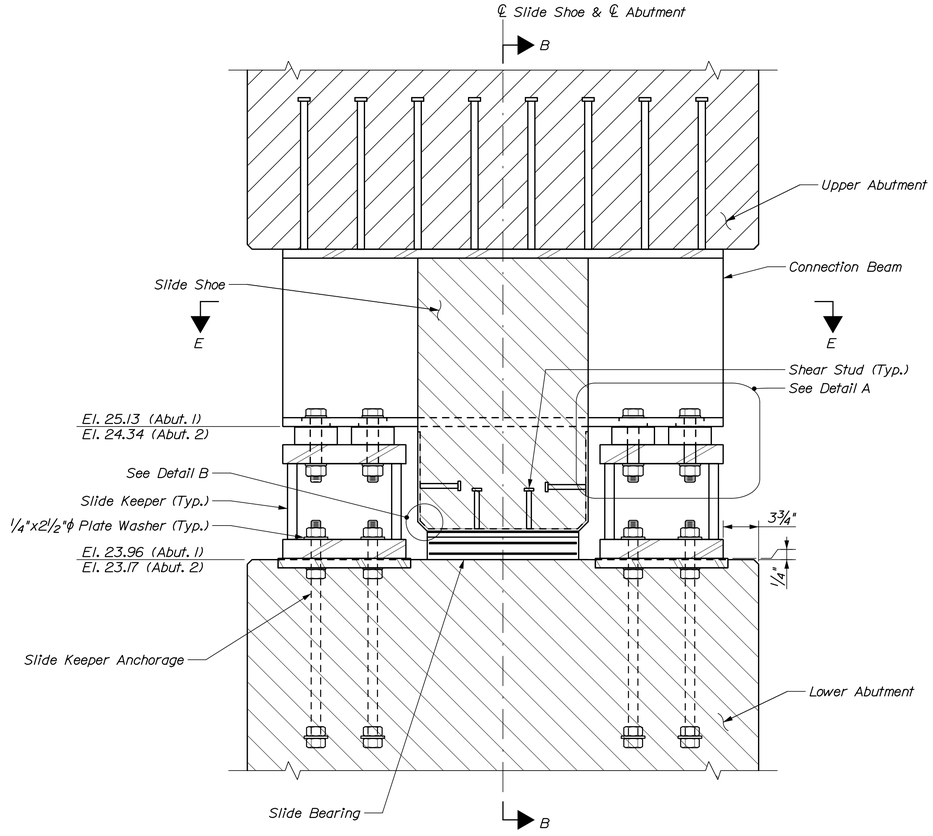
OF 220

Date:9/24/2020

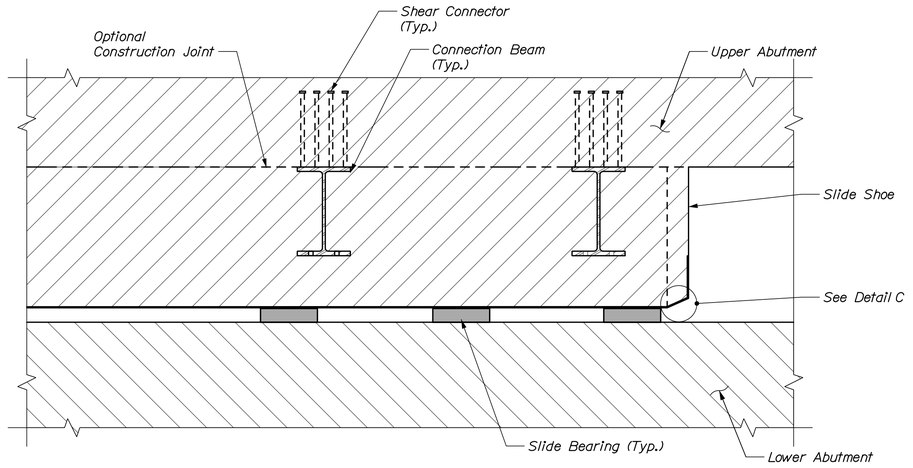
Username:

Division:

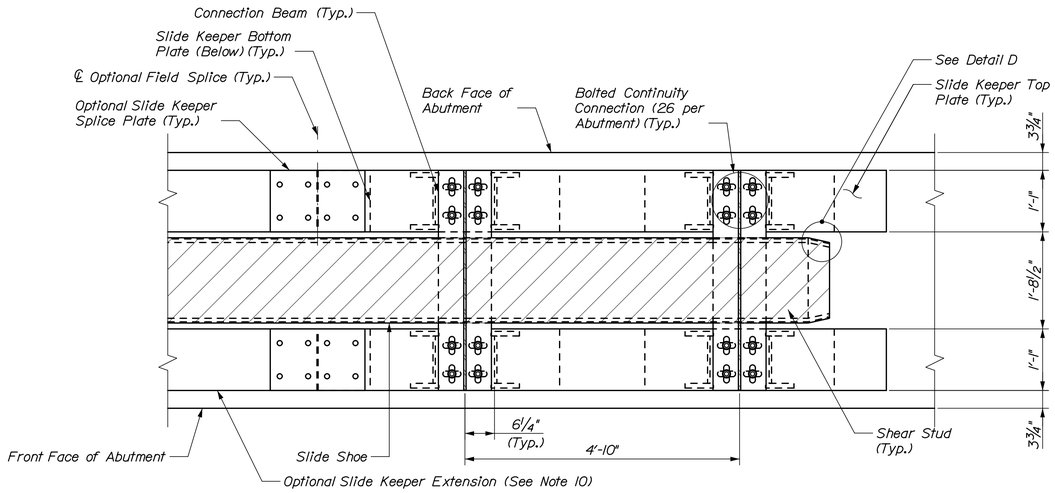
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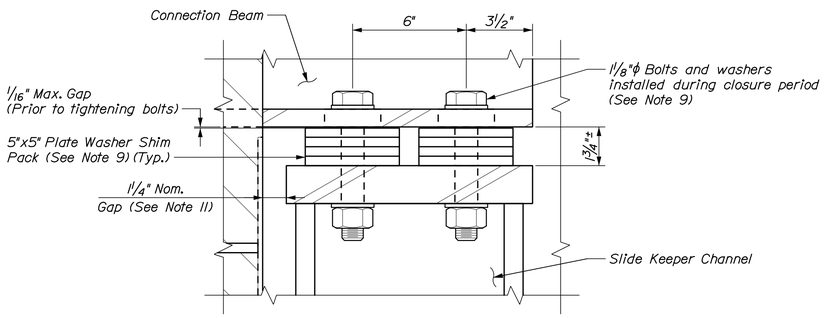

SECTION A-A



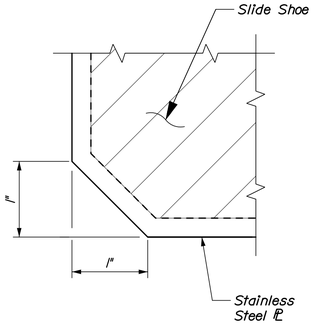

SECTION B-B



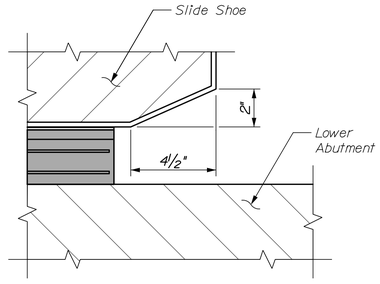

SECTION E-E



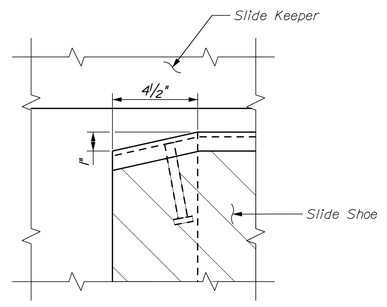

DETAIL A




DETAIL B




DETAIL C




DETAIL D

NOTES:

1. Reinforcing and shear connectors in slide shoe not shown for clarity.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 9\20 |
| CHECKED-REVIEWED | JDW | TRC | 9\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

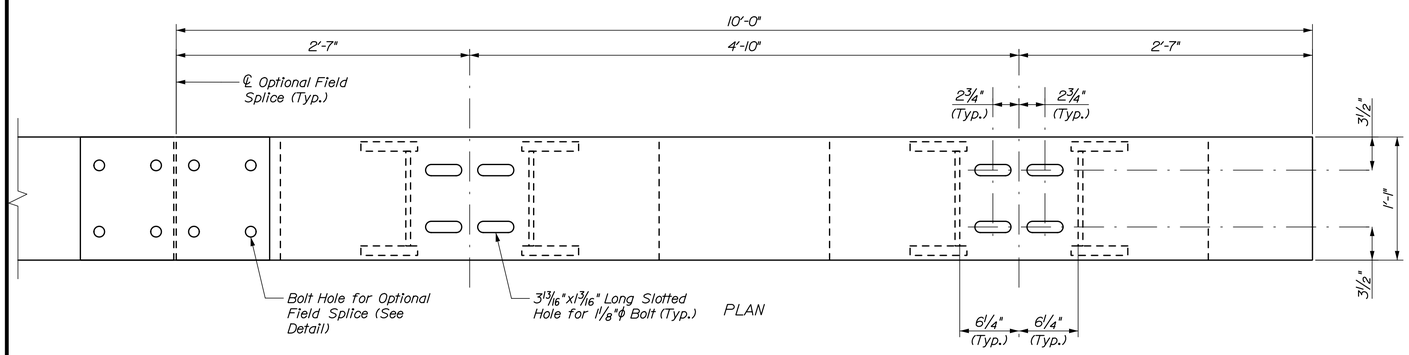
ABUTMENT CONNECTION DETAILS III

SHEET NUMBER

192

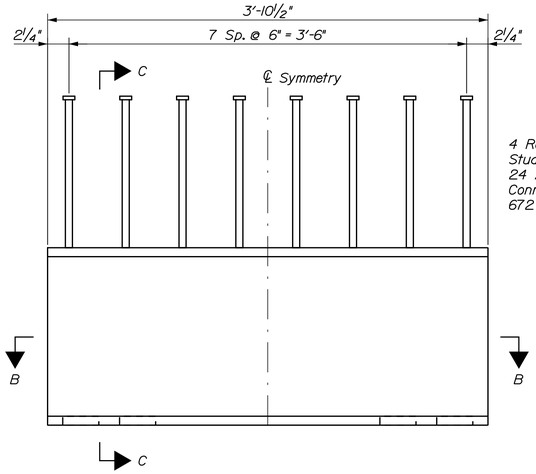
OF 220

Filename: 192_Abutment Connection Details III.dgn Division:
Username:
Date:9/24/2020



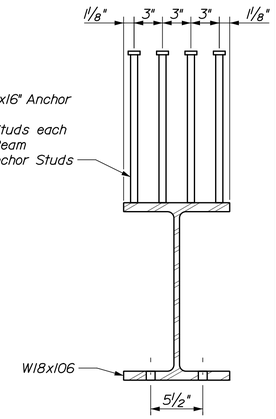

## SLIDE KEEPER

(Slide keeper anchorage not shown)
(14 Each Abutment, 28 Total)

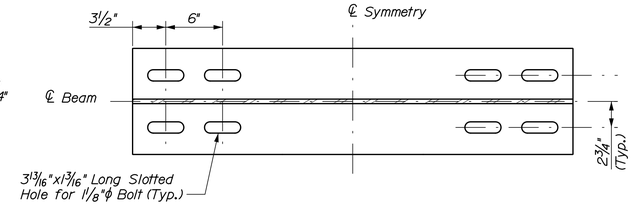



## CONNECTION BEAM ELEVATION

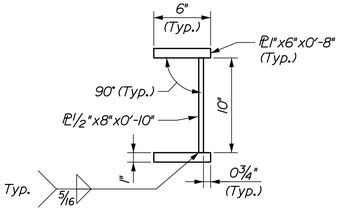
(14 Each Abutment, 28 Total)



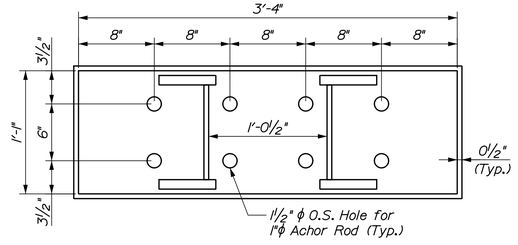

## SECTION C-C



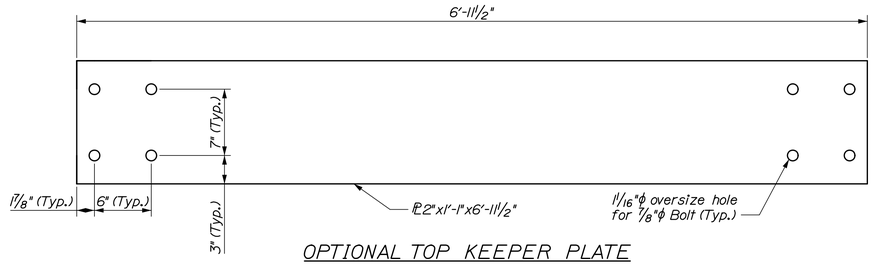

## SECTION B-B



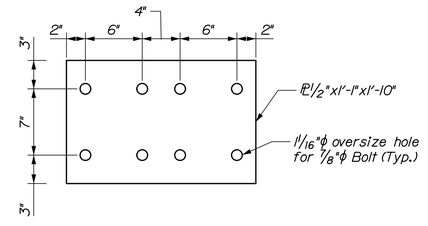

## SLIDE KEEPER CHANNEL PLAN



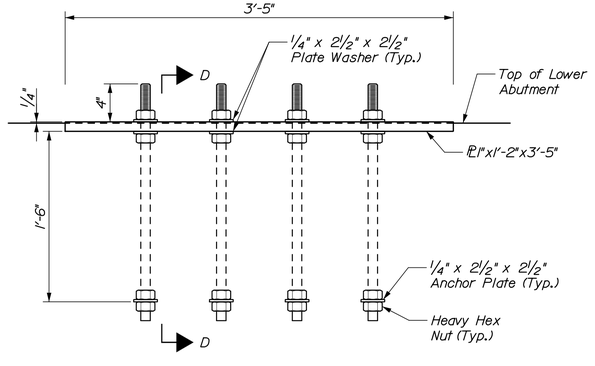

## SECTION A-A



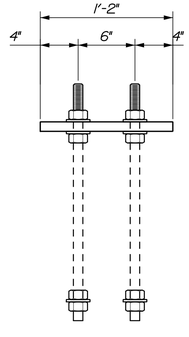

## OPTIONAL TOP KEEPER PLATE



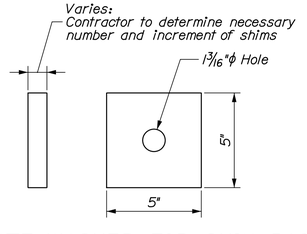

## OPTIONAL SLIDE KEEPER SPLICE PLATE




## SLIDE KEEPER ANCHORAGE




## SECTION D-D




## PLATE WASHER FOR SHIM PACK

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 9.20 |
| CHECKED-REVIEWED | JDW | TRC | 9.20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT CONNECTION DETAILS IV

SHEET NUMBER

193

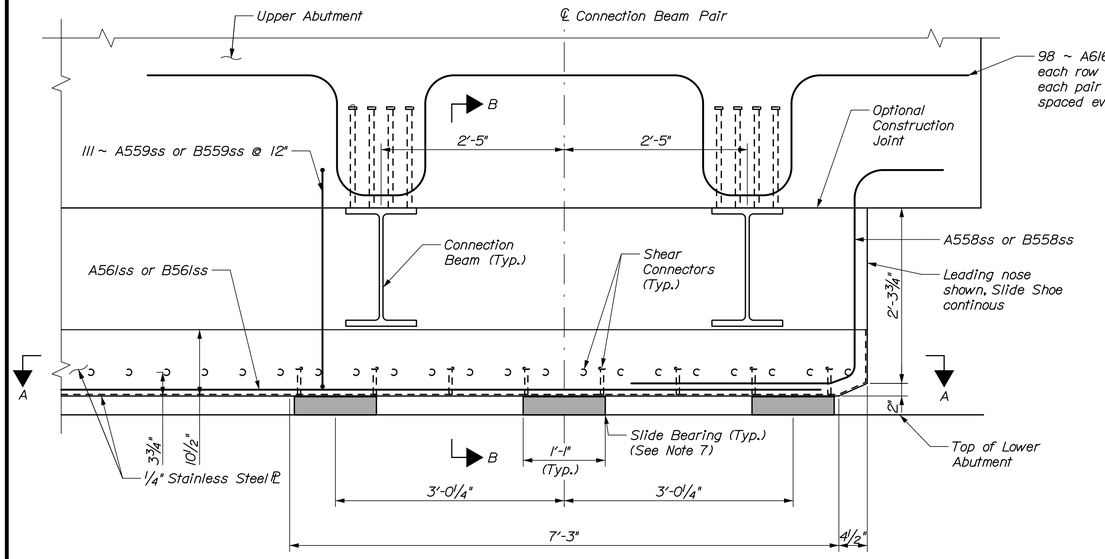
OF 220

HNTB

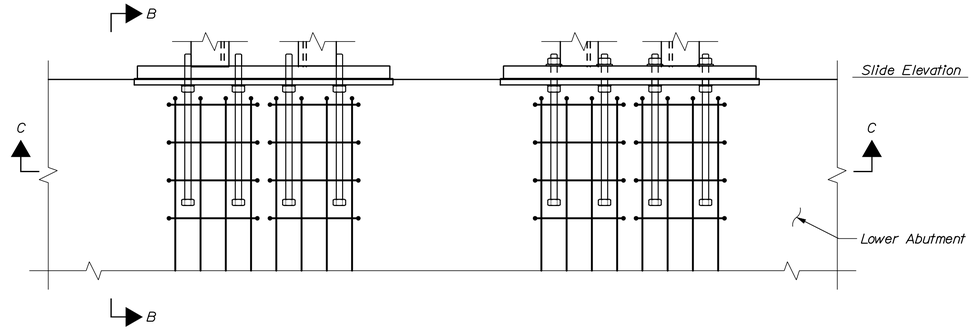
Date:9/24/2020

Username:

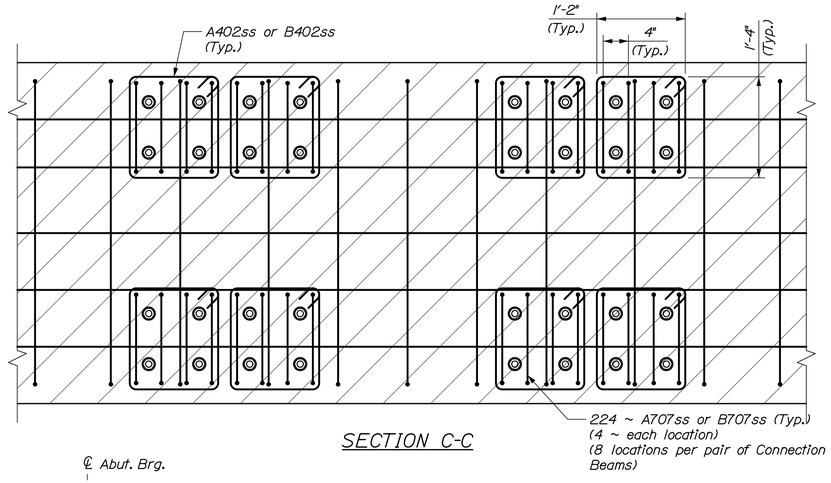
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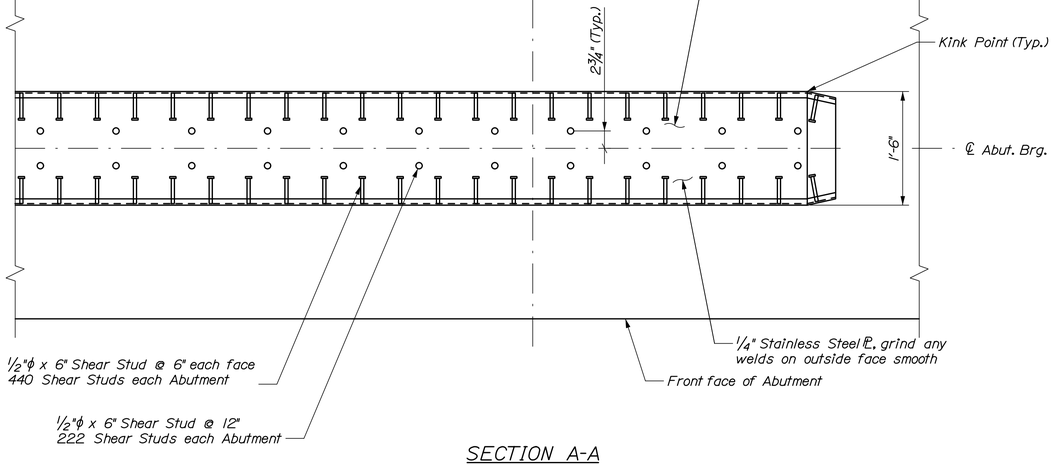

## SLIDE SHOE ELEVATION
(Slide Keepers not shown for clarity)



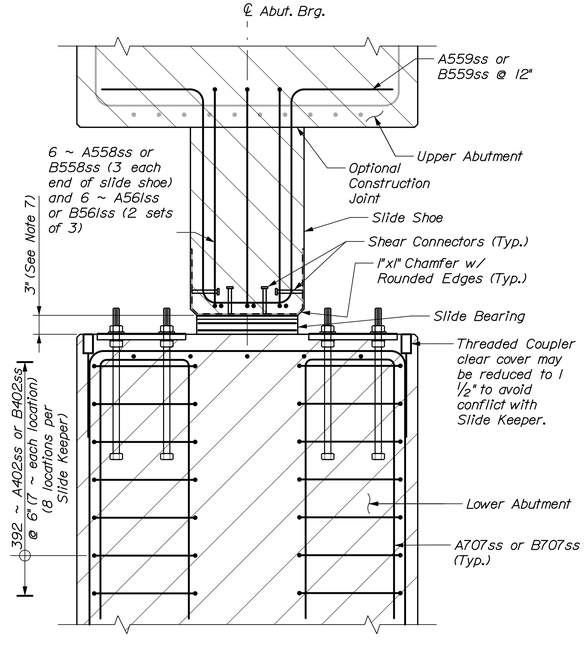

## LOWER ABUTMENT ELEVATION



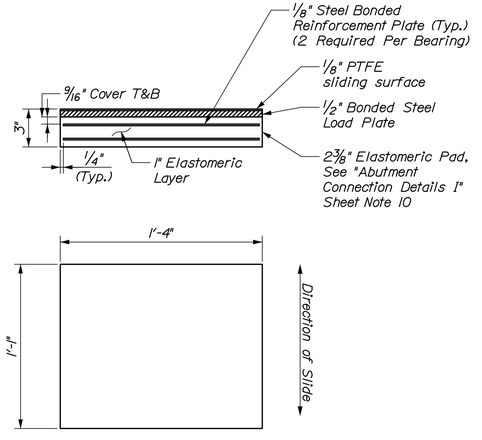

## SECTION C-C




## SECTION A-A




## SECTION B-B




## SLIDE BEARING

**NOTES:**

1. Reinforcing for Abutment 1 shown. Reinforcing for Abutment 2 similar.

Draft 100% Plans
August 12, 2020

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN
021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | BY | DATE |
| DESIGN-DETAILED | HJW | ERB | 9.'20 |
| CHECKED-REVIEWED | JDW | TRC | 9.'20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

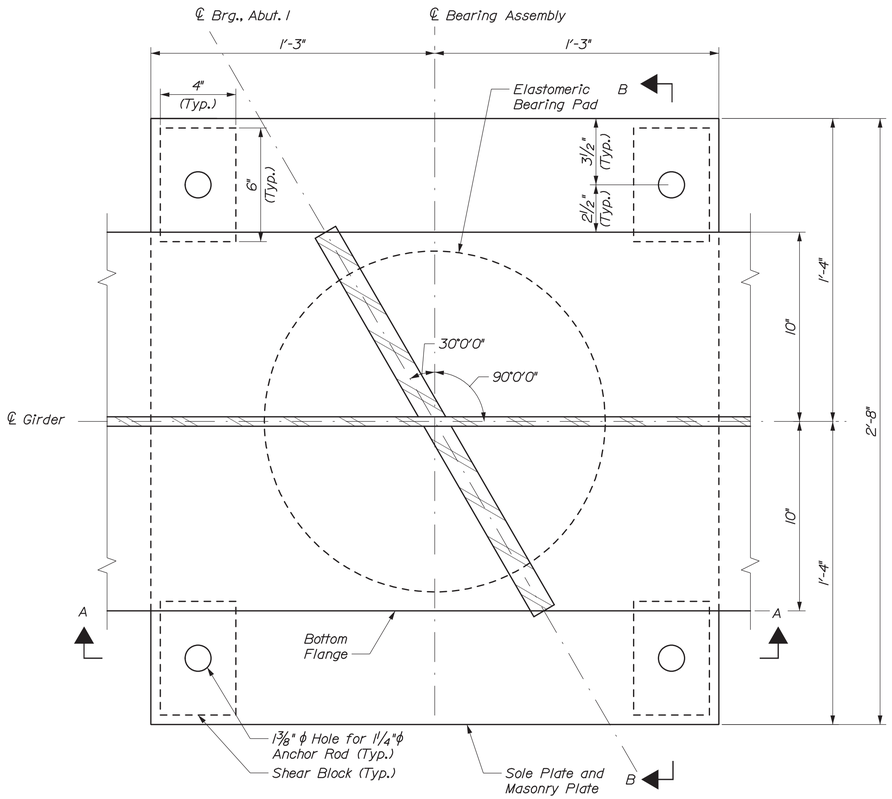
DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# ABUTMENT CONNECTION DETAILS V

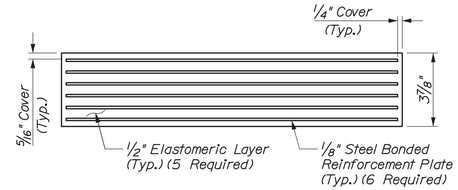
SHEET NUMBER
194
OF 220

Filename: 194_Abutment Connection Details V.dgn Division:
Username:
Date:9/24/2020

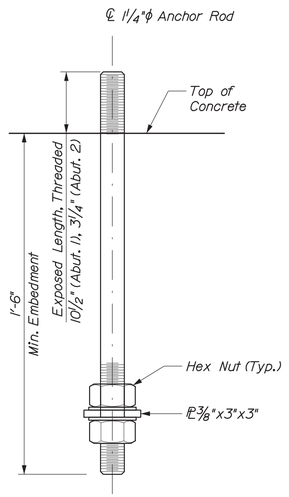



PLAN

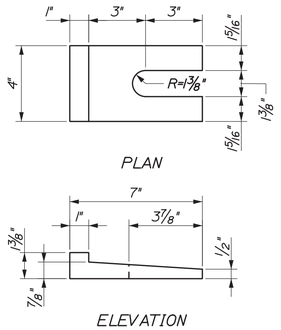
| BEARING DESIGN CRITERIA | | |
|---|---|---|
| Criteria | Abutment 1 | Abutment 2 |
| Unfactored Dead Load (kips) | 182 | 182 |
| Unfactored Live Load (kips) | 100 | 100 |
| Max. Longitudinal Displ. (in.) | 0 | 0.61 |



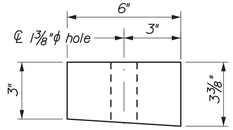

ELASTOMERIC BEARING PAD
(24 Required)



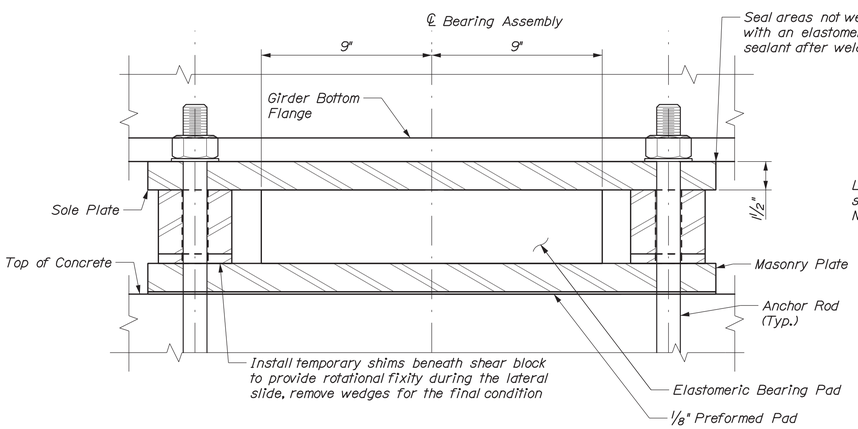

ANCHOR ROD DETAIL



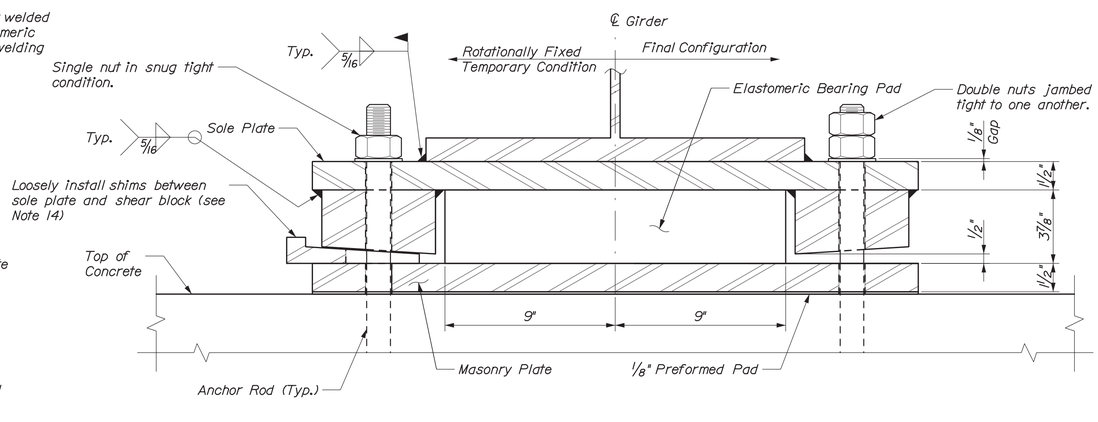

WEDGE DETAIL
(48 Required)




SHEAR BLOCK DETAIL




SECTION A-A
(Rotationally Fixed Temporary Condition)




SECTION B-B

FIXED BEARING ASSEMBLY
(12 Required)

## BEARING NOTES:

1. Elastomer shall be 100% polychloroprene (neoprene) with durometer hardness of 50. The shear modulus of the elastomer shall be between 95 and 130 psi.

2. Vulcanizing of the elastomer to the sole plate and masonry plate shall be done during the primary mold process.

3. For the Normal Configuration, single nut the anchor rods in expansion bearings and double nut the anchor rods in fixed bearings. Upset the threads on the anchor rods after the lateral slide and before the bridge is opened to traffic.

4. Sole plate, masonry plate, shim plates, and shear block shall be AASHTO M270 Grade 36. Anchor rods shall meet the requirements of ASTM F1554, Grade 105.

5. Bearings shall be covered during transit.

6. Masonry and Sole plates shall be galvanized in accordance with Section 506. Anchor rods, washers and nuts shall be galvanized to ASTM A 153 or ASTM B 695, Class 50, Type 1. Temporary shims may be uncoated.

7. Bearings are designed such that the superstructure may be erected when the ambient temperature is within the range of 30°F and 80°F. If the ambient temperature is outside of this range, the bearings shall be reset as directed by the Resident.

8. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points up-station. All marks shall be permanent and shall be visible after the bearing is installed.

9. The Contractor shall not weld the girders to the sole plates until after all adjustments have been made in accordance with Section 523.

10. All necessary precautions shall be taken to protect bearing components from field weld flash and spatter. Heat from welding operations shall be controlled such that steel adjacent to the elastomer does not exceed 200°F. The temperature shall be verified by use of temperature indicating crayons or other suitable means.

11. Contractor shall re-finish galvanizing and girder metallizing, as directed by Resident, in accordance with ASTM A780 after welding.

12. Bearing pads were designed using "Method A" and shall be subsequently tested in accordance with the specifications.

13. All bearings shall be in their rotationally fixed condition during the times indicated in Special Provision 524 - Lateral Slide. At all other times, bearings shall be in their Final Configuration. For Notes on expansion bearing rotationally fixed condition see Sheet "Bearing Details II".

14. To achieve the rotationally fixed condition for fixed bearings, the Contractor shall loosely install steel wedges between the masonry plate and shear blocks at each of the four anchor bolt locations. Following installation of the wedges the Contractor shall bring the anchor rod nuts to a snug tight condition. After bolt tightening the contractor shall tap each wedge with a steel hammer to confirm the wedges are securely clamped in place. If loose wedges are encountered the Contractor shall repeat the process. The Contractor shall not drive the wedges to a snug tight condition prior to tightening the anchor rod nuts whereas the additional load added to the structure following the lateral slide, and prior to removal of the wedges, will compress the bearings and make wedge removal difficult.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | | | |
|---|---|---|---|---|
| DESIGN-DETAILED | HJW | ERB | 2\20 | |
| CHECKED-REVIEWED | NMW | TRC | 2\20 | |
| DESIGN2-DETAILED2 | NMW | | | |
| DESIGN3-DETAILED3 | | | | |
| REVISIONS 1 | | | | |
| REVISIONS 2 | | | | |
| REVISIONS 3 | | | | |
| REVISIONS 4 | | | | |
| FIELD CHANGES | | | | |

SIGNATURE

P.E. NUMBER

DATE

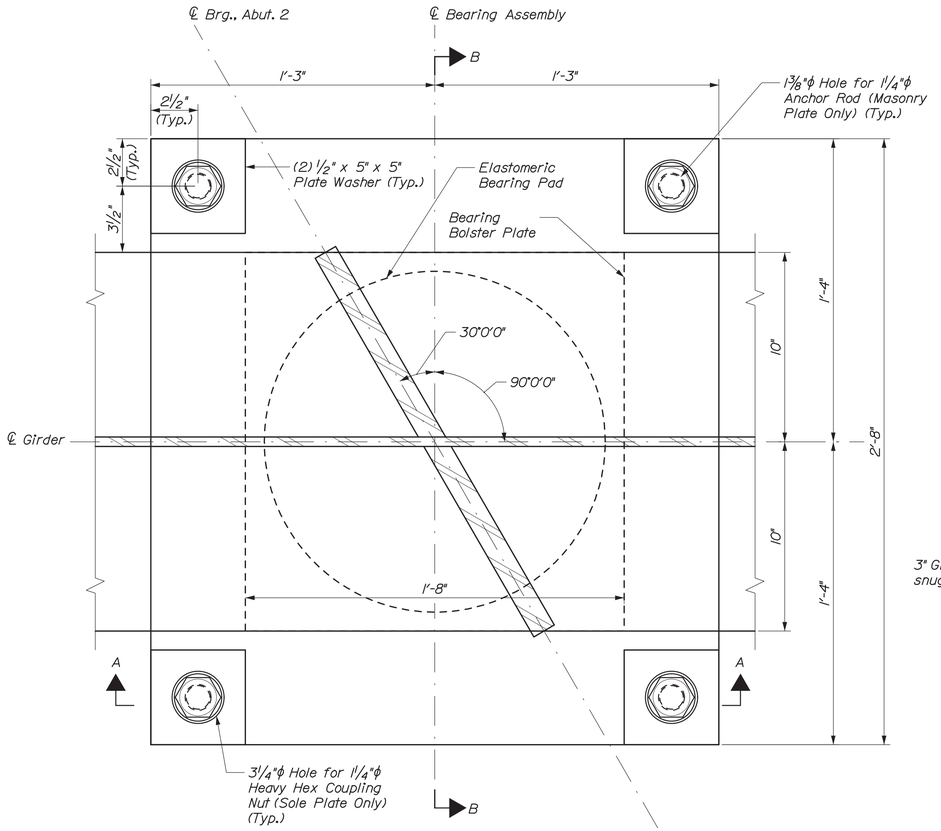
INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BEARING DETAILS I

SHEET NUMBER
195
OF 220

HNTB

Filename: 195_Bearing Details I.dgn Division: Username: Date:3/3/2020



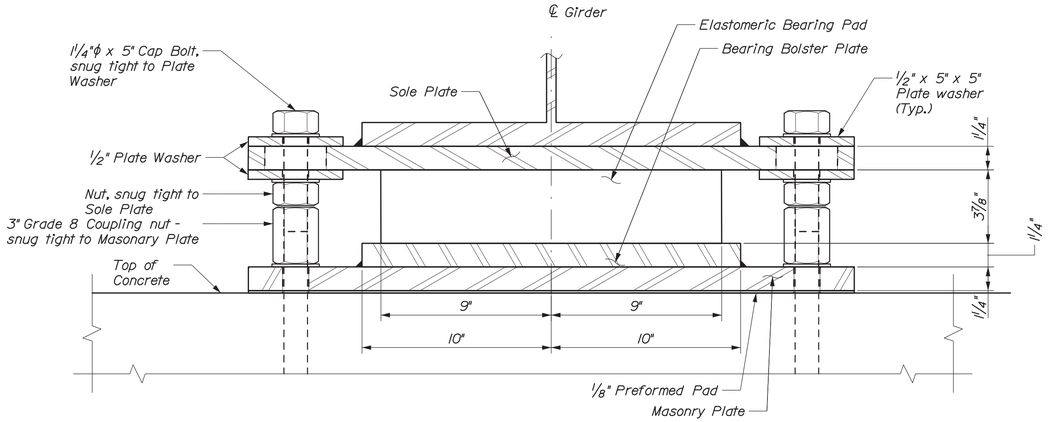

PLAN

## NOTES:

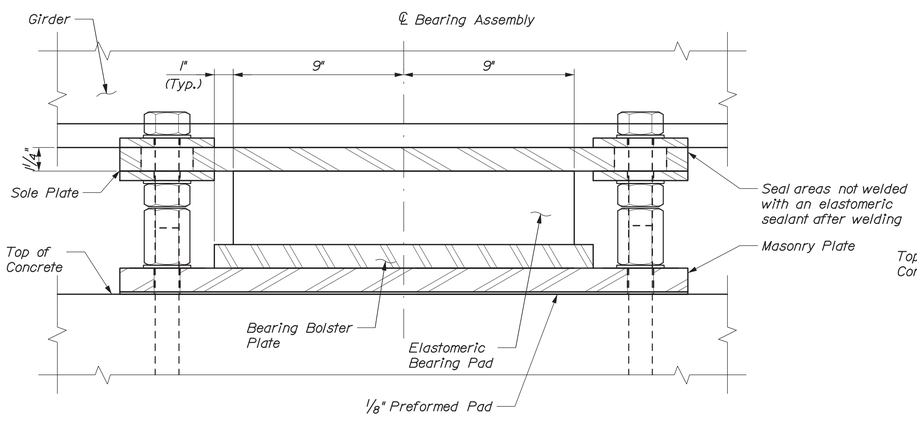
1. For general notes on bearings see "Bearing Notes" on Sheet "Bearing Details I".

2. Prior to starting the trial slide, the Contractor shall verify that all anchor rods for expansion bearings have a projection of 3¼" ⅛" from face of concrete abutment seat. Any anchor rods with project greater than the allowable tolerance shall be cut to meet tolerance.

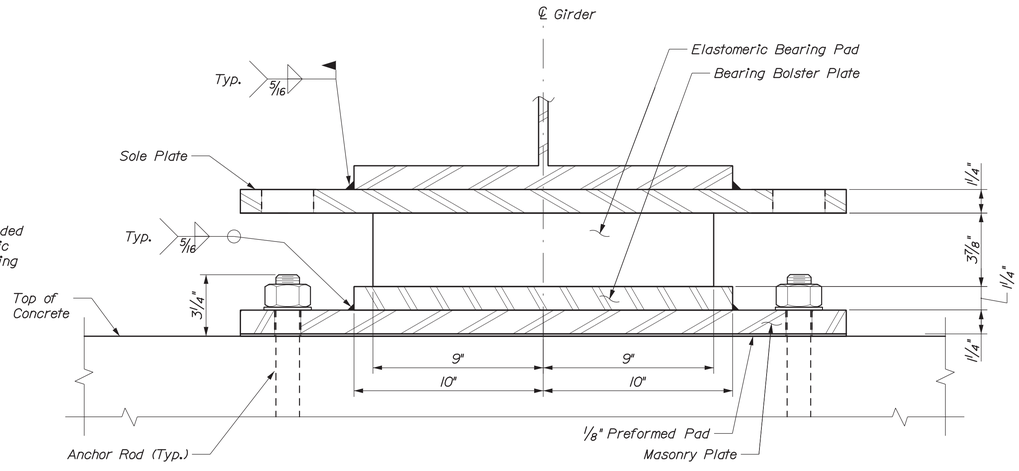
3. To achieve the rotationally fixed condition for expansion bearings, the Contractor shall remove the anchor rod nut, thread a hex coupler nut to the anchor rod, place a heavy hex jamming nut and a ½" thick plate washer between the coupler nut and the sole plate, place a ½" plate washer and a standard 1¼"ϕ washer on top of the sole plate, and thread a 5" cap bolt through the jamming nut and into the coupling nut to a finger tight condition. After all four cap bolts are installed finger tight with the coupling nut, each cap bolt shall be tightened to a snug tight condition to the coupling nut, making sure that the jamming nut is not bearing on the coupling nut. All cap bolts shall be tightened together; turn the cap bolts no more than ¼ turn with a wrench at a time before moving to the next cap bolt, tightening all cap bolts in sequence. After tightening the cap bolts, the Contractor shall verify that the top plate washers are not free to spin by hand. If one plate washer is free to spin, and a gap is visible between the cap bolt and the washer, remove the cap bolt that is not bearing, insert an additional standard washer between the head of the bolt and the plate washer, re-thread the cap bolt into the jamming nut and the cap bolt, and tighten the cap bolt to a snug tight condition in the coupling nut. If two or more top plate washers are free to spin, loosen all cap bolts to a finger tight condition, install an additional washer where necessary, and re-tighten all cap bolts to a snug tight condition. After all four cap bolts are tightened to a snug tight condition in the coupling nut, tighten all four jamming nuts to a snug tight condition against the sole plate, making sure the cap bolt doesn't loosen in the coupling nut.




SECTION B-B
(Rotationally Fixed Temporary Condition)




SECTION A-A
(Rotationally Fixed Temporary Condition)




SECTION B-B

## EXPANSION BEARING ASSEMBLY
(12 Required)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | BY |
| DESIGN-DETAILED | HJW | ERB 2\20 |
| CHECKED-REVIEWED | TJP | TRC 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

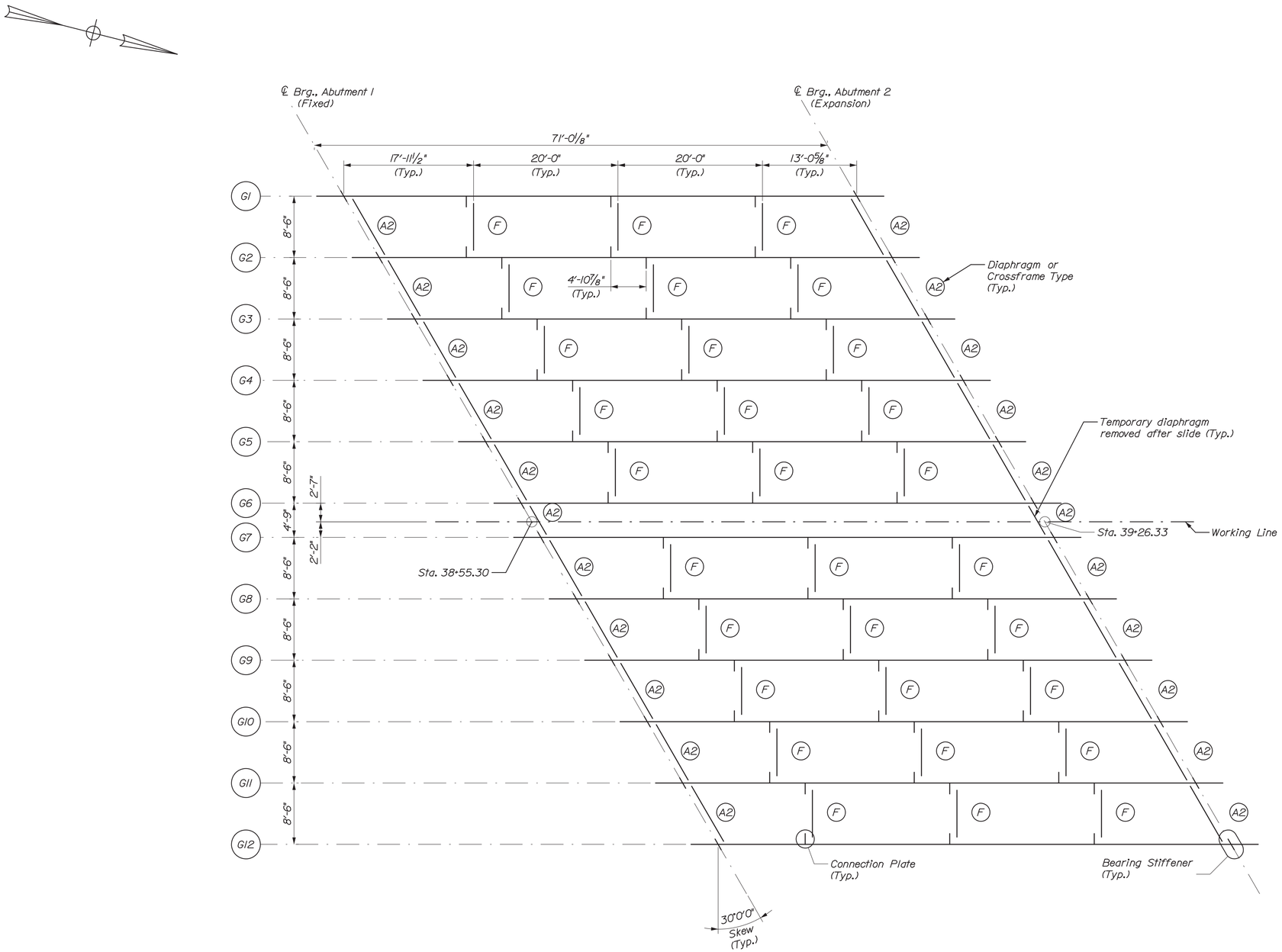
DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BEARING DETAILS II

SHEET NUMBER
196
OF 220

Username:
Division:
Date:3/3/2020
Filename: 196_Bearing Details II.dgn




FRAMING PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | H.W | 2\20 |
| CHECKED-REVIEWED | NMW | 2\20 |
| DESIGN2-DETAILED2 | ERB | |
| DESIGN3-DETAILED3 | TRC | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

FRAMING PLAN

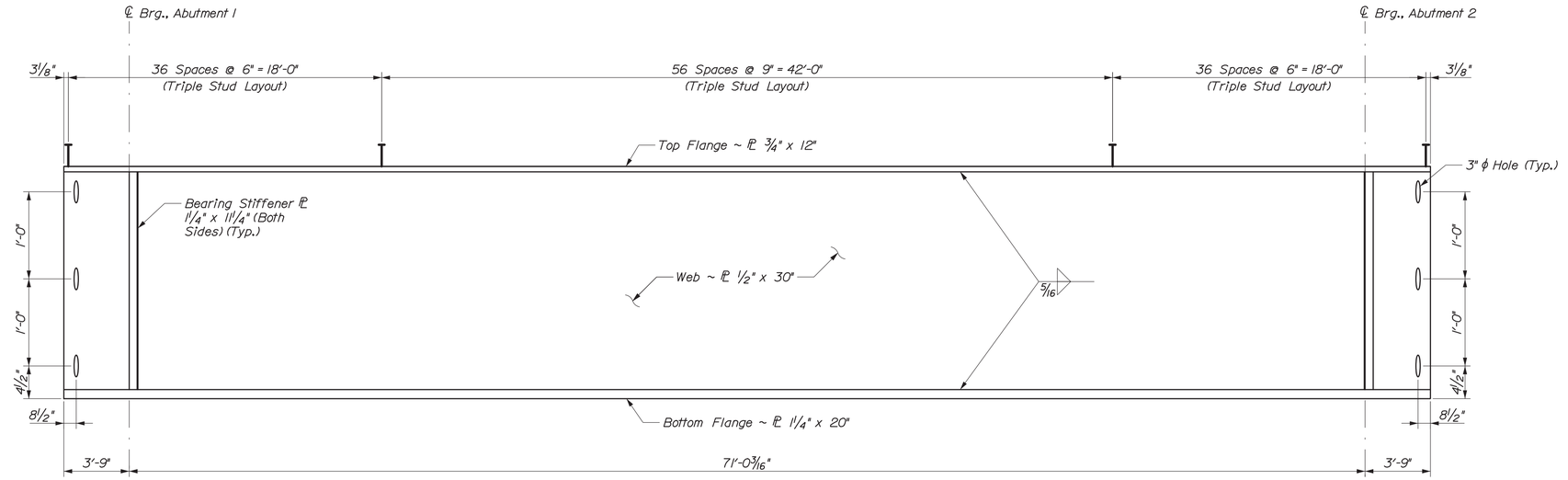
SHEET NUMBER

197

OF 220

HNTB

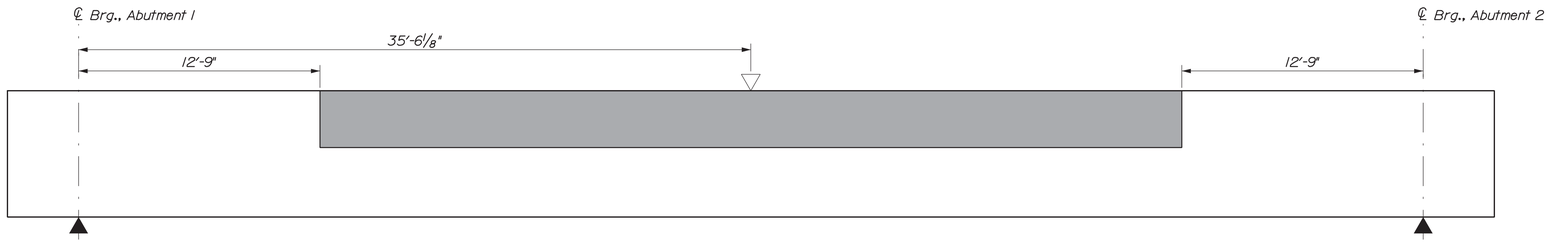
Filename: 197_Framing Plan.dgn Division: Username: Date:3/3/2020




## GIRDER ELEVATION

387 studs per girder (4644 studs total)

| GIRDER | BOTTOM OF SLAB ELEVATIONS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ℄ Brg., Abut. 1 | 0.10 x L | 0.20 x L | 0.30 x L | 0.40 x L | 0.50 x L | 0.60 x L | 0.70 x L | 0.80 x L | 0.90 x L | ℄ Brg., Abut. 2 |
| G1 | 32.12 | 32.10 | 32.08 | 32.05 | 32.00 | 31.94 | 31.85 | 31.76 | 31.64 | 31.52 | 31.39 |
| G2 | 32.76 | 32.75 | 32.73 | 32.70 | 32.65 | 32.59 | 32.50 | 32.40 | 32.28 | 32.15 | 32.01 |
| G3 | 33.40 | 33.38 | 33.37 | 33.34 | 33.29 | 33.22 | 33.14 | 33.03 | 32.91 | 32.77 | 32.63 |
| G4 | 34.03 | 34.02 | 34.00 | 33.97 | 33.92 | 33.85 | 33.76 | 33.65 | 33.53 | 33.39 | 33.25 |
| G5 | 34.66 | 34.64 | 34.62 | 34.59 | 34.54 | 34.47 | 34.38 | 34.27 | 34.15 | 34.01 | 33.87 |
| G6 | 35.29 | 35.27 | 35.24 | 35.20 | 35.15 | 35.08 | 34.99 | 34.88 | 34.76 | 34.63 | 34.49 |
| G7 | 34.89 | 34.87 | 34.85 | 34.82 | 34.78 | 34.73 | 34.66 | 34.58 | 34.48 | 34.38 | 34.28 |
| G8 | 35.53 | 35.52 | 35.51 | 35.48 | 35.44 | 35.39 | 35.32 | 35.24 | 35.14 | 35.03 | 34.91 |
| G9 | 36.17 | 36.16 | 36.15 | 36.13 | 36.09 | 36.04 | 35.97 | 35.88 | 35.78 | 35.67 | 35.55 |
| G10 | 36.81 | 36.80 | 36.79 | 36.77 | 36.73 | 36.68 | 36.61 | 36.52 | 36.42 | 36.31 | 36.19 |
| G11 | 37.45 | 37.44 | 37.42 | 37.40 | 37.36 | 37.31 | 37.24 | 37.16 | 37.06 | 36.95 | 36.83 |
| G12 | 38.08 | 38.07 | 38.05 | 38.03 | 37.99 | 37.94 | 37.87 | 37.78 | 37.69 | 37.58 | 37.47 |




## LEGEND

- Indicates areas always in compression. All other areas are in tension or have stress reversal.
- ▽ Point of maximum positive moment.
- ▲ Point of maximum negative moment.

## STEEL GIRDER BEAM STRESS DIAGRAM

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | PEB | 2\20 | |
| CHECKED-REVIEWED | HJW | | |
| DESIGN2-DETAILED2 | NMW | | |
| DESIGN3-DETAILED3 | TRC | 2\20 | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# STRUCTURAL STEEL DETAILS I

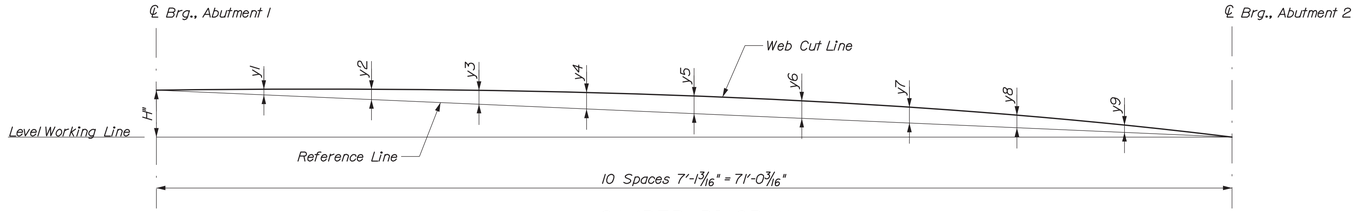
SHEET NUMBER

198

OF 220

HNTB

Filename: 198_Structural Steel Details 1.dgn Division: Username: Date:3/3/2020




## CAMBER DIAGRAM

| GIRDER | CAMBER ORDINATES (INCHES) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | H | ℄ Brg., Abut. 1 | y1 | y2 | y3 | y4 | y5 | y6 | y7 | y8 | y9 | ℄ Brg., Abut. 2 |
| G1 | 8 13/16 | 0 | 1 3/16 | 1 9/16 | 2 1/8 | 2 1/2 | 2 5/8 | 2 1/2 | 2 1/8 | 1 9/16 | 1 3/16 | 0 |
| G2 | 9 | 0 | 7/8 | 1 3/4 | 2 3/8 | 2 3/4 | 2 7/8 | 2 3/4 | 2 3/8 | 1 11/16 | 7/8 | 0 |
| G3 | 9 3/16 | 0 | 1 5/16 | 1 13/16 | 2 7/16 | 2 7/8 | 3 1/16 | 2 7/8 | 2 1/2 | 1 13/16 | 1 5/16 | 0 |
| G4 | 9 3/8 | 0 | 1 5/16 | 1 13/16 | 2 7/16 | 2 7/8 | 3 | 2 7/8 | 2 7/16 | 1 13/16 | 1 5/16 | 0 |
| G5 | 9 1/2 | 0 | 7/8 | 1 3/4 | 2 3/8 | 2 13/16 | 2 15/16 | 2 3/4 | 2 3/8 | 1 3/4 | 1 5/16 | 0 |
| G6 | 9 5/8 | 0 | 1 3/16 | 1 5/8 | 2 3/16 | 2 9/16 | 2 3/4 | 2 5/8 | 2 3/16 | 1 5/8 | 1 3/16 | 0 |
| G7 | 7 7/16 | 0 | 1 1/16 | 1 1/4 | 1 3/4 | 2 1/8 | 2 3/16 | 2 1/16 | 1 3/4 | 1 1/4 | 1 1/16 | 0 |
| G8 | 7 3/8 | 0 | 3/4 | 1 1/2 | 2 1/16 | 2 3/8 | 2 9/16 | 2 3/8 | 2 1/16 | 1 1/2 | 3/4 | 0 |
| G9 | 7 3/8 | 0 | 1 3/16 | 1 9/16 | 2 3/16 | 2 9/16 | 2 11/16 | 2 9/16 | 2 3/16 | 1 9/16 | 1 3/16 | 0 |
| G10 | 7 3/8 | 0 | 1 3/16 | 1 9/16 | 2 3/16 | 2 9/16 | 2 11/16 | 2 9/16 | 2 3/16 | 1 9/16 | 1 3/16 | 0 |
| G11 | 7 3/8 | 0 | 3/4 | 1 1/2 | 2 1/8 | 2 7/16 | 2 5/8 | 2 7/16 | 2 1/8 | 1 1/2 | 3/4 | 0 |
| G12 | 7 5/16 | 0 | 1 1/16 | 1 3/8 | 1 7/8 | 2 1/4 | 2 3/8 | 2 1/4 | 1 15/16 | 1 3/8 | 1 1/16 | 0 |

| GIRDER | DEAD LOAD COMPONENT | DEAD LOAD DEFLECTIONS (INCHES) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ℄ Brg., Abut. 1 | y1 | y2 | y3 | y4 | y5 | y6 | y7 | y8 | y9 | ℄ Brg., Abut. 2 |
| G1 | Steel Dead Load | 0.00 | -0.16 | -0.29 | -0.40 | -0.47 | -0.49 | -0.47 | -0.40 | -0.29 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.46 | -0.90 | -1.24 | -1.44 | -1.55 | -1.45 | -1.25 | -0.91 | -0.47 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.14 | -0.14 | -0.13 | -0.11 | -0.07 | -0.02 | 0.00 |
| G2 | Steel Dead Load | 0.00 | -0.16 | -0.30 | -0.41 | -0.49 | -0.50 | -0.49 | -0.41 | -0.30 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.55 | -1.07 | -1.48 | -1.72 | -1.81 | -1.72 | -1.48 | -1.07 | -0.55 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.12 | -0.14 | -0.12 | -0.11 | -0.07 | -0.02 | 0.00 |
| G3 | Steel Dead Load | 0.00 | -0.16 | -0.31 | -0.42 | -0.49 | -0.53 | -0.49 | -0.42 | -0.31 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.59 | -1.15 | -1.58 | -1.85 | -1.94 | -1.85 | -1.58 | -1.15 | -0.59 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.13 | -0.14 | -0.13 | -0.11 | -0.07 | -0.02 | 0.00 |
| G4 | Steel Dead Load | 0.00 | -0.16 | -0.31 | -0.42 | -0.49 | -0.53 | -0.49 | -0.42 | -0.31 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.60 | -1.15 | -1.60 | -1.86 | -1.96 | -1.86 | -1.60 | -1.15 | -0.60 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.10 | -0.12 | -0.13 | -0.12 | -0.10 | -0.07 | -0.02 | 0.00 |
| G5 | Steel Dead Load | 0.00 | -0.16 | -0.30 | -0.41 | -0.49 | -0.50 | -0.49 | -0.41 | -0.30 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.56 | -1.10 | -1.52 | -1.78 | -1.87 | -1.78 | -1.54 | -1.10 | -0.58 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.12 | -0.14 | -0.12 | -0.11 | -0.07 | -0.02 | 0.00 |
| G6 | Steel Dead Load | 0.00 | -0.16 | -0.29 | -0.40 | -0.47 | -0.49 | -0.47 | -0.40 | -0.29 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.52 | -1.01 | -1.38 | -1.62 | -1.73 | -1.62 | -1.38 | -1.01 | -0.52 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.06 | -0.10 | -0.12 | -0.14 | -0.13 | -0.10 | -0.06 | -0.02 | 0.00 |
| G7 | Steel Dead Load | 0.00 | -0.16 | -0.29 | -0.40 | -0.47 | -0.49 | -0.47 | -0.40 | -0.29 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.44 | -0.85 | -1.18 | -1.38 | -1.46 | -1.38 | -1.18 | -0.85 | -0.43 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.04 | -0.08 | -0.12 | -0.16 | -0.16 | -0.14 | -0.12 | -0.06 | -0.04 | 0.00 |
| G8 | Steel Dead Load | 0.00 | -0.16 | -0.30 | -0.41 | -0.49 | -0.50 | -0.49 | -0.41 | -0.30 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.54 | -1.06 | -1.46 | -1.69 | -1.79 | -1.69 | -1.45 | -1.04 | -0.54 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.13 | -0.16 | -0.13 | -0.11 | -0.07 | -0.02 | 0.00 |
| G9 | Steel Dead Load | 0.00 | -0.16 | -0.31 | -0.42 | -0.49 | -0.53 | -0.49 | -0.42 | -0.31 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.59 | -1.15 | -1.58 | -1.85 | -1.94 | -1.85 | -1.58 | -1.15 | -0.59 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.13 | -0.14 | -0.13 | -0.11 | -0.07 | -0.02 | 0.00 |
| G10 | Steel Dead Load | 0.00 | -0.16 | -0.31 | -0.42 | -0.49 | -0.53 | -0.49 | -0.42 | -0.31 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.60 | -1.15 | -1.60 | -1.86 | -1.96 | -1.86 | -1.60 | -1.15 | -0.60 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.13 | -0.14 | -0.13 | -0.11 | -0.07 | -0.02 | 0.00 |
| G11 | Steel Dead Load | 0.00 | -0.16 | -0.30 | -0.41 | -0.49 | -0.50 | -0.49 | -0.41 | -0.30 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.56 | -1.09 | -1.52 | -1.76 | -1.87 | -1.78 | -1.52 | -1.10 | -0.56 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.07 | -0.11 | -0.12 | -0.16 | -0.12 | -0.11 | -0.07 | -0.02 | 0.00 |
| G12 | Steel Dead Load | 0.00 | -0.16 | -0.29 | -0.40 | -0.47 | -0.49 | -0.47 | -0.40 | -0.29 | -0.16 | 0.00 |
| | Deck Concrete Load | 0.00 | -0.50 | -0.98 | -1.34 | -1.58 | -1.69 | -1.60 | -1.36 | -1.00 | -0.52 | 0.00 |
| | Superimposed Dead Load | 0.00 | -0.02 | -0.06 | -0.11 | -0.13 | -0.16 | -0.14 | -0.11 | -0.07 | -0.02 | 0.00 |

## STRUCTURAL STEEL NOTES:

1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the finished grade profile.

2. No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet or 10 percent of the span length (whichever is greater) from the points of maximum negative moment or maximum positive moment. Butt weld splices in flanges shall be not less than 3 feet from transverse butt welds in the web plates and no transverse web or flange butt welds shall be located within 3 feet of other transverse welds (e.g. connection plates to web welds) on either flange or web. No transverse butt weld splices will be allowed in areas of stress reversal.

3. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be not less than 20 feet in length unless otherwise shown on the plans.

4. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.

5. Crossframe and diaphragm connection plates may be either plumb or normal to the top flange.

6. All connection plates shall be welded to the web and top and bottom flanges using 5/16" fillet welds.

7. Shear Connectors shall be installed per Standard Detail 505(01).

8. Drip bars shall be installed in accordance with Standard Detail 504(10).

9. Girders shall be metallized in accordance with Standard Specifications Section 506. Diaphragms may be metallized or hot-dipped galvanized after fabrication.

10. Diaphragms between girders G06 and G07 shall be removed after the bridge has been slid into its final position. Diaphragm removal shall occur within two weeks of opening the bridge to traffic.

11. Cross frames shall be detailed and fabricated to fit under total steel dead load.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

STRUCTURAL STEEL DETAILS II

SHEET NUMBER

199

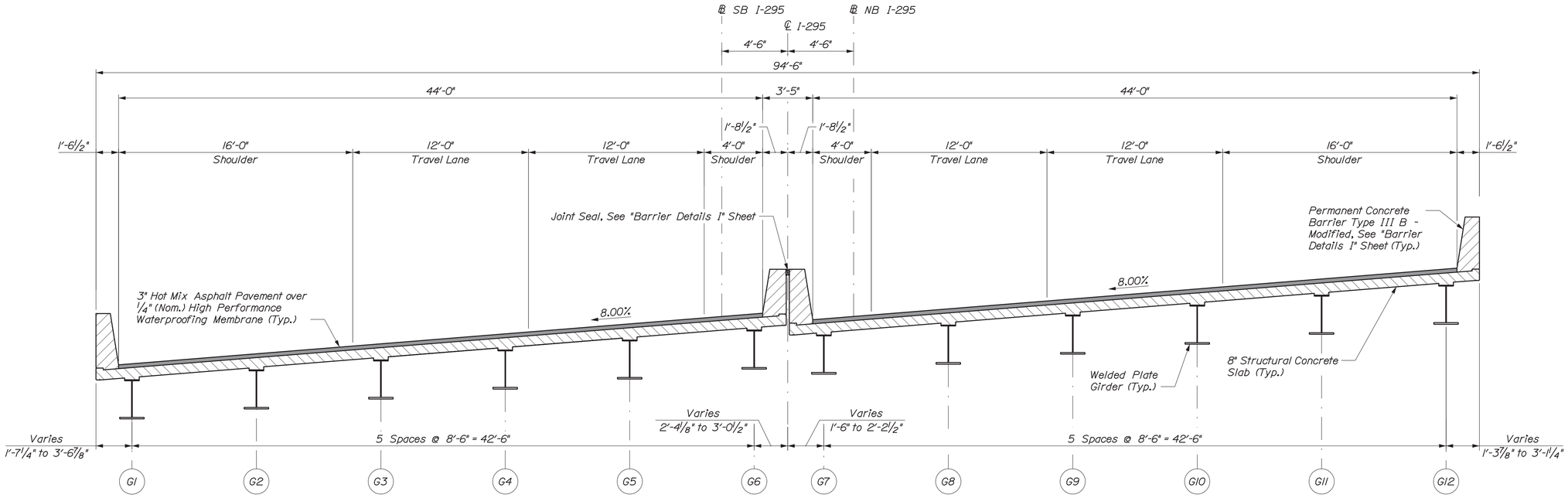
OF 220

Username:

Date:3/3/2020

Division:

Filename: 199_Structural Steel Details II.dgn




TRANSVERSE SECTION

## SUPERSTRUCTURE NOTES:

1. The theoretical blocking used for design of the structure is 3" (2 1/4" clear) at the centerline of bearing of the abutments. Refer to Standard Detail 502(03) for blocking details.

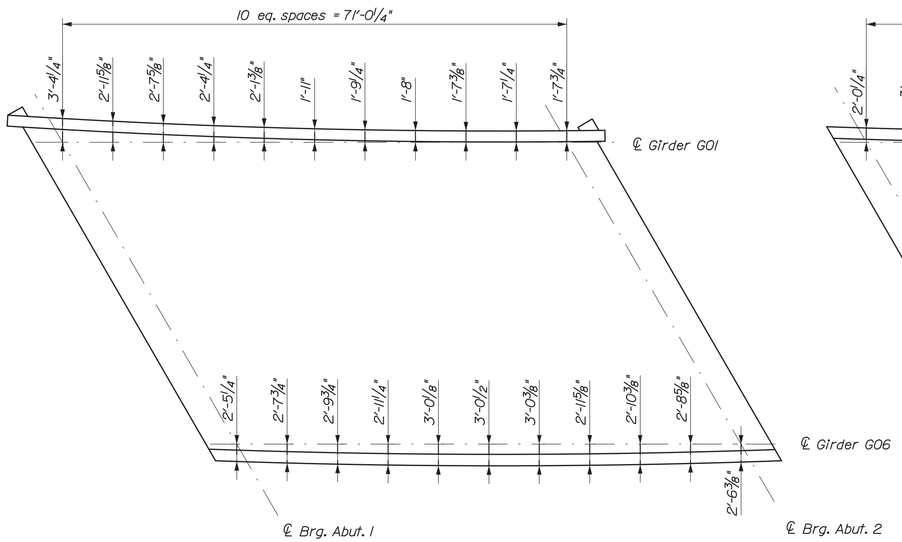
2. Reinforcing bars shall have a minimum concrete cover of 2" unless otherwise noted.

3. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.

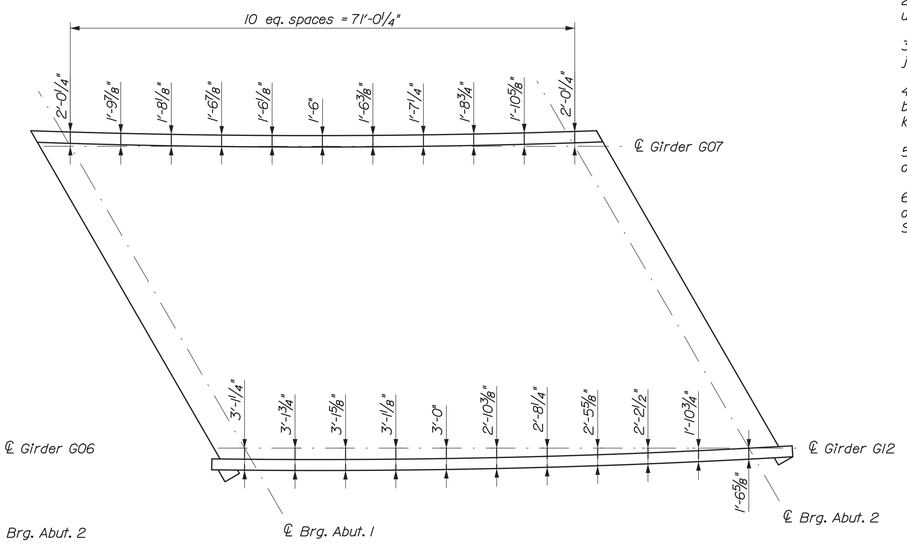
4. The superstructure slab and semi-integral backwall for each bound shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made.

5. The use of Precast Concrete Deck Panels will not be allowed on this project.

6. Concrete for the semi-integral backwall will be paid as part of Pay Item 502.26, Structural Concrete Roadway and Sidewalk Slab on Steel Bridges.




SOUTHBOUND FASCIA OFFSET PLAN




NORTHBOUND FASCIA OFFSET PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | ERB | 2.'20 |
| CHECKED-REVIEWED | NMW | TRC | 2.'20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

TRANSVERSE SECTION

SHEET NUMBER

200

OF 220

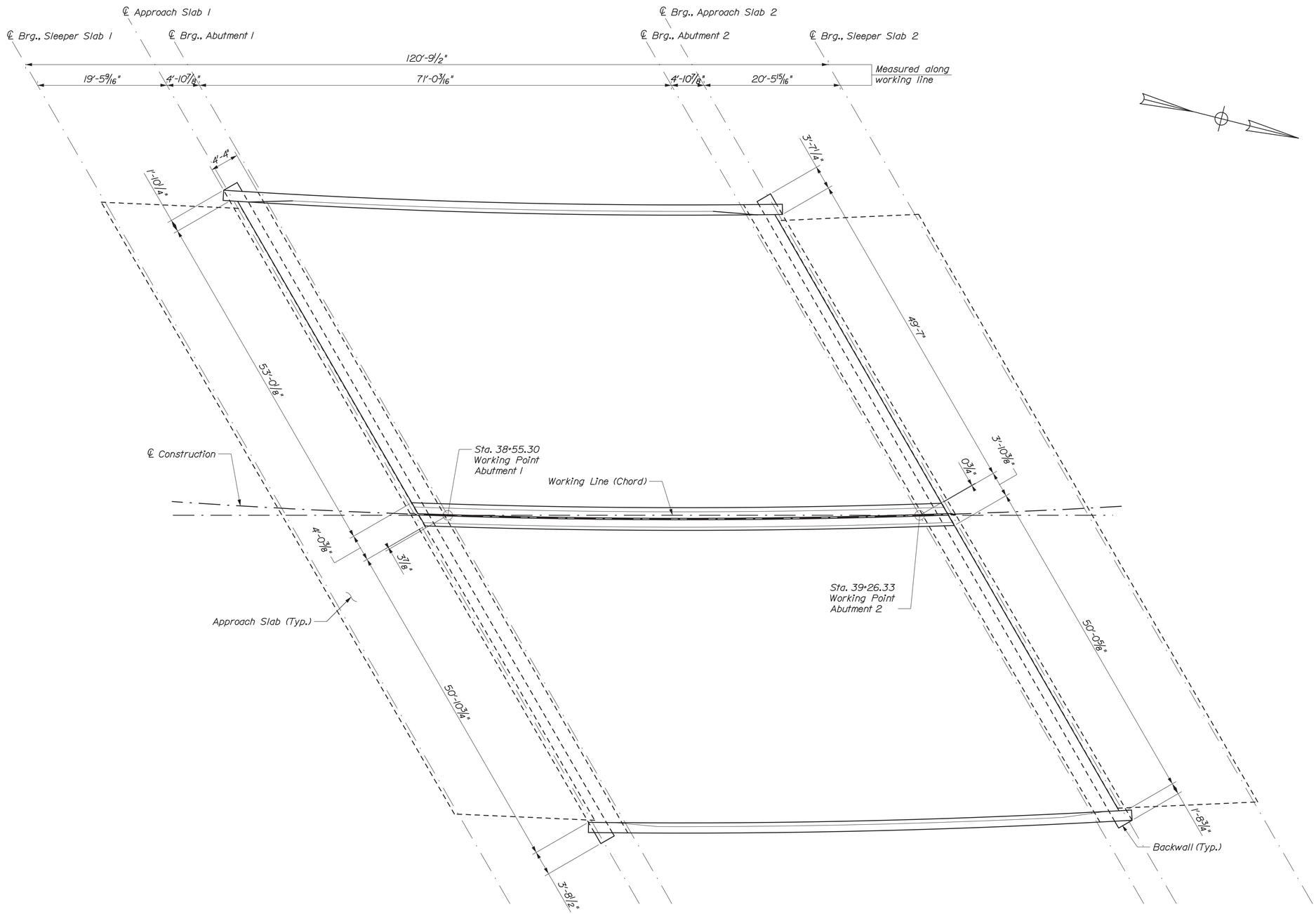
HNTB

Date:4/13/2020

Username:

Division:

Filename: 200_Transverse Section.dgn




SUPERSTRUCTURE PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| D. EATON | | |
| PROJ. MANAGER | ERB | 2.'20 |
| DESIGN-DETAILED | HJW | 2.'20 |
| CHECKED-REVIEWED | NWM | |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

SUPERSTRUCTURE PLAN

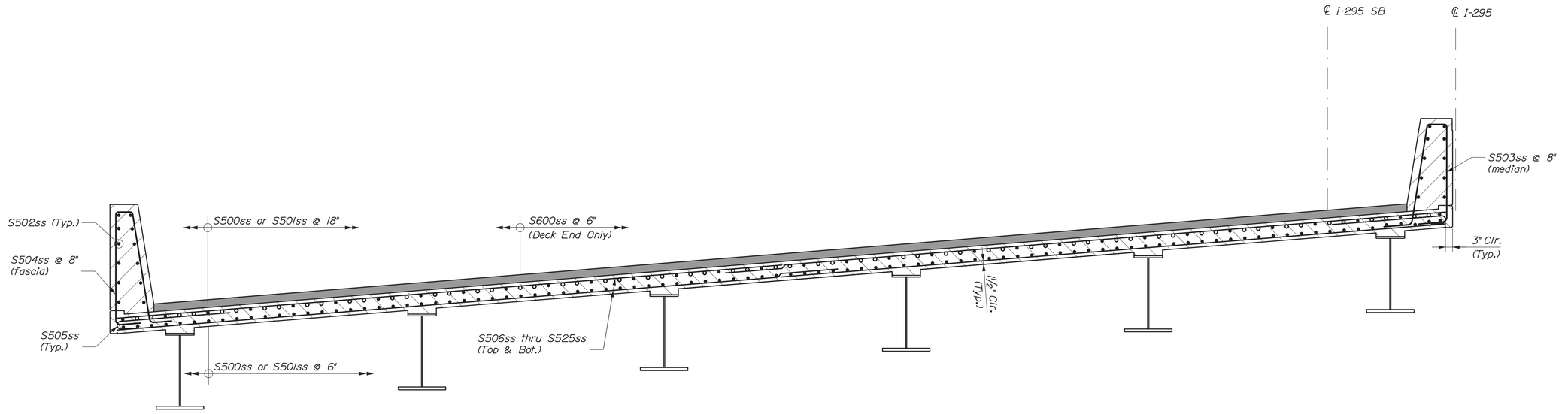
SHEET NUMBER

201

OF 220

HNTB

Filename: 201_Superstructure Plan.dgn Division: Username: Date:3/3/2020




TRANSVERSE SECTION - REINFORCING

(Southbound Shown, Looking Upstation)

(Northbound Similar, Opposite Hand)

NOTES:

1. Shear connectors on girder top flanges not shown for clarity.
2. Refer to "Barrier Details" for additional information regarding barrier reinforcing.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933 BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | HJW | ERB 2\20 |
| CHECKED-REVIEWED | NMW | TRC 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

TRANSVERSE SECTION
REINFORCING

SHEET NUMBER

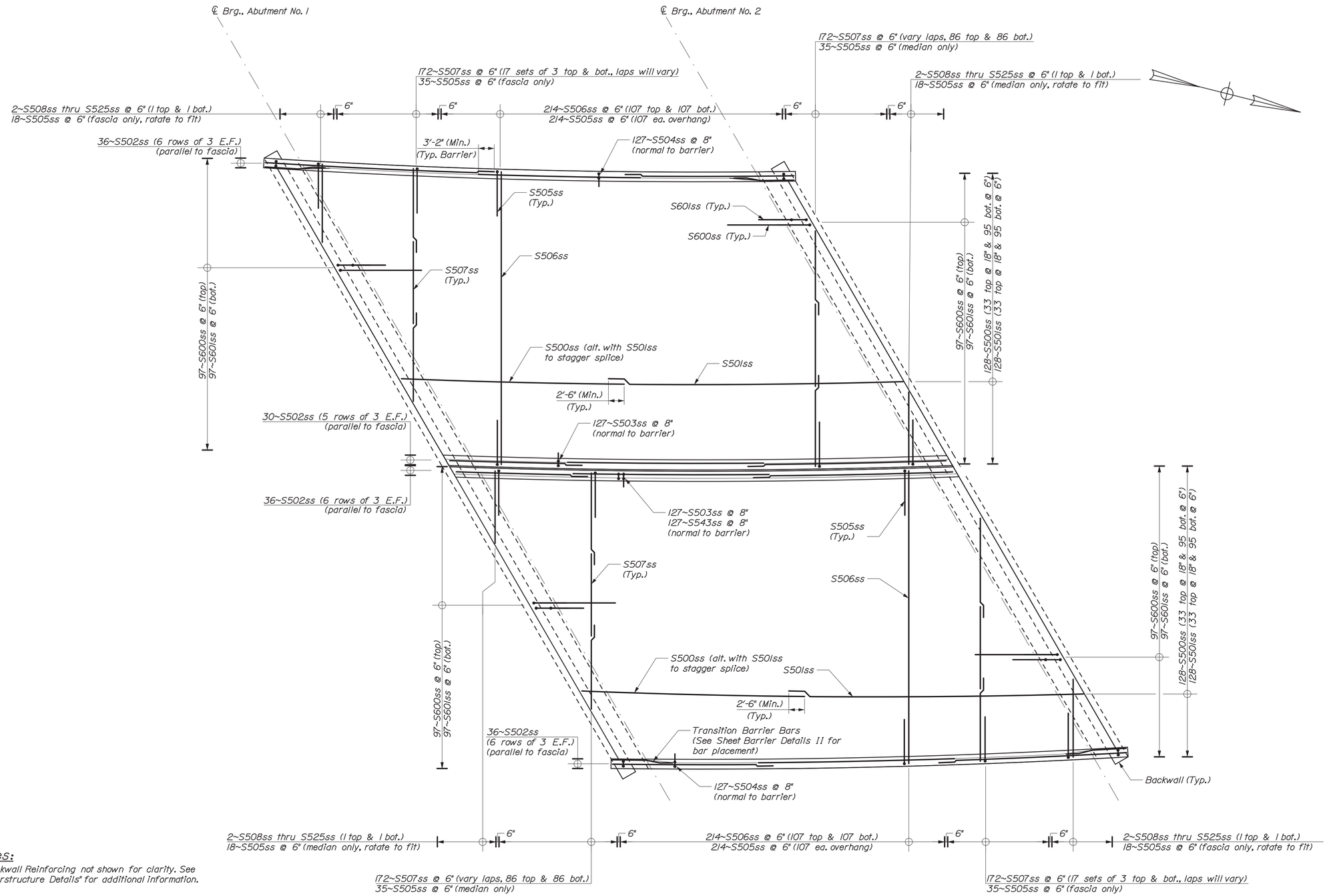
202

OF 220

HNTB

Filename: 202_Transverse Section Reinforcing.dgn Division:

Username: Date:3/3/2020




## Notes:

1. Backwall Reinforcing not shown for clarity. See "Superstructure Details" for additional information.

2. Longitudinal reinforcing bars (S500ss and S501ss) shall be placed along the bridge curve.

4. All bars layed out normal or parallel to girders unless otherwise noted.

## SUPERSTRUCTURE PLAN - REINFORCING

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | BY | DATE |
|---|---|---|---|
| DESIGN-DETAILED | H.W. | ERB | 2.'20 |
| CHECKED-REVIEWED | NMW | TRC | 2.'20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

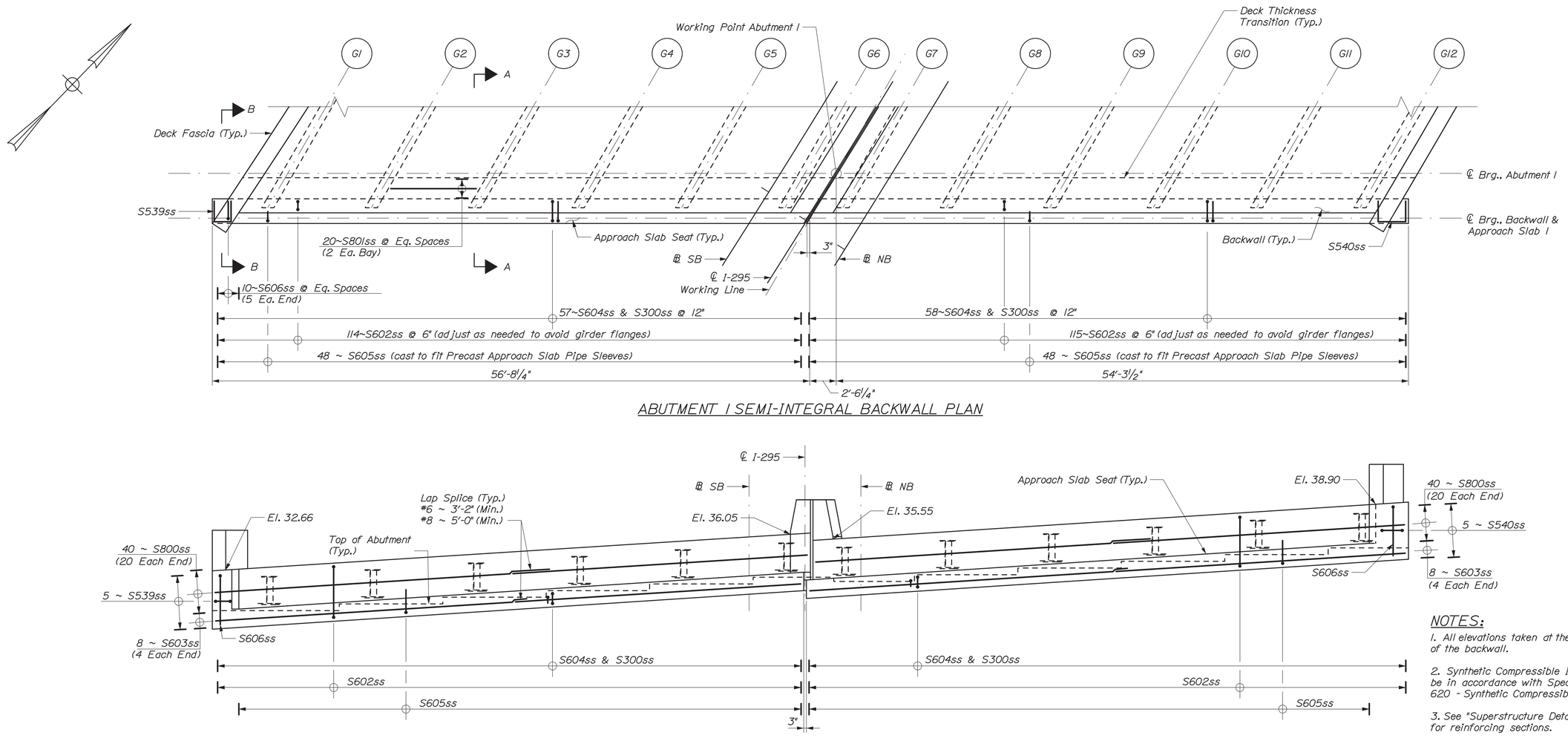
DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

SUPERSTRUCTURE PLAN
REINFORCING

SHEET NUMBER
203
OF 220

Filename: 203_Superstructure Plan Reinforcing.dgn Division: Username: Date:3/3/2020



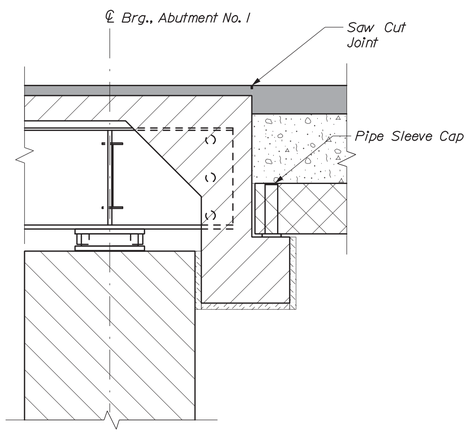

## ABUTMENT 1 SEMI-INTEGRAL BACKWALL PLAN



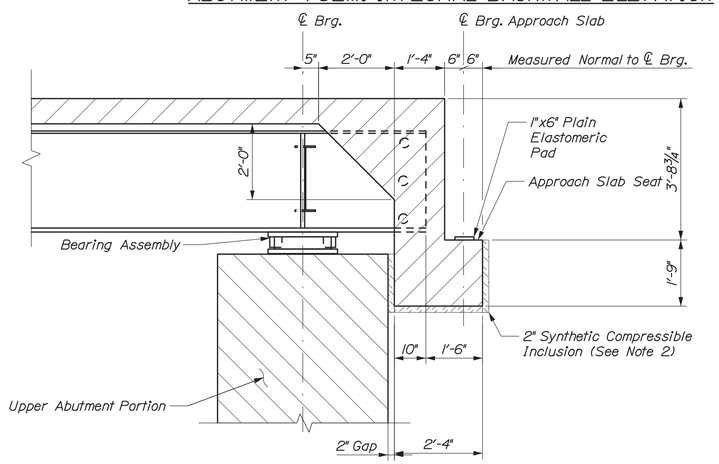

## ABUTMENT 1 SEMI-INTEGRAL BACKWALL ELEVATION

### NOTES:

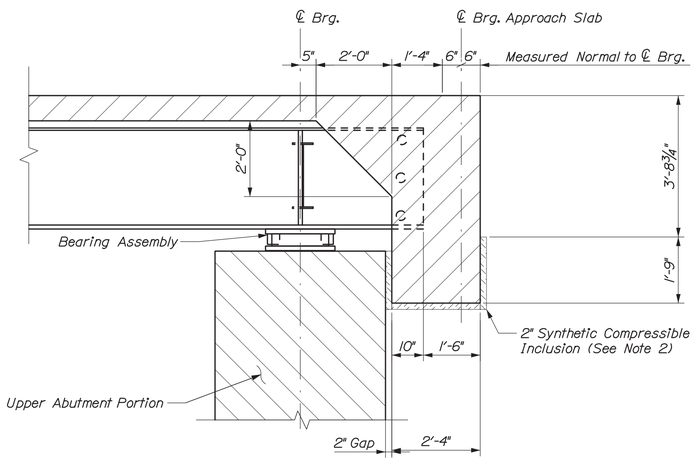
1. All elevations taken at the south face of the backwall.
2. Synthetic Compressible Inclusion shall be in accordance with Special Provision 620 - Synthetic Compressible Inclusion
3. See "Superstructure Details 11" sheet for reinforcing sections.
4. The Contractor may drill and anchor the S605ss approach slab dowel bars.




SECTION A-A - PAVEMENT DETAIL




SECTION A-A




SECTION B-B
(Barrier not shown for clarity)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

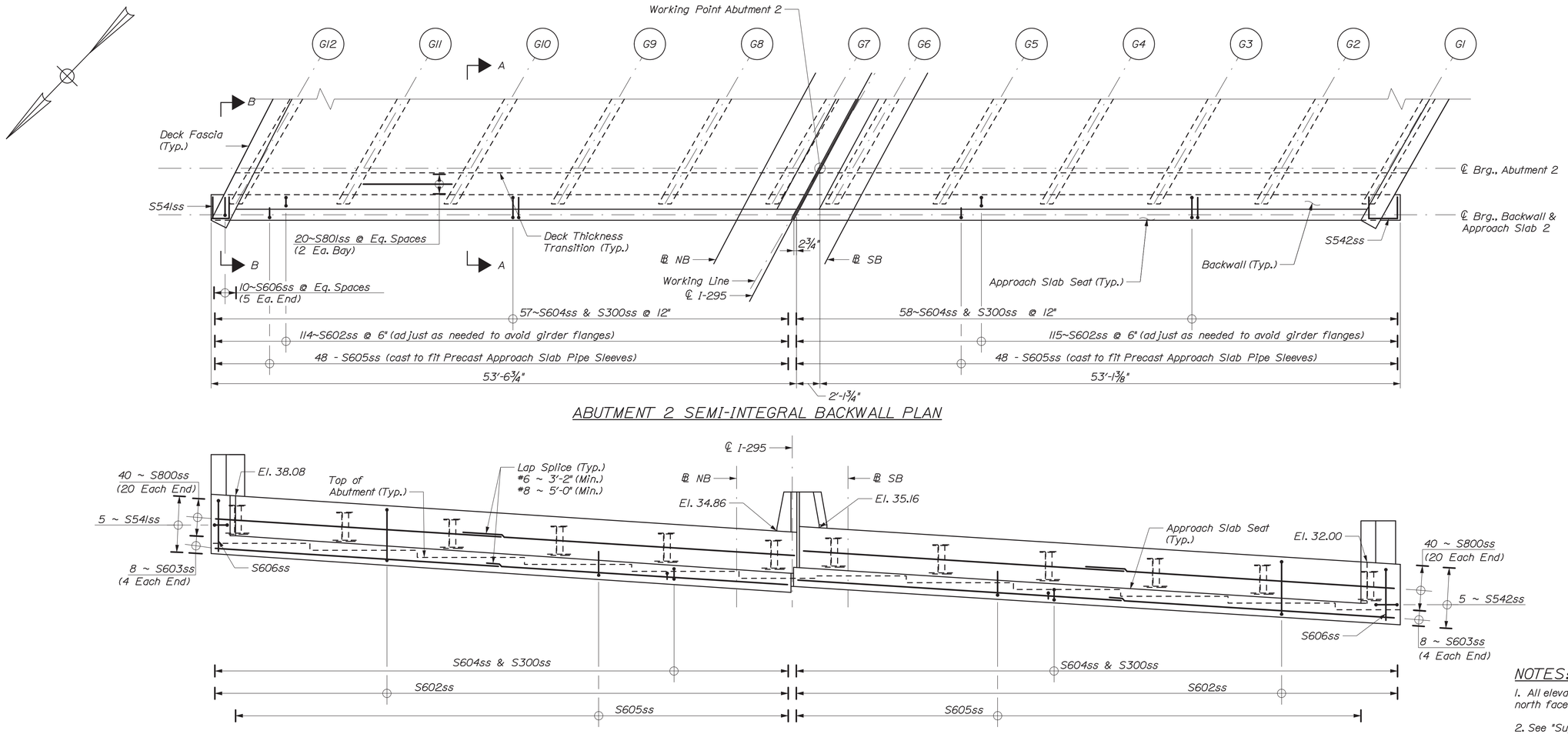
DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# SUPERSTRUCTURE DETAILS I

SHEET NUMBER
204
OF 220

Filename: 204_Superstructure Details 1.dgn Division: Username: Date:3/3/2020



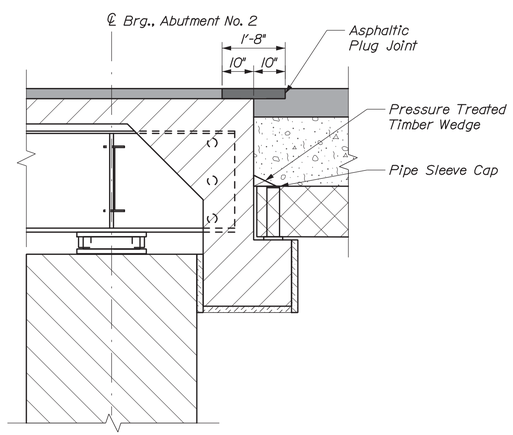

## ABUTMENT 2 SEMI-INTEGRAL BACKWALL PLAN



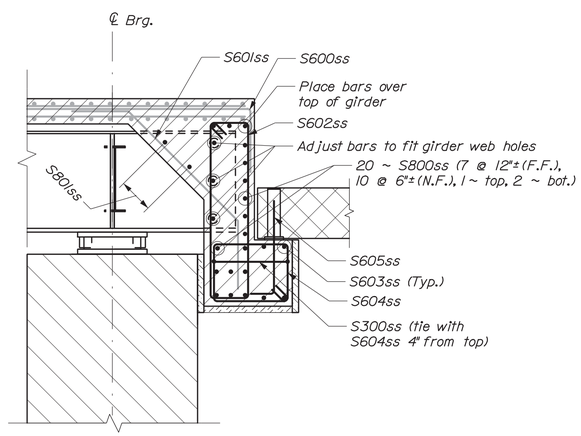

## ABUTMENT 2 SEMI-INTEGRAL BACKWALL ELEVATION

### NOTES:

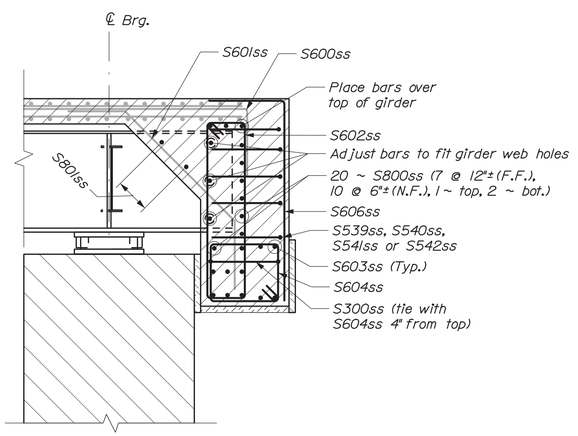
1. All elevations taken at the north face of the backwall.
2. See "Superstructure Details I" sheet for geometry sections.




## SECTION A-A - PAVEMENT DETAIL




## SECTION A-A - REINFORCING DETAIL




## SECTION B-B - REINFORCING DETAIL

(Barrier not shown for clarity)

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# SUPERSTRUCTURE DETAILS II

SHEET NUMBER

205

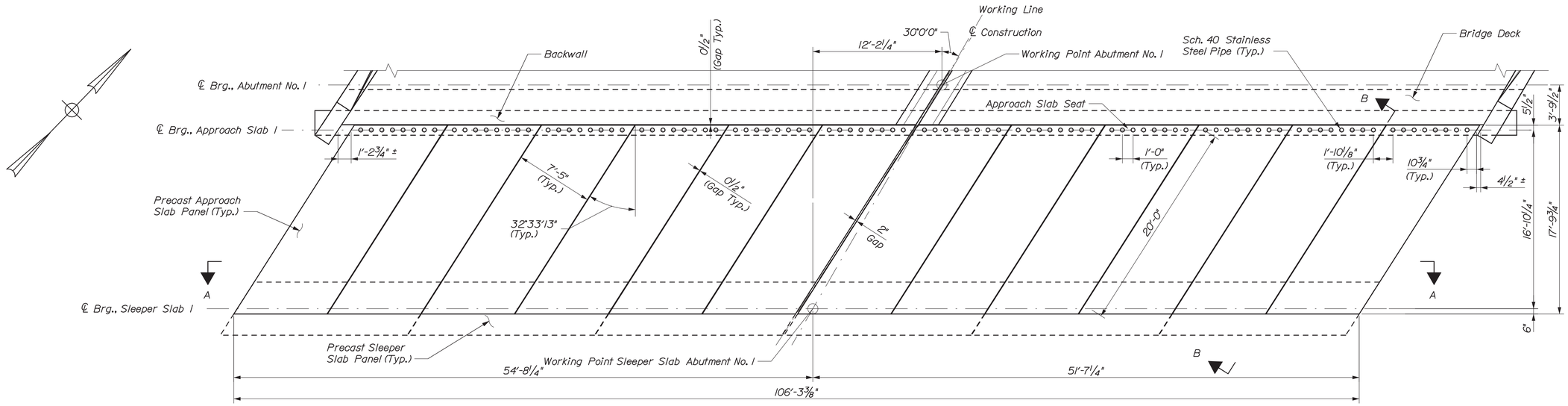
OF 220

Username:

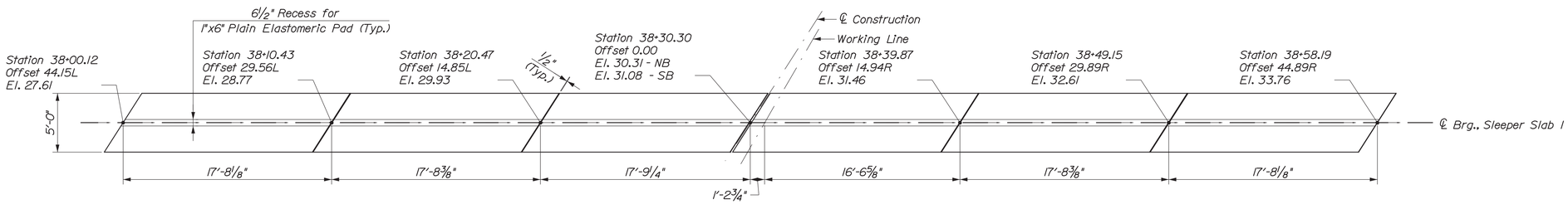
Date:3/3/2020

Division:

Filename: 205_Superstructure Details II.dgn

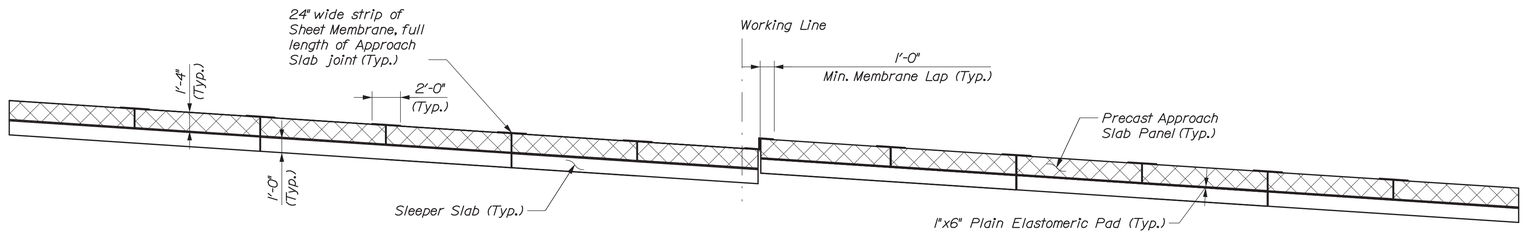



## APPROACH SLAB NO. 1 PLAN




## SLEEPER SLAB APPROACH NO. 1

NOTE: Elevations are to bottom of sleeper slab.




## SECTION A-A

## NOTES:

1. Sleeper Slabs shall be placed on a minimum of 6" of Granular Borrow, see sheet "Abutment and Wingwall Sections V1".

2. No connection is required between adjacent sleeper or approach slab sections.

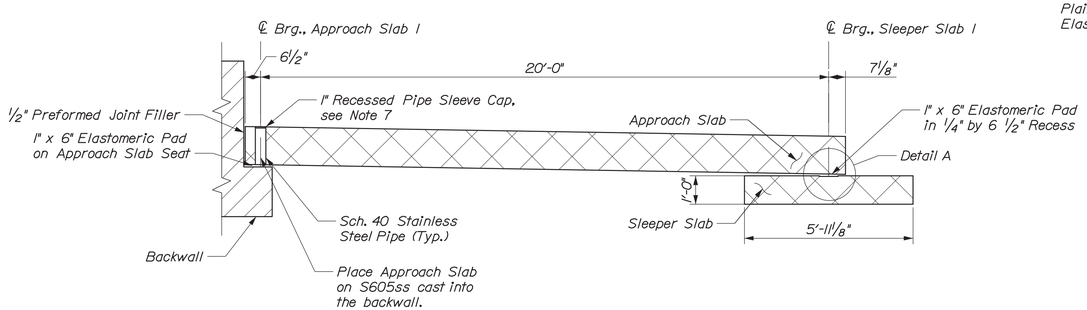
3. Sheet membrane for the backwall connection, shown on sheets "Superstructure Details I" and "Superstructure Details II" longitudinal slab joints, and the longitudinal joint between the northbound and southbound center approach slabs will be incidental to Pay Item 534.7601 - Precast Approach Slab.

4. Elastomeric bearing pads shall be incidental to Pay Item 534.7601 - Precast Approach Slab.

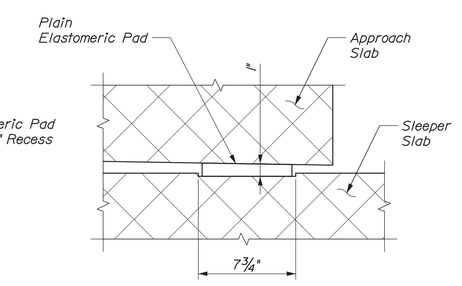
5. Concrete for precast sleeper slabs and approach slabs shall meet the requirements of Class P concrete. The Contractor may self-perform the construction of the approach slabs and sleeper slabs. If so, the Contractor shall construct the precast approach slabs and sleeper slabs on site or at a location coordinated with the Department.

6. The Contractor shall adjust the center location of each approach slab pipe sleeve to correspond to the center of the backwall dowels as necessary.

7. The Contractor shall design the recessed pipe sleeve cap. The cap may be either an insert to the pipe sleeve or a cover in a recessed blockout in the top of the concrete approach slab. The pipe sleeve cap must meet the following: be made of an environmentally durable material i.e. galvanized steel or stainless steel, sit flush or below the top of the approach slab, not interfere with the movement between the pipe sleeve and the S605ss dowel bar, prevent soil migration into the pipe sleeve, and withstand a 400 pound impact.




## SECTION B-B




## DETAIL A

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | ERB | 2\20 |
| CHECKED-REVIEWED | KEB | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

APPROACH SLAB 1
PLAN AND SECTION

SHEET NUMBER

206

OF 220

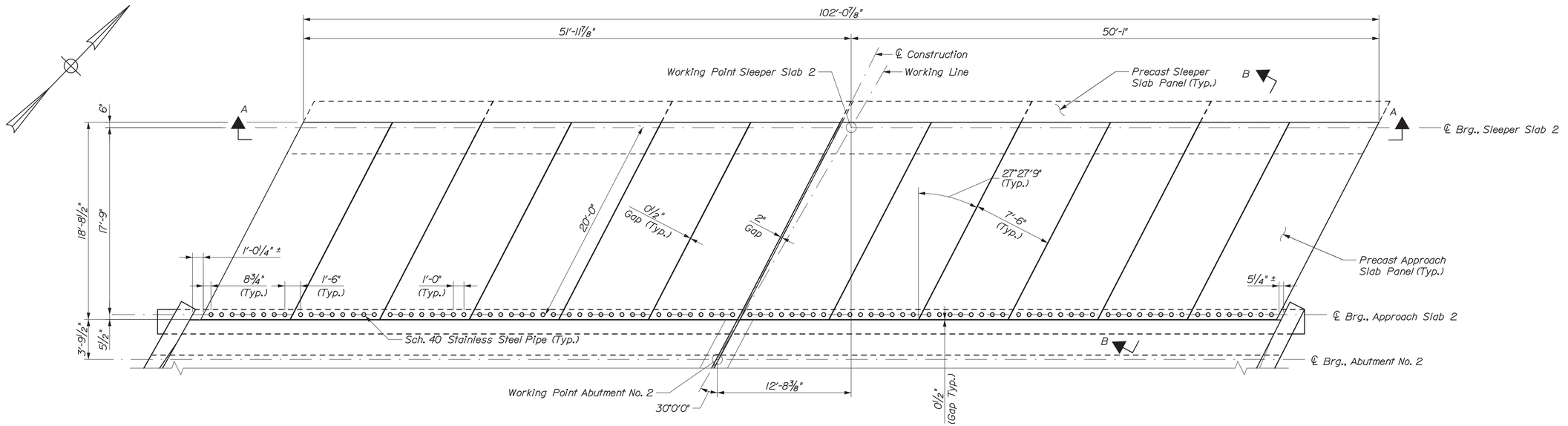
Username:

Division:

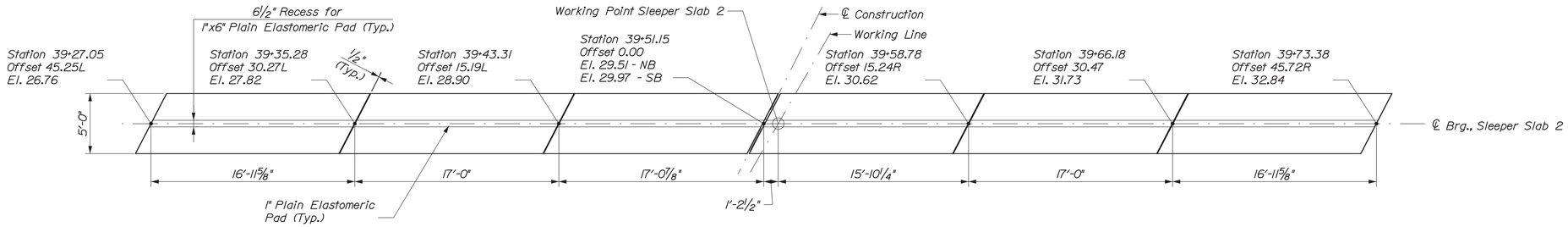
Date:3/3/2020

Filename: 206_Approach Slab 1.dgn

Filename: 207_Approach Slab 2.dgn Division: Username: Date:3/3/2020

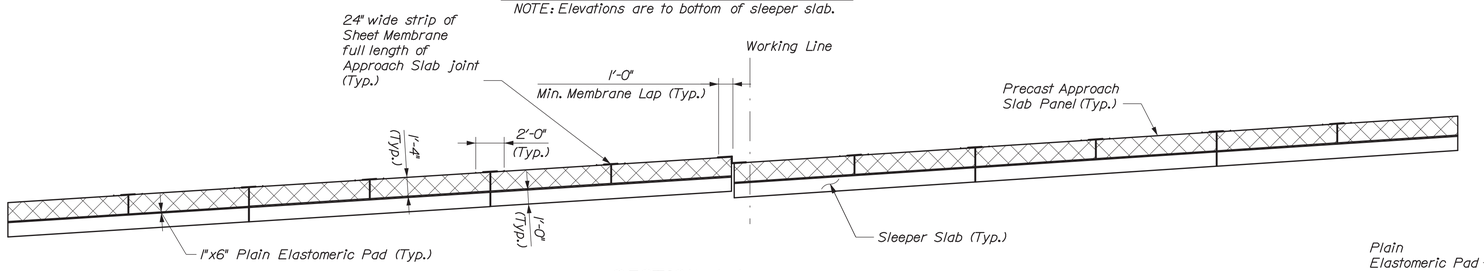



## APPROACH SLAB NO. 2 PLAN

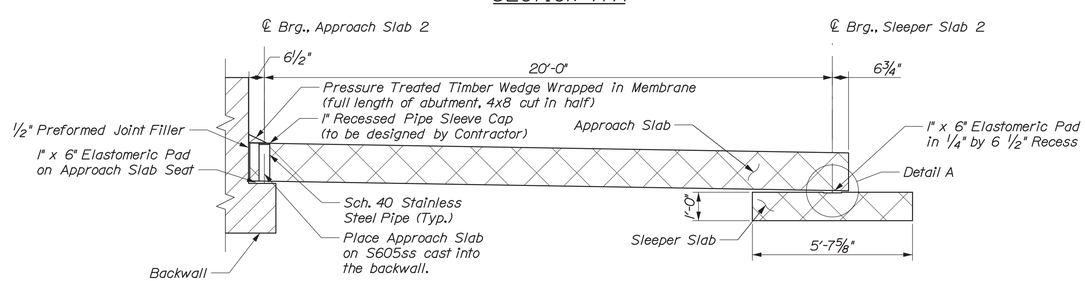



## SLEEPER SLAB APPROACH NO. 2

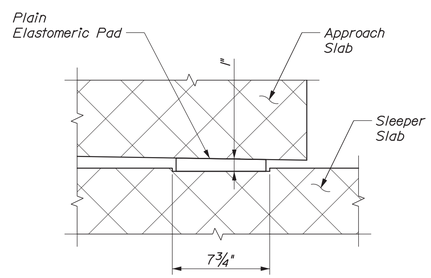
NOTE: Elevations are to bottom of sleeper slab.




## SECTION A-A




## SECTION B-B




## DETAIL A

### NOTES:

1. See "Approach Slab 1 Plan and Section" for Approach Slab Notes.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | HJW | 2\20 |
| CHECKED-REVIEWED | KEB | 2\20 |
| DESIGN2-DETAILED2 | EB | |
| DESIGN3-DETAILED3 | TRC | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

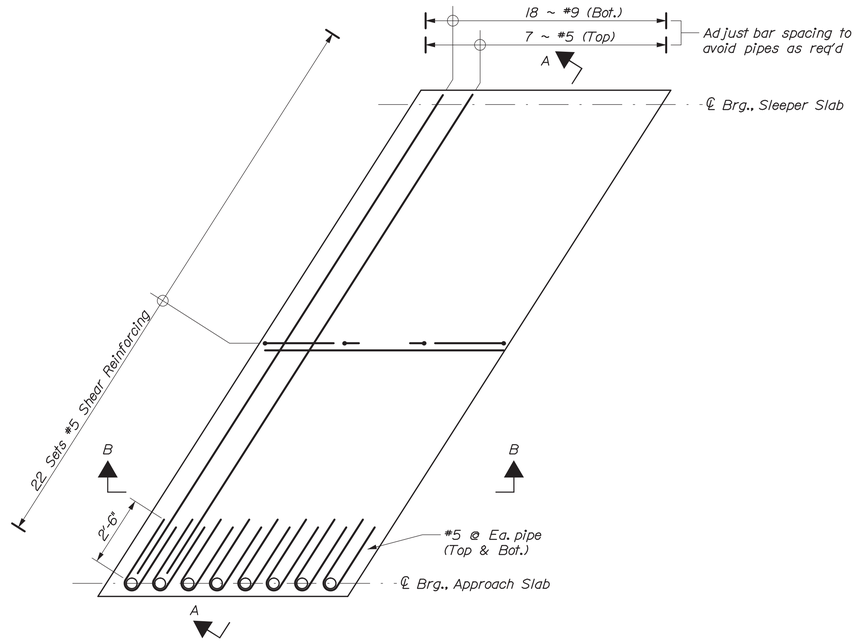
APPROACH SLAB 2
PLAN AND SECTION

SHEET NUMBER

207

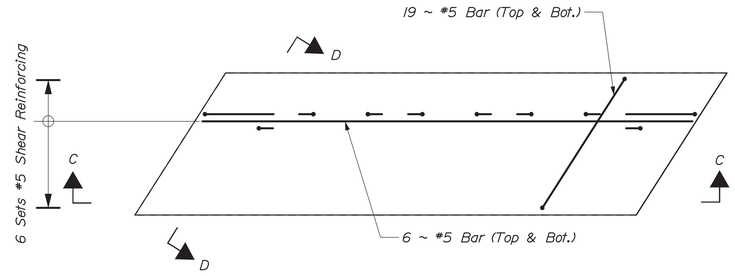
OF 220

HNTB



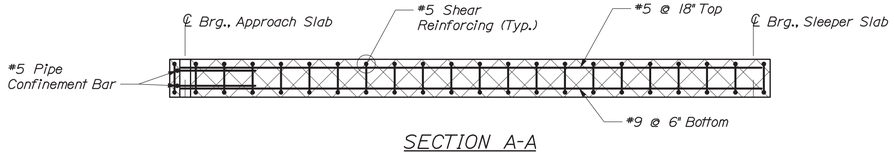

APPROACH SLAB PANEL REINFORCING PLAN

(Approach Slab 1 shown, Approach Slab 2 similar)

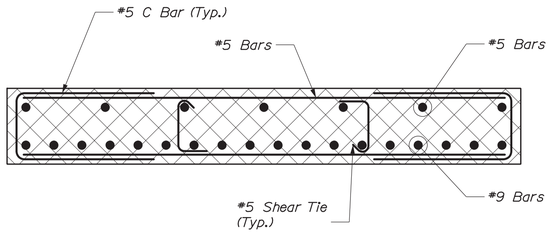



SLEEPER SLAB PANEL REINFORCING PLAN

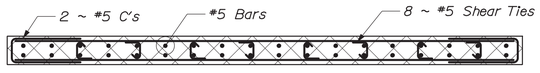
(Sleeper Slab 1 shown, Sleeper Slab 2 similar)



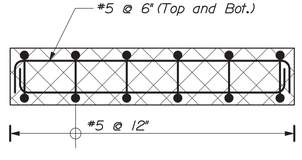

SECTION A-A




SECTION B-B




SECTION C-C




SECTION D-D

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | H.JW | BY | DATE |
| CHECKED-REVIEWED | KEB | ERB | 2\20 |
| DESIGN2-DETAILED2 | | TRC | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

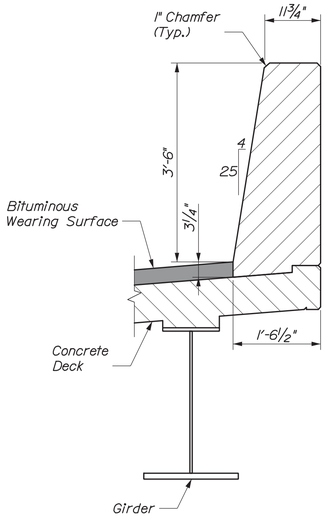
# APPROACH SLAB REINFORCING

SHEET NUMBER

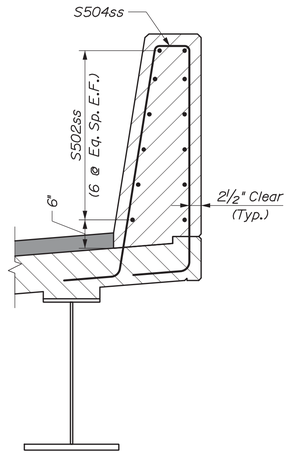
208

OF 220

Filename: 208_Approach Slab Reinforcing.dgn Division: Username: Date:3/3/2020




FASCIA BARRIER - MASONRY

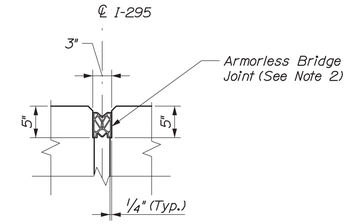



FASCIA BARRIER - REINFORCING

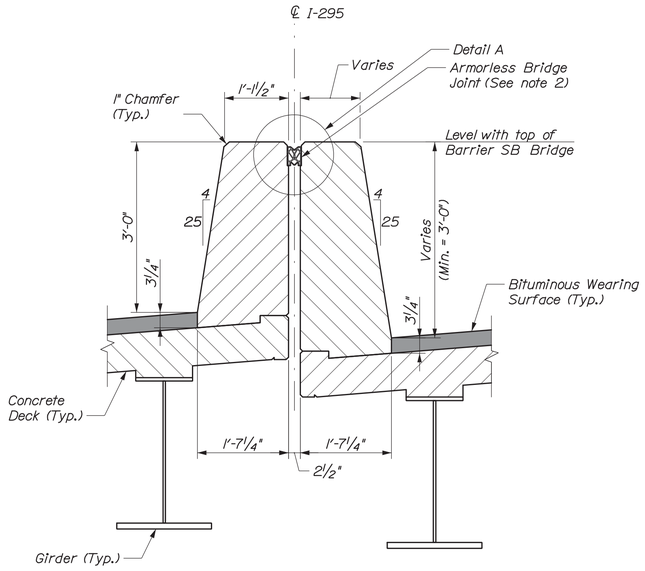
## NOTES:

1. All bridge barriers shall have full perimeter ¾" chamfered dummy joints spaced at a maximum of 20'-0" on center. Contraction joints shall be no more than 40'-0" on center and chamfers shall be similar to dummy joints.

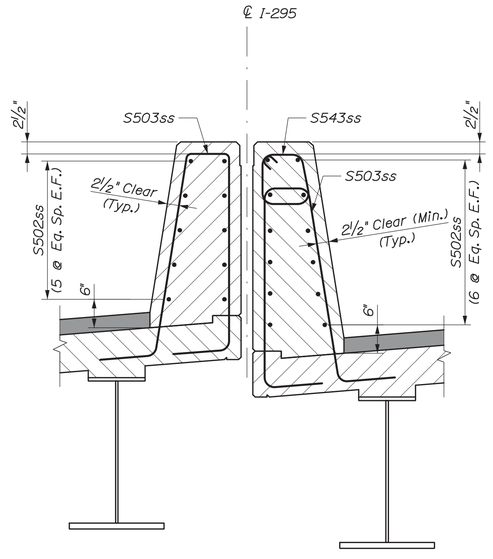
2. Armorless bridge joint shall be in accordance with Special Provision 520.223 "Armorless Bridge Joint".




DETAIL A




MEDIAN BARRIER - MASONRY




MEDIAN BARRIER - REINFORCING

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BARRIER DETAILS I
BRIDGE BARRIER

SHEET NUMBER

209

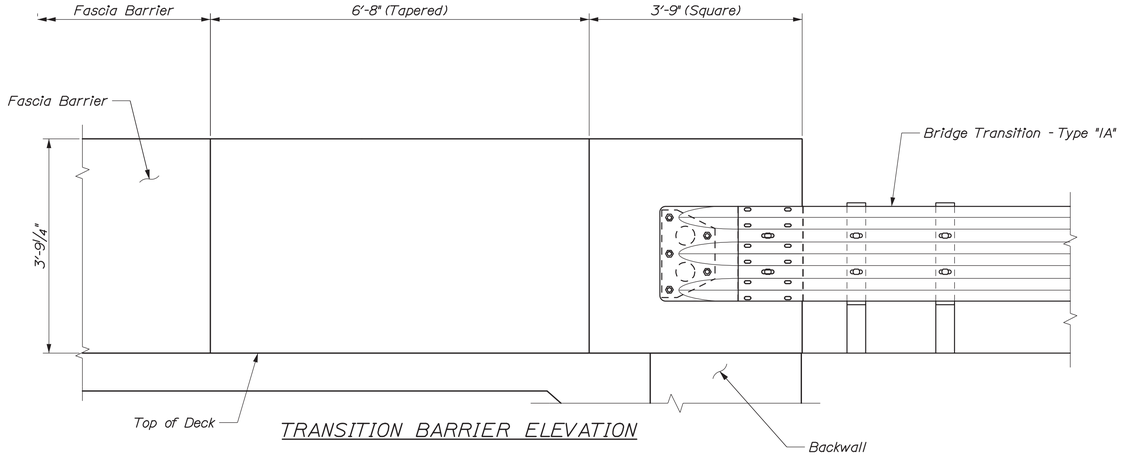
OF 220

Username:

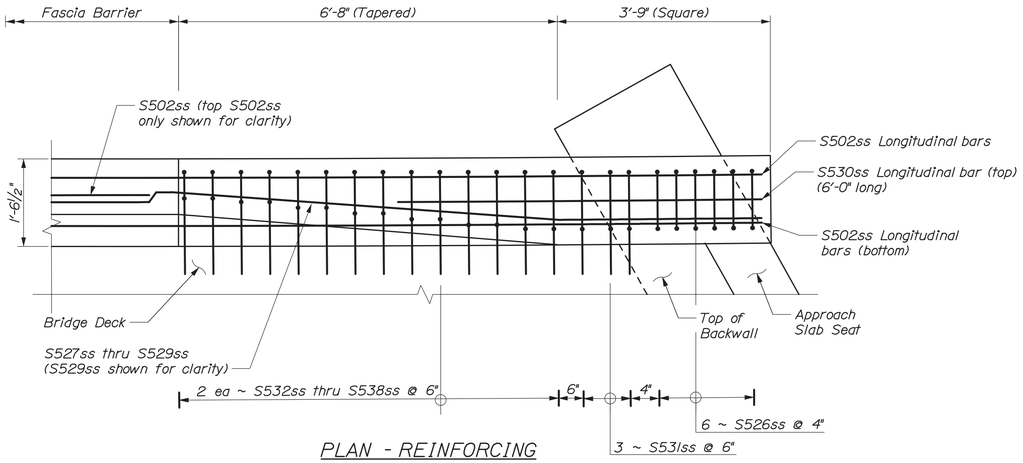
Date:3/3/2020

Division:

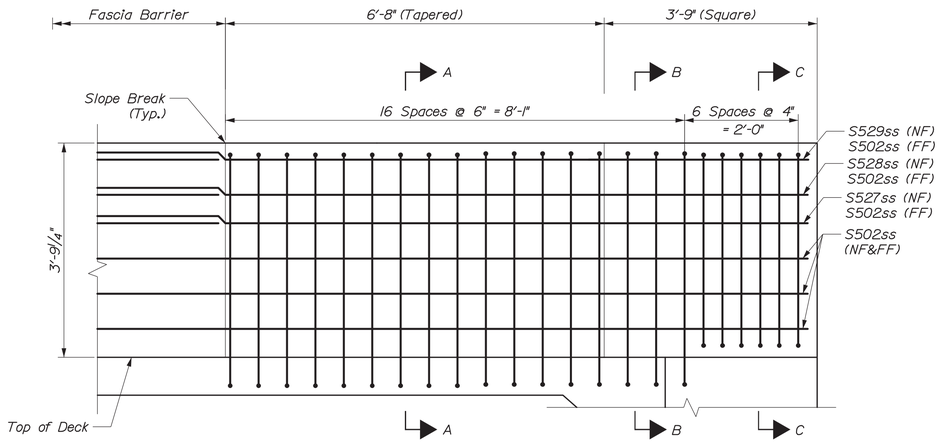
Filename: 209_Barrier Details I.dgn



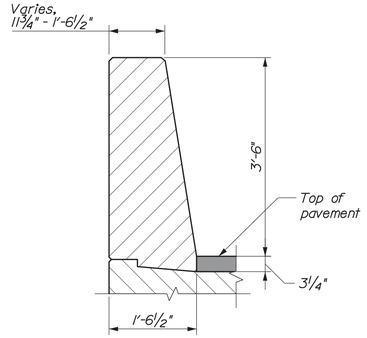

TRANSITION BARRIER ELEVATION



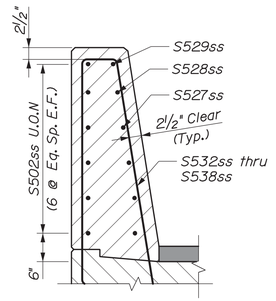

PLAN - REINFORCING



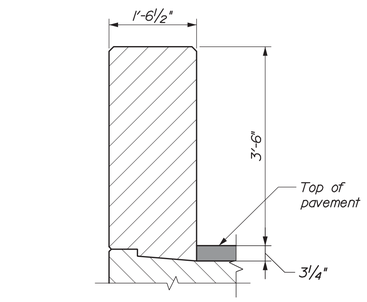

ELEVATION - REINFORCING



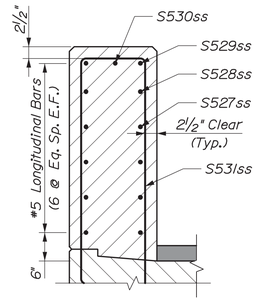

SECTION A-A (MASONRY)



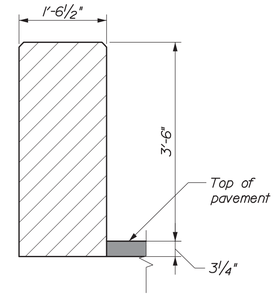

SECTION A-A (REINFORCING)



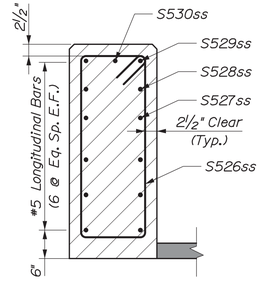

SECTION B-B (MASONRY)




SECTION B-B (REINFORCING)




SECTION C-C (MASONRY)




SECTION C-C (REINFORCING)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | HJW | ERB 2\20 |
| CHECKED-REVIEWED | NMW | TRC 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# BARRIER DETAILS II
# BRIDGE BARRIER

SHEET NUMBER

210

OF 220

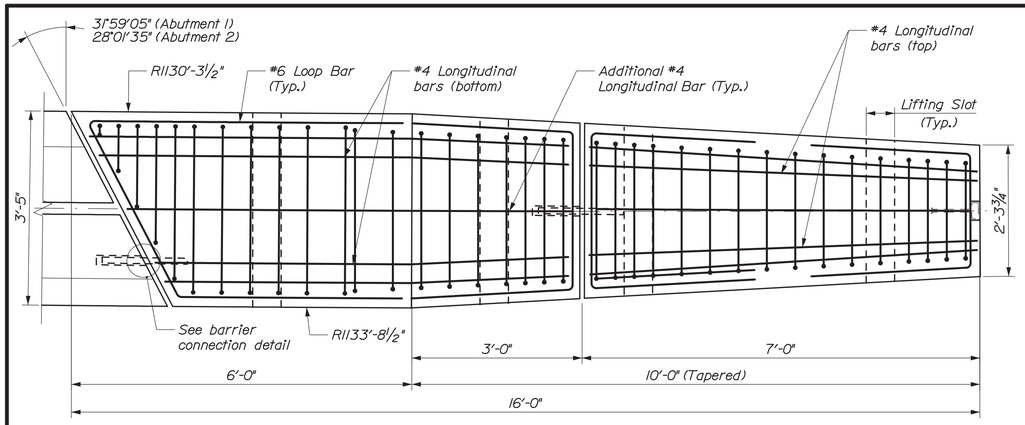
HNTB

Username:

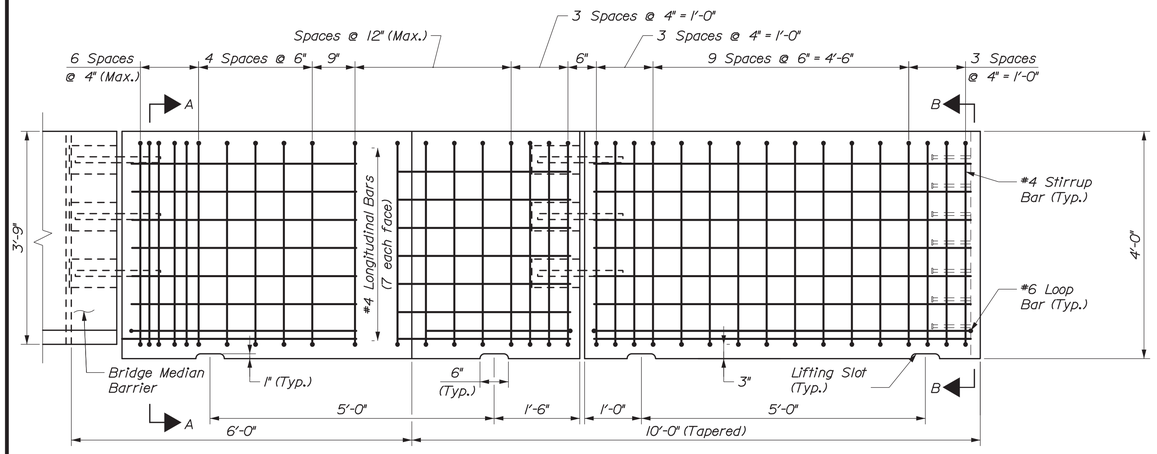
Date:3/3/2020

Division:

Filename: 210_Barrier Details II.dgn

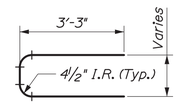



PLAN
(Abutment 2 shown, Abutment 1 similar)




ELEVATION

| CONCRETE BARRIER REINFORCING SCHEDULE * | | | | |
|---|---|---|---|---|
| DESCRIPTION | SIZE | NO. | UNBENT LENGTH | TYPE |
| LONGITUDINAL (EACH FACE) | #4 | 11 | VARIES | |
| STIRRUPS | #4 | 8 | VARIES | |
| STIRRUPS | #4 | 8 | VARIES | |
| STIRRUPS | #4 | 13 | VARIES | |
| LOOP BAR | #6 | 2 | VARIES | |




#6 LOOP BAR (TOP VIEW)



DIMENSIONS VARY

#4 STIRRUP BAR



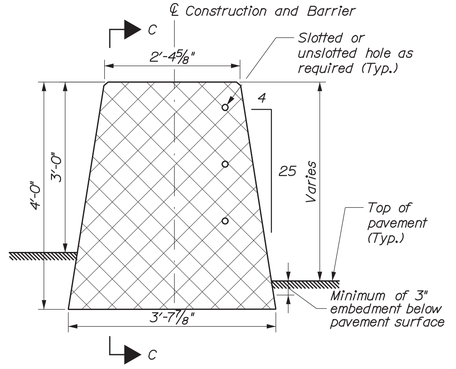
DIMENSIONS VARY

#4 STIRRUP BAR

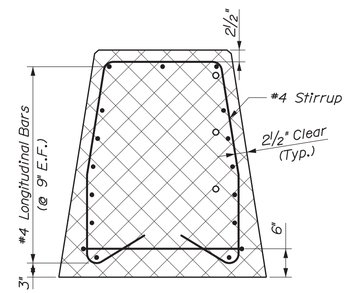


DIMENSIONS VARY

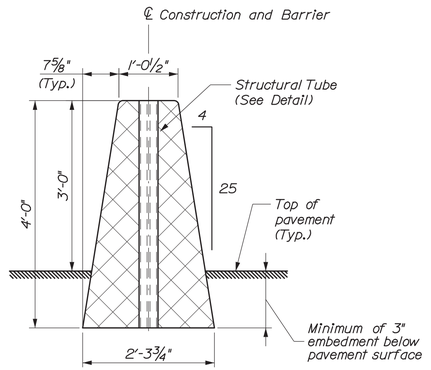
#4 STIRRUP BAR



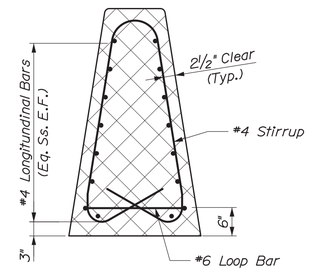

SECTION A-A (MASONRY)




SECTION A-A (REINFORCEMENT)




SECTION B-B (MASONRY)




SECTION B-B (REINFORCEMENT)

NOTES:

1. See Barrier Details IV Sheet for barrier connection detail.

2. Preparation of subgrade shall be performed to ensure proper height of connection guardrail prior to setting concrete transition barrier.

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | D. EATON | | |
| DESIGN-DETAILED | HJW | ERB | 2/20 |
| CHECKED-REVIEWED | NMW | TRC | 2/20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BARRIER DETAILS III
MEDIAN TRANSITION

SHEET NUMBER

211

OF 220

Date:3/3/2020

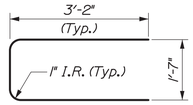
Username:

Division:

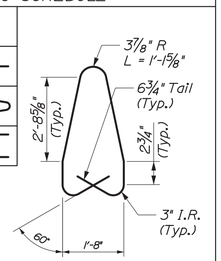
Filename: 211_Barrier Details III.dgn

## CONCRETE BARRIER REINFORCING SCHEDULE*

| Description | Size | No. | Unbent Length | Type |
|---|---|---|---|---|
| Longitudinal | #4 | 10 | 19'-6" | |
| Stirrups | #4 | 29 | 8'-6" | |
| Loop Bar | #6 | 2 | 7'-11" | |

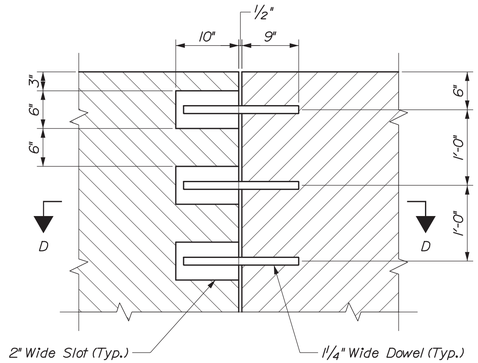



#6 LOOP BAR (TOP VIEW)

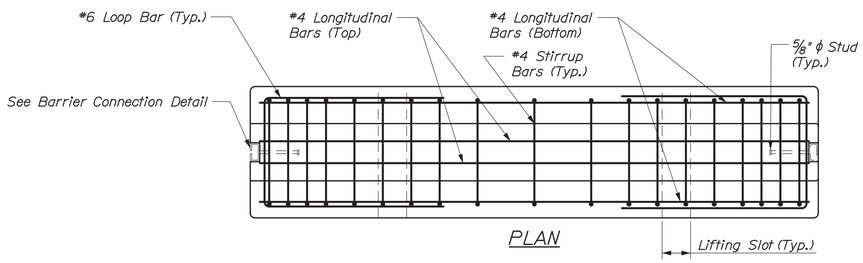



#4 STIRRUP BAR

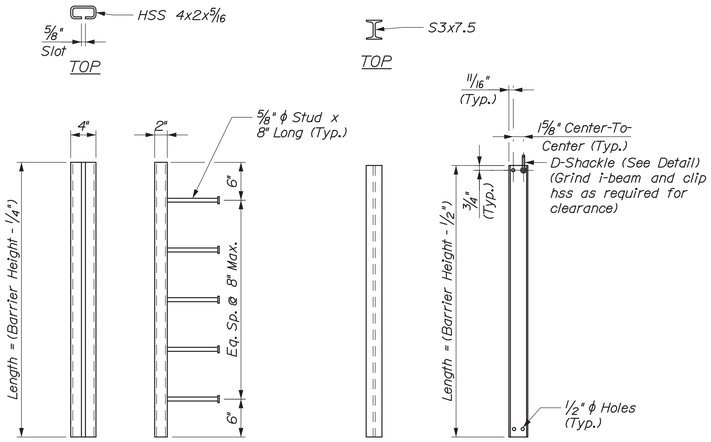
* Quantities Based On 20'-0" Barrier Length.




SECTION C-C



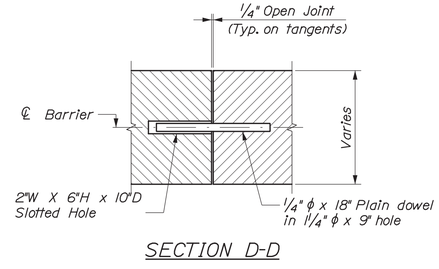

PLAN



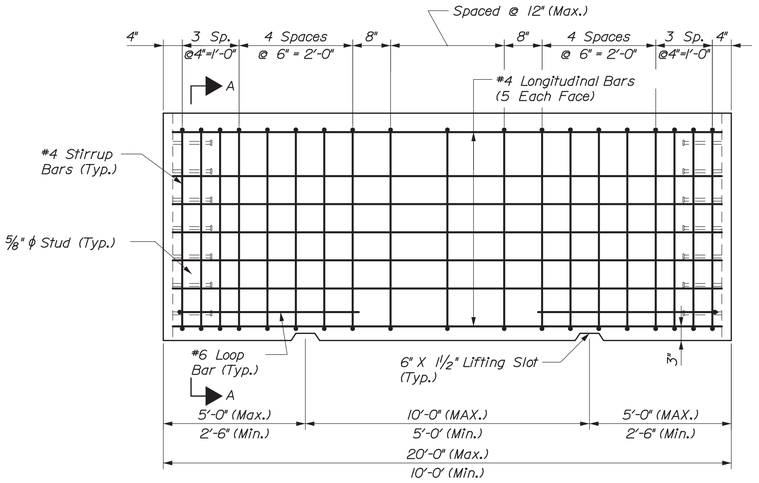

STRUCTURAL TUBE DETAILS



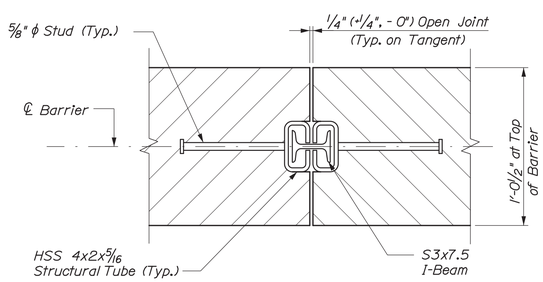

I-BEAM DETAILS



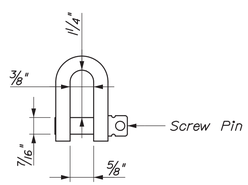

SECTION D-D



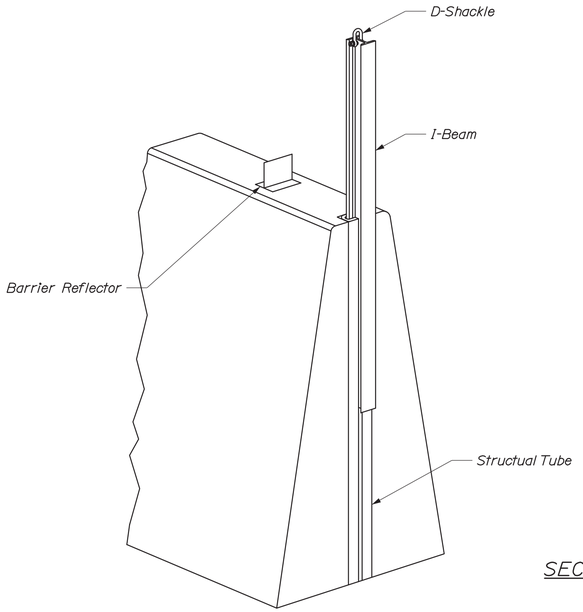

ELEVATION



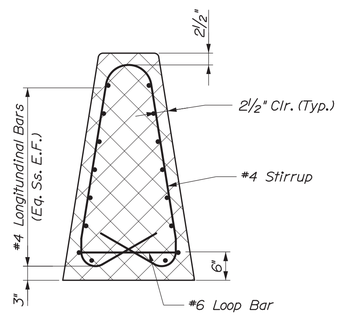

BARRIER CONNECTION DETAIL



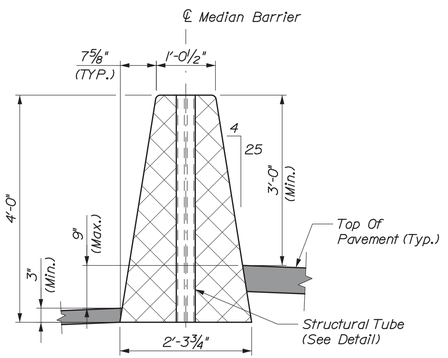

D-SHACKLE DETAIL
(One Per I-Beam)




PERSPECTIVE VIEW
NOT TO SCALE




SECTION A-A (REINFORCEMENT)




SECTION A-A (MASONRY)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | D. EATON | BY | DATE |
|---|---|---|---|
| PROJ. MANAGER | | | |
| DESIGN-DETAILED | HJW | ERB | 2\20 |
| CHECKED-REVIEWED | NMW | TRC | 2\20 |
| DESIGN2-DETAILED2 | | | |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

BARRIER DETAILS IV
PRECAST BARRIER DETAILS

SHEET NUMBER
212
OF 220

HNTB

Username: Division: Date:3/3/2020

Filename: 212_Barrier Details IV.dgn

Username:

Date:3/3/2020

Division:

Filename: 213_Reinforcing Schedule I.dgn

## STRAIGHT BARS

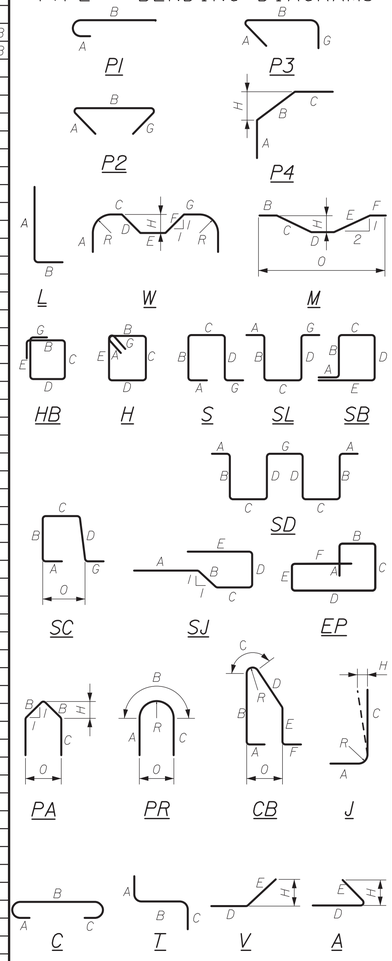
| MARK | QTY. | LENGTH | LOCATION |
|---|---|---|---|
| *Abutment I (Plain Bars)* | | | |
| A501 | 42 | 8'-6" | West Wingwall Footing Long. Top |
| A502 | 35 | 8'-6" | East Wingwall Footing Long. Top |
| A503 | 84 | 42'-0" | Footing Transverse Top & Bot. |
| A504 | 20 | 40'-9" | West Wingwall Footing Transv. T & B |
| A506 | 20 | 33'-5" | East Wingwall Footing Transv. T & B |
| | | | |
| A700 | 83 | 8'-6" | West Wingwall Footing Long. Bot. |
| A701 | 68 | 8'-6" | East Wingwall Footing Long. Bot. |

| MARK | QTY. | LENGTH | LOCATION |
|---|---|---|---|
| *Abutment I (Stainless Steel)* | | | |
| A510ss | 228 | 1'-11" | Closure Pour Coupler Bars (Bot.) |
| A511ss | 228 | 1'-11" | Closure Pour Coupler Bars (Top) |
| A512ss | 228 | 1'-11" | Cap Vertical Dowel (Bot.) |
| A516ss | 24 | 40'-0" | Closure Pour Longitudinal |
| A518ss | 86 | 12'-4" | West Wingwall Vertical |
| A520ss | 30 | 35'-3" | West Wingwall Horizontal |
| A521ss | 2 | 30'-5" | West Wingwall Horizontal |
| A522ss | 2 | 25'-7" | West Wingwall Horizontal |
| A523ss | 2 | 20'-9" | West Wingwall Horizontal |
| A524ss | 2 | 15'-11" | West Wingwall Horizontal |
| A525ss | 2 | 11'-1" | West Wingwall Horizontal |
| A526ss | 2 | 6'-3" | West Wingwall Horizontal |
| A527ss | 2 | 2'-0" | West Wingwall Horizontal |
| A528ss | 2 | 36'-0" | West Wingwall Top |
| A533ss | 68 | 3'-0" | East Wingwall Coupler Bars (Bot.) |
| A534ss | 62 | 3'-0" | East Wingwall Coupler Bars (Top) |
| A535ss | 32 | 28'-8" | East Wingwall Horizontal |
| A549ss | 18 | 6'-10" | East Wingwall Vertical |
| A550ss | 28 | 11'-1" | East Wingwall Vertical |
| A551ss | 28 | 14'-11" | East Wingwall Horizontal |
| A552ss | 12 | 8'-1" | East Wingwall Horizontal |
| A553ss | 2 | 6'-1" | East Wingwall Horizontal |
| A554ss | 2 | 4'-1" | East Wingwall Horizontal |
| A557ss | 2 | 31'-11" | East Wingwall Top |
| A560ss | 228 | 1'-10" | Cap Vertical Dowel (Top) |
| | | | |
| A604ss | 66 | 58'-6" | Stem Horizontal |
| A607ss | 10 | 47'-2" | Cap Horizontal Mid |
| A608ss | 2 | 27'-8" | Cap Horizontal Top |
| A609ss | 2 | 17'-6" | Cap Horizontal Top |
| A610ss | 8 | 39'-0" | Cap Horizontal Mid |
| A611ss | 4 | 34'-9" | Cap Horizontal Mid |
| | | | |
| A702ss | 20 | 59'-0" | Cap Horizontal Bot. |

## BENT BARS

| MARK | QTY. | LENGTH | TYPE | A | B | C | D | E | F | G | H | O | R | LOCATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Abutment I (Plain Bars)* | | | | | | | | | | | | | | |
| A500 | 120 | 10'-2" | S | 0" | 10" | 8'-6" | 10" | | | 0" | | | | Footing Longitudinal Top |
| A505 | 20 | 5'-2" | V | | | | 2'-7" | 2'-7" | | | 1'-4" | | | West Wingwall Footing to Abut. T & B |
| A507 | 20 | 5'-2" | V | | | | 2'-7" | 2'-7" | | | 2'-0" | | | West Wingwall Footing to Abut. T & B |
| | | | | | | | | | | | | | | |
| A600 | 238 | 10'-6" | S | 0" | 1'-0" | 8'-6" | 1'-0" | | | 0" | | | | Footing Longitudinal Bot. |
| *Abutment I (Stainless Steel)* | | | | | | | | | | | | | | |
| A400ss | 16 | 11'-7" | S | 0" | 4'-0" | 3'-7" | 4'-0" | | | 0" | | | | Keeper Block Long. |
| A401ss | 10 | 15'-3" | S | 0" | 4'-0" | 7'-3" | 4'-0" | | | 0" | | | | Keeper Block Trans. |
| A402ss | 392 | 5'-8" | H | 6" | 1'-2" | 1'-2" | 1'-2" | 1'-2" | | 6" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| A508ss | 43 | 16'-7" | L | 15'-9" | 10" | | | | | | | | | Footing to West Wingwall (NF) |
| A509ss | 35 | 16'-7" | L | 15'-9" | 10" | | | | | | | | | Footing to East Wingwall (NF) |
| A513ss | 142 | 11'-10" | S | 0" | 3'-10" | 4'-2" | 3'-10" | | | 0" | | | | Cap Stirrups (G5-G12) |
| A514ss | 160 | 10'-7" | EP | 0" | 10" | 2'-10" | 3'-3" | 2'-10" | 10" | | | | | Cap Stirrups (G3-G4) |
| A515ss | 172 | 8'-1" | EP | 0" | 10" | 1'-7" | 3'-3" | 1'-7" | 10" | | | | | Cap Stirrups (G1-G2) |
| A517ss | 8 | 5'-10" | S | 0" | 10" | 4'-2" | 10" | | | 0" | | | | Closure Pour Ends |
| A519ss | 43 | 2'-10" | S | 0" | 10" | 1'-2" | 10" | | | 0" | | | | West Wingwall Vertical |
| A529ss | 51 | 14'-6" | V | | | | 8'-6" | 6'-0" | | | 3'-0" | | | West Wingwall Corner |
| A530ss | 15 | 7'-6" | V | | | | 3'-10" | 3'-8" | | | 1'-10" | | | West Wingwall Corner |
| A531ss | 8 | 11'-10" | CB | 0" | 6'-0" | 4" | 1'-2" | 4'-4" | 0" | | | 1'-2" | 2" | West Wingwall Corner |
| A532ss | 34 | 2'-10" | S | 0" | 10" | 1'-2" | 10" | | | 0" | | | | East Wingwall Vertical |
| A536ss | 51 | 11'-4" | V | | | | 7'-8" | 3'-8" | | | 2'-10" | | | East Wingwall Corner |
| A537ss | 1 | 3'-10" | S | 0" | 1'-4" | 1'-2" | 1'-4" | | | 0" | | | | East Wingwall Vertical |
| A538ss | 1 | 4'-10" | S | 0" | 1'-10" | 1'-2" | 1'-10" | | | 0" | | | | East Wingwall Vertical |
| A539ss | 1 | 5'-10" | S | 0" | 2'-4" | 1'-2" | 2'-4" | | | 0" | | | | East Wingwall Vertical |
| A540ss | 1 | 6'-10" | S | 0" | 2'-10" | 1'-2" | 2'-10" | | | 0" | | | | East Wingwall Vertical |
| A541ss | 1 | 7'-10" | S | 0" | 3'-4" | 1'-2" | 3'-4" | | | 0" | | | | East Wingwall Vertical |
| A542ss | 1 | 8'-10" | S | 0" | 3'-10" | 1'-2" | 3'-10" | | | 0" | | | | East Wingwall Vertical |
| A543ss | 1 | 9'-10" | S | 0" | 4'-4" | 1'-2" | 4'-4" | | | 0" | | | | East Wingwall Vertical |
| A544ss | 1 | 10'-10" | S | 0" | 4'-10" | 1'-2" | 4'-10" | | | 0" | | | | East Wingwall Vertical |
| A545ss | 1 | 11'-10" | S | 0" | 5'-4" | 1'-2" | 5'-4" | | | 0" | | | | East Wingwall Vertical |
| A546ss | 1 | 12'-10" | S | 0" | 5'-10" | 1'-2" | 5'-10" | | | 0" | | | | East Wingwall Vertical |
| A547ss | 1 | 13'-10" | S | 0" | 6'-4" | 1'-2" | 6'-4" | | | 0" | | | | East Wingwall Vertical |
| A548ss | 23 | 14'-10" | S | 0" | 6'-10" | 1'-2" | 6'-10" | | | 0" | | | | East Wingwall Vertical |
| A555ss | 39 | 4'-3" | V | | | | 2'-2" | 2'-1" | | | 1'-7" | | | East Wingwall Corner |
| A556ss | 14 | 9'-6" | CB | 0" | 3'-11" | 5" | 1'-2" | 3'-7" | 0" | | | 1'-2" | 2" | East Wingwall Corner |
| A558ss | 21 | 14'-8" | SL | 10" | 2'-8" | 7'-8" | 2'-8" | | | 10" | | | | Slide Shoe Reinforcing |
| A559ss | 63 | 8'-6" | SL | 10" | 2'-8" | 1'-6" | 2'-8" | | | 10" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| A601ss | 341 | 16'-9" | L | 15'-9" | 1'-0" | | | | | | | | | Footing to Abutment Stem |
| A602ss | 82 | 16'-9" | L | 15'-9" | 1'-0" | | | | | | | | | Footing to West Wingwall (FF) |
| A603ss | 67 | 16'-9" | L | 15'-9" | 1'-0" | | | | | | | | | Footing to East Wingwall (FF) |
| A605ss | 30 | 6'-2" | S | 0" | 1'-0" | 4'-2" | 1'-0" | | | 0" | | | | Seat Ends |
| A606ss | 114 | 10'-6" | S | 0" | 3'-2" | 4'-2" | 3'-2" | | | 0" | | | | Stem U-Bar at Construction Joint |
| A612ss | 6 | 13'-1" | S | 0" | 2'-11" | 7'-3" | 2'-11" | | | 0" | | | | Cap Horizontal (G6) |
| A613ss | 78 | 15'-0" | S | 0" | 5'-5" | 4'-2" | 5'-5" | | | 0" | | | | Cap Stirrup (G9-G12) |
| A614ss | 3 | 6'-2" | S | 0" | 1'-0" | 4'-2" | 1'-0" | | | 0" | | | | Cap End (G1) |
| A615ss | 9 | 6'-2" | S | 0" | 1'-0" | 4'-2" | 1'-0" | | | 0" | | | | Cap End (G12) |
| A616ss | 98 | 17'-8" | SD | 2'-6" | 1'-8" | 1'-2" | 1'-8" | | | 3'-8" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| A703ss | 40 | 19'-0" | SJ | 0" | 0" | 3'-9" | 1'-8" | 13'-7" | | | | | | Cap Horizontal Top (G1-G4) |
| A704ss | 10 | 32'-6" | L | 28'-11" | 3'-7" | | | | | | | | | Cap Horizontal Top (G5-G7) |
| A705ss | 40 | 17'-10" | L | 13'-7" | 4'-3" | | | | | | | | | Cap Horizontal Top (G8-G11) |
| A706ss | 10 | 16'-2" | S | 0" | 4'-3" | 7'-8" | 4'-3" | | | 0" | | | | Cap Horizontal Top (G12) |
| A707ss | 224 | 11'-0" | S | 0" | 5'-0" | 1'-0" | 5'-0" | | | 0" | | | | Slide Shoe Reinforcing |

## TYPE - BENDING DIAGRAMS




All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 60
ASTM A955, GRADE 75
CSA S807-10, ACI 440.1r-15

## GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6
   Mark "S650ss" = bar size #6 Stainless Steel
   Mark "S600G" = bar size #6 GFRP

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

3. Bar marks ending with 'G' indicate GFRP. Bar marks ending with 'ss' indicate stainless steel. All other bars are plain (uncoated).

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | | | | |
|---|---|---|---|---|
| PROJ. MANAGER | D. EATON | | | |
| DESIGN-DETAILED | T.JP | BY | DATE | SIGNATURE |
| CHECKED-REVIEWED | KEB | ERB | 2\20 | |
| DESIGN2-DETAILED2 | | TRC | 2\20 | |
| DESIGN3-DETAILED3 | | | | P.E. NUMBER |
| REVISIONS 1 | | | | |
| REVISIONS 2 | | | | DATE |
| REVISIONS 3 | | | | |
| REVISIONS 4 | | | | |
| FIELD CHANGES | | | | |

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# REINFORCING STEEL SCHEDULE I

SHEET NUMBER

213

OF 220

Username:

Date:3/3/2020

Division:

Filename: 214_Reinforcing Schedule II.dgn

## STRAIGHT BARS

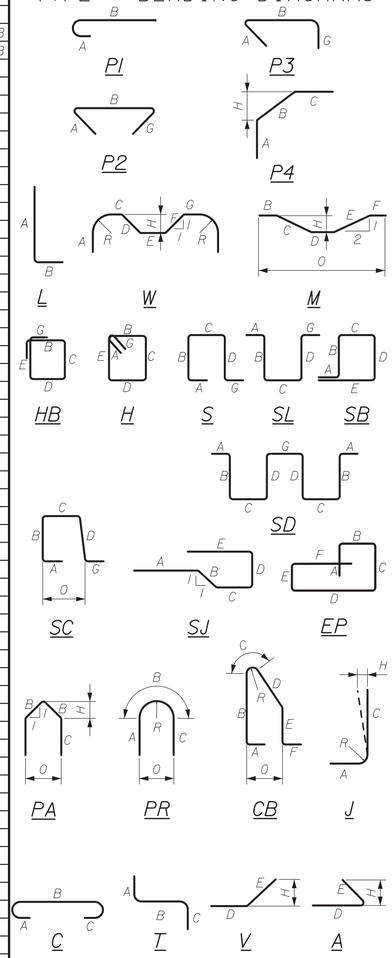
| MARK | QTY. | LENGTH | LOCATION |
|---|---|---|---|
| *Abutment 2 (Plain Bars)* | | | |
| B501 | 49 | 8'-6" | East Wingwall Footing Long. Top |
| B502 | 27 | 8'-6" | West Wingwall Footing Long. Top |
| B503 | 84 | 43'-0" | Footing Transverse Top & Bot. |
| B504 | 20 | 47'-3" | East Wingwall Footing Transv. T & B |
| B506 | 20 | 25'-3" | West Wingwall Footing Transv. T & B |
| | | | |
| B700 | 96 | 8'-6" | East Wingwall Footing Long. Bot. |
| B701 | 52 | 8'-6" | West Wingwall Footing Long. Bot. |

| MARK | QTY. | LENGTH | LOCATION |
|---|---|---|---|
| *Abutment 2 (Stainless Steel)* | | | |
| B510ss | 228 | 1'-11" | Closure Pour Coupler Bars (Bot.) |
| B511ss | 228 | 1'-11" | Closure Pour Coupler Bars (Top) |
| B512ss | 228 | 1'-11" | Cap Vertical Dowel (Bot.) |
| B516ss | 24 | 40'-0" | Closure Pour Longitudinal |
| B519ss | 88 | 3'-0" | East Wingwall Coupler Bars (Bot.) |
| B520ss | 88 | 3'-6" | East Wingwall Coupler Bars (Top) |
| B521ss | 34 | 41'-8" | East Wingwall Horizontal |
| B524ss | 12 | 4'-0" | East Wingwall Vertical |
| B525ss | 12 | 5'-8" | East Wingwall Vertical |
| B526ss | 12 | 7'-4" | East Wingwall Vertical |
| B527ss | 12 | 9'-0" | East Wingwall Vertical |
| B528ss | 12 | 10'-8" | East Wingwall Vertical |
| B529ss | 12 | 12'-4" | East Wingwall Vertical |
| B530ss | 12 | 14'-0" | East Wingwall Vertical |
| B532ss | 2 | 38'-2" | East Wingwall Horizontal |
| B533ss | 2 | 34'-8" | East Wingwall Horizontal |
| B534ss | 2 | 31'-2" | East Wingwall Horizontal |
| B535ss | 2 | 27'-8" | East Wingwall Horizontal |
| B536ss | 2 | 24'-2" | East Wingwall Horizontal |
| B537ss | 2 | 20'-8" | East Wingwall Horizontal |
| B538ss | 2 | 17'-2" | East Wingwall Horizontal |
| B539ss | 2 | 13'-8" | East Wingwall Horizontal |
| B540ss | 2 | 10'-2" | East Wingwall Horizontal |
| B541ss | 2 | 6'-8" | East Wingwall Horizontal |
| B542ss | 2 | 3'-2" | East Wingwall Horizontal |
| B543ss | 2 | 43'-4" | East Wingwall Top |
| B545ss | 52 | 12'-2" | West Wingwall Vertical |
| B547ss | 28 | 19'-2" | West Wingwall Horizontal |
| B549ss | 8 | 6'-6" | West Wingwall Horizontal |
| B550ss | 2 | 14'-8" | West Wingwall Horizontal |
| B551ss | 2 | 10'-2" | West Wingwall Horizontal |
| B552ss | 2 | 5'-8" | West Wingwall Horizontal |
| B553ss | 2 | 19'-6" | West Wingwall Horizontal |
| B554ss | 2 | 8'-0" | West Wingwall Horizontal |
| B555ss | 2 | 6'-4" | West Wingwall Horizontal |
| B556ss | 2 | 4'-8" | West Wingwall Horizontal |
| B560ss | 228 | 1'-10" | Cap Vertical Dowel (Top) |
| | | | |
| B604ss | 58 | 58'-6" | Stem Horizontal |
| B607ss | 10 | 48'-6" | Cap Horizontal Mid |
| B608ss | 2 | 28'-10" | Cap Horizontal Top |
| B609ss | 2 | 19'-1" | Cap Horizontal Top |
| B610ss | 8 | 39'-0" | Cap Horizontal Mid |
| B611ss | 4 | 33'-3" | Cap Horizontal Mid |
| | | | |
| B702ss | 20 | 59'-0" | Cap Horizontal Bot. |

## BENT BARS

| MARK | QTY. | LENGTH | TYPE | A | B | C | D | E | F | G | H | O | R | LOCATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Abutment 2 (Plain Bars)* | | | | | | | | | | | | | | |
| B500 | 122 | 10'-2" | S | 0" | 10" | 8'-6" | 10" | | | 0" | | | | Footing Longitudinal Top |
| B505 | 20 | 5'-2" | V | | | | 2'-7" | 2'-7" | | | 1'-4" | | | East Wingwall Footing to Abut. T & B |
| B507 | 20 | 5'-2" | L | 2'-7" | 2'-7" | | | | | | | | | West Wingwall Footing to Abut. T & B |
| | | | | | | | | | | | | | | |
| B600 | 243 | 10'-6" | S | 0" | 1'-0" | 8'-6" | 1'-0" | | | 0" | | | | Footing Longitudinal Bot. |
| | | | | | | | | | | | | | | |
| *Abutment 2 (Stainless Steel)* | | | | | | | | | | | | | | |
| B400ss | 16 | 11'-9" | S | 0" | 4'-1" | 3'-7" | 4'-1" | | | 0" | | | | Keeper Block Long. |
| B401ss | 10 | 14'-5" | S | 0" | 4'-1" | 6'-3" | 4'-1" | | | 0" | | | | Keeper Block Trans. |
| B402ss | 392 | 5'-8" | H | 6" | 1'-2" | 1'-0" | 1'-2" | 1'-0" | | 6" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| B508ss | 43 | 15'-1" | L | 14'-3" | 10" | | | | | | | | | Footing to East Wingwall (NF) |
| B509ss | 27 | 15'-1" | L | 14'-3" | 10" | | | | | | | | | Footing to West Wingwall (NF) |
| B513ss | 142 | 11'-10" | S | 0" | 3'-10" | 4'-2" | 3'-10" | | | 0" | | | | Cap Stirrups (G5-G8) |
| B514ss | 160 | 10'-7" | EP | 0" | 10" | 2'-10" | 3'-3" | 2'-10" | 10" | | | | | Cap Stirrups (G3-G4) |
| B515ss | 156 | 8'-1" | EP | 0" | 10" | 1'-7" | 3'-3" | 1'-7" | 10" | | | | | Cap Stirrups (G1-G2) |
| B517ss | 8 | 5'-10" | S | 0" | 10" | 4'-2" | 10" | | | 0" | | | | Closure Pour Ends |
| B518ss | 44 | 2'-10" | S | 0" | 10" | 1'-2" | 10" | | | 0" | | | | East Wingwall Vertical (Top Phase I) |
| B522ss | 48 | 7'-11" | V | | | | 4'-3" | 3'-8" | | | 1'-10" | | | East Wingwall Corner |
| B523ss | 46 | 7'-10" | S | 0" | 3'-4" | 1'-2" | 3'-4" | | | 0" | | | | East Wingwall Top |
| B531ss | 3 | 10'-0" | S | 0" | 4'-5" | 1'-2" | 4'-5" | | | 0" | | | | East Wingwall Horizontal |
| B544ss | 6 | 6'-4" | CB | 0" | 2'-5" | 4" | 1'-2" | 2'-5" | 0" | | | 1'-2" | 2" | East Wingwall Top |
| B546ss | 26 | 2'-10" | S | 0" | 10" | 1'-2" | 10" | | | 0" | | | | West Wingwall Vertical |
| B548ss | 48 | 13'-4" | L | 4'-8" | 8'-8" | | | | | | | | | West Wingwall Horizontal |
| B557ss | 2 | 10'-5" | V | | | | 2'-10" | 7'-7" | | | 3'-11" | | | West Wingwall Horizontal |
| B558ss | 21 | 14'-8" | SL | 10" | 2'-8" | 7'-8" | 2'-8" | | | 10" | | | | Slide Shoe Reinforcing |
| B559ss | 63 | 8'-6" | SL | 10" | 2'-8" | 1'-6" | 2'-8" | | | 10" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| B601ss | 341 | 15'-3" | L | 14'-3" | 1'-0" | | | | | | | | | Footing to Abutment Stem |
| B602ss | 85 | 15'-3" | L | 14'-3" | 1'-0" | | | | | | | | | Footing to East Wingwall (FF) |
| B603ss | 51 | 15'-3" | L | 14'-3" | 1'-0" | | | | | | | | | Footing to West Wingwall (FF) |
| B605ss | 26 | 6'-2" | S | 0" | 1'-0" | 4'-2" | 1'-0" | | | 0" | | | | Seat Ends |
| B606ss | 114 | 10'-6" | S | 0" | 3'-2" | 4'-2" | 3'-2" | | | 0" | | | | Stem U-Bar at Construction Joint |
| B612ss | 6 | 13'-1" | S | 0" | 2'-11" | 7'-3" | 2'-11" | | | 0" | | | | Cap Horizontal (G6) |
| B613ss | 80 | 15'-0" | S | 0" | 5'-5" | 4'-2" | 5'-5" | | | 0" | | | | Cap Stirrup (G9-G12) |
| B614ss | 3 | 6'-2" | S | 0" | 1'-0" | 4'-2" | 1'-0" | | | 0" | | | | Cap End (G1) |
| B615ss | 9 | 6'-2" | S | 0" | 1'-0" | 4'-2" | 1'-0" | | | 0" | | | | Cap End (G12) |
| B616ss | 98 | 17'-8" | SD | 2'-6" | 1'-8" | 1'-2" | 1'-8" | | | 3'-8" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| B703ss | 40 | 19'-0" | SJ | 0" | 0" | 3'-9" | 1'-8" | 13'-7" | | | | | | Cap Horizontal Top (G1-G4) |
| B704ss | 10 | 32'-6" | L | 28'-11" | 3'-7" | | | | | | | | | Cap Horizontal Top (G5-G7) |
| B705ss | 40 | 18'-2" | L | 13'-7" | 4'-7" | | | | | | | | | Cap Horizontal Top (G8-G11) |
| B706ss | 10 | 17'-9" | L | 0" | 4'-3" | 9'-3" | 4'-3" | | | 0" | | | | Cap Horizontal Top (G12) |
| B707ss | 224 | 11'-0" | S | 0" | 5'-0" | 1'-0" | 5'-0" | | | 0" | | | | Slide Shoe Reinforcing |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

## TYPE - BENDING DIAGRAMS




All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 60
ASTM A955, GRADE 75
CSA S807-10, ACI 440.1r-15

## GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6
   Mark "S650ss" = bar size #6 Stainless Steel
   Mark "S600G" = bar size #6 GFRP

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

3. Bar marks ending with 'G' indicate GFRP. Bar marks ending with 'ss' indicate stainless steel. All other bars are plain (uncoated).

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

WIN 021745.00

BRIDGE NO.5933

BRIDGE PLANS

| | BY | DATE |
|---|---|---|
| PROJ. MANAGER | D. EATON | |
| DESIGN-DETAILED | HJW | ERB 2\20 |
| CHECKED-REVIEWED | NMW | TRC 2\20 |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
PORTLAND CUMBERLAND COUNTY

# REINFORCING STEEL SCHEDULE II

SHEET NUMBER

214

OF 220

Date:3/3/2020

Username:

Division:

Filename: 215_Reinforcing Schedule III.dgn

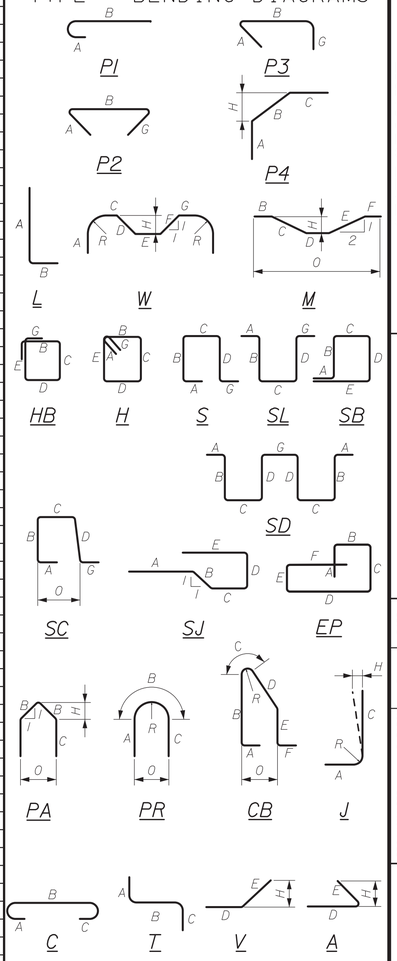
## STRAIGHT BARS

| MARK | QTY. | LENGTH | LOCATION | MARK | QTY. | LENGTH | LOCATION |
|---|---|---|---|---|---|---|---|
| *Superstructure (Stainless Steel)* | | | | | | | |
| S500ss | 256 | 50'-0" | Top & Bot Longitudinal | | | | |
| S501ss | 256 | 33'-6" | Top & Bot Longitudinal | | | | |
| S502ss | 138 | 30'-6" | Barrier Longitudinal | | | | |
| S506ss | 428 | 46'-11" | Top & Bot Transverse | | | | |
| S507ss | 688 | 17'-4" | Top & Bot Transverse | | | | |
| S508ss | 8 | 16'-6" | Top & Bot Transverse | | | | |
| S509ss | 8 | 15'-8" | Top & Bot Transverse | | | | |
| S510ss | 8 | 14'-10" | Top & Bot Transverse | | | | |
| S511ss | 8 | 14'-0" | Top & Bot Transverse | | | | |
| S512ss | 8 | 13'-2" | Top & Bot Transverse | | | | |
| S513ss | 8 | 12'-4" | Top & Bot Transverse | | | | |
| S514ss | 8 | 11'-6" | Top & Bot Transverse | | | | |
| S515ss | 8 | 10'-8" | Top & Bot Transverse | | | | |
| S516ss | 8 | 9'-10" | Top & Bot Transverse | | | | |
| S517ss | 8 | 9'-0" | Top & Bot Transverse | | | | |
| S518ss | 8 | 8'-2" | Top & Bot Transverse | | | | |
| S519ss | 8 | 7'-4" | Top & Bot Transverse | | | | |
| S520ss | 8 | 6'-6" | Top & Bot Transverse | | | | |
| S521ss | 8 | 5'-8" | Top & Bot Transverse | | | | |
| S522ss | 8 | 4'-10" | Top & Bot Transverse | | | | |
| S523ss | 8 | 4'-0" | Top & Bot Transverse | | | | |
| S524ss | 8 | 3'-2" | Top & Bot Transverse | | | | |
| S525ss | 8 | 2'-4" | Top & Bot Transverse | | | | |
| S530ss | 4 | 6'-0" | Barrier Transition Long. Middle | | | | |
| | | | | | | | |
| S603ss | 32 | 30'-6" | Backwall Corbel Transverse | | | | |
| | | | | | | | |
| S800ss | 160 | 31'-6" | Backwall Transverse | | | | |
| S801ss | 40 | 9'-2" | Backwall Haunch Btwn Girders | | | | |

## BENT BARS

| MARK | QTY. | LENGTH | TYPE | A | B | C | D | E | F | G | H | O | R | LOCATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Superstructure (Stainless Steel)* | | | | | | | | | | | | | | |
| S300ss | 230 | 2'-10" | C | 5" | 2'-0" | 5" | | | | | | | | Backwall Corbel Tie |
| | | | | | | | | | | | | | | |
| S503ss | 254 | 9'-9" | SC | 1'-0" | 3'-6" | 8" | 3'-7" | | | 1'-0" | | 1'-2" | | Barrier Stirrup (Median) |
| S504ss | 254 | 10'-7" | SC | 1'-0" | 4'-0" | 6" | 4'-1" | | | 1'-0" | | 1'-2" | | Barrier Stirrup (Fascia) |
| S505ss | 640 | 9'-7" | C | 7" | 9'-0" | 0" | | | | | | | | Top Transverse Overhang |
| S526ss | 24 | 9'-10" | H | 6" | 1'-1" | 3'-4" | 1'-1" | 3'-4" | | 6" | | | | Barrier Transition Vertical Hoop End |
| S527ss | 4 | 13'-8" | M | | 3'-6" | 4'-5" | 3'-2" | 0" | 0" | | 2" | 13'-8" | | Barrier Transition Long. Taper |
| S528ss | 4 | 13'-8" | M | | 3'-6" | 4'-5" | 3'-2" | 0" | 0" | | 4" | 13'-8" | | Barrier Transition Long. Taper |
| S529ss | 4 | 13'-9" | M | | 3'-6" | 4'-5" | 3'-2" | 0" | 0" | | 6" | 13'-8" | | Barrier Transition Long. Taper |
| S531ss | 12 | 10'-1" | SC | 1'-0" | 3'-6" | 1'-0" | 3'-7" | | | 1'-0" | | 1'-2" | | Barrier Transition Vertical Hoop |
| S532ss | 8 | 10'-1" | SC | 1'-0" | 3'-6" | 1'-0" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S533ss | 8 | 10'-0" | SC | 1'-0" | 3'-6" | 11" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S534ss | 8 | 9'-11" | SC | 1'-0" | 3'-6" | 10" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S535ss | 8 | 9'-10" | SC | 1'-0" | 3'-6" | 9" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S536ss | 8 | 9'-9" | SC | 1'-0" | 3'-6" | 8" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S537ss | 8 | 9'-8" | SC | 1'-0" | 3'-6" | 7" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S538ss | 8 | 9'-7" | SC | 1'-0" | 3'-6" | 6" | 3'-7" | | | 1'-0" | | 1'-1" | | Barrier Transition Vertical Hoop |
| S539ss | 5 | 5'-2" | S | 0" | 1'-11" | 1'-4" | 1'-1" | | | 0" | | | | Backwall Ends |
| S540ss | 5 | 6'-6" | S | 0" | 1'-11" | 2'-8" | 1'-1" | | | 0" | | | | Backwall Ends |
| S541ss | 5 | 5'-2" | S | 0" | 1'-11" | 1'-4" | 1'-1" | | | 0" | | | | Backwall Ends |
| S542ss | 5 | 6'-6" | S | 0" | 1'-11" | 2'-8" | 1'-1" | | | 0" | | | | Backwall Ends |
| S543ss | 127 | 3'-6" | H | 6" | 7" | 8" | 7" | 8" | | 6" | | | | Barrier Stirrup (NB Median Only) |
| | | | | | | | | | | | | | | |
| S600ss | 388 | 19'-5" | L | 15'-9" | 3'-8" | | | | | | | | | Deck End Top Longitudinal |
| S601ss | 388 | 8'-8" | P4 | 2'-6" | 3'-8" | 2'-6" | | | | | | | | Deck End Bottom Longitudinal |
| S602ss | 458 | 12'-0" | H | 6" | 1'-0" | 4'-6" | 1'-0" | 4'-6" | | 6" | | | | Backwall Stirrup |
| S604ss | 230 | 7'-10" | H | 6" | 2'-0" | 1'-5" | 2'-0" | 1'-5" | | 6" | | | | Backwall Corbel Stirrup |
| S605ss | 192 | 3'-8" | L | 1'-6" | 2'-2" | | | | | | | | | Approach Slab Dowel |
| S606ss | 20 | 6'-5" | L | 4'-6" | 1'-11" | | | | | | | | | Backwall Ends |

## TYPE - BENDING DIAGRAMS




All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 60
ASTM A955, GRADE 75
CSA S807-10, ACI 440.1r-15

## GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6
   Mark "S650ss" = bar size #6 Stainless Steel
   Mark "S600G" = bar size #6 GFRP

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case shall be based on crank bars as schedule on the plans.

3. Bar marks ending with "G" indicate GFRP. Bar marks ending with "ss" indicate stainless steel. All other bars are plain (uncoated).

HNTB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**NHPP-2174(500)**

**WIN 021745.00**

BRIDGE NO.5933

BRIDGE PLANS

| PROJ. MANAGER | D. EATON | | |
|---|---|---|---|
| DESIGN-DETAILED | HJW | BY | DATE |
| CHECKED-REVIEWED | NMW | ERB | 2\20 |
| DESIGN2-DETAILED2 | | TRC | 2\20 |
| DESIGN3-DETAILED3 | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER
VERANDA STREET
CUMBERLAND COUNTY
PORTLAND

# REINFORCING STEEL SCHEDULE III

SHEET NUMBER

215

OF 220

## PLAN LEGEND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Town, County, State | | New R/W Along Existing R/W | | Existing | Proposed | Existing | Proposed |
| Approx. Property Lines | P.L. | Building | Clearing Limit Line | Sanitary Sewer | | Traveled Way | |
| Existing Right of Way | | Trees Conifer | Deciduous | Telephone Line | | Ditch | |
| Limits of Wrought Portion | L.O.W.P. | Tree Line | Bush Line | Electric Line | E | Catch Basin | |
| Control Of Access | C.O.A. | Water Edge | | Water Line | W | Manhole | |
| New Right of Way | | Ledge | Rock/Boulder | Underdrain Line | | Sewer Manhole | |
| New Easement | | Fence CHAIN LINK | BARB WIRE STOCKADE | Gas Line | | Utility Pole | |
| New Temporary Rights | | Sign | Well WELL | Guardrail | | Fire Hydrant | |
| New R/W Within Existing R/W | | | Mailbox | Culvert | | Curbing | |

| | | | |
|---|---|---|---|
| Cut Line C C C | Fill Line F F F | | |
| Stonewall | Retaining Wall | | |
| Baseline 10+00 | 11+00 | 12+00 | |
| Monument | Traverse Point | | |
| Iron Rod Found IRF | Pipe Found IPF | | |
| Replacement Pin Set | | | |

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER

PLAN OF LOTS ARCADIA PARK
EAST DEERING DISTRICT, PORTLAND, ME
BY F.A. MERRIAM & CO.
RECORDING DATE NOVEMBER, 25, 1904
C.C.R.D. PLAN BOOK 10, PAGE 101

CONTROL INFORMATION
HORIZONTAL DATUM:
US STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM:
NAVD88 COMBINED
FACTOR - 0.9999832

GRID NORTH

PLAN OF VERANDA PARK
FESSENDEN PARK CO.
RECORDING DATE: JANUARY 30, 1904
C.C.R.D. PLAN BOOK 10, PAGE 55

BOUNDARY SURVEY FOR NATALIE J. MCMANUS
182 VERANDA STREET, PORTLAND
BY TITCOMB ASSOCIATES
DATED OCTOBER 25, 1995
JOB NO. 95081

I-295 ON RAMP
CURVE DATA #1
PI = 201+49.91
D = 38°11'49.9"
Δ = 42°01'10.0" Lt.
R = 150.00'
L = 110.01'
T = 57.61'
E = 10.68'

VERANDA STREET
CURVE DATA #1
PI = 103+22.94
D = 13°28'52.9"
Δ = 10°55'56.5" Rt.
R = 425.00'
L = 81.09'
T = 40.67'
E = 1.94'

COLUMBIA SOCIAL & ALTHETIC CLUB OF PORTLAND

POB = STA. 98+34.13

HAWTHORNE STREET

2G PROPERTIES, LLC

LUX LLC
ITEM NO. (1)
TEMP. CONST. RIGHTS = 137± S.F. (1)
TOTAL AREA = 0.13± AC. (CITY)

STA. 101+63.15 VERANDA STREET =
STA. 202+71.21 I-295 SB ON RAMP

STA. 101+78.27 VERANDA STREET =
STA. 1+00.00 WORDSWORTH STREET

MARGARET CARY CURRAN
WILLIAM CARY LAIRD
ITEM NO. (2)
TEMP. CONST. RIGHTS = 348± S.F.(1)
TOTAL AREA = 0.12± AC. (CITY)

WORDSWORTH STREET

LAWRENCE J. DONAHUE, III
SANDRA L. DONAHUE

JIMMY H. DANG
ITEM NO. (3)
TEMP. CONST. RIGHTS = 77± S.F. (1)
TOTAL AREA = 0.12± AC. (CITY)

IAN SCHLEH
ITEM NO. (4)
TEMP. CONST. RIGHTS = 889± S.F. (3)
TOTAL AREA = 0.19± AC. (CITY)

STA. 103+59±, 171± LT.

TEMP. CONST. LIMITS 420± S.F.
PROPOSED PAVED DRIVE
TEMP. CONST. LIMITS

TEMP. CONST. LIMITS 348± S.F.
TEMP. CONST. LIMITS 137± S.F.
TEMP. CONST. LIMITS 24± S.F.
TEMP. CONST. LIMITS 77± S.F.
TEMP. CONST. LIMITS 445± S.F.

BARBARA GARDNER

STA. 103+54± 117± LT.
STA. 103+66± 117± LT.
STA. 103+67± 128± LT.
STA. 103+57± 129± LT.
STA. 103+62± 117± LT.
S.H.C. FILE 3-132

BEGIN C.O.A.
C.O.A.

520 PTRA PK

348± S.F. PLOT

PRWM PLUG W/DISK

98+34 99+00 BEGIN B.L. 100+00 101+00 102+00 103+00

VERANDA STREET/STATE AID HIGHWAY NO. 32
N 34°55'07.6" E 282.27'

PC CURVE #1 = STA. 102+82.27

21745-13 PUNCH IN DMH RIM

81.09'

VERANDA STREET CURVE #1

N 45°51'0

BM-160 AN 40"ELM

PBMK 160

6X6 GRAN FLUSH

5/8 REBAR BENT DOWN

FAYETTE STREET

SHIRLEY R. DUTTON

SHERENE M. BERNIER
IRIS D. MICUCCI
(LIFE ESTATE)

BEGIN C.O.A.

PT = STA. 202+02.31

S.H.C. FILE 3-132
CONTROL OF ACCESS

I-295 ON RAMP CURVE #1

BOUNDARY SURVEY FOR LEO MICUCCI
163 VERANDA STREET, PORTLAND
BY TITCOMB ASSOCIATES
DATED SEPTEMBER, 27, 1991
JOB NO. 91078

CONTROL OF ACCESS
S.H.C. FILE 3-132

PC = STA. 200+92.31

200+00 201+00

I-295 SOUTHBOUND ON-RAMP/U.S. ROUTE 1

N 2°24'23.5" E

PTRA 521 PK

N 39°36'46.5" W

202+00

PT CURVE #1 = STA. 103+62.36

BM-161 AN 18" MAPLE PBMK 161

38+00

37+00

I-295 SOUTHBOUND

VERANDA ST. BRIDGE OVER VERANDA STREET

BRIDGE NO. 5933 WIN 021745.08

SEE DEED FROM STATE OF MAINE TO SHIRLEY R. DUTTON BOOK 17402, PAGE 204 DATED 1-30-2002

CONTROL OF ACCESS
S.H.C. FILE 3-132

R/W REFERENCES

I-295:
S.H.C. FILE 3-132 (1960) SHEETS 1-5 OF 18
S.H.C. FILE 3-75 (1952) SHEETS 4-8 & 11-12 OF 13

VERANDA STREET (WESTERLY OF I-295):
VERANDA STREET MONUMENT LAYOUT PLAN
BY CITY OF PORTLAND PUBLIC WORKS DEPT.
DATED JANUARY 1996 (SHEETS 1 & 2 OF 2)
CITY PLAN 944/5A

VERANDA STREET (EASTERLY OF I-295):
VERANDA STREET CITY BLUESHEETS
NUMBERED 3 THROUGH 6
(ON FILE WITH PORTLAND ENGINEERING DEPT.)

CUMBERLAND COUNTY COMMISSIONERS RECORDS (C.C.C.R.)
VOLUME 16, PAGE 943, DATED 1896, 60' WIDE WITHIN PROJECT LOCUS
AND ASSOCIATED PLAN: COMMISSIONER'S PLAN BOOK 3, BOOK 51

D.O.T. FILE 3-586 (2012) MARTIN'S POINT BRIDGE, WIN 16731.00
S.H.C. FILE 3-51 (1940)

SIDE ROADS:
HAWTHORNE, FAYETTE, & WORDSWORTH STREETS:
SEE CITY PLAN 944/5A (SHEET 2)

OLYMPIA & OREGON STREETS
SEE CITY BLUESHEETS

CONTROLLED ACCESS LIMIT

CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE

CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE

NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "295" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

PLAN OF LOTS, MARINE TERRACE
F.A. MERRIAM & CO.
BY V.C. RICHARDSON C.E.
RECORDING DATE: NOVEMBER, 25, 1904
C.C.R.D. PLAN BOOK 10, PAGE 103

| TECH | CHECKED |
|---|---|
| N.T.A. | C.W.K. |
| R.M.C. | C.W.K. |
| R.M.C. | E.M.S. |

| ITEM | |
|---|---|
| EXISTING CONDITION PLAN | |
| FINAL RIGHT OF WAY | |
| AREAS | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP

**REVISIONS**

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|

| PLAN FILED IN PLAN BOOK PAGE | | COUNTY RECORD | | | |
|---|---|---|---|---|---|
| NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE |
| | | COND. | 4/6/2020 | 36566 | 164 |

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "295" &
STATE AID HIGHWAY NO. 32
I-295 AND VERANDA STREET
PORTLAND CUMBERLAND COUNTY
FEDERAL AID PROJECT NO. NHPP-2174(500)

| DECEMBER 2019 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 3-652 |
|---|---|---|
| SCALE 1" = 25' | SHEET 1 OF 4 | |

SHEET NUMBER
216
OF 220

Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: BRIDGE Username: Mark.Poulin Date:4/16/2020

Filename: ...\00\ROW\MSTA\002_RWPLAN2.dgn Division: BRIDGE Usermame: Mark.Poulin Date:4/16/2020

## PLAN LEGEND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Town, County, State | | New R/W Along Existing R/W | | Existing | Proposed | Existing | Proposed |
| Approx. Property Lines | P.L. | Building | Clearing Limit Line | Sanitary Sewer | | Traveled Way | |
| Existing Right of Way | | Trees Conifer | Deciduous | Telephone Line | | Ditch | |
| Limits of Wrought Portion | L.O.W.P. | Tree Line | Bush Line | Electric Line | E | Catch Basin | |
| Control Of Access | C.O.A. | Water Edge | | Water Line | W | Manhole | |
| New Right of Way | | Ledge | Rock/Boulder | Underdrain Line | | Sewer Manhole | |
| New Easement | | Fence CHAIN LINK | BARB WIRE / STOCKADE | Gas Line | | Utility Pole | |
| New Temporary Rights | | Sign | Well WELL | Guardrail | | Fire Hydrant | |
| New R/W Within Existing R/W | | | Mailbox | Culvert | | Curbing | |

| | | | |
|---|---|---|---|
| Cut Line C—C—C | Fill Line F—F—F | Monument | Traverse Point |
| Stonewall | Retaining Wall | Iron Rod Found IRF | Pipe Found IPF |
| Baseline 10+00 11+00 12+00 | | Replacement Pin Set | |

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

## STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER

CONTROL INFORMATION
HORIZONTAL DATUM:
US STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM:
NAVD88 COMBINED
FACTOR - 0.9999832

GRID NORTH

**VERANDA STREET CURVE DATA #2**
PI = 105+26.63
D = 10°25'02.7"
Δ = 8°28'01.1" Rt.
R = 550.00'
L = 81.28'
T = 40.71'
E = 1.50'

**I-295 NB OFF RAMP CURVE DATA #2**
PI = 305+79.51
D = 10°25'02.7"
Δ = 19°16'34.5" Lt.
R = 550.00'
L = 185.04'
T = 93.40'
E = 7.87'

**I-295 NB OFF RAMP CURVE DATA #3**
PI = 307+47.57
D = 20°50'05.4"
Δ = 31°03'45.9" Lt.
R = 275.00'
L = 149.09'
T = 76.43'
E = 10.42'

CONDOMINIUM PLAT OF
226 VERANDA STREET CONDOMINIUM
MADE FOR JWAY, LLC
BY OWEN HASKELL, INC.
DATED JULY 10, 2015
C.C.R.D. PLAN BOOK 216, PAGE 29

PLAN OF OCEAN VIEW PARK
EAST DEERING, ME
OWNED BY J. W. WILBUR
PREPARED BY A. L. ELIOT
DATED AUGUST 3, 1898
C.C.R.D. PLAN BOOK 8, PAGE 141

STA. 108+54.98, VERANDA STREET =
STA. 3+00.00, OLYMPIA STREET

CITY OF PORTLAND
ITEM NO. (13)
TEMP. CONST.
RIGHTS = 518± S.F. (1)
ENTIRE LOT

HEWITT PROPERTIES, LLC
ITEM NO. (5)
TEMP. CONST. RIGHTS = 0.13±AC. (1)
TOTAL AREA = 2.87± AC. (CITY)

IAN SCHLEH
ITEM NO. (4)
TEMP. CONST. RIGHTS = 889± S.F. (3)
TOTAL AREA = 0.19± AC. (CITY)

CINDY LOU MEOLI LIVING TRUST
CINDY LOU MEOLI, TRUSTEE
RICHARD A. MEOLI, TRUSTEE
ITEM NO. (6)
TEMP. CONST. RIGHTS = 59± S.F. (1)
TOTAL AREA = 0.14± AC. (PLAN)

226 VERANDA STREET CONDOMINIUM ASSOCIATION
ITEM NO. (6)
TEMP. CONST. RIGHTS = 59± S.F. (1)
TOTAL AREA = 0.14± AC. (PLAN)

MATTHEW CARDINALI
ITEM NO. (7)
TEMP. CONST. RIGHTS = 249± S.F. (1)
TOTAL AREA = 0.14± AC. (CITY)

242 VERANDA STREET, LLC

HARBO
CONDO
OWNER

I-295 SOUTHBOUND
I-295 NORTHBOUND
I-295 NORTHBOUND OFF-RAMP
RELOCATED I-295 NORTHBOUND OFF-RAMP
PRESENT I-295 NORTHBOUND OFF-RAMP
VERANDA STREET/U.S. ROUTE 1/STATE AID HIGHWAY NO. 22
4+00 OLYMPIA STREET
242 VERANDA STREET, LLC

STA. 103+70±, 175±' LT.
STA. 103+59±, 171±' LT.
STA. 103+54±, 117± Lt.
STA. 103+57±, 129± Lt.
STA. 103+66±, 117± Lt.
STA. 103+67±, 128± Lt.
STA. 106+03±, 90' LT.
BEGIN C.O.A.
END C.O.A.
TEMP. CONST. LIMITS
PROPOSED PAVED DRIVE
TEMP. CONST. LIMITS
TEMP. CONST. 420± S.F.
TEMP. CONST. 445± S.F.
TEMP. CONST. LIMITS 59± S.F.
TEMP. CONST. LIMITS 249± S.F.
0.13± AC.
S.H.C. FILE 3-132
S.H.C. FILE 3-75
CONTROL OF ACCESS
RIGHT OF WAY TO OTHERS
P.L.
CL
LIMITS

VERANDA STREET CURVE #2
VERANDA STREET CURVE #1
PC CURVE #2 = STA. 104+85.91
PT CURVE #1 = STA. 103+62.36
PT CURVE #2 = STA. 105+67.19
PT CURVE #3 = STA. 308+20.24
STA. 105+50.71 VERANDA STREET = STA. 308+62.82 I-295 NB RELOCATED OFF RAMP
PCC = STA. 306+71.15

81.09'
N 45°51'04.2" E
122.55'
81.28'
N 54°19'05.2" E
624.80'
N 37°23'56.1" W
N 39°17'56.2" W

RELOCATED I-295 NORTHBOUND OFF RAMP CURVE #3
RELOCATED I-295 NORTHBOUND OFF RAMP CURVE #2

PBMK 162
BM-162 AN 15"MAPLE
21745-12 PUNCH IN DMH RIM
PCT 12
PFLY 622
PK (PA) 105.58
PTRA 524 SPK
PTRA 528 PK
PTRA 525 PK
PTRA 522 SPK

R/W REFERENCES

I-295:
S.H.C. FILE 3-132 (1960) SHEETS 1-5 OF 18
S.H.C. FILE 3-75 (1952) SHEETS 4-8 & 11-12 OF 13

VERANDA STREET (WESTERLY OF I-295):
VERANDA STREET MONUMENT LAYOUT PLAN
BY CITY OF PORTLAND PUBLIC WORKS DEPT.
DATED JANUARY 1996 (SHEETS 1 & 2 OF 2)
CITY PLAN 944/5A

VERANDA STREET (EASTERLY OF I-295):
VERANDA STREET CITY BLUESHEETS
NUMBERED 3 THROUGH 6
(ON FILE WITH PORTLAND ENGINEERING DEPT.)

CUMBERLAND COUNTY COMMISSIONERS RECORDS (C.C.C.R.)
VOLUME 16, PAGE 943, DATED 1896, 60' WIDE WITHIN PROJECT LOCUS
AND ASSOCIATED PLAN: COMMISSIONER'S PLAN BOOK 3, BOOK 51

D.O.T. FILE 3-586 (2012) MARTIN'S POINT BRIDGE, WIN 16731.00
S.H.C. FILE 3-51 (1940)

SIDE ROADS:
HAWTHORNE, FAYETTE, & WORDSWORTH STREETS:
SEE CITY PLAN 944/5A (SHEET 2)

OLYMPIA & OREGON STREETS
SEE CITY BLUESHEETS

### CONTROLLED ACCESS LIMIT

CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE
R/W LINE
CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE
NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "295" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

CONTROL OF ACCESS

VERANDA ST. BRIDGE
OVER
VERANDA STREET

BRIDGE NO. 5933 WIN 021745.00

| ITEM | CHECKED |
|---|---|
| EXISTING CONDITION PLAN | N.T.A. C.W.K. |
| FINAL RIGHT OF WAY | R.M.C. C.W.K. |
| AREAS | R.M.C. E.M.S. |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP

**REVISIONS**

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

| NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE |
|---|---|---|---|---|---|
| | | COND. | 4/6/2020 | 36566 | 164 |

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "295" &
STATE AID HIGHWAY NO. 22
I-295 AND VERANDA STREET/U.S.ROUTE 1
PORTLAND CUMBERLAND COUNTY
FEDERAL AID PROJECT NO. NHPP-2174(500)

DECEMBER 2019 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 3-652
SCALE 1" = 25' | SHEET 2 OF 4

SHEET NUMBER
217
OF 220

Filename: ...\00\ROW\MSTA\003_RWPLAN3.dgn Division: BRIDGE Username: Mark.Poulin Date:4/16/2020

## PLAN LEGEND

| | | | | | |
|---|---|---|---|---|---|
| Town, County, State | New R/W Along Existing R/W | Sanitary Sewer | Traveled Way | Cut Line | Fill Line |
| Approx. Property Lines P.L. | Building | Telephone Line | Ditch | Stonewall | Retaining Wall |
| Existing Right of Way | Clearing Limit Line | Electric Line | Catch Basin | Baseline 10+00 11+00 12+00 | |
| Limits of Wrought Portion L.O.W.P. | Trees Conifer Deciduous | Water Line | Manhole | Monument | Traverse Point |
| Control Of Access C.O.A. | Tree Line Bush Line | Underdrain Line | Sewer Manhole | Iron Rod Found IRF | Pipe Found IPF |
| New Right of Way | Water Edge | Gas Line | Utility Pole | Replacement Pin Set | |
| New Easement | Ledge Rock/Boulder Flag Pole | Guardrail | Fire Hydrant | | |
| New Temporary Rights | Fence CHAIN LINK BARB WIRE STOCKADE | Culvert | Curbing | | |
| New R/W Within Existing R/W | Sign Well WELL Mailbox | Existing / Proposed | Existing / Proposed | | |

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

## STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER

CONTROL INFORMATION
HORIZONTAL DATUM:
US STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM:
NAVD88 COMBINED
FACTOR - 0.9999832

GRID NORTH

PLAN OF OCEAN VIEW PARK
EAST DEERING, ME
OWNED BY J. W. WILBUR
PREPARED BY A. L. ELIOT
DATED AUGUST 3, 1898
C.C.R.D. PLAN BOOK 8, PAGE 141

HARBOR'S EDGE
CONDOMINIUM PLAT
244 VERANDA STREET
BY OWEN HASKELL, INC.
DATED FEBRUARY 14, 2002
C.C.R.D. PLAN BOOK 202, PAGE 57

BOUNDARY SURVEY FOR LEO BIFULCO
BY TITCOMB ASSOCIATES
DATED NOVEMBER 1, 1995
C.C.R.D. PLAN BOOK 195, PAGE 388

CONDOMINIUM PLAT/SITE PLAN
AT 256 VERANDA STREET
FOR VERANDA STREET CONDOMINIUM
BY BACK BAY BOUNDARY, INC.
DATED MARCH 18, 2003
C.C.R.D. PLAN BOOK 203, PAGE 316

VERANDA STREET
CURVE DATA #3
PI = 113+64.92
D = 2°51'53.2"
Δ = 9°53'01.8" Lt.
R = 2000.00'
L = 345.01'
T = 172.93'
E = 7.46'

HARBOR'S EDGE CONDOMINIUM OWNER'S ASSOCIATION

LEOPOLDO ANGELO BIFULCO
RACHELENA MICHELENA BROOKS

ACCESS EASEMENT (PB 195/388)

256 VERANDA STREET CONDOMINIUM ASSOCIATION

JAMES E. MCPHERSON

OREGON STREET

STA. 113+33.64, VERANDA STREET =
STA. 5+00.00, OREGON STREET

N 38°59'38.6" W 6+00

JAMES I. PHILLIPS
MEGHAN R. PHILLIPS
ITEM NO. (8)
TEMP. CONST.
RIGHTS = 197± S.F. (2)
TOTAL AREA =
0.22± AC. (CITY)

MARIA J. GLAD
ITEM NO. (9)
TEMP. CONST.
RIGHTS = 366± S.F. (1)
TOTAL AREA =
0.18± AC. (CITY)

TEMP. CONST. LIMITS 366± S.F.

MARK L. RAJOTTE
ITEM NO. (10)
TEMP. CONST.
RIGHTS = 620± S.F. (1)
TOTAL AREA =
0.17± AC. (CITY)

TEMP. CONST. LIMITS 620± S.F.

TEMP. CONST. LIMITS 104± S.F.

TEMP. CONST. LIMITS 93± S.F.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

S.H.C. FILE NO. 3-I-1 & 3-I-5

VERANDA STREET/U.S. ROUTE 1/STATE AID HIGHWAY NO. 22

624.80'

345.01'

361.58'

N 44°26'03.4" E

110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

PBMK 163
BM-163
CHIS SQR
SE CNR PAD

VERANDA STREET CURVE #3

PBMK 164
BM-164
AN 36" OAK

PFLY 620
PK (PIN 10158)

PTRA 526
PK

PTRA 527 PK

PTRA 511
PK (PIN 10158)

PC CURVE #3 =
STA. 111+91.99

PT CURVE#3 =
STA. 115+37.00

C.C.C.R. BOOK 16, PAGE 943 & PLAN BOOK 3, PAGE 51

S.H.C. FILE 3-75, SHT. 8 (1952)

0.05± AC.

0.12± AC. CONST.

TEMP. CONST.

LIMITS

DRAINAGE EASE.

1272± S.F. CLL

CLL

OUTLET DRAINAGE STRUCTURE
STA. 112+88 RT. TO
STA. 113+58 RT.

PORTLAND WATER DISTRICT EASEMENT
C.C.R.D. BOOK 2115, PAGE 301
PARAGRAPH 7

APPROXIMATE LOCATION
CITY OF PORTLAND SEWER EASEMENT
SEE C.C.R.D. BOOK 4815, PAGE 160

APPROX. LOCATION

APPROXIMATE LOCATION
PORTLAND WATER DISTRICT EASEMENT
SEE C.C.R.D. BOOK 2254, PAGE 97

R/W REFERENCES

I-295:
S.H.C. FILE 3-132 (1960) SHEETS 1-5 OF 18
S.H.C. FILE 3-75 (1952) SHEETS 4-8 & 11-12 OF 13

VERANDA STREET (WESTERLY OF I-295):
VERANDA STREET MONUMENT LAYOUT PLAN
BY CITY OF PORTLAND PUBLIC WORKS DEPT.
DATED JANUARY 1996 (SHEETS 1 & 2 OF 2)
CITY PLAN 944/5A

VERANDA STREET (EASTERLY OF I-295):
VERANDA STREET CITY BLUESHEETS
NUMBERED 3 THROUGH 6
(ON FILE WITH PORTLAND ENGINEERING DEPT.)

CUMBERLAND COUNTY COMMISSIONERS RECORDS (C.C.C.R.)
VOLUME 16, PAGE 943, DATED 1896, 60' WIDE WITHIN PROJECT LOCUS
AND ASSOCIATED PLAN: COMMISSIONER'S PLAN BOOK 3, BOOK 51

D.O.T. FILE 3-586 (2012) MARTIN'S POINT BRIDGE, WIN 16731.00
S.H.C. FILE 3-51 (1940)

SIDE ROADS:
HAWTHORNE, FAYETTE, & WORDSWORTH STREETS:
SEE CITY PLAN 944/5A (SHEET 2)

OLYMPIA & OREGON STREETS
SEE CITY BLUESHEETS

END C.O.A.

S.H.C. FILE 3-75, SHT. 8
STATE OF MAINE OWNS THE TIDE FLATS TO THE MEAN LOW WATER LINE (S.H.C. 3-75 SHTS. 11 & 12, AND C.C.R.D. BOOK 2217, PAGE 255)

CONTROLLED ACCESS LIMIT

CONTROLLED ACCESS LIMIT LINE ALONG R/W LINE

R/W LINE

CONTROLLED ACCESS LIMIT LINE NOT ON R/W LINE

NO ACCESS WILL BE PERMITTED TO OR FROM STATE HIGHWAY "295" AND ADJOINING PROPERTIES WITHIN BOUNDARIES DEFINED BY CONTROLLED ACCESS LIMIT LINES

ATLANTIC PROPERTIES, LLC
ITEM NO. (11)
DRAINAGE EASE. = 1,272± S.F. (1)
TEMP. CONST. RIGHTS = 0.05± AC. (1)
TOTAL AREA = 0.53± AC. (CITY)

MARTIN'S POINT HEALTH CARE, INC.
ITEM NO. (12)
TEMP. CONST. RIGHTS = 0.12± AC. (1)
TOTAL AREA = 9.1± AC. (CITY)

VERANDA ST. BRIDGE
OVER
VERANDA STREET

BRIDGE NO. 5933 WIN 021745.00

| TECH | CHECKED |
|---|---|
| N.T.A. | C.W.K. |
| R.M.C. | C.W.K. |
| R.M.C. | E.M.S. |

| ITEM | PLAN |
|---|---|
| EXISTING CONDITION | |
| FINAL RIGHT OF WAY | |
| AREAS | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP

**REVISIONS**

| NO. | DATE | DESCRIPTION | BY |
|---|---|---|---|

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

| NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE |
|---|---|---|---|---|---|
| | | COND. | 4/6/2020 | 36566 | 164 |

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "295" &
STATE AID HIGHWAY NO. 22
I-295 AND VERANDA STREET/U.S. ROUTE 1
PORTLAND CUMBERLAND COUNTY
FEDERAL AID PROJECT NO. NHPP-2174(500)

| DECEMBER 2019 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 3-652 |
|---|---|---|
| SCALE 1" = 25' | SHEET 3 OF 4 | |

SHEET NUMBER
218
OF 220

Filename: ...\00\ROW\MSTA\004_RWPLAN4.dgn Division: BRIDGE Username: Mark.Poulin Date:4/16/2020

## PLAN LEGEND

Town, County, State
Approx. Property Lines P.L.
Existing Right of Way
Limits of Wrought Portion L.O.W.P.
Control Of Access C.O.A.
New Right of Way
New Easement
New Temporary Rights
New R/W Within Existing R/W

New R/W Along Existing R/W
Building
Clearing Limit Line
Trees Conifer Deciduous
Tree Line Bush Line
Water Edge
Ledge Rock/Boulder Flag Pole
Fence CHAIN LINK BARB WIRE STOCKADE
Sign Well WELL Mailbox

| | Existing | Proposed |
|---|---|---|
| Sanitary Sewer | S | S |
| Telephone Line | T | T |
| Electric Line | E | E |
| Water Line | W | W |
| Underdrain Line | | |
| Gas Line | G | G |
| Guardrail | | |
| Culvert | | |

| | Existing | Proposed |
|---|---|---|
| Traveled Way | | |
| Ditch | | |
| Catch Basin | | |
| Manhole | | |
| Sewer Manhole | | |
| Utility Pole | | |
| Fire Hydrant | | |
| Curbing | | |

Cut Line C C C
Fill Line F F F
Stonewall
Retaining Wall
Baseline 10+00 11+00 12+00
Monument
Traverse Point
Iron Rod Found IRF
Pipe Found IPF
Replacement Pin Set

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

## STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER

CONTROL INFORMATION
HORIZONTAL DATUM:
US STATE PLANE NAD83(2011)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM:
NAVD88 COMBINED
FACTOR - 0.9999832

GRID NORTH

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

VERANDA STREET
CURVE DATA #4
PI = 120+02.10
D = 1°47'25.8"
Δ = 3°42'20.6" Lt.
R = 3200.00'
L = 206.96'
T = 103.52'
E = 1.67'

PC = STA. 118+98.58
PT = STA. 121+05.54

VERANDA STREET/U.S. ROUTE 1/STATE AID HIGHWAY NO. 22
VERANDA STREET CURVE #4
117+00 118+00 119+00 120+00 121+00 122+00 123+00
°26'03.4" E 361.58'
206.96'
94.46'
N 40°43'42.8" E
END B.L.

PTRA 529 PK
PBMK 164
BM-164 AN 36" OAK
PTRA 60
16731-60 ROD/DISK

0.12± AC. CONST.
0.12± AC. CONST.
LIMITS
LIMITS
TEMP.

30' WIDE EASEMENT PORTLAND WATER DISTRICT C.C.R.D. BOOK 2115, PAGE 40 PARAGRAPH 7

SIGNAL EASEMENT EXHIBIT A
AT MARTIN'S POINT HEALTH CARE, INC.
331 VERANDA STREET, PORTLAND, MAINE
BY OWEN HASKELL, INC.
DRWG. NO. 1E, DATED JULY 29, 2010
C.C.R.D. BOOK 28274, PAGE 60

APPROXIMATE LOCATION OF A 40' EASEMENT CITY OF PORTLAND SEE C.C.R.D. BOOK 4015, PAGE 160

APPROXIMATE LOCATION PORTLAND SEWER EASEMENT BOOK 4015 PAGE 160

MARTIN'S POINT HEALTH CARE, INC.
ITEM NO. (12)
TEMP. CONST. RIGHTS = 0.12± AC. (1)
TOTAL AREA = 9.1± AC. (CITY)

NOTE: FOR ITEM NO. 13, SEE SHEET 2

R/W REFERENCES

I-295:
S.H.C. FILE 3-132 (1960) SHEETS 1-5 OF 18
S.H.C. FILE 3-75 (1952) SHEETS 4-8 & 11-12 OF 13

VERANDA STREET (WESTERLY OF I-295):
VERANDA STREET MONUMENT LAYOUT PLAN
BY CITY OF PORTLAND PUBLIC WORKS DEPT.
DATED JANUARY 1996 (SHEETS 1 & 2 OF 2)
CITY PLAN 944/5A

VERANDA STREET (EASTERLY OF I-295):
VERANDA STREET CITY BLUESHEETS
NUMBERED 3 THROUGH 6
(ON FILE WITH PORTLAND ENGINEERING DEPT.)

CUMBERLAND COUNTY COMMISSIONERS RECORDS (C.C.C.R.)
VOLUME 16, PAGE 943, DATED 1896, 60' WIDE WITHIN PROJECT LOCUS
AND ASSOCIATED PLAN: COMMISSIONER'S PLAN BOOK 3, BOOK 51

D.O.T. FILE 3-586 (2012) MARTIN'S POINT BRIDGE, WIN 16731.00
S.H.C. FILE 3-51 (1940)

SIDE ROADS:
HAWTHORNE, FAYETTE, & WORDSWORTH STREETS:
SEE CITY PLAN 944/5A (SHEET 2)

OLYMPIA & OREGON STREETS
SEE CITY BLUESHEETS

BOUNDARY & TOPOGRAPHIC SURVEY ON VERANDA STREET
FOR MARTIN'S POINT HEALTH CARE CENTER
BY OWEN HASKELL, INC.
DATED DECEMBER 2, 2004, REVISED DECEMBER 7, 2005
JOB NO. 8644P

CONVEYANCE PLAN ON VERANDA STREET, PORTLAND
FOR MARTIN'S POINT HEALTH CARE, INC.
F/K/A PENOBSCOT BAY MEDICAL ASSOCIATES, INC.
331 VERANDA STREET, PORTLAND
BY OWEN HASKELL, INC.
DATED JUNE 13, 2006
C.C.R.D. PLAN BOOK 207, PAGE 364

VERANDA ST. BRIDGE
OVER
VERANDA STREET

BRIDGE NO. 5933 WIN 021745.00

| ITEM | TECH | CHECKED |
|---|---|---|
| EXISTING CONDITION PLAN | N.T.A. | C.W.K. |
| FINAL RIGHT OF WAY | R.M.C. | C.W.K. |
| AREAS | R.M.C. | E.M.S. |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
PORTLAND
RIGHT OF WAY MAP

| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | DESCRIPTION | BY |

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

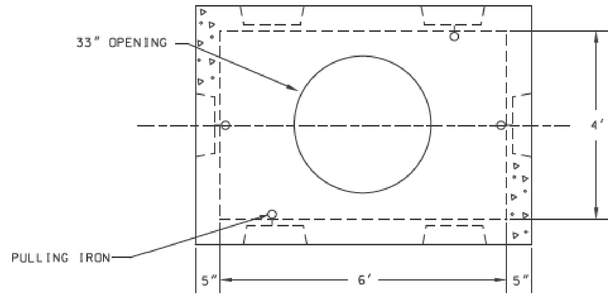
| NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE |
|---|---|---|---|---|---|
| | | COND. | 4/6/2020 | 36566 | 164 |

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE AID HIGHWAY NO. 22
VERANDA STREET/U.S.ROUTE 1
PORTLAND CUMBERLAND COUNTY
FEDERAL AID PROJECT NO. NHPP-2174(500)

| DECEMBER 2019 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 3-652 |
|---|---|---|
| SCALE 1" = 25' | SHEET 4 OF 4 | |

SHEET NUMBER
219
OF 220



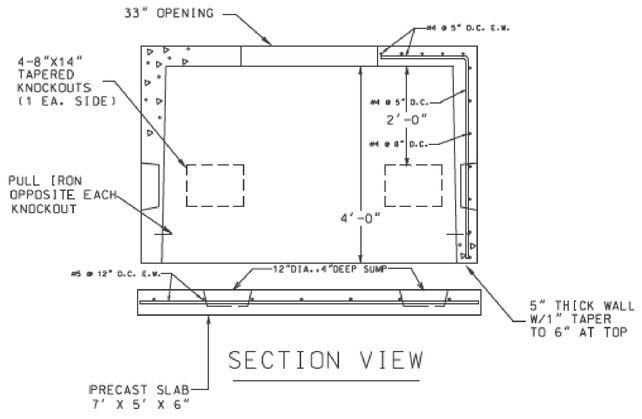

PLAN VIEW

NOTES:

1) Splice box shall be designed to withstand H20 wheel loading with 6 inches of overburden. The design shall also comply with National Electrical Safety Code Section 323A. Provide shop drawings stamped by a State of Maine Registered Professional Engineer upon Request.

2) For use with 32" cover marked CMP Co., S/C62-1830 (Min. one course of brick to grade.)

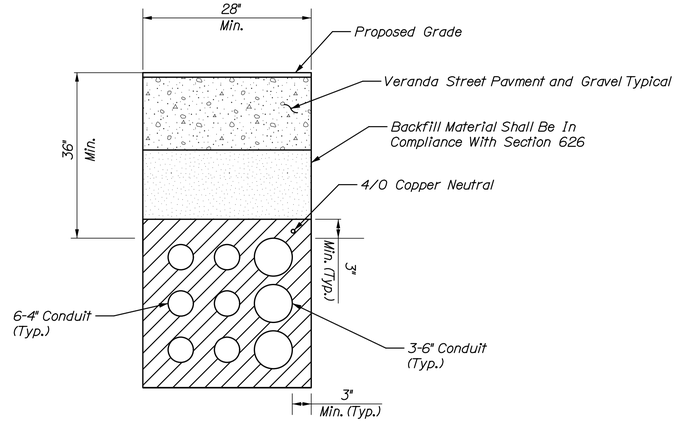
3) Splice box and slab shall be set on a suitable gravel base.




SECTION VIEW

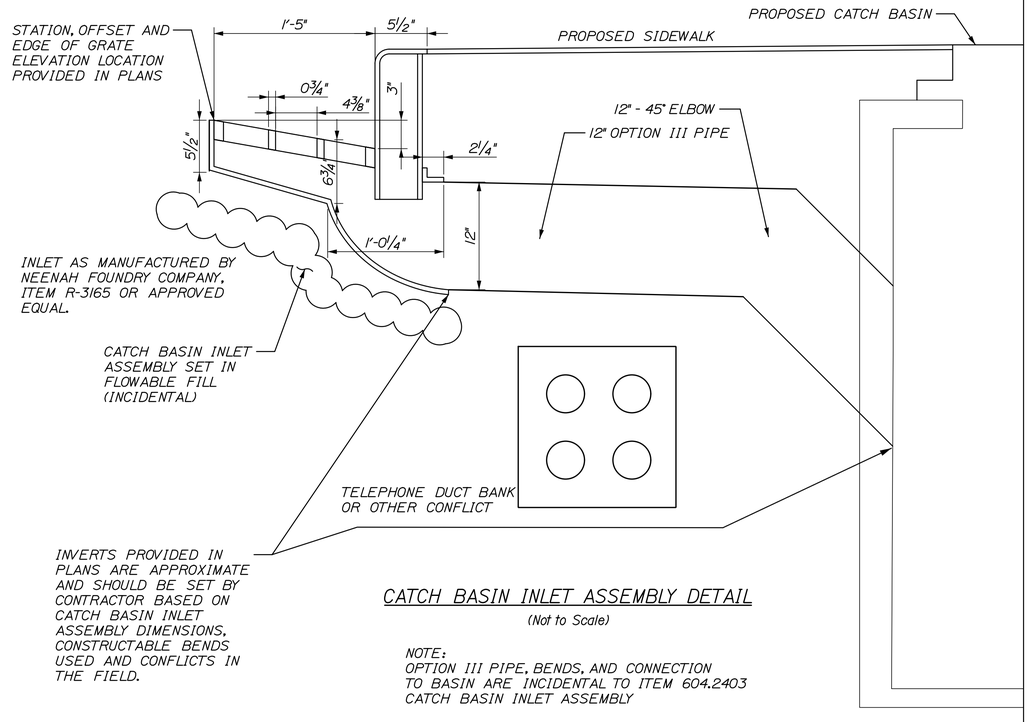
4' X 6' SPLICE BOX

( NOT TO SCALE )




3X3 UTILITY CONDUIT CONCRETE DUCT BANK

(Not to Scale)




CATCH BASIN INLET ASSEMBLY DETAIL

(Not to Scale)

NOTE:
OPTION III PIPE, BENDS, AND CONNECTION TO BASIN ARE INCIDENTAL TO ITEM 604.2403 CATCH BASIN INLET ASSEMBLY

THIS DRAWING SHALL BE REVISED ON THE CADD SYSTEM ONLY

| | ORIGINAL | REVISED | REVISED |
|---|---|---|---|
| BY | REC | REC | |
| APPROVED | BAC | BCB | |
| APPROVED | | | |
| DATE | 12/12/03 | 08/06/07 | |

CMP CADD Engineered by Bentley

| | |
|---|---|
| DISTRIBUTION ENGINEERING | 4 X 6 SPLICE BOX WITH 32" ROUND COVER |
| CENTRAL MAINE POWER CO. | 905A-4 |

FILE NAME _____ SCANNED _____

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2174(500)

WIN 021745.00

BRIDGE NO.5933 BRIDGE PLANS

| PROJ. MANAGER | D. EATON | BY |
|---|---|---|
| DESIGN-DETAILED | EDD | CDH |
| CHECKED-REVIEWED | RWH | LZD |
| DESIGN2-DETAILED2 | | |
| DESIGN3-DETAILED3 | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

| | BY | DATE |
|---|---|---|
| | | |
| | CDH | 2\20 |
| | LZD | 2\20 |

SIGNATURE

P.E. NUMBER

DATE

INTERSTATE 295 OVER VERANDA STREET
PORTLAND CUMBERLAND COUNTY

UTILITY DETAILS

SHEET NUMBER

220

OF 220

HNTB

Filename: 220_Utility Details.dgn Division: Username: Date:4/10/2020

0 50 100 200 300 400 Feet

1 " = 100 '

Interstate 295

Whittier

Wordsworth

Helene

Vaill

Bismark

Olympia

Cleveland

Oregon

Victoria

Veranda

Hawthorne

Fayette

Sullivan

Route 1

6" CASTCL 1960

8" CASTCL 1960

6" CASTCL 1962

2.25" CASTCL 1956

2.25" CASTCL 1955

6" CASTCL 1955

8" CAST 1901

8" CASTCL 1955

8" CASTCL 1969

6" CASTCL 1963

6" CASTCL 1990

12" DI 1994

12" CAST 1928

12" CAST 1948

14" HDPE 1986

CONNECT 6" TEMPORARY MAIN TO EXISTING 8" CAST IRON MAIN

INSTALL 8" CUT-IN VALVE ON EXISTING 8" CAST IRON MAIN CLOSE FOR PHASE 1 INSTALLATION

CONNECT 6" TEMPORARY MAIN TO EXISTING 6" DI MAIN

INSTALL 6" CUT-IN VALVE ON EXISTING 6" DI MAIN CLOSE FOR PHASE 1 INSTALLATION

INSTALL 6" CUT-IN VALVE ON EXISTING 6" CAST IRON MAIN CLOSE FOR PHASE 2 INSTALLATION

INSTALL 12" CUT-IN VALVE ON EXISTING 12" DI MAIN CLOSE FOR PHASE 1 INSTALLATION

EXISTING 6" GATE VALVE TO BE CLOSED FOR PHASE 1 INSTALLATION **POD-DTV03257**

EXISTING 12" GATE VALVE TO BE CLOSED FOR PHASE 1 INSTALLATION **POD-DTV03260**

CLOSE 6" TEMP VALVE AND DISCONNECT TEMP MAIN FROM HYDRANT FOR PHASE 2 INSTALLATION

EXISTING 8" SERVICE GATE VALVE TO BE CLOSED FOR PHASE 2 INSTALLATION **PON-SVV023500** *331 VERANDA ST* SERVICE **SV279373A**

EXISTING 12" GATE VALVE TO BE CLOSED FOR PHASE 2 INSTALLATION

CONNECT 6" TEMPORARY MAIN TO EXISTING HYDRANT FOR PHASE 1 INSTALLATION **POD-HYD11869**

INSTALL 1" AIR VLAVE ON EXISTING 12" MAIN

CONNECT 6" TEMPORARY MAIN TO EXISTING HYDRANT FOR PHASE 2 INSTALLATION **POD-HYD01798**

INSTALL 8" INSERTION VALVE ON PRIVATE SERVICE PIPE CLOSE FOR PHASE 2 INSTALLATION *331 VERANDA ST* SERVICE **SV27D5278A**

CONNECT 6" TEMPORARY MAIN TO EXISTING PRIVATE HYDRANT FOR PHASE 2 INSTALLATION **PON-HYP008590**

CONNECT 6" TEMPORARY MAIN TO EXISTING PRIVATE HYDRANT FOR PHASE 2 INSTALLATION **PON-HYP008971**

6" TEMP MAIN

6" TEMP VALVE

4" FD CONNECTION

PHASE 1

PHASE 2

## NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED PIPING AND APPURTENANCES. SALVAGE ALL REMOVED HYDRANTS AND DELIVER TO PWD YARD AT 225 DOUGLASS ST - PORTLAND.

2. ALL MAINS AND SERVICES SHALL BE INSTLLED WITH 5.5′ OF COVER MEASURED FROM PROPOSED ROAD GRADE UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR APPROVED BY A PWD REPRESENTATIVE.

3. THE PORTLAND WATER DISTRICT WILL NOTIFY CUSTOMERS FOR ALL WORK INVOLVING TEMPORARY SHUTDONW OF SERVICE. CUSTOMERS MUST RECEIVE AT LEAST 48 HOURS NOTIFICATION PRIO TO ANY SHUTDOWN. THE DISTRICT MUST RECEIVE NOTICE FROM THE CONTRACTOR OF THE SHUTDOWN AT LEAST 48 HOURS PRIOR TO CUSTOMER NOTIFICATION.

4. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY-WRAPPED PER SPECIICATIONS.

5. INSTALL 4″ TEMPORARY FIRE DEPARTMENT. CONNECTION (TYP.). 4″ GATE VALVE, 90° ELBOW, AND 4-1/2″ NPT STEAMER PORT CONNECTION WITH CAP AT LOCATIONS SHOWN ON THE DRAWINGS. ALL JOINTS TO BE RESTRAINED. STEAMER PORT AND RISER TO BE ANCHORED TO THE GROUND. OUTLET TO BE BETWEEN 1′ AND 2′ OFF THE GROUND. OUTLET AND TEE TO BE BRACED.

6. TEMPORARY WATER SYSTEM SHALL ONLY BE ACTIVE BETWEEN APRIL 15TH AND OCTOBER 15TH. ALL WATER MAIN, EITHER EXISTING OR NEWLY INSTALLED, MUST BE ACTIVE BETWEEN OCTOBER 16TH AND APRIL 14TH.

7. CONTRACTOR MUST ALLOW OWNER SUFFICIENT TIME TO TRANSFER WATER SERVICES FROM EXISTING WATER MAIN TO TEMPORARY WATER MAIN SERVICES INSTALLED BY CONTRACTOR AND TO TRANSFER SERVICE TO NEW WATER MAIN/SERVICE LINE UPON SUCCESSFUL TESTING OF SAMPLE FOR ABSENCE OF BACTERIA. THE CONTRCTOR SHALL NOT CLAIM ANY DELAY-RELATED COST OR TIME RELATD TO THIS WORK.

8. REPLACE ALL SERVICES TO BE RENEWED FROM MAIN TO STREET LINE WITH 1" COPPER PIPING, UNLESS OTHERWISE NOTED.

9. LOCATIONS OF UTILITIES OTHER THAN WATER ARE APPROXIMATE, AND NOT ALL UTILITES ARE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UTILITIES DURING INSTALLATION OF THE WATER MAIN.

10. INSTALL SWIVEL TYPE TEES FOR ALL HYDRANT CONNECTIONS.

11. A SHUTDOWN IS REQUIRED FOR INSTALLATION OF ALL CUT-IN VALVES AND FITTINGS ON EXISTING WATER MAINS.

12. ALL FITTINGS SHALL BE MECHANICAL JOINT (RETAINED).

13. REMOVE THE TOP SECTION OF ALL ABANDONED VALVE BOXES AND FILL WITH SAND.

14. INSTALL A MECHANICAL JOINT CAP ON ENDS OF ALL ABANDONED MAINS.

15. CONTRACTOR SHALL TEST AND ACTIVATE PHASE 1 BEFORE INSTALLATION CAN BEGIN IN PHASE 2.

16. ALL TEMPORARY WATER MAIN TO BE BURIED BELOW GRADE AT ALL STREET AND DRIVEWAY CROSSINGS. INSTALL AND MAINTAIN TEMPORARY PAVEMENT IN THESE AREAS.

## LEGEND

EXISTING WATER MAIN

TEMPORARY WATER MAIN

PROJECT:

**374376**

# VERANDA STREET
# PORTLAND, MAINE
# WATER MAIN REPLACEMENT
# TEMPORARY WATER MAIN

STATE OF MAINE · TIMOTHY J. MCMULLIN · 9385 · REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: BSJ

DESIGN BY: TM

DATE: 12/10/2019


**Portland Water District**

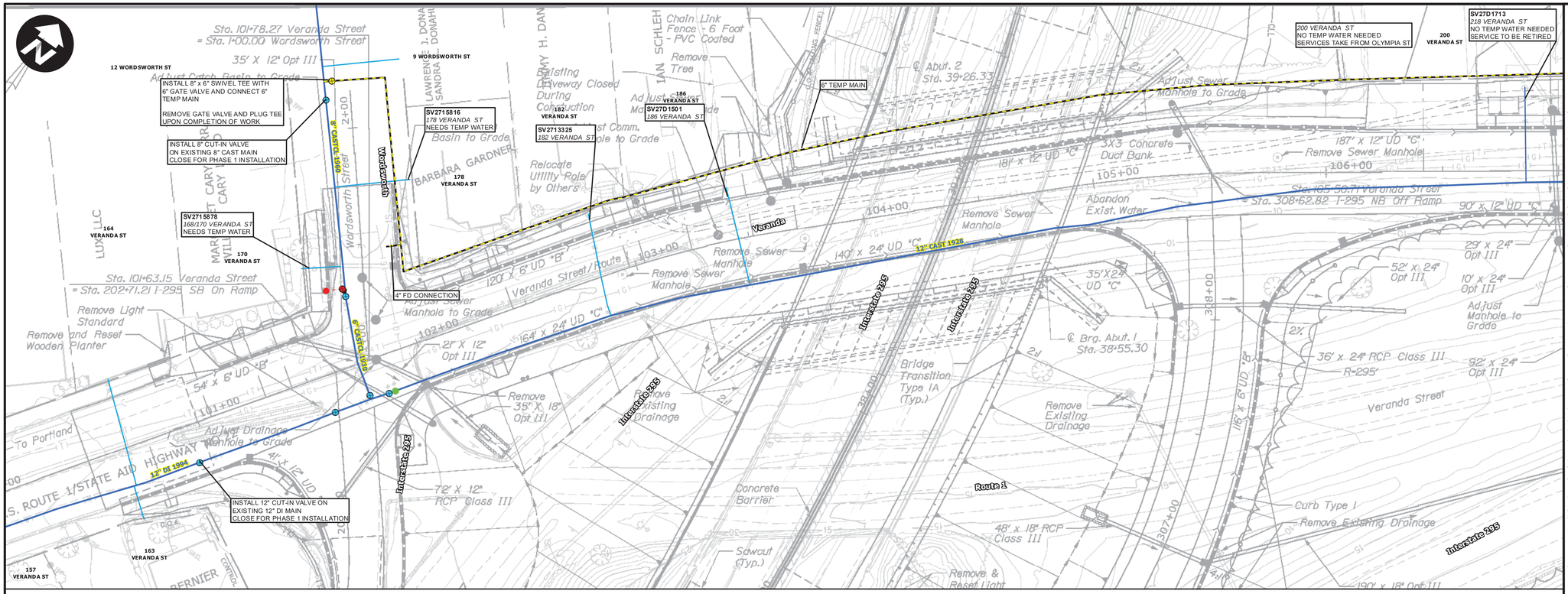
ASSET MANAGEMENT AND PLANNING DEPARTMENT

225 DOUGLASS STREET, PORTLAND ME 04104

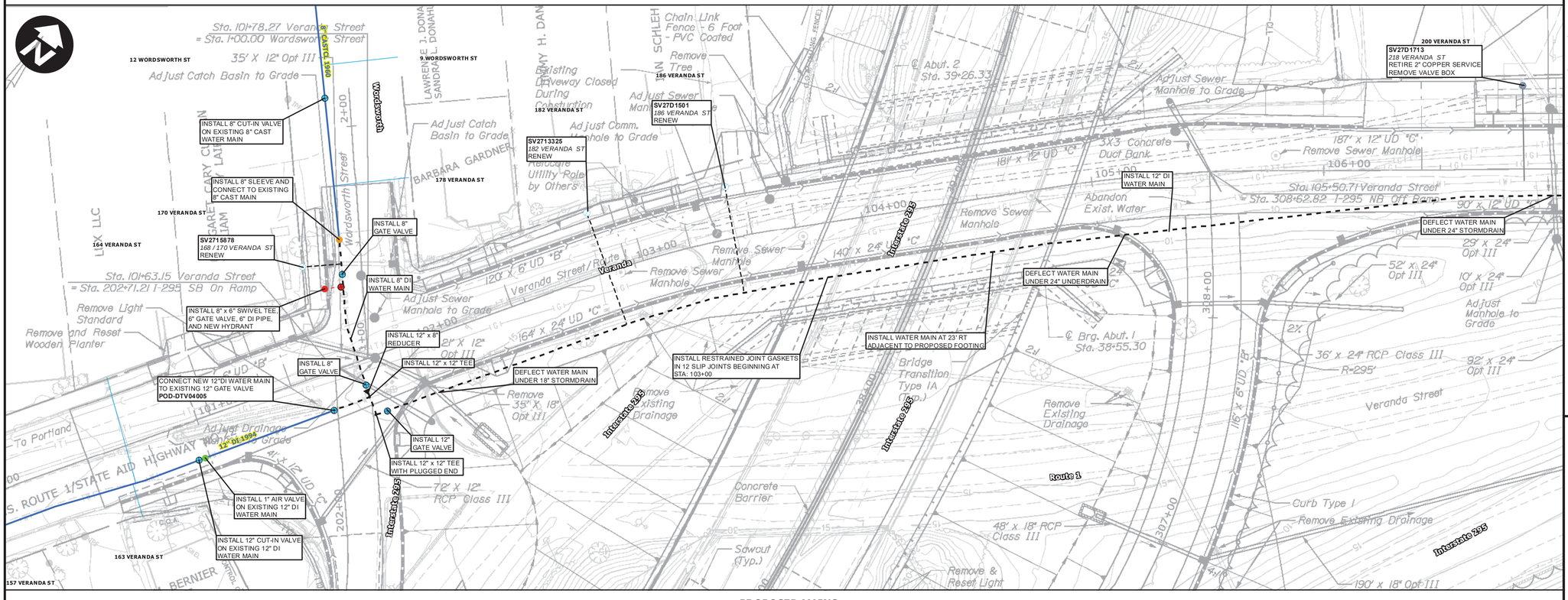
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SHEET:

**W1 OF W6**




**EXISTING AND TEMPORARY MAINS**
**1 " = 25 '**




**PROPOSED MAINS**
**1 " = 25 '**

## NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED PIPING AND APPURTENANCES. SALVAGE ALL REMOVED HYDRANTS AND DELIVER TO PWD YARD AT 225 DOUGLASS ST - PORTLAND.

2. ALL MAINS AND SERVICES SHALL BE INSTLLED WITH 5.5' OF COVER MEASURED FROM PROPOSED ROAD GRADE UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR APPROVED BY A PWD REPRESENTATIVE.

3. THE PORTLAND WATER DISTRICT WILL NOTIFY CUSTOMERS FOR ALL WORK INVOLVING TEMPORARY SHUTDONW OF SERVICE. CUSTOMERS MUST RECEIVE AT LEAST 48 HOURS NOTIFICATION PRIO TO ANY SHUTDOWN. THE DISTRICT MUST RECEIVE NOTICE FROM THE CONTRACTOR OF THE SHUTDOWN AT LEAST 48 HOURS PRIOR TO CUSTOMER NOTIFICATION.

4. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY-WRAPPED PER SPECIICATIONS.

5. INSTALL 4" TEMPORARY FIRE DEPARTMENT. CONNECTION (TYP.). 4" GATE VALVE, 90° ELBOW, AND 4-1/2" NPT STEAMER PORT CONNECTION WITH CAP AT LOCATIONS SHOWN ON THE DRAWINGS. ALL JOINTS TO BE RESTRAINED. STEAMER PORT AND RISER TO BE ANCHORED TO THE GROUND. OUTLET TO BE BETWEEN 1' AND 2' OFF THE GROUND. OUTLET AND TEE TO BE BRACED.

6. TEMPORARY WATER SYSTEM SHALL ONLY BE ACTIVE BETWEEN APRIL 15TH AND OCTOBER 15TH. ALL WATER MAIN, EITHER EXISTING OR NEWLY INSTALLED, MUST BE ACTIVE BETWEEN OCTOBER 16TH AND APRIL 14TH.

7. CONTRACTOR MUST ALLOW OWNER SUFFICIENT TIME TO TRANSFER WATER SERVICES FROM EXISTING WATER MAIN TO TEMPORARY WATER MAIN SERVICES INSTALLED BY CONTRACTOR AND TO TRANSFER SERVICE TO NEW WATER MAIN/SERVICE LINE UPON SUCCESSFUL TESTING OF SAMPLE FOR ABSENCE OF BACTERIA. THE CONTRCTOR SHALL NOT CLAIM ANY DELAY-RELATED COST OR TIME RELATD TO THIS WORK.

8. REPLACE ALL SERVICES TO BE RENEWED FROM MAIN TO STREET LINE WITH 1" COPPER PIPING, UNLESS OTHERWISE NOTED.

9. LOCATIONS OF UTILITIES OTHER THAN WATER ARE APPROXIMATE, AND NOT ALL UTILITES ARE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UTILITIES DURING INSTALLATION OF THE WATER MAIN.

10. INSTALL SWIVEL TYPE TEES FOR ALL HYDRANT CONNECTIONS.

11. A SHUTDOWN IS REQUIRED FOR INSTALLATION OF ALL CUT-IN VALVES AND FITTINGS ON EXISTING WATER MAINS.

12. ALL FITTINGS SHALL BE MECHANICAL JOINT (RETAINED).

13. REMOVE THE TOP SECTION OF ALL ABANDONED VALVE BOXES AND FILL WITH SAND.

14. INSTALL A MECHANICAL JOINT CAP ON ENDS OF ALL ABANDONED MAINS.

15. CONTRACTOR SHALL TEST AND ACTIVATE PHASE 1 BEFORE INSTALLATION CAN BEGIN IN PHASE 2.

16. ALL TEMPORARY WATER MAIN TO BE BURIED BELOW GRADE AT ALL STREET AND DRIVEWAY CROSSINGS. INSTALL AND MAINTAIN TEMPORARY PAVEMENT IN THESE AREAS.

## LEGEND

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- TEMPORARY WATER MAIN
- PROPOSED/RENEWED SERVICE
- RECONNECT SERVICE

PROJECT:
**374376**

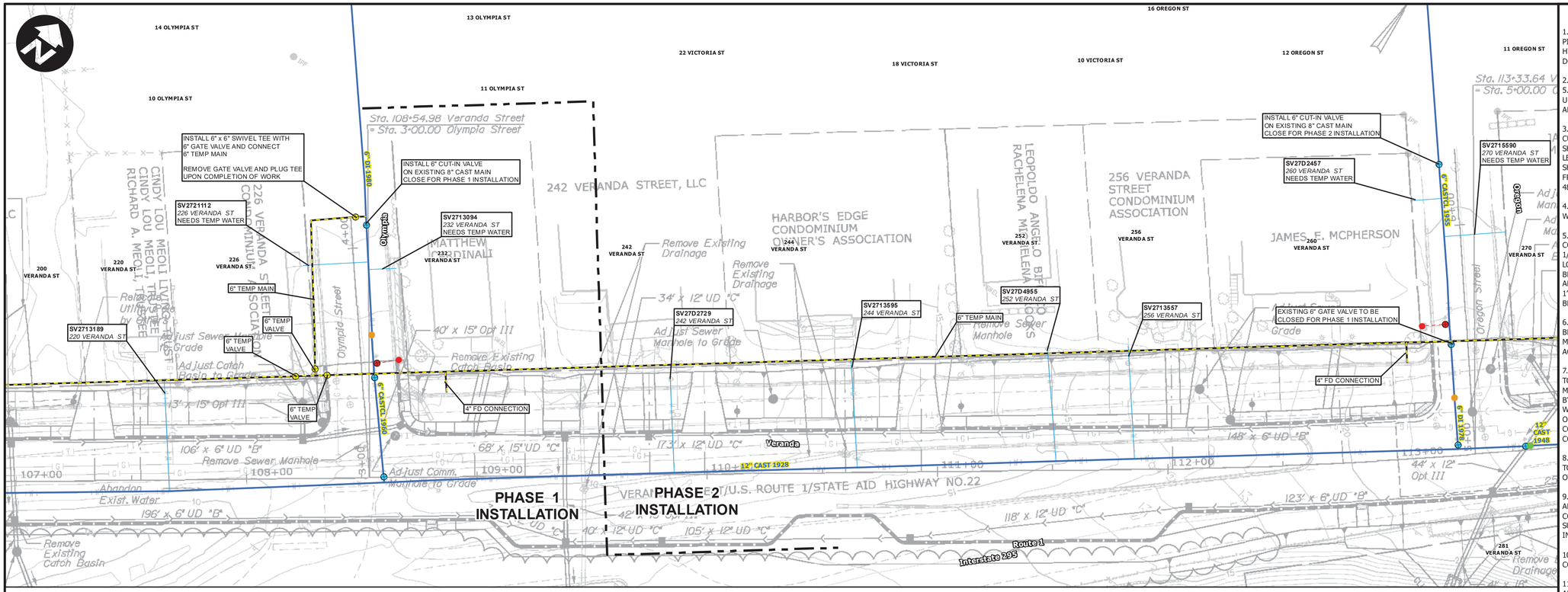
# VERANDA STREET
# PORTLAND, MAINE
# WATER MAIN REPLACEMENT

STATE OF MAINE · TIMOTHY J. MCMULLIN · 13855 · REGISTERED PROFESSIONAL ENGINEER

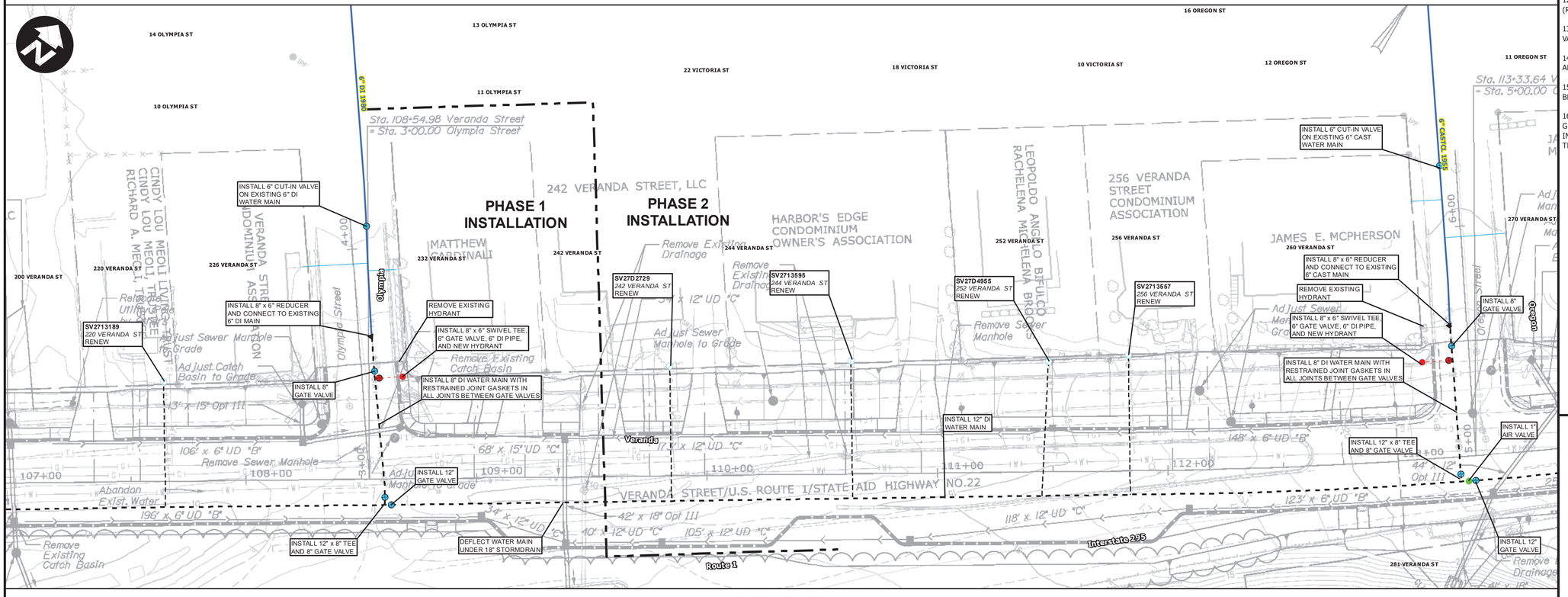
DRAWN BY: BSJ
DESIGN BY: TM
DATE: 12/10/2019


**Portland Water District**
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
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SHEET:
**W2 OF W6**




**EXISTING AND TEMPORARY MAINS**
**1 " = 25 '**




**PROPOSED MAINS**
**1 " = 25 '**

## NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED PIPING AND APPURTENANCES. SALVAGE ALL REMOVED HYDRANTS AND DELIVER TO PWD YARD AT 225 DOUGLASS ST - PORTLAND.

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## LEGEND

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
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- PROPOSED/RENEWED SERVICE
- RECONNECT SERVICE

PROJECT:
**374376**

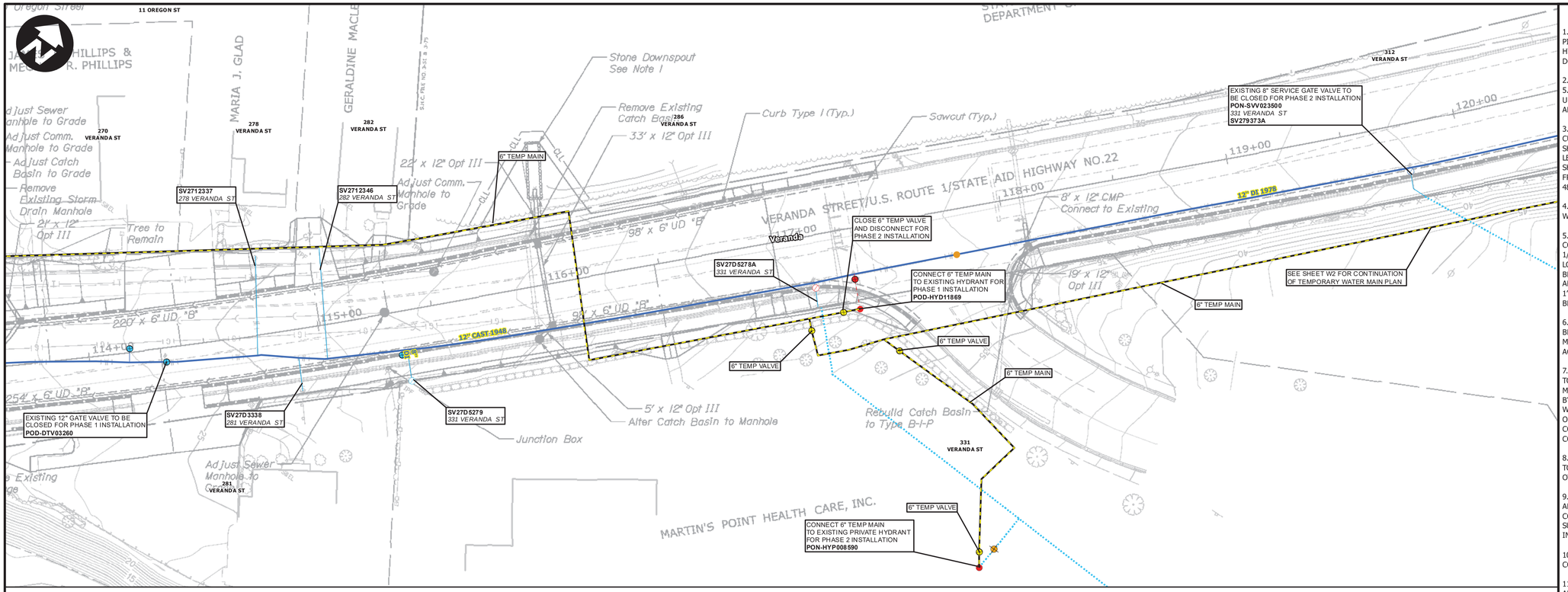
# VERANDA STREET
# PORTLAND, MAINE
# WATER MAIN REPLACEMENT

STATE OF MAINE
TIMOTHY J. MCMULLIN
9355
REGISTERED PROFESSIONAL ENGINEER

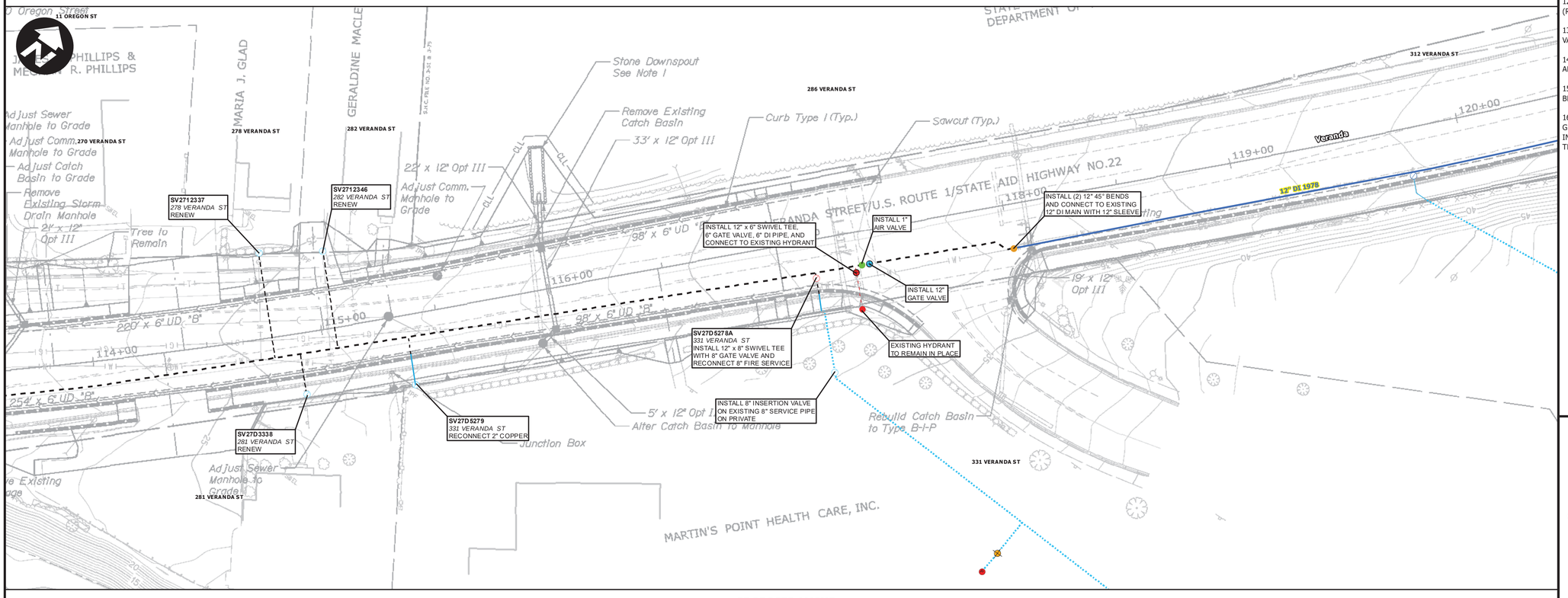
DRAWN BY: BSJ
DESIGN BY: TM
DATE: 12/10/2019


**Portland Water District**
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 • WWW.PWD.ORG


SHEET:
**W3 OF W6**




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PROJECT:
**374376**

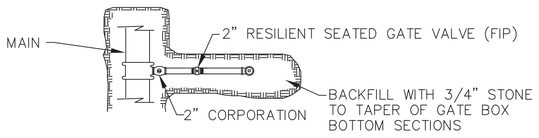
# VERANDA STREET PORTLAND, MAINE WATER MAIN REPLACEMENT

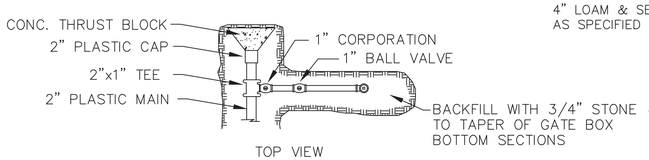
STATE OF MAINE · TIMOTHY J. MCMULLIN · 13855 · REGISTERED PROFESSIONAL ENGINEER

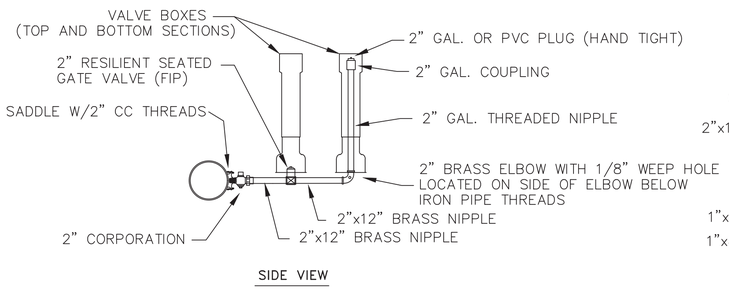
DRAWN BY: BSJ
DESIGN BY: TM
DATE: 12/10/2019


**Portland Water District**
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 • WWW.PWD.ORG

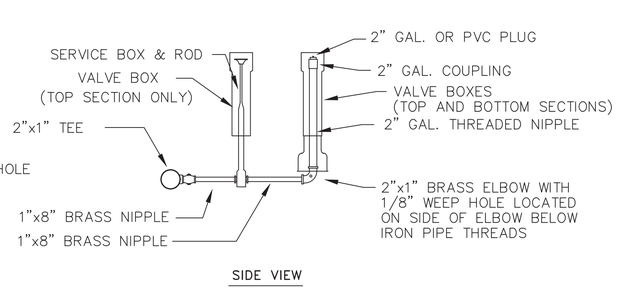

SHEET:
**W4 OF W6**



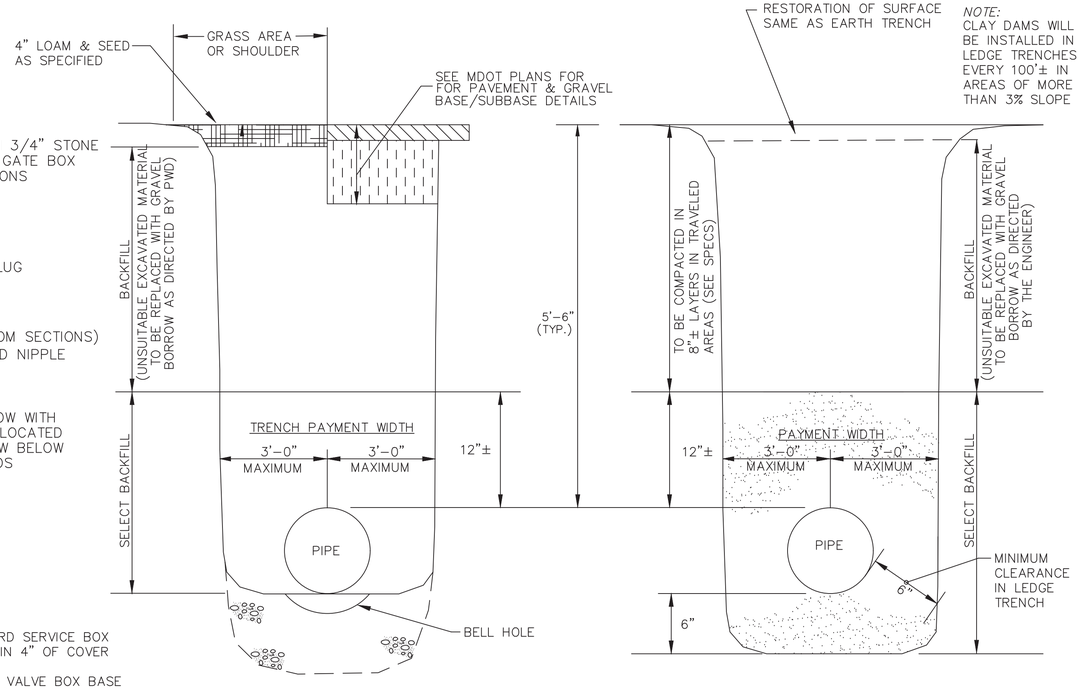




## SIDE-ARM BLOW-OFF 4" & LARGER MAINS

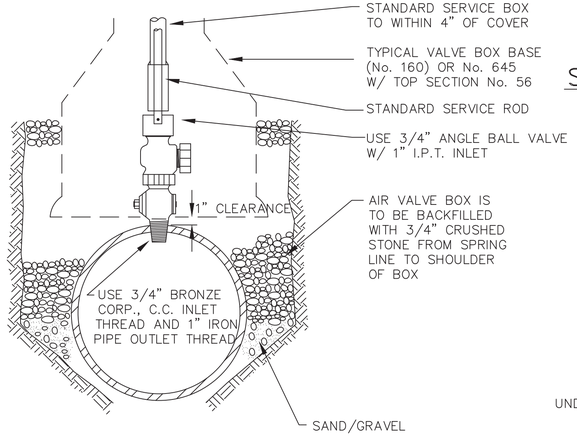



## SIDE-ARM BLOW-OFF 2" MAIN

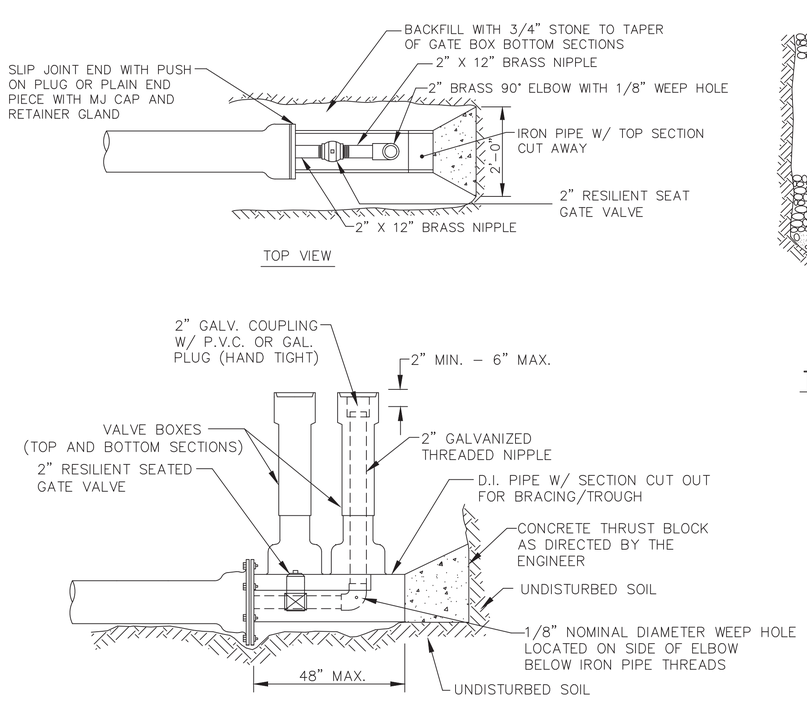



## SECTION THRU EARTH TRENCH

## SECTION THRU LEDGE TRENCH



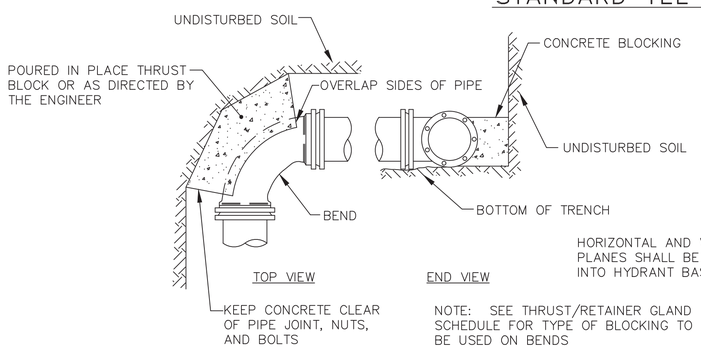

## TYPICAL AIR VALVE (1")



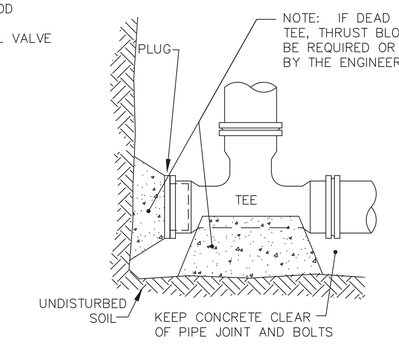




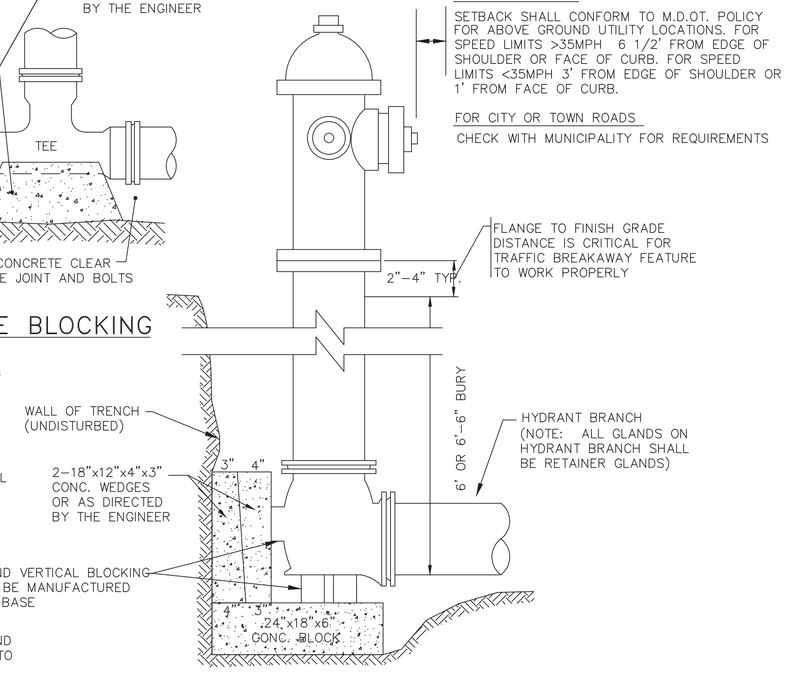
## STANDARD 2" BLOW OFF




## STANDARD BEND BLOCKING




## STANDARD TEE BLOCKING




## TYPICAL HYDRANT INSTALLATION DETAIL

PROJECT: 374376

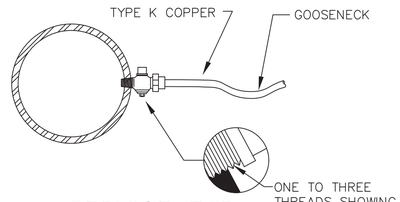
# VERANDA STREET PORTLAND, MAINE WATER MAIN REPLACEMENT STANDARD DETAILS

STATE OF MAINE · TIMOTHY J. MCMULLEN 9375 · REGISTERED PROFESSIONAL ENGINEER

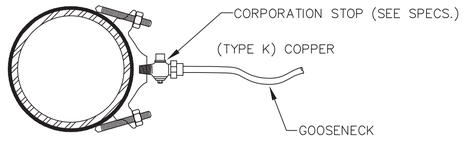
DRAWN BY: BSJ
CHECKED BY: TM
DATE: 11/18/2019

**Portland Water District**
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 EXT. 3041 • MEANS@PWD.ORG

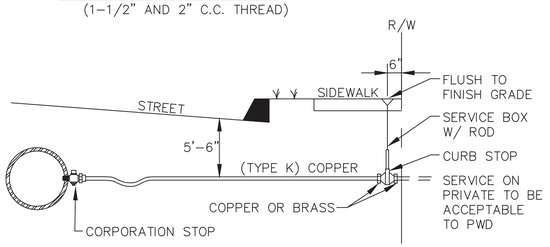
SHEET: W5 OF W6



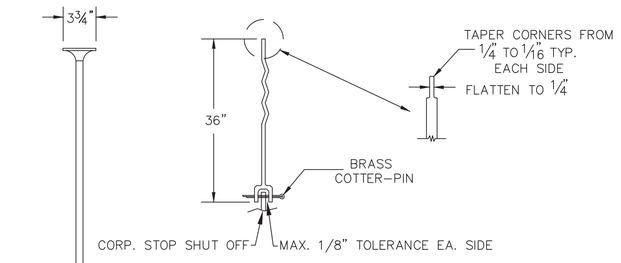

SERVICE TAP
(3/4" AND 1" C.C. THREAD)




SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)




TYPICAL SERVICE CONNECTION

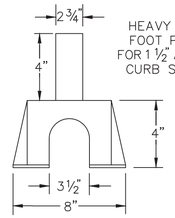



SERVICE ROD

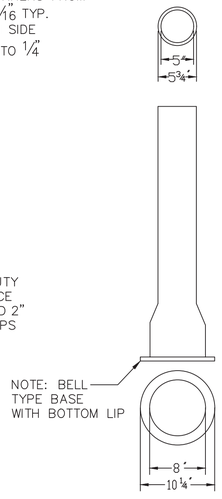
COVER

STANDARD
FOOT, PIECE
FOR ¾" AND 1"
CURB STOPS

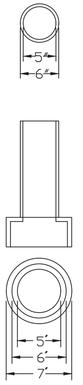
SERVICE BOX



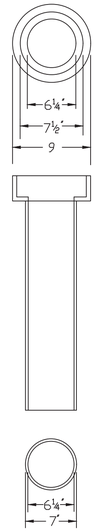

FOOT PIECE



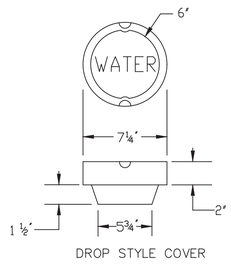

BASE SECTION
NO. 645



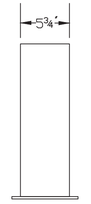

INTERMEDIATE
SECTION NO.58




TOP SECTION
NO.56




DROP STYLE COVER




(NUMBERS ARE FOR 5 1/4" BUFFALO VALVE BOXES)
(BASE SECTION MAY BE USED AS INTERMEDIATE SECTION)

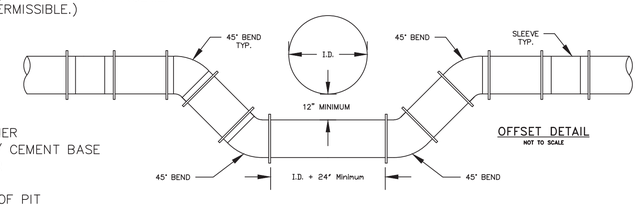
VALVE BOX & COVER

NOTE : ANY EXTENSION OF SERVICE BOX REQUIRES:
1) 1" FEMALE IRON PIPE COUPLING
2) 1" THREADED PIPE

(THIS IS TO BE A NON-WELDED, TWO PIECE ARRANGEMENT.
SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)

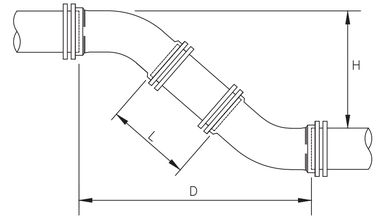
5/8" TO 2" METERS

METER BOX
1) TO BE INSTALLED AND SUPPLIED BY OWNER
2) MINIMUM 4'-0" DIAMETER CONC. M.H. W/ CEMENT BASE
3) WATER METER TO HAVE 5'-6" OF COVER
AND IS TO BE SUPPLIED BY P.W.D.
4) OWNER IS TO SUPPLY 2 VALVES INSIDE OF PIT
(MINIMUM SEPARATION OF 2'-0")
5) COPPER PIPE REQUIRED THRU METER PIT



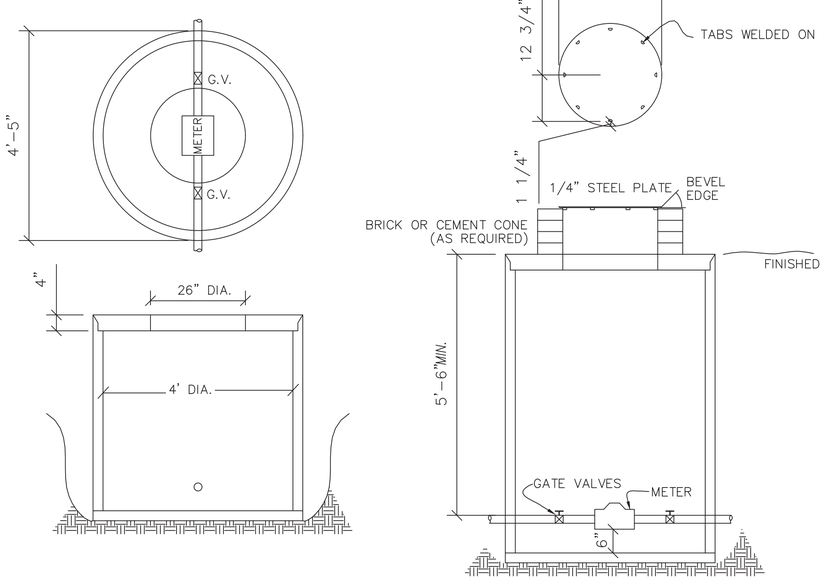

OFFSET DETAIL
NOT TO SCALE

NOTE: DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS.
FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION
AND SUBTRACT 1/2" FROM "L" DIMENSION. FOR OTHER
FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.




| | 6" PIPE | | 8" PIPE | | 12" PIPE | |
|---|---|---|---|---|---|---|
| H | D | L | D | L | D | L |
| 12" | 1' 6-1/2" | 0' 10-1/2" | 1' 7-1/2" | 0' 9-1/2" | 1' 11-1/2" | 0' 5-1/2" |
| 13" | 1' 7-1/2" | 0' 11-7/8" | 1' 8-1/2" | 0' 10-7/8" | 2' 0-1/2" | 0' 6-7/8" |
| 14" | 1' 8-1/2" | 1' 1-5/16" | 1' 9-1/2" | 1' 0-5/16" | 2' 1-1/2" | 0' 8-5/16" |
| 15" | 1' 9-1/2" | 1' 2-11/16" | 1' 10-1/2" | 1' 1-11/16" | 2' 2-1/2" | 0' 9-11/16" |
| 16" | 1' 10-1/2" | 1' 4-1/8" | 1' 11-1/2" | 1' 3-1/8" | 2' 3-1/2" | 0' 11-1/8" |
| 17" | 1' 11-1/2" | 1' 5-9/16" | 2' 0-1/2" | 1' 4-9/16" | 2' 4-1/2" | 1' 0-9/16" |
| 18" | 2' 0-1/2" | 1' 6-15/16" | 2' 1-1/2" | 1' 5-15/16" | 2' 5-1/2" | 1' 1-15/16" |
| 19" | 2' 1-1/2" | 1' 8-3/8" | 2' 2-1/2" | 1' 7-3/8" | 2' 6-1/2" | 1' 3-3/8" |
| 20" | 2' 2-1/2" | 1' 9-13/16" | 2' 3-1/2" | 1' 8-13/16" | 2' 7-1/2" | 1' 4-13/16" |
| 21" | 2' 3-1/2" | 1' 11-3/16" | 2' 4-1/2" | 1' 10-3/16" | 2' 8-1/2" | 1' 6-3/16" |
| 22" | 2' 4-1/2" | 2' 0-5/8" | 2' 5-1/2" | 1' 11-5/8" | 2' 9-1/2" | 1' 7-5/8" |
| 23" | 2' 5-1/2" | 2' 2" | 2' 6-1/2" | 2' 1" | 2' 10-1/2" | 1' 9" |
| 24" | 2' 6-1/2" | 2' 3-7/16" | 2' 7-1/2" | 2' 2-7/16" | 2' 11-1/2" | 1' 10-7/16" |
| 25" | 2' 7-1/2" | 2' 4-7/8" | 2' 8-1/2" | 2' 3-7/8" | 3' 0-1/2" | 1' 11-7/8" |
| 26" | 2' 8-1/2" | 2' 6-1/4" | 2' 9-1/2" | 2' 5-1/4" | 3' 1-1/2" | 2' 1-1/4" |
| 27" | 2' 9-1/2" | 2' 7-11/16" | 2' 10-1/2" | 2' 6-11/16" | 3' 2-1/2" | 2' 2-11/16" |
| 28" | 2' 10-1/2" | 2' 9-1/8" | 2' 11-1/2" | 2' 8-1/8" | 3' 3-1/2" | 2' 4-1/8" |
| 29" | 2' 11-1/2" | 2' 10-1/2" | 3' 0-1/2" | 2' 9-1/2" | 3' 4-1/2" | 2' 5-1/2" |
| 30" | 3' 0-1/2" | 2' 11-15/16" | 3' 1-1/2" | 2' 10-15/16" | 3' 5-1/2" | 2' 6-15/16" |
| 31" | 3' 1-1/2" | 3' 1-5/16" | 3' 2-1/2" | 3' 0-5/16" | 3' 6-1/2" | 2' 8-5/16" |
| 32" | 3' 2-1/2" | 3' 2-3/4" | 3' 3-1/2" | 3' 1-3/4" | 3' 7-1/2" | 2' 9-3/4" |
| 33" | 3' 3-1/2" | 3' 4-3/16" | 3' 4-1/2" | 3' 3-3/16" | 3' 8-1/2" | 2' 11-3/16" |
| 34" | 3' 4-1/2" | 3' 5-9/16" | 3' 5-1/2" | 3' 4-9/16" | 3' 9-1/2" | 3' 0-9/16" |
| 35" | 3' 5-1/2" | 3' 7" | 3' 6-1/2" | 3' 6" | 3' 10-1/2" | 3' 2" |
| 36" | 3' 6-1/2" | 3' 8-7/16" | 3' 7-1/2" | 3' 7-7/16" | 3' 11-1/2" | 3' 3-7/16" |
| 37" | 3' 7-1/2" | 3' 9-13/16" | 3' 8-1/2" | 3' 8-13/16" | 4' 0-1/2" | 3' 4-13/16" |
| 38" | 3' 8-1/2" | 3' 11-1/4" | 3' 9-1/2" | 3' 10-1/4" | 4' 1-1/2" | 3' 6-1/4" |
| 39" | 3' 9-1/2" | 4' 0-11/16" | 3' 10-1/2" | 3' 11-11/16" | 4' 2-1/2" | 3' 7-11/16" |
| 40" | 3' 10-1/2" | 4' 2-1/16" | 3' 11-1/2" | 4' 1-1/16" | 4' 3-1/2" | 3' 9-1/16" |
| 41" | 3' 11-1/2" | 4' 3-1/2" | 4' 0-1/2" | 4' 2-1/2" | 4' 4-1/2" | 3' 10-1/2" |
| 42" | 4' 0-1/2" | 4' 4-7/8" | 4' 1-1/2" | 4' 3-7/8" | 4' 5-1/2" | 3' 11-7/8" |
| 43" | 4' 1-1/2" | 4' 6-5/16" | 4' 2-1/2" | 4' 5-5/16" | 4' 6-1/2" | 4' 1-5/16" |
| 44" | 4' 2-1/2" | 4' 7-3/4" | 4' 3-1/2" | 4' 6-3/4" | 4' 7-1/2" | 4' 2-3/4" |
| 45" | 4' 3-1/2" | 4' 9-1/8" | 4' 4-1/2" | 4' 8-1/8" | 4' 8-1/2" | 4' 4-1/8" |
| 46" | 4' 4-1/2" | 4' 10-9/16" | 4' 5-1/2" | 4' 9-9/16" | 4' 9-1/2" | 4' 5-9/16" |
| 47" | 4' 5-1/2" | 4' 11-15/16" | 4' 6-1/2" | 4' 10-15/16" | 4' 10-1/2" | 4' 6-15/16" |
| 48" | 4' 6-1/2" | 5' 1-3/8" | 4' 7-1/2" | 5' 0-3/8" | 4' 11-1/2" | 4' 8-3/8" |
| 49" | 4' 7-1/2" | 5' 2-13/16" | 4' 8-1/2" | 5' 1-13/16" | 5' 0-1/2" | 4' 9-13/16" |
| 50" | 4' 8-1/2" | 5' 4-3/16" | 4' 9-1/2" | 5' 3-3/16" | 5' 1-1/2" | 4' 11-3/16" |
| 51" | 4' 9-1/2" | 5' 5-5/8" | 4' 10-1/2" | 5' 4-5/8" | 5' 2-1/2" | 5' 0-5/8" |
| 52" | 4' 10-1/2" | 5' 7-1/16" | 4' 11-1/2" | 5' 6-1/16" | 5' 3-1/2" | 5' 2-1/16" |
| 53" | 4' 11-1/2" | 5' 8-7/16" | 5' 0-1/2" | 5' 7-7/16" | 5' 4-1/2" | 5' 3-7/16" |
| 54" | 5' 0-1/2" | 5' 9-7/8" | 5' 1-1/2" | 5' 8-7/8" | 5' 5-1/2" | 5' 4-7/8" |
| 55" | 5' 1-1/2" | 5' 11-5/16" | 5' 2-1/2" | 5' 10-5/16" | 5' 6-1/2" | 5' 6-5/16" |

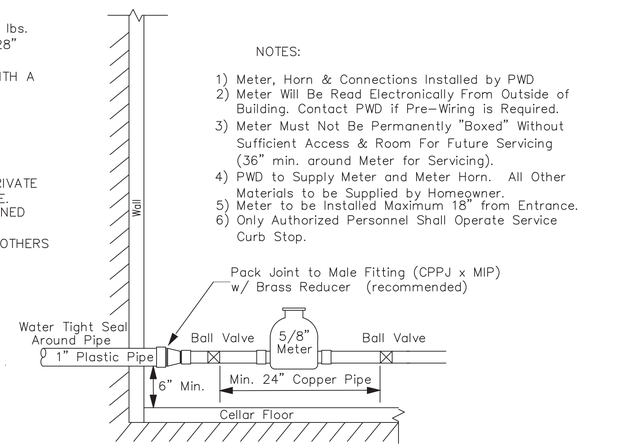
TYPICAL MAIN OFFSET




TYPICAL METER PIT

COVER PLATE
1) COVER MUST WEIGH LESS THAN 60 lbs.
2) MINIMUM SIZE OF COVER WILL BE 28" DIAMETER.
3) IF STEEL PLATE IS USED, TREAT WITH A COAT OF RUST INHIBITING PAINT.

NOTES
1) THIS PIT IS TO BE PLACED ON PRIVATE PROPERTY NEAR THE STREET LINE.
2) THIS TYPICAL PIT WAS NOT DESIGNED FOR ANY TRAFFIC LOAD
3) THE PIT CAN BE ORDERED THRU OTHERS WITH SPECIAL DETAILS SUCH AS LARGER M.H. COVERS, ETC.
4) THIS PIT WILL HOUSE UP TO TWO 5/8", 3/4", OR 1" METERS




TYP. HORIZONTAL METER SET

NOTES:
1) Meter, Horn & Connections Installed by PWD
2) Meter Will Be Read Electronically From Outside of Building. Contact PWD if Pre-Wiring is Required.
3) Meter Must Not Be Permanently "Boxed" Without Sufficient Access & Room For Future Servicing (36" min. around Meter for Servicing).
4) PWD to Supply Meter and Meter Horn. All Other Materials to be Supplied by Homeowner.
5) Meter to be Installed Maximum 18" from Entrance.
6) Only Authorized Personnel Shall Operate Service Curb Stop.

PROJECT:
374376

# VERANDA STREET
# PORTLAND, MAINE
# WATER MAIN REPLACEMENT
# STANDARD DETAILS

STATE OF MAINE
TIMOTHY J. MCMULLIN
9385
REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: BSJ
CHECKED BY: TM
DATE: 11/18/2019


**Portland Water District**
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 EXT. 3041 • MEANS@PWD.ORG


SHEET:
W6 OF W6

Catch basin and pipe to be furnished and installed by Bridge Contractor

Path culvert to be installed by others

Catch basin and pipe to be furnished and installed by Bridge Contractor

CB
Rim 11.75

CB
Rim 10.75

Naturalized area

Grass

Naturalized area

HP

12' Path

HP

Grass

Naturalized area

Paved paths through Open Space to be installed by others

Rough grading of Open Space, catch basins, and pipes tying into roadway drainage network to be completed by Bridge Contractor. Fine grading, naturalization, plantings, and paths to be completed by others.

GRAPHIC SCALE

( IN FEET )
1 inch = 30 ft.

Keith Smith Landscape Architecture
ksla

Owner/Client:
City of Portland, Maine

Draft: KBS
Scale: As Shown
Date: 09.20.19

Stamp

| Rev | Date | By |
|---|---|---|
| - | 02.14.2020 | KBS |
| | Reference in MDOT Plan Set | |
| | Issued for | |

Status
Concept

Project
Veranda Bridge Replacement Open Space

Drawing Name
Concept Plan

Sheet
OS-1