# MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
# HIGHWAY DIVISION

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 1 | 61 |
| | PROJECT FILE NO. 609068 | | |

**TITLE SHEET & INDEX**

PLAN AND PROFILE OF

## KELSEY ROAD OVER SCHENOB BROOK

## (BRIDGE NO. S-10-015)

IN THE TOWN OF

## SHEFFIELD

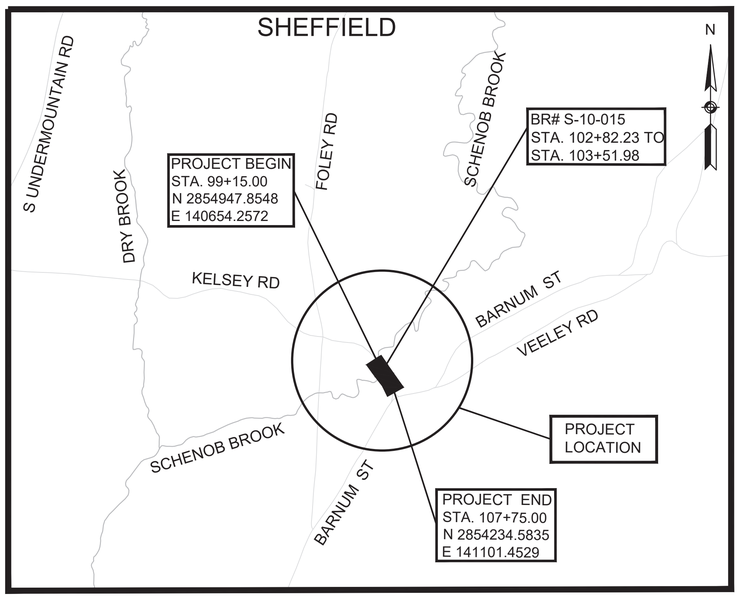
## BERKSHIRE COUNTY

## FEDERAL AID PROJECT NO. STP(BR-OFF)-003S(993)X

THESE PLANS ARE SUPPLEMENTED BY THE LATEST EDITIONS OF THE FOLLOWING PUBLICATIONS, AS IDENTIFIED IN THE CONTRACT SPECIAL PROVISIONS: THE MASSDOT CONSTRUCTION STANDARD DETAILS, THE MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, AND THE ANSI AMERICAN STANDARD FOR NURSERY STOCK.

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0 1000 2000 3000 4000

SCALE: 1" = 1000'

LENGTH OF PROJECT = 860.00 FEET = 0.163 MILES

### DESIGN DESIGNATION (KELSEY ROAD)

| | |
|---|---|
| DESIGN SPEED | 20 MPH |
| ADT (2026) | 121 |
| ADT (2046) | 148 |
| K | - |
| D | - |
| T (PEAK HOUR) | 6% |
| T (AVERAGE DAY) | 6% |
| DHV | - |
| DDHV | - |
| FUNCTIONAL CLASSIFICATION | RURAL LOCAL |

COMMONWEALTH OF MASSACHUSETTS
THOMAS P DALEY CIVIL NO. 46418 REGISTERED PROFESSIONAL ENGINEER

Digitally signed by TEST - Thomas Daley
Date: 2026-10-12 14:18:56-04:00

| DATE | DESCRIPTION | REV # |
|---|---|---|
| | | |
| | | |
| | | |

**GFT**
175 FEDERAL STREET, SUITE 800
BOSTON, MA 02110

MassDOT Massachusetts Department of Transportation Highway Division

**APPROVED**

Digitally signed by Carrie Lavallee, P.E.
Date: 2026.10.13 08:54:44 -04'00'

10/13/2026

CHIEF ENGINEER — DATE

609068_HD (SHEFFIELD COVER SHEET).DWG Plotted on 14-Aug-2019 1:54 PM

## GENERAL SYMBOLS

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| JB | JB | JERSEY BARRIER |
| CB | CB | CATCH BASIN |
| | | CATCH BASIN CURB INLET |
| FP | FP | FLAG POLE |
| GP | GP | GAS PUMP |
| MB | MB | MAIL BOX |
| | | POST SQUARE |
| | | POST CIRCULAR |
| WELL | WELL | WELL |
| EHH | EHH | ELECTRIC HANDHOLE |
| | | FENCE GATE POST |
| GG | GG | GAS GATE |
| BHL # | BHL # | BORING HOLE |
| MW # | MW # | MONITORING WELL |
| TP # | TP # | TEST PIT |
| | | HYDRANT |
| | | LIGHT POLE |
| CO.BD. | | COUNTY BOUND |
| | | GPS POINT |
| C | C | CABLE MANHOLE |
| D | D | DRAINAGE MANHOLE |
| E | E | ELECTRIC MANHOLE |
| G | G | GAS MANHOLE |
| M | M | MISC MANHOLE |
| S | S | SEWER MANHOLE |
| T | T | TELEPHONE MANHOLE |
| W | W | WATER MANHOLE |
| MHB | MHB | MASSACHUSETTS HIGHWAY BOUND |
| MON | | MONUMENT |
| SB | | STONE BOUND |
| TB | | TOWN OR CITY BOUND |
| | | TRAVERSE OR TRIANGULATION STATION |
| TPL or GUY | TPL or GUY | TROLLEY POLE OR GUY POLE |
| HTP | | TRANSMISSION POLE |
| UFB | UFB | UTILITY POLE W/ FIREBOX |
| UPDL | UPDL | UTILITY POLE WITH DOUBLE LIGHT |
| ULT | ULT | UTILITY POLE W / 1 LIGHT |
| UPL | UPL | UTILITY POLE |
| | | BUSH |
| SIZE & TYPE | | TREE |
| | | STUMP |
| | | SWAMP / MARSH |
| WG | WG | WATER GATE |
| PM | PM | PARKING METER |
| OHW | | OVERHEAD CABLE/WIRE |
| | | CURBING |
| 100 99 | | CONTOURS (ON-THE-GROUND SURVEY DATA) |
| 100 99 | | CONTOURS (PHOTOGRAMMETRIC DATA) |
| | | UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER) |
| | | UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER) |
| | | UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER) |
| | | UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER) |
| | | UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER) |
| | | UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER) |
| | | BALANCED STONE WALL |
| | | GUARD RAIL - STEEL POSTS |
| | | GUARD RAIL - WOOD POSTS |
| | | GUARD RAIL - DOUBLE FACE - STEEL POSTS |
| | | GUARD RAIL - DOUBLE FACE - WOOD POSTS |
| | | CHAIN LINK OR METAL FENCE |
| | | WOOD FENCE |
| | | EROSION AND SEDIMENT CONTROL BARRIER |
| | | EROSION AND SEDIMENT CONTROL BARRIER-COIR LOGS |
| | | TREE LINE |
| | | SAWCUT LINE |
| | | TOP OR BOTTOM OF SLOPE |
| | | EDGE OF PAVEMENT |
| | | LIMIT OF MICROMILLING AND OVERLAY |
| | | BANK OF RIVER OR STREAM |
| | | BORDER OF WETLAND |
| | | 100 FT WETLAND BUFFER |
| | | 200 FT RIVERFRONT BUFFER |
| | | STATE HIGHWAY LAYOUT |
| | | TOWN OR CITY LAYOUT |
| | | COUNTY LAYOUT |
| | | RAILROAD SIDELINE |
| | | TOWN OR CITY BOUNDARY LINE |
| | | PROPERTY LINE OR APPROXIMATE PROPERTY LINE |
| | | EASEMENT |
| | | WETLAND |

## TRAFFIC SYMBOLS

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| 1 | 1 | CONTROLLER PHASE ACTUATED |
| | | TRAFFIC SIGNAL HEAD (SIZE AS NOTED) |
| | | WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED) |
| | | VIDEO DETECTION CAMERA |
| | | MICROWAVE DETECTOR |
| | | PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE |
| | * | EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT |
| | | VEHICULAR SIGNAL HEAD |
| | | VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED |
| | | FLASHING BEACON |
| | | PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED) |
| RRSG | RRSG | RAILROAD SIGNAL |
| OR | | SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED) |
| | 20' | MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED) |
| | | HIGH MAST POLE OR TOWER |
| | | SIGN AND POST |
| | | SIGN AND POST (2 POSTS) |
| | 20' | MAST ARM WITH LUMINAIRE |
| | | OPTICAL PRE-EMPTION DETECTOR |
| | | CONTROL CABINET, GROUND MOUNTED |
| | | CONTROL CABINET, POLE MOUNTED |
| | | FLASHING BEACON CONTROL AND METER PEDESTAL |
| | | LOAD CENTER ASSEMBLY |
| | | PULL BOX 12"x12" (OR AS NOTED) |
| | | ELECTRIC HANDHOLE 12"x24" (OR AS NOTED) |
| | | TRAFFIC SIGNAL CONDUIT |

## PAVEMENT MARKINGS SYMBOLS

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| ONLY | ONLY | PAVEMENT ARROW - WHITE |
| | SL | LEGEND "ONLY" - WHITE |
| | CW | STOP LINE |
| | SWL | CROSSWALK |
| | SYL | SOLID WHITE LINE |
| | BWL | SOLID YELLOW LINE |
| | BYL | BROKEN WHITE LINE |
| | DWL | BROKEN YELLOW LINE |
| | DYL | DOTTED WHITE LINE |
| | DWLEx | DOTTED YELLOW LINE |
| | DYLEx | DOTTED WHITE LINE EXTENSION |
| | DBWL | DOTTED YELLOW LINE EXTENSION |
| | DBYL | DOUBLE WHITE LINE |
| | | DOUBLE YELLOW LINE |

### SURVEY NOTES:

1. BOUNDARY INFORMATION SHOWN HEREON WAS COMPILED FROM AN ACTUAL FIELD SURVEY CONDUCTED BY WSP SURVEYORS FROM SEPTEMBER 4, 2020 THROUGH OCTOBER 2, 2020. SURVEY FIELD NOTES CAN BE FOUND IN MASSDOT SURVEY NOTEBOOK 23412.
2. NORTH ORIENTATION AND BEARING BASE PER GRID NORTH.
3. HORIZONTAL COORDINATES RELATIVE TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MASSACHUSETTS MAINLAND ZONE. BASED ON THE NORTH AMERICAN DATUM OF 1983, NAD83 (2011) EPOCH 2010.00. GPS POINTS 2613 & 2614 WERE USED AS SURVEY CONTROL POINTS TO ESTABLISH A DATUM FOR THE PROJECT.
4. ELEVATIONS RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, (NAVD 1988).
5. HORIZONTAL COORDINATE AND ELEVATION UNITS ARE U.S. SURVEY FEET.
6. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY HIGHWAY BOUND OR PRIVATE PROPERTY PIN THAT MAY BE DAMAGED OR DESTROYED DURING CONSTRUCTION, TO ITS LOCATION JUST PRIOR TO CONSTRUCTION.

## ABBREVIATIONS

### GENERAL

| | |
|---|---|
| AADT | ANNUAL AVERAGE DAILY TRAFFIC |
| ABAN | ABANDON |
| ADJ | ADJUST |
| APPROX. | APPROXIMATE |
| A.C. | ASPHALT CONCRETE |
| ACCM PIPE | ASPHALT COATED CORRUGATED METAL PIPE |
| BIT. | BITUMINOUS |
| BC | BOTTOM OF CURB |
| BD. | BOUND |
| BL | BASELINE |
| BLDG | BUILDING |
| BM | BENCHMARK |
| BO | BY OTHERS |
| BOS | BOTTOM OF SLOPE |
| BR. | BRIDGE |
| CB | CATCH BASIN |
| CBCI | CATCH BASIN WITH CURB INLET |
| CC | CEMENT CONCRETE |
| CCM | CEMENT CONCRETE MASONRY |
| CEM | CEMENT |
| CI | CURB INLET |
| CIP | CAST IRON PIPE |
| CLF | CHAIN LINK FENCE |
| CL | CENTERLINE |
| CMP | CORRUGATED METAL PIPE |
| CSP | CORRUGATED STEEL PIPE |
| CO. | COUNTY |
| CONC | CONCRETE |
| CONT | CONTINUOUS |
| CONST | CONSTRUCTION |
| CR GR | CROWN GRADE |
| DHV | DESIGN HOURLY VOLUME |
| DI | DROP INLET |
| DIA | DIAMETER |
| DIP | DUCTILE IRON PIPE |
| DW | STEADY DON'T WALK - PORTLAND ORANGE |
| DWY | DRIVEWAY |
| ELEV (or EL.) | ELEVATION |
| EMB | EMBANKMENT |
| EOP | EDGE OF PAVEMENT |
| EXIST (or EX) | EXISTING |
| EXC | EXCAVATION |
| F&C | FRAME AND COVER |
| F&G | FRAME AND GRATE |
| FDN. | FOUNDATION |
| FLDSTN | FIELDSTONE |
| GAR | GARAGE |
| GD | GROUND |
| GG | GAS GATE |
| GI | GUTTER INLET |
| GIP | GALVANIZED IRON PIPE |
| GRAN | GRANITE |
| GRAV | GRAVEL |
| GRD | GUARD |
| HDW | HEADWALL |
| HMA | HOT MIX ASPHALT |
| HOR | HORIZONTAL |
| HYD | HYDRANT |
| INV | INVERT |
| JCT | JUNCTION |
| L | LENGTH OF CURVE |
| LB | LEACH BASIN |
| LP | LIGHT POLE |
| LT | LEFT |
| MAX | MAXIMUM |
| MB | MAILBOX |
| MH | MANHOLE |
| MHB | MASSACHUSETTS HIGHWAY BOUND |
| MIN | MINIMUM |
| NIC | NOT IN CONTRACT |
| NO. | NUMBER |
| PC | POINT OF CURVATURE |
| PCC | POINT OF COMPOUND CURVATURE |
| PCR | PEDESTRIAN CURB RAMP |
| P.G.L. | PROFILE GRADE LINE |
| PI | POINT OF INTERSECTION |
| POC | POINT ON CURVE |
| POT | POINT ON TANGENT |
| PRC | POINT OF REVERSE CURVATURE |
| PROJ | PROJECT |
| PROP | PROPOSED |
| PSB | PLANTABLE SOIL BORROW |
| PT | POINT OF TANGENCY |
| PVC | POINT OF VERTICAL CURVATURE |
| PVI | POINT OF VERTICAL INTERSECTION |
| PVT | POINT OF VERTICAL TANGENCY |
| PVMT | PAVEMENT |

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 2 | 61 |
| PROJECT FILE NO. | 609068 | | |

**LEGEND & ABBREVIATIONS**

## ABBREVIATIONS (cont.)

### GENERAL

| | |
|---|---|
| PWW | PAVED WATERWAY |
| R | RADIUS OF CURVATURE |
| R&D | REMOVE AND DISPOSE |
| RCP | REINFORCED CONCRETE PIPE |
| RD | ROAD |
| RDWY | ROADWAY |
| REM | REMOVE |
| RET | RETAIN |
| RET WALL | RETAINING WALL |
| ROW | RIGHT OF WAY |
| RR | RAILROAD |
| R&R | REMOVE AND RESET |
| R&S | REMOVE AND STACK |
| RT | RIGHT |
| SB | STONE BOUND |
| SHLD | SHOULDER |
| SMH | SEWER MANHOLE |
| ST | STREET |
| STA | STATION |
| SSD | STOPPING SIGHT DISTANCE |
| SHLO | STATE HIGHWAY LAYOUT LINE |
| SW | SIDEWALK |
| T | TANGENT DISTANCE OF CURVE/TRUCK % |
| TAN | TANGENT |
| TEMP | TEMPORARY |
| TC | TOP OF CURB |
| TOS | TOP OF SLOPE |
| TYP | TYPICAL |
| UP | UTILITY POLE |
| VAR | VARIES |
| VERT | VERTICAL |
| VC | VERTICAL CURVE |
| WG | WATER GATE |
| WIP | WROUGHT IRON PIPE |
| WM | WATER METER/WATER MAIN |
| X-SECT | CROSS SECTION |

## TRAFFIC SIGNAL ABBREVIATIONS

| | |
|---|---|
| CAB | CABINET |
| CCVE | CLOSED CIRCUIT VIDEO EQUIPMENT |
| DW | STEADY UPRAISED HAND |
| FDW | FLASHING UPRAISED HAND |
| FR | FLASHING CIRCULAR RED |
| FRL | FLASHING RED LEFT ARROW |
| FRR | FLASHING RED RIGHT ARROW |
| FY | FLASHING CIRCULAR YELLOW |
| FYL | FLASHING YELLOW LEFT ARROW |
| FYR | FLASHING YELLOW RIGHT ARROW |
| G | STEADY CIRCULAR GREEN |
| GL | STEADY GREEN LEFT ARROW |
| GR | STEADY GREEN RIGHT ARROW |
| GSL | STEADY GREEN SLASH LEFT ARROW |
| GSR | STEADY GREEN SLASH RIGHT ARROW |
| GV | STEADY GREEN VERTICAL ARROW |
| OL | OVERLAP |
| PED | PEDESTRIAN |
| PTZ | PAN, TILT, ZOOM |
| R | STEADY CIRCULAR RED |
| RL | STEADY RED LEFT ARROW |
| RR | STEADY RED RIGHT ARROW |
| TR SIG | TRAFFIC SIGNAL |
| TSC | TRAFFIC SIGNAL CONDUIT |
| W | STEADY WALKING PERSON |
| Y | STEADY CIRCULAR YELLOW |
| YL | STEADY YELLOW LEFT ARROW |

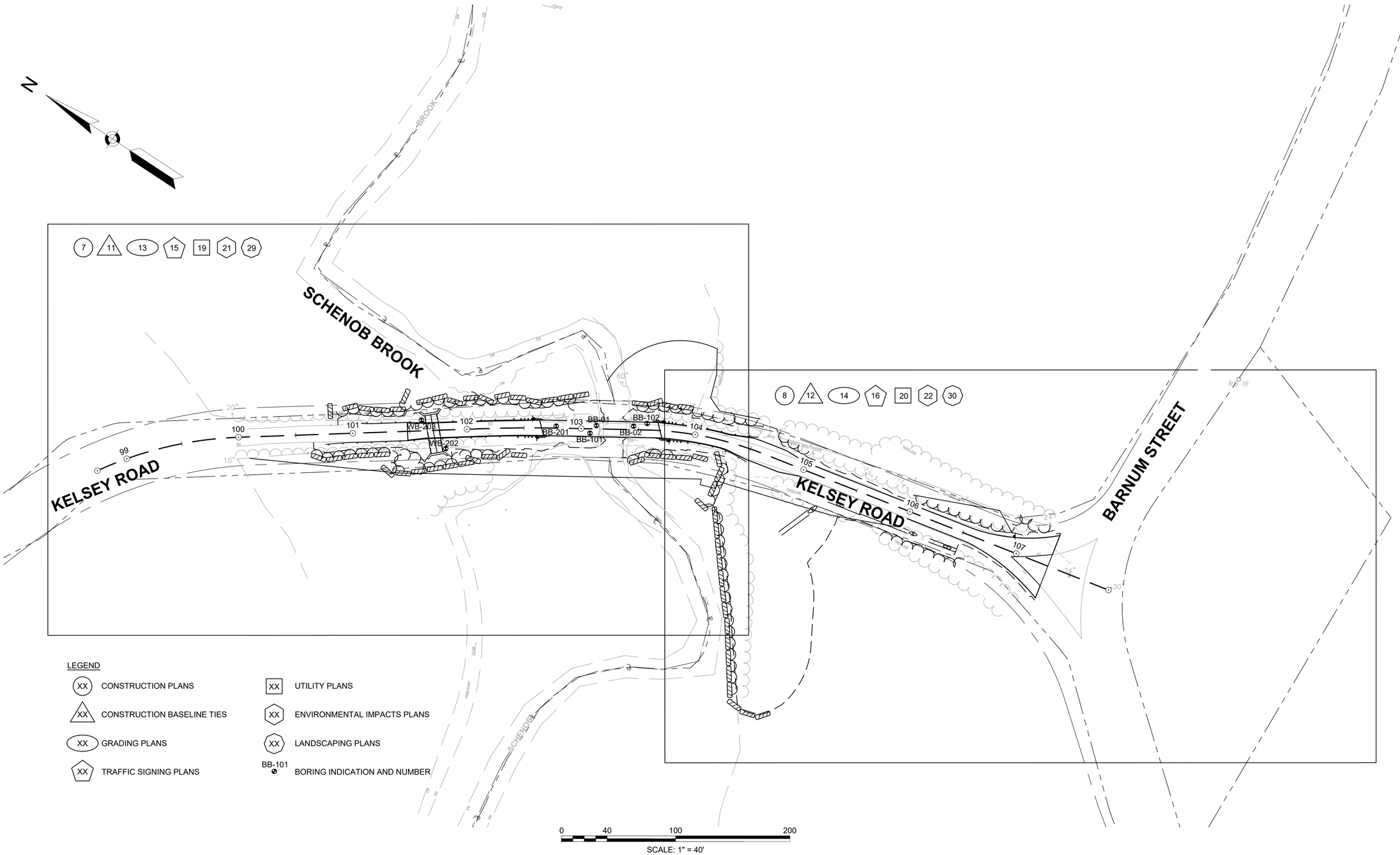
609068_HD (SHEFFIELD LEGEND).DWG Plotted on 13-Aug-2026 11:21 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 3 | 61 |
| PROJECT FILE NO. | 609068 | | |

## KEY PLAN AND BORING LOCATIONS

609088_HD\KEY PLAN\.DWG Plotted on 13-Aug-2026 11:21 AM



**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 4 | 61 |
| PROJECT FILE NO. | 609068 | | |

**BORING LOGS**

BORING WB-202

STA. 101+80.9
OFFSET 16.3' RT.

| | | | |
|---|---|---|---|
| Date Started: | 3/19/26 | Hole Number: | WB-202 |
| Date Finished: | 3/19/26 | Sheet: | 1 of 2 |
| Soil Drilling: | 37.0 ft | Line & Station: | 101+80.9 |
| Rock Sampling: | 0.0 ft | Offset: | 16.3 ft R |
| Total Depth of Hole: | 37.0 ft | N Coordinate: | 2854747 ft |
| No. of Undist. Core Samples: | | E Coordinate: | 140828 ft |
| Total Number of Core Boxes: | 0 | Elev. Top of Hole: | +675.0 ft |
| GROUNDWATER OBSERVATIONS | | Direction of Hole | |
| At 5.0 ft After 0 Hrs | | Vertical ☒ Inclined ☐ | |
| Elev. 670.0 ft After 0 Hrs | | Degrees from Vertical --- | |
| | | Inspector: | Allen Winders |

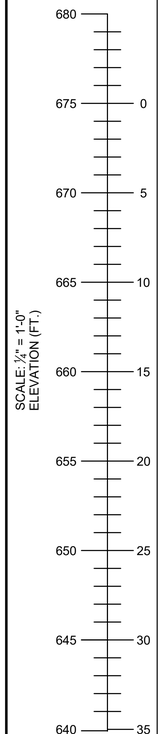
DRILLING LOG — Gannett Fleming

Project: Kelsey Road over Schenob Brook Bridge
Drilling Company: Seaboard Drilling
Driller: Jeff Nitsch
Bit Size and Type: Spoon Size: 2.0 in. O.D.
Casing Size: 4.0 in. Spoon Size:
Hollow Stem: N/A Hammer wt.: 140lb
Drilling Fluid: Mud Hammer Drop: 30.0"
Drill Rig: Mobile 53 Truck Drill Rig

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 0.0'-2.0': Brown Silty Sand with Gravel (SM); moist; medium dense — 673.0 |
| Some organics present in sample | 0 - 2 | S1 | 15-10-11-16 | 2.0 | 100 | | |
| | 2 - 4 | S2 | 13-8-3-2 | 1.6 | 79 | | 2.0'-4.0': Gray Lean Clay with Sand (CL); moist; stiff — 671.0 |
| | 4 - 6 | S3 | 3-14-6-3 | 0.8 | 42 | | 4.0'-8.0': Dark Gray Clayey Sand (SC); moist; loose to medium desnse — 667.0 |
| Trace organics present in sample | 6 - 8 | S4 | 3-3-3-3 | 0.0 | 0 | | |
| Organics present in sample | 8 - 10 | S5 | 3-3-6-6 | 0.8 | 38 | | 8.0'-10.0': Gray Lean Clay with Sand (CL); moist; stiff — 665.0 |
| | 10 - 12 | S6 | 5-5-4-5 | 1.0 | 50 | | 10.0'-18.5': Gray Silt (ML); wet; stiff — 656.5 |
| | 15 - 17 | S7 | 4-4-6-8 | 0.0 | 0 | | |
| | 20 - 22 | S8 | 2-4-5-6 | 0.1 | 4 | | 18.5'-28.5': Gray Silty Sand with Gravel (SM); wet; loose — 646.5 |
| Cobble fragments observed in spoon | 25 - 27 | S9 | 3-3-4-5 | 0.0 | 0 | | |
| | 30 - 32 | S10 | 3-3-6-7 | 1.4 | 71 | | 28.5'-33.5': Gray Silt with Sand (ML); wet; stiff |

Remarks: Hole grouted upon completion.

SCALE: ¼" = 1'-0"
ELEVATION (FT.)




NBGS BORING LOG LOG - GF_MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/2/26

BORING WB-202

STA. 101+80.9
OFFSET 16.3' RT.

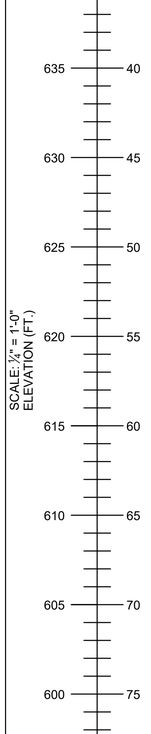
| | | | |
|---|---|---|---|
| Drilling Company: | Seaboard Drilling | Hole Number: | WB-202 |
| Driller: | Jeff Nitsch | Sheet: | 2 of 2 |
| Inspector: | Allen Winders | Elev. Top of Hole: | 675 |

DRILLING LOG — Gannett Fleming

Kelsey Road over Schenob Brook Bridge

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 641.5 |
| | | | | | | | 33.5'-37.0': Brown Silty Sand (SM); wet; medium dense |
| | 35 - 37 | S11 | 4-6-7-11 | 1.4 | 71 | | 638.0 |
| | | | | | | | Bottom of borehole at 37.00 feet. |

SCALE: ¼" = 1'-0"
ELEVATION (FT.)




NBGS BORING LOG LOG - GF_MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/2/26

BORING NOTES:

1. LOCATION OF BRIDGE BORINGS SHOWN ON THE PLAN THUS: WB-#
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A 1 3/8" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
5. BORING SAMPLES ARE STORED AT A STORAGE FACILITY LOCATED ON ROUTE 114 (219 WINTHROP AVE.) IN LAWRENCE, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES BY CONTACTING THE MASSDOT GEOTECHNICAL SECTION AT 10 PARK PLAZA, BOSTON, MA.
6. BORINGS WERE DRILLED BETWEEN MARCH 18TH 2026 AND MARCH 19TH 2026.
7. BORINGS WERE MADE BY SEABOARD DRILLING, 95 CARANDO DRIVE, SPRINGFIELD, MA 01104.
8. THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.
9. SEE BRIDGE PLANS FOR ADDITIONAL BORING LOGS.

609068_HD\BORING LOGS\.DWG Plotted on 15-Oct-2026 10:50 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

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**BORING LOGS**

BORING WB-203

STA. 101+49.1
OFFSET 17.3' RT.

| | | | |
|---|---|---|---|
| Date Started: | 3/18/26 | **DRILLING LOG** Gannett Fleming | Hole Number: WB-203 |
| Date Finished: | 3/18/26 | | Sheet: 1 of 2 |
| Soil Drilling: | 37.0 ft | | Line & Station: 101+49.1 |
| Rock Sampling: | 0.0 ft | Project: Kelsey Road over Schenob Brook Bridge | Offset: 17.3 ft R |
| Total Depth of Hole: | 37.0 ft | Drilling Company: Seaboard Drilling | N Coordinate: 2854770 ft |
| No. of Undist. Core Samples: | | Driller: Jeff Nitsch | E Coordinate: 140806 ft |
| Total Number of Core Boxes: | 0 | Bit Size and Type: Spoon Size: 2.0 in. O.D. | Elev. Top of Hole: +674.9 ft |
| GROUNDWATER OBSERVATIONS | | Casing Size: 4.0 in. Spoon Size: | Direction of Hole |
| At 5.0 ft After 0 Hrs | | Hollow Stem: N/A Hammer wt.: 140lb | Vertical ☒ Inclined ☐ |
| Elev. 669.9 ft After | | Drilling Fluid: Mud Hammer Drop: 30.0" | Degrees from Vertical --- |
| 0 Hrs | | Drill Rig: Mobile 53 Truck Drill Rig | Inspector: Allen Winders |

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | 0 - 2 | S1 | 10-9-9-11 | 0.9 | 46 | | 0.0'-2.0': Brown Silty Sand with Gravel (SP-SM); moist; medium dense |
| | | | | | | | 672.9 |
| | 2 - 4 | S2 | 9-5-4-4 | 1.3 | 63 | | 2.0'-4.0': Dark Gray Lean Clay (CL); moist; stiff |
| | | | | | | | 670.9 |
| | 4 - 6 | S3 | 3-5-5-7 | 0.3 | 13 | | 4.0'-6.0': Brown Clayey Sand (SP-SC); moist; loose |
| | | | | | | | 668.9 |
| | 6 - 8 | S4 | 3-5-5-6 | 1.5 | 75 | | 6.0'-13.5': Gray Silt (ML); moist to wet; stiff |
| | 8 - 10 | S5 | 5-6-8-10 | 1.5 | 75 | | |
| | 10 - 12 | S6 | 6-6-7-7 | 1.4 | 71 | | |
| | | | | | | | 661.4 |
| | 15 - 17 | S7 | 5-4-6-6 | 0.7 | 34 | | 13.5'-18.5': Brown poorly-graded Sand with Gravel (SP); wet; loose |
| | | | | | | | 656.4 |
| | 20 - 22 | S8 | 3-3-7-6 | 1.5 | 75 | | 18.5'-28.5': Gray Silt with Sand (ML); wet; stiff |
| | 25 - 27 | S9 | 4-4-6-6 | 1.2 | 59 | | |
| | | | | | | | 646.4 |
| | 30 - 32 | S10 | 5-6-11-15 | 1.2 | 59 | | 28.5'-33.5': Brown Silty Sand (SM); wet; medium dense |

Remarks:

SCALE: ¼" = 1'-0"
ELEVATION (FT.)



BORING WB-203

STA. 101+49.1
OFFSET 17.3' RT.

| | | | |
|---|---|---|---|
| Drilling Company: | Seaboard Drilling | **DRILLING LOG** Gannett Fleming | Hole Number: WB-203 |
| Driller: | Jeff Nitsch | | Sheet: 2 of 2 |
| Inspector: | Allen Winders | | Elev. Top of Hole: 674.9 |
| Kelsey Road over Schenob Brook Bridge | | | |

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 641.4 |
| | 35 - 37 | S11 | 9-12-16-18 | 1.2 | 59 | | 33.5'-37.0': Brown Silt with Sand (ML); wet; very stiff |
| | | | | | | | 637.9 |
| | | | | | | | Bottom of borehole at 37.00 feet. |

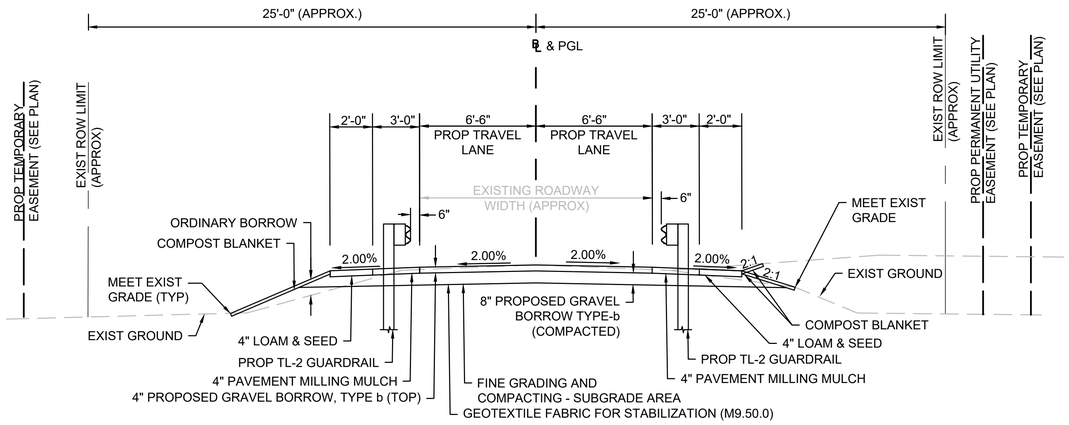
SCALE: ¼" = 1'-0"
ELEVATION (FT.)



BORING NOTES:

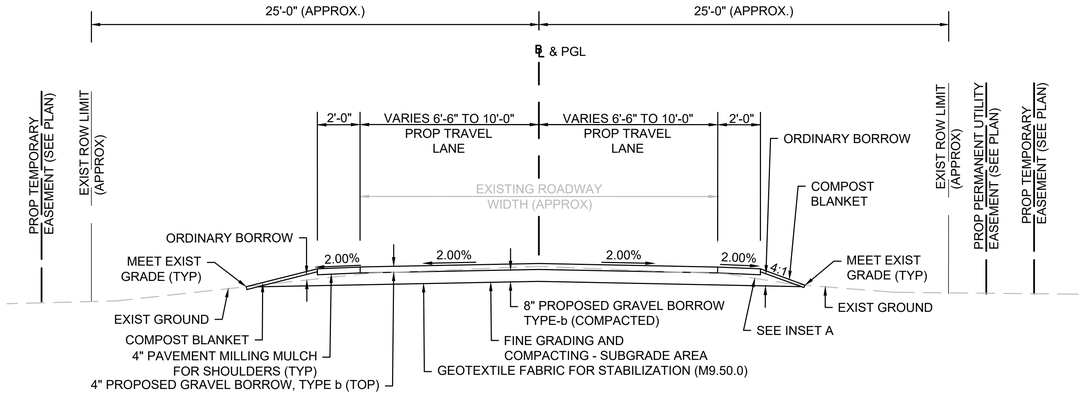
1. LOCATION OF BRIDGE BORINGS SHOWN ON THE PLAN THUS: WB-#
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A 1 3/8" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
5. BORING SAMPLES ARE STORED AT A STORAGE FACILITY LOCATED ON ROUTE 114 (219 WINTHROP AVE.) IN LAWRENCE, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES BY CONTACTING THE MASSDOT GEOTECHNICAL SECTION AT 10 PARK PLAZA, BOSTON, MA.
6. BORINGS WERE DRILLED BETWEEN MARCH 18TH 2026 AND MARCH 19TH 2026.
7. BORINGS WERE MADE BY SEABOARD DRILLING, 95 CARANDO DRIVE, SPRINGFIELD, MA 01104.
8. THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.
9. SEE BRIDGE PLANS FOR ADDITIONAL BORING LOGS.

609068_HD\BORING LOGS\.DWG Plotted on 15-Oct-2026 10:51 AM



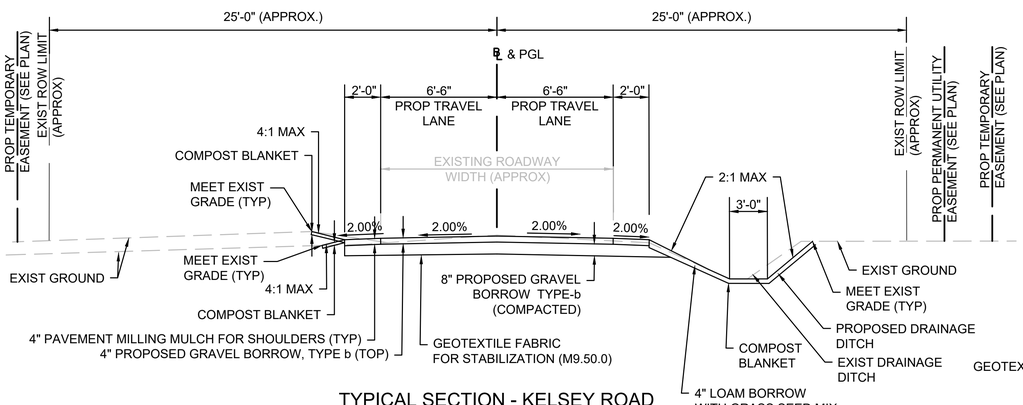

## TYPICAL SECTION - KELSEY ROAD

STA. 103+95.00 TO STA. 104+53.97
NOT TO SCALE




## TYPICAL SECTION - KELSEY ROAD PASSING SECTION AND WETLAND ADJACENT GRADING

STA. 104+53.97 TO STA. 105+37.00
NOT TO SCALE




## TYPICAL SECTION - KELSEY ROAD WITH PROPOSED ROADSIDE DITCH

STA. 105+37.00 TO STA. 106+50.00
NOT TO SCALE

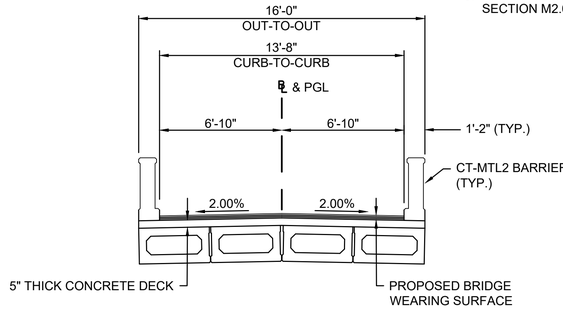
NOTES:

1. ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED IN ACCORDANCE WITH SECTION 450.
2. SEE LANDSCAPE PLANS FOR COMPOST BLANKET SEEDING DETAILS
3. SEE CONSTRUCTION STANDARD DETAILS (628.24.2, 628.24.3) FOR GUARDRAIL TRANSITIONS AT BRIDGE APPROACHES
4. GRAVEL BORROW TYPE-b SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 4 INCHES.
5. RIP RAP MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION M2.02.0

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 6 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TYPICAL SECTIONS**




## TYPICAL SECTION - KELSEY ROAD BRIDGE

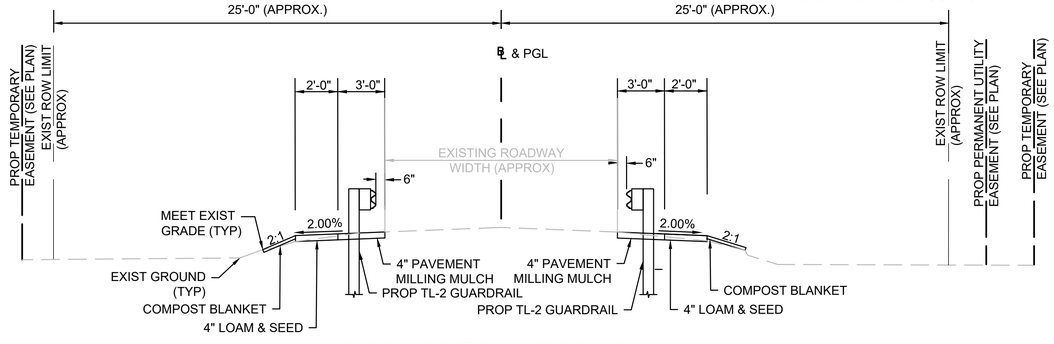
STA. 102+82.23 TO STA. 103+51.98
SCALE: ¼" = 1'-0"

PAVEMENT NOTES:

PROPOSED GRAVEL FOR SURFACING & GRAVEL DRIVEWAY
4" GRAVEL BORROW, TYPE b (TOP), OVER
8" GRAVEL BORROW, TYPE-b (COMPACTED), OVER
GEOTEXTILE FABRIC (STABILIZATION), OVER
SPECIAL BORROW AS REQUIRED BASED ON EXISTING SUBGRADE MATERIALS ONLY WHEN NEEDED

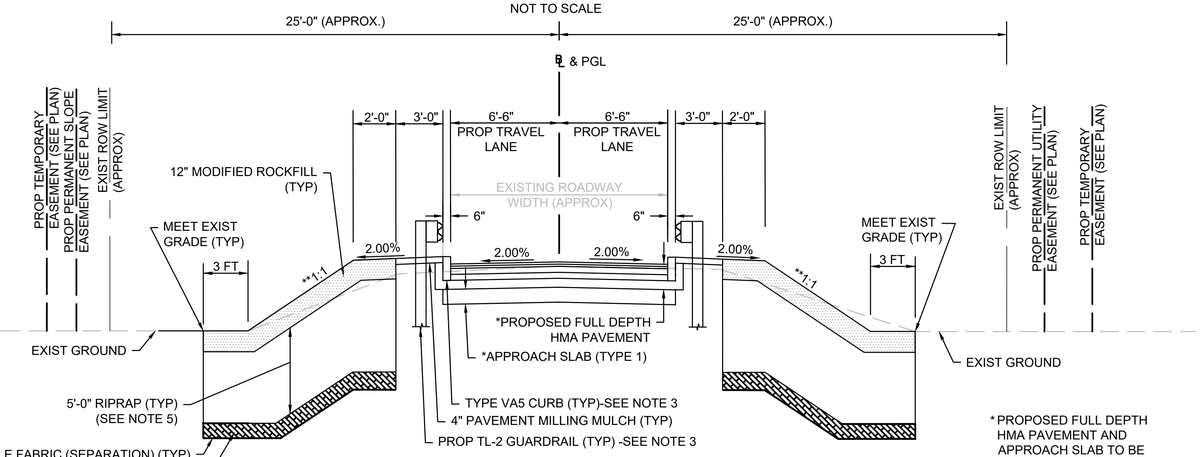
PROPOSED FULL DEPTH HMA PAVEMENT
1.5" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B-9.5-P), OVER
1.5" SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 POLYMER (SPC-B-9.5-P)), OVER
4" SUPERPAVE BASE COURSE - 37.5 (SBC-37.5), OVER
4" DENSE GRADED CRUSHED STONE, OVER
6" MIN. GRAVEL BORROW TYPE B, OVER
PROPOSED APPROACH SLAB (TYPE 1)

PROPOSED BRIDGE WEARING SURFACE
1.5" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B-9.5-P), OVER
1.5" SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 POLYMER (SPC-B-9.5-P), OVER
MEMBRANE WATERPROOFING




## TYPICAL SECTION - KELSEY ROAD

STA. 101+00.00 TO STA. 101+48.00
NOT TO SCALE




**TRANSITION 1:1 SLOPES TO MEET ADJACENT SLOPE GRADES OVER 10 FOOT DISTANCE AT LIMITS OF RIP RAP SHOWN ON CONSTRUCTION PLANS

## TYPICAL SECTION - KELSEY ROAD BRIDGE APPROACH

STA. 101+48.00 TO STA. 102+81.48
STA. 103+52.73 TO STA. 103+95.00
NOT TO SCALE

* PROPOSED FULL DEPTH HMA PAVEMENT AND APPROACH SLAB TO BE USED ONLY AT THE LIMITS OF THE PROPOSED BRIDGE APPROACH SLABS. OTHERWISE, GRAVEL BORROW TYPE-B IS TO BE USED. SEE PLANS FOR LIMITS.

609068_HD (SHEFFIELD TYPICAL SECTIONS).DWG Plotted on 13-Aug-2026 11:22 AM

## HIGHWAY GUARD DETAILS

TANGENT END TREATMENT, STA. 100+97.81 (LT) TO STA. 101+22.80 (LT)
IMPACT HEAD TO BE OFFSET 9.72 LT AT STA. 100+97.81
GUARDRAIL, TL-2 (SINGLE FACED), STA. 101+22.80 (LT) TO STA. 102+35.13 (LT)
TRANSITION TO BRIDGE RAIL, STA. 102+35.13 (LT) TO STA. 102+68.68 (LT)
TANGENT END TREATMENT, STA. 100+76.06 (RT) TO STA. 101+01.65 (RT)
IMPACT HEAD TO BE OFFSET 8.93 RT AT STA. 100+76.06
GUARDRAIL, TL-2 (SINGLE FACED), STA. 101+01.65 (RT) TO STA. 102+38.65 (RT)
TRANSITION TO BRIDGE RAIL, STA. 102+38.65 (RT) TO STA. 102+72.60 (RT)
TRANSITION TO BRIDGE RAIL, STA. 103+61.42 (LT) TO STA. 103+94.39 (LT)
GUARDRAIL, TL-2 (SINGLE FACED), STA. 103+94.39 (LT) TO STA. 104+28.95 (LT)
TANGENT END TREATMENT, STA. 104+28.95 (LT) TO STA. 104+53.01 (LT)
TRANSITION TO BRIDGE RAIL, STA. 103+65.85 (RT) TO STA. 104+00.43 (RT)
GUARDRAIL, TL-2 (SINGLE FACED), STA. 104+00.43 (RT) TO STA. 104+24.78 (RT)
TANGENT END TREATMENT, STA. 104+24.78 (RT) TO STA. 104+50.27 (RT)

## WATER SUPPLY ALTERATIONS

PROP DRY HYDRANT
STA 104+00.00 12.00 RT

## DRAINAGE DETAILS

34" X 53" ELLIPTICAL CLASS V RCP
STA. 101+70.47 20.09 RT (UPSTREAM CENTER OF PIPE END AT HEADWALL) TO
STA. 101+66.06 13.32 LT (DOWNSTREAM CENTER OF PIPE END AT HEADWALL)
SKEW ANGLE =9°

34" X 53" ELLIPTICAL CLASS V RCP
STA. 101+75.80 19.36 RT (UPSTREAM CENTER OF PIPE END AT HEADWALL) TO
STA. 101+71.43 14.05 LT (DOWNSTREAM CENTER OF PIPE END AT HEADWALL)
SKEW ANGLE =9°

SEE SHEET 17 FOR DETAILS

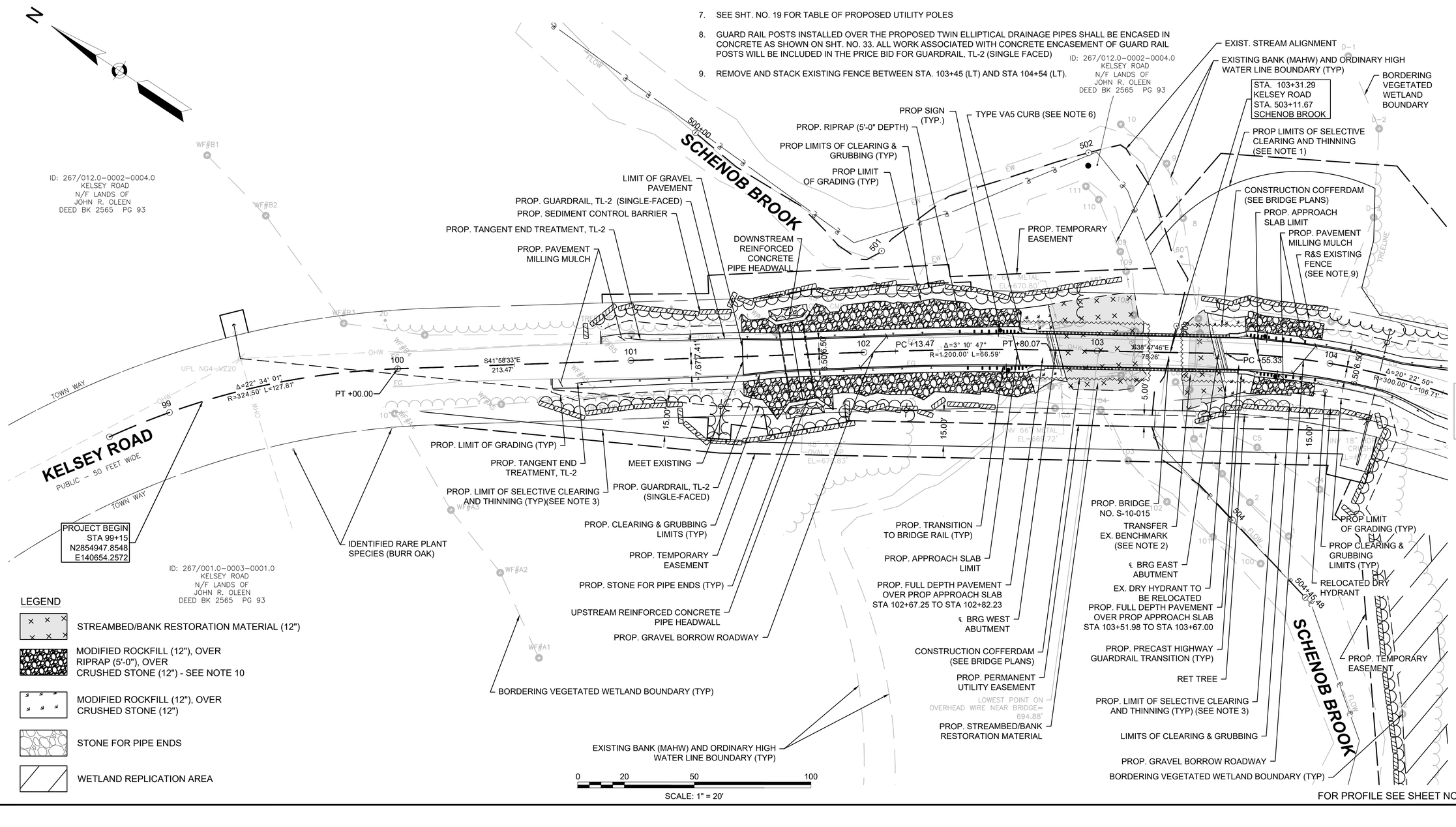
## NOTES:

1. CLEAR AND THIN TREES TO ALLOW FOR SWING RADIUS OF CRANE FOR BRIDGE BEAM INSTALLATION. AREA OF CLEARING TO BE MINIMIZED TO THE EXTENT REQUIRED TO ACCOMMODATE THE CRANE ACTIVITIES. ENGINEER SHALL APPROVE LIMITS AND TREES TO BE CUT.
2. THE CONTRACTOR SHALL NOTIFY THE DISTRICT SURVEY ENGINEER AT LEAST TWO (2) WEEKS PRIOR TO THE WING WALL BEING DEMOLISHED, SO BOSTON SURVEY CAN TRANSFER THE BENCHMARK ELEVATION.
3. LIMITS OF CLEARING AND THINNING TO EXTEND NO MORE THAN 15 FEET FROM PROPOSED UTILITY LINES. GRUBBING SHALL NOT TO BE DONE WHERE THE SOLE PURPOSE OF THE CLEARING IS TO ACCOMMODATE UTILITY RELOCATIONS. THE MINIMUM OFFSET FROM THE PROPOSED UTILITY LINE TO THE PROPOSED TRIMMING AND SELECTIVE CLEARING LIMIT SHALL BE 10'
4. THE DRY HYDRANT SHALL BE ACCESSIBLE AT ALL TIMES. ANY SHORT PERIODS WHERE ACCESS WILL BE INTERRUPTED SHALL BE COORDINATED AND APPROVED BY THE FIRE DEPARTMENT IN WRITING.
5. PROPOSED UTILITY POLES AND GUY WIRES TO BE INSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE WORK WITH UTILITY COMPANIES.
6. INSTALL GRANITE CURBING TYPE VA5 AT EACH OF THE TRANSITIONS TO BRIDGE RAIL. REFER TO MASSDOT CONSTRUCTION STANDARD DETAILS, DWG NO. 628.24.2
7. SEE SHT. NO. 19 FOR TABLE OF PROPOSED UTILITY POLES
8. GUARD RAIL POSTS INSTALLED OVER THE PROPOSED TWIN ELLIPTICAL DRAINAGE PIPES SHALL BE ENCASED IN CONCRETE AS SHOWN ON SHT. NO. 33. ALL WORK ASSOCIATED WITH CONCRETE ENCASEMENT OF GUARD RAIL POSTS WILL BE INCLUDED IN THE PRICE BID FOR GUARDRAIL, TL-2 (SINGLE FACED)
9. REMOVE AND STACK EXISTING FENCE BETWEEN STA. 103+45 (LT) AND STA 104+54 (LT).
10. WHERE INSTALLED OVER RIPRAP, MODIFIED ROCKFILL SHALL BE PLACED IN A MANNER TO FILL/CHOKE THE VOIDS IN THE UNDERLYING RIPRAP. FILL VOIDS BY SHAKING STONE WITH THE TEETH OF AN EXCAVATOR BUCKET, HAND TAMPING WITH METAL TAMPING RODS, AND BY SPRAYING WATER TO SETTLE FINES BETWEEN LARGE STONES. PLATE COMPACTORS SHALL NOT BE USED.

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 7 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CONSTRUCTION PLANS**
**SHEET 1 OF 2**




LEGEND

- STREAMBED/BANK RESTORATION MATERIAL (12")
- MODIFIED ROCKFILL (12"), OVER RIPRAP (5'-0"), OVER CRUSHED STONE (12") - SEE NOTE 10
- MODIFIED ROCKFILL (12"), OVER CRUSHED STONE (12")
- STONE FOR PIPE ENDS
- WETLAND REPLICATION AREA

CONTINUED ON SHEET NO. 8

FOR PROFILE SEE SHEET NO. 9

609068_HD (SHEFFIELD CONST PLAN 01).DWG Plotted on 13-Aug-2026 11:22 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 8 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CONSTRUCTION PLANS**
**SHEET 2 OF 2**

HIGHWAY GUARD DETAILS

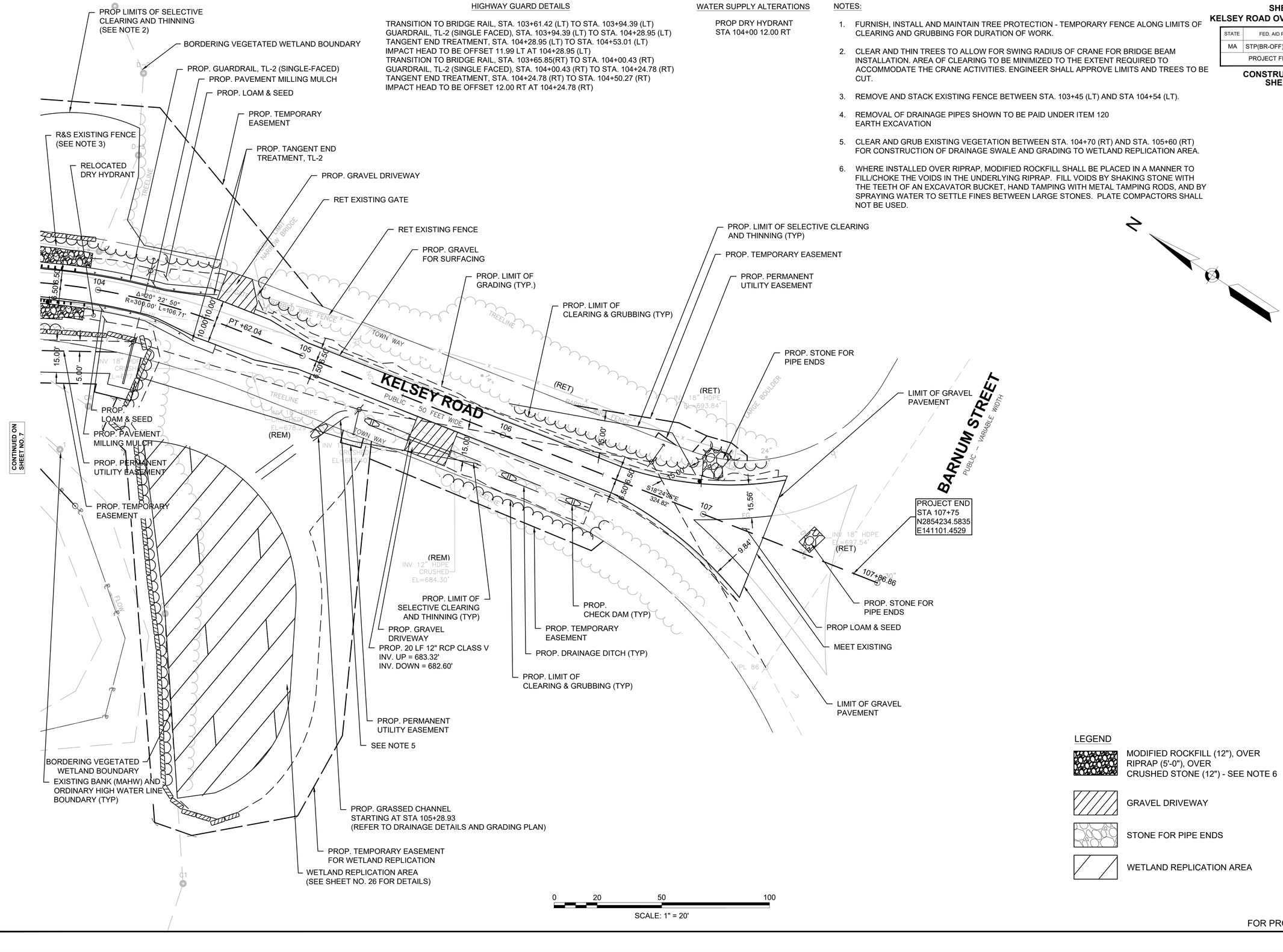
TRANSITION TO BRIDGE RAIL, STA. 103+61.42 (LT) TO STA. 103+94.39 (LT)
GUARDRAIL, TL-2 (SINGLE FACED), STA. 103+94.39 (LT) TO STA. 104+28.95 (LT)
TANGENT END TREATMENT, STA. 104+28.95 (LT) TO STA. 104+53.01 (LT)
IMPACT HEAD TO BE OFFSET 11.99 LT AT 104+28.95 (LT)
TRANSITION TO BRIDGE RAIL, STA. 103+65.85(RT) TO STA. 104+00.43 (RT)
GUARDRAIL, TL-2 (SINGLE FACED), STA. 104+00.43 (RT) TO STA. 104+24.78 (RT)
TANGENT END TREATMENT, STA. 104+24.78 (RT) TO STA. 104+50.27 (RT)
IMPACT HEAD TO BE OFFSET 12.00 RT AT 104+24.78 (RT)

WATER SUPPLY ALTERATIONS

PROP DRY HYDRANT
STA 104+00 12.00 RT

NOTES:

1. FURNISH, INSTALL AND MAINTAIN TREE PROTECTION - TEMPORARY FENCE ALONG LIMITS OF CLEARING AND GRUBBING FOR DURATION OF WORK.
2. CLEAR AND THIN TREES TO ALLOW FOR SWING RADIUS OF CRANE FOR BRIDGE BEAM INSTALLATION. AREA OF CLEARING TO BE MINIMIZED TO THE EXTENT REQUIRED TO ACCOMMODATE THE CRANE ACTIVITIES. ENGINEER SHALL APPROVE LIMITS AND TREES TO BE CUT.
3. REMOVE AND STACK EXISTING FENCE BETWEEN STA. 103+45 (LT) AND STA 104+54 (LT).
4. REMOVAL OF DRAINAGE PIPES SHOWN TO BE PAID UNDER ITEM 120 EARTH EXCAVATION
5. CLEAR AND GRUB EXISTING VEGETATION BETWEEN STA. 104+70 (RT) AND STA. 105+60 (RT) FOR CONSTRUCTION OF DRAINAGE SWALE AND GRADING TO WETLAND REPLICATION AREA.
6. WHERE INSTALLED OVER RIPRAP, MODIFIED ROCKFILL SHALL BE PLACED IN A MANNER TO FILL/CHOKE THE VOIDS IN THE UNDERLYING RIPRAP. FILL VOIDS BY SHAKING STONE WITH THE TEETH OF AN EXCAVATOR BUCKET, HAND TAMPING WITH METAL TAMPING RODS, AND BY SPRAYING WATER TO SETTLE FINES BETWEEN LARGE STONES. PLATE COMPACTORS SHALL NOT BE USED.




LEGEND

- MODIFIED ROCKFILL (12"), OVER RIPRAP (5'-0"), OVER CRUSHED STONE (12") - SEE NOTE 6
- GRAVEL DRIVEWAY
- STONE FOR PIPE ENDS
- WETLAND REPLICATION AREA

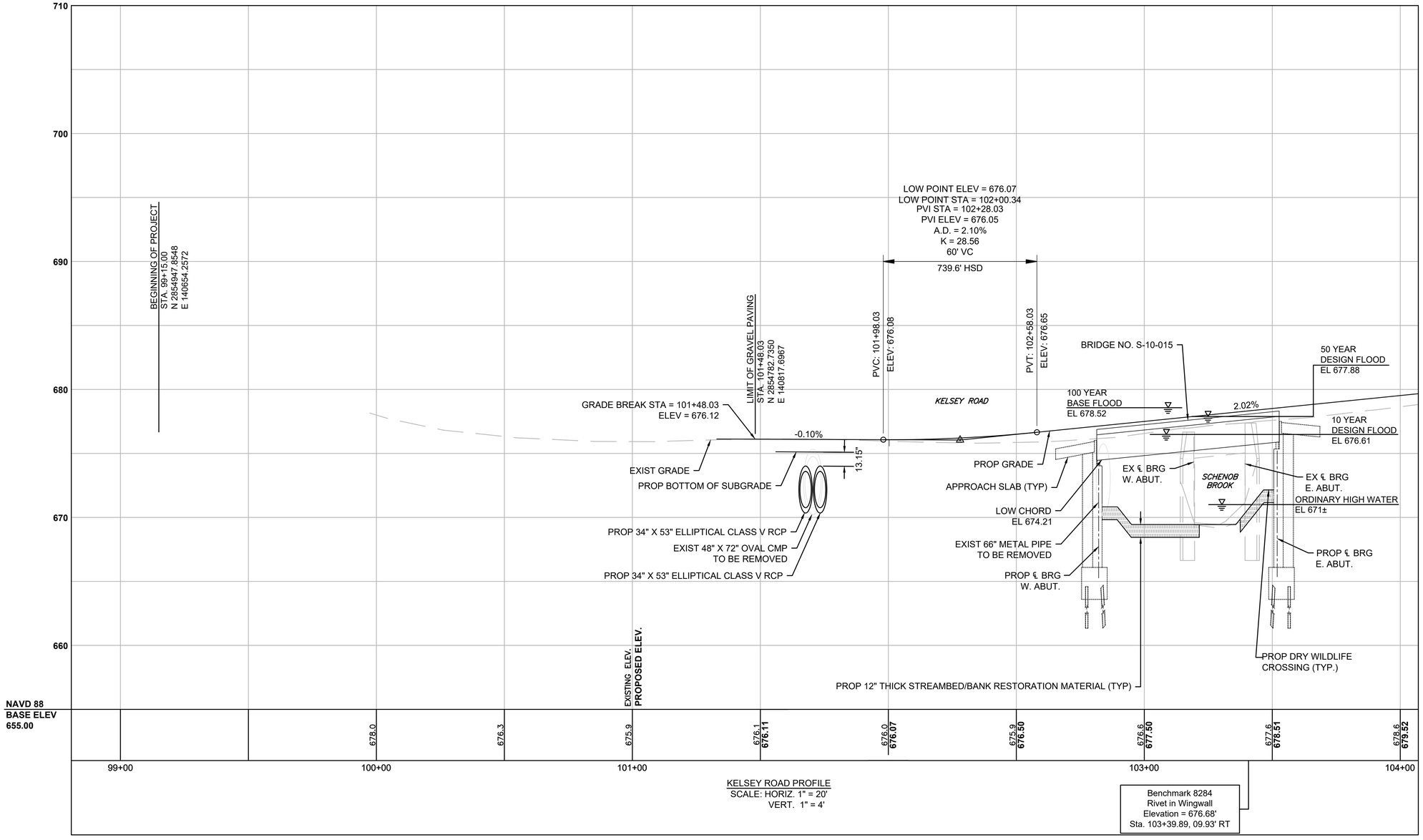
FOR PROFILE SEE SHEET NO. 10

609068_HD (SHEFFIELD CONST PLAN 02).DWG Plotted on 13-Aug-2026 11:22 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 9 | 61 |
| PROJECT FILE NO. 609068 | | | |

**ROADWAY PROFILES**




KELSEY ROAD PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'

Benchmark 8284
Rivet in Wingwall
Elevation = 676.68'
Sta. 103+39.89, 09.93' RT

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

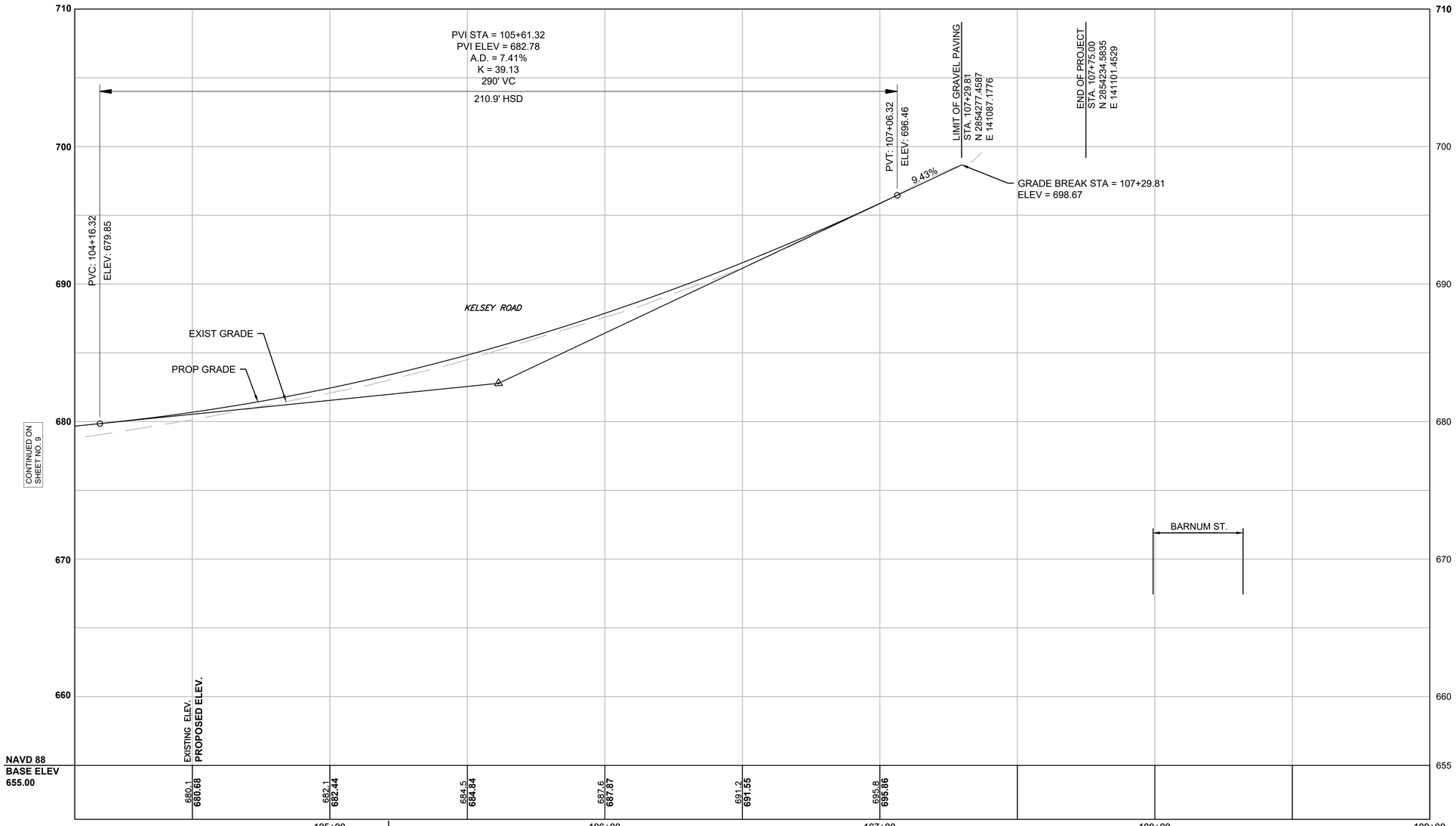
**FOR CONSTRUCTION PLAN:**
**SEE SHT. NO. 7**

609068_HD (SHEFFIELD PROFILE 01).DWG Plotted on 13-Aug-2026 11:22 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 10 | 61 |
| PROJECT FILE NO. | 609068 | | |

## ROADWAY PROFILES




Benchmark A
Mag Nail in UPL NG1
Elevation = 684.25'
Sta. 105+21.11, 14.13' LT

KELSEY ROAD PROFILE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

**FOR CONSTRUCTION PLAN:**
**SEE SHT. NO. 8**

609068_HD (SHEFFIELD PROFILE 02).DWG Plotted on 13-Aug-2026 11:22 AM

NOTES:

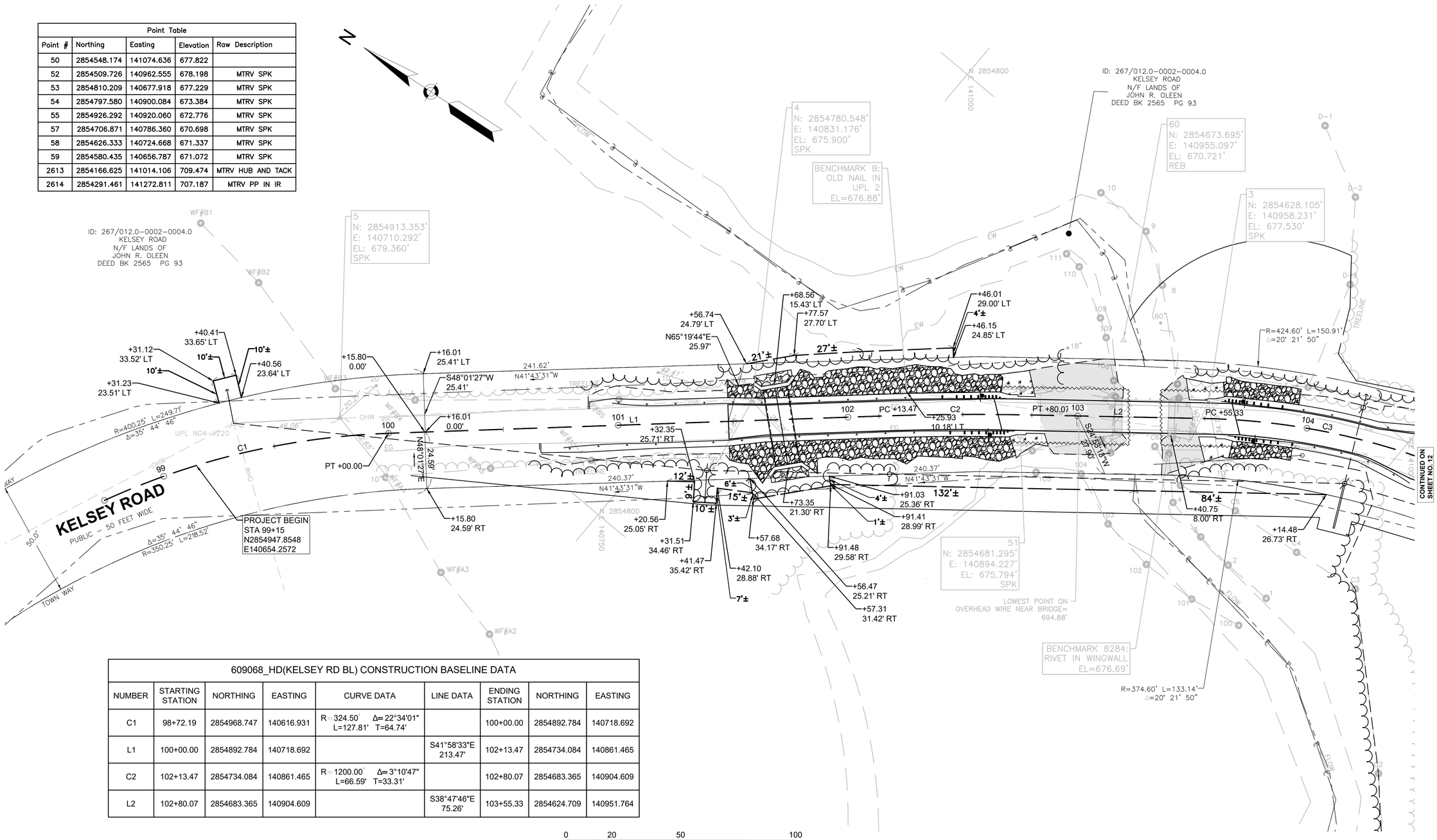
1. NO EXISTING RECORD LAYOUT FOR THE PORTION OF KELSEY ROAD DEPICTED HEREON.

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 11 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CONSTRUCTION BASELINE TIE PLANS**
**SHEET 1 OF 2**

| Point Table | | | | |
|---|---|---|---|---|
| Point # | Northing | Easting | Elevation | Raw Description |
| 50 | 2854548.174 | 141074.636 | 677.822 | |
| 52 | 2854509.726 | 140962.555 | 678.198 | MTRV SPK |
| 53 | 2854810.209 | 140677.918 | 677.229 | MTRV SPK |
| 54 | 2854797.580 | 140900.084 | 673.384 | MTRV SPK |
| 55 | 2854926.292 | 140920.060 | 672.776 | MTRV SPK |
| 57 | 2854706.871 | 140786.360 | 670.698 | MTRV SPK |
| 58 | 2854626.333 | 140724.668 | 671.337 | MTRV SPK |
| 59 | 2854580.435 | 140656.787 | 671.072 | MTRV SPK |
| 2613 | 2854166.625 | 141014.106 | 709.474 | MTRV HUB AND TACK |
| 2614 | 2854291.461 | 141272.811 | 707.187 | MTRV PP IN IR |




| 609068_HD(KELSEY RD BL) CONSTRUCTION BASELINE DATA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NUMBER | STARTING STATION | NORTHING | EASTING | CURVE DATA | LINE DATA | ENDING STATION | NORTHING | EASTING |
| C1 | 98+72.19 | 2854968.747 | 140616.931 | R=324.50' Δ=22°34'01" L=127.81' T=64.74' | | 100+00.00 | 2854892.784 | 140718.692 |
| L1 | 100+00.00 | 2854892.784 | 140718.692 | | S41°58'33"E 213.47' | 102+13.47 | 2854734.084 | 140861.465 |
| C2 | 102+13.47 | 2854734.084 | 140861.465 | R=1200.00' Δ=3°10'47" L=66.59' T=33.31' | | 102+80.07 | 2854683.365 | 140904.609 |
| L2 | 102+80.07 | 2854683.365 | 140904.609 | | S38°47'46"E 75.26' | 103+55.33 | 2854624.709 | 140951.764 |

0 20 50 100
SCALE: 1" = 20'

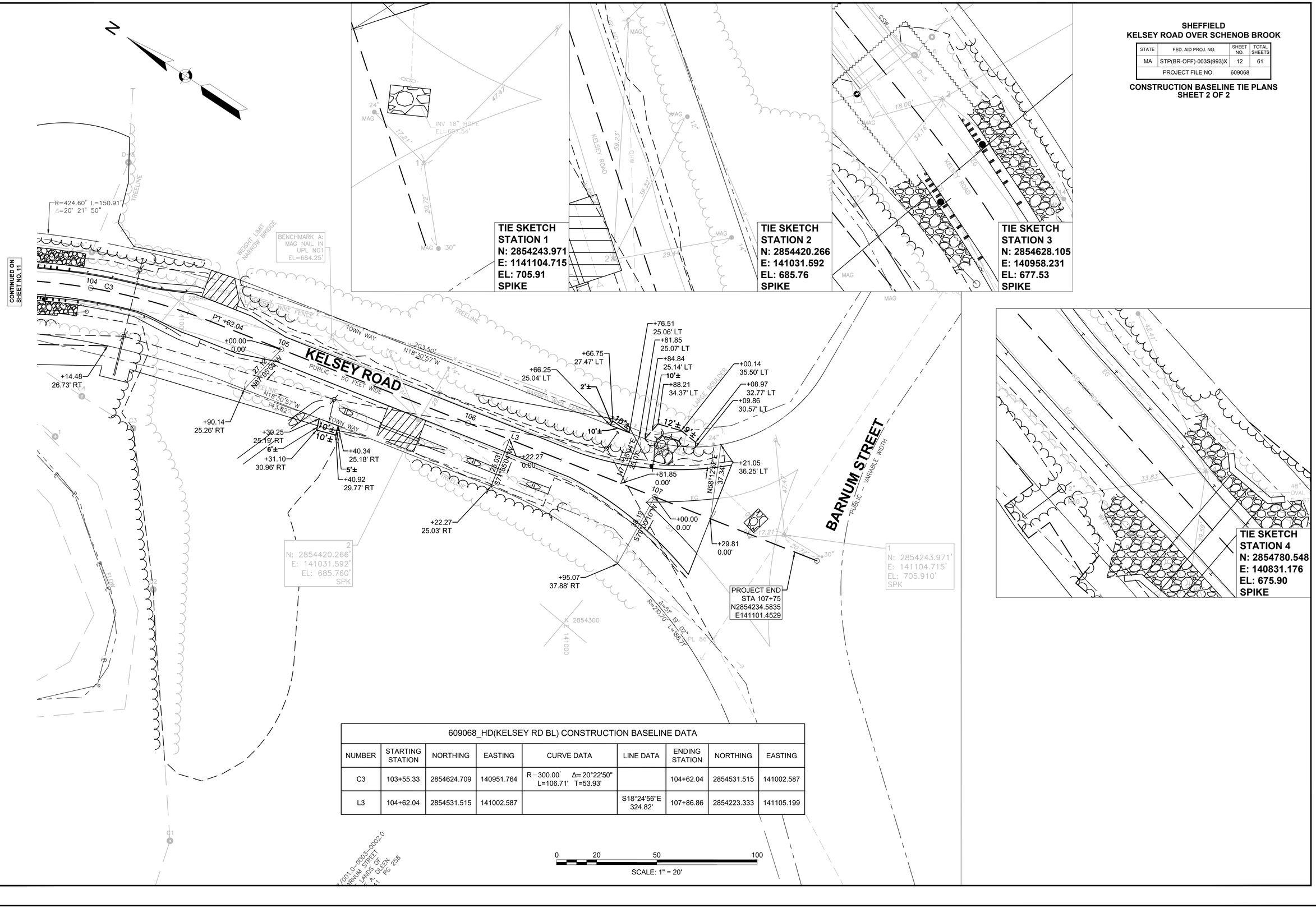
609068_HD\SHEFFIELD CONSTRUCTION BASELINE TIES).DWG Plotted on 13-Aug-2026 11:22 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 12 | 61 |
| | PROJECT FILE NO. 609068 | | |

**CONSTRUCTION BASELINE TIE PLANS**
**SHEET 2 OF 2**

609068_HD\SHEFFIELD CONSTRUCTION BASELINE TIES).DWG Plotted on 13-Aug-2026 11:22 AM



**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 13 | 61 |
| PROJECT FILE NO. | 609068 | | |

**GRADING PLANS**
**SHEET 1 OF 2**

609068_HD(PROP GRADING PLAN).DWG Plotted on 13-Aug-2026 11:23 AM

N

SCHENOB BROOK

FLOW

ID: 267/012.0-0002-0004.0
KELSEY ROAD
N/F LANDS OF
JOHN R. OLEEN
DEED BK 2565 PG 93

PROJECT BEGIN
STA 99+15
N2854947.8548
E140654.2572

KELSEY ROAD
PUBLIC - 50 FEET WIDE

TOWN WAY

ID: 267/001.0-0003-0001.0
KELSEY ROAD
N/F LANDS OF
JOHN R. OLEEN
DEED BK 2565 PG 93

INV 66" METAL
EL=670.80'

INV 66" METAL
EL=669.72'

48" 72" x 73"
OVAL CMP
EL=670.83'

INV 18" CPP
EL=

675.94 | 675.97 | 676.07 | 676.50 | 676.37 | 679.39
675.92 | 675.66 | 675.64 | 675.96 | 676.11 | 675.94 | 676.37 | 679.52

TREELINE

0 20 50 100
SCALE: 1" = 20'

CONTINUED ON SHEET NO. 14

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 14 | 61 |
| PROJECT FILE NO. | 609068 | | |

**GRADING PLANS**
**SHEET 2 OF 2**

609068_HD(PROP GRADING PLAN).DWG Plotted on 13-Aug-2026 11:23 AM

CONTINUED ON SHEET NO. 13

N

KELSEY ROAD

BARNUM STREET
PUBLIC - VARIABLE WIDTH

PROJECT END
STA 107+75
N2854234.5835
E141101.4529

107+86.86

NO GRADING AT NEW UTILITY POLE LOCATION

PROP DRAINAGE DITCH

PROP. GRASSED CHANNEL (TYP)
STARTING AT STA 105+28.93

INV 18" HDPE
EL=693.84'

INV 18" HDPE
EL=697.54'

INV 12" HDPE
CRUSHED
EL=678.29'

INV 12" HDPE
CRUSHED
EL=684.30'

INV 18" HDPE
CRUSHED
EL=678.29'

679.39
679.52
680.48
680.68
682.31
682.44
684.71
684.84
684.70
687.76
687.87
687.73
691.44
691.55
691.43
695.57
695.86
695.41

TREELINE
BARBED WIRE FENCE
TOWN WAY
UPL 85
UPL 86
24"
30"
C1
C2
C3
C4

0 20 50 100
SCALE: 1" = 20'

# TRAFFIC SIGN SUMMARY

| IDENTIFICATION NUMBER | SIZE OF SIGN (INCHES) | | TEXT | TEXT DIMENSIONS (INCHES) | | | NUMBER OF SIGNS REQUIRED | COLOR | | | POST SIZE AND NUMBER REQUIRED | UNIT AREA (S.F) | AREA IN SQUARE FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | WIDTH | HEIGHT | | LETTER HEIGHT | VERTICAL SPACING | ARROW RTE. MKR. | | BACK-GROUND | LEGEND | BORDER | | | |
| OM3-L | 12 | 48 |  | NONE | | | 2 | YELLOW/ BLACK | - | - | 1-P5 | 4.0 | 8.0 |
| OM3-R | 12 | 48 |  | NONE | | | 2 | YELLOW/ BLACK | - | - | 1-P5 | 4.0 | 8.0 |
| R1-2 | 36 | 36 |   | SEE MUTCD STANDARDS | | | 1 | RED | WHITE | WHITE | 1-P5 | 4.5 | 4.5 |

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 15 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TRAFFIC SIGNING PLANS**
**SHEET 1 OF 2**

609068_HD(TRAFFIC SIGNING PLAN).DWG Plotted on 13-Aug-2026 11:23 AM

N

SCHENOB BROOK

KELSEY ROAD

PROJECT BEGIN
STA 99+15
N2854947.8548
E140654.2572

ID: 267/012.0-0002-0004.0
KELSEY ROAD
N/F LANDS OF
JOHN R. OLEEN
DEED BK 2565 PG 93

OM3-L

OM3-R

R&S

R&S R12-5
WEIGHT LIMIT SIGN

ROAD

FOLEY

KELSEY ROAD

0 20 50 100

SCALE: 1" = 20'

CONTINUED ON SHEET NO. 16

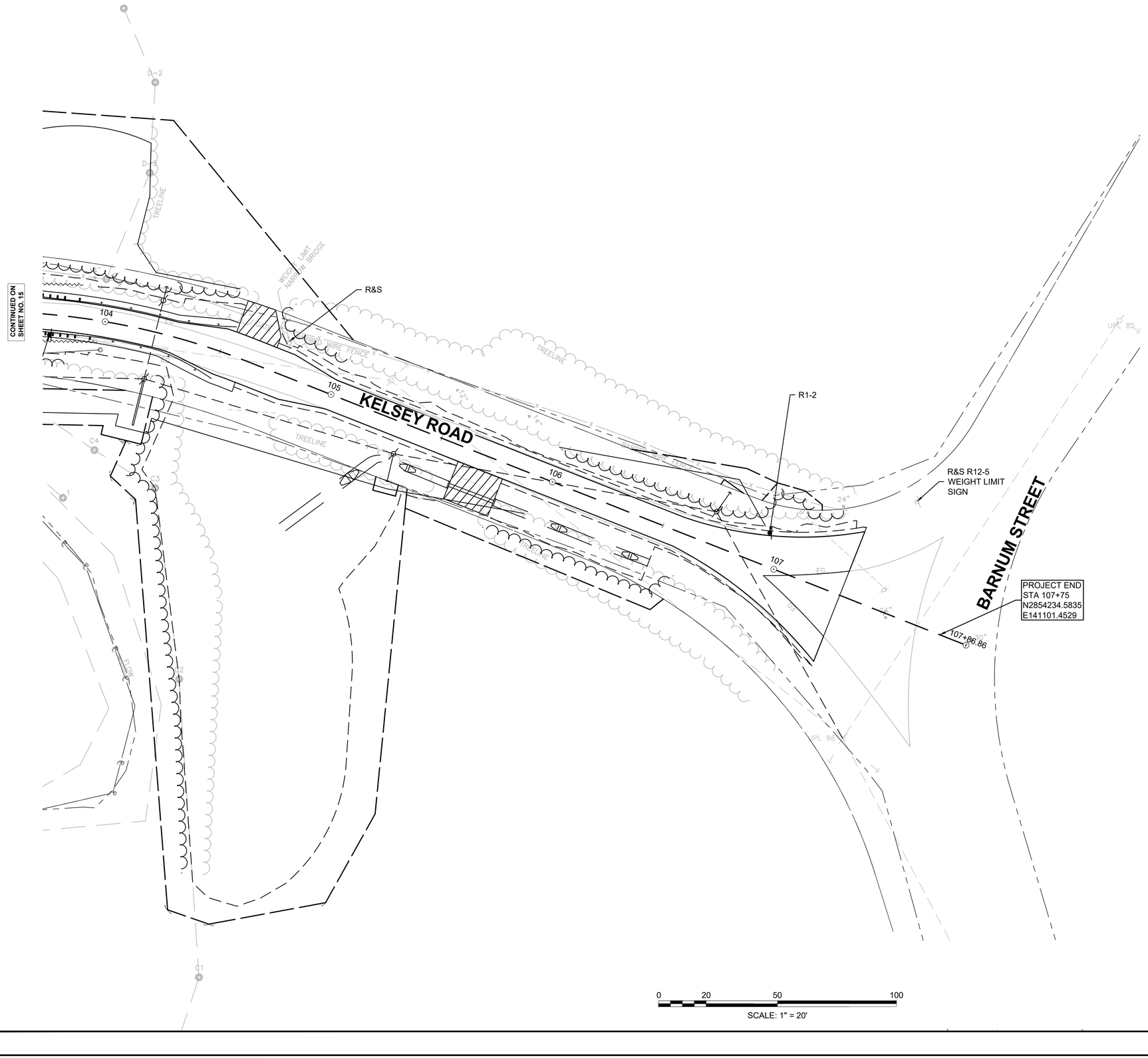
**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 16 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TRAFFIC SIGNING PLANS**
**SHEET 2 OF 2**

609068_HD(TRAFFIC SIGNING PLAN).DWG Plotted on 13-Aug-2026 11:23 AM

CONTINUED ON SHEET NO. 15

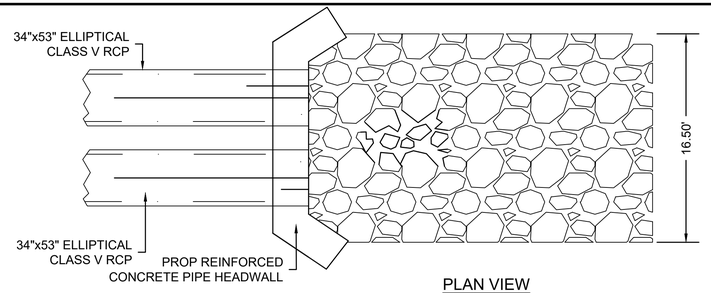


**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

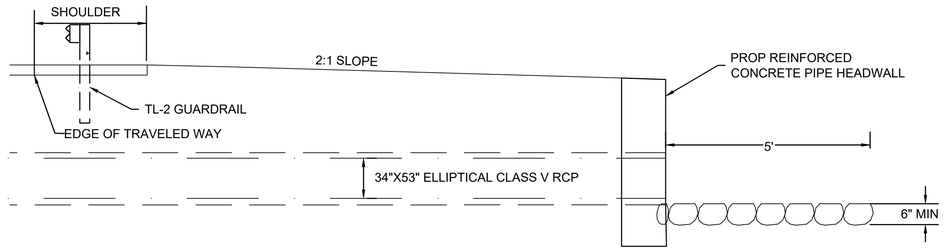
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 17 | 61 |
| PROJECT FILE NO. | 609068 | | |

**DRAINAGE DETAILS**

608069_HD\DRAINAGE DETAILS.DWG Plotted on 13-Aug-2026 11:23 AM



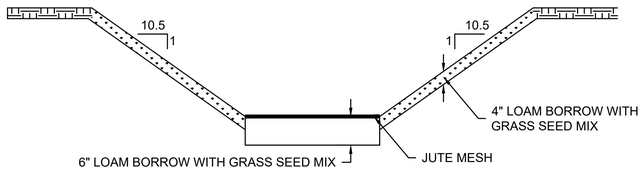

PLAN VIEW




PROFILE VIEW

## STONE FOR PIPE ENDS AT ELLIPTICAL CULVERT

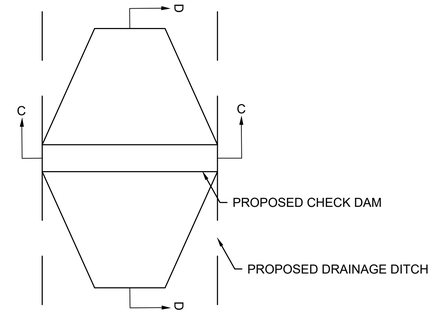
NOT TO SCALE




NOTES:
1. THE LINEAR SLOPE OF THE SWALE SHALL BE A MAXIMUM OF 5%.

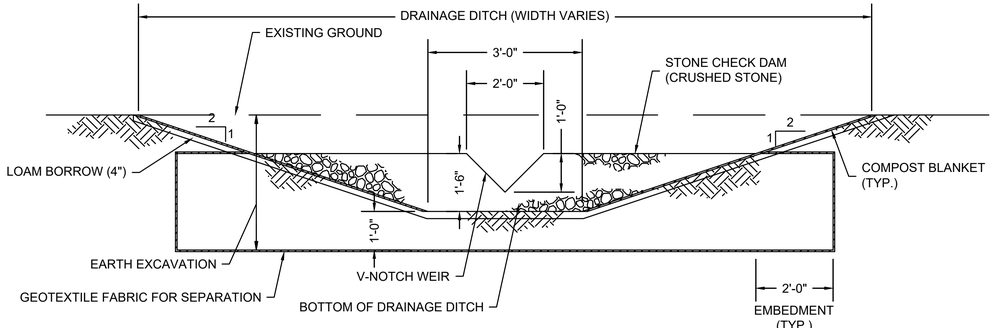
## GRASSED CHANNEL

NOT TO SCALE



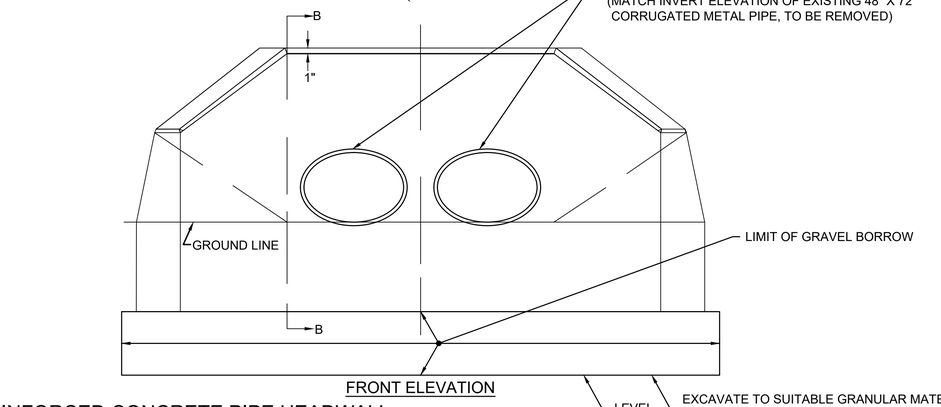

## STONE CHECK DAM PLAN VIEW

NOT TO SCALE




## SECTION C-C

NOT TO SCALE

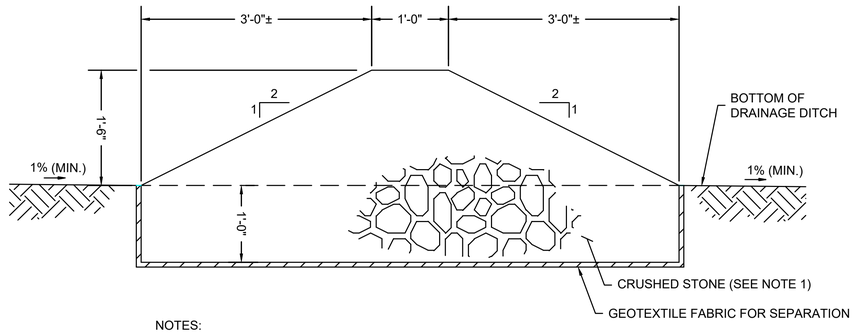



Ø = 45° FOR DEPTH OF 5'-0" OR LESS
Ø = 60° FOR DEPTH OVER 5'-0"

## REINFORCED CONCRETE PIPE HEADWALL

NOT TO SCALE

(ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM)

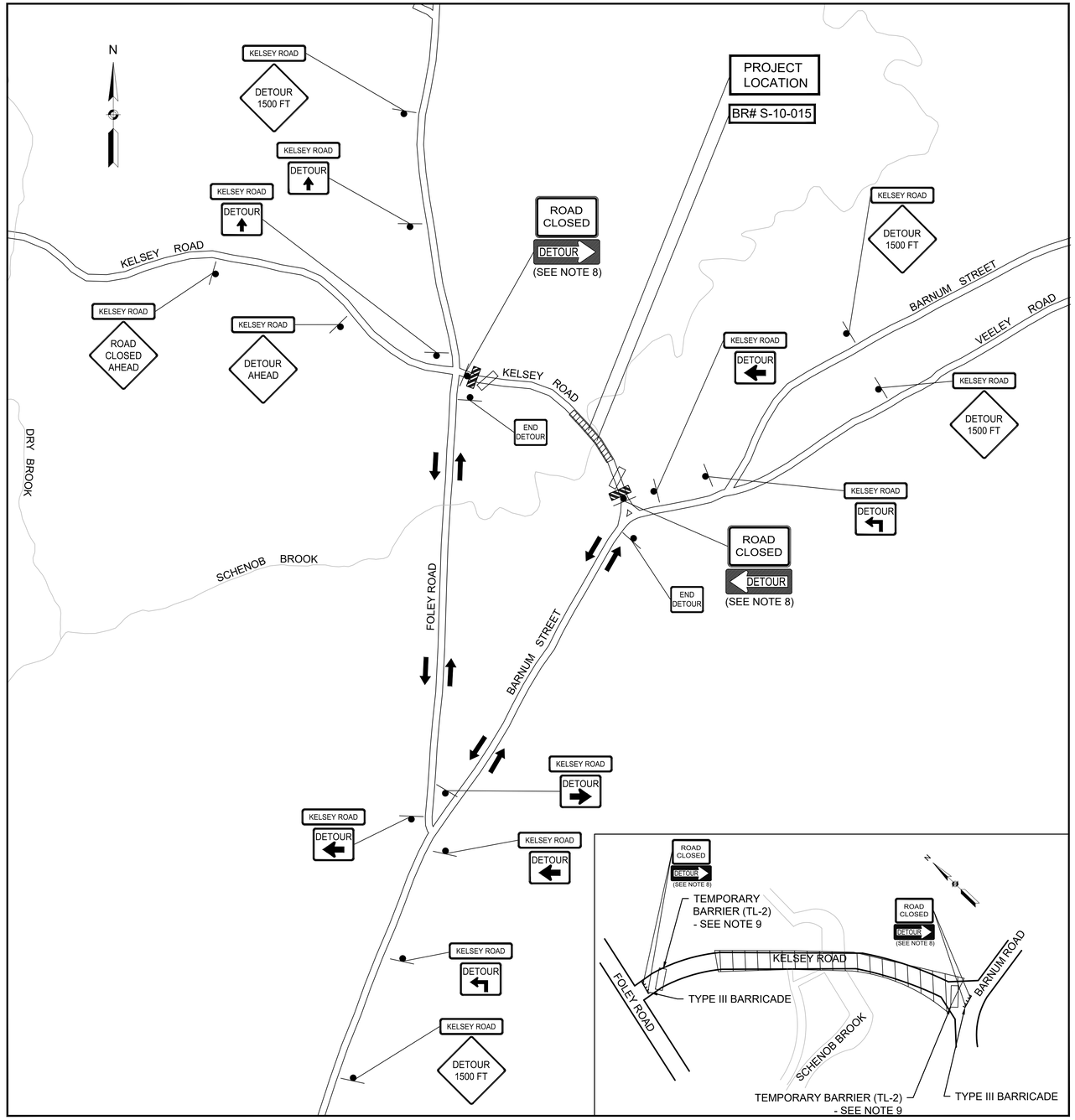



NOTES:
1. CRUSHED STONE SHALL MEET MATERIAL REQUIREMENTS OF SECTION M2.01.2

## SECTION D-D

NOT TO SCALE

# DETOUR PLAN




**DETOUR LENGTH = 0.9 MILES** NOT TO SCALE

## LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ARROW BOARD
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- TEMPORARY BARRIER (TL-2)
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN

GENERAL NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
7. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
8. WHERE NOTED, R11-2 (ROAD CLOSED) ALONG WITH THEIR RESPECTIVE M4-10 (DETOUR ARROW) SIGNS, SHALL BE MOUNTED ON TYPE III BARRICADE.
9. PROVIDE TEMPORARY CONCRETE BARRIER PLACED AT 45 DEGREE ANGLE TO ROADWAY SO BLUNT END IS AWAY FROM APPROACHING TRAFFIC.
10. ALL DETOUR SIGNS SHALL BE PLACED WITHIN EXISTING RIGHT OF WAY

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 18 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TEMPORARY TRAFFIC CONTROL PLANS**

# TRAFFIC SIGN SUMMARY

| IDENTIFICATION NUMBER | SIZE OF SIGN (INCHES) WIDTH | SIZE OF SIGN (INCHES) HEIGHT | TEXT | TEXT DIMENSIONS (INCHES) LETTER HEIGHT | TEXT DIMENSIONS (INCHES) VERTICAL SPACING | TEXT DIMENSIONS (INCHES) ARROW RTE. MKR. | NUMBER OF SIGNS REQUIRED | COLOR BACK-GROUND | COLOR LEGEND | COLOR BORDER | UNIT AREA IN SQUARE FEET | AREA IN SQUARE FEET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W16-8P | 30 | 12 | KELSEY ROAD | SEE MUTCD STANDARDS | | | 14 | FLUORESCENT ORANGE | BLACK | BLACK | 2.5 | 35.0 |
| M4-8a | 24 | 18 | END DETOUR | | | | 2 | FLUORESCENT ORANGE | BLACK | BLACK | 3.0 | 6.0 |
| M4-9R | 30 | 24 | DETOUR → | | | | 1 | FLUORESCENT ORANGE | BLACK | BLACK | 5.0 | 5.0 |
| M4-9L | 30 | 24 | DETOUR ← | | | | 3 | FLUORESCENT ORANGE | BLACK | BLACK | 5.0 | 15.0 |
| M4-9AL | 30 | 24 | DETOUR ↰ | | | | 2 | FLUORESCENT ORANGE | BLACK | BLACK | 5.0 | 10.0 |
| M4-9V | 30 | 24 | DETOUR ↑ | | | | 2 | FLUORESCENT ORANGE | BLACK | BLACK | 5.0 | 10.0 |
| M4-10R | 48 | 18 | DETOUR → | | | | 1 | FLUORESCENT ORANGE | BLACK | BLACK | 6.0 | 6.0 |
| M4-10L | 48 | 18 | ← DETOUR | | | | 1 | FLUORESCENT ORANGE | BLACK | BLACK | 6.0 | 6.0 |
| R11-2 | 48 | 30 | ROAD CLOSED | | | | 2 | FLUORESCENT ORANGE | BLACK | BLACK | 10.0 | 20.0 |
| W20-2 | 36 | 36 | DETOUR 1500 FT | | | | 4 | FLUORESCENT ORANGE | BLACK | BLACK | 9.0 | 36.0 |
| W20-2 | 36 | 36 | DETOUR AHEAD | | | | 1 | FLUORESCENT ORANGE | BLACK | BLACK | 9.0 | 9.0 |
| W20-3 | 36 | 36 | ROAD CLOSED AHEAD | | | | 1 | FLUORESCENT ORANGE | BLACK | BLACK | 9.0 | 9.0 |
| TOTAL AREA OF SIGNS (SQUARE FEET) | | | | | | | | | | | | 168.0 |

609068_TR (SHEFFIELD_DETOUR PLAN).DWG Plotted on 13-Aug-2026 11:23 AM

| PROPOSED ELECTRIC UTILITY DATA | | | | |
|---|---|---|---|---|
| NO. | NORTHING | EASTING | STATION | OFFSET |
| UPL 1 | 2854776.2757 | 140795.2523 | 101+37.82 | 21.01 |
| UPL 1 GUY WIRE | 2854769.1334 | 140785.6093 | 101+36.68 | 32.95 |
| UPL 2 | 2854714.2992 | 140845.0760 | 102+17.30 | 25.41 |
| UPL 3 | 2854559.9334 | 140969.1670 | 104+21.69 | 20.20 |
| UPL 3 PUSH BRACE | 2854551.1217 | 140951.2153 | 104+21.70 | 40.20 |
| UPL 3S | 2854574.9042 | 140999.6665 | 104+21.68 | -13.77 |
| UPL 3S GUY WIRE | 2854577.5480 | 141005.0526 | 104+21.67 | -19.77 |
| UPL 4 | 2854459.3673 | 141012.3374 | 105+33.57 | 13.54 |
| UPL 4 GUY WIRE | 2854453.9411 | 141001.6342 | 105+35.34 | 25.41 |
| UPL 5 | 2854339.6795 | 141080.8878 | 106+68.79 | -13.69 |
| UPL 5 GUY WIRE | 2854338.1713 | 141093.3429 | 106+74.15 | -25.03 |
| UPL NG4-VZ20 GUY WIRE | 2854958.9325 | 140688.1630 | 99+35.60 | -28.47 |

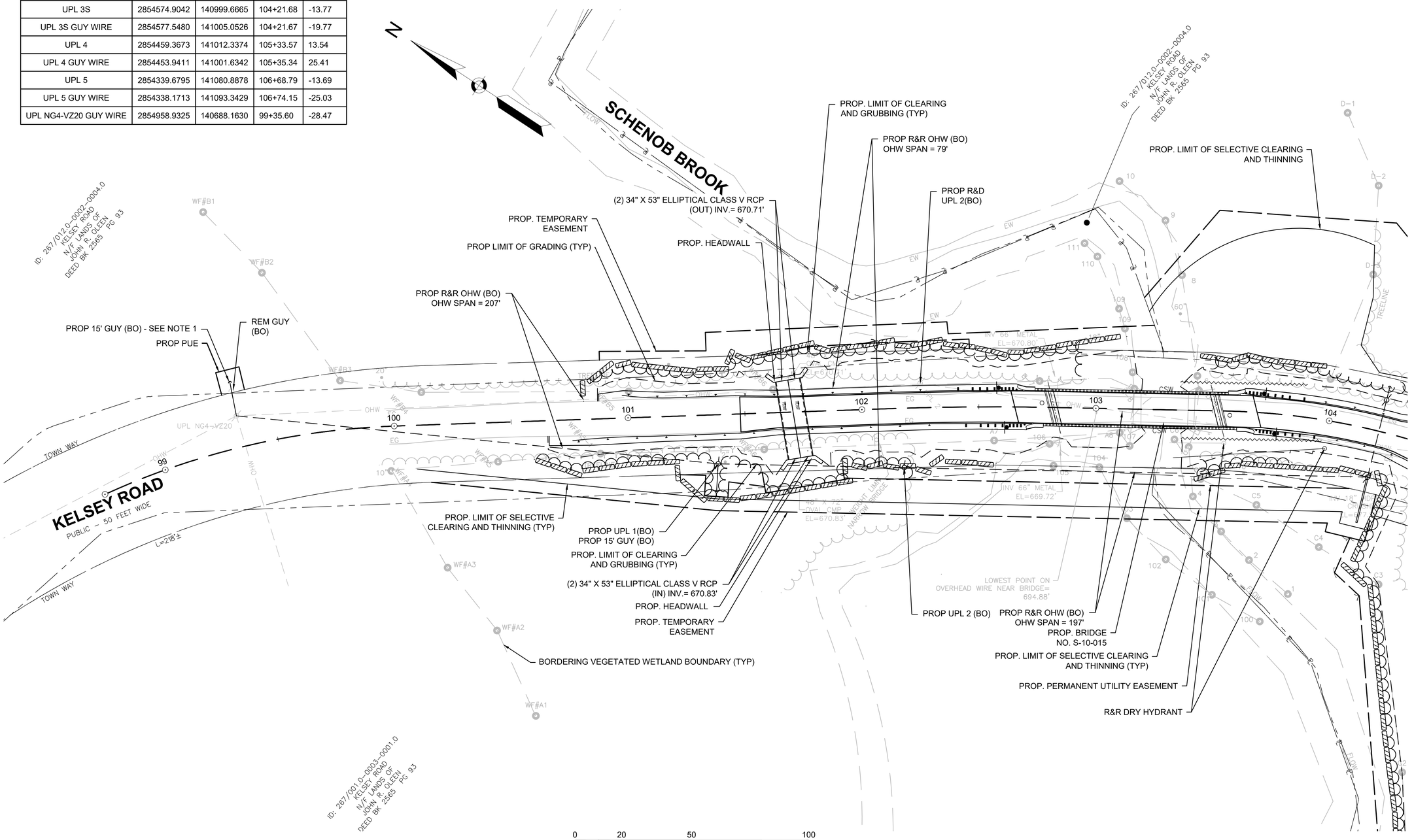
NOTES:

1. PROPOSED UTILITY POLES AND GUY WIRES TO BE INSTALLED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE FOR TRIMMING TREES PRIOR TO BEGINNING OF UTILITY RELOCATIONS. CONTRACTOR SHALL COORDINATE WORK WITH UTILITY COMPANIES.
2. THE CONTRACTOR SHALL PROVIDE THE UTILITY COMPANIES ACCESS NEEDED FOR POLE AND OVERHEAD WIRE RELOCATIONS. POLE ACCESS SHALL BE RETAINED UNTIL UTILITY RELOCATIONS ARE COMPLETE. THE COST OF PROVIDING ACCESS IS INCIDENTAL TO OTHER CONTRACT ITEMS.
3. UPL 3S SHALL BE INSTALLED BY OTHERS FOLLOWING THE COMPLETION OF THE BRIDGE REPLACEMENT. CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES TO COORDINATE THE INSTALLATION OF THIS POLE AND GUY WIRE.

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 19 | 61 |
| PROJECT FILE NO. | 609068 | | |

**UTILITY PLANS**
**SHEET 1 OF 2**




CONTINUED ON SHEET NO. 20

609068_HD\SHEFFIELD UTILITY PLANS).DWG Plotted on 24-Aug-2026 2:18 PM

| PROPOSED ELECTRIC UTILITY DATA | | | | |
|---|---|---|---|---|
| NO. | NORTHING | EASTING | STATION | OFFSET |
| UPL 1 | 2854776.2757 | 140795.2523 | 101+37.82 | 21.01 |
| UPL 1 GUY WIRE | 2854769.1334 | 140785.6093 | 101+36.68 | 32.95 |
| UPL 2 | 2854714.2992 | 140845.0760 | 102+17.30 | 25.41 |
| UPL 3 | 2854559.9334 | 140969.1670 | 104+21.69 | 20.20 |
| UPL 3 PUSH BRACE | 2854551.1217 | 140951.2153 | 104+21.70 | 40.20 |
| UPL 3S | 2854574.9042 | 140999.6665 | 104+21.68 | -13.77 |
| UPL 3S GUY WIRE | 2854577.5480 | 141005.0526 | 104+21.67 | -19.77 |
| UPL 4 | 2854459.3673 | 141012.3374 | 105+33.57 | 13.54 |
| UPL 4 GUY WIRE | 2854453.9411 | 141001.6342 | 105+35.34 | 25.41 |
| UPL 5 | 2854339.6795 | 141080.8878 | 106+68.79 | -13.69 |
| UPL 5 GUY WIRE | 2854338.1713 | 141093.3429 | 106+74.15 | -25.03 |
| UPL NG4-VZ20 GUY WIRE | 2854958.9325 | 140688.1630 | 99+35.60 | -28.47 |

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 20 | 61 |
| PROJECT FILE NO. 609068 | | | |

**UTILITY PLANS**
**SHEET 2 OF 2**

CONTINUED ON SHEET NO. 19

PROP. LIMIT OF SELECTIVE CLEARING AND THINNING
PROP UPL 3S(BO)
PROP 6 FT GUY (BO)
(SEE NOTE 3)
RELOCATED DRY HYDRANT
PROP. LIMIT OF SELECTIVE CLEARING AND THINNING
PROP. TEMPORARY EASEMENT
PROP. LIMIT OF CLEARING AND GRUBBING (TYP)
PROP. LIMIT OF SELECTIVE CLEARING AND THINNING
REM UPL NG1 (BO)
PROP R&R OHW (BO)
OHW SPAN = 138'
PROP. TEMPORARY EASEMENT
PROP UPL 5 (BO)
PROP 10 FT GUY (BO)
PROP. PERMANENT UTILITY EASEMENT
PROP. STONE FOR PIPE ENDS
REM 18" HDPE
PROP UPL 3 (BO)
PROP 20 FT TEMP PUSH BRACE (BO)
PROP. PERMANENT UTILITY EASEMENT
PROP. TEMPORARY EASEMENT
REM 12" HDPE
PROP. 12" RCP CLASS V
INV. UP = 683.32'
INV. DOWN = 682.60'
PROP. PERMANENT UTILITY EASEMENT
PROP UPL 4 (BO)
PROP 12 FT GUY (BO)
PROP R&R OHW (BO)
OHW SPAN = 122'
PROP. CHECK DAM (TYP)
PROP. DRAINAGE DITCH (TYP)
PROP R&R OHW (BO)
OHW SPAN = 107'
PROP. LIMIT OF CLEARING AND GRUBBING (TYP)
PROP. LIMIT OF SELECTIVE CLEARING AND THINNING
PROP. TEMPORARY EASEMENT FOR WETLAND REPLICATION
PROP. GRASSED CHANNEL STARTING AT STA 105+28.93
PROP. STONE FOR PIPE ENDS

KELSEY ROAD
PUBLIC - VARIABLE WIDTH
AT INTERSECTION

BARNUM STREET
PUBLIC - VARIABLE WIDTH

SURFACE BORDER
TREELINE
WIRE FENCE
LIMIT OF MARSH
TOWN WAY
TOWN WAY
TOWN WAY
LARGE BOULDER
INV. 18" HDPE
EL=693.84'
INV. 18" HDPE
EL=678.
INV. CRUSHED
EL=68
INV. 18" HDPE
EL=697.54'
(RET)
FLOW
UPL 85
UPL 86
104
105
106
107
C1
C2
C3
C4
24"
30"

0 20 50 100
SCALE: 1" = 20'

609068_HD\SHEFFIELD UTILITY PLANS).DWG Plotted on 24-Aug-2026 2:19 PM

WETLAND FLAG NOTES:

1. WETLAND FLAG SERIES A-WF-01 THROUGH A-WF-08, B-WF-01 THROUGH B-WF-08, C-WF-01 THROUGH C-WF-06, AND D-WF-01 THROUGH D-WF-05 REPRESENT BORDERING VEGETATED WETLANDS (BVW)/ FEDERAL WETLANDS. FLAGS RB-01 THROUGH RB-10 AND RB-100 THROUGH RB-111 REPRESENT BANK/ORDINARY HIGH WATER (OHW) DELINEATIONS.

NOTES:

1. EXISTING CULVERT AT STA. 101+70 TO BE REMOVED AND REPLACED.

2. CLEAR AND THIN TREES TO ALLOW FOR SWING RADIUS OF CRANE FOR BRIDGE BEAM INSTALLATION. AREA OF CLEARING TO BE MINIMIZED TO THE EXTENT REQUIRED TO ACCOMMODATE THE CRANE ACTIVITIES. ENGINEER SHALL APPROVE LIMITS AND TREES TO BE CUT.

3. THE CONTRACTOR SHALL NOTIFY THE DISTRICT SURVEY ENGINEER AT LEAST TWO (2) WEEKS PRIOR TO THE WING WALL BEING DEMOLISHED, SO BOSTON SURVEY CAN TRANSFER THE BENCHMARK ELEVATION.

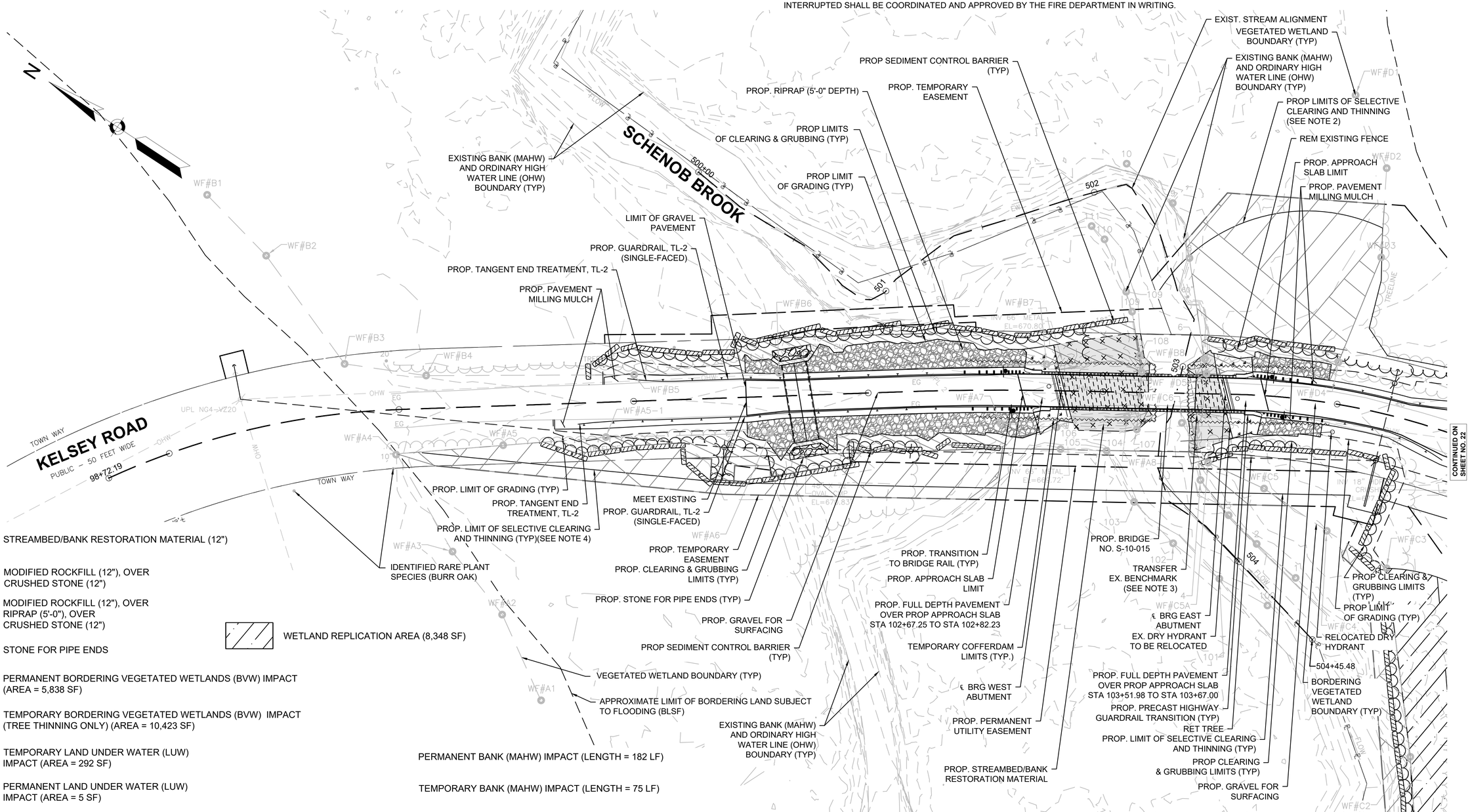
4. LIMITS OF CLEARING AND THINNING TO EXTEND NO MORE THAN 15 FEET FROM PROPOSED UTILITY LINES. GRUBBING SHALL NOT TO BE DONE WHERE THE SOLE PURPOSE OF THE CLEARING IS TO ACCOMMODATE UTILITY RELOCATIONS. THE MINIMUM OFFSET FROM THE PROPOSED UTILITY LINE TO THE PROPOSED TRIMMING AND SELECTIVE CLEARING LIMIT SHALL BE 10'

5. THE DRY HYDRANT SHALL BE ACCESSIBLE AT ALL TIMES. ANY SHORT PERIODS WHERE ACCESS WILL BE INTERRUPTED SHALL BE COORDINATED AND APPROVED BY THE FIRE DEPARTMENT IN WRITING.

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 21 | 61 |
| PROJECT FILE NO. | 609068 | | |

**ENVIRONMENTAL IMPACTS PLANS**
**SHEET 1 OF 2**




609068_HD\WETLAND REPLICATION PLANS.DWG Plotted on: 24-Aug-2026 2:26 PM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

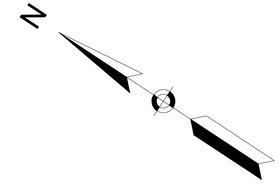
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 22 | 61 |
| PROJECT FILE NO. | 609068 | | |

**ENVIRONMENTAL IMPACTS PLANS**
**SHEET 2 OF 2**

NOTES:

1. FURNISH, INSTALL AND MAINTAIN TREE PROTECTION - TEMPORARY FENCE ALONG LIMITS OF CLEARING AND GRUBBING FOR DURATION OF WORK.

2. CLEAR AND THIN TREES TO ALLOW FOR SWING RADIUS OF CRANE FOR BRIDGE BEAM INSTALLATION. AREA OF CLEARING TO BE MINIMIZED TO THE EXTENT REQUIRED TO ACCOMMODATE THE CRANE ACTIVITIES. ENGINEER SHALL APPROVE LIMITS AND TREES TO BE CUT.




CONTINUED ON SHEET NO. 21

PROP LIMITS OF SELECTIVE CLEARING AND THINNING (SEE NOTE 2)
VEGETATED WETLAND BOUNDARY (TYP)
REM EXISTING FENCE
PROP. GUARDRAIL, TL-2 (SINGLE-FACED)
PROP. PAVEMENT MILLING MULCH
PROP. LOAM & SEED
PROP. TEMPORARY EASEMENT
PROP. TANGENT END TREATMENT, TL-2
PROP. GRAVEL DRIVEWAY
RET EXISTING GATE
RET EXISTING FENCE
PROP. GRAVEL FOR SURFACING
PROP. LIMIT OF GRADING (TYP.)
PROP. LIMIT OF CLEARING & GRUBBING (TYP)
PROP. LIMIT OF SELECTIVE CLEARING AND THINNING (TYP)
PROP. TEMPORARY EASEMENT
PROP. PERMANENT UTILITY EASEMENT
PROP. STONE FOR PIPE ENDS
LIMIT OF GRAVEL PAVEMENT
PROP. STONE FOR PIPE ENDS
PROP LOAM & SEED
MEET EXISTING
LIMIT OF GRAVEL PAVEMENT
PROP. LOAM & SEED
PROP. PAVEMENT MILLING MULCH
504+45.48
PROP. PERMANENT UTILITY EASEMENT
PROP. TEMPORARY EASEMENT
EXISTING ORDINARY HIGH WATER LINE (OHW) BOUNDARY (TYP)
PROP. DRAINAGE DITCH WITH CHECK DAMS (TYP)
PROP. LIMIT OF CLEARING & GRUBBING (TYP)
PROP. LIMIT OF SELECTIVE CLEARING AND THINNING (TYP)
PROP. GRASSED CHANNEL WITH CHECK DAMS (TYP) STARTING AT STA 105+28.93
PROP. TEMPORARY EASEMENT FOR WETLAND REPLICATION
APPROXIMATE LIMIT OF BORDERING LAND SUBJECT TO FLOODING (BLSF)
SEE WETLAND REPLICATION PLAN (SHEET 26) FOR DETAILS
PROPOSED LIMIT OF GRADING (TYP.)
VEGETATED WETLANDS BOUNDARY (TYP)
PROJECT END STA 107+75 N2854234.5835 E141101.4529
107+86.86
KELSEY ROAD
PUBLIC 50 FEET WIDE
BARNUM STREET
PUBLIC – VARIABLE WIDTH
TOWN WAY
TREELINE
BARBED WIRE FENCE
WOOD WIRE FENCE
CHAIN LINK FENCE
INV. 18" HDPE EL=693.84
INV. 18" HDPE EL=697.54'
INV. 12" HDPE CRUSHED EL=684.30'
CRUSHED EL=683.
CRUSHED EL=678.25
24"
30"
CMP
FES
UPL 85
UPL 86
WF#C1
WF#C2
WF#C3
WF#C4
WF#D1
WF#D2
WF#D3
WF#D4
104
105
106
107
670
675
680
685

0 20 50 100
SCALE: 1" = 20'

LEGEND

MODIFIED ROCKFILL (12"), OVER RIPRAP (5'-0"), OVER CRUSHED STONE (12")

PERMANENT BORDERING VEGETATED WETLANDS (BVW) IMPACT (AREA = 5,838 SF)

TEMPORARY BORDERING VEGETATED WETLANDS (BVW) IMPACT (TREE THINNING ONLY) (AREA = 10,423 SF)

WETLAND REPLICATION AREA (8,348 SF)

609068_HD(WETLAND REPLICATION PLANS).DWG Plotted on 24-Aug-2026 2:26 PM

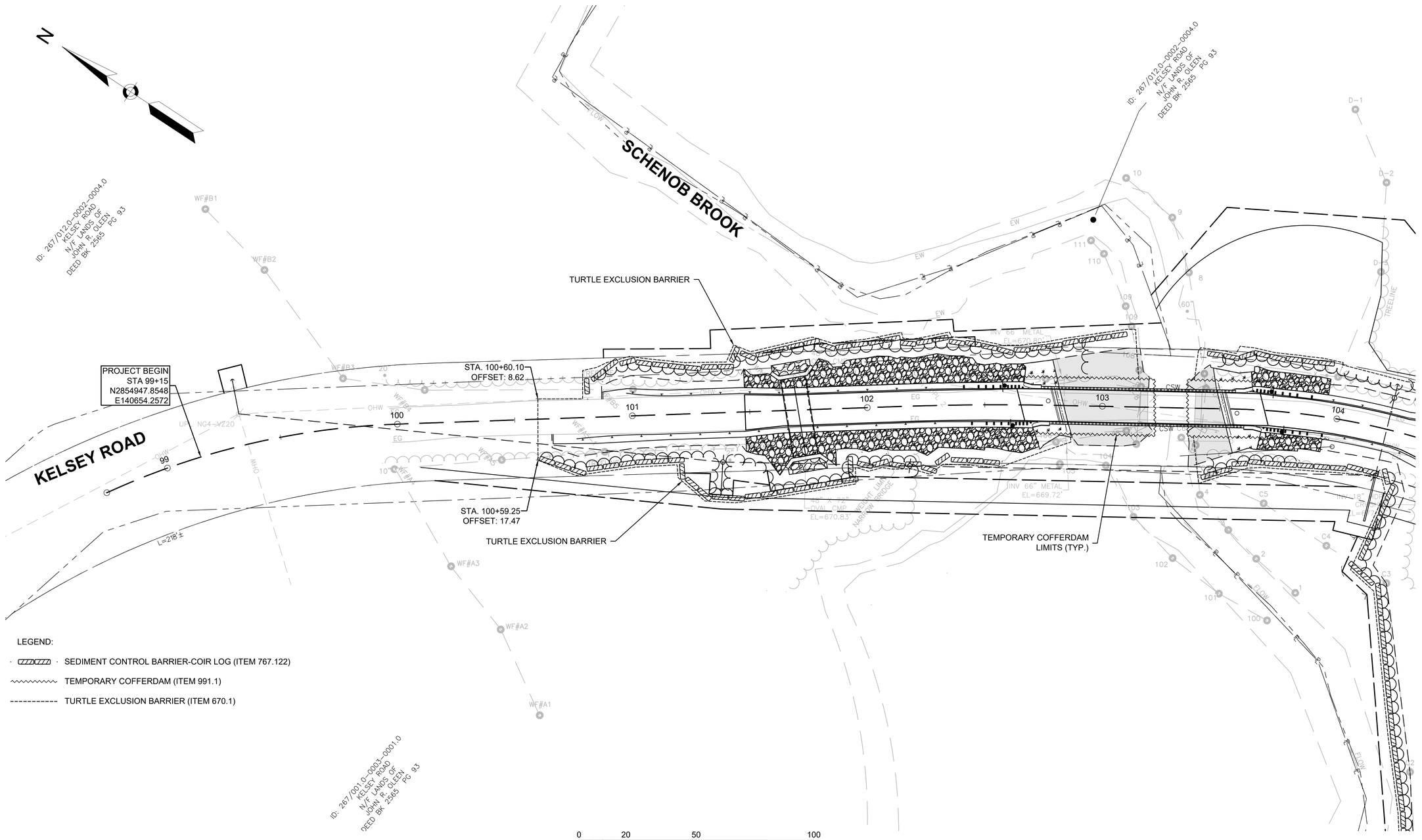
NOTES:

1. TURTLE EXCLUSION BARRIER SHALL BE PLACED AS SHOWN ON THE TURTLE EXCLUSION BARRIER PLAN. FINAL LOCATION SHALL BE DETERMINED BY FIELD CONDITIONS AND MUST BE APPROVED BY THE MASSDOT WILDLIFE MONITOR.
2. INSTALLATION AND MONITORING SHALL BE AS SHOWN AND AS DESCRIBED IN THE SPECIFICATIONS.
3. THE BARRIER MUST CONNECT, WITHOUT GAPS, TO ANY PROPOSED WATER CONTROL STRUCTURES SUCH AS COFFERDAMS OR SANDBAGS TO PREVENT TURTLES FROM ENTERING THE WORKZONE.
4. CONSTRUCTION VEHICLE ENTRANCES TO THE WORK AREA MUST BE CLOSED EACH NIGHT DURING THE TURTLE ACTIVE SEASON (MARCH 15 - OCTOBER 31) WITH EITHER A GATE AND/OR SEDIMENTATION FENCING. THE CONSTRUCTION VEHICLE ENTRANCES SHALL BE INSTALLED AS DESCRIBED IN THE SPECIFICATION.
5. SIGNAGE NOTING THE LIMIT OF WORK SHALL BE INSTALLED AS DESCRIBED IN THE SPECIFICATION.

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 23 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TURTLE EXCLUSION BARRIER PLANS**
**SHEET 1 OF 2**




LEGEND:

- SEDIMENT CONTROL BARRIER-COIR LOG (ITEM 767.122)
- TEMPORARY COFFERDAM (ITEM 991.1)
- TURTLE EXCLUSION BARRIER (ITEM 670.1)

0 20 50 100
SCALE: 1" = 20'

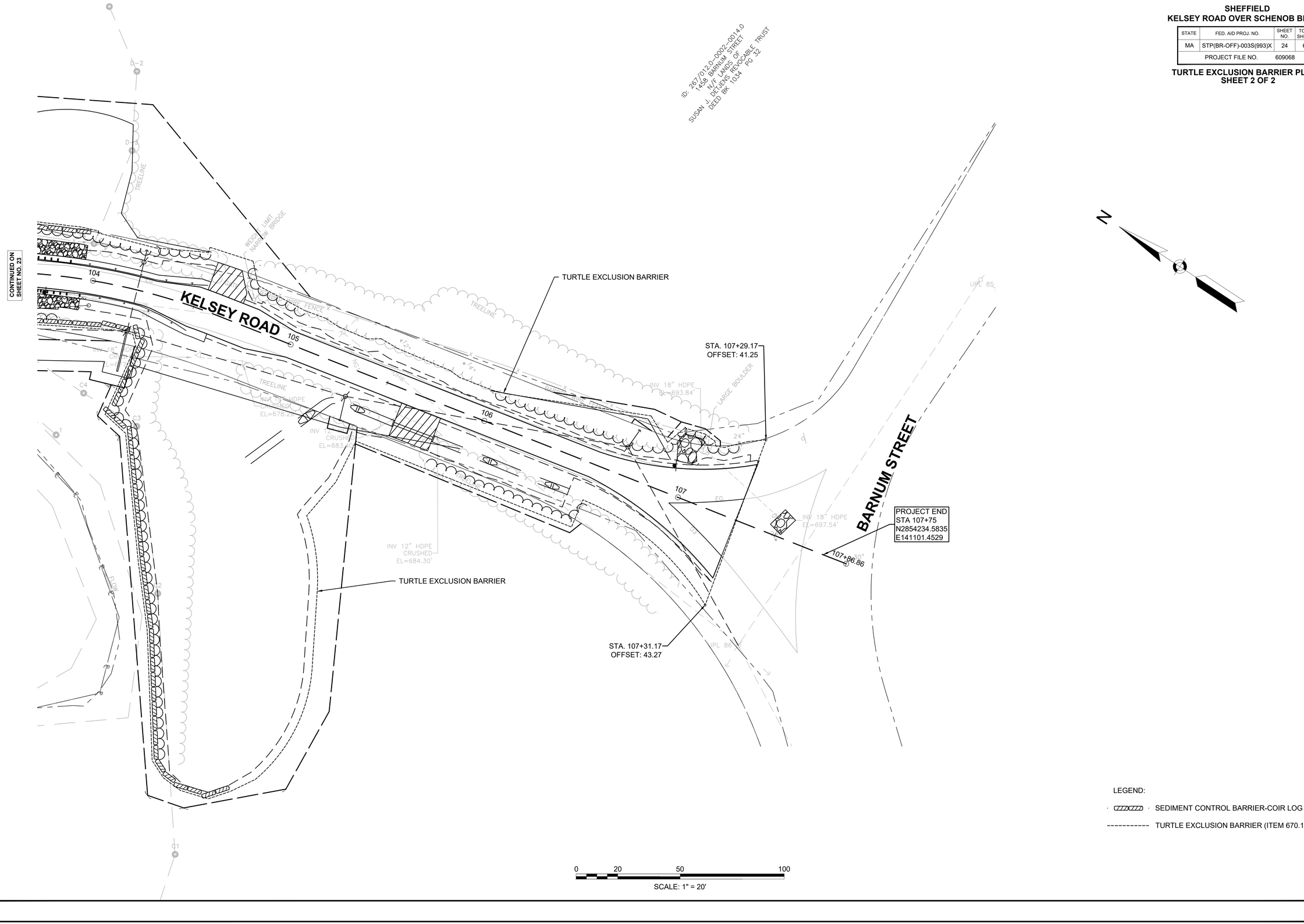
609068_HD(TURTLE BARRIER EXCLUSION PLAN).DWG Plotted on 25-Aug-2026 9:48 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 24 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TURTLE EXCLUSION BARRIER PLANS**
**SHEET 2 OF 2**

609068_HD\TURTLE BARRIER EXCLUSION PLAN).DWG Plotted on 25-Aug-2026 9:49 AM

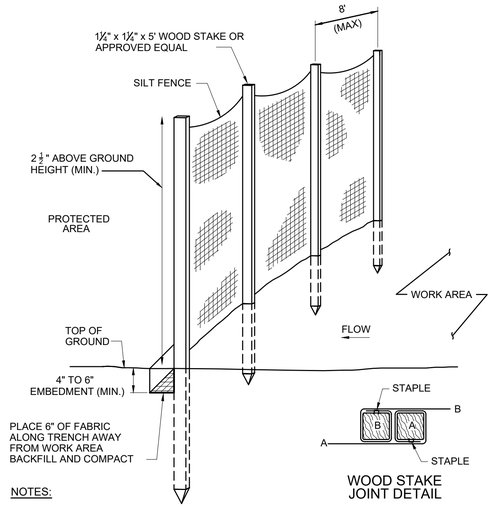


**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BRROK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 25 | 61 |
| PROJECT FILE NO. | 609068 | | |

**TURTLE EXCLUSION BARRIER DETAILS**

609068_HD(TURTLE BARRIER EXCLUSION PLAN DETAILS).DWG Plotted on 13-Aug-2026 11:24 AM

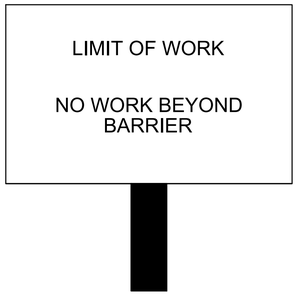



NOTES:

1. ENSURE THE TURTLE EXCLUSION BARRIER CONNECTS, WITHOUT GAPS, TO ANY WATER CONTROL STRUCTURES, SUCH AS COFFERDAMS OR SAND BAGS, TO PREVENT TURTLES FROM ENTERING WORK ZONE
2. INSPECT TURTLE EXCLUSION BARRIER DAILY AND REPAIR AS NEEDED AROUND WORK AREA AT THE END OF EACH WORK DAY.

## TURTLE EXCLUSION BARRIER

SCALE: N.T.S.

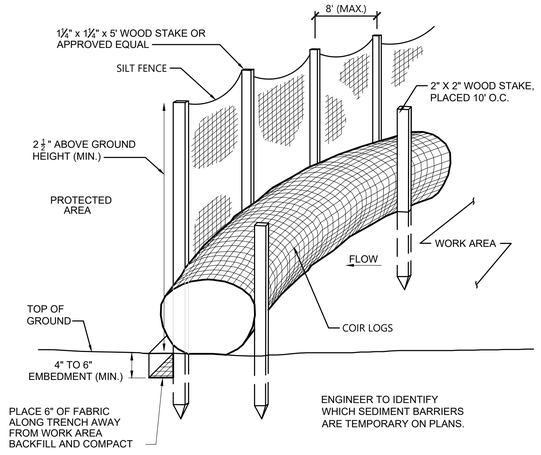



NOTES:

1. SIGNAGE MUST CLEARLY IDENTIFY THE LIMIT OF WORK IN ALL 4 QUADRANTS OF THE WORK SITE.

## ENVIRONMENTALLY SENSITIVE AREA SIGNAGE

SCALE: N.T.S.




NOTES:

1. ENSURE THE TURTLE EXCLUSION BARRIER CONNECTS, WITHOUT GAPS, TO ANY WATER CONTROL STRUCTURES, SUCH AS COFFERDAMS OR SAND BAGS, TO PREVENT TURTLES FROM ENTERING WORK ZONE
2. INSPECT TURTLE EXCLUSION BARRIER DAILY AND REPAIR AS NEEDED AROUND WORK AREA AT THE END OF EACH WORK DAY.

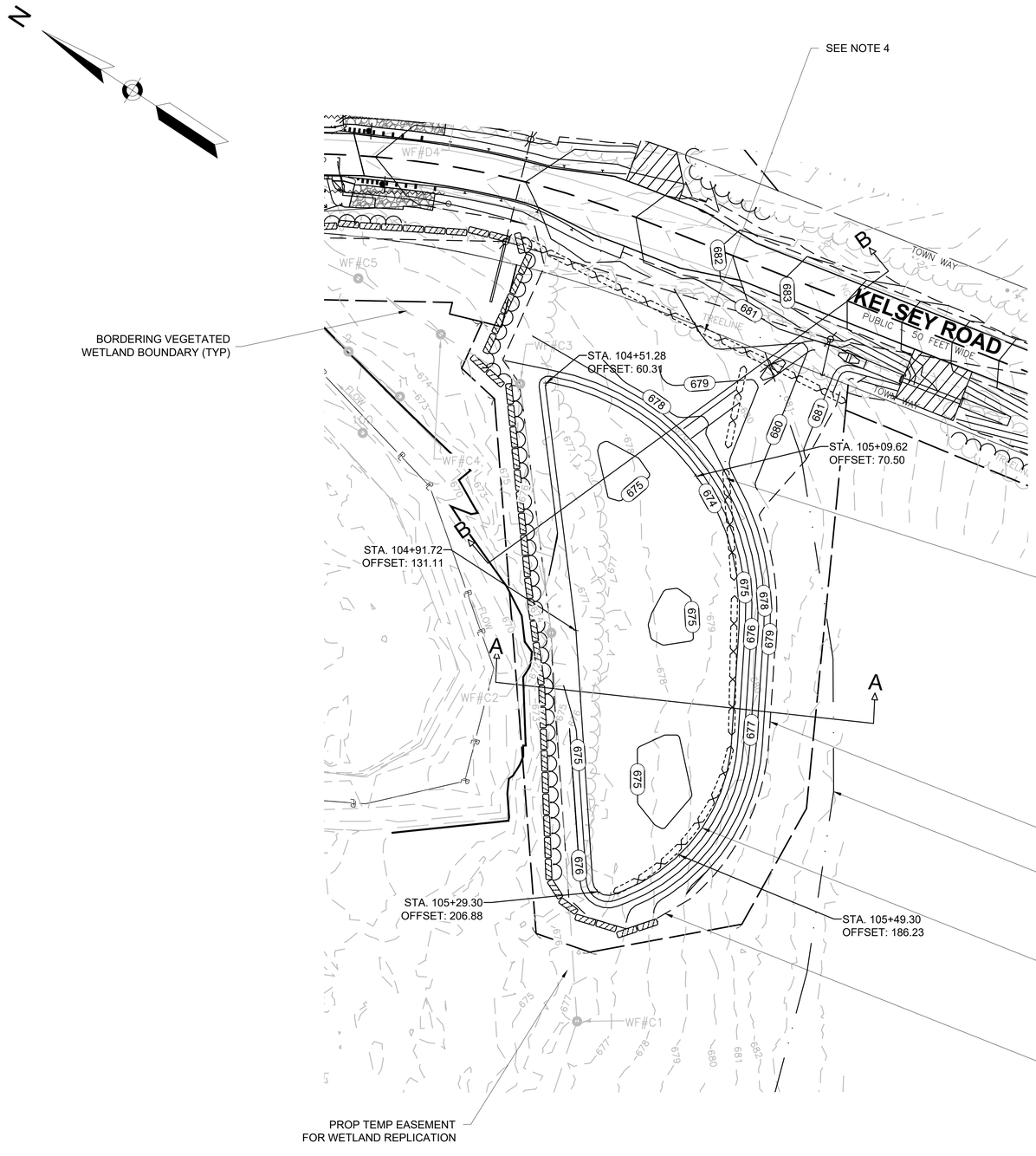
## TURTLE EXCLUSION BARRIER WITH SEDIMENT CONTROL BARRIER

SCALE: NTS

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 26 | 61 |
| PROJECT FILE NO. | 609068 | | |

**WETLAND REPLICATION PLAN**
**SHEET 1 OF 3**




NOTE:

1. WETLAND REPLICATION AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 755.35 OF THE SPECIAL PROVISIONS.EXCAVATE TO TARGET ELEVATIONS. IF EXISTING SUBSOIL IS DETERMINED TO BE UNSUITABLE FOR PLANTING, EXCAVATE TO DEPTH NECESSARY FOR PLANTING AND BACKFILL WITH APPROPRIATE MANUFACTURED SOIL. BACKFILL SHALL BE INSTALLED AS PER MASSDOT STANDARD SPECIFICATIONS.
2. WETLAND REPLICATION AREA SHALL BE SEEDED WITH WETLAND SEED - SEASONALLY FLOODED MIX MEETING THE REQUIREMENTS OF ITEM 765.554.
3. SEE WETLAND REPLICATION PLAN SHEET 2 OF 3 FOR SECTION A-A. SEE WETLAND REPLICATION PLAN SHEET 3 OF 3 FOR SECTION B-B.
4. CONTRACTOR SHALL INSTALL COMPOST FILTER TUBES ALONG BOTTOM OF ROADWAY SLOPE BETWEEN STA. 104+25 (RT) AND STA. 105+60 (RT) TO PREVENT SEDIMENT FROM ROADWAY WORK ENTERING WETLAND REPLICATION AREA. WORK TO BE PAID UNDER ITEM 767.121 - SEDIMENT CONTROL BARRIER.
5. REFER TO LANDSCAPING PLANS FOR WETLAND PLANTING.

**LEGEND**

- OHW/ELEV 671±
- TEMPORARY EROSION & SEDIMENT CONTROL
- TEMPORARY EROSION & SEDIMENT CONTROL - COIR LOGS

0 20 50 100
SCALE: 1" = 20'

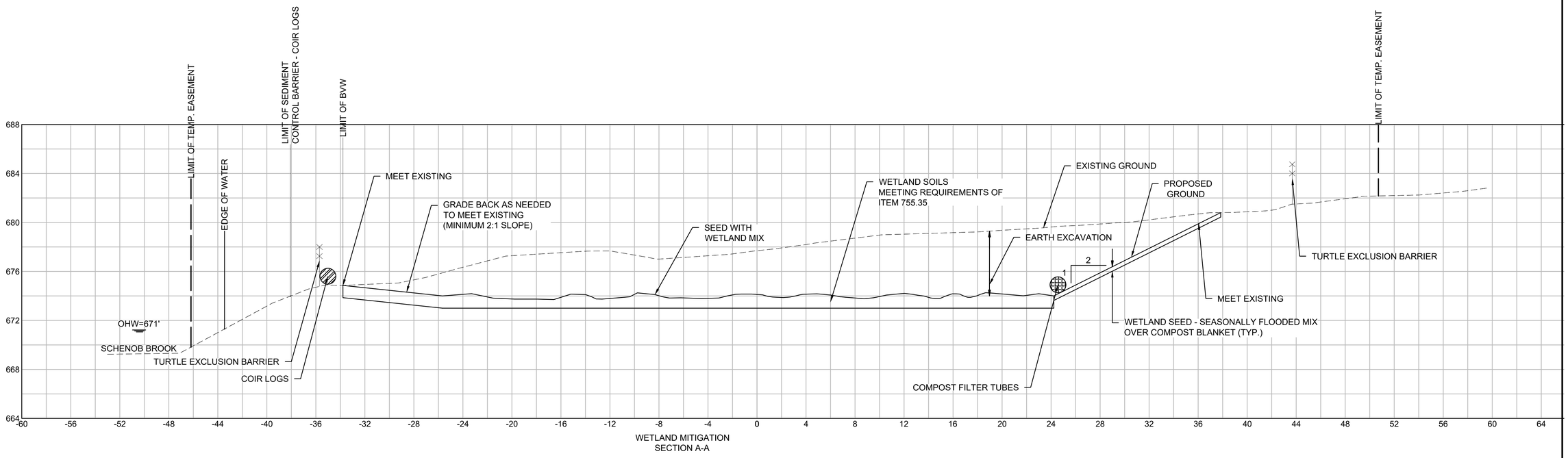
609068_HD(WETLAND REPLICATION PLANS).DWG Plotted on 24-Aug-2026 2:58 PM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 27 | 61 |
| PROJECT FILE NO. | 609068 | | |

**WETLAND REPLICATION PLAN**
**SHEET 2 OF 3**

NOTES:
1. LOCATIONS OF COIR LOGS, COMPOST FILTER TUBES, AND TURTLE EXCLUSION BARRIER ARE APPROXIMATE




WETLAND MITIGATION
SECTION A-A

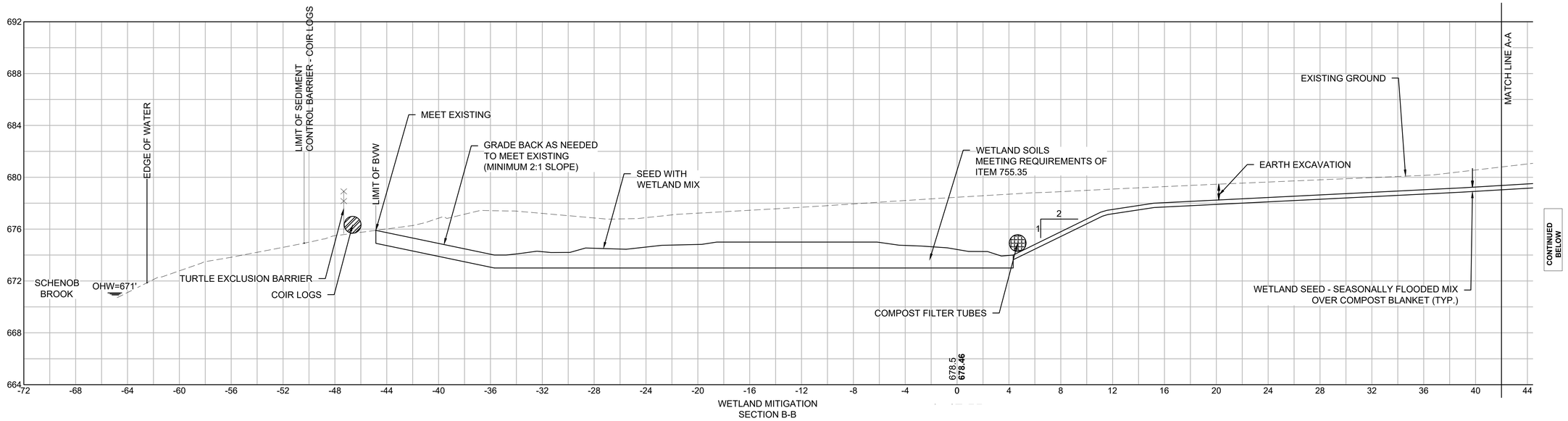
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SCALE IN FEET

609068_HD\WETLAND REPLICATION PLANS).DWG Plotted on 13-Aug-2026 11:24 AM

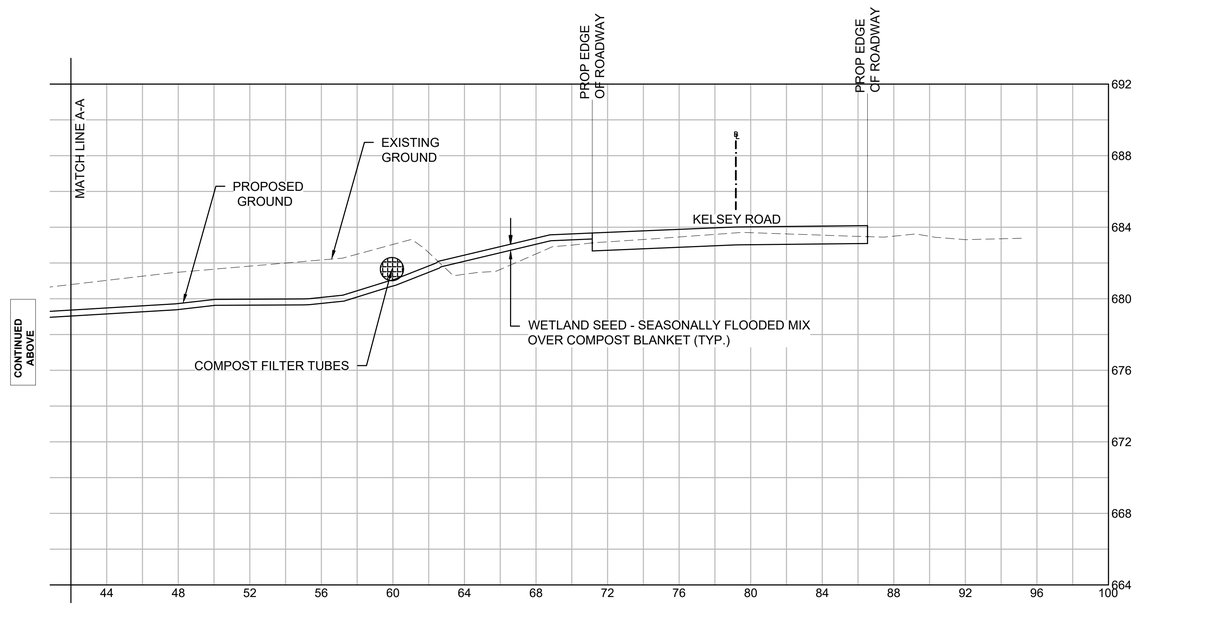
**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 28 | 61 |
| PROJECT FILE NO. | 609068 | | |

**WETLAND REPLICATION PLAN**
**SHEET 3 OF 3**




WETLAND MITIGATION
SECTION B-B




WETLAND MITIGATION
SECTION B-B CONT.

NOTES:
1. LOCATIONS OF COIR LOGS, COMPOST FILTER TUBES, AND TURTLE EXCLUSION BARRIER ARE APPROXIMATE

4 0 4 8
SCALE IN FEET

609068_HD\WETLAND REPLICATION PLANS].DWG Plotted on 13-Aug-2026 11:24 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 29 | 61 |
| PROJECT FILE NO. | 609068 | | |

# LANDSCAPE PLAN
# KELSEY ROAD (1 OF 2)

GENERAL NOTES:

1. ALL EXISTING TREES ARE TO BE RETAINED UNLESS OTHERWISE NOTED OR REMOVED BY EARTHWORK OPERATIONS.
2. LIMITS OF GRADING AND LIMITS OF SELECTIVE CLEARING ARE SHOWN FOR REFERENCE ONLY. SEE CONSTRUCTION PLANS.

609068_LD1.DWG Plotted on 21-Jul-2026 9:52 AM

N

SCHENOB BROOK

PROP. STREAMBED RESTORATION MATERIAL (SEE CONSTRUCTION PLANS)

PROP. RIP RAP (SEE CONSTRUCTION PLANS)

PROP. LIMIT OF SELECTIVE CLEARING AND TRIMMING (SEE CONSTRUCTION PLANS)

CONSTRUCTION COFFERDAM (SEE BRIDGE PLANS)

PROP. EROSION CONTROL (SEE CONSTRUCTION PLANS)

PROP. LIMIT OF CLEARING AND GRUBBING (SEE CONSTRUCTION PLANS)

PROP. LIMIT OF GRADING (SEE CONSTRUCTION PLANS)

PROJECT BEGIN
STA 99+15
N2854947.8548
E1140654.2572

EXISTING TREES TO RECEIVE TREE PROTECTION - ROOT ZONE

PROP. LIMIT OF CLEARING AND GRUBBING (SEE CONSTRUCTION PLANS)

PROP. LIMIT OF SELECTIVE CLEARING AND TRIMMING (SEE CONSTRUCTION PLANS)

PROP. WETLAND SEED - SEASONALLY FLOODED MIX OVER COMPOST BLANKET (TYP.)

VEGETATED WETLAND BOUNDARY (TYP.)

INV 66" METAL EL=670.80'

INV 66" METAL EL=669.72'

INV 18" CR EL=

OVAL CMP EL=670.83

WEIGHT LIMIT NARROW BRIDGE

TREELINE

CONTINUED ON SHEET NO. 30

LEGEND

- LOAM AND SEED
- WETLAND SEED - SEASONALLY FLOODED MIX OVER COMPOST BLANKET

0 20 50 100

SCALE: 1" = 20'

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 30 | 61 |
| PROJECT FILE NO. | 609068 | | |

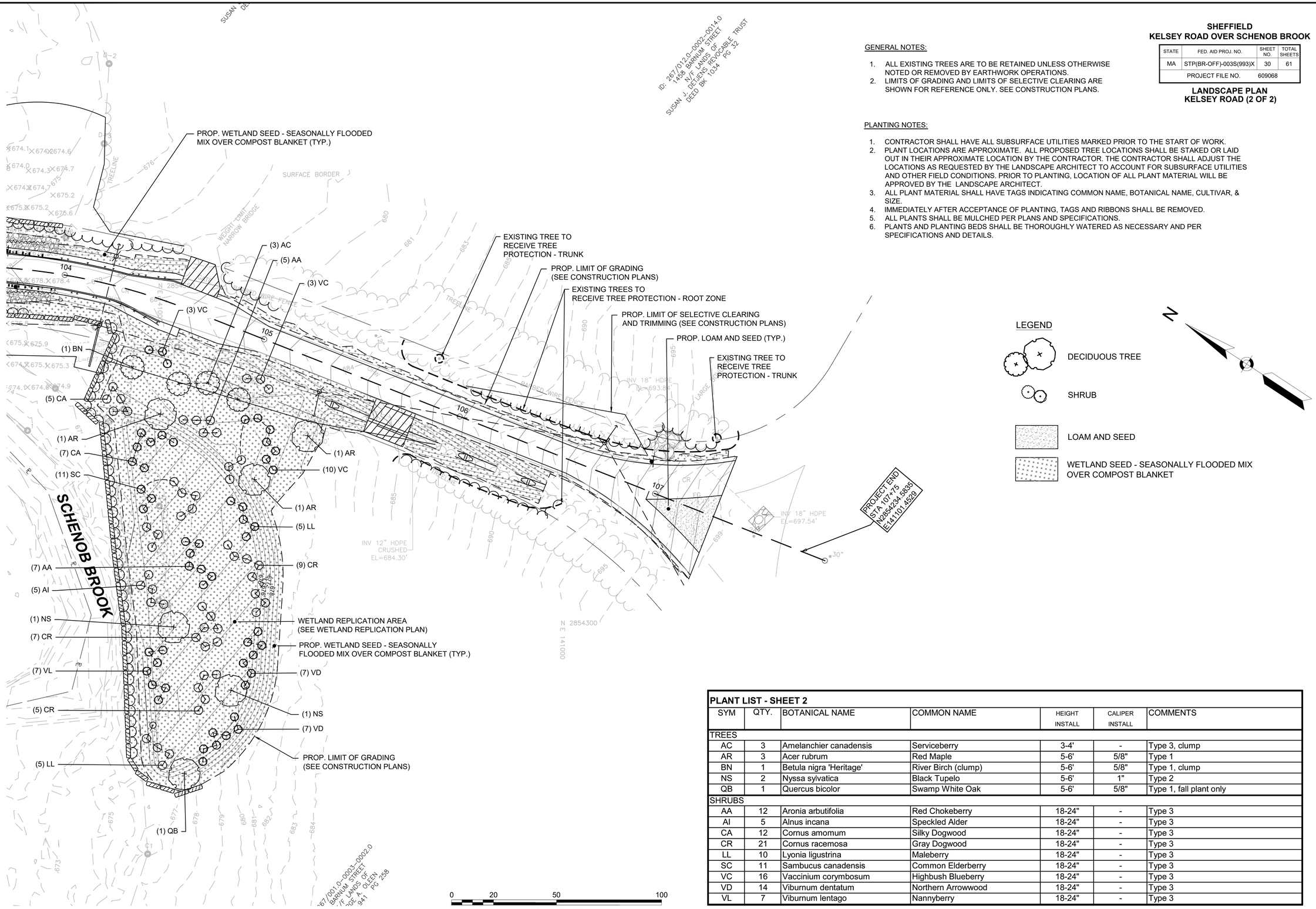
**LANDSCAPE PLAN**
**KELSEY ROAD (2 OF 2)**

GENERAL NOTES:

1. ALL EXISTING TREES ARE TO BE RETAINED UNLESS OTHERWISE NOTED OR REMOVED BY EARTHWORK OPERATIONS.
2. LIMITS OF GRADING AND LIMITS OF SELECTIVE CLEARING ARE SHOWN FOR REFERENCE ONLY. SEE CONSTRUCTION PLANS.

PLANTING NOTES:

1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
2. PLANT LOCATIONS ARE APPROXIMATE. ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE LANDSCAPE ARCHITECT.
3. ALL PLANT MATERIAL SHALL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.
4. IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.
5. ALL PLANTS SHALL BE MULCHED PER PLANS AND SPECIFICATIONS.
6. PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS AND DETAILS.




LEGEND

- DECIDUOUS TREE
- SHRUB
- LOAM AND SEED
- WETLAND SEED - SEASONALLY FLOODED MIX OVER COMPOST BLANKET

**PLANT LIST - SHEET 2**

| SYM | QTY. | BOTANICAL NAME | COMMON NAME | HEIGHT INSTALL | CALIPER INSTALL | COMMENTS |
|---|---|---|---|---|---|---|
| TREES | | | | | | |
| AC | 3 | Amelanchier canadensis | Serviceberry | 3-4' | - | Type 3, clump |
| AR | 3 | Acer rubrum | Red Maple | 5-6' | 5/8" | Type 1 |
| BN | 1 | Betula nigra 'Heritage' | River Birch (clump) | 5-6' | 5/8" | Type 1, clump |
| NS | 2 | Nyssa sylvatica | Black Tupelo | 5-6' | 1" | Type 2 |
| QB | 1 | Quercus bicolor | Swamp White Oak | 5-6' | 5/8" | Type 1, fall plant only |
| SHRUBS | | | | | | |
| AA | 12 | Aronia arbutifolia | Red Chokeberry | 18-24" | - | Type 3 |
| AI | 5 | Alnus incana | Speckled Alder | 18-24" | - | Type 3 |
| CA | 12 | Cornus amomum | Silky Dogwood | 18-24" | - | Type 3 |
| CR | 21 | Cornus racemosa | Gray Dogwood | 18-24" | - | Type 3 |
| LL | 10 | Lyonia ligustrina | Maleberry | 18-24" | - | Type 3 |
| SC | 11 | Sambucus canadensis | Common Elderberry | 18-24" | - | Type 3 |
| VC | 16 | Vaccinium corymbosum | Highbush Blueberry | 18-24" | - | Type 3 |
| VD | 14 | Viburnum dentatum | Northern Arrowwood | 18-24" | - | Type 3 |
| VL | 7 | Viburnum lentago | Nannyberry | 18-24" | - | Type 3 |

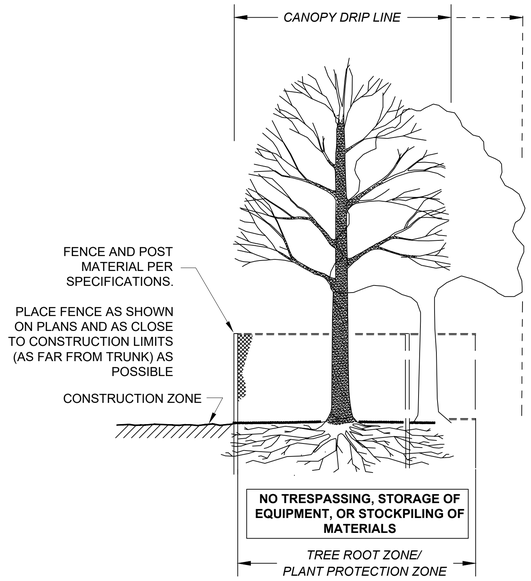
609068_LD2.DWG Plotted on 21-Jul-2026 11:28 AM

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

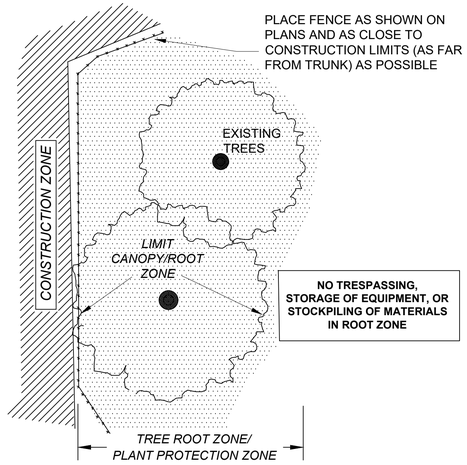
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 31 | 61 |
| PROJECT FILE NO. | 609068 | | |

**LANDSCAPE DETAILS**
**KELSEY ROAD (1 OF 1)**

609068_LD1.DWG Plotted on 21-Jul-2026 9:53 AM



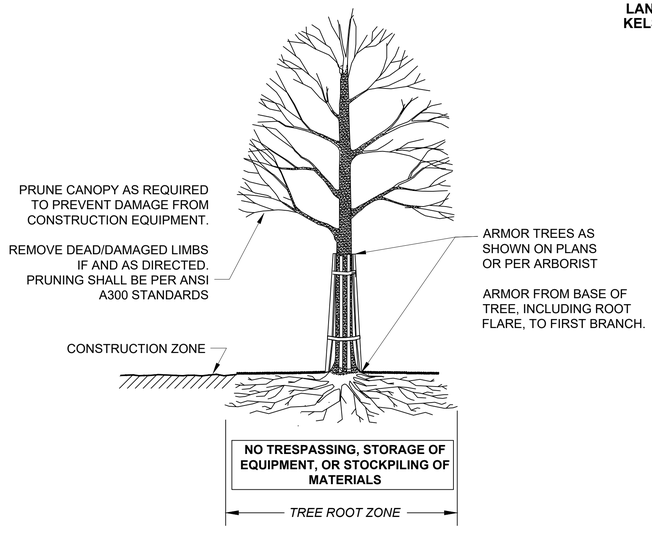

*SECTION - FENCE PROTECTION OF ROOT ZONE*




*PLAN VIEW - FENCE PROTECTION OF ROOT ZONE*

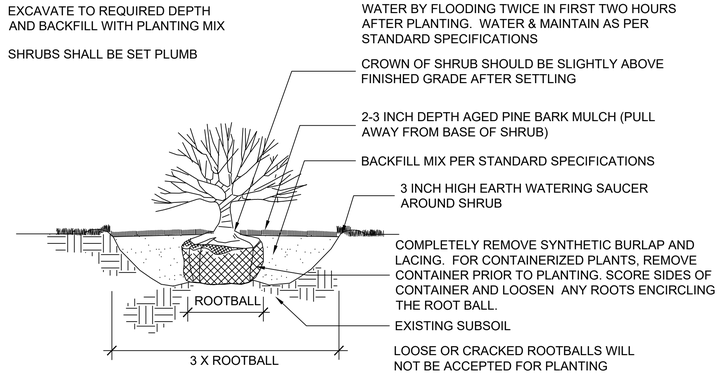
## TREE PROTECTION - ROOT ZONE

NOT TO SCALE



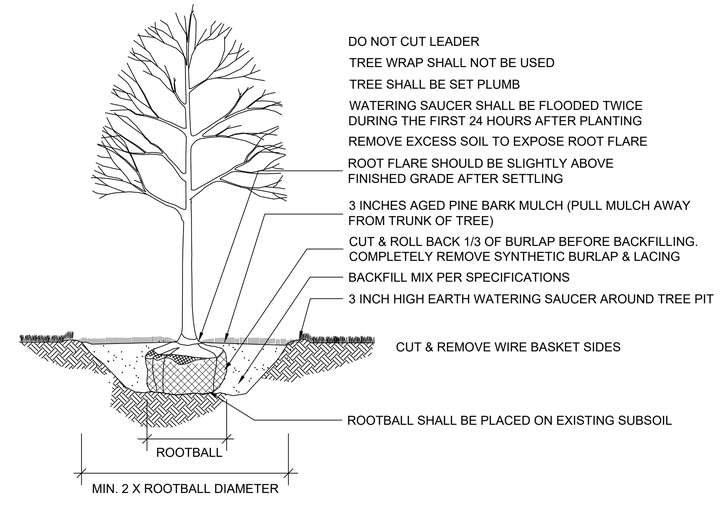

*SECTION - TRUNK ARMORING & PRUNING*

## TREE PROTECTION - TRUNK




## SHRUB PLANTING

NOT TO SCALE




## DECIDUOUS TREE PLANTING

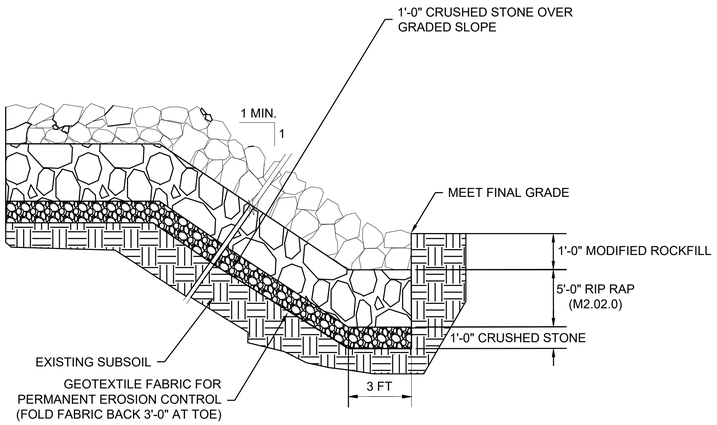
NOT TO SCALE

**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

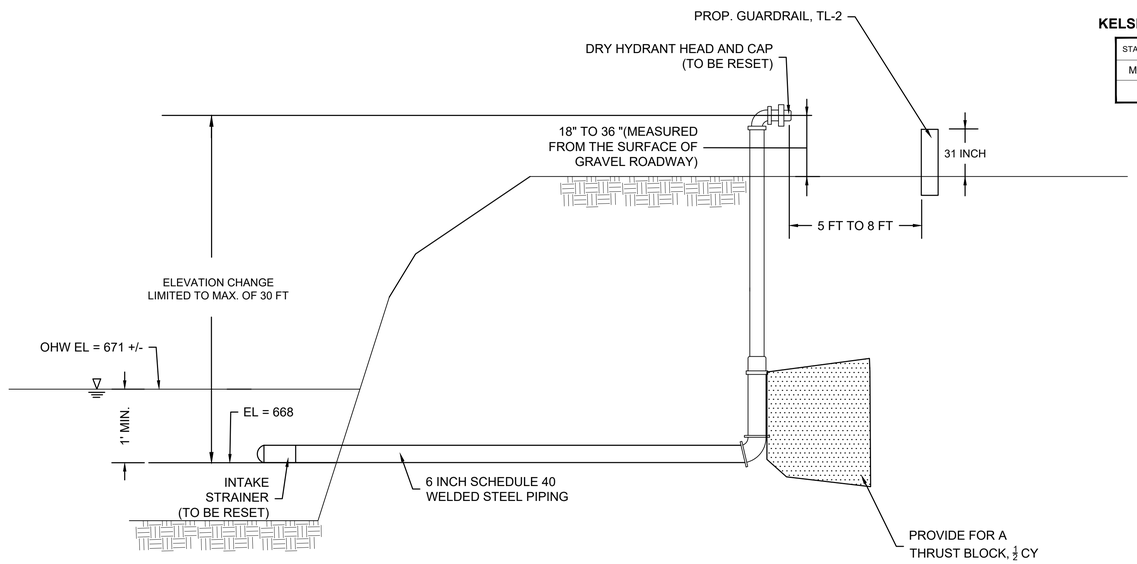
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 32 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CONSTRUCTION DETAILS**

609068_HD (CONSTRUCTION DETAILS.DWG Plotted on 13-Aug-2026 11:24 AM

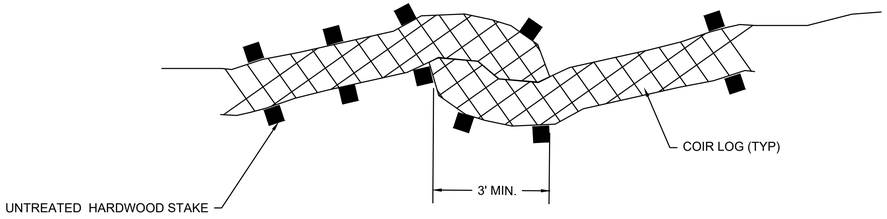


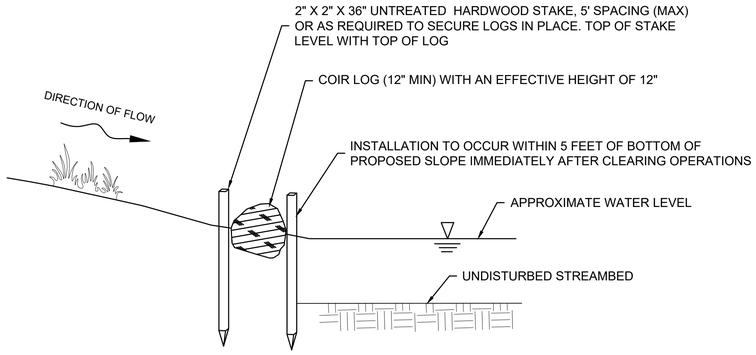

## RIPRAP SIDE SLOPE DETAIL
NTS



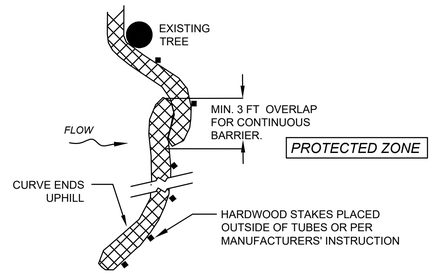

## DRY HYDRANT DETAILS
NTS

STREAM OR VEGETATED WETLANDS



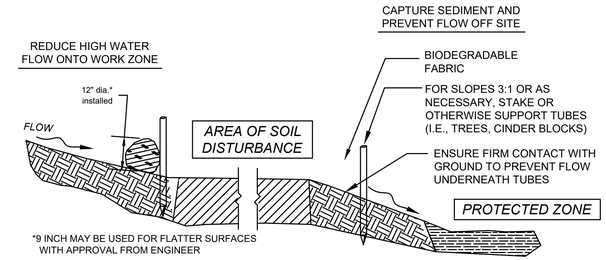

## COIR LOG DETAILS
NTS




PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

*PLAN VIEW*



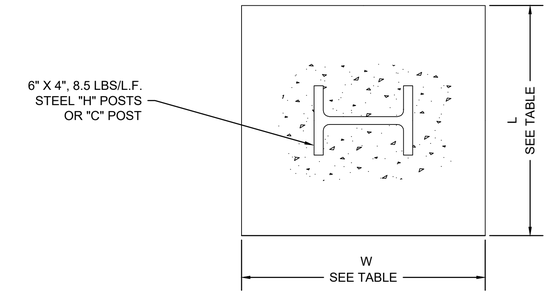

*SECTION*

## SEDIMENT BARRIER - COMPOST FILTER TUBE
NTS

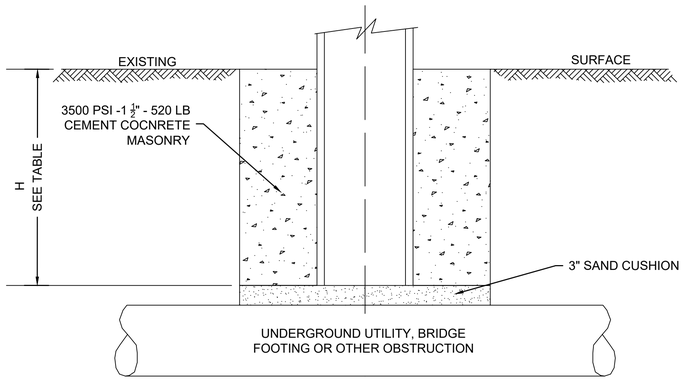
**SHEFFIELD**
**KELSEY ROAD OVER SCHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 33 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CONSTRUCTION DETAILS**




PLAN




ELEVATION

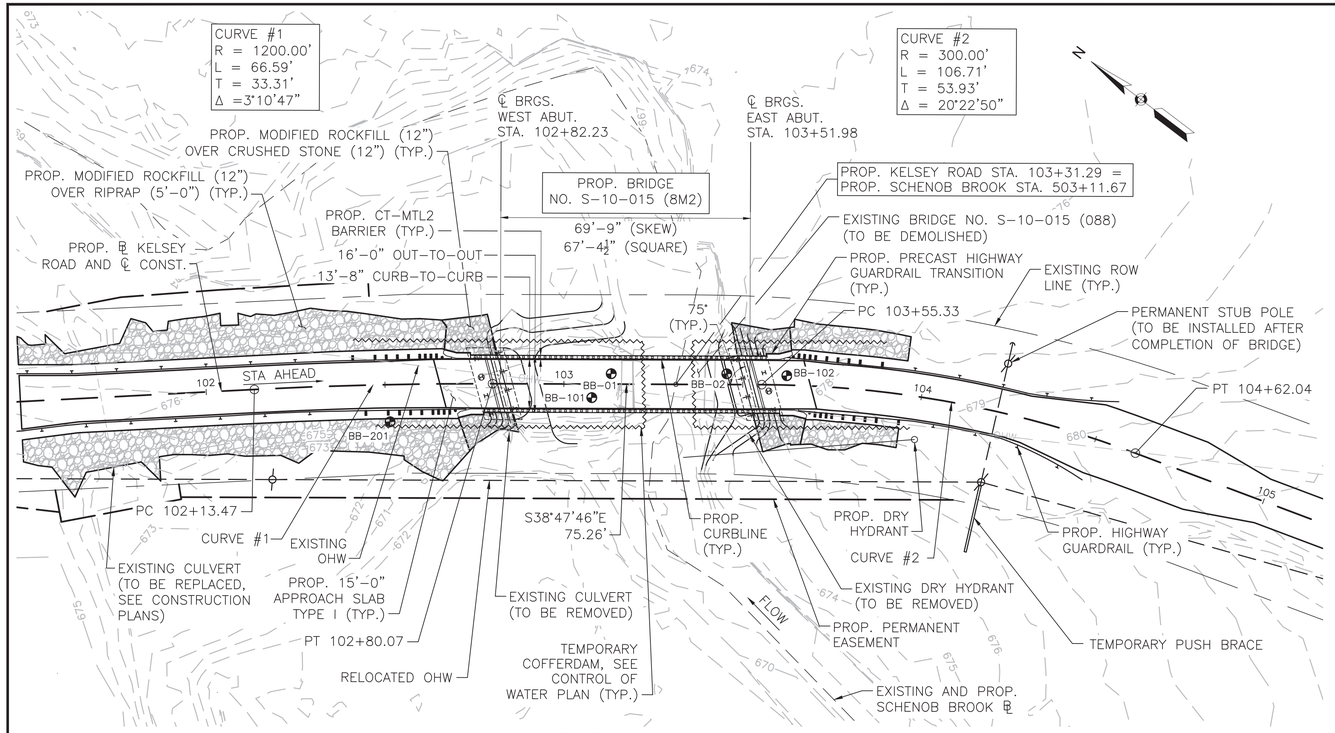
| HEIGHT OF EXISTING SURFACE ABOVE TOP OF SAND CUSHION | DIMENSION OF CONCRETE ENVELOPE | | |
|---|---|---|---|
| | H HEIGHT OF SURFACE ABOVE SAND CUSHION | W | L |
| 1'-0" - 1'-6" | VARIES 1'-0" - 1'-6" | 2'-6" | 2'-6" |
| 1'-6" - 2'-6" | VARIES 1'-6" - 2'-6" | 2'-0" | 1'-6" |
| OVER 2'-6" | 2'-6" | 1'-6" | 1'-6" |

NOTES:

1. OFFSET BRACKETS ARE TO BE INSTALLED AND RAILS ARE TO BE MOUNTED AS SHOWN ON DRAWINGS 620.12.1
2. NOT TO BE USED ON MORE THAN 2 POSTS IN A ROW

MODIFIED HIGHWAY GUARD
POST INSTALLATION
NTS

609068_HD (CONSTRUCTION DETAILS.DWG Plotted on 13-Aug-2026 11:24 AM




KEY PLAN

SCALE: 1" = 20'




LOCUS

SCALE: 1" = 2000'

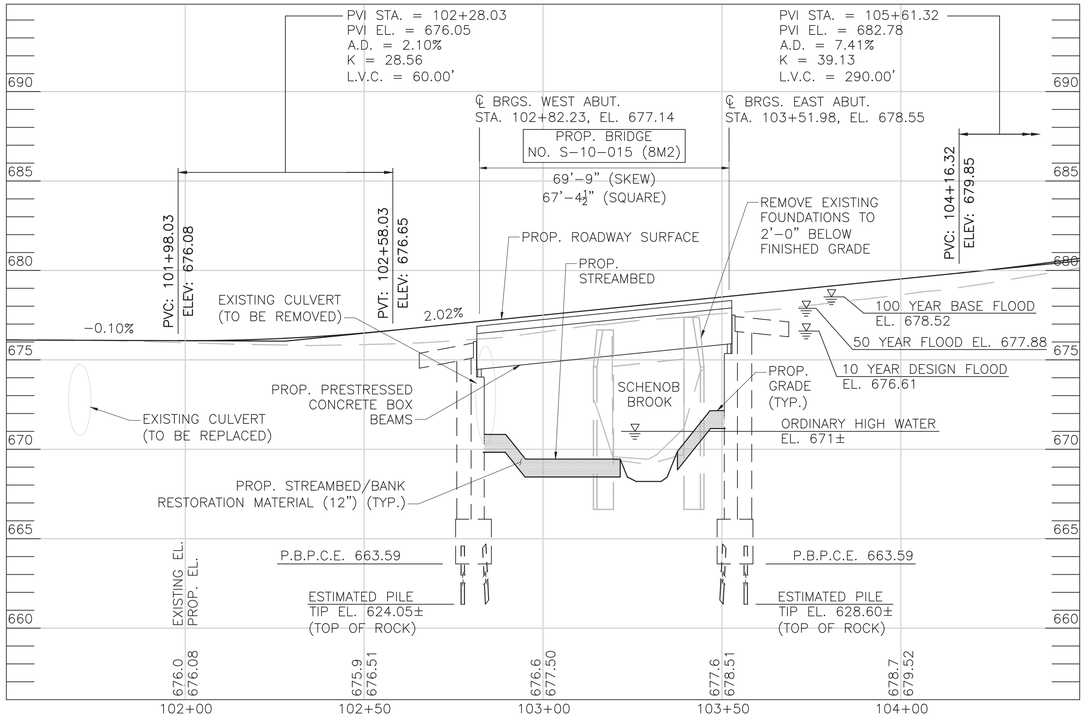
**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 34 | 61 |
| PROJECT FILE NO. | 609068 | | |

**KEY PLAN, LOCUS, AND PROFILES**

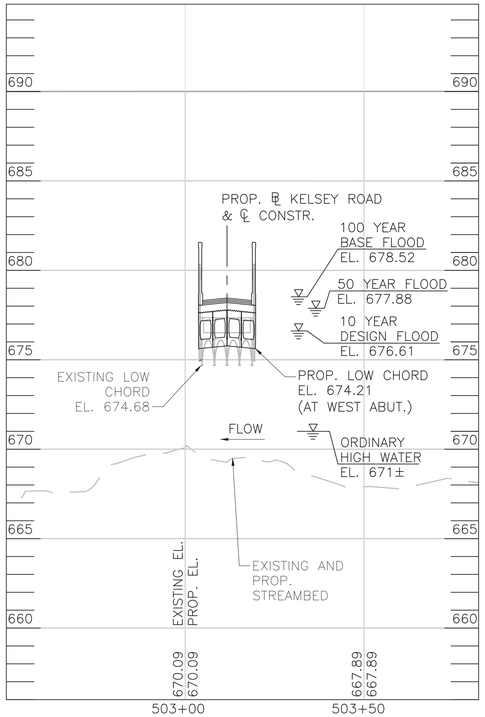
## INDEX OF DRAWINGS


| BRIDGE SHEET NO. | TITLE |
|---|---|
| 1 | KEY PLAN, LOCUS, AND PROFILES |
| 2 | GENERAL NOTES |
| 3 | BORING LOGS – 1 |
| 4 | BORING LOGS – 2 |
| 5 | BORING LOGS – 3 |
| 6 | BORING LOGS – 4 |
| 7 | BORING LOGS – 5 |
| 8 | GENERAL PLAN AND ELEVATION |
| 9 | BRIDGE DEMOLITION PLAN |
| 10 | CONTROL OF WATER PLAN |
| 11 | WEST ABUTMENT PLAN AND ELEVATION |
| 12 | EAST ABUTMENT PLAN AND ELEVATION |
| 13 | SUBSTRUCTURE DETAILS – 1 |
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| 16 | BEAM DETAILS – 1 |
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| 18 | DECK SECTION AND APPROACH SLAB DETAILS |
| 19 | BRIDGE RAILING DETAILS |
| 20 | HIGHWAY GUARDRAIL TRANSITION DETAILS – 1 |
| 21 | HIGHWAY GUARDRAIL TRANSITION DETAILS – 2 |


PROFILE – ℄ CONSTRUCTION – KELSEY ROAD

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: ¼" = 1'




PROFILE – SCHENOB BROOK

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: ¼" = 1'

THOMAS P. DALEY CIVIL NO. 46418 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

Digitally signed by TEST - Thomas Daley
Date: 2026-10-12 14:22:17-04:00

GFT
175 FEDERAL STREET
SUITE 800
BOSTON, MA 02110
781-326-4605

SEPTEMBER 5, 2026 | ISSUED FOR CONSTRUCTION

MassDOT Massachusetts Department of Transportation Highway Division

PROPOSED BRIDGE
**SHEFFIELD**
KELSEY ROAD
OVER SCHENOB BROOK
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

Alexander K. Bardow, P.E.
Digitally signed by Alexander K. Bardow, P.E.
Date: 2026.10.13 10:33:57 -04'00'
STATE BRIDGE ENGINEER

Carrie Lavallee
Digitally signed by Carrie Lavallee, P.E.
Date: 2026.10.13 11:38:20 -04'00'
CHIEF ENGINEER

SHEET 1 OF 21 SHEETS BRIDGE NO. S-10-015 (8M2)

609068_BR1.DWG Plotted on 11-Sep-2026 1:43 PM

609068 Issued for Construction 5-Sep-2026

## GENERAL NOTES:

DESIGN:

IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020, FOR HL–93 LOADING.

MASSDOT BENCH MARK:

BENCHMARK #8284, BRASS RIVET SET IN THE TOP OF THE SOUTHEAST CONCRETE WINGWALL OF A BRIDGE OVER SCHENOB BROOK, EL. = 676.68.

ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

DATE:

TO BE PLACED ON THE INSIDE FACE OF THE SOUTHWEST AND NORTHEAST HIGHWAY GUARDRAIL TRANSITIONS. A SHEET SHOWING SIZE AND CHARACTER OF NUMERALS WILL BE FURNISHED. THE DATE USED SHALL BE THE LATEST YEAR OF CONTRACT COMPLETION AS OF THE DATE THE FIRST HIGHWAY GUARDRAIL TRANSITION IS CONSTRUCTED. BOTH HIGHWAY GUARDRAIL TRANSITIONS SHALL FEATURE THE SAME DATE.

MASSDOT SURVEY NOTEBOOKS:

SURVEY NOTEBOOK NO. 23412. FIELD SURVEY WAS PERFORMED BY WSP USA, INC. AND WAS ELECTRONICALLY RECORDED. COPIES OF THE FILES MAY BE OBTAINED FROM THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION–HIGHWAY DIVISION.

SCALES:

SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF–SIZE PRINTS (A3).

CONCRETE:

UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL BE 5000 HP CONCRETE, EXCEPT THAT THE CT–MTL2 BARRIERS SHALL BE 5000 3/8 IN. HP CONCRETE.

ALL CONCRETE POURS SHOWN ON THESE CONSTRUCTION DRAWINGS MEETING THE CONDITIONS FOR MASS PLACEMENT CONCRETE IN SECTION 901.32.A OF THE MASSDOT STANDARD SPECIFICATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THAT SECTION.

REINFORCEMENT:

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 GRADE 60. COATED BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

| MODIFICATION CONDITION | #4 BARS | #5 BARS | #6 BARS |
|---|---|---|---|
| 1. NONE | 16" | 17" | 21" |
| 2. 12" OF CONCRETE BELOW BAR | 18" | 22" | 27" |
| 3. EPOXY COATED BARS, COVER < 3db, OR CLEAR SPACING < 6db | 21" | 26" | 31" |
| 4. COATED BARS, ALL OTHER CASES | 17" | 21" | 25" |
| 5. CONDITION 2. AND 3. | 23" | 29" | 35" |
| 6. CONDITION 2. AND 4. | 21" | 27" | 32" |

ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

FOUNDATIONS:

FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION, WITH THE APPROVAL OF THE ENGINEER.

UNSUITABLE MATERIAL:

ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE ENGINEER.

EXISTING CONDITIONS:

THE CONFIGURATION AND LAYOUT OF THE EXISTING BRIDGE STRUCTURE AND FOUNDATIONS ARE BASED ON INFORMATION CONTAINED IN THE 2016 BRIDGE RATING REPORT AND PROJECT SURVEY. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH FIELD CONDITIONS.

THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED FIELD VERIFICATIONS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER. THE EXISTING STRUCTURE IS SHOWN IN A SCREENED LINEWEIGHT.

TRAFFIC:

THE BRIDGE WILL BE CLOSED TO ALL VEHICULAR TRAFFIC DURING ALL PHASES OF DEMOLITION AND RECONSTRUCTION. TRAFFIC WILL BE CONTROLLED AS SHOWN IN THE TRAFFIC MANAGEMENT PLANS.

UTILITIES:

THE CONTRACTOR SHALL LOCATE AND PROTECT FROM DAMAGE, OR RELOCATE, AS NECESSARY, ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE RESPECTIVE UTILITY OWNERS FOR ALL UTILITIES THAT ARE TO BE TEMPORARILY OR PERMANENTLY RELOCATED FOR THE BRIDGE WORK.

THE LOCATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES. SEE UTILITY PLANS FOR ADDITIONAL INFORMATION REGARDING UTILITIES.

## ESTIMATED QUANTITIES
(NOT GUARANTEED)

| ITEM | QTY. | UNIT |
|---|---|---|
| DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. B–10–015 (088) | 1 | LS |
| MUCK EXCAVATION | 400 | CY |
| REINFORCED CONCRETE EXCAVATION | 50 | CY |
| BRIDGE EXCAVATION WITHIN COFFERDAM | 420 | CY |
| TEST PIT FOR EXPLORATION | 50 | CY |
| CLASS B ROCK EXCAVATION | 7 | CY |
| GRAVEL BORROW FOR BRIDGE FOUNDATION | 65 | CY |
| GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES | 75 | CY |
| CRUSHED STONE | 30 | TON |
| CONTROLLED LOW–STRENGTH MATERIAL–STRUCTURAL NON–EXCAVATABLE | 2 | CY |
| DISPOSAL OF TREATED WOOD PRODUCTS | 0.5 | TON |
| SUPERPAVE BRIDGE SURFACE COURSE – 9.5 POLYMER (SSC–B–9.5–P) | 11 | TON |
| SUPERPAVE BRIDGE PROTECTIVE COURSE – 9.5 POLYMER (SPC–B–9.5–P) | 11 | TON |
| SAWING & SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES | 30 | FT |
| GEOTEXTILE FABRIC FOR SEPARATION | 70 | SY |
| STEEL PILE HP 12 X 84 | 620 | FT |
| DYNAMIC LOAD TEST BY CONTRACTOR | 2 | EA |
| PILE SHOES | 16 | EA |
| STREAMBED/BANK RESTORATION | 212 | SY |
| MODIFIED ROCKFILL | 30 | TON |
| CONTROL OF WATER – STRUCTURE NO. S–10–015 (8M2) | 1 | LS |
| TEMPORARY PROTECTIVE SHIELDING BRIDGE NO. S–10–015 (088) | 1 | LS |
| BRIDGE STRUCTURE, BRIDGE NO. S–10–015 (8M2) | 1 | LS |

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 35 | 61 |
| | PROJECT FILE NO. 609068 | | |

**GENERAL NOTES**

| TRAFFIC DATA | ROADWAY OVER | ROADWAY UNDER |
|---|---|---|
| DESIGN YEAR | 2046 | |
| AVERAGE DAILY TRAFFIC – PRESENT | 121 | |
| AVERAGE DAILY TRAFFIC – DESIGN YEAR | 148 | |
| DESIGN HOURLY VOLUME | N/A | |
| DIRECTIONAL DISTRIBUTION | 50% | |
| TRUCK PERCENTAGE – AVERAGE DAY | 6% | |
| TRUCK PERCENTAGE – PEAK HOUR | 6% | |
| DESIGN SPEED | 20 MPH | |
| DIRECTIONAL DESIGN HOURLY VOLUME | N/A | |

| SEISMIC DESIGN CRITERIA | |
|---|---|
| DESIGN RETURN PERIOD: | 1000 YR |
| **DESIGN SPECTRA** | |
| As | 0.096 |
| SDs | 0.232 |
| SD1 | 0.084 |
| SITE CLASS | D |
| SEISMIC DESIGN CATEGORY (SDC) | A |

| HYDRAULIC DESIGN FLOOD (HDF) DATA | |
|---|---|
| DRAINAGE AREA (SQ. MILES) | 19.00 |
| HDF DISCHARGE (C.F.S.) | 2,000 |
| HDF FREQUENCY (YEARS) | 10 |
| HDF VELOCITY (F.P.S.) | 4.02 |
| HDF ELEVATION (FEET, NAVD, UPSTREAM) | 676.61 |
| **BASE (100–YEAR) FLOOD DATA** | |
| BASE FLOOD DISCHARGE (C.F.S.) | 4,460 |
| BASE FLOOD ELEVATION (FEET, NAVD, UPSTREAM) | 678.52 |
| **SCOUR DESIGN FLOOD (SDF) EVENT DATA** | |
| SDF EVENT FREQUENCY (YEARS) | 25 |
| SDF ELEVATION (FEET, NAVD, UNDER BRIDGE) | 677.29 |
| SDF TOTAL SCOUR DEPTH AT ABUTMENT (FEET) | 3.36 |
| SDF TOTAL SCOUR DEPTH AT PIER (FEET) | N/A |
| **SCOUR CHECK FLOOD (SCF) EVENT DATA** | |
| SCF EVENT FREQUENCY (YEARS) | 50 |
| SCF ELEVATION (FEET, NAVD, UNDER BRIDGE) | 677.88 |
| SCF TOTAL SCOUR DEPTH AT ABUTMENT (FEET) | 4.27 |
| SCF TOTAL SCOUR DEPTH AT PIER (FEET) | N/A |
| **FLOOD OF RECORD** | |
| DISCHARGE (C.F.S.) | N/A |
| FREQUENCY (IF KNOWN, YEARS) | N/A |
| MAXIMUM ELEVATION (FEET, NAVD) | N/A |
| DATE (MM/YYYY) | N/A |
| HISTORY OF ICE FLOES | N/A |
| EVIDENCE OF SCOUR AND EROSION | N/A |

| TEMPORARY WATER CONTROL DESIGN DATA | |
|---|---|
| DESIGN FLOOD DISCHARGE (C.F.S.) | 864 |
| DESIGN FLOOD FREQUENCY (YEARS) | 2 |
| DESIGN FLOOD VELOCITY (F.P.S.) | 8.45 |
| DESIGN FLOOD ELEVATION (FEET, NAVD) | 676.13 |

| DATE | DESCRIPTION |
|---|---|
| 9/5/2026 | ISSUED FOR CONSTRUCTION |

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE



609068_BR2.DWG Plotted on 11-Sep-2026 1:43 PM
609068 Issued for Construction 5-Sep-2026

# BORING BB–201

STA. 102+51.2
OFFSET 10.4' RT.

| | | | |
|---|---|---|---|
| Date Started: | 3/19/26 | DRILLING LOG | Hole Number: BB-201 |
| Date Finished: | 3/20/26 | Gannett Fleming | Sheet: 1 of 2 |
| Soil Drilling: | 54.5 ft | | Line & Station: 102+51.2 |
| Rock Sampling: | 7.5 ft | Project: Kelsey Road over Schenob Brook Bridge | Offset: 10.4 ft R |
| Total Depth of Hole: | 70.0 ft | Drilling Company: Seaboard Drilling | N Coordinate: 2854699 ft |
| No. of Undist. Core Samples: | | Driller: Jeff Nitsch | E Coordinate: 140878 ft |
| Total Number of Core Boxes: | 1 | Bit Size and Type: | Spoon Size: 2.0 in. O.D. | Elev. Top of Hole: +675.1 ft |
| GROUNDWATER OBSERVATIONS | | Casing Size: 4.0 in. | Spoon Size: | Direction of Hole |
| At 5.0 ft After 0 Hrs | | Hollow Stem: N/A | Hammer wt.: 140lb | Vertical ☒ Inclined ☐ |
| Elev. 670.1 ft After 0 Hrs | | Drilling Fluid: Mud | Hammer Drop: 30.0" | Degrees from Vertical --- |
| | | Drill Rig: Mobile 53 Truck Drill Rig | | Inspector: Allen Winders |

SCALE: ¼" = 1'–0"
ELEVATION (FT.)

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 0.0'-2.0': Brown Silty Sand with Gravel (SM); moist; medium dense |
| Trace organics present in sample | 0 - 2 | S1 | 6-11-11-11 | 0.5 | 25 | | 673.1 |
| | 2 - 4 | S2 | 7-9-9-4 | 0.8 | 38 | | 2.0'-6.0': Brown Clayey Sand with Gravel (SC); moist; very loose to medium dense |
| Trace organics present in sample | 4 - 6 | S3 | 2-1-1-1 | 0.3 | 17 | | 669.1 |
| | 6 - 8 | S4 | 1-2-2-2 | 0.6 | 29 | | 6.0'-8.0': Dark Brown Sandy Lean Clay with Gravel (CL); moist; soft |
| | 8 - 10 | S5 | 2-3-3-3 | 1.3 | 63 | | 667.1 |
| | 10 - 12 | S6 | 3-5-8-5 | 0.8 | 42 | | 8.0'-18.5': Gray Silty Sand with Gravel (SM); moist; loose to medium dense |
| | | | | | | | 661.6 |
| | | | | | | | 13.5'-18.5': Gray poorly-graded Sand with Silt (SP-SM); moist; loose |
| | 15 - 17 | S7 | 5-5-4-4 | 1.0 | 50 | | 656.6 |
| | | | | | | | 18.5'-38.5': Gray Silt with Sand (ML); moist to wet; very soft to hard |
| | 20 - 22 | S8 | 3-2-2-2 | 0.8 | 38 | | OBSERVED GROUND WATER EL. 670.10 (3/19/2026) |
| | 25 - 27 | S9 | WH-WH-3-3 | 1.1 | 54 | | BOTTOM OF PROPOSED WEST ABUTMENT PILE CAP EL. 663.59 |
| | 30 - 32 | S10 | 2-2-3-3 | 1.3 | 63 | | |

Remarks: Hole grouted upon completion.

NRCS BORING LOG LOG - GF MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/3/26

# BORING BB–201 (CONT.)

102+51.2
OFFSET 10.4' RT.

| | | | |
|---|---|---|---|
| Drilling Company: | Seaboard Drilling | DRILLING LOG | Hole Number: BB-201 |
| Driller: | Jeff Nitsch | Gannett Fleming | Sheet: 2 of 2 |
| Inspector: | Allen Winders | | Elev. Top of Hole: 675.1 |

Kelsey Road over Schenob Brook Bridge

SCALE: ¼" = 1'–0"
ELEVATION (FT.)

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 18.5'-38.5': Gray Silt with Sand (ML); moist to wet; very soft to hard *(continued)* |
| Spoon was damaged, unable to retrieve the sample<br>Boulder felt at 36'-38' depth | 35 - 37 | S11 | 17-20-33-50/1 | 0.0 | 0 | | 639.1 |
| Attempted to core boulder from 38-43'. No recovery achieved from rock coring attempt. | | | | | | | 38.5'-54.5': Gray to brown Silty Gravel with Sand (GM); wet; medium dense to dense |
| Drilled down to 45' to sample | 45 - 47 | S12 | 16-9-12-8 | 0.3 | 17 | | |
| | 50 - 52 | S13 | 13-12-23-46 | 1.3 | 63 | | ESTIMATED PILE TIP EL. 620.60± (TOP OF ROCK) |
| Top of rock at approx. 54.5' depth | | | | | | | Top of Rock @ 54.5 ft 620.6 |
| | 54.5 - 59.5 | C1 | | 1.2 | 23 | | 54.5'-63.0': DOLOSTONE, gray, hard, slightly weathered, thickly bedding, slightly fractured |
| Attempted to core C-2. Core barrel got plugged after coring 2.5'. Attempted to start coring again at 62' depth but hole had completely collapsed to the bottom of the casing at 54.5'. Collapsed due to water pumped down hole into carbonate rock<br>Drilled through weathered rock from 62-70' | 59.5 - 62 | C2 | | 0.0 | 0 | | |
| | | | | | | | 605.1 |
| | | | | | | | Bottom of borehole at 70.00 feet. |

NRCS BORING LOG LOG - GF MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/3/26

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 36 | 61 |
| | PROJECT FILE NO. 609068 | | |

**BORING LOGS - 1**

## BORING NOTES:

1. LOCATION OF BRIDGE BORINGS SHOWN ON THE PLAN THUS: ⊕ BB–#
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A 1 3/8" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
5. BORING SAMPLES ARE STORED AT A STORAGE FACILITY LOCATED ON ROUTE 114 (219 WINTHROP AVE.) IN LAWRENCE, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES BY CONTACTING THE MASSDOT GEOTECHNICAL SECTION AT 10 PARK PLAZA, BOSTON, MA.
6. EXISTING BORINGS BB–01 AND BB–02 WERE DRILLED BETWEEN DECEMBER 17TH 2002 AND DECEMBER 19TH 2002. BORINGS BB–101 AND BB–102 WERE DRILLED BETWEEN JUNE 15TH 2021 AND JUNE 18TH 2021. BORING BB–201 WAS DRILLED BETWEEN MARCH 19TH 2026 AND MARCH 20TH 2026.
7. BORINGS BB–01 AND BB–02 WERE MADE BY NEW HAMPSHIRE BORING, INC, P.O. BOX 165, DERRY, NH 03038. BORINGS BB–101 AND BB–102 WERE MADE BY NORTHERN DRILL SERVICE, INC, 130 EAST MAIN STREET, BLDG. A, NORTHBOROUGH, MA 01532. BORING BB–201 WAS MADE BY SEABOARD DRILLING, 95 CARANDO DRIVE, SPRINGFIELD, MA 01104.
8. THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.
9. EXISTING BOTTOM OF FOOTING ELEVATION UNKNOWN.

| 9/5/2026 | ISSUED FOR CONSTRUCTION |
|---|---|
| DATE | DESCRIPTION |

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE



609068_BR3.DWG Plotted on 11-Sep-2026 1:43 PM
609068 Issued for Construction 5-Sep-2026

# BORING BB–101

STA. 103+07.8
OFFSET 3.8' RT.

| | | | |
|---|---|---|---|
| Date Started: | 6/17/21 | DRILLING LOG | Hole Number: BB-101 |
| Date Finished: | 6/18/21 | Gannett Fleming | Sheet: 1 of 2 |
| Soil Drilling: | 49.3 ft | | Line & Station: 103+07.8 |
| Rock Sampling: | 10.0 ft | Project: Kelsey Road over Schenob Brook Bridge | Offset: 3.8 ft R |
| Total Depth of Hole: | 59.3 ft | Drilling Company: Northern Drill Service, Inc. | N Coordinate: 2854659 ft |
| No. of Undist. Core Samples: | | Driller: Tyler Kennedy | E Coordinate: 140919 ft |
| Total Number of Core Boxes: | 1 | Bit Size and Type: Spoon Size: 2.0 in. O.D. | Elev. Top of Hole: +676.8 ft |
| GROUNDWATER OBSERVATIONS | | Casing Size: 3.5 in. Spoon Size: | Direction of Hole |
| At 4.6 ft After 27.5 Hrs | | Hollow Stem: 4.5 in. O.D. Hammer wt.: 140lb | Vertical ☒ Inclined ☐ |
| Elev. 672.2 ft After 27.5 Hrs | | Drilling Fluid: Mud Hammer Drop: 30.0" | Degrees from Vertical --- |
| | | Drill Rig: Diedrich D-25 Skid Rig - Automatic Hammer | Inspector: Hratch A. Agopian |

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 0.0'-27.5': Light Brown Silty Sand (SM); moist to wet; very loose to medium dense |
| Cobbles present in sample - heterogeneous | 0 - 2 | S1 | 8-11-17-10 | 1.3 | 65 | | |
| Homogeneous | 2 - 4 | S2 | 14-14-15-18 | 1.3 | 65 | | |
| Contains wood fragments and organics - heterogeneous | 4 - 6 | S3 | 10-4-3-3 | 1.0 | 50 | | |
| Homogeneous - Dark Brown organic | 6 - 8 | S4 | 3-2-2-2 | 0.8 | 40 | | |
| Contains wood fragments and organics - heterogeneous | 8 - 10 | S5 | 1-1-1-1 | 1.1 | 55 | | |
| | | | | | | | OBSERVED GROUND WATER EL. 672.20 (6/18/2021) |
| Homogeneous | 14 - 16 | S6 | 5-4-5-8 | 0.9 | 45 | | |
| | | | | | | | BOTTOM OF PROPOSED WEST ABUTMENT PILE CAP EL. 663.59 |
| Homogeneous | 19 - 21 | S7 | 2-3-4-3 | 1.1 | 55 | | |
| Homogeneous | 24 - 26 | S8 | 3-2-3-3 | 1.0 | 50 | | |
| | | | | | | | 649.3 |
| | | | | | | | 27.5'-32.5': Light Gray Sandy Silt (ML); wet; medium stiff to stiff |
| Homogeneous | 29 - 31 | S9 | 5-5-5-11 | 1.0 | 50 | | |
| 31.5'-33': Cobbles | | | | | | | |
| | | | | | | | 644.3 |

Remarks: Rock cored comparable as pressure and torque remained constant throughout core run.
Hole grouted upon completion.

SCALE: ¼" = 1'–0"
ELEVATION (FT.)

NRCS BORING LOG LOG - GF MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/3/26

# BORING BB–101 (CONT.)

STA. 103+07.8
OFFSET 3.8' RT.

| | | | |
|---|---|---|---|
| Drilling Company: | Northern Drill Service, Inc. | DRILLING LOG | Hole Number: BB-101 |
| Driller: | Tyler Kennedy | Gannett Fleming | Sheet: 2 of 2 |
| Inspector: | Hratch A. Agopian | | Elev. Top of Hole: 676.8 |

Kelsey Road over Schenob Brook Bridge

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| | | | | | | | 32.5'-49.3': Light Gray Silty Sand (SM); wet; medium dense to dense |
| Homogeneous | 34 - 36 | S10 | 10-12-17-24 | 0.7 | 35 | | |
| Tip brown Silty Sand SM | 39 - 41 | S11 | 18-25-20-11 | 0.8 | 40 | | |
| Homogeneous | 44 - 46 | S12 | 10-9-8-6 | 0.9 | 45 | | |
| | | | | | | | ESTIMATED PILE TIP EL. 627.50± (TOP OF ROCK) |
| | 49 - 49.3 | S13 | 50/4" | 0.0 | 0 | | Top of Rock @ 49.3 ft |
| | | | | | | | 627.5 |
| | 49.3 - 54.3 | C1 | | 5.0 | 100 | | 49.3'-59.3': DOLOSTONE, white, hard, slightly weathered, thickly bedding, very slightly fractured |
| Sedminetary rock appears banded | 54.3 - 59.3 | C2 | | 5.0 | 100 | | |
| | | | | | | | 617.5 |
| | | | | | | | Bottom of borehole at 59.30 feet. |

SCALE: ¼" = 1'–0"
ELEVATION (FT.)

NRCS BORING LOG LOG - GF MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/3/26

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 37 | 61 |
| PROJECT FILE NO. | 609068 | | |

**BORING LOGS - 2**

## BORING NOTES:

1. FOR BORING NOTES, SEE SHEET 3.

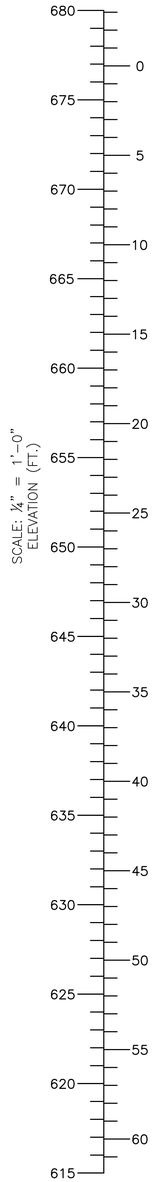
| | |
|---|---|
| 9/5/2026 | ISSUED FOR CONSTRUCTION |
| DATE | DESCRIPTION |
| THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY: | STATE BRIDGE ENGINEER |
| USE ONLY PRINTS OF LATEST DATE | |



609068_BR4.DWG Plotted on 11-Sep-2026 1:43 PM
609068 Issued for Construction 5-Sep-2026

# EXISTING BORING BB–01

STA. 103+13.2
OFFSET 2.9' LT.




PHONE: (603) 437-1610 — NEW HAMPSHIRE BORING, INC. — FAX: (603) 437-0034
P. O. BOX 165 DERRY, NH 03038
E MAIL: nhb@nhboring

| | | | |
|---|---|---|---|
| Boring #: B-2 | Project: S-10-15 | Contract #: 31240 | Station: |
| Project Address: Kelsey Road over Schenob Brook | City: Sheffield | State: MA | Offset: |
| Date Start: 12/18/02 Start Time: 9:45AM | Date End: 12/19/02 | End Time: 12:00PM | Elev: |

Casing: HW — Size: 1m I.D. — Sampler: S/S 34.9mm ID
Hammer: 138 kg — Fall: .8m — Hammer: 83.5 Kg — Fall: 760 mm Length

GROUNDWATER OBSERVATION - METRIC, SCALE 1:50

Date: 12/19/02 — Time: 11:15AM — Depth: 3.43m — Casing: 0m — Stabilization Per:

| DP | S./# | DEPTH (m) | PEN (m) | REC | BLOWS/.15m | S/C | SAMPLE DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | S-1 | .3 - .9 | .6 | .15 | 27-54-27-18 | | Note: Roller bit to .3m due to frost. Dry, very dense, brown FINE TO COARSE SAND, some medium to coarse gravel, trace inorganic silt. |
| 1M | | | | | | | |
| | S-2 | 1.5 - 1.7 | .5 | .3 | 10 | | |
| | S-2A | 1.7 - 2.1 | | | 2-3-4 | | |
| 2M | | | | | | 1.7m | Wet, loose, brown ORGANIC SILT. |
| 3M | S-3 | 3 - 3.8 | .8 | .55 | 1-3-2-5 | | Wet, loose, brown ORGANIC SILT. |
| 4M | | | | | | 4.0m | |
| | S-4 | 4.5 - 5.1 | .6 | .08 | 5-7-5-8 | | Wet, medium dense, grey FINE SAND, trace inorganic silt. |
| 5M | | | | | | | |
| 6M | S-5 | 6 - 6.6 | .6 | .25 | 1-3-4-5 | | Wet, loose, grey FINE SAND, trace inorganic silt. |
| 7M | | | | | | | |
| | S-6 | 7.5 - 8.1 | .6 | .45 | 2-3-5-5 | | Wet, loose, grey FINE SAND, trace inorganic silt. |
| 8M | | | | | | | |
| 9M | S-7 | 9 - 9.6 | .6 | .45 | 7-10-13-20 | | Wet, medium dense, grey FINE SAND AND INORGANIC SILT, trace coarse sand. |
| 10M | | | | | | | |
| | S-8 | 10.5 - 11.1 | .6 | .15 | 10-12-18-16 | | Wet, medium dense, grey FINE SAND, trace inorganic silt. |
| 11M | | | | | | | |
| | | | | | | 11.6m | |
| 12M | S-9 | 12 - 12.6 | .6 | .03 | 33-20-17-21 | | Wet, dense, brown FINE TO COARSE SAND and medium gravel, trace inorganic silt. |
| 13M | | | | | | | |
| | S-10 | 13.5 - 14.1 | .6 | .27 | 26-22-13-12 | | Wet, dense, brown FINE TO COARSE SAND and medium gravel, trace inorganic silt. |
| 14M | | | | | | | |
| | | | | | | 14.55 | Hit bedrock at 14.55m and roller bit to 15m then began coring bedrock. |
| | | | | | Times Min per.5m | | |
| 15M | C-1 | 15 - 16.5 | 1.5 | 1.48 | 6<br>6<br>6 | | Fractured grey/white SANDSTONE. Percent Recovery = 99.3% |
| 16M | | | | | | | |
| | C-2 | 16.5 - 18.0 | 1.5 | 1.5 | 6<br>6<br>7 | | Fractured grey/white SANDSTONE Percent Recovery = 100% |
| 17M | | | | | | | |
| 18M | | | | | | 18.0 | Bottom of Exploration = 18.0 |

OBSERVED GROUND WATER EL. 665.65 (12/19/2002)

BOTTOM OF PROPOSED WEST ABUTMENT PILE CAP EL. 663.59

ESTIMATED PILE TIP EL. 629.20± (TOP OF ROCK)

Driller: Kenneth Smith — Helper: Jack Lefebvre — Inspection: Alan Oral

Remarks: PAGE OF — HOURS WORKED: 10.5 CASING SIZE: HW — CASING USED: 14.55m TYPE OF COREBARREL: 54.7mm

No. Of Road Signs Used: 2 — Bags Of Grout Used: — Well Size: — Screen Size: — Riser:

Note 1. - Boring initially moved due to overhead utilities.

S./#: SAMPLE | PEN: PENETRATION | REC: RECOVERY | S/C: STRATA CHANGE

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 38 | 61 |
| PROJECT FILE NO. | 609068 | | |

**BORING LOGS - 3**

## BORING NOTES:

1. FOR BORING NOTES, SEE SHEET 3.
2. BORING BB–01 IS A HISTORICAL BORING TAKEN 12/19/2002. ELEVATIONS SHOWN ARE BASED ON 2020 SURVEY DATA. SEE BORING LOCATION PLAN CONTAINED WITHIN THE GEOTECHNICAL REPORT.

| 9/5/2026 | ISSUED FOR CONSTRUCTION |
|---|---|
| DATE | DESCRIPTION |

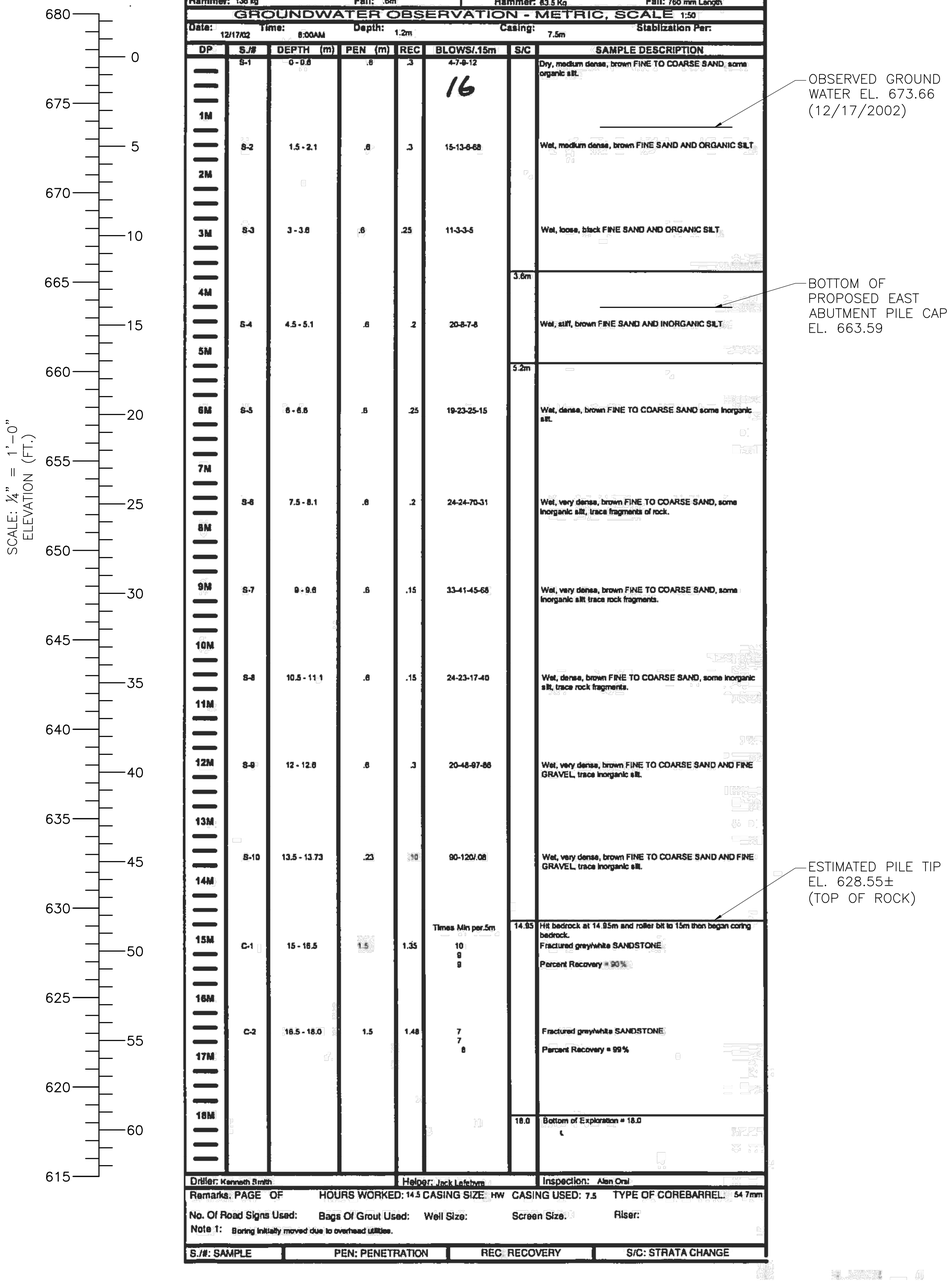
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE



609068_BR5.DWG Plotted on 11-Sep-2026 1:43 PM
609068 Issued for Construction 5-Sep-2026

# EXISTING BORING BB–02

STA. 103+45.5
OFFSET 3.0' LT.




PHONE: (603) 437-1610 — NEW HAMPSHIRE BORING, INC. — FAX: (603) 437-0034
P. O. BOX 165 DERRY, NH 03038
E MAIL: nhb@nhboring

| | | | |
|---|---|---|---|
| Boring #: B-1 | Project: S-10-15 | Contract #: 31240 | Station: |
| Project Address: Kelsey Road over Schenob Brook | City: Sheffield | State: MA | Offset: |
| Date Start: 12/16/02 Start Time: 2:00PM | Date End: 12/18/02 | End Time: 9:30AM | Elev: |

Casing: HW — Size: 1m I.D. — Sampler: S/S 34.9mm ID
Hammer: 136 kg — Fall: .6m — Hammer: 63.5 Kg — Fall: 760 mm Length

GROUNDWATER OBSERVATION - METRIC, SCALE 1:50

Date: 12/17/02 — Time: 8:00AM — Depth: 1.2m — Casing: 7.5m — Stabilization Per:

| DP | S./# | DEPTH (m) | PEN (m) | REC | BLOWS/.15m | S/C | SAMPLE DESCRIPTION |
|---|---|---|---|---|---|---|---|
| | S-1 | 0 - 0.6 | .6 | .3 | 4-7-9-12 | | Dry, medium dense, brown FINE TO COARSE SAND, some organic silt. |
| 1M | | | | | 16 | | |
| | S-2 | 1.5 - 2.1 | .6 | .3 | 15-13-6-68 | | Wet, medium dense, brown FINE SAND AND ORGANIC SILT |
| 2M | | | | | | | |
| 3M | S-3 | 3 - 3.6 | .6 | .25 | 11-3-3-5 | | Wet, loose, black FINE SAND AND ORGANIC SILT |
| | | | | | | 3.6m | |
| 4M | S-4 | 4.5 - 5.1 | .6 | .2 | 20-8-7-8 | | Wet, stiff, brown FINE SAND AND INORGANIC SILT |
| 5M | | | | | | 5.2m | |
| 6M | S-5 | 6 - 6.6 | .6 | .25 | 19-23-25-15 | | Wet, dense, brown FINE TO COARSE SAND some inorganic silt. |
| 7M | | | | | | | |
| | S-6 | 7.5 - 8.1 | .6 | .2 | 24-24-70-31 | | Wet, very dense, brown FINE TO COARSE SAND, some inorganic silt, trace fragments of rock. |
| 8M | | | | | | | |
| 9M | S-7 | 9 - 9.6 | .6 | .15 | 33-41-45-68 | | Wet, very dense, brown FINE TO COARSE SAND, some inorganic silt trace rock fragments. |
| 10M | | | | | | | |
| | S-8 | 10.5 - 11.1 | .6 | .15 | 24-23-17-40 | | Wet, dense, brown FINE TO COARSE SAND, some inorganic silt, trace rock fragments. |
| 11M | | | | | | | |
| 12M | S-9 | 12 - 12.6 | .6 | .3 | 20-46-97-86 | | Wet, very dense, brown FINE TO COARSE SAND AND FINE GRAVEL, trace inorganic silt. |
| 13M | | | | | | | |
| | S-10 | 13.5 - 13.73 | .23 | .10 | 90-120/.08 | | Wet, very dense, brown FINE TO COARSE SAND AND FINE GRAVEL, trace inorganic silt. |
| 14M | | | | | Times Min per.5m | 14.85 | Hit bedrock at 14.85m and roller bit to 15m then began coring bedrock. |
| 15M | C-1 | 15 - 15.5 | 1.5 | 1.35 | 10<br>9<br>9 | | Fractured grey/white SANDSTONE<br>Percent Recovery = 90% |
| 16M | | | | | | | |
| | C-2 | 15.5 - 16.0 | 1.5 | 1.48 | 7<br>7<br>8 | | Fractured grey/white SANDSTONE<br>Percent Recovery = 99% |
| 17M | | | | | | | |
| 18M | | | | | | 18.0 | Bottom of Exploration = 18.0 |

Driller: Kenneth Smith — Helper: Jack Lefebvre — Inspection: Alan Oral

Remarks. PAGE OF — HOURS WORKED: 14.5 — CASING SIZE: HW — CASING USED: 7.5 — TYPE OF COREBARREL: 54.7mm
No. Of Road Signs Used: — Bags Of Grout Used: — Well Size: — Screen Size. — Riser:
Note 1: Boring initially moved due to overhead utilities.

S./#: SAMPLE — PEN: PENETRATION — REC: RECOVERY — S/C: STRATA CHANGE

OBSERVED GROUND WATER EL. 673.66 (12/17/2002)

BOTTOM OF PROPOSED EAST ABUTMENT PILE CAP EL. 663.59

ESTIMATED PILE TIP EL. 628.55± (TOP OF ROCK)

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 39 | 61 |
| PROJECT FILE NO. | 609068 | | |

**BORING LOGS - 4**

## BORING NOTES:

1. FOR BORING NOTES, SEE SHEET 3.
2. BORING BB–02 IS A HISTORICAL BORING TAKEN 12/17/2002. ELEVATIONS SHOWN ARE BASED ON 2020 SURVEY DATA. SEE BORING LOCATION PLAN CONTAINED WITHIN THE GEOTECHNICAL REPORT.

| DATE | DESCRIPTION |
|---|---|
| 9/5/2026 | ISSUED FOR CONSTRUCTION |

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE



609068_BR6.DWG Plotted on 11-Sep-2026 1:43 PM
609068 Issued for Construction 5-Sep-2026

# BORING BB–102

STA. 103+62.2
OFFSET 2.6' LT.

| | | | |
|---|---|---|---|
| Date Started: | 6/15/21 | **DRILLING LOG** Gannett Fleming | Hole Number: BB-102 |
| Date Finished: | 6/16/21 | | Sheet: 1 of 2 |
| Soil Drilling: | 51.0 ft | | Line & Station: 103+62.2 |
| Rock Sampling: | 10.0 ft | Project: Kelsey Road over Schenob Brook Bridge | Offset: 2.6 ft L |
| Total Depth of Hole: | 61.0 ft | Drilling Company: Northern Drill Service, Inc. | N Coordinate: 2854626 ft |
| No. of Undist. Core Samples: | | Driller: Carl Beirholm | E Coordinate: 140958 ft |
| Total Number of Core Boxes: | 1 | Bit Size and Type: Spoon Size: 2.0 in. O.D. | Elev. Top of Hole: +677.8 ft |
| GROUNDWATER OBSERVATIONS At 5.3 ft After 27.5 Hrs Elev. 672.5 ft After 27.5 Hrs | | Casing Size: 3.5 in. Spoon Size: | Direction of Hole Vertical ☒ Inclined ☐ Degrees from Vertical --- |
| | | Hollow Stem: 4.5 in. O.D. Hammer wt.: 140lb | |
| | | Drilling Fluid: Mud Hammer Drop: 30.0" | |
| | | Drill Rig: B-57 Mobile Drill Rig - Automatic Hammer | Inspector: Hratch A. Agopian |

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| Homogeneous | 0 - 2 | S1 | 15-12-16-13 | 1.0 | 50 | | 0.0'-27.5': Light Brown Silty Sand (SM); moist to wet; very loose to medium dense |
| Homogeneous | 2 - 4 | S2 | 9-9-9-6 | 1.2 | 60 | | |
| Wood chips in tip of spoon | 4 - 6 | S3 | 5-5-8-5 | 0.7 | 35 | | |
| Homogeneous - Dark Brown organic | 6 - 8 | S4 | 14-3-WOH-1 | 0.8 | 40 | | |
| Wood chips hindered recovery (contained decomposed wood chips) | 8 - 10 | S5 | 1-1-2-2 | 0.1 | 5 | | |
| | | | | | | | |
| Homogeneous | 14 - 16 | S6 | 4-7-8-11 | 0.8 | 40 | | |
| | | | | | | | |
| Homogeneous | 19 - 21 | S7 | 8-14-10-24 | 0.9 | 45 | | |
| | | | | | | | |
| Homogeneous | 24 - 26 | S8 | 15-20-19-29 | 1.3 | 65 | | |
| | | | | | | | |
| Homogeneous | 29 - 31 | S9 | 23-20-16-18 | 0.8 | 40 | | |
| 32'-34': Probable boulder or cobbles at | | | | | | | 650.3 27.5'-32.5': Light Gray Sandy Silt (ML); wet; medium stiff to stiff 645.3 |

OBSERVED GROUND WATER EL. 672.50 (6/16/2021)

BOTTOM OF PROPOSED EAST ABUTMENT PILE CAP EL. 663.59

Remarks: Hole grouted upon completion.

SCALE: ¼" = 1'–0" ELEVATION (FT.)

NRCS BORING LOG LOG - GF MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/3/26

# BORING BB–102 (CONT.)

103+62.2
OFFSET 2.6' LT.

| | | | |
|---|---|---|---|
| Drilling Company: Northern Drill Service, Inc. | **DRILLING LOG** Gannett Fleming | | Hole Number: BB-102 |
| Driller: Carl Beirholm | | | Sheet: 2 of 2 |
| Inspector: Hratch A. Agopian | | | Elev. Top of Hole: 677.8 |
| Kelsey Road over Schenob Brook Bridge | | | |

| Remarks | Depth (Ft.) | Sample No. | Blows or RQD (%) | Rec. (ft.) | Rec. (%) | USCS | Description Of Materials |
|---|---|---|---|---|---|---|---|
| tip | | | | | | | 32.5'-49.0': Light Gray Silty Sand (SM); wet; medium dense to very dense |
| | 34 - 36 | S10 | 50/3" | 0.0 | 0 | | |
| Heterogeneous | 36 - 38 | S11 | 7-15-11-27 | 2.0 | 100 | | |
| | | | | | | | |
| Homogeneous | 39 - 41 | S12 | 24-22-18-23 | 0.8 | 40 | | |
| 42'-44': Cobbles - Heterogeneous | | | | | | | |
| | 44 - 46 | S13 | 49-50/4" | 0.8 | 40 | | |
| | | | | | | | Top of Rock @ 49.0 ft 628.8 |
| | 48.9 - 49 | S14 | 50/0" | 0.0 | 0 | | 49.0'-61.0': DOLOSTONE, white to light gray, moderately hard to very hard, slightly to moderately weathered, thinly to thickly bedding, very slightly to slightly fractured |
| Rock contains seam = 1/4" @ 53', filled with silt and clay | 51 - 56 | C1 | | 5.0 | 100 | | |
| Sedimentary rock appears banded | 56 - 61 | C2 | | 5.0 | 100 | | 616.8 Bottom of borehole at 61.00 feet. |

ESTIMATED PILE TIP EL. 628.80± (TOP OF ROCK)

SCALE: ¼" = 1'–0" ELEVATION (FT.)

NRCS BORING LOG LOG - GF MASSDOT KELSEY ROAD OVER SCHENOB BROOK_LOGS - 2026 - R1.GPJ GF-DATATMPL-FINAL.GDT 4/3/26

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 40 | 61 |
| PROJECT FILE NO. 609068 | | | |

**BORING LOGS - 5**

## BORING NOTES:

1. FOR BORING NOTES, SEE SHEET 3.

| 9/5/2026 | ISSUED FOR CONSTRUCTION |
|---|---|
| DATE | DESCRIPTION |

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

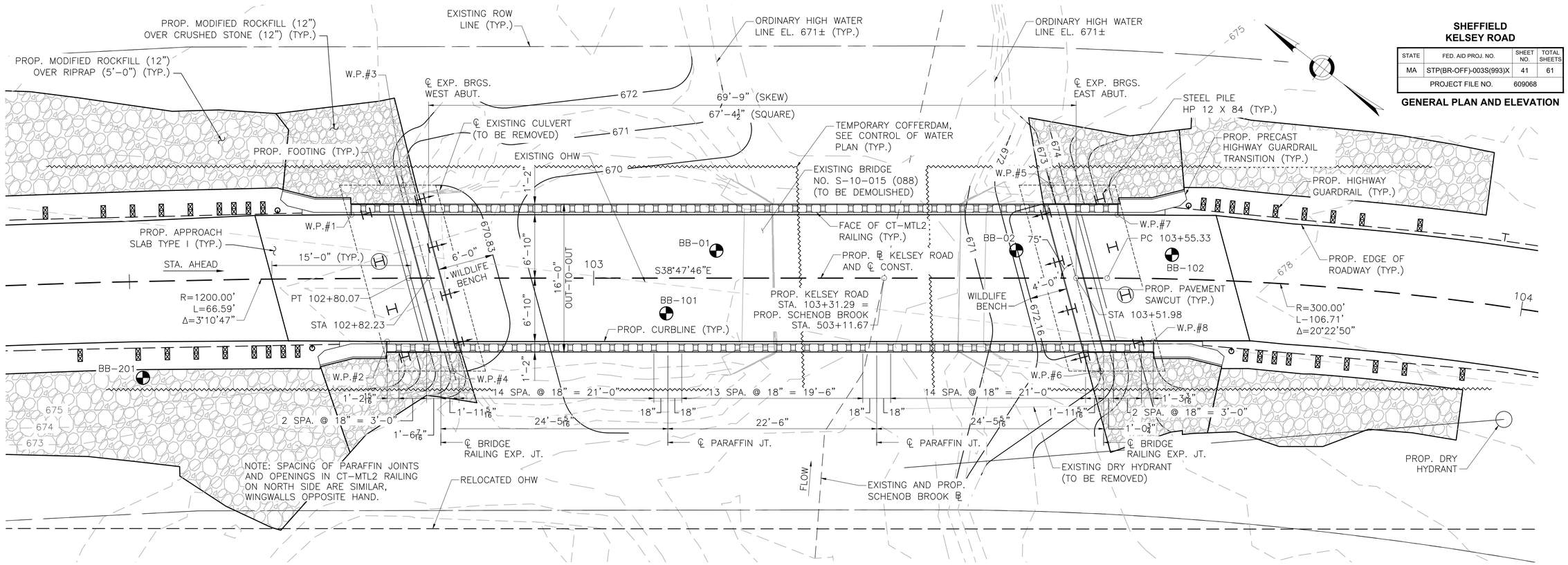


609068_BR7.DWG Plotted on 11-Sep-2026 1:43 PM
609068 Issued for Construction 5-Sep-2026

**SHEFFIELD**
**KELSEY ROAD**

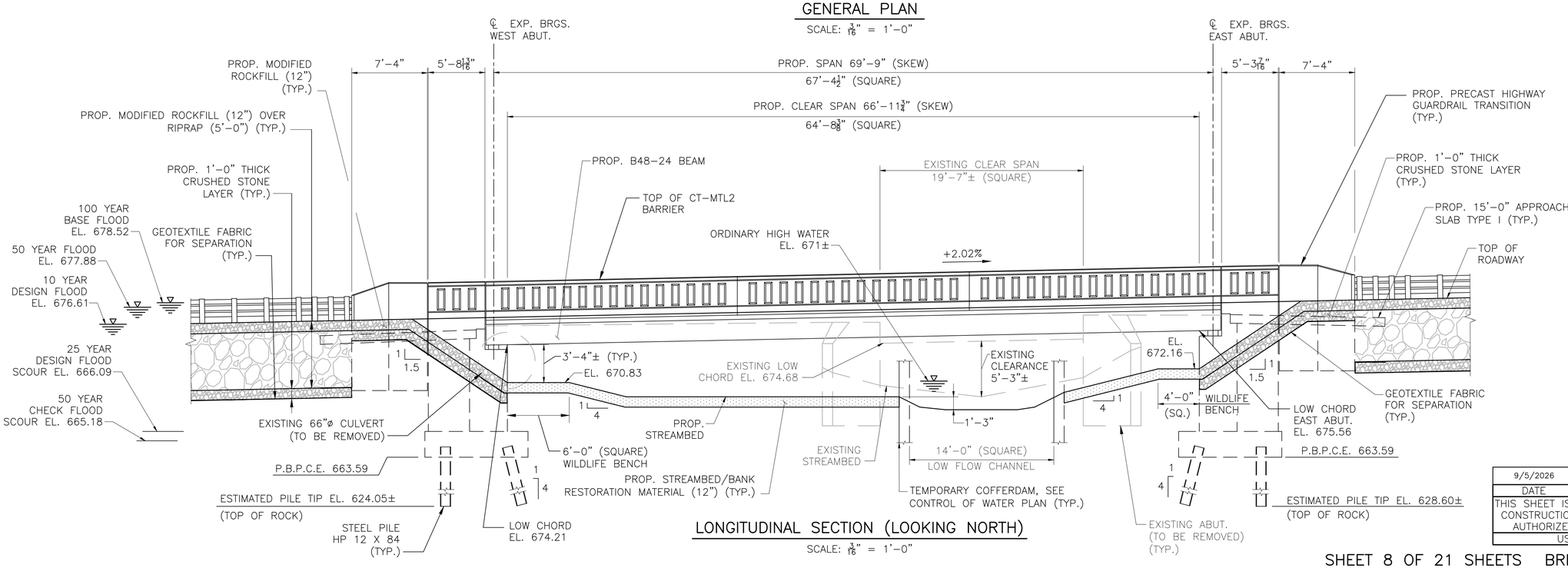
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 41 | 61 |
| PROJECT FILE NO. | 609068 | | |

**GENERAL PLAN AND ELEVATION**




## GENERAL PLAN

SCALE: 3/16" = 1'-0"




## LONGITUDINAL SECTION (LOOKING NORTH)

SCALE: 3/16" = 1'-0"

**LEGEND:**

- VERTICAL PILE
- TEST PILE
- 4V:1H BATTERED PILE

| WORKING POINT TABLE | | |
|---|---|---|
| W.P. | STATION | OFFSET |
| W.P.#1 | 102+73.97 | 6.85' LT |
| W.P.#2 | 102+77.76 | 6.83' RT |
| W.P.#3 | 102+79.55 | 10.02' LT |
| W.P.#4 | 102+84.92 | 10.02' RT |
| W.P.#5 | 103+49.29 | 10.02' LT |
| W.P.#6 | 103+54.67 | 10.02' RT |
| W.P.#7 | 103+56.41 | 6.83' LT |
| W.P.#8 | 103+61.02 | 6.79' RT |

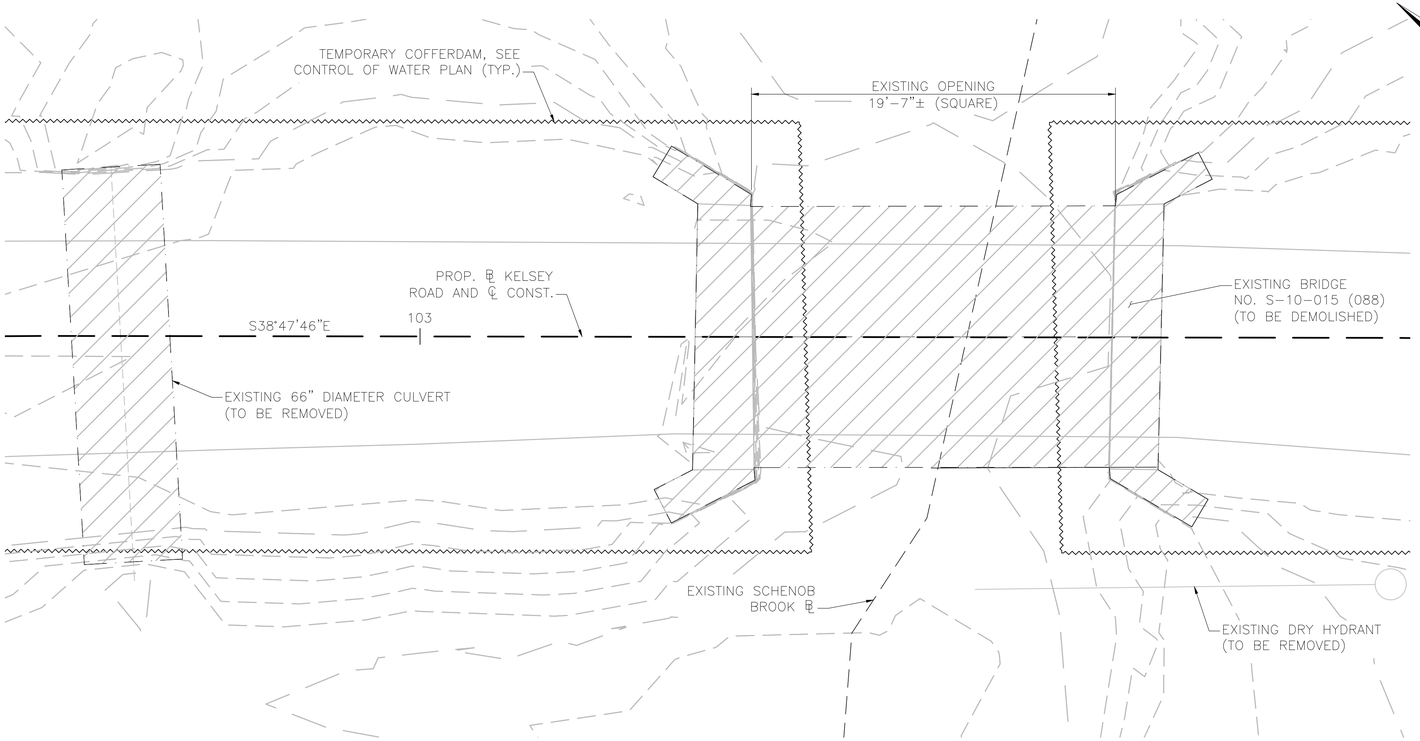
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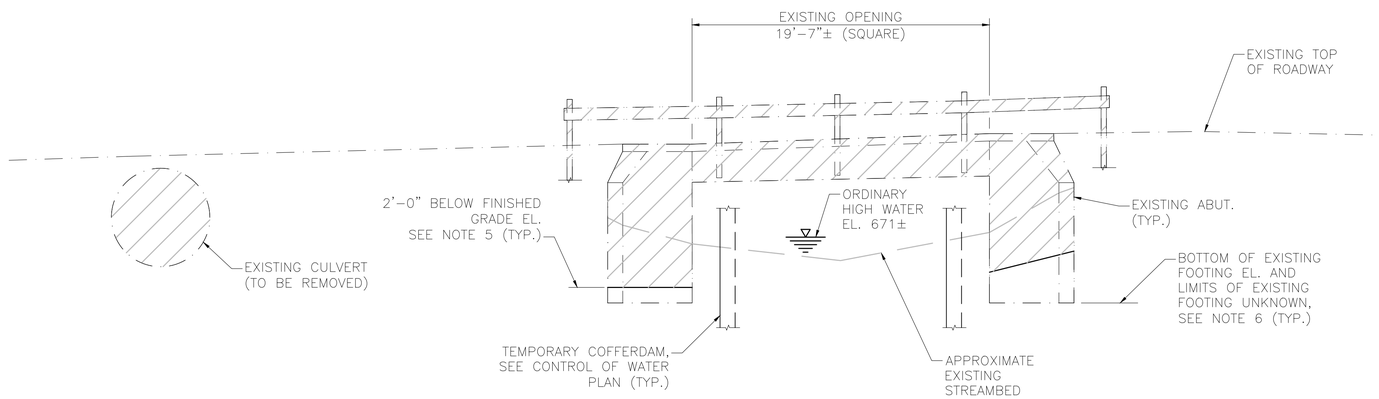
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## DEMOLITION PLAN

SCALE: $\frac{1}{4}$" = 1'-0"




## DEMOLITION ELEVATION

SCALE: $\frac{1}{4}$" = 1'-0"

**SHEFFIELD**
**KELSEY ROAD**

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| | PROJECT FILE NO. 609068 | | |

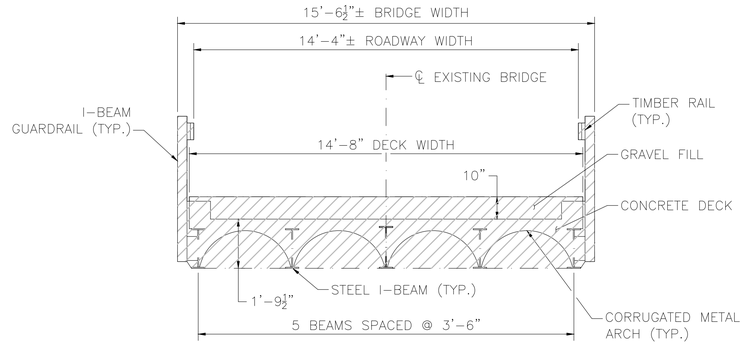
**BRIDGE DEMOLITION PLAN**

## LEGEND:

▨ TO BE REMOVED

## DEMOLITION NOTES:

1. THE EXISTING BRIDGE SHALL BE DEMOLISHED TO THE LIMITS SHOWN ON THE PLANS. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROTECT THE SCHENOB BROOK AND ADJACENT WETLAND AREAS FROM ALL CONSTRUCTION OPERATIONS.
2. CONTRACTOR MUST CONTAIN ALL DEBRIS FROM FALLING INTO THE BROOK DURING CONSTRUCTION ACTIVITIES. TEMPORARY PROTECTIVE SHIELDING ASSOCIATED WITH DEMOLITION SHALL BE INCLUDED IN THE PAY ITEM 994.01 TEMPORARY PROTECTIVE SHIELDING BRIDGE NO. S-10-015 (088). SEE SPECIAL PROVISIONS.
3. THE INFORMATION PRESENTED HERE IS FOR BIDDING PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL INFORMATION PRIOR TO SUBMITTING BIDS.
4. EXACT LIMITS OF THE EXISTING SUBSTRUCTURE ARE UNKNOWN. TEST PITS ARE TO BE PERFORMED TO LOCATE EXISTING FOUNDATIONS PRIOR TO ANY DEMOLITION WORK. TEST PITS WILL BE PAID UNDER PAY ITEM 141.1 TEST PIT FOR EXPLORATION.
5. EXISTING SUBSTRUCTURES ARE TO BE REMOVED A MINIMUM OF 24 INCHES BELOW FINISHED GRADE.
6. EXISTING WINGWALLS AND FOUNDATIONS IN CONFLICT WITH PROPOSED SUBSTRUCTURE SHALL BE REMOVED ENTIRELY WITHIN 1 FOOT FROM PROPOSED SUBSTRUCTURE.




## EXISTING BRIDGE TYPICAL CROSS SECTION

SCALE: $\frac{3}{8}$" = 1'-0"

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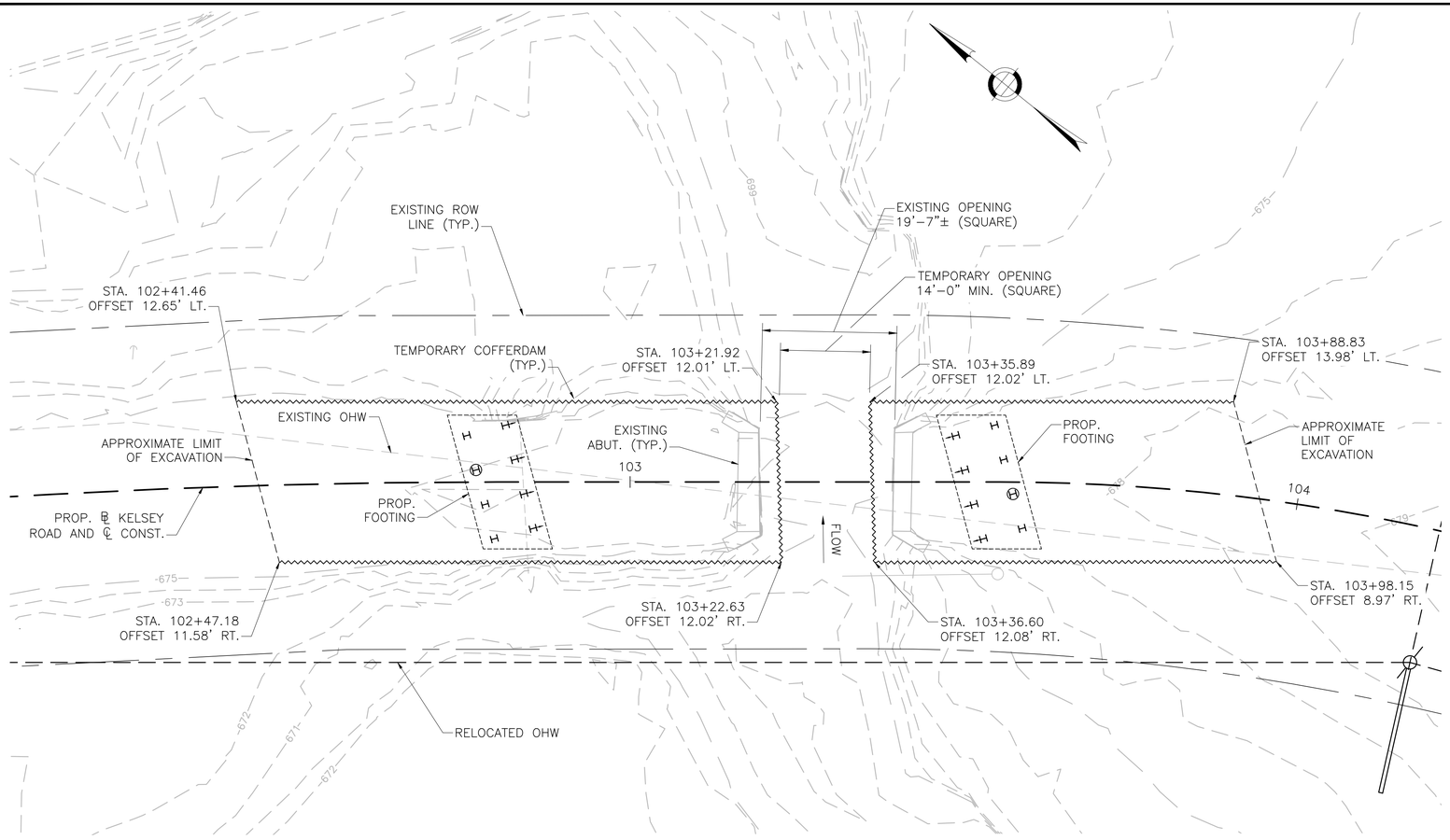
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**SHEFFIELD**
**KELSEY ROAD**

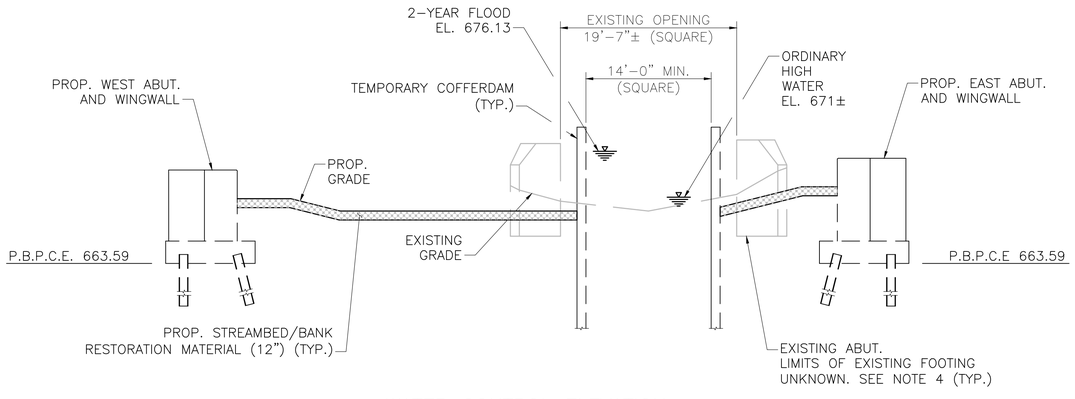
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**CONTROL OF WATER PLAN**




## WATER CONTROL PLAN

SCALE: 1" = 10'




## WATER CONTROL ELEVATION

SCALE: $\frac{1}{8}$" = 1'-0"

## WATER CONTROL NOTES:

1. THE COST OF COFFERDAM AND ALL OTHER MEASURES NECESSARY FOR CONTROL OF WATER SHALL BE INCLUDED IN ITEM 991.1 CONTROL OF WATER – STRUCTURE NO. S-10-015 (8M2). SEE SPECIAL PROVISIONS.
2. THE COFFERDAM SHALL BE DESIGNED BY CONTRACTOR TO CONSTRUCT THE BRIDGE FOUNDATIONS IN THE DRY. THE TEMPORARY WATER CONTROL DESIGN DATA SHOWN ON THESE PLANS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE AWARE THAT THE ROADWAY WILL BE OVERTOPPED DURING THE 2-YEAR FLOOD EVENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUSLY MONITORING THE FORECAST AND TAKING THE NECESSARY PRECAUTIONS TO ENSURE THAT THE EXCAVATIONS REMAIN DRY DURING CONSTRUCTION.
3. STATIONS AND OFFSETS SHOWN ARE APPROXIMATE.
4. EXISTING FOOTING LIMITS ARE UNKNOWN. CONTRACTOR SHALL ESTABLISH EXISTING FOOTING LIMITS PRIOR TO DESIGNING COFFERDAMS.
5. INSTALLATION OF COFFERDAM SHALL BE COORDINATED WITH RELOCATION OF OVERHEAD WIRES.
6. THE TEMPORARY COFFERDAM SYSTEM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION. FULL REMOVAL OF ANY STEEL SHEETING IS REQUIRED.
7. SEE BRIDGE DEMOLITION PLAN FOR EXISTING STRUCTURE DEMOLITION NOTES.

## TEMPORARY WATER CONTROL DESIGN DATA:

| | |
|---|---|
| FLOOD FREQUENCY: | 2-YEAR |
| PEAK FLOW: | 864 C.F.S. |
| WATER SURFACE ELEVATION: | 676.13 |
| VELOCITY | 8.45 F.P.S. |
| FREE BOARD: | N/A |
| TOP ELEVATION OF COFFERDAM: | 677.13 |

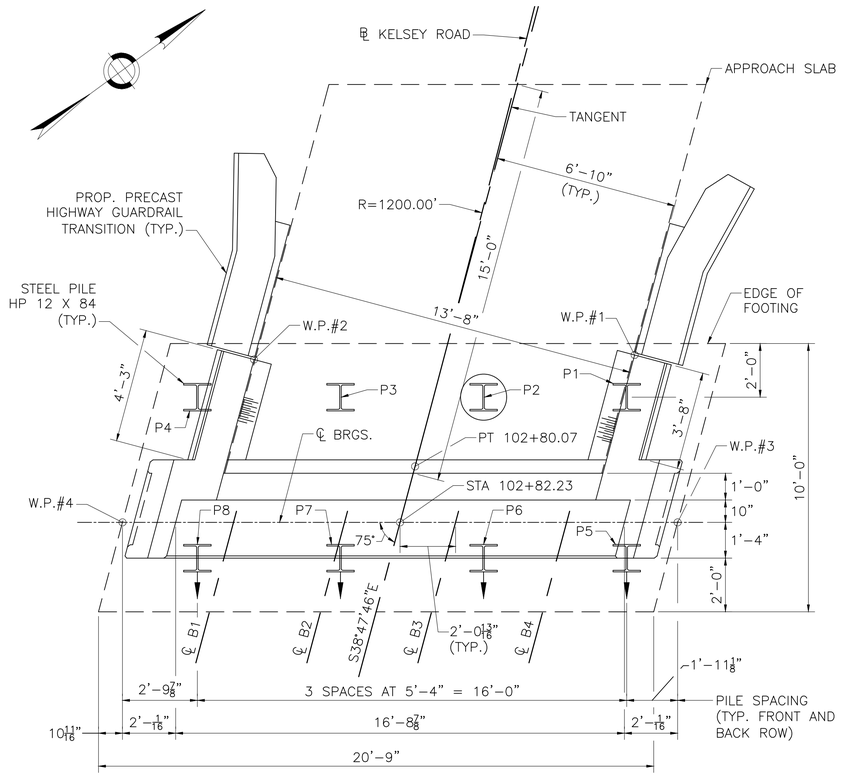
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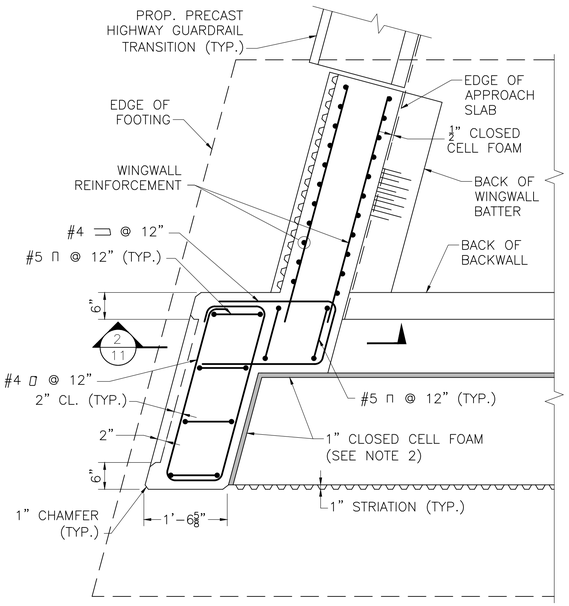


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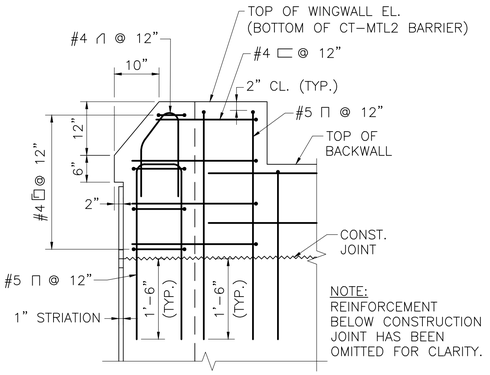

## WEST ABUTMENT PLAN

SCALE: 3/8" = 1'-0"



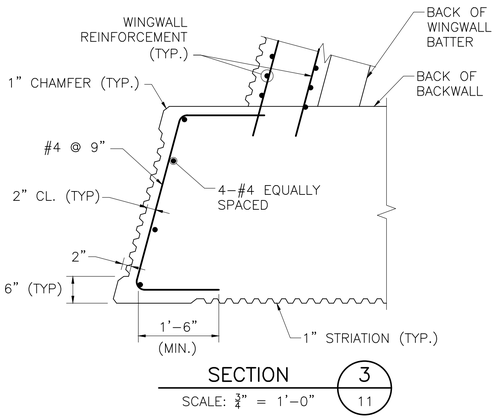

## SECTION 1 / 11

SCALE: 3/4" = 1'-0"



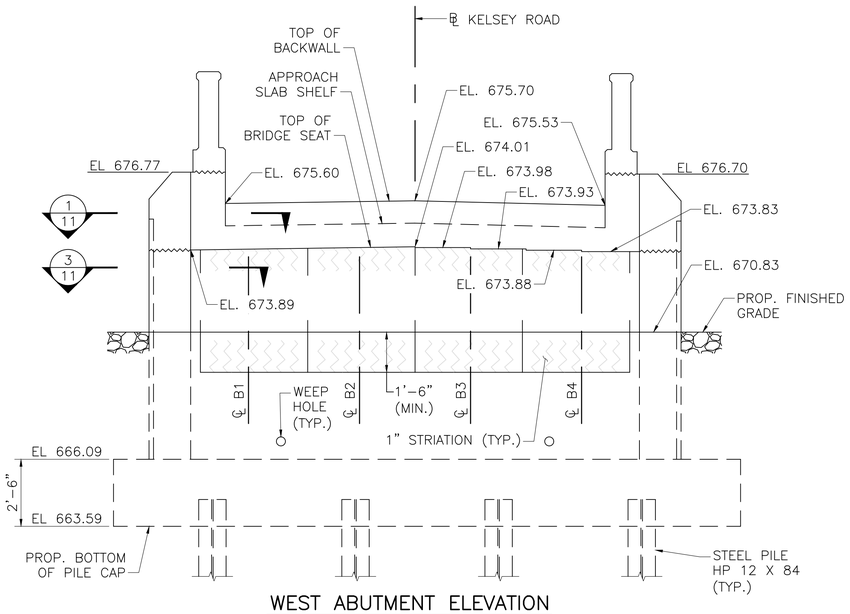

## SECTION 2 / 11

SCALE: 3/4" = 1'-0"




## SECTION 3 / 11

SCALE: 3/4" = 1'-0"




## WEST ABUTMENT ELEVATION

SCALE: 3/8" = 1'-0"

PILE NOTES:

1. PILES SHALL CONFORM TO AASHTO M270 GRADE 50.
2. HEAVY DUTY PILE SHOES SHALL BE INSTALLED ON THE TIPS OF ALL PILES. PREFABRICATED PILE SHOES MAY BE USED IF APPROVED BY THE ENGINEER.
3. ALL PILE SPLICES SHALL BE EITHER BUTT JOINTS MADE USING COMPLETE JOINT PENETRATION (CJP) WELDS OR MECHANICAL TYPE SPLICERS INSTALLED IN ACCORDANCE WITH THE APPROVED INSTALLATION NOTES. ALL SPLICES WITHIN 16 FEET FROM THE TOP OF PILE SHALL BE CJP SPLICES WITH CJP WELDS 100% INSPECTED USING UT. THE COST OF PILE SPLICES SHALL BE INCLUDED IN THE COST OF PAY ITEM 942.124 STEEL PILE HP 12 X 84.
4. FACTORED AXIAL DESIGN LOAD PER PILE PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

   STRENGTH I LIMIT STATE
   FACTORED AXIAL DESIGN LOAD = 228 KIPS.
5. PILES SHALL BE DRIVEN TO BEDROCK WITH THE ESTIMATED TIP ELEVATION AT EL. 620.6 TO 629.2. THE FACTORED STRUCTURAL RESISTANCE PER PILE IS 428 KIPS AND IS THE PRODUCT OF THE NOMINAL STRUCTURAL RESISTANCE OF 857 KIPS AND A RESISTANCE FACTOR OF 0.5.
6. DETERMINATION OF THE DRIVEN PILE RESISTANCE, PILE DRIVING CRITERIA, AND PILE INTEGRITY SHALL BE PERFORMED ON AT LEAST 1 PILE PER ABUTMENT USING DYNAMIC TESTING WITH A RESISTANCE FACTOR OF 0.65. PILES SHALL BE INSTALLED TO ACHIEVE A FACTORED DRIVEN RESISTANCE EQUAL TO OR GREATER THAN THE FACTORED AXIAL DESIGN LOAD.
7. LOAD TESTS SHALL BE PERFORMED AT THE PRODUCTION PILE LOCATIONS SHOWN. ALTERNATE LOCATIONS MAY BE SUBMITTED FOR APPROVAL BY ENGINEER. THE TEST PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK TO ACHIEVE THE REQUIRED RESISTANCE. THE CONTRACTOR SHALL SUBMIT THE TEST PILE DRIVING RESULTS TO SHOW THE CAPABILITY OF THE PILE HAMMER TO DRIVE THE PILES TO THE REQUIRED RESISTANCE WITHOUT EXCEEDING THE ALLOWABLE PILE DRIVING STRESS OF 45 KSI FOR 50 KSI STEEL. ACCEPTED TEST PILES SHALL REMAIN AS FINAL PRODUCTION PILES.
8. THE DYNAMIC LOAD TEST SHALL BE PERFORMED WITH THE PILE DRIVING ANALYZER (PDA) AND THE TEST DATA SHALL BE ANALYZED WITH THE CASE PILE WAVE ANALYZER PROGRAM (CAPWAP).
9. DIVERSION OF RIVER WATER (FROM CULVERT TO SCHENOB BROOK) WILL BE NEEDED TO AID THE DEWATERING MEASURES AND PROVIDE SUPPORT OF EXCAVATIONS. THE CONTRACTOR WILL BE RESPONSIBLE TO DESIGN AND INSTALL ADEQUATE SUPPORT OF EXCAVATION AND DEWATERING MEASURES.
10. EXCAVATIONS MUST BE DRY FOR INSPECTION BY THE ENGINEER PRIOR TO FOUNDATION CONSTRUCTION. EXCAVATION AND DEWATERING SHALL BE PERFORMED IN A WAY THAT DOES NOT UNDERMINE SURROUNDING STRUCTURES, ROADWAYS, AND UTILITIES.
11. THE CONTRACTOR SHALL SUBMIT A PILE SCHEDULE, PILE INSTALLATION, AND PILE DRIVING/TESTING PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER.
12. AFTER PILE DRIVING IS COMPLETE THE CONTRACTOR SHALL SUBMIT PILE DRIVING LOGS INCLUDING THE FINAL TIP ELEVATIONS AND THE RESULTS OF ANY DYNAMIC OR STATIC LOAD TESTING. SIGNIFICANT DEVIATIONS SHALL BE NOTED AS REVISIONS ON THE CONSTRUCTION DRAWINGS.

**SHEFFIELD**
**KELSEY ROAD**

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**WEST ABUTMENT PLAN AND ELEVATION**

### ℄ PILE COORDINATES TABLE

| PILE NO. | NORTHING | EASTING |
|---|---|---|
| P1 | 2854691.2523 | 140907.1871 |
| P2 | 2854686.9487 | 140904.0370 |
| P3 | 2854682.6452 | 140900.8868 |
| P4 | 2854678.3416 | 140897.7366 |
| P5 | 2854687.7084 | 140912.0287 |
| P6 | 2854683.4048 | 140908.8785 |
| P7 | 2854679.1012 | 140905.7283 |
| P8 | 2854674.7976 | 140902.5781 |

LEGEND:

- VERTICAL PILE
- TEST PILE
- 4V:1H BATTERED PILE

NOTES:

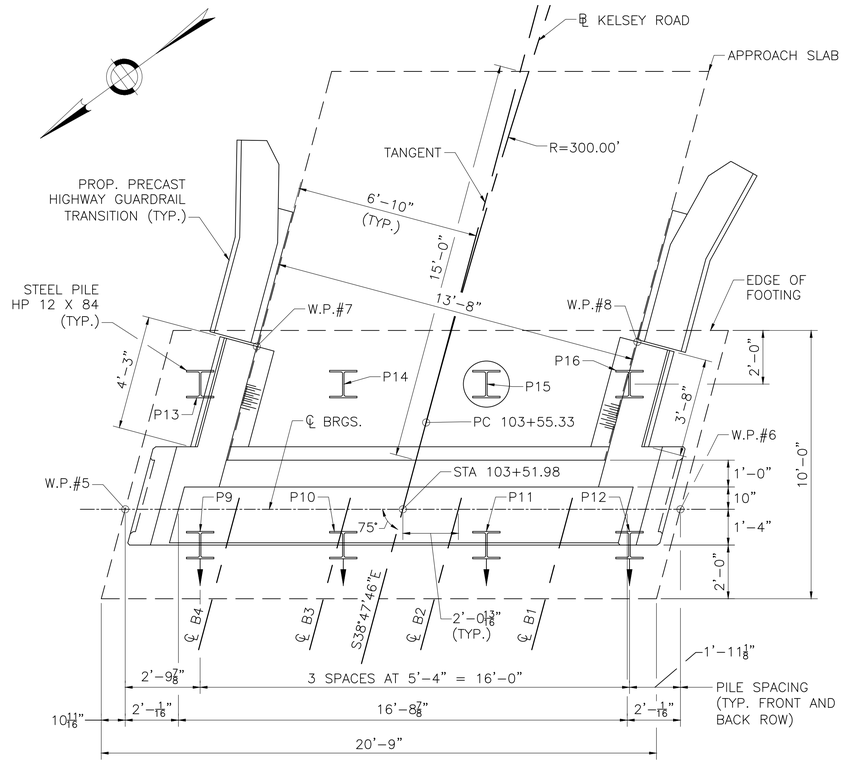
1. FOR SUBSTRUCTURE DETAILS, SEE SHEETS 13 AND 14.
2. ATTACH CLOSED CELL FOAM AS REQUIRED TO ALL BEAMS PRIOR TO PLACING THE CONCRETE FOR THE BACKWALL AND CURTAIN WALL.
3. SEAT ELEVATIONS ARE PROVIDED AT CENTERLINE OF BEARINGS. TOP OF BACKWALL AND PARAPET CONSTRUCTION JOINT ELEVATIONS ARE PROVIDED AT FRONT FACE OF BACKWALL.
4. CENTERLINE OF PILE COORDINATES ARE AT BOTTOM OF PILE CAP.

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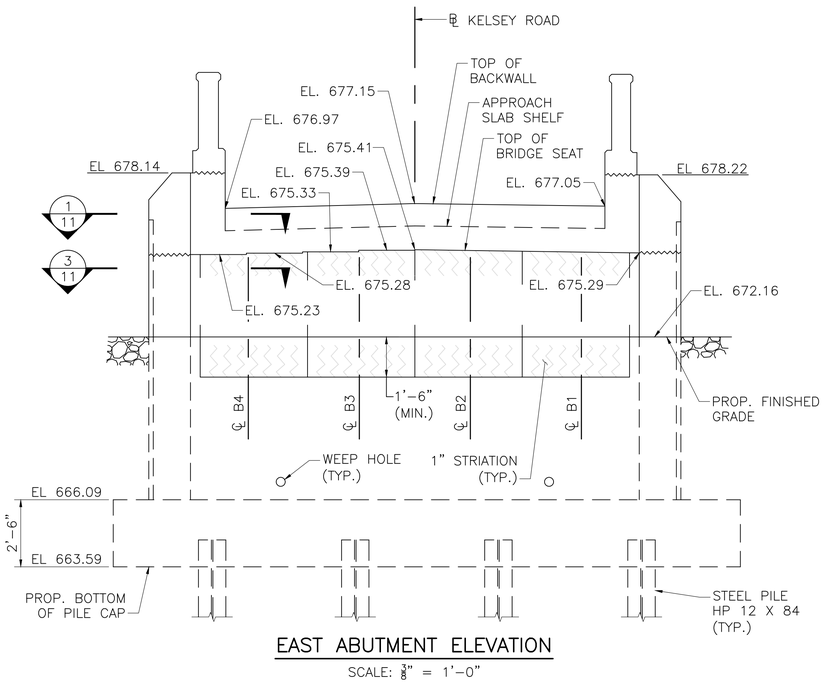


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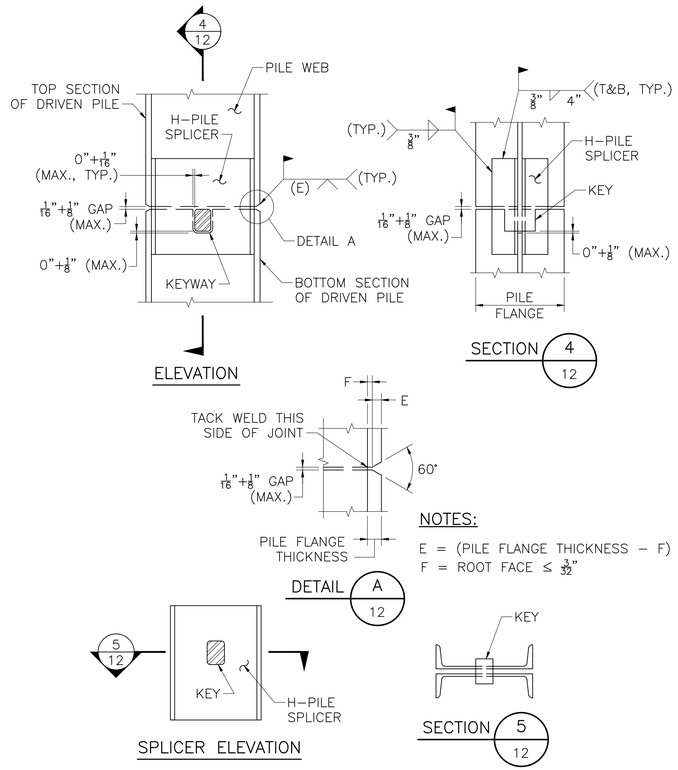

## EAST ABUTMENT PLAN

SCALE: 3/8" = 1'-0"



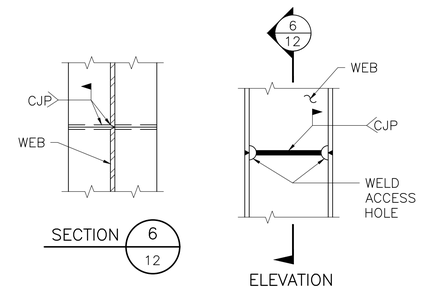

## EAST ABUTMENT ELEVATION

SCALE: 3/8" = 1'-0"




## WELDED MECHANICAL H–PILE SPLICE DETAILS

NOT TO SCALE




### NOTES:

1. ALL WELDS SHALL BE COMPLETE PENETRATION AND SHALL CONFORM TO THE AASHTO/AWS BRIDGE WELDING CODE, D1.5.
2. WELDING PROCEDURE SPECIFICATIONS MUST BE APPROVED BY THE ENGINEER PRIOR TO WELDING.
3. WHENEVER POSSIBLE ALL PILES SHALL BE SPLICED ON THE GROUND IN THE FLAT POSITION.
4. WEB SHALL BE COPED TO ALLOW FOR COMPLETE PENETRATION WELDING OF FLANGES.
5. WELDED MECHANICAL PILE SPLICERS MAY BE USED PROVIDED THAT COMPLETE DETAILS AND WELDING PROCEDURES HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER.

## CJP H–PILE SPLICE DETAILS

NOT TO SCALE

**SHEFFIELD**
**KELSEY ROAD**

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**EAST ABUTMENT PLAN AND ELEVATION**

## H–PILE SPLICER INSTALLATION NOTES:

1. CUT OFF AND SQUARE A MINIMUM LENGTH OF 1 FOOT FROM THE TOP OF THE PILE THAT HAS JUST BEEN DRIVEN INTO THE GROUND.
2. BEVEL THE TWO FLANGES OF THE DRIVEN PILE 30° DEGREES (+10°, −5°) EACH WITH A MAXIMUM ROOT FACE OF 3/32" (+0, −3/32).
3. GRIND ALL FLAME CUT SURFACES SMOOTH.
4. LAYOUT AND FLAME CUT THE KEYWAY IN THE WEB OF THE DRIVEN PILE FOR THE KEY OF THE H–PILE SPLICER WITH THE SPECIFIED TOLERANCES. RADIUS THE BOTTOM OF THE SLOT 3/8" IN EACH CORNER.
5. GRIND ALL FLAME CUT SURFACES SMOOTH.
6. SLIDE THE H–PILE SPLICER ONTO THE PILE. THE KEY OF THE SPLICER MUST SLIDE DOWN THE KEYWAY IN THE WEB OF THE DRIVEN PILE.
7. SQUARE THE END OF THE PILE SECTION TO BE ADDED TO THE PREVIOUSLY DRIVEN PILE. BEVEL BOTH FLANGES OF THE PILE 30° DEGREES (+10°, −5°) EACH WITH A MAXIMUM ROOT FACE OF 3/32" (+0, −3/32).
8. GRIND ALL FLAME CUT SURFACES SMOOTH.
9. SLIDE THE TOP PILE SECTION WITH A CRANE INTO THE H–PILE SPLICER SLEEVE. PLUMB PILE; ALIGN THE FLANGES OF BOTH PILE SECTIONS. THE FLANGES MUST BE IN ALIGNMENT WITH THE MAXIMUM TOLERANCE OF +1/8". TACK WELD IN PLACE ON BACK SIDE OF JOINT AS PER THE APPROVED FILLET WELDING PROCEDURE.
10. FAYING SURFACES BETWEEN THE H–PILE SPLICER AND THE PILE FLANGES SHALL HAVE A GAP OF 0" (+1/8"). CLAMPS OR HYDRAULIC JACKS MAY BE USED TO ACCOMPLISH THIS. NO HEATING WILL BE ALLOWED.
11. USING A 3/8" FILLET WELD, WELD THE H–PILE SPLICER TO THE FLANGES, 4 INCHES OF WELD AT THE TOP AND BOTTOM AT EACH CORNER AND THE LENGTH OF THE SPLICER AS PER THE APPROVED FILLET WELDING PROCEDURE.
12. USING A PARTIAL PENETRATION GROOVE WELD, WELD THE FLANGES AS PER THE APPROVED GROOVE WELDING PROCEDURE. THE SIZE SHALL BE SHOWN ON THE WELDING PROCEDURE.

### ℄ PILE COORDINATES TABLE

| PILE NO. | NORTHING | EASTING |
|---|---|---|
| P9 | 2854634.2011 | 140953.0512 |
| P10 | 2854629.8974 | 140949.9010 |
| P11 | 2854625.5937 | 140946.7510 |
| P12 | 2854621.2900 | 140943.6009 |
| P13 | 2854630.6573 | 140957.8927 |
| P14 | 2854626.3536 | 140954.7427 |
| P15 | 2854622.0499 | 140951.5926 |
| P16 | 2854617.7462 | 140948.4426 |

### LEGEND:

VERTICAL PILE

TEST PILE

4V:1H BATTERED PILE

### NOTES:

1. FOR PILE NOTES, SEE SHEET 11.
2. FOR SUBSTRUCTURE DETAILS, SEE SHEETS 13 AND 14.
3. ATTACH CLOSED CELL FOAM AS REQUIRED TO ALL BEAMS PRIOR TO PLACING THE CONCRETE FOR THE BACKWALL AND CURTAIN WALL.
4. SEAT ELEVATIONS ARE PROVIDED AT CENTERLINE OF BEARINGS. TOP OF BACKWALL AND PARAPET CONSTRUCTION JOINT ELEVATIONS ARE PROVIDED AT FRONT FACE OF BACKWALL.
5. CENTERLINE OF PILE COORDINATES ARE AT BOTTOM OF PILE CAP.

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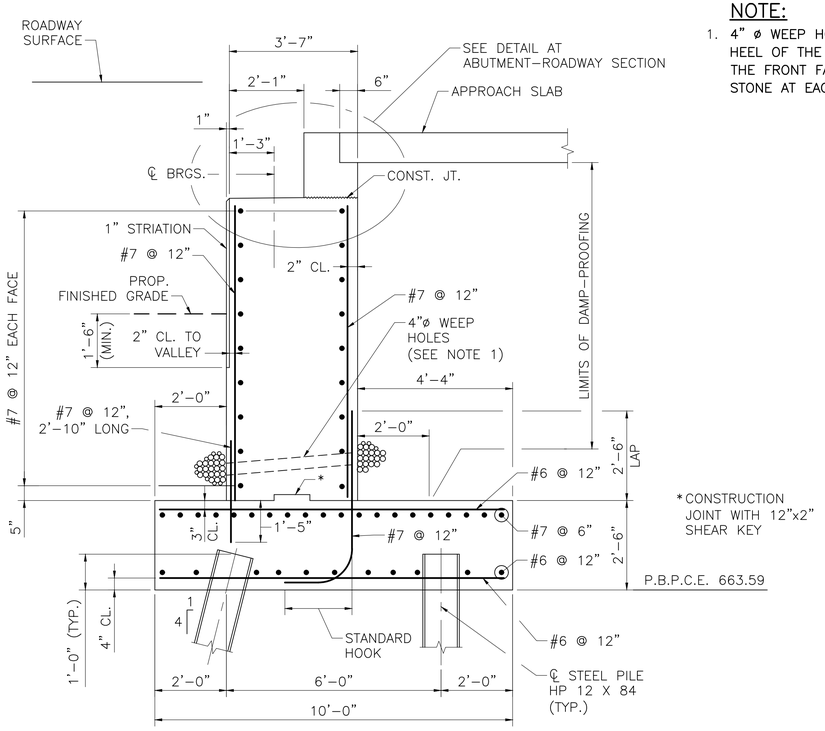
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**SUBSTRUCTURE DETAILS - 1**

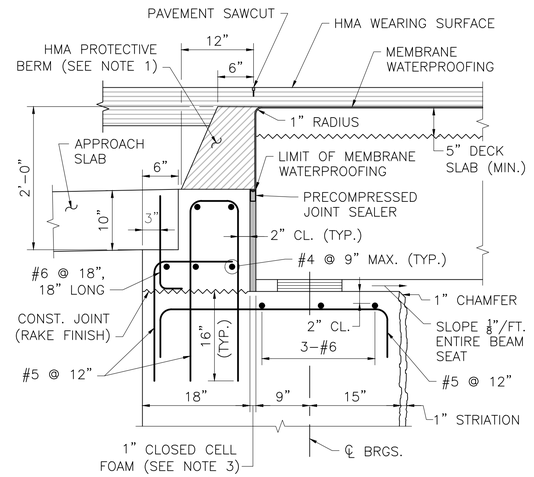



## TYPICAL ABUTMENT SECTION

SCALE: ½" = 1'-0"

**NOTE:**

1. 4" ø WEEP HOLES 10'-0" O.C. LOCATED 12" ABOVE THE HEEL OF THE FOOTING SLOPING 1" PER FOOT TOWARDS THE FRONT FACE. PROVIDE 1 CUBIC YARD OF CRUSHED STONE AT EACH END OF WEEP HOLE.

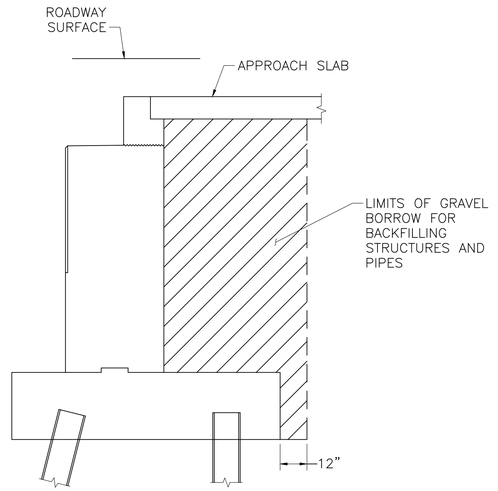



## DETAIL AT ABUTMENT – ROADWAY SECTION

SCALE: 1" = 1'-0"

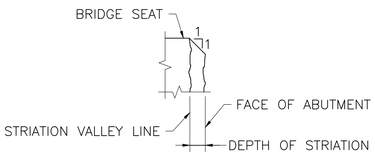
**ROADWAY SECTION NOTES:**

1. HMA PROTECTIVE BERM TO BE SUPERPAVE BRIDGE PROTECTIVE COURSE-9.5 POLYMER (SPC-B-9.5-P), PLACED IN 2" LAYERS AND COMPACTED WITH A MECHANICAL HAND-GUIDED TAMPER.
2. ALL REINFORCING SHOWN IN THIS DETAIL SHALL BE COATED BARS.
3. ATTACH CLOSED CELL FOAM TO BACK OF PRECAST BEAM WITH ADHESIVE.
4. ALL CURTAIN WALL AND BACKWALL CONCRETE SHALL BE PLACED AFTER ALL BEAMS HAVE BEEN ERECTED.



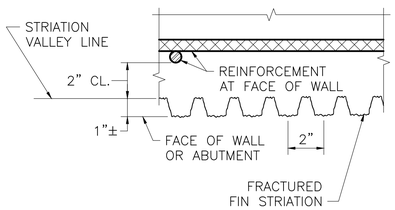

## LIMITS OF GRAVEL BORROW FOR BACKFILLING ABUTMENTS

NOT TO SCALE




## DETAIL AT BRIDGE SEAT

SCALE: 3" = 1'-0"

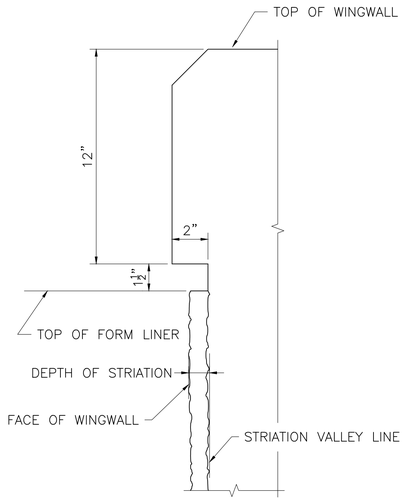



**NOTE:**

1. THE CONTRACTOR SHALL MAKE SURE THAT THE STRIATION FINS ARE PLUMB AND LINED UP VERTICALLY FROM PANEL TO PANEL FOR THE FULL HEIGHT OF THE WALL.

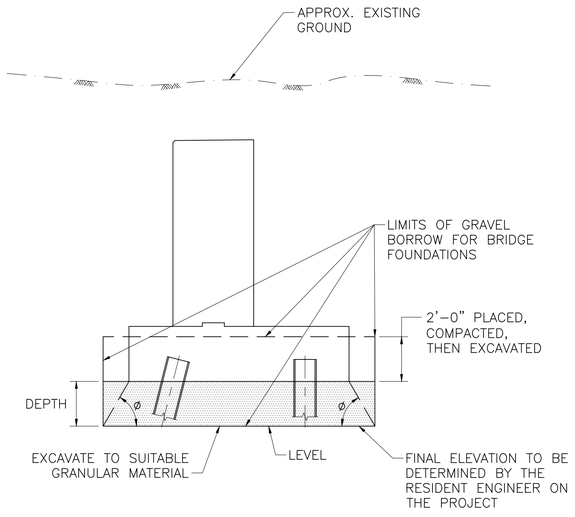
## TYPICAL STRIATION DETAIL

SCALE: 3" = 1'-0"




## DETAIL AT TOP OF WINGWALL

SCALE: 3" = 1'-0"




**NOTE:**

1. ø = 45° FOR DEPTH OF 5'-0" OR LESS.
   ø = 60° FOR DEPTH OVER 5'-0".

## LIMITS OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS

NOT TO SCALE

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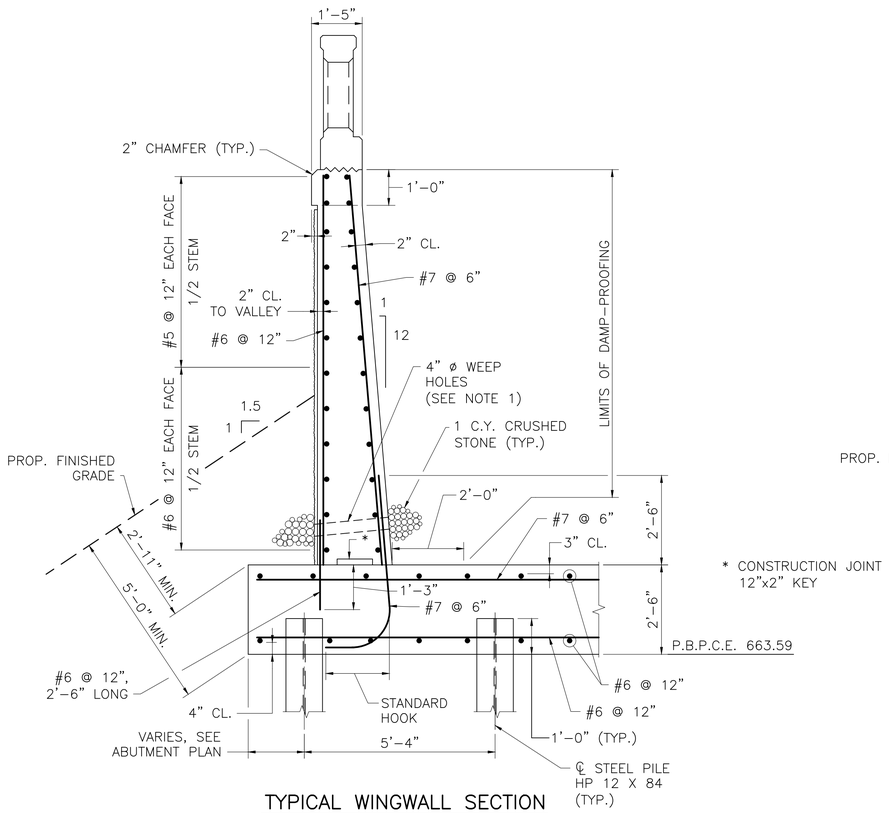
609068_BR13.DWG Plotted on 11-Sep-2026 1:45 PM

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**SHEFFIELD**
**KELSEY ROAD**

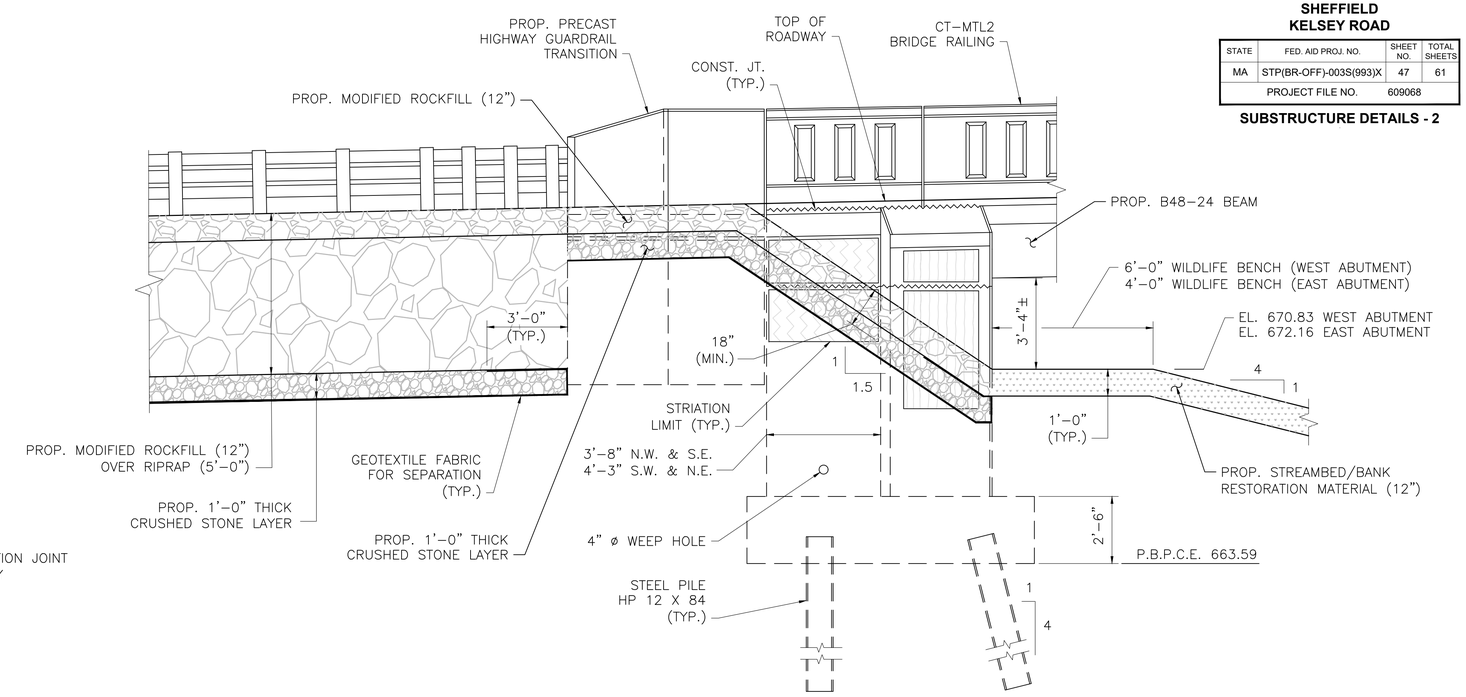
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
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**SUBSTRUCTURE DETAILS - 2**



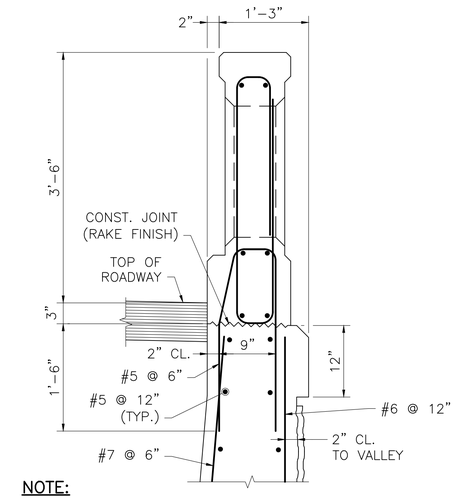

TYPICAL WINGWALL SECTION

SCALE: $\frac{1}{2}$" = 1'-0"




TYPICAL U-WINGWALL ELEVATION

SCALE: $\frac{3}{8}$" = 1'-0"




NOTE:

1. SEE SECTION THRU CT-MTL2 RAILING AT SAFETY CURB FOR DIMENSIONS AND REINFORCEMENT NOT SHOWN HERE.

TOP OF U-WINGWALL DETAILS AT SAFETY CURB

SCALE: 1" = 1'-0"

NOTES:

1. 4" ø WEEP HOLES 10'-0" O.C. LOCATED 12" ABOVE THE HEEL OF THE FOOTING SLOPING 1" PER FOOT TOWARDS THE FRONT FACE. PROVIDE 1 CUBIC YARD OF CRUSHED STONE AT EACH END OF WEEP HOLE.
2. RIPRAP SHALL BE SIZE $D_{50}$ = 30 INCHES, $D_{100}$ = 60 INCHES AND SHALL CONFORM TO M2.02.0 OF THE STANDARD SPECIFICATIONS.

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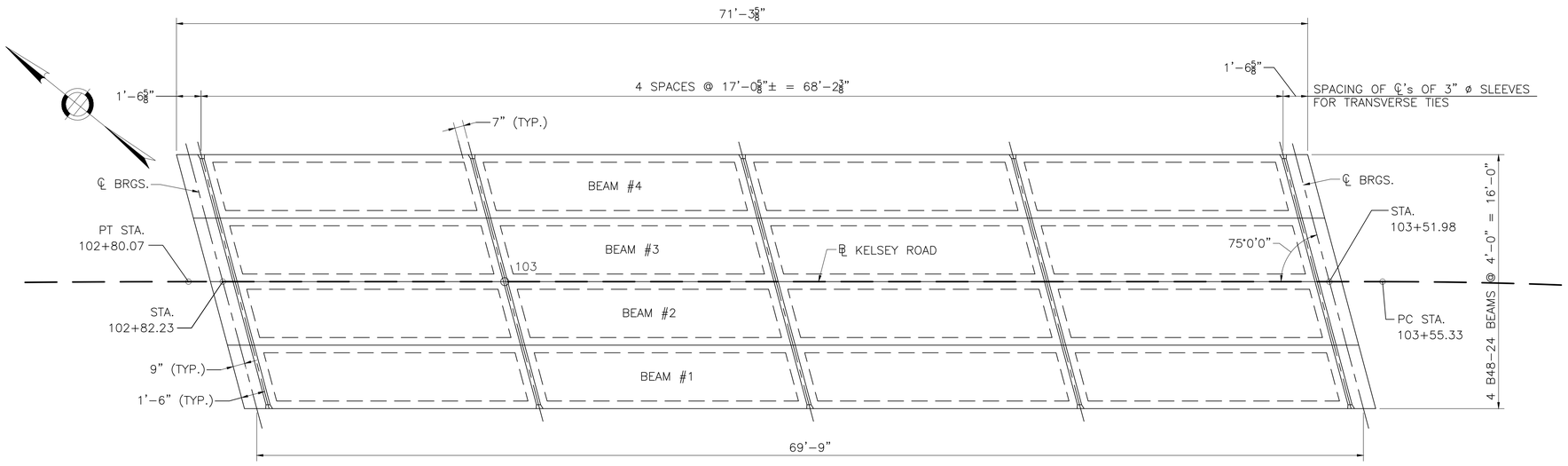


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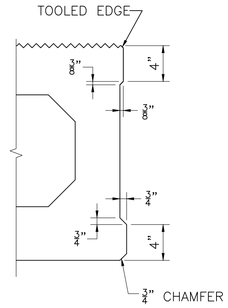
**SHEFFIELD**
**KELSEY ROAD**

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**FRAMING PLAN**




FRAMING PLAN
SCALE: 1/4" = 1'-0"




SHEAR KEY DETAIL
SCALE: 1 1/2" = 1'-0"

| ESTIMATED CAMBER AND DEFLECTIONS AT MIDSPAN (INCHES) | | |
|---|---|---|
| STATE OF BEAM | DIRECTION | BEAMS #1, #2, #3, #4 |
| CAMBER AT TRANSFER (2) | UP | 1.66 |
| CAMBER AT ERECTION | UP | 3.15 |
| FINAL NCDL DEFLECTION (3) | DOWN | 0.59 |
| FINAL CDL DEFLECTION (3) | DOWN | 0.43 |

NOTES:

1. CAMBER AND DEFLECTIONS IN THE TABLE ARE NOT GUARANTEED AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
2. THE BEAM CONCRETE MODULUS OF ELASTICITY AT TRANSFER USED IN THE ABOVE BEAM CAMBER IS ASSUMED TO BE 4,347,000 PSI.
3. THE BEAM CONCRETE MODULUS OF ELASTICITY USED IN THE ABOVE BEAM DEFLECTION IS ASSUMED TO BE 4,679,000 PSI (AT 28 DAYS).

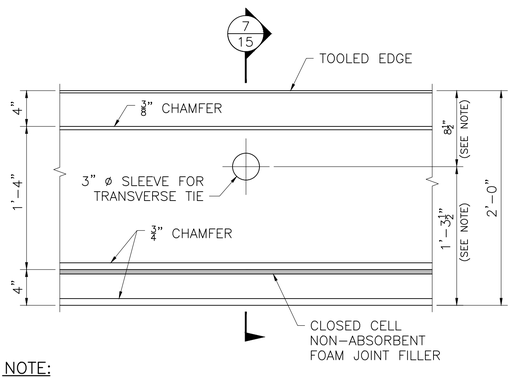
| BEAM DEAD LOAD FORCE EFFECTS AND LIVE LOAD DISTRIBUTION FACTORS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BEAM | DC1 | | DC2 | | DW (3) | | LL | |
| | MOMENT (FT-KIP) | SHEAR (KIP) | MOMENT (FT-KIP) | SHEAR (KIP) | MOMENT (FT-KIP) | SHEAR (KIP) | MOMENT (LANES) | SHEAR (LANES) |
| BEAMS #1 & #4 | 664 | 35 | 244 | 20 | 36 | 3 | 0.324 | 0.457 |
| BEAMS #2 & #3 | 668 | 36 | 253 | 13 | 70 | 2 | 0.310 | 0.452 |

NOTES:

1. DEAD LOAD FORCE EFFECTS AND LIVE LOAD DISTRIBUTION FACTORS ARE FROM 3D FEM ANALYSIS USING AASHTOWare BrR VERSION 7.4.0.3001.
2. THE LIVE LOAD DISTRIBUTION FACTORS ASSUME A MULTIPLE PRESENCE FACTOR OF 1.00.
3. DW EFFECTS ARE DUE TO AN ASSUMED FUTURE UTILITY LOAD OF 125 PLF.

## CONSTRUCTION SEQUENCE NOTES:

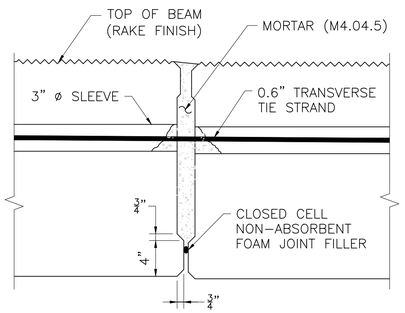
1. AFTER ALL BEAMS HAVE BEEN ERECTED, TENSION EACH TRANSVERSE TIE TO 5 KIPS.
2. FILL ALL KEYWAYS WITH MORTAR (M4.04.5). IF THE KEYWAYS ARE NOT FILLED WITHIN FIVE (5) DAYS AFTER THE BEAMS ARE ERECTED, THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM WEATHER AND DEBRIS UNTIL THEY ARE FILLED.
3. AFTER THE MORTAR HAS CURED (24 HOURS MINIMUM), TENSION EACH TRANSVERSE TIE TO 44 KIPS.
4. CONCRETE FOR DECK SLAB SHALL BE PLACED AFTER THE TRANSVERSE TIES HAVE BEEN FULLY TENSIONED.
5. NO TRAFFIC OR HEAVY EQUIPMENT WILL BE PERMITTED ON THE BRIDGE UNTIL ALL TRANSVERSE TIES HAVE BEEN PROPERLY TENSIONED AND THE DECK HAS BEEN CAST AND CURED PER THE STANDARD SPECIFICATIONS.



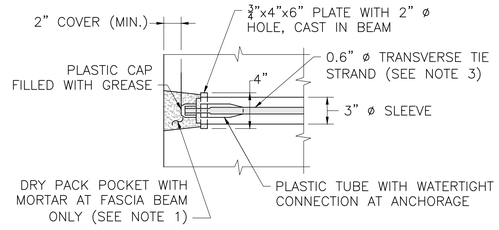

NOTE:

THE VERTICAL POSITION OF THE TRANSVERSE TIE STRANDS MUST BE COORDINATED WITH THE LOCATIONS OF THE PRESTRESSING STRANDS AND ADJUSTED AS NECESSARY TO AVOID INTERFERENCE.

TYPICAL BEAM ELEVATION AT TRANSVERSE TIE LOCATIONS
SCALE: 1 1/2" = 1'-0"




SECTION 7/15
SCALE: 1 1/2" = 1'-0"




NOTES:

1. MORTAR FOR EXTERIOR POCKETS SHALL CONFORM TO M4.04.5 AND SHALL BE THE SAME COLOR AND TEXTURE AS THE BEAM CONCRETE.
2. OTHER ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATERTIGHT AND CORROSION PROOF.
3. TRANSVERSE TIES SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITING GREASE BETWEEN THE STRAND AND SHEATH) FOR THE FULL LENGTH OF THE STRAND, EXCEPT AT THE ANCHORAGE LOCATION.

TRANSVERSE TIE ANCHORAGE
SCALE: 1 1/2" = 1'-0"

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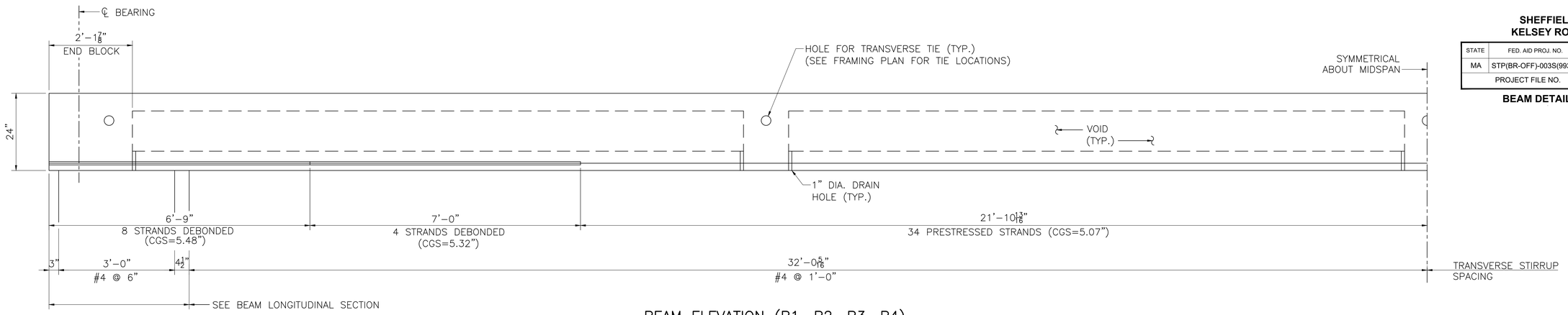


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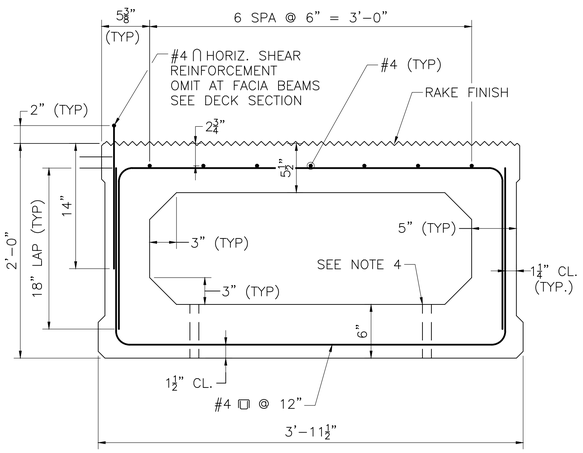
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**BEAM DETAILS - 1**




## BEAM ELEVATION (B1, B2, B3, B4)

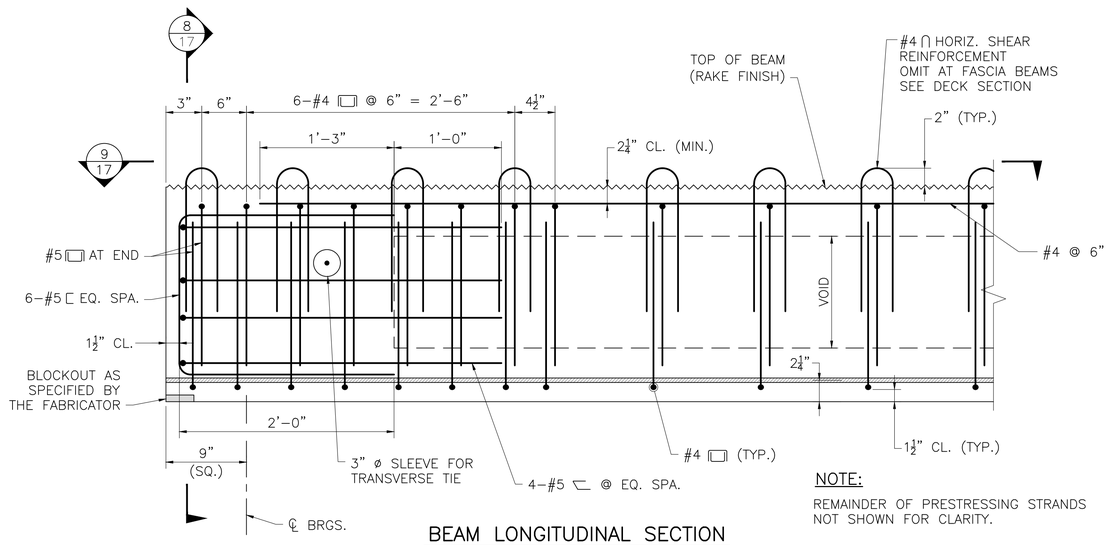
SCALE: ¾" = 1'–0"




(PRESTRESSING STRANDS ARE NOT SHOWN FOR CLARITY)

## MIDSPAN BEAM SECTION

SCALE: 1½" = 1'–0"




## BEAM LONGITUDINAL SECTION

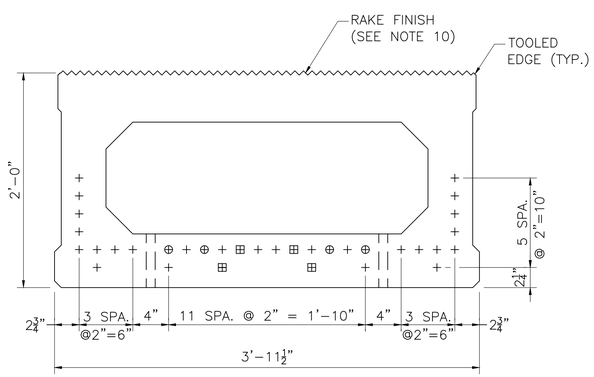
SCALE: 1½" = 1'–0"

NOTE:

REMAINDER OF PRESTRESSING STRANDS NOT SHOWN FOR CLARITY.

## NOTES:

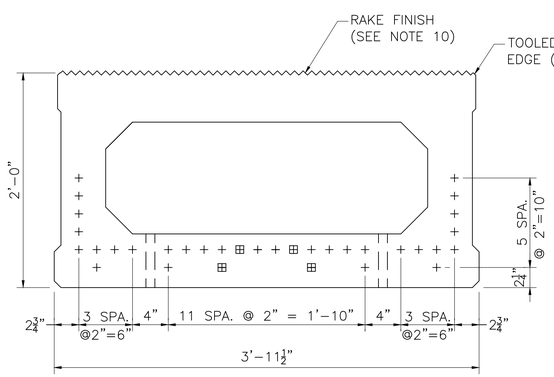
1. + DENOTES STRAIGHT STRANDS.
2. ⊕ DENOTES DEBONDED STRANDS AT 6'–9".
3. ⊞ DENOTES DEBONDED STRANDS AT 13'–9".
4. 1" ø DRAINS PLACED AT BOTH ENDS OF EACH VOID.
5. ALL PRETENSIONING ELEMENTS SHALL BE 0.6" ø, UNCOATED, SEVEN–WIRE, LOW RELAXATION STEEL STRANDS AND SHALL CONFORM TO AASHTO M 203.
6. THE NOMINAL TENSILE STRENGTH OF THE PRETENSIONING STRANDS SHALL BE 270 KSI.
7. THE INITIAL TENSION PER 0.6" ø STRAND SHALL BE 44 KIPS.
8. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 6500 PSI.
9. NO PRESTRESS SHALL BE TRANSFERRED TO THE CONCRETE UNTIL IT HAS ATTAINED A COMPRESSIVE STRENGTH, AS SHOWN BY A CYLINDER TEST, OF AT LEAST 5200 PSI.
10. THE TOP OF ALL BEAMS SHALL BE GIVEN A RAKED FINISH (¼" AMPLITUDE) ACROSS THE WIDTH (PERPENDICULAR TO THE BEAM'S AXIS).
11. THE FABRICATOR IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCEDURE.
12. TO CONTROL CRACKING AT THE END OF THE BEAM, THE FABRICATOR SHALL DEBOND APPROXIMATELY 50% OF THE STRANDS FOR THE FIRST 6" FROM THE END OF THE BEAM.




(REINFORCEMENT BARS ARE NOT SHOWN FOR CLARITY)

## STRAND LOCATION AT 6'–9" FROM END OF BEAM

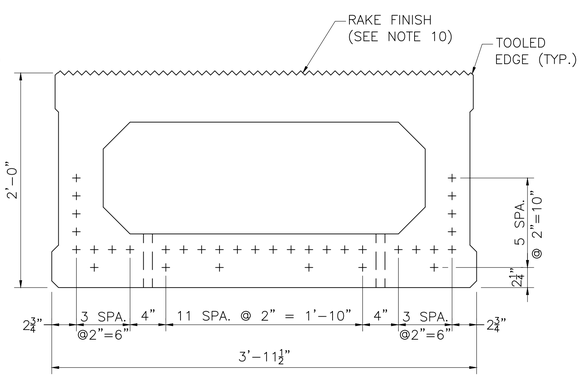
SCALE: 1½" = 1'–0"




(REINFORCEMENT BARS ARE NOT SHOWN FOR CLARITY)

## STRAND LOCATION AT 13'–9" FROM END OF BEAM

SCALE: 1½" = 1'–0"




(REINFORCEMENT BARS ARE NOT SHOWN FOR CLARITY)

## STRAND LOCATION AT MIDSPAN OF BEAM

SCALE: 1½" = 1'–0"

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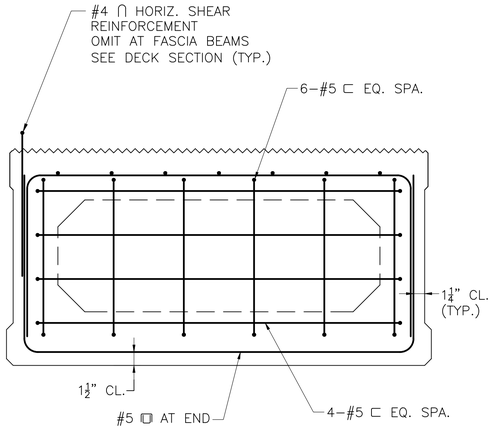


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**KELSEY ROAD**

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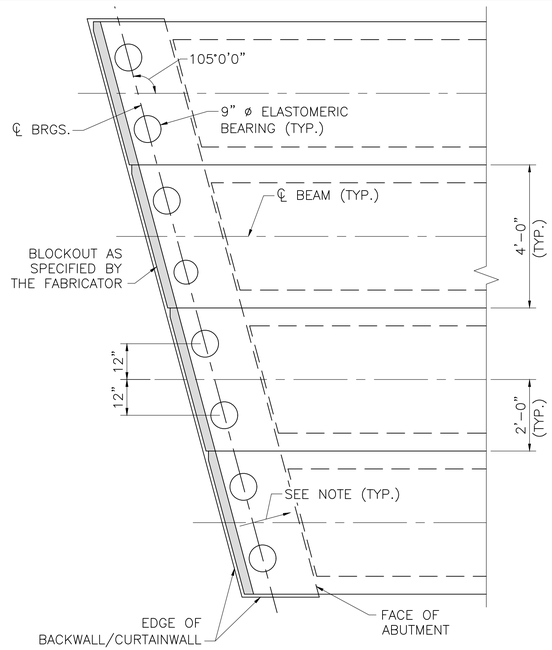
**BEAM DETAILS - 2**




(PRESTRESSING STRANDS ARE NOT SHOWN FOR CLARITY)

SECTION 8/16
SCALE: 1½" = 1'–0"

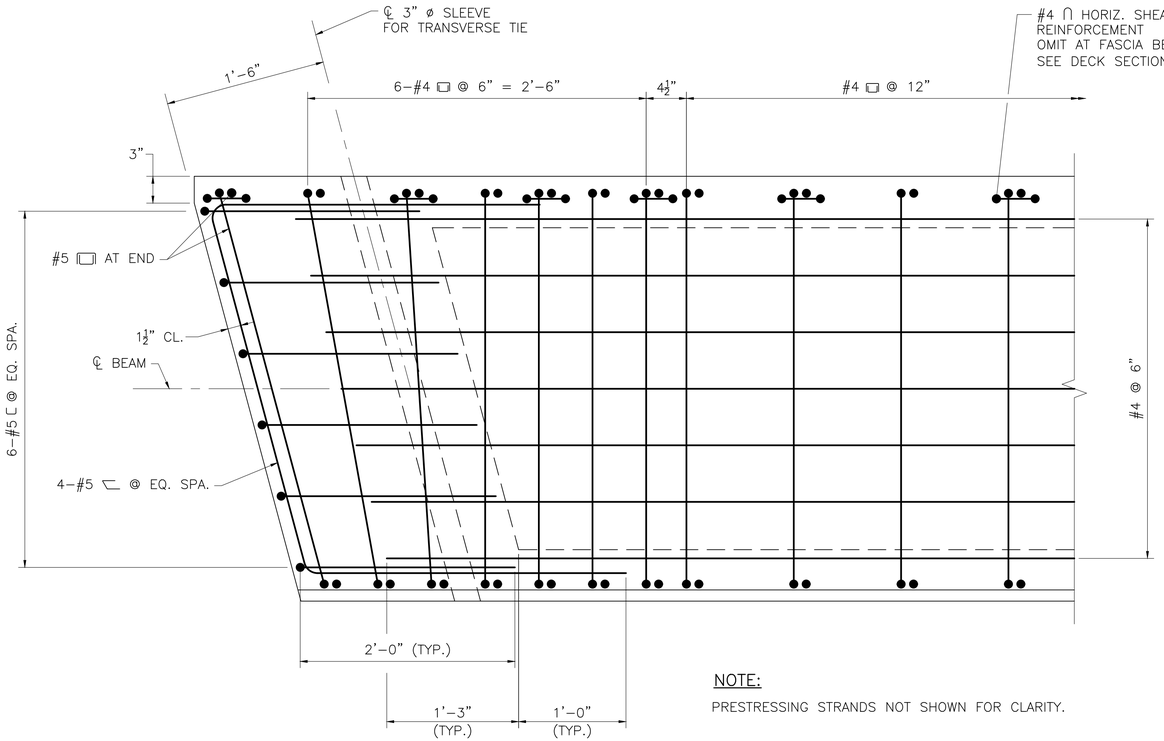
NOTE:
SEE MIDSPAN SECTION FOR DETAILS AND INFORMATION NOT SHOWN.




NOTE:
SLOPE BEAM SEAT 1%

## NOTES:

1. BEARING IS DESIGNED USING AASHTO METHOD B.
2. ELASTOMER SHALL HAVE A SHEAR MODULUS OF 0.160 KSI.
3. STEEL LAMINATES SHALL CONFORM TO ASTM A 1011 GRADE 36 OR HIGHER. ALL EDGES OF STEEL LAMINATES SHALL BE GROUND SMOOTH.
4. THE COMPRESSIVE DESIGN LOAD ON THE BEARING PAD IS 49.7 KIPS. THE COMPRESSIVE DESIGN STRESS IS THE RESULT OF DIVIDING THE COMPRESSIVE DESIGN LOAD BY THE AREA OF THE PAD AND IS EQUAL TO 0.782 KSI.
5. THE 25 YEAR CREEP STRAIN SHALL BE LIMITED TO 35%.
6. TAPERED INTERNAL LOAD PLATE SHALL CONFORM TO AASHTO M 270 GRADE 36 OR GRADE 50. ALL EDGES OF TAPERED INTERNAL LOAD PLATE SHALL BE GROUND SMOOTH.
7. ALL TAPERED BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A $\frac{1}{32}$" DEEP DIRECTION ARROW THAT POINTS UP–STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER BEARING IS INSTALLED.
8. BEAMS SHALL BE ERECTED WHEN THE AMBIENT TEMPERATURE IS BETWEEN 30 °F AND 90 °F. IF BEAMS ARE ERECTED AT OTHER AMBIENT TEMPERATURES, THEY WILL HAVE TO BE JACKED AND THE ELASTOMERIC BEARINGS RECENTERED WHEN THE TEMPERATURE RETURNS TO THAT RANGE.

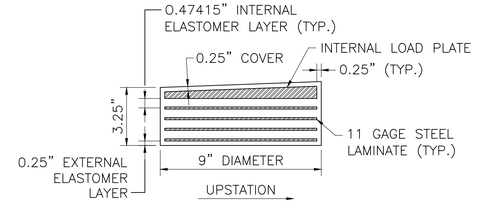



NOTE:
PRESTRESSING STRANDS NOT SHOWN FOR CLARITY.

SECTION 9/16
SCALE: 1½" = 1'–0"

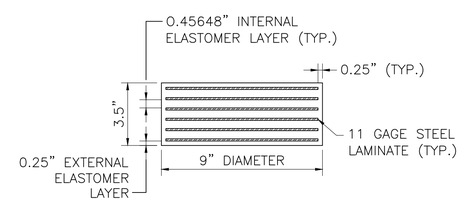
## LAYOUT OF BEARINGS

SCALE: ½" = 1'–0"



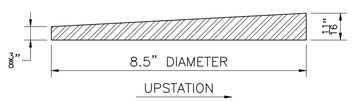

## ELASTOMERIC BEARING PAD–WEST ABUTMENT

SCALE: 3" = 1'–0"



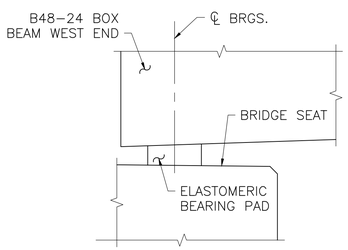

## ELASTOMERIC BEARING PAD–EAST ABUTMENT

SCALE: 3" = 1'–0"




## INTERNAL LOAD PLATE DETAIL

NOT TO SCALE




## ELEVATION–WEST ABUTMENT

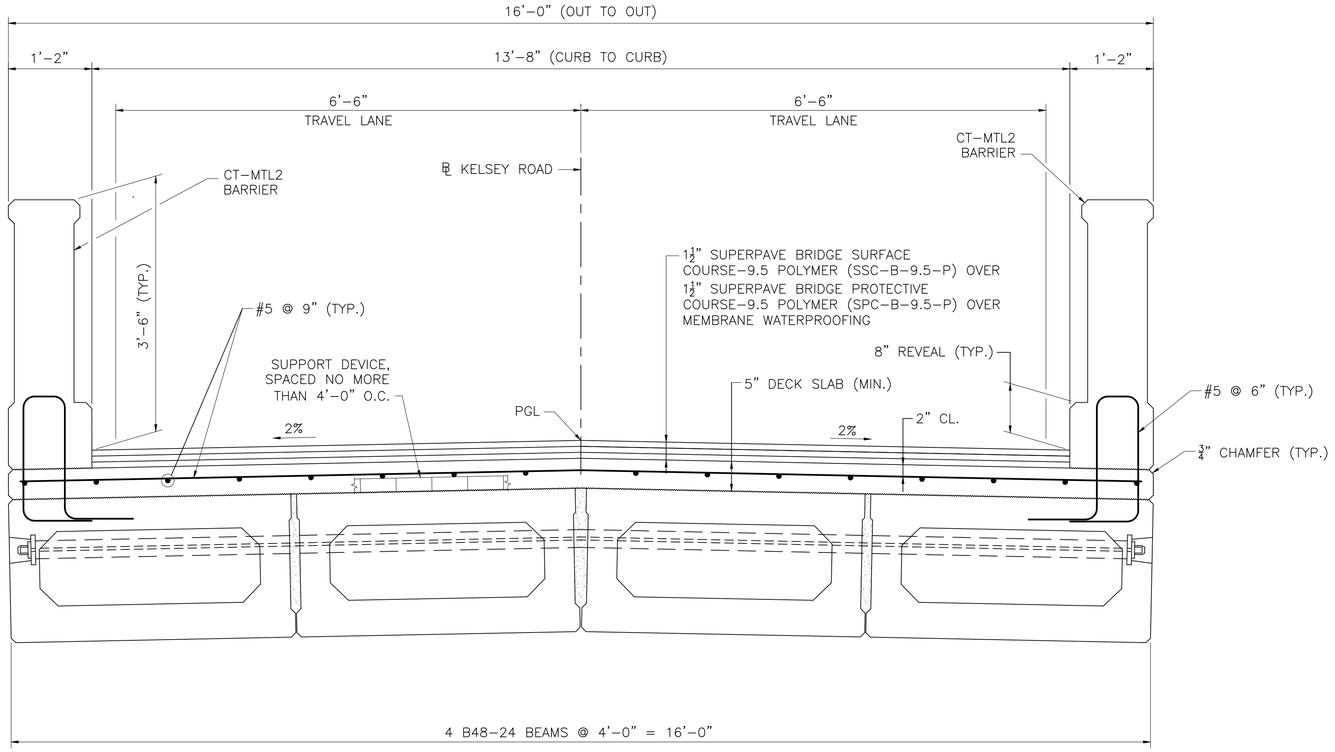
SCALE: 1" = 1'–0"

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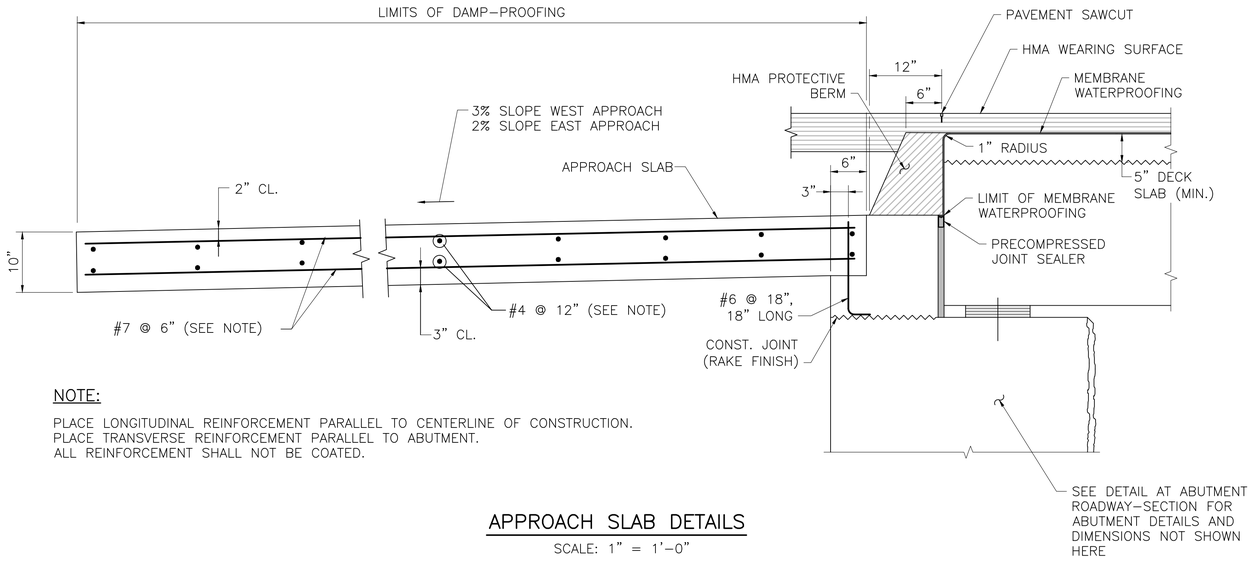


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## DECK SECTION

SCALE: 1" = 1'-0"




NOTE:

PLACE LONGITUDINAL REINFORCEMENT PARALLEL TO CENTERLINE OF CONSTRUCTION.
PLACE TRANSVERSE REINFORCEMENT PARALLEL TO ABUTMENT.
ALL REINFORCEMENT SHALL NOT BE COATED.

## APPROACH SLAB DETAILS

SCALE: 1" = 1'-0"

NOTES:

1. LONGITUDINAL REINFORCEMENT SHALL BE PLACED PARALLEL TO THE ℄ OF CONSTRUCTION. TRANSVERSE (PRIMARY) REINFORCEMENT SHALL BE PLACED PERPENDICULAR TO THE ℄ OF CONSTRUCTION.
2. ALL REINFORCEMENT AND SUPPORT DEVICES SHALL BE COATED.
3. THE FINISHED SURFACE OF THE BRIDGE DECK SHALL BE SMOOTH AND WITHOUT ANY PROJECTIONS THAT COULD PUNCTURE THE MEMBRANE WATERPROOFING OR DEPRESSIONS THAT COULD RETAIN WATER.

**SHEFFIELD**
**KELSEY ROAD**

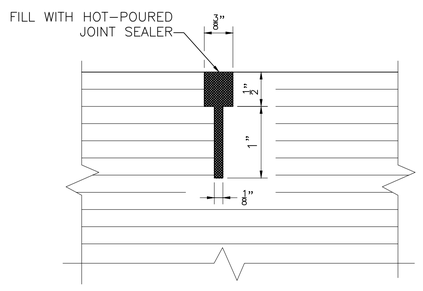
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**DECK SECTION AND APPROACH SLAB DETAILS**

| THEORETICAL TOP OF DECK ELEVATIONS ALONG THE SPAN LENGTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | INCREASING STATIONS → | | | | | | | | | | |
| | ℄ BRG. | 0.1L | 0.2L | 0.3L | 0.4L | 0.5L | 0.6L | 0.7L | 0.8L | 0.9L | ℄ BRG. |
| LEFT CURBLINE | 676.72 | 676.89 | 677.06 | 677.21 | 677.37 | 677.51 | 677.65 | 677.78 | 677.90 | 678.01 | 678.12 |
| CROWN | 676.89 | 677.06 | 677.23 | 677.39 | 677.54 | 677.69 | 677.82 | 677.95 | 678.07 | 678.19 | 678.30 |
| RIGHT CURBLINE | 676.79 | 676.96 | 677.12 | 677.28 | 677.44 | 677.59 | 677.72 | 677.85 | 677.98 | 678.09 | 678.20 |

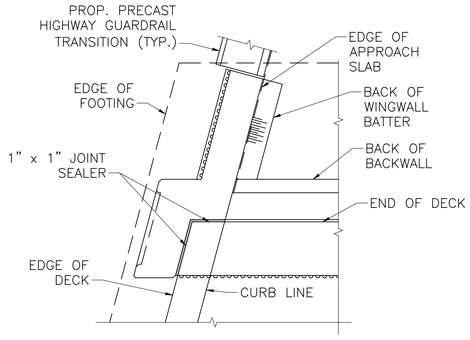
NOTES:

1. REFERENCE FOR RIGHT CURBLINE, CROWN, AND LEFT CURBLINE LOOKING UP STATION.
2. THE THEORETICAL TOP OF DECK ELEVATIONS ARE PROVIDED FOR SETTING THE SCREED ELEVATIONS FOR DECK FINISHING. THESE VALUES ARE CALCULATED BY TAKING THE PROPOSED TOP OF HMA ELEVATION ALONG THE SPAN AT THE POINTS INDICATED IN THE TABLE, SUBTRACTING THE THICKNESS OF THE HMA AND ADDING THE DEFLECTIONS DUE TO THE DECK AND OTHER SUPERIMPOSED DEAD LOADS.




## PAVEMENT SAWCUT DETAIL

NOT TO SCALE




## END OF DECK – PLAN

SCALE: ⅜" = 1'-0"

| 9/5/2026 | ISSUED FOR CONSTRUCTION |
|---|---|
| DATE | DESCRIPTION |
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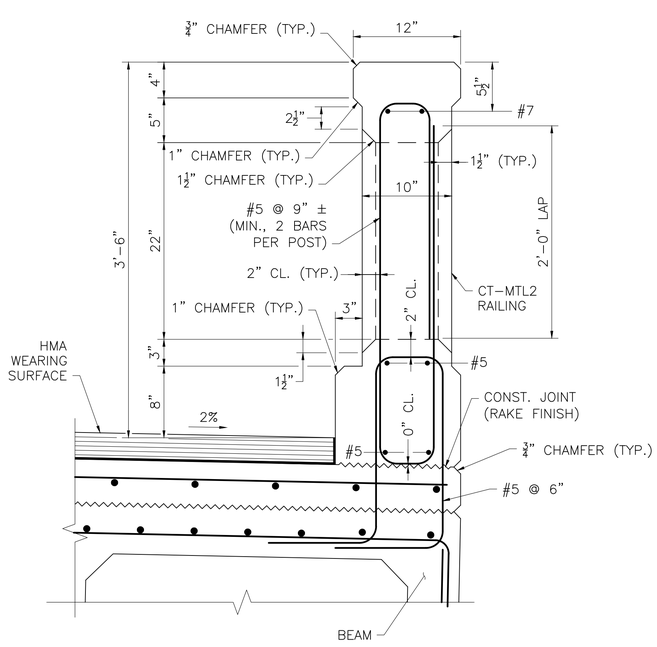


609068_BR18.DWG Plotted on 11-Sep-2026 1:46 PM
609068 Issued for Construction 5-Sep-2026

**SHEFFIELD**
**KELSEY ROAD**

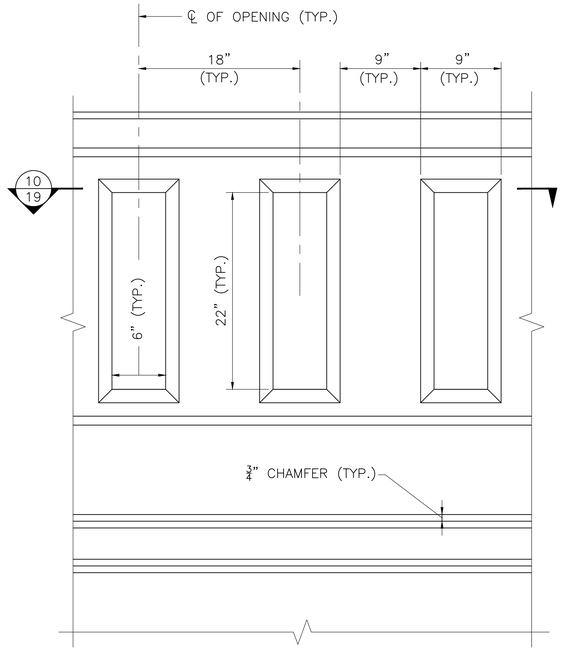
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 52 | 61 |
| | PROJECT FILE NO. 609068 | | |

**BRIDGE RAILING DETAILS**



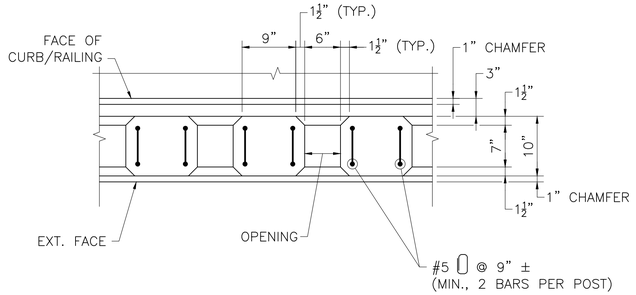

## SECTION THRU SAFETY CURB

SCALE: 1½" = 1'-0"



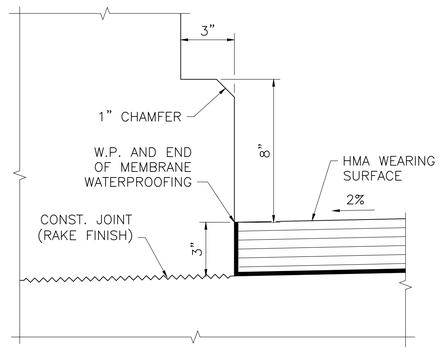

## SECTION THRU SAFETY CURB

SCALE: 1½" = 1'-0"



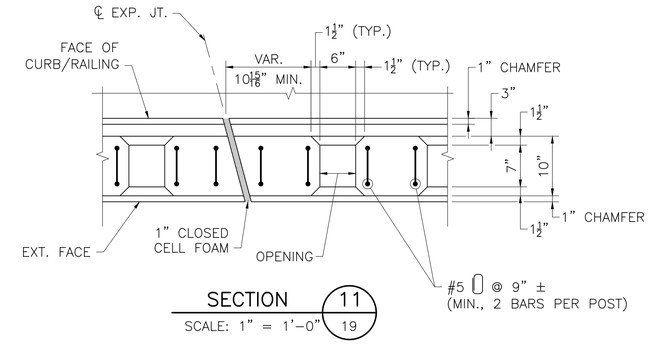

## SECTION 10/19

SCALE: 1" = 1'-0"



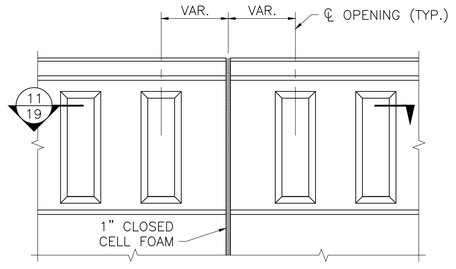

## FACE OF SAFETY CURB DETAILS

NOT TO SCALE



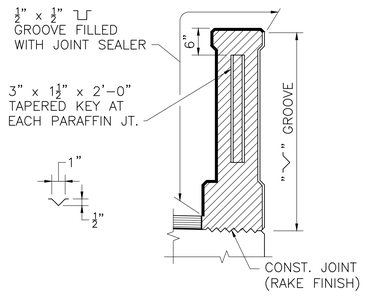

## SECTION 11/19

SCALE: 1" = 1'-0"



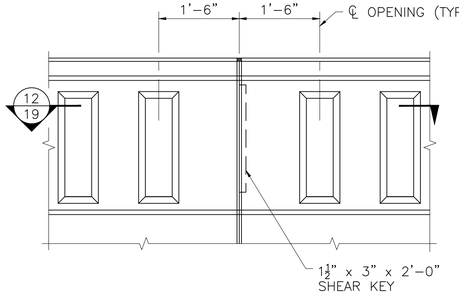

## EXPANSION JOINT

SCALE: ¾" = 1'-0"



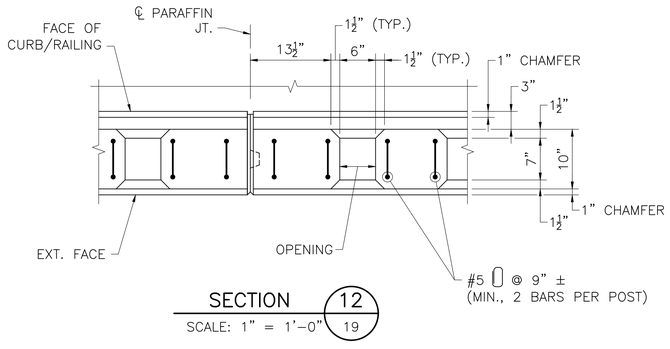

## PARAFFIN JOINT DETAILS

SCALE: ¾" = 1'-0"




## PARAFFIN JOINT

SCALE: ¾" = 1'-0"




## SECTION 12/19

SCALE: 1" = 1'-0"

NOTES:

1. ALL CONCRETE ABOVE SLAB SHALL BE POURED IN ALTERNATING SECTIONS WITH NOT LESS THAN 3 DAYS BETWEEN POURS.
2. DO NOT CARRY LONGITUDINAL BARS THROUGH THE PARAFFIN JOINTS. END THE REINFORCEMENT 2" CLEAR OF JOINT.
3. PARAFFIN JOINT SHALL BE SQUARE TO FACE OF CURB.
4. SEE GENERAL PLAN FOR EXPANSION AND PARAFFIN JOINT LAYOUT.

| DATE | DESCRIPTION |
|---|---|
| 9/5/2026 | ISSUED FOR CONSTRUCTION |

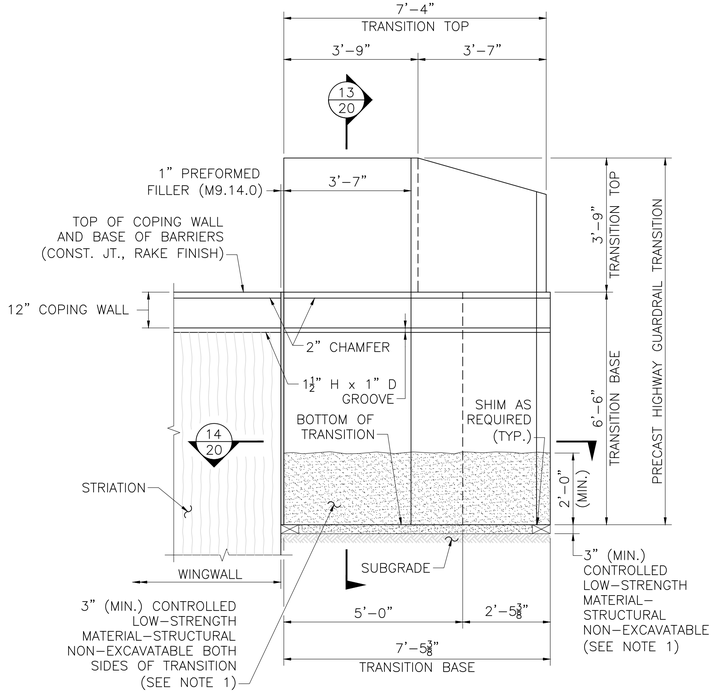
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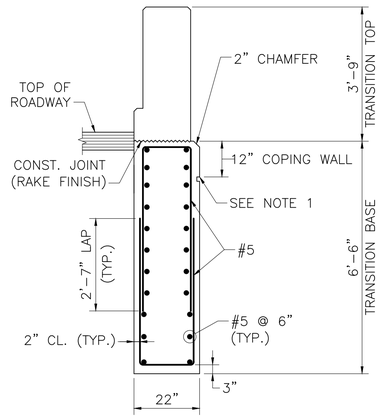
609068_BR19.DWG Plotted on 11-Sep-2026 1:46 PM

609068 Issued for Construction 5-Sep-2026




## PRECAST HIGHWAY GUARDRAIL TRANSITION ELEVATION AT U-WINGWALL

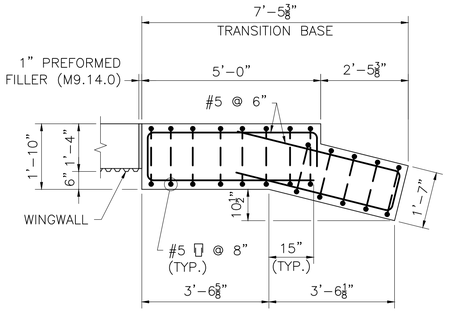
SCALE: ½" = 1'-0"




NOTES:

1. 1½" H x 1" D GROOVE. ALIGN WITH GROOVE AT TOP OF STRIATIONS.
2. REINFORCEMENT OF THE TRANSITION TOP IS NOT SHOWN FOR CLARITY.

SECTION 13
SCALE: ½" = 1'-0" (20)



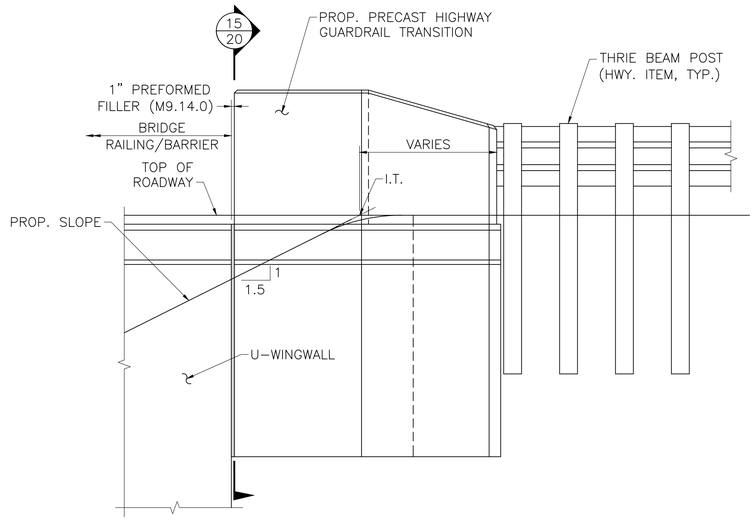

NOTE:

WINGWALL REINFORCEMENT AND STRIATIONS NOT SHOWN FOR CLARITY.

SECTION 14
SCALE: ½" = 1'-0" (20)

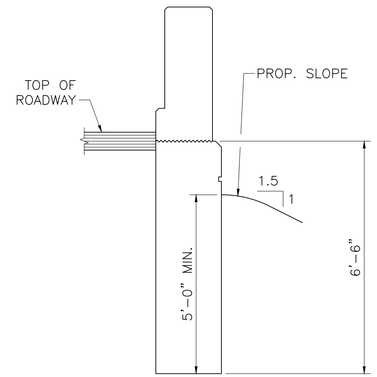
NOTES:

1. GRAVEL BORROW SHALL BE PLACED AND THOROUGHLY COMPACTED TO THE GRADE OF 3" (MIN.) BELOW THE INTENDED BOTTOM OF THE GUARDRAIL TRANSITION BASE AND TO A HEIGHT OF 2'-0" (MIN.) ON ALL SIDES OF THE TRANSITION BASE TO FORM A TRENCH IN WHICH TO SET THE TRANSITION.
2. CONTRACTOR SHALL SET THE PRECAST GUARDRAIL TRANSITION TO THE REQUIRED ELEVATION AND ALIGNMENT, AND BACKFILL GUARDRAIL TRANSITION WITH CONTROLLED LOW-STRENGTH MATERIAL-STRUCTURAL NON-EXCAVATABLE TO THE ELEVATION SHOWN.
3. BACKFILL THE REMAINDER OF EXCAVATION WITH GRAVEL BORROW, WHICH SHALL BE THOROUGHLY COMPACTED IN 12" LIFTS.
4. THE REST OF REINFORCEMENT IS NOT SHOWN FOR CLARITY.

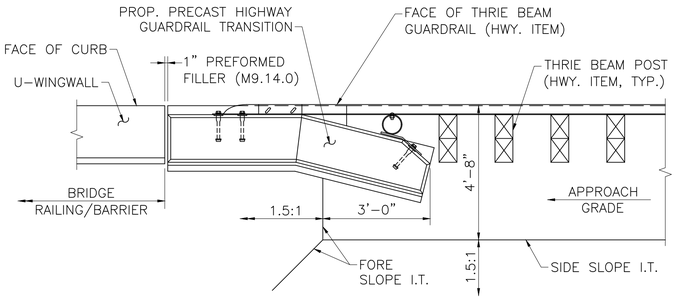



## GRADING REQUIREMENTS ELEVATION

SCALE: ½" = 1'-0"




SECTION 15
SCALE: ½" = 1'-0" (20)




## GRADING REQUIREMENTS PLAN

SCALE: ½" = 1'-0"

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 53 | 61 |
| | PROJECT FILE NO. 609068 | | |

**HIGHWAY GUARDRAIL TRANSITION DETAILS - 1**

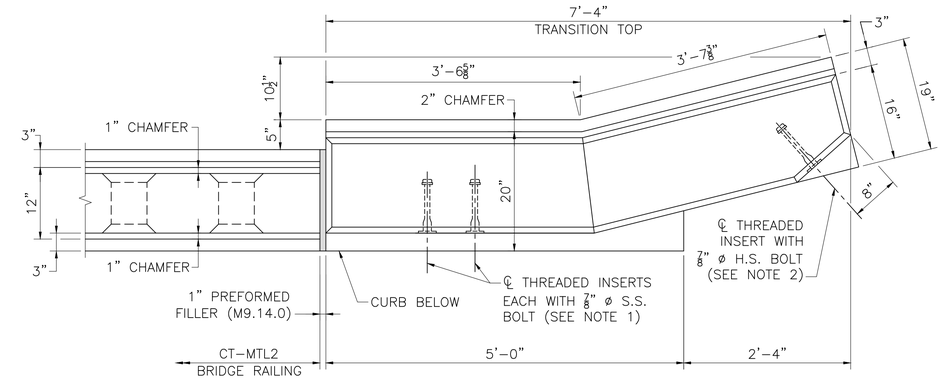
| 9/5/2026 | ISSUED FOR CONSTRUCTION |
|---|---|
| DATE | DESCRIPTION |

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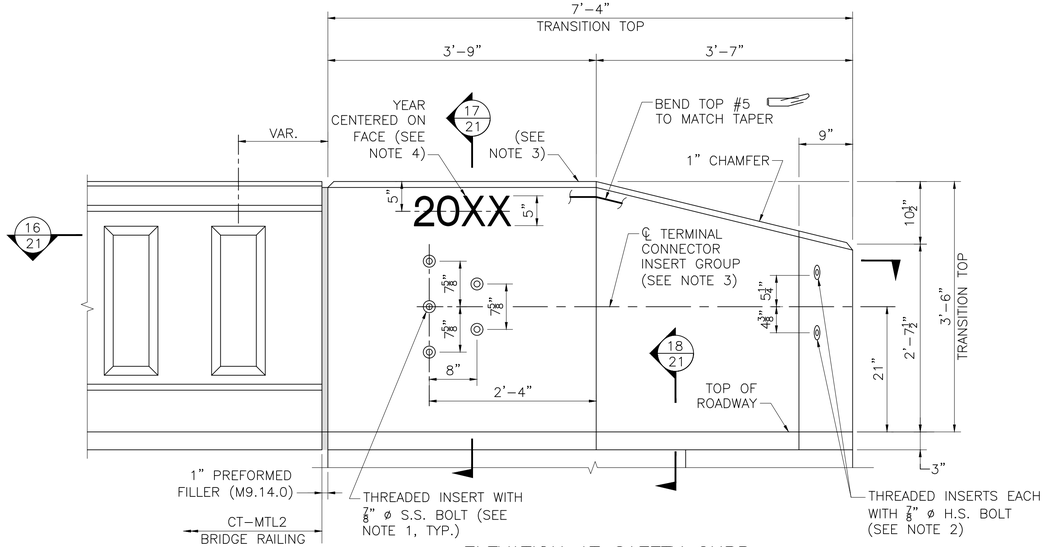
609068_BR20.DWG Plotted on 11-Sep-2026 1:46 PM

609068 Issued for Construction 5-Sep-2026



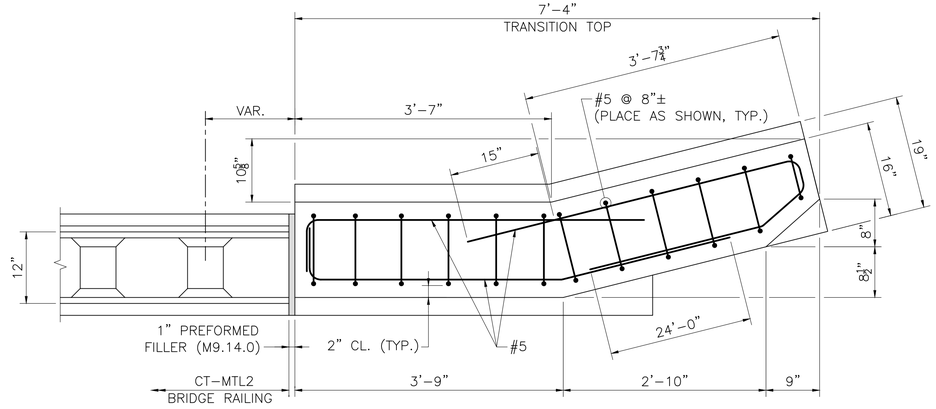

PLAN AT SAFETY CURB

SCALE: 1" = 1'–0"



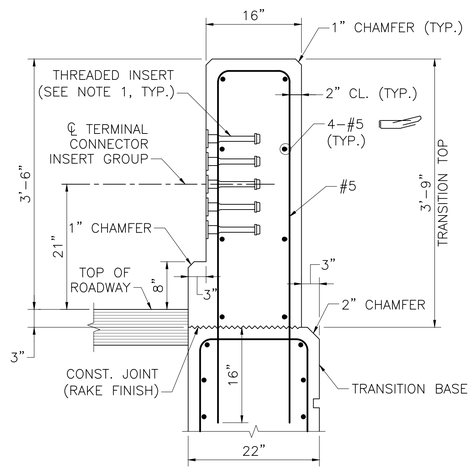

ELEVATION AT SAFETY CURB

SCALE: 1" = 1'–0"




SECTION 16/21

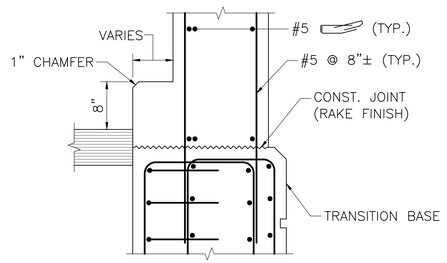
SCALE: 1" = 1'–0"




SECTION AT SAFETY CURB

SECTION 17/21

SCALE: 1" = 1'–0"




SECTION AT SAFETY CURB

SECTION 18/21

SCALE: 1" = 1'–0"

## NOTES:

1. THREADED INSERTS SHALL BE PREQUALIFIED BY THE MANUFACTURER AS BEING CAPABLE OF DEVELOPING A NOMINAL SHEAR RESISTANCE OF 20 KIPS PER ⅞" ø S.S. BOLT. S.S. BOLTS SHALL BE ⅞" ø x 1½" LONG FULLY THREADED CONFORMING TO ASTM F593D WITH AISI TYPE 304N S.S. WASHERS. INSERTS FOR ⅞" STAINLESS STEEL BOLTS SHALL BE GALVANIZED AND CAST INTO THE TRANSITION.
2. ⅞" ø HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3125 GRADE 325 TYPE 1 GALVANIZED. USE ADDITIONAL WASHERS AS REQUIRED TO PROPERLY ENGAGE THE BOLTS.
3. THE TRANSITION MAY BE CAST SQUARE AND SET PLUMB WITH THE MINIMUM EMBEDMENT DEPTH SHOWN. THE TERMINAL CONNECTOR INSERT GROUP SHALL BE SQUARE TO THE POST.
4. USE LATEST CONTRACT COMPLETION YEAR IN EFFECT WHEN THE FIRST GUARDRAIL TRANSITION IS CAST. USE THIS YEAR FOR ALL GUARDRAIL TRANSITIONS.
5. ALL CONCRETE FOR THE PRECAST HIGHWAY GUARDRAIL TRANSITION SHALL BE 5000 HP CEMENT CONCRETE.
6. LIFTING DEVICES (NOT SHOWN), INCLUDING THEIR NUMBER AND LOCATION, SHALL BE DESIGNED AND DETAILED BY THE PRECASTER. THEY SHALL BE GALVANIZED AND SHALL BE PLACED AND RECESSED IN POCKETS TO PROVIDE 1½" CLEAR COVER TO THE FACE OF THE TRANSITION CONCRETE. THESE DEVICES SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS ALONG WITH ALL SUPPORTING CALCULATIONS AND/OR CATALOG CUTS. ONCE THE PRECAST TRANSITION IS SET IN PLACE, THE LIFTING DEVICE POCKETS SHALL BE FILLED WITH A NON–SHRINK GROUT THAT MATCHES THE COLOR OF THE TRANSITION CONCRETE WHEN CURED AND THE FILLED POCKETS SHALL BE RUBBED WITH A CORUNDUM STONE TO BLEND OUT THE JOINTS.

**SHEFFIELD**
**KELSEY ROAD**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 54 | 61 |
| PROJECT FILE NO. | 609068 | | |

**HIGHWAY GUARDRAIL TRANSITION DETAILS - 2**

| 9/5/2026 | ISSUED FOR CONSTRUCTION |
|---|---|
| DATE | DESCRIPTION |

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609068_BR21.DWG Plotted on 11-Sep-2026 1:46 PM

609068 Issued for Construction 5-Sep-2026

**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

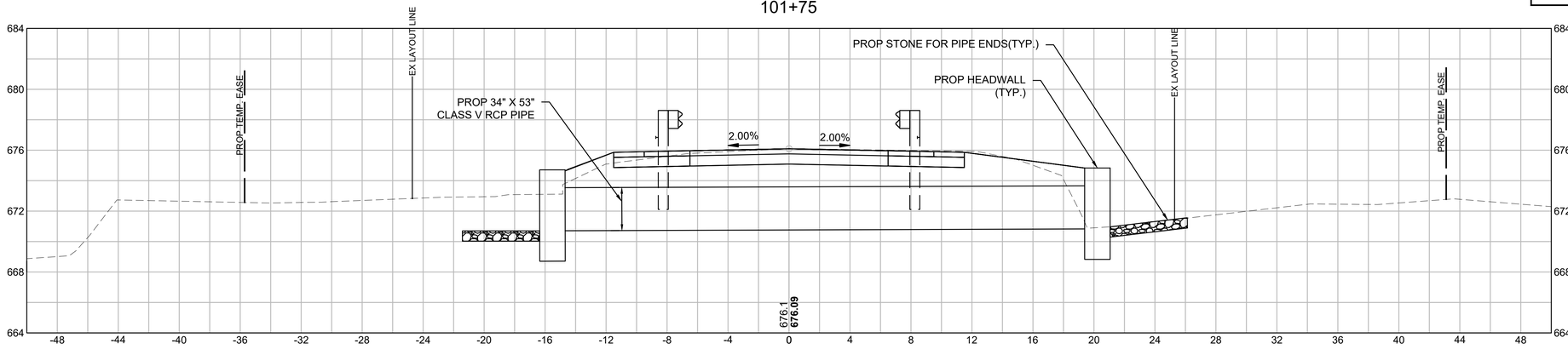
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 55 | 61 |
| PROJECT FILE NO. 609068 | | | |

**CROSS SECTIONS**

609068_HD (SHEFFIELD CROSS SECTION 01).DWG Plotted on 13-Aug-2026 11:25 AM

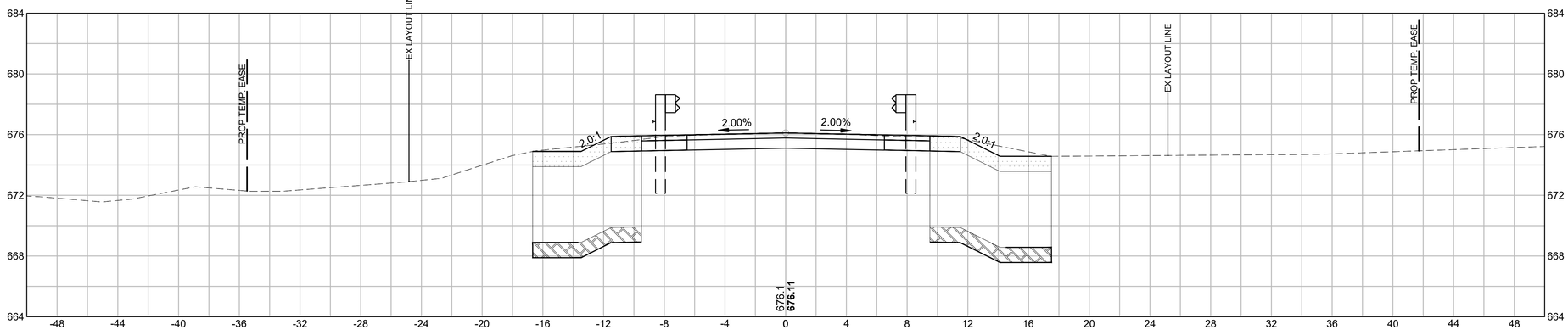
## 101+75

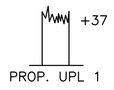
CUT: 38.96 SF
FILL: 9.11 SF




## 101+50

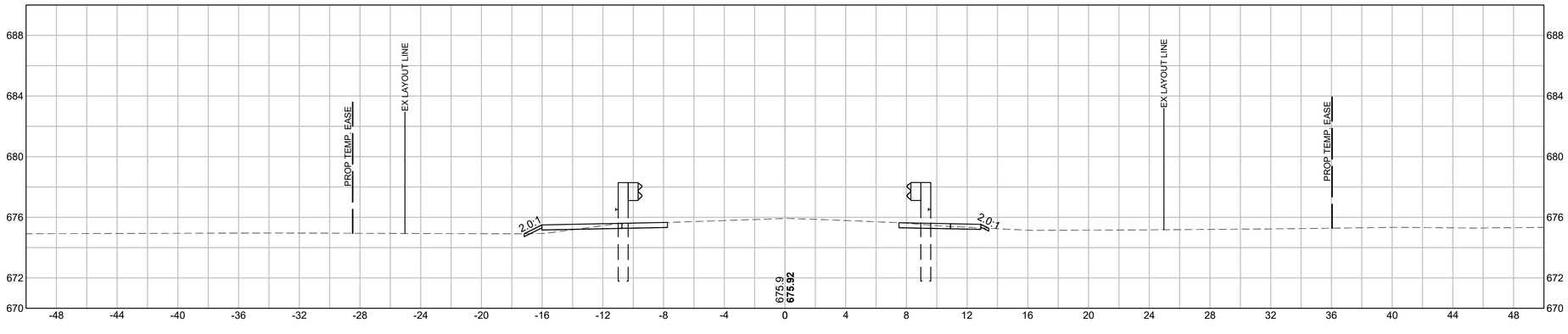
CUT: 124.96 SF
FILL: 1.86 SF




## 101+00

CUT: 2.63 SF
FILL: 2.66 SF




4 0 4 8
SCALE IN FEET

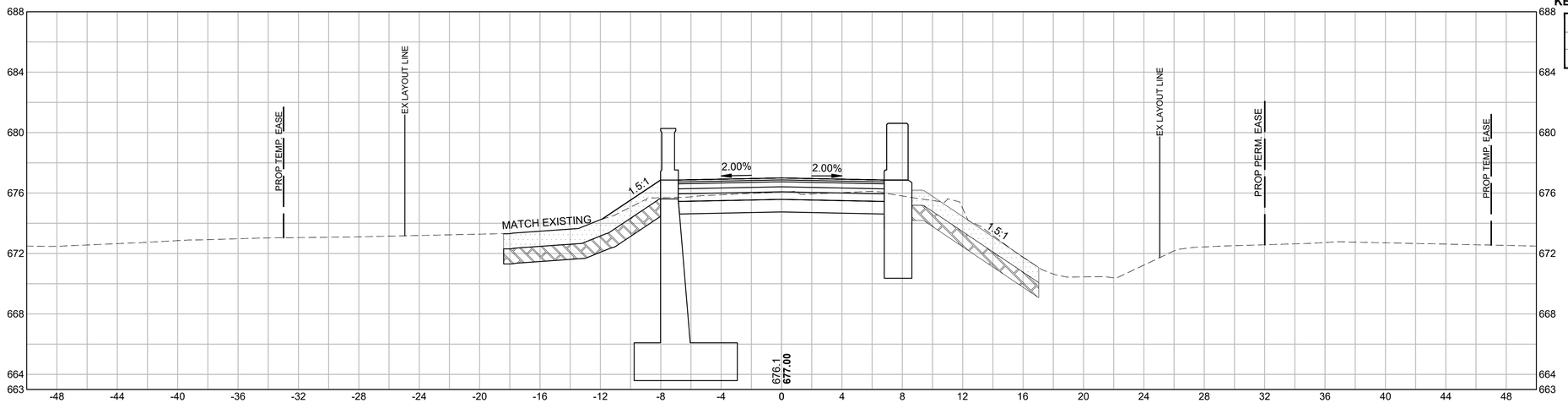
**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 56 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CROSS SECTIONS**

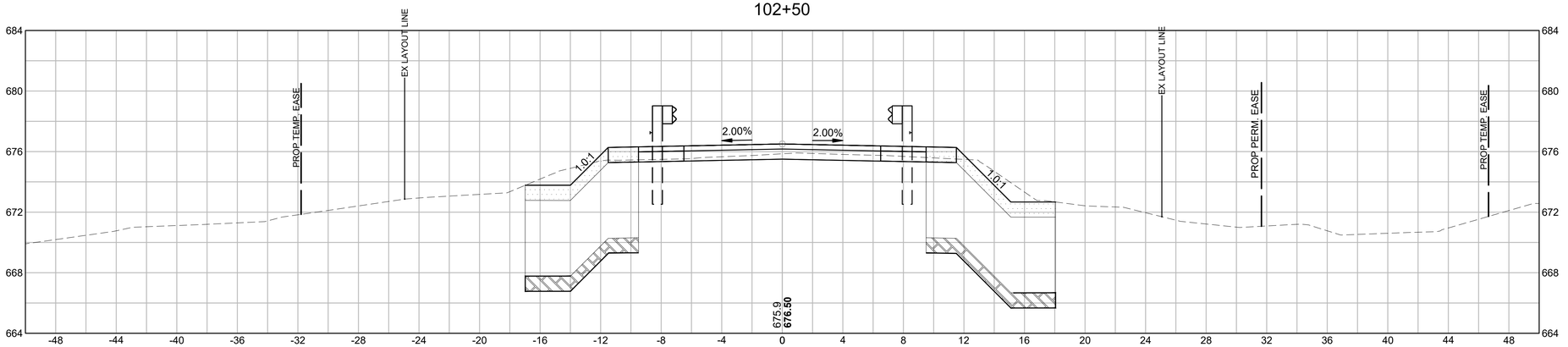
## 102+75

CUT: 55.29 SF
FILL: 2.68 SF



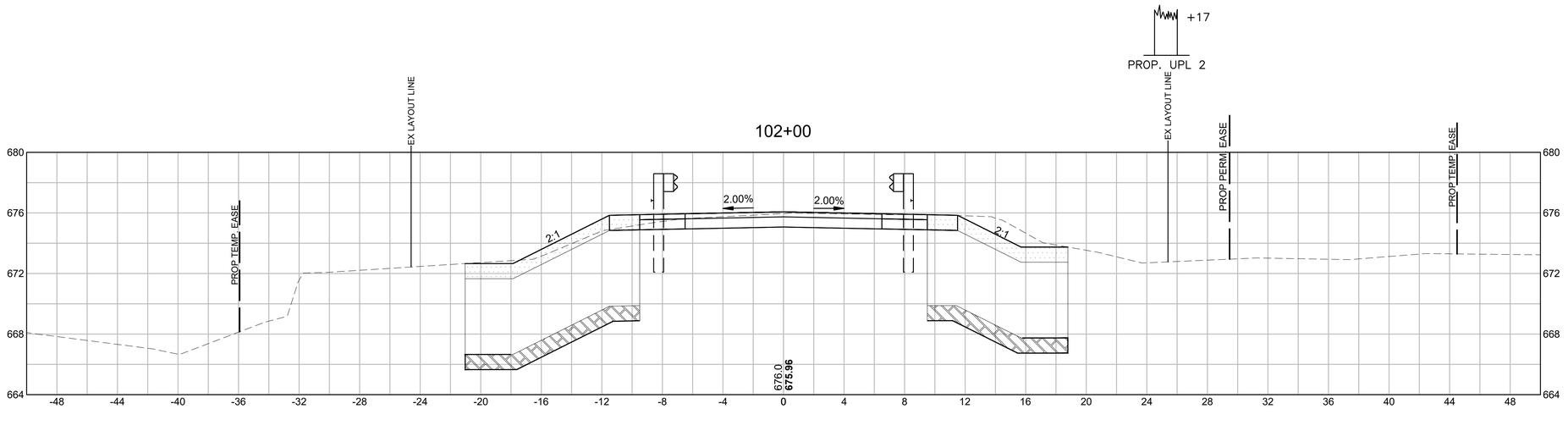

## 102+50

CUT: 120.16 SF
FILL: 17.21 SF




## 102+00

CUT: 162.70 SF
FILL: 8.22 SF




4 0 4 8
SCALE IN FEET

609068_HD (SHEFFIELD CROSS SECTION 02).DWG Plotted on 13-Aug-2026 11:25 AM

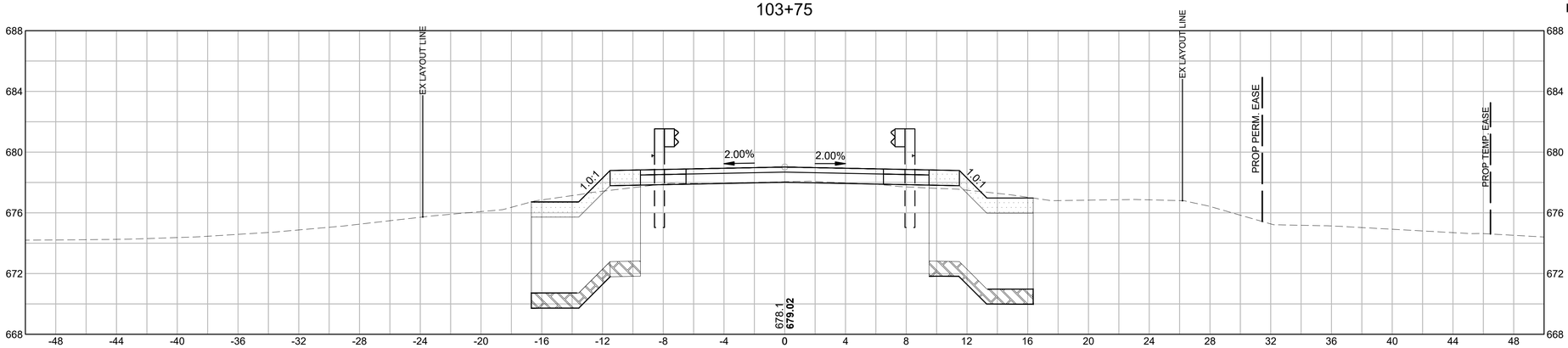
**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 57 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CROSS SECTIONS**

## 103+75

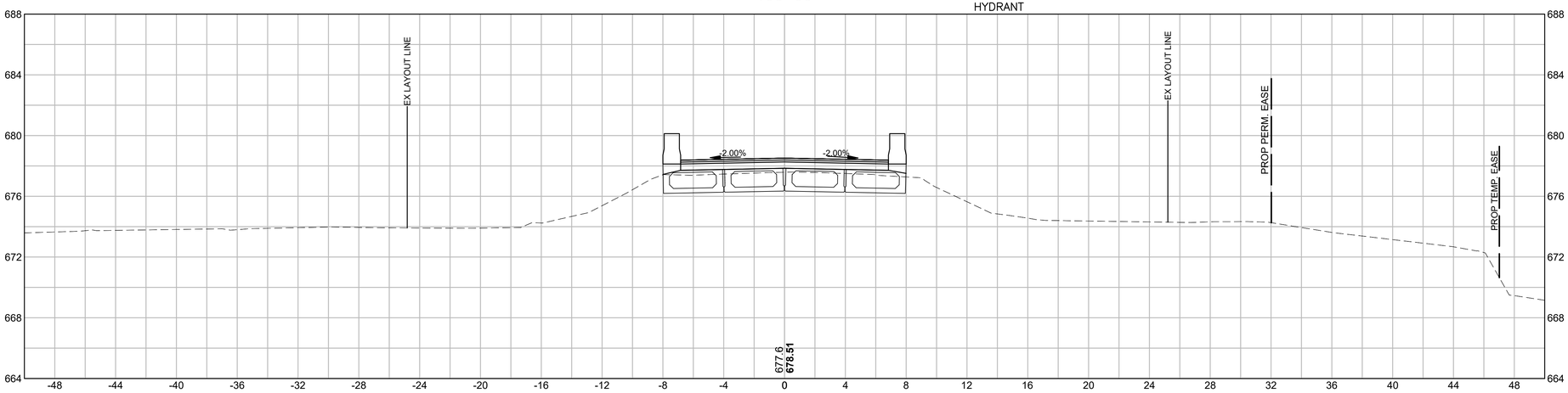
CUT: 93.84 SF
FILL: 25.56 SF




## 103+50

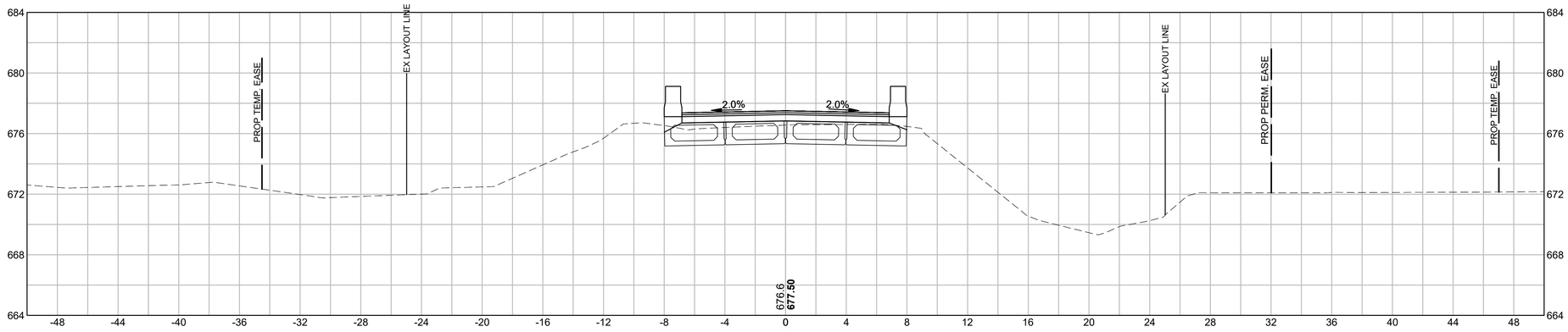
CUT: 116.04 SF
FILL: 0.03 SF

+64
EXIST DRY HYDRANT




## 103+00

CUT: 183.17 SF
FILL: 0.00 SF




4 0 4 8
SCALE IN FEET

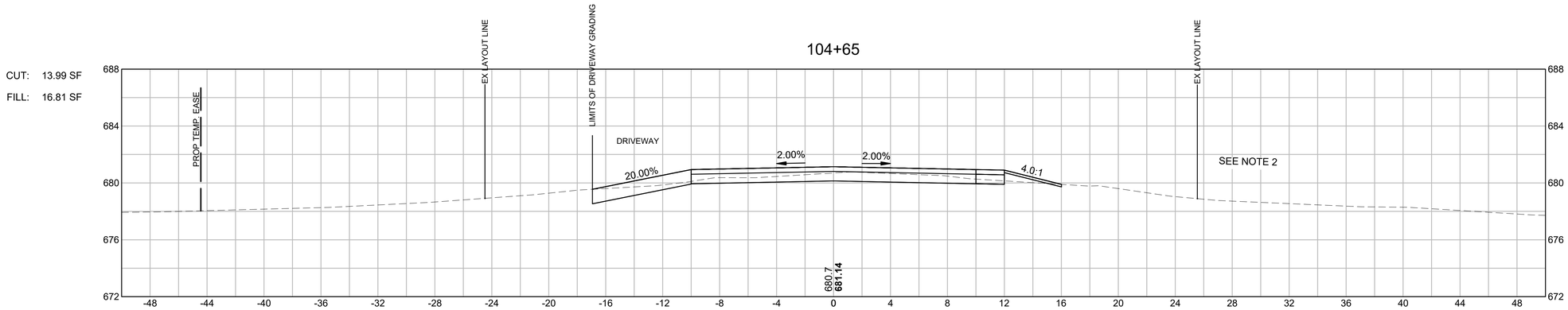
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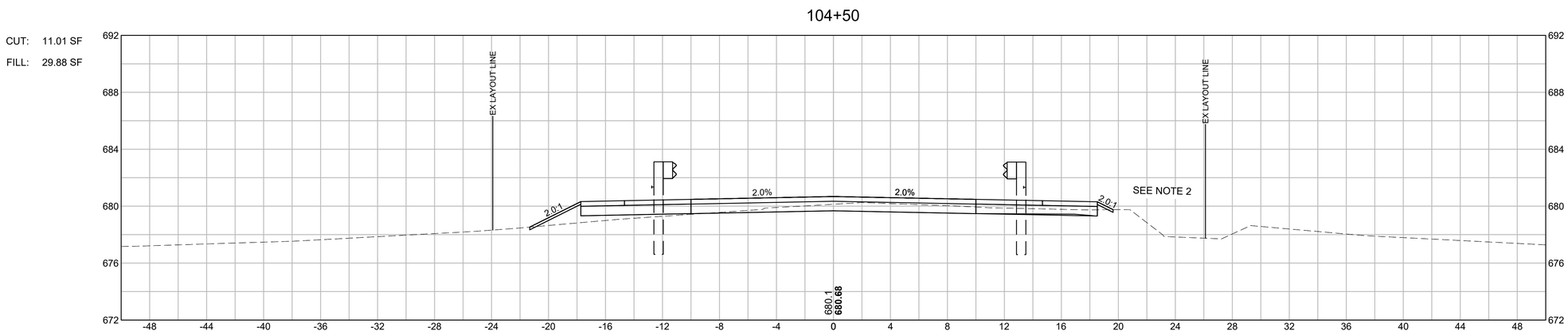
**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

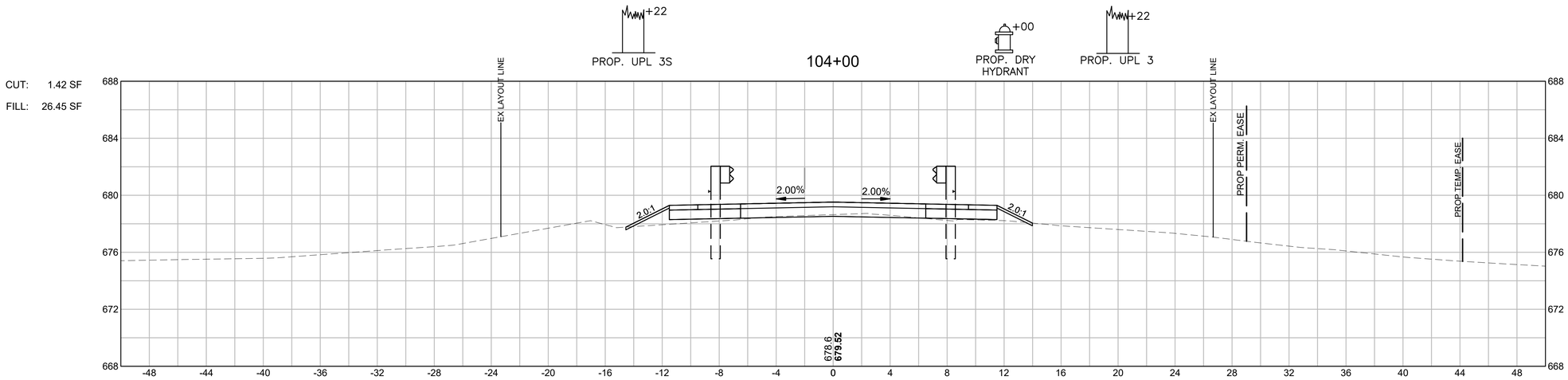
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 58 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CROSS SECTIONS**

NOTES:
1. CROSS-SECTIONS DO NOT REFLECT PROPOSED GRADING FOR WETLAND REPLICATION AREA. REFER TO WETLAND REPLICATION PLAN FOR GRADING AND CROSS-SECTION.
2. GRADING FOR WETLAND REPLICATION AREA BETWEEN STA 104+50 AND 105+50 NOT SHOWN. REFER TO WETLAND REPLICATION PLAN FOR ADDITIONAL INFORMATION




4 0 4 8
SCALE IN FEET

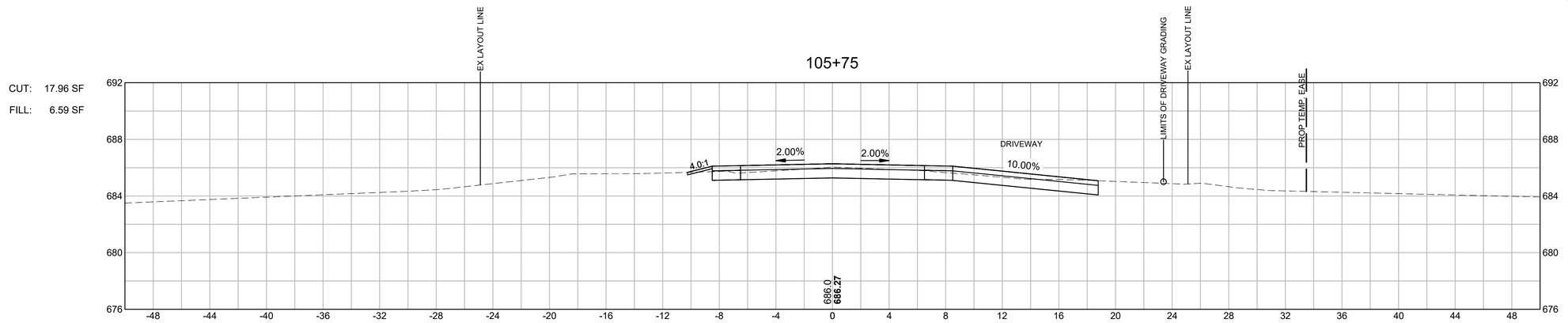
609068_HD (SHEFFIELD CROSS SECTION 04).DWG Plotted on 13-Aug-2026 11:25 AM

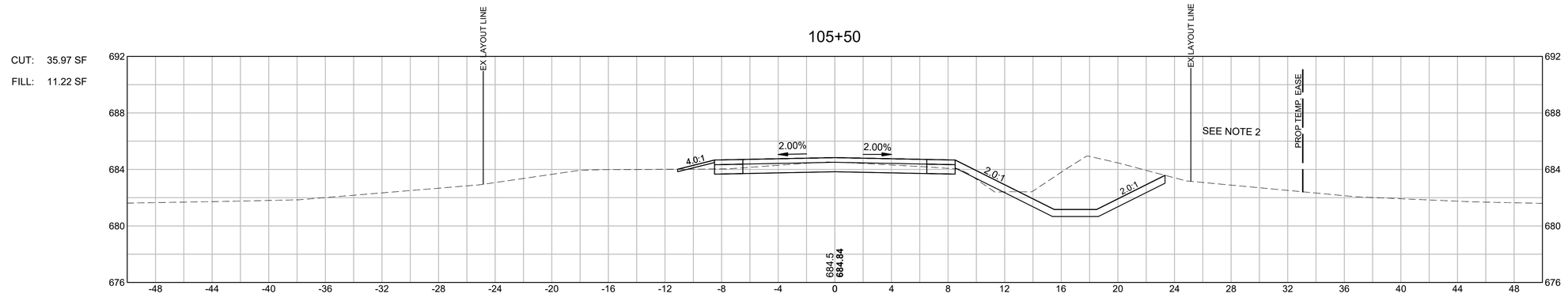
**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

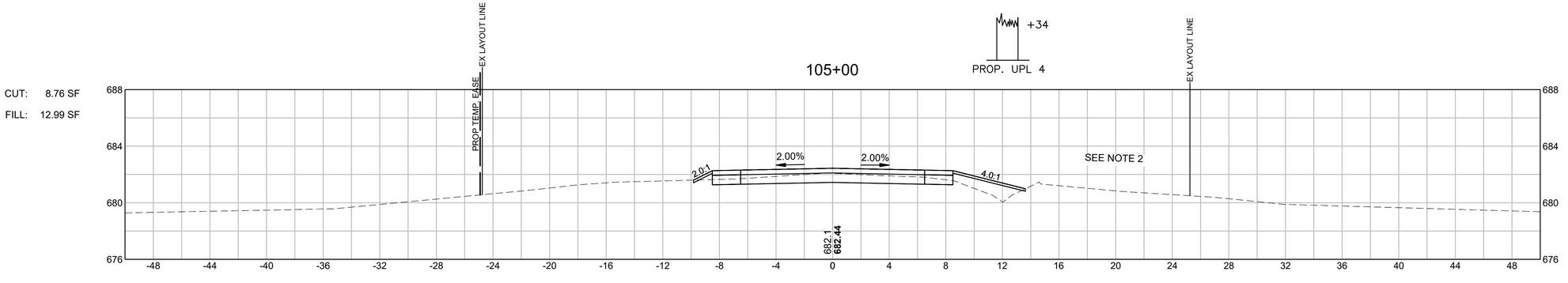
| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 59 | 61 |
| PROJECT FILE NO. | 609068 | | |

## CROSS SECTIONS

NOTES:
1. CROSS-SECTIONS DO NOT REFLECT PROPOSED GRADING FOR WETLAND REPLICATION AREA. REFER TO WETLAND REPLICATION PLAN FOR GRADING AND CROSS-SECTION.
2. GRADING FOR WETLAND REPLICATION AREA BETWEEN STA 104+50 AND 105+50 NOT SHOWN. REFER TO WETLAND REPLICATION PLAN FOR ADDITIONAL INFORMATION




4 0 4 8
SCALE IN FEET

609068_HD (SHEFFIELD CROSS SECTION 05).DWG Plotted on 13-Aug-2026 11:26 AM

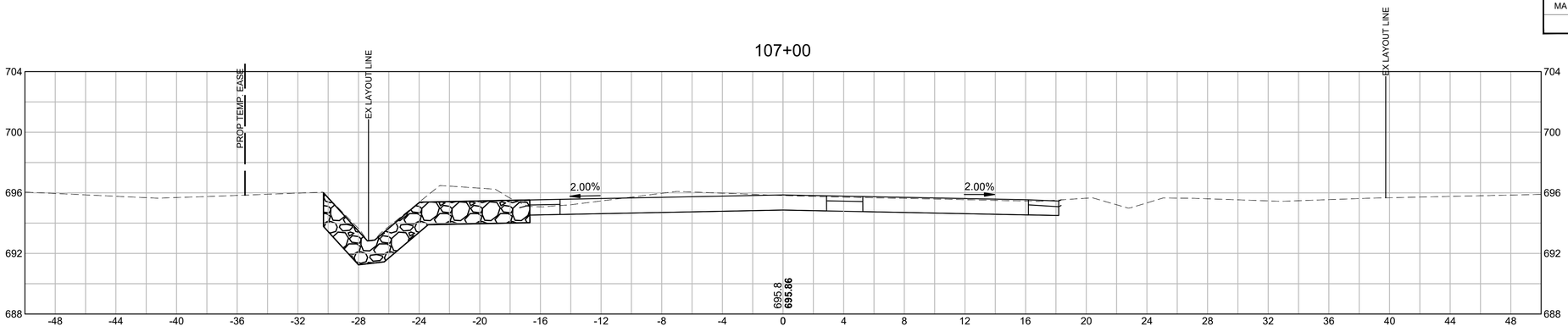
**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 60 | 61 |
| PROJECT FILE NO. | 609068 | | |

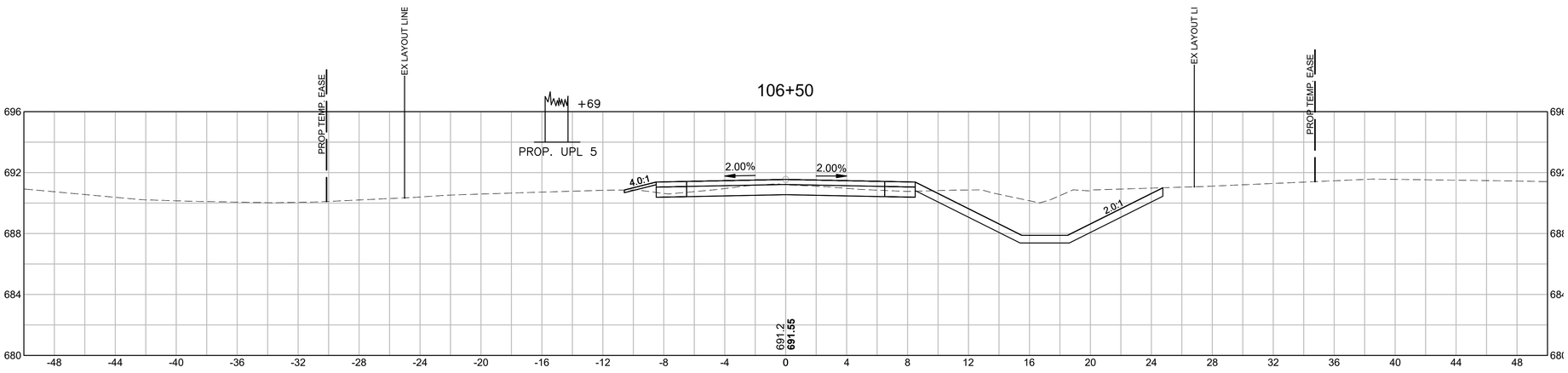
**CROSS SECTIONS**

609068_HD (SHEFFIELD CROSS SECTION 05).DWG Plotted on 13-Aug-2026 11:26 AM

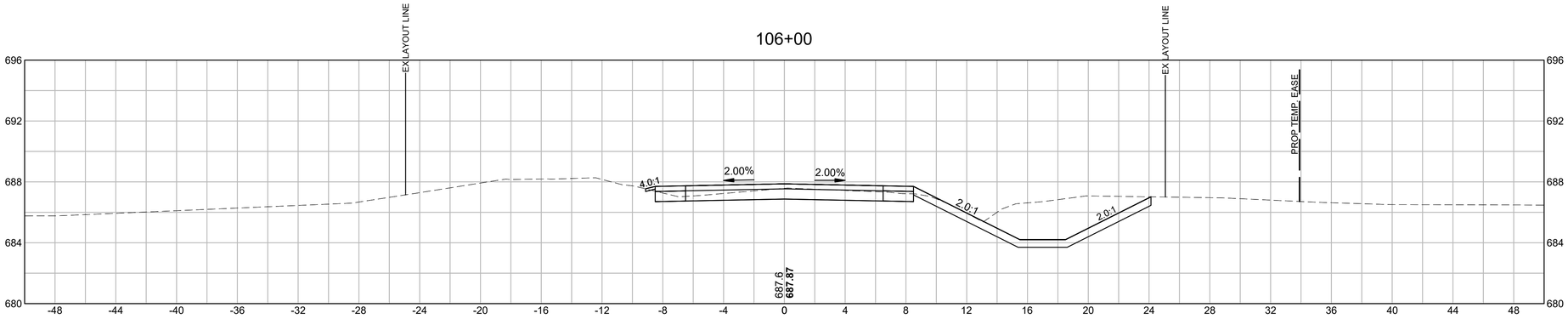
CUT: 62.19 SF
FILL: 3.25 SF




CUT: 41.09 SF
FILL: 9.73 SF




CUT: 36.31 SF
FILL: 8.06 SF



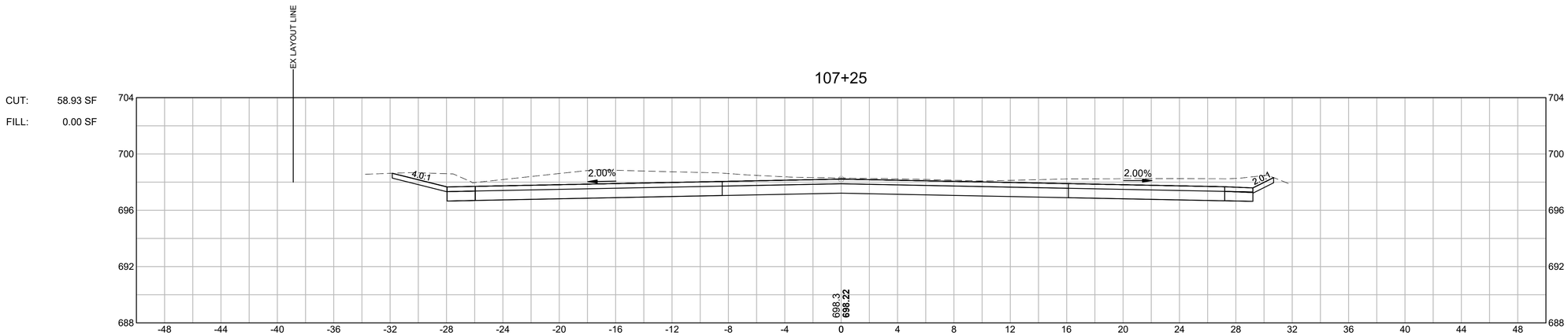

4 0 4 8
SCALE IN FEET

**SHEFFIELD**
**KELSEY ROAD OVER SHENOB BROOK**

| STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| MA | STP(BR-OFF)-003S(993)X | 61 | 61 |
| PROJECT FILE NO. | 609068 | | |

**CROSS SECTIONS**

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4 0 4 8
SCALE IN FEET