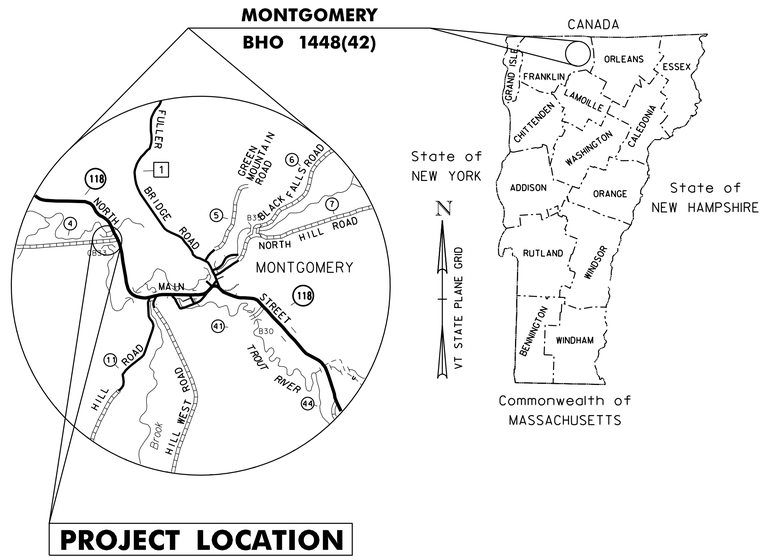
SEE SHEET 2 FOR INDEX OF SHEETS
AND STANDARDS LIST

# STATE OF VERMONT
# AGENCY OF TRANSPORTATION

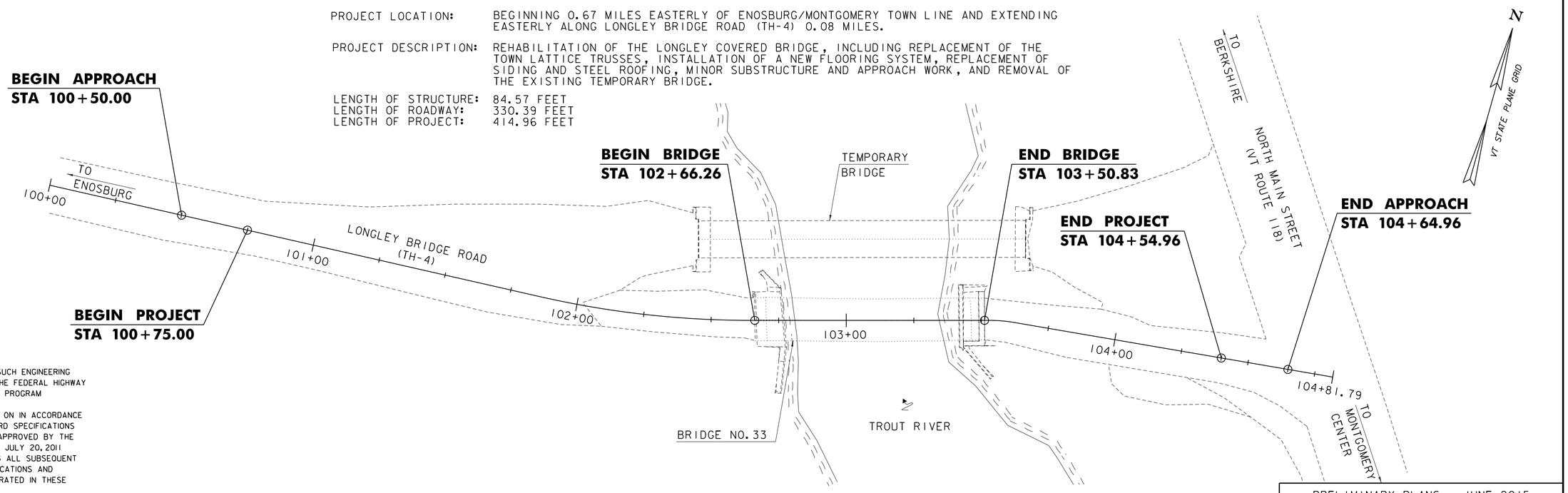
# PROPOSED IMPROVEMENT
# BRIDGE PROJECT
# TOWN OF MONTGOMERY
# COUNTY OF FRANKLIN
# LONGLEY BRIDGE ROAD (TH-4, CLASS 3)
# BRIDGE NO. 33




PROJECT LOCATION: BEGINNING 0.67 MILES EASTERLY OF ENOSBURG/MONTGOMERY TOWN LINE AND EXTENDING EASTERLY ALONG LONGLEY BRIDGE ROAD (TH-4) 0.08 MILES.

PROJECT DESCRIPTION: REHABILITATION OF THE LONGLEY COVERED BRIDGE, INCLUDING REPLACEMENT OF THE TOWN LATTICE TRUSSES, INSTALLATION OF A NEW FLOORING SYSTEM, REPLACEMENT OF SIDING AND STEEL ROOFING, MINOR SUBSTRUCTURE AND APPROACH WORK, AND REMOVAL OF THE EXISTING TEMPORARY BRIDGE.

LENGTH OF STRUCTURE: 84.57 FEET
LENGTH OF ROADWAY: 330.39 FEET
LENGTH OF PROJECT: 414.96 FEET




THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2

SURVEYED BY : VERMONT SURVEY & ENG. INC.
SURVEYED DATE : 6-30-2014

DATUM
VERTICAL NAVD 88 FT
HORIZONTAL NAD 83 (2011) sFT

SCALE: 1" = 20'-0"
20 0 20


Hoyle, Tanner & Associates, Inc.
125 College St. 4th Floor Burlington, VT 05401
Telephone: 802-860-1331 Fax: 802-860-6499
Web Page: www.hoyletanner.com


| HTA PROJECT NO. | MODEL |
|---|---|
| 904227 | z12j352title |

PRELIMINARY PLANS - JUNE 2015

CHIEF ENGINEER OF THE HIGHWAY DIVISION
APPROVED _____ DATE _____

PROJECT MANAGER : M. SARGENT

PROJECT NAME : MONTGOMERY
PROJECT NUMBER : BHO 1448(42)

SHEET 1 OF 47 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

# PRELIMINARY INFORMATION SHEET

## INDEX OF SHEETS



## INDEX OF STANDARDS

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|---|---|---|
| B-5 | SLOPE ROUNDING | 6/1/1994 |
| D-4 | DRAINAGE END SECTIONS | 8/13/2007 |
| D-15 | PRECAST REINF. CONC. CB-GRATES, CAST IRON GRATE WITH FRAME, TYPE D & E | 6/1/1994 |
| E-121 | STANDARD SIGN PLACEMENT-CONVENTIONAL ROAD | 8/8/1995 |
| E-141 | REGULATORY SIGN DETAILS | 9/20/1995 |
| E-143 | REGULATORY SIGN DETAILS | 6/15/2004 |
| E-146 | REGULATORY SIGN DETAILS | 9/20/1995 |
| E-155 | WARNING SIGN DETAILS | 5/1/2004 |
| E-193 | PAVEMENT MARKING DETAILS | 8/18/1995 |
| T-1 | TRAFFIC CONTROL GENERAL NOTES | 8/6/2012 |
| T-10 | CONVENTIONAL ROADS CONST. APPROACH SIGNING, SIDE ROAD | 8/6/2012 |
| T-28 | CONSTRUCTION SIGN DETAILS | 8/6/2012 |
| T-30 | CONSTRUCTION SIGN DETAILS | 8/6/2012 |
| T-45 | SQUARE TUBE SIGN POST AND ANCHOR | 1/2/2013 |

## FINAL HYDRAULIC REPORT

### HYDROLOGIC DATA

Date:

DRAINAGE AREA :
CHARACTER OF TERRAIN :
STREAM CHARACTERISTICS :
NATURE OF STREAMBED :

PEAK FLOW DATA

| | | | |
|---|---|---|---|
| Q 2.33 = | | Q 50 = | |
| Q 10 = | | Q 100 = | |
| Q 25 = | | Q 500 = | |

DATE OF FLOOD OF RECORD :
ESTIMATED DISCHARGE:
WATER SURFACE ELEV.:
NATURAL STREAM VELOCITY :
ICE CONDITIONS :
DEBRIS:
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY?
IS ORDINARY RISE RAPID?
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: HEADWATERS:
UNIFORM:
IMMEDIATELY ABOVE SITE:

### EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Town Lattice Timber Covered Bridge
YEAR BUILT: 1863
CLEAR SPAN (NORMAL TO STREAM): 66'-11"
VERTICAL CLEARANCE ABOVE STREAMBED: 16' +/-
WATERWAY OF FULL OPENING: 967 sq. ft.
DISPOSITION OF STRUCTURE: REHABILITATE
TYPE OF MATERIAL UNDER SUBSTRUCTURE: LEDGE AND GRAVEL

WATER SURFACE ELEVATIONS AT:

| | | | |
|---|---|---|---|
| Q2.33 = | | VELOCITY = | |
| Q10 = | | " | |
| Q25 = | 448.1 | " | |
| Q50 = | | " | |
| Q100 = | | " | |

LONG TERM STREAMBED CHANGES:

IS THE ROADWAY OVERTOPPED BELOW Q100:
FREQUENCY:
RELIEF ELEVATION:
DISCHARGE OVER ROAD @Q100: None

### UPSTREAM STRUCTURE

TOWN: DISTANCE:
HIGHWAY # : STRUCTURE #:
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

### DOWNSTREAM STRUCTURE

TOWN: DISTANCE:
HIGHWAY # : STRUCTURE #:
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:
STRUCTURE TYPE:

### WORKING STRESS LOAD RATING (TONS)

| LOADING LEVELS | TRUCK | | | | | | |
|---|---|---|---|---|---|---|---|
| | H | HS | 3S2 | 6 AXLE | 3A. STR. | 4A. STR. | 5A. SEMI |
| INVENTORY | 20 | - | | | | | |
| POSTED | 20 | - | - | | - | - | - |
| OPERATING | | - | - | - | - | - | |

COMMENTS: BOTTOM CHORD AND LATTICE CONTROL THE LOAD RATING

### TRAFFIC DATA

| YEAR | ADT | DHV | % D | % T | ADTT |
|---|---|---|---|---|---|
| 2014 | <40 | <10 | NA | NA | NA |
| 2034 | <40 | <10 | NA | NA | NA |

20 year ESAL for flexible pavement from 2014 to 2034 : <50,000
40 year ESAL for flexible pavement from 2014 to 2054 : <50,000
Design Speed : 10 mph

### PROPOSED STRUCTURE

STRUCTURE TYPE: REHABILITATED COVERED BRIDGE

CLEAR SPAN (NORMAL TO STREAM): 66'-11"
VERTICAL CLEARANCE ABOVE STREAMBED: 16' +/-
WATERWAY OF FULL OPENING: 967 sq. ft.

WATER SURFACE ELEVATIONS AT:

| | | | |
|---|---|---|---|
| Q2.33 = | | VELOCITY= | |
| Q10 = | | " | |
| Q25 = | 448.1 | " | |
| Q50 = | | " | |
| Q100 = | | " | |

IS THE ROADWAY OVERTOPPED BELOW Q100:
FREQUENCY:
RELIEF ELEVATION:
DISCHARGE OVER ROAD @Q100:

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:
VERTICAL CLEARANCE:

SCOUR:

REQUIRED CHANNEL PROTECTION:

### PERMIT INFORMATION

| | | |
|---|---|---|
| AVERAGE DAILY FLOW: | | DEPTH OR ELEVATION: |
| ORDINARY LOW WATER: | | Depth = |
| ORDINARY HIGH WATER: | | Depth = |

### TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: SINGLE SPAN BRIDGE PRESENT
CLEAR SPAN (NORMAL TO STREAM): 112'-10"
VERTICAL CLEARANCE ABOVE STREAMBED: 18+/-
WATERWAY AREA OF FULL OPENING: 1274 sq. ft.

### ADDITIONAL INFORMATION

### DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO H20
2. DESIGN SPAN 66'-11"
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
   ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A
   TYPE N/A
   ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO M270M/M270 GRADE N/A
6. REINFORCING STEEL GRADE 60
7. CONCRETE, HIGH PERFORMANCE CLASS A f'c: 4000 PSI
   CONCRETE, HIGH PERFORMANCE CLASS B f'c: 3500 PSI
8. DESIGN SOIL UNIT WEIGHT 140 PCF
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

### TRAFFIC MAINTENANCE

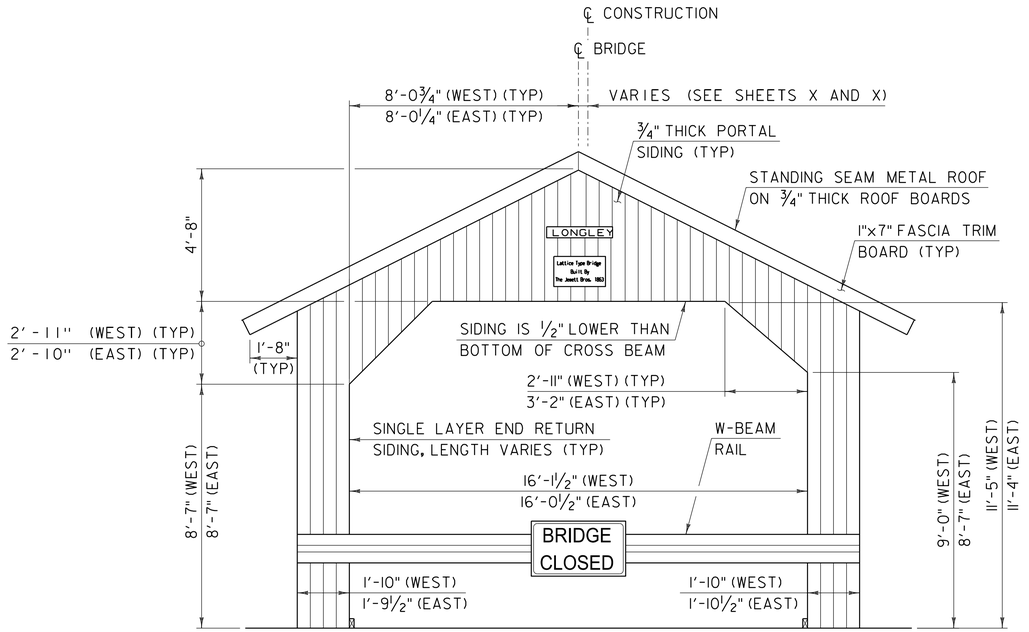
1. IS TRAFFIC TO BE MAINTAINED? YES ON EXISTING TEMPORARY BRIDGE
   IF YES, ON EXISTING STRUCTURE? NO
   OR ON TEMPORARY BRIDGE? YES ON EXISTING TEMPORARY BRIDGE
   ONE OR TWO-WAY TRAVEL? ONE LANE ALTERNATING TRAFFIC
2. TRAFFIC CONTROL SIGNALS REQUIRED? NO
3. ARE SIDEWALKS REQUIRED? NO
   IF SO, ON WHAT SIDE? N/A

Hoyle, Tanner & Associates, Inc.

HTA PROJECT 904227 | MODEL z12j352pi

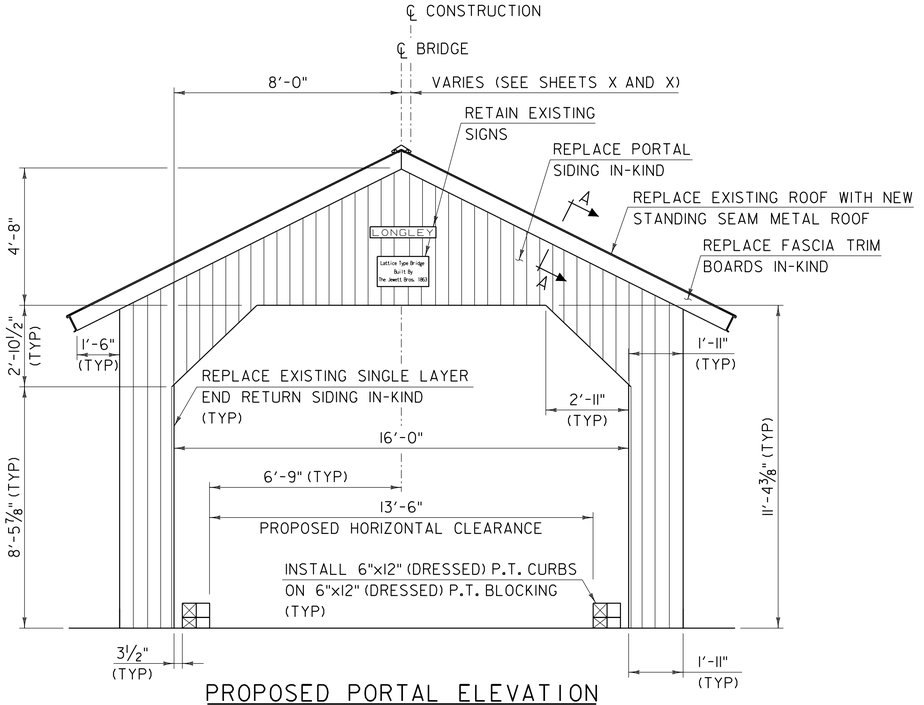
PROJECT NAME: **MONTGOMERY**
PROJECT NUMBER: **BHO 1448(42)**

FILE NAME: **z12j352forms.xls** PLOT DATE: **6/10/15**
PROJECT MANAGER: **M. SARGENT** DRAWN BY: **P. DUSTIN**
DESIGNED BY: **W. DURACK** CHECKED BY: **J. BICJA**
**PRELIMINARY INFORMATION SHEET** SHEET **2** OF **47**



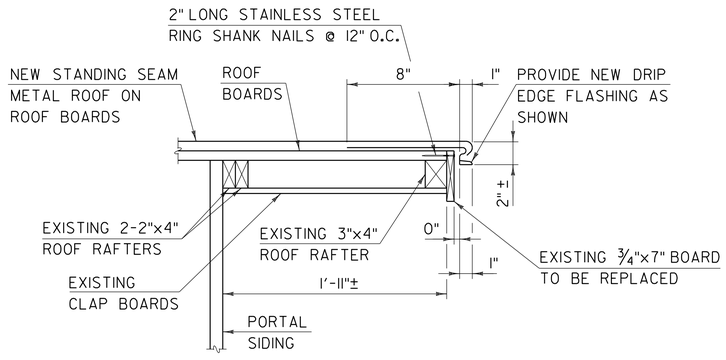

## EXISTING PORTAL ELEVATION
## (LOOKING EAST)

(WEST PORTAL SHOWN, EAST PORTAL SIMILAR)
SCALE ⅜" = 1'-0"




## PROPOSED PORTAL ELEVATION
## (LOOKING EAST)

(WEST PORTAL SHOWN, EAST PORTAL SIMILAR)
SCALE ⅜" = 1'-0"




## SECTION A-A
NOT TO SCALE

DIMENSIONS OF TIMBER AND LUMBER MEMBERS SHOWN ON THE PLANS ARE THE ACTUAL SIZES UNLESS NOTED OTHERWISE.

## NOTES

1. DIMENSIONS SHOWN ON THE EXISTING PORTAL ELEVATION SHALL BE MAINTAINED EXCEPT WHERE NOTED OTHERWISE ON THE PROPOSED PORTAL ELEVATION.
2. APPLY FIRE RETARDANT AND TERMITICIDE/ INSECTICIDE/FUNGICIDE TO WOODEN BRIDGE MEMBERS IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION 900.

## LEGEND

P.T. PRESSURE TREATED

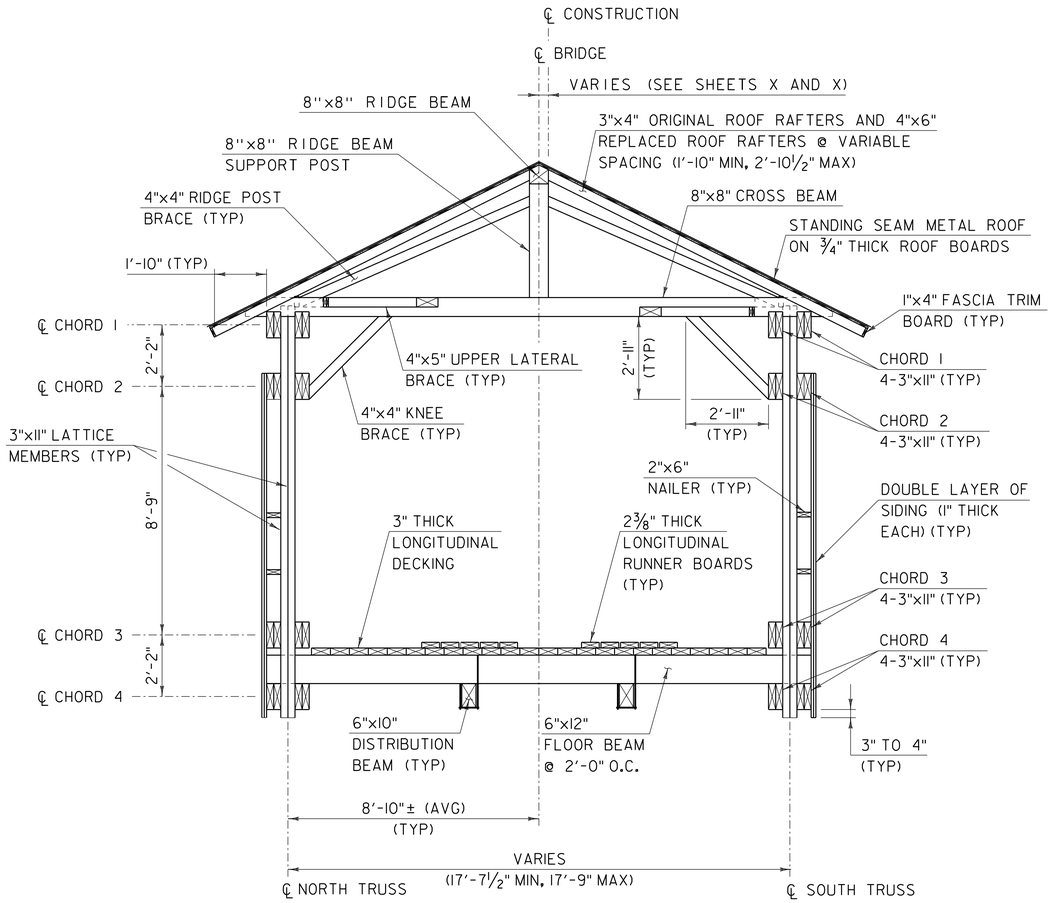
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | zl2j352supl |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

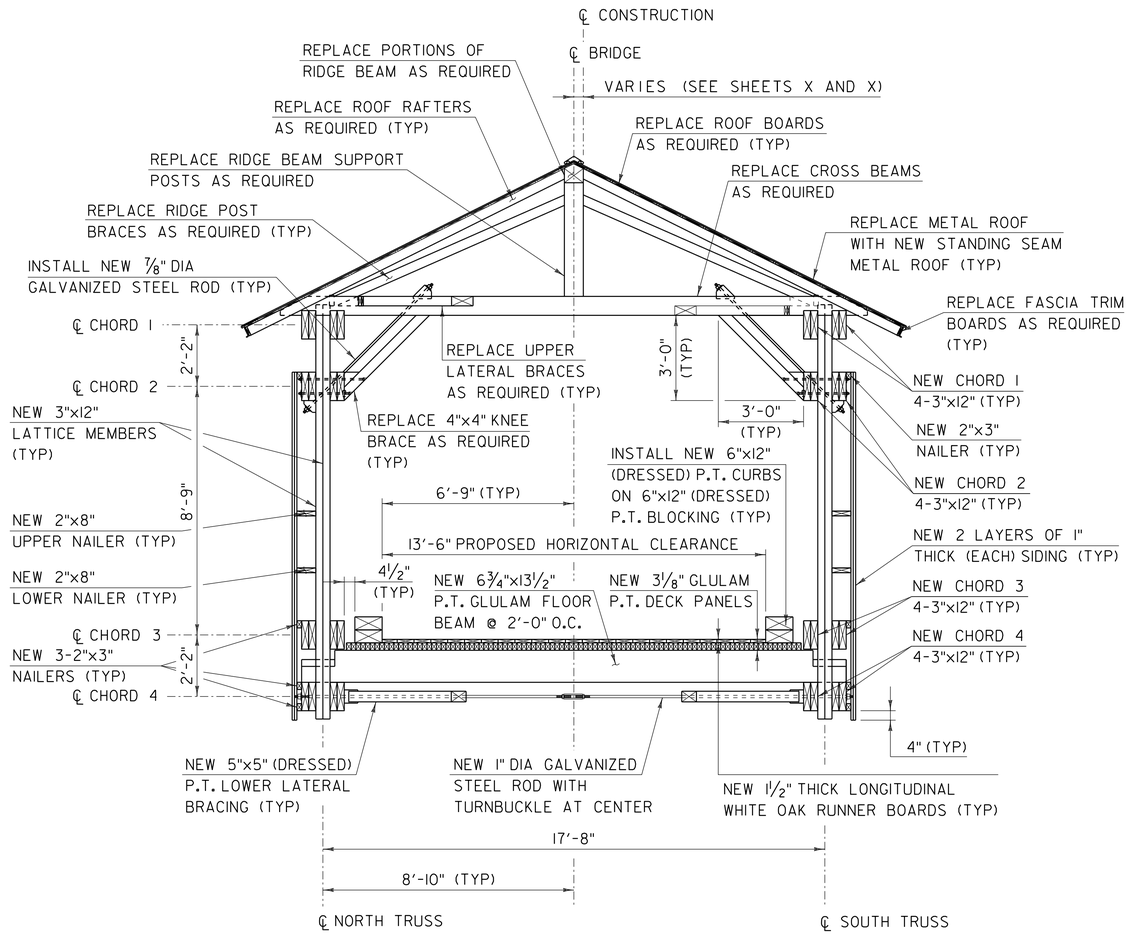
FILE NAME: zl2j352supl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
TYPICAL PORTAL ELEVATIONS

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 3 OF 47




## EXISTING TYPICAL BRIDGE SECTION

SCALE ⅜" = 1'-0"




## PROPOSED TYPICAL BRIDGE SECTION

SCALE ⅜" = 1'-0"

## NOTES

1. APPLY FIRE RETARDANT AND TERMITICIDE/INSECTICIDE/FUNGICIDE TO WOODEN BRIDGE MEMBERS IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION 900.
2. SIDING BOARDS SHALL CONSIST OF SINGLE VERTICAL PIECES AT ALL LOCATIONS AND AS SHOWN ON THE PLANS. HORIZONTAL JOINTS IN THE SIDING WILL NOT BE ALLOWED.
3. REFER TO SHEET XX FOR SIDING CONNECTION DETAILS.
4. SEE SHEET XX FOR ESTIMATED LUMBER AND TIMBER QUANTITIES.

DIMENSIONS OF TIMBER AND LUMBER MEMBERS SHOWN ON THE PLANS ARE THE ACTUAL SIZES UNLESS NOTED OTHERWISE.

## LEGEND

P.T. PRESSURE TREATED

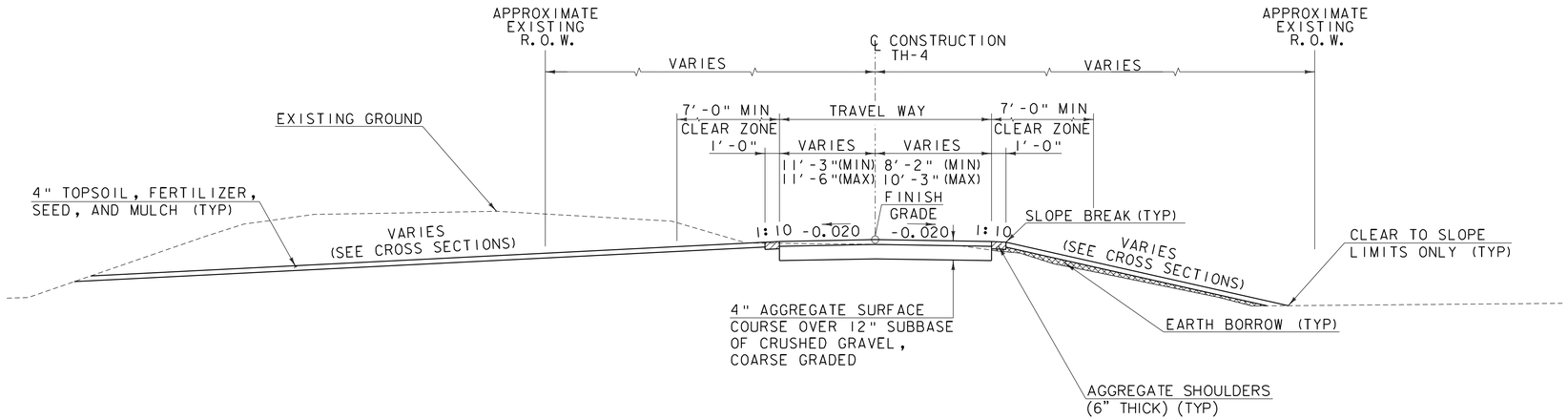
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | zl2j352sup2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: zl2j352sup2.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
TYPICAL BRIDGE SECTIONS

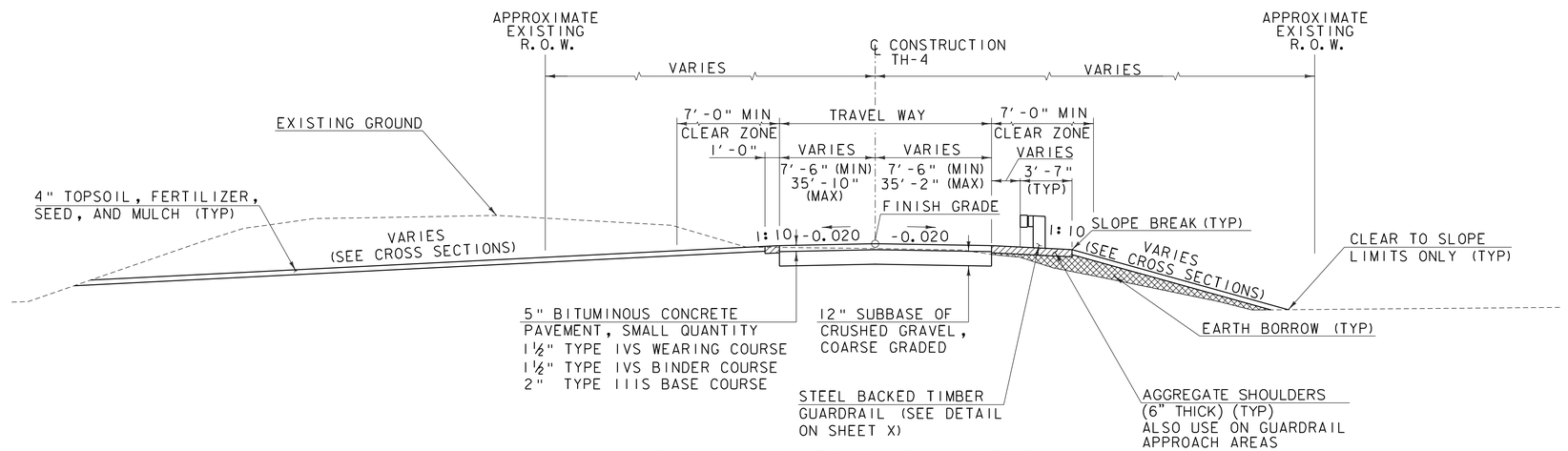
PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 4 OF 47




## TYPICAL UNPAVED ROADWAY SECTION

STA 100+75.00 - 101+90.00

NOT TO SCALE




## TYPICAL PAVED ROADWAY SECTION

STA 101+90.00 - 102+66.26

STA 103+50.83 - 104+39.96

NOT TO SCALE

EMULSIFIED ASPHALT TO BE APPLIED AT A RATE OF 0.04 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT, AS DIRECTED BY THE ENGINEER.

## MATERIAL TOLERANCES

| | |
|---|---|
| SURFACE | |
| - PAVEMENT (TOTAL THICKNESS) | +/- ¼" |
| - AGGREGATE SURFACE COURSE | +/- ½" |
| SUBBASE | +/- 1" |

## NOTE

1. SEE ROADWAY CROSS SECTIONS SHEET 4 FOR MATERIAL TRANSITION DETAILS.

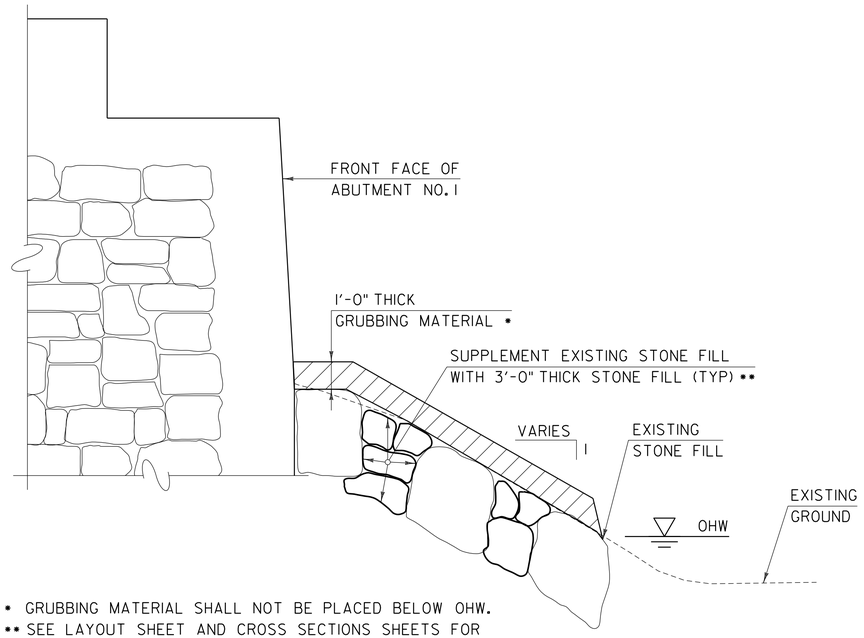
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | zl2j352typl |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: zl2j352typ.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
TYPICAL ROADWAY SECTIONS

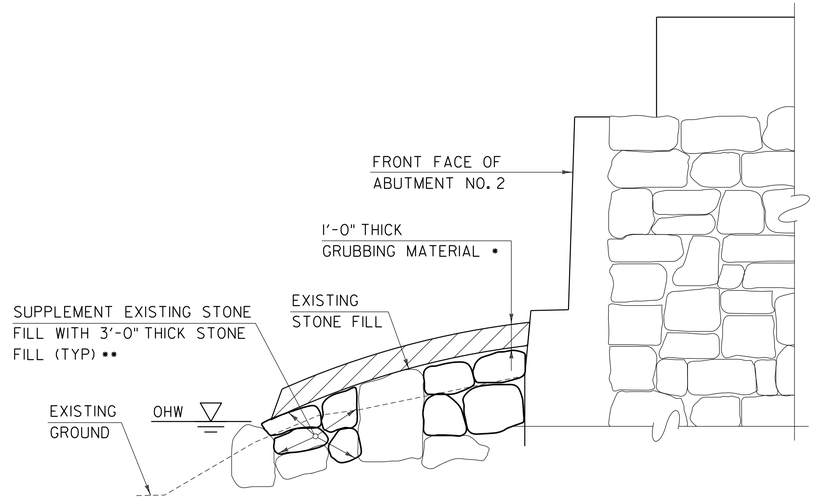
PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 5 OF 47




• GRUBBING MATERIAL SHALL NOT BE PLACED BELOW OHW.
•• SEE LAYOUT SHEET AND CROSS SECTIONS SHEETS FOR LOCATIONS AND LIMITS OF STONE FILL.

## TYPICAL STONE FILL SECTION
## ABUTMENT NO. 1

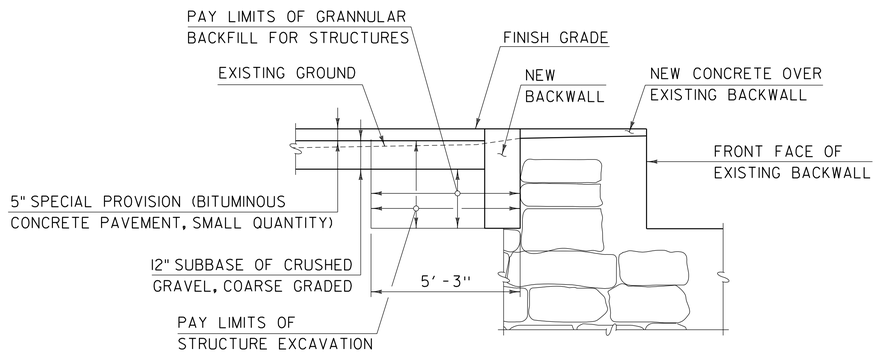
SCALE: 3/8" = 1'-0"




• GRUBBING MATERIAL SHALL NOT BE PLACED BELOW OHW.
•• SEE LAYOUT SHEET AND CROSS SECTIONS SHEETS FOR LOCATIONS AND LIMITS OF STONE FILL.

## TYPICAL STONE FILL SECTION
## ABUTMENT NO. 2

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




## ABUTMENTS NO. 1 AND NO. 2
## TYPICAL EARTHWORK SECTION

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

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352typ2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352typ.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
TYPICAL EARTHWORK SECTIONS

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 6 OF 47

## GENERAL NOTES

G-1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

G-2. DESIGN OF THE REHABILITATED STRUCTURE IS FOR AN AASHTO H20 LIVE LOAD.

G-3. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO INSURE THAT NO DEBRIS FALLS INTO THE TROUT RIVER DURING CONSTRUCTION. ALL MATERIAL FALLING IN THE AREA BELOW AND ADJACENT TO THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO COST TO THE STATE.

G-4. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING R.O.W AND TEMPORARY CONSTRUCTION EASEMENT LIMITS SHOWN IN THESE PLANS. THE RIGHT-OF-WAY SHOWN IS ASSUMED TO BE APPROXIMATELY CENTERED ABOUT THE CENTERLINE OF THE BRIDGE. SHOULD THE CONTRACTOR REQUIRE ANY ADDITIONAL EASEMENTS BEYOND THOSE SHOWN IN THE PLANS IT WILL BE THE RESPONSIBILTY OF THE CONTRACTOR TO OBTAIN ALL EASEMENTS, AND BEAR THE COSTS OF SUCH EASEMENTS WITHOUT FURTHER COMPENSATION FROM THE STATE.

G-5. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME OF BIDDING. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE CHECKED BY THE CONTRACTOR IN THE FIELD PRIOR TO COMMENCING THE WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE DIMENSIONS AND DETAILS OF EXISTING BRIDGE FEATURES AND COMPONENTS PRIOR TO THE FABRICATION OF NEW BRIDGE COMPONENTS. ACTUAL WORK SHALL MATCH FIELD CONDITIONS UNLESS NOTED OTHERWISE. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

G-6. BRIDGE NO.33 IS CLOSED TO ALL TRAFFIC AND SHALL REMAIN CLOSED FOR THE DURATION OF CONSTRUCTION.

G-7. EXCEPT AS NOTED OTHERWISE, ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE SHALL INCLUDE ANY WORK NECESSARY TO FACILITATE AND ACCOMPLISH THE SCOPE OF PROJECT WORK AS INDICATED BY THE CONTRACT DOCUMENTS AND DIRECTED BY THE ENGINEER: REMOVING AND DISPOSING SUPERSTRUCTURE MEMBERS AND PORTIONS OF MEMBERS; AS WELL AS REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR RE-USE, INCLUDING REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR THE CONTRACTOR'S METHODS OF REHABILITATION.

G-8. NO BURNING OF REMOVED MATERIALS AT THE PROJECT SITE WILL BE ALLOWED. THE EXISTING COVERED BRIDGE TIMBERS AND LUMBER MAY CONTAIN HAZARDOUS WOOD PRESERVATIVES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS AND EMPLOYEES HARMLESS REGARDING THE CONTRACTOR'S HANDLING OF THESE MATERIALS AND SUBSEQUENT USE, RE-USE, OR DISPOSAL OF THESE MATERIALS.

G-9. THE COST OF INSTALLING AND MAINTAINING ALL TEMPORARY CONSTRUCTION SIGNS SHALL BE INCLUDED IN ITEM 641.10, TRAFFIC CONTROL. THE REMOVAL AND/OR RESETTING OF TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER SHALL ALSO BE INCLUDED IN THE TRAFFIC CONTROL ITEM.

G-10. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO MEMBERS THAT ARE TO REMAIN AND TO AVOID MOVEMENT OF THE TRUSS THAT COULD RESULT IN DISTORTION OR MISALIGNMENT OF THE TRUSS AND ITS JOINTS. MEMBERS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT CONTRACTOR'S EXPENSE.

G-11. ALL JOINTS IN REPLACED MEMBERS SHALL MATCH THE EXISTING JOINT, INCLUDING ALL NAILS, BOLTS, TRUNNELS OR SCREWS REQUIRED UNLESS NOTED OTHERWISE.

G-12. ALL EXISTING MEMBERS SHOWN TO BE REPLACED ARE TO BE REPLACED "IN-KIND" WITH NEW MEMBERS IDENTICAL IN DIMENSIONS AND CONFIGURATIONS AS THE MEMBERS ORIGINALLY USED IN THE COVERED BRIDGE (INCLUDING MORTISES, TENONS, NOTCHES, HOLES, ETC.) UNLESS NOTED OTHERWISE IN THESE PLANS.

## TIMBER CONNECTORS NOTES

TC-1. EXCEPT AS SPECIFIED IN THE STRUCTURAL STEEL NOTES, PAYMENT FOR STRUCTURAL LUMBER AND TIMBER AND NON-STRUCTURAL LUMBER QUANTITIES SHALL BE FULL COMPENSATION FOR DETAILING, FURNISHING, TRANSPORTING, HANDLING, PLACING AND INSTALLING NEW TIMBER CONNECTORS WHICH ARE USED TO CONNECT NEW LUMBER AND TIMBER MEMBERS WITH EXISTING LUMBER AND TIMBER MEMBERS.

TC-2. EXCEPT AS SPECIFIED IN THE STRUCTURAL STEEL NOTES, DETAILING, FURNISHING, TRANSPORTING, HANDLING, AND INSTALLING NEW AND REUSED TIMBER CONNECTORS WHICH ARE USED TO CONNECT EXISTING LUMBER AND TIMBER MEMBERS SHALL BE CONSIDERED INCIDENTAL TO THE WORK REQUIRED FOR ITEM 900.645 SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

## WOOD NOTES

W-1. ALL WOOD CONSTRUCTION SHALL COMPLY WITH THE LATEST AASHTO SPECIFICATIONS, THE NATIONAL DESIGN SPECIFICATION (NDS) AND SUPPLEMENT FOR WOOD CONSTRUCTION, AND THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) SPECIFICATION, 6TH EDITION.

W-2. THE MAXIMUM IN PLACE MOISTURE CONTENT OF THE WOOD USED SHALL BE AS FOLLOWS:

| | |
|---|---|
| MEMBERS LESS THAN 5" THICK | 16% |
| MEMBERS GREATER THAN 5" THICK | 19% |
| TRUNNELS | 10% |
| ALL HARDWOOD 2.5" AND THICKER (INCLUDING BLACK LOCUST) MAY BE GREEN | |

W-3. ALL NEW WOOD TRUNNELS SHALL BE MADE OF WHITE OAK. TRUNNELS SHALL BE DRIVEN IN A MANNER WHICH AVOIDS SPLITTING THE TRUNNELS OR THE MEMBER CONNECTED BY THEM. HOLES SHALL BE SIZED 1/16" IN DIAMETER SMALLER THAN THE TRUNNEL TO PROVIDE A FRICTION FIT. TRUNNELS SHALL BE DIPPED IN BOILED LINSEED OIL, MINERAL OIL OR AN APPROVED WAX PRIOR TO DRIVING.

W-4. EACH PIECE OF NEW LUMBER AND TIMBER SHALL BE GRADED, BY A RECOGNIZED LUMBER GRADING AGENCY. INDIVIDUAL PIECES SHOULD SHALL BE STAMPED WITH A GRADE STAMP AT THE END GRAIN OF THE MEMBERS. MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WOOD (EXCEPT BLACK LOCUST) IN ACCORDANCE WITH SECTION 709.

W-5. THE QUANTITY OF ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED ASSUMES REPLACEMENT OF ALL, PORTAL, END RETURN, UPSTREAM AND DOWNSTREAM SIDING AND 15% OF EXISTING ROOF BOARDS. THE CONTRACTOR AND RESIDENT ENGINEER SHALL JOINTLY INSPECT ALL ROOF BOARDS AFTER THE REMOVAL OF THE EXISTING METAL ROOF TO IDENTIFY ADDITIONAL MEMBERS TO BE REPLACED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LUMBER DIMENSIONS AND SIZES REQUIRED FOR CONSTRUCTION.

W-6. THE QUANTITY OF ITEM 522.20, STRUCTURAL LUMBER AND TIMBER, UNTREATED ASSUMES REPLACEMENT OF 4 ADDITIONAL ROOF RAFTERS, 1 ADDITIONAL CROSS BEAM, 1 ADDITIONAL UPPER LATERAL BRACE, 1 KNEE BRACE, 2 RIDGE POST BRACES AND 1 RIDGE BEAM SUPPORT POST FOR BIDDING PURPOSES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LUMBER DIMENSIONS AND SIZES REQUIRED FOR CONSTRUCTION.

W-7. ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE) SHALL INCLUDE ALL COSTS ASSOCIATED WITH RE-INSTALLING STOCKPILED COMPONENTS (FROM ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE) ON THE SUPERSTRUCTURE; ALTERATIONS TO IN-PLACE MEMBERS REQUIRED FOR RE-USE/REHABILITATION OF THE SUPERSTRUCTURE; TEMPORARY BRACING AND BLOCKING; ALL LABOR, MATERIALS AND SUBMITTALS REQUIRED FOR THE REHABILITATION WORK (EXCEPT AS SPECIFIED BY OTHER CONTRACT ITEMS); STRAIGHTENING, PLUMBING, AND RE-ALIGNING THE ROOF AND UPPER BRACING MEMBERS.

W-8. ALL NUTS, BOLTS, WASHERS, AND SCREWS SHALL CONFORM TO ASTM A307, ALL NAILS AND SPIKES SHALL CONFORM TO ASTM F1667 AND BE DOUBLE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232. STAINLESS STEEL NAILS ARE REQUIRED FOR THE SIDING.

W-9. ALL STRUCTURAL LUMBER AND TIMBER NOT SHOWN ON THE WOOD MATERIALS LIST TABLE ON SHEET X SHALL BE DOUGLAS FIR NO.1 OR BETTER. LIKEWISE, ALL HARDWOOD SHALL BE WHITE OAK NO.1 OR BETTER OR BLACK LOCUST WHERE THE SPECIES IS NOT NOTED.

W-10. ALL FIELD CUTS AND BORINGS OF TREATED WOOD SHALL BE TREATED WITH TWO COATS OF COPPER NAPHTHENATE LIBERALLY APPLIED PER SPECIFICATION SECTION 522.

W-11. EXISTING TRUSS, ROOF RAFTER, KNEE BRACING, CROSS BEAMS, UPPER LATERAL BRACING, AND LOWER LATERAL BRACING JOINTS SHALL BE REPLICATED ON ALL STRUCTURE MEMBERS TO BE REPLACED UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS.

W-12. ALL LAG BOLTS AND NUTS FOR THROUGH BOLTS SHALL BE TIGHTENED SNUGLY BUT NOT SO TIGHTLY AS TO CAUSE CRUSHING OF THE WOOD UNDER THE WASHER OR PLATE.

W-13. DIMENSIONS OF ALL LUMBER AND TIMBER MEMBERS SHOWN IN THESE PLANS ARE THE ACTUAL SIZES AFTER SEASONING UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.

W-14. PRESERVATIVE TREATMENT FOR ITEM 522.25, STRUCTURAL LUMBER AND TIMBER, TREATED SHALL COMPLY WITH SUBSECTION 726.01 FOR TYPE III PENTACHLOROPHENOL TYPE C.

## STRUCTURAL STEEL NOTES

S-1. EXCEPT AS NOTED OTHERWISE IN THE CONTRACT PLANS, ITEM 506.75, STRUCTURAL STEEL SHALL INCLUDE THE FOLLOWING:

- CARRIAGE BOLTS INCLUDING OGEE WASHERS AND HEAVY SQUARE NUTS FOR UPPER LATERAL BRACING MEMBERS.
- THROUGH BOLTS AND TIE RODS AT ALL KNEE BRACES.
- FLOOR BEAM HOLD DOWN STRAPS.
- NEW LOWER LATERAL BRACING TIE RODS.

FABRICATION DRAWINGS AND ERECTION PLAN SUBMITTALS ARE NOT REQUIRED FOR ITEM 506.75, STRUCTURAL STEEL.

S-2. ALL NEW STRUCTURAL STEEL SHOWN IN THE PLANS INCLUDING PLATES, BOLTS, LAG BOLTS, TURNBUCKLES, NUTS, WASHERS, RODS, ANGLES AND MISCELLANEOUS STEEL, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232 EXCEPT FOR PLATES WHICH SHALL BE GALVANIZED PER AASHTO M 111M/ M 111. ALL STEEL PLATES AND RODS SHALL BE ASTM A36.

S-3. EXPOSED ENDS OF ALL NEW STRUCTURAL STEEL AND HARDWARE SHALL BE COATED WITH 2 COATS OF A-H COAL TAR EPOXY 210 BY ANTI-HYDRO COMPANY, BITUMASTIC 300-M BY CARBOLINE, RUST-OLEUM C957 SYSTEM COAL TAR EPOXY OR OTHER EQUIVALENT APPROVED EQUAL COAL TAR EPOXY. ALL COST FOR THIS WORK IS CONSIDERED INCIDENTAL TO ITEM 506.75, STRUCTURAL STEEL.

## RECOMMENDED SEQUENCE OF WORK

RS-1. INSTALL PORTABLE CONCRETE BARRIER AT EACH APPROACH AND CONSTRUCTION WARNING SIGNS AS INDICATED IN THE CONTRACT DOCUMENTS.

RS-2. SALVAGE AND TRANSPORT ROOF AND UPPER BRACING MEMBERS TO A WORK SITE AS INDICATED IN THE CONTRACT DOCUMENTS.

RS-3. REMOVE AND DISPOSE OF EXISTING RUNNERS, DECK, FLOOR BEAMS, DISTRIBUTION BEAMS, SLEEPER BEAMS, BEARING BLOCKS, SIDING, AND TRUSSES.

RS-4. CONSTRUCT NEW TRUSSES.

RS-5. REHABILITATE EXISTING ABUTMENTS AND INSTALL NEW STONE FILL TYPE III AS SHOWN ON THE CONTRACT DOCUMENTS.

RS-6. ERECT NEW TRUSSES OVER THE REHABILITATED ABUTMENTS. FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF THE WORK THE CONTRACTOR SHALL SUBMIT PLANS AND DESIGN CALCULATIONS FOR THE PROPOSED WORK TO THE RESIDENT ENGINEER IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS.

RS-7. INSTALL SALVAGED ROOF AND UPPER BRACING MEMBERS AND NEW BRIDGE MEMBERS AS SHOWN ON THE CONTRACT DOCUMENTS.

RS-8. COMPLETE ANY REMAINING SUBSTRUCTURE WORK.

RS-9. COMPLETE REMAINING WORK ITEMS AS DETAILED IN THE CONTRACT DOCUMENTS.

## ENVIRONMENTAL PROTECTION NOTES

E-1. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO ANY STREAM FROM POLLUTION BY DEBRIS, SEDIMENT, OR OTHER FOREIGN MATERIAL OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR SUCH STREAMS. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO A STREAM ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM A STREAM, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM REQUIRED TO PROTECT AND SUSTAIN AQUATIC LIFE.

## SUBSTRUCTURE REHABILITATION NOTES

SR-1. EXISTING CONCRETE ON ABUTMENTS NO.1 AND ABUTMENT NO.2 SHALL BE INSPECTED FOR UNSOUND CONCRETE JOINTLY BY THE ENGINEER AND CONTRACTOR. ALL UNSOUND CONCRETE BEYOND WHAT IS IDENTIFIED IN THE PLANS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH ITEM 580.14, REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II UNLESS INDICATED OTHERWISE.

SR-2. PRIOR TO PLACING NEW CONCRETE, THE ENTIRE REPAIR AREA SHALL BE BLAST CLEANED AND SATURATED SURFACE-DRY.

SR-3. HOLES DRILLED IN EXISTING CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ITEM 507.16, DRILLING AND GROUTING DOWELS.

## WINTER PROTECTION NOTES

WP-1. IF A WINTER SHUTDOWN IS UTILIZED, THE FOLLOWING CONDITIONS MUST BE MET:

A. THE BRIDGE SHALL HAVE AN EQUIVALENT WATER TIGHTNESS DURING THE SHUTDOWN TO WHAT IT CURRENTLY HAS.

B. SUFFICIENT SHORING SHALL REMAIN IN PLACE TO SUPPORT ALL BRIDGE DEAD, WIND AND SNOW LOADS.

C. ACCESS TO THE BRIDGE SHALL BE RESTRICTED WITH CHAIN LINK FENCE OR EQUIVALENT MEASURES APPROVED BY THE ENGINEER. COST FOR THIS WORK IS CONSIDERED INCIDENTAL TO THE PROJECT.

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | zl2j352prjnotel |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: zl2j352forms.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
PROJECT NOTES SHEET 1

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA

## CONCRETE AND REINFORCING STEEL NOTES

C-1. REINFORCING STEEL SHALL CONFORM TO SECTION 507 AND DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE" (CRSI).

C-2. WHEN EPOXY COATED REINFORCING IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL IS NOT PERMITTED.

C-3. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT; ANY DOWNWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE ABOVE THE JOINT.

C-4. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 1"
CLEARANCE +/- $^{1}/_{4}$"

C-5. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE 2 ½" UNLESS NOTED OTHERWISE.

C-6. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS NOTED OTHERWISE.

C-7. THE PROPOSED CONCRETE FOR THE NEW BACKWALLS, OVERLAYS, FLOOR BEAM PEDESTALS AND ABUTMENT NO.2 FACING SHALL BE HIGH PERFORMANCE CONCRETE CLASS A AND PAID UNDER ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A.

C-8. ALL NEW AND EXISTING EXPOSED CONCRETE SURFACES SHALL BE SEALED AND STAINED. PAYMENT WILL BE MADE UNDER ITEM 900.625, SPECIAL PROVISION (CONCRETE STAINING AND SEALING).

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | zI2J352prjnote2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: zI2J352forms.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
PROJECT NOTES SHEET 2

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 8 OF 47

## GENERAL INFORMATION

### SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

## R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

| POINT | CODE | DESCRIPTION |
|---|---|---|
| | CH | CHANNEL EASEMENT |
| | CONST | CONSTRUCTION EASEMENT |
| | CUL | CULVERT EASEMENT |
| | D&C | DISCONNECT & CONNECT |
| | DIT | DITCH EASEMENT |
| | DR | DRAINAGE EASEMENT |
| | DRIVE | DRIVEWAY EASEMENT |
| | EC | EROSION CONTROL |
| | HWY | HIGHWAY EASEMENT |
| | I&M | INSTALL & MAINTAIN EASEMENT |
| | LAND | LANDSCAPE EASEMENT |
| | R&RES | REMOVE & RESET |
| | R&REP | REMOVE & REPLACE |
| | SR | SLOPE RIGHT |
| | UE | UTILITY EASEMENT |
| | (P) | PERMANENT EASEMENT |
| | (T) | TEMPORARY EASEMENT |
| ■ | BNDNS | BOUND SET |
| ⧈ | BNDNS | BOUND TO BE SET |
| ● | IPNS | IRON PIN SET |
| ◎ | IPNS | IRON PIN TO BE SET |
| ⊠ | CALC | EXISTING ROW POINT |
| ○ | PROW | PROPOSED ROW POINT |
| [LENGTH] | | LENGTH CARRIED ON NEXT SHEET |

## COMMON TOPOGRAPHIC POINT SYMBOLS

| POINT | CODE | DESCRIPTION |
|---|---|---|
| | APL | BOUND APPARENT LOCATION |
| | BM | BENCHMARK |
| | BND | BOUND |
| | CB | CATCH BASIN |
| | COMB | COMBINATION POLE |
| | DITHR | DROP INLET THROATED DNC |
| | EL | ELECTRIC POWER POLE |
| | FPOLE | FLAGPOLE |
| | GASFIL | GAS FILLER |
| | GP | GUIDE POST |
| | GSO | GAS SHUT OFF |
| | GUY | GUY POLE |
| | GUYW | GUY WIRE |
| | GV | GATE VALUE |
| | H | TREE HARDWOOD |
| | HCTRL | CONTROL HORIZONTAL |
| | HVCTRL | CONTROL HORIZ. & VERTICAL |
| | HYD | HYDRANT |
| | IP | IRON PIN |
| | IPIPE | IRON PIPE |
| | LI | LIGHT - STREET OR YARD |
| | MB | MAILBOX |
| | MH | MANHOLE (MH) |
| | MM | MILE MARKER |
| | PM | PARKING METER |
| | PMK | PROJECT MARKER |
| | POST | POST STONE/WOOD |
| | RRSIG | RAILROAD SIGNAL |
| | RRSL | RAILROAD SWITCH LEVER |
| | S | TREE SOFTWOOD |
| | SAT | SATELLITE DISH |
| | SHRUB | SHRUB |
| | SIGN | SIGN |
| | STUMP | STUMP |
| | TEL | TELEPHONE POLE |
| | TIE | TIE |
| | TSIGN | SIGN W/DOUBLE POST |
| | VCTRL | CONTROL VERTICAL |
| | WELL | WELL |
| | WSO | WATER SHUT OFF |

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

## PROPOSED GEOMETRY CODES

| CODE | DESCRIPTION |
|---|---|
| PC | POINT OF CURVATURE |
| PI | POINT OF INTERSECTION |
| CC | CENTER OF CURVE |
| PT | POINT OF TANGENCY |
| PCC | POINT OF COMPOUND CURVE |
| PRC | POINT OF REVERSE CURVE |
| POB | POINT OF BEGINNING |
| POE | POINT OF ENDING |
| STA | STATION PREFIX |
| AH | AHEAD STATION SUFFIX |
| BK | BACK STATION SUFFIX |
| D | CURVE DEGREE OF (100FT) |
| R | CURVE RADUIS OF |
| T | CURVE TANGENT LENGTH |
| L | CURVE LENGTH OF |
| E | CURVE EXTERNAL DISTANCE |

## UTILITY SYMBOLOGY

### UNDERGROUND UTILITIES

- UGU — UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

### ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEP.
- UTILITY POLE GUY WIRE

## PROJECT CONSTRUCTION SYMBOLOGY

### PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

### PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PROJECT DEMARCATION FENCE
- BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

## CONVENTIONAL BOUNDARY SYMBOLOGY

### BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6f — 6F PROPERTY BOUNDARY
- 4f — 4F PROPERTY BOUNDARY
- HAZ — HAZARDOUS WASTE

## EPSC LAYOUT PLAN SYMBOLOGY

### EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

### ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

### ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) — HISTORIC STRUCTURE

## CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

### EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352LegendSheet |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352LegendSheet.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
CONVENTIONAL SYMBOLOGY LEGEND

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 9 OF 47

## GPS/NGS CONTROL POINTS

### ENOSBURG CORS ARP

ID = VTEB
N = 880140.55
E = 1562984.59
ELLIP. HEIGHT = 396.86

STATION IS A GPS CONTINOUSLY OPERATING REFERENCE STATION. STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA. LOCATED AT THE VERMONT AGENCY OF TRANSPORTATION DISTRICT 8 GARAGE IN ENOSBURG, VERMONT. THE MONUMENT IS ATTACHED TO A TWO STORY CONCRETE BLOCK BUILDING WITH A 1.5 M CONCRETE FOUNDATION BUILT IN 1991. MAST IS A 2 INCH GALV PIPE THAT IS 108 INCHES LONG. THE MAST IS ATTACHED TO A STEEL MOUNTING FRAME WITH THREE ATTACHMENTS CONSISTING OF 3/8 INCH SS THROUGH BOLTS. THE MOUNTING FRAME IS ATTACHED TO THE BUILDING USING 8 THROUGH BOLTED ATTACHMENT POINTS THAT CONSIST OF 1/2 INCH SS THREADED RODS AND NUTS.

### MONTGOMERY AZ MK

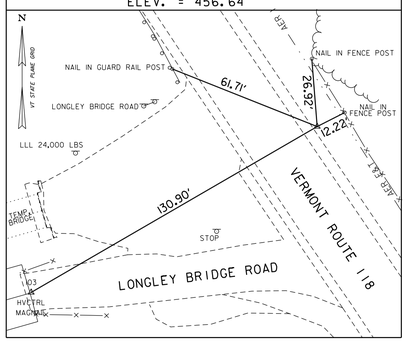
VT PID = VT0366
N = 877138.46
E = 1600400.28
ELEV. = 454.21

GENERAL LOCATION, MONTGOMERY, VT. OWNERSHIP, RICHARD BURNS, HCR ROUTE 290, EAST BERKSHIRE, VT.05447. PHONE 802-326-4334. TO REACH FROM THE INTERSECTION OF VT ROUTES 118 AND 242 IN MONTGOMERY CENTER GO NORTHWEST ALONG VT ROUTE 118 FOR 2.4 MI (3.9 KM) TO THE INTERSECTION OF SOUTH RICHFORD ROAD RIGHT, AT A TRIANGULAR SHAPED PARK AT THE WEST END OF MONTGOMERY VILLAGE. BEAR LEFT AND CONTINUE NORTHWEST ALONG VT ROUTE 118 FOR 1.0 MI (1.6 KM) TO THE SITE OF THE MARK ON THE LEFT IN A SMALL GRASSY AREA. IT IS 0.1 MI (0.2 KM) SOUTH OF THE INTERSECTION OF VT ROUTE 118 AND LONGLEY BRIDGE ROAD. THE MARK IS SET 15 CM BELOW GROUND SURFACE IN THE TOP OF A ROCK OUTCROP. IT IS ENCASED IN A 15 CM DIAMETER PLASTIC SLEEVE WITH CAP. IT IS 21.4 M (70.2 FT) WEST OF AND ABOUT 2.5 M (8.2 FT) LOWER THAN THE WEST EDGE OF PAVEMENT OF VT ROUTE 118, 48.0 M (157.5 FT) NORTHWEST OF MILE MARKER 1180/0610/0900 AT THE NORTH END OF A WIRE FENCE, 11.7 M (38.4 FT) NORTH OF TWIN 5 CM WHITE BIRCHES, 8.3 M (27.2 FT) SOUTHWEST OF A 5 CM WHITE BIRCH, AND 3.0 M (9.8 FT) EAST OF A 5 CM POPLAR AND A FIBERGLASS WITNESS POST.

## TRAVERSE TIES

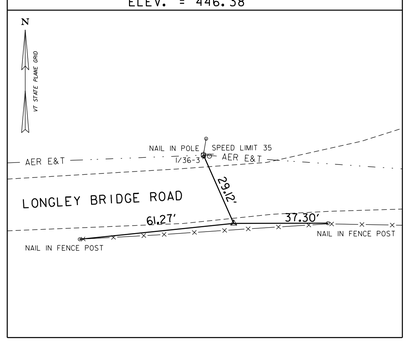
**HVCTRL #1** 5/8"REBAR SET FLUSH YELLOW VSE CONTROL CAP

NORTH = 877570.86
EAST = 1600252.75
ELEV. = 456.64




**HVCTRL #2** 5/8"REBAR SET FLUSH YELLOW VSE CONTROL CAP

NORTH = 877450.42
EAST = 1599856.18
ELEV. = 446.38




* SURVEY COMPLETED: JUNE 30, 2014 BY VSE, M. YEFHCAK-PC, T. YEFCHAK

## ALIGNMENT TIES

DATUM
VERTICAL NAVD 88 FT
HORIZONTAL NAD 83(2011) sFT
ADJUSTMENT UNADJUSTED

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352tie1 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

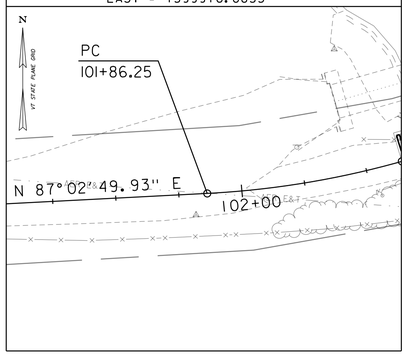
FILE NAME: z12j352tie.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: VSE
TIE SHEET 1

PLOT DATE: 6/10/2015
DRAWN BY: VSE
CHECKED BY: VSE
SHEET 10 OF 47

ALIGNMENT TIES

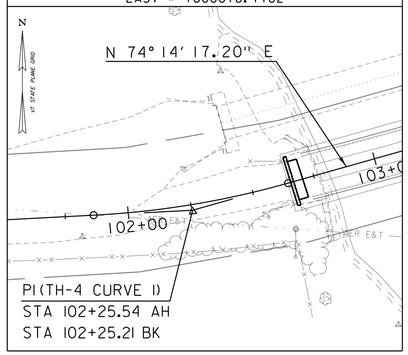
## PC STA TH-4 101+86.25

NORTH = 877468.1879
EAST = 1599976.8835



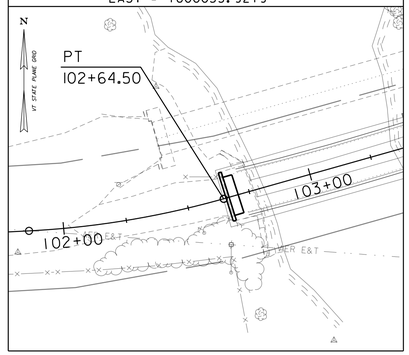

## PI STA TH-4 102+25.21 BK

NORTH = 877470.2117
EAST = 1600016.1182



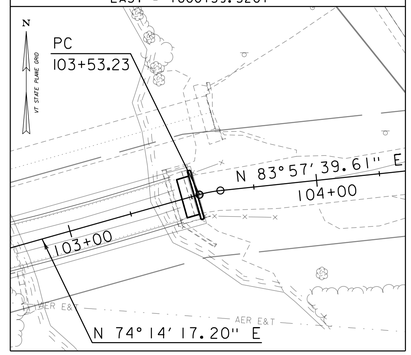

## PT STA TH-4 102+64.50

NORTH = 877480.8836
EAST = 1600053.9279



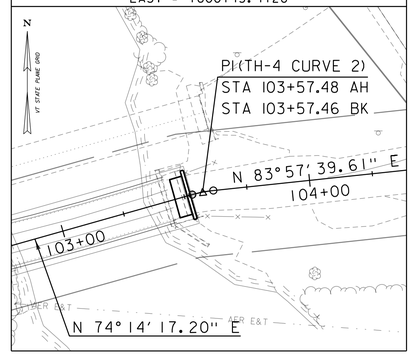

## PC STA TH-4 103+53.23

NORTH = 877504.9858
EAST = 1600139.3201



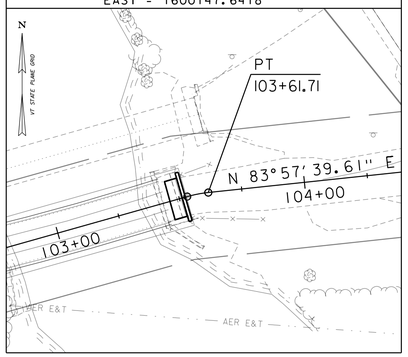

## PI STA TH-4 103+57.46 BK

NORTH = 877506.1410
EAST = 1600143.4128




## PT STA TH-4 103+61.71

NORTH = 877506.5884
EAST = 1600147.6418




Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352tie2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

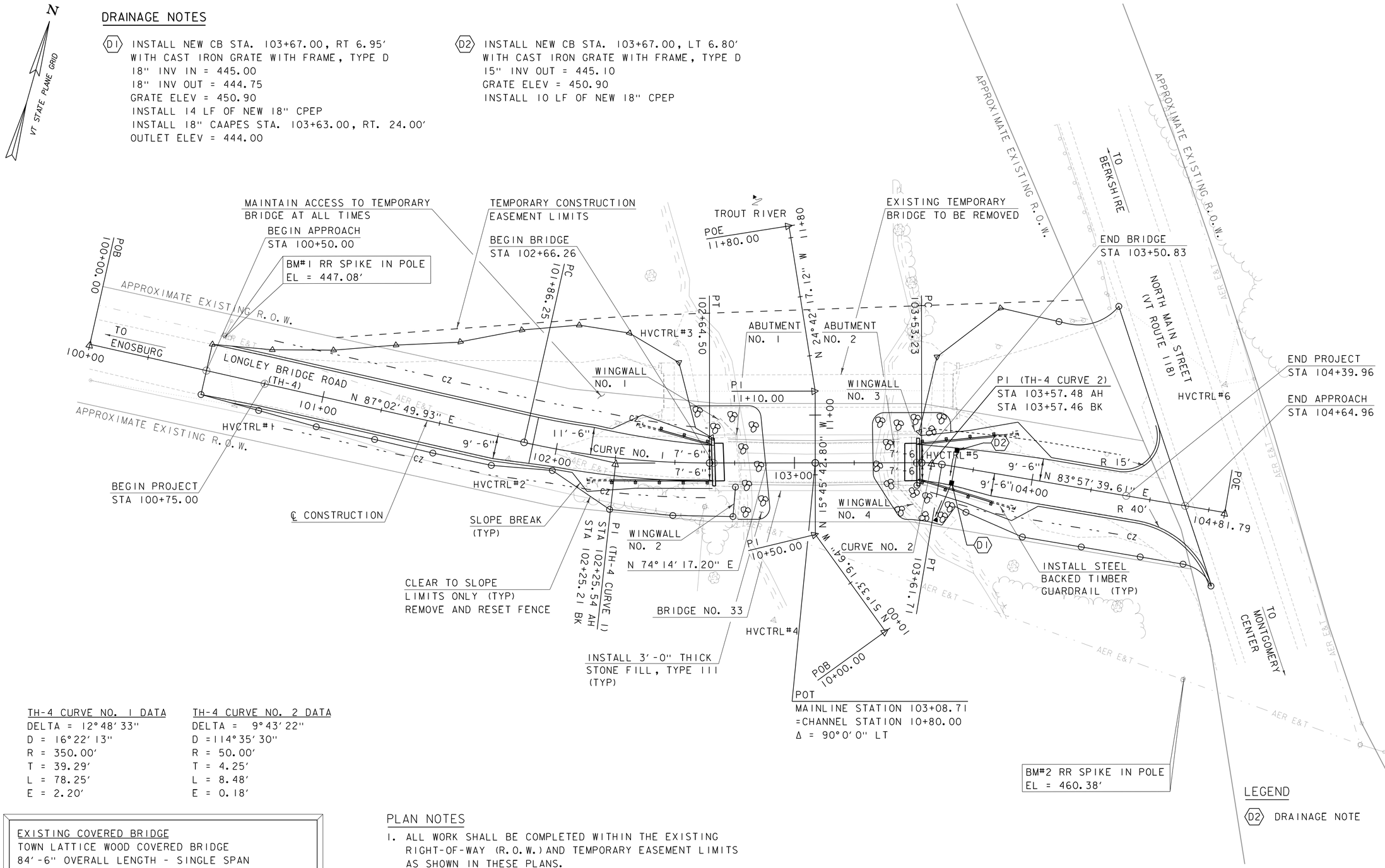
FILE NAME: z12j352tie.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
TIE SHEET 2

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 11 OF 47

## DRAINAGE NOTES

(D1) INSTALL NEW CB STA. 103+67.00, RT 6.95'
WITH CAST IRON GRATE WITH FRAME, TYPE D
18" INV IN = 445.00
18" INV OUT = 444.75
GRATE ELEV = 450.90
INSTALL 14 LF OF NEW 18" CPEP
INSTALL 18" CAAPES STA. 103+63.00, RT. 24.00'
OUTLET ELEV = 444.00

(D2) INSTALL NEW CB STA. 103+67.00, LT 6.80'
WITH CAST IRON GRATE WITH FRAME, TYPE D
15" INV OUT = 445.10
GRATE ELEV = 450.90
INSTALL 10 LF OF NEW 18" CPEP




### TH-4 CURVE NO. 1 DATA

DELTA = 12°48'33"
D = 16°22'13"
R = 350.00'
T = 39.29'
L = 78.25'
E = 2.20'

### TH-4 CURVE NO. 2 DATA

DELTA = 9°43'22"
D = 114°35'30"
R = 50.00'
T = 4.25'
L = 8.48'
E = 0.18'

### EXISTING COVERED BRIDGE

TOWN LATTICE WOOD COVERED BRIDGE
84'-6" OVERALL LENGTH - SINGLE SPAN
66'-11" CLEAR SPAN
CONSTRUCTED 1863
15'-0" ROADWAY
WOODEN DECK WITH RUNNER PLANKS
8'-5⅞" (MIN) CLEAR HEIGHT
LAID-UP STONE AND CONCRETE ENCASED ABUTMENTS

## PLAN NOTES

1. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING RIGHT-OF-WAY (R.O.W.) AND TEMPORARY EASEMENT LIMITS AS SHOWN IN THESE PLANS.

2. CATCH BASINS SHALL BE PLACED AT ROADWAY LOW POINT.

SCALE 1" = 20'-0"
20 0 20

## LEGEND

(D2) DRAINAGE NOTE

Hoyle, Tanner & Associates, Inc.

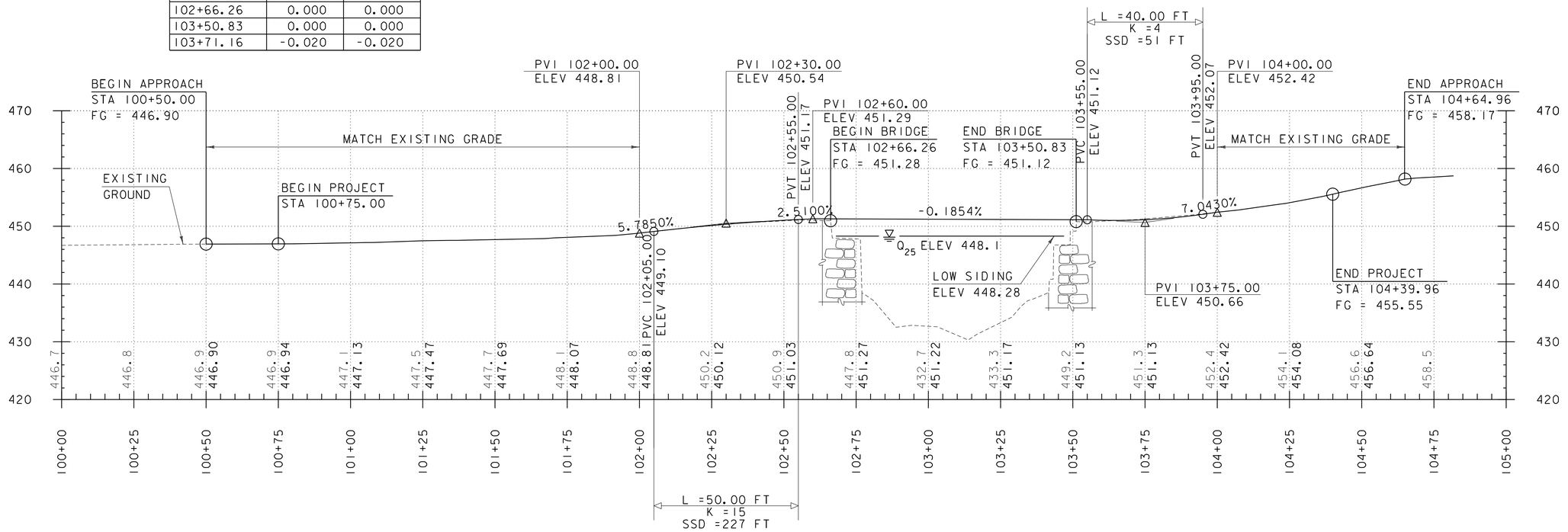
| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352bdr_lay |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352bdr_lay.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
LAYOUT SHEET

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 12 OF 47

| STATION | CROSS SLOPE | |
|---|---|---|
| | LEFT | RIGHT |
| 102+46.16 | -0.020 | -0.020 |
| 102+66.26 | 0.000 | 0.000 |
| 103+50.83 | 0.000 | 0.000 |
| 103+71.16 | -0.020 | -0.020 |




## TH-4 PROFILE

HORIZONTAL SCALE: 1" = 20'  VERTICAL SCALE: 1" = 10'

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352profile |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352profile.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
TH-4 PROFILE SHEET

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 13 OF 47

N

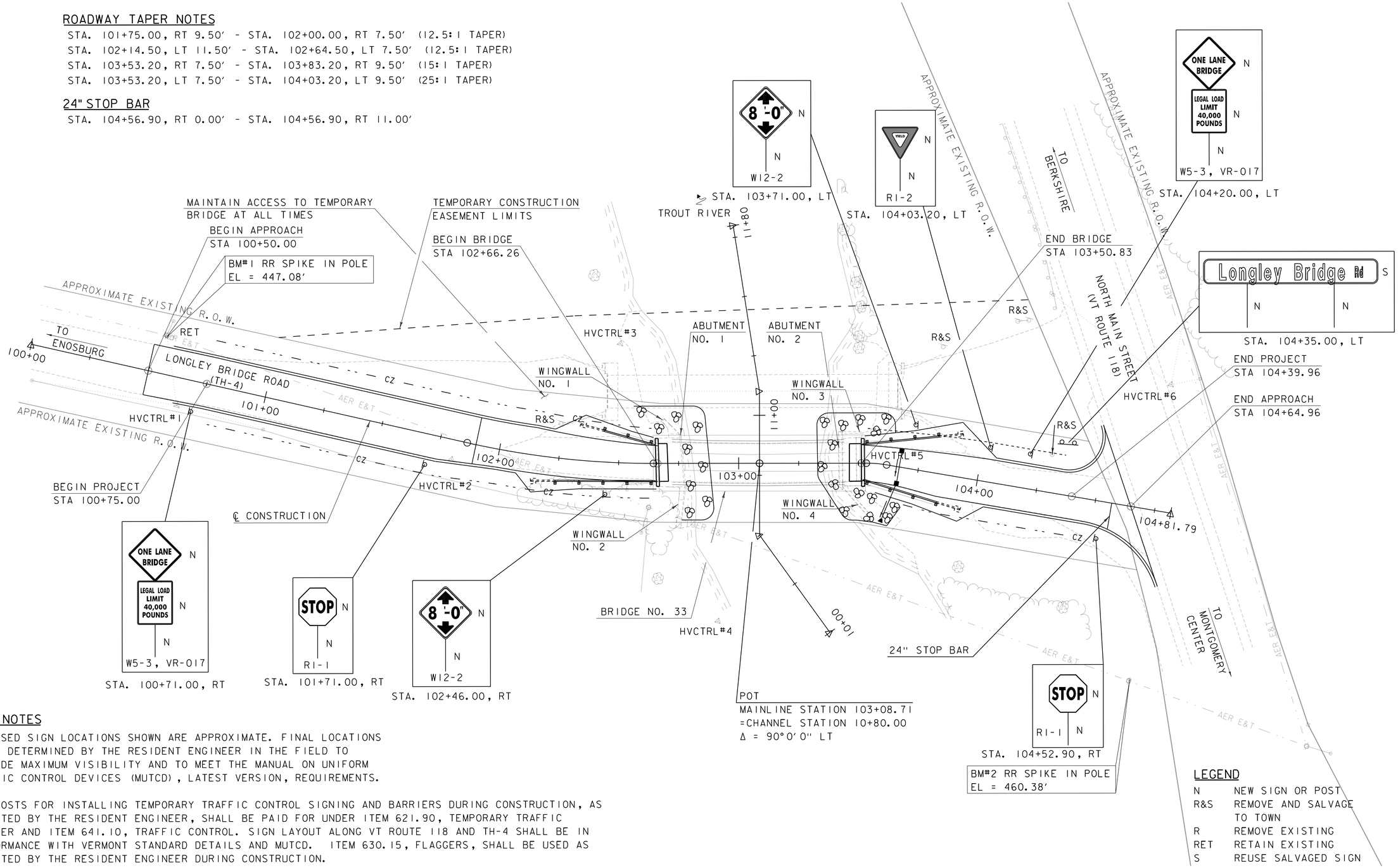
VT STATE PLANE GRID

## ROADWAY TAPER NOTES

STA. 101+75.00, RT 9.50' - STA. 102+00.00, RT 7.50' (12.5:1 TAPER)
STA. 102+14.50, LT 11.50' - STA. 102+64.50, LT 7.50' (12.5:1 TAPER)
STA. 103+53.20, RT 7.50' - STA. 103+83.20, RT 9.50' (15:1 TAPER)
STA. 103+53.20, LT 7.50' - STA. 104+03.20, LT 9.50' (25:1 TAPER)

## 24" STOP BAR

STA. 104+56.90, RT 0.00' - STA. 104+56.90, RT 11.00'




## SIGNING NOTES

1. PROPOSED SIGN LOCATIONS SHOWN ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD TO PROVIDE MAXIMUM VISIBILITY AND TO MEET THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST VERSION, REQUIREMENTS.

2. ALL COSTS FOR INSTALLING TEMPORARY TRAFFIC CONTROL SIGNING AND BARRIERS DURING CONSTRUCTION, AS DIRECTED BY THE RESIDENT ENGINEER, SHALL BE PAID FOR UNDER ITEM 621.90, TEMPORARY TRAFFIC BARRIER AND ITEM 641.10, TRAFFIC CONTROL. SIGN LAYOUT ALONG VT ROUTE 118 AND TH-4 SHALL BE IN CONFORMANCE WITH VERMONT STANDARD DETAILS AND MUTCD. ITEM 630.15, FLAGGERS, SHALL BE USED AS DIRECTED BY THE RESIDENT ENGINEER DURING CONSTRUCTION.

3. SEE VTRANS STANDARDS T-1, T-10, T-28 AND T-30 FOR SIGN PLACEMENT AND DETAILS.

4. NO CONSTRUCTION SIGNS SHALL BE INSTALLED IN SUCH A WAY AS TO INTERFERE OR OBSTRUCT EXISTING SIGNS, THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE AND/OR CORNER SIGHT DISTANCE FROM EXISTING DRIVES AND HIGHWAYS. SIGN LOCATIONS TO BE APPROVED BY THE RESIDENT ENGINEER.

## LEGEND

| | |
|---|---|
| N | NEW SIGN OR POST |
| R&S | REMOVE AND SALVAGE TO TOWN |
| R | REMOVE EXISTING |
| RET | RETAIN EXISTING |
| S | REUSE SALVAGED SIGN |

SCALE 1" = 20'-0"
20 0 20

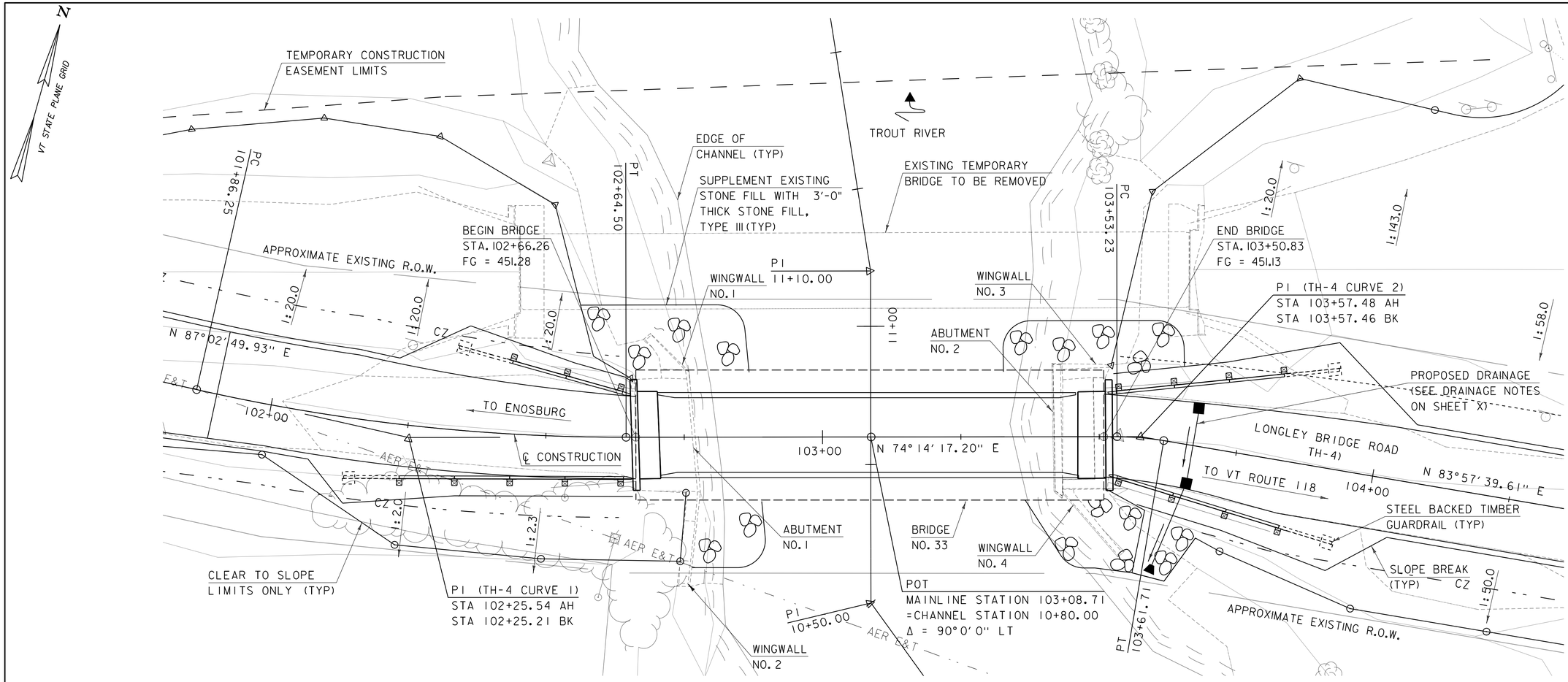
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352bdr_sgn |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

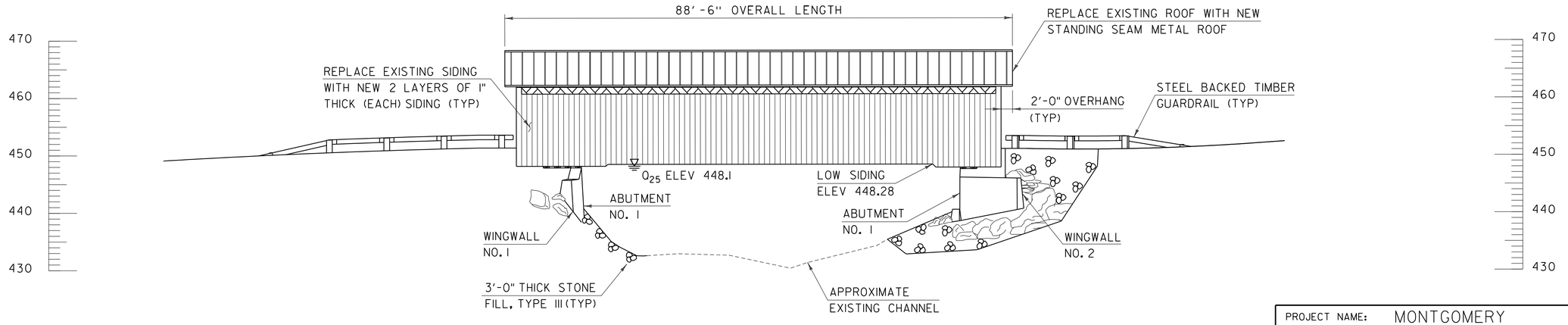
FILE NAME: z12j352bdr_sgn.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
TRAFFIC SIGNS AND LINES LAYOUT SHEET

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 14 OF 47




## PLAN

SCALE: 1" = 10'-0"




## ELEVATION AT UPSTREAM FASCIA

SCALE: 1" = 10'-0"

NOTE

1. SEE SHEET X FOR APPROACH GUARDRAIL LAYOUT.

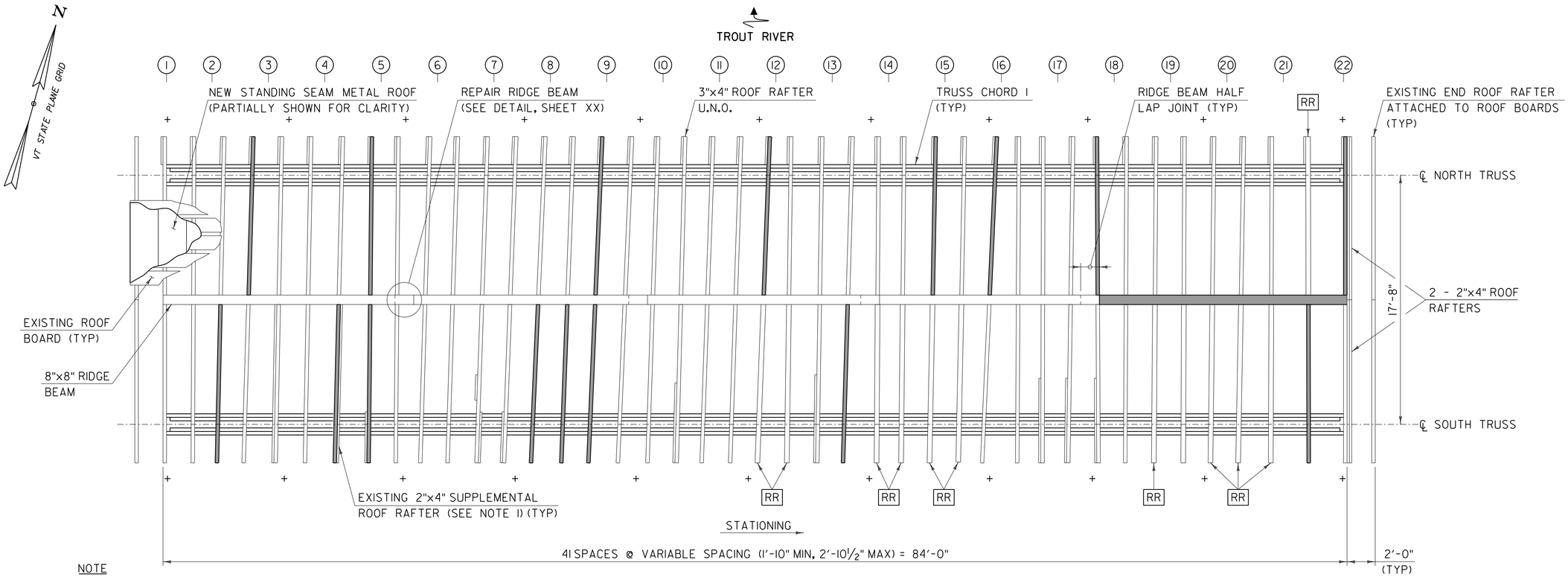
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352pe |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

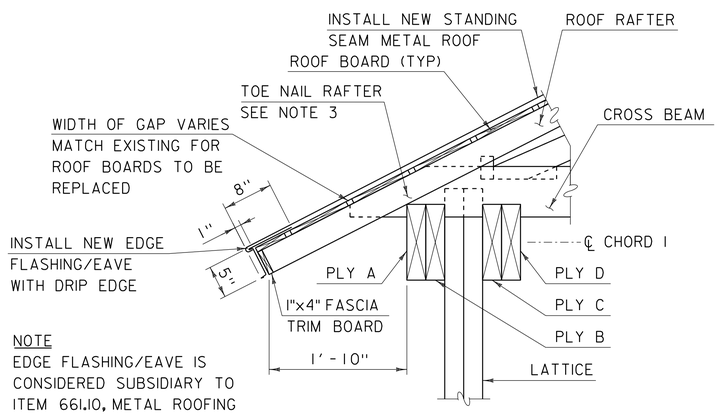
FILE NAME: z12j352pe.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
PLAN AND ELEVATION

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 15 OF 47



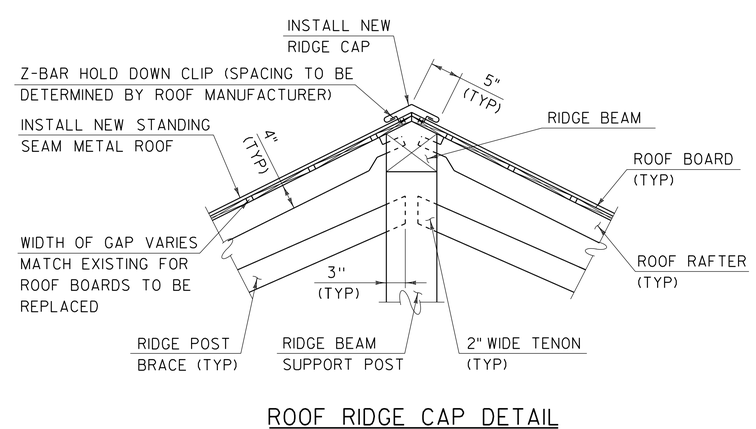

NOTE
METAL ROOF AND ROOF BOARDS ARE PARTIALLY SHOWN FOR CLARITY

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




NOTE
EDGE FLASHING/EAVE IS CONSIDERED SUBSIDIARY TO ITEM 661.10, METAL ROOFING

## ROOF RAFTER DETAIL
SCALE: 1" = 1'-0"




## ROOF RIDGE CAP DETAIL
SCALE: 1" = 1'-0"

## NOTES

1. EXISTING SUPPLEMENTAL ROOF RAFTERS VARY IN SIZE AND ARE 1¾"x4" ON AVERAGE. THOSE SUPLEMENTAL ROOF RAFTERS SHALL NOT BE REUSED AT ROOF RAFTERS TO BE REPLACED AND SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
2. SUPPLEMENTAL ROOF RAFTERS THAT ARE TO REMAIN SHALL BE NAILED WITH 10d GALVANIZED SINKER NAILS AT 12" O.C. COST OF SUCH WORK IS PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).
3. EACH FACE OF EXISTING AND REPLACED ROOF RAFTERS SHALL BE TOE NAILED TO PLY A OF CHORD 1 WITH ONE 30d GALVANIZED SINKER NAIL. COST OF SUCH WORK IS PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

## LEGEND

- PREDETERMINED MEMBER TO BE REPLACED
- (XX) TRUSS NODE LOCATION
- [RR] PREVIOUSLY REPLACED 4"x6" ROOF RAFTER
- U.N.O. UNLESS NOTED OTHERWISE
- \+ APPROXIMATE LOCATION OF CROSS BEAM (NOT SHOWN FOR CLARITY)

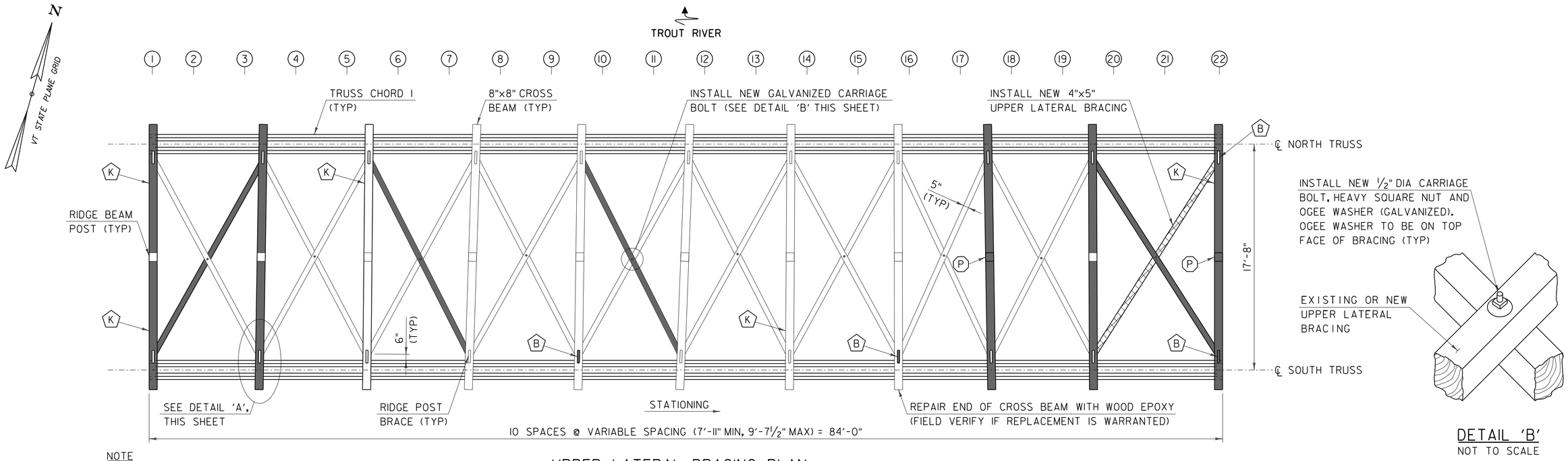
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup3 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352sup3.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
ROOF FRAMING PLAN AND DETAILS

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 16 OF 47

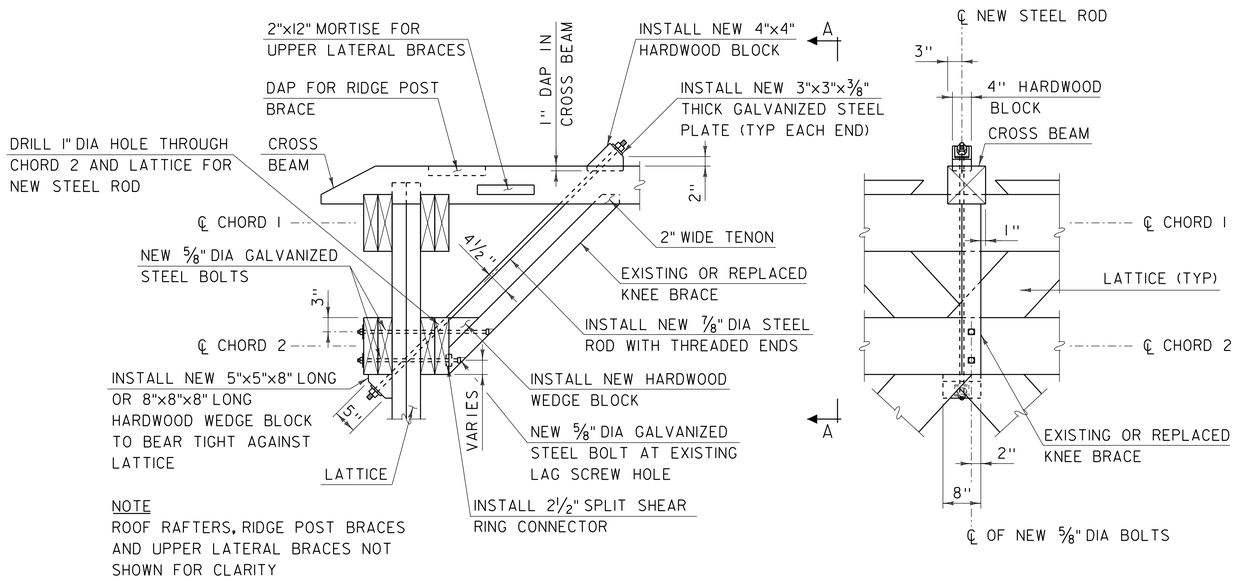



NOTE
KNEE BRACES ARE NOT SHOWN FOR CLARITY

## UPPER LATERAL BRACING PLAN
SCALE: ¼" = 1'-0"



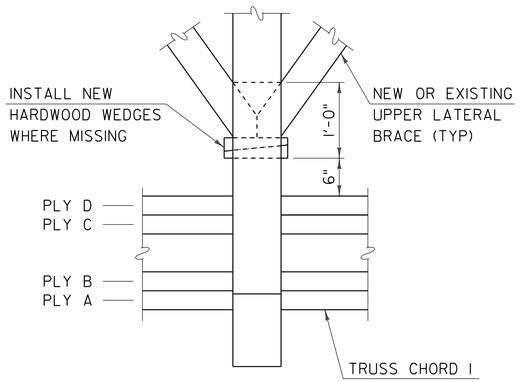

## DETAIL 'B'
NOT TO SCALE




## KNEE BRACE MODIFICATION DETAIL
SCALE: ¾" = 1'-0"




## SECTION A-A
SCALE: ¾" = 1'-0"




## DETAIL 'A'
SCALE: 1" = 1'-0"

NOTE

1. SEE SHEET XX FOR ADDITIONAL DETAILS THAT APPLY TO THIS SHEET.

LEGEND

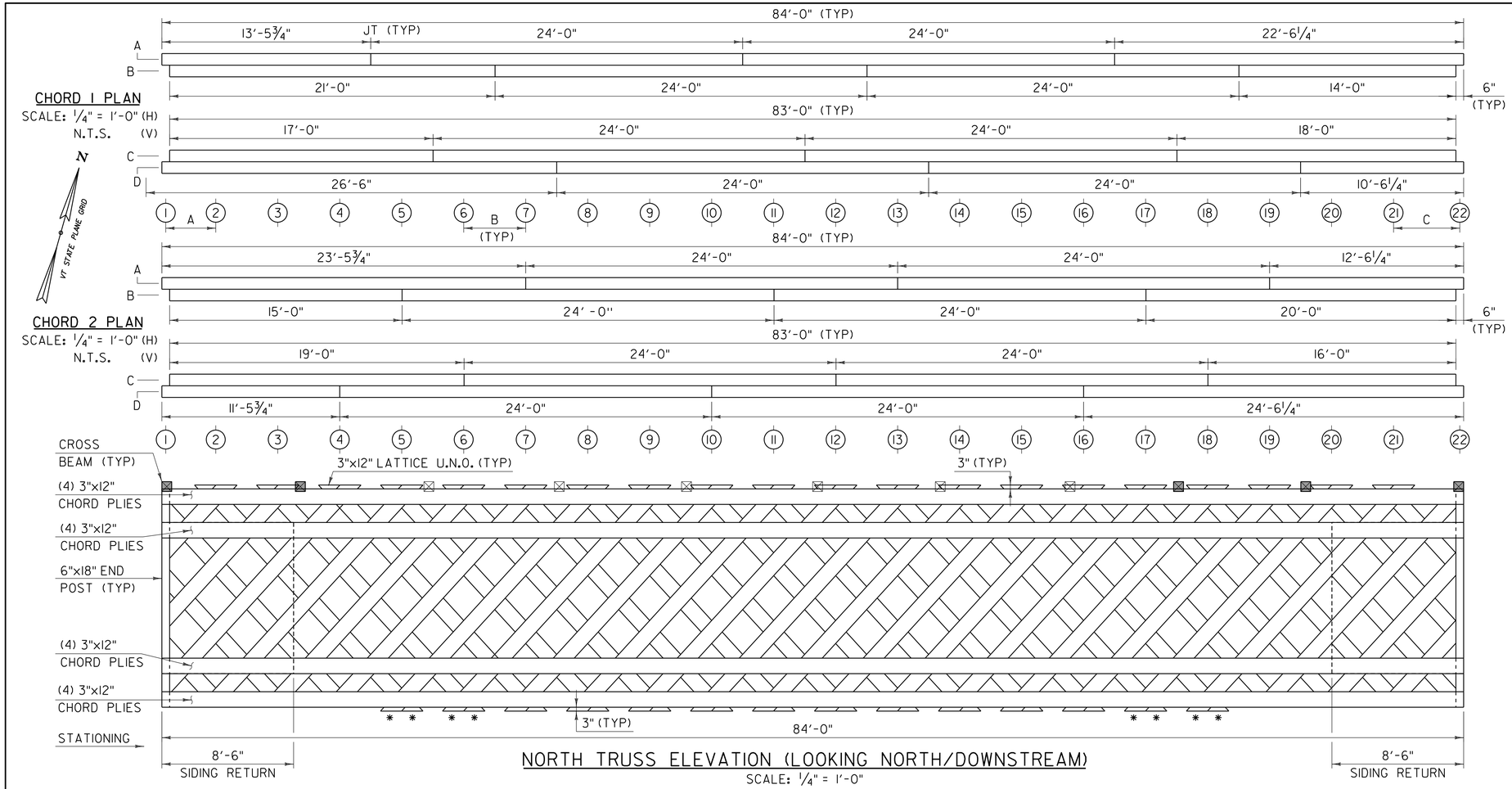
- PREDETERMINED MEMBER TO BE REPLACED
- NEW MEMBER
- (XX) TRUSS NODE LOCATION
- (P) REPLACE EXISTING RIDGE BEAM POST
- (B) REPLACE EXISTING RIDGE POST BRACE
- (K) REPLACE EXISTING KNEE BRACE (SEE DETAIL THIS SHEET)

Hoyle, Tanner & Associates, Inc.

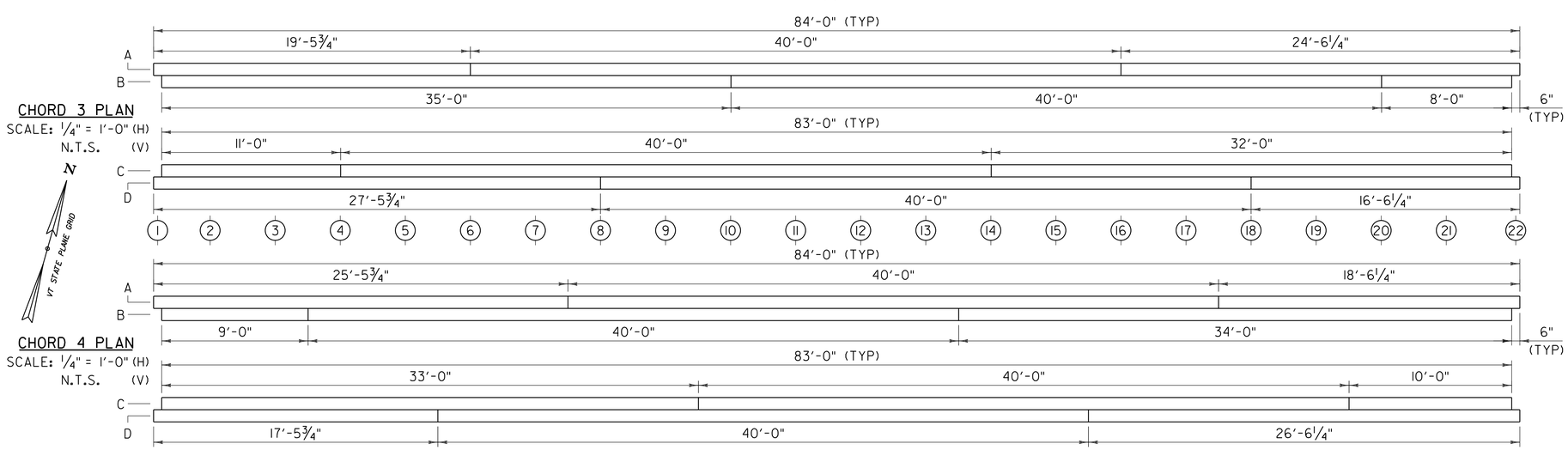
| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup4 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352sup4.dgn — PLOT DATE: 6/10/2015
PROJECT LEADER: M. SARGENT — DRAWN BY: P. DUSTIN
DESIGNED BY: J. RIPLEY — CHECKED BY: J. BICJA
UPPER LATERAL BRACING PLAN AND DETAILS — SHEET 17 OF 47



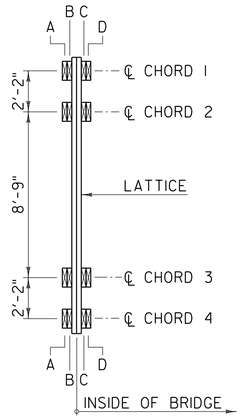

NORTH TRUSS ELEVATION (LOOKING NORTH/DOWNSTREAM)
SCALE: ¼" = 1'-0"




## NOTES

1. RAFTERS, FLOOR BEAMS AND LATERAL BRACING NOT SHOWN FOR CLARITY.
2. SEE DETAIL ON SHEET XX FOR CONNECTION OF TRUSS CHORDS TO END POSTS.
3. SEE SHEET XX FOR ADDITIONAL DETAILS THAT APPLY TO THIS SHEET.
4. SEE SHEET XX FOR NOTES THAT APPLY TO THIS SHEET.

| DIMENSION TABLE | |
|---|---|
| A | 3'-2¾" |
| B | 4'-0" U.N.O. |
| C | 4'-3¼" |




TYPICAL TRUSS SECTION
SCALE: ¼" = 1'-0"

## LEGEND

- PREDETERMINED MEMBER TO BE REPLACED
- (XX) TRUSS NODE LOCATION
- U.N.O. UNLESS NOTED OTHERWISE
- JT CHORD PLY BUTT JOINT
- * 4½"x12" LATTICE NOTCHED 1½" TO PASS CHORDS

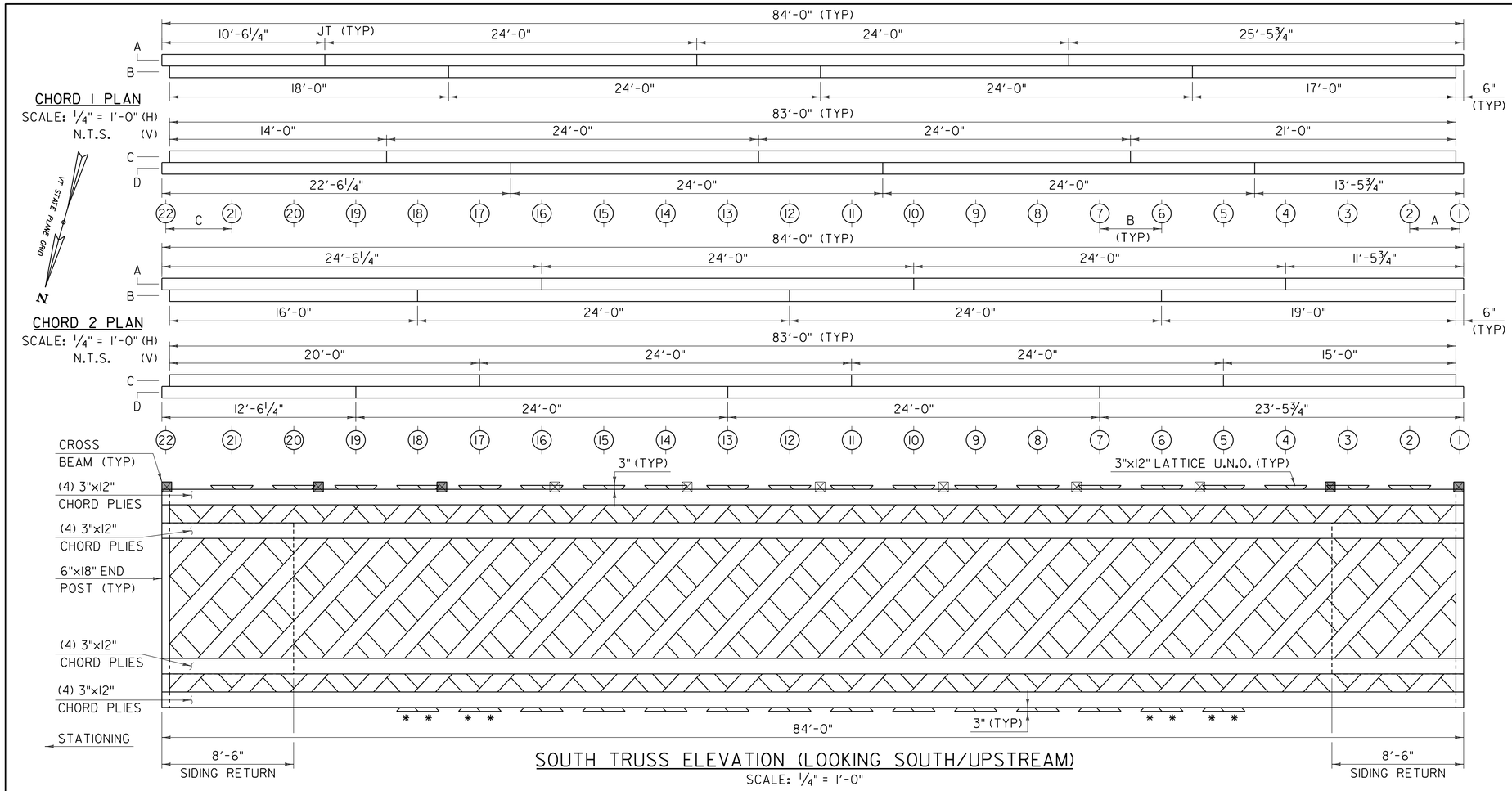
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup5North |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

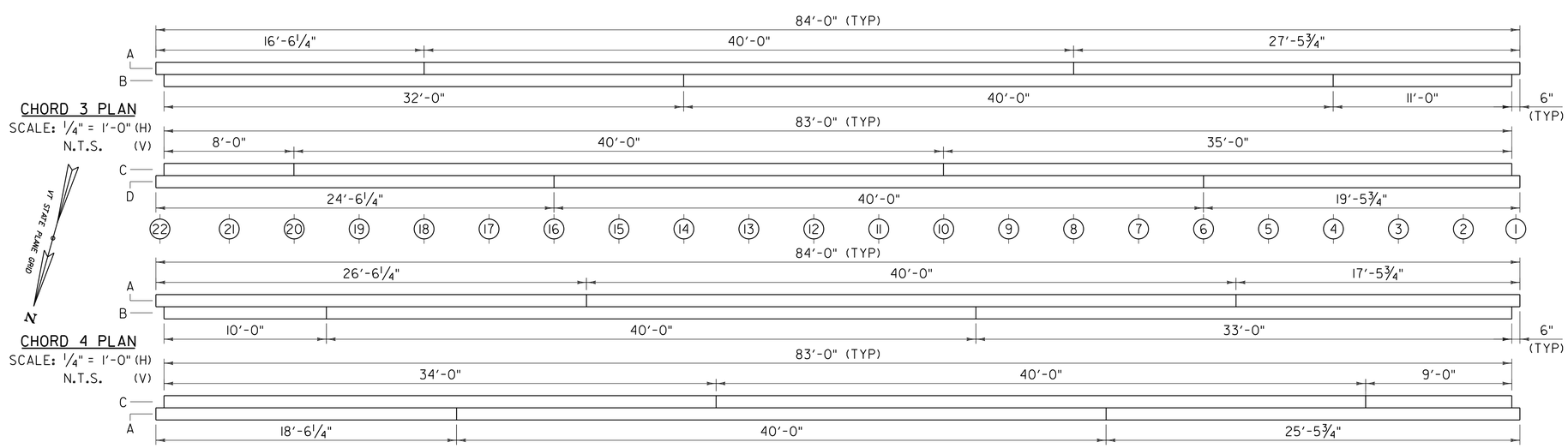
FILE NAME: z12j352sup5.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
NORTH TRUSS PLAN AND ELEVATION

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 18 OF 47




## SOUTH TRUSS ELEVATION (LOOKING SOUTH/UPSTREAM)

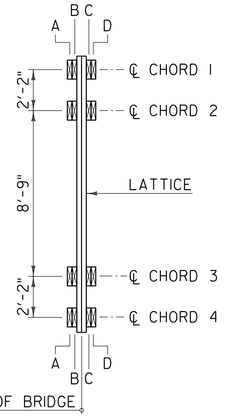
SCALE: 1/4" = 1'-0"




## NOTE

1. SEE SHEET XX FOR NOTES THAT APPLY TO THIS SHEET.

| DIMENSION TABLE | |
|---|---|
| A | 3'-2 3/4" |
| B | 4'-0" U.N.O. |
| C | 4'-3 1/4" |




## TYPICAL TRUSS SECTION

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

## LEGEND

- PREDETERMINED MEMBER TO BE REPLACED
- (XX) TRUSS NODE LOCATION
- U.N.O. UNLESS NOTED OTHERWISE
- JT CHORD PLY BUTT JOINT
- * 4 1/2"x12" LATTICE NOTCHED 1 1/2" TO PASS CHORDS

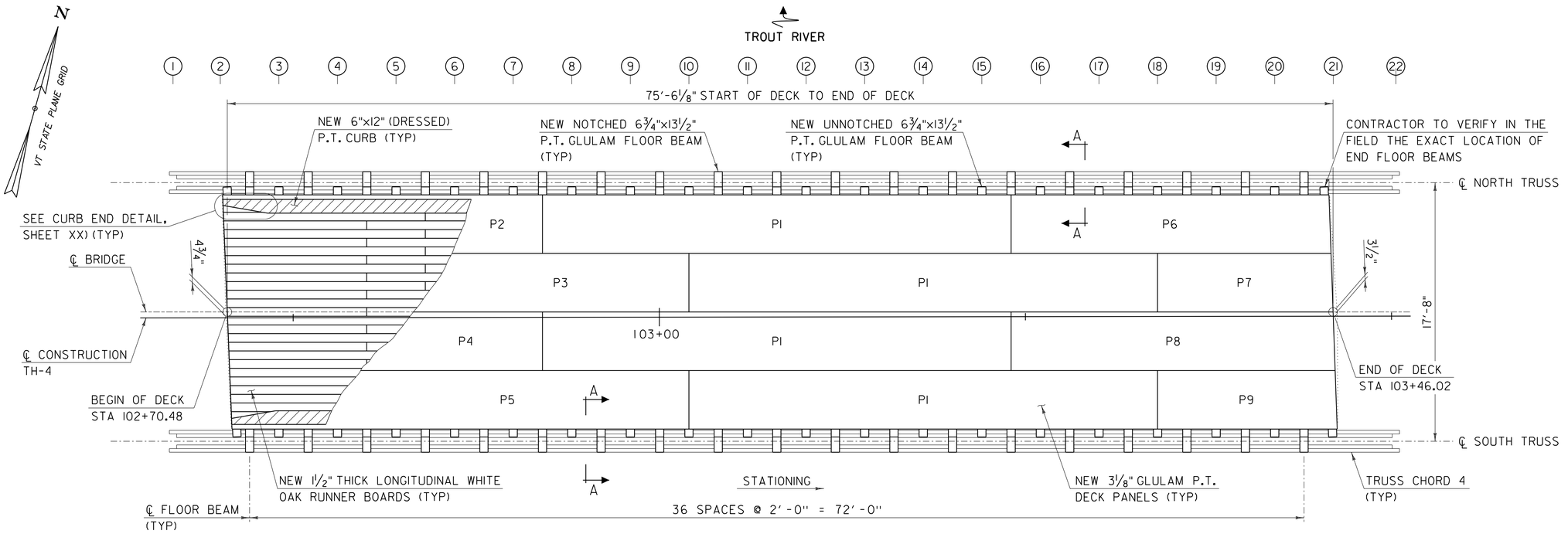
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup5South |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352sup5.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
SOUTH TRUSS PLAN AND ELEVATION

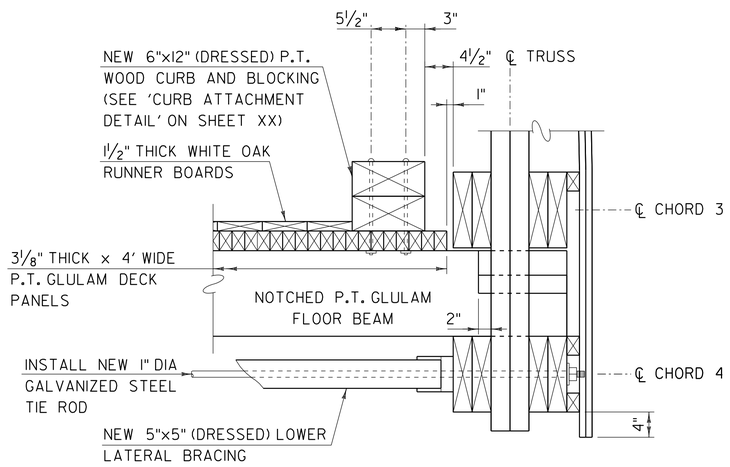
PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 19 OF 47




NOTE
DECK AND CURBING ARE PARTIALLY SHOWN FOR CLARITY

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

| GLULAM DECK PANEL SIZES | |
|---|---|
| PANEL NO. | MAXIMUM LENGTH |
| P1 | 32'-0" |
| P2 | 21'-10 1/2" |
| P3 | 31'-8 1/8" |
| P4 | 21'-6 1/4" |
| P5 | 31'-4 3/8" |
| P6 | 21'-10 1/8" |
| P7 | 11'-11 7/8" |
| P8 | 22'-1 1/2" |
| P9 | 12'-3 1/8" |




## SECTION A-A
SCALE: 1" = 1'-0"

## NOTES

1. SEE SHEET XX FOR ADDITIONAL DETAILS THAT APPLY TO THIS SHEET.
2. SEE SHEET XX FOR NOTES THAT APPLY TO THIS SHEET.

## LEGEND

(XX) TRUSS NODE LOCATION

P.T. PRESSURE TREATED

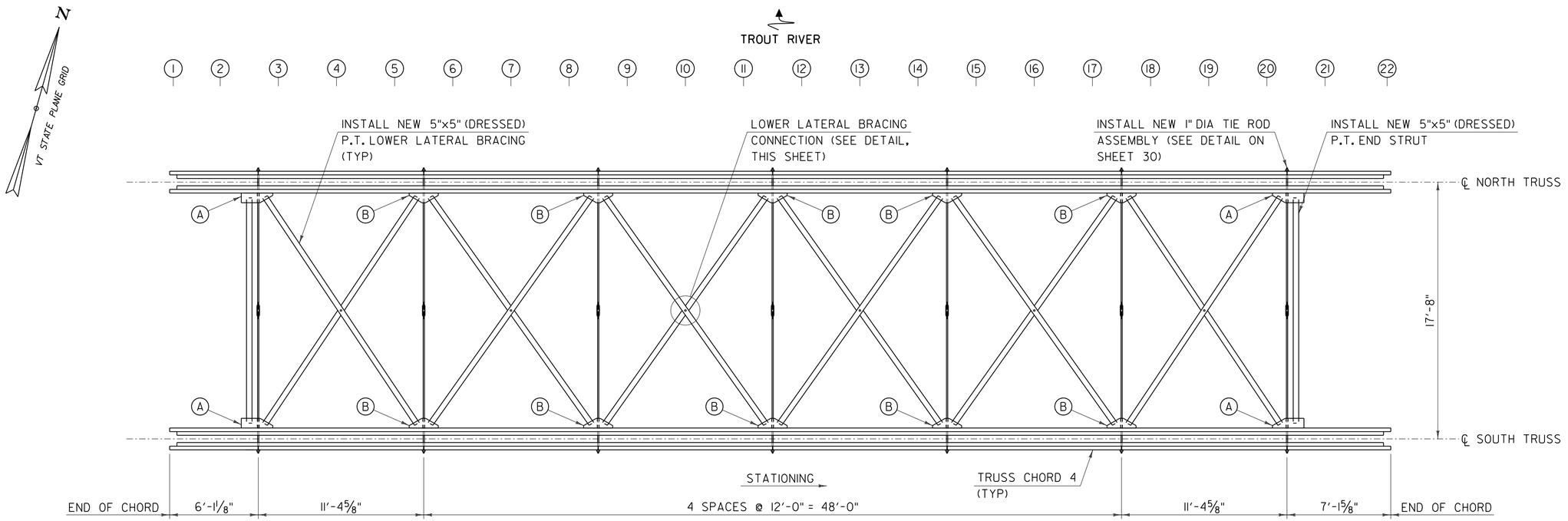
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup6 |

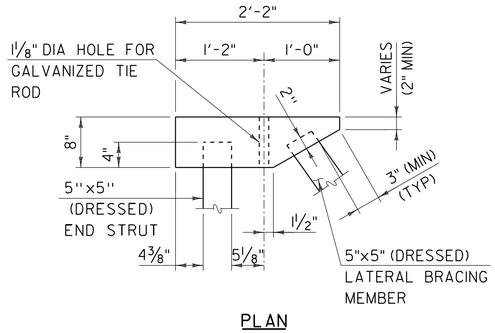
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352sup6.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
FLOOR FRAMING PLAN AND DETAILS

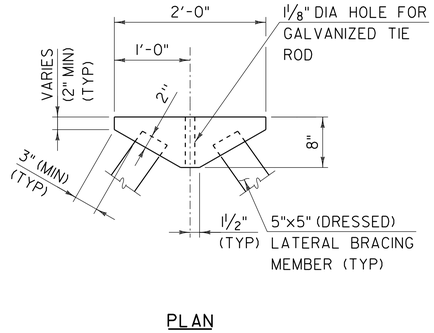
PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 20 OF 47



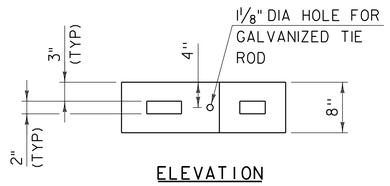

## LOWER LATERAL BRACING PLAN
SCALE: 1/4" = 1'-0"




PLAN

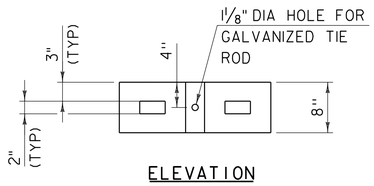



PLAN




ELEVATION

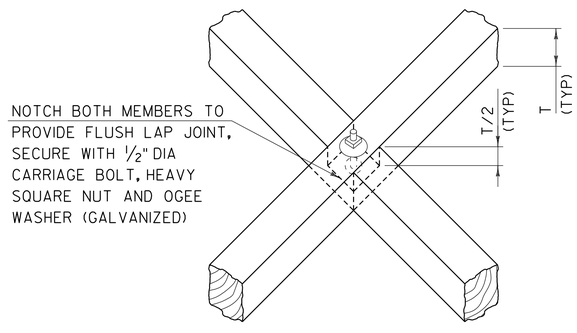
BEARING BLOCK TYPE "A"




ELEVATION

BEARING BLOCK TYPE "B"

## BEARING BLOCK DETAILS
SCALE: 1" = 1'-0"




## LOWER LATERAL BRACING CONNECTION DETAIL
NOT TO SCALE

## NOTES

1. SEE SHEET XX FOR ADDITIONAL DETAILS THAT APPLY TO THIS SHEET.
2. SEE SHEET XX FOR NOTES THAT APPLY TO THIS SHEET.

## LEGEND

- (XX) TRUSS NODE LOCATION
- P.T. PRESSURE TREATED
- (X) INSTALL NEW BEARING BLOCK TYPE (SEE DETAIL, THIS SHEET)

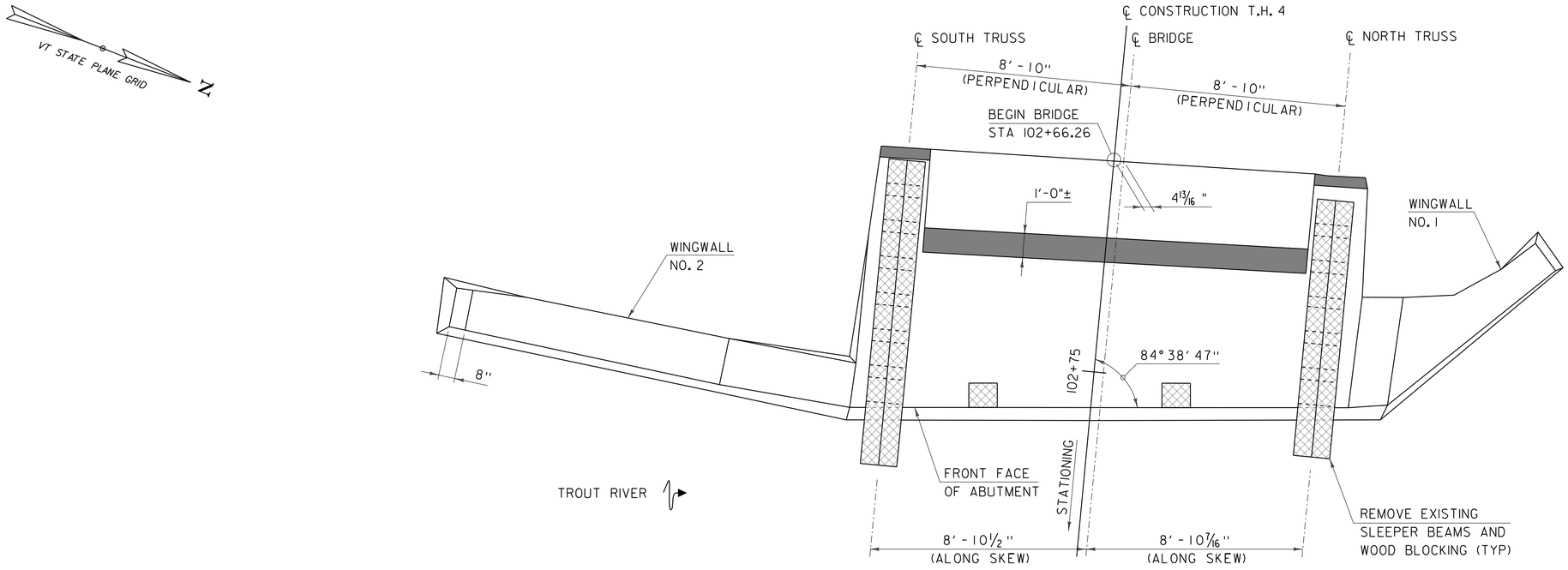
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | zl2j352sup6 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: zl2j352sup7.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
LOWER LATERAL BRACING PLAN AND DETAILS

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 21 OF 47

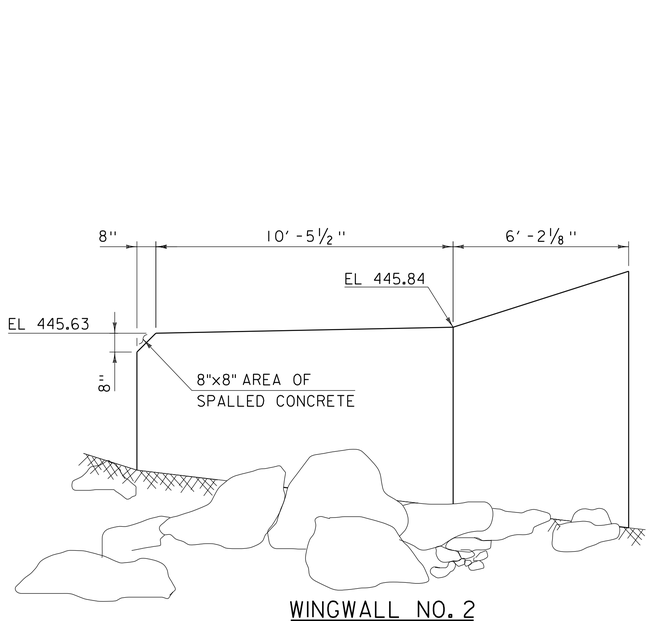



## ABUTMENT NO. 1 PLAN

SCALE: 3/8" = 1′-0"

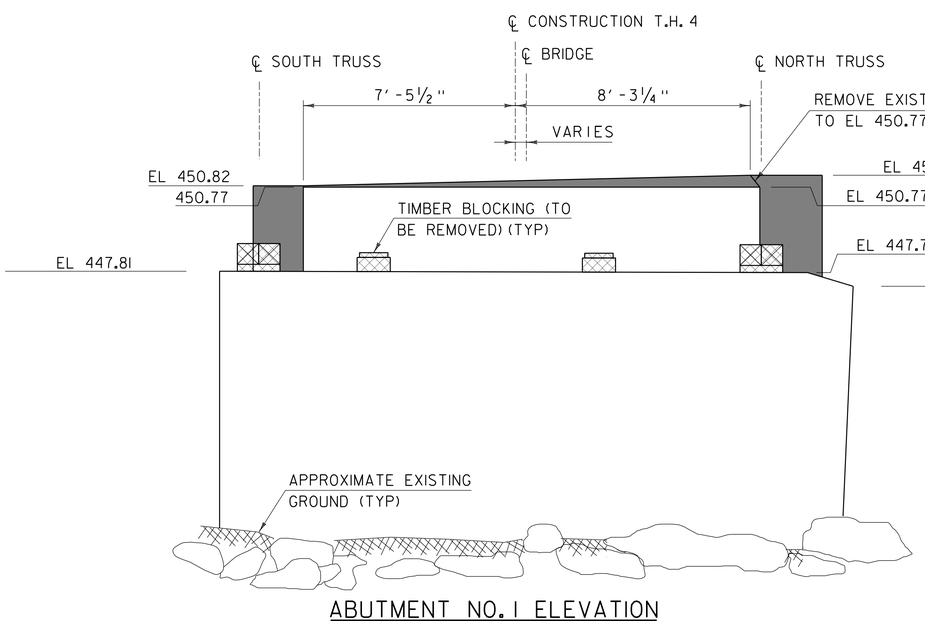
LEGEND

- DENOTES LIMITS OF CONCRETE REMOVAL
- MEMBER TO BE REMOVED



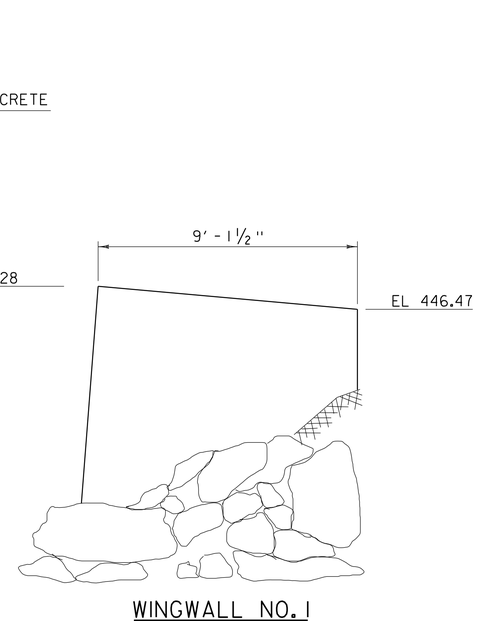

## WINGWALL NO. 2

SCALE: 3/8" = 1′-0"




## ABUTMENT NO. 1 ELEVATION

SCALE: 3/8" = 1′-0"




## WINGWALL NO. 1

SCALE: 3/8" = 1′-0"

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352subl |

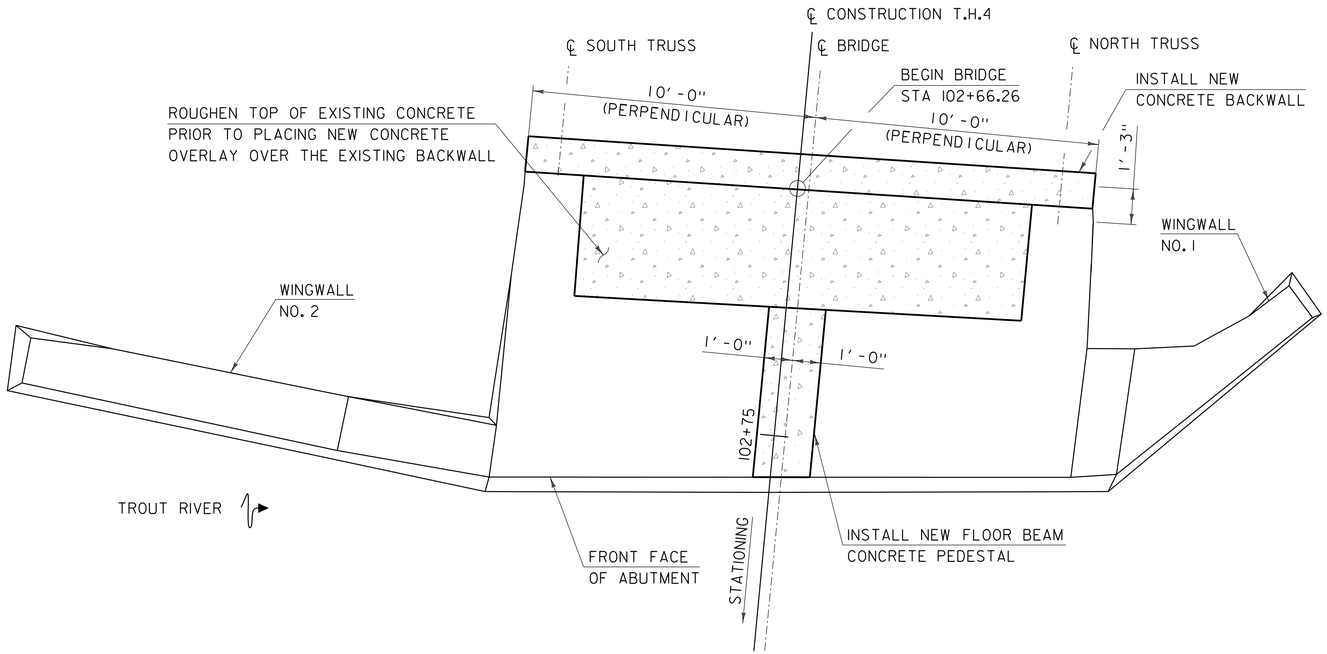
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352subl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
EXIST. ABUTMENT NO. 1 PLAN AND ELEVATION

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 22 OF 47

VT STATE PLANE GRID

N

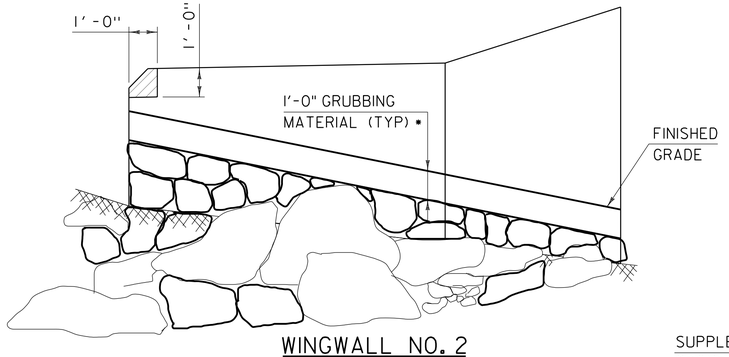



## ABUTMENT NO. 1 PLAN

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

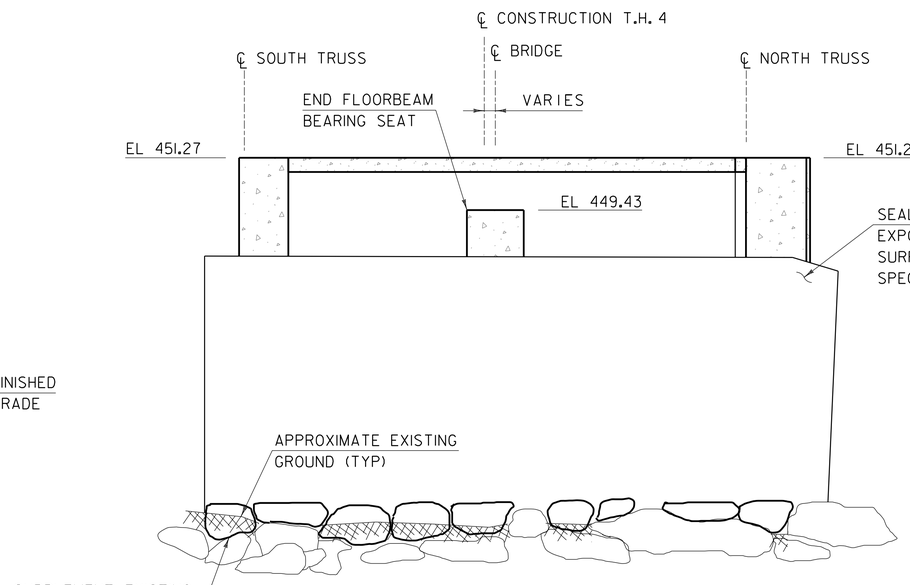
LEGEND

- DENOTES LIMITS OF CLASS II SUBSTRUCTURE CONCRETE REPAIR
- DENOTES LIMITS OF NEW CONCRETE



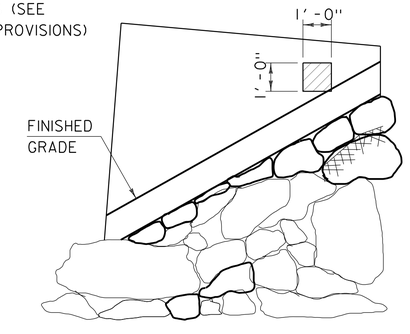

## WINGWALL NO. 2

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




## ABUTMENT NO. 1 ELEVATION

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




## WINGWALL NO. 1

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

• GRUBBING MATERIAL SHALL NOT BE PLACED BELOW OHW.

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352Sub2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352sub2.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
PROP. ABUTMENT NO. 1 PLAN AND ELEVATION

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 23 OF 47

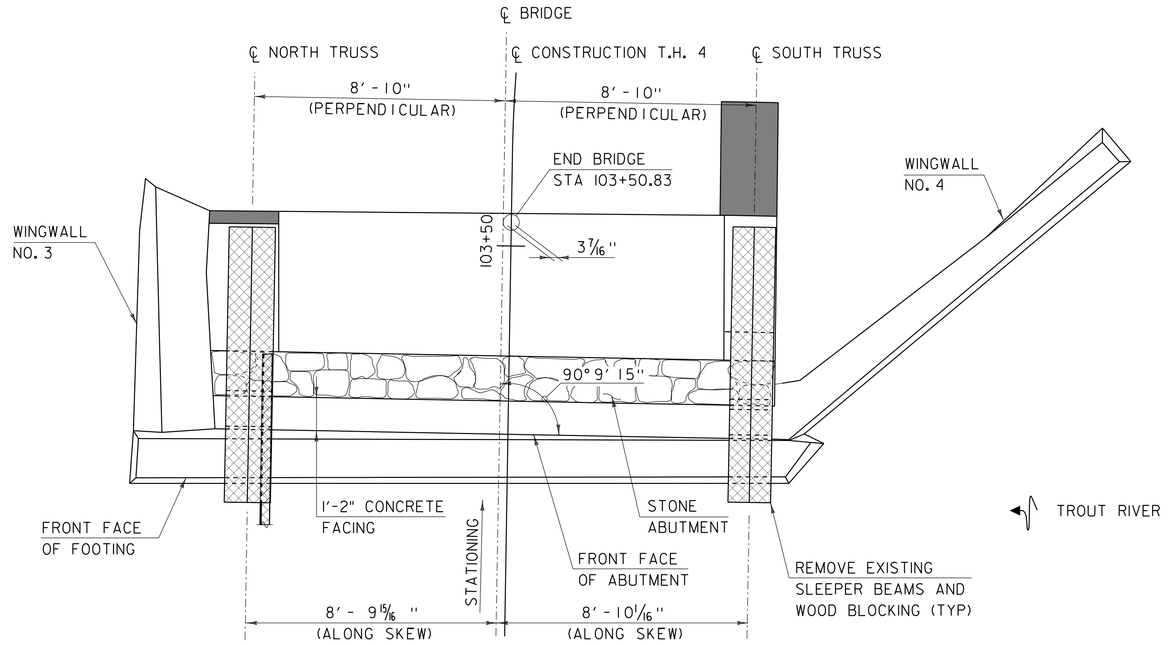
N

VT STATE PLANE GRID

## LEGEND

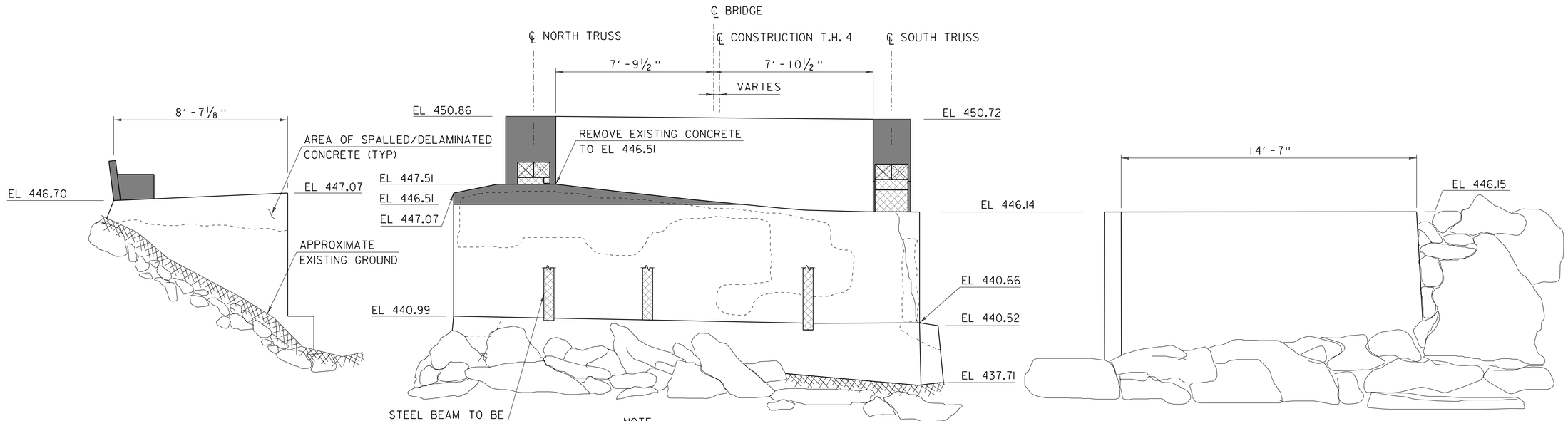
DENOTES LIMITS OF CONCRETE REMOVAL

MEMBER TO BE REMOVED




## ABUTMEMT NO. 2 PLAN

SCALE: 3/8" = 1′-0"




## WINGWALL NO. 3 ELEVATION

SCALE: 3/8" = 1′-0"

## ABUTMENT NO. 2 ELEVATION

SCALE: 3/8" = 1′-0"

## WINGWALL NO. 4 ELEVATION

SCALE: 3/8" = 1′-0"

Hoyle, Tanner & Associates, Inc.

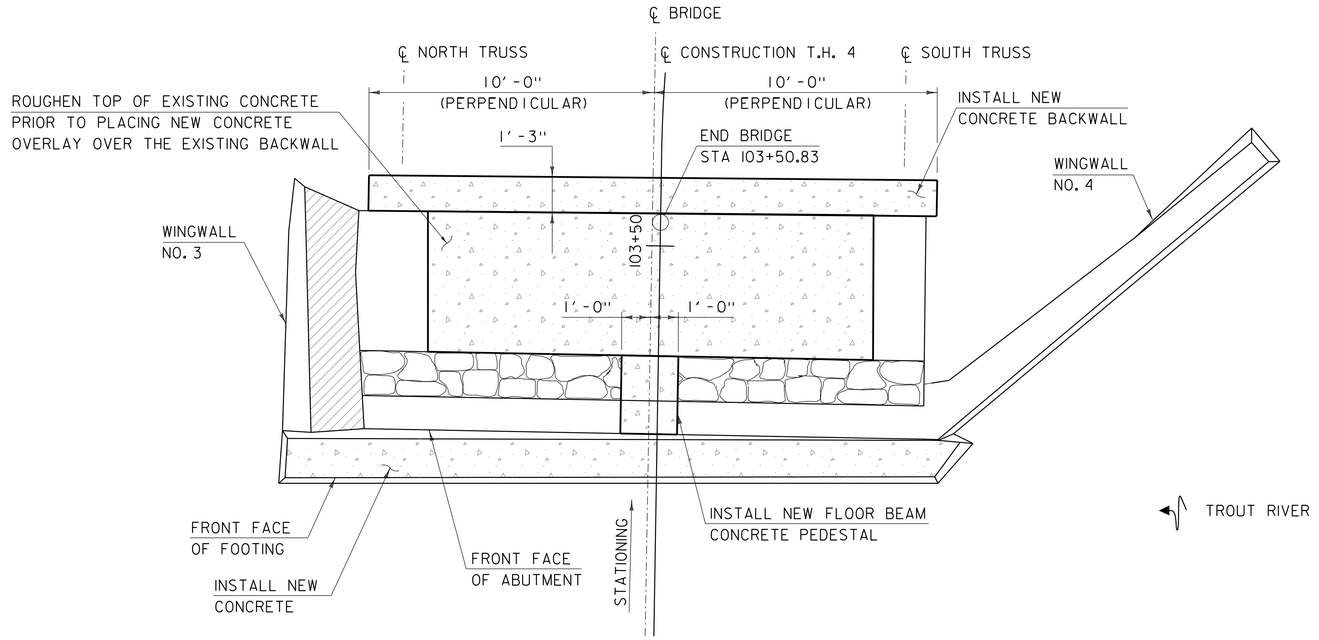
| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12J352Sub3 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12J352sub3.dgn — PLOT DATE: 6/10/2015
PROJECT LEADER: M. SARGENT — DRAWN BY: P. DUSTIN
DESIGNED BY: J. RIPLEY — CHECKED BY: J. BICJA
EXIST. ABUTMENT NO. 2 PLAN AND ELEVATION SHEET 24 OF 47

N

VT STATE PLANE GRID

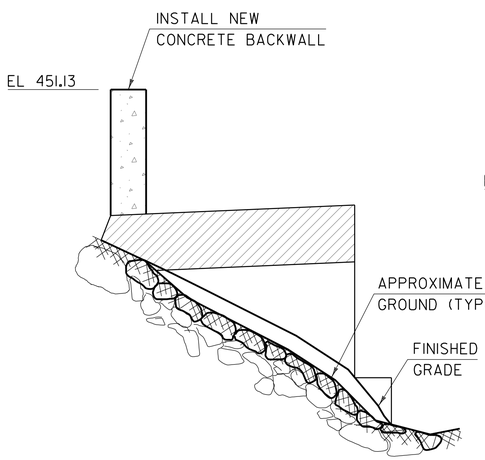



## ABUTMEMT NO. 2 PLAN

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

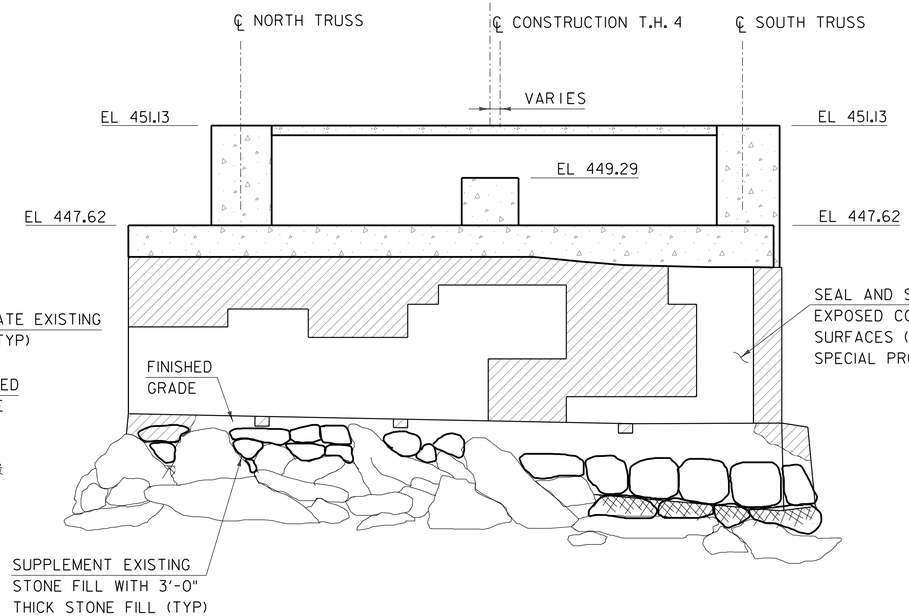
LEGEND

- DENOTES LIMITS OF CLASS II SUBSTRUCTURE CONCRETE REPAIR
- DENOTES LIMITS OF NEW CONCRETE



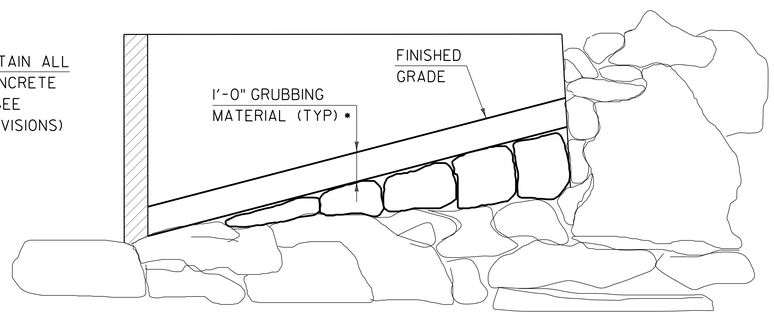

## WINGWALL NO. 3 ELEVATION

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




## ABUTMENT NO. 2 ELEVATION

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




## WINGWALL NO. 4 ELEVATION

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

• GRUBBING MATERIAL SHALL NOT BE PLACED BELOW OHW.

Hoyle, Tanner & Associates, Inc.

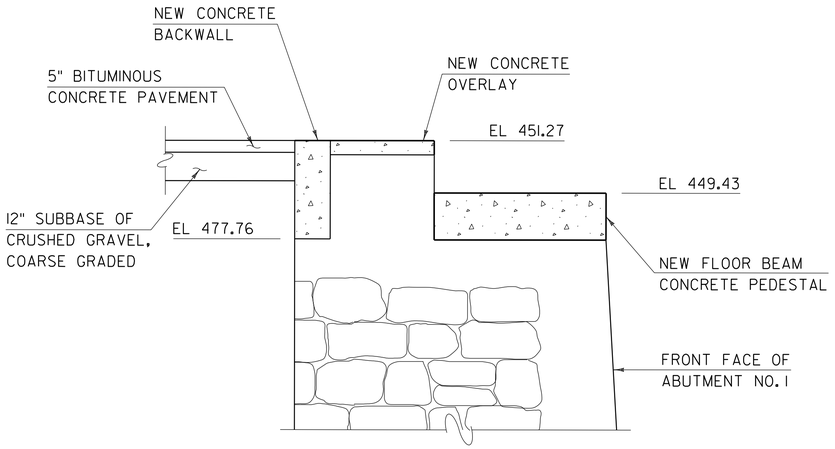
| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12J352sub4 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12J352sub4.dgn — PLOT DATE: 6/10/2015
PROJECT LEADER: M. SARGENT — DRAWN BY: P. DUSTIN
DESIGNED BY: J. RIPLEY — CHECKED BY: J. BICJA
PROP. ABUTMENT NO. 2 PLAN AND ELEVATION — SHEET 25 OF 47

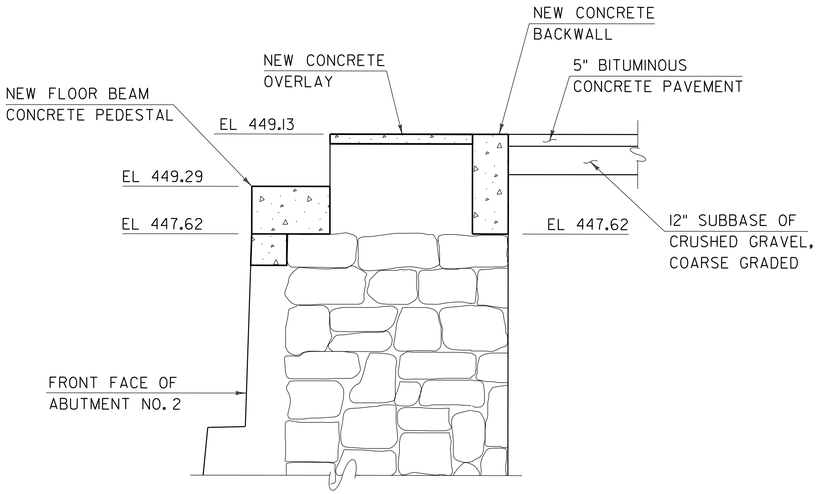
LEGEND

DENOTES LIMITS OF NEW CONCRETE




ABUTMENT NO. 1 TYPICAL SECTION

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




ABUTMENT NO. 2 TYPICAL SECTION

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

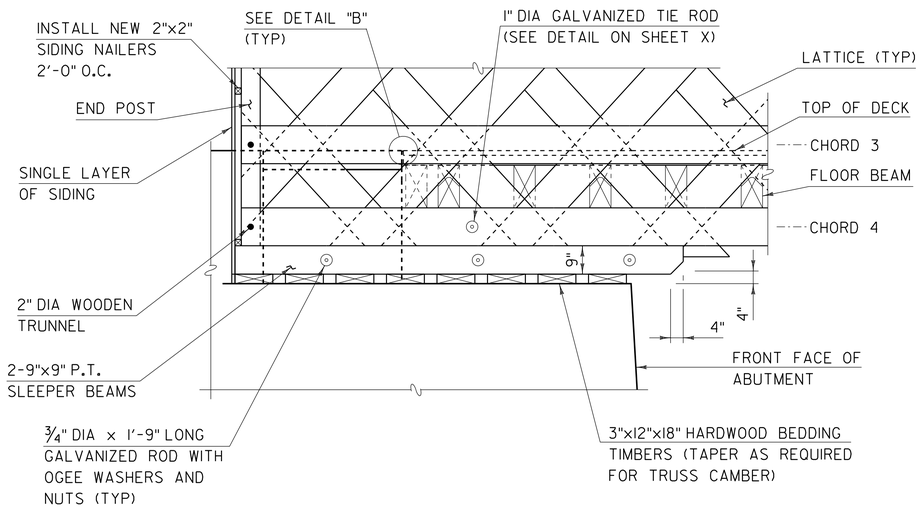
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | ZI2J352sub5 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

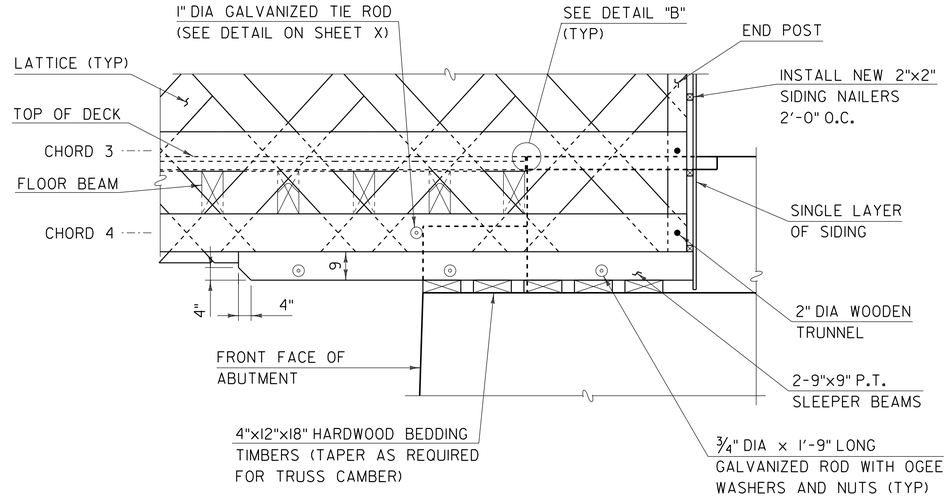
FILE NAME: zi2j352sub5.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
ABUTMENT SECTIONS

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 26 OF 47



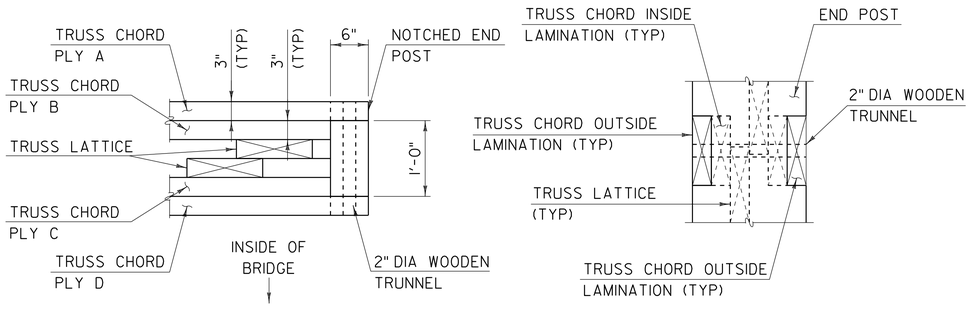

## ABUTMENT NO. 1 BEARING DETAIL

SCALE: 1/2" = 1'-0"



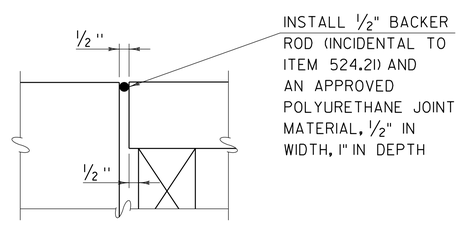

## ABUTMENT NO. 2 BEARING DETAIL

SCALE: 1/2" = 1'-0"




## TYPICAL TRUSS CHORD TO END POST DETAIL

SCALE: 1" = 1'-0"




## DETAIL "B"

SCALE: 3" = 1'-0"

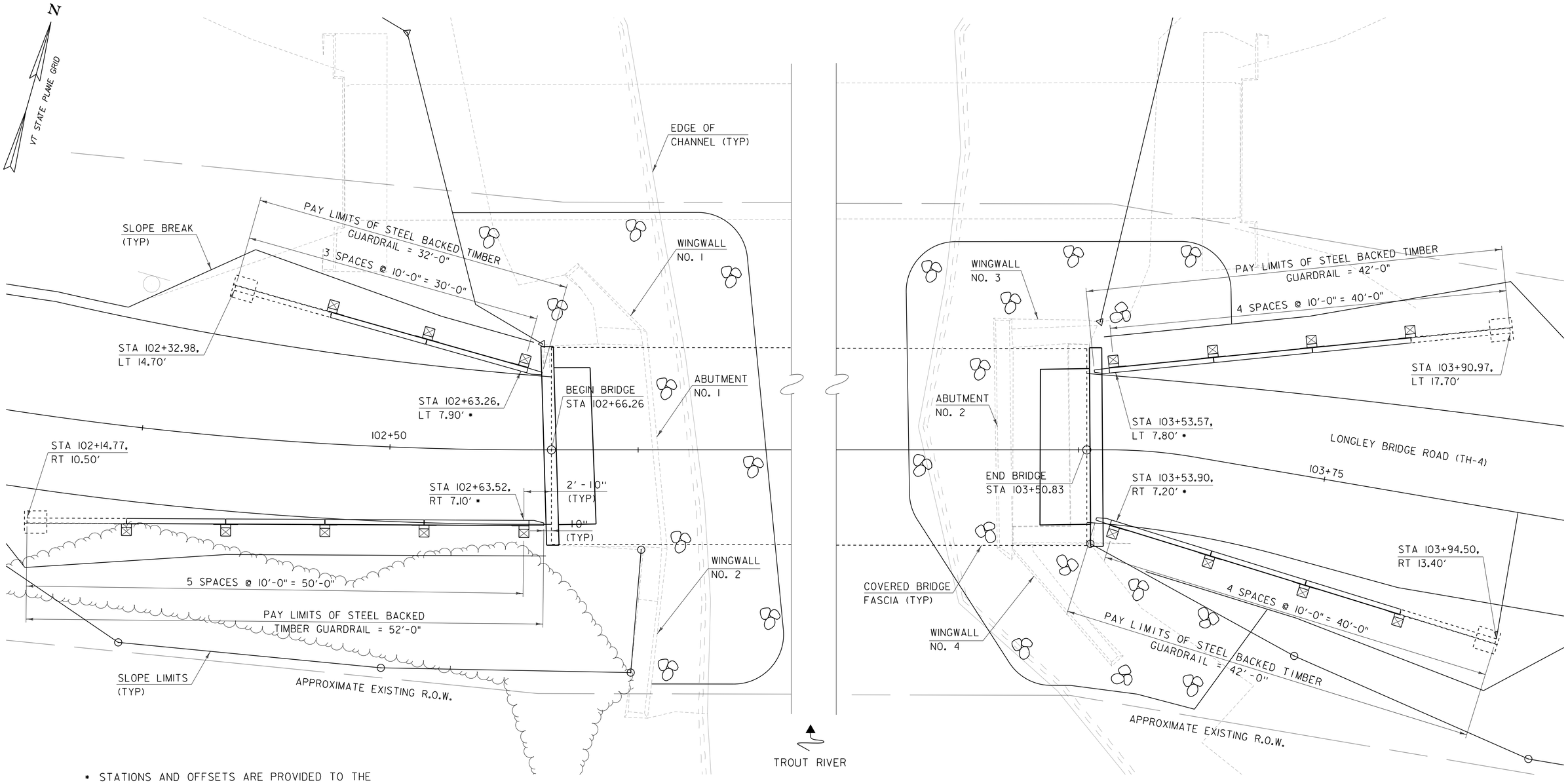
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352brg.dgn |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352brg.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
COVERED BRIDGE BEARING DETAILS

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 27 OF 47




• STATIONS AND OFFSETS ARE PROVIDED TO THE FACE OF RAIL AT THE CENTERLINE OF POST.

## APPROACH RAIL LAYOUT PLAN

SCALE: 1" = 5'-0"

SCALE 1" = 5'-0"
5 0 5

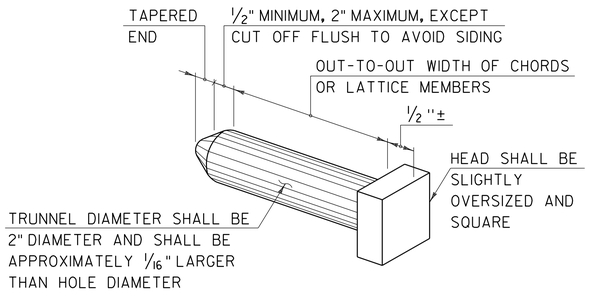
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352brl |

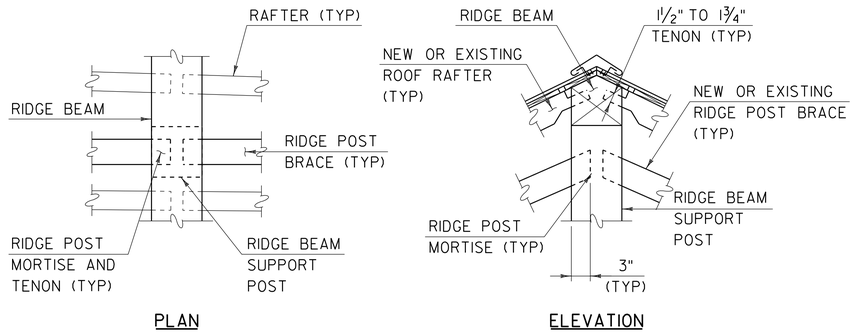
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352brl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
APPROACH RAIL LAYOUT SHEET

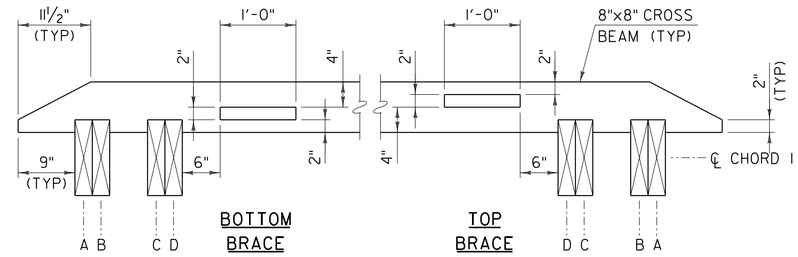
PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 28 OF 47



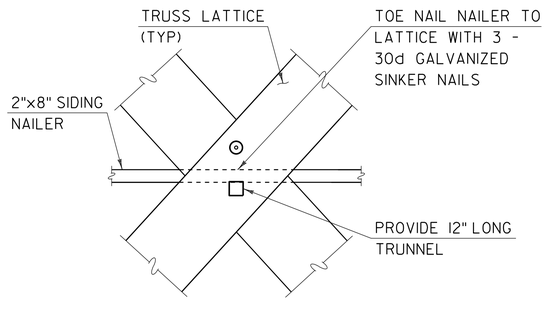

## TRUNNEL DETAIL
SCALE: 1" = 1'-0"



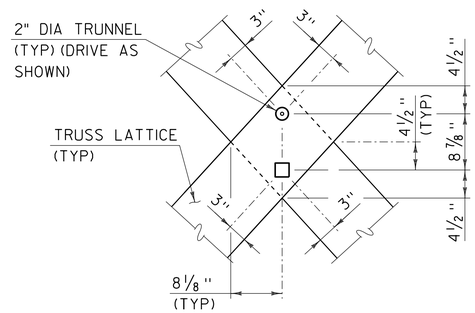

## RIDGE BEAM/POST DETAIL
SCALE: 1" = 1'-0"



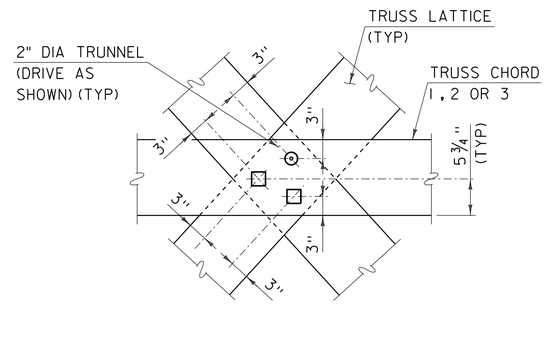

## NEW CROSS BEAM DETAIL
SCALE: 1" = 1'-0"



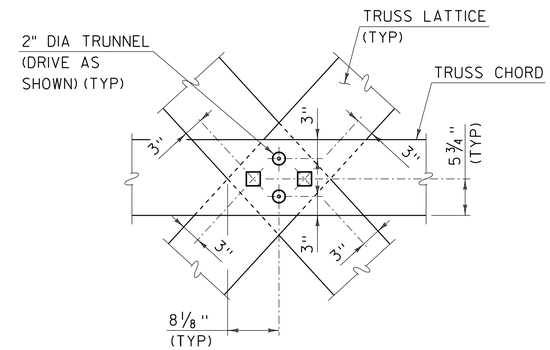

## SIDING NAILER TO LATTICE CONNECTION
SCALE: 1" = 1'-0"




## TYPICAL LATTICE TO LATTICE 2 TRUNNEL CONNECTION
SCALE: 1" = 1'-0"



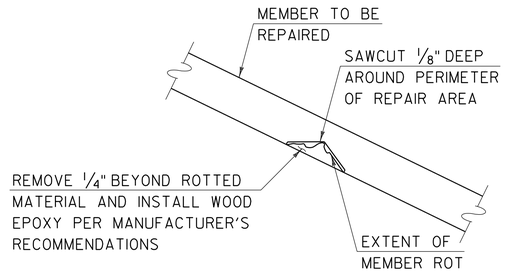

## TYPICAL LATTICE TO CHORD 1, 2 AND 3 3 TRUNNEL CONNECTION DETAIL
SCALE: 1" = 1'-0"




## TYPICAL LATTICE TO CHORD 4 4 TRUNNEL CONNECTION DETAIL
SCALE: 1" = 1'-0"

## RECOMMENDED REPAIR SEQUENCE

1. IDENTIFIED ROTTED MATERIAL IN LUMBER AND TIMBER MEMBERS, IF LESS THAN 1 INCH IN DEPTH, SHALL BE REPAIRED AS SHOWN ABOVE ON THE "EPOXY REPAIR DETAIL". IF ROT IS GREATER THAN 1 INCH IN DEPTH, THE ENTIRE MEMBER SHALL BE REPLACED AS DIRECTED BY THE RESIDENT ENGINEER.
2. REMOVE ALL ROTTED MATERIAL TO A MINIMUM OF 1/4" BEYOND EXTENT OF ROT. SAWCUT 1/8" DEEP AROUND PERIMETER OF REPAIR AREA.
3. CLEAN EXISTING MEMBER OF ALL DIRT, SAWDUST, ETC. AND PREPARE SURFACE PER MANUFACTURER'S RECOMMENDATIONS.
4. INSTALL/INJECT APPROVED WOOD EPOXY REPAIR MATERIAL PER MANUFACTURER'S RECOMMENDATIONS, (PAID UNDER ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS)). COLOR OF REPAIR MATERIAL TO MATCH EXISTING WOOD. A COMPLETED TEST SECTION SHALL BE MADE FOR APPROVAL BY THE RESIDENT ENGINEER.
5. INSTALL TWO GALVANIZED LAG SCREWS INTO EXISTING SPLIT THROUGH REPAIR MATERIAL (IF REQUIRED). SIZE OF LAG SCREWS TO BE DETERMINED BY THE RESIDENT ENGINEER.




## EPOXY REPAIR DETAIL
NOT TO SCALE

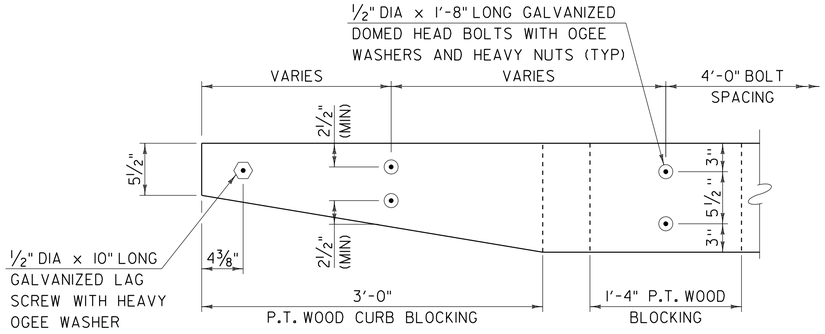
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup8 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

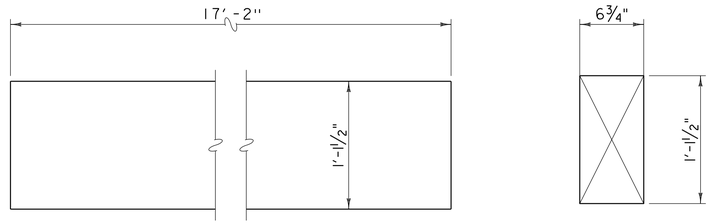
FILE NAME: z12j352sup8.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
BRIDGE DETAILS SHEET 1

PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 29 OF 47




## CURB END TAPER

SCALE: 1 1/2" = 1'-0"

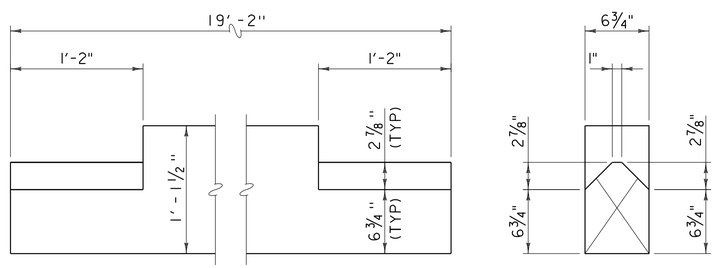



ELEVATION

END SECTION

## UNNOTCHED P.T. FLOOR BEAM

(20 REQUIRED)
SCALE: 1 1/2" = 1'-0"

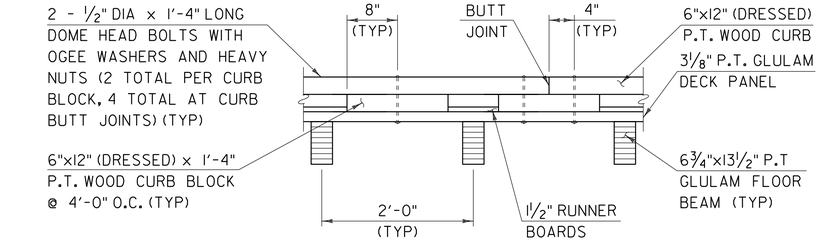



ELEVATION

END SECTION

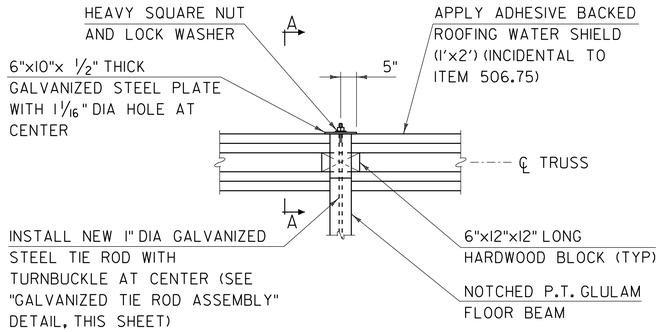
## NOTCHED P.T. FLOOR BEAM

(19 REQUIRED)
SCALE: 1 1/2" = 1'-0"



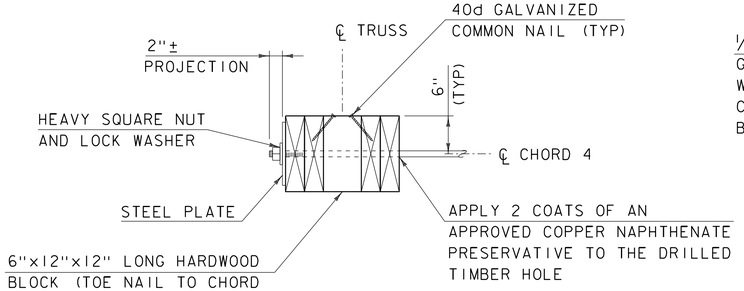

## CURB ATTACHMENT DETAIL

SCALE: 1" = 1'-0"



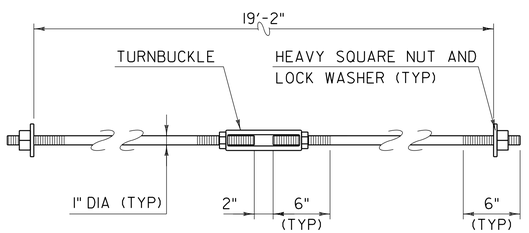

## TIE ROD CONNECTION DETAIL

SCALE: 1/2" = 1'-0"




## SECTION A-A

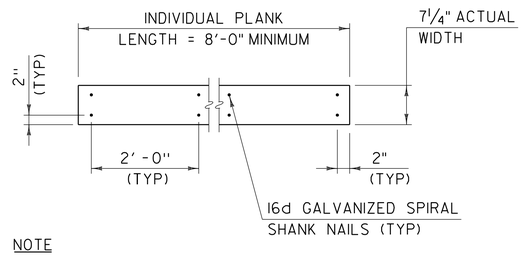
SCALE: 1" = 1'-0"




NOTE
TIGHTEN NUTS AND TURNBUCKLES SNUG BUT NOT SO TIGHT AS TO CAUSE CRUSHING OF WOOD BEHIND THE STEEL PLATES.

## GALVANIZED TIE ROD ASSEMBLY

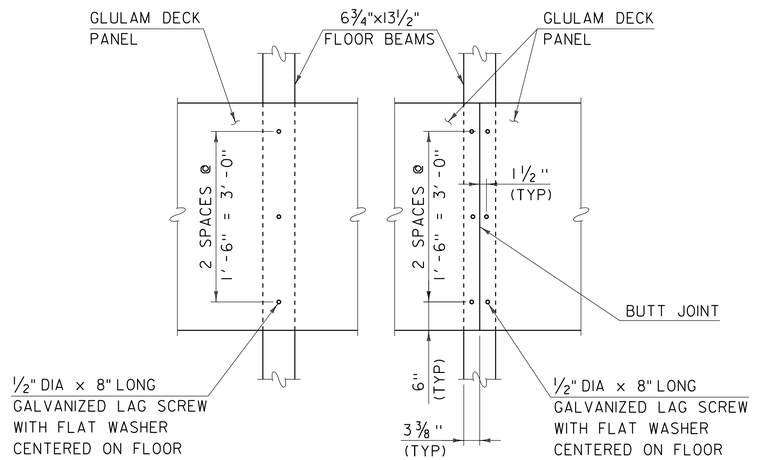
(7 REQUIRED)
SCALE: 1 1/2" = 1'-0"




NOTE
STAGGER JOINTS OF ADJACENT PLANKS BY A MINIMUM OF TWO FLOOR BEAM SPACINGS.

## DECK PLANK ATTACHMENT

NOT TO SCALE




NOTE
LAG SCREWS SHALL BE CONTERSUNK FLUSH WITH TOP OF DECK PANEL.

## GLULAM DECK PANEL CONNECTION DETAIL

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

## LEGEND

P.T. PRESSURE TREATED

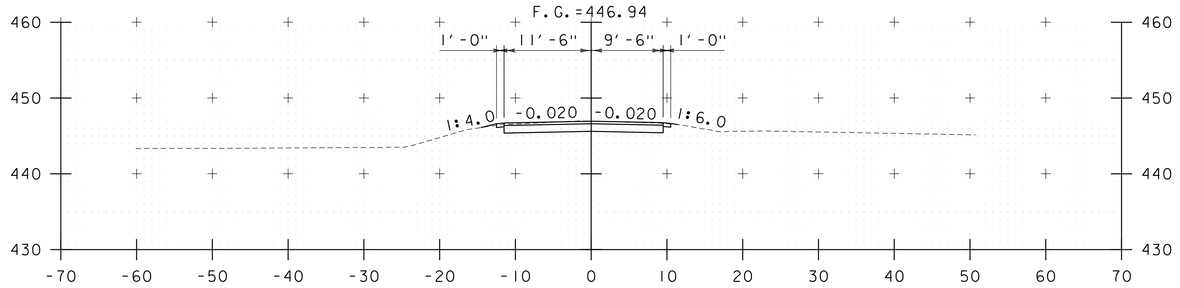
Hoyle, Tanner & Associates, Inc.

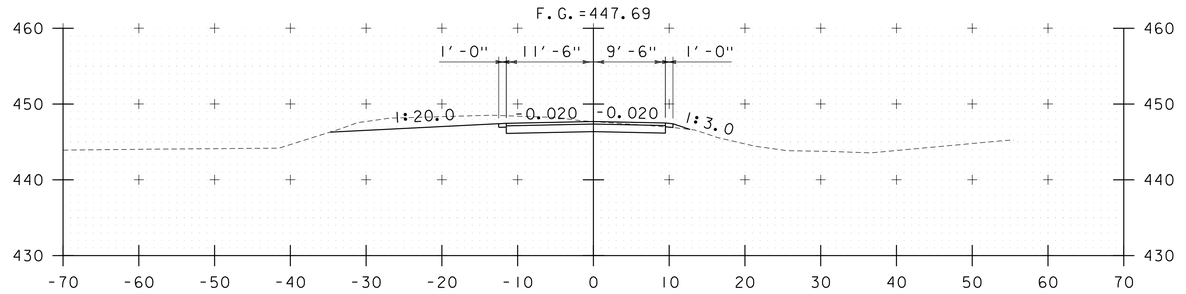
| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352sup9 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352sup9.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
BRIDGE DETAILS SHEET 2

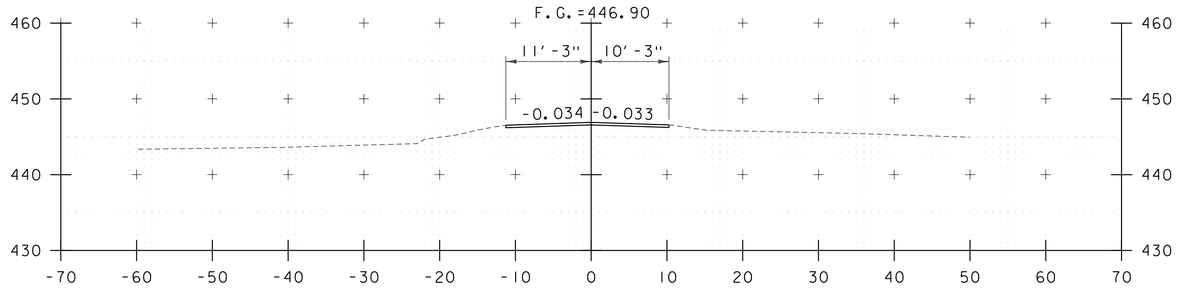
PLOT DATE: 6/10/2015
DRAWN BY: P. DUSTIN
CHECKED BY: J. BICJA
SHEET 30 OF 47



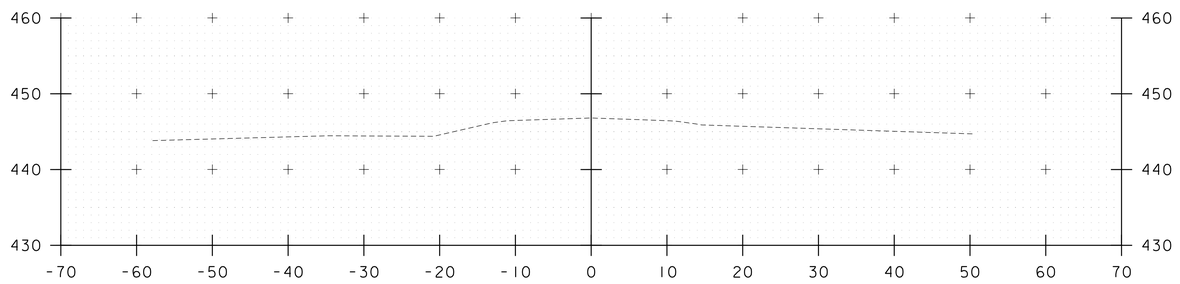

100+75

BEGIN PROJECT STA 100+75.00



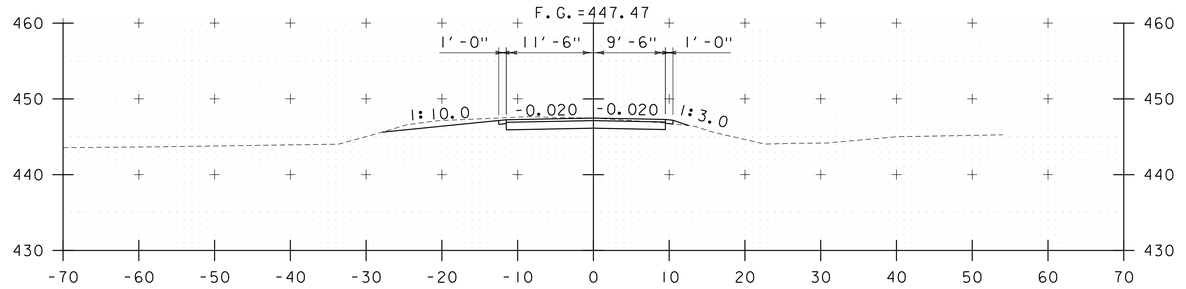

100+50

BEGIN APPROACH

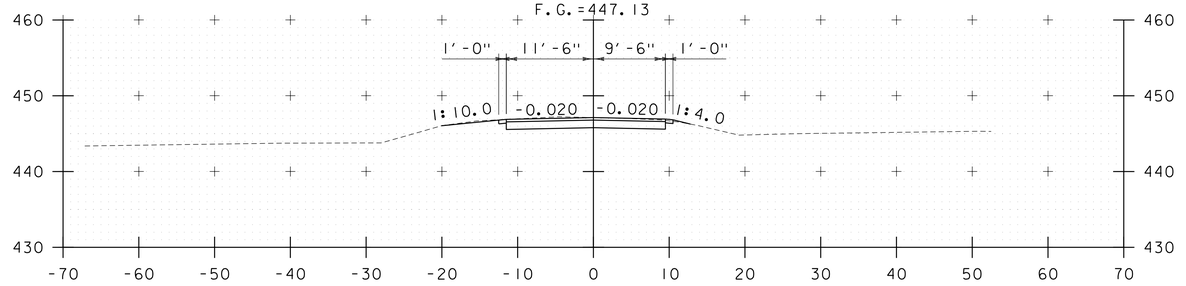



100+25

101+50




101+25




101+00

STA. 100+25 TO STA. 101+50

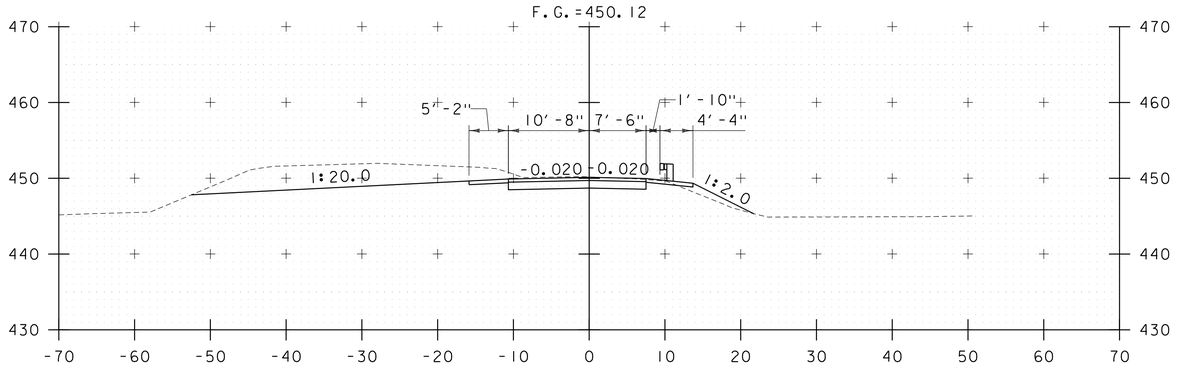
Hoyle, Tanner & Associates, Inc.

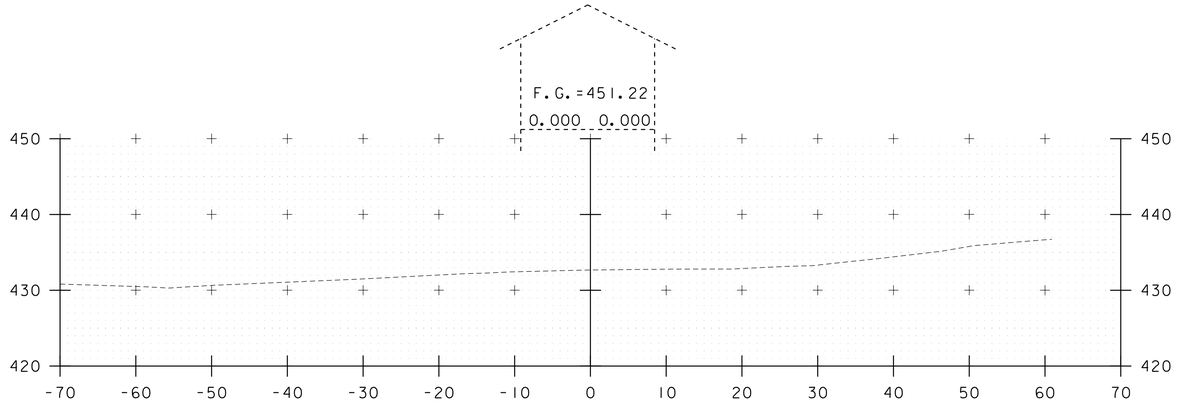
| HTA PROJECT | MODEL |
|---|---|
| 904227 | XSI |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352xsl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
ROADWAY CROSS SECTIONS SHEET 1

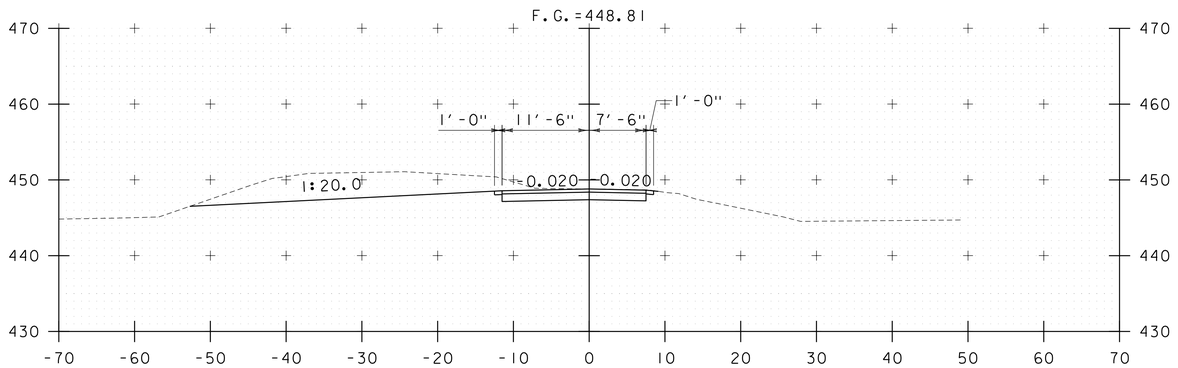
PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 31 OF 47

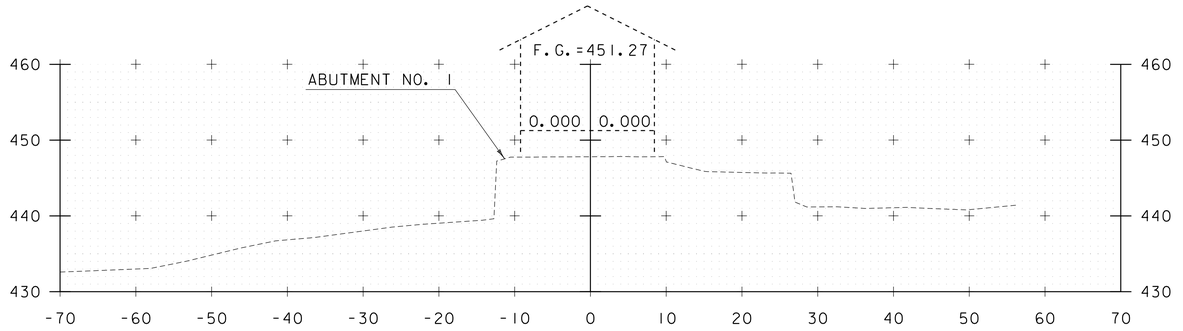



103+00

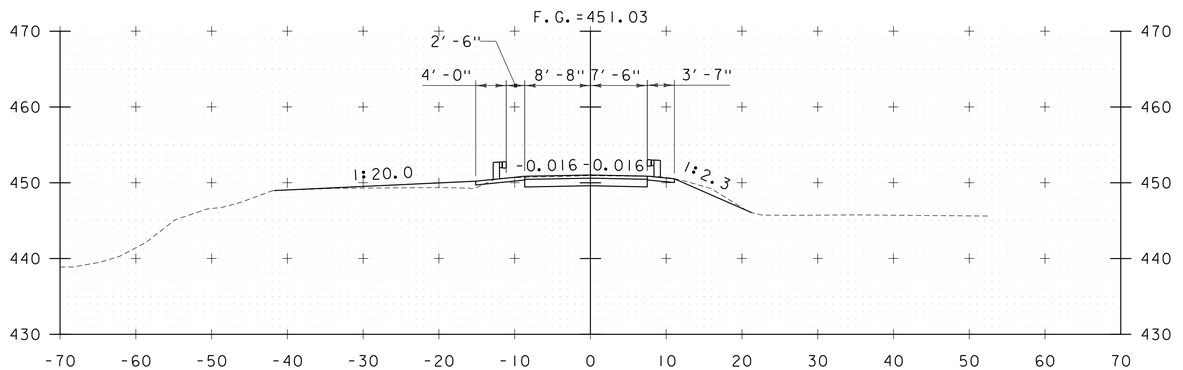
102+25



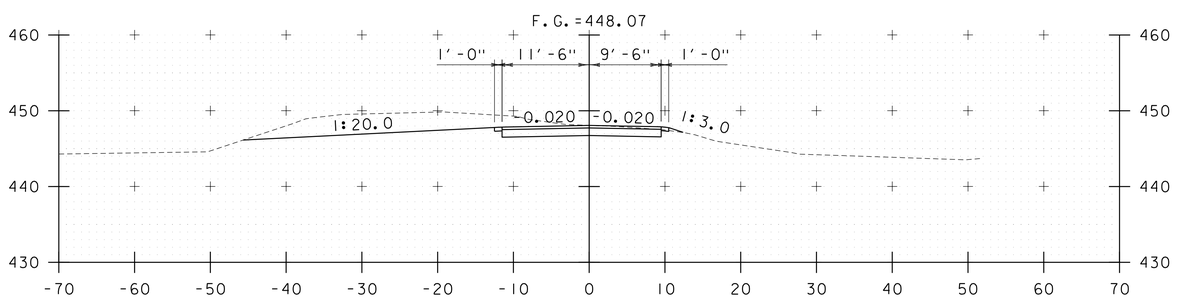




102+75

BEGIN BRIDGE STA 102+66.26




102+00




101+75

STA. 101+75 TO STA. 103+00

Hoyle, Tanner & Associates, Inc.

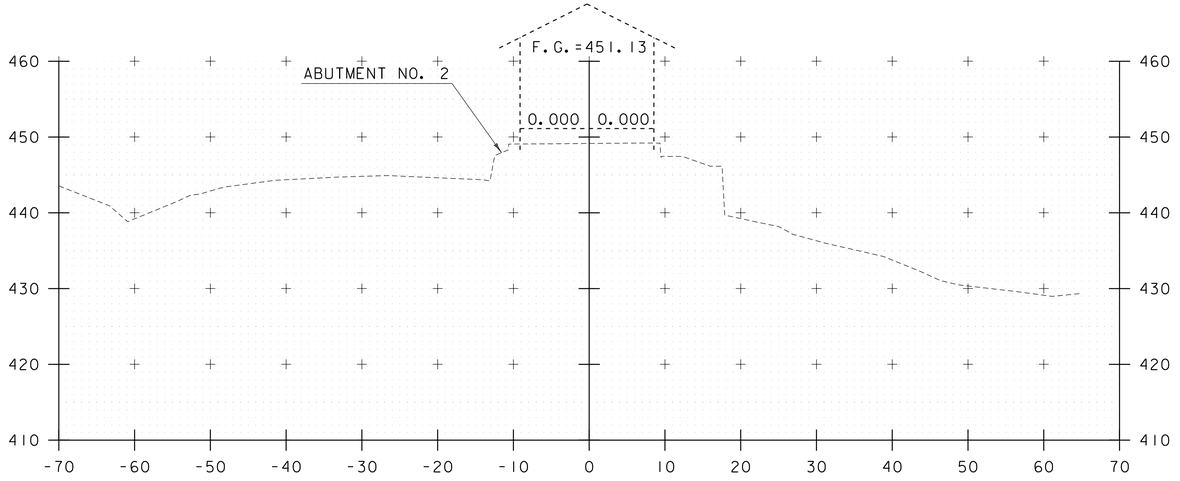
| HTA PROJECT | MODEL |
|---|---|
| 904227 | XS2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

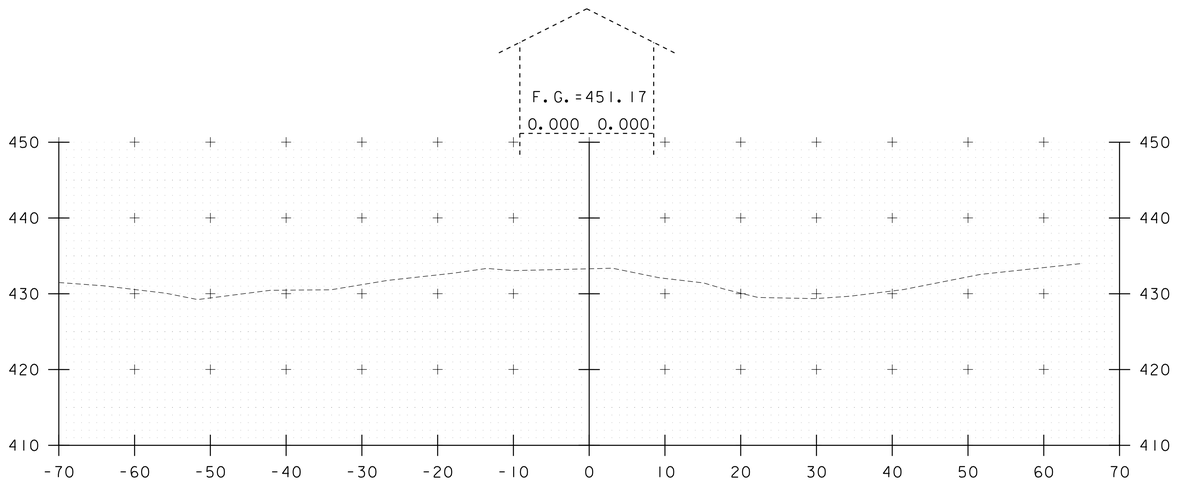
FILE NAME: z12j352xsl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
ROADWAY CROSS SECTIONS SHEET 2

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 32 OF 47

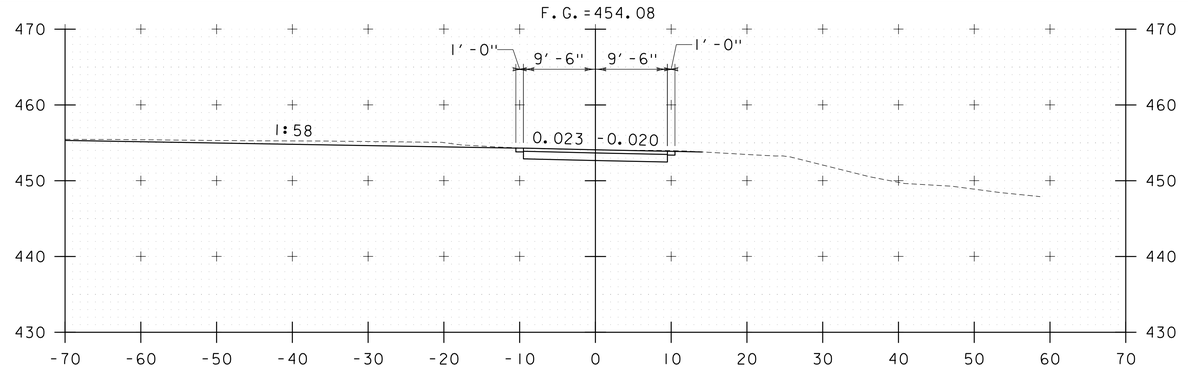
END BRIDGE STA. 103+50.83



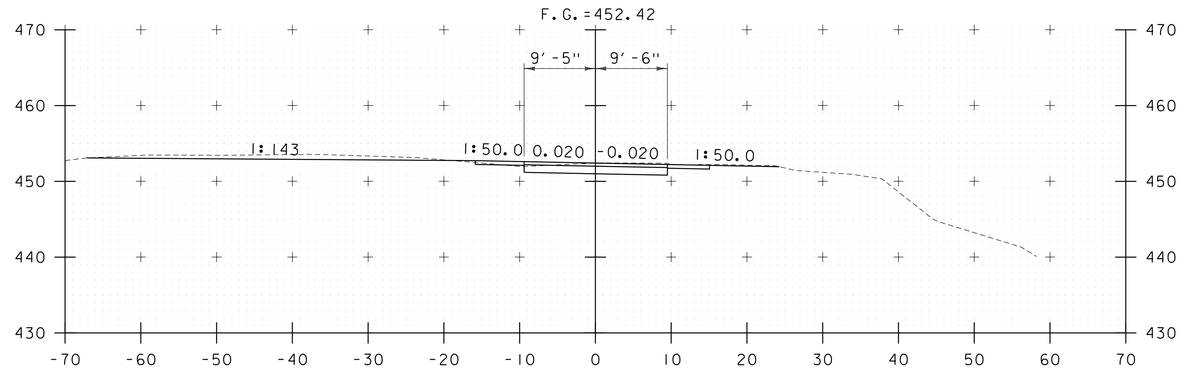

103+50



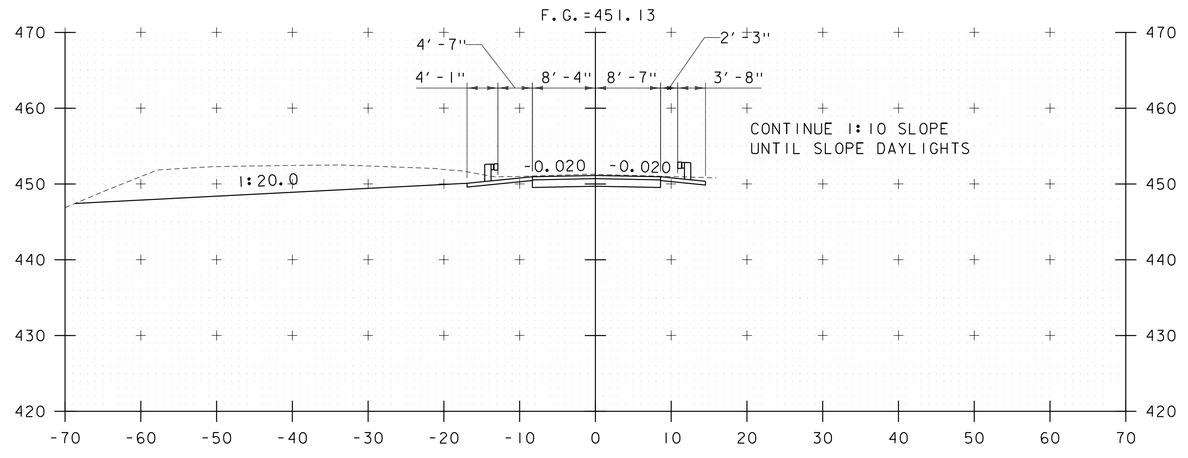

103+25




104+25




104+00




103+75

STA. 103+25 TO STA. 104+25

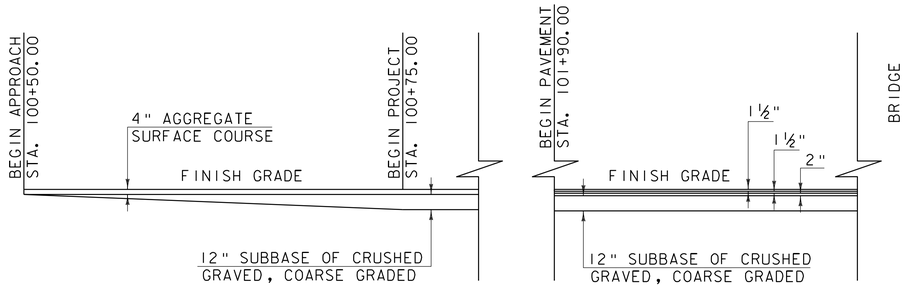
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | XS3 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352xsl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
ROADWAY CROSS SECTIONS SHEET 3

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 33 OF 47




## TH-4 (LONGLEY BRIDGE ROAD)
## MATERIAL TRANSITION (WEST) DETAIL

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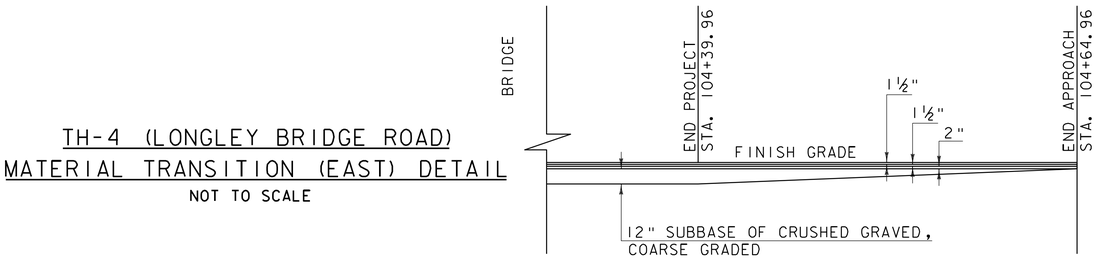


## TH-4 (LONGLEY BRIDGE ROAD)
## MATERIAL TRANSITION (EAST) DETAIL

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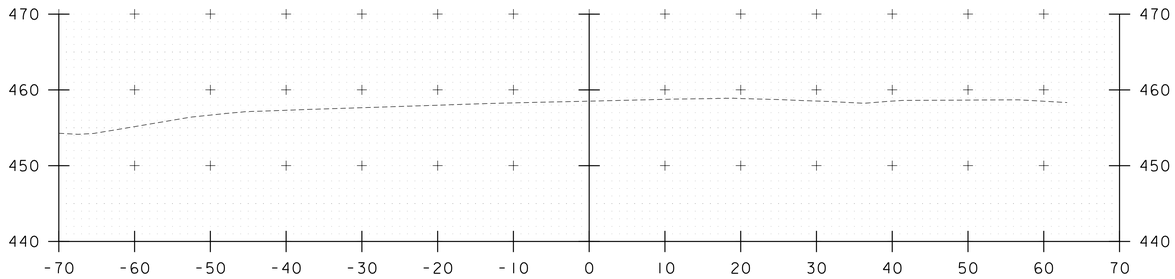
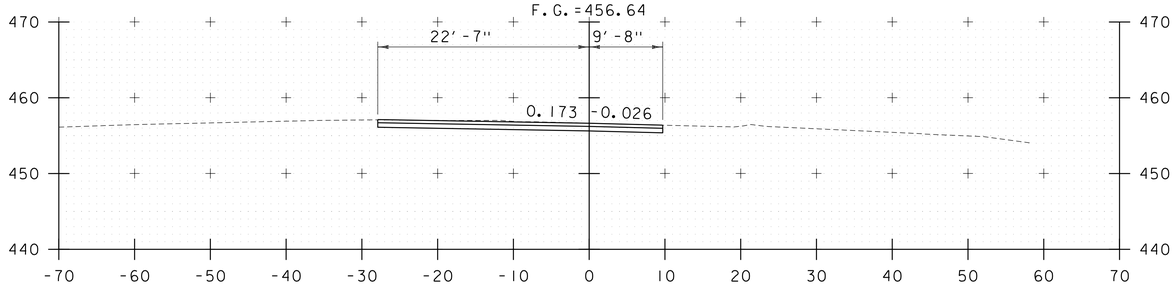
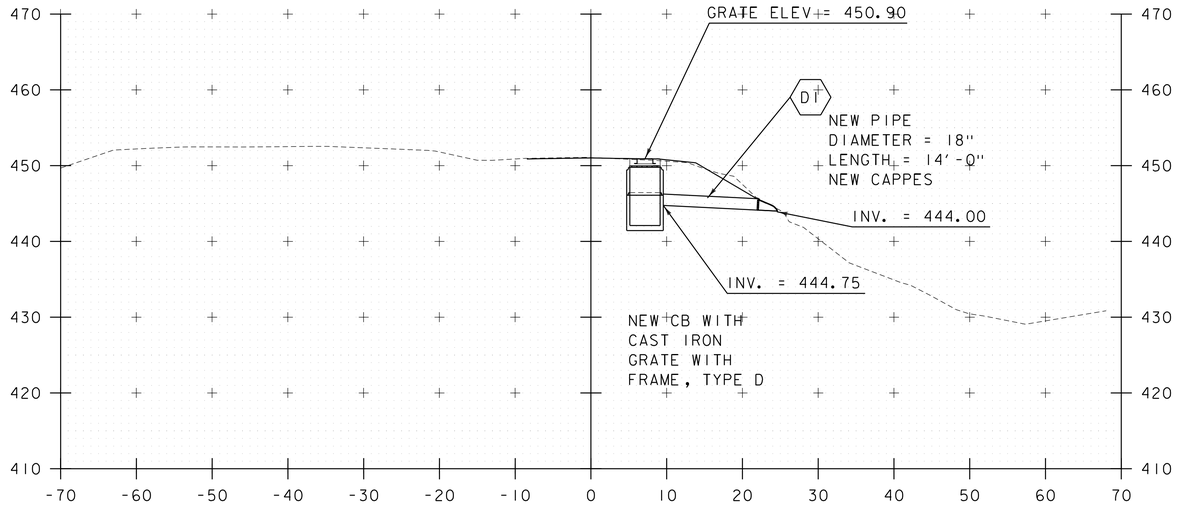


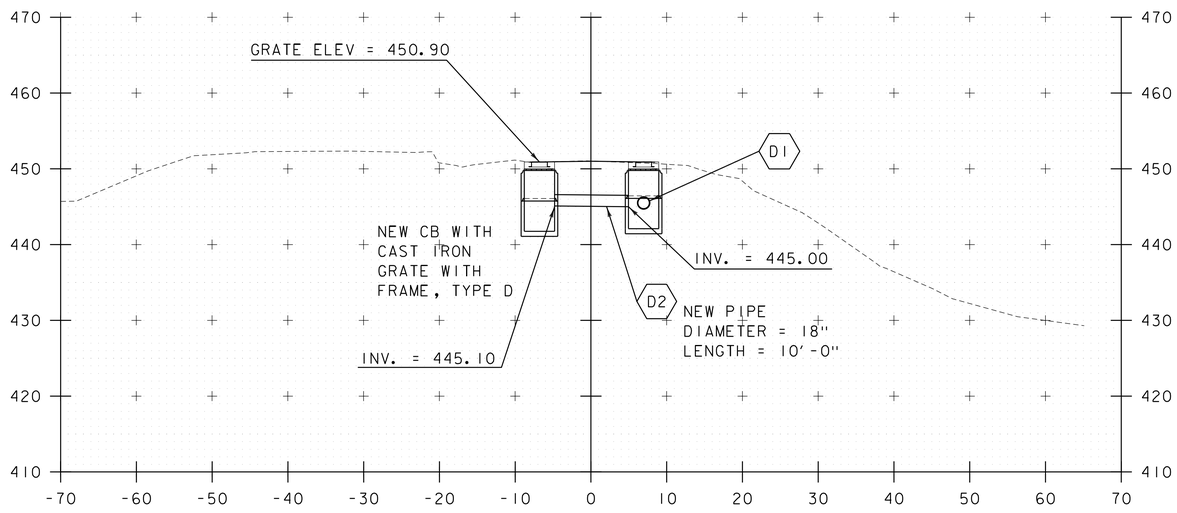

104+75
END APPROACH STA 104+64.96




104+50
END PROJECT STA 104+39.96




ASKEW 103+68.63




103+67

STA. 104+50 TO STA. 104+75

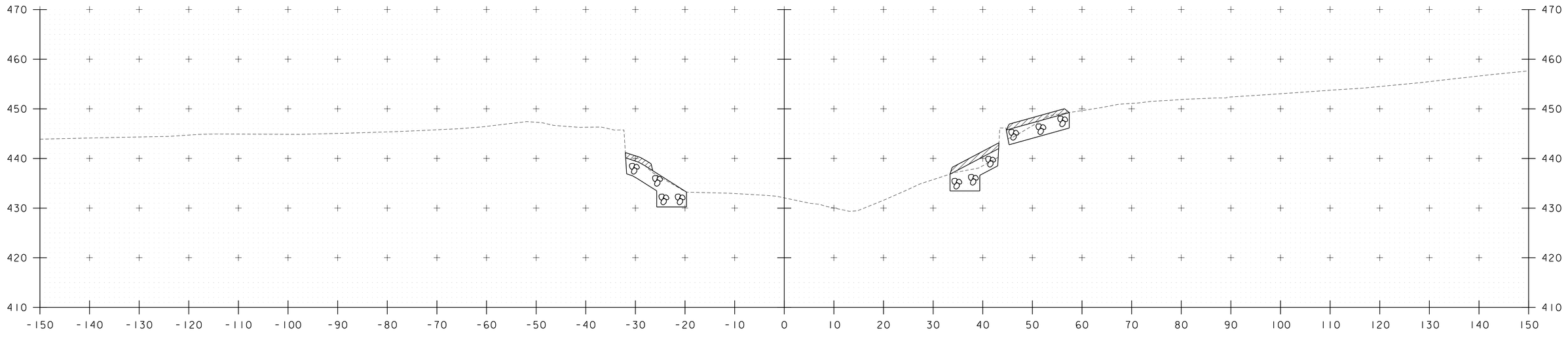
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | XS4 |

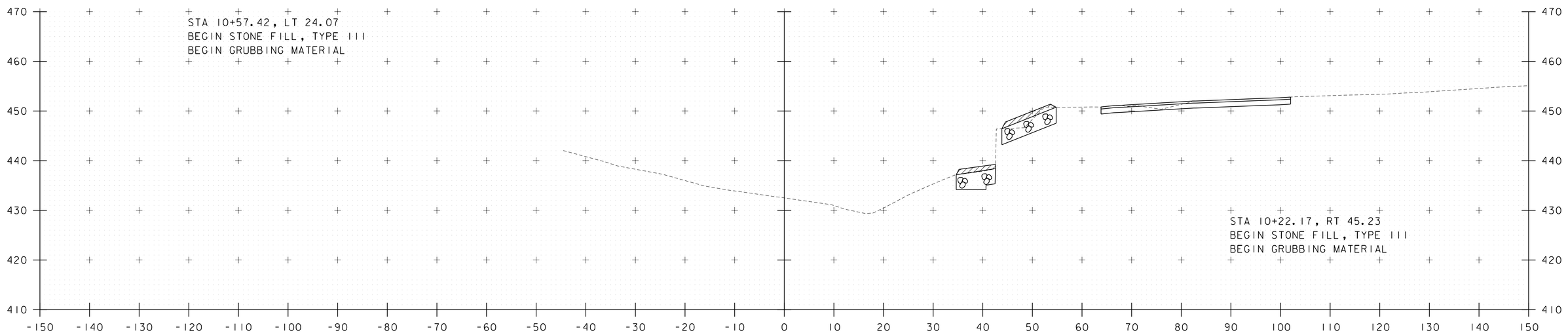
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352xsl.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
ROADWAY CROSS SECTIONS SHEET 4

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 34 OF 47




10+60




10+50

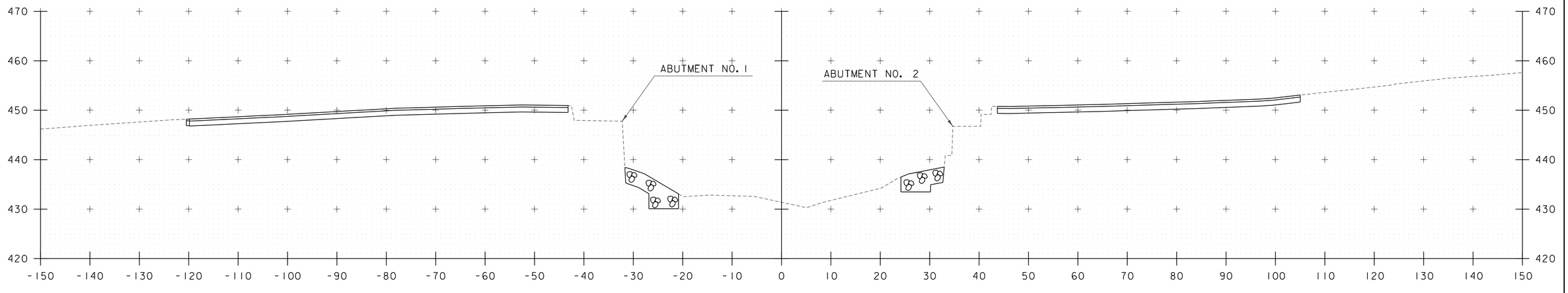
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | XSI |

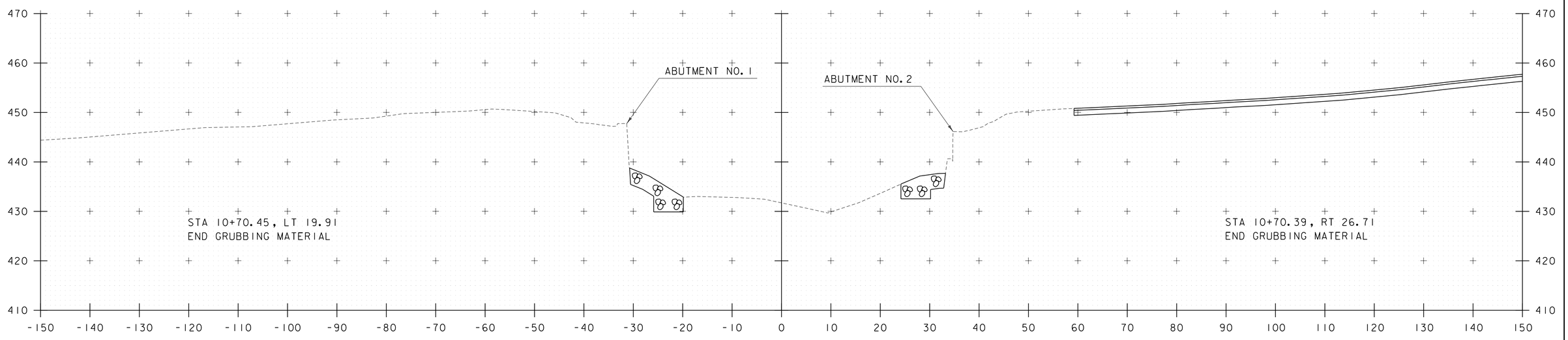
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12J352xs2.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
CHANNEL CROSS SECTION SHEET 1

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 35 OF 47




10+80




10+70

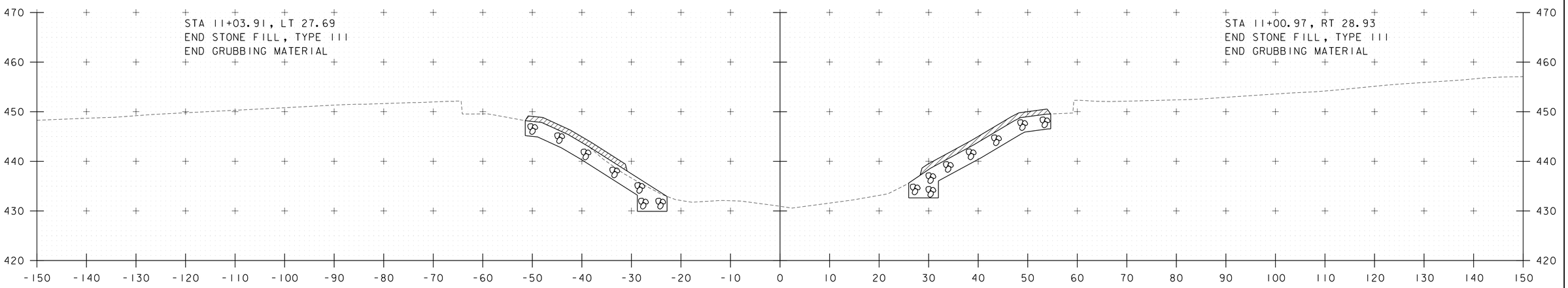
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | XS2 |

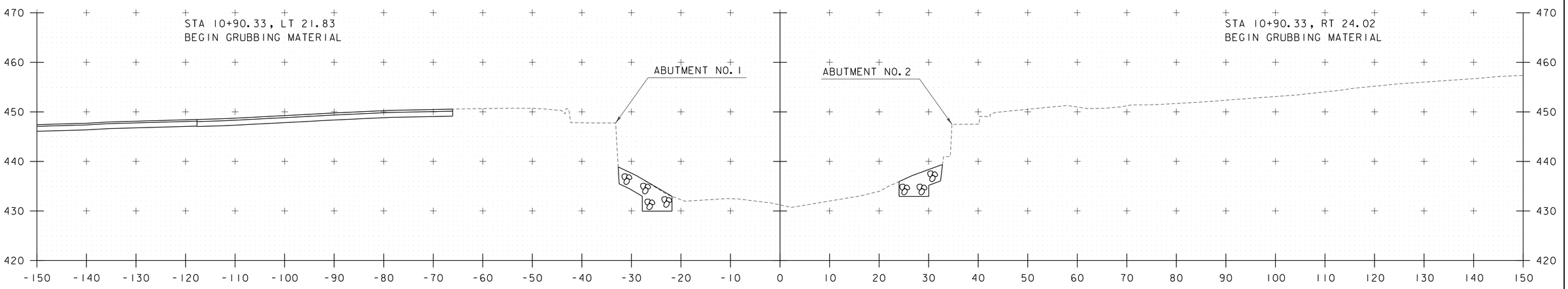
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12J352xs2.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
CHANNEL CROSS SECTION SHEET 2

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 36 OF 47




11+00




10+90

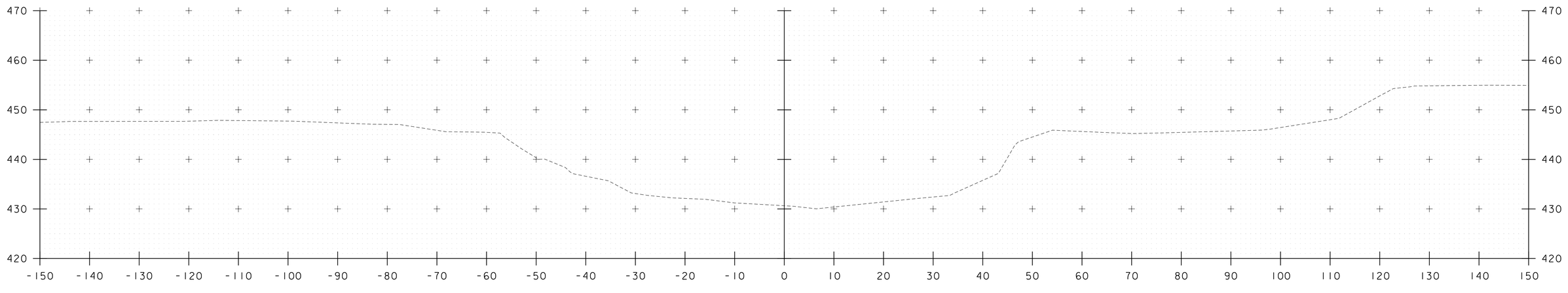
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | XS3 |

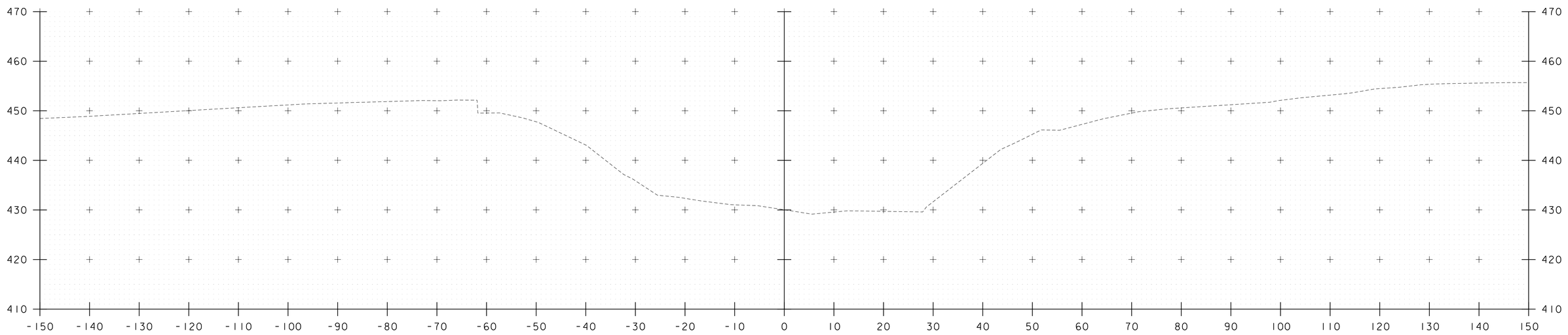
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352xs2.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
CHANNEL CROSS SECTION SHEET 3

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 37 OF 47




11+50




11+25

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | XS4 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12J352xs2.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
CHANNEL CROSS SECTION SHEET 4

PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 38 OF 47

# EPSC PLAN NARRATIVE

## 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE HISTORIC LONGLEY COVERED BRIDGE ALONG ITS CURRENT ALIGNMENT, INCLUDING REPAIR OF THE EXISTING FOUNDATIONS. THE PROJECT SITE IS LOCATED IN THE TOWN OF MONTGOMERY, APPROXIMATELY ONE MILE WEST OF THE VILLAGE OF MONTGOMERY, NEAR THE NORTHWEST CORNER OF THE TOWNSHIP. THE STRUCTURE CARRIES LONGLEY BRIDGE ROAD (T.H. 4) OVER THE TROUT RIVER.

THE EXISTING COVERED BRIDGE WILL BE REHABILIATED TO A LEVEL THAT ACCOMODATES A REGULATORY POSTED WEIGHT LIMIT OF 20 TONS. REHABILITATION OF THE EXISTING SUBSTRUCTURES WILL INCLUDE REPAIRS OF CRACKS AND SPALLS IN THE CONCRETE ENCASING THE LAID-UP STONE, ADDITION OF STONE FILL CHANNEL ARMORING, AND RAISING OF THE CONCRETE BACKWALLS. ROADWAY WORK WILL INCLUDE NEW GUARDRAIL AT THE CORNERS OF THE BRIDGE, MINOR PROFILE ADJUSTMENTS, CATCH BASINS AT THE EAST END OF THE BRIDGE, REGRADING OF THE TEMPORARY DETOUR, AND PAVED APPROACHES.

THE BRIDGE WILL BE CLOSED DURING CONSTRUCTION AND TRAFFIC WILL BE REROUTED AROUND THE SITE VIA THE EXISTING TEMPORARY BRIDGE.

IT IS ANTICIPATED THIS PROJECT WILL BE COMPLETED IN 12 MONTHS.

TOTAL AREA OF DISTURBANCE, EXCLUDING WASTE, BORROW, AND STAGING AREAS, AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.60 ACRES.

THE TOTAL DISTURBED AREA IS AN ESTIMATE. ALL ON-SITE AND OFF-SITE WASTE AND BORROW AREAS, STAGING AREAS, AND HAUL ROADS NEED PRIOR WRITTEN CLEARANCE BY VTRANS ENVIRONMENTAL SECTION PRIOR TO THE BEGINNING OF CONSTRUCTION.

CONSTRUCTION SHALL CONFORM TO ALL OTHER ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT.

## 1.2 SITE INVENTORY

### 1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS A WIDE, LEVEL RIVER VALLEY. TO THE EAST OF THE SITE, THE LAND IS GENTLY SLOPING AND IS MIXED WITH FARM FIELDS AND WOODS. TO THE NORTH, SOUTH, AND WEST, THE LAND IS GENERALLY FLAT AND CLEARED FOR FARM FIELDS. THE RIVER BANKS ARE LINED BY VARIOUS SIZED TREES AND BRUSH. THERE ARE NO RESIDENCES OR ARGRICULTURAL STRUCTURES NEAR THE PROJECT AREA. LONGLEY BRIDGE ROAD (T.H. 4) IS AN UNPAVED CLASS 3 RURAL LOCAL ROAD, WITH PAVED APPROACHES TO THE BRIDGE. THE INTERSECTION OF NORTH MAIN STREET (VT ROUTE 118) AND LONGELY BRIDGE ROAD IS LOCATED ADJACENT TO THE EAST END OF THE BRIDGE. A TEMPORARY BRIDGE WITH APPROACH ROADWAYS HAS BEEN CONSTRUCTED IMMEDIATELY ADJACENT TO THE NORTH SIDE OF THE BRDIGE. OVERHEAD UTILITY LINES CROSS LONGLEY BRIDGE ROAD AT THE WEST APPROACH TO THE BRIDGE, WITH A UTILITY POLE LOCATED ADJACENT TO THE SOUTHWEST CORNER OF THE BRIDGE THAT WILL REMAIN. THERE ARE NO KNOWN UNDERGROUND UTILITIES OR DRAINAGE PIPES IN THE PROEJCT AREA.

### 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE TROUT RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. IT IS A RURAL MEANDERING WATERWAY THAT FLOWS NORTHWESTERLY FROM ITS HEADWATERS AT THE CONFLUENCE OFJAY BROOK AND WADE BROOK IN THE TOWN OF MONTGOMERY TO ITS OUTLET IN THE MISSISQUOI RIVER IN THE VILLAGE OF EAST BERKSHIRE. THE BED MATERIAL IN THE IMMEDIATE AREA OF THE BRDIGE IS MAINLY COMPOSE OF SAND, GRAVEL, AND LEDGE. THE RIVER BANKS ARE MODERATELY STEEP THROUGHOUT THE PROJECT. THE TROUT RIVER IS CLASSIFIED AS A SINUOUS, SEMI-ALLUVIAL, MOUNTAINOUS AND FORRESTED SURROUNDINGS. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS XX.XX SQUARE MILES.

### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOOD TREES, BRUSH AND UNDERGROWTH ON THE ESTABLISHED RIVER BANKS AND ACTIVE FARM FIELDS ADJACENT THE RIVER BANKS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE COVERED BRIDGE REHABILITATION PROJECT, INCLUDING APPROACH WORK AND THE REMOVAL OF THE EXISTING DETOUR ROADWAY WITHIN THE ACQUIRED TEMPORARY CONSTRUCTION EASEMENT AND EXISTING RIGHT-OF-WAY. SOME SMALL TREES WILL BE REMOVED TO ALLOW CONSTRUCTION OF THE STONE FILL CHANNEL ARMORING AND REPAIRS TO THE EXISTING BRIDGE FOUNDATIONS. UPON PROJECT COMPLETION, THE CHANNEL BANKS WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

### 1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF FRANKLIN, VERMONT. SOILS ON THE PROJECT SITE ARE ONDAWA VARIANT SILT LOAM, SLOPES OF 0 TO 2 PERCENT, “K-FACTOR” = 0.43, CONSIDERED HIGHLY ERODABLE.

**NOTE**: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

### 1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: LONGLEY COVERED BRIDGE IS ON NATIONAL REGISTER OF HISTORIC PLACES (NRHP). THE BRIDGE IS LOCATED WITHIN A HISTORIC DISTRICT.
AN ARCHEOLOGICAL RESOURCE ASSEMEMENT WAS PREPARED BY HARTGEN ARCHEOLOGICAL ASSOCIATES, DATED AUGUST 2012. THE ASSESSMENT STATED THE AREA ADJACENT TO THE BRIDGE IS CONSIDERED TO HAVE LOW ARCHEOLOGICAL SENSETIVITY
PRIME AGRICULTURAL LAND: UNDER EXISTING TEMPORARY DETOUR AND ALONG EMBANKMENT SLOPES OF EXISTING APPROACH ROADWAY
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: TROUT RIVER
WETLANDS: NO

## 1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES, BASED ON THE PROEJCT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

## 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

### 1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

### 1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

### 1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

### 1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN (TURBIDITY CURTAIN) WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

### 1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

THERE ARE NO PROPOSED OR EXISTING CHANNELS WITHIN THE PROJECT SITE, THEREFORE CHECK STRUCTURES WILL LIKELY NOT BE UTILIZED.

### 1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

### 1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

### 1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

### 1.4.11 DE-WATERING ACTIVITIES

NO DEWATERING ACTIVITIES ANTICIPATED.

### 1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

## 1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

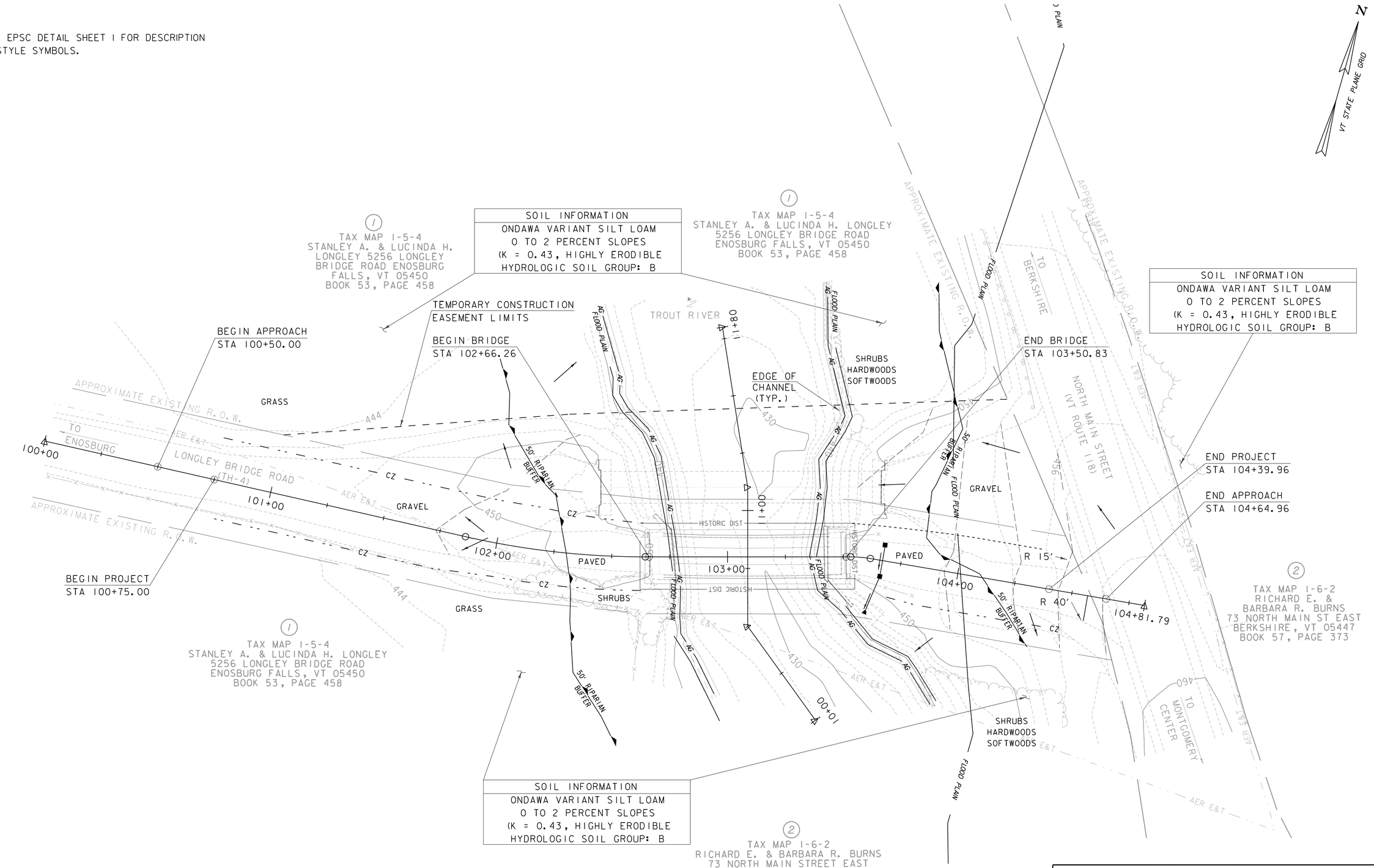
### 1.5.1 CONSTRUCTION SEQUENCE

### 1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SPECIFICATION 105.25-105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

## NOTE

1. REFER TO EPSC DETAIL SHEET 1 FOR DESCRIPTION OF LINE STYLE SYMBOLS.




| DATUM | |
|---|---|
| VERTICAL | NAVD 88 FT |
| HORIZONTAL | NAD 83(2011) sFT |
| ADJUSTMENT | UNADJUSTED |

## EPSC EXISTING CONDITIONS PLAN

SCALE: 1" = 20'-0"

0 20 40

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | EPSC EXISTING |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352bdr_ero.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
EPSC EXISTING SITE PLAN

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 40 OF 47

## NOTES

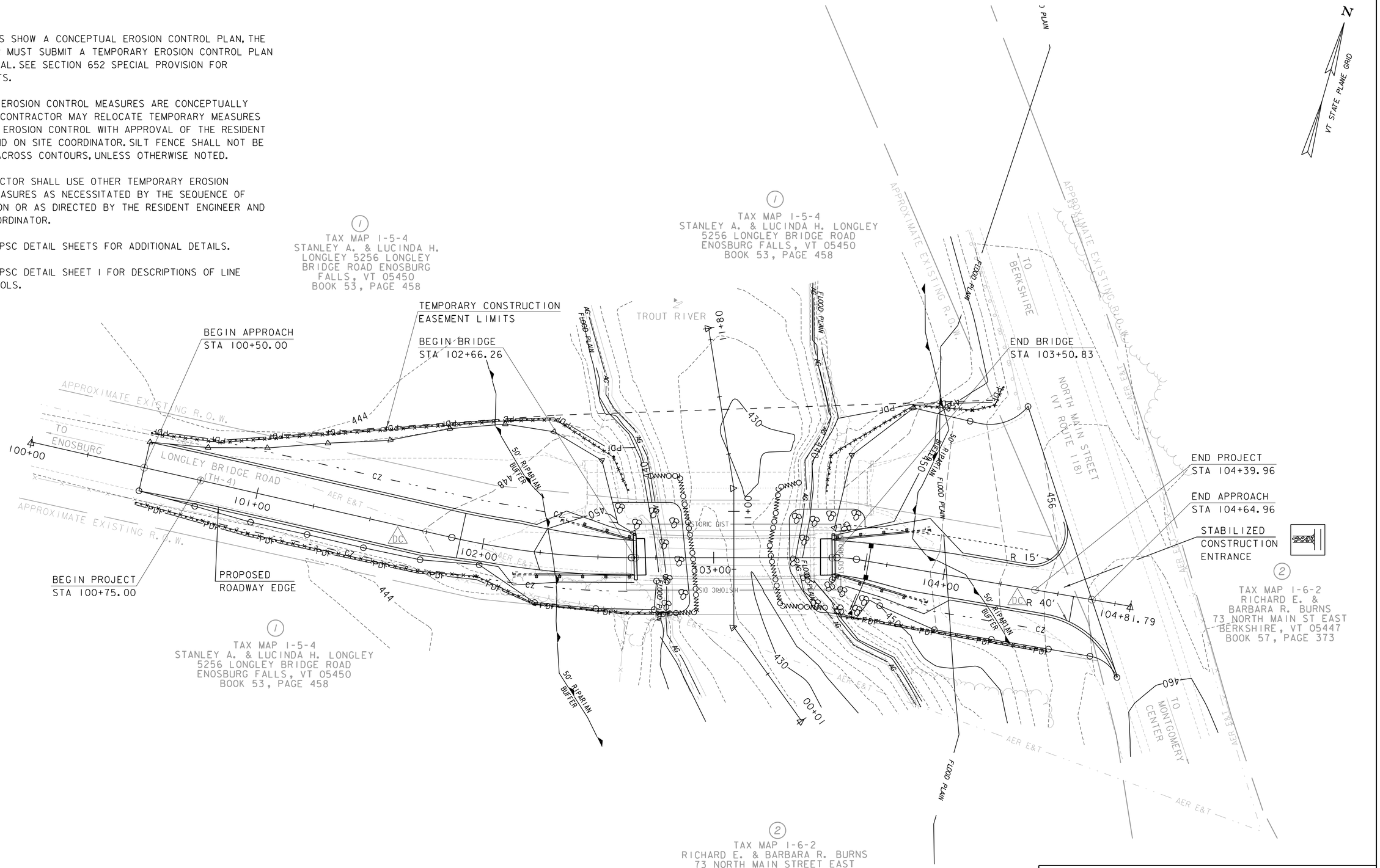
1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL. SEE SECTION 652 SPECIAL PROVISION FOR REQUIREMENTS.

2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS, UNLESS OTHERWISE NOTED.

3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.

4. REFER TO EPSC DETAIL SHEETS FOR ADDITIONAL DETAILS.

5. REFER TO EPSC DETAIL SHEET 1 FOR DESCRIPTIONS OF LINE STYLE SYMBOLS.




DATUM

| | |
|---|---|
| VERTICAL | NAVD 88 FT |
| HORIZONTAL | NAD 83(2011) sFT |
| ADJUSTMENT | UNADJUSTED |

## EPSC CONSTRUCTION PLAN

SCALE: 1" = 20'-0"

0 20 40

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | EPSC CONST |

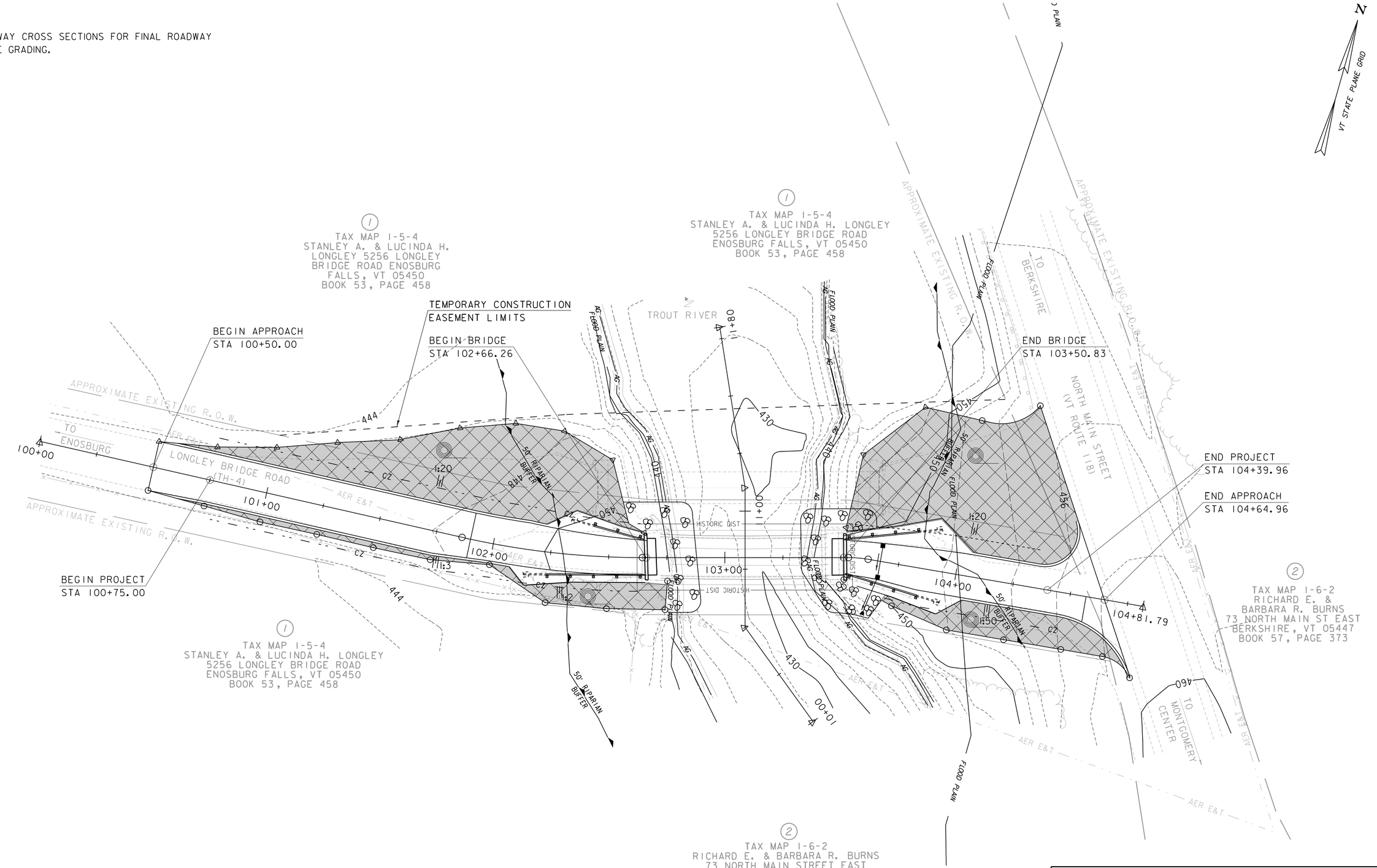
PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352bdr_ero.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
EPSC CONSTRUCTION SITE PLAN

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 41 OF 47

## NOTE

1. SEE ROADWAY CROSS SECTIONS FOR FINAL ROADWAY AND SLOPE GRADING.




## EPSC FINAL CONDITIONS PLAN

SCALE: 1" = 20'-0"

0 20 40

| DATUM | |
|---|---|
| VERTICAL | NAVD 88 FT |
| HORIZONTAL | NAD 83(2011) sFT |
| ADJUSTMENT | UNADJUSTED |

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | EPSC FINAL |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352bdr_ero.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
EPSC FINAL SITE PLAN

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 42 OF 47

BARRIER FENCE (LINE STYLE) -BF-×-×-×-BF-
653.50

BRUSH LAYER (BL)
653.75, DETAIL

CHECK DAM (LINE STYLE)
653.25, DETAIL

COFFERDAM (LINE STYLE)
208.40

CURB DROP INLET PROTECTION
653.40, DETAIL

DUST CONTROL (DC)
609.10 & 15

PIPE INLET PROTECTION
653.40, DETAIL

EXCAVATED DROP INLET PROTECTION
653.40, DETAIL

FIBER ROLL (EROSION LOG) (FR)
653.60, DETAIL

FILTER BAG
653.45, DETAIL

FILTER FABRIC DROP INLET PROTECTION
653.40, DETAIL

LIVE CUTTINGS/LIVE STAKES PLANTING (LS)
653.70, DETAIL

LIVE FASCINE (LF)
653.65, DETAIL

PROJECT DEMARCATION FENCE (LINE STYLE) -PDF——PDF-
653.55

ROLLED EROSION CONTROL PRODUCT (RECP)
653.20 (TEMP. EROSION MATTING)

SEDIMENT BASIN
INCIDENTAL TO COFFERDAM 208.40

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STANDARD SYMBOLS

SILT FENCE(LINE STYLE)
649.51, DETAIL

SILT FENCE WOVEN WIRE(LINE STYLE)
649.515, DETAIL

STABILIZED CONSTRUCTION ENTRANCE
653.35, DETAIL, VEHICLE TRACKING PAD

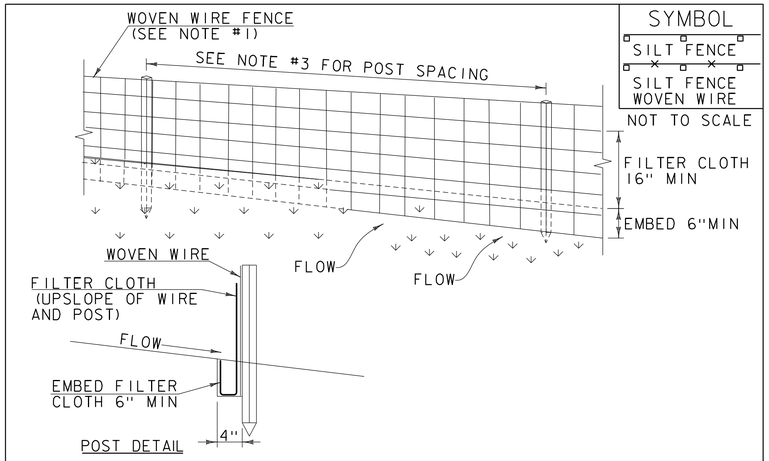
STONE & BLOCK DROP INLET PROTECTION
653.40, DETAIL

SURFACE ROUGHENING
INCIDENTAL TO CONTRACT

TURBIDITY CURTAIN
649.61, DETAIL, FILTER CURTAIN

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STANDARD SYMBOLS




## CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR ~~GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.511) OR~~ GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

| REVISIONS | |
|---|---|
| MARCH 21, 2008 | WHF |
| DECEMBER 11, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| | |
| | |

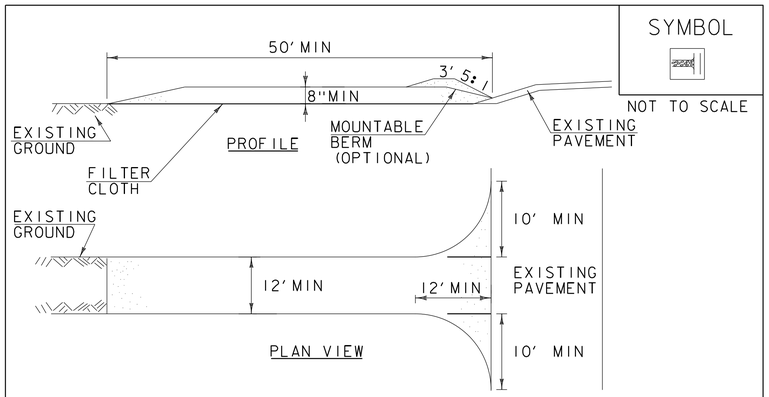
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352erodtlsl |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352erodtls.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
EPSC DETAILS SHEET 1

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 43 OF 47




SYMBOL

NOT TO SCALE

## CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

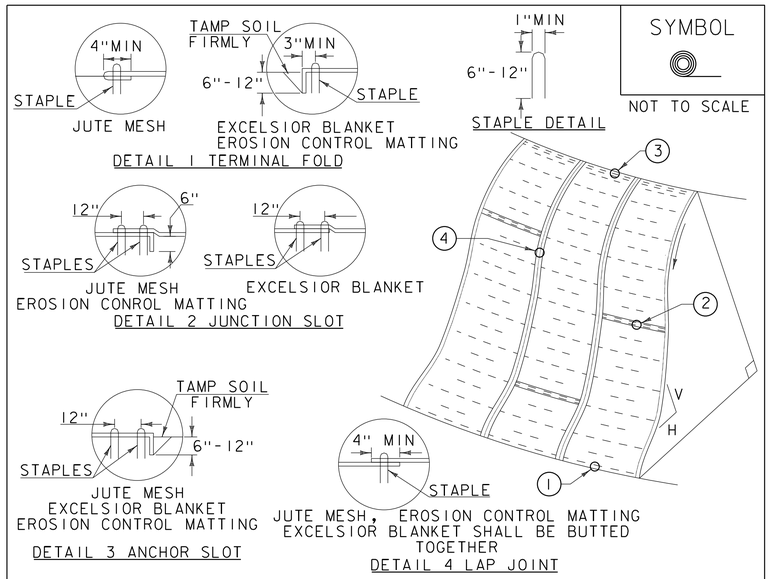
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

| REVISIONS | |
|---|---|
| MARCH 24, 2008 | WHF |
| JANUARY 13, 2009 | WHF |




SYMBOL

NOT TO SCALE

## CONSTRUCTION SPECIFICATIONS

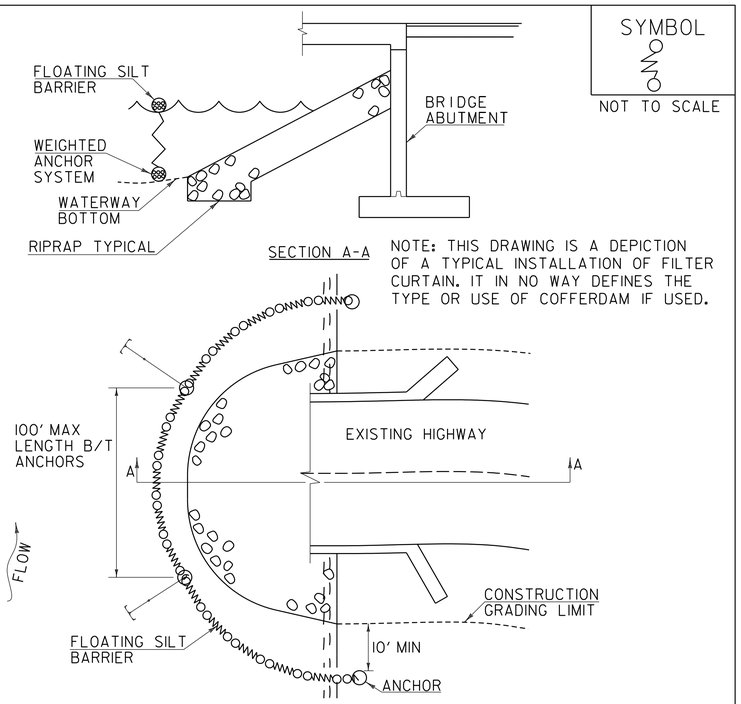
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20).

| REVISIONS | |
|---|---|
| APRIL 16, 2007 | JMF |
| JANUARY 13, 2009 | WHF |




SYMBOL

NOT TO SCALE

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.

## CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

# FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

| REVISIONS | |
|---|---|
| APRIL 1, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| SEPTEMBER 4, 2009 | WHF |

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352erodtls2 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352erodtls.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
EPSC DETAILS SHEET 2

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 44 OF 47

| VAOT LOW GROW/FINE FESCUE MIX | | | | | | |
|---|---|---|---|---|---|---|
| | LBS/AC | | | | | |
| WEIGHT | BROADCAST | HYDROSEED | NAME | LATIN NAME | GERM | PURITY |
| 38% | 57 | 95 | CREEPING RED FESCUE | FESTUCA RUBRA VAR. RUBRA | 90% | 98% |
| 29% | 43.5 | 72.5 | HARD FESCUE | FESTUCA LONGIFOLIA | 85% | 95% |
| 15% | 22.5 | 37.5 | CHEWINGS FESCUE | FESTUCA RUBRA VAR. COMMUTATA | 87% | 95% |
| 15% | 22.5 | 37.5 | ANNUAL RYEGRASS | LOLIUM MULTIFLORUM | 90% | 95% |
| 3% | 4.5 | 7.5 | INERTS | | | |
| 100% | 150 | 250 | | | | |

| VAOT RURAL AREA MIX | | | | | | |
|---|---|---|---|---|---|---|
| | LBS/AC | | | | | |
| WEIGHT | BROADCAST | HYDROSEED | NAME | LATIN NAME | GERM | PURITY |
| 37.5% | 22.5 | 45 | CREEPING RED FESCUE | FESTUCA RUBRA VAR. RUBRA | 85% | 98% |
| 37.5% | 22.5 | 45 | TALL FESCUE | FESTUCA ARUNDINACEA | 90% | 95% |
| 5.0% | 3 | 6 | RED TOP | AGROSTIS GIGANTEA | 90% | 95% |
| 15.0% | 9 | 18 | WHITE FIELD CLOVER | TRIFOLIUM REPENS | 85% | 98% |
| 5.0% | 3 | 6 | ANNUAL RYE GRASS | LOLIUM MULTIFLORUM | 85% | 95% |
| 100% | 60 | 120 | | | | |

| GENERAL AMENDMENT GUIDANCE | | |
|---|---|---|
| FERTILIZER | LIME | |
| 10/20/10 | AG LIME | PELLITIZED |
| 500 LBS/AC | 2 TONS/AC | 1 TONS/AC |

## CONSTRUCTION GUIDANCE

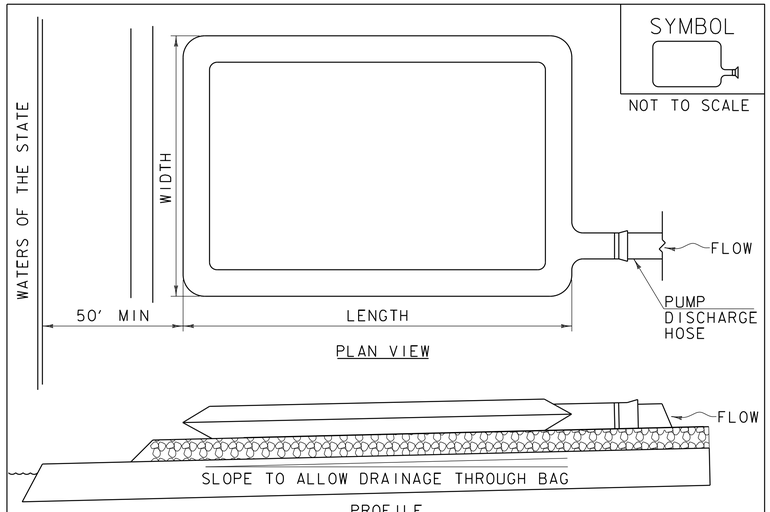
1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

# TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

| REVISIONS | |
|---|---|
| JANUARY 12, 2015 | WHF |
| | |
| | |




## CONSTRUCTION SPECIFICATIONS

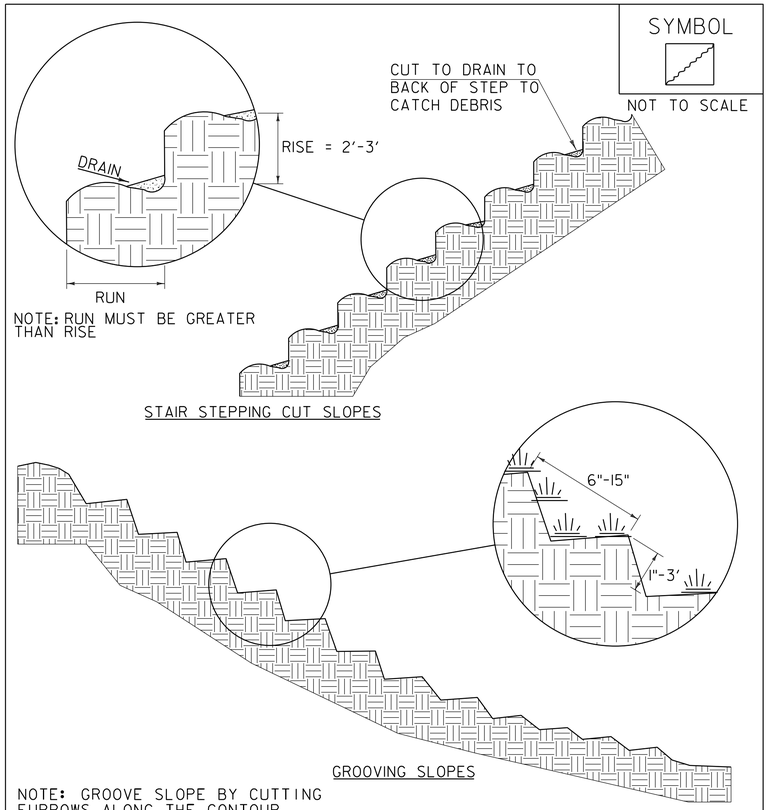
1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

# FILTER BAG

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

| REVISIONS | |
|---|---|
| MARCH 24, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| | |
| | |
| | |




NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

| REVISIONS | |
|---|---|
| APRIL 1, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| | |
| | |
| | |

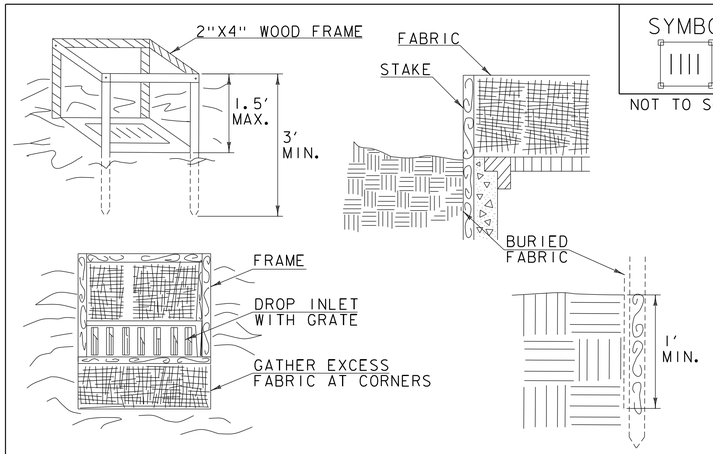
Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352erodtls3 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448 (42)

FILE NAME: z12j352erodtls.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: A. BEAULAC
EPSC DETAILS SHEET 3

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 45 OF 47




SYMBOL

NOT TO SCALE

## CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# FILTER FABRIC DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

| REVISIONS | |
|---|---|
| MARCH 7, 2008 | WHF |
| JANUARY 13, 2009 | WHF |
| | |
| | |
| | |

Hoyle, Tanner & Associates, Inc.

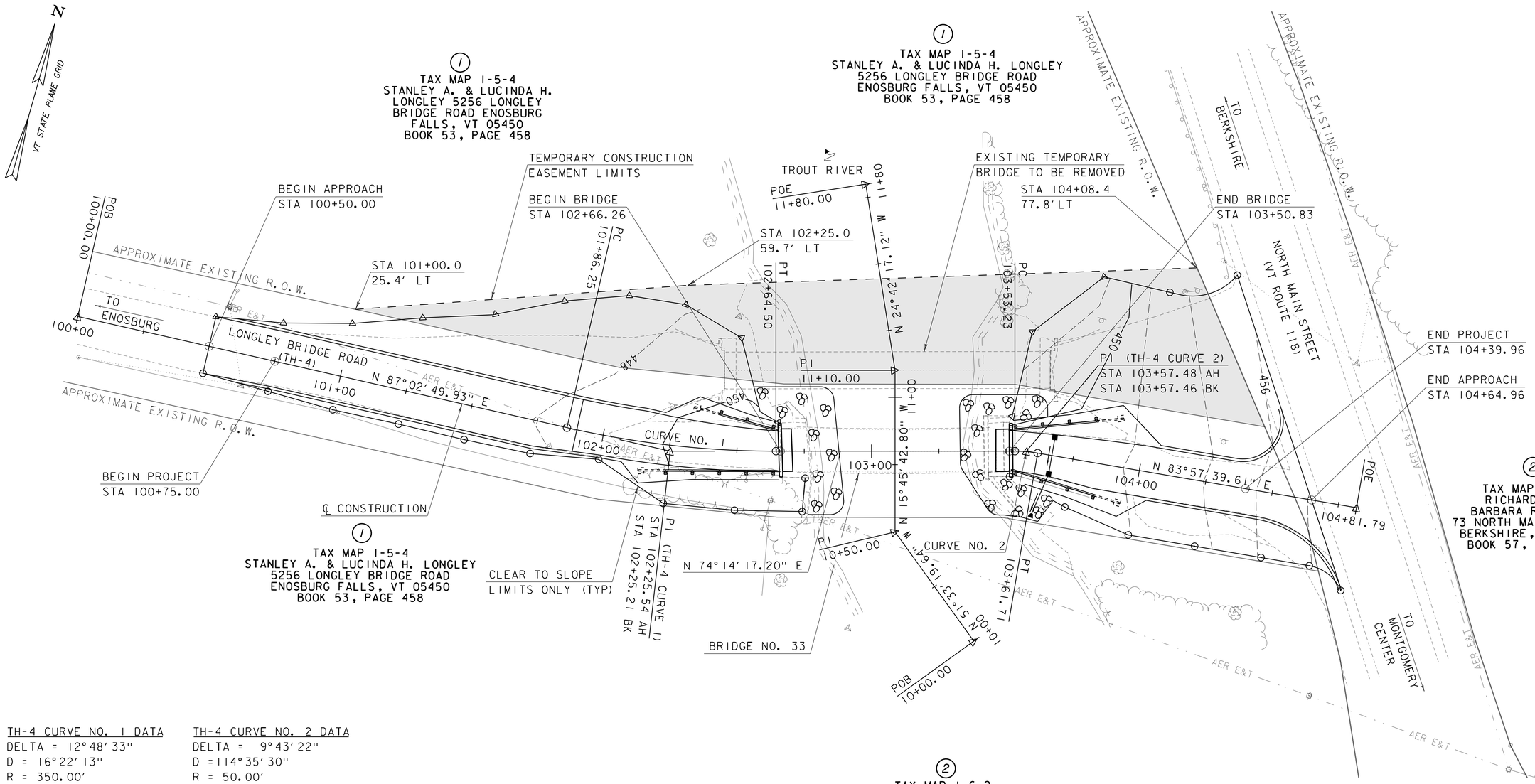
| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352erodtls4 |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)

FILE NAME: z12j352erodtls.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: M. SARGENT
EPSC DETAILS SHEET 4

PLOT DATE: 6/10/2015
DRAWN BY: A. BEAULAC
CHECKED BY: J. AYOTTE
SHEET 46 OF 47

| PARCEL NO | GRANTOR | SHEET NO | BEGIN STATION | END STATION | TAKING | REM | RIGHTS | TITLE TAKEN | DATE | TOWN OR CITY RECORDED | VOL | PG | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LONGLEY, STANLEY A. & LUCINDA H. | 6 | 101+00.0, LT. 25.4' | 104+08.4, LT. 77.8' | | | DETOUR (T) 10756 S.F.± | | 8-9-2011 | TOWN OF MONTGOMERY | 53 | 458 | TEMPORARY EASEMENT |




TH-4 CURVE NO. 1 DATA
DELTA = 12° 48' 33"
D = 16° 22' 13"
R = 350.00'
T = 39.29'
L = 78.25'
E = 2.20'

TH-4 CURVE NO. 2 DATA
DELTA = 9° 43' 22"
D = 114° 35' 30"
R = 50.00'
T = 4.25'
L = 8.48'
E = 0.18'

RIGHT-OF-WAY PLAN
SCALE 1" = 20'-0"
20 0 20

LEGEND

AREAS OF TEMPORARY CONSTRUCTION EASEMENT

LINES SHOWN ON THIS PLAN AS EXISTING R.O.W. ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE TOWN OF MONTGOMERY'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT

DATUM
VERTICAL NAVD 88 FT
HORIZONTAL NAD 83(2011) sFT
ADJUSTMENT UNADJUSTED

Hoyle, Tanner & Associates, Inc.

| HTA PROJECT | MODEL |
|---|---|
| 904227 | z12j352row |

PROJECT NAME: MONTGOMERY
PROJECT NUMBER: BHO 1448(42)
FILE NAME: z12j352row.dgn
PROJECT LEADER: M. SARGENT
DESIGNED BY: J. RIPLEY
RIGHT-OF-WAY SHEET
PLOT DATE: 6/10/2015
DRAWN BY: T. GELINAS
CHECKED BY: J. BICJA
SHEET 47 OF 47