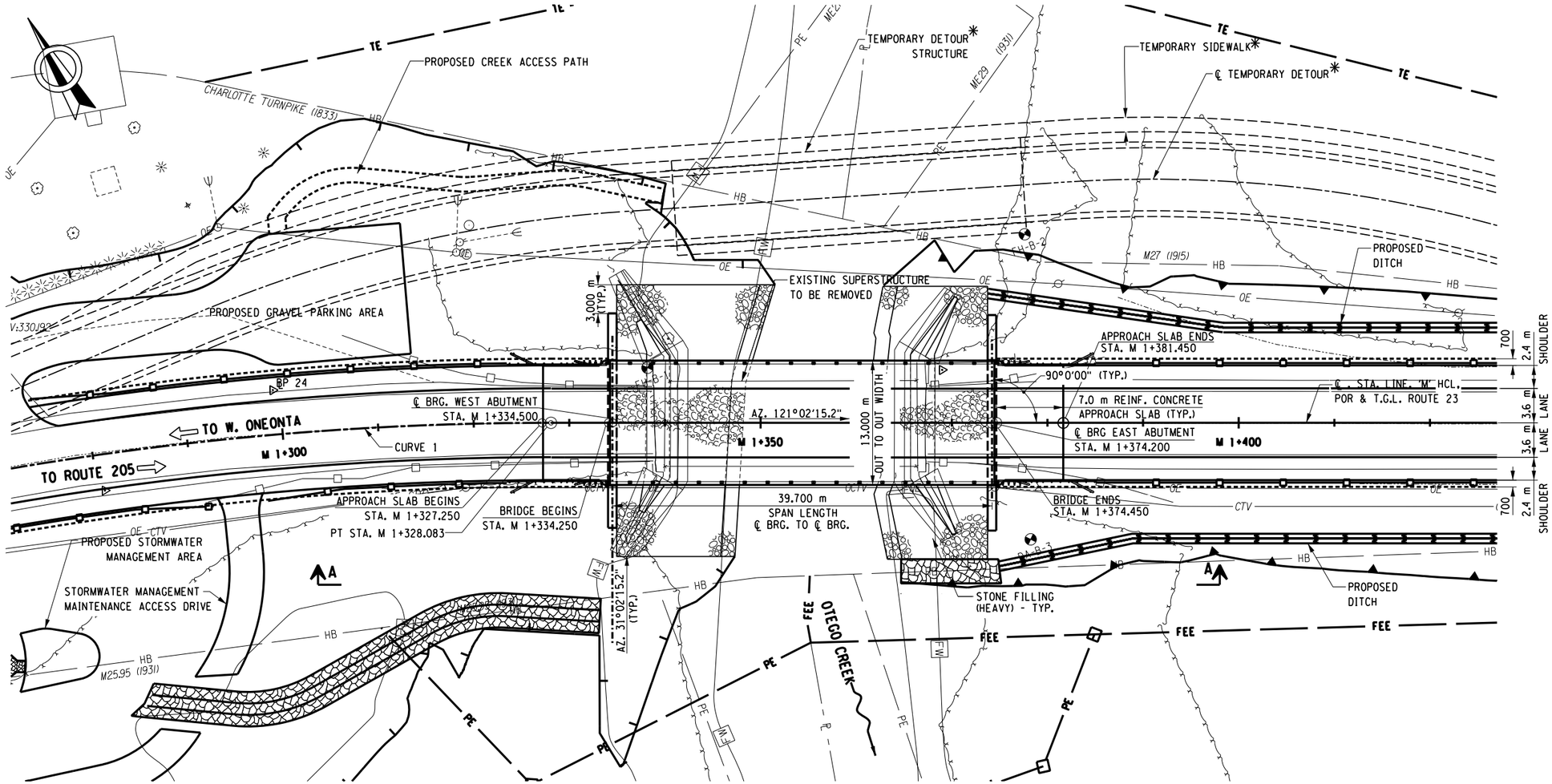
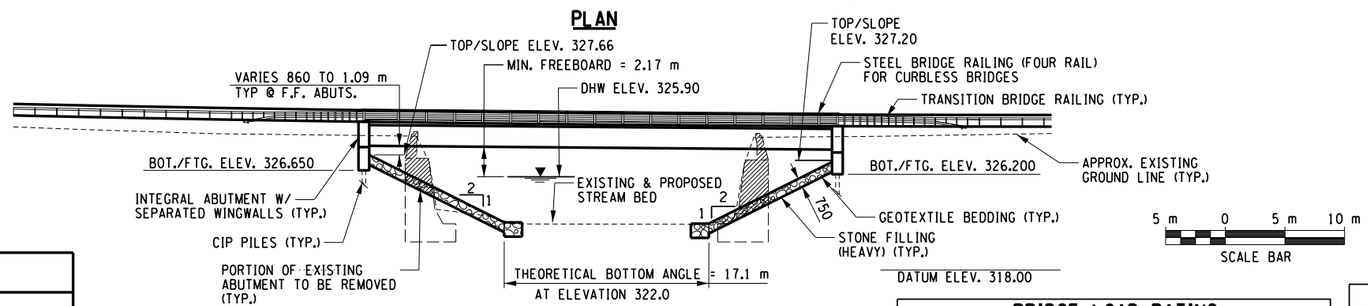



## PLAN




## ELEVATION A-A

5 m 0 5 m 10 m
SCALE BAR

✳ NOTE:
TEMPORARY DETOUR AND TEMPORARY DETOUR STRUCTURE CONSTRUCTED UNDER SEPARATE CONTRACT (D260848)

### HYDRAULIC DATA

| | | DESIGN FLOOD | BASIC FLOOD |
|---|---|---|---|
| DRAINAGE AREA 267.0 ($km^2$) | | | |
| RECURRENCY INTERVAL | (YEARS) | 50 | 100 |
| PEAK DISCHARGE | (CM/S) | 175.9 | 202.6 |
| HIGH WATER ELEVATION AT POINT OF MAX. BACKWATER | EXISTING | 326.03 | 326.38 |
| | PROPOSED | 325.96 | 326.30 |
| AVG. VELOCITY THRU STRUCTURE @ DESIGN FLOOD = 1.7 (m/SEC) | | | |

### BRIDGE LOAD RATING

| METHOD: DESIGN LOAD | INVENTORY | OPERATING |
|---|---|---|
| LFD: MS-23 | MS-25.6 (46.1MTONS) | MS-42.9 (85.1MTONS) |
| LRFR: HL-93 | 1.08 | 1.40 |

CURVE 1
PC = STA. M 1+209.874
PT = STA. M 1+328.083
R = 336.000 m
Δ = 20°09'26.5"
L = 118.209 m
T = 59.722 m
$e_{MAX.}$ = 6.00%

### BRIDGE DRAWING INDEX

| DRAWING NO. | TITLE |
|---|---|
| ST-1 | GENERAL PLAN AND ELEVATION |
| ST-2 | PROFILE AND BRIDGE SECTIONS |
| ST-3 | TYPICAL APPROACH SECTIONS |
| ST-4 | ESTIMATE OF QUANTITIES AND NOTES |
| ST-5 | BORING LOCATION AND GENERAL SUBSURFACE PROFILE |
| ST-6 | BORING LOCATION AND GENERAL SUBSURFACE PROFILE |
| ST-7 | EXCAVATION AND EMBANKMENT PLAN |
| ST-8 | EXCAVATION AND EMBANKMENT SECTIONS |
| ST-9 | WEST ABUTMENT PLAN AND ELEVATION |
| ST-10 | WEST ABUTMENT PILE LAYOUT AND REINFORCEMENT PLAN |
| ST-11 | EAST ABUTMENT PLAN AND ELEVATION |
| ST-12 | EAST ABUTMENT PILE LAYOUT AND REINFORCEMENT PLAN |
| ST-13 | ABUTMENT SECTIONS AND DETAILS (1 OF 2) |
| ST-14 | ABUTMENT SECTIONS AND DETAILS (2 OF 2) |
| ST-15 | TRANSVERSE SECTION |
| ST-16 | FRAMING PLAN AND DIAPHRAGM DETAILS |
| ST-17 | GIRDER DETAILS |
| ST-18 | SUPERSTRUCTURE TABLES (1 OF 2) |
| ST-19 | SUPERSTRUCTURE TABLES (2 OF 2) |
| ST-20 | SUPERSTRUCTURE PRECAST SLAB PANEL PLAN |
| ST-21 | PRECAST SLAB PANEL LAYOUT, P-1, P-1B, P-2, P-2B LAYOUT PLANS |
| ST-22 | PRECAST SLAB PANEL P-1A, P2-A LAYOUT PLANS |
| ST-23 | PRECAST SLAB PANEL - TYPICAL REINFORCING LAYOUT |
| ST-24 | PRECAST SLAB PANEL DETAILS-1 |
| ST-25 | PRECAST SLAB PANEL DETAILS-2 |
| ST-26 | PRECAST SLAB PANEL DETAILS-3 |
| ST-27 | APPROACH SLAB AND BRIDGE RAILING LAYOUT |
| ST-28 | MISCELLANEOUS DETAILS |
| ST-29 | BRIDGE RAILING DETAILS |
| ST-30 | TRANSITION BRIDGE RAILING DETAILS (1 OF 3) |
| ST-31 | TRANSITION BRIDGE RAILING DETAILS (2 OF 3) |
| ST-32 | TRANSITION BRIDGE RAILING DETAILS (3 OF 3) |
| ST-33 | BAR BENDING DIAGRAMS AND BAR LIST (1 OF 2) |
| ST-34 | BAR LIST (2 OF 2) |

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**GENERAL PLAN AND ELEVATION**

DELTA ENGINEERS

CONTRACT NUMBER D260931

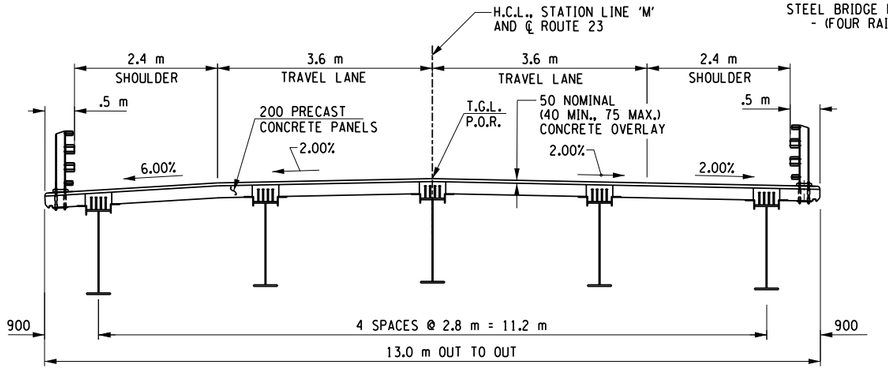
DRAWING NO. ST-1
SHEET NO. 53

DOCUMENT NAME: 912032_cpb_GEN.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

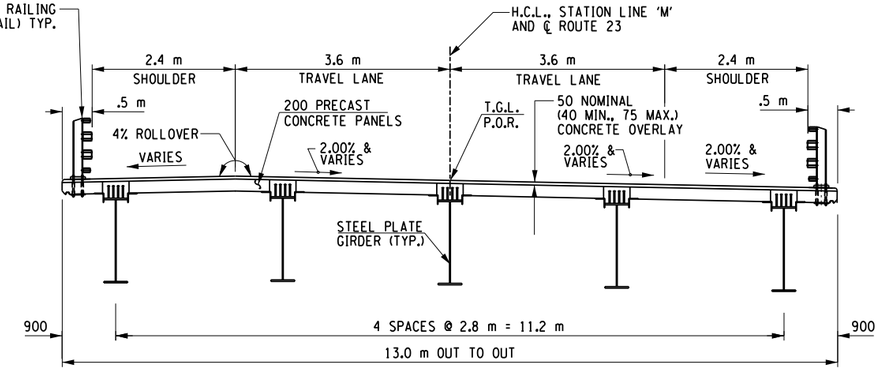
DESIGN SUPERVISOR JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY JRM/JFS ESTIMATED BY RPJ DRAFTED BY BRT/JFS CHECKED BY RPJ

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032cpb_GEN.dgn
DATE/TIME = 10/14/2008 10:53:23 AM
USER = ssingh



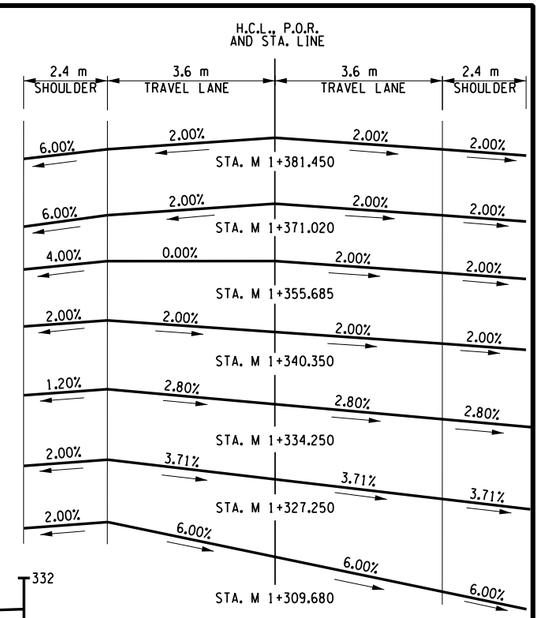

## BRIDGE SECTION NORMAL CROWN

STA. M 1+371.020 TO STA. M 1+374.200




## BRIDGE SECTION BANKED

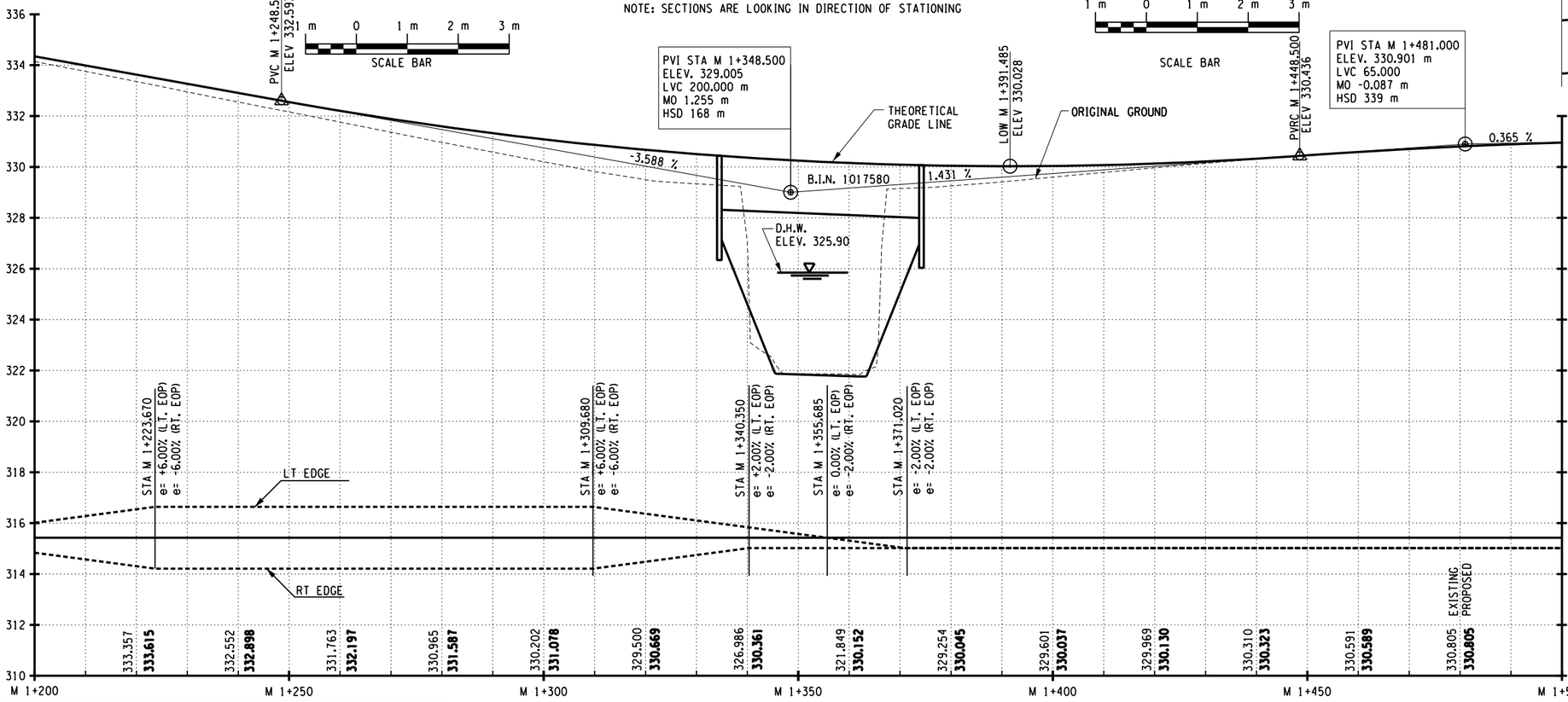
STA. M 1+334.500 TO STA. M 1+371.020



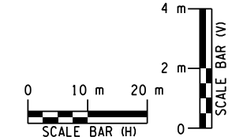

## NY ROUTE 23 BANKING DIAGRAM

LOOKING IN DIRECTION OF STATIONING
NOT TO SCALE

NOTE: SECTIONS ARE LOOKING IN DIRECTION OF STATIONING




## ℄ PROFILE - NY ROUTE 23




PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK<br>SH 1302 MORRIS - ONEONTA<br>TOWN OF ONEONTA<br>COUNTY: OTSEGO | PIN 9120.32<br>PS&E DATE OCT. 23, 2008 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED<br>**PROFILE AND BRIDGE SECTIONS** |

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-2
SHEET NO. 54

DOCUMENT NAME: 912032_cpb_SEC_typ_01.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM DESIGNED BY JJV ESTIMATED BY JFS/RPJ DRAFTED BY JJV/JFS CHECKED BY RPJ CHECKED BY RPJ/JFS

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032.cpb.SEC.typ.01.dgn
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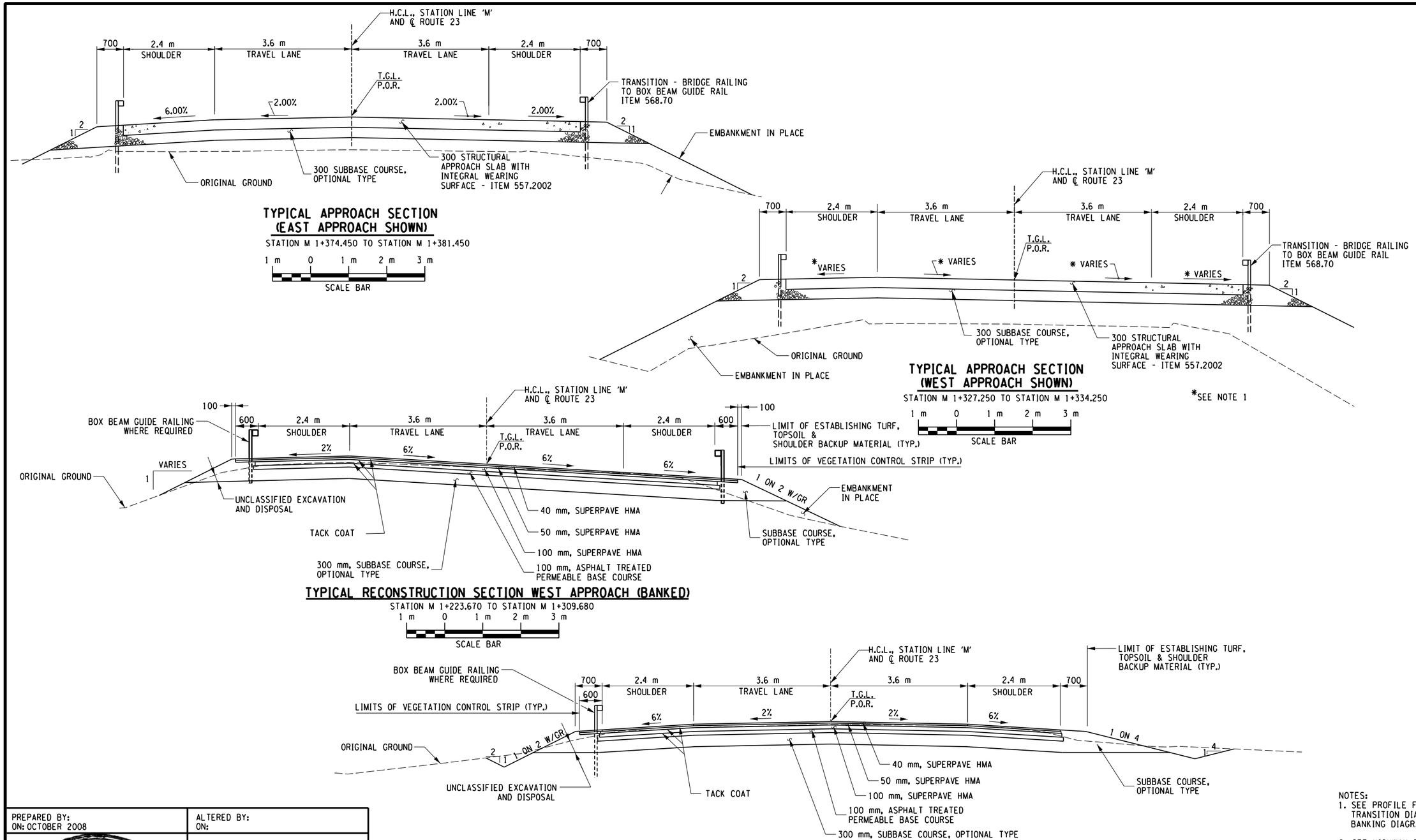


NOTES:
1. SEE PROFILE FOR SUPERELEVATION TRANSITION DIAGRAM IN PROFILE AND BANKING DIAGRAM ON DWG ST-2.
2. SEE HIGHWAY TYPICAL SECTIONS FOR ITEM NUMBERS NOT SHOWN.

| | |
|---|---|
| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK | PIN 9120.32 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED |
| SH 1302 MORRIS - ONEONTA | PS&E DATE OCT. 23, 2008 | | | TYPICAL APPROACH SECTIONS |
| TOWN OF ONEONTA | | | | CONTRACT NUMBER D260931 |
| COUNTY: OTSEGO | | | | DRAWING NO. ST-3 SHEET NO. 55 |

DOCUMENT NAME: 912032_cpb_sec_typ_02.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DELTA ENGINEERS

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY JFS/RPJ DRAFTED BY JJV/JFS DESIGNED BY JJV CHECKED BY RPJ CHECKED BY RPJ

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USER = ssingh

## ESTIMATE OF QUANTITIES

| ITEM NO. | DESCRIPTION | UNIT | ESTIMATED | FINAL |
|---|---|---|---|---|
| 202.11 | DISMANTLING AND REMOVING EXISTING SUPERSTRUCTURES | LS | NEC. | |
| 202.120001 | REMOVING EXISTING SUPERSTRUCTURES | LS | NEC. | |
| 202.19 | REMOVAL OF SUBSTRUCTURES | CM | 390 | |
| 202.20 | REMOVING OLD BITUMINOUS CONCRETE OVERLAY | SQM | 280 | |
| 203.02 | UNCLASSIFIED EXCAVATION AND DISPOSAL | CM | 146 | |
| 203.03 | EMBANKMENT IN PLACE | CM | 470 | |
| 203.21 | SELECT STRUCTURE FILL | CM | 150 | |
| 206.01 | STRUCTURE EXCAVATION | CM | 1000 | |
| 206.02 | TRENCH AND CULVERT EXCAVATION | CM | 115 | |
| 207.20 | GEOTEXTILE BEDDING | SQM | 790 | |
| 207.27 | PREFABRICATED COMPOSITE INTEGRAL ABUTMENT DRAIN | SQM | 136 | |
| 24209.1501 | TURBIDITY CURTAIN | M | 85 | |
| 304.15 | SUBBASE COURSE OPTIONAL TYPE | CM | 127 | |
| 551.11 | CAST-IN-PLACE CONCRETE PILES | M | 971 | |
| 551.13 | FURNISHING EQUIPMENT FOR DRIVING PILES | LS | NEC. | |
| 555.09 | CONCRETE FOR STRUCTURES, CLASS HP | CM | 132 | |
| 556.0201 | UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES | Kg | 2396 | |
| 556.0202 | EPOXY-COATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES | Kg | 3444 | |
| 556.03 | STUD SHEAR CONNECTORS FOR BRIDGES | EA | 1278 | |
| 16557.0501 | PRECAST CONCRETE DECK SYSTEM | SQM | 505 | |
| 16557.2101 | FIELD CAST JOINTS BETWEEN PRECAST CONCRETE UNITS | M | 169 | |
| 557.2002 | STRUCTURAL APPROACH SLAB WITH INTEGRAL WEARING SURFACE - TYPE 2 FRICTION | SQM | 170 | |
| 558.02 | LONGITUDINAL SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE | SQM | 657 | |
| 18559.1896 | PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS | SQM | 695 | |
| 564.0501 | STRUCTURAL STEEL (TYPE 1) | LS | NEC. | |
| 565.30 | RUBBER IMPREGNATED WOVEN COTTON-POLYESTER FABRIC | EA | 10 | |
| 568.51 | STEEL BRIDGE RAILING (FOUR-RAIL) | M | 84 | |
| 568.70 | TRANSITION BRIDGE RAILING | M | 39 | |
| 570.090001 | ENVIRONMENTAL GROUND PROTECTION | LS | NEC. | |
| 570.100001 | ENVIRONMENTAL WATERWAY PROTECTION | LS | NEC. | |
| 571.010001 | TREATMENT AND DISPOSAL OF PAINT REMOVAL WASTE | CM | 0.1 | |
| 620.05 | STONE FILLING (HEAVY) | CM | 660 | |
| 637.01 | FIELD LABORATORY | EA | 1 | |
| 637.03 | CONCRETE CYLINDER CURING BOX | EA | 1 | |
| 697.03 | FIELD CHANGE PAYMENT | DC | 1 | |
| 698.04 | ASPHALT PRICE ADJUSTMENT | DC | 1 | |
| 698.05 | FUEL PRICE ADJUSTMENT | DC | 1 | |
| 698.06 | STEEL/IRON PRICE ADJUSTMENT | DC | 100 | |
| 699.040001 | MOBILIZATION | LS | NEC. | |

## BAR SIZES - INCH POUND AND SOFT METRIC•

| BAR DESIGNATION NO. | NOMINAL DIAMETER, IN. (mm) | NOMINAL AREA, IN.² (mm²) |
|---|---|---|
| 3(10) | 0.375(9.5) | 0.11(71) |
| 4(13) | 0.500(12.7) | 0.20(129) |
| 5(16) | 0.625(15.9) | 0.31(199) |
| 6(19) | 0.750(19.1) | 0.44(284) |
| 7(22) | 0.875(22.2) | 0.60(387) |
| 8(25) | 1.000(25.4) | 0.79(510) |
| 9(29) | 1.128(28.7) | 1.00(645) |
| 10(32) | 1.270(32.3) | 1.27(819) |
| 11(36) | 1.410(35.8) | 1.56(1006) |
| 14(43) | 1.693(43.0) | 2.25(1452) |
| 18(57) | 2.257(57.3) | 4.00(2581) |

• SOFT METRIC BAR DESIGNATION NUMBERS, NOMINAL DIAMETERS AND AREAS ARE THE VALUES ENCLOSED WITHIN THE BRACKETS. BAR DESIGNATION NUMBERS APPROXIMATE THE NUMBER OF MILLIMETERS OF THE NOMINAL DIAMETER OF THE BAR.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

## HIGH VOLTAGE ELECTRICAL LINES

HIGH VOLTAGE ELECTRICAL LINES ARE IN PROXIMITY TO THIS BRIDGE. REFER TO SUBSECTION 107-05 OF THE STANDARD SPECIFICATIONS FOR CONTRACTOR SAFETY REQUIREMENTS.

## GENERAL NOTES

DESIGN SPECIFICATIONS: NYSDOT LRFD BRIDGE DESIGN SPECIFICATIONS WITH ALL PROVISIONS IN EFFECT AS OF OCTOBER 2008 FOR DESIGN PURPOSES, COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS:

SUBSTRUCTURES, f'c = 21 MPA
PRECAST DECK PANELS, f'c = 35 MPA
UHPC GROUT, f'c = 120 MPA

LIVE LOAD: AASHTO HL-93 AND NYSDOT DESIGN PERMIT VEHICLE.

CONSTRUCTION AND MATERIAL SPECIFICATIONS: STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING, DATED MAY 4, 2006 WITH CURRENT ADDITIONS AND MODIFICATIONS.

ALL SHOP DRAWINGS SUBMITTED FOR THIS PROJECT SHALL BE IN SI UNITS. ERECTION DRAWINGS ARE TO BE PREPARED IN DUAL UNITS.

THE COST OF WATER USED FOR COMPACTION OF SELECT FILL ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203.21 - SELECT STRUCTURE FILL.

THE COST OF ALL JOINT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

THE LOAD RATINGS ARE IN ACCORDANCE WITH THE AASHTO "MANUAL FOR CONDITION EVALUATION OF BRIDGES - 1994" AND THE MANUAL FOR CONDITION EVALUATION AND LOAD AND RESISTANCE FACTOR RATING (LRFR) OF HIGHWAY BRIDGES - OCTOBER 2003 WITH ALL INTERIM PROVISIONS IN EFFECT.

DIMENSIONS FOR THICKNESSES OF STEEL ROLLED ANGLE SHAPES AND STRUCTURAL TUBING ARE SHOWN ACCORDING TO THE AISC MANUAL "METRIC PROPERTIES OF STRUCTURE SHAPES WITH DIMENSIONS ACCORDING TO ASTM A6M."

THIS BRIDGE SHALL BE MAINTAINED IN ACCORDANCE WITH THE GUIDELINES CONTAINED IN THE CURRENT EDITION OF AASHTO MAINTENANCE MANUAL: THE MAINTENANCE AND MANAGEMENT OF ROADWAYS AND BRIDGES.

## SUPERSTRUCTURE NOTES

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A709M GRADE 345W.

CLEANING CONTROLLED OXIDIZING STRUCTURAL STEEL ASTM A709M GRADE 345W.

A. IN THE FABRICATION SHOP:
GIRDERS SHALL BE BLAST CLEANED IN ACCORDANCE WITH SSPC-SP6 (COMMERCIAL BLAST CLEANING). HEAVY COATINGS OF OIL OR GREASE SHALL BE REMOVED BEFORE BLASTING IN ACCORDANCE WITH SSPC-SP1 (SOLVENT CLEANING).

B. IN THE FIELD:
THE OUTSIDE SURFACE OF THE FASCIA STRINGERS SHALL BE CLEANED SO THAT ALL DIRT, GREASE, PAINT OR OTHER FOREIGN MATERIAL IS REMOVED AT THE COMPLETION OF THE BRIDGE CONSTRUCTION. THE PURPOSE OF THE CLEANING IS TO RETURN THE FASCIA SURFACES TO THE CONDITION IN WHICH THEY LEFT THE FABRICATION SHOP.

THE COST OF CLEANING THIS STEEL IN THE FABRICATION SHOP AND THE FIELD SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS IN THE CONTRACT.

FOR THE VARIOUS LUMP SUM STRUCTURAL STEEL MEMBERS IN THE CONTRACT, THE "TOTAL MASS FOR PROGRESS PAYMENT" IS AS FOLLOWS:

| ITEM | TOTAL MASS FOR PROGRESS PAYMENT |
|---|---|
| 564.0501 | 82,000 KILOGRAMS |

THIS MASS SHALL BE USED IN DETERMINING PARTIAL PAYMENTS AND PROGRESS. UNDER NO CIRCUMSTANCES SHALL THE "TOTAL MASS FOR PROGRESS PAYMENT" BE USED FOR FINAL PAYMENT PURPOSES. THE CONTRACTOR IS ADVISED NOT TO USE THE "TOTAL MASS FOR PROGRESS PAYMENTS" AS A BIDDING TOOL. DISCREPANCIES WHICH MAY OCCUR BETWEEN THE TOTAL MASS SHIPPED AND "TOTAL MASS FOR PROGRESS PAYMENT" SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION.

TOP SURFACES OF THE NEW BRIDGE DECK OVERLAY AND APPROACH SLABS SHALL BE SEALED ACCORDING TO ITEM 18559.1896 PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS.

## STEEL ERECTION NOTES

THE CONTRACTOR SHALL PROVIDE FOR THE STABILITY OF STRUCTURAL STEEL DURING ALL PHASES OF ERECTION AND CONSTRUCTION, AS PROVIDED IN PARAGRAPH 204.2 OF THE NEW YORK STATE STEEL CONSTRUCTION MANUAL (SCM).

## SUBSTRUCTURE NOTES

ALL PLACEMENTS OF SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY.

HIGHWAY EMBANKMENT MATERIAL (HIGHWAY ESTIMATE) AND SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE PLACED SIMULTANEOUSLY, IN CONTACT, ON BOTH SIDES OF THE PAYMENT LINE.

## REMOVAL NOTES

EXISTING SUBSTRUCTURE SHALL BE REMOVED WITHIN THE LIMITS SHOWN ON THE PLANS UNDER ITEM 202.19 IN THE BRIDGE ESTIMATE.

EXISTING SUPERSTRUCTURE SHALL BE REMOVED UNDER ITEM 202.120001 IN THE BRIDGE ESTIMATE.

HYDRO-DEMOLITION METHODS WILL NOT BE ALLOWED.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF SUBSECTION 202-3.01 GENERAL AND SAFETY REQUIREMENTS. A REMOVAL PLAN SHALL BE SUBMITTED TO THE ENGINEER FIFTEEN (15) DAYS PRIOR TO BEGINNING THE DEMOLITION. THE REQUIREMENT THAT IT BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER IS WAIVED.

## SUPERSTRUCTURE (OR SUBSTRUCTURE) REMOVAL NOTES

LIMITS AND METHODS FOR REMOVAL OF PAINT AT LOCATIONS OF FASTENER REMOVAL OR FLAME CUTTING SHALL BE AS DESCRIBED IN SUBSECTIONS 202-3.05 AND 574 OF THE STANDARD SPECIFICATIONS. THE COST OF PAINT REMOVAL SHALL BE INCLUDED IN THE LUMP SUM PRICE(S) BID FOR THE SUPERSTRUCTURE REMOVAL ITEM(S) (OR THE UNIT PRICE BID FOR THE SUBSTRUCTURE REMOVAL ITEM). PAINT WASTE NOT COLLECTED BY VACUUM METHODS SHALL BE COLLECTED USING THE ENVIRONMENTAL GROUND AND/OR WATERWAY PROTECTION ITEM(S). WASTE SHALL BE DISPOSED OF USING THE TREATMENT AND DISPOSAL OF PAINT REMOVAL WASTE ITEM.

LOOSE AND/OR PEELING PAINT ON STEEL SURFACES MAY BECOME DISLODGED DURING REMOVAL OPERATIONS OR DURING TRANSPORTATION FROM THE SITE UNLESS APPROPRIATE MEASURES ARE TAKEN. THE CONTRACTOR SHALL FORMULATE AND SUBMIT A METHOD OF REMEDIATING THE CONDITION FOR APPROVAL BY THE ENGINEER. WORKER LEAD PROTECTION IN ACCORDANCE WITH OSHA 1926.62 MUST BE SATISFIED. ALTERNATIVES COULD INCLUDE TRANSPORTING AFFECTED MEMBERS IN CLOSED TRUCKS, WRAPPING AFFECTED MEMEBERS PRIOR TO REMOVAL, EXCAPSULATING THE LOOSE PAINT OR REMOVAL OF LOOSE PAINT PRIOR TO DISMANTLING OPERATIONS. THE COST OF REMEDIATING THIS CONDITION SHALL BE INCLUDED IN THE LUMP SUM PRICE(S) BID FOR THE SUPERSTRUCTURE REMOVAL ITEM(S) (OR THE UNIT PRICE BID FOR THE SUBSTRUCUTRE REMOVAL ITEM.) THE USE OF ENVIRONMENTAL GROUND AND/OR WATERWAY PROTECTION ITEMS WILL BE REQUIRED. DEPENDING ON THE ALTERNATIVE CHOSEN, THE TREATMENT AND DISPOSAL OF PAINT REMOVAL WASTE ITEM MAY BE REQUIRED. BECAUSE OF THE ABOVE-MENTIONED CONDITION, THE CONTRACTOR SHOULD EXAMINE THE CONDITION OF THE STRUCTURE'S PAINT PRIOR TO SUBMITTING A BID.

REFER TO SUBSECTION 107-05 OF THE STANDARD SPECIFICATIONS FOR SAFETY AND HEALTH REQUIREMENTS.

## STRUCTURAL SLAB OVERLAY NOTES

THE NOMINAL THICKNESS OF THE CONCRETE OVERLAY SHALL BE 50 (40 MINIMUM, 75 MAXIMUM).

SHOULD THE INSTALLATION OF THE PRECAST DECK PANELS, TOGETHER WITH APPLICATION OF THE SPECIALIZED CONCRETE OVERLAY, RESULT IN A REVISED FINISHED PROFILE HIGHER THAN THAT SHOWN ON THE PLANS, THE CONTRACTOR SHALL SUBMIT THE REVISED PROFILE TO THE REGIONAL DIRECTOR FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO PLACEMENT OF THE CONCRETE OVERLAY.

NO OVERLAY MATERIAL SHALL BE PLACED UNTIL THE REGIONAL DIRECTOR HAS APPROVED THE CONTRACTOR'S PROPOSED REVISIONS.

ALL ROADWAY SURFACES RECEIVING A SPECIALIZED CONCRETE OVERLAY SHALL BE GROOVED UNDER THE SAWCUT GROOVING OF THE STRUCTURAL SLAB SURFACE ITEM AND BE SEALED UNDER THE PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS ITEM.

DESIGN SUPERVISOR JRM | JOB MANAGER JRM | ESTIMATED BY RPJ | DRAFTED BY SS/JFS | DESIGNED BY RPJ | CHECKED BY RPJ | CHECKED BY SS

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032.cpb.tbl.EST.dgn
DATE/TIME = 10/23/2008 8:01:20 AM
USER = ssingh

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

ESTIMATE OF QUANTITIES AND NOTES

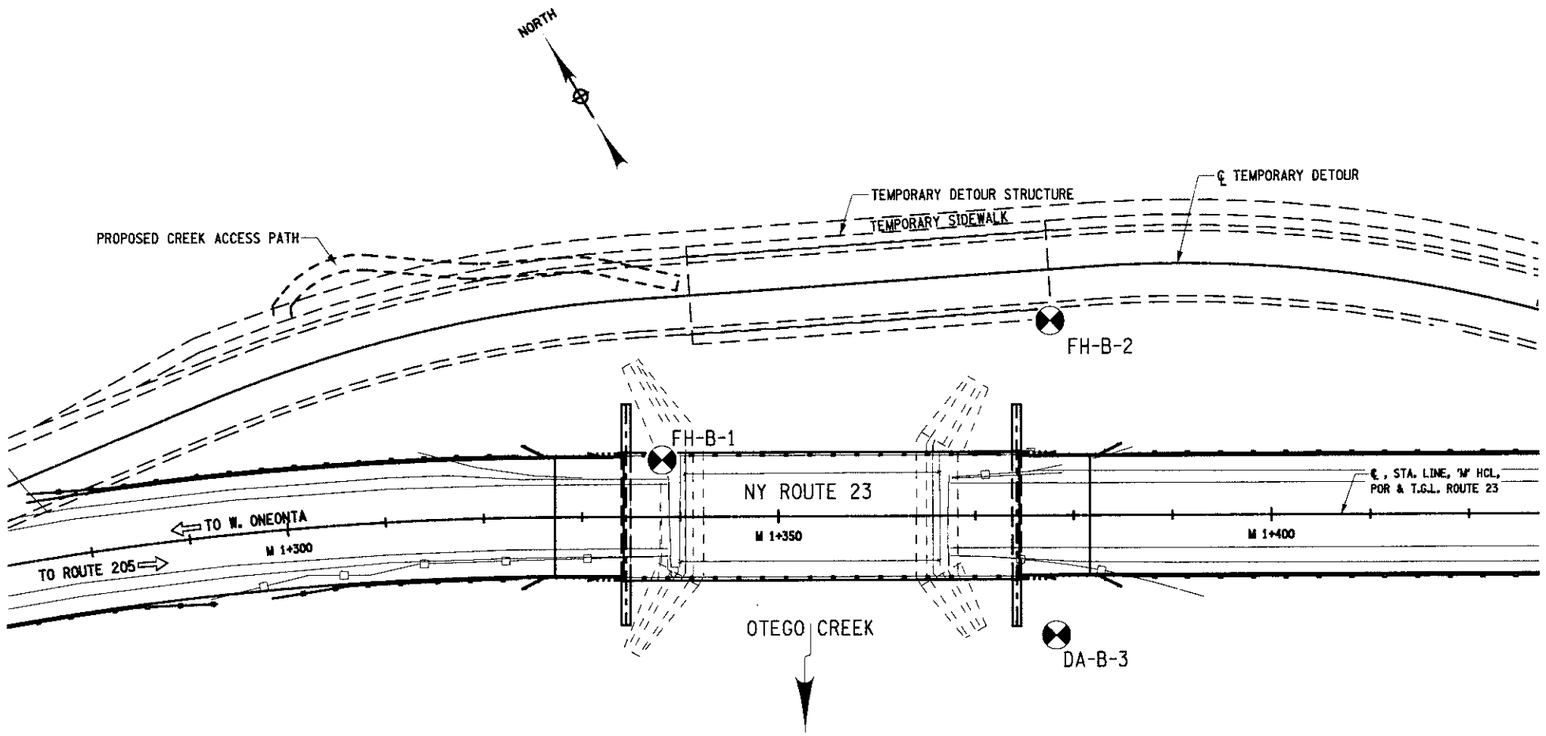
DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-4
SHEET NO. 56

DOCUMENT NAME: 912032_cpb_tbl_EST.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9




BORING LOCATION PLAN

5 0 5 10 15 20 25 30 m

SCALE

## GENERAL NOTES

1.) SOUND ENGINEERING JUDGMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HERE ON. THIS INFORMATION WAS PREPARED AND IS INTENDED FOR STATE DESIGN AND ESTIMATE PURPOSES ONLY. ITS PRESENTATION ON THE PLANS OR ELSEWHERE IS FOR THE PURPOSE OF PROVIDING INTENDED USERS WITH ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. THIS IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION, INDEPENDENT INTERPRETATIONS OR JUDGEMENT OF THE CONTRACTOR.

2.) GENERAL SOIL AND ROCK (WHERE ENCOUNTERED) STRATUM DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON AN ENGINEERING INTERPRETATION OF ALL AVAILABLE SUBSURFACE INFORMATION BY THE GEOTECHNICAL ENGINEERING BUREAU AND MAY NOT NECESSARILY REFLECT THE ACTUAL VARIATION IN SUBSURFACE CONDITIONS BETWEEN BORINGS AND SAMPLES. DETAILED DATA AND FIELD INTERPRETATIONS OF CONDITIONS ENCOUNTERED IN INDIVIDUAL BORINGS ARE SHOWN ON THE SUBSURFACE EXPLORATION LOGS.

3.) THE OBSERVED WATER LEVELS AND/OR CONDITIONS INDICATED ON THE SUBSURFACE PROFILES ARE AS RECORDED AT THE TIME OF EXPLORATION. ACTUAL WATER LEVELS MAY DIFFER FROM THE OBSERVED WATER LEVEL BECAUSE OF LIMITATIONS IN THE NUMBER AND DURATION OF OBSERVATIONS AND WILL VARY WITH CHANGES IN CLIMATE AND RAINFALL.

4.) ALL STRUCTURE DETAILS AND FOOTING ELEVATIONS SHOWN HEREON ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY NOT BE INDICATIVE OF THE FINAL DESIGN CONDITIONS SHOWN ON THE CONTRACT PLANS.

## LEGEND

THE FOLLOWING TABLES SUMMARIZE THE DESCRIPTIVE INFORMATION USED ON THIS PROFILE.

| DENSITY (NON-PLASTIC SOILS) | NO. OF BLOWS PER 0.3 m OF PENETRATION OF A 50.8 mm O.D. (34.9 mm I.D.) SAMPLER USING A 64 kg DROP HAMMER, 762 mm FALL. |
|---|---|
| Very Loose | 0-4 |
| Loose | 5-10 |
| Medium Compact | 11-24 |
| Compact | 25-50 |
| Very Compact | over 50 |

| CONSISTENCY (PLASTIC SOILS) | |
|---|---|
| Very Soft | 0-1 |
| Soft | 2-4 |
| Medium Stiff | 5-8 |
| Stiff | 9-15 |
| Very Stiff | 16-30 |
| Hard | over 30 |

## SYMBOLS

DRILL HOLE — DA-B, FH-B

Loose to Compact Brown Silty SAND, Gravelly to Silty GRAVEL, Sandy

Medium Compact to Compact Gray Clayey SILT to Clayey SILT, Sandy

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE. THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

| PREPARED BY: ON: | ALTERED BY: ON: |
|---|---|
| STATE OF NEW YORK JOSEPH J. DIGREGORIO 073041 LICENSED PROFESSIONAL ENGINEER | |

R. A. Burnett
DIRECTOR
GEOTECHNICAL ENGINEERING BUREAU

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA
COUNTY: OTSEGO

PIN 9120.32
NY 23
PS&E DATE 10/23/2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN m UNLESS OTHERWISE NOTED

BORING LOCATION PLAN

NY ROUTE 23 OVER OTEGO CREEK

CONTRACT NUMBER D260931

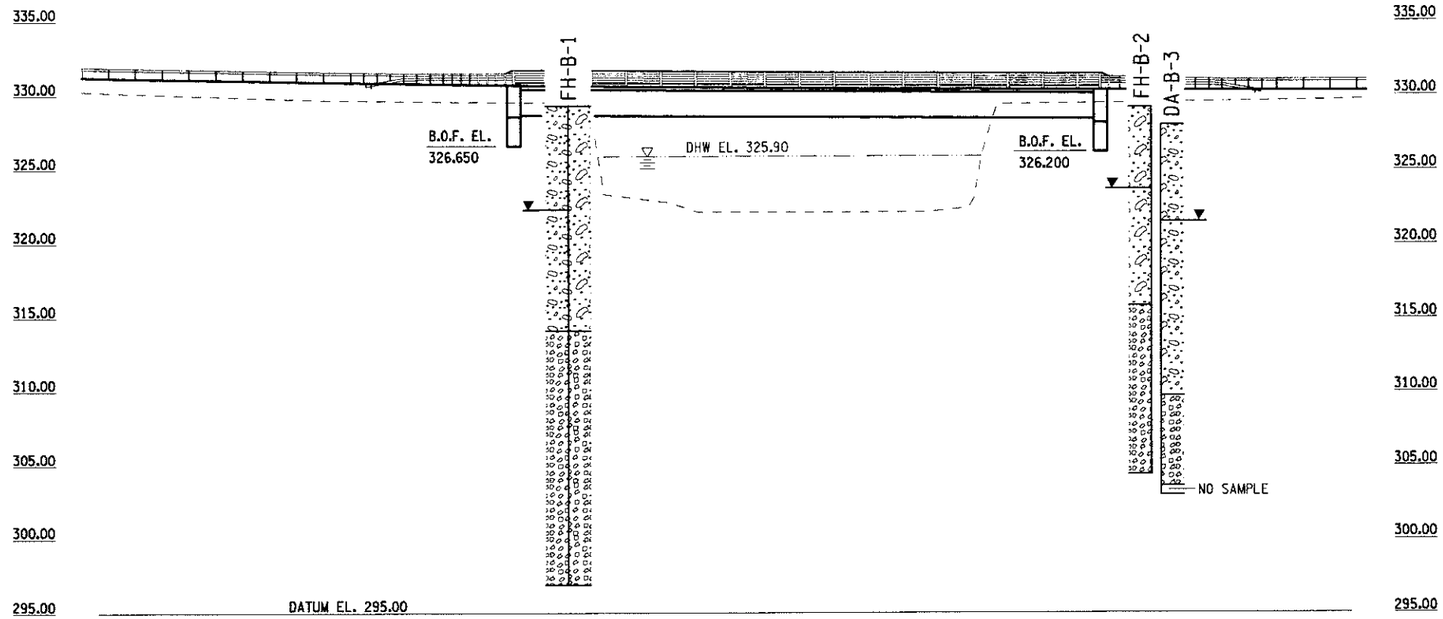
DRAWING NO. ST-5
SHEET NO. 57

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DOCUMENT NAME: 912032AP_GEB.DGN

DESIGN SUPERVISOR P.WALTON 8/29/08 JOB MANAGER J.DIGREGORIO DESIGNED BY N.VERTUCCI CHECKED BY
DRAFTED BY B.MCCULLEN CHECKED BY D.CHRISS
ESTIMATED BY CHECKED BY

FILE NAME = 912032AP_GEB.DGN
DATE/TIME = 16-OCT-2008 13:24
USER = nver-tucci




GENERAL SUBSURFACE PROFILE
ELEVATION A-A

5 0 5 10 15 20 m
SCALE

## GENERAL NOTES

1.) SOUND ENGINEERING JUDGMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HERE ON. THIS INFORMATION WAS PREPARED AND IS INTENDED FOR STATE DESIGN AND ESTIMATE PURPOSES ONLY. ITS PRESENTATION ON THE PLANS OR ELSEWHERE IS FOR THE PURPOSE OF PROVIDING INTENDED USERS WITH ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. THIS IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION, INDEPENDENT INTERPRETATIONS OR JUDGEMENT OF THE CONTRACTOR.

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## LEGEND

THE FOLLOWING TABLES SUMMARIZE THE DESCRIPTIVE INFORMATION USED ON THIS PROFILE.

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|---|---|
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| Loose | 5-10 |
| Medium Compact | 11-24 |
| Compact | 25-50 |
| Very Compact | over 50 |

| CONSISTENCY (PLASTIC SOILS) | |
|---|---|
| Very Soft | 0-1 |
| Soft | 2-4 |
| Medium Stiff | 5-8 |
| Stiff | 9-15 |
| Very Stiff | 16-30 |
| Hard | over 30 |

## SYMBOLS

DRILL HOLE — DA-B, FH-B

Loose to Compact Brown Silty SAND, Gravelly to Silty GRAVEL, Sandy

Medium Compact to Compact Gray Clayey SILT to Clayey SILT, Sandy



| PREPARED BY: ON: | ALTERED BY: ON: |
|---|---|
| Joseph J. DiGregorio 16 OCT 2008 | |

R. A. Burnett
DIRECTOR
GEOTECHNICAL ENGINEERING BUREAU

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA
COUNTY: OTSEGO

PIN 9120.32
NY 23
PS&E DATE 10/23/2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN m UNLESS OTHERWISE NOTED

GENERAL SUBSURFACE PROFILE

NY ROUTE 23
OVER
OTEGO CREEK

CONTRACT NUMBER D260931

DRAWING NO. ST-6
SHEET NO. 58

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DOCUMENT NAME: 912032AP_GE2.DGN

DESIGN SUPERVISOR P.WALTON 8/29/08 JOB MANAGER J.DIGREGORIO DESIGNED BY N.VERTUCCI CHECKED BY
DRAFTED BY B.MCCULLEN CHECKED BY D.CHRISS
ESTIMATED BY CHECKED BY

FILE NAME = 912032AP_GE2.DGN
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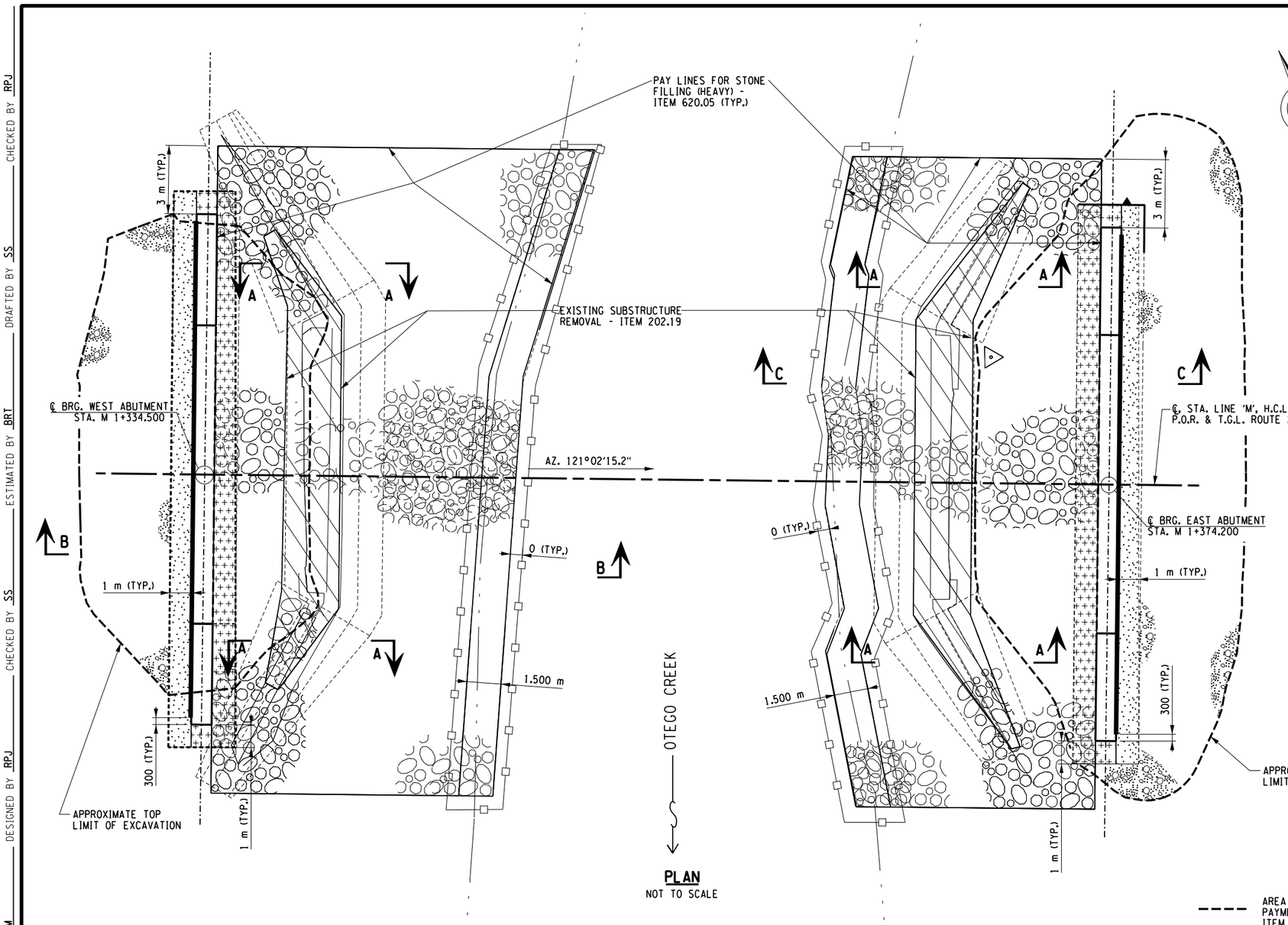
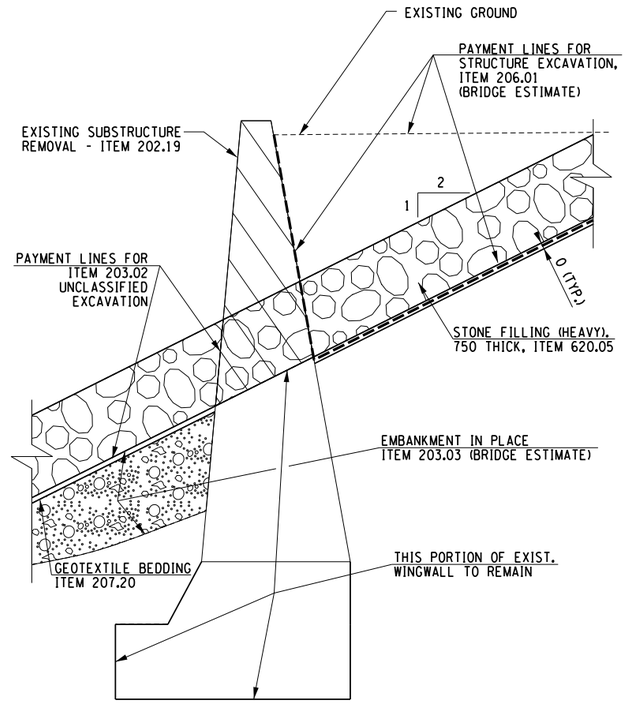
USER = nvertucci




**PLAN**
NOT TO SCALE




NOTE:
EXISTING TIMBER PILES NOT SHOWN.

**SECTION A-A**
NOT TO SCALE

## LEGEND

- AREA ENCLOSED WITHIN THESE LINES DESIGNATES PAYMENT LINES FOR STRUCTURE EXCAVATION, ITEM 206.01
- BACKFILL WITH SUITABLE EXCAVATION MATERIAL AS PROVIDED FOR UNDER ITEM 206.01, STRUCTURE EXCAVATION
- SELECT STRUCTURE FILL, ITEM 203.21
- STONE FILLING (HEAVY), ITEM 620.05
- EMBANKMENT IN PLACE, ITEM 203.03 (BRIDGE ESTIMATE)
- REMOVAL OF SUBSTRUCTURES ITEM 202.19
- PREFABRICATED COMPOSITE INTEGRAL ABUTMENT DRAIN - ITEM 207.27
- AREA ENCLOSED WITHIN THESE LINES DESIGNATES PAYMENT LINES FOR TRENCH & CULVERT EXCAVATION - ITEM 206.02

NOTES:

1. FOR SECTIONS B-B AND C-C, SEE DWG. NO. ST-8.
2. GEOTEXTILE BEDDING CONFORM TO CLASS 2 / MONOFILAMENT, CLASS B, OR CLASS 1 / COMBINATION MONOFILIMENT, FILIBRATED WOVEN, CLASS B.
3. FOR TYPICAL TURBIDITY CURTAIN DETAIL, SEE DWG. NO. ST-8.

| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |
|---|---|

STATE OF NEW YORK · JAMES R. McDUFFEE · 069508 · LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

DOCUMENT NAME: 912032_cpb_ERW_PLN.dgn

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**EXCAVATION AND EMBANKMENT PLAN**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-7
SHEET NO. 59

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM — JOB MANAGER JRM — ESTIMATED BY BRT — DRAFTED BY SS — DESIGNED BY RPJ — CHECKED BY SS — CHECKED BY RPJ

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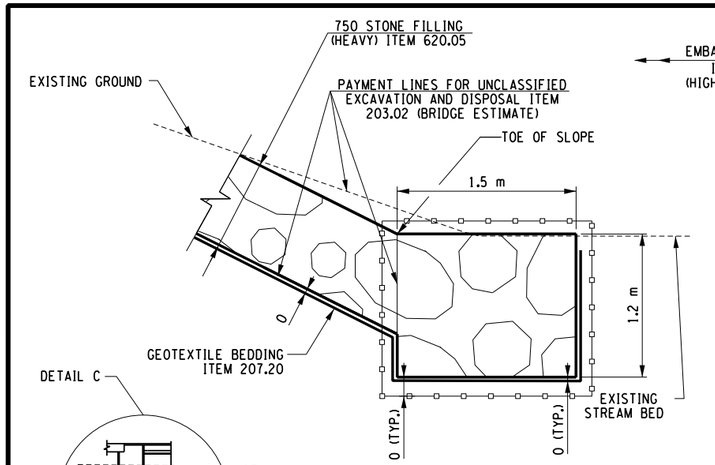
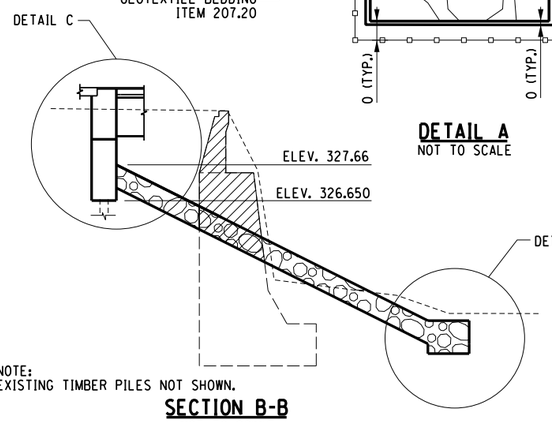
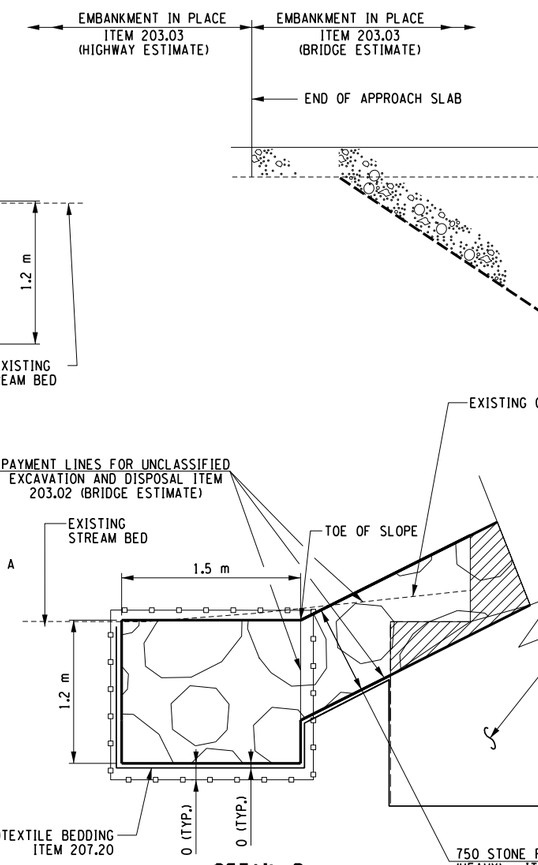



**DETAIL A**
NOT TO SCALE

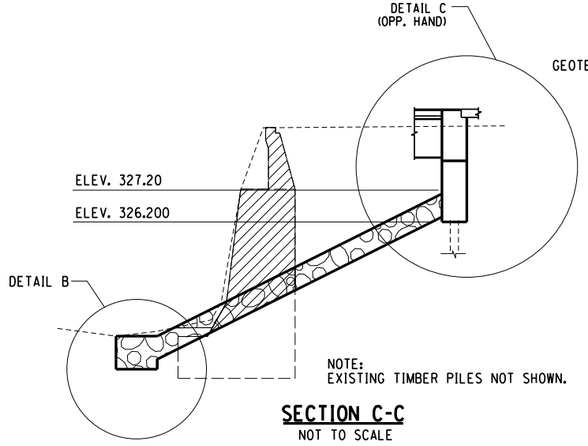



NOTE:
EXISTING TIMBER PILES NOT SHOWN.

**SECTION B-B**
NOT TO SCALE

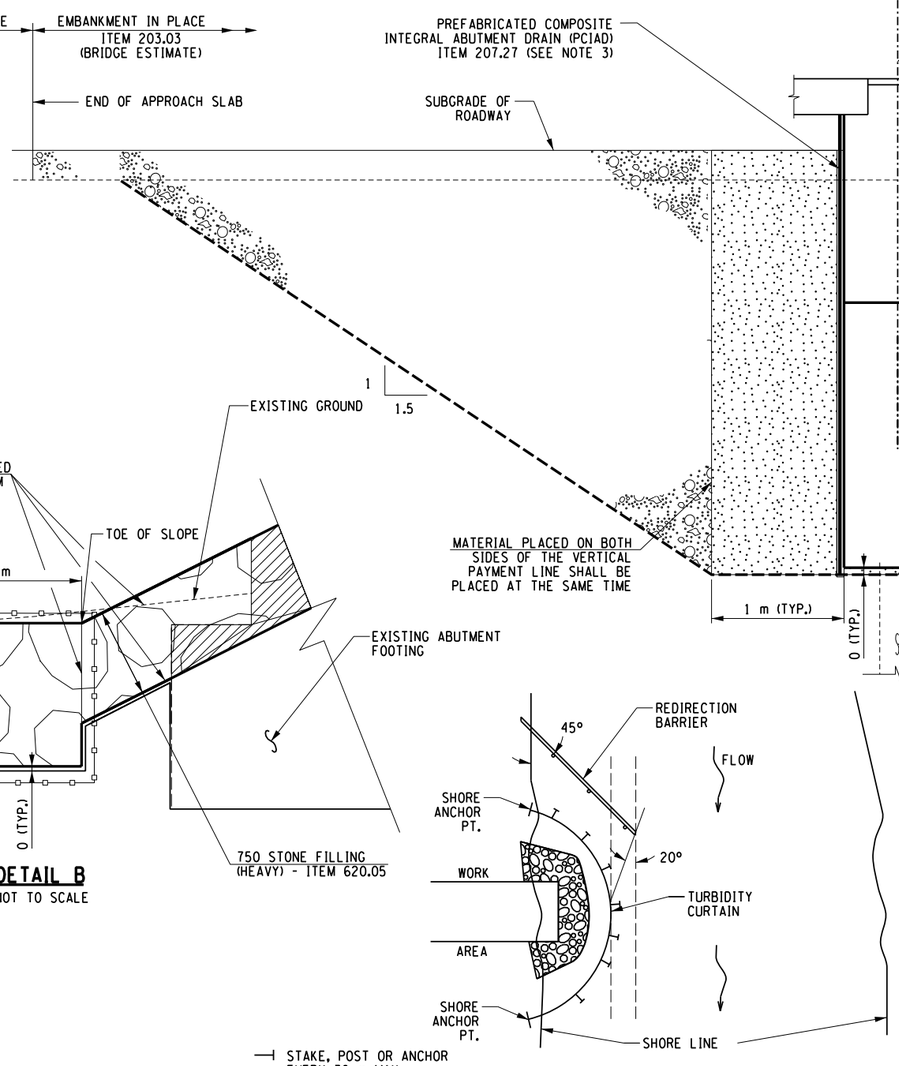


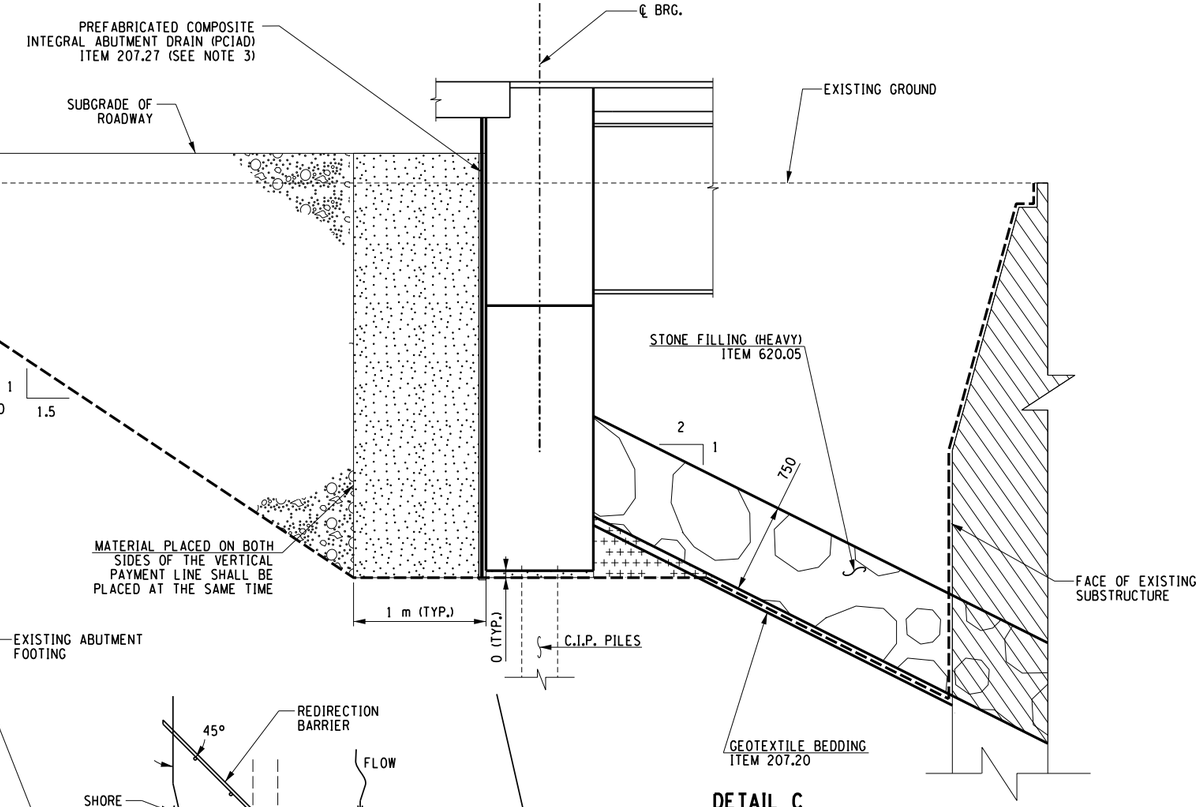

**DETAIL B**
NOT TO SCALE




NOTE:
EXISTING TIMBER PILES NOT SHOWN.

**SECTION C-C**
NOT TO SCALE




**DETAIL C**
NOT TO SCALE




⊣ STAKE, POST OR ANCHOR EVERY 30 m MAX.

**TYPICAL TURBIDITY CURTAIN DETAIL**
NOT TO SCALE

NOTES:

1. FOR LOCATION OF SECTIONS B-B AND C-C AND ADDITIONAL NOTES SEE DWG. NO. ST-7.
2. GEOTEXTILE BEDDING CONFORM TO CLASS 2 / MONOFILAMENT, CLASS B, OR CLASS 1 / COMBINATION MONOFILAMENT, FILIBRATED WOVEN, CLASS B.

EXISTING SUBSTRUCTURE REMOVAL NOTES:

REMOVE EXISTING SUBSTRUCTURES AS FOLLOWS:

1. COMPLETELY REMOVE THE OF THE EXISTING SUBSTRUCTURE WITHIN A LATERAL LIMIT OF 1 m OF THE NEW SUBSTRUCTURE.
2. REMOVE THE PORTION OF THE EXISTING SUBSTRUCTURE THAT IS OUTSIDE OF THIS LATERAL LIMIT AS FOLLOWS:
   - A. EXISTING SUBSTRUCTURE LOCATED UNDER ROADWAY - REMOVE TO 0.6 m BELOW SUBGRADE SURFACE.
   - B. EXISTING SUBSTRUCTURE LOCATED UNDER APPROACH EMBANKMENT END SLOPE - REMOVE TO ELEVATION WHERE IT INTERSECTS THE BOTTOM OF THE STONE FILLING.
   - C. EXISTING SUBSTRUCTURE AT ALL OTHER LOCATIONS - REMOVE TO 0.750 m BELOW FINISHED GRADE.

TURBIDITY CURTAIN NOTES:

INSTALL A REDIRECTION BARRIER PRIOR TO CURTAIN INSTALLATION SUCH THAT FLOW EXPANDING AT 20° FROM BARRIER WILL REACH THE CURTAIN AT A POINT WHERE THE CURTAIN IS ESSENTIALLY PARALLEL TO STREAM FLOW.

THE REDIRECTION BARRIER MAY CONSIST OF CONCRETE BARRIER, PLANKING OR OTHER MATERIAL SUCH THAT IT CAN BE QUICKLY REMOVED OR WASHED OUT IN THE EVENT OF HIGH FLOWS. IT SHOULD NOT BE SUCH THAT IT WILL REMAIN IN PLACE AND OVERTOPPED.

## LEGEND

- AREA ENCLOSED WITHIN THESE LINES DESIGNATES PAYMENT LINES FOR STRUCTURE EXCAVATION, ITEM 206.01
- BACKFILL WITH SUITABLE EXCAVATION MATERIAL AS PROVIDED FOR UNDER ITEM 206.01, STRUCTURE EXCAVATION
- SELECT STRUCTURE FILL, ITEM 203.21
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- REMOVAL OF SUBSTRUCTURES ITEM 202.19
- PREFABRICATED COMPOSITE INTEGRAL ABUTMENT DRAIN - ITEM 207.27
- AREA ENCLOSED WITHIN THESE LINES DESIGNATES PAYMENT LINES FOR TRENCH & CULVERT EXCAVATION - ITEM 206.02 (BRIDGE ESTIMATE)

| PREPARED BY: | ALTERED BY: |
|---|---|
| ON: OCTOBER 2008 | ON: |

STATE OF NEW YORK · JAMES R. McDUFFEE · 069508 · LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK: _____

SIGNATURE _____ DATE _____

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK | PIN 9120.32 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED |
| SH 1302 MORRIS - ONEONTA | PS&E DATE OCT. 23, 2008 | | | **EXCAVATION AND EMBANKMENT SECTIONS** |
| TOWN OF ONEONTA | | | | CONTRACT NUMBER D260931 |
| COUNTY: OTSEGO | | | | DRAWING NO. ST-8 SHEET NO. 60 |

DOCUMENT NAME: 912032_cpb_ERW_SEC.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM — JOB MANAGER JRM — ESTIMATED BY BRT — DESIGNED BY RPJ — DRAFTED BY SS — CHECKED BY RPJ — CHECKED BY SS

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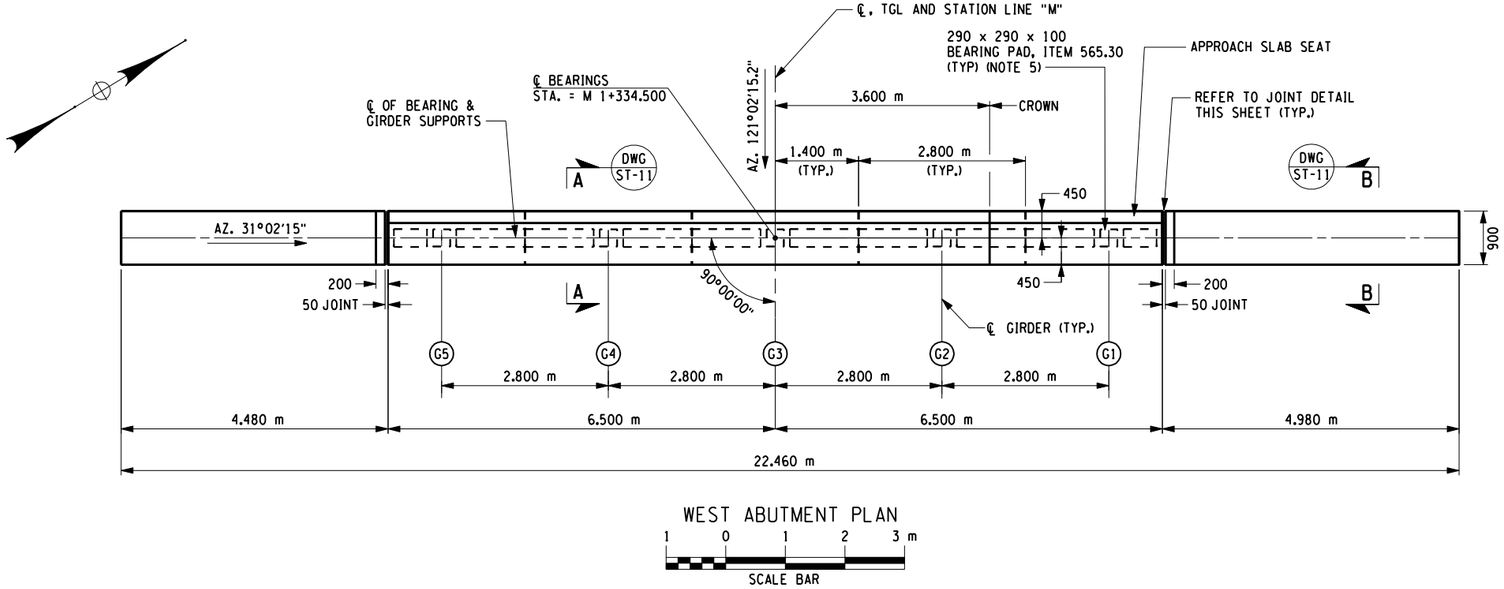



WEST ABUTMENT PLAN

1 0 1 2 3 m

SCALE BAR

NOTES:

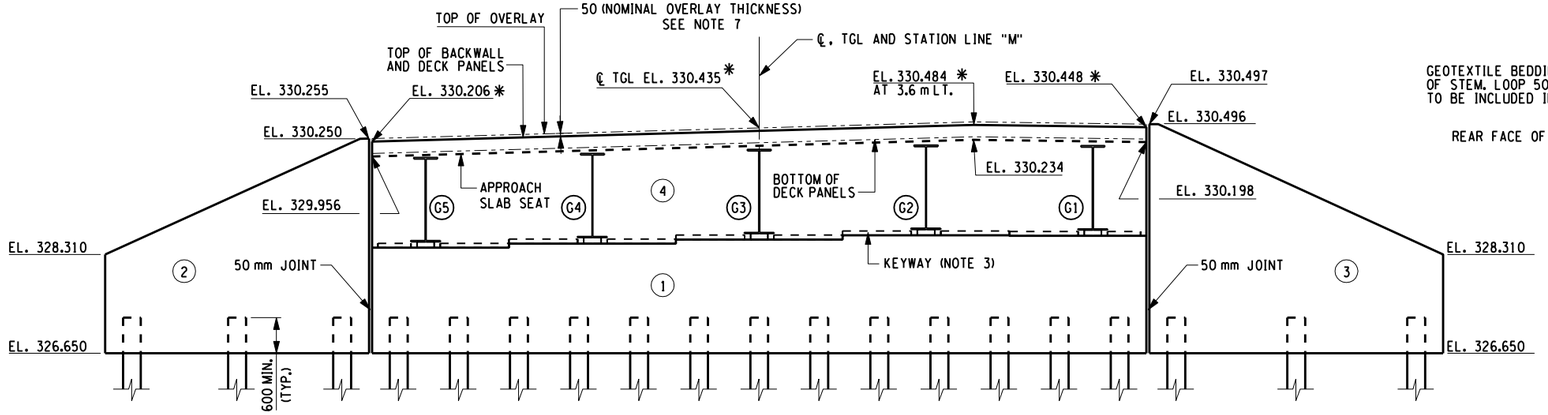
1. FOR PILE LAYOUT AND DETAILS, SEE DWG. NUMBERS ST-10 AND ST-14.
2. FOR REINFORCEMENT DETAILS, SEE DWG. NUMBERS ST-10 AND ST-13.
3. REFER TO CONSTRUCTION JOINT KEYWAY DETAILS ON MISCELLANEOUS DETAIL SHEET.
4. ALL ELEVATIONS SHOWN ARE IN METERS.
5. BEARING PAD TO MEET THE REQUIREMENTS OF NYS MATERIAL SPECIFICATION 728-01, RUBBER - IMPREGNATED WOVEN COTTON - POLYESTER FABRIC BEARING PAD. PAID FOR UNDER 565.30 ITEM.
6. GEOTEXTILE BEDDING SHALL CONFORM TO SPECIFICATION SECTION 207-2.
7. OVERLAY THICKNESS = 40 (MIN.), 75 (MAX.).

**WEST ABUTMENT CONCRETE PLACEMENT TABLE**

| PLACEMENT | QUANTITY | ITEM NO. |
|---|---|---|
| 1 | 22.3 $m^3$ | 555.09 |
| 2 | 10.7 $m^3$ | 555.09 |
| 3 | 12.4 $m^3$ | 555.09 |
| 4 | 20.5 $m^3$ | 555.09 |

**WEST SEAT ELEVATIONS**

| GIRDER NO. | ELEVATION |
|---|---|
| G1 | 328.622 |
| G2 | 328.631 |
| G3 | 328.561 |
| G4 | 328.492 |
| G5 | 328.423 |



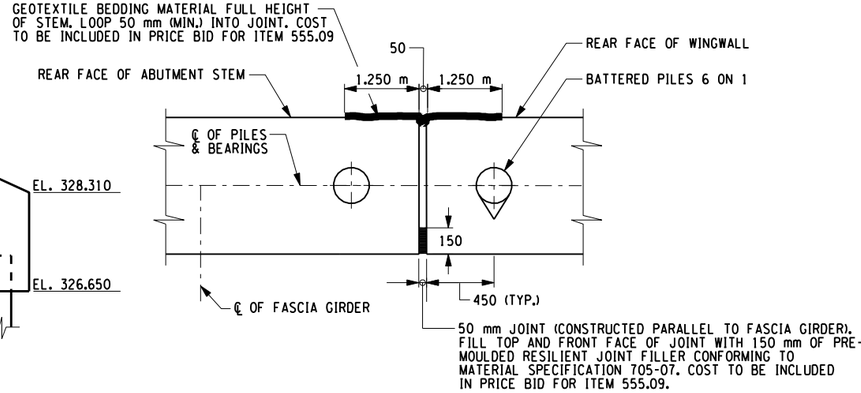

WEST ABUTMENT ELEVATION

1 0 1 2 3 m

SCALE BAR

(#) - INDICATES CONCRETE PLACEMENT NUMBER

* - INDICATES ELEVATION AT ℄ OF BEARINGS




PLAN

JOINT DETAIL FOR SEPARATED WINGWALLS

NOT TO SCALE

| PREPARED BY: NAGAPPA RAVINDRA<br>ON: OCTOBER 2008 | ALTERED BY:<br>ON: |
|---|---|

STATE OF NEW YORK
NAGAPPA RAVINDRA
062591
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

DOCUMENT NAME: 912032a_plt.dgn

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**WEST ABUTMENT PLAN AND ELEVATION**

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

CONTRACT NUMBER D260931

DRAWING NO. ST-9
SHEET NO. 61

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

ESTIMATED BY MDB DRAFTED BY AJC CHECKED BY CTK
DESIGN SUPERVISOR JRM JOB MANAGER JRM DESIGNED BY MDB

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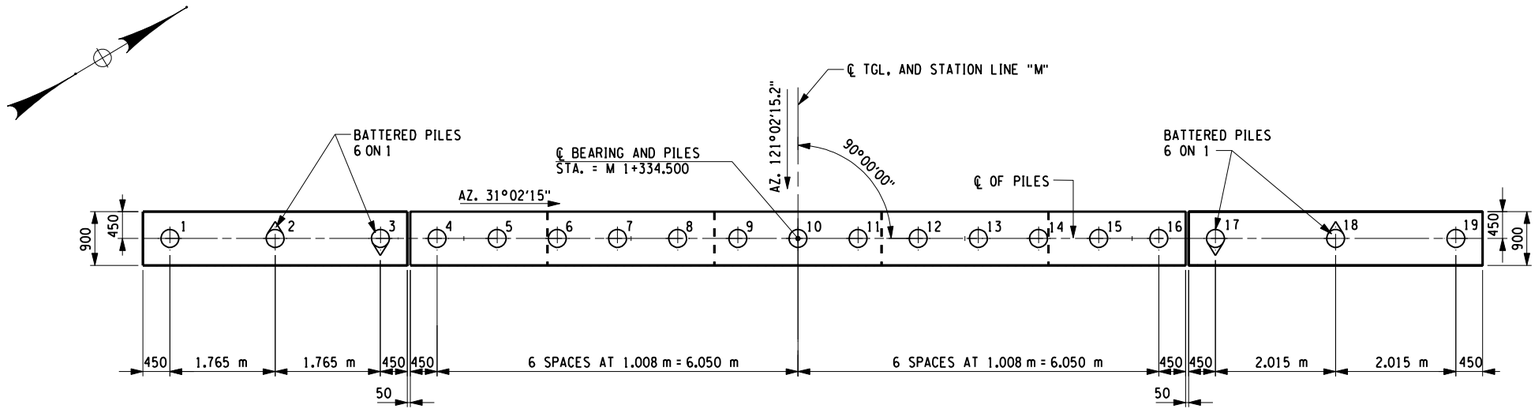
DATE/TIME = 10/14/2008




WEST ABUTMENT PILE LAYOUT

1 0 1 2 3 m

SCALE BAR

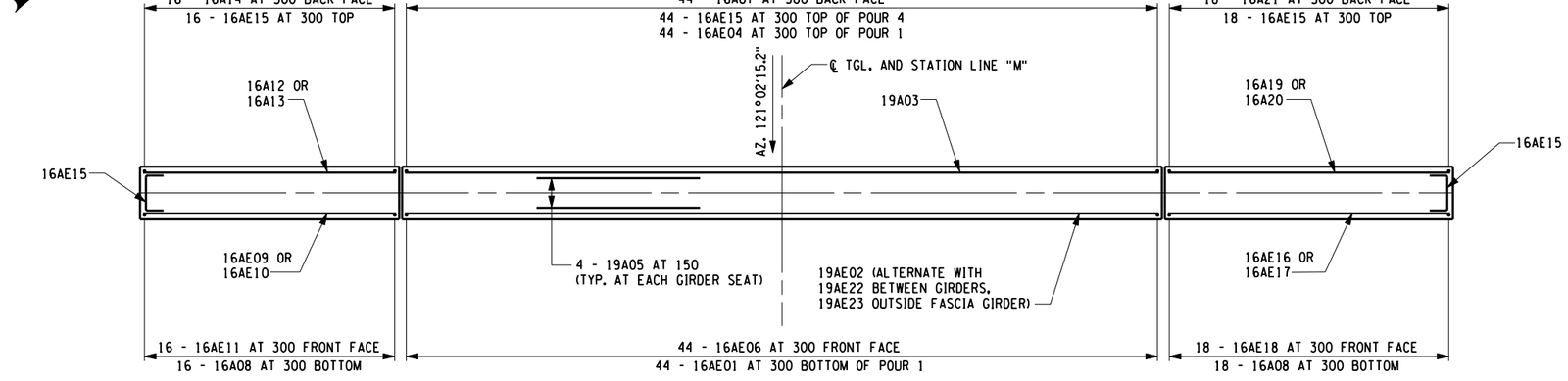
NOTES:

1. THE ABUTMENT AND WINGWALL PILES ARE DESIGNED TO SUPPORT A MAXIMUM STRENGTH LIMIT STATE AXIAL LOAD OF 520 kN PER PILE AND SERVICE LIMIT STATE AXIAL LOAD OF 360 kN PER PILE.
2. DRIVE THE WEST ABUTMENT AND WINGWALL PILES TO ACHIEVE A NOMINAL RESISTANCE OF 1,630 kN PER PILE.
3. DRIVE THE PILES AT THE WEST ABUTMENT TO MINIMUM LENGTH OF 16.9 m. THE ENGINEER WILL IMMEDIATELY CONTACT THE DCES IF THE MINIMUM LENGTH IS NOT ACHIEVED.
4. AFTER COMPLETION OF THE PILE INSTALLATION, THE ENGINEER WILL COMPLETE THE "ACTUAL PILE LENGTH" TABLE FOR INCLUSION IN THE AS-BUILT PLANS.
5. PILE CUT-OFF ELEVATION IS 327.250 m
6. THE ESTIMATED LENGTH OF PILE IS 27.3 m
7. FOR PILE DETAILS, SEE DWG. NO. ST-14

LEGEND

⊕ — CAST-IN-PLACE PILE, ITEM NO. 551.11

⊕ — BATTERED CIP PILE, ITEM NO. 551.11 (BATTERED 6 ON 1 IN DIRECTION OF ARROW)




WEST ABUTMENT REINFORCEMENT PLAN

1 0 1 2 3 m

SCALE BAR

| WEST ABUTMENT PILE TABLE | | | |
|---|---|---|---|
| PILE NO. | LENGTH BELOW CUT-OFF (METERS) | PILE NO. | LENGTH BELOW CUT-OFF (METERS) |
| 1 | | 11 | |
| 2 | | 12 | |
| 3 | | 13 | |
| 4 | | 14 | |
| 5 | | 15 | |
| 6 | | 16 | |
| 7 | | 17 | |
| 8 | | 18 | |
| 9 | | 19 | |
| 10 | | | |

PREPARED BY: NAGAPPA RAVINDRA
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK · NAGAPPA RAVINDRA · LICENSED PROFESSIONAL ENGINEER · 062591

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

WEST ABUTMENT PILE LAYOUT AND REINFORCEMENT PLAN

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

CONTRACT NUMBER D260931

DRAWING NO. ST-10
SHEET NO. 62

DOCUMENT NAME: 912032aa_plt.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY MDB DESIGNED BY MDB DRAFTED BY AJC CHECKED BY GTK

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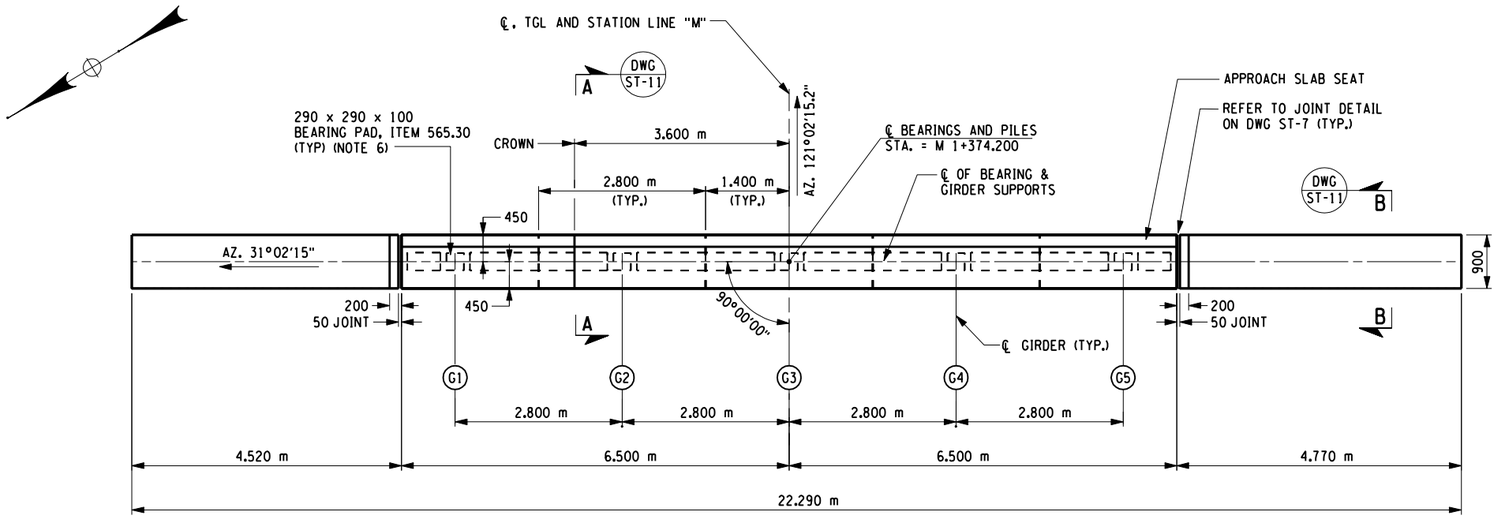
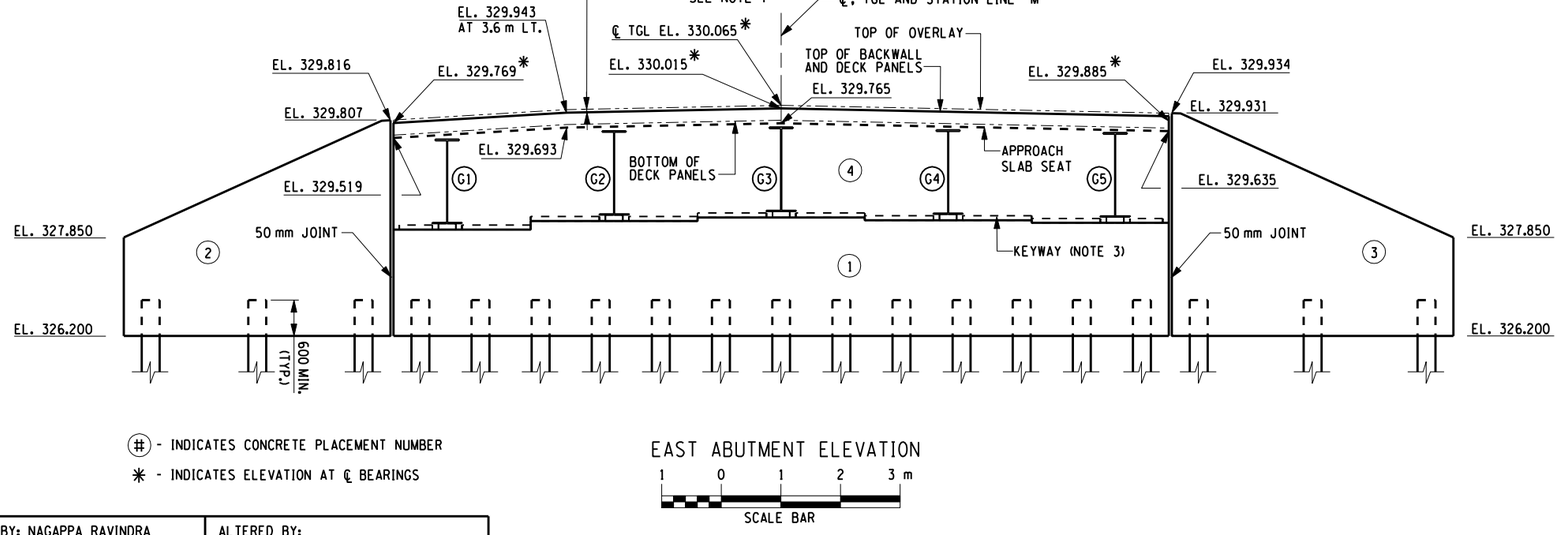
DATE/TIME = 10/14/2008




EAST ABUTMENT PLAN

1 0 1 2 3 m

SCALE BAR




(#) - INDICATES CONCRETE PLACEMENT NUMBER

* - INDICATES ELEVATION AT ℄ BEARINGS

EAST ABUTMENT ELEVATION

1 0 1 2 3 m

SCALE BAR

NOTES:

1. FOR PILE LAYOUT AND DETAILS, SEE DWG. NUMBERS ST-12 AND ST-14.
2. FOR REINFORCEMENT DETAILS, SEE DWG. NUMBERS ST-12 AND ST-13.
3. REFER TO CONSTRUCTION JOINT KEYWAY DETAILS ON MISCELLANEOUS DETAIL SHEET.
4. FOR SEPARATED WINGWALL JOINT DETAIL, SEE DWG. NUMBER ST-9.
5. ALL ELEVATIONS SHOWN ARE IN METERS.
6. BEARING PAD TO MEET THE REQUIREMENTS OF NYS MATERIAL SPECIFICATION 728-01, RUBBER - IMPREGNATED WOVEN COTTON - POLYESTER FABRIC BEARING PAD. PAID FOR UNDER ITEM 565.30.
7. OVERLAY THICKNESS = 40 (MIN.), 75 (MAX.).

**EAST ABUTMENT CONCRETE PLACEMENT TABLE**

| PLACEMENT | QUANTITY | ITEM NO. |
|---|---|---|
| 1 | 22.4 $m^3$ | 555.09 |
| 2 | 10.8 $m^3$ | 555.09 |
| 3 | 11.7 $m^3$ | 555.09 |
| 4 | 20.6 $m^3$ | 555.09 |

**EAST SEAT ELEVATIONS**

| GIRDER NO. | ELEVATION |
|---|---|
| G1 | 327.985 |
| G2 | 328.128 |
| G3 | 328.188 |
| G4 | 328.142 |
| G5 | 328.096 |

PREPARED BY: NAGAPPA RAVINDRA
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
NAGAPPA RAVINDRA
062591
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**EAST ABUTMENT PLAN AND ELEVATION**

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

CONTRACT NUMBER D260931

DRAWING NO. ST-11
SHEET NO. 63

DOCUMENT NAME: 912032ab_plt.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM — JOB MANAGER JRM — DESIGNED BY MDB — DRAFTED BY AJC — ESTIMATED BY MDB — CHECKED BY GTK

USER = ACretelle
FILE NAME = S:\2005\54A - Rt 23 over Otego Creek\DRAWINGS\912032ab_plt.dgn
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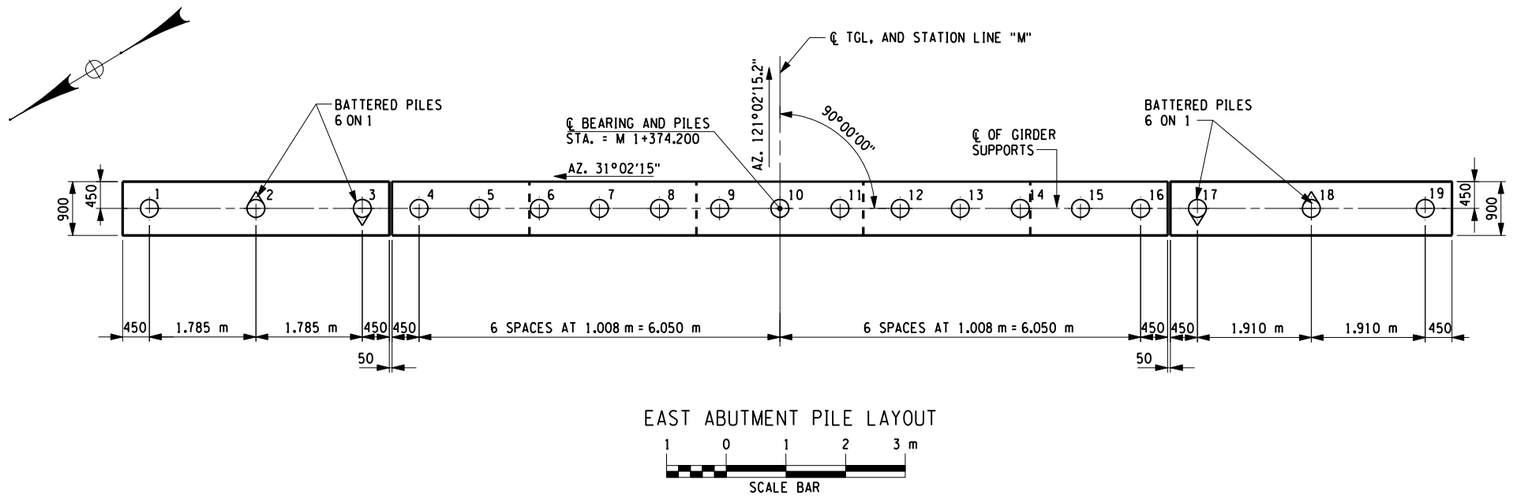



EAST ABUTMENT PILE LAYOUT

1 0 1 2 3 m

SCALE BAR

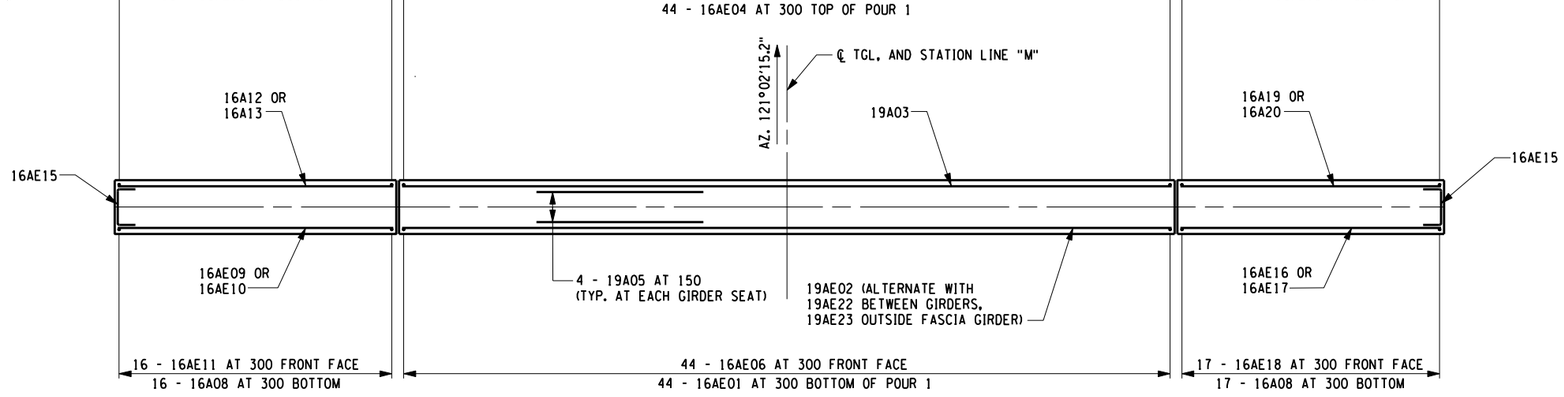
NOTES:

1. THE ABUTMENT AND WINGWALL PILES ARE DESIGNED TO SUPPORT A MAXIMUM STRENGTH LIMIT STATE AXIAL LOAD OF 520 kN PER PILE AND SERVICE LIMIT STATE AXIAL LOAD OF 360 kN PER PILE.
2. DRIVE THE EAST ABUTMENT AND WINGWALL ALL PILES TO ACHIEVE A NOMINAL RESISTANCE OF 1,350 kN PER PILE.
3. DRIVE THE PILES AT THE EAST ABUTMENT TO A MINIMUM LENGTH OF 10.3 m. THE ENGINEER WILL IMMEDIATELY CONTACT THE DCES IF THE MINIMUM LENGTH IS NOT ACHIEVED.
4. AFTER COMPLETION OF THE PILE INSTALLATION, THE ENGINEER WILL COMPLETE THE "ACTUAL PILE LENGTH" TABLE FOR INCLUSION IN THE AS-BUILT PLANS.
5. PILE CUT-OFF ELEVATION IS 326.800 m
6. THE ESTIMATED LENGTH OF PILE IS 23.8 m
7. FOR PILE DETAILS, SEE DWG. NO. ST-14

LEGEND

⊕ — CAST-IN-PLACE PILE, ITEM NO. 551.11

⊕ — BATTERED CIP PILE, ITEM NO. 551.11
(BATTERED 6 ON 1 IN DIRECTION OF ARROW)




EAST ABUTMENT REINFORCEMENT PLAN

1 0 1 2 3 m

SCALE BAR

EAST ABUTMENT PILE TABLE

| PILE NO. | LENGTH BELOW CUT-OFF (METERS) | PILE NO. | LENGTH BELOW CUT-OFF (METERS) |
|---|---|---|---|
| 1 | | 11 | |
| 2 | | 12 | |
| 3 | | 13 | |
| 4 | | 14 | |
| 5 | | 15 | |
| 6 | | 16 | |
| 7 | | 17 | |
| 8 | | 18 | |
| 9 | | 19 | |
| 10 | | | |

PREPARED BY: NAGAPPA RAVINDRA
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
NAGAPPA RAVINDRA
062591
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

EAST ABUTMENT PILE LAYOUT AND REINFORCEMENT PLAN

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

CONTRACT NUMBER D260931

DRAWING NO. ST-12
SHEET NO. 64

DOCUMENT NAME: 912032ac_plt.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM DESIGNED BY MDB ESTIMATED BY MDB DRAFTED BY AJC CHECKED BY GTK

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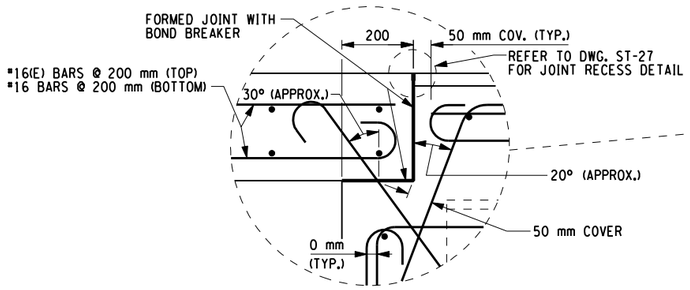
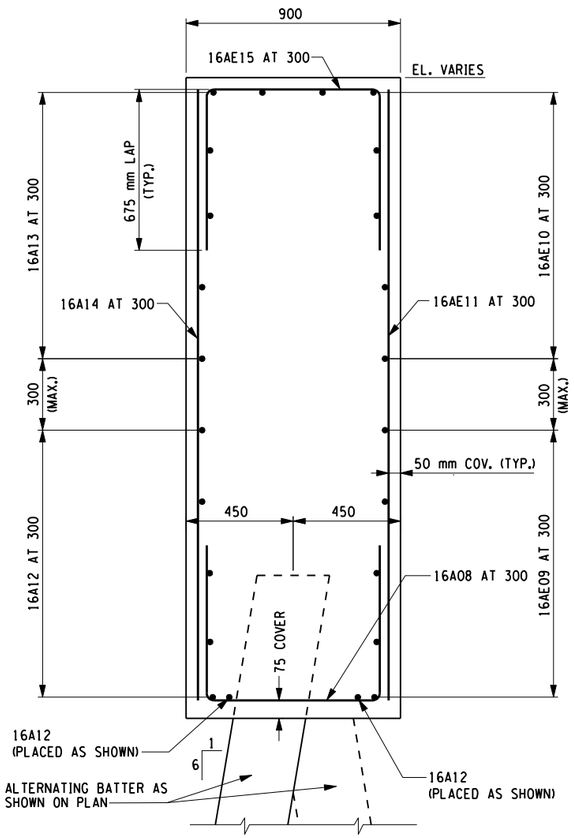
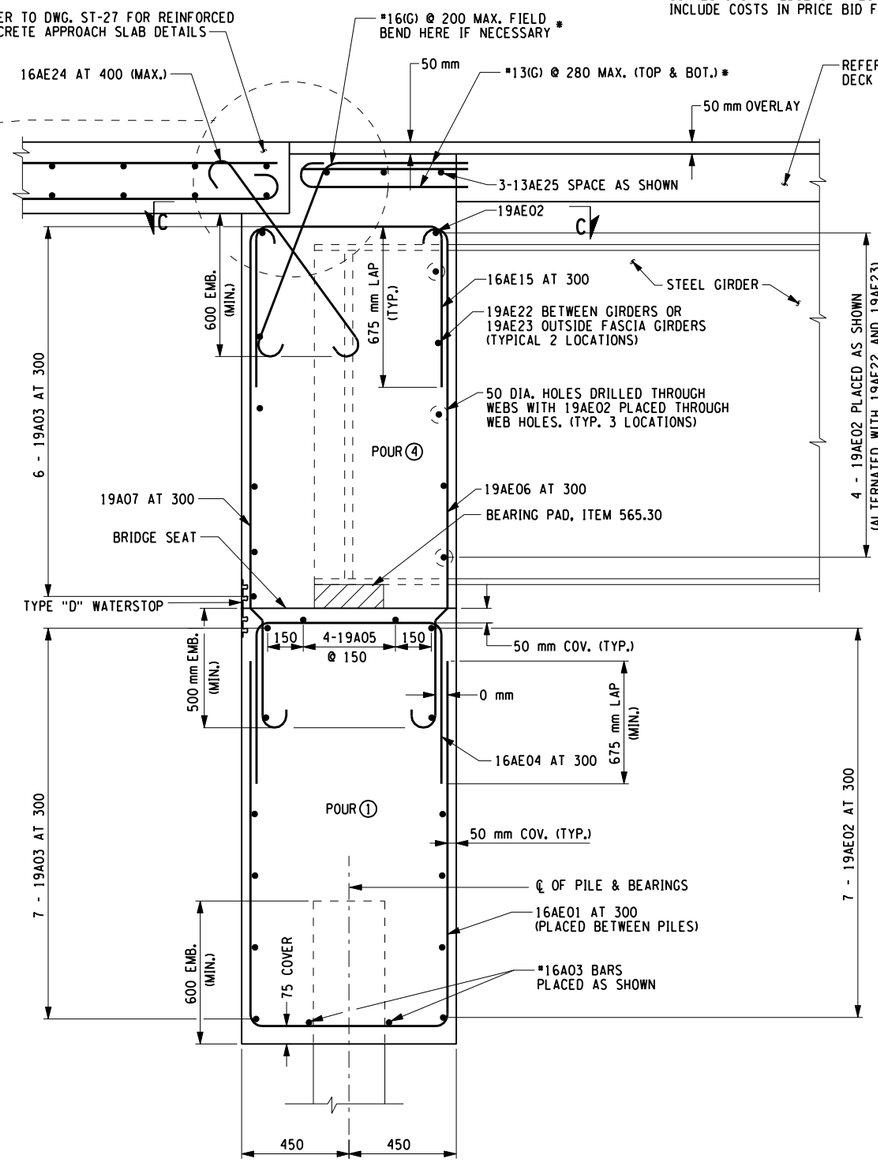



SECTION B - B




SECTION A - A
INTEGRAL ABUTMENT DETAIL

## INTEGRAL ABUTMENT CONSTRUCTION PROCEDURE

1. PLACE THE PILES FOR THE INTEGRAL ABUTMENTS IN 500 mm DIAMETER HOLES THAT EXTEND 2.5 m BELOW THE BOTTOM OF EACH ABUTMENT STEM. DO NOT PRE-EXCAVATE HOLES FOR WINGWALL PILES. KEEP EACH OF THESE HOLES OPEN DURING THE INSTALLATION OF PILES SO THAT CUSHION SAND (MEETING THE REQUIREMENTS OF SECTION 703-06) CAN BE PLACED LOOSELY AROUND EACH PILE FOR THE FULL DEPTH OF THE HOLE. INCLUDE THE COST OF EXCAVATING THE HOLES, CASING, AND CUSHION SAND IN THE UNIT PRICE BID FOR THE PILE ITEM.
2. DRIVE PILES AND CUT OFF PILES AT ELEVATIONS SHOWN.
3. BACKFILL HOLES WITH SAND MEETING THE REQUIREMENTS OF NYS MATERIAL SUBSECTION 703-06, CUSHION SAND. COST TO BE INCLUDED IN PILE ITEM.
4. FILL CIP PILES WITH CONCRETE.
5. PLACE ABUTMENT STEM CONCRETE TO BRIDGE SEAT ELEVATION. PLACE WINGWALL CONCRETE TO ELEVATIONS SHOWN.
6. BACKFILL ABUTMENT STEMS AND WINGWALLS TO 150 mm BELOW THE BRIDGE SEAT ELEVATION. NO BACKFILL OF THE ABUTMENT STEMS ALLOWED UNTIL THE ABUTMENTS HAVE CURED FOR 7 DAYS.
7. PLACE HEAVY STONE FILL.
8. ERECT GIRDERS AND INSTALL ALL DIAPHRAGMS. GIRDERS SHALL BE ERECTED PLUMB AND THE DIAPHRAGMS FABRICATED FOR THE STEEL DEAD LOAD POSITION.
9. ERECT AND GROUT PRECAST CONCRETE DECK PANELS.
10. PLACE ABUTMENT BACKWALL CONCRETE TO ELEVATIONS SHOWN.
11. BACKFILL ABUTMENT BACKWALLS. NO BACKFILLING OF THE ABUTMENT IS ALLOWED UNTIL BACKWALLS HAVE CURED FOR 7 DAYS.
12. PLACE CONCRETE FOR APPROACH SLABS.




SECTION C - C

| PREPARED BY: NAGAPPA RAVINDRA<br>ON: OCTOBER 2008 | ALTERED BY:<br>ON: |
|---|---|

STATE OF NEW YORK
NAGAPPA RAVINDRA
062591
LICENSED PROFESSIONAL ENGINEER

0.5 m 0 0.5 m 1.0 m
SCALE BAR

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**ABUTMENT SECTIONS AND DETAILS**
**SHEET 1 OF 2**

CONTRACT NUMBER D260931

DRAWING NO. ST-13
SHEET NO. 65

DOCUMENT NAME: 912032ad_plt.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY MDB DRAFTED BY AJC CHECKED BY GTK DESIGNED BY MDB CHECKED BY GTK

USER = ACretelle
FILE NAME = S:\2005\54A - Rt. 23 over Otego Creek\DRAWINGS\912032ad_plt.dgn
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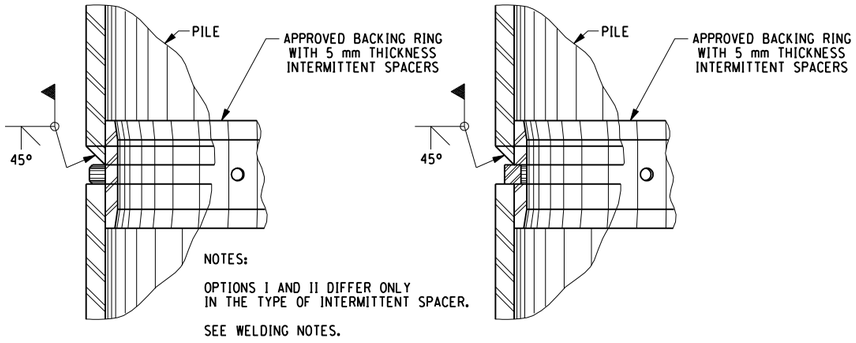
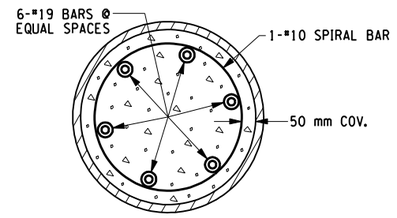



SECTION THRU PILE AT SPLICE
(OPTION I)

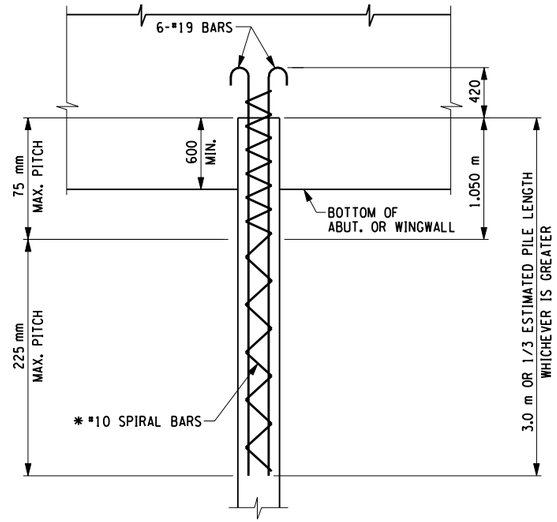



SECTION THRU PILE AT SPLICE
(OPTION II)

CAST-IN-PLACE PILE SPLICE DETAILS
NOT TO SCALE



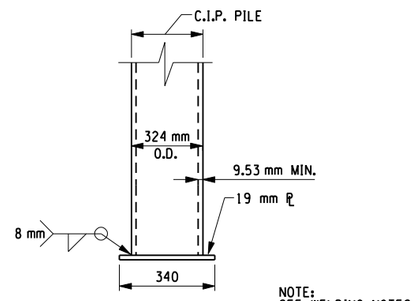

PILE SECTION




PILE ELEVATION

* TWO SEPARATE SPIRAL BARS MAY BE USED, ONE FOR A PITCH OF 75 mm AND THE SECOND FOR A PITCH OF 225 mm. IF TWO BARS ARE USED, A WELDED SPLICE SHALL BE USED. SEE WELDING NOTES.

CAST-IN-PLACE CONCRETE PILE REINFORCEMENT
NOT TO SCALE




NOTE:
SEE WELDING NOTES.

CAST-IN-PLACE PILE SHOES
NOT TO SCALE

WELDING NOTES:

1. A "WELDING PROCEDURE SPECIFICATION" (WPS) APPROVED BY THE D.C.E.S. IS REQUIRED.
2. ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER IN CONFORMANCE WITH REQUIREMENTS FOR WELDING SPECIFIED IN THE N.Y.S. STEEL CONSTRUCTION MANUAL.

FOUNDATION NOTES:

1. DO NOT USE MECHANICAL PILE SPLICES ON THIS STRUCTURE.
2. SEE NOTE 1, DRAWING ST-12 FOR PRE-EXCAVATION REQUIREMENTS FOR ABUTMENT PILES.
3. PROVIDE CAST-IN-PLACE CONCRETE PILES WITH A MINIMUM WALL THICKNESS OF 9.53 mm.
4. EQUIP ALL CAST-IN-PLACE CONCRETE PILES WITH 19 mm THICK FLAT CLOSURE PLATES. SUPPLY A FLAT PLATE WITH A DIAMETER THAT DOES NOT EXCEED THE PILE DIAMETER BY MORE THAT 16 mm. ATTACH THE PLATE TO THE PILE WITH AN 8 mm FILLET WELD. WELD ALL AROUND.

| PREPARED BY: NAGAPPA RAVINDRA<br>ON: OCTOBER 2008 | ALTERED BY:<br>ON: |
|---|---|

STATE OF NEW YORK · NAGAPPA RAVINDRA · 062591 · LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

DOCUMENT NAME: 912032ae_plt.dgn

| NY ROUTE 23 OVER OTEGO CREEK |
|---|
| SH 1302 MORRIS - ONEONTA |
| TOWN OF ONEONTA |
| COUNTY: OTSEGO |

| PIN | BRIDGES | CULVERTS |
|---|---|---|
| 9120.32 | 1017580 | |

PS&E DATE
OCT. 23, 2008

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**ABUTMENT SECTIONS AND DETAILS**
**SHEET 2 OF 2**

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

CONTRACT NUMBER
D260931

DRAWING NO. ST-14
SHEET NO. 66

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM — JOB MANAGER JRM — DESIGNED BY MDB — DRAFTED BY AJC — ESTIMATED BY MDB — CHECKED BY GTK — CHECKED BY GTK

USER = ACretella
FILE NAME = S:\2005\54A - Rt 23 over Otego Creek\DRAWINGS\912032ae_plt.dgn
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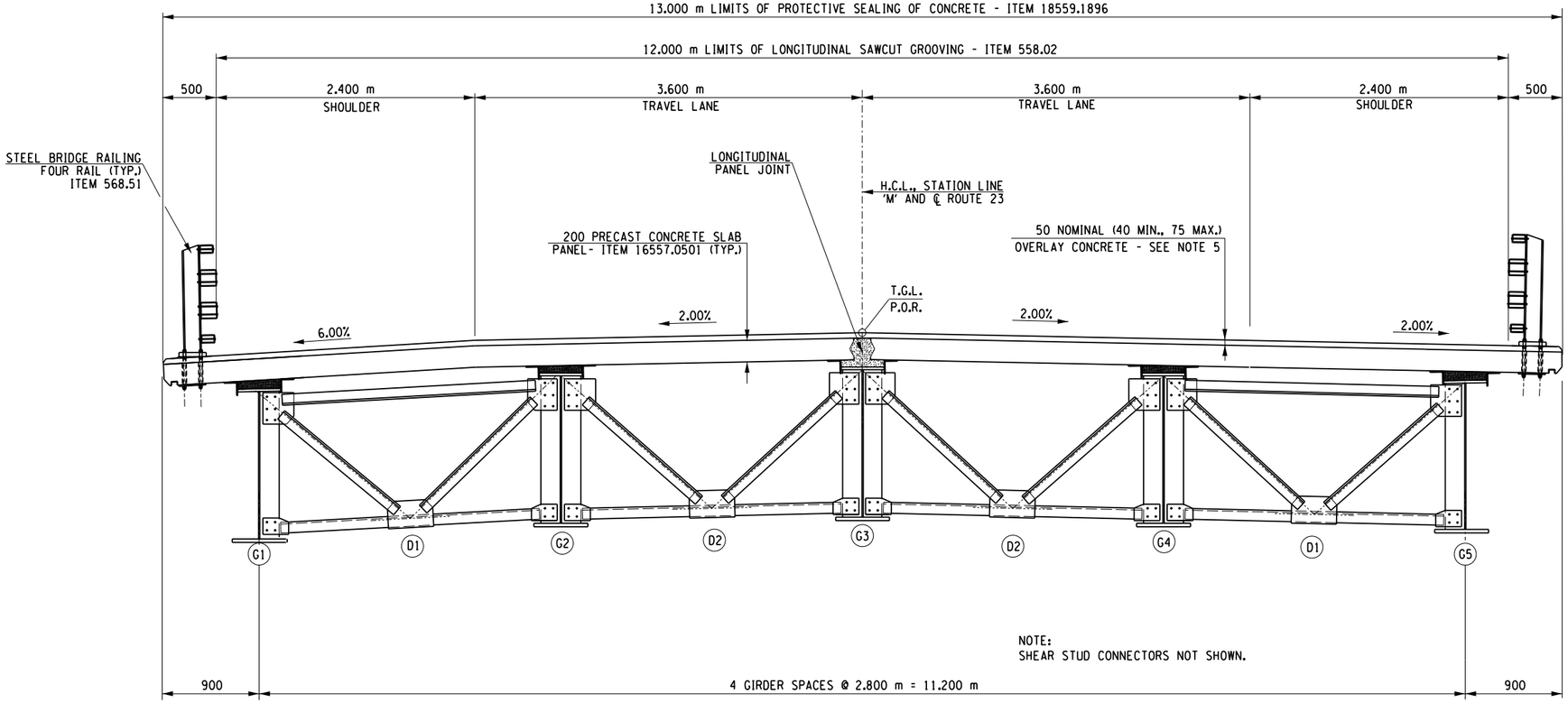
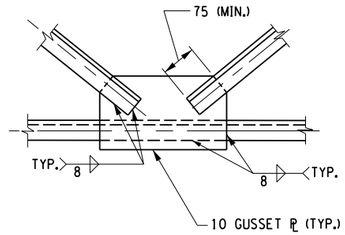



## TRANSVERSE SECTION (NORMAL CROWN SHOWN)

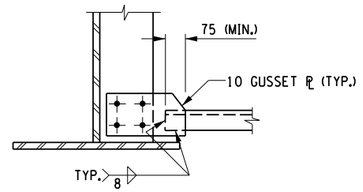
(LOOKING UPSTATION)

0 1 2 m

SCALE BAR




**CENTER GUSSET PLATE**




**CORNER GUSSET PLATE**

## TYPICAL WELDED DIAPHRAGM CONNECTION DETAILS

NOT TO SCALE

NOTES:

1. FOR STRUCTURAL STEEL DETAILS, SEE DWG. NOS. ST-16 AND ST-17.
2. FOR BANKING DIAGRAM, SEE DWG. NO. ST-2.
3. FOR SUPERSTRUCTURE PRECAST SLAB PANEL PLAN, SEE DWG. NO. ST-20.
4. PRIOR TO OVERLAY PLACEMENT, THE TOP SURFACE OF THE PRECAST DECK PANELS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 16557.0501.
5. OVERLAY CONCRETE IS INCLUDED IN ITEM 16557.0501.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**TRANSVERSE SECTION**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-15
SHEET NO. 67

DOCUMENT NAME: 912032_cpb_SEC_trn.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY RPJ DRAFTED BY SS DESIGNED BY JFS CHECKED BY RPJ CHECKED BY RPJ

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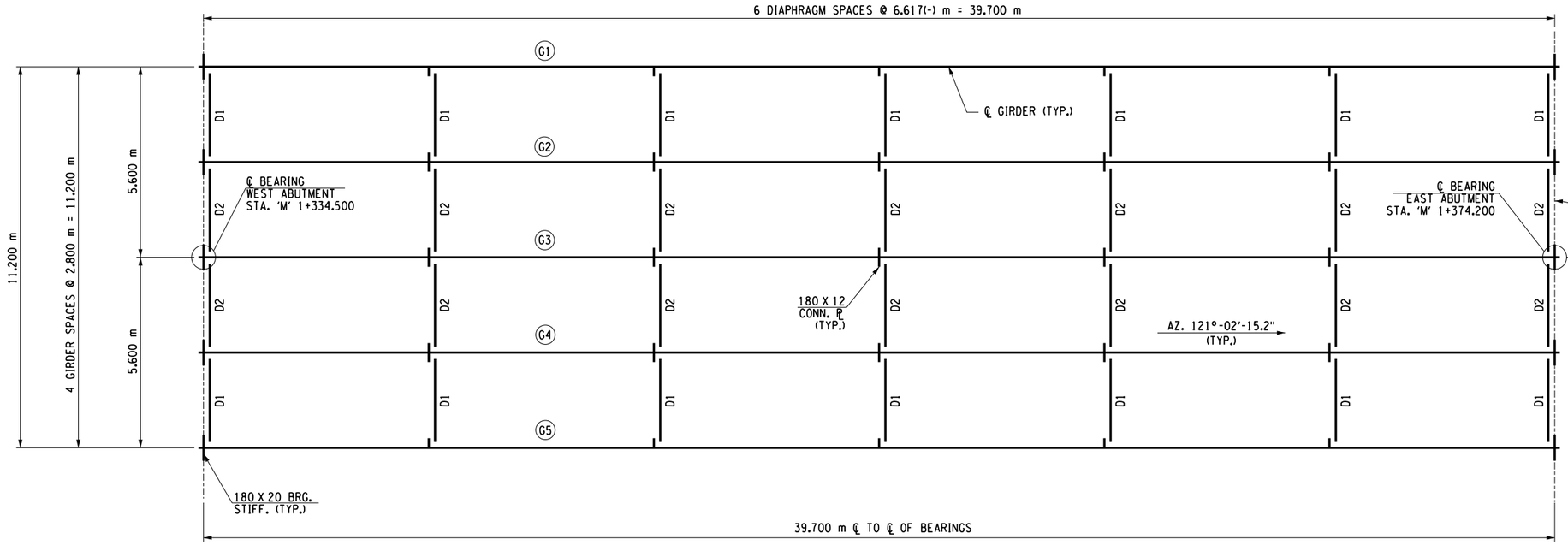
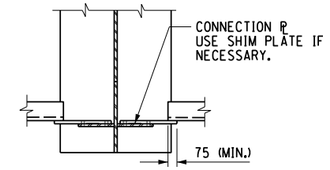



## FRAMING PLAN

2 0 METER 2 4

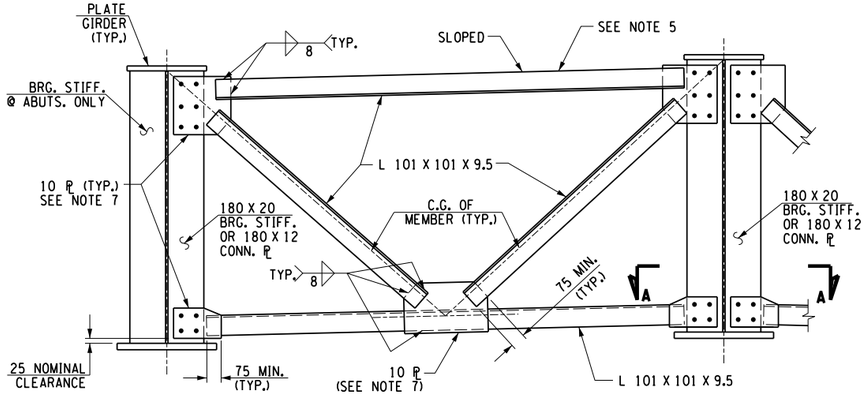
SCALE BAR




## SECTION A-A

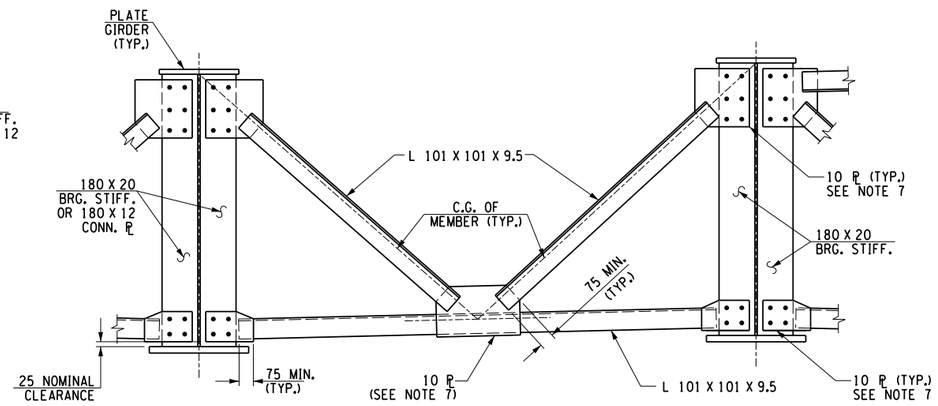
NOT TO SCALE

NOTE:
SECTION A-A SHOWN AT BEARING STIFFENERS AT ABUTMENTS. SECTION AT CONNECTION PLATES SIMILAR.




## DIAPHRAGM D1

NOT TO SCALE




## DIAPHRAGM D2

NOT TO SCALE

NOTES:

1. CONNECTIONS SHALL BE MADE ACCORDING TO THE NEW YORK STATE STEEL CONSTRUCTION MANUAL.
2. UNLESS OTHERWISE INDICATED, BOLTED CONNECTIONS SHALL BE MADE WITH M22 A325 HIGH-STRENGTH BOLTS.
3. THE CONTRACTOR MAY PLACE DIAPHRAGMS ON EITHER SIDE OF THE BEARING STIFFENERS OR CONNECTION PLATES AS NECESSARY TO CORRECT ALIGNMENT PROVIDED THERE WILL BE NO INTERFERENCE WITH OTHER STRUCTURAL DETAILS.
4. TAPERED OR FLAT SHIM PLATES MAY BE USED IN THE CONNECTION BETWEEN DIAPHRAGMS AND THE BEARING STIFFENERS, STIFFENER CONNECTION PLATES OR GUSSET PLATES. VARIABLE THICKNESSES OF SHIM PLATES MAY BE USED. THE MINIMUM THICKNESS OF SHIM PLATE SHALL BE 3 mm WITH A MAXIMUM NUMBER OF THREE SHIM PLATES PERMITTED AT ANY CONNECTION. THE TOTAL THICKNESS OF ALL SHIM PLATES USED AT ANY CONNECTION SHALL NOT EXCEED 25 mm. SHIM PLATES SHALL HAVE THE DIMENSIONS OF THE FAYING SURFACE. THE SHIM MATERIAL SHALL CONFORM TO ASTM DESIGNATION A709M GRADE 345W FOR WEATHERING STEEL APPLICATIONS. NO ADDITIONAL PAYMENT WILL BE MADE FOR FURNISHING AND PLACING THE SHIM PLATES.
5. IN ORDER TO MAXIMIZE THE DISTANCE BETWEEN THE OUTSTANDING LEG OF THE TOP STRUT AND THE BOTTOM OF THE STRUCTURAL SLAB, THIS STRUT SHALL BE ORIENTED AS SHOWN. IN ADDITION, ON STRUCTURES WITH STRAIGHT BEAMS OR GIRDERS, THE POSITION OF THIS STRUT SHALL BE LOWERED (TO THE EXTENT THAT IT DOES NOT INTERFERE WITH THE ALIGNMENT OF THE DIAGONAL STRUTS AS SHOWN).
6. ALL BOLT HEADS SHALL BE PLACED ON THE TOP SIDE OF CONNECTIONS UNLESS OTHERWISE NOTED.
7. FOR CONNECTION DETAILS, SEE DWG. NO. ST-15.
8. FOR TRANSVERSE SECTION, SEE DWG. NO. ST-15.

| PREPARED BY: | ALTERED BY: |
|---|---|
| ON: OCTOBER 2008 | ON: |

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK<br>SH 1302 MORRIS - ONEONTA<br>TOWN OF ONEONTA<br>COUNTY: OTSEGO | PIN 9120.32<br>PS&E DATE OCT. 23, 2008 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED<br>**FRAMING PLAN AND DIAPHRAGM DETAILS** |

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-16
SHEET NO. 68

DOCUMENT NAME: 912032_cpb_FRM.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY RPJ/CST DESIGNED BY JFS/RPJ DRAFTED BY JJR CHECKED BY RPJ

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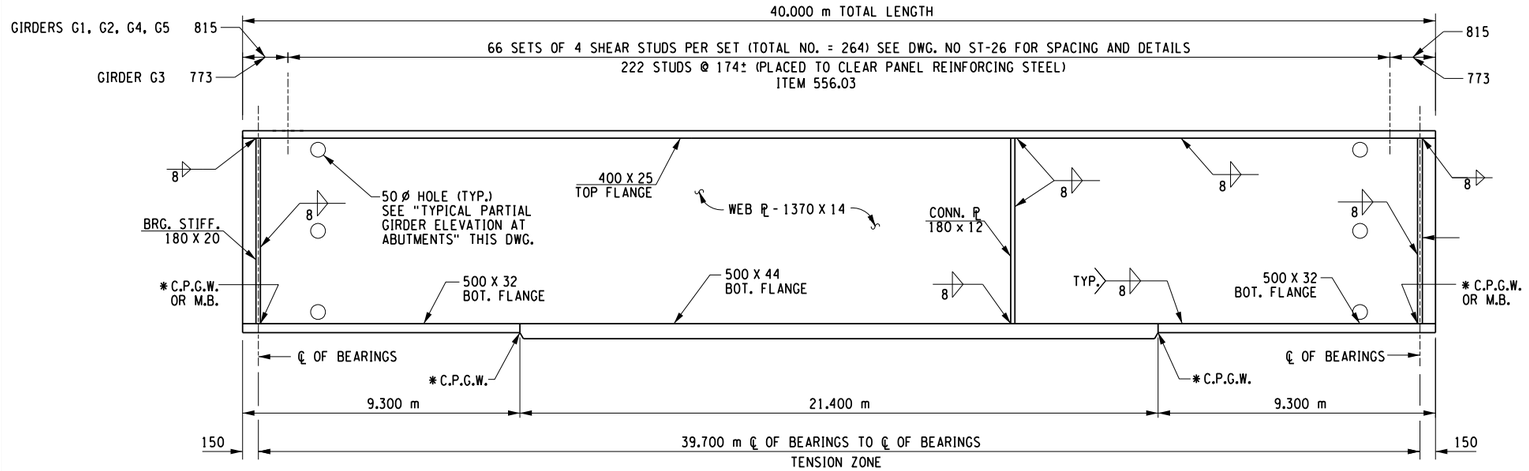
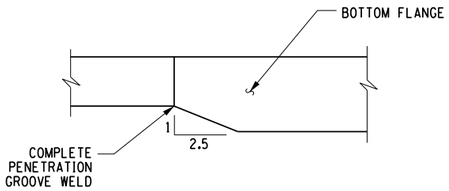



## TYPICAL GIRDER ELEVATION

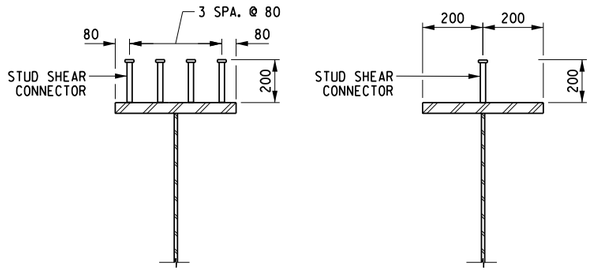
NOT TO SCALE




## FLANGE THICKNESS TAPER

NOT TO SCALE

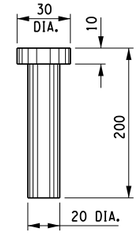
NOTE:
SHEAR STUD CONNECTORS WILL BE PERMITTED TO BE INSTALLED FOLLOWING ERECTION OF AND PRIOR TO GROUTING OF PRECAST DECK PANELS.




GIRDERS G1, G2, G4, & G5 — GIRDER 3

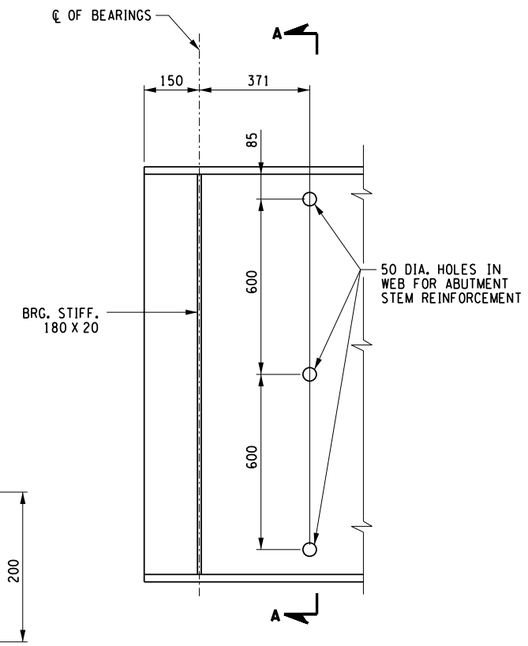
## STUD SHEAR CONNECTOR DETAILS

NOT TO SCALE



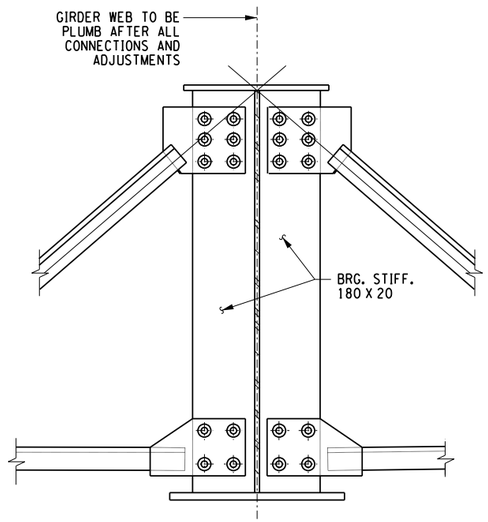

## DETAIL OF STUD

NOT TO SCALE



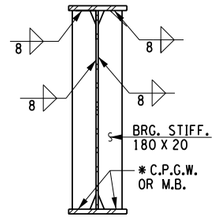

## TYPICAL PARTIAL GIRDER ELEVATION AT ABUTMENTS

NOT TO SCALE

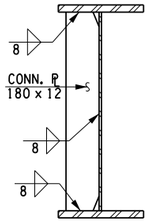



## SECTION A-A

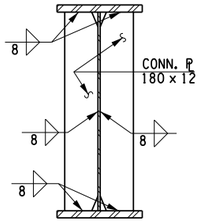
NOT TO SCALE




## BEARING STIFFENER AT ABUTMENT



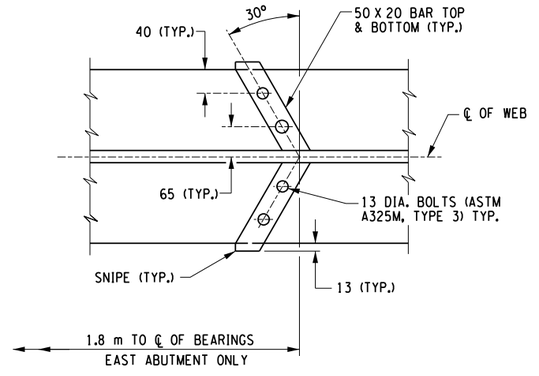

## FASCIA GIRDER CONNECTION PL




## INTERIOR GIRDER CONNECTION PL

## GIRDER SECTIONS

NOT TO SCALE




## DRIP BAR DETAIL

NOT TO SCALE

NOTES:

1. * C.P.G.W. = COMPLETE PENETRATION GROOVE WELD
2. * M.B. = MILL TO BEAR
3. NO WELDING SHALL BE ALLOWED WITHIN THE TENSION ZONES SHOWN UNLESS SPECIFICALLY NOTED. THE ATTACHMENT OF FORMING DEVICES OR OTHER CONSTRUCTION AIDS BY WELDING WITHIN THE TENSION AREA SHOWN IS PROHIBITED.
4. THE ENDS OF ALL GIRDERS AND THE BEARING STIFFENERS SHALL BE VERTICAL. ALL CONNECTION PLATES AND INTERMEDIATE STIFFENERS SHALL BE PERPENDICULAR TO THE TOP FLANGES.
5. DIMENSIONS ARE MEASURED ALONG CENTERLINE OF GIRDER.
6. ALL STRUCTURAL STEEL SHALL BE ASTM 709M GRADE 345W.
7. SEE DWG. NO. ST-16 FOR FRAMING PLAN AND DIAPHRAGM DETAILS.

### GIRDER STABILITY NOTE

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS FOR STABILITY OF STEEL GIRDERS DURING ERECTION. THE GIRDERS ON THIS BRIDGE SHALL BE STABILIZED DURING ERECTION BY USE OF FALSEWORK, TEMPORARY BRACING, COMPRESSION FLANGE STIFFENING TRUSSES, CHOOSING ALTERNATE PICKING POINTS, OR BY USE OF A HOLDING CRANE UNTIL A SUFFICIENT NUMBER OF GIRDERS HAVE BEEN ERECTED AND CROSS FRAMES INSTALLED. THE METHODS USED BY THE CONTRACTOR SHALL BE DOCUMENTED ON THE ERECTION DRAWINGS WITH ALL SUPPORTING STABILITY CALCULATIONS SUBMITTED AND STAMPED BY A LICENSED NEW YORK STATE PROFESSIONAL ENGINEER AND SUBMITTED TO THE DCES IN ACCORDANCE WITH THE STEEL CONSTRUCTION MANUAL.

| PREPARED BY: | ALTERED BY: |
|---|---|
| ON: OCTOBER 2008 | ON: |

STATE OF NEW YORK — JAMES R. McDUFFEE — 069508 — LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK<br>SH 1302 MORRIS - ONEONTA<br>TOWN OF ONEONTA<br>COUNTY: OTSEGO | PIN 9120.32<br>PS&E DATE OCT. 23, 2008 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED<br>**GIRDER DETAILS** |

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-17
SHEET NO. 69

DOCUMENT NAME: 912032_cpb_DTL_ELV.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM — JOB MANAGER JRM — ESTIMATED BY RPJ — DESIGNED BY RPJ — DRAFTED BY JJR — CHECKED BY XXX

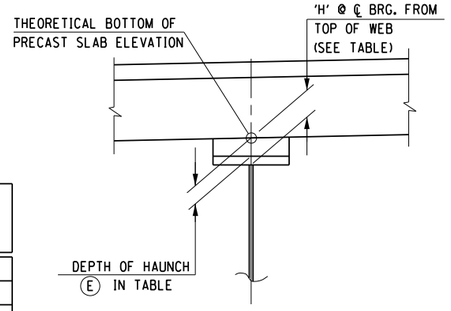
FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032.cpb.DTL.ELV.dgn
DATE/TIME = 10/14/2008 10:51:58 AM
USER = ssingh

| MOMENT & SHEAR TABLE | | | ℄ OF BRGS. WEST ABUT. | 0.1 $L_1$ | 0.2 $L_1$ | 0.3 $L_1$ | 0.4 $L_1$ | 0.5 $L_1$ | 0.6 $L_1$ | 0.7 $L_1$ | 0.8 $L_1$ | 0.9 $L_1$ | ℄ OF BRGS. EAST ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GIRDERS G1 & G5 | D.L. | MOMENT | 0.0 | 1231.2 | 2188.7 | 2872.7 | 3283.1 | 3419.9 | 3283.1 | 2872.7 | 2188.7 | 1231.2 | 0.0 |
| | | SHEAR | 344.7 | 275.8 | 206.8 | 137.9 | 68.9 | 0.0 | -68.9 | -137.9 | -206.8 | -275.8 | -344.7 |
| | S.D.L. | MOMENT | 0.0 | 239.3 | 425.3 | 558.2 | 638.0 | 664.6 | 638.0 | 558.2 | 425.3 | 239.3 | 0.0 |
| | | SHEAR | 67.2 | 53.4 | 40.0 | 26.7 | 13.3 | 0.0 | -13.3 | -26.7 | -40.0 | -53.4 | -67.2 |
| | L.L. (+) HL-93 | MOMENT | 0.0 | 1605.8 | 2833.9 | 3684.2 | 4188.0 | 4329.8 | 4188.0 | 3684.2 | 2833.9 | 1605.8 | 0.0 |
| | | SHEAR | 451.9 | 391.4 | 333.6 | 278.9 | 226.9 | 177.9 | 226.9 | 278.9 | 333.6 | 391.4 | 451.9 |
| | L.L. (+) NYSDOT PV | MOMENT | 0.0 | 1891.0 | 3348.1 | 4371.3 | 4975.6 | 5142.6 | 4975.6 | 4371.3 | 3348.1 | 1891.0 | 0.0 |
| | | SHEAR | 535.6 | 470.6 | 405.7 | 340.7 | 275.8 | 210.8 | 275.8 | 340.7 | 405.7 | 470.6 | 535.6 |
| GIRDERS G2, G3 & G4 | D.L. | MOMENT | 0.0 | 1281.5 | 2278.3 | 2990.3 | 3417.5 | 3559.8 | 3417.5 | 2990.3 | 2278.3 | 1281.5 | 0.0 |
| | | SHEAR | 358.5 | 286.9 | 215.3 | 143.7 | 71.6 | 0.0 | -71.6 | -143.7 | -215.3 | -286.9 | -358.5 |
| | S.D.L. | MOMENT | 0.0 | 239.3 | 425.3 | 558.2 | 638.0 | 664.6 | 638.0 | 558.2 | 425.3 | 239.3 | 0.0 |
| | | SHEAR | 67.2 | 53.4 | 40.0 | 26.7 | 13.3 | 0.0 | -13.3 | -26.7 | -40.0 | -53.4 | -67.2 |
| | L.L. (+) HL-93 | MOMENT | 0.0 | 1434.5 | 2531.5 | 3290.8 | 3741.0 | 3867.6 | 3741.0 | 3290.8 | 2531.5 | 1434.5 | 0.0 |
| | | SHEAR | 520.9 | 451.0 | 384.8 | 321.6 | 261.6 | 205.1 | -261.6 | -321.6 | -384.8 | -451.0 | -520.9 |
| | L.L. (+) NYSDOT PV | MOMENT | 0.0 | 1390.5 | 2462.0 | 3214.5 | 3658.8 | 3781.7 | 3658.8 | 3214.5 | 2462.0 | 1390.5 | 0.0 |
| | | SHEAR | 649.0 | 570.3 | 491.5 | 412.8 | 334.1 | 255.3 | 334.1 | 412.8 | 491.5 | 570.3 | 649.0 |

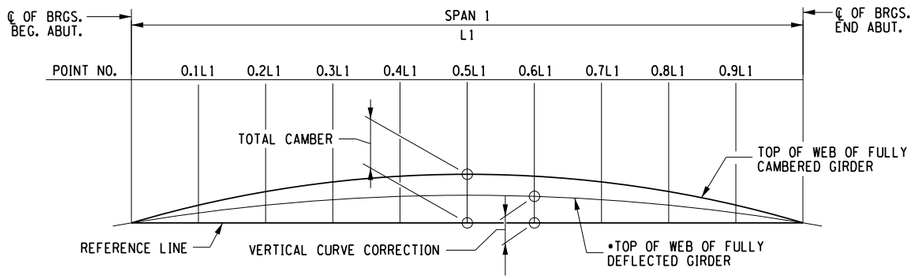
NOTES:
L.L. MOMENTS AND SHEARS INCLUDE IMPACT.
MOMENTS ARE EXPRESSED IN KILONEWTON-METERS.
SHEARS ARE EXPRESSED IN KILOMEWTONS.
MOMENTS AND SHEARS ARE BASED ON SERVICE (UNFACTORED) LOADS.
PV DENOTES PERMIT VEHICLE.

BECAUSE THIS STRUCTURE WILL RECEIVE A SPECIALIZED CONCRETE OVERLAY, NO ADDITIONAL FUTURE WEARING SURFACE IS CONSIDERED IN THE DESIGN.

| 'H' TABLE | | ℄ OF BRGS. WEST ABUT. | ℄ OF BRGS. EAST ABUT. |
|---|---|---|---|
| 'H' (m) | GIRDER 1 | 0.136 | 0.136 |
| | GIRDER 2 | 0.129 | 0.129 |
| | GIRDER 3 | 0.122 | 0.125 |
| | GIRDER 4 | 0.114 | 0.116 |
| | GIRDER 5 | 0.105 | 0.105 |




GIRDER HAUNCH DETAIL
NOT TO SCALE




CAMBER DIAGRAM - SINGLE SPAN
NOT TO SCALE

| HAUNCH TABLE | | ①* | ②* | ③* | ④* | ⑤* | ⑥* | ⑦* | ⑧* | ⑨* | ⑩* | ⑪* | ⑫* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GIRDER G1 | (A) REQ'D BOTTOM OF PRECAST SLAB ELEVATION | 330.250 | 330.177 | 330.106 | 330.038 | 329.973 | 329.911 | 329.852 | 329.796 | 329.743 | 329.694 | 329.648 | 329.625 |
| | (B) TOP OF STEEL EL. (FIELD MEASURE) | | | | | | | | | | | | |
| | (C) = (A) - (B) | | | | | | | | | | | | |
| | (D) CONCRETE + S.D.L. DEFLECTION | 0.005 | 0.045 | 0.080 | 0.108 | 0.127 | 0.138 | 0.138 | 0.127 | 0.108 | 0.080 | 0.045 | 0.005 |
| | (E) DEPTH OF HAUNCH REQ'D = (C)+(D) (m) | | | | | | | | | | | | |
| GIRDER G2 | (A) REQ'D BOTTOM OF PRECAST SLAB ELEVATION | 330.255 | 330.194 | 330.136 | 330.081 | 330.028 | 329.979 | 329.933 | 329.890 | 329.851 | 329.814 | 329.781 | 329.761 |
| | (B) TOP OF STEEL EL. (FIELD MEASURE) | | | | | | | | | | | | |
| | (C) = (A) - (B) | | | | | | | | | | | | |
| | (D) CONCRETE + S.D.L. DEFLECTION | 0.005 | 0.046 | 0.083 | 0.112 | 0.133 | 0.143 | 0.143 | 0.133 | 0.112 | 0.085 | 0.046 | 0.005 |
| | (E) DEPTH OF HAUNCH REQ'D = (C)+(D) (m) | | | | | | | | | | | | |
| GIRDER G3 | (A) REQ'D BOTTOM OF PRECAST SLAB ELEVATION | 330.179 | 330.131 | 330.086 | 330.043 | 330.004 | 329.968 | 329.935 | 329.905 | 329.878 | 329.855 | 329.834 | 329.817 |
| | (B) TOP OF STEEL EL. (FIELD MEASURE) | | | | | | | | | | | | |
| | (C) = (A) - (B) | | | | | | | | | | | | |
| | (D) CONCRETE + S.D.L. DEFLECTION | 0.005 | 0.046 | 0.083 | 0.112 | 0.133 | 0.143 | 0.143 | 0.133 | 0.112 | 0.085 | 0.046 | 0.005 |
| | (E) DEPTH OF HAUNCH REQ'D = (C)+(D) (m) | | | | | | | | | | | | |
| GIRDER G4 | (A) REQ'D BOTTOM OF PRECAST SLAB ELEVATION | 330.103 | 330.068 | 330.030 | 329.987 | 329.948 | 329.912 | 329.879 | 329.849 | 329.822 | 329.799 | 329.778 | 329.761 |
| | (B) TOP OF STEEL EL. (FIELD MEASURE) | | | | | | | | | | | | |
| | (C) = (A) - (B) | | | | | | | | | | | | |
| | (D) CONCRETE + S.D.L. DEFLECTION | 0.005 | 0.046 | 0.083 | 0.112 | 0.133 | 0.143 | 0.143 | 0.133 | 0.112 | 0.085 | 0.046 | 0.005 |
| | (E) DEPTH OF HAUNCH REQ'D = (C)+(D) (m) | | | | | | | | | | | | |
| GIRDER G5 | (A) REQ'D BOTTOM OF PRECAST SLAB ELEVATION | 330.027 | 330.005 | 329.974 | 329.931 | 329.892 | 329.856 | 329.823 | 329.793 | 329.766 | 329.743 | 329.722 | 329.705 |
| | (B) TOP OF STEEL EL. (FIELD MEASURE) | | | | | | | | | | | | |
| | (C) = (A) - (B) | | | | | | | | | | | | |
| | (D) CONCRETE + S.D.L. DEFLECTION | 0.005 | 0.045 | 0.080 | 0.108 | 0.127 | 0.138 | 0.138 | 0.127 | 0.108 | 0.080 | 0.045 | 0.005 |
| | (E) DEPTH OF HAUNCH REQ'D = (C)+(D) (m) | | | | | | | | | | | | |

* DENOTES EDGE OF END PANEL OR ℄ JOINT BETWEEN INTERMEDIATE PANELS. SEE DWG. NO. ST-20 FOR PANEL JOINT DESIGNATIONS.

| CAMBER TABLE | | ℄ OF BRGS. WEST ABUT. | 0.1 $L_1$ | 0.2 $L_1$ | 0.3 $L_1$ | 0.4 $L_1$ | 0.5 $L_1$ | 0.6 $L_1$ | 0.7 $L_1$ | 0.8 $L_1$ | 0.9 $L_1$ | ℄ OF BRGS. EAST ABUT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GIRDERS G1 & G5 | I STEEL D.L. (m) | 0.0 | 0.0123 | 0.0232 | 0.0315 | 0.0368 | 0.0386 | 0.0368 | 0.0315 | 0.0232 | 0.0123 | 0.0 |
| | II CONCRETE D.L. (m) | 0.0 | 0.0392 | 0.0737 | 0.1002 | 0.1169 | 0.1227 | 0.1169 | 0.1002 | 0.0737 | 0.0392 | 0.0 |
| | III SUPERIMPOSED D.L. (m) | 0.0 | 0.0057 | 0.0108 | 0.0146 | 0.0170 | 0.0179 | 0.0170 | 0.0146 | 0.0108 | 0.0057 | 0.0 |
| | IV VERTICAL CURVE (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | TOTAL= I+II+III+IV (m) | 0.0 | 0.057 | 0.108 | 0.146 | 0.171 | 0.179 | 0.171 | 0.146 | 0.108 | 0.057 | 0.0 |
| GIRDERS G2, G3 & G4 | I STEEL D.L. (m) | 0.0 | 0.0123 | 0.0232 | 0.0315 | 0.0368 | 0.0386 | 0.0368 | 0.0315 | 0.0232 | 0.0123 | 0.0 |
| | II CONCRETE D.L. (m) | 0.0 | 0.0413 | 0.0777 | 0.1056 | 0.1232 | 0.1293 | 0.1232 | 0.1056 | 0.0777 | 0.0413 | 0.0 |
| | III SUPERIMPOSED D.L. (m) | 0.0 | 0.0054 | 0.0102 | 0.0138 | 0.0162 | 0.0169 | 0.0162 | 0.0138 | 0.0102 | 0.0054 | 0.0 |
| | IV VERTICAL CURVE (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | TOTAL= I+II+III+IV (m) | 0.0 | 0.059 | 0.111 | 0.151 | 0.176 | 0.185 | 0.176 | 0.151 | 0.111 | 0.059 | 0.0 |

CAMBER NOTES:

1. THE CAMBER LABELED "VERTICAL CURVE" IN THE TABLE IN THE CAMBER REQUIRED TO FOLLOW THE VERTICAL CURVES.
2. THE CAMBER LABELED "STEEL D.L." IN THE TABLE IS THE CAMBER REQUIRED TO OFFSET THE DEFLECTION DUE TO THE DEAD LOAD WEIGHT OF THE GIRDERS AS FABRICATED.
3. THE CAMBER LABELED "CONCRETE D.L." IN THE TABLE IS THE CAMBER REQUIRED TO OFFSET THE DEFLECTION DUE TO THE DEAD LOAD WEIGHT OF THE PRECAST CONCRETE SLAB UNITS, GROUTED HAUNCHES, AND JOINTS.
4. THE CAMBER LABELED "SUPERIMPOSED D.L." IN THE TABLE IS THE CAMBER REQUIRED TO OFFSET THE DEFLECTION DUE TO THE WEIGHT OF THE BARRIER AND SPECIALIZED CONCRETE OVERLAY.
5. THE TOTAL CAMBER IS THE SUM OF VERTICAL CURVE, STEEL DEAD LOAD, CONCRETE DEAD LOAD AND SUPERIMPOSED DEAD LOAD. ALL CAMBER OFFSETS ARE MEASURED VERTICALLY TO THE TOP OF WEB FROM A STRAIGHT REFERENCE LINE DRAWN FROM THE INTERSECTION OF TOP OF WEB AND CENTERLINE OF BEARINGS AT ONE END OF THE GIRDER TO THE CORRESPONDING POINT AT THE OTHER END OF THE GIRDER.
6. POSITIVE NUMBERS IN THE TABLE ARE ABOVE THE STRAIGHT REFERENCE LINE.
7. NEGATIVE NUMBERS IN THE TABLE ARE BELOW THE STRAIGHT REFERENCE LINE.
8. THE CAMBER OFFSETS ARE TABULATED IN DECIMALS OF A METER.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA
COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

SUPERSTRUCTURE TABLES (1 OF 2)

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-18
SHEET NO. 70

DOCUMENT NAME: 912032_cpb_TBL__01.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY RPJ DESIGNED BY JFS DRAFTED BY JFS/SS CHECKED BY RPJ

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032_cpb_TBL__01.dgn
DATE/TIME = 10/14/2008 10:57:33 AM
USER = ssingh

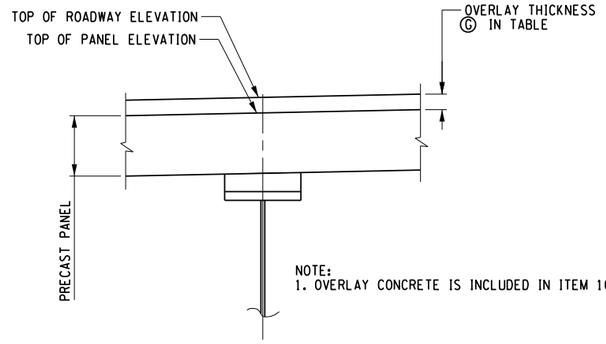
| OVERLAY TABLE | | ①** | ②** | ③** | ④** | ⑤** | ⑥** | ⑦** | ⑧** | ⑨** | ⑩** | ⑪** | ⑫** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GIRDER G1 | Ⓐ REQUIRED TOP OF ROADWAY ELEVATION | 330.500 | 330.427 | 330.356 | 330.288 | 330.223 | 330.161 | 330.102 | 330.046 | 329.993 | 329.944 | 329.898 | 329.875 |
| | Ⓑ S.D.L. DEFLECTION | 0.001 | 0.006 | 0.010 | 0.014 | 0.016 | 0.018 | 0.018 | 0.016 | 0.014 | 0.010 | 0.006 | 0.001 |
| | Ⓒ = Ⓐ + Ⓑ ADJUSTED TOP OF ROADWAY ELEVATION | 330.501 | 330.433 | 330.366 | 330.302 | 330.239 | 330.179 | 330.120 | 330.062 | 330.007 | 329.954 | 329.904 | 329.876 |
| | Ⓓ TOP OF PANEL ELEVATION (REQUIRED) | 330.451 | 330.383 | 330.316 | 330.252 | 330.189 | 330.129 | 330.070 | 330.012 | 329.957 | 329.904 | 329.854 | 329.826 |
| | Ⓔ TOP OF PANEL ELEVATION (FIELD MEASURED) | | | | | | | | | | | | |
| | Ⓕ ADJUSTMENT TO TOP OF PANEL =Ⓓ-Ⓔ(m) | | | | | | | | | | | | |
| | Ⓖ DEPTH OF OVERLAY =Ⓒ-Ⓓ(m) • | | | | | | | | | | | | |
| GIRDER G2 | Ⓐ REQUIRED TOP OF ROADWAY ELEVATION | 330.505 | 330.444 | 330.386 | 330.331 | 330.278 | 330.229 | 330.183 | 330.140 | 330.101 | 330.064 | 330.031 | 330.011 |
| | Ⓑ S.D.L. DEFLECTION | 0.001 | 0.005 | 0.010 | 0.013 | 0.015 | 0.017 | 0.017 | 0.015 | 0.013 | 0.010 | 0.005 | 0.001 |
| | Ⓒ = Ⓐ + Ⓑ ADJUSTED TOP OF ROADWAY ELEVATION | 330.506 | 330.449 | 330.396 | 330.344 | 330.293 | 330.246 | 330.200 | 330.155 | 330.114 | 330.074 | 330.036 | 330.012 |
| | Ⓓ TOP OF PANEL ELEVATION (REQUIRED) | 330.456 | 330.399 | 330.346 | 330.294 | 330.243 | 330.196 | 330.150 | 330.105 | 330.064 | 330.024 | 329.986 | 329.962 |
| | Ⓔ TOP OF PANEL ELEVATION (FIELD MEASURED) | | | | | | | | | | | | |
| | Ⓕ ADJUSTMENT TO TOP OF PANEL =Ⓓ-Ⓔ(m) | | | | | | | | | | | | |
| | Ⓖ DEPTH OF OVERLAY =Ⓒ-Ⓓ(m) • | | | | | | | | | | | | |
| GIRDER G3 | Ⓐ REQUIRED TOP OF ROADWAY ELEVATION | 330.429 | 330.381 | 330.336 | 330.293 | 330.254 | 330.218 | 330.185 | 330.155 | 330.128 | 330.105 | 330.084 | 330.067 |
| | Ⓑ S.D.L. DEFLECTION | 0.001 | 0.005 | 0.010 | 0.013 | 0.015 | 0.017 | 0.017 | 0.015 | 0.013 | 0.010 | 0.005 | 0.001 |
| | Ⓒ = Ⓐ + Ⓑ ADJUSTED TOP OF ROADWAY ELEVATION | 330.430 | 330.386 | 330.346 | 330.306 | 330.269 | 330.235 | 330.202 | 330.170 | 330.141 | 330.115 | 330.089 | 330.068 |
| | Ⓓ TOP OF PANEL ELEVATION (REQUIRED) | 330.380 | 330.336 | 330.296 | 330.256 | 330.219 | 330.185 | 330.152 | 330.120 | 330.091 | 330.065 | 330.039 | 330.018 |
| | Ⓔ TOP OF PANEL ELEVATION (FIELD MEASURED) | | | | | | | | | | | | |
| | Ⓕ ADJUSTMENT TO TOP OF PANEL =Ⓓ-Ⓔ(m) | | | | | | | | | | | | |
| | Ⓖ DEPTH OF OVERLAY =Ⓒ-Ⓓ(m) • | | | | | | | | | | | | |
| GIRDER G4 | Ⓐ REQUIRED TOP OF ROADWAY ELEVATION | 330.353 | 330.318 | 330.280 | 330.237 | 330.198 | 330.162 | 330.129 | 330.099 | 330.072 | 330.049 | 330.028 | 330.011 |
| | Ⓑ S.D.L. DEFLECTION | 0.001 | 0.005 | 0.010 | 0.013 | 0.015 | 0.017 | 0.017 | 0.015 | 0.013 | 0.010 | 0.005 | 0.001 |
| | Ⓒ = Ⓐ + Ⓑ ADJUSTED TOP OF ROADWAY ELEVATION | 330.354 | 330.323 | 330.290 | 330.250 | 330.213 | 330.179 | 330.146 | 330.114 | 330.085 | 330.059 | 330.033 | 330.012 |
| | Ⓓ TOP OF PANEL ELEVATION (REQUIRED) | 330.304 | 330.273 | 330.240 | 330.200 | 330.163 | 330.129 | 330.096 | 330.064 | 330.035 | 330.009 | 329.983 | 329.962 |
| | Ⓔ TOP OF PANEL ELEVATION (FIELD MEASURED) | | | | | | | | | | | | |
| | Ⓕ ADJUSTMENT TO TOP OF PANEL =Ⓓ-Ⓔ(m) | | | | | | | | | | | | |
| | Ⓖ DEPTH OF OVERLAY =Ⓒ-Ⓓ(m) • | | | | | | | | | | | | |
| GIRDER G5 | Ⓐ REQUIRED TOP OF ROADWAY ELEVATION | 330.277 | 330.255 | 330.224 | 330.181 | 330.142 | 330.106 | 330.073 | 330.043 | 330.016 | 329.993 | 329.972 | 329.955 |
| | Ⓑ S.D.L. DEFLECTION | 0.001 | 0.006 | 0.010 | 0.014 | 0.016 | 0.018 | 0.018 | 0.016 | 0.014 | 0.010 | 0.006 | 0.001 |
| | Ⓒ = Ⓐ + Ⓑ ADJUSTED TOP OF ROADWAY ELEVATION | 330.278 | 330.261 | 330.234 | 330.195 | 330.158 | 330.124 | 330.091 | 330.059 | 330.030 | 330.003 | 329.978 | 329.956 |
| | Ⓓ TOP OF PANEL ELEVATION (REQUIRED) | 330.228 | 330.211 | 330.184 | 330.145 | 330.108 | 330.074 | 330.041 | 330.009 | 329.980 | 329.953 | 329.928 | 329.906 |
| | Ⓔ TOP OF PANEL ELEVATION (FIELD MEASURED) | | | | | | | | | | | | |
| | Ⓕ ADJUSTMENT TO TOP OF PANEL =Ⓓ-Ⓔ(m) | | | | | | | | | | | | |
| | Ⓖ DEPTH OF OVERLAY =Ⓒ-Ⓓ(m) • | | | | | | | | | | | | |

• IN SOME CASES, THE ADJUSTMENT TO THE TOP OF PANEL THAT IS REQUIRED IN ROW Ⓕ CANNOT BE FULLY ACHIEVED IN THE FIELD. IF THIS IS THE CASE, THE VALUE COMPUTED FOR THE DEPTH OF OVERLAY IN ROW Ⓖ SHOULD USE THE REQUIRED TOP OF ROADWAY ELEVATION VALUE FROM ROW Ⓐ, AND THE ACTUAL TOP OF PANEL ELEVATION IN THE FIELD AFTER ADJUSTMENTS TO COME UP WITH THE FINAL OVERLAY DEPTH IN ROW Ⓖ.

•• DENOTES EDGE OF END PANEL OR ℄ JOINT BETWEEN INTERMEDIATE PANELS. SEE DWG. NO. ST-20 FOR PANEL JOINT DESIGNATIONS.

| DESIGN LOAD TABLE | | UNIT | LOAD kN/m |
|---|---|---|---|
| GIRDERS G1 & G5 | D.L. | PRECAST SLAB | 12.489 |
| | | HAUNCH | 0.707 |
| | | GIRDER | 3.785 |
| | | DIAPHRAGMS | 0.107 |
| | | | |
| | | TOTAL | 17.088 |
| | S.D.L. | | |
| | | RAILING | 0.250 |
| | | CONCRETE OVERLAY | 3.370 |
| | | | |
| | | TOTAL | 3.620 |
| GIRDERS G2, G3 & G4 | D.L. | PRECAST SLAB | 13.196 |
| | | HAUNCH | 0.707 |
| | | GIRDER | 3.785 |
| | | DIAPHRAGMS | 0.212 |
| | | | |
| | | TOTAL | 17.900 |
| | S.D.L. | RAILING | 0.250 |
| | | CONCRETE OVERLAY | 3.370 |
| | | | |
| | | TOTAL | 3.620 |

NOTES:
SERVICE (UNFACTORED) LOADS SHOWN. ASSUMED LIVE LOAD = HL-93 AND NYSDOT PERMIT VEHICLE (MS-23 FOR LFD).




NOTE:
1. OVERLAY CONCRETE IS INCLUDED IN ITEM 16557.0501.

## DECK OVERLAY DETAIL

NOT TO SCALE

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

SUPERSTRUCTURE TABLES (2 OF 2)

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-19
SHEET NO. 71

DOCUMENT NAME: 912032_cpb_TBL_02.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM DESIGNED BY JFS DRAFTED BY SS ESTIMATED BY RPJ CHECKED BY RPJ

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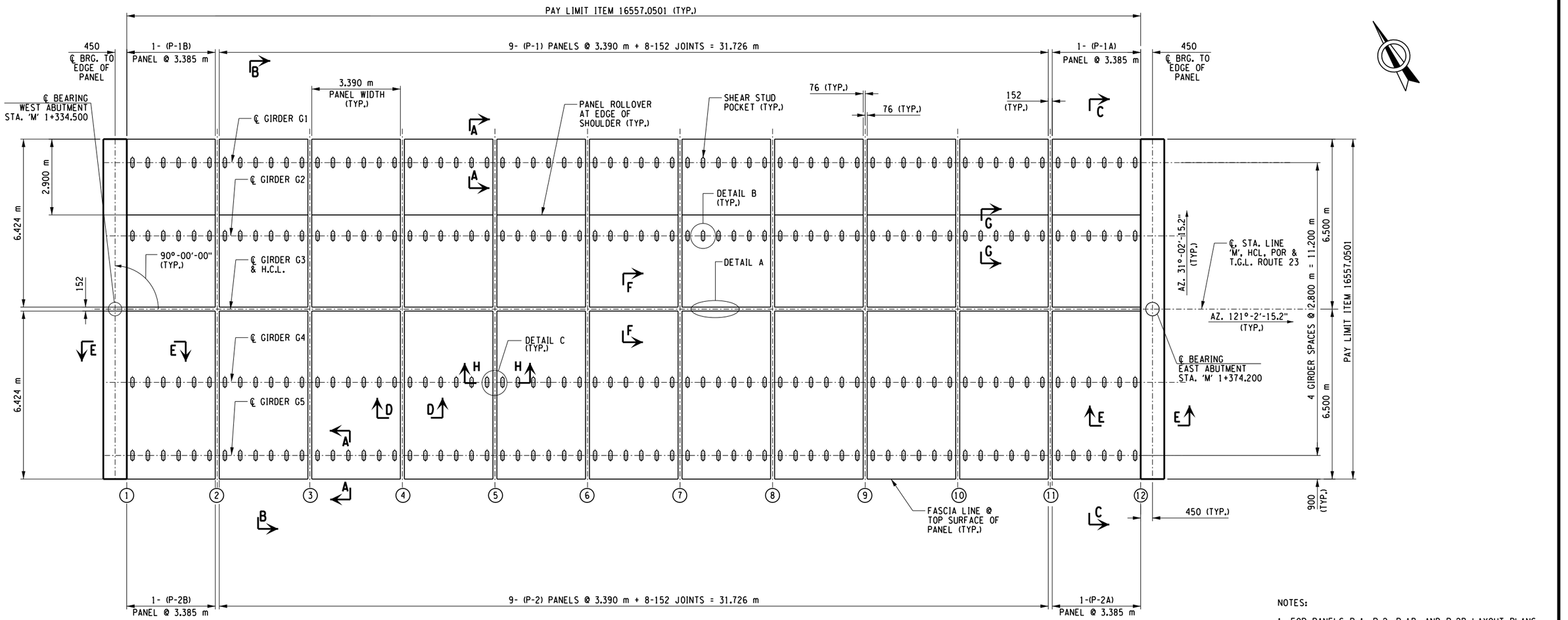


## SUPERSTRUCTURE PRECAST SLAB
## PANEL PLAN
NOT TO SCALE

NOTES:

1. FOR PANELS P-1, P-2, P-1B, AND P-2B LAYOUT PLANS, SEE DWG. NO. ST-21.
2. FOR PANELS P-1A AND P-2A LAYOUT PLAN, SEE DWG. NO. ST-22.
3. FOR TYPICAL PANEL REINFORCEMENT LAYOUT, SEE DWG. NO. ST-23.
4. FOR SECTIONS A-A, B-B AND C-C, SEE DWG. NO. ST-24.
5. FOR SECTIONS D-D AND E-E, SEE DWG. NO. ST-26.
6. FOR DETAIL A, AND SECTION F-F, SEE DWG. ST-25.
7. FOR DETAIL B AND SECTION G-G, SEE DWG. ST-25.
8. FOR DETAIL C AND SECTION H-H, SEE DWG. NO. 26.
9. Ⓧ DENOTES EDGE OF PANEL OR ℄ OF JOINT BETWEEN PANELS.

| PREPARED BY: | ALTERED BY: |
|---|---|
| ON: OCTOBER 2008 | ON: |

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK<br>SH 1302 MORRIS - ONEONTA<br>TOWN OF ONEONTA<br>COUNTY: OTSEGO | PIN 9120.32<br>PS&E DATE OCT. 23, 2008 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED<br>**SUPERSTRUCTURE PRECAST SLAB PANEL PLAN** |

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-20
SHEET NO. 72

DOCUMENT NAME: 912032_cpb_SLB_SUP.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY SS DRAFTED BY SS/BRT DESIGNED BY RPJ CHECKED BY RPJ CHECKED BY JFS

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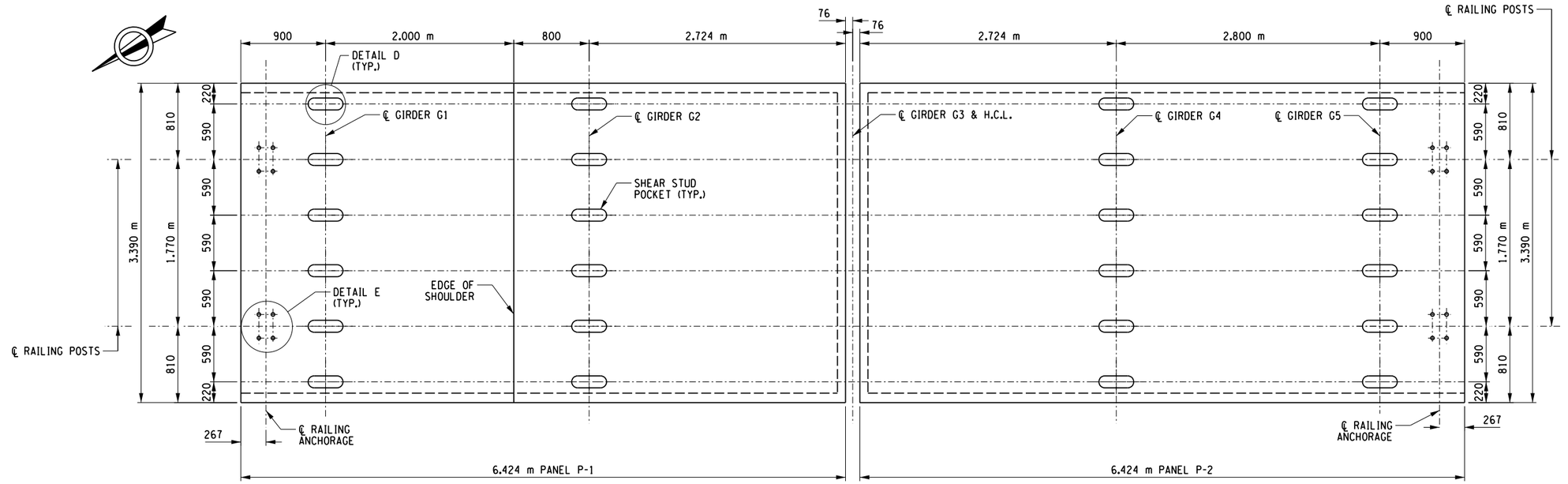
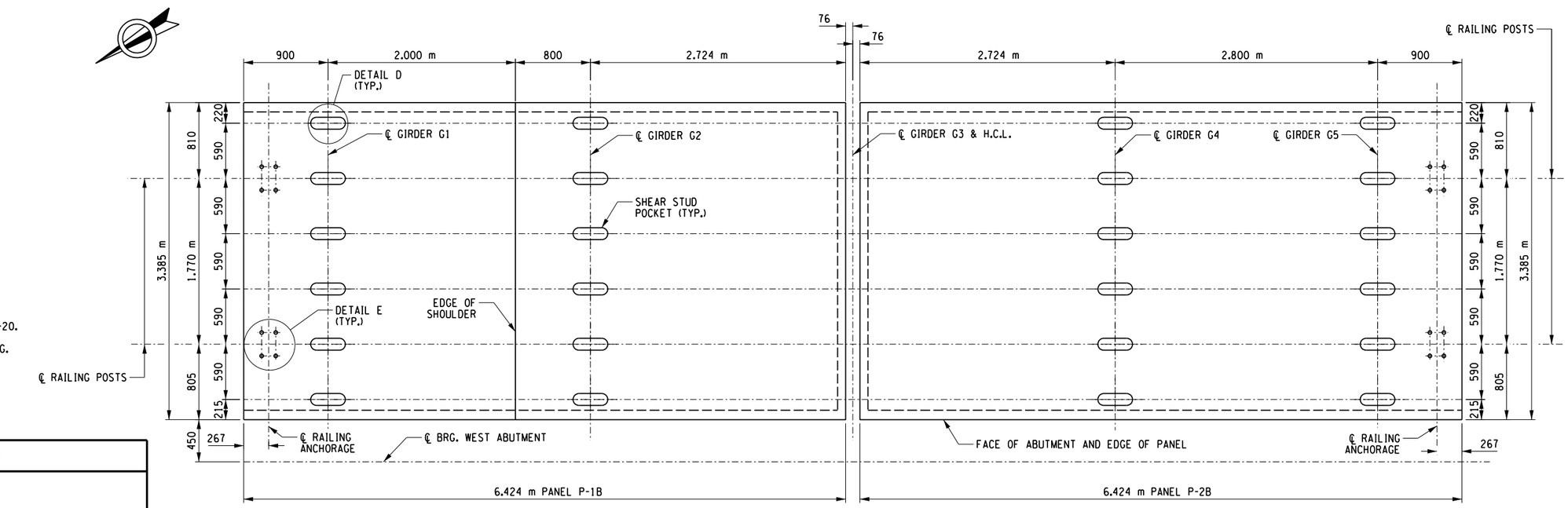



## PANEL P-1 / P-2




## PANEL P-1B / P-2B

NOTES:

1. FOR RAILING DETAILS SEE DWG. NO. ST-29.
2. FOR PRECAST SLAB PANEL PLAN, SEE DWG. NO. ST-20.
3. FOR DETAILS D AND E, SEE DWG. NO. ST-22.
4. FOR TYPICAL PANEL REINFORCEMENT PLAN, SEE DWG. NO. ST-23.

0.5 m 0 0.5 m 1 m
SCALE BAR

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**PRECAST SLAB PANEL**
**P-1, P-2, P-1B, P-2B LAYOUT PLANS**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-21
SHEET NO. 73

DOCUMENT NAME: 912032_cpb_SLB_DTL_01.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR BRM JOB MANAGER JRM DESIGNED BY JFS CHECKED BY RPJ ESTIMATED BY JFS DRAFTED BY BRT/SS CHECKED BY JFS/RPJ

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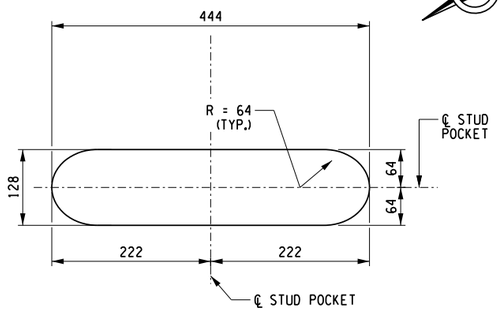
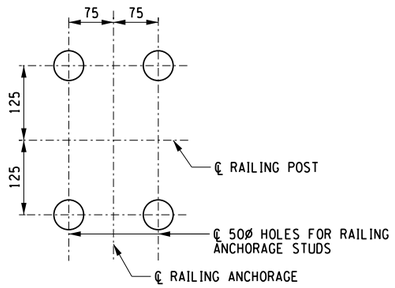



## DETAIL D

0.1m 0 0.1m 0.2m

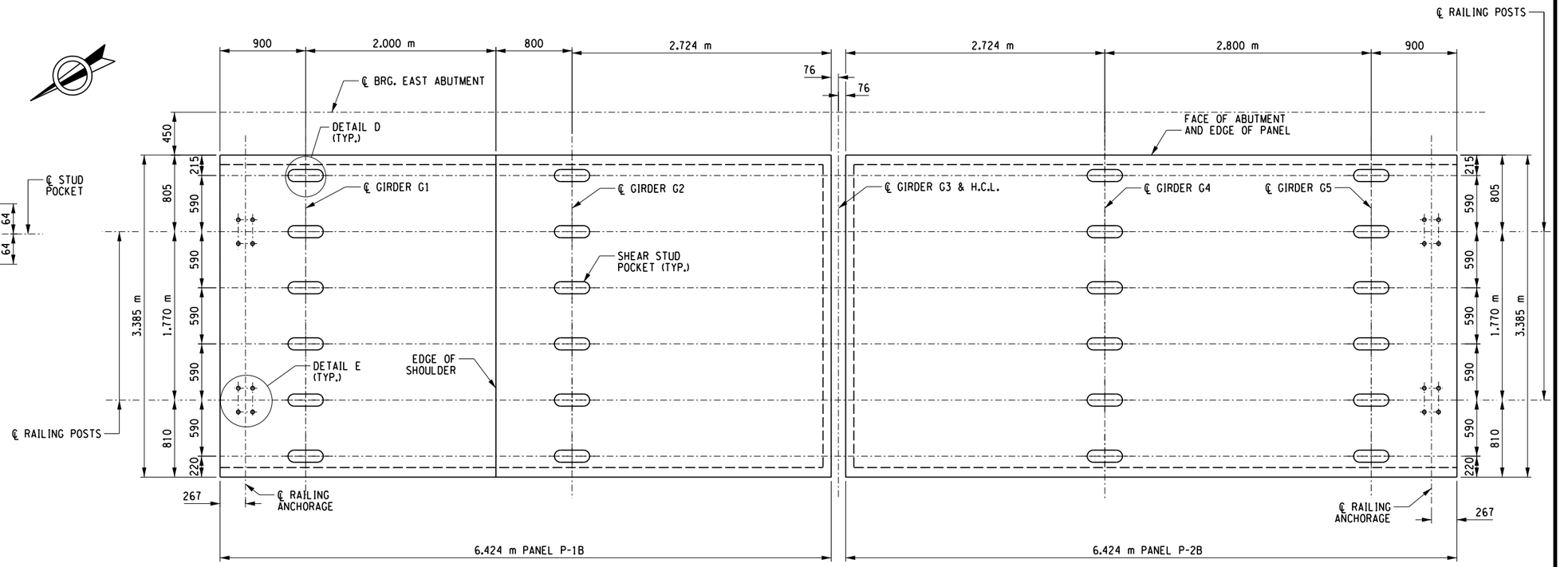
SCALE BAR




## DETAIL E

0.1m 0 0.1m 0.2m

SCALE BAR




## PANEL P-1A / P-2A

0.5 m 0 0.5 m 1 m

SCALE BAR

NOTES:

1. FOR PRECAST PANEL PLAN, SEE DWG. NO. ST-20.
2. FOR TYPICAL PANEL REINFORCEMENT LAYOUT, SEE DWG. NO. ST-23.

| PREPARED BY: | ALTERED BY: |
|---|---|
| ON: OCTOBER 2008 | ON: |

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**PRECAST SLAB PANEL P-1A, P-2A LAYOUT PLAN**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-22
SHEET NO. 74

DOCUMENT NAME: 912032_cpb_SLB_DTL_02.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR BRM JOB MANAGER JRM DESIGNED BY JFS ESTIMATED BY JFS DRAFTED BY BRT/SS CHECKED BY JFS/RPJ CHECKED BY RPJ

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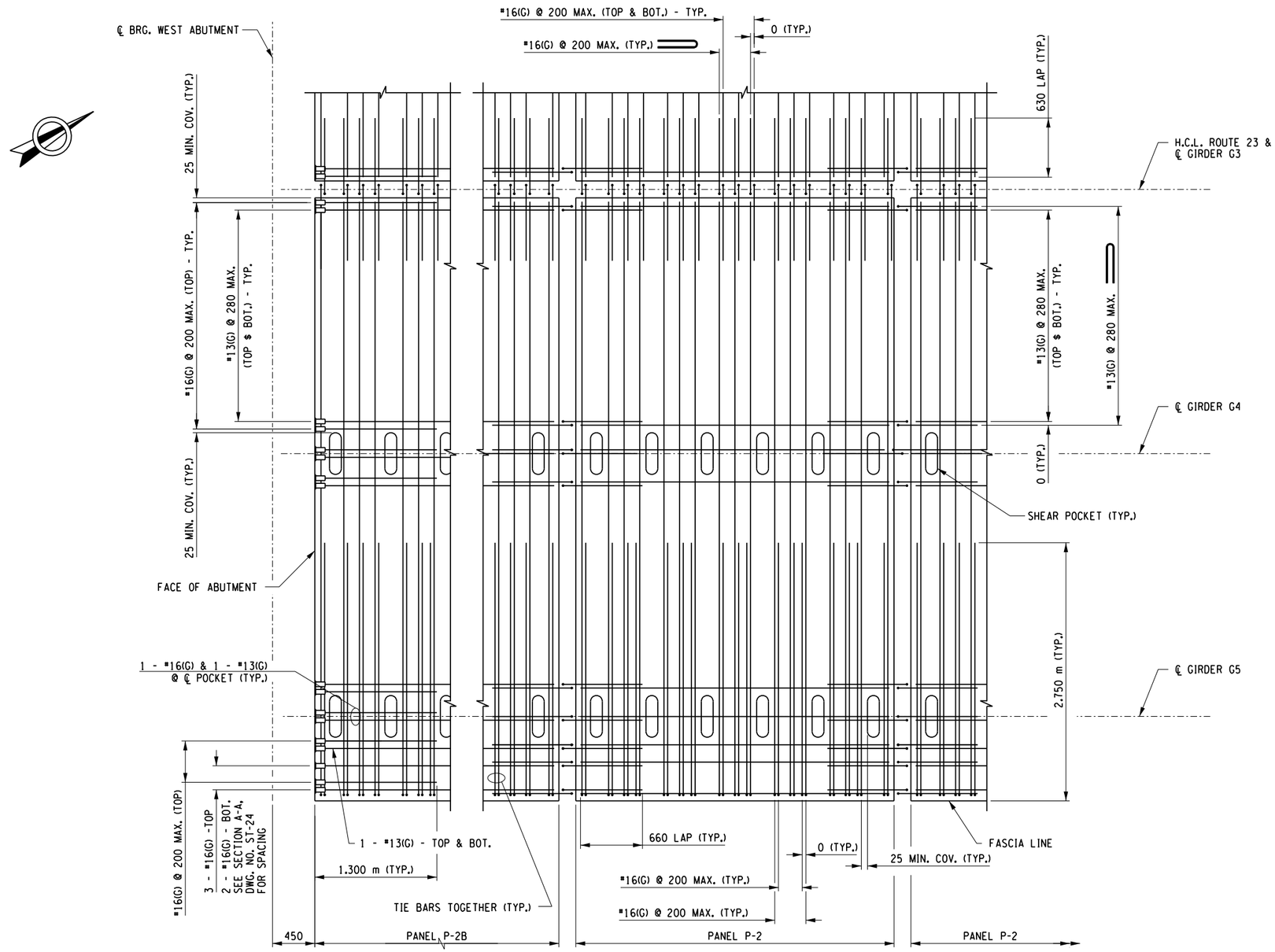


## TYPICAL REINFORCEMENT LAYOUT

**(PANEL P-2 AND P-2B SHOWN, OTHER PANELS SIMILAR)**

0.5 m 0 0.5 m 1 m

SCALE BAR

NOTES:

1. ⊏——— DENOTES REINFORCING STEEL BAR WITH ATTACHED GALVANIZED MECHANICAL CONNECTOR. COST FOR MECHANICAL CONNECTORS SHALL BE INCLUDED IN PRICE BID FOR ITEM 16557.0501.
2. (G) DENOTES GALVANIZED REINFORCING STEEL.
3. FOR PRECAST SLAB PANEL PLAN, SEE DWG. NO. ST-20.
4. FOR PANEL DIMENSIONS, SEE DWG. NO.'S ST-21 AND ST-22.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**PRECAST SLAB PANEL - TYPICAL REINFORCEMENT LAYOUT**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-23
SHEET NO. 75

DOCUMENT NAME: 912032_cpb_SLB_DTL_03.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

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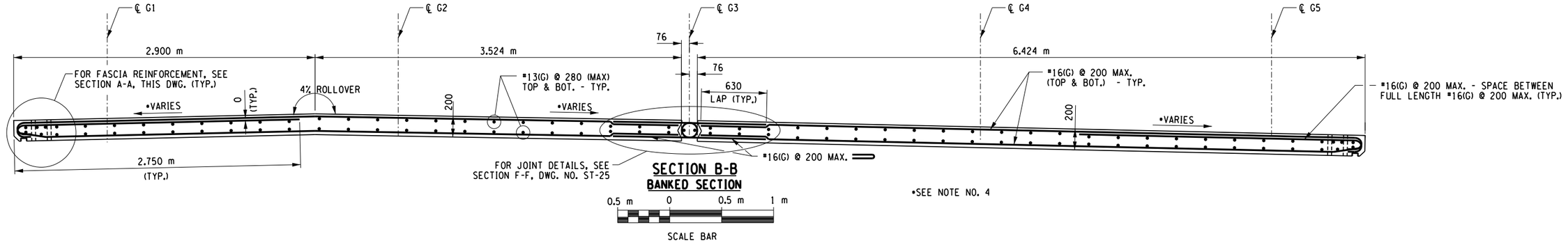
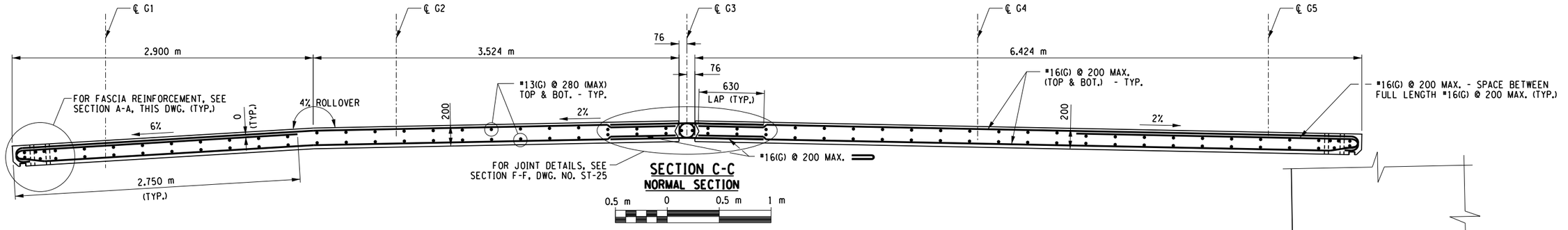
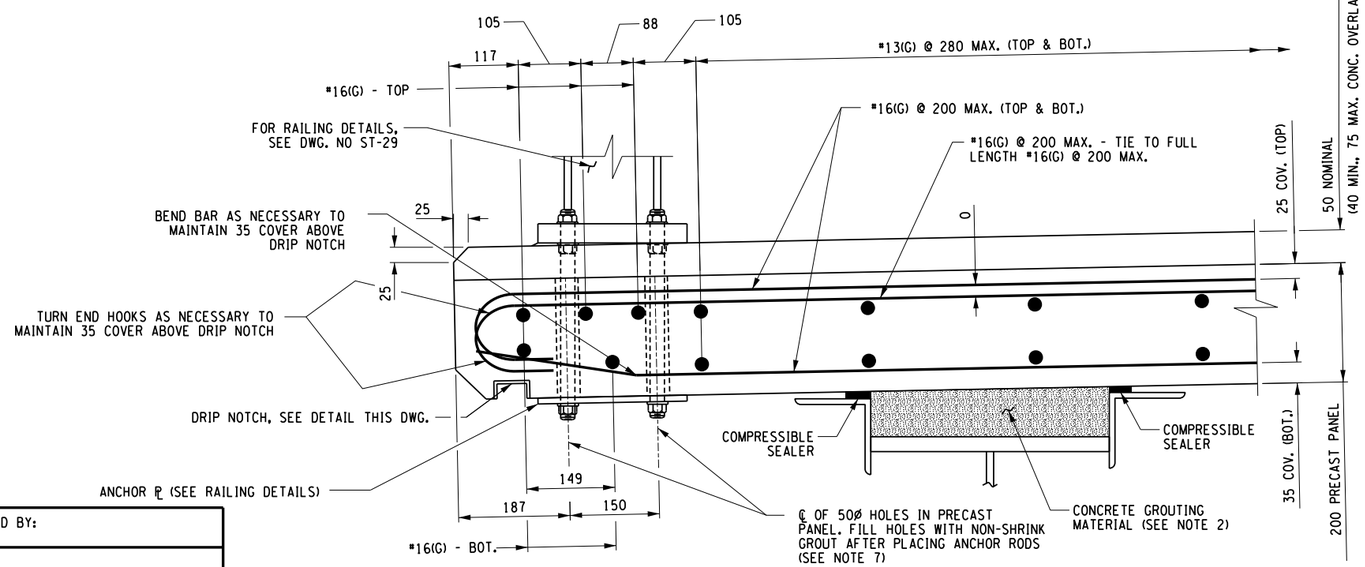



## SECTION B-B
## BANKED SECTION

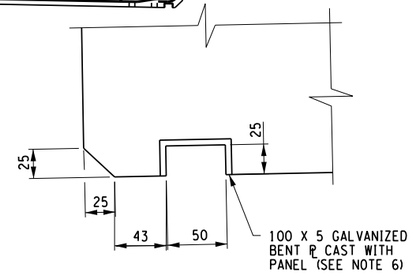



## SECTION C-C
## NORMAL SECTION




## SECTION A-A
(WITH OVERLAY SHOWN)

0.2 m 0 0.2 m 0.4 m
SCALE BAR




## DRIP NOTCH DETAIL

0.1 m 0 0.1 m 0.2 m
SCALE BAR

NOTE:
DRIP NOTCH SHALL TERMINATE 900 FROM FACES OF ABUTMENTS. DRIP NOTCH TO BE FORMED IN TRANSVERSE GROUT JOINTS.

NOTES:

1. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE DWG. NO. ST-20.
2. CONCRETE GROUTING MATERIAL SHALL CONFORM TO MATERIAL SPECIFICATION SECTION 701-05 OR 701-06. COST SHALL BE INCLUDED IN PRICE BID FOR ITEM 16557.0501.
3. (G) DENOTES GALVANIZED REINFORCING STEEL.
4. FOR SUPERELEVATION, SEE PROFILE, DWG. NO. ST-2.
5. CONTRACTOR SHALL VERIFY RAILING ANCHOR STUD LAYOUT PRIOR TO POURING PRECAST CONCRETE PANELS.
6. THE CONTRACTOR SHALL SUBMIT DETAILS OF THE DRIP NOTCH FORM TO THE ENGINEER FOR APPROVAL.
7. CONCRETE GROUTING MATERIAL SHALL CONFORM TO MATERIAL SPECIFICATION SECTION 701-07. COST SHALL BE INCLUDED IN PRICE BID FOR ITEM 568.51.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**PRECAST SLAB PANEL DETAILS - 1**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-24
SHEET NO. 76

DOCUMENT NAME: 912032_cpb_SLB_DTL_04.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY JFS DESIGNED BY JFS DRAFTED BY RPJ CHECKED BY RPJ CHECKED BY JFS/RPJ

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032.cpb.SLB.DTL.04.dgn
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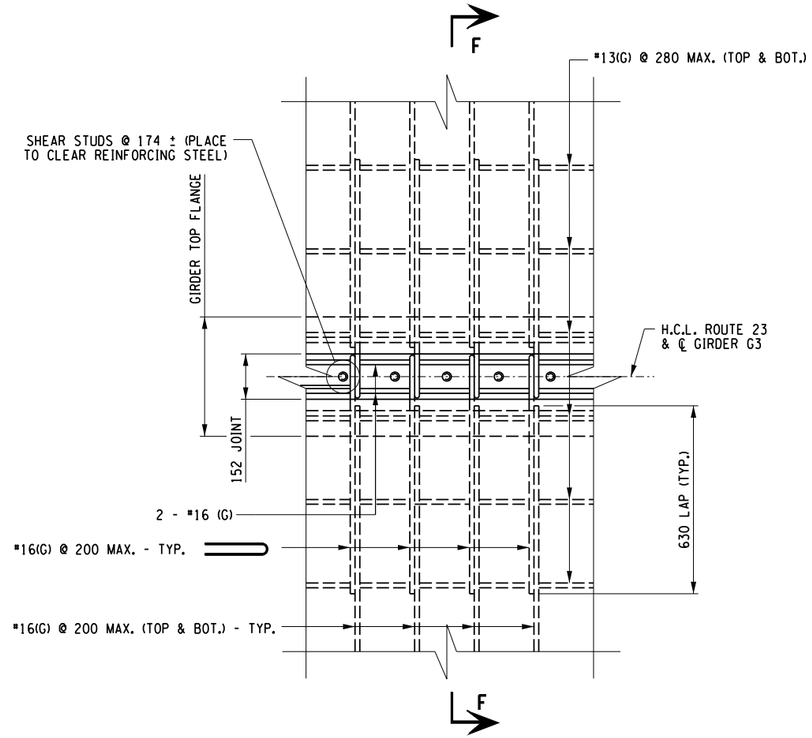
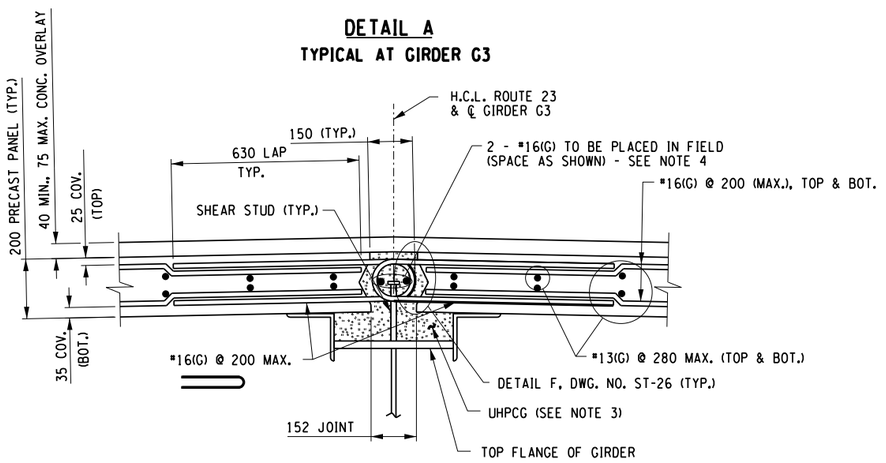
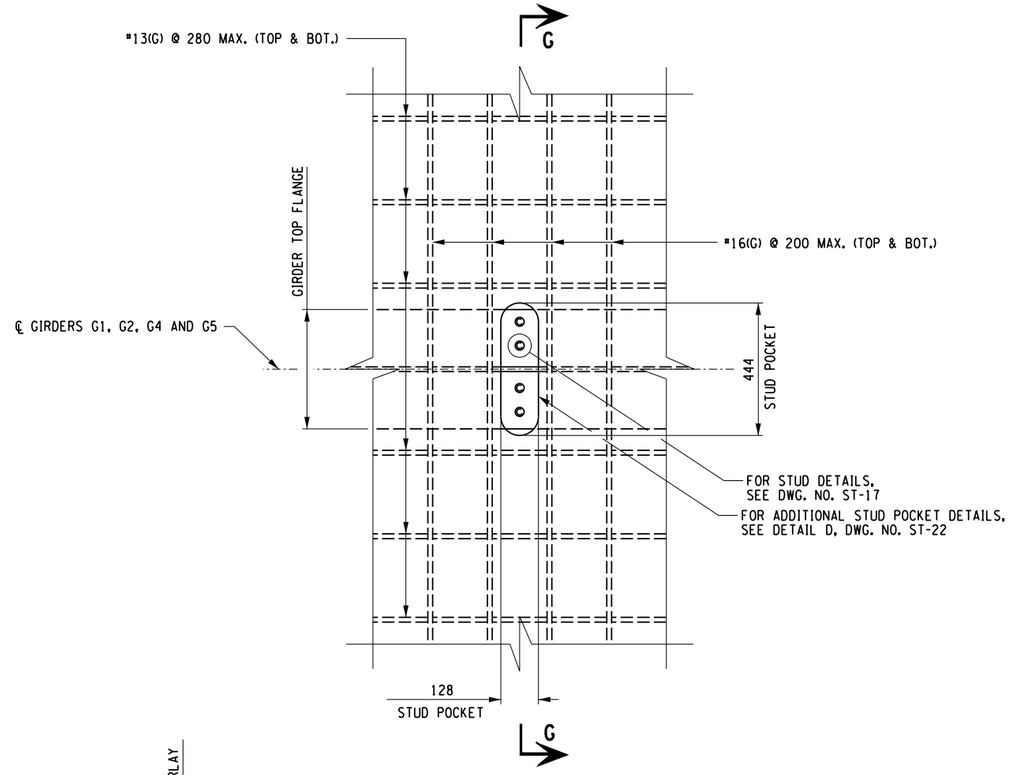


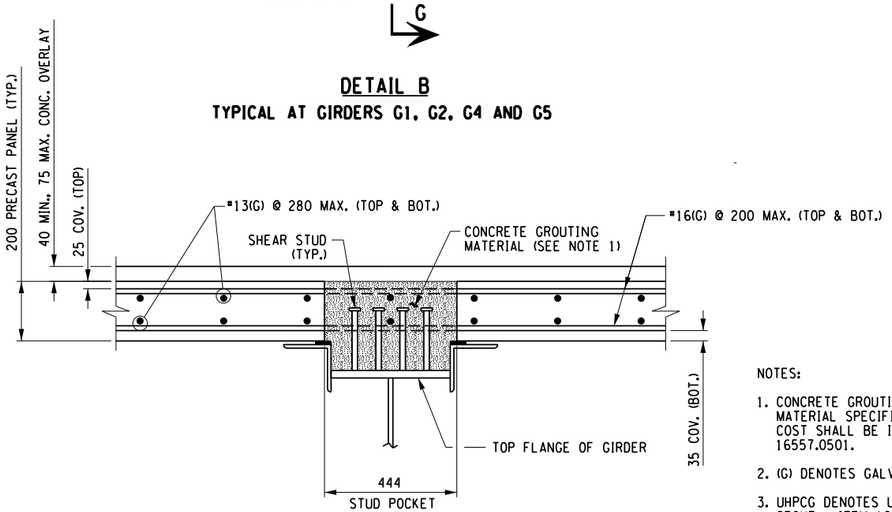

## DETAIL A
### TYPICAL AT GIRDER G3




## SECTION F-F




## DETAIL B
### TYPICAL AT GIRDERS G1, G2, G4 AND G5




## SECTION G-G

NOTES:

1. CONCRETE GROUTING MATERIAL SHALL CONFORM TO MATERIAL SPECIFICATION SECTION 701-05 OR 701-06. COST SHALL BE INCLUDED IN PRICE BID FOR ITEM 16557.0501.
2. (G) DENOTES GALVANIZED REINFORCING STEEL.
3. UHPCG DENOTES ULTRA HIGH PERFORMANCE CONCRETE GROUT - ITEM 16557.2101.
4. COST FOR REINFORCING STEEL BARS SHALL BE INCLUDED IN PRICE BID FOR ITEM 16557.0501 - MINIMUM LAP LENGTH = 660.

0.5 m 0 0.5 1 m
SCALE BAR

| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |
|---|---|

STATE OF NEW YORK · JAMES R. McDUFFEE · 069508 · LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:
ALTERED BY:
ON:
SIGNATURE
DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA
COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**PRECAST SLAB PANEL DETAILS - 2**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-25
SHEET NO. 77

DOCUMENT NAME: 912032_cpb_SLB_DTL_05.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY SS DRAFTED BY RPJ/SS DESIGNED BY JFS CHECKED BY JFS CHECKED BY RPJ

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032_cpb_SLB_DTL_05.dgn
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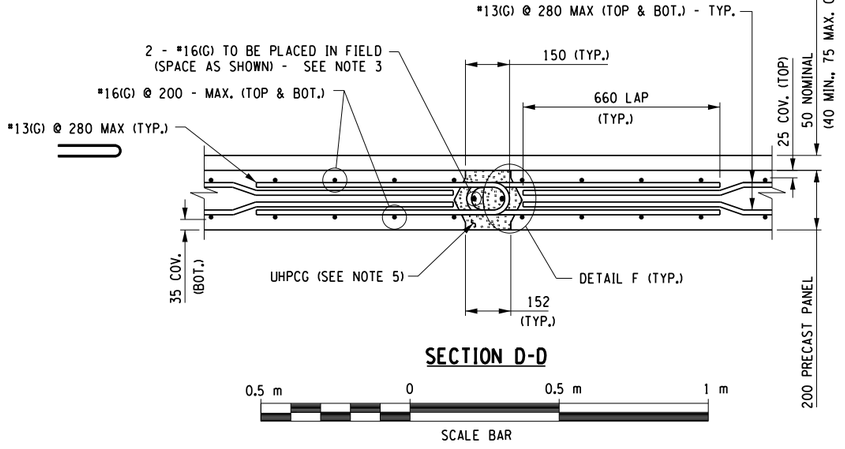
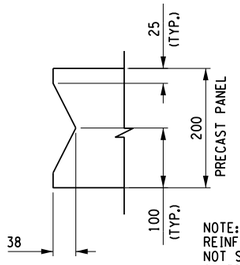


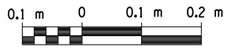

## SECTION D-D

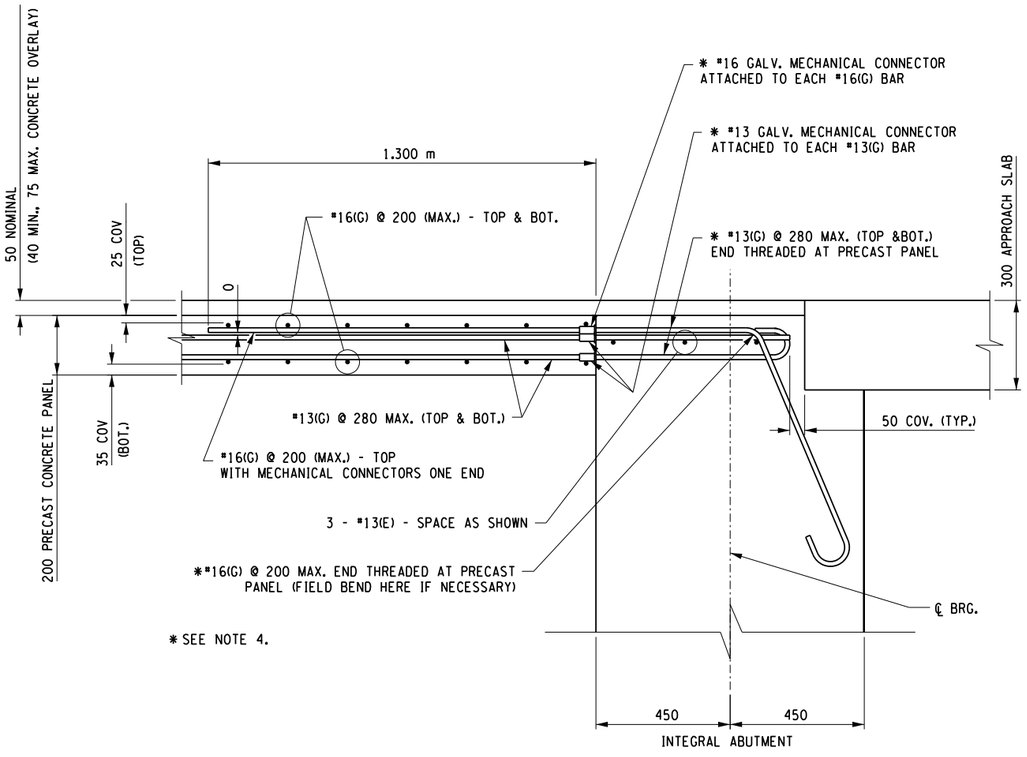


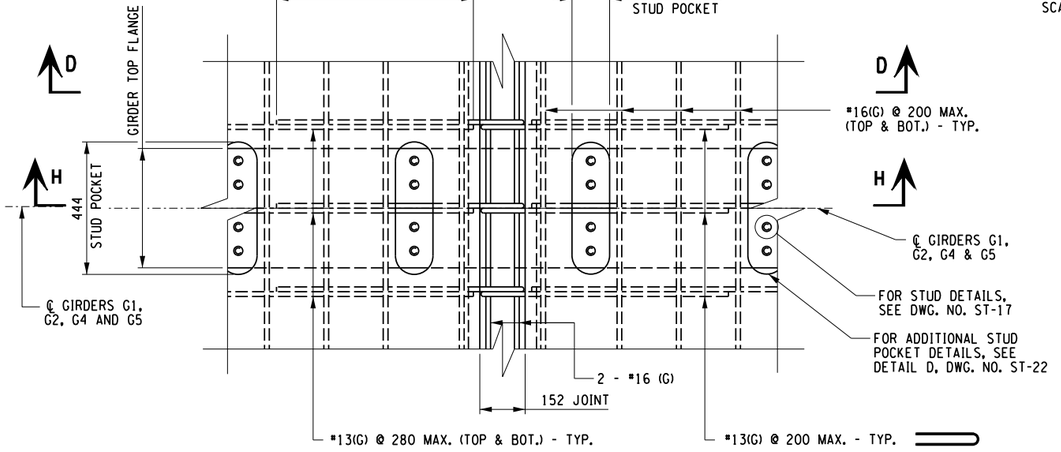

NOTE:
REINFORCING STEEL NOT SHOWN FOR CLARITY.

## DETAIL F



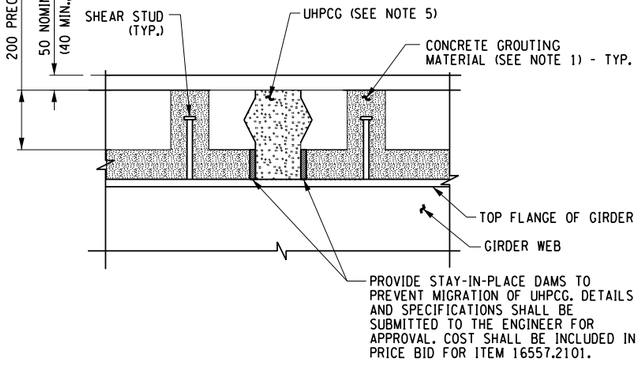




## SECTION E-E


## DETAIL C

### TYPICAL AT GIRDERS G1, G2, G4, AND G5


## SECTION H-H

REINFORCING STEEL NOT SHOWN FOR CLARITY


NOTES:

1. CONCRETE GROUTING MATERIAL SHALL CONFORM TO MATERIAL SPECIFICATION SECTION 701-05 OR 701-06. COST SHALL BE INCLUDED IN PRICE BID FOR ITEM 16557.0501.
2. (G) DENOTES GALVANIZED REINFORCING STEEL.
3. COST FOR REINFORCING STEEL BARS SHALL BE INCLUDED IN PRICE BID FOR ITEM 16557.0501. MINIMUM LAP LENGTH = 660.
4. INCLUDE COSTS FOR MECHANICAL REBAR CONNECTORS AND END THREADED REBARS IN PRICE BID FOR ITEM 16557.0501.
5. UHPCG DENOTES ULTRA HIGH PERFORMANCE CONCRETE GROUT - ITEM 16557.2101.
6. FOR LOCATION OF SECTION E-E, SEE DWG. NO. ST-20.
7. FOR ABUTMENT DETAILS, SEE DWG. NO. ST-9 THROUGH ST-14.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK<br>SH 1302 MORRIS - ONEONTA<br>TOWN OF ONEONTA<br>COUNTY: OTSEGO | PIN 9120.32<br>PS&E DATE OCT. 23, 2008 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED<br>**PRECAST SLAB PANEL DETAILS - 3** |

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-26
SHEET NO. 78

DOCUMENT NAME: 912032_cpb_SLB_DTL_06.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM DESIGNED BY RPJ CHECKED BY RPJ DRAFTED BY RPJ ESTIMATED BY JFS CHECKED BY JFS/RPJ

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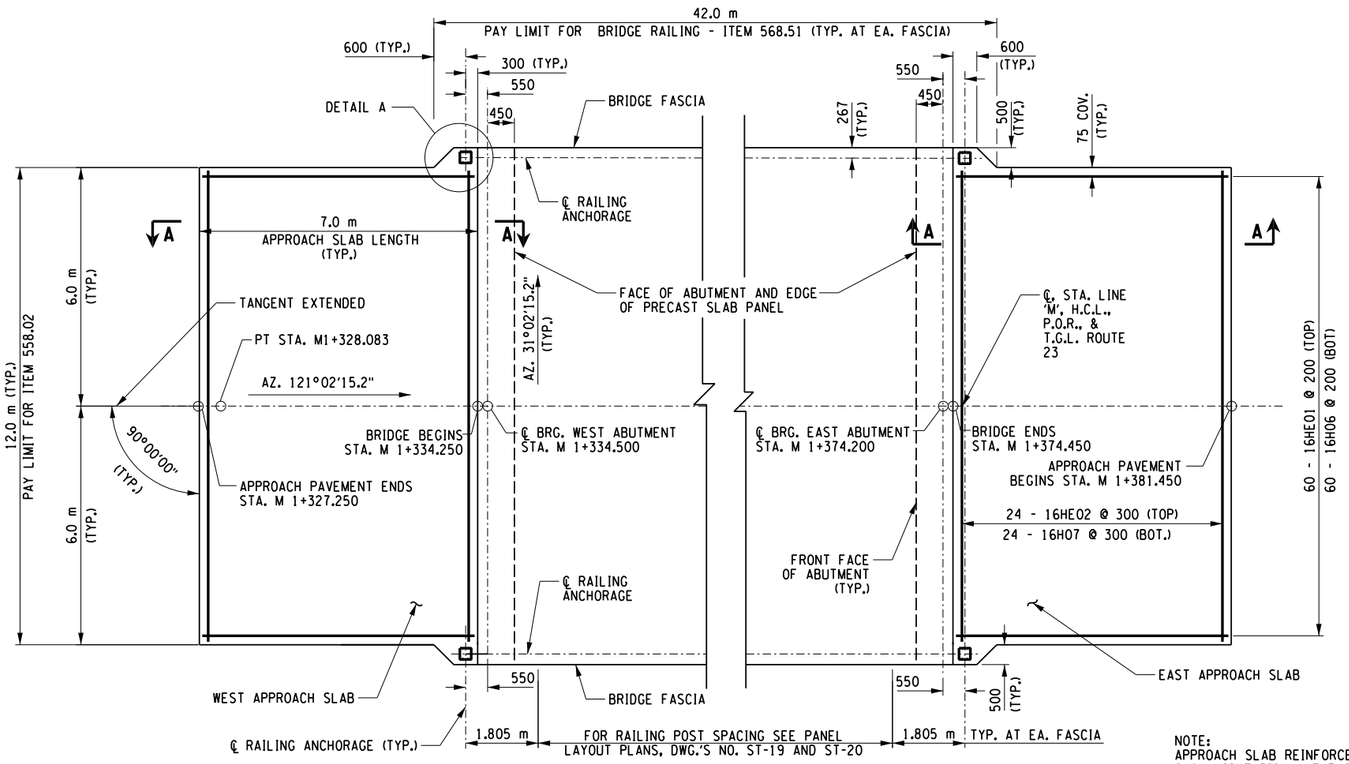
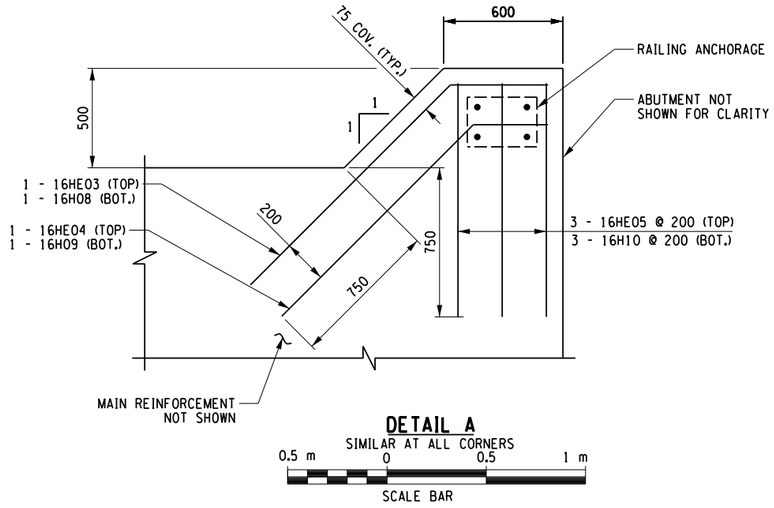



## APPROACH SLAB AND BRIDGE RAILING LAYOUT

NOT TO SCALE

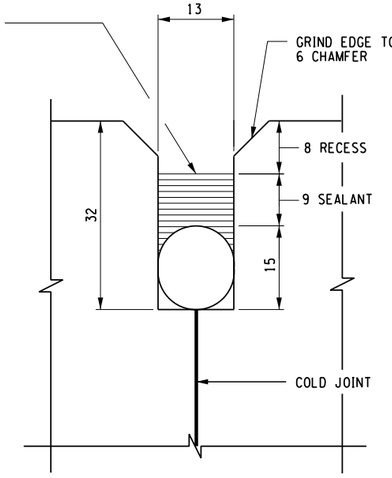
NOTE:
APPROACH SLAB REINFORCEMENT SHOWN IS TYPICAL AT EACH APPROACH SLAB.




## DETAIL A

SIMILAR AT ALL CORNERS

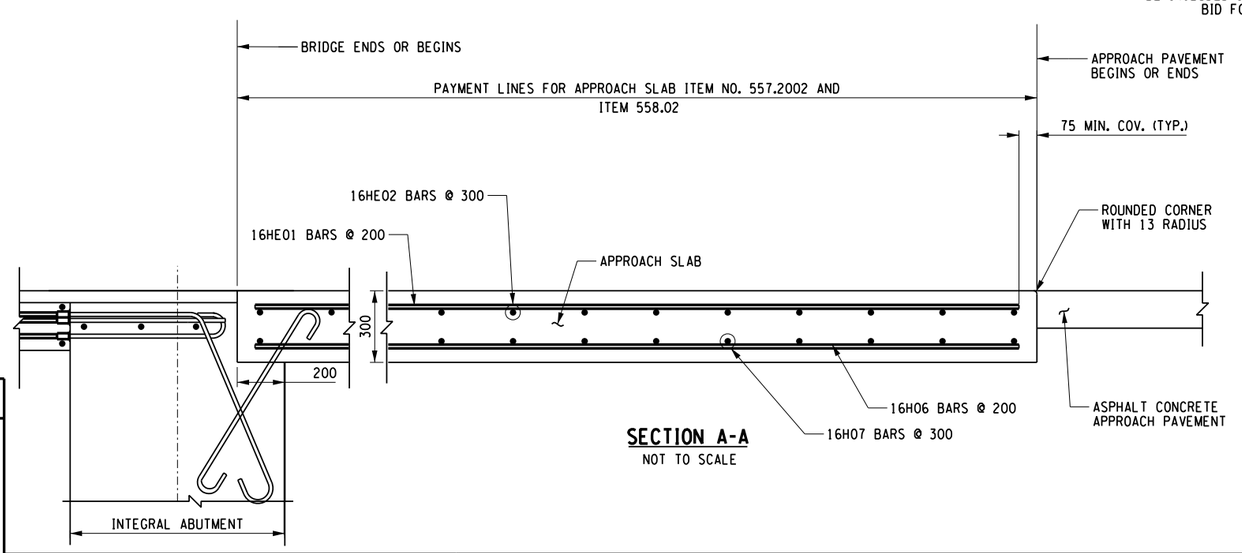
FILL THE RECESS WITH A STRUCTURAL JOINT MATERIAL, LIQUID SEALANT, FROM THE DEPARTMENT'S APPROVED LIST. IF THE RECESS IS SAW CUT, WATER BLAST IMMEDIATELY FOLLOWING CUTTING TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES. CLEAN THE VERTICAL FACES OF THE RECESS BY ABRASIVE BLAST, AND AIR BLOW THE RESIDUE FROM THE RECESS. PRIME THE VERTICAL FACES WITH THE MANUFACTURER'S RECOMMENDED PRIMER, AND ALLOW TO DRY. PLACE A 15 DIA. SOFT CLOSED CELL BACKER ROD IN THE BOTTOM OF THE RECESS. POUR THE SILICONE SEALANT TO A DEPTH OF APPROX. 9. PAYMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 557.2002.




## JOINT RECESS DETAIL

NOT TO SCALE

| APPROACH SLAB PAY ITEMS | | |
|---|---|---|
| LOCATION | ITEM 557.2002 (SM) | ITEM 558.02 (SM) |
| WEST APPROACH SLAB | 85 | 85 |
| EAST APPROACH SLAB | 85 | 85 |




## SECTION A-A

NOT TO SCALE

NOTES:

1. ALL REINFORCEMENT SHALL HAVE 75 mm COVER UNLESS OTHERWISE NOTED.
2. COST OF APPROACH SLAB REINFORCEMENT IS INCLUDED IN ITEM 557.2002. SURFACE OF APPROACH SLABS TO BE FINISHED WITH LONGITUDINAL SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE, ITEM 558.02 AND SEALED WITH ITEM 18559.1896, PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS.
3. (E) DENOTES EPOXY COATED BARS.

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

| | | | | |
|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK | PIN 9120.32 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED |
| SH 1302 MORRIS - ONEONTA | PS&E DATE OCT. 23, 2008 | | | APPROACH SLABS AND BRIDGE RAILING LAYOUT |
| TOWN OF ONEONTA | | | | CONTRACT NUMBER D260931 |
| COUNTY: OTSEGO | | | | DRAWING NO. ST-27 SHEET NO. 79 |

DOCUMENT NAME: 912032_cpb_SLB_APR.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY RPJ DRAFTED BY SS DESIGNED BY RPJ CHECKED BY SS CHECKED BY RPJ

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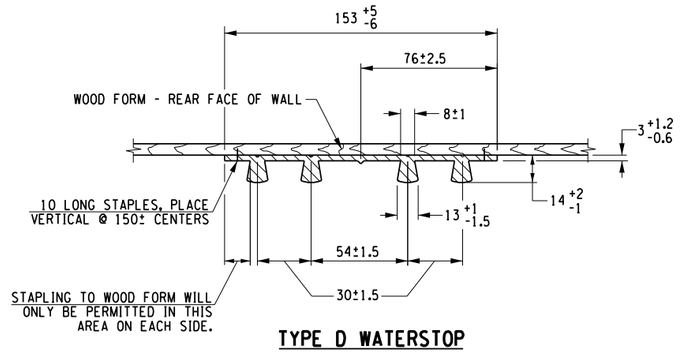
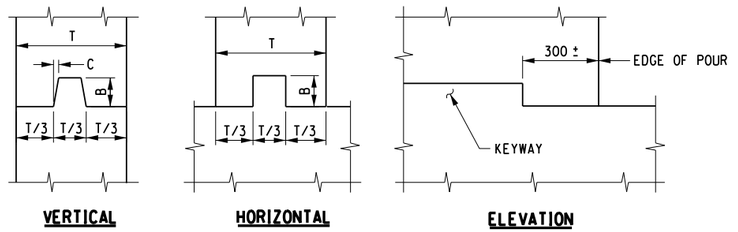



## TYPE D WATERSTOP




VERTICAL HORIZONTAL ELEVATION

## KEYWAY DETAILS

NOTES:

1. ALL KEYS SHOULD BEGIN AND END 300± FROM THE EDGE OF POUR AS INDICATED.
2. WATERSTOP NOT SHOWN.

**WATERSTOP NOTES:**

1. HOLES MUST NOT BE MADE IN WATERSTOP FOR ANY PURPOSE EXCEPT AS REQUIRED FOR STAPLING TO FORMS.
2. TYPE 'D' WATERSTOP SHALL BE LIGHT GRAY IN COLOR.
3. PVC USED IN WATERSTOPS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 705-11 OF THE SPECIFICATIONS.
4. THE COST OF FURNISHING AND PLACING WATERSTOP SHALL BE INCLUDED IN THE PRICE BID FOR THE CONCRETE ITEMS.
5. FIELD SPLICES SHALL BE AVOIDED IF POSSIBLE, HOWEVER, HEAT WELDED BUTT SPLICES WILL BE PERMITTED ON LONG STRAIGHT RUNS (GENERALLY IN EXCESS OF 15 METERS) AT POINTS APPROVED BY THE ENGINEER.
6. WATERSTOP SHALL BE SHIPPED IN STRAIGHT SECTIONS HAVING A MINIMUM LENGTH OF 3 METERS UNLESS SHORTER LENGTHS ARE REQUIRED.

| CONSTRUCTION & CONTRACTION JOINTS | | |
|---|---|---|
| C | B | T/3 |
| 5 | 40 | 0 TO 150 |
| 10 | 90 | 150-250 |
| 20 | 140 | OVER 250 |

| EXPANSION JOINTS | | |
|---|---|---|
| C | B | T/3 |
| 10 | 90 | 0 TO 250 |
| 20 | 140 | OVER 250 |

| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |
|---|---|

STATE OF NEW YORK JAMES R. McDUFFEE 069508 LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

DOCUMENT NAME: 912032_cpb_DTL_MIS.dgn

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**MISCELLANEOUS DETAILS**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-28
SHEET NO. 80

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY RPJ DRAFTED BY JJR DESIGNED BY RPJ CHECKED BY JJR CHECKED BY RPJ

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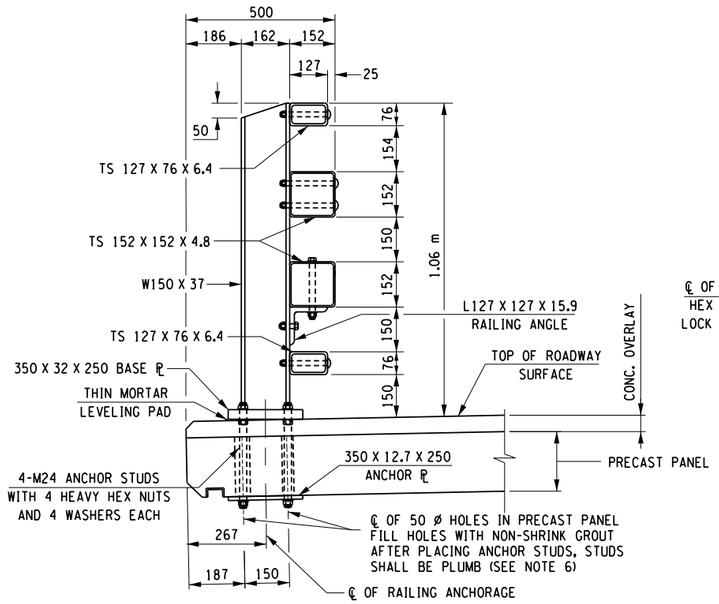
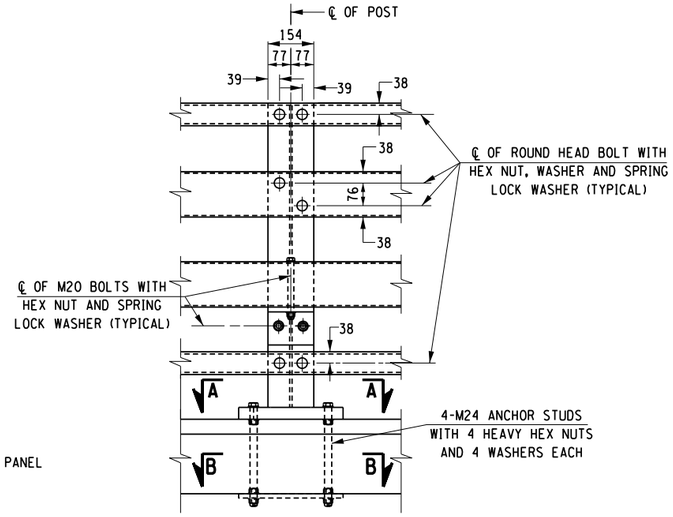
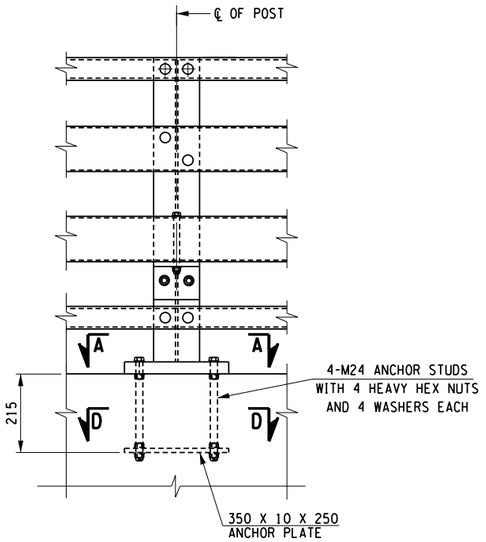


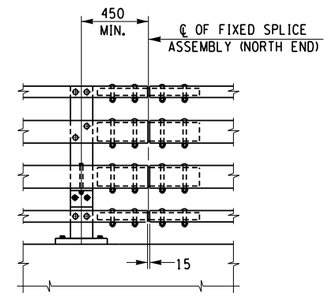

**SECTION**



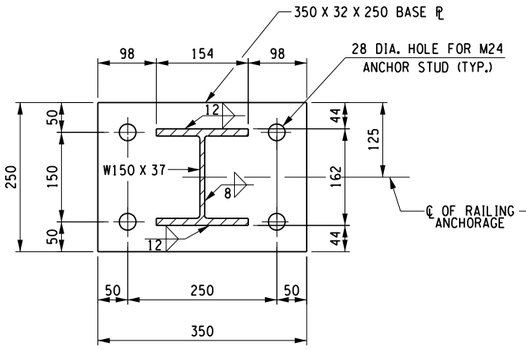

**ELEVATION**
(ON BRIDGE)



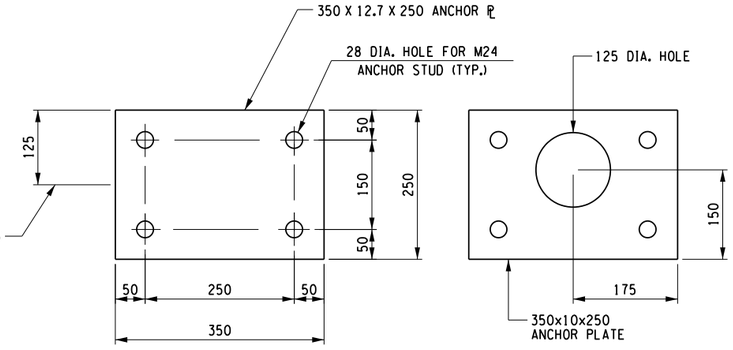

**ELEVATION**
(ON APPROACH SLAB)




**ELEVATION**
**STEEL BRIDGE RAILING**
**(FOUR RAIL) SPLICE DETAIL**
NOT TO SCALE




**SECTION A-A**

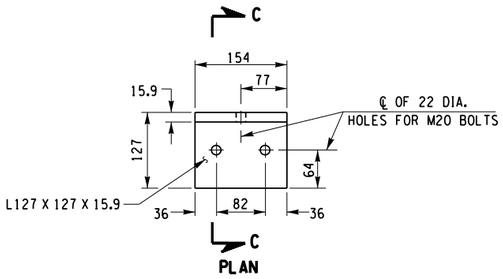



**SECTION B-B**
(ON BRIDGE)

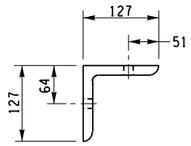



**SECTION D-D**
(ON APPROACH SLAB)

**STEEL BRIDGE RAILING**
**(FOUR RAIL)**
NOT TO SCALE




**PLAN**




**SECTION C-C**

**RAILING ANGLE DETAILS**
NOT TO SCALE




**ROUND HEAD BOLT**
NOT TO SCALE

**NOTES:**

1. ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 568 OF THE STANDARD SPECIFICATIONS.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 2.
3. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 135 N-m).
4. FOR SPLICE DETAILS, SEE DWG. NO. ST-32.
5. ALL STEEL SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH THE N.Y.S. STANDARD SPECIFICATION SUBSECTION 719-01.
6. CONCRETE GROUTING MATERIAL SHALL CONFORM TO MATERIAL SPECIFICATION SECTION 701-07. COST SHALL BE INCLUDED IN PRICE BID FOR ITEM 568.51.

| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |
|---|---|

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

DOCUMENT NAME: 912032_cpb_RLG_01.dgn

| NY ROUTE 23 OVER OTEGO CREEK | PIN 9120.32 | BRIDGES 1017580 | CULVERTS |
|---|---|---|---|
| SH 1302 MORRIS - ONEONTA | PS&E DATE OCT. 23, 2008 | | |
| TOWN OF ONEONTA | | | |
| COUNTY: OTSEGO | | | |

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**BRIDGE RAILING DETAILS**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-29
SHEET NO. 81

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

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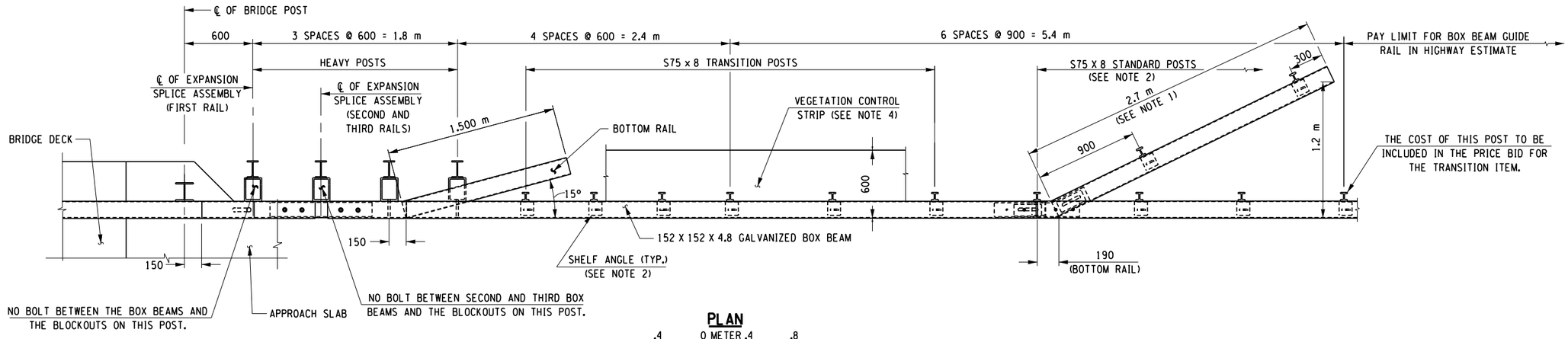
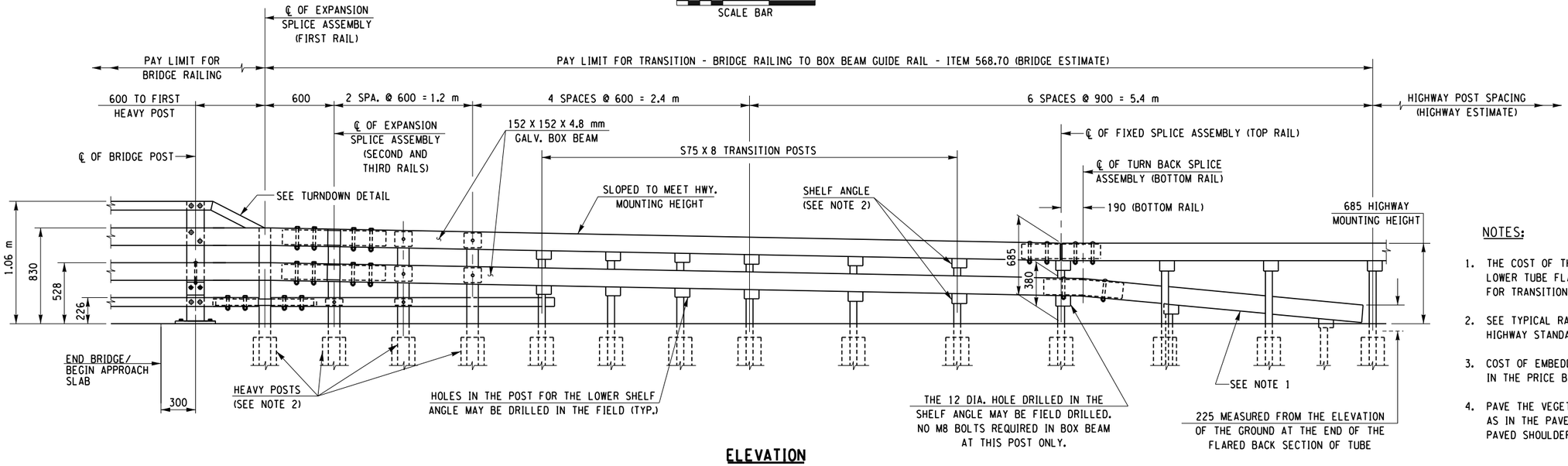



**PLAN**

.4 0 METER .4 .8

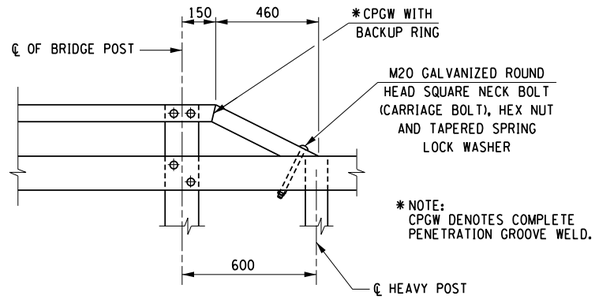
SCALE BAR




**ELEVATION**

.4 0 METER .4 .8

SCALE BAR




**TURNDOWN DETAIL**

NOT TO SCALE

NOTES:

1. THE COST OF THE POSTS, SPLICE TUBE AND RAIL FOR THE LOWER TUBE FLARE SECTION IS INCLUDED IN THE PRICE BID FOR TRANSITION ITEM 568.70.
2. SEE TYPICAL RAIL TO POST CONNECTION DETAIL ON CURRENT HIGHWAY STANDARD SHEET TITLED "BOX BEAM GUIDE RAIL".
3. COST OF EMBEDDED PLATE AND ANCHOR BARS IS INCLUDED IN THE PRICE BID FOR TRANSITION ITEM 568.70.
4. PAVE THE VEGETATION CONTROL STRIP WITH THE SAME MATERIAL AS IN THE PAVED SHOULDER. PAYMENT WILL BE MADE UNDER THE PAVED SHOULDER ITEM.

| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |
|---|---|

STATE OF NEW YORK · JAMES R. McDUFFEE · 069508 · LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

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|---|---|---|---|---|
| NY ROUTE 23 OVER OTEGO CREEK<br>SH 1302 MORRIS - ONEONTA<br>TOWN OF ONEONTA<br>COUNTY: OTSEGO | PIN 9120.32<br>PS&E DATE OCT. 23, 2008 | BRIDGES 1017580 | CULVERTS | ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED<br>**TRANSITION BRIDGE RAILING DETAILS (1 OF 3)** |

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-30
SHEET NO. 82

DOCUMENT NAME: 912032_cpb_RLG_02.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

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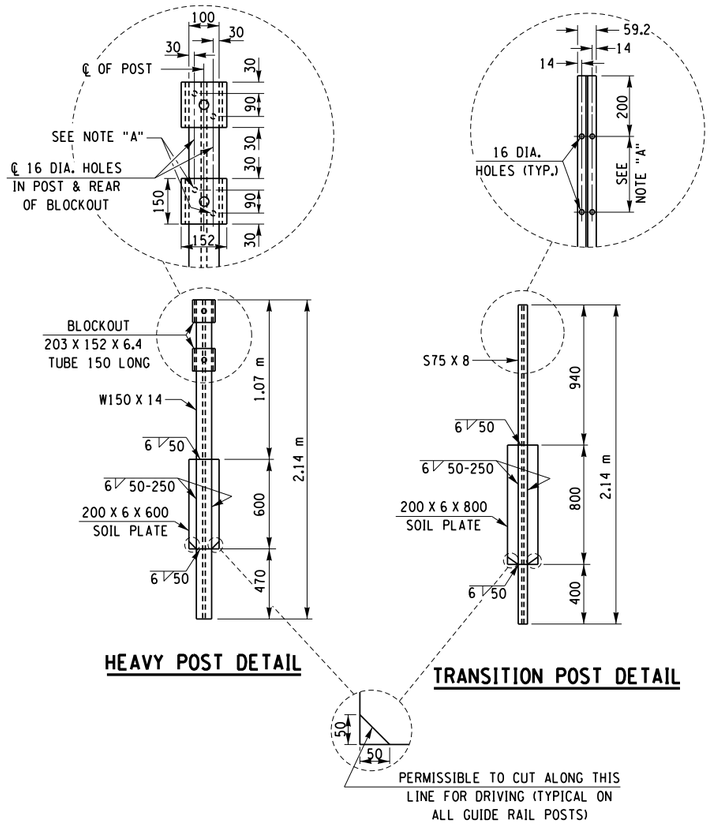


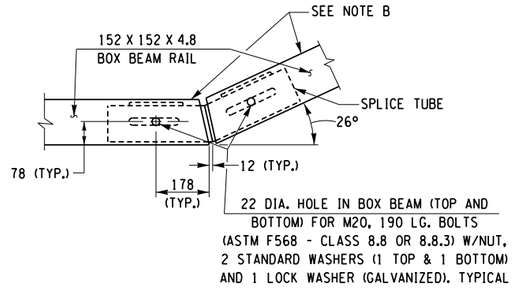

## HEAVY POST DETAIL



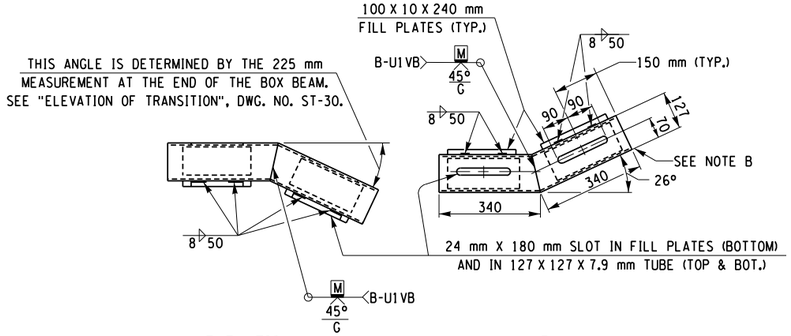

## TRANSITION POST DETAIL



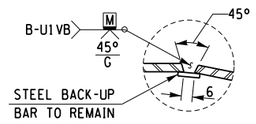

PERMISSIBLE TO CUT ALONG THIS LINE FOR DRIVING (TYPICAL ON ALL GUIDE RAIL POSTS)



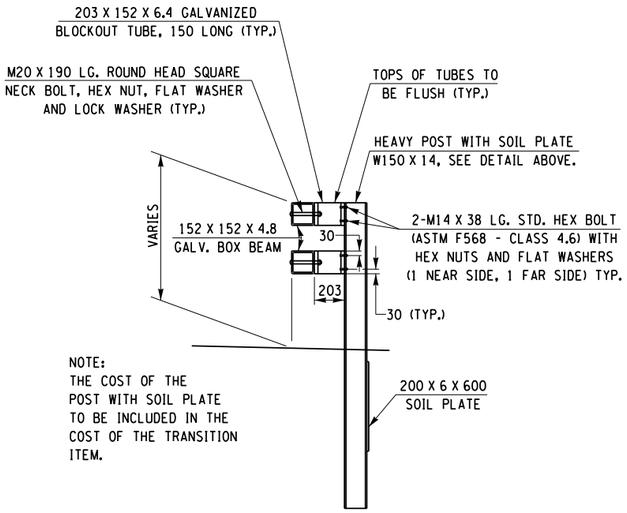

## SPLICE DETAIL AT TURN BACK IN LOWER TRANSITION GUIDE RAIL




## SPLICE TUBE DETAIL FOR TURN BACK




## WELD DETAIL FOR SPLICE TUBE




NOTE:
THE COST OF THE POST WITH SOIL PLATE TO BE INCLUDED IN THE COST OF THE TRANSITION ITEM.

## HEAVY POST ELEVATION

**NOTES:**

FOR SPLICE DETAILS FOR THE 152X152X4.8 TUBES, SEE DWG. NO. ST-32.

ALL STEEL SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH THE N.Y.S. STANDARD SPECIFICATION SUBSECTION 719-01.

NOTE "A"
HOLES IN THE POST FOR THE LOWER RAIL MAY BE LOCATED AND DRILLED IN THE FIELD. IF SO, THE GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 719-01.

NOTE "B"
PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

| PREPARED BY: | ALTERED BY: |
|---|---|
| ON: OCTOBER 2008 | ON: |

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

DOCUMENT NAME: 912032_cpb_RLG_03.dgn

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**TRANSITION BRIDGE RAILING DETAILS (2 OF 3)**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-31
SHEET NO. 83

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM | JOB MANAGER JRM | ESTIMATED BY RPJ | DRAFTED BY SS | DESIGNED BY RPJ | CHECKED BY RPJ | CHECKED BY SS

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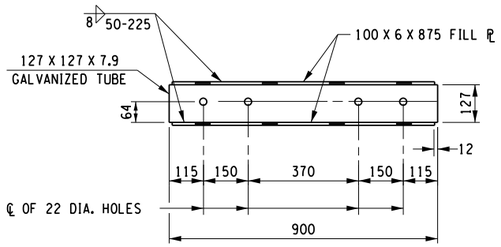
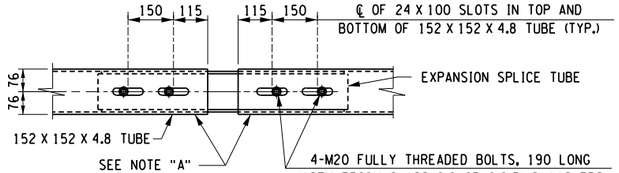
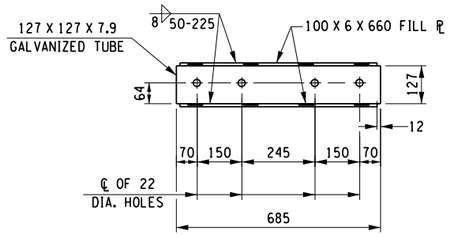


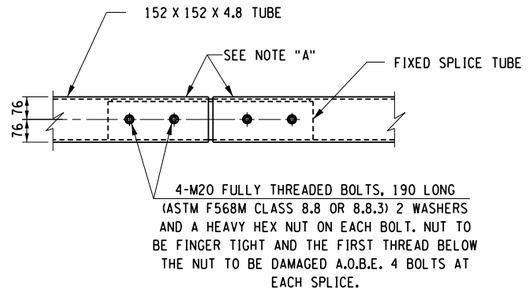

**PLAN**



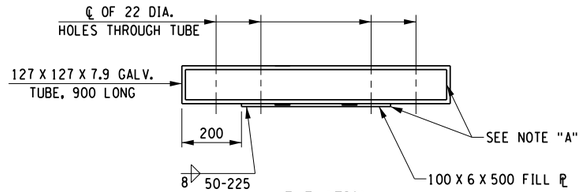

**PLAN**




**PLAN**

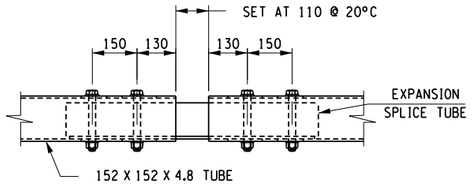



**PLAN**



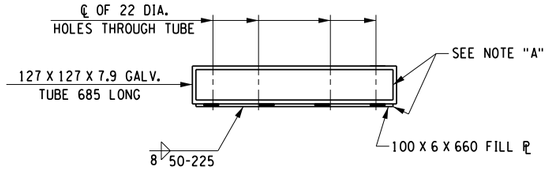

**ELEVATION**

## EXPANSION SPLICE TUBE



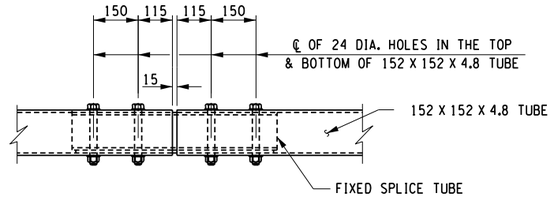

**ELEVATION**

## EXPANSION SPLICE ASSEMBLY




**ELEVATION**

## FIXED SPLICE TUBE




**ELEVATION**

## FIXED SPLICE ASSEMBLY




**PLAN**



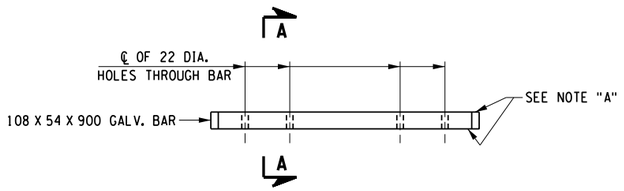

**PLAN**




**PLAN**

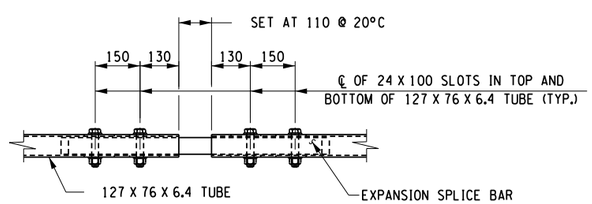



**PLAN**



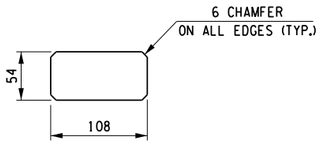

**ELEVATION**

## EXPANSION SPLICE BAR

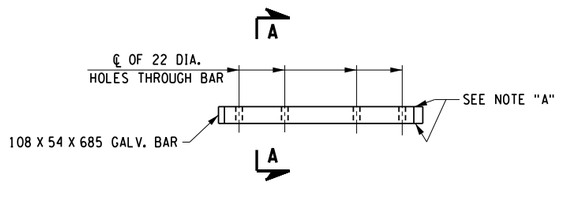



**ELEVATION**

## EXPANSION SPLICE ASSEMBLY

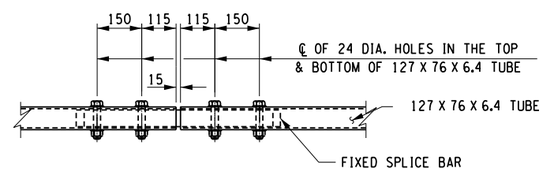



**SECTION A-A**




**ELEVATION**

## FIXED SPLICE BAR




**ELEVATION**

## FIXED SPLICE ASSEMBLY

NOTE "A":
PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

| PREPARED BY: ON: OCTOBER 2008 | ALTERED BY: ON: |
|---|---|

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE _____ DATE _____

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**TRANSITION BRIDGE RAILING DETAILS (3 OF 3)**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-32
SHEET NO. 84

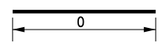
DOCUMENT NAME: 912032_cpb_RLG_04.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM | JOB MANAGER JRM | ESTIMATED BY RPJ | DESIGNED BY RPJ | DRAFTED BY SS | CHECKED BY RPJ

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032_cpb_RLG_04.dgn
DATE/TIME = 10/14/2008 10:54:29 AM
USER = ssingh

| MARK | NO. | LENGTH | TYPE | WEIGHT | A | B | C | D | E | F | G | H H1 | H2 | J | K K1 | K2 | L | O | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | |
| EAST APPROACH SLAB | | | | | | | | | | | | | | | | | | | |
| 16HE01 | 60 | 6.850 | N1 | 638 | | | | | | | | | | | | | | 6850 | |
| 16HE02 | 24 | 11.850 | N1 | 442 | | | | | | | | | | | | | | 11850 | |
| 16HE03 | 2 | 1.914 | 7 | 6 | | | 491 | 1423 | | | | 347 | | | 347 | | | | |
| 16HE04 | 2 | 1.738 | 7 | 6 | | | 376 | 1362 | | | | 266 | | | 266 | | | | |
| 16HE05 | 6 | 1.175 | N1 | 11 | | | | | | | | | | | | | | 1175 | |
| 16H06 | 60 | 6.850 | N1 | 638 | | | | | | | | | | | | | | 6850 | |
| 16H07 | 24 | 11.850 | N1 | 442 | | | | | | | | | | | | | | 11850 | |
| 16H08 | 2 | 1.914 | 7 | 6 | | | 491 | 1423 | | | | 347 | | | 347 | | | | |
| 16H09 | 2 | 1.738 | 7 | 6 | | | 376 | 1362 | | | | 266 | | | 266 | | | | |
| 16H10 | 6 | 1.175 | N1 | 11 | | | | | | | | | | | | | | 1175 | |
| | | | | | | | | | | | | | | | | | | | |
| EAST TOTAL PLAIN BARS = 1103 KG (INCLUDED IN ITEM 557.2002) | | | | | | | | | | | | | | | | | | | |
| EAST TOTAL EPOXY COATED BARS = 1103 KG (INCLUDED IN ITEM 557.2002) | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| WEST APPROACH SLAB | | | | | | | | | | | | | | | | | | | |
| 16HE01 | 60 | 6.850 | N1 | 638 | | | | | | | | | | | | | | 6850 | |
| 16HE02 | 24 | 11.850 | N1 | 442 | | | | | | | | | | | | | | 11850 | |
| 16HE03 | 2 | 1.914 | 7 | 6 | | | 491 | 1423 | | | | 347 | | | 347 | | | | |
| 16HE04 | 2 | 1.738 | 7 | 6 | | | 376 | 1362 | | | | 266 | | | 266 | | | | |
| 16HE05 | 6 | 1.175 | N1 | 11 | | | | | | | | | | | | | | 1175 | |
| 16H06 | 60 | 6.850 | N1 | 638 | | | | | | | | | | | | | | 6850 | |
| 16H07 | 24 | 11.850 | N1 | 442 | | | | | | | | | | | | | | 11850 | |
| 16H08 | 2 | 1.914 | 7 | 6 | | | 491 | 1423 | | | | 347 | | | 347 | | | | |
| 16H09 | 2 | 1.738 | 7 | 6 | | | 376 | 1362 | | | | 266 | | | 266 | | | | |
| 16H10 | 6 | 1.175 | N1 | 11 | | | | | | | | | | | | | | 1175 | |
| | | | | | | | | | | | | | | | | | | | |
| WEST TOTAL PLAIN BARS = 1103 KG (INCLUDED IN ITEM 557.2002) | | | | | | | | | | | | | | | | | | | |
| WEST TOTAL EPOXY COATED BARS = 1103 KG (INCLUDED IN ITEM 557.2002) | | | | | | | | | | | | | | | | | | | |



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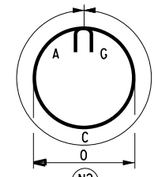

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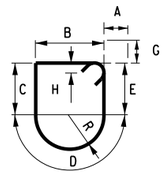

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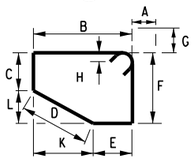

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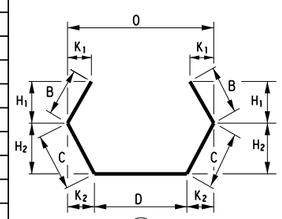

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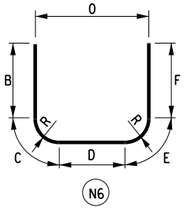

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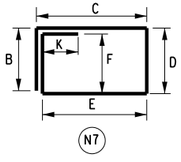

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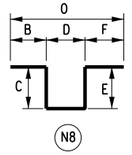

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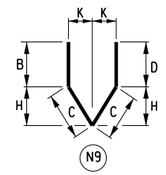

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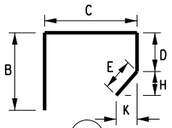

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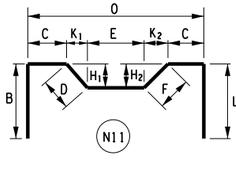
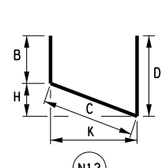


N11



N6



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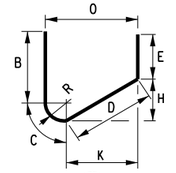

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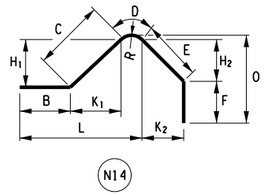

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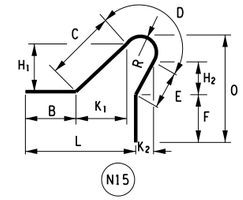

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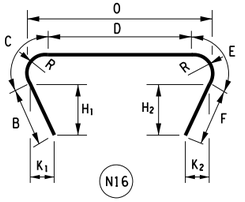

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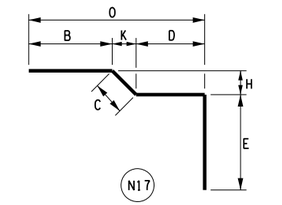

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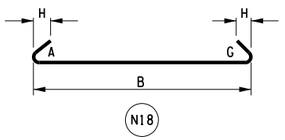

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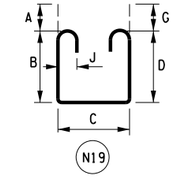

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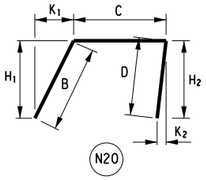

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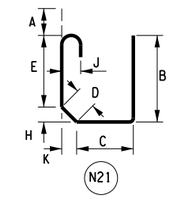

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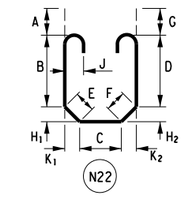

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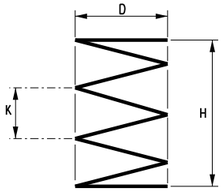

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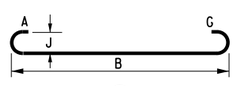

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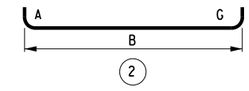

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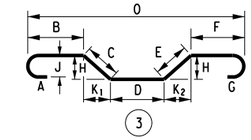

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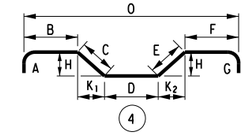

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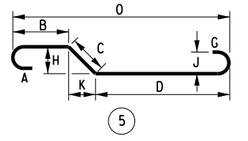

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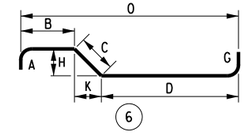

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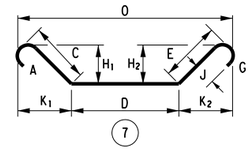

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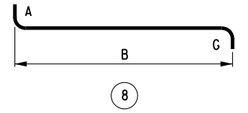

8

PREPARED BY:
ON: OCTOBER 2008

ALTERED BY:
ON:

STATE OF NEW YORK
JAMES R. McDUFFEE
069508
LICENSED PROFESSIONAL ENGINEER

AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN m UNLESS OTHERWISE NOTED

**BAR BENDING DIAGRAMS AND BAR LIST (1 OF 2)**

DELTA ENGINEERS

CONTRACT NUMBER D260931

DRAWING NO. ST-33
SHEET NO. 85

DOCUMENT NAME: 912032_cpb_tbl_bar_01.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM JOB MANAGER JRM ESTIMATED BY SS DRAFTED BY SS DESIGNED BY RPJ CHECKED BY RPJ CHECKED BY SS

FILE NAME = T:\2005\2005.166.115 RT 23 over Otego Creek\PIN 9120.32 Perm Bridge\Drawings\Structure\912032.cpb_tbl_bar_01.dgn
DATE/TIME = 10/14/2008 10:58:03 AM
USER = ssingh

| MARK | NO. | LENGTH | TYPE | WEIGHT | A | B | C | D | E | F | G | H H1 | H2 | J | K K1 | K2 | L | O | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EAST ABUTMENT | | | | | | | | | | | | | | | | | | | |
| POUR 1 - ABUTMENT LOWER STEM | | | | | | | | | | | | | | | | | | | |
| 16AE01 | 44 | 3.792 | N19 | 259 | | 1.496 | 0.800 | 1.496 | | | | | | | | | | | |
| 19AE02 | 7 | 12.900 | N1 | 202 | | | | | | | | | | | | | | 12.900 | |
| 19A03 | 9 | 12.900 | N1 | 259 | | | | | | | | | | | | | | 12.900 | |
| 16AE04 | 44 | 2.856 | N19 | 195 | | 1.028 | 0.800 | 1.028 | | | | | | | | | | | |
| 19A05 | 20 | 2.700 | N1 | 121 | | | | | | | | | | | | | | 2.700 | |
| 19AE06 | 44 | 2.476 | 1 | 243 | 0.200 | 2.076 | | | | | 0.200 | | | 0.155 | | | | | |
| 19A07 | 44 | 2.476 | 1 | 243 | 0.200 | 2.076 | | | | | 0.200 | | | 0.155 | | | | | |
| SUBTOTAL PLAIN BARS = | | | | | | 624 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 899 | KG | | | | | | | | | | | | |
| POUR 2 - NORTH WINGWALL | | | | | | | | | | | | | | | | | | | |
| 16A08 | 16 | 2.150 | N19 | 53 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| 16AE09 | 5 | 4.370 | N1 | 34 | | | | | | | | | | | | | | 4.370 | |
| 16AE10 | 7 | 2.560 | N1 | 28 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.370 m | | | | | | | | | 2.560 | |
| 16AE11 | 16 | 2.504 | N1 | 62 | | | | | NOTE: O VARIES FROM 1.525 m TO 3.482 m | | | | | | | | | 2.504 | |
| 16A12 | 7 | 4.370 | N1 | 47 | | | | | | | | | | | | | | 4.370 | |
| 16A13 | 7 | 2.560 | N1 | 28 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.370 m | | | | | | | | | 2.560 | |
| 16A14 | 16 | 2.504 | N1 | 62 | | | | | NOTE: O VARIES FROM 1.525 m TO 3.482 m | | | | | | | | | 2.504 | |
| 16AE15 | 21 | 2.150 | N19 | 70 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| SUBTOTAL PLAIN BARS = | | | | | | 191 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 194 | KG | | | | | | | | | | | | |
| POUR 3 - SOUTH WINGWALL | | | | | | | | | | | | | | | | | | | |
| 16A08 | 17 | 2.150 | N19 | 57 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| 16AE16 | 5 | 4.620 | N1 | 36 | | | | | | | | | | | | | | 4.620 | |
| 16AE17 | 7 | 2.685 | N1 | 29 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.620 m | | | | | | | | | 2.685 | |
| 16AE18 | 17 | 2.504 | N1 | 66 | | | | | NOTE: O VARIES FROM 1.525 m TO 3.482 m | | | | | | | | | 2.504 | |
| 16A19 | 7 | 4.620 | N1 | 50 | | | | | | | | | | | | | | 4.620 | |
| 16A20 | 7 | 2.685 | N1 | 29 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.620 m | | | | | | | | | 2.685 | |
| 16A21 | 17 | 2.504 | N1 | 66 | | | | | NOTE: O VARIES FROM 1.525 m TO 3.482 m | | | | | | | | | 2.504 | |
| 16AE15 | 22 | 2.150 | N19 | 73 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| SUBTOTAL PLAIN BARS = | | | | | | 202 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 204 | KG | | | | | | | | | | | | |
| POUR 4 - UPPER STEM | | | | | | | | | | | | | | | | | | | |
| 19AE02 | 4 | 12.900 | N1 | 115 | | | | | | | | | | | | | | 12.900 | |
| 19AE22 | 8 | 2.700 | N1 | 48 | | | | | | | | | | | | | | 2.700 | |
| 19AE23 | 4 | 0.800 | N1 | 7 | | | | | | | | | | | | | | 0.800 | |
| 19A03 | 6 | 12.900 | N1 | 173 | | | | | | | | | | | | | | 12.900 | |
| 16AE15 | 44 | 2.150 | N19 | 147 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| 16AE24 | 34 | 1.150 | 1 | 61 | 0.175 | 0.800 | | | | | 0.175 | | | 0.130 | | | | | |
| 13AE25 | 3 | 12.900 | N1 | 38 | | | | | | | | | | | | | | 12.900 | |
| SUBTOTAL PLAIN BARS = | | | | | | 173 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 417 | KG | | | | | | | | | | | | |
| EAST ABUTMENT TOTAL PLAIN BARS = | | | | | | 1190 | KG | | | | | | | | | | | | |
| EAST ABUTMENT TOTAL EPOXY COATED BARS = | | | | | | 1714 | KG | | | | | | | | | | | | |

| MARK | NO. | LENGTH | TYPE | WEIGHT | A | B | C | D | E | F | G | H H1 | H2 | J | K K1 | K2 | L | O | R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WEST ABUTMENT | | | | | | | | | | | | | | | | | | | |
| POUR 1 - ABUTMENT LOWER STEM | | | | | | | | | | | | | | | | | | | |
| 16AE01 | 44 | 3.768 | N19 | 257 | | 1.484 | 0.800 | 1.484 | | | | | | | | | | | |
| 19AE02 | 7 | 12.900 | N1 | 201 | | | | | | | | | | | | | | 12.900 | |
| 19A03 | 9 | 12.900 | N1 | 259 | | | | | | | | | | | | | | 12.900 | |
| 16AE04 | 44 | 2.866 | N19 | 196 | | 1.033 | 0.800 | 1.033 | | | | | | | | | | | |
| 19A05 | 20 | 2.700 | N1 | 121 | | | | | | | | | | | | | | 2.700 | |
| 19AE06 | 44 | 2.473 | 1 | 243 | 0.200 | 2.073 | | | | | 0.200 | | | 0.155 | | | | | |
| 19A07 | 44 | 2.473 | 1 | 243 | 0.200 | 2.073 | | | | | 0.200 | | | 0.155 | | | | | |
| SUBTOTAL PLAIN BARS = | | | | | | 623 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 897 | KG | | | | | | | | | | | | |
| POUR 2 - SOUTH WINGWALL | | | | | | | | | | | | | | | | | | | |
| 16A08 | 16 | 2.150 | N19 | 53 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| 16AE09 | 5 | 4.330 | N1 | 34 | | | | | | | | | | | | | | 4.330 | |
| 16AE10 | 7 | 2.540 | N1 | 28 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.330 m | | | | | | | | | 2.540 | |
| 16AE11 | 16 | 2.505 | N1 | 62 | | | | | NOTE: O VARIES FROM 1.535 m TO 3.475 m | | | | | | | | | 2.505 | |
| 16A12 | 7 | 4.330 | N1 | 47 | | | | | | | | | | | | | | 4.330 | |
| 16A13 | 7 | 2.540 | N1 | 28 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.330 m | | | | | | | | | 2.540 | |
| 16A14 | 16 | 2.505 | N1 | 62 | | | | | NOTE: O VARIES FROM 1.535 m TO 3.475 m | | | | | | | | | 2.505 | |
| 16AE15 | 21 | 2.150 | N19 | 70 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| SUBTOTAL PLAIN BARS = | | | | | | 190 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 193 | KG | | | | | | | | | | | | |
| POUR 3 - NORTH WINGWALL | | | | | | | | | | | | | | | | | | | |
| 16A08 | 18 | 2.150 | N19 | 60 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| 16AE16 | 5 | 4.830 | N1 | 37 | | | | | | | | | | | | | | 4.830 | |
| 16AE17 | 8 | 2.790 | N1 | 35 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.830 m | | | | | | | | | 2.790 | |
| 16AE18 | 18 | 2.628 | N1 | 73 | | | | | NOTE: O VARIES FROM 1.535 m TO 3.721 m | | | | | | | | | 2.628 | |
| 16A19 | 7 | 4.830 | N1 | 52 | | | | | | | | | | | | | | 4.830 | |
| 16A20 | 8 | 2.790 | N1 | 35 | | | | | NOTE: O VARIES FROM 0.750 m TO 4.830 m | | | | | | | | | 2.790 | |
| 16A21 | 18 | 2.628 | N1 | 73 | | | | | NOTE: O VARIES FROM 1.535 m TO 3.721 m | | | | | | | | | 2.628 | |
| 16AE15 | 23 | 2.150 | N19 | 77 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| SUBTOTAL PLAIN BARS = | | | | | | 221 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 222 | KG | | | | | | | | | | | | |
| POUR 4 - UPPER STEM | | | | | | | | | | | | | | | | | | | |
| 19AE02 | 4 | 12.900 | N1 | 115 | | | | | | | | | | | | | | 12.900 | |
| 19AE22 | 8 | 2.700 | N1 | 48 | | | | | | | | | | | | | | 2.700 | |
| 19AE23 | 4 | 0.800 | N1 | 7 | | | | | | | | | | | | | | 0.800 | |
| 19A03 | 6 | 12.900 | N1 | 173 | | | | | | | | | | | | | | 12.900 | |
| 16AE15 | 44 | 2.150 | N19 | 147 | | 0.675 | 0.800 | 0.675 | | | | | | | | | | | |
| 16AE24 | 34 | 1.150 | 1 | 61 | 0.175 | 0.800 | | | | | 0.175 | | | 0.130 | | | | | |
| 13AE25 | 3 | 12.900 | N1 | 38 | | | | | | | | | | | | | | 12.900 | |
| SUBTOTAL PLAIN BARS = | | | | | | 173 | KG | | | | | | | | | | | | |
| SUBTOTAL EPOXY COATED BARS = | | | | | | 417 | KG | | | | | | | | | | | | |
| WEST ABUT. TOTAL PLAIN BARS = | | | | | | 1206 | KG | | | | | | | | | | | | |
| WEST ABUT. TOTAL EPOXY COATED BARS = | | | | | | 1730 | KG | | | | | | | | | | | | |

PREPARED BY: NAGAPPA RAVINDRA
ON: OCTOBER 2008

ALTERED BY:
ON:


AS BUILT REVISIONS
DESCRIPTION OF WORK:

SIGNATURE

DATE

NY ROUTE 23 OVER OTEGO CREEK
SH 1302 MORRIS - ONEONTA
TOWN OF ONEONTA

COUNTY: OTSEGO

PIN 9120.32
PS&E DATE OCT. 23, 2008

BRIDGES 1017580

CULVERTS

ALL DIMENSIONS IN mm UNLESS OTHERWISE NOTED

**BAR LIST (2 OF 2)**

RAVI ENGINEERING & LAND SURVEYING, P.C.
CONSULTING ENGINEERS & SURVEYORS

CONTRACT NUMBER D260931

DRAWING NO. ST-34
SHEET NO. 86

DOCUMENT NAME: 912032af_plt.dgn

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 9

DESIGN SUPERVISOR JRM | JOB MANAGER JRM | ESTIMATED BY MDB | DESIGNED BY MDB | DRAFTED BY AJC | CHECKED BY GTK | CHECKED BY GTK

USER = ACretelle
FILE NAME = S:\2005\54A - Rt 23 over Otego Creek\DRAWINGS\912032af_plt.dgn
DATE/TIME = 10/14/2008