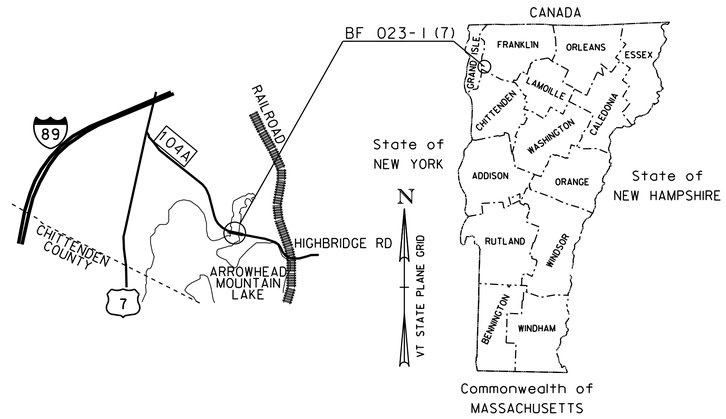
NOTE TO REVIEWER

1. DUE TO RECENT HYDRAULIC INFORMATION THE SUBSTRUCTURE TYPE WILL BE CHANGED TO A DEEP FOUNDATION. PLANS WILL BE UPDATED IN THE NEXT SUBMISSION.

STATE OF VERMONT
AGENCY OF TRANSPORTATION





PROPOSED IMPROVEMENT
BRIDGE PROJECT

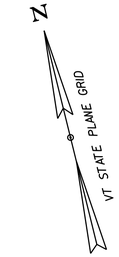
TOWN OF GEORGIA
COUNTY OF FRANKLIN

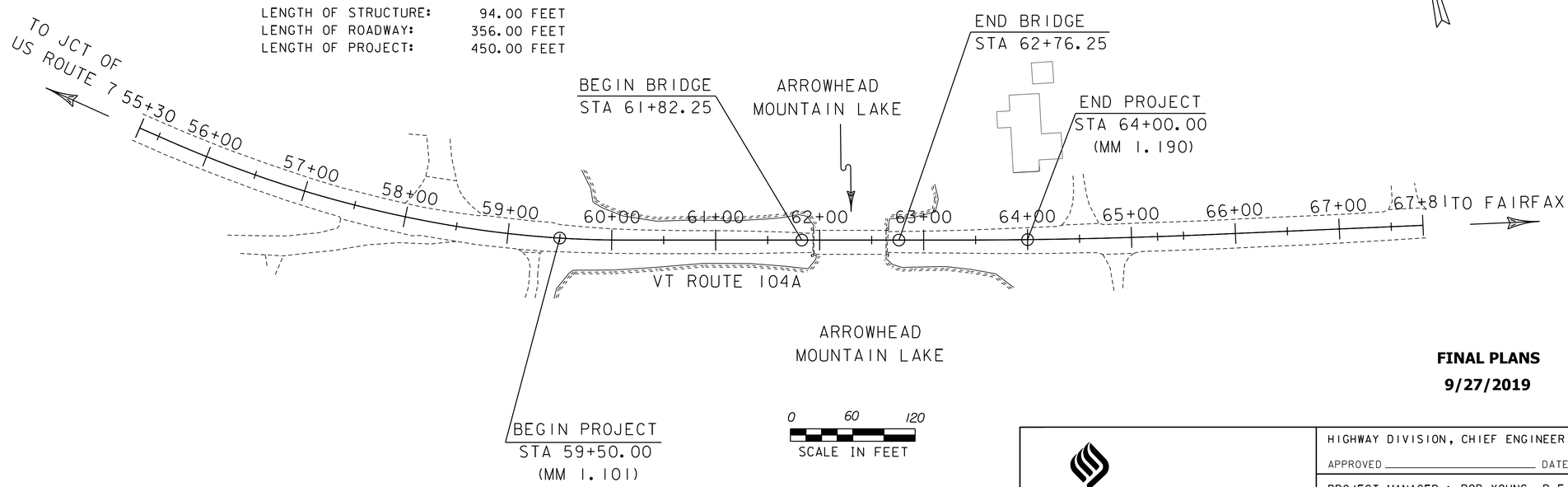
ROUTE NO : VT ROUTE 104A, (MINOR ARTERIAL) OVER ARROWHEAD MOUNTAIN LAKE BRIDGE NO : 1

PROJECT LOCATION: BRIDGE REPLACEMENT: APPROXIMATELY 1.1 MILES EAST OF THE JUNCTION WITH US ROUTE 7.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW BRIDGE ON THE EXISTING ALIGNMENT WITH RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE:	94.00 FEET
LENGTH OF ROADWAY:	356.00 FEET
LENGTH OF PROJECT:	450.00 FEET





FINAL PLANS
9/27/2019

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 1
SURVEYED BY : VTRANS SURVEYED DATE : OCTOBER 23, 2018
DATUM VERTICAL NAVD 88 HORIZONTAL NAD83 (2011)

McFarland Johnson

HIGHWAY DIVISION, CHIEF ENGINEER
APPROVED _____ DATE _____

PROJECT MANAGER : ROB YOUNG, P.E.

PROJECT NAME : GEORGIA
PROJECT NUMBER : BF 023-1 (7)

SHEET 1 OF 48 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

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STANDARDS LIST

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E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	03-10-2017
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11-15-2002
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	02-02-2017
T-1	TRAFFIC CONTROL GENERAL NOTES	04-25-2016
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T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-2012
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T-42	BRIDGE NUMBER PLAQUE	04-09-2014
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DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	2/9/2012
SD-502.00	CONCRETE DETAILS AND NOTES	10/10/2012
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011
HSD-400.01	SAFETY EDGE DETAILS	1/5/2018
HSD-621.07	MIDWEST GUARDRAIL SYSTEM (MGS)	4/17/2019
HSD-621.07I	MIDWEST GUARDRAIL SYSTEM TRANSITION SECTION	4/17/2019

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2021	5700	690	65	2.5	410
2041	6200	740	65	3.3	580

20 year ESAL for flexible pavement from 2021 to 2041 : 3558000

40 year ESAL for flexible pavement from 2021 to 2061 : 8288000

Design Speed : 50 mph

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: September, 2019

DRAINAGE AREA : 8.3 sq. mi.
CHARACTER OF TERRAIN : Agriculture and light residential development
STREAM CHARACTERISTICS : Low gradient wetland observing moderate deposition
NATURE OF STREAMBED : Predominantly sand and silt

PEAK FLOW DATA - ANNUAL EXCEEDANCE PROBABILITY (AEP)

43% =	210 cfs	2% =	600 cfs
10% =	380 cfs	1% =	700 cfs
4% =	500 cfs	0.2% =	1,000 cfs

DATE OF FLOOD OF RECORD 2011
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: 290.0 ft.
NATURAL STREAM VELOCITY : -
ICE CONDITIONS : Moderate
DEBRIS: Light
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
IF YES, DESCRIBE: Arrowhead Mountain Lake water surface elevations are controlled by the Clark Falls Dam**

WATERSHED STORAGE: 4.4% HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE: X

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span rolled beam bridge with skeletal abutments
YEAR BUILT: 1937
CLEAR SPAN(NORMAL TO STREAM): 69 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 9.2 ft. (approximate)
WATERWAY OF FULL OPENING: 160 sq. ft.
DISPOSITION OF STRUCTURE: Remove and replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: See borings

WATER SURFACE ELEVATIONS AT:

43% AEP =	**	VELOCITY =	-
10% AEP =	**	"	-
4% AEP =	**	"	-
2% AEP =	**	"	-
1% AEP =	**	"	-

LONG TERM STREAMBED CHANGES: Evidence of slight historic incision, with moderate widening and aggradation occurring in the channel upstream of this wetland.

IS THE ROADWAY OVERTOPPED BELOW 1% AEP: No
FREQUENCY: -
RELIEF ELEVATION: 293.9 ft.
DISCHARGE OVER ROAD @ 1% AEP: -

UPSTREAM STRUCTURE

TOWN: **Georgia** DISTANCE: 0.7 mi.
HIGHWAY # : - STRUCTURE #: -
CLEAR SPAN: - CLEAR HEIGHT: -
YEAR BUILT: - FULL WATERWAY: -
STRUCTURE TYPE: Confluence - Deer Brook and unnamed stream with A.M. Lake*

DOWNSTREAM STRUCTURE

TOWN: **Milton** DISTANCE: 3.2 mi.
HIGHWAY # : - STRUCTURE #: -
CLEAR SPAN: - CLEAR HEIGHT: -
YEAR BUILT: 1937 FULL WATERWAY: -
STRUCTURE TYPE: Green Mountain Power's Clark Falls Hydroelectric Dam

PROPOSED STRUCTURE

STRUCTURE TYPE: Single-span bridge with steel plate girders

CLEAR SPAN(NORMAL TO STREAM): 87 ft.
VERTICAL CLEARANCE ABOVE STREAMBED: 9.6 ft. (approximate)
WATERWAY OF FULL OPENING: 180 sq. ft.

WATER SURFACE ELEVATIONS AT:

43% AEP =	**	VELOCITY=	-
10% AEP =	**	"	-
4% AEP =	**	"	-
2% AEP =	**	"	-
1% AEP =	**	"	-

IS THE ROADWAY OVERTOPPED BELOW 1% AEP: No
FREQUENCY: -
RELIEF ELEVATION: 294.5 ft.
DISCHARGE OVER ROAD @ 1% AEP: -

BRIDGE LOW CHORD ELEVATION: 290.5 ft.
FREEBOARD: **

SCOUR: Total scour at 1% AEP = 4.9 ft.

REQUIRED CHANNEL PROTECTION: N/A

PERMIT INFORMATION

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

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: -
CLEAR SPAN (NORMAL TO STREAM): -
VERTICAL CLEARANCE ABOVE STREAMBED: -
WATERWAY AREA OF FULL OPENING: -

ADDITIONAL INFORMATION

* - Georgia BR-1 crosses a wetland extension of Arrowhead Mountain Lake (A.M. Lake)
** - Water surface elevations in the A.M. Lake are actively controlled by the Clark Falls Dam.
This dam has an operating range of 287.5 ft. to 290.0 ft.

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
TONNAGE	**20**	**36**	**36**	**66**	**30**	**34.5**	**38**
INVENTORY	2.89	1.34					
POSTING							
OPERATING	3.75	1.73	2.32	1.48	2.2	1.96	2.03
COMMENTS:	Truck + Lane Governs HL-93 Rating						

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. PEDESTRIAN ACCOMODATIONS ARE NOT NECESSARY

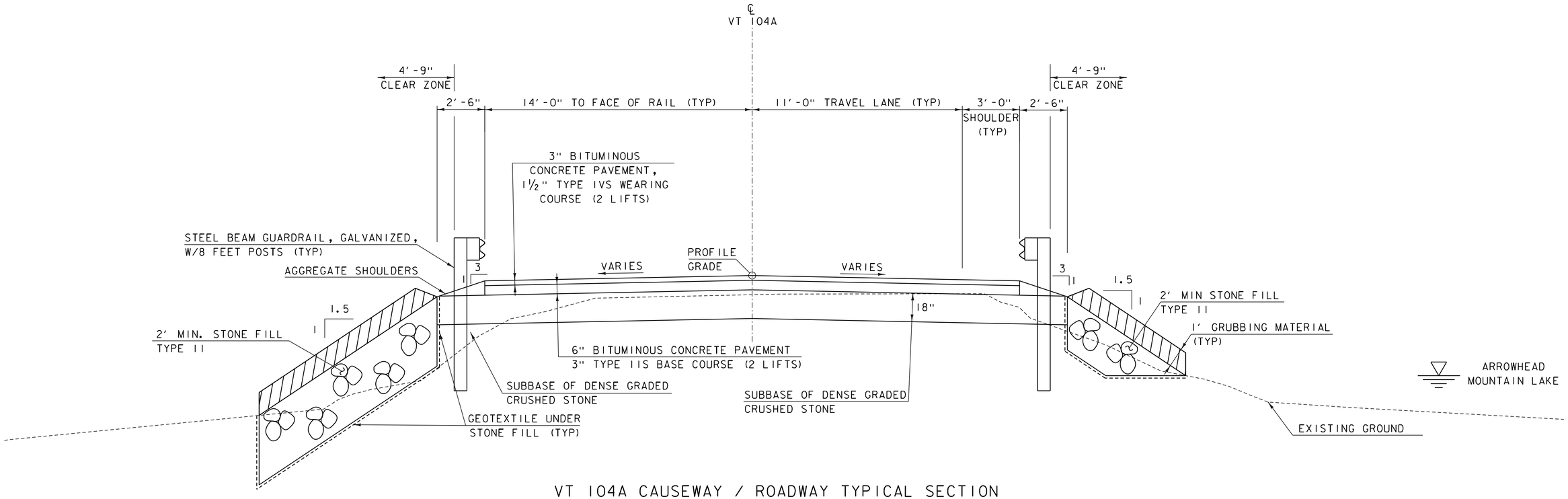
DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_P:	3.0 INCH
3. DESIGN SPAN	L:	90.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	- - -
5. PRESTRESSING STRAND	f_y:	- - -
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	- - -
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	- - -
8. HIGH PERFORMANCE CONCRETE, CLASS PCD	f'_c:	4.0 KSI
9. HIGH PERFORMANCE CONCRETE, CLASS PCS	f'_c:	3.5 KSI
10. CONCRETE HIGH PERFORMANCE, CLASS PSS	f'_c:	4.0 KSI
11. CONCRETE, CLASS C	f'_c:	3.0 KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	50 KSI
14. FACTORED BEARING RESISTANCE OF SOIL (ABUT. 1)	q_n:	6.8 KSF
15. SOIL BEARING RESISTANCE FACTOR (ABUTMENT 1)	ϕ:	--
16. FACTORED BEARING RESISTANCE OF SOIL (ABUT. 2)	q_n:	4.8 KSF
17. SOIL BEARING RESISTANCE FACTOR (ABUTMENT 1)	ϕ:	--
18. PILE RESISTANCE FACTOR	ϕ:	--
19. LATERAL PILE DEFLECTION	Δ:	-- INCH
20. BASIC WIND SPEED	V_{3s}:	- - -
21. MINIMUM GROUND SNOW LOAD	p_g:	- - -
22. SEISMIC DATA PGA: - - -	S_s:	- - -
	S_1:	- - -
23.		
24.		- - -
25.		- - -
26.		- - -

PROJECT NAME: **GEORGIA**
PROJECT NUMBER: **BF 023-1(7)**

FILE NAME: **PI Sheet Builder_v008-20c.xls**
PROJECT LEADER: **R. YOUNG**
DESIGNED BY: **D. KULL**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 9/27/2019
DRAWN BY: **D. DEPAOLO**
CHECKED BY: **R. JOY**
SHEET 2 OF 48



VT 104A CAUSEWAY / ROADWAY TYPICAL SECTION

SCALE ⅜" = 1'-0"
STA 59+50 TO STA 64+00

MATERIAL REQUIREMENTS

	THICKNESS	DESCRIPTION
BINDER	70-28	PERFORMANCE GRADE ASPHALT BINDER
GYRATION	65	DESIGN NUMBER OF GYRATIONS
WEARING COURSE #2	1½"	SPECIAL PROVISION (SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (*TYPE IVS))
WEARING COURSE #1	1½"	SPECIAL PROVISION (SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (*TYPE IVS))
BASE COURSE #2	3"	SPECIAL PROVISION (SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, (*TYPE IIS))
BASE COURSE #1	3"	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY (*TYPE IIS))
EMULSIFIED ASPHALT	---	STANDARD SPECIFICATIONS TABLE 406.12A
SUBBASE	18"	SUBBASE OF DENSE GRADED CRUSHED STONE
TOPSOIL	4"	TOPSOIL

MATERIAL TOLERANCES

(IF USED ON PROJECT)

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

NOTES

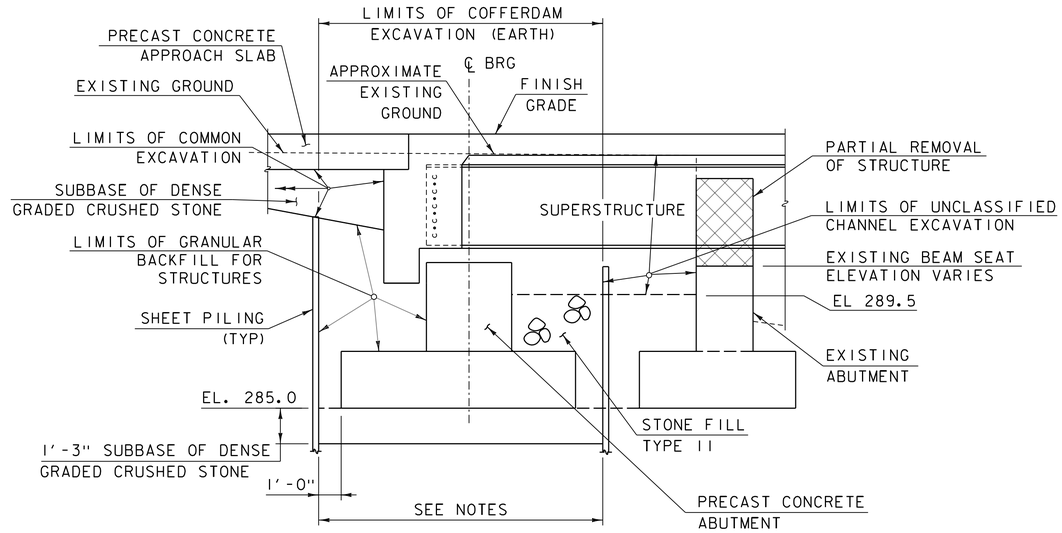
1. BITUMINOUS CONCRETE PAVEMENT WILL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)"
2. SLOPE AREAS OUTSIDE THE LIMITS OF STONE FILL TYPE II SHALL BE STABILIZED WITH 4" TOPSOIL AND SEED.

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

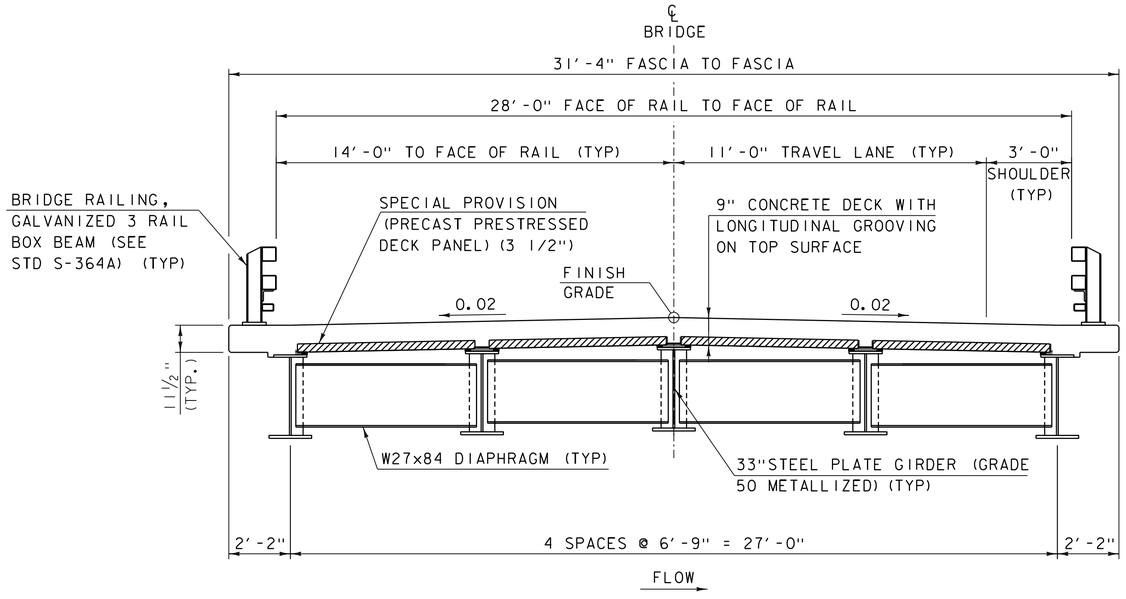
FILE NAME: z18b265typ.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
TYPICAL ROADWAY SECTION

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: B. COLBURN
SHEET 3 OF 48



ABUTMENT EARTHWORK TYPICAL SECTION

NOT TO SCALE



BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

COFFERDAM NOTES

1. COFFERDAM DIMENSIONS TO BE DETERMINED BY THE CONTRACTOR

2. THE PAY LIMITS OF THE COFFERDAM EXCAVATION (EARTH) ITEMS SHALL BE 1 FOOT OUTSIDE OF THE HORIZONTAL LIMITS OF THE FOOTING OR AND FROM THE BOTTOM OF EXCAVATION UP TO THE EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER. NO CHANGES TO THESE LIMITS WILL BE MADE FOR ENCOUNTERING OBSTRUCTION UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER, ANY EXCAVATION OUTSIDE OF THE IDENTIFIED PAY LIMITS WILL BE MADE AT THE CONTRACTOR'S EXPENSE.

3. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION. NO MEASUREMENT AND PAYMENT WILL BE MADE FOR COFFERDAM EXCAVATION AND GRANULAR BACKFILL FOR STRUCTURES OUTSIDE THE PAY LIMITS DEFINED IN NOTE 2.

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265typ.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
TYPICAL BRIDGE SECTION

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 4 OF 48

PROJECT NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2018, THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8th EDITION, AND THEIR LATEST REVISIONS.

2. ALL PRECAST CONCRETE ELEMENTS SHALL BE FABRICATED TO THE SPECIFIED DIMENSIONS WITHIN THE TOLERANCES DICTATED IN THE PRECAST/PRESTRESSED CONCRETE INSTITUTE TOLERANCE MANUAL FOR PRECAST AND PRESTRESSED CONCRETE CONSTRUCTION, MNL 135-00, AND ITS LATEST REVISIONS OR AS DIRECTED IN THE CONTRACT DOCUMENTS.

3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

4. THE BRIDGE IS DESIGNED FOR HL-93 LIVE LOAD WITH A 3.0 INCH ALLOWANCE FOR FUTURE PAVEMENT.

5. THE REMOVAL OF EXISTING STRUCTURE WILL BE PAID FOR UNDER ITEM 529.15 "REMOVAL OF STRUCTURE (3720 SF-EST.)". THIS WORK SHALL INCLUDE REMOVAL OF THE ENTIRE SUPERSTRUCTURE, AND ANY PORTIONS OF ABUTMENTS ABOVE THE ELEVATIONS GIVEN BELOW, WHICH FALL OUTSIDE THE LIMITS OF ANY OTHER EXCAVATION ITEM.

   ABUTMENT 1 – REMOVE ABOVE BEAM SEAT (APPROXIMATE ELEVATION 290.1)

   ABUTMENT 2 – REMOVE ABOVE BEAM SEAT (APPROXIMATE ELEVATION 289.95)

6. BRIDGE PLAQUES SHALL BE FURNISHED FOR EACH BRIDGE BY THE AGENCY. LOCATION OF PLAQUES SHALL BE SHOWN ON THE ABUTMENT PLANS. SEE SD-502.00 FOR FURTHER DETAIL.

TRAFFIC CONTROL

7. THE CONTRACTOR SHALL IMPLEMENT THE ROAD CLOSURE, TRAFFIC CONTROL, AND DETOUR AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A SITE-SPECIFIC TRAFFIC CONTROL PLAN FOR ANY STAGES OF CONSTRUCTION NOT SHOWN IN THE PLANS. THE PLAN SHALL CLEARLY DETAIL HOW TRAFFIC WILL BE MAINTAINED. THE PLAN SHALL SPECIFY ALL CONSTRUCTION ACTIVITIES REQUIRING ALTERNATING ONE WAY TRAFFIC, RELATE THOSE ACTIVITIES TO THE CONSTRUCTION SCHEDULE, AND SHOW APPROPRIATE TEMPORARY TRAFFIC CONTROL. THE CONTRACTOR SHALL SUBMIT DETAILED TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL PER SUBSECTION 105.03. ALL COSTS WILL BE INCLUDED IN ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE".

8. ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOKN(SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

9. FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE". IF THE CONTRACTOR MUST TEMPORARILY CLOSE A DRIVE, NOTIFY THE PROPERTY OWNER 24 HOURS BEFORE THE CLOSURE. WORK WITH THE PROPERTY OWNER TO ACCOMMODATE THEIR ACCESS DURING THE CLOSURE.

10. INSTALLATION OF TEMPORARY TRAFFIC CONTROL SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES. TRY TO MAINTAIN AT LEAST 200 FEET BETWEEN SIGN ASSEMBLIES

EARTHWORK

11. THE CONTRACTOR SHALL PROVIDE A SITE-SPECIFC EROSION PREVENTION AND SEDIMENT CONTROL PLAN IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. PLAN IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ESTIMATED QUANTITIES FOR EPSC WORK HAVE BEEN INCLUDED IN THE CONTRACT FOR BIDDING PURPOSES. IF THE CONTRACTORS EPSC PLAN REQUIRES ITEMS OF WORK THAT ARE NOT INCLUDED IN THE PLANS IT SHALL BE PAID FOR AS PART OF ITEM 653.03 MAINTENANCE OF EPSC PLAN.

12. THE "STONE FILL, TYPE II" UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE STEEL GIRDERS ARE SET.

13. TEMPORARY CONSTRUCTION FILLS WITHIN THE WATERCOURSE FOR ANY PURPOSE SHALL CONSIST OF CLEAN STONE FILL ONLY.

STRUCTURAL STEEL

14. SOME OF THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.

15. UNLESS OTHERWISE NOTED, ALL NEW STRUCTURAL STEEL WILL BE PAID FOR UNDER ITEM 506.55 "STRUCTURAL STEEL, PLATE GIRDER (METALLIZED) (FPQ)".

16. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4 FEET. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

17. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.

18. AFTER THE GIRDERS HAVE BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF THE GIRDERS AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING THE HEIGHT OF THE DECK PANEL BEDDING STRIPS. AFTER THE DECK PANELS HAVE BEEN SET AND BEFORE THE GROUT BED IS PLACED, THE CONTRACTOR SHALL RE-PROFILE THE TOP FLANGES OF THE GIRDERS AS DIRECTED BY THE ENGINEER, FOR USE IN DETERMINING SCREED RAIL ELEVATIONS AND CHAIR HEIGHTS FOR REINFORCING STEEL.

19. ENDS OF GIRDERS ARE TO BE VERTICAL IN FINAL POSITION.

20. BEAM WEBS SHALL BE PLUMB IN FINAL POSITION.

CONCRETE AND REINFORCING STEEL

21. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, WITH THE EXCEPTION OF THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES. THE SUBSTRUCTURE SHALL RECEIVE A MINIMUM OF ONE COAT AND THE SUPERSTRUCTURE SHALL RECEIVE A MINIMUM OF TWO COATS OF WATER REPELLENT, SILANE.

22. THE DECK IS TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF THE DECK PLACEMENT CANNOT BE COMPLETED, FOR SOME REASON, A CONSTRUCTION JOINT SHALL BE USED. A 96 HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S PLACEMENT AND THE BEGINNING OF ANY OTHER ADJACENT SEGMENT SHALL BE OBSERVED.

23. THE EFFECTIVE CURE TIME OF THE BRIDGE RAIL TRANSITION BARRIER MAY BE REDUCED TO A MINIMUM OF (7) SEVEN DAYS PROVIDED THAT THE CONCRETE HAS REACHED 85% OF THE DESIGN COMPRESSIVE STRENGTH (f'c). THE BRIDGE RAIL SHALL MEET ALL OTHER SPECIFICATIONS OF SECTION 501 OF THE STANDARD SPECIFICATIONS.

24. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH:	2 INCH
ALONG TOP SURFACE OF DECK SLAB:	3 INCH
ALONG BOTTOM SURFACE OF DECK SLAB:	1-1/2 INCH
ELSEWHERE UNLESS OTHERWISE NOTED:	3 INCH

25. THERE SHALL BE 3" COVER ON THE TOP SURFACE OF THE DECK SLAB INITIALLY. AFTER FINAL GRINDING, A MINIMUM COVER OF 2-1/2" COVER SHALL BE MAINTAINED ACROSS THE DECK.

26. ALL FORM SUPPORTS AND FORM TIES THAT ARE TO REMAIN PERMANENTLY IN THE CONCRETE ABOVE THE BRIDGE SEAT SHALL BE GALVANIZED AND CONFORM TO SECTION 726 OF THE STANDARD SPECIFICATIONS. PAYMENT WILL BE CONSIDERED INCIDENTAL TO SUPERSTRUCTURE ITEMS.

27. THE MINIMUM CONCRETE STRENGTHS REQUIRED BEFORE SUBSEQUENT CONSTRUCTION ACTIVITIES SHALL BE AS NOTED BELOW:

ABUTMENT CLOSURE POURS:	1500 PSI BEFORE STEM PLACEMENT
CONCRETE IN ABUTMENT VOIDS:	1500 PSI BEFORE BEARING PLACMEENT
TRANSITION BARRIER:	2000 PSI BEFORE BRIDGE RAIL PLACEMENT

28. CONCRETE AND REINFORCING STEEL SHALL MEET THE FOLLOWING REQUIREMENTS:

CONCRETE		REINFORCING STEEL	
STRUCTURAL ELEMENT	CONTRACT ITEM	TO MEET REQUIREMENTS OF:	PAYMENT TO BE INCLUDED IN:
Bridge Deck (f'c=4ksi)	Item 501.37 "High Performance Concrete (Class PCD)"	Level III	Item 507.13, "Reinforcing Steel Level III"
Transition Barrier (f'c=4ksi)	Item 501.37 "High Performance Concrete (Class PCD)"	Level III	Item 507.13, "Reinforcing Steel Level III"
Precast Abutments and Footings (f'c=3.5ksi)	Item 540.1 "Precast Concrete Structure)"	Level I (Epoxy Coated)	Item 540.10, "Precast Concrete Structure", as appropriate
Abutment Void and Footing Closure Pour Concrete (f'c=3.5ksi)	Item 900.608 "Special Provision (High Performance Concrete, Rapid Set)"	Level III	Item 507.13, "Reinforcing Steel Level III"
Precast Approach Slabs (f'c=3.5ksi)	Item 540.1 "(Precast Concrete Structure)"	Level III	Item 540.10, "Precast Concrete Structure", as appropriate
Approach Slab Closure Pour Concrete (f'c=5 ksi)	Item 900.608 "Special Provision (High Performance Concrete, Rapid Set)"	Level III	Item 507.13, "Reinforcing Steel Level III"

PRECAST PRESTRESSED DECK PANELS

29. DESIGN VALUES:

    - CONCRETE COMPRESSIVE STRENGTH: f'c = 5 KSI
    - CONCRETE COMPRESSIVE STRENGTH AT RELEASE: f'ci = 4 KSI
    - PRESTRESSING STRANDS: 0.375 INCH DIAMETER, 270 KSI, LOW-RELAXATION 7- WIRE STRANDS
    - JACKING FORCE PER PRESTRESSING STRAND = 17.2 KIPS
    - ASSUMED MODULUS OF ELASTICITY FOR THE STRAND IS 28,500 KSI.

30. BEDDING STRIPS ACTING AS TEMPORARY SUPPORTS FOR THE PANELS SHALL BE CUT TO THE REQUIRED HEIGHT AFTER THE GIRDERS HAVE BEEN ERECTED AND PROFILED

31. THE MINIMUM HEIGHT OF THE BEDDING STRIPS IS 1". IF THIS CANNOT BE MET, THE PROFILE GRADE MUST BE ADJUSTED.

32. BEDDING STRIPS SHALL BE HIGH-DENSITY EXTRUDED POLYSTYRENE WITH A MINIMUM COMPRESSIVE STRENGTH OF 60 PSI MEETING THE REQUIREMENTS OF SUBSECTION 735.01.

33. BEDDING STRIPS SHALL BE ATTACHED TO THE TOP FLANGE OF THE GIRDERS WITH AN APPROVED HIGH STRENGTH ADHESIVE. THE ADHESIVE SHALL BE ALLOWED TO CURE PER THE MANUFACTURER'S INSTRUCTIONS BEFORE SETTING PANELS.

34. TEMPORARY BRACING BETWEEN PANELS SHALL BE PROVIDED AS REQUIRED TO PREVENT PANEL MOVEMENT TRANSVERSE TO THE GIRDERS.

35. PANELS SHALL NOT BE USED TO SUPPORT HEAVY LOADS UNTIL THE FULL DECK IS CAST AND CURED.

36. MORTAR, TYPE IV WITH EXPANSIVE ADDITIVES THAT REQUIRE ALL SURFACES TO BE CONFINED SHALL NOT BE USED FOR THE GROUT BEDS UNLESS THE CONTRACTOR PROVIDES A METHOD AND MEANS FOR CONFINEMENT THAT IS ACCEPTABLE TO THE ENGINEER.

37. ALL COSTS ASSOCIATED WITH PROVIDING AND PLACING BEDDING STRIPS AND MORTAR FOR GROUT BEDS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 900.670, SPECIAL PROVISION (PRECAST PRESTRESSED CONCRETE DECK PANEL)(3 1/2").

PRECAST ABUTMENTS

38. ABUTMENT FOOTING AND STEMS SHALL BE PRECAST WITH PAYMENT INCLUDED IN THE APPROPRIATE PRECAST PAY ITEMS. INCLUDE ALL WORK NECESSARY TO FABRICATE, DELIVER, AND ASSEMBLE EACH UNIT COMPLETE AND IN-PLACE AS SHOWN ON THE PLANS. ALL APPURTENANCES WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PRECAST CONCRETE ABUTMENT ITEM.

39. THE CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF SUBSECTION 711.01 AND SHALL BE GALVANIZED PER SUBSECTION 726.08 OF THE STANDARD SPECIFICATIONS. ALL COSTS ASSOCIATED WITH FURNISHING AND PLACING THE CORRUGATED STEEL PIPE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE PRECAST ITEM.

40. STABILITY OF ALL PRECAST SUBSTRUCTURE UNITS IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL REQUIRED BACKFILLING IS COMPLETE AND THE STEEL GIRDERS HAVE BEEN ERECTED.

41. SETTLEMENT OF BOTH ABUTMENTS IS ANTICIPATED DURING CONSTRUCTION. THE ANTICIPATED SETTLEMENT DURING CONSTRUCTION OF THE BRIDGE (THROUGH PLACEMENT OF THE BRIDGE RAIL AND TRANSITION BARRIER IS:

    ABUTMENT NO. 1: 1.98 in

    ABUTMENT NO. 2: 2.07 in

    IN ORDER TO MITIGATE AND ACCOUNT FOR THE SETTLEMENT DURING CONSTRUCTION, ELEVATIONS SHALL BE TAKEN TWICE OR AS DIRECTED BY THE ENGINEER. THE FIRST MEASUREMENT WILL BE TAKEN AT THE BEAM SEATS AFTER PLACEMENT OF THE PRECAST ABUTMENT STEMS. THE SECOND MEASUREMENT WILL BE TAKEN AFTER PLACEMENT OF THE STEEL GIRDERS. SURVEY MEASUREMENTS WILL BE REPORTED TO THE ENGINEER. ANTICIPATED BRIDGE SETTLEMENT WILL BE MADE UP FOR IN THE HEIGHT OF THE HAUNCH. PAYMENT FOR SURVEYING AND REQUIRED SHIMMING WILL BE CONSIDERED INCIDENTAL IN THE APPROPRIATE PRECAST CONCRETE ABUTMENT ITEM.

PRECAST APPROACH SLABS

42. GROUT USED TO FILL DOWEL DUCTS IN THE PRECAST APPROACH SLABS FOR DOWEL CONNECTIONS SHALL BE MORTAR, TYPE IV IN ACCORDANCE WITH SECTION 540- PRECAST CONCRETE. ALL COSTS ASSOCIATED WITH PROVIDING AND PLACING GROUT FOR THE APPROACH SLAB DOWEL CONNECTIONS SHALL BE INCLUDED IN THE BID PRICE FOR THE APPROPRIATE PRECAST APPROACH SLAB OPTION.

43. FILL APPROACH SLAB CLOSURE POURS WITH ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)".

44. THE FABRICATOR MAY ALTER THE DESIGN DETAILED WITHIN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THIS ALTERATION SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT AND SUBMITTED FOR APPROVAL TO THE AGENCY.

45. THE APPROACH SLABS ARE TO BE SET AT THE GIVEN ELEVATIONS IN ORDER TO ACCOMMODATE THE ROADWAY GEOMETRY. THE PAVEMENT OVER THE APPROACH SLAB WILL VARY TO ACCOUNT FOR THE DIFFERENCE BETWEEN THE TOP OF SLAB ELEVATIONS AND THE FINISH GRADE. A MINIMUM OF 3" PAVEMENT SHALL BE MAINTAINED OVER THE APPROACH SLABS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
1150				1150		CY	COMMON EXCAVATION	203.15	
		34		34		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
		53		53		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
		315		315		CY	COFFERDAM EXCAVATION, EARTH	208.30	
		1		1		LS	COFFERDAM (ABUTMENT NO. 1)	208.40	
		1		1		SY	COFFERDAM (ABUTMENT NO. 2)	208.40	
320				320		SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.10	
1200		44		1244		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
70				70		TON	AGGREGATE SHOULDERS	402.12	
9				9		CWT	EMULSIFIED ASPHALT	404.65	
1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
		87		87		CY	HIGH PERFORMANCE CONCRETE, CLASS PCD	501.37	
		101220		101220		LB	STRUCTURAL STEEL, PLATE GIRDER (METALIZED)	506.55	
		300		300		LB	REINFORCING STEEL, LEVEL I	507.11	
		19370		19370		LB	REINFORCING STEEL, LEVEL III	507.13	
		1		1		LS	SHEAR CONNECTORS (1720 SF - EST)	508.15	
		293		293		SY	LONGITUDINAL DECK GROOVING	509.10	
		28		28		GAL	WATER REPELLENT, SILANE	514.10	
		56		56		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
		126		126		SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	519.10	
		56		56		LF	JOINT SEALER, HOT POURED	524.11	
		167		167		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335	
		1		1		EACH	PARTIAL REMOVAL OF STRUCTURE (1720 SF - EST)	529.20	
		10		10		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17	
		1		1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 1)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT NO. 2)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 1)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB NO. 1)	540.10	
400		28		428		CY	STONE FILL, TYPE II	613.11	
587.5				587.5		LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	
4				4		EACH	MANUFACTURED TERMINAL SECTION, FLARED	621.50	
470				470		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
80				80		LF	TEMPORARY TRAFFIC BARRIER	621.90	
200				200		HR	UNIFORMED TRAFFIC OFFICERS	630.10	
400				400		HR	FLAGGERS	630.15	
			1	1		LS	FIELD OFFICE, ENGINEERS	631.10	
			1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16	
			1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	

TOTALS

DESCRIPTIONS

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
		FILL AVAILABLE
690	CY	COMMON EXCAVATION (1150 x 0.6)
10.2	CY	UNCLASSIFIED CHANNEL EXCAVATION (34 x 0.3)
94.5	CY	COFFERDAM EXCAVATION, EARTH (315 x 0.3)
5.3	CY	ROUNDING
800	**CY**	**TOTAL FILL AVAILABLE**
0	**CY**	**TOTAL FILL REQUIRED**
800	**CY**	**TOTAL WASTE**
		SPECIAL PROVISION (BITUMINOUS CONCRETE
		PAVEMENT, SMALL QUANTITY)
300	TON	WEARING COURSE
580	TON	BASE COURSE

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265qnty.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
QUANTITY SHEET NO. 1

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 6 OF 48

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
			2400	2400		DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26				
			1	1		EACH	CPM SCHEDULE	633.10				
			1	1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
			1	1		LS	TRAFFIC CONTROL, ALL-INCLUSIVE	641.11				
4				4		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
1350				1350		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404				
1350				1350		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414				
	718			718		SY	GEOTEXTILE UNDER STONE FILL	649.31				
	450			450		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
	5			5		LB	SEED	651.15				
	5			5		LB	SEED, WINTER RYE	651.17				
	20			20		LB	FERTILIZER	651.18				
	0.1			0.1		TON	AGRICULTURAL LIMESTONE	651.20				
	20			20		CY	TOPSOIL	651.35				
	410			410		SY	GRUBBING MATERIAL	651.40				
	1			1		LS	EPSC PLAN	653.01				
	104			104		HR	MONITORING EPSC PLAN	653.02				
	1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	653.03				
	0.1			0.1		TON	HAY MULCH	653.10				
	175			175		SY	ROLLED EROSION CONTROL PRODUCT, TYPE I	653.20				
	30			30		CY	STABILIZED CONSTRUCTION ENTRANCE	653.35				
	2			2		EACH	FILTER BAG	653.45				
	780			780		LF	SILT FENCE, TYPE II	653.476				
	470			470		LF	BARRIER FENCE	653.50				
	310			310		LF	PROJECT DEMARCATION FENCE	653.55				
	780			780		LF	EROSION LOG	653.60				
14.83				14.83		SF	TRAFFIC SIGN, TYPE A	675.20				
32				32		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
20				20		EACH	REMOVING SIGNS	675.50				
2				2		EACH	REMOVAL OF EXISTING TRAFFIC CONTROL SIGNAL SYSTEM	678.45				
1				1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
		14		14		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)(FPQ)	900.608				
90000				1		DL	SPECIAL PROVISION (INCENTIVE/DISENCENTIVE)(N.A.B.I.)	900.615				
4				4		EACH	SPECIAL PROVISION (GUARDRAIL APPROACH SECTION, MGS TO CONCRETE END SEC	900.620				
1				1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
1				1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
		2000		2000		SF	SPECIAL PROVISION (PRECAST PRESTRESSED DECK PANEL)(3 1/2")	900.670				
880				880		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265qnty.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
QUANTITY SHEET NO. 2

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 7 OF 48

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

| SUMMARY OF BRIDGE QUANTITIES | | |

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

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

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

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

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

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

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

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

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

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

ARCHEOLOGICAL & HISTORIC

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

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

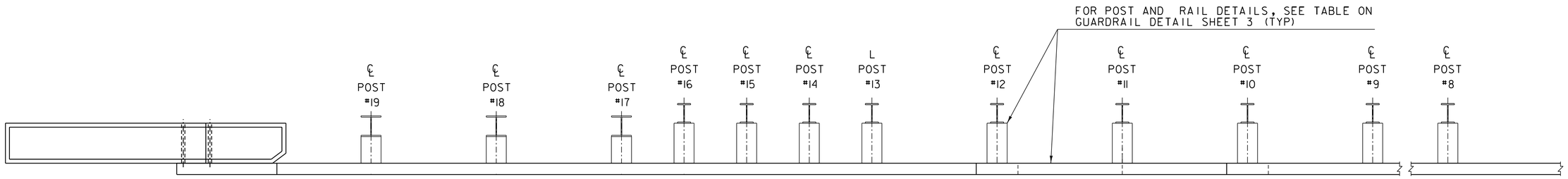
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- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE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

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

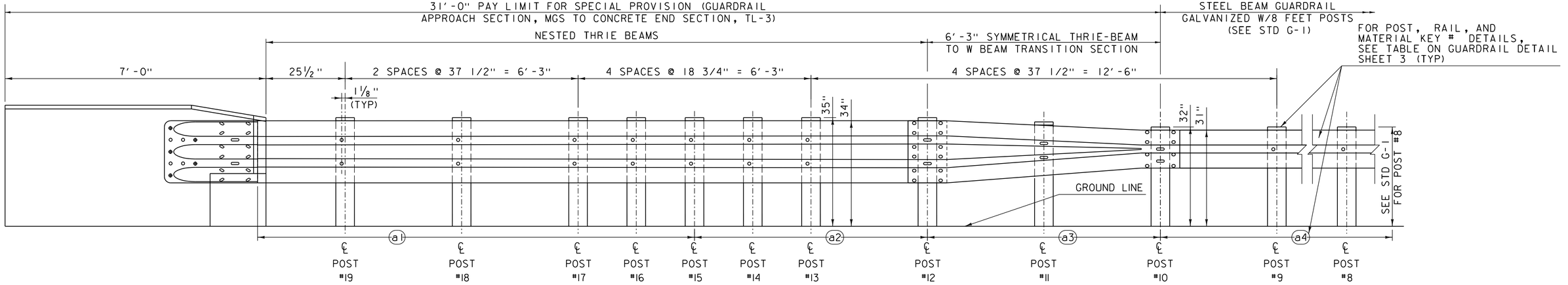
FILE NAME: zl8b265leg.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
CONVENTIONAL SYMBOLOGY - LEGEND

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 9 OF 48



CONCRETE BUTTRESS GUARDRAIL TRANSITION - PLAN

3/4" = 1'-0"



CONCRETE BUTTRESS GUARDRAIL TRANSITION - ELEVATION

3/4" = 1'-0"

NOTES:

1. THRIE-BEAM TERMINAL CONNECTOR SHALL BE INCLUDED IN THE UNIT BID PRICE FOR GUARDRAIL APPROACH SECTION, MGS TO CONCRETE END BLOCK, TL-3.

2. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, A COMPOSITE MATERIAL BLOCKOUT FROM THE APPROVED PRODUCTS LIST MAY BE SUBSTITUTED FOR A BLOCKOUT OF SIMILAR DIMENSIONS.

3. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, STEEL POSTS SHALL BE USED IN AN APPROACH SECTION.

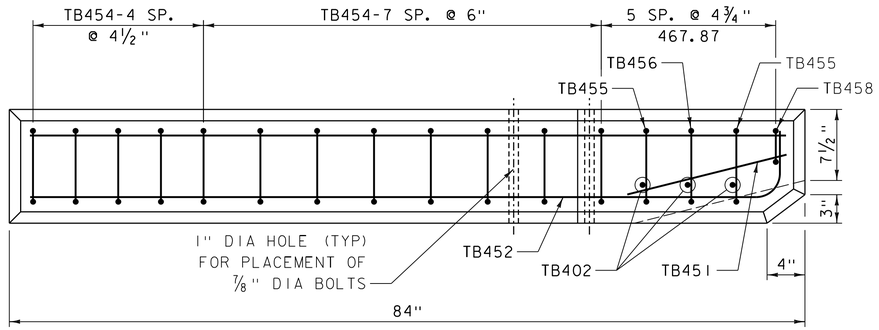
4. GROUND SUPPORT TO BE INSTALLED PER MANUFACTURER'S DETAILS.

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265-gdr_det.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
GUARDRAIL DETAIL SHEET 1

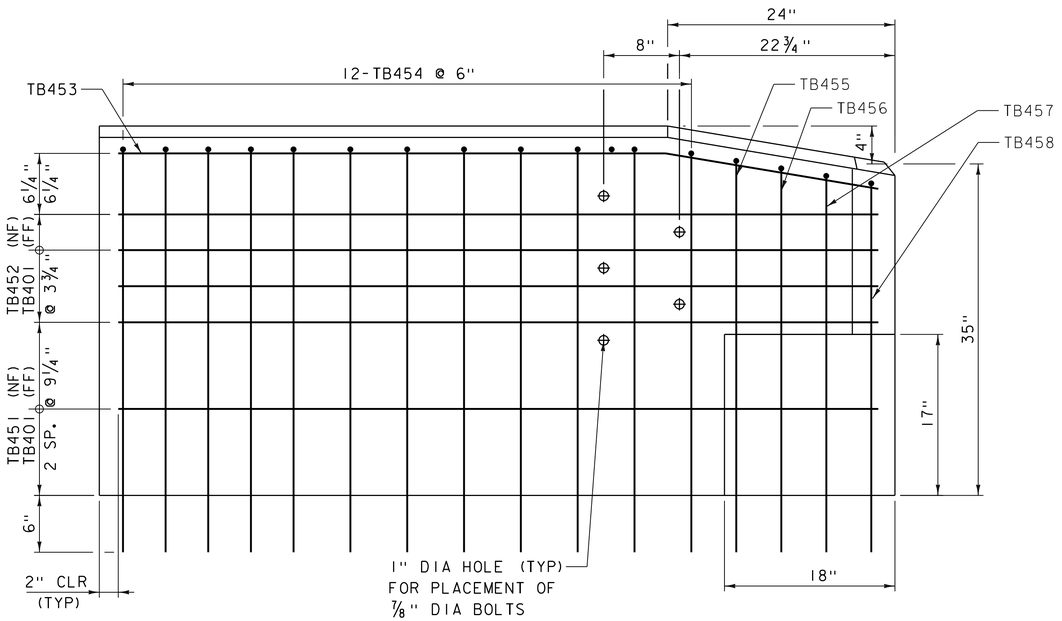
PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 10 OF 48



PLAN VIEW

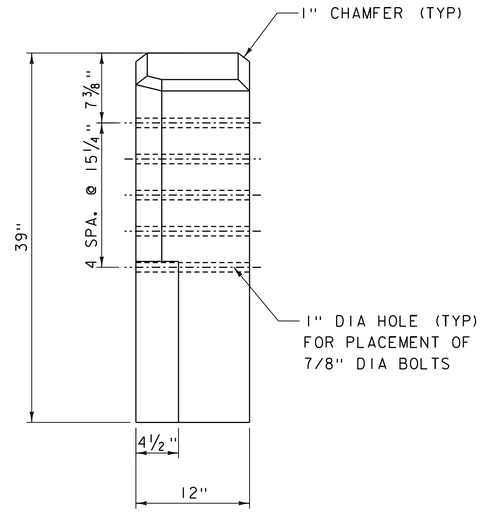
1 1/2" = 1'-0"

TRAFFIC IN TRAVEL WAY



ELEVATION VIEW

1 1/2" = 1'-0"



PROFILE VIEW

1 1/2" = 1'-0"

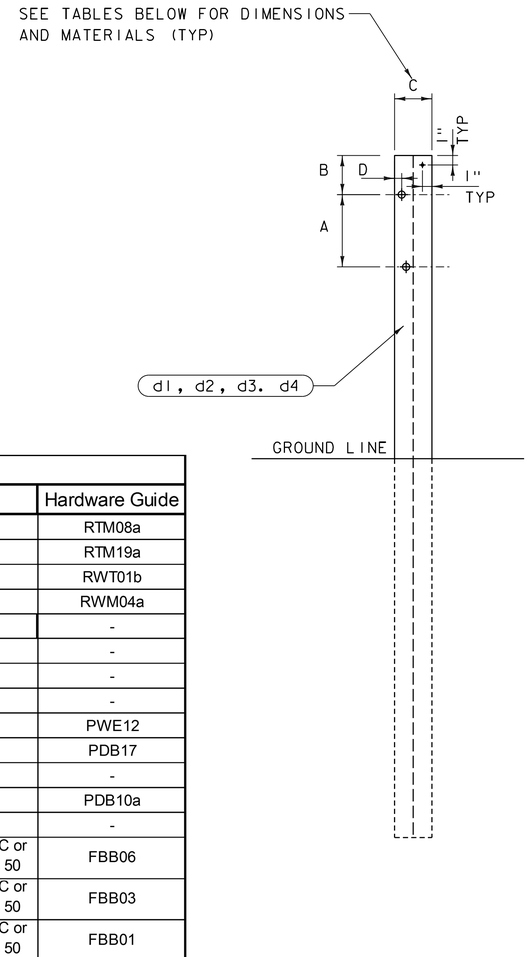
CONCRETE TRANSITION BARRIER

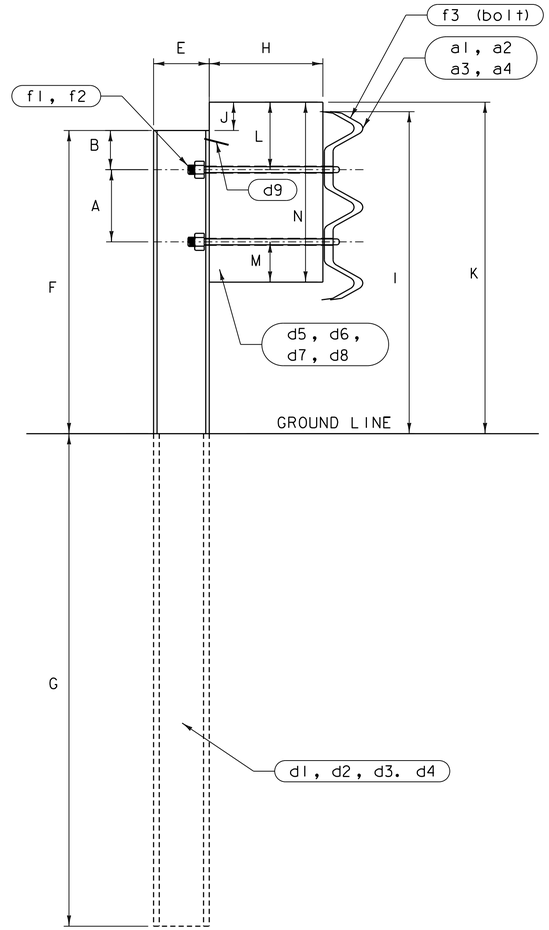
NOTE:

1. SEE GUARDRAIL DETAIL SHEET 3
   FOR GUARDRAIL AND MATERIAL TABLES

McFarland Johnson

PROJECT NAME: GEORGIA	
PROJECT NUMBER: BF 023-1(7)	
FILE NAME: z18b265-gdr_det.dgn	PLOT DATE: 9/20/2019
PROJECT LEADER: R. YOUNG	DRAWN BY: M. VALLETTA
DESIGNED BY: S. IRELAND	CHECKED BY: B. COLBURN
GUARDRAIL DETAIL SHEET 2	SHEET 11 OF 48





POST DETAIL

1 1/2" = 1'-0"

MATERIALS

KEY#	Description	Material Specification	Galvanization Specification	Hardware Guide
a1	12'-6" 12-gauge Thrie Beam Section	AASHTO M180	ASTM A653	RTM08a
a2	6'-3" 12-gauge Thrie Beam Section	AASHTO M180	ASTM A653	RTM19a
a3	10-gauge Symmetrical W-beam to Thrie Beam Transition	AASHTO M180	ASTM A653	RWT01b
a4	12'-6" 12-gauge W-Beam Section	AASHTO M180	ASTM A653	RWM04a
b1	Concrete - 21.9 Cubic Ft.	Min f 'c=4,000 psi	-	-
d1	W6x8.5 or W6x9, 72" Long Steel Post	ASTM A992	*AASHTO M111 (ASTM A123)	-
d2	W6x8.5 or W6x9, 72" Long Steel Post	ASTM A992	*AASHTO M111 (ASTM A123)	-
d3	W6x8.5 or W6x9, 72" Long Steel Post	ASTM A992	*AASHTO M111 (ASTM A123)	-
d4	W6x815, 84" Long Steel Post	ASTM A992	*AASHTO M111 (ASTM A123)	PWE12
d5	6"x8"x19" Timber Blockout	SYP Grade No.1 or better	-	PDB17
d6	6"x12"x19" Timber Blockout	SYP Grade No.1 or better	-	-
d8	6"x2"x14 1/4" Timber Blockout	SYP Grade No.1 or better	-	PDB10a
d9	16D Double Head Nail	-	-	-
f1	5/8" Dia. UNC, 14" Long Guardrail Bolt and Nut	Bolt - ASTM A307 Gr. A Nut - ASTM A563A	AASHTO M232 (ASTM A153) For Class C or AASHTO M298 (ASTM B695) For Class 50	FBB06
f2	5/8" Dia. UNC, 10" Long Guardrail Bolt and Nut	Bolt - ASTM A307 Gr. A Nut - ASTM A563A	AASHTO M232 (ASTM A153) For Class C or AASHTO M298 (ASTM B695) For Class 50	FBB03
f3	5/8" Dia. UNC, 1 1/4" Long Guardrail Bolt and Nut	Bolt - ASTM A307 Gr. A Nut - ASTM A563A	AASHTO M232 (ASTM A153) For Class C or AASHTO M298 (ASTM B695) For Class 50	FBB01
f6	7/8" Dia. UNC, 14" Long Heavy Hex Bolt and Nut	Bolt - ASTM A325 Type 1 or ASTM A449 or SAI J429 Gr. 5 Nut - ASTM A563DH or ASTM A194 Gr. 2H	AASHTO M232 (ASTM A153) For Class C or AASHTO M298 (ASTM B695) For Class 50	FBX22b
f8	5/8" Dia. UNC, 2" Long Guardrail Bolt and Nut	Bolt - ASTM A307 Gr. A Nut - ASTM A563A	AASHTO M232 (ASTM A153) For Class C or AASHTO M298 (ASTM B695) For Class 50	FBB02
g1	5/8" Dia.Plain Round Washer	ASTMF844	AASHTO M232 (ASTM A153) For Class C or AASHTO M298 (ASTM B695) For Class 50	FWC16a
g3	3"x3"x1/4" or 3 1/2"x3 1/2"x1/4" Square Plate Washer	ASTM A572 Gr. 50	*AASHTO M111 (ASTM A123)	FWR10

GUARDRAIL TABLE

DIMENSIONS (INCHES)															MATERIAL KEY#					
POST#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	POST	BLOCK	BOLT	RAIL	RAIL BOLT	NAIL
8,9	-	7 1/8	3 15/16	3/4	5 7/8	32	40	12	31	0	32	7 1/8	7 1/8	14 1/4	d1	d8	f1	a4	f3	d9
10	-	7 1/8	3 15/16	3/4	5 7/8	32	40	12	31	0	32	7 1/8	7 1/8	14 1/4	d1	d8	f1	a4/a3	f3	d9
11	7 5/8	4 1/8	3 15/16	3/4	5 7/8	32	40	12	31-34	3	32-35	7 1/8	4 1/4	19	d2	d7	f1	a3	-	d9
12	7 5/8	4 1/8	3 15/16	3/4	5 7/8	32	40	12	31-34	3	32-35	7 1/8	4 1/4	19	d2	d7	f1	a3/a2	-	d9
13, 14, 15	7 5/8	4 1/8	3 15/16	3/4	5 7/8	32	40	12	34	3	35	7 1/8	4 1/4	19	d3	d6	f1	a2/a1	-	
16, 17, 18, 19	7 5/8	4 1/8	6	1 3/4	6	32	52	8	34	3	35	7 1/8	4 1/4	19	d4	d5	f2	a1	-	

CONCRETE BUTTRESS GUARDRAIL TRANSITION

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265-gdr_det.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
GUARDRAIL DETAIL SHEET 3

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 12 OF 48

PRIMARY CONTROL

HVCTRL #1
M 64 AZ MK
NORTH =803570.9749
EAST = 1483148.3200
ELEV. =430.6500

TO REACH FROM THE NORTHEAST END OF THE US ROUTE 7 BRIDGE OVER INTERSTATE 89 AT EXIT 18, GO NORTHEAST ALONG US ROUTE 7 FOR 0.2 MI (0.3 KM) TO THE SITE OF THE MARK ON THE LEFT IN THE GRASSY ISLAND MEDIAN, OPPOSITE THE GEORGIA PUBLIC LIBRARY.
THE MARK IS SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A 30 CM(12 INCH) DIAMETER CONCRETE MONUMENT.
IT IS 2.2 M (7.2 FT) SOUTHEAST OF THE NORTHWEST EDGE OF THE GRANITEMEDIAN CURB, 2.2 M (7.2 FT) NORTHWEST OF THE SOUTHEAST EDGE OF THECURB, 16.5 M (54.1 FT) SOUTHWEST OF A DIVIDED HIGHWAY SIGN, 21.5 M (70.5 FT) SOUTHWEST OF THE NORTHEAST END OF THE ISLAND, 27.0 M (88.6 FT) NORTHEAST OF THE OVERHEAD INTERSTATE SIGN STRUCTURE, 18.1 M (59.4SOUTHEAST OF AND ACROSS THE ROADFROM POLE NO 94324/5 AND 0.3 M(1.0 FT) SOUTHWEST OF A FIBERGLASS WITNESS POST.
NOTE, THE MARK IS INTERVISIBLE WITH THE MARK BEAVER DRAGON.

HVCTRL #2
BEAVER DRAGON
NORTH =800564.8162
EAST =1482364.0560
ELEV. =388.5500

TO REACH FROM THE SOUTH END OF THE US ROUTE 7 BRIDGE OVER INTERSTATE 89 AT EXIT 19, GO SOUTH ALONG US ROUTE 7 FOR 0.3 MI (0.5 KM) TO THE SITE OF THE MARK IN A GRASSY MEDIAN WITH GRANITE CURB, JUST SOUTH OF THE INTERSECTION OF VT ROUTE 104A (HIGHBRIDGE ROAD).
THE MARK IS SET 6 CM (2 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCH) DIAMETER CONCRETE MONUMENT.
IT IS 45.7 M (149.9 FT) NORTHEAST OF THE SOUTHWEST END OF THE ISLAND, 14.4 M (47.2 FT) SOUTHWEST OF THE NORTHEAST TIP OF THE MEDIAN, 1.1 M (3.6 FT) NORTHWEST OF THE SOUTHEAST EDGE OF THE GRANITE CURB, 3.4 M (11.2 FT) SOUTHEAST OF THE NORTHWEST EDGE OF THE CURB, 23.7 M (77.8 FT) SOUTH-SOUTHEAST OF AND ACROSS THE ROAD FROM POLE NO 94/123 AND 0.3 M (1.0 FT) SOUTHWEST OF A FIBERGLASS WITNESS POST.
NOTE, THE MARK IS INTERVISIBLE THE MARK M 64 AZIMUTH MARK.

PRIMARY CONTROL

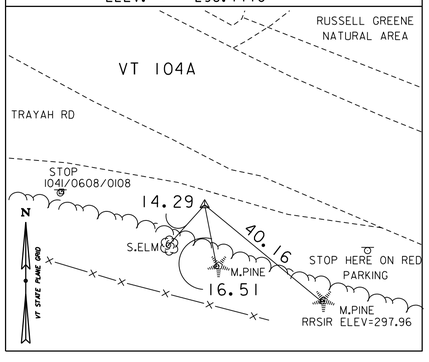
HVCTRL #10
A99066
NORTH =796487.0700
EAST =1485769.8000
ELEV. =301.3600

TO REACH FROM THE INTERSECTION OF US ROUTE 7 AND VT ROUTE 104A, GO EAST ALONG VT ROUTE 104A (HIGHBRIDGE ROAD) FOR 1.0 MI (1.6 KM) TO THE MOST EASTERLY INTERSECTION OF TRAYAH ROAD RIGHT AND THE SITE OF THE MARK ON THE RIGHT IN A GRASSY AREA ENCIRCLED BY TRAYAH ROAD AND VT ROUTE 104A.
THE MARK IS SET 5 CM (2 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCH) DIAMETER CONCRETE MONUMENT.
IT IS 9.7 M (31.8 FT) SOUTHWEST OF AND ABOUT 0.3 M (1.0 FT) LOWER THAN THE VT ROUTE 104A SOUTHWEST EDGE OF PAVEMENT, 7.8 M (25.6 FT) NORTHEAST OF THE CENTERLINE OF TRAYAH ROAD, 80.6 M (264.4 FT) SOUTHEAST OF POLE NO 19X, 16.5 M (54.1 FT) NORTH OF THE CENTERLINE OF THE GRAVEL DRIVE LEADING TO HOUSE NO 128, 41.3 M (135.5 FT) EAST OF THE CENTERLINE OF THE GRAVEL DRIVE LEADING TO HOUSE NO 100 AND 14.9 M (48.9 FT) NORTHWEST OF A STREET SIGN AND A FIBERGLASS WITNESS POST.

SECONDARY CONTROL

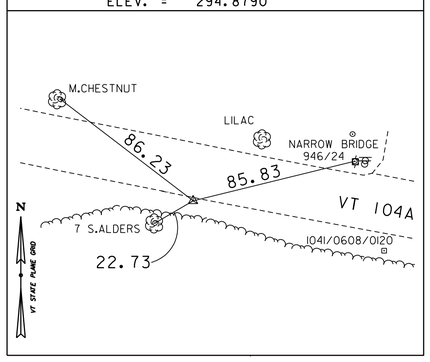
HVCTRL #8

NORTH = 796420.5010
EAST = 1485922.6498
ELEV. = 298.7110



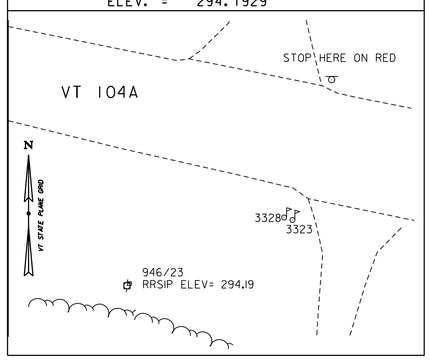
HVCTRL #9

NORTH = 796215.2847
EAST = 1486754.6840
ELEV. = 294.8790



BM # 1709

NORTH = 796230.9348
EAST = 1486522.7684
ELEV. = 294.1929



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (2011)
ADJUSTMENT COMPASS

*TRAVERSE COMPLETED ON 10/23/2018 BY R.GILMAN AND H.MCGOWAN

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

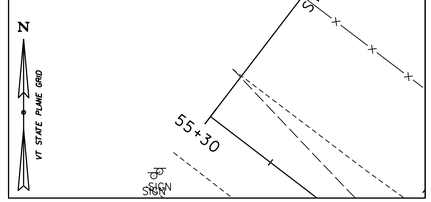
FILE NAME: z18b265ti.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
TIE SHEET 1

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 13 OF 48

ALIGNMENT COORD

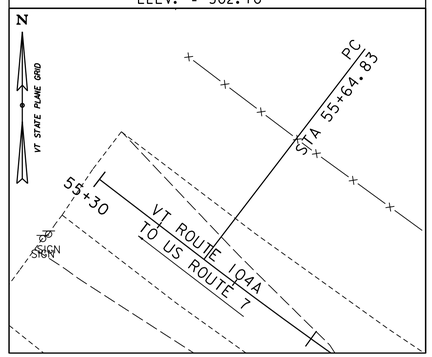
POB STA 55+30.07

NORTH = 796593.1793
EAST = 1485699.8170
ELEV. = 303.26



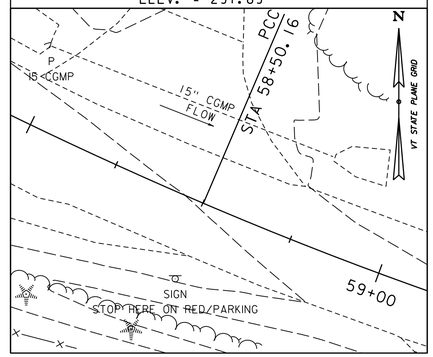
PC STA 55+64.83

NORTH = 796572.0452
EAST = 1485727.4152
ELEV. = 302.70



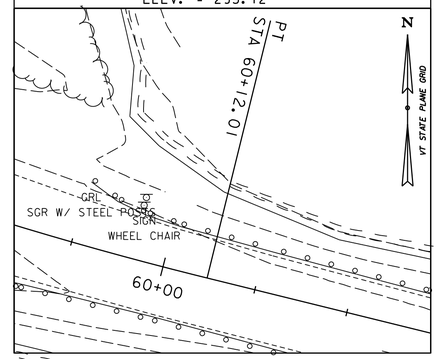
PCC STA 58+50.16

NORTH = 796428.4131
EAST = 1485973.1046
ELEV. = 297.89



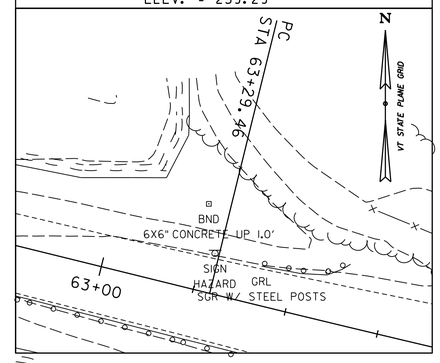
PT STA 60+12.01

NORTH = 796377.0724
EAST = 1486126.4073
ELEV. = 295.12



PC STA 63+29.46

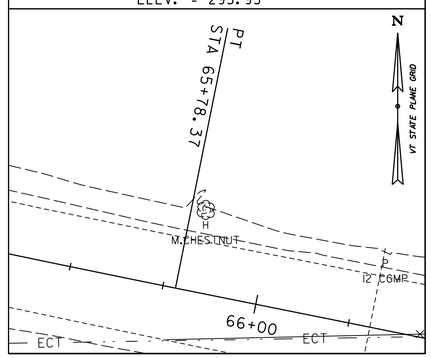
NORTH = 796301.0614
EAST = 1486434.6268
ELEV. = 259.29



ALIGNMENT COORD

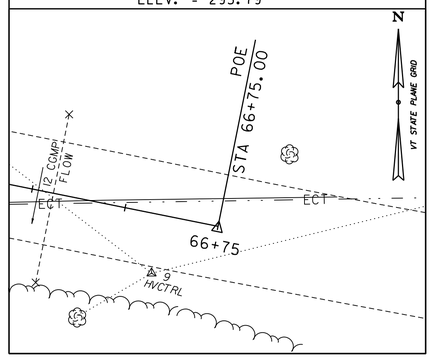
PT STA 65+78.37

NORTH = 796246.7308
EAST = 1486677.5092
ELEV. = 295.95



POE STA 66+75.00

NORTH = 796227.6895
EAST = 1486772.2472
ELEV. = 295.79



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

ALIGNMENT COORD

NORTH =
EAST =
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NORTH =
EAST =
ELEV. =

NORTH =
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NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (2011)

ADJUSTMENT COMPASS

McFarland Johnson

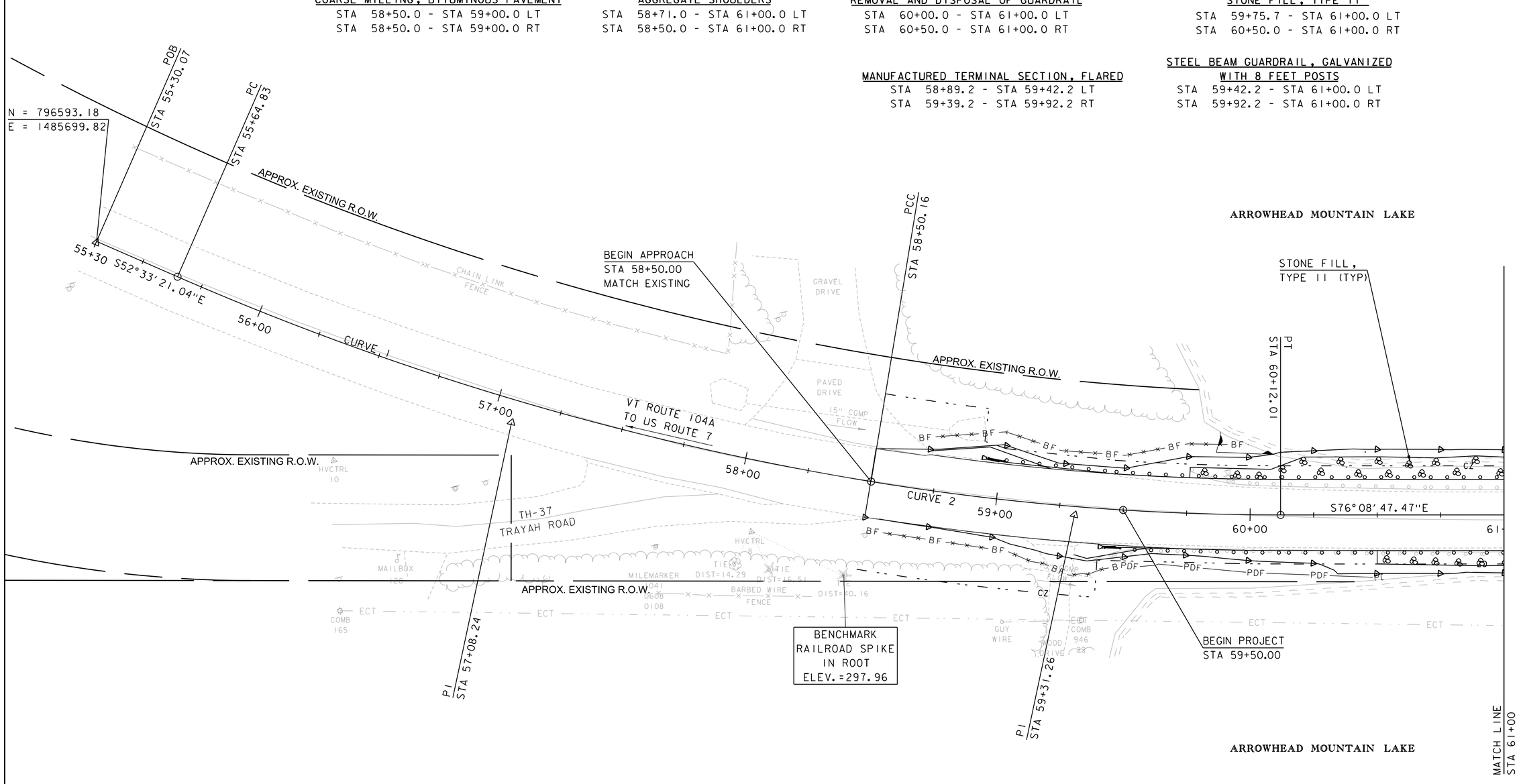
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265ti.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
TIE SHEET 2

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 14 OF 48

COARSE-MILLING, BITUMINOUS PAVEMENT	AGGREGATE SHOULDERS	REMOVAL AND DISPOSAL OF GUARDRAIL	STONE FILL, TYPE II
STA 58+50.0 - STA 59+00.0 LT	STA 58+71.0 - STA 61+00.0 LT	STA 60+00.0 - STA 61+00.0 LT	STA 59+75.7 - STA 61+00.0 LT
STA 58+50.0 - STA 59+00.0 RT	STA 58+50.0 - STA 61+00.0 RT	STA 60+50.0 - STA 61+00.0 RT	STA 60+50.0 - STA 61+00.0 RT

MANUFACTURED TERMINAL SECTION, FLARED	STEEL BEAM GUARDRAIL, GALVANIZED WITH 8 FEET POSTS
STA 58+89.2 - STA 59+42.2 LT	STA 59+42.2 - STA 61+00.0 LT
STA 59+39.2 - STA 59+92.2 RT	STA 59+92.2 - STA 61+00.0 RT



VT104A CURVE 1	VT104A CURVE 2
DELTA = 14° 15' 59.40" LT.	DELTA = 9° 19' 27.03" LT.
D = 5° 00' 00.00"	D = 5° 45' 39.36"
R = 1145.92'	R = 994.54'
T = 143.41'	T = 81.10'
L = 285.33'	L = 161.85'
E = 8.94'	E = 3.30'

LAYOUT PLAN

SCALE 1" = 20'-0"

20 0 20

McFarland Johnson

PROJECT NAME:	GEORGIA
PROJECT NUMBER:	BF 023-1(7)
FILE NAME: z18b265 lp	PLOT DATE: 9/20/2019
PROJECT LEADER: R. YOUNG	DRAWN BY: M. VALLETTA
DESIGNED BY: S. IRELAND	CHECKED BY: B. COLBURN
LAYOUT PLAN 1	SHEET 15 OF 48

SPECIAL PROVISION (GUARDRAIL APPROACH SECTION, MSG TO CONCRETE END BLOCK, TL2)

STA 61+58.3 - STA 61+89.3 LT
STA 61+58.3 - STA 61+89.3 RT
STA 62+69.3 - STA 63+00.3 LT
STA 62+69.3 - STA 63+00.3 RT

AGGREGATE SHOULDERS

STA 61+00.0 - STA 61+82.3 LT
STA 61+00.0 - STA 61+82.3 RT
STA 62+76.2 - STA 65+25.0 LT
STA 62+76.2 - STA 65+25.0 RT

STEEL BEAM GUARDRAIL, GALVANIZED WITH 8 FEET POSTS

STA 61+00.0 - STA 61+58.3 LT
STA 61+00.0 - STA 61+58.3 RT
STA 63+00.3 - STA 63+66.4 LT
STA 63+00.3 - STA 64+03.9 RT

COARSE-MILLING, BITUMINOUS PAVEMENT

STA 64+50.0 - STA 65+25.0 LT
STA 64+50.0 - STA 65+25.0 RT

MANUFACTURED TERMINAL SECTION, FLARED

STA 63+66.4 - STA 64+19.4 LT
STA 64+03.9 - STA 64+56.9 RT

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 61+00.0 - STA 61+84.0 LT
STA 61+00.0 - STA 61+84.0 RT
STA 63+41.1 - STA 63+63.9 LT
STA 62+66.3 - STA 63+88.6 RT

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM

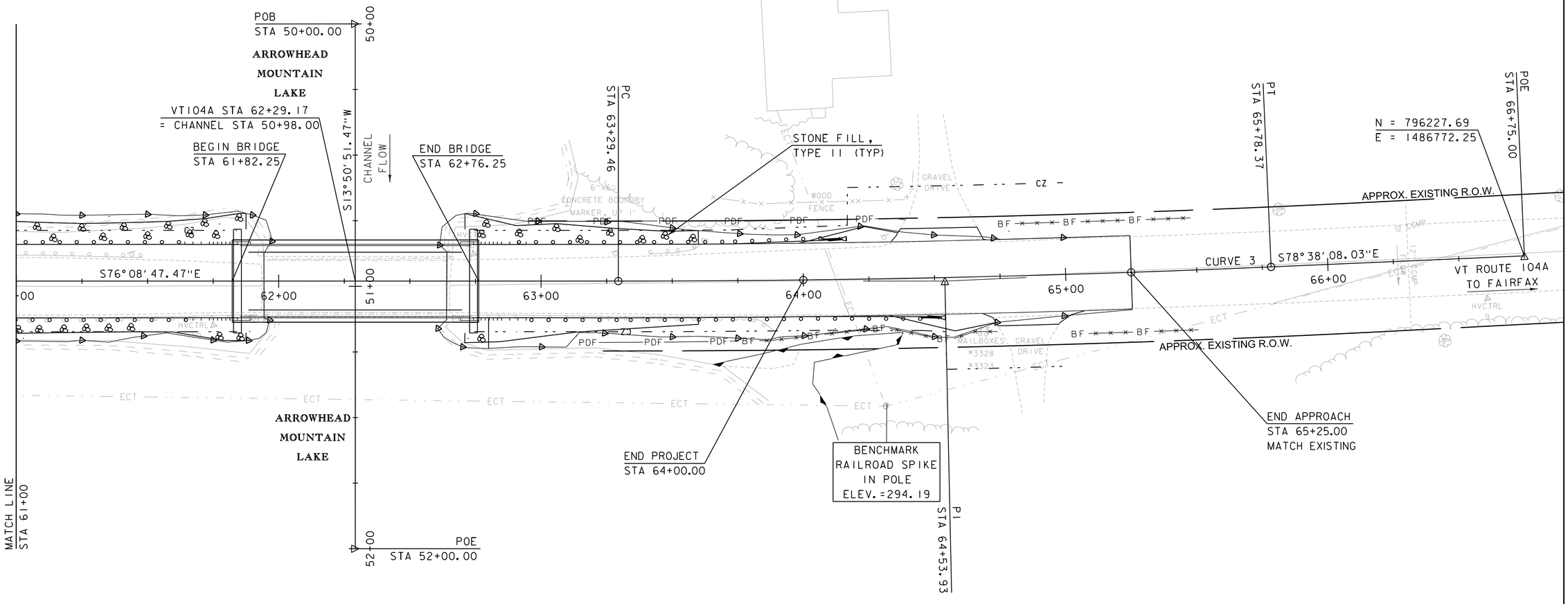
STA 61+89.3 - STA 62+69.3 LT
STA 61+89.3 - STA 62+69.3 RT

STONE FILL, TYPE II

STA 61+00.0 - STA 61+87.5 LT
STA 61+00.0 - STA 61+87.5 RT
STA 62+71.0 - STA 63+60.0 LT
STA 62+71.0 - STA 62+80.0 RT

5' PAVED APRON FOR GRAVEL DRIVES

STA 64+33.8 LT TO STA 64+70.1 LT
STA 64+67.9 RT TO STA 65+07.2 RT



VT104A CURVE 3

DELTA = 2°29'20.56" LT.
D = 1°00'00.00"
R = 5729.58'
T = 124.47'
L = 248.90'
E = 1.35'

EXISTING BRIDGE INFORMATION
BUILT 1937, 74' LENGTH
SINGLE SPAN ROLLED BEAM
WITH CIP CONCRETE DECK
CURRENTLY SINGLE LANE
DUE TO TRUCK CRASH

LAYOUT PLAN

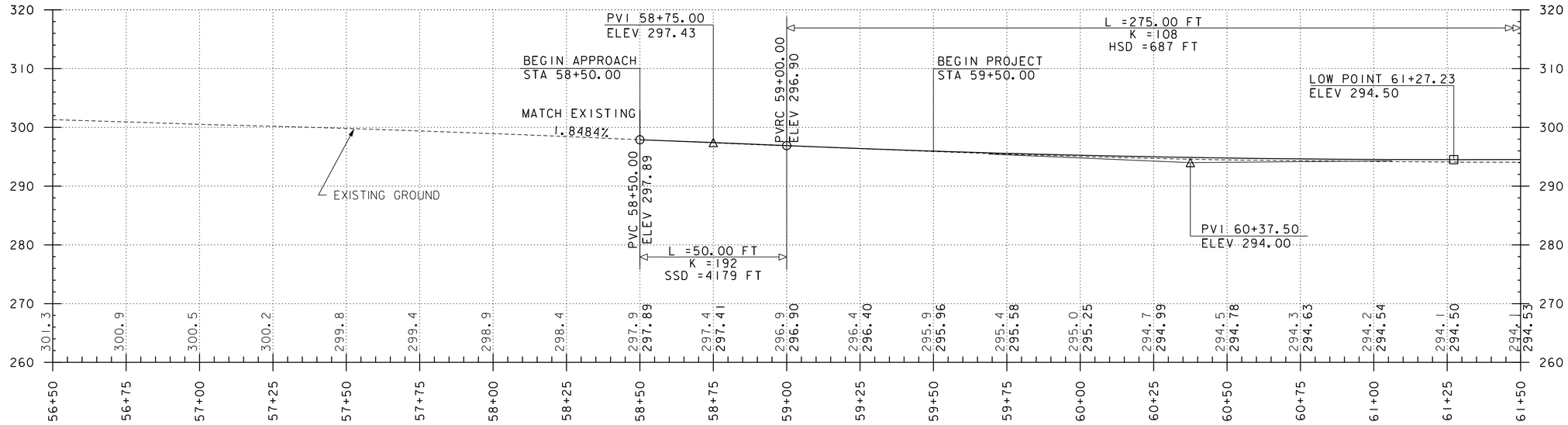
SCALE 1" = 20'-0"
20 0 20

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

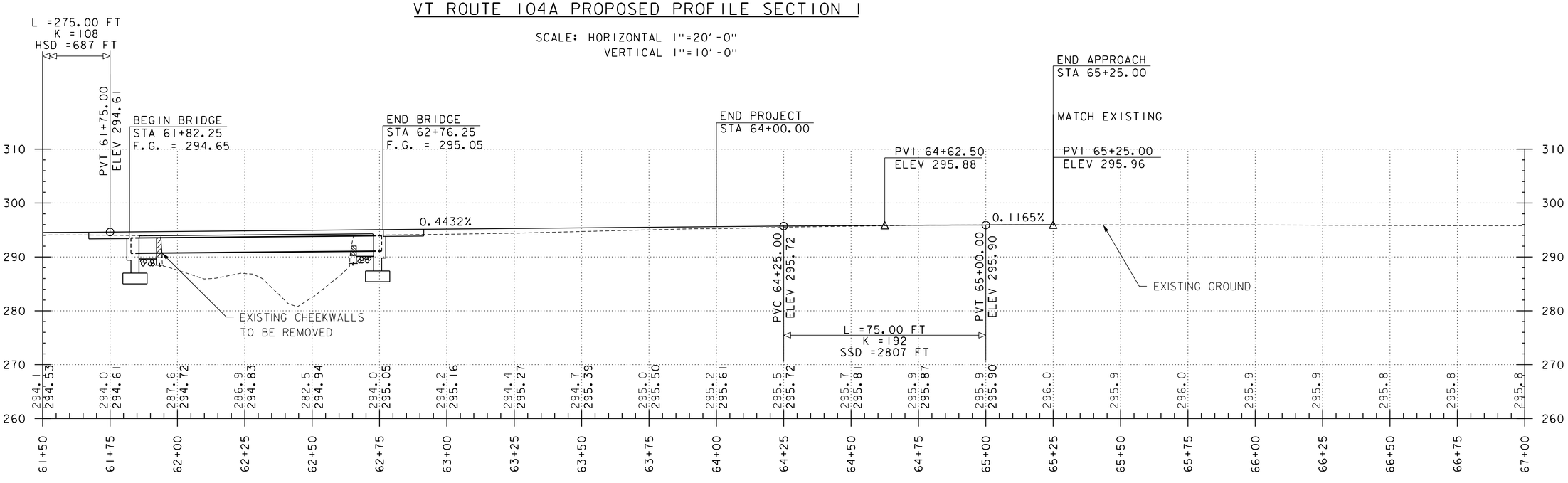
FILE NAME: z18b265 lp
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
LAYOUT PLAN 2

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 16 OF 48



VT ROUTE 104A PROPOSED PROFILE SECTION 1

SCALE: HORIZONTAL 1"=20'-0"
VERTICAL 1"=10'-0"



VT ROUTE 104A PROPOSED PROFILE SECTION 2

SCALE: HORIZONTAL 1"=20'-0"
VERTICAL 1"=10'-0"

NOTE:
GRADES SHOWN TO THE NEAREST
TENTH ARE EXISTING GROUND ALONG ℄
GRADES SHOWN TO THE NEAREST
HUNDREDTH ARE FINISH GRADE ALONG ℄

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265 profile
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
PROFILE - VERMONT ROUTE 104A

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 17 OF 48

DURABLE 4" WHITE LINE, POLYUREA

STA 58+50 - STA 61+00 LT
STA 58+50 - STA 61+00 RT

DURABLE 4" YELLOW LINE, POLYUREA

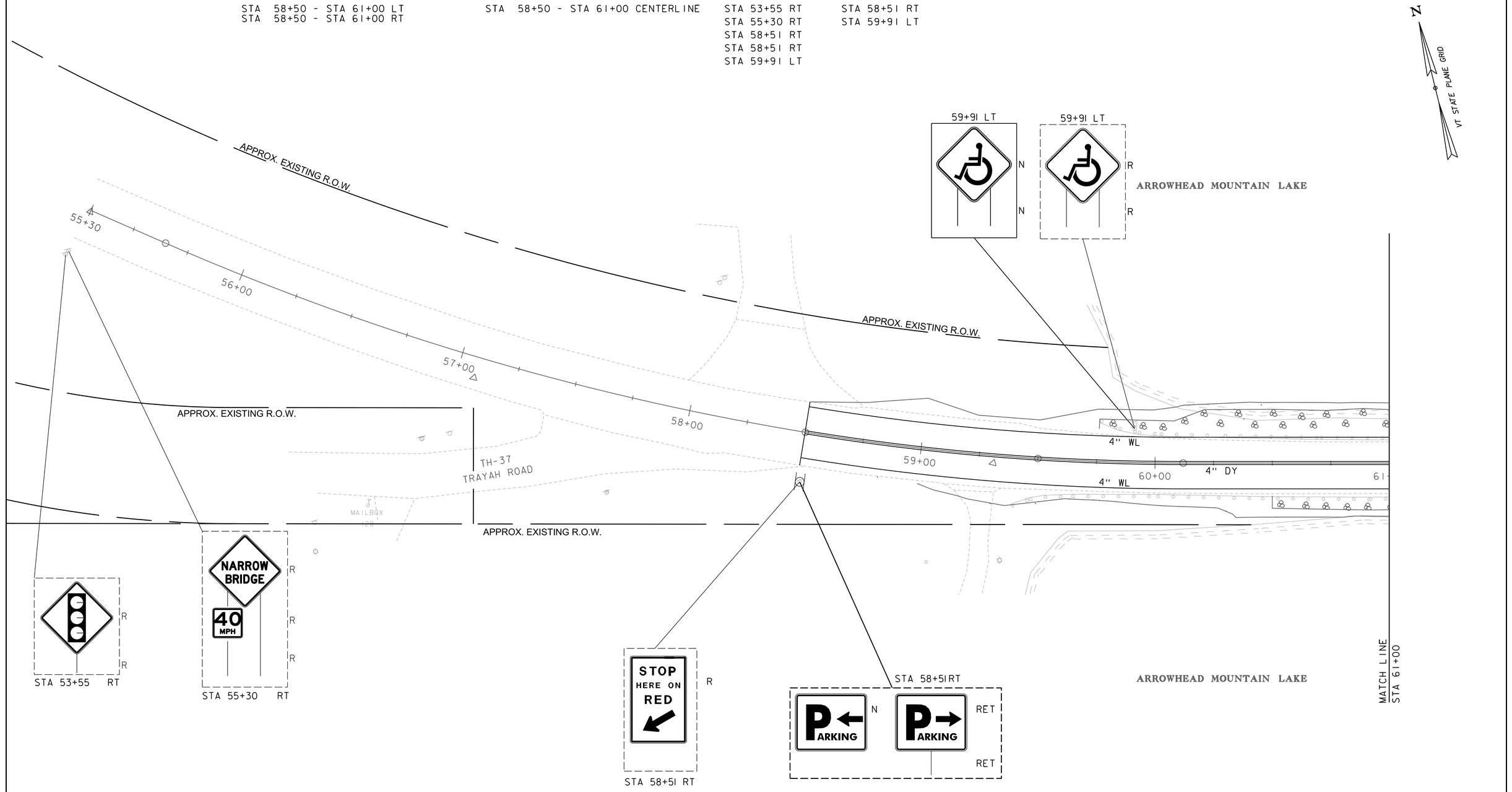
STA 58+50 - STA 61+00 CENTERLINE

REMOVING SIGNS

STA 53+55 RT
STA 55+30 RT
STA 58+51 RT
STA 58+51 RT
STA 59+91 LT

TRAFFIC SIGN, TYPE A

STA 58+51 RT
STA 59+91 LT



SIGNING AND STRIPING PLAN

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

SIGNING LEGEND

R	REMOVE EXISTING SIGN AND OR POST
RES	RESET EXISTING SIGN AND POST
RET	RETAIN EXISTING SIGN AND POST
N	NEW SIGN AND/OR POST

STRIPING LEGEND

DY = DOUBLE YELLOW LINE
WL = SINGLE WHITE LINE

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265bdr ts.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
SIGNING AND STRIPING PLAN 1

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 18 OF 48

DURABLE 4" WHITE LINE, POLYUREA

STA 61+00 - STA 65+25 LT
STA 61+00 - STA 65+25 RT

DURABLE 4" YELLOW LINE, POLYUREA

STA 61+00 - STA 65+25 CENTERLINE

REMOVING SIGNS

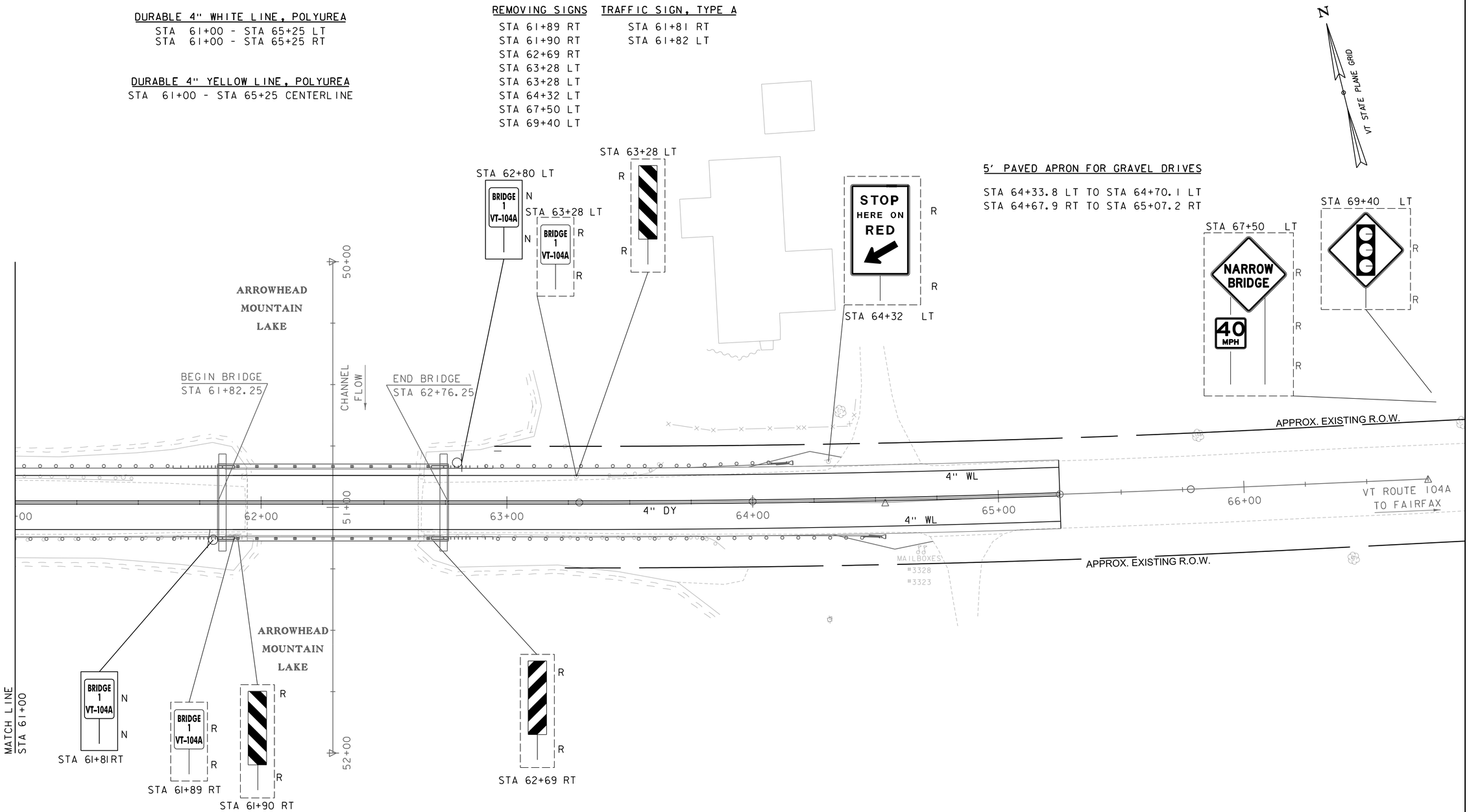
STA 61+89 RT
STA 61+90 RT
STA 62+69 RT
STA 63+28 LT
STA 63+28 LT
STA 64+32 LT
STA 67+50 LT
STA 69+40 LT

TRAFFIC SIGN, TYPE A

STA 61+81 RT
STA 61+82 LT

5' PAVED APRON FOR GRAVEL DRIVES

STA 64+33.8 LT TO STA 64+70.1 LT
STA 64+67.9 RT TO STA 65+07.2 RT



SIGNING AND STRIPING PLAN

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

SIGNING LEGEND

R	REMOVE EXISTING SIGN AND OR POST
RES	RESET EXISTING SIGN AND POST
RET	RETAIN EXISTING SIGN AND POST
N	NEW SIGN AND/OR POST

STRIPING LEGEND

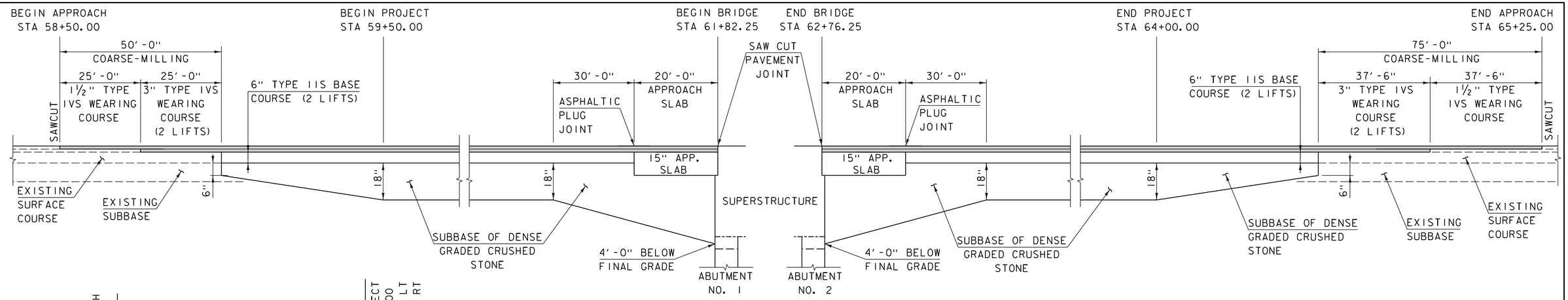
DY = DOUBLE YELLOW LINE
WL = SINGLE WHITE LINE

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

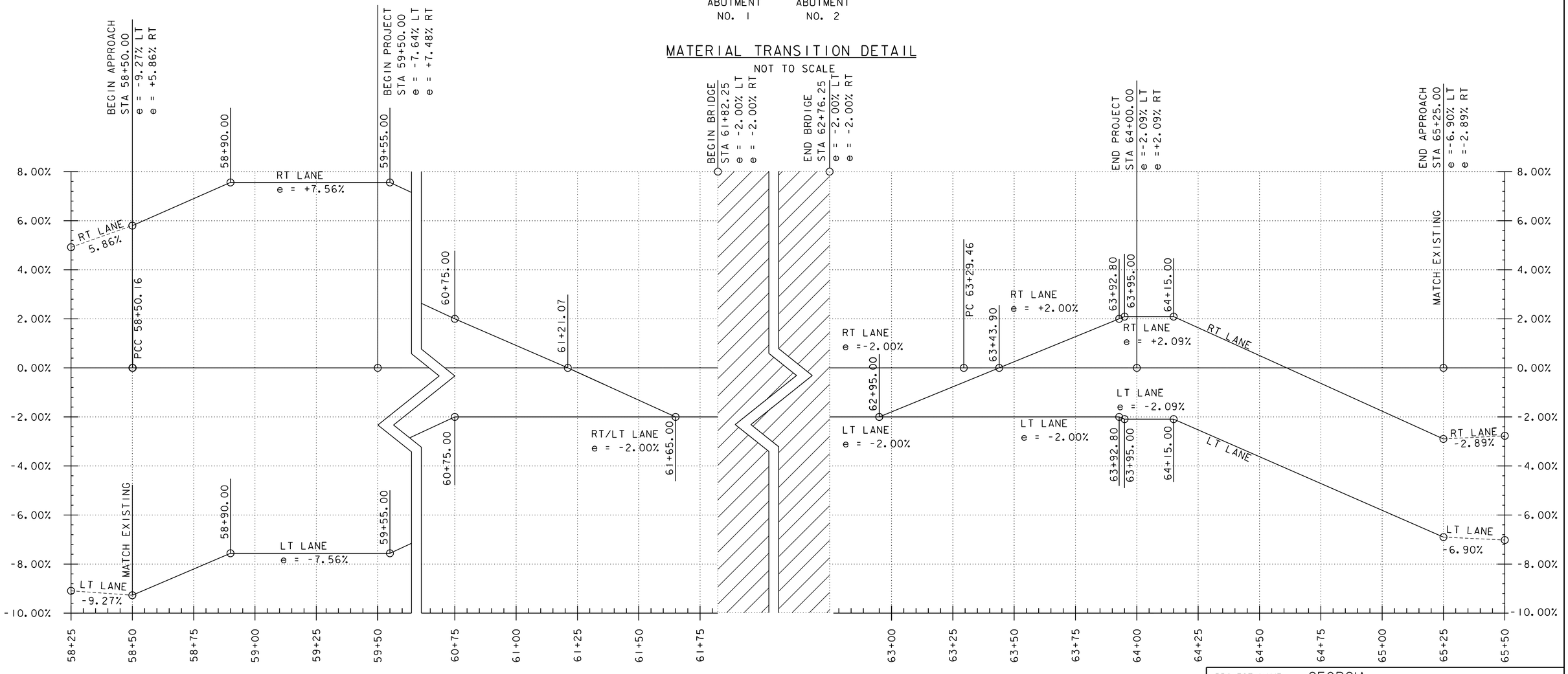
FILE NAME: z18b265bdr ts.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
SIGNING AND STRIPING PLAN 2

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 19 OF 48



MATERIAL TRANSITION DETAIL

NOT TO SCALE



BANKING DIAGRAM

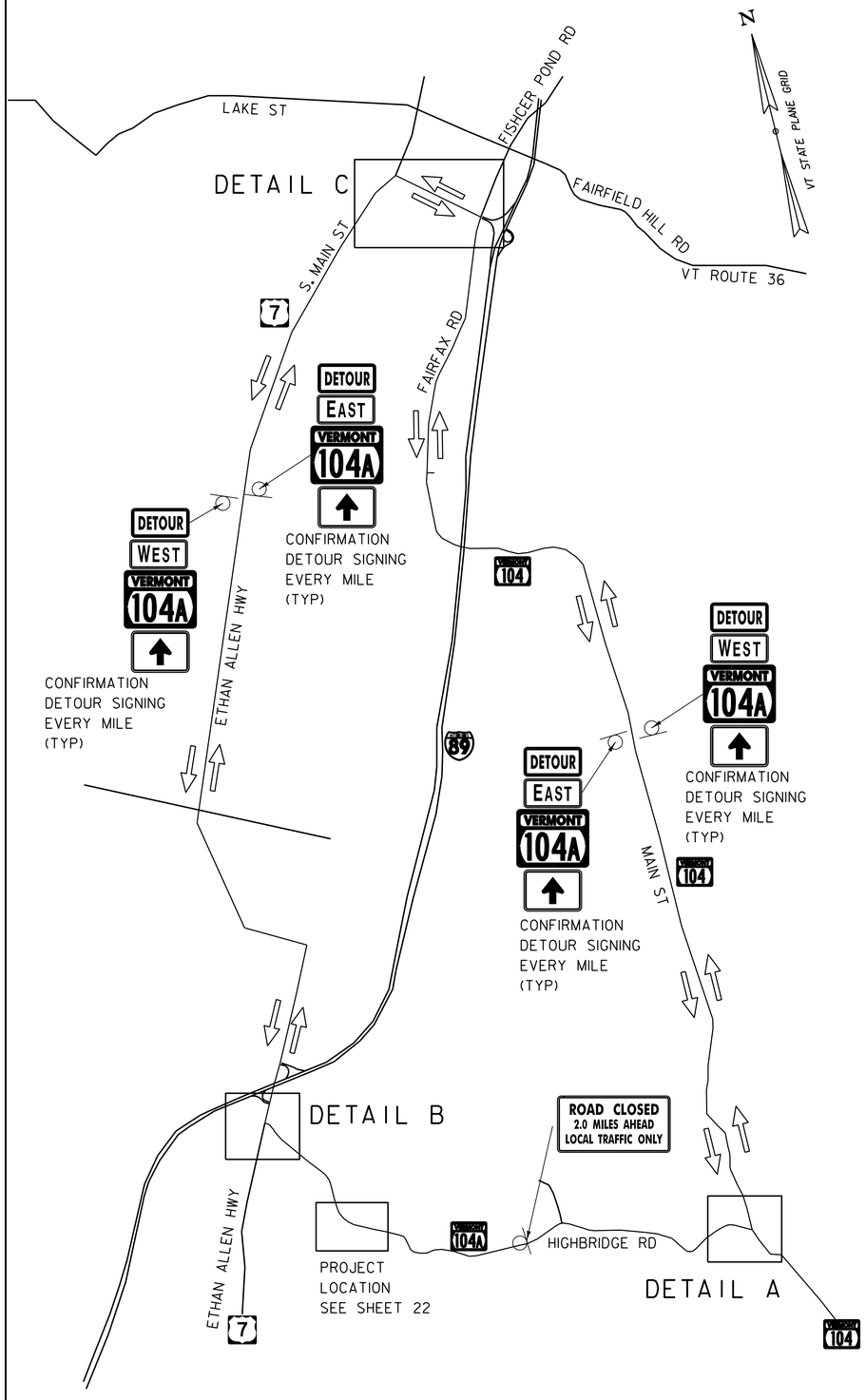
SCALE: 1"=20' (H)
1"=2% (V)

McFarland Johnson

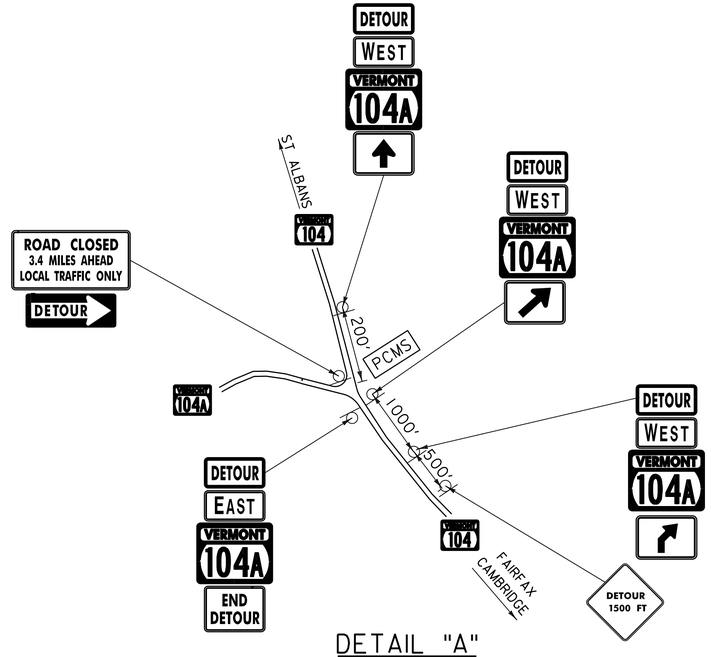
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: zl8b265mat_det.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
BANKING AND MATERIAL TRANSITION

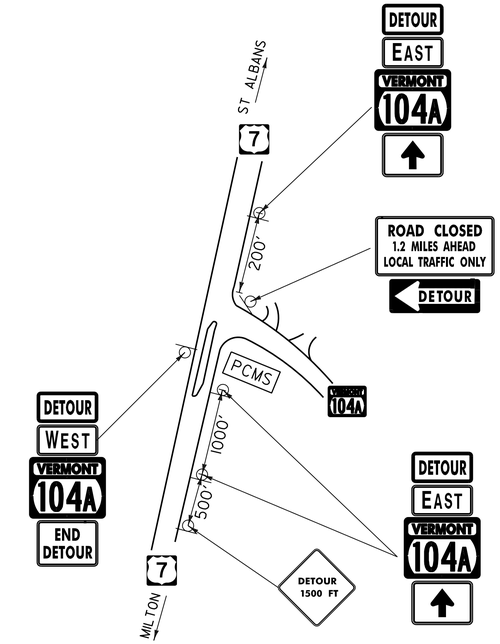
PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: B. COLBURN
SHEET 20 OF 48



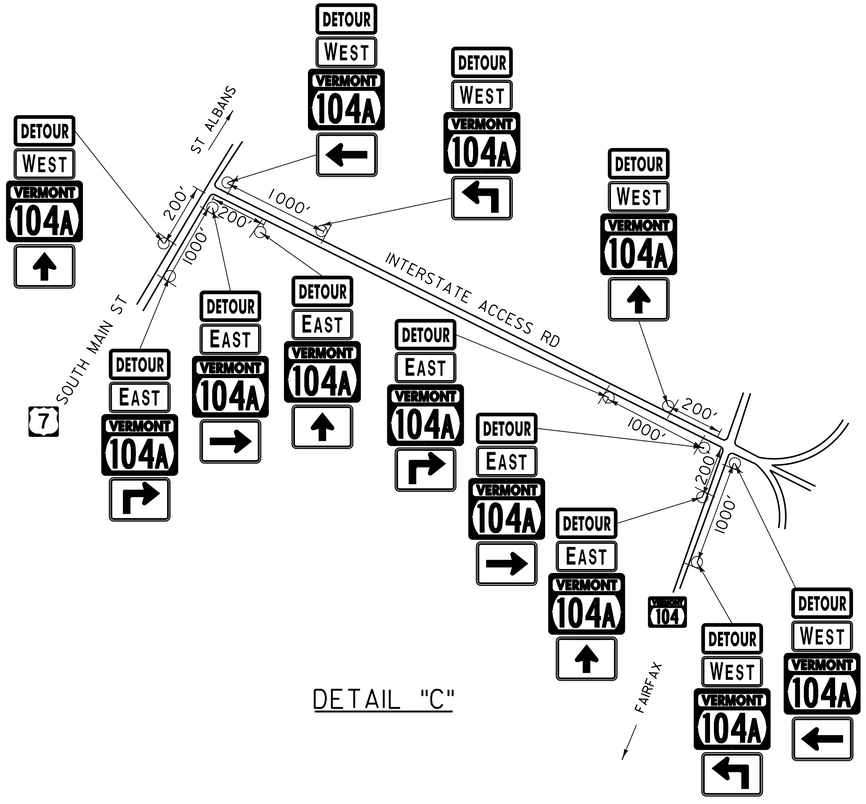
DETOUR SIGNING PLAN
NOT TO SCALE



DETAIL "A"



DETAIL "B"



DETAIL "C"

NOTES

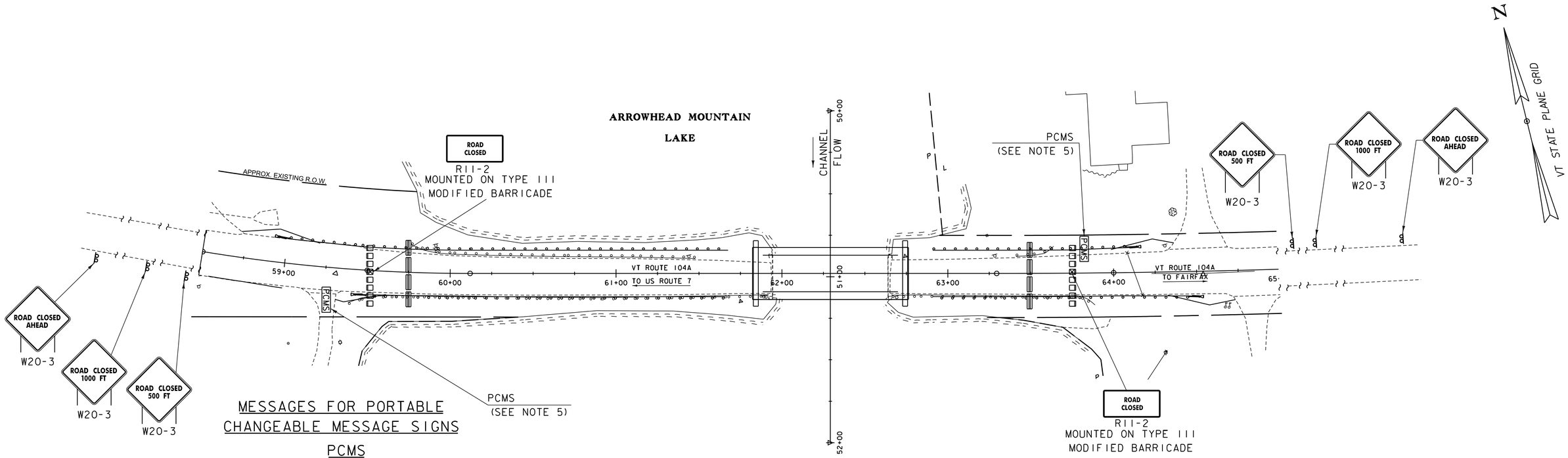
1. FOR TRAFFIC CONTROL NOTES, SEE SHEET 22.
2. THRU LENGTH : 4.5 MILES
   DETOUR LENGTH : 18.2 MILES
   45 DAY PROPOSED CLOSURE
   ADDITIONAL LENGTH :13.7 MILES
   END TO END LENGTH : 22.7 MILES
3. DETOUR ROUTE CONFIRMATION SIGNS ARE NEEDED AFTER EACH MAJOR INTERSECTION AND EVERY MILE ALONG THE DETOUR ROUTE IN BOTH DIRECTIONS OF TRAVEL.

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265 tcp DETOUR
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
DETOUR SIGNING PLAN

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 21 OF 48

McFarland Johnson



MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS

PCMS

MESSAGE 1	MESSAGE 2	
VT 104A	**MMMM DD**	*
ROAD	**THRU**	
CLOSED	**MMMM DD**	*

* MONTH SHALL BE SPELLED OUT
MAY 1, NOT 5/1

TRAFFIC CONTROL PLAN

SCALE 1" = 30'-0"
30 0 30

LEGEND

- □— TYPE III BARRICADE
- ⊠— TYPE III (MOD) BARRICADE
- ▭▭▭— TEMPORARY TRAFFIC BARRIER
- PCMS— PORTABLE CHANGEABLE MESSAGE SIGN

VT104A TRAFFIC CONTROL NOTES

1. THE OFFICIAL STATE DETOUR SIGNING PLAN FOR THE ROAD CLOSURE IS SHOWN ON TRAFFIC CONTROL SHEET 18.
2. A PUBLIC OUTREACH COORDINATOR SHALL BE USED FOR PUBLICIZING AND COORDINATING DETOUR INFORMATION, INCLUDING (BUT NOT LIMITED TO) TRAFFIC DELAYS FOR THE PUBLIC. THE CONTRACTOR SHALL COORDINATE WITH THE PUBLIC OUTREACH COORDINATOR AS NEEDED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, ERECTING AND MAINTAINING (AS WELL AS REMOVING AND RESETTING) ALL ON-PROJECT TEMPORARY TRAFFIC CONTROL ZONE DEVICES, INCLUDING (BUT NOT LIMITED TO) CONSTRUCTION SIGNS, BARRICADES, TEMPORARY TRAFFIC BARRIERS, PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AND OTHER REQUIRED DEVICES (AS ORDERED BY THE ENGINEER) USED TO REGULATE, WARN AND GUIDE TRAFFIC DURING CONSTRUCTION. TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ITS LATEST REVISIONS AND PERTINENT E-SERIES AND T-SERIES STANDARDS. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN. EXACT LOCATIONS OF DEVICES SHALL BE COORDINATED WITH THE RESIDENT ENGINEER. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS REQUIRED BY THE RESIDENT ENGINEER.
4. PORTABLE CHANGEABLE MESSAGE SIGNS "PCMS" SHALL BE PLACED AT THE APPROXIMATE LOCATIONS SHOWN ON THE PLANS OR WHERE DESIGNATED BY THE ENGINEER. TWO SIGNS SHALL BE PLACED AT THE BRIDGE 14 DAYS PRIOR TO THE ROAD CLOSURE TO WARN OF THE IMPENDING CLOSURE & DETOURS, THEN BE MOVED OUT TO START OF DETOUR. PCMS SHALL BE PLACED OFF THE EDGE OF THE ROAD, OUTSIDE THE CLEAR ZONE AS DEFINED IN THE ROADSIDE DESIGN GUIDE, BUT SHALL BE VISIBLE FROM THE ROADWAY.
5. THE ROUTE MARKERS USED FOR THE DETOUR AS SHOWN ON THE PLANS SHALL FOLLOW MUTCD. THESE SIGNS SHALL BE REMOVED AT THE END OF THE ROAD CLOSURE.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
7. ALL SIGNS SHALL BE PLACED WITHIN EXISTING STATE OR TOWN RIGHTS-OF-WAY, UNLESS OTHERWISE NOTED.
8. ACCESS TO ALL EXISTING DRIVES AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION. (INCIDENTAL TO ITEM 641.11 - TRAFFIC CONTROL, ALL-INCLUSIVE)
9. INSTALLATION OF DETOUR AND ON-SITE SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES AND SHALL MODIFY OR BE PLACED ADJACENT TO EXISTING ROUTE MARKER SIGN ASSEMBLIES WHEN POSSIBLE. THE CONTRACTOR SHOULD MAINTAIN AT LEAST 200 FEET BETWEEN SIGN ASSEMBLIES WHENEVER POSSIBLE.
10. EXISTING SIGNS THAT ARE IN CONFLICT WITH THE TRAFFIC FLOW OF THE DETOUR SHALL BE REMOVED OR COVERED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER. ALL SIGNS REMOVED OR COVERED SHALL BE REPLACED OR UNCOVERED WHEN THE TRAFFIC CONTROL PACKAGE IS DISASSEMBLED.
11. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE WITH STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE FROM DRIVES AND TOWN HIGHWAYS.
12. CONTACT DIG-SAFE AT 1-888-344-7233 PRIOR TO BREAKING GROUND TO INSTALL ANY SIGN POSTS.

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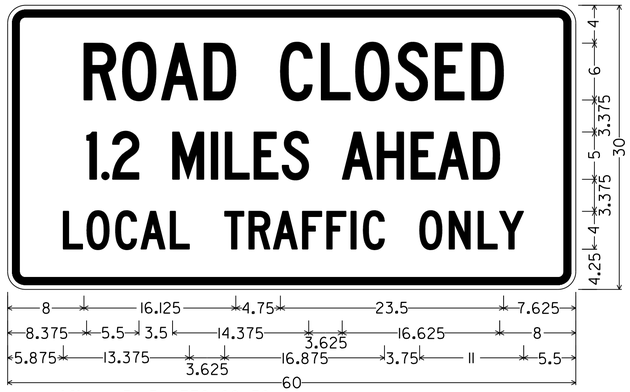
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265 tcp
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
TRAFFIC CONTROL NOTES AND PLAN

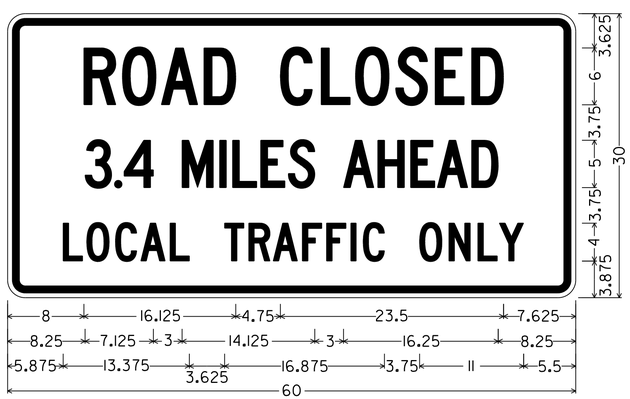
PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 22 OF 48

TYPE "A" TRAFFIC SIGN SUMMARY

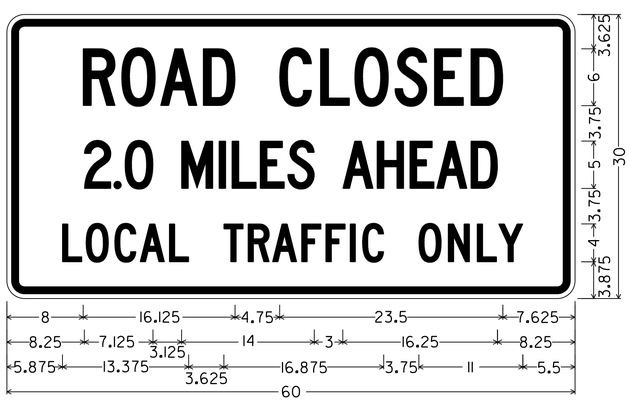
ID NUMBER	SIGN TEXT	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	NUMBER OF SIGNS REQ'D	AREA OF EACH SIGN (SF)	TOTAL AREA (SF)	NUMBER NEW POSTS	COLOR	SHSM/ VTRANS STANDARD
VD-701		6	10	2	0.42	0.82	2	WHITE AND GREEN	T-42
W11-9		36	36	1	9.0	9.0	2	BLACK AND YELLOW	SHSM
D4-1		30	24	1	5.0	5.0	1	GREEN AND WHITE	SHSM



Identifier : RII-3a TTC 60x30;
1.875" Radius, 0.750" Border, 0.500" Indent, Black on Orange;
"ROAD CLOSED" C 2K Specified Length;
"1.2 MILES AHEAD" C 2K Secified Length;
"LOCAL TRAFFIC ONLY" C 2K Specified Length;

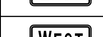
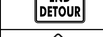
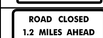
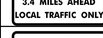
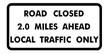


Identifier : RII-3a TTC 60x30;
1.875" Radius, 0.750" Border, 0.500" Indent, Black on Orange;
"ROAD CLOSED" C 2K Specified Length;
"3.4 MILES AHEAD" C 2K Secified Length;
"LOCAL TRAFFIC ONLY" C 2K Specified Length;



Identifier : RII-3a TTC 60x30;
1.875" Radius, 0.750" Border, 0.500" Indent, Black on Orange;
"ROAD CLOSED" C 2K Specified Length;
"2.0 MILES AHEAD" C 2K Secified Length;
"LOCAL TRAFFIC ONLY" C 2K Specified Length;

TEMPORARY TRAFFIC SIGN SUMMARY

ID NUMBER	SIGN TEXT	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	NUMBER OF SIGNS REQ'D	AREA OF EACH SIGN (SF)	COLOR	REMARKS
M4-8		24	12	54	2.0	BLACK AND FLUORESCENT ORANGE	MOUNT ABOVE M3-2 OR M3-4
M3-2		24	12	28	2.0	GREEN AND WHITE	MOUNT ABOVE MI-6
M3-4		24	12	26	2.0	GREEN AND WHITE	MOUNT ABOVE MI-6
MI-6		30	24	54	5.0	GREEN AND WHITE	
M6-3		21	15	40	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M6-1R		21	15	3	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M5-1R		21	15	3	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M6-1L		21	15	2	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M5-1L		21	15	2	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M6-2R		21	15	1	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M5-2R		21	15	1	2.19	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
M4-8a		24	18	2	3.0	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW MI-6
W20-2		48	48	2	16.0	BLACK AND FLUORESCENT ORANGE	INSTALL ON 2 POSTS
W20-3		48	48	2	16.0	BLACK AND FLUORESCENT ORANGE	INSTALL ON 2 POSTS
W20-3		48	48	2	16.0	BLACK AND FLUORESCENT ORANGE	INSTALL ON 2 POSTS
RII-2		48	30	2	10.0	BLACK AND WHITE	INSTALL ON TYPE III BARRICADE
RII-3a		60	30	1	12.5	BLACK AND WHITE	INSTALL ON 2 POSTS
RII-3a		60	30	1	12.5	BLACK AND WHITE	INSTALL ON 2 POSTS
RII-3a		60	30	1	12.5	BLACK AND WHITE	INSTALL ON 2 POSTS
M4-10R		48	18	1	6.0	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW RII-3B
M4-10L		48	18	1	6.0	BLACK AND FLUORESCENT ORANGE	MOUNT BELOW RII-3B

THE ESTIMATED QUANTITIES OF "PERMANENT CONTROLS" ARE HEREBY LISTED. ADDITIONAL SIGNS REQUIRED FOR THE CONSTRUCTION APPROACHES ARE SHOWN ON STANDARD DETAIL T-10. THE CONTRACTOR IS RESPONSIBLE FOR ALL "OPERATIONAL CONTROLS" REQUIRED UNDER SECTION 641 OF THE 2018 VTRANS SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART VI LATEST EDITION.

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: zl8b265trf_sum.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
TEMPORARY TRAFFIC SIGN SUMMARY

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 23 OF 48

SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

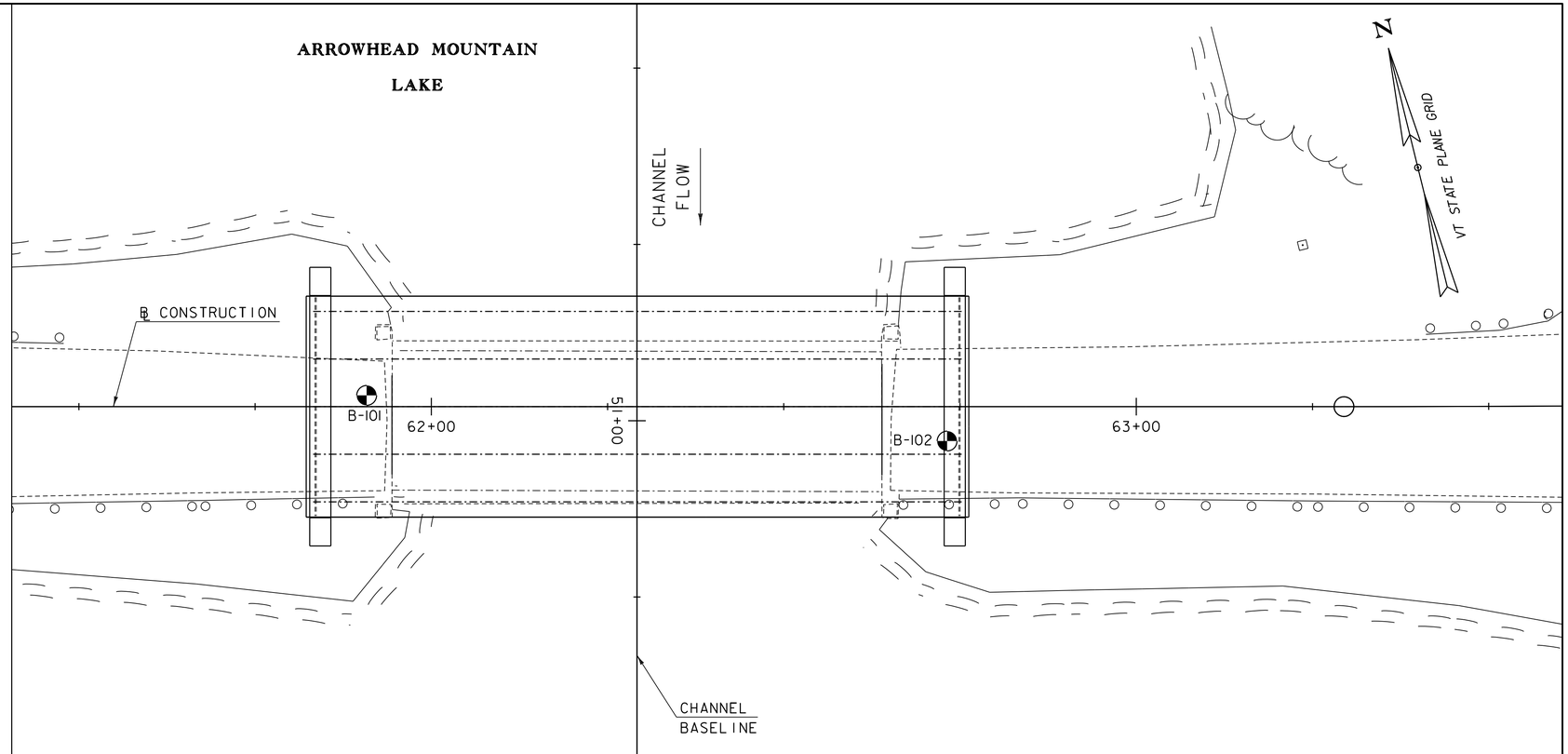
DENSITY (GRANULAR SOILS) N	DESCRIPTIVE TERM	CONSISTENCY (COHESIVE SOILS) N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
⊗	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		



BORING LAYOUT

10 0 10

SCALE: 1" = 10'-0"

BORING CHART

HOLE NO.	BASELINE STATION	OFFSET	GROUND ELEV.	DEPTH TLOB (FT.)	NORTHING	EASTING
B-101	61+91	3.6 LT.	293.9		796335.80	1486300.40
B-102	62+73	2.9 RT.	294.0		796309.80	1486378.80

LEGEND

BORING

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between May 20 and May 23, 2019 by VTrans and Terracon.

2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.

3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.

4. Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.

5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265bor_lay.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
BORING LAYOUT SHEET

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 24 OF 48

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
Bridge 1 VT Route 104A

Boring No.: **B-101**
Page No.: 1 of 3
Pin No.: 18b265
Checked By: END

Boring Crew: Judkins, Emerson, Brochu, Gonyaw
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796335.80 ft E 1486300.40 ft
Station: 61+91 Offset: -3.60
Ground Elevation: 293.9 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 55 TRACK	C_E = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	2.2	W.T. during drilling
05/21/19	1.1	W.T. before drilling
05/23/19	15.2	W/ casing in hole

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		Field Note, Asphalt 0.0-1.5'							
		A-1-b, SaGr, brn, Moist, Rec. = 1.1 ft, Field Note, broken rock was within sample Cleanout NXDC 2.1'-3.0'	12-22-17 (39)	8.3	45.5	40.3	14.2		
		A-1-b, GrSa, brn, Moist, Rec. = 1.1 ft, Cleanout NXDC 4.4'-5.0'	8-10-11-11 (21)	12.7	31.6	53.6	14.8		
5		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft, Cleanout NXDC 6.2'-7.0'	7-5-6-4 (11)	11.3	29.8	57.7	12.5		
		A-1-b, SaGr, brn, MTW, Rec. = 0.8 ft, Cleanout NXDC 8.6'-9.0'	6-4-3-4 (7)	12.1	47.9	42.4	9.7		
10		A-2-4, SiSa, gry, MTW, Rec. = 1.0 ft	4-2-2-2 (4)	22.4	1.8	65.3	32.9		
		Field Note, No Recovery	3-2-3-2 (5)						
		A-2-4, Sa, gry, MTW, Rec. = 0.6 ft	1-1-WoH-WoH (1)	21.1	12.7	67.7	19.6		
15		Field Note, No Recovery	1-1-1-1 (2)						
		A-2-4, Sa, brn, MTW, Rec. = 0.3 ft	WoH-1-1-WoR (2)	21.3	14.3	69.3	16.4		
20		A-2-4, SiSa, gry, MTW, Rec. = 1.2 ft, Field Note: wood was within sample cleanout rollercone 24.4'-25.0'	9-6-7-7 (13)	26.4	11.4	61.7	26.9		
25		Field Note, No Recovery, Cleanout rollercone 29.5'-30.0'	3-2-3-2 (5)						
30		A-4, Si, gry, MTW, Rec. = 0.8 ft	3-2-2-2 (4)	23.3	8.4	16.2	75.4		
35		A-2-4, SiSa, gry, MTW, Rec. = 1.3 ft	9-8-9-9 (17)	25.3		75.2	24.8		
40		A-2-4, SiSa, gry, Moist, Rec. = 1.0 ft, Field Note, started using bentonite, artesian condition encountered	6-6-6-6 (12)	24.1	2.9	76.1	21.0		
45									

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG GEORGIA BF 023-1(7).GPJ VERMONT AOT.GDT 8/26/19

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
Bridge 1 VT Route 104A

Boring No.: **B-101**
Page No.: 2 of 3
Pin No.: 18b265
Checked By: END

Boring Crew: Judkins, Emerson, Brochu, Gonyaw
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796335.80 ft E 1486300.40 ft
Station: 61+91 Offset: -3.60
Ground Elevation: 293.9 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 55 TRACK	C_E = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	2.2	W.T. during drilling
05/21/19	1.1	W.T. before drilling
05/23/19	15.2	W/ casing in hole

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		A-2-4, SiSa, gry, Moist, Rec. = 1.0 ft	4-5-7-8 (12)		0.1	78.9	21.0		
55									
60		A-3, Sa, gry, Moist, Rec. = 1.3 ft, Cleanout rollercone 69.1'-70.0'	4-7-7-9 (14)	23.7		91.3	8.7		
65									
70		A-2-4, SiSa, gry, MTW, Rec. = 1.2 ft, Cleanout rollercone 76.0'-80.0'	7-10-9-10 (19)	26.2	0.1	67.0	32.9		
75									
80		A-4, ClSi, gry, Moist, Rec. = 2.0 ft	WoH-5-4-4 (9)	29.7			100.0	29	8
		A-6, Cl Field Note, Pushed shelby tube		33.4			100.0	33	12
85		Field Note, Pushed shelby tube, Appears to be Clay							
90		A-4, ClSi, gry, Moist, Rec. = 2.0 ft, Cleanout rollercone 86.8'-90.0'	WoH-WoH-2-5 (2)	43.2			30	10	
95									

Notes:
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3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG GEORGIA BF 023-1(7).GPJ VERMONT AOT.GDT 8/26/19

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
Bridge 1 VT Route 104A

Boring No.: **B-101**
Page No.: 3 of 3
Pin No.: 18b265
Checked By: END

Boring Crew: Judkins, Emerson, Brochu, Gonyaw
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796335.80 ft E 1486300.40 ft
Station: 61+91 Offset: -3.60
Ground Elevation: 293.9 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	4 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 55 TRACK	C_E = 1.52

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	2.2	W.T. during drilling
05/21/19	1.1	W.T. before drilling
05/23/19	15.2	W/ casing in hole

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		A-6, Cl, gry, Moist, Rec. = 2.0 ft, Cleanout NXDC 118.2'-120.0'	WoH-WoH-WoH-5 (0)	26.8	1.4		98.6	32	14
105									
110									
115									
120		A-2-4, SiSa, gry, MTW, Rec. = 0.8 ft, Lab Note: Split sample	17-R@5" (R)	24.5	8.5	66.5	25.0		
		A-1-b, SaGr, gry, Moist, Field Note, broken rock was within sample. Cleanout BXDC 129.7'-130.0'		8.1	64.0	24.3	11.7		
125									
130		A-4, SaGrSi, gry, Moist, Rec. = 1.1 ft, Cleanout BXDC 139.5'-140.0'	9-19-27-R@11" (46)	8.6	27.5	26.3	46.2		
135									
140		Hole stopped @ 140.0 ft							
145									

Remarks:
1. Switched to 3" casing at 120'
2. Artesian condition encountered at 40'

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG GEORGIA BF 023-1(7).GPJ VERMONT AOT.GDT 8/26/19

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: zl8b265bor_log.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
BORING LOG SHEET NO. 1

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 25 OF 48

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
VT-104A Br. #1

Boring No.: **B-102**
Page No.: 1 of 4
Pin No.: 18b265
Checked By: MAF

Boring Crew: Terracon/C. Johnston, M. Rooney
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796309.80 ft E 1486378.80 ft
Station: 62+73 Offset: 2.9 ft
Ground Elevation: 294.0 ft

	Casing	Sampler
Type:	Casing	SS
I.D.:	4 in	2 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/N	
Rig:	Mobile B-57	C_E =

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	5.0	while drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
		10 inches of bituminous concrete							
		SiSa, brown, Rec. = 1.0 ft, (FILL)	9-12-14-11 (26)						
		A-2-4, SiSa, brown, Rec. = 1.83 ft, (FILL)	10-7-5-6 (12)						
5		SiSa, brown, Rec. = 1.0 ft, (ALLUVIUM)	15-15-7-5 (22)						
		SiSa, brown, Rec. = 0.33 ft, (ALLUVIUM)	3-2-2-2 (4)						
		A-2-4, SiSa, brown, Rec. = 0.33 ft, (ALLUVIUM)	2-2-2-2 (4)						
10		SiSa, gray brown, Rec. = 1.75 ft, (ALLUVIUM)	1-WOH-WOH-1						
		A-2-4, SiSa, gray brown, Rec. = 1.75 ft, (ALLUVIUM)	1-WOH-1-1 (1)						
15		SiSa, gray brown, Rec. = 0.46 ft, (ALLUVIUM)	1-WOH-WOH-WOH						
		A-2-4, SiSa, gray brown, Rec. = 1.42 ft, (ALLUVIUM)	2-2-2-3 (4)						
20		SiSa, gray brown, Rec. = 1.33 ft, (ALLUVIUM)	3-3-2-4 (5)						
		A-2-4, Sa, dark gray, Rec. = 1.5 ft, (ALLUVIUM)	7-7-10-13 (17)						
30		A-4, SaSi, dark gray, Rec. = 1.75 ft, (ALLUVIUM)	5-4-5-7 (9)					NP	NP
35		SiSa, dark gray, Rec. = 1.83 ft, (ALLUVIUM)	6-8-8-10 (16)						
40		A-2-4, SiSa, dark gray, Rec. = 2.0 ft, (ALLUVIUM)	7-8-7-6 (15)						

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG J:\185142 GEORGIA VTRANS VERSION.GPJ VERMONT AOT.GDT 8/26/19

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
VT-104A Br. #1

Boring No.: **B-102**
Page No.: 2 of 4
Pin No.: 18b265
Checked By: MAF

Boring Crew: Terracon/C. Johnston, M. Rooney
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796309.80 ft E 1486378.80 ft
Station: 62+73 Offset: 2.9 ft
Ground Elevation: 294.0 ft

	Casing	Sampler
Type:	Casing	SS
I.D.:	4 in	2 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/N	
Rig:	Mobile B-57	C_E =

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	5.0	while drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
45		Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	2-4-4-5 (8)						
50		A-4, Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	3-4-4-5 (8)					31	9
55		Shelby tube taken at 55 feet, Rec. = 2.0 ft, (GLACIOLACUSTRINE)							
60		A-4, Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	3-5-5-5 (10)					28	8
65		Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	WOH-3-5-5 (8)						
70		Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	4-3-5-5 (8)						
75		A-7-6, Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	8-5-5-7 (10)					53	36
80									

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG J:\185142 GEORGIA VTRANS VERSION.GPJ VERMONT AOT.GDT 8/26/19

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
VT-104A Br. #1

Boring No.: **B-102**
Page No.: 3 of 4
Pin No.: 18b265
Checked By: MAF

Boring Crew: Terracon/C. Johnston, M. Rooney
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796309.80 ft E 1486378.80 ft
Station: 62+73 Offset: 2.9 ft
Ground Elevation: 294.0 ft

	Casing	Sampler
Type:	Casing	SS
I.D.:	4 in	2 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/N	
Rig:	Mobile B-57	C_E =

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	5.0	while drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
85		Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	WOH-2-4-4 (6)						
90									
95		A-6, Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	WOH/24"					39	23
100									
105		Cl, gray, Rec. = 2.0 ft, (GLACIOLACUSTRINE)	WOH/12"-3-4 (3)						
110									
		Roller bit resistance indicating a strata change at 114 feet							
115		A-4, GrSaSi, dark gray, Rec. = 1.0 ft, (GLACIAL TILL)	47-45-50/5" (95+)					17	5
120									
125		A-4, SaSi, dark gray, Rec. = 1.33 ft, (GLACIAL TILL)	49-50-					17	4

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

BORING LOG J:\185142 GEORGIA VTRANS VERSION.GPJ VERMONT AOT.GDT 8/26/19

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265bor_log.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
BORING LOG SHEET NO. 2

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 26 OF 48

STATE OF VERMONT
AGENCY OF TRANSPORTATION
CONSTRUCTION AND
MATERIALS BUREAU
CENTRAL LABORATORY

BORING LOG

Georgia
BF 023-1(7)
VT-104A Br. #1

Boring No.: **B-102**
Page No.: 4 of 4
Pin No.: 18b265
Checked By: MAF

Boring Crew: Terracon/C. Johnston, M. Rooney
Date Started: 5/20/19 Date Finished: 5/23/19
VTSPG NAD83: N 796309.80 ft E 1486378.80 ft
Station: 62+73 Offset: 2.9 ft
Ground Elevation: 294.0 ft

	Casing	Sampler
Type:	Casing	SS
I.D.:	4 in	2 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/N	
Rig:	Mobile B-57	C_E =

Groundwater Observations

Date	Depth (ft)	Notes
05/20/19	5.0	while drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	LL %	PI %
			50/4" (100+)						
130									
135		GrSaSi, dark gray, Rec. = 0.08 ft, (GLACIAL TILL)	50/1"						
		Advanced roller bit without sampling past 135 feet							
140									
145		Roller bit resistance indicating a strata change at 145, wash cuttings indicate pcssible weathered rock							
150									
155									
160									
165		Boring terminated in possible weathered rock at 165 feet							
		Hole stopped @ 165.0 ft							

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

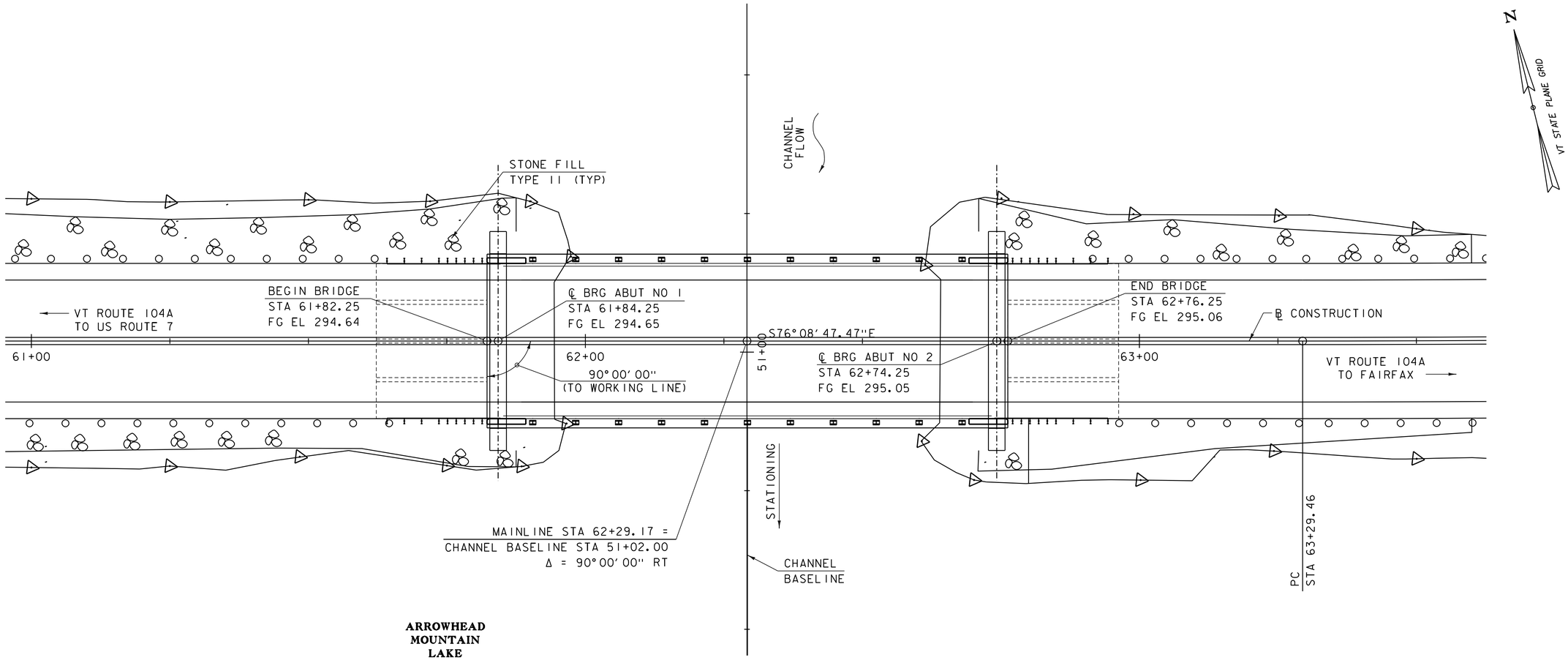
BORING LOG J1185142 GEORGIA VTRANS VERSION.GPJ VERMONT AOT.GDT 8/26/19

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

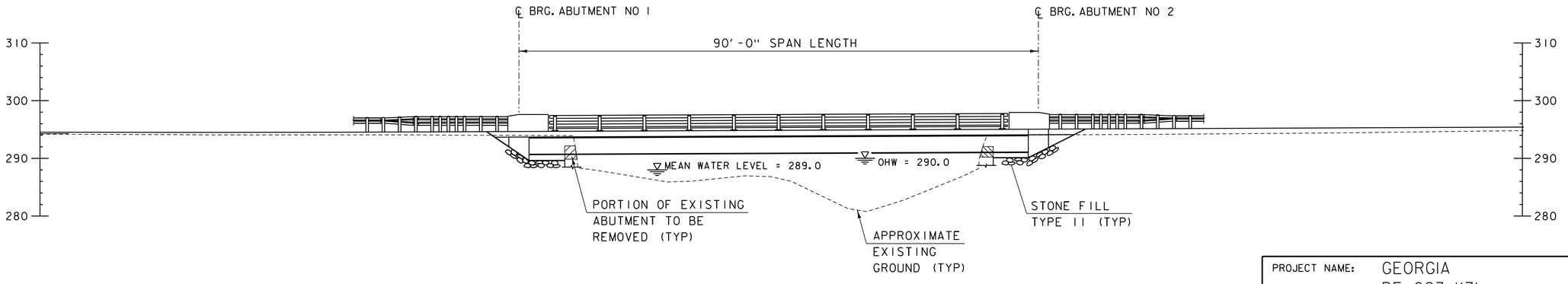
FILE NAME: z18b265bor_log.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: S. IRELAND
BORING LOG SHEET NO. 3

PLOT DATE: 9/20/2019
DRAWN BY: M. VALLETTA
CHECKED BY: B. COLBURN
SHEET 27 OF 48



PLAN

SCALE 1" = 10'-0"
10 0 10

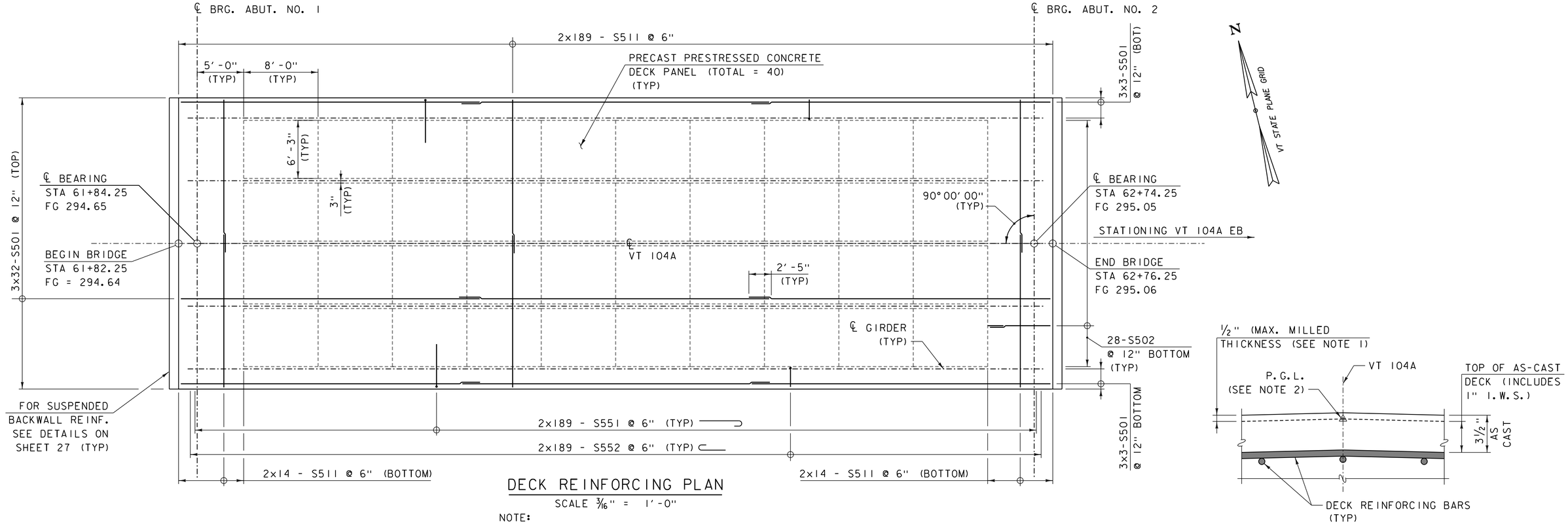


ELEVATION

SCALE 1" = 10'-0"
10 0 10

PROJECT NAME:	GEORGIA
PROJECT NUMBER:	BF 023-1(7)
FILE NAME: zl8b265pe.dgn	PLOT DATE: 9/20/2019
PROJECT LEADER: R. YOUNG	DRAWN BY: D. DePAOLO
DESIGNED BY: D. KULL	CHECKED BY: R. JOY
PLAN & ELEVATION	SHEET 28 OF 48

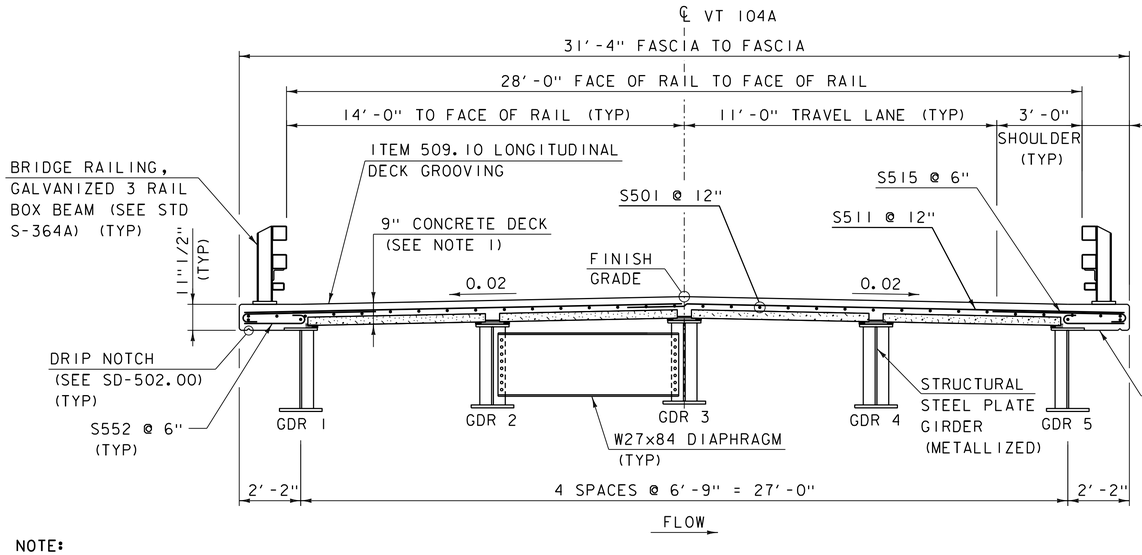
McFarland Johnson



DECK REINFORCING PLAN

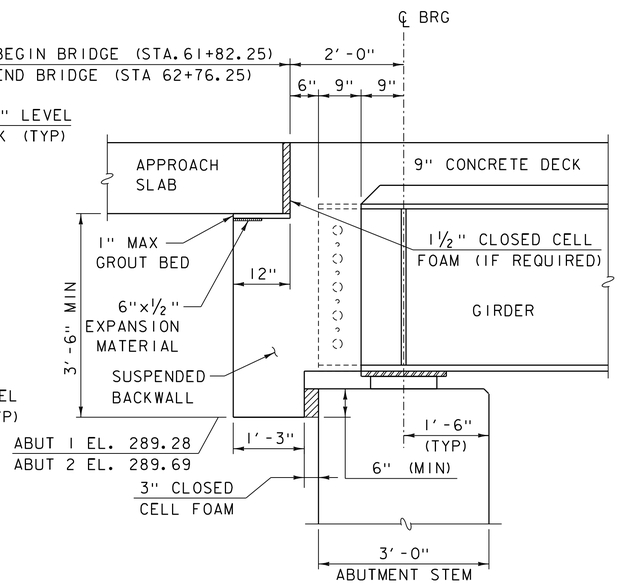
SCALE 3/16" = 1'-0"

NOTE:
RAIL POSTS, TRANSITION BARRIERS NOT SHOWN FOR CLARITY.



BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"



BRIDGE END DETAIL

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

CONCRETE COVER DETAIL

NOT TO SCALE

NOTES:

1. 9" DECK CONSISTS OF 5½" HIGH PERFORMANCE CONCRETE, CLASS PCD OVER 3½" SPECIAL PROVISION (PRECAST PRESTRESSED CONCRETE DECK PANEL)
2. AS MILLED THICKNESS OF ½" FOR RIDEABLITY IS ASSUMED FOR DEFINITION OF P.G.L. (TOP OF AS-CAST DECK IS ½" ABOVE P.G.L.)

NOTE:

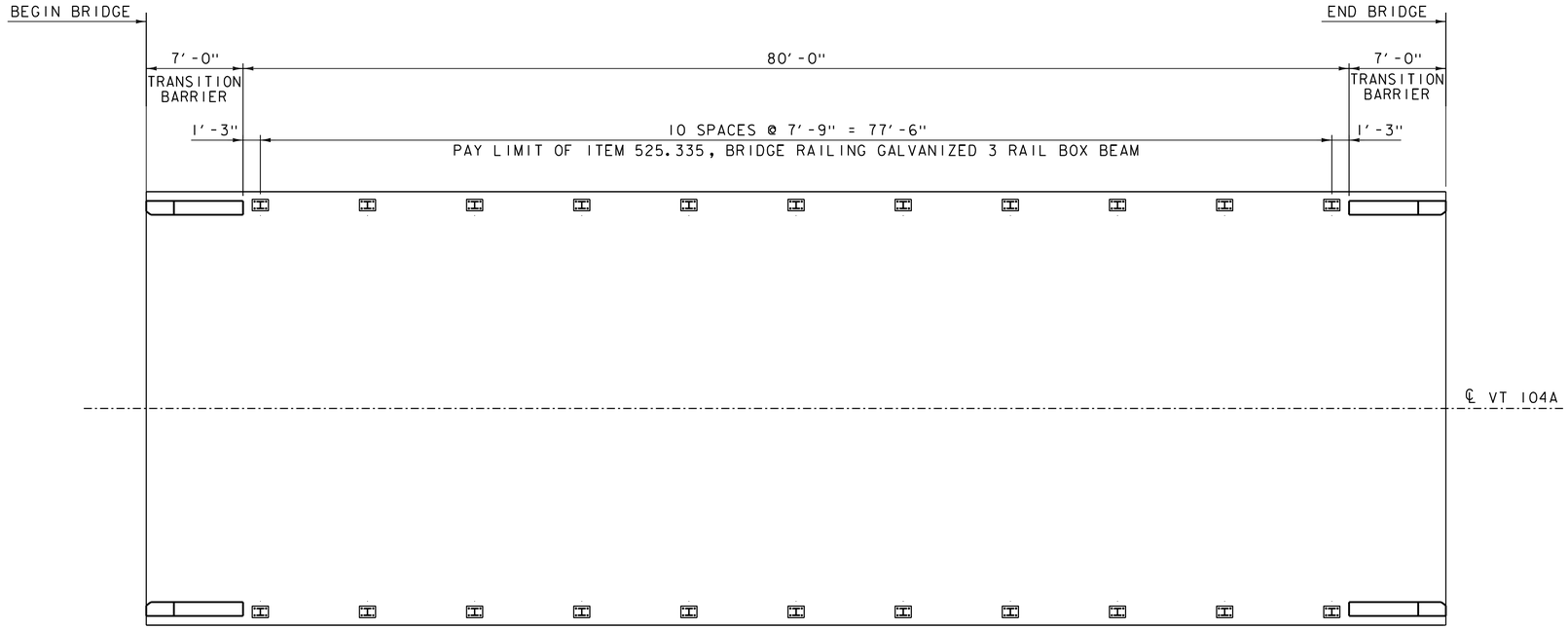
P.G.L. = PROFILE GRADE LINE
I.W.S. = INTEGRAL WEARING SURFACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED IN PLANS.
2'-2" BAR LAP UNLESS OTERWISE SPECIFIED ON THE PLAN.

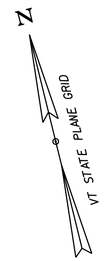
McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: zl8b265sup.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
BRIDGE DECK REINFORCEMENT DETAILS

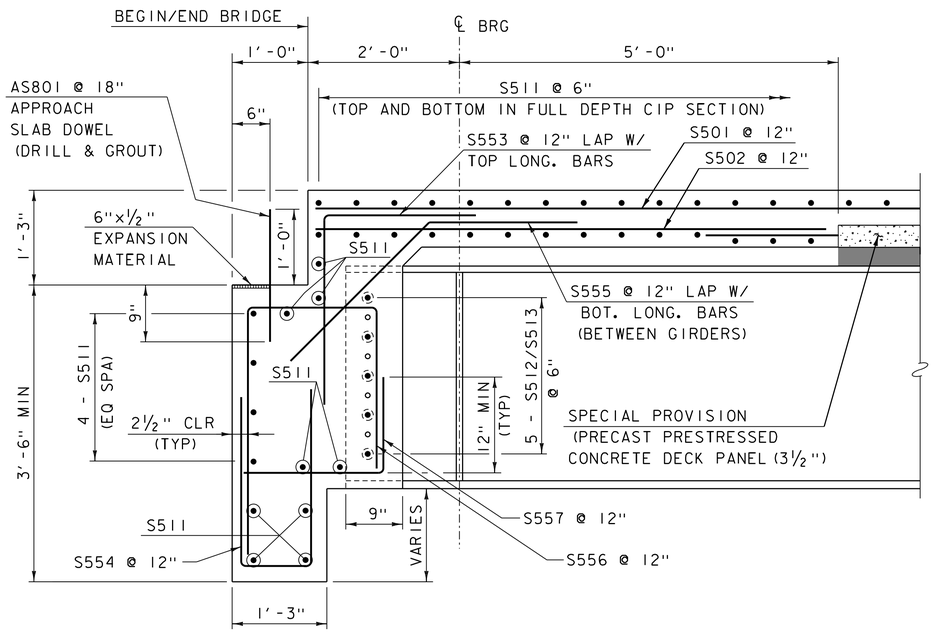
PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 29 OF 48





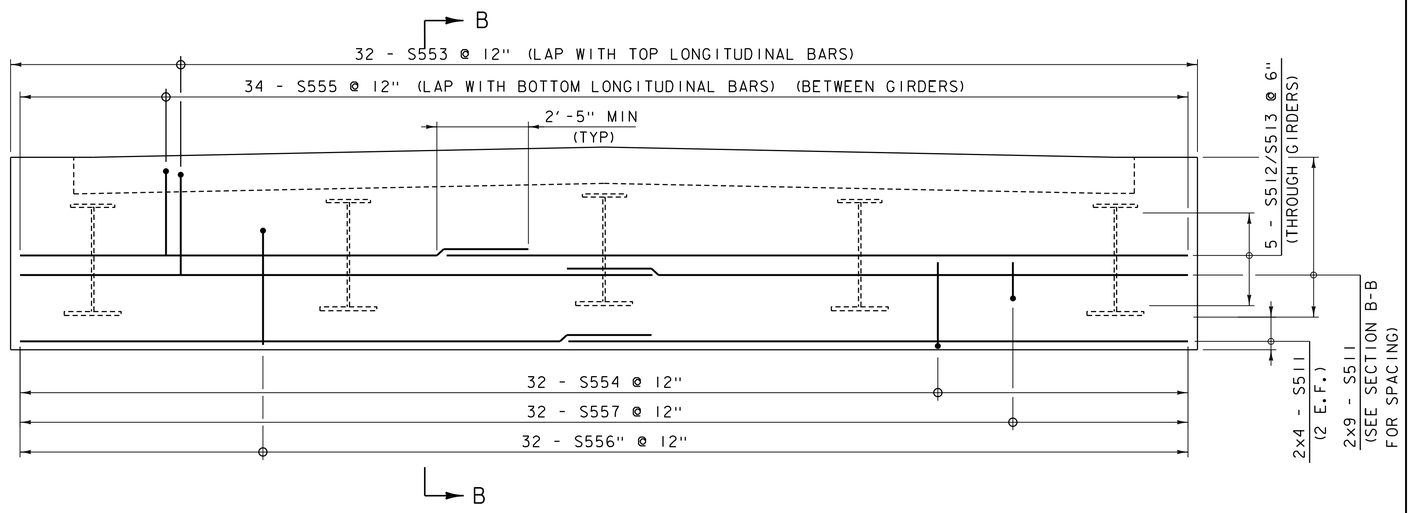
BRIDGE RAIL LAYOUT

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



SECTION B-B

SCALE: 1" = 1'-0"

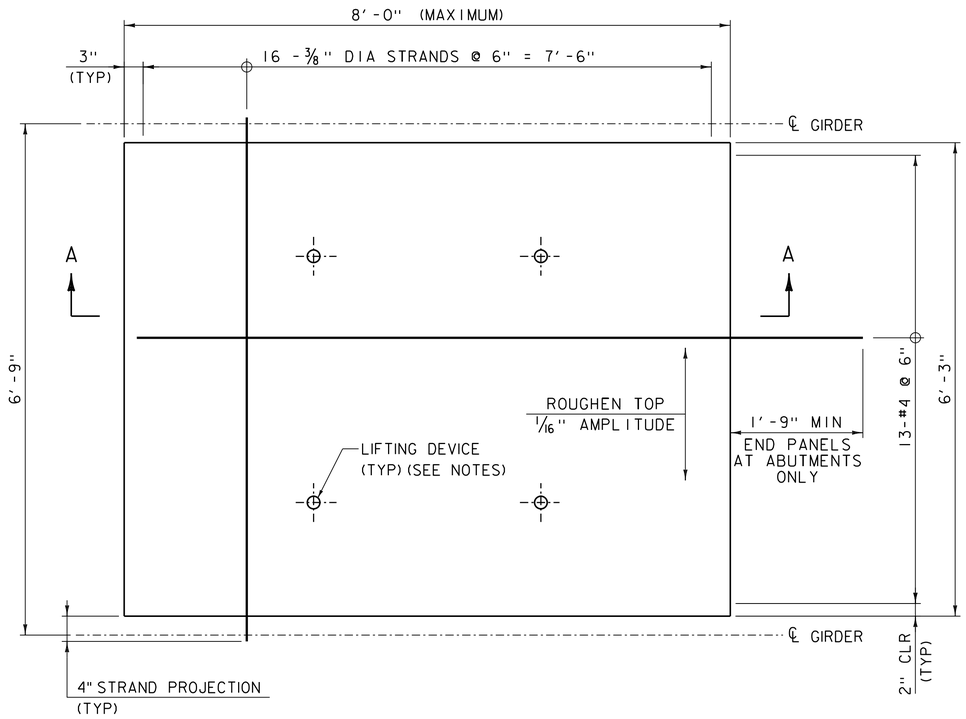


SUSPENDED BACKWALL ELEVATION

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

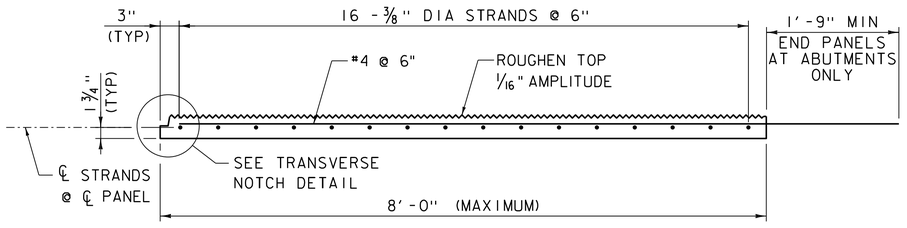
McFarland Johnson

PROJECT NAME:	GEORGIA
PROJECT NUMBER:	BF 023-1(7)
FILE NAME: zl8b265backwalldtls.dgn	PLOT DATE: 9/20/2019
PROJECT LEADER: R. YOUNG	DRAWN BY: D. DePAOLO
DESIGNED BY: D. KULL	CHECKED BY: R. JOY
BRIDGE DECK DETAILS	SHEET 30 OF 48



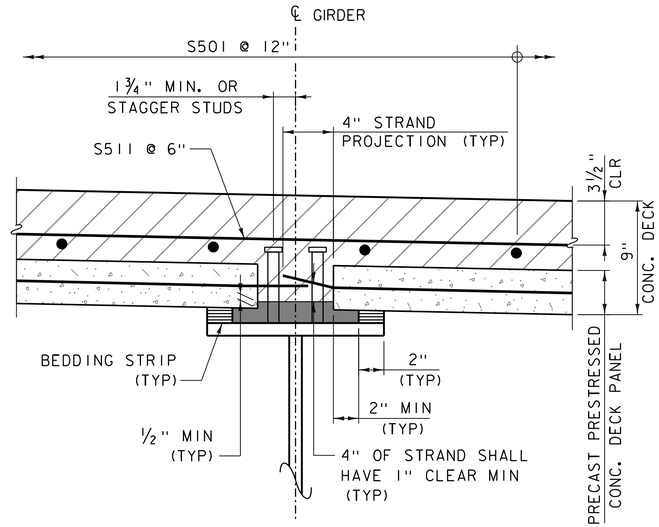
PRECAST PRESTRESSED CONCRETE DECK PANEL PLAN

SCALE: 1" = 1'-0"



SECTION A-A

SCALE: 1" = 1'-0"

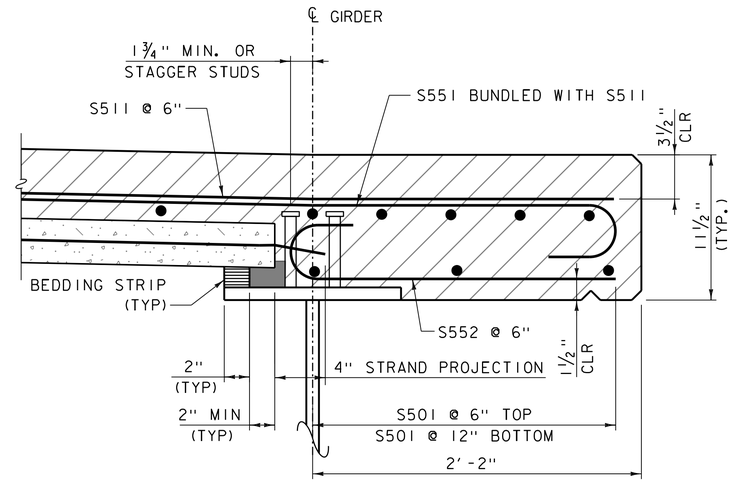


HAUNCH DETAIL

SCALE: 2" = 1'-0"

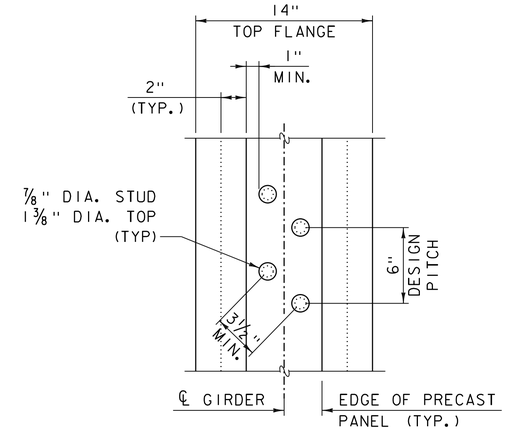
TRANSVERSE NOTCH DETAIL

SCALE: 4" = 1'-0"
(SEE NOTE 4)



TYPICAL OVERHANG

SCALE: 2" = 1'-0"



ALTERNATE STAGGERED STUD DETAIL

SCALE: 2" = 1'-0"

NOTES:

1. LIFTING DEVICE SHALL BE DESIGNED BY THE FABRICATOR.
2. SHEAR CONNECTORS AND STRANDS PROJECTING FROM PANELS SHALL BE CLEANED OF ANY EXCESS MORTAR AFTER GROUT BED PLACEMENT.
3. STRANDS PROJECTING FROM PANELS SHALL BE SECURED IN PLACE DURING DECK CONCRETE PLACEMENT.
4. OMIT TRANSVERSE NOTCH ON END PANELS AT ABUTMENTS.

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED IN PLANS.
2'-2" BAR LAP UNLESS OTERWISE SPECIFIED ON THE PLAN.

LEGEND

CONCRETE, HPC CLASS PCD

PRECAST PRESTRESSED CONCRETE DECK PANEL

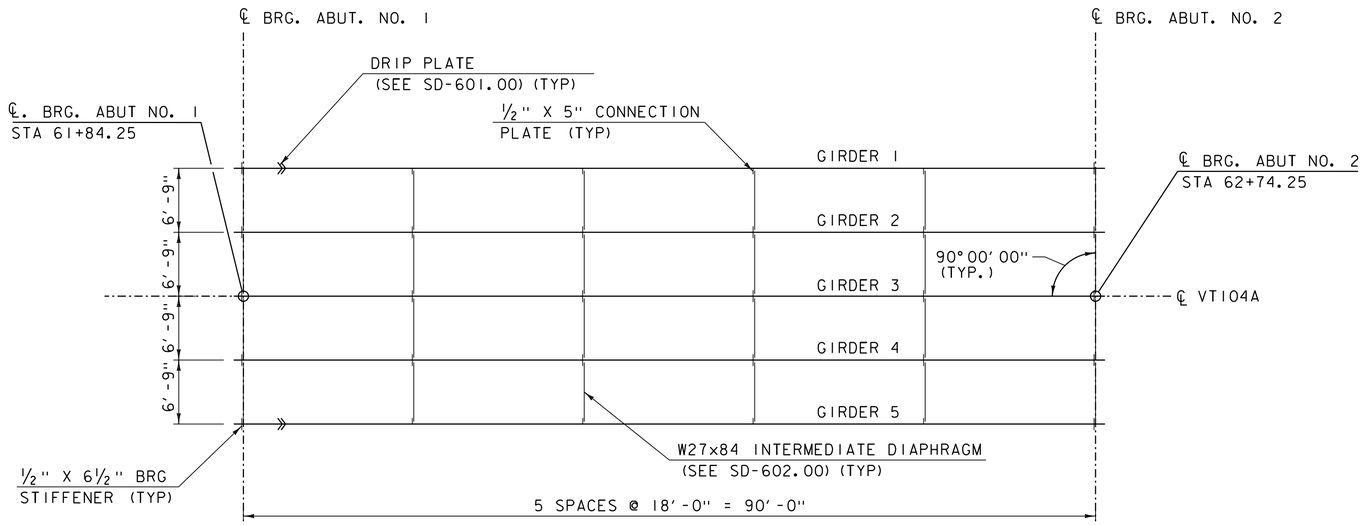
MORTAR, TYPE IV (DEPTH VARIES)

McFarland Johnson

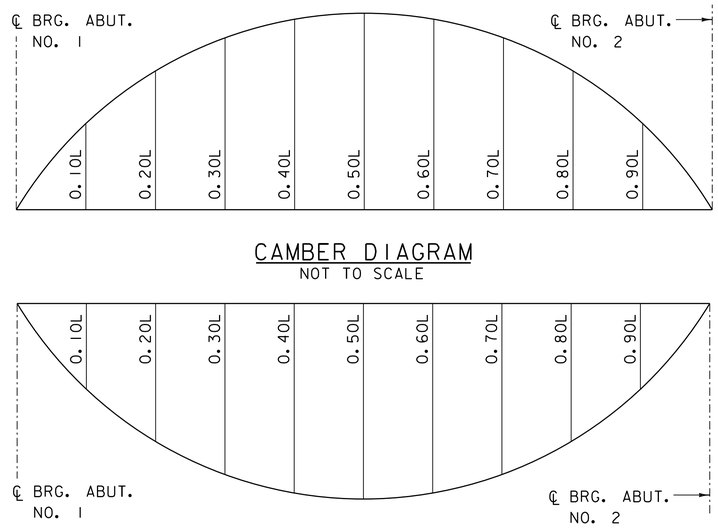
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: zl8b265suppanel.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
BRIDGE DECK PANEL DETAILS

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 31 OF 48



FRAMING PLAN
SCALE: ⅛" = 1'-0"

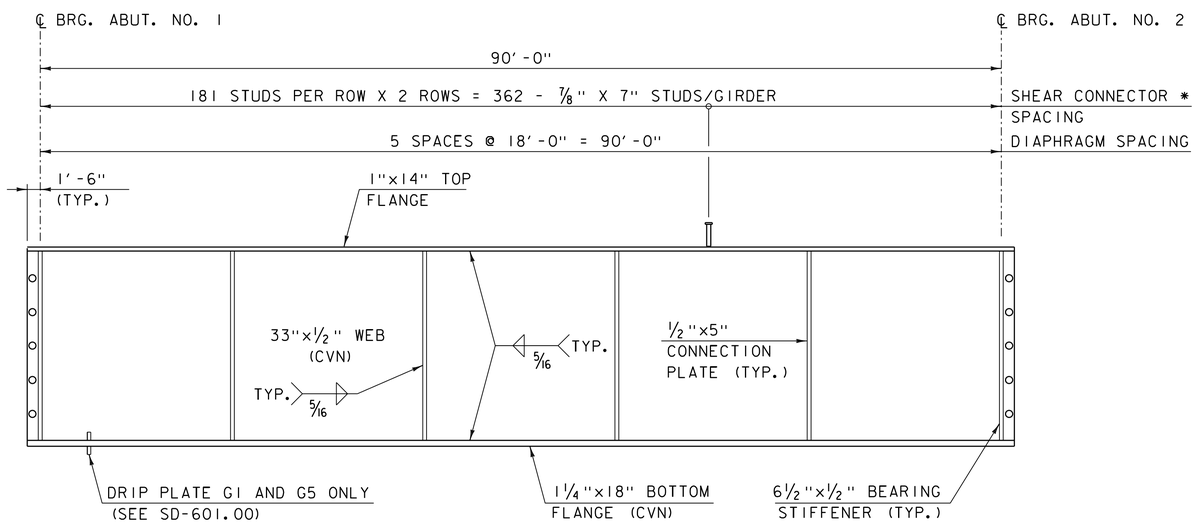


CAMBER DIAGRAM
NOT TO SCALE

DEAD LOAD DEFLECTION DIAGRAM
NOT TO SCALE

CAMBER & DEFLECTION TABLE - GIRDERS 1-5 (INCHES)

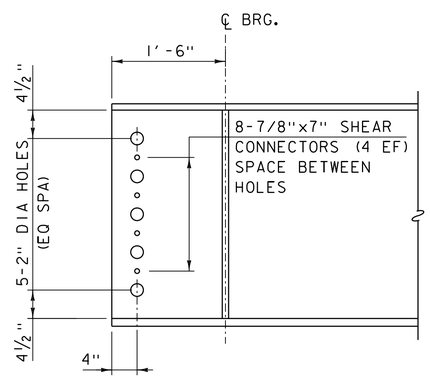
POINT ON GIRDER	CL BRG. ABUT 1	0.10 L	0.20 L	0.30 L	0.40 L	0.50 L	0.60 L	0.70 L	0.80 L	0.90 L	CL BRG. ABUT 2
STEEL DL	0.0	0.31	0.59	0.81	0.95	1.00	0.95	0.81	0.59	0.31	0.0
CONCRETE SLAB	0.0	1.10	2.08	2.85	3.34	3.50	3.34	2.85	2.08	1.10	0.0
SUPERIMPOSED DL	0.0	0.02	0.04	0.06	0.07	0.07	0.07	0.06	0.04	0.02	0.0
TOTAL DEFLECTION	0.0	1.44	2.72	3.72	4.36	4.57	4.36	3.72	2.72	1.44	0.0
RESIDUAL CAMBER	0.0	0.23	0.45	0.68	0.90	1.13	0.90	0.68	0.45	0.23	0.0
TOTAL CAMBER	0.0	1.66	3.17	4.39	5.26	5.70	5.26	4.39	3.17	1.66	0.0



GIRDER ELEVATION
NOT TO SCALE

* - SEE ALTERNATE STAGGERED STUD DETAIL FOR ALTERNATIVE STUD LAYOUT

CVN = CHARPY V-NOTCH TEST IN ACCORDANCE WITH SUBSECTION 714.01.



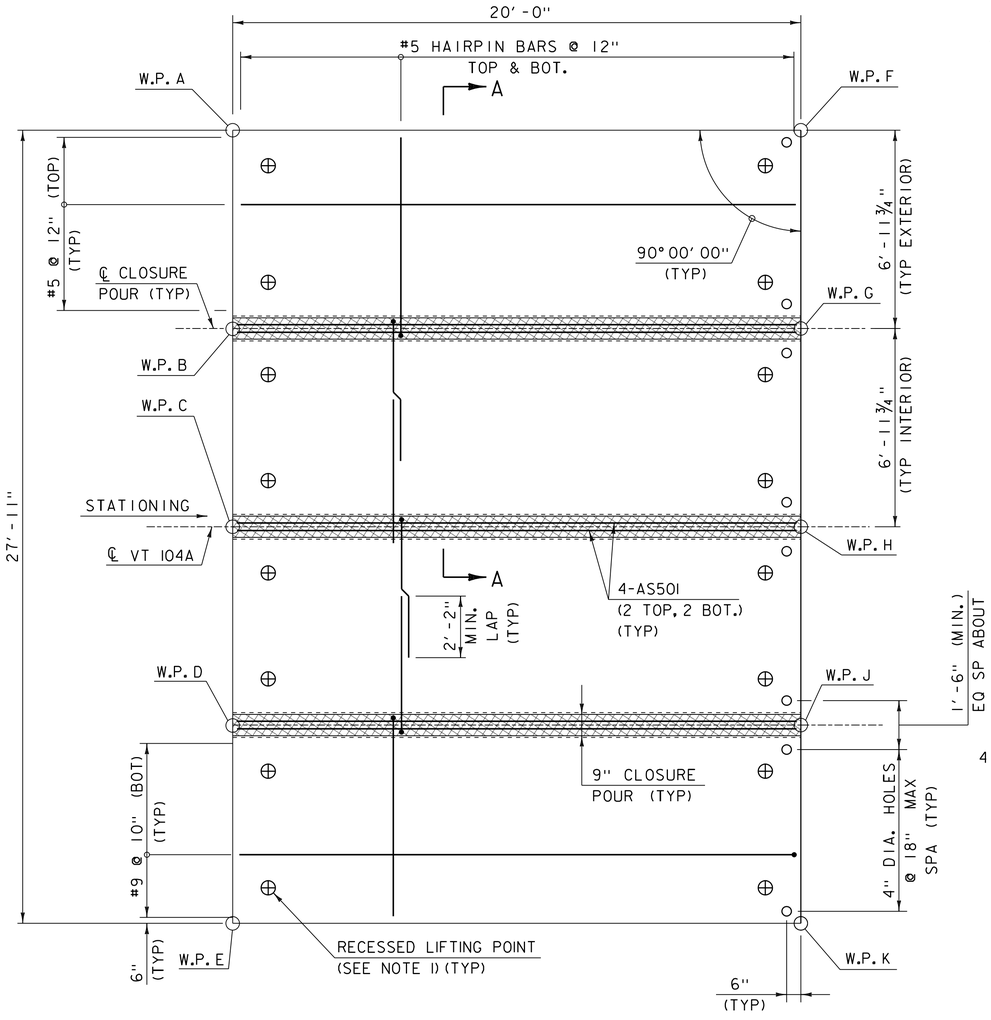
TYPICAL GIRDER END DETAIL
SCALE: 1" = 1'-0"

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265girder.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
FRAMING PLAN & GIRDER DETAILS

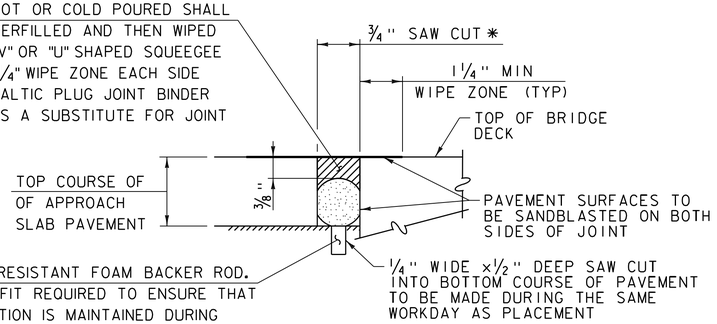
PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 32 OF 48



APPROACH SLAB NO. 1 PLAN

(APPROACH SLAB NO. 2 SIMILAR)
SCALE ⅜" = 1'-0"

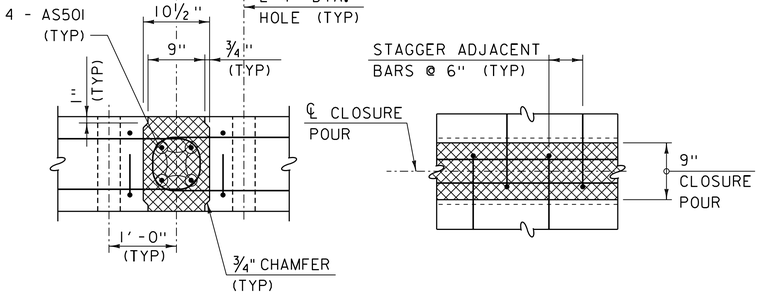
JOINT SEALER, HOT OR COLD POURED SHALL BE SLIGHTLY OVERFILLED AND THEN WIPED FLUSH WITH A "V" OR "U" SHAPED SQUEEGEE TO PROVIDE A 1¼" WIPE ZONE EACH SIDE OF JOINT. ASPJHALTIC PLUG JOINT BINDER MAY BE USED AS A SUBSTITUTE FOR JOINT SEALER.



SAWED PAVEMENT JOINT DETAIL

(NOT TO SCALE)

* - JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.



SECTION PLAN

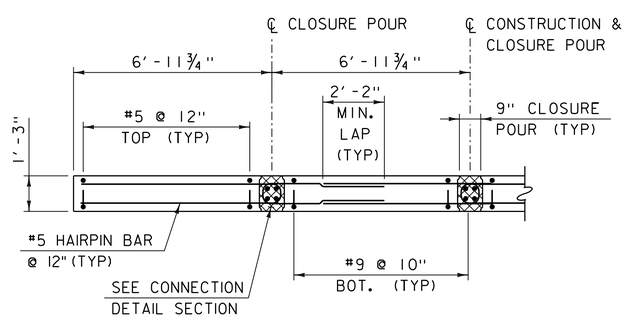
CLOSURE POUR DETAILS

SCALE: 1" = 1'-0"

APPROACH SLAB ELEVATIONS			
	APPROACH SLAB NO. 1		
W.P.	STATION	OFFSET	ELEVATION
A	61+62.25	13.96' LT.	294.02
B	61+62.25	6.98' LT.	294.17
C	61+62.25	0.00	294.31
D	61+62.25	6.98' RT.	294.18
E	61+62.25	13.96' RT.	294.05
F	61+82.25	13.96' LT.	294.11
G	61+82.25	6.98' LT.	294.25
H	61+82.25	0.00	294.39
J	61+82.25	6.98' RT.	294.25
K	61+82.25	13.96' RT.	294.11

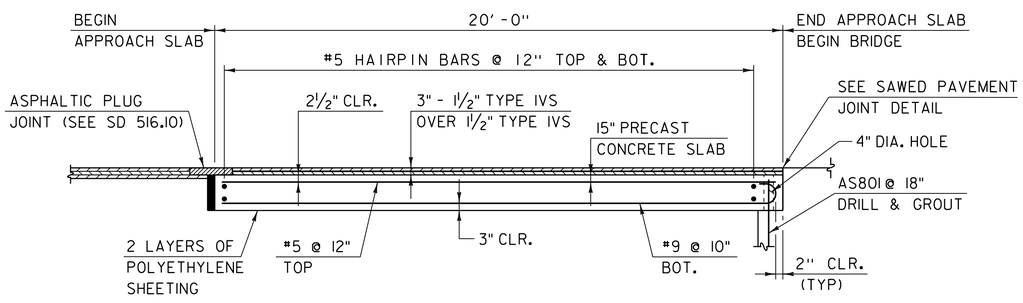
APPROACH SLAB ELEVATIONS			
	APPROACH SLAB NO. 2		
W.P.	STATION	OFFSET	ELEVATION
A	62+76.25	13.96' LT.	294.53
B	62+76.25	6.98' LT.	294.67
C	62+76.25	0.00	294.81
D	62+76.25	6.98' RT.	294.67
E	62+76.25	13.96' RT.	294.53
F	62+96.25	13.96' LT.	294.62
G	62+96.25	6.98' LT.	294.76
H	62+96.25	0.00	294.90
J	62+96.25	6.98' RT.	294.76
K	62+96.25	13.96' RT.	294.63

ALL ELEVATIONS ARE AT TOP OF SLAB



SECTION A-A

SALE: ⅜" = 1'-0"



APPROACH SLAB NO. 1 DETAIL

(APPROACH SLAB NO. 2 SIMILAR)
SCALE ⅜" = 1'-0"

NOTES

1. LIFTING POINTS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE FABRICATION DRAWINGS WITH CALCULATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING UNIFORM CONTACT BETWEEN THE APPROACH SLAB AND THE SUBBASE MATERIAL TO THE SATISFACTION OF THE ENGINEER. THE FABRICATION DRAWINGS SHALL INDICATE THE MEANS AND METHODS NECESSARY TO INSTALL THE APPROACH SLABS TO THE ELEVATIONS SPECIFIED.
3. FRONT FACE OF APPROACH SLAB SHALL BE VERTICAL WHEN PLACED ON APPROACH SLAB SEAT.

LEGEND

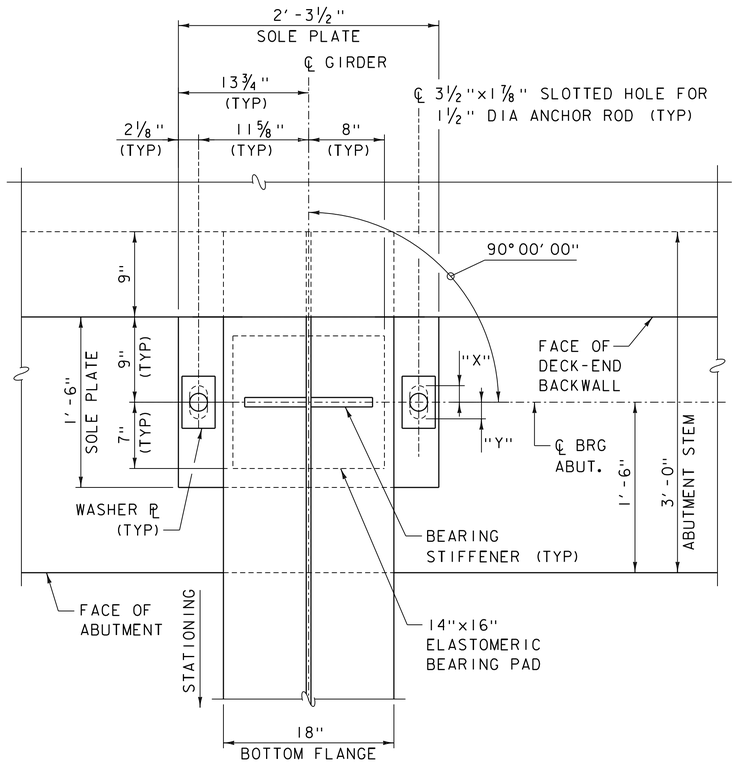
SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265supapp.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
APPROACH SLAB DETAILS

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R.JOY
SHEET 33 OF 48

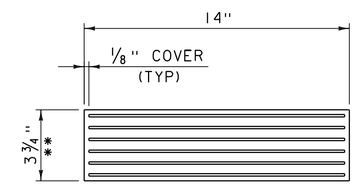


PLAN

SCALE: 1½" = 1'-0"

(ABUTMENT 1 SHOWN, ABUT 2 SIMILAR)

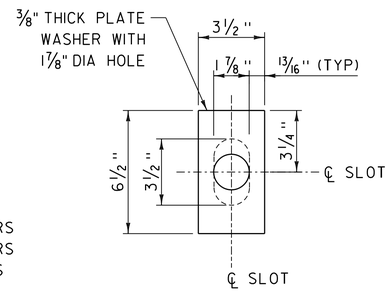
TEMPERATURE ADJUSTMENT TABLE		
TEMP.	"X"	"Y"
0° F	1⅞"	1⅝"
15° F	1⅞"	1⅝"
30° F	1¾"	1¾"
45° F	1¾"	1¾"
60° F	1¾"	1¾"
75° F	1⅝"	1⅞"
90° F	1⅝"	1⅞"
105° F	1½"	2"



** 2 - ¼" EXTERIOR ELASTOMER LAYERS
5 - ½" INTERIOR ELASTOMER LAYERS
6 - ⅛" STEEL REINFORCING PLATES

ELASTOMERIC BEARING PAD DETAIL

SCALE: 3" = 1'-0"



WASHER PLATE DETAIL

SCALE: 3" = 1'-0"

BEARING NOTES

1. BEARINGS WILL BE PAID FOR UNDER ITEM 531.17 "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD".

2. FABRICATION DRAWINGS, INCLUDING ASSOCIATED WELDING PROCEDURES, SHALL BE SUBMITTED CONFORMING TO SUBSECTION 531.03.

3. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL MEETING THE REQUIREMENTS OF SUBSECTION 714.02. ALL INTERNAL STEEL PLATES SHALL BE BLASTED CLEANED AND FREE OF COATINGS, RUST, AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.

4. ALL STEEL IN BEARING DEVICES SHALL BE AASHTO M 270M/M 270 GRADE 36, UNLESS OTHERWISE NOTED.

5. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM ⅛" EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.

6. THE ELASTOMER SHALL BE GRADE 60 SHORE A DUROMETER AND MEET THE REQUIREMENTS OF LOW TEMPERATURE ZONE D, GRADE 4.

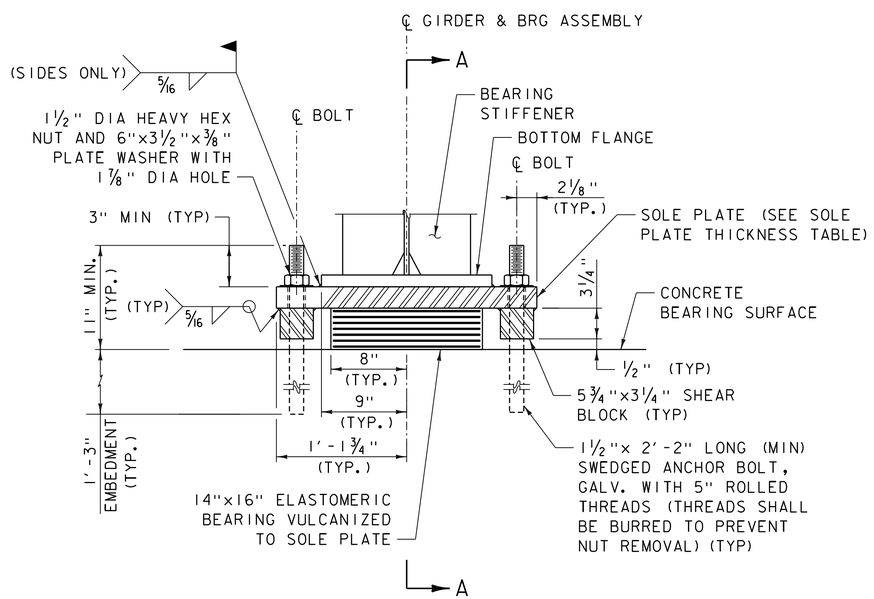
7. ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER SUBSECTIONS 506.14 AND 531.05(b). IF THE BEARING DEVICES ARE METALIZED, THEY SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN SUBSECTION 531.04(B). ALL AREAS OF GALVANIZING OR METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH SUBSECTION 726.08.

8. DESIGN CRITERIA (AASHTO METHOD A):

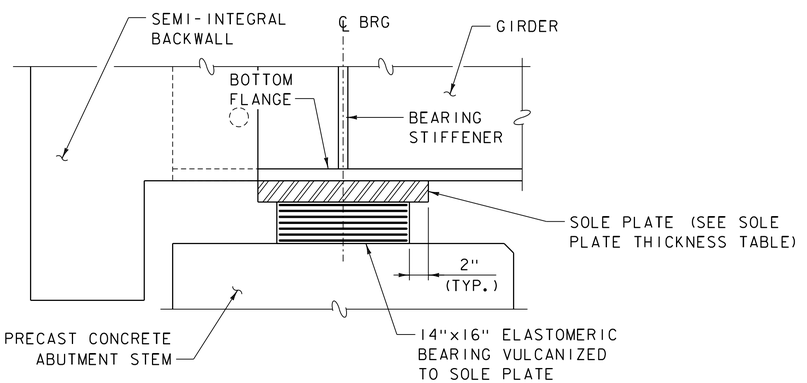
DESIGN SHEAR MODULUS:	130-200 PSI
MAXIMUM BEARING STRESS:	915 PSI
DESIGN DEAD LOAD (UNFACTORED):	90 KIPS
DESIGN LIVE LOAD (UNFACTORED):	115 (INCL. IMP) KIPS
DESIGN LONGITUDINAL MOVEMENT:	0.707 IN (ABUT 1 & 2)

9. THE CONTRACTOR SHALL INCLUDE THE BEARING INSTALLATION PROCEDURE WITH THE FABRICATION DRAWING PACKAGE REQUIRED UNDER SUBSECTION 531.03. PROCEDURE SHALL INCLUDE BEARING ADJUSTMENT SETTING DEPENDING UPON TEMPERATURE AT TIME OF ERECTION.

10. THE CONCRETE SURFACE UNDER THE BEARING DEVICES SHALL BE LEVEL.



FRONT ELEVATION



SECTION A-A

SOLE PLATE THICKNESS TABLE		
GIRDER	ABUT. NO. 1	ABUT. NO. 2
G1	1⁹⁄16"	1½"
G2	3⅜"	3⅜"
G3	1¹³⁄16"	1½"
G4	3⅜"	3⅜"
G5	1⁹⁄16"	1½"

ABUTMENT BEARING DETAILS

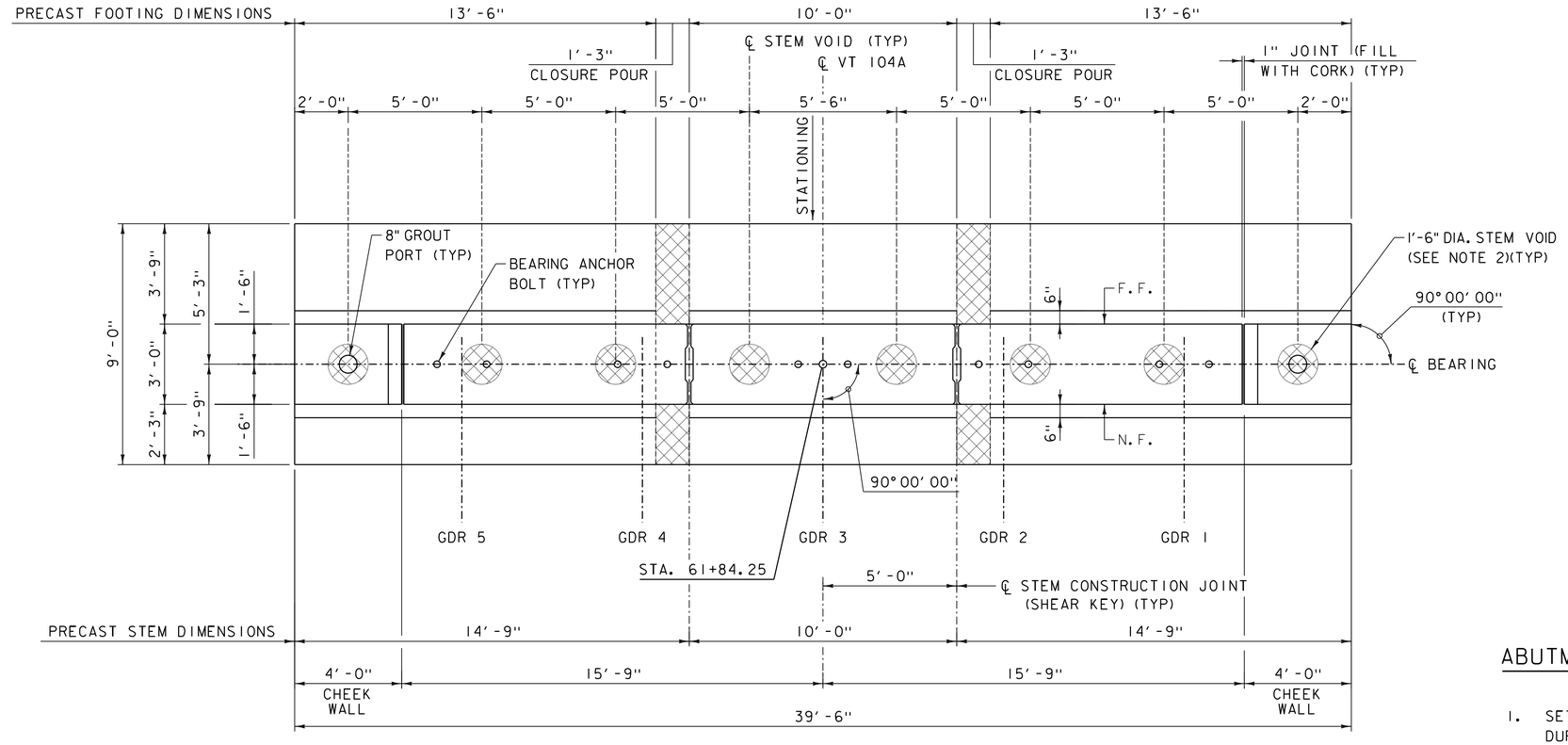
SCALE: 1½" = 1'-0"

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

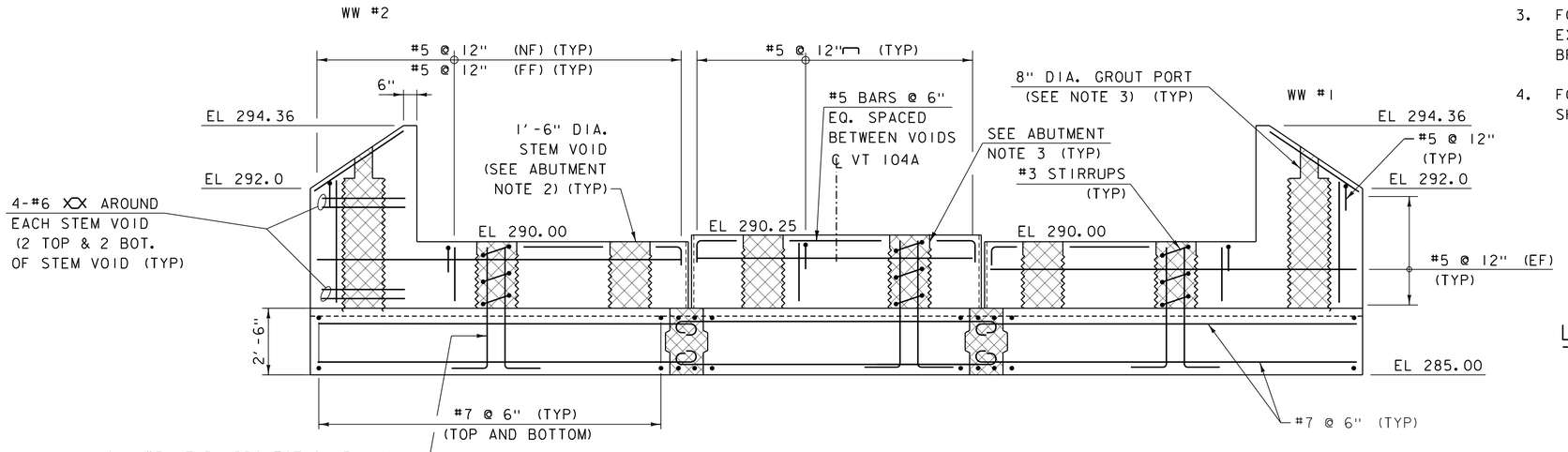
FILE NAME: z18b265brgs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
BEARING DETAILS

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 34 OF 48



ABUTMENT NO. 1 PLAN

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



ABUTMENT NO. 1 ELEVATION

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

NOTE

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ABUTMENT NOTES

1. SETTLEMENT OF THE ABUTMENTS IS EXPECTED DURING CONSTRUCTION. REFERENCE PROJECT NOTE 40 FOR FURTHER INFORMATION.
2. USE GALVANIZED CORRUGATED STEEL PIPE THAT CONFORMS TO SUBSECTION 711.01 FOR PILE POCKETS, STEM VOIDS AND GROUT PORTS.
3. FORM TOP 6" WITH REMOVABLE FORM TO ELIMINATE EXPOSED CORRUGATED STEEL ON THE TOP OF THE BRIDGE SEAT.
4. FOR PRECAST FOOTING CLOSURE POUR DETAILS, SEE SHEET 37.

LEGEND

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

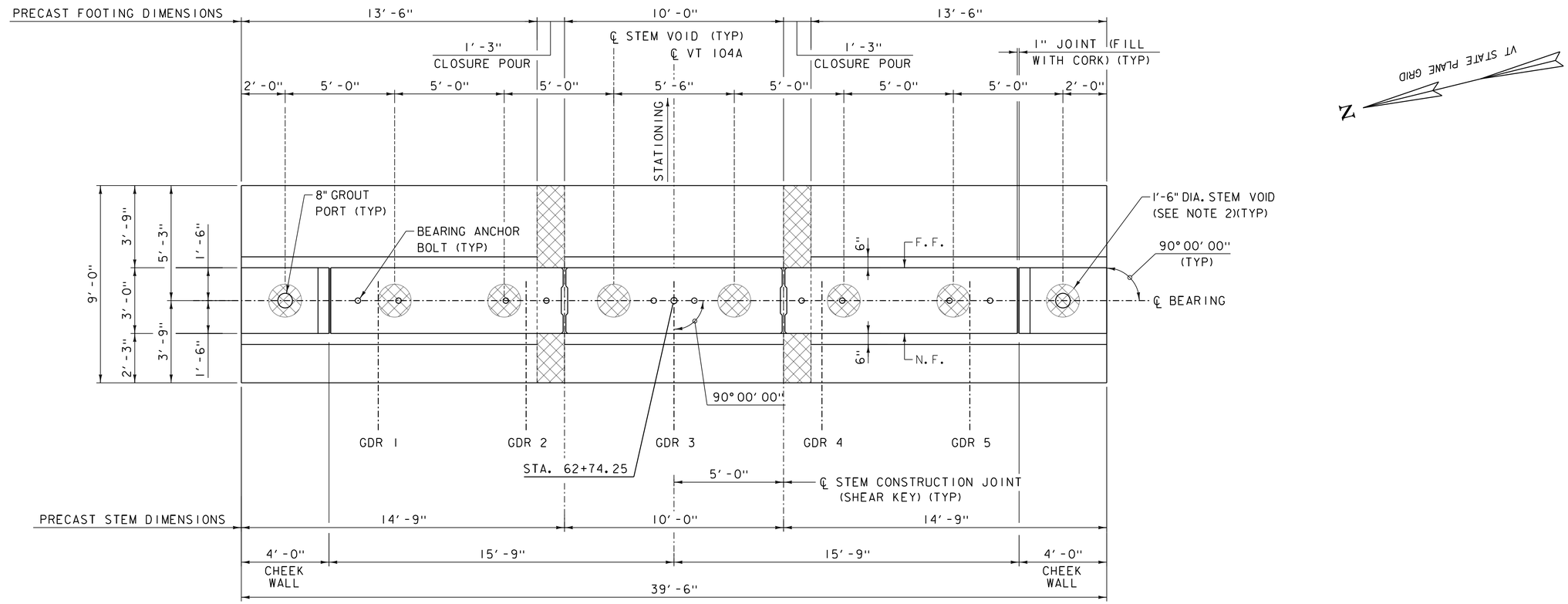
VT STATE PLANE GRID

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

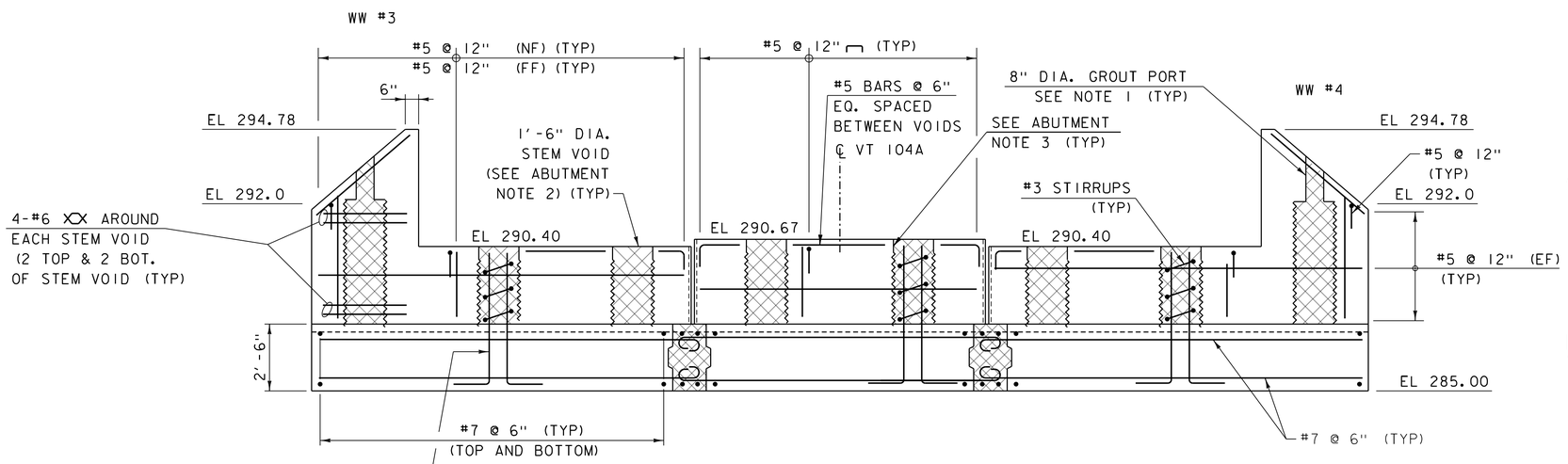
FILE NAME: zl3c064abutdtls.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
ABUTMENT NO. 1 PLAN & ELEVATION

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 35 OF 48



ABUTMENT NO. 2 PLAN

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



ABUTMENT NO. 2 ELEVATION

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

ABUTMENT NOTES

1. FOR ABUTMENT NOTES, SEE SHEET 35.

LEGEND

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

NOTE

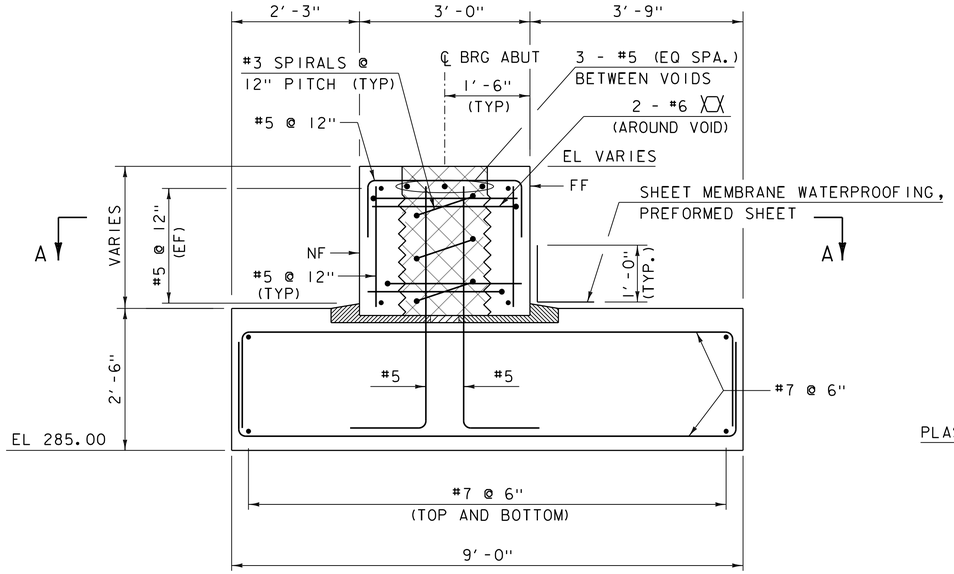
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

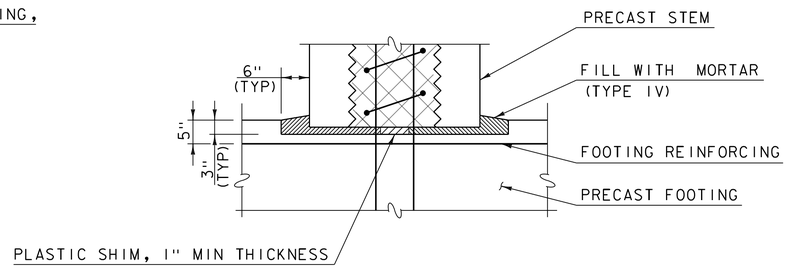
FILE NAME: zl3c064abutdtls.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
ABUTMENT NO. 2 PLAN & ELEVATION

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY



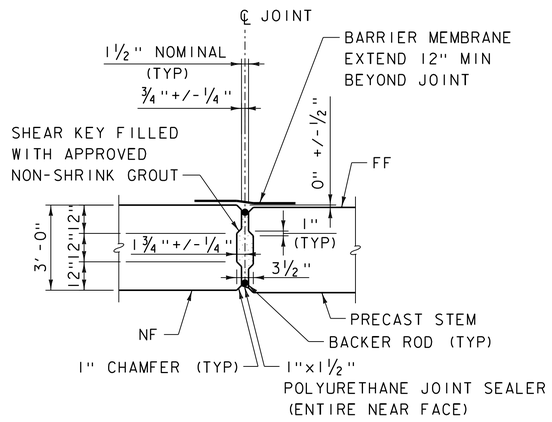
TYPICAL ABUTMENT SECTION

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



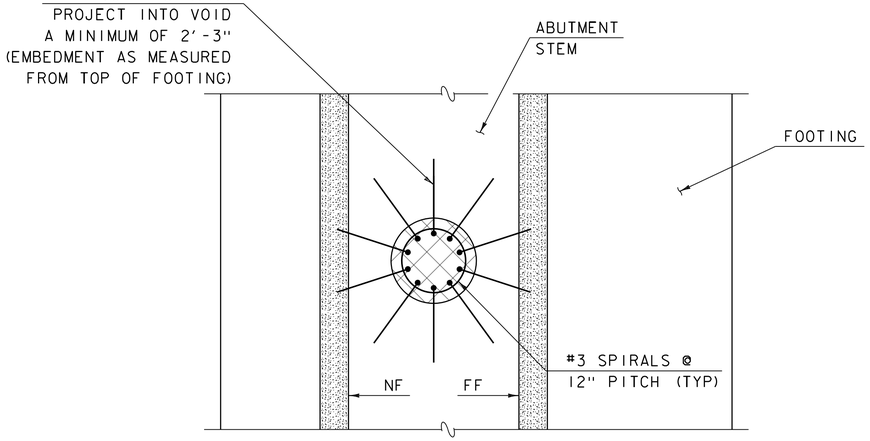
FOOTING TO STEM CONNECTION DETAIL

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



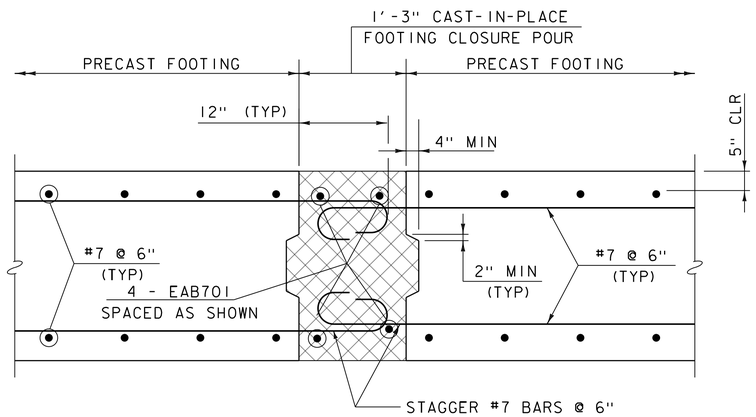
ABUTMENT STEM VERTICAL JOINT

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



SECTION A-A
FOOTING CONNECTION PLAN VIEW

SCALE: 3/4" = 1'-0"
NOTE: PRECAST STEM AND FOOTING REINFORCING NOT SHOWN FOR CLARITY



PRECAST FOOTING CLOSURE POUR DETAIL

NOT TO SCALE

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-5" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

LEGEND

SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: zl8b265abutdtls.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: D. KULL
ABUTMENT DETAILS

PLOT DATE: 9/20/2019
DRAWN BY: D. DePAOLO
CHECKED BY: R. JOY
SHEET 37 OF 48

STATE OF VERMONT
AGENCY OF TRANSPORTATION

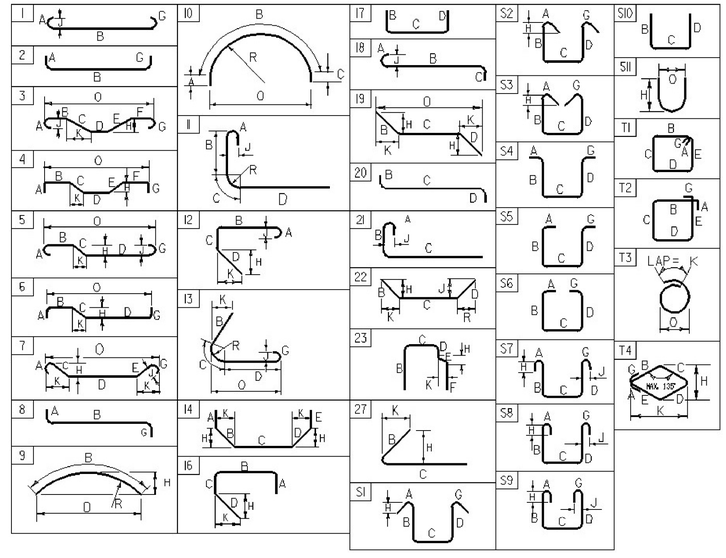
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	SUPERSTRUCTURE - DECK & SUSPENDED BACKWALL																
✳	115	5	32'- 10"	S501	STR												
	56	5	6'- 8"	S502	STR												
△	492	5	16'- 6"	S511	STR												
	10	5	20'- 0"	S512	STR												
	10	5	13'- 0"	S513	STR												
	378	5	5'- 1"	S551	1	0'- 7"	4'- 6"					0'- 0"					
△	380	5	2'- 9"	S552	1	0'- 7"	2'- 2"					0'- 0"					
	64	5	4'- 7"	S553	S10		2'- 0"	2'- 7"	0'- 0"								
	64	5	5'- 4"	S554	S10		2'- 3"	0'- 10"	2'- 3"								
	68	5	5'- 2"	S555	19		3'- 2"	2'- 0"	0'- 0"				2'- 3"		2'- 3"		4'- 3"
	64	5	7'- 0"	S556	S10		3'- 1"	1'- 10"	2'- 1"								
	64	5	3'- 1"	S557	S10		1'- 3"	1'- 10"	0'- 0"								
	SUPERSTRUCTURE - TRANSITION BARRIER																
✳	21	4	6'- 8"	TB401	STR												
	12	4	3'- 5"	TB402	STR												
	4	4	6'- 9"	TB451	19		1'- 5"	5'- 4"	0'- 0"				0'- 5"		1'- 5"		6'- 8"
	16	4	7'- 2"	TB452	8	0'- 7"	6'- 8"					0'- 0"					
	8	4	6'- 8"	TB453	19		0'- 0"	4'- 10"	1'- 10"				0'- 4"		1'- 10"		6'- 8"
	48	4	7'- 10"	TB454	S10		3'- 7"	0'- 8"	3'- 7"								
	4	4	5'- 8"	TB455	S10		1'- 6"	0'- 8"	3'- 6"								
	4	4	5'- 6"	TB456	S10		1'- 5"	0'- 8"	3'- 5"								
	4	4	5'- 4"	TB457	S10		1'- 4"	0'- 8"	3'- 4"								
	4	4	7'- 2"	TB458	S11								3'- 4"				0'- 4"
	APPROACH SLABS																
	24	5	19'- 8"	AS501	STR												
	40	8	1'- 9"	AS801	STR												
	ABUTMENTS																
✳	17	7	8'- 7"	EAB701	STR												

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES 2	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

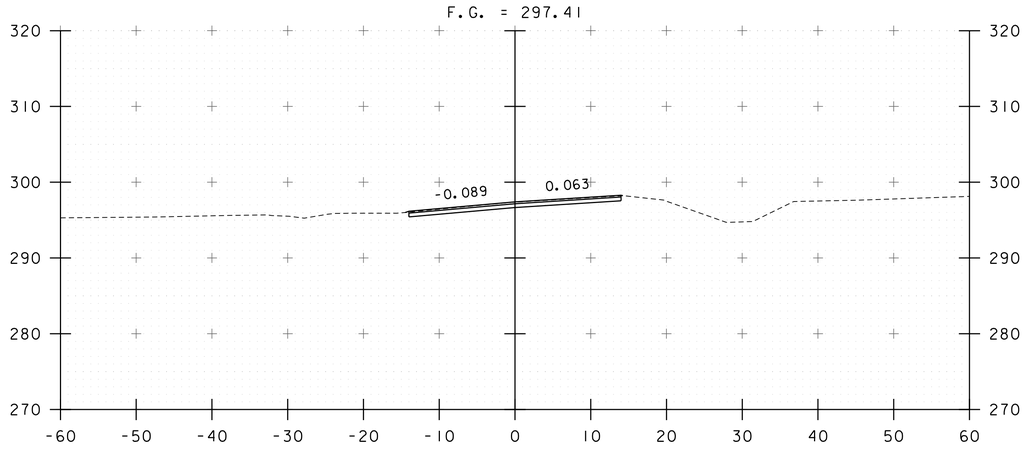
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A .2 FOR LEVEL TWO SUFFIX OR .3 FOR LEVEL THREE SUFFIX .1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROVIDED FOR EACH CORROSION LEVEL WILL BE RECORDED ON THE PLAN SET PI SHEET FOR AS-BUILT RECORD PLAN ARCHIVES.

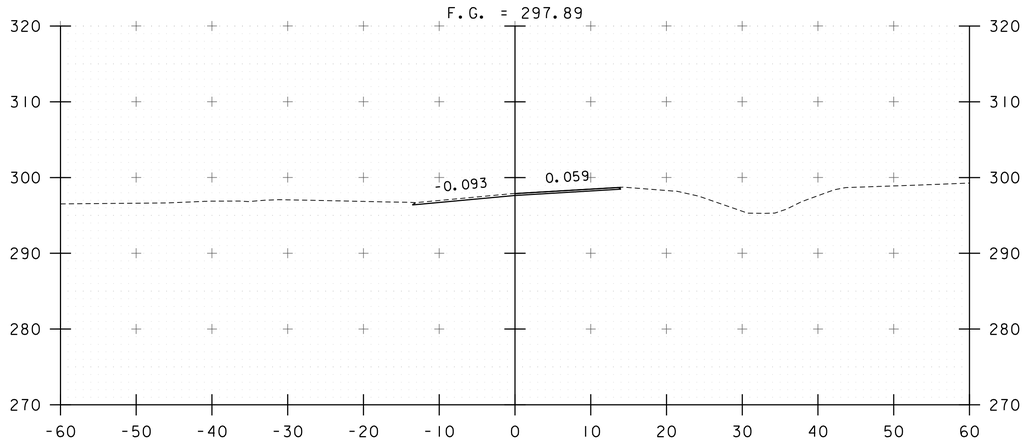
PROJECT NAME: **GEORGIA**
PROJECT NUMBER: **BF 023-1(7)**

FILE NAME: **Z18b265engreinf**
PROJECT MANAGER: **R. YOUNG**
DESIGNED BY: **D. KULL**
REINFORCING STEEL SCHEDULE SHEET #1

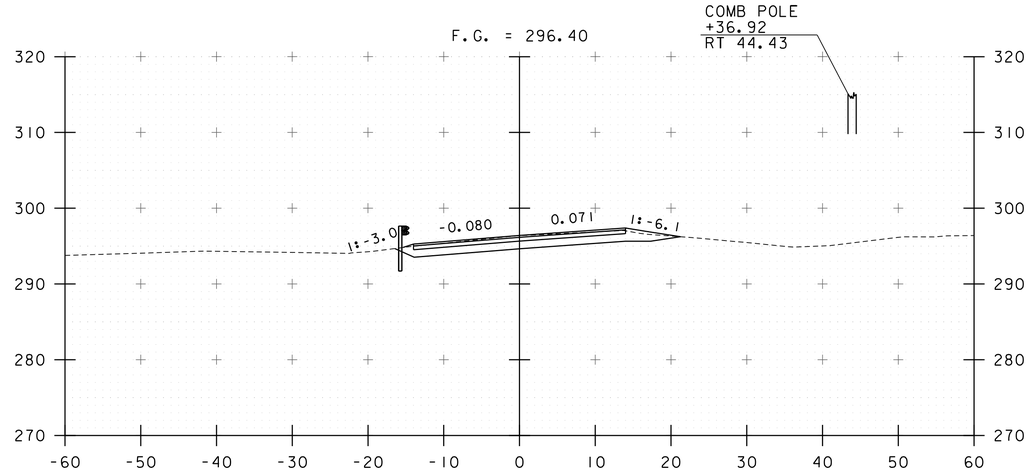
PLOT DATE: **8/26/2019**
DRAWN BY: **D. DePAOLO**
CHECKED BY: **R. JOY**
SHEET **38** OF **48**



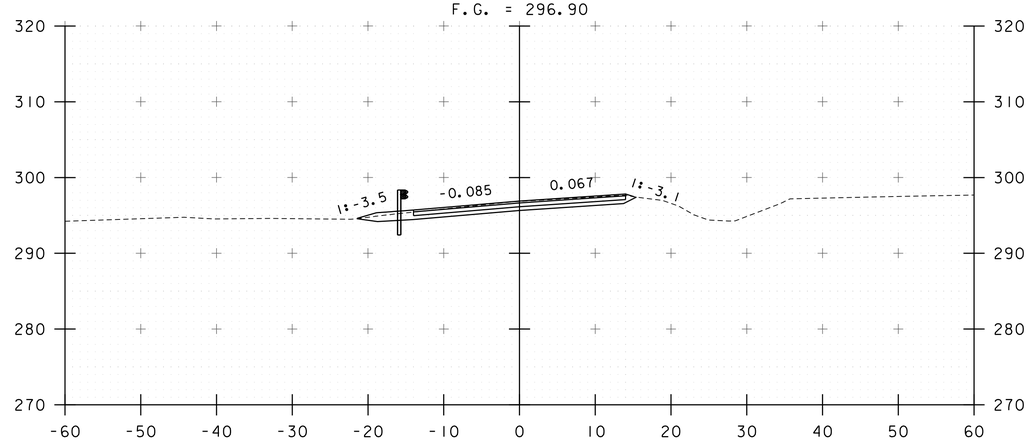
58+75



58+50
BEGIN APPROACH - MATCH EXISTING



59+25



59+00

0 10 20
SCALE IN FEET

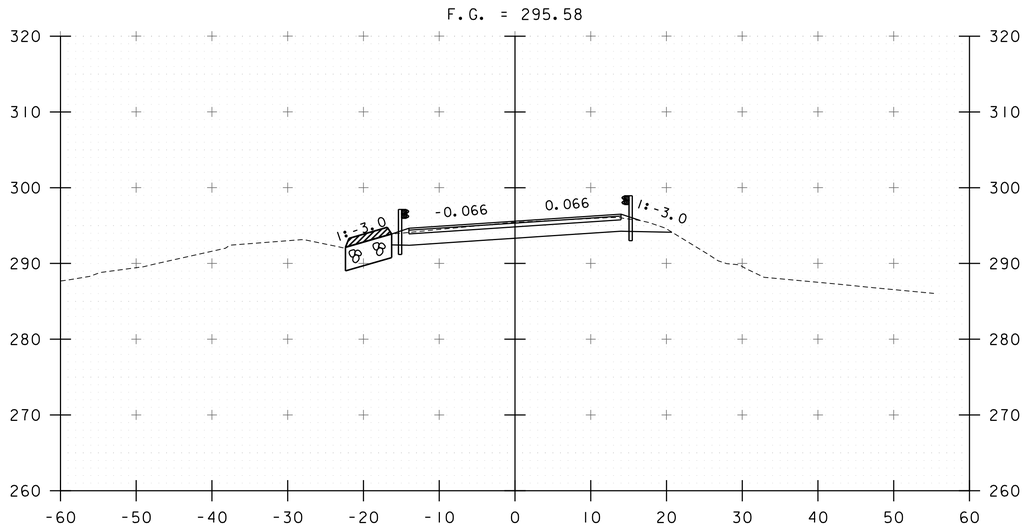
STA. 58+50 TO STA. 59+25

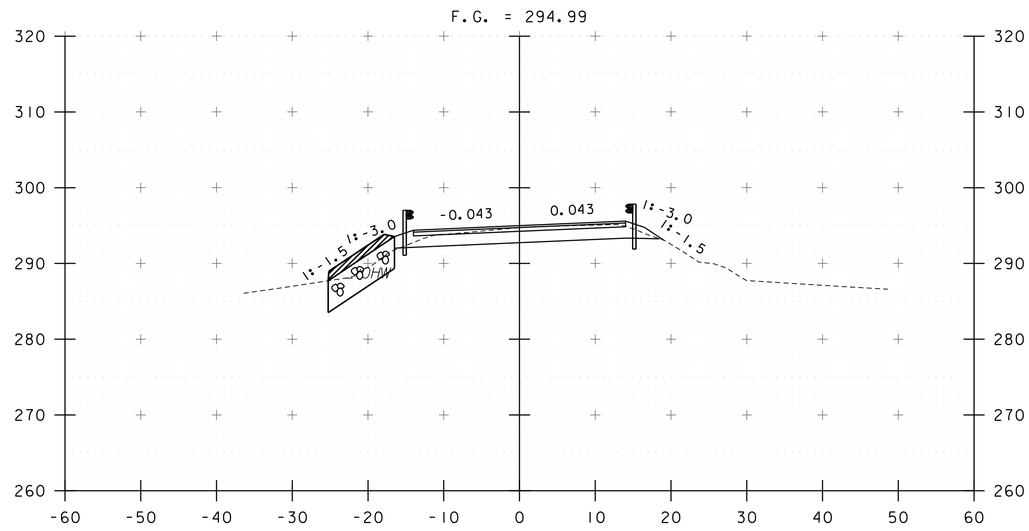
McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VT104A CROSS SECTION 1

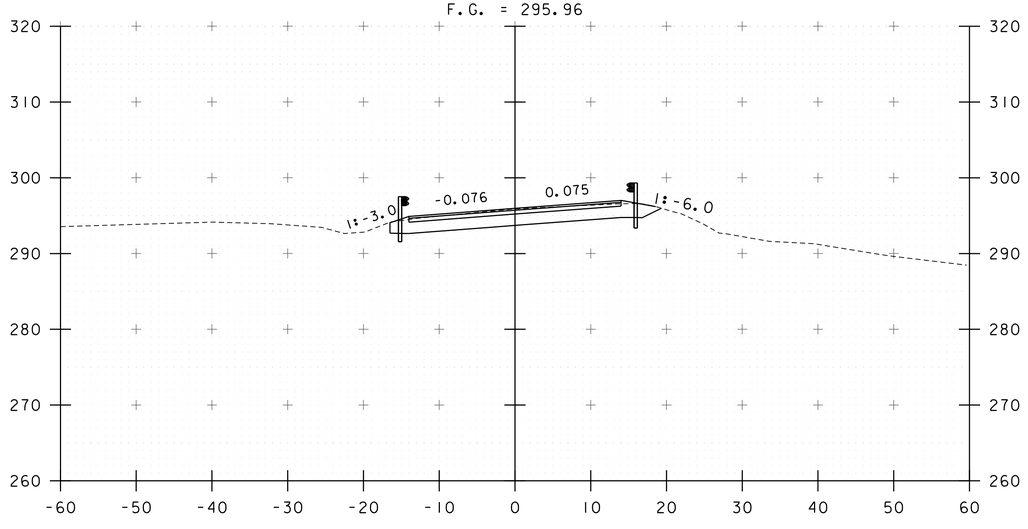
PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 39 OF 48





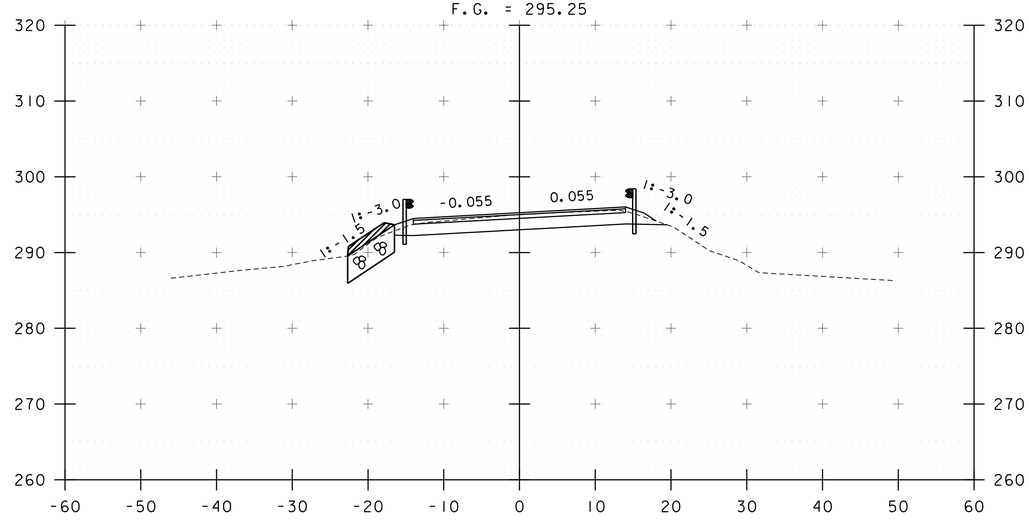
STA 59+75.7 LT
BEGIN STONE FILL TYPE II
BEGIN GEOTEXTILE UNDER STONE FILL

59+75



59+50
END APPROACH - BEGIN PROJECT

60+25



60+00

0 10 20
SCALE IN FEET

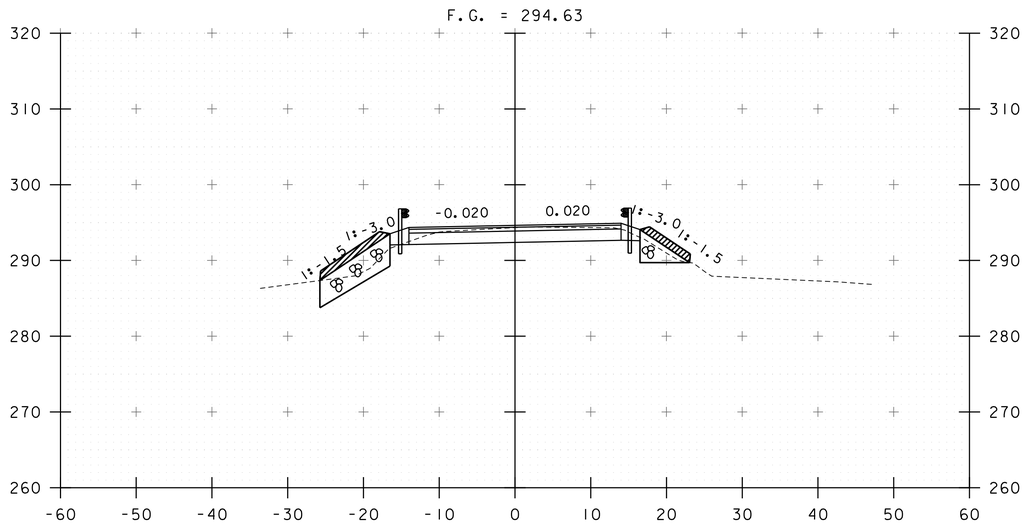
STA. 59+50 TO STA. 60+25

McFarland Johnson

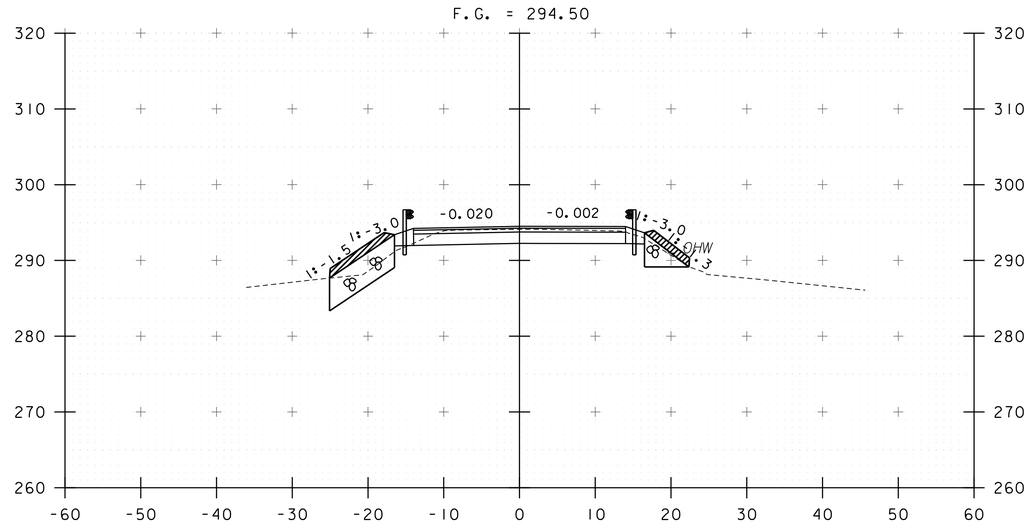
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VT104A CROSS SECTION 2

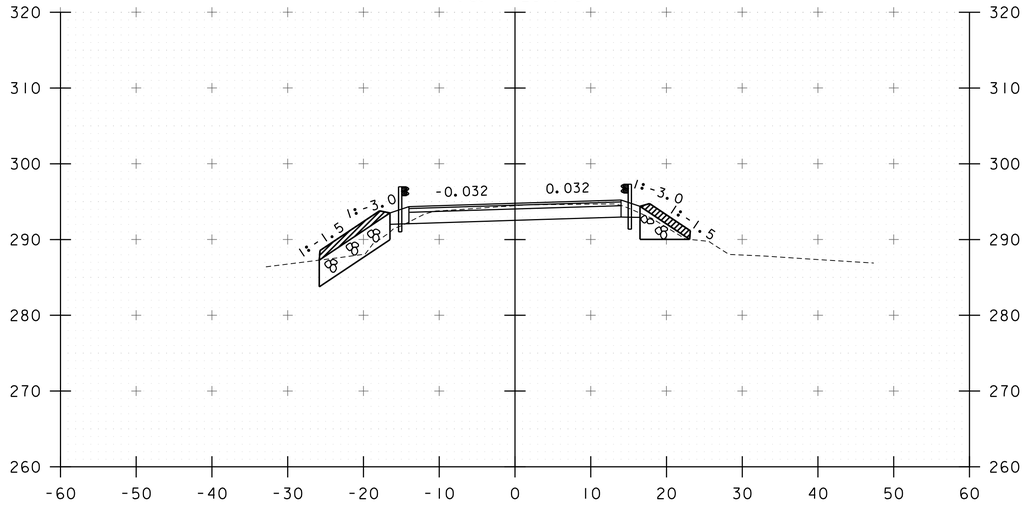
PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 40 OF 48



60+75

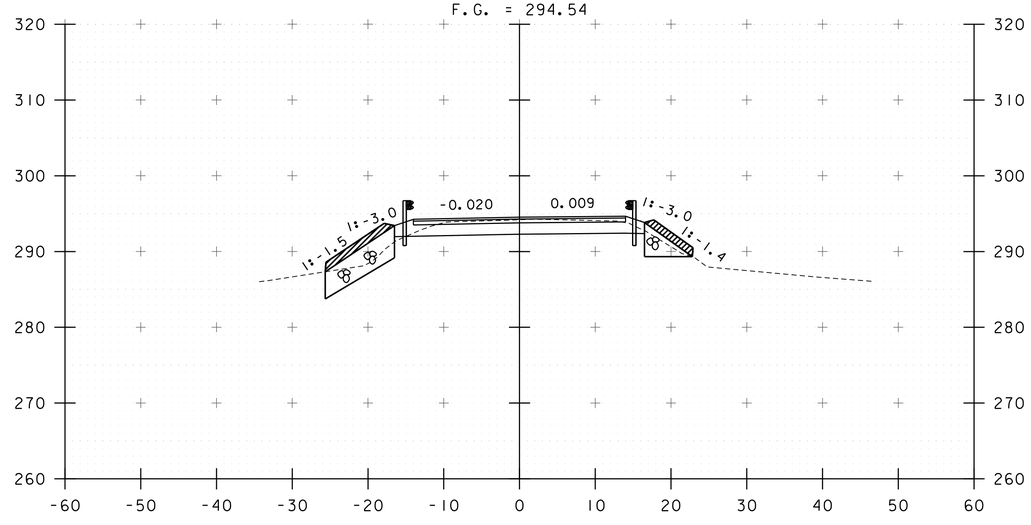


61+25



60+50

STA 60+50.0 RT
BEGIN STONE FILL TYPE II
BEGIN GEOTEXTILE UNDER STONE FILL



61+00

0 10 20
SCALE IN FEET

STA. 60+50 TO STA. 61+25

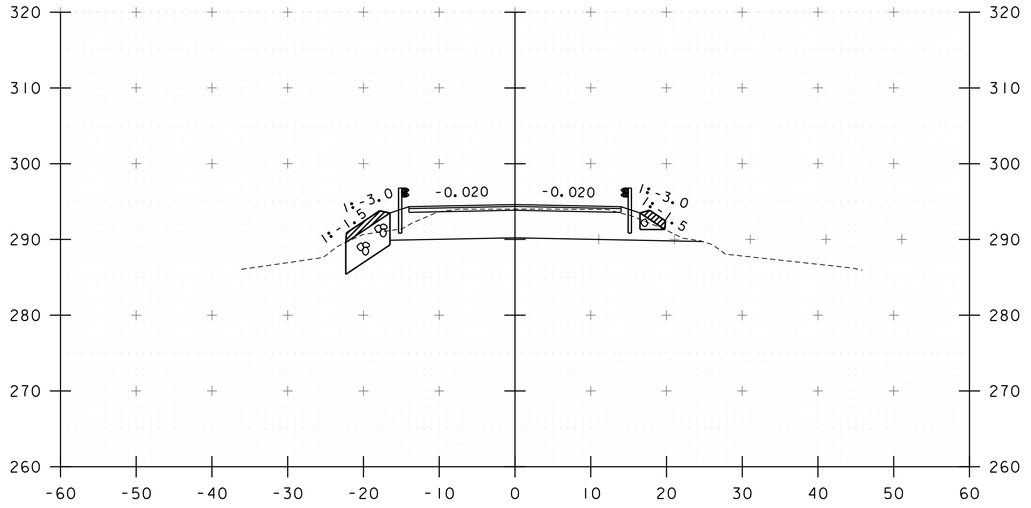
McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VT104A CROSS SECTION 3

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 41 OF 48

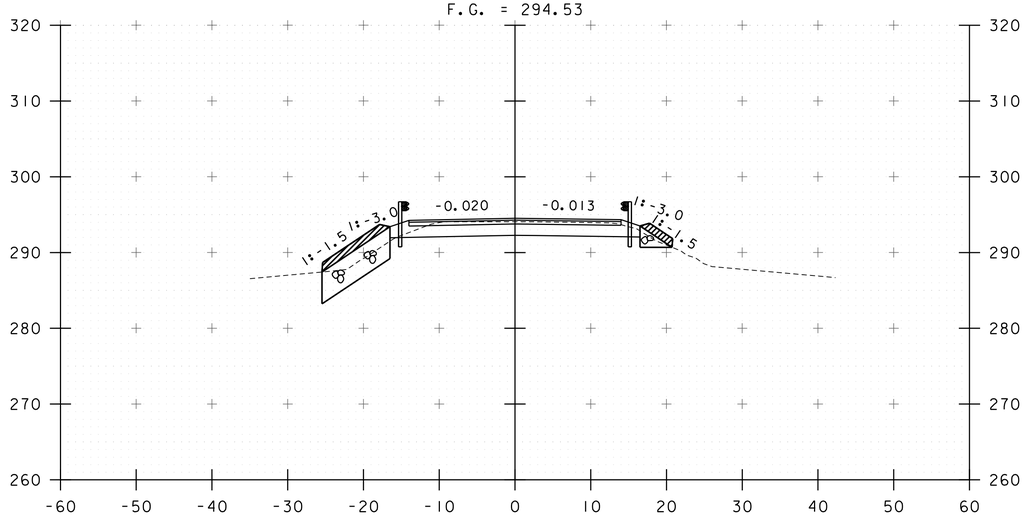
F.G. = 294.61



STA 61+87.5 LT
END STONE FILL TYPE II
END GEOTEXTILE UNDER STONE FILL

61+75

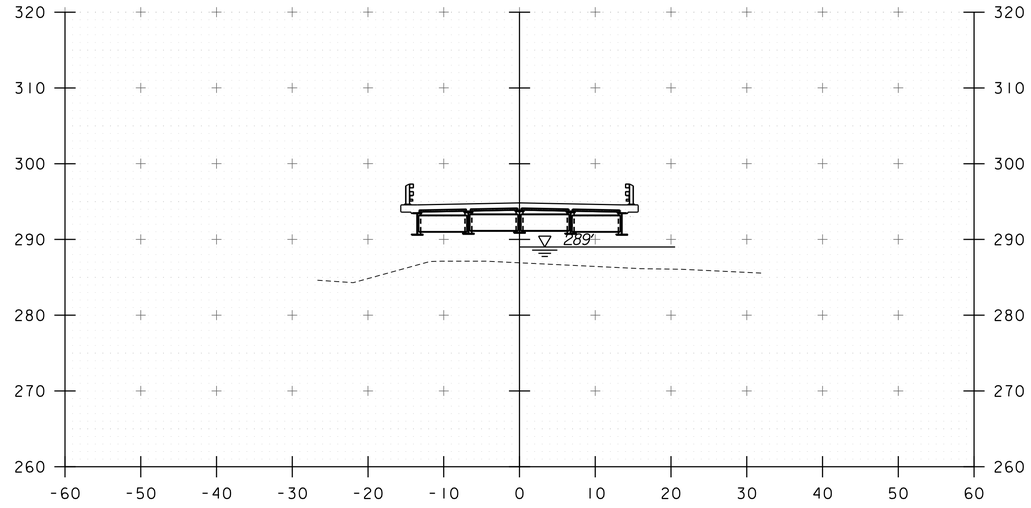
F.G. = 294.53



61+50

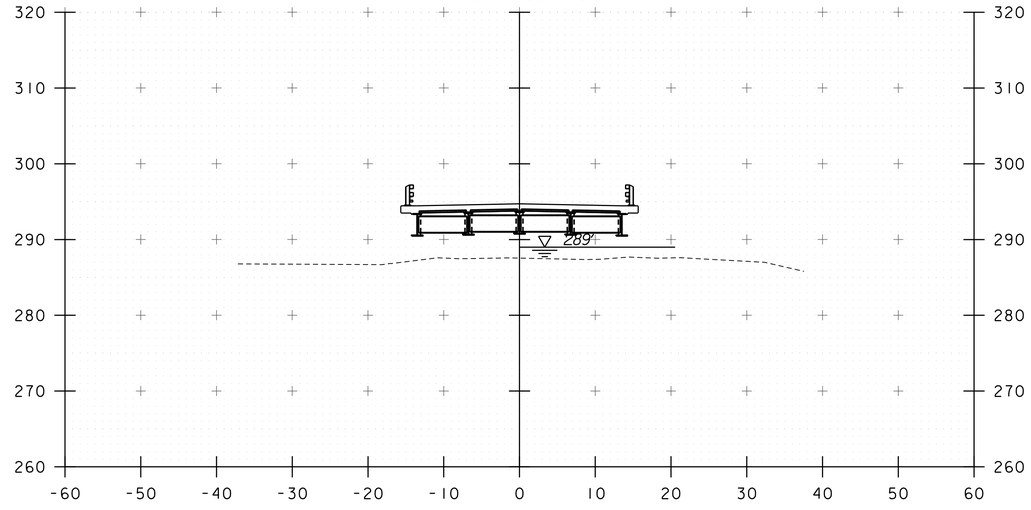
STA 61+87.5 RT
END STONE FILL TYPE II
END GEOTEXTILE UNDER STONE FILL

F.G. = 294.83



62+25

F.G. = 294.72



62+00

BEGIN BRIDGE STA 61+82.25

0 10 20
SCALE IN FEET

STA. 61+50 TO STA. 62+25

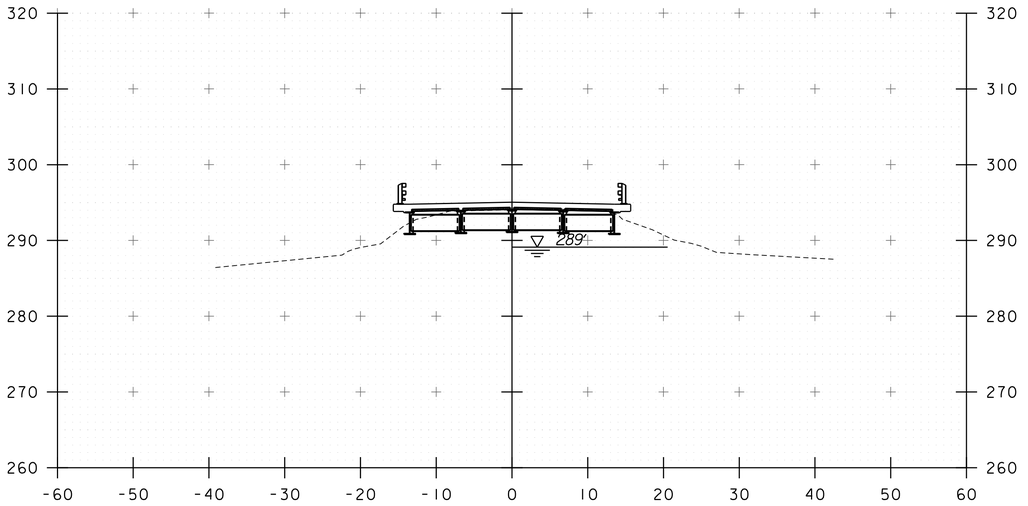
McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VT104A CROSS SECTION 4

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 42 OF 48

F.G. = 295.05



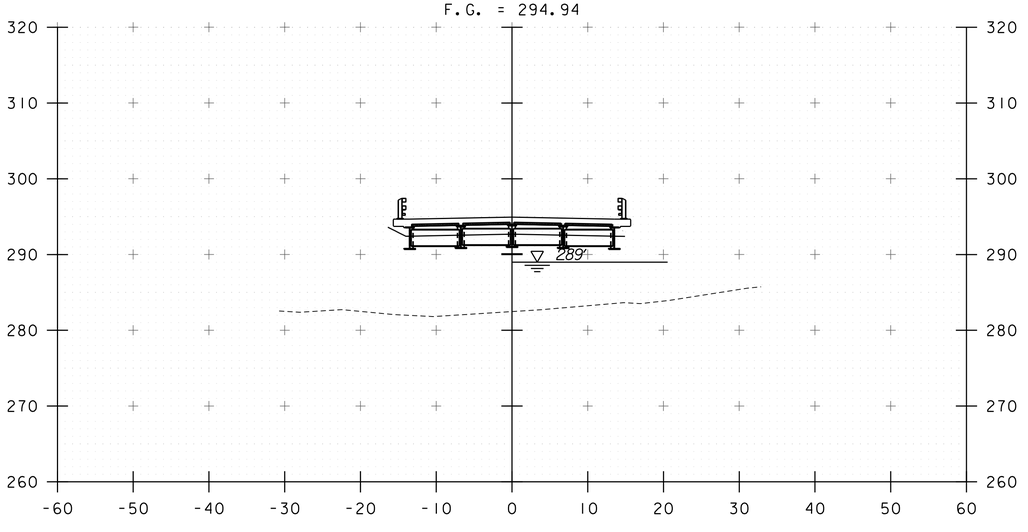
STA 62+71.0 LT
BEGIN STONE FILL TYPE II
BEGIN GEOTEXTILE UNDER STONE FILL

62+75

STA 62+71.0 RT
BEGIN STONE FILL TYPE II
BEGIN GEOTEXTILE UNDER STONE FILL

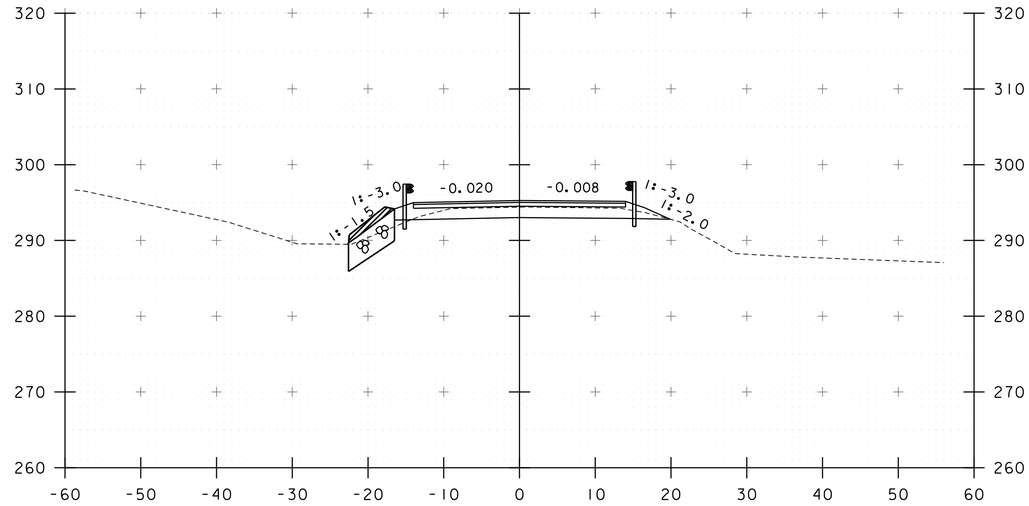
END BRIDGE STA 62+76.25

F.G. = 294.94



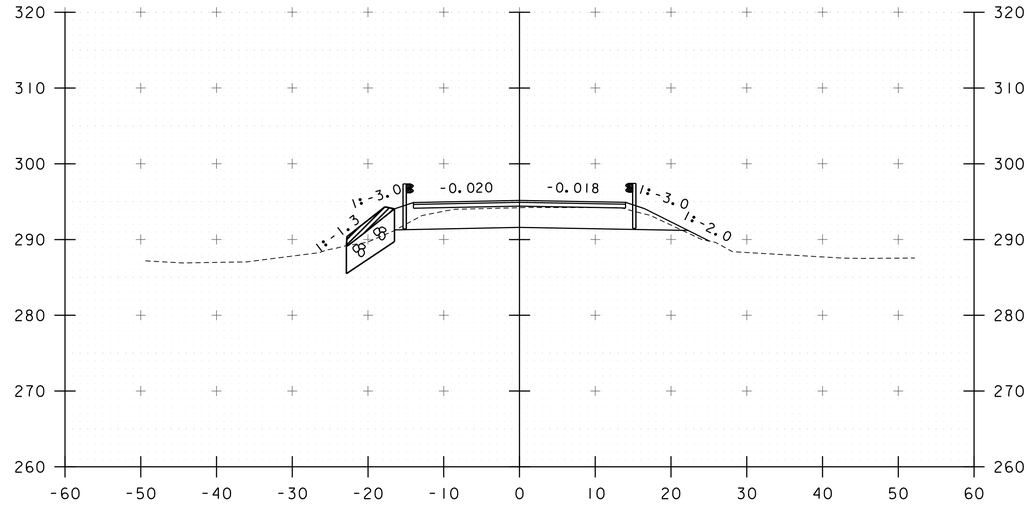
62+50

F.G. = 295.27



63+25

F.G. = 295.16



STA 62+80.0 RT
END STONE FILL TYPE II
END GEOTEXTILE UNDER STONE FILL

63+00

0 10 20
SCALE IN FEET

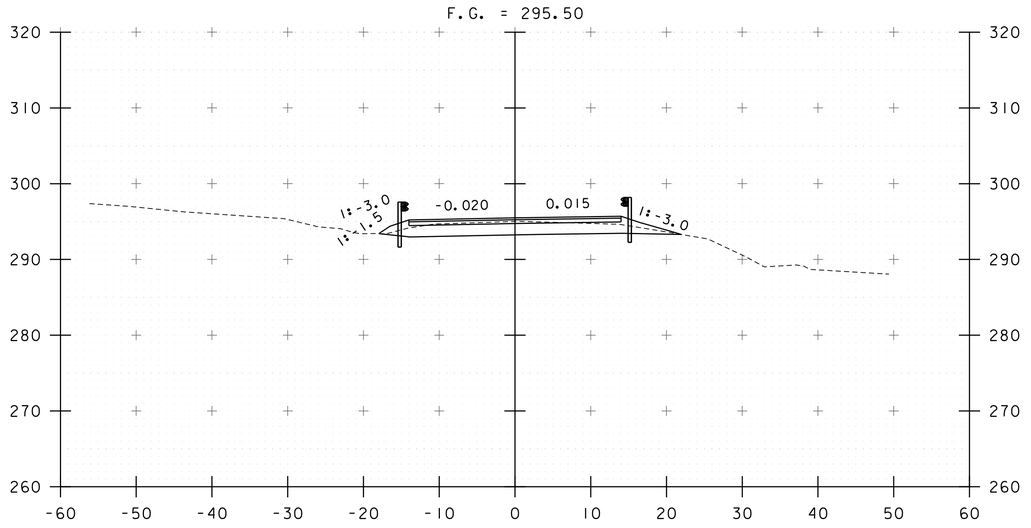
STA. 62+50 TO STA. 63+25

McFarland Johnson

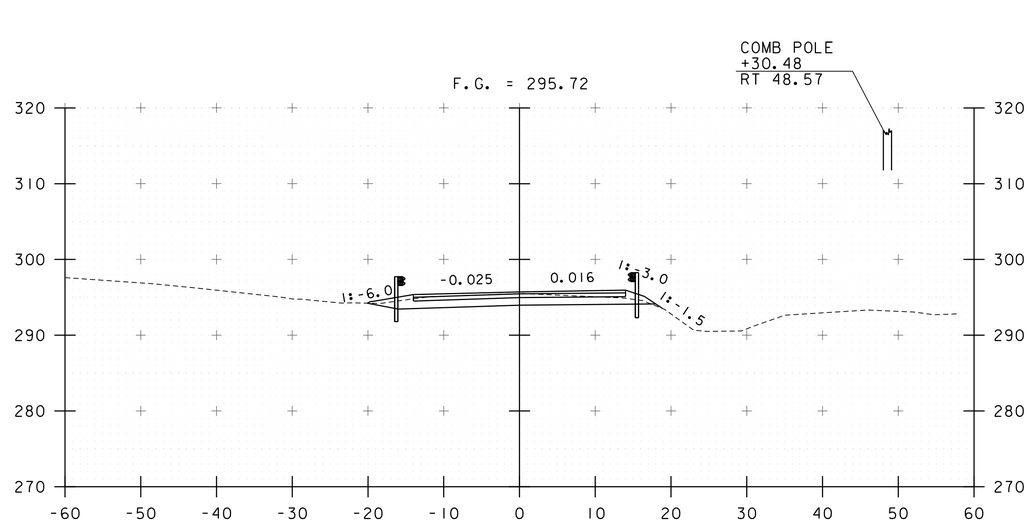
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VTI04A CROSS SECTION 5

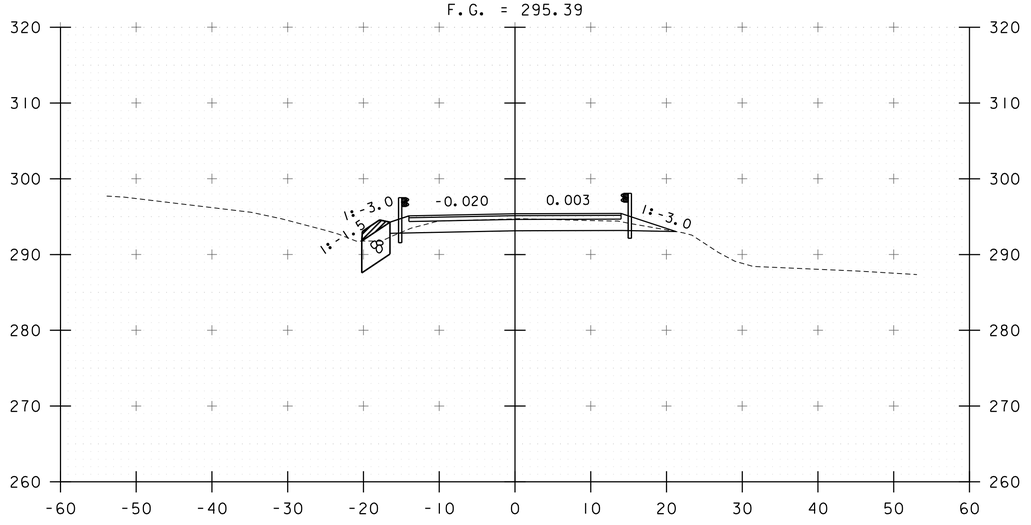
PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 43 OF 48



63+75



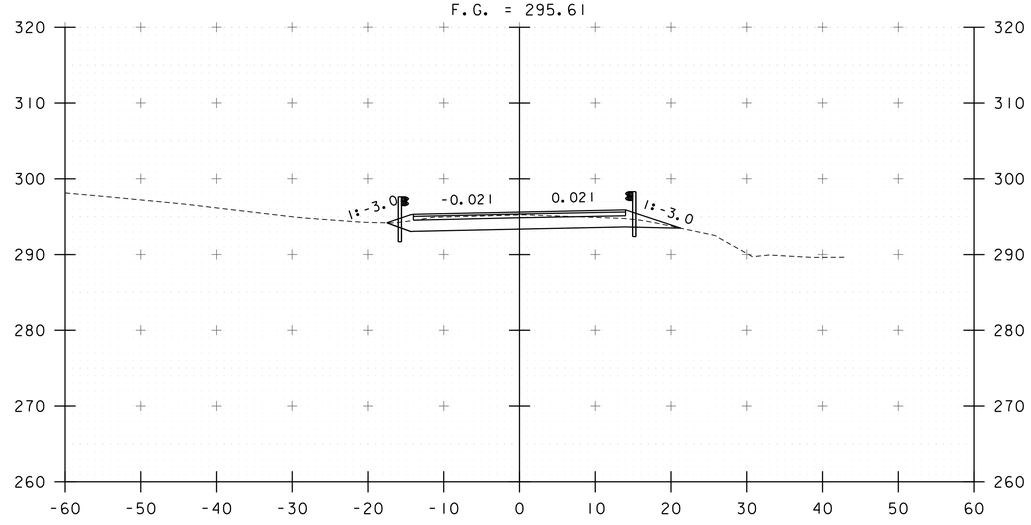
64+25



63+75

STA 63+60.0 LT
END STONE FILL TYPE II
END GEOTEXTILE UNDER STONE FILL

63+50



64+25

64+00
END PROJECT - BEGIN APPROACH

STA. 63+50 TO STA. 64+25

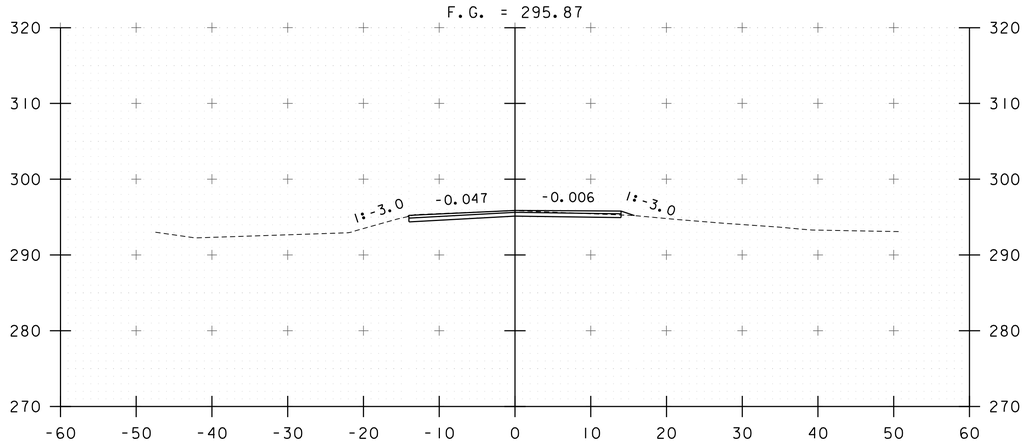
0 10 20
SCALE IN FEET

McFarland Johnson

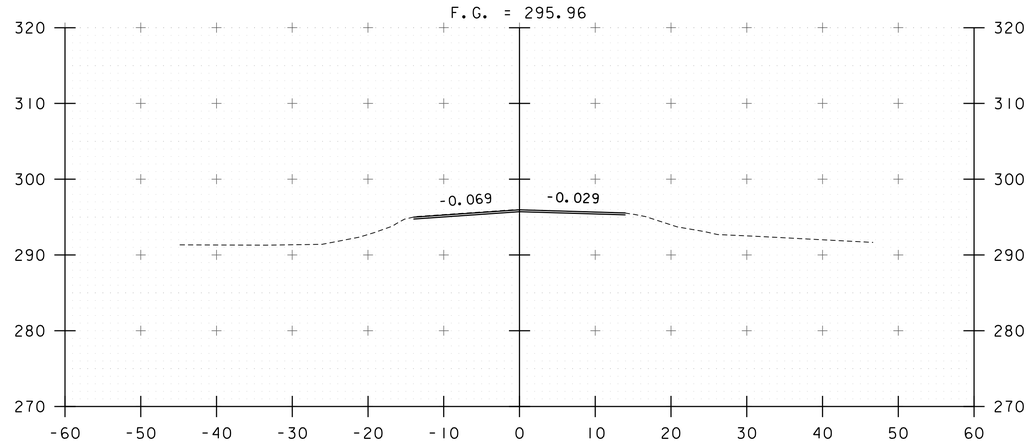
PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VT104A CROSS SECTION 6

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 44 OF 48

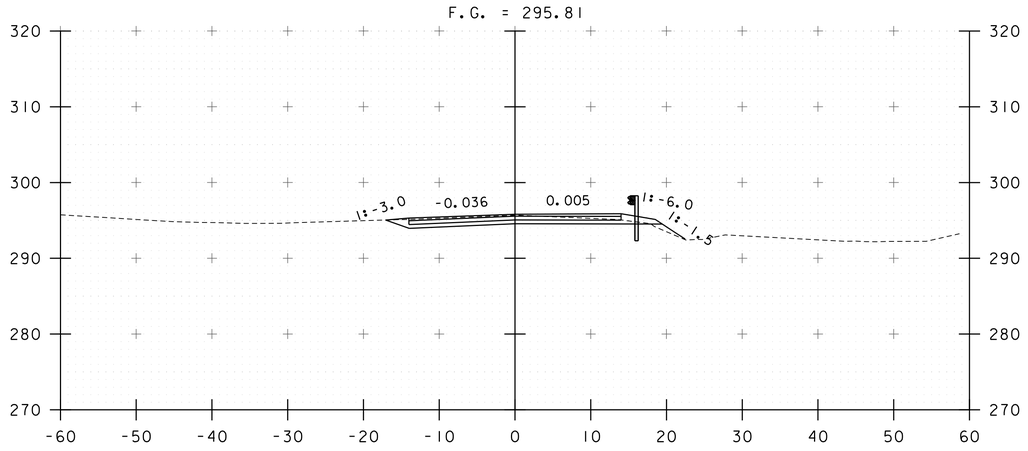


64+75

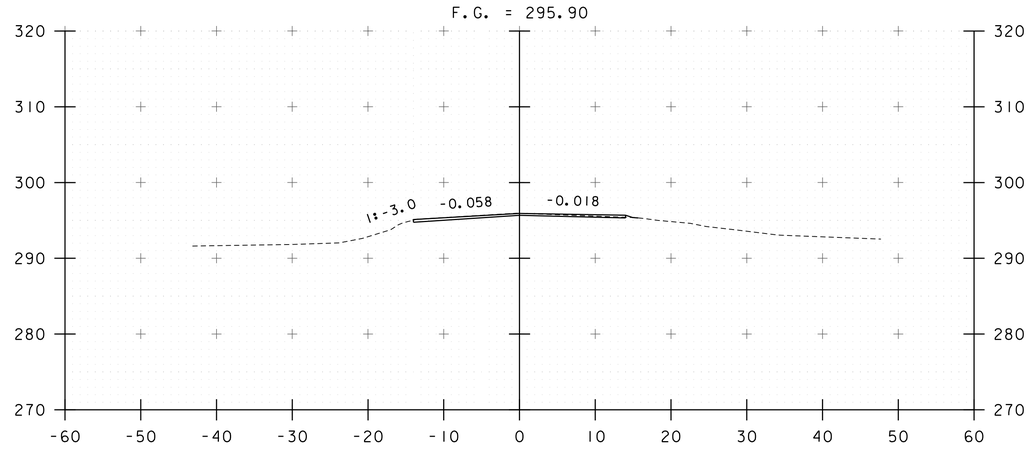


65+25

END APPROACH - MATCH EXISTING



64+50



65+00

0 10 20
SCALE IN FEET

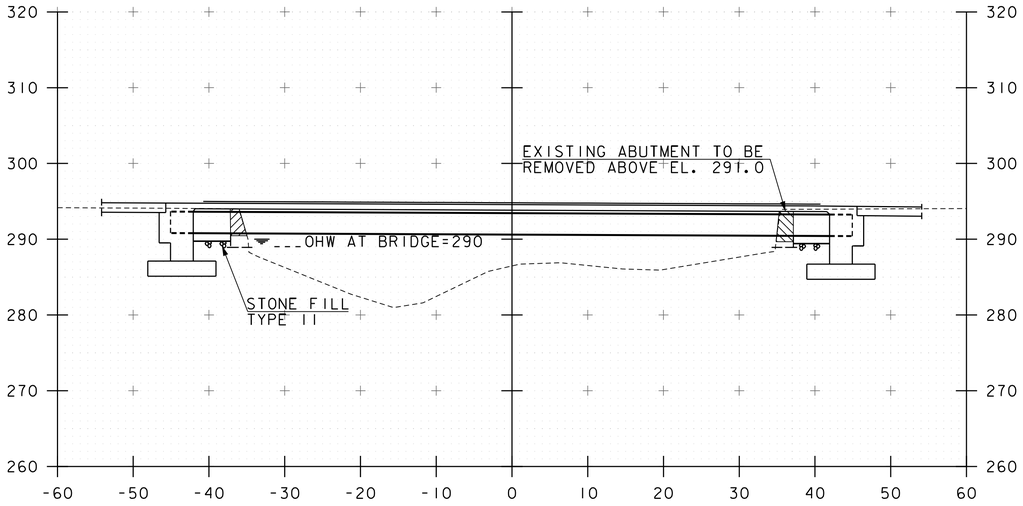
STA. 64+50 TO STA. 65+00

McFarland Johnson

PROJECT NAME: GEORGIA
PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
VT104A CROSS SECTION 7

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 45 OF 48



51+00

STA. 50+75 TO STA. 51+25

0 10 20

SCALE IN FEET

McFarland

PROJECT NAME: GEORGIA

PROJECT NUMBER: BF 023-1(7)

FILE NAME: z18b265xs.dgn
PROJECT LEADER: R. YOUNG
DESIGNED BY: M. HASKINS
CHANNEL CROSS SECTIONS 1

PLOT DATE: 9/20/2019
DRAWN BY: M. LOVETT
CHECKED BY: D. KULL
SHEET 46 OF 48

YANKEE CORPORATION

TOWN OF GEORGIA

ARROWHEAD MOUNTAIN LAKE

APPROX. EXISTING R.O.W.

APPROX. EXISTING R.O.W.

APPROX. EXISTING R.O.W.

APPROX. EXISTING R.O.W.

VT ROUTE 104A
TO US ROUTE 7

TH-37
TRAYAH ROAD

55+30

56+00

57+00

58+00

59+00

60+00

61+

MATCH LINE
STA 61+00

MIRANDA, CHARLES
& TERESA

MOQUIN, ELIZABETH M.;
SOUTHWELL, KILEY S.

TOWN OF GEORGIA

ARROWHEAD MOUNTAIN LAKE

N

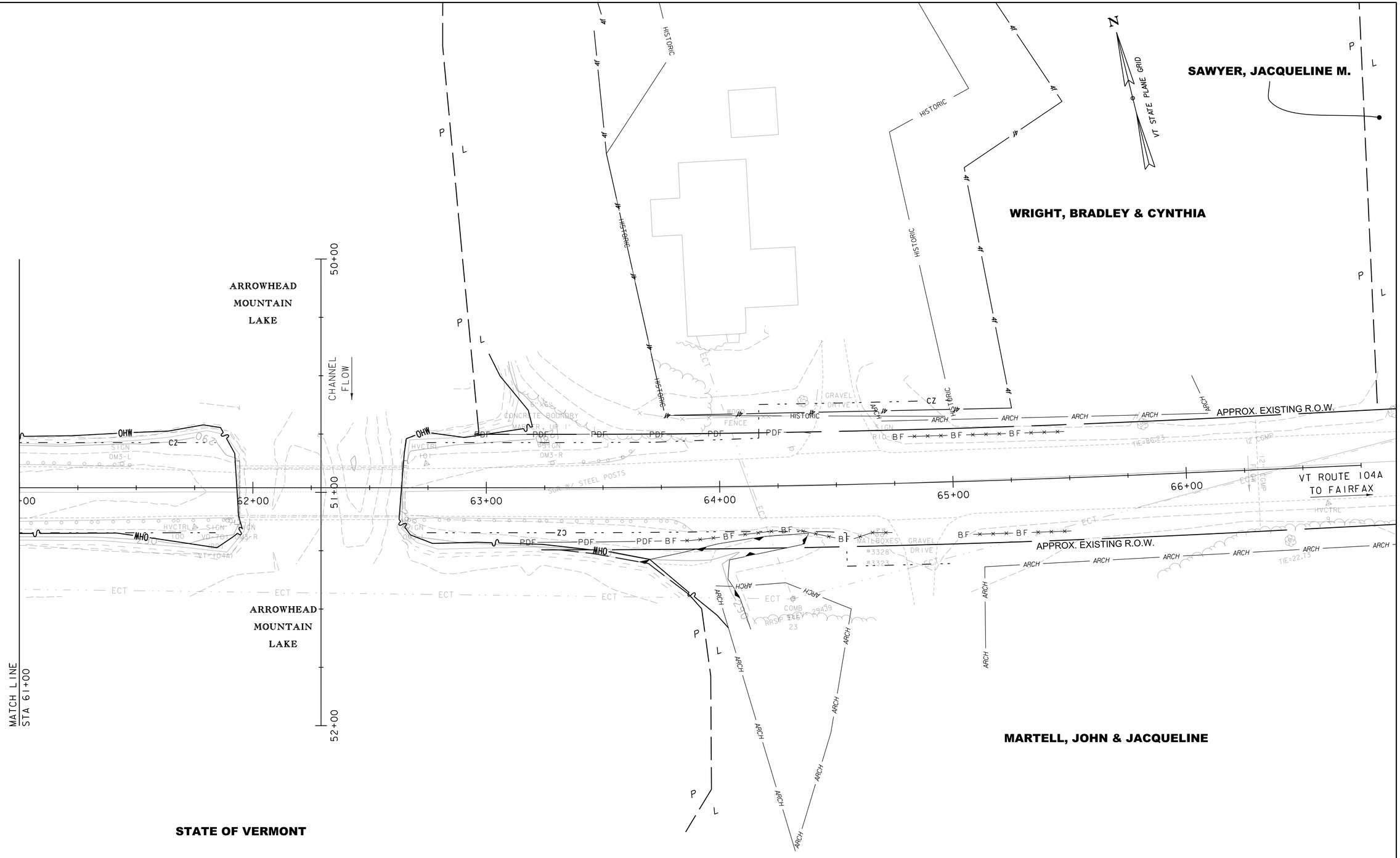
VT STATE PLANE GRID

EXISTING CONDITIONS PLAN

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

McFarland Johnson

PROJECT NAME: GEORGIA	
PROJECT NUMBER: BF 023-1(7)	
FILE NAME: z18b265ex_pln	PLOT DATE: 9/20/2019
PROJECT LEADER: R. YOUNG	DRAWN BY: M. LOVETT
DESIGNED BY: S. IRELAND	CHECKED BY: B. COLBURN
EXISTING CONDITIONS PLAN 1	SHEET 47 OF 48



EXISTING CONDITIONS PLAN

SCALE 1" = 20'-0"

20 0 20

McFarland Johnson

PROJECT NAME:	GEORGIA
PROJECT NUMBER:	BF 023-1(7)
FILE NAME: z18b265ex_pln	PLOT DATE: 9/20/2019
PROJECT LEADER: R. YOUNG	DRAWN BY: M. LOVETT
DESIGNED BY: S. IRELAND	CHECKED BY: B. COLBURN
EXISTING CONDITIONS PLAN 2	SHEET 48 OF 48