

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS
FEDERAL AID PROJECT

X-A000(473)
N.H. PROJECT NO. 14541J
N.H. ROUTE 123

DESIGN DATA	
AVERAGE DAILY TRAFFIC 20_06	2000
AVERAGE DAILY TRAFFIC 20_26	2400
PERCENT OF TRUCKS	8.1%
DESIGN SPEED	35 mph
LENGTH OF PROJECT	6195 ft

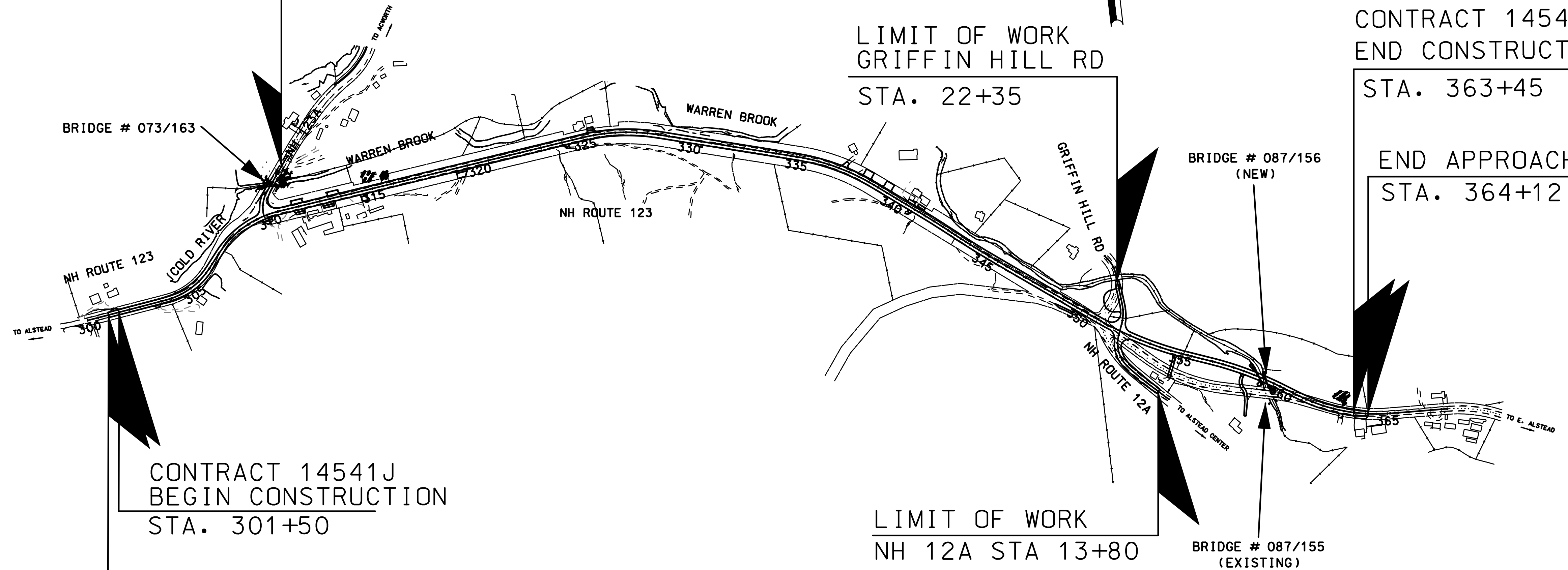
LIMIT OF WORK
NH 123A
STA. 32+50

LIMIT OF WORK
GRIFFIN HILL RD
STA. 22+35

CONTRACT 14541J
END CONSTRUCTION

STA. 363+45

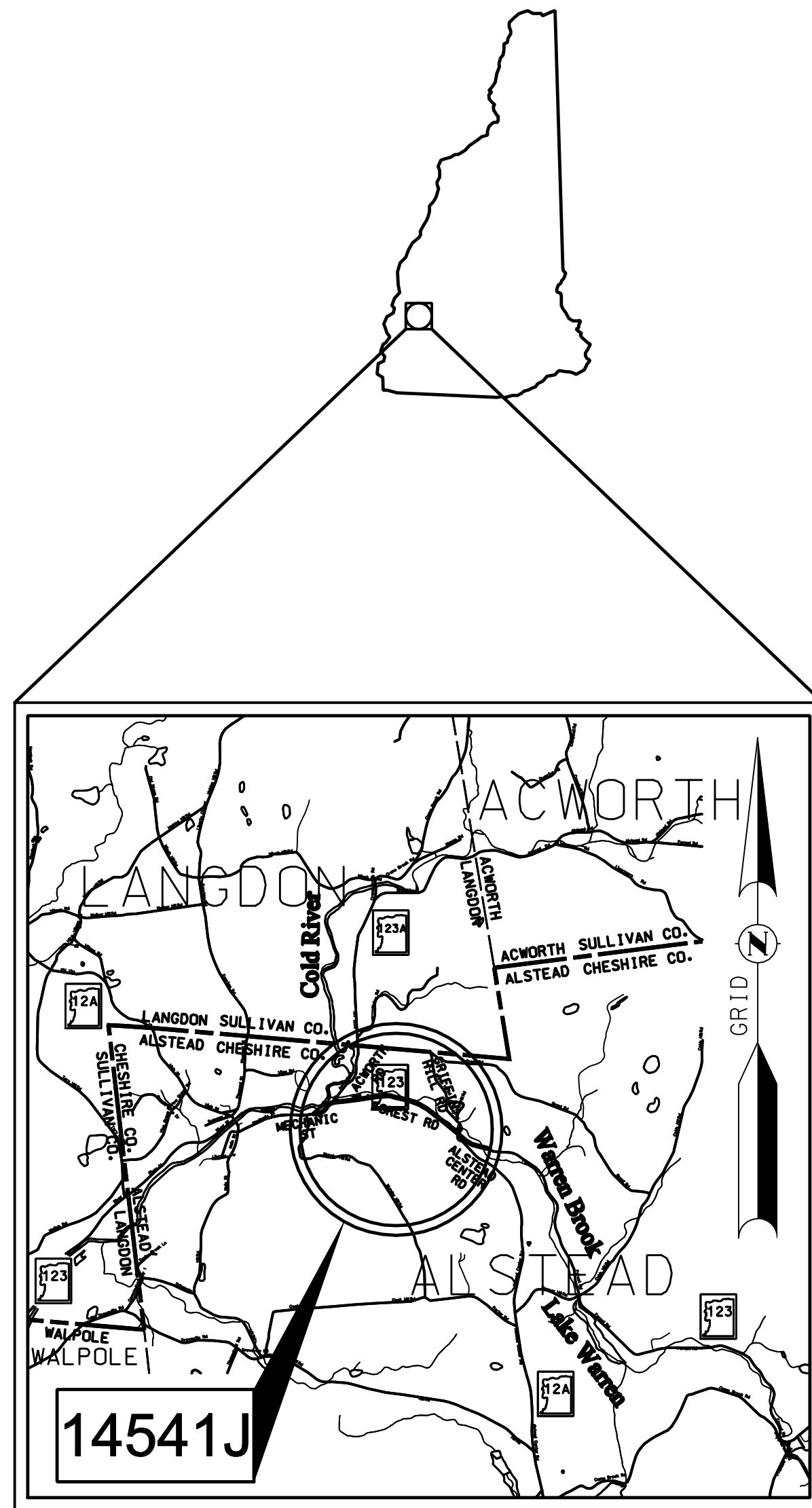
END APPROACH
STA. 364+12



CONTRACT 14541J
BEGIN CONSTRUCTION
STA. 301+50

LIMIT OF WORK
NH 12A STA 13+80

BEGIN APPROACH
STA. 301+00



LOCATION MAP



DRAWN BY DRH DATE 2006
CHECKED BY CAC DATE MAY 2007

NOTE: DETAILS AND NOTES
MAY NOT BE CURRENT.
CLOSELY REVIEW BEFORE
USING DETAILS.

TOWN OF ALSTEAD
COUNTY OF CHESHIRE
SCALE: 1" = 300'

SAMPLE PLAN
DATE: 10-25-2006

PRELIMINARY PLAN
APPROVED BY:

Date _____

Date _____

NHDOT THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL:

DIRECTOR OF PROJECT DEVELOPMENT DATE _____

APPROVED:

ASSISTANT COMMISSIONER AND CHIEF ENGINEER DATE _____

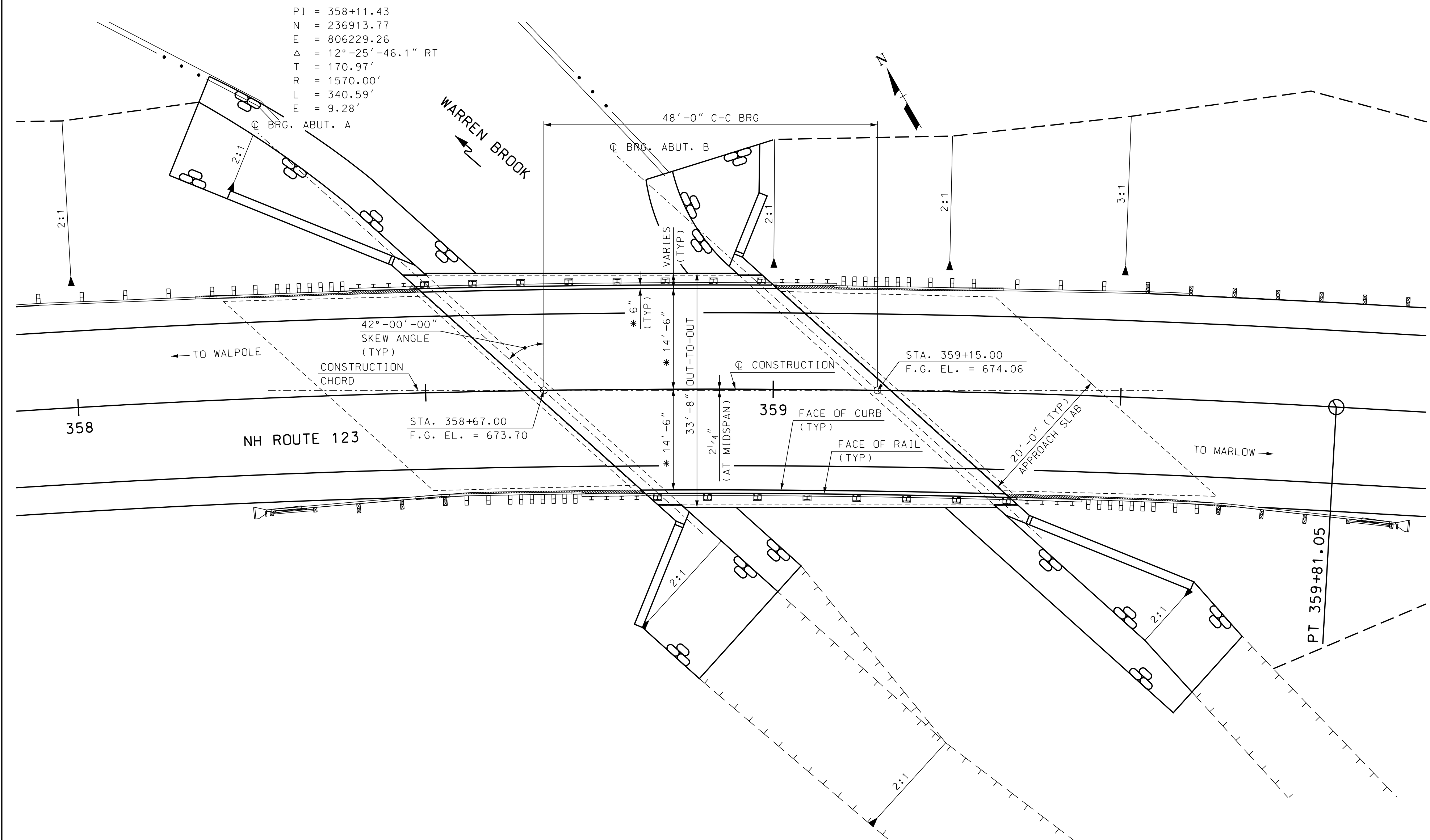
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE _____

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
X-A000(473)	14541J	1	156

PI = 358+11.43
 N = 236913.77
 E = 806229.26
 Δ = 12°-25'-46.1" RT
 T = 170.97'
 R = 1570.00'
 L = 340.59'
 E = 9.28'



GENERAL NOTES

- DESIGN METHOD: LOAD AND RESISTANCE FACTORED DESIGN.
- DESIGN LOADING: HL-93
- SPECIFICATIONS: AASHTO 2004 LRFD BRIDGE DESIGN SPECIFICATION WITH 2005 AND 2006 INTERIMS. NHDOT 2006 STANDARD SPECIFICATIONS AS AMENDED.
- FOUNDATION DATA: ABUTMENT A AND B - SPREAD FOOTING SUPPORTED ON STRUCTURAL FILL. ULTIMATE BEARING CAPACITY = 6.2 TSF
- REINFORCING STEEL: AASHTO M31 (ASTM A615) GRADE 60
- CONCRETE: ABUTMENTS, WINGS, AND FOOTINGS: $f'_c = 3$ ksi
BRIDGE DECK OVERLAY AND APPROACH SLABS: $f'_c = 4$ ksi
PRESTRESSED VOIDED SLABS: $f'_c = 6$ ksi, $f'_{ci} = 4.8$ ksi
- SEISMIC ZONE 1, A = 0.09

SUMMARY OF PRELIMINARY BRIDGE QUANTITIES

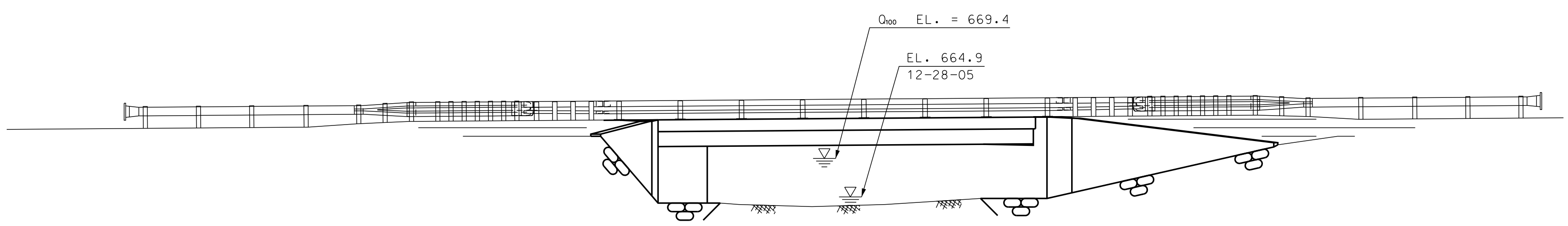
ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
207.3	UNCLASSIFIED CHANNEL EXCAVATION	542	CY
209.201	GRANULAR BACKFILL (BRIDGE) (F)	360	CY
403.911	HOT BITUMINOUS BRIDGE PAVEMENT, 1" BASE COURSE (F)	9	T
502.0	REMOVAL OF EXISTING BRIDGE STRUCTURE	1	U
503.201	COFFERDAMS	1	U
504.1	COMMON BRIDGE EXCAVATION (F)	580	CY
508.	STRUCTURAL FILL	80	CY
520.0102	CONCRETE CLASS AA (OC/OA) (F)	39	CY
520.0302	CONCRETE CLASS AA, APPROACH SLABS (OC/OA) (F)	85	CY
520.12	CONCRETE CLASS A, ABOVE FOOTINGS (F)	181	CY
520.213	CONCRETE CLASS B, FOOTINGS (ON SOIL) (F)	130	CY
528.3121	PRESTRESSED CONCRETE BRIDGE DECK, BUTTED DECK BEAMS (F)	1640	SF
534.3	WATER REPELLENT (SILANE-SILOXANE)	25	GAL
538.2	BARRIER MEMBRANE, VERTICAL SURFACES (F)	18	SY
538.6	BARRIER MEMBRANE, WELDED BY TORCH-MACHINE METHOD (F)	200	SY
541.4	PVC WATERSTOPS, NH TYPE 4 (F)	60	LF
544.	REINFORCING STEEL (F)	22807	LB
544.2	REINFORCING STEEL, EPOXY COATED (F)	17623	LB
548.11	ELASTOMERIC BEARING PADS (F)	33	EA
559.41	MODIFIED ELASTOMERIC PLUG TYPE FLEXIBLE JOINT, 6" WIDE (F)	87	LF
559.5	SILICONE JOINT SEALANT (F)	110	LF
563.22	BRIDGE RAIL T2 (F)	105	LF
565.22	BRIDGE APPROACH RAIL T2 (F)	117	LF
585.21	STONE FILL, CLASS B (BRIDGE)	140	CY
593.311	GEOTEXTILE, STABILIZATION, CLASS 1, NON-WOVEN	240	SY
593.411	GEOTEXTILE, PERMANENT CONTROL, CLASS 1, NON-WOVEN	180	SY
645.22	SLOPE STABILIZATION (STEEPER THAN 2:1)	280	SY
646.41	TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND HUMUS	280	SY
1010.4	QUALITY CONTROL QUALITY ASSURANCE (QC/QA) FOR CONCRETE	1	U

NOTE: DETAILS AND NOTES MAY NOT BE CURRENT. CLOSELY REVIEW BEFORE USING DETAILS.

* RADIAL DIMENSION
PLAN
SCALE: 1" = 10'-0"

HYDRAULIC DATA

- DRAINAGE AREA: 11.7 SQ. MI.
- DESIGN FLOOD: $Q_{100} = 1650$ cfs
- DESIGN FLOOD ELEVATION: 669.4 FEET
- DESIGN VELOCITY: 11.0 fps
- BRIDGE FULL WATERWAY OPENING \perp TO BROOK: 220 SQ. FT.



ELEVATION
SCALE: 1" = 10'-0"

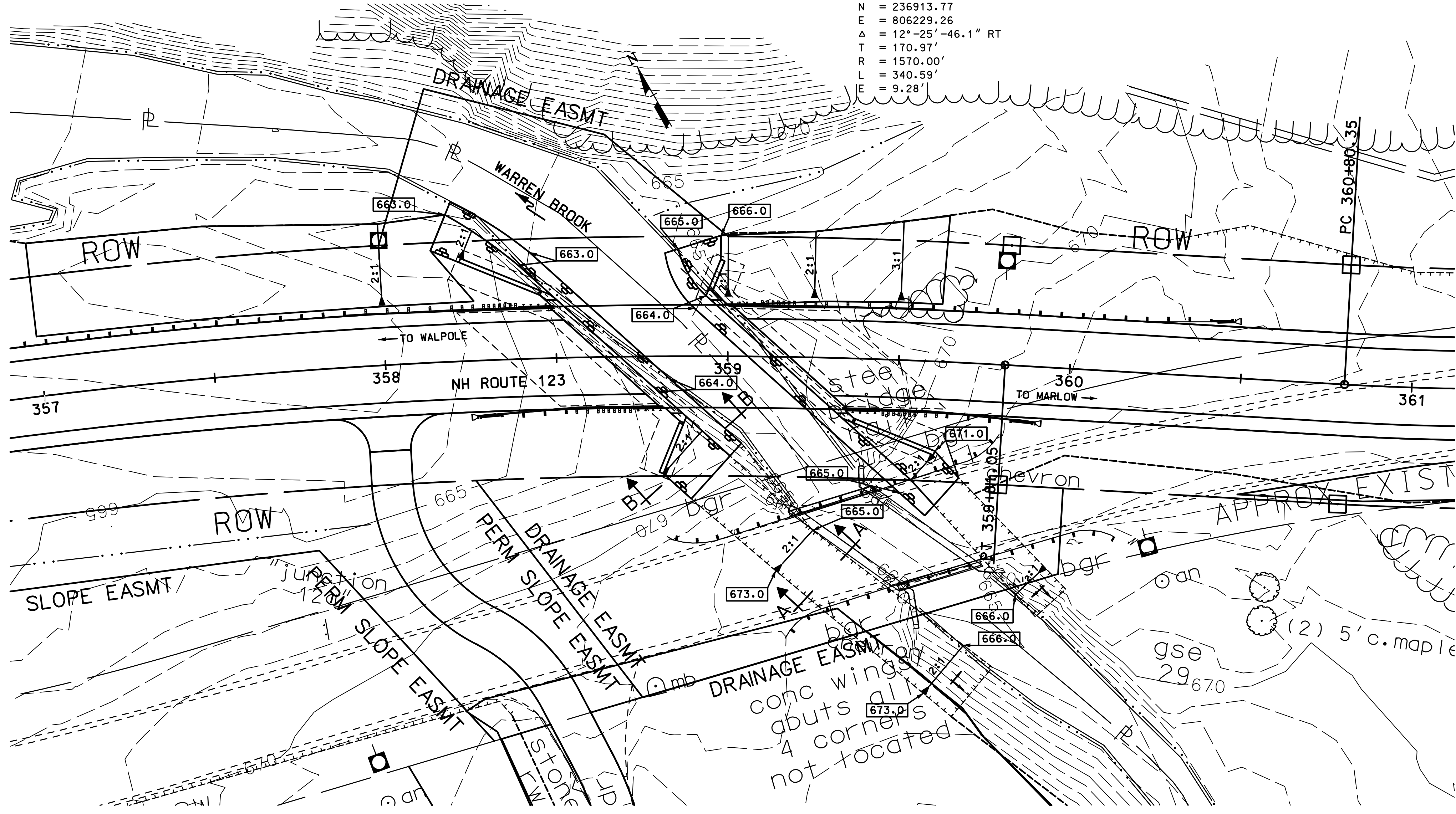
SAMPLE PLAN
DATE: 10-2006

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE 25-OCT-06

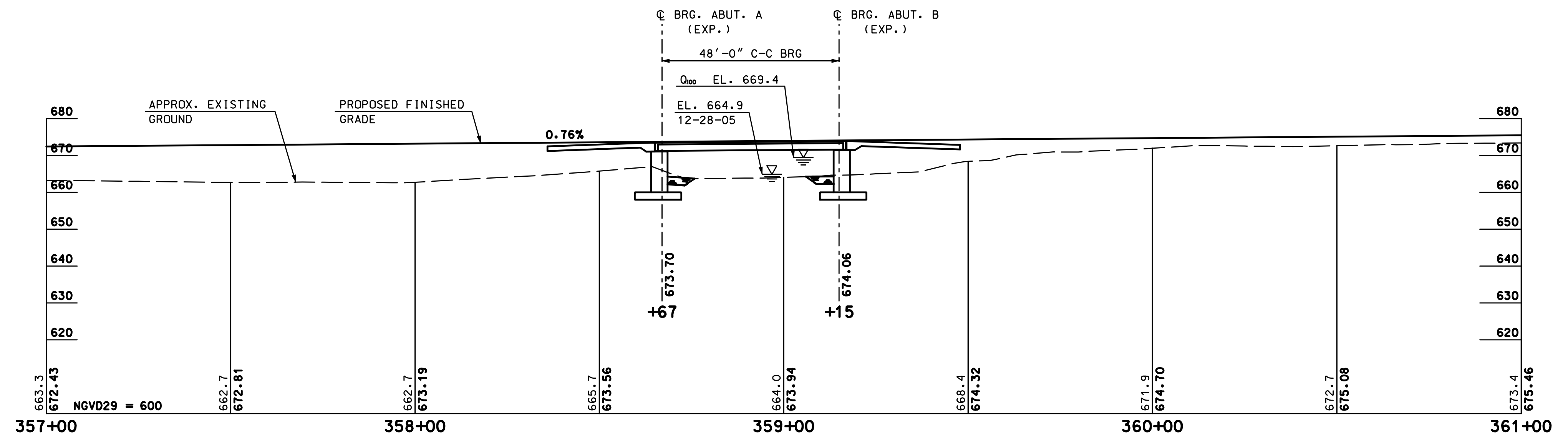
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN XX	BRIDGE NO. XXXXXX			STATE PROJECT XX			BRIDGE SHEET		
LOCATION XX									
PRELIMINARY GENERAL PLAN AND ELEVATION									
REVISIONS AFTER PROPOSAL		BY	DATE	BY	DATE	1 OF		FILE NUMBER	
		DESIGNED	SDF 9/06	CHECKED	XXX XX/XX	XX		XX-X-X	
		DRAWN	SMG 9/06	CHECKED	SDF 10/06	XX		XX	
		QUANTITIES	XXX XX/XX	CHECKED	XXX XX/XX	XX		XX	
		ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS	
		REV. DATE		-----		XX		XX	

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRD/PRELPLNS	14541JPreGen	AS NOTED

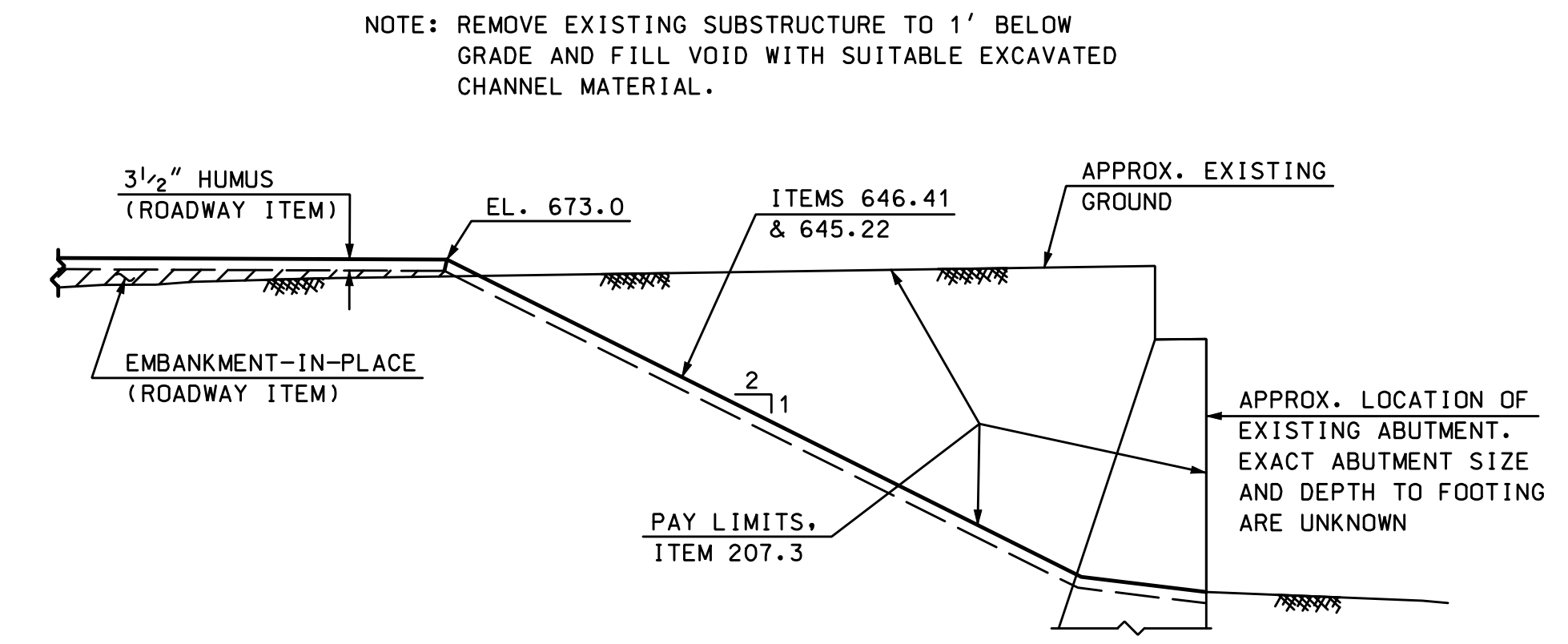
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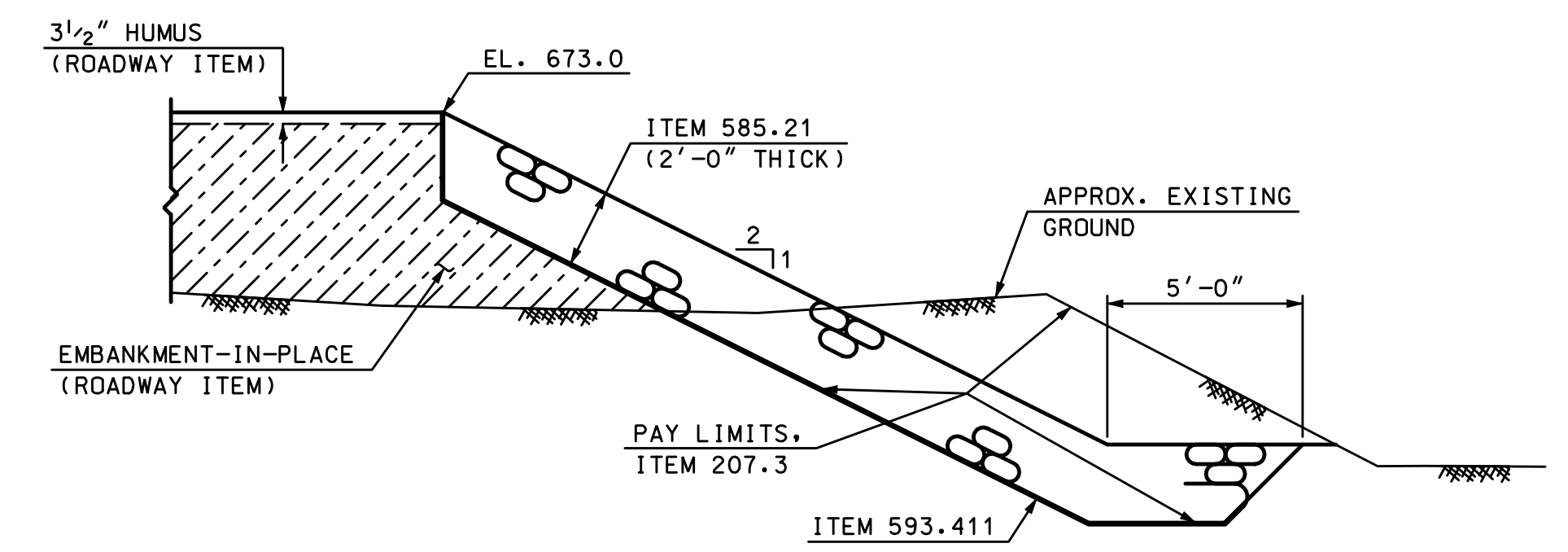
PLAN
SCALE: 1" = 20'-0"



PROFILE
SCALE: 1" = 20'-0"



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



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

NOTE: DETAILS AND NOTES MAY NOT BE CURRENT. CLOSELY REVIEW BEFORE USING DETAILS.

SAMPLE PLAN
DATE: 10-25-2006

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	ALSTEAD	BRIDGE NO.	087156	STATE PROJECT	14541J				
LOCATION	NH ROUTE 123 over WARREN BROOK								
PRELIMINARY SITE PLAN AND PROFILE					BRIDGE SHEET				
					2 OF 6				
					FILE NUMBER				
					105-3-1				
					TOTAL SHEETS				
					156				

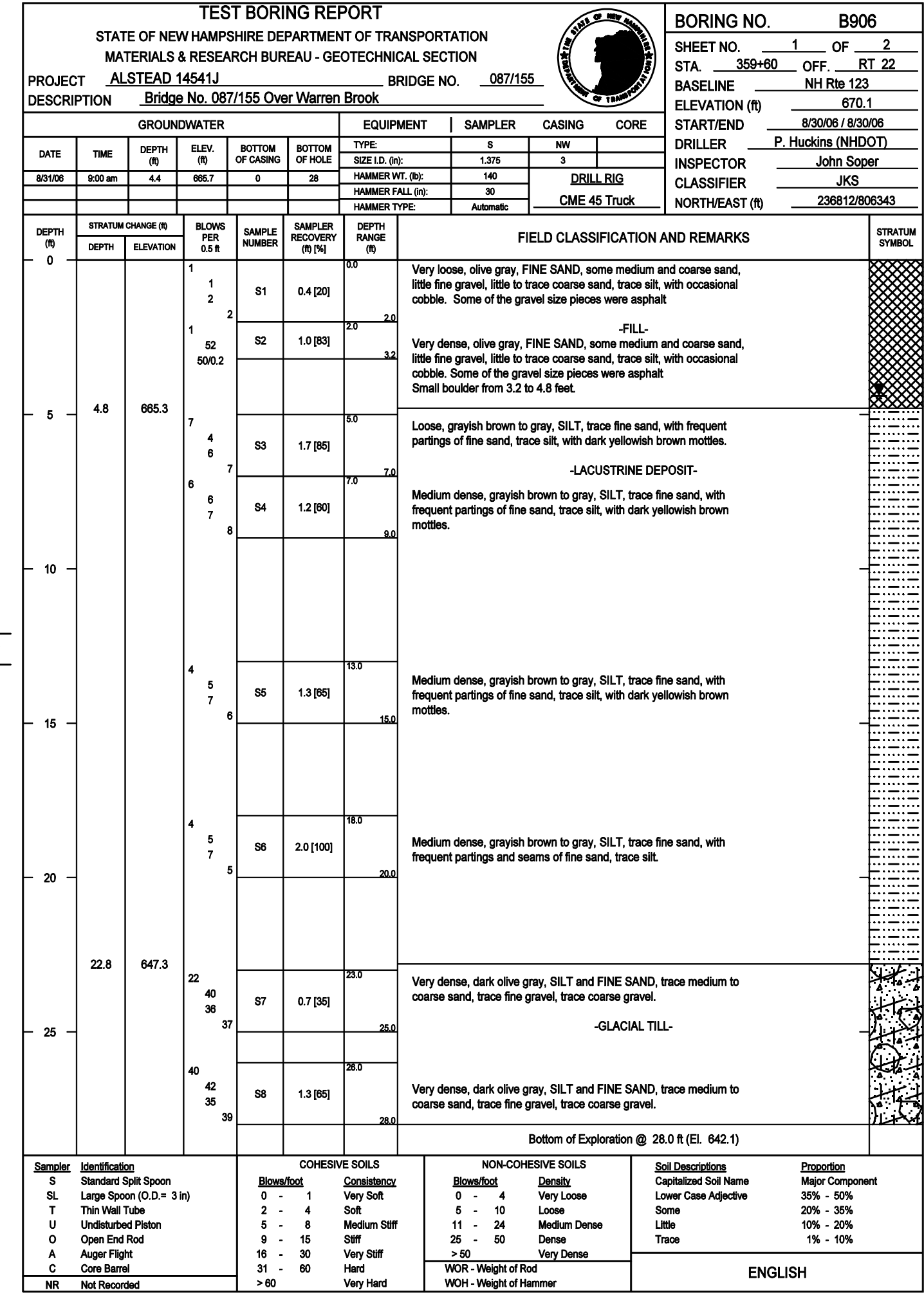
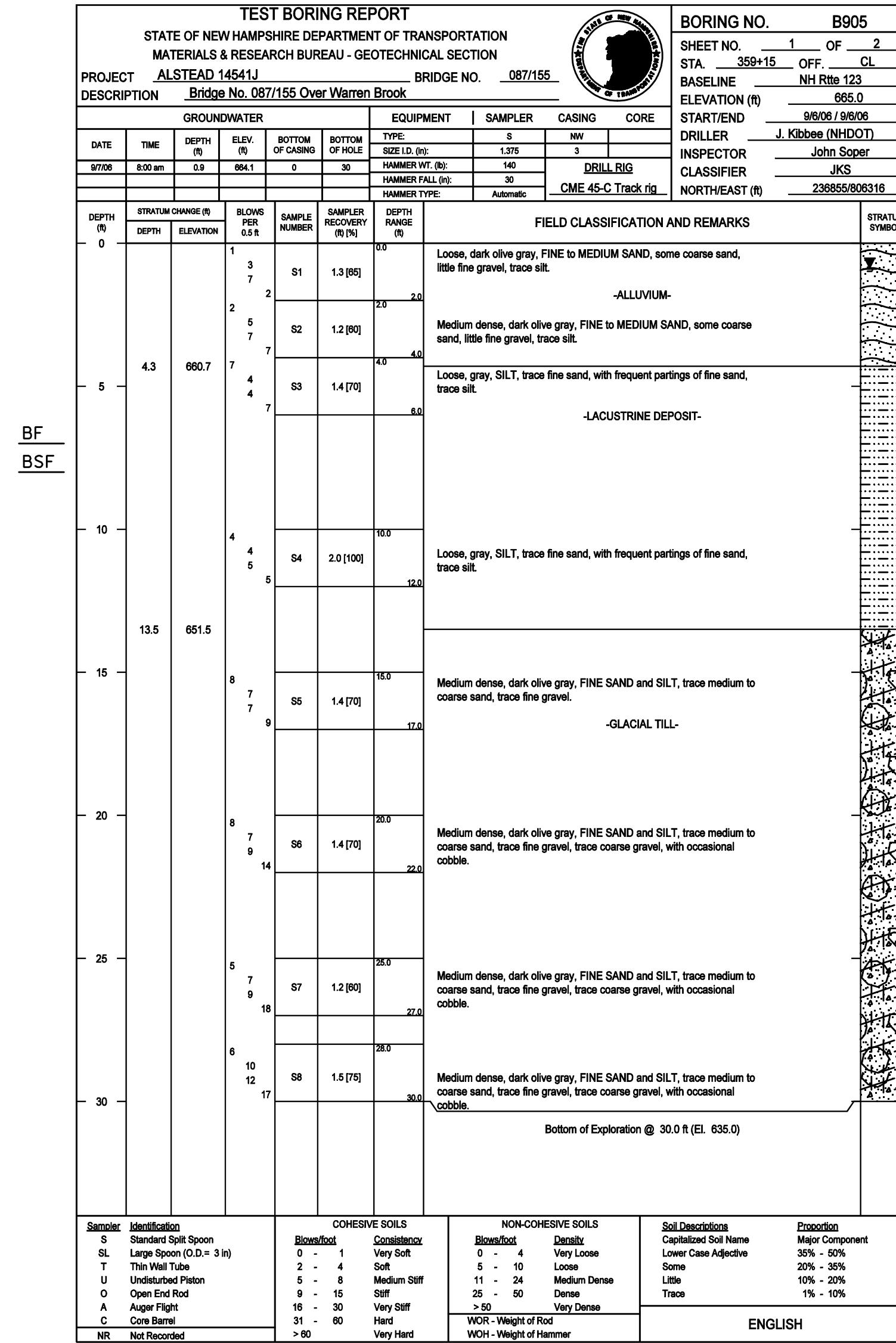
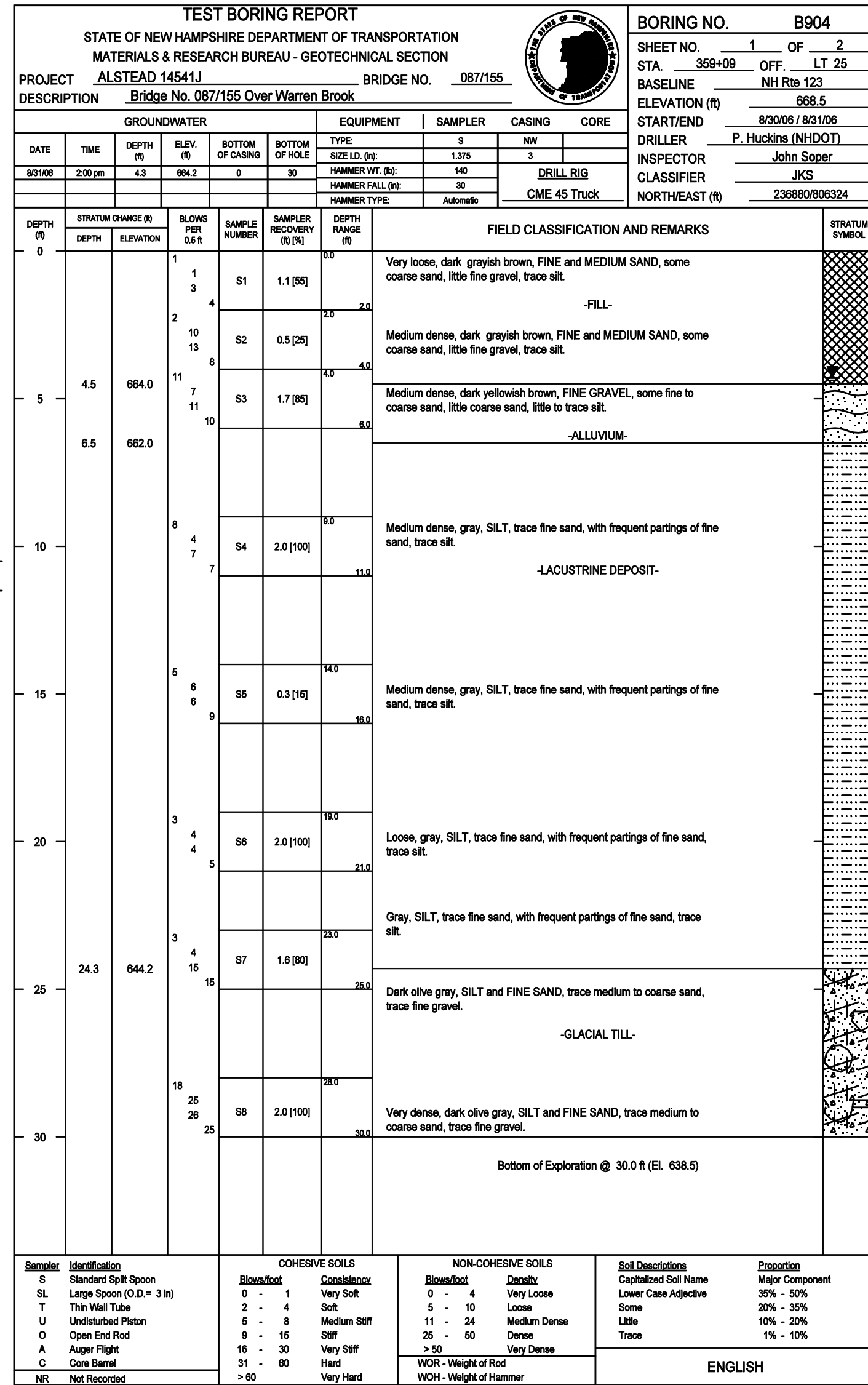
PRELIMINARY PLANS
 SUBJECT TO CHANGE
 DATE 25-OCT-06

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRD/PRELPLNS	14541JPreSite	AS NOTED

675
670
665
660
655
650
645
640
635
630

TEST BORING REPORT										
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION										
PROJECT ALSTEAD 14541J BRIDGE NO. 087/155										
DESCRIPTION Bridge No. 087/155 Over Warren Brook										
GROUNDWATER					EQUIPMENT					
DATE	TIME	DEPTH (ft)	ELEV. (ft)	BOTTOM OF CASING (ft)	TYPE	SAMPLER	CASING	CORE		
8/29/06	10:00 am	5.1	662.7	0	28	HAMMER WT. (lb)	140	DRILL RIG		
					HAMMER FALL (in)	30				
					HAMMER TYPE	Automatic				
BORING NO. B901										
SHEET NO. 1 OF 1										
STA. 385+84 OFF. RT. 123										
BASELINE NH Rte 123										
ELEVATION (ft) 667.9										
START/END 8/23/06 / 8/23/06										
DRILLER P. HUCKINS (NHDOT)										
INSPECTOR John Soper										
CLASSIFIER JKS										
NORTHEAST (ft) 236850/806279										
FIELD CLASSIFICATION AND REMARKS										
DEPTH (ft)	STRATUM CHANGE (ft)	BLOWS PER 0.5 ft	SAMPLER NUMBER	SAMPLER RECOVERY (%)	DEPTH RANGE (ft)					STRATUM SYMBOL
0					0.5	Small boulder from 0.5 to 1.9 feet.				
1.9	665.9	3			1.9 - 2.0	-FILL- Loose, olive brown, FINE SAND, some silt, little medium sand.				
2			S1	1.3 (85)	2.0 - 2.2	-ALLUVIUM- Dense, olive brown, FINE and COARSE GRAVEL, some fine and medium sand, little silt, trace coarse sand, occasional cobble.				
3					2.2 - 2.4					
4			S2	1.0 (85)	2.4 - 2.6					
5					2.6 - 2.8					
6			S3	1.3 (85)	2.8 - 3.0	-LACUSTRINE DEPOSIT- Medium dense, gray, SILT, trace fine sand.				
7					3.0 - 3.2					
8			S4	1.7 (85)	3.2 - 3.4	-GLACIAL TILL- Dense, olive gray, SILT and FINE SAND, trace medium to coarse sand, trace fine gravel.				
9					3.4 - 3.6					
10			S5	1.8 (80)	3.6 - 3.8	-LACUSTRINE DEPOSIT- Medium dense, dark olive gray, SILT, trace fine sand, trace medium to coarse sand, trace fine gravel.				
11					3.8 - 4.0					
12			S6	1.8 (80)	4.0 - 4.2	-GLACIAL TILL- Dense, dark olive gray, SILT and FINE SAND, trace medium to coarse sand, trace fine and coarse gravel.				
13					4.2 - 4.4					
14					4.4 - 4.6					
15					4.6 - 4.8					
16					4.8 - 5.0					
17					5.0 - 5.2					
18					5.2 - 5.4					
19					5.4 - 5.6					
20					5.6 - 5.8					
21					5.8 - 6.0					
22					6.0 - 6.2					
23					6.2 - 6.4					
24					6.4 - 6.6					
25					6.6 - 6.8					
26					6.8 - 7.0					
27					7.0 - 7.2					
28					7.2 - 7.4					
29					7.4 - 7.6					
30					7.6 - 7.8					
31					7.8 - 8.0					
32					8.0 - 8.2					
33					8.2 - 8.4					
34					8.4 - 8.6					
35					8.6 - 8.8					
36					8.8 - 9.0					
37					9.0 - 9.2					
38					9.2 - 9.4					
39					9.4 - 9.6					
40					9.6 - 9.8					
41					9.8 - 10.0					
42					10.0 - 10.2					
43					10.2 - 10.4					
44					10.4 - 10.6					
45					10.6 - 10.8					
46					10.8 - 11.0					
47					11.0 - 11.2					
48					11.2 - 11.4					
49					11.4 - 11.6					
50					11.6 - 11.8					
51					11.8 - 12.0					
52					12.0 - 12.2					
53					12.2 - 12.4					
54					12.4 - 12.6					
55					12.6 - 12.8					
56					12.8 - 13.0					
57					13.0 - 13.2					
58					13.2 - 13.4					
59					13.4 - 13.6					
60					13.6 - 13.8					
61					13.8 - 14.0					
62					14.0 - 14.2					
63					14.2 - 14.4					
64					14.4 - 14.6					
65					14.6 - 14.8					
66					14.8 - 15.0					
67					15.0 - 15.2					
68					15.2 - 15.4					
69					15.4 - 15.6					
70					15.6 - 15.8					
71					15.8 - 16.0					
72					16.0 - 16.2					
73					16.2 - 16.4					
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75					16.6 - 16.8					
76					16.8 - 17.0					
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84					18.4 - 18.6					
85					18.6 - 18.8					
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88					19.2 - 19.4					
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90					19.6 - 19.8					
91					19.8 - 20.0					
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94					20.4 - 20.6					
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103					22.2 - 22.4					
104					22.4 - 22.6					
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114					24.4 - 24.6					
115					24.6 - 24.8					
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117					25.0 - 25.2					
118					25.2 - 25.4					
119					25.4 - 25.6					
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126					26.8 - 27.0					
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133					28.2 - 28.4					
134					28.4 - 28.6					
135					28.6 - 28.8					
136					28.8 - 29.0					
137					29.0 - 29.2					
138					29.2 - 29.4					
139					29.4 - 29.6					
140					29.6 - 29.8					
141					29.8 - 30.0					
142					30.0 - 30.2					
143					30.2 - 30.4					
144					30.4 - 30.6					
145					30.6 - 30.8					
146					30.8 - 31.0					
147					31.0 - 31.2					
148					31.2 - 31.4					
149					31.4 - 31.6					
150					31.6 - 31.8					
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154					32.4 - 32.6					
155					32.6 - 32.8					
156					32.8 - 33.0					
157					33.0 - 33.2					
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163					34.2 - 34.4					
164					34.4 - 34.6					
165					34.6 - 34.8					
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168					35.2 - 35.4					
169					35.4 - 35.6					
170					35.6 - 35.8					
171					35.8 - 36.0					
172					36.0 - 36.2					
173					36.2 - 36.4					
174	</									

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BF = BOTTOM OF FOOTING
BSF = BOTTOM OF STRUCTURAL FILL
BORING LOGS
SCALE: 1/4" = 1'-0"

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USING DETAILS.**

SAMPLE PLAN
DATE: 10-25-2006

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE 25-OCT-06

SUBDIRECTORY BRD/PRELPLNS DGN LOCATOR 14541BORLOG-P SHEET SCALE AS NOTED

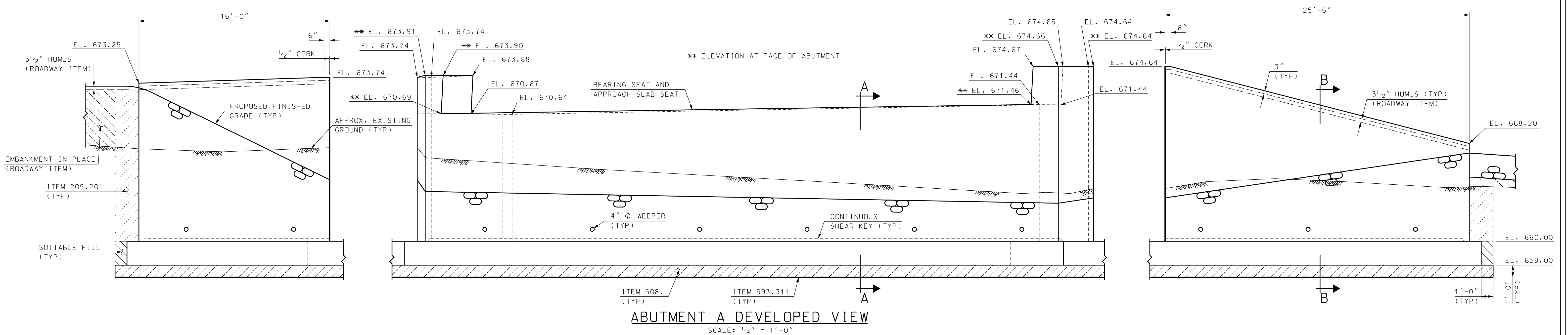
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN ALSTEAD BRIDGE NO. 087155 STATE PROJECT 14541J
LOCATION NH ROUTE 123 over WARREN BROOK

PRELIMINARY BORING LOG (2 OF 2)

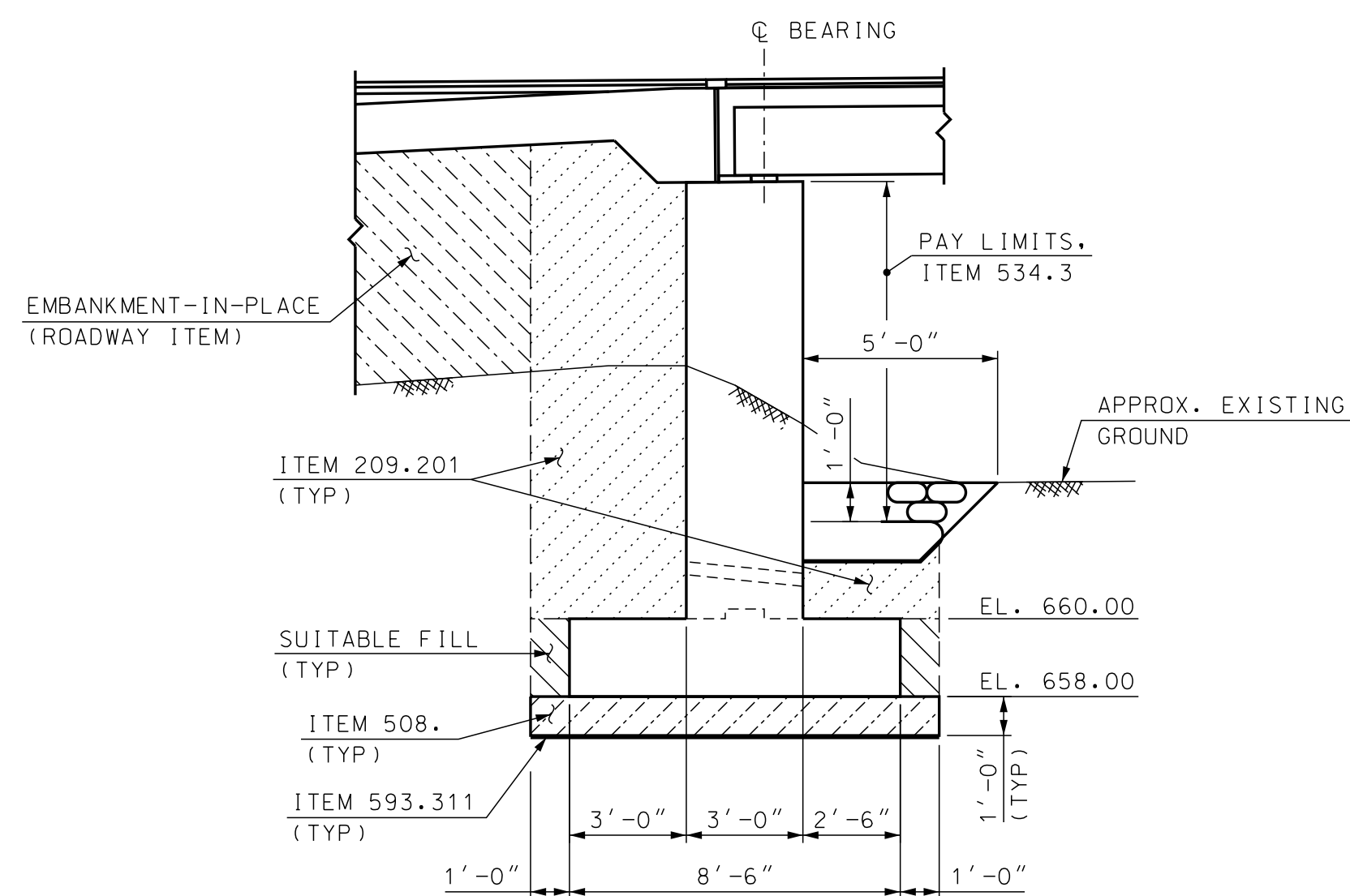
REVISIONS AFTER PROPOSAL	BY	DATE	BY	DATE	BRIDGE SHEET
	DESIGNED	NHDOT	9/06	CHECKED XXX	4 OF 6
	DRAWN	SMG	9/06	CHECKED SDF	FILE NUMBER
	QUANTITIES	XXX	9/06	CHECKED XXX	105-3-1
	ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
	REV. DATE			XX	XX

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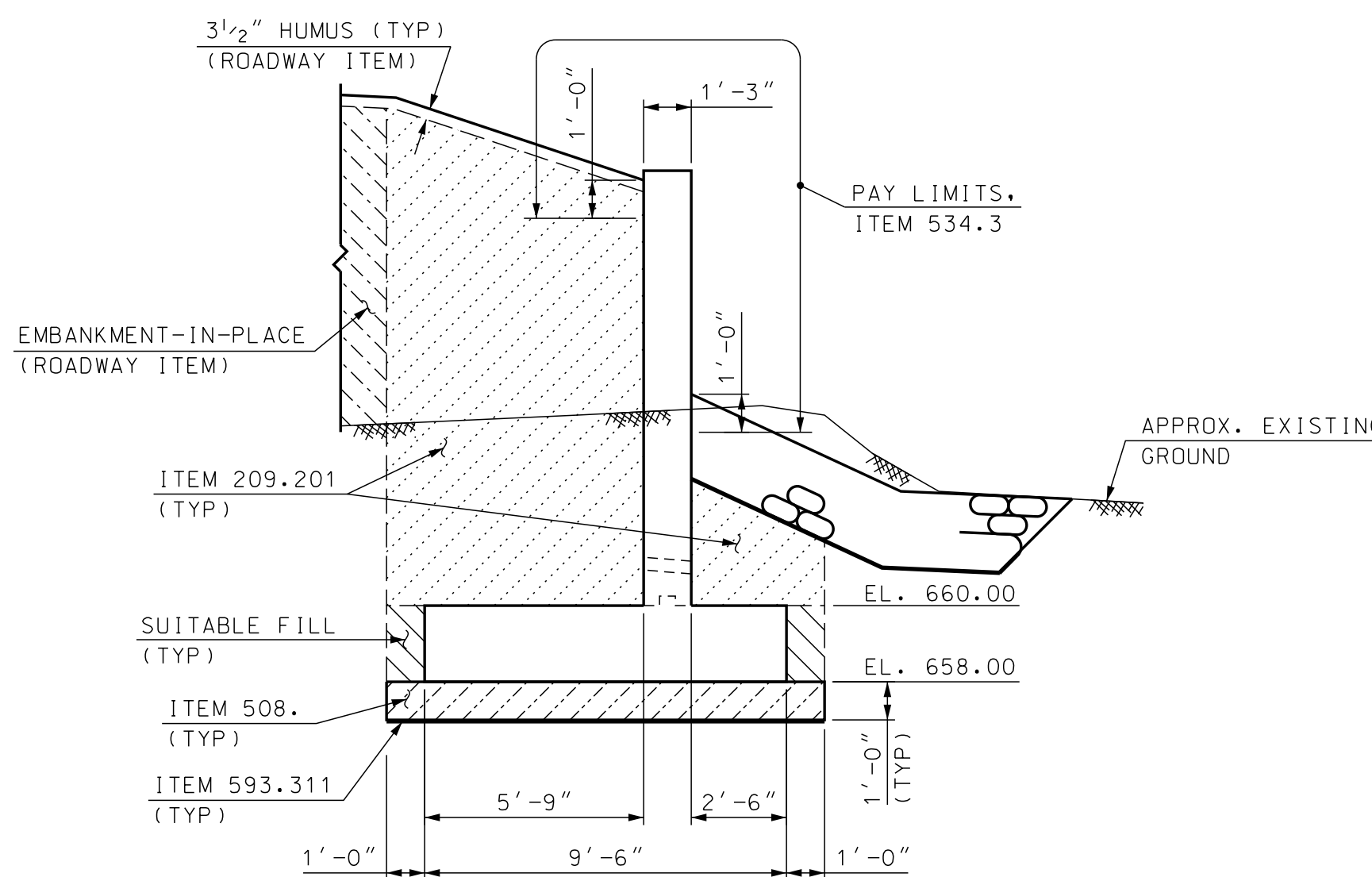
ABUTMENT A DEVELOPED VIEW

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



SECTION A-A

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



SECTION B-B

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

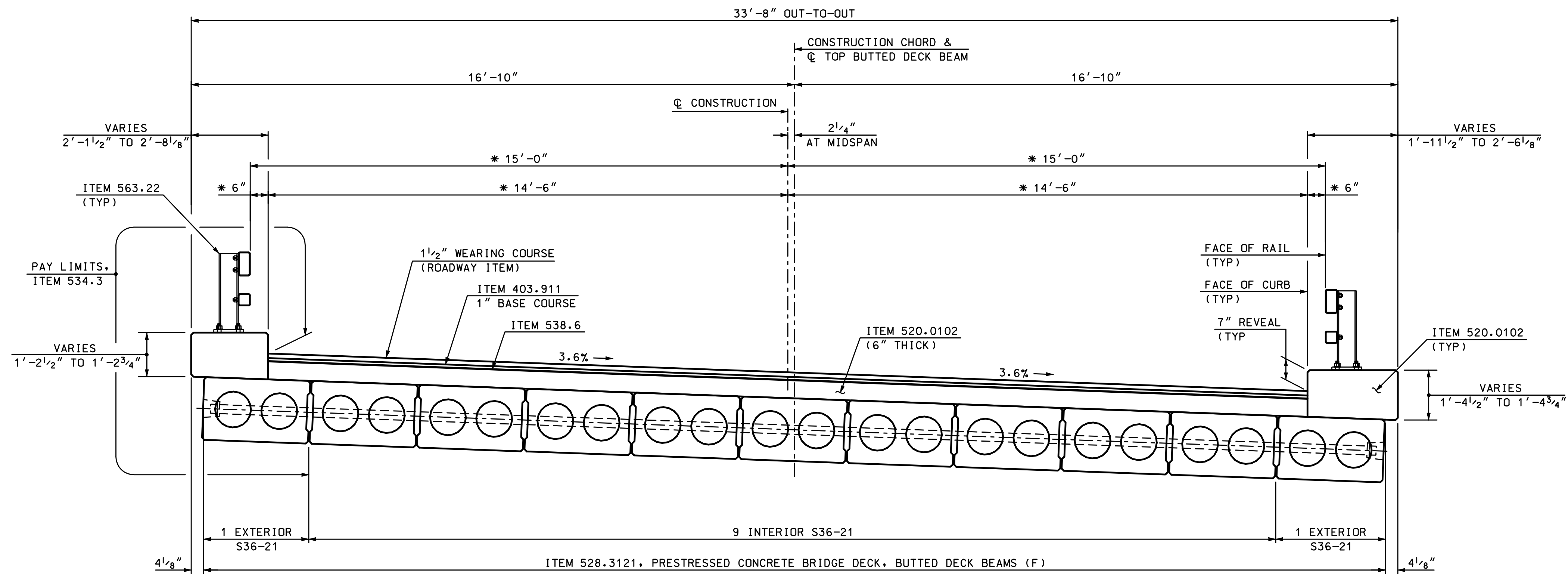
SAMPLE PLAN

DATE: 10-2006

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE 25-OCT-06

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN ALSTEAD		BRIDGE NO. 087156		STATE PROJECT 14541J		BRIDGE SHEET		5 OF 6	
LOCATION NH ROUTE 123 over WARREN BROOK									
PRELIMINARY ABUTMENT A DEVELOPED VIEW									
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	BY	DATE	FILE NUMBER		
		SDF	9/06	XXX	XXX	XX/XX	105-3-1		
		SMG	9/06	CHECKED	XXX	XX/XX	TOTAL SHEETS		
		XXX	XX/XX	CHECKED	XXX	XX/XX	XX		
ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS			
REV. DATE		-----		XX		XX			

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRD/PRELPLNS	14541JPre-AbutA	AS NOTED



* RADIAL DIMENSION
PRELIMINARY DECK SECTION
 SCALE: 1/4" = 1'-0"

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SAMPLE PLAN
 DATE: 10-25-2006

PRELIMINARY PLANS
 SUBJECT TO CHANGE
 DATE 25-OCT-06

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN ALSTEAD		BRIDGE NO. 087156		STATE PROJECT 14541J					
LOCATION NH ROUTE 123 over WARREN BROOK									
PRELIMINARY DECK SECTION								BRIDGE SHEET	
REVISIONS AFTER PROPOSAL		BY		DATE		BY		DATE	
		DESIGNED		SDF 9/06		CHECKED		XXX XX/XX	
		DRAWN		SMG 9/06		CHECKED		XXX XX/XX	
		QUANTITIES		XXX XX/XX		CHECKED		XXX XX/XX	
		ISSUE DATE				FEDERAL PROJECT NO.		SHEET NO.	
		REV. DATE				-----		XX	
SUBDIRECTORY		DGN LOCATOR		SHEET SCALE				TOTAL SHEETS	
BRD/PRELPLNS		14541JPre-Decksect		AS NOTED				XX	

6 OF 6
 FILE NUMBER
 105-3-1
 TOTAL SHEETS
 XX