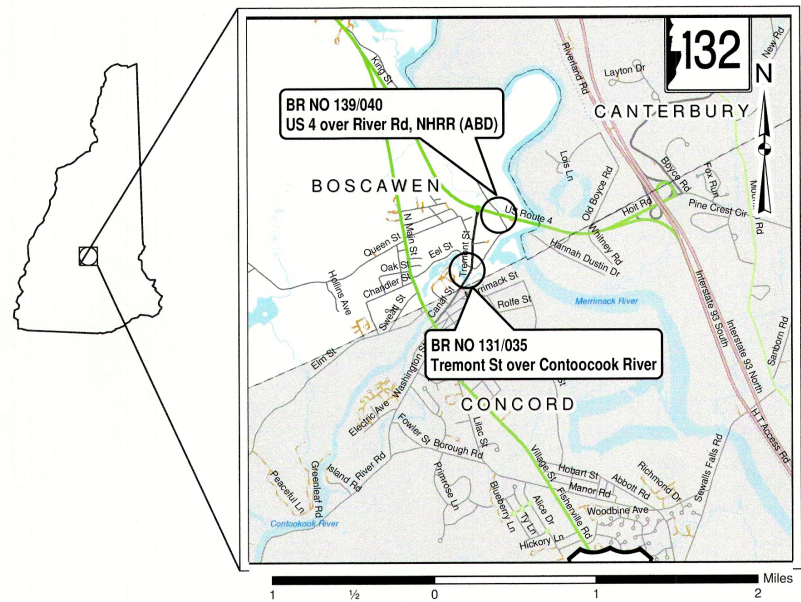


STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS
BRIDGE PRESERVATION PROJECT

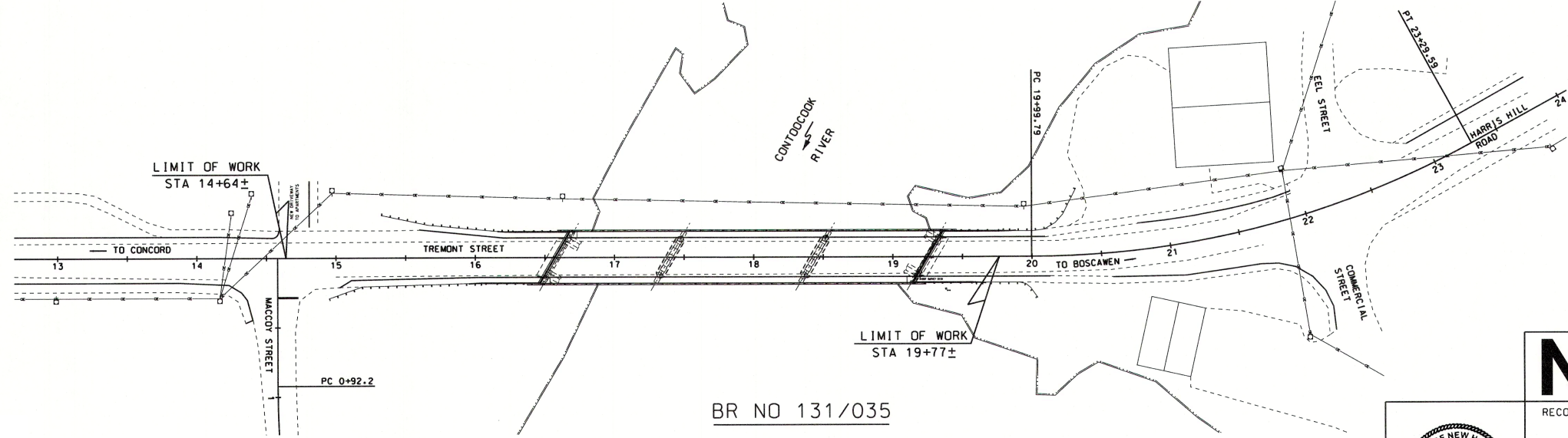
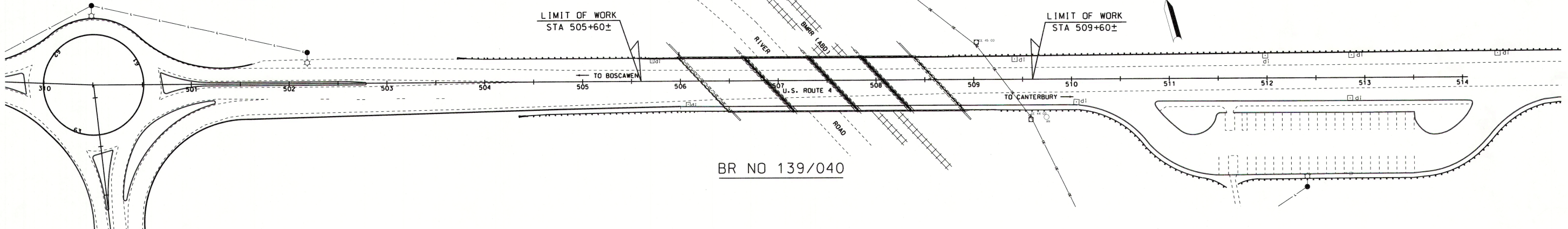
N.H. PROJECT NO. 42440
US ROUTE 4 & TREMONT STREET

DESIGN DATA	BR NO 139/040	BR NO 131/035
	AVERAGE DAILY TRAFFIC 20 14	8800
AVERAGE DAILY TRAFFIC 20 38	13024	8584
PERCENT OF TRUCKS	5%	5%
DESIGN SPEED	35 MPH	30 MPH
LENGTH OF PROJECT	400 FT	513 FT

THESE PLANS HAVE BEEN REDUCED
DIGITALLY TO
APPROXIMATELY 1/2 SCALE



LOCATION MAP



TOWN OF BOSCAWEN
COUNTY OF MERRIMACK

SCALE: 1" = 50'

DRAWN BY SMC DATE 2/19
CHECKED BY GMC DATE 2/19

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

SAMPLE PLAN
DATE: 11-2019

	RECOMMENDED FOR APPROVAL:	11/12/2019		
	 DIRECTOR OF PROJECT DEVELOPMENT	DATE		
APPROVED:	11/12/2019			
 ASSISTANT COMMISSIONER AND CHIEF ENGINEER	DATE			
DRAWING NAME	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
42440fsc		42440	1	34

GENERAL NOTES

- ① FOR STANDARD PLANS, SEE DEPARTMENT OF TRANSPORTATION WEBSITE AT: WWW.NH.GOV/DOT/ORG/PROJECTDEVELOPMENT/HIGHWAYDESIGN/STANDARDPLANS/INDEX.HTM.
- ② HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.
- ③ MODIFY SUPERELEVATION ON EXISTING CURVES BY THE USE OF A LEVELING COURSE TO THE RATES INDICATED ON THE PLANS OR AS ORDERED.
- ④ EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE REMOVED AND DETERMINED BY THE ENGINEER TO BE IN ACCEPTABLE CONDITION SHALL BE RESET (SUBSIDIARY). ADDITIONAL DELINEATORS AND WITNESS MARKERS ORDERED WILL BE PAID UNDER THE APPROPRIATE ITEMS OF THE CONTRACT.
- ⑤ NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
- ⑥ PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER.
- ⑦ REMOVE UNPROTECTED PROJECT MARKERS (SUBSIDIARY).
- ⑧ SURVEY DATA FOR THIS PROJECT WAS COLLECTED BY SDR AND THE FIELD NOTES CAN BE FOUND IN THE FIELD BOOK(S) ----- . COORDINATES ARE NEW HAMPSHIRE STATE PLANE COORDINATES OF NAD83, ---- ADJUSTMENT AND THE BEARINGS ARE GRID. ELEVATIONS ARE REFERENCED TO ---- -----.
- ⑨ QUANTITIES FOR EMBANKMENT AND EXCAVATION FOR SLOPE ROUNDINGS AS SHOWN ON THE TYPICALS HAVE NOT BEEN CALCULATED AND ARE NOT INCLUDED IN THE QUANTITY SUMMARIES, AND ARE CONSIDERED SUBSIDIARY TO THE APPROPRIATE 203 ITEMS.

SHEET NO.	DESCRIPTION
1	TITLE PAGE
2	INDEX OF SHEETS AND GENERAL NOTES
3.4	STANDARD SYMBOLS
5	SUMMARY OF QUANTITIES
6	NOTES
BRIDGE PLANS	
7-14	BRIDGE NUMBER 139/040
15-28	BRIDGE NUMBER 131/035
29	REINFORCEMENT SCHEDULE
30-31	PORTABLE CONCRETE BARRIER - BRACED
32-34	TEXAS RESTRAINED BARRIER (X-BOLT)

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:											
○	○	○	○	⑤	⑥	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○

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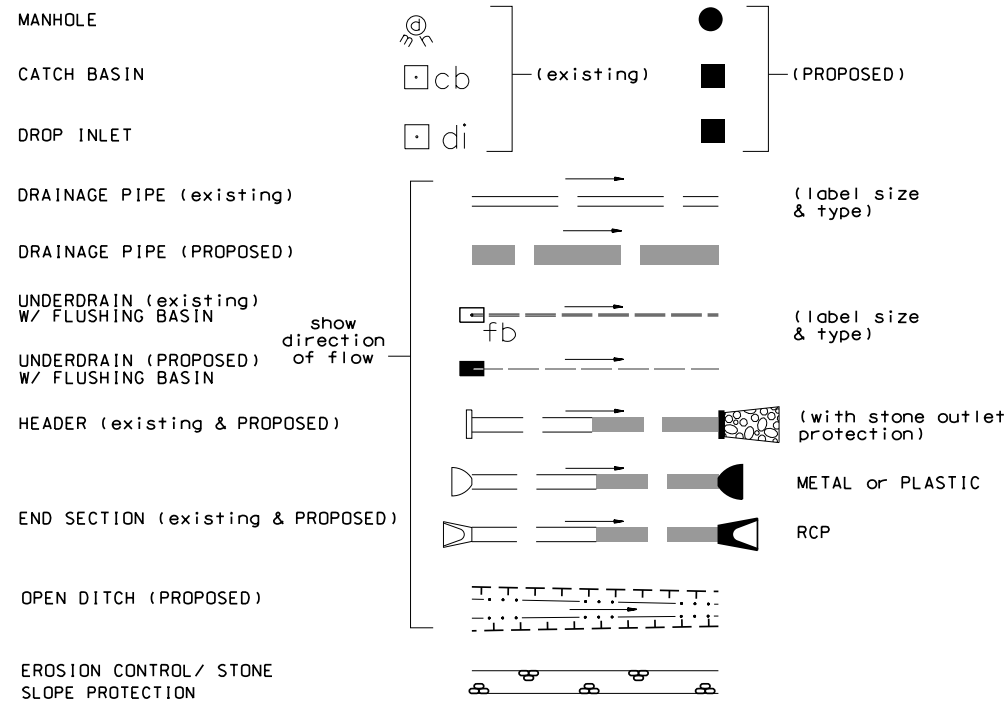
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE
BOSCAWEN
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

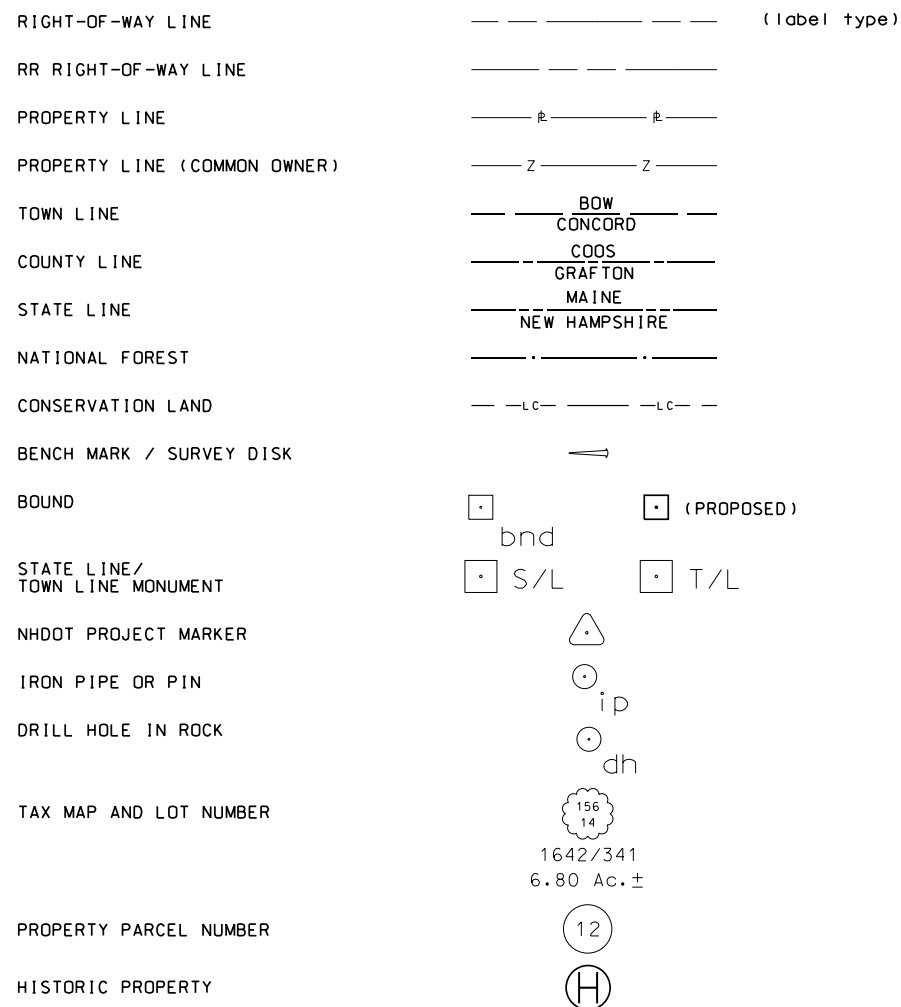
INDEX OF SHEETS
AND GENERAL NOTES

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	index_sheet	42440	2	34

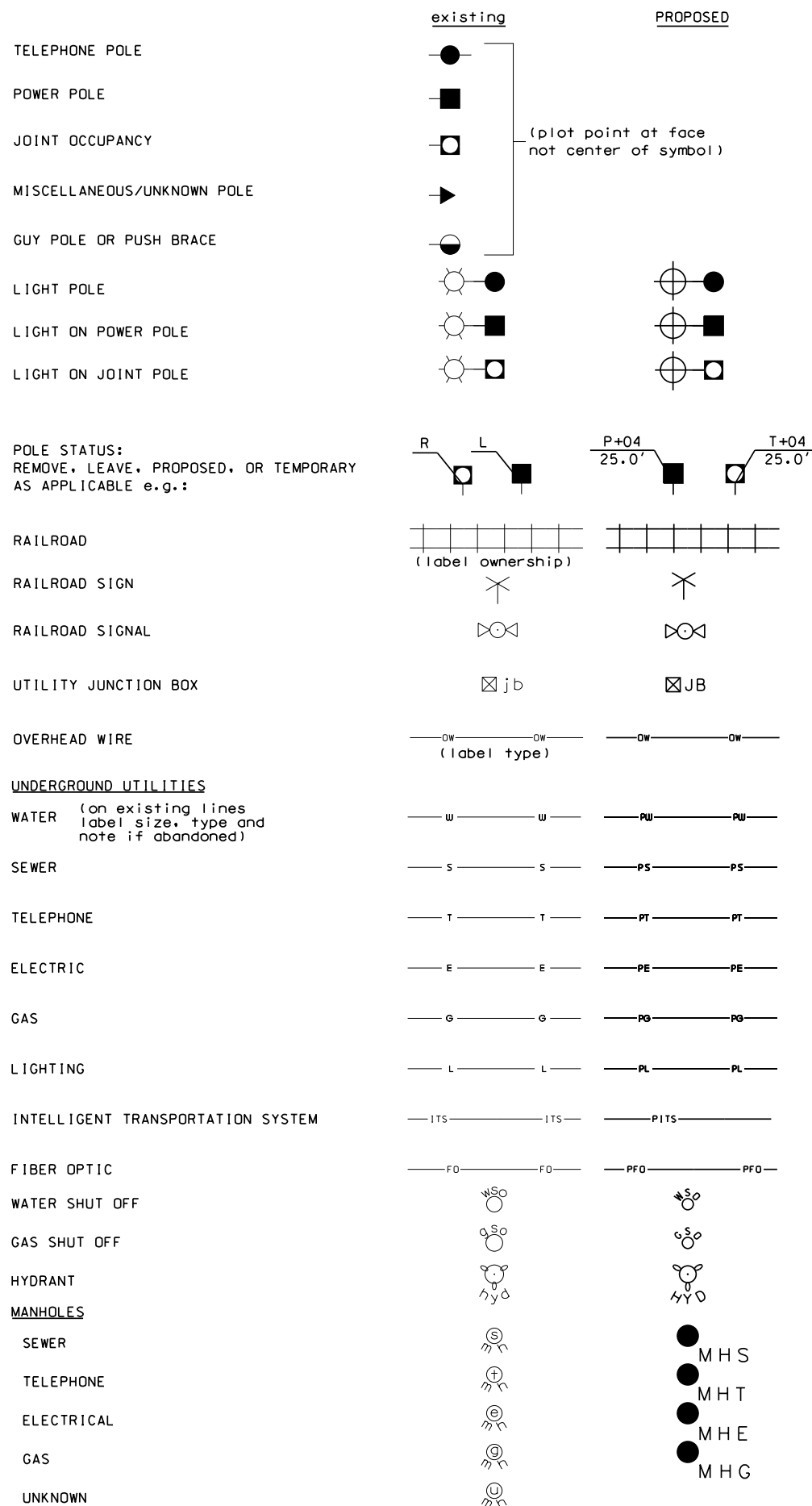
DRAINAGE



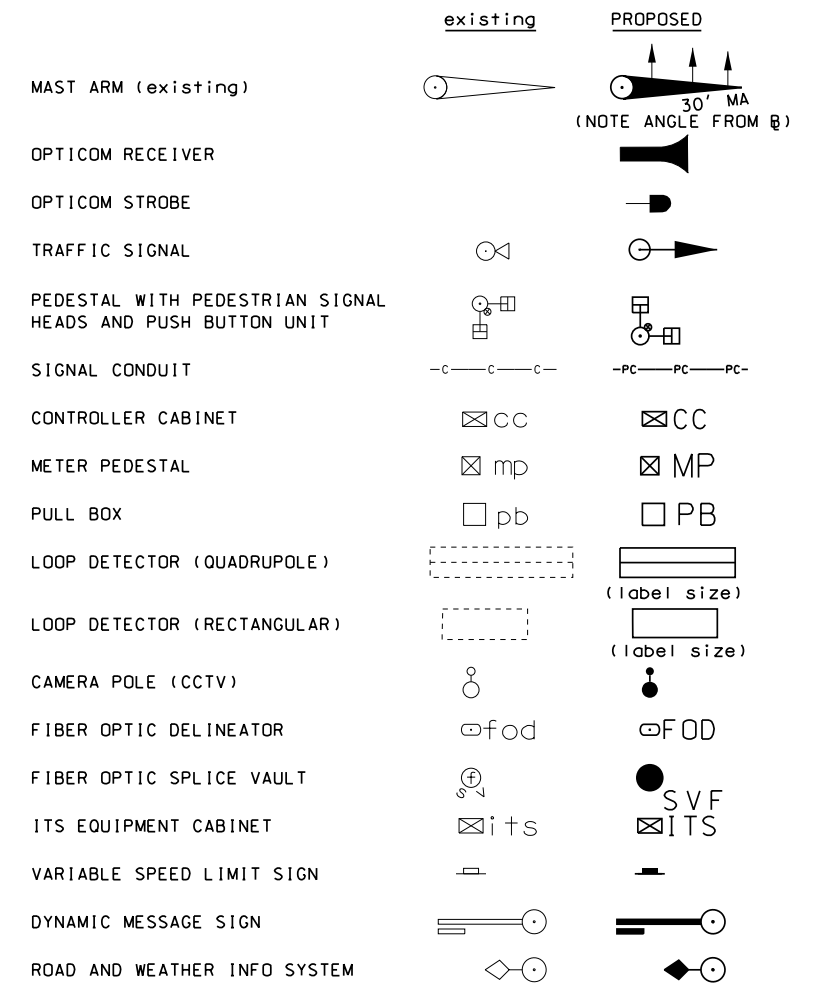
BOUNDARIES / RIGHT-OF-WAY



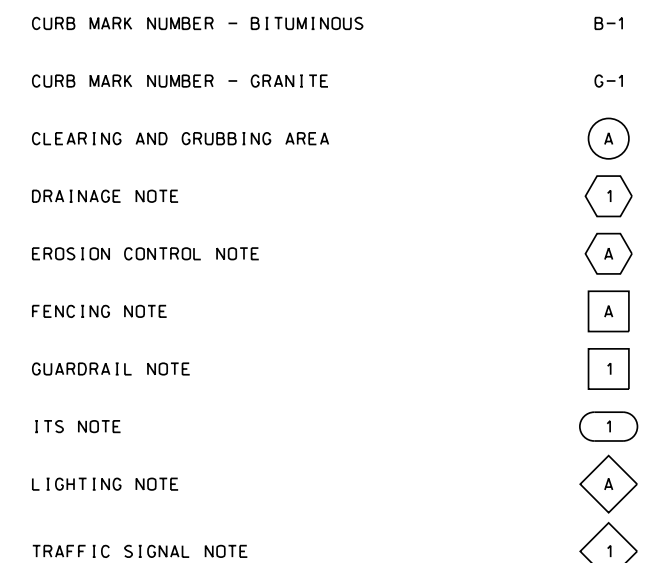
UTILITIES



TRAFFIC SIGNALS / ITS



CONSTRUCTION NOTES



SHEET 2 OF 2

STATE OF NEW HAMPSHIRE
BOSCAWEN
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	stdsymb1_2	42440	3	34

GENERAL

EDGE OF PAVEMENT TRAVELED WAY			
DRIVEWAYS			
BUILDINGS			
FOUNDATION			
LEACH FIELD			
BRIDGE CROSSINGS			
STEPS AND WALK			
INTERMITTENT WATER COURSE			
SHORE LINE			
POTENTIAL WET AREA SYMBOL			
BRUSH OR WOODS LINE			
TREES (PLANS)			
TREE OR STUMP (CROSS-SECTIONS)			
HEDGE			
MONITORING WELL			
WELL			
FLAG POLE			

ORIGINAL GROUND (TYPICALS)	
ROCK OUTCROP	
ROCK LINE (TYPICALS & SECTIONS ONLY)	
GUARDRAIL (label type)	
JERSEY BARRIER	
CURB (LABEL TYPE)	
STONE WALL	
RETAINING WALL (LABEL TYPE)	
FENCE (LABEL TYPE)	
SIGNS	
GAS PUMP	
FUEL TANK (ABOVE GROUND)	
STORAGE TANK FILLER CAP	
SEPTIC TANK	
GRAVE	
MAILBOX	
VENT PIPE	
SATELLITE DISH ANTENNA	
PHONE	
GROUND LIGHT/LAMP POST	
BORING LOCATION	
TEST PIT	
INTERSTATE NUMBERED HIGHWAY	
UNITED STATES NUMBERED HIGHWAY	
STATE NUMBERED HIGHWAY	

SHORELAND - WETLAND

WETLAND DESIGNATION AND TYPE	
DELINEATED WETLAND	
ORDINARY HIGH WATER	
TOP OF BANK	
TOP OF BANK & ORDINARY HIGH WATER	
NORMAL HIGH WATER	
WIDTH AT BANK FULL	
PRIME WETLAND	
PRIME WETLAND 100' BUFFER	
NON-JURISDICTIONAL DRAINAGE AREA	
COWARDIN DISTINCTION LINE	
TIDAL BUFFER ZONE	
DEVELOPED TIDAL BUFFER ZONE	
HIGHEST OBSERVABLE TIDE LINE	
MEAN HIGH WATER	
MEAN LOW WATER	
VERNAL POOL	
SPECIAL AQUATIC SITE	
REFERENCE LINE	
WATER FRONT BUFFER	
NATURAL WOODLAND BUFFER	
PROTECTED SHORELAND	
INVASIVE SPECIES LABEL	
INVASIVE SPECIES	

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY	
100 YEAR FLOODPLAIN BOUNDARY	
FLOODWAY	

ENGINEERING

CONSTRUCTION BASELINE	
PC, PT, POT (ON CONST BASELINE)	
PI (IN CONSTRUCTION BASELINES)	
INTERSECTION OR EQUATION OF TWO LINES	
ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)	
PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)	
CLEARING LINE	
SLOPE LINE	
SLOPE LINE (FILL)	
SLOPE LINE (CUT)	
PROFILES AND CROSS SECTIONS:	
ORIGINAL GROUND ELEVATION (LEFT)	
FINISHED GRADE ELEVATION (RIGHT)	

STATE OF NEW HAMPSHIRE	
BOSCAWEN	
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN	
STANDARD SYMBOLS	

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
11-21-2014	stdsyml_2	42440	4	34

SUMMARY OF BRIDGE QUANTITIES					
ITEM NO.	ITEM DESCRIPTION	BOSCAWEN BR NO 139/040 US RTE 4 over RIVER RD, NHRR (ABD)		BOSCAWEN BR NO 131/035 TREMONT ST over CONTOOCOOK RIVER	
		QUANTITY	UNIT	QUANTITY	UNIT
209.4	GRANULAR BACKFILL (GRAVEL)(4" DEEP)	1		2	
304.301	CRUSHED GRAVEL	12		95	
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	202		133	
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	5.5		9.5	
403.6	PAVEMENT JOINT ADHESIVE	2633		2741	
403.61	PAVEMENT JOINT ADHESIVE (BRIDGE BASE)	1603		1390	
403.911	HOT BITUMINOUS BRIDGE PAVEMENT, 1" BASE COURSE	68		47	
410.22	ASPHALT EMULSION FOR TACK COAT	122		70	
417.	COLD PLANING BITUMINOUS SURFACES	876		744	
502.101	REMOVAL OF EXISTING BRIDGE STRUCTURE	1		---	
502.102	REMOVAL OF EXISTING BRIDGE STRUCTURE	---		1	
503.201	COFFERDAMS	---		1	
503.301	COFFERDAMS WITH SHEETING LEFT IN PLACE	---		1	
504.1	COMMON BRIDGE EXCAVATION (F)	12		118	
511.0001	CONCRETE BRIDGE DECK PAVEMENT REMOVAL (F)	1242		---	
511.0002	CONCRETE BRIDGE DECK PAVEMENT REMOVAL (F)	---		833	
511.02	PREPARATION FOR PARTIAL DEPTH CONCRETE BRIDGE DECK REPAIRS	68		54	
511.03	PREPARATION FOR FULL DEPTH CONCRETE BRIDGE DECK REPAIRS	13		7	
512.0201	PREPARATION FOR CONCRETE REPAIRS, CLASS II	66		---	
512.0202	PREPARATION FOR CONCRETE REPAIRS, CLASS II	---		9	
520.01	CONCRETE CLASS AA	9		7	
520.0201	CONCRETE CLASS AA, ABOVE FOOTINGS	53		42	
520.0302	CONCRETE CLASS AA, APPROACH SLABS (OC/OA) (F)	---		17	
534.3	WATER REPELLENT (SILANE-SILOXANE)	66		50	
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F)	17		20	
538.6	BARRIER MEMBRANE, HEAT WELDED - MACHINE METHOD (F)	1321		824	
540.512	GALVANIC CORROSION PROTECTION SYSTEM (DISCRETE ANODES)	726		99	
541.1	PVC WATERSTOPS, NH TYPE 1 (F)	---		32	
541.5	PVC WATERSTOPS, NH TYPE 5 (F)	---		45	
544.	REINFORCING STEEL (F)	---		2349	
544.11	REINFORCING STEEL, MECHANICAL CONNECTORS (F)	---		142	
544.2	REINFORCING STEEL, EPOXY COATED (F)	4311		3643	
544.21	REINFORCING STEEL, EPOXY COATED, MECHANICAL CONNECTORS (F)	316		292	
544.7	SYNTHETIC FIBER REINFORCEMENT (F)	---		112	
559.41	ASPHALTIC PLUG FOR CRACK CONTROL (F)	134		---	
560.1001	PREFABRICATED COMPRESSION SEAL EXPANSION JOINT (F)	---		43	
561.1001	PREFABRICATED STRIP SEAL EXPANSION JOINT (F)	78		---	
561.1002	PREFABRICATED STRIP SEAL EXPANSION JOINT (F)	78		---	
561.1003	PREFABRICATED STRIP SEAL EXPANSION JOINT (F)	78		---	
561.1004	PREFABRICATED STRIP SEAL EXPANSION JOINT (F)	---		43	
562.1	SILICONE JOINT SEALANT (F)	---		20????	
563.072	ALUMINUM POST ASSEMBLY FOR RAIL F (2-BAR)	3		---	
563.073	ALUMINUM POST ASSEMBLY FOR RAIL F (3-BAR)	3		4	
563.8	RESETTING BRIDGE RAIL	6		4	
604.0007	POLYETHYLENE LINER	2		1????	
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	2		1????	
604.72	GRATES AND FRAMES, TYPE B	2		1????	
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	480		160	
606.41741	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE)	400		360	
606.9523	TEMP. IMPACT ATTENUATION DEVICE (NON-REDIRECTIVE), TEST LEVEL 3	2		2	
608.12	2" BITUMINOUS SIDEWALK (F)	2		14	
609.5	RESET GRANITE CURB	12		40	
609.55	RESET GRANITE CURB (BRIDGE)	60		32	
616.161	TRAFFIC SIGNALS (TEMPORARY)	---		1	
618.61	UNIFORMED OFFICERS WITH VEHICLE	*		*	
618.7	FLAGGERS	480		480	
619.1	MAINTENANCE OF TRAFFIC	0.5		0.5	
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	2		1	
619.27	TRAILER-MOUNTED SPEED LIMIT SIGN	1		---	
628.2	SAWED BITUMINOUS PAVEMENT	168		159	
628.22	SAWED BITUMINOUS PAVEMENT (BRIDGE)	242		265	
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	3200		3860	
632.1104	PREFORMED RETROREFLECTIVE TAPE, TYPE 1 (REMOVABLE) 4" LINE	16500		4550	
632.1118	PREFORMED RETROREFLECTIVE TAPE, TYPE 1 (REMOVABLE) 18" LINE	---		152	
632.1304	BLACKOUT PAVEMENT MARKING TAPE, TYPE 1 (REMOVABLE), 4" LINE	9100		4440	
670.104	TEMPORARY PORTABLE LIGHTING	2		---	
692.	MOBILIZATION	0.5		0.5	
698.13	FIELD OFFICE TYPE C	20		---	
699.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	*		*	
1002.1	REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES	*		*	
1010.15	FUEL ADJUSTMENT	*		*	

* NOT A BID ITEM

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

SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN					
TOWN	BOSCAWEN	BRIDGE NO.	139/040, 131/035	STATE PROJECT	42440
LOCATION	US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCOOK RIVER				
SUMMARY OF QUANTITIES					BRIDGE SHEET
					1 OF 30
DESIGNED	GMC	2/19	CHECKED	WPS	10/19
DRAWN	SMG	2/19	CHECKED	WPS	10/19
QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19
ISSUE DATE			FEDERAL PROJECT NO.		SHEET NO.
REV. DATE			-----		5
					TOTAL SHEETS
					34

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC\	42440 Notes	AS NOTED

SCOPE OF WORK

- BOSCAWEN BR NO 139/040
US ROUTE 4 over RIVER RD AND NHRR (ABD)
- REMOVE AND REPLACE DECK PAVEMENT AND MEMBRANE
- FULL AND PARTIAL DEPTH DECK REPAIRS
- REPLACE STRIP SEAL EXPANSION JOINTS AT PIERS (3 LOCATIONS)
- INSTALL 6" CRACK SEAL AT ABUTMENT A & ABUTMENT B
- REPAIR SPALLS ON ABUTMENTS, WINGS, & PIERS
- BOSCAWEN BR NO 131/035
TREMONT ST over CONTOOCCOOK RIVER
- REMOVE AND REPLACE DECK PAVEMENT AND MEMBRANE
- FULL AND PARTIAL DEPTH DECK REPAIRS
- INSTALL COMPRESSION SEAL EXPANSION JOINT AT ABUTMENT A
- REPLACE STRIP SEAL EXPANSION JOINT AT ABUTMENT B
- REPAIR SPALLS ON ABUTMENTS, WINGS, & PIERS
- INSTALL APPROACH SLABS WITH CORBEL SUPPORT AT ABUTMENT A & B

MATERIALS AND SPECIFICATIONS

- SPECIFICATIONS: AASHTO 2014, LRFD BRIDGE DESIGN SPECIFICATIONS
WELDING PER AASHTO/AWS D1.5-02 & NHDOT 2016 STANDARD
SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, AS AMENDED
- REINFORCING STEEL: AASHTO M31 (ASTM A615) GRADE 60
AASHTO M31 (ASTM A615) GRADE 60 EPOXY COATED
- CONCRETE: PARTIAL DEPTH DECK REPAIRS = 4000 psi
ITEM 520.01, CONCRETE CLASS AA
FULL DEPTH DECK REPAIRS, CORBELS, BACKWALL AND
END OF DECK RECONSTRUCTION = 4000 psi
ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS
APPROACH SLABS = 4000 psi
ITEM 520.0302, CONCRETE CLASS AA, APPROACH SLABS (OC/OA) (F)

TO THE CONTRACTOR

THE CONTRACTOR SHOULD BE AWARE THAT EXISTING STRUCTURE DIMENSIONS AND ELEVATIONS SHOWN ON THESE PLANS WERE TAKEN FROM ORIGINAL BRIDGE PLANS AND DO NOT NECESSARILY REPRESENT "AS BUILT" DIMENSIONS AND ELEVATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURES AND BE PREPARED TO MAKE ANY ADJUSTMENTS REQUIRED TO PROPERLY REHABILITATE THE BRIDGE. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO ADVANCING THE WORK. THE EXISTING PLANS MAY BE VIEWED AT THE NHDOT, BUREAU OF BRIDGE DESIGN OFFICE DURING THE BIDDING PERIOD. AFTER THE CONTRACT IS AWARDED, A COMPLETE SET OF THE EXISTING PLANS WILL BE FORWARDED TO THE CONTRACTOR UPON REQUEST. THE FILE NUMBERS FOR THESE BRIDGES ARE FOUND IN THE GENERAL CONSTRUCTION NOTES, NOTE 1 THIS SHEET.

BENCHMARK NOTE

ALL EXISTING BRONZE DISCS REPRESENTING STATE BENCHMARKS OR SURVEY TRIANGULATION POINTS MUST NOT BE DISTURBED. WHEN THE WORK CALLED FOR INVOLVES DISTURBING A BRONZE DISC THE CONTRACTOR SHALL NOTIFY THE ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT THE STATE TO TEMPORARILY RELOCATE THE AFFECTED MARKER.

REMOVAL NOTES

- THE CONTRACTOR SHALL SUBMIT, FOR DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02, A DETAILED OUTLINE OR PLAN OF THE PROPOSED METHOD FOR ITEM 502.10X PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK.
- REMOVAL OF EXISTING BRIDGE STRUCTURE, ITEM 502.10X, EXCEPT AS OTHERWISE SHOWN IN THE PLANS, SHALL INCLUDE:
 - REMOVAL OF EXISTING JOINT, TOP OF BACKWALL, AND END OF DECK AS REQUIRED.
 - REMOVAL OF EXISTING GRANITE CURB AS REQUIRED.
 - REMOVAL OF EXISTING EPOXY COATING.
 - ALL REINFORCING THAT IS FULLY ENCASED WITHIN THE LIMITS OF CONCRETE REMOVAL.
 - REMOVAL AND CAREFUL STORAGE OF GUARDRAIL POSTS AS REQUIRED TO REPLACE EXPANSION JOINTS.
 - REMOVAL OF EXISTING MEMBRANE AND FLASHING AT THE DECK OVER BACKWALL JOINT OF THE EAST ABUTMENT OF BRIDGE 139/040 AS DIRECTED BY THE ENGINEER
- EXISTING DECK PAVEMENT AND MEMBRANE SHALL BE REMOVED UNDER ITEM 511.00XX. CONCRETE BRIDGE DECK PAVEMENT REMOVAL (F).

GENERAL CONSTRUCTION NOTES

- EXISTING PLANS (BR NO 139/040 FILE NOS 7-2-2 & 5-13-3-5, BR NO 131/035 FILE NOS 3-3-3-13 & 5-13-3-4) ARE AVAILABLE, ON-LINE IN THE BID PACKAGE ON THE INVITATION TO BID WEBSITE DURING THE BIDDING PERIOD. AFTER THE CONTRACT HAS BEEN AWARDED, A COMPLETE SET OF EXISTING PLANS WILL BE FORWARDED TO THE CONTRACTOR UPON REQUEST.
- PORTABLE CONCRETE BARRIER OR CHANNELIZING DEVICES SHALL BE IN PLACE BEFORE REMOVAL OPERATIONS BEGIN FOR EACH CONSTRUCTION PHASE. SEE BARRIER LAYOUT PLANS FOR LAYOUT OF PROPOSED PHASED CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO INSURE THAT DEBRIS DOES NOT FALL INTO THE ROADWAY, RAILWAY, OR WATERWAY BELOW EXISTING STRUCTURES. ALL COST TO BE PAID UNDER ITEM 502.10X AND SHALL INCLUDE THE ERECTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH METHODS AS APPROVED.
- NO SCAFFOLDS SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE ROADWAY RIGHT OF WAY, UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR.
- DURING ALL REMOVAL AND REPAIR OPERATIONS EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING DECK REINFORCEMENT. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE BUREAU OF BRIDGE DESIGN AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
- DURING END OF DECK CONCRETE REMOVAL OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE TOP FLANGES OF EXISTING GIRDERS. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE BUREAU OF BRIDGE DESIGN AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
- TO ACCOMPLISH THE PROPOSED EXPANSION JOINT REPAIRS, THE EXISTING DECK AND BACKWALL SHALL BE REMOVED TO LIMITS SHOWN IN THE PLANS UNDER ITEM 502.10X, REMOVAL OF EXISTING BRIDGE STRUCTURE. ALL EXPOSED CONCRETE SURFACES OF THE DECK AND BACKWALL SHALL BE SAWCUT 1" DEEP TO PROVIDE CLEAN REMOVAL LINES (ALL COSTS INCLUDED IN ITEM 502.10X, REMOVAL OF EXISTING BRIDGE STRUCTURE. PRIOR TO PLACING NEW CONCRETE, THE REMOVAL SURFACES SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS INCLUDED IN ITEM 520.0201).
- AFTER REMOVAL OF EXISTING PAVEMENT AND MEMBRANE, AS REQUIRED IN THE SCOPE OF WORK, THE EXISTING CONCRETE BRIDGE DECKS SHALL BE "SOUNDED" TO DETERMINE AREAS REQUIRING PARTIAL AND FULL DEPTH DECK REPAIRS. ALL COSTS TO BE INCLUDED IN ITEM 511.02 OR ITEM 511.03.
- DETERIORATED AREAS OF DECK SHALL BE PATCHED WITH CONCRETE CLASS AA. PRIOR TO PLACING NEW CONCRETE, THE PREPARED AREAS SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS SUBSIDIARY TO ITEM 520.01 OR 520.0201).
- ALL ABUTMENT, WINGWALL, AND PIER CONCRETE REPAIRS SHALL HAVE DETERIORATED CONCRETE REMOVED TO A DEPTH OF 1 1/2" BEHIND THE MAIN REINFORCING AND SHALL BE PAID AS ITEM 512.020X, PREPARATION FOR CONCRETE REPAIRS, CLASS II.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
- ITEM 538.6, BARRIER MEMBRANE, HEAT WELDED - MACHINE METHOD (F) SHALL BE OVERLAPPED PER MANUFACTURER'S REQUIREMENTS AT PHASED CONSTRUCTION JOINTS. AT DECK ENDS, WHERE THE MEMBRANE WILL NOT OVERLAP NEW OR EXISTING MEMBRANE, A SEALANT/REPAIR MASTIC COMPATIBLE WITH ITEM 538.6 SHALL BRIDGE ANY GAP BETWEEN THE EXISTING MEMBRANE AND NEW MEMBRANE OR BETWEEN THE NEW MEMBRANE AND THE END DECK WHEN THERE IS NO EXISTING MEMBRANE. ALL COSTS SHALL BE SUBSIDIARY TO ITEM 538.6.
- PROFILE ADJUSTMENTS IN THE VICINITY OF THE REHABILITATED BRIDGES SHALL BE MADE AS REQUIRED OR AS DIRECTED TO ACCOUNT FOR VARIATIONS IN THE BRIDGE DECK CROSS SLOPES. ALL COSTS SHALL BE SUBSIDIARY TO THE APPROPRIATE ITEMS.
- REMOVE ANY EXISTING LOOSE OR FLAKING EPOXY COATING FROM THE BACKWALL AND SEATS AS DIRECTED. COSTS PAID UNDER ITEM 502.10X.
- EXISTING BRIDGE DECK COPINGS, WINGS, BACKWALLS, BRIDGE SEATS, ABUTMENT FACES (BOTH BRIDGES), AND PIER CAPS AND COLUMNS, (139/040 ONLY), SHALL BE WASHED, SUBSIDIARY TO ITEM 534.3, IN SUCH A MANNER THAT OVERSPRAY INTO SURFACE WATERS IS KEPT TO A MINIMUM. IF THE WATER BEADS, NO COATING NEEDS TO BE APPLIED. IF THE WATER DOES NOT BEAD, COAT THE SURFACE WITH ITEM 534.3, WATER REPELLENT (SILANE-SILOXANE). APPLICATION RATE = 150 SF/GAL.
- EXCEPT AS SHOWN IN PLANS, WHERE THE EXISTING GRANITE CURB HAS SEPARATED OR BEEN DISPLACED FROM THE CONCRETE BRUSH CURB, THE GRANITE CURB SHALL BE REMOVED AND RESET AS DIRECTED BY THE ENGINEER. ALL COSTS INCLUDED IN ITEM 609.55, RESET GRANITE CURB (BRIDGE).
- PROVIDE ITEMS 403.6 AND 403.61, AS REQUIRED, ALONG LONGITUDINAL JOINTS BETWEEN PAVEMENT PASSES FOR EACH PAVEMENT COURSE, ALONG EDGES OF HAND METHOD, ALONG BRIDGE CURBS, AND ALONG EXPANSION JOINT ARMORING.
- APPLY ITEM 410.22, ASPHALT EMULSION FOR TACK COAT, TO BOTH EXISTING AND PROPOSED BRIDGE AND ROADWAY PAVEMENT COURSES PRIOR TO PLACING THE NEXT COURSE.
- ITEM 403.12, HOT BITUMINOUS PAVEMENT, HAND METHOD, SHALL BE PLACED TO FINISHED GRADE AS REQUIRED FOR PHASING IN PLACE OF TEMPORARY PAVEMENT ON BRIDGES WHERE HAND METHOD IS REQUIRED.
- RESETTING EACH BRIDGE RAIL POST AS SHOWN ON PLANS SHALL BE PAID AS 1 LF/POST OF ITEM 563.8, RESETTING BRIDGE RAIL.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL MAKE A RECORD OF THE EXISTING PAVEMENT MARKINGS. UPON COMPLETION OF THE BRIDGE WORK, THE PAVEMENT MARKINGS SHALL BE REPLACED IN KIND WITH ITEM 632.0104, RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE.

APPROACH SLAB NOTES

- FILL SPACE BETWEEN TIPPED DOWN APPROACH SLAB AND ROADWAY CURB WITH ITEM 520.0302. CONCRETE CLASS AA, APPROACH SLABS (OC/OA) (F) (6" MIN DEPTH). EXTEND CONCRETE FROM ABUTMENT END OF APPROACH SLAB 6' ALONG SLAB, OR AS DIRECTED BY THE ENGINEER. (OC/OA TESTING REQUIREMENTS WAIVED).
- APPROACH SLABS SHALL BE POURED AFTER THE CONCRETE DECK HAS BEEN CONSTRUCTED.
- APPROACH SLABS FOR BOTH ABUTMENTS SHALL BE CAST 2 3/8" BELOW FINISHED GRADE AT THE APPROACH SLAB SEATS AND SLOPE DOWN AS DETAILED ON THE PLANS.
- APPROACH CURBS SHALL BE SUPPORTED ON CONCRETE FORMED INTO BLOCKS AND PLACED ON CORBEL AS SHOWN ON THE ABUTMENT MASONRY SHEETS AS REQUIRED. COST TO BE INCLUDED IN ITEM 520.0302, WITH ALL OC/OA TESTING REQUIREMENTS WAIVED.
- ITEM 544.7, SYNTHETIC FIBER REINFORCEMENT (F), SHALL BE ADDED TO THE CONCRETE USED FOR THE APPROACH SLABS.

REINFORCING NOTES

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A615), GRADE 60.
- 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".
- EXISTING REINFORCING STEEL THAT IS TO REMAIN IN PLACE WITHIN THE RECONSTRUCTED AREAS SHALL BE CUT AS REQUIRED TO PROVIDE 2 1/2" MINIMUM CLEAR COVER FROM THE PROPOSED CONCRETE SURFACES, EXCEPT AS OTHERWISE NOTED. ALL COSTS INCLUDED IN ITEM 502.10X. ALL NEW REINFORCING BARS SHALL HAVE A MINIMUM CLEAR COVER OF 2 1/2" FROM PROPOSED CONCRETE SURFACES UNLESS OTHERWISE NOTED.
- ANY EPOXY COATED REINFORCING BARS CUT TO FIT SHALL BE TOUCHED UP WITH AN APPROVED EPOXY COATING MATERIAL. ALL COSTS SHALL BE INCLUDED IN ITEM 544.2 OR 544.21.
- ANY EXISTING REBAR THAT IS EXPOSED SHALL BE CLEANED OF ALL FOREIGN MATERIAL, SUBSIDIARY TO ITEM 511.
- REINFORCING LEGEND: SP = SPACE, SPL = SPLICE, FS = FAR SIDE, NS = NEAR SIDE, BOT = BOTTOM, ALT = ALTERNATING.
- PLACE REINFORCING STEEL TO AVOID RAIL POST ANCHOR ASSEMBLIES, ANCHOR BOLTS, AND EXPANSION JOINT ASSEMBLIES.
- REINFORCING BAR MARKS APPENDED WITH AN (E), INDICATE EPOXY COATED BARS.
- GALVANIC CORROSION PROTECTION SYSTEMS, ITEMS 540.512, SHALL BE PLACED IN THE CONCRETE REPAIRS FOR ABUTMENTS, PIERS, AND WINGWALLS AS REQUIRED. SEE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

DRAINAGE NOTES

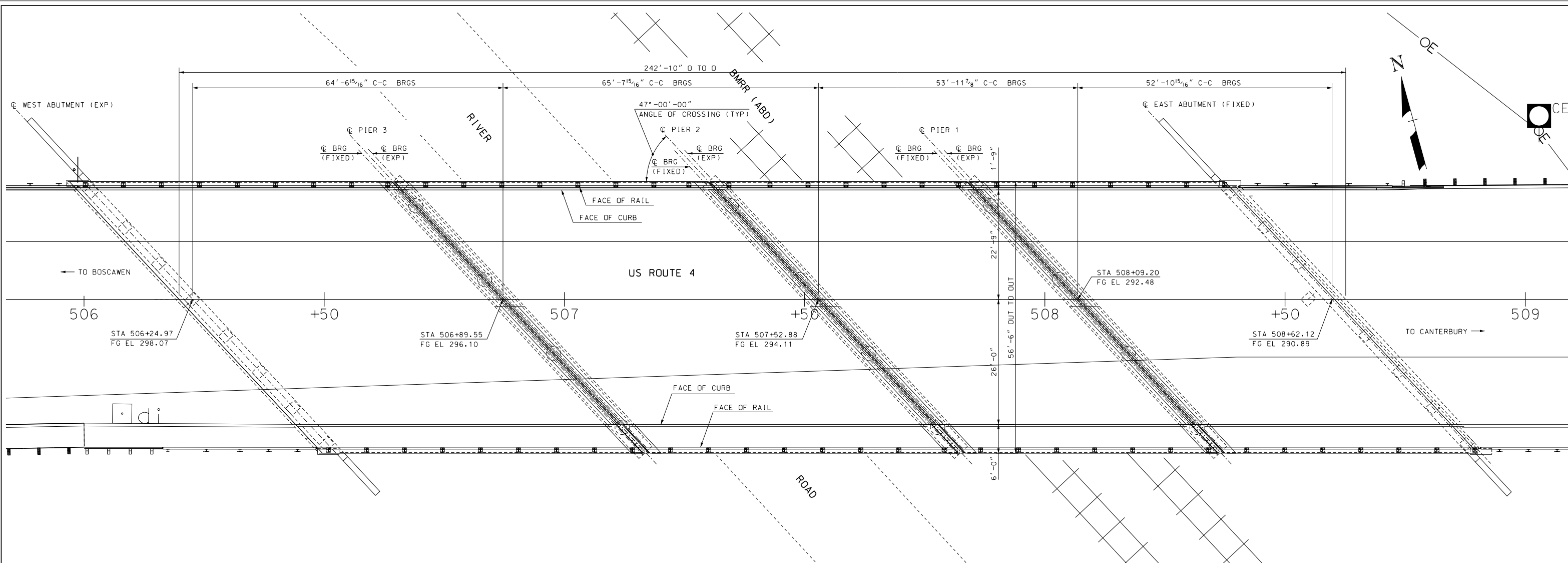
- BRIDGE NO 139/040:
STA 505+71±, LT 22'±
ADJUST FRAME AND GRATE WITH:
ITEM 604.0007, POLYETHYLENE LINER
ITEM 604.4, RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET
ITEM 604.72, GRATES AND FRAMES, TYPE B
- BRIDGE NO 139/040:
STA 506+08±, RT 25'±
ADJUST FRAME AND GRATE WITH:
ITEM 604.0007, POLYETHYLENE LINER
ITEM 604.4, RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET
ITEM 604.72, GRATES AND FRAMES, TYPE B
- BRIDGE NO 131/035:
STA 16+36±, RT 14'±
ADJUST FRAME AND GRATE WITH:
ITEM 604.0007, POLYETHYLENE LINER
ITEM 604.4, RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET
ITEM 604.72, GRATES AND FRAMES, TYPE B

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

SAMPLE PLAN
DATE: 11-2019

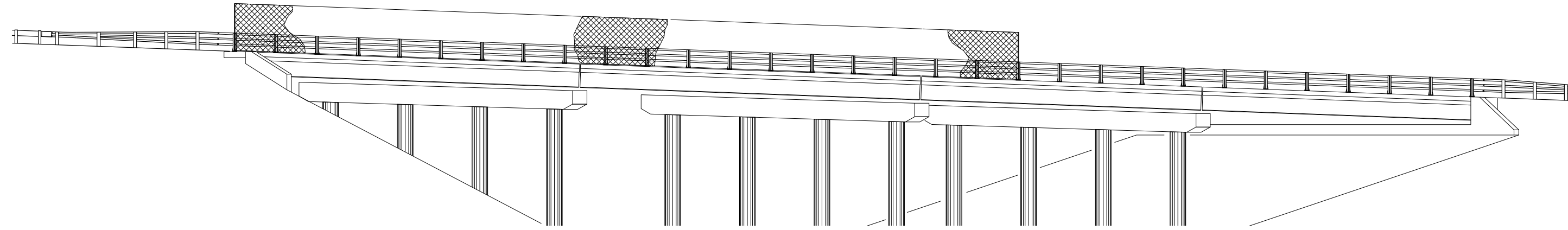
SUBDIRECTORY	DGN LOCATOR	SHEET SCALE							
BRC\	42440 Notes	AS NOTED							

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN										
TOWN	BOSCAWEN	BRIDGE NO.	139/040, 131/035	STATE PROJECT	42440					BRIDGE SHEET
LOCATION	US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCCOOK RIVER									2 OF 30
NOTES										
	REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE	FILE NUMBER		
		DESIGNED	GMC	2/19	CHECKED	WPS	10/19	136-2-1		
		DRAWN	SMG	2/19	CHECKED	WPS	10/19			
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19			
		ISSUE DATE			FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS		
		REV. DATE			-----		6	34		



PLAN

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

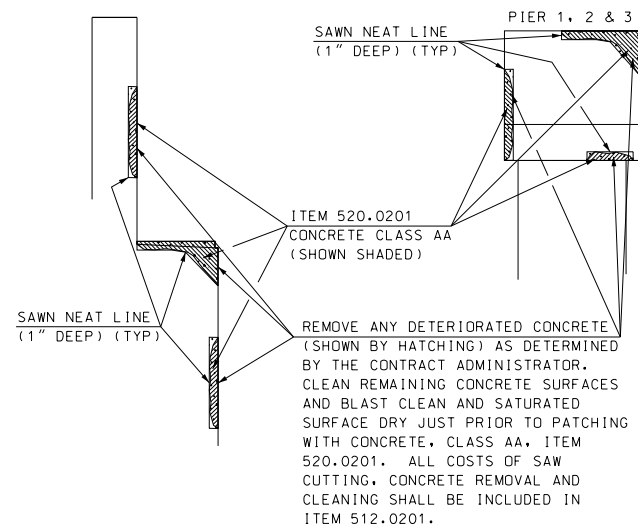


ELEVATION

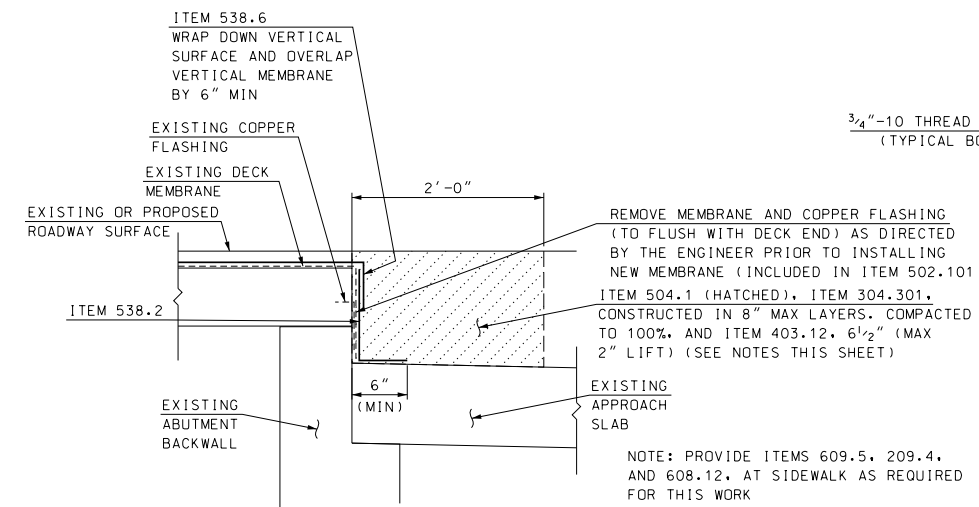
SAMPLE PLAN
DATE: 11-2019

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/139-040 US ROUTE 4	Genplan139040	1" = 10'-0"

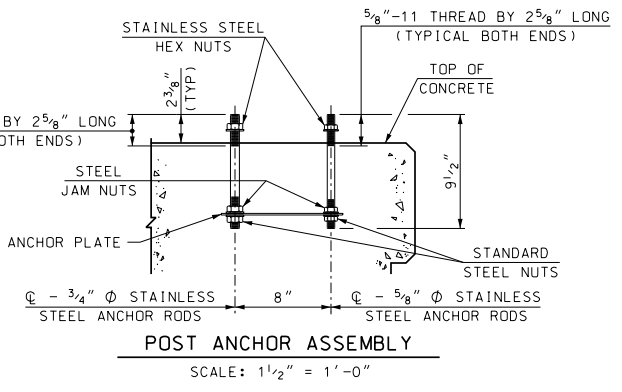
STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440						
LOCATION U.S. ROUTE 4 OVER RIVER ROAD AND N.H.R.R. (ABD)											
GENERAL PLAN AND ELEVATION BR NO 139/040										BRIDGE SHEET	3 OF 30
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	BY	DATE					
		DESIGNED	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER			
		DRAWN	GMC	2/19	CHECKED	WPS	10/19	136-2-1			
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19	TOTAL SHEETS			
		ISSUE DATE	FEDERAL PROJECT NO.			SHEET NO.					
		REV. DATE	-----			7	34				



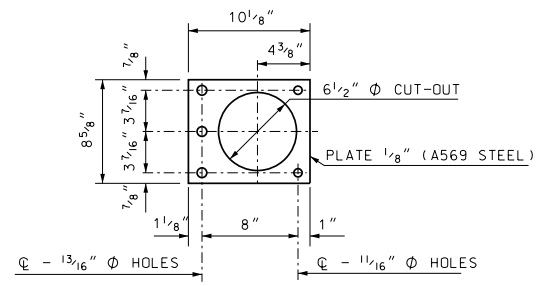
TYPICAL CONCRETE REPAIR DETAIL
GENERIC DETAIL NOT TO SCALE



ABUTMENT B: DECK OVER BACKWALL REPAIR DETAIL
GENERIC DETAIL NOT TO SCALE



POST ANCHOR ASSEMBLY
SCALE: 1 1/2" = 1'-0"



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

RAIL NOTES:

- (1) ITEM 563.072, ALUMINUM POST ASSEMBLY FOR RAIL F (2-BAR), SHALL INCLUDE POSTS, BASE PLATES, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, ALL APPURTENANCES.
- (2) ITEM 563.073, ALUMINUM POST ASSEMBLY FOR RAIL F (3-BAR), SHALL INCLUDE POSTS, BASE PLATES, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, ALL APPURTENANCES.
- (3) ALUMINUM BRIDGE RAIL SHALL NOT BE USED ON NATIONAL HIGHWAY SYSTEMS.
- (4) THE ALUMINUM BRIDGE RAIL SYSTEM IS NOT CRASH TESTED TO CURRENT STANDARDS AND SHALL NOT BE USED EXCEPT FOR REHABILITATION OF EXISTING ALUMINUM RAIL.
- (5) RAIL POSTS SHALL BE NORMAL TO FINISHED GRADE.
- (6) THREADS FOR ANCHOR BOLTS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN ROOT DIAMETER OF THREADS.
- (7) JOINTS IN RAIL LENGTH SHALL BE SPLICED AS DETAILED.
- (8) ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED.
- (9) CUT ENDS SHALL BE TRUE AND SMOOTH.
- (10) EACH RAIL SECTION SHALL BE ATTACHED TO A MINIMUM OF THREE (3) POSTS.
- (11) GRIND ALL EDGES SMOOTH.

MATERIAL NOTES:

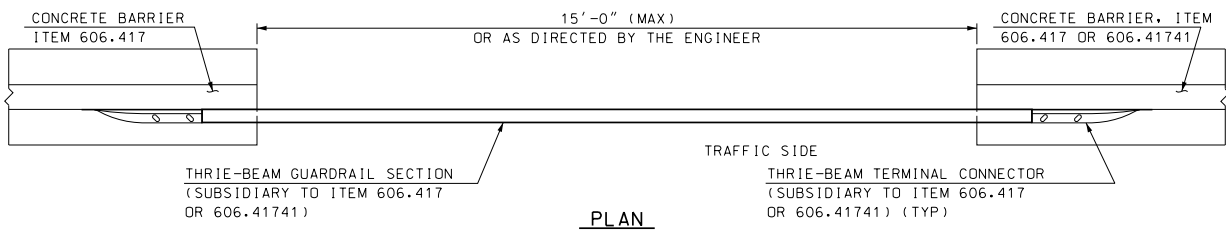
- (1) ALUMINUM EXTRUSIONS (POSTS, BASE PLATES, RAILS, SPLICE BARS, PINS AND CLAMP BARS) SHALL BE ASTM B221, ALLOY 6061-T6 OR ALLOY 6351-T5 (MINIMUM 10% ELONGATION).
- (2) STAINLESS STEEL ANCHOR RODS, HEX HEAD BOLTS AND HEX NUTS (TYPE 302) SHALL BE ASTM A276, TYPE 430 MOD OR TYPE 304 MOD, (100,000 PSI AND 15% ELONGATION).
- (3) STEEL EMBEDDED JAM AND HEX NUTS SHALL BE ASTM A563 GRADE A OR BETTER.
- (4) ALUMINUM WASHERS SHALL BE ASTM B209, ALLOY 2024-T3 ALCLAD.
- (5) PREFORMED ELASTOMERIC BEARING PAD SHALL MEET REQUIREMENTS OF AASHTO M251.
- (6) RETROREFLECTIVE DELINEATORS, FIELD DRILLING OF POSTS, STAINLESS STEEL (TYPE 304) BOLTS, NUTS & WASHERS SHALL BE SUBSIDIARY TO ITEM 563.072 AND 563.073. SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (DL-1) FOR ADDITIONAL DETAILS AND SPACING.

ANCHOR ASSEMBLY NOTES:

- (1) 3/4" AND 5/8" AMERICAN STANDARD FINISHED HEXAGON STEEL NUTS ON BOTTOM OF ANCHOR ASSEMBLY. 3/4" AND 5/8" AMERICAN STANDARD FINISHED HEXAGON STEEL JAM NUTS ON TOP OF ANCHOR PLATE.
- (2) 3/4" AND 5/8" STAINLESS STEEL HEXAGON NUTS ON THE TOP ENDS OF BOLTS WITH CLASS 2B THREADS. 13/16" I.D., 2" O.D., 1/8" THICK ALUMINUM WASHERS UNDER NUTS ON TOP. ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPEC. B18.2. STAINLESS STEEL HEXAGON NUTS SHALL HAVE FULL THREADS.

HAND PAVEMENT NOTE:

- (1) HOT BITUMINOUS PAVEMENT, HAND METHOD, ITEM 403.12, REQUIRED AT THE ABUTMENT B DECK OVER BACKWALL REPAIR, SHALL BE PLACED TO EXISTING PAVEMENT SURFACE PRIOR TO COLD PLANNING OPERATIONS.

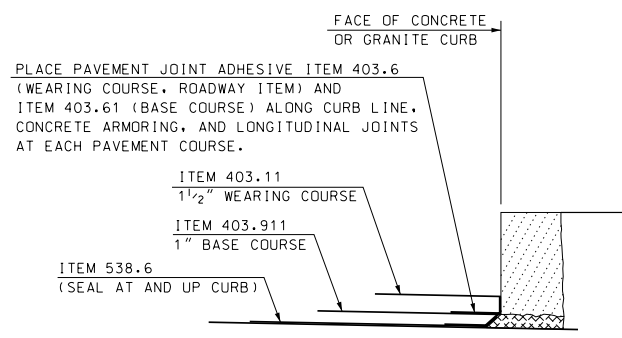


PLAN

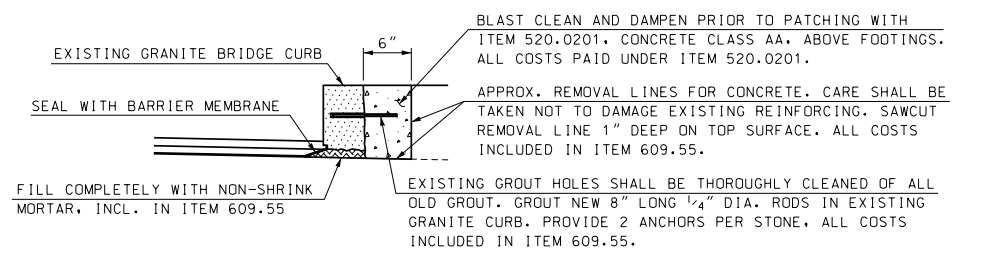


ELEVATION

WORK ZONE BARRIER LAYOUT AT EXPANSION JOINT (PHASE 1 ONLY)
N.T.S.

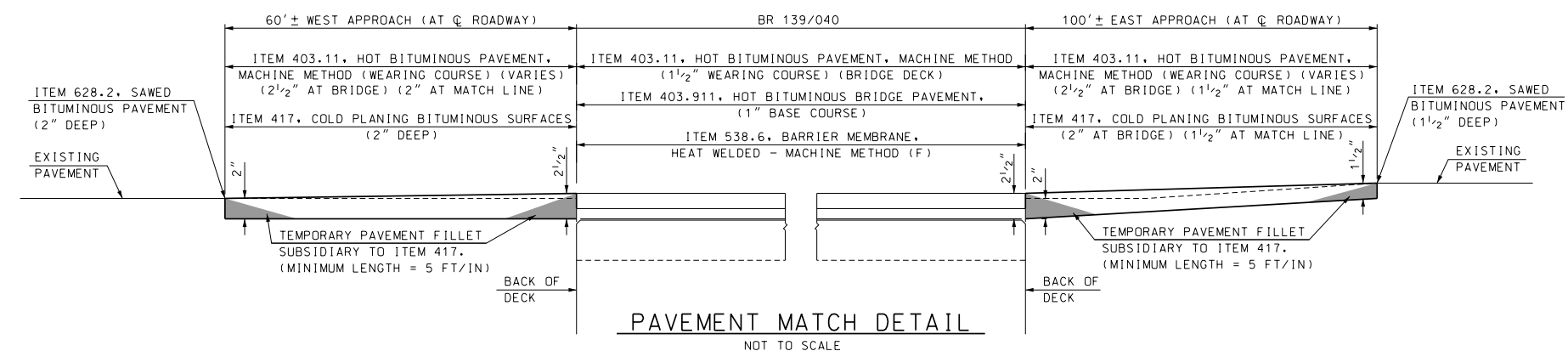


CURB DETAIL
SCALE: 1 1/2" = 1'-0"



**** RESETTING GRANITE BRIDGE CURB DETAIL**
SCALE: 1" = 1'-0"

** WHERE EXISTING GRANITE BRIDGE CURB HAS PULLED AWAY FROM THE CONCRETE BRUSH CURB, THE GRANITE CURB SHALL BE REMOVED AND RESET AS DIRECTED BY THE ENGINEER. ALL COSTS INCLUDED IN ITEM 609.55, RESET GRANITE CURB (BRIDGE).

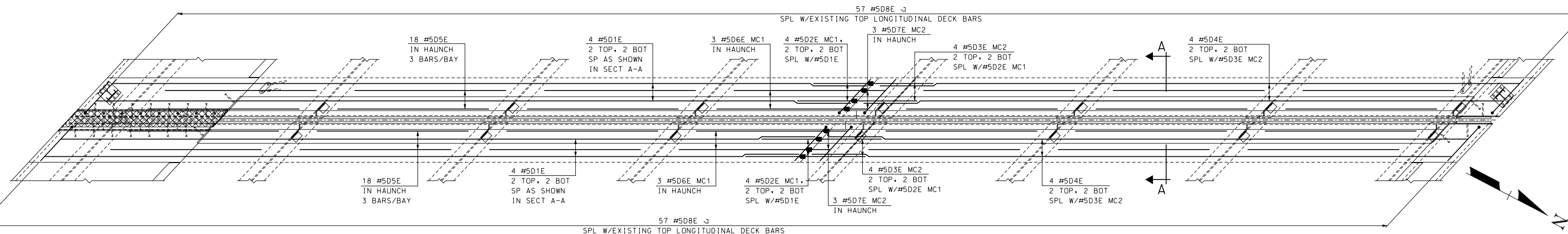


PAVEMENT MATCH DETAIL
NOT TO SCALE

SAMPLE PLAN
DATE: 11-2019

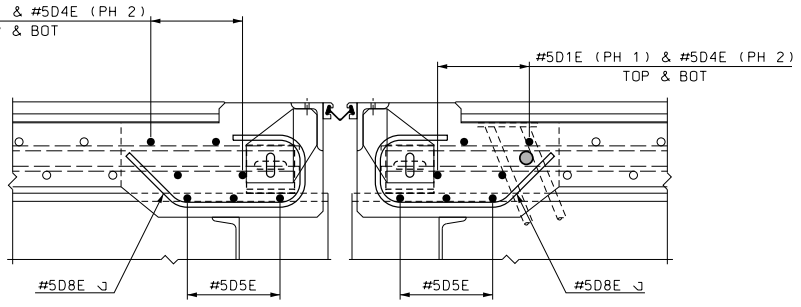
STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440				
LOCATION	U.S. ROUTE 4 OVER RIVER ROAD AND N.H.R.R. (ABD)								
MISCELLANEOUS DETAILS BR NO 139/040									BRIDGE SHEET
									4 OF 30
									FILE NUMBER
									136-2-1
									TOTAL SHEETS
									34

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/139-040 US ROUTE 4	Misc139040	1/4" = 1'-0"



DECK END REINFORCEMENT

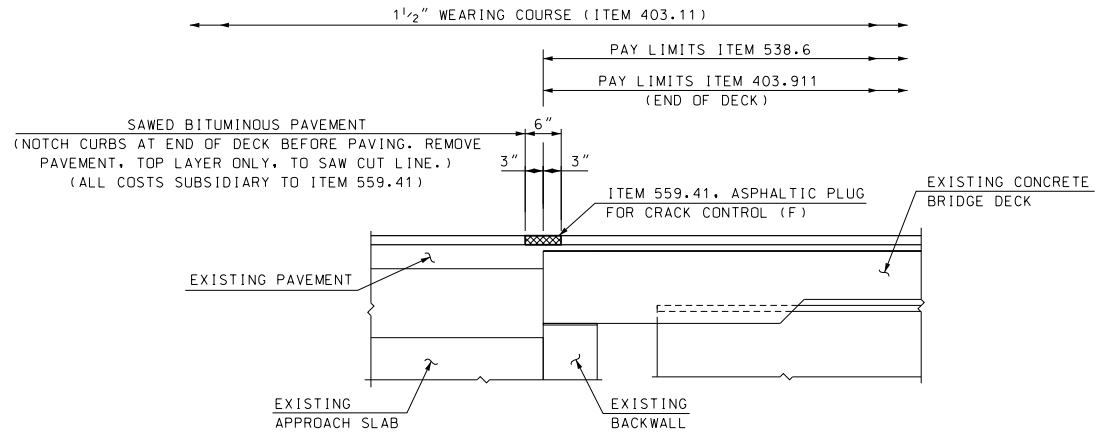
SCALE: 3/8" = 1'-0"



SECTION A-A

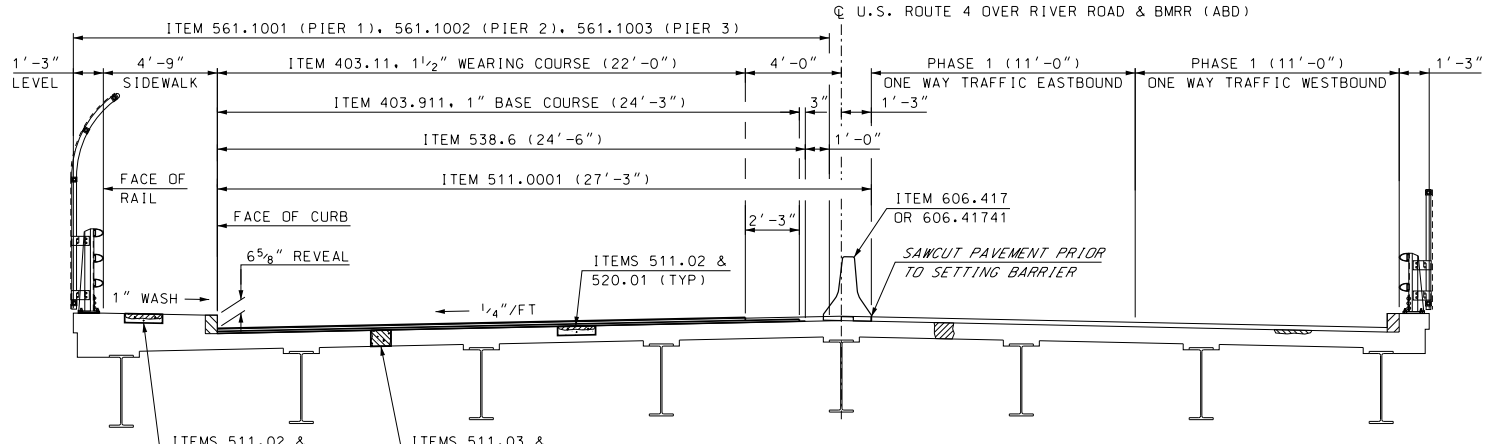
SCALE: 1" = 1'-0"

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



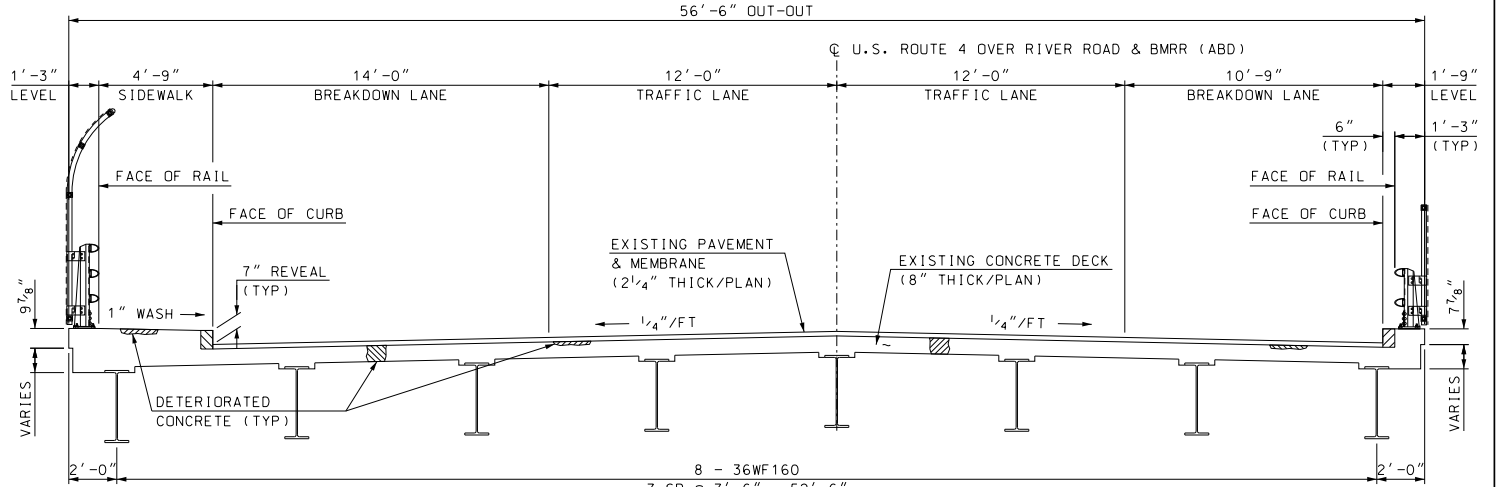
ASPHALTIC PLUG FOR CRACK CONTROL (ABUTMENTS A & B)

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



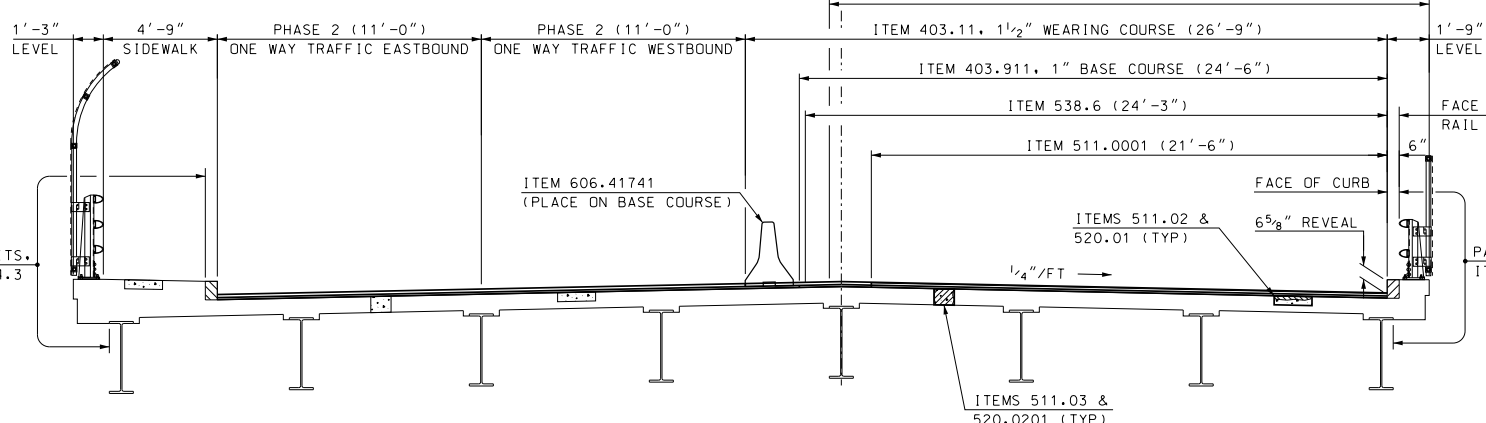
PHASE 1

(LOOKING WEST)
SCALE: 1/4" = 1'-0"



EXISTING DECK SECTION

(LOOKING WEST)
SCALE: 1/4" = 1'-0"



PHASE 2

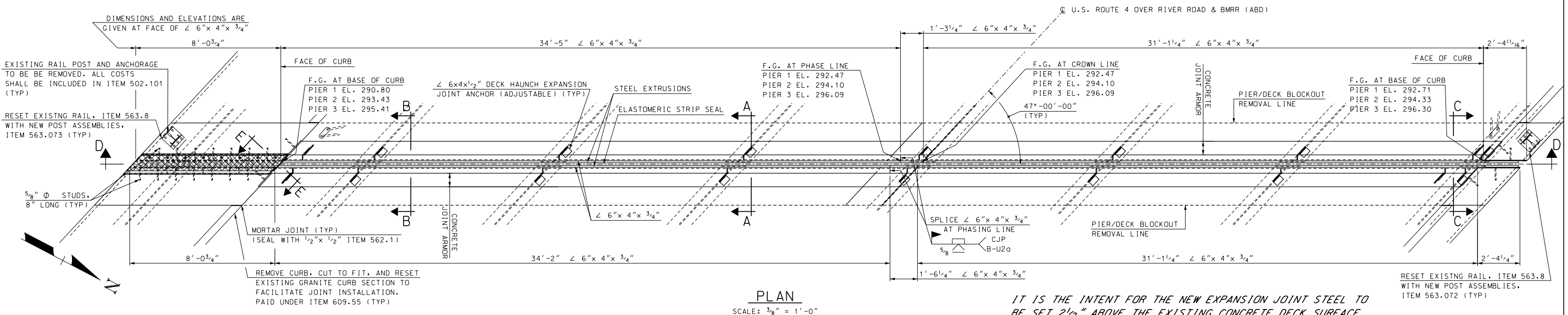
(LOOKING WEST)
SCALE: 1/4" = 1'-0"

SAMPLE PLAN

DATE: 11-2019

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440				
LOCATION U.S. ROUTE 4 OVER RIVER ROAD AND N.H.R.R. (ABD)									
DECK BR NO 139/040									
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	WPS	DATE	BY	DATE	BRIDGE SHEET
		DESIGNED	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER	5 OF 30
		DRAWN	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER	136-2-1
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19	TOTAL SHEETS	34
ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.				
REV. DATE		-----			9				

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/139-040 US ROUTE 4	decksect139040	1/4" = 1'-0"



NOTE THAT THE ELEVATIONS AND DIMENSIONS SHOWN ARE TAKEN FROM THE ORIGINAL PLANS AND/OR BRIDGE MAINTENANCE RECORDS. DAMAGE AND/OR FIELD MAINTENANCE MAY HAVE OCCURRED THAT MAY NOT HAVE BEEN RECORDED SO FIELD VERIFICATION OF DIMENSIONS AND ELEVATIONS IS REQUIRED TO ENSURE PROPER FITTING OF EXPANSION JOINT. ANY DIFFERENCES BETWEEN FIELD MEASUREMENTS AND DESIGN PLANS SHALL BE NOTED ON THE SHOP DRAWINGS.

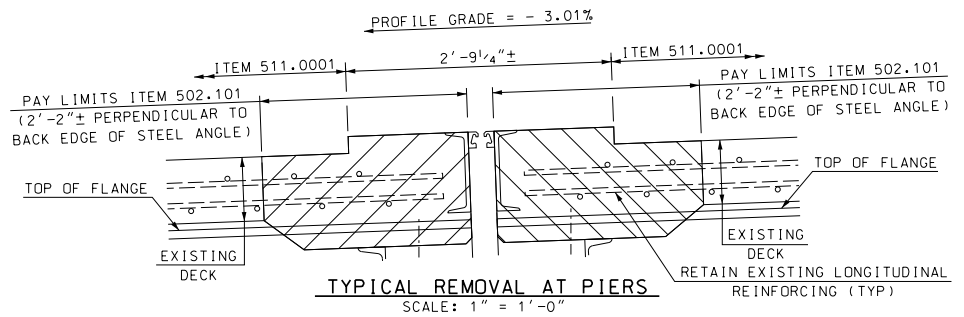
TEMPERATURE ADJUSTMENT NOTES

- "T" DIMENSIONS ARE PERPENDICULAR TO FACE OF BACKWALL.
- MINIMUM "T" WIDTH FOR SEAL INSTALLATION = 1 3/4" (APPROXIMATELY 65°F OR LESS).
- VALUES IN THE TEMPERATURE ADJUSTMENT TABLE ARE FOR SETTING THE EXPANSION JOINT ASSEMBLY IMMEDIATELY PRIOR TO POURING CONCRETE BLOCKOUTS.

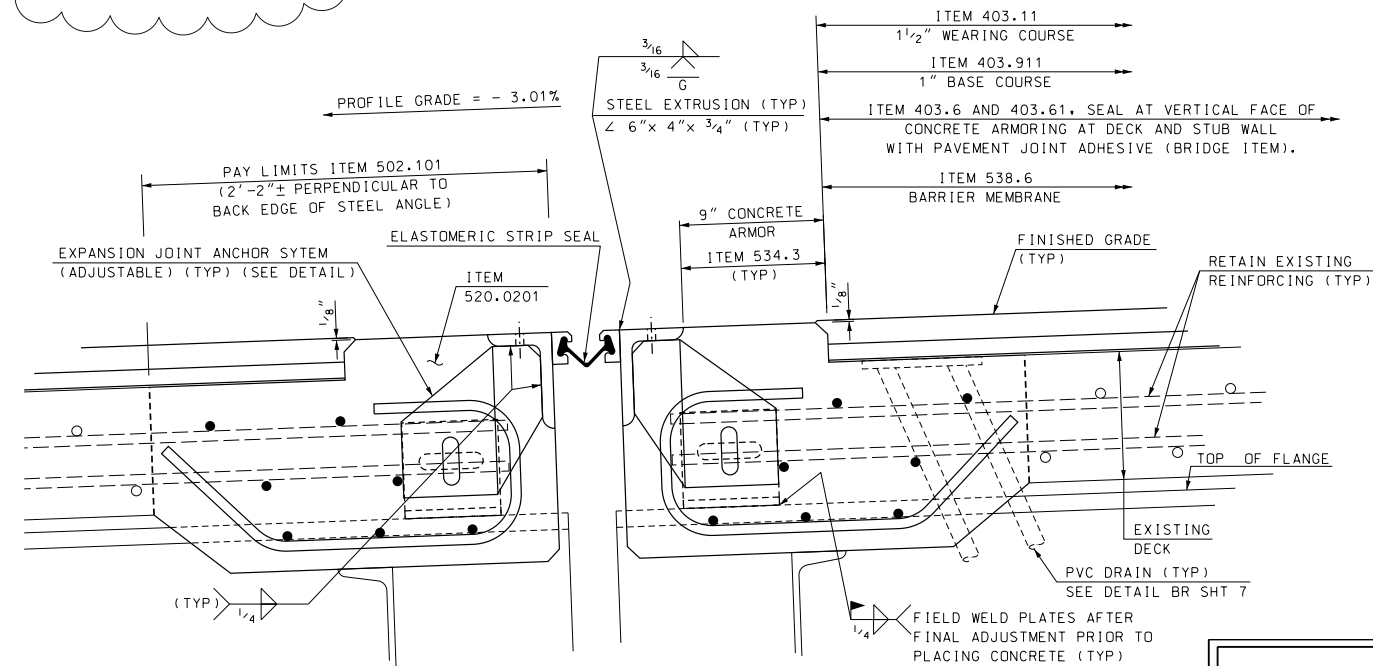
TEMPERATURE ADJUSTMENT TABLE			
TEMPERATURE	"T" PIER 1	"T" PIER 2	"T" PIER 3
20°F	1 7/8"	1 15/16"	1 7/8"
35°F	1 7/8"	1 7/8"	1 13/16"
50°F	1 13/16"	1 13/16"	1 13/16"
65°F	1 3/4"	1 3/4"	1 3/4"
80°F	1 11/16"	1 11/16"	1 11/16"
95°F	1 5/8"	1 5/8"	1 11/16"

EXPANSION JOINT NOTES

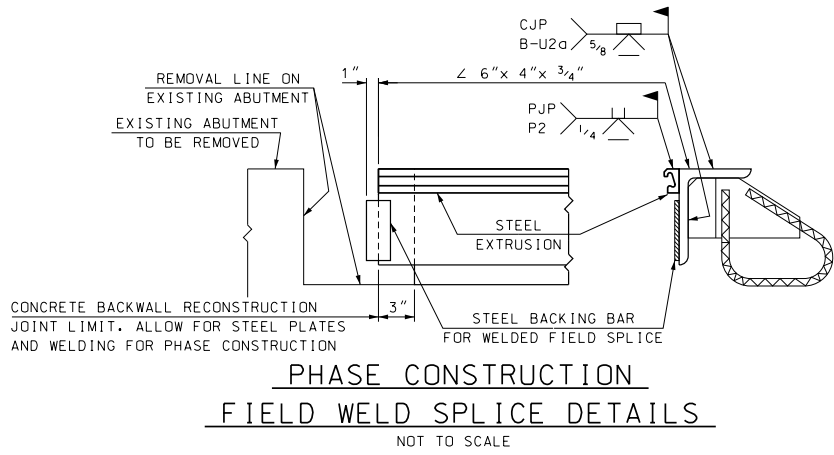
- ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING STRIP SEAL, SHALL BE PAID FOR AS ITEM 561.1001, 561.1002 AND 561.1003 PREFABRICATED STRIP SEAL EXPANSION JOINT (F).
- SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.
- EXPANSION JOINT OPENING SHALL BE ADJUSTED TO TEMPERATURE ANTICIPATED JUST PRIOR TO POURING DECK BLOCKOUT. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR. SEE TEMPERATURE ADJUSTMENT TABLE & NOTES.
- STRIP SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL.
- JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES AND EXTRUSIONS SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.
- THE EXPANSION JOINT ASSEMBLY SHALL BE INSTALLED ONLY AFTER BOTH ABUTMENTS HAVE BEEN BACKFILLED TO WITHIN 3'-0" OF FINISHED GRADE.
- IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.
- PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
- THE STRIP SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF 2.1" INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE AN SE-400 SEAL BY WATSON BOWMAN OR A2R-400 BY D.S. BROWN, AS NOTED IN THE OPL.
- ELEVATIONS SHOWN AT TOP OF ANGLES ARE 1/8" LOWER THAN PROPOSED FINISHED ROADWAY GRADE.
- NO "LOW PROFILE" STEEL EXTRUSIONS SHALL BE ALLOWED. SEE OPL FOR APPROVED PRODUCTS.
- PRIOR TO INSTALLING THE SEAL, ALL TEMPORARY FORM WORK SHALL BE REMOVED. STEEL ANGLES AND EXTRUSIONS SHALL BE MAINTAINED FREE FROM DIRT, WATER AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.



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



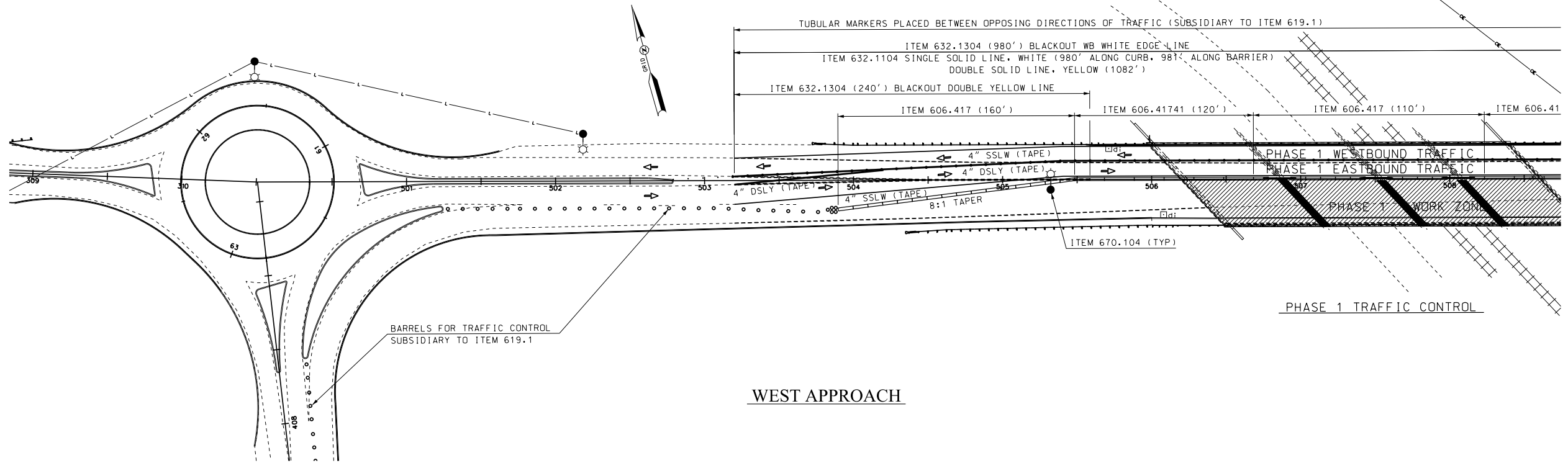
SAMPLE PLAN
DATE: 11-2019



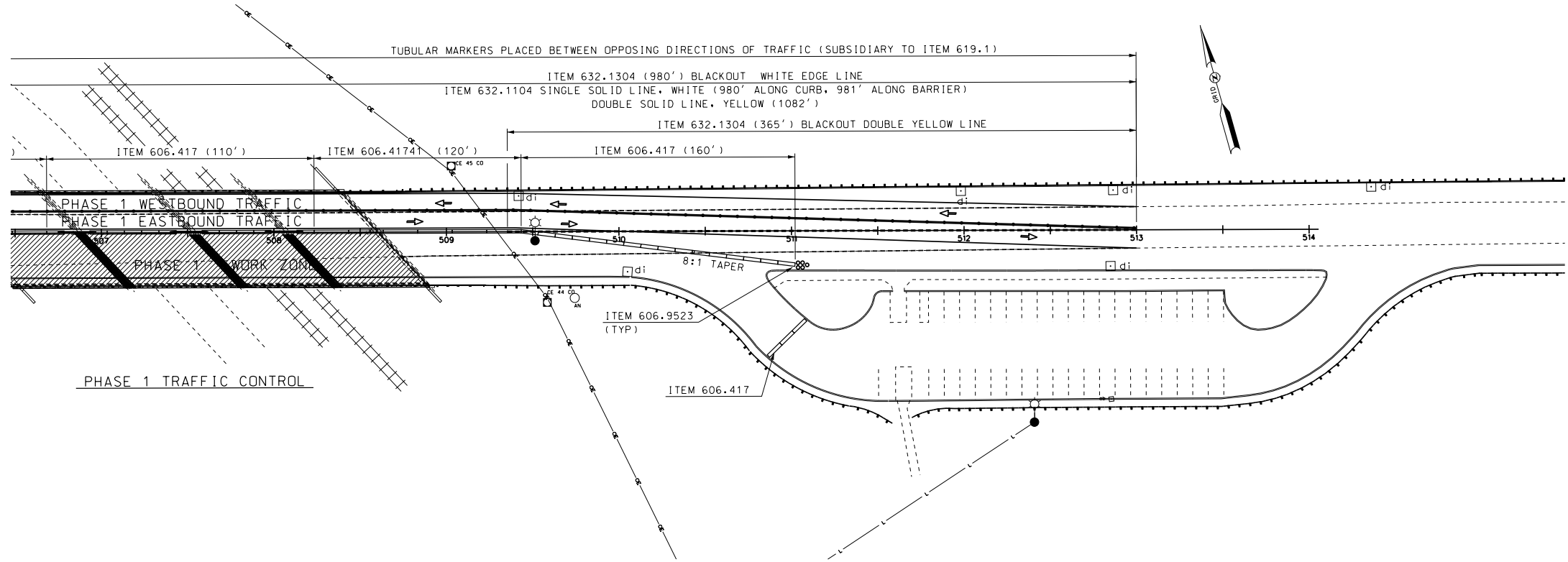
NOTE: FOR SECTIONS B-B, C-C, D-D, E-E, AND EXPANSION JOINT SUPPORT SYSTEM, SEE BRIDGE SHEET 7.

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/049-096	ExpJoint139040	AS NOTED

STATE OF NEW HAMPSHIRE												
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN												
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440							
LOCATION U.S. ROUTE 4 OVER RIVER ROAD AND NHRR (ABD)												
STRIP SEAL EXP JOINT BR NO 139/040 (SHT 1 OF 2)				BRIDGE SHEET								
REVISIONS AFTER PROPOSAL				DESIGNED	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER	136-2-1	
				DRAWN	GMC	2/19	CHECKED	WPS	10/19			
				QUANTITIES	GMC	2/19	CHECKED	WPS	10/19			
				ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.	10	TOTAL SHEETS	34
				REV. DATE								



WEST APPROACH



EAST APPROACH

NOTES

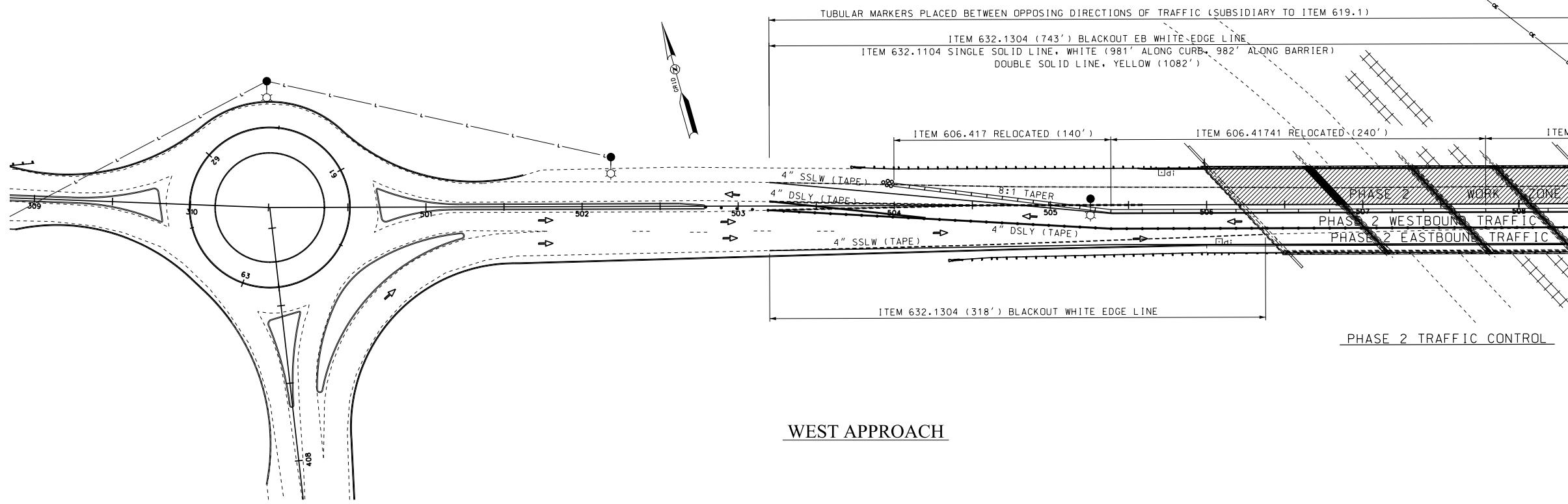
1. NHDOT STANDARD SHEETS TC-1 AND TC-2 SHALL BE INCORPORATED INTO THE WORK AS DETAILED.
2. SIGNAGE AND SIGNAGE SPACING PER MUTCD AND NHDOT STANDARD SHEETS TC-3 AND TC-4 WITH RURAL ROAD TYPE.
3. TUBULAR MARKERS MEETING MUTCD REQUIREMENTS SHALL BE PLACED BETWEEN OPPOSING DIRECTIONS OF TRAFFIC FROM STATION 302+75± TO STATION 313+00± (SUBSIDIARY TO ITEM 619.1).
4. CONTRACTOR SHALL BE PREPARED TO CLOSE THE ROUNDABOUT SLIP LANE DURING PHASE 2 IN A SIMILAR MANNER AS SHOWN FOR PHASE 1 AT THE DIRECTION OF THE ENGINEER (SUBSIDIARY TO ITEM 619.1).
5. PROVIDE VARIABLE MESSAGE BOARD WITH MESSAGE "SLIP LANE CLOSED AHEAD" PLACED AS REQUIRED BY MUTCD ON SOUTHERLY ROUNDABOUT APPROACH DURING PHASE 1 AND IF DIRECTED BY THE ENGINEER, DURING PHASE 2 (SUBSIDIARY TO ITEM 619.1).

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

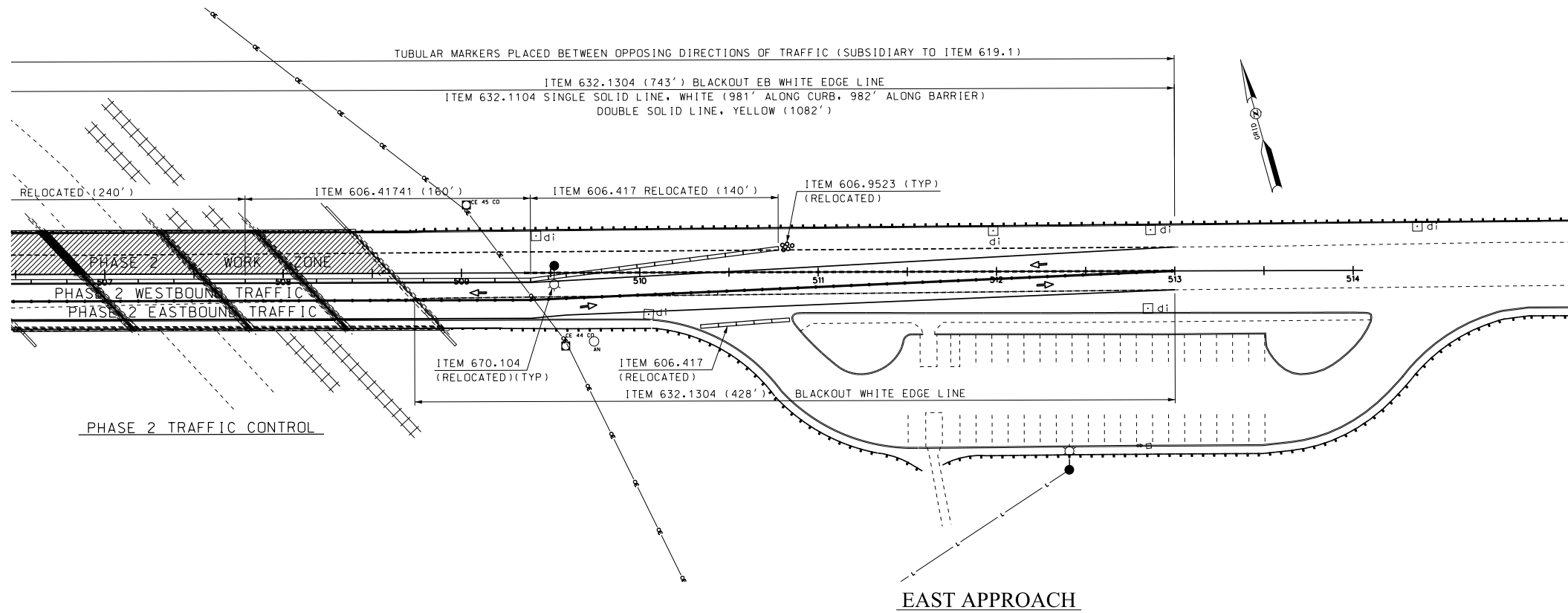
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN					
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440
LOCATION	U.S. ROUTE 4 OVER RIVER ROAD AND N.H.R.R. (ABD)				
PHASE 1 TRAFFIC CONTROL BR NO 139/040					BRIDGE SHEET
					8 OF 30
DESIGNED	GMC	2/19	CHECKED	WPS	10/19
DRAWN	GMC	2/19	CHECKED	WPS	10/19
QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19
ISSUE DATE			FEDERAL PROJECT NO.		SHEET NO.
REV. DATE					12
					TOTAL SHEETS
					34

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/139-040 US ROUTE 4	Phasing139040	1" = 40'-0"



WEST APPROACH



EAST APPROACH

NOTES

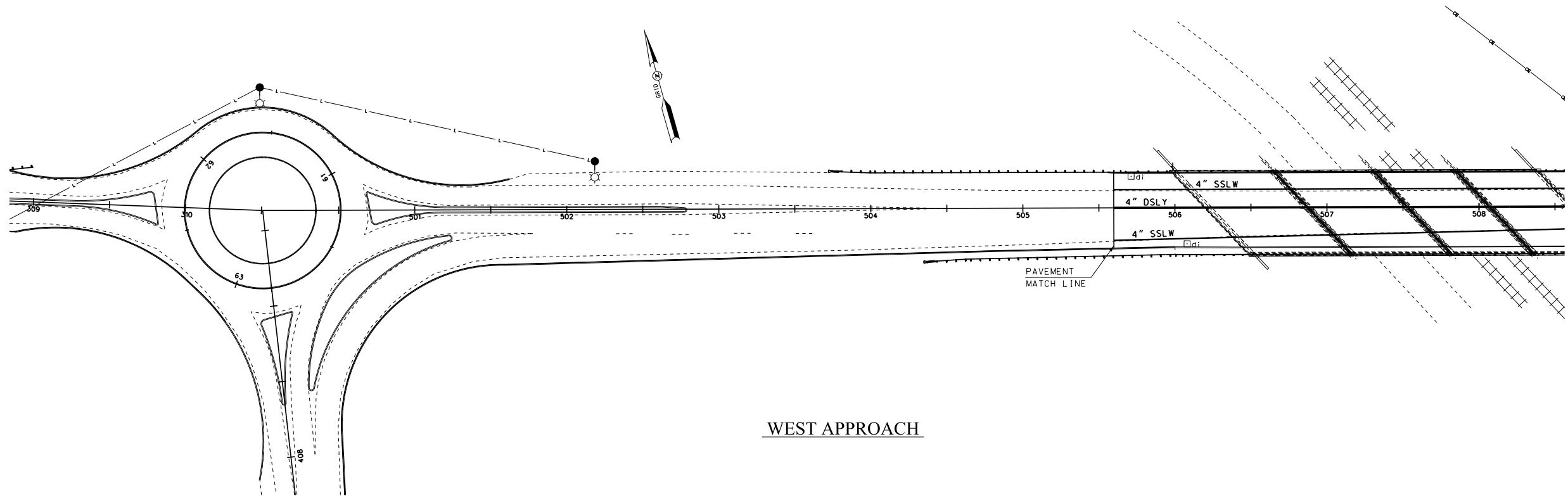
1. THE CONTRACTOR SHALL PROVIDE BARRELS TO CLOSE OFF THE HARRIS HILL ROAD ROUNDABOUT SLIP LANE DURING PHASE 2 (SIMILAR TO THAT PROVIDED IN PHASE 1) IF SO DIRECTED BY THE ENGINEER IF TRAFFIC CONFLICTS BETWEEN SLIP LANE TRAFFIC AND TRAFFIC EXITING THE ROUNDABOUT IS UNEXCEPTABLE (SUBSIDIARY TO ITEM 619.1).
2. FOR ADDITIONAL NOTES SEE BRIDGE SHEET 8.

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

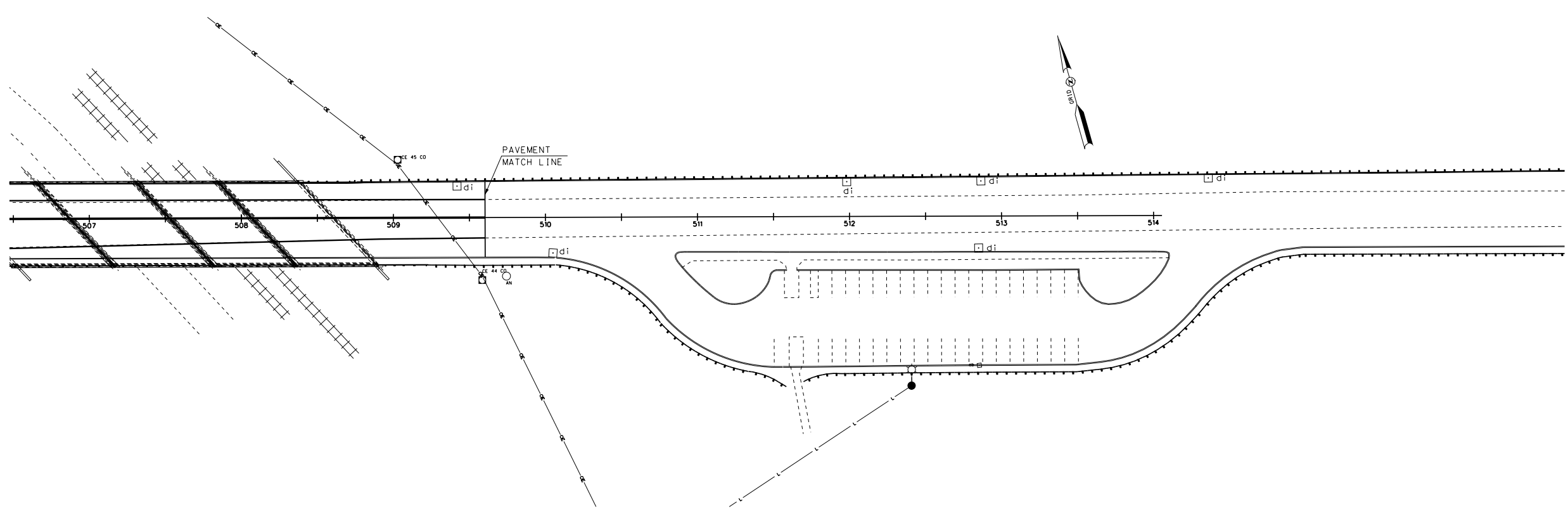
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440						
LOCATION U.S. ROUTE 4 OVER RIVER ROAD AND N.H.R.R. (ABD)											
PHASE 2 TRAFFIC CONTROL BR NO 139/040										BRIDGE SHEET	9 OF 30
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	WPS	10/19					
		DESIGNED	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER			
		DRAWN	GMC	2/19	CHECKED	WPS	10/19	136-2-1			
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19	TOTAL SHEETS			
		ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.	13			
		REV. DATE		-----				34			

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/139-040 US ROUTE 4	Phasing139040	1" = 40'-0"



WEST APPROACH



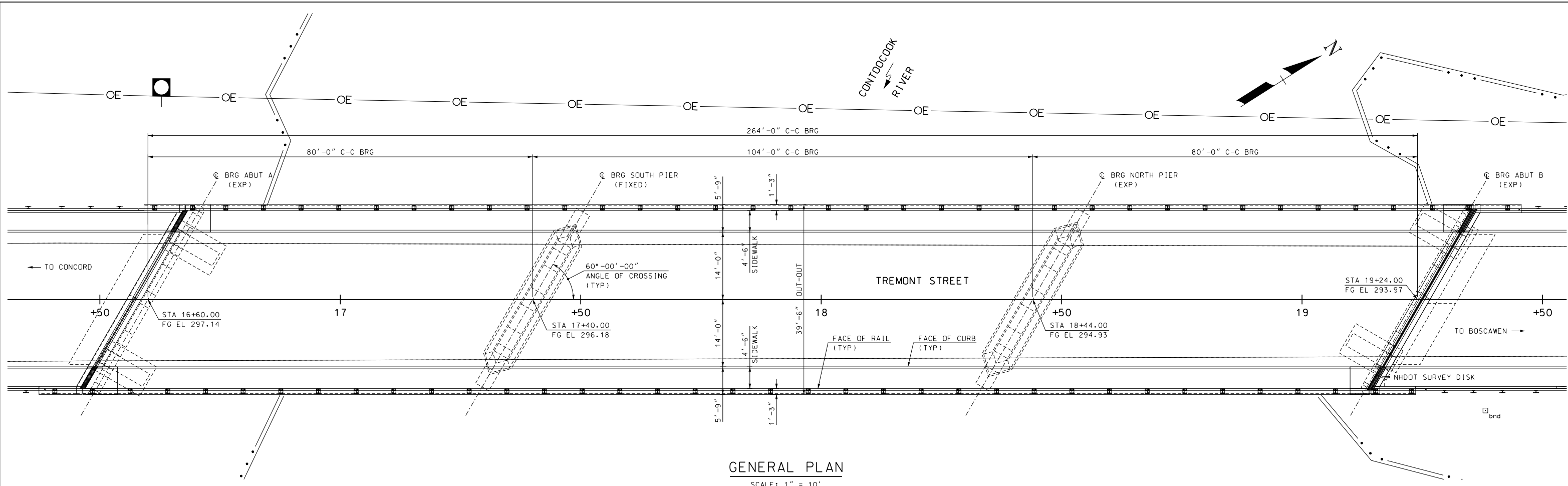
EAST APPROACH

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

SAMPLE PLAN
DATE: 11-2019

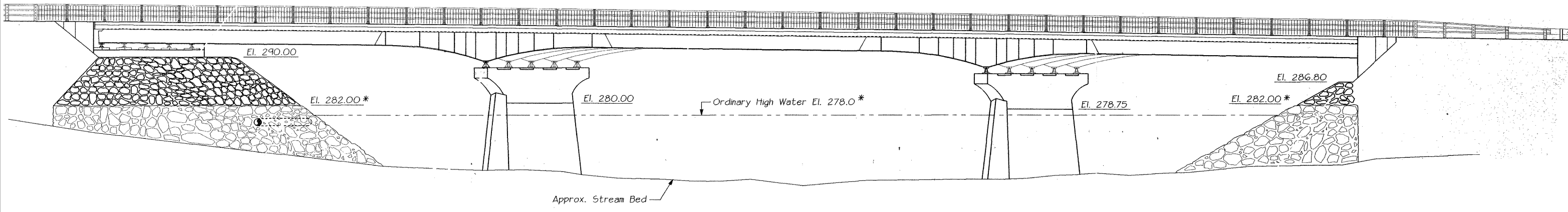
STATE OF NEW HAMPSHIRE												
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN												
TOWN	BOSCAWEN	BRIDGE NO.	139/040	STATE PROJECT	42440							
LOCATION U.S. ROUTE 4 OVER COMMERCIAL STREET AND N.H.R.R. (ABD)												
FINAL PAVEMENT MARKINGS BR NO 139/040												
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET					
		DESIGNED	GMC	2/19	CHECKED	WPS	10/19	10 OF 30				
		DRAWN	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER				
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19	136-2-1				
ISSUE DATE		FEDERAL PROJECT NO.			SHEET NO.	TOTAL SHEETS						
REV. DATE		-----			14	34						

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/139-040 US ROUTE 4	Phasing139040	1" = 40'-0"



GENERAL PLAN
SCALE: 1" = 10'

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

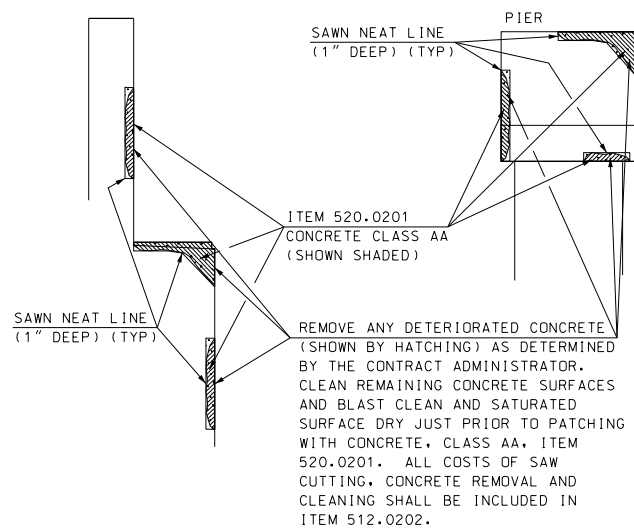


ELEVATION VIEW
SCALE: 1" = 10'

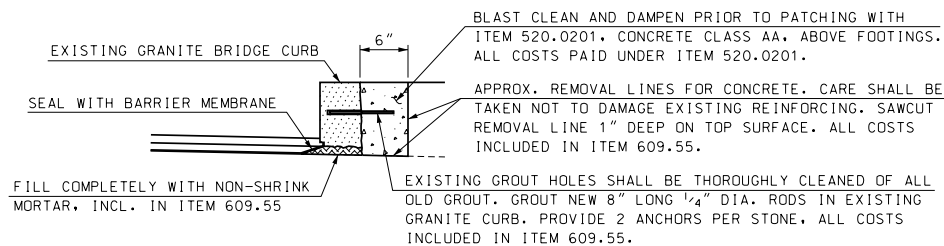
SAMPLE PLAN
DATE: 11-2019

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Genplan	AS NOTED

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440				
LOCATION TREMONT STREET over CONTOOCCOOK RIVER						GENERAL PLAN AND ELEVATION BR NO 131/035		BRIDGE SHEET	
						11 OF 30			
						FILE NUMBER			
						136-2-1			
						TOTAL SHEETS			
						15		34	

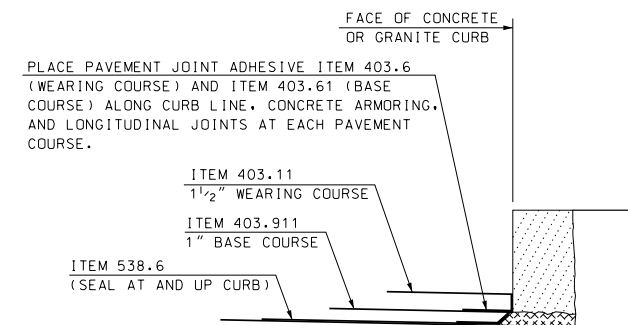


TYPICAL CONCRETE REPAIR DETAIL
GENERIC DETAIL NOT TO SCALE

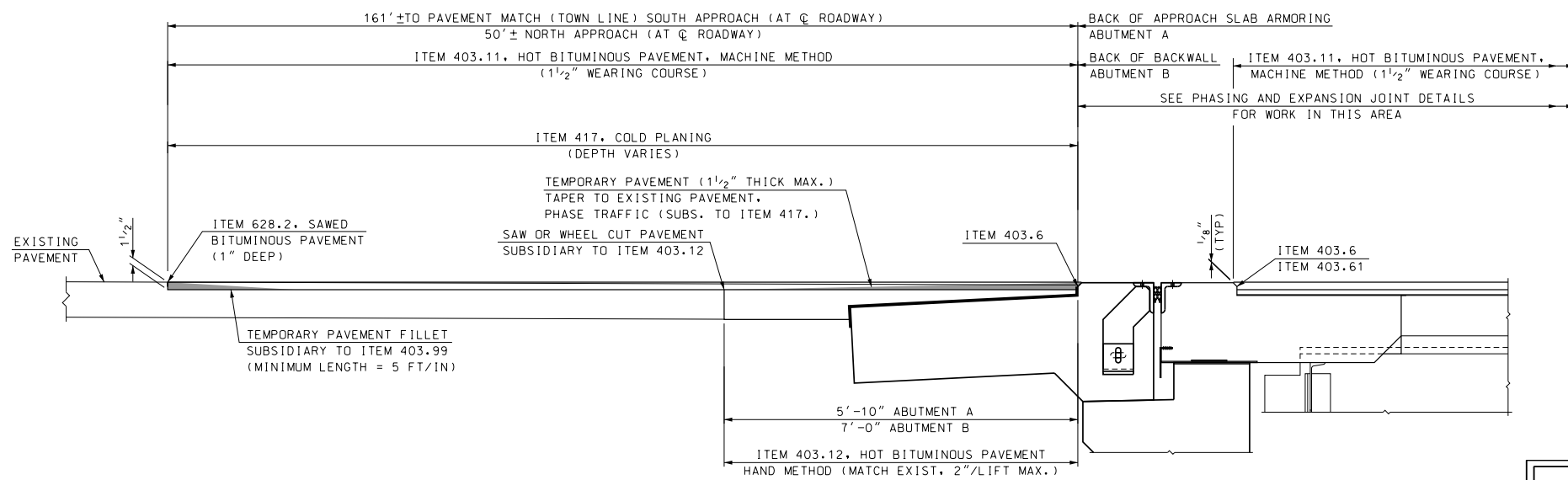


**** RESETTING GRANITE BRIDGE CURB DETAIL**
SCALE: 1" = 1'-0"

** WHERE EXISTING GRANITE BRIDGE CURB HAS PULLED AWAY FROM THE CONCRETE BRUSH CURB. THE GRANITE CURB SHALL BE REMOVED AND RESET AS DIRECTED BY THE ENGINEER. ALL COSTS INCLUDED IN ITEM 609.55. RESET GRANITE CURB (BRIDGE).



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



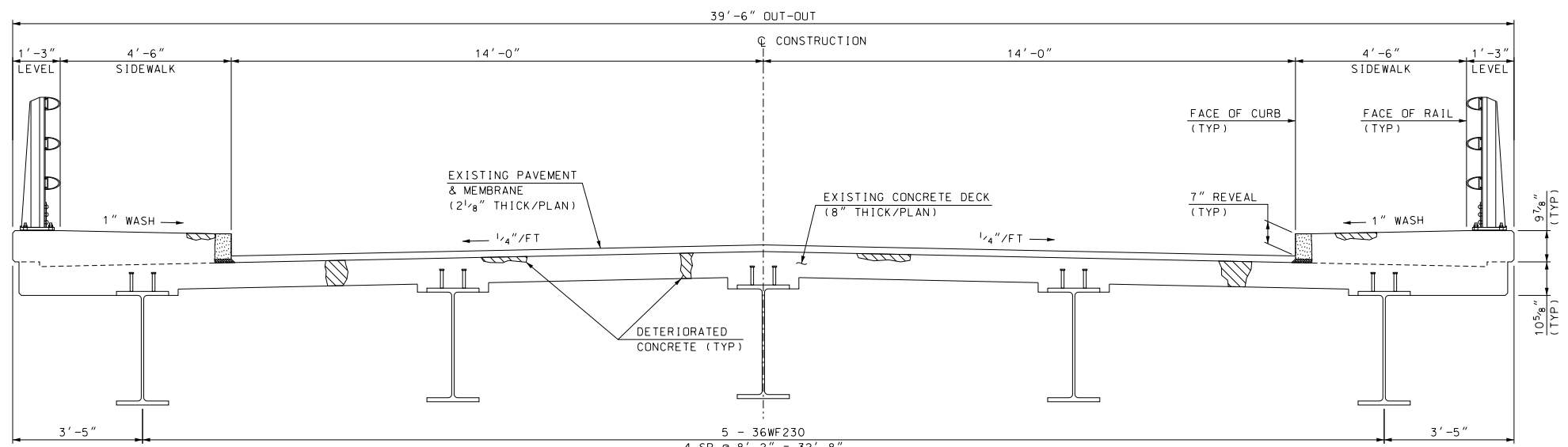
PAVEMENT MATCH DETAIL
NOT TO SCALE

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

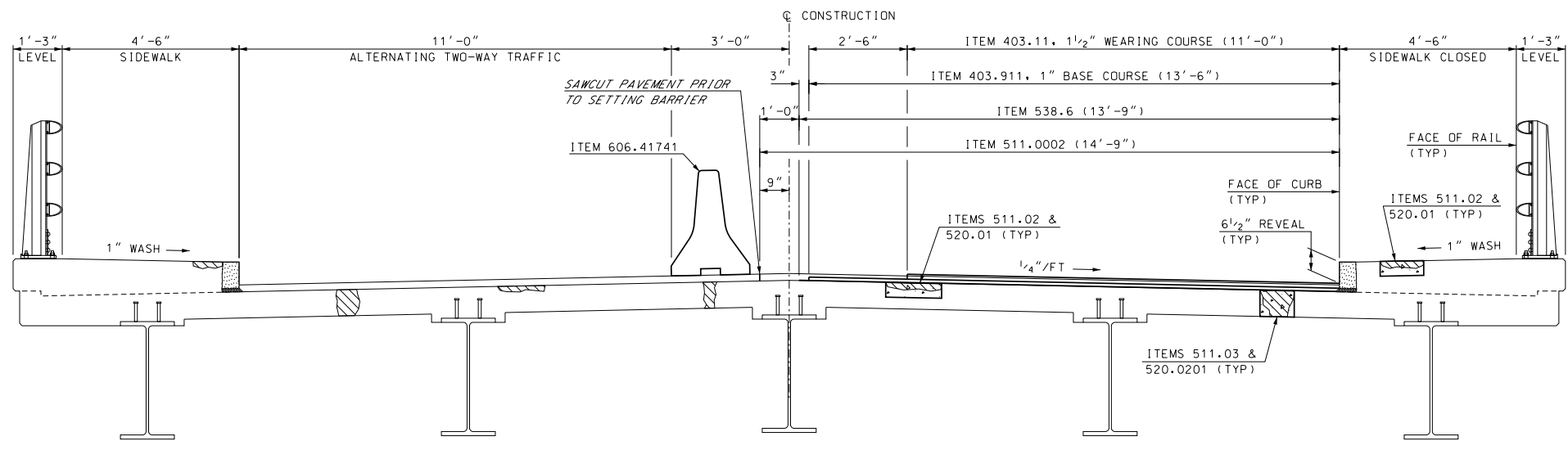
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440				
LOCATION TREMONT STREET over CONTOOCCOOK RIVER						BRIDGE SHEET			
MISCELLANEOUS DETAILS BR NO 131/035						12 OF 30			
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	WPS	DATE	FILE NUMBER		
		DESIGNED	SMG	8/19	CHECKED	WPS	10/19		
		DRAWN	SMG	8/19	CHECKED	WPS	10/19		
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19		
		ISSUE DATE	FEDERAL PROJECT NO.			SHEET NO.	TOTAL SHEETS		
		REV. DATE	-----			16	34		

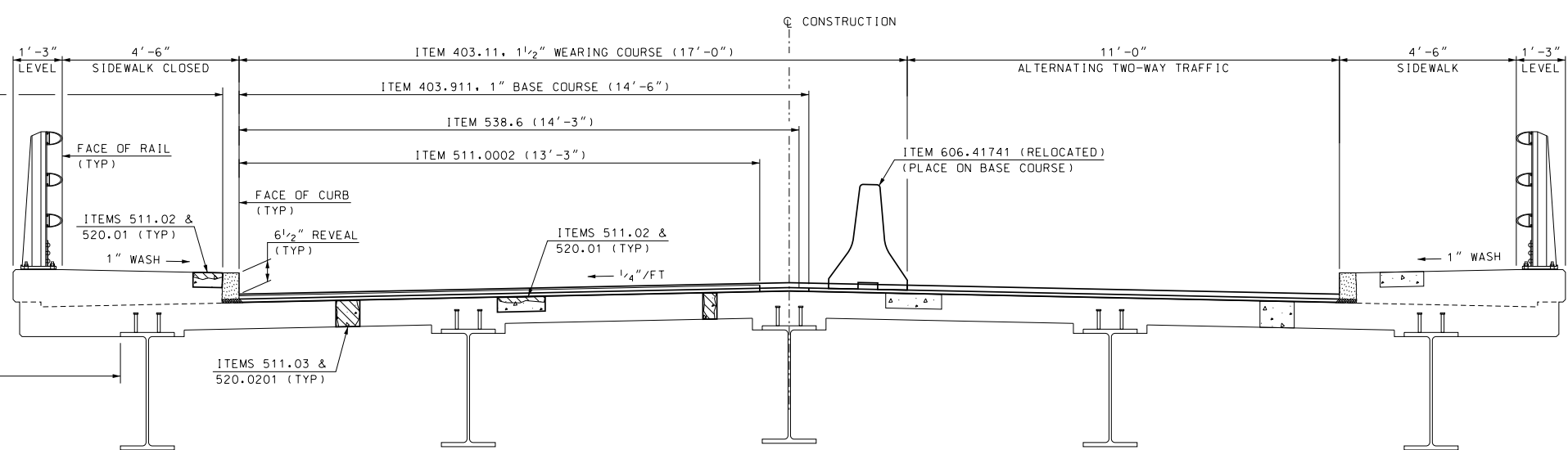
SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/131-035 Tremont St	131-035 Misc	as noted



EXISTING DECK SECTION
SCALE: 1/2" = 1'-0"



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



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

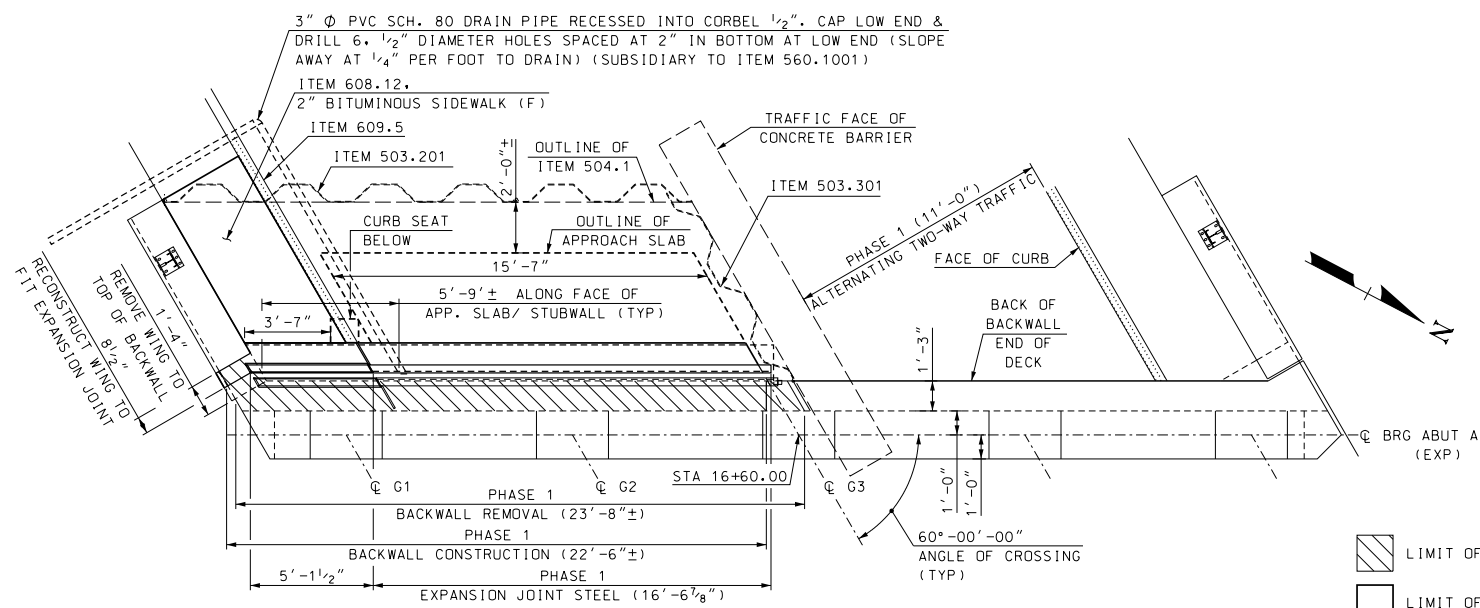
PAY LIMITS.
ITEM 534.3
(TYP)

SAMPLE PLAN
DATE: 11-2019

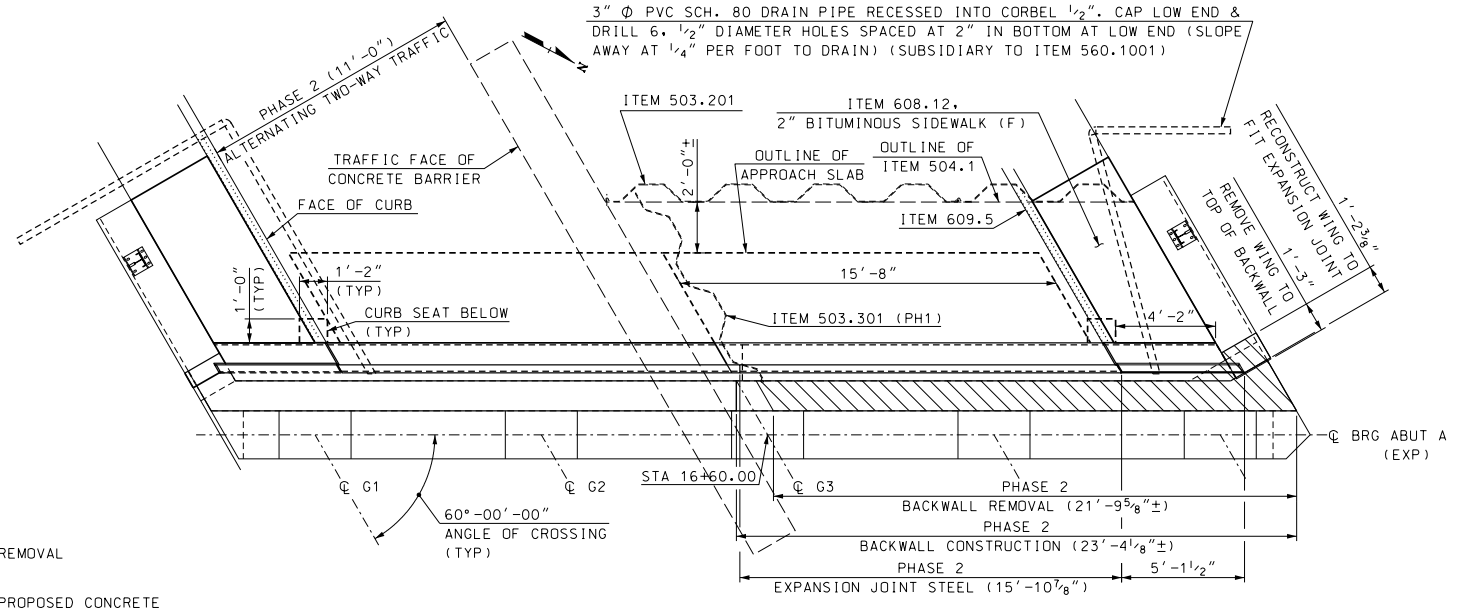
**NOTE: DETAILS AND NOTES
MAY NOT BE CURRENT
CLOSELY REVIEW BEFORE
USING DETAILS.**

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440				
LOCATION TREMONT STREET over CONTOOCOOK RIVER									
DECK BR NO 131/035								BRIDGE SHEET	
								13 OF 30	
								FILE NUMBER	
								136-2-1	
								TOTAL SHEETS	
								34	

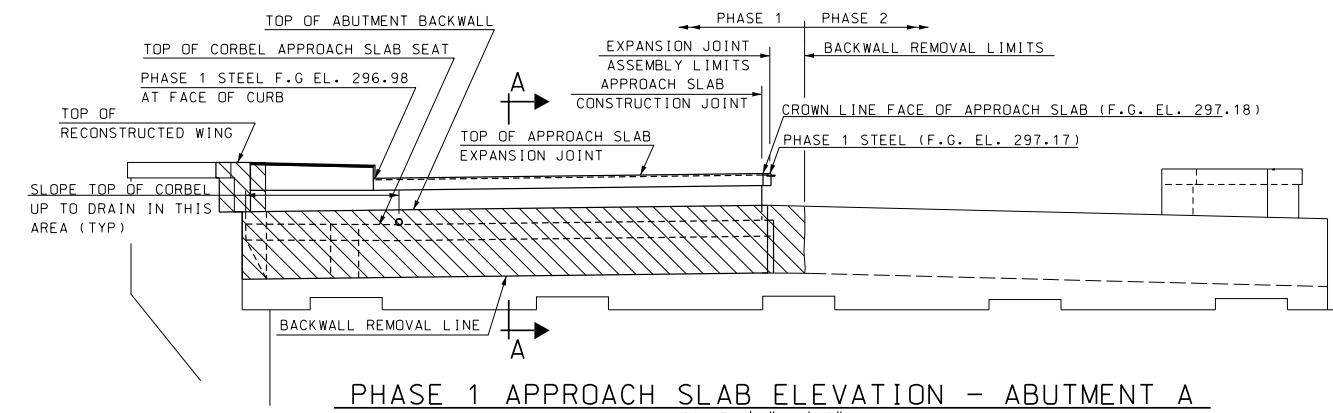
SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Deck	AS NOTED



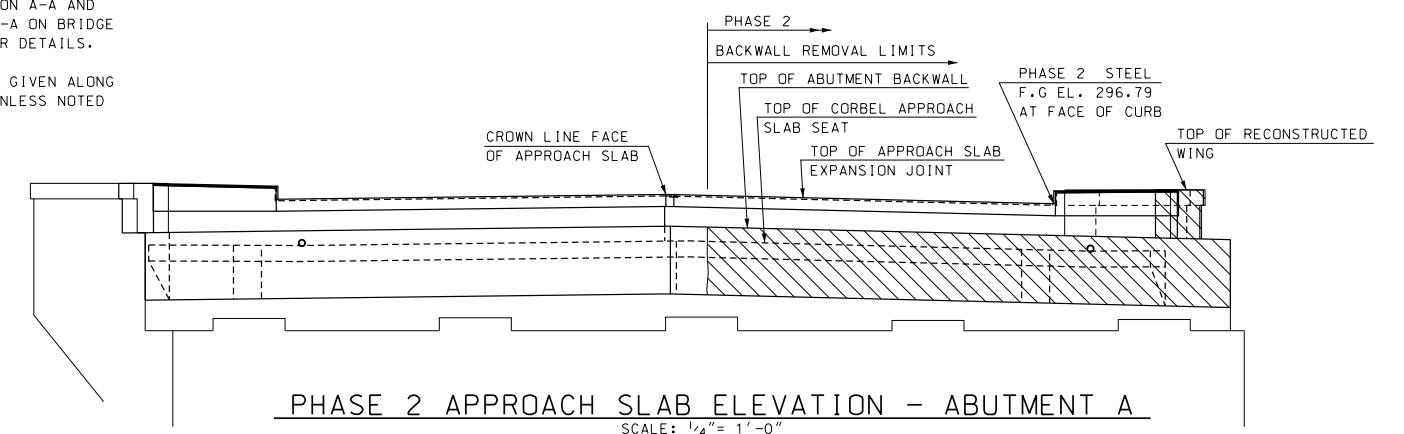
PHASE 1 APPROACH SLAB & ABUTMENT A PLAN
SCALE: 1/4" = 1'-0"



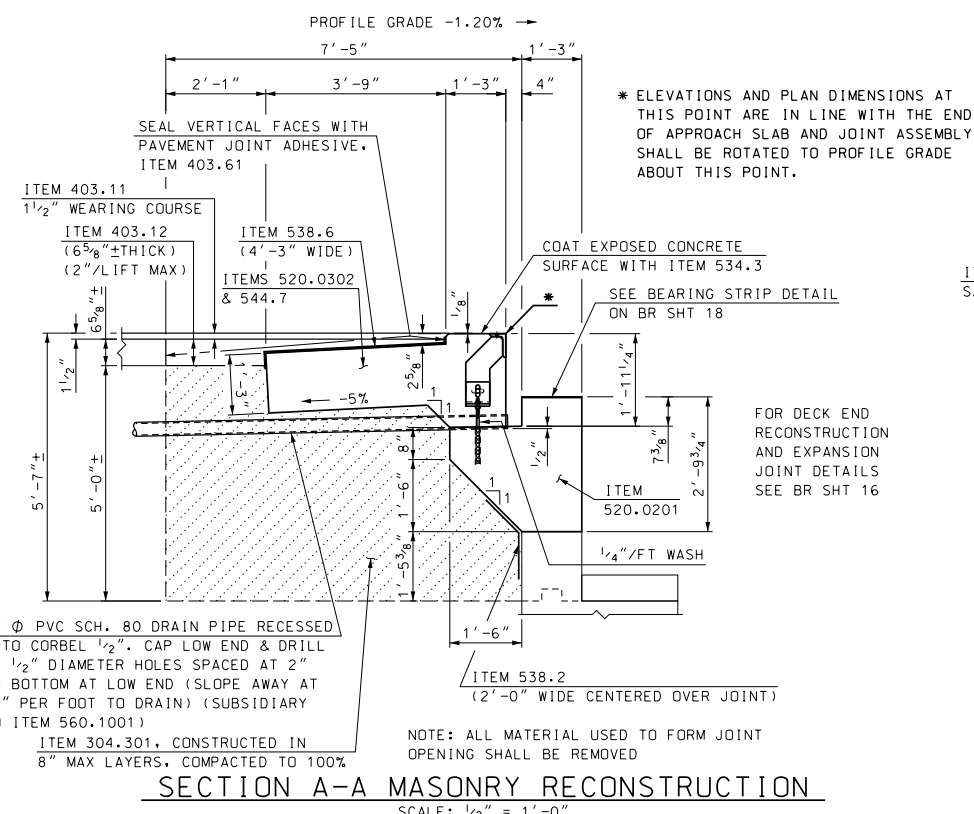
PHASE 2 APPROACH SLAB & ABUTMENT A PLAN
SCALE: 1/4" = 1'-0"



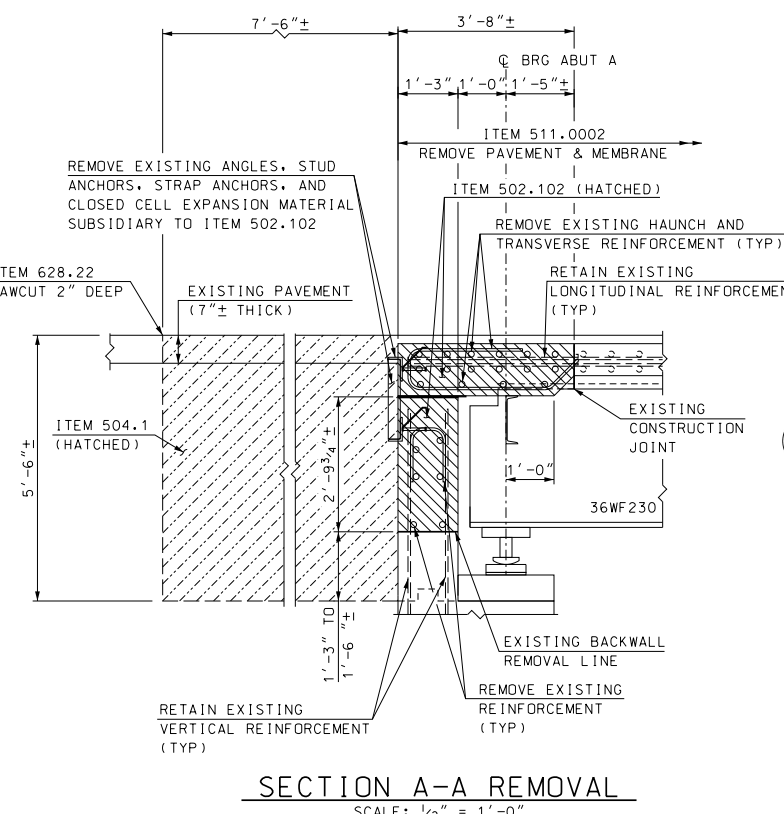
PHASE 1 APPROACH SLAB ELEVATION - ABUTMENT A
SCALE: 1/4" = 1'-0"



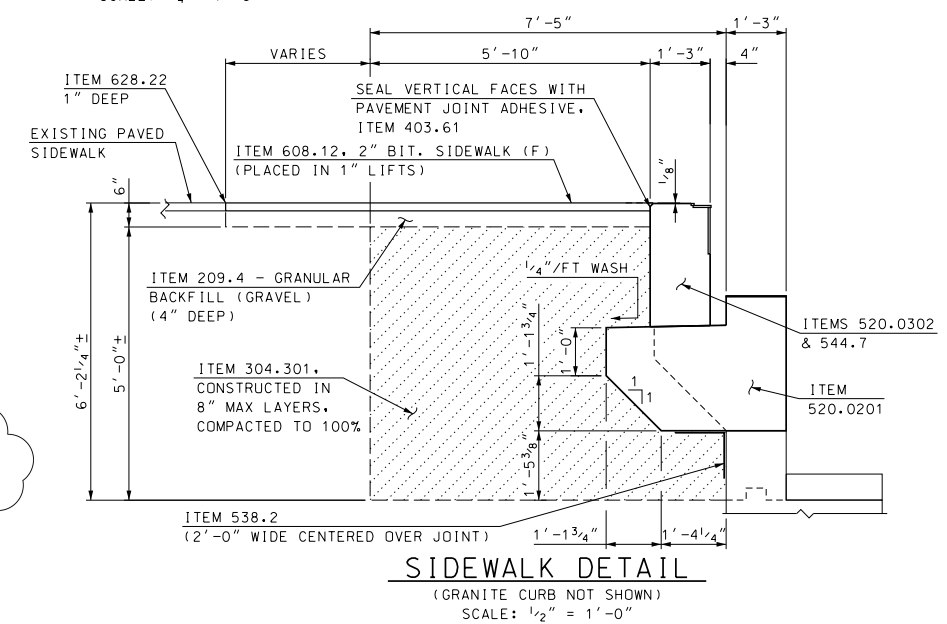
PHASE 2 APPROACH SLAB ELEVATION - ABUTMENT A
SCALE: 1/4" = 1'-0"



SECTION A-A MASONRY RECONSTRUCTION
SCALE: 1/2" = 1'-0"



SECTION A-A REMOVAL
SCALE: 1/2" = 1'-0"

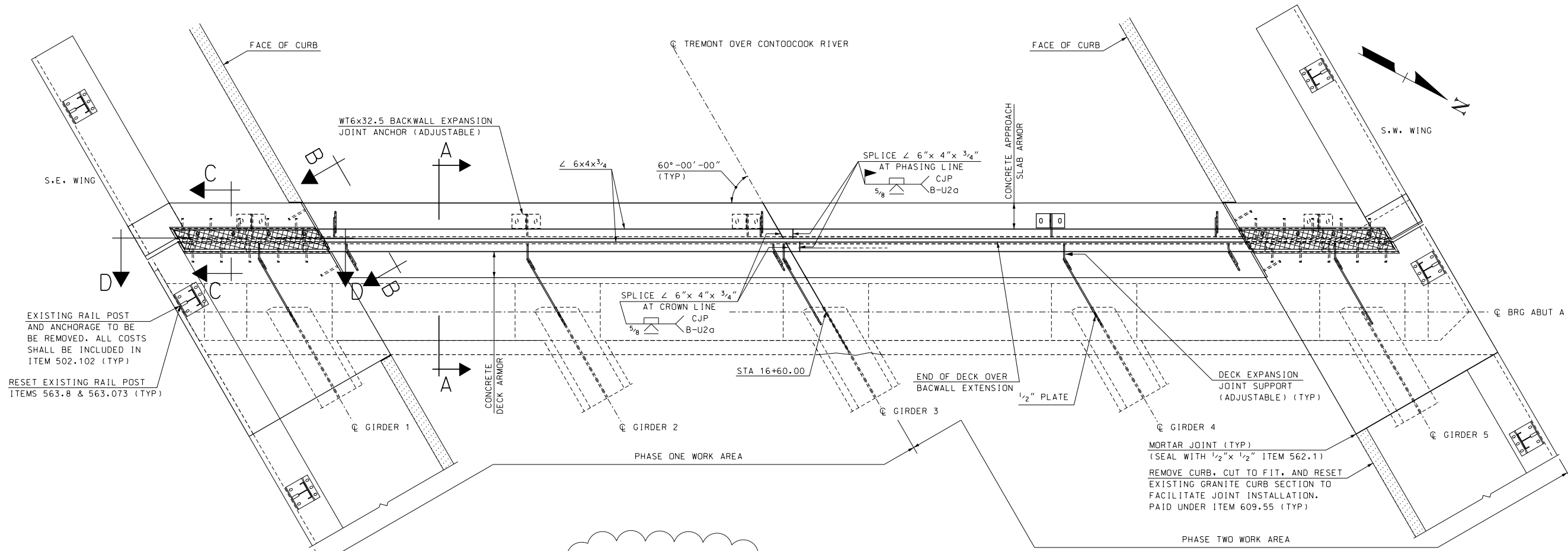


SIDEWALK DETAIL
SCALE: 1/2" = 1'-0"

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

SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE				DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN				
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440	BRIDGE SHEET	14 OF 30	
LOCATION	TREMONT STREET over CONTOOCOOK RIVER						FILE NUMBER	136-2-1
ABUTMENT A MASONRY AND DETAILS				REVISIONS AFTER PROPOSAL				
DESIGNED	GMC	5/19	CHECKED	WPS	10/19	BY	DATE	
DRAWN	GMC	5/19	CHECKED	WPS	10/19	BY	DATE	
QUANTITIES	GMC/GCN	10/19	CHECKED	WPS	10/19	BY	DATE	
ISSUE DATE	FEDERAL PROJECT NO.			SHEET NO.		TOTAL SHEETS		
REV. DATE				18		34		



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

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

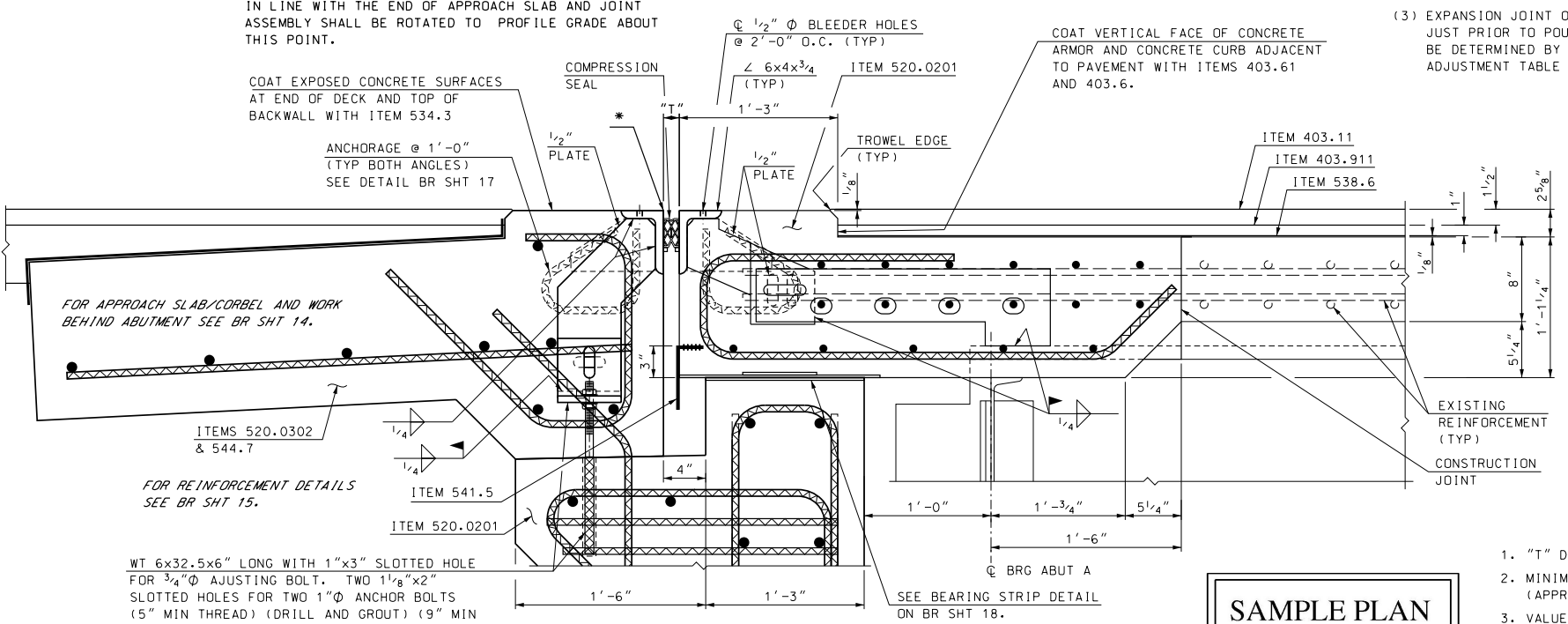
FOR EXISTING END OF DECK AND BACKWALL REMOVAL LIMITS SEE BRIDGE SHEET 14.

EXPANSION JOINT NOTES

- (1) ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING COMPRESSION SEAL, SHALL BE PAID FOR AS ITEM 560.1001, PREFABRICATED COMPRESSION SEAL EXPANSION JOINT (F).
- (2) SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.
- (3) EXPANSION JOINT OPENING SHALL BE ADJUSTED TO TEMPERATURE ANTICIPATED JUST PRIOR TO POURING DECK BLOCKOUT. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR. SEE TEMPERATURE ADJUSTMENT TABLE & NOTES.
- (4) THE COMPRESSION SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL.
- (5) JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.
- (6) THE EXPANSION JOINT ASSEMBLY SHALL BE INSTALLED ONLY AFTER BOTH ABUTMENTS HAVE BEEN BACKFILLED TO WITHIN 3'-0" OF FINISHED GRADE.
- (7) IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.
- (8) PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
- (9) THE COMPRESSION SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF 1 1/2" INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE A WA-250 SEAL BY WATSON BOWMAN OR CV-2502 BY D.S. BROWN, AS NOTED IN THE OPL.
- (10) ELEVATIONS SHOWN AT TOP OF ANGLES ARE 1/8" LOWER THAN PROPOSED FINISHED ROADWAY GRADE.
- (11) ANGLES 6" x 4" x 3/4" SHALL BE UTILIZED FOR SEALS LESS THAN 5" (HEIGHT). FOR SEALS GREATER THAN OR EQUAL TO 5" (HEIGHT) STEEL ANGLES SHALL BE 8" x 4" x 3/4".
- (12) PRIOR TO INSTALLING THE SEAL, ALL TEMPORARY FORM WORK SHALL BE REMOVED. STEEL ANGLES AND STOP BARS SHALL BE MAINTAINED FREE FROM DIRT, WATER AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.

* ELEVATIONS AND PLAN DIMENSIONS AT THIS POINT ARE IN LINE WITH THE END OF APPROACH SLAB AND JOINT ASSEMBLY SHALL BE ROTATED TO PROFILE GRADE ABOUT THIS POINT.

PROFILE GRADE -1.20%



SECTION A-A RECONSTRUCTION
SCALE: 1 1/2" = 1'-0"

TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
20°F	1 3/4"
35°F	1 1/16"
50°F	1 9/16"
65°F	1 1/2"
80°F	1 3/8"
95°F	1 5/16"

TEMPERATURE ADJUSTMENT NOTES

- "T" DIMENSIONS ARE PERPENDICULAR TO FACE OF BACKWALL.
- MINIMUM "T" WIDTH FOR SEAL INSTALLATION = 1 1/2" (APPROXIMATELY 65°F OR LESS).
- VALUES IN THE TEMPERATURE ADJUSTMENT TABLE ARE FOR SETTING THE EXPANSION JOINT ASSEMBLY IMMEDIATELY PRIOR TO POURING THE DECK BLOCKOUT.

SAMPLE PLAN
DATE: 11-2019

COAT EXPOSED CONCRETE SURFACES AT END OF DECK AND TOP OF BACKWALL WITH ITEM 534.3

ANCHORAGE @ 1'-0" (TYP BOTH ANGLES) SEE DETAIL BR SHT 17

FOR APPROACH SLAB/CORBEL AND WORK BEHIND ABUTMENT SEE BR SHT 14.

FOR REINFORCEMENT DETAILS SEE BR SHT 15.

WT 6x32.5x6" LONG WITH 1"x3" SLOTTED HOLE FOR 3/4" ADJUSTING BOLT. TWO 1 1/8"x2" SLOTTED HOLES FOR TWO 1" ANCHOR BOLTS (5" MIN THREAD) (DRILL AND GROUT) (9" MIN EMBEDMENT) (COST INCLUDED IN ITEM 560.1001)

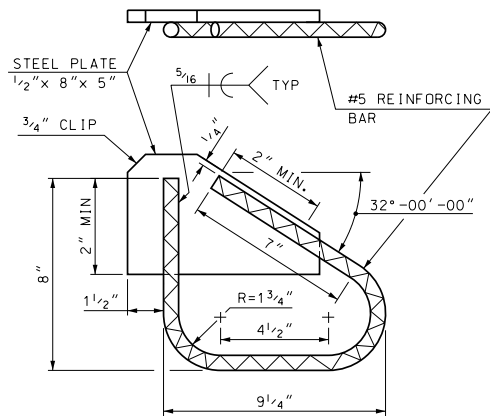
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN BOSCAWEN BRIDGE NO. 131/035 STATE PROJECT 42440
LOCATION TREMONT STREET OVER CONTOOCCOOK RIVER

COMPRESSION SEAL EXP JT BR NO 131/035 (1 OF 3)

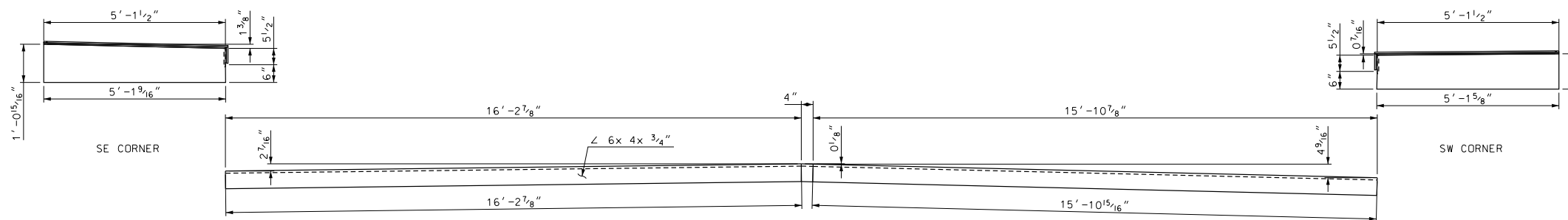
DESIGNED	SMG	1/19	CHECKED	WPS	10/19	16 OF 30
DRAWN	SMG	1/19	CHECKED	WPS	10/19	FILE NUMBER
QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19	136-2-1
ISSUE DATE			FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
REV. DATE					20	34

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Comp Jt A	AS NOTED



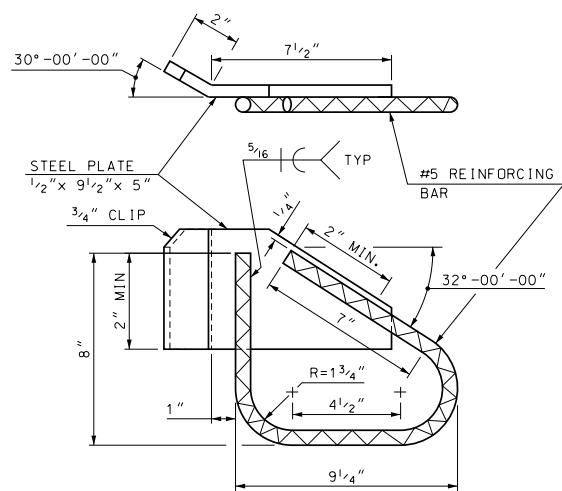
APPROACH SLAB ANCHORAGE DETAIL

SCALE: 3" = 1'-0"



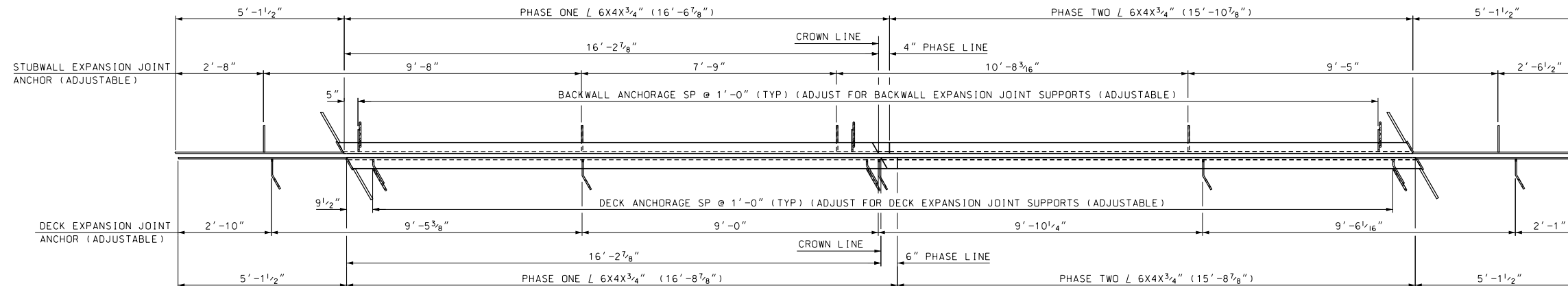
ELEVATION VIEW APPROACH SLAB STEEL

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



DECK ANCHORAGE DETAIL

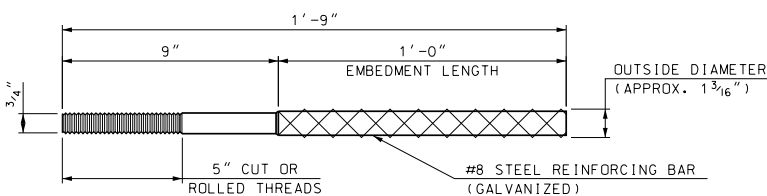
SCALE: 3" = 1'-0"



PLAN - DECK ANCHORS AND SUPPORT PLAN ABUTMENT A

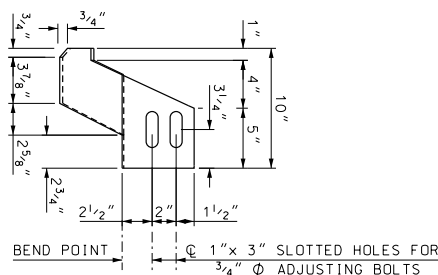
SCALE: 1/2" = 1'-0"

ALL DIMENSIONS GIVEN ARE HORIZONTAL AT FACE OF 6" x 4" x 3/4"



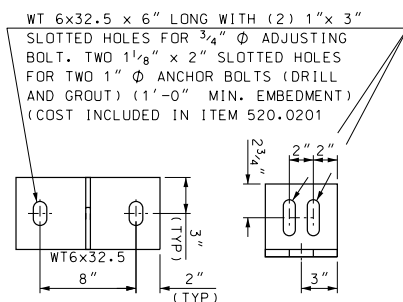
ANCHOR ROD DETAIL

(14 REQUIRED)
SCALE: NTS



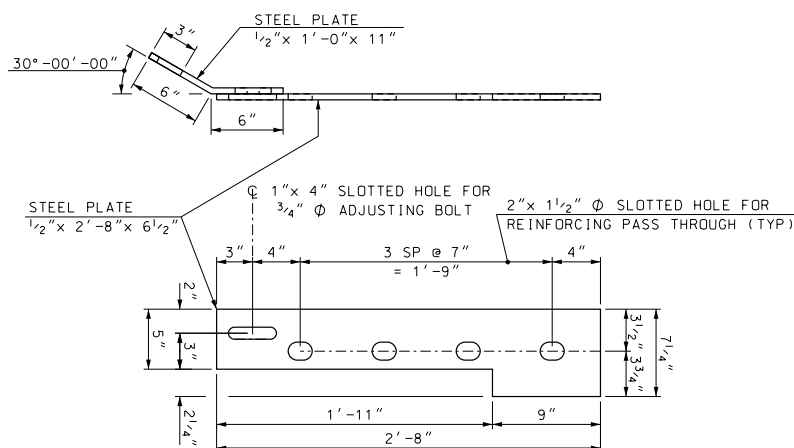
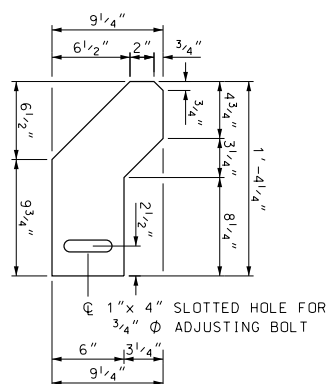
BEND POINT
1" x 3" SLOTTED HOLES FOR 3/4" ADJUSTING BOLTS

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



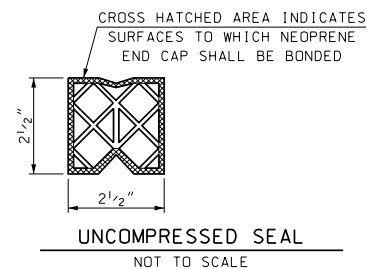
APPROACH SLAB EXPANSION JOINT SUPPORT SYTEM (ADJUSTABLE)

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

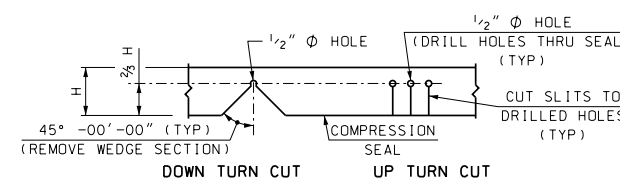


DECK SIDE EXPANSION JOINT SUPPORT SYTEM (ADJUSTABLE)

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



UNCOMPRESSED SEAL
NOT TO SCALE

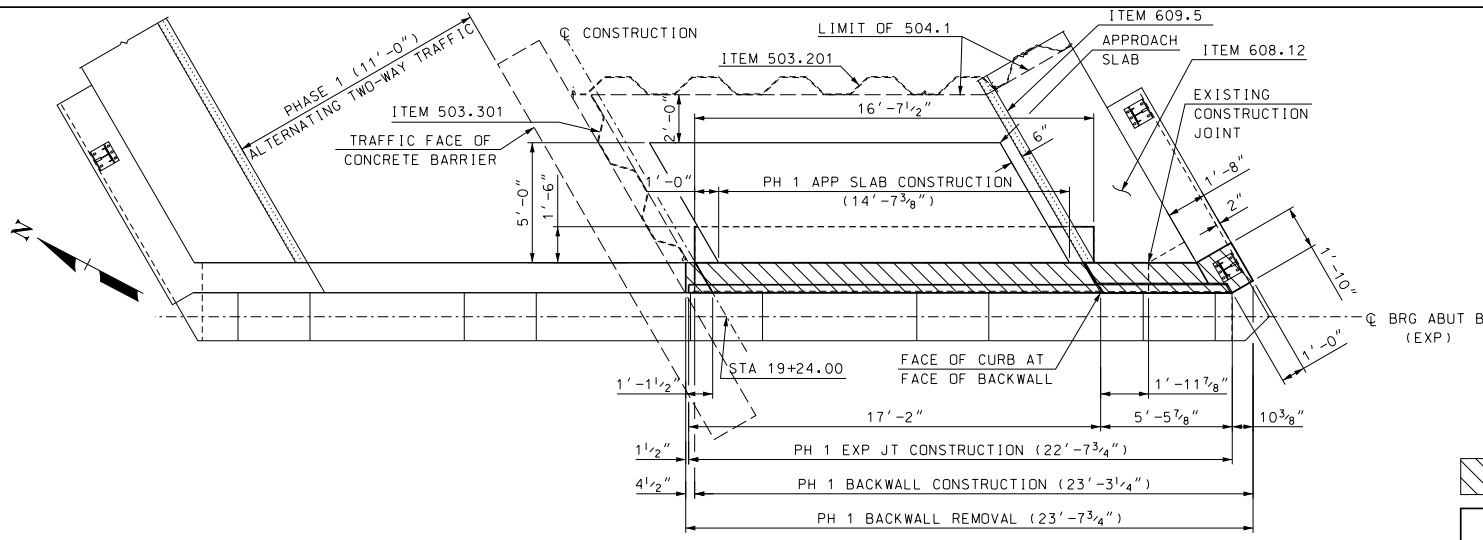


RELIEF CUT DETAILS
NOT TO SCALE

SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440				
LOCATION TREMONT STREET over CONTOOCCOOK RIVER						COMPRESSION SEAL EXP JT BR NO 131/035 (2 OF 3)		BRIDGE SHEET	
								17 OF 30	
								FILE NUMBER	
								136-2-1	
								TOTAL SHEETS	
								21	
								34	
DESIGNED	SMG	1/19	CHECKED	WPS	10/19	BY	DATE	BY	DATE
DRAWN	SMG	1/19	CHECKED	WPS	10/19	BY	DATE	BY	DATE
QUANTITIES	GMC/KN	10/19	CHECKED	WPS	10/19	BY	DATE	BY	DATE
ISSUE DATE			FEDERAL PROJECT NO.			SHEET NO.		TOTAL SHEETS	
REV. DATE			-----			21		34	

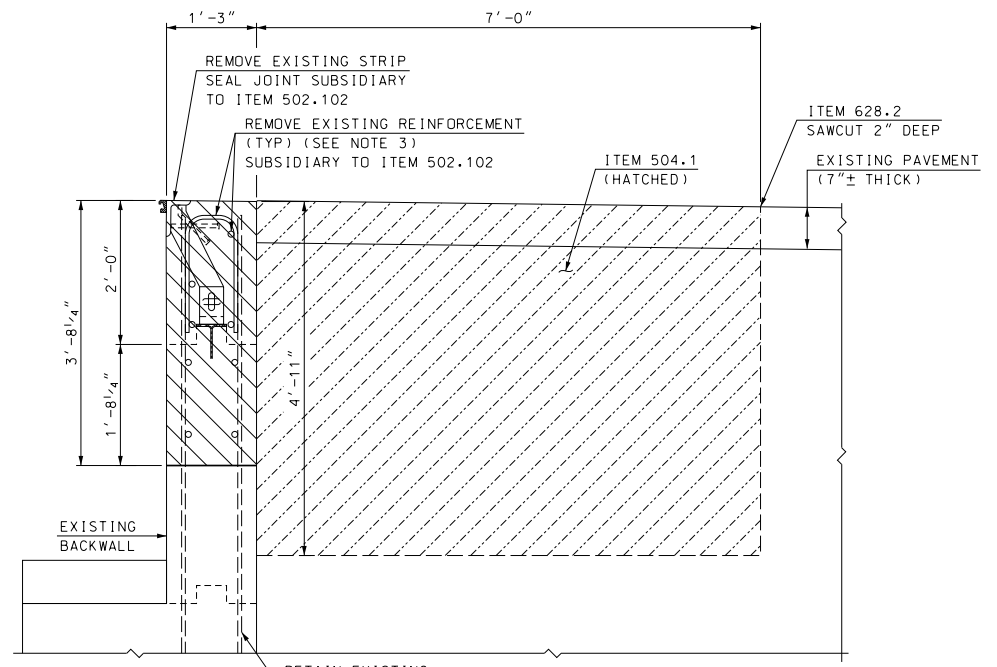
SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Comp Jt A	AS NOTED



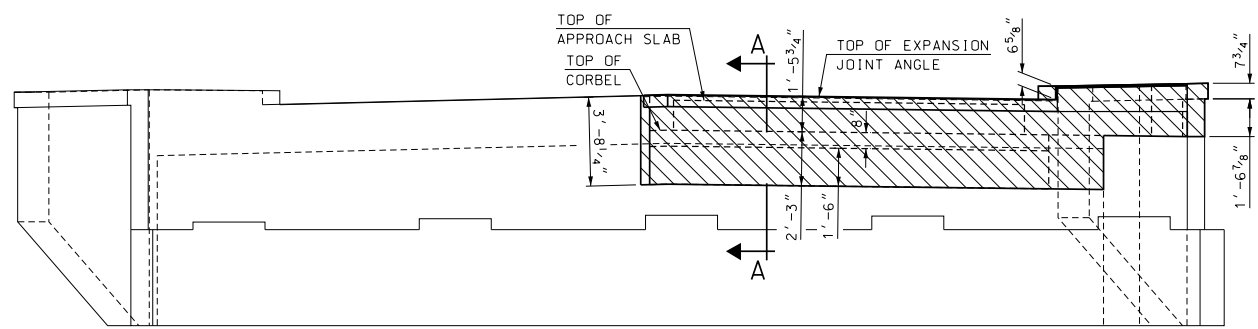
PH 1 ABUTMENT B PLAN
SCALE: 1/4" = 1'-0"

LIMIT OF REMOVAL
 LIMIT OF PROPOSED CONCRETE

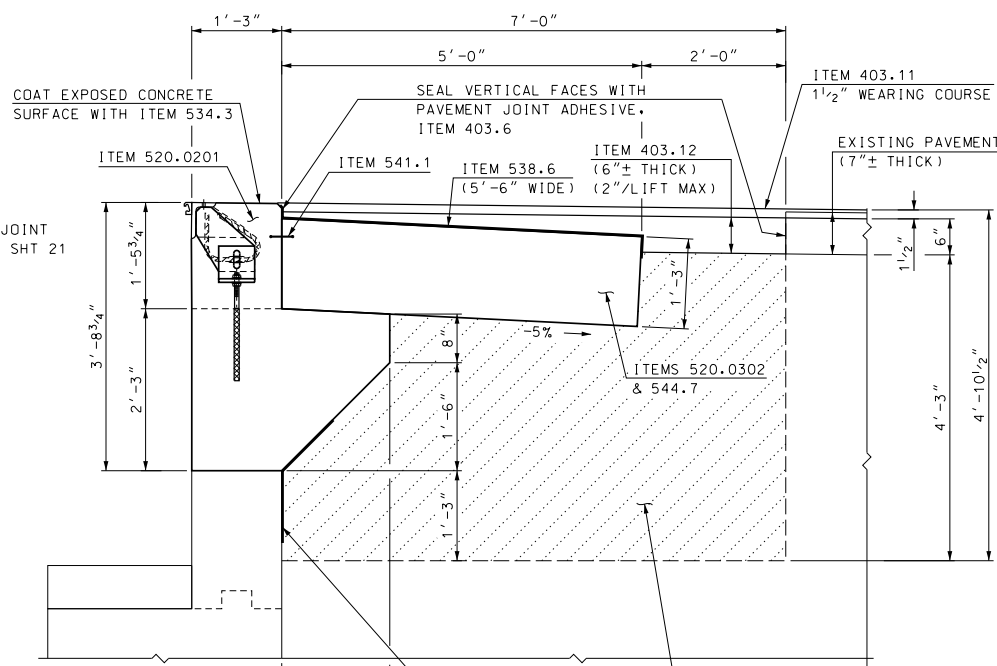
- NOTES:
1. SEE EXISTING SECTION A-A AND PROPOSED SECTION A-A ON BRIDGE SHEET 9 FOR FURTHER DETAILS.
 2. ALL DIMENSIONS ARE GIVEN ALONG FACE OF BACKWALL UNLESS NOTED OTHERWISE.
 3. VERTICAL REINFORCING PARTIALLY EXPOSED WITHIN THE WINGWALL REMOVAL LIMITS IS TO BE RETAINED.



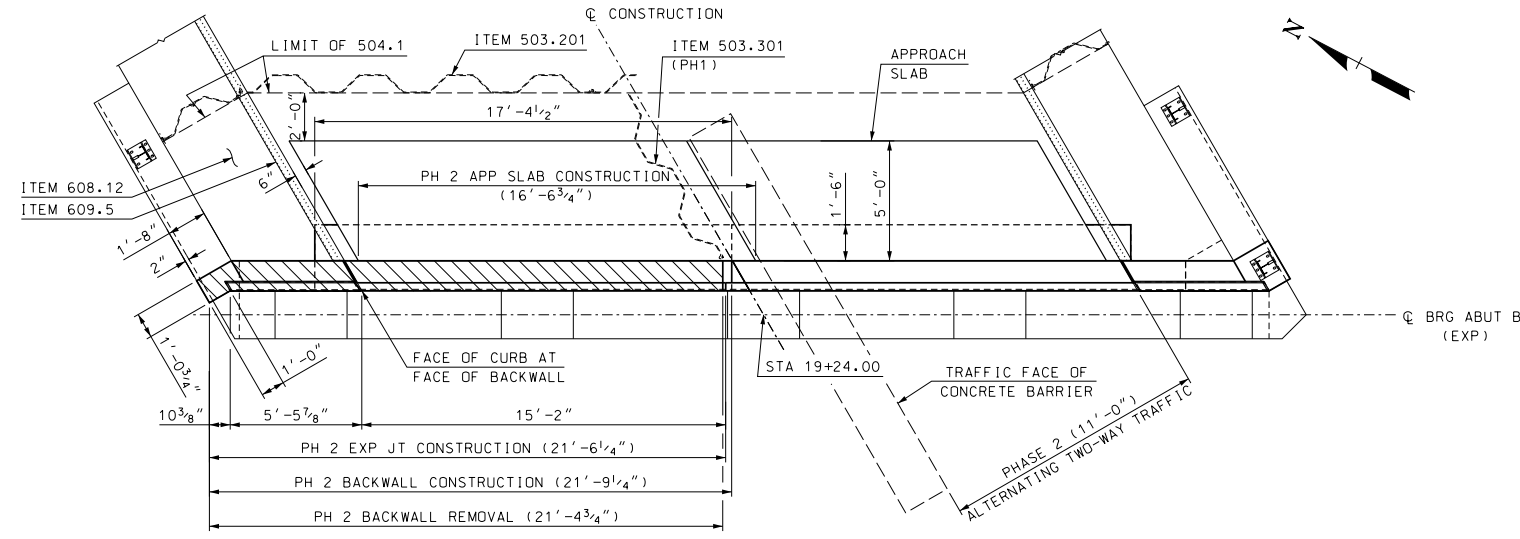
SECTION A-A REMOVAL
SCALE: 3/4" = 1'-0"



PH 1 ABUTMENT B ELEVATION
SCALE: 1/4" = 1'-0"

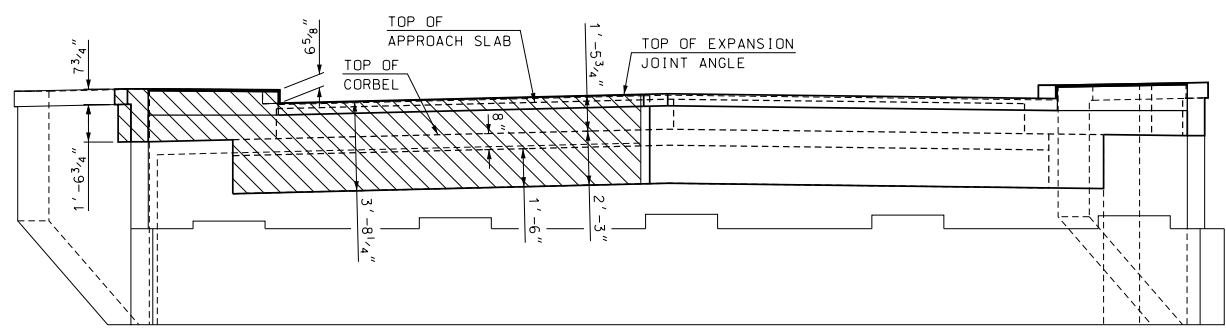


SECTION A-A MASONRY RECONSTRUCTION
SCALE: 3/4" = 1'-0"



PH 2 ABUTMENT B PLAN
SCALE: 1/4" = 1'-0"

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

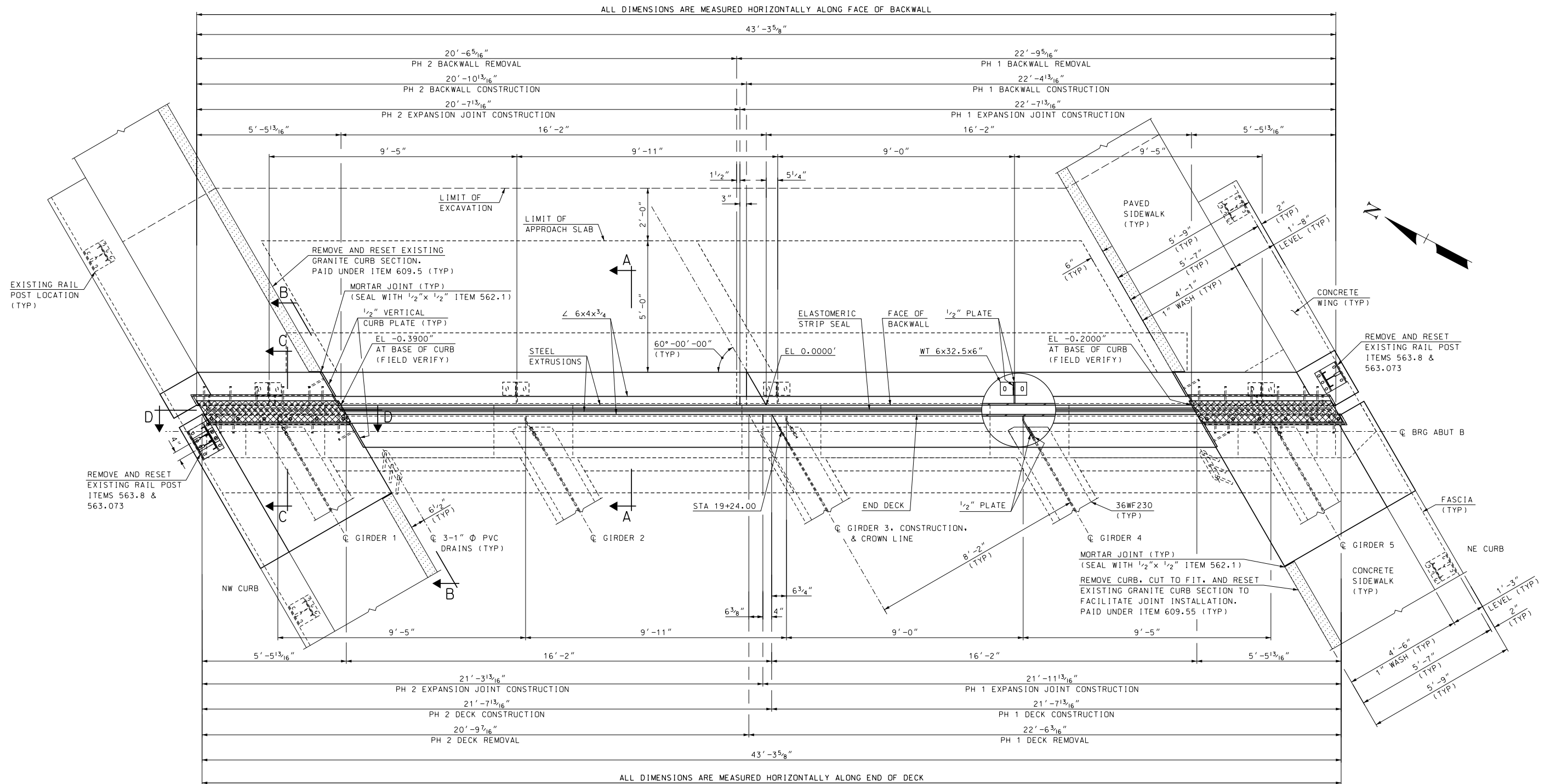


PH 2 ABUTMENT B ELEVATION
SCALE: 1/4" = 1'-0"

SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440				
LOCATION	TREMONT STREET over CONTOOCCOOK RIVER								
ABUTMENT B MASONRY BR NO 131/035					BRIDGE SHEET				
					19 OF 30				
REVISIONS AFTER PROPOSAL					FILE NUMBER				
					136-2-1				
DESIGNED		SMG	2/19	CHECKED		WPS	10/19		
DRAWN		SMG	2/19	CHECKED		WPS	10/19		
QUANTITIES		GMC/CKN	10/19	CHECKED		WPS	10/19		
ISSUE DATE				FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS	
REV. DATE				-----		23		34	

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Abut B	AS NOTED



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

EXPANSION JOINT NOTES

- (1) ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING STRIP SEAL, SHALL BE PAID FOR AS ITEM 561.1004, PREFABRICATED STRIP SEAL EXPANSION JOINT (F).
- (2) SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.
- (3) EXPANSION JOINT OPENING SHALL BE ADJUSTED TO TEMPERATURE ANTICIPATED JUST PRIOR TO POURING DECK BLOCKOUT. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR. SEE TEMPERATURE ADJUSTMENT TABLE & NOTES.
- (4) STRIP SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL.
- (5) JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES AND EXTRUSIONS SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.
- (6) IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.
- (7) PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
- (8) THE STRIP SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF 2.15 INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE AN SE-400 SEAL BY WATSON BOWMAN OR A2R-400 BY D.S. BROWN, AS NOTED IN THE OPL.
- (9) ELEVATIONS SHOWN AT TOP OF ANGLES ARE 1/8" LOWER THAN PROPOSED FINISHED ROADWAY GRADE.
- (10) NO "LOW PROFILE" STEEL EXTRUSIONS SHALL BE ALLOWED. SEE OPL FOR APPROVED PRODUCTS.
- (11) PRIOR TO INSTALLING THE SEAL, ALL TEMPORARY FORM WORK SHALL BE REMOVED. STEEL ANGLES AND EXTRUSIONS SHALL BE MAINTAINED FREE FROM DIRT, WATER, AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.

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

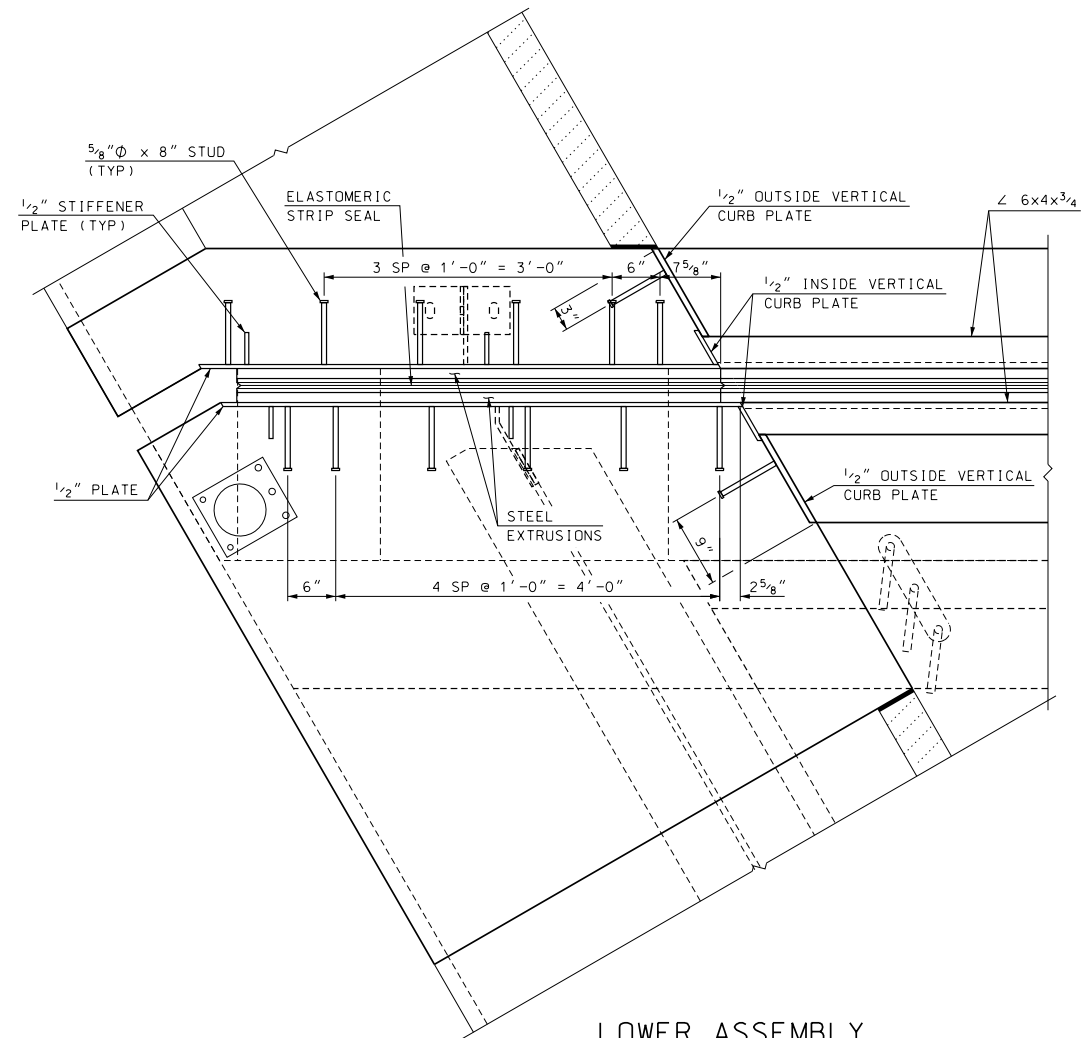
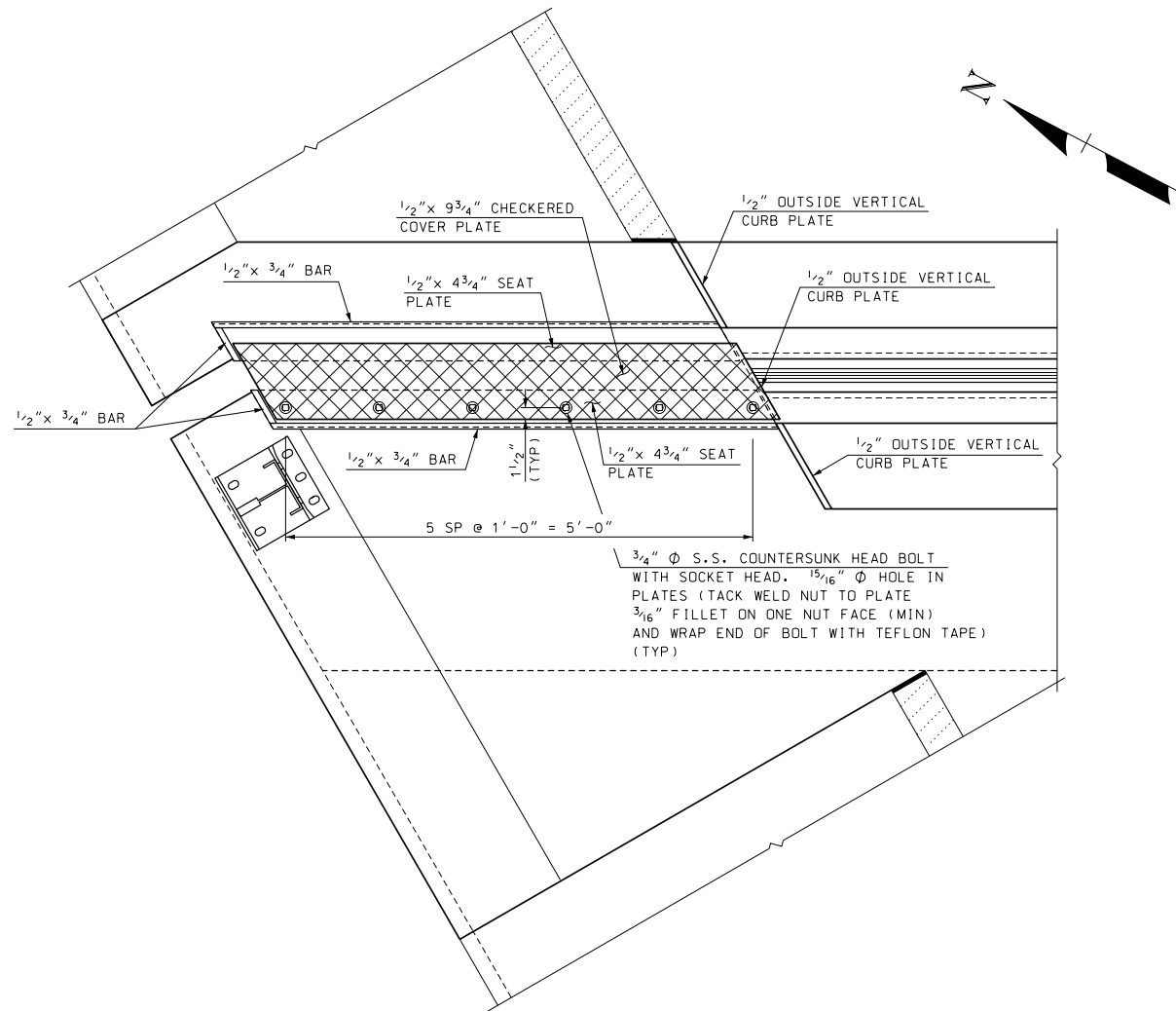
NOTE:
PROPOSED EXPANSION JOINT AND CONCRETE ARMORING TO BE SET TO ACCOMMODATE 1/2" CHANGE IN FINISHED GRADE IN PHASE 2 CONSTRUCTION (SEE BR SHT 13).

FOR SECTIONS A-A THROUGH C-C SEE BRIDGE SHEET 22.
FOR SECTION D-D SEE BRIDGE SHEET 23.

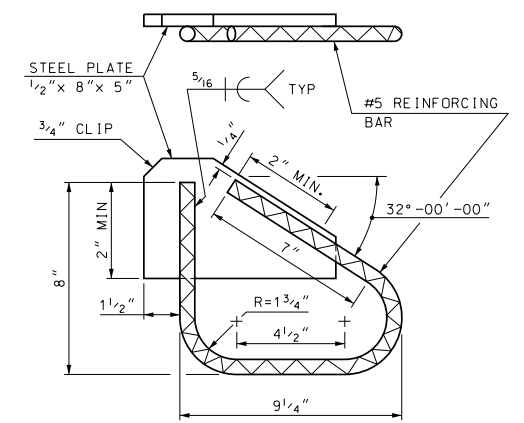
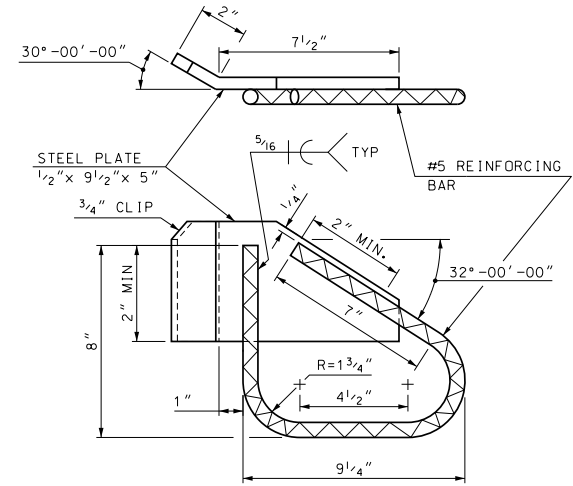
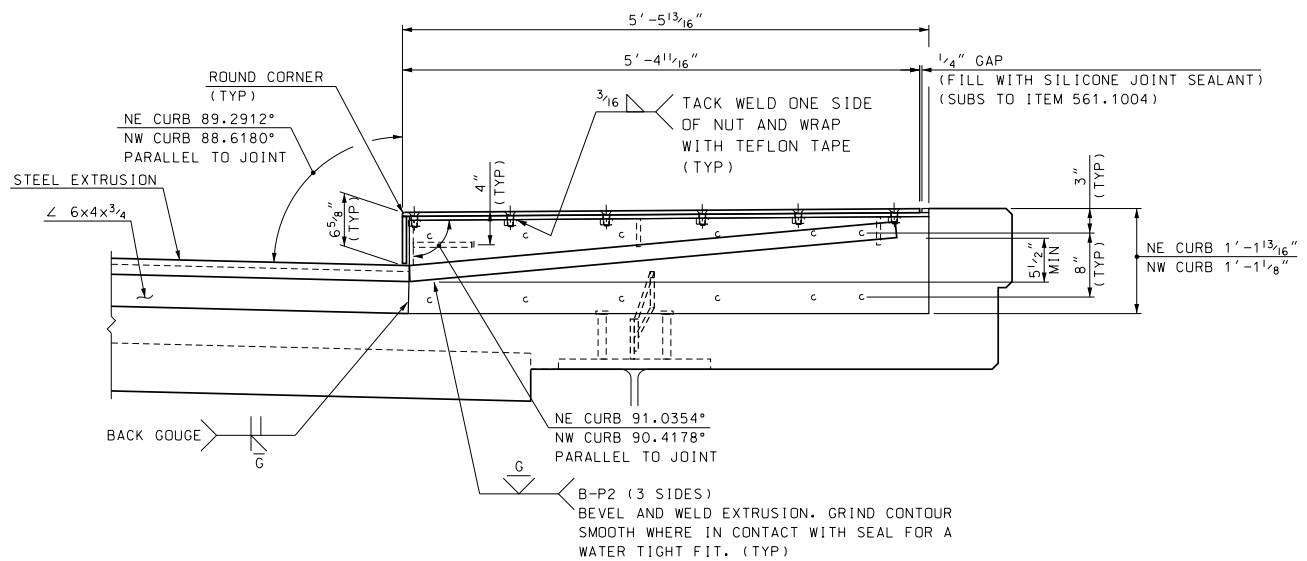
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440				
LOCATION	TREMONT STREET over CONTOOCOOK RIVER								
STRIP SEAL EXP JT BR NO 131/035 (1 OF 3)					BRIDGE SHEET				
					21 OF 30				
					FILE NUMBER				
					136-2-1				
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	WPS	DATE			
		DESIGNED	SMG	1/19	CHECKED	WPS	10/19		
		DRAWN	SMG	1/19	CHECKED	WPS	10/19		
		QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19		
		ISSUE DATE			FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS
		REV. DATE			-----		25		34

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Strip exp jt B	AS NOTED



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

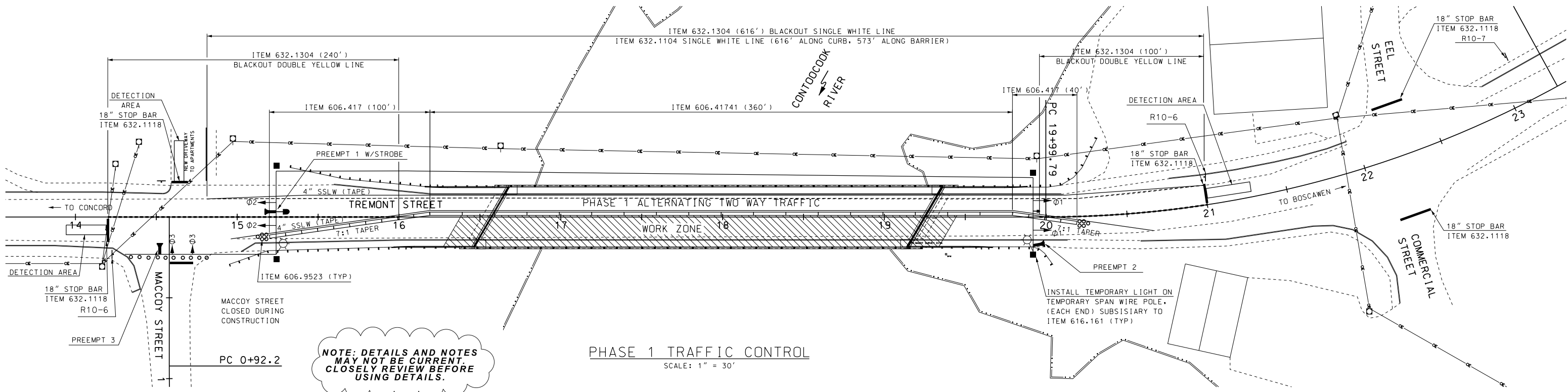


SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN											
TOWN	BOSCAWEN	BRIDGE NO.	131/035	STATE PROJECT	42440						
LOCATION TREMONT STREET over CONTOOCCOOK RIVER											
STRIP SEAL EXP JT BR NO 131/035 (3 OF 3)										BRIDGE SHEET	23 OF 30
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	WPS	DATE					
		SMG	1/19	CHECKED	WPS	10/19	FILE NUMBER				
		SMG	1/19	CHECKED	WPS	10/19	136-2-1				
QUANTITIES		GMC/CKN	10/19	CHECKED	WPS	10/19	TOTAL SHEETS				
ISSUE DATE		FEDERAL PROJECT NO.				SHEET NO.	27				
REV. DATE							34				

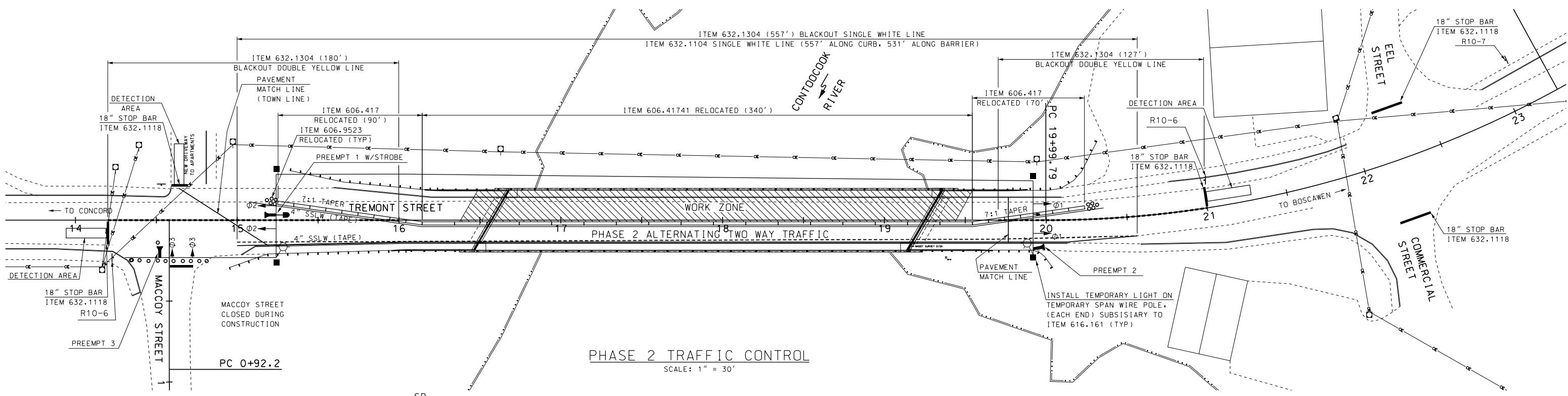
FOR LOCATION OF SECTIONS D-D SEE BRIDGE SHEET 21.

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Strip exp jt B	AS NOTED



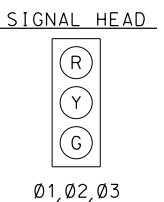
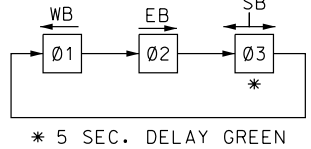
NOTE: DETAILS AND NOTES MAY NOT BE CURRENT. CLOSELY REVIEW BEFORE USING DETAILS.

PHASE 1 TRAFFIC CONTROL
SCALE: 1" = 30'



PHASE 2 TRAFFIC CONTROL
SCALE: 1" = 30'

SIGNAL PHASE 1				
	Ø1	Ø2	Ø3	
TIMING IN SECONDS	WB	EB	SB	*1
INITIAL INTERVAL	10	10	5	
VEHICAL EXTENSION	5	5	3	
MAXIMUM I	22	22	10	
MAXIMUM II				
YELLOW	4	4	4	
ALL RED	26	26	2	
FLASH	FR	FR	FR	
RECALL	SOFT	OFF	OFF	



SIGNAL PHASE 2				
	Ø1	Ø2	Ø3	
TIMING IN SECONDS	WB	EB	SB	*1
INITIAL INTERVAL	10	10	5	
VEHICAL EXTENSION	5	5	3	
MAXIMUM I	22	22	10	
MAXIMUM II				
YELLOW	4	4	4	
ALL RED	26	26	2	
FLASH	FR	FR	FR	
RECALL	OFF	SOFT	OFF	

SIGNAL TIMING NOTE: Ø3 MUST ALWAYS CALL Ø2
Ø3 WILL BE SERVICED FIRST BUT Ø2 MUST ALWAYS FOLLOW Ø3
Ø1 CAN BE SERVICED WITHOUT A CALL FROM Ø2 OR Ø3
Ø2 CAN BE SERVICED WITHOUT A CALL FROM Ø3

EMERGENCY PREEMPT	
PREEMPT 1 CALLS	Ø1
PREEMPT 2 CALLS	Ø2
PREEMPT 3 CALLS	Ø3

SAMPLE PLAN
DATE: 11-2019

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

TOWN BOSCAWEN BRIDGE NO. 131/035 STATE PROJECT 42440

LOCATION TREMONT STREET over CONTOOCOOK RIVER

TRAFFIC CONTROL BR NO 131/035

DESIGNED	GMC	2/19	CHECKED	WPS	10/19	BRIDGE SHEET	24 OF 30
DRAWN	GMC	2/19	CHECKED	WPS	10/19	FILE NUMBER	136-2-1
QUANTITIES	GMC/CKN	10/19	CHECKED	WPS	10/19		
ISSUE DATE			FEDERAL PROJECT NO.		SHEET NO.	28	TOTAL SHEETS
REV. DATE							34

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
BRC/TREMONT ST	131-035 Traf control	AS NOTED

Mark:	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O
A1	#5	21.50	6	---												
A2MC	#5	3.25	10	C1	3.25											
A3MC	#5	3.25	10	C2	3.25											
A4	#5	22.25	6	---												
A5	#5	5.83	45	17		2.50	0.83	2.50								
A6	#5	6.25	40	N5		2.25	2.25	1.75								
A7	#3	3.04	40	N5		2.21	0.33	0.50								
A8	#3	2.33	40	N5		1.50	0.33	0.50								
A9		0.00														
A10		0.00														
A11		0.00														
A12	#5	20.25	8	---												
A13E	#5	2.75	32	N7			1.25	1.50					0.88		0.88	
A14E	#5	4.77	32	N2		0.83	1.50	0.73	1.71					1.21		1.21
A15E	#5	5.25	32	---												
A16E	#5	15.08	10	---												
A17EMC	#5	3.25	8	C1	3.25											
A18EMC	#5	3.25	8	C2	3.25											
A19E	#5	20.25	6	---												
A20E	#5	4.00	4	---												
A21E	#5	7.48	10	N2		3.50	0.83	1.98	1.17				0.70		1.01	
A22	#5	7.07	4	14	3.00	0.00	0.71	1.45	1.92							1.71
A23	#3	5.25	4	17		2.25	0.75	2.25								

SECTION SUMMARY TOTAL WEIGHT (lbs):	ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	Total
544	REINFORCING STEEL	89	0	1,007	0	0	0	0	0	0	0	0	0	1,096
544.11	MECH. CONNECTOR	0	0	68	0	0	0	0	0	0	0	0	0	68
544.2	EPOXY COATED	0	0	805	0	0	0	0	0	0	0	0	0	805
544.21	EPOXY MECH. CON.	0	0	54	0	0	0	0	0	0	0	0	0	54

131/035 DECK END @ ABUTMENT A BRIDGE SHEET 15 OF 30	Mark:	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O
AD1E	#5	7.33	8	---													
AD2E	#5	6.79	36	N2		2.00	0.81	3.21	0.77					0.54		0.54	
AD3E	#5	21.75	15	---													
AD4EMC	#5	3.25	15	C1	3.25												
AD5EMC	#5	3.25	15	C2	3.25												
AD6E	#5	22.00	15	---													
AD7E	#5	4.08	7	N8		0.83	3.25										
AD8E	#5	7.96	4	N1		0.38	1.08	4.85	1.27	0.38				1.22		0.34	

SECTION SUMMARY TOTAL WEIGHT (lbs):	ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	Total
544	REINFORCING STEEL	0	0	0	0	0	0	0	0	0	0	0	0	0
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	0	1,064	0	0	0	0	0	0	0	0	0	1,064
544.21	EPOXY MECH. CON.	0	0	102	0	0	0	0	0	0	0	0	0	102

131/035 ABUTMENT B BACKWALL/CORBEL/APPROACH SLAB BRIDGE SHEET 20 OF 30	Mark:	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O
B1E	#5	5.83	33	17		2.50	0.83	2.50									
B2E	#5	7.00	12	17		3.08	0.83	3.08									
B3	#5	5.75	67	N5		1.50	2.25	2.00									
B4	#5	2.96	67	N5		2.13	0.33	0.50									
B5	#5	2.33	67	N5		1.50	0.33	0.50									
B6	#5	0.00															
B7	#5	0.00															
B8	#5	0.00															
B9E	#5	5.83	2	S5	0.67	1.75	0.83	1.75					0.83				
B10E	#5	6.17	3	S5	0.83	1.75	1.00	1.75					0.83				
B11	#5	21.42	11	---													
B12MC	#5	3.25	11	C1	3.25												
B13MC	#5	3.25	11	C2	3.25												
B14	#5	20.58	11	---													
B15E	#5	21.42	3	---													
B16EMC	#5	3.25	3	C1	3.25												
B17EMC	#5	3.25	3	C2	3.25												
B18E	#5	20.75	3	---													
B19E	#5	5.33	6	N7				1.17	4.17				0.68		1.18		
B20E	#5	3.00	3	17		1.25	1.42	0.33									
B21E	#5	5.92	6	N7				1.00	4.92				0.68		1.18		
B22E	#5	2.17	3	17		1.08	0.67	0.42									
B23E	#5	14.00	6	---													
B24EMC	#5	3.25	6	C1	3.25												
B25EMC	#5	3.25	6	C2	3.25												
B26E	#5	16.00	6	---													
B27E	#5	5.25	28	---													
B28E	#5	2.50	31	N7				1.25	1.25				0.88		0.88		

SECTION SUMMARY TOTAL WEIGHT (lbs):	ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	Total
544	REINFORCING STEEL	0	0	1,253	0	0	0	0	0	0	0	0	0	1,253
544.11	MECH. CONNECTOR	0	0	75	0	0	0	0	0	0	0	0	0	75
544.2	EPOXY COATED	0	0	960	0	0	0	0	0	0	0	0	0	960
544.21	EPOXY MECH. CON.	0	0	61	0	0	0	0	0	0	0	0	0	61

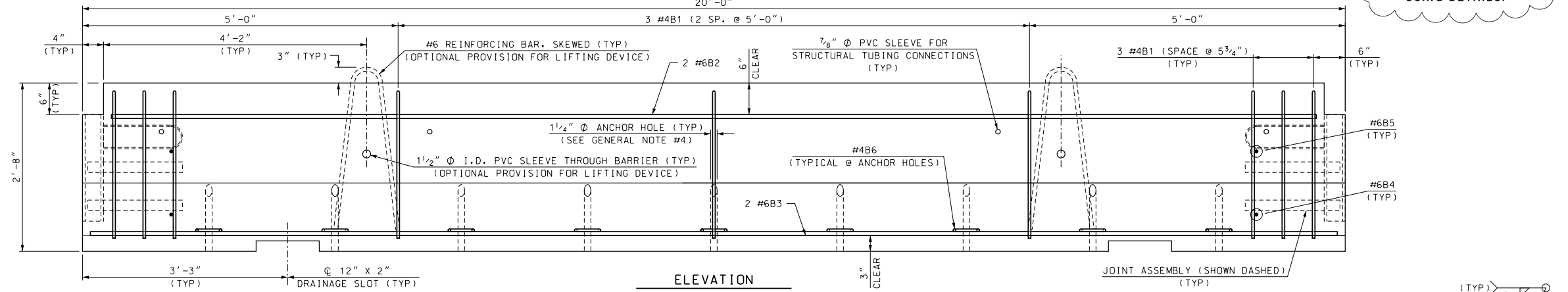
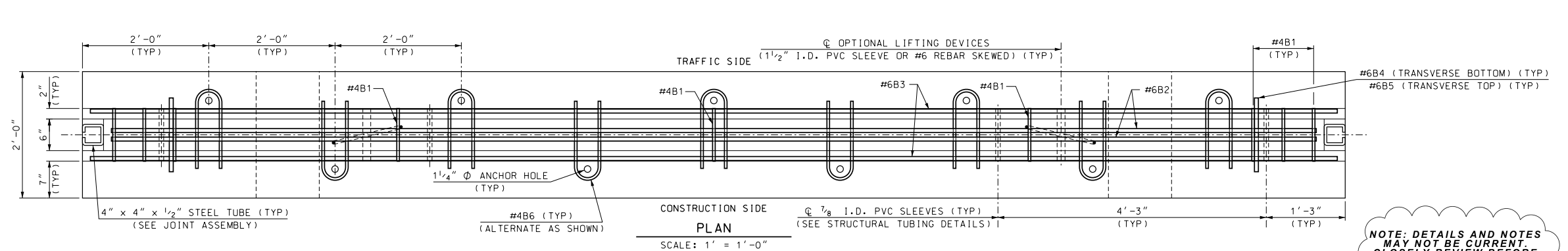
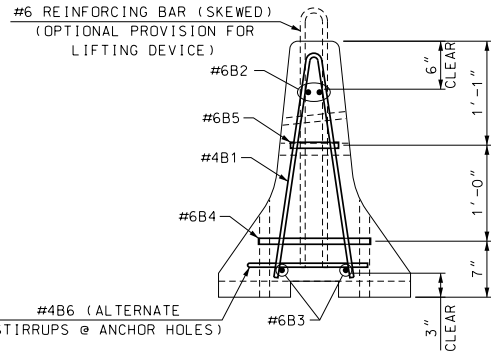
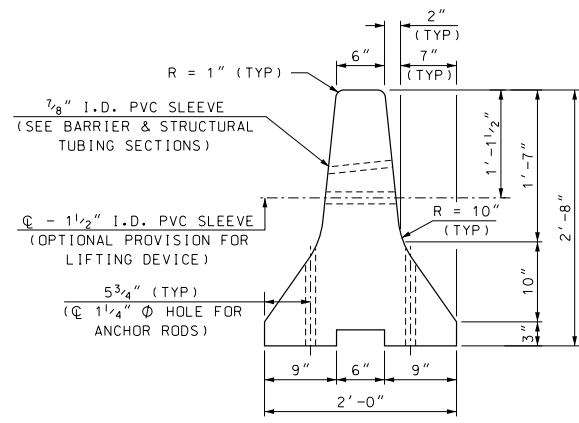
131/035 DECK END @ ABUTMENT B BRIDGE SHEET 20 OF 30	Mark:	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O
BD1E	#5	22.08	11	---													
BD2EMC	#5	3.25	11	C1	3.25												
BD3EMC	#5	3.25	11	C2	3.25												
BD4E	#5	22.08	11	---													
BD5E	#5	4.43	36	N2		1.00	0.79	1.64	1.00				0.71		0.71		
BD6E	#5	7.33	12	---													
BD7E	#5	8.30	2	N1		0.38	1.20	5.08	1.27	0.38			1.20		0.34		
BD8E	#5	4.50	7	N8		3.67	0.83										
BD9E	#5	0.00															
BD10E	#5	0.00															
BD11E	#5	0.00															
BD12E	#5	0.00															
BD13E	#5	0.00															

SECTION SUMMARY TOTAL WEIGHT (lbs):	ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	Total
544	REINFORCING STEEL	0	0	0	0	0	0	0	0	0	0	0	0	0
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	0	815	0	0	0	0	0	0	0	0	0	815
544.21	EPOXY MECH. CON.	0	0	75	0	0	0	0	0	0	0	0	0	75

139/040 DECK JOINTS BRIDGE SHEET 5 OF 30	Mark:	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O
D1E	#5	40.75	24	---													
D2EMC	#5	3.25	24	C1	3.25												
D3EMC	#5	3.25	24	C2	3.25												
D4E	#5	34.58	24	---													
D5E	#5	8.17	108	---													
D6EMC	#5	7.17	18	C1	7.17												
D7EMC	#5	1.00	18	C2	1.00												
D8E	#5	4.22	342	N2		0.75	0.75	1.97	0.75				0.53		0.53		

SECTION SUMMARY TOTAL WEIGHT (lbs):	ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	Total
544	REINFORCING STEEL	0	0	0	0	0	0	0	0	0	0	0	0	0
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	0	4,311	0	0	0	0	0	0	0	0	0	4,311
544.21	EPOXY MECH. CON.	0	0	316	0	0	0	0	0	0	0	0	0	316

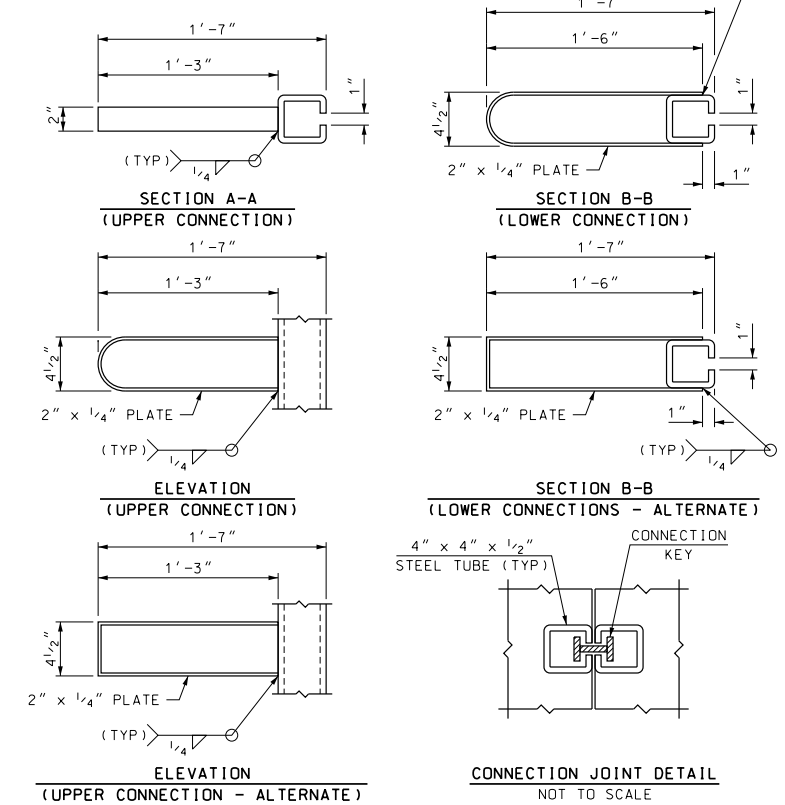
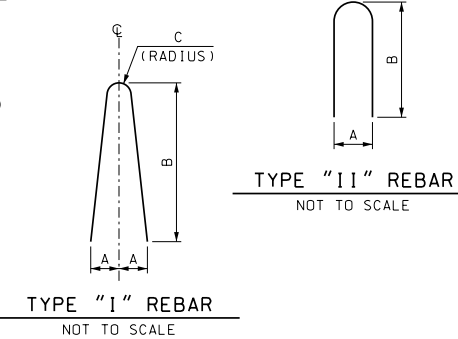
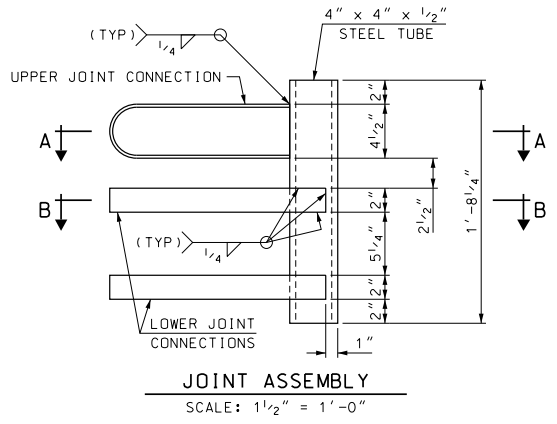
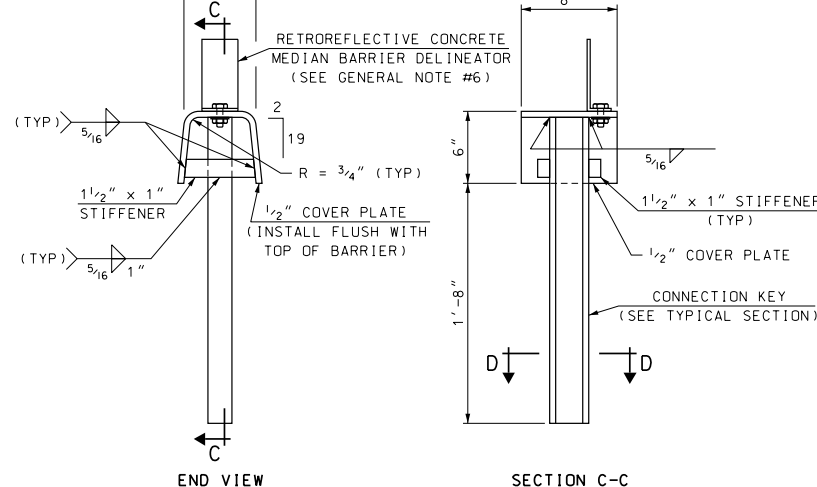
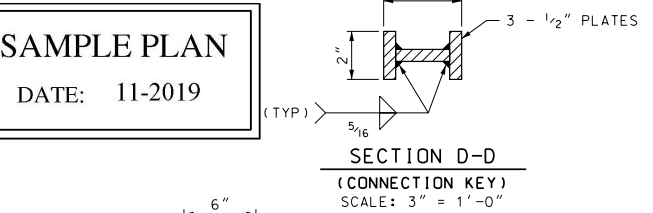
GRAND SUMMARY (ALL SECTIONS) TOTAL WEIGHT (lbs)													
ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	Total
544	REINFORCING STEEL	89	0	2,260	0	0	0	0	0	0	0	0	2,349
544.11	MECH. CONNECTOR	0	0	142	0	0	0	0	0	0	0	0	142
544.2	EPOXY COATED	0	0	7,954	0	0	0	0	0	0	0	0	7,954



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

SAMPLE PLAN
DATE: 11-2019

- GENERAL NOTES**
- PORTABLE CONCRETE BARRIER SHALL BE FURNISHED BY THE CONTRACTOR AND PAID FOR AS ITEM 606.41741 PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE). CONCRETE BARRIER AND ALL ATTACHMENTS SHALL BE FABRICATED IN ACCORDANCE WITH SPECIAL PROVISIONS. ALL BARRIER UNITS FOR BRACED SYSTEMS SHALL BE 20' LONG.
 - PORTABLE CONCRETE BARRIER DETAILS, AS SHOWN IN THESE PLANS, ARE IN COMPLIANCE WITH REQUIREMENTS PER UPDATED NCHRP REPORT 350 FOR TEST NO. 3-11 (MASH TEST LEVEL 3), CRASH TESTED BY MIDWEST ROADSIDE SAFETY; NY BOX BEAM STIFFENING OF UNANCHORED TCB, MARCH 2008, AND ACCEPTED PER FHWA LETTER B-239 (11/1/2012). THE BARRIER SYSTEM HAS BEEN CRASH TESTED WITH A 27.6" DYNAMIC DEFLECTION WHICH WILL ALLOW BRACED BARRIER TO BE PLACED A MINIMUM 12" FROM THE EDGE OF BRIDGE DECK.
 - A MINIMUM OF TWO BARRIER UNITS, WITH BRACED JOINTS ARE REQUIRED TO BE PLACED BEYOND BOTH ENDS OF THE BRIDGE WORK AREA. FOR SPEEDS GREATER THAN 45 MPH. FOR SPEEDS ≤ 45 MPH, A MINIMUM OF ONE BRACED BARRIER IS REQUIRED TO BE FULLY SET BEYOND EACH END OF BRIDGE WORK AREA.
 - THE LAST CONCRETE BARRIER UNIT, AT EACH END OF BRACED BARRIER LAYOUT, SHALL BE ANCHORED A MINIMUM 18" BELOW THE ROADWAY SURFACE. REQUIRED 1" Ø ANCHOR RODS (A36 STEEL) SHALL BE INSTALLED WITH 5 ANCHORS ON THE TRAFFIC SIDE OF BARRIER AND 4 ON THE CONSTRUCTION SIDE. IF THE END(S) OF THE BRACED CONCRETE BARRIER SYSTEM EXTENDS 50' OR MORE BEYOND LIMITS OF BRIDGE WORK THE LAST BARRIER UNIT DOES NOT REQUIRE ANCHORAGE.
 - PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE), ITEM 606.41741, MAY BE INSTALLED WITH A 230' MINIMUM RADIUS. GAPS CREATED BETWEEN STRUCTURAL TUBES AND CONCRETE BARRIER, DURING A RADIAL LAYOUT, SHALL BE SHIMMED WITH 8" x 8" x 1/2" PLATES & FENDER WASHERS TO FIRMLY ATTACH STRUCTURAL TUBING TO BARRIER.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL APPROVED RETROREFLECTIVE DELINEATORS AT 25-FOOT INTERVALS ALONG TOP AND/OR ONE FOOT DOWN THE SIDE OF PORTABLE CONCRETE BARRIER, SUBSIDIARY TO ITEM 606.41741 (SEE STANDARD NO. DL-1 OF NHDOT STANDARD PLANS FOR ROAD CONSTRUCTION). THE COLOR OF DELINEATORS SHALL, IN ALL INSTANCES, CONFORM TO THE COLOR OF EDGE LINE MARKINGS. DELINEATORS SUPPLEMENT, BUT DO NOT REPLACE, THE NEED FOR RETROREFLECTIVE SOLID EDGE LINE MARKINGS.



- MATERIAL NOTES**
- BARRIERS SHALL BE LIGHT COLORED CLASS AA CONCRETE, WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 psi, AND SHALL HAVE A SMOOTH UNIFORM SURFACE FREE OF DEFECTS AND IRREGULARITIES. CASTING DATE SHALL BE SHOWN ON BARRIER. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
 - ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615) GRADE 60. ALL REINFORCEMENT SHALL HAVE 1/2" MINIMUM CLEAR COVER, UNLESS OTHERWISE NOTED.
 - STRUCTURAL STEEL, EXCEPT THE STEEL TUBES, SHALL BE ASTM A36 OR A572. ALL STEEL SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 550.
 - STEEL TUBES, 6" x 6" x 3/16" & 4" x 4" x 1/2", SHALL BE ASTM A 500 GRADE B OR C. ALL TUBES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.
 - ALL STEEL FOR CONNECTION KEY AND TRANSITION KEY ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.
 - A MINIMUM OF 2 LIFTING DEVICES, EACH WITH THE CAPACITY TO LIFT A MASS OF 6 TONS (MINIMUM), SHALL BE INSTALLED TO EACH BARRIER UNIT. TWENTY FOOT LONG CONCRETE BARRIER UNITS ARE APPROXIMATELY 400 LBS./FT.
 - DELINEATORS SHALL BE ATTACHED TO BARRIER USING AN APPROVED ADHESIVE MATERIAL OR AS SHOWN ON THIS SHEET.

REINFORCING SCHEDULE (PER 20' BARRIER UNIT)

MARK	SIZE	LENGTH	# PIECES	TYPE	A	B	C	LOCATION
B1	#4	4'-10"	9	I	5"	2'-4"	1"	STIRRUPS
B2	#6	19'-1"	2	---	---	---	---	LONGITUDINAL (TOP)
B3	#6	19'-9"	2	---	---	---	---	LONGITUDINAL (BOTTOM)
B4	#6	1'-2"	2	---	---	---	---	TRANSVERSE (BOTTOM)
B5	#6	6"	2	---	---	---	---	TRANSVERSE (TOP)
B6	#4	2'-9"	9	II	5"	1'-3"	---	STIRRUPS

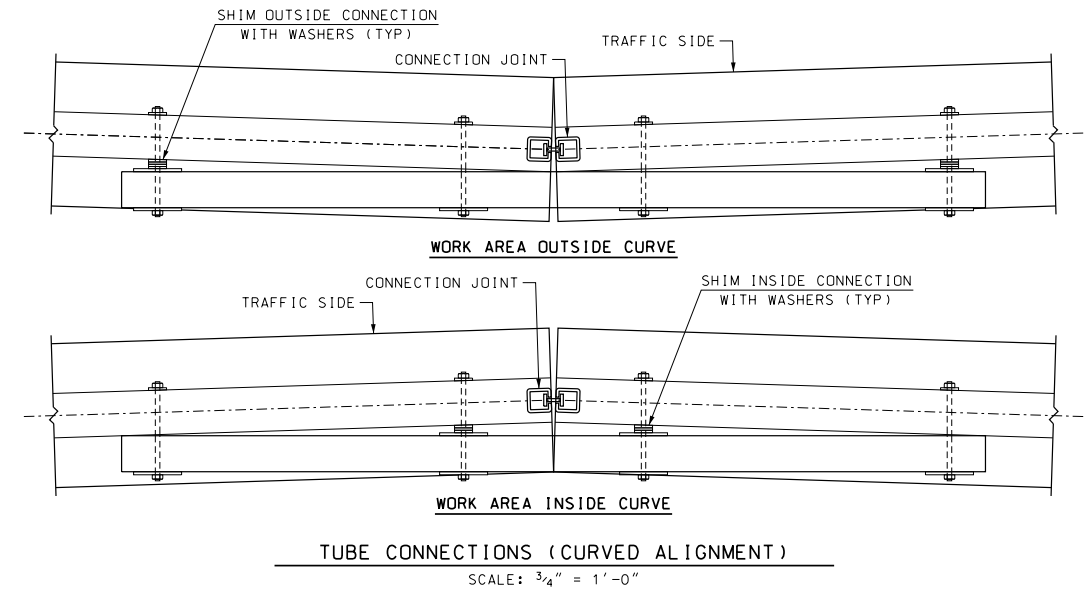
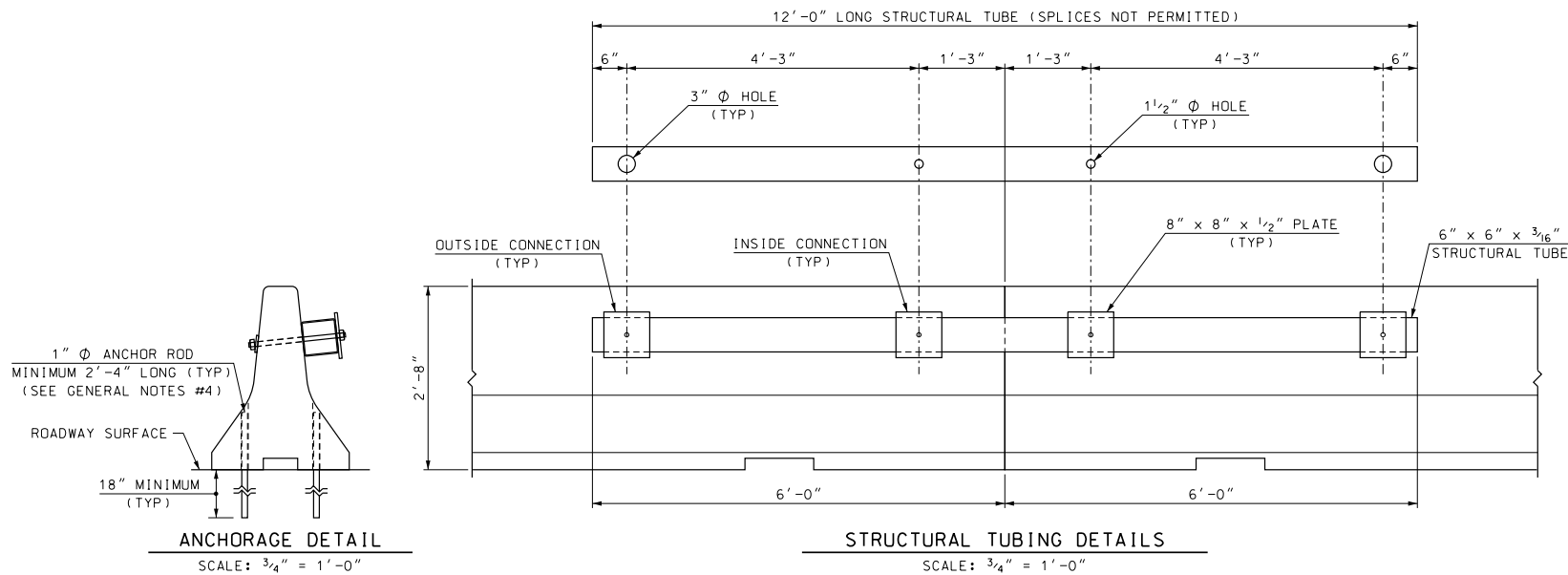
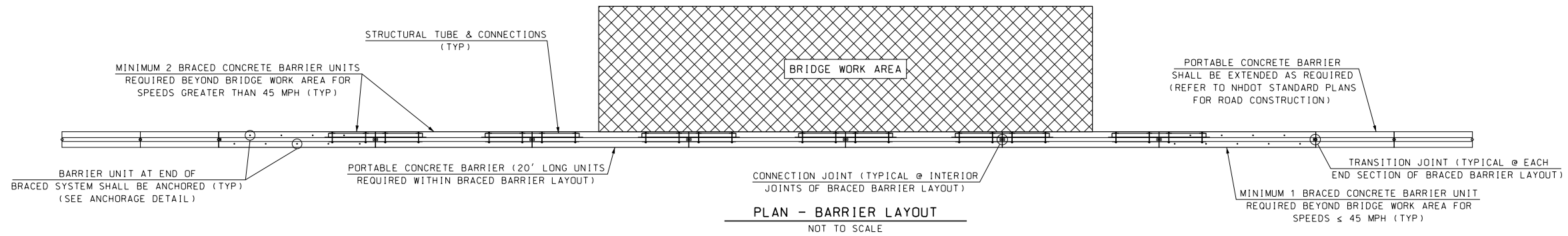
STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN: BOSCAWEN BRIDGE NO.: 139040, 131035 STATE PROJECT: 42440

LOCATION: US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCCOOK RIVER

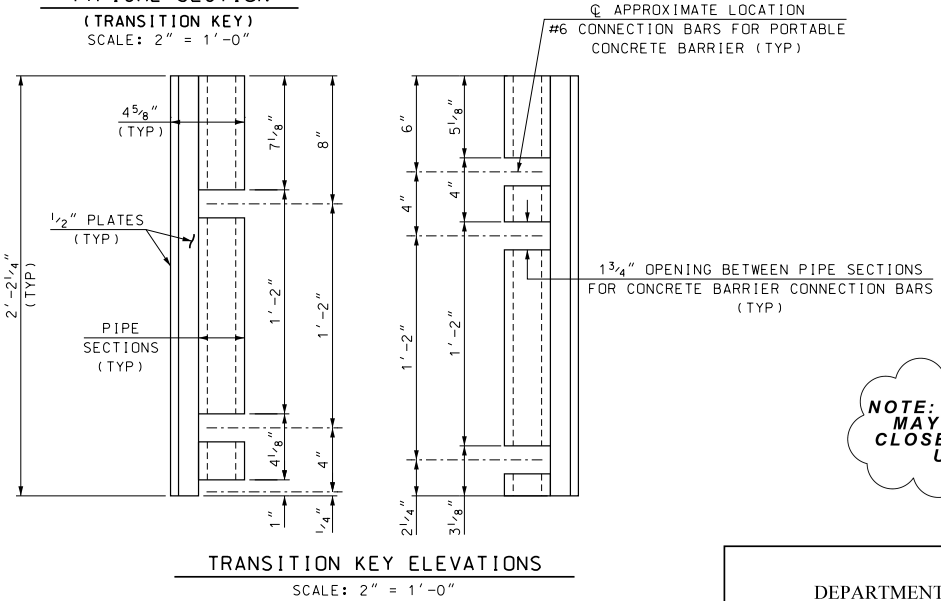
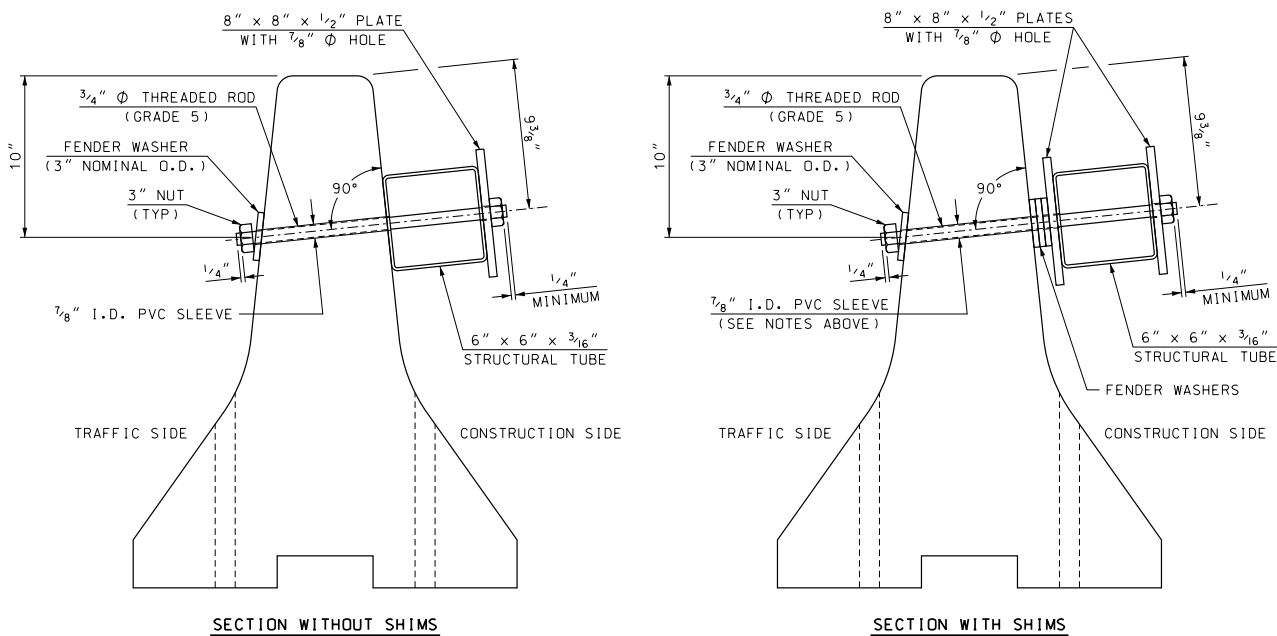
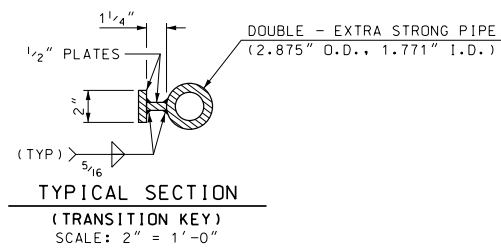
PORTABLE CONCRETE BARRIER - BRACED (1 OF 2)

DESIGNED	NHDOT	7/12	CHECKED	ABH	8/12
DRAWN	PJP	8/12	CHECKED	ABH	8/12
QUANTITIES	XXX	XX/XX	CHECKED	XXX	XX/XX
ISSUE DATE	8/15/12	FEDERAL PROJECT NO.	SHEET NO. 30		
REV. DATE	5/15/18	TOTAL SHEETS 34			



PVC SLEEVE OPENINGS SHALL BE MODIFIED/DRILLED AS REQUIRED TO PROPERLY ALIGN STRUCTURAL TUBE BRACING UNITS FOR CURVED ALIGNMENTS

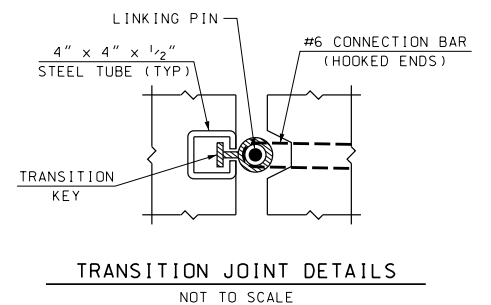
THE PRESENCE OF NORMAL HOLES WHICH HAVE BEEN MODIFIED/DRILLED WILL NOT AFFECT THE REUSE OF CONCRETE BARRIER UNITS



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

BARRIER & STRUCTURAL TUBING SECTIONS
SCALE: 2" = 1'-0"

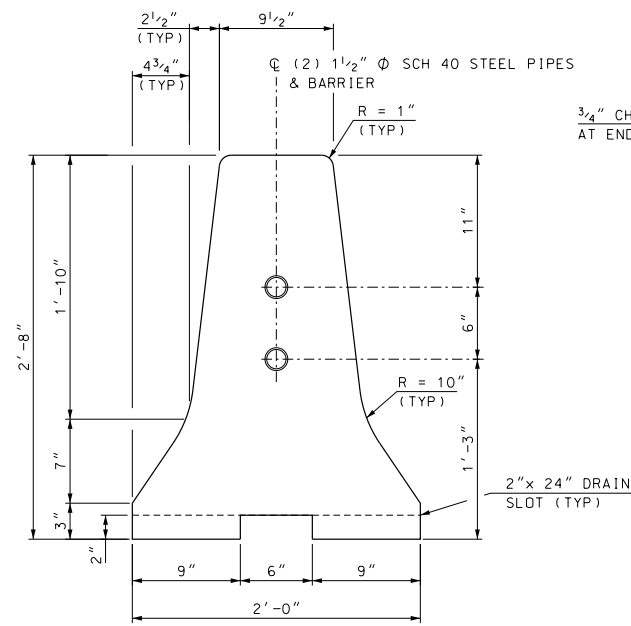
TRANSITION KEY ELEVATIONS
SCALE: 2" = 1'-0"



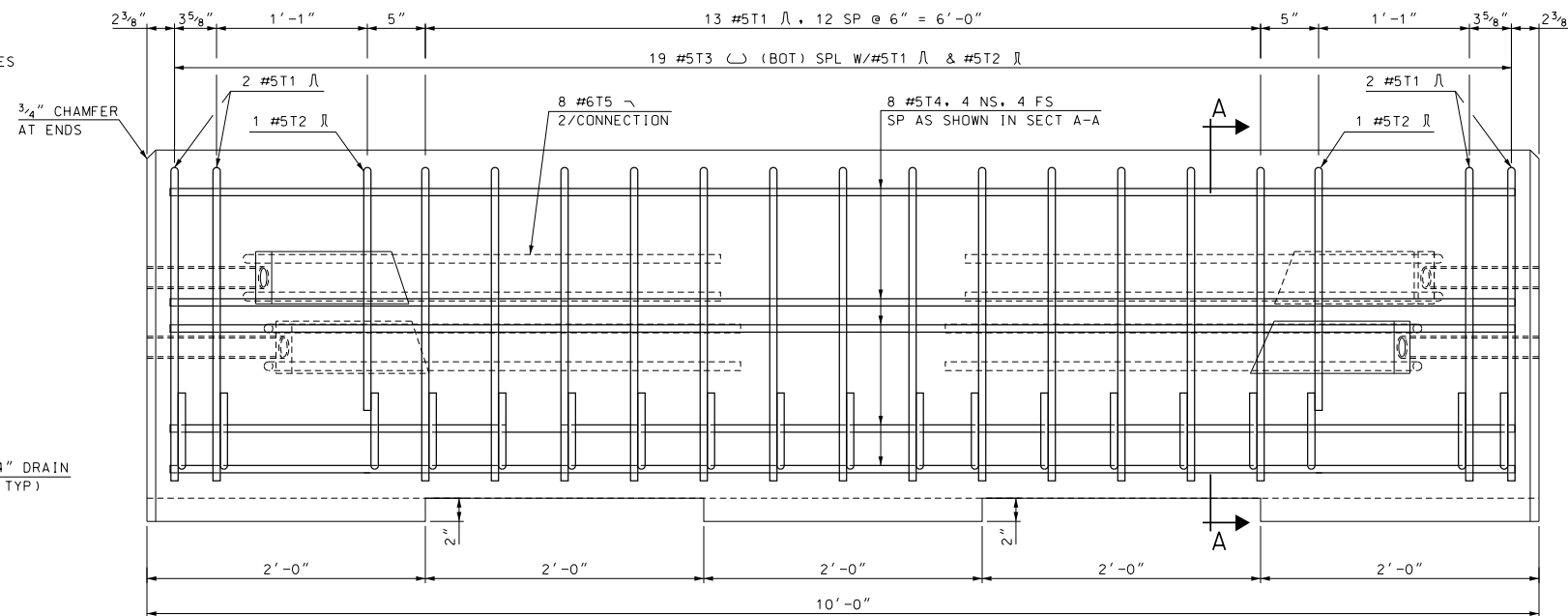
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE													
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN													
TOWN	BOSCAWEN	BRIDGE NO.	139/040, 131/035	STATE PROJECT	42440								
LOCATION US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCOOK RIVER													
PORTABLE CONCRETE BARRIER - BRACED (2 OF 2)						BRIDGE SHEET							
REVISIONS AFTER PROPOSAL						DESIGNED	NHDOT	7/12	CHECKED	ABH	8/12	FILE NUMBER	27 OF 30
						DRAWN	PJP	8/12	CHECKED	ABH	8/12	136-2-1	
						QUANTITIES	XXX	XX/XX	CHECKED	XXX	XX/XX	TOTAL SHEETS	34
						ISSUE DATE	8/15/12	FEDERAL PROJECT NO.		SHEET NO.		31	
						REV. DATE	5/15/18						

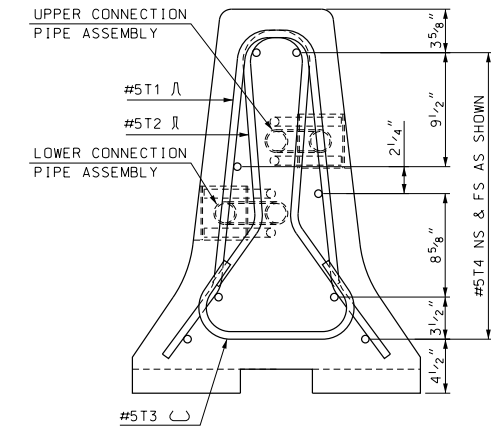
SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
CADD/BRC	PCB-BRACED	AS NOTED



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



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



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

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

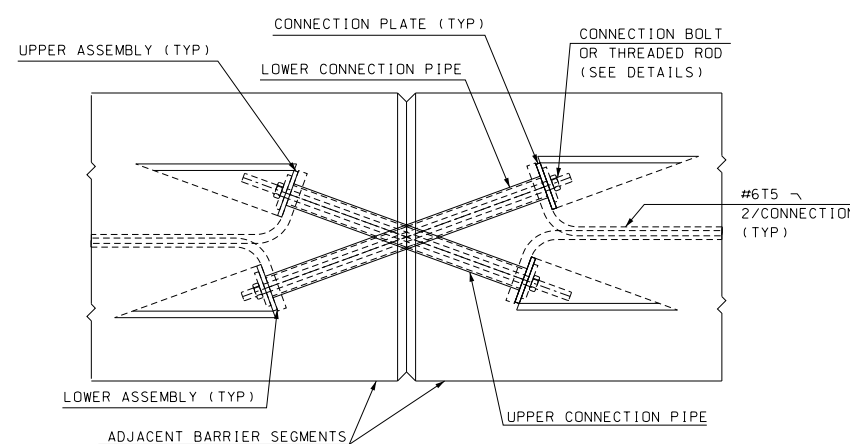
GENERAL NOTES:

- PORTABLE CONCRETE BARRIER SHALL BE FURNISHED BY THE CONTRACTOR AND PAID FOR AS ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE). CONCRETE BARRIER AND ALL ATTACHMENTS SHALL BE FABRICATED IN ACCORDANCE WITH SPECIAL PROVISIONS. ALL BARRIER UNITS SHALL BE 10' LONG.
- PORTABLE CONCRETE BARRIER DETAILS, AS SHOWN ON THESE PLANS, ARE IN COMPLIANCE WITH REQUIREMENTS PER UPDATED NCHRP REPORT 350 FOR TEST NO 3-11 (MASH TEST LEVEL 3), CRASH TESTED BY TEXAS A&M UNIVERSITY SYSTEM, MAY 2005, AND ACCEPTED PER REPORT FHWA/TX-05/0-4692-1.
- THE BARRIER HAS BEEN CRASH TESTED WITH A 27" DYNAMIC DEFLECTION WHICH WILL ALLOW THE BARRIER TO BE PLACED A MINIMUM 12" FROM THE EDGE OF THE DECK.
- USAGE OF THE TEXAS X-BOLT BARRIER REQUIRES A MINIMUM OF 100 LINEAR FEET (10 - 10' UNITS). THE X-BOLT BARRIER SHALL EXTEND A MINIMUM OF 50' BEYOND THE BRIDGE AT EACH END, PARALLEL TO THE ROADWAY CENTERLINE. THE ENDS OF THE BARRIER SHALL CONNECT TO THE TRANSITION UNIT AND THEN TO NHDOT PCB FLARED OUT THE REQUIRED CLEAR ZONE AS SHOWN ON SHEET 2 OF 3.
- THE CONNECTION BOLTS AT THE BARRIER JOINTS SHALL BE TIGHTENED TO THE "TURN OF THE NUT" METHOD IN ACCORDANCE WITH SECTION 550.3.11.6.4 OF NHDOT STANDARD SPECIFICATIONS. AFTER INSTALLATION, ALL X-BOLT JOINTS SHALL BE CHECKED BY THE CONTRACT ADMINISTRATOR CONFIRMING THEY MEET THE TIGHTENED REQUIREMENT.
- THE TEXAS X-BOLT BARRIER MAY BE INSTALLED WITH A 125' MINIMUM RADIUS OF CURVATURE AND A RELATIVE ANGLE OF 4 DEGREES BETWEEN THE 10' UNITS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL APPROVED RETROREFLECTIVE DELINEATORS AT 25-FOOT INTERVALS ALONG TOP AND/OR ONE FOOT DOWN THE SIDE OF PORTABLE CONCRETE BARRIER, SUBSIDIARY TO ITEM 606.41741 (SEE STANDARD NO. DL-1 OF NHDOT STANDARD PLANS FOR ROAD CONSTRUCTION). THE COLOR OF THE DELINEATORS SHALL, IN ALL INSTANCES, CONFORM TO THE COLOR OF THE EDGE LINE MARKINGS. DELINEATOR SUPPLEMENT, BUT DO NOT REPLACE, THE NEED FOR RETROREFLECTIVE SOLID EDGE LINE MARKINGS.

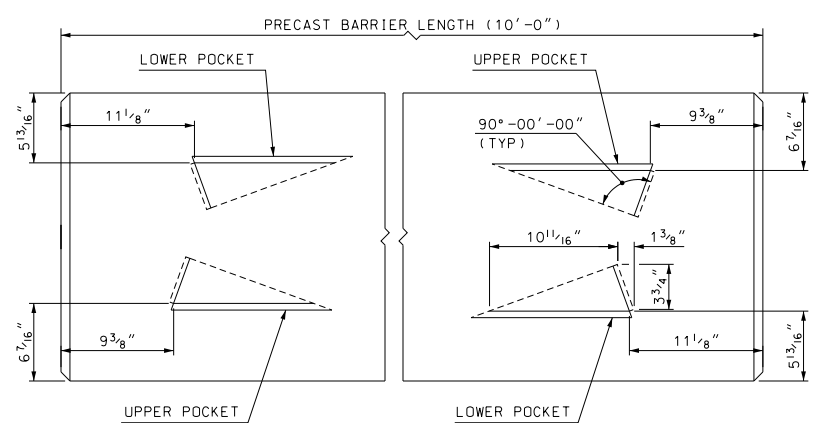
MATERIAL NOTES:

- BARRIERS SHALL BE LIGHT COLORED CLASS AA CONCRETE, WITH COMPRESSIVE STRENGTH OF 4000 psi, AND SHALL HAVE A SMOOTH UNIFORM SURFACE FREE OF DEFECTS AND IRREGULARITIES. CASTING DATE SHALL BE SHOWN ON BARRIER. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615) GRADE 60. ALL REINFORCEMENT SHALL HAVE 1 3/4" MINIMUM CLEAR COVER, UNLESS OTHERWISE NOTED.
- CONNECTION BOLTS SHALL BE 7/8" DIA GALVANIZED HIGH STRENGTH THREADED RODS CONFORMING TO ASTM A325. STEEL PIPES, PLATE WASHERS, AND CONNECTION PLATES SHALL BE GALVANIZED ASTM A36 STEEL.
- ALL STEEL FOR CONNECTIONS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.

NOTE: CONNECTION HARDWARE SHALL NOT EXTEND BEYOND THE CONCRETE FACE OF BARRIER



TYPE X JOINT CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0"



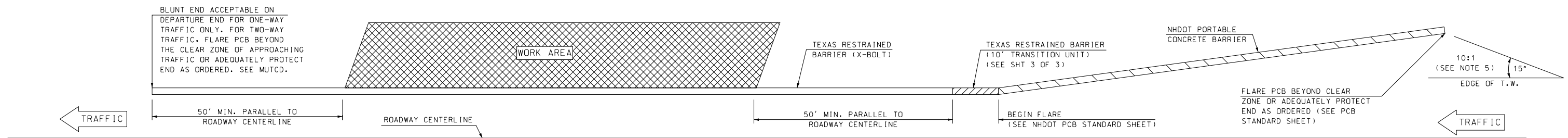
TOP VIEW CONNECTION POCKETS
SCALE: 1 1/2" = 1'-0"

BARRIER WEIGHT APPROX. 2.38 TONS

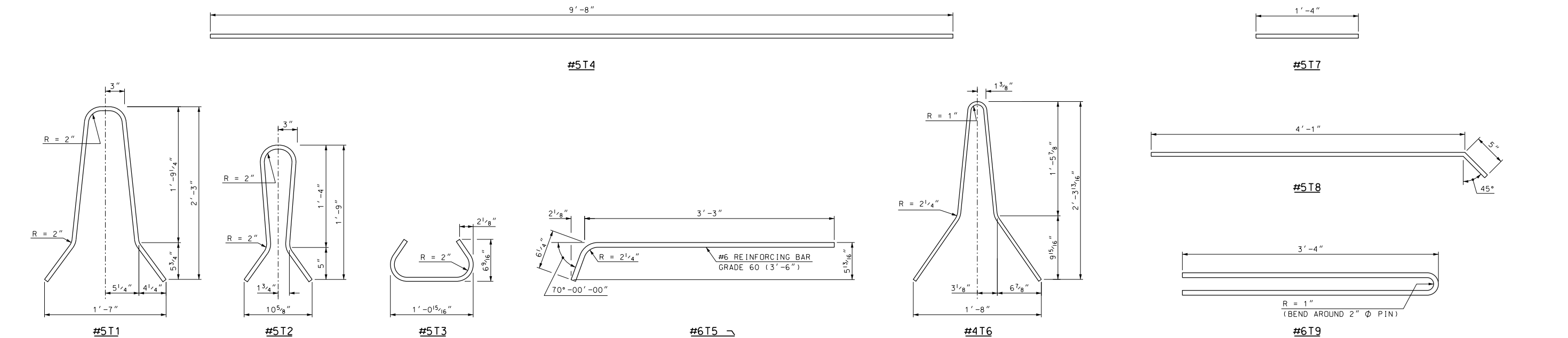
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN			
TOWN	BOSCAWEN	BRIDGE NO.	139/040, 131/035 STATE PROJECT 42440
LOCATION	US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCOOK RIVER		
TEXAS RESTRAINED BARRIER (X-BOLT) (1 OF 3)			BRIDGE SHEET 28 OF 30
DESIGNED	TXDOT	12/10	CHECKED NHDOT 4/18
DRAWN	GMC	1/18	CHECKED NHDOT 4/18
QUANTITIES	XXX	XX/XX	CHECKED XXX XX/XX
ISSUE DATE	5/15/18	FEDERAL PROJECT NO.	SHEET NO.
REV. DATE			32
			TOTAL SHEETS 34

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
CADD/BRC	X-BoltBarrier	AS NOTED

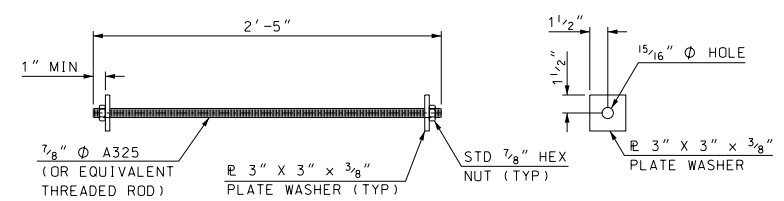


PLAN - BARRIER LAYOUT
(NTS)

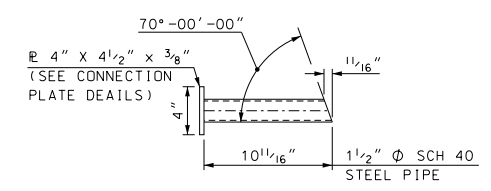


BENDING SCHEDULE
SCALE: 1 1/2" = 1'-0"

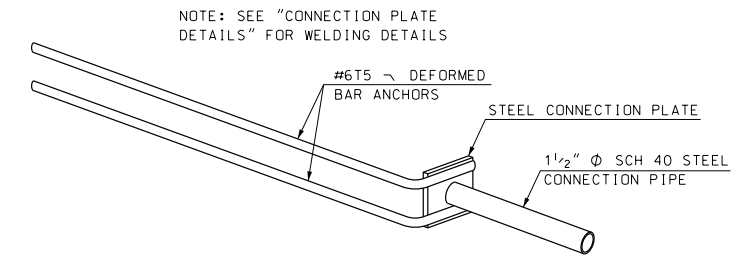
NOTE: DETAILS AND NOTES MAY NOT BE CURRENT. CLOSELY REVIEW BEFORE USING DETAILS.



CONNECTION BOLT OR THREADED ROD DETAILS
SCALE: 1 1/2" = 1'-0"



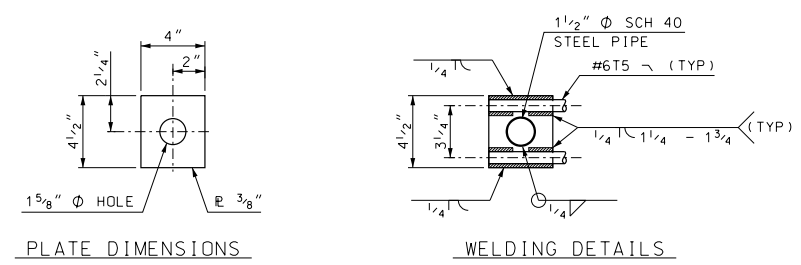
UPPER CONNECTION PIPE DETAIL
SCALE: 1 1/2" = 1'-0"



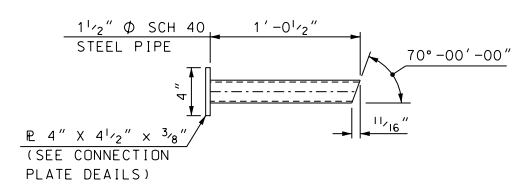
ISOMETRIC VIEW OF TYPICAL WELD ASSEMBLY
SCALE: N.T.S.

REBAR SCHEDULE TEXAS X-BOLT (10' BARRIER)			
MK	QTY	LENGTH	
T1	#5	17	5'-2"
T2	#5	2	4'-0"
T3	#5	19	2'-1"
T4	#5	8	9'-8"
T5	#6	8	3'-9"

REBAR SCHEDULE TRANSITION (10' BARRIER)			
MK	QTY	LENGTH	
T1	#5	9	5'-2"
T2	#5	1	4'-0"
T3	#5	10	2'-1"
T4	#5	8	9'-8"
T5	#6	4	3'-9"
T6	#4	4	5'-2"
T7	#5	4	1'-4"
T8	#5	2	4'-6"
T9	#6	3	6'-10"



CONNECTION PLATE DETAILS
SCALE: 2" = 1'-0"

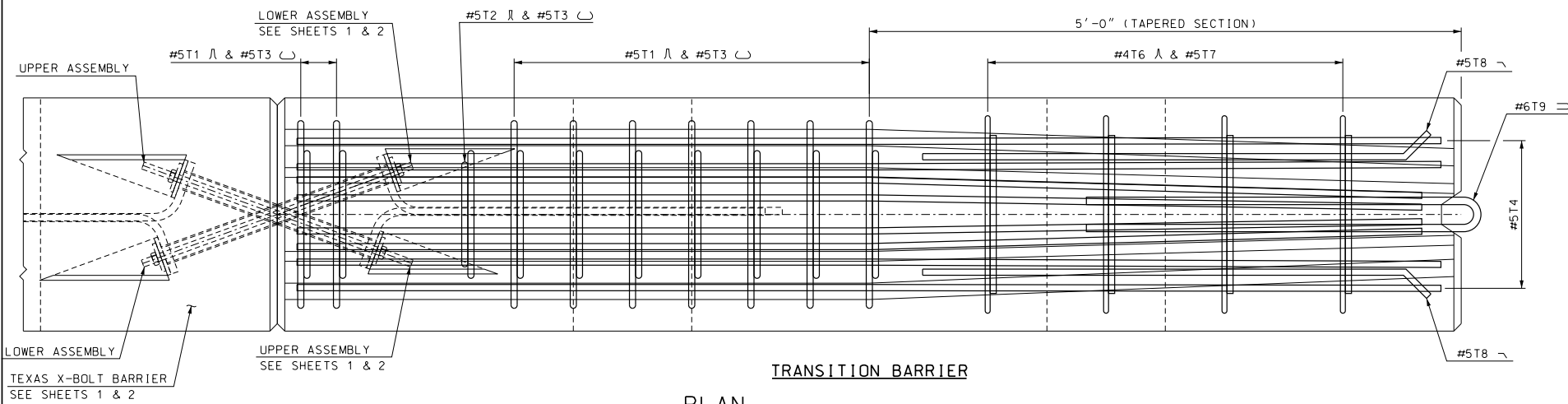


LOWER CONNECTION PIPE DETAIL
SCALE: 1 1/2" = 1'-0"

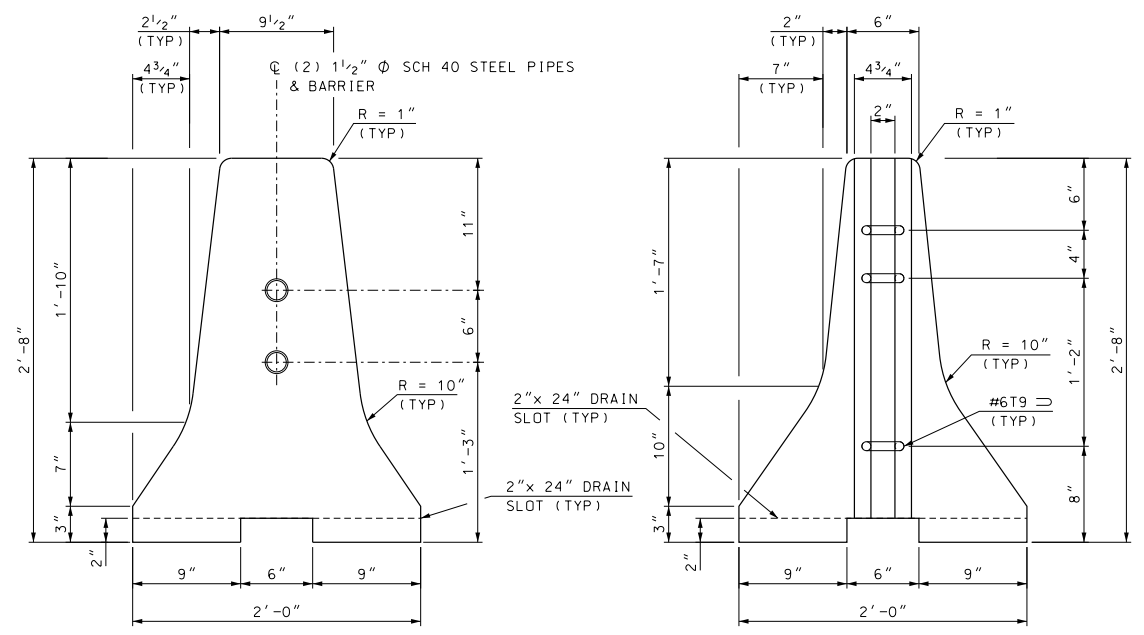
SAMPLE PLAN
DATE: 11-2019

STATE OF NEW HAMPSHIRE															
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN															
TOWN	BOSCAWEN	BRIDGE NO.	139/040, 131/035	STATE PROJECT	42440										
LOCATION - US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCOOK RIVER															
TEXAS RESTRAINED BARRIER (X-BOLT) (2 OF 3)								BRIDGE SHEET	29 OF 30						
REVISIONS AFTER PROPOSAL								DESIGNED	TXDOT	12/10	CHECKED	NHDOT	4/18	FILE NUMBER	136-2-1
								DRAWN	GMC	1/18	CHECKED	NHDOT	4/18		
								QUANTITIES	XXX	XX/XX	CHECKED	XXX	XX/XX		
								ISSUE DATE	5/15/18	FEDERAL PROJECT NO.		SHEET NO.	33	TOTAL SHEETS	34
								REV. DATE							

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
CADD/BRC	X-BoltBarrier	AS NOTED

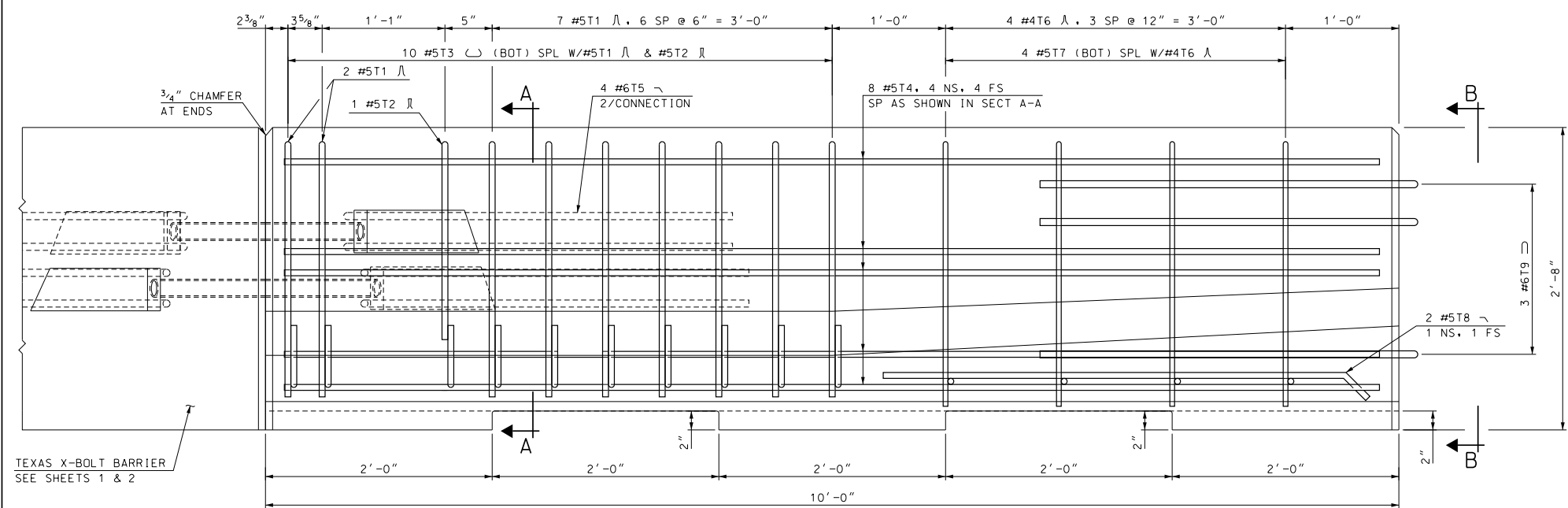


PLAN
SCALE: 1 1/2" = 1'-0"

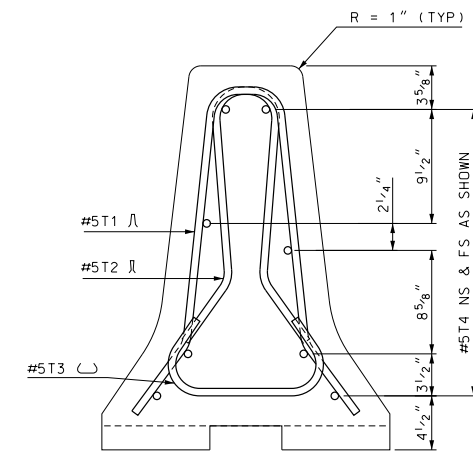


END VIEW SECTION A-A
SCALE: 1 1/2" = 1'-0"

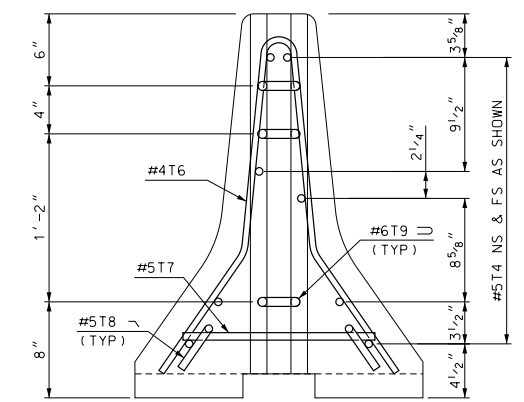
VIEW B-B
SCALE: 1 1/2" = 1'-0"



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

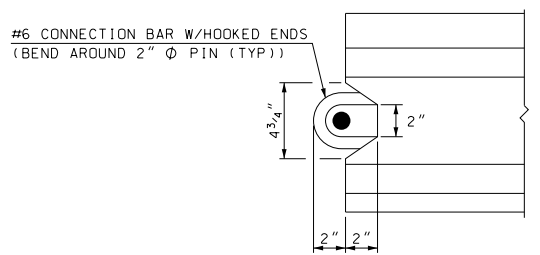


SECTION A-A
SCALE: 1 1/2" = 1'-0"

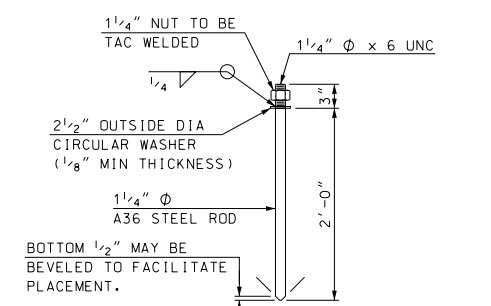


VIEW B-B
SCALE: 1 1/2" = 1'-0"

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



END NOTCH DETAIL
SCALE: 2" = 1'-0"

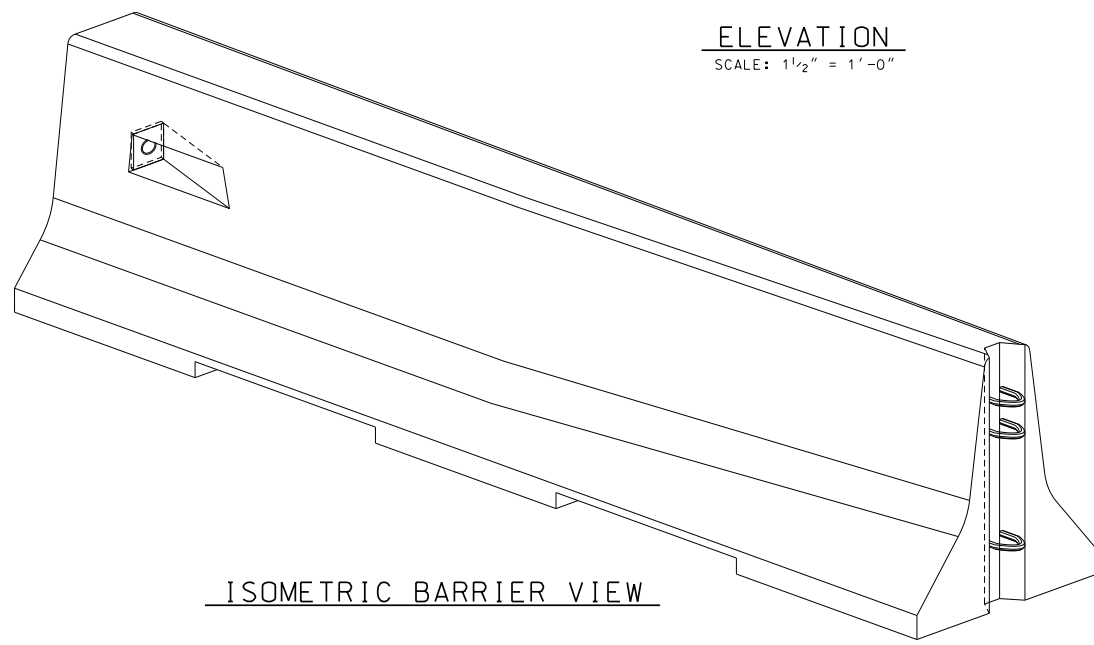


CONNECTOR PIN ASSEMBLY
SCALE: 1" = 1'-0"

NOTES

1. TEXAS RESTRAINED BARRIER (TRANSITION UNIT) SHALL BE PAID FOR UNDER ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE).
2. SEE SHEET 1 OF 3 FOR NOTES AND SHEET 2 OF 3 FOR REBAR SCHEDULE.

BARRIER WEIGHT APPROX. 2.28 TONS



ISOMETRIC BARRIER VIEW

SAMPLE PLAN
DATE: 11-2019

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
CADD/BRC	X-BoltBarrier	AS NOTED

STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN					
TOWN	BOSCAWEN	BRIDGE NO.	139/040, 131/035	STATE PROJECT	42440
LOCATION US RTE 4 over RIVER RD & NHRR (ABD) & TREMONT ST over CONTOOCOOK RIVER					
TEXAS RESTRAINED BARRIER (X-BOLT) (3 OF 3)					BRIDGE SHEET
REVISIONS AFTER PROPOSAL					30 OF 30
DESIGNED	TXDOT	DATE	CHECKED	NHDOT	DATE
DRAWN	GMC	12/10	CHECKED	NHDOT	4/18
QUANTITIES	XXX	XX/XX	CHECKED	XXX	XX/XX
ISSUE DATE	5/15/18	FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
REV. DATE				34	34