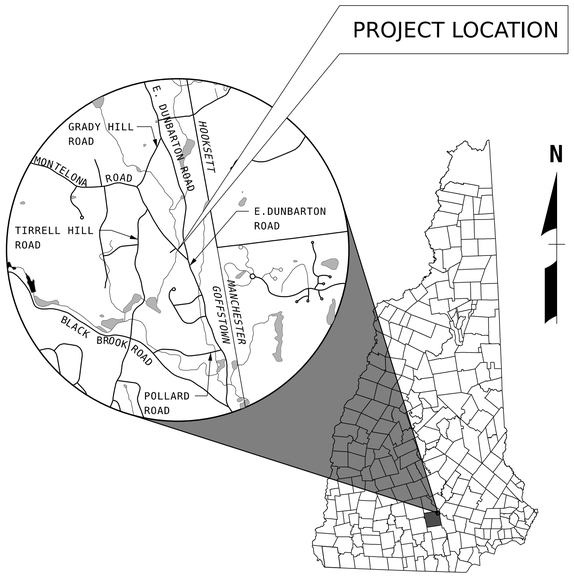
TOWN OF GOFFSTOWN
HILLSBOROUGH COUNTY
NEW HAMPSHIRE

PLANS OF PROPOSED CULVERT REPLACEMENT
MONTELONA ROAD OVER HARDY BROOK

FEBRUARY 2026



LOCATION MAP

INDEX OF SHEETS

STATE OF NEW HAMPSHIRE — JOSIF BICJA No. 13312 LICENSED PROFESSIONAL ENGINEER
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
(603) 669-5555 • www.hoyletanner.com

GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
TITLE SHEET

PROJECT NO. 24.010001.02

SHEET NO.
1
OF 18

2/19/2026
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GENERAL

EDGE OF PAVEMENT — PROPOSED ROADWAY
TRAVELED WAY — existing roadway
(pavement removed outside slope lines)

DRIVEWAYS — (label surface type)

BUILDINGS — (building to be removed)
(label house or type of building)

FOUNDATION — (label type)

LEACH FIELD — leach field

BRIDGE CROSSINGS — STREAM — OVERPASS

STEPS AND WALK — (label type)

DITCH LINE

INTERMITTENT WATER COURSE/STREAM — ST

SHORE LINE — river/stream — pond — (label name of water body)

POTENTIAL WET AREA SYMBOL

BRUSH OR WOODS LINE

TREES (PLANS) — (deciduous) (coniferous) (stump)

TREE OR STUMP (CROSS-SECTIONS) — (show station, circumference in feet & type)

HEDGE — (label type)

MONITORING WELL — mon

WELL

FLAG POLE — fp

ORIGINAL GROUND (TYPICALS)

MUCK LAYER (SECTIONS/REMOVAL) — Exist. Muck

ROCK OUTCROP

ROCK LINE (TYPICALS & SECTIONS ONLY) — Exist. Rock

	existing	PROPOSED
GUARDRAIL	(label type) bgr	
	(label type) cgr	
JERSEY BARRIER		
CURB	(label type)	
STONE WALL		
SHEET PILE \ COFFERDAM		
RETAINING WALL	(label type)	(points toward retained ground)
FENCE	(label type)	

SIGNS — (single post) (double post)

OVERHEAD SIGN STRUCTURE

GAS PUMP — gp

FUEL TANK (ABOVE GROUND) — ft (label size & type)

STORAGE TANK FILLER CAP — fc

SEPTIC TANK — S

GRAVE — gr

MAILBOX — mb

VENT PIPE — vp

SATELLITE DISH ANTENNA — da

PHONE — ph

GROUND LIGHT/LAMP POST — gl lp

BORING LOCATION

TEST PIT

INTERSTATE NUMBERED HIGHWAY — 93

UNITED STATES NUMBERED HIGHWAY — 3

STATE NUMBERED HIGHWAY — 102

SHORELAND - WETLAND

WETLAND DESIGNATION AND TYPE — 2 PUB2E

DELINEATED WETLAND — DW
ORDINARY HIGH WATER — OHW
TOP OF BANK — TOB
TOP OF BANK & ORDINARY HIGH WATER — TOBOHW
NORMAL HIGH WATER — NHW
WIDTH AT BANK FULL — WBF
PRIME WETLAND — PWET
PRIME WETLAND 100' BUFFER — PWET100
NON-JURISDICTIONAL DRAINAGE AREA — NJDA
COWARDIN DISTINCTION LINE — CDL
TIDAL BUFFER ZONE — TBZ
DEVELOPED TIDAL BUFFER ZONE — DTBZ
HIGHEST OBSERVABLE TIDE LINE — HOTL
MEAN HIGH WATER — MHW
MEAN LOW WATER — MLW
VERNAL POOL — VP
SPECIAL AQUATIC SITE — SAS
REFERENCE LINE — REF
WATER FRONT BUFFER — WB50
NATURAL WOODLAND BUFFER — NWB150
PROTECTED SHORELAND — PS250
INVASIVE SPECIES LABEL — I.S. I / I.S. II
INVASIVE SPECIES — INV

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY — FP500
100 YEAR FLOODPLAIN BOUNDARY — FPI00
FLOODWAY — FW

ENGINEERING

CONSTRUCTION BASELINE — 30 31 32

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/ CLEARING LINE

SLOPE LINE (FILL)

SLOPE LINE (CUT)

PROFILES AND CROSS SECTIONS:
ORIGINAL GROUND ELEVATION (LEFT) 72.5
FINISHED GRADE ELEVATION (RIGHT) 79.14
72.5 79.14

JOSIF BOJA No. 13912 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
2/19/2026

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DESIGNED H. LAUZON | DRAWN T. GELINAS | CHECKED J. BOJA | NHDOT BRIDGE NO. N/A | DATE FEBRUARY 2026

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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
STANDARD SYMBOLS SHEET (1 OF 2)

PROJECT NO. 24.010001.02
SHEET NO. 2 OF 18

DRAINAGE

MANHOLE

CATCH BASIN — cb

DROP INLET — di

(existing) / (PROPOSED)

DRAINAGE PIPE (existing) — DP — DP — (label size & type)

DRAINAGE PIPE (PROPOSED) — PDP — PDP

UNDERDRAIN (existing) W/ FLUSHING BASIN — DP — fb — DP — (label size & type)

UNDERDRAIN (PROPOSED) W/ FLUSHING BASIN — PDP — PDP

show direction of flow

HEADER (existing & PROPOSED) — DP — PDP — (with stone outlet protection)

END SECTION (existing & PROPOSED) — DP — PDP — METAL or PLASTIC — DP — PDP — RCP

OPEN DITCH (PROPOSED)

EROSION CONTROL/ STONE SLOPE PROTECTION

BOUNDARIES / RIGHT-OF-WAY

RIGHT-OF-WAY LINE — (label type)

RR RIGHT-OF-WAY LINE

PROPERTY LINE

TOWN/COUNTY/STATE LINE — EASTON / BENTON — COOS / GRAFTON

EASEMENT — (label type)

BENCH MARK / SURVEY DISK

BOUND CONCRETE — cnb

BOUND STONE — snb

BOUND NH HIGHWAY — nhb — (PROPOSED)

NHDOT PROJECT MARKER

IRON PIPE — ip

IRON ROD — ir

REBAR — rb

DRILL HOLE IN ROCK — dh

MISCELLANEOUS BOUNDARY MONUMENT — mb

TAX MAP AND LOT NUMBER — TM 156 Lot 1642/341, Bk. 32 Pg. 14, 6.80 Ac.±, Plan 5

PROPERTY PARCEL NUMBER — 12

UTILITIES

	existing	PROPOSED
TELEPHONE POLE		
POWER POLE		
JOINT OCCUPANCY		
MISCELLANEOUS/UNKNOWN POLE		
GUY POLE OR PUSH BRACE		
	(plot point at face not center of symbol)	
LIGHT POLE		
LIGHT ON POWER POLE		
LIGHT ON JOINT POLE		
POLE STATUS: REMOVE, LEAVE, PROPOSED, OR TEMPORARY AS APPLICABLE e.g.:	R L	P+04 25.0' T+04 25.0'
RAILROAD	(label ownership)	
RAILROAD SIGN		
RAILROAD SIGNAL		
UTILITY JUNCTION BOX	jb	JB
OVERHEAD WIRE	OW OW (label type)	OW OW

UNDERGROUND UTILITIES

WATER	(on existing lines label size, type and note if abandoned)	PW PW
SEWER	S S	PS PS
TELEPHONE	T T	PT PT
ELECTRIC	E E	PE PE
GAS	G G	PG PG
LIGHTING	L L	PL PL
INTELLIGENT TRANSPORTATION SYSTEM	ITS ITS	PITS PITS
FIBER OPTIC	FO FO	PFO PFO
WATER SHUT OFF	WSO	WSO
GAS SHUT OFF	GSO	GSO
HYDRANT	HYD	HYD

MANHOLES

SEWER	S	MHS
TELEPHONE	t	MHT
ELECTRICAL	e	MHE
GAS	g	MHG
UNKNOWN	U	
WATER	W	MHW

TRAFFIC SIGNALS / ITS

	existing	PROPOSED
MAST ARM		30' MA (NOTE ANGLE FROM R)
OPTICOM RECEIVER		
OPTICOM STROBE		
TRAFFIC SIGNAL		
PEDESTAL WITH PEDESTRIAN SIGNAL HEADS AND PUSH BUTTON UNIT		
SIGNAL CONDUIT	C C C	PC PC PC
CONTROLLER CABINET	cc	CC
METER PEDESTAL	mp	MP
PULL BOX	pb	PB
LOOP DETECTOR (QUADRUPOLE)		(label size)
LOOP DETECTOR (RECTANGULAR)		(label size)
CAMERA POLE (CCTV)		
FIBER OPTIC DELINEATOR	fod	FOD
FIBER OPTIC SPLICE VAULT		SVF
ITS EQUIPMENT CABINET	its	ITS
MOTOR VEHICLE DETECTION SYSTEM (MVDS)		
VARIABLE SPEED LIMIT SIGN		
DYNAMIC MESSAGE SIGN		
ROAD AND WEATHER INFO SYSTEM		

CONSTRUCTION NOTES

CURB MARK NUMBER - BITUMINOUS	B-1
CURB MARK NUMBER - GRANITE	G-1
CLEARING AND GRUBBING AREA	A
DRAINAGE NOTE	1
EROSION CONTROL NOTE	A
FENCING NOTE	A
GUARDRAIL NOTE	1
ITS NOTE	1
LIGHTING NOTE	A
TRAFFIC SIGNAL NOTE	1

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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
STANDARD SYMBOLS SHEET (2 OF 2)

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SHEET NO. 3 OF 18

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GENERAL NOTES

1. ALL WORK SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS AND THE MORE STRINGENT SHALL GOVERN.

2. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS AND COORDINATION OF OTHER TRADES.

3. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION AND COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SITE SAFETY SHALL SOLELY BE THE CONTRACTOR'S RESPONSIBILITY.

4. ALL DIMENSIONS, ELEVATIONS AND CONDITIONS MUST BE VERIFIED BY THE GENERAL CONTRACTOR OR RESPONSIBLE TRADES PRIOR TO COMMENCING WITH THE WORK, FABRICATION OR ORDERING MATERIALS. DO NOT SCALE DRAWINGS, USE DIMENSIONS SHOWN.

5. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, BEFORE PROCEEDING WITH THE WORK.

6. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. ALL COSTS FOR DETERMINING UNDERGROUND UTILITY TYPES AND LOCATIONS SHALL BE SUBSIDIARY TO THE CONTRACT. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER AND UTILITY OWNERS BEFORE PROCEEDING WITH THE WORK.

7. ALL APPLICABLE UTILITY DEPARTMENTS AND COMPANIES SHALL BE NOTIFIED BEFORE EXCAVATION IS STARTED. UTILITIES WITHIN 50 FEET OF AN EXCAVATION SHALL BE MARKED IN THE FIELD.

8. HOYLE TANNER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE DUE TO THE FAILURE OF THE CONTRACTOR:

    - TO FOLLOW THESE DRAWINGS AND SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY.
    - TO NOTIFY HOYLE TANNER OF ANY DISCREPANCIES, ERRORS, OMISSIONS OR CONFLICTS AND OBTAIN THEIR GUIDANCE TO RESOLVE.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, INSTALLATION AND REMOVAL OF ALL TEMPORARY SHORING AND BRACING REQUIRED DURING CONSTRUCTION.

10. THE CONTRACTOR SHOULD NOTE THAT THE NHDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION" ARE MADE A PART OF THIS PROJECT AND ALL APPLICABLE DETAILS, STANDARDS AND SPECIFICATIONS SHALL APPLY. THIS PROJECT SHALL INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING STANDARD PLANS:

    - ES-1 – END SECTIONS FOR CORRUGATED STEEL AND REINFORCED CONCRETE PIPES

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.

GENERAL CONSTRUCTION NOTES

1. FOR WORKING POINTS LAYOUT, SEE SHEET 13.

2. THE CULVERT WILL BE CLOSED PRIOR TO THE START OF CONSTRUCTION AND TRAFFIC WILL BE DETOURED AROUND THE SITE. THE TOWN WILL SUPPLY, ERECT AND MAINTAIN THE PERMANENT CONSTRUCTION FENCING, SIGNS AND/OR WARNING DEVICES AS NEEDED.

3. DIMENSIONS, ANGLES, BEARINGS AND ELEVATIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM EXISTING PLANS, LIMITED FIELD INVESTIGATIONS, AND SURVEY, AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS IMPACTED BY THE PROPOSED WORK TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK.

4. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

5. WATER LEVEL MAY VARY FROM THAT SHOWN.

6. CONCRETE TIES AND ANCHORAGES FOR USE IN FORMS ABOVE THE TOP OF FOOTINGS SHALL BE FABRICATED SO AS TO BE REMOVED TO A MINIMUM DEPTH OF 2" WITHOUT INJURY TO THE CONCRETE. HOLES SHALL BE PLUGGED WITH A MORTAR MATCHING THE COLOR OF ADJACENT CONCRETE FOR EXPOSED CONCRETE SURFACES.

7. IF CONCRETE FORMS ARE TO BE TREATED WITH FORM RELEASE COMPOUND THIS WORK SHALL BE DONE PRIOR TO THE ERECTION OF THE FORMS. THE REINFORCING STEEL, AT THE TIME CONCRETE IS PLACED, SHALL BE FREE OF DIRT, PAINT, OIL, FORM RELEASE COMPOUND, OR OTHER ORGANIC MATERIALS THAT MAY ADVERSELY AFFECT OR REDUCE BOND.

8. ALL BACKFILL MATERIAL (EXCEPT SUITABLE FILL) SHALL NOT EXCEED THE OPTIMUM MOISTURE CONTENT BY MORE THAN 2 PERCENTAGE POINTS. THE MATERIAL SHALL BE PLACED IN LAYERS NOT MORE THAN 12" LOOSE DEPTH, UNLESS OTHERWISE NOTED. FOR EARTH MATERIALS UNDER APPROACH SLABS AND FOR EARTH MATERIALS WITHIN 10' OF THE BACK OF STRUCTURES NOT HAVING APPROACH SLABS, AT LEAST 98 PERCENT OF MAXIMUM DENSITY SHALL BE OBTAINED. ALL OTHER BACKFILL MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF MAXIMUM DENSITY. THE COMPACTION WILL BE TESTED AT FREQUENCIES DETERMINED IN THE FIELD BY THE ENGINEER.

9. A TEMPORARY BENCHMARK IS SHOWN ON SHEET 9. THERE ARE NO CONTROL POINTS FOR HORIZONTAL CONTROL, AND THE CONTRACTOR IS EXPECTED TO LAYOUT ALL PROPOSED WORK USING GPS EQUIPMENT. (ALL COSTS INCLUDED UNDER ITEM 692, MOBILIZATION).

WORK AREA NOTES

1. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL LAYOUT LIMITS OF ALL EASEMENTS AND TOWN'S RIGHT-OF-WAY WITHIN THE PROJECT LIMITS. COST IS INCLUDED UNDER ITEM 692, MOBILIZATION.

2. TEMPORARY AND PERMANENT EASEMENTS FROM AFFECTED ABUTTERS HAVE BEEN OBTAINED AND COORDINATED BY THE TOWN.

3. CONSTRUCTION ACCESS SHALL BE LIMITED TO WITHIN THE TOWN'S RIGHT-OF-WAY AND EASEMENTS SHOWN IN THE PROJECT SPECIFICATIONS, UNLESS NOTED OTHERWISE. ADDITIONAL AREAS REQUIRED BY THE CONTRACTOR SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL COORDINATE WITH AFFECTED PROPERTY OWNERS AND OBTAIN TEMPORARY USE RIGHTS FOR SUCH AREAS.

HYDRAULIC DATA

1.	DRAINAGE AREA:	2.0 SQUARE MILES
2.	DESIGN FLOOD:	Q100
3.	Q100 VELOCITY:	9.7 FPS
4.	Q100 FLOOD ELEVATION:	432.8 FT
5.	Q100 FLOOD FLOW:	253 CFS
6.	BRIDGE WATERWAY OPENING:	41 SF
7.	BRIDGE WATERWAY OPENING BELOW THE DESIGN FLOOD ELEVATION:	26 SF

EXISTING CULVERT REMOVAL NOTES

1. ITEM 204.42, REMOVAL OF EXISTING PIPE OVER 24" DIAMETER, SHALL INCLUDE REMOVAL OF THE EXISTING CORRUGATED METAL PIPE, AND REMOVAL OF THE UPSTREAM AND DOWNSTREAM STONE AND CONCRETE HEADWALLS TO THE LIMITS SHOWN ON THESE PLANS.

2. ITEM 207.3, UNCLASSIFIED CHANNEL EXCAVATION SHALL INCLUDE NECESSARY EXCAVATION OF EXISTING SOIL REQUIRED TO INSTALL RIPRAP IN FRONT OF THE WINGWALLS AND BOX CULVERT.

3. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO ENSURE THAT NO DEBRIS FALLS INTO HARDY BROOK DURING CONSTRUCTION OPERATIONS. THE ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER METHODS TO PREVENT DEBRIS FROM FALLING INTO HARDY BROOK, ARE CONSIDERED SUBSDARY TO ITEM 202.42.

DESIGN LOADS, MATERIALS AND SPECIFICATIONS

1.	DESIGN LOADING:	HL-93
2.	DESIGN SPEED:	30 MPH
3.	DESIGN METHOD:	LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD)
4.	SPECIFICATIONS:	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 10TH EDITION. NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2016 WITH CURRENT ADDITIONS AND MODIFICATIONS AS OF THE BID OPENING DATE.
5.	FOUNDATION DATA:	FOUR-SIDED BOX CULVERT ON STRUCTURAL FILL ON UNDISTURBED SOIL WITH A NOMINAL BEARING RESISTANCE OF 3.5 TSF IN COMBINATION WITH A RESISTANCE FACTOR OF 0.45.
6.	REINFORCING STEEL:	AASHTO M 284 (ASTM A775) GRADE 60 EPOXY COATED (BOX CULVERT, HEADWALLS, CUTOFF WALLS, AND WINGWALLS)
7.	CONCRETE:	PRECAST CONCRETE BOX CULVERT AND HEADWALLS: ITEM 529.002, PRECAST CONCRETE BOX CULVERT 5,000 PSI (AT 28 DAYS) (CLASS AAA) CUTOFF WALLS: ITEM 529.002, PRECAST CONCRETE BOX CULVERT 3,000 PSI (AT 28 DAYS) (CLASS B) WINGWALLS: ITEM 592.3, CONCRETE FACED RETAINING WALL SYSTEM 5,000 PSI (AT 28 DAYS) (CLASS AAA) WINGWALL FOOTINGS: ITEM 592.3, CONCRETE FACED RETAINING WALL SYSTEM 3,000 PSI (AT 28 DAYS) (CLASS B)

UTILITY COORDINATION

1. OVERHEAD UTILITIES ARE PRESENT WITHIN THE PROJECT SITE, AND WILL BE DEENERGIZED FOR THE SPAN DIRECTLY OVER THE BOX CULVERT FOR A MAXIMUM OF 2 DAYS. THE CONTRACTOR SHALL BE FAMILIAR AND TAKE NECESSARY PRECAUTIONS WITH THESE UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE TEMPORARY RELOCATIONS; SHIELDING NECESSARY FOR EQUIPMENT MOBILIZATION (SUCH AS CRANE TO INSTALL THE PRECAST COMPONENTS) AND TEMPORARY DISCONNECTION OF POWER WITH THE UTILITY OWNERS. ALL COST FOR THIS COORDINATION SHALL BE INCLUDED IN ITEM 692, MOBILIZATION.

    OVERHEAD UTILITY OWNER INFORMATION:
    EVERSOURCE
    CONTACT NAME: KONRAD RYBA
    PHONE: (508) 935-1706

STORMWATER POLLUTION PREVENTION NOTES

1. THE EROSION AND SEDIMENT CONTROLS DETAILED IN THESE PLANS ARE NOT INTENDED TO DICTATE CONSTRUCTION MEANS AND METHODS, NOR THE SPECIFIC EROSION AND SEDIMENT CONTROLS NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL SUBMIT ITEM 645.7, STORMWATER POLLUTION PREVENTION PLAN (SWPPP), FOR REVIEW AND APPROVAL TO THE ENGINEER. UPON APPROVAL BY THE ENGINEER, THE SWPPP WILL BE SENT TO NHDES FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK IF ANY OF THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES VARY FROM THOSE SHOWN IN THESE PLANS.

2. THE EROSION AND SEDIMENT CONTROL MEASURES DETAILED ON THESE PLANS ARE BASED ON THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION, DECEMBER 2008.

3. ALL STORMWATER, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE LOCATED WITHIN THE TEMPORARY AND PERMANENT EASEMENT AREAS SHOWN ON THE EASEMENT PLAN.

4. FOR ANY WORK ASSOCIATED WITH ITEM 699, MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL, DETAILED ESTIMATES FOR THE WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO START OF THE WORK.

5. PERFORM ALL WORK DURING LOW FLOW PERIODS. ALL WORK SHALL BE PERFORMED WITHIN THE IMPACT AREAS AS PERMITTED BY NHDES.

6. ALL STORMWATER, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CONTRACTOR'S STORM WATER POLLUTION PREVENTION PLAN (ITEM 645.7). SILT FENCE SHALL BE INSTALLED AS SHOWN ON PAGE 96 AND THE DEWATERING BAG (IF USED AS PART OF THE SEDIMENTATION BASIN) SHALL BE INSTALLED AS SHOWN ON PAGE 149 OF NHDES STORMWATER MANUAL, VOLUME 3.

WATER DIVERSION NOTES

1. THE CONTRACTOR SHALL SUBMIT A PLAN ILLUSTRATING THE METHOD OF WATER DIVERSION WITH THE DESIGN CALCULATIONS TO ENGINEER AND NHDES. THE SUGGESTED CONSTRUCTION SEQUENCING APPROACH MAY BE UTILIZED SUBJECT TO THE CONTRACTOR VERIFYING THIS METHOD IS ACCURATE AND ACKNOWLEDGING IN WRITING THAT THIS IS THE CASE. THE ENGINEER AND TOWN OF GOFFSTOWN ASSUME NO RESPONSIBILITY FOR THE ADEQUACY OF THE CONTRACTOR'S WATER DIVERSION METHODS OR PLAN. MEASURES SUCH AS CLEAN STONE FILL MAY BE PROVIDED AT THE INLET AND OUTLET ENDS TO PROTECT AGAINST EROSION, SCOUR, AND SILTATION OF HARDY BROOK. WATER DIVERSION STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE THE STORM EVENT DISCHARGE AS DETERMINED BY THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK. ALL COSTS FOR INSTALLATION, MAINTENANCE AND REMOVAL OF THE WATER DIVERSION STRUCTURE WILL BE PAID FOR UNDER ITEM 503.101, WATER DIVERSION STRUCTURE.

2. THESE PLANS ASSUME TEMPORARY BYPASS PUMP SYSTEM IS TO BE INSTALLED BY THE CONTRACTOR TO BE CAPABLE OF PUMPING THE STORM EVENT DISCHARGE AS DETERMINED BY THE CONTRACTOR. PUMP INTAKES(S) SHALL BE POSITIONED ABOVE THE STREAM BED TO REDUCE SEDIMENT TRANSPORT AND INSTALLED WITH SCREENS TO PREVENT AQUATIC ORGANISM DISTURBANCE. A BACKUP PUMP SHALL BE INSTALLED, AT MINIMUM, AT THE MAIN CHANNEL PUMP LOCATION TO PREVENT CHANNEL FLOW THROUGH THE CONSTRUCTION SITE IN THE EVENT OF A PUMP FAILURE. PUMPING SHALL BE CONTINUOUS DURING IN-STREAM WORK. PUMP SYSTEM MUST REMAIN OPERATIONAL DURING NON-WORK HOURS AND PERIODS OF THE DAY WHEN IN-STREAM WORK IS NOT ACTIVE. COSTS FOR THE PUMPING SYSTEM INCLUDE INSTALLATION, OPERATION, MAINTENANCE, AND DESIGN AND SHALL BE INCLUDED IN ITEM 503.101. CALCULATIONS FOR THE PROPOSED SEDIMENTATION BASINS AS WELL AS LAYOUT AND DETAILING SHALL BE INCLUDED IN THE SWPP.

3. DEWATERING SHALL BE REQUIRED IN THE CHANNEL TO CONTROL THE WATER INFLOW AND ADEQUATELY DEWATER THE CHANNEL EXCAVATION. SUMP PUMPING AREAS AROUND THE ENTIRE PERIMETER MAY BE REQUIRED TO ADEQUATELY CONTROL THE GROUNDWATER WITHIN THE EXCAVATION AREAS. DEWATERING SHALL BE CONTINUOUS UNTIL THE FOOTINGS, CUTOFF WALLS AND BOX CULVERT ARE CONSTRUCTED. THE PRECAST CONCRETE BOX CULVERT SHALL BE BACKFILLED EVENLY ON BOTH SIDES TO THE ELEVATIONS OF THE SURROUNDING WATER TABLE. ALL COSTS FOR DEWATERING SHALL BE INCLUDED IN ITEM 503.101, WATER DIVERSION STRUCTURE.

4. WATER PUMPED FROM DEWATERING LOCATIONS SHALL BE FILTERED ADEQUATELY TO REMOVE FINE MATERIALS PRIOR TO RETURNING THE WATER TO HARDY BROOK. ALL COSTS FOR CONSTRUCTION AND MAINTENANCE OF SEDIMENTATION BASIN OR OTHER METHODS TO CONTROL WATER POLLUTION SHALL BE INCLUDED IN ITEM 645.0002, SEDIMENTATION BASIN. ACTUAL LOCATION OF SEDIMENTATION BASIN TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

STATE OF NEW HAMPSHIRE
JOSIF BICJA
No. 19312
LICENSED
PROFESSIONAL ENGINEER
2/19/2026

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GOFFSTOWN, NEW HAMPSHIRE

MONTELONA ROAD OVER HARDY BROOK

PROJECT NOTES

PROJECT NO. 24.010001.02

SHEET NO.

4

OF 18

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CONSTRUCTION SEQUENCE NOTES

1. INSTALL TEMPORARY EROSION CONTROL MEASURES AS DETAILED IN THE STORMWATER POLLUTION PREVENTION PLAN.
2. INSTALL APPROVED CONTRACTOR DETAILED WATER DIVERSION STRUCTURE AND BYPASS PUMP SYSTEM WITHIN THE WETLAND IMPACT AREAS SHOWN ON PLANS.
3. REMOVE ALL EXISTING ROADWAY MATERIALS AND SOIL ABOVE THE EXISTING CORRUGATED METAL PIPE AND REMOVE THE PIPE AND HEADWALLS.
4. EXCAVATE TO THE LIMITS AND ELEVATIONS AS SHOWN ON THE PLANS. CONSTRUCT NEW PRECAST CUTOFF WALLS, CONCRETE BOX CULVERT, WINGWALLS AND WATERPROOFING MEMBRANE.
5. BACKFILL BEHIND THE NEW PRECAST CONCRETE BOX CULVERT AND WINGWALLS. INSTALL RIPRAP AS SHOWN IN THE PLAN DETAILS.
6. REMOVE WATER DIVERSION STRUCTURES ALLOWING THE BROOK TO FLOW THROUGH THE NEW CULVERT OPENING.
7. COMPLETE ROADWAY RECONSTRUCTION.
8. RESTORE ALL DISTURBED AREAS TO PRECONSTRUCTION CONDITIONS WITH TURF ESTABLISHMENT AND SLOPE STABILIZATION.

FOUNDATION NOTES

1. ANY UNSUITABLE MATERIALS SUCH AS BOULDERS, ROOTS, ORGANIC SOILS, OR SILT/CLAY ENCOUNTERED AT THE PROPOSED BOTTOM OF EXCAVATION ELEVATION SHALL BE REMOVED AND REPLACED WITH ITEM 508., STRUCTURAL FILL AS REQUESTED BY THE ENGINEER.
2. FINAL EXCAVATIONS TO SUITABLE SUBGRADES SHALL BE PERFORMED USING A SMOOTH-BLADED EXCAVATOR BUCKET TO MINIMIZE DISTURBANCE TO THE EXISTING SUBGRADE.
3. PROTRUDING BOULDERS OR COBBLES ENCOUNTERED AT THE FINAL EXCAVATION DEPTH SHALL BE REMOVED OR SPLIT TO PROVIDE A LEVEL BEARING SURFACE.
4. ANY FOUNDATION MATERIALS WEAKENED AS A RESULT OF INSUFFICIENT CARE WHILE MAINTAINING A DEWATERED CONDITION, SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL AT THE CONTRACTOR'S EXPENSE.
5. ALL FOOTING CONCRETE SHALL BE PLACED IN THE DRY.

PRECAST CONCRETE BOX CULVERT NOTES

1. ITEM 529.002 PRECAST CONCRETE BOX CULVERT SHALL CONSIST OF THE DESIGN, FABRICATION, AND ERECTION OF THE PRECAST CONCRETE BOX CULVERT UNITS, HEADWALLS, AND APPURTENANCES. THE PRECAST CONCRETE BOX CULVERT SHALL HAVE AN OUT-TO-OUT DIMENSION OF 55'-0" WITH A 12'-0" CLEAR SPAN AND 5'-0" RISE.
2. SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO HOYLE, TANNER & ASSOCIATES, INC FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW THE JOINT DETAILS, REINFORCEMENT SIZE AND LOCATION, CONCRETE HEADWALLS AND CUT OFF WALLS. ALL WORK SHALL CONFORM TO SPECIAL PROVISION FOR ITEM 529.002.
3. THE CONTRACTOR SHALL SUBMIT AN ELECTRONIC COPY OF THE APPROVED SHOP DRAWINGS TO THE ENGINEER.
4. EPOXY COATED REINFORCING CONFORMING TO AASHTO M284 SHALL BE USED FOR THE CONCRETE HEADWALLS, CUTOFF WALLS AS WELL AS THE ENTIRE BOX CULVERT.
5. REINFORCEMENT OF THE PRECAST UNITS SHALL HAVE A 2" MINIMUM CLEAR COVER IN THE TOP FACE OF TOP SLAB, BOTTOM FACE OF BOTTOM SLAB, AND INSIDE FACE OF WALLS. ALL OTHER REINFORCEMENT IN THE PRECAST UNITS SHALL HAVE A 1½" MINIMUM CLEAR COVER.
6. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ¾" EXCEPT AS NOTED.
7. THE PRECAST BOX CULVERT AND HEADWALLS SHALL BE TREATED WITH ITEM 534.3, WATER REPELLENT (SILANE/SILOXANE), AS SHOWN ON THE CONTRACT DOCUMENTS.
8. JOINTS BETWEEN ABUTTING PRECAST UNITS SHALL BE WATERTIGHT AND MECHANICALLY CONNECTED. SEE DETAIL ON SHEET 16 FOR ADDITIONAL INFORMATION.
9. MEMBRANED SURFACES TO BE BACKFILLED AGAINST SHALL BE PROTECTED BY A PROTECTION BOARD. THE PROTECTION BOARD SHALL BE SEALTIGHT PC-2 MANUFACTURED BY W.R. MEADOWS OR APPROVED EQUAL AND AS SHOWN ON THE NHDOT QUALIFIED PRODUCTS LIST AND SUBSIDIARY TO THE APPROPRIATE 538 PAY ITEM. THE USE OF CLOSED-CELL EXTRUDED POLYSTYRENE BOARD (RIGID INSULATION) IS NOT ALLOWED FOR THIS PROJECT
10. THE QUALITY OF MATERIALS, THE PROCESS OF MANUFACTURE, AND THE PRECAST SECTIONS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER. FABRICATION SHALL NOT BEGIN UNTIL WRITTEN APPROVAL OF THE SUBMITTED SHOP DRAWINGS HAS BEEN RECEIVED FROM THE ENGINEER. PROVIDE TO HOYLE, TANNER & ASSOCIATES, INC . A MINIMUM OF FOURTEEN (14) DAYS NOTICE PRIOR TO THE START OF FABRICATION, AND A DETAILED CASTING SCHEDULE.
11. ALL MARKINGS ON VISIBLE SURFACES (INSIDE FACE, ENDS, ETC.) OF THE PRECAST CONCRETE BOX CULVERT SHALL BE REMOVED PRIOR TO INSTALLATION AT THE SITE.
12. A CORROSION INHIBITOR ADMIXTURE MEETING THE REQUIREMENTS OF 520, PARAGRAPH 2.3.3.2 SHALL BE INCLUDED IN THE CONCRETE FOR THE RIGID FRAME AND HEADWALLS. THE ADMIXTURE SHALL BE FROM THE NHDOT QUALIFIED PRODUCTS LIST. THE DOSAGE SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS FOR A 75 YEAR SERVICE LIFE.
13. NO LIFTING HOLES ALLOWED ON HEADWALLS. MUST USE ANCHORING LIFTING DEVICES FOR ERECTION.

WINGWALL NOTES

1. SEE SPECIAL PROVISIONS OF ITEM 592.3 CONCRETE FACED RETAINING WALL SYSTEM FOR ACCEPTABLE MANUFACTURED WALL SYSTEMS. THE RETAINING WALL FACES SHALL BE VERTICAL; BATTERED VERTICAL FRONT FACES WILL NOT BE ACCEPTED. NO GEOGRID WILL BE ALLOWED WITHIN THE PENETRATION DEPTH OF GUARDRAIL POSTS.
2. SHOP DRAWINGS AND DESIGN CALCULATIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO HOYLE, TANNER & ASSOCIATES, INC FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL BE SEALED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE SHOP DRAWINGS AND DESIGN CALCULATIONS SHALL INCLUDE ALL INFORMATION LISTED IN THE SPECIAL PROVISION FOR THIS ITEM.
3. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO PERFORM ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF THE OF THE CONCRETE FACED RETAINING WALL SYSTEM IN ACCORDANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS.
4. ITEM 592.3 CONCRETE FACED RETAINING WALL SYSTEM SHALL INCLUDE ALL EXCAVATION, BACKFILL, PRECAST CONCRETE MODULAR (PCM) UNITS, WINGWALL ANCHORS/STEMS/REINFORCING, STRUCTURAL FILL, CONCRETE FOOTINGS AND JOINT MATERIALS, COMPLETE AND IN PLACE.
5. EPOXY COATED REINFORCING CONFORMING TO AASHTO M284 SHALL BE USED FOR THE WINGWALLS.
6. THE CONTRACTOR SHALL SUBMIT AN ELECTRONIC COPY OF THE APPROVED SHOP DRAWINGS TO THE ENGINEER.
7. ALL CAULKING AND JOINT SEALERS SHALL BE INSTALLED AFTER BACKFILLING AND PRIOR TO APPLICATION OF THE WATER REPELLENT. CONCRETE SURFACES SHALL HAVE CURED A MINIMUM OF 14 DAYS AND SHALL BE DRY PRIOR TO THE APPLICATION OF WATER REPELLENT. MINIMUM SUBSTRATE AND AMBIENT APPLICATION TEMPERATURES SHALL BE AS NOTED ON THE NHDOT QUALIFIED PRODUCTS LIST FOR THE PRODUCT USED.
8. ALL SURFACES TO BE SEALED WITH WATER REPELLENT MUST BE THOROUGHLY CLEANED AS NEEDED BY POWER WASHING SURFACE CLEAN OF DUST AND CONSTRUCTION DIRT. THE SURFACE SHALL BE ALLOWED TO DRY PRIOR TO APPLICATION OF WATER REPELLENT.
9. EXPOSED FACES OF THE PCM UNITS TO A DEPTH OF 1'-0" BELOW FINISHED GRADE SHALL BE TREATED WITH ITEM 534.3, WATER REPELLENT (SILANE/SILOXANE).
10. THE BOTTOM ELEVATION OF THE PCM UNITS SHOWN IN THE CONTRACT DRAWINGS SHALL BE HELD FOR THE ENTIRE WIDTH OF THE UNIT. THE USE OF CUT OFF WALLS IS NOT ALLOWED.

PAVEMENT NOTES

1. ALL PAVING OPERATIONS SHALL BE PERFORMED BY A SUBCONTRACTOR THAT IS LISTED ON THE NHDOT PREQUALIFIED CONTRACTORS LIST IN THE CATEGORY OF PAVING.
2. THE BITUMINOUS MIXTURE SHALL BE THOROUGHLY COMPACTED BY ROLLING. THE INITIAL ROLLING SHALL BE DONE WITH A STATIC OR VIBRATORY STEEL-DRUM ROLLER. INTERMEDIATE ROLLING SHALL BE DONE BY A PNEUMATIC-TIRED ROLLER. FINAL ROLLING SHALL BE DONE WITH A STATIC-DRUM ROLLER. THE MINIMUM WEIGHT OF STATIC ROLLER SHALL BE 8 TONS.
3. SUBMIT PAVEMENT MIX DESIGN TO ENGINEER FOR APPROVAL PRIOR TO PAVING. SEE SECTION 401 OF THE NHDOT STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. THE GRADE OF ASPHALT CEMENT SHALL BE PG 64-28.

SUMMARY OF QUANTITIES

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY
202.42	REMOVAL OF EXISTING PIPE OVER 24" DIAMETER	LF	41
203.1	COMMON EXCAVATION	CY	100
203.6	EMBANKMENT-IN-PLACE (F)	CY	60
207.3	UNCLASSIFIED CHANNEL EXCAVATION	CY	50
209.201	GRANULAR BACKFILL (BRIDGE) (F)	CY	175
214	FINE GRADING	U	1
304.3	CRUSHED GRAVEL (F)	CY	70
304.31	CRUSHED GRAVEL FOR SHIMMING	CY	30
304.99	STREAMBED SIMULATION MATERIAL	CY	50
403.11023	HBP-3/4" BINDER MIX, MACHINE METHOD	TON	80
403.11043	HBP-1/2" SURFACE MIX, MACHINE METHOD	TON	40
403.16	PAVEMENT JOINT ADHESIVE	LF	310
410.22	ASPHALT EMULSION FOR TACK COAT	GAL	14
417	COLD PLANING BITUMINOUS SURFACES	SY	32
503.101	WATER DIVERSION STRUCTURE	U	1
504.1	COMMON BRIDGE EXCAVATION (F)	CY	410
504.2	ROCK BRIDGE EXCAVATION	CY	50
508	STRUCTURAL FILL	CY	65
529.002	PRECAST CONCRETE BOX CULVERT (BRIDGE)	U	1
534.3	WATER REPELLENT (SILANE/SILOXANE)	GAL	4
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F)	SY	82
538.5	BARRIER MEMBRANE, HEAT WELDED (F)	SY	93
562.1	SILICONE JOINT SEALANT (F)	LF	40
583.2	RIPRAP CLASS II	CY	40
583.3	RIPRAP, CLASS III	CY	60
592.3	CONCRETE FACED RETAINING WALL SYSTEM	SF	335
593.411	GEOTEXTILE; PERM CONTROL CL.1, NON-WOVEN	SY	230
603.36112	12" ALUMINIZED STEEL END SECTION	EA	1
603.82212	12" PE PIPE (TYPE S)	LF	50
622.1	STEEL WITNESS MARKERS	EA	1
628.2	SAWED BITUMINOUS PAVEMENT	LF	50
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	LF	640
645.0002	SEDIMENTATION BASIN	U	1
645.44	TEMPORARY SLOPE MATTING TYPE D (WILDLIFE FRIENDLY)	SY	220
645.512	COMPOST SOCK FOR PERIMETER BERM	LF	300
645.531	SILT FENCE	LF	300
645.7	STORM WATER POLLUTION PREVENTION PLAN	U	1
645.719	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	EA	20
646.512	TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND LOAM (F)	SY	390
692	MOBILIZATION	U	1
699	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	$	1000

JOSIF BOJA No. 13912 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON | DRAWN T. GELINAS | CHECKED J. BOJA | NHDOT BRIDGE NO. N/A | DATE FEBRUARY 2026

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
(603) 669-5555 • www.hoyletanner.com

GOFFSTOWN, NEW HAMPSHIRE

MONTELONA ROAD OVER HARDY BROOK

PROJECT NOTES AND SUMMARY OF QUANTITIES

PROJECT NO. 24.010001.02

SHEET NO.

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OF 18

2/19/2026
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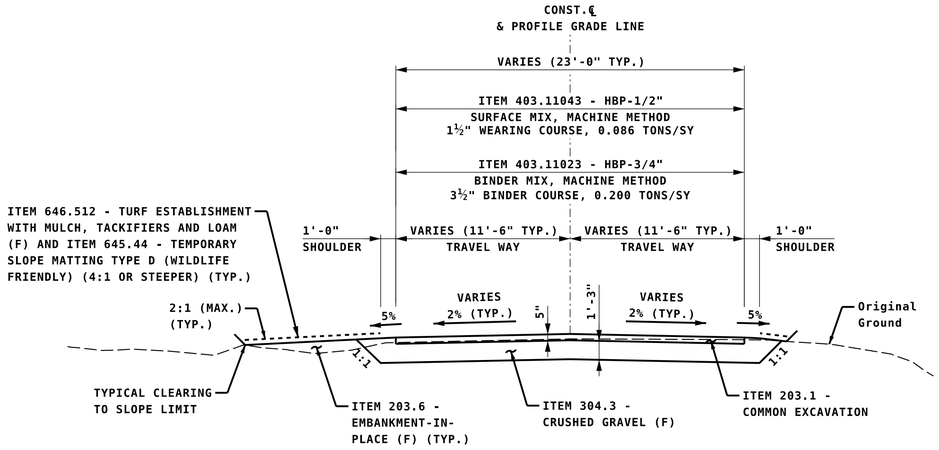


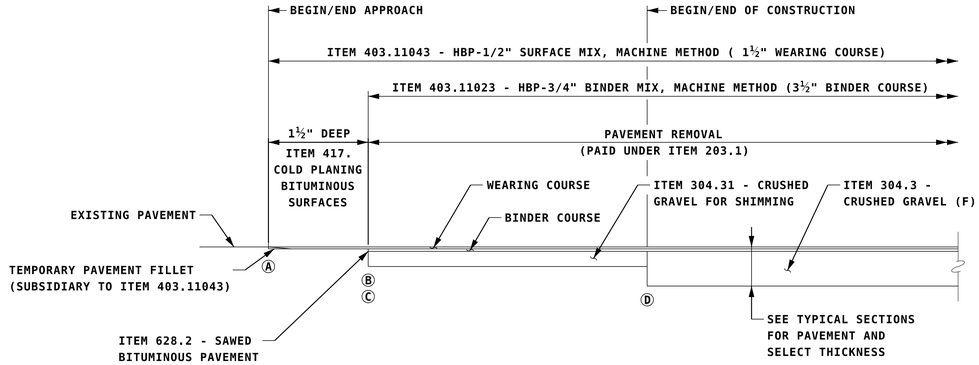
MONTELONA ROAD

STA. 101+00 TO STA. 101+17 (BRIDGE)

STA. 101+31.54 (BRIDGE) TO STA. 101+50

NOT TO SCALE

	STATION			
	WEARING	BINDER	SHIM	CRUSHED GRAVEL
LOCATION	Ⓐ	Ⓑ	Ⓒ	Ⓓ
MONTELONA ROAD - BEGIN APPROACH	100+55	100+60	100+60	101+00
MONTELONA ROAD- END APPROACH	102+15	102+10	102+10	101+50

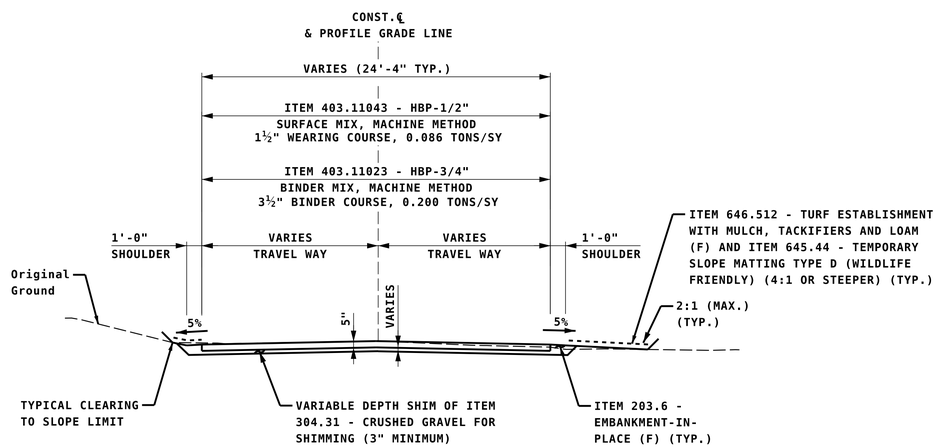


NOTES

1. COMPACT SUBGRADE (PAID AS ITEM 214.) PRIOR TO PLACING PAVEMENT COURSES.
2. ITEM 403.16 - PAVEMENT JOINT ADHESIVE SHALL BE APPLIED TO ALL LONGITUDINAL JOINTS ASSOCIATED WITH THE HOT BITUMINOUS PAVEMENT COURSES AND BUTT JOINTS AT EXISTING PAVEMENT.
3. ITEM 410.22 - ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED BETWEEN BITUMINOUS PAVEMENT COURSES.

PAVEMENT MATCH DETAIL

NOT TO SCALE



MONTELONA ROAD

STA. 100+55 TO STA. 101+00

STA. 101+50 TO STA. 102+15

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2/19/2026

JOSIF BICJA No. 13912 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
(603) 669-5555 • www.hoyletanner.com

GOFFSTOWN, NEW HAMPSHIRE

MONTELONA ROAD OVER HARDY BROOK

ROADWAY TYPICAL SECTION AND DETAILS

PROJECT NO. 24.010001.02

SHEET NO.

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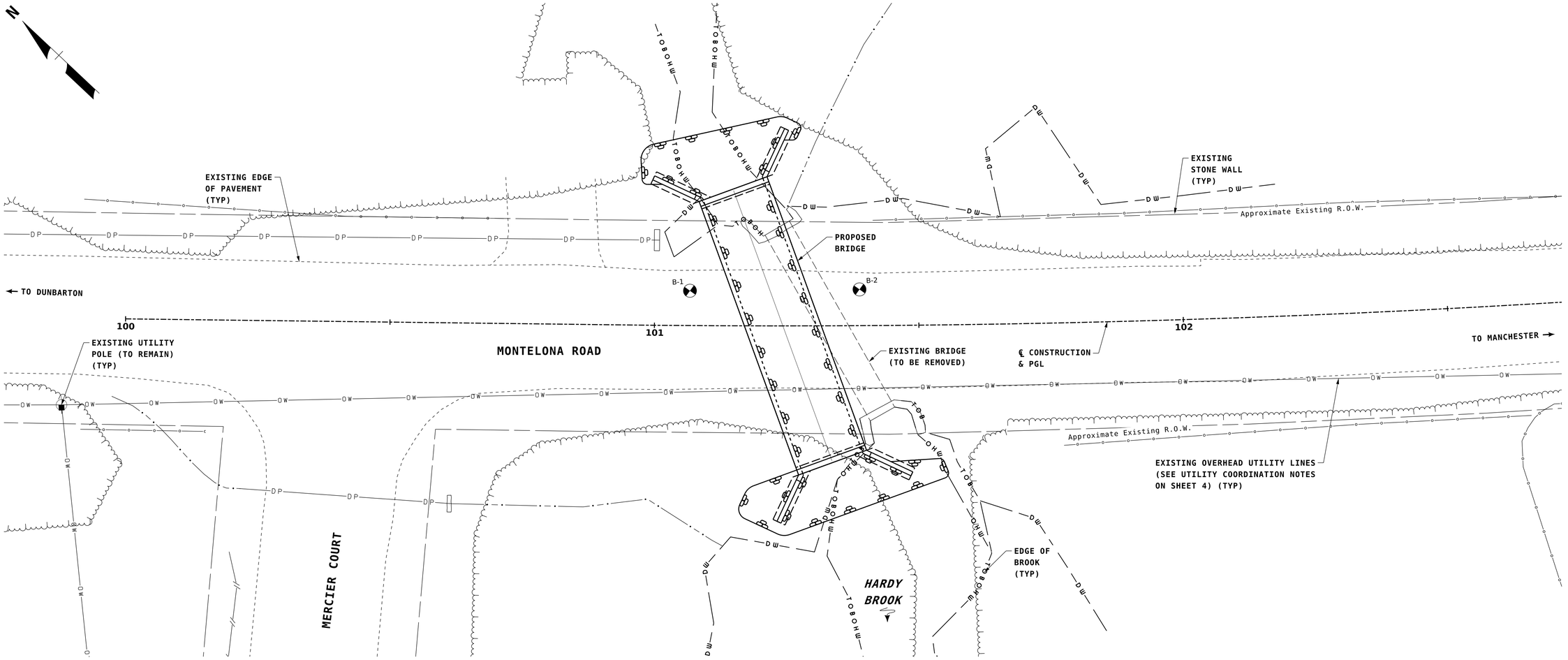
OF 18



BORING LOCATION PLAN

SCALE: 1" = 10'

BORING LOCATIONS TABLE				
NO.	STATION	OFFSET	NORTHING	EASTING
B-1	101+07	7' LT	200273	1023991
B-2	101+39	7' LT	200250	1024014

BORING NOTES

1. BORINGS INDICATED THUS ◓ WERE MADE BY NEW ENGLAND BORING CONTRACTORS ON SEPTEMBER 26, 2025. REFER TO THE TEST BORING LOGS FOR DRILLER AND SAMPLING DATA INFORMATION.
2. BORINGS ARE FOR DESIGN PURPOSES, SHOWING CONDITIONS AT BORING POINTS ONLY, AND DO NOT NECESSARILY INDICATE MATERIAL TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER ELEVATIONS INDICATED THUS ▽ WERE MEASURED AT THE TIME OF EXPLORATION. THE WATER LEVELS ENCOUNTERED DURING CONSTRUCTION MAY VARY CONSIDERABLY, DUE TO PREVAILING CLIMATE, RAINFALL OR OTHER FACTORS.
4. THE SURFACE ELEVATION, IF INDICATED ON EACH BORING LOG, IS THE ELEVATION OF THE EXISTING GROUND AT THE TIME THE BORING WAS TAKEN.

2/19/2026
JOSIF BICJA
No. 13312
LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
(603) 669-5555 • www.hoyletanner.com

GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
BORING LOCATION PLAN

PROJECT NO. 24.010001.02
SHEET NO. 7
OF 18

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(603) 437-1610 **New England Boring Contractors** Fax: (603) 437-0034
P.O. Box 165
Derry, NH 03038
E-Mail: nebc@neboring.com

Boring # B-1 **Project**: Hoyle Tanner **Project #** 198952

Project Address: 5 Montelona Road **City:** Goffstown **State:** NH **Zip:** 03045

Date Start: 9/26/2025 **Date End:** 9/26/2025 **Location:** See Plan

Casing Type & size: HW 4"ID
Hammer wt.: 300lb.
Hammer fall: 30".

Sampler: SS 1 3/8
Hammer wt.: 140lb.
Hammer fall: 30".

Core Barrel: NQ
Size: 1 7/8 dia

GROUNDWATER OBSERVATION

Date:	Depth:	Casing:	Stabilization Period
9/26/25			

	DP	S#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
APPROXIMATE EXISTING GROUND EL 435.6±		S-1	0'-2'	24"	14"	7-8-7-8		Dry, medium dense, brown SAND and GRAVEL.
	5'0"	S-2	4'-6'	24"	12"	2-2-5-15		Wet, loose, brown, silty SAND, some Gravel.
BOTTOM OF BOX CULVERT (INLET) EL 428.22	10'0"	S-3	9'-11'	24"	14"	17-9-21-27		Wet, dense, brown, silty SAND, some Gravel.
BOTTOM OF BOX CULVERT (OUTLET) EL 427.07	15'0" 20'0" 25'0"							E.O.B. 25' Hit rock at 12', rolled to 15' and cored rock from 15'-25'.
	30'0"							

Driller: Mike Matarozzo **Helpers:** Corey Culligan **Inspector:**

Remarks:

S/#: Sample **PEN:** Penetration **REC:** Recovery **S/C:** Strata Change

(603) 437-1610 **New England Boring Contractors** Fax: (603) 437-0034
P.O. Box 165
Derry, NH 03038
E-Mail: nebc@neboring.com

Boring # B-2 **Project**: Hoyle Tanner **Project #** 198952

Project Address: 5 Montelona Road **City:** Goffstown **State:** NH **Zip:** 03045

Date Start: 9/26/2025 **Date End:** 9/26/2025 **Location:** See Plan

Casing Type & size: HW 4"ID
Hammer wt.: 300lb.
Hammer fall: 30".

Sampler: SS 1 3/8
Hammer wt.: 140lb.
Hammer fall: 30".

Core Barrel: NQ
Size: 1 7/8 dia

GROUNDWATER OBSERVATION

Date:	Depth:	Casing:	Stabilization Period
9/26/25			

	DP	S#	DEPTH	PEN	REC	BLOWS/6"	S/C	SAMPLE DESCRIPTION
APPROXIMATE EXISTING GROUND EL 435.7±		S-1	0'-2'	24"	10"	14-14-15-39		Moist, dense, brown SAND and GRAVEL.
	5'0"	S-2	5'-7'	24"	4"	38-32-13-16		Wet, dense, brown SAND and GRAVEL.
BOTTOM OF BOX CULVERT (INLET) EL 428.22	10'0"	S-3	10'-12'	6"	5"	100/6"		Wet, very dense, brown, weathered ROCK.
BOTTOM OF BOX CULVERT (OUTLET) EL 427.07	15'0" 20'0" 25'0"							E.O.B. 20' Rolled to 15' and cored 15'-20'.
	30'0"							

Driller: Mike Matarozzo **Helpers:** Corey Culligan **Inspector:**

Remarks:

S/#: Sample **PEN:** Penetration **REC:** Recovery **S/C:** Strata Change

BORING LOGS
NOT TO SCALE

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
(603) 669-5555 • www.hoyletanner.com

GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
BORING LOGS

PROJECT NO. 24.010001.02

SHEET NO.
8
OF 18

CURVE NO. 1

PI = 101+87.55
R = 2420.00' LT
L = 185.00'

TAX MAP 9, LOT 90-3
DANIEL B. WHELAN
283 EAST DUNBARTON ROAD
GOFFSTOWN, NH 03045
C.C.R.D. BOOK 8377, PAGE 1980

STA. 101+02.44,
LT 31.56'

STA. 101+00
BEGIN CONST.

STA. 101+50
END CONST.

STA. 100+55.09,
LT 15.96'
(11.25° BENT)

STA. 100+74.69, LT
19.96'
(11.25° BENT)

MONTELONA RD
N 280347.0860
E 1023914.4397

TBM = EL. 436.37'

STA. 100+55
BEGIN APPROACH

PROPOSED EDGE
OF PAVEMENT
(TYP.)

EXISTING EDGE
OF PAVEMENT
(TYP.)

STA. 102+15
END APPROACH

PCC 102+80.00

Approximate Existing R.O.W.

TO DUNBARTON

10.9'

11.5'

PROPOSED
DITCH
FLOW

CURVE NO. 1

4" DSLY (PAID AS
ITEM 632.0104)
(LIMITS OF PROJECT)

11.5'

11.0'

S42°33'30.8"E

100

101

102

MONTELONA ROAD

TO MANCHESTER

13.0'

℄ CONSTRUCTION

PROPOSED
BRIDGE

11.5'

EXISTING CULVERT
(TO BE REMOVED)

11.5'

12.0'

22.1'

Approximate Existing R.O.W.

EXISTING
DRAINAGE
PIPE (TO
REMAIN)

R = 21'

PC 100+95.00

SLOPE
LIMITS
(TYP.)

EXISTING STONE
WALL (TYP.)

EXIST. OVERHEAD
UTILITY LINES
(SEE UTILITY
COORDINATION
NOTES ON SHEET 4)

TAX MAP 9, LOT 87-1-4
STEPHEN HALSEY
65 MERCIER COURT
GOFFSTOWN, NH 03045
C.C.R.D. BOOK 9666, PAGE 2674

TAX MAP 9, LOT 87-1-3
JOHN J.& TANYA M LIBBY
5 MERCIER COURT
GOFFSTOWN, NH 03045
C.C.R.D. BOOK 9325, PAGE 1113

MERCIER COURT

Approximate Existing R.O.W.

Approximate Existing R.O.W.

HARDY
BROOK

10 0 10 20

SCALE IN FEET

1 STA. 100+55.09, LT. 15.96' TO STA. 101+00.83, LT. 16.10'
REMOVE 46 LF x 12" HDPE PIPE (SUBSID. TO ITEM 603.82212)
REMOVE CONCRETE HEADWALL (SUBSID. TO ITEM 603.82212)
STA. 100+55.09, LT. 15.96' TO STA. 101+02.44, LT 31.56'
CONST. 50 LF x 12" PE PIPE (TYPE S) W/ 2- 11.25
DEGREE BENTS (ITEM 603.82212)
CONST. ALUM. STEEL END SECTION (ITEM 603.36112)
CONST. STEEL WITNESS MARKER @ OUTLET (ITEM 622.1)
12" INV. OUT = MATCH EXIST. (FIELD VERIFY)
12" INV. OUTLET = 431.50 (FIELD VERIFY)

STATE OF NEW HAMPSHIRE
JOSIF BICJA
No. 13912
LICENSED
PROFESSIONAL ENGINEER
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. DICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
ROADWAY PLAN

PROJECT NO. 24.010001.02

SHEET NO.
9
OF 18

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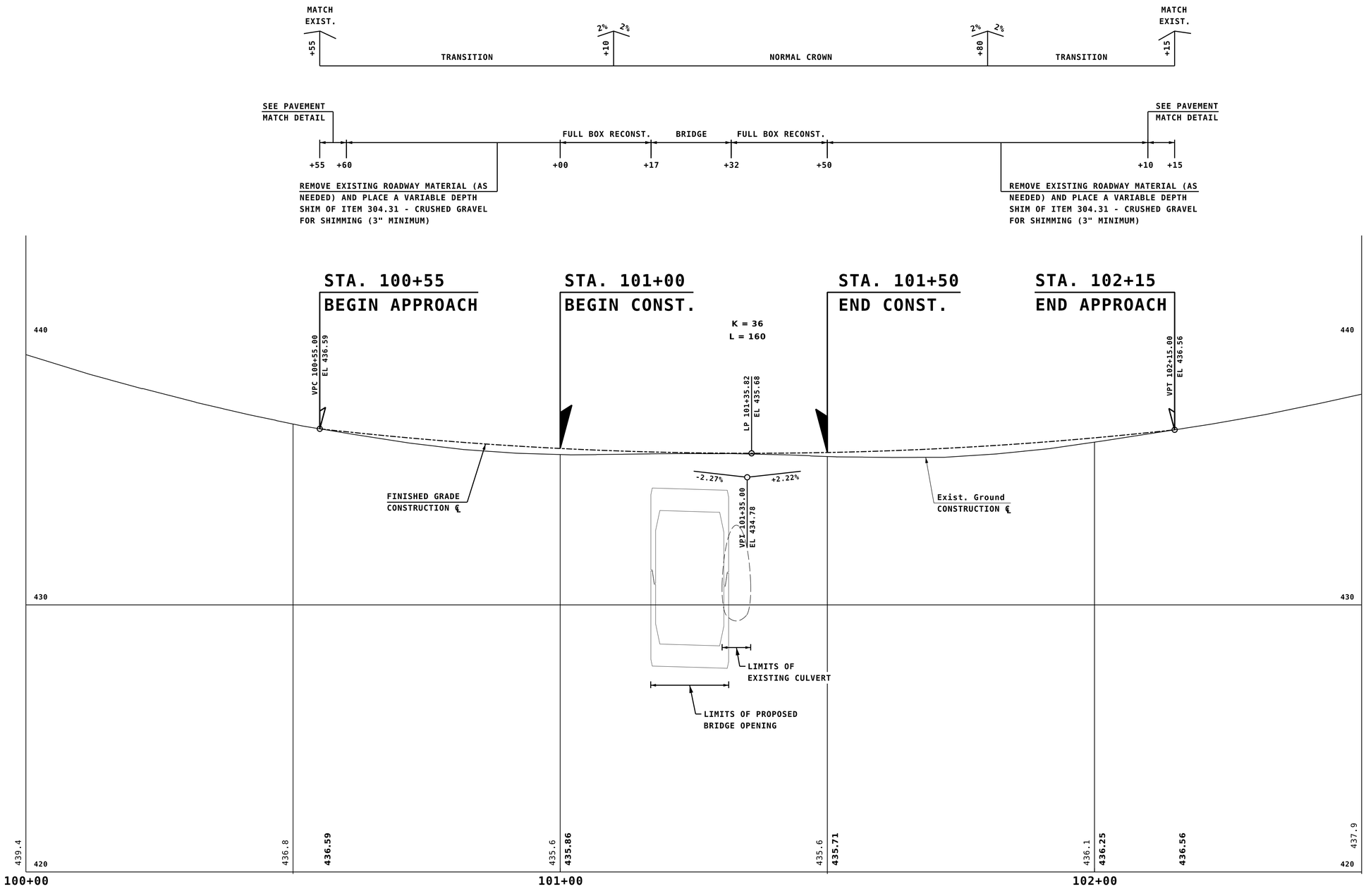

10 0 10 20 HORIZONTAL

2 0 2 4 VERTICAL

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JOSIF BICJA No. 13312 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

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GOFFSTOWN, NEW HAMPSHIRE

MONTELONA ROAD OVER HARDY BROOK

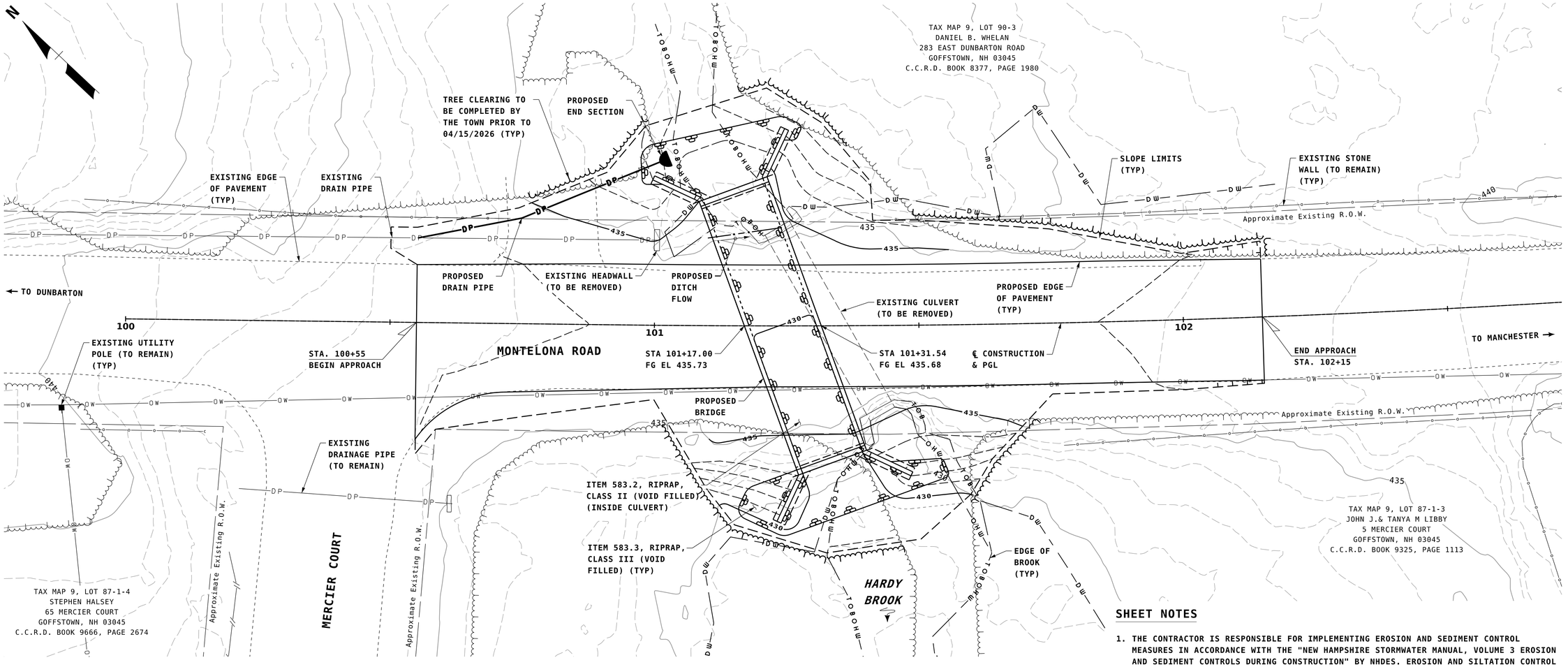
ROADWAY PROFILE

PROJECT NO. 24.010001.02

SHEET NO.

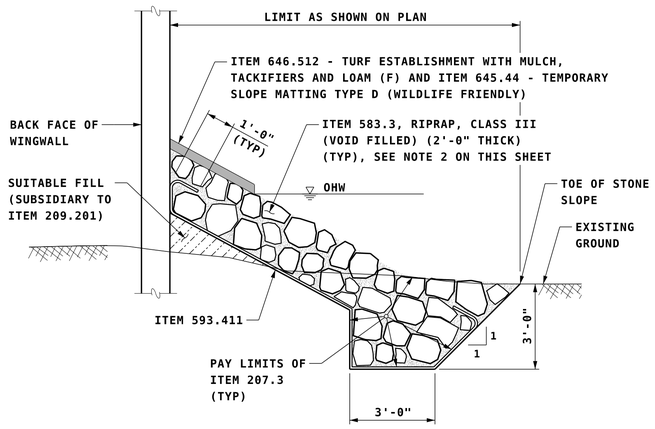
10

OF 18



SITE PLAN

SCALE: 1" = 10'



WINGWALL RIPRAP DETAIL - ON SOIL

NOT TO SCALE

SHEET NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" BY NHDES. EROSION AND SILTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO START OF ANY WORK AND SHALL BE MAINTAINED DURING THE DURATION OF THE CONSTRUCTION ACTIVITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOT CAUSE VIOLATIONS OF SURFACE WATER QUALITY STANDARDS. THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN AS REQUIRED BY THE CONTRACT DOCUMENTS AND SUCH PLAN SHALL BE SUBMITTED TO NHDES FOR REVIEW AND APPROVAL PRIOR TO START OF WORK.

2. VOID-FILLED RIPRAP SHALL BE ITEM 583.2, RIPRAP, CLASS II (1'-6" THICK) AND ITEM 583.3, RIPRAP, CLASS III (2'-0" THICK), WITH THE VOID SPACES FILLED WITH NATIVE STREAMBED MATERIAL AS THE RIPRAP IS BEING PLACED. WHERE NECESSARY, THE CONTRACTOR MAY SUPPLEMENT NATIVE STREAMBED MATERIAL WITH ITEM 304.99, STREAMBED SIMULATION MATERIAL. SEE BELOW FOR GRADATION REQUIREMENTS. ITEM 304.99 SHALL CONTAIN NO ANGULAR FACES. NATIVE STREAMBED MATERIAL OR ITEM 304.99 SHALL BE HYDRAULICALLY WASHED INTO THE RIPRAP VOID SPACES UNTIL THEY ARE FULL SO AS TO CREATE A MONOLITHIC MASS OF MATERIAL WITH A SMOOTH FINISH SURFACE. ALL COSTS FOR INSTALLING THE NATIVE CHANNEL MATERIAL OR ITEM 304.99 SHALL BE INCLUDED IN ITEM 304.99.

ITEM 304.99 - STREAMBED SIMULATION MATERIAL

MATERIAL TYPE	PERCENT OF MIX	SIZE
BOULDER	5%	> 10"
COBBLE	80%	2.5" - 10"
GRAVEL	10%	0.08" - 2.5"
SAND	5%	0.0024" - 0.08"
SILT	0%	< 0.0024"

3. THE CONTOURS SHOWN ON THIS PLAN WERE CREATED USING A COMBINATION OF FIELD COLLECTED DATA AND AERIAL 3D LIDAR (LIGHT DETECTION AND RANGING) TECHNOLOGY.

JOSIF BICJA No. 13912 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
SITE PLAN

PROJECT NO. 24.010001.02
SHEET NO. 11
OF 18

2/19/2026
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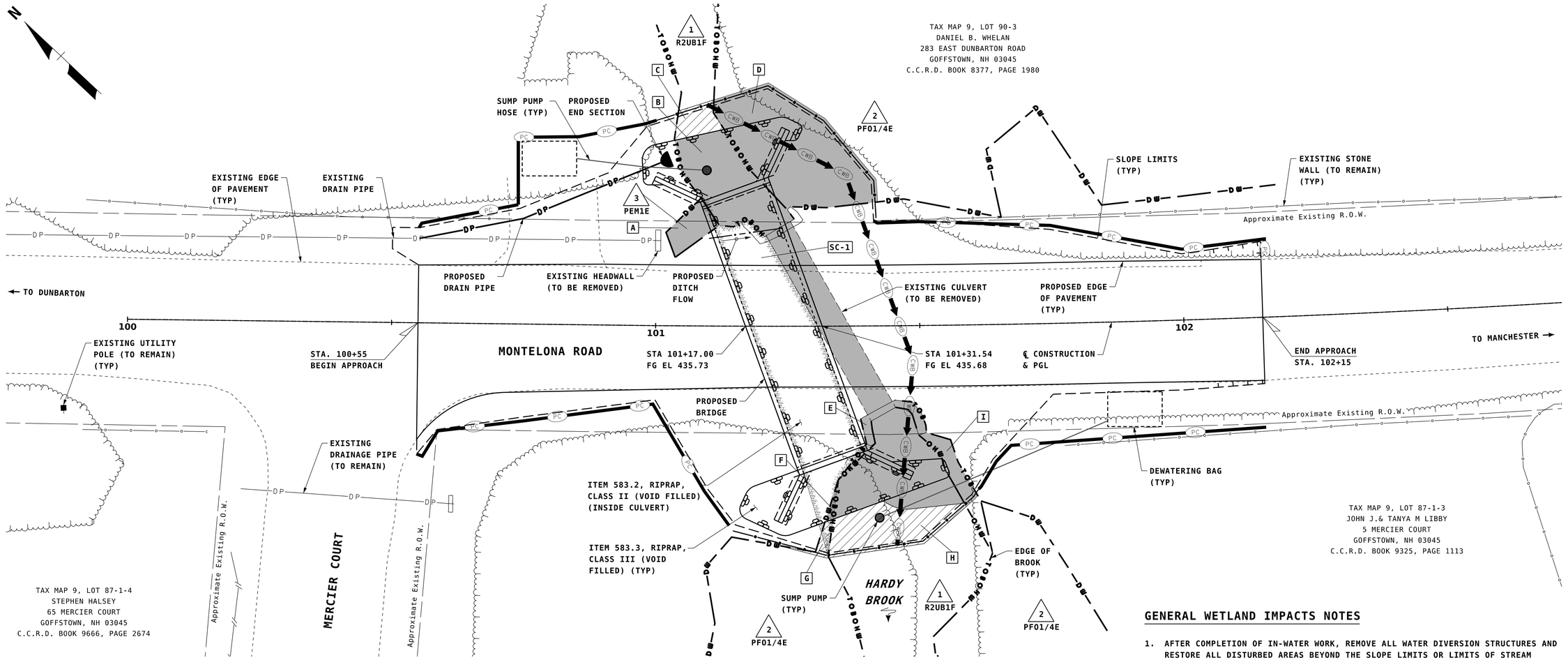

WETLAND IMPACTS PLAN

SCALE: 1" = 10'

WETLAND IMPACTS

SYMBOL	WETLAND DESIGNATION	IMPACT TYPE	AREA (SF)	LENGTH (LF)
A	PEM1E	PERMANENT WETLAND	53	-
B	R2UB1F	PERMANENT BED OF STREAM	728	82
C	R2UB1F	TEMPORARY BED OF STREAM	44	6
D	PFO1/4E	PERMANENT WETLAND	442	-
E	BANK	PERMANENT BANK OF STREAM	14	6
F	PFO1/4E	PERMANENT WETLAND	6	-
G	PFO1/4E	TEMPORARY WETLAND	16	-
H	R2UB1F	TEMPORARY BED OF STREAM	169	4
I	BANK	PERMANENT BANK OF STREAM	61	24

STREAM CREATION/RESTORATION

	IMPACT TYPE	AREA (SF)	LENGTH (LF)
SC-1	STREAM CREATION	605	52

SUMMARY OF IMPACTS
TOTAL NEW TEMPORARY IMPACTS = 229 SF / 10 LF
TOTAL NEW PERMANENT IMPACTS = 1304 SF / 112 LF

TOTAL IMPACTS = 1533 SF / 122 LF

TOTAL STREAM CREATION/RESTORATION = 605 SF / 52 LF

WETLAND CLASSIFICATION

1 R2UB1F	RIVERINE, LOWER PERENNIAL FLOW REGIME, UNCONSOLIDATED BOTTOM, GRAVEL/COBBLE SUBSTRATE, SEMI-PERMANENTLY FLOODED
2 PFO1/4E	PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS/NEEDLE-LEAVED CONIFEROUS VEGETATION, SEASONALLY FLOODED/SATURATED
3 PEM1E	PALUSTRINE, EMERGENT, PERSISTENT VEGETATION, SEASONALLY FLOODED/SATURATED

JOANNE THERIAULT, CERTIFIED WETLAND SCIENTIST #305, OF HOYLE, TANNER & ASSOCIATES, INC. PERFORMED THE WETLAND MAPPING ON JUNE 7, 2022 ACCORDING TO THE STANDARDS OF THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0, JANUARY 2012, US ARMY CORPS OF ENGINEERS.

LEGEND

- TEMPORARY IMPACTS
- PERMANENT IMPACTS
- STREAM CREATION/RESTORATION
- TOB OHW — TOP OF BANK AND ORDINARY HIGH WATER
- TOB — TOP OF BANK
- OHW — ORDINARY HIGH WATER
- DW — DELINEATED WETLANDS
- WATER DIVERSION STRUCTURE (ITEM 503.101)
- CWB — CLEAN WATER BYPASS
- PC — PERIMETER CONTROL (SILT FENCE OR SILT SOCK)
- # CODE — WETLAND DESIGNATION NUMBER

GENERAL WETLAND IMPACTS NOTES

1. AFTER COMPLETION OF IN-WATER WORK, REMOVE ALL WATER DIVERSION STRUCTURES AND RESTORE ALL DISTURBED AREAS BEYOND THE SLOPE LIMITS OR LIMITS OF STREAM RESTORATION TO PRE-CONSTRUCTION CONDITIONS.
2. SHOULD CONTRACTOR REQUIRE EROSION AND SEDIMENT CONTROLS BEYOND THE LIMITS OF IMPACTS AS SHOWN ON THIS PLAN TO MEET CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMIT AMENDMENTS OR NEW PERMITS.
3. CONTRACTOR MAY CHANGE LOCATION OF DEWATERING/STREAM BYPASS ONLY IN THE UPLAND AREAS AND SHALL NOT CHANGE IMPACTS TO WETLANDS/STREAM RESOURCES.
4. CONTRACTOR SHALL RETAIN SEDIMENT ON-SITE AND IMPLEMENT THE FOLLOWING DEWATERING CONTROL PRACTICES:
   A. TEMPORARY SEDIMENT BASINS SHALL BE SIZED TO RETAIN ON SITE, THE VOLUME OF A 2-YEAR 24-HOUR STORM EVENT FOR ANY AREA OF DISTURBANCE OR 3,600 CUBIC FEET OF STORMWATER RUNOFF PER ACRE OF DISTURBANCE, WHICHEVER IS GREATER.
   B. CONSTRUCT AND STABILIZE DEWATERING INFILTRATION BASINS OR BAGS PRIOR TO ANY EXCAVATION THAT MAY REQUIRE DEWATERING.
   C. TEMPORARY SEDIMENT BASINS SHALL BE PLACED AND STABILIZED AT LOCATIONS WHERE CONCENTRATED FLOW (CHANNELS AND PIPES) DISCHARGE TO THE SURROUNDING ENVIRONMENT FROM AREAS OF UNSTABILIZED EARTH DISTURBING ACTIVITIES.
   D. SEDIMENT FROM THE DEWATERING INFILTRATION BASINS OR BAG SHALL BE DISPOSED OF PER NHDES REGULATIONS.
5. OVERHEAD UTILITY LINES NOT SHOWN FOR CLARITY, SEE SITE PLAN FOR LOCATION OF OVERHEAD UTILITY LINES.
6. PERIMETER CONTROL SHALL NOT BE PLACED OUTSIDE OF SLOPE LIMITS AND IS ONLY DEPICTED OUTSIDE OF SLOPE LIMITS FOR CLARITY.
7. OHW AND TOB ARE THE SAME IN THIS LOCATION THUS ALL IMPACTS ARE TO BED OF STREAM, NOT BANK, WATERCOURSE LF OF IMPACTS CALCULATED FOR A PERENNIAL STREAM PER ENV-WT 407.03(C)(2) AS LEFT BANK + RIGHT BANK + CHANNEL ARE SHOWN AS BED OF STREAM IMPACTS ON THE APPLICATION FORM.

STATE OF NEW HAMPSHIRE — JOSIF BICJA No. 13912 LICENSED PROFESSIONAL ENGINEER
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. DICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
WETLAND IMPACTS PLAN

PROJECT NO. 24.010001.02
SHEET NO. 12 OF 18

2/19/2026
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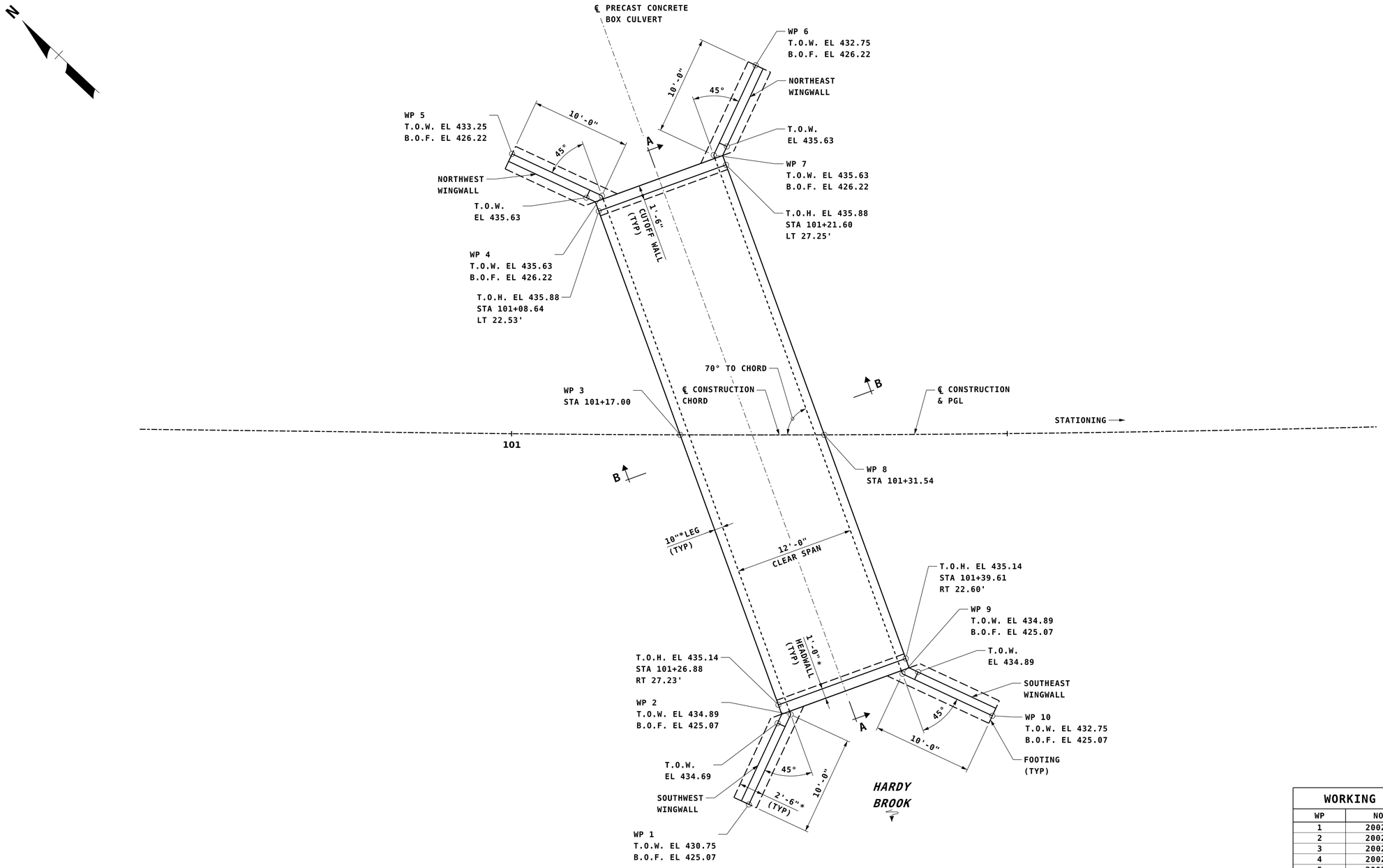

* DIMENSIONS TO BE DESIGNED BY THE CONTRACTOR'S FABRICATOR. DIMENSIONS MAY CHANGE.

BRIDGE LAYOUT PLAN

SCALE: $\frac{3}{16}$" = 1'-0"

WORKING POINT COORDINATES		
WP	NORTHING	EASTING
1	200230.3797	1023971.2409
2	200233.5116	1023980.7378
3	200260.9732	1023993.6454
4	200283.2427	1024005.8025
5	200292.7396	1024002.6706
6	200280.9737	1024026.0153
7	200277.8418	1024016.5184
8	200250.3802	1024003.6108
9	200228.1108	1023991.4537
10	200218.6139	1023994.5856

LEGEND

T.O.H. = TOP OF HEADWALL
T.O.W. = TOP OF WINGWALL
B.O.F. = BOTTOM OF FOOTING

NOTE

1. SEE SHEET 14 FOR SECTION A-A AND SHEET 15 FOR SECTION B-B.

JOSIF BICJA No. 13312 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
2/19/2026

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CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

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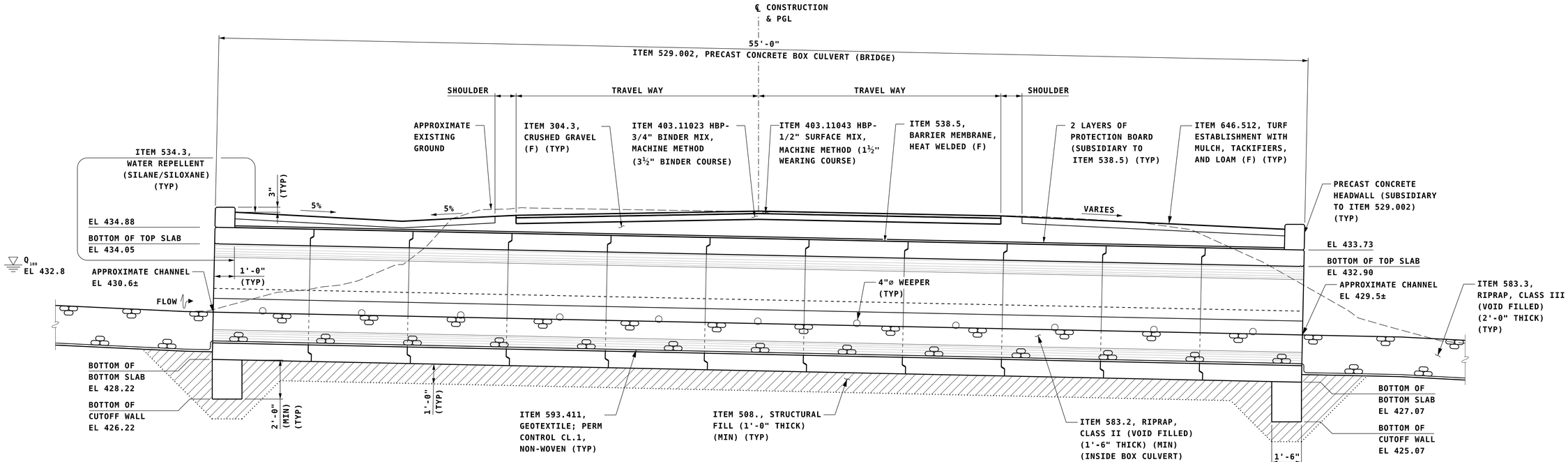
GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
BRIDGE LAYOUT PLAN

PROJECT NO. 24.010001.02
SHEET NO. 13 OF 18

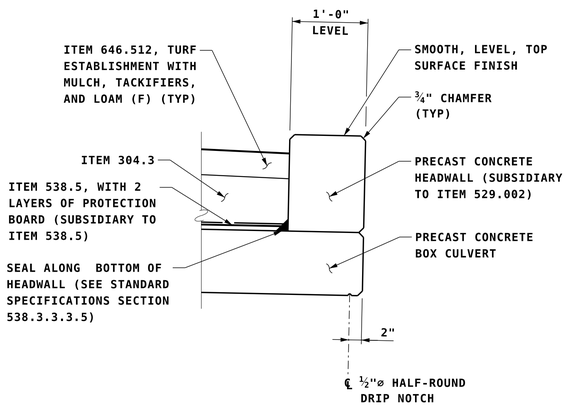


NOTES

1. CONTRACTOR SHALL FINALIZE FINISHED GRADE OF CHANNEL AFTER INSTALLATION OF UPPER PORTION OF THE BOX CULVERT.
2. SEE SHEET 13 FOR LOCATION OF SECTION A-A.

SECTION A-A

SCALE: ⅜" = 1'-0"

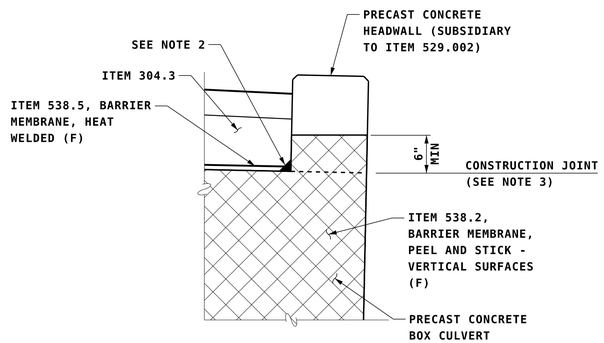


NOTE

1. BOX CULVERT AND HEADWALL REINFORCING TO BE DESIGNED BY THE CONTRACTOR'S FABRICATOR. SEE SPECIAL PROVISION FOR ITEM 529.002 FOR DESIGN REQUIREMENTS.

PRECAST CONCRETE HEADWALL DETAIL (SUBSIDIARY TO ITEM 529.002)

SCALE: 1" = 1'-0"

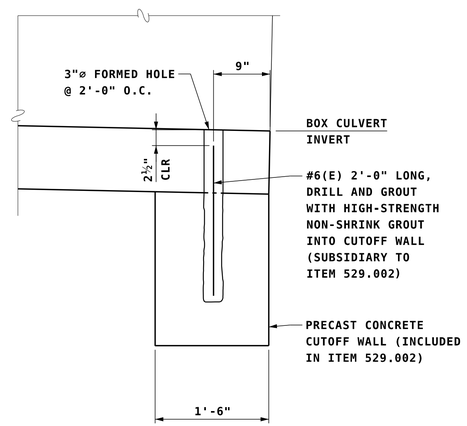


NOTES

1. EXTEND ITEM 538.2, BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F) A MINIMUM OF 6" ABOVE CONSTRUCTION JOINT ON THE EXTERIOR END FACES OF PRECAST CONCRETE RIGID FRAME.
2. SEAL ALONG PRECAST CONSTRUCTION JOINT (SEE STANDARD SPECIFICATIONS SECTION 538.3.3.3.5).
3. PRECAST FABRICATOR SHALL NOT CHAMFER THE HEADWALL OR BOX CULVERT AT THIS JOINT.
4. PROTECTION BOARD NOT SHOWN FOR CLARITY.

END OF HEADWALL SEALING DETAIL

SCALE: 1" = 1'-0"



NOTES

1. LENGTH OF CUTOFF WALL TO MATCH TOTAL WIDTH OF CULVERT.
2. DOWEL BARS TO BE GROUTED AFTER INSTALLATION OF THE CULVERT.
3. ITEM 529.002 REINFORCING TO BE DESIGNED BY THE CONTRACTOR'S FABRICATOR. SEE SPECIAL PROVISION FOR ITEM 529.002 FOR DESIGN REQUIREMENTS.

PRECAST CONCRETE CUTOFF WALL DETAIL (SUBSIDIARY TO ITEM 529.002)

SCALE: 1" = 1'-0"

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CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
PRECAST CONCRETE BOX CULVERT DETAILS (1 OF 3)

PROJECT NO. 24.010001.02
SHEET NO. 14
OF 18

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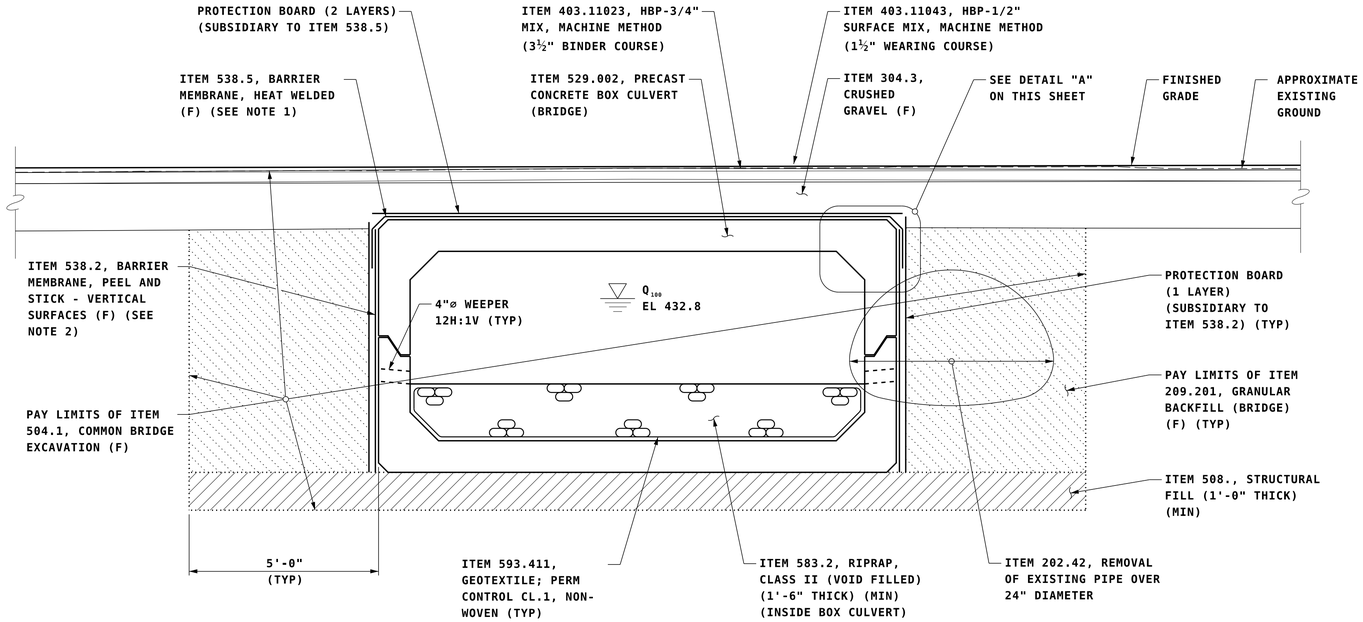
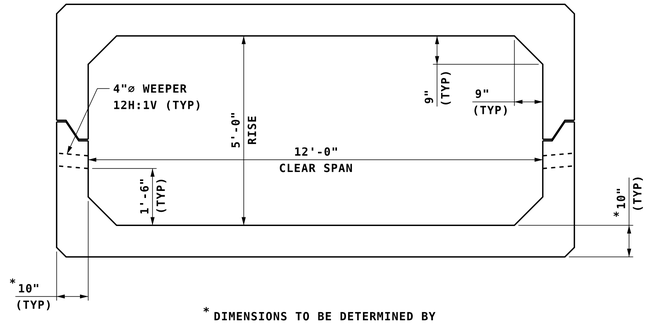


NOTES

1. PLACE OVER ENTIRE HORIZONTAL SURFACE AND DOWN EACH VERTICAL SURFACE 1'-0" BELOW BOTTOM OF CHAMFER.
2. PLACE OVER ENTIRE VERTICAL SURFACE OF BOX CULVERT.
3. SEE SHEET 13 FOR LOCATION OF SECTION B-B.

SECTION B-B

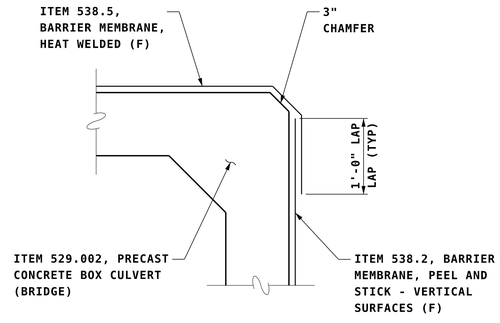
SCALE: ½" = 1'-0"



*DIMENSIONS TO BE DETERMINED BY THE CONTRACTOR'S FABRICATOR. DIMENSIONS MAY CHANGE.

PRECAST CONCRETE BOX CULVERT MASONRY SECTION

SCALE: ½" = 1'-0"



NOTE

1. PROTECTION BOARD NOT SHOWN FOR CLARITY.

DETAIL "A"

SCALE: 1" = 1'-0"

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JOSIF BICJA No. 13312 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE

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DESIGNED	DRAWN	CHECKED	NHDOT BRIDGE NO.	DATE
H. LAUZON	T. GELINAS	J. BICJA	N/A	FEBRUARY 2026

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GOFFSTOWN, NEW HAMPSHIRE

MONTELONA ROAD OVER HARDY BROOK

PRECAST CONCRETE BOX CULVERT DETAILS (2 OF 3)

PROJECT NO. 24.010001.02

SHEET NO.

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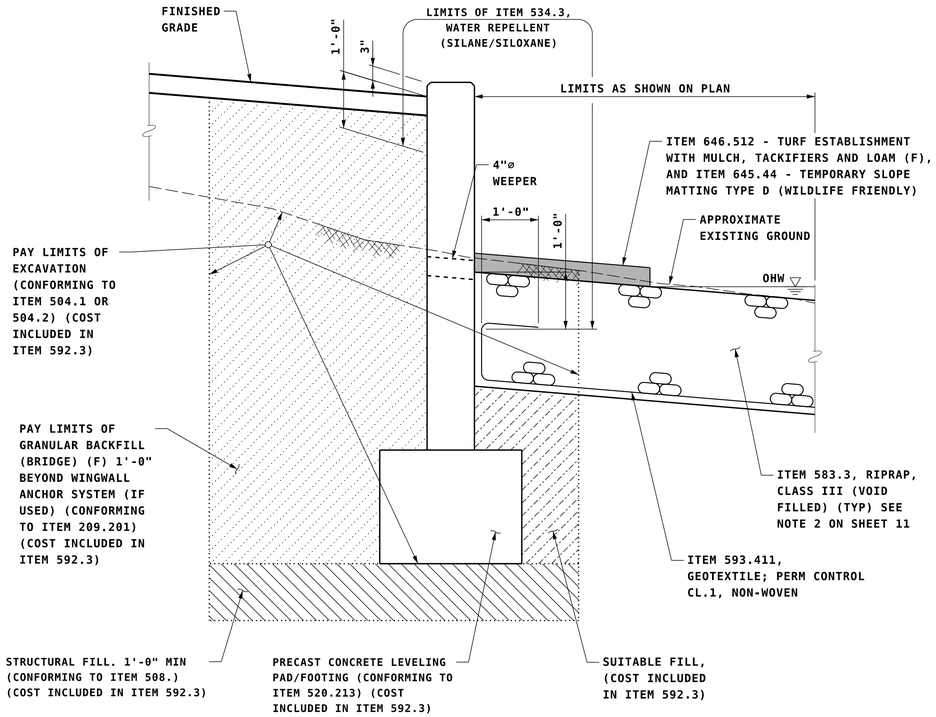
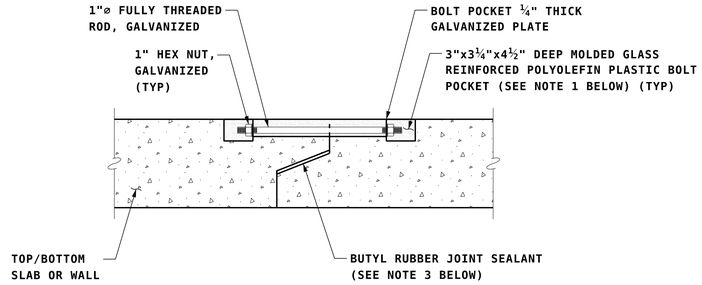
OF 18



WINGWALL EARTHWORK TYPICAL SECTION

SCALE: ¾" = 1'-0"

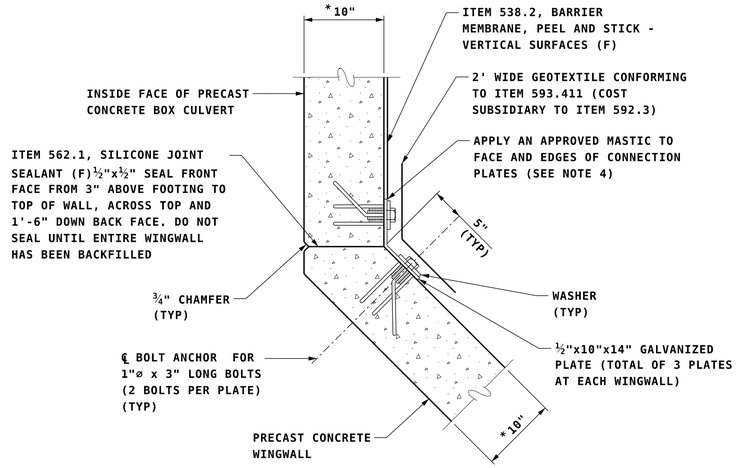


NOTES

1. 3"x3¼"x4½" DEEP MOLDED GLASS REINFORCED POLYOLEFIN PLASTIC BOLT POCKETS CAST IN TOP SLAB AND EXTERIOR SIDEWALLS TO ACCEPT 1"ø GALVANIZED THREADED ROD, NUTS AND WASHERS FOR PERMANENT ASSEMBLY IN FIELD. UPON SUCCESSFUL INSTALLATION, ALL POCKETS SHALL BE THOROUGHLY FILLED IN WITH AN NHDOT APPROVED, NON-SHRINK GROUT AND STRUCK LEVEL.
2. A MINIMUM OF 4 MECHANICAL CONNECTORS ARE REQUIRED FOR EACH BOX CULVERT UNIT (2 TOP SLAB AND 1 EACH SIDEWALL).
3. BUTYL RUBBER JOINT SEALANT PER ASTM C-990 & AASHTO M-199 SHALL BE PROVIDED.

BOX CULVERT MECHANICAL CONNECTION DETAIL (SUBSIDIARY TO ITEM 529.002)

NOT TO SCALE



* ASSUMED DIMENSION. ACTUAL DIMENSION TO BE DETERMINED BY FABRICATOR

NOTES

1. CONNECTION PLATES MUST BE POSITIONED WITH SMALL DIAMETER HOLES TOWARD STRUCTURE.
2. ALL HARDWARE TO BE HOT-DIPPED GALVANIZED.
3. FABRICATOR TO DESIGN ALL CONNECTION PLATES BUT IN NO CASE SHALL THEY BE SMALLER THAN AS DETAILED ABOVE (SEE WINGWALL NOTE 2 ON SHEET 5) (COST SUBSIDIARY TO ITEM 592.3).
4. THE APPROVED MASTIC MATERIAL SHALL COMPLY WITH STANDARD SPECIFICATION SECTION 538 AND SHALL BE LISTED ON THE NHDOT QUALIFIED PRODUCTS LIST PER ITEM 538 (COST SUBSIDIARY TO ITEM 538.2).

WINGWALL TO PRECAST CONCRETE STRUCTURE CONNECTION DETAIL

NOT TO SCALE

JOSIF BICJA No. 13912 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
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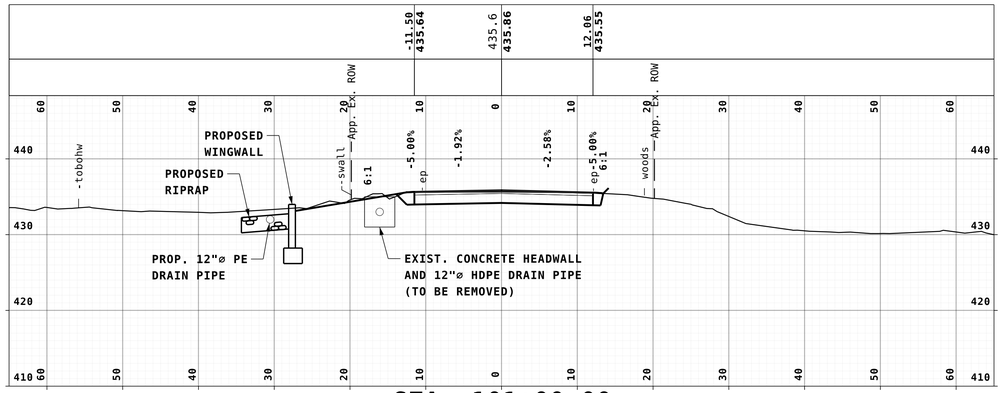
GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
PRECAST CONCRETE BOX CULVERT DETAILS (3 OF 3)

PROJECT NO. 24.010001.02

SHEET NO.
16
OF 18



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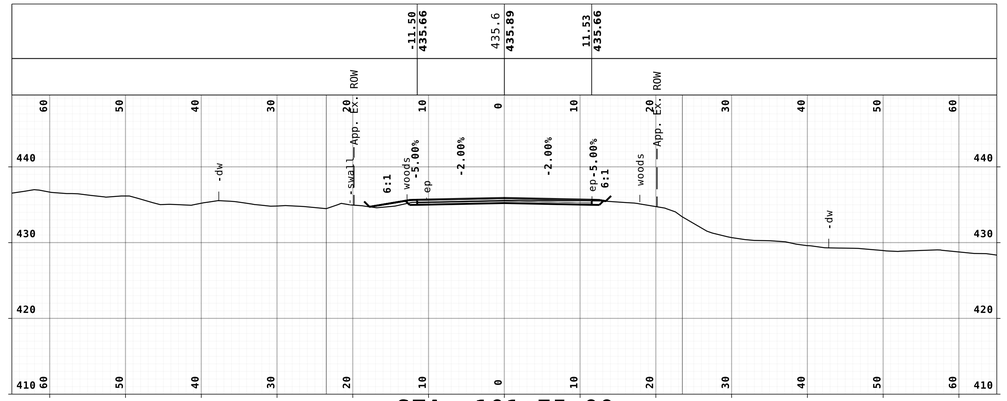

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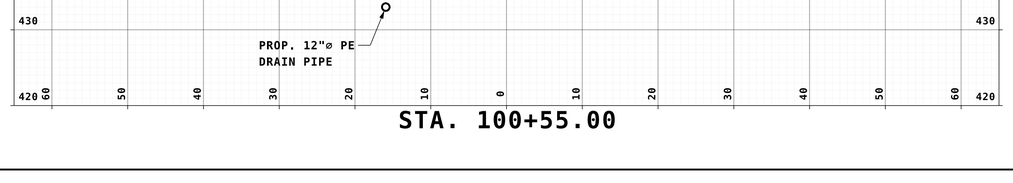

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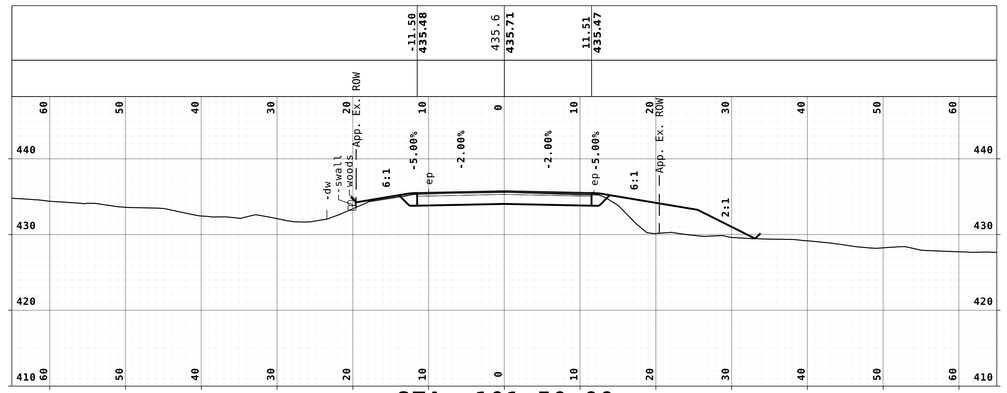

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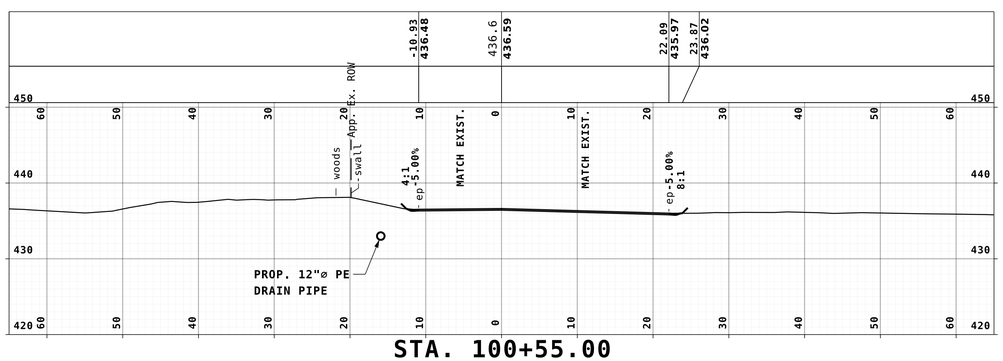

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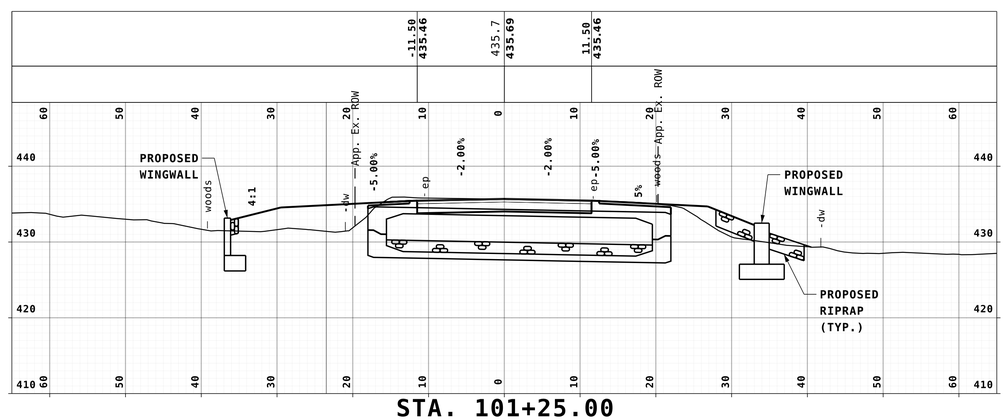

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JOSIF BICJA
No. 13912
LICENSED
PROFESSIONAL ENGINEER
STATE OF NEW HAMPSHIRE
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

HOYLE TANNER
150 Dow Street • Manchester, NH 03101
(603) 669-5555 • www.hoyletanner.com

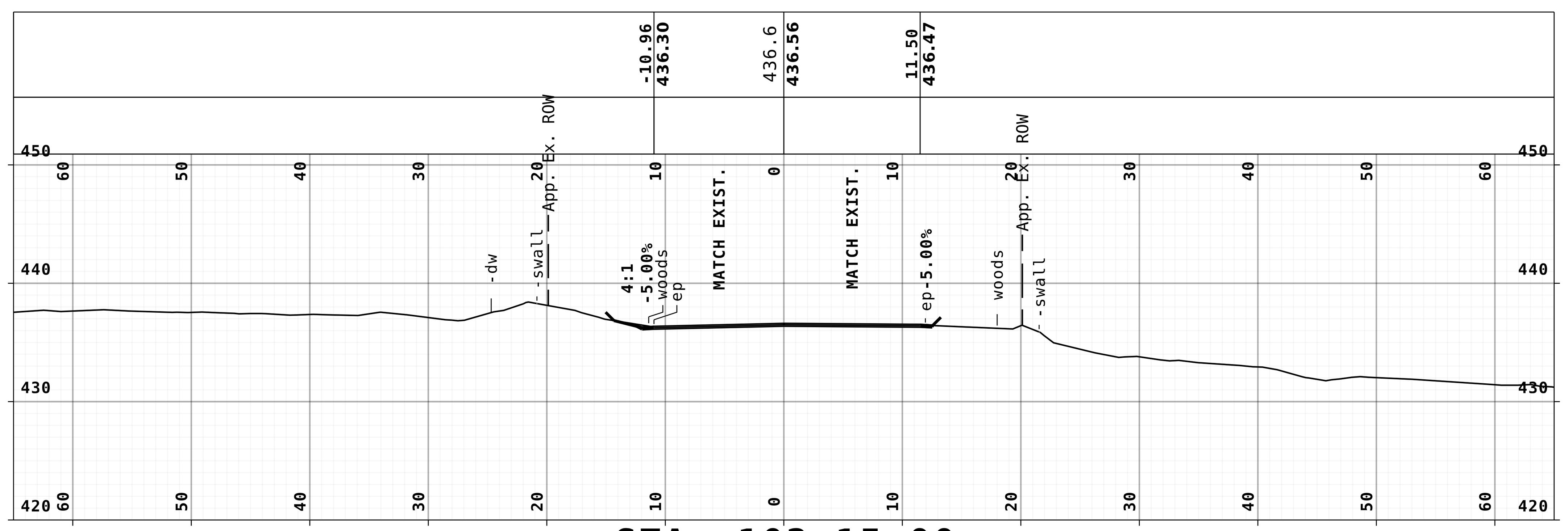
GOFFSTOWN, NEW HAMPSHIRE

MONTELONA ROAD OVER HARDY BROOK

MONTELONA ROAD CROSS SECTIONS (1 OF 2)

PROJECT NO. 24.010001.02

SHEET NO.
17
OF 18



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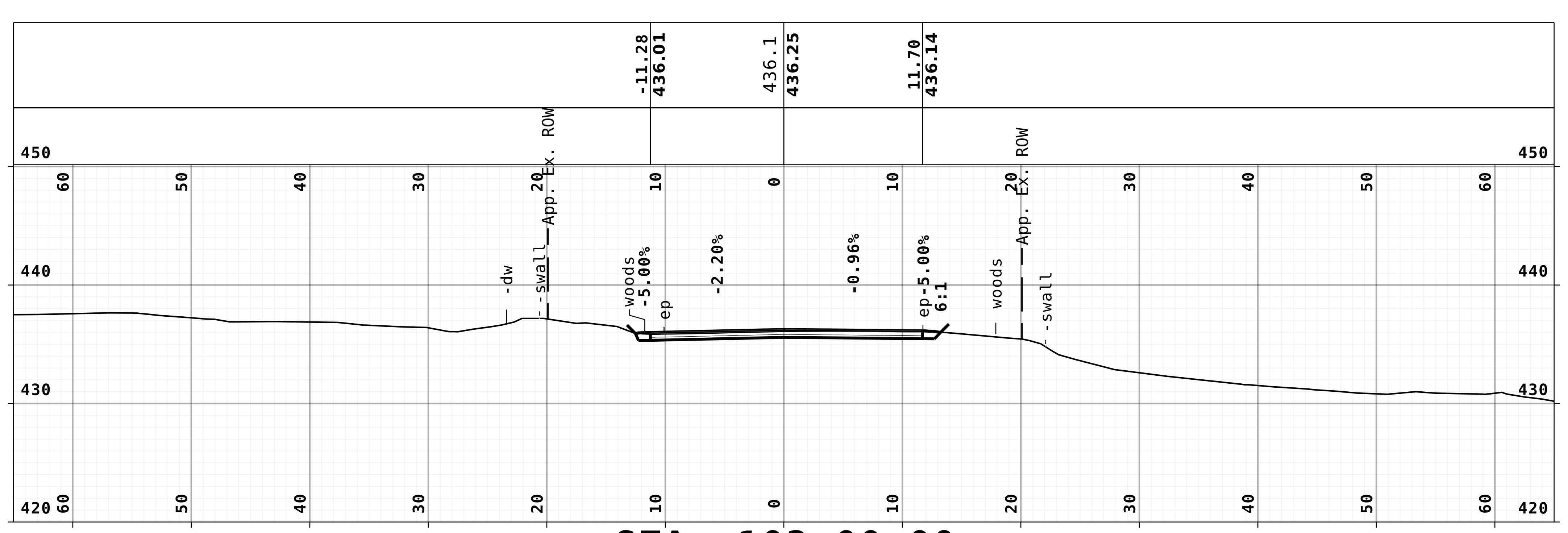

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STATE OF NEW HAMPSHIRE
JOSIF BICJA
No. 13312
LICENSED
PROFESSIONAL ENGINEER
2/19/2026

REV.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE

DESIGNED H. LAUZON
DRAWN T. GELINAS
CHECKED J. BICJA
NHDOT BRIDGE NO. N/A
DATE FEBRUARY 2026

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GOFFSTOWN, NEW HAMPSHIRE
MONTELONA ROAD OVER HARDY BROOK
MONTELONA ROAD CROSS SECTIONS (2 OF 2)

PROJECT NO. 24.010001.02
SHEET NO.
18
OF 18