INDEX OF SHEETS

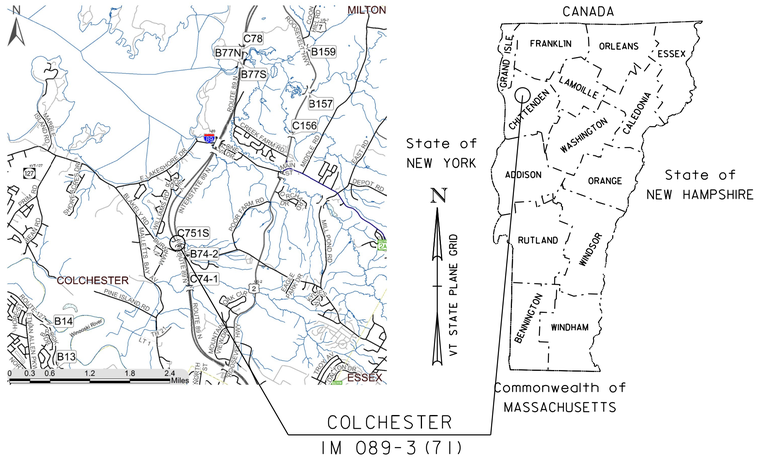
STANDARDS LIST

T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
T-11	CONSTRUCTION APPROACH SIGNING DIVIDED HIGHWAY ONE LANE CLOSED	08-06-2012
T-12	TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED	08-06-2012
T-13	TRAFFIC CONTROL DIVIDED HIGHWAY ONE LANE CLOSED	08-06-2012
T-16	TRAFFIC CONTROL FOR U TURN USE ON DIVIDED HIGHWAY	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-31	CONSTRUCTION SIGN DETAILS	08-06-2012
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	5/7/2010

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

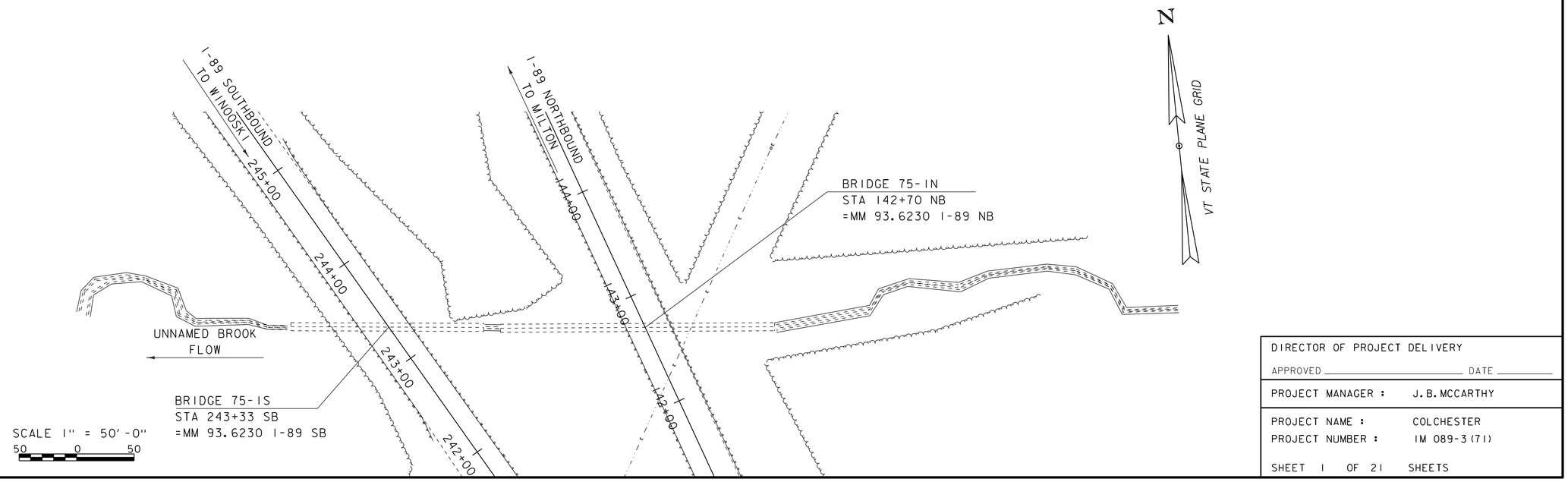
TOWN OF COLCHESTER
COUNTY OF CHITTENDEN

ROUTE NO : INTERSTATE 89 CULVERT NO : 75-1 N/S

PROJECT LOCATION: APPROXIMATLY 2.1 MILES NORTH OF EXIT 16 ON I-89

PROJECT DESCRIPTION: LINING OF THE EXISTING CULVERTS

	NORTH BOUND	SOUTH BOUND
LENGTH OF CULVERT:	238.00 FEET	172.00 FEET



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 1

SURVEYED BY : LIDAR
SURVEYED DATE :

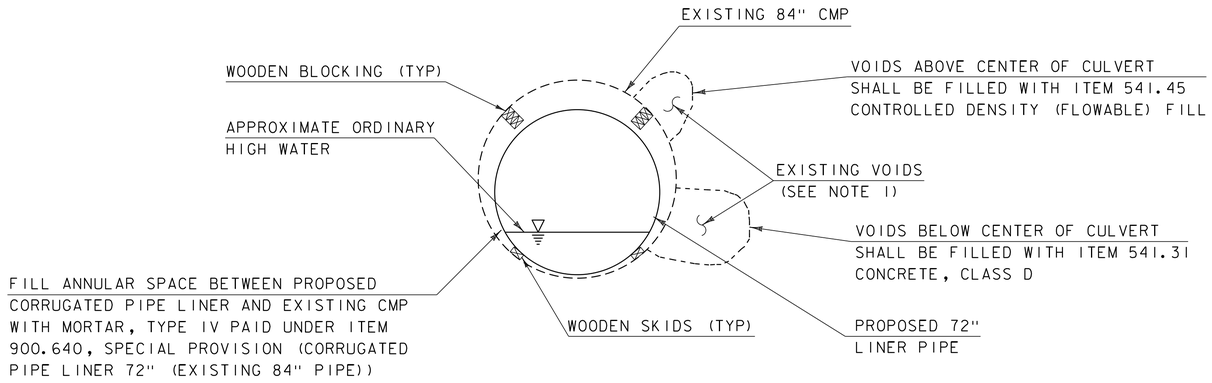
DATUM
VERTICAL
HORIZONTAL

DIRECTOR OF PROJECT DELIVERY
APPROVED _____ DATE _____

PROJECT MANAGER : J.B. MCCARTHY

PROJECT NAME : COLCHESTER
PROJECT NUMBER : IM 089-3(71)

SHEET 1 OF 21 SHEETS

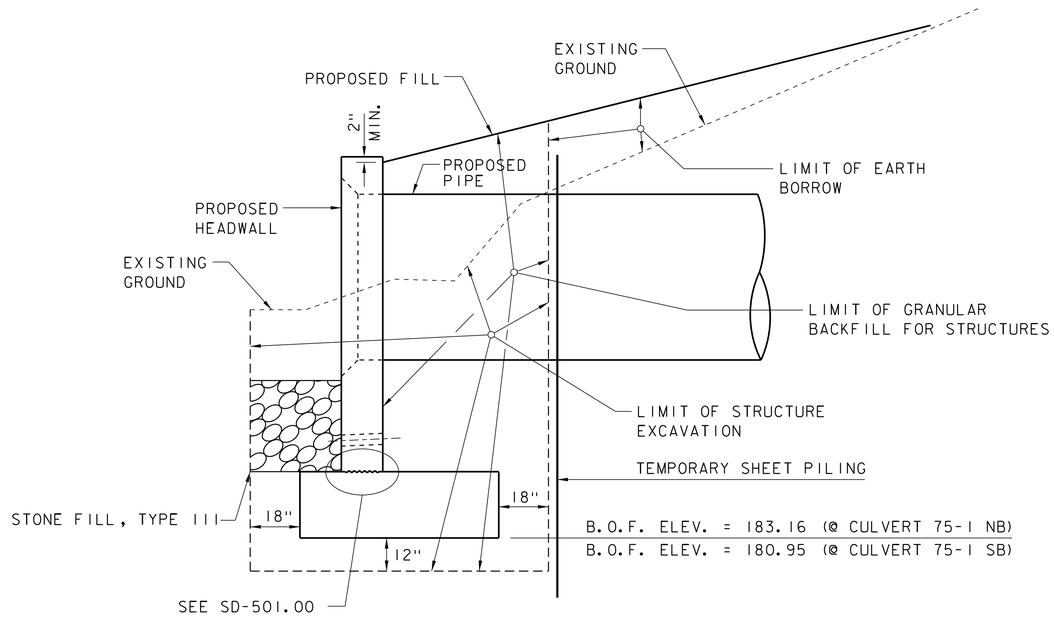


CULVERT LINING DETAIL

NOT TO SCALE

PROJECT NOTES

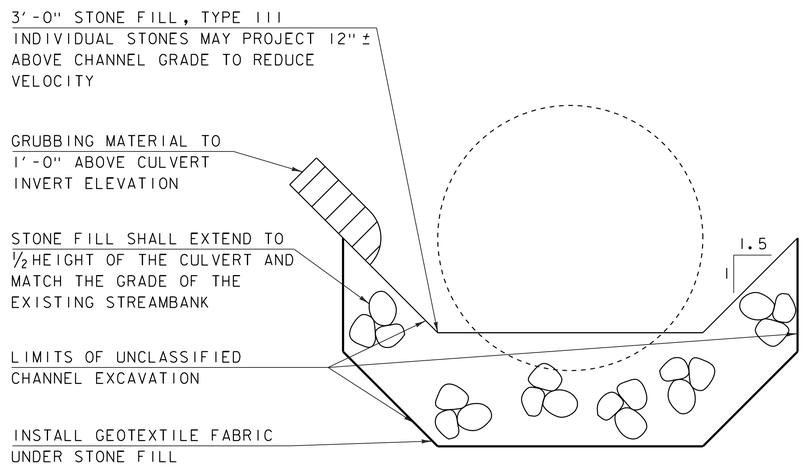
1. POTENTIAL VOID LOCATIONS SHOWN FOR EXPLANATION PURPOSES ONLY.
2. CULVERT LINER SHALL BE CONSTRUCTED AT A CONSTANT SLOPE TO ELIMINATE THE SAG IN THE EXISTING CULVERT.



INLET EARTHWORK SECTION

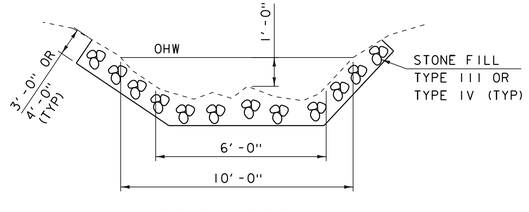
(EARTHWORK)

(ELEVATIONS ARE FROM AS-BUILT PLANS AND MAY NOT REFLECT EXISTING CONDITIONS)



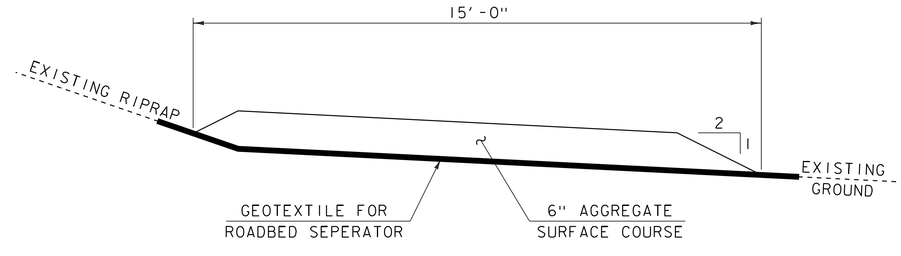
STONE FILL DETAIL

NOT TO SCALE



TYPICAL STREAM CROSS SECTION

NOT TO SCALE



TEMPORARY ACCESS ROAD TYPICAL SECTION

NOT TO SCALE

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: 13a092/sl3a092typical.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
TYPICAL SECTIONS	SHEET 2 OF 21

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES												TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
												GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				**EARTHWORK SUMMARY**
									390			390		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				FILL AVAILABLE
									200			200		CY	STRUCTURE EXCAVATION	204.25		0	CY	COMMON EXCAVATION (0 x 1.0)
									120			120		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30		117	CY	CHANNEL EXCAVATION (390 x 0.3)
									4800			4800		LB	REINFORCING STEEL, LEVEL I	507.11		0	CY	UNDERDRAIN EXCAVATION (0 x 0.9)
									10			10		GAL	WATER REPELLENT, SILANE	514.10		60	CY	STRUCTURE EXCAVATION (200 x 0.3)
									4			4		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20		0	CY	TRENCH EXCAVATION OF EARTH (0 x 0.9)
									40			40		CY	CONCRETE, CLASS B	541.25		3	CY	ROUNDING
									20			20		CY	CONCRETE, CLASS D	541.31		180	CY	TOTAL FILL AVAILABLE
									20			20		CY	CONTROLLED DENSITY (FLOWABLE) FILL	541.45		15	CY	FILL REQUIRED (15 CY EARTH + 0 CY GRANULAR)
									270			270		CY	STONE FILL, TYPE III	613.12		17.25	CY	PLANIMETERED FILL (x1.15)
									85			85		CY	STONE FILL, TYPE IV	613.13		2.75	CY	ROUNDING
							250					250		HR	UNIFORMED TRAFFIC OFFICERS	630.10		20	CY	TOTAL FILL REQUIRED
											1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16		160	CY	TOTAL WASTE
							1					1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
								370				370		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								40				40		SY	GEOTEXTILE FOR SILT FENCE	649.51				
								20				20		LB	SEED	651.15				
								170				170		LB	FERTILIZER	651.18				
								1				1		TON	AGRICULTURAL LIMESTONE	651.20				
								1				1		TON	HAY MULCH	651.25				
								230				230		SY	GRUBBING MATERIAL	651.40				
								1				1		LS	EPSC PLAN	652.10				
								20				20		HR	MONITORING EPSC PLAN	652.20				
								1				1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
								1880				1880		SY	PERMANENT EROSION MATTING	653.21				
								50				50		CY	VEHICLE TRACKING PAD	653.35				
								560				560		LF	BARRIER FENCE	653.50				
									410			410		LF	SPECIAL PROVISION (CORRIGATED PIPE LINER PCCSP) (72") (EXISTING 84" PIPE))	900.640				
							1					1		LS	SPECIAL PROVISION (LUMP SUM PROJECT)	900.645				
								1				1		LS	SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS, CULVERT)	900.645				
								1				1		LS	SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM)	900.645				
							1					1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: l3a092\sl3a092forms.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
QUANTITY SHEET

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY
SHEET 3 OF 21

PROJECT NOTES

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2012, AND ITS LATEST REVISIONS.

2. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS OF THE EXISTING CULVERTS SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS TO ENSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK. WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED.

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

4. IT IS EXPECTED THAT CULVERT LINING, NEW CULVERT INSTALLATION AND HEADWALL CONSTRUCTION WILL BE THE EXTENT OF THE WORK. DURING THE COURSE OF CONSTRUCTION IF THE CONTRACTOR SEES AN AREA OF CONCERN, SUCH AS VOIDS AROUND THE EXISTING CULVERT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER SHALL MAKE A DETERMINATION AS TO THE NEED FOR FURTHER EXPLORATION.

5. THE CONTRACTOR MUST CONTACT DIG SAFE AT 1-888-344-7233 AT LEAST THREE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TRAFFIC CONTROL NOTES

1. ALL TRAFFIC CONTROL MEASURES FOR THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH TYPICAL APPLICATIONS TA-5, TA-33, AND TA-34 OF THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE REFERENCED VTRANS STANDARD DRAWINGS. CONFLICTS BETWEEN THE MUTCD AND THE VTRANS STANDARD DRAWINGS SHOULD DEFER TO THE MUTCD.

2. THE CONTRACTOR SHALL SUBMIT A SPECIFIC TRAFFIC CONTROL PLAN FOR EACH CONSTRUCTION SITE TO THE HIGHWAY SAFETY AND DESIGN ENGINEER FOR APPROVAL PER SUBSECTIONS 104.04 AND 105.03. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN TRAFFIC CONTROL ITEMS.

3. LARGE CONSTRUCTION VEHICLES MAY BE REQUIRED TO BACK DOWN THE TEMPORARY ACCESS ROAD AT EACH CULVERT LOCATION. THESE VEHICLES WILL LIKELY NOT HAVE ADEQUATE SPACE AT THE INTERSECTION OF THE ACCESS ROAD AND THE INTERSTATE TO PERFORM THE NECESSARY TURNING MOVEMENTS. AT THE DISCRETION OF THE ENGINEER, A TEMPORARY CLOSURE OF AN INTERSTATE TRAVEL LANE AND SHOULDER WILL BE ALLOWED FOR ACCESS TO THE PROJECT SITES. SEE VTRANS STANDARDS T-11 & T-12. THIS WORK SHALL BE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).

4. THE CONTRACTOR WILL NOT BE ALLOWED TO PERFORM LANE CLOSURE AT PEAK TRAVEL TIMES. PEAK TRAVEL TIMES FOR THIS PROJECT ARE DEFINED AS BETWEEN 5 AM AND 11 AM FOR I-89 SOUTHBOUND, AND BETWEEN 1 PM AND 7 PM FOR I-89 NORTHBOUND, MONDAY THROUGH FRIDAY.

5. ENERGY ABSORPTION ATTENUATORS, IF USED, SHALL MEET THE REQUIREMENTS OF SECTION 621. PAYMENT FOR INSTALLING AND REMOVING ANY ENERGY ABSORPTION ATTENUATORS SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).

6. SIGNS, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE CLEANED WEEKLY AND THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 900.645, SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).

7. TEMPORARY SIGNS LOCATED BEHIND GUARDRAIL SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE SIGN IS ABOVE THE HEIGHT OF THE GUARDRAIL. ALL CONSTRUCTION RELATED SIGNS SHALL BE PLACED SUCH THAT THEY DO NOT OBSTRUCT VISIBILITY OF EXISTING SIGNS.

8. IF THE CONTRACTOR REMOVES ANY EXISTING GUARDRAIL FOR CONSTRUCTION ACCESS, TRAFFIC SHALL BE PROTECTED BY TEMPORARY BARRIER MEETING THE REQUIREMENTS LISTED IN TRAFFIC CONTROL NOTE 5 ABOVE. PAYMENT FOR REMOVING AND RESETTING GUARDRAIL, FURNISHING, INSTALLING, RESETTING, AND REMOVING ANY TEMPORARY TRAFFIC BARRIER OR OTHER MATERIALS REQUIRED TO PROVIDE PROTECTION SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE). THE CONTRACTOR SHALL PLACE TEMPORARY BARRIER IN A MANNER SUCH THAT IT PROTECTS TRAFFIC FROM EXPOSED ENDS OF THE BARRIER AND GUARDRAIL.

9. THE CONTRACTOR SHALL COORDINATE ANY PROPOSED TRAFFIC CONTROL MEASURES WITH ABUTTING CONSTRUCTION PROJECTS.

PIPE REHABILITATION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ACCESS TO ALL CULVERT REHABILITATION SITES. ALL RESULTING DISTURBED EARTH SHALL BE STABILIZED AND RESTORED UPON COMPLETION OF CONSTRUCTION. PAYMENT SHALL BE MADE UNDER CONTRACT ITEM 900.645, SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS, CULVERT).

2. CONTRACTOR IS RESPONSIBLE FOR PIPE DESIGN WITH SUBMITTAL AND ACCEPTANCE PRIOR TO INSTALLATION.

3. THE INLET ACCESS ROAD WILL REQUIRE THE REMOVAL OF EXISTING GUARDRAIL. THIS WORK SHALL BE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS, CULVERT).

4. STABILIZATION AND RESTORATION ASSOCIATED WITH THE TEMPORARY ACCESS SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (TEMPORARY ACCESS ROAD AND STAGING AREAS, CULVERT). EARTH DISTURBED WITHIN THE LIMITS OF STRUCTURE EXCAVATION FOR HEADWALL CONSTRUCTION SHALL BE RESTORED AND PAID FOR UNDER CONTRACT ITEMS FOR TURF ESTABLISHMENT.

5. AT EACH LOCATION SPECIFIED IN THESE PLANS, THE EXISTING CULVERT SHALL REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION OF THE EXISTING PIPE TO THE SATISFACTION OF THE ENGINEER. IT IS ANTICIPATED THAT IT WILL BE NECESSARY FOR THE CONTRACTOR TO REMOVE SEDIMENT, LARGE STONES, AND/OR DEBRIS FROM INSIDE THE EXISTING CULVERT, AND TO FILL AND REPAIR LARGE HOLES IN THE EXISTING CULVERT, PRIOR TO INSTALLING THE NEW LINER. PAYMENT FOR THIS WORK SHALL BE MADE UNDER THE APPROPRIATE SECTION 900 PIPE-LINER ITEM.

6. THE CONTRACTOR SHALL FILL ANY VOIDS BELOW THE CENTER OF THE CULVERT FROM WITHIN THE CULVERT BEFORE INSTALLING THE LINER. PAYMENT FOR THIS WORK SHALL BE MADE UNDER ITEM 541.31, CONCRETE, CLASS D. (AN ESTIMATED AMOUNT OF 10 CY OF CONCRETE, CLASS D HAS BEEN INCLUDED FOR FILLING VOIDS ABOUT EACH EXISTING PIPE.)

7. THE CONTRACTOR SHALL FILL ANY VOIDS ABOVE THE CENTER OF THE CULVERT FROM WITHIN THE CULVERT BEFORE INSTALLING THE LINER. PAYMENT FOR THIS WORK SHALL BE MADE UNDER ITEM 541.45, CONTROLLED DENSITY (FLOWABLE) FILL. (AN ESTIMATED AMOUNT OF 10 CY OF CONTROLLED DENSITY (FLOWABLE) FILL HAS BEEN INCLUDED FOR FILLING VOIDS ABOUT EACH EXISTING PIPE.)

8. THE EXISTING CRADLE WALL AT EACH PIPE INLET, AND EXISTING PIPE AS SHOWN ON THE CRADLE DETAIL, SHALL BE REMOVED UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE, AND A NEW CONCRETE HEADWALL SHALL BE CONSTRUCTED AT THE INLET. SEE HEADWALL DETAILS SHEET.

9. A NEW FULLY BEVELED HEADWALL SHALL BE CONSTRUCTED AT THE INLET OF EACH CULVERT. SEE HEADWALL DETAILS SHEET. THE NEW HEADWALL SHALL BE CONSTRUCTED IN THE DRY. CONTROL OF WATER SHALL BE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM).

10. THE CONTRACTOR SHALL VERIFY THAT THE RECOMMENDED SIZE LINER WILL FIT IN THE EXISTING PIPE BEFORE ORDERING THE LINER PIPE. SHOULD THE CONTRACTOR DISCOVER THAT THE RECOMMENDED SIZE LINER WILL NOT FIT IN THE EXISTING PIPE, THEN THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER. ANY CHANGES TO THE PROPOSED SIZE OF THE LINER WILL BE PAID FOR AS EXTRA WORK.

11. THE CONTRACTOR SHALL DEVELOP A SYSTEM OF SKIDS AND BLOCKING TO HOLD THE LINER IN PROPER POSITION DURING THE GROUTING OPERATION.

12. THERE WILL NEED TO BE A CLEAR AREA EQUAL TO THE PIPE SEGMENT LENGTH PLUS FIVE FEET IN FRONT OF THE INSTALLATION POINT TO PERMIT PROPER PIPE INSERTION.

13. AN ADDITIONAL 10 CY OF STONE FILL, TYPE III, IS PROVIDED FOR ENERGY DISSIPATION AT EACH INLET. AN ADDITIONAL 10 CY OF STONE FILL, TYPE IV, IS PROVIDED FOR ENERGY DISSIPATION AT THE OUTLET OF CULVERT 75-1 SB.

REINFORCING STEEL NOTES

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

   ALONG BACK FACES OF WALLS AGAINST EARTH: 2"
   ELSEWHERE UNLESS OTHERWISE INDICATED: 3"

2. REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:

   SPACING = +/- 1-INCH
   CLEARANCE = +/- 1/4-INCH

CONCRETE NOTES

1. CONCRETE PAYMENT AND CLASSIFICATION SHALL BE AS FOLLOWS:

   STRAIGHT HEADWALLS: ITEM 541.25, CONCRETE, CLASS B
   CRADLE HEADWALLS: ITEM 541.25, CONCRETE, CLASS B
   FILLING VOIDS BELOW CULVERT CENTERLINE: ITEM 541.31, CONCRETE, CLASS D

2. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH, UNLESS OTHERWISE NOTED.

3. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

4. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT UNLESS OTHERWISE INDICATED. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

5. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. PAYMENT SHALL BE MADE AS ITEM 514.10, WATER REPELLENT, SILANE. APPLICATION RATE OF WATER REPELLENT, SILANE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL PERFORM EROSION CONTROL AS STATED IN SECTION 105 OF THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011.

2. THE CONTRACTOR SHALL ESTABLISH TURF ON ANY AREAS DISTURBED AS A RESULT OF WORK ON THIS PROJECT.

3. SILT FENCE SHALL BE INSTALLED ALONG THE TOE OF SLOPES BELOW AREAS OF CONSTRUCTION ACCESS. NO WORK SHALL BE PERFORMED BELOW THOSE LIMITS, EXCEPT WITHIN THE LIMITS OF NEW STONE FILL.

4. BARRIER FENCE SHALL BE USED TO DELINEATE THE LIMIT OF WORK ON THE INLET SIDE. IT SHALL BE PLACED ALONG THE EXISTING RIGHT-OF-WAY UTILIZING THE EXISTING BOUNDARY MARKER AT APPROXIMATELY STATION 141+56, 145' RIGHT.

TRAFFIC DATA I-89 NORTHBOUND

YEAR	ADT	DHV	%D	%T	ADTT
2015	15,700	2500	100	6.2	1300
2035	19,500	3100	100	11.1	2900

TRAFFIC DATA I-89 SOUTHBOUND

YEAR	ADT	DHV	%D	%T	ADTT
2015	15,700	2900	100	5.2	1300
2035	19,500	3600	100	9.2	2800

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: 13a092/sl3a092forms.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
PROJECT NOTES

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

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

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

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

COMMON TOPOGRAPHIC POINT SYMBOLS

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

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

PROPOSED GEOMETRY CODES

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

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

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

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

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

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

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

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

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

ARCHEOLOGICAL & HISTORIC

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

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

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

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: l3a092/sl3a092forms.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: ------
SYMBOLOGY LEGEND SHEET

PLOT DATE: 28-MAR-2016
DRAWN BY: M.LONGSTREET
CHECKED BY: ------
SHEET 5 OF 21

N

VT STATE PLANE GRID

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

ARCH

UNNAMED BROOK
FLOW

50+00

SUMP FOR BYPASS DURING
CONSTRUCTION, TEMP IMPACT
625 SF BELOW OWH

40' X 30' TYPE III
STONE FILL, 300 SF
PERMANENT IMPACT BELOW OHW

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

55'-0"

50'-0"

BRIDGE 75-1 NB
EXISTING 84" X 248' CGMPP
NEW 72" OD X 238' LINER
1070 SF PERM IMPACT BELOW OHW

84" CGMPP
FLOW

51+00

I-89 NORTHBOUND
TO MILTON

N 19°10'28.25" W

147+00 146+00 145+00 144+00 143+00 142+00 141+00

OHW

52+00

N 64°21'03" W

53+00

84" CGMPP
FLOW

241+00 242+00 243+00

I-89 NORTHBOUND LAYOUT

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: I3a092/sI3a092border.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
I-89 NORTHBOUND LAYOUT	SHEET 6 OF 21

BRIDGE 75-1 NB
EXISTING 84" X 248' CGMPP
NEW 72" OD X 238' LINER
1070 SF PERM IMPACT BELOW OHW

25' X 40' TYPE III
STONE FILL, 250 SF
PERMANENT IMPACT BELOW OHW

15' ACCESS ROAD
ALONG TOE OF SLOPE
FOR TEMPORARY ACCESS

N 29°40'38.28" W

143+00
142+00
141+00
140+00
246+00
245+00
244+00
243+00
242+00
241+00
54+00
55+00

84" CGMPP
FLOW

OHW

I-89 SOUTHBOUND
TO WINOOSKI

APPROXIMATE
TOE OF SLOPE

PT
STA 241+66.47

ARCH

20' X 25' TYPE IV
STONE FILL, 250 SF
PERMANENT IMPACT BELOW OHW

15' ACCESS ROAD
ALONG TOE OF SLOPE
FOR TEMPORARY ACCESS

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

55+50

UNNAMED BROOK
FLOW

BRIDGE 75-1 SB
EXISTING 84" X 182' CGMPP
NEW 72" OD X 172' LINER
770 SF PERM IMPACT BELOW OHW

EXISTING CURVE DATA
DELTA = 23°06'27"
D = 1°00'00"
R = 5729.58'
T = 1171.29'
L = 2310.74'
E = 118.50'

N
VT STATE PLANE GRID

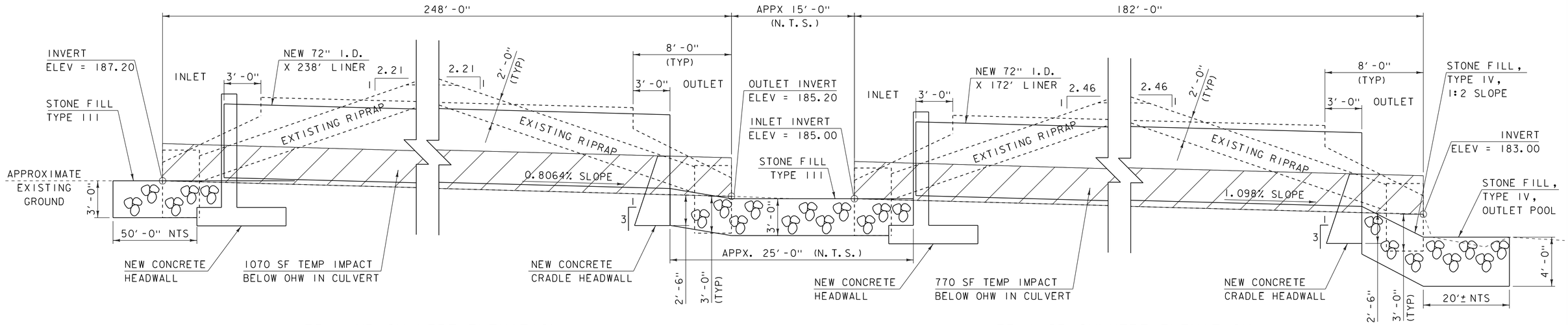
I-89 SOUTHBOUND LAYOUT

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

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: 13a092/sl3a092border.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
I-89 SOUTHBOUND LAYOUT

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY
SHEET 7 OF 21

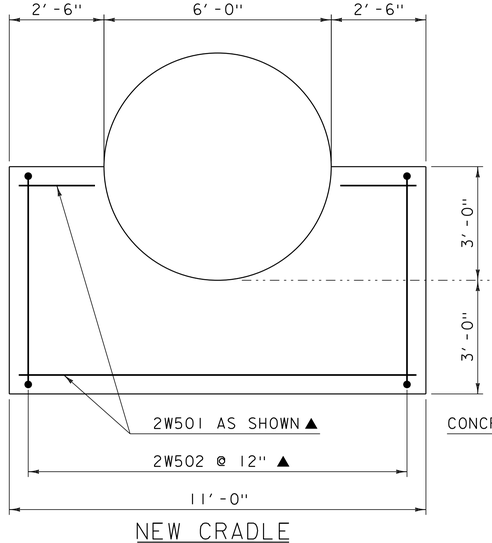


75-1 NB CULVERT ELEVATION

(ELEVATIONS ARE FROM AS-BUILT PLANS AND MAY NOT REFLECT EXISTING CONDITIONS)

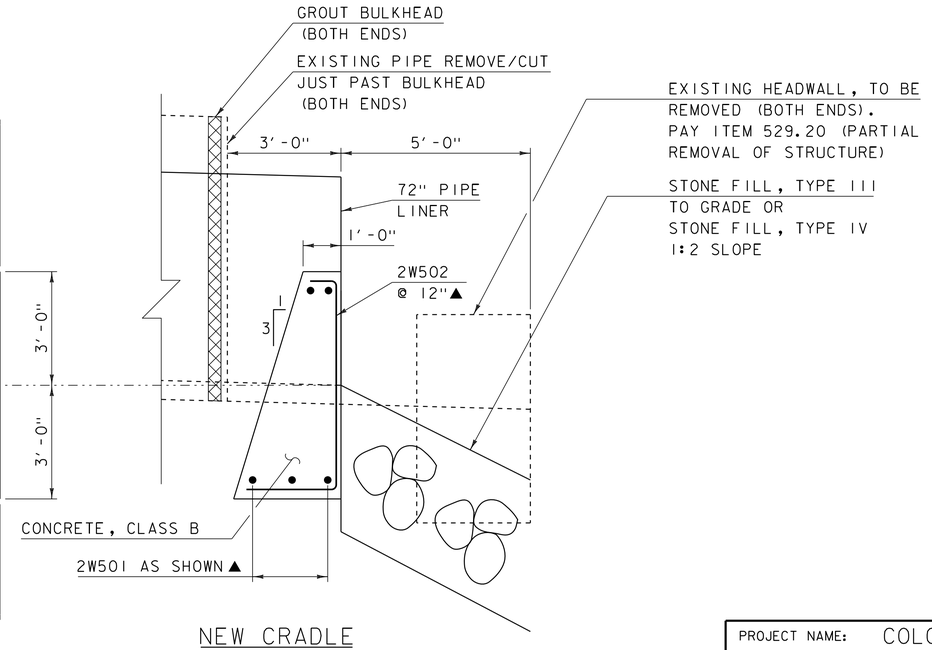
75-1 SB CULVERT ELEVATION

(ELEVATIONS ARE FROM AS-BUILT PLANS AND MAY NOT REFLECT EXISTING CONDITIONS)



NEW CRADLE HEADWALL ELEVATION

NOTE: REBAR NUMBERED FOR BRIDGE 75-1 NB OUTLET, BRIDGE 75-1 SB OUTLET SIMILAR



NEW CRADLE HEADWALL DETAILS

NOTE: REBAR NUMBERED FOR BRIDGE 75-1 NB OUTLET, BRIDGE 75-1 SB OUTLET SIMILAR

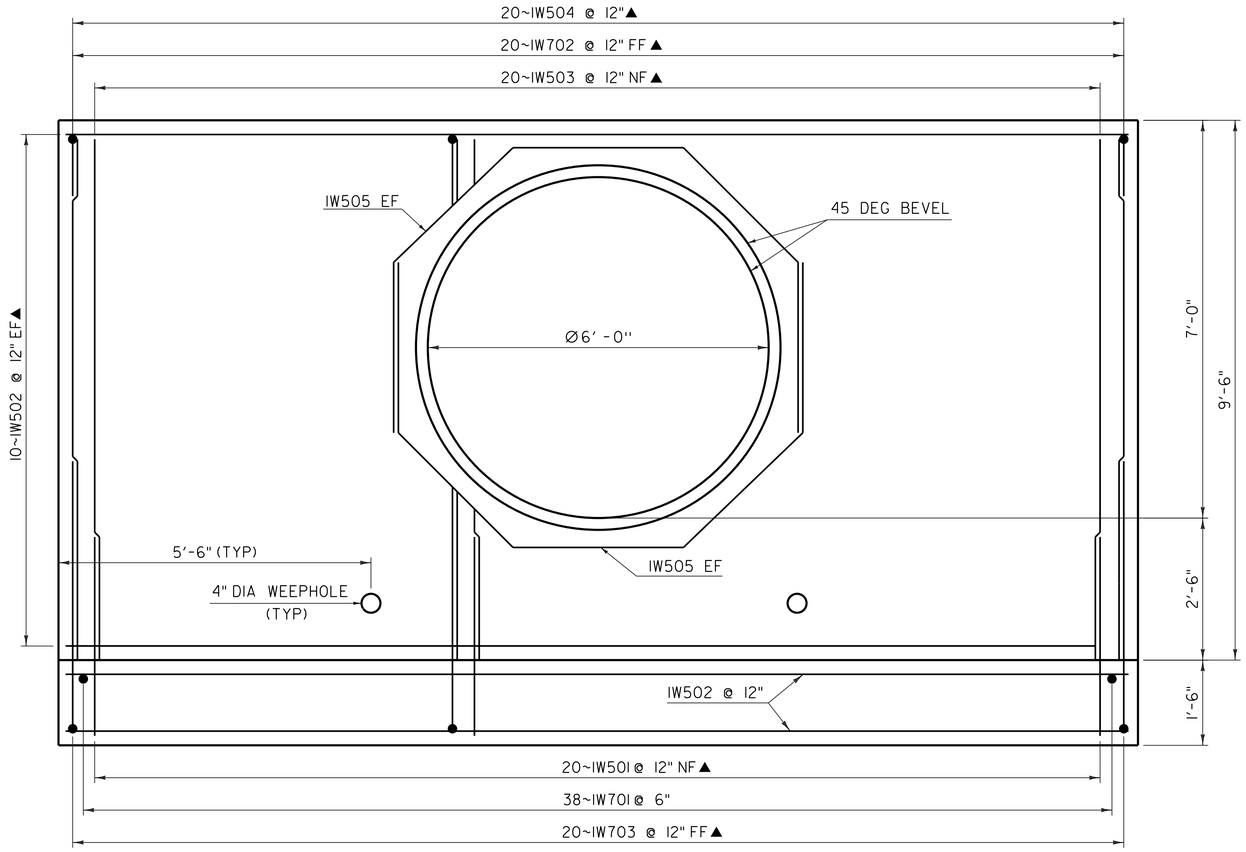
NOTE:

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

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: 13a092/sl3a092profile.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
PROFILE AND CRADLE DETAIL

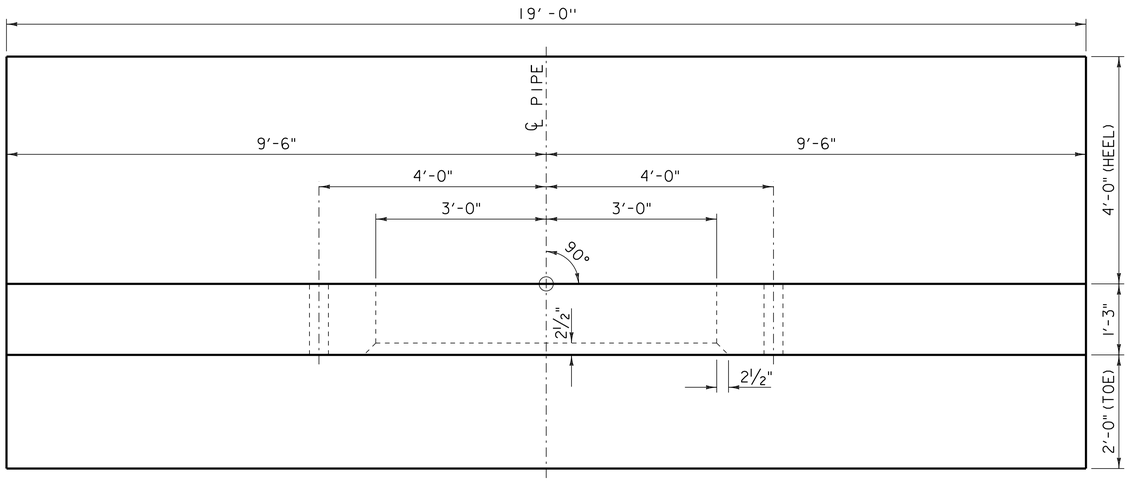
PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY



HEADWALL ELEVATION

SCALE 3/4" = 1'-0"

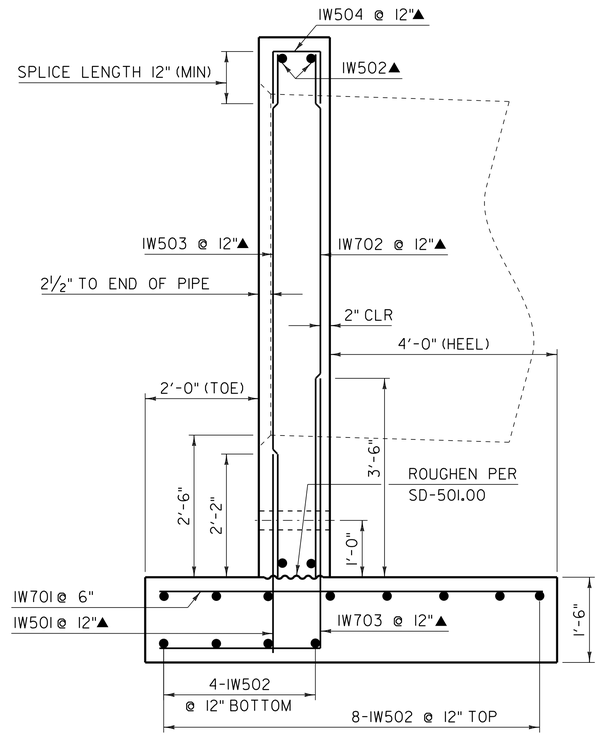
NOTE: REBAR NUMBERED FOR BRIDGE 75-1 NB INLET, BRIDGE 75-1 SB INLET SIMILAR



HEADWALL PLAN

SCALE 3/4" = 1'-0"

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



HEADWALL SECTION

SCALE 3/4" = 1'-0"

NOTE: REBAR NUMBERED FOR BRIDGE 75-1 NB INLET, BRIDGE 75-1 SB INLET SIMILAR

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: 13a092/sl3a092sub.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
HEADWALL DETAIL SHEET	SHEET 9 OF 21

STATE OF VERMONT
AGENCY OF TRANSPORTATION

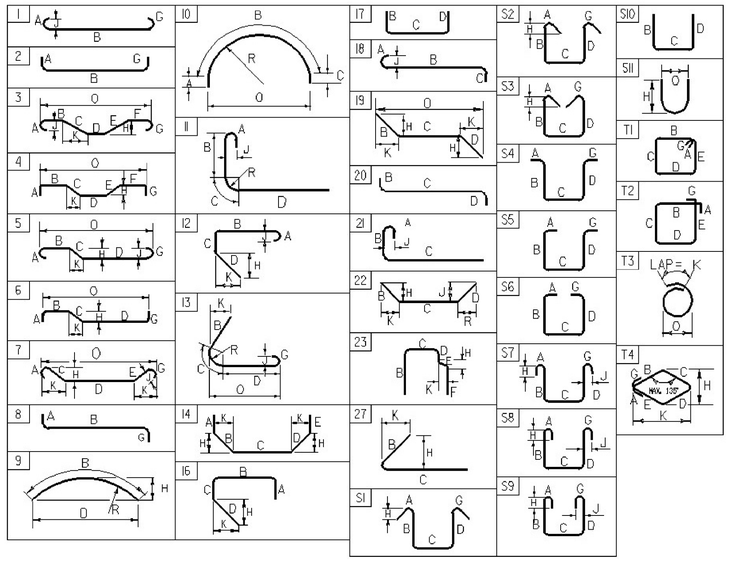
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	INLET 75-1 NB																
▲	20	5	3'- 6"	1W501	STR												
▲	32	5	18'- 6"	1W502	STR												
✳ ▲	21	5	9'- 3"	1W503	STR												
▲	20	5	2'- 10"	1W504	17		1'- 0"	0'- 10"	1'- 0"								
	4	5	10'- 0"	1W505	14	2'- 0"	2'- 0"	2'- 0"	2'- 0"	2'- 0"							
	38	7	6'- 10"	1W701	STR												
✳ ▲	21	7	9'- 3"	1W702	STR												
▲	20	7	7'- 8"	1W703	17		2'- 10"	4'- 10"	---								
	OUTLET 75-1 NB																
▲	5	5	10'- 6"	2W501	STR												
▲	12	5	8'- 6"	2W502	S10		2'- 6"	5'- 6"	0'- 6"								
	INLET 75-1 SB																
▲	20	5	3'- 6"	3W501	STR												
▲	32	5	18'- 6"	3W502	STR												
▲	20	5	9'- 3"	3W503	STR												
▲	20	5	2'- 10"	3W504	17		1'- 0"	0'- 10"	1'- 0"								
	4	5	10'- 0"	3W505	14	2'- 0"	2'- 0"	2'- 0"	2'- 0"	2'- 0"							
✳	39	7	6'- 10"	3W701	STR												
▲	20	7	9'- 3"	3W702	STR												
▲	20	7	7'- 8"	3W703	17		2'- 10"	4'- 10"	---								
	OUTLET 75-1 SB																
✳ ▲	6	5	10'- 6"	4W501	STR												
▲	12	5	8'- 6"	4W502	S10		2'- 6"	5'- 6"	0'- 6"								

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

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

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

PROJECT NAME: **COLCHESTER**
PROJECT NUMBER: **IM 089-3(71)**

FILE NAME: **13a092/s13a092forms.dgn**
PROJECT MANAGER: **J.B.MCCARTHY**
DESIGNED BY: **J.B.MCCARTHY**
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: **2/17/2016**
DRAWN BY: **D.D.BEARD**
CHECKED BY: **J.B.MCCARTH**

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE LINING OF CULVERTS 75-1 N/S AND THE REPLACEMENT OF ITS HEADWALLS. CULVERTS 75-1 N/S WILL BE LINED WITH 72" OD LINERS, RUNNING 238 FEET UNDER INTERSTATE 89 NORTHERN BARREL, AND RUNNING 172 FEET UNDER INTERSTATE 89 SOUTHERN BARREL. CULVERTS 75-1 N/S ARE LOCATED IN THE TOWN OF COLCHESTER, ON INTERSTATE 89, APPROXIMATELY 2.1 MILES NORTH OF INTERSTATE 89, EXIT 16. THE LENGTH OF EACH CULVERT WILL BE REDUCED BY 10 FEET WITH THE NEW HEADWALLS.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.42 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA CONTAINS PALUSTRINE EMERGENT WETLANDS, AND PALUSTRINE FORESTED WETLANDS. INTERSTATE 89 IS WITHIN THE PROJECT SITE.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE UNNAMED BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS A TRIBUTARY OF LAKE CHAMPLAIN (MALLETS BAY).

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS PRIMARILY OF HARDWOOD TREES AND MARSHLAND GROWTH. THE PROJECT AREA HAS HABITAT TO SUPPORT THE ENDANGERED NORTHERN LONG-EARED BAT. THEREFORE, TIME OF YEAR (TOY) RESTRICTIONS WILL BE PLACED ON TREE CUTTING ACTIVITIES. TREES CAN ONLY BE CUT BETWEEN SEPT 1 - APR 15, UNLESS THE CONTRACTOR CONDUCTS ACOUSTIC SURVEYS AND NO PRESENCE OF THE SPECIES IS DETECTED. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY LINING THE EXISTING CULVERTS AND REPLACEMENT OF THE EXISTING HEADWALLS. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III/IV AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CHITTENDEN, VERMONT. SOIL ON THE PROJECT SITE IS FARMINGTON EXTREMELY ROCKY LOAM, 5% TO 20% SLOPES, "K FACTOR" = 0.32. THE SOIL IS CONSIDERED POTENTIALLY HIGHLY ERODIBLE DUE TO A HIGH "K FACTOR".

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS
CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: PROJECT HAS THE HABITAT TO SUPPORT NORTHERN LONG-EARED BAT (ENDANGERED)
WATER RESOURCE: UNNAMED BROOK
WETLANDS: CLASS II AND CLASS III WETLANDS AROUND THE UNNAMED BROOK

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

BARRIER FENCING (BF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

SPECIAL PROVISION (TEMPORARY RELOCATION OF STREAM) WILL BE UTILIZED TO DIVERT THE UNNAMED BROOK THROUGH THE WORK ZONE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

1.4.7 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING COFFERDAM IS NOT ANTICIPATED.

1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

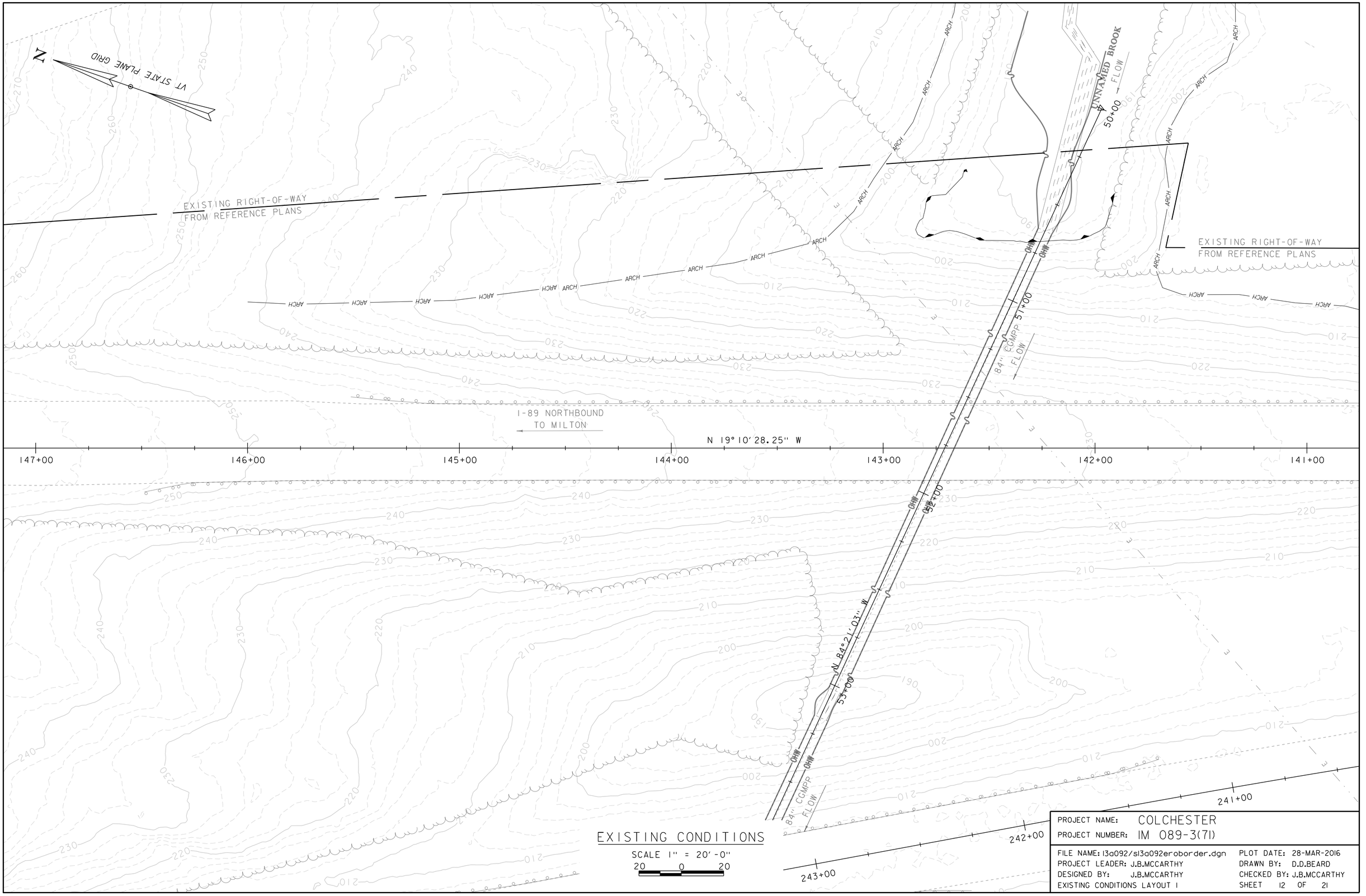
THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SPECIFICATION 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

1.5.3 UPDATES

PROJECT NAME:	COLCHESTER		
PROJECT NUMBER:	IM 089-3(71)		
FILE NAME:	I3a092/sI3a092_EPSC_Narrative.dgn	PLOT DATE:	28-MAR-2016
PROJECT LEADER:	J.B.MCCARTHY	DRAWN BY:	D.D.BEARD
DESIGNED BY:	J.B.MCCARTHY	CHECKED BY:	J.B.MCCARTHY
EPSC NARRATIVE		SHEET	11 OF 21

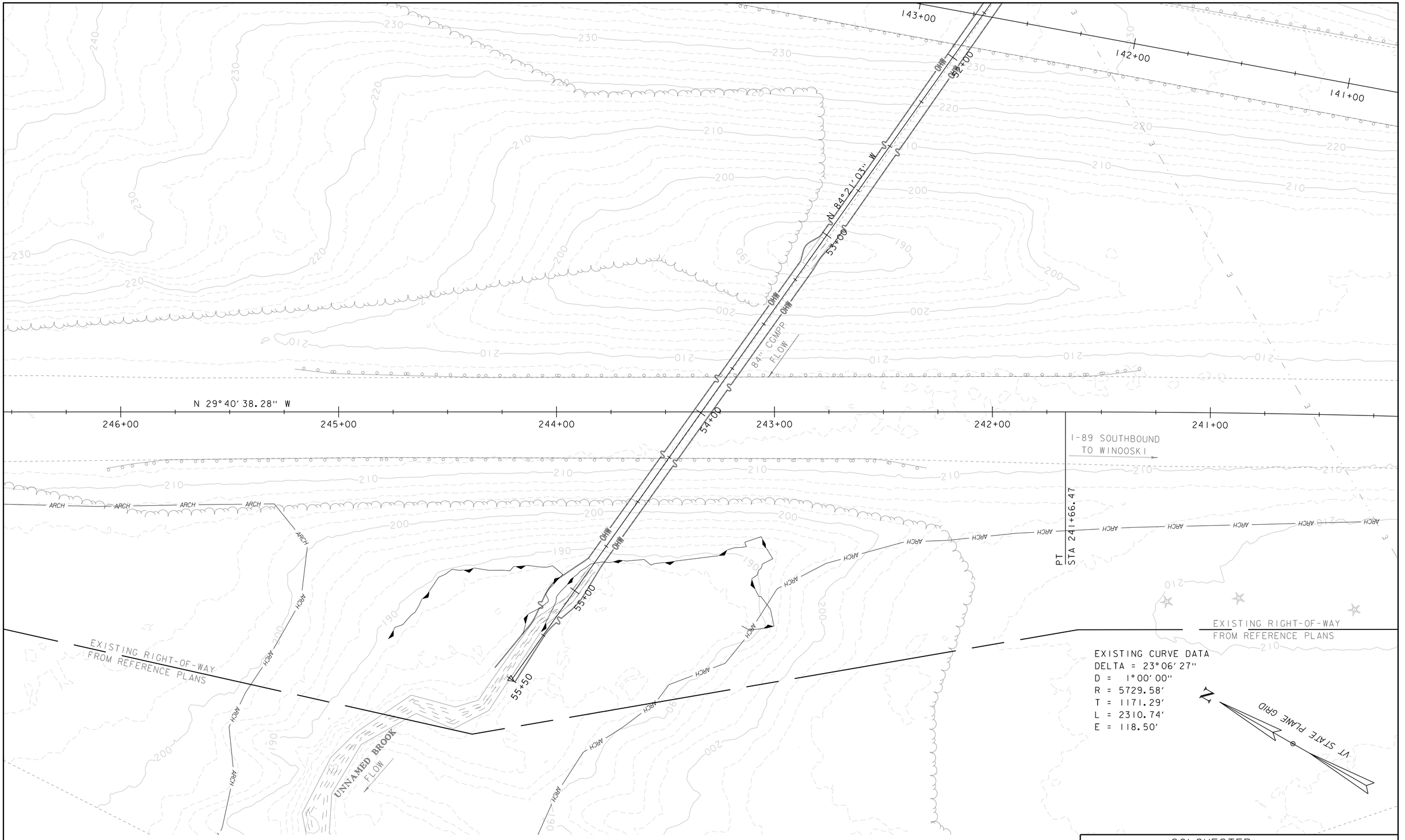


EXISTING CONDITIONS

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: 13a092/sl3a092eroborder.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
EXISTING CONDITIONS LAYOUT 1	SHEET 12 OF 21



EXISTING CONDITIONS

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: 13a092/sl3a092eroborder.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
EXISTING CONDITIONS LAYOUT 2	SHEET 13 OF 21

N

VT STATE PLANE GRID

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

ARCH

BF

UNNAMED BROOK
FLOW

50+00

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

84" CGMPP 51+00

FLOW

I-89 NORTHBOUND
TO MILTON

N 19° 10' 28.25" W

147+00 146+00 145+00 144+00 143+00 142+00 141+00

OHW

52+00

N 84° 21' 03" W

53+00

84" CGMPP

FLOW

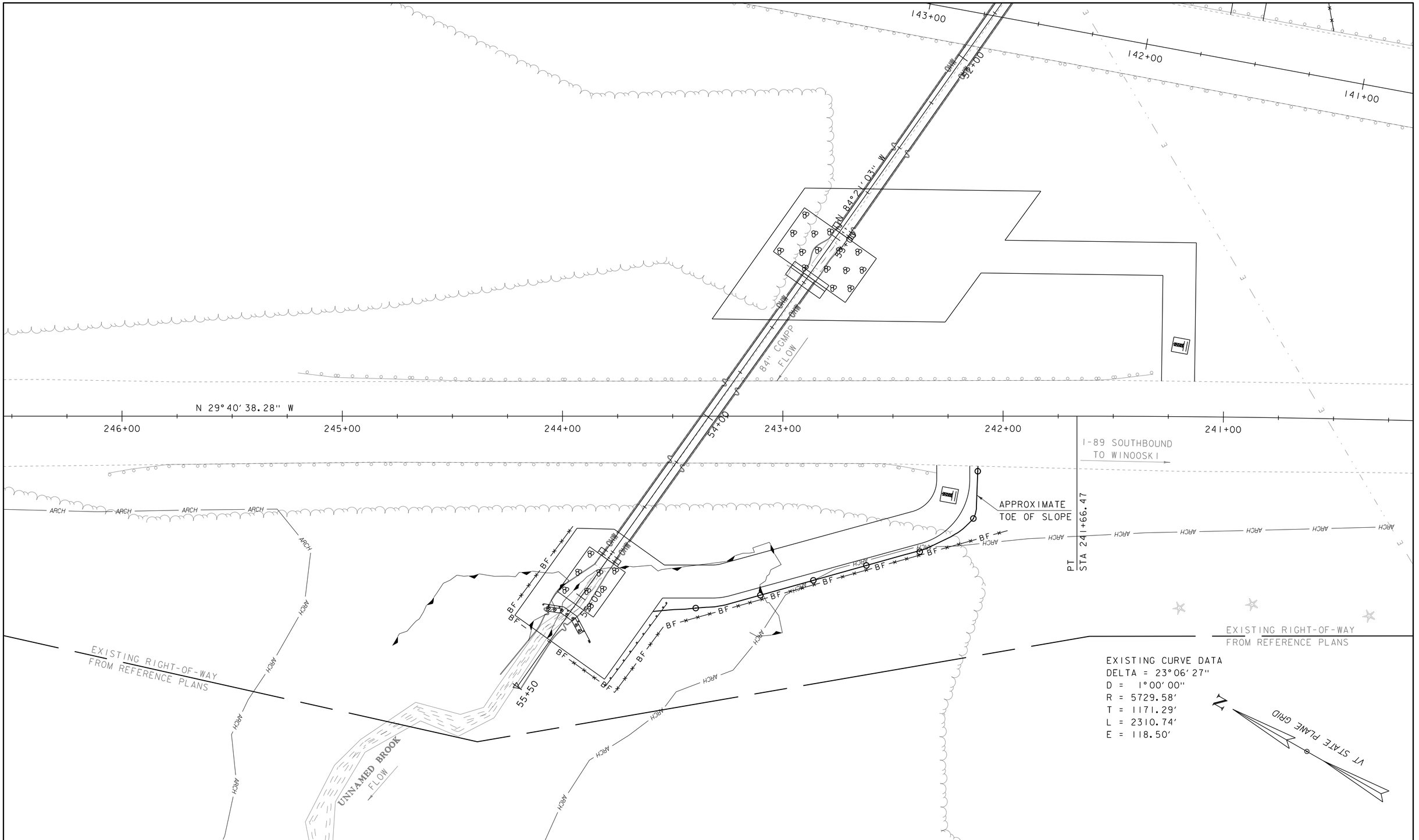
241+00 242+00 243+00

EPSC LAYOUT

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: l3a092/sl3a092eroborder.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
EPSC LAYOUT 1	SHEET 14 OF 21



EPSC LAYOUT

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: 13a092/sl3a092eroborder.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
EPSC LAYOUT 2	SHEET 15 OF 21

N

VT STATE PLANE GRID

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

I-89 NORTHBOUND
TO MILTON

N 19° 10' 28.25" W

UNNAMED BROOK
FLOW

50+00

84" CGMPP

51+00

FLOW

52+00

84" CGMPP

FLOW

EXISTING RIGHT-OF-WAY
FROM REFERENCE PLANS

ARCH

147+00 146+00 145+00 144+00 143+00 142+00 141+00

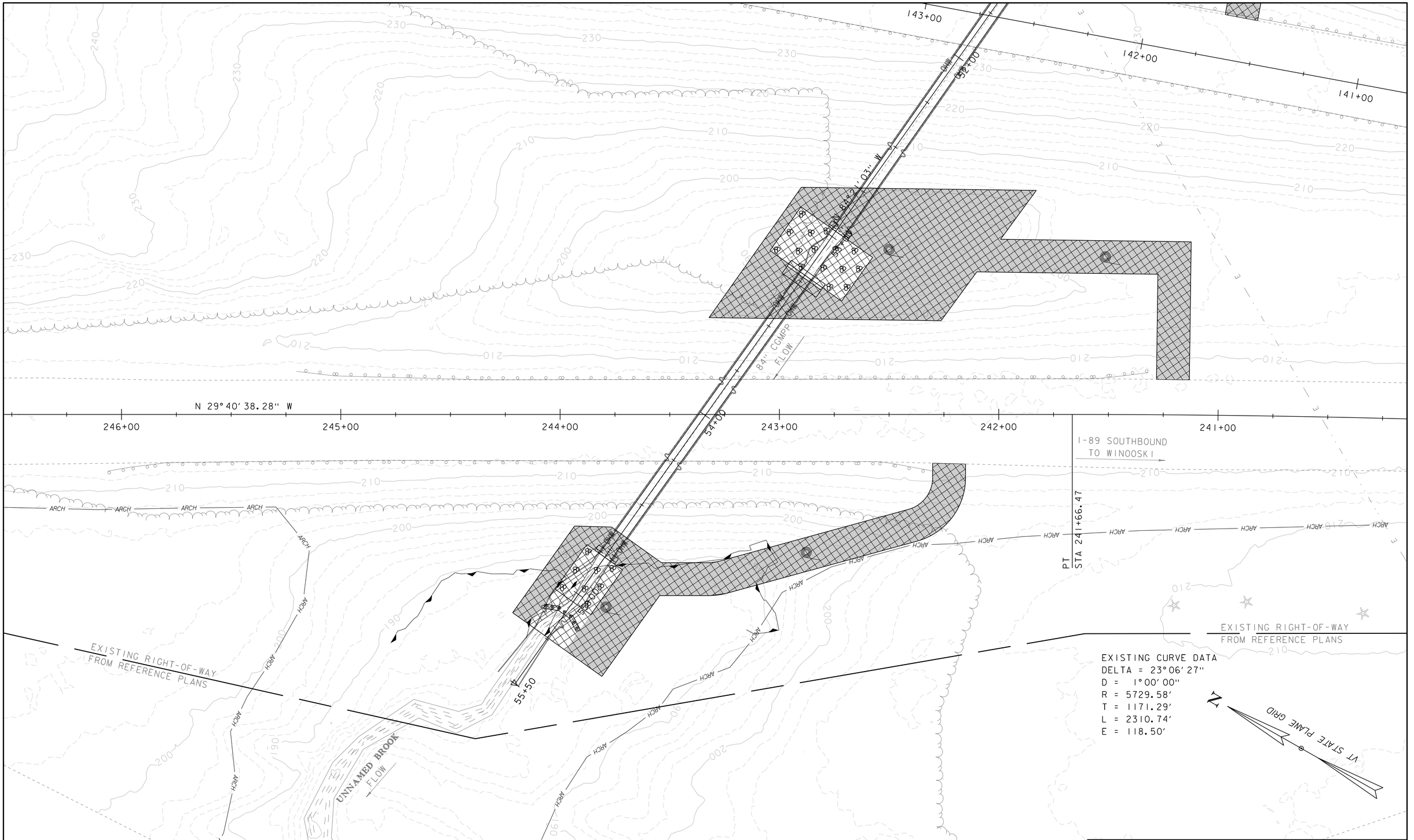
241+00 242+00 243+00

FINAL CONDITIONS

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: I3a092/sI3a092eroborder.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
FINAL CONDITIONS LAYOUT 1	SHEET 16 OF 21



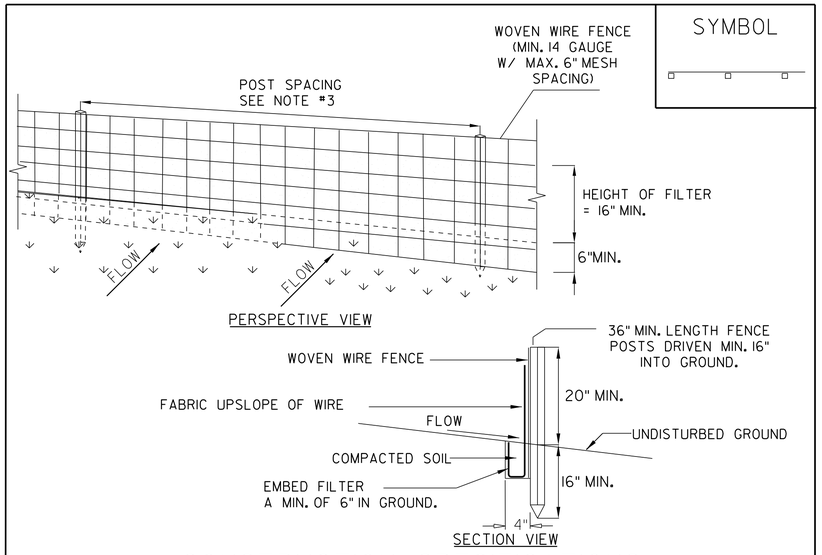
FINAL CONDITIONS

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(71)
FILE NAME: 13a092/sl3a092eroborder.dgn	PLOT DATE: 28-MAR-2016
PROJECT LEADER: J.B.MCCARTHY	DRAWN BY: D.D.BEARD
DESIGNED BY: J.B.MCCARTHY	CHECKED BY: J.B.MCCARTHY
FINAL CONDITIONS LAYOUT 2	SHEET 17 OF 21

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.

2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.

3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.

4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.

6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

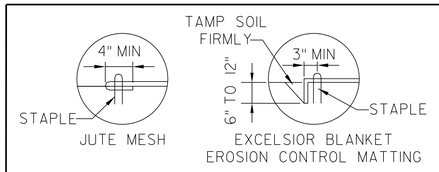
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

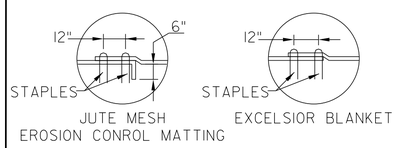
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
649.51 GEOTEXTILE FOR SILT FENCE OR
649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED

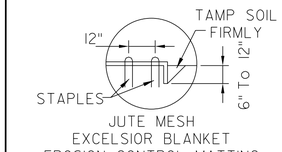
SYMBOL



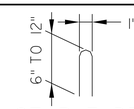
DETAIL 1 TERMINAL FOLD



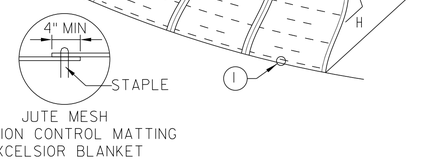
DETAIL 2 JUNCTION SLOT



DETAIL 3 ANCHOR SLOT



STAPLE DETAIL



DETAIL 4 LAP JOINT

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.

2. APPLY FERTILIZER, LIME AND SEED PRIOR TO PLACING MATTING.

3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.

4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.

5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

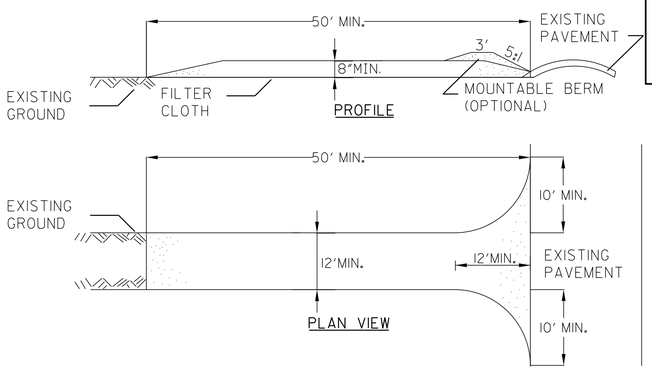
THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.20 TEMPORARY EROSION MATTING OR
653.21 PERMANENT EROSION MATTING

NEW
APRIL 16, 2007 WHF
REVISIONS

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: 13a092/sl3a092ecdetails.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
EROSION CONTROL DETAILS 1

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY
SHEET 18 OF 21



SYMBOL

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.35 VEHICLE TRACKING PAD

REVISIONS	
FEBRUARY 9, 2007	WHF
MARCH 8, 2007	JMF

SEEDING FORMULA
RURAL AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
37.5	22.5	CREEPING RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B - 5.

PAY LIMITS OF SAND BORROW: WHEN USED IN CONJUNCTION WITH UNDERDRAIN - SEE STANDARD SHEET D - 2.

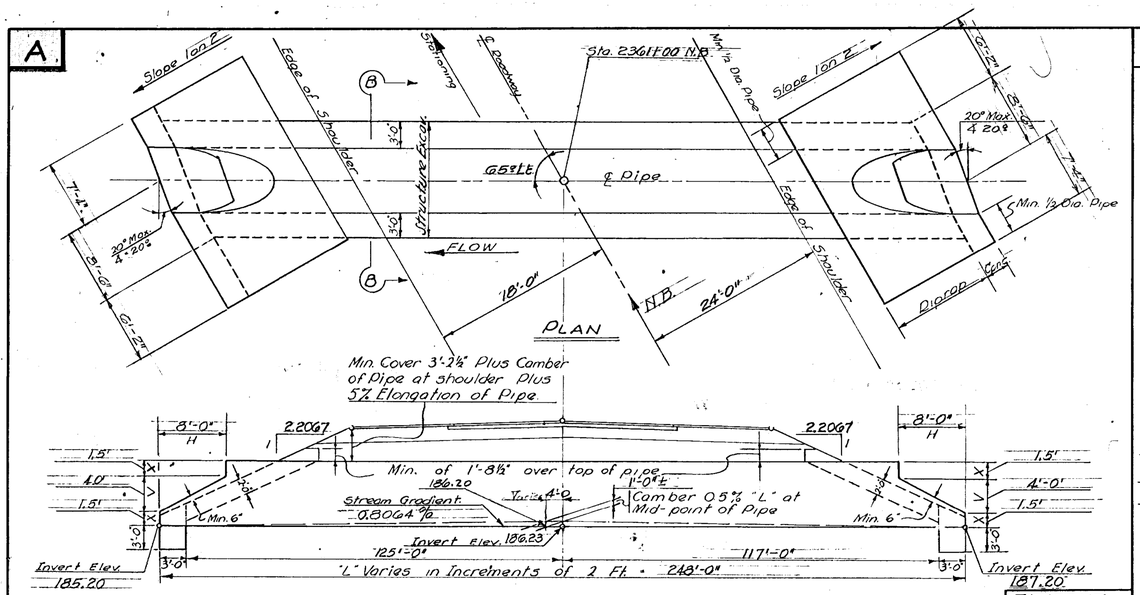
TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.015 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: 13a092/sl3a092ecdetails.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
EROSION CONTROL DETAILS 2

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY
SHEET 19 OF 21

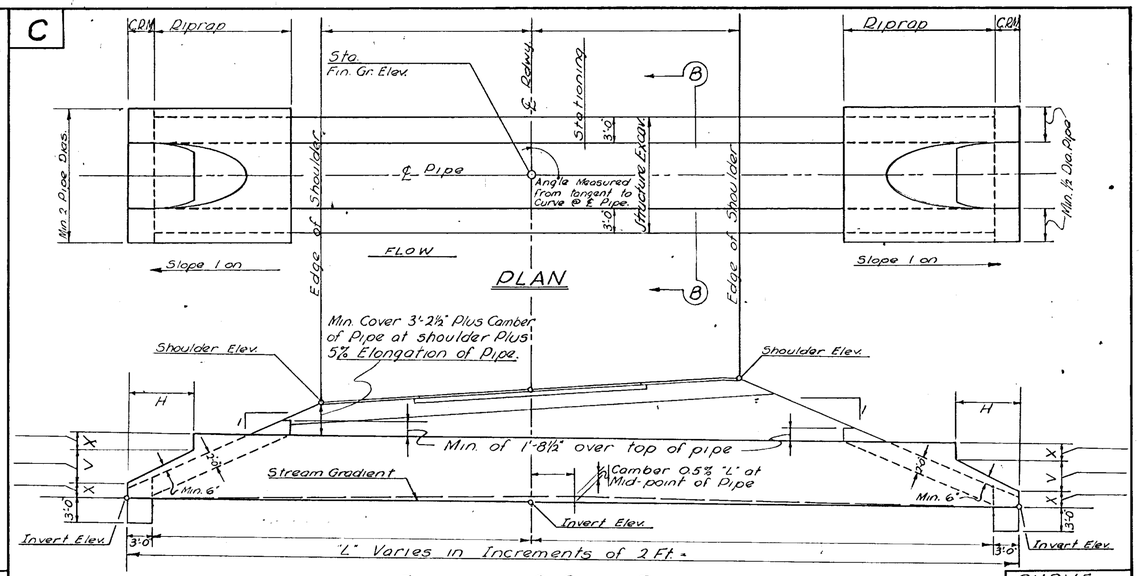
A



ELEVATION & PLATE PIPE

TANGENT SKEW LT.

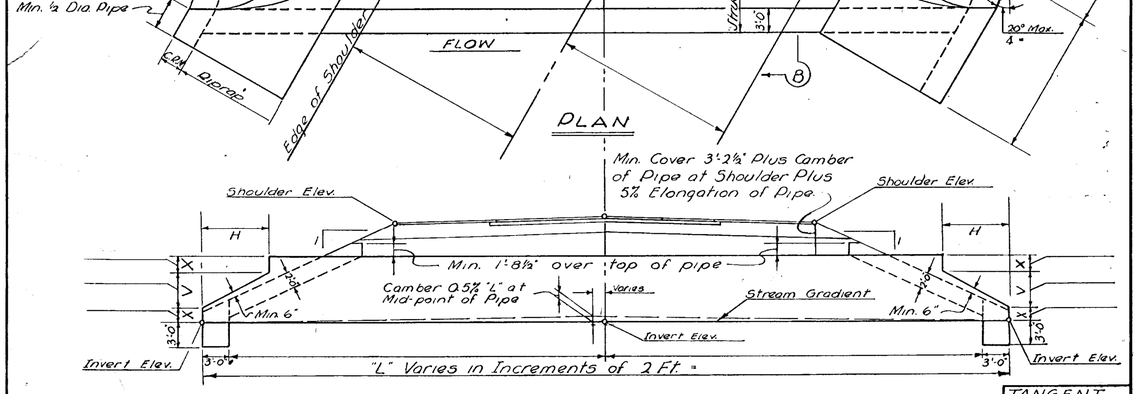
C



ELEVATION & PLATE PIPE

CURVE SQUARE

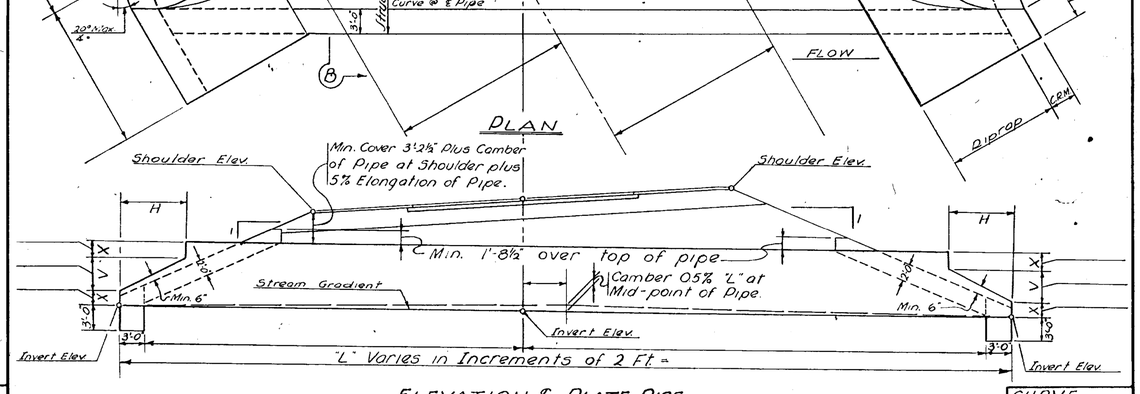
B



ELEVATION & PLATE PIPE

TANGENT SKEW RT.

D



ELEVATION & PLATE PIPE

CURVE SKEW LT.

Revisions & Corrections:-
Gravel Backfill Deleted May 27, 1959 WB

Drawn By: J.A.B. Mar. 1959
Traced By: H.W.S. Mar. 1959
Checked By: R.I.B. Apr. 1959
Correct: Apr. 24, 1959 — R. I. Bishop, Bridge Engineer
Approved: Apr. 28, 1959 — R. J. Haugen, Chief Engineer

DETAILS OF ROUND PLATE PIPE

Sheet 1 of 2

USE DETAIL "A" FOR THIS PIPE

Use Section "B-B", Detail "E", for all pipes

DIA. OF PIPE = 84"
O.A. LENGTH = 248'-0"
GAGE TOP Rs. 8 GAGE BOT. Rs. 7
CAMBER = 1'-0"
TOTAL WEIGHT = 57,010 Lbs.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURES

SB-PP #1

TOWN OF COLCHESTER
ROUTE NO. I-89 ~~EBG~~ NB STA. 2361+00
SURVEYED BY A. Remick
COMPLETED BY D.R.B. CHECKED BY A.P.K.
PROJECT NO. I-89-3(19) CONTRACT #2
SHEET 80 OF 205

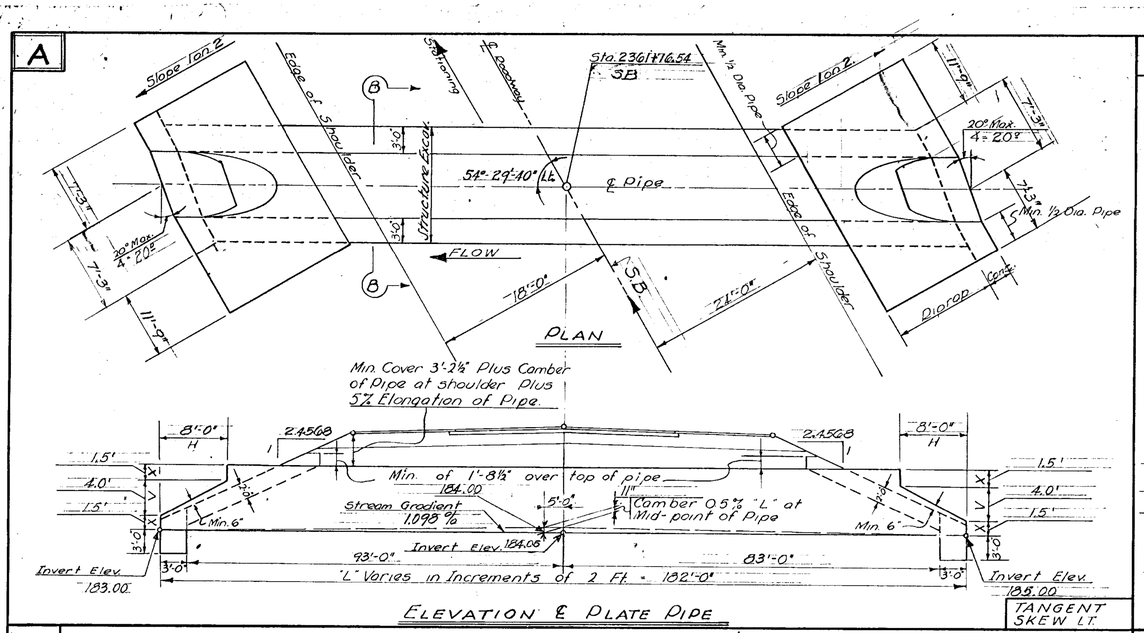
PP1 & PP2

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: 13a092\sl3a092forms.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
CULVERT 75-INB AS BUILT PLANS

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY
SHEET 20 OF 21

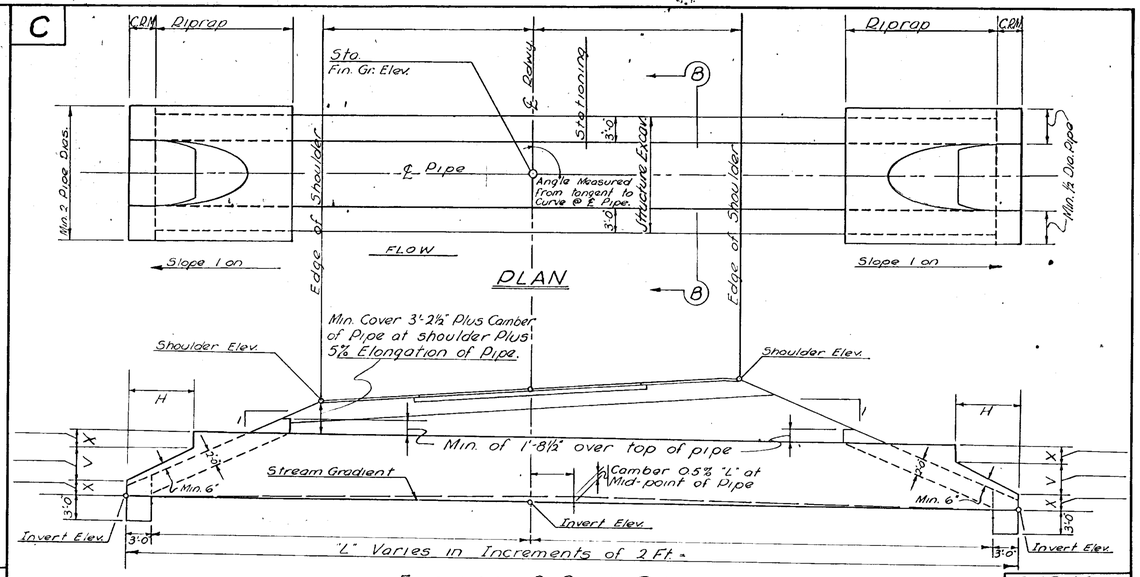
A



ELEVATION & PLATE PIPE

TANGENT SKEW LT.

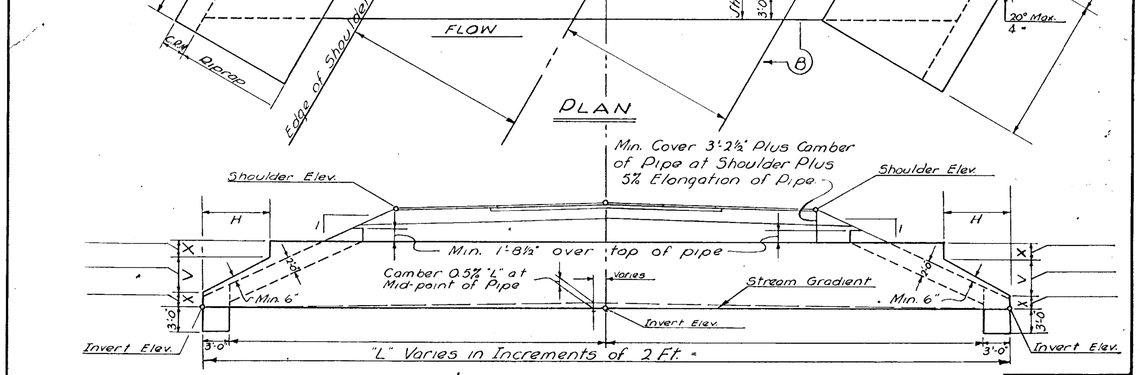
C



ELEVATION & PLATE PIPE

CURVE SQUARE

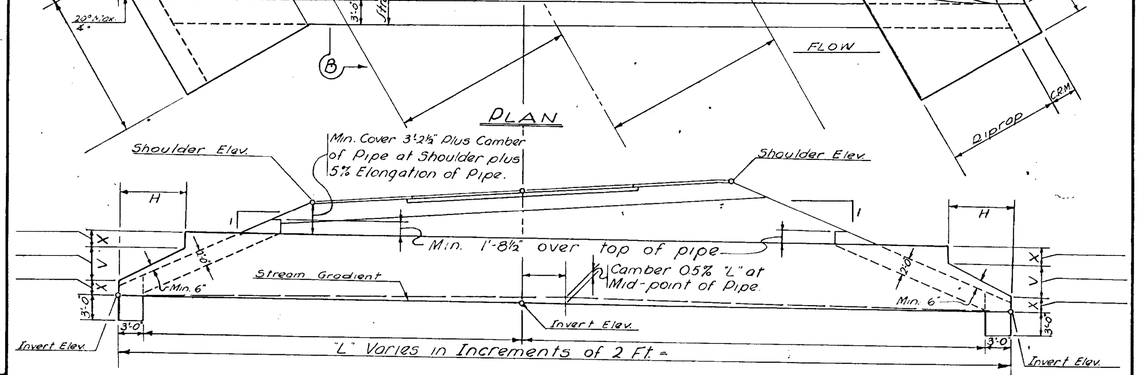
B



ELEVATION & PLATE PIPE

TANGENT SKEW RT.

D



ELEVATION & PLATE PIPE

CURVE SKEW LT.

Revisions & Corrections:-
Gravel Backfill Deleted May 27, 1959 MB

Drawn By: J.A.B. Mar. 1959
Traced By: H.W.S. Mar. 1959
Checked By: R.I.B. Apr. 1959
Correct: Apr. 24, 1959
R. D. Bishop
Bridge Engineer
Approved: Apr. 28, 1959
H. J. August
Chief Engineer

DETAILS OF ROUND PLATE PIPE

Sheet 1 of 2

USE DETAIL "A" FOR THIS PIPE

Use Section "B-B", Detail "E", for all pipes

DIA. OF PIPE = 84"
O.A. LENGTH = 182'-0"
GAGE TOP Rs. 10 GAGE BOT Rs. 8
CAMBER = 11"
TOTAL WEIGHT = 35,054 Lbs.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURES

SB-PP #1

TOWN OF COLCHESTER
ROUTE NO. I-89 ~~I-86~~ SB STA. 2361+16.54
SURVEYED BY A. Remick
COMPLETED BY D.R.B. CHECKED BY A.E.K.
PROJECT NO. I-89-3(19)
SHEET 32 OF 193 Contract #2

PROJECT NAME: COLCHESTER
PROJECT NUMBER: IM 089-3(71)

FILE NAME: l3a092\sl3a092forms.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: J.B.MCCARTHY
CULVERT 75-1SB AS BUILT PLANS

PLOT DATE: 28-MAR-2016
DRAWN BY: D.D.BEARD
CHECKED BY: J.B.MCCARTHY
SHEET 21 OF 21