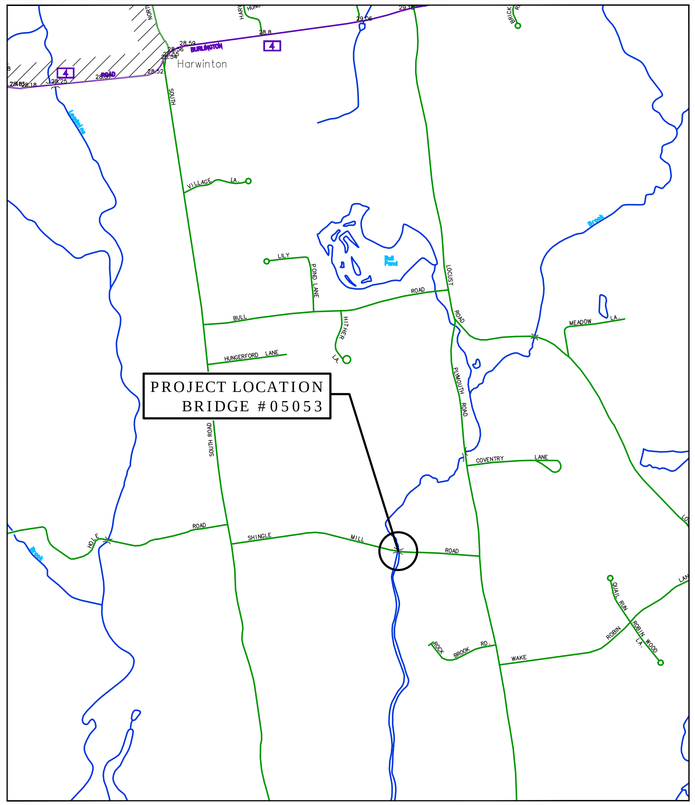


LOCATION MAP

SCALE: 1" = 1000'

TOWN OF HARWINTON, CONNECTICUT

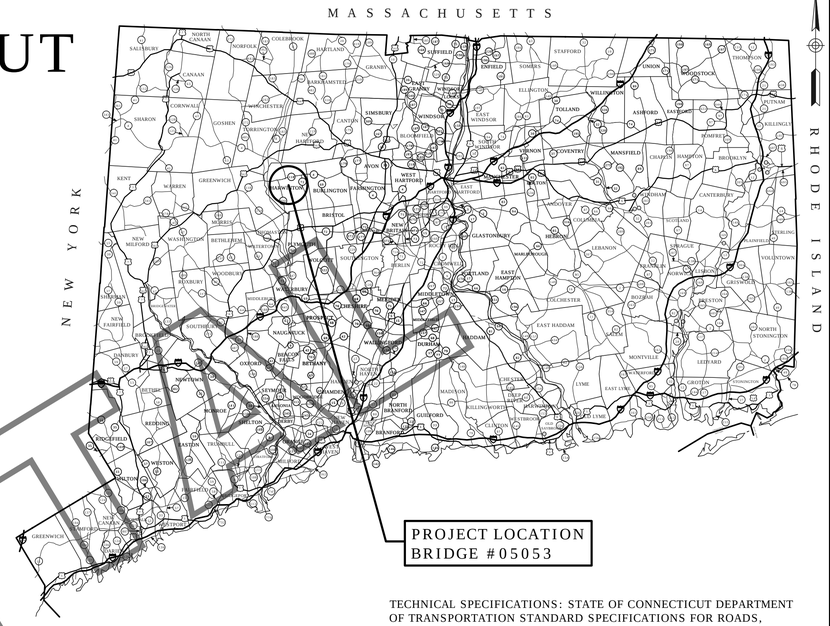
PLAN FOR
REPLACEMENT OF SHINGLE MILL ROAD BRIDGE OVER ROCK BROOK
STATE PROJECT #65-113

BRIDGE #05053

ROADWAY RECONSTRUCTION

STATION 0+50 TO STATION 2+01.92

TO BE MAINTAINED BY THE TOWN OF HARWINTON



ROAD CLASSIFICATION: RURAL LOCAL
DESIGN SPEED: 15 MPH
ADT (2011): 57 V.P.D.
ROADSIDE CLEAR ZONE: 7' MIN.

TECHNICAL SPECIFICATIONS: STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION (FORM 817) AND ALL LATEST SUPPLEMENTAL SPECIFICATIONS THERETO, AS WELL AS ANY SPECIAL PROVISIONS BY THE TOWN OF HARWINTON.

DESIGN STANDARDS: AASHTO POLICY ON THE GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, DATED 2004 AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN MANUAL DATED 2003.

SURVEY: ALL COORDINATES ON THE PROJECT ARE BASED ON NAD 83. ALL ELEVATIONS ARE BASED ON NAVD 1988.

CONNECTICUT DEPARTMENT OF TRANSPORTATION OR TOWN OF HARWINTON BIDDING AND OTHER INFORMATION AND DOCUMENTS WHICH ARE OBTAINED THROUGH THE INTERNET, WORLD WIDE WEB SITES OR OTHER SOURCES ARE NOT TO BE CONSTRUED TO BE OFFICIAL INFORMATION FOR THE PURPOSES OF BIDDING OR CONDUCTING OTHER BUSINESS WITH THE TOWN OF HARWINTON.

IT IS THE RESPONSIBILITY OF EACH BIDDER AND ALL OTHER INTERESTED PARTIES TO OBTAIN ALL BIDDING RELATED INFORMATION AND DOCUMENTS FROM OFFICIAL SOURCES WITHIN THE TOWN OF HARWINTON.

PERSONS AND/OR ENTITIES WHICH REPRODUCE AND/OR MAKE SUCH INFORMATION AVAILABLE BY ANY MEANS ARE NOT AUTHORIZED BY THE TOWN OF HARWINTON TO DO SO AND MAY BE LIABLE FOR CLAIMS RESULTING FROM THE DISSEMINATION OF UNOFFICIAL, INCOMPLETE AND/OR INACCURATE INFORMATION.

LIST OF DRAWINGS

SHEET NO.	TITLE
1	TITLE SHEET
2	DETAILED ESTIMATE SHEET
3	DETOUR PLAN
4	EXISTING CONDITIONS PLAN
5	ROADWAY PLAN
6	ROADWAY PROFILE
7	ROADWAY DETAILS
8-9	ROADWAY CROSS SECTIONS
10	HANDLING WATER PLANS
11	HANDLING WATER DETAILS
12	EROSION AND SEDIMENTATION CONTROL DETAILS
13	STRUCTURE PLAN, ELEVATION AND SECTION
14	BORING LOGS
15	ROW IMPACT PLAN

STANDARD DRAWINGS

DWG. NO.	TITLE
HW-601_01	FIGURES FOR DATES ON BRIDGE PARAPETS
HW-652_01	PIPE ENDS & TYPE "L" ENDWALLS
HW-822_01	TEMPORARY PRECAST CONCRETE BARRIER CURB
HW-910_01	W- BEAM METAL BEAM RAIL HARDWARE
HW-910_07	R-B 350 BRIDGE ATTACHMENT VERTICAL SHAPE
HW-925_01	PAVEMENT FOR RAILING
TR-1205_01	DELINEATION, DELINEATOR AND OBJECT MARKER DETAILS
TR-1208_01	SIGN SUPPORT AND SIGN PLACEMENT DETAILS, GORE EXIT SIGN
TR-1208_02	METAL SIGN POSTS AND SIGN MOUNTING DETAILS
TR-1220_01	SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS
TR-1220_02	CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

STANDARD CONVENTIONS

North Arrow W/No. Coor.

Grid Arrow

Edge Of Road
Concrete Pavement
Dirt Road
B.C.L.C.
Concrete Curb
Guide Rail
Concrete Median Barrier
Bit. Walk
Conc. Sidewalk
Railroad Tracks
Chain Link Fence
Rustic Fence
Pipe Fence
Board Fence
Water Edge
Stream
Ditch
TOWN LINE
Boring Location

Limit Of Marsh
Stone Wall
Ledge Outcrop
Connecticut Wetland Limits
Federal Wetlands Limits
STATE LINE
Power Line
Swamp
Building
Transmission Tower
Riprap
Hedge Row
Tree Line
Shrub
Evergreen Tree
Deciduous Tree
Highway Line
Street Line
Property Line
Lot Line
Easement Line

LEGEND:

Iron Pin (Found)
Monument (Found)
Sign
Manhole
"C" Catch Basin
"C-L" Catch Basin
Utility Pole
Light Pole
Metal Post
Guy Anchor
Water Gate
GV Gas Valve
GM Gas Meter
Mail Box

Underground Piping (San.,Stm.)
E — U/G Elec. Line
W — Water Line
OHW — Overhead Utilities
T — U/G Tele. Line
Property Line
108 Contour Line
Wetlands Boundary
WF #69 Wetlands Flag
WF #69 OHW Ordinary High Water

DESIGNED BY WMC CONSULTING ENGINEERS

SUBMITTED BY _____ DATE _____

FIRST SELECTMAN - TOWN OF HARWINTON

_____ DATE _____

MICHAEL R. CRISS

DATE: 08/05/16

THE INFORMATION INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE TOWN OF HARWINTON AND IS NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

WHEREVER THE PAY UNITS IN THE LEFT COLUMN APPEAR ON THE DETAILED ESTIMATE SHEET, THEY SHALL BE CONSTRUED TO MEAN THE EQUIVALENT PAY UNITS IN THE RIGHT COLUMN ON THE PROPOSAL FORM.

c.y.	C.Y.
l.f.	L.F.
ton	TON
s.y.	S.Y.
lb.	LB.
s.f.	S.F.
gal.	GAL.
c.f.	C.F.
c.i.	C.I.

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	2	15

FOR THE CONSTRUCTION OF REPLACEMENT OF BRIDGE NO.05053, SHINGLE MILL ROAD BRIDGE OVER ROCK BROOK IN THE TOWN OF HARWINTON, CONNECTICUT

ROADWAY ITEMS

ITEM NUMBER	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X
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ROADWAY ITEMS

ITEM NUMBER	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X
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BRIDGE ITEMS

ITEM NUMBER	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X	0000000X
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TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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NO.	DATE	DESCRIPTION

REVISIONS

SUPV.	J.A.C.
DESIGN	J.A.W.
DRAWN	S.M.M./ S.A.
CHECKED	J.A.W.
DATE	08/05/16

PD SUBMITTAL

WMC
CONSULTING ENGINEERS

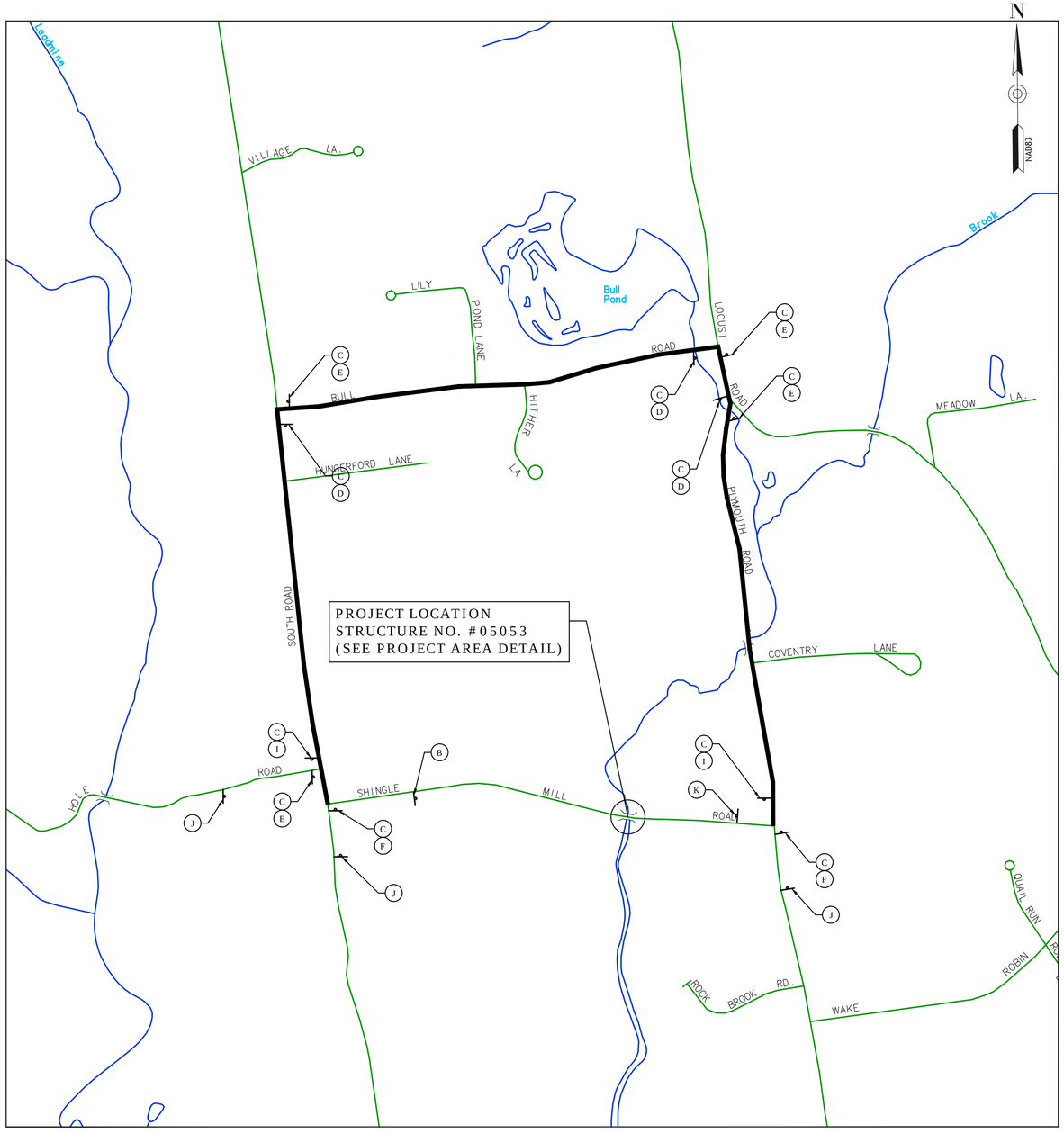
• WENGELL, McDONNELL & COSTELLO •
87 HOLMES ROAD
NEWINGTON, CT 06111
(860) 667-9624

PREPARED FOR
TOWN OF HARWINTON
100 BENTLEY DRIVE, P.O. BOX 86
HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL RD BRIDGE
OVER ROCK BROOK
EXISTING CONDITIONS PLAN

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D	SHINGLE MILL RD	P.D.	14039.10		2	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	3	15



DETOUR PLAN

SCALE: 1" = 500'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

SHINGLE MILL ROAD BRIDGE REPLACEMENT CONSTRUCTION SIGNING

	SIGN	CONNDOT	DIMENSION	DESCRIPTION	NO. REQ.'D
*	A	80-9929	72" X 48"	SHINGLE MILL ROAD CLOSED TO THRU TRAFFIC EFFECTIVE MONDAY (00/00)	2
	B	80-9078	60" X 30"	BRIDGE CLOSED 0.3 MILES AHEAD. LOCAL TRAFFIC ONLY	1
	C	80-9913	60" X 10"	SHINGLE MILL ROAD	11
	D	80-9710	30" X 24"	DETOUR (RIGHT ARROW)	3
	E	80-9710	30" X 24"	DETOUR (LEFT ARROW)	4
	F	80-9710	30" X 24"	DETOUR (STRAIGHT ARROW)	2
**	G	80-9080	48" X 30"	ROAD CLOSED	2
**	H	31-0552	30"	STOP	2
	I	80-9708	24" X 18"	END DETOUR	2
**	J	80-9710	60" X 30"	SHINGLE MILL ROAD CLOSED TO THRU TRAFFIC	3
	K	80-9078	60" X 30"	BRIDGE CLOSED 0.15 MILES AHEAD. LOCAL TRAFFIC ONLY	1

* INDICATES SIGNS TO BE VISIBLE AT LEAST 2 WEEKS PRIOR TO CONSTRUCTION AND THEN COVERED OR REMOVED DURING CONSTRUCTION (SEE NOTE 7, THIS SHEET).
** INDICATES SIGNS MOUNTED ON TYPE III CONSTRUCTION BARRICADES WHICH SHALL BE INSTALLED WITH A BARRICADE WARNING LIGHT - HIGH INTENSITY

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES

1. THE CONTRACTOR SHALL LOCATE AND PLACE ALL SIGNS AS INDICATED ON THIS SHEET OR AS DIRECTED BY THE ENGINEER.

2. THE CONTRACTOR SHALL CLOSE SHINGLE MILL ROAD FOR THE DURATION OF THE BRIDGE REPLACEMENT AND ROADWAY CONSTRUCTION.

3. ALL TRAFFIC OVER SHINGLE MILL ROAD SHALL BE DETOURED TO PLYMOUTH ROAD, LOCUST ROAD, BULL ROAD AND SOUTH ROAD.

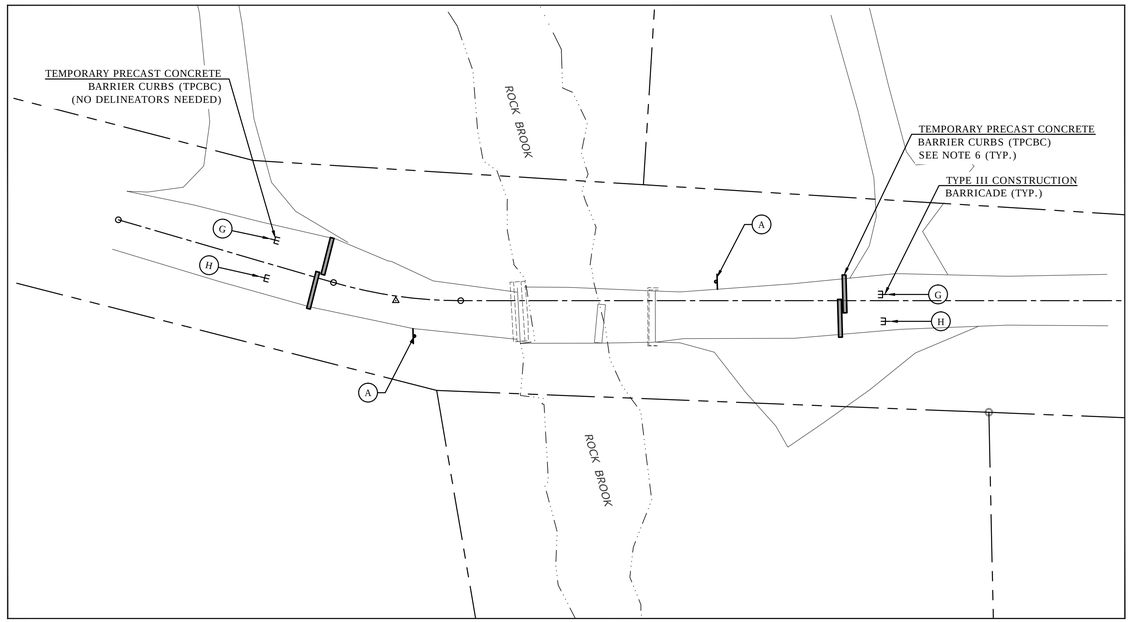
4. TEMPORARY PRECAST CONCRETE BARRIER CURBS (TPCBC) SHALL BE PROVIDED AT BOTH ENDS OF THE WORK AREA TO ADEQUATELY WARN, AND PROHIBIT MOTORISTS AND PEDESTRIANS FROM USING THE BRIDGE DURING CONSTRUCTION. THE TPCBC SHALL EXTEND ACROSS THE FULL WIDTH OF THE EXISTING ROADWAY AND BEYOND. THE CONTRACTOR SHALL ALSO PROVIDE MOVEABLE TYPE III CONSTRUCTION BARRICADE IN FRONT OF THE TPCBC, OR AS ORDERED BY THE ENGINEER, TO FURTHER INSURE MOTORIST AND PEDESTRIAN SAFETY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE UPRIGHT STABILITY OF THE TYPE III CONSTRUCTION BARRICADES AT ALL TIMES.

5. ALL TRAFFIC CONTROL AND PROTECTION DEVICES SHALL BE IN PLACE BEFORE RESPECTIVE CONSTRUCTION OPERATION COMMENCES.

6. THE CONTRACTOR SHALL POST THE ADVANCE NOTICE SIGNS AT LEAST 2 WEEKS PRIOR TO CLOSING THE ROAD. NOTICE TO PROCEED WILL BE GIVEN TO INSTALL THE ADVANCED NOTICE SIGNS, BUT THE ROAD MUST REMAIN OPEN UNTIL THE DATE ON THE ADVANCE NOTICE SIGNS.

7. ALL EXISTING CONFLICTING SIGNS SHALL BE COVERED OR REMOVED WHILE THE DETOUR IS IN EFFECT. ANY REMOVED SIGN SHALL BE REINSTALLED BEFORE THE BRIDGE IS REOPENED TO TRAFFIC.

8. ALL DETOUR SIGNS SHALL BE COVERED WHILE THE DETOUR IS NOT IN EFFECT.



PROJECT AREA DETAIL

SCALE : 1" 20'-0"

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NO.	DATE	DESCRIPTION

REVISIONS

SUPV.	J.A.C.
DESIGN	J.A.W.
DRAWN	S.M.M./ S.A.
CHECKED	J.A.W.
DATE	08/05/16

PD SUBMITTAL

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PREPARED FOR

TOWN OF HARWINTON

100 BENTLEY DRIVE, P.O. BOX 86

HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL RD BRIDGE OVER ROCK BROOK DETAILED ESTIMATE SHEET

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D	SHINGLE MILL RD	P.D.	14039.10		3	15

NOTES:

1) NORTH ORIENTATION AND COORDINATES REFER TO CONNECTICUT GRID SYSTEM NAD83.

2) ELEVATIONS BASED ON NAVD 1988

3) SITE CONTROL CONFORMS CLASS A-2 TO HORIZONTAL ACCURACY.

4) PROPERTY AND STREET LINES DEPICTED HEREON ARE COMPILED FROM RECORD RESEARCH, OTHER MAPS, FIELD MEASUREMENTS AND OTHER SOURCES. CONFORM TO CLASS D.

5) SURVEYED AREA LIE IN "A" FLOOD HAZARD ZONE AS PER FLOOD INSURANCE RATE MAP, TOWN OF HARWINTON, CONNECTICUT LITCHFIELD COUNTY, PANEL 20 OF 20. MAP NUMBER 0901470020B, . EFFECTIVE DATE FEBRUARY 17, 1982.

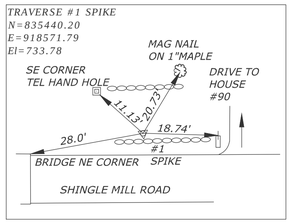
MAP REFERENCES:

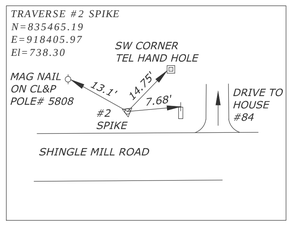
1) IVY ACRES. MAP PREPARED FOR ANTHONY NEJAIME AND JOYCE NEJAIME. SHINGLE MILL ROAD AND PLYMOUTH ROAD TOWN OF HARWINTON COUNTY OF LITCHFIELD STATE OF CONNECTICUT. SCALE 1"=40'. DATE JUNE , 1990. LAST REVISED FEBRUARY 26, 1991 PREPARED BY ARTHUR H. HOWLAND

2) GRAN VIEW ACRES, PROPOSED SUBDIVISION PREPARED FOR JOSEPH FERRO, SHINGLE MILL ROAD, HARWINTON CONNECTICUT. SCALE 1"=50'. DATE JULY 26, 1975. LAST REVISED DECEMBER 9, 1975 PREPARED BY PAUL A. NEVEU, JR & ASSOCCIATES.

3) RESUBDIVISON PLAN PARCEL B-KATHARINA L. LEPPER SUBDIVISION LAND OWNED BY GARY S. & BETH A. MORIN SHINGLE MILL ROAD HARWINTON, CONNECTICUT. SCALE 1"=50'. DATE NOVEMBER, 1988. PREPARED BY NASCEMBINI & JAHNE SURVEYORS, P.C.

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	4	15



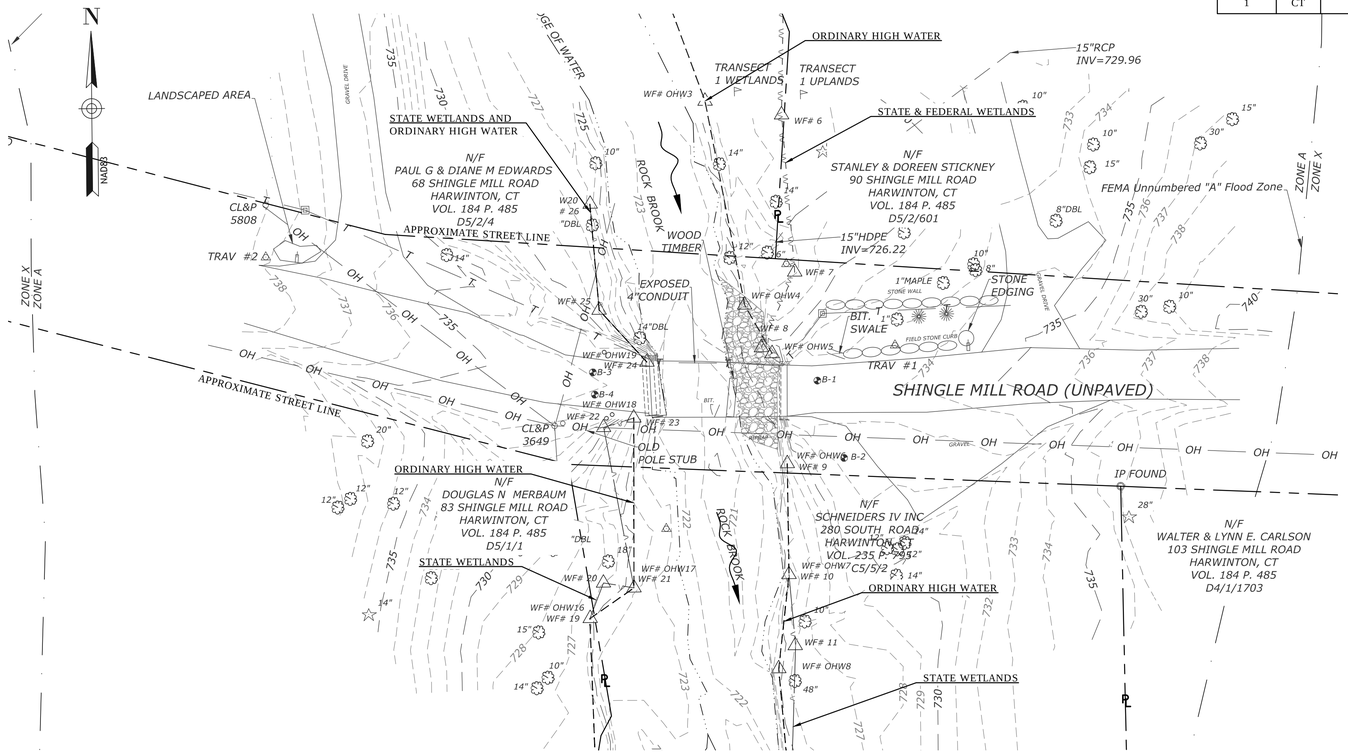


CONTROL POINTS

SCALE: N.T.S.

SYMBOLS LEGEND

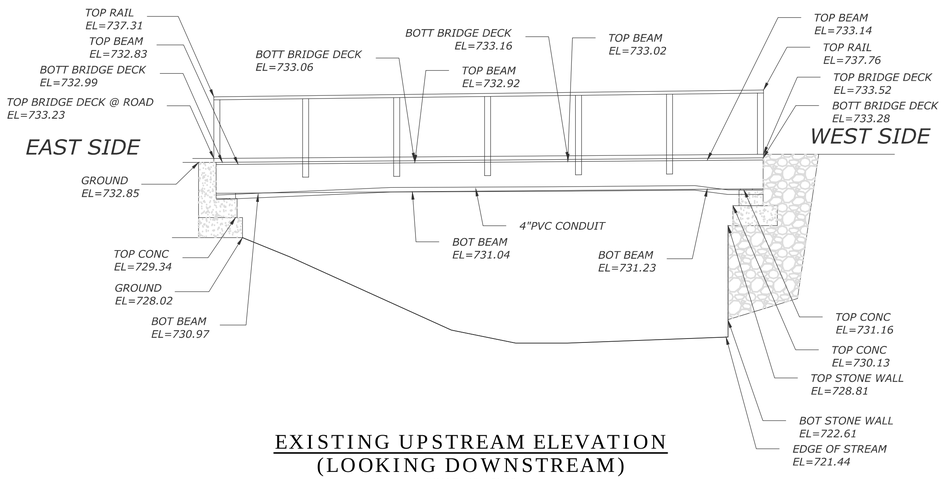
Iron Pin		Stone Wall	
Monument		Property Line	
Post	100	Contour Line	
Utility Pole		Wetlands Boundary	
Guy Anchor	OHW	Ordinary High Water	
Sign	WF#	Flag Number	
Deciduous Tree			
Evergreen Tree			
101.81 Spot Grade			



EXISTING PLAN

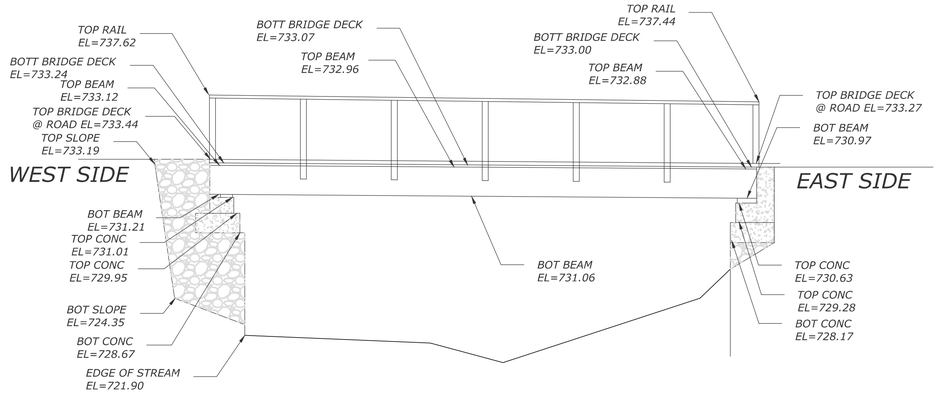
SCALE: 1" = 20'-0"

APPROXIMATE BORING LOCATIONS



EXISTING UPSTREAM ELEVATION
(LOOKING DOWNSTREAM)

SCALE: 1" =5'-0"



EXISTING DOWNSTREAM ELEVATION
(LOOKING UPSTREAM)

SCALE: 1" = 5'-0"

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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NO.	DATE	DESCRIPTION

REVISIONS

SUPV.	J.A.C.
DESIGN	J.A.W.
DRAWN	S.M.M./ S.A.
CHECKED	J.A.W.
DATE	08/05/16

PD SUBMITTAL

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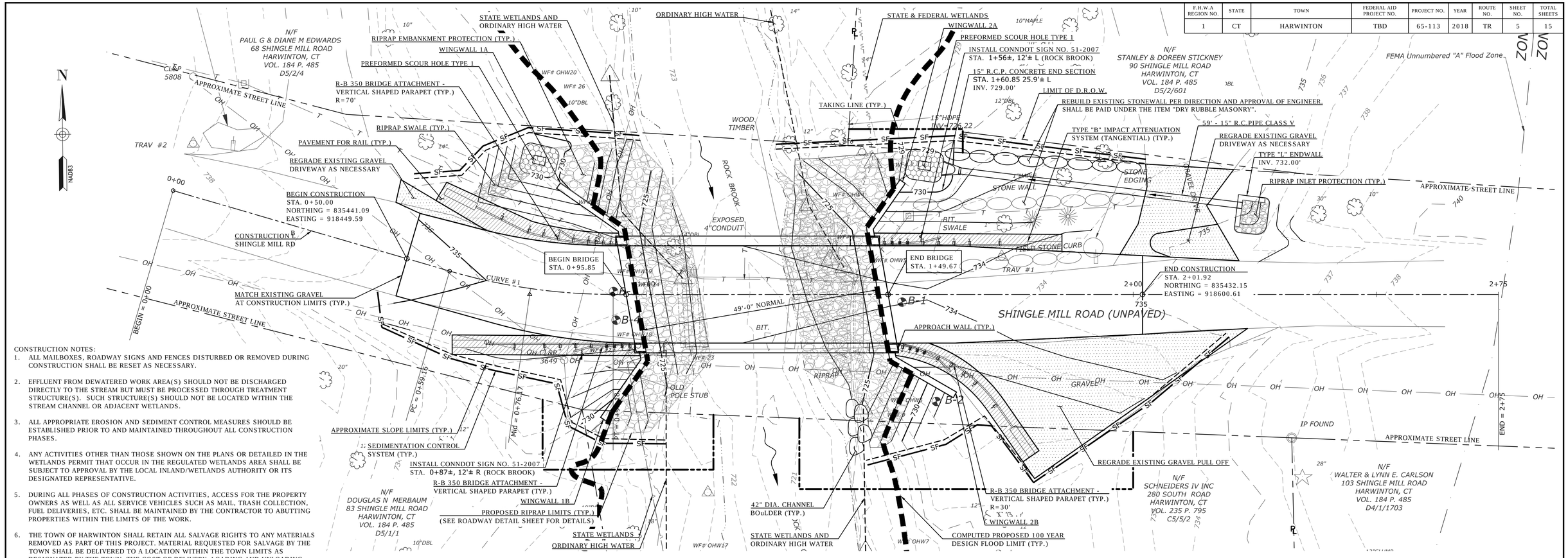
100 BENTLEY DRIVE, P.O. BOX 86

HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL RD BRIDGE OVER ROCK BROOK EXISTING CONDITIONS PLAN

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D	SHINGLE MILL RD	P.D.	14039.10		4	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	5	15



ROADWAY PLAN

SCALE: 1" = 10'-0"

APPROXIMATE BORING LOCATIONS

CONSTRUCTION NOTES:

1. ALL MAILBOXES, ROADWAY SIGNS AND FENCES DISTURBED OR REMOVED DURING CONSTRUCTION SHALL BE RESET AS NECESSARY.
2. EFFLUENT FROM DEWATERED WORK AREA(S) SHOULD NOT BE DISCHARGED DIRECTLY TO THE STREAM BUT MUST BE PROCESSED THROUGH TREATMENT STRUCTURE(S). SUCH STRUCTURE(S) SHOULD NOT BE LOCATED WITHIN THE STREAM CHANNEL OR ADJACENT WETLANDS.
3. ALL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE ESTABLISHED PRIOR TO AND MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.
4. ANY ACTIVITIES OTHER THAN THOSE SHOWN ON THE PLANS OR DETAILED IN THE WETLANDS PERMIT THAT OCCUR IN THE REGULATED WETLANDS AREA SHALL BE SUBJECT TO APPROVAL BY THE LOCAL INLAND/WETLANDS AUTHORITY OR ITS DESIGNATED REPRESENTATIVE.
5. DURING ALL PHASES OF CONSTRUCTION ACTIVITIES, ACCESS FOR THE PROPERTY OWNERS AS WELL AS ALL SERVICE VEHICLES SUCH AS MAIL, TRASH COLLECTION, FUEL DELIVERIES, ETC. SHALL BE MAINTAINED BY THE CONTRACTOR TO ABUTTING PROPERTIES WITHIN THE LIMITS OF THE WORK.
6. THE TOWN OF HARWINTON SHALL RETAIN ALL SALVAGE RIGHTS TO ANY MATERIALS REMOVED AS PART OF THIS PROJECT. MATERIAL REQUESTED FOR SALVAGE BY THE TOWN SHALL BE DELIVERED TO A LOCATION WITHIN THE TOWN LIMITS AS DESIGNATED BY THE TOWN. THE COST OF DELIVERY, LOADING AND UNLOADING SHALL BE INCLUDED IN THE GENERAL COST OF THE PROJECT.

PAVEMENT MARKING NOTES:

1. FINAL PAVEMENT MARKING SHALL BE EPOXY RESIN AND SHALL MATCH EXISTING MARKINGS AT CONSTRUCTION LIMITS.
2. PAVEMENT MARKINGS SHALL BE INSTALLED PER TRAFFIC STANDARD SHEET TR-1210_03 "SPECIAL DETAILS & TYPICAL PAVEMENT MARKINGS FOR TWO-WAY HIGHWAYS".

SIGNING NOTES:

1. ALL EXISTING SIGNS WITHIN THE SIGNING LIMITS ARE TO BE REMOVED UNLESS OTHERWISE NOTED ON THE PLAN OR DIRECTED BY THE ENGINEER.
2. THE PERMANENT REMOVAL OF EXISTING SIGNS SHALL BE PAID FOR UNDER ITEM NO. 1206013 "REMOVAL OF EXISTING SIGNING".
3. SIGNS TO BE INSTALLED PER TRAFFIC STANDARD SHEETS TR-1208_01 "SIGN SUPPORT & PLACEMENT DETAILS, GORE EXIT SIGN" AND TR-1208_02 "METAL SIGN POSTS AND SIGN MOUNTING DETAILS", EXCEPT AS NOTED.
4. EXACT SIGN LOCATIONS TO BE VERIFIED BY THE ENGINEER.
5. SIGNS SHALL BE PLACED NO CLOSER THAN 10 FEET FROM UTILITY POLES.

DESIGN DATA	
ROAD CLASS	RURAL LOCAL
DESIGN SPEED	15 MPH
ADT (2011)	57 VPD
RADIUS (MIN.)	120 FT.
e	N/A
MAXIMUM GRADE	4.50%
CROSS SLOPE	2.08%
K (SAG MIN.)	10
K (CREST MIN.)	N/A

CURVE DATA
CURVE #1
Δ = 16°14'47"
L = 34.07'
T = 17.13'
R = 120.00'
PI N 835433.47
PI E 918474.75

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

SURVEY NOTES:

HORIZONTAL DATUM:	NAD83
HORIZONTAL ACCURACY:	CLASS A-2
VERTICAL DATUM IS	NAVD88
VERTICAL ACCURACY:	CLASS T-2

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NO.	DATE	DESCRIPTION

REVISIONS

SUPV.	J.A.C.
DESIGN	J.A.W.
DRAWN	S.M.M./ S.A.
CHECKED	J.A.W.
DATE	08/05/16

PD SUBMITTAL

WMC CONSULTING ENGINEERS
• WENGELL, McDONNELL & COSTELLO •
87 HOLMES ROAD
NEWINGTON, CT 06111
(860) 667-9624

PREPARED FOR

TOWN OF HARWINTON

100 BENTLEY DRIVE, P.O. BOX 86

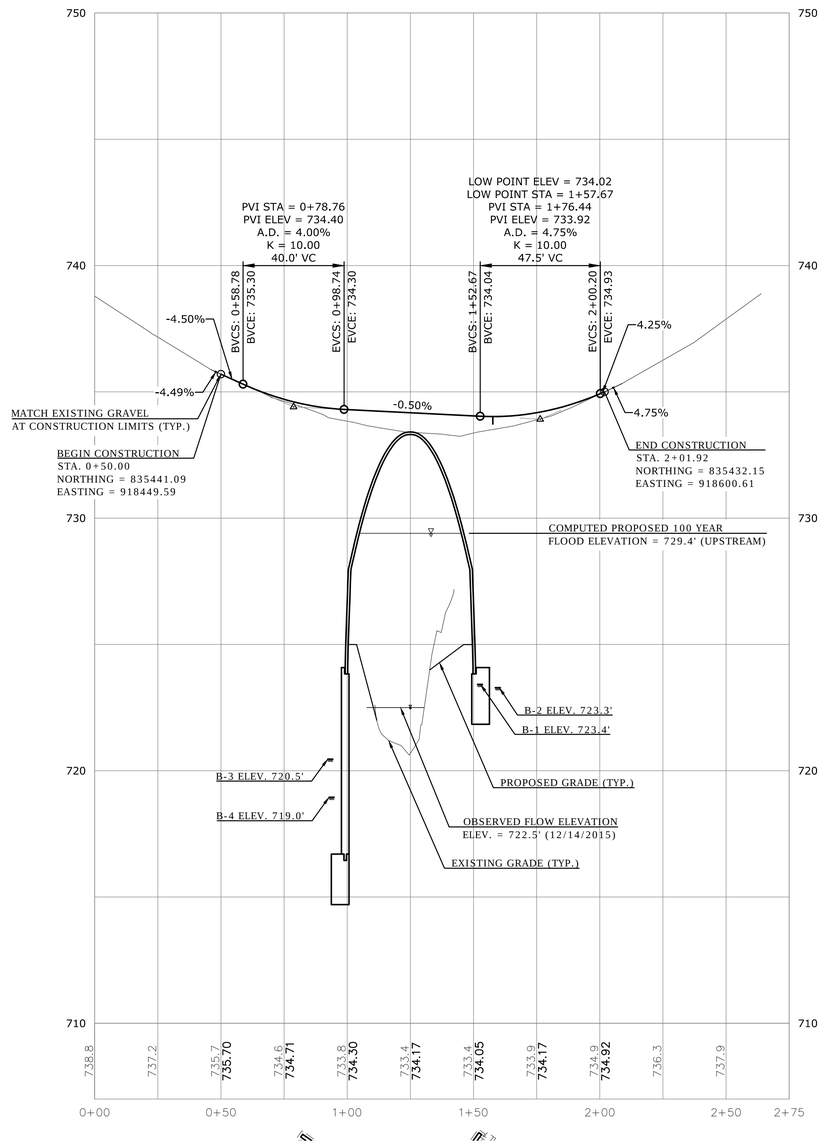
HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL RD BRIDGE OVER ROCK BROOK ROADWAY PLAN

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D	SHINGLE MILL	P.D.	14039.10		5	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	6	15

DESIGN DATA	
ROAD CLASS	RURAL LOCAL
DESIGN SPEED	15 MPH
ADT (2011)	57 VPD
RADIUS (MIN.)	120 FT.
e	N/A
MAXIMUM GRADE	4.50%
CROSS SLOPE	2.08%
K (SAG MIN.)	10
K (CREST MIN.)	N/A



ROADWAY PROFILE

HORIZONTAL SCALE: 1" = 30'-0"
VERTICAL SCALE: 1" = 3'-0"

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK ROADWAY PROFILE

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D	SHINGLE MILL	P.D.	14039.10		6	15

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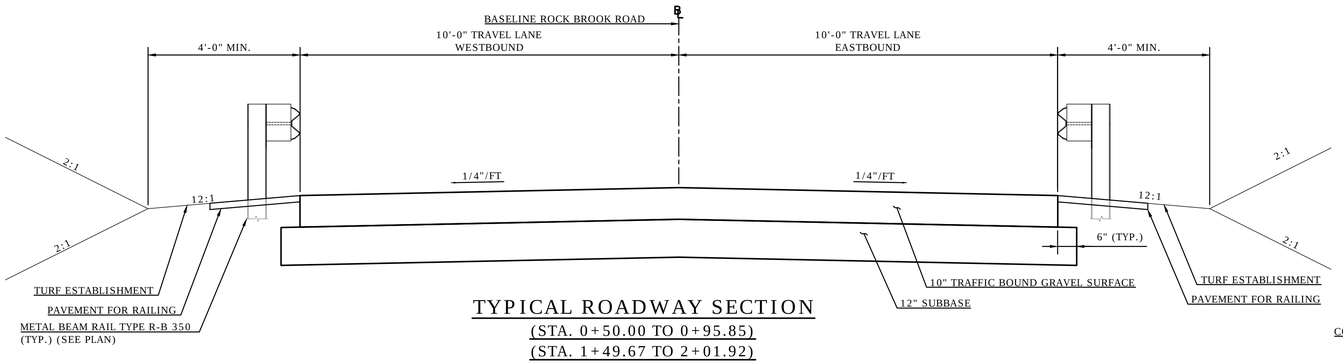
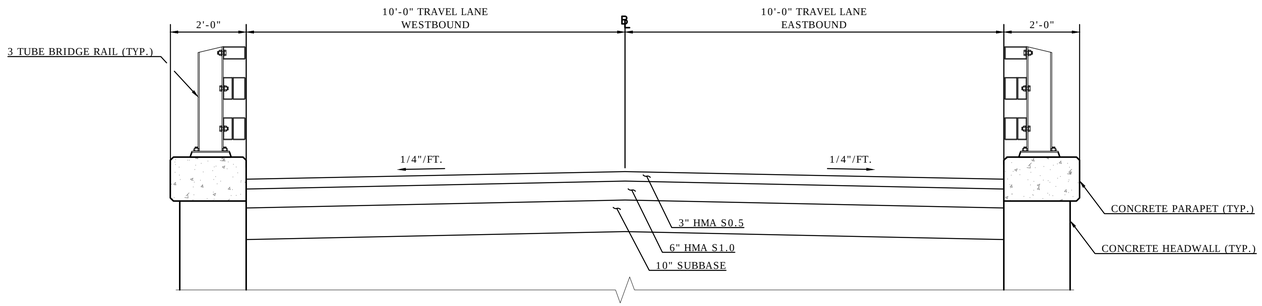
1	CT	HARWINTON	TBD	65-113	2018	TR	7	15



TYPICAL ROADWAY SECTION

(STA. 0+50.00 TO 0+95.85)
(STA. 1+49.67 TO 2+01.92)

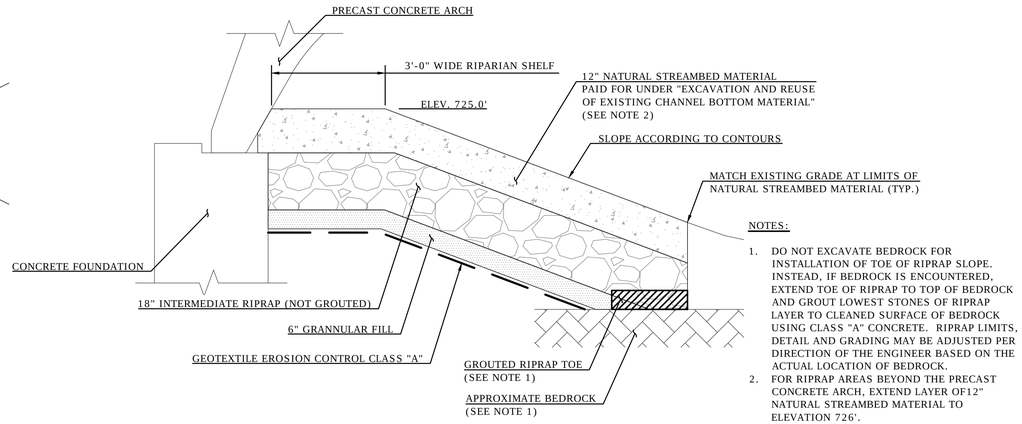
SCALE: 1" = 2'-0"



TYPICAL BRIDGE ROADWAY SECTION

(STA. 0+95.85 TO STA. 1+49.67)

SCALE: 1" = 2'-0"

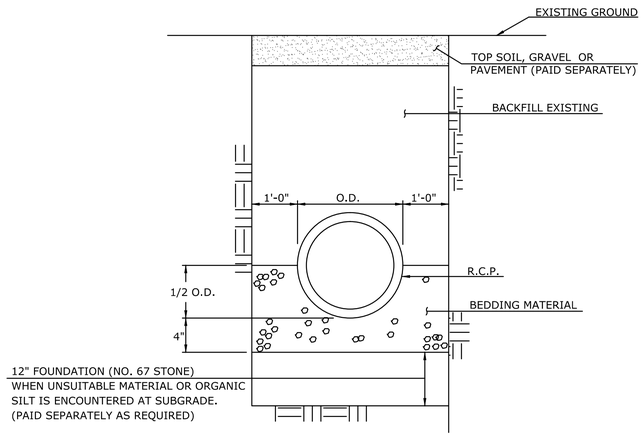


TYPICAL RIPRAP DETAIL

SCALE: 1" = 2'-0"

NOTES:

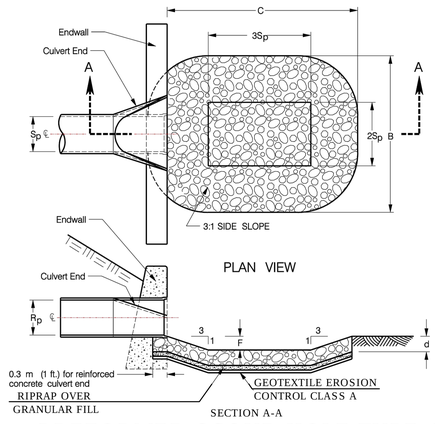
1. DO NOT EXCAVATE BEDROCK FOR INSTALLATION OF TOE OF RIPRAP SLOPE. INSTEAD, IF BEDROCK IS ENCOUNTERED, EXTEND TOE OF RIPRAP TO TOP OF BEDROCK AND GROUT LOWEST STONES OF RIPRAP LAYER TO CLEANED SURFACE OF BEDROCK USING CLASS "A" CONCRETE. RIPRAP LIMITS, DETAIL AND GRADING MAY BE ADJUSTED PER DIRECTION OF THE ENGINEER BASED ON THE ACTUAL LOCATION OF BEDROCK.
2. FOR RIPRAP AREAS BEYOND THE PRECAST CONCRETE ARCH, EXTEND LAYER OF12" NATURAL STREAMBED MATERIAL TO ELEVATION 726'.



TRENCH SECTION FOR R.C.P.

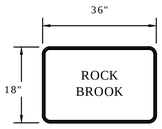
SCALE: N.T.S.

PERFORMED SCOUR HOLE	
Sp	15"
Rp	15"
d	18"
F	7 1/2"
C	7'-6"
B	6'-3"



PREFORMED SCOUR HOLE TYPE 1

N.T.S.



CONNDOT SIGN NO. 51-2007

NOT TO SCALE

SCHEDULE OF SIGNS							
CONNDOT SIGN NO.	SIZE	LEGEND	LOCATION	ALUM. THK.	POSTS	BACKGROUND COLOR	LEGEND COLOR
51-2007	36" X 18"	ROCK BROOK	STA. 0+87±, 12'± R	0.080	2	GREEN	WHITE
51-2007	36" X 18"	ROCK BROOK	STA. 1+56±, 12'± L	0.080	2	GREEN	WHITE

* NOTE: ALL COLORS SHALL BE TYPE IV RETROREFLECTIVE WITH THE EXCEPTION OF BLACK WHICH SHALL BE OPAQUE.

NOTES:

1. FOR SPECIFIC SIGN DESIGN CONTACT CONN. D.O.T., DIVISION OF TRAFFIC ENGINEERING FOR BOLT HOLE PATTERN REFER TO FHWA PUBLICATION "STANDARD HIGHWAY SIGNS". SIGNS OF DIFFERENT DIMENSIONS TO BE ERECTED ON THE SAME POSTS, OR SPAN/MAST ARM MOUNTED, MAY REQUIRE SPECIAL BOLT HOLE PATTERS.
2. POSTS - SEE STANDARD SHEET TR-1208_02 - "METAL SIGN POSTS & SIGN MOUNTING DETAILS."
3. POSTS - TYPE A (EXCEPT WHERE NOTED WITH A "B" FOR TYPE B)
4. SIGNS SHALL BE FABRICATED OF ONE CONTINUOUS PIECE OF SHEET ALUMINUM. SPLICING OF SHEET ALUMINUM WILL NOT BE ACCEPTED.

GRAPHIC SCALE

2 0 1 2 4 40

(IN FEET)
1 inch = 2 ft.

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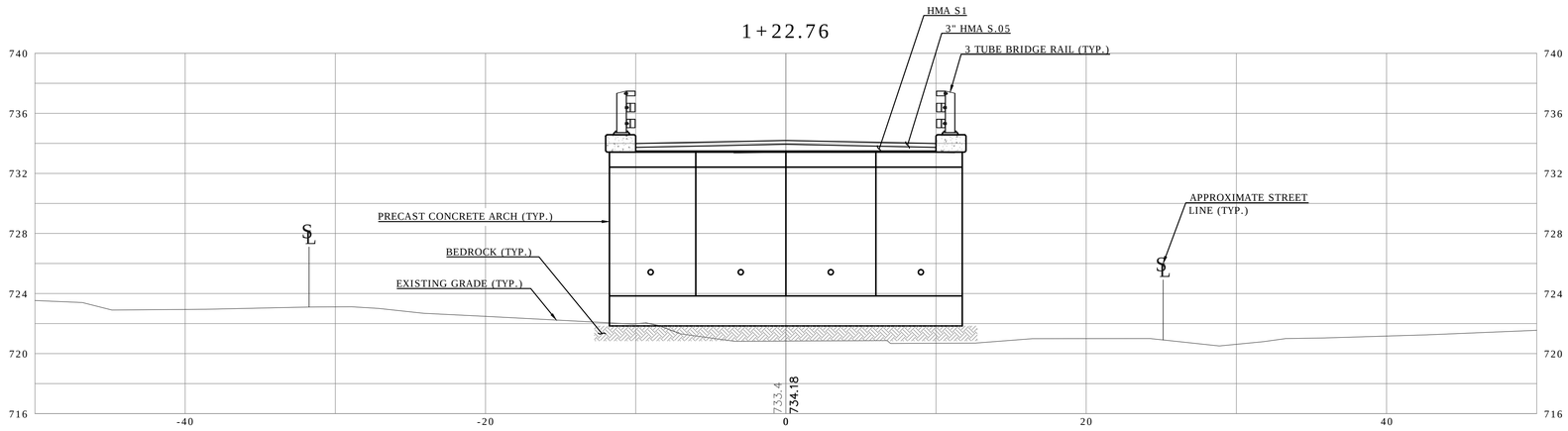
HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK ROADWAY DETAILS

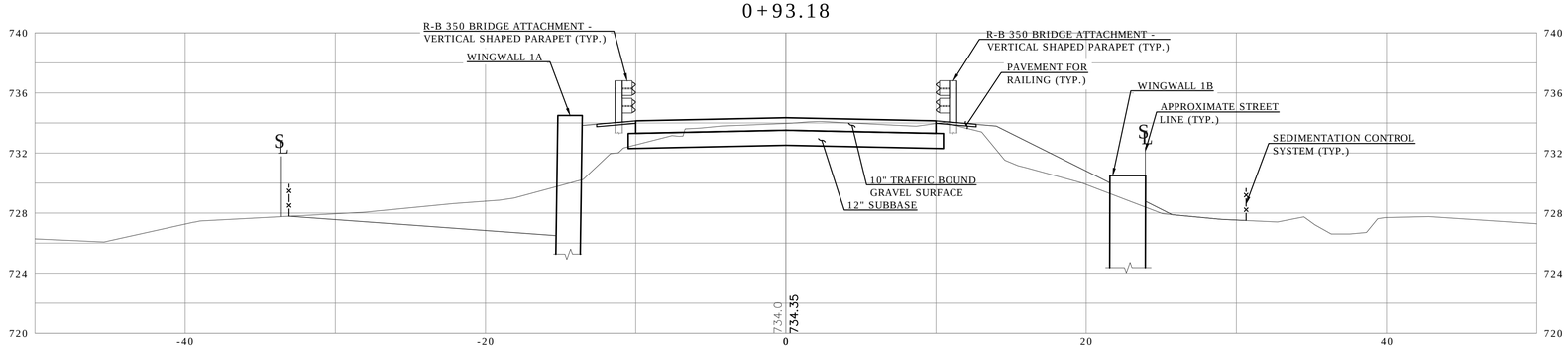
SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D. –	14039.10	–	7	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	8	15

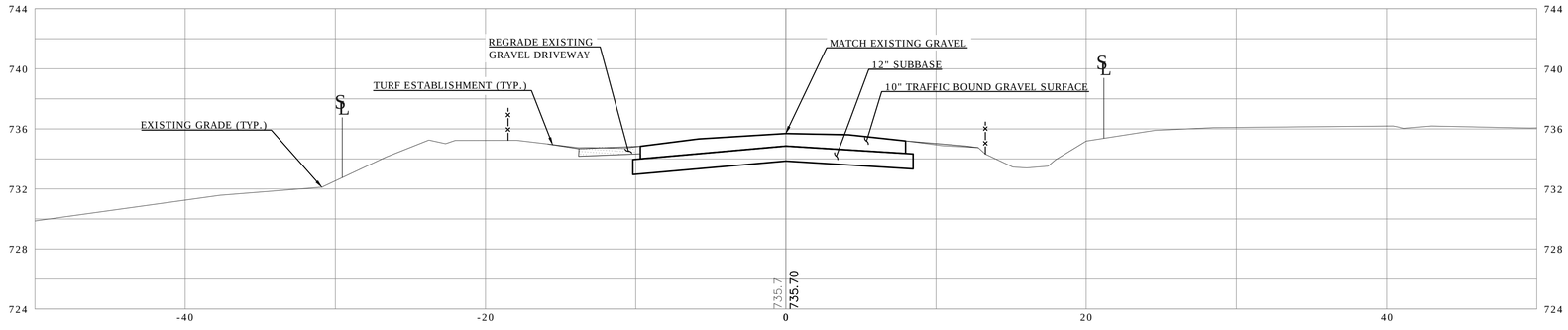
1+22.76



0+93.18



0+50



ROADWAY SECTIONS

SCALE: 1" = 5'-0"

GRAPHIC SCALE

5 0 5 10 20

(IN FEET)
1 inch = 5 ft.

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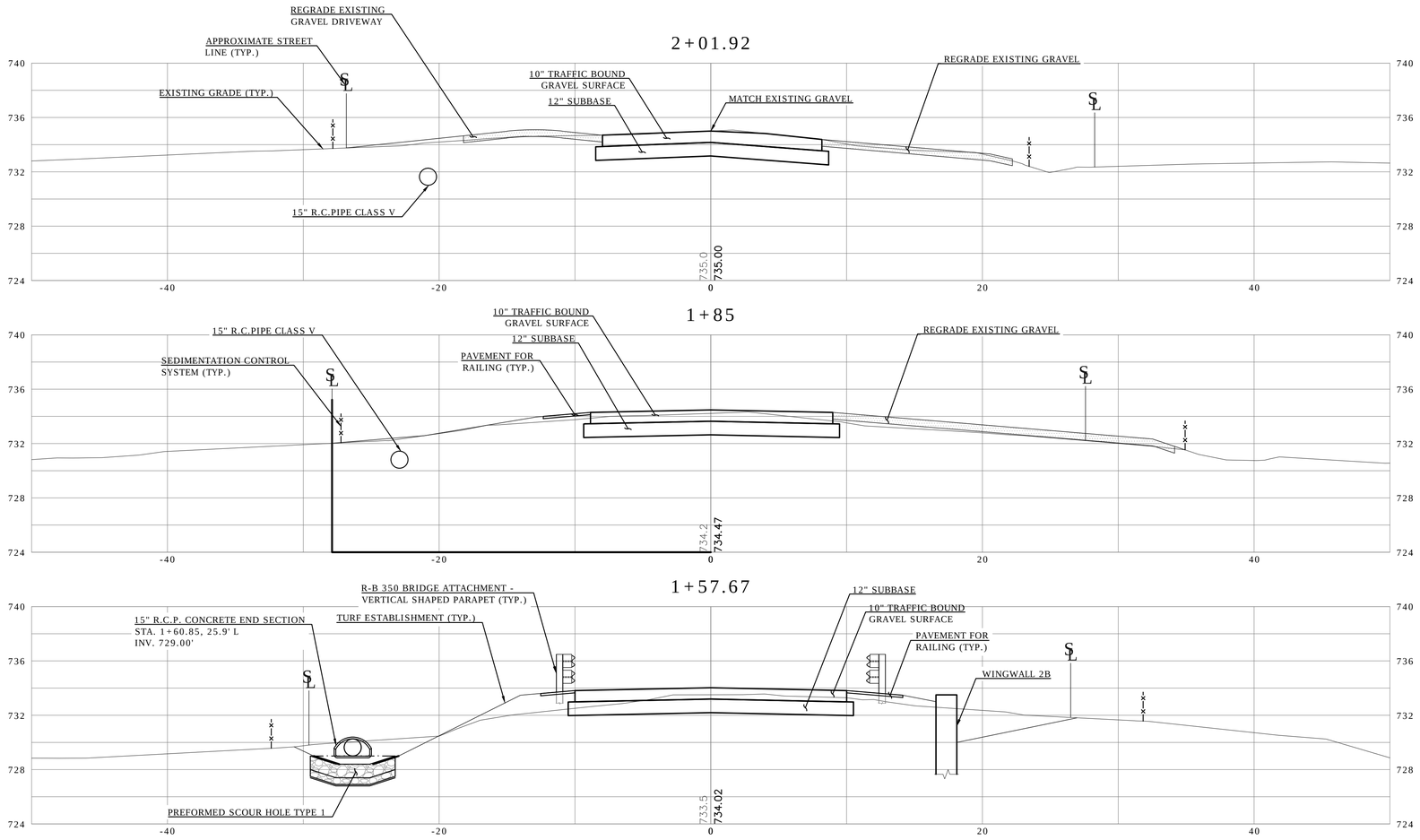
HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK
ROADWAY SECTIONS

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D. –	14039.10	–	8	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	9	15



ROADWAY SECTIONS

SCALE: 1" = 5'-0"

GRAPHIC SCALE

5 0 5 10 20

(IN FEET)
1 inch = 5 ft.

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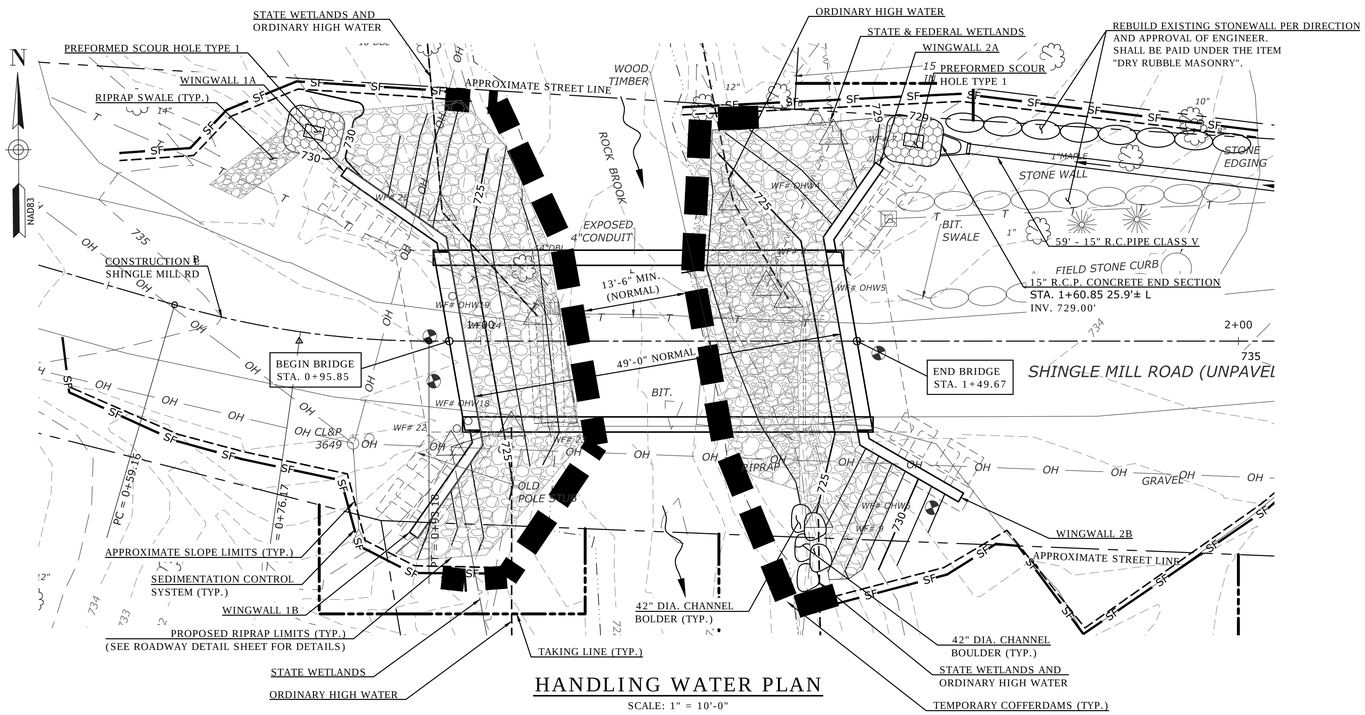
REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK ROADWAY SECTIONS

SIZE	PROJECT	FILE NAME	NUMBER	REV.
D	SHINGLE MILL	P.D.	14039.10	

SHEET 9 OF 15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	10	15



HANDLING WATER PLAN

SCALE: 1" = 10'-0"

HANDLING WATER NOTES:

1. INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROLS.
2. COORDINATE RELOCATION OF EXISTING UTILITIES.
3. REMOVE EXISTING SUPERSTRUCTURE.
4. INSTALL TEMPORARY COFFERDAMS AS SHOWN TO CONFINE WATER TO THE EXISTING CHANNEL. THE MINIMUM HYDRAULIC CLEAR OPENING BETWEEN THE COFFERDAMS SHALL BE 13'-6", NORMAL TO THE ALIGNMENT OF THE COFFERDAMS. THE TOP OF COFFERDAMS SHALL BE ELEVATION 727.0 FEET WHICH WILL PROVIDE PROTECTION FOR THE COMPUTED 2 YEAR TEMPORARY CONDITION FLOOD LEVEL WITH MINIMAL FREEBOARD.
5. REMOVE THE EXISTING ABUTMENTS AND WINGWALLS.
6. INSTALL NEW ABUTMENT AND WINGWALL FOOTINGS.
7. INSTALL RIPRAP EMBANKMENT PROTECTION AND NATURAL STREAMBED MATERIAL SO AS NOT TO INTERFERE WITH THE PRECAST CONCRETE ARCH INSTALLATION.
8. INSTALL PRECAST CONCRETE ARCH.
9. INSTALL HEADWALL AND WINGWALLS.
10. COMPLETE INSTALLATION OF RIPRAP EMBANKMENT PROTECTION AND NATURAL STREAMBED MATERIAL.
11. COMPLETE EMBANKMENT GRADING AND DRAINAGE.
12. REMOVE ALL TEMPORARY COFFERDAMS.
13. COMPLETE REMAINING ROADWAY WORK.
14. THE SEDIMENTATION CONTROL SYSTEM IS TO BE REMOVED AFTER THE IMPACTED AREAS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

TEMPORARY FACILITIES HYDRAULICS	
AVERAGE DAILY FLOW	11 C.F.S.
AVERAGE SPRING FLOW	22 C.F.S.
2 - YEAR FREQUENCY DISCHARGE	370 C.F.S.
TEMPORARY DESIGN DISCHARGE	370 C.F.S.
TEMPORARY DESIGN FREQUENCY	2-YEAR
TEMPORARY WATER SURFACE ELEVATION UPSTREAM	726.7 FT.
TEMPORARY WATER SURFACE ELEVATION DOWNSTREAM	725.2 FT.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)

1 inch = 10 ft.

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REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK HANDLING WATER PLANS

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D.	– 14039.10	–	10	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
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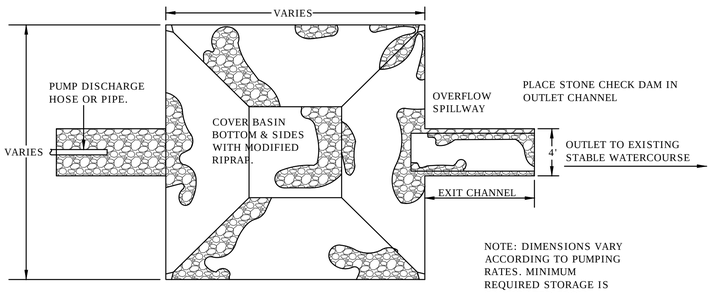
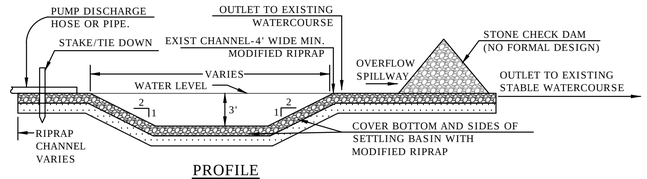


NOTE: DIMENSIONS VARY ACCORDING TO PUMPING RATES. MINIMUM REQUIRED STORAGE IS CALCULATED FROM SPILLWAY WEIR.

PLAN VIEW



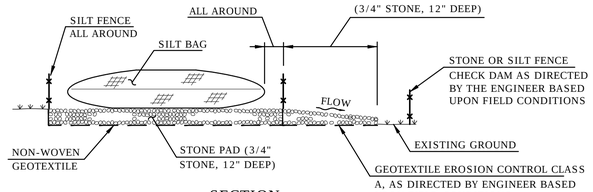
PROFILE

REFER TO PAGE 5-13-7 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL".

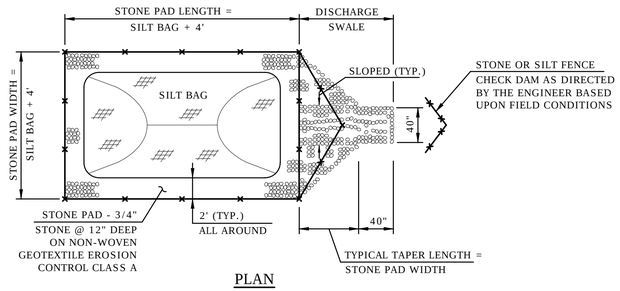
TYPE III PUMPING SETTLING BASIN

N.T.S.

PUMPING SETTLING BASIN NOTES:
1. LOCATION AS DIRECTED BY ENGINEER. REMOVE WHEN PUMPING IS COMPLETED.
2. PUMP DISCHARGE PAD HALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST THE GENERAL WORK.
3. STORAGE VOLUME BASED UPON PUMP DISCHARGE, LARGER PAD DIMENSIONS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. (MINIMUM REQUIRED STORAGE, CUBIC FEET) = 16 x (PUMP DISCHARGE RATE, GPM)
4. TYPE II PUMPING SETTLING BASIN TO BE USED WHEN THE EXPECTED DURATION OF USE IS LESS THAN 3 MONTHS. TYPE III PUMPING SETTLING BASIN TO BE USED WHEN THE EXPECTED DURATION OF USE IS LONGER THAN 3 MONTHS.
5. SETTLING BASIN AND EXIT CHANNEL TO BE BACKFILLED AT COMPLETION OF WORK. AREA SHALL BE GRADED AND STABILIZED ACCORDING TO PLANS OR AS DIRECTED BY THE ENGINEER.

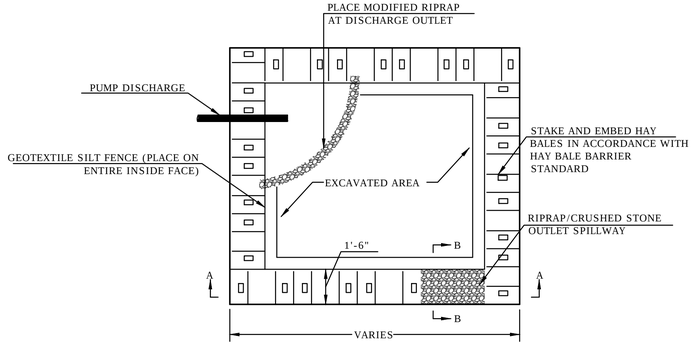


SECTION

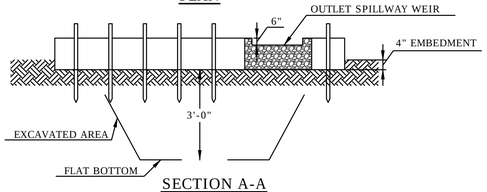


PLAN

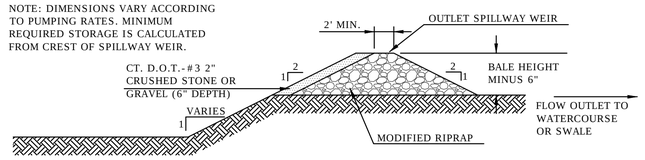
SILT BAG INSTALLATION



PLAN



SECTION A-A

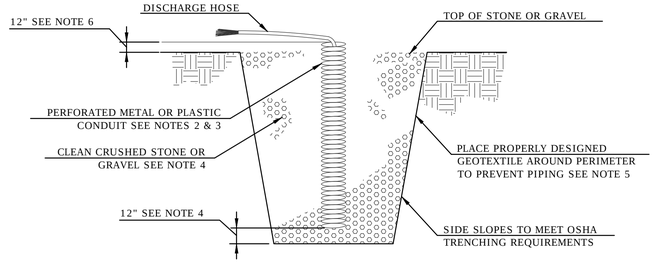


SECTION B-B

REFER TO PAGE 5-13-7 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL".

TYPE II PUMPING SETTLING BASIN

N.T.S.



REFER TO PAGE 5-13-3 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL".

NOTE:
1. OVERALL SUMP PIT DIMENSIONS SHALL BE COMPATIBLE WITH ANTICIPATED SEEPAGE RATES AND PUMP SIZE TO BE USED.
2. THE STANDPIPE DIAMETER AND NUMBER OF PERFORATIONS SHALL BE COMPATIBLE WITH THE PUMP SIZE BEING USED.
3. PERFORATIONS IN THE STANDPIPE SHALL BE EITHER CIRCULAR OR SLOTS. PERFORATION SIZE SHALL NOT EXCEED 1/2" IN DIAMETER.
4. CRUSHED STONE OR GRAVEL SHALL BE NO SMALLER THAN CT DOT #8 SIZE NOR LARGER THAN CT DOT #3 SIZE. CRUSHED STONE SHALL EXTEND A MINIMUM OF 12" BELOW THE BOTTOM OF THE STANDPIPE.
5. IF EXCESSIVE MOVEMENT OF FINE SOIL PARTICLES FROM THE SURROUNDING EXISTING SOILS IS ANTICIPATED, A PROPERLY DESIGNED GEOTEXTILE SHALL BE PLACED BETWEEN THE EXISTING SOILS AND THE CRUSHED STONE OR GRAVEL BACKFILL.
6. THE STANDPIPE SHALL EXTEND A MINIMUM OF 12" ABOVE THE SURROUNDING GROUND.

PUMP INTAKE

TYPICAL SECTION OF SUMP PIT

N.T.S.

GENERAL
EFFLUENT FROM DEWATERED WORK AREA(S) SHOULD NOT BE DISCHARGED DIRECTLY TO THE STREAM BUT BE PROCESSED THROUGH TREATMENT STRUCTURE(S). SUCH STRUCTURES SHOULD NOT BE LOCATED WITHIN THE STREAM CHANNEL OR ADJACENT WETLANDS.

THE PROJECT SHOULD NOT BE CONDUCTED IN A MANNER WHICH IMPEDES STREAM FLOW.

COFFERDAM NOTES
1. A CONSTRUCTION SEQUENCING PLAN AND A WATER HANDLING PLAN INCLUDING A CONTINGENCY PLAN FOR FLOOD EVENTS MUST BE SUBMITTED IN WRITING TO THE ENGINEER AND APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION IN A WATERWAY.

2. TEMPORARY COFFERDAM AND PUMPING NOT PAID SEPARATELY. COST TO BE INCLUDED IN THE PAY ITEM "COFFERDAM AND DEWATERING".

3. WATER HANDLING PLAN IS EXAMPLE ONLY.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE TOWN AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

NO.	DATE	DESCRIPTION

REVISIONS

SUPV. J.A.C.
DESIGN J.A.W.
DRAWN S.M.M./ S.A.
CHECKED J.A.W.
DATE 08/05/16

PD SUBMITTAL

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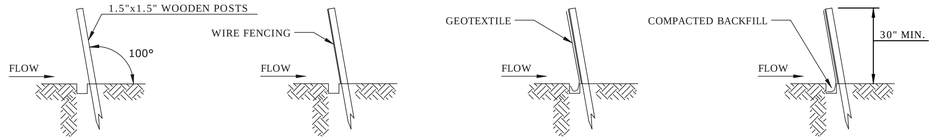
87 HOLMES ROAD
NEWINGTON, CT 06111
(860) 667-9624

PREPARED FOR
TOWN OF HARWINTON
100 BENTLEY DRIVE, P.O. BOX 86
HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK
HANDLING WATER DETAILS

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D. –	14039.10	–	11	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	12	15



1. SET POSTS AND EXCAVATE A 6"x6" TRENCH. SET POSTS DOWN SLOPE. ANGLE 10° UPSLOPE FOR STABILITY AND SELF CLEANING.

2. ATTACH THE WIRE MESH FENCING TO POST.

3. ATTACH GEOTEXTILE TO THE WIRE FENCING AND EXTEND IT TO THE TRENCH.

4. BACKFILL THE TRENCH AND COMPACT THE EXCAVATED SOIL.

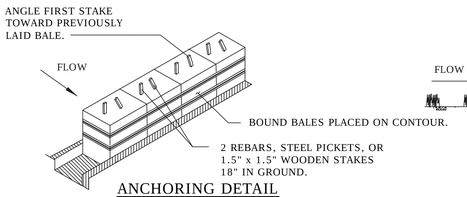
* WHEN INSTALLATION OF TRENCH IS IMPRACTICAL, ALTERNATE INSTALLATION SHALL BE TO LAY 6" FLAP HORIZONTALLY ON GROUND AND BURY FLAP BY RAMP SOIL OR STONE UP TO CONTROL FENCE. DEPTH OF RAMP SHALL BE AS REQUIRED TO HOLD DOWN FLAP WITHOUT LEAKAGE UNDER CONTROL FENCE WHILE MAINTAINING MINIMUM HEIGHT.

GEOTEXTILE FENCE SYSTEM

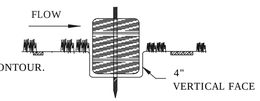
REFER TO PAGE 5-11-35 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" AND PAGE 55 "ON-SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".

SEDIMENTATION CONTROL SYSTEM INSTALLATION

N.T.S.



ANCHORING DETAIL



BEDDING DETAIL

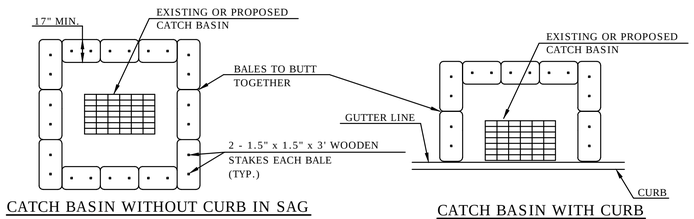
HAY BALE CONSTRUCTION SPECIFICATIONS:

1. HAY BALES SHALL BE PLACED AROUND NEWLY INSTALLED CATCH BASINS IN SAGS AND DROP INLETS TO PREVENT SEDIMENTATION AND OTHER DEBRIS FROM ACCUMULATING ON THE GRATE OR IN THE SUMP. HAY BALES SHOULD BE KEPT CLEAN AND FREE OF DEBRIS TO FACILITATE FLOW.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4", AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

REFER TO PAGE 5-11-30 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" AND PAGE 53 "ON-SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".

HAY BALE DETAIL

N.T.S.



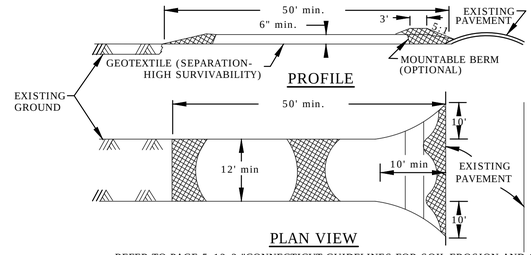
CATCH BASIN WITHOUT CURB IN SAG

CATCH BASIN WITH CURB

REFER TO PAGE 5-11-33 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" AND PAGE 40 "ON-SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".

SEDIMENTATION CONTROL DETAILS

N.T.S.



PROFILE

PLAN VIEW

REFER TO PAGE 5-12-2 "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" AND PAGE 50 "ON-SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".

CONSTRUCTION SPECIFICATION:

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FT (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN 6".
4. WIDTH - 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. GEOTEXTILE WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS 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 RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SETTLING AREA SIZED TO HOLD THE VOLUME OF WATER USED DURING ANY 2-HOUR PERIOD.
9. PERIODIC INSPECTION AND NECESSARY MAINTENANCE SHALL BE PROVIDED AFTER EACH RAINFALL.
10. THE COST OF CONSTRUCTING THE STABILIZED CONSTRUCTION ENTRANCE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE GENERAL WORK.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

GENERAL

THIS PLAN PROPOSES EROSION CONTROL MEASURES TO HELP CONTROL ACCELERATED EROSION AND SEDIMENTATION AND REDUCE THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION, AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHENEVER POSSIBLE. EXISTING VEGETATION SHALL BE PROTECTED AND ONLY THAT CLEARING AND GRUBBING ABSOLUTELY NECESSARY FOR THE PROPOSED CONSTRUCTION SHALL BE PERFORMED. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CONTOUR, UNLESS OTHERWISE INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH HIS CONSTRUCTION METHODS AND SHALL COMPLY WITH THE FOLLOWING GUIDELINES. REFERENCE IS MADE TO THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" (2002), AS AMENDED. THE GUIDELINES ARE OBTAINABLE FROM THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION, 79 ELM STREET, HARTFORD, CONNECTICUT 06106, AND SHOULD BE USED AS A REFERENCE IN CONSTRUCTING THE EROSION AND SEDIMENTATION CONTROLS INDICATED ON THESE PLANS. AN ADDITIONAL REFERENCE IS THE 1994 CONNDOT PUBLICATION "ON-SITE MITIGATION FOR CONSTRUCTION ACTIVITIES".

EROSION CONTROL

ALL AREAS SHALL BE PROTECTED FROM EROSION DURING AND AFTER CONSTRUCTION, PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM, OR ORGANIC MATTER PRIOR TO TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENTATION CONTROL SYSTEM (I.E. HAY BALES AND/OR GEOTEXTILE FENCE). DEBRIS AND OTHER WASTE RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION WILL NOT BE DISCARDED ON SITE. STABILIZING OF SLOPES SHALL BE DONE IMMEDIATELY AFTER CONSTRUCTION OF SLOPES. SLOPES STEEPER THAN 4:1 SHALL BE PROTECTED WITH EROSION CONTROL MATTING. THIS MATTING IS MANUFACTURED COMBINATIONS OF MULCH AND NETTING AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL OTHER AREAS SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 2 TO 3 TONS PER ACRE. STRAW OR HAY MULCH MUST BE ANCHORED IMMEDIATELY AFTER SPREADING TO PREVENT WINDBLOWING. THE METHODS RECOMMENDED BY THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" SHALL BE USED FOR THE ANCHORING OF MULCH OR NETTING.

EROSION AND SEDIMENTATION CONTROL PLAN

AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE SUBMITTED IN WRITING TO THE ENGINEER AND APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
SEDIMENTATION CONTROL SYSTEM - THE SEDIMENTATION CONTROL SYSTEM SHALL CONSIST OF A GEOTEXTILE BARRIER FENCE. THE SEDIMENTATION CONTROL SYSTEM SHALL BE INSTALLED IMMEDIATELY AFTER A CUT SLOPE HAS BEEN GRADED, BEFORE A FILL SLOPE HAS BEEN CREATED AND AS INDICATED ON THE PLANS. THE SYSTEM IS DESIGNED TO INTERCEPT SILT AND SEDIMENT BEFORE IT REACHES THE WETLANDS OR WATERCOURSES. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. THE SEDIMENTATION CONTROL SYSTEM IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE FENCE ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

STACKED HAY BALES - HAY OR STRAW BALES USED FOR EROSION CONTROL SHALL BE STACKED AT CATCH BASINS WHERE SEDIMENT MAY ENTER THE CATCH BASIN OR AS DIRECTED BY THE RESIDENT ENGINEER. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE EROSION CHECKS. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. HAY OR STRAW BALES ARE TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

IN ALL AREAS, REMOVAL OF TREES, BUSHES, AND OTHER VEGETATION, AND DISTURBANCE OF THE SOIL, IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE.

DURING CONSTRUCTION, AS SMALL AN AREA OF SOIL AS POSSIBLE SHOULD BE EXPOSED FOR AS SHORT A TIME AS POSSIBLE. AFTER CONSTRUCTION, GRADE, RESPREAD TOPSOIL, AND STABILIZE SOIL BY SEEDING AND MULCHING AS TO PREVENT EROSION.

EROSION AND SEDIMENTATION CONTROL MAINTENANCE PROCEDURES

ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION ON A DAILY BASIS AND FOLLOWING ALL STORMS BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUESTED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS OF THE REQUEST AND THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK.

THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, AND PIPES AT THE COMPLETION OF CONSTRUCTION, AND AS REQUESTED BY THE RESIDENT INSPECTOR TO KEEP THE SYSTEM FUNCTIONING PROPERLY DURING CONSTRUCTION.

FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AND ENSURE A GOOD STAND OF TURF IS ESTABLISHED THROUGHOUT. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP, AND CLEAN SEDIMENT COVERED STONES.

ALL APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE ESTABLISHED PRIOR TO AND BE MAINTAINED THROUGH ALL CONSTRUCTION PHASES.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE TOWN AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

NO.	DATE	DESCRIPTION

REVISIONS

SUPV. J.A.C.
DESIGN J.A.W.
DRAWN S.M.M./ S.A.
CHECKED J.A.W.
DATE 08/05/16

PD SUBMITTAL

WMC CONSULTING ENGINEERS

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(860) 667-9624

PREPARED FOR

TOWN OF HARWINTON

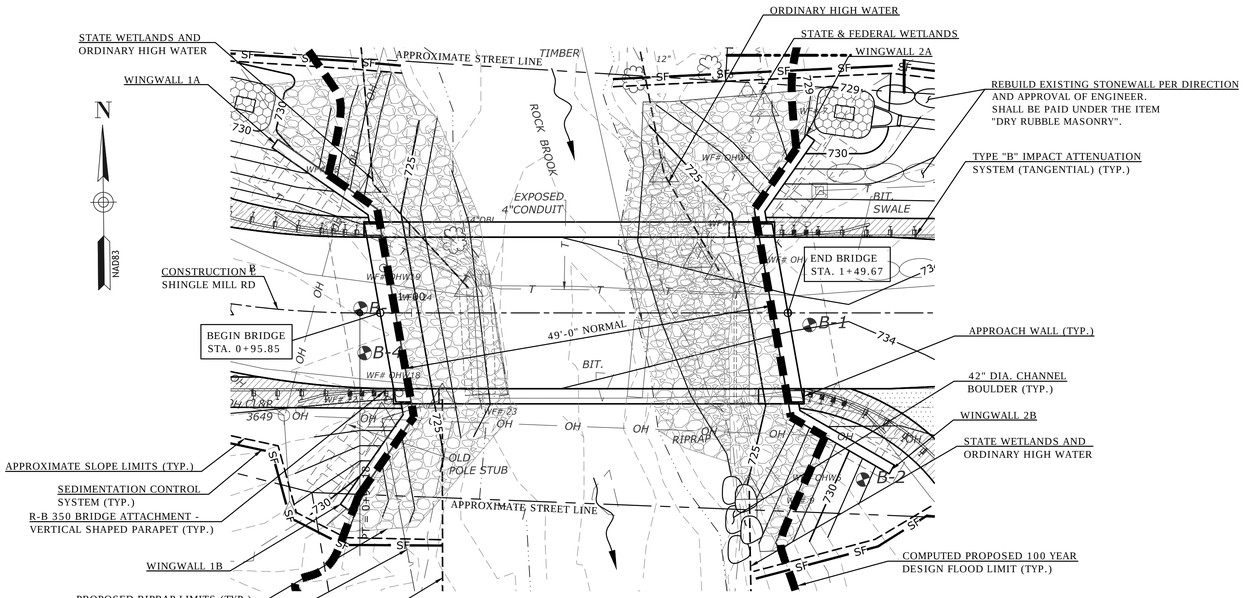
100 BENTLEY DRIVE, P.O. BOX 86

HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK EROSION AND SEDIMENTATION CONTROL DETAILS

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D. –	14039.10	–	12	15

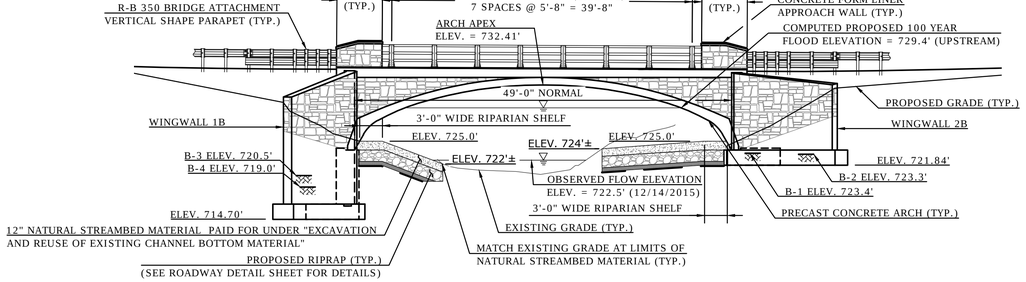
F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	13	15



STRUCTURE PLAN

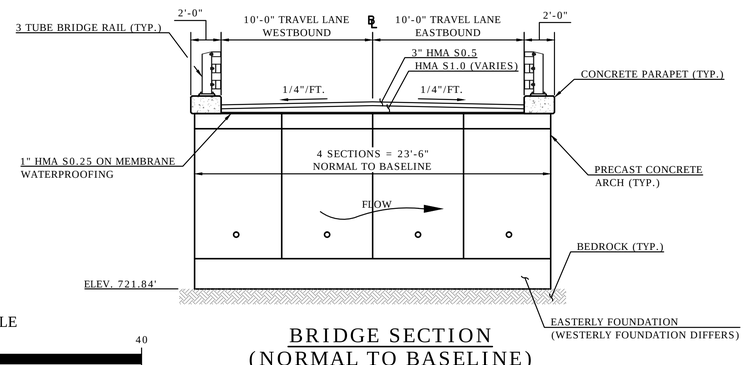
SCALE: 1" = 10'-0"

APPROXIMATE BORING LOCATIONS



DOWNSTREAM BRIDGE ELEVATION (LOOKING UPSTREAM)

SCALE: 1" = 10'-0"



BRIDGE SECTION (NORMAL TO BASELINE)

SCALE: 1" = 5'-0"

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)

1 inch = 10 ft.

QUANTITIES

ITEM	UNIT	QTY
LEAD COMPLIANCE FOR MISCELLANEOUS EXTERIOR TASKS	L.S.	1
EXCAVATION AND REUSE OF EXISTING CHANNEL BOTTOM MATERIAL	C.Y.	80
STRUCTURE EXCAVATION - EARTH (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	505
STRUCTURE EXCAVATION - ROCK (EXCLUDING COFFERDAM AND DEWATERING)	C.Y.	30
COFFERDAM AND DEWATERING	L.F.	210
PERVIOUS STRUCTURE BACKFILL	C.Y.	590
HMA S1	TON	50
HMA S0.5	TON	30
HMA S0.25	TON	8
MATERIAL FOR TACK COAT	Gal	50
REMOVAL OF SUPERSRUCTURE	L.S.	1
PRECAST CONCRETE ARCH	L.S.	1
CLASS "A" CONCRETE	C.Y.	50
CONCRETE FORM LINERS	S.F.	170
PRECAST CONCRETE WALLS	L.S.	1
CLASS "F" CONCRETE	C.Y.	20
1/2" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES	S.F.	70
DEFORMED STEEL BARS	LBS.	6000
DEFORMED STEEL BARS - EPOXY COATED	LBS	3000
MEMBRANE WATERPROOFING (WOVEN GLASS FABRIC)	S.Y.	170
DAMPPROOFING	S.Y.	5
3 TUBE BRIDGE RAIL	L.S.	85
REMOVAL OF EXISTING MASONRY	C.Y.	80
TEMPORARY SUPPORT OF UTILITIES	L.S.	1

HYDRAULIC DATA

DRAINAGE AREA	6.284 SQ. MILES
DESIGN FREQUENCY	100 YEAR
DESIGN DISCHARGE	1550 C.F.S.
OBSERVED FLOW ELEVATION	±722.5 FT. (12/14/2015)
UPSTREAM DESIGN WATER SURFACE ELEVATION	729.4 FT.
DOWNSTREAM DESIGN WATER SURFACE ELEVATION	728.1 FT.
MAXIMUM SCOUR ELEVATION	SCOUR NOT COMPUTED, PROPOSED FOUNDATION TO BE FOUNDED DIRECTLY ON BEDROCK
FREQUENCY	
DISCHARGE	
WORST CASE SCOUR SUB-STRUCTURE UNIT	

NOTICE TO BRIDGE INSPECTORS	
THE DEPARTMENT'S BRIDGE SAFETY PROCEDURES REQUIRE THIS BRIDGE TO BE INSPECTED FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS (THE LISTING OF COMPONENTS FOR SPECIAL ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF THE INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE). THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OF BRIDGES AND STRUCTURES, OR NOTED BELOW.	
COMPONENT OR DETAIL	BRIDGE SHEET REF.
NONE	NONE

GENERAL NOTES:

SPECIFICATIONS: CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016), AND ALL LATEST SUPPLEMENTAL SPECIFICATIONS THERETO.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (AASHTO 2012), AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003).

ALLOWABLE DESIGN STRESSES:

CLASS "A" CONCRETE: BASED ON f'c = 3000 P.S.I.

CLASS "F" CONCRETE: BASED ON f'c = 4000 P.S.I.

REINFORCEMENT: (ASTM A615 GRADE 60) fy = 60,000 P.S.I.

CONCRETE:

THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN (f'c) OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF 'SECTION 6.01 CONCRETE FOR STRUCTURES'.

LIVE LOAD: HL-93, L3S2, P76.5, L73, P204, P380, TLC

FUTURE PAVING ALLOWANCE: NONE

HMA OVERLAY: THIS SHALL CONSIST OF 3" MIN. OF HMA S0.5, ON HMA S1.0 (DEPTH VARIES), ON 1" OF HMA S0.25, ON MEMBRANE WATERPROOFING (WOVEN GLASS FABRIC).

DIMENSIONS: ALL DIMENSIONS SHOWN ON THE PLANS ARE IN FEET AND INCHES EXCEPT IF NOTED OTHERWISE. ALL ELEVATIONS ARE GIVEN IN FEET. WHEN ELEVATIONS AND ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

EXISTING DIMENSIONS: DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY OF THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

SUPERSTRUCTURE REMOVAL: BEFORE INITIATING CONSTRUCTION, CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL DEFINING METHOD FOR PROTECTION OF THE STREAM AREA DURING REMOVAL OF EXISTING BRIDGE SUPERSTRUCTURE. COST TO BE INCLUDED IN THE COST OF REMOVAL OF SUPERSTRUCTURE.

COFFERDAMS AND DEWATERING: BEFORE INITIATING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL THAT DEFINES METHODS AND MATERIALS FOR CONTROLLING STREAM WATER (COFFERDAMS, ETC.), DEWATERING, STRUCTURE EXCAVATION AND PROTECTING THE STREAM DURING VARIOUS STAGES OF CONSTRUCTION. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF "COFFERDAM AND DEWATERING".

UTILITY RELOCATIONS: OVERHEAD OR UNDERGROUND UTILITY LINES MAY BE IN CONFLICT WITH TEMPORARY SHEETING OR COFFERDAMS, SETTING OF PRECAST ARCH CULVERT UNITS OR OTHER CONSTRUCTION. DEPENDING UPON THE CONTRACTOR'S CONSTRUCTION OPERATIONS, THESE UTILITIES MAY NEED TO BE RELOCATED TO TEMPORARY LOCATIONS FOR PORTIONS OF THE CONSTRUCTION OPERATIONS AND THEN MOVED BACK TO PERMANENT LOCATIONS WHICH MAY BE OTHER THAN CURRENT LOCATIONS. THE ACTUAL UTILITY RELOCATIONS (PERMANENT OR TEMPORARY) WILL BE THE RESPONSIBILITY OF THE INDIVIDUAL UTILITY OWNER, HOWEVER THE CONTRACTOR WILL BE REQUIRED TO COORDINATE ALL UTILITY RELOCATIONS WITH EACH UTILITY OWNER AND TO PHASE HIS WORK AS REQUIRED TO ACCOMMODATE TEMPORARY AND PERMANENT UTILITY RELOCATION WORK. THE CONTRACTOR SHALL HAVE NO RIGHT TO CLAIM EXTRA COMPENSATION FOR DELAYS OR STAGING AND PHASING OF HIS WORK DUE TO UTILITY RELOCATION WORK.

UNCONFINED IN-STREAM: ACTIVITIES MUST BE LIMITED TO THE TIME PERIOD JUNE 1 THROUGH SEPTEMBER 30.

CONCRETE NOTES:

CLASS "A" CONCRETE: CLASS "A" CONCRETE SHALL BE USED FOR WINGWALLS AND ABUTMENTS UNLESS NOTED OTHERWISE.

CLASS "F" CONCRETE: CLASS "F" CONCRETE SHALL BE USED FOR BRIDGE PARAPETS, AND APPROACH WALLS.

JOINT SEAL: SEE SPECIAL PROVISIONS.

CONCRETE COVER: ALL REINFORCEMENT SHALL HAVE MIN. 2" COVER UNLESS DIMENSIONED OTHERWISE.

REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.

EPOXY COATED REINFORCING BARS: ALL REINFORCEMENT IN THE BRIDGE PARAPETS AND APPROACH WALLS SHALL BE EPOXY COATED UNLESS NOTED OTHERWISE. THESE BARS SHALL BE INCLUDED IN THE PAY ITEM FOR "DEFORMED STEEL BARS (EPOXY COATED)"

CONSTRUCTION JOINTS: CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

PREFORMED EXPANSION JOINT FILLER: THE COST OF FURNISHING AND INSTALLING PREFORMED EXPANSION JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE ITEM "1/2" PREFORMED EXPANSION JOINT FILLER FOR BRIDGES".

EXPOSED EDGES: EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"X1" UNLESS DIMENSIONED OTHERWISE

PRECAST CONCRETE ARCH CULVERT: FABRICATORS OF PRECAST CONCRETE ARCH CULVERT SHALL BE REQUIRED TO SUBMIT SHOP DRAWINGS PREPARED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE TOWN AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

NO.	DATE	DESCRIPTION

REVISIONS

SUPV.	J.A.C.
DESIGN	J.A.W.
DRAWN	S.M.M./ S.A.
CHECKED	J.A.W.
DATE	08/05/16

PD SUBMITTAL

WMC CONSULTING ENGINEERS

• WENGELL, McDONNELL & COSTELLO •
87 HOLMES ROAD
NEWINGTON, CT 06111
(860) 667-9624

PREPARED FOR

TOWN OF HARWINTON

100 BENTLEY DRIVE, P.O. BOX 86

HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL RD BRIDGE OVER ROCK BROOK
STRUCTURE PLAN, ELEVATION AND SECTION

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D.	– 14039.10	–	13	15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	14	15

Jaime Lloret — DRILLER — Sebghatullah Abdullah — INSPECTOR

TEST BORING REPORT
ASSOCIATED BORINGS CO., INC.
119 MARGARET CIRCLE, NAUGATUCK, CT 06770
Tel (203) 729-5435 Fax (203) 729-5116

SHEET 1 OF 1

CME-55 — DRILLING EQUIPMENT — Wengall McDonnell Costello — CLIENT

PROJECT NAME: Shingle Mill Road Bridge
PROJECT NUMBER:
LOCATION: Harwinton, Connecticut

SOILS ENGINEER
Surface Elevation:
Date Started: 12/7/2015
Date Finished: 12/7/2015
Groundwater Observations
AT 9 ' AFTER 0 HRS
AT ' AFTER HRS

	Auger	Casing	Sampler	Core Bar
Type	HSA		SS	NV2
Size I. D.	3 1/4 in		2 in	
Hammer			140 lb	Bit
Fall			30 in	

Hole No. **B-2**
Line & Station
Offset
N Coordinate
E. Coordinate

DEPTH	Casing blows per foot	SAMPLE DEPTH IN FEET FROM - TO	NO.	PEN. INCH	REC. INCH	TYPE	BLOWS PER 6 INCHES ON SAMPLER 0 - 6	6 - 12	12-18	18-24	STRATA CHANGE: DEPTH, ELEV.	FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)
		1.0 - 3.0	1	24	2	D	2	2	3	2		Br. M-F Sand, Little Silt, Little C-F Gravel (Fill)
5		5.0 - 7.0	2	24	7	D	2	4	6	10		
		7.0 - 9.0	3	24	6	D	6	17	35	50/0"	7.5	
		9.0 - 14.0	1	60	60	C					9	Br. M-F Sand, Some C-F Gravel, Little Silt Cobbles (Natural)
10	6											Cored Run # 1 From 9.0 feet to 14.0 feet Recovery - 60" RQD - 54/60 = 90%
	7											
	8											
	9											
	9	14.0 - 19.0	2	60	54	C						
15	7										15	Cored Run # 2 From 14.0 feet to 19.0 feet Recovery - 54" RQD - 42/60 = 70%
	8											
	7											
	7											
	9										19	
20												End of Boring - 19.0
25												
30												
35												
40												

From Ground Surface to — Feet Used — Inch Casing Then — Inch Casing For — Feet

Footage in Earth 9.0 — Footage in Rock 10.0 — No. of Samples 3 — Hole No. **B-2**

SAMPLE TYPE CODING: D = DRIVEN C = CORE A = AUGER UP = UNDISTURBED PISTON
PROPORTIONS USED: TRACE = 1-10% LITTLE = 10-20% SOME = 20-35% AND = 35-50%

Jaime Lloret — DRILLER — Sebghatullah Abdullah — INSPECTOR

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SHEET 1 OF 1

CME-55 — DRILLING EQUIPMENT — Wengall McDonnell Costello — CLIENT

PROJECT NAME: Shingle Mill Road Bridge
PROJECT NUMBER:
LOCATION: Harwinton, Connecticut

SOILS ENGINEER
Surface Elevation:
Date Started: 12/8/2015
Date Finished: 12/8/2015
Groundwater Observations
AT 9 ' AFTER 0 HRS
AT ' AFTER HRS

	Auger	Casing	Sampler	Core Bar
Type	HSA		SS	NV2
Size I. D.	3 1/4 in		2 in	
Hammer			140 lb	Bit
Fall			30 in	

Hole No. **B-3**
Line & Station
Offset
N Coordinate
E. Coordinate

DEPTH	Casing blows per foot	SAMPLE DEPTH IN FEET FROM - TO	NO.	PEN. INCH	REC. INCH	TYPE	BLOWS PER 6 INCHES ON SAMPLER 0 - 6	6 - 12	12-18	18-24	STRATA CHANGE: DEPTH, ELEV.	FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)
		1.0 - 3.0	1	24	6	D	3	3	3	3		Br. M-F Sand, Little Silt, Little C-F Gravel Cobbles, Boulders (Fill)
5		5.0 - 7.0	2	24	7	D	11	17	14	6		
		7.0 - 7.5	3	6	1	D	50	X	X	X		
10		10.0 - 11.5	4	18	8	D	26	36	60	X	10	Br. M-F Sand, Some C-F Gravel, Little Silt Cobbles (Natural)
		13.5 - 18.5	1	60	45	C					13.5	Cored Run # 1 From 13.5 feet to 18.5 feet Recovery - 46" RQD - 25/60 = 42%
15	7											
	8											
	8											
	9											
	8	18.5 - 23.5	2	60	58	C					18.5	Cored Run # 2 From 18.5 feet to 23.5 feet Recovery - 58" RQD - 58/60 = 97%
	6											
20	8											
	7											
	7											
	8										23.5	End of Boring - 23.5
25												
30												
35												
40												

From Ground Surface to — Feet Used — Inch Casing Then — Inch Casing For — Feet

Footage in Earth 13.5 — Footage in Rock 10.0 — No. of Samples 4 — Hole No. **B-3**

SAMPLE TYPE CODING: D = DRIVEN C = CORE A = AUGER UP = UNDISTURBED PISTON
PROPORTIONS USED: TRACE = 1-10% LITTLE = 10-20% SOME = 20-35% AND = 35-50%

Jaime Lloret — DRILLER — Sebghatullah Abdullah — INSPECTOR

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119 MARGARET CIRCLE, NAUGATUCK, CT 06770
Tel (203) 729-5435 Fax (203) 729-5116

SHEET 1 OF 1

CME-55 — DRILLING EQUIPMENT — Wengall McDonnell Costello — CLIENT

PROJECT NAME: Shingle Mill Road Bridge
PROJECT NUMBER:
LOCATION: Harwinton, Connecticut

SOILS ENGINEER
Surface Elevation:
Date Started: 12/8/2015
Date Finished: 12/8/2015
Groundwater Observations
AT 9 ' AFTER 0 HRS
AT ' AFTER HRS

	Auger	Casing	Sampler	Core Bar
Type	HSA		SS	NV2
Size I. D.	3 1/4 in		2 in	
Hammer			140 lb	Bit
Fall			30 in	

Hole No. **B-4**
Line & Station
Offset
N Coordinate
E. Coordinate

DEPTH	Casing blows per foot	SAMPLE DEPTH IN FEET FROM - TO	NO.	PEN. INCH	REC. INCH	TYPE	BLOWS PER 6 INCHES ON SAMPLER 0 - 6	6 - 12	12-18	18-24	STRATA CHANGE: DEPTH, ELEV.	FIELD IDENTIFICATION OF SOIL, REMARKS (INCL. COLOR, LOSS OF WASH WATER, ETC.)
		1.0 - 3.0	1	24	8	D	15	12	17	13		Br. M-F Sand, Little Silt, Little C-F Gravel Cobbles, Boulders (Fill)
5		5.0 - 7.0	2	24	7	D	4	4	17	50		
											7	Cored Cobbles and Boulders from 7.0 feet to 12.0 feet
10		12.0 - 13.5	3	18	2	D	14	21	50	X	10	Br. M-F Sand, Some C-F Gravel, Little Silt Cobbles (Natural)
		15.0 - 20.0	1	60	59	C					15	Cored Run # 1 From 15.0 feet to 20.0 feet Recovery - 59" RQD - 26/60 = 43%
15	5											
	6											
	7											
	6											
20	6	20.0 - 25.0	2	60	59	C					20	Cored Run # 2 From 20.0 feet to 25.0 feet Recovery - 59" RQD - 45/60 = 75%
	7											
	8											
	6											
	7											
25	7										25	End of Boring - 25.0
30												
35												
40												

From Ground Surface to — Feet Used — Inch Casing Then — Inch Casing For — Feet

Footage in Earth 15.0 — Footage in Rock 10.0 — No. of Samples 3 — Hole No. **B-4**

SAMPLE TYPE CODING: D = DRIVEN C = CORE A = AUGER UP = UNDISTURBED PISTON
PROPORTIONS USED: TRACE = 1-10% LITTLE = 10-20% SOME = 20-35% AND = 35-50%

File: P:\Projects\14039 Harwinton - Shingle Mill Road\Drawings\New folder\Shingle Mill Road Bridge Harwinton.dwg pdf
Missing or invalid reference

B-1
STATION = 1+52.54
OFFSET = 1.59'R
NORTHING = 835431.08
EASTING = 918551.21
ELEV. 733.43

B-2
STATION = 1+59.59
OFFSET = 22.00'R
NORTHING = 835410.60
EASTING = 918558.04
ELEV. 732.29

B-3
STATION = 0+93.29
OFFSET = 0.59'L
NORTHING = 835433.88
EASTING = 918491.98
ELEV. 733.94

B-4
STATION = 0+93.81
OFFSET = 5.29'R
NORTHING = 835427.99
EASTING = 918492.44
ELEV. 733.94

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NO.	DATE	DESCRIPTION

REVISIONS

SUPV. J.A.C.
DESIGN J.A.W.
DRAWN S.M.M./ S.A.
CHECKED J.A.W.
DATE 08/05/16

PD SUBMITTAL

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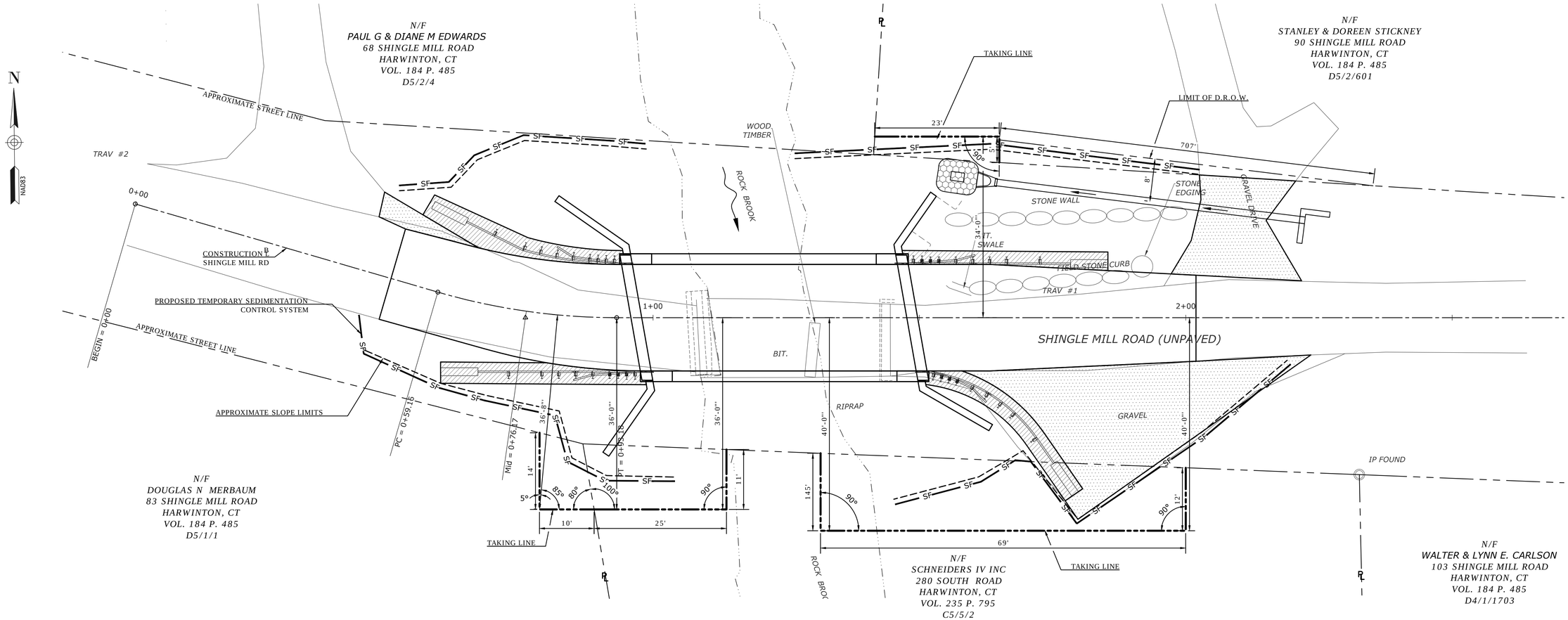
PREPARED FOR
TOWN OF HARWINTON
100 BENTLEY DRIVE, P.O. BOX 86
HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL BRIDGE OVER ROCK BROOK BORING LOGS

D – SHINGLE MILL – P.D. – 14039.10 – SIZE PROJECT FILE NAME NUMBER REV.

SHEET 14 OF 15

F.H.W.A REGION NO.	STATE	TOWN	FEDERAL AID PROJECT NO.	PROJECT NO.	YEAR	ROUTE NO.	SHEET NO.	TOTAL SHEETS
1	CT	HARWINTON	TBD	65-113	2018	TR	15	15



ROW IMPACT PLAN

SCALE: 1" = 10'-0"

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE TOWN AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

NO.	DATE	DESCRIPTION

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DESIGN	J.A.W.
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CHECKED	J.A.W.
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TOWN OF HARWINTON

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HARWINTON CT, 06791

REPLACEMENT OF SHINGLE MILL RD BRIDGE OVER ROCK BROOK ROW IMPACT PLAN

SIZE	PROJECT	FILE NAME	NUMBER	REV.	SHEET	OF
D –	SHINGLE MILL	– P.D. –	14039.10	–	15	15