MILLER BROOK
CULVERT REPLACEMENT

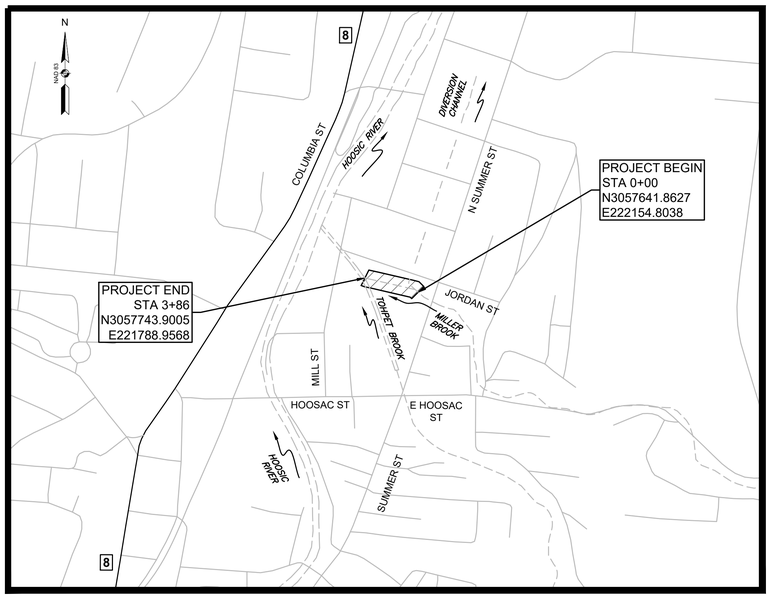
IN THE TOWN OF

ADAMS

BERKSHIRE COUNTY

THESE PLANS ARE SUPPLEMENTED BY THE LATEST EDITIONS OF THE FOLLOWING PUBLICATIONS, AS IDENTIFIED IN THE CONTRACT SPECIAL PROVISIONS: THE MASSDOT CONSTRUCTION STANDARD DETAILS, THE MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, AND THE ANSI AMERICAN STANDARD FOR NURSERY STOCK.

INDEX



0 500 1000 1500 2000

SCALE: 1" = 500'

LENGTH OF PROJECT = 550 FEET = 0.10 MILES

DATE	DESCRIPTION	REV #

Vanasse Hangen Brustlin, Inc.
120 Front Street, Suite 500
Worcester, MA 01608
508.752.1001 FAX 508.752.1276

COMMONWEALTH OF MASSACHUSETTS
CHRISTINE A. CHAMPEAU
CIVIL
NO 40071
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY KF/SN	APPROVED BY MC	SHEET 1 OF 28
DRAWN BY KF/SN	DFTG CHECKED BY CAC/SL	VHB CAD FILE NAME 13867_01-COV.dwg
CHECKED BY CAC/SL	DATE June 3, 2026	JOB NO. 13867.01

GENERAL SYMBOLS

EXISTING	PROPOSED	
CB (OR GI, LB)		CATCH BASIN (OR GUTTER INLET, OR LEACHING BASIN)
CBCI (OR GICI)		CATCH BASIN (OR GUTTER INLET) WITH CURB INLET (GUTTERMOUTH)
		EDGESTONE-TYPE NOTED
		EDGE OF ROAD
EHH	EHH	ELECTRIC HANDHOLE (NUMBER AS NOTED)
EMH	EMH	ELECTRIC MANHOLE "
TMH	TMH	TELEPHONE MANHOLE "
WMH	WMH	WATER MANHOLE "
SMH	SMH	SEWER MANHOLE "
DMH	DMH	DRAINAGE MANHOLE "
GG	GG	GAS GATE
WG	WG	WATER GATE
CS	CS	CURB STOP
Hyd	HYD	HYDRANT
FA	FA	FIRE ALARM BOX
PM	PM	PARKING METER
LP	LP	STREET LIGHT POLE
UP	UP	UTILITY POLE
Guy	GUY	GUY POLE
12" RCP D	D 21'-12"RCP 21'-24"RCP D	DRAIN PIPE (UNDER 24") DRAIN PIPE (DOUBLE LINE 24" AND OVER)
8" VCP S	S 82'-8"VCP	SEWER MAIN " "
E	E	ELECTRIC DUCT " "
4" HP G	G 8"GAS	GAS MAIN " "
8" C.I. W	W 12"DI	WATER MAIN " "
T	T	TELEPHONE DUCT " "
MB	MB	MAIL BOX
		HIGHWAY GUARD (TYPE NOTED)
		FENCE (SIZE AND TYPE NOTED)
MHB	MHB	HIGHWAY/PROPERTY BOUND (TYPE NOTED)
LABEL/DATE	LABEL/DATE	CITY, TOWN, OR COUNTY LAYOUT
		STATE HIGHWAY LAYOUT (S.H.L.O.)
		EASEMENT LINE
℄	℄	PROPERTY LINE
NAME		CITY, TOWN, OR COUNTY BOUNDARY
NAME		STATE BOUNDARY
N00°00'00"E		BASE OR SURVEY LINE
+57.59 10 P.C. N00°00'00"E		CONSTRUCTION BASELINE
		TREE (SIZE AND TYPE NOTED)
		APPROXIMATE FULL DEPTH AREA
	B-1	BORINGS, PAVEMENT CORES
	TP-1	TEST PIT
		HAYBALE

PAVEMENT MARKINGS AND SIGNING SYMBOLS

EXISTING	PROPOSED	
		PAVEMENT ARROW AND LEGEND
CW	CW	CROSSWALK, 2-12" WHITE LINES (WIDTH NOTED)
SL	SL	STOP LINE, 12" WHITE LINE 4.0' BEHIND CW (TYP)
		YIELD LINE, 24" x 36" WHITE TRIANGLE, 36" O.C.
SWCHL	SWCHL	SOLID WHITE CHANNELIZING LINE-SIZE AS NOTED
SYCHL	SYCHL	SOLID YELLOW CHANNELIZING LINE-SIZE AS NOTED
BWLL	BWLL	BROKEN WHITE LANE LINE - 6"
SWLL	SWLL	SOLID WHITE LANE LINE - 6"
DYCL	DYCL	DOUBLE YELLOW CENTERLINE - 4"
SYEL	SYEL	SOLID YELLOW EDGE LINE - 6"
SWEL	SWEL	SOLID WHITE EDGE LINE - 6"
BYLL	BYLL	BROKEN YELLOW LANE LINE - 6"
		BICYCLE LANE
		BICYCLE DETECTION LEGEND
Sign		SIGN AND POST
		DELINEATOR

ABBREVIATIONS

GENERAL

ABAN	ABANDON	NTS	NOT TO SCALE
ADJ	ADJUST	PGL	PROFILE GRADE LINE
APPROX	APPROXIMATE	PROP	PROPOSED
BIT	BITUMINOUS	PVM'T	PAVEMENT
BOS	BOTTOM OF SLOPE	REM	REMOVE
(BO)	BY OTHERS	REMOD	REMODEL
CEM	CEMENT	RET	RETAIN
CLF	CHAINLINK FENCE	R&D	REMOVE AND DISCARD
CONC	CONCRETE	R&R	REMOVE AND RESET
ELEV	ELEVATION	R&S	REMOVE AND STACK
EOP	EDGE OF PAVEMENT	RT	RIGHT
EXIST	EXISTING	STA	STATION
FND	FOUNDATION	TEMP	TEMPORARY
GRAN	GRANITE	TOS	TOP OF SLOPE
HMA	HOT MIX ASPHALT	TYP	TYPICAL
LOAM	LOAM BORROW		
LT	LEFT		
MAX	MAXIMUM		
MIN	MINIMUM		

UTILITIES

ACCMP	ASHPALT COATED CORRIGATED METAL PIPE
CAP	CORRUGATED ALUMINUM PIPE
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT
PVC	POLYVINYLCHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE
TSV&B	TAPPING SLEEVE VALVE AND BOX
UP	UTILITY POLE

ALIGNMENT/GRADING

CC	CENTER OF CURVE
HP	HIGH POINT
LP	LOW POINT
PC	POINT OF CURVE
PI	POINT OF INTERSECTION
PNT	POINT
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
25.45	SPOT ELEVATION

PROFILES

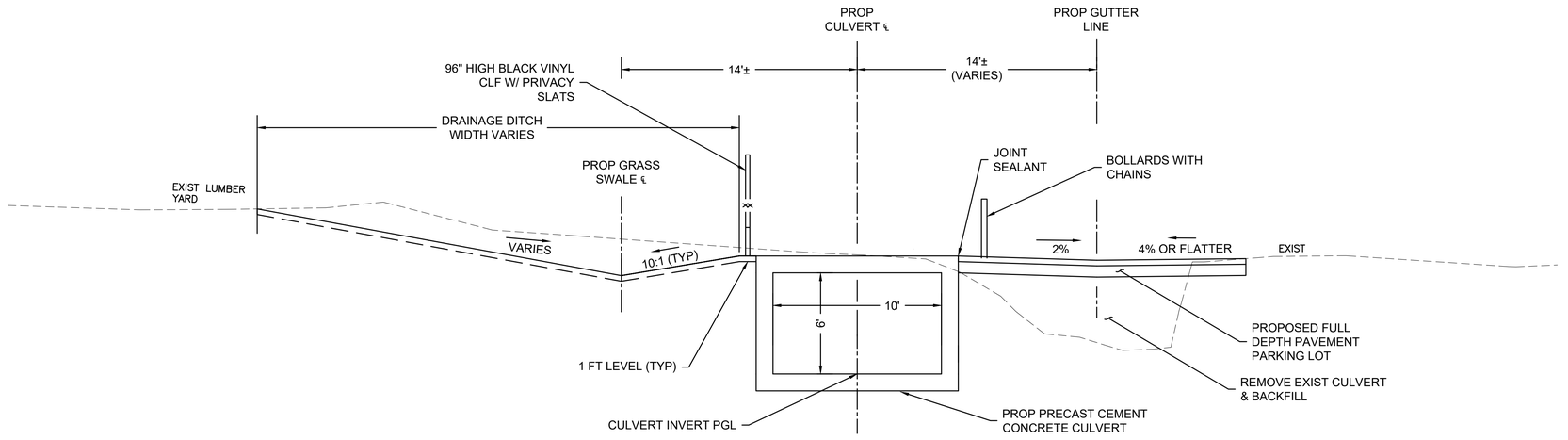
AD	ALGEBRAIC DIFFERENCE IN RATES OF GRADE
ELEV	ELEVATION
HSD	HORIZONTAL SIGHT DISTANCE
K	RATE OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVC	POINT OF VERTICAL CURVE
PVT	POINT OF VERTICAL TANGENT
PVRC	POINT OF VERTICAL REVERSE CURVE
PVCC	POINT OF VERTICAL COMPOUND CURVE
SSD	STOPPING SIGHT DISTANCE
VC	VERTICAL CURVE

ADAMS
MILLER BROOK
LEGEND ABBREVIATIONS & GENERAL NOTES
SHEET 2 OF 28

GENERAL NOTES

1. TOPOGRAPHICAL INFORMATION FROM A SURVEY BY HILL-ENGINEERS, ARCHITECTS, PLANNERS, INC., DALTON, MASSACHUSETTS BETWEEN THE DATES OF JULY 2022 AND APRIL 2024.
2. HORIZONTAL DATUM IS BASED ON [MASS GRID SYSTEM, NAD 1983. ELEVATIONS SHOWN REFER TO NAVD OF 1988.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT DIGSAFE TO REQUEST EXISTING UTILITY MARKOUT IN THE FIELD.
4. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
5. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
6. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
7. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS.
8. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
10. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
11. JOINTS BETWEEN NEW HOT MIX ASPHALT PAVEMENT SURFACE AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH HMA JOINT SEALANT.
12. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
13. ALL LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 0.01 FOOT PER FOOT (MINIMUM) UNLESS NOTED OTHERWISE ON THE DRAWINGS.
14. ALL EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
15. EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.

13867_01-TYP SECT.DWG Plotted on 3-Jun-2026 6:43 PM



TYPCAL SECTION - PROPOSED CULVERT

STA 00+76 TO STA 03+26
SCALE: 1" = 4'

PAVEMENT NOTES

PROPOSED FULL DEPTH PAVEMENT DRIVEWAY/ PARKING LOT

SURFACE:	2"	SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)
INTERMEDIATE:	2"	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5)
++SUBBASE:	8"	GRAVEL BORROW (TYPE b)

PROPOSED CEMENT CONCRETE SIDEWALK AT DRIVE

SURFACE:	6"	CEMENT CONCRETE AIR ENTRAINED 4000 PSI, ¾", 610
++SUBBASE:	8"	GRAVEL BORROW (TYPE b)

++ WHERE EXISTING GRAVEL IS FOUND TO BE SUITABLE, THE EXISTING GRAVEL MAY BE USED IN PROPOSED SUBBASE, AFTER APPROVAL BY THE ENGINEER.

0 4 10 16
SCALE: 1" = 4'

ADAMS
MILLER BROOK
CONSTRUCTION PLANS
SHEET 4 OF 28

13867_01-GEN.DWG Plotted on 3-Jun-2026 6:44 PM

N

NAD 83

PROP FLOATING SILT FENCE

PROP TEMP PAVEMENT (20' X 12") FOR ACCESSIBLE PARKING SPACE

PROP TEMP ACCESSIBLE PARKING PAVEMENT MARKINGS (PAINT)

CONSTRUCTION ACCESS OFF OF JORDAN STREET

PROP FLOATING SILT FENCE

MEET EXIST INVERT

RET EXIST CULVERT FOR CONTROL OF WATER IN PHASE A

MAINTAIN PEDESTRIAN ACCESS TO WOOD RAMP BEHIND BLDG

TEMP EARTH SUPPORT - PHASE A

PROP MH COVER FOR CULVERT MAIN-TENANCE

APPROX LIMIT OF PHASE A GRADING FOR DIVERSION CHANNEL

CONSTRUCT PORTION OF DIVERSION CHANNEL

PROP LOAM & SEED

PROP CLEARING & GRUBBING

PROVIDE NOTCH IN RIGHT WALL TO CONVEY OVERFLOW TO DIVERSION CHANNEL

EROSION CONTROL BARRIER INSTALL AT END OF PHASE A (SEE NOTES)

TEMP COFFERDAM

TEMP CHECK DAMS, R&R AS NEEDED

PROP CLEARING & GRUBBING

APPROX LIMIT OF EXCAVATION AT 1.5H:1V SLOPE

CONSTRUCT PORTION OF CLOSED CULVERT (10' INSIDE W X 6' INSIDE H X 89' L)

TEMPORARY GRADING FOR CULVERT INSTALLATION, SLOPE 1.5H:1V OR FLATTER

CONSTRUCT PORTION OF UPSTREAM OPEN CULVERT (10' INSIDE W X 6' INSIDE H X 26' L)

PROP CULVERT CONST. BASELINE

PROP CLEARING & GRUBBING

EROSION CONTROL BARRIER INSTALL AT END OF PHASE A (SEE NOTES)

BID ALT1 - CONCRETE REPAIRS TO EXIST OPEN CULVERT BOTTOM, CONTROL OF WATER WILL BE WITHIN THE EXIST OPEN CULVERT. SPECIFIC LOCATIONS WILL BE COORDINATED WITH THE TOWN DURING THE CONSTRUCTION PHASE.

CONSTRUCTION ACCESS OFF OF NORTH SUMMER STREET

JORDAN ST.

NORTH SUMMER ST.

N/F TAWNA SANDALL BOOK 1766, PAGE 877

N/F NADINE L. JURAS & JAY A. COMEAU BOOK 1264, PAGE 899

N/F LOGAN J. THOMPSON BOOK 1771, PAGE 552

N/F THERESA MENDEL BOOK 1539, PAGE 181

N/F WAYNE ARNOLD BOOK 1676, PAGE 284

N/F SHARON TOPOROWSKI BOOK 1497, PAGE 437

N/F JOHN F., III & TRACY J. SHEERIN BOOK 1709, PAGE 804

N/F SHARON TOPOROWSKI BOOK 1497, PAGE 437

N/F MICHELE PURCELL BOOK 1684, PAGE 828

N/F NICHOLAS S. & JENNIFER M. MIRKE BOOK 1700, PAGE 647

N/F TOWN OF ADAMS BOOK 444, PAGE 450 & BOOK 491, PAGE 7

N/F JASON M. ARIGONI BOOK 1787, PAGE 708

N/F STANLEY'S LUMBER, LLC BOOK 1592, PAGE 465

N/F JAMES D. DUDA & STEVEN M. HOLLAND BOOK 1052, PAGE 1045

BLDG #30

BLDG #17-31

BLDG #32-34

BLDG #26

BLDG #24

GARAGE

SHED

GAZEBO

100' RA MILLER BRK

200' RA MILLER BRK

100' RA TOPHET BRK

MILLER BROOK

TOPHET BROOK

CONC. BOTTOM

CONC. WALL

CONC. STRUCTURE

CONC. SW

CONC. STEPS

CONC. FOOTING

WD STEPS

DECK

STAIRS

GRAVEL

BIT. DRIVE

BITUMINOUS (ONE-WAY)

RD-GAS 4" LPP CIP MAIN

RD-4" WATER

ULT 1

CHW

GAR

EM

CC

OPEN WATER WITH CONC. BOTTOM

TEMP. FENCING

WOOD RAMP

TEMP FLOW

CONC. RIPRAP LOCATED ON 10-23

END OF TEMP. FENCING LOCATED 10-20-23

BEGIN TEMP. FENCING LOCATED 10-20-23

NEW ACCESS GATE

NEW CLEARING & GRAVEL DRIVE FOR ACCESS

REMOVE & DISPOSE LANDSCAPING DEBRIS

PILE OF CONC. DEMO. DEBRIS 10± CU. YARDS

CONC. BLOCKS

BRUSH, FALLEN TREES, LANDSCAPE DEBRIS

DEBRIS & TRASH

GENERAL NOTES:

1. AT THE END OF PHASE A, CONSTRUCT FINAL GRADING AND STABILIZE SLOPE WITH JUTE MESH AND LOAM AND SEED. INSTALL EROSION CONTROL BARRIERS.

LEGEND

BID ALTERNATE1 - POTENTIAL REPAIR LOCATION

PHASE A CULVERT CONSTRUCTION

0 20 50 100

SCALE: 1" = 20'

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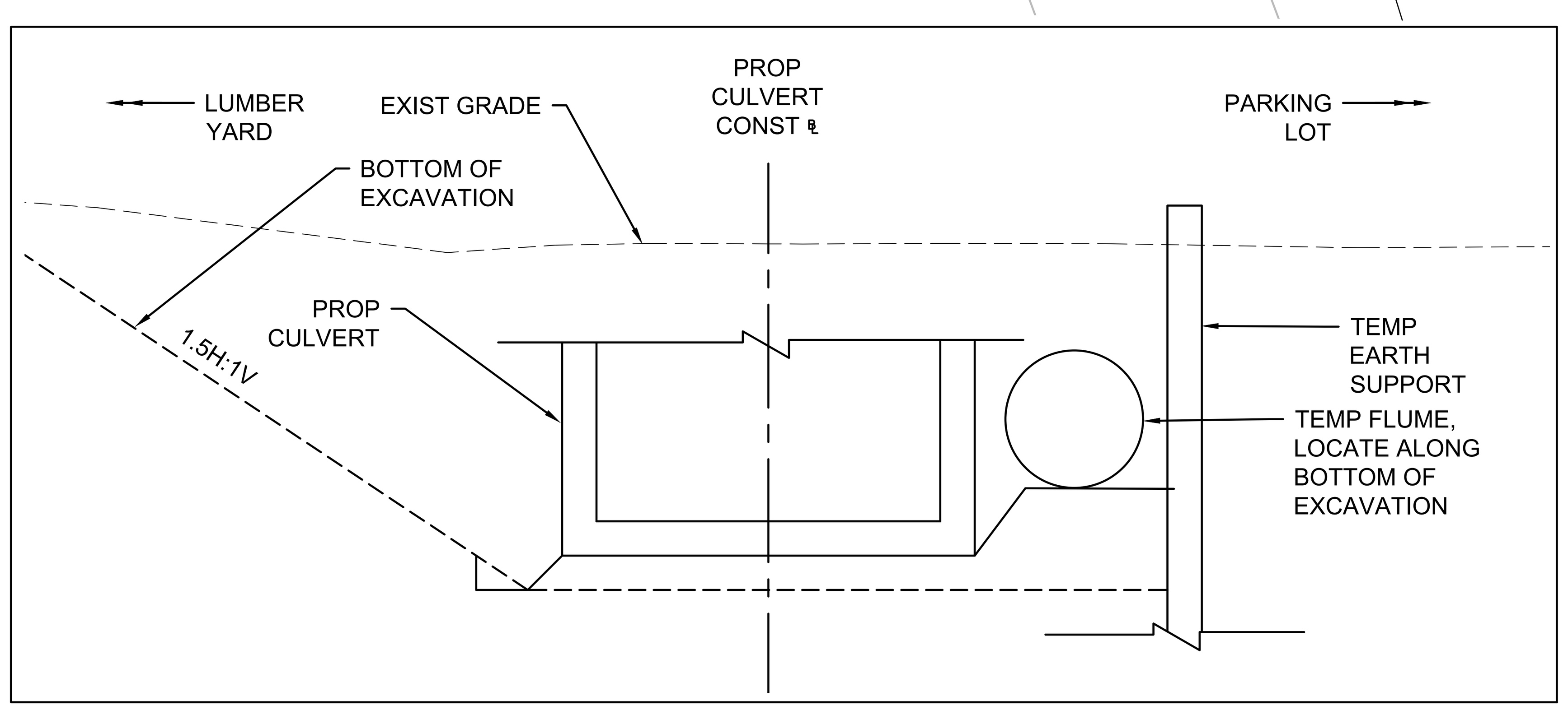

INSET - FLUME PIPE

SCALE: NONE

GENERAL NOTES:

1. AT THE END OF PHASE B, CONSTRUCT FINAL GRADING AND STABILIZE SLOPE WITH JUTE MESH AND LOAM AND SEED. RETAIN EROSION CONTROL BARRIER FROM PHASE A AND INSTALL ADDITIONAL EROSION CONTROL BARRIERS.

PHASE B CULVERT CONSTRUCTION

ADAMS
MILLER BROOK
CONSTRUCTION PLANS
SHEET 6 OF 28

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N

NAD 83

PHASE C1

PHASE C2

JORDAN ST.
BITUMINOUS (ONE-WAY)

NORTH SUMMER ST.
BITUMINOUS

100' RA MILLER BRK

200' RA MILLER BRK

100' RA TOPHET BRK

200' RA TOPHET BRK

MILLER BROOK

TOPHET BROOK

COMPLETE DOWNSTREAM OPEN CULVERT BEFORE COMPLETING UPSTREAM OPEN CULVERT

RETAIN PORTION OF TEMP EARTH SUPPORT FROM PHASE B

MAINTAIN SEDIMENT CONTROL BARRIERS

CONTROL OF WATER - TEMPORARY 4 FT DIA. BYPASS FLUME PIPE - MAY REQUIRE PUMPING

PROP FLOATING SILT FENCE

R&R TEMP COFFERDAMS FROM PREVIOUS PHASES & RESET HERE

CONSTRUCT DITCH

FINAL GRADING - STABILIZE SLOPE W/ JUTE MESH AND LOAM & SEED

PROP DITCH CENTERLINE

EXIST CLOSED CULVERT TO BE FILLED W/ SUITABLE BACKFILL MEETING ORDINARY FILL STANDARDS OR ORDINARY FILL

REM TEMP COFFERDAMS FROM PHASE C1 & RESET HERE

PROP CULVERT CONST. BASELINE

FILL EX OPEN CULVERT W/ SUITABLE BACKFILL MEETING ORDINARY FILL STANDARDS OR ORDINARY FILL

COMPLETE UPSTREAM OPEN CULVERT AFTER COMPLETING DOWNSTREAM OPEN CULVERT

PROP FLOATING SILT FENCE

CONSTRUCTION ACCESS OFF OF JORDAN STREET

REM TEMP PAVEMENT AND PLACE PROP LOAM AND SEED AT THE END OF PHASE C2

MAINTAIN PEDESTRIAN ACCESS TO WOOD RAMP BEHIND BLDG

REM SECTION OF WALL TO BE 2 FT BELOW FINISHED GRADE OF CHANNEL BOTTOM

MAINTAIN SEGMENT OF DIVERSION CHANNEL

COMPLETE CONSTRUCTION OF DIVERSION CHANNEL

REM WALL TO 2 FT BELOW FINISHED GRADE

R&R FENCE

MEET EXIST WALL & FENCE

REM TEMP COFFERDAMS FROM PHASE C1 & RESET HERE

TEMP CHECK DAM, R&R AS NEEDED

TEMP WATER BYPASS FOR CONTROL OF WATER , PUMPING MAY BE REQUIRED

EXTEND & MAINTAN SEDIMENT CONTROL BARRIERS AFTER CONSTRUCTION OF OPEN CULVERT WALLS (TYP)

CONSTRUCTION ACCESS OFF OF NORTH SUMMER STREET

N/F TOWN OF ADAMS BOOK 444, PAGE 450 & BOOK 491, PAGE 7

N/F NADINE L. JURAS & JAY A. COMEAU BOOK 1264, PAGE 899

N/F LOGAN J. THOMPSON BOOK 1771, PAGE 552

N/F THERESA MENDEL BOOK 1539, PAGE 181

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N/F JASON M. ARIGONI BOOK 1787, PAGE 708

BLDG #30

BLDG #17-31

BLDG #32-34

BLDG #26

BLDG #24

GARAGE

GRAVEL

CONC. RIPRAP LOCATED ON 10-23

END OF TEMP. FENCING LOCATED 10-20-23

BRUSH, FALLEN TREES, LANDSCAPE DEBRIS

NEW ACCESS & GRAVEL DRIVE FOR ACCESS

PILE OF CONC. DEMO. DEBRIS 10± CU. YARDS

CONC. BLOCKS

TEMP. FENCING

WOOD RAMP

CONC. STRUCTURE

CONC. WALL TO BE CUT DOWN

CONC. SW

CONC. FOOTING

WD STEPS

DECK

CONC. STEPS

CONCRETE

GENERAL NOTES:

1. PHASE C1 - CONSTRUCT THE DOWNSTREAM END OF THE OPEN CULVERT. REMOVE CONTROL OF WATER AND RELOCATE TO PHASE C2 LOCATION
2. PHASE C2 - CONSTRUCTION THE UPSTREAM END OF THE OPEN CULVERT AND COMPLETE THE DIVERSION CHANNEL. REMOVE CONTROL OF WATER.
3. CONSTRUCT REMAINING SITE WORK AND PLANTINGS
4. REMOVE EROSION CONTROL

PHASE C CULVERT CONSTRUCTION

0 20 50 100

SCALE: 1" = 20'

ADAMS
MILLER BROOK
CONSTRUCTION PLANS
SHEET 7 OF 28

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N

NAD 83

JORDAN ST.
BITUMINOUS
(ONE-WAY)

NORTH SUMMER ST.
BITUMINOUS

APPROX LIMIT OF GRADING (TYP)

PROP GUTTER LINE - GRADE LOT TO PROVIDE POSITIVE DRAINAGE TO NEW CB

APPROX LIMIT OF GRADING

PROP 72" HIGH STOCKADE FENCE; RETAIN FIRST THREE POSTS, REPLACE REMAINING POSTS

PROP FULL DEPTH PAVEMENT PARKING LOT

PROP 16' SWING GATE

R&R 20± LF STONE WALL

ADJ CB TO FINAL GRADE

PROP LOAM AND SEED

END WOOD FENCE, BEGIN 72" CHAIN LINK FENCE

PROP FULL DEPTH PAVEMENT DRIVE

PROP STEEL BOLLARD - 6" DIA., SPACED @ 12' (TYP), WITH CHAIN

83± LF PROP STEEL BACKED TIMBER GUARDRAIL

BEGIN PROP LOCATION FOR R&R EXIST FENCE

BEGINNING OF EXIST FENCE TO BE R&R

END PROP LOCATION FOR R&R EXIST FENCE

PROP LOAM & SEED

END PROP 72" CLF

ENDING OF EXIST FENCE TO BE R&R

BEGIN PROP 72" CLF OVER CULVERT

PROP DIVERSION CHANNEL CONST. BASELINE

PROP TREE - ARMSTRONG RED MAPLE

PROP 72" CANTILEVER CLF GATE (16' WIDTH), SLIDE TO WEST

END PROP 72" CLF
BEGIN PROP 96" HIGH VINYL COATED CLF W/ BLACK PRIVACY SLATS

PROP ARBORVITAE (AV), 41 EA SPACED @ 6' O.C.

APPROX LIMIT OF GRADING (TYP)

PROP CULVERT CONST. BASELINE

PROP LOAM & SEED

PROP DRAINAGE DITCH CENTERLINE

PROP TREE - ARMSTRONG RED MAPLE COORDINATE FINAL PLANTING LOCATION WITH TOWN

248± LF PROP 96" HIGH VINYL COATED CLF W/ BLACK PRIVACY SLATS

PROP CLOSED CULVERT (10' INSIDE W X 6' INSIDE H X 242' L)

REMOVE GRAVEL DRIVE PROP LOAM & SEED

THE FIRST 3 PROP STEEL BOLLARDS - SHALL BE SPACED @ 6' WITH CHAIN

REMOVE AND RESET DUMPSTER (BY OTHERS)

PROP TREE - ARMSTRONG RED MAPLE

PROP LOAM & SEED

END PROP 96" HIGH VINYL COATED CLF W/ BLACK PRIVACY SLATS

PROP CULVERT CONST. BASELINE

DISTURBED AREAS FOR STAGING, STOCKPILING, AND CONSTRUCTION OUTSIDE THE LIMIT OF WORK SHOWN, SHALL BE RESTORED TO ORIGINAL CONDITION. EXISTING DRIVEWAY AREA DISTURBED SHALL BE REMOVED TO A DEPTH OF 6 TO 8 INCHES AND A NEW GRAVEL DRIVEWAY SHALL BE PROVIDED, GRADED AND COMPACTED. THE NEW DRIVEWAY SHALL MATCH THE EXISTING STONE AS CLOSELY AS FEASIBLE AND SHALL BE PAID FOR UNDER ITEM 156.

Plant List

Key	Qty.	Botanical Name	Common Name	Size
AR	2	ACER RUBRUM "ARMSTRONG"	ARMSTRONG RED MAPLE	2 - 2.5 INCH CAL.
AV	41	ARBOR VITAE THUJA OCCIDENTALIS	EMERALD GREEN ARBORVITAE	3 GAL.

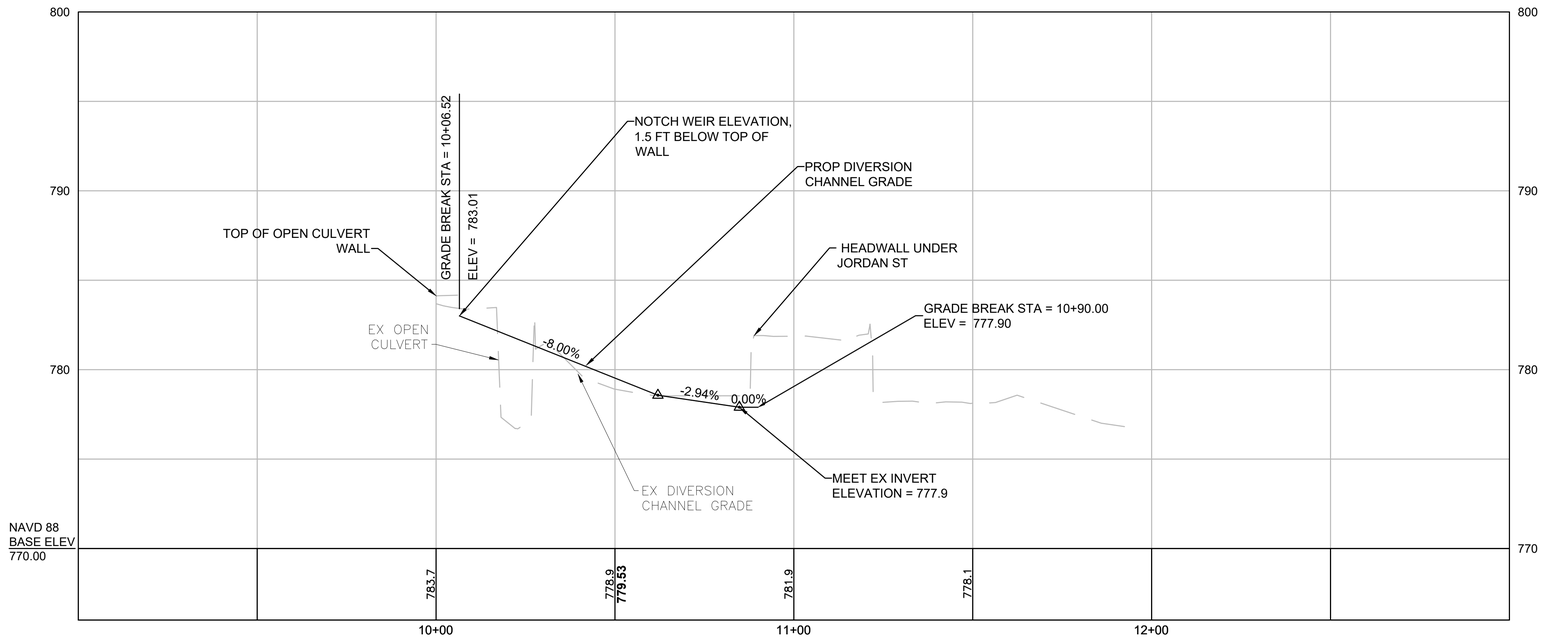
FINAL CONDITIONS

0 20 50 100
SCALE: 1" = 20'

ADAMS
MILLER BROOK
CULVERT PROFILE
SHEET 8 OF 28

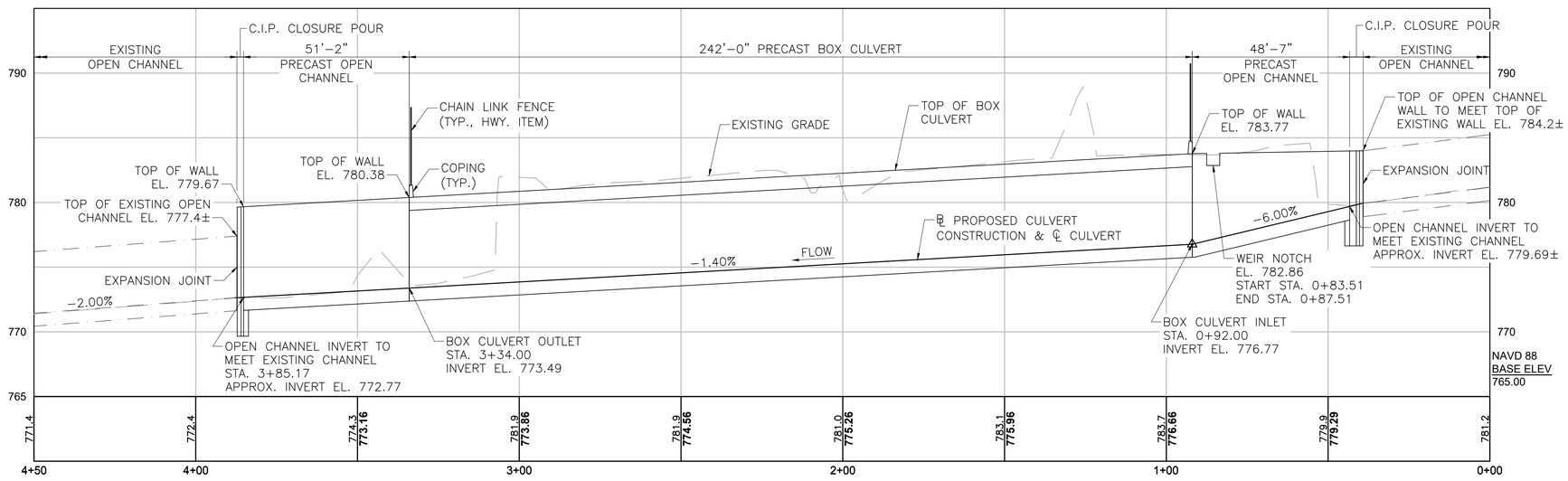
13867_01_PROF.DWG Plotted on 3-Jun-2026 6:43 PM

PROPOSED DIVERSION CHANNEL



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

PROPOSED CULVERT CONSTRUCTION BASELINE



ADAMS
MILLER BROOK
ALIGNMENT & GRADING PLAN
SHEET 9 OF 23

13867_01-ALN.DWG Plotted on 3-Jun-2026 6:44 PM

N

JORDAN ST.

N/F BAHLMAN REALTY NOMINEE TRUST BOOK 1325, PAGE 188

N/F TAWNA SANDALL BOOK 1766, PAGE 877

N/F NADINE L. JURAS & JAY A. COMEAU BOOK 1264, PAGE 899

N/F LOGAN J. THOMPSON BOOK 1771, PAGE 552

N/F THERESA MENDEL BOOK 1539, PAGE 181

N/F WAYNE ARNOLD BOOK 1676, PAGE 284

N/F WAYNE ARNOLD BOOK 1676, PAGE 284

N/F EUGENE & ANNA PRZYSTANSKI BOOK 995, PAGE 630

N/F SHARON TOPOROWSKI BOOK 1497, PAGE 437

N/F JOHN F., III & TRACY J. SHEERIN BOOK 1709, PAGE 804

N/F SHARON TOPOROWSKI BOOK 1497, PAGE 437

26
N: 3057779.641'
E: 221749.889'
EL: 777.232'
PTS–26

25
N: 3057739.111'
E: 221823.262'
EL: 777.691'
PTS–25

24
N: 3057850.576'
E: 221833.478'
EL: 777.809'
PTS–24

EL: 775.842'
PTS–17

18
N: 3057792.727'
E: 222120.964'
EL: 782.053'
PTS–18

20
N: 3057733.697'
E: 222088.030'
EL: 782.060'
PTS–20

19
N: 3057713.478'
E: 222078.609'
EL: 783.003'
MN–19

22
N: 3057695.448'
E: 221998.892'
EL: 782.847'
PTS–22

21
N: 3057656.423'
E: 222156.960'
EL: 785.638'
PTS–21

23
N: 3057587.148'
E: 222235.165'
EL: 789.991'
DH–23

N 3057750
E 222000

N 3057750
E 222250

N 57° 16' 28" W 86.01'

PI +87.82

N 77° 46' 12" W 348.30'

N 18° 49' 16" E 104.51'

PI +87.88

N 17° 13' 03" E 87.88'

PI +39.52

N 48° 33' 05" E 39.52'

+89.42
14.89' RT

+76.97
13.62' RT

+20.82
15.64' RT

1.0%-4.3%

1.0%-2.0%

GRADE BREAK

GRASS DITCH CL

14.00'

6.00'

10%

10-33%

BHL 1

BHL 2

BHL 3

CULVERT CONST ℄ STA 0+86.00 =
PROP DIVERSION CHANNEL CONST ℄ STA 10+00.00

N/F TOWN OF ADAMS BOOK 444, PAGE 450 & BOOK 491, PAGE 7

N/F JASON M. ARIGONI BOOK 1787, PAGE 708

N/F STANLEY'S LUMBER, LLC BOOK 1592, PAGE 465

N/F MICHELE PURCELL BOOK 1684, PAGE 828

N/F NICHOLAS S. & JENNIFER M. MIRKE BOOK 1700, PAGE 647

N/F JAMES D. DUDA & STEVEN M. HOLLAND BOOK 1052, PAGE 1045

SUMMER ST.

NORTH

BRUSH, FALLEN TREES, LANDSCAPE DEBRIS

NEW CLEARING & GRAVEL DRIVE FOR ACCESS

BRUSH & LANDSCAPING DEBRIS

BLDG #17–31

BLDG #30

BLDG #32–34

BLDG #26

BLDG #24

SHED

PORCH

GARAGE

BIT. DRIVE

GRAVEL

BITUMINOUS (ONE–WAY)

RD–GAS 4" LPP CIP MAIN

RD–WATER

STAIRS

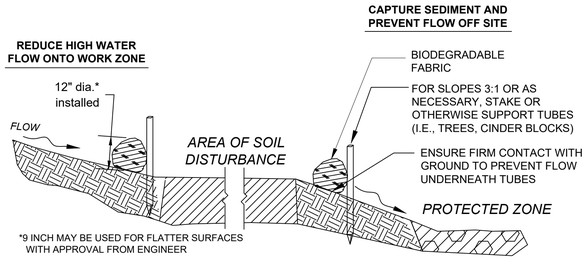
PLANTER

WD STEPS

DECK

0 20 50 100

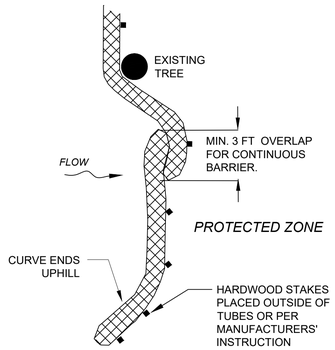
SCALE: 1" = 20'



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBES

NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

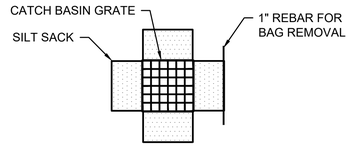
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

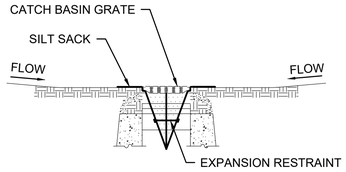
PLAN VIEW

COMPOST FILTER TUBE

NOT TO SCALE



PLAN VIEW

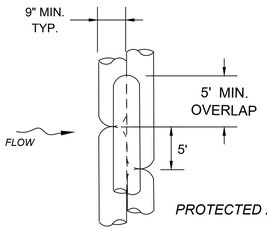


SECTION VIEW

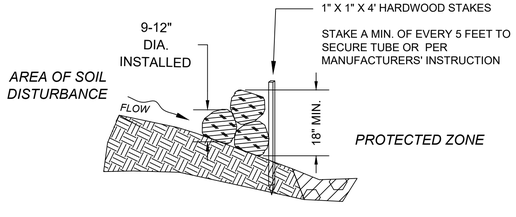
NOTES:
1. INSTALL SILT SACK IN EXISTING CATCH BASINS WITHIN AND ADJACENT TO PROJECT LIMITS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL PROJECT IS COMPLETE.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED WHEN REQUIRED.

SILT SACK DETAIL

SCALE: N.T.S.



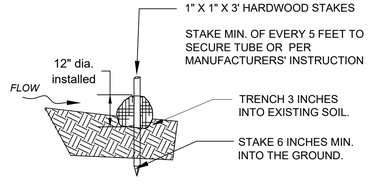
PLAN VIEW



SECTION

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

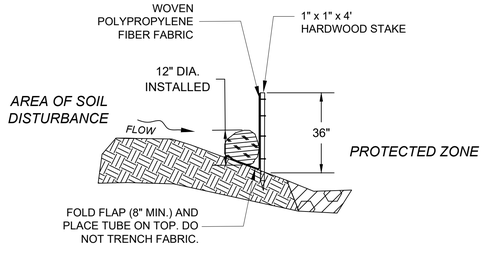
NOT TO SCALE



SECTION

12 INCH STRAW WATTLE

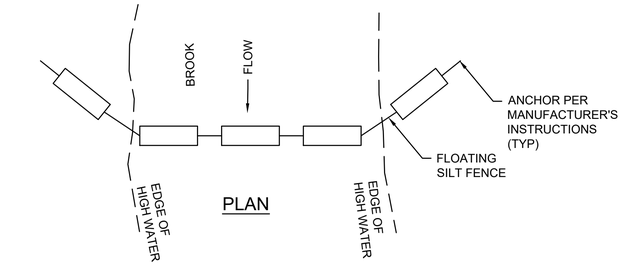
NOT TO SCALE



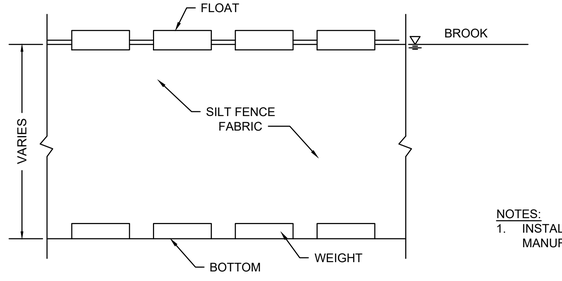
SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE



PLAN

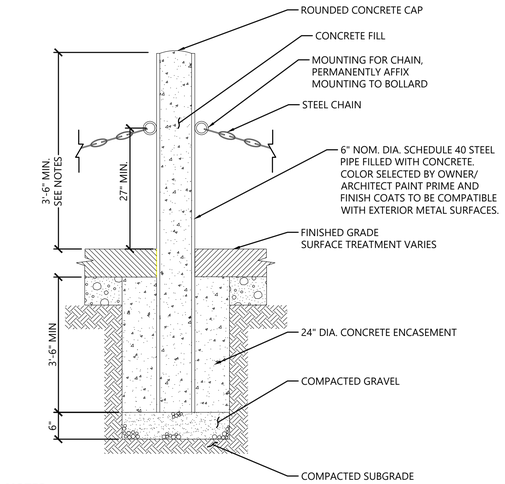


PROFILE

NOTES:
1. INSTALL FLOATING SILT FENCE PER MANUFACTURER'S INSTRUCTIONS.

FLOATING SILT FENCE DETAIL

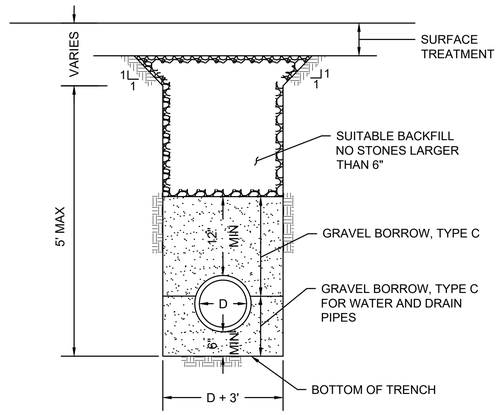
SCALE: N.T.S.



NOTES:
1. PROVIDE A CONSISTENT REVEAL HEIGHT ABOVE FINISHED GROUND FOR THE ENTIRE ROW OF BOLLARDS.

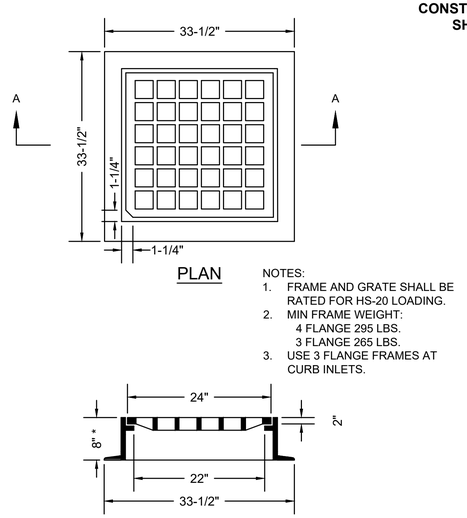
STEEL BOLLARD

SCALE: N.T.S.



TRENCH DETAIL

SCALE: N.T.S.



PLAN

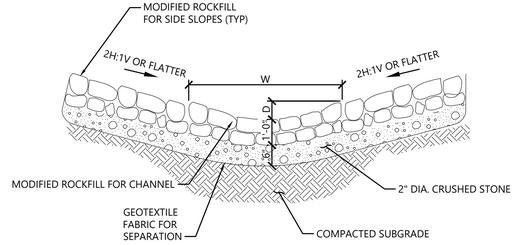
NOTES:
1. FRAME AND GRATE SHALL BE RATED FOR HS-20 LOADING.
2. MIN FRAME WEIGHT:
   4 FLANGE 295 LBS.
   3 FLANGE 265 LBS.
3. USE 3 FLANGE FRAMES AT CURB INLETS.

SECTION A-A

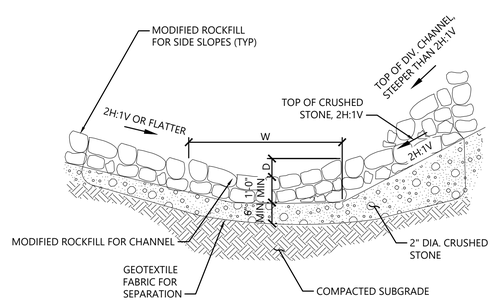
*4" FRAME FOR GUTTER INLETS

MUNICIPAL STANDARD FRAME & GRATE

SCALE: N.T.S.



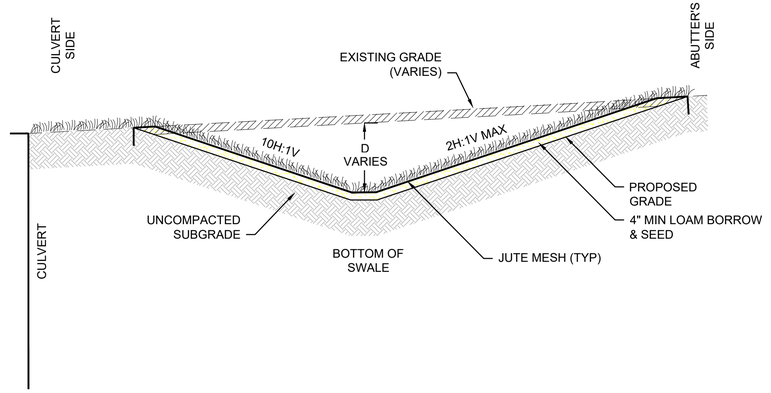
BOTH SLOPES - 2H:1V OR FLATTER



SLOPE RIGHT - STEEPER THAN 2H:1V

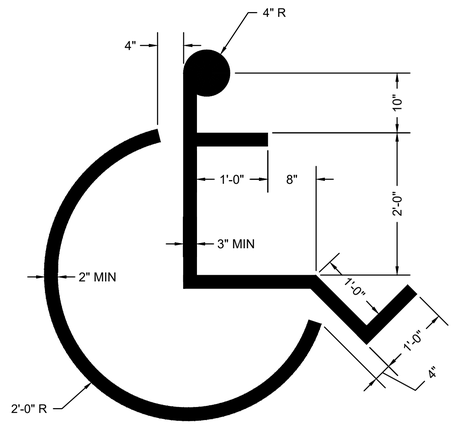
DIVERSION CHANNEL DETAIL - STEEP SLOPE RT

SCALE: N.T.S.



DRAINAGE DITCH

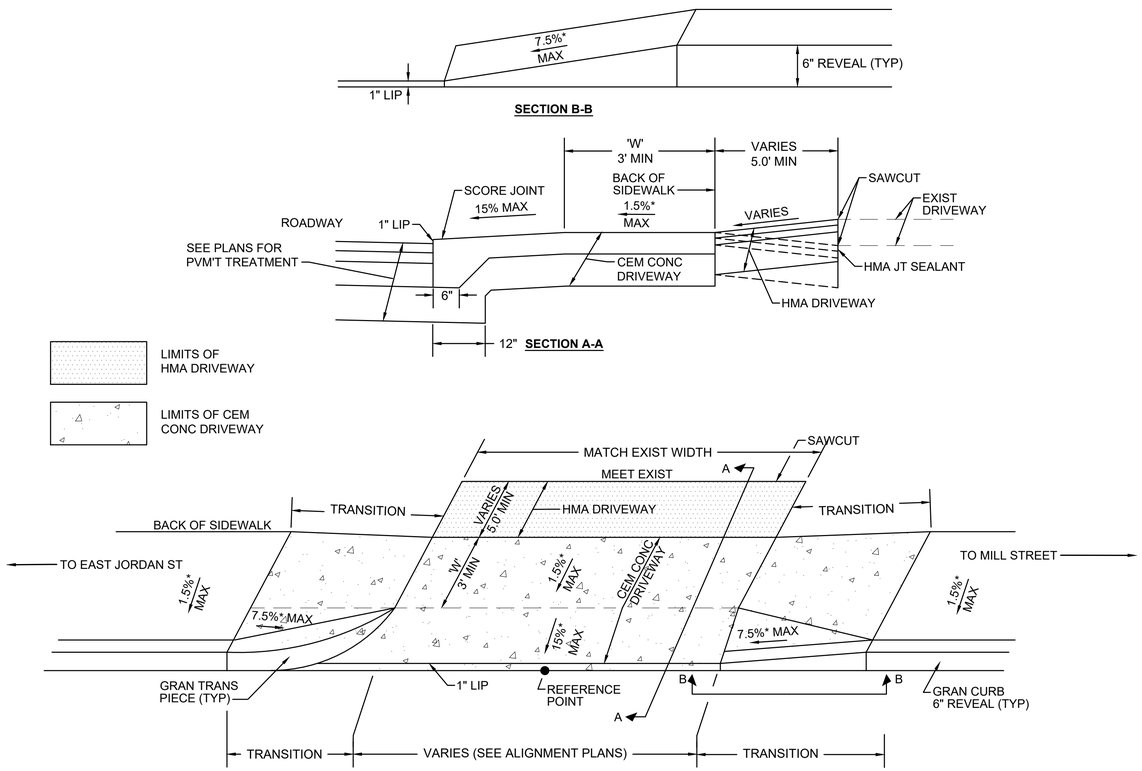
SCALE: N.T.S.



NOTES:
1. SYMBOL SHALL BE CENTERED IN THE PARKING STALL.
2. PAVEMENT MARKINGS SHALL BE REFLECTORIZED PAINT OR REFLECTORIZED PREFORMED THERMOPLASTIC.

HANDICAPPED PARKING STALL SYMBOL

SCALE: N.T.S. DWG: PM-02 DATE: MARCH 2013



SIDEWALK AT DRIVEWAY DETAIL

SCALE: N.T.S.

PAVEMENT NOTES

PROPOSED HOT MIX ASPHALT DRIVEWAY AND PARKING LOT

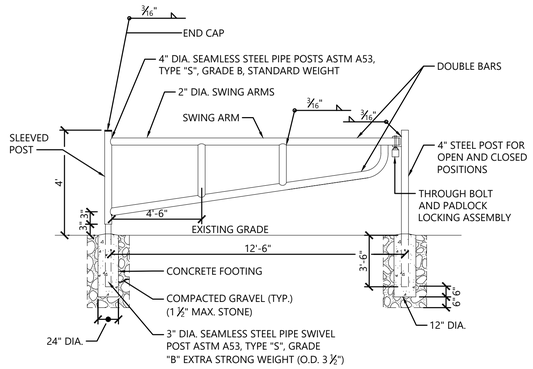
SURFACE: 1.5" SUPERPAVE SURFACE COURSE – 9.5 (SSC – 9.5) OVER ASPHALT EMULSION FOR TACK COAT OVER
INTERMEDIATE: 2.5" SUPERPAVE INTERMEDIATE COURSE – 12.5 (SIC – 12.5) OVER
SUBBASE: 8" GRAVEL BORROW, TYPE b

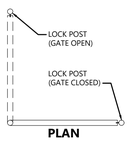
PROPOSED CEMENT CONCRETE SIDEWALK AT DRIVEWAYS

SURFACE: 6" CEMENT CONCRETE AIR ENTRAINED 4000 PSI, 3/4", 610 LB. OVER
SUBBASE: 8" GRAVEL BORROW, TYPE b

GENERAL NOTES:

1. MATERIALS AND CONSTRUCTION OF HOT MIX ASPHALT DRIVEWAY AND PARKING LOT SHALL COMPLY WITH MASSDOT STANDARD SPECIFICATIONS, SUBSECTION 460. HOT MIX ASPHALT PAVEMENT FOR LOCAL STREETS.
2. ALL SUPERPAVE HOT MIX ASPHALT SHALL BE PRODUCED WITH WARM MIX ASPHALT TECHNOLOGY.
3. HMA JOINT SEALANT (ITEM 453.) SHALL BE APPLIED IN SURFACE AT ALL VERTICAL COLD JOINTS PRIOR TO HMA PAVING.



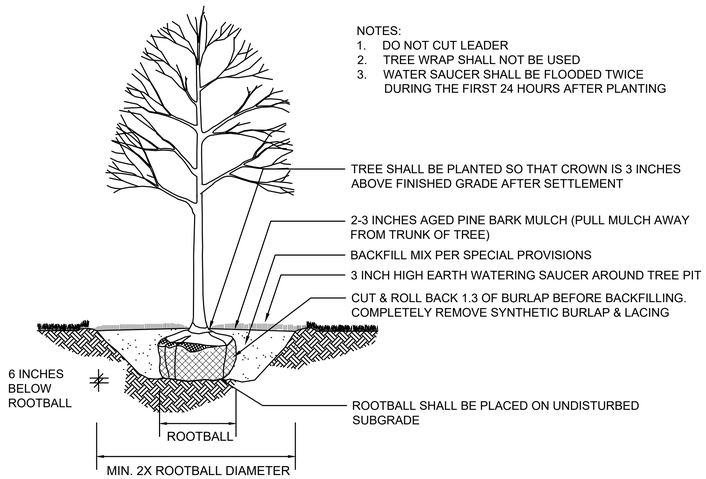


NOTES

1. SHOP PRIME PAINT EXPOSED SURFACES FIELD PAINT EPOXY ENAMEL TO MATCH LIGHT POLES.
2. PROVIDE "MASTER" PADLOCK WITH 6 WORKING KEYS.
3. 3,000 PSI CONCRETE FOOTING.
4. GATE AND POST PAINTED TO MATCH LIGHT POLES.
5. STRUCTURAL ENGINEER TO REVIEW GATE AND FOOTINGS TO MEET ALL APPLICABLE CODES.
6. SEE PLANS FOR DIRECTION OF GATE SWING.

SWING GATE

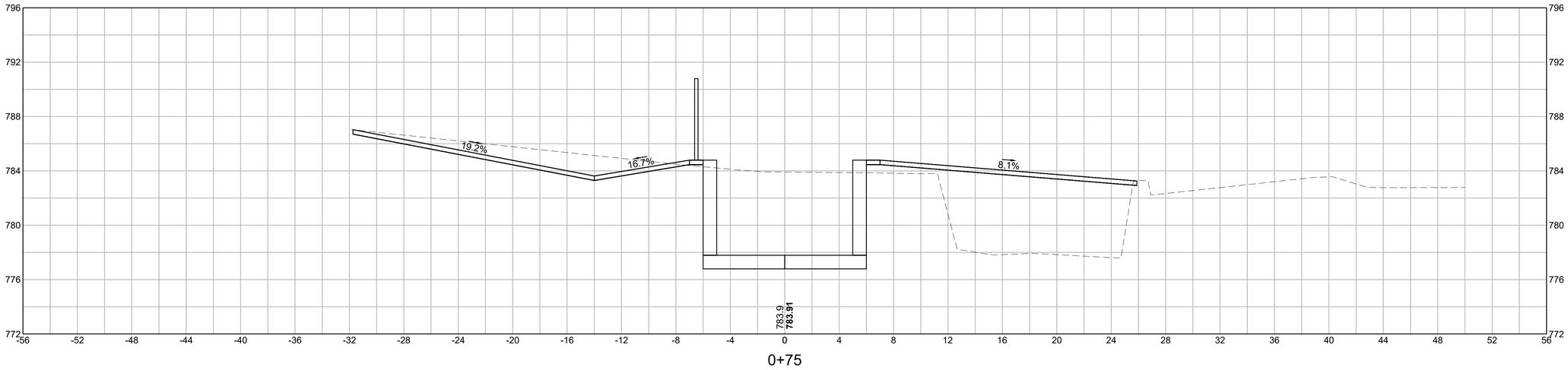
SCALE: N.T.S. DWG: PM-37 DATE: FEBRUARY 2020



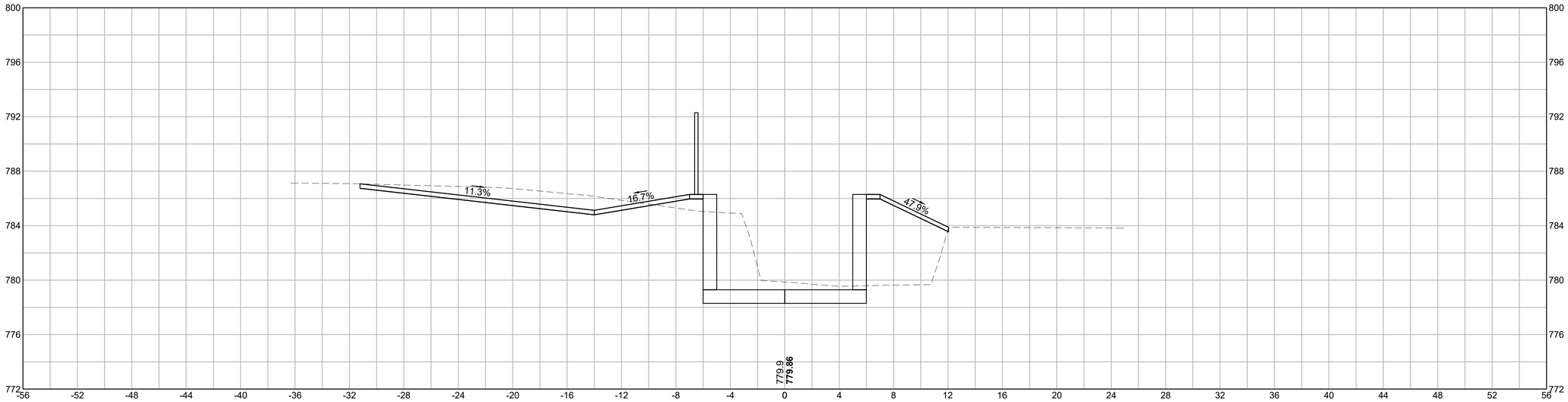
DECIDUOUS TREE PLANTING

SCALE: N.T.S.

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 13 OF 28



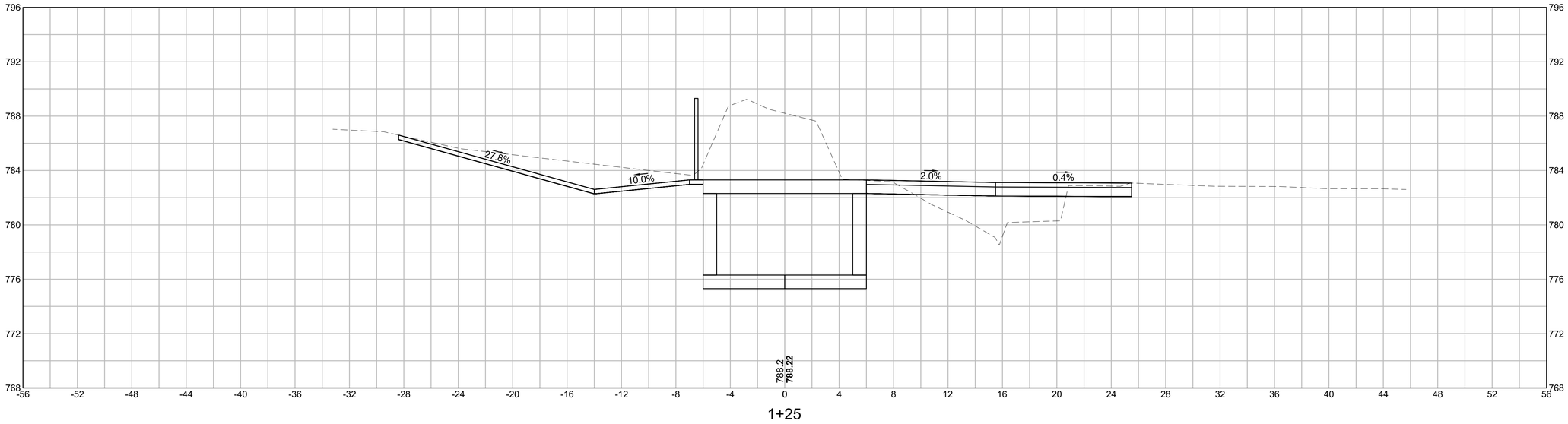
0+75



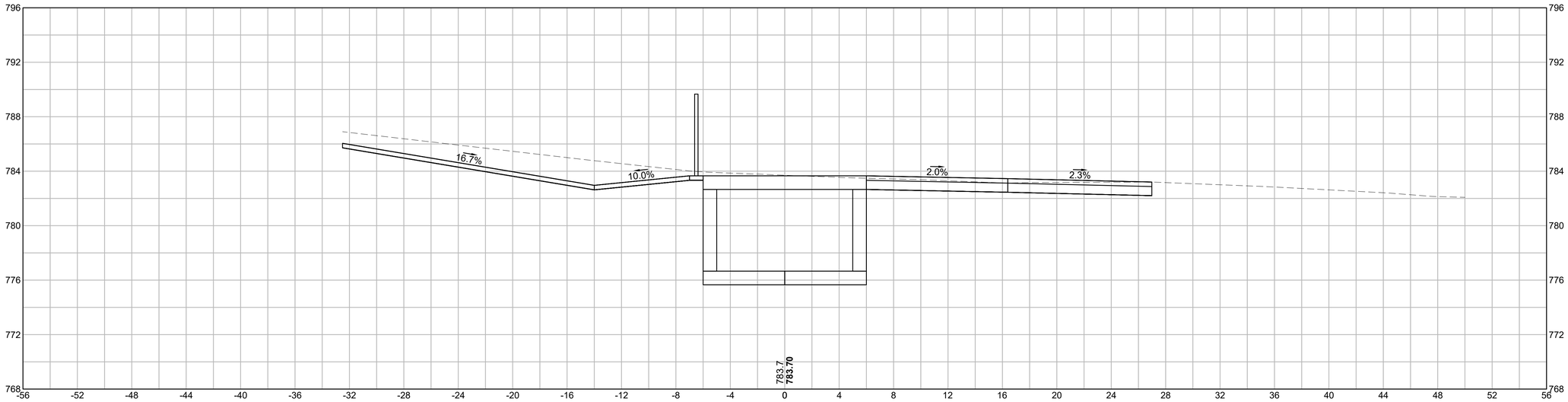
0+50

HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 14 OF 28



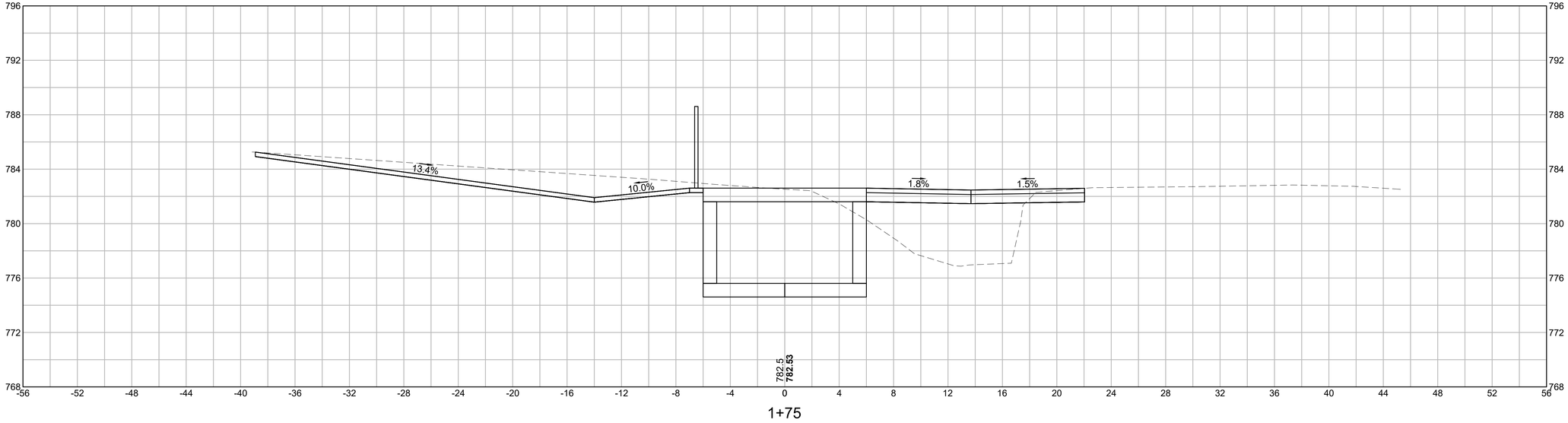
1+25



1+00

HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 15 OF 28



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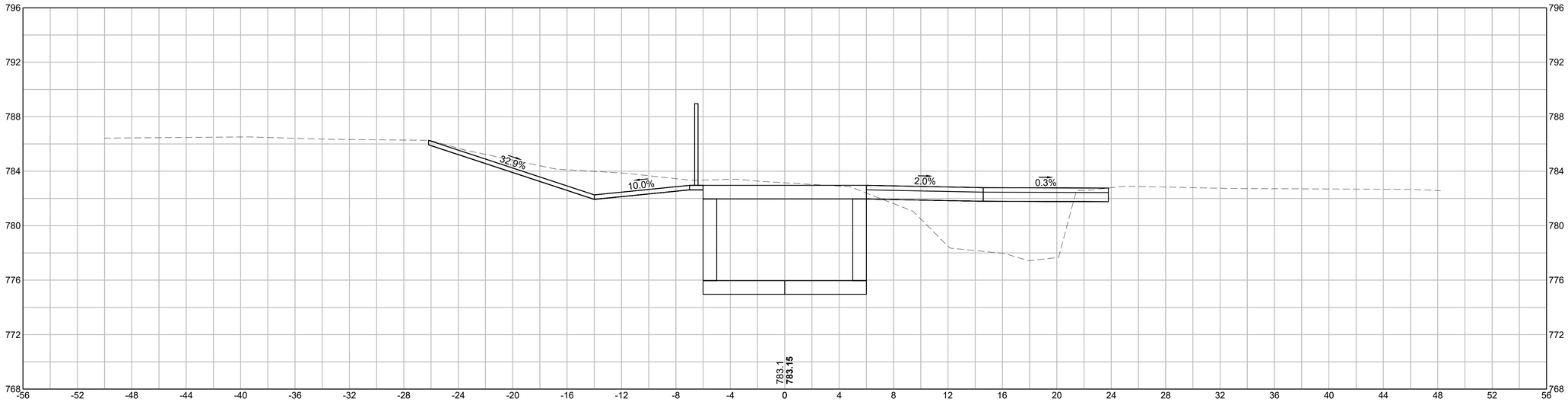

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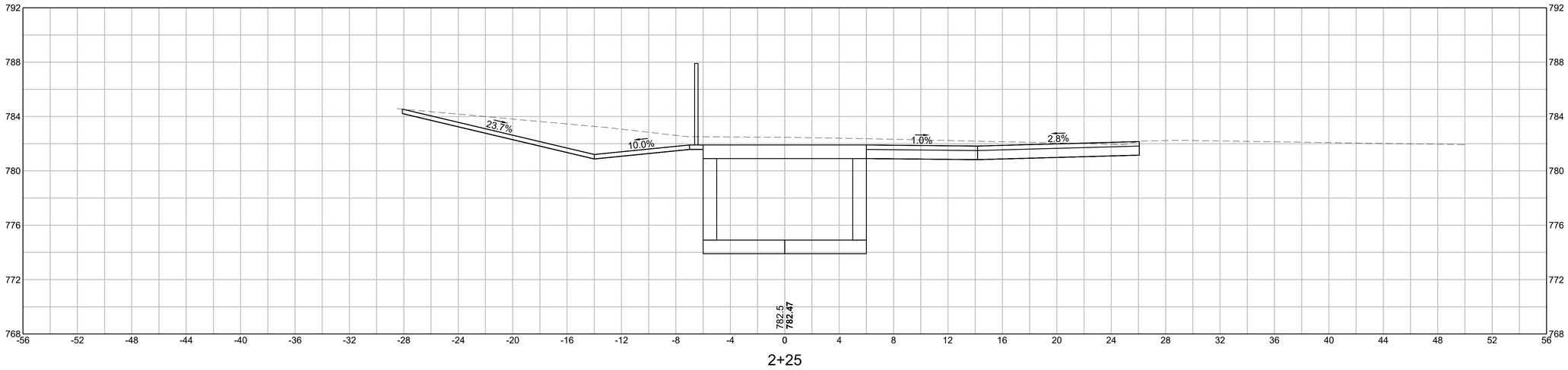
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 16 OF 28



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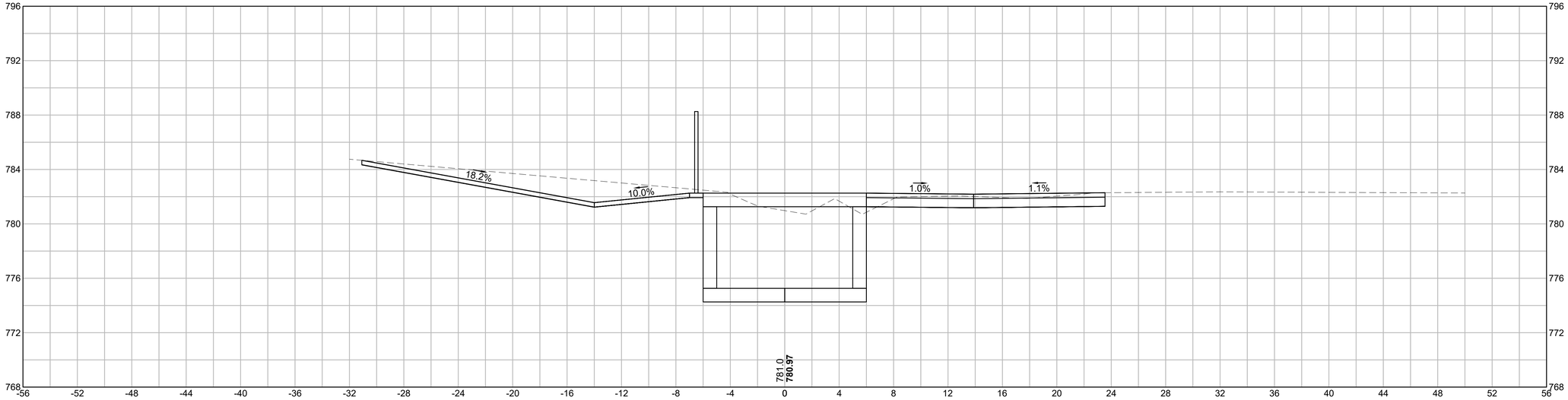
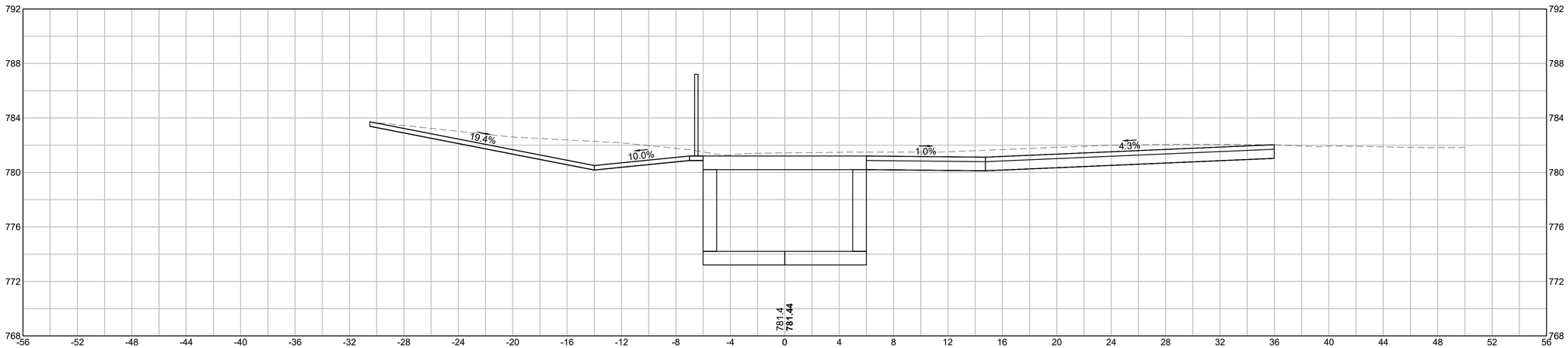


2+00

HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 17 OF 28



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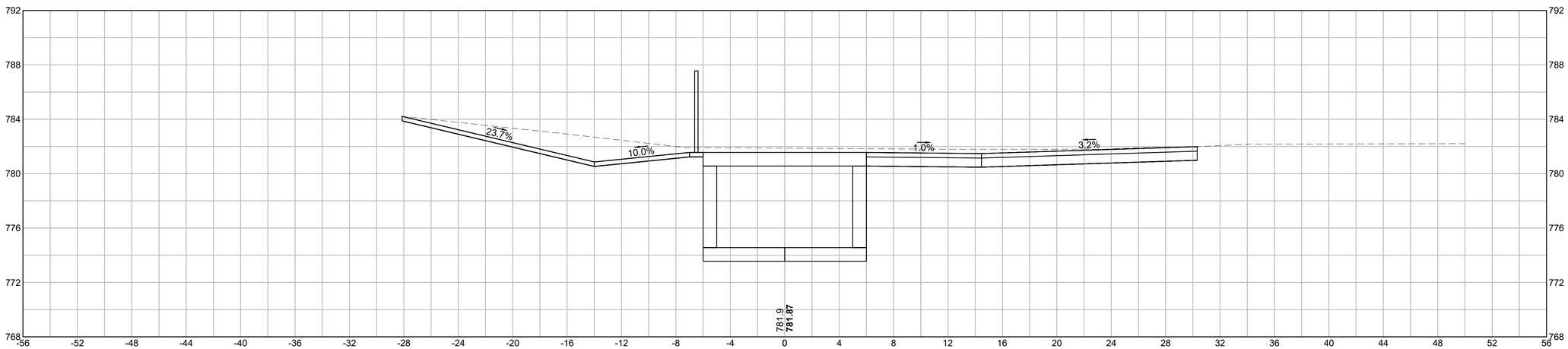

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HOR. SCALE IN FEET
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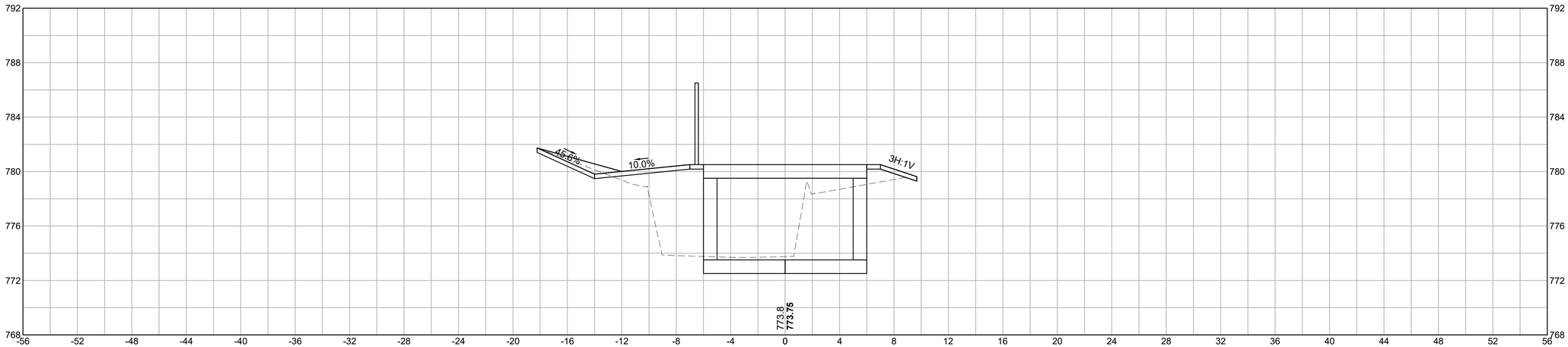
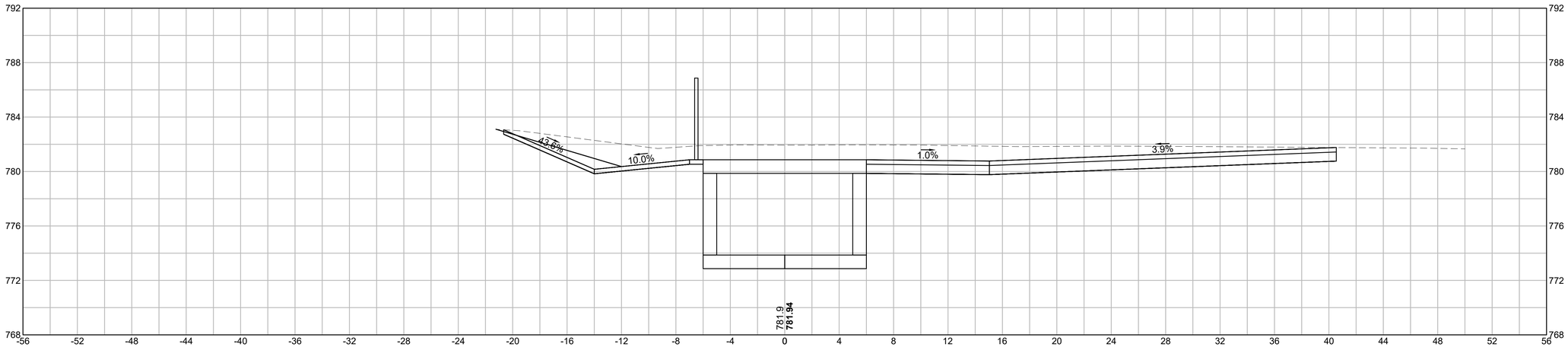
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 18 OF 28



3+25



3+00

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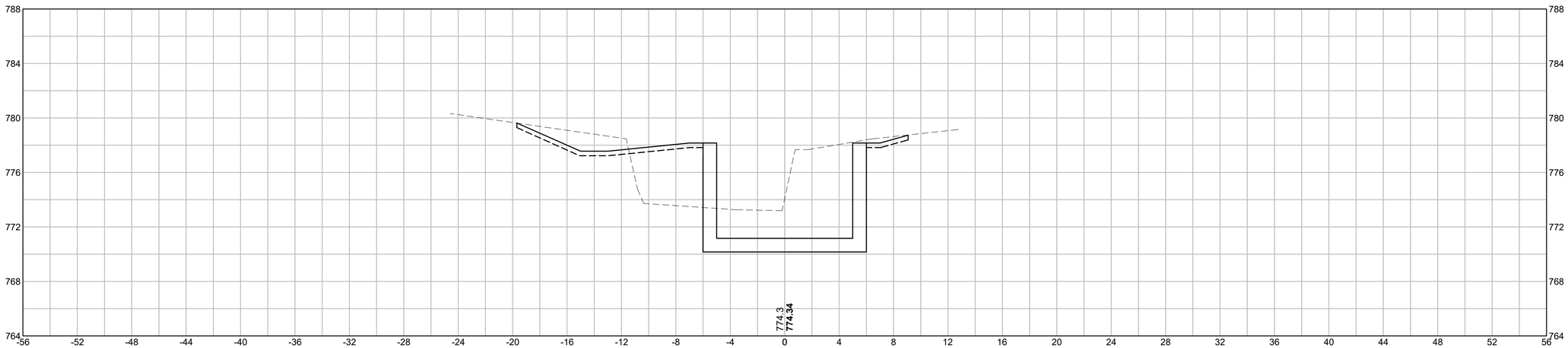
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
CROSS SECTIONS
SHEET 19 OF 28



3+50

HOR. SCALE IN FEET
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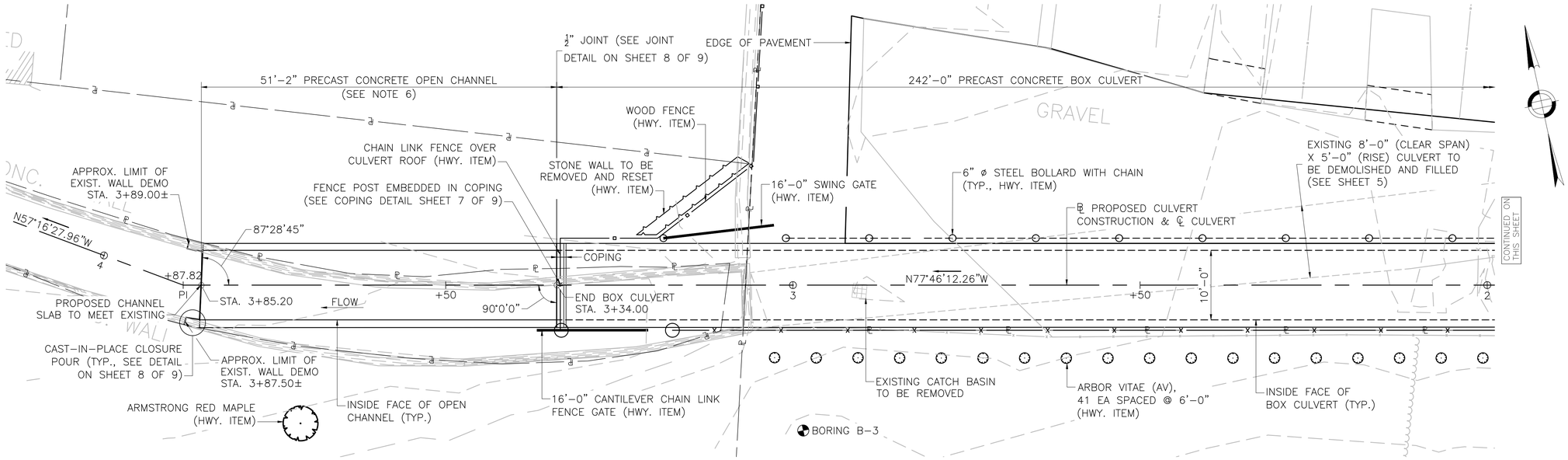
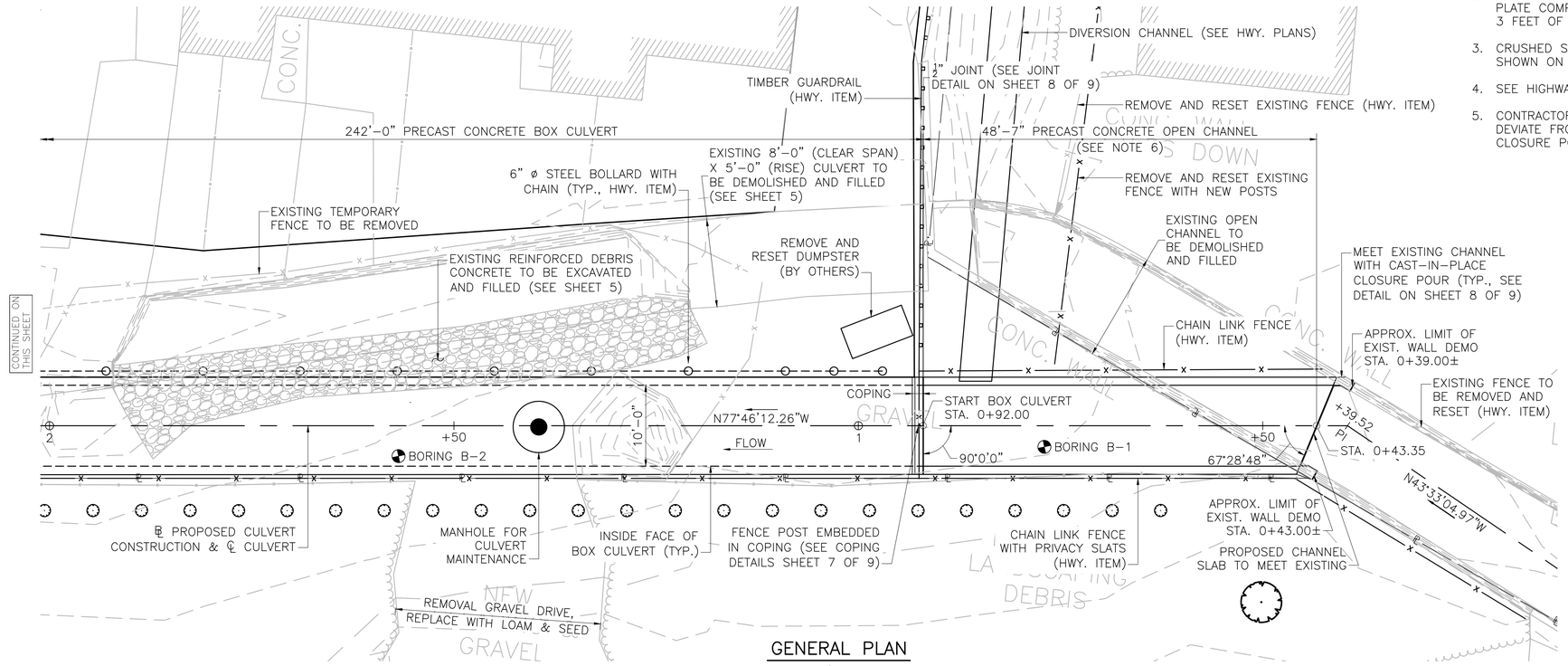
4 0 4 8
VER. SCALE IN FEET

ADAMS
MILLER BROOK
GENERAL PLAN AND INDEX
SHEET 20 OF 28



GENERAL PLAN
SCALE: ⅛" = 1'–0"

INDEX OF SHEETS



GENERAL PLAN
SCALE: ⅛" = 1'–0"

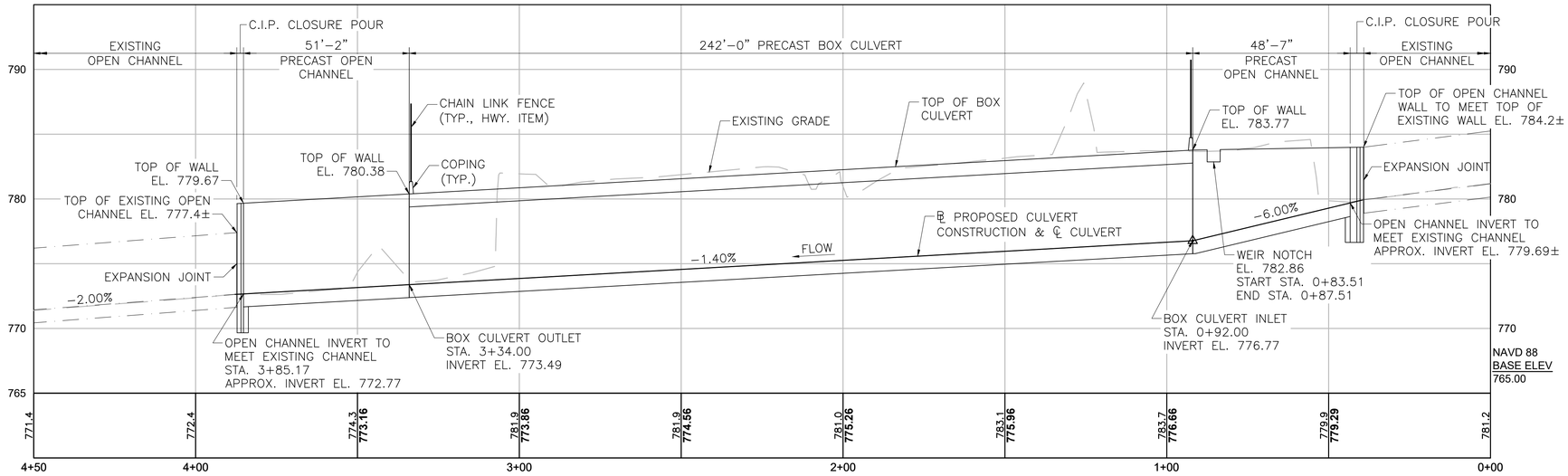
NOTES:

1. THE SUBGRADE OF THE PROPOSED STRUCTURES SHALL BE COMPACTED WITH A DYNAMIC VIBRATORY COMPACTOR IMPARTING A MINIMUM OF 4 KIPS OF FORCE TO THE SUBGRADE.
2. FILL PLACED WITHIN 3 FEET OF THE WALLS SHOULD BE COMPACTED USING A SMALL PLATE COMPACTOR IMPARTING A MAXIMUM DYNAMIC EFFORT OF 4 KIPS. THE FILL WITHIN 3 FEET OF THE WALLS SHOULD BE PLACED IN A MAXIMUM OF 8–INCH LOOSE LIFTS.
3. CRUSHED STONE SHALL BE WRAPPED IN A GEOTEXTILE FABRIC FOR SEPARATION AS SHOWN ON THE PLANS.
4. SEE HIGHWAY PLANS FOR CONTROL OF WATER RECOMMENDATIONS.
5. CONTRACTOR TO VERIFY OPEN CHANNEL LENGTH PRIOR FABRICATION. LENGTHS MAY DEVIATE FROM THOSE SPECIFIED IN PLANS DUE TO THE REQUIRED LIMITS OF THE CLOSURE POUR CONNECTION BETWEEN THE PROPOSED AND EXISTING STRUCTURES.

JUNE 3, 2026	ISSUED FOR BID

PROPOSED CULVERT REPLACEMENT
ADAMS
EXISTING PARKING AREA
OVER MILLER BROOK

vhb
260 Arsenal PL #2
PO Box 9151
Watertown, MA 02471
617.924.1770



PROFILE ALONG ℄ PROPOSED CULVERT CONSTRUCTION

HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 4'

DATE	DESCRIPTION
JUNE 3, 2026	ISSUED FOR BID
USE ONLY PRINTS OF LATEST DATE	

SHEET 2 OF 9 SHEETS BRIDGE NO. N/A

GENERAL NOTES

DESIGN

IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS, 10TH EDITION, 2024, FOR H–10 LOADING.

IN ACCORDANCE WITH THE HUNDREDTH ANNIVERSARY EDITION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION LRFD BRIDGE MANUAL.

BENCH MARK

CHISELED SQUARE
N 3058108.5593, E 222228.8627, EL.=776.05'

ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD88) OF 1988.

SURVEY NOTEBOOK

SURVEY PERFORMED BY HILL ENGINEERS BETWEEN JULY 2022 AND AUGUST 2022.

GEOTECHNICAL REPORT

REFER TO GEOTECHNICAL REPORT PREPARED BY LGCI, DATED DECEMBER 21, 2023.

SCALES

SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF–SIZE PRINTS (A3).

FOUNDATIONS

FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION, WITH THE APPROVAL OF THE ENGINEER.

UNSUITABLE MATERIAL

ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE ENGINEER.

CONSTRUCTION REQUIREMENTS AND PROCEDURES

THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL ELEMENTS DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT DEMOLITION AND ERECTION PLANS TO THE ENGINEER FOR REVIEW AND APPROVAL.

IF THERE ARE REVISIONS TO THE APPROVED PLANS, THE CONTRACTOR SHALL SUBMIT THESE CHANGES TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

EXISTING CONDITIONS

THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL THE REQUIRED MEASUREMENTS HAVE BEEN MADE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

UTILITIES

THE EXISTING UTILITIES HAVE BEEN DISPLAYED FROM THE BEST AVAILABLE INFORMATION. THE EXACT LOCATIONS AND DEPTHS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION FROM DAMAGE FOR ALL THE EXISTING UTILITIES.

CONSTRUCTION JOINTS

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

CONCRETE

UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL BE 5000 HP CONCRETE.

REINFORCEMENT

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31 GRADE 60. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

MODIFICATION CONDITION	#4 BARS	#5 BARS	#6 BARS
1. NONE	16"	17"	21"
2. 12" OF CONCRETE BELOW BAR	18"	22"	27"
3. COATED BARS, COVER <3d_b,OR CLEAR SPACING <6d_b	21"	26"	31"
4. COATED BARS, ALL OTHER CASES	17"	21"	25"
5. CONDITION 2, AND 3	23"	29"	35"
6. CONDITION 2, AND 4	21"	27"	32"

ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

PRECAST CONCRETE

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD SHOP DRAWINGS WITH SUPPORTING DESIGN CALCULATIONS FOR THE PRECAST BOX CULVERT AND PRECAST OPEN CHANNEL WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

PROTECTIVE SEALING COMPOUND

ALL PROTECTIVE SEALING COMPOUNDS USED ON THE EXPOSED PRECAST CONCRETE BOX CULVERT ROOF SHALL BE CLEAR AND SELECTED FROM THE MASSDOT QUALIFIED CONSTRUCTION MATERIALS LIST (QCML).

TEMPORARY WATER CONTROL

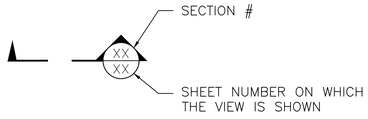
TEMPORARY WATER CONTROL SHALL BE ESTABLISHED TO PERMIT FOUNDATION CONSTRUCTION IN THE DRY.

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD A PROPOSED WATER DIVERSION AND DEWATERING PLAN DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

PLAN REVISIONS

ANY REVISIONS TO THE APPROVED CONCEPTUAL PLANS SHALL REQUIRE REVIEW AND APPROVAL BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED REVISIONS TO THE ENGINEER FOR REVIEW AND APPROVAL.

SECTION MARK



SEISMIC DESIGN CRITERIA	
DESIGN RETURN PERIOD:	UNKNOWN
DESIGN SPECTRA	
As	0.096
SDs	0.218
SD1	0.098
SITE CLASS	D
SEISMIC DESIGN CATEGORY (SDC)	A

ESTIMATED QUANTITIES

(NOT GUARANTEED)

NO.	ITEM	UNIT	QUANTITY
115.1	DEMOLITION OF EXISTING CULVERT	1	LS
127.2	REMOVAL AND DISPOSAL OF EXISTING REINFORCED CONCRETE DEBRIS	35	CY
140.	BRIDGE EXCAVATION	1470	CY
144.	CLASS B ROCK EXCAVATION	80	CY
150.	ORDINARY BORROW	120	CY
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	400	CY
156.1	CRUSHED STONE FOR BRIDGE FOUNDATIONS	350	TON
950.1	TEMPORARY SHORING	1	LS
991.11	CONTROL OF WATER	1	LS
995.011	PRECAST CONCRETE CULVERT STRUCTURE	1	LS

DATE	DESCRIPTION
JUNE 3, 2026	ISSUED FOR BID
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BORING B–1

STATION: 0+77.00
OFFSET: 2.61' LT
NORTHING: 3,057,675
EASTING: 222,090
SURFACE EL.: 784.0

EL. 776.7
APPROX.
BOT. OF CULV.

LGCI Lahlaf Geotechnical Consulting, Inc. — 100 Chelmsford Rd Suite 2, Billerica, MA 01862, Telephone: 9783305912, Fax: 9783305056

BORING LOG B-1 PAGE 1 OF 2

CLIENT: Vanasse Hangen Brustlin, Inc.
PROJECT NAME: Proposed Jordan Street Culvert
LGCI PROJECT NUMBER: 2343
PROJECT LOCATION: Adams, MA

DATE STARTED: 10/31/23 **DATE COMPLETED:** 10/31/23
BORING LOCATION: Near eastern side of proposed culvert
COORDINATES: NA
SURFACE EL.: 784 ft. (see note 1) **TOTAL DEPTH:** 41 ft.
WEATHER: 30's / Sunny
GROUNDWATER LEVELS:
▽ **DURING DRILLING:** 15.0 ft. / El. 769.0 ft. Based on sample moisture
▼ **AT END OF DRILLING:** 13.0 ft. / El. 771.0 ft.
▼ **OTHER:** -

DRILLING SUBCONTRACTOR: Soil Exploration Corp.
DRILLING FOREMAN: Don Ledger
DRILLING METHOD: HSA (4-1/4" I.D.) then 3-inch casing
DRILL RIG TYPE/MODEL: Mobile B-57 Truck Rig
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: TG **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remarks	Strata	Depth (ft.)	Material Description
0	780.0					Topsoil	0.9 / 783.1	S1 - Top 10": Topsoil
2		S1	3-3-4-2 (7)	24/14		Fill		Bot. 4": Silty SAND (SM), fine to medium, 20-25% fines, 5-10% fine to coarse gravel, trace of organic soil, trace of coal ash, dark brown, moist
4		S2	3-3-6-7 (9)	24/15				S2 - Silty SAND (SM), fine to medium, 15-20% fines, 5-10% fine to coarse subrounded gravel, trace of organic soil, trace of roots, brown, moist
5	775.0						4.0 / 780.0	
6		S3	7-10-13-14 (23)	24/9	1	Sand and Gravel		S3 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, 40-45% fine to coarse subangular gravel, light brown, moist REMARK 1: HSA grinding on cobbles or boulder between depths of 5.0 feet and 15.0 feet.
8		S4	14-10-11-9 (21)	24/13				S4 - Similar to S3, 20-25% fine to coarse subangular gravel
10	770.0							
12		S5	25-11-8-11 (19)	24/7				S5 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, 25-30% fine to coarse subangular gravel, brown, moist
14								
15		S6	3-4-10-10 (14)	24/13	2			REMARK 2: Switched to drive and wash with 3-inch casing at depth of 15.0 feet. S6 - Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, 15-20% fine to coarse subangular gravel, brown, wet
17								
19	765.0	S7	8-3-4-6 (7)	24/4				S7 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 15-20% fine subrounded gravel, brown, wet
20								
21								
24	760.0	S8	3-4-1-1 (5)	24/0				S8 - No recovery, fine gravel encountered in the tip of split spoon
25								
26								
29	755.0	S9	4-8-16-17 (24)	24/12				S9 - Poorly Graded SAND with Gravel (SP), fine to medium, 0-5% fines, 15-20% fine subrounded gravel, brown, wet
30								
31								
34	750.0	S10	6-17-16-8 (33)	24/2				S10 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 5-10% fine subrounded gravel, light brown, wet
35								
36								
39	745.0	S11	11-11-14-11 (25)	24/5				S11 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 30-35% fine to coarse angular gravel, light brown, wet
40								
41							41.0	
45	740.0							Bottom of borehole at 41.0 feet. Backfilled borehole with drill cuttings, 3 bags of concrete, and 1 bag of sand.

GENERAL NOTES:
1. The ground surface elevation was interpolated to the nearest foot from drawing titled: "Plan of Topographic Survey of Miller Brook, In the Town of Adams, (Sheet 2 of 4)," prepared by Hill Engineers, dated August 8, 2022, and provided to LGCI by Vanasse Hangen Brustlin, Inc. via e-mail on November 2, 2023.

BORING B–2

STATION: 1+56.85
OFFSET: 3.76' LT
NORTHING: 3,057,691
EASTING: 222,012
SURFACE EL.: 783.0

EL. 774.9
APPROX.
BOT. OF CULV.

LGCI Lahlaf Geotechnical Consulting, Inc. — 100 Chelmsford Rd Suite 2, Billerica, MA 01862, Telephone: 9783305912, Fax: 9783305056

BORING LOG B-2 PAGE 1 OF 2

CLIENT: Vanasse Hangen Brustlin, Inc.
PROJECT NAME: Proposed Jordan Street Culvert
LGCI PROJECT NUMBER: 2343
PROJECT LOCATION: Adams, MA

DATE STARTED: 10/30/23 **DATE COMPLETED:** 10/30/23
BORING LOCATION: Near center of proposed culvert
COORDINATES: NA
SURFACE EL.: 783 ft. (see note 1) **TOTAL DEPTH:** 42 ft.
WEATHER: 40's / Rain
GROUNDWATER LEVELS:
▽ **DURING DRILLING:** 20.0 ft. / El. 763.0 ft. Based on sample moisture
▼ **AT END OF DRILLING:** 15.0 ft. / El. 768.0 ft.
▼ **OTHER:** -

DRILLING SUBCONTRACTOR: Soil Exploration Corp.
DRILLING FOREMAN: Don Ledger
DRILLING METHOD: HSA (4-1/4" I.D.) then 3-inch casing
DRILL RIG TYPE/MODEL: Mobile B-57 Truck Rig
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: TG **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remarks	Strata	Depth (ft.)	Material Description
0	780.0	S1	11-16-20-8 (36)	24/9	1	Fill	4.0 / 779.0	S1 - Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, 25-30% fine to coarse angular gravel, trace of organic soil, brown, moist REMARK 1: HSA grinding on cobbles between depths of 0.0 feet and 5.0 feet.
2		S2	12-14-8-4 (22)	24/2				S2 - Silty SAND (SM), fine to coarse, ~15% fines, 0-5% fine subangular gravel, trace of organic soil, brown, moist
4		S3	2-1-3-4 (4)	24/16				S3 - Silty SAND (SM), mostly fine, 25-30% fines, brown, moist
6	775.0	S4	4-3-4-8 (7)	24/16				S4 - Similar S3
8								
10	770.0	S5	5-13-31-7 (44)	24/9	2	Sand and Gravel		REMARK 2: HSA grinding on cobbles between depths of 10.0 feet and 20.0 feet. S5 - Similar to S3, 10-15% fine to coarse subangular gravel
12		S6	78-15-9-7 (24)	24/10				S6 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 20-25% fine to coarse subangular gravel, brown, moist
14								
15		S7	33-37-9-27 (46)	24/3				S7 - Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, 20-25% fine to coarse subrounded gravel, brown, moist
17	765.0							
20		S8	21-9-5-1 (14)	24/2				S8 - Similar to S7, wet
22	760.0							
25		S9	1-2-3-5 (5)	24/12	3			REMARK 3: Maintained positive head in HSA between depths of 25.0 feet and 42.0 feet. S9 - Similar to S7, wet
27	755.0							
30		S10	2-4-6-7 (10)	24/16				S10 - Well Graded SAND with Silt (SW-SM), fine to coarse, 5-10% fines, 5-10% fine to coarse subangular gravel, brown, wet
32	750.0							
35		S11	4-6-6-10 (12)	24/17				S11 - Similar to S10, 10-15% fines
37	745.0							
40		S12	7-10-11-13 (21)	24/15				S12 - Silty SAND (SM), fine to coarse, 15-20% fines, 5-10% fine to coarse subangular gravel, brown, wet
42	740.0						42.0	
45								Bottom of borehole at 42.0 feet. Backfilled borehole with drill cuttings and 12 buckets of gravel.

GENERAL NOTES:
1. The ground surface elevation was interpolated to the nearest foot from drawing titled: "Plan of Topographic Survey of Miller Brook, In the Town of Adams, (Sheet 2 of 4)," prepared by Hill Engineers, dated August 8, 2022, and provided to LGCI by Vanasse Hangen Brustlin, Inc. via e-mail on November 2, 2023.

BORING B–3

STATION: 2+98.51
OFFSET: 20.93' LT
NORTHING: 3,057,704
EASTING: 221,870
SURFACE EL.: 783.0

EL. 772.9
APPROX.
BOT. OF CULV.

LGCI Lahlaf Geotechnical Consulting, Inc. — 100 Chelmsford Rd Suite 2, Billerica, MA 01862, Telephone: 9783305912, Fax: 9783305056

BORING LOG B-3 PAGE 1 OF 2

CLIENT: Vanasse Hangen Brustlin, Inc.
PROJECT NAME: Proposed Jordan Street Culvert
LGCI PROJECT NUMBER: 2343
PROJECT LOCATION: Adams, MA

DATE STARTED: 10/30/23 **DATE COMPLETED:** 10/31/23
BORING LOCATION: Near western side of proposed culvert
COORDINATES: NA
SURFACE EL.: 783 ft. (see note 1) **TOTAL DEPTH:** 42 ft.
WEATHER: 40's / Rain
GROUNDWATER LEVELS:
▽ **DURING DRILLING:** 20.0 ft. / El. 763.0 ft. Based on sample moisture
▼ **AT END OF DRILLING:** 19.0 ft. / El. 764.0 ft.
▼ **OTHER:** -

DRILLING SUBCONTRACTOR: Soil Exploration Corp.
DRILLING FOREMAN: Don Ledger
DRILLING METHOD: HSA (4-1/4" I.D.) then 3-inch casing
DRILL RIG TYPE/MODEL: Mobile B-57 Truck Rig
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: TG **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remarks	Strata	Depth (ft.)	Material Description
0	780.0	S1	100/3"	3/1	1	Fill	4.0 / 779.0	S1 - Silty SAND (SM), fine to medium, 25-30% fines, 5-10% fine subangular gravel, trace of organic soil, trace of brick, dark brown, moist REMARK 1: HSA grinding on cobbles or boulder between depths of 0.0 feet and 5.0 feet.
2		S2	14-15-7-7 (22)	24/9				S2 - Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, 30-35% fine to coarse subangular gravel, trace of organic soil, trace of asphalt, brown, moist
4		S3	9-3-4-3 (7)	24/5				S3 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 25-30% fine to coarse angular gravel, brown, moist
6	775.0	S4	10-3-5-17 (8)	24/14				S4 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subangular gravel, brown, moist
8								
10	770.0	S5	12-15-8-9 (23)	24/7	2	Sand and Gravel		REMARK 2: HSA grinding on cobbles or boulder between depths of 10.0 feet and 15.0 feet. S5 - Well Graded SAND with Gravel (SW), fine to coarse, 0-5% fines, 40-45% fine to coarse angular gravel, light brown, moist
12								
14								
15		S6	4-9-17-14 (26)	24/10				S6 - Similar to S5, light brown to brown
17	765.0							
20		S7	1-0-1-1 (1)	24/8				S7 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, ~10% fine to coarse subrounded gravel, brown, wet
22	760.0							
25		S8	2-1-8-4 (9)	24/11	3			REMARK 3: Maintained positive head in HSA between depths of 25.0 feet and 42.0 feet. S8 - Similar to S7, 5-10% fines, 0-5% fine subrounded gravel
27	755.0							
30		S9	3-8-7 (11)	24/16				S9 - Poorly Graded SAND (SP), fine to medium, 0-5% fines, brown, wet
32	750.0							
35		S10	4-5-10-13 (15)	24/20				S10 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, brown, wet
37	745.0							
40		S11	4-7-7-7 (14)	24/6				S11 - Poorly Graded SAND (SP), fine, 0-5% fines, light brown, wet
42	740.0						42.0	
45								Bottom of borehole at 42.0 feet. Backfilled borehole with drill cuttings and 8 buckets of sand.

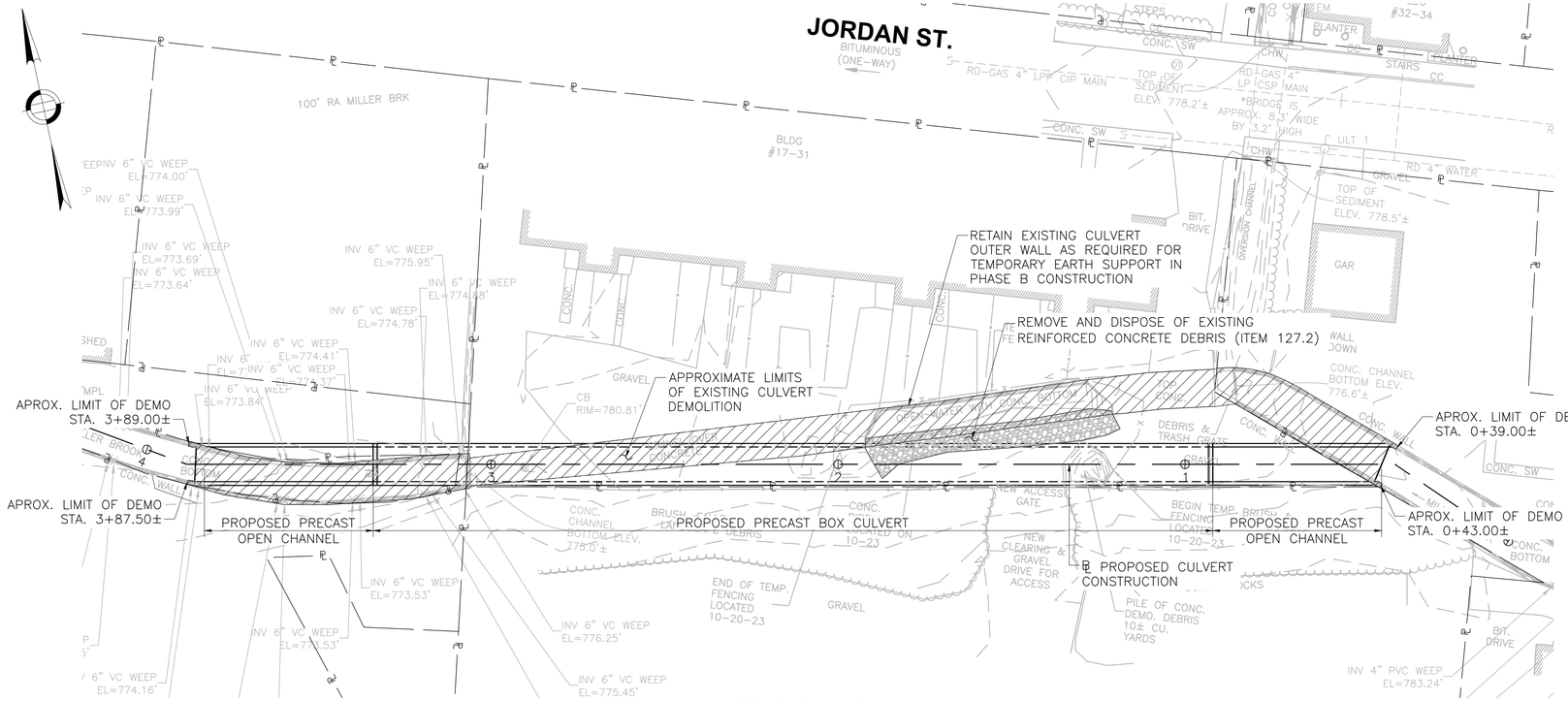
GENERAL NOTES:
1. The ground surface elevation was interpolated to the nearest foot from drawing titled: "Plan of Topographic Survey of Miller Brook, In the Town of Adams, (Sheet 2 of 4)," prepared by Hill Engineers, dated August 8, 2022, and provided to LGCI by Vanasse Hangen Brustlin, Inc. via e-mail on November 2, 2023.

BORING NOTES:

1. LOCATION OF BORINGS SHOWN ON THE KEY PLAN THUS: ⊕
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A $1\frac{3}{8}$" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
5. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES UPON REQUEST.
6. ALL BORINGS WERE MADE IN OCTOBER 2023.
7. BORINGS WERE MADE BY SOIL EXPLORATION CORP., 148 PIONEER DRIVE, LEOMINSTER, MA. 01453.
8. THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

DATE	DESCRIPTION
JUNE 3, 2026	ISSUED FOR BID
USE ONLY PRINTS OF LATEST DATE	

ADAMS
MILLER BROOK
DEMOLITION PLAN AND SECTIONS
SHEET 24 OF 28



DEMOLITION PLAN

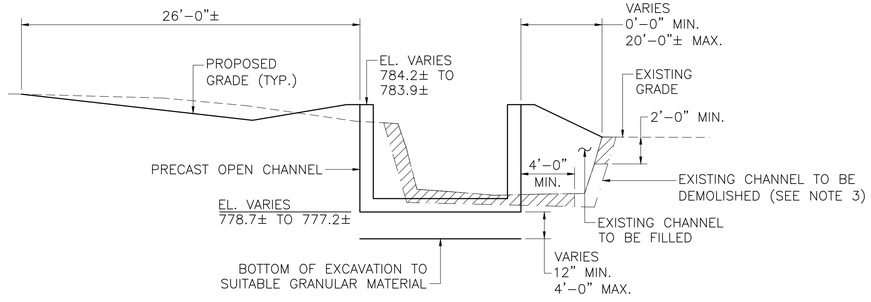
SCALE: 1" = 20'

NOTES:

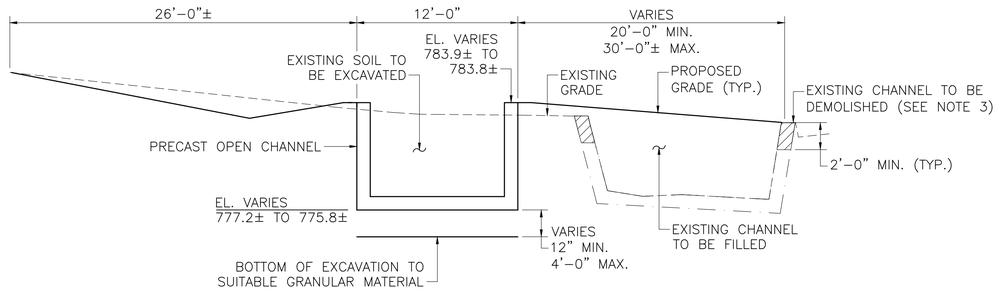
1. THE TOPSOIL, EXISTING FILL, ABANDONED UTILITIES AND OTHER BELOW-GROUND STRUCTURES SHALL BE ENTIRELY REMOVED FROM UNDER THE PROPOSED STRUCTURE AND REPLACED WITH GRAVEL BORROW FOR BRIDGE FOUNDATIONS. THE REMOVAL SHOULD EXTEND BEYOND THE FOOTPRINT OF THE STRUCTURE A DISTANCE EQUAL TO THE THICKNESS OF THE CRUSHED STONE BENEATH THE STRUCTURE OR A MINIMUM OF 4 FEET.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LIMITS OF DEMOLITION TO ALLOW FOR THE INSTALLATION OF ALL PROPOSED STRUCTURES, PIPES, DRAINS OR UTILITIES.
3. EXISTING CONCRETE WALLS AND SLAB COMPONENTS OF THE CULVERT SHALL BE REMOVED AND DISPOSED OF TO THE LIMITS THAT EXTEND TO 4 FEET IN ALL DIRECTIONS OF THE PROPOSED CONCRETE CULVERT STRUCTURES, PROPOSED DRAINAGE STRUCTURES, PIPES OR UTILITIES. THE PORTIONS OF THE EXISTING CULVERT SLABS OR WALLS THAT LIE OUTSIDE THE 4 FOOT ENVELOPE OF THE PROPOSED STRUCTURE AT LOCATIONS SPECIFIED TO BE FILLED SHALL BE DEMOLISHED TO A MINIMUM OF 2 FEET BELOW FINISHED GRADE.

LEGEND

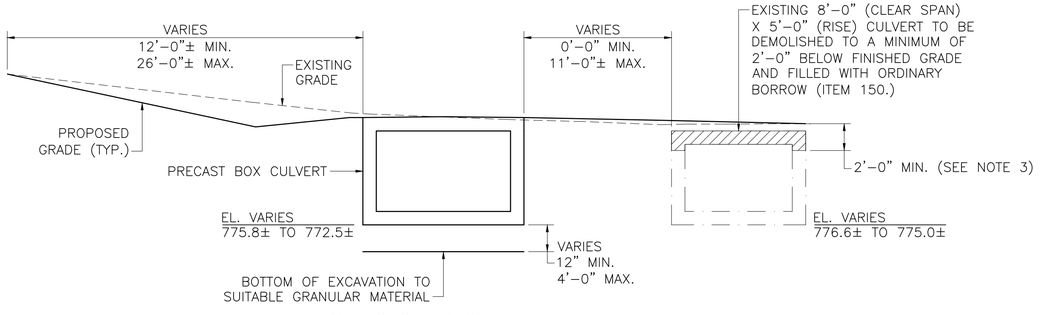
- EXISTING CULVERT DEMOLITION (ITEM 115.01)
- REMOVAL AND DISPOSAL OF EXISTING REINFORCED CONCRETE DEBRIS (ITEM 127.2)



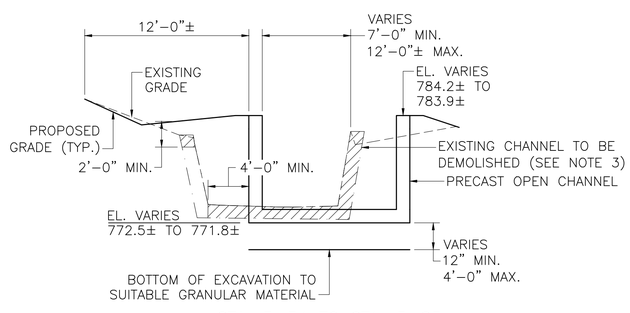
STA. 0+45 TO STA. 0+65



STA. 0+65 TO STA. 0+92



STA. 0+92 TO STA. 3+34



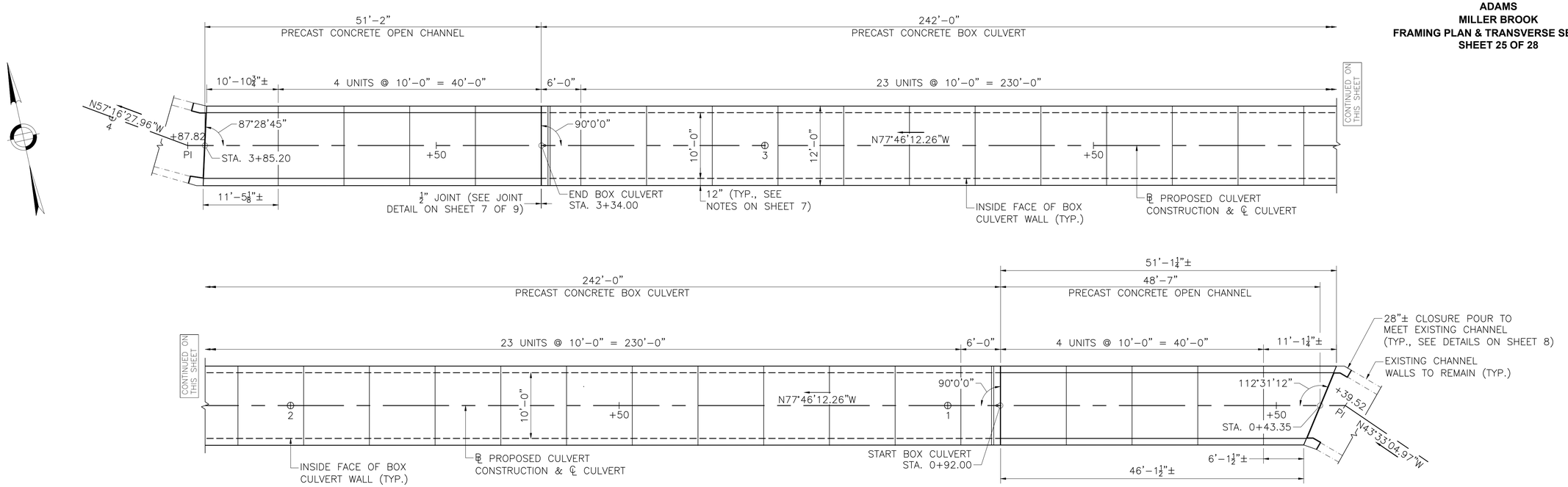
STA. 3+34 TO STA. 3+85

APPROXIMATE LIMITS OF DEMOLITION

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

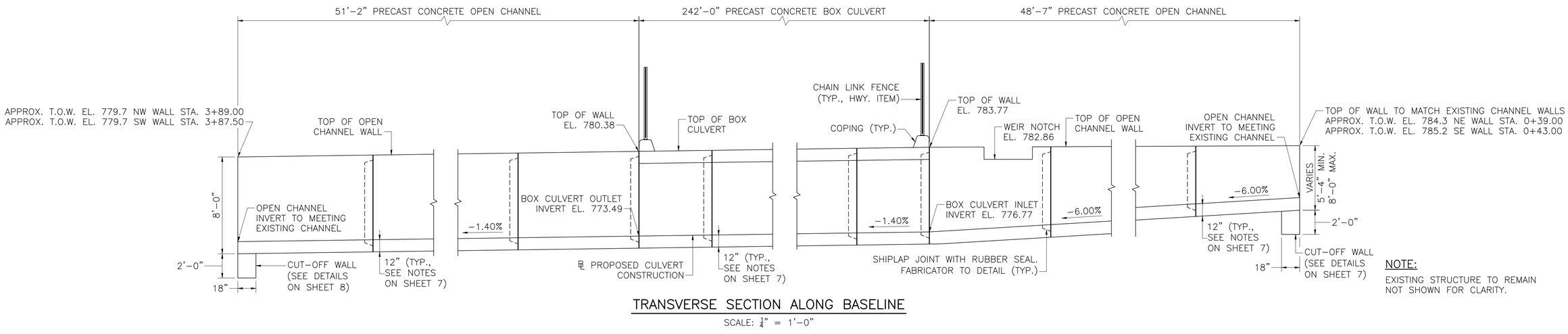
DATE	DESCRIPTION
JUNE 3, 2026	ISSUED FOR BID
USE ONLY PRINTS OF LATEST DATE	

ADAMS
MILLER BROOK
FRAMING PLAN & TRANSVERSE SECTION
SHEET 25 OF 28



FRAMING PLAN

SCALE: ⅛" = 1'–0"



TRANSVERSE SECTION ALONG BASELINE

SCALE: ¼" = 1'–0"

NOTE:

EXISTING STRUCTURE TO REMAIN NOT SHOWN FOR CLARITY.

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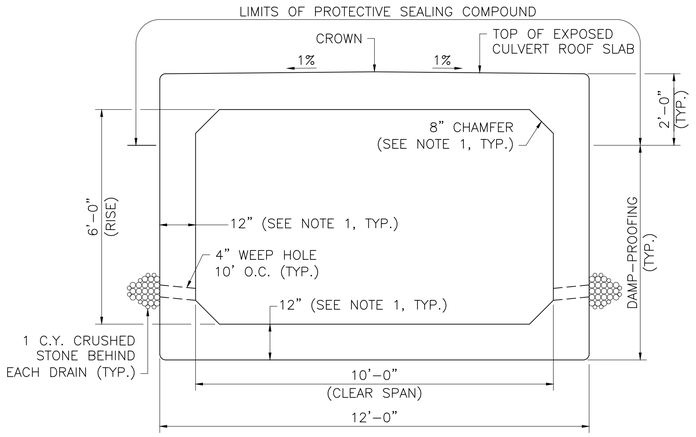
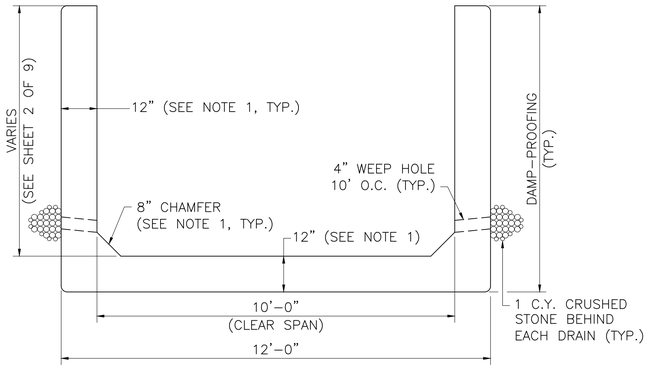


BOX CULVERT



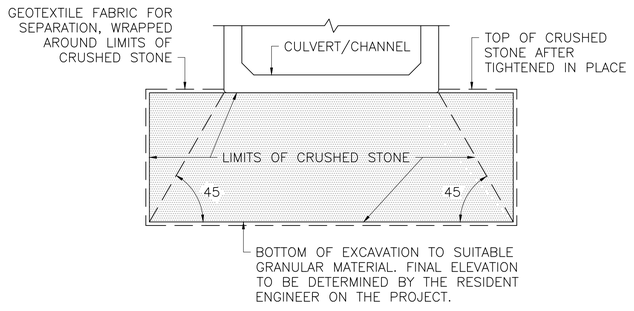
OPEN CHANNEL

NOTES:

1. DIMENSIONS SHOWN INDICATE PRELIMINARY DESIGN DIMENSIONS. CONTRACTOR TO DETERMINE FINAL DIMENSIONS BASED UPON THEIR APPROVED DESIGN.
2. BOX CULVERT WALL AND SLAB THICKNESS TO MATCH OPEN CHANNEL WALL AND SLAB THICKNESS.
3. BOX CULVERT AND OPEN CHANNEL SHALL HAVE A CLEAR OPENING OF 10'-0".
4. MAXIMUM BEARING PRESSURE = 4.97 KSF.

TRANSVERSE SECTIONS

SCALE: $\frac{1}{2}$" = 1'-0"

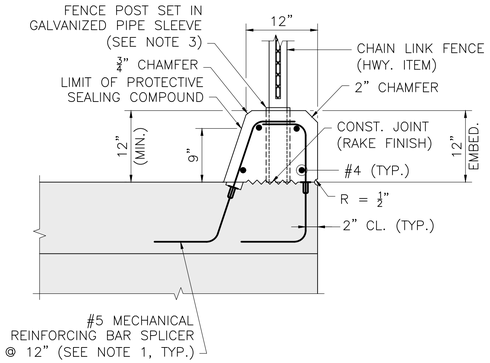


NOTE:

LOWER WATER LEVEL AS MUCH AS POSSIBLE WITHOUT DISTURBING THE GRANULAR SOIL (SIDES AND BOTTOM) AND COMPACT THE CRUSHED STONE IN PLACE (SEE STANDARD SPECIFICATIONS)

LIMITS OF CRUSHED STONE FOR BRIDGE FOUNDATIONS

NOT TO SCALE

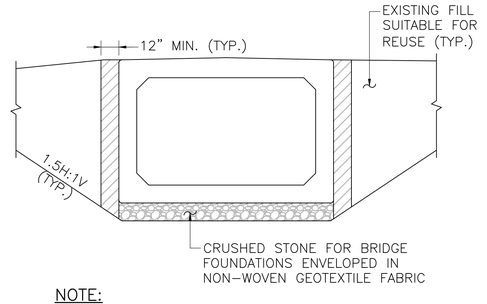


NOTES:

1. THE CONTRACTOR MAY SUBSTITUTE EXTENDED #5 HOOPS FOR THE MECHANICAL REINFORCING BAR SPLICERS AND THREADED REBARS AS SHOWN.
2. CULVERT REINFORCEMENT IS NOT SHOWN FOR CLARITY.
3. COAT THE EMBEDDED PORTION OF THE FENCE POST AND THE INSIDE OF THE GALVANIZED PIPE SLEEVE WITH A SUITABLE BITUMINOUS PAINT PRIOR TO INSTALLATION INTO THE CONCRETE CULVERT COPING. SET THE POST PLUMB IN THE PREDRILLED HOLE AND COMPLETELY FILL THE ANNULAR SPACE WITH NON-SHRINK GROUT, CONSOLIDATING AS NEEDED TO ELIMINATE VOIDS AND FINISHING FLUSH WITH THE FACE OF THE COPING.

COPING DETAILS

SCALE: 1" = 1'-0"



NOTE:

AREA INDICATES LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES.

LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES

SCALE: $\frac{1}{4}$" = 1'-0"

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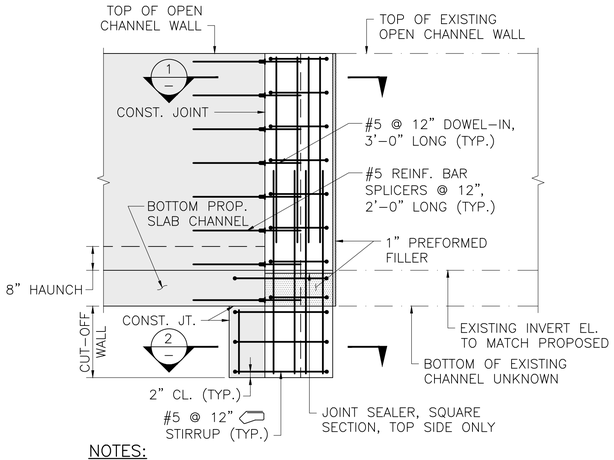
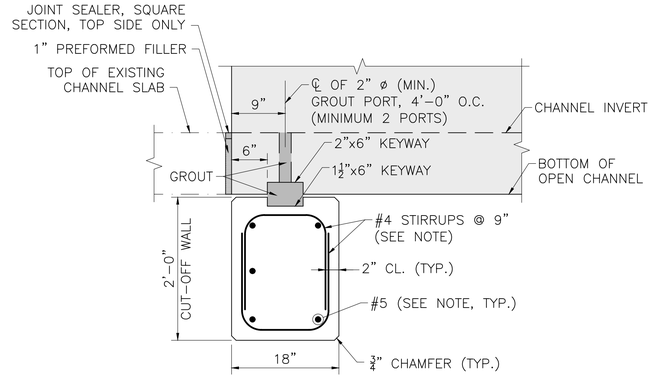


NOTES:

1. THE CONTRACTOR MAY SUBSTITUTE #5 DOWELS, 3'–0" LONG FOR MECHANICAL REINFORCING BAR SPLICERS AND THREADED REBARS.
2. CULVERT REINFORCEMENT IS NOT SHOWN FOR CLARITY.

CLOSURE POUR DETAIL SECTION AT EXISTING CHANNEL WALL

SCALE: ½" = 1'–0"

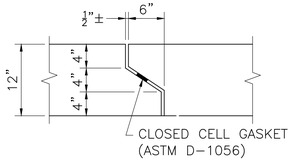


NOTE:

REINFORCEMENT SHOWN IS PRELIMINARY.
CONTRACTOR TO DETERMINE FINAL REINFORCEMENT.

CUT–OFF WALL CONNECTION DETAIL

SCALE: 1" = 1'–0"

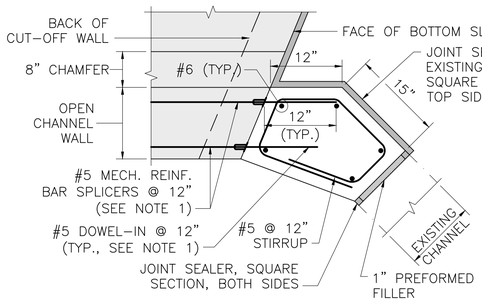


NOTE:

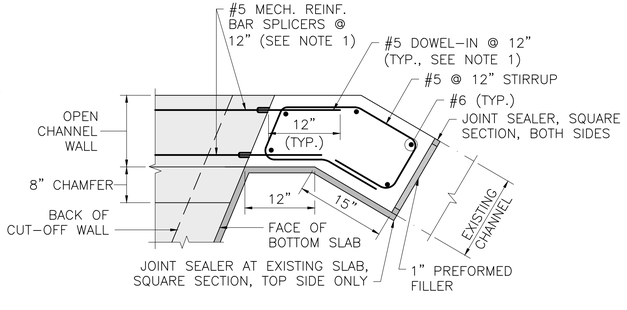
DETAIL SHOWN IS PRELIMINARY.
FABRICATOR TO PROVIDE FINAL DETAIL.

JOINT DETAIL

SCALE: 1" = 1'–0"



SOUTHEAST & NORTHWEST

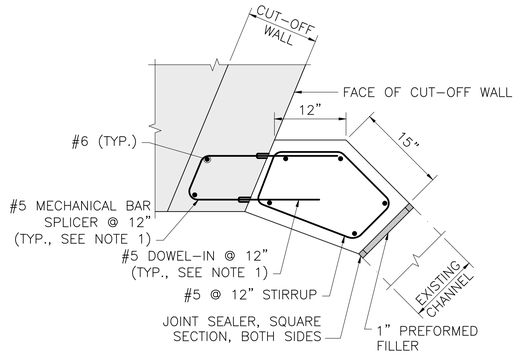


NORTHEAST & SOUTHWEST

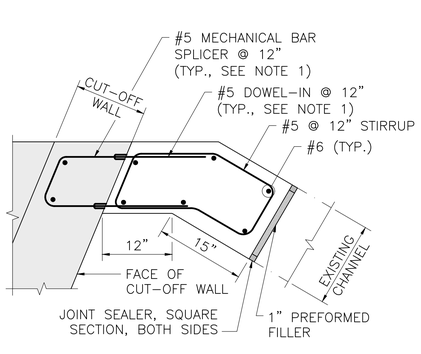
NOTES:

1. THE CONTRACTOR MAY SUBSTITUTE #5 DOWELS, 3'–0" LONG, FOR MECHANICAL REINFORCING BAR SPLICERS AND THREADED REBARS.
2. OPEN CHANNEL REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION 1 – SCALE: 1" = 1'–0"



SOUTHEAST & NORTHWEST



NORTHEAST & SOUTHWEST

NOTES:

1. THE CONTRACTOR MAY SUBSTITUTE #5 DOWELS, 3'–0" LONG, FOR MECHANICAL REINFORCING BAR SPLICERS AND THREADED REBARS.
2. OPEN CHANNEL REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION 2 – SCALE: 1" = 1'–0"

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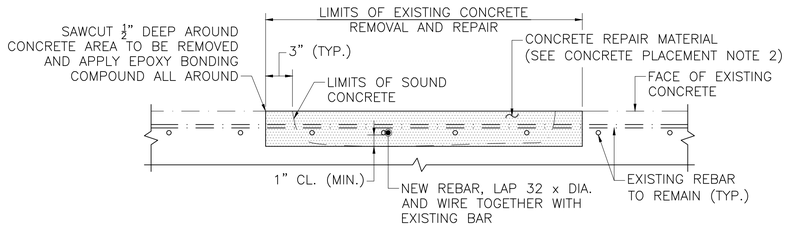
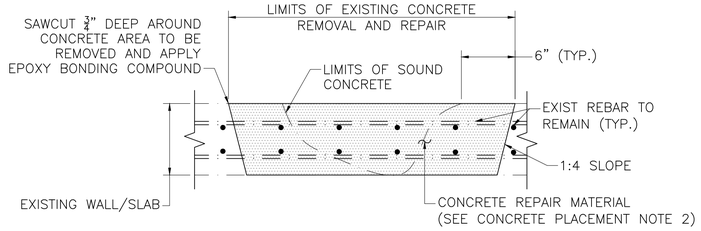
NOTE:

DETAILS TO BE INCORPORATED WITH BID ALTERNATE 1 – CONCRETE REPAIRS TO EXISTING OPEN CULVERT BOTTOM. SPECIFIC LOCATIONS WILL BE COORDINATED WITH THE TOWN AND ENGINEER DURING CONSTRUCTION PHASE. SEE SHEET 4 OF HIGHWAY PLANS FOR APPROXIMATE LIMITS OF REPAIR AREA.



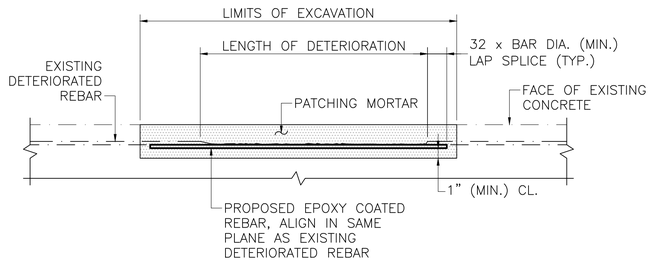
PARTIAL DEPTH REPAIR DETAIL

SCALE: 1½" = 1'–0"



FULL DEPTH REPAIR DETAIL

SCALE: 1½" = 1'–0"



REBAR REPAIR DETAIL

SCALE: 1½" = 1'–0"

REPAIR NOTES:

CONCRETE REMOVAL

1. DETERIORATED CONCRETE SHALL BE REMOVED TO A SOUND SUBSTRATE OR A MINIMUM OF 1" BEHIND REINFORCING STEEL.

SURFACE PREPARATION

1. ALL REINFORCING STEEL EXPOSED BY CONCRETE REMOVAL SHALL BE MECHANICALLY CLEANED OF ALL LOOSE RUST BY SANDBLASTING, WIRE BRUSHING, OR OTHER METHODS APPROVED BY THE ENGINEER.
2. THE CONCRETE SURFACES AND EXISTING REINFORCING STEEL TO RECEIVE REPAIR MATERIAL SHALL BE FREE OF OIL, SOLVENT, GREASE, DIRT, LOOSE PARTICLES AND FOREIGN MATTER. CLEANING OF THE REPAIR AREAS SHALL BE PERFORMED NOT MORE THAN 36 HOURS AHEAD OF THE REPAIR PLACEMENT.
3. ALL EXISTING REINFORCING STEEL AND CONCRETE SURFACES SHALL BE COATED WITH EPOXY BONDING AGENT AND CORROSION INHIBITOR AFTER CLEANING PER MANUFACTURER REQUIREMENTS.

REINFORCING PREPARATION

1. EXISTING REINFORCING THAT HAS LOST 25% OR MORE OF ITS ORIGINAL DIAMETER SHALL BE SUPPLEMENTED BY NEW EPOXY COATED BARS PLACED PARALLEL TO EXISTING REINFORCING.
2. PROPOSED DOWELS SHALL BE A #4 REINFORCING STEEL BAR EMBEDDED 6 INCHES INTO A DRILLED HOLE IN THE EXISTING CONCRETE AND GROUTED WITH AN EPOXY ADHESIVE. THE EPOXY ADHESIVE ANCHOR SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
1. REINFORCING STEEL, INCLUDING WELDED WIRE FABRIC, SHALL BE EPOXY COATED.
2. NEW REINFORCEMENT SHALL EXTEND 30 BAR DIAMETER IN EACH DIRECTION FROM WHERE THE SECTION LOSS OR BREAK ENDS. THE LIMITS OF THE REPAIR SHALL BE MODIFIED TO MEET THE REINFORCEMENT STEEL LAP SPLICE REQUIREMENTS. NEW REINFORCING STEEL SHALL BE PLACED AT THE SAME LEVEL ALONGSIDE THE EXISTING DETERIORATED OR BROKEN REINFORCING STEEL.

CONCRETE PLACEMENT

1. FACE OF WALL/FLOOR REPAIRS SHALL BE FINISHED FLUSH WITH THE FACE OF THE EXISTING.
2. ALL REPAIR CONCRETE SHALL BE A RAPID HARDENING CONCRETE (M4.06.3) SELECTED FROM THE MASSDOT QCML AND APPROVED BY THE ENGINEER.

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