MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

AYER ROAD (ROUTE 110/111)

IN THE TOWN OF

HARVARD

WORCESTER COUNTY

FEDERAL AID PROJECT NO.

WPA NOI SUBMITTAL

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	80
PROJECT FILE NO.	609213		

TITLE SHEET & INDEX

609213_HD1(NOI TITLE SHEET).DWG Plotted on 3-Apr-2024 7:04 PM

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

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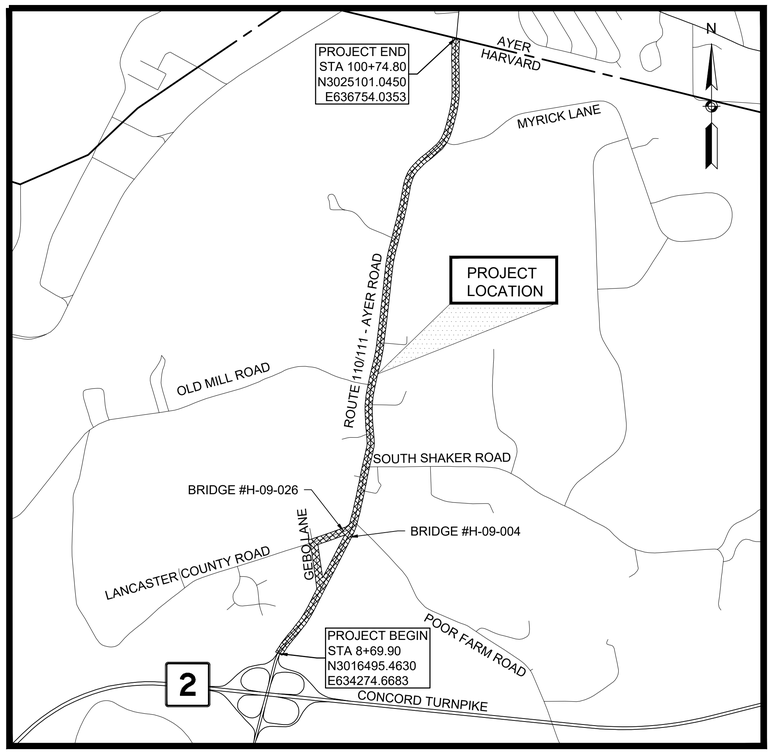
80	DRIVEWAY DETAILS



LENGTH OF PROJECT = 9,204.90 FEET = 1.743 MILES

DESIGN DESIGNATION (AYER ROAD)

DESIGN SPEED	45 MPH
ADT (2019)	14,227
ADT (2029)	17,173
K	8.1%
D	57.3% NB
T (PEAK HOUR)	2.9%
T (AVERAGE DAY)	3.6%
DHV	1397
DDHV	800
FUNCTIONAL CLASSIFICATION	URBAN ARTERIAL

DATE	DESCRIPTION	REV #
4/1/2024	WPA NOI SUBMITTAL	-

TEC
The Engineering Corp

TEC, Inc.

282 Merrimack Street
2nd Floor
Lawrence, MA 01843
978-794-1792

311 Main Street
2nd Floor
Worcester, MA 01608
508-868-5104

169 Ocean Blvd, Unit 3
PO Box 249
Hampton, NH 03842
603-601-8154

www.TheEngineeringCorp.com

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

CHIEF ENGINEER **DATE**

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB/GI	CATCH BASIN OR GUTTER INLET
	CBCI/GICI	CATCH BASIN OR GUTTER INLET W/ CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TREE PROTECTION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
WSO	WSO	WATER SHUTOFF/CURB STOP
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		EDGE OF PAVEMENT
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF MICROMILLING AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER CABINET, FOUNDATION
		CONTROLLER CABINET, FOUNDATION, CONC. PAD
		MAST ARM FOUNDATION (SCALE OF BLOCK = DIAMETER IN INCHES)
		MAST ARM (LENGTH NOTED)
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD
		MAST ARM OR TS POLE MOUNTED SIGN
		EMERGENCY PRE-EMPTION RECEIVER
		EMERGENCY PRE-EMPTION CONFIRMATION STROBE
		PEDESTRIAN PUSH BUTTON
		YAGI ANTENNA
		BICYCLE WIRE LOOP DETECTOR (SIZE AS NOTED)
		WIRE LOOP DETECTOR (SIZE AND TYPE NOTED)
		TRAFFIC SIGN (1 POST)
		TRAFFIC SIGN (2 POST)
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
		BIKE LANE LEGEND - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
AP	ANGLE POINT
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWP	DETECTABLE WARNING PANEL
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GC	GRANITE CURB
GCC	GRANITE CURB CORNER
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDWL	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HP	HIGH POINT
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LOG	LIMIT OF GRADING
LP	LIGHT POLE / LOW POINT
LSA	LANDSCAPE AREA
L&S	LOAM AND SEED
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	PEDESTRIAN CURB RAMP
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	80
PROJECT FILE NO.	609213		

LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATERWAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
RRFB	RECTANGULAR RAPID FLASHING BEACON
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SGE	SLOPED GRANITE EDGING
SHLD	SHOULDER
SHLO	STATE HIGHWAY LAYOUT LINE
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SUP	SHARED USE PATH
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UPL	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

609213_HD2(NOI LEGEND).DWG Plotted on 3-Apr-2024 7:04 PM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	80
PROJECT FILE NO.		609213	

CONSTRUCTION NOTES

CONSTRUCTION NOTES:

1. EXISTING CONDITIONS INFORMATION COMPILED FROM SURVEY BY HANCOCK ASSOCIATES, PERFORMED IN JULY AND AUGUST, 2019.

   HORIZONTAL DATUM = NAD83 (MASSACHUSETTS STATE PLANE COORDINATES)
   VERTICAL DATUM = NAVD88

2. ALL EXISTING STATE, COUNTY, AND TOWN LOCATION LINES HAVE BEEN ESTABLISHED FROM AN ACTUAL ON-THE-GROUND SURVEY. ALL PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.

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 CONTACT DIGSAFE (1-888-DIGSAFE) A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION TO VERIFY THE 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 LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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. ALL MUNICIPALLY OWNED UTILITY STRUCTURES (CATCH BASINS, DRAIN MANHOLES, WATER GATES, ETC.) SHALL BE ADJUSTED BY THE CONTRACTOR TO FINISHED GRADE UNLESS DIRECTED OTHERWISE.

6. ALL PRIVATELY OWNED UTILITY STRUCTURES (GAS GATES, ELECTRIC /TELEPHONE MANHOLES, ETC.) SHALL BE ADJUSTED TO FINISHED GRADE BY THE PRIVATE UTILITY COMPANY, UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE ALTERATION AND ADJUSTMENT, AS NECESSARY.

7. PROPOSED LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 1.0% (MINIMUM) UNLESS OTHERWISE NOTED.

8. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

9. ALL DISTURBED AREAS OUTSIDE THE CURBLINE SHALL BE STABILIZED WITH 4" LOAM AND SEED, UNLESS OTHERWISE NOTED.

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), AS APPROVED BY THE ENGINEER.

11. THE TERM "MEET EXIST" MEANS TO MEET BOTH THE EXISTING ALIGNMENT AND ELEVATION.

12. ALL EXISTING TREES WITHIN THE PROJECT LIMITS SHALL BE RETAINED AND PROTECTED WITH TREE PROTECTION UNLESS INDICATED OTHERWISE ON THE DRAWINGS. ALL PROVIDED DIMENSIONS REFER TO THE DIAMETER AT BREAST HEIGHT.

13. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" (EXCLUDING THE WIDTH OF CURB) SHALL BE MAINTAINED PAST ALL OBSTRUCTIONS (UTILITY POLES, LIGHT POLES, SIGNS, MAILBOXES, ALONG DRIVEWAY OPENINGS, ETC.)

14. ALL OBJECTS SHALL BE A MINIMUM DISTANCE OF 2'-0" (EXCLUDING THE WIDTH OF CURB) FROM THE SHARED USE PATH (UTILITY POLES, LIGHT POLES, SIGNS, MAILBOXES, ALONG DRIVEWAY OPENINGS, ETC.)

15. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED PEDESTRIAN CURB RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.

16. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT IS NOT CALLED OUT TO BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOP MOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

17. RUMBLE STRIPS SHALL BE INSTALLED ON ALL CENTERLINES ON AYER ROAD. ALL CENTERLINE RUMBLE STRIPS SHALL BE SINUSOIDAL (TYPE C).

18. IN AREAS OF EXISTING ROADWAY / SIDEWALK WHERE LOAM AND SEED IS PROPOSED, THE CONTRACTOR SHALL REMOVE EXISTING ROADWAY / SIDEWALK AND SUBBASE, AND REPLACE WITH SUITABLE EXCAVATED MATERIAL AND PROPOSED 4" LOAM AND SEED TO MEET FINAL GRADE.

SURVEY NOTES:

1. THE HORIZONTAL DATUM FOR THIS SURVEY IS THE MASSACHUSETTS COORDINATE SYSTEM, NAD 1983, MAINLAND ZONE. SAID HORIZONTAL DATUM WAS ESTABLISHED VIA GPS OBSERVATIONS UTILIZING REALIZATION NAD83(2011) AND GEOID 12A.

2. THE PROJECT SOURCE BENCHMARKS ARE MASSACHUSETTS GEODETIC SURVEY (MAGS) POINT ID'S 18370 (STATION 6640) AND 18371 (STATION 6641). SAID BENCHMARKS ARE BRASS RIVETS IN LEDGE, AND ARE SHOWN AS BENCHMARKS ON THIS PLAN. THE ELEVATION OF SAID BENCHMARKS ARE 278.26' AND 284.80', RESPECTFULLY, AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). ELEVATIONS SHOWN HEREON REFER TO SAID NAVD88.

3. UNDERGROUND UTILITIES ARE SHOWN HEREON FROM FIELD LOCATIONS OF SURFACE VISIBLE STRUCTURES AND FROM AVAILABLE RECORD INFORMATION ON FILE AT THE TOWN OF HARVARD PUBLIC WORKS AND PRIVATE UTILITY COMPANIES. OTHER UNDERGROUND UTILITIES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.

4. THE LIMIT OF BORDERING VEGETATED WETLANDS SHOWN HEREON WAS DELINEATED BY THE ENGINEERING CORP AND LOCATED VIA FIELD SURVEY BY HANCOCK ASSOCIATES.

5. THIS PLAN IS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY HANCOCK ASSOCIATES IN JULY AND AUGUST OF 2019.

6. THE HARVARD/AYER TOWN LINE IS SHOWN APPROXIMATELY HEREON FROM THE MASSACHUSETTS BUREAU OF GEOGRAPHIC INFORMATION (MASSGIS).

7. ABUTTING PROPERTY LINES HAVE BEEN COMPILED FROM RECORD INFORMATION.

609213_HD2(NOI LEGEND).DWG Plotted on 3-Apr-2024 7:04 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	80
PROJECT FILE NO.	609213		

KEY PLAN

609213_HD3(NOI KEY PLAN).DWG Plotted on 3-Apr-2024 7:05 PM

PROJECT BEGIN
STA 8+69.90
N3016495.4630
E634274.6683

NAD 83

AYER ROAD

GEBO LANE

LANCASTER COUNTY ROAD

29+81 AYER ROAD=
120+00 POOR FARM ROAD

21+30 AYER ROAD=
110+00 GEBO LANE

POOR FARM ROAD

SOUTH SHAKER ROAD

OLD MILL ROAD

MYRICK LANE

HARVARD

AYER

CONTINUED BELOW

CONTINUED ABOVE

PROJECT END
STA 100+74.80
N3025101.0471
E636754.0355

LEGEND

- (X) CONSTRUCTION PLANS
- (X) CURB TIE & GRADING PLANS
- [X] UTILITY PLANS
- [X] LANDSCAPE PLANS AND DETAILS

0 150 300 450 600

SCALE: 1" = 150'

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 1 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:05 PM

ROUTE 110/111 - AYER ROAD
(1950 TOWN LAYOUT - STATE HIGHWAY ALTERATION 33799A)

NAD 83

185 AYER ROAD
12 LANCASTER COUNTY ROAD LLC
ASSESSORS MAP 8, BLOCK 59
DEED BOOK 46796, PAGE 296
PLAN BOOK 226, PLAN 27

187 AYER ROAD
12 LANCASTER COUNTY ROAD, LLC
ASSESSORS MAP 8, BLOCK 60
DEED BOOK 54974, PAGE 74
PLAN BOOK 226, PLAN 27

AYER ROAD
WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

184 AYER ROAD
PHOENIX-DURANGO LLC
ASSESSORS MAP 8, BLOCK 41
DEED BOOK 64869, PAGE 275
PLAN BOOK 219, PLAN 95

188 AYER ROAD
SAMANTHA'S REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 1
DEED BOOK 33654, PAGE 159
PLAN BOOK 780, PLAN 121

196 AYER ROAD
BOWERS ROAD, LLC
ASSESSORS MAP 8, BLOCK 40
DEED BOOK 45722, PAGE 348
PLAN BOOK 881, PLAN 28

198 AYER ROAD
AYER ROAD REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 3
DEED BOOK 45608, PAGE 289
PLAN BOOK 881, PLAN 28

200 AYER ROAD
HARVARD OFFICE PARK LLC
ASSESSORS MAP 8, BLOCK 40, LOT 2
DEED BOOK 28957, PAGE 72
PLAN BOOK 780, PLAN 121

1950 STATE ALTERATION	1950 TOWN LAYOUT

1950 TOWN LAYOUT	1924 COUNTY LAYOUT

8+00 — PROJECT BEGIN STA 8+69.90 N3016495.4630 E634274.6683

R=760.00' L=222.12' — PT +22.12

PC +16.54 — 140+00

PC +15.24

BENCHMARK: MAG IN UPL80-1 EL=311.69'

N39°07'50"E 293.12'

RET FIRE ESCAPE STEPS; RET HMA WALK; RET SIGN; RET BOULDERS; RET FLASHER; RET PLANTER; RET POST; RET STUMP; RET SGE; RET WALL; RET TREE; PROP TREE PROTECTION; RET STONE WALL

MEET EXIST DWY (SAWCUT); MEET EXIST GRAV DWY; MEET EXIST SW AND GC; MEET EXIST DWY (SAWCUT)

PROP TEMP EASEMENT; PROP 4" L&S (TYP); PROP FULL DEPTH PVMT; PROP HMA DWY (TYP); PROP HMA DWY; PROP 10' HMA SHARED USE PATH; PROP LAYOUT ALTERATION; PROP EOP; PROP BIKE RAMP; PROP 2.5' GRASS BUFFER; PROP GC; TYPE VB (TYP); PROP SAWCUT (TYP); PROP CC PCR W/ DWP; PROP PB (TYP); PROP RRFB (TYP); PROP 5.5' CEM CONC SW; PROP 3" ELEC CONDUIT (TYP); PROP DRAINAGE SEDIMENT REMOVAL; PROP HMA BERM TYPE A - MODIFIED; PROP HMA MILL & OVERLAY; PROP CONST ℄; PROP GC; TYPE VB AT 7" REVEAL

REM EXIST PVMT; PROP 4" L&S

LIMIT OF HMA MILL & OVERLAY; BEGIN HMA BERM TYPE A - MODIFIED

R&S GRANITE BLOCKS (TYP)

APPROX LOG (TYP)

R&R MB (2)

RAISED PLANTER

STATE HIGHWAY ALTERATION 33799A

1950 TOWN LAYOUT

0 20 50 100

SCALE: 1" = 20'

CONTINUED ON SHEET NO. 6

GUARDRAIL DETAILS

STA 19+14 RT TO STA 19+39 RT TANGENT END TREATMENT, TL-2
STA 19+39 RT TO STA 21+14 RT GUARDRAIL, TL-2

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 2 OF 17

IMPACT TYPE

PERMANENT IMPACTS
12 SF

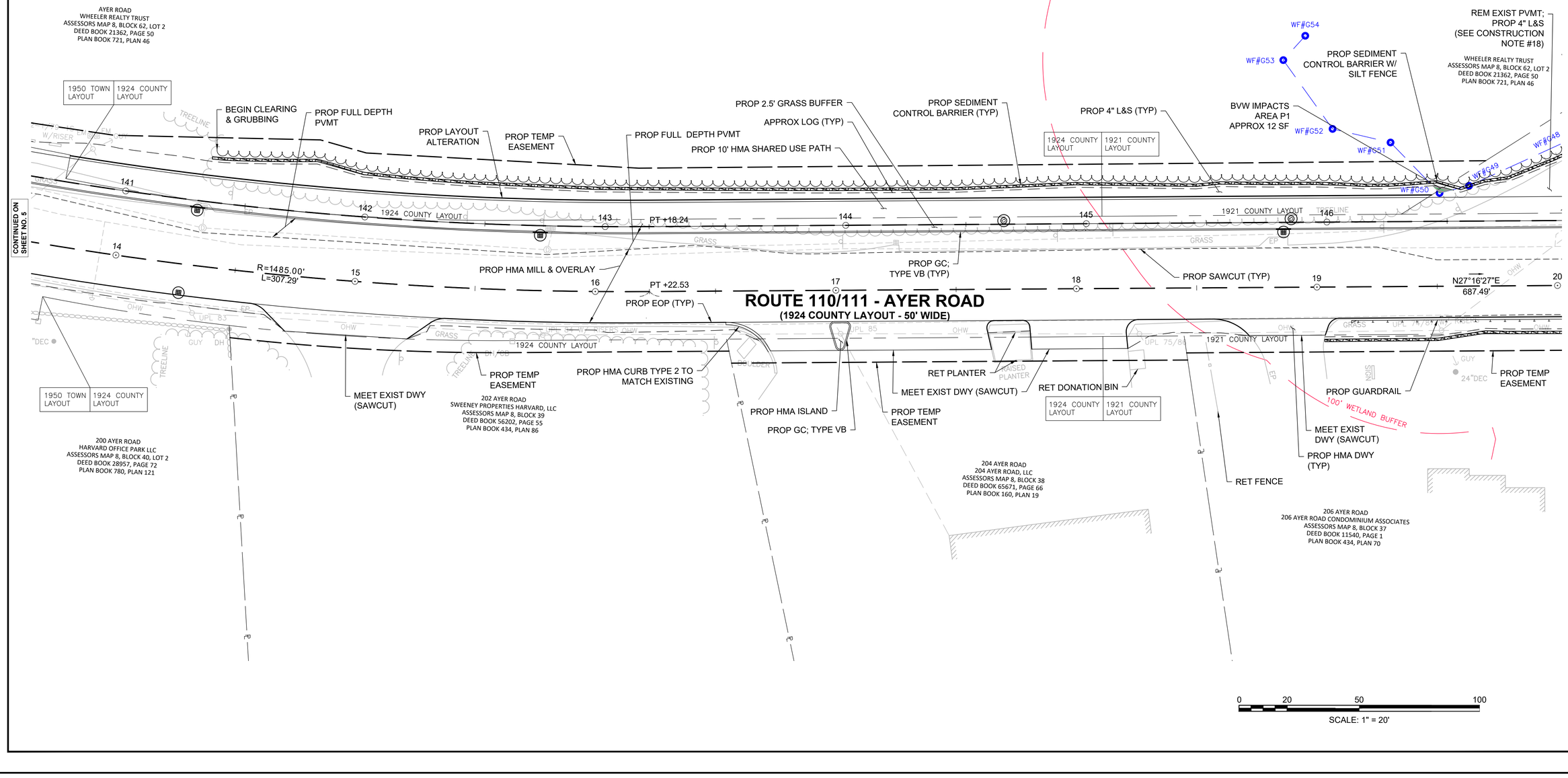
TEMPORARY IMPACTS
0 SF

RESOURCE AREA IMPACT TYPE

BORDERING VEGETATED WETLANDS (BVW)
12 SF (12 SF PERMANENT, 0 SF TEMPORARY)

RESOURCE AREA IMPACTS			
AREA	DURATION	RESOURCE AREA	IMPACT
P1	PERMANENT	BVW	12 SF

NAD 83 N



609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:05 PM

GUARDRAIL DETAILS

STA 19+14 RT TO STA 19+39 RT TANGENT END TREATMENT, TL-2
STA 19+39 RT TO STA 21+14 RT GUARDRAIL, TL-2
STA 21+14 RT TO STA 21+39 RT TANGENT END TREATMENT, TL-2

STA 20+28 LT TO STA 20+38 LT TRAILING ANCHORAGE
STA 20+38 LT TO STA 21+00 LT GUARDRAIL, TL-2
STA 110+39 LT TO STA 111+34 LT GUARDRAIL - CURVED, TL-2
STA 111+34 LT TO STA 111+57 LT TANGENT END TREATMENT, TL-2

STA 24+13 RT TO STA 24+38 RT TANGENT END TREATMENT, TL-2
STA 24+38 RT TO STA 27+00 RT GUARDRAIL, TL-2

TRAFFIC SIGNAL CONDUIT

SEE BELOW

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

CONTINUED ON SHEET NO. 8

LEGEND

△# = DRIVEWAY NUMBER
□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 3 OF 17

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

GEBO LANE (PUBLIC - VARIABLE WIDTH)

LANCASTER COUNTY ROAD
INHABITANTS OF THE TOWN OF HARVARD
ASSESSORS MAP 8, BLOCK 62, LOT 4
DEED BOOK 21051, PAGE 25
PLAN BOOK 721, PLAN 46

WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

206 AYER ROAD
206 AYER ROAD CONDOMINIUM ASSOCIATES
ASSESSORS MAP 8, BLOCK 37
DEED BOOK 11540, PAGE 1
PLAN BOOK 434, PLAN 70

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 8, BLOCK 36
DEED BOOK 6223, PAGE 264
PLAN BOOK 434, PLAN 86

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

BENCHMARK: NAIL UPL71/105-5
EL=257.20'

21+29.95 AYER ROAD=
110+00.00 GEBO LANE

N27°16'27"E 687.49'
N26°33'14"E 241.06'
R=7500.00'
L=94.29'
PC +32.26
PT +80.14
PC +72.44
PT +24.05
PC +68.77
PT +30.45
PC +73.39
PC +10.02
PT +04.31

RESOURCE AREA IMPACTS			
AREA	DURATION	RESOURCE AREA	IMPACT
P2	PERMANENT	BANK	41 LF
P2	PERMANENT	LUW	181 SF
P3	PERMANENT	BVW	205 SF
T1	TEMPORARY	BANK	17 LF
T1	TEMPORARY	LUW	86 SF
T2	TEMPORARY	BANK	86 LF
T2	TEMPORARY	LUW	431 SF

IMPACT TYPE
PERMANENT IMPACTS 386 SF
TEMPORARY IMPACTS 517 SF

RESOURCE AREA IMPACT TYPE
BORDERING VEGETATED WETLANDS (BVW) 205 SF (205 SF PERMANENT, 0 SF TEMPORARY)
LAND UNDER WATER (LUW) 698 SF (181 SF PERMANENT, 517 SF TEMPORARY)
BANK IMPACT 144 LF (41 LF PERMANENT, 103 LF TEMPORARY)

SCALE: 1" = 20'

CONTINUED ON SHEET NO. 6
CONTINUED ON SHEET NO. 9

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM

GUARDRAIL DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	SEE UTILITY PLANS	SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

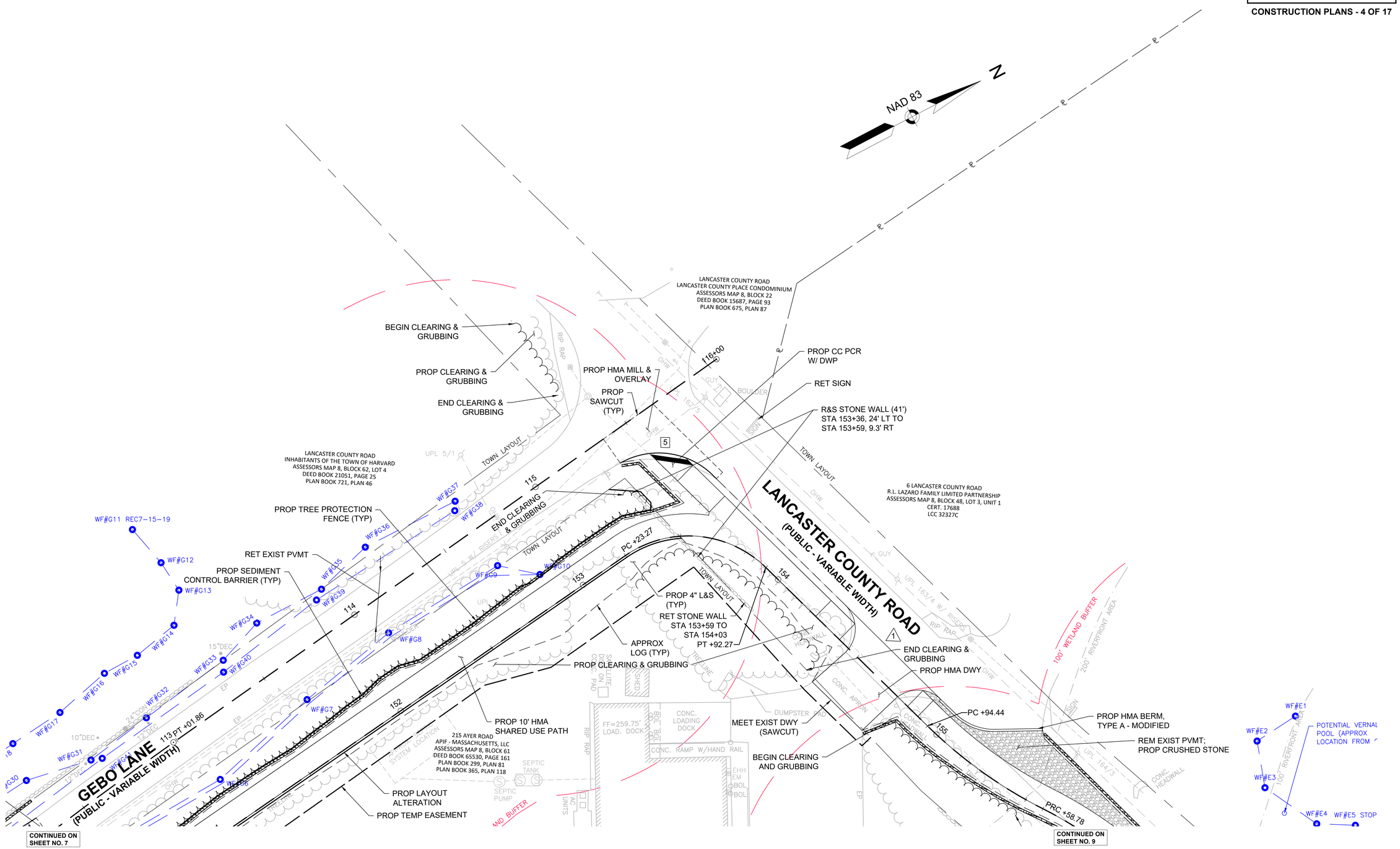
□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 4 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM



GUARDRAIL DETAILS

STA 24+38 TO STA 27+00 RT GUARDRAIL, TL-2
STA 27+00 TO STA 27+35 RT MODIFIED TRANSITION TO BRIDGE RAIL

STA 26+39 LT TO STA 26+64 LT TANGENT END TREATMENT, TL-2
STA 26+64 LT TO STA 27+26 LT GUARDRAIL, TL-2
STA 27+26 LT TO STA 27+60 LT MODIFIED TRANSITION TO BRIDGE RAIL

STA 27+57 RT TO STA 27+91 RT MODIFIED TRANSITION TO BRIDGE RAIL
STA 27+91 RT TO STA 29+15 RT GUARDRAIL, TL-2 (DEEP POST)
STA 29+15 RT TO STA 29+41 RT FLARED END TREATMENT, TL-2

STA 27+82 LT TO STA 28+16 LT MODIFIED TRANSITION TO BRIDGE RAIL
STA 28+16 LT TO STA 28+41 LT GUARDRAIL, TL-2
STA 28+41 LT TO STA 28+66 LT FLARED END TREATMENT, TL-2

CONTINUED ON SHEET NO. 8

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

IMPACT TYPE

PERMANENT IMPACTS
85 SF

TEMPORARY IMPACTS
175 SF

RESOURCE AREA IMPACT TYPE

BORDERING VEGETATED WETLANDS (BVW)
85 SF (85 SF PERMANENT, 0 SF TEMPORARY)

BORDERING LAND SUBJECT TO FLOODDING (BLSF)
175 SF (0 SF PERMANENT, 175 SF TEMPORARY)

RESOURCE AREA IMPACTS			
AREA	DURATION	RESOURCE AREA	IMPACT
P4	PERMANENT	BVW	51 SF
P5	PERMANENT	BVW	34 SF
T3	TEMPORARY	BLSF	175 SF

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 5 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM

BEGIN CLEARING AND GRUBBING
PC +94.44
PROP HMA BERM, TYPE A - MODIFIED
REM EXIST PVMT; PROP CRUSHED STONE
PRC +58.78
PT +12.77
END CLEARING & GRUBBING
PROP 10' HMA SHARED USE PATH
PROP SEDIMENT CONTROL BARRIER (TYP)
PROP WOOD POST AND RAIL FENCE
REM EXIST PVMT; PROP 4" L&S
REM EXIST CONCRETE GUARDRAIL
LINE OF EXIST GAS EASEMENT
GAS EASEMENT (NATIONAL GRID) DEED BOOK 4726, PAGE 527 PLAN BOOK 305, PLAN 118
PROP TEMP EASEMENT
MEET EXIST DWY (SAWCUT)
RET SIGN
PROP HMA DWY
PROP GC; TYPE VB (TYP)
APPROX LOG (TYP)
PROP SAWCUT (TYP)
PROP CONST ℄
PC +45.37
R=3500.00'
L=110.76'
N26°33'14"E
241.06'
PROP GUARDRAIL (TYP)
REM EXIST GUARDRAIL
PT +56.12
REM EXIST GUARDRAIL
PROP HMA MILL & OVERLAY
REM EXIST PVMT; PROP CRUSHED STONE
N28°22'02"E
85.19'
PC +41.32
PROP TRANSITION TO HMA BERM
PROP HMA BERM TYPE A - MODIFIED
PROP EOP (TYP)
PROP CRUSHED STONE
PROP STONE FOR PIPE ENDS
PROP HDWL
PROP PERM EASEMENT
BVW IMPACTS AREA P5 APPROX 34 SF
BVW IMPACTS AREA P4 APPROX 51 SF
PROP FULL DEPTH PVMT LESS THAN 4'
TEMP BLSF IMPACTS AREA T3 APPROX 175 SF
PROP LAYOUT ALTERATION
LIMIT OF HMA MILL & OVERLAY
29+81.00 AYER ROAD= 120+00.00 POOR FARM ROAD
PC +40.76
PT +64.21
121+00
PROP PUE
PROP TEMP EASEMENT
REM EXIST PVMT; PROP 4" L&S
PROP 5.5' HMA SW
PROP CC PCR W/ DWP
PROP PB (TYP)
PROP RRFB (TYP)
PROP PUE
R=714.00'
L=199.03'
120+00
PROP GC; 30 TYPE VB (TYP)
PT +40.35
PROP 3" ELEC CONDUIT (TYP)
PT +93.00
N12°23'44"E
961.28'
PROP 4" L&S
R&R (BO) SIGN
PROP 10' HMA SHARED USE PATH
PROP 4.5' GRASS BUFFER
R&S POST
100' WETLAND BUFFER
PROP TEMP EASEMENT
MEET EXIST DWY (SAWCUT)
PROP HMA DWY
PROP TEMP EASEMENT
APPROXIMATE 100 YEAR FLOOD ZONE
PROP PERM EASEMENT
PROP HDWL
PROP STONE FOR PIPE ENDS
END CLEARING & GRUBBING
PROP HDWL
PROP TEMP EASEMENT
APPROXIMATE 100 YEAR FLOOD ZONE
APPROXIMATE 100 YEAR FLOOD ZONE
POTENTIAL VERNAL POOL (APPROX LOCATION FROM GIS)
STOP
PROP PERMANENT EASEMENT
PROP 10' HMA SHARED USE PATH
PROP 4" L&S
PROP 3" ELEC CONDUIT (TYP)
PROP PUE
PROP CC PCR W/ DWP
PROP PB (TYP)
PROP RRFB (TYP)
PROP TEMP EASEMENT
REM EXIST PVMT; PROP 4" L&S
PROP 5.5' HMA SW
PROP PERM EASEMENT
PROP LAYOUT ALTERATION
LIMIT OF HMA MILL & OVERLAY
PROP PUE

6 LANCASTER COUNTY ROAD
R.L. LAZARO FAMILY LIMITED PARTNERSHIP
ASSESSORS MAP 8, BLOCK 48, LOT 3, UNIT 1
CERT. 17688
LCC 32327C

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

129 POOR FARM ROAD
LAURA A. CLARAGE
ASSESSORS MAP 8, BLOCK 35
DEED BOOK 64304, PAGE 359

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

LANCASTER COUNTY ROAD
(PUBLIC - VARIABLE WIDTH)

POOR FARM ROAD
(PUBLIC - VARIABLE WIDTH)

NAD 83

SCALE: 1" = 20'

CONTINUED ON SHEET NO. 7

CONTINUED ON SHEET NO. 10

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 6 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM

NAD 83 N

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

CONTINUED ON SHEET NO. 9

CONTINUED ON SHEET NO. 11

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

233 AYER ROAD
SHAKER PLACE OFFICES, LLC
ASSESSORS MAP 4, BLOCK 48, LOT 1
DEED BOOK 34484, PAGE 146
PLAN BOOK 548, PLAN 46

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

232 AYER ROAD
BRYAN & REBECCA KELLEY
ASSESSORS MAP 8, BLOCK 23
DEED BOOK 57957, PAGE 89

236 AYER ROAD
ROBERT A. WILLIAMS JR.
& JANET M. WILLIAMS
ASSESSORS MAP 4, BLOCK 47
DEED BOOK 61011, PAGE 81
PLAN BOOK 347, PLAN 77

242 AYER ROAD
DAVID M. & MARTIN D. POUTRY
ASSESSORS MAP 4, BLOCK 46
DEED BOOK 27509, PAGE 388
PLAN BOOK 246, PLAN 69

100' WETLAND BUFFER
100' RIVERFRONT AREA
200' RIVERFRONT AREA
PROP TEMP EASEMENT
BEGIN CLEARING & GRUBBING
R&S POST
END CLEARING & GRUBBING
PROP 4" L&S (TYP)
APPROX LOG (TYP)
PROP PUE
PROP TEMP EASEMENT
R&R (BO) SIGN
R&S WOOD POST
PROP GC; TYPE VB (TYP)
PROP 10' HMA SHARED USE PATH
R&R STONE WALL
PROP 4.5' GRASS BUFFER
BEGIN CLEARING & GRUBBING
END CLEARING & GRUBBING
PROP CC PCR W/ DWP (TYP)
MEET EXIST DWY (SAWCUT)
RET LP
RET STONE WALL
PROP PUE
RET SIGN
PROP TEMP EASEMENT
RET TREE
PROP SAWCUT (TYP)
PROP HMA MILL & OVERLAY
PROP FULL DEPTH PVMT LESS THAN 4'
R&S BOULDER (TYP)
PROP CONST ℄
PROP FULL DEPTH PVMT
N12°23'44"E
961.28'
PROP EOP (TYP)
PROP TEMP EASEMENT
PROP PUE
R&R MB
PROP HMA DWY (TYP)
MEET EXIST DWY (SAWCUT)
PROP PUE
R&R MB
MEET EXIST DWY (SAWCUT)
BEGIN CLEARING & GRUBBING
PROP PUE
PROP TEMP EASEMENT
END CLEARING & GRUBBING
PROP HMA DWY (TYP)
MEET EXIST DWY (SAWCUT)
R&R MB
PROP PUE
1921 COUNTY LAYOUT
6' STOCKADE
TREELINE
BOULDERS
GRASS
WOOD
OHW
UPL
EP
MB
RET
161
162
163
164
165
166
32
33
34
35
36
37
9
10

0 20 50 100

SCALE: 1" = 20'

GUARDRAIL DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	SEE UTILITY PLANS	SEE UTILITY PLANS

LEGEND

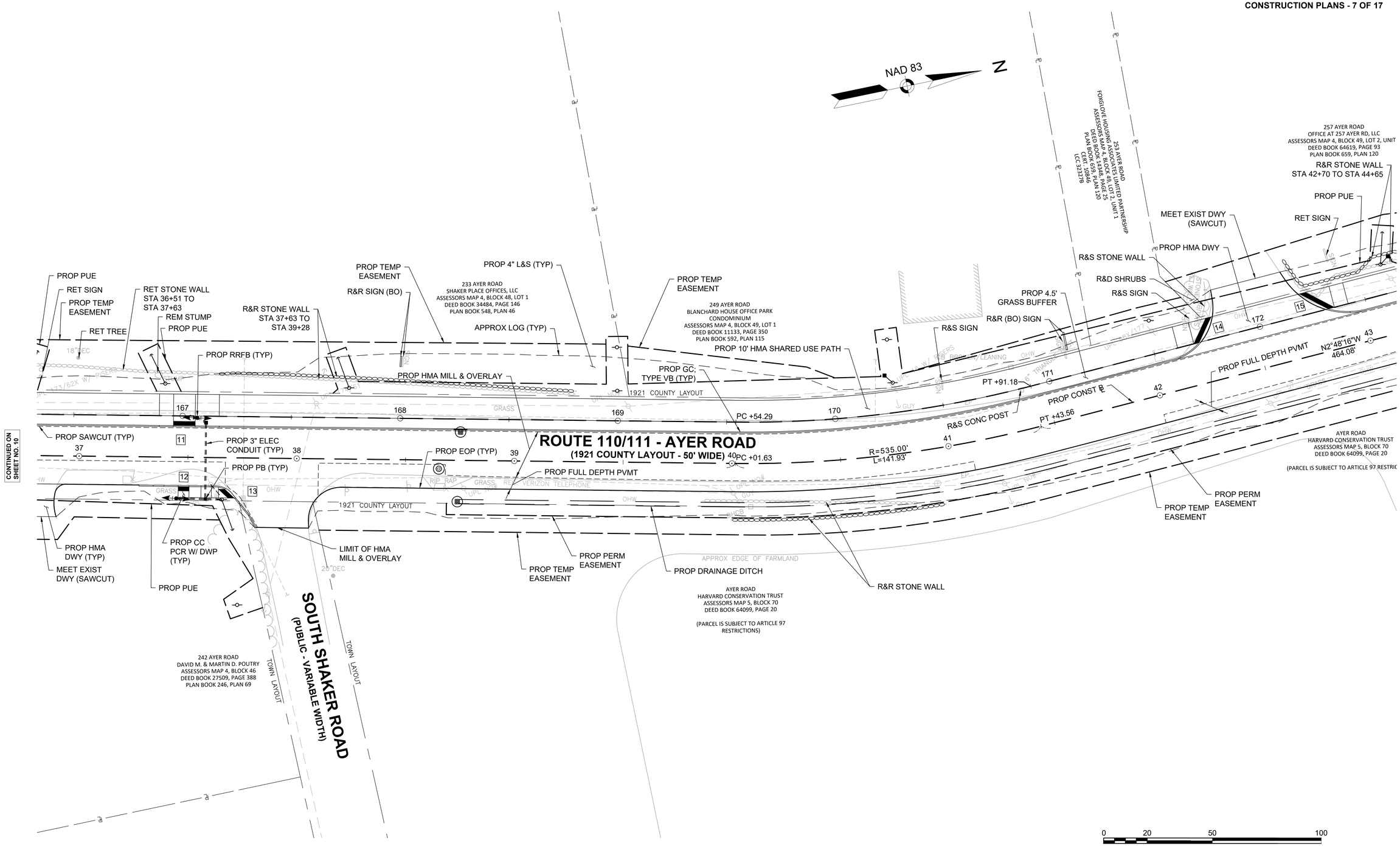
△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 7 OF 17



609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 8 OF 17

NAD 83

N

259 AYER ROAD
259 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 51
DEED BOOK 69129, PAGE 227
PLAN BOOK 462, PLAN 72

257 AYER ROAD
OFFICE AT 257 AYER RD, LLC
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 2
DEED BOOK 64619, PAGE 93
PLAN BOOK 659, PLAN 120

AYER ROAD
HARVARD CONSERVATION TRUST
ASSESSORS MAP 5, BLOCK 70
DEED BOOK 64099, PAGE 20

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

256 AYER ROAD
256 AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 41
DEED BOOK 59556, PAGE 235
PLAN BOOK 281, PLAN 117

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

262 AYER ROAD
DKMF REALTY, LLC
ASSESSORS MAP 4, BLOCK 40
DEED BOOK 61126, PAGE 24

264 AYER ROAD
THREE SEASONS TREESCAPE, LLC
ASSESSORS MAP 4, BLOCK 39
DEED BOOK 64293, PAGE 91
PLAN BOOK 379, PLANS 10-11

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PROP HDWL
PROP PERM DRAINAGE EASEMENT
PROP STONE FOR PIPE ENDS
PROP 4.5' GRASS BUFFER
PROP 10' HMA SHARED USE PATH
APPROX LOG (TYP)
PROP TEMP EASEMENT
BEGIN CLEARING & GRUBBING
PROP PUE
RET SIGN
R&R STONE WALL STA 42+70 TO STA 44+65
PROP GC; TYPE VB (TYP)
PROP CONST ℄
N2°48'16"W 464.08'
PROP 4" L&S (TYP)
END CLEARING & GRUBBING
MEET EXIST DWY (SAWCUT)
R&R SIGN (BO)
R&S PLANTER
PC +55.26
PROP HMA MILL & OVERLAY
PC +07.64
R&R MB
R&R MB (2)
RET LP
MEET EXIST DWY (SAWCUT)
PROP EOP (TYP)
PROP DRAINAGE DITCH
PROP PERM EASEMENT
REM TREE
PROP HMA DWY (TYP)
MEET EXIST DWY (SAWCUT)
PROP PERM EASEMENT
R&R (BO) LP
PROP TEMP EASEMENT
PROP FULL DEPTH PVMT
MEET EXIST DWY (SAWCUT)
RET SIGN
PROP PUE
BEGIN CLEARING & GRUBBING
PROP TEMP EASEMENT
R&R STONE WALL
END CLEARING & GRUBBING
PROP SAWCUT (TYP)
R=715.00'
L=184.07'
PT +44.22
PT +91.71
RET TREE; PROP TREE PROTECTION
MEET EXIST DWY (SAWCUT)
PROP TEMP EASEMENT
PROP PUE

CONTINUED ON SHEET NO. 11

CONTINUED ON SHEET NO. 13

0 20 50 100

SCALE: 1" = 20'

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

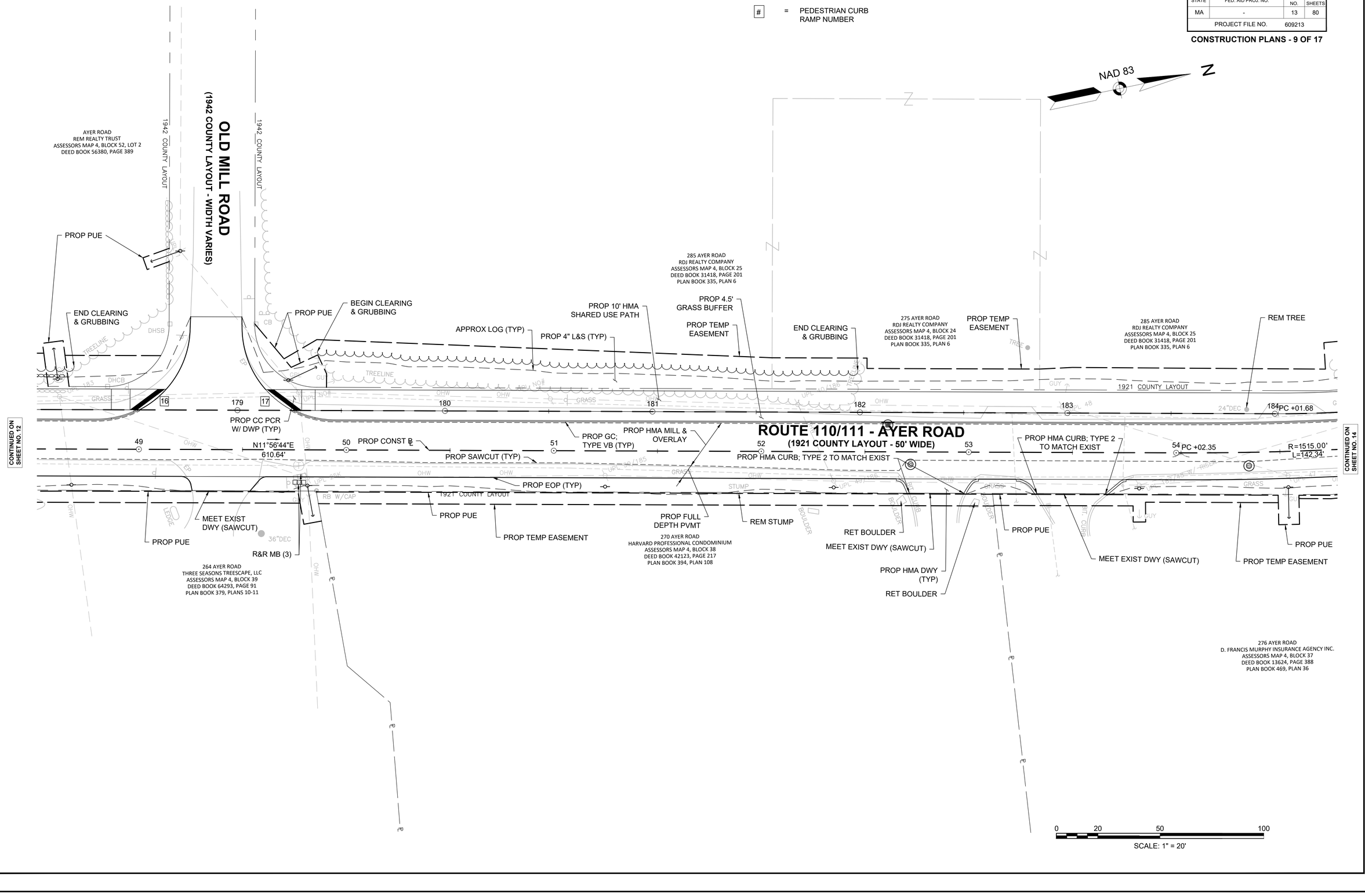
[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 9 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:06 PM



GUARDRAIL DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	SEE UTILITY PLANS	SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 10 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:07 PM

NAD 83 N

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PROP 10' HMA SHARED USE PATH
PROP PUE
REM TREE
PROP TEMP EASEMENT
RET LP
R&R STONE WALL
RET PLANTER WITH SIGN
PROP PUE
PROP TEMP EASEMENT
APPROX LOG (TYP)
RET LP
PROP CC PCR W/ DWP (TYP)
PROP 4.5' GRASS BUFFER
RET LP
REM STUMP
RET LP
R&S CONC BARRIER (2)
MEET EXIST DWY (SAWCUT)
RET SIGN
RET LP
R&R STONE WALL STA 58+17 TO STA 59+45
PROP 4" L&S (TYP)
RET STONE WALL STA 59+45 TO STA 59+47
MEET EXIST DWY (SAWCUT)
PROP PUE
REM HDWL
MEET EXIST DWY (SAWCUT)
PROP HMA DWY (TYP)
PROP GC; TYPE VB (TYP)
PROP SAWCUT (TYP)
PROP CONST ℄
R&R MB
PROP PUE
PROP TEMP EASEMENT
MEET EXIST DWY (SAWCUT)
RET BOULDERS
R&R MB
PROP PUE
PROP TEMP EASEMENT
MEET EXIST DWY (SAWCUT)
PROP HMA MILL & OVERLAY
PROP FULL DEPTH PVMT
PROP PUE
PROP TEMP EASEMENT
RET TREE; PROP TREE PROTECTION
MEET EXIST DWY (SAWCUT)
PROP HMA DWY (TYP)
PROP PUE
PROP PUE
PROP TEMP EASEMENT
PC +01.68
PT +48.66
PT +44.69
R=1515.00'
L=142.34'
N6°33'44"E
1057.99'

CONTINUED ON SHEET NO. 13

CONTINUED ON SHEET NO. 15

276 AYER ROAD
FRANCIS MURPHY INSURANCE AGENCY INC.
ASSESSORS MAP 4, BLOCK 37
DEED BOOK 13624, PAGE 388
PLAN BOOK 469, PLAN 36

280 AYER ROAD
YUKON HOLDINGS, LLC
ASSESSORS MAP 4, BLOCK 36
DEED BOOK 48875, PAGE 84
PLAN BOOK 469, PLAN 36

284 AYER ROAD
DAVID B. ALEXANDER
ASSESSORS MAP 4, BLOCK 35
DEED BOOK 63500, PAGE 332
PLAN BOOK 587, PLAN 5

288 AYER ROAD
THE 39 EATON REALTY TRUST
ASSESSORS MAP 4, BLOCK 34
DEED BOOK 67617, PAGE 325
PLAN BOOK 389, PLAN 9

0 20 50 100
SCALE: 1" = 20'

GUARDRAIL DETAILS

STA 64+09 RT TO 64+34 RT TANGENT END TREATMENT, TL-2
STA 64+34 RT TO 65+84 RT GUARDRAIL, TL-2 (DEEP POST)
STA 65+84 RT TO 66+09 RT TANGENT END TREATMENT, TL-2

STA 64+49 LT TO 64+59 LT TRAILING ANCHORAGE
STA 64+59 LT TO 67+22 LT GUARDRAIL, TL-2 (DEEP POST)
STA 67+22 LT TO 67+47 LT TANGENT END TREATMENT, TL-2

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 11 OF 17

IMPACT TYPE

PERMANENT IMPACTS
453 SF

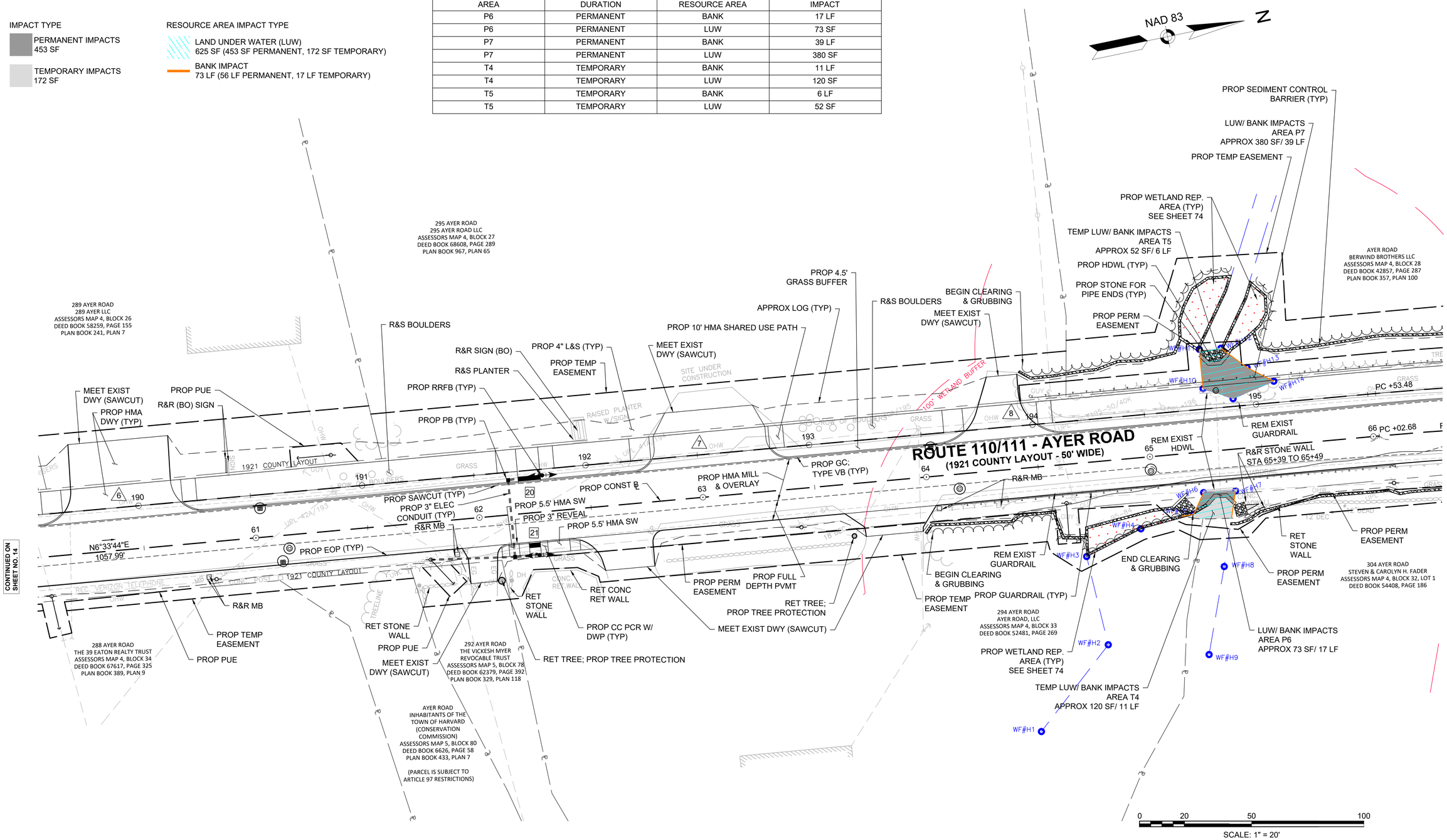
TEMPORARY IMPACTS
172 SF

RESOURCE AREA IMPACT TYPE

LAND UNDER WATER (LUW)
625 SF (453 SF PERMANENT, 172 SF TEMPORARY)

BANK IMPACT
73 LF (56 LF PERMANENT, 17 LF TEMPORARY)

RESOURCE AREA IMPACTS			
AREA	DURATION	RESOURCE AREA	IMPACT
P6	PERMANENT	BANK	17 LF
P6	PERMANENT	LUW	73 SF
P7	PERMANENT	BANK	39 LF
P7	PERMANENT	LUW	380 SF
T4	TEMPORARY	BANK	11 LF
T4	TEMPORARY	LUW	120 SF
T5	TEMPORARY	BANK	6 LF
T5	TEMPORARY	LUW	52 SF



609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:07 PM

GUARDRAIL DETAILS

STA 64+09 RT TO 64+34 RT TANGENT END TREATMENT, TL-2
STA 64+34 RT TO 65+84 RT GUARDRAIL, TL-2 (DEEP POST)
STA 65+84 RT TO 66+09 RT TANGENT END TREATMENT, TL-2

STA 64+49 LT TO 64+59 LT TRAILING ANCHORAGE
STA 64+59 LT TO 67+22 LT GUARDRAIL, TL-2 (DEEP POST)
STA 67+22 LT TO 67+47 LT TANGENT END TREATMENT, TL-2

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

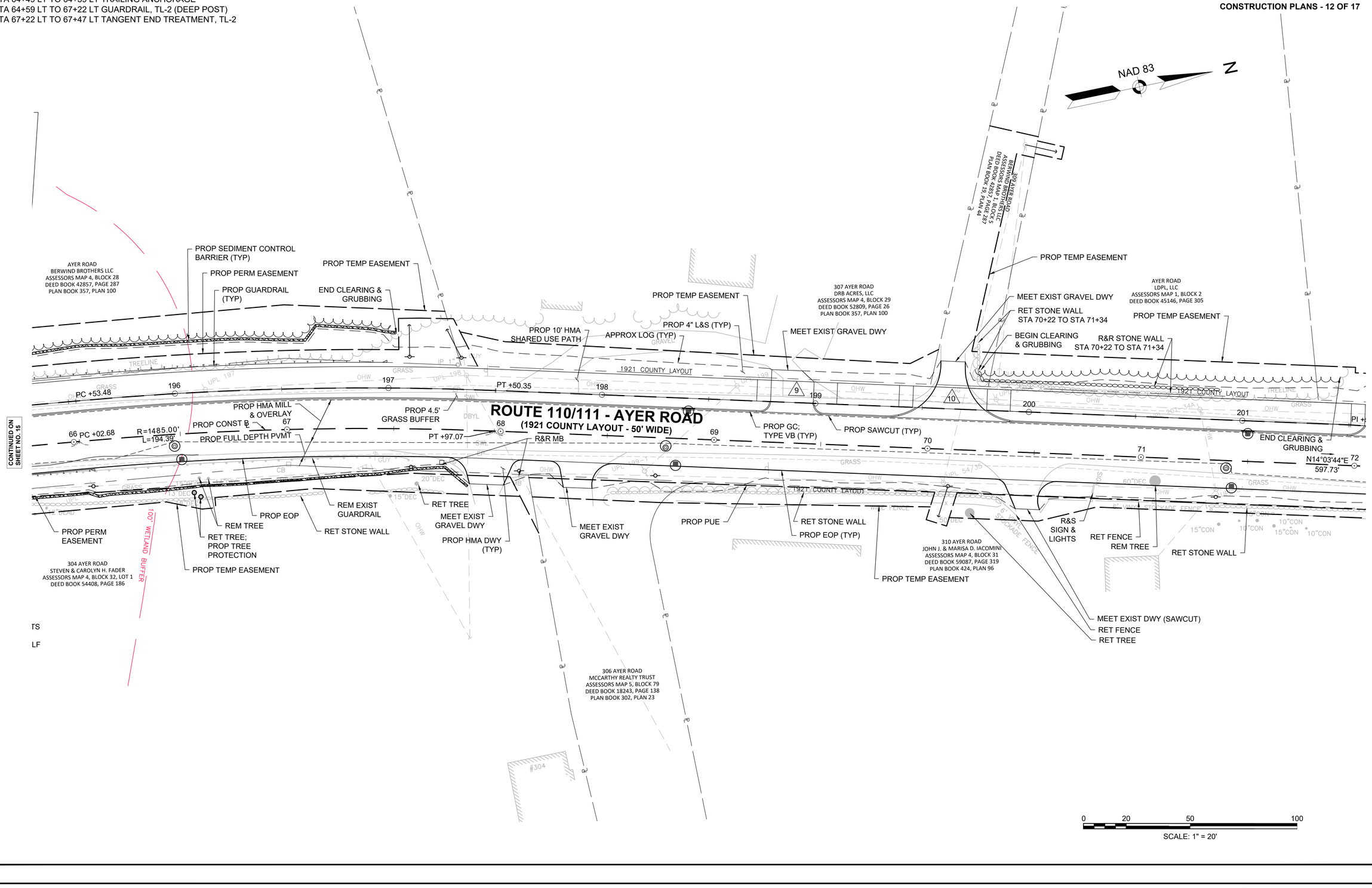
△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 12 OF 17



609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:07 PM

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

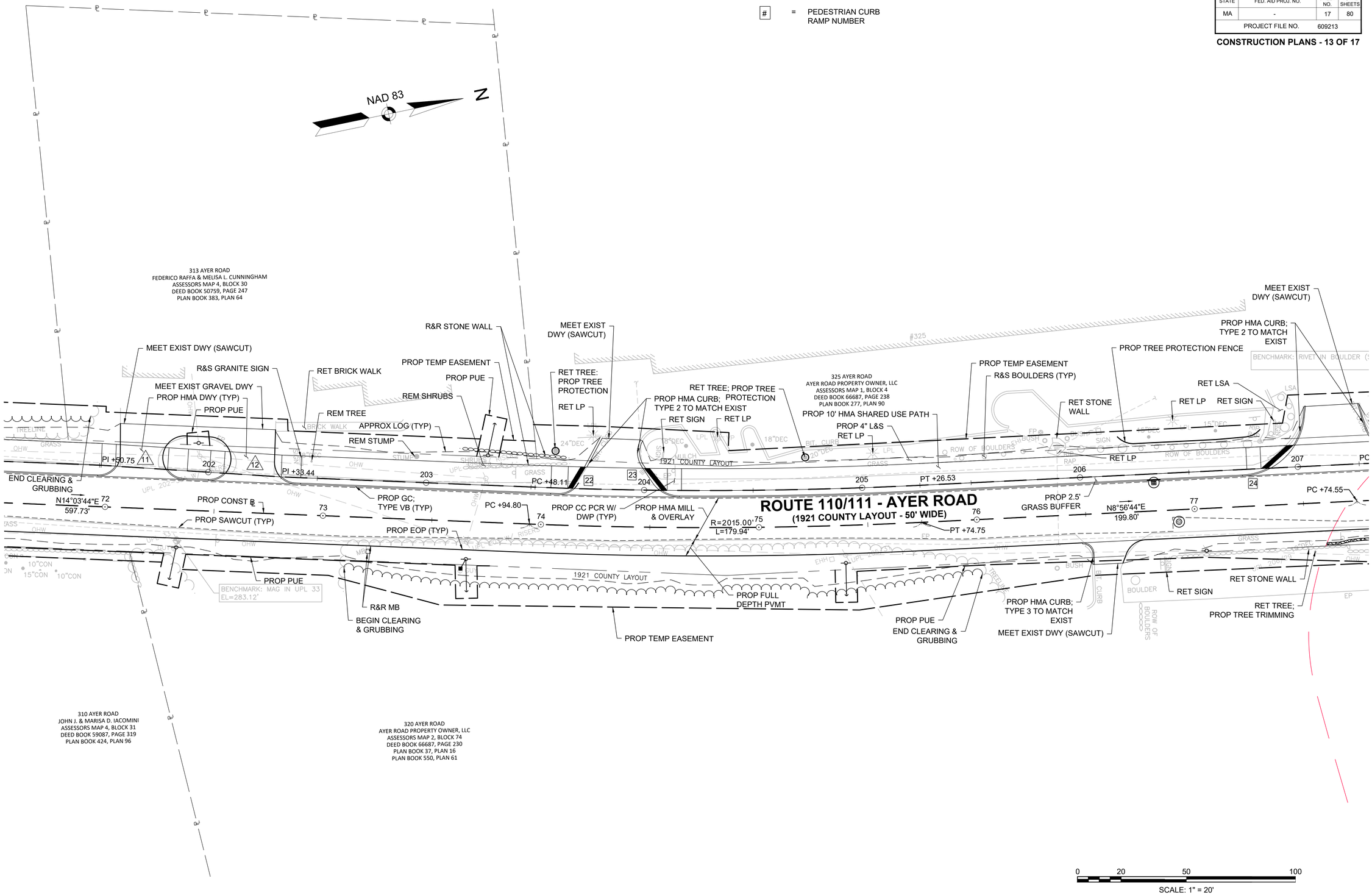
[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 13 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:07 PM



0 20 50 100

SCALE: 1" = 20'

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 14 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:07 PM

NAD 83 N

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

327 AYER ROAD
LAWRENCE C. DOE &
PAMELA C. LAWSON
ASSESSORS MAP 1, BLOCK 3
DEED BOOK 45146, PAGE 310

320 AYER ROAD
AYER ROAD PROPERTY OWNER, LLC
ASSESSORS MAP 2, BLOCK 74
DEED BOOK 66687, PAGE 230
PLAN BOOK 37, PLAN 16
PLAN BOOK 550, PLAN 61

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

100' WETLAND BUFFER

PROP 10' HMA SHARED USE PATH

MEET EXIST DWY (SAWCUT)

PROP TEMP EASEMENT

PROP HMA DWY (TYP)

PROP 4" L&S (TYP)

R&D PLANTER EDGING

APPROX LOG (TYP)

R&R (BO)

MEET EXIST DWY (SAWCUT)

R&D WOOD EDGING

R&S BOULDER

PROP TEMP EASEMENT

MEET EXIST DWY (SAWCUT)

PROP PUE

PROP 4.5' GRASS BUFFER

PROP CLEARING & GRUBBING

REM TREE (PAID UNDER ITEM 101.)

MEET EXIST DWY (SAWCUT)

PROP HMA DWY (TYP)

RET STONE WALL

RET LP

RET BOULDER

RET SIGN

PROP CC PCR W/ DWP

REM BOULDER

(STATION 16+41)
EL=238.10

PROP GC; TYPE VB (TYP)

PROP 3.5' GRASS BUFFER

PROP HMA MILL & OVERLAY

PROP FULL DEPTH PVMT

PT +04.05

PT +35.82

R=495.00'
L=361.27'

PROP SAWCUT (TYP)

PROP 2.5' GRASS BUFFER

PROP CONST ℄

PC +28.07

PC +74.55

NOTE: WF#J9 WAS NOT FOUND

WF#J1
WF#J2
WF#J3
WF#J4
WF#J5
WF#J6
WF#J7
WF#J8
WF#J10
WF#J11
WF#J12
WF#J13
WF#J14
WF#J15
WF#J16
WF#J17
WF#J18
WF#J19
WF#J20
WF#J21

R&R MB

BEGIN CLEARING & GRUBBING

END CLEARING & GRUBBING

PROP SEDIMENT CONTROL BARRIER (TYP)

PROP TEMP EASEMENT

PROP PUE

RET TREE; PROP TREE TRIMMING

RET STONE WALL

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PROP EOP (TYP)

N50°45'44"E
310.69'

1921 COUNTY LAYOUT

WOOD PLANTER EDGING (1' WIDE)

GRASS

TREELINE

EP

BIT DRIVE

GUY

CONTINUED ON SHEET NO. 17

CONTINUED ON SHEET NO. 19

0 20 50 100

SCALE: 1" = 20'

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

□# = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 15 OF 17

CONTINUED ON SHEET NO. 18

CONTINUED ON SHEET NO. 20

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:07 PM

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

343 AYER ROAD
KATHLEEN M. DECOT
ASSESSORS MAP 2, BLOCK 2
DEED BOOK 50213, PAGE 223
PLAN BOOK 122, PLAN 50

345 AYER ROAD
GEOFFREY O. & JENNIFER K. GILLARD
ASSESSORS MAP 2, BLOCK 3
DEED BOOK 57294, PAGE 103
PLAN BOOK 122, PLAN 50

341 AYER ROAD
ELIZABETH MAE SHUMAN JOYCE &
CHRISTOPHER MICHAEL JOYCE
ASSESSORS MAP 2, BLOCK 1
DEED BOOK 68063, PAGE 317
PLAN BOOK 122, PLAN 50

346 AYER ROAD
FRANK, JR. & BARBARA S. HEIM
ASSESSORS MAP 2, BLOCK 11
DEED BOOK 4971, PAGE 277
PLAN BOOK 329, PLAN 92

344 AYER ROAD
KATIE ELIZABETH & NATHAN J. BERG
ASSESSORS MAP 2, BLOCK 12
DEED BOOK 59619, PAGE 196
PLAN BOOK 393, PLAN 112

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

MYRICK LANE
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 2, BLOCK 13
DEED BOOK 5247, PAGE 435
PLAN BOOK 349, PLAN 92
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

NAD 83

N

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

MYRICK LANE
(PUBLIC - 50' WIDE)

1921 COUNTY LAYOUT

TOWN LAYOUT

MEET EXIST DWY (SAWCUT)
PROP HMA DWY (TYP)
BEGIN CLEARING & GRUBBING
R&R STONE WALL
END CLEARING & GRUBBING
RET FENCE
PROP TEMP EASEMENT
PROP 4" L&S (TYP)
PROP 4.5' GRASS BUFFER
R&S WALL
PROP 10' HMA SHARED USE PATH
PROP PUE
PROP GC; TYPE VB (TYP)
APPROX LOG (TYP)
R&S BOULDERS
RET FENCE STA 86+63 TO 86+68
R&S FENCE STA 86+68 TO 86+70
PROP HMA MILL & OVERLAY
PROP SAWCUT (TYP)
PROP CONST ℄
PROP 3" ELEC CONDUIT (TYP)
PC +11.36
PC +46.51
PT +28.31
PT +75.85
R=505.00'
L=329.35'
N13°23'44"E 341.21'
R&R MB
R&R MB (2)
PROP FULL DEPTH PVMT
PROP SEDIMENT CONTROL BARRIER (TYP)
PROP TEMP EASEMENT
PROP CC PCR W/ DWP (TYP)
PROP RRFB (TYP)
PROP EOP (TYP)
PROP PB (TYP)
PROP 5.5 HMA SIDEWALK
END CLEARING & GRUBBING
LIMIT OF HMA MILL & OVERLAY
BEGIN CLEARING & GRUBBING
PROP HMA DWY (TYP)
MEET EXIST DWY (SAWCUT)
END CLEARING & GRUBBING
PROP PUE
PROP TEMP EASEMENT
RET STONE WALL
BEGIN CLEARING & GRUBBING
MEET EXIST DWY (SAWCUT)
END CLEARING & GRUBBING
PROP TEMP EASEMENT
RET STONE WALL
PROP PUE
BEGIN CLEARING & GRUBBING
RET TREE
PROP TEMP EASEMENT
RET BOULDER
REM HEDGE
BEGIN CLEARING & GRUBBING
MEET EXIST DWY (SAWCUT)
R&S BOUND
PROP 4.5' GRASS BUFFER
PROP TEMP EASEMENT
MEET EXIST DWY (SAWCUT)
PROP PUE
PROP GC; TYPE VB (TYP)
APPROX LOG (TYP)
R&S BOULDERS
R&S WALL
PROP PUE
PROP TEMP EASEMENT
PROP PUE
R&R STONE WALL
PROP TEMP EASEMENT
END CLEARING & GRUBBING
R&R MB (2)
BEGIN CLEARING & GRUBBING
PROP HMA DWY (TYP)
MEET EXIST DWY (SAWCUT)
END CLEARING & GRUBBING
PROP PUE
PROP TEMP EASEMENT

0 20 50 100

SCALE: 1" = 20'

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 16 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:08 PM

NAD 83 N

CONTINUED ON SHEET NO. 19

CONTINUED ON SHEET NO. 21

349 AYER ROAD
CHRISTOPHER & ELIZABETH HORNE
ASSESSORS MAP 2, BLOCK 4
DEED BOOK 56424, PAGE 146
PLAN BOOK 122, PLAN 50

351 AYER ROAD
YELLOW BOOTS REALTY TRUST
ASSESSORS MAP 2, BLOCK 5
DEED BOOK 64062, PAGE 141
PLAN BOOK 122, PLAN 50

355 AYER ROAD
ROBERT J., JR. & YULING L. DIPIETRO
ASSESSORS MAP 2, BLOCK 6
DEED BOOK 23343, PAGE 164
PLAN BOOK 122, PLAN 50

361 AYER ROAD
JOHN E. SWANSON, III,
& LISA A.R. SHAW
ASSESSORS MAP 2, BLOCK 7
DEED BOOK 60577, PAGE 356
PLAN BOOK 904, PLAN 84

350 AYER ROAD
LISA MCATEER
ASSESSORS MAP 2, BLOCK 10
DEED BOOK 63929, PAGE 220

354 AYER ROAD
GILLIAN D. PRICE & CHRISTOPHER KRUEGLER
ASSESSORS MAP 2, BLOCK 9
DEED BOOK 32703, PAGE 258

0 AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8, LOT 1
DEED BOOK 61239, PAGE 194
PLAN BOOK 143, PLAN 89

AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8
DEED BOOK 62439, PAGE 134
PLAN BOOK 143, PLAN 89

(PARCEL IS SUBJECT TO CONSERVATION RESTRICTIONS AND ARTICLE 97 RESTRICTIONS)

#349 #350 #351 #354 #355

GARAGE

PROP PUE
MEET EXIST DWY (SAWCUT)
PROP TEMP EASEMENT
R&S LIGHTED POST
R&S PLANTER
PROP TEMP EASEMENT
MEET EXIST DWY (SAWCUT)
R&R (BO) LP
PROP PUE
PROP PUE
PROP 4.5' GRASS BUFFER
RET TREE; PROP TREE PROTECTION
R&R STONE WALL
APPROX LOG (TYP)
R&S BOULDER
PROP 4" L&S (TYP)
MEET EXIST DWY (SAWCUT)
PROP 10' HMA SHARED USE PATH
RET TREE; PROP TREE PROTECTION
PROP TEMP EASEMENT
RET TREE; PROP TREE PROTECTION
R&R STONE WALL
STA 94+21 TO 94+27
MEET EXIST DWY (SAWCUT)
BEGIN CLEARING & GRUBBING
RET TREE; PROP TREE PROTECTION
REM TREE (PAID UNDER ITEM 101.)
RET STONE WALL
PROP TEMP EASEMENT
END CLEARING & GRUBBING
MEET EXIST DWY (SAWCUT)
PROP HMA DWY

1921 COUNTY LAYOUT

PC +69.52
PT +94.06
PT 241.82
PI +30.02
PI +14.92
PI +04.87
PI +89.76
N0°47'16"W 557.41'
R=715.00' L=177.00'

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PROP SAWCUT (TYP)
PROP TEMP EASEMENT
PROP EOP (TYP)
PROP CONST ℄
PROP HMA MILL & OVERLAY
PROP GC; TYPE VB (TYP)
N13°23'44"E 341.21'
R&R MB
PC +17.06
END CLEARING & GRUBBING
RET STONE WALL
MEET EXIST DWY (SAWCUT)
PROP HMA DWY (TYP)
PROP PUE
RET TREE; PROP TREE PROTECTION
PROP TEMP EASEMENT
RET STONE WALL
MEET EXIST DWY (SAWCUT)
R&R MB
PROP FULL DEPTH PVMT
PROP PUE
R&R STONE WALL STA 91+62 TO 92+00
PROP TEMP EASEMENT
RET TREE
RET STONE WALL
PROP PUE
RET TREE; PROP TREE PROTECTION
MEET EXIST DWY (SAWCUT)
R&R MB (2)
PROP PUE
BENCHMARK: CB/EPLP TOP CENTER EL=261.38'
LIMIT OF CONSERVATION RESTRICTION

0 20 50 100

SCALE: 1" = 20'

GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

LEGEND

△# = DRIVEWAY NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	80
PROJECT FILE NO.	609213		

CONSTRUCTION PLANS - 17 OF 17

609213_HDS(NOI CONSTRUCTION PLANS).DWG Plotted on 3-Apr-2024 7:08 PM

NAD 83 N

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

CORTLAND LANE

MEET EXIST DWY (SAWCUT)
PROP HMA DWY
END CLEARING & GRUBBING
PROP TEMP EASEMENT
BEGIN CLEARING & GRUBBING
MEET EXIST DWY (SAWCUT)
END CLEARING & GRUBBING
PROP TEMP EASEMENT
MEET EXIST SW
PROP HMA SW
REM EXIST RAMP
BEGIN CLEARING & GRUBBING
RET STONE WALL STA 96+86 TO STA 97+73
REM RIPRAP
PROP 4.5' GRASS BUFFER
PROP 10' HMA SHARED USE PATH
PROP TEMP EASEMENT
APPROX LOG (TYP)
RET STONE WALL STA 96+86 TO STA 99+66
PROP LAYOUT ALTERATION
PROP 4" L&S (TYP)
PROP PUE
R&R STONE WALL STA 99+66 TO STA 100+08
END CLEARING & GRUBBING
PROP RRFB (TYP)
PROP BIKE RAMP
RET GUARDRAIL
PROJECT END
STA 100+74.80
N3025101.0471
E636754.0355
100' WETLAND BUFFER
PROP GC; TYPE VB (TYP)
PROP HMA MILL & OVERLAY
PROP SAWCUT (TYP)
PROP FULL DEPTH PVMT
RET STONE WALL
PROP TEMP EASEMENT
PC +99.49
PC +51.47
PROP CONST ℄
R=1813.00'
L=186.60'
PROP 3" ELEC CONDUIT (TYP)
PT +38.06 N5°06'33"E
61.94'
229+70.59
101+00
LIMIT OF MILL & OVERLAY
PROP CC PCR W/ DWP (TYP)
PROP PB (TYP)
PROP SEDIMENT CONTROL BARRIER (TYP)
100' WETLAND BUFFER
RET GUARDRAIL
N0°47'16"W
557.41'
CONTINUED ON SHEET NO. 20

AYER ROAD
CRAFTSMAN VILLAGE-HARVARD, LLC
ASSESSORS MAP 2, BLOCK 7, LOT 2
DEED BOOK 67486, PAGE 268
PLAN BOOK 912, PLAN 50

AYER ROAD
CRAFTSMAN VILLAGE-HARVARD, LLC
ASSESSORS MAP 2, BLOCK 7, LOT 1
DEED BOOK 67486, PAGE 268
PLAN BOOK 912, PLAN 50

AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8
DEED BOOK 62439, PAGE 134
PLAN BOOK 143, PLAN 89

(PARCEL IS SUBJECT TO CONSERVATION RESTRICTIONS AND ARTICLE 97 RESTRICTIONS)

29 HARVARD ROAD
29 HARVARD ROAD, LLC.
ASSESSORS MAP 35, LOT 22
DEED BOOK 71496, PAGE 87 (MIDDLESEX)

28 HARVARD ROAD
MAXANT INDUSTRIES, INC.
ASSESSORS MAP 35, LOT 53
DEED BOOK 12183, PAGE 272 (MIDDLESEX)
PLAN NO. 273 OF 1972

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY RIGHT-OF-WAY

MIDDLESEX COUNTY
TOWN OF AYER (SEE SURVEY NOTE 6)
TOWN OF HARVARD
WORCESTER COUNTY

WF#K1 WF#K2 WF#K5 WF#K6 WF#K7 WF#K8 WF#K9 WF#K10 WF#K11 WF#K12 WF#K13 WF#K14

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 1 OF 17

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:08 PM

LEGEND

- (#) = DRIVEWAY NUMBER
- C# = CURVE NUMBER
- # = PEDESTRIAN CURB RAMP NUMBER

NAD 83

ROUTE 110/111 - AYER ROAD
(1950 TOWN LAYOUT - STATE HIGHWAY ALTERATION 33799A)

1950 TOWN LAYOUT – STATE HIGHWAY ALTERATION 33799A

185 AYER ROAD
12 LANCASTER COUNTY ROAD LLC
ASSESSORS MAP 8, BLOCK 59
DEED BOOK 46796, PAGE 296
PLAN BOOK 226, PLAN 27

187 AYER ROAD
12 LANCASTER COUNTY ROAD, LLC
ASSESSORS MAP 8, BLOCK 60
DEED BOOK 54974, PAGE 74
PLAN BOOK 226, PLAN 27

AYER ROAD
WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

184 AYER ROAD
PHOENIX-DURANGO LLC
ASSESSORS MAP 8, BLOCK 41
DEED BOOK 64869, PAGE 275
PLAN BOOK 219, PLAN 95

188 AYER ROAD
SAMANTHA'S REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 1
DEED BOOK 33654, PAGE 159
PLAN BOOK 780, PLAN 121

196 AYER ROAD
BOWERS REALTY LLC
ASSESSORS MAP 8, BLOCK 40
DEED BOOK 45722, PAGE 348
PLAN BOOK 881, PLAN 28

198 AYER ROAD
HARVARD REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 3
DEED BOOK 45608, PAGE 289
PLAN BOOK 881, PLAN 28

200 AYER ROAD
HARVARD OFFICE PARK LLC
ASSESSORS MAP 8, BLOCK 40, LOT 2
DEED BOOK 28957, PAGE 72
PLAN BOOK 780, PLAN 121

1950 STATE ALTERATION | 1950 TOWN LAYOUT

1950 TOWN LAYOUT | 1924 COUNTY LAYOUT

PROJECT BEGIN
STA 8+69.90
N3016495.4630
E634274.6683

8+00 ① 9 C1 317.03 315.33 10 ② 313.58 PT +22.12 311.63 11 ② 309.44 L1 307.11 12 ② 304.79 + 302.46 13 ② 300.14 PC +15.24 297.81 14 ② C2 295.49 295.23

140+00 L20 PC +16.54 300.04 141 295.01

+69.38 29.77 LT
317.60
29.00'
315.61
313.86
311.63
309.17
306.60
304.29
301.97
300.19
297.33
297.55

+70.47 30.34 RT
316.16
29.00'
314.50
313.02
311.10
308.95
306.68
304.40
302.15
300.38 300.24 300.30
300.39 301.51
24.00'
13.00'

PC +01.66 28.73 LT
PT +12.70 36.79 LT
PC +62.83 30.01 LT
PT +68.44 28.02 LT
PC +47.52 27.13 LT
PT +52.58 32.30 LT
PC +98.05 31.51 LT
PT +02.98 26.41 LT
PROP CB RIM ELEV = 307.59
PROP DMH RIM ELEV = 307.47
PROP DMH RIM ELEV = 301.12
PT +66.72 77.91 LT
PRC +55.32 35.12 LT
PC +75.59 54.88 LT
PCC +73.57 32.87 LT
PT +83.37 24.06 LT
+13.72 24.96 LT
PC +45.20 24.55 LT
PROP 7" REVEAL
PC +00.40 19.24 RT
PROP CONST ℄
PT +14.43 29.00 RT
PC +68.39 24.47 RT
PT +91.98 13.00 RT
+65.02 28.65 RT
+15.24 13.00 RT
PC +82.09 29.88 RT
PT +90.74 34.36 RT
PC +20.66 33.90 RT
PT +28.77 27.07 RT
PC +65.11 21.16 RT
PT +76.56 25.56 RT

BENCHMARK: MAG IN UPL80-1 EL=311.69'

UPL 80-1 W/ RISERS
UPL 79
UPL 78/50
UPL 80/81
UPL 82-1/79-1S W/RISER
UPL 82/79 W/ RISER
1950 TOWN LAYOUT – STATE HIGHWAY ALTERATION 33799A
RAISED PLANTER
6" TRIANGLE CONC. POST
BIT. CURB
BRICK WALK
BOULDERS
FIRE ESCAPE
EXIST. 12"CPP
INV 12" CPP EL=293.49'
INV 15" RCP EL=303.01'
INV 15" RCP EL=302.28'
CB BROKEN
CONC. WALL
RIP RAP
CB1
EHH
GUY
EMH
SEW
EPLP
EG
EP
EM
W
B2

CONTINUED ON SHEET NO. 23

0 20 50 100
SCALE: 1" = 20'

AYER ROAD CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C1	8+00.00	3016432.1448	634245.1154	R=760.00' Δ=16°44'43" L=222.12' T=111.86'		10+22.12	3016622.3403	634358.3055
L1	10+22.12	3016622.3403	634358.3055		N39°07'50"E 293.12'	13+15.24	3016849.7147	634543.2891
C2	13+15.24	3016849.7147	634543.2891	R=1485.00' Δ=11°51'23" L=307.29' T=154.20'		16+22.53	3017106.3809	634711.2623

SUP CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L20	140+00.00	3016853.9249	634511.9076		N39°07'50"E 16.54'	140+16.54	3016866.7541	634522.3450

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	63° 04' 03"	9.00	9.91	5.52
C2	80° 37' 51"	8.00	11.26	6.79
C3	71° 39' 34"	12.00	15.01	8.66
C4	35° 48' 05"	10.00	6.25	3.23
C5	92° 39' 23"	5.00	8.09	5.24
C6	90° 22' 13"	5.00	7.89	5.03
C7	48° 16' 22"	15.00	12.64	6.72
C8	30° 55' 50"	32.00	17.27	8.85
C9	93° 59' 34"	10.00	16.40	10.72
C10	36° 09' 47"	71.00	44.81	23.18
C11	24° 03' 44"	53.00	22.26	11.30
C12	82° 27' 43"	10.00	14.39	8.76
C13	50° 57' 41"	30.00	26.68	14.30

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 2 OF 17

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:09 PM

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C2	13+15.24	3016849.7147	634543.2891	R=1485.00' Δ=11°51'23" L=307.29' T=154.20'		16+22.53	3017106.3809	634711.2623
L2	16+22.53	3017106.3809	634711.2623		N27°16'27"E 687.49'	23+10.02	3017717.4371	635026.3047

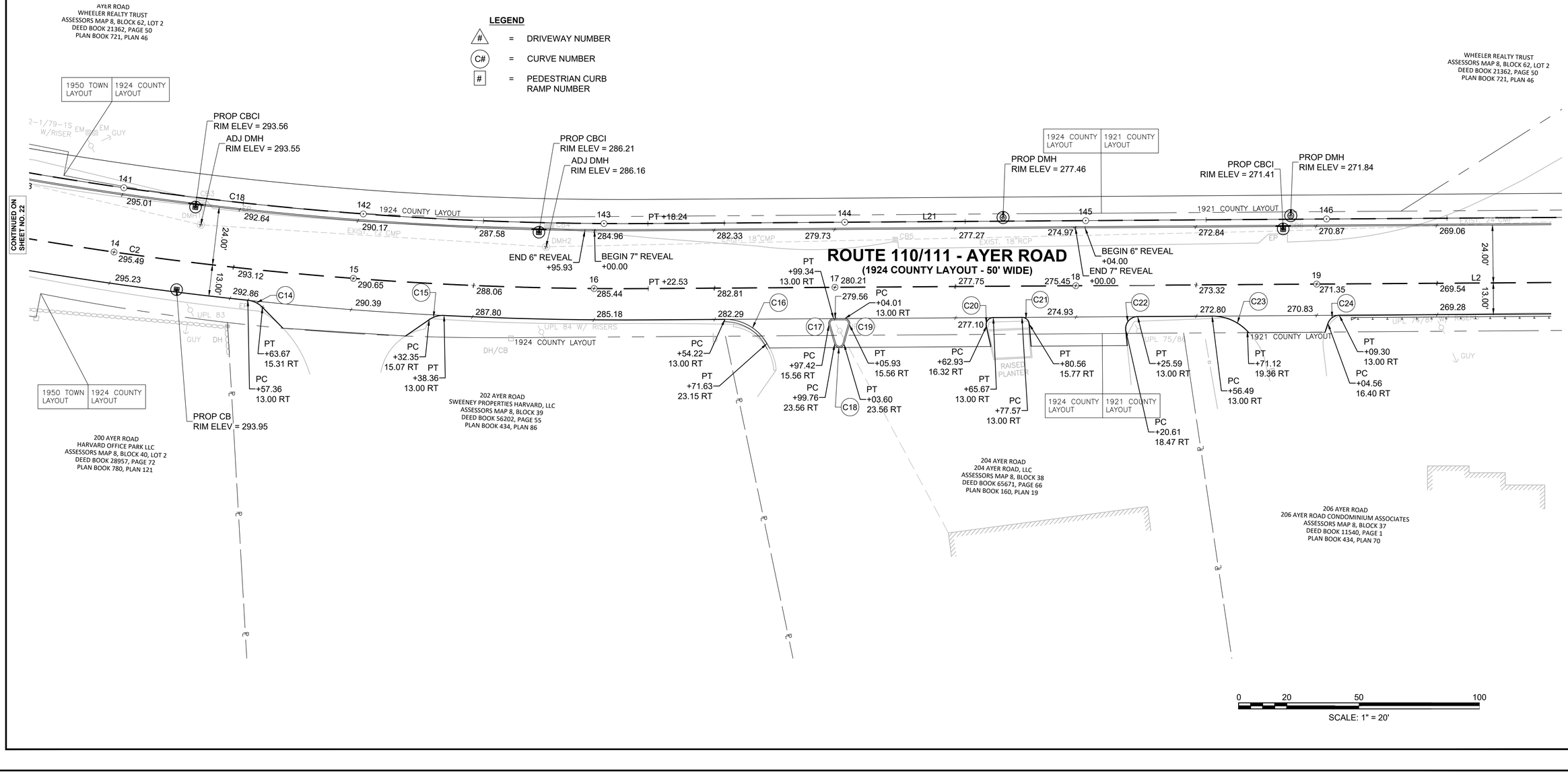
SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C18	140+16.54	3016866.7541	634522.3450	R=1458.00' Δ=11°51'23" L=301.71' T=151.39'		143+18.24	3017118.7536	634687.2641
L21	143+18.24	3017118.7536	634687.2641		N27°16'27"E 555.14'	148+73.39	3017612.1792	634941.6596

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C14	39° 38' 52"	10.00	6.92	3.60
C15	37° 25' 59"	10.00	6.53	3.39
C16	60° 30' 15"	20.00	21.12	11.66
C17	106° 15' 37"	2.00	3.71	2.67
C18	147° 28' 47"	2.00	5.15	6.86
C19	106° 15' 37"	2.00	3.71	2.67
C20	102° 24' 04"	3.00	5.36	3.73
C21	85° 30' 40"	3.00	4.48	2.77
C22	95° 20' 35"	5.00	8.32	5.49
C23	46° 59' 24"	20.00	16.40	8.69
C24	71° 18' 49"	5.00	6.22	3.59

NAD 83

LEGEND

- # = DRIVEWAY NUMBER
- C# = CURVE NUMBER
- # = PEDESTRIAN CURB RAMP NUMBER



609213_HDB(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:09 PM

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C25	90° 00' 00"	40.00	62.83	40.00
C26	89° 12' 27"	40.00	62.28	39.45
C27	50° 04' 14"	120.00	104.87	56.05
C28	53° 10' 28"	120.00	111.37	60.06
C32	94° 31' 21"	15.00	24.75	16.23

CONTINUED ON SHEET NO. 25

LANCASTER COUNTY ROAD
INHABITANTS OF THE TOWN OF HARVARD
ASSESSORS MAP 8, BLOCK 62, LOT 4
DEED BOOK 21051, PAGE 25
PLAN BOOK 721, PLAN 46

GEBO LANE
(PUBLIC - VARIABLE WIDTH)

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

WETLAND REPLICATION AREA SEE SHEET 74

WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

206 AYER ROAD
206 AYER ROAD CONDOMINIUM ASSOCIATES
ASSESSORS MAP 8, BLOCK 37
DEED BOOK 11540, PAGE 1
PLAN BOOK 434, PLAN 70

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 8, BLOCK 36
DEED BOOK 6223, PAGE 264
PLAN BOOK 434, PLAN 86

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

21+29.95 AYER ROAD=
110+00.00 GEBO LANE

BENCHMARK: NAIL UPL71/105-5
EL=257.20'

CONTINUED ON SHEET NO. 23

CONTINUED ON SHEET NO. 26

GEBO LANE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	110+00.00	3017557.3878	634943.7881		N62°43'33"W 68.77'	110+68.77	3017588.9039	634882.6595
C15	110+68.77	3017588.9039	634882.6595	R=120.00' Δ=53°10'28" L=111.37' T=60.06'		111+80.14	3017675.6508	634819.3131
L16	111+80.14	3017675.6508	634819.3131		N9°33'05"W 52.12'	112+32.26	3017727.0502	634810.6644
C16	112+32.26	3017727.0502	634810.6644	R=2000.00' Δ=1°59'38" L=69.60' T=34.80'		113+01.86	3017795.8686	634800.3125

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L2	16+22.53	3017106.3809	634711.2623		N27°16'27"E 687.49'	23+10.02	3017717.4371	635026.3047
C3	23+10.02	3017717.4371	635026.3047	R=7500.00' Δ=0°43'13" L=94.29' T=47.14'		24+04.31	3017801.5117	635068.9843
L3	24+04.31	3017801.5117	635068.9843		N26°33'14"E 241.06'	26+45.37	3018017.1438	635176.7482

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L21	143+18.24	3017118.7536	634687.2641		N27°16'27"E 555.14'	148+73.39	3017612.1792	634941.6596
C19	148+73.39	3017612.1792	634941.6596	R=35.00' Δ=93°24'11" L=57.06' T=37.14'		149+30.45	3017660.2239	634924.7147
L22	149+30.45	3017660.2239	634924.7147		N66°07'44"W 41.99'	149+72.44	3017677.2162	634886.3174
C20	149+72.44	3017677.2162	634886.3174	R=50.00' Δ=59°08'36" L=51.61' T=28.37'		150+24.05	3017716.8583	634856.9227
L23	150+24.05	3017716.8583	634856.9227		N6°59'07"W 299.22'	153+23.27	3018013.8587	634820.5329

LEGEND

- △# = DRIVEWAY NUMBER
- C# = CURVE NUMBER
- □# = PEDESTRIAN CURB RAMP NUMBER

0 20 50 100

SCALE: 1" = 20'

GEBO LANE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C16	112+32.26	3017727.0502	634810.6644	R=2000.00' Δ=1°59'38" L=69.60' T=34.80'		113+01.86	3017795.8686	634800.3125
L17	113+01.86	3017795.8686	634800.3125		N7°33'27"W 298.14'	116+00.00	3018091.4178	634761.1003

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L23	150+24.05	3017716.8583	634856.9227		N6°59'07"W 299.22'	153+23.27	3018013.8587	634820.5329
C21	153+23.27	3018013.8587	634820.5329	R=50.00' Δ=79°04'20" L=69.00' T=41.27'		153+92.27	3018067.5157	634854.7830
L24	153+92.27	3018067.5157	634854.7830		N72°05'13"E 102.17'	154+94.44	3018098.9394	634951.9963
C22	154+94.44	3018098.9394	634951.9963	R=210.00' Δ=17°33'22" L=64.35' T=32.43'		155+58.78	3018127.7297	635009.2614

LEGEND

- △# = DRIVEWAY NUMBER
- (C#) = CURVE NUMBER
- [#] = PEDESTRIAN CURB RAMP NUMBER

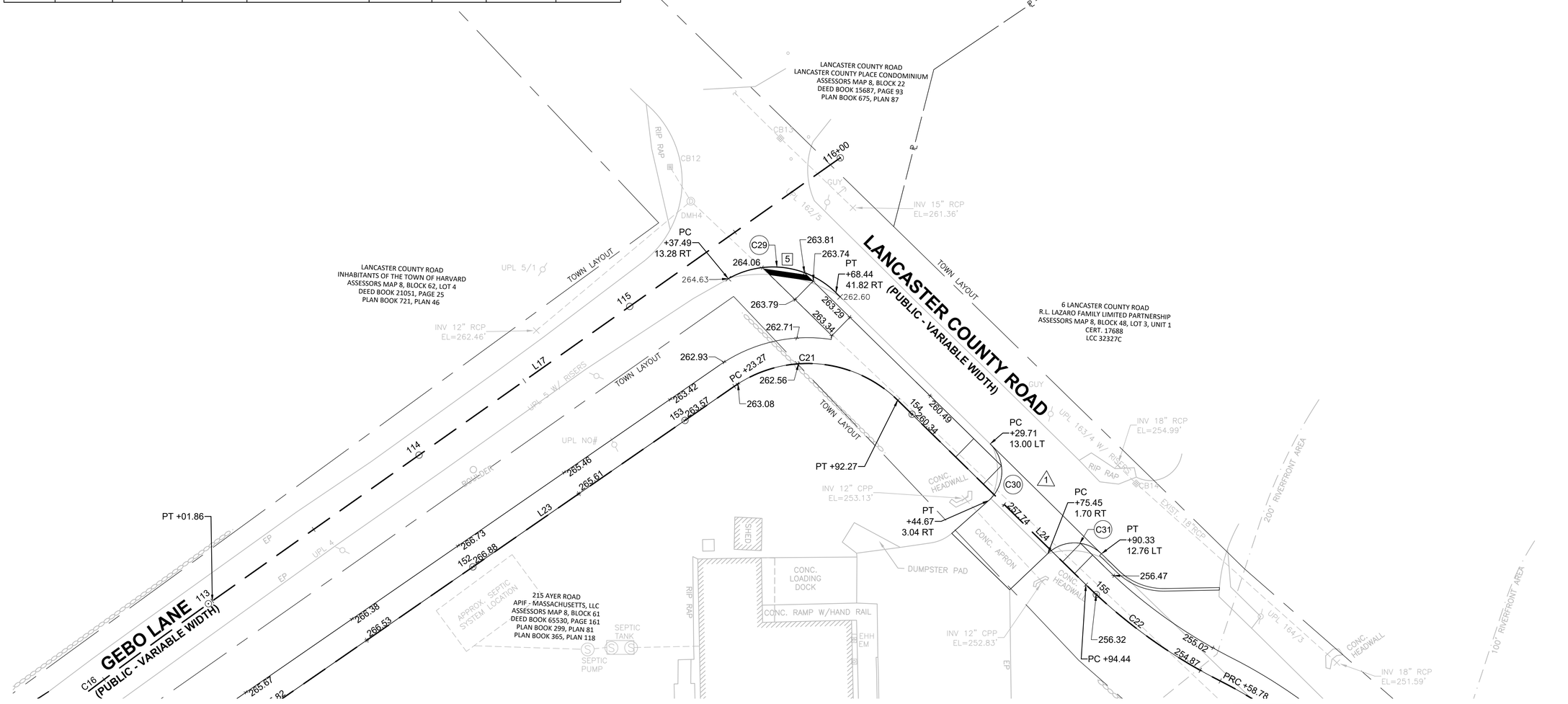
CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C29	73° 56' 45"	35.00	45.17	26.35
C30	93° 58' 05"	15.00	24.60	16.08
C31	87° 30' 30"	15.00	22.91	14.36

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 4 OF 17

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:10 PM



CONTINUED ON SHEET NO. 24

CONTINUED ON SHEET NO. 26

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 5 OF 17

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C32	94° 31' 21"	15.00	24.75	16.23
C33	60° 35' 20"	45.00	47.59	26.29
C34	91° 25' 02"	10.00	15.96	10.25
C35	49° 43' 17"	30.00	26.03	13.90
C36	41° 05' 49"	25.00	17.93	9.37
C37	91° 44' 32"	10.00	16.01	10.31
C38	91° 31' 58"	30.00	47.93	30.81
C39	13° 51' 05"	43.00	10.40	5.22
C40	14° 09' 26"	50.00	12.35	6.21
C41	11° 07' 56"	67.00	13.02	6.53
C42	83° 13' 22"	35.00	50.84	31.09

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	24+04.31	3017801.5117	635068.9843		N26°33'14"E 241.06'	26+45.37	3018017.1438	635176.7482
C4	26+45.37	3018017.1438	635176.7482	R=3500.00' Δ=1°48'47" L=110.76' T=55.38'		27+56.12	3018115.4179	635227.8205
L4	27+56.12	3018115.4179	635227.8205		N28°22'02"E 85.19'	28+41.32	3018190.3795	635268.2965
C5	28+41.32	3018190.3795	635268.2965	R=714.00' Δ=15°58'17" L=199.03' T=100.17'		30+40.35	3018376.3473	635337.3884
L5	30+40.35	3018376.3473	635337.3884		N12°23'44"E 961.28'	40+01.63	3019315.2225	635543.7376

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C22	154+94.44	3018098.9394	634951.9963	R=210.00' Δ=17°33'22" L=64.35' T=32.43'		155+58.78	3018127.7297	635009.2614
C23	155+58.78	3018127.7297	635009.2614	R=190.00' Δ=16°16'45" L=53.98' T=27.18'		156+12.77	3018152.4311	635057.0587
L25	156+12.77	3018152.4311	635057.0587		N70°48'35"E 176.18'	157+88.95	3018210.3418	635223.4462
C24	157+88.95	3018210.3418	635223.4462	R=100.00' Δ=48°51'56" L=85.29' T=45.43'		158+74.23	3018267.1603	635283.5718
C25	158+74.23	3018267.1603	635283.5718	R=695.00' Δ=9°47'29" L=118.77' T=59.53'		159+93.00	3018380.4258	635318.8313
L26	159+93.00	3018380.4258	635318.8313		N12°23'44"E 961.28'	169+54.29	3019319.3011	635525.1805

POOR FARM ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L18	120+00.00	3018318.9796	635322.2560		S72°50'31"E 40.76'	120+40.76	3018306.9543	635361.2045
L19	120+64.21	3018295.5395	635381.4855		S48°24'48"E 35.79'	121+00.00	3018271.7855	635408.2529

LEGEND

- △# = DRIVEWAY NUMBER
- (C#) = CURVE NUMBER
- [#] = PEDESTRIAN CURB RAMP NUMBER

CONTINUED ON SHEET NO. 38

CONTINUED ON SHEET NO. 25

CONTINUED ON SHEET NO. 27

6 LANCASTER COUNTY ROAD
R.L. LAZARO FAMILY LIMITED PARTNERSHIP
ASSESSORS MAP 8, BLOCK 48, LOT 3, UNIT 1
CERT. 17688
LCC 32327C

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

GAS EASEMENT
(NATIONAL GRID)
DEED BOOK 4726, PAGE 527
PLAN BOOK 305, PLAN 118

129 POOR FARM ROAD
LAURA A. CLARAGE
ASSESSORS MAP 8, BLOCK 35
DEED BOOK 64304, PAGE 359

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

LANCASTER COUNTY ROAD
(PUBLIC - VARIABLE WIDTH)

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

POOR FARM ROAD
(PUBLIC - VARIABLE WIDTH)

29+81 AYER ROAD=
120+00.00 POOR FARM ROAD

NAD 83

SCALE: 1" = 20'

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:10 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 6 OF 17

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C43	70° 58' 16"	8.00	9.91	5.70
C44	63° 44' 33"	10.00	11.13	6.22
C45	69° 04' 17"	5.00	6.03	3.44
C46	87° 07' 04"	30.00	45.61	28.53
C47	79° 48' 16"	35.00	48.75	29.27
C48	68° 15' 48"	5.00	5.96	3.39
C49	30° 35' 18"	21.00	11.21	5.74
C50	77° 43' 24"	5.00	6.78	4.03

NAD 83 N

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

CONTINUED ON SHEET NO. 26

CONTINUED ON SHEET NO. 28

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

233 AYER ROAD
SHAKER PLACE OFFICES, LLC
ASSESSORS MAP 4, BLOCK 48, LOT 1
DEED BOOK 34484, PAGE 146
PLAN BOOK 548, PLAN 46

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

232 AYER ROAD
BRYAN & REBECCA KELLEY
ASSESSORS MAP 8, BLOCK 23
DEED BOOK 57957, PAGE 89

236 AYER ROAD
ROBERT A. WILLIAMS JR.
& JANET M. WILLIAMS
ASSESSORS MAP 4, BLOCK 47
DEED BOOK 61011, PAGE 81
PLAN BOOK 347, PLAN 77

242 AYER ROAD
DAVID M. & MARTIN D. POUTRY
ASSESSORS MAP 4, BLOCK 46
DEED BOOK 27509, PAGE 388
PLAN BOOK 246, PLAN 69

100' RIVERFRONT AREA
200' RIVERFRONT AREA

PROP CBCI
RIM ELEV = 274.17

BENCHMARK: RIVET IN LEDGE (STATION 6640)
EL=278.26'

PROP DMH
RIM ELEV = 273.83

PROP CB
RIM ELEV = 273.87

PROP DMH
RIM ELEV = 265.00

PROP CB
RIM ELEV = 265.13

PROP CBCI
RIM ELEV = 281.91

PROP DMH
RIM ELEV = 281.86

PROP CB
RIM ELEV = 281.81

PC +84.36 14.00 LT
PT +14.33 42.49 LT
PC +44.12 42.80 LT
PT +78.57 14.00 LT
PC +22.82 18.39 RT
PT +30.38 13.00 RT
PC +39.96 13.00 RT
PT +48.93 18.58 RT
PT +74.08 13.00 RT
PC +69.47 16.21 RT
PC +68.82 13.00 RT
PT +73.52 16.15 RT
PT +94.02 13.00 RT
PCC +STA 89.13 16.94 RT
PC +89.72 28.00 RT

"236" WOOD POST

1921 COUNTY LAYOUT

6'STOCKADE

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	30+40.35	3018376.3473	635337.3884		N12°23'44"E 961.28'	40+01.63	3019315.2225	635543.7376

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L26	159+93.00	3018380.4258	635318.8313		N12°23'44"E 961.28'	169+54.29	3019319.3011	635525.1805

LEGEND

△# = DRIVEWAY NUMBER
(C#) = CURVE NUMBER
[#] = PEDESTRIAN CURB RAMP NUMBER

0 20 50 100
SCALE: 1" = 20'

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:10 PM

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	30+40.35	3018376.3473	635337.3884		N12°23'44"E 961.28'	40+01.63	3019315.2225	635543.7376
C6	40+01.63	3019315.2225	635543.7376	R=535.00' Δ=15°12'00" L=141.93' T=71.38'		41+43.56	3019456.2415	635555.5683
L6	41+43.56	3019456.2415	635555.5683		N2°48'16"W 464.08'	46+07.64	3019919.7653	635532.8624

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L26	159+93.00	3018380.4258	635318.8313		N12°23'44"E 961.28'	169+54.29	3019319.3011	635525.1805
C26	169+54.29	3019319.3011	635525.1805	R=516.00' Δ=15°12'00" L=136.89' T=68.85'		170+91.18	3019455.3119	635536.5911
L27	170+91.18	3019455.3119	635536.5911		N2°48'16"W 464.08'	175+55.26	3019918.8357	635513.8851

LEGEND

- △# = DRIVEWAY NUMBER
- (C#) = CURVE NUMBER
- [#] = PEDESTRIAN CURB RAMP NUMBER

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C50	77° 43' 24"	5.00	6.78	4.03
C51	50° 20' 31"	10.00	8.79	4.70
C52	91° 46' 36"	15.00	24.03	15.47
C53	85° 45' 55"	25.00	37.42	23.22
C54	70° 43' 33"	35.00	43.20	24.84

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 7 OF 17

609213_HDB(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:11 PM

NAD 83

233 AYER ROAD
SHAKER PLACE OFFICES, LLC
ASSESSORS MAP 4, BLOCK 48, LOT 1
DEED BOOK 34484, PAGE 146
PLAN BOOK 548, PLAN 46

249 AYER ROAD
BLANCHARD HOUSE OFFICE PARK CONDOMINIUM
ASSESSORS MAP 4, BLOCK 49, LOT 1
DEED BOOK 11133, PAGE 350
PLAN BOOK 592, PLAN 115

253 AYER ROAD
FOXGLOVE HOUSING ASSOCIATES LIMITED PARTNERSHIP
ASSESSORS MAP 4, BLOCK 49, LOT 25
DEED BOOK 14348, PAGE 125
PLAN BOOK 659, PLAN 120
CERT 135446
LCC 33278

257 AYER ROAD
OFFICE AT 257 AYER RD, LLC
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 2
DEED BOOK 64619, PAGE 93
PLAN BOOK 659, PLAN 120

PROP CBCI
RIM ELEV = 288.34

PROP DMH
RIM ELEV = 288.35

PROP DI
RIM ELEV = 287.59

1921 COUNTY LAYOUT

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PROP CONST ℄

PC +54.29

PC +01.63

PC +68.80
37.38 LT

PT +34.38
37.15 LT

PC +09.45
14.00 LT

PT +01.89
14.00 LT

PT +91.18

PT +94.02
13.00 RT

PC +62.92
13.00 RT

PCC
+STA 89.13
16.94 RT

PT +70.61
16.62 RT

PC +89.72
28.00 RT

AP +78.54
26.18 RT

+81.77
31.87 RT

PT +20.70
13.00 RT

PC +05.71
28.47 RT

SOUTH SHAKER ROAD
(PUBLIC - VARIABLE WIDTH)

TOWN LAYOUT

242 AYER ROAD
DAVID M. & MARTIN D. POUTRY
ASSESSORS MAP 4, BLOCK 46
DEED BOOK 27509, PAGE 388
PLAN BOOK 246, PLAN 69

APPROX EDGE OF FARMLAND

AYER ROAD
HARVARD CONSERVATION TRUST
ASSESSORS MAP 5, BLOCK 70
DEED BOOK 64099, PAGE 20

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

AYER ROAD
HARVARD CONSERVATION TRUST
ASSESSORS MAP 5, BLOCK 70
DEED BOOK 64099, PAGE 20

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTI

292.58
(HP +35.00)

292.05
(HP +75.17)

292.33
(HP +75.17)

PT +43.56

CONTINUED ON SHEET NO. 27

CONTINUED ON SHEET NO. 29

0 20 50 100

SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 8 OF 17

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:11 PM

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	41+43.56	3019456.2415	635555.5683		N2°48'16"W 464.08'	46+07.64	3019919.7653	635532.8624
C7	46+07.64	3019919.7653	635532.8624	R=715.00' Δ=14°45'00" L=184.07' T=92.55'		47+91.71	3020102.7405	635547.4896
L7	47+91.71	3020102.7405	635547.4896		N11°56'44"E 610.64'	54+02.35	3020700.1545	635673.8810

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L27	170+91.18	3019455.3119	635536.5911		N2°48'16"W 464.08'	175+55.26	3019918.8357	635513.8851
C27	175+55.26	3019918.8357	635513.8851	R=734.00' Δ=14°45'00" L=188.96' T=95.00'		177+44.22	3020106.6732	635528.9011
L28	177+44.22	3020106.6732	635528.9011		N11°56'44"E 657.46'	184+01.68	3020749.8981	635664.9844

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C54	70° 43' 33"	35.00	43.20	24.84
C55	59° 28' 20"	30.00	31.14	17.14
C56	106° 35' 49"	20.00	37.21	26.83
C57	107° 15' 41"	10.00	18.72	13.58
C58	59° 17' 42"	10.00	10.35	5.69
C59	50° 49' 28"	10.00	8.87	4.75
C60	85° 59' 32"	10.00	15.01	9.32
C61	39° 58' 42"	33.00	23.03	12.00
C62	65° 25' 06"	5.00	5.71	3.21
C63	43° 20' 17"	5.00	3.78	1.99
C64	31° 09' 42"	15.00	8.16	4.18
C65	40° 07' 41"	35.00	24.51	12.78
C66	61° 40' 03"	5.00	5.38	2.98
C67	87° 47' 00"	45.00	68.94	43.29

259 AYER ROAD
259 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 51
DEED BOOK 69129, PAGE 227
PLAN BOOK 462, PLAN 72

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

257 AYER ROAD
OFFICE AT 257 AYER RD, LLC
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 2
DEED BOOK 64619, PAGE 93
PLAN BOOK 659, PLAN 120

AYER ROAD
HARVARD CONSERVATION TRUST
ASSESSORS MAP 5, BLOCK 70
DEED BOOK 64099, PAGE 20

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

256 AYER ROAD
256 AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 41
DEED BOOK 59556, PAGE 235
PLAN BOOK 281, PLAN 117

262 AYER ROAD
DMM REALTY, LLC
ASSESSORS MAP 4, BLOCK 40
DEED BOOK 61126, PAGE 24

264 AYER ROAD
THREE SEASONS TREESCAPE, LLC
ASSESSORS MAP 4, BLOCK 39
DEED BOOK 64293, PAGE 91
PLAN BOOK 379, PLANS 10-11

CONTINUED ON SHEET NO. 28

CONTINUED ON SHEET NO. 30

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

LEGEND

△# = DRIVEWAY NUMBER

(C#) = CURVE NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

0 20 50 100

SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

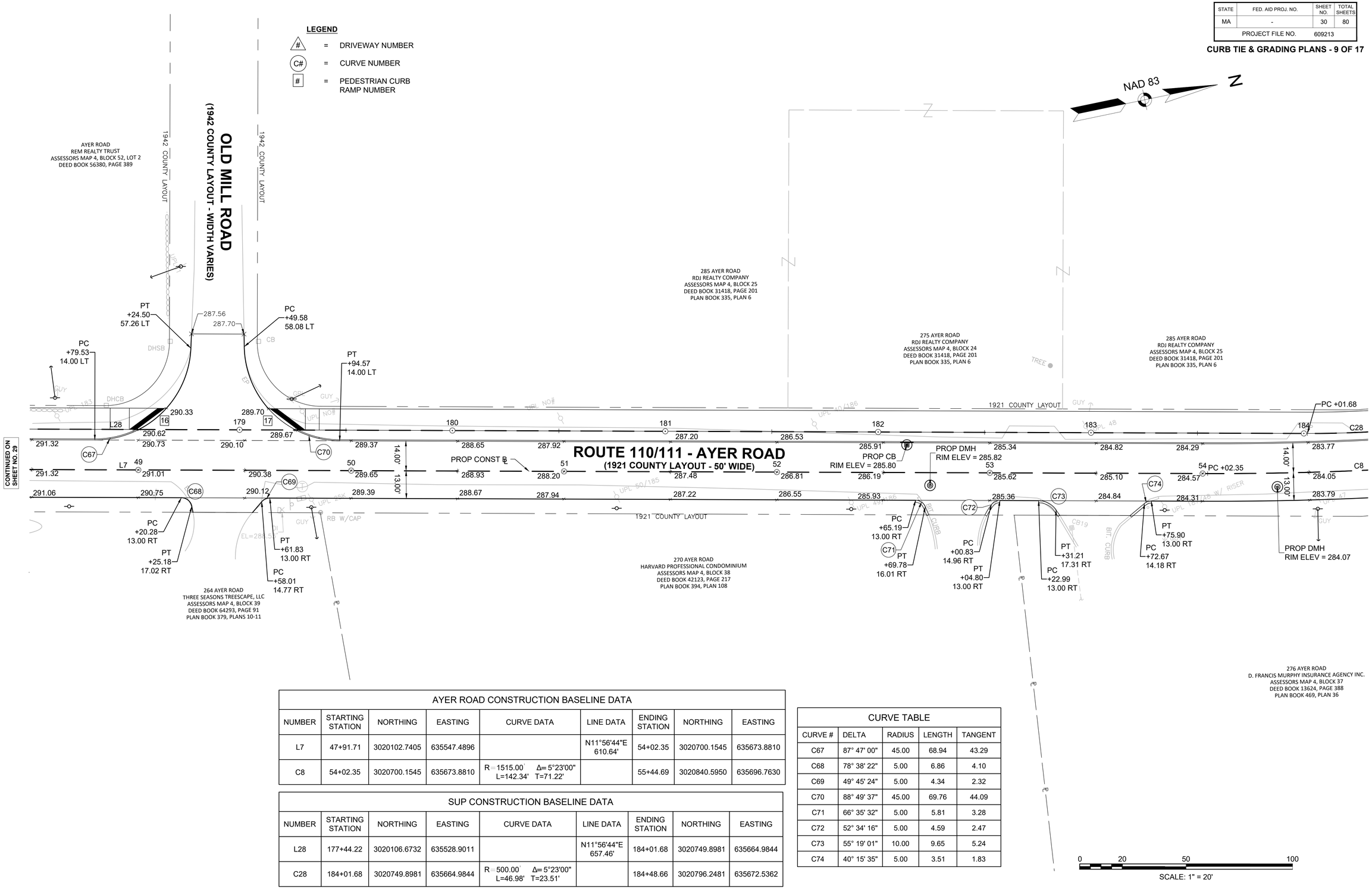
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 9 OF 17

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:11 PM

LEGEND

- △# = DRIVEWAY NUMBER
- C# = CURVE NUMBER
- # = PEDESTRIAN CURB RAMP NUMBER



AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	47+91.71	3020102.7405	635547.4896		N11°56'44"E 610.64'	54+02.35	3020700.1545	635673.8810
C8	54+02.35	3020700.1545	635673.8810	R=1515.00' Δ=5°23'00" L=142.34' T=71.22'		55+44.69	3020840.5950	635696.7630

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L28	177+44.22	3020106.6732	635528.9011		N11°56'44"E 657.46'	184+01.68	3020749.8981	635664.9844
C28	184+01.68	3020749.8981	635664.9844	R=500.00' Δ=5°23'00" L=46.98' T=23.51'		184+48.66	3020796.2481	635672.5362

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C67	87° 47' 00"	45.00	68.94	43.29
C68	78° 38' 22"	5.00	6.86	4.10
C69	49° 45' 24"	5.00	4.34	2.32
C70	88° 49' 37"	45.00	69.76	44.09
C71	66° 35' 32"	5.00	5.81	3.28
C72	52° 34' 16"	5.00	4.59	2.47
C73	55° 19' 01"	10.00	9.65	5.24
C74	40° 15' 35"	5.00	3.51	1.83

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 10 OF 17

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C8	54+02.35	3020700.1545	635673.8810	R=1515.00' Δ=5°23'00" L=142.34' T=71.22'		55+44.69	3020840.5950	635696.7630
L8	55+44.69	3020840.5950	635696.7630		N6°33'44"E 1057.99'	66+02.68	3021891.6571	635817.6733

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C28	184+01.68	3020749.8981	635664.9844	R=500.00' Δ=5°23'00" L=46.98' T=23.51'		184+48.66	3020796.2481	635672.5362
L29	184+48.66	3020796.2481	635672.5362		N6°33'44"E 1104.82'	195+53.48	3021893.8285	635798.7977

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C75	52° 08' 24"	5.00	4.55	2.45
C76	56° 15' 14"	10.00	9.82	5.35
C77	138° 35' 25"	20.00	48.38	52.92
C78	72° 13' 55"	10.00	12.61	7.30
C79	125° 33' 14"	20.00	43.83	38.88
C80	85° 37' 59"	15.00	22.42	13.90
C81	99° 39' 06"	20.00	34.79	23.69
C82	79° 55' 25"	10.00	13.95	8.38
C83	88° 14' 16"	15.00	23.10	14.55

LEGEND

△# = DRIVEWAY NUMBER

(C#) = CURVE NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

NAD 83 N

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +01.68
PT +48.66
PT +44.69
PT +52.41
49.00 LT
PC +39.18
14.00 LT
PC +09.78
45.63 LT
PT +26.05
14.00 LT
PROP CBCI
RIM ELEV = 279.81
PROP CBCI
RIM ELEV = 282.62
PROP DMH
RIM ELEV = 284.07
PROP DMH
RIM ELEV = 282.61
PROP CONST CB
PROP DMH
RIM ELEV = 279.83
PROP CB
RIM ELEV = 279.74
PT +20.61
14.94 RT
PC +16.70
13.00 RT
PC +59.45
17.44 RT
PT +67.76
13.00 RT
PC +81.38
13.00 RT
PT +90.91
19.95 RT
PC +36.19
14.00 LT
PT +55.90
37.35 LT
PC +82.87
22.25 LT
PT +92.71
14.00 LT
PC +04.82
14.00 LT
PT +19.69
28.54 LT
PC +41.91
13.00 RT
PT +56.87
26.86 RT
1921 COUNTY LAYOUT
UPL 45/190-1 W/ RISERS
UPL 46 W/ RISERS
UPL 188 W/ RISERS
UPL 45/191 W/ RISERS
UPL 45/191 W/ RISERS
UPL 45/191

LEGEND

△# = DRIVEWAY NUMBER

(C#) = CURVE NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 11 OF 17

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	55+44.69	3020840.5950	635696.7630		N6°33'44"E 1057.99'	66+02.68	3021891.6571	635817.6733
C9	66+02.68	3021891.6571	635817.6733	R=1485.00' Δ=7°30'00" L=194.39' T=97.33'		67+97.07	3022082.7667	635852.4460

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L29	184+48.66	3020796.2481	635672.5362		N6°33'44"E 1104.82'	195+53.48	3021893.8285	635798.7977
C29	195+53.48	3021893.8285	635798.7977	R=1504.00' Δ=7°30'00" L=196.87' T=98.58'		197+50.35	3022087.3832	635834.0153

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C83	88° 14' 16"	15.00	23.10	14.55
C84	91° 43' 07"	15.00	24.01	15.46
C85	84° 20' 19"	5.00	7.36	4.53
C86	76° 42' 15"	15.00	20.08	11.87
C87	89° 34' 27"	5.00	7.82	4.96
C88	90° 00' 00"	10.00	15.71	10.00
C89	90° 00' 00"	10.00	15.71	10.00
C90	68° 46' 57"	20.00	24.01	13.69
C91	90° 46' 21"	20.00	31.69	20.27

NAD 83 N

NOTE: SEE SHEET 74 FOR WETLAND REPLICATION AREA DETAILS

295 AYER ROAD
295 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 27
DEED BOOK 68608, PAGE 289
PLAN BOOK 967, PLAN 65

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 4, BLOCK 28
DEED BOOK 42857, PAGE 287
PLAN BOOK 357, PLAN 100

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

CONTINUED ON SHEET NO. 31

CONTINUED ON SHEET NO. 33

288 AYER ROAD
THE 39 EATON REALTY TRUST
ASSESSORS MAP 4, BLOCK 34
DEED BOOK 67617, PAGE 325
PLAN BOOK 389, PLAN 9

292 AYER ROAD
THE VICKESH MYER REVOCABLE TRUST
ASSESSORS MAP 5, BLOCK 78
DEED BOOK 62379, PAGE 392
PLAN BOOK 329, PLAN 118

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD (CONSERVATION COMMISSION)
ASSESSORS MAP 5, BLOCK 80
DEED BOOK 6626, PAGE 58
PLAN BOOK 433, PLAN 7

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

294 AYER ROAD
AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 33
DEED BOOK 52481, PAGE 269

304 AYER ROAD
STEVEN & CAROLYN H. FADER
ASSESSORS MAP 4, BLOCK 32, LOT 1
DEED BOOK 54408, PAGE 186

0 20 50 100
SCALE: 1" = 20'

609213_HDB(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:12 PM

LEGEND

△# = DRIVEWAY NUMBER

C# = CURVE NUMBER

= PEDESTRIAN CURB RAMP NUMBER

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C92	73° 26' 10"	10.00	12.82	7.46
C93	68° 12' 33"	5.00	5.95	3.39
C94	77° 24' 26"	5.00	6.76	4.01
C95	96° 01' 13"	10.00	16.76	11.11
C96	90° 00' 00"	5.00	7.85	5.00
C97	89° 59' 57"	5.00	7.85	5.00
C98	92° 15' 17"	25.00	40.25	26.00
C99	87° 12' 34"	25.00	38.05	23.81
C100	64° 50' 21"	5.00	5.66	3.18
C101	111° 06' 59"	9.00	17.45	13.12
C102	92° 10' 11"	10.00	16.09	10.39

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 12 OF 17

609213_HD8(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:12 PM

NAD 83

AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 4, BLOCK 28
DEED BOOK 42857, PAGE 287
PLAN BOOK 357, PLAN 100

304 AYER ROAD
STEVEN & CAROLYN H. FADER
ASSESSORS MAP 4, BLOCK 32, LOT 1
DEED BOOK 54408, PAGE 186

306 AYER ROAD
MCCARTHY REALTY TRUST
ASSESSORS MAP 5, BLOCK 79
DEED BOOK 18243, PAGE 138
PLAN BOOK 302, PLAN 23

307 AYER ROAD
DRB ACRES, LLC
ASSESSORS MAP 4, BLOCK 29
DEED BOOK 52809, PAGE 26
PLAN BOOK 357, PLAN 100

309 AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 1, BLOCK 5
DEED BOOK 42857, PAGE 287
PLAN BOOK 13, PLAN 44

310 AYER ROAD
JOHN J. & MARISA D. IACOMINI
ASSESSORS MAP 4, BLOCK 31
DEED BOOK 59087, PAGE 319
PLAN BOOK 424, PLAN 96

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

CONTINUED ON SHEET NO. 32

CONTINUED ON SHEET NO. 34

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

1921 COUNTY LAYOUT

PROP CBCI
RIM ELEV = 274.23

PROP CONST ℄

PROP CB
RIM ELEV = 271.35

271.31 (LP)

PROP DMH
RIM ELEV = 271.60

PROP CB
RIM ELEV = 273.96

PROP DMH
RIM ELEV = 274.03

PROP CBCI
RIM ELEV = 280.01

PROP DMH
RIM ELEV = 279.97

PROP CB
RIM ELEV = 279.87

PC +53.48 C29

PT +50.35

PC +02.68 C9

PT +97.07

PT +25.73
19.00 LT

PC +20.73
14.00 LT

PC +45.73
18.97 LT

PT +50.73
14.00 LT

PC +79.71
14.00 LT

PT +04.69
39.98 LT

PC +16.20
37.78 LT

PT +41.17
14.00 LT

PT +06.04
24.38 LT

PC +96.05
14.00 LT

PC +75.00
13.00 RT

PT +84.72
20.12 RT

PC +05.90
16.14 RT

PT +10.55
13.00 RT

PT +28.59
16.91 RT

PC +23.71
13.00 RT

PT +53.69
13.00 RT

PC +43.75
24.05 RT

PC +32.65
13.00 RT

PT +37.17
15.87 RT

PT +61.44
13.00 RT

PC +53.05
25.24 RT

L30

L9

PI +50

WIRE FENCE

6' VINYL STOCKADE FENCE

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C9	66+02.68	3021891.6571	635817.6733	R=1485.00' Δ=7°30'00" L=194.39' T=97.33'		67+97.07	3022082.7667	635852.4460
L9	67+97.07	3022082.7667	635852.4460		N14°03'44"E 597.73'	73+94.80	3022662.5869	635997.6807

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C29	195+53.48	3021893.8285	635798.7977	R=1504.00' Δ=7°30'00" L=196.87' T=98.58'		197+50.35	3022087.3832	635834.0153
L30	197+50.35	3022087.3832	635834.0153		N14°03'44"E 400.40'	201+50.75	3022475.7853	635931.3032

0 20 50 100

SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 13 OF 17

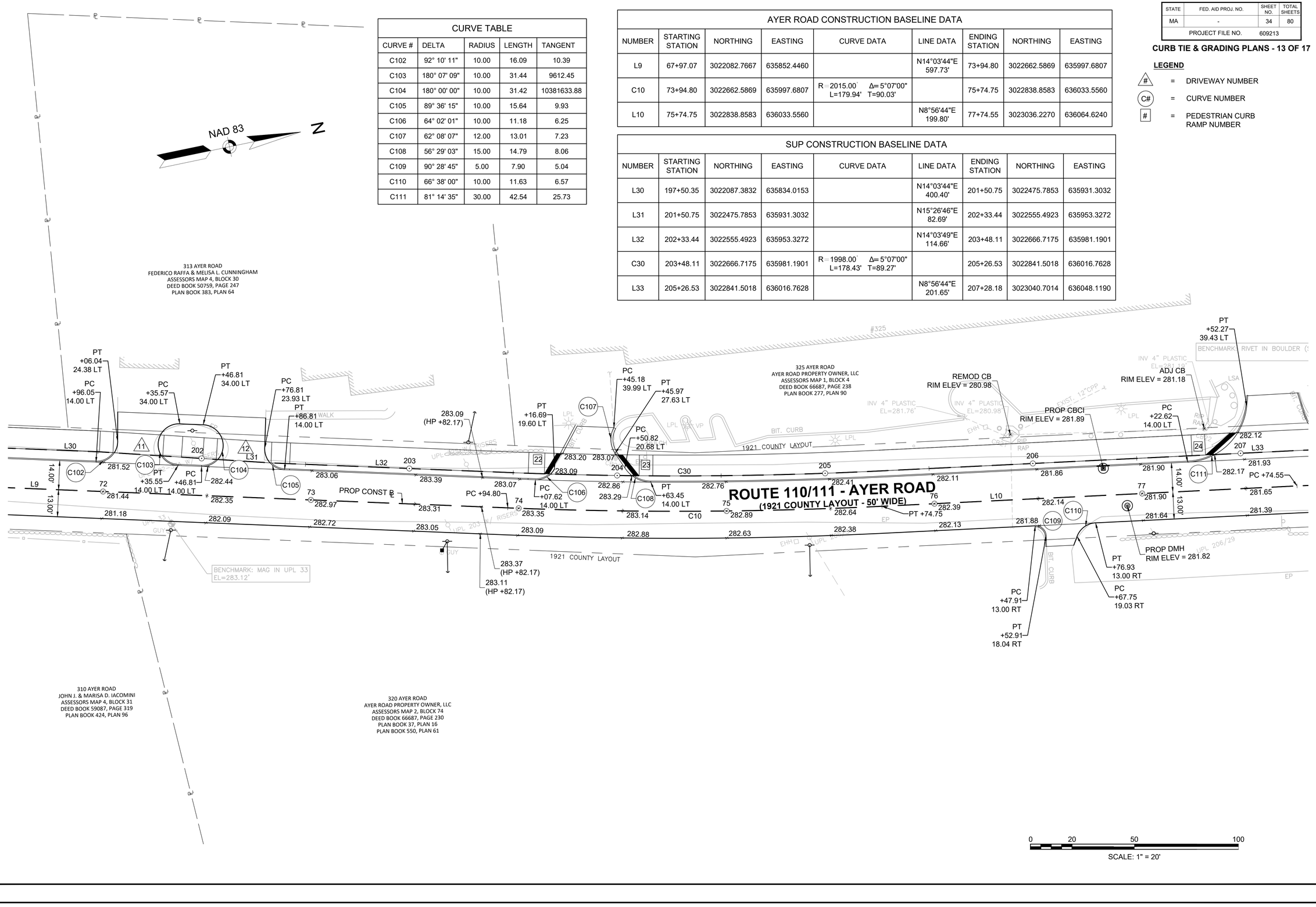
LEGEND

△# = DRIVEWAY NUMBER
(C#) = CURVE NUMBER
[#] = PEDESTRIAN CURB RAMP NUMBER

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C102	92° 10' 11"	10.00	16.09	10.39
C103	180° 07' 09"	10.00	31.44	9612.45
C104	180° 00' 00"	10.00	31.42	10381633.88
C105	89° 36' 15"	10.00	15.64	9.93
C106	64° 02' 01"	10.00	11.18	6.25
C107	62° 08' 07"	12.00	13.01	7.23
C108	56° 29' 03"	15.00	14.79	8.06
C109	90° 28' 45"	5.00	7.90	5.04
C110	66° 38' 00"	10.00	11.63	6.57
C111	81° 14' 35"	30.00	42.54	25.73

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L9	67+97.07	3022082.7667	635852.4460		N14°03'44"E 597.73'	73+94.80	3022662.5869	635997.6807
C10	73+94.80	3022662.5869	635997.6807	R=2015.00' Δ=5°07'00" L=179.94' T=90.03'		75+74.75	3022838.8583	636033.5560
L10	75+74.75	3022838.8583	636033.5560		N8°56'44"E 199.80'	77+74.55	3023036.2270	636064.6240

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L30	197+50.35	3022087.3832	635834.0153		N14°03'44"E 400.40'	201+50.75	3022475.7853	635931.3032
L31	201+50.75	3022475.7853	635931.3032		N15°26'46"E 82.69'	202+33.44	3022555.4923	635953.3272
L32	202+33.44	3022555.4923	635953.3272		N14°03'49"E 114.66'	203+48.11	3022666.7175	635981.1901
C30	203+48.11	3022666.7175	635981.1901	R=1998.00' Δ=5°07'00" L=178.43' T=89.27'		205+26.53	3022841.5018	636016.7628
L33	205+26.53	3022841.5018	636016.7628		N8°56'44"E 201.65'	207+28.18	3023040.7014	636048.1190



609213_HDB(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:13 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 14 OF 17

609213_HDR(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:13 PM

LEGEND

△# = DRIVEWAY NUMBER

C# = CURVE NUMBER

= PEDESTRIAN CURB RAMP NUMBER

NAD 83

N

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

327 AYER ROAD
LAWRENCE C. DOE &
PAMELA C. LAWSON
ASSESSORS MAP 1, BLOCK 3
DEED BOOK 45146, PAGE 310

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

320 AYER ROAD
AYER ROAD PROPERTY OWNER, LLC
ASSESSORS MAP 2, BLOCK 74
DEED BOOK 66687, PAGE 230
PLAN BOOK 37, PLAN 16
PLAN BOOK 550, PLAN 61

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

PROP DMH
RIM ELEV = 280.43

PROP DMH
RIM ELEV = 278.97

PROP CBCI
RIM ELEV = 276.77

PROP DMH
RIM ELEV = 276.91

PROP CB
RIM ELEV = 276.84

CONTINUED ON SHEET NO. 34

CONTINUED ON SHEET NO. 36

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C11	77+74.55	3023036.2270	636064.6240	R=495.00' Δ=41°49'00" L=361.27' T=189.10'		81+35.82	3023342.6476	636240.4959
L11	81+35.82	3023342.6476	636240.4959		N50°45'44"E 310.69'	84+46.51	3023539.1706	636481.1329

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L33	205+26.53	3022841.5018	636016.7628		N8°56'44"E 201.65'	207+28.18	3023040.7014	636048.1190
C31	207+28.18	3023040.7014	636048.1190	R=515.00' Δ=41°49'00" L=375.87' T=196.75'		211+04.05	3023359.5027	636231.0968
L34	211+04.05	3023359.5027	636231.0968		N50°45'44"E 307.31'	214+11.36	3023553.8866	636469.1146

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C112	72° 23' 46"	30.00	37.91	21.96
C113	100° 04' 29"	30.00	52.40	35.80
C114	68° 25' 08"	10.00	11.94	6.80
C115	104° 16' 08"	20.00	36.40	25.72
C116	76° 14' 19"	25.00	33.27	19.62
C117	65° 15' 05"	35.00	39.86	22.41
C118	129° 29' 03"	15.00	33.90	31.79
C119	89° 59' 59"	18.00	28.27	18.00
C120	37° 11' 50"	18.00	11.69	6.06

0 20 50 100

SCALE: 1" = 20'

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	81+35.82	3023342.6476	636240.4959		N50°45'44"E 310.69'	84+46.51	3023539.1706	636481.1329
C12	84+46.51	3023539.1706	636481.1329	R=505.00' Δ=37°22'00" L=329.35' T=170.77'		87+75.85	3023813.3123	636652.9611
L12	87+75.85	3023813.3123	636652.9611		N13°23'44"E 341.21'	91+17.06	3024145.2390	636732.0102

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L34	211+04.05	3023359.5027	636231.0968		N50°45'44"E 307.31'	214+11.36	3023553.8866	636469.1146
C32	214+11.36	3023553.8866	636469.1146	R=486.00' Δ=37°22'00" L=316.96' T=164.34'		217+28.31	3023817.7141	636634.4781
L35	217+28.31	3023817.7141	636634.4781		N13°23'44"E 341.21'	220+69.52	3024149.6408	636713.5271

CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C119	89° 59' 59"	18.00	28.27	18.00
C120	37° 11' 50"	18.00	11.69	6.06
C121	91° 13' 34"	18.00	28.66	18.39
C122	54° 54' 14"	5.00	4.79	2.60
C123	138° 56' 01"	12.00	29.10	32.04
C124	22° 22' 41"	50.00	19.53	9.89
C125	83° 27' 41"	20.00	29.13	17.84
C126	23° 59' 37"	50.00	20.94	10.62
C127	138° 57' 14"	12.00	29.10	32.06
C128	78° 23' 54"	20.00	27.37	16.31
C129	88° 28' 35"	20.00	30.88	19.48
C130	88° 35' 16"	10.00	15.46	9.76
C131	94° 58' 34"	20.00	33.15	21.82
C132	82° 07' 49"	5.00	7.17	4.36
C133	96° 21' 17"	25.00	42.04	27.94
C134	85° 10' 57"	25.00	37.17	22.98

LEGEND

△# = DRIVEWAY NUMBER

(C#) = CURVE NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 15 OF 17

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

343 AYER ROAD
KATHLEEN M. DECOT
ASSESSORS MAP 2, BLOCK 2
DEED BOOK 50213, PAGE 223
PLAN BOOK 122, PLAN 50

345 AYER ROAD
GEOFFREY O. & JENNIFER K. GILLARD
ASSESSORS MAP 2, BLOCK 3
DEED BOOK 57294, PAGE 103
PLAN BOOK 122, PLAN 50

341 AYER ROAD
ELIZABETH MAE SHUMAN JOYCE &
CHRISTOPHER MICHAEL JOYCE
ASSESSORS MAP 2, BLOCK 1
DEED BOOK 66963, PAGE 37

346 AYER ROAD
FRANK, JR. & BARBARA S. HEIM
ASSESSORS MAP 2, BLOCK 11
DEED BOOK 4971, PAGE 277
PLAN BOOK 329, PLAN 92

344 AYER ROAD
KATIE ELIZABETH & NATHAN J. BERG
ASSESSORS MAP 2, BLOCK 12
DEED BOOK 59619, PAGE 196
PLAN BOOK 393, PLAN 112

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

MYRICK LANE
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 2, BLOCK 13
DEED BOOK 5247, PAGE 435
PLAN BOOK 348, PLAN 12
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTION(S))

ROUTE 110/111 - AYER ROAD (1921 COUNTY LAYOUT - 50' WIDE)

MYRICK LANE (PUBLIC - 50' WIDE)

PT +58.31 44.71 LT
PC +61.98 33.83 LT
PT +61.98 32.00 LT
PROP CBCI ELEV = 276.77
PC +80.92 32.39 LT
PC +43.98 14.00 LT
PT +98.91 14.00 LT
PT +04.21 16.11 LT
PC +99.99 14.00 LT
PC +55.90 44.63 LT
PCC +37.62 34.98 LT
PC +83.83 45.03 LT
PC +95.13 14.00 LT
PCC +03.59 34.98 LT
PC +29.27 33.04 LT
PT +50.67 14.00 LT
PROP CBCI RIM ELEV = 273.46
PC +18.21 14.00 LT
PT +28.70 23.65 LT
PC +01.27 14.00 LT
PT +26.23 41.66 LT
PC +45.37 36.90 LT
PT +69.52 14.00 LT
PC +48.09 35.31 LT
PROP CBCI RIM ELEV = 274.87
PROP CBCI RIM ELEV = 270.35
PT +70.28 14.00 LT
PT +46.09 14.00 LT
PROP DMH RIM ELEV = 276.91
PROP CB RIM ELEV = 276.84
PROP DMH RIM ELEV = 276.34
PROP DMH RIM ELEV = 275.59
PROP DMH RIM ELEV = 270.26
PROP DMH RIM ELEV = 274.10
PROP DMH RIM ELEV = 274.88
PC +46.51
PT +41.51 13.00 RT
PC +22.99 29.34 RT
PC +77.09 13.00 RT
PT +95.81 31.09 RT
PT +65.19 13.00 RT
PC +60.40 17.34 RT
PROP CONST ℄ 87
PT +28.31
PT +75.85
PC +11.36
1921 COUNTY LAYOUT
TOWN LAYOUT
6' STOCKADE
S/M WALL
GRAVEL DRIVE
GARAGE
DH/CB BROKEN
DH/CB
UPL 215 W/ RISERS
UPL 213
UPL 22
EG
W/ RISERS
GUY
L34
L35
L12
C12
C32
14.00'
13.00'

CONTINUED ON SHEET NO. 35

CONTINUED ON SHEET NO. 37

0 20 50 100

SCALE: 1" = 20'

609213_HDB(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:13 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 16 OF 17

609213_HD8(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:14 PM

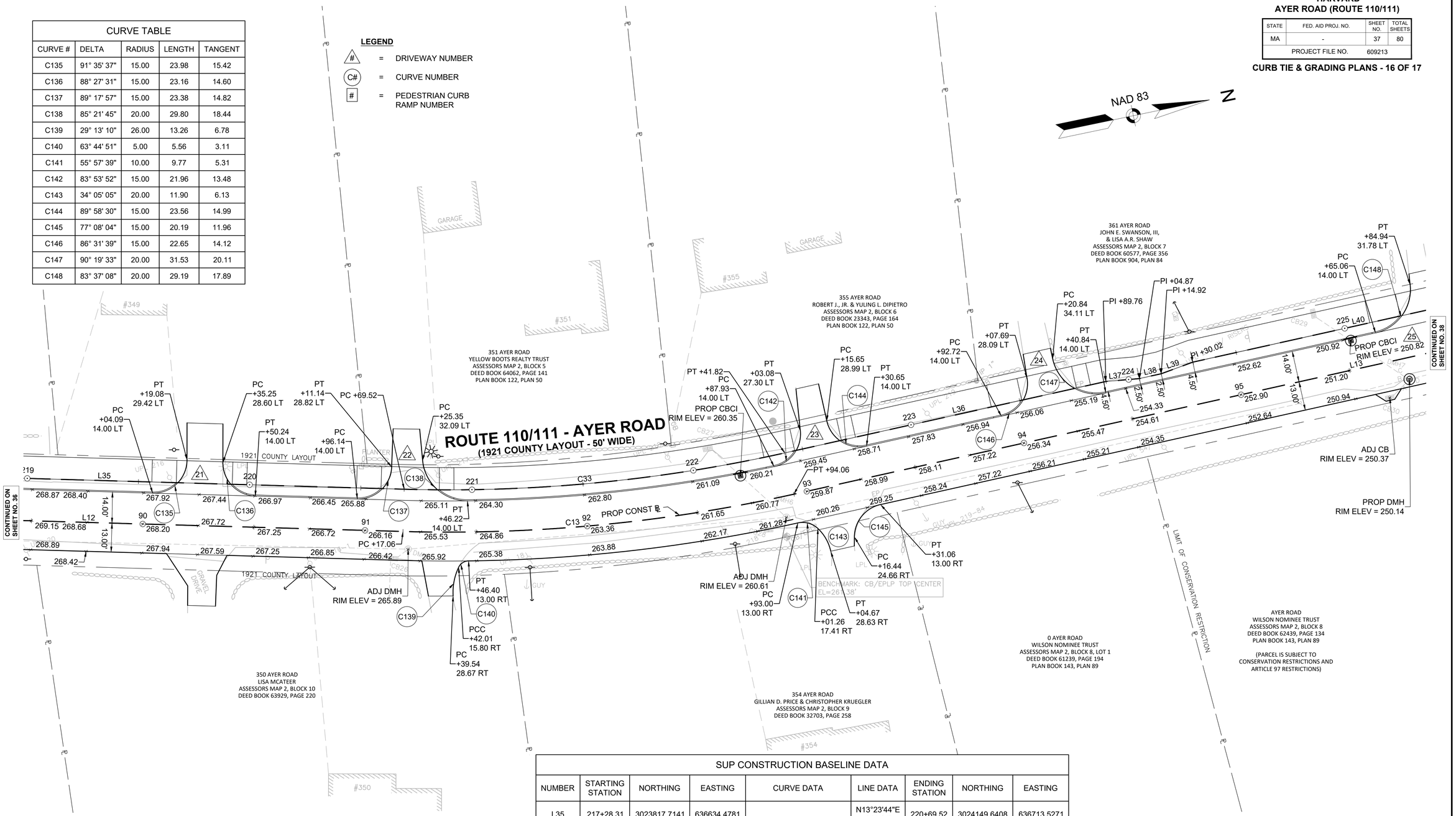
CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C135	91° 35' 37"	15.00	23.98	15.42
C136	88° 27' 31"	15.00	23.16	14.60
C137	89° 17' 57"	15.00	23.38	14.82
C138	85° 21' 45"	20.00	29.80	18.44
C139	29° 13' 10"	26.00	13.26	6.78
C140	63° 44' 51"	5.00	5.56	3.11
C141	55° 57' 39"	10.00	9.77	5.31
C142	83° 53' 52"	15.00	21.96	13.48
C143	34° 05' 05"	20.00	11.90	6.13
C144	89° 58' 30"	15.00	23.56	14.99
C145	77° 08' 04"	15.00	20.19	11.96
C146	86° 31' 39"	15.00	22.65	14.12
C147	90° 19' 33"	20.00	31.53	20.11
C148	83° 37' 08"	20.00	29.19	17.89

LEGEND

△# = DRIVEWAY NUMBER

(C#) = CURVE NUMBER

[#] = PEDESTRIAN CURB RAMP NUMBER



AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L12	87+75.85	3023813.3123	636652.9611		N13°23'44"E 341.21'	91+17.06	3024145.2390	636732.0102
C13	91+17.06	3024145.2390	636732.0102	R=715.00' Δ=14°11'00" L=177.00' T=88.95'		92+94.06	3024320.7153	636751.3951
L13	92+94.06	3024320.7153	636751.3951		N0°47'16"W 557.41'	98+51.47	3024878.0720	636743.7316

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L35	217+28.31	3023817.7141	636634.4781		N13°23'44"E 341.21'	220+69.52	3024149.6408	636713.5271
C33	220+69.52	3024149.6408	636713.5271	R=696.00' Δ=14°11'00" L=172.29' T=86.59'		222+41.82	3024320.4540	636732.3969
L37	223+89.76	3024468.3834	636730.3629		N6°49'10"E 15.11'	224+04.87	3024483.3846	636732.1568
L38	224+04.87	3024483.3846	636732.1568		N0°47'16"W 10.05'	224+14.92	3024493.4344	636732.0186
L39	224+14.92	3024493.4344	636732.0186		N8°23'43"W 15.11'	224+30.02	3024508.3797	636729.8129
L40	224+30.02	3024508.3797	636729.8129		N0°47'16"W 369.47'	227+99.49	3024877.8108	636724.7334

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	80
PROJECT FILE NO.	609213		

CURB TIE & GRADING PLANS - 17 OF 17

609213_HDB(NOI CURB TIE & GRADING).DWG Plotted on 3-Apr-2024 7:14 PM

AYER ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L13	92+94.06	3024320.7153	636751.3951		N0°47'16"W 557.41'	98+51.47	3024878.0720	636743.7316
C14	98+51.47	3024878.0720	636743.7316	R=1813.00' Δ=5°53'49" L=186.60' T=93.38'		100+38.06	3025064.4536	636750.7637
L14	100+38.06	3025064.4536	636750.7637		N5°06'33"E 61.94'	101+00.00	3025126.1449	636756.2795

SUP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C34	227+99.49	3024877.8108	636724.7334	R=1832.00' Δ=5°21'05" L=171.10' T=85.61'		229+70.59	3025048.7590	636730.3681
L40	224+30.02	3024508.3797	636729.8129		N0°47'16"W 369.47'	227+99.49	3024877.8108	636724.7334

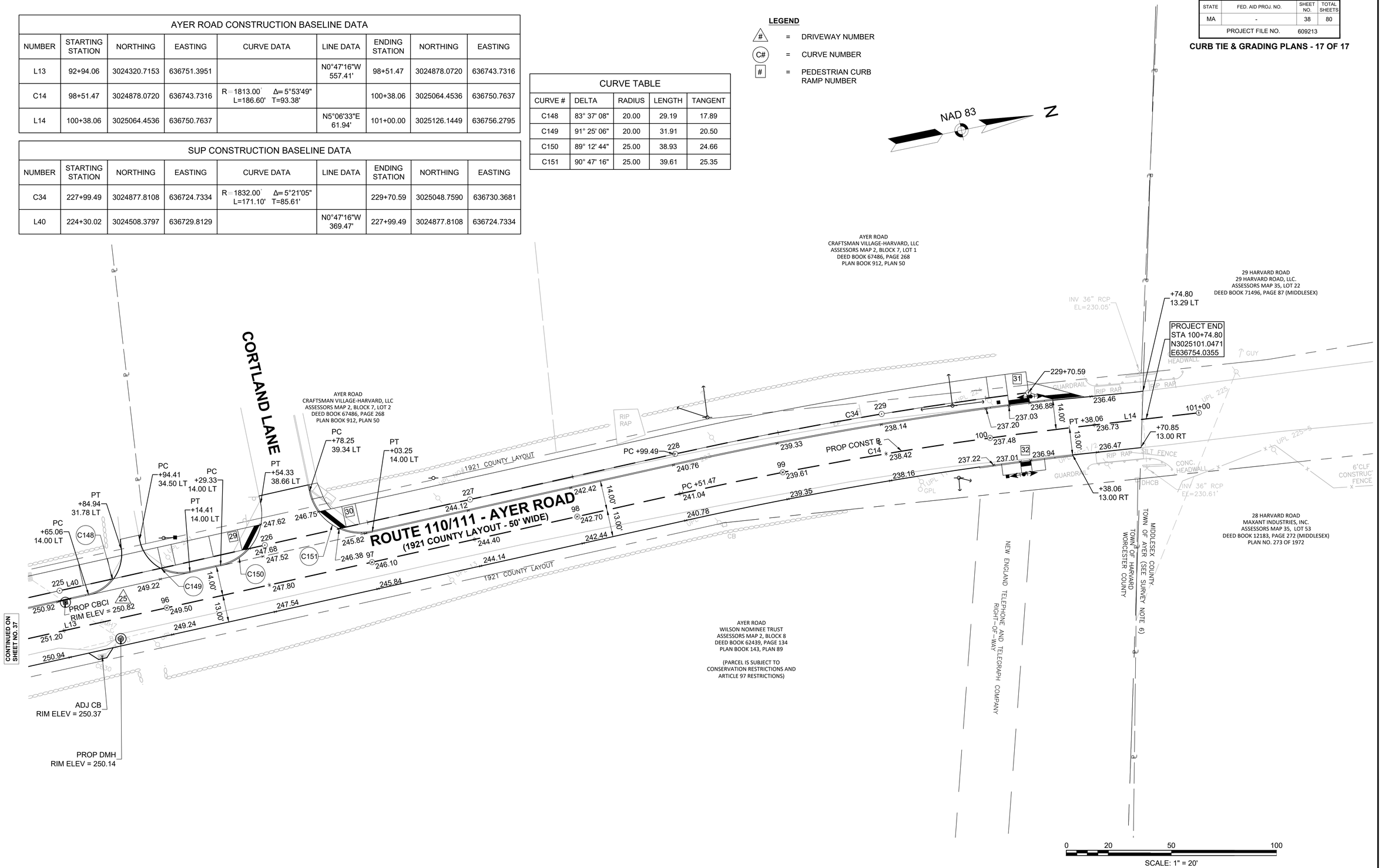
CURVE TABLE				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C148	83° 37' 08"	20.00	29.19	17.89
C149	91° 25' 06"	20.00	31.91	20.50
C150	89° 12' 44"	25.00	38.93	24.66
C151	90° 47' 16"	25.00	39.61	25.35

LEGEND

△# = DRIVEWAY NUMBER

C# = CURVE NUMBER

= PEDESTRIAN CURB RAMP NUMBER



HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 1 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:15 PM

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
1	PROP CB	11+30.99	25.0 LT	307.59		I=302.09' (2)	OFFSET TOP
2	PROP DMH	11+35.65	17.5 LT	307.49	I=301.99' (1)	I=302.39' (2A)	
2A	PROP DMH	12+55.95	26.1 LT	301.65	I=296.15' (2)	I=296.05' (5)	

NAD 83 N

185 AYER ROAD
12 LANCASTER COUNTY ROAD LLC
ASSESSORS MAP 8, BLOCK 59
DEED BOOK 46796, PAGE 296
PLAN BOOK 226, PLAN 27

1950 STATE ALTERATION | 1950 TOWN LAYOUT

PROP TEMP EASEMENT

PROJECT BEGIN
STA 8+69.90
N3016495.4630
E634274.6683

RET UP

187 AYER ROAD
12 LANCASTER COUNTY ROAD, LLC
ASSESSORS MAP 8, BLOCK 60
DEED BOOK 54974, PAGE 74
PLAN BOOK 226, PLAN 27

1950 TOWN LAYOUT – STATE HIGHWAY ALTERATION 33799A

5' - 12" PIPE OPTION

ROUTE 110/111 - AYER ROAD

117' - 12" RCP

AYER ROAD
WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

PROP LAYOUT ALTERATION

1950 TOWN LAYOUT | 1924 COUNTY LAYOUT

PROP TEMP EASEMENT

RET UP

PT +22.12

PC +16.54

REM EXIST CB

REM EXIST 12" CMP

173' - 12" RCP

PC +15.24

4' - 12" PIPE OPTION

RET TMH

PROP TEMP EASEMENT

1950 TOWN LAYOUT – STATE HIGHWAY ALTERATION 33799A

PROP DRAINAGE SEDIMENT REMOVAL

PROP TEMP EASEMENT

PROP TEMP EASEMENT

PROP 3" ELEC CONDUIT (TYP)

RET UP;
PROP SERVICE CONNECTION W/ RISER, WEATHERHEAD, & DISCONNECT

1950 STATE ALTERATION | 1950 TOWN LAYOUT

184 AYER ROAD
PHOENIX-DURANGO LLC
ASSESSORS MAP 8, BLOCK 41
DEED BOOK 64869, PAGE 275
PLAN BOOK 219, PLAN 95

188 AYER ROAD
SAMANTHA'S REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 1
DEED BOOK 33654, PAGE 159
PLAN BOOK 780, PLAN 121

196 AYER ROAD
BOWERS BROOK LLC
ASSESSORS MAP 8, BLOCK 40
DEED BOOK 45722, PAGE 348
PLAN BOOK 881, PLAN 28

198 AYER ROAD
AYER ROAD REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 3
DEED BOOK 45608, PAGE 289
PLAN BOOK 881, PLAN 28

1950 TOWN LAYOUT | 1924 COUNTY LAYOUT

200 AYER ROAD
HARVARD OFFICE PARK LLC
ASSESSORS MAP 8, BLOCK 40, LOT 2
DEED BOOK 28957, PAGE 72
PLAN BOOK 780, PLAN 121

CONTINUED ON SHEET NO. 40

CB1
RIM=301.34'
INV=299.1' (TOP HOOD)
SUMP=297.9' (TOP DEBRIS)

CB2
RIM=301.12'
INV=296.9'
SUMP=296.9'

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

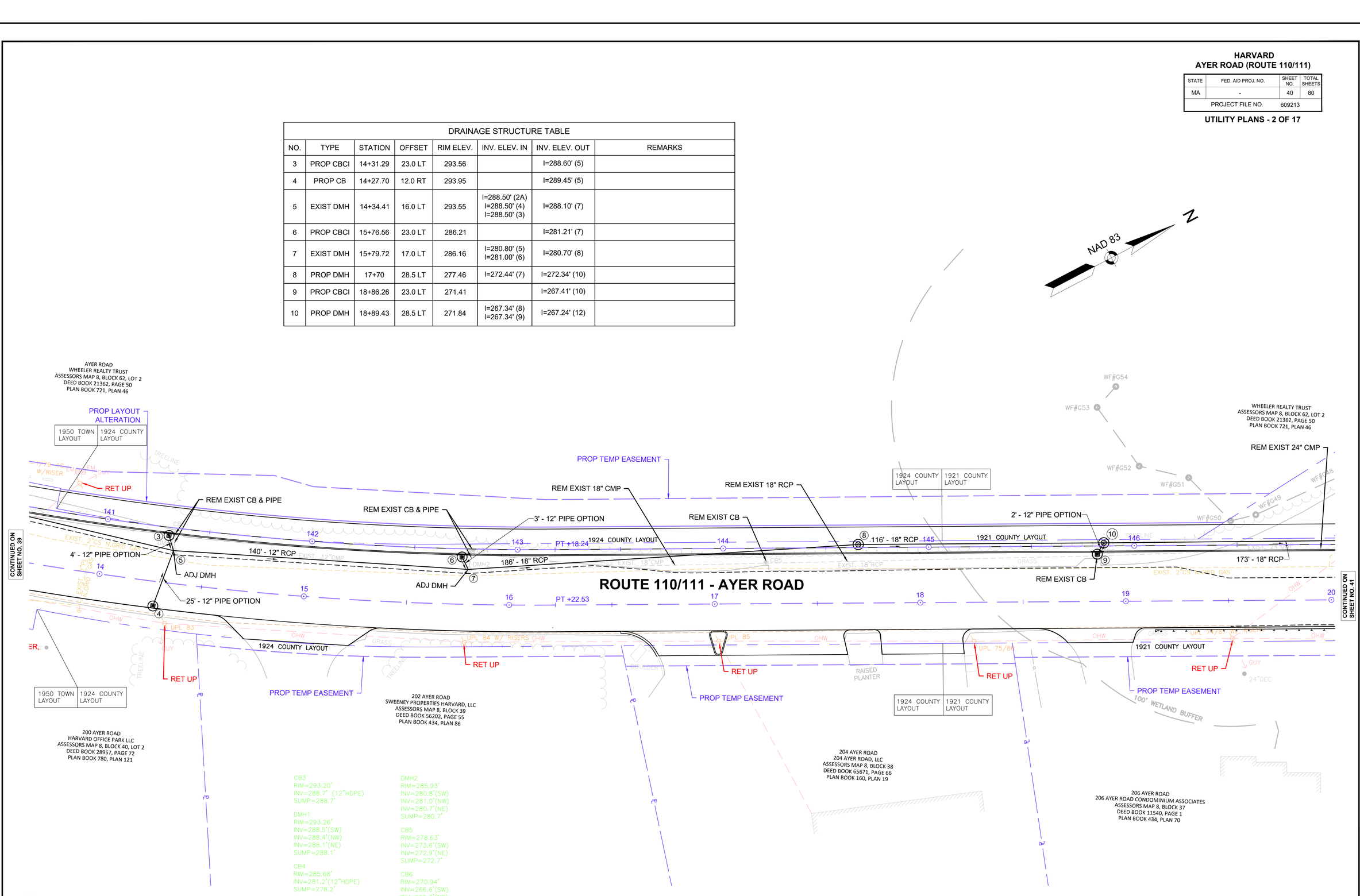
HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 2 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:15 PM

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
3	PROP CBCI	14+31.29	23.0 LT	293.56		I=288.60' (5)	
4	PROP CB	14+27.70	12.0 RT	293.95		I=289.45' (5)	
5	EXIST DMH	14+34.41	16.0 LT	293.55	I=288.50' (2A) I=288.50' (4) I=288.50' (3)	I=288.10' (7)	
6	PROP CBCI	15+76.56	23.0 LT	286.21		I=281.21' (7)	
7	EXIST DMH	15+79.72	17.0 LT	286.16	I=280.80' (5) I=281.00' (6)	I=280.70' (8)	
8	PROP DMH	17+70	28.5 LT	277.46	I=272.44' (7)	I=272.34' (10)	
9	PROP CBCI	18+86.26	23.0 LT	271.41		I=267.41' (10)	
10	PROP DMH	18+89.43	28.5 LT	271.84	I=267.34' (8) I=267.34' (9)	I=267.24' (12)	



NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 3 OF 17

608213_HD10(NO) UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:15 PM

CONTINUED ON SHEET NO. 42

CONTINUED ON SHEET NO. 40

CONTINUED ON SHEET NO. 43

ROUTE 110/111 - AYER ROAD

GEBO LANE

LANCASTER COUNTY ROAD
INHABITANTS OF THE TOWN OF HARVARD
ASSESSORS MAP 8, BLOCK 62, LOT 4
DEED BOOK 21051, PAGE 25
PLAN BOOK 721, PLAN 46

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

206 AYER ROAD
206 AYER ROAD CONDOMINIUM ASSOCIATES
ASSESSORS MAP 8, BLOCK 37
DEED BOOK 11540, PAGE 1
PLAN BOOK 434, PLAN 70

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 8, BLOCK 36
DEED BOOK 6223, PAGE 264
PLAN BOOK 434, PLAN 86

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

CB7
RIM=254.76'
INV=250.7'
SUMP=248.6'

CB8
RIM=255.42'
INV=250.5'(SW)
INV=250.4'(NE)
SUMP=250.6'(TOP DEBRIS)

DMH3
RIM=252.92'
INV=249.2'(SW)
INV=249.1'(N)
SUMP=249.7'(TOP DEBRIS)

CB9
RIM=253.23'
INV=250.2'(W)
INV=250.3'(NE)
INV=249.8'(SE)
SUMP=250.6'(TOP DEBRIS)

CB10
RIM=252.00'
INV=*NPV*
SUMP=249.8'(TOP DEBRIS)
(UNABLE TO OPEN)

PROP GAS RELOCATION (BO-NGRID)
RELOCATE UP (BO)
34' - 30" PIPE OPTION
MATCH EXIST INVERTS
TOWN LAYOUT
REM EXIST 30" CMP
REM EXIST 24" CMP
RET UP
17' - 18" RCP
3' - 12" PIPE OPTION
173' - 18" RCP
COORDINATE WITH NGRID PRIOR TO PIPE REPLACEMENT
70' - 30" RCP
104' - 24" RCP CLASS V
PC +68.77
PC +73.39
PC +80.14
PC +32.26
PT +80.14
PT +01.86
PT +72.44
PT +30.45
PT +24.05
PROP LAYOUT ALTERATION
PROP TEMP EASEMENT
PROP PERM EASEMENT
RET UP; PROP TEMPORARY SUPPORT FOR EXCAVATION OF HEADWALL (BO)
PROP TS CONDUIT (TYP)
1921 COUNTY LAYOUT
EXIST. 2"PL N.GRID GAS
APPROX. SEPTIC SYSTEM LOCATION
SEPTIC TANK
SEPTIC PUMP
100' WETLAND BUFFER
200' RIVERFRONT AREA
RIP RAP
CONC. WALK
FF=259.75'
LOAD. DOCK
INV 12" CPF
EL=252.83
WMH
RIM=257.92'
SUMP=251.5'
FF=259.76'
FF=259.79'
RET EXIST CB
PROP GAS RELOCATION (BO-NGRID)
REMOD CB; R&D F&G PROP F&C
REMOD CB; R&D F&G PROP F&C
RET EXIST DMH
CONC. APRON
6' - 12" PIPE OPTION
295' - 12" RCP CLASS IV
RET UP
RET UP
RET UP
NAD 83
N

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

DRAINAGE STRUCTURE TABLE

NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
11	PROP CBCI	20+63.78	23.0 LT	265.43		I=261.43' (12)	
12	PROP DMH	20+66.56	29.0 LT	265.90	I=260.90' (10) I=261.33' (11)	I=260.80' (13)	
13	PROP HDWL	20+73.60	47.0 LT		I=260.21' (12)	I=260.21' (14)	REFER TO MASSDOT STANDARD DRAWING E 206.5.0
14	PROP HDWL	20+70.99	23.5 RT		I=258.64' (13)		REFER TO MASSDOT STANDARD DRAWING E 206.4.0
15	PROP HDWL	21+04.69	84.2 LT		I=262.00' (16)		REFER TO MASSDOT STANDARD DRAWING E 206.4.0
16	PROP DI	111+78.79	18.0 RT	267.02		I=262.52' (15)	
17	PROP CBCI	23+64.69	20.3 LT	256.00		I=251.50' (18)	
18	PROP DMH	23+71.59	12.7 LT	255.94	I=251.40' (17)	I=251.30' (21)	

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 4 OF 17

609213_HD10(NO) UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:16 PM

CB12
RIM=263.66'
INV=260.4'(15" PLASTIC)
SUMP=259.2'

DMH4
RIM=264.23'
INV=259.5'(W)
INV=259.5'(E)
INV=259.7'(S)
SUMP=259.0'

CB13
RIM=264.04'
INV=261.6'(W)
INV=261.6'(E)
SUMP=260.3'

CB14
RIM=256.72'
INV=253.4'(W)
INV=253.3'(E)
SUMP=252.6'

NAD 83

LANCASTER COUNTY ROAD
LANCASTER COUNTY PLACE CONDOMINIUM
ASSESSORS MAP 8, BLOCK 22
DEED BOOK 15687, PAGE 93
PLAN BOOK 675, PLAN 87

LANCASTER COUNTY ROAD
INHABITANTS OF THE TOWN OF HARVARD
ASSESSORS MAP 8, BLOCK 62, LOT 4
DEED BOOK 21051, PAGE 25
PLAN BOOK 721, PLAN 46

6 LANCASTER COUNTY ROAD
R.L. LAZARO FAMILY LIMITED PARTNERSHIP
ASSESSORS MAP 8, BLOCK 48, LOT 3, UNIT 1
CERT. 17688
LCC 32327C

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

GEBO LANE

LANCASTER COUNTY ROAD

RET CB
RET DMH
RET UP
RET HDWL
RET EXIST 12" CPP
REM UP (BO)
PROP LAYOUT ALTERATION
PROP TEMP EASEMENT
PC +23.27
PT +92.27
PT +01.86
PC +94.44
PRC +58.78
116+00
UPL 5/1
UPL 4
UPL NO#
UPL 163/4 W/ RIPRAPS
UPL 164/3
UPL S.W. RISERS
EXIST. 2"PL N.GRID GAS
INV 12" RCP EL=262.46'
INV 15" RCP EL=261.36'
INV 12" CPP EL=253.13'
INV 12" CPP EL=252.83'
INV 18" RCP EL=254.99'
INV 18" RCP EL=251.59'
FF=259.75'
LOAD. DOCK
CONC. LOADING DOCK
CONC. RAMP W/HAND RAIL
CONC. APRON
DUMPSTER PAD
SHED
SATELLITE DISH ON CONC. PAD
SEPTIC TANK
SEPTIC PUMP
APPROX. SEPTIC SYSTEM LOCATION
100' WETLAND BUFFER
200' RIVERFRONT AREA
100' RIVERFRONT AREA
POTENTIAL VERNAL POOL (APPROX LOCATION FROM G
WF#G11 REC7-15-19
WF#G12
WF#G13
WF#G14
WF#G15
WF#G16
WF#G17
WF#G18
WF#G30
WF#G31
WF#G32
WF#G33
WF#G34
WF#G35
WF#G36
WF#G37
WF#G38
WF#G39
WF#G40
WF#G41
WF#G6
WF#G7
WF#G8
WF#G9
WF#G10
WF#E1
WF#E2
WF#E3
WF#E4
WF#E5 STOP

CONTINUED ON SHEET NO. 41
CONTINUED ON SHEET NO. 43

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
24	PROP HDWL	29+15.24	23.8 RT		I=252.22' (25)		REFER TO MASSDOT STANDARD DRAWING E 206.4.0
25	PROP DMH	29+54.31	20.8 RT	254.87	I=252.66' (26)	I=252.66' (24)	
26	PROP DMH	30+51.29	9.1 RT	261.58	I=257.08' (27) I=256.68' (28)	I=256.58' (25)	
27	PROP CBCI	30+62.60	13.0 LT	261.50		I=257.50' (26)	

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	80
PROJECT FILE NO.		609213	

UTILITY PLANS - 5 OF 17

609213_HD10(NO) UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:16 PM

RET HDWL
PC +94.44
RET EXIST 12" CPP
RET UP
PRC +58.78
PT +12.77
RET UP
LANCASTER COUNTY ROAD
TOWN LAYOUT
RET UP
PC +88.95
RET UP
REM UP (BO)
PCC +74.23
PT +40.35
21' - 12" PIPE OPTION
PT +93.00
REM UP (BO)
277' - 12" RCP
PROP TEMP EASEMENT
PROP GAS RELOCATION (BO-NGRID)
PROP TEMP EASEMENT
1921 COUNTY LAYOUT
5' - 12" PIPE OPTION
ADJ CB
295' - 12" RCP CLASS IV
PC +45.37
14' - 12" PIPE OPTION
11' - 12" PIPE OPTION
41' - 18" RCP
PT +56.12
PC +41.32
ROUTE 110/111 - AYER ROAD
TEST PIT PRIOR TO RELOCATING POLE
96' - 18" RCP
39' - 18" RCP
PROP 3" ELEC CONDUIT (TYP)
REM EXIST 12" CMP
UPGRADE UP (BO)
PROP GUY (BO)
ADJ TMH (BO-VERIZON)
REM EXIST CB (2)
REM EXIST 18" CMP
PROP PUE
PROP SERVICE CONNECTION W/ RISER, WEATHERHEAD, & DISCONNECT
RET UP
PROP TEMP EASEMENT
PROP PERM EASEMENT
RET UP (BO)
RELOCATE UP (BO)
PROP GUY WIRE (BO)
PROP LAYOUT ALTERATION
RELOCATE UP & GUY WIRE (BO)
PROP PUE
PROP UP & GUY WIRES (BO)
PROP PUE
PROP TEMP EASEMENT
RET UP
PROP TEMP EASEMENT
APPROXIMATE 100 YEAR FLOOD ZONE
RET UP
PROP PERM EASEMENT
RET EXIST CB
ADJ CB
POOR FARM ROAD
TOWN LAYOUT
TOWN LAYOUT
200' RIVERFRONT AREA
100' RIVERFRONT AREA
100' WETLAND BUFFER
200' RIVERFRONT AREA
APPROXIMATE 100 YEAR FLOOD ZONE
NAD 83
N
SCALE: 1" = 20'
0 20 50 100

6 LANCASTER COUNTY ROAD
R.L. LAZARO FAMILY LIMITED PARTNERSHIP
ASSESSORS MAP 8, BLOCK 48, LOT 3, UNIT 1
CERT. 17688
LCC 32327C

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

GAS EASEMENT (NATIONAL GRID)
DEED BOOK 4726, PAGE 527
PLAN BOOK 305, PLAN 118

129 POOR FARM ROAD
LAURA A. CLARAGE
ASSESSORS MAP 8, BLOCK 35
DEED BOOK 64304, PAGE 359

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

CB10
RIM=252.00'
INV=*NPV*
SUMP=249.8'(TOP DEBRIS)
(UNABLE TO OPEN)

CB11
RIM=251.65'
INV=248.9'(NW)
SUMP=246.5'
TOP WATER=248.5'

CB15
RIM=258.96'
INV=255.7'(S)
INV=*NPV*(N)
SUMP=253.0'(TOP DEBRIS)

CONTINUED ON SHEET NO. 41

CONTINUED ON SHEET NO. 44

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
19	PROP CBCI	26+64.70	12.7 LT	251.56		I=248.06' (21)	
20	PROP CB	26+64.71	12.0 RT	251.55		I=248.05' (21)	
21	PROP SPECIAL DMH	26+70.58	5.5 LT	251.73	I=247.63' (18) I=247.73' (19) I=247.73' (22) I=247.73' (20)	I=247.13' (23)	5' DIAMETER
22	PROP CBCI	26+84.62	12.4 LT	251.59		I=248.09' (21)	
23	PROP HDWL	27+03.46	22.4 RT		I=246.72' (21)		REFER TO MASSDOT STANDARD DRAWING E 206.4.0

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	80
PROJECT FILE NO.		609213	

UTILITY PLANS - 6 OF 17

609213_HD10(NO) UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:17 PM

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
28	PROP DMH	33+32.05	6.0 RT	273.83	I=269.33' (30) I=269.23' (29) I=268.93' (31)	I=268.83' (26)	
29	PROP CB	33+36.52	14.0 RT	273.87		I=269.37' (28)	OFFSET TOP
30	PROP CBCI	33+42.81	13.0 LT	274.17		I=270.17' (28)	OFFSET TOP
31	PROP DMH	35+71.52	4.0 RT	281.86	I=277.36' (33) I=277.36' (32) I=276.96' (34)	I=276.86' (28)	
32	PROP CB	35+76.12	12.0 RT	281.81		I=277.81' (31)	
33	PROP CBCI	35+81.36	13.0 LT	281.91		I=277.91' (31)	

CB16
RIM=273.39'
INV=268.3'(N)
INV=267.4'(S)
SUMP=266.6'

CB17
RIM=278.75'
INV=273.9'(N)
INV=276.7'(E)
INV=273.9'(E)
INV=273.7'(S)
SUMP=273.5'

NAD 83

100' WETLAND BUFFER
100' RIVERFRONT AREA
200' RIVERFRONT AREA

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

ROUTE 110/111 - AYER ROAD

1921 COUNTY LAYOUT

REM UP (BO)
PROP TEMP EASEMENT
PROP PUE
PROP GAS RELOCATION (BO-NGRID)
PROP GUY WIRE (BO)
RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 1
REM UP (BO)
RET LP
PROP PUE
PROP GUY WIRE (BO)
RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 2

161 162 163 164 165 166

30 18' - 12" PIPE OPTION
28 5' - 12" PIPE OPTION
29
277' - 12" RCP
REM EXIST 12" CMP
UPGRADE UP (BO)
REM EXIST CB
UPGRADE UP (BO)
PROP PUE
PROP TEMP EASEMENT
6'STOCKADE

236' - 12" RCP
REM EXIST CB
REM EXIST PIPE
PROP TEMP EASEMENT
PROP GUY WIRE (BO)
PROP PUE
RELOCATE UP (BO)
PROP TEMP EASEMENT
PROP UP (BO)

33 16' - 12" PIPE OPTION
31 5' - 12" PIPE OPTION
32
REM EXIST DI; PLUG AND ABAN ANY EXIST PIPES
290' - 12" RCP
PROP GUY WIRE (BO)
RELOCATE UP (BO)
REM UP (BO)
PROP PUE
PROP TEMP EASEMENT

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

232 AYER ROAD
BRYAN & REBECCA KELLEY
ASSESSORS MAP 8, BLOCK 23
DEED BOOK 57957, PAGE 89

236 AYER ROAD
ROBERT A. WILLIAMS JR.
& JANET M. WILLIAMS
ASSESSORS MAP 4, BLOCK 47
DEED BOOK 61011, PAGE 81
PLAN BOOK 347, PLAN 77

242 AYER ROAD
DAVID M. & MARTIN D. POUTRY
ASSESSORS MAP 4, BLOCK 46
DEED BOOK 27509, PAGE 388
PLAN BOOK 246, PLAN 69

CONTINUED ON SHEET NO. 43
CONTINUED ON SHEET NO. 45

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 7 OF 17

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
34	PROP DMH	38+65.34	4.0 RT	288.35	I=283.65' (35) I=283.15' (36)	I=283.05' (31)	
35	PROP CBCI	38+75.15	13.0 LT	288.34		I=283.84' (34)	
36	PROP DI	38+74	19.0 RT	287.59		I=283.26' (34)	TYPE DF

CB18
RIM=286.27'
INV=284.0'(E)
INV=284.0'(W)
SUMP=284.2'(TOP DEBRIS)

NAD 83

233 AYER ROAD
SHAKER PLACE OFFICES, LLC
ASSESSORS MAP 4, BLOCK 48, LOT 1
DEED BOOK 34484, PAGE 146
PLAN BOOK 548, PLAN 46

233 AYER ROAD
SHAKER PLACE OFFICES, LLC
ASSESSORS MAP 4, BLOCK 48, LOT 1
DEED BOOK 34484, PAGE 146
PLAN BOOK 548, PLAN 46

249 AYER ROAD
BLANCHARD HOUSE OFFICE PARK CONDOMINIUM
ASSESSORS MAP 4, BLOCK 49, LOT 1
DEED BOOK 11133, PAGE 350
PLAN BOOK 592, PLAN 115

253 AYER ROAD
FOXGLOVE HOUSING ASSOCIATES LIMITED PARTNERSHIP
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 1
DEED BOOK 14348, PAGE 225
PLAN BOOK 659, PLAN 120
CERT. 339846
LCC 3327B

257 AYER ROAD
OFFICE AT 257 AYER RD, LLC
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 2
DEED BOOK 64619, PAGE 93
PLAN BOOK 659, PLAN 120

PROP PUE
PROP GUY WIRE (BO)
RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 2
PROP PUE
PROP UP & GUY WIRE (BO)
PROP TEMP EASEMENT
PROP GUY WIRE (BO)
RELOCATE UP (BO)
PROP PUE
PROP PUSH BRACE (BO)
PROP TEMP EASEMENT
PROP PUSH BRACE (BO)
PROP PB ON EXIST CONDUIT; PROP 5' 2-4" CONDUIT (BO-NGRID)
RELOCATE UP (BO); RELOCATE ELECTRIC RISER (BO-NGRID)
RELOCATE UP (BO)
PROP GUY WIRE (BO)
RELOCATE UP (BO); RELOCATE ELECTRIC RISER (BO-NGRID)

1921 COUNTY LAYOUT
EXIST. 2"CS N.GRID GAS
EXIST. 3"CS N.GRID GAS
EXIST. 8"CS N.GRID GAS
EXIST. 12"CS N.GRID GAS
EXIST. 6"CS N.GRID GAS
EXIST. 4"CS N.GRID GAS
EXIST. 2"CS N.GRID GAS
EXIST. 3"CS N.GRID GAS
EXIST. 4"CS N.GRID GAS
EXIST. 6"CS N.GRID GAS
EXIST. 8"CS N.GRID GAS
EXIST. 12

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 8 OF 17

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
37	PROP HDWL	44+66.32	37.6 LT		I=285.94' (39)		REFER TO MASSDOT STANDARD DRAWING E 206.4.0
38	PROP SPECIAL CBCI	44+74.92	13.0 LT	289.48		I=286.28' (39)	
39	PROP DMH	44+82.76	13.0 LT	289.41	I=286.10' (41) I=286.16' (40) I=286.21' (38)	I=286.08' (37)	
40	PROP SPECIAL CB	44+99.92	13.0 LT	289.29		I=286.29' (39)	
41	PROP DI	45+05.13	20.5 RT	288.49		I=286.28' (39)	

NAD 83

259 AYER ROAD
259 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 51
DEED BOOK 69129, PAGE 227
PLAN BOOK 462, PLAN 72

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

257 AYER ROAD
OFFICE AT 257 AYER RD, LLC
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 2
DEED BOOK 64619, PAGE 93
PLAN BOOK 659, PLAN 120

AYER ROAD
HARVARD CONSERVATION TRUST
ASSESSORS MAP 5, BLOCK 70
DEED BOOK 64099, PAGE 20

PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

256 AYER ROAD
256 AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 41
DEED BOOK 59556, PAGE 235
PLAN BOOK 281, PLAN 117

264 AYER ROAD
THREE SEASONS TREESCAPE, LLC
ASSESSORS MAP 4, BLOCK 39
DEED BOOK 64293, PAGE 91
PLAN BOOK 379, PLANS 10-11

262 AYER ROAD
DNAP REALTY LLC
ASSESSORS MAP 4, BLOCK 40
DEED BOOK 61124, PAGE 24

ROUTE 110/111 - AYER ROAD

1921 COUNTY LAYOUT

PC +55.34
PC +07.64
PT +44.30
PT +91.71

28' - 18" RCP
4' - 12" DIP
37' - 18" DIP
13' - 12" DIP
33'-12" RCP UNDER DWY

REM UP (BO)
PROP PUE
PROP UP & GUY WIRE (BO)
ELECTRIC RISER RELOCATION
LOCATION NO. 3
PROP TEMP EASEMENT
RELOCATE UP & GUY WIRE (BO)
ADJ GG (BO-NGRID)
PROP PERM DRAIN EASEMENT
PROP GUY WIRE (BO)
PROP PB ON EXIST CONDUIT: PROP 5' 2-4" CONDUIT (BO-NGRID)
RELOCATE UP (BO); RELOCATE ELECTRIC RISER (BO-NGRID)
BEGIN DRAINAGE DITCH
PROP GUY WIRE (BO)
RELOCATE UP (BO)
R&R (BO) LP
END DRAINAGE DITCH
RET LP
END DRAINAGE DITCH
RELOCATE UP (BO)
PROP UP (BO) (NGRID TO CONFIRM)
RELOCATE UP (BO)
PROP UP (BO)
PROP TEMP EASEMENT
PROP PUE
RET UP
PROP GUY WIRE (BO)
PROP PUE

CONTINUED ON SHEET NO. 45
CONTINUED ON SHEET NO. 47

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:17 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 9 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:18 PM

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
42	PROP CBCI	52+61.01	13.0 LT	285.80		I=281.80' (43)	
43	PROP DMH	52+71.98	6.0 RT	285.82	I=281.32' (42)	I=281.22' (44)	
44	PROP DMH	54+35	6.5 RT	284.07	I=279.57' (43)	I=279.47' (46)	

NAD 83

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

1942 COUNTY LAYOUT

OLD MILL ROAD

UPGRADE UP & GUY WIRE (BO)

PROP PUE

PROP TEMP EASEMENT

RELOCATE UP & GUY WIRE (BO)

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

REM UP (BO)

275 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 24
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

1921 COUNTY LAYOUT

ROUTE 110/111 - AYER ROAD

PC +01.76

18' - 12" PIPE OPTION

159' - 12" RCP

PC +02.35

136' - 12" RCP

PROP UP (BO)

ADJ TMH (BO-VERIZON)

PROP TEMP EASEMENT

RELOCATE UP (BO)

RELOCATE UP & GUY WIRE (BO)

264 AYER ROAD
THREE SEASONS TREESCAPE, LLC
ASSESSORS MAP 4, BLOCK 39
DEED BOOK 64293, PAGE 91
PLAN BOOK 379, PLANS 10-11

270 AYER ROAD
HARVARD PROFESSIONAL CONDOMINIUM
ASSESSORS MAP 4, BLOCK 38
DEED BOOK 42123, PAGE 217
PLAN BOOK 394, PLAN 108

RET EXIST CB

ADJ GG (BO-NGRID)

RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 4

REM GUY WIRE (BO)

PROP GUY WIRE (BO)

276 AYER ROAD
D. FRANCIS MURPHY INSURANCE AGENCY INC.
ASSESSORS MAP 4, BLOCK 37
DEED BOOK 13624, PAGE 388
PLAN BOOK 469, PLAN 36

CB19
RIM=283.93'
INV=280.8'
SUMP=280.5'

CONTINUED ON SHEET NO. 46

CONTINUED ON SHEET NO. 48

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
45	PROP CBCI	55+61.05	13.0 LT	282.62		I=278.62' (46)	
46	PROP DMH	55+74.76	6.5 RT	282.61	I=278.11' (44) I=278.21' (45)	I=278.01' (49)	
47	PROP CBCI	58+29.05	13.0 LT	279.81		I=275.81' (49)	
48	PROP CB	58+37.91	12.0 RT	279.74		I=275.74' (49)	OFFSET TOP

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	48	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 10 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:18 PM

NAD 83 N

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

ROUTE 110/111 - AYER ROAD

1921 COUNTY LAYOUT

PC +01.76
PT +48.74
PT +44.69

136' - 12" RCP
20' - 12" PIPE OPTION
262' - 15" RCP
18' - 12" PIPE OPTION
3' - 12" PIPE OPTION
270' - 15" RCP

RET LP
RET CB
REM UP (BO)
REMOVE EXIST. 8"PL N.GRID GAS
REM EXIST DI; PLUG AND ABAN EXIST PIPES
R&R FLOOD LIGHT (BO)
PROP TEMP EASEMENT
PROP PUE
PROP GUY WIRE (BO)
PROP PB ON EXIST CONDUIT; PROP 10' 2-4" CONDUIT (BO-NGRID)
RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 5
RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 6
RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 7
RELOCATE UP (BO)
PROP GUY WIRE (BO)
PROP UP & GUY WIRE (BO)
UPGRADE UP (BO)
PROP TEMP EASEMENT
PROP PUE
PROP TEMP EASEMENT
PROP PUE
PROP TEMP EASEMENT
PROP PUE
PROP GUY WIRE (BO)
PROP PUE
PROP TEMP EASEMENT
RELOCATE UP (BO)
PROP GUY WIRE (BO)
RELOCATE UP (BO)
PROP UP & GUY WIRE (BO)

276 AYER ROAD
RANCIS MURPHY INSURANCE AGENCY INC.
ASSESSORS MAP 4, BLOCK 37
DEED BOOK 13624, PAGE 388
PLAN BOOK 469, PLAN 36

280 AYER ROAD
YUKON HOLDINGS, LLC
ASSESSORS MAP 4, BLOCK 36
DEED BOOK 48875, PAGE 84
PLAN BOOK 469, PLAN 36

284 AYER ROAD
DAVID B. ALEXANDER
ASSESSORS MAP 4, BLOCK 35
DEED BOOK 63500, PAGE 332
PLAN BOOK 587, PLAN 5

288 AYER ROAD
THE 39 EATON REALTY TRUST
ASSESSORS MAP 4, BLOCK 34
DEED BOOK 67617, PAGE 325
PLAN BOOK 389, PLAN 9

CONTINUED ON SHEET NO. 47
CONTINUED ON SHEET NO. 49

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 11 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:18 PM

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
50	PROP CBCI	61+03	13.0 LT	276.93		I=272.93' (52)	
51	PROP CB	61+11.08	12.0 RT	276.86		I=272.86' (52)	OFFSET TOP
52	PROP DMH	61+14.46	6.0 RT	276.95	I=272.35' (49) I=272.65' (50) I=272.65' (51)	I=272.25' (54)	
53	PROP CBCI	64+03.05	13.0 LT	272.88		I=268.88' (54)	
54	PROP DMH	64+14.31	6.5 RT		I=268.43' (52) I=268.43' (53)	I=268.33' (55)	
55	PROP DMH	64+99.89	6.5 RT	272.26	I=267.66' (54)	I=267.56' (56)	OFFSET TOP
56	PROP HDWL	65+11.87	21.1 RT	269.34	I=267.40' (55)		REFER TO MASSDOT STANDARD DRAWING E 206.4.0
57	PROP SPECIAL DMH	65+31.92	26.8 LT		I=264.84' ()	I=264.82' (58)	5' DIAMETER
58	PROP HDWL	65+32.50	39.8 LT		I=264.76' (57)		REFER TO MASSDOT STANDARD DRAWING E 206.6.0
59	PROP HDWL	65+29.77	21.0 RT			I=265.06' ()	REFER TO MASSDOT STANDARD DRAWING E 206.6.0
60	PROP FES	65+40.58	26.5 RT	268.32	I=266.38' (61)		

NAD 83 N

295 AYER ROAD
295 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 27
DEED BOOK 68608, PAGE 289
PLAN BOOK 967, PLAN 65

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

ROUTE 110/111 - AYER ROAD

PROP GUY WIRE (BO)
PROP TEMP EASEMENT
PROP PUE
RELOCATE UP (BO)
REM UP (BO)
PROP TEMP EASEMENT
PROP TEMP EASEMENT
REM UP (BO)
REM UP (BO)
RET UP
PROP PERM DRAINAGE AND GUARDRAIL EASEMENT
PROP TEMP EASEMENT
RELOCATE UP (BO)
PROP GUY WIRE (BO)
PROP PERM DRAINAGE EASEMENT
UPGRADE UP (BO)
PROP PUE
PROP PUE
PROP PUE
PROP TEMP EASEMENT
PROP 3" ELEC CONDUIT (TYP)
PROP SERVICE CONNECTION W/ RISER, WEATHERHEAD, & DISCONNECT
PROP GUY WIRE (BO)
PROP TEMP EASEMENT
PROP PUE
PROP UP & GUY WIRE (BO)
RELOCATE UP (BO)

1921 COUNTY LAYOUT
1921 COUNTY LAYOUT
18' - 12" PIPE OPTION
296' - 15" RCP CLASS IV
270' - 15" RCP
3' - 12" PIPE OPTION
19' - 12" PIPE OPTION
82' - 15" RCP CLASS IV
11' - 36" RCP
3' - 12" PIPE
RET EXIST RCP
PROP 3'-36" RCP
17' - 15" RCP CLASS IV
106' - 15" RCP CLASS IV

CONTINUED ON SHEET NO. 48

CONTINUED ON SHEET NO. 50

288 AYER ROAD
THE 39 EATON REALTY TRUST
ASSESSORS MAP 4, BLOCK 34
DEED BOOK 67617, PAGE 325
PLAN BOOK 389, PLAN 9

292 AYER ROAD
THE VICKESH MYER REVOCABLE TRUST
ASSESSORS MAP 5, BLOCK 78
DEED BOOK 62379, PAGE 392
PLAN BOOK 329, PLAN 118

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD (CONSERVATION COMMISSION)
ASSESSORS MAP 5, BLOCK 80
DEED BOOK 6626, PAGE 58
PLAN BOOK 433, PLAN 7

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

294 AYER ROAD
AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 33
DEED BOOK 52481, PAGE 269

AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 4, BLOCK 28
DEED BOOK 42857, PAGE 287
PLAN BOOK 357, PLAN 100

304 AYER ROAD
STEVEN & CAROLYN H. FADER
ASSESSORS MAP 4, BLOCK 32, LOT 1
DEED BOOK 54408, PAGE 186

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	50	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 12 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:18 PM

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
61	PROP DMH	66+47	5.5 RT	271.60	I=267.20' (63) I=267.20' (62)	I=267.10' (60)	
62	PROP CB	66+50	12.0 RT	271.35		I=267.35' (61)	
63	PROP DMH	68+77.48	4.5 RT	274.03	I=269.63' (66) I=269.73' (65) I=269.73' (64)	I=269.53' (61)	OFFSET TOP
64	PROP CB	68+82.44	12.0 RT	273.96		I=269.96' (63)	OFFSET TOP
65	PROP CBCI	68+87.50	13.0 LT	274.23		I=270.23' (63)	
66	PROP DMH	71+40.03	3.5 RT	279.97	I=275.47' (68) I=275.47' (67)	I=275.37' (63)	
67	PROP CB	71+42.90	12.0 RT	279.87		I=275.57' (66)	OFFSET TOP
68	PROP CBCI	71+49.55	13.0 LT	280.01		I=276.01' (66)	

NAD 83 N

ROUTE 110/111 - AYER ROAD

AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 4, BLOCK 28
DEED BOOK 42857, PAGE 287
PLAN BOOK 357, PLAN 100

304 AYER ROAD
STEVEN & CAROLYN H. FADER
ASSESSORS MAP 4, BLOCK 32, LOT 1
DEED BOOK 54408, PAGE 186

307 AYER ROAD
DRB ACRES, LLC
ASSESSORS MAP 4, BLOCK 29
DEED BOOK 52809, PAGE 26
PLAN BOOK 357, PLAN 100

306 AYER ROAD
MCCARTHY REALTY TRUST
ASSESSORS MAP 5, BLOCK 79
DEED BOOK 18243, PAGE 138
PLAN BOOK 302, PLAN 23

310 AYER ROAD
JOHN J. & MARISA D. IACOMINI
ASSESSORS MAP 4, BLOCK 31
DEED BOOK 59087, PAGE 319
PLAN BOOK 424, PLAN 96

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

CONTINUED ON SHEET NO. 49
CONTINUED ON SHEET NO. 51

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	51	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 13 OF 17

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
69	PROP CBCI	76+81.92	13.0 LT	281.89		I=277.89' (70)	
70	PROP DMH	76+92.60	5.5 RT	281.82	I=277.42' (69)	I=277.32' (71)	

NAD 83 N

CB20
RIM=282.07'
INV=280.2'
SUMP=276.6'
TOP WATER=280.4'

CB21
RIM=280.38'
INV=278.1'(NW)
INV=278.2'(N)
INV=277.7'(E)
SUMP=275.6'

CB22
RIM=280.76'
INV=278.6'
SUMP=276.6'

313 AYER ROAD
FEDERICO RAFFA & MELISA L CUNNINGHAM
ASSESSORS MAP 4, BLOCK 30
DEED BOOK 50759, PAGE 247
PLAN BOOK 383, PLAN 64

325 AYER ROAD
AYER ROAD PROPERTY OWNER, LLC
ASSESSORS MAP 1, BLOCK 4
DEED BOOK 66687, PAGE 238
PLAN BOOK 277, PLAN 90

310 AYER ROAD
JOHN J. & MARISA D. IACOMINI
ASSESSORS MAP 4, BLOCK 31
DEED BOOK 59087, PAGE 319
PLAN BOOK 424, PLAN 96

320 AYER ROAD
AYER ROAD PROPERTY OWNER, LLC
ASSESSORS MAP 2, BLOCK 74
DEED BOOK 66687, PAGE 230
PLAN BOOK 37, PLAN 16
PLAN BOOK 550, PLAN 61

ROUTE 110/111 - AYER ROAD

1921 COUNTY LAYOUT

RET LP
RET EHH
PROP PUE
PROP TEMP EASEMENT
PROP GUY WIRE (BO-CHARTER)
RELOCATE UP (BO); RET EXIST ANCHOR; ELECTRIC RISER RELOCATION LOCATION NO. 8
RELOCATE UP & RISER (BO-CHARTER)
ADJ GG (BO-NGRID)
ADJ CB
REMOD CB
ADJ EHH
RELOCATE UP (BO)
PROP GUY WIRE (BO)
RELOCATE UP (BO); RELOCATE ELECTRIC RISER (BO-NGRID)
PROP PB ON EXIST CONDUIT; PROP 5' 2-4" CONDUIT (BO-NGRID)
UPGRADE UP (BO)
17' - 12" PIPE OPTION
201' - 12" RCP

PI +50.83
PI +38.52
PC +48.19
PC +94.80
PT +26.61
PT +74.75
PC

CONTINUED ON SHEET NO. 50
CONTINUED ON SHEET NO. 52

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:19 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	52	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 14 OF 17

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
71	PROP DMH	79+00	4.5 RT	280.43	I=276.03' (70)	I=275.93' (72)	
72	PROP DMH	80+60	4.5 RT	278.97	I=274.57' (71)	I=274.47' (75)	
73	PROP CBCI	83+41.37	13.0 LT	276.77		I=272.77' (75)	
74	PROP CB	83+49.94	12.0 RT	276.84		I=272.84' (75)	
75	PROP DMH	83+51.47	4.5 RT	276.91	I=272.51' (72) I=272.61' (73) I=272.61' (74)	I=272.41' (76)	

NAD 83

N

ROUTE 110/111 - AYER ROAD

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

327 AYER ROAD
LAWRENCE C. DOE &
PAMELA C. LAWSON
ASSESSORS MAP 1, BLOCK 3
DEED BOOK 45146, PAGE 310

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

320 AYER ROAD
AYER ROAD PROPERTY OWNER, LLC
ASSESSORS MAP 2, BLOCK 74
DEED BOOK 66687, PAGE 230
PLAN BOOK 37, PLAN 16
PLAN BOOK 550, PLAN 61

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

100' WETLAND BUFFER

PROP TEMP EASEMENT

PROP PUE

PROP GUY WIRE (BO)

RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 9

ADJ GG (BO-NGRID)

RET UP

ADJ TMH (BO-VERIZON)

UPGRADE UP (BO)

PROP PUSH BRACE (BO)

RELOCATE UP (BO)

RELOCATE UP (BO)

PROP GUY WIRE (BO)

RELOCATE UP (BO)

16' - 12" PIPE OPTION

4' - 12" PIPE OPTION

104' - 12" RCP

154' - 12" RCP

201' - 12" RCP

287' - 12" RCP

1921 COUNTY LAYOUT

PC +28.07

PC +74.55

PT +04.13

PT +35.82

REM EXIST CB

CB23
RIM=276.78'
INV=274.3'
SUMP=273.6'(TOP DEBRIS)

NOTE: WF#J9 WAS NOT FOUND

CONTINUED ON SHEET NO. 51

CONTINUED ON SHEET NO. 53

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100

SCALE: 1" = 20'

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:19 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	53	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 15 OF 17

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
76	PROP DMH	84+59.36	6.0 RT	276.34	I=271.84' (75)	I=271.74' (78)	OFFSET TOP
77	PROP CBCI	85+59.13	13.0 LT	274.87		I=271.37' (78)	
78	PROP DMH	85+65.11	6.0 RT	275.59	I=271.09' (76) I=271.19' (77)	I=270.99' (79)	
79	PROP DMH	86+58.93	6.0 RT	274.88	I=270.38' (78)	I=270.28' (81)	OFFSET TOP
80	PROP CBCI	87+11.94	13.0 LT	273.46		I=269.96' (81)	
81	PROP DMH	87+19.61	6.0 RT	274.10	I=269.60' (79) I=269.70' (80)	I=269.50' (83)	OFFSET TOP
82	PROP CBCI	88+73.30	13.0 LT	270.35		I=266.35' (83)	
83	PROP DMH	88+85.13	9.6 RT	270.26	I=265.75' (81) I=265.85' (82)	I=265.65' (84)	OFFSET TOP

CB24
RIM=274.66'
INV=270.6'(SW)
INV=270.5'(NE)
SUMP=269.8'

CB25
RIM=270.47'
INV=265.3'(SW)
INV=266.4'(S)
INV=263.9'(NE)
SUMP=263.5'

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

343 AYER ROAD
KATHLEEN M. DECOT
ASSESSORS MAP 2, BLOCK 2
DEED BOOK 50213, PAGE 223
PLAN BOOK 122, PLAN 50

345 AYER ROAD
GEOFFREY O. & JENNIFER K. GILLARD
ASSESSORS MAP 2, BLOCK 3
DEED BOOK 57294, PAGE 103
PLAN BOOK 122, PLAN 50

341 AYER ROAD
ELIZABETH MAE SHUMAN JOYCE &
CHRISTOPHER MICHAEL JOYCE
ASSESSORS MAP 2, BLOCK 1
DEED BOOK 66963, PAGE 37

346 AYER ROAD
FRANK, JR. & BARBARA S. HEIM
ASSESSORS MAP 2, BLOCK 11
DEED BOOK 4971, PAGE 277
PLAN BOOK 329, PLAN 92

344 AYER ROAD
KATIE ELIZABETH & NATHAN J. BERG
ASSESSORS MAP 2, BLOCK 12
DEED BOOK 59619, PAGE 196
PLAN BOOK 393, PLAN 112

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

MYRICK LANE
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 2, BLOCK 13
DEED BOOK 5295, PAGE 435
PLAN BOOK 340, PLAN 42
(PARCEL IS SUBJECT TO ARTICL RESTRICTIONS)

NAD 83

ROUTE 110/111 - AYER ROAD

1921 COUNTY LAYOUT

TOWN LAYOUT

MYRICK LANE

PROP TEMP EASEMENT

PROP PUE

PROP GUY WIRE (BO)

RELOCATE UP (BO)

RELOCATE UP; PROP GUY WIRE (BO)

RELOCATE UP, RISER, & GUY WIRE (BO)

RELOCATE UP & RISER (BO)

RELOCATE UP (BO); ELECTRIC RISER RELOCATION LOCATION NO. 10

PROP UP (BO)

PROP GUY WIRES (BO)

REM UP (BO)

RET UP

RET TMH

ADJ GG (BO-NGRID)

ADJ TMH (BO-VERIZON)

PROP 3" ELEC CONDUIT (TYP)

PROP SERVICE CONNECTION W/ RISER, WEATHERHEAD, & DISCONNECT

REM EXIST 12" CMP

REM EXIST 12" RCP

REM EXIST CB

REM EXIST 4" PVC

16' - 12" PIPE OPTION

4' - 12" PIPE OPTION

22' - 12" PIPE OPTION

104' - 12" RCP

103' - 12" RCP

91' - 12" RCP

57' - 12" RCP

231' - 12" RCP

162' - 12" RCP

PC +46.51

PC +11.27

PT +28.56

PT +75.85

CONTINUED ON SHEET NO. 82

CONTINUED ON SHEET NO. 84

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:20 PM

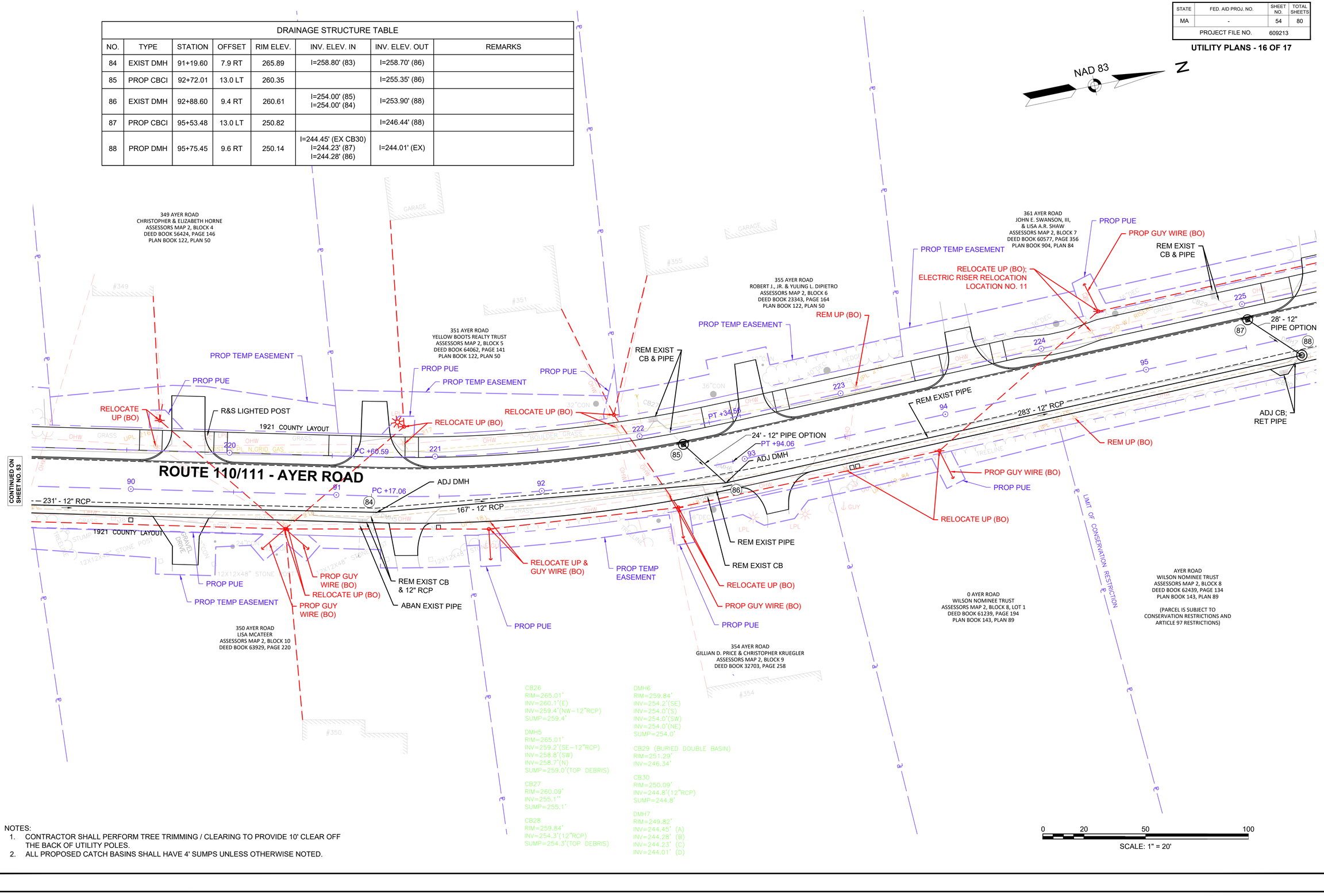
HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	54	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 16 OF 17

NAD 83 N

DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
84	EXIST DMH	91+19.60	7.9 RT	265.89	I=258.80' (83)	I=258.70' (86)	
85	PROP CBCI	92+72.01	13.0 LT	260.35		I=255.35' (86)	
86	EXIST DMH	92+88.60	9.4 RT	260.61	I=254.00' (85) I=254.00' (84)	I=253.90' (88)	
87	PROP CBCI	95+53.48	13.0 LT	250.82		I=246.44' (88)	
88	PROP DMH	95+75.45	9.6 RT	250.14	I=244.45' (EX CB30) I=244.23' (87) I=244.28' (86)	I=244.01' (EX)	



NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:20 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	55	80
PROJECT FILE NO.	609213		

UTILITY PLANS - 17 OF 17

609213_HD10(NOI UTILITY PLANS).DWG Plotted on 3-Apr-2024 7:20 PM

NAD 83 N

CORTLAND LANE

ROUTE 110/111 - AYER ROAD

AYER ROAD
CRAFTSMAN VILLAGE-HARVARD, LLC
ASSESSORS MAP 2, BLOCK 7, LOT 2
DEED BOOK 67486, PAGE 268
PLAN BOOK 912, PLAN 50

AYER ROAD
CRAFTSMAN VILLAGE-HARVARD, LLC
ASSESSORS MAP 2, BLOCK 7, LOT 1
DEED BOOK 67486, PAGE 268
PLAN BOOK 912, PLAN 50

29 HARVARD ROAD
29 HARVARD ROAD, LLC.
ASSESSORS MAP 35, LOT 22
DEED BOOK 71496, PAGE 87 (MIDDLESEX)

28 HARVARD ROAD
MAXANT INDUSTRIES, INC.
ASSESSORS MAP 35, LOT 53
DEED BOOK 12183, PAGE 272 (MIDDLESEX)
PLAN NO. 273 OF 1972

AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8
DEED BOOK 62439, PAGE 134
PLAN BOOK 143, PLAN 89

(PARCEL IS SUBJECT TO CONSERVATION RESTRICTIONS AND ARTICLE 97 RESTRICTIONS)

PROJECT END
STA 100+74.80
N3025101.0471
E636754.0355

PROP TEMP EASEMENT
PROP GUY WIRE (BO)
PROP LAYOUT ALTERATION
PROP SERVICE CONNECTION W/ RISER, WEATHERHEAD, & DISCONNECT
PROP SIDEWALK ANCHOR GUY WIRE (BO)
RELOCATE UP (BO)
RET UP
PROP 3" ELEC CONDUIT (TYP)
PROP PUE
RELOCATE UP (BO); RELOCATE ELECTRIC RISER (BO-NGRID)
PROP PB ON EXIST CONDUIT; PROP 5' 2-4" CONDUIT (BO-NGRID)
28' - 12" PIPE OPTION
ADJ CB; RET PIPE
REM UP (BO)
PROP SIDEWALK ANCHOR GUY (BO)

1921 COUNTY LAYOUT
PC +79.67
PC +51.47
PT +38.06
229+70.43

100' WETLAND BUFFER

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY RIGHT-OF-WAY

MIDDLESEX COUNTY
TOWN OF AYER (SEE SURVEY NOTE 6)
TOWN OF HARVARD
WORCESTER COUNTY

CB30
RIM=250.09'
INV=244.8'(12"RCP)
SUMP=244.8'

DMH7
RIM=249.82'
INV=244.45' (A)
INV=244.28' (B)
INV=244.23' (C)
INV=244.01' (D)

CONTINUED ON SHEET NO. 54

NOTES:
1. CONTRACTOR SHALL PERFORM TREE TRIMMING / CLEARING TO PROVIDE 10' CLEAR OFF THE BACK OF UTILITY POLES.
2. ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

= NATIVE SHORT GRASSLAND MIX (ITEM 765.415)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	56	80
PROJECT FILE NO.		609213	

LANDSCAPE PLANS AND DETAILS - 1 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:21 PM

NAD 83

185 AYER ROAD
12 LANCASTER COUNTY ROAD LLC
ASSESSORS MAP 8, BLOCK 59
DEED BOOK 46796, PAGE 296
PLAN BOOK 226, PLAN 27

187 AYER ROAD
12 LANCASTER COUNTY ROAD, LLC
ASSESSORS MAP 8, BLOCK 60
DEED BOOK 54974, PAGE 74
PLAN BOOK 226, PLAN 27

AYER ROAD
WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

ROUTE 110/111 - AYER ROAD
(1950 TOWN LAYOUT - STATE HIGHWAY ALTERATION 33799A)

1950 STATE ALTERATION	1950 TOWN LAYOUT

1950 TOWN LAYOUT	1924 COUNTY LAYOUT

8+00

PROJECT BEGIN
STA 8+69.90
N3016495.4630
E634274.6683

PT +22.12

PC +16.54

PC +15.24

140+00

9 10 11 12 13 14 141

FLASHER · UPL 78/50 · UPL 79 · UPL 80/81 W/ RISER · UPL 82/79 W/ RISER · UPL 80/87 · UPL 80–1 W/ RISERS · SB/EPLP · BRICK WALK · PLANTER W/SIGN · BIT. CURB · GRASS · RAISED PLANTER · RIP RAP · CONC. MED. · SIGN · GUY · TREELINE · 6" TRIANGLE CONC. POST · STUMP · 20"DEC · CB BROKEN · FLOW OF GRANITE BLOCKS · EMH · WG · OHW · EP · EM · GPL · EHH · MB · CROSS

184 AYER ROAD
PHOENIX-DURANGO LLC
ASSESSORS MAP 8, BLOCK 41
DEED BOOK 64869, PAGE 275
PLAN BOOK 219, PLAN 95

188 AYER ROAD
SAMANTHA'S REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 1
DEED BOOK 33654, PAGE 159
PLAN BOOK 780, PLAN 121

196 AYER ROAD
BOWERS ROW LLC
ASSESSORS MAP 8, BLOCK 40
DEED BOOK 45722, PAGE 348
PLAN BOOK 881, PLAN 28

198 AYER ROAD
AYER ROAD REALTY LLC
ASSESSORS MAP 8, BLOCK 40, LOT 3
DEED BOOK 45608, PAGE 289
PLAN BOOK 881, PLAN 28

200 AYER ROAD
HARVARD OFFICE PARK LLC
ASSESSORS MAP 8, BLOCK 40, LOT 2
DEED BOOK 28957, PAGE 72
PLAN BOOK 780, PLAN 121

CONTINUED ON SHEET NO. 57

0 20 50 100

SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

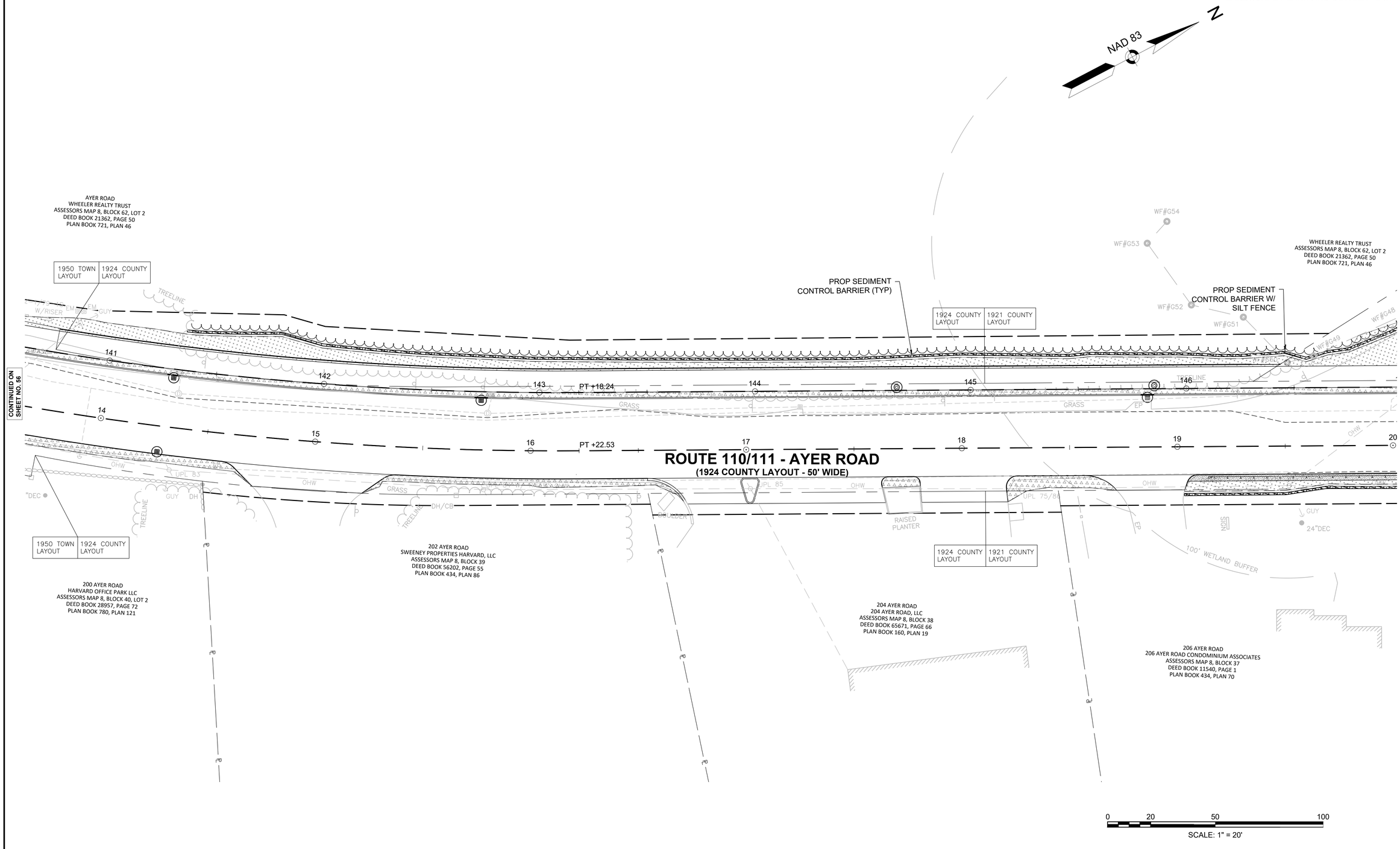
= NATIVE SHORT GRASSLAND MIX (ITEM 765.415)

= PAVEMENT MILLING MULCH (ITEM 769.)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	57	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 2 OF 19



609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:21 PM

SEEDING AND MULCH LEGEND

- = STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS
- = STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES
- = NATIVE SHORT GRASSLAND MIX (ITEM 765.415)
- = PAVEMENT MILLING MULCH (ITEM 769.)
- = WETLAND SEED MIX (ITEM 765.555)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	58	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 3 OF 19

CONTINUED ON SHEET NO. 10

GEBO LANE (PUBLIC - VARIABLE WIDTH)

LANCASTER COUNTY ROAD
INHABITANTS OF THE TOWN OF HARVARD
ASSESSORS MAP 8, BLOCK 62, LOT 4
DEED BOOK 21051, PAGE 25
PLAN BOOK 721, PLAN 46

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

PROP SEDIMENT CONTROL BARRIER (TYP)

NATIVE SHORT GRASSLAND MIX

PROP INT. STREAM REST. AREA SEE SHEET 74

PROP WETLAND REP. AREA, TYP. SEE SHEET 74

WHEELER REALTY TRUST
ASSESSORS MAP 8, BLOCK 62, LOT 2
DEED BOOK 21362, PAGE 50
PLAN BOOK 721, PLAN 46

PC +32.26
PT +80.14
PT +24.05
PC +72.44
PT +30.45
PC +68.77
PC +73.39

EXISTING VEGETATION TO BE PRESERVED WITHIN LIMITS SHOWN

POTENTIAL STAGING AREA. SEE GENERAL CONSTRUCTION NOTES #8 AND #9.

NAD 83

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +10.02
PT +04.31

21+29.95 AYER ROAD=
110+00.00 GEBO LANE

PROP SEDIMENT CONTROL BARRIER (TYP)

PROP INT. STREAM REST. AREA SEE SHEET 74

206 AYER ROAD
206 AYER ROAD CONDOMINIUM ASSOCIATES
ASSESSORS MAP 8, BLOCK 37
DEED BOOK 11540, PAGE 1
PLAN BOOK 434, PLAN 70

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 8, BLOCK 36
DEED BOOK 6223, PAGE 264
PLAN BOOK 434, PLAN 86

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

CONTINUED ON SHEET NO. 57

CONTINUED ON SHEET NO. 59

0 20 50 100
SCALE: 1" = 20'

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:21 PM

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

= NATIVE SHORT GRASSLAND MIX (ITEM 765.415)

= CRUSHED STONE (ITEM 151.)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	59	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 4 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:21 PM

NAD 83 N

LANCASTER COUNTY ROAD
LANCASTER COUNTY PLACE CONDOMINIUM
ASSESSORS MAP 8, BLOCK 22
DEED BOOK 15687, PAGE 93
PLAN BOOK 675, PLAN 87

LANCASTER COUNTY ROAD
INHABITANTS OF THE TOWN OF HARVARD
ASSESSORS MAP 8, BLOCK 62, LOT 4
DEED BOOK 21051, PAGE 25
PLAN BOOK 721, PLAN 46

6 LANCASTER COUNTY ROAD
R.L. LAZARO FAMILY LIMITED PARTNERSHIP
ASSESSORS MAP 8, BLOCK 48, LOT 3, UNIT 1
CERT. 17688
LCC 32327C

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

GEBO LANE
(PUBLIC - VARIABLE WIDTH)

LANCASTER COUNTY ROAD
(PUBLIC - VARIABLE WIDTH)

PROP SEDIMENT CONTROL BARRIER (TYP)

PT +01.86

PC +23.27

PT +92.27

PC +94.44

PRC +58.78

116+00

FF=259.75'
LOAD. DOCK

CONC. LOADING DOCK

CONC. RAMP W/HAND RAIL

DUMPSTER PAD

CONC. APRON

CONC. HEADWALL

RIP RAP

SEPTIC TANK

SEPTIC PUMP

AC UNITS

SATELLITE DISH ON CONC. PAD

SHED

BOULDER

GUY

SIGN

TREELINE

OHW

EP

UPL 5/1

UPL 5 W/ RISERS

UPL 163/4 W/ RISERS

UPL 164/3

100' WETLAND BUFFER

200' RIVERFRONT AREA

POTENTIAL VERNAL POOL (APPROX LOCATION FROM

WF#E1 WF#E2 WF#E3 WF#E4 WF#E5 STOP

WF#G7 WF#G8 WF#G11 REC7-15-19 WF#G12 WF#G13 WF#G14 WF#G15 WF#G16 WF#G17 WF#G18 WF#G30 WF#G31 WF#G32 WF#G33 WF#G34 WF#G35 WF#G36 WF#G37 WF#G38 WF#G39 WF#G40

24"CON 12"DEC 10"DEC 15"DEC

152 153 154 155

CONTINUED ON SHEET NO. 58

CONTINUED ON SHEET NO. 60

0 20 50 100

SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

- = STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS
- = STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES
- = NATIVE SHORT GRASSLAND MIX (ITEM 765.415)
- = PAVEMENT MILLING MULCH (ITEM 769.)
- = CRUSHED STONE (ITEM 151.)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	60	80
PROJECT FILE NO.		609213	

LANDSCAPE PLANS AND DETAILS - 5 OF 19

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:21 PM

CONTINUED ON SHEET NO. 10

PC +94.44

155

PRC +58.78

156

PT +12.77

157

PC +88.95

158

PCC +74.23

159

PT +93.00

160

161

PT +40.35

31

PT +56.12

26

27

28

29

30

PC +45.37

PC +41.32

120+00

121+00

PT +64.21

PC +40.76

29+81.00 AYER ROAD=
120+00.00 POOR FARM ROAD

LANCASTER COUNTY ROAD
(PUBLIC - VARIABLE WIDTH)

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

POOR FARM ROAD
(PUBLIC - VARIABLE WIDTH)

PROP SEDIMENT CONTROL BARRIER (TYP)

6 LANCASTER COUNTY ROAD
R.L. LAZARO FAMILY LIMITED PARTNERSHIP
ASSESSORS MAP 8, BLOCK 48, LOT 3, UNIT 1
CERT. 17688
LCC 32327C

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

215 AYER ROAD
APIF - MASSACHUSETTS, LLC
ASSESSORS MAP 8, BLOCK 61
DEED BOOK 65530, PAGE 161
PLAN BOOK 299, PLAN 81
PLAN BOOK 365, PLAN 118

GAS EASEMENT
(NATIONAL GRID)
DEED BOOK 4726, PAGE 527
PLAN BOOK 305, PLAN 118

129 POOR FARM ROAD
LAURA A. CLARAGE
ASSESSORS MAP 8, BLOCK 35
DEED BOOK 64304, PAGE 359

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

POTENTIAL VERNAL POOL (APPROX LOCATION FROM GIS)

APPROXIMATE 100 YEAR FLOOD ZONE

"BOWERS BROOK"

100' RIVERFRONT AREA

200' RIVERFRONT AREA

100' WETLAND BUFFER

CONTINUED ON SHEET NO. 99

CONTINUED ON SHEET NO. 61

NAD 83

N

0 20 50 100

SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

= NATIVE SHORT GRASSLAND MIX (ITEM 765.415)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	61	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 6 OF 19

CONTINUED ON SHEET NO. 60

CONTINUED ON SHEET NO. 62

NAD 83

N

100' WETLAND BUFFER

100' RIVERFRONT AREA

200' RIVERFRONT AREA

LANCASTER COUNTY ROAD
TOWN OF HARVARD
(CONSERVATION COMMISSION)
ASSESSORS MAP 4, BLOCK 48, LOT 3, UNIT 4
CERT. 11358
LCC 32327C

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

231 AYER ROAD
SCHOOL HOUSE 1870 TRUST
ASSESSORS MAP 4, BLOCK 48, LOT 2
CERT. 17941
LCC 32327B

233 AYER ROAD
SHAKER PLACE OFFICES, LLC
ASSESSORS MAP 4, BLOCK 48, LOT 1
DEED BOOK 34484, PAGE 146
PLAN BOOK 548, PLAN 46

6' TRIANGLE CONC. PAD

TREELINE

BOULDERS

3' X 8" WOOD POST

"236" WOOD POST

18"DEC

ROUTE 110/111 - AYER ROAD

(1921 COUNTY LAYOUT - 50' WIDE)

132 POOR FARM ROAD
JEFFREY P. & ALEXANDRA H. MCKEARNEY
ASSESSORS MAP 8, BLOCK 24
DEED BOOK 67692, PAGE 264

232 AYER ROAD
BRYAN & REBECCA KELLEY
ASSESSORS MAP 8, BLOCK 23
DEED BOOK 57957, PAGE 89

236 AYER ROAD
ROBERT A. WILLIAMS JR.
& JANET M. WILLIAMS
ASSESSORS MAP 4, BLOCK 47
DEED BOOK 61011, PAGE 81
PLAN BOOK 347, PLAN 77

242 AYER ROAD
DAVID M. & MARTIN D. POUTRY
ASSESSORS MAP 4, BLOCK 46
DEED BOOK 27509, PAGE 388
PLAN BOOK 246, PLAN 69

6'STOCKADE

0 20 50 100

SCALE: 1" = 20'

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:22 PM

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

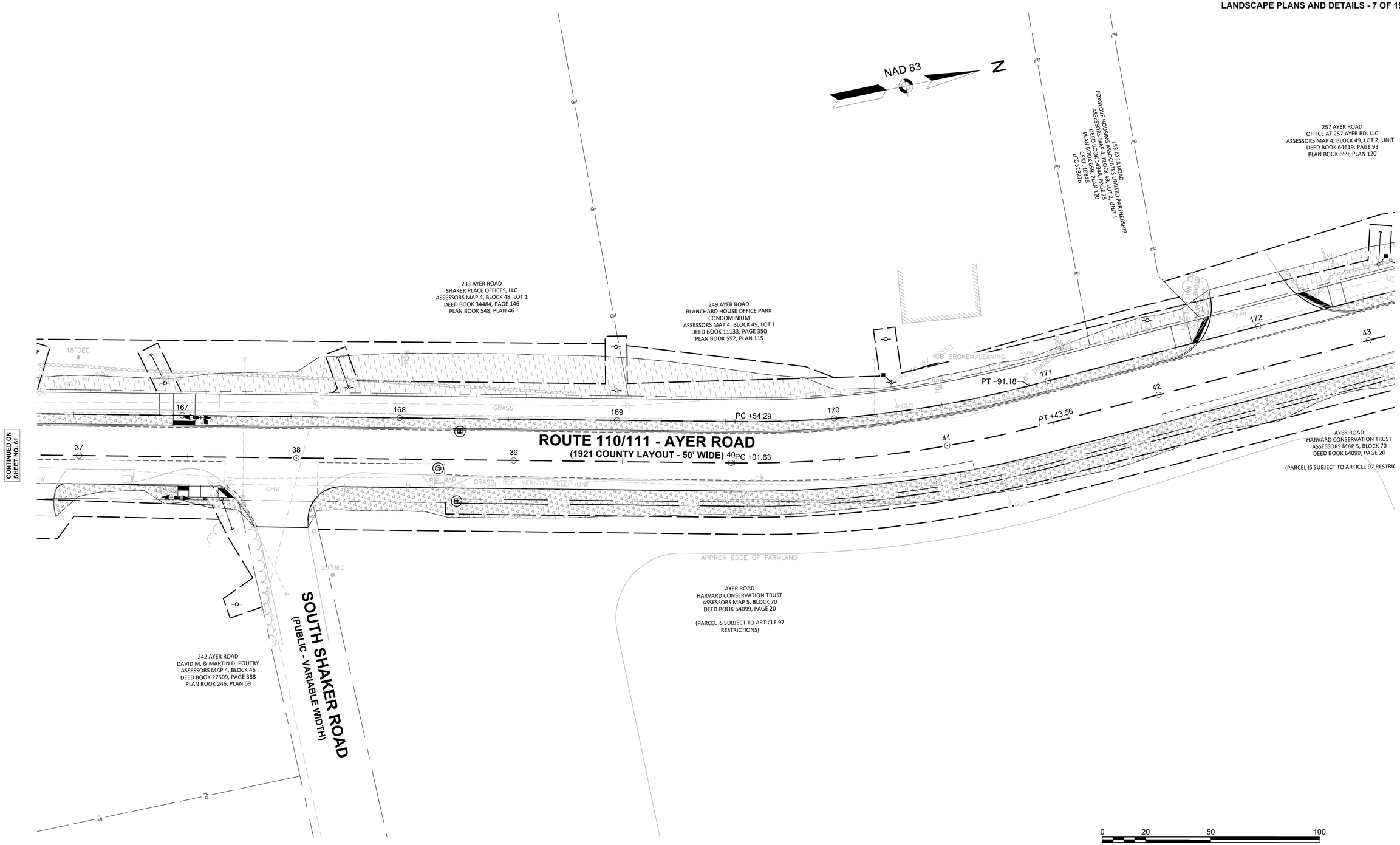
= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	62	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 7 OF 19

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:22 PM



SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	63	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 8 OF 19

NAD 83 N

259 AYER ROAD
259 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 51
DEED BOOK 69129, PAGE 227
PLAN BOOK 462, PLAN 72

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

257 AYER ROAD
OFFICE AT 257 AYER RD, LLC
ASSESSORS MAP 4, BLOCK 49, LOT 2, UNIT 2
DEED BOOK 64619, PAGE 93
PLAN BOOK 659, PLAN 120

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +55.26
PC +07.64
PT +44.22
PT +91.71

262 AYER ROAD
DKMC REALTY, LLC
ASSESSORS MAP 4, BLOCK 40
DEED BOOK 61126, PAGE 24

264 AYER ROAD
THREE SEASONS TREESCAPE, LLC
ASSESSORS MAP 4, BLOCK 39
DEED BOOK 64293, PAGE 91
PLAN BOOK 379, PLANS 10-11

AYER ROAD
HARVARD CONSERVATION TRUST
ASSESSORS MAP 5, BLOCK 70
DEED BOOK 64099, PAGE 20

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

256 AYER ROAD
256 AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 41
DEED BOOK 59556, PAGE 235
PLAN BOOK 281, PLAN 117

CONTINUED ON SHEET NO. 62

CONTINUED ON SHEET NO. 64

0 20 50 100
SCALE: 1" = 20'

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:22 PM

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	64	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 9 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:22 PM

NAD 83

AYER ROAD
REM REALTY TRUST
ASSESSORS MAP 4, BLOCK 52, LOT 2
DEED BOOK 56380, PAGE 389

OLD MILL ROAD
(1942 COUNTY LAYOUT - WIDTH VARIES)

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

275 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 24
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

CONTINUED ON SHEET NO. 63

CONTINUED ON SHEET NO. 65

264 AYER ROAD
THREE SEASONS TREESCAPE, LLC
ASSESSORS MAP 4, BLOCK 39
DEED BOOK 64293, PAGE 91
PLAN BOOK 379, PLANS 10-11

270 AYER ROAD
HARVARD PROFESSIONAL CONDOMINIUM
ASSESSORS MAP 4, BLOCK 38
DEED BOOK 42123, PAGE 217
PLAN BOOK 394, PLAN 108

276 AYER ROAD
D. FRANCIS MURPHY INSURANCE AGENCY INC.
ASSESSORS MAP 4, BLOCK 37
DEED BOOK 13624, PAGE 388
PLAN BOOK 469, PLAN 36

0 20 50 100

SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	65	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 10 OF 19

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:22 PM

NAD 83 N

285 AYER ROAD
RDJ REALTY COMPANY
ASSESSORS MAP 4, BLOCK 25
DEED BOOK 31418, PAGE 201
PLAN BOOK 335, PLAN 6

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +01.68
PT +48.66
PT +44.69

CONTINUED ON SHEET NO. 64

CONTINUED ON SHEET NO. 66

288 AYER ROAD
THE 39 EATON REALTY TRUST
ASSESSORS MAP 4, BLOCK 34
DEED BOOK 67617, PAGE 325
PLAN BOOK 389, PLAN 9

284 AYER ROAD
DAVID B. ALEXANDER
ASSESSORS MAP 4, BLOCK 35
DEED BOOK 63500, PAGE 332
PLAN BOOK 587, PLAN 5

280 AYER ROAD
YUKON HOLDINGS, LLC
ASSESSORS MAP 4, BLOCK 36
DEED BOOK 48875, PAGE 84
PLAN BOOK 469, PLAN 36

276 AYER ROAD
:ANCIS MURPHY INSURANCE AGENCY INC.
ASSESSORS MAP 4, BLOCK 37
DEED BOOK 13624, PAGE 388
PLAN BOOK 469, PLAN 36

0 20 50 100
SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

= NATIVE SHORT GRASSLAND MIX (ITEM 765.415)

= PAVEMENT MILLING MULCH (ITEM 769.)

= WETLAND SEED MIX (ITEM 765.555)

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	66	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 11 OF 19

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:22 PM

NAD 83 N

289 AYER ROAD
289 AYER LLC
ASSESSORS MAP 4, BLOCK 26
DEED BOOK 58259, PAGE 155
PLAN BOOK 241, PLAN 7

295 AYER ROAD
295 AYER ROAD LLC
ASSESSORS MAP 4, BLOCK 27
DEED BOOK 68608, PAGE 289
PLAN BOOK 967, PLAN 65

PROP SEDIMENT CONTROL BARRIER (TYP)

INT STREAM RESTORATION AREA SEE SHEET 74

PROP WETLAND REP. AREA, TYP. SEE SHEET 74

AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 4, BLOCK 28
DEED BOOK 42857, PAGE 287
PLAN BOOK 357, PLAN 100

SITE UNDER CONSTRUCTION

APPROX LIMIT OF GRAVEL ENTRANCE

RAISED PLANTER W/SIGN

100' WETLAND BUFFER

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +53.48

PC +02.68

CONTINUED ON SHEET NO. 67

CONTINUED ON SHEET NO. 65

288 AYER ROAD
THE 39 EATON REALTY TRUST
ASSESSORS MAP 4, BLOCK 34
DEED BOOK 67617, PAGE 325
PLAN BOOK 389, PLAN 9

292 AYER ROAD
THE VICKESH MYER REVOCABLE TRUST
ASSESSORS MAP 5, BLOCK 78
DEED BOOK 62379, PAGE 392
PLAN BOOK 329, PLAN 118

AYER ROAD
INHABITANTS OF THE TOWN OF HARVARD (CONSERVATION COMMISSION)
ASSESSORS MAP 5, BLOCK 80
DEED BOOK 6626, PAGE 58
PLAN BOOK 433, PLAN 7

(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

294 AYER ROAD
AYER ROAD, LLC
ASSESSORS MAP 4, BLOCK 33
DEED BOOK 52481, PAGE 269

304 AYER ROAD
STEVEN & CAROLYN H. FADER
ASSESSORS MAP 4, BLOCK 32, LOT 1
DEED BOOK 54408, PAGE 186

PROP WETLAND REP. AREA, TYP. SEE SHEET 74

INT STREAM RESTORATION AREA SEE SHEET 74

WF#H1 WF#H2 WF#H3 WF#H8 WF#H9

0 20 50 100

SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	67	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 12 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:23 PM

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

= NATIVE SHORT GRASSLAND MIX (ITEM 765.415)

= PAVEMENT MILLING MULCH (ITEM 769.)

NAD 83

N

AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 4, BLOCK 28
DEED BOOK 42857, PAGE 287
PLAN BOOK 357, PLAN 100

PROP SEDIMENT CONTROL BARRIER (TYP)

307 AYER ROAD
DRB ACRES, LLC
ASSESSORS MAP 4, BLOCK 29
DEED BOOK 52809, PAGE 26
PLAN BOOK 357, PLAN 100

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

309 AYER ROAD
BERWIND BROTHERS LLC
ASSESSORS MAP 1, BLOCK C
DEED BOOK 42857, PAGE 287
PLAN BOOK 131, PLAN 44

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +53.48
PT +50.35
PT +97.07
66 PC +02.68
PI +

196 197 198 199 200 201
66 67 68 69 70 71 72

CONTINUED ON SHEET NO. 66

CONTINUED ON SHEET NO. 68

304 AYER ROAD
STEVEN & CAROLYN H. FADER
ASSESSORS MAP 4, BLOCK 32, LOT 1
DEED BOOK 54408, PAGE 186

306 AYER ROAD
MCCARTHY REALTY TRUST
ASSESSORS MAP 5, BLOCK 79
DEED BOOK 18243, PAGE 138
PLAN BOOK 302, PLAN 23

310 AYER ROAD
JOHN J. & MARISA D. IACOMINI
ASSESSORS MAP 4, BLOCK 31
DEED BOOK 59087, PAGE 319
PLAN BOOK 424, PLAN 96

100' WETLAND BUFFER

#304

0 20 50 100
SCALE: 1" = 20'

HARVARD
AYER ROAD (ROUTE 110/111)

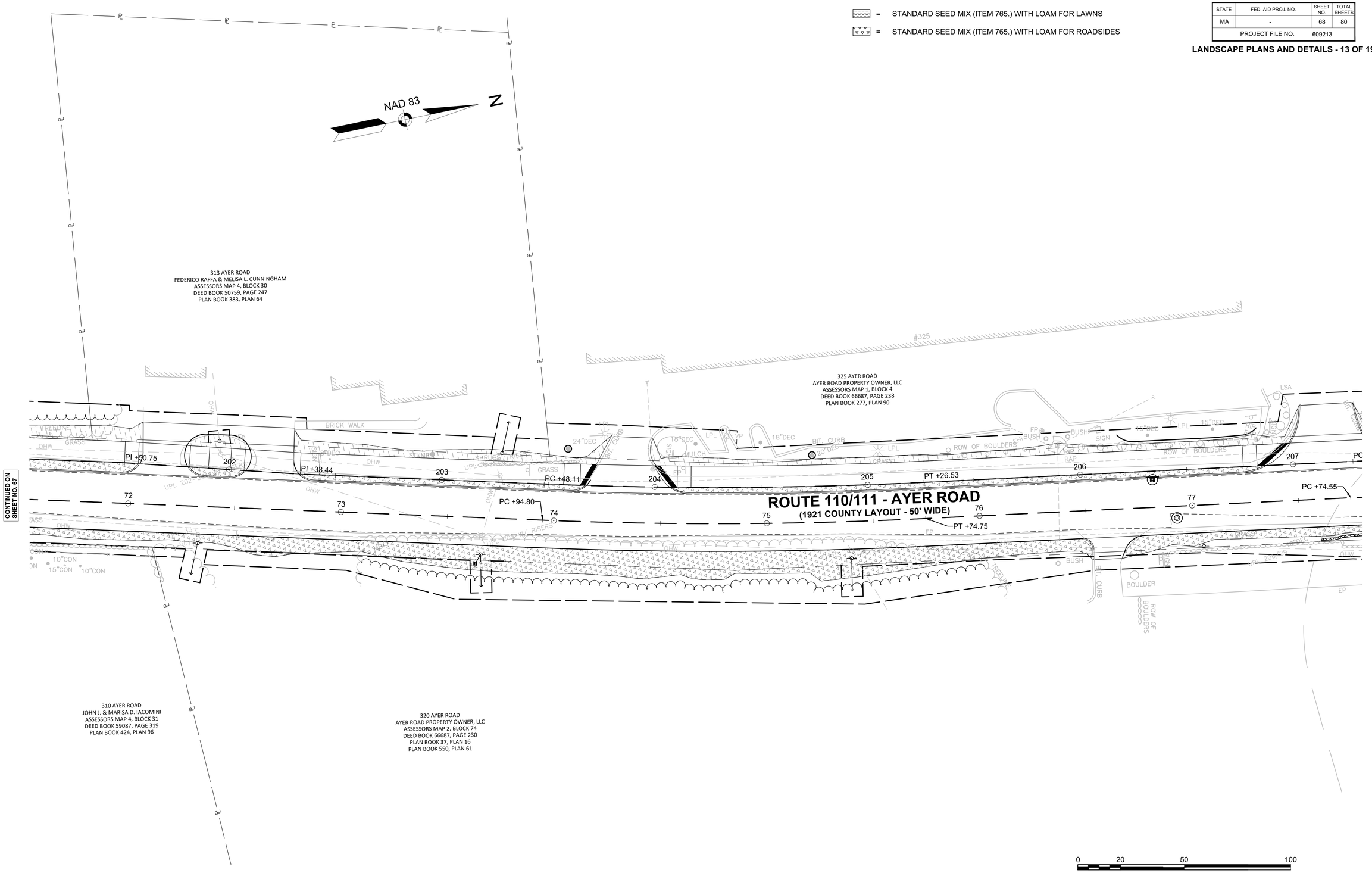
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	68	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 13 OF 19

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES



0 20 50 100

SCALE: 1" = 20'

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:23 PM

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	69	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 14 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:23 PM

NAD 83

N

AYER ROAD
LDPL, LLC
ASSESSORS MAP 1, BLOCK 2
DEED BOOK 45146, PAGE 305

327 AYER ROAD
LAWRENCE C. DOE &
PAMELA C. LAWSON
ASSESSORS MAP 1, BLOCK 3
DEED BOOK 45146, PAGE 310

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

320 AYER ROAD
AYER ROAD PROPERTY OWNER, LLC
ASSESSORS MAP 2, BLOCK 74
DEED BOOK 66687, PAGE 230
PLAN BOOK 37, PLAN 16
PLAN BOOK 550, PLAN 61

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +74.55

PC +28.

PT +35.82

PT +04.05

PROP SEDIMENT CONTROL BARRIER (TYP)

NOTE: WF#J9 WAS NOT FOUND

100' WETLAND BUFFER

WOOD PLANTER EDGING (1' WIDE)

WOOD EDGING

GRASS

TREELINE

BOULDER

BIT. CONC.

GUY

GRAVEL DRIVE

BIT DRIVE

CONC

EP

WF#J1 WF#J2 WF#J3 WF#J4 WF#J5 WF#J6 WF#J7 WF#J8 WF#J10 WF#J11 WF#J12 WF#J13 WF#J14 WF#J17 WF#J18 WF#J19 WF#J20 WF#J21

CONTINUED ON SHEET NO. 68

CONTINUED ON SHEET NO. 70

0 20 50 100

SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	70	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 15 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:23 PM

CONTINUED ON SHEET NO. 71

CONTINUED ON SHEET NO. 69

NAD 83

335 AYER ROAD
335 AYER ROAD REALTY TRUST
ASSESSORS MAP 1, BLOCK 1
DEED BOOK 68137, PAGE 106
PLAN BOOK 122, PLAN 50

341 AYER ROAD
ELIZABETH MAE SHUMAN JOYCE &
CHRISTOPHER MICHAEL JOYCE
ASSESSORS MAP 2, BLOCK 1
DEED BOOK 66963, PAGE 37

343 AYER ROAD
KATHLEEN M. DECOT
ASSESSORS MAP 2, BLOCK 2
DEED BOOK 50213, PAGE 223
PLAN BOOK 122, PLAN 50

345 AYER ROAD
GEOFFREY O. & JENNIFER K. GILLARD
ASSESSORS MAP 2, BLOCK 3
DEED BOOK 57294, PAGE 103
PLAN BOOK 122, PLAN 50

346 AYER ROAD
FRANK, JR. & BARBARA S. HEIM
ASSESSORS MAP 2, BLOCK 11
DEED BOOK 4971, PAGE 277
PLAN BOOK 329, PLAN 92

346 AYER ROAD
FRANK, JR. & BARBARA S. HEIM
ASSESSORS MAP 2, BLOCK 11
DEED BOOK 4971, PAGE 277
PLAN BOOK 329, PLAN 92

344 AYER ROAD
KATIE ELIZABETH & NATHAN J. BERG
ASSESSORS MAP 2, BLOCK 12
DEED BOOK 59619, PAGE 196
PLAN BOOK 393, PLAN 112

6 MYRICK LANE
JAMES R. & SIBLEY A. HANNIGAN
ASSESSORS MAP 2, BLOCK 73
DEED BOOK 6485, PAGE 19
PLAN BOOK 351, PLAN 116

MYRICK LANE
TOWN OF HARVARD
(CONSERVATION COMMISION)
ASSESSORS MAP 2, BLOCK 13
DEED BOOK 5207, PAGE 43
PLAN BOOK 2499, PLAN 42
(PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS)

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

MYRICK LANE
(PUBLIC - 50' WIDE)

PC +46.51
PC +11.36
PT +28.31
PT +75.85

PROP SEDIMENT CONTROL BARRIER (TYP)

0 20 50 100
SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	71	195
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 16 OF 19

609213_HD111(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:23 PM

NAD 83 N

349 AYER ROAD
CHRISTOPHER & ELIZABETH HORNE
ASSESSORS MAP 2, BLOCK 4
DEED BOOK 56424, PAGE 146
PLAN BOOK 122, PLAN 50

351 AYER ROAD
YELLOW BOOTS REALTY TRUST
ASSESSORS MAP 2, BLOCK 5
DEED BOOK 64062, PAGE 141
PLAN BOOK 122, PLAN 50

355 AYER ROAD
ROBERT J., JR. & YULING L. DIPIETRO
ASSESSORS MAP 2, BLOCK 6
DEED BOOK 23343, PAGE 164
PLAN BOOK 122, PLAN 50

361 AYER ROAD
JOHN E. SWANSON, III,
& LISA A.R. SHAW
ASSESSORS MAP 2, BLOCK 7
DEED BOOK 60577, PAGE 356
PLAN BOOK 904, PLAN 84

#349 #351 #355 GARAGE GARAGE

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PC +69.52 PC +17.06 PT 241.82 PT +94.06

PI +82.26 PI +04.27 PI +14.92 PI +30.02

90 91 92 93 94 95 220 221 222 223 225

CONTINUED ON SHEET NO. 107

CONTINUED ON SHEET NO. 105

12X12X48" STONE POST

350 AYER ROAD
LISA MCATEER
ASSESSORS MAP 2, BLOCK 10
DEED BOOK 63929, PAGE 220

#350

354 AYER ROAD
GILLIAN D. PRICE & CHRISTOPHER KRUEGLER
ASSESSORS MAP 2, BLOCK 9
DEED BOOK 32703, PAGE 258

#354

0 AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8, LOT 1
DEED BOOK 61239, PAGE 194
PLAN BOOK 143, PLAN 89

AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8
DEED BOOK 62439, PAGE 134
PLAN BOOK 143, PLAN 89

(PARCEL IS SUBJECT TO CONSERVATION RESTRICTIONS AND ARTICLE 97 RESTRICTIONS)

LIMIT OF CONSERVATION RESTRICTION

0 20 50 100

SCALE: 1" = 20'

SEEDING AND MULCH LEGEND

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR LAWNS

= STANDARD SEED MIX (ITEM 765.) WITH LOAM FOR ROADSIDES

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	72	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 17 OF 19

609213_HD11(NOI LANDSCAPE PLANS).DWG Plotted on 3-Apr-2024 7:23 PM

NAD 83 N

AYER ROAD
CRAFTSMAN VILLAGE-HARVARD, LLC
ASSESSORS MAP 2, BLOCK 7, LOT 1
DEED BOOK 67486, PAGE 268
PLAN BOOK 912, PLAN 50

29 HARVARD ROAD
29 HARVARD ROAD, LLC.
ASSESSORS MAP 35, LOT 22
DEED BOOK 71496, PAGE 87 (MIDDLESEX)

AYER ROAD
CRAFTSMAN VILLAGE-HARVARD, LLC
ASSESSORS MAP 2, BLOCK 7, LOT 2
DEED BOOK 67486, PAGE 268
PLAN BOOK 912, PLAN 50

CORTLAND LANE

ROUTE 110/111 - AYER ROAD
(1921 COUNTY LAYOUT - 50' WIDE)

PROJECT END
STA 100+74.70
N3025100.9454
E636754.0264

PC +99.49
PC +51.47
PT +38.06
229+70.59

PROP SEDIMENT CONTROL BARRIER (TYP)

AYER ROAD
WILSON NOMINEE TRUST
ASSESSORS MAP 2, BLOCK 8
DEED BOOK 62439, PAGE 134
PLAN BOOK 143, PLAN 89

(PARCEL IS SUBJECT TO CONSERVATION RESTRICTIONS AND ARTICLE 97 RESTRICTIONS)

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY RIGHT-OF-WAY

TOWN OF HARVARD WORCESTER COUNTY

MIDDLESEX COUNTY
TOWN OF AYER (SEE SURVEY NOTE 6)

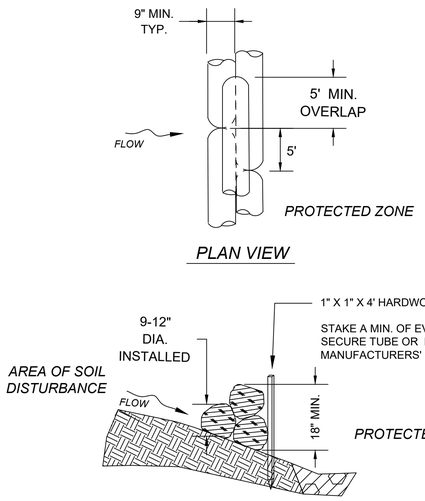
28 HARVARD ROAD
MAXANT INDUSTRIES, INC.
ASSESSORS MAP 35, LOT 53
DEED BOOK 12183, PAGE 272 (MIDDLESEX)
PLAN NO. 273 OF 1972

CONTINUED ON SHEET NO. 71

0 20 50 100

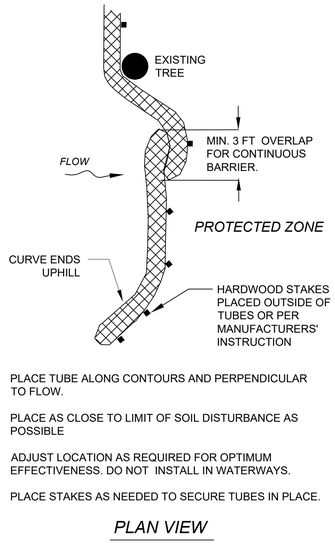
SCALE: 1" = 20'

609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:25 PM



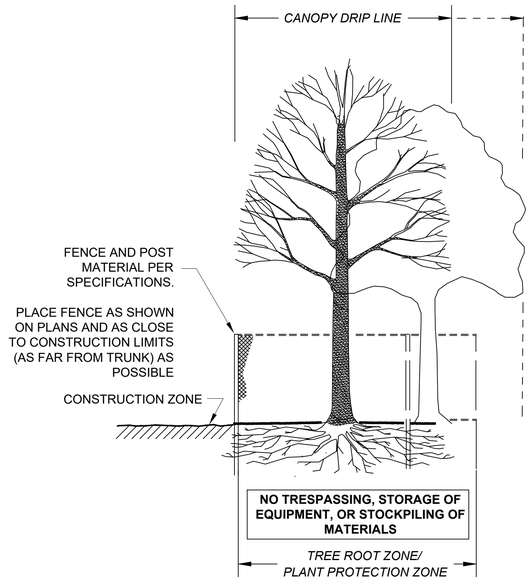
COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE

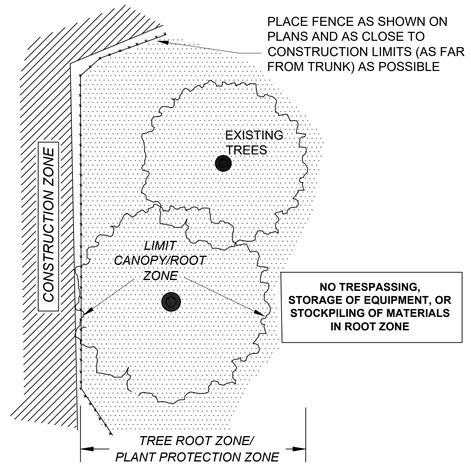


COMPOST FILTER TUBE

NOT TO SCALE



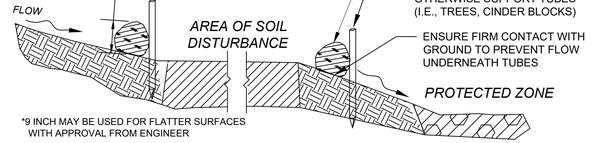
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

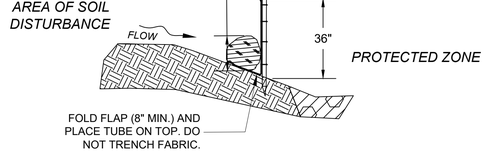
TREE PROTECTION - ROOT ZONE

NOT TO SCALE



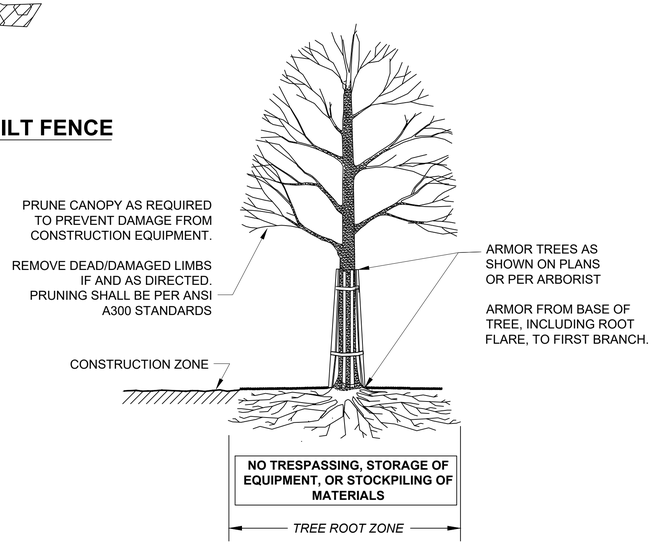
SEDIMENT BARRIER - COMPOST FILTER TUBES

NOT TO SCALE



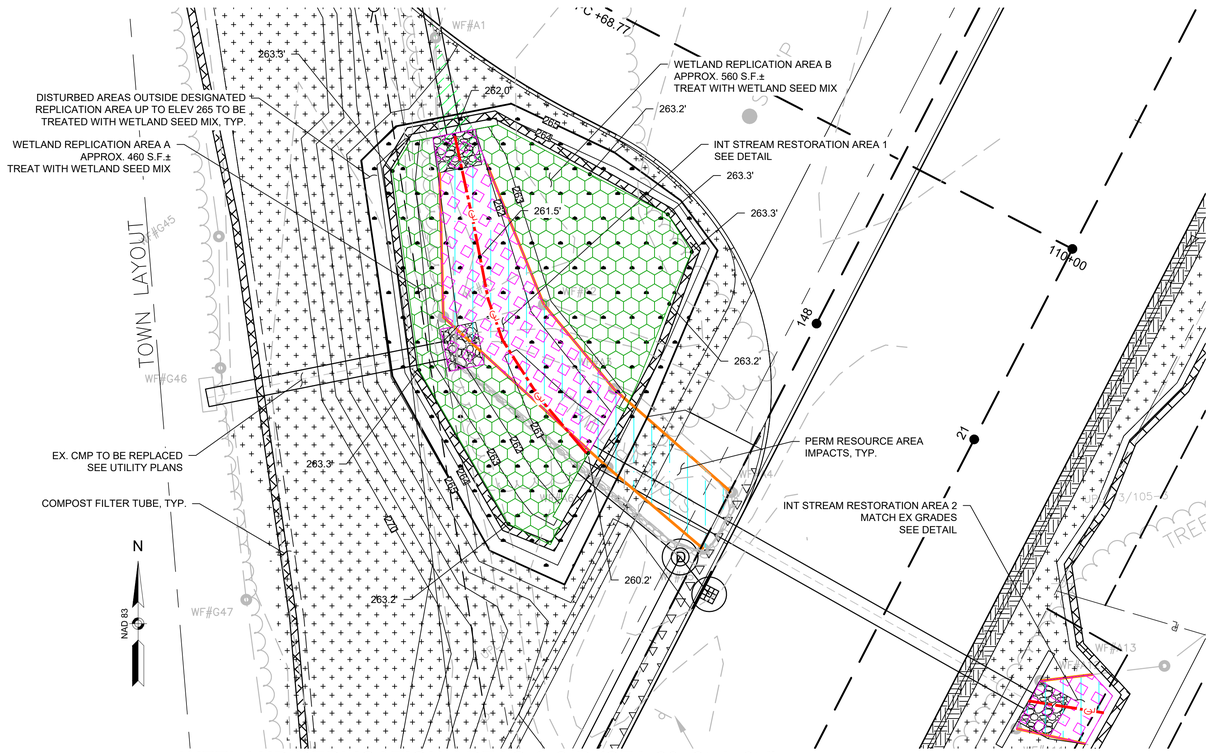
COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE



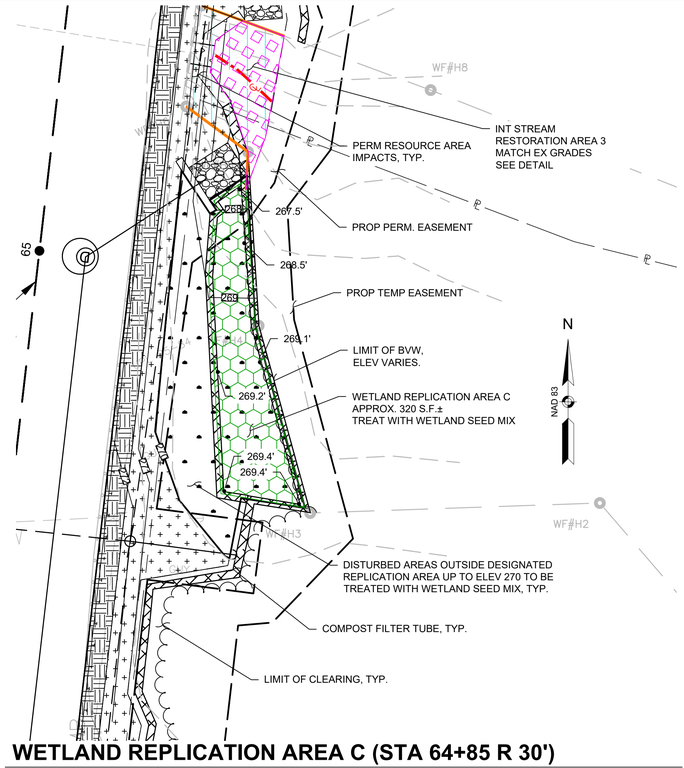
SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK



WETLAND REPLICATION AREAS A & B (STA 20+85 L 65')

SCALE: 1"=10'



WETLAND REPLICATION AREA C (STA 64+85 R 30')

SCALE: 1"=10'

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	74	80
PROJECT FILE NO.	609213		

LANDSCAPE PLANS AND DETAILS - 19 OF 19

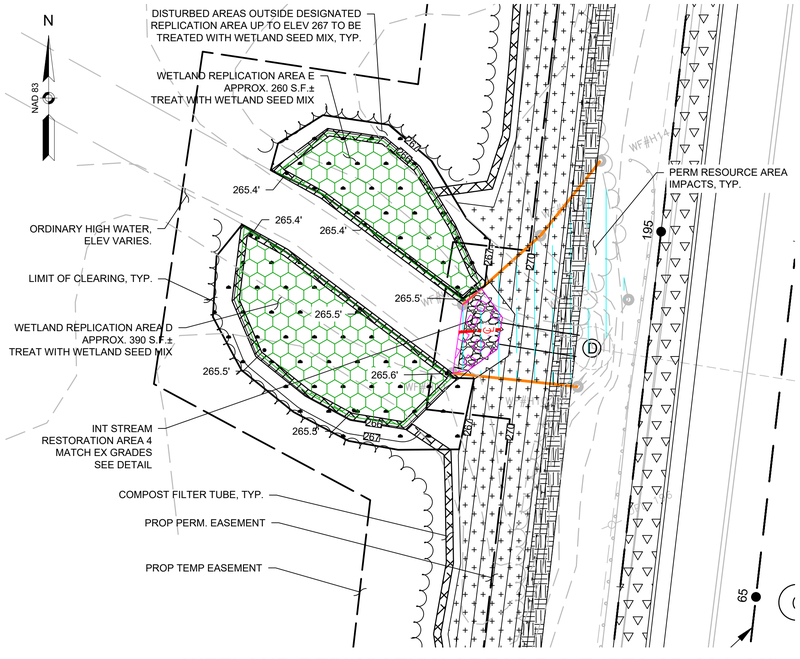
RESOURCE AREA IMPACT TYPE

- BORDERING VEGETATED WETLANDS (BVW)
- LAND UNDER WATER (LUW)
- BANK IMPACT

WETLAND REPLICATION TYPE

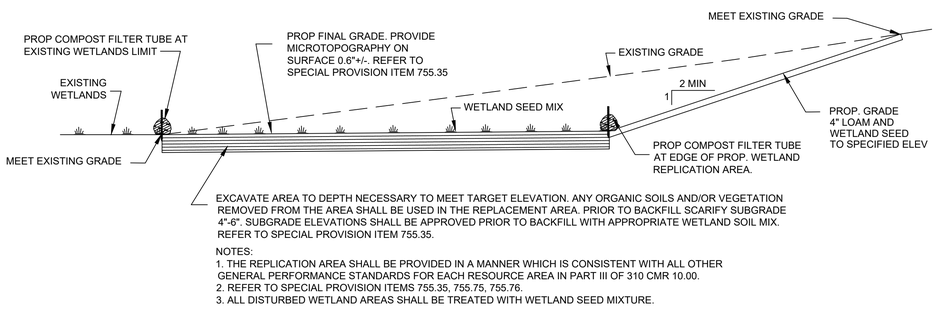
- BVW REPLICATION AREA
- LUW INT STREAM RESTORATION AREA
- BANK RESTORATION CENTERLINE

609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:27 PM



WETLAND REPLICATION AREAS D & E (STA 65+30 L 60')

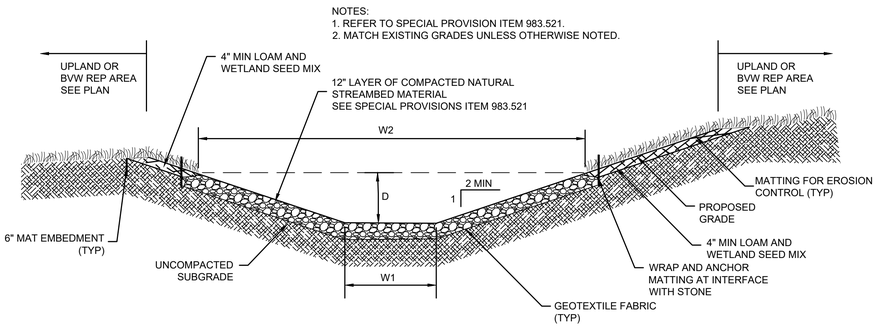
SCALE: 1"=10'



NOTES:
1. THE REPLICATION AREA SHALL BE PROVIDED IN A MANNER WHICH IS CONSISTENT WITH ALL OTHER GENERAL PERFORMANCE STANDARDS FOR EACH RESOURCE AREA IN PART III OF 310 CMR 10.00.
2. REFER TO SPECIAL PROVISION ITEMS 755.35, 755.75, 755.76.
3. ALL DISTURBED WETLAND AREAS SHALL BE TREATED WITH WETLAND SEED MIXTURE.

TYPICAL SECTION AT WETLAND REPLICATION AREA

NOT TO SCALE



TYPICAL SECTION AT INT. STREAM RESTORATION AREA

NOT TO SCALE

RESOURCE AREA MITIGATION		
AREA	**RESOURCE AREA**	**MITIGATION**
REP A	BVW	460 SF
REP B	BVW	560 SF
REP C	BVW	320 SF
REP D	BVW	390 SF
REP E	BVW	260 SF
REST 1	LUW	490 SF
REST 1	BANK	90 LF
REST 2	LUW	86 SF
REST 2	BANK	20 LF
REST 3	LUW	80 SF
REST 3	BANK	38 LF
REST 3	BVW	40 SF
REST 4	LUW	52 SF
REST 4	BANK	12 LF

WETLAND/STREAM REPLICATION/RESTORATION NOTES

1. REPLICATION AREA LOCATIONS AND ELEVATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION, EXACT LOCATION OF THE REPLICATION AREAS WILL BE DETERMINED BY THE WETLANDS SCIENTIST.
2. THE CONTRACTOR SHALL PLAN AND EXECUTE OPERATIONS IN A MANNER MINIMIZING THE AMOUNT OF EXCAVATED AND EXPOSED FILL OR OTHER FOREIGN MATERIALS THAT COULD BE WASHED OR OTHERWISE CARRIED INTO REPLICATION AREA AND NEARBY RESOURCE AREAS.
3. CONSTRUCTION OF AND ACCESS TO THE REPLICATION AREA SHALL MINIMIZE DAMAGE TO EXISTING VEGETATION AND SOILS.
4. THE REPLICATION AREA SHALL BE PROVIDED IN A MANNER WHICH IS CONSISTENT WITH ALL OTHER GENERAL PERFORMANCE STANDARDS FOR EACH RESOURCE AREA IN PART III OF 310 CMR 10.00.
5. ALL DISTURBED WETLAND AREAS SHALL BE TREATED WITH WETLAND SEED MIXTURE.
6. SEDIMENT BARRIERS SHALL BE INSTALLED ALONG THE DOWNSLOPE PERIMETER OF THE REPLICATION AREA BEGINNING AND ENDING IN THE SURROUNDING UPLAND SO THAT NO EXCAVATED MATERIAL OR DISTURBED SOIL CAN ENTER ADJACENT WETLANDS OR WATERS. THE CONTRACTOR SHALL ENSURE THAT ALL SEDIMENT BARRIERS FUNCTION AS INTENDED AND AT ALL TIMES PER THE SPECIFICATIONS OF THOSE RESPECTIVE ITEMS.
7. SEE SPECIAL PROVISION ITEMS 755.35, 755.45, 755.75, 755.76, 983.521.

STREAM RESTORATION AREA TABLE

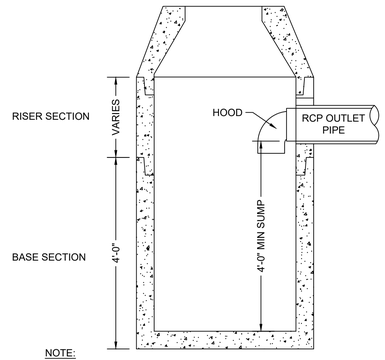
AREA	D	W1	W2
1	6"	24"	48"
2	6"	24"	48"
3	12"	48"	96"
4	12"	48"	96"

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	75	80
PROJECT FILE NO.	609213		

CONSTRUCTION DETAILS - 1 OF 3

609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:27 PM

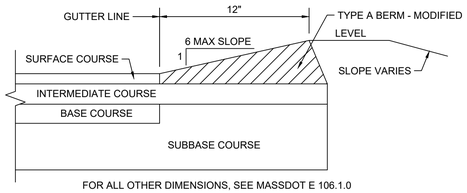


NOTE:

ALL CATCH BASINS SHALL CONFORM TO MASSDOT CONSTRUCTION STANDARD E 201.4.0 EXCEPT FOR 4' SUMP DEPTH AS SHOWN

DEEP SUMP CATCH BASIN WITH HOOD

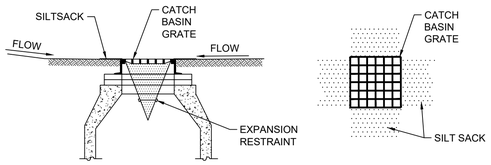
N.T.S.



FOR ALL OTHER DIMENSIONS, SEE MASSDOT E 106.1.0

HOT MIX ASPHALT BERM, TYPE A - MODIFIED

N.T.S.

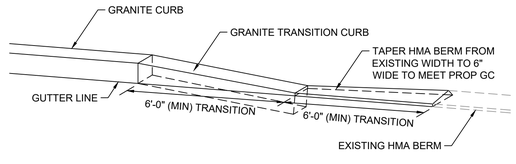


NOTES:

1. INSTALL SILT SACK IN EXISTING CATCH BASINS BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL INTERMEDIATE COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
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 PROMPTLY AS NEEDED.

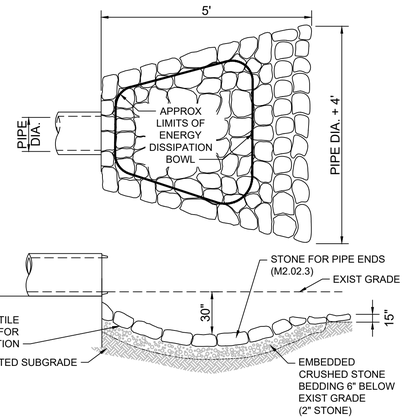
INLET PROTECTION SILT SACK IN CATCH BASIN

N.T.S.



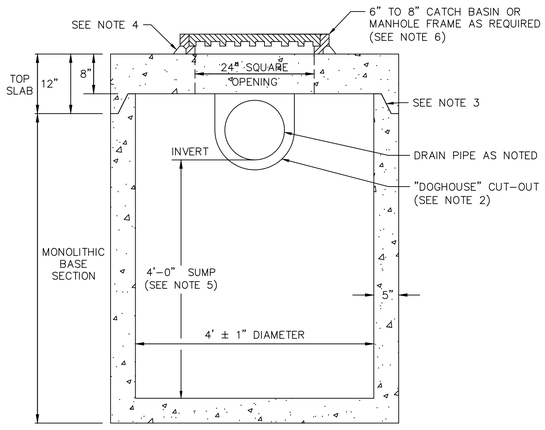
GRANITE CURB TRANSITION TO HMA BERM

N.T.S.



STONE FOR PIPE ENDS

N.T.S.



SPECIAL CATCH BASIN/MANHOLE (SHALLOW)

N.T.S.

NOTES:

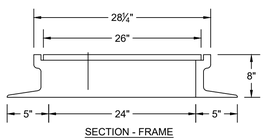
1. ALL SECTIONS SHALL BE DESIGNED FOR HL-93 LOADING.
2. PROVIDE DOGHOUSE OPENING FOR PIPE WITH 2" MAX CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS WITH NON-SHRINK GROUT.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN AND MANHOLE FRAMES SHALL BE SET IN FULL MORTAR BED.
5. OMIT 4' SUMP FOR MANHOLE STRUCTURES.
6. FRAME ELEVATION SHALL BE INSTALLED AT FINISH GRADE USING VARIABLE FRAME DEPTHS AND VARIABLE HEIGHT BRICK COURSES.

PLAN - FRAME

PLAN - COVER

NOTES:

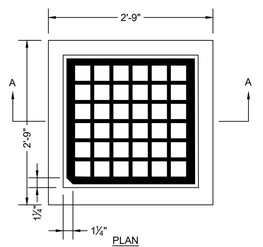
1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.
2. MATERIAL - CAST IRON.
3. MINIMUM MASS - 265 LBS.
4. ALL MH FRAMES AND COVERS SHALL BE ADA AND AAB COMPLIANT.
5. MANHOLE COVERS SHALL HAVE A DIAMOND PATTERN, PICK HOLES, AND THE WORD "DRAIN" OR "SEWER" CAST IN 3-INCH LETTERS.



SECTION - FRAME

MANHOLE FRAME & COVER

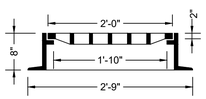
N.T.S.



PLAN

NOTES:

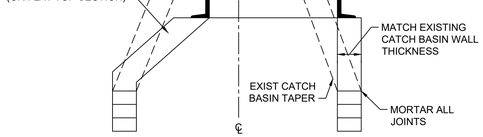
1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.
2. MATERIAL - CAST IRON.
3. MINIMUM FRAME WEIGHT:
   4 FLANGE - 295 LB
   3 FLANGE - 264 LB



SECTION A-A

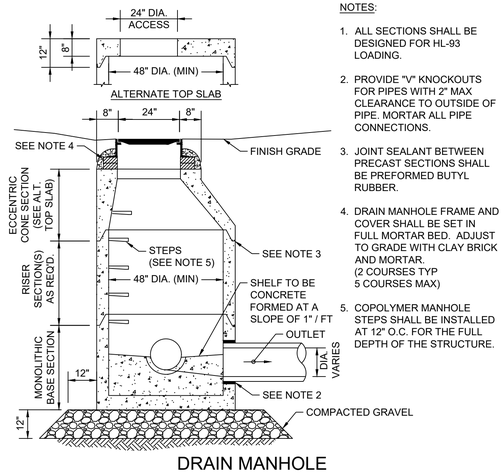
CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)

N.T.S.



CATCH BASIN REMODEL

N.T.S.

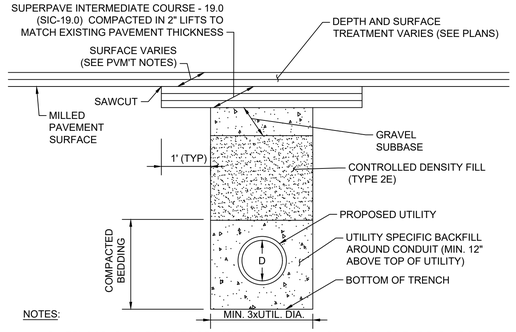


NOTES:

1. ALL SECTIONS SHALL BE DESIGNED FOR HL-93 LOADING.
2. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. (2 COURSES TYP 5 COURSES MAX)
5. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.

DRAIN MANHOLE

N.T.S.

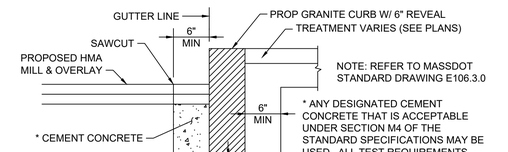


NOTES:

1. IF A TEMPORARY PATCH IS TO BE USED, THE CDF SHALL BE PLACED TO THE ELEVATION OF THE ADJOINING SUBGRADE, THEN GRAVEL SHALL BE PLACED AND COMPACTED TO WITHIN 3 ½ INCHES OF THE FINISHED GRADE. THE LAST 3 ½ INCHES SHALL BE HOT MIX ASPHALT PLACED IN TWO LAYERS: 1 ¼" SURFACE COURSE OVER 2" INTERMEDIATE COURSE.
2. MATERIAL WHICH MEETS THE SPECIFICATION FOR GRAVEL BORROW TYPE C (M1.03.0 TYPE C), PLACED AND COMPACTED IN LAYERS NO GREATER THAN 6", MAY BE USED IN PLACE OF THE CDF WITH APPROVAL FROM THE DISTRICT HIGHWAY DIRECTOR.
3. THE EXPOSED EDGES OF ALL LONGITUDINAL AND TRANSVERSE SAW CUT JOINTS SHALL BE TREATED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALANT MEETING MASSDOT SPECIFICATIONS.
4. YELLOW METAL FOIL MARKING TYPE SHALL BE PLACED 18" OVER THE CONDUIT (METAL MARKING TAPE/WIRE SHOULD BE USED FOR NON-METALLIC CONDUIT).
5. FOR ROADS WITH AN EXISTING CEMENT CONCRETE BASE, A REINFORCED, HIGH EARLY STRENGTH AIR ENTRAINED, CLASS "F" CEMENT CONCRETE SLAB SHALL BE CAST IN PLACE TO MEET THE EXISTING PAVEMENT. SPECIFIC JOINT DETAILS WITH THE EXISTING PAVEMENT SHALL BE APPROVED DEPENDENT ON THE EXISTING SITE CONDITIONS.
6. ALL TRENCH DIMENSIONS SHALL BE IN ACCORDANCE WITH SUB-SECTION 140.80 OF THE MASSDOT STANDARDS AND SPECIFICATIONS FOR HIGHWAYS AND BRIDGES

UTILITY TRENCH

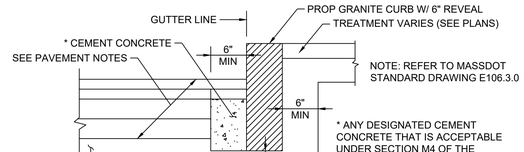
N.T.S.



* ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR VARIOUS GRANITE CURB ITEMS FOR 6" OFFSET FROM FACE OF CURB.

GRANITE CURB IN HMA MILL & OVERLAY

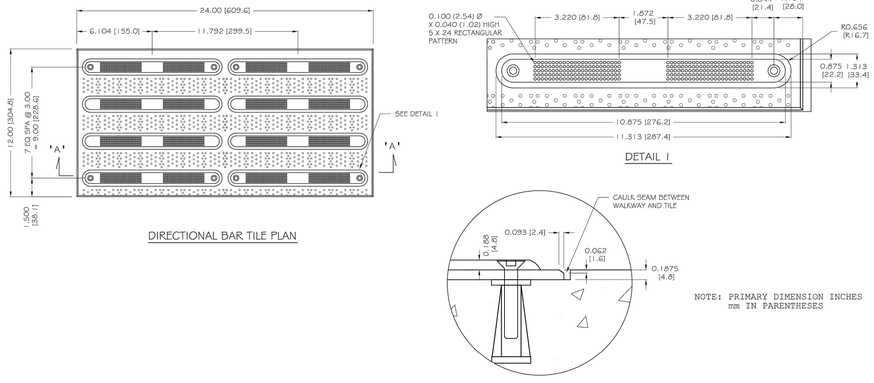
N.T.S.

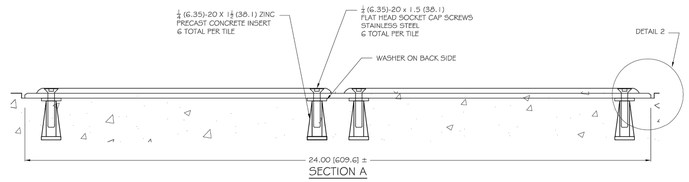


* ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR VARIOUS GRANITE CURB ITEMS FOR 6" OFFSET FROM FACE OF CURB.

GRANITE CURB IN FULL DEPTH PAVEMENT

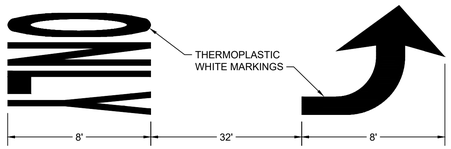
N.T.S.





DETECTABLE WARNING PANELS FOR BIKE RAMPS

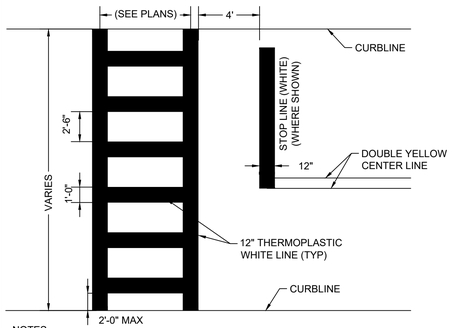
N.T.S.



NOTE: SPACING SHALL BE SAME FOR RIGHT TURN LANE AND THRU ONLY PAVEMENT MARKING (REFER TO MASSDOT STANDARD DRAWING TR.6.1)

LEFT TURN LANE PAVEMENT MARKING

N.T.S.

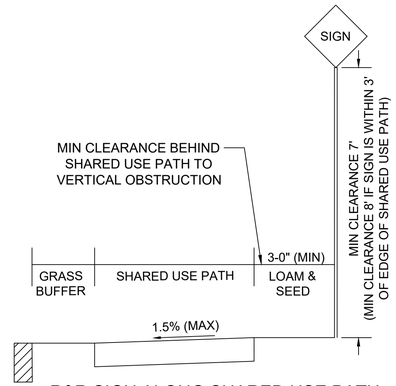


NOTES:

1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED. ALL 24" LINES MAY BE EITHER ONE 24" LINE OR A COMBINATION OF TWO - 12" LINES.
2. LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.
3. CROSSWALK BARS SHALL BE PLACED OUTSIDE THE VEHICULAR WHEEL PATH WHEREVER POSSIBLE.
4. OMIT STOP BAR WHERE NOT SHOWN ON TRAFFIC SIGN & PAVEMENT MARKING PLANS.

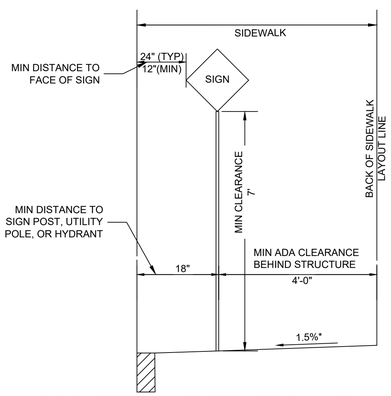
CROSSWALK PAVEMENT MARKING (LADDER)

N.T.S.



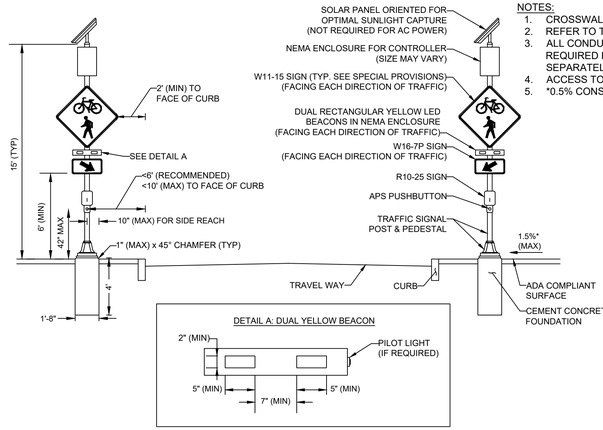
R&R SIGN ALONG SHARED USE PATH

N.T.S.



R&R VERTICAL OBSTRUCTION WITHIN SIDEWALK

N.T.S.



RECTANGULAR RAPID FLASHING BEACON (RRFB)

N.T.S.

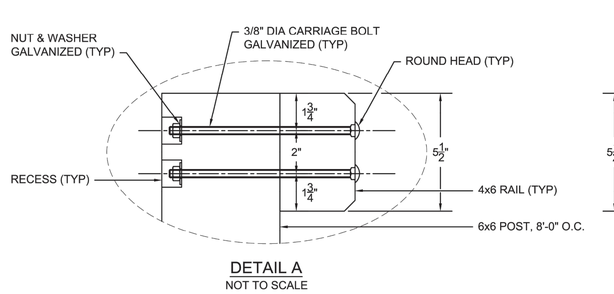
NOTES:

1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
3. ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWERS IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THEIR RESPECTIVE PAY ITEMS.
4. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT
5. *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE

MAJOR ITEMS LIST

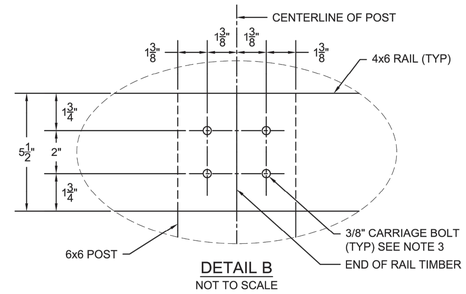
- 2 CEMENT CONCRETE FOUNDATIONS PER 812.30.1
- 2 15' TRAFFIC SIGNAL POSTS & PEDESTALS
- 2 APS PUSHBUTTON SYSTEMS
- 4 DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
- 2 R10-25 SIGNS
- 4 W11-15 SIGNS
- 2 W16-7PR SIGNS
- 2 W16-7PL SIGNS
- 2 SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
- 2 NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
- 2 BATTERY SYSTEMS (NOT REQUIRED FOR AC POWER)

PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



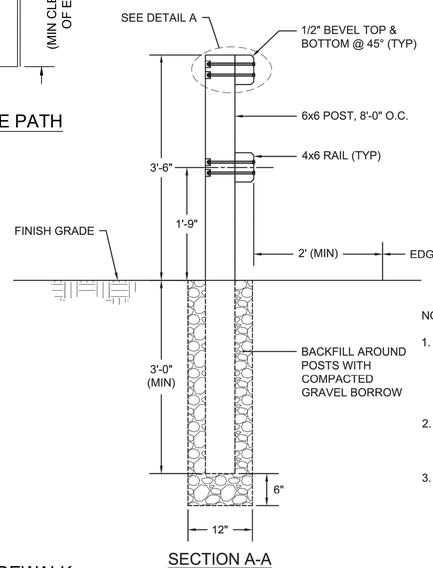
DETAIL A

NOT TO SCALE



DETAIL B

NOT TO SCALE

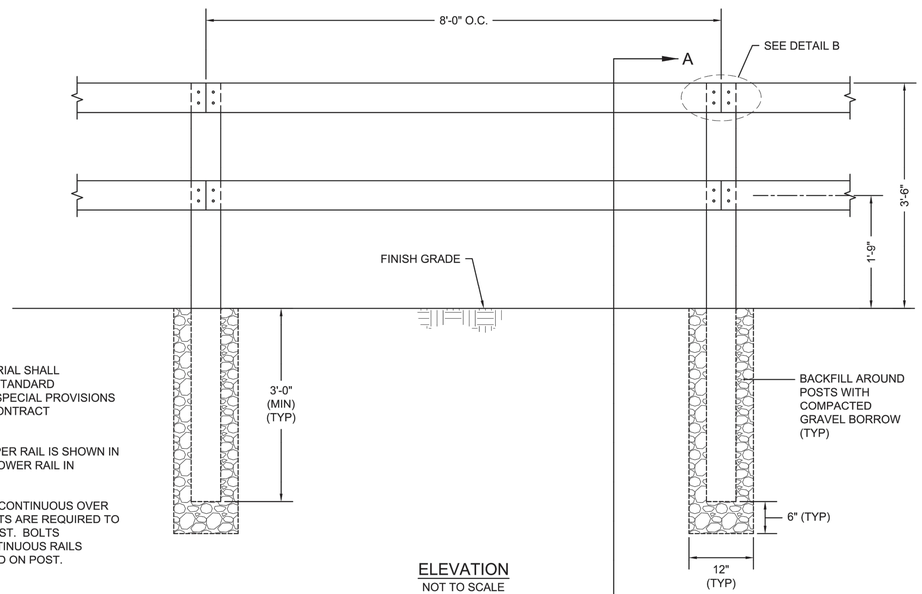


SECTION A-A

NOT TO SCALE

NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT LOWER RAIL IN SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.



ELEVATION

NOT TO SCALE

WOOD RAIL FENCE

N.T.S.

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	76	80
PROJECT FILE NO.	609213		

CONSTRUCTION DETAILS - 2 OF 3

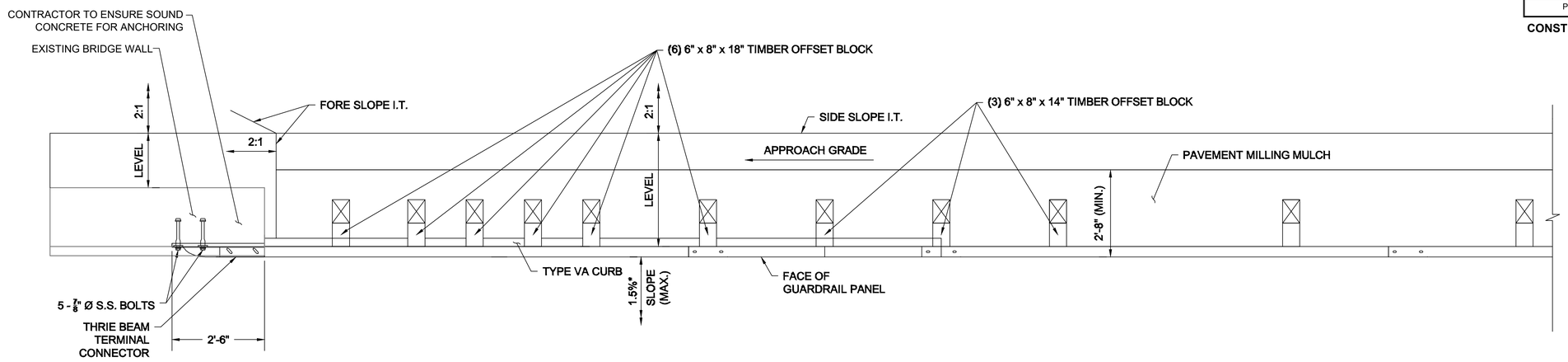
609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:28 PM

HARVARD
AYER ROAD (ROUTE 110/111)

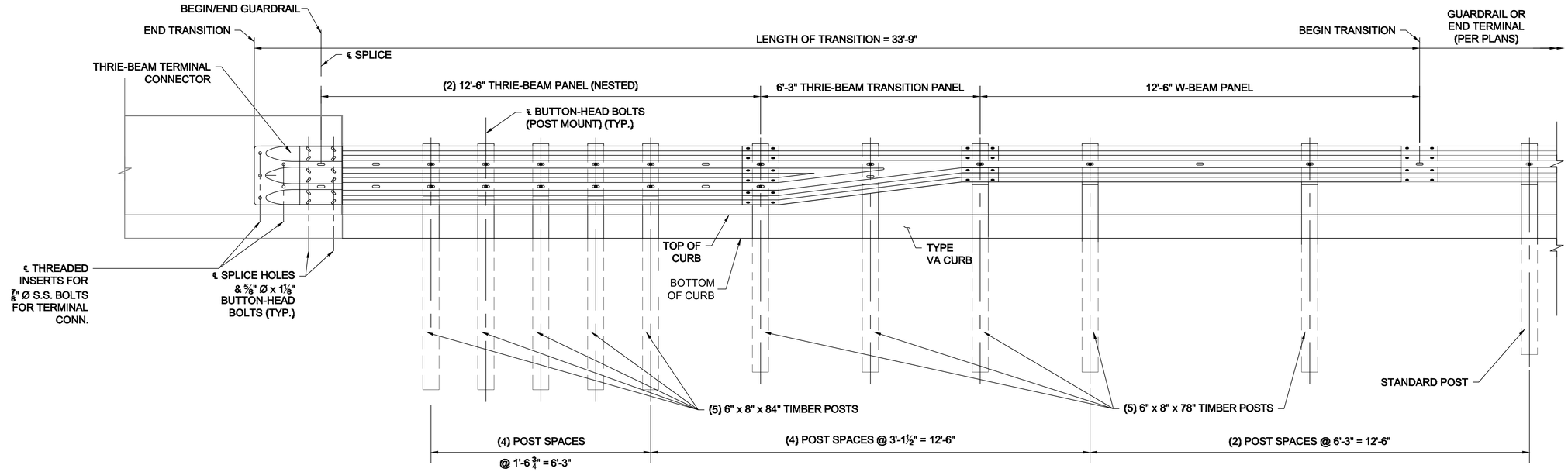
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	77	80
PROJECT FILE NO.	609213		

CONSTRUCTION DETAILS - 3 OF 3

609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:28 PM



PLAN



ELEVATION

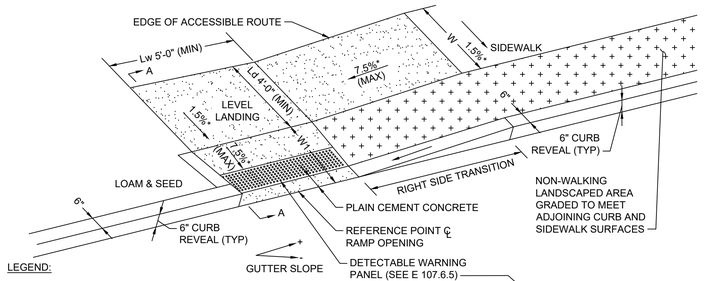
MODIFIED TRANSITION TO BRIDGE RAIL (FACE OF CURB)
N.T.S.

NOTE: REFER TO MASSDOT STANDARD DRAWING E400.3.6

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	78	80
PROJECT FILE NO.	609213		

PEDESTRIAN CURB RAMP DETAILS - 1 OF 2

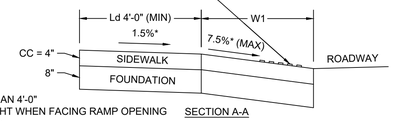


LEGEND:

W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

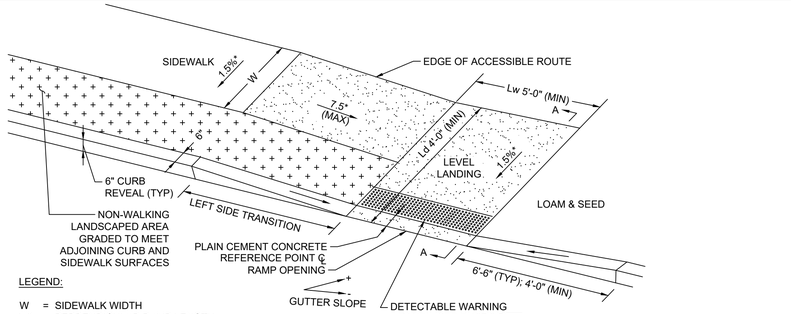
1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS



PEDESTRIAN CURB RAMP TYPE A

N.T.S.

PEDESTRIAN CURB RAMP DATA									
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	PERPENDICULAR RAMP LENGTH (W1)	RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
1	AYER ROAD	12+93.7	24.0' LT	10'-0"	10'-0"	-4.7%	3'-0"	6'-6"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

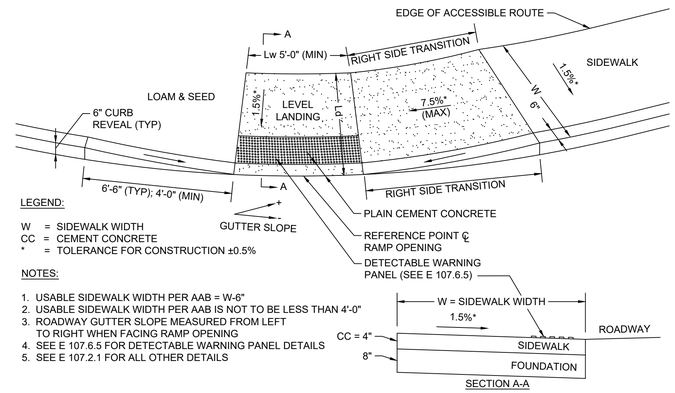
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FRPM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

PEDESTRIAN CURB RAMP TYPE B

N.T.S.

PEDESTRIAN CURB RAMP DATA									
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
31	AYER ROAD	100+15.9	14.0' LT	10'-0"	15'-0"	-1.4%	9'-0"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

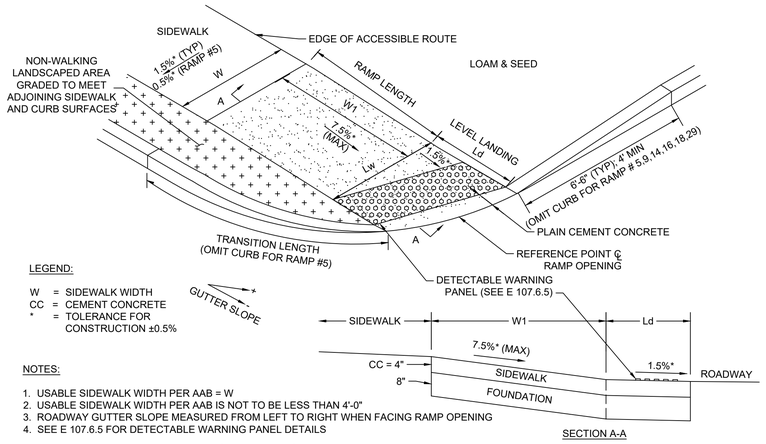
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W-6"
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
5. SEE E 107.2.1 FOR ALL OTHER DETAILS

PEDESTRIAN CURB RAMP TYPE C

N.T.S.

PEDESTRIAN CURB RAMP DATA									
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
2	AYER ROAD	12+93.7	13.2' RT	5'-0"	5'-6"	+4.7%	15'-0"	6"	5'-6"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

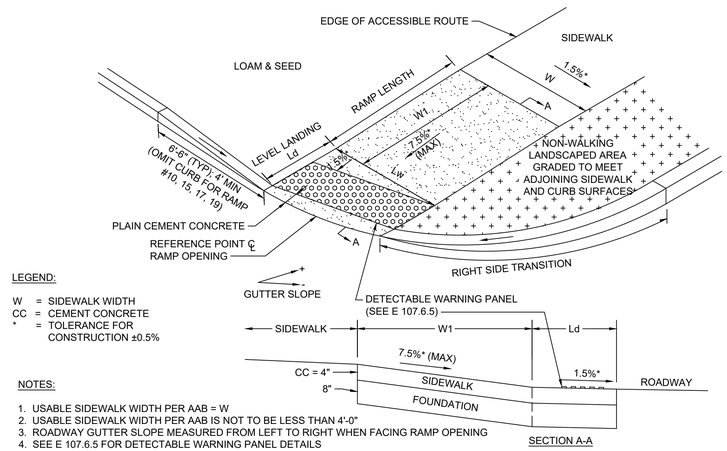
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

PEDESTRIAN CURB RAMP TYPE D

N.T.S.

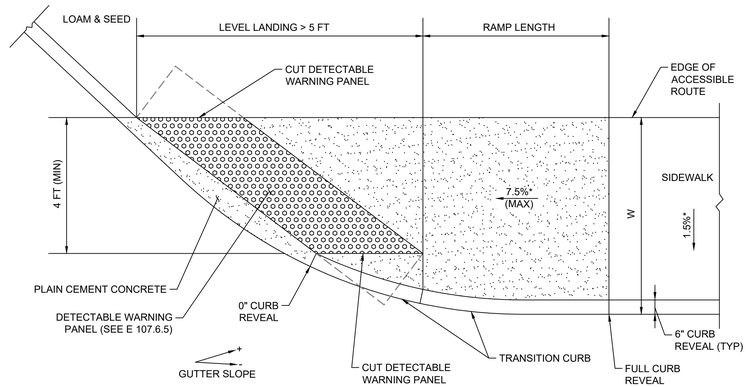
PEDESTRIAN CURB RAMP DATA								
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	SIDEWALK WIDTH (W)
				WIDTH (Lw)	DEPTH (Ld)			
3	AYER ROAD	20+97.9	31.2' LT	10'-0"	18'-6"	-3.2%	14'-0"	10'-0"
5	GEBO LANE	115+57.5	22.2' RT	10'-0"	17'-8"	+4.7%	20'-0"	10'-0"
9	AYER ROAD	36+06.2	23.5' LT	10'-0"	12'-6"	+2.3%	6'-6"	10'-0"
14	AYER ROAD	42+29.1	23.5' LT	10'-0"	10'-10"	-0.6%	7'-8"	10'-0"
16	AYER ROAD	49+07.1	23.4' LT	10'-0"	16'-8"	-1.1%	9'-0"	10'-0"
18	AYER ROAD	57+56.2	23.5' LT	10'-0"	8'-9"	-1.1%	9'-0"	10'-0"
22	AYER ROAD	74+17.9	21.9' LT	10'-0"	7'-11"	-0.5%	7'-8"	10'-0"
24	AYER ROAD	77+42.2	21.2' LT	10'-0"	15'-4"	-0.1%	6'-6"	10'-0"
29	AYER ROAD	96+48.9	23.5' LT	10'-0"	8'-9"	-3.5%	14'-0"	10'-0"



PEDESTRIAN CURB RAMP TYPE E

N.T.S.

PEDESTRIAN CURB RAMP DATA								
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	SIDEWALK WIDTH (W)
				WIDTH (Lw)	DEPTH (Ld)			
4	AYER ROAD	21+62.0	31.2' LT	10'-0"	18'-7"	-3.2%	6'-6"	10'-0"
10	AYER ROAD	36+54.7	23.4' LT	10'-0"	14'-0"	+2.3%	11'-0"	10'-0"
15	AYER ROAD	42+78.0	23.4' LT	10'-0"	14'-1"	-1.0%	6'-6"	10'-0"
17	AYER ROAD	49+67.0	23.4' LT	10'-0"	16'-8"	-1.5%	6'-6"	10'-0"
19	AYER ROAD	58+09.0	23.5' LT	10'-0"	8'-9"	-1.1%	6'-6"	10'-0"
23	AYER ROAD	74+50.2	21.7' LT	10'-0"	10'-8"	-0.5%	6'-6"	10'-0"
25	AYER ROAD	77+87.1	21.3' LT	10'-0"	14'-11"	+0.1%	7'-8"	10'-0"



PEDESTRIAN CURB RAMP TYPE D OR TYPE E WHEN LEVEL LANDING > 5 FEET

N.T.S.

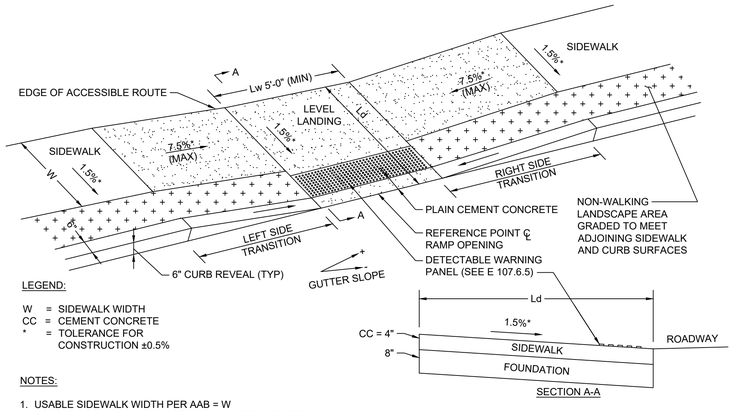
PEDESTRIAN CURB RAMP DATA									
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
13	AYER ROAD	38+70.0	16.0' RT	4'-0"	7'-4"	-2.3%	3'-3"	3"	5'-6"

609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:29 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	79	80
PROJECT FILE NO.	609213		

PEDESTRIAN CURB RAMP DETAILS - 2 OF 2



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

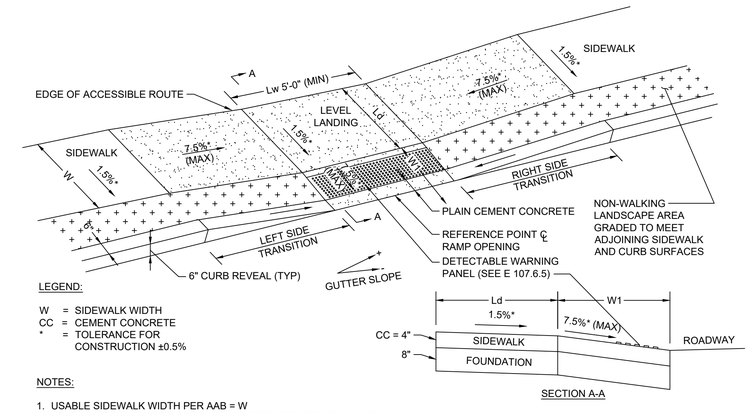
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

PEDESTRIAN CURB RAMP TYPE F

N.T.S.

PEDESTRIAN CURB RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)
11	AYER ROAD	37+48.2	14.0' LT	10'-0"	15'-0"	+2.3%	6'-6"	6"	10'-0"	11'-0"	6"	10'-0"
20	AYER ROAD	62+23.7	14.0' LT	10'-0"	15'-0"	-1.5%	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

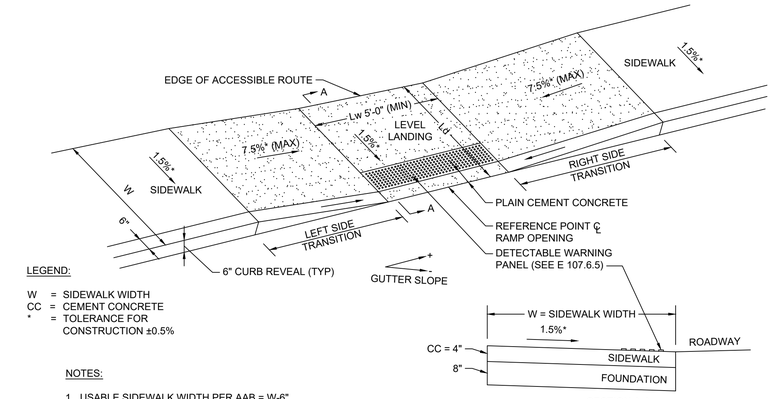
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

PEDESTRIAN CURB RAMP TYPE G

N.T.S.

PEDESTRIAN CURB RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	PERPENDICULAR RAMP LENGTH (W1)	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)
7	AYER ROAD	30+34.4	14.0' LT	10'-0"	10'-0"	+5.0%	5'-0"	6'-6"	6"	10'-0"	15'-0"	6"	10'-0"
26	AYER ROAD	85+75.6	14.0' LT	10'-0"	10'-0"	-0.8%	5'-0"	7'-8"	6"	10'-0"	6'-6"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

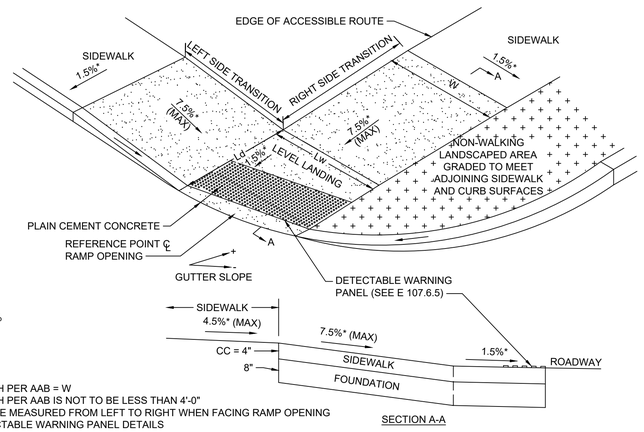
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W-6"
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
5. SEE E 107.2.1 FOR ALL OTHER DETAILS

PEDESTRIAN CURB RAMP TYPE H

N.T.S.

PEDESTRIAN CURB RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)
8	AYER ROAD	30+33.7	13.0' RT	5'-0"	5'-6"	-4.0%	15'-0"	6"	5'-6"	6'-6"	6"	5'-6"
12	AYER ROAD	37+48.2	13.0' RT	5'-0"	5'-6"	-2.3%	5'-6"	3"	5'-6"	6'-6"	6"	N/A
21	AYER ROAD	62+23.5	13.0' RT	5'-0"	5'-6"	+1.5%	3'-3"	3"	5'-6"	4'-6"	3"	5'-6"
27	AYER ROAD	85+74.6	13.0' RT	5'-0"	5'-6"	+0.8%	6'-6"	6"	5'-6"	7'-8"	6"	5'-6"
32	AYER ROAD	100+15.3	13.0' RT	5'-0"	5'-6"	+1.4%	6'-6"	6"	5'-6"	9'-0"	6"	5'-6"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

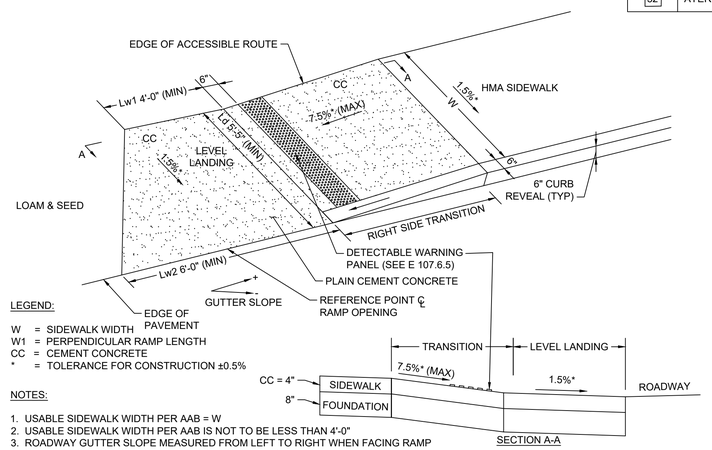
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

PEDESTRIAN CURB RAMP TYPE I

N.T.S.

PEDESTRIAN CURB RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		AYER ROAD ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)
30	AYER ROAD	96+83.6	23.5' LT	10'-0"	8'-9"	-3.5%	6'-6"	6"	4'-6"	6'-6"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

PEDESTRIAN CURB RAMP RAMP TYPE J

N.T.S.

PEDESTRIAN CURB RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING			AYER ROAD ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw1)	WIDTH (Lw2)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH (W)
6	POOR FARM ROAD	120+47.2	12.0' LT	5'-0"	8'-0"	5'-6"	+2.1%	6.5'	6"	5'-6"	-	-	-
28	AYER ROAD	85+93.3	35.8' RT	4'-0"	6'-6"	5'-6"	+2.6%	-	-	-	7'-8"	6"	5'-6"

PEDESTRIAN CURB RAMP NOTES:

1. MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE DESIGNED TO 4.5% ±0.5% (7.5% ±0.5% FOR CURB RAMPS)
2. A MINIMUM OF 3'-0" CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
3. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
4. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
5. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'x5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FT.
6. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY.
7. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL OF THE PROPOSED PEDESTRIAN CURB RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD E 107.6.5 (OCTOBER 2017). CONTRACTOR SHALL PROVIDE 6" BETWEEN DETECTABLE WARNING PANEL AND EDGE OF CONCRETE WHERE IT ABUTS LOAM & SEED.
8. PEDESTRIAN RAMP SLOPES AND CROSS SLOPES SHALL HAVE A CONSTRUCTION TOLERANCE OF ±0.5%.

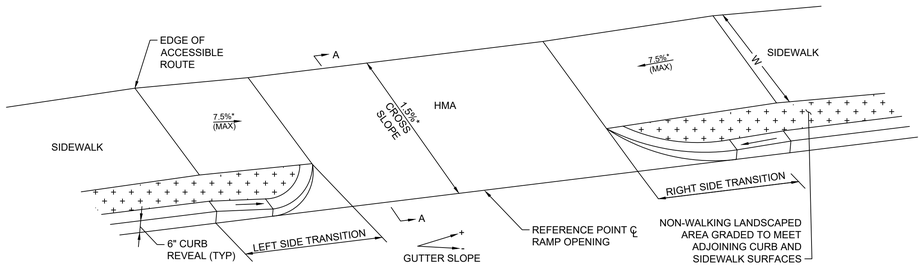
609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:29 PM

HARVARD
AYER ROAD (ROUTE 110/111)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	80	80
PROJECT FILE NO.	609213		

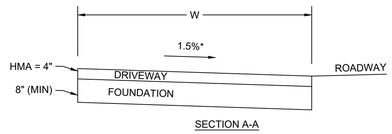
DRIVEWAY DETAILS

609213_HD11(NO) CONSTRUCTION DETAILS).DWG Plotted on 3-Apr-2024 7:30 PM



LEGEND:

W = SIDEWALK WIDTH
HMA = HOT MIX ASPHALT
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%



SECTION A-A

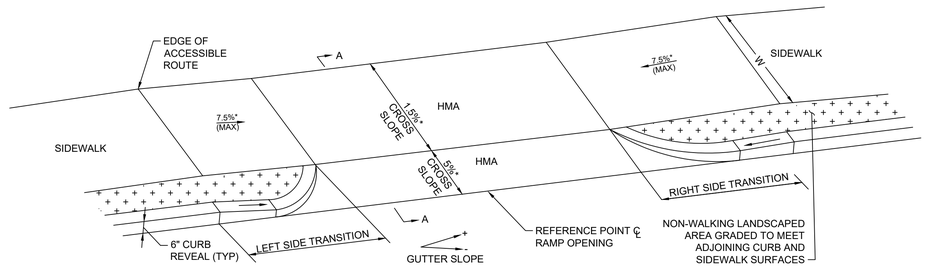
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING DRIVEWAY OPENING

SIDEWALK THROUGH DRIVEWAY TYPE A

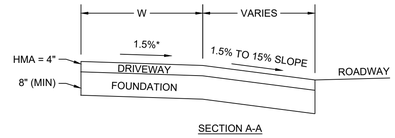
N.T.S.

DRIVEWAY DATA												
DWY #	BASELINE REFERENCE	STATION	OFFSET	DRIVEWAY SURFACE	DWY WIDTH @ GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF ACCESSIBLE ROUTE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
								LENGTH	CURB REVEAL	SW WIDTH (W)	LENGTH	CURB REVEAL	SW WIDTH (W)
1	SUP	154+60.0	12.9' LT	HMA	60'-7"	+3.6%	10'-0"	6'-6"	N/A	10'-0"	15'-0"	N/A	10'-0"
3	AYER ROAD	45+14.0	14.0' LT	HMA	70'-3"	LT: -0.8% RT: +0.3%	10'-0"	7'-8"	6"	10'-0"	7'-8"	6"	10'-0"
4	AYER ROAD	46+91.4	14.0' LT	HMA	61'-0"	+1.0%	10'-0"	6'-6"	6"	10'-0"	9'-0"	6"	10'-0"
5	AYER ROAD	59+64.5	14.0' LT	HMA	56'-6"	-1.1%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
6	AYER ROAD	60+42.0	14.0' LT	HMA	74'-8"	-1.1%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
7	AYER ROAD	63+05.3	14.0' LT	HMA	70'-0"	-1.5%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
8	AYER ROAD	64+35.1	14.0' LT	HMA	58'-1"	-1.1%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
9	AYER ROAD	69+35.7	14.0' LT	HMA	30'-0"	+2.4%	10'-0"	6'-6"	6"	10'-0"	11'-0"	6"	10'-0"
11	AYER ROAD	72+15.9	14.0' LT	HMA	39'-6"	+1.8%	10'-0"	6'-6"	6"	10'-0"	9'-0"	6"	10'-0"
12	AYER ROAD	72+66.8	14.0' LT	HMA	40'-0"	+1.2%	10'-0"	6'-6"	6"	10'-0"	9'-0"	6"	10'-0"
14	AYER ROAD	81+56.8	14.0' LT	HMA	68'-2"	-1.3%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
15	AYER ROAD	82+23.2	14.0' LT	HMA	59'-10"	-1.3%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
16	AYER ROAD	83+71.7	14.0' LT	HMA	54'-6"	-0.7%	10'-0"	7'-8"	6"	10'-0"	6'-6"	6"	10'-0"
17	AYER ROAD	85+23.1	14.0' LT	HMA	44'-9"	-0.6%	10'-0"	7'-8"	6"	10'-0"	6'-6"	6"	10'-0"
18	AYER ROAD	86+22.9	14.0' LT	HMA	54'-0"	-0.9%	10'-0"	7'-8"	6"	10'-0"	6'-6"	6"	10'-0"
21	AYER ROAD	90+27.2	14.0' LT	HMA	46'-2"	-2.1%	10'-0"	11'-0"	6"	10'-0"	6'-6"	6"	10'-0"
22	AYER ROAD	91+21.0	14.0' LT	HMA	49'-8"	-2.8%	10'-0"	11'-0"	6"	10'-0"	6'-6"	6"	10'-0"
23	AYER ROAD	93+12.4	14.0' LT	HMA	42'-3"	-3.3%	10'-0"	14'-0"	6"	10'-0"	6'-6"	6"	10'-0"
25	AYER ROAD	95+89.7	14.0' LT	HMA	45'-4"	-3.5%	10'-0"	14'-0"	6"	10'-0"	6'-6"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
HMA = HOT MIX ASPHALT
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%



SECTION A-A

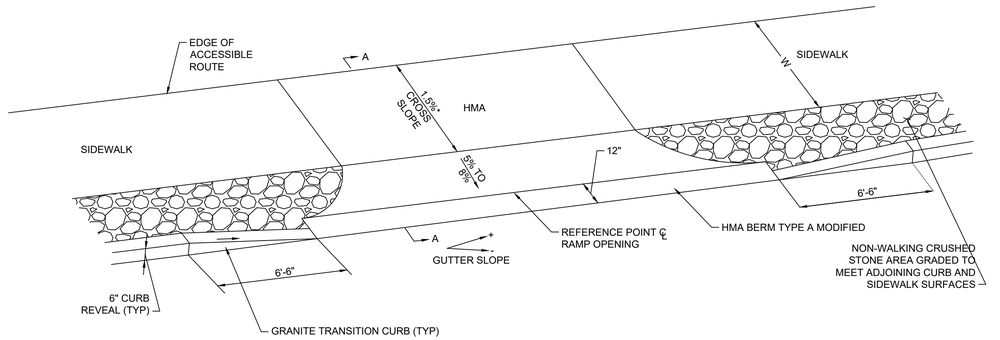
NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING DRIVEWAY OPENING

SIDEWALK THROUGH DRIVEWAY TYPE B

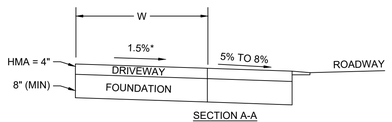
N.T.S.

DRIVEWAY DATA												
DWY #	BASELINE REFERENCE	STATION	OFFSET	DRIVEWAY SURFACE	DWY WIDTH @ GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF ACCESSIBLE ROUTE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
								LENGTH	CURB REVEAL	SW WIDTH (W)	LENGTH	CURB REVEAL	SW WIDTH (W)
10	AYER ROAD	70+10.4	14.0' LT	HMA	61'-6"	+2.4%	10'-0"	6'-6"	6"	10'-0"	11'-0"	6"	10'-0"
13	AYER ROAD	79+07.7	14.0' LT	HMA	55'-5"	-0.8%	10'-0"	7'-8"	6"	10'-0"	6'-6"	6"	10'-0"
19	AYER ROAD	87+43.9	14.0' LT	HMA	49'-10"	-1.7%	10'-0"	9'-0"	6"	10'-0"	6'-6"	6"	10'-0"
20	AYER ROAD	88+35.9	14.0' LT	HMA	69'-0"	-2.1%	10'-0"	11'-0"	6"	10'-0"	6'-6"	6"	10'-0"
24	AYER ROAD	94+16.8	14.0' LT	HMA	48'-0"	-3.5%	10'-0"	14'-0"	6"	10'-0"	6'-6"	6"	10'-0"



LEGEND:

W = SIDEWALK WIDTH
HMA = HOT MIX ASPHALT
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%



SECTION A-A

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING DRIVEWAY OPENING

SIDEWALK THROUGH DRIVEWAY TYPE C

N.T.S.

DRIVEWAY DATA							
DWY #	BASELINE REFERENCE	STATION	OFFSET	DRIVEWAY SURFACE	DWY WIDTH @ GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF ACCESSIBLE ROUTE
2	AYER ROAD	28+83.7	13.5' LT	HMA	38'-4"	+2.6%	10'-0"