

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	46
PROJECT FILE NO.		608495	

TITLE SHEET & INDEX

PLAN OF RESURFACING & RELATED WORK ON ROUTE 2A

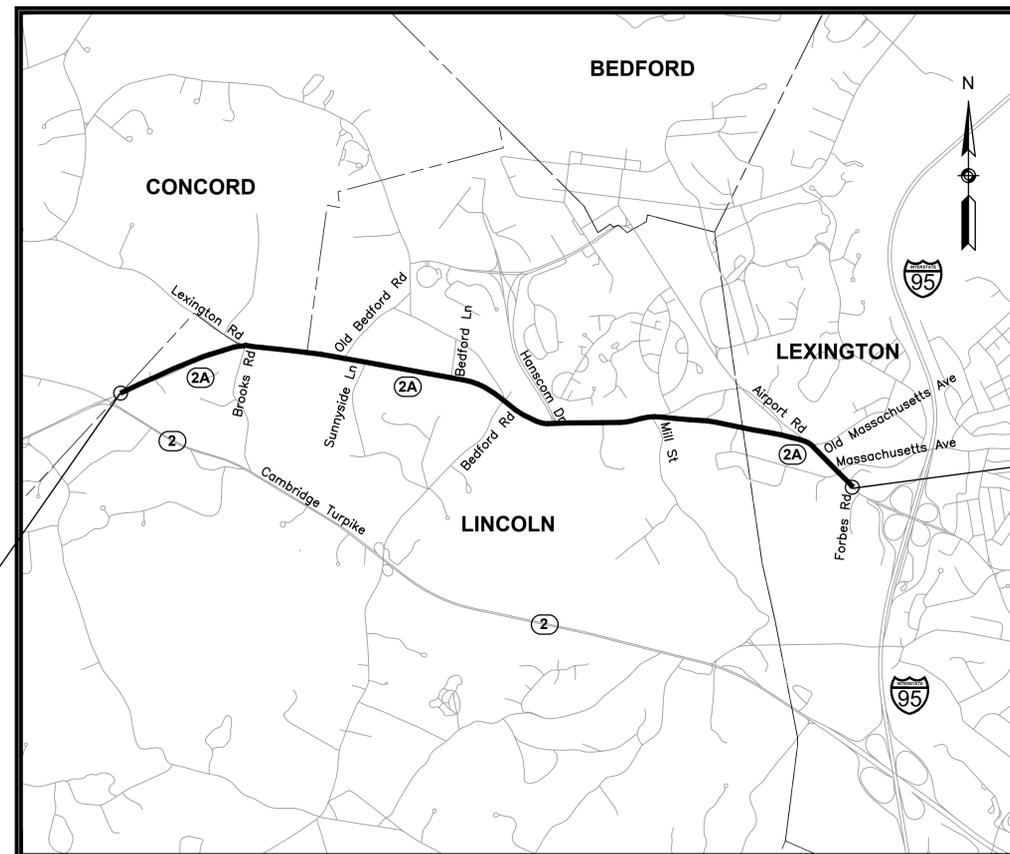
IN THE CITY/TOWN OF LINCOLN - CONCORD - LEXINGTON MIDDLESEX COUNTY

FEDERAL AID PROJECT NO.

THESE PLANS ARE SUPPLEMENTED BY 2021 EDITION OF THE MASSDOT HIGHWAY DIVISION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 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.

DRAFT 100%/PSE SUBMISSION

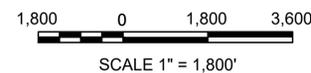
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BEGIN PROJECT (RTE 2A)
STA. 80+99.42±(LINCOLN) =
STA. 0+00 (CONCORD)
N 2989219.4184
E 704902.0112
MM 91.701

END PROJECT (RTE 2A)
STA. 153+81.73±(LEXINGTON)
N 2987234.1712
E 720444.0933
MM 94.223

DESIGN DESIGNATION (ROUTE 2A)
DESIGN SPEED 40 MPH
FUNCTIONAL CLASSIFICATION PRINCIPAL ARTERIAL



LENGTH OF PROJECT = 13,625 FEET = 2.6 MILE

1/5/2022	DRAFT 100%/PSE SUBMISSION	1
4/1/2021	25/75% SUBMISSION	0



APPROVED

CHIEF ENGINEER

DATE

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		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
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE 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 PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		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
		LEGEND "ONLY" - WHITE
		STOP LINE
		CROSSWALK
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE (10' LINE W/30' GAP)
		BROKEN YELLOW LINE
		DOTTED WHITE LINE
		DOTTED YELLOW LINE
		DOTTED WHITE LINE EXTENSION (3' LINE W/9' GAP)
		DOTTED YELLOW LINE EXTENSION
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL	DESCRIPTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
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
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
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
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
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY

LINCOLN - CONCORD - LEXINGTON ROUTE 2A

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MA	-	2	46
PROJECT FILE NO. 608495			

LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL	DESCRIPTION
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
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SBE	SLOPED BITUMINOUS EDGING
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	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

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

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MA	-	3	46
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GENERAL NOTES

GENERAL NOTES

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR REVIEW A SCHEDULE OF OPERATIONS IN ADDITION TO OTHER CONTRACT REQUIREMENTS TO THE ENGINEER.

CONSTRUCTION PLANS

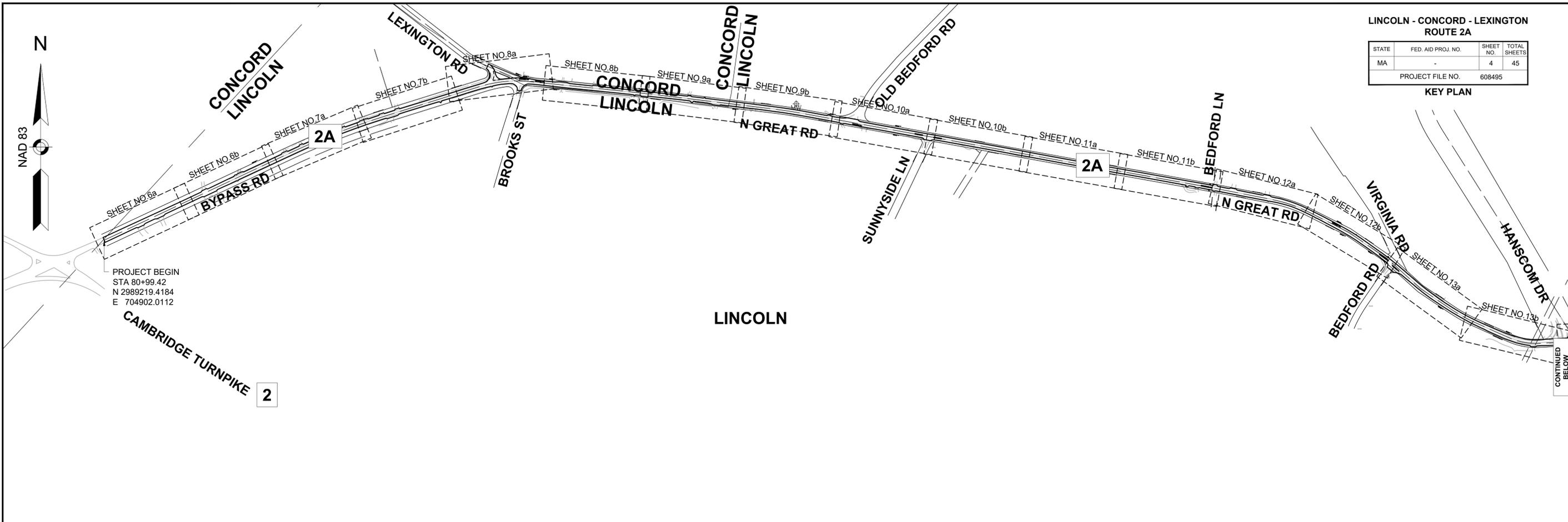
THE BASE MAPPING UTILIZED IN THE CONSTRUCTION PLANS WAS DEVELOPED USING AERIAL PHOTOGRAPHY AND RECORD PLANS. THE LOCATIONS OF FEATURES ARE APPROXIMATE AND ACTUAL FIELD CONDITIONS MAY VARY.

1. THE BASELINE, STATE HIGHWAY LAYOUT, AND EXISTING ROADWAY WAS SURVEY BY WSP USA, INC. ON MAY 1, 2020. UPON REQUEST MASSDOT SHALL STAKEOUT THE EXISTING LAYOUT AND STATE HIGHWAY LAYOUT.
2. GUARDRAIL STATION AND OFFSET INFORMATION IS APPROXIMATE AND ACTUAL LOCATIONS MAY VARY SLIGHTLY IN THE FIELD. UNLESS WHERE DIRECTED BY THE PLANS OR THE RESIDENT ENGINEER, EXISTING FIELD LOCATIONS ARE TO BE MAINTAINED.
3. ALL FRAME AND GRATES WITHIN RESURFACING LIMITS, AND WITHIN THE TRAVELED WAY, ARE TO BE REPLACED WITH HOOK & LOCK TYPE CASTINGS. CASCADE GRATES SHALL BE INSTALLED ON LOCAL ROADS
4. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, ALL SIGNS ARE TO BE RETAINED
5. THE LOCATIONS OF EXISTING STRUCTURES SUCH AS SEWERS, DRAINS, WATER MAINS AND OTHER UTILITIES ARE ONLY APPROXIMATE AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITH THE PROPER UTILITY ENGINEERING DEPARTMENT/COMPANY BEFORE EXCAVATING.
6. THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) SEVENTY-TWO HOURS PRIOR TO THE START OF ANY WORK ON THE PROJECT. IN ADDITION, THE CONTRACTOR SHALL SAFELY AND ACCURATELY DETERMINE THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES ON THE SITE PRIOR TO THE START OF WORK.
7. COORDINATES, IN FEET, ARE REFERENCED TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
8. ELEVATIONS, IN FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
9. NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.
10. DAMAGE OF PROPERTY BEYOND THE WORK LIMITS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, SUBJECT TO THE APPROVAL OF THE ENGINEER AND ACCEPTANCE OF THE PROPERTY OWNER.
11. ALL NON-PRECAST CEMENT CONCRETE USED ON THIS PROJECT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI OR AS OTHERWISE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS.
12. THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS AT HIS OWN EXPENSE IF NOT OTHERWISE SPECIFIED, OUTSIDE OF THE PROJECT LIMITS.
13. THE LOCATIONS OF PROPOSED PIPELINES, STRUCTURES AND UTILITY RELOCATIONS MAY BE MODIFIED TO SUIT FIELD CONDITIONS AT THE DISCRETION OF THE ENGINEER. OFFSETS TO DRAINAGE STRUCTURES ARE TO THE CENTER OF THE FRAME OR GRATE.
14. IF THE CONTRACTOR DAMAGES UTILITY SERVICES, HE SHALL IMMEDIATELY NOTIFY THE RESPECTIVE UTILITY COMPANY AND SHALL IMMEDIATELY REPLACE OR REPAIR, UNLESS INDICATED OTHERWISE BY THE RESPECTIVE UTILITY OWNER.
15. ALL PROPOSED DRAINAGE CONNECTIONS TO EXISTING STRUCTURES WILL BE INCLUDED IN THE COST OF INSTALLATION OF THE NEW PIPE OR STRUCTURE.
16. RIM ELEVATIONS MAY BE SUBJECT TO FIELD ADJUSTMENTS AS DIRECTED BY THE ENGINEER. ELEVATIONS ON CATCH BASINS ARE REFERENCED TO THE CENTER OF GRATE AT FACE OF CURB.
17. WHEN A PROPOSED STRUCTURE INTERFERES WITH ANY UNDERGROUND UTILITY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
18. ALL EXISTING DRAINAGE STRUCTURES, AND SELECTED DRAINAGE PIPES, WHICH ARE TO REMAIN WITHIN THE PROJECT LIMITS SHALL BE CLEANED AND THE SEDIMENT SHALL BE PROPERLY DISPOSED OF.
19. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESEDED PRIOR TO THE END OF THE PROJECT.
20. ALL TRENCH BACKFILL SHALL BE MECHANICALLY TAMPED; NO JETTING SHALL BE ALLOWED.

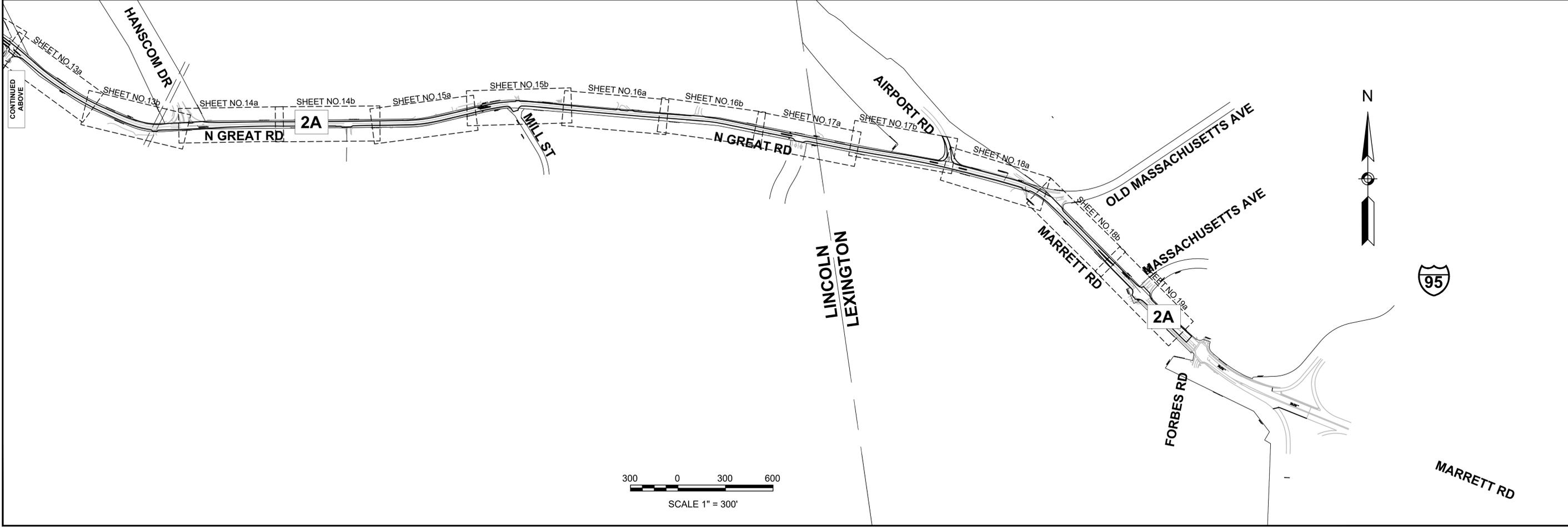
LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	45
PROJECT FILE NO.		608495	

KEY PLAN



PROJECT BEGIN
STA 80+99.42
N 2989219.4184
E 704902.0112



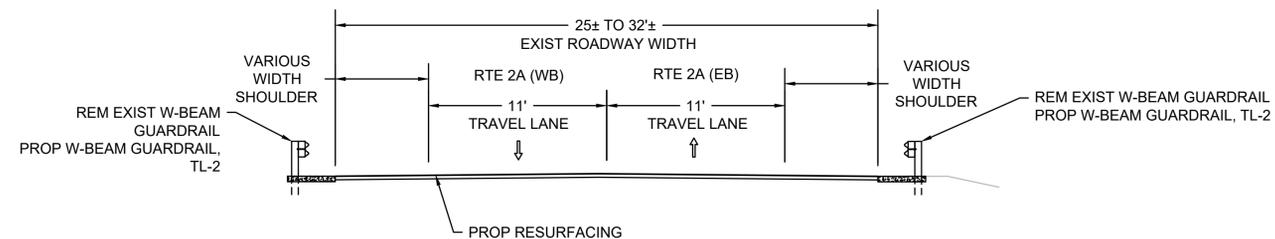
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LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

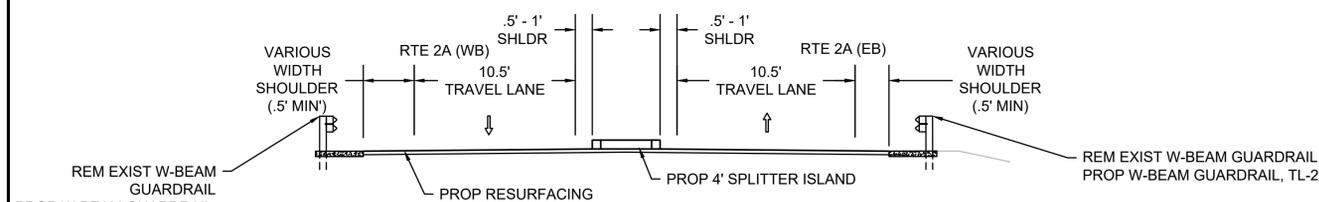
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	46
PROJECT FILE NO.		608495	

TYPICAL SECTIONS



TYPICAL SECTION - ROUTE 2A

STA 80+99.42± TO 27+61.73± (1895 MAIN BL)
 STA 25+91.23± TO 9+26.65± (1895 MAIN BL)
 STA 8+58.15± TO 0+00± (1895 MAIN BL) = STA 0+00± (1896 MAIN BL)
 STA 0+00± TO 2+95.46± (1896 MAIN BL)
 STA 3+64.32± TO 34+65.68± (1896 MAIN BL)
 STA 0+05.18± TO 18+53.67± (1897 MAIN BL)
 STA 19+22.17± TO 20+34.00 (1897 MAIN BL) = STA 181+95.48 (1898 MAIN BL)
 STA 181+95.48 TO STA 174+20.57 (1898 MAIN BL)
 STA 171+84.16± TO STA 153+81.73 (1898 MAIN BL)
 NTS



TYPICAL SECTION - PROP CROSSINGS

STA 27+61.73± TO 25+91.23± (1895 MAIN BL)
 STA 9+26.65± TO 8+58.15± (1895 MAIN BL)
 STA 2+95.46± TO 3+64.32± (1896 MAIN BL)
 STA 34+65.68 - 35+58.97 (1896 MAIN BL) = STA 0+00.00 (1897 MAIN BL)
 STA 0+00.00 TO 0+05.18 (1897 MAIN BL)
 STA 18+53.67 TO 19+22.17 (1897 MAIN BL)
 STA 174+20.57 - 171+84.16 (1898 MAIN BL)
 NTS

PAVEMENT NOTES

PROPOSED MILLING AND OVERLAY (ROUTE 2A)
 SURFACE: 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
 MILLING: FINE MILLING TO A DEPTH OF 2"

RECONSTRUCTED DRIVEWAYS:
 SURFACE: 1.5" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER
 2.5" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)
 FOUNDATION: 8" GRAVEL BORROW

RECONSTRUCTED PEDESTRIAN CURB RAMPS:
 SURFACE: 4" CEMENT CONCRETE (AIR-ENTRAINED 4000 PSI, 3/4", 610)
 FOUNDATION: 8" GRAVEL BORROW

FULL DEPTH RECONSTRUCTED - AREAS OF WIDENING >4' (LEXINGTON RD)
 SURFACE: 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)
 2.5" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)
 4.5" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)
 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE

FOUNDATION: 8" GRAVEL BORROW

BOX WIDENING RECONSTRUCTED - AREAS OF WIDENING <4' (LEXINGTON RD)
 SURFACE: 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)
 8" HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE

FOUNDATION: 8" GRAVEL BORROW

GENERAL NOTES:

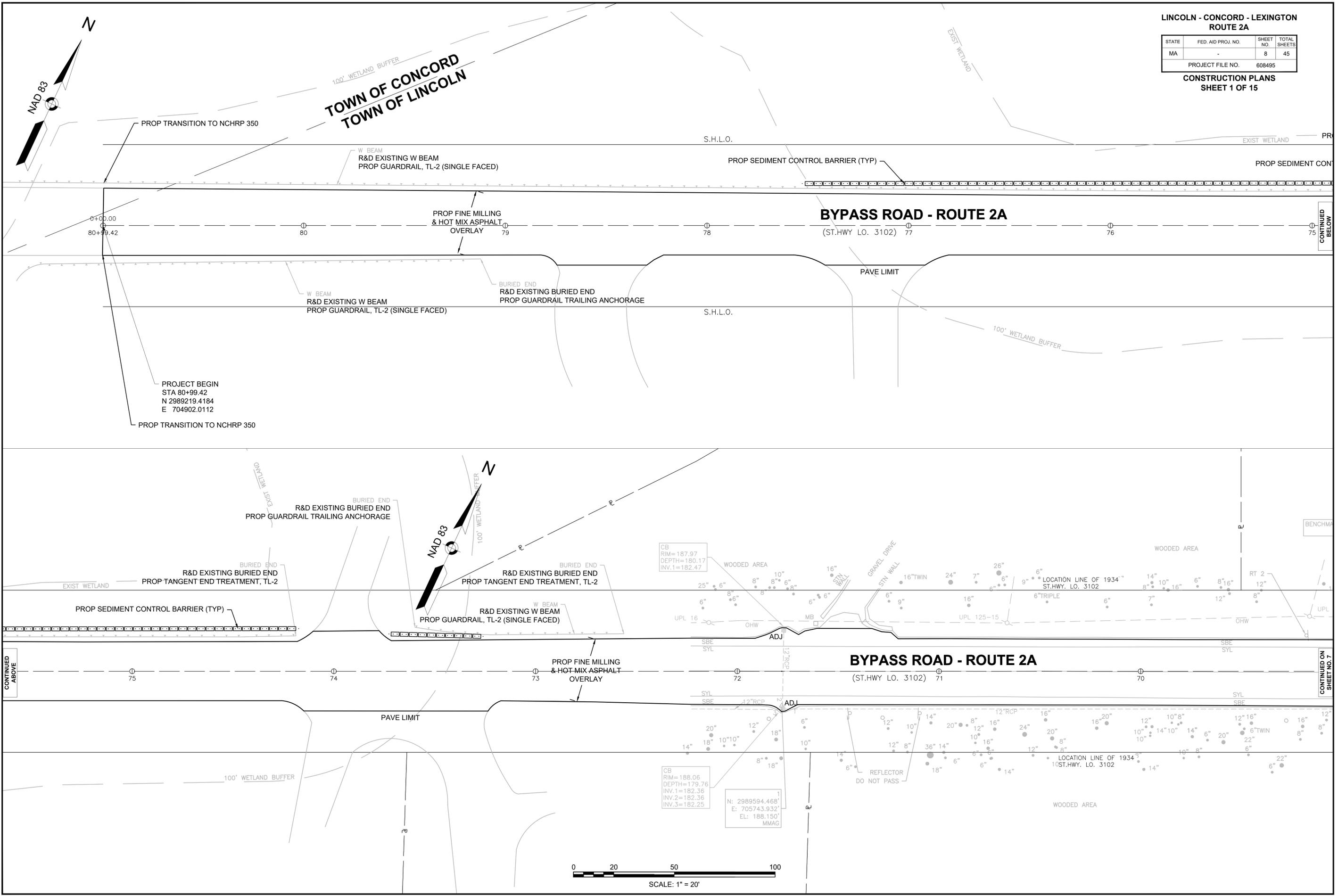
- CONSTRUCTION PLANS ARE GENERALLY NOT BASED ON GROUND SURVEY AND ARE FOR REFERENCE ONLY, THE BASELINE WILL NOT BE REPRODUCED IN THE FIELD BY MASSDOT.
- PERMANENT ROADWAY PATCHING SHALL BE COMPENSATED UNDER ITEM 451., AND BE INSTALLED USING SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5).
- ASPHALT EMULSION FOR TACK COAT AND HMA JOINT SEALANT SHALL BE APPLIED PER MASSDOT SUPERPAVE SPECIFICATIONS.
- WHERE ACCEPTABLE FOR REUSE, EXISTING SUBGRADE MAY BE RETAINED AT SIDEWALK AND DRIVEWAY CONSTRUCTION LOCATIONS.

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MA	-	8	45
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CONSTRUCTION PLANS
SHEET 1 OF 15

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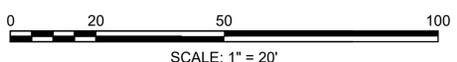


PROJECT BEGIN
STA 80+99.42
N 2989219.4184
E 704902.0112

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DEPTH=180.17
INV.1=182.47

CB
RIM=188.06
DEPTH=179.76
INV.1=182.36
INV.2=182.36
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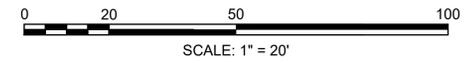
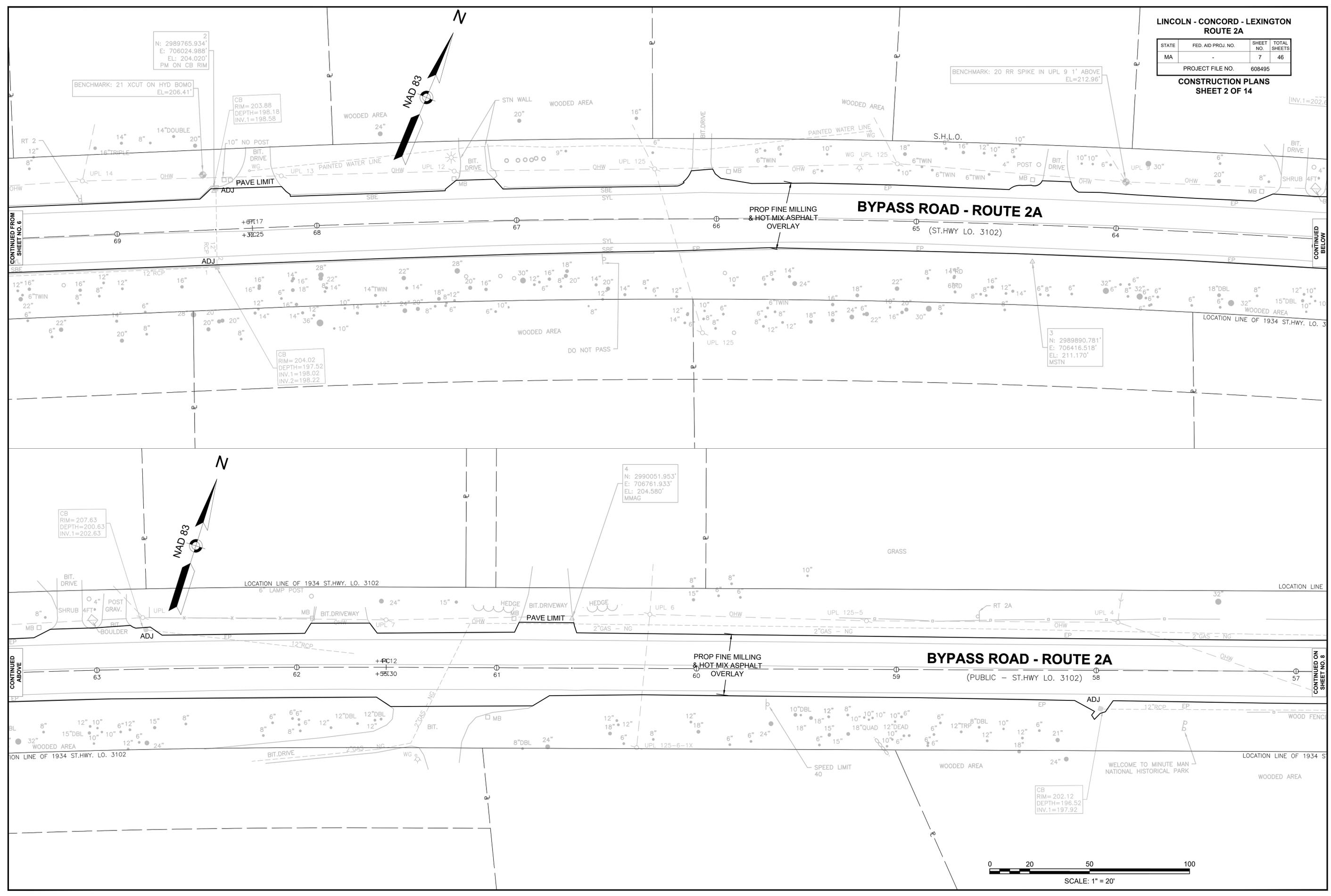
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LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	46

PROJECT FILE NO. 608495
CONSTRUCTION PLANS
SHEET 2 OF 14

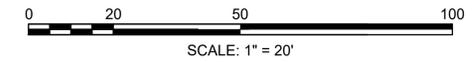
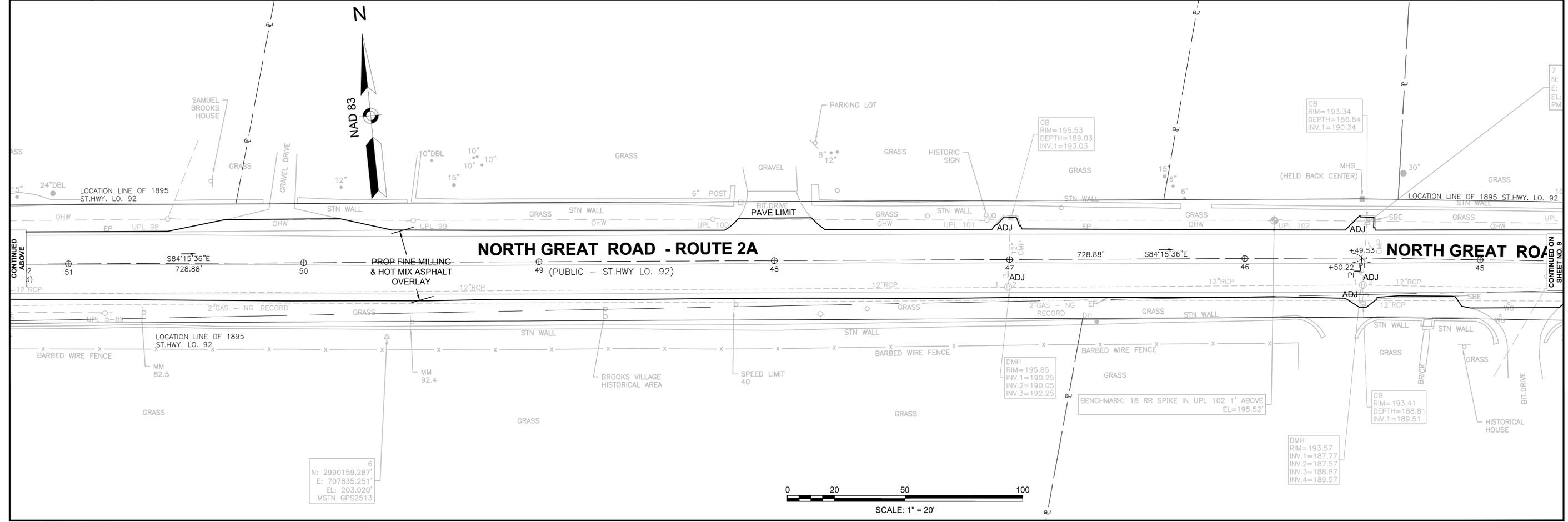
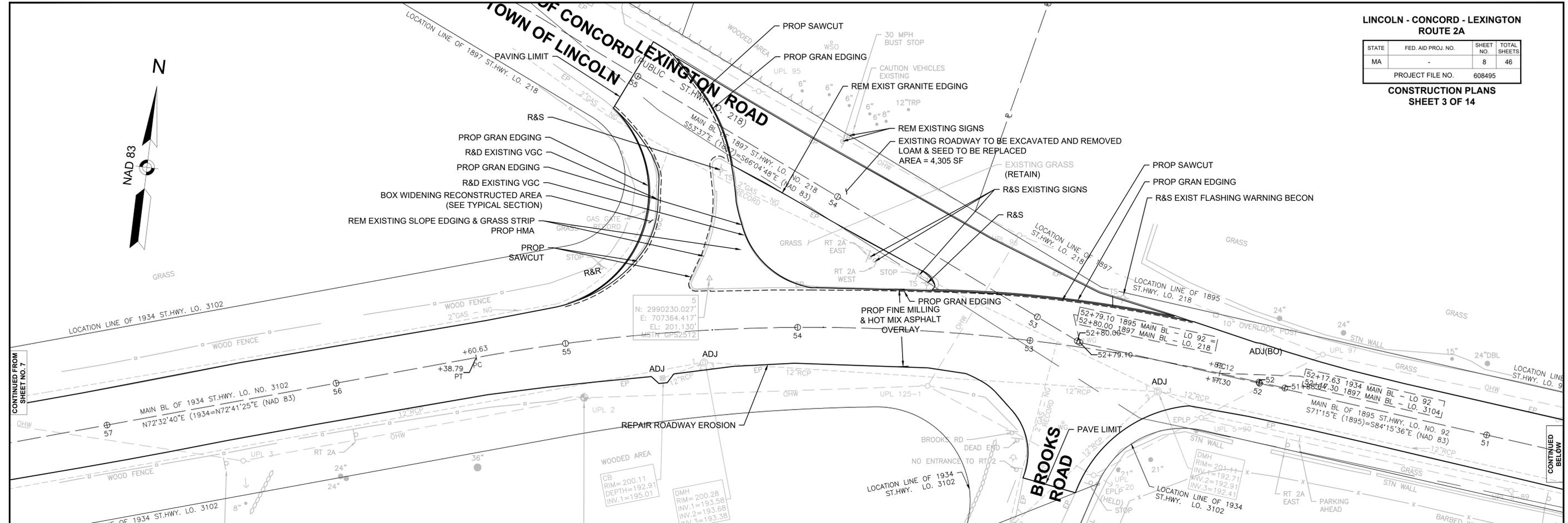
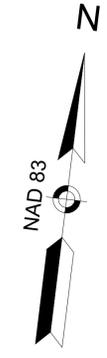
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**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	46
PROJECT FILE NO. 608495			

**CONSTRUCTION PLANS
SHEET 3 OF 14**



CONTINUED FROM
SHEET NO. 7

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON
SHEET NO. 9

6
N: 2990159.287'
E: 707835.251'
EL: 203.020'
MSTN GPS2513

DMH
RIM=195.85
INV.1=190.25
INV.2=190.05
INV.3=192.25

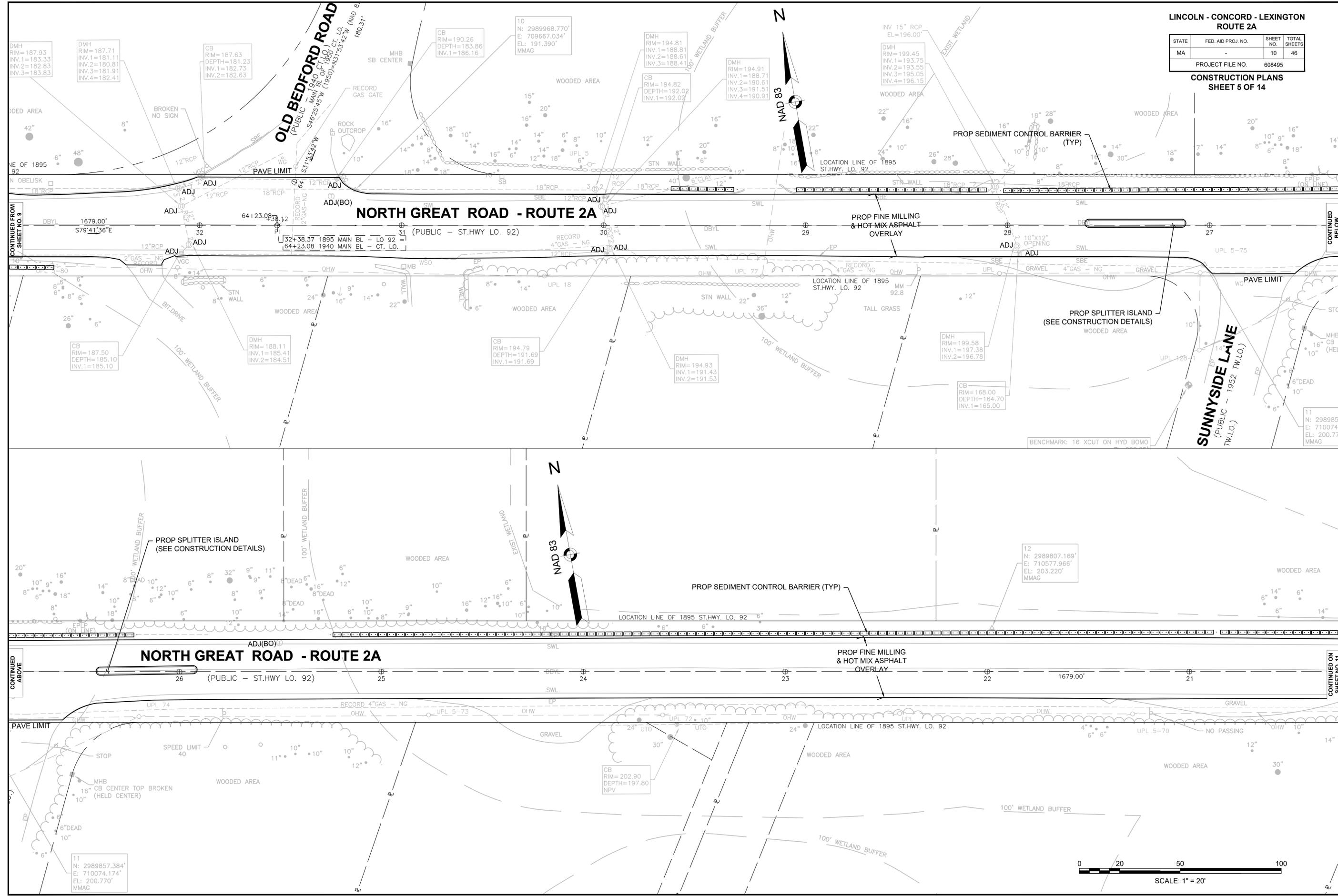
DMH
RIM=193.57
INV.1=187.77
INV.2=187.57
INV.3=188.87
INV.4=189.57

7
N:
E:
EL:
PM:

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	46

PROJECT FILE NO. 608495
**CONSTRUCTION PLANS
SHEET 5 OF 14**

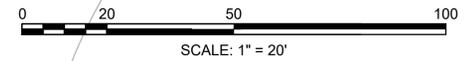


CONTINUED FROM SHEET NO. 9

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 11



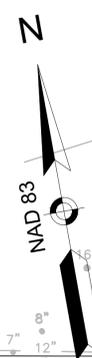
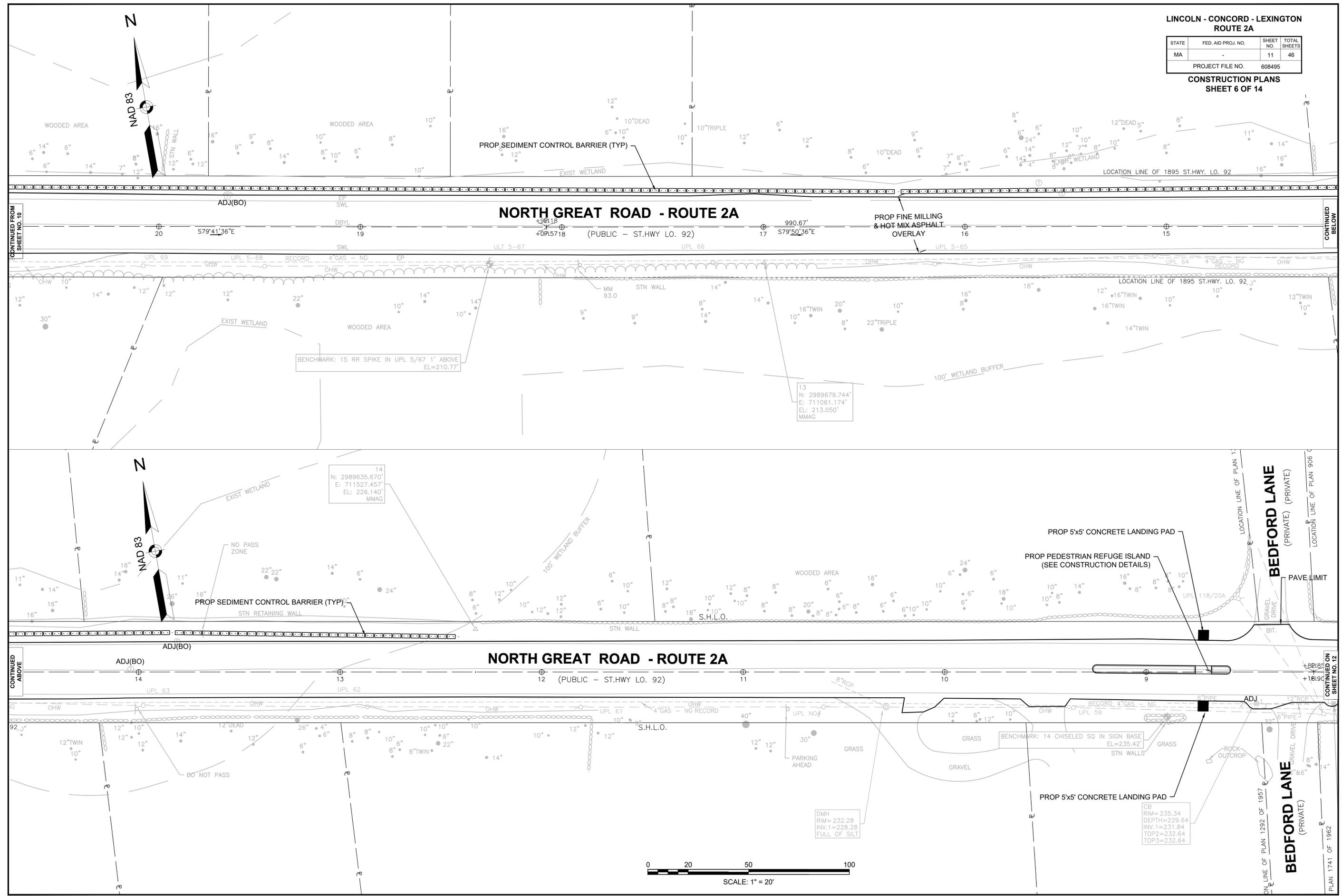
LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	46

CONSTRUCTION PLANS
SHEET 6 OF 14

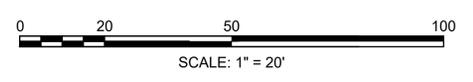
PROJECT FILE NO. 608495

608495(XX)HD1.DWG Plotted on 7-Jan-2022 1:06 PM



NORTH GREAT ROAD - ROUTE 2A

NORTH GREAT ROAD - ROUTE 2A



CONTINUED FROM
SHEET NO. 10

CONTINUED
BELOW

CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 12

BENCHMARK: 15 RR SPIKE IN UPL 5/67 1' ABOVE
EL=210.77'

13
N: 2989679.744'
E: 711061.174'
EL: 213.050'
MMAG

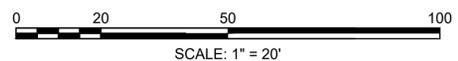
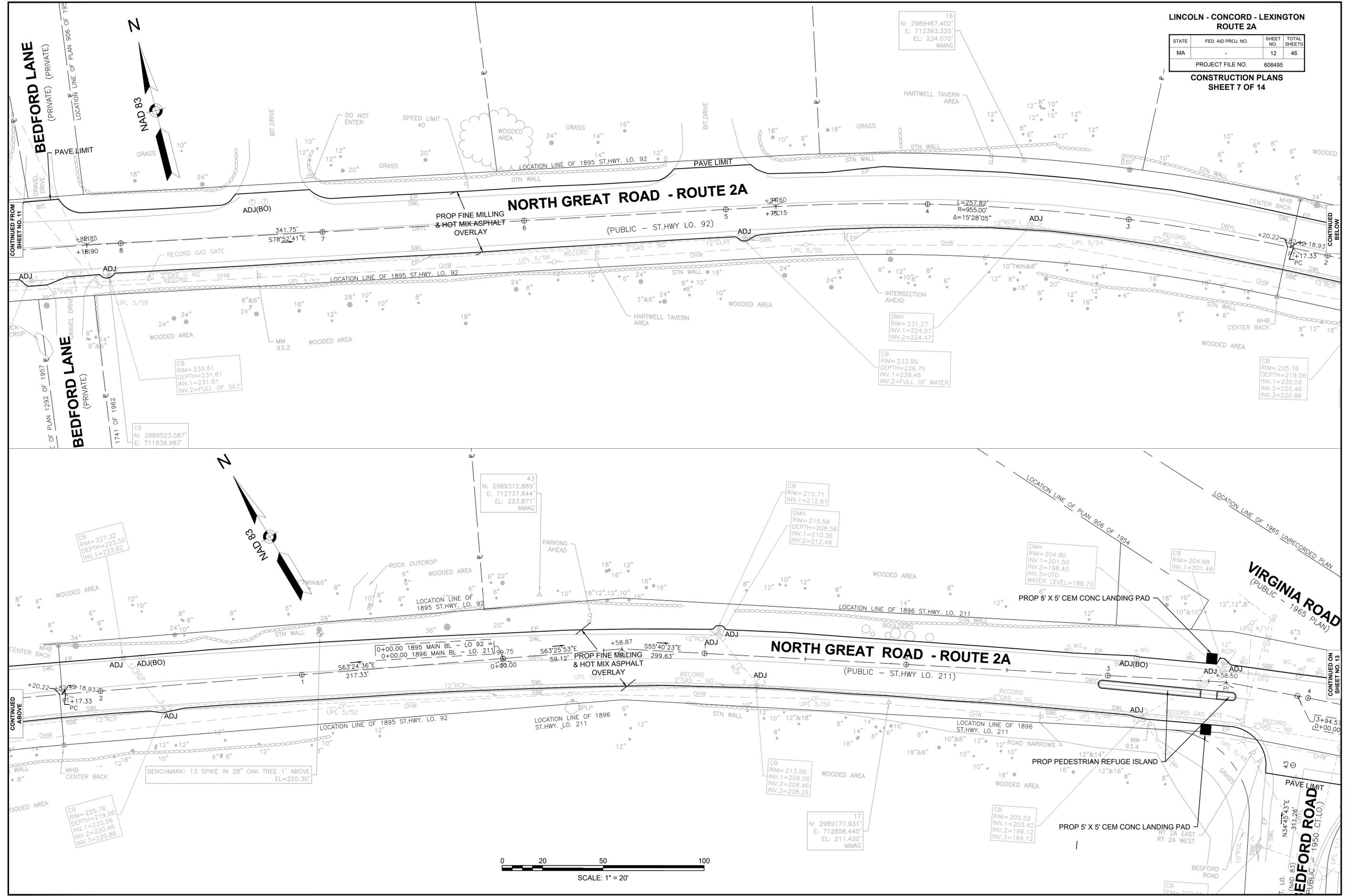
14
N: 2989635.670'
E: 711527.457'
EL: 226.140'
MMAG

BENCHMARK: 14 CHISELED SQ IN SIGN BASE
EL=235.42'

DMH
RIM=232.28
INV.1=228.28
FULL OF SILT

CB
RIM=235.34
DEPTH=229.64
INV.1=231.84
TOP2=232.64
TOP3=232.64

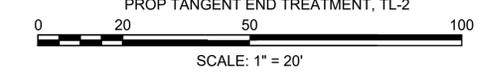
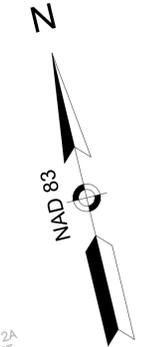
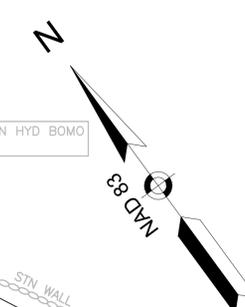
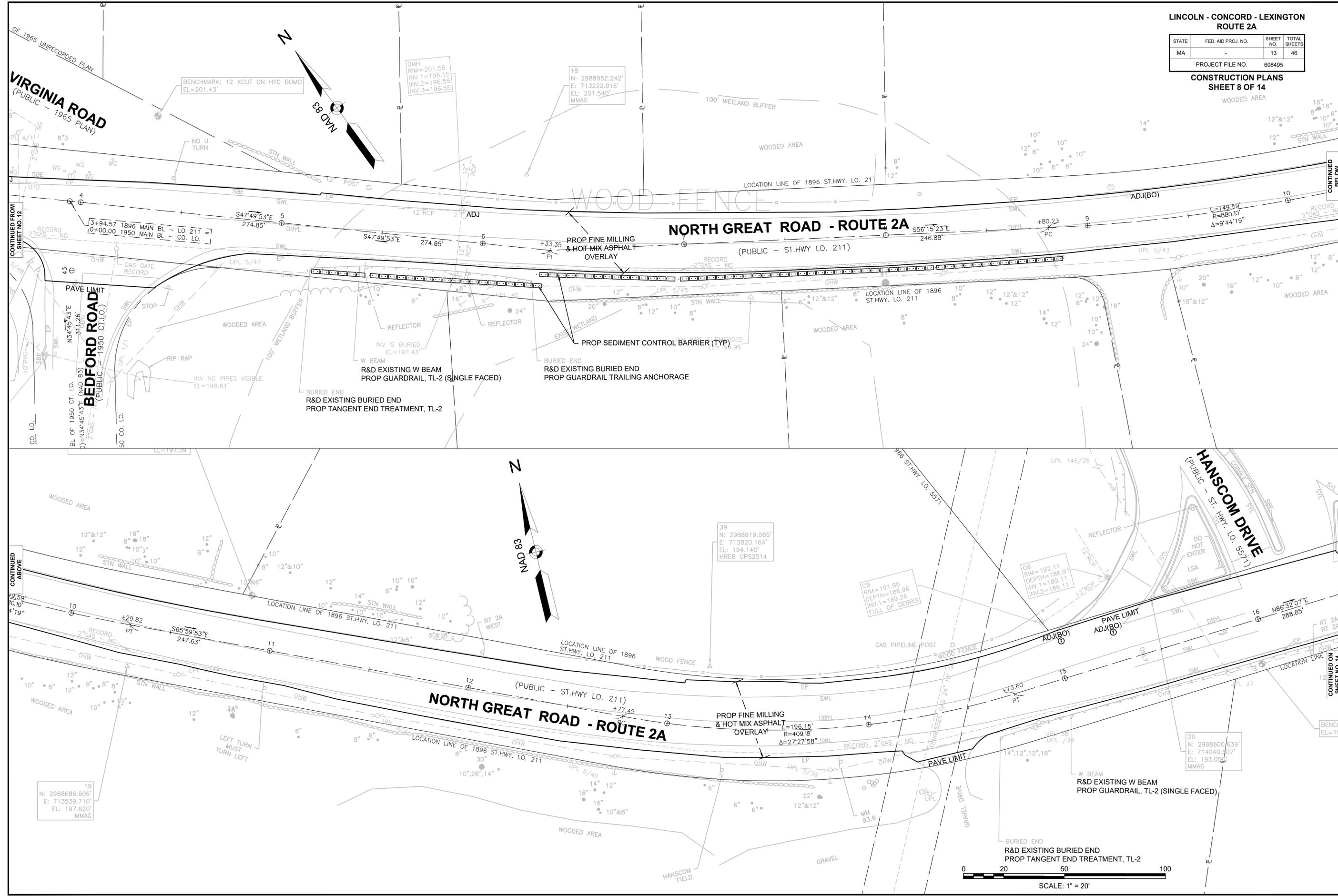
BEDFORD LANE (PRIVATE) (PLAN 906)
BEDFORD LANE (PRIVATE) (PLAN 1741 OF 1962)



**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	46
PROJECT FILE NO.		608495	

**CONSTRUCTION PLANS
SHEET 8 OF 14**



CONTINUED FROM SHEET NO. 12

CONTINUED BELOW

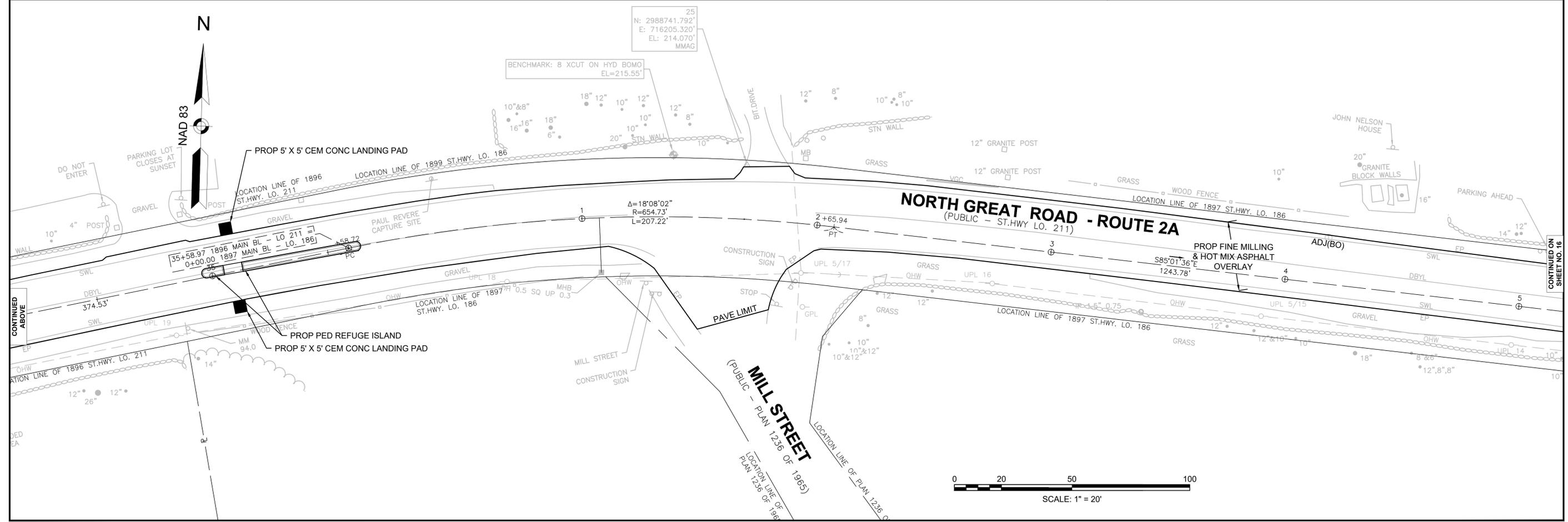
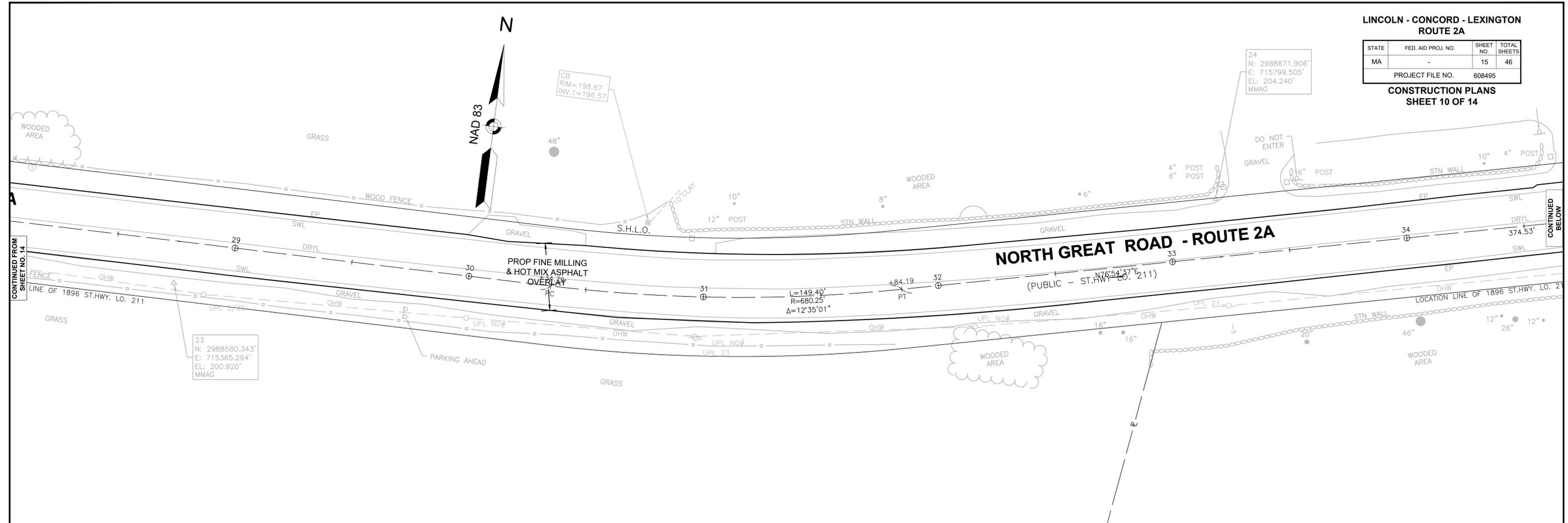
CONTINUED ABOVE

CONTINUED ON SHEET NO. 14

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	46

PROJECT FILE NO. 608495
**CONSTRUCTION PLANS
SHEET 10 OF 14**



608495(XX)HD1.DWG Plotted on 7-Jan-2022 1:09 PM

CONTINUED FROM SHEET NO. 9

CONTINUED BELOW

CONTINUED ABOVE

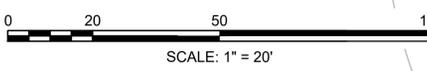
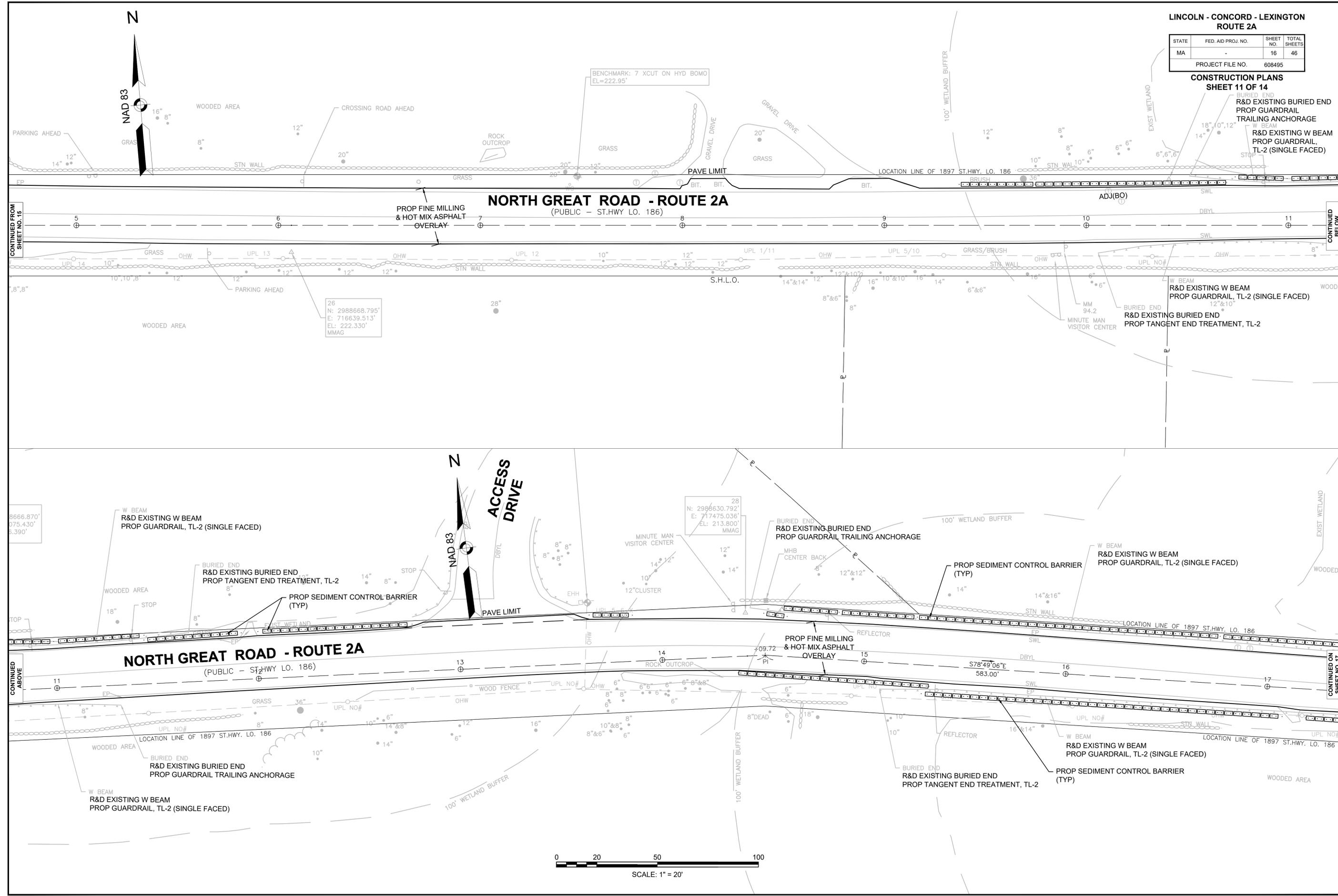
CONTINUED ON SHEET NO. 16

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	46
PROJECT FILE NO. 608495			

**CONSTRUCTION PLANS
SHEET 11 OF 14**

BURIED END
R&D EXISTING BURIED END
PROP GUARDRAIL
TRAILING ANCHORAGE
W BEAM
R&D EXISTING W BEAM
PROP GUARDRAIL,
TL-2 (SINGLE FACED)



CONTINUED FROM
SHEET NO. 19

CONTINUED
BELOW

CONTINUED
ABOVE

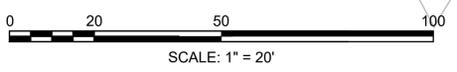
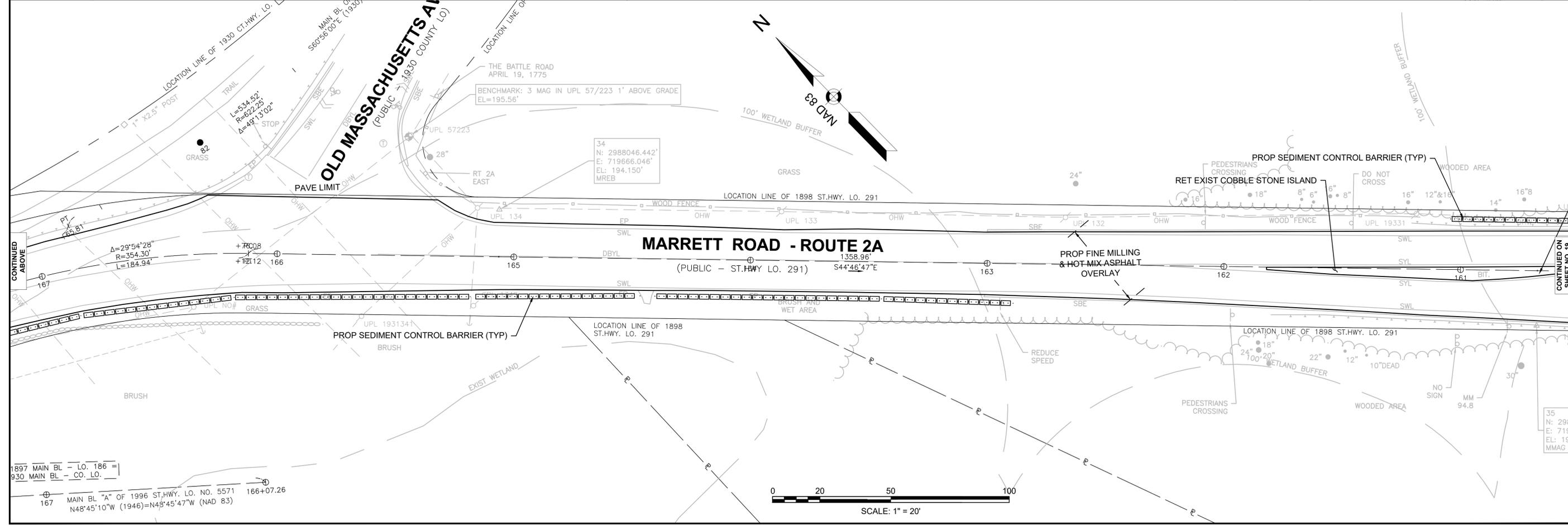
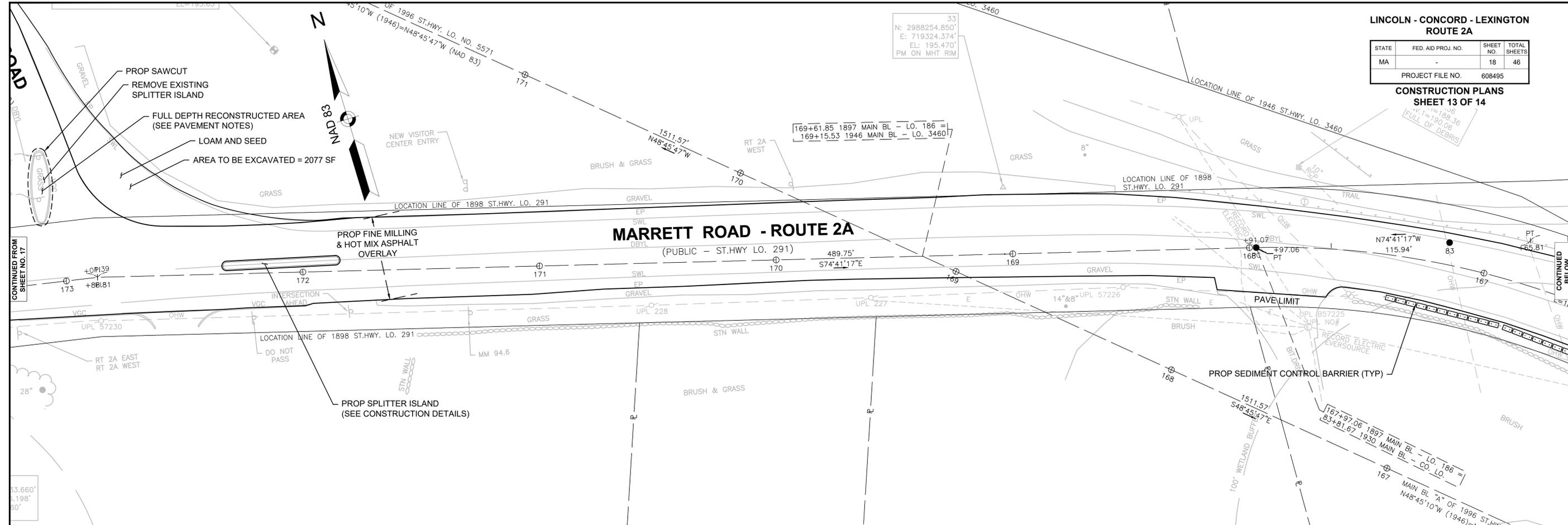
CONTINUED ON
SHEET NO. 17

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	46

**CONSTRUCTION PLANS
SHEET 13 OF 14**

PROJECT FILE NO. 608495



1897 MAIN BL - LO. 186 =
930 MAIN BL - CO. LO.
MAIN BL "A" OF 1996 ST.HWY. LO. NO. 5571 166+07.26
N48°45'10"W (1946)=N48°45'47"W (NAD 83)

CONTINUED FROM
SHEET NO. 17

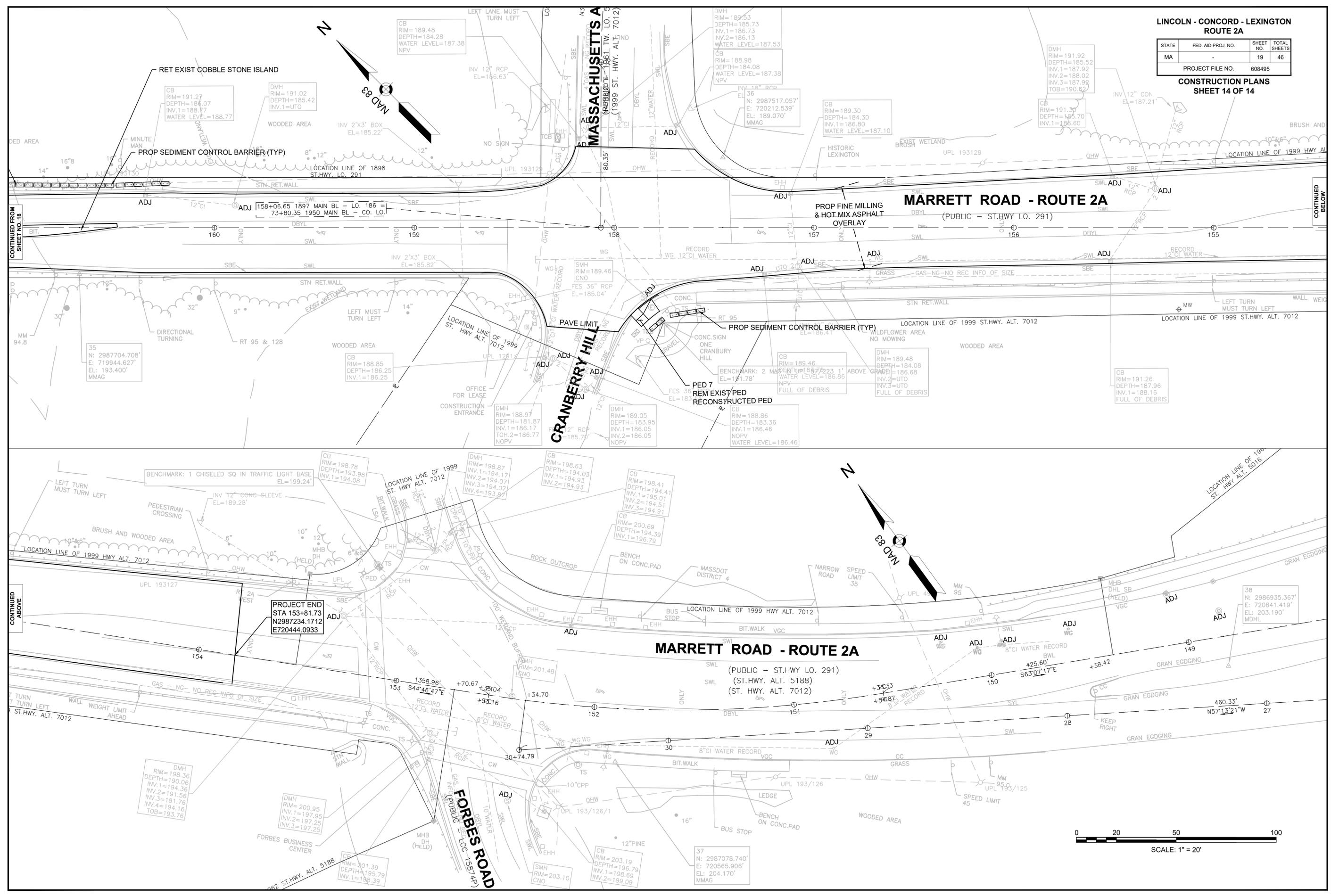
CONTINUED
BELOW

CONTINUED ON
SHEET NO. 19

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	46

PROJECT FILE NO. 608495
**CONSTRUCTION PLANS
SHEET 14 OF 14**



CONTINUED FROM
SHEET NO. 18

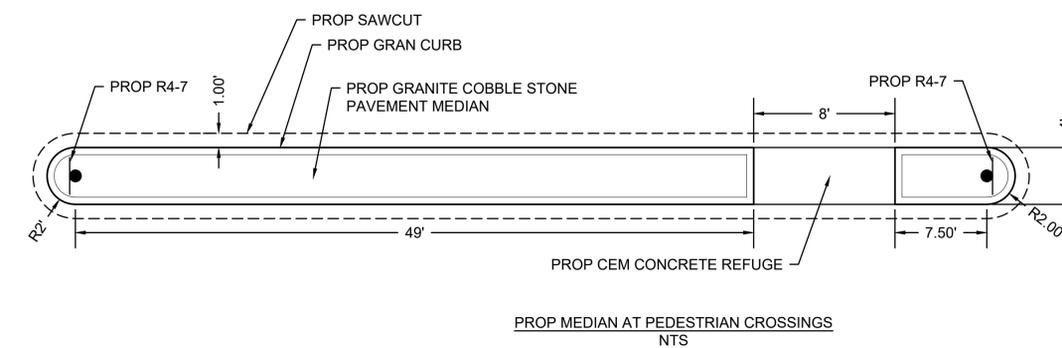
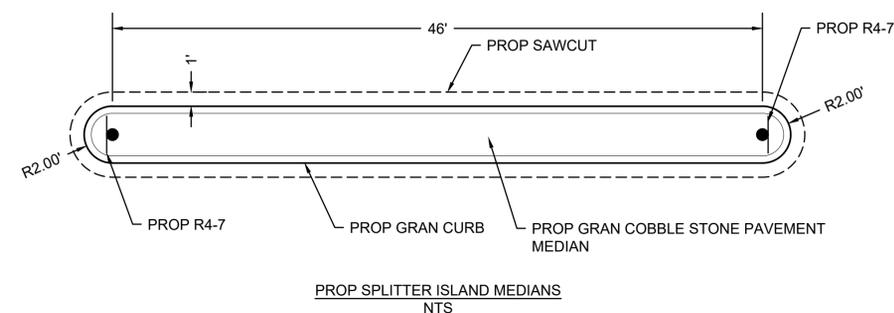
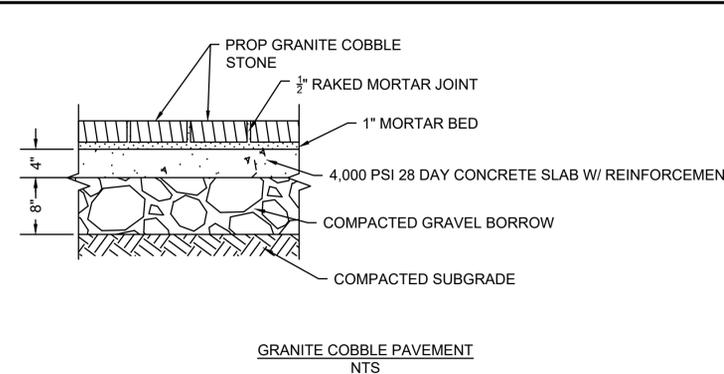
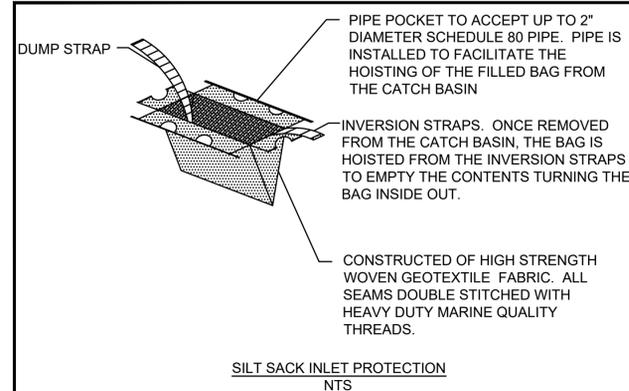
CONTINUED
BELOW

CONTINUED
ABOVE

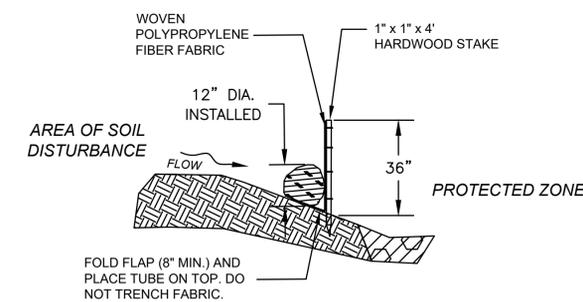
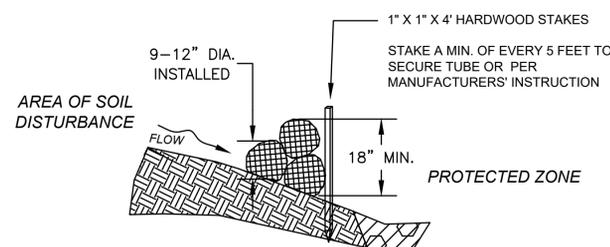
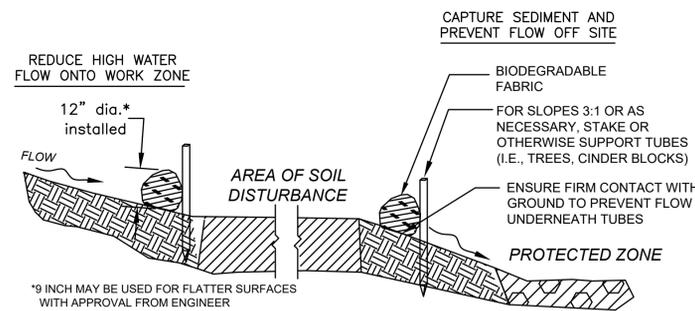
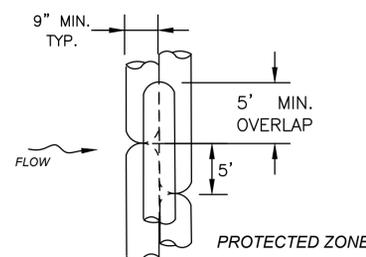
**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	46
PROJECT FILE NO.		608495	

CONSTRUCTION DETAILS



WHERE SPECIFIED ON CONSTRUCTION PLANS OR AS REQUIRED

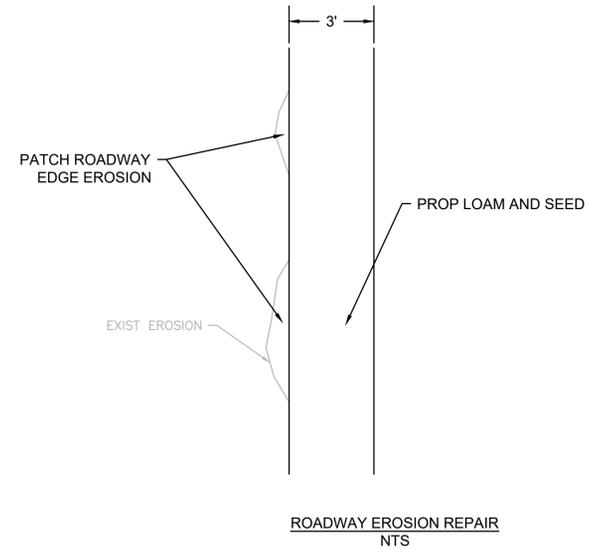


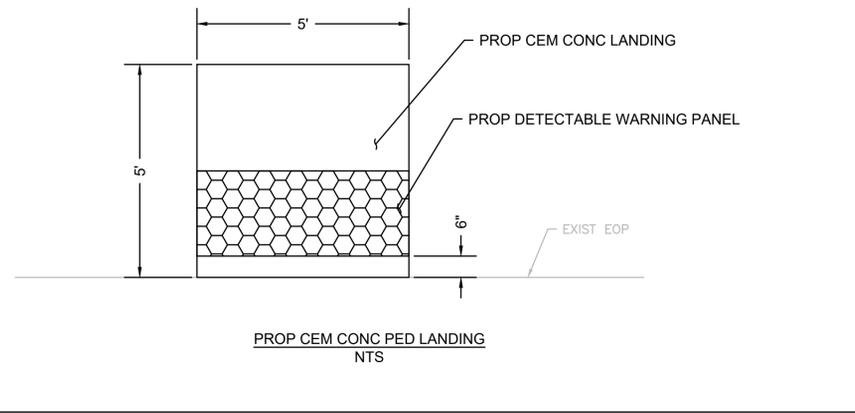
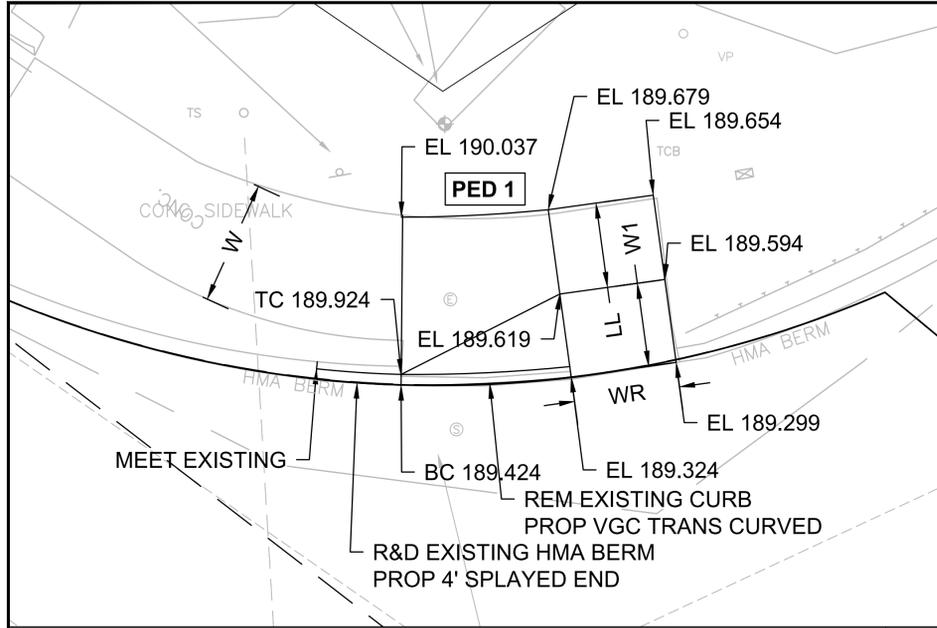
LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	46

PROJECT FILE NO. 608495

CONSTRUCTION DETAILS





**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	46
PROJECT FILE NO.		608495	

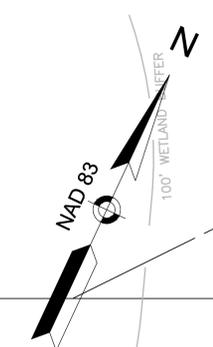
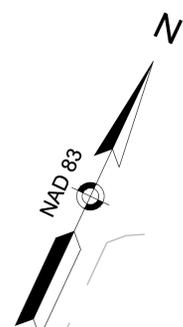
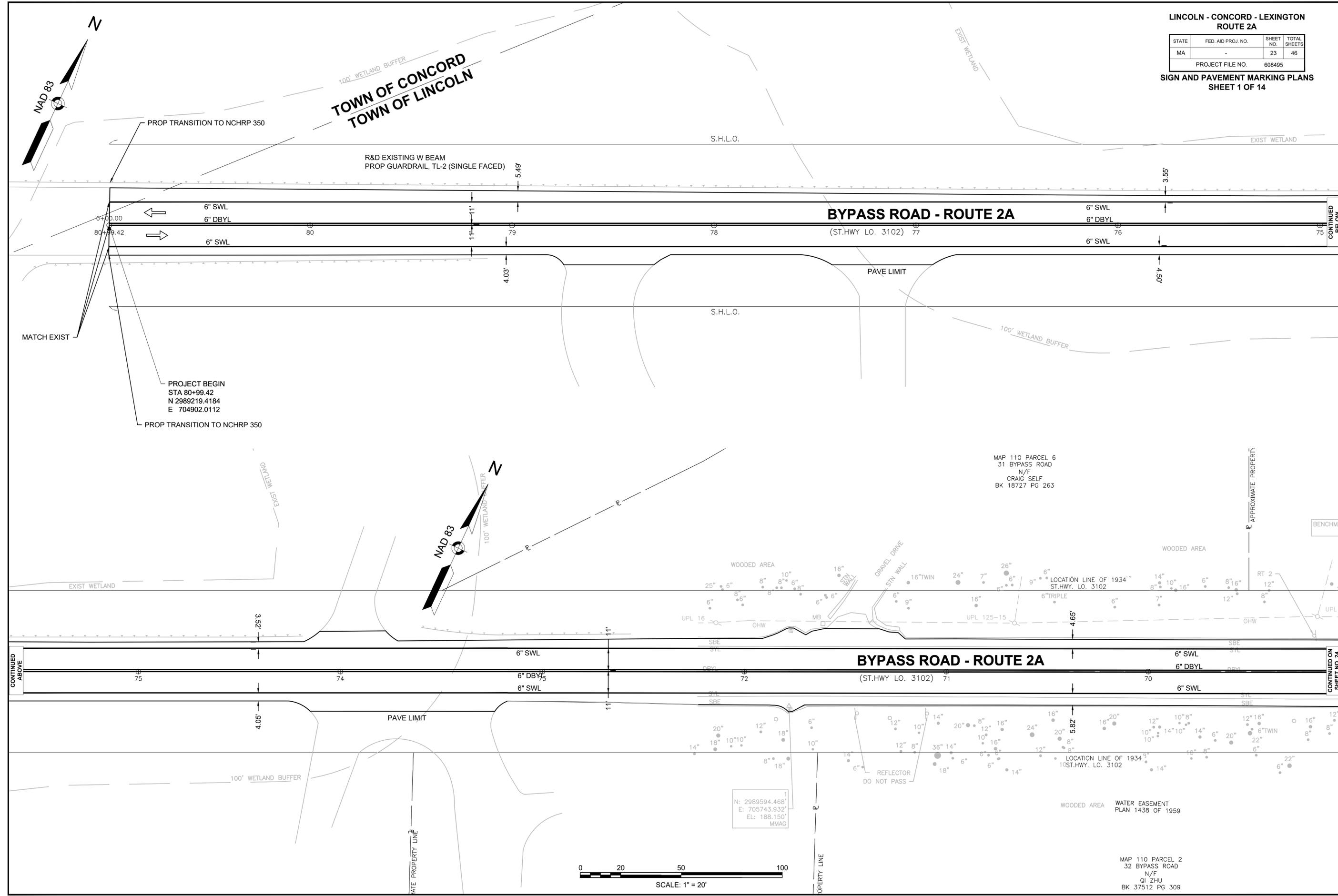
PEDESTRIAN CURB RAMP DETAILS

LINCOLN-CONCORD-LEXINGTON RT 2A				PEDESTRIAN CURB RAMP DESIGN TABLE													
PED NO	TOWN-BASELINE	RAMP REFERENCE POINT		Reveal			GUTTER SLOPE		TRANSITION LENGTH		W1			W2		LL	
		STATION	OFFSET	R1 (L)	R2 (R)	WR	S1 (LEFT)	S2 (RIGHT)	LEFT SIDE	RIGHT SIDE	W	LENGTH	SLOPE	LENGTH	SLOPE	LENGTH	SLOPE
1	LEXINGTON- RT 2A	157+90	42' LT	6.00	2.70	5.0'	-1.29%	-0.28	8.00	NA	5.3	3.9	7.50%	NA	NA	4.0	1.5%

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	46
PROJECT FILE NO.		608495	

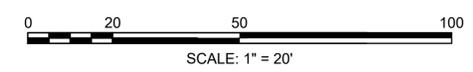
SIGN AND PAVEMENT MARKING PLANS
SHEET 1 OF 14



PROJECT BEGIN
STA 80+99.42
N 2989219.4184
E 704902.0112
PROP TRANSITION TO NCHRP 350

MAP 110 PARCEL 6
31 BYPASS ROAD
N/F
CRAIG SELF
BK 18727 PG 263

1
N: 2989594.468'
E: 705743.932'
EL: 188.150'
MMAG



MAP 110 PARCEL 2
32 BYPASS ROAD
N/F
QI ZHU
BK 37512 PG 309

608495(XX)PAVTRKGD.WG Plotted on 7-Jan-2022 1:16 PM

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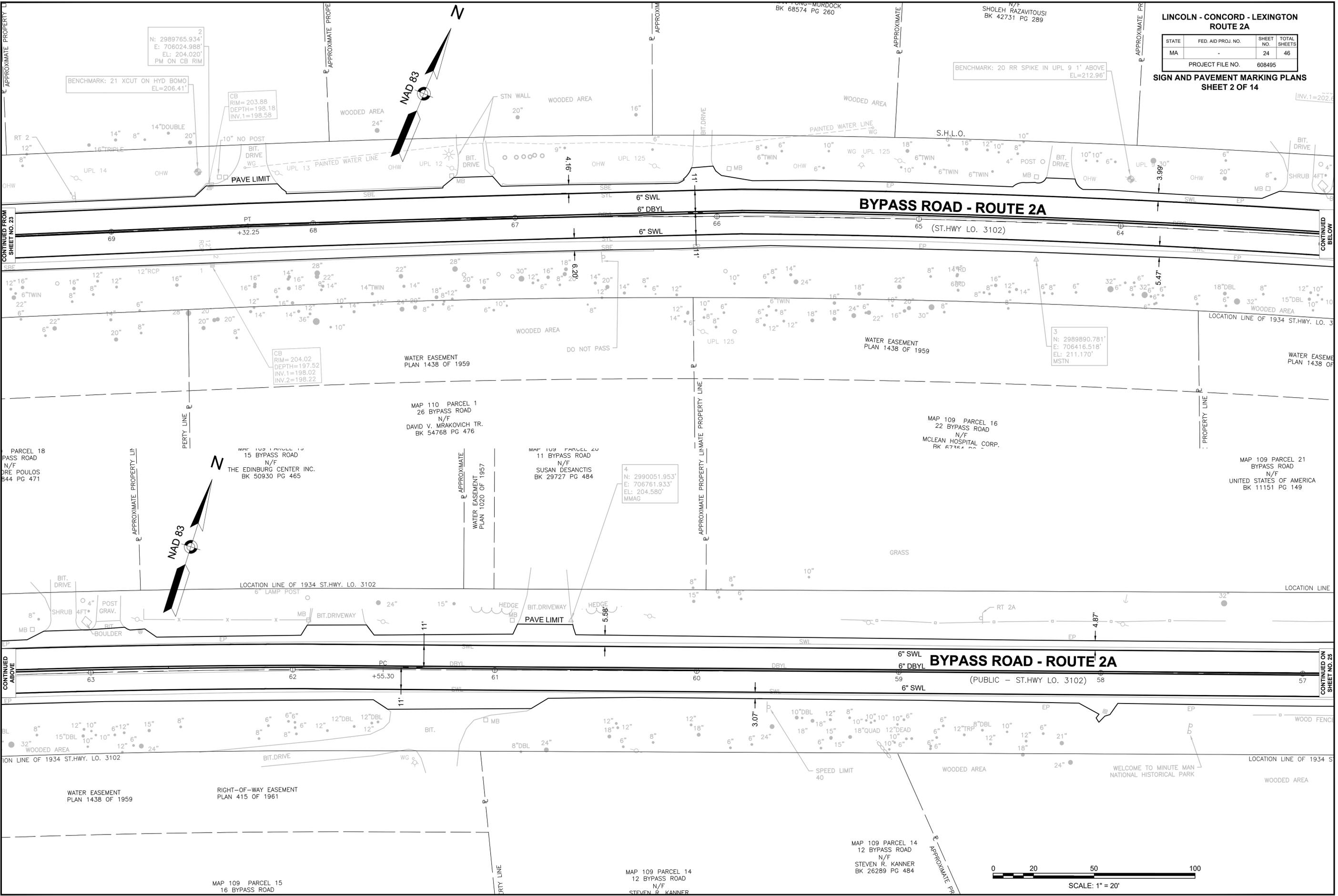
CONTINUED ON SHEET NO. 24

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	46

PROJECT FILE NO. 608495

**SIGN AND PAVEMENT MARKING PLANS
SHEET 2 OF 14**



2
N: 2989765.934'
E: 706024.988'
EL: 204.020'
PM ON CB RIM

BENCHMARK: 21 XCUT ON HYD BOMO
EL=206.41'

CB
RIM=203.88
DEPTH=198.18
INV.1=198.58

BENCHMARK: 20 RR SPIKE IN UPL 9 1' ABOVE
EL=212.96'

CB
RIM=204.02
DEPTH=197.52
INV.1=198.02
INV.2=198.22

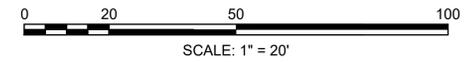
4
N: 2990051.953'
E: 706761.933'
EL: 204.580'
MMAG

3
N: 2989890.781'
E: 706416.518'
EL: 211.170'
MSTN

MAP 109 PARCEL 15
16 BYPASS ROAD
N/F
STEVEN R. KANNER
BK 26289 PG 484

MAP 109 PARCEL 14
12 BYPASS ROAD
N/F
STEVEN R. KANNER
BK 26289 PG 484

MAP 109 PARCEL 12
12 BYPASS ROAD
N/F
STEVEN R. KANNER
BK 26289 PG 484

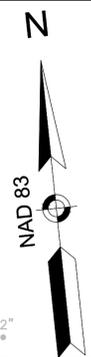
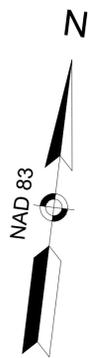
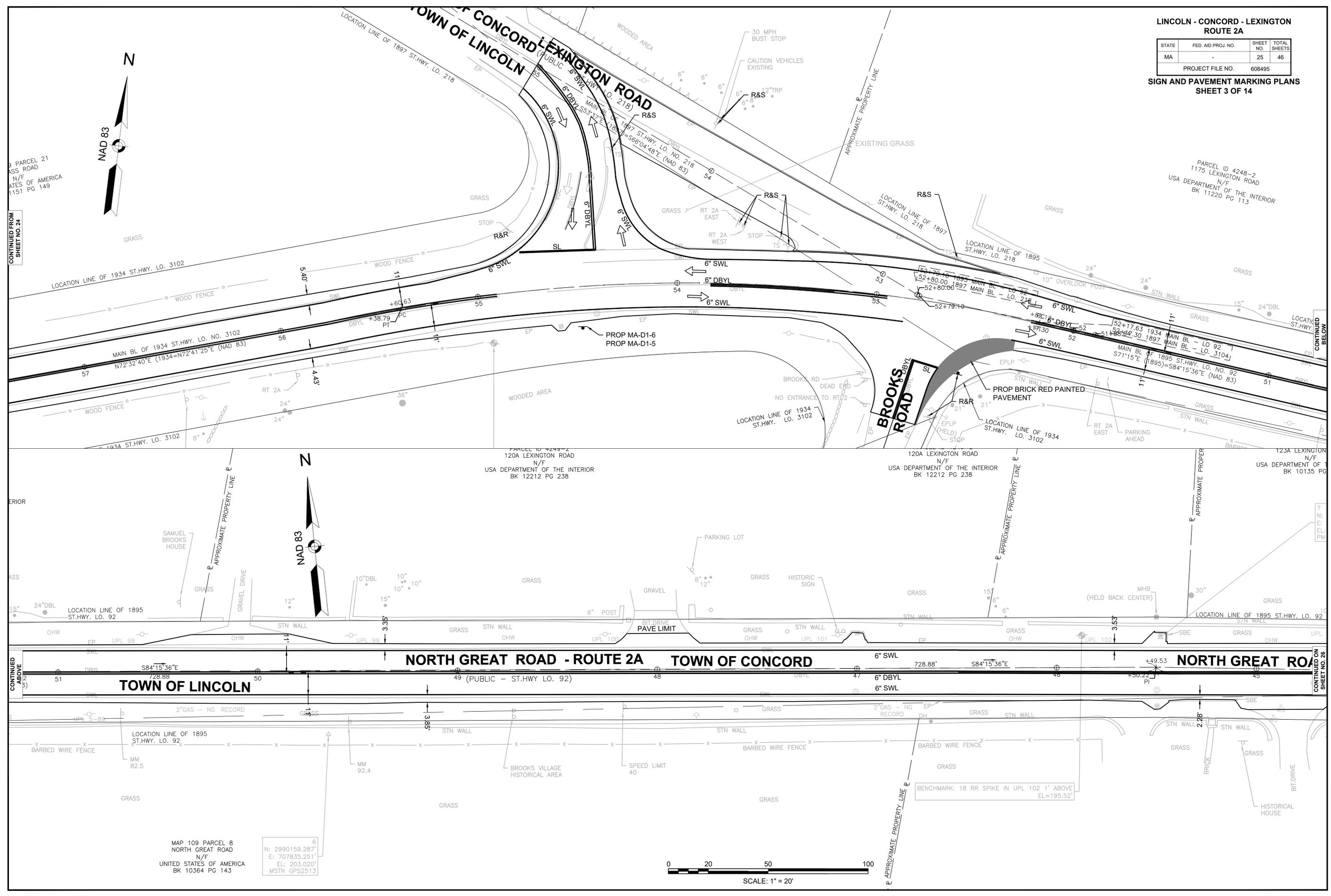


**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	46
PROJECT FILE NO. 608495			

**SIGN AND PAVEMENT MARKING PLANS
SHEET 3 OF 14**

608495(XX)PAVTRK.DWG Plotted on 7-Jan-2022 11:18 PM



CONTINUED FROM
SHEET NO. 24

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON
SHEET NO. 26

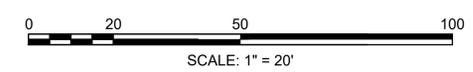
TOWN OF LINCOLN

NORTH GREAT ROAD - ROUTE 2A TOWN OF CONCORD

NORTH GREAT ROAD

MAP 109 PARCEL 8
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 10364 PG 143

6
N: 2990159.287'
E: 707835.251'
EL: 203.020'
MSTN GPS2513



BENCHMARK: 18 RR SPIKE IN UPL 102 1' ABOVE
EL=195.52'

7
N:
E:
EL:
PM:

123A LEXINGTON ROAD
N/F
USA DEPARTMENT OF THE INTERIOR
BK 10135 PG 53

N/F
USA DEPARTMENT OF THE INTERIOR
BK 10019 PG 472

USA DEPARTMENT OF THE INTERIOR
BK 10019 PG 472

LINCOLN - CONCORD - LEXINGTON ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	46
PROJECT FILE NO. 608495			

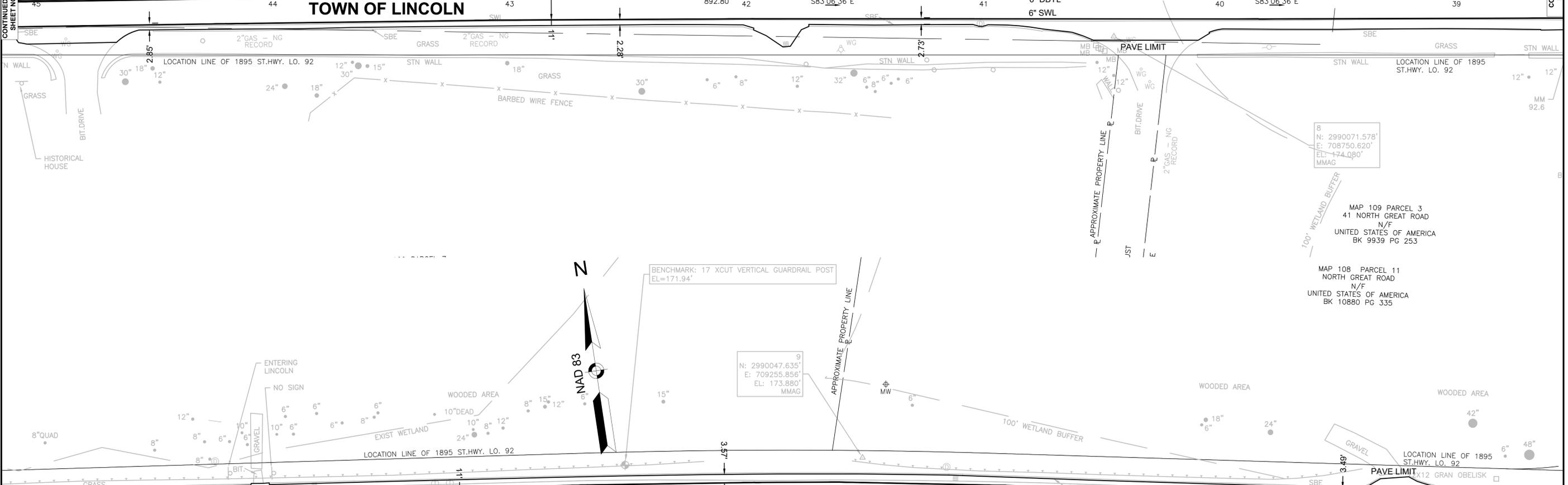
SIGN AND PAVEMENT MARKING PLANS SHEET 4 OF 14

TOWN OF CONCORD

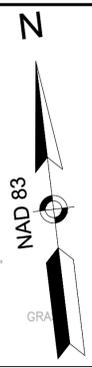
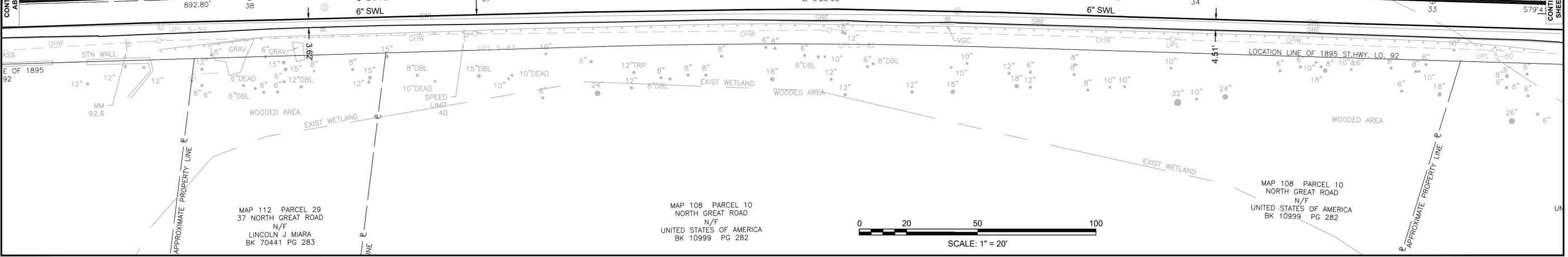
CONTINUED FROM
SHEET NO. 25

CONTINUED
BELOW

NORTH GREAT ROAD - ROUTE 2A (PUBLIC - ST.HWY. LO. 92)



NORTH GREAT ROAD - ROUTE 2A (PUBLIC - ST.HWY. LO. 92)



BENCHMARK: 17 XCUT VERTICAL GUARDRAIL POST
EL=171.94'

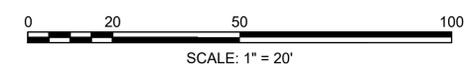
9
N: 2990047.635'
E: 709255.856'
EL: 173.880'
MMAG

8
N: 2990071.578'
E: 708750.620'
EL: 174.080'
MMAG

MAP 112 PARCEL 29
37 NORTH GREAT ROAD
N/F
LINCOLN J MIARA
BK 70441 PG 283

MAP 108 PARCEL 10
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 10999 PG 282

MAP 108 PARCEL 10
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 10999 PG 282



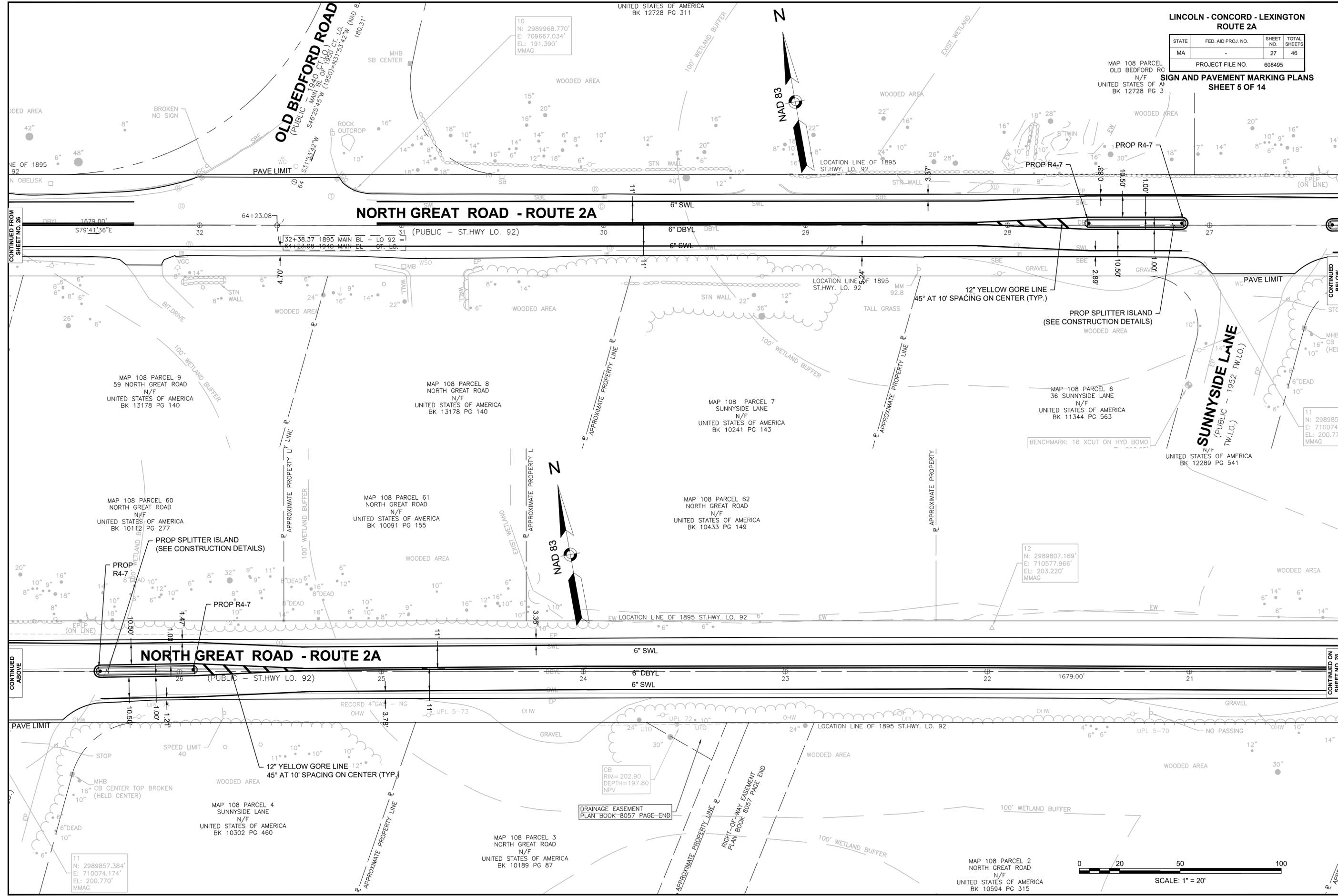
**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	46

PROJECT FILE NO. 608495

**SIGN AND PAVEMENT MARKING PLANS
SHEET 5 OF 14**

MAP 108 PARCEL
OLD BEDFORD RD
N/F
UNITED STATES OF AM
BK 12728 PG 3



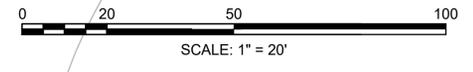
10
N: 2989968.770'
E: 709667.034'
EL: 191.390'
MMAG



12
N: 2989807.169'
E: 710577.966'
EL: 203.220'
MMAG

11
N: 298985
E: 710074.
EL: 200.77
MMAG

11
N: 2989857.384'
E: 710074.174'
EL: 200.770'
MMAG



CONTINUED FROM
SHEET NO. 26

CONTINUED
BELOW

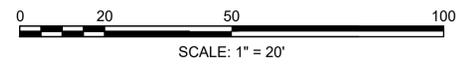
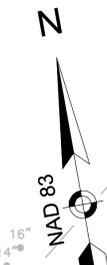
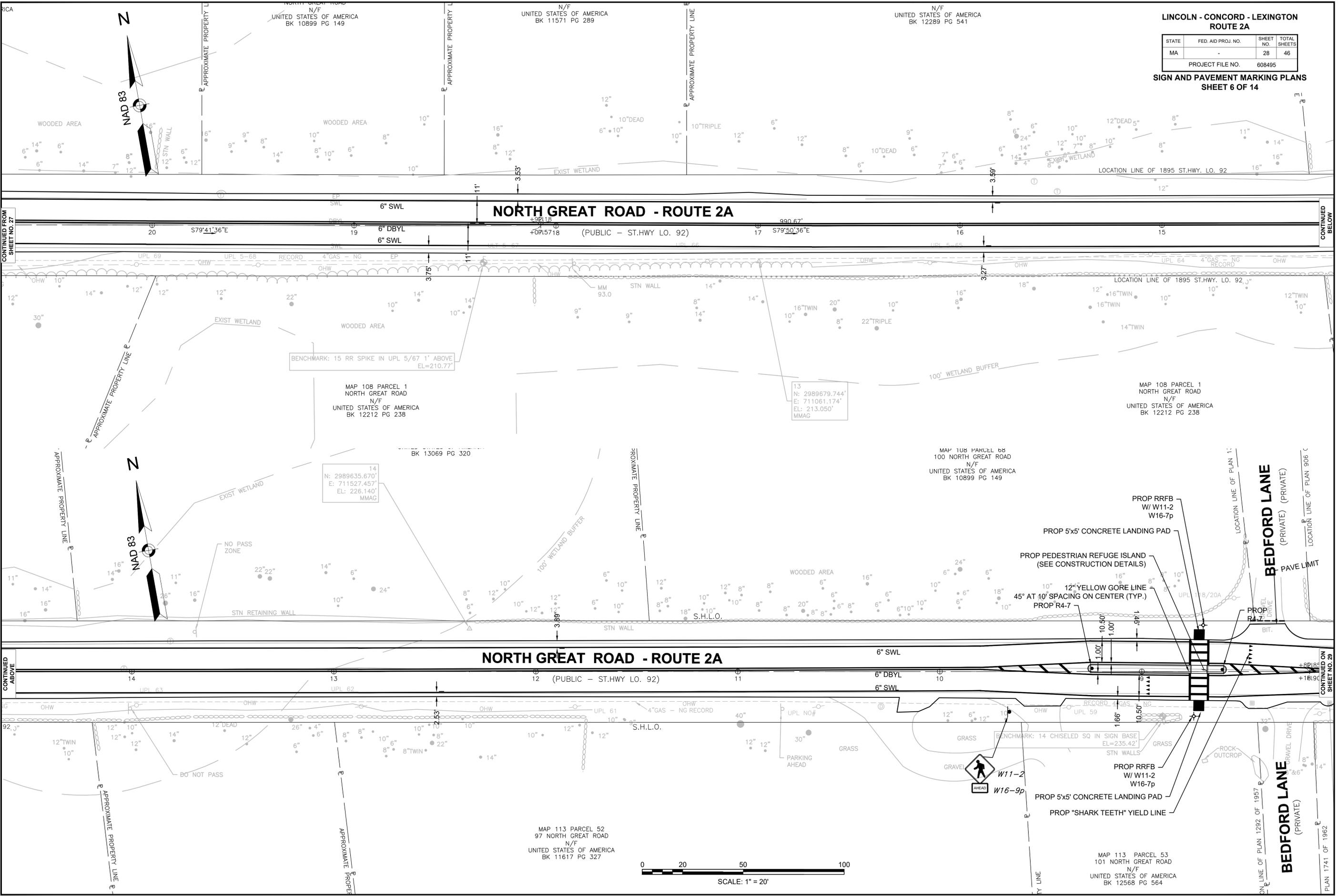
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ABOVE

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SHEET NO. 28

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	46
PROJECT FILE NO.		608495	

**SIGN AND PAVEMENT MARKING PLANS
SHEET 6 OF 14**



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SHEET NO. 27

CONTINUED
BELOW

CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 29

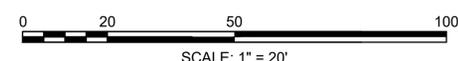
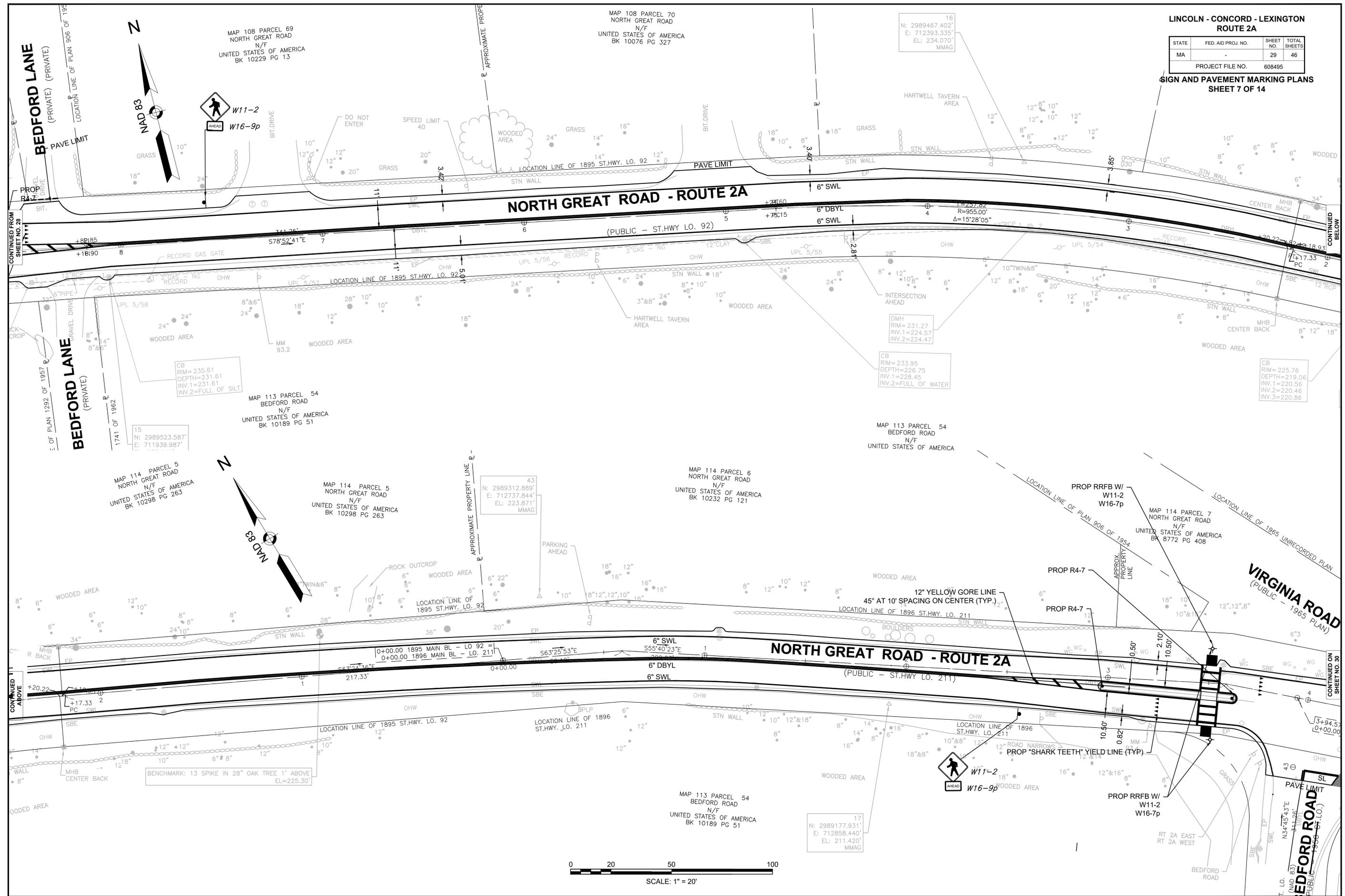
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PLAN 1741 OF 1962

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	46

PROJECT FILE NO. 608495
SIGN AND PAVEMENT MARKING PLANS
SHEET 7 OF 14



608495(XX)PAVTRK.DWG Potted on 7-Jun-2022 1:22 PM

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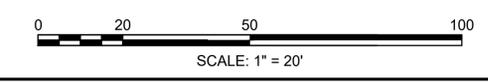
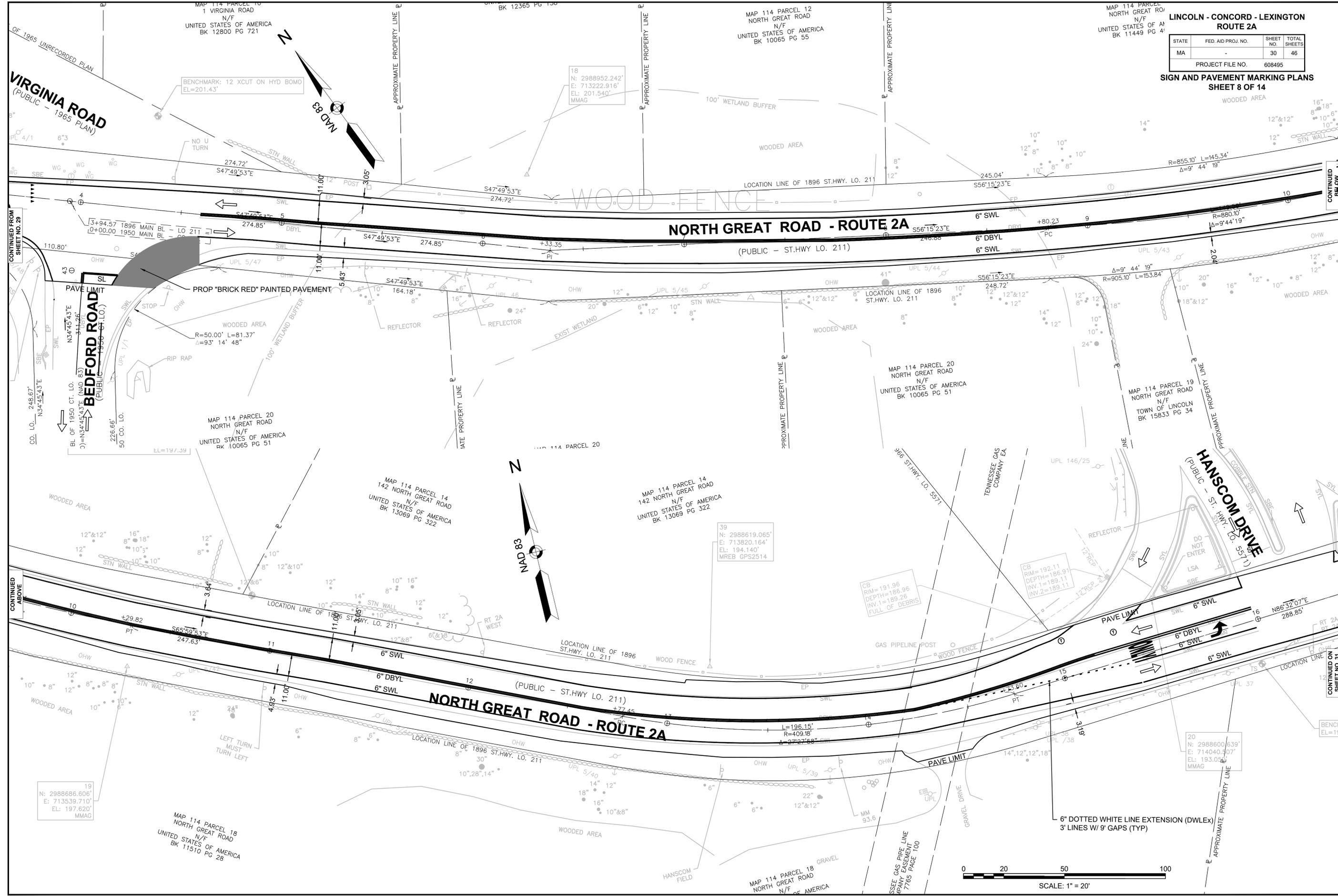
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**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	46

PROJECT FILE NO. 608495

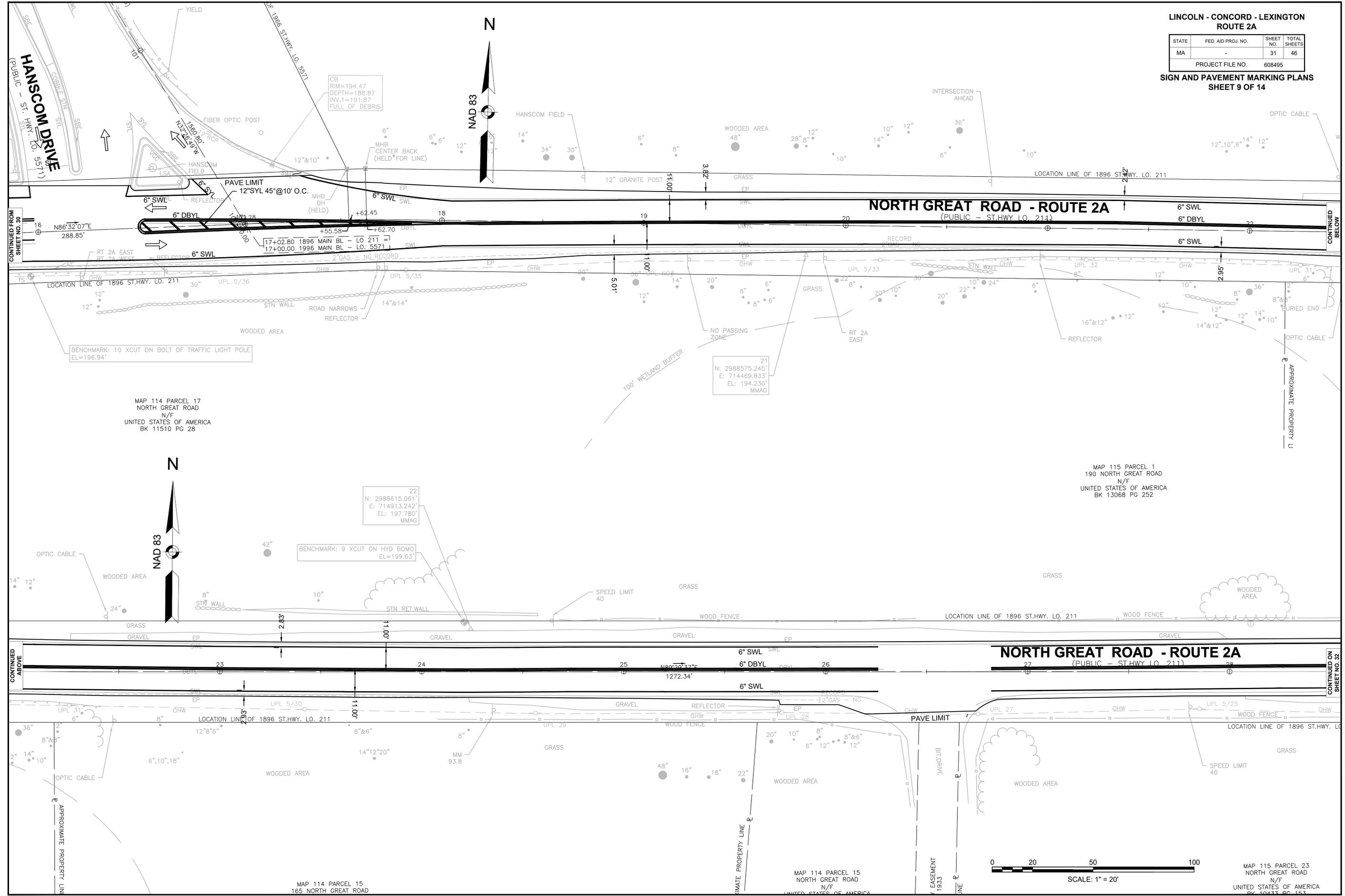
**SIGN AND PAVEMENT MARKING PLANS
SHEET 8 OF 14**



**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	46
PROJECT FILE NO.		608495	

**SIGN AND PAVEMENT MARKING PLANS
SHEET 9 OF 14**



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SHEET NO. 30

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CONTINUED ON
SHEET NO. 32

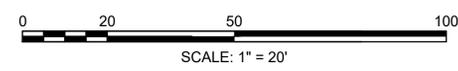
MAP 114 PARCEL 17
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 11510 PG 28

MAP 115 PARCEL 1
190 NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 13068 PG 252

MAP 114 PARCEL 15
165 NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA

MAP 114 PARCEL 15
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA

MAP 115 PARCEL 23
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 10433 PG 153

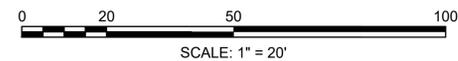
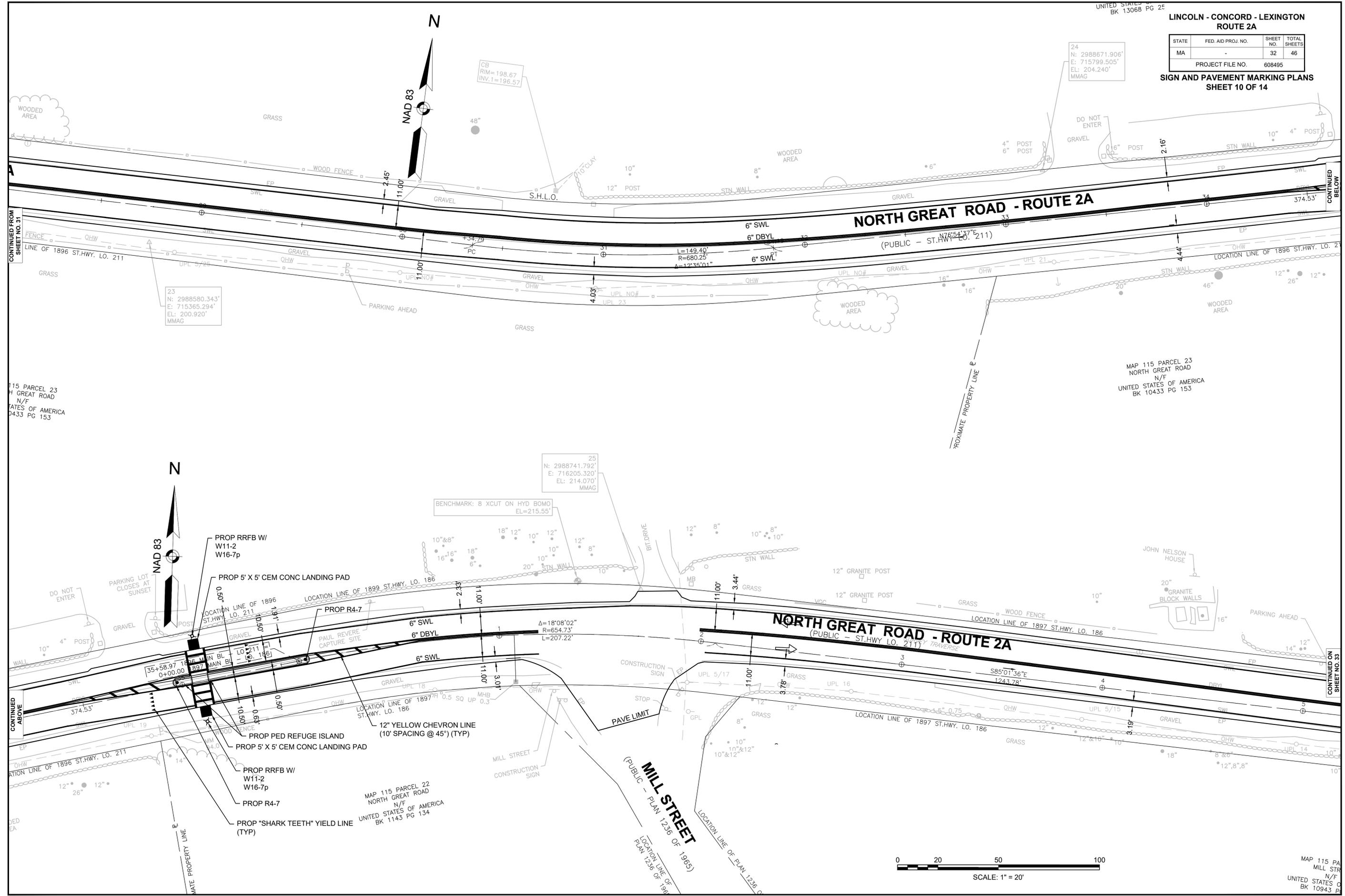


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**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	46
PROJECT FILE NO.		608495	

**SIGN AND PAVEMENT MARKING PLANS
SHEET 10 OF 14**



CONTINUED FROM
SHEET NO. 31

CONTINUED
BELOW

CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 33

MAP 115 PARCEL 23
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 10433 PG 153

MAP 115 PARCEL 23
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 10433 PG 153

MAP 115 PARCEL 22
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 1143 PG 134

MAP 115 PA
MILL STR
N/F
UNITED STATES OF AMERICA
BK 10943 PG 134

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	46
PROJECT FILE NO.		608495	

**SIGN AND PAVEMENT MARKING PLANS
SHEET 11 OF 14**

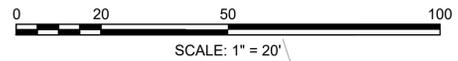
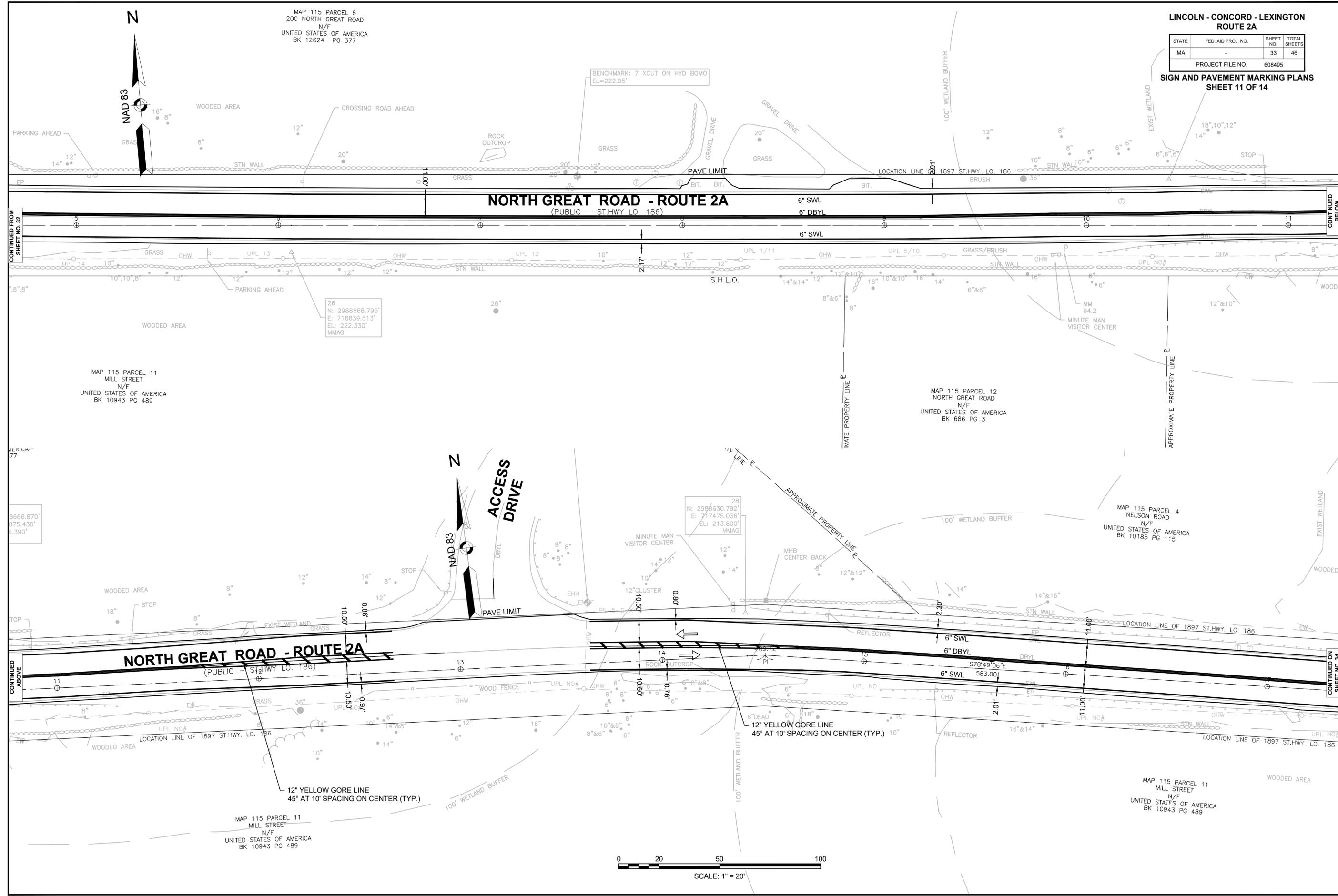
MAP 115 PARCEL 6
200 NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 12624 PG 377

MAP 115 PARCEL 11
MILL STREET
N/F
UNITED STATES OF AMERICA
BK 10943 PG 489

MAP 115 PARCEL 12
NORTH GREAT ROAD
N/F
UNITED STATES OF AMERICA
BK 686 PG 3

MAP 115 PARCEL 4
NELSON ROAD
N/F
UNITED STATES OF AMERICA
BK 10185 PG 115

MAP 115 PARCEL 11
MILL STREET
N/F
UNITED STATES OF AMERICA
BK 10943 PG 489



CONTINUED FROM
SHEET NO. 32

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BELOW

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ABOVE

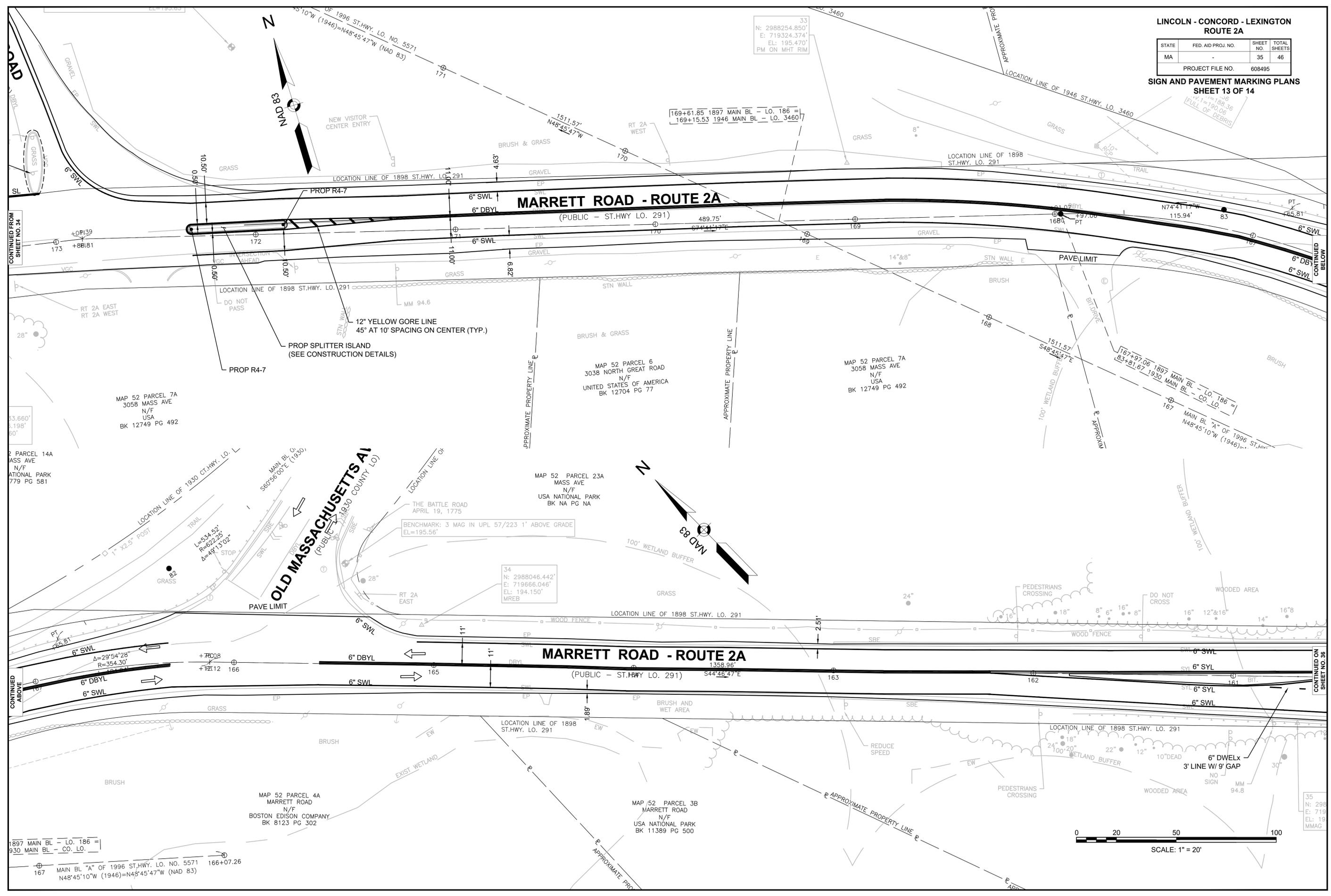
CONTINUED ON
SHEET NO. 34

**LINCOLN - CONCORD - LEXINGTON
ROUTE 2A**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	46

**SIGN AND PAVEMENT MARKING PLANS
SHEET 13 OF 14**

PROJECT FILE NO. 608495



CONTINUED FROM SHEET NO. 34

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 38

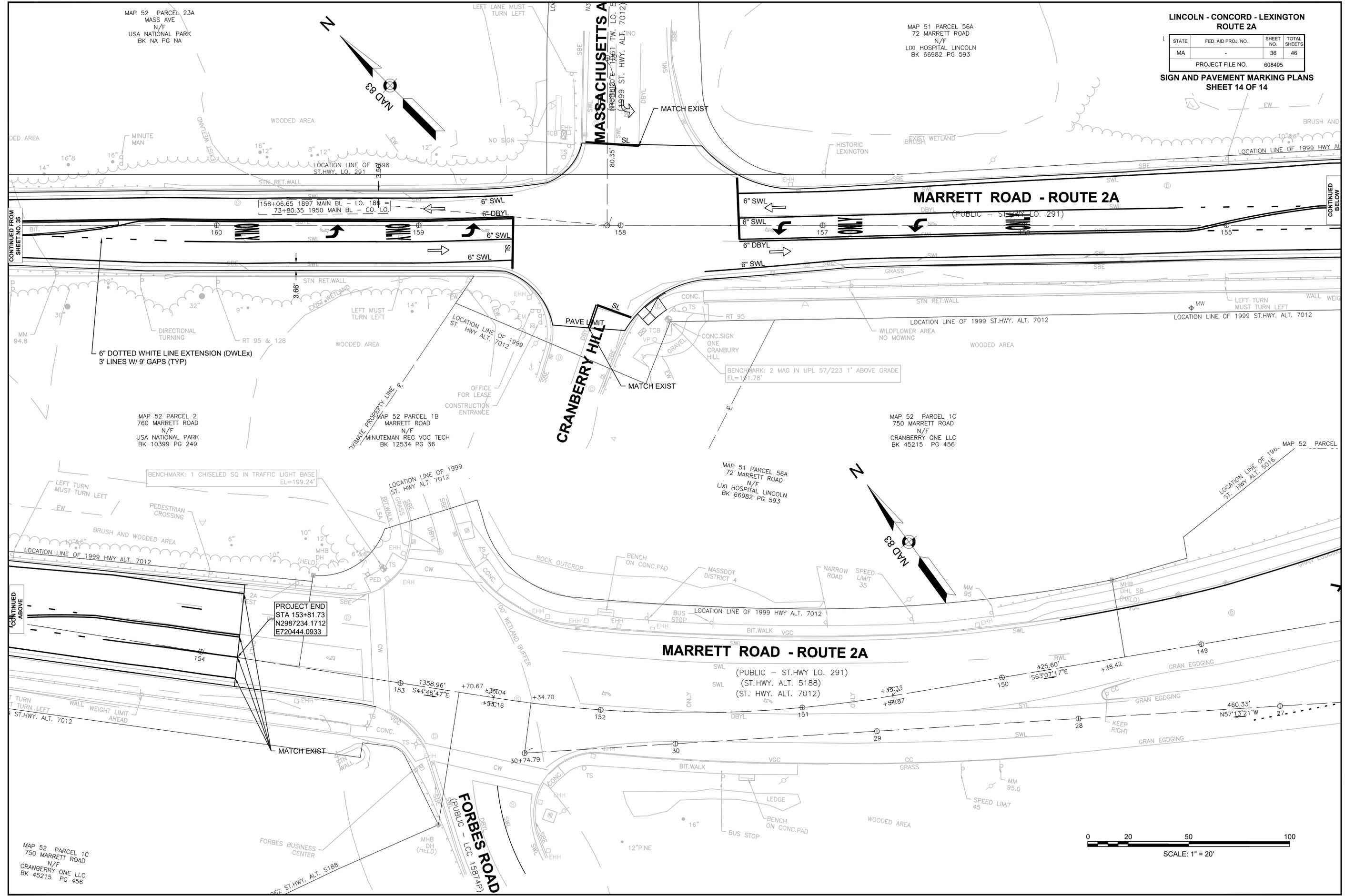
1897 MAIN BL - LO. 186 =
1930 MAIN BL - CO. LO.
MAIN BL "A" OF 1996 ST.HWY. LO. NO. 5571 166+07.26
N48°45'10"W (1946)=N48°45'47"W (NAD 83)

35
N: 298
E: 719
EL: 19
MMAG

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	46
PROJECT FILE NO.		608495	

SIGN AND PAVEMENT MARKING PLANS
SHEET 14 OF 14

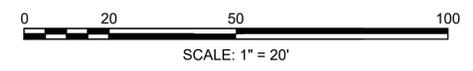


CONTINUED FROM
SHEET NO. 35

CONTINUED
BELOW

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ABOVE

PROJECT END
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E720444.0933

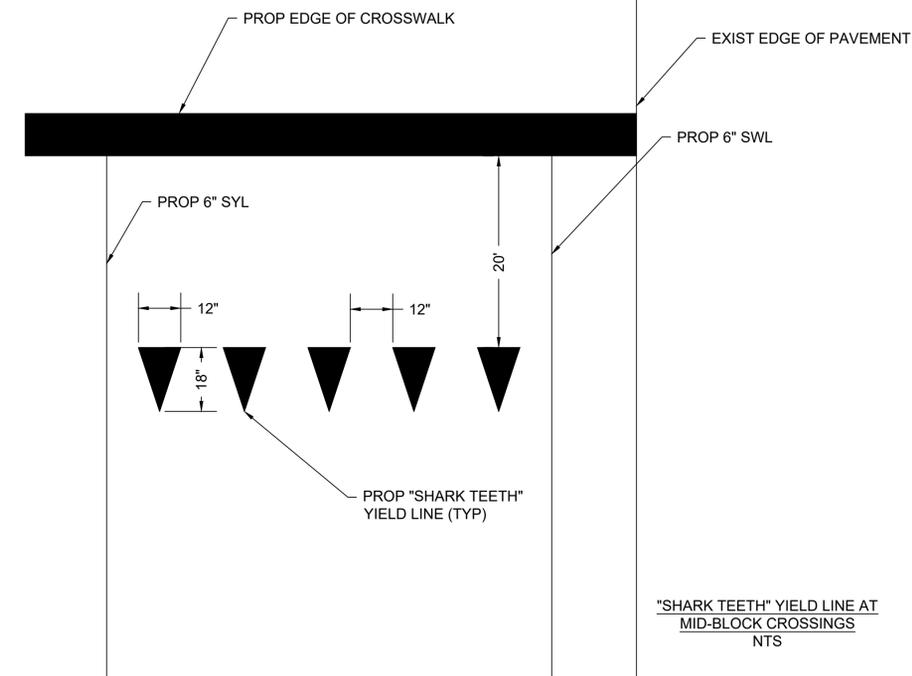


LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	46
PROJECT FILE NO.		608495	

SIGN AND PAVEMENT MARKING DETAILS

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R4-7	24	30		SEE	LATEST	MUTCD	12	WHITE	BLACK	BLACK	P-5 12	5	60
W11-2	30	30		SEE	LATEST	MUTCD	24	YELLOW	BLACK	BLACK	P-5 8	6.25	150
W16-7pL	24	12		SEE	LATEST	MUTCD	8	YELLOW	BLACK	BLACK	ATTACHED TO W11-2	2	16
W16-7pR	24	12		SEE	LATEST	MUTCD	8	YELLOW	BLACK	BLACK	ATTACHED TO W11-2	2	16
W16-9p	24	12		SEE	LATEST	MUTCD	8	YELLOW	BLACK	BLACK	ATTACHED TO W11-2	2	16



"SHARK TEETH" YIELD LINE AT
MID-BLOCK CROSSINGS
NTS

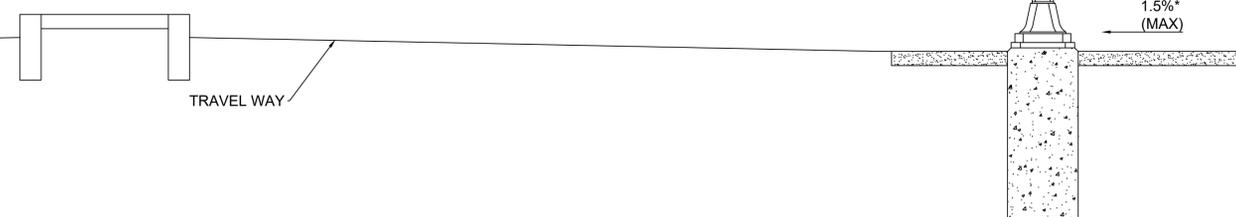
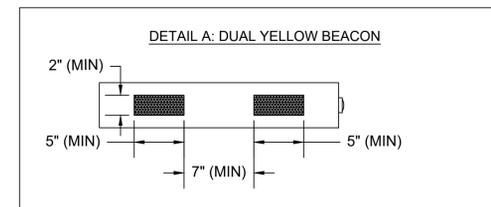
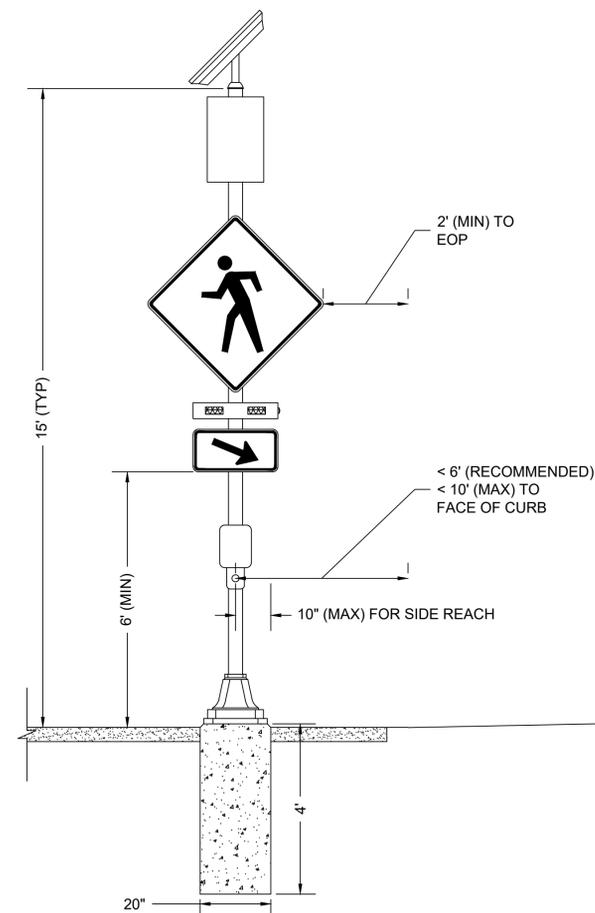
NOTES:

- CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
- REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
- ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THEIR RESPECTIVE PAY ITEMS.
- ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
- *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.

MAJOR ITEMS LIST

- 2 CEMENT CONCRETE FOUNDATIONS PER 812.30.1
- 2 15' TRAFFIC SIGNAL POSTS & PEDESTALS (FEDERAL STANDARD 595 COLOR 10233 - COCOA BROWN / NATIONAL PARK SERVICE)
- 2 APS PUSHBUTTON SYSTEMS
- 4 DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
- 2 R10-25 SIGNS
- 4 W11-2 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)

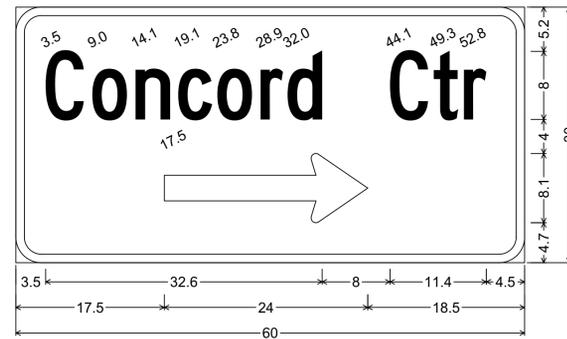
PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



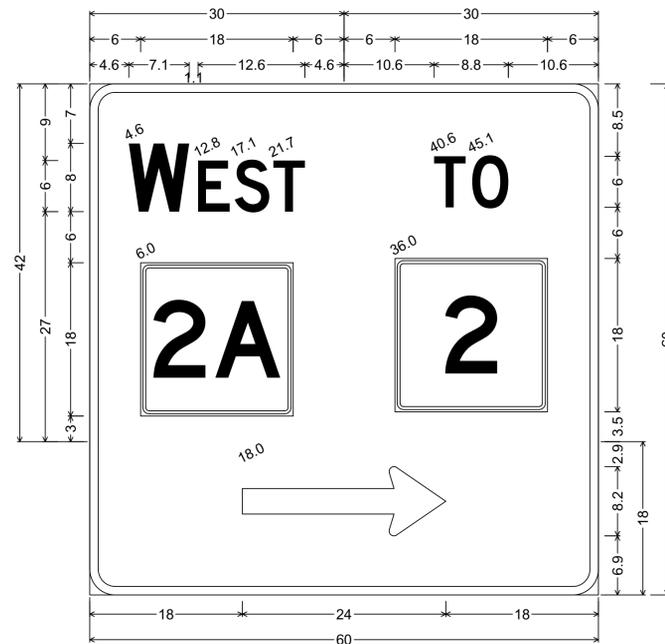
LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	46
PROJECT FILE NO.		608495	

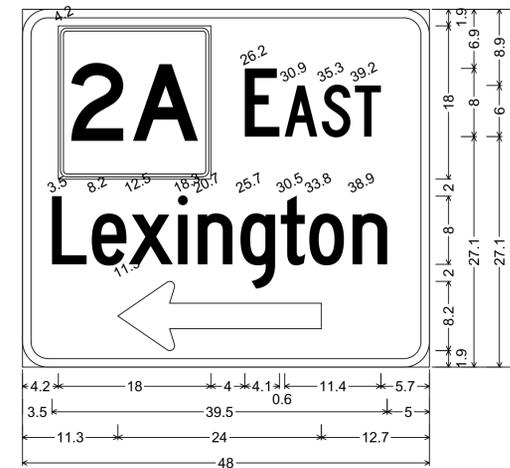
SIGN AND PAVEMENT MARKING DETAILS



Identifier : MA-D1-4 ;
Job Number : 608495;
Supports : 2 - P5 posts;
3.0" Radius, 1.0" Border, White on Green;
[Concord Ctr] C 2K 85% spacing;
Standard Arrow Custom 24.0" X 8.1" 0°;



Identifier : MA-D1-6;
Job Number : 608495;
3.0" Radius, 1.0" Border, White on Green;
[WEST] D 2K; State Highway 2A M1-5;
Job Number : 608495;
3.0" Radius, 1.0" Border, White on Green;
[TO] D 2K; State Highway 2 M1-5;
Job Number : 608495;
3.0" Radius, 1.0" Border, White on Green;
Standard Arrow Custom 24.0" X 8.1" 0°;



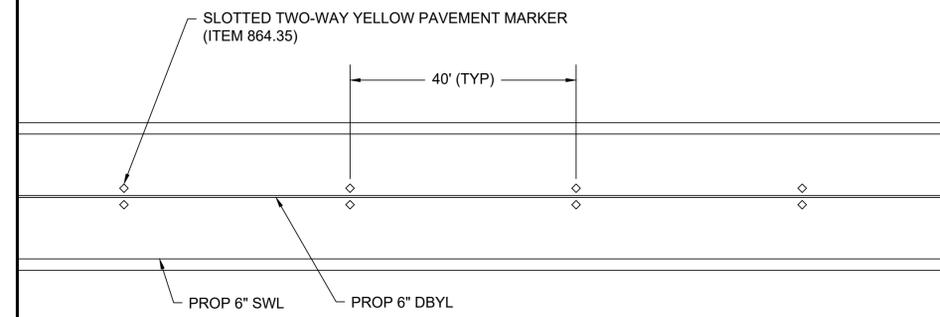
Identifier : MA-D1-5 ;
Job Number : 608495;
Supports : Mount with MA-D1-5;
3.0" Radius, 1.0" Border, White on Green;
State Highway 2A M1-5; [EAST] C 2K;
[Lexington] C 2K 85% spacing;
Standard Arrow Custom 24.0" X 8.1" 180°;

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

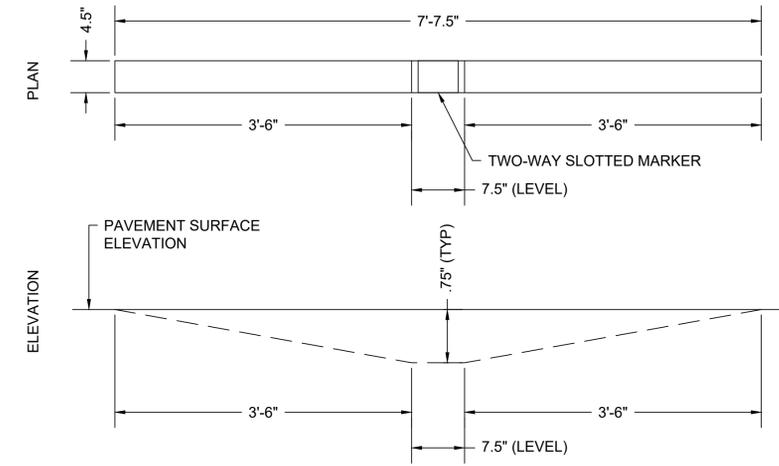
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	46
PROJECT FILE NO.		608495	

SIGN AND PAVEMENT MARKING DETAILS

NOTE:
SEE TYPICAL SECTIONS FOR
LANE AND SHOULDER WIDTHS



SLOTTED TWO-WAY PAVEMENT MARKER
DETAIL (2 LANE UNDIVIDED HIGHWAY)
NTS



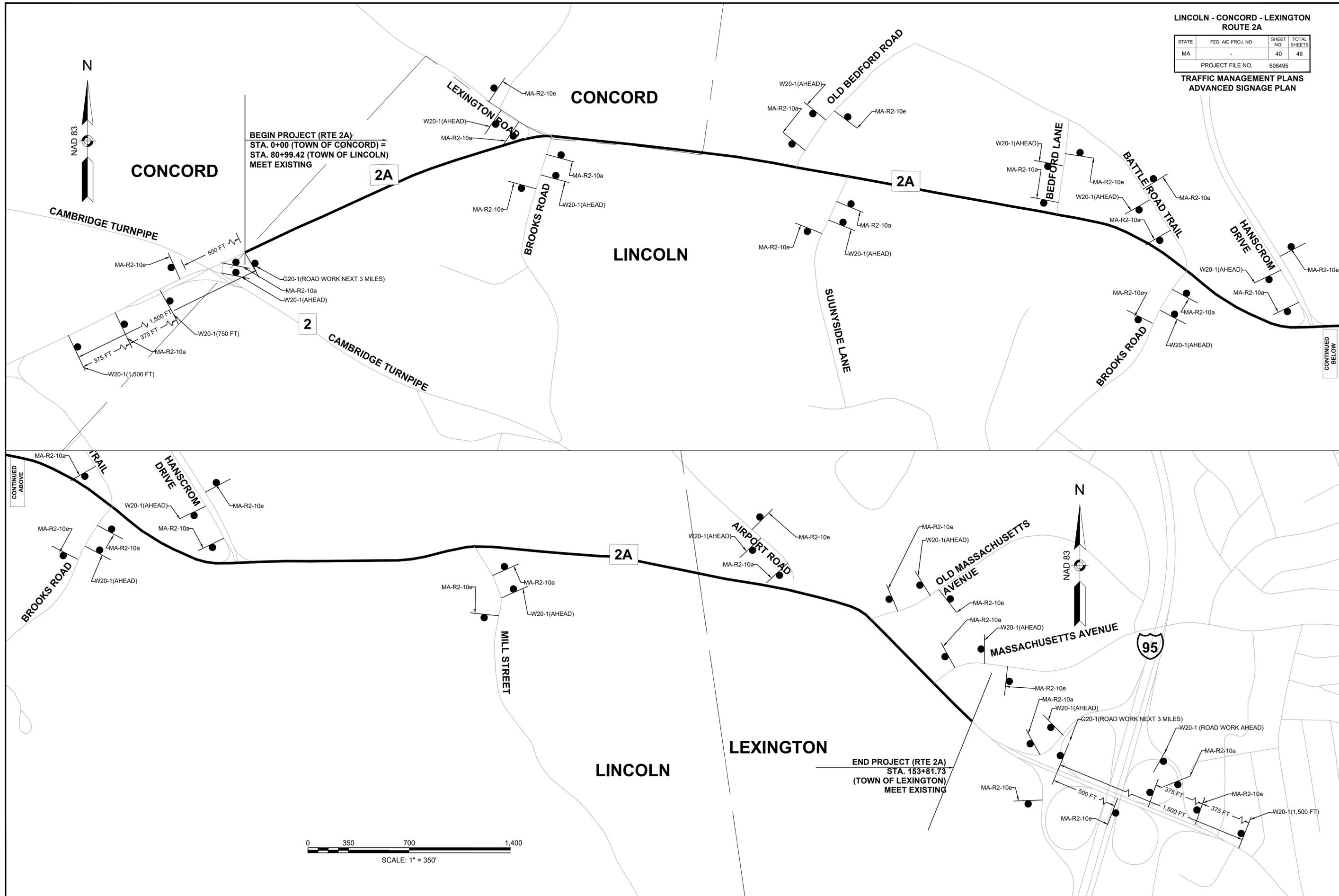
SLOTTED TWO-WAY PAVEMENT MARKER
NTS

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	46
PROJECT FILE NO. 608495			

TRAFFIC MANAGEMENT PLANS
ADVANCED SIGNAGE PLAN

608495(XX)TR-ADVTRMANSIGNPLN.DWG Plotted on 7-Jan-2022 2:12 PM



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	46
PROJECT FILE NO.		608495	

**TRAFFIC MANAGEMENT PLANS
TYPICAL SETUP DETAILS**

NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A SEQUENTIAL LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET (3.3m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- ▨ WORK ZONE
- 🚚 WORK VEHICLE
- ➔ DIRECTION OF TRAFFIC
- 🚚 TRUCK MOUNTED ATTENUATOR
- P/F POLICE/FLAGGER DETAIL
- 🌐 IMPACT ATTENUATOR
- ➔ TRAFFIC OR PEDESTRIAN SIGNAL
- ▨ TYPE III BARRICADE
- ▭ MEDIAN BARRIER
- SIGN
- 📄 CHANGEABLE MESSAGE SIGN
- 🚧 MEDIAN BARRIER WITH WARNING LIGHTS
- ➔ ARROW BOARD

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI-LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

MEASURED AVERAGE WORK ZONE CAPACITIES

NUMBER OF LANES		NUMBER OF STUDIES	AVERAGE CAPACITY	
NORMAL (EXISTING)	OPEN (TO TRAFFIC)		VPH	VPHPL
3	1	7	1,170	1,170
2	1	8	1,340	1,340
5	2	8	2,740	1,370
4	2	4	2,960	1,480
3	2	9	2,980	1,490
4	3	4	4,560	1,520

Source: Dudek, C., *Notes on Work Zone Capacity and Level of Service*, Texas Transportation Institute, Texas A&M University, College Station, Texas (1984)

BY OBTAINING HOURLY TRAFFIC COUNTS FOR A PARTICULAR ROADWAY (WITH A MINIMUM OF A 48-HOUR AUTOMATIC TRAFFIC RECORDER (ATR) COUNT), THIS WILL HELP TO DETERMINE AT WHAT TIMES OF THE DAY OR NIGHT A CERTAIN NUMBER OF LANES MAY BE CLOSED.

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350	350	350
MOST OTHER ROADWAYS*	500	500	500
FREEWAYS AND EXPRESSWAYS*	1,000	1,500	2,640

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

** DISTANCES ARE SHOWN IN FEET. THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (I.E. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (I.E. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

MA-R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

MA-R2-10a, MA-R2-10e AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Based on: Table 6C-1 MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

SPEED* (mph)	DISTANCE (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION

CONVENTIONAL ROADWAY- A STREET OR HIGHWAY OTHER THAN A LOW-VOLUME ROAD, EXPRESSWAY, OR FREEWAY.

EXPRESSWAY- A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY- A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

LOW-VOLUME ROAD- A FACILITY LYING OUTSIDE OF BUILT-UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 AADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

WHERE: L = TAPER LENGTH IN FEET

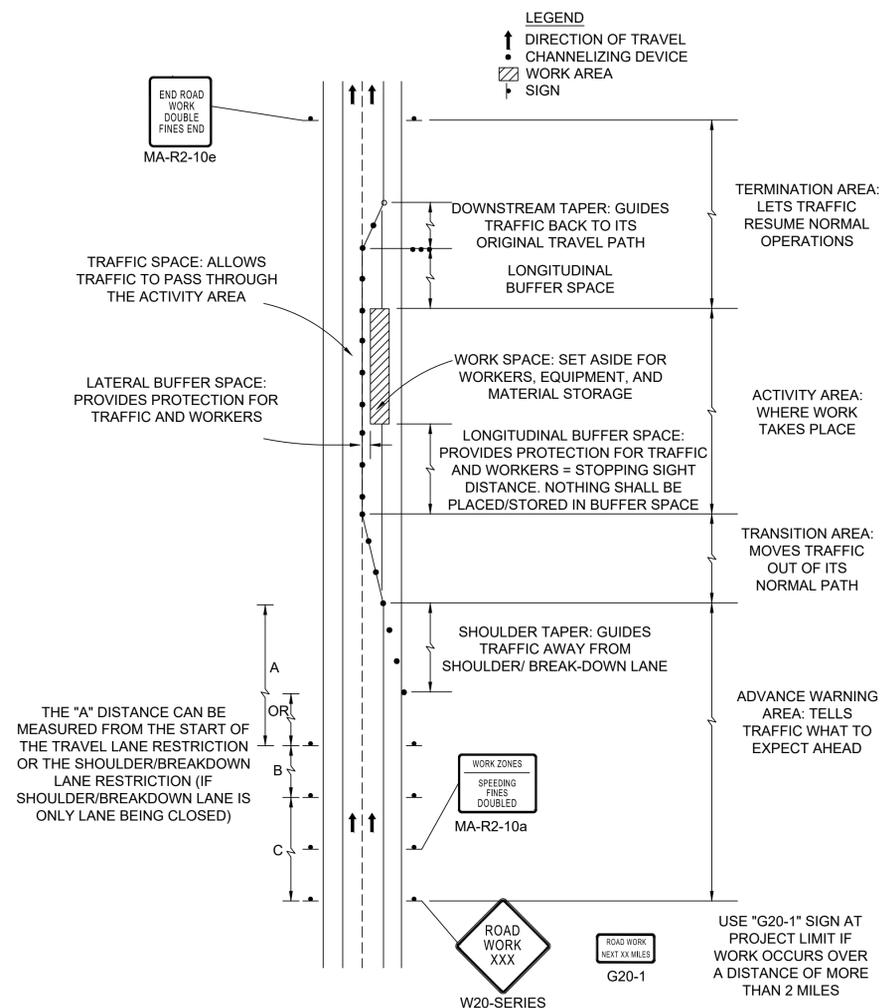
W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

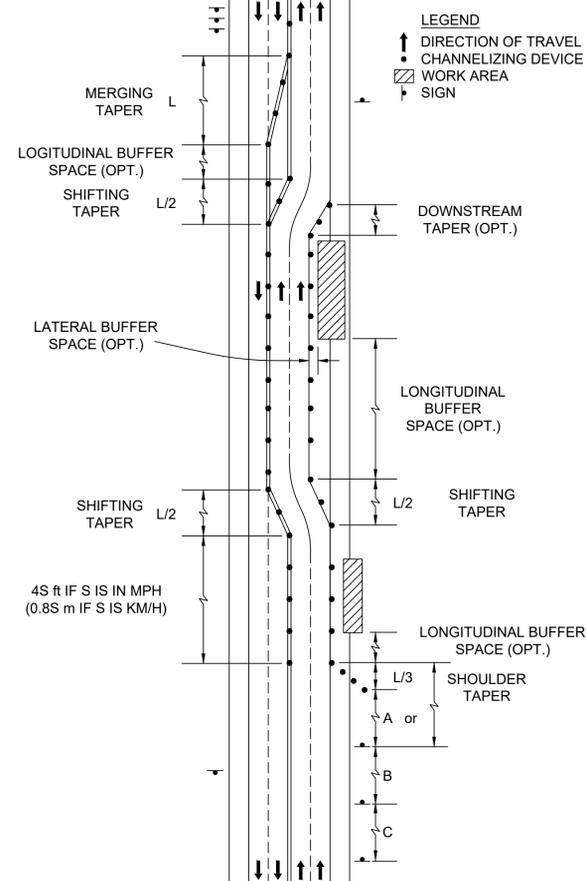
Source: Table 6C-4 MUTCD LATEST EDITION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	46
PROJECT FILE NO.		608495	

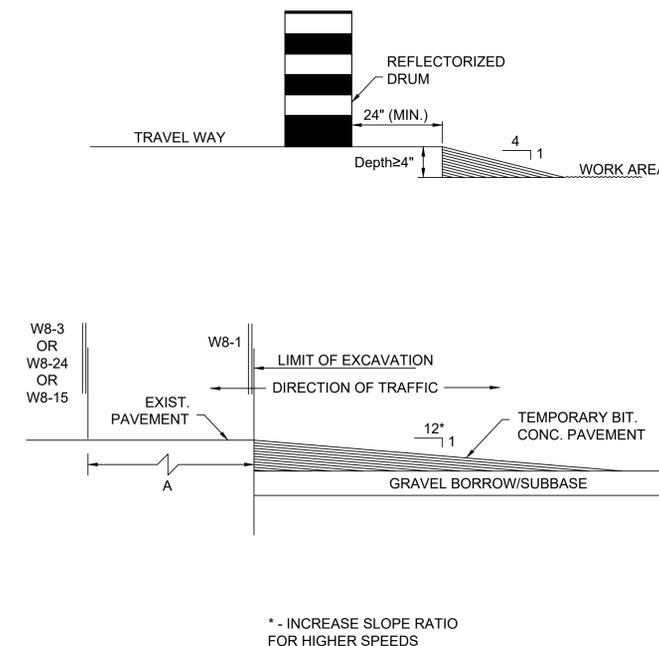
TRAFFIC MANAGEMENT PLANS
TYPICAL SETUP DETAILS



BLOCK NAME: TR-GEN-4
 DESCRIPTION: COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE
 LAYER: GE-TEXT



BLOCK NAME: TR-GEN-5
 DESCRIPTION: TYPES OF TAPERS AND BUFFER SPACES
 LAYER: GE-TEXT

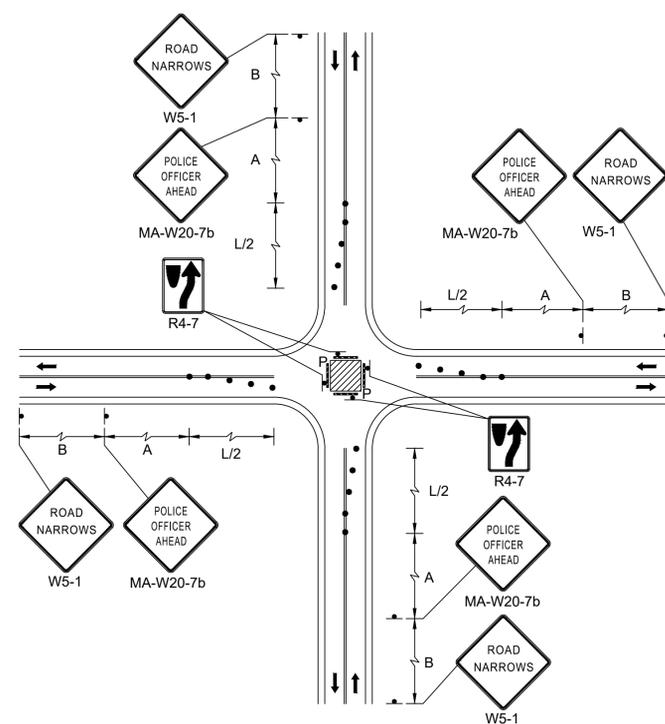


BLOCK NAME: TR-GEN-6
 DESCRIPTION: LATERAL AND LONGITUDINAL DROP-OFF DETAILS
 LAYER: GE-TEXT

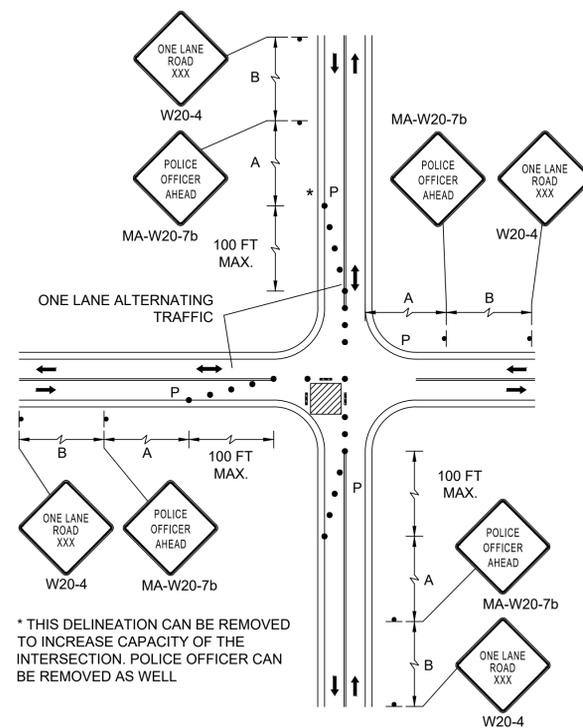
LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	46
PROJECT FILE NO.		608495	

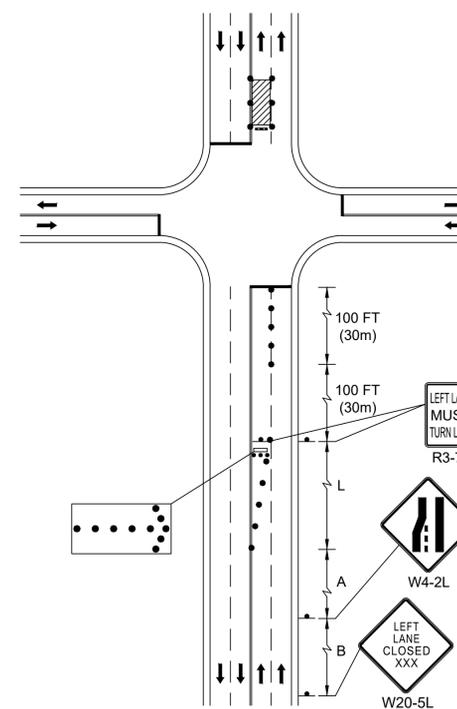
TRAFFIC MANAGEMENT PLANS
TYPICAL SETUP DETAILS



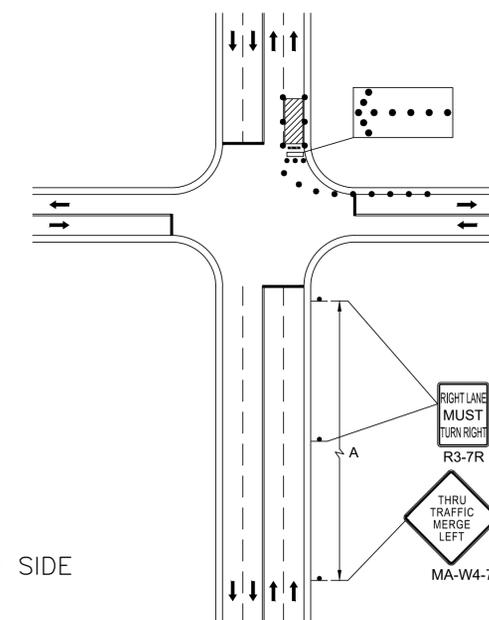
BLOCK NAME: TR-INT-1
DESCRIPTION: SINGLE LANE APPROACH CENTER CLOSURE
LAYER: GE-TEXT



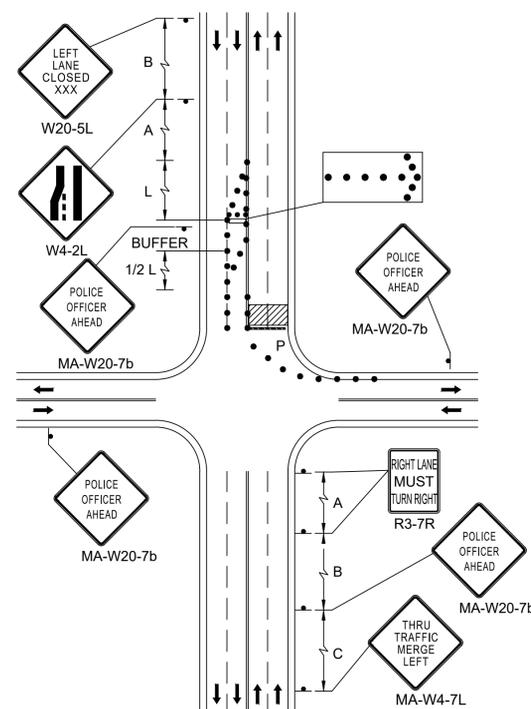
BLOCK NAME: TR-INT-2
DESCRIPTION: SINGLE LANE APPROACH ONE QUADRANT CLOSURE
LAYER: GE-TEXT



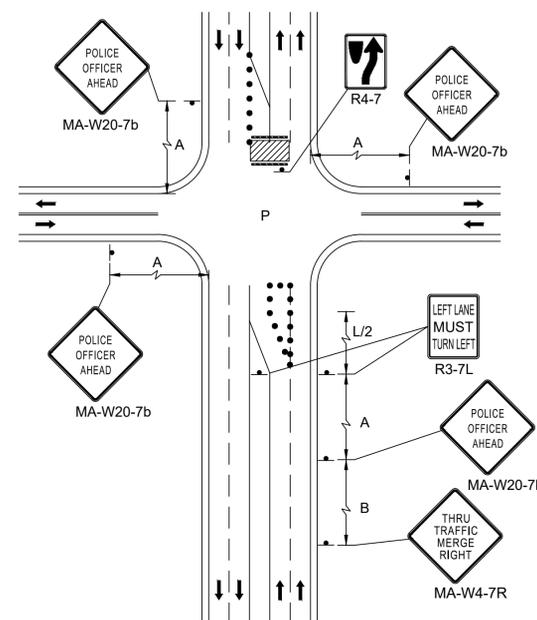
BLOCK NAME: TR-INT-3
DESCRIPTION: DOUBLE LANE APPROACH FAR SIDE CLOSURE INSIDE LANE
LAYER: GE-TEXT



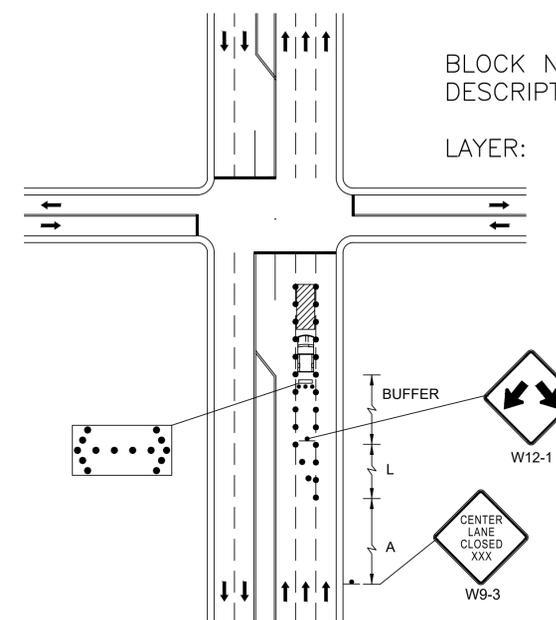
BLOCK NAME: TR-INT-4
DESCRIPTION: DOUBLE LANE APPROACH FAR SIDE CLOSURE RIGHT LANE
LAYER: GE-TEXT



BLOCK NAME: TR-INT-5
DESCRIPTION: DOUBLE LANE APPROACH HALF ROAD CLOSURE
LAYER: GE-TEXT



BLOCK NAME: TR-INT-6
DESCRIPTION: MULTI-LANE APPROACH MULTIPLE LANE CLOSURE
LAYER: GE-TEXT

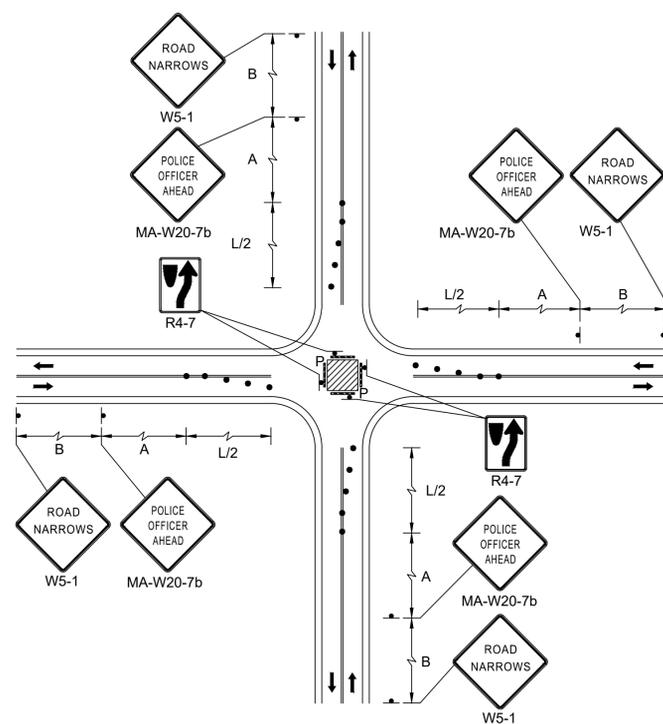


BLOCK NAME: TR-INT-7
DESCRIPTION: MULTI-LANE APPROACH NEAR SIDE CLOSURE
LAYER: GE-TEXT

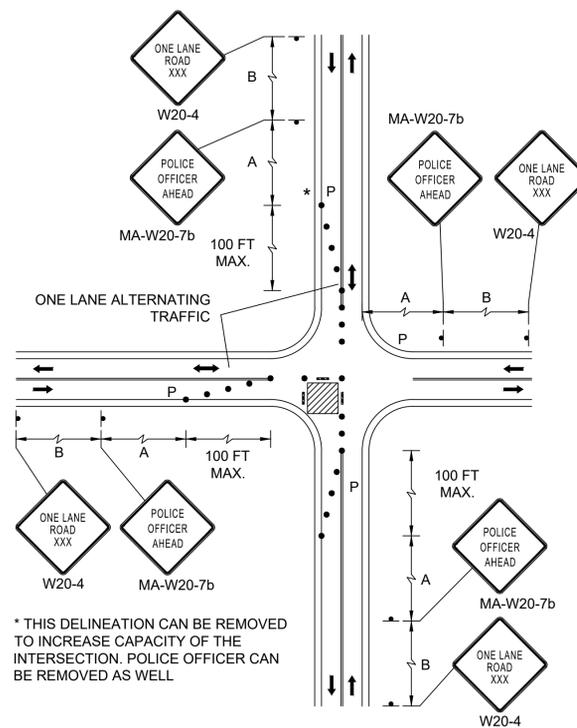
LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	46
PROJECT FILE NO. 608495			

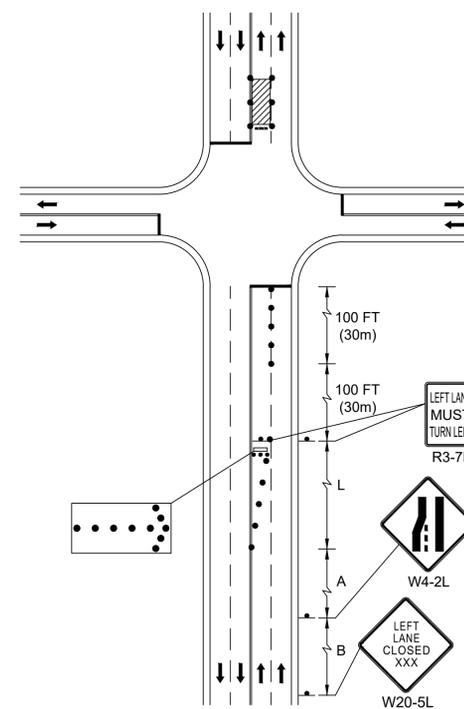
TRAFFIC MANAGEMENT PLANS
TYPICAL SETUP DETAILS



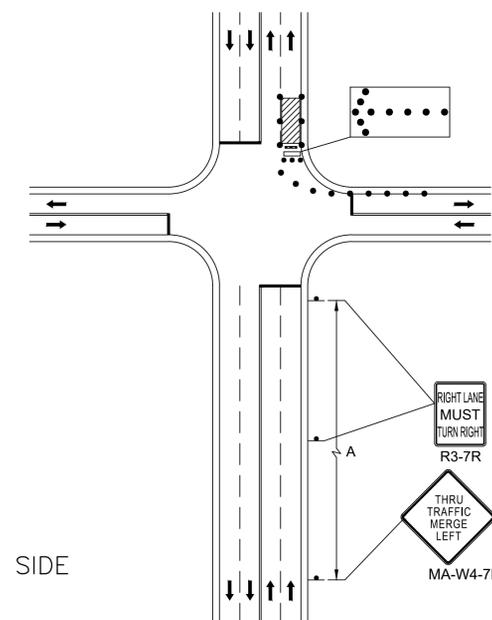
BLOCK NAME: TR-INT-1
DESCRIPTION: SINGLE LANE APPROACH CENTER CLOSURE
LAYER: GE-TEXT



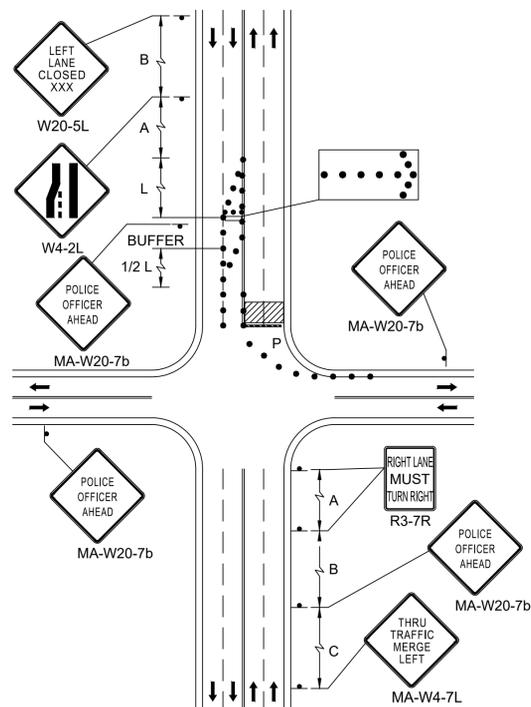
BLOCK NAME: TR-INT-2
DESCRIPTION: SINGLE LANE APPROACH ONE QUADRANT CLOSURE
LAYER: GE-TEXT



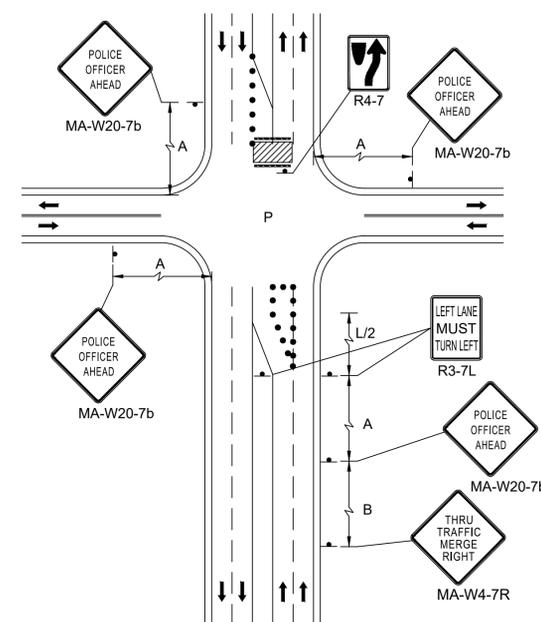
BLOCK NAME: TR-INT-3
DESCRIPTION: DOUBLE LANE APPROACH FAR SIDE CLOSURE INSIDE LANE
LAYER: GE-TEXT



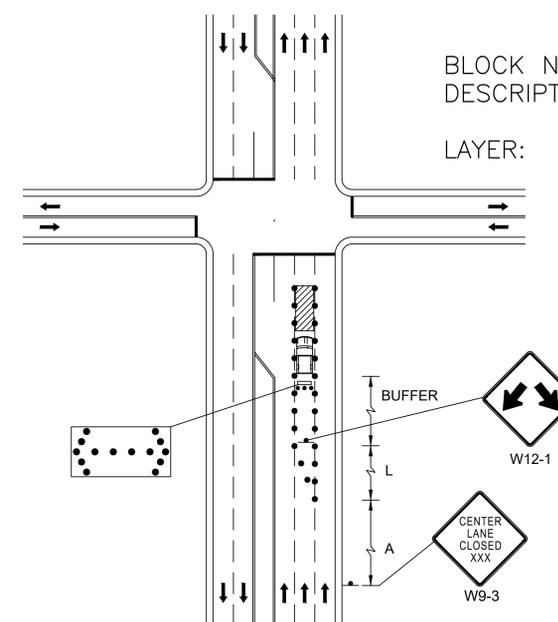
BLOCK NAME: TR-INT-4
DESCRIPTION: DOUBLE LANE APPROACH FAR SIDE CLOSURE RIGHT LANE
LAYER: GE-TEXT



BLOCK NAME: TR-INT-5
DESCRIPTION: DOUBLE LANE APPROACH HALF ROAD CLOSURE
LAYER: GE-TEXT



BLOCK NAME: TR-INT-6
DESCRIPTION: MULTI-LANE APPROACH MULTIPLE LANE CLOSURE
LAYER: GE-TEXT



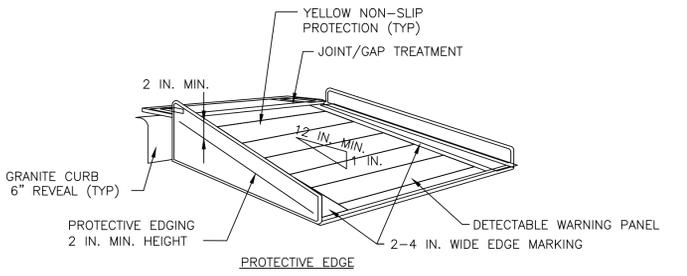
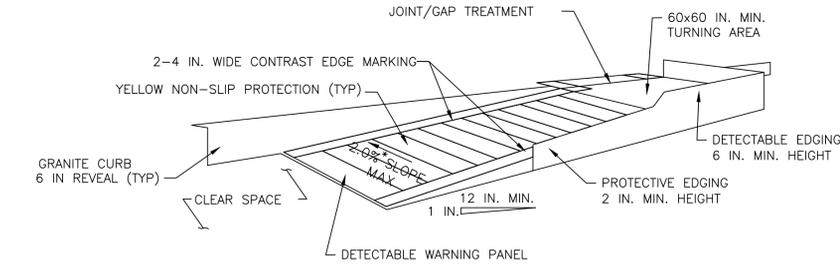
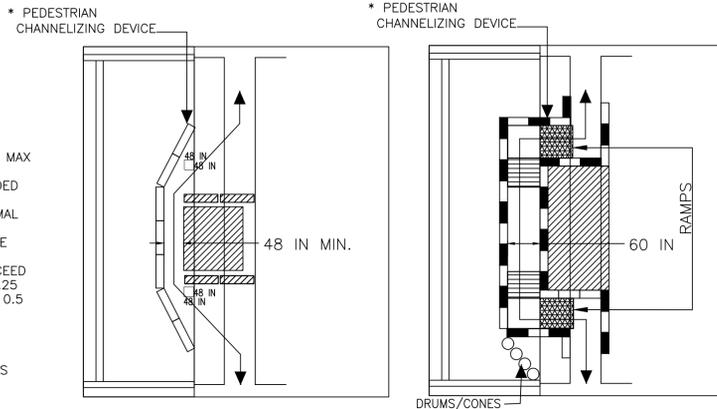
BLOCK NAME: TR-INT-7
DESCRIPTION: MULTI-LANE APPROACH NEAR SIDE CLOSURE
LAYER: GE-TEXT

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	46
PROJECT FILE NO.		608495	

TRAFFIC MANAGEMENT PLANS
TYPICAL SETUP DETAILS

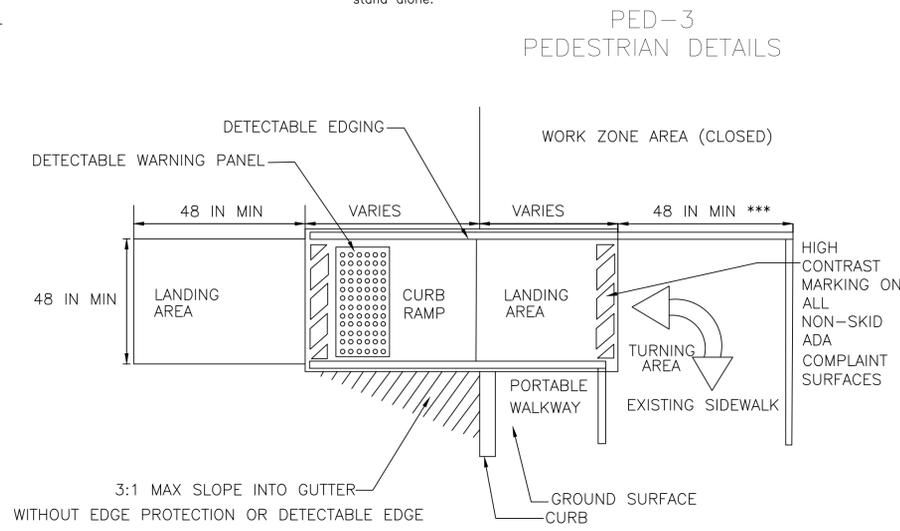
NOTES:

- CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
- PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
- DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
- CURB RAMPS AND LANDING SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
- CLEAR SPACE OF 48X48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
- IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PANEL MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.



PED-1
PEDESTRIAN DETAILS

- * - LANDING AREA USED TO OVERLAP NON-ADA COMPLAINT SURFACES.
- ** - DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.
- *** - 60 IN IF AN OBSTRUCTION IS AT BACK OF SIDEWALK

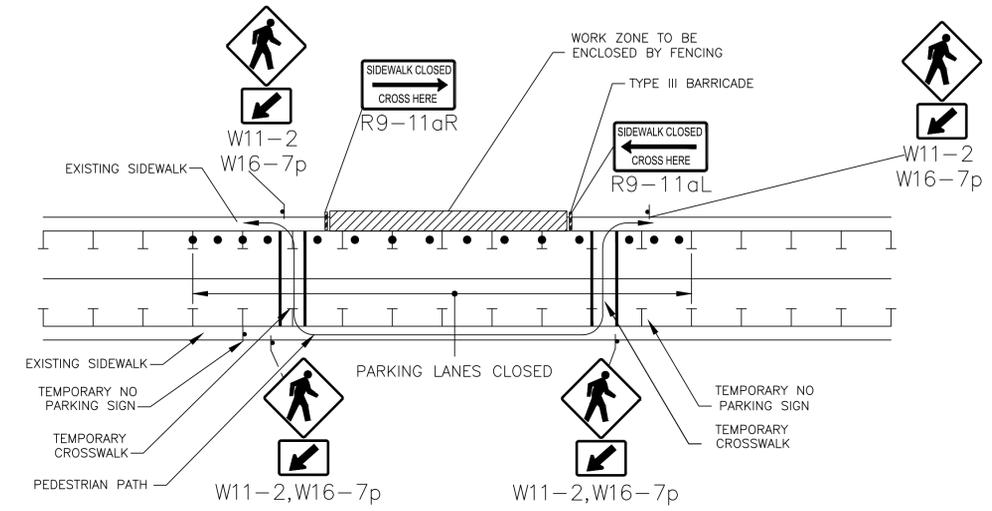
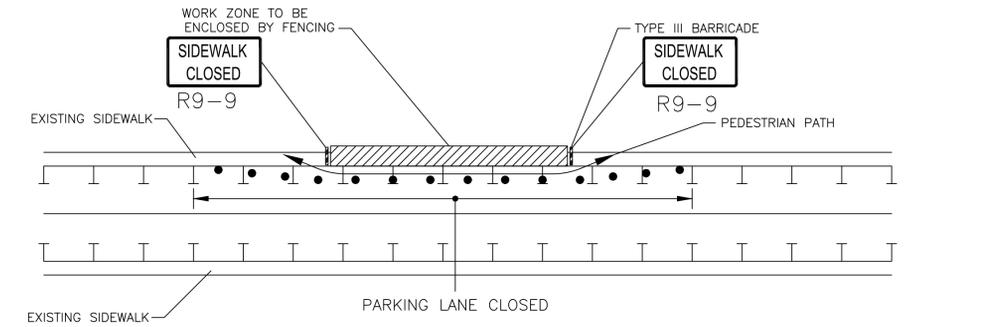


TEMPORARY CURB RAMP
PED-2
PEDESTRIAN DETAILS

- Detail I is considered an example of a short term closure and pedestrian assistance (personal) to navigate around the closure/work area could be considered as an option in place of providing ADA/AAB devices. Detail II is considered an example of a long term closure that would require additional ADA/AAB complaint devices. If a sidewalk closure or restriction lasts for more than one (1) work shift then ADA/AAB compliance shall be followed.
- When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, temporary facilities shall be provided and they shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
- A pedestrian channelizing device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.
- When used, temporary ramps shall comply with Americans with Disabilities Act (see Figures Ped-1 & Ped-2).
- The alternate pathway should have a smooth continuous hard surface for the entire length of the temporary pedestrian facility.
- The protective requirements of a TTC situation have priority in determining the need for temporary traffic barriers and their use in this situation should be based on engineering judgment.
- Controls only for pedestrian traffic are shown; vehicular traffic should be handled as shown elsewhere. These details are used in conjunction with the proposal lane closure details and during construction staging, as determined by the Engineer.
- Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.
- Existing audible devices no longer applicable due to construction shall be disabled.

AUDIBLE DEVICES
For long term sidewalk closures (at a minimum overnight) a form of speech messaging for pedestrians with visual disabilities shall be provided. Audible information devices such as detectable barriers or barricades and other passive pedestrian activation (motion activated) devices should be considered for these cases. These audible devices can be mountable or stand alone.

PED-3
PEDESTRIAN DETAILS

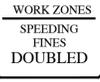


- NOTES
- ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
 - CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
 - STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
 - IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
 - BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
 - THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE (FOR SHORT TERM SETUPS < 10 HOURS, THIS CONDITION MAY BE WAIVED. A NOTE WOULD NEED TO BE INCLUDED IN THE TTC THAT STATES HOW THE CONTRACTOR SHOULD ADDRESS THIS ISSUE.)

LINCOLN - CONCORD - LEXINGTON
ROUTE 2A

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	46
PROJECT FILE NO.		608495	

TRAFFIC MANAGEMENT PLANS
TRAFFIC SIGN SUMMARY

IDENTIFI- CATION NUMBER	DIMENSION OF SIGN IN INCHES		TEXT	TEXT DIMENSIONS (INCHES)			NO. OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER		
W20-1(1,500 FT)	36	36		SEE	2009	MUTCD	2	ORANGE	BLACK	BLACK	9	18
MA-R2-10a	48	36		MASS	DOT	STNDRD	16	ORANGE WHITE	BLACK	BLACK	12	192
W20-1(AHEAD)	36	36		SEE	2009	MUTCD	14	ORANGE	BLACK	BLACK	9	126
MA-R2-10e	48	36		MASS	DOT	STNDRD	16	ORANGE WHITE	BLACK	BLACK	12	192
W4-2R	36	36		SEE	LATEST	MUTCD	1	ORANGE	BLACK	BLACK	9	9
W4-2L	36	36					6				9	54
W20-5L (AHEAD)	36	36					6				9	54
W20-5R (AHEAD)							1				9	9
MA-W4-7L	36	36					4				9	36
MA-W4-7R							2				9	18
R3-7L	30	30					2				6.25	12.5
R3-7R	30	30					2				6.25	12.5
MA-W20-7b	36	36					8				9	72
W5-1	36	36					2				9	18
W1-4L	36	36					2				9	18
W1-4R	36	36					2				9	18
R4-7	24	30					3				5	15
W13-1p	24	30					4				5	20

NOTE: ALL BACKGROUND SIGNS ARE TO BE FLUORESCENT ORANGE UNLESS OTHERWISE SPECIFIED.

IDENTIFI- CATION NUMBER	DIMENSION OF SIGN IN INCHES		TEXT	TEXT DIMENSIONS (INCHES)			NO. OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER		
W8-14	30	30		SEE	LATEST	MUTCD	2	ORANGE	BLACK	BLACK	6.25	12.5
W12-1	36	36					2				9	18
W9-3	36	36					2				9	18
R1-2	36	36					2	RED WHITE			9	18