



MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	1	28
PROJECT FILE NO.		607901	

TITLE SHEET & INDEX

PLAN AND PROFILE OF
ELM STREET AND RUSTCRAFT ROAD
ROADWAY AND SIDEWALK IMPROVEMENTS

IN THE TOWN OF
DEDHAM
NORFOLK COUNTY

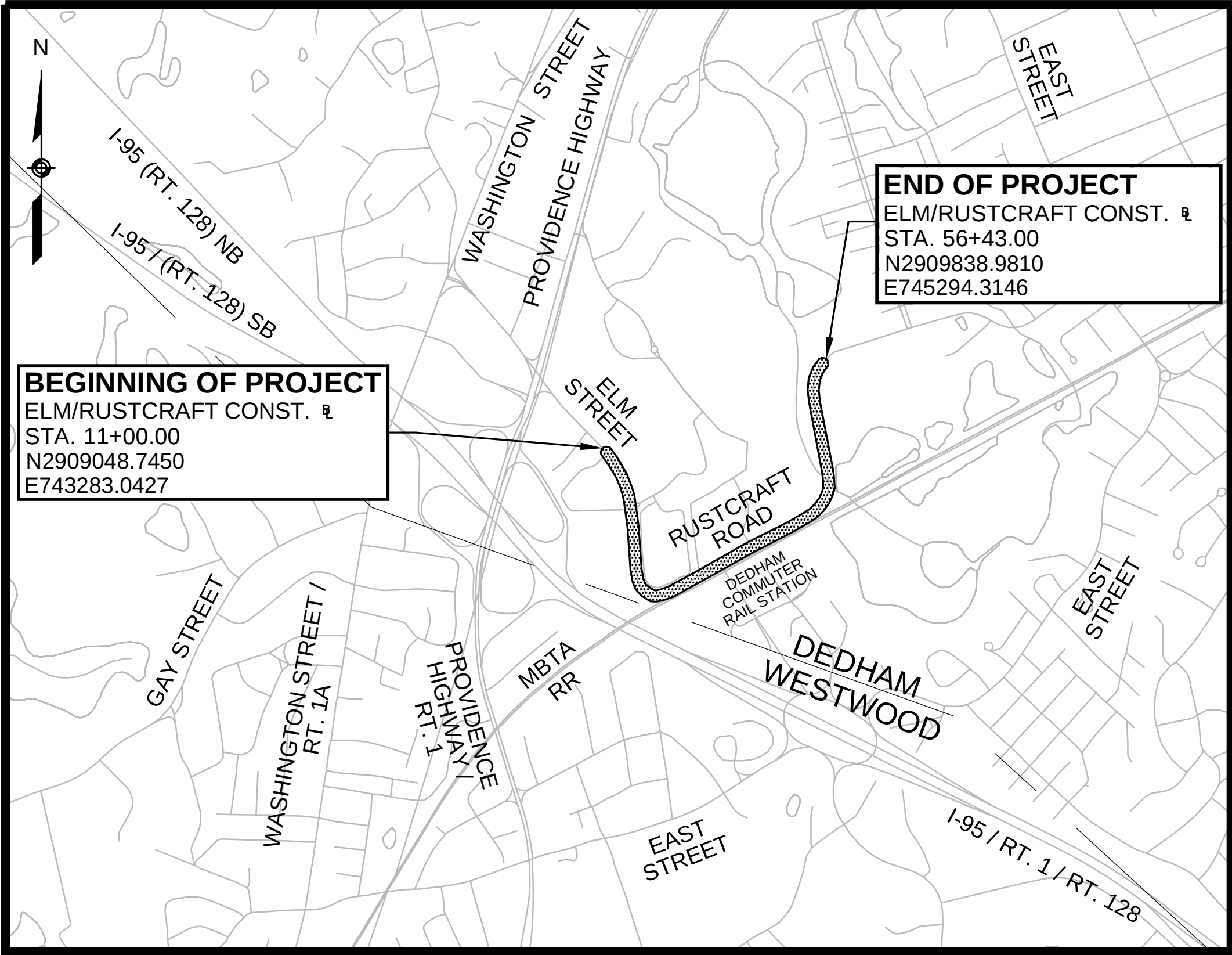
FEDERAL AID PROJECT NO. XX-XXXX(XXX)

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 15, 2012, THE INTERIM SUPPLEMENTAL SPECIFICATIONS DATED OCTOBER 17, 2014, THE 2014 CONSTRUCTION STANDARD DETAILS, THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS, (AS RELATED TO TRAFFIC STANDARD DETAILS ONLY), THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, 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, WILL GOVERN.

25% SUBMITTAL

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
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15-19	PROFILE
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25-26	TEMPORARY TRAFFIC CONTROL PLANS
27-28	CRITICAL CROSS SECTIONS



PROJECT LOCATION

0 1000 2000 3000 4000

SCALE: 1" = 1000'

LENGTH OF PROJECT = 4543.00 FEET = 0.860 MILES

DESIGN DESIGNATION

DESIGN SPEED
ADT (2014)
ADT (2024)
K
D
T (PEAK HOUR)
T (AVERAGE DAY)
DHV
DDHV
FUNCTIONAL CLASSIFICATION

ELM STREET

30 MPH*
14,700
15,450
8.8%
52% (NB)
5.9%
4.3%
1,360
707
URBAN MINOR ARTERIAL

RUSTCRAFT ROAD

30 MPH
6,900
7,250
7.6%
55% (WB)
8.2%
5.3%
551
303
URBAN MINOR ARTERIAL

*STA 19+00 TO 31+00
20 MPH PER SPEED REGULATION

March 27, 2014

PREPARED BY:

BETA Group, Inc.
Engineers • Planners • Landscape Architects
Lincoln, RI • Norwood, MA • Hartford, CT

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED:

DIVISION ADMINISTRATOR DATE



RECOMMENDED FOR APPROVAL

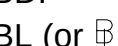
CHIEF ENGINEER

DATE

APPROVED

HIGHWAY ADMINISTRATOR

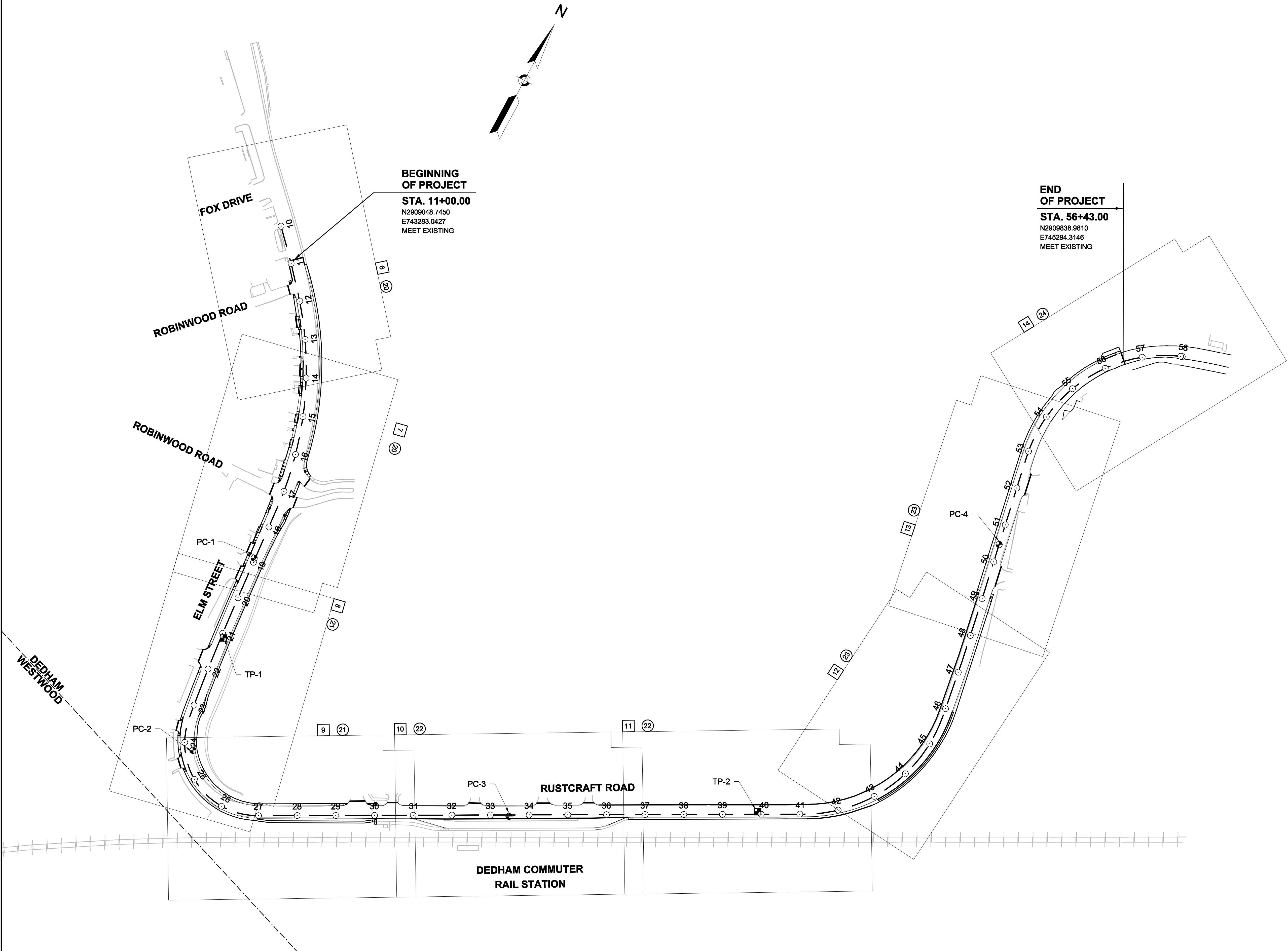
DATE

GENERAL SYMBOLS			PAVEMENT MARKINGS AND SIGNING SYMBOLS			TRAFFIC SIGNAL			ABBREVIATIONS		
EXISTING		PROPOSED	DESCRIPTION		PROPOSED	CABINET		GENERAL	DEDHAM ELM STREET AND RUSTCRAFT ROAD		
	JB		JB	JERSEY BARRIER	CW	CAB.	CABINET	AADT	ANNUAL AVERAGE DAILY TRAFFIC	STATE	PROJECT
	CB		CB	CATCH BASIN	SL	CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT	ABAN	ABANDON	FED. AID PROJ. NO.	PROPOSED
	FP		FP	CATCH BASIN CURB INLET	SWEL	DW	STEADY DON'T WALK	ADJ	ADJUST	SHEET NO.	PLANTABLE SOIL BORROW
	GP		GP	FLAG POLE	SWCHL	FDW	FLASHING DON'T WALK	APPROX.	APPROXIMATE	TOTAL SHEETS	POINT OF TANGENCY
	MB		MB	GAS PUMP	SWGL	FR	FLASHING CIRCULAR RED	A.C.	ASPHALT CONCRETE		POINT OF VERTICAL CURVATURE or
				MAIL BOX	SWLL	FRL	FLASHING RED LEFT ARROW	ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE		POLY-VINYL -CHLORIDE-PIPE
				POST SQUARE	SWPL	FRR	FLASHING RED RIGHT ARROW	ALT	ALTERATION		POINT OF VERTICAL INTERSECTION
	WELL		WELL	POST CIRCULAR	BWLL	FY	FLASHING CIRCULAR AMBER	BIT.	BITUMINOUS		POINT OF VERTICAL TANGENCY
	EHH		EHH	WELL	DWLex	FYR	FLASHING AMBER LEFT ARROW	BC	BOTTOM OF CURB		PAVEMENT
	GG		GG	ELECTRIC HANDHOLE	SYEL	G	STEADY CIRCULAR GREEN	BD.	BOUND		PAVED WATER WAY
	BHL #		BHL #	FENCE GATE POST	SYGL	GL	STEADY GREEN LEFT ARROW	BL (or 	BASELINE		RADIUS OF CURVATURE
	MW #		MW #	GAS GATE	SYLL	GR	STEADY GREEN RIGHT ARROW	BMDG	BUILDING		REMOVE AND DISPOSE
	TP #		TP #	BORING HOLE	SYCTEL	GSL	STEADY GREEN SLASH LEFT ARROW	BO	BY OTHERS		REINFORCED CONCRETE PIPE
				MONITORING WELL	DYCTCL	GSR	STEADY GREEN SLASH RIGHT ARROW	BOS	BOTTOM OF SLOPE		ROAD
				TEST PIT		GV	STEADY GREEN VERTICAL ARROW	BOW	BOTTOM OF WALL		ROADWAY
	CO.BD.			HYDRANT		OL	OVERLAP	BR.	BRIDGE		REMOVE
				LIGHT POLE		PED	PEDESTRIAN	BSW	BACK OF SIDEWALK		RETAIN
				COUNTY BOUND		PTZ	PAN, TILE, ZOOM	CB	CATCH BASIN		RETAINING WALL
				GPS POINT		R	STEADY CIRCULAR RED	CBCI	CATCH BASIN WITH CURB INLET		RIGHT OF WAY
				CABLE MANHOLE		RL	STEADY RED LEFT ARROW	CC	CEMENT CONCRETE		RAILROAD
				DRAINAGE MANHOLE		RR	STEADY RED RIGHT ARROW	CCM	CEMENT CONCRETE MASONRY		REMOVE AND RESET
				ELECTRIC MANHOLE		TR SIG	TRAFFIC SIGNAL	CEM	CEMENT		REMOVE AND STACK
				GAS MANHOLE		TSC	TRAFFIC SIGNAL CONDUIT	CI	CURB INLET		RIGHT
				MISC MANHOLE		W	STEADY WALK	CIP	CAST IRON PIPE		STONE BOUND
				SEWER MANHOLE		Y	STEADY CIRCULAR AMBER	CIT	CHANGE IN TYPE		SUBDRAIN
	MHB		MHB	TELEPHONE MANHOLE		YL	STEADY AMBER LEFT ARROW	CLF	CHAIN LINK FENCE		SHLD
	MON			WATER MANHOLE				CL	CENTERLINE		SHEET
	SB			MASSACHUSETTS HIGHWAY BOUND				CMP	CORRUGATED METAL PIPE		SMH
	TB			MONUMENT				CPP	CORRUGATED PLASTIC PIPE		ST
				STONE BOUND				CSP	CORRUGATED STEEL PIPE		STA
	TPL or GUY		TPL or GUY	TOWN OR CITY BOUND				CO.	COUNTY		SSD
	HTP			TRAVERSE OR TRIANGULATION STATION				CONC	CONCRETE		SHLO
	UFB		UFB	TROLLEY POLE OR GUY POLE				COND	CONDUIT		SW
	UPDL		UPDL	TRANSMISSION POLE				CONT	CONTINUOUS		T
	ULT		ULT	UTILITY POLE W/ FIREBOX				CONST	CONSTRUCTION		TAN
	UPL		UPL	UTILITY POLE WITH DOUBLE LIGHT				CR GR	CROWN GRADE		TEMP
				UTILITY POLE W/ 1 LIGHT				DHV	DESIGN HOURLY VOLUME		TC
				UTILITY POLE				DI	DROP INLET		TOS
				BUSH				DIA	DIAMETER		TOW
				TREE				DIP	DUCTILE IRON PIPE		TS
	WG		WG	STUMP				DW	STEADY DON'T WALK - PORTLAND ORANGE		TSV&B
	PM		PM	SWAMP / MARSH				DWY	DRIVEWAY		TYP
				WATER GATE				ELEV (or EL.)	ELEVATION		UP
				PARKING METER				EMB	EMBANKMENT		UPL
				OVERHEAD CABLE/WIRE				EOP	EDGE OF PAVEMENT		VAR
				CURBING				EXIST (or EX)	EXISTING		VERT
				CONTOURS (ON-THE-GROUND SURVEY DATA)				EXC	EXCAVATION		VC
				CONTOURS (PHOTOGRAMMETRIC DATA)				F&C	FRAME AND COVER		VCP
				UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)				F&G	FRAME AND GRATE		VGC
				UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)				FDN.	FOUNDATION		WCR
				UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)				FLDSTN	FIELDSTONE		WG
				UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)				FM	FORCE MAIN		WIP
				UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)				GAR	GARAGE		WM
				UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)				GD	GROUND		WQU
				BALANCED STONE WALL				GG	GAS GATE		X-SECT
				RETAINING WALL (TYPE AS NOTED)				GI	GUTTER INLET		
				GUARD RAIL (TYPE AS NOTED)				GIP	GALVANIZED IRON PIPE		
				GUARD RAIL - STEEL POSTS				GRAN	GRANITE		
				GUARD RAIL - WOOD POSTS				GRAV	GRAVEL		
				CHAIN LINK OR METAL FENCE				GRD	GUARD		
				WOOD FENCE				HDW	HEADWALL		
				HAY BALES/SILT FENCE				HMA	HOT MIX ASPHALT		
				TREE LINE or LIMIT OF CLEARING AND GRUBBING				HOR	HORIZONTAL		
				SAWCUT LINE				HYD	HYDRANT		
				TOP OR BOTTOM OF SLOPE				INV	INVERT		
				LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY				IP	IRON PIPE		
				BANK OF RIVER OR STREAM				JCT	JUNCTION		
				BORDER OF WETLAND				L	LENGTH OF CURVE		
				100 FT WETLAND BUFFER				LB	LEACH BASIN		
				200 FT RIVERFRONT BUFFER				LP	LIGHT POLE or LOW POINT		
				STATE HIGHWAY LAYOUT				LT	LEFT		
				TOWN OR CITY LAYOUT				MAX	MAXIMUM		
				RAILROAD SIDELINE				MB	MAILBOX		
				TOWN OR CITY BOUNDARY LINE				MH	MANHOLE		
	BND		BND	PROPERTY LINE OR APPROXIMATE PROPERTY LINE				MHB	MASSACHUSETTS HIGHWAY BOUND		
	TP-1		TP-1	EASEMENT				MIN	MINIMUM		
	B-1/PC-1		B-1/PC-1	HIGHWAY/PROPERTY BOUND (TYPE AS NOTED)				NIC	NOT IN CONTRACT		
				TEST PIT				NO.	NUMBER		
				BORING/PAVEMENT CORE				O.C.	ON CENTER		
				EROSION CONTROL BARRIER/COMPOST FILTER TUBES				PC	POINT OF CURVATURE		
				SIGN AND POST				PCC	POINT OF COMPOUND CURVATURE		
				SIGN AND POST (2 POSTS)				P.G.L.	PROFILE GRADE LINE		
				CONSTRUCTION BASELINE				PI	POINT OF INTERSECTION		
				SURVEY LINE				POC	POINT ON CURVE		
				WHEELCHAIR RAMP				POT	POINT ON TANGENT		
				TREE (SIZE AND TYPE AS NOTED)				PRC	POINT OF REVERSE CURVATURE		

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	3	28
PROJECT FILE NO.		607901	

KEY PLAN &
BORING LOCATIONS

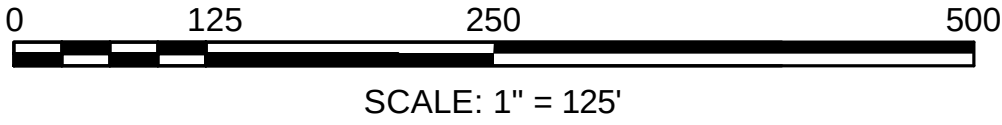


SHEET NUMBER LEGEND

- XX CONSTRUCTION PLAN
- XX SIGN & PAVEMENT MARKING PLAN

LEGEND

- PC-# PAVEMENT CORE
- TP-# TEST PIT



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	4	28
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TYPICAL SECTIONS

PAVEMENT NOTES

FULL DEPTH PAVEMENT BOX WIDENING

SURFACE COURSE: 1-3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
BASE COURSE: 4" SUPERPAVE BASE COURSE 25.0 (SBC-25.0) OVER
SUB-BASE: 4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW, TYPE b

FULL DEPTH PAVEMENT BOX WIDENING ≤4' WIDE

SURFACE COURSE: 1-3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
BASE COURSE: 6" HES CEMENT CONCRETE BASE COURSE OVER
SUB-BASE: 8" GRAVEL BORROW, TYPE b

PAVEMENT MILLING AND OVERLAY

SURFACE COURSE: 1-3/4" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
PAVEMENT MILLING: 1-3/4" PAVEMENT MICROMILLING

CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS

SURFACE: 4" CEMENT CONCRETE WALK SURFACE
4000 PSI, 3/4", 610 OVER
FOUNDATION: 8" GRAVEL BORROW, TYPE b

CEMENT CONCRETE DRIVEWAYS

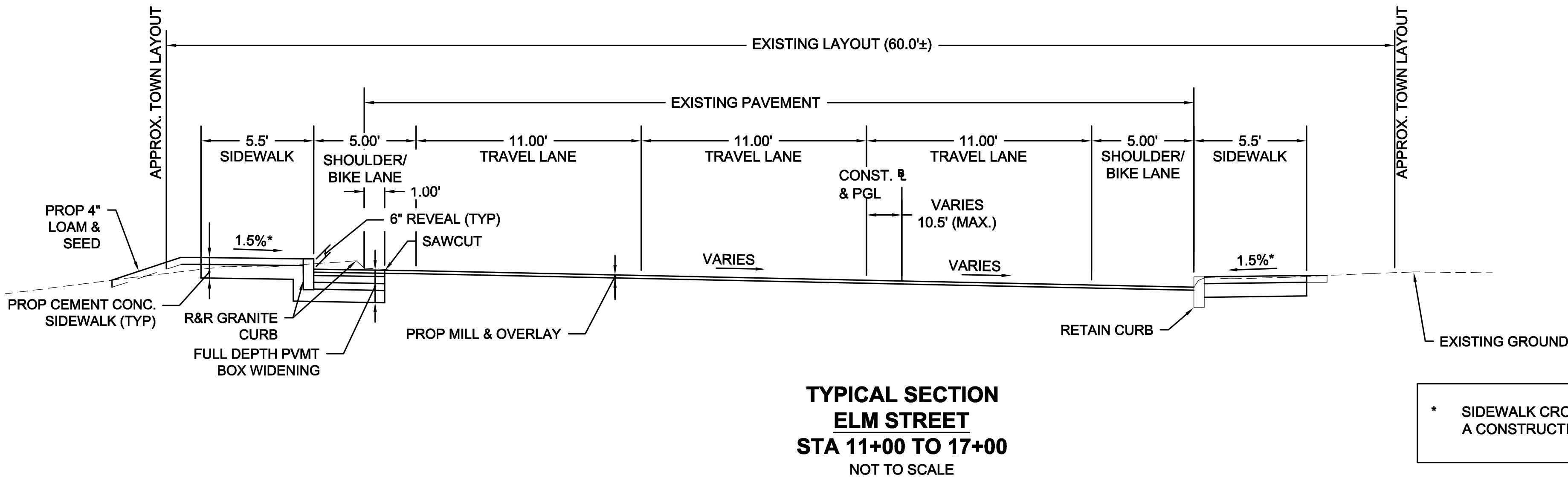
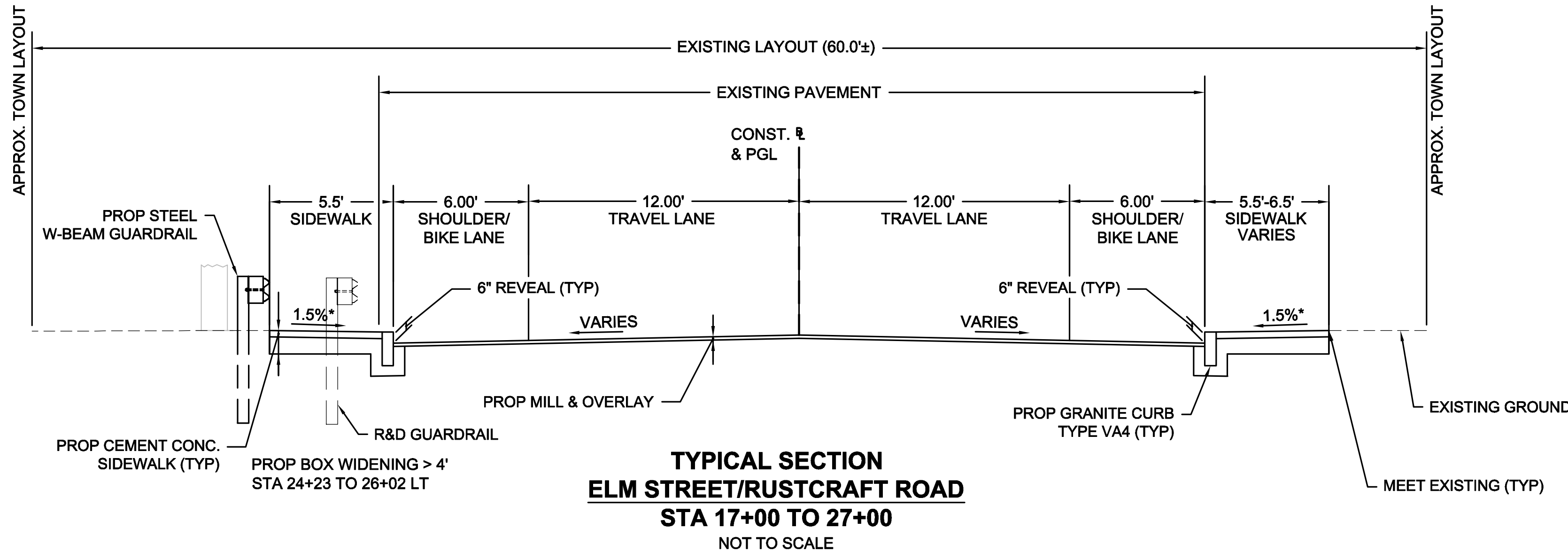
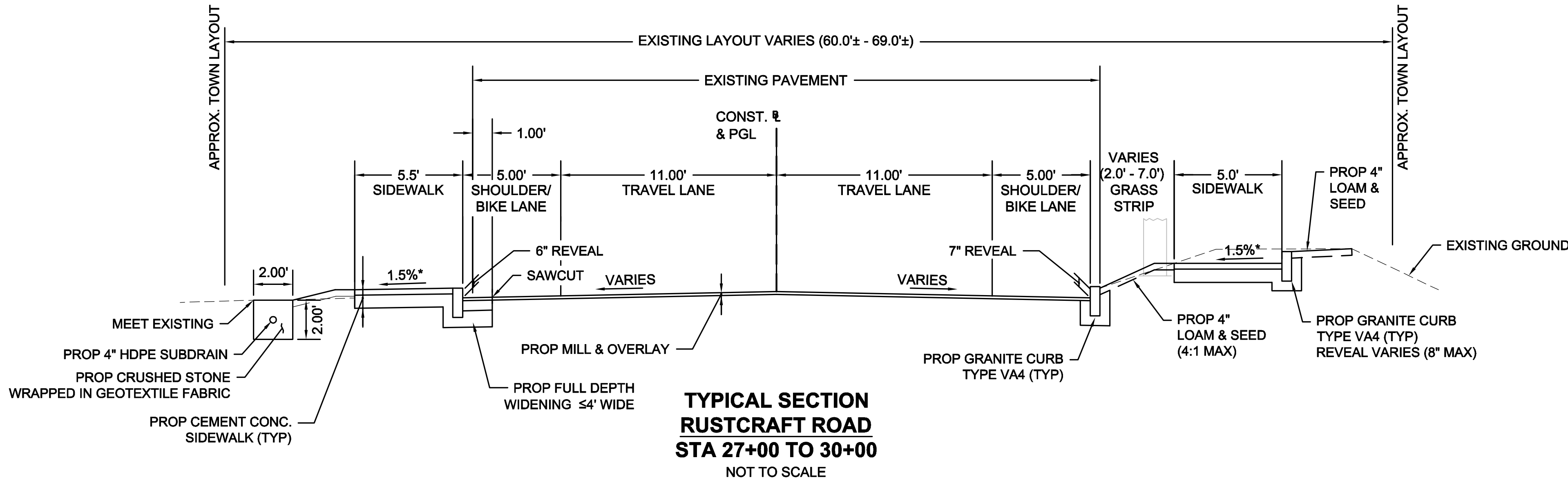
SURFACE COURSE: 6" CEMENT CONCRETE WALK SURFACE
4000 PSI, 3/4", 610 OVER
BASE COURSE: 8" GRAVEL BORROW, TYPE b

HMA DRIVEWAYS

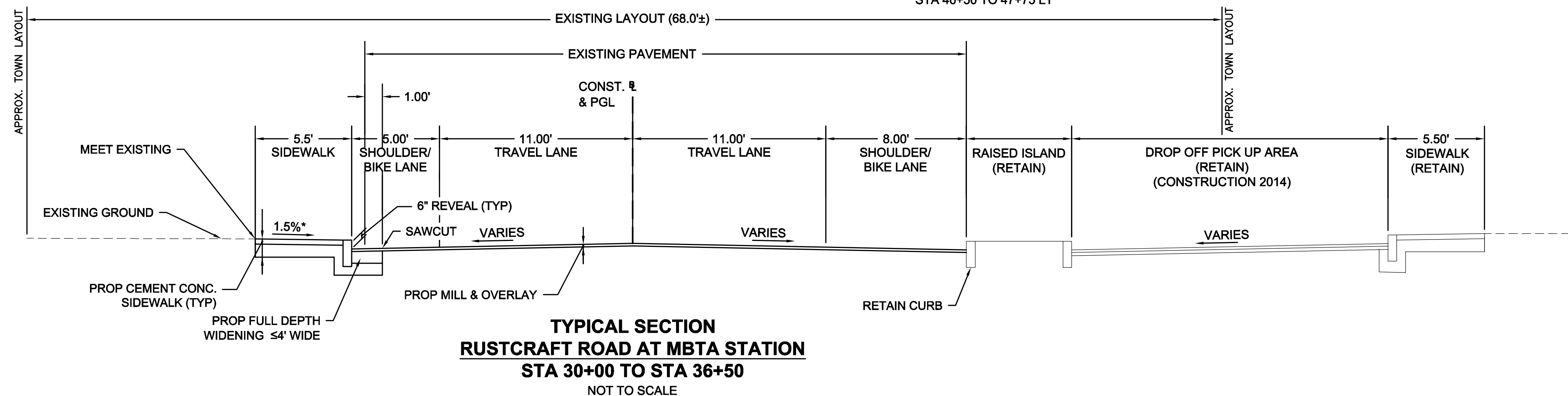
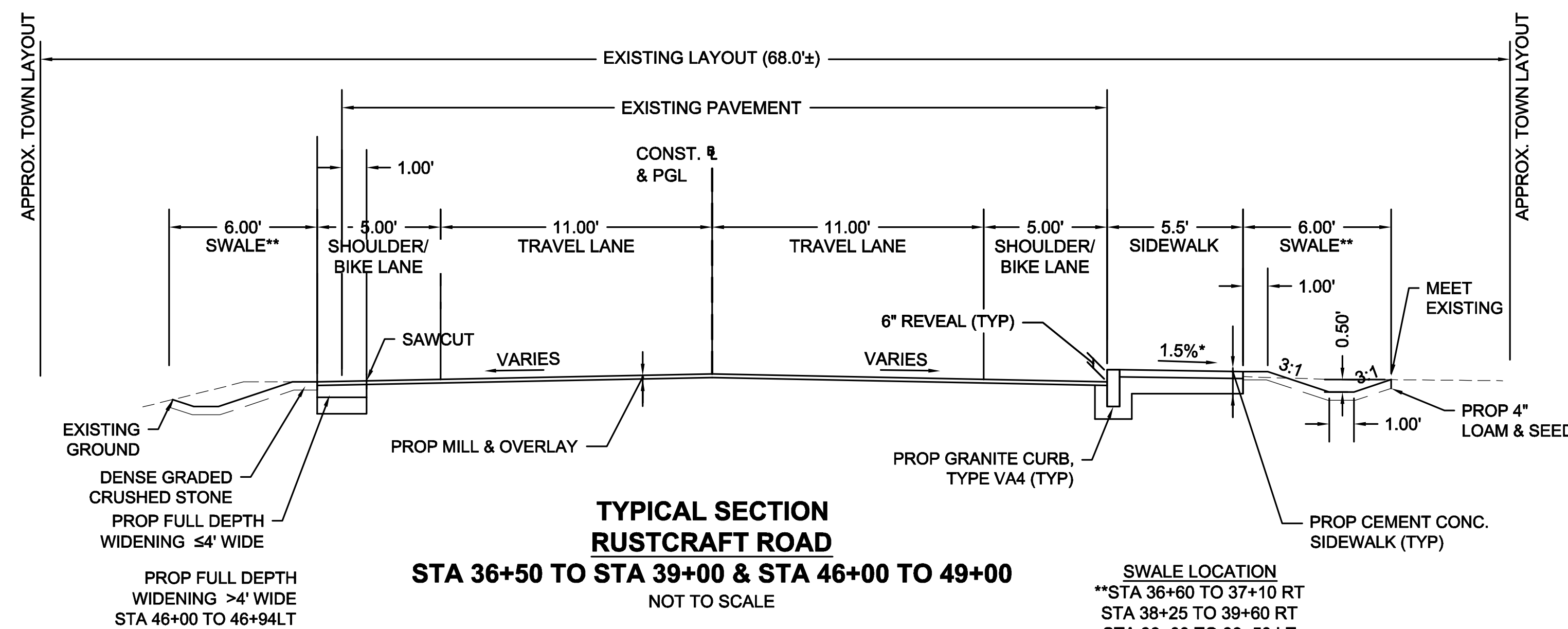
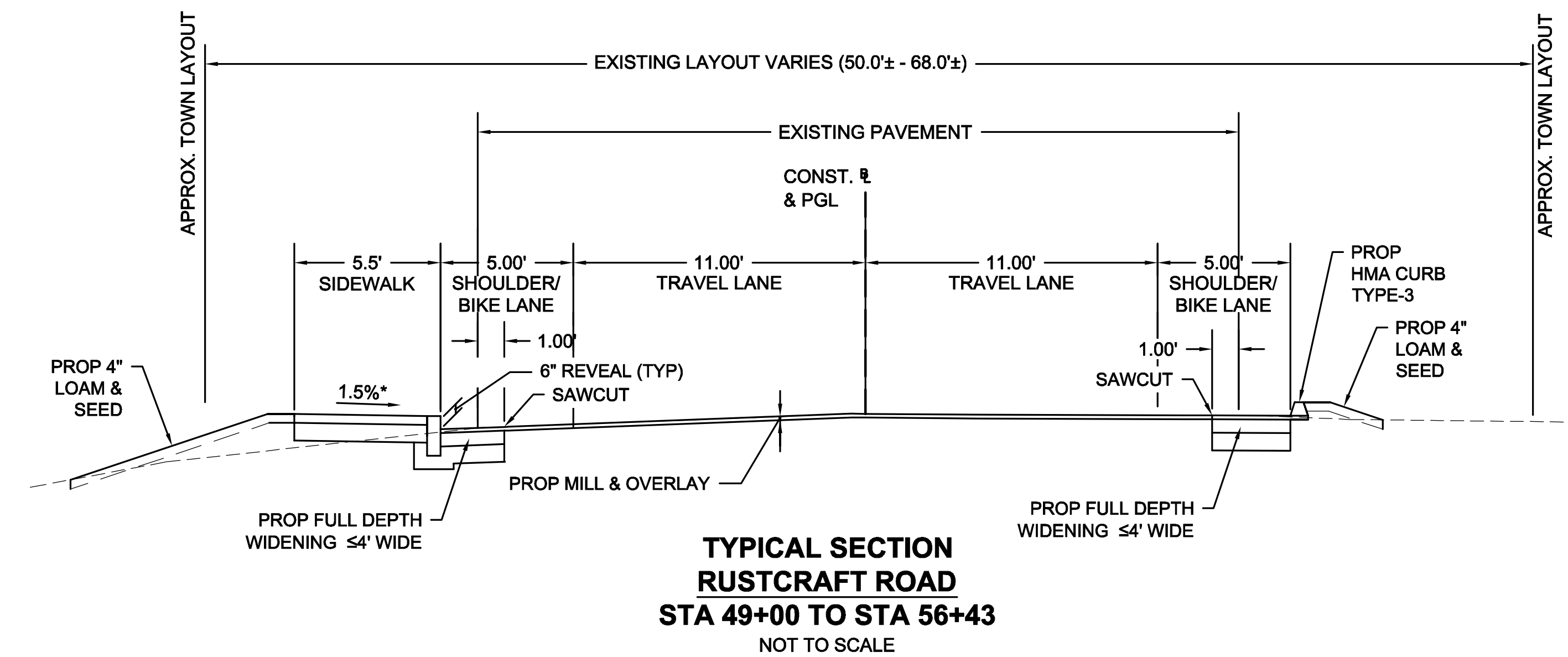
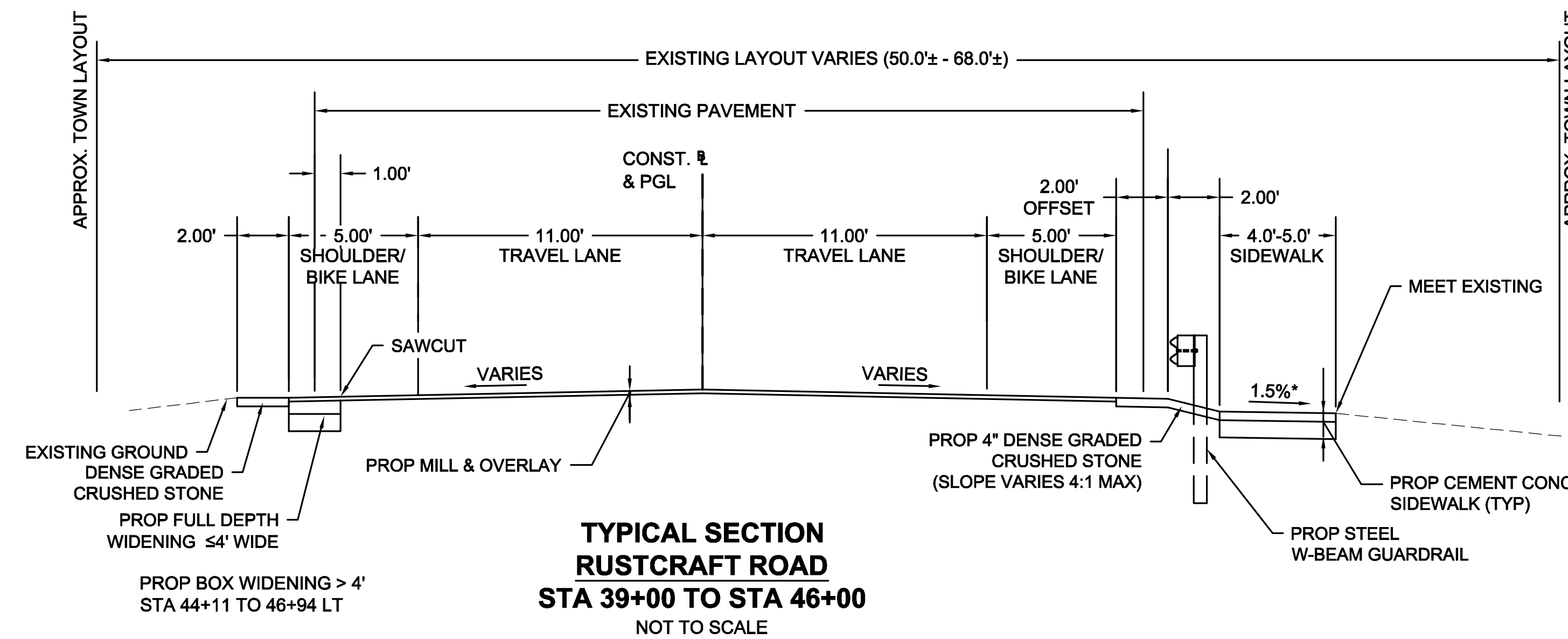
SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
FOUNDATION: 8" GRAVEL BORROW, TYPE b

PROJECT TACK COAT NOTES

TACK COAT: ASPHALT EMULSION FOR TACK COAT, GRADE RS-1
SHALL BE PLACED AT A RATE OF:
0.07 GALLONS PER SQUARE YARD OVER MILLED SURFACES
0.07 GALLONS PER SQUARE YARD OVER CEMENT CONCRETE
BASE COURSE
0.05 GALLONS PER SQUARE YARD OVER SMOOTH TIGHT PAVEMENTS
PRIOR TO PAVING AN OVERLAY



* SIDEWALK CROSS-SLOPE SHALL BE 1.5% WITH
A CONSTRUCTION TOLERANCE OF 0.5%±



HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

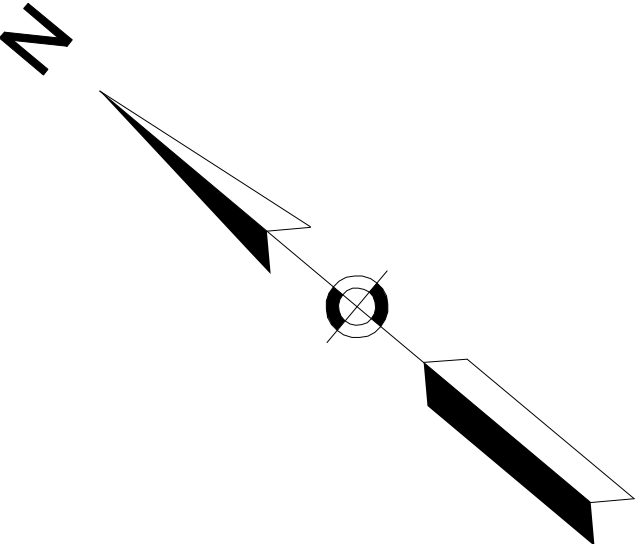
DRAINAGE DETAILS
SEE BELOW

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	6	28

PROJECT FILE NO. 607901

CONSTRUCTION PLANS



N/F
LEGACY PLACE LLC
PARCEL ID 162-1
DEED BK 902 PG 78

DMH 5331
RIM=118.09
INV A=113.19
INV B=113.09

DMH 5330
RIM=118.20
INV A=113.35
INV B=113.75
INV C=113.40

CB 5329
RIM=117.86
INV A=115.21

DMH 5341
RIM=119.18

N/F
THOMAS J. POWERS
PARCEL ID 162-41
DEED BK 31758 PG 403

N/F
MARIAN L. MARTINS
PARCEL ID 162-40
DEED BK 26631 PG 396

N/F
LOUIS C. BALEZOS ETAL
PARCEL ID 162-38
DEED BK 30367 PG 31

N/F
CHAOUKI F. FREIHA ETUX
PARCEL ID 162-26
DEED BK 24205 PG 300

N/F
NIKOLAOS CHRISTOULIS
PARCEL ID 162-25
DEED BK 08105 PG 0328

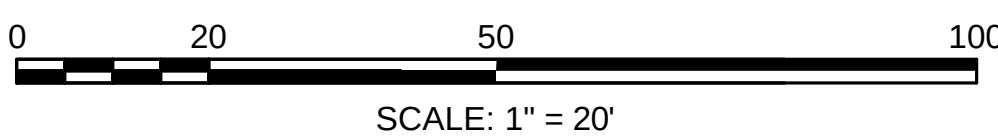
N/F
MILENA PIRINT ETAL
PARCEL ID 162-24
DEED BK 30988 PG 525

BEGINNING
OF PROJECT
STA. 11+00.00
N N2909048.7450
E E743283.0427
MEET EXISTING

ELM STREET

ROBINWOOD ROAD

FOX DRIVE



FOR PROFILE SEE SHEET 15

CONTINUED ON
SHEET NO. 7

STEEL W-BEAM TERMINAL END STA 17+69 LT
STEEL W-BEAM HIGHWAY GUARD STA 17+69 TO 18+76 LT
STEEL W-BEAM TERMINAL END SECTION STA 18+76 LT

STEEL W-BEAM TERMINAL END SECTION STA 18+85 LT
STEEL W-BEAM HIGHWAY GUARD STA 18+85 TO 26+67 LT
STEEL W-BEAM BURIED END TREATMENT STA 26+67 LT

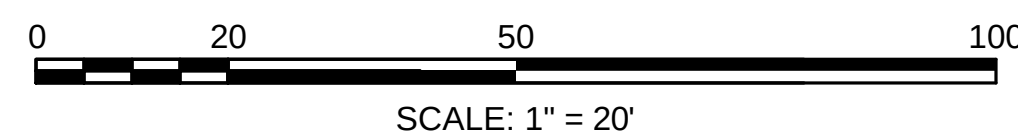
NONE

NONE

SEE BELOW

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	7	28
PROJECT FILE NO.		607901	

CONSTRUCTION PLANS



STEEL W-BEAM TERMINAL END SECTION STA 18+85 LT
STEEL W-BEAM HIGHWAY GUARD STA 18+85 TO 26+67 LT
STEEL W-BEAM BURIED END TREATMENT STA 26+67 LT

NONE

NONE

SEE BELOW

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	8	28
PROJECT FILE NO.		607901	

N/F
ARCHSTONE LEGACY PLACE LP
PARCEL ID 162-4
DEED BK 30294 PG 13



CONTINUED ON
SHEET NO. 9

DEDHAM
WESTWOOD



STEEL W-BEAM TERMINAL END SECTION STA 18+85 LT
STEEL W-BEAM HIGHWAY GUARD STA 18+85 TO 26+67 LT
STEEL W-BEAM BURIED END TREATMENT STA 26+67 LT

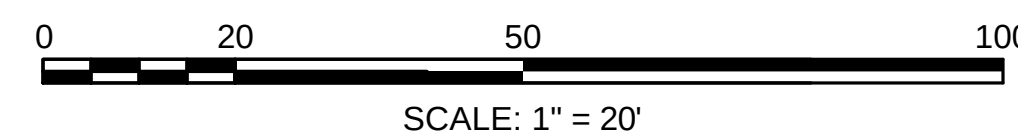
NONE

NONE

SEE BELOW

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	9	28
PROJECT FILE NO.		607901	

CONSTRUCTION PLANS



607901_HD(4816 CONST).DWG Plotted on 24-Mar-2015 1:20 PM

DEDHAM ELM STREET AND RUSTCRAFT ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	10	28
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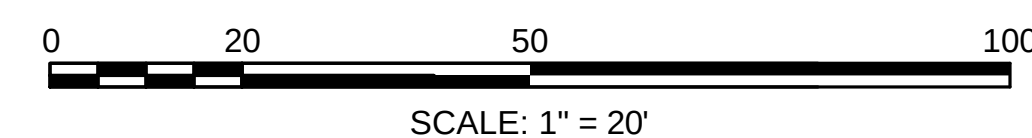
CONSTRUCTION PLANS

CONSTRUCTION PLANS

N/F
RAR2 JEFFERSON AT DEDHAM STATION MN INC
PARCEL ID 163-2
DEED BK 870 PG 75

N/F
RAR2 JEFFERSON AT DEDHAM STATION MN INC
PARCEL ID 163-2
DEED BK 870 PG 75

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
PARCEL ID 176-5



FOR PROFILE SEE SHEET 16-17

NONE

NONE

SEE BELOW

SEE BELOW

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	11	28
PROJECT FILE NO.		607901	

N/F
500 COMMERCIAL CIRCLE LLC
C/O CLAY NISSAN
PARCEL ID 163-1
DEED BK 874 PG 105



STEEL W-BEAM TANGENT END TREATMENT STA 39+18 RT
STEEL W-BEAM HIGHWAY GUARD STA 39+18 TO 45+86 RT
STEEL W-BEAM TANGENT END TREATMENT STA 45+86 RT

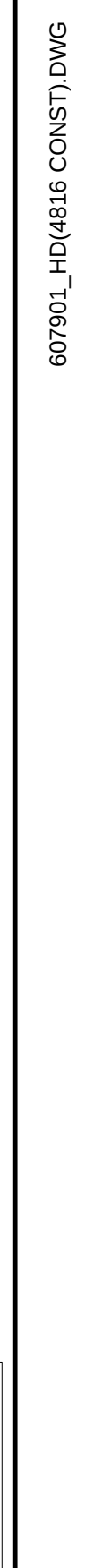
NONE

NONE

SEE BELOW

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	12	28
PROJECT FILE NO.		607901	

607901_HD(4816 CONST).DWG Plotted on 24-Mar-2015 9:45 AM



FOR PROFILE SEE SHEET 17-18

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

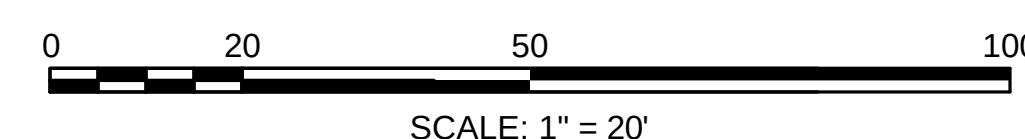
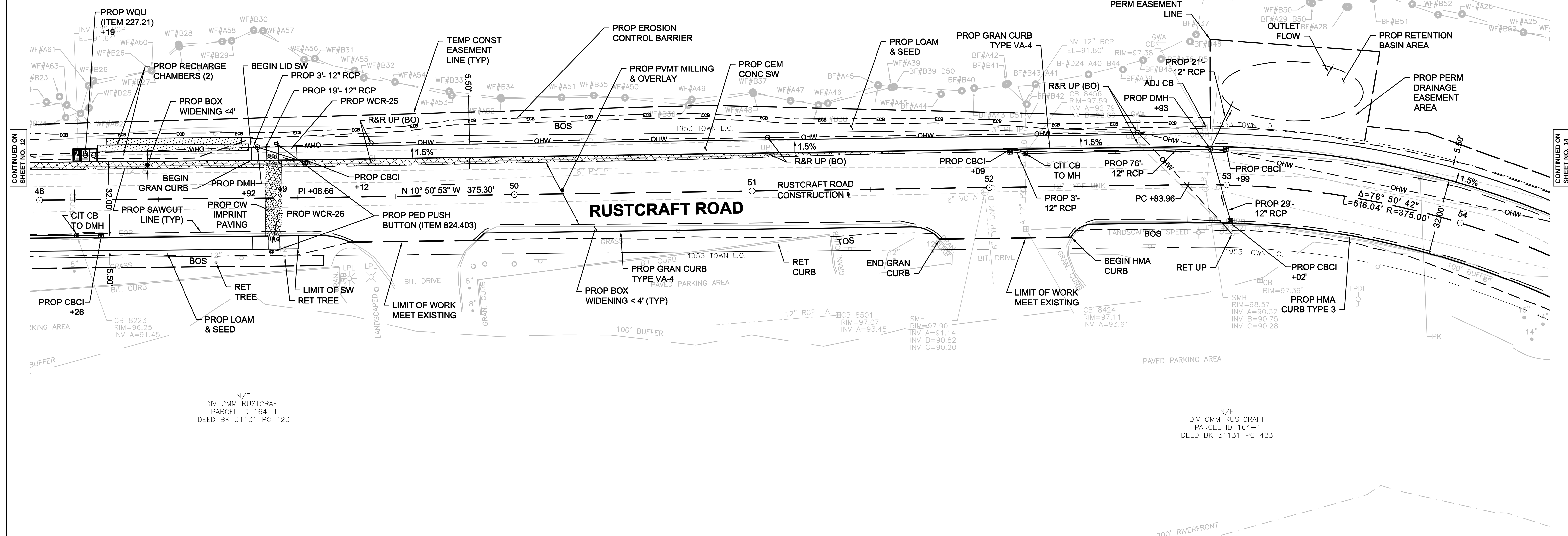
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	13	28
PROJECT FILE NO.		607901	

CONSTRUCTION PLANS

N/F
DEDHAM CORP CENTER REALTY TRUS
PARCEL ID 150-4
DEED BK 642 PG 170

N/F
DIV CCM RUSTCRAFT
PARCEL ID 164-7
DEED BK 31131 PG 423
TOTAL PARCEL AREA
ABOUT 150.718 SF

WF#A31 N/F
DIV CCM RUSTCRAFT
PARCEL ID 164-7
DEED BK 31131 PG 423
TOTAL PARCEL AREA
ABOUT 150.718 SF



HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	14	28
PROJECT FILE NO.		607901	

CONSTRUCTION PLANS

N/F
TOWN OF DEDHAM
PARCEL ID 151-53
DEED BK 3596 PG 130

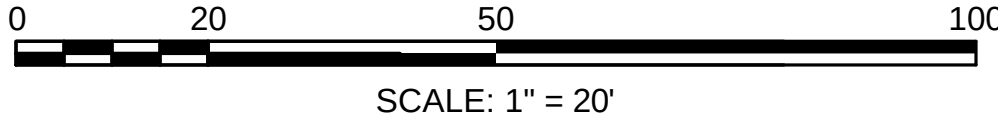
CONTINUED ON
SHEET NO. 13

FAIRBANKS PARK

RUSTCRAFT ROAD

RED CROSS
BUILDING

END
OF PROJECT
STA. 56+43.00
N2909838.9810
E745294.3146
MEET EXISTING

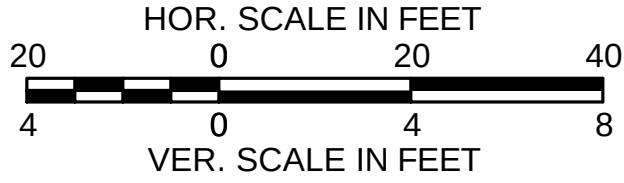
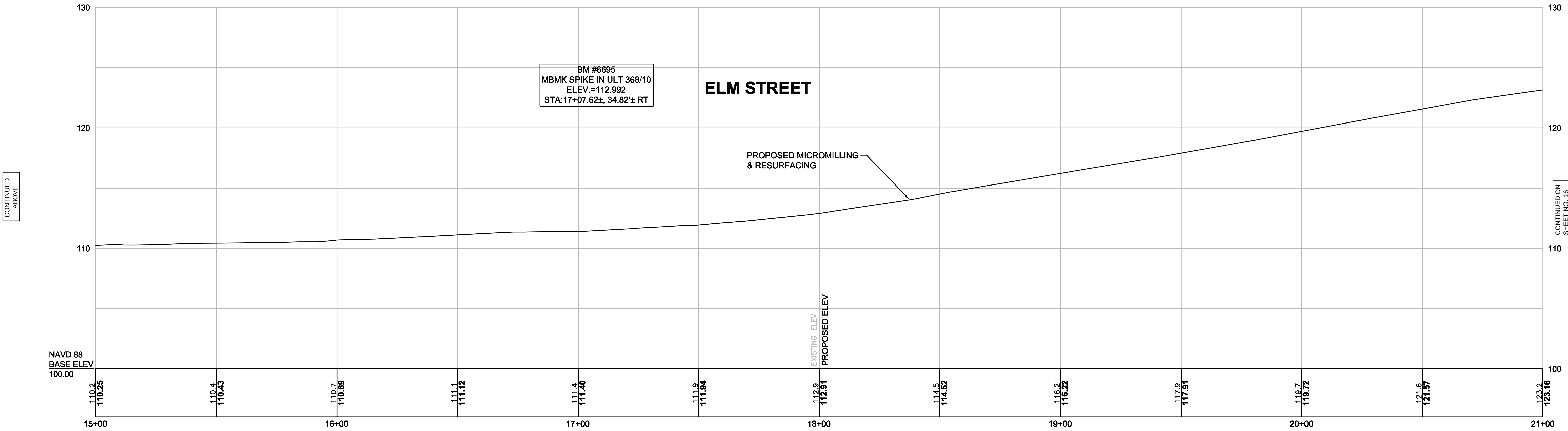
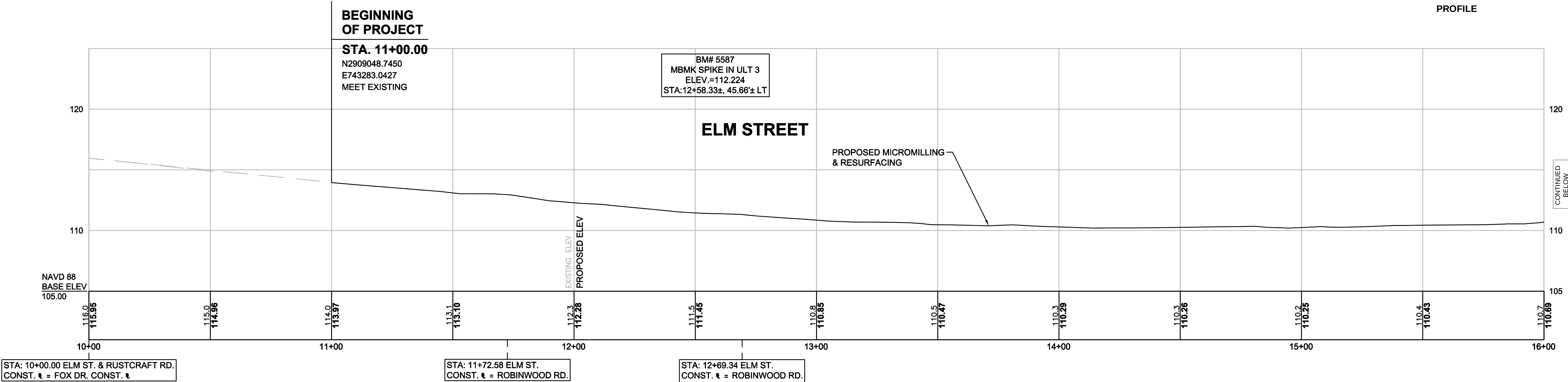


FOR PROFILE SEE SHEET 18

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	15	28
PROJECT FILE NO.			607901

PROFILE

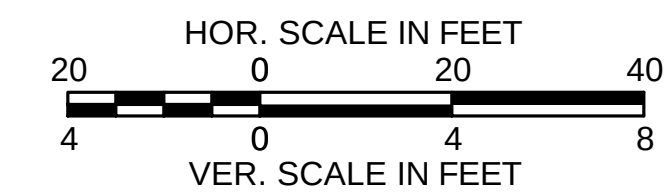
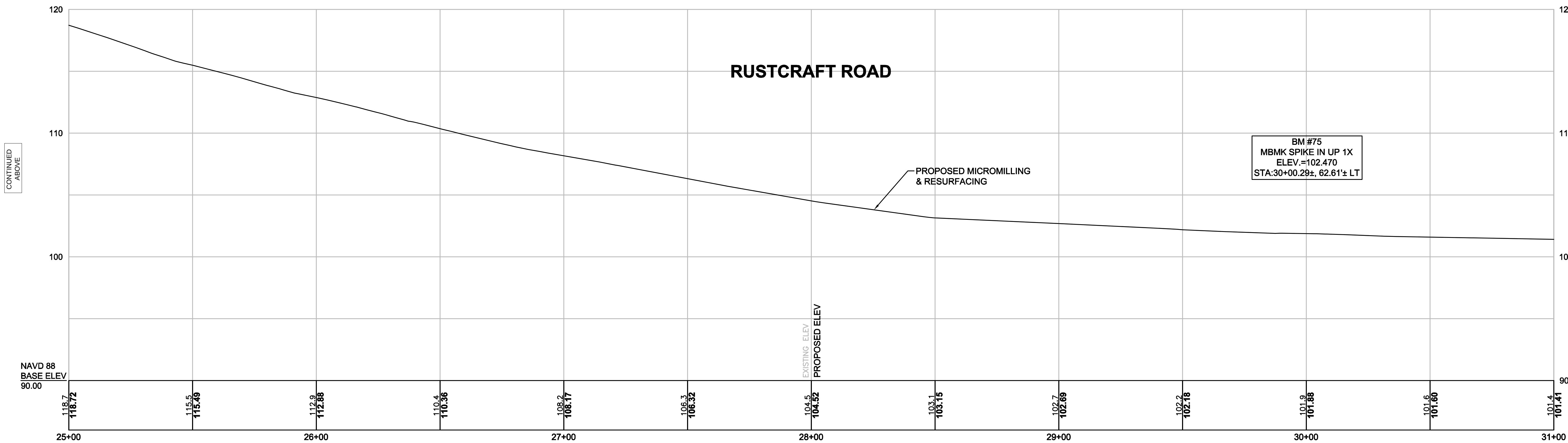


FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 6-8

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	16	28
PROJECT FILE NO.		607901	

PROFILE



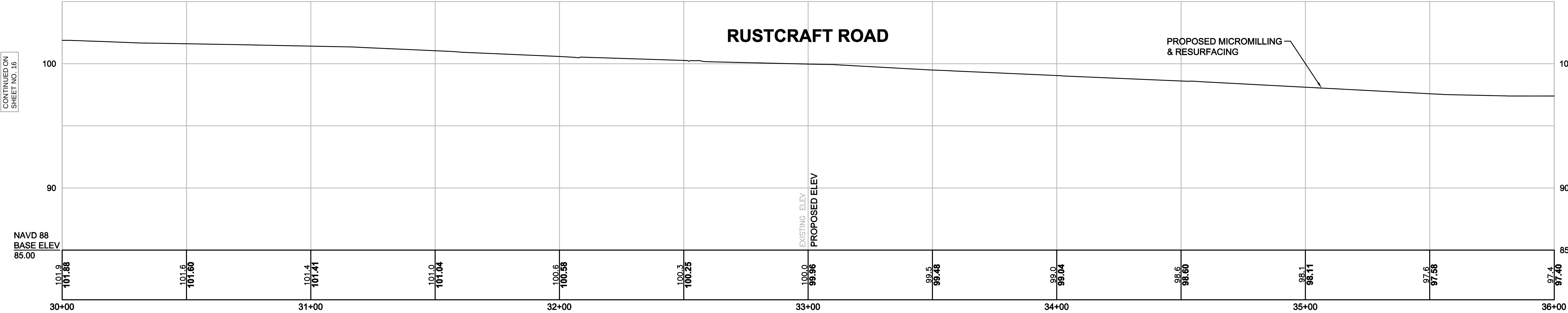
FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 8-10

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

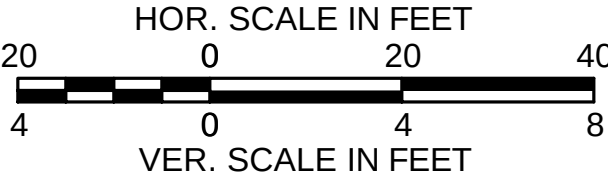
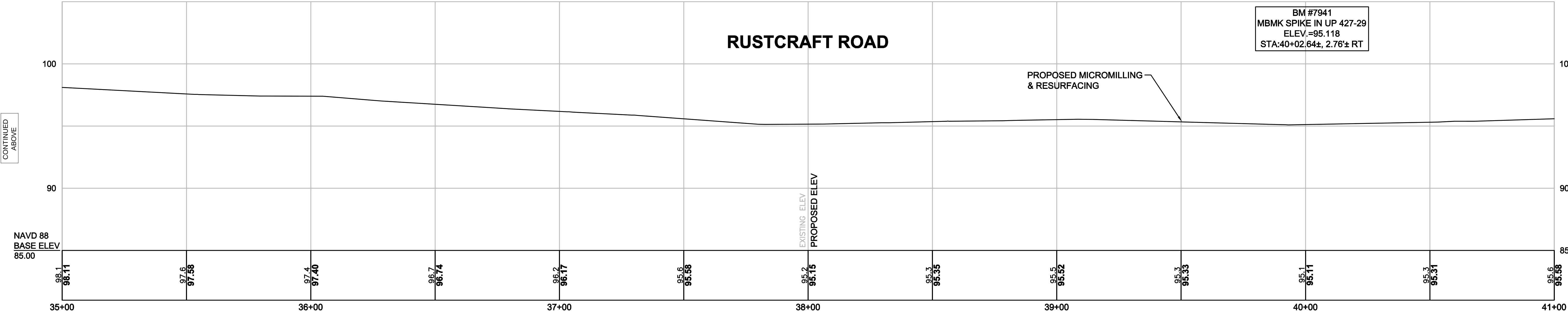
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	17	28
PROJECT FILE NO.		607901	

PROFILE

BM #8008
MBMK SPIKE IN UP 427/32
ELEV.=98.510
STA:34+85.01±, 23.69± RT



BM #7941
MBMK SPIKE IN UP 427-29
ELEV.=95.118
STA:40+02.64±, 2.76'± RT

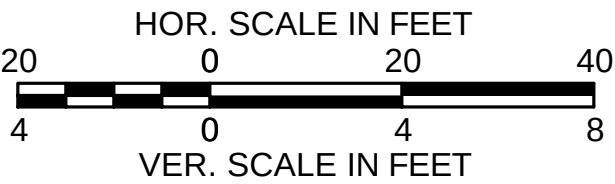
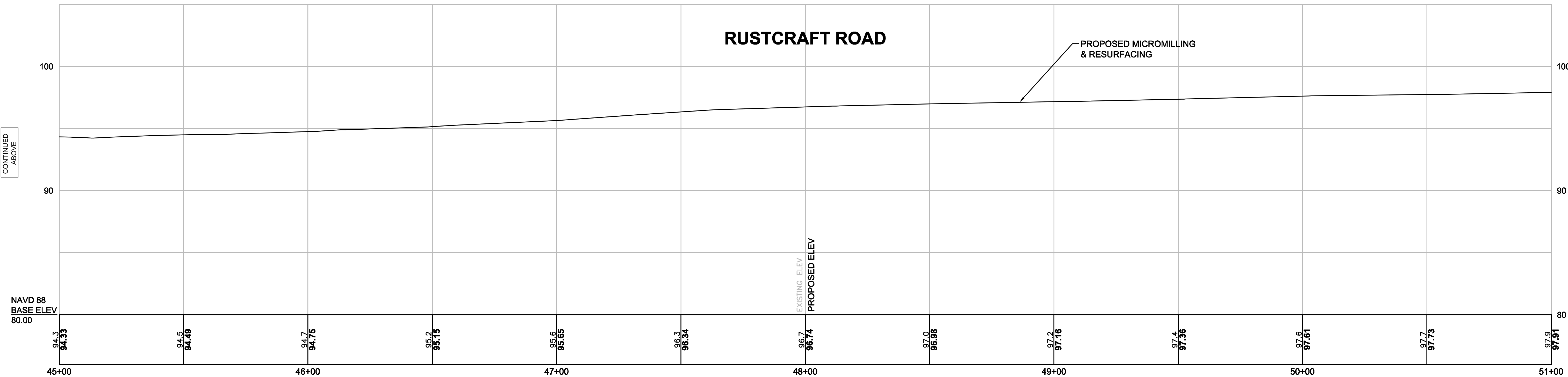
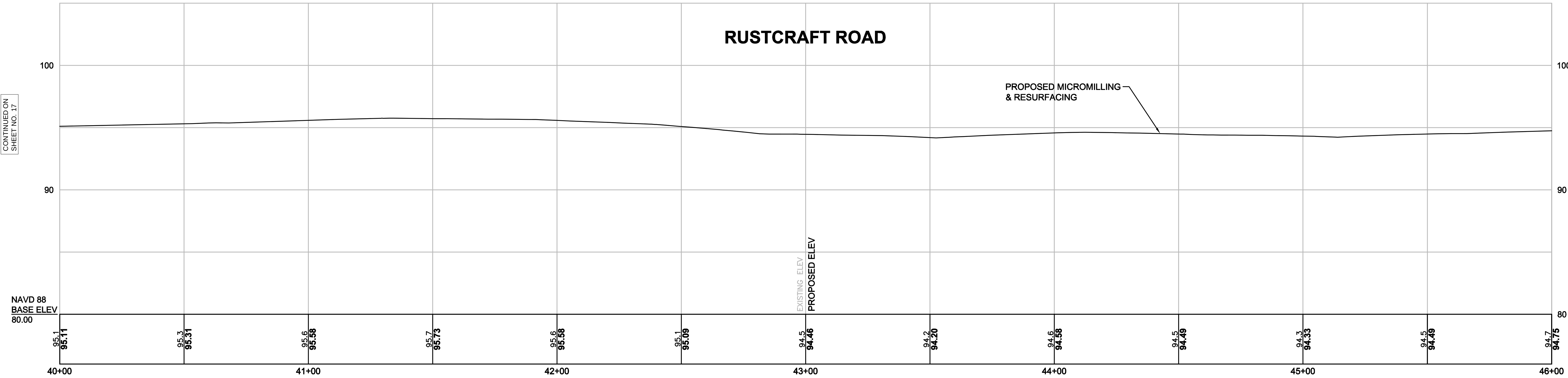


FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 10-12

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	18	28
PROJECT FILE NO.		607901	

PROFILE

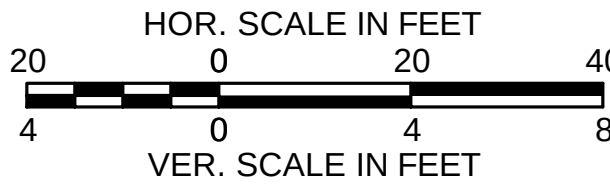
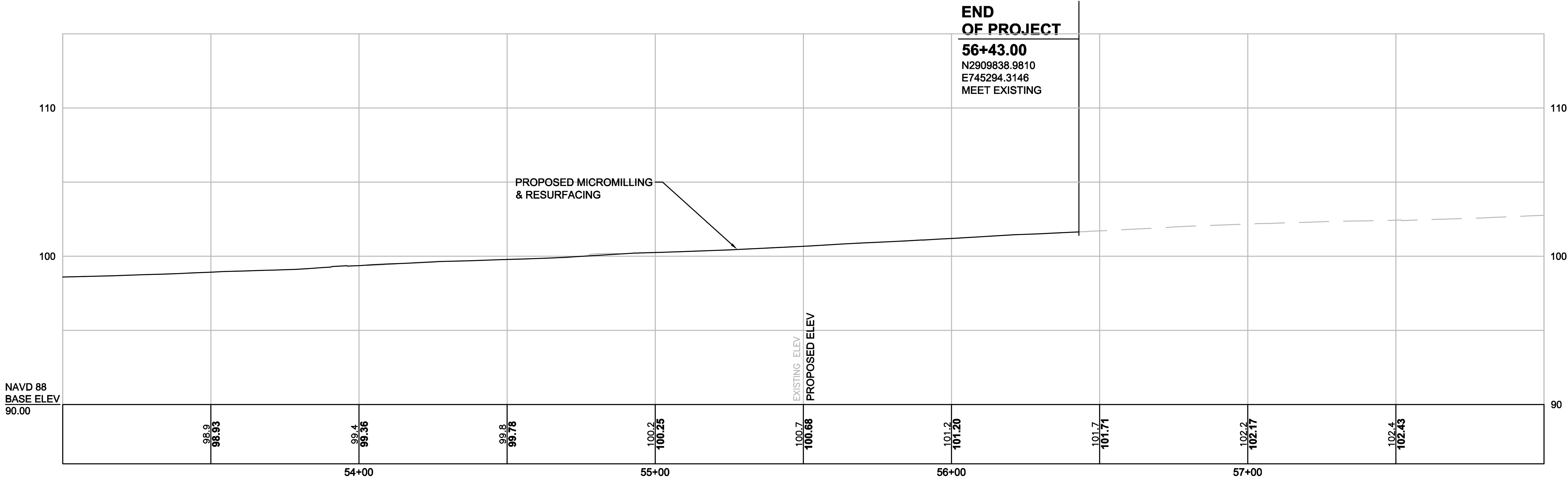
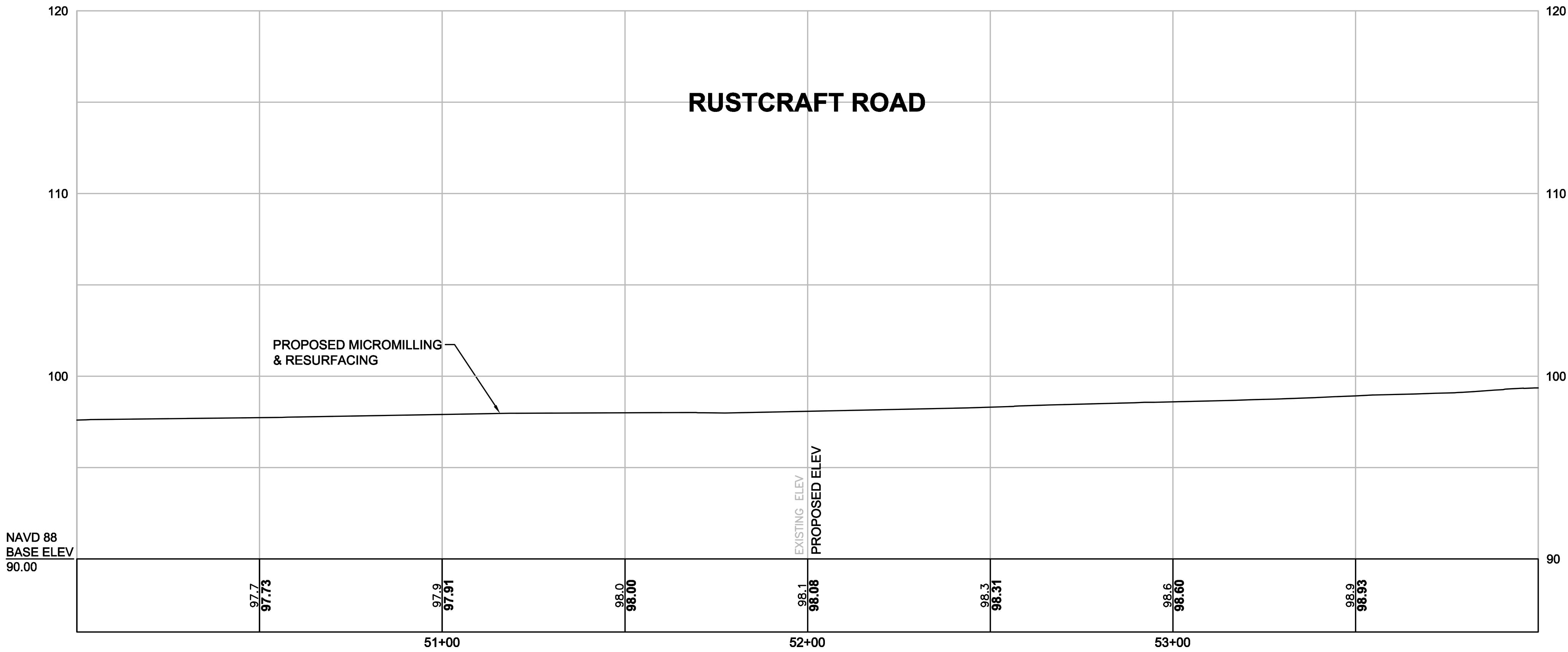


FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 12-14

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	19	28
PROJECT FILE NO.		607901	

PROFILE

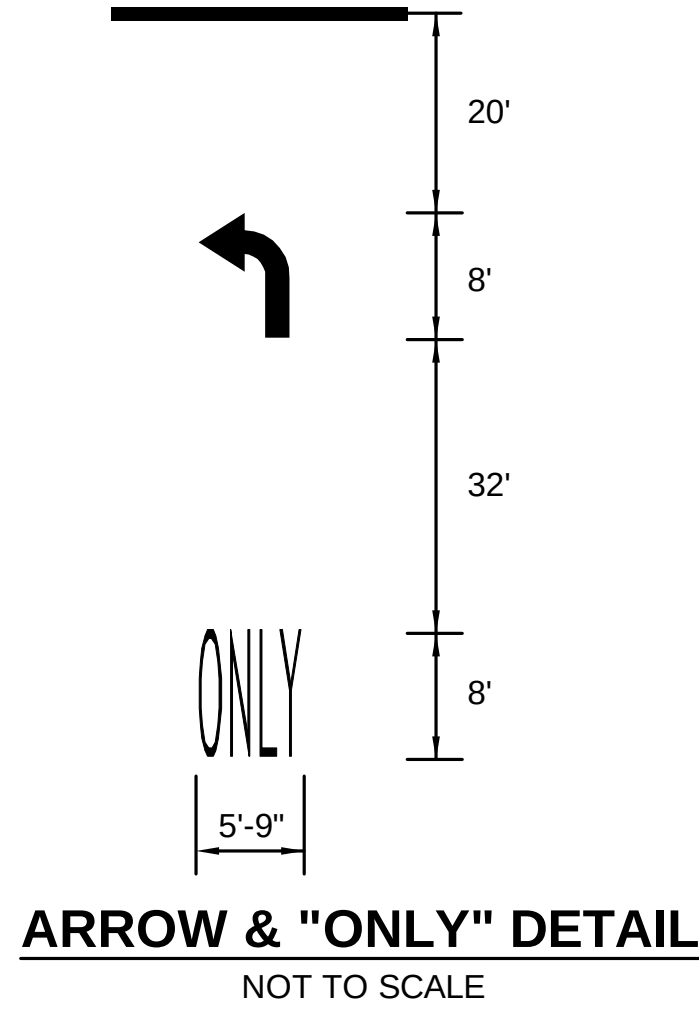
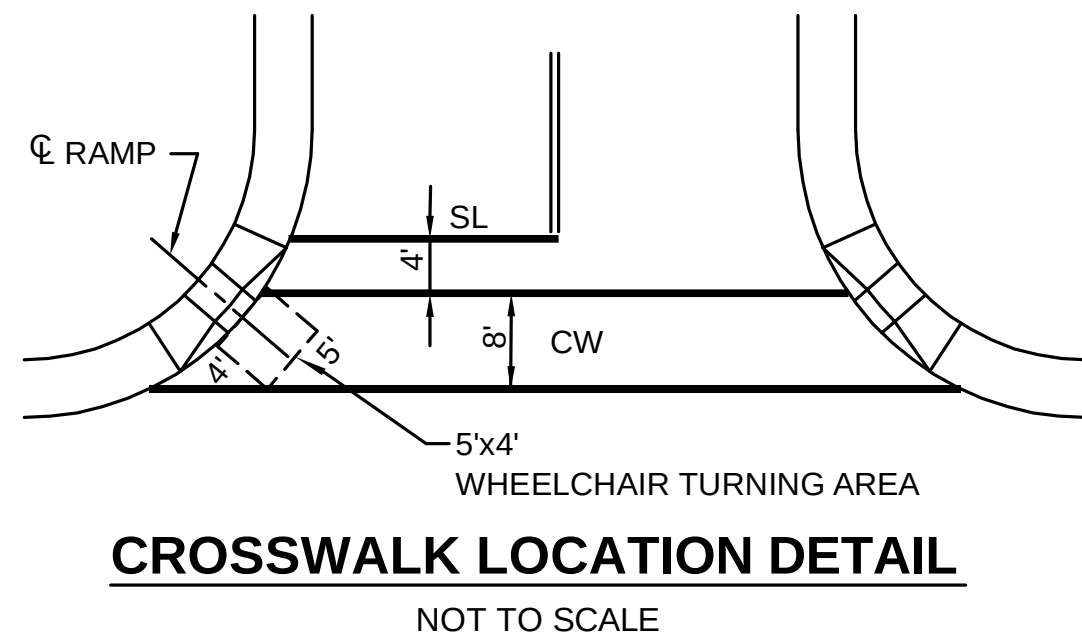
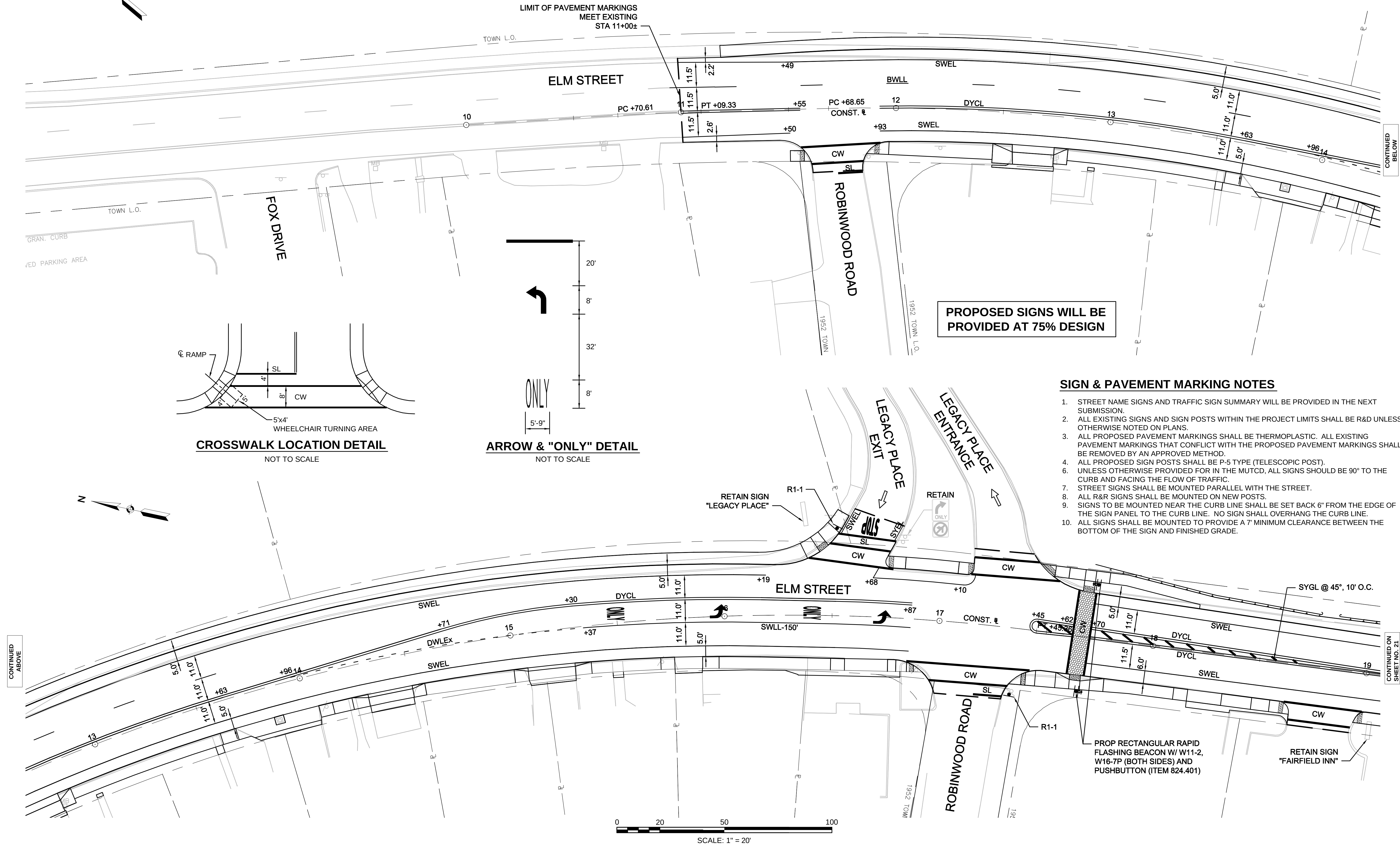


FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 13-14

CONTINUED ON
SHEET NO. 18

CONTINUED
ABOVE

CONTINUED
BELOW



PROPOSED SIGNS WILL BE
PROVIDED AT 75% DESIGN

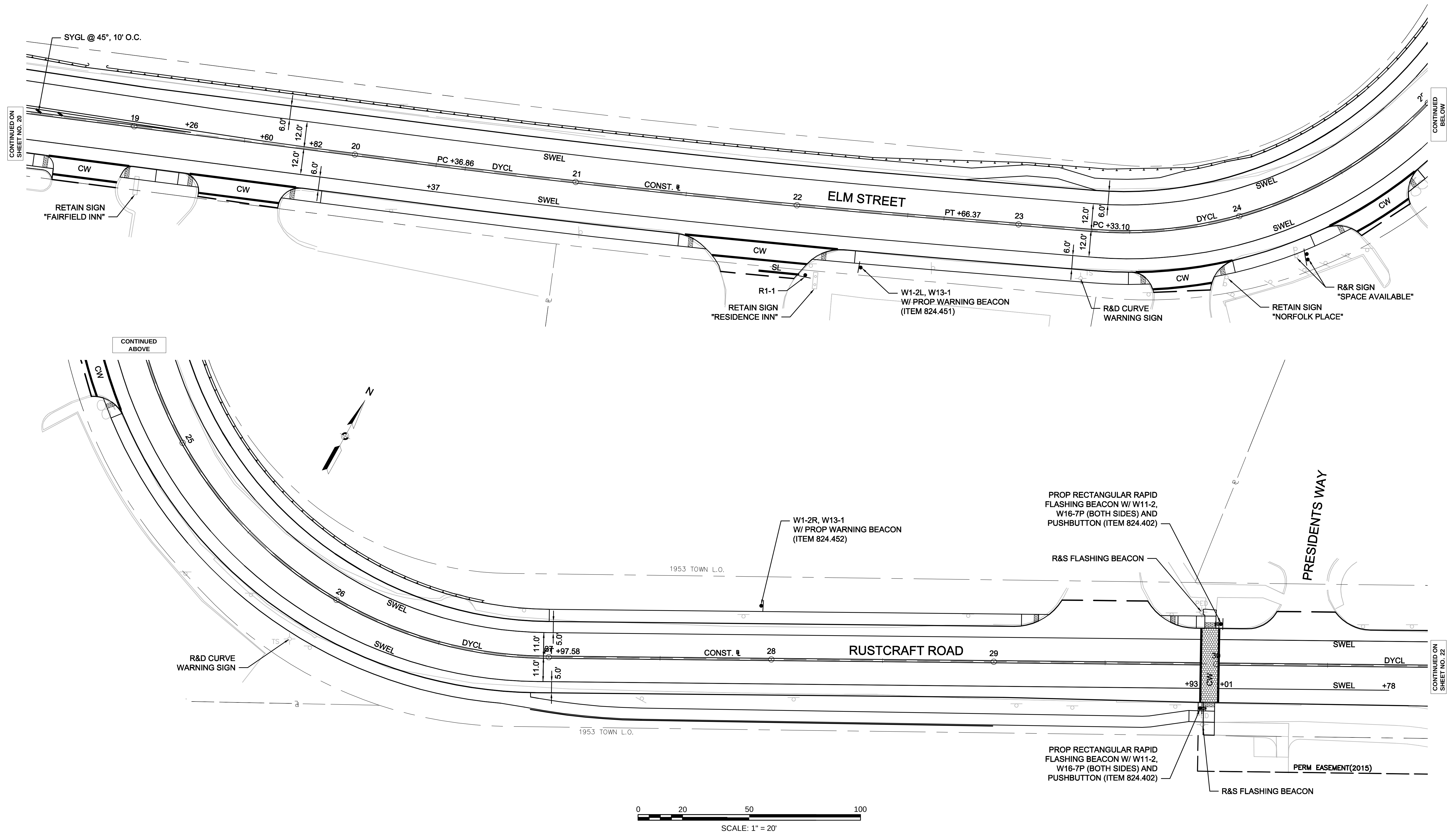
- SIGN & PAVEMENT MARKING NOTES**
1. STREET NAME SIGNS AND TRAFFIC SIGN SUMMARY WILL BE PROVIDED IN THE NEXT SUBMISSION.
 2. ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE R&D UNLESS OTHERWISE NOTED ON PLANS.
 3. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
 4. ALL PROPOSED SIGN POSTS SHALL BE P-5 TYPE (TELESCOPIC POST).
 5. UNLESS OTHERWISE PROVIDED FOR IN THE MUTCD, ALL SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
 6. STREET SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
 7. ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS.
 8. SIGNS TO BE MOUNTED NEAR THE CURB LINE SHALL BE SET BACK 6" FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
 9. ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.

PROP RECTANGULAR RAPID
FLASHING BEACON W/ W11-2,
W16-7P (BOTH SIDES) AND
PUSHBUTTON (ITEM 824.401)

RETAIN SIGN
"FAIRFIELD INN"

CONTINUED ON
SHEET NO. 21

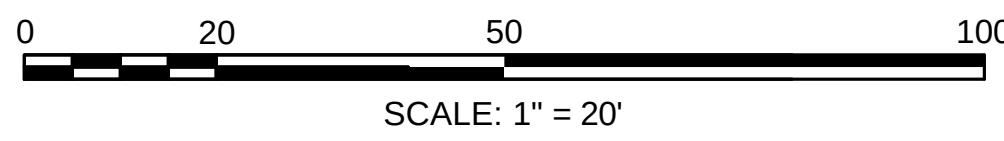
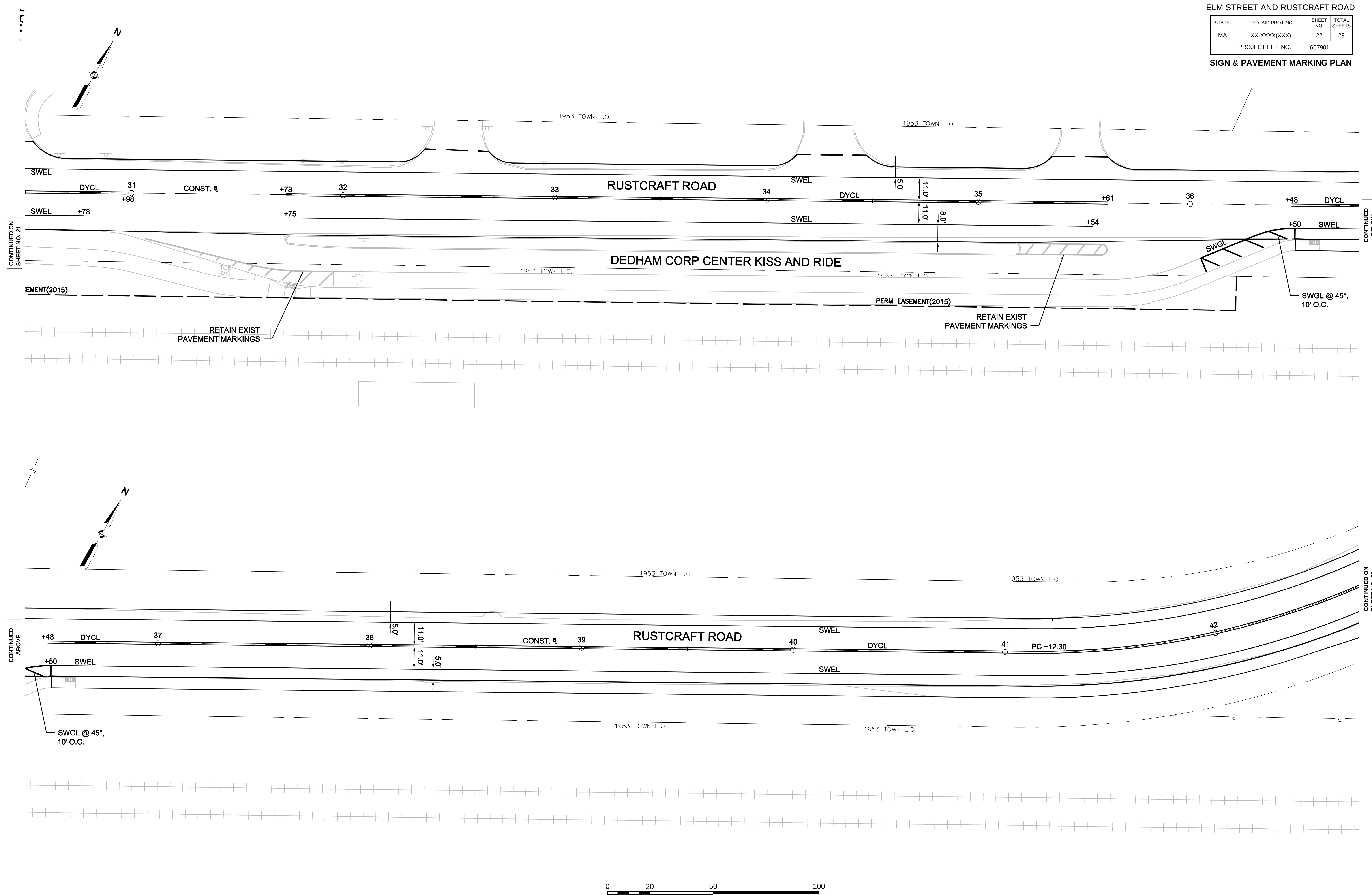
CONTINUED
BELOW



DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	22	28
PROJECT FILE NO.		607901	

SIGN & PAVEMENT MARKING PLAN

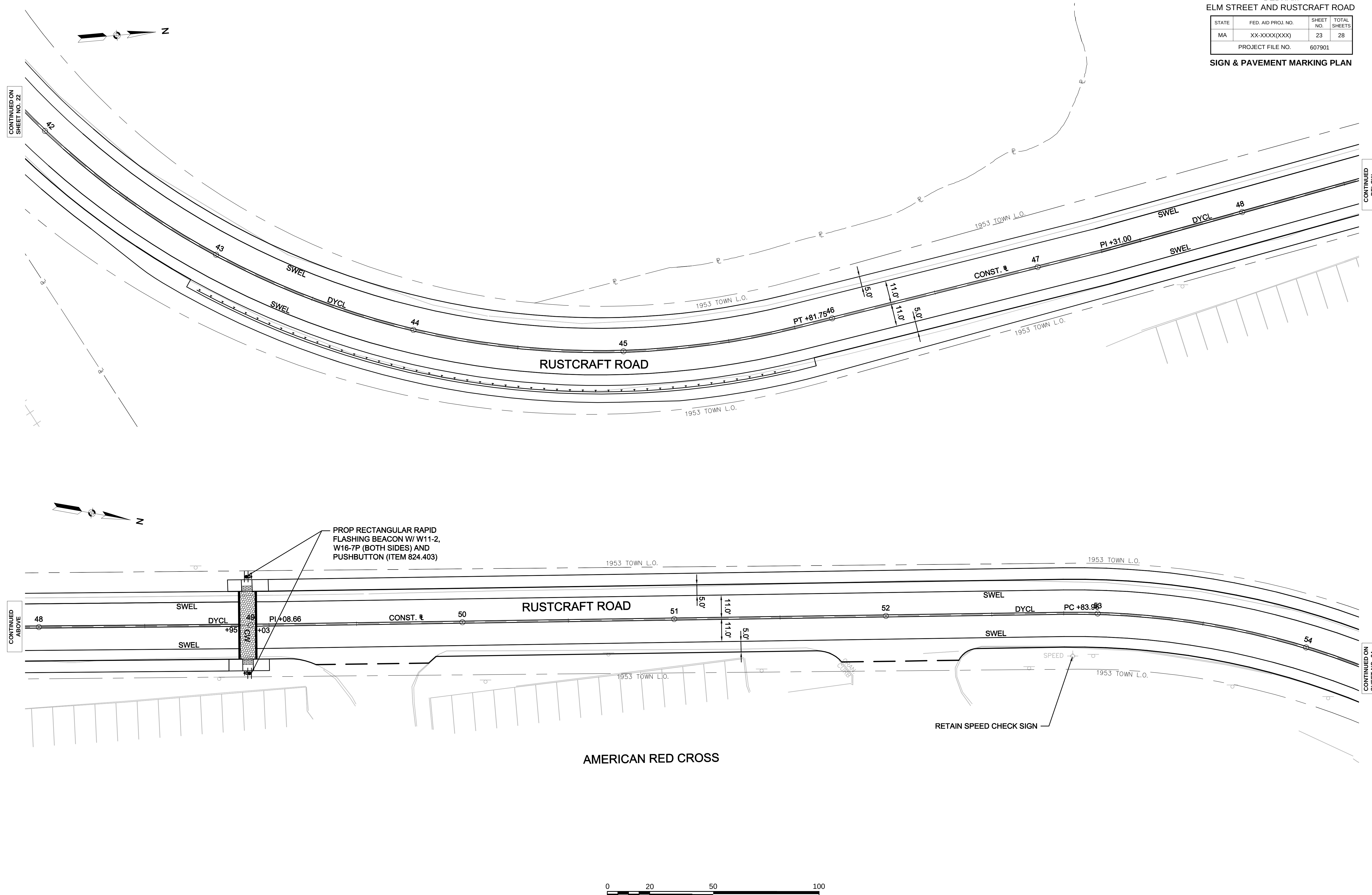


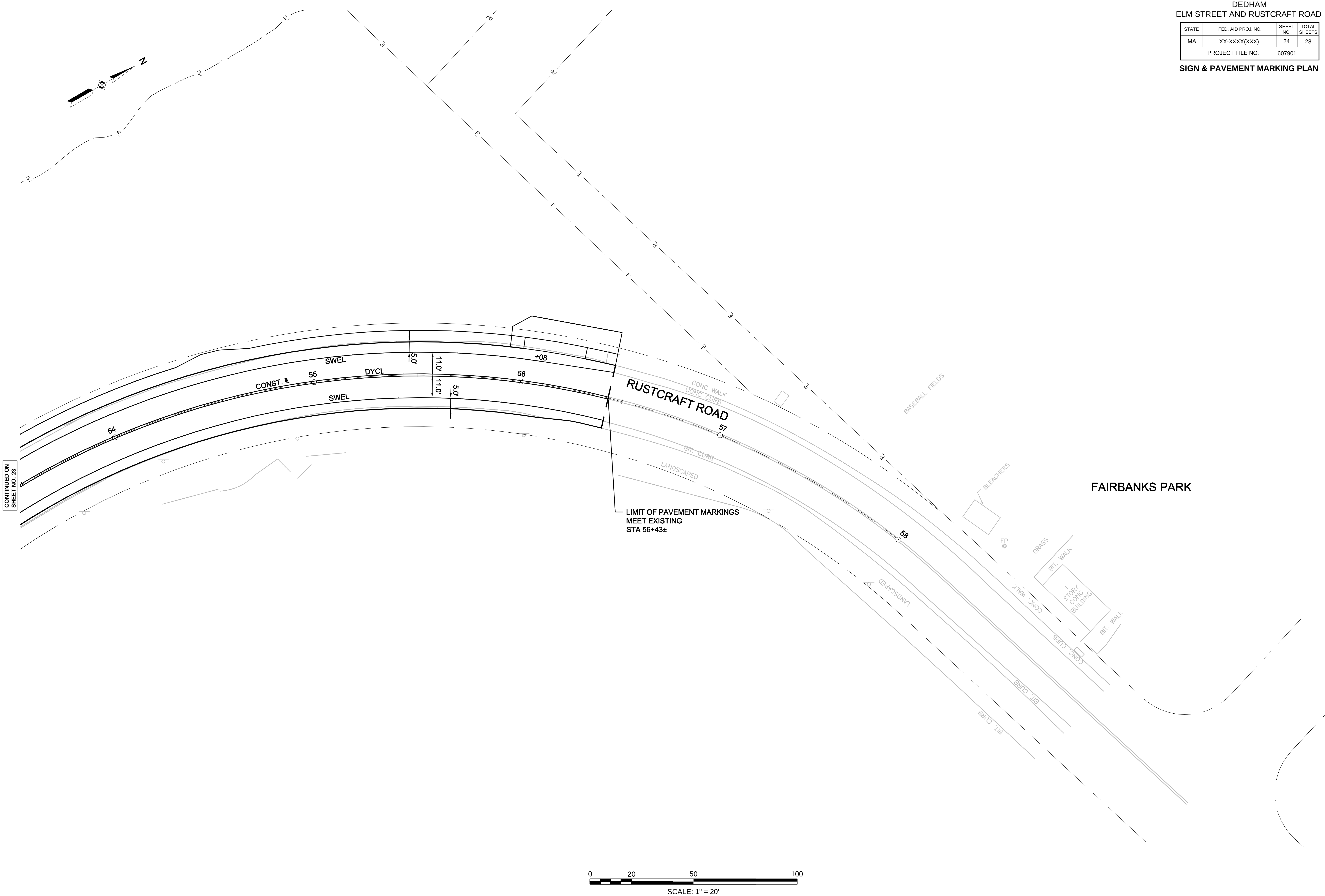
CONTINUED ON
SHEET NO. 21

CONTINUED
BELOW

CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 23



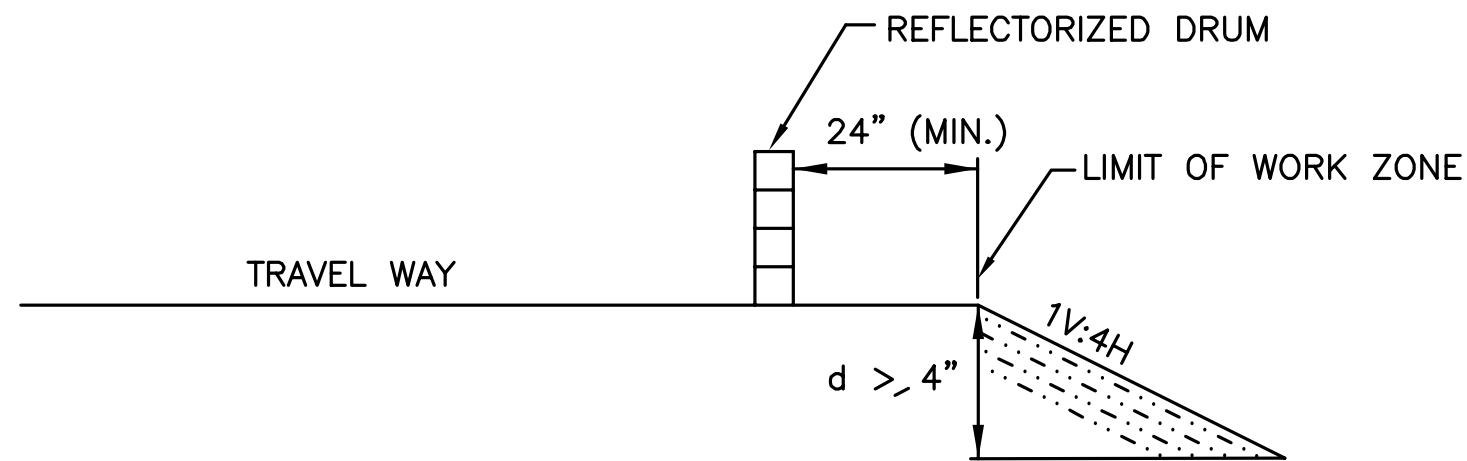


NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE WITH MASSDOT SPECIFICATIONS.
- 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, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES."
- 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 THREE PLASTIC DRUMS OF A TAPER MAY BE MOUNTED WITH TYPE A 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 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.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".

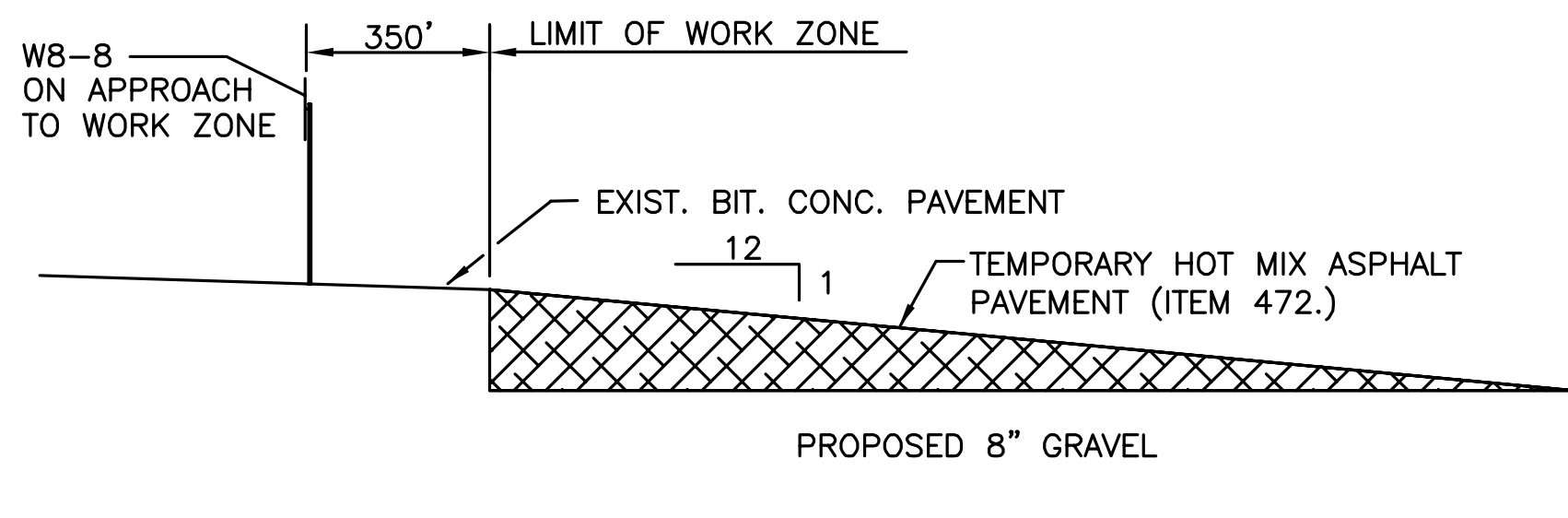
LEGEND:

- | | | |
|------------------------------|------------------------------------|------------------------------|
| ● REFLECTORIZED PLASTIC DRUM | ▨ WORK ZONE | WORK VEHICLE |
| P POLICE DETAIL | ➔ DIRECTION OF TRAFFIC | TRUCK MOUNTED ATTENUATOR |
| ▨ TYPE III BARRICADE | IMPACT ATTENUATOR | TRAFFIC OR PEDESTRIAN SIGNAL |
| FLASHING ARROW PANEL | MEDIAN BARRIER | SIGN |
| FLASHING ARROW PANEL | MEDIAN BARRIER WITH WARNING LIGHTS | F FLAGGER |



TEMPORARY TRAVEL WAY AND LATERAL PAVEMENT SLOPE
(AFTER WORK HOUR SETUP)

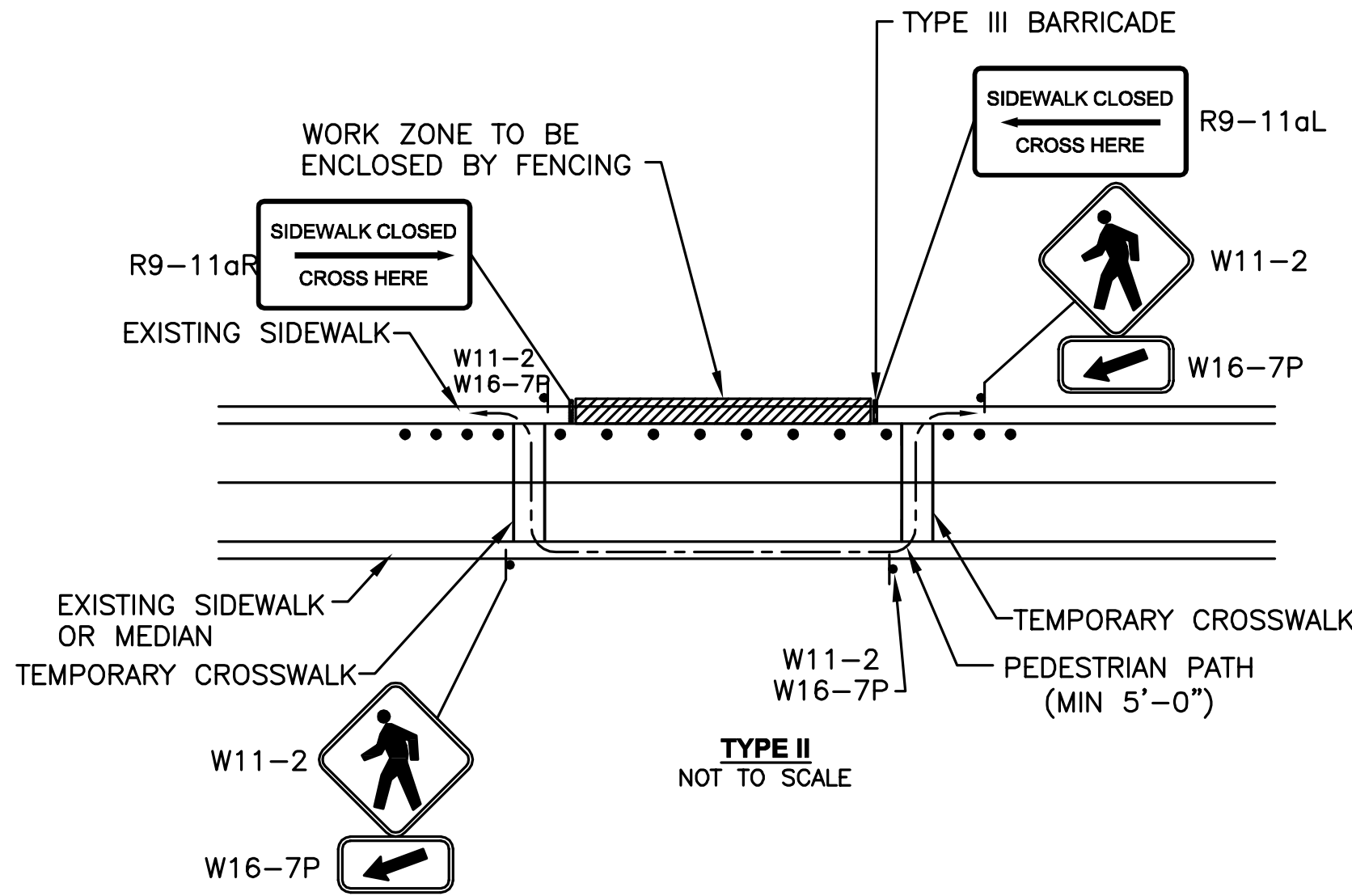
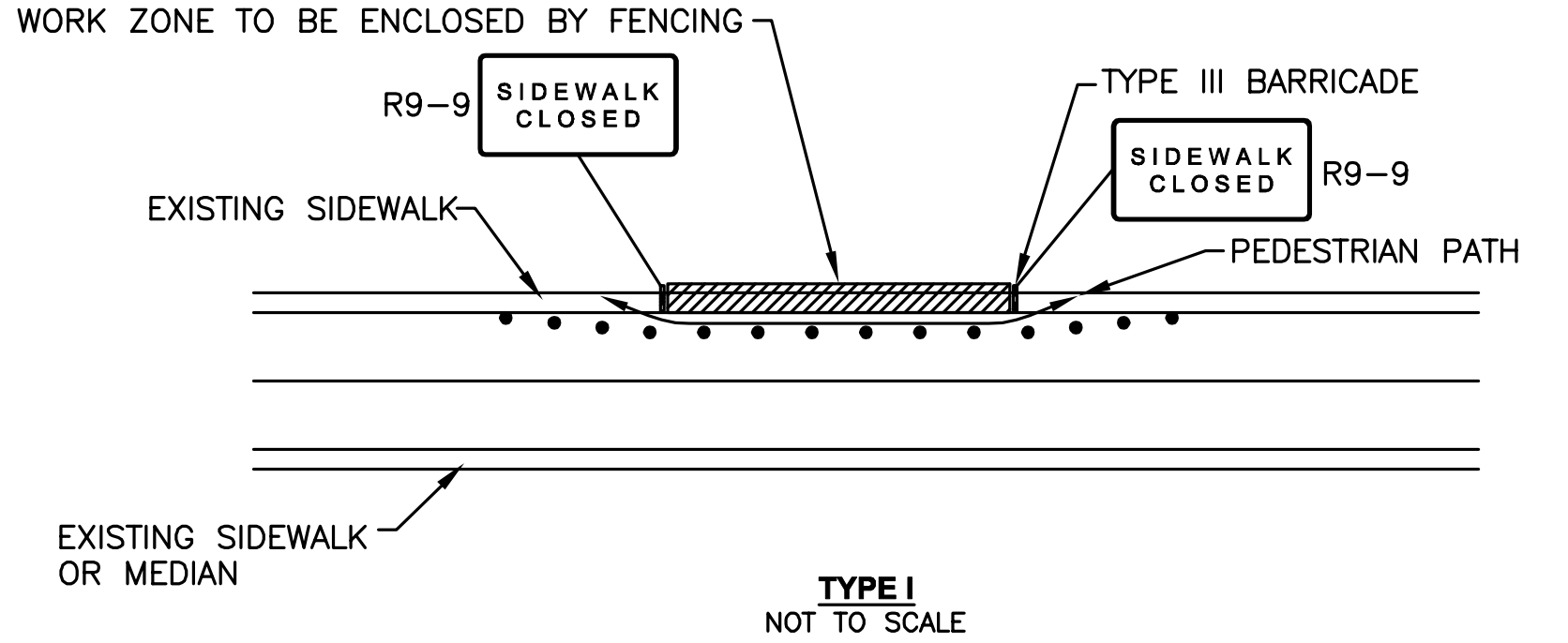
NOT TO SCALE



TEMPORARY PAVEMENT RAMP

NOT TO SCALE

PEDESTRIAN BYPASS



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.
- DIRECTION OF PEDESTRIAN TRAVEL.
- 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.
- BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.

TAPER LENGTH

SPEED LIMIT	FORMULA
40 MPH or Less	$L = WS^2/60$
45 MPH or Greater	$L = W \times S$
L = TAPER LENGTH IN FEET	
W = WIDTH OF OFFSET IN FEET	
S = POSTED SPEED IN MPH	

DEDHAM
ELM STREET AND RUSTCRAFT ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XX-XXXX(XXX)	25	28
PROJECT FILE NO.		607901	

TEMPORARY TRAFFIC CONTROL PLAN

GENERAL CONSTRUCTION STAGES

- UTILITY WORK
 - CONSTRUCT ALL PROPOSED UTILITIES AND ADJUST, ABANDON, REMOVE, OR REMOVE AND RESET, ALL EXISTING UTILITIES, AS SHOWN ON THE PLANS.
- ROADWAY MILLING AND RESURFACING
 - MILL ROADWAY, ONE HALF AT A TIME, THE LENGTH OF WHICH WILL BE DETERMINED BY THE CONTRACTOR'S ABILITY TO EXCAVATE AND MAKE SUITABLE FOR TRAFFIC THE ENTIRE WIDTH OF ROADWAY BY THE END OF THE DAY.
 - DURING THE FIRST HALF OF THE DAY, MILL ONE HALF OF THE ROADWAY AND MAKE THE AREA SUITABLE FOR TRAFFIC, WHILE MAINTAINING TRAFFIC IN EACH DIRECTION AROUND WORK ZONE AS SHOWN, AND BY POLICE OFFICER.
 - DURING THE SECOND HALF OF THE DAY, SWITCH TRAFFIC TO THE PREVIOUSLY MILLED PORTION OF ROADWAY AND REPEAT THE SEQUENCE ON THE REMAINING HALF OF ROADWAY.
- WIDENING

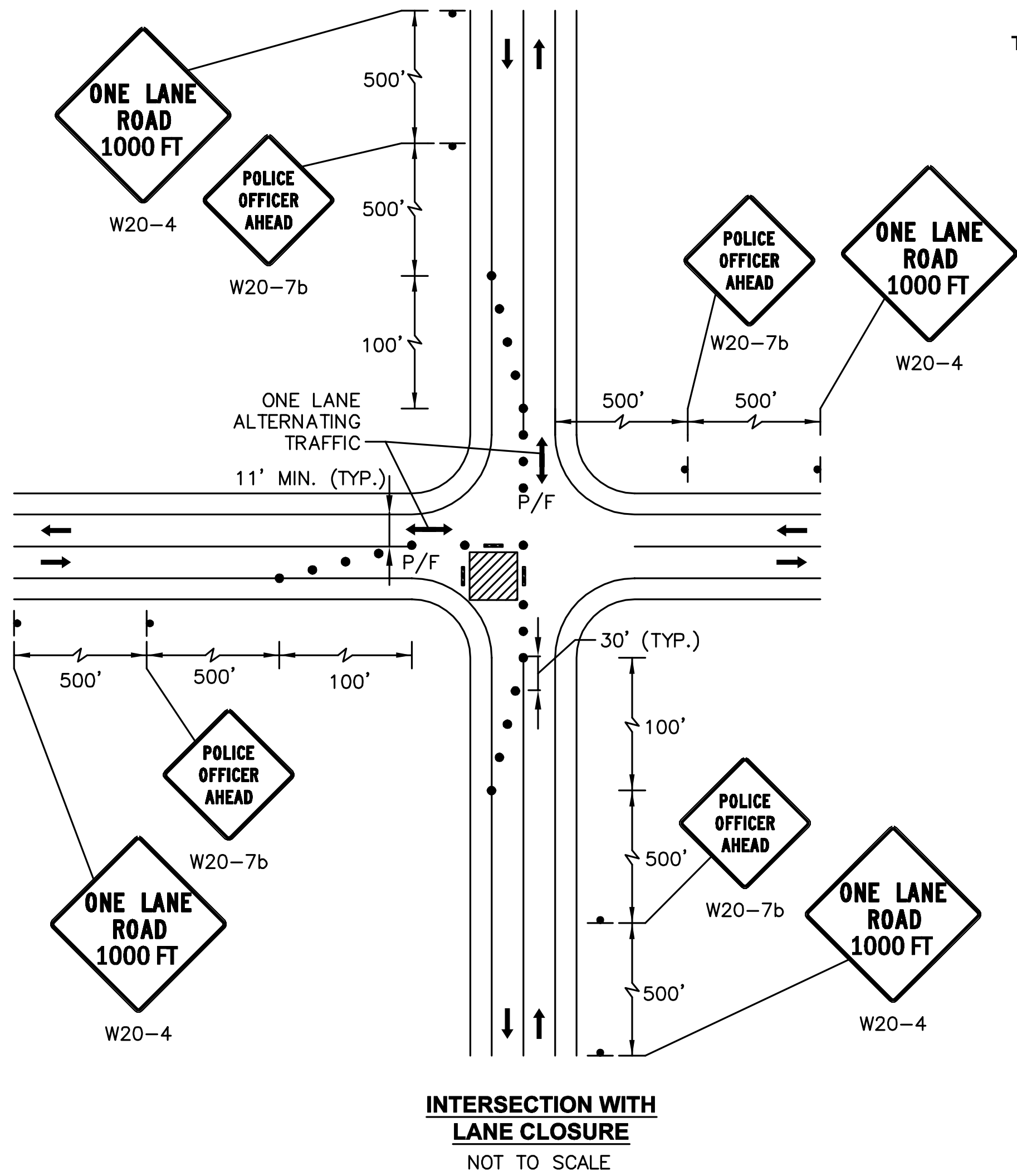
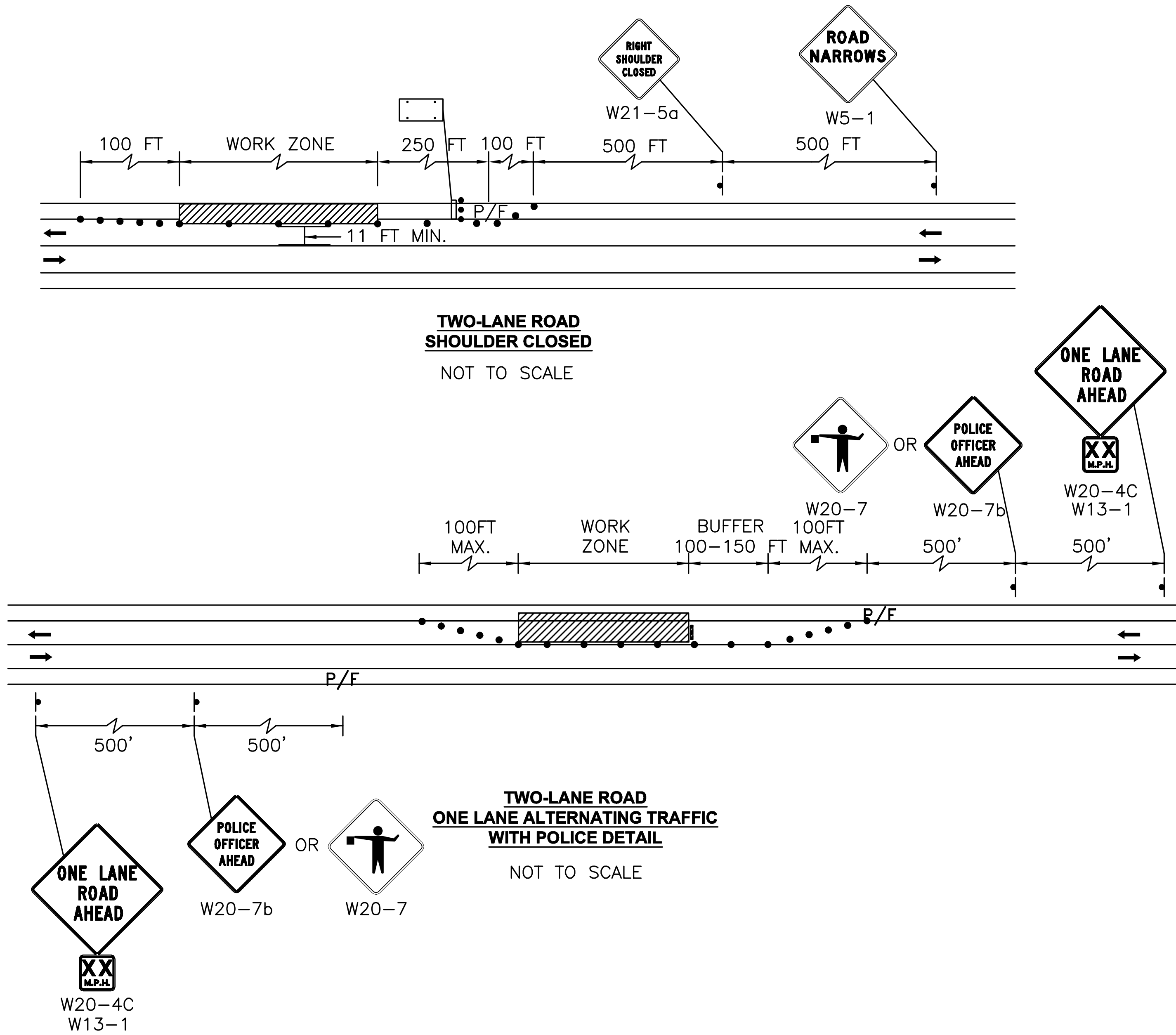
SET CURBING AND PERFORM BOX WIDENING.
- TRAFFIC CONTROL

INSTALL ALL TRAFFIC SIGNAL EQUIPMENT AND SIGNING.
- SIDEWALKS AND ISLANDS

CONSTRUCT SIDEWALKS AND ISLANDS
- TOP COURSE AND BINDER COURSE

PLACE BINDER COURSE (WHERE REQUIRED) FOLLOWED BY TOP COURSE FOR THE ENTIRE LENGTH OF THE PROJECT.
- PAVEMENT MARKINGS

INSTALL PAVEMENT MARKINGS.



WORK ZONE
SPEEDING
FINES
DOUBLED

R2-10a
NOTE:
"WORK ZONE"
BLACK ON ORANGE;
"SPEEDING FINES DOUBLED"
BLACK ON WHITE

SIDEWALK
CLOSED

R9-9
30" x 18"

SIDEWALK CLOSED
CROSS HERE

R9-11aR
48" x 24"

SIDEWALK CLOSED
CROSS HERE

R9-11aL
48" x 24"

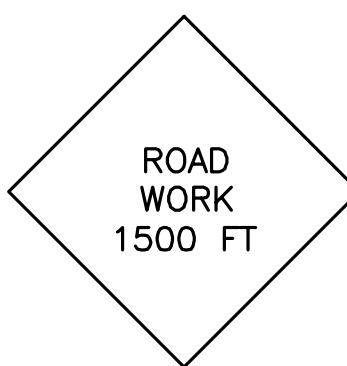
END ROAD
WORK

DOUBLED
FINES END

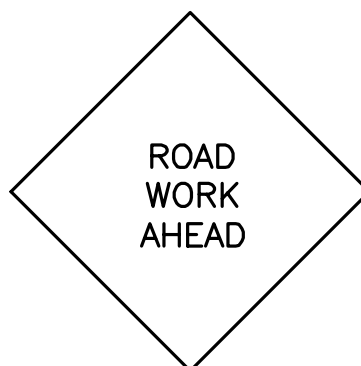
R2-10e
NOTE:
"END ROAD WORK"
BLACK ON ORANGE;
"DOUBLE FINES END"
BLACK ON WHITE

XX
M.P.H.

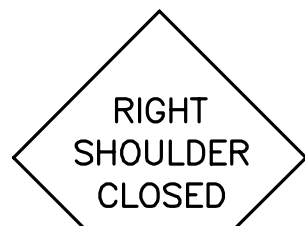
W13-1
24" x 30"



W20-1A
36" x 36"



W20-1B
36" x 36"



W21-5aR
30" x 30"

CONSTRUCTION SIGNS

SAFETY SIGNING FOR CONSTRUCTION OPERATIONS

LEGEND	TYPE	SIZE	UNIT AREA	NO. SIGNS *	TOTAL AREA	POSTS
END ROAD WORK	R2-10e	48" x 36"	12 SF	2	24 SF	P-5: 4
WORK ZONE SPEEDING FINES	R2-10a	48" x 36"	12 SF	2	24 SF	P-5: 4
SIDEWALK CLOSED	R9-9	30" x 18"	3.8 SF	2	7.5 SF	P-5: 2
SIDEWALK CLOSED CROSS HERE	R9-11a	48" x 24"	8 SF	2	16 SF	P-5: 2
ROAD NARROWS	W5-1	36" x 36"	9 SF	2	18 SF	P-5: 2
ROUGH ROAD	W8-8	30" x 30"	6.3 SF	2	12.5 SF	P-5: 2
GRAPHICS	W11-2	30" x 30"	6.3 SF	4	25 SF	P-5: 4
ADVISORY SPEED	W13-1	24" x 30"	5 SF	2	10 SF	P-5: 0
GRAPHICS	W16-7P	24" x 12"	2 SF	4	8 SF	P-5: 0
ROAD WORK 1500 FT	W20-1A	36" x 36"	9 SF	2	18 SF	P-5: 2
ROAD WORK AHEAD	W20-1B	36" x 36"	9 SF	2	18 SF	P-5: 2
ONE LANE ROAD 1000 FT	W20-4	36" x 36"	9 SF	4	36 SF	P-5: 4
FLAGGER	W20-7	36" x 36"	9 SF	2	18 SF	P-5: 2
POLICE OFFICER AHEAD	W20-7b	36" x 36"	9 SF	2	18 SF	P-5: 2
RIGHT SHOULDER CLOSED	W21-5aR	30" x 30"	6.3 SF	2	12.5 SF	P-5: 2
TOTAL AREA OF SIGNS					265.5 SF	TOTAL: 34

* NO. OF SIGNS ARE ESTIMATED FOR BIDDING PURPOSES ONLY

