

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF
BEACH ROAD
IN THE TOWN OF
TISBURY
DUKES COUNTY

TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	58
PROJECT FILE NO.		607411	

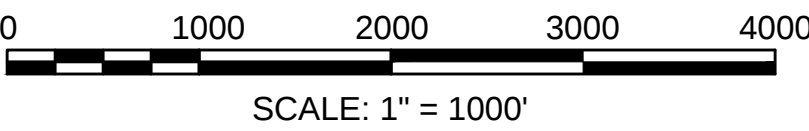
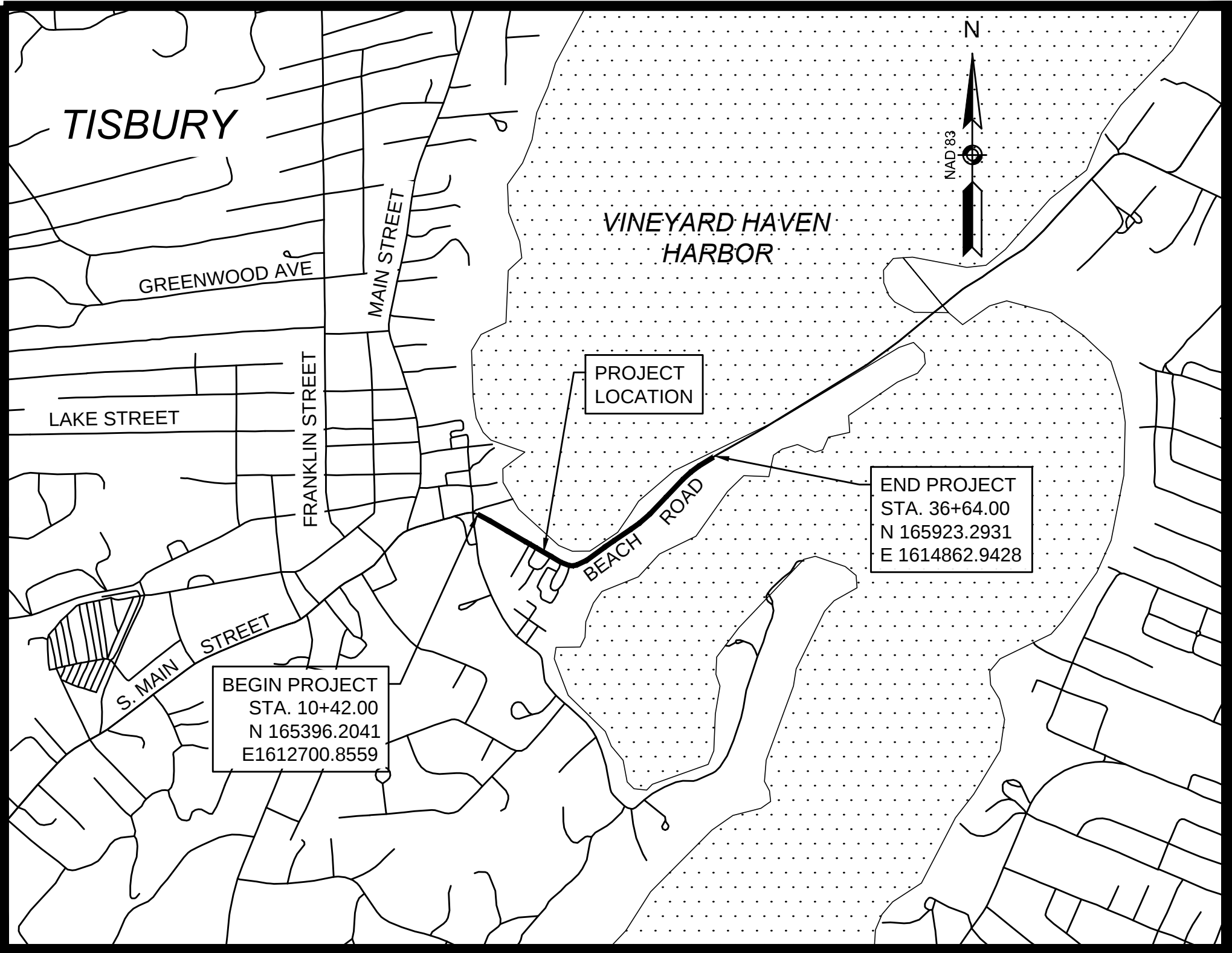
TITLE SHEET & INDEX

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, 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

REVISED DECEMBER 2015

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	KEY PLAN & BORING LOCATIONS
4	BORING LOGS
5-6	TYPICAL SECTIONS
7-11	CONSTRUCTION BASELINE TIES
12-16	CONSTRUCTION PLANS & PROFILES
17-21	DRAINAGE & UTILITY PLANS
22-26	TRAFFIC SIGN & PAVEMENT MARKINGS
27	TRAFFIC SIGN SUMMARY SHEET
28-30	TEMPORARY TRAFFIC CONTROL PLANS
31	CONSTRUCTION DETAILS
32-33	WHEELCHAIR RAMP/DRIVEWAY DETAILS
34-58	CROSS SECTIONS



LENGTH OF PROJECT = 2622 FEET = 0.4966 MILES

DESIGN DESIGNATION (BEACH ROAD)

DESIGN SPEED	30 MPH
ADT (2015)	13,500
ADT (2022)	14,500
K	7.0%
D	55%
T (PEAK HOUR)	3.5%
T (AVERAGE DAY)	3.5%
DHV	1,015
DDHV	560
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

GPI

Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 Ballardvale Street, Suite 202, Wilmington, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

<http://www.gpinet.com>

DATE	DESCRIPTION	REV #



RECOMMENDED FOR APPROVAL

CHIEF ENGINEERDATE

APPROVED

DIVISION ADMINISTRATORDATEHIGHWAY ADMINISTRATORDATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

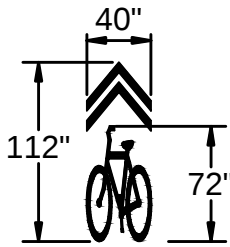
APPROVED:

GENERAL SYMBOLS

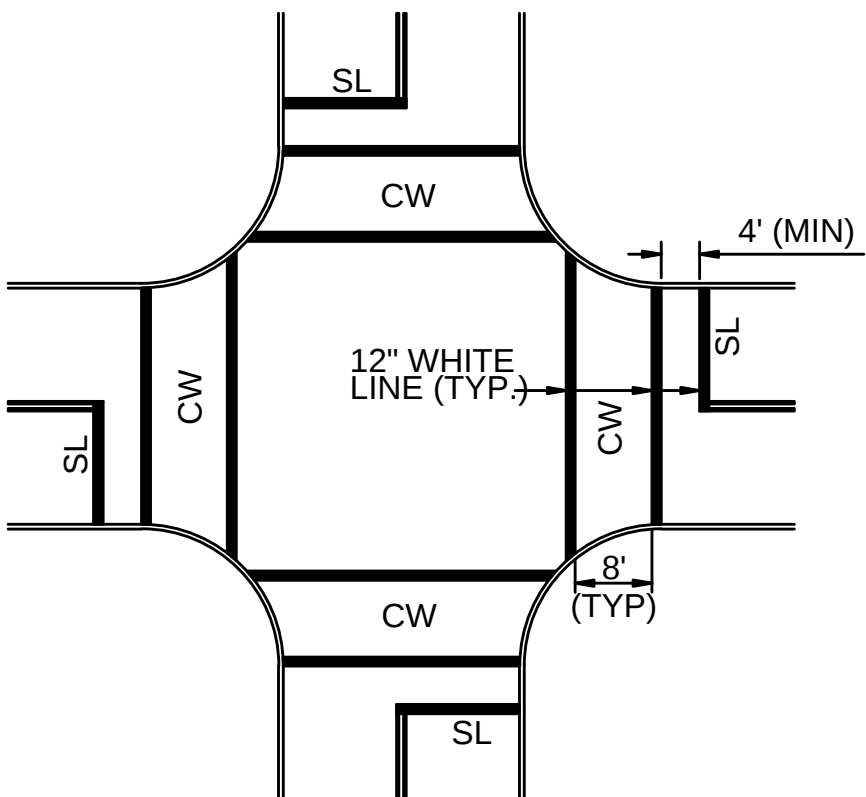
EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER ON BRIDGE OR JERSEY BARRIER
CB	CB	CATCH BASIN
CBI	CBI	CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
PS	PS	POST SQUARE
PC	PC	POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
FGP	FGP	FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL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

PAVEMENT MARKINGS SYMBOLS

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



SHARED LANE "SHARROW"
MARKING DETAIL
NOT TO SCALE



TYPICAL CROSSWALK MARKINGS
NOT TO SCALE

GENERAL NOTES

- TOPOGRAPHICAL INFORMATION WAS PROVIDED BY GREENMAN-PEDERSEN, INC. (978) 570-2977, OCTOBER 2013. VERTICAL DATUM IS BASED ON NAVD88. HORIZONTAL DATUM IS BASED ON NAD83 MASSACHUSETTS STATE PLANE, ISLAND ZONE.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION.
- WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R&R).
- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.
- ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- ALL EXISTING STATE, COUNTY, CITY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- ALL JOINTS BETWEEN NEW SURFACE PAVEMENT AND EXISTING SURFACE PAVEMENT TO REMAIN SHALL BE COATED WITH A HOT MIX ASPHALT JOINT SEALANT MEETING SPECIAL PROVISION ITEM 453.
- ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM BORROW PLACED AND SEEDED. THE LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.
- PRIOR TO THE START OF ANY NEW UTILITY WORK, ALL ELEVATIONS OF EXISTING UTILITIES IN THOSE AREAS ARE TO BE VERIFIED. THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY SHOULD ANY DISCREPANCIES OCCUR.
- ALL CASTINGS SHALL BE SET FLUSH WITH FINISHED GRADE.
- ALL PUBLICLY OWNED GATE BOXES, SERVICE BOXES, MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO GRADE BY THE CONTRACTOR.
- ALL NEW SIDEWALKS AND DRIVEWAY GRADES SHALL MATCH EXISTING GRADES AT BACK OF SIDEWALK LINE UNLESS SHOWN OTHERWISE ON THE PLANS AND CROSS-SECTIONS.
- THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PROTECT ALL EXISTING TREES AND ROOTS THAT ARE NOT DESIGNATED FOR REMOVAL.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.

GENERAL ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC	EXC	EXCAVATION	PVC	POINT OF VERTICAL CURVATURE
ABAN	ABANDON	F&C	FRAME AND COVER	PVI	POINT OF VERTICAL INTERSECTION
ADJ	ADJUST	F&G	FRAME AND GRATE	PVT	POINT OF VERTICAL TANGENCY
APPROX.	APPROXIMATE	FDN	FOUNDATION	PVMT	PAVEMENT
A.C.	ASPHALT CONCRETE	FLDSTN	FIELDSTONE	PWW	PAVED WATER WAY
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	GAR	GARAGE	R	RADIUS OF CURVATURE
BIT.	BITUMINOUS	GD	GROUND	R&D	REMOVE AND DISPOSE
BC	BOTTOM OF CURB	GG	GAS GATE	RCP	REINFORCED CONCRETE PIPE
BD.	BOUND	GI	GUTTER INLET	RD	ROAD
BL	BASELINE	GIP	GALVANIZED IRON PIPE	RDWY	ROADWAY
BLDG	BUILDING	GRAN	GRANITE	REM	REMOVE
BM	BENCHMARK	GRAV	GRAVEL	RET	RETAIN
BO	BY OTHERS	GRD	GUARD	RET WALL	RETAINING WALL
BOS	BOTTOM OF SLOPE	HDW	HEADWALL	ROW	RIGHT OF WAY
BR.	BRIDGE	HMA	HOT MIX ASPHALT	RR	RAILROAD
CB	CATCH BASIN	HOR	HORIZONTAL	R&R	REMOVE AND RESET
CBCI	CATCH BASIN WITH CURB INLET	HYD	HYDRANT	R&S	REMOVE AND STACK
CC	CEMENT CONCRETE	INV	INVERT	RT	RIGHT
CCM	CEMENT CONCRETE MASONRY	JCT	JUNCTION	SB	STONE BOUND
CEM	CEMENT	L	LENGTH OF CURVE	SHLD	SHOULDER
CI	CURB INLET	LB	LEACH BASIN	SMH	SEWER MANHOLE
CIP	CAST IRON PIPE	LP	LIGHT POLE	ST	STREET
CLF	CHAIN LINK FENCE	LT	LEFT	STA	STATION
CL	CENTERLINE	MAX	MAXIMUM	SSD	STOPPING SIGHT DISTANCE
CMP	CORRUGATED METAL PIPE	MB	MAILBOX	SHLO	STATE HIGHWAY LAYOUT LINE
CSP	CORRUGATED STEEL PIPE	MH	MANHOLE	SW	SIDEWALK
CO.	COUNTY	MHB	MASSACHUSETTS HIGHWAY BOUND	T	TANGENT DISTANCE OF CURVE/TRUCK %
CONC	CONCRETE	MIN	MINIMUM	TAN	TANGENT
CONT	CONTINUOUS	NIC	NOT IN CONTRACT	TEMP	TEMPORARY
CONST	CONSTRUCTION	NO.	NUMBER	TC	TOP OF CURB
CR GR	CROWN GRADE	PC	POINT OF CURVATURE	TOS	TOP OF SLOPE
DHV	DESIGN HOURLY VOLUME	PCC	POINT OF COMPOUND CURVATURE	TYP	TYPICAL
DI	DROP INLET	P.G.L.	PROFILE GRADE LINE	UP	UTILITY POLE
DIA	DIAMETER	PI	POINT OF INTERSECTION	VAR	VARIES
DIP	DUCTILE IRON PIPE	POC	POINT ON CURVE	VERT	VERTICAL
DW	STEADY DON'T WALK - PORTLAND ORANGE	POT	POINT ON TANGENT	VC	VERTICAL CURVE
DWY	DRIVEWAY	PRC	POINT OF REVERSE CURVATURE	WCR	WHEEL CHAIR RAMP
ELEV (or EL.)	ELEVATION	PROJ	PROJECT	WG	WATER GATE
EMB	EMBANKMENT	PROP	PROPOSED	WIP	WROUGHT IRON PIPE
EOP	EDGE OF PAVEMENT	PSB	PLANTABLE SOIL BORROW	WM	WATER METER/WATER MAIN
EXIST (or EX)	EXISTING	PT	POINT OF TANGENCY	X-SECT	CROSS SECTION

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	58
PROJECT FILE NO.		607411	

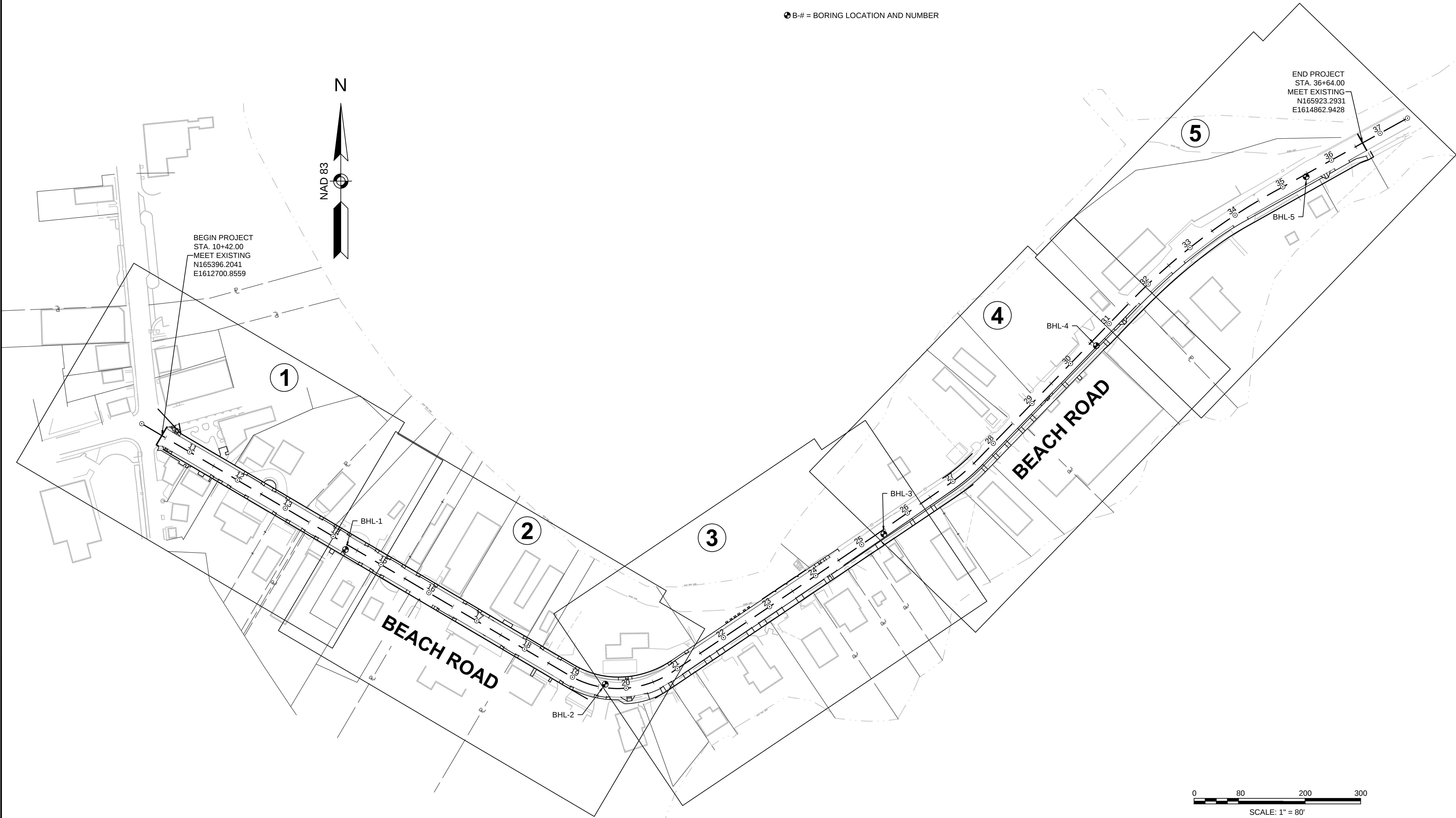
LEGEND & ABBREVIATIONS

SHEET REFERENCE:	1	2	3	4	5
Drawing Title:	Drawing Number:				
CONSTRUCTION BASELINE TIES	7	8	9	10	11
CONSTRUCTION PLANS & PROFILES	12	13	14	15	16
DRAINAGE & UTILITY PLANS	17	18	19	20	21
TRAFFIC SIGN & PAVEMENT MARKINGS	22	23	24	25	26

TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	58
PROJECT FILE NO.		607411	

KEY PLAN & BORING LOCATIONS

B-# = BORING LOCATION AND NUMBER



BORING LOG										Boring No. : <u>B-1</u>	
				Project: <u>Tisbury - Bike and Pedestrian Improvements</u> <u>Along Beach Road</u>				Boring Location: <u>Beach Road</u> N: <u>165188.78</u> E: <u>161304.36</u>			
								Log Checked by: <u>B. Waterman</u> Date Start: <u>September 29, 2014</u> Date Finish: <u>September 29, 2014</u>			
Design: <u>Nobis Engineering, Inc. for Greenman-Pedersen, Inc.</u> MassDOT Project No.: <u>607411 (Nobis No. 0854.03)</u> MassDOT Contract No.: <u>68386</u>				Rig Type / Model: <u>Truck / CME 75</u> Hammer Type: <u>Safety Hammer</u> Hammer Host: <u>Rope & Cathad</u>				Surface Elevation: <u>(+/-) 3</u> Datum: <u>NAVD 88</u>			
Contractor: <u>New England Boring Contractors</u> Driller: <u>N. Stultard</u> Nobis Representative: <u>C. Marchionda</u>											
Drilling Method				Sampler		Groundwater Observations					
Type	See Notes			Split-Spoon		Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Size ID (in.)	See Notes			1-3/8		05/29/14	10:30	1	0	4	< 5 minutes
Advancement	See Notes			140-lb Hammer							
SAMPLE INFORMATION					LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)				
Beam No.	Type	Recover (in.)	Depth (ft.)	Bowls/6 ft.	Ground Water	Grain Size					
1	S-4	3.6	0.7-1	220%		ASPHALT	8.5" ASPHALT. "S-1A" (7") ASPHALT.				
2	S-2	16	2.4	16			SAND	S-1B (3") Wet, very dense, brown, FINE TO COARSE SAND, some inorganic silt, trace asphalt fragments. S-2: Wet, dense, tan, FINE TO COARSE SAND, trace fine to medium gravel, trace inorganic silt. Laboratory Sieve Analysis Performed (9% Gravel, 88.3% Sand, 2.7% Fines). S-3: Wet, medium dense, tan, FINE TO COARSE SAND, trace inorganic silt, trace fine gravel.			
3	S-3	17	4.6	13							
4				13							
5				13							
6				15							
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

Minor Components	Percentage
trace	<10
some	10 - 40
and	40 - 50

NOTES: 1) Boring Started: 08:15; Boring Completed: 10:45; Duration: 1 hour 30 minutes.
 2) Sampler Hammer Fall = 30"
 3) Borehole sampled continuously. 4" outside diameter solid stem auger used after split spoon sampling to obtain a bulk sample.
 4) Borehole backfilled with bagged sand, concrete, and asphalt pitched to the surface.
 5) Groundwater in this borehole is likely influenced by tidal conditions.

Best descriptions are based on visual observations and should be considered approximate. Stratification lines are approximate locations between strata; variations may be gradual.

Contractor		Drilling Method		Sampler	Groundwater Observations						Stabilization Time < 5 minutes
		Type	See Notes	Split-Spoon	Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)		
New England Boring Contractors				1-3/8	09/29/14	11:30	2.5	0	4.5		
Driller: N. Stultard											
Nobis Representative: C. Marchionda											
Hammer Type / Model:				Tuck / CME 75							
Safety Hammer											
Rope & Cathode											
Datum:				NAVD 88							
SAMPLE INFORMATION				LITHOLOGY		GROUNDWATER DESCRIPTION AND REMARKS (Classification System: Modified Burnister)					NOTES
Borehole ID	Type	Recovery (%)	Depth (ft.)	Bowser / Elev.	Casings / Elevation						
1	S-1	13	0.5-2.5	45	27.03	CLASHALT S-1A (7'): Wet, dense, brown, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt (FILL). S-1B (7'): Moist, dense, tan, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt, trace brick fragments (FILL). S-2A (14'): Wet, dense, tan, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt. S-2B (2"): Wet, dense, gray, FINE TO COARSE SAND, trace inorganic silt, gasoline-like odor and sheen. S-3A (9'): Wet, medium dense, brown / gray, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt, gasoline-like odor and sheen. S-3B (4"): Wet, medium dense, gray, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt, strong gasoline-like odor and sheen. S-3C (5"): Wet, medium dense, brown, FINE TO COARSE SAND, trace inorganic silt. Boring terminated at 6.5 feet.					
2				23	-3.5 / 6.5						
3	S-2	16	2.5-4.5	16							
4				10							
5	S-3	18	4.5-6.5	12							
6				12							
7				9							
8				16							
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
Minor Components		Percentage									
trace		<10									
some		10 - 40									
and		40 - 50									

NOTES: 1) Boring Started: 10:45; Boring Completed: 12:30; Duration: 1 hour 45 minutes.
 2) Sampler Hammer Fall = 30"
 3) Borehole sampled continuously. 4" outside diameter solid stem auger used after split spoon sampling to obtain a bulk sample.
 4) Borehole backfilled with bagged sand, concrete, and asphalt patched to the surface.
 5) Groundwater in this borehole is likely influenced by tidal conditions.

* Soil descriptions are based on visual classifications and should be considered approximate. Stratification terms are approximate boundaries between strata; transitions may be gradual.



Project: Tisbury - Bike and Pedestrian Improvements

Along Beach Road

Design: Nobis Engineering, Inc. for Greenman-Pedersen, Inc.

MassDOT Project No.: 607411 (Nobis No. 08530.04)

MassDOT Contract No.: 68386

Boring Log #: B-3

Boring Location: Beach Road

N: 165219.39 E: 1614000.90

Log Checked by: B. Waterman

Date Start: September 29, 2014

Date Finish: September 29, 2014

Surface Elevation: (+/-) 4

Datum: NAVD 88

Contractor: New England Boring Contractors

Driller: N. Stultard

Nobis Representative: C. Marchionda

Rig Type / Model: Truck / CME 75

Hammer Type: Safety Hammer

Hammer Holst: Rope & Cathead

Drilling Method		Sampler		Groundwater Observations					
Type	See Notes	Split-Spoon		Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Size ID (in.)	See Notes	1-3/8		9/29/14	00:55	2	0	5	< 5 minutes
Advancement	See Notes	140-lb Hammer							

SAMPLE INFORMATION					LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burlingurst)	NOTES
Depth (ft.)	Type Recovery (%)	Depth (ft.)	Blow/ft.	Gravel	Stratum Elevation (ft.)			
1	8-4	9	0.7-1.4	30	ASPHALT	7.5' ASPHALT	S-1A (5'): Wet, very dense, brown, FINE TO COARSE SAND, some inorganic silt (FILL). S-1B (3'): ASPHALT S-2A (3'): ASPHALT S-2B (13'): Wet, dense, brown, FINE TO COARSE SAND, some inorganic silt; trace fine gravel. S-3: Wet, medium dense, brown, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt. Boring terminated at 6 feet.	
2	S-2	16	2-4	40	BURIED ASPHALT			
3	S-3	19	4-8	10	SAND			
4				17				
5				21				
6				12				
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Minor Components	Percentage
trace	<10
some	10 - 40
and	40 - 50

NOTES: 1) Boring Started: 12:38; Boring Completed: 13:43; Duration: 1 hour 5 minutes.

2) Sampler Hammer Fall = 30"

3) Borehole sampled continuously. 4" outside diameter solid stem auger used after split spoon sampling to obtain a bulk sample.

4) Borehole backfilled with bagged sand, concrete, and asphalt patched to the surface.

5) Groundwater in this borehole is likely influenced by tidal conditions.

See descriptions are based on visual classification and should be considered approximate. Stratification lines are approximate boundaries between strata; they are not final.

Page No. 1 of 4



Project: Tisbury - Bike and Pedestrian Improvements

Location: Along Beach Road

Design: Nobis Engineering, Inc. for Greenman-Pedersen, Inc.

MassDOT Project No.: 607411 (Nobis No. 85830.04)

MassDOT Contract No.: 68386

Boring No.: B-4

Boring Location: Beach Road

N: 165559.58 E: 1614383.10

Log Checked by: B. Waterman

Date Start: September 29, 2014

Date Finish: September 29, 2014

Surface Elevation: (+/-) 2

Datum: NAVD 88

Contractor: New England Boring Contractors

Driller: N. Stultard

Nobis Representative: C. Marchionda

Rig Type / Model: Truck / CME 75

Hammer Type: Safety Hammer

Hammer Host: Rope & Cathed

Drilling Method		Sampler	Groundwater Observations					
Type	See Notes	Split-Spoon	Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Size ID (in.)	See Notes	1-3/8	05/29/14	14:34	1.8	0	6	< 5 minutes
Advancement	See Notes	140-lb Hammer						

SAMPLE INFORMATION				LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burnister)	NOTES
Depth (ft.)	Recovery (ft.)	Depth (ft.)	Recovery (ft.)	Grain Size	Stratification / Depth (ft.)		
1	3-4	16	0-7.2	16	ASPHALT	8" ASPHALT	S-1: Wet, medium dense, brown FINE TO COARSE SAND, some inorganic silt, trace fine gravel. S-2: Wet, medium dense, gray / brown, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt. S-3: Wet, medium dense, gray / brown, FINE TO COARSE SAND, some fine to medium gravel, trace inorganic silt. Boring terminated at 6.7 feet.
2		16		16			
3		16		10			
4		11		11			
5		9		12			
6		12		11			
7		9		9			
8		13		13			
9		16		16			
10		19		19			
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Minor Components	Percentage
trace	< 10
some	10 - 40
and	40 - 50

Notes:

1) Boring Started: 13:43; Boring Completed: 15:00; Duration: 1 hour 17 minutes.
2) Sampler Hammer Fall = 30"
3) Borehole sampled continuously. 4" outside diameter solid stem auger used after split spoon sampling to obtain a bulk sample.
4) Borehole backfilled with bagged sand, concrete, and asphalt patched to the surface.
5) Groundwater in this borehole is likely influenced by tidal conditions.

Small descriptions are based on visual classification and should be considered approximate. Stratification lines are approximate boundaries between strata; variations may be present.

Page No. 1

of 4



Project: Tisbury - Bike and Pedestrian Improvements

Along Beach Road

Design: Nobis Engineering, Inc. for Greenman-Pedersen, Inc.

MassDOT Project No.: 607411 (Nobis No. 65830.04)

MassDOT Contract No.: 68386

Boring No.: B-5

Boring Location: Beach Road

N: 165862.06 E: 1614760.51

Log Checked by: B. Waterman

Date Start: September 30, 2014

Date Finish: September 30, 2014

Surface Elevation: (+/-) 4

Datum: NAVD 88

Contractor: New England Boring Contractors

Driller: N. Stultard

Nobis representative: C. Marchionda

Rig Type / Model: Truck / CME 75

Hammer Type: Safety Hammer

Hammer Host: Rope & Cathpad

Drilling Method		Sampler		Groundwater Observations					
Type	See Notes	Split-Spoon		Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Size ID (in.)	See Notes	1-3/8		09/30/14	09:30	4	0	6	< 5 minutes
Advancement	See Notes	140-lb Hammer							

SAMPLE INFORMATION					LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
Depth (ft.)	Type	Recovery (in.)	Depth (ft.)	Borehole Size (in.)	Groundwater	Stratigraphic Elevation / Depth (ft.)		
1						ASPHALT 32.0/3	10" ASPHALT. S-1: Wet, medium dense, brown. FINE TO COARSE SAND, trace inorganic silt, trace fine gravel. S-2: Wet, medium dense, brown, FINE TO COARSE SAND, trace fine gravel, trace inorganic silt. Laboratory Sieve Analysis Performed (3% Gravel, 94.3% Sand, 2.7% Fines). S-3: Wet, medium dense, brown, FINE TO COARSE SAND, trace inorganic silt, trace fine gravel. Laboratory California Bearing Ratio Test performed on bulk sample taken from approximately 1 to 5' below ground surface. Maximum dry density 112.0 pounds per cubic foot, optimum moisture content 12.5%. Boring terminated at 7 feet.	
2	S-1	17	1-3	14				
3				9				
4	S-2	14	3-5	11				
5				10				
6	S-3	23	5-7	11				
7				6				
8				6				
9				6				
10				6				
11				6				
12				6				
13				6				
14				6				
15				6				
16				6				
17				6				
18				6				
19				6				
20				6				
21				6				
22				6				
23				6				
24				6				
25				6				
26				6				
27				6				
28				6				
29				6				
30				6				

Minor Components	Percentage	NOTES
trace	< 10	NOTES: 1) Boring Started: 08:16; Boring Completed: 09:30; Duration: 1 hour 14 minutes. 2) Sampler Hammer Fall = 30" 3) Borehole sampled continuously; 4" outside diameter solid stem auger used after split spoon sampling to obtain a bulk sample. 4) Borehole backfilled with bagged sand, concrete, and asphalt pitched to the surface. 5) Groundwater in this borehole is likely influenced by tidal conditions.
some	10 - 40	
and	40 - 50	

All descriptions are based on visual classifications and should be considered approximate. Stratification lines are approximate boundaries between strata; transitions may be gradual.

Page No. 1 of 1

TISBURY BEACH ROAD

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	58
PROJECT FILE NO.		607411	

TYPICAL SECTIONS

PAVEMENT NOTES

FULL DEPTH HMA CONSTRUCTION

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
2-1/4" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER

BASE: 4" SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER
8" GRAVEL BORROW TYPE B (OR SUITABLE EXISTING MATERIAL)

FULL DEPTH HMA CONSTRUCTION (LESS THAN 4 FEET)

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
2-1/4" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SSC - 19.0) OVER

SUBBASE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE OVER
8" GRAVEL BORROW TYPE B (OR SUITABLE EXISTING MATERIAL)

MICROMILLING AND HMA OVERLAY

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER

SURFACE MILLING: 1-3/4" PAVEMENT MICROMILLING (ITEM 415) TO BE USED ON THE EXISTING PAVEMENT SURFACE

TACK COAT: ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED AT THE RATE OF 0.07 GAL/S.Y. FOR
MILLED SURFACES AND 0.05 GAL/S.Y. FOR SMOOTH TIGHT PAVED SURFACES

HMA DRIVEWAYS

SURFACE COURSE: 1-1/2" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
2" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) OVER

SUBBASE: 8" GRAVEL BORROW TYPE B

HMA WALK

SURFACE COURSE: 1-1/4" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
1-1/4" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER

SUBBASE: 8" GRAVEL BORROW TYPE B

CEMENT CONCRETE SIDEWALK & SHARED USE PATH AT DRIVEWAY APRONS

SURFACE COURSE: 6" CEMENT CONCRETE (AIR ENTRAINED 4000 PSI, 3/4", 610) OVER

SUBBASE: 8" GRAVEL BORROW TYPE B

CEMENT CONCRETE SIDEWALK, WHEELCHAIR RAMPS & SHARED USE PATH

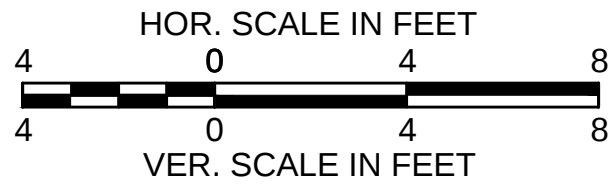
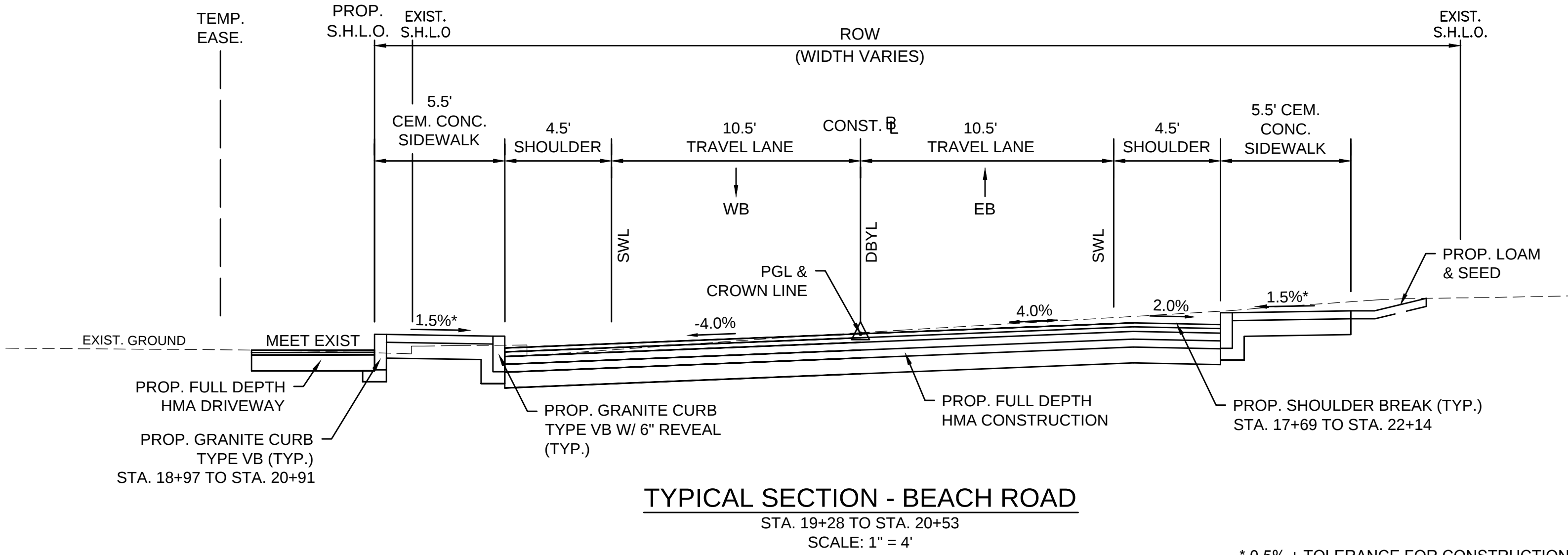
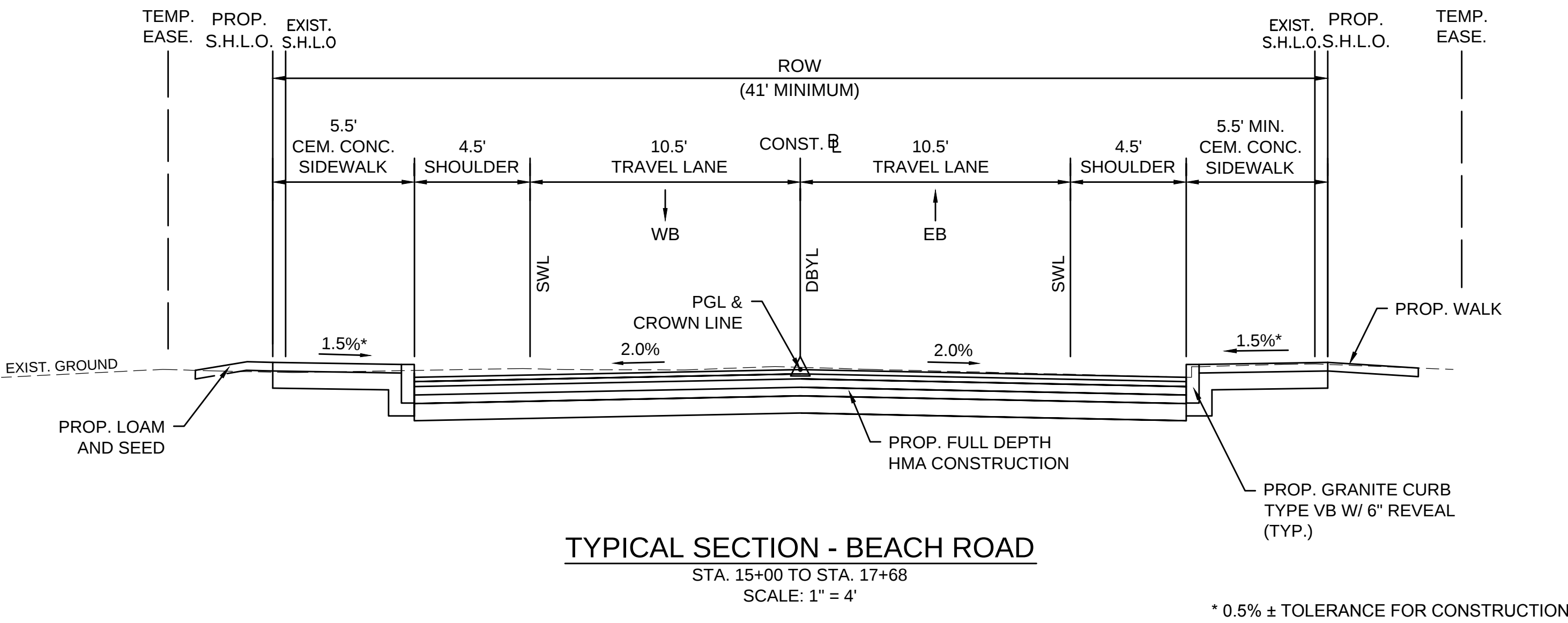
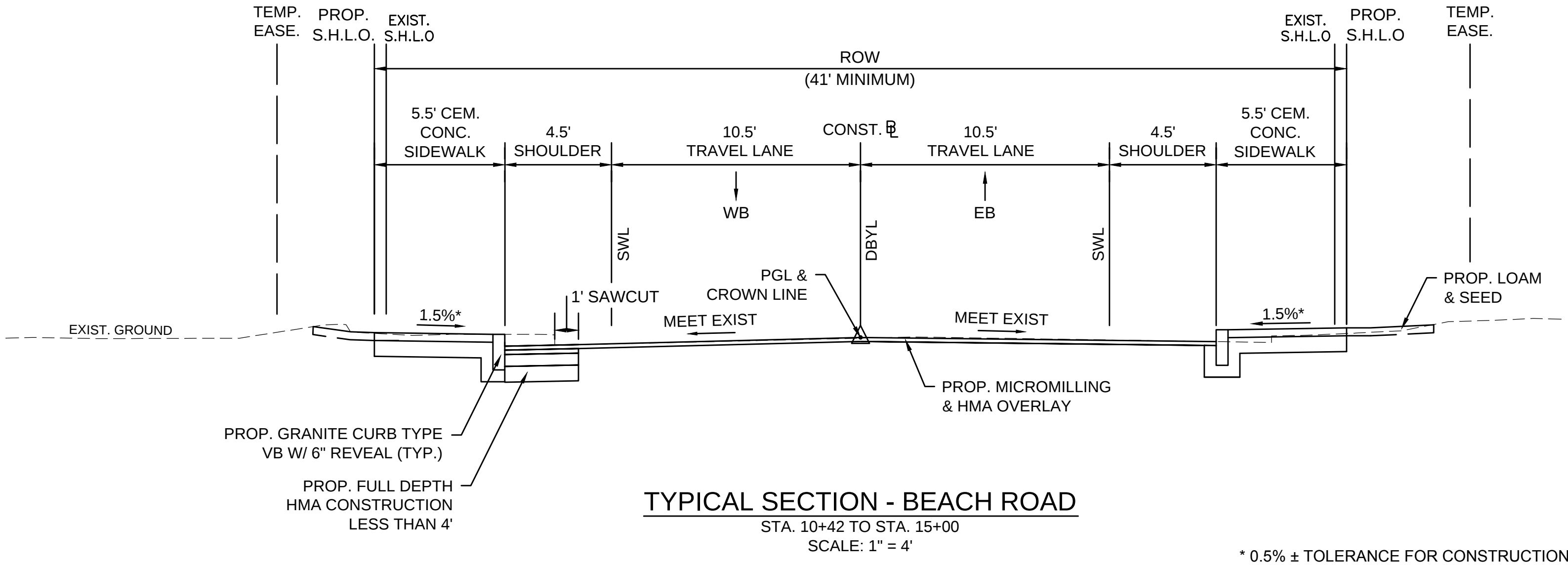
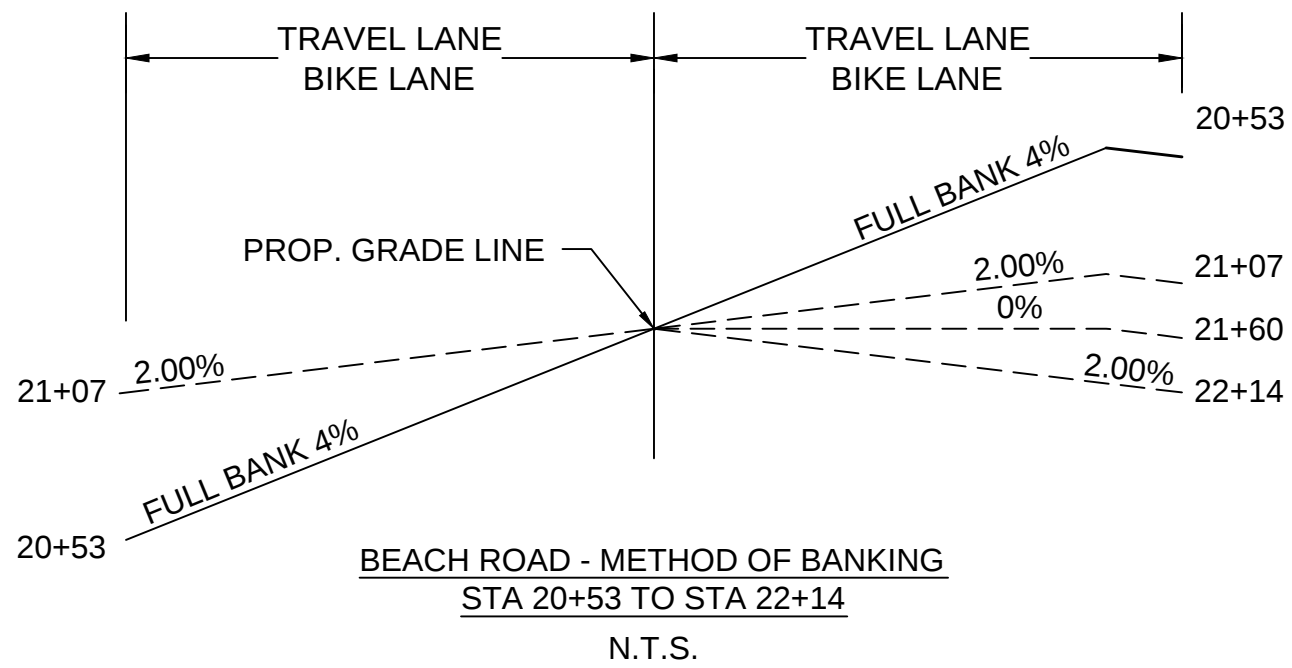
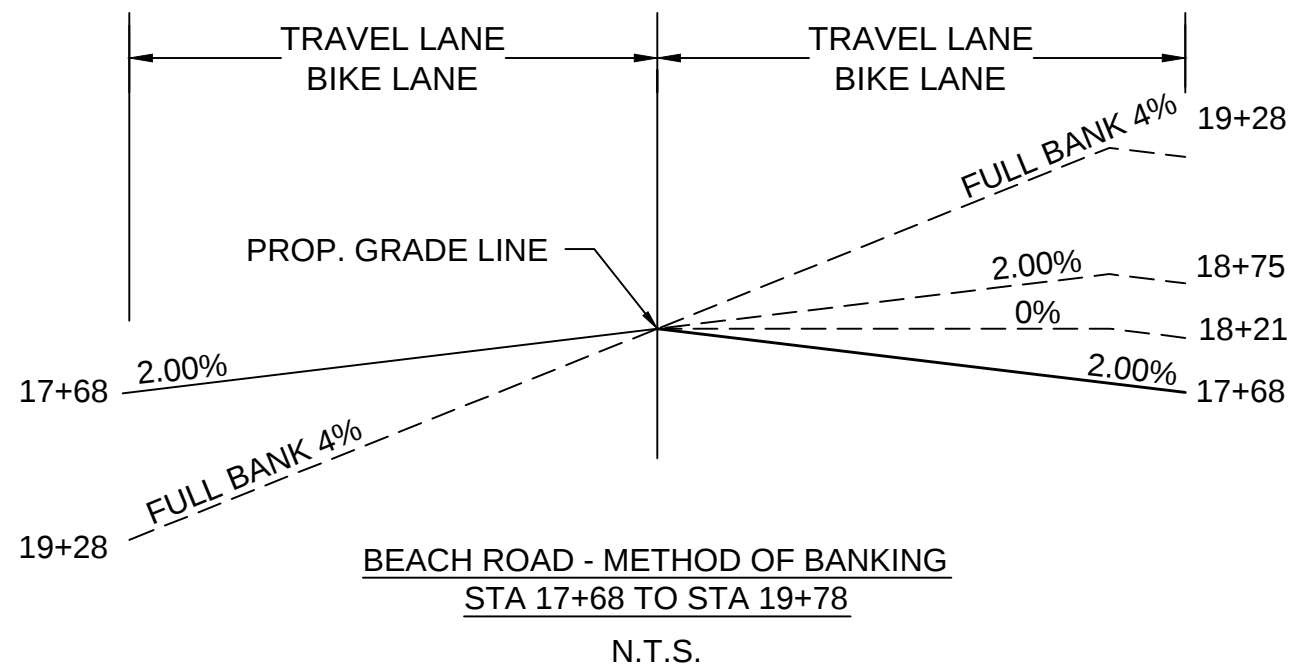
SURFACE COURSE: 4" CEMENT CONCRETE (AIR ENTRAINED 4000 PSI, 3/4", 610) OVER

SUBBASE: 8" GRAVEL BORROW TYPE B

NOTE:

1. THE SECTIONS OF PROPOSED ROADWAY NOT COVERED IN THE RANGE OF STATIONS ASSOCIATED WITH THE TYPICAL SECTIONS ARE IN AREAS OF TRANSITION AND THEREFORE NOT COVERED. THESE SECTIONS ARE AS FOLLOWS:

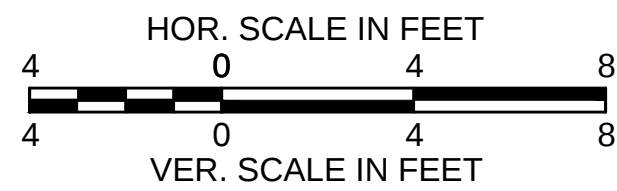
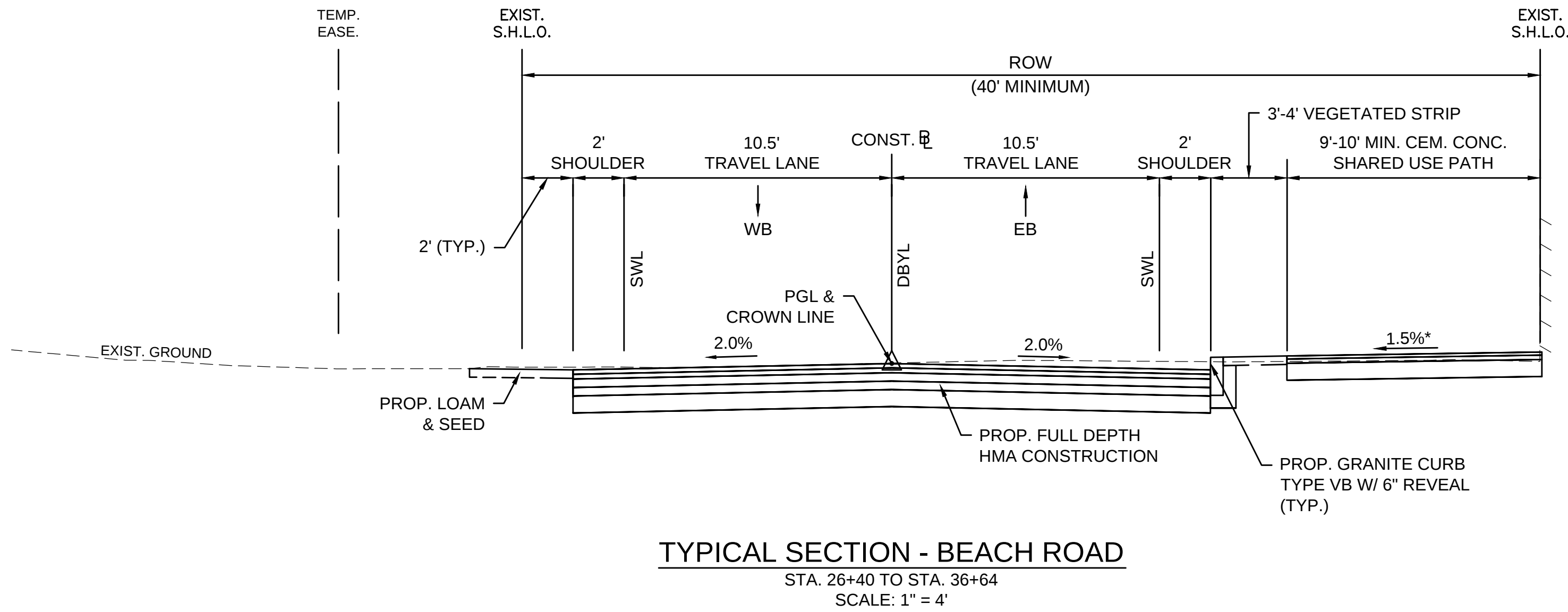
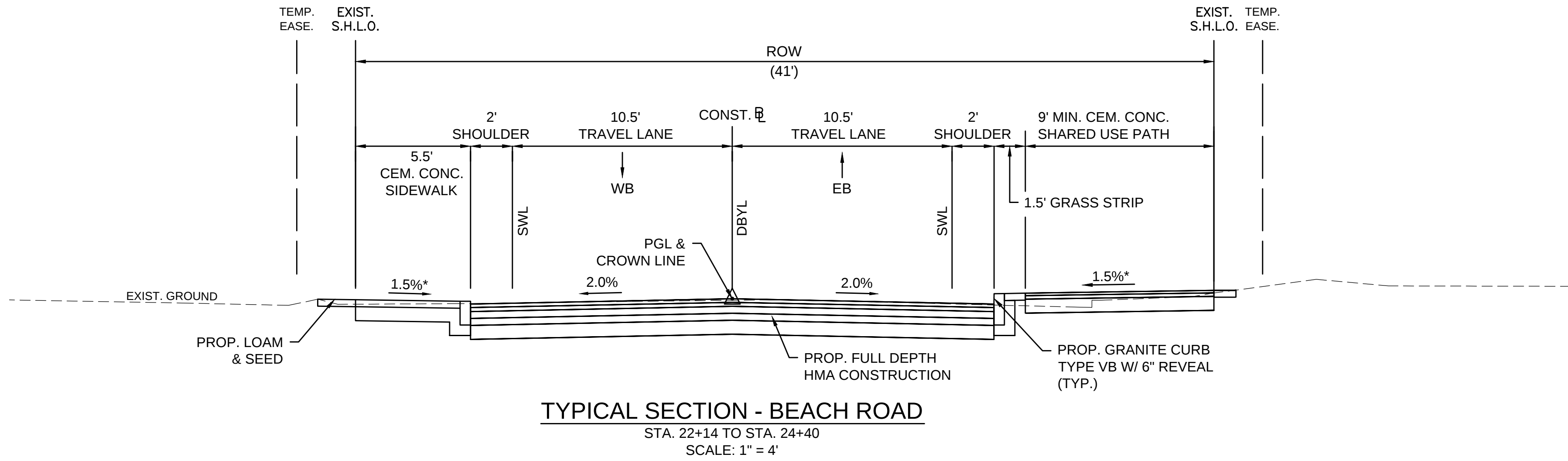
STA 17+68 TO STA. 19+28
STA. 20+53 TO STA. 22+14
STA. 24+40 TO STA. 26+40

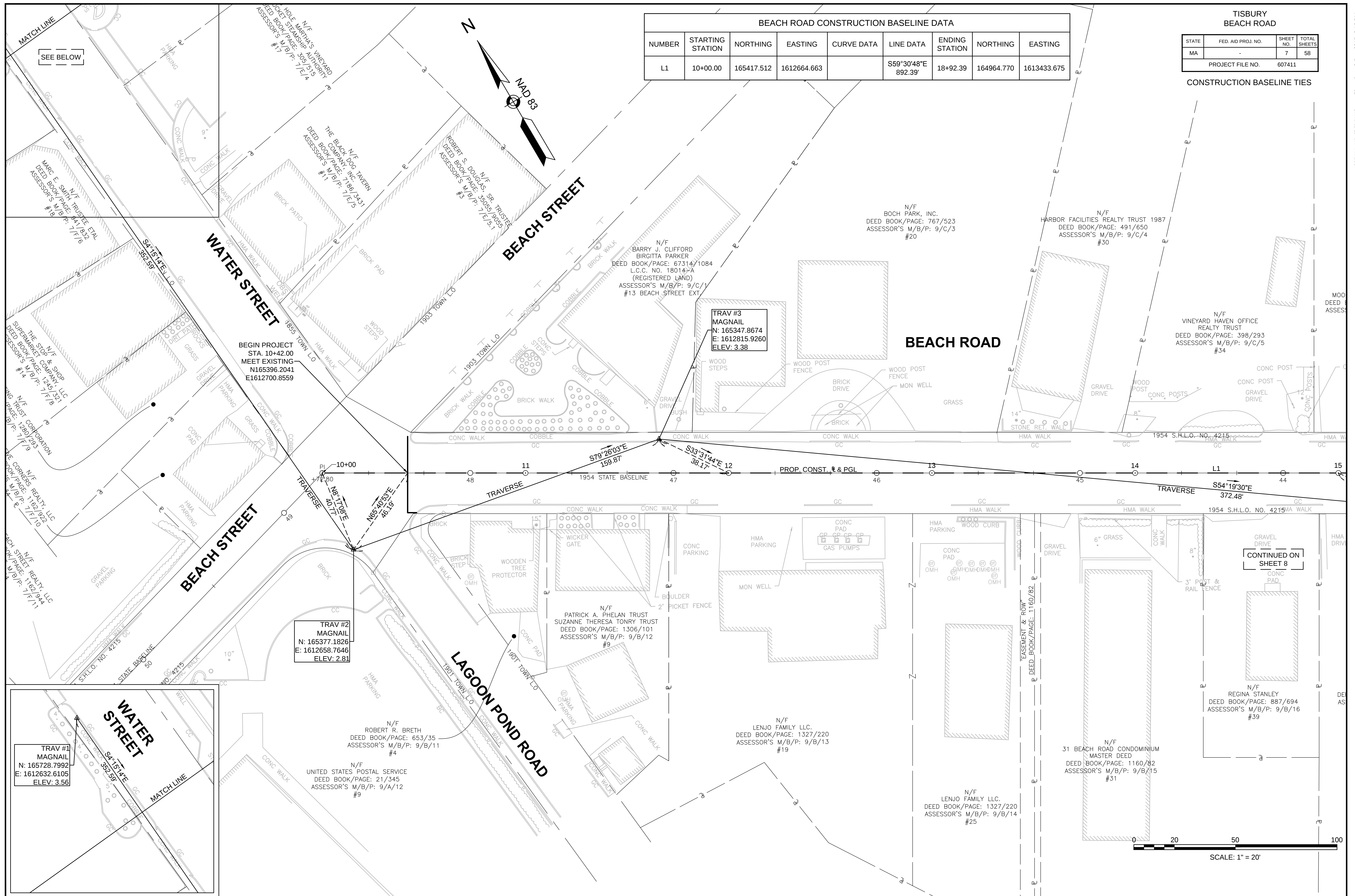


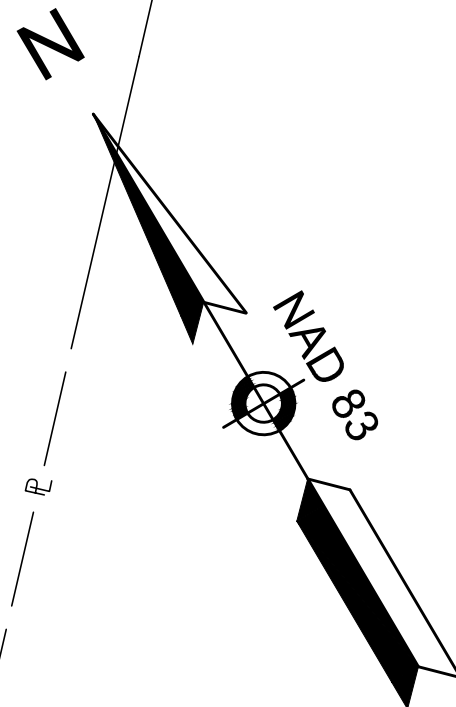
TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	58
PROJECT FILE NO.		607411	

TYPICAL SECTIONS







CONTINUED ON
SHEET 7

BEACH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	165417.512	1612664.663		S59°30'48"E 892.39'	18+92.39	164964.770	1613433.675
C1	18+92.39	164964.770	1613433.675	R = 175.00' Δ= 64°23'40" L=196.68' T=110.19'		20+89.07	164970.337	1613620.084

TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	58
PROJECT FILE NO.		607411	

CONSTRUCTION BASELINE TIES

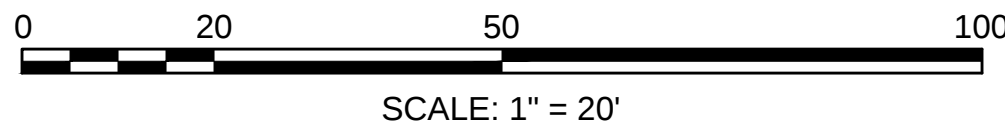
WF#CD1-1 WF#CD1-2 DUNE LINE WF#CD1-3

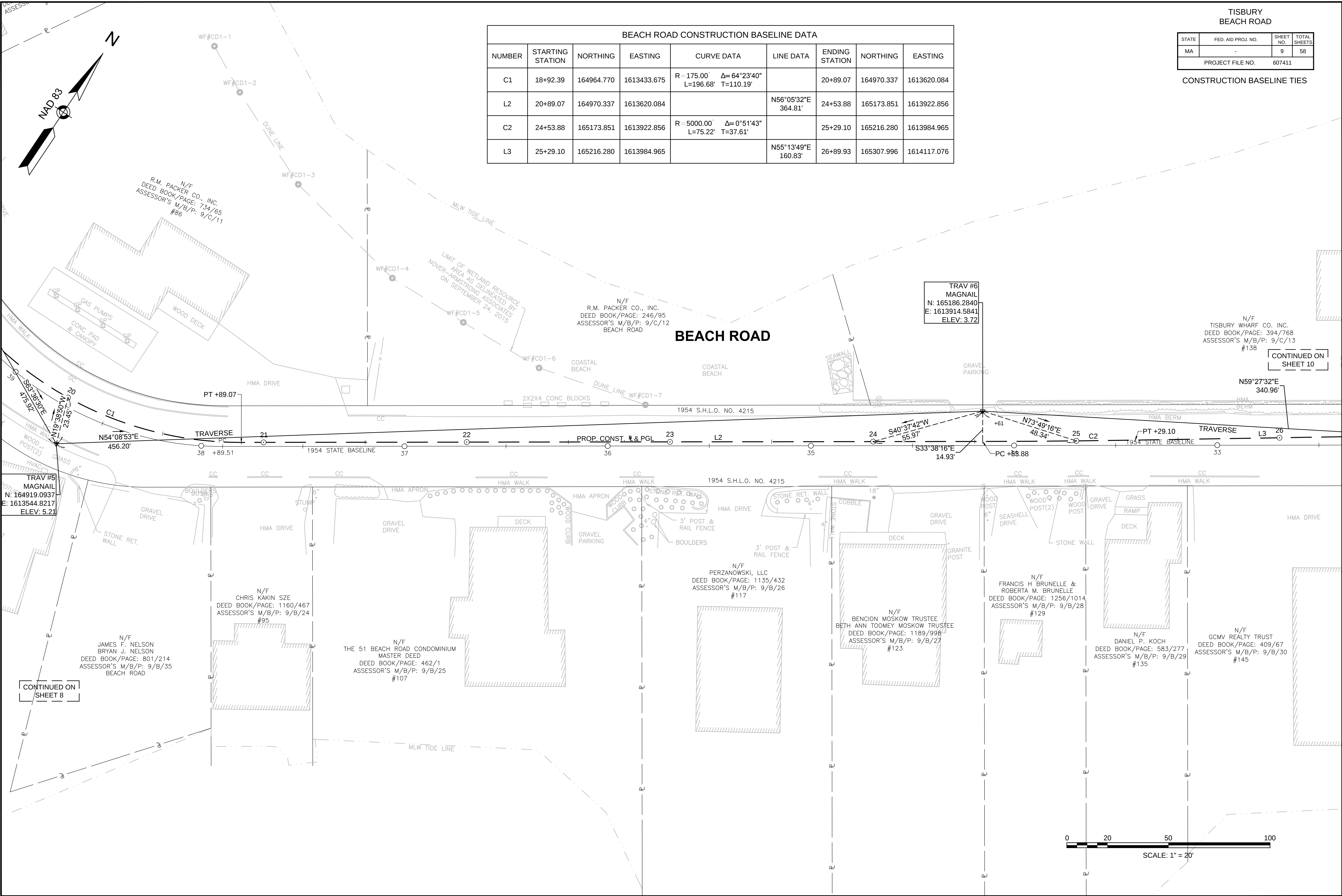
BEACH ROAD

TRAV #5
MAGNAIL
N: 164919.0937
E: 1613544.8217
ELEV: 5.21

TRAV #4
MAGNAIL
N: 165130.6398
E: 1613118.5079
ELEV: 3.43

CONTINUED ON
SHEET 9



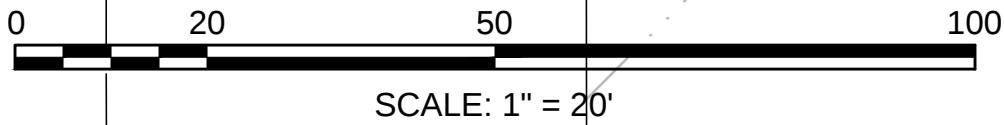


BEACH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C1	18+92.39	164964.770	1613433.675	R = 175.00' Δ= 64°23'40" L=196.68' T=110.19'		20+89.07	164970.337	1613620.084
L2	20+89.07	164970.337	1613620.084		N56°05'32"E 364.81'	24+53.88	165173.851	1613922.856
C2	24+53.88	165173.851	1613922.856	R = 5000.00' Δ= 0°51'43" L=75.22' T=37.61'		25+29.10	165216.280	1613984.965
L3	25+29.10	165216.280	1613984.965		N55°13'49"E 160.83'	26+89.93	165307.996	1614117.076

TISBURY
BEACH ROAD

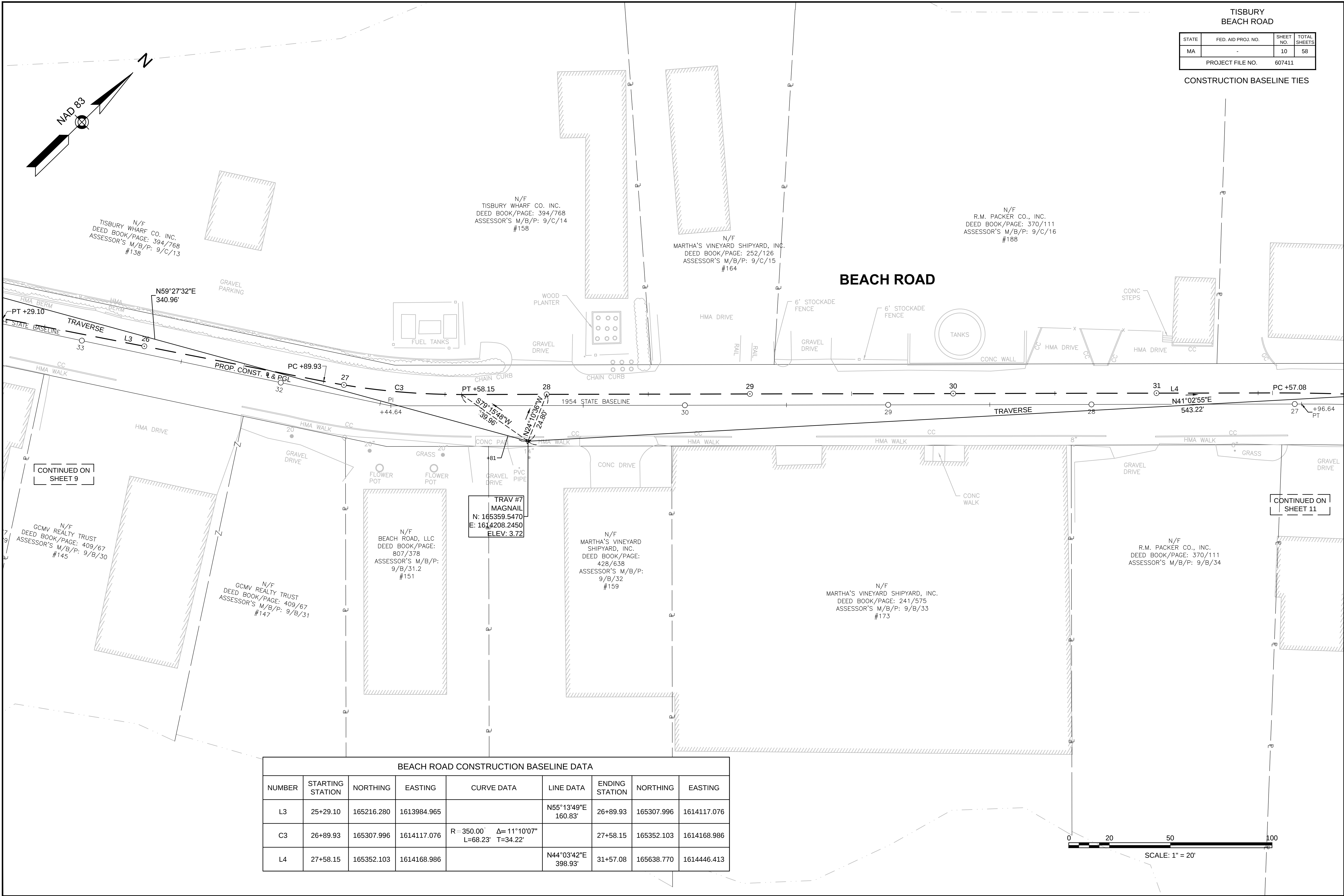
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	58
PROJECT FILE NO.		607411	

CONSTRUCTION BASELINE TIES

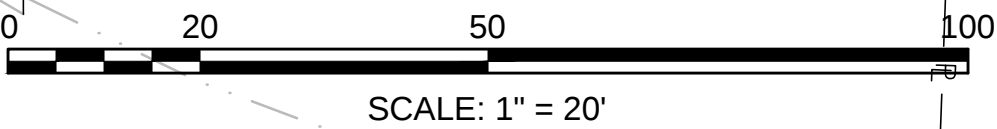


TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	58
PROJECT FILE NO.		607411	

CONSTRUCTION BASELINE TIES



BEACH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	25+29.10	165216.280	1613984.965		N55°13'49"E 160.83'	26+89.93	165307.996	1614117.076
C3	26+89.93	165307.996	1614117.076	R = 350.00' Δ = 11°10'07" L = 68.23' T = 34.22'		27+58.15	165352.103	1614168.986
L4	27+58.15	165352.103	1614168.986		N44°03'42"E 398.93'	31+57.08	165638.770	1614446.413

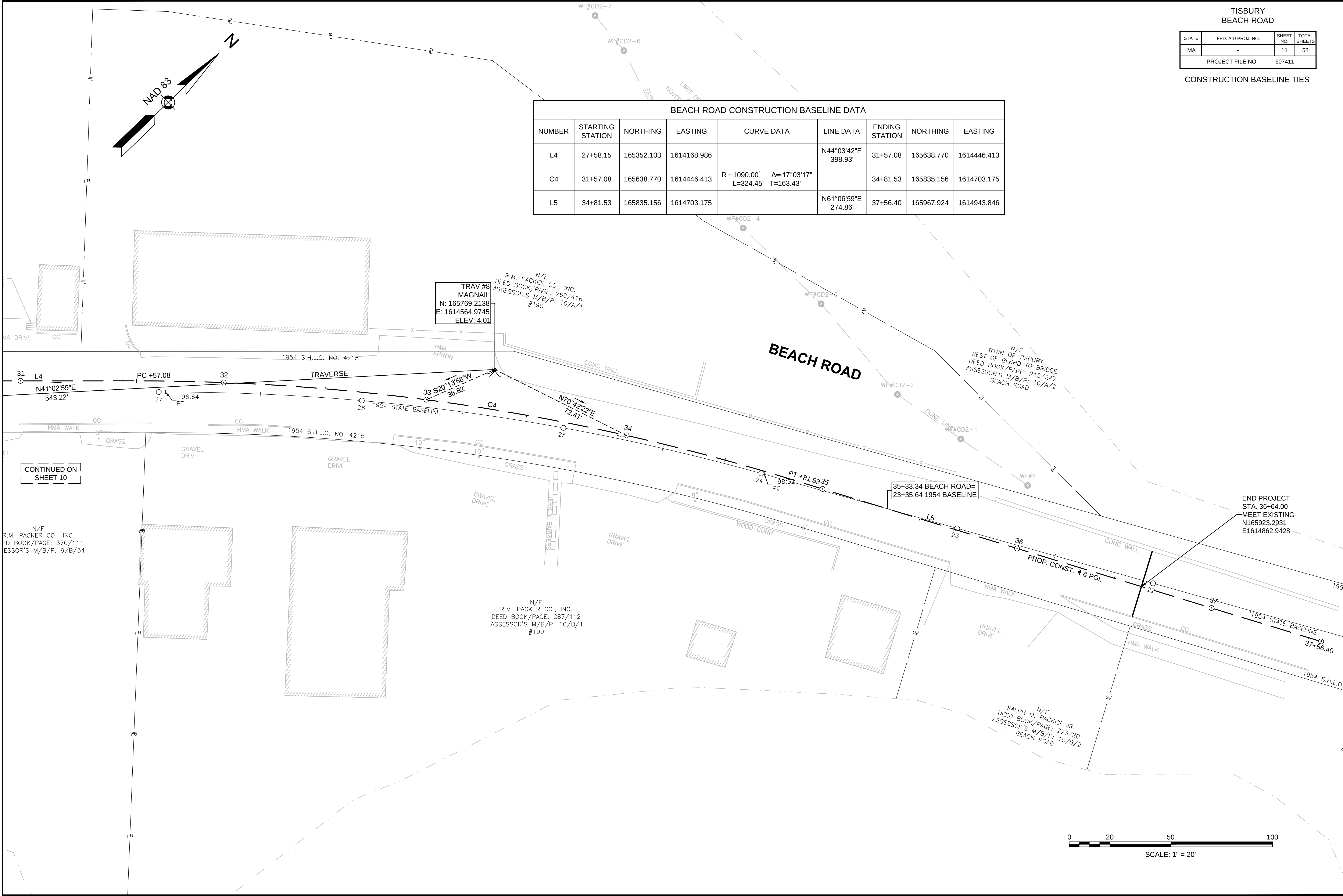


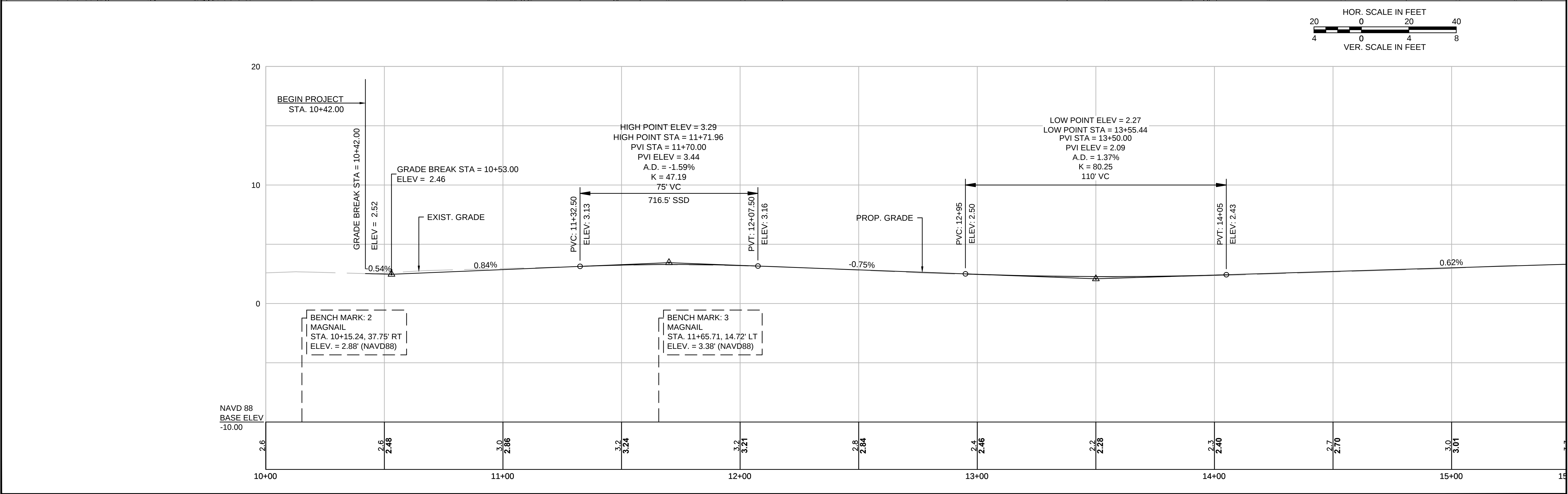
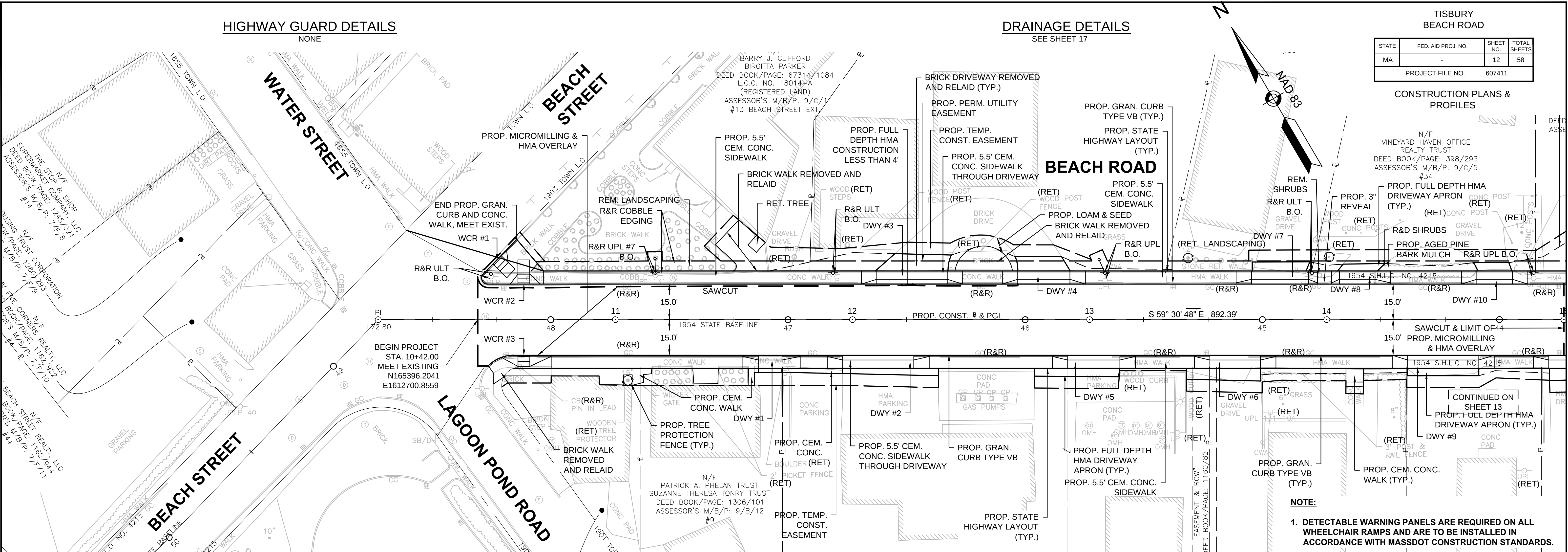
TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	58
PROJECT FILE NO.		607411	

CONSTRUCTION BASELINE TIES

BEACH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	27+58.15	165352.103	1614168.986		N44°03'42"E 398.93'	31+57.08	165638.770	1614446.413
C4	31+57.08	165638.770	1614446.413	R=1090.00' Δ=17°03'17" L=324.45' T=163.43'		34+81.53	165835.156	1614703.175
L5	34+81.53	165835.156	1614703.175		N61°06'59"E 274.86'	37+56.40	165967.924	1614943.846





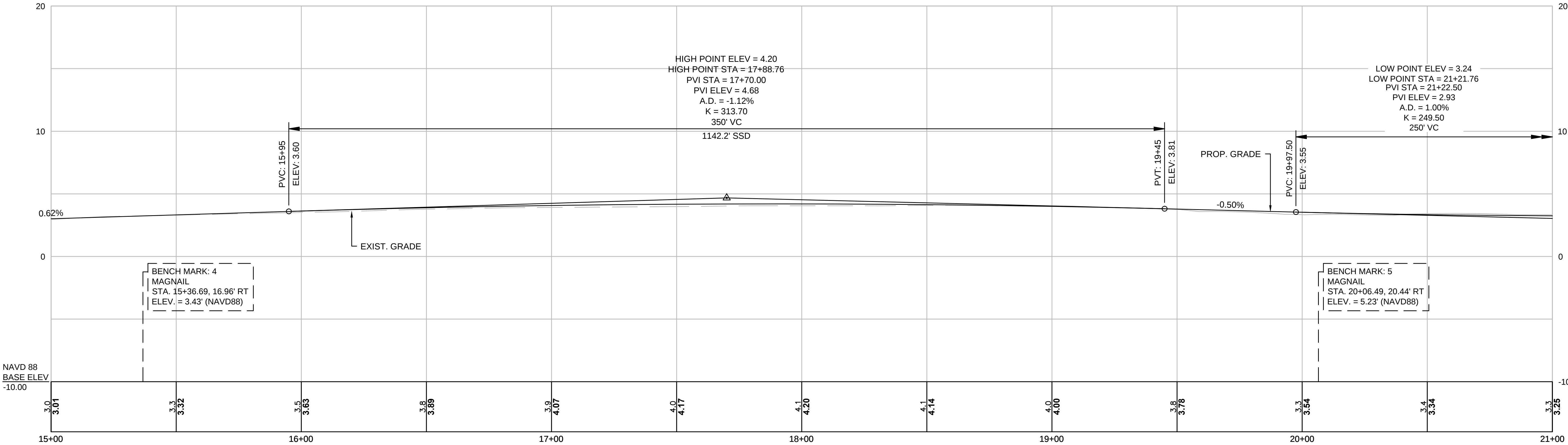
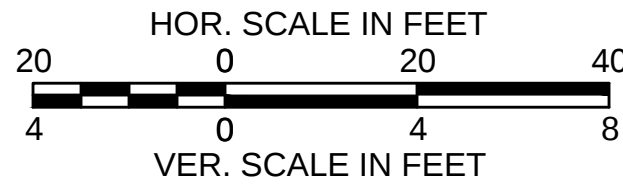
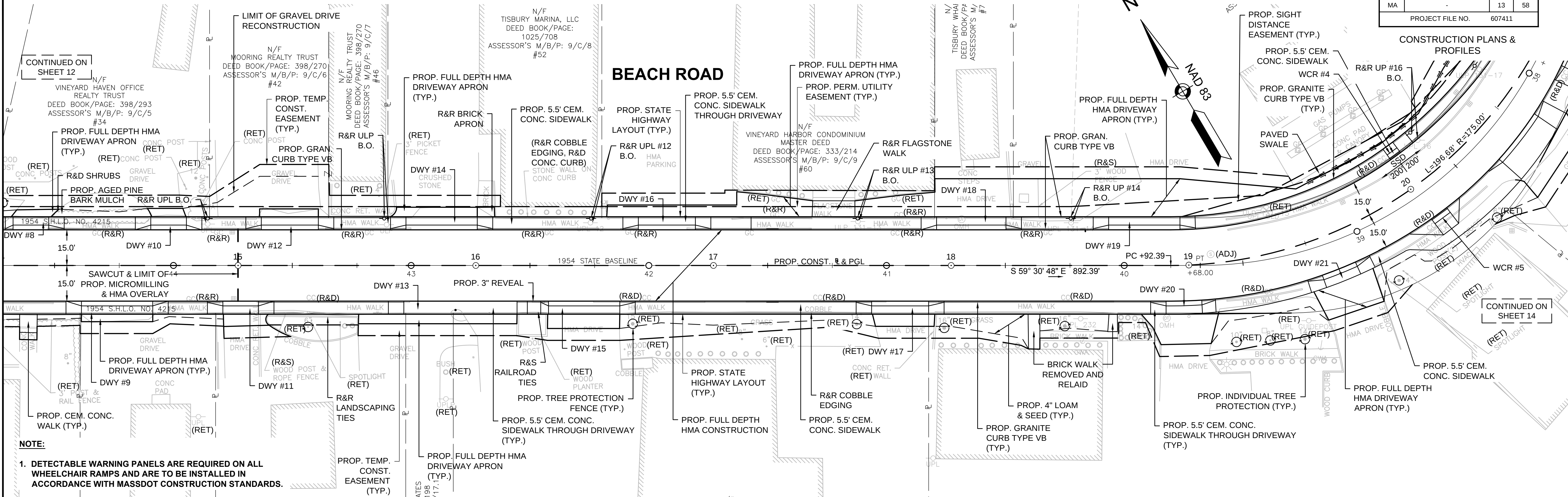
HIGHWAY GUARD DETAILS
NONE

DRAINAGE DETAILS
SEE SHEET 18

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	58
PROJECT FILE NO.		607411	

CONSTRUCTION PLANS &
PROFILES



HIGHWAY GUARD DETAILS
NONE

DRAINAGE DETAILS
SEE SHEET 19

TISBURY
BEACH ROAD

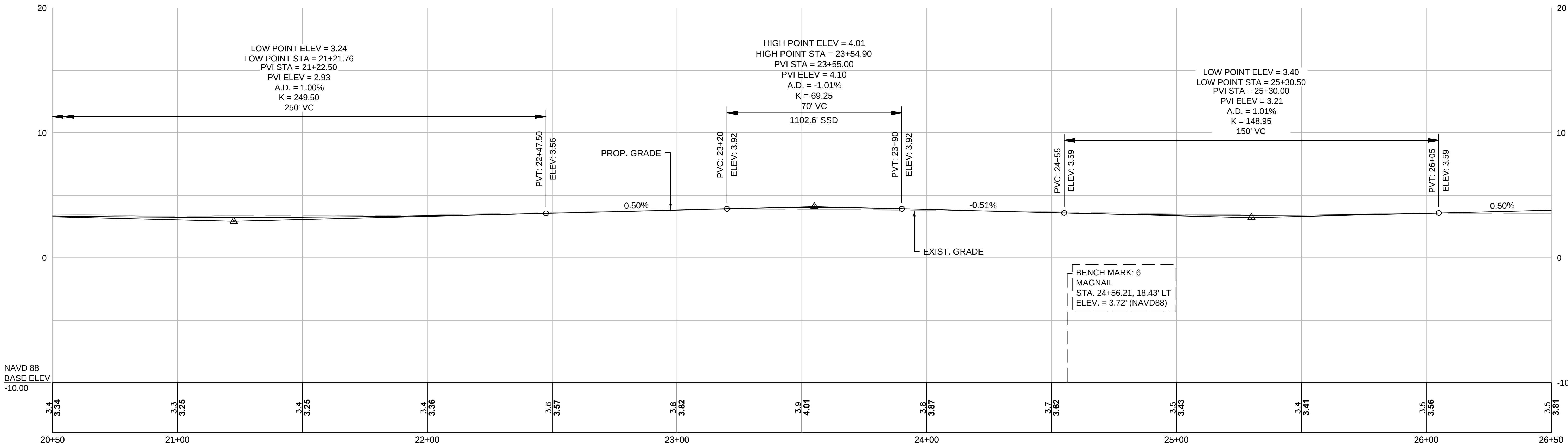
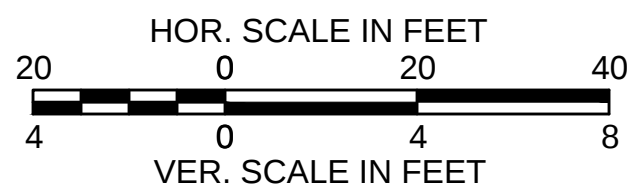
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	58
PROJECT FILE NO.		607411	

CONSTRUCTION PLANS &
PROFILES

NOTE:

1. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL WHEELCHAIR RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.

BEACH ROAD



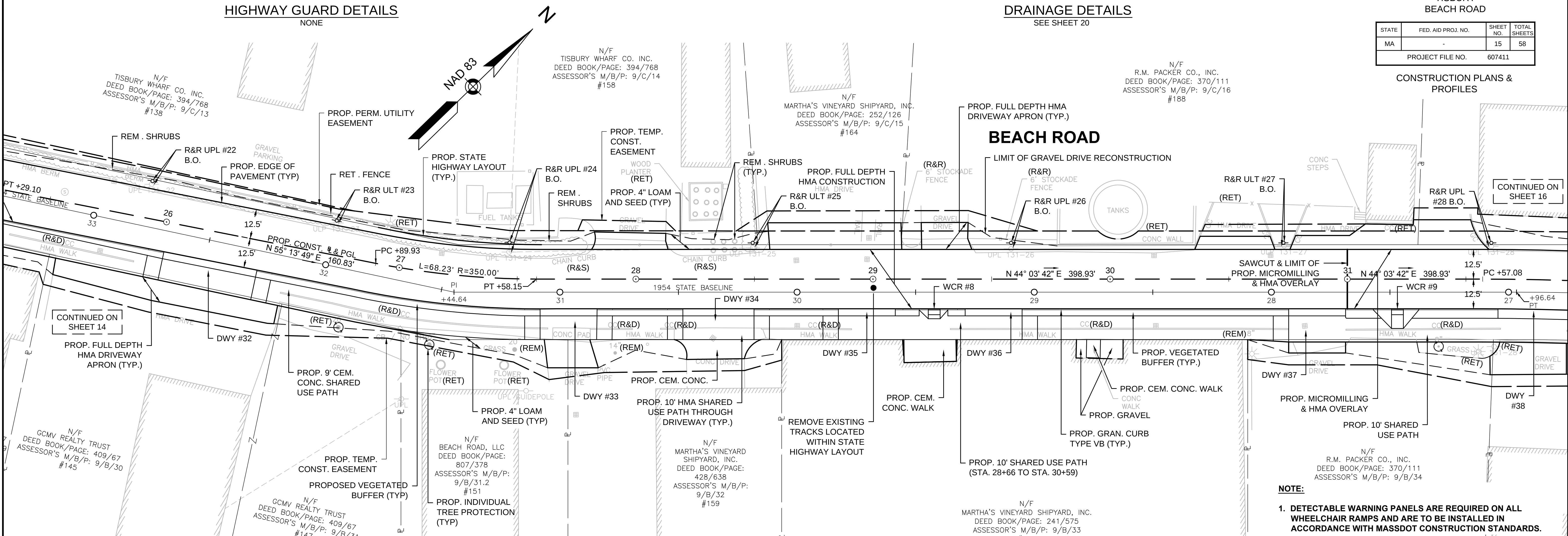
HIGHWAY GUARD DETAILS
NONE

DRAINAGE DETAILS
SEE SHEET 20

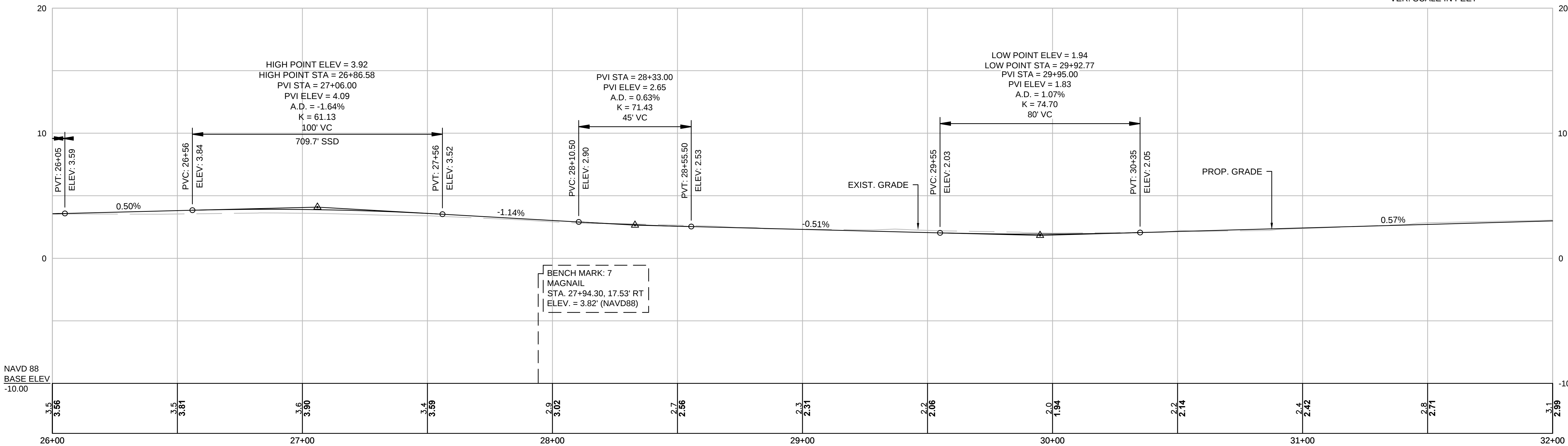
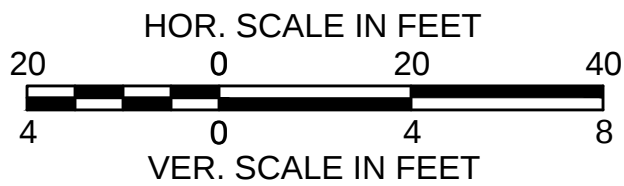
TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	58
PROJECT FILE NO.		607411	

CONSTRUCTION PLANS &
PROFILES



NOTE:
1. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL WHEELCHAIR RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.



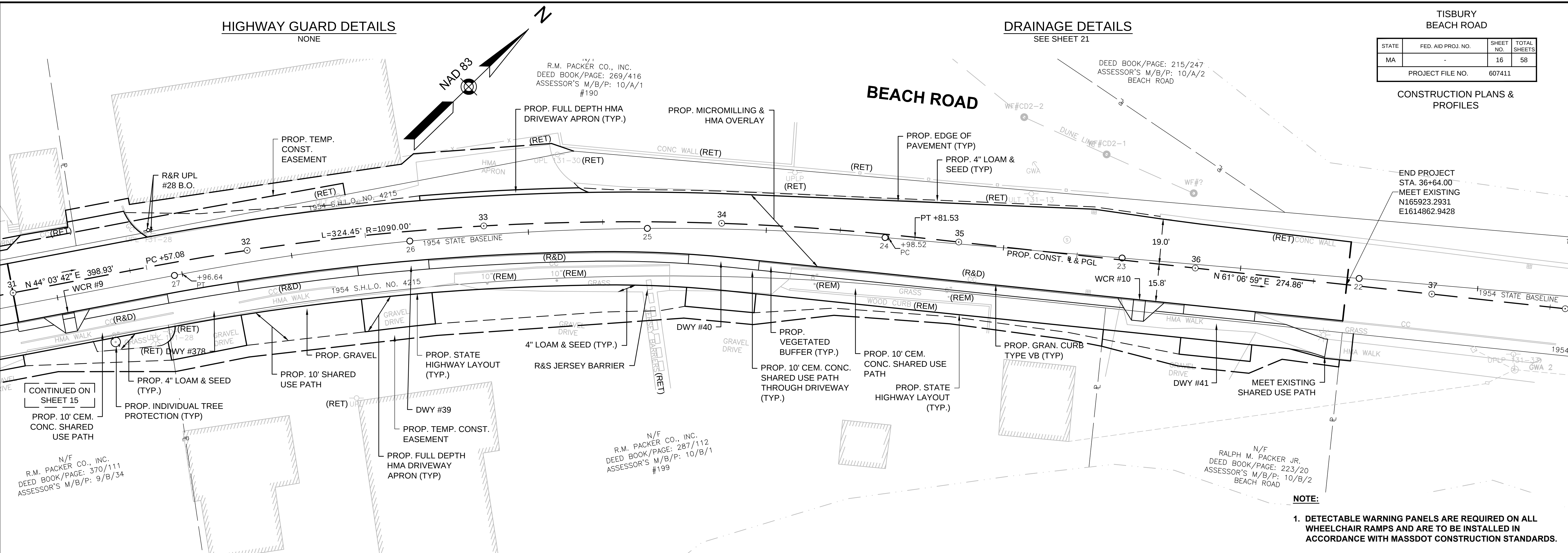
HIGHWAY GUARD DETAILS
NONE

DRAINAGE DETAILS
SEE SHEET 21

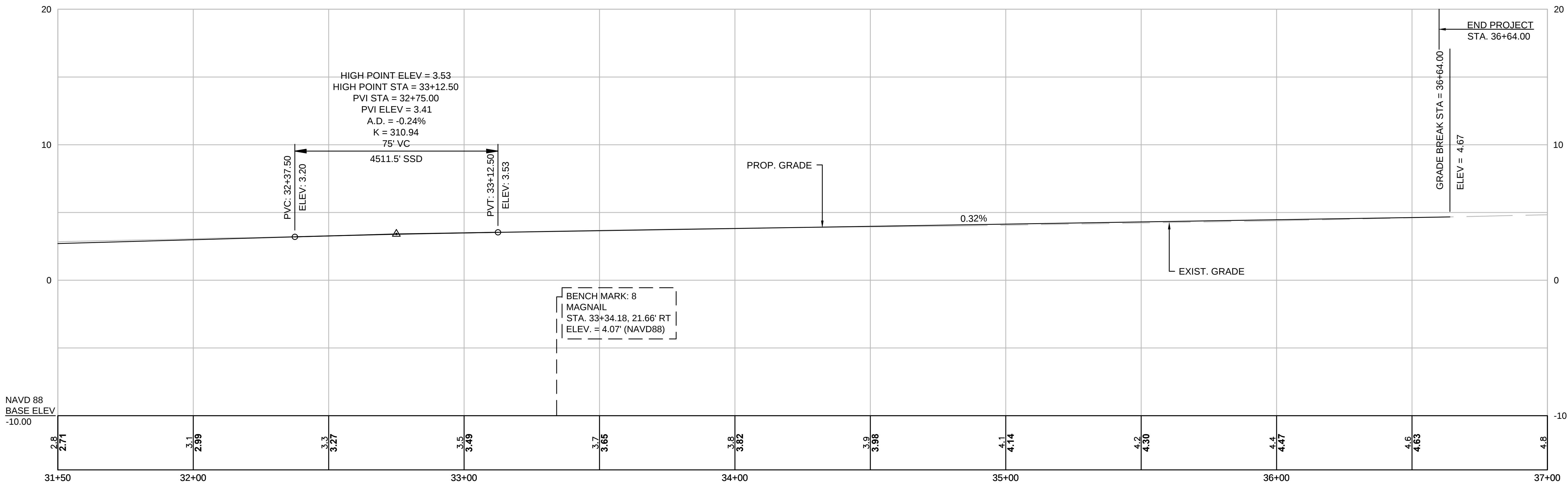
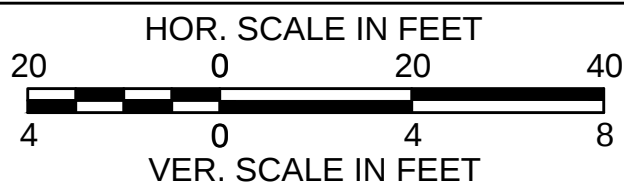
TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	58
PROJECT FILE NO.		607411	

CONSTRUCTION PLANS &
PROFILES



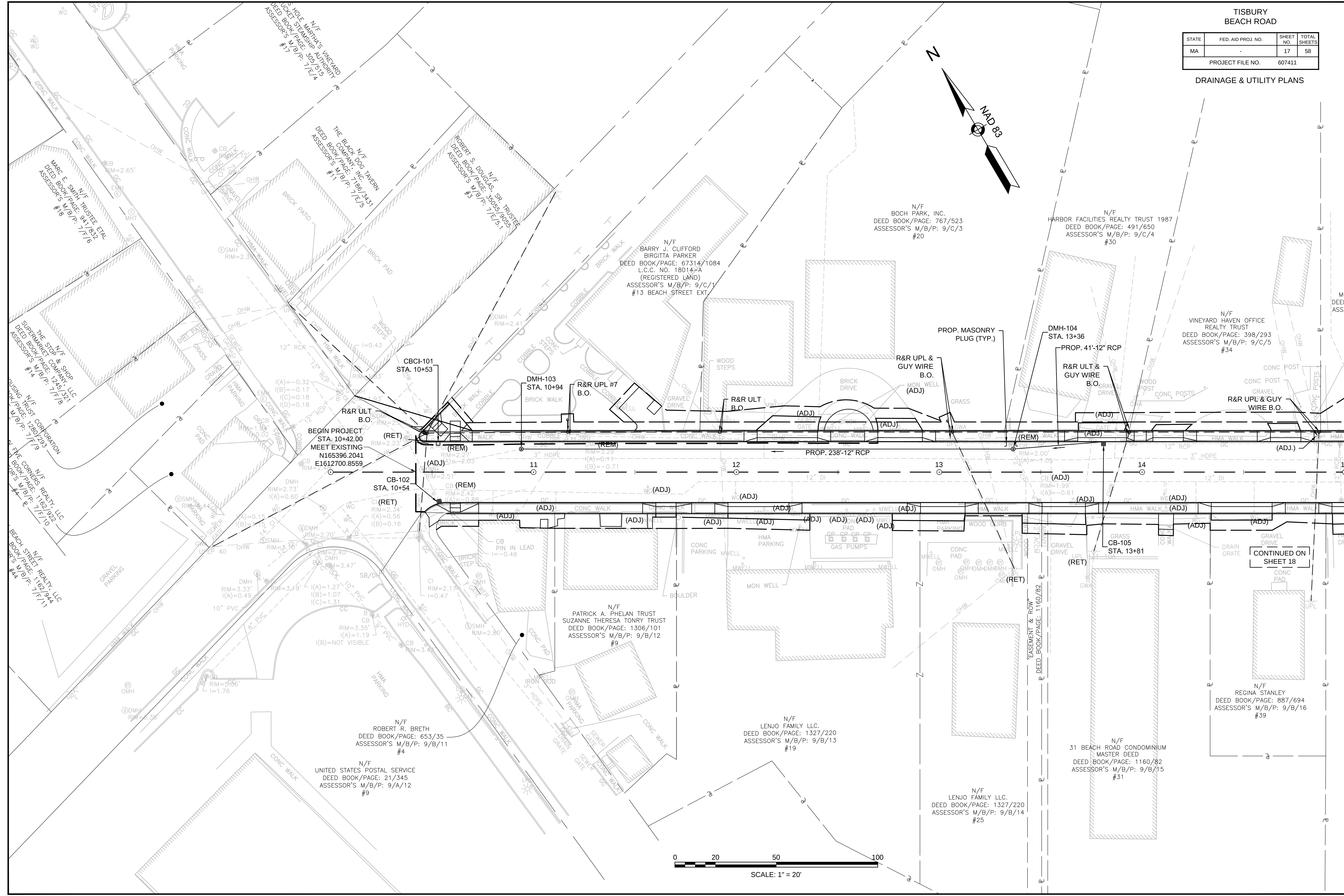
NOTE:
1. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL
WHEELCHAIR RAMPS AND ARE TO BE INSTALLED IN
ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.



TISBURY
BEACH ROAD

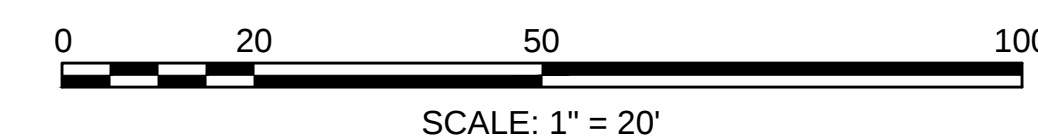
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	58
PROJECT FILE NO.		607411	

DRAINAGE & UTILITY PLANS



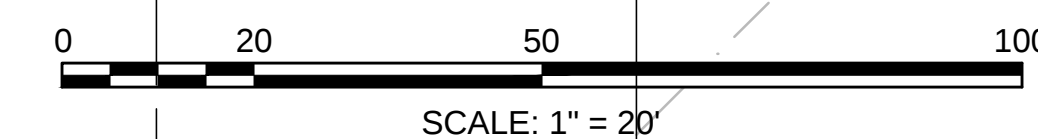
CONTINUED ON
SHEET 18

CONTINUED ON
SHEET 19

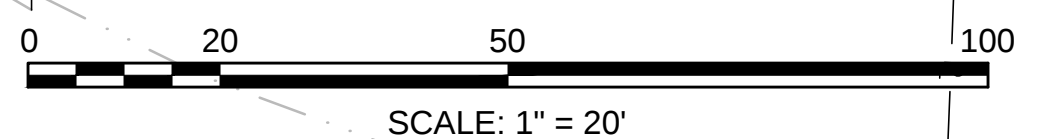


STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	58
PROJECT FILE NO.		607411	

DRAINAGE & UTILITY PLANS



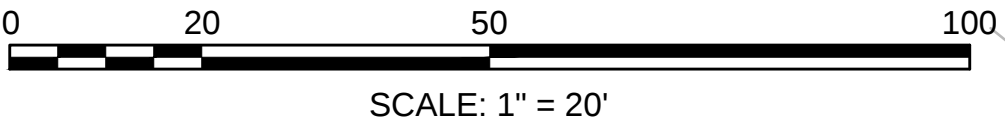
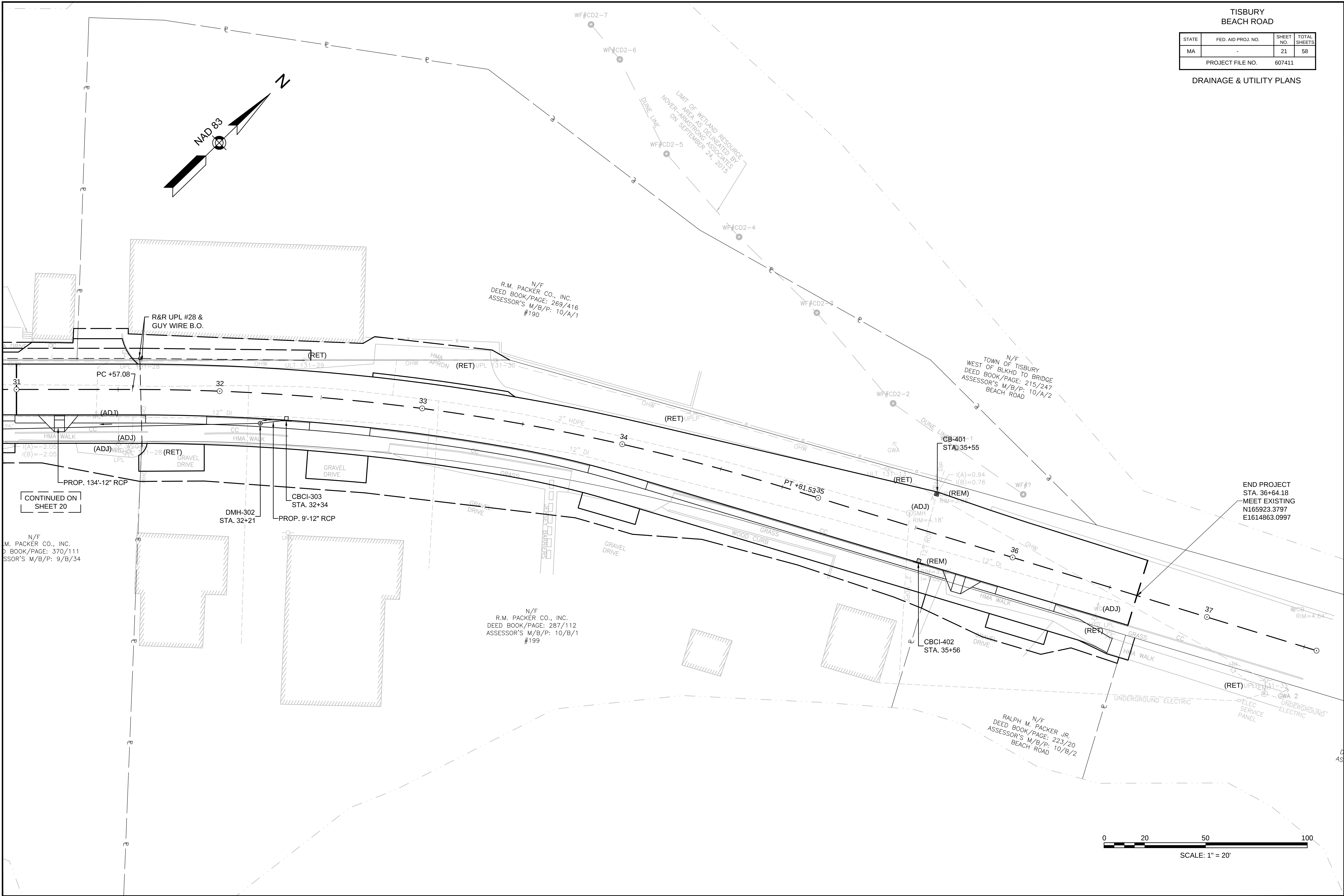
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	58
PROJECT FILE NO.		607411	

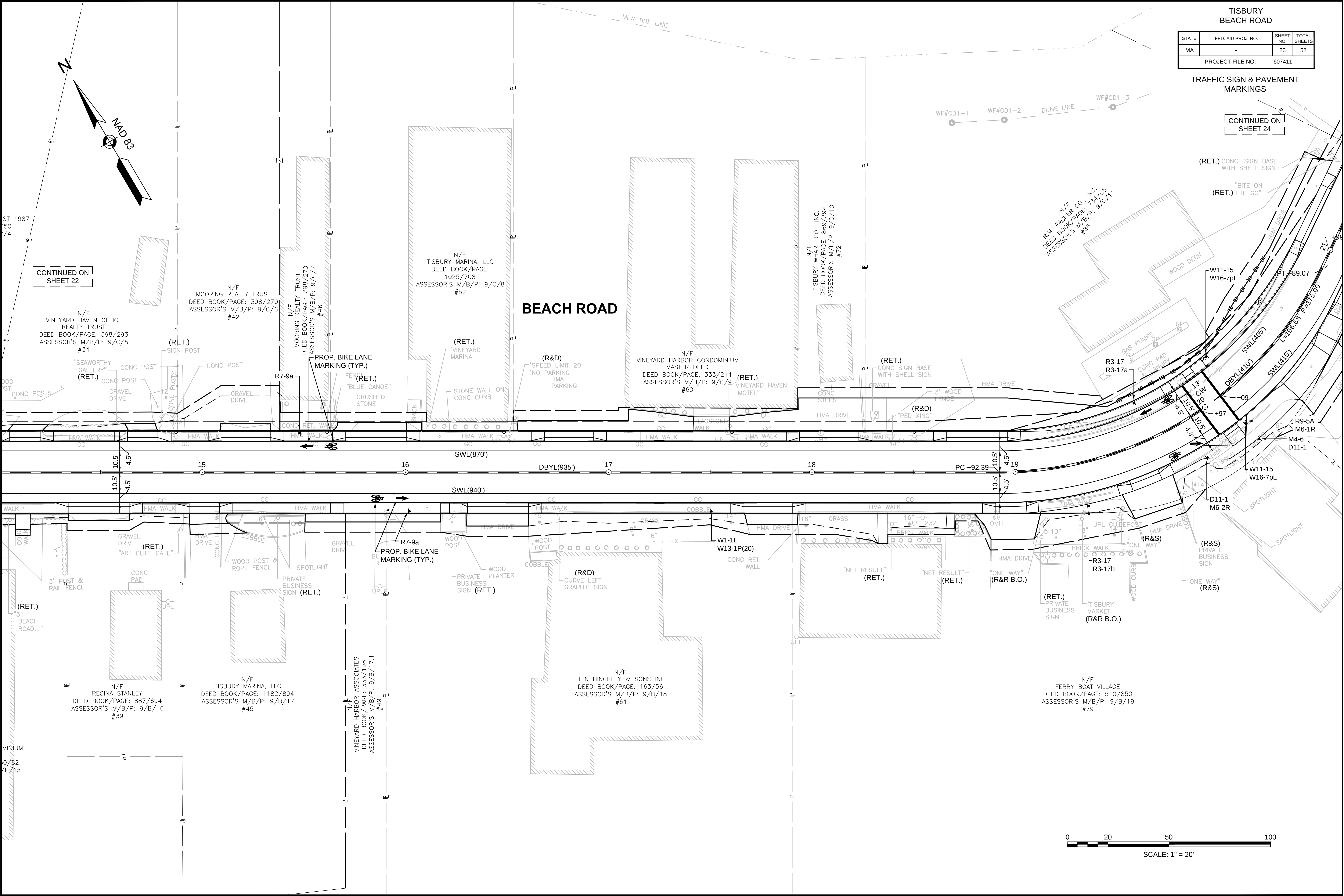


TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	58
PROJECT FILE NO.		607411	

DRAINAGE & UTILITY PLANS





TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	58
PROJECT FILE NO.		607411	

TRAFFIC SIGN & PAVEMENT MARKINGS

CONTINUED ON SHEET 24

(RET.) CONC. SIGN BASE WITH SHELL SIGN
(RET.) "BITE ON THE GO"

R.M. PACKER CO., INC.
DEED BOOK/PAGE: 754/65
ASSESSOR'S M/B/P: 9/C/11
#86

W11-15
W16-7pL

PT. #89.07

SWL(405)

DBYL(410)

SWL(415)

L=196.68' R=175.00'

+09

+97

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

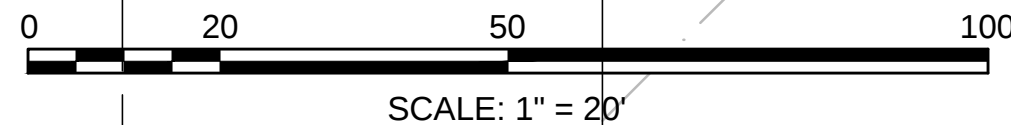
10.5' 4.5'

10.5' 4.5'

10.5' 4.5'

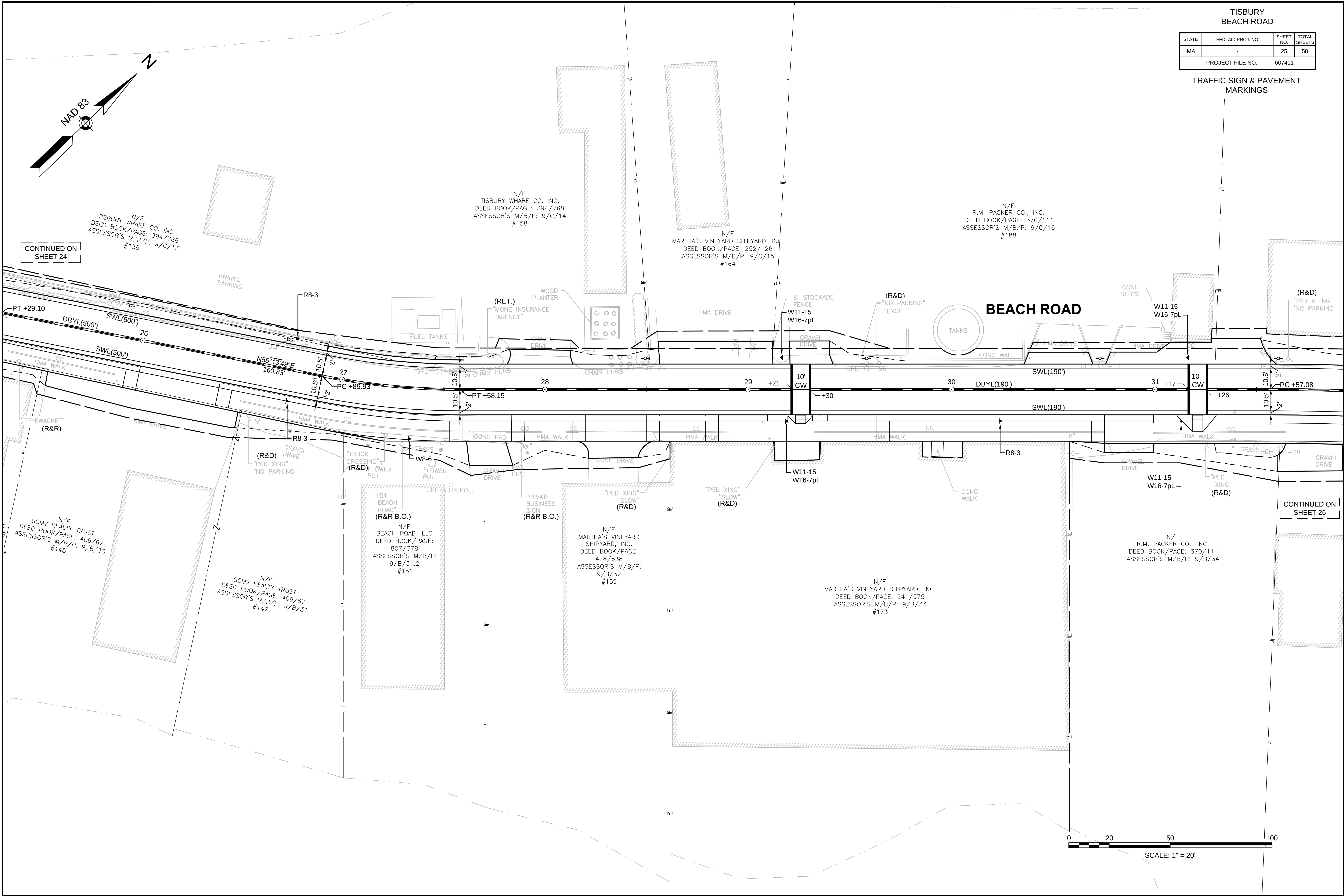
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	58
PROJECT FILE NO.		607411	

607411 HD (PM&S) DW/G Plotted on 9-Dec-2015 3:18 PM



TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	58
PROJECT FILE NO.		607411	

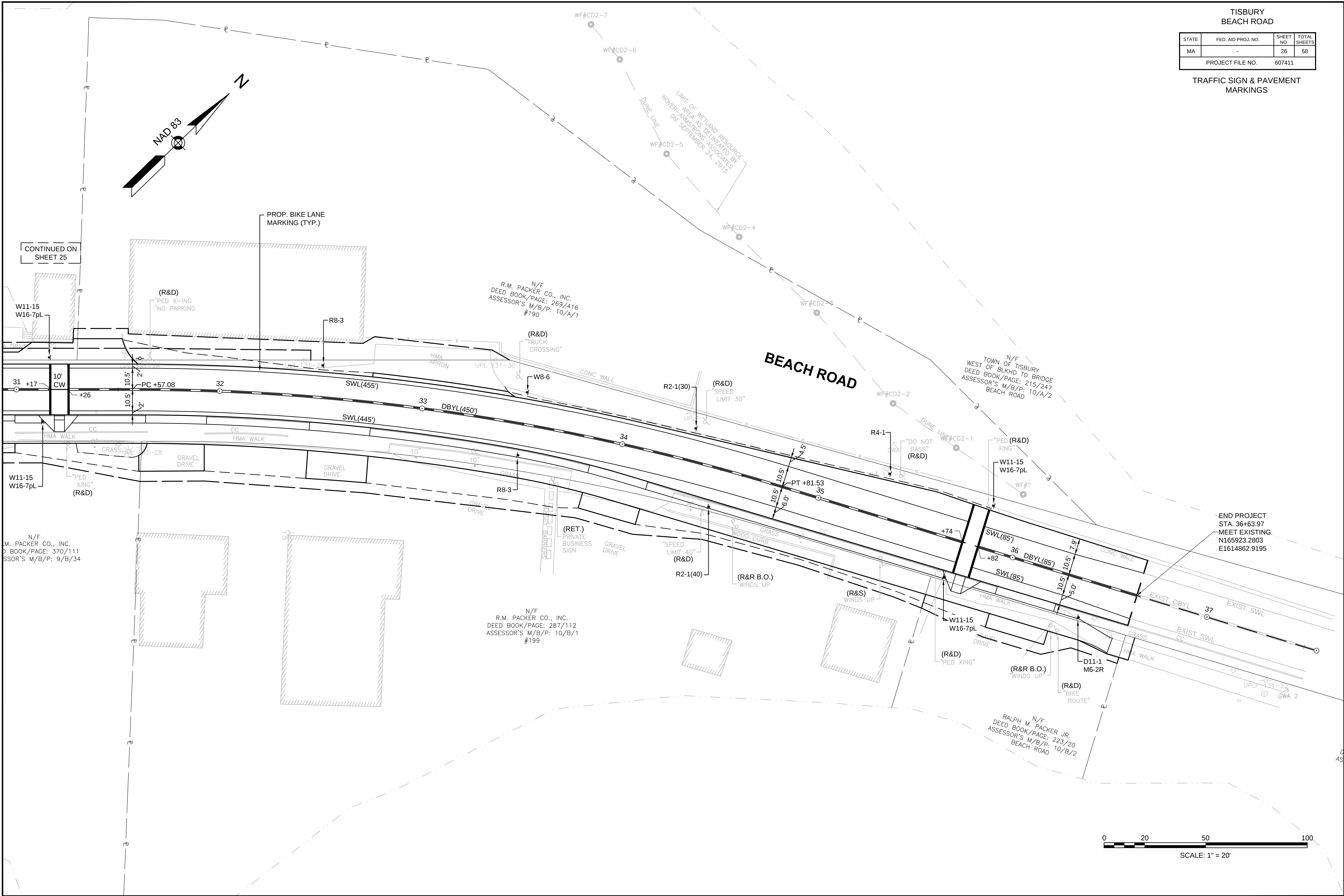
TRAFFIC SIGN & PAVEMENT MARKINGS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	58
PROJECT FILE NO.		607411	

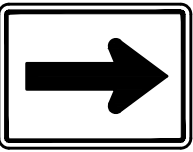
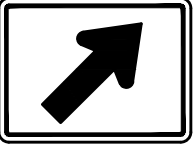
TRAFFIC SIGN & PAVEMENT MARKINGS



TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	58
PROJECT FILE NO.		607411	

TRAFFIC SIGN & PAVEMENT MARKINGS

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH (INCHES)	HEIGHT (INCHES)		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER			
R2-1(30)	24	30		MUTCD STANDARD	MUTCD STANDARD	2	WHITE	BLACK	BLACK	P5 (2 REQ'D)	5.00	10.00
R2-1(40)	24	30		MUTCD STANDARD	MUTCD STANDARD	1	WHITE	BLACK	BLACK	P5 (1 REQ'D)	5.00	5.00
R3-17	30	24		MUTCD STANDARD	MUTCD STANDARD	4	WHITE	BLACK	-	P5 (4 REQ'D)	5.00	20.00
R3-17a	30	12		MUTCD STANDARD	MUTCD STANDARD	2	WHITE	BLACK	BLACK	MNT w/R3-17	2.50	5.00
R3-17b	30	12		MUTCD STANDARD	MUTCD STANDARD	2	WHITE	BLACK	BLACK	MNT w/R3-17	2.50	5.00
R4-1	24	30		MUTCD STANDARD	MUTCD STANDARD	1	WHITE	BLACK	BLACK	P5 (1 REQ'D)	5.00	5.00
R7-9a	12	18		MUTCD STANDARD	MUTCD STANDARD	2	WHITE	RED & BLACK	RED	P5 (2 REQ'D)	1.50	3.00
R8-3	24	24		MUTCD STANDARD	MUTCD STANDARD	7	WHITE	BLACK & RED SYMBOL	BLACK	P5 (7 REQ'D)	4.00	28.00
R9-5A	12	18		MUTCD STANDARD	MUTCD STANDARD	1	WHITE	BLACK	BLACK	MNT w/W11-15	1.50	1.50
W1-1L	30	30		MUTCD STANDARD	MUTCD STANDARD	1	YELLOW	BLACK	BLACK	P5 (1 REQ'D)	6.25	6.25
W1-1R	30	30		MUTCD STANDARD	MUTCD STANDARD	1	YELLOW	BLACK	BLACK	P5 (1 REQ'D)	6.25	6.25
W8-6	24	24		MUTCD STANDARD	MUTCD STANDARD	2	YELLOW	BLACK	BLACK	P5 (2 REQ'D)	4.00	8.00
W11-15	30	30		MUTCD STANDARD	MUTCD STANDARD	12	YELLOW	BLACK	BLACK	P5 (12 REQ'D)	6.25	75.00
W13-1P(20)	18	18		MUTCD STANDARD	MUTCD STANDARD	2	YELLOW	BLACK	BLACK	MNT w/W1-1L	2.25	4.50
W16-7PL	24	12		MUTCD STANDARD	MUTCD STANDARD	12	YELLOW	BLACK	BLACK	MNT w/W11-15	2.00	24.00

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH (INCHES)	HEIGHT (INCHES)		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER			
M4-6	24	6		MUTCD STANDARD	MUTCD STANDARD	1	GREEN	WHITE	WHITE	P1 (1 REQ'D)	1.00	1.00
M6-1R	12	9		MUTCD STANDARD	MUTCD STANDARD	1	GREEN	WHITE	WHITE	MNT w/R9-5A	0.75	0.75
M6-2R	12	9		MUTCD STANDARD	MUTCD STANDARD	2	GREEN	WHITE	WHITE	MNT w/D11-1	0.75	1.50
D3-1 (PBS)	VAR.	12		6"C/4.5"C (INCL. TOWN SEAL)	4.5"C 3"	1	GREEN H/I	SILVER/ WHITE H/I	WHITE H/I	P5 (1 REQ'D)	PAY UNDER ITEM 874.	PAY UNDER ITEM 874.
D11-1	24	18		MUTCD STANDARD	MUTCD STANDARD	3	GREEN	WHITE	WHITE	P5 (2 REQ'D); 1 MNT w/M4-6	3.00	9.00

- NOTES:
- ALL WARNING, REGULATORY AND ROUTE MARKERS SHALL BE FABRICATED WITH HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING (SEE SECTION M9.30.0) TYPE III OR IV.
 - ALL SIGNS NOTED AS "(R&R)" SHALL BE MOUNTED ON NEW P5 POSTS OR AS OTHERWISE INDICATED.
 - ALL P5 POSTS SHALL BE TELESCOPIC SQUARE TYPE POSTS.
 - QUANTITIES OF SIGNS AND POSTS SHOWN ON THIS SHEET MAY DIFFER FROM THE PAVEMENT MARKING AND SIGNING PLANS. WHERE DIFFERENCES OCCUR, THE PAVEMENT MARKINGS AND SIGNING PLANS SHALL PREVAIL.

TRAFFIC CONTROL NOTES

GENERAL

- ALL TEMPORARY TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL MEASURES SHALL CONFORM TO THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), MASSDOT'S "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS", THE STANDARD SPECIFICATIONS, AND THE FOLLOWING NOTES.
- THE TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE REFERENCES LISTED IN NOTE NO. 1 AND AS APPROVED OR DIRECTED BY THE ENGINEER.
- LANE RESTRICTIONS MAY NOT REMAIN OVERNIGHT OR DURING NON-WORKING HOURS UNLESS UNDER TEMPORARY SIGNAL CONTROL. AFTER EACH WORKING DAY, TRAFFIC CONTROL DEVICES THAT ARE NOT REQUIRED SHALL BE MOVED OFF THE ROADWAY OR FULL DEPTH CONSTRUCTION AREA AND PLACED SO AS NOT TO IMPEDE PEDESTRIAN AREAS, ABUTTER ACCESS OR CAUSE CONFUSION TO MOTORISTS. IN CERTAIN CIRCUMSTANCES, AND ONLY WITH THE APPROVAL OF MASSDOT AND THE ENGINEER, CAN LANE RESTRICTIONS REMAIN OVERNIGHT.
- CONTRACTOR 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 EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
- PLACE ALL CONSTRUCTION SIGNING, TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS FOR EACH PHASE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ONE (1) THRU TRAVEL LANE HAVING A MINIMUM WIDTH OF 11'-0" SHALL BE PROVIDED FOR BOTH DIRECTIONS (LANE MAY BE SHARED AND DIRECTION OF TRAVEL TO ALTERNATE UNDER POLICE OFFICER CONTROL) DURING ALL PHASES OF CONSTRUCTION AS SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. MINIMUM LANE WIDTH IS MEASURED FROM THE EDGE OF DRUMS OR TEMPORARY BARRIER.
- WHEN WORK INFRINGES UPON THE TRAVELED WAY, WORK SHALL BE RESTRICTED TO OFF-PEAK HOURS ONLY (NORMALLY 9:00am to 4:00pm, MONDAY TO FRIDAY). THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF ROAD CLOSURE.
- TAPER LENGTH FORMULAE FOR CHANNELIZATION DEVICES:
ENGLISH UNITS:
L = WS FOR SPEED EQUAL TO OR GREATER THAN 45 M.P.H.
L = WS²/60 FOR SPEED EQUAL TO OR LESS THAN 40 M.P.H.
WHERE: L = MIN. LENGTH OF TAPER, S = POSTED SPEED, W = OFFSET WIDTH.
- ADVISORY SPEED LIMIT, IF USED, SHALL BE SET IN THE FIELD BY THE ENGINEER. W13-1 PLATES SHALL BE USED WHERE APPROPRIATE.
- DISTANCES SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS ARE A GUIDE ONLY, AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.

GRADE DIFFERENCES

- WHERE THERE IS A LONGITUDINAL DIFFERENCE IN ELEVATION BETWEEN EXISTING PAVEMENT AND ADJACENT TRAVEL SURFACE (UNDER REPAIR OR RECONSTRUCTION), THE CONTRACTOR SHALL PATCH A TEMPORARY HMA WEDGE WITH A 12:1 (OR FLATTER) SLOPE FOR SMOOTH TRANSITION. SEE DETAIL, THIS SHEET.
- CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 2" DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF REFLECTORIZED DRUMS.
- CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 4" DURING NON-WORKING HOURS SHALL BE PROTECTED BY BACKFILLING WITH A WEDGE OF EARTHWORK TO BE COMPACTED AT 4:1 SLOPE AND WILL ALSO REQUIRE DELINEATION BY USE OF DRUMS.
- A MINIMUM SLOPE OF 4:1 MUST BE MAINTAINED AFTER WORKING HOURS DURING SUBBASE AND BASE COURSE INSTALLATION ALONG EDGE OF THE TRAVELWAY (SEE DETAIL, THIS SHEET). A MAXIMUM SLOPE OF 8:1 MUST BE MAINTAINED ON ALL ABUTTER ACCESS DRIVES AND A MAXIMUM SLOPE OF 12:1 MUST BE MAINTAINED ON ALL SIDEWALKS.

CONSTRUCTION SIGNING

- THE FIRST CONSTRUCTION SIGN IN A SERIES ON EACH APPROACH TO THE PROJECT SHALL BE FLUORESCENT ORANGE, HIGH PERFORMANCE (OR HIGH INTENSITY) SHEETING.
- ALL CONSTRUCTION SIGNS SHALL BE BLACK LEGEND ON A REFLECTORIZED ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
- CONSTRUCTION SIGNING SHOWN ON THE ADVANCE SIGNING PLAN SHALL REMAIN IN PLACE FOR THE ENTIRE PROJECT DURATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- STANDARD ORANGE OR FLUORESCENT RED-ORANGE FLAGS (16"x16" MIN.) MAY BE ATTACHED TWO (2) EACH ON ALL ADVANCE WARNING SIGNS. FLAGS SHALL NOT INTERFERE WITH A CLEAR VIEW OF THE SIGN FACE.
- EXISTING GUIDE SIGNS SHALL BE TEMPORARILY RESET AS DIRECTED BY THE ENGINEER.
- ALL SIGNS, INCLUDING EXISTING, THAT ARE NOT REPRESENTATIVE OF ACTUAL WORK CONDITIONS SHALL BE EITHER COVERED OR REMOVED WHEN NOT APPLICABLE.
- IF USED, ALL W20-4 AND W20-5 SIGNS SHALL BE TAKEN DOWN OR COVERED AT THE CLOSE OF EACH DAY UNLESS LANE RESTRICTIONS ARE PERMITTED TO REMAIN OVERNIGHT IN ACCORDANCE WITH NOTE NO. 3 ABOVE.
- USE W20-7b AND W20-7 SIGNS ONLY WHILE POLICE OR FLAGGERS ARE DIRECTING TRAFFIC. THEY SHALL BE TAKEN DOWN OR COVERED AT THE CLOSE OF EACH DAY OR WHEN NOT IN USE.

PAVEMENT MARKINGS

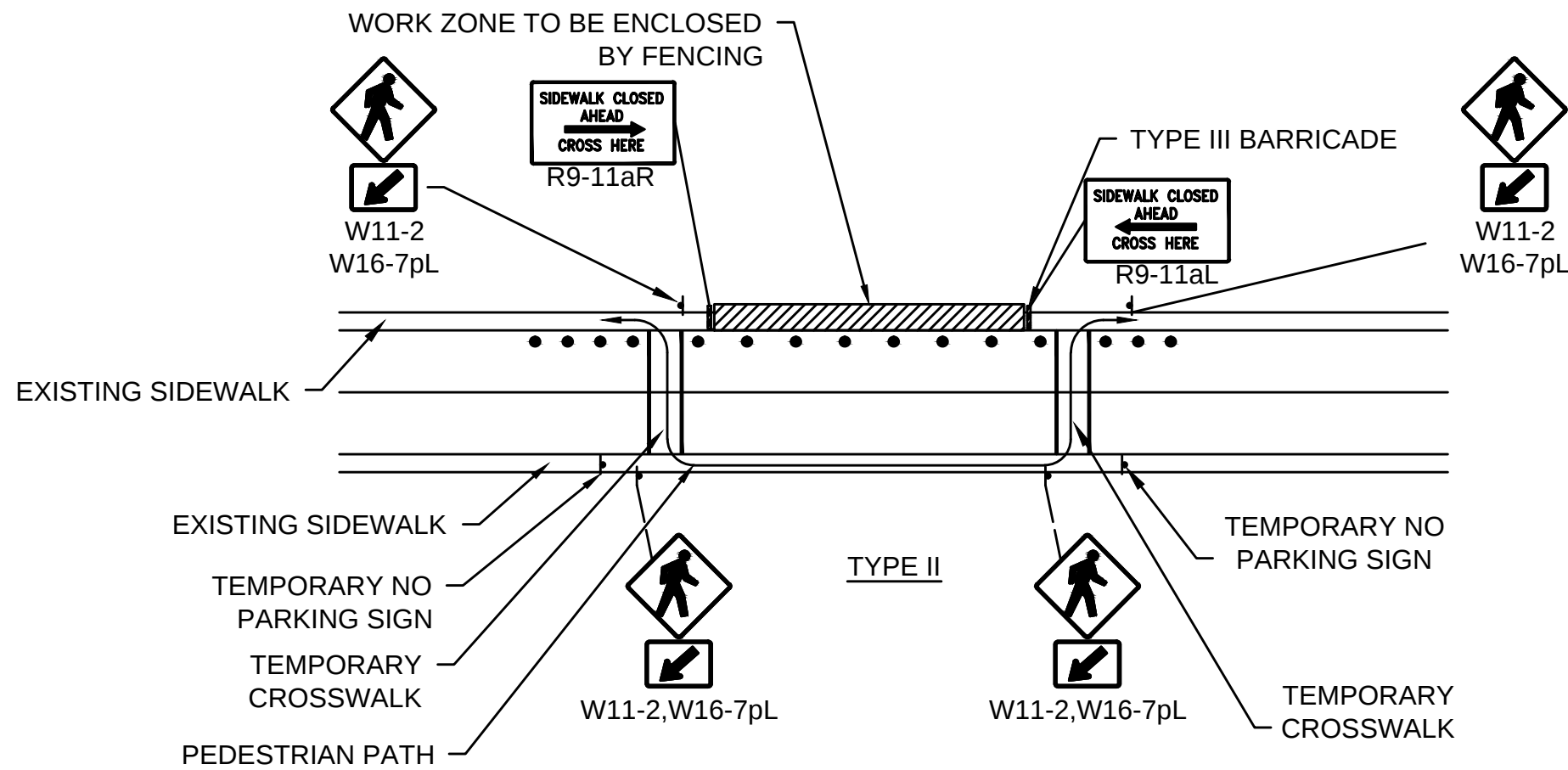
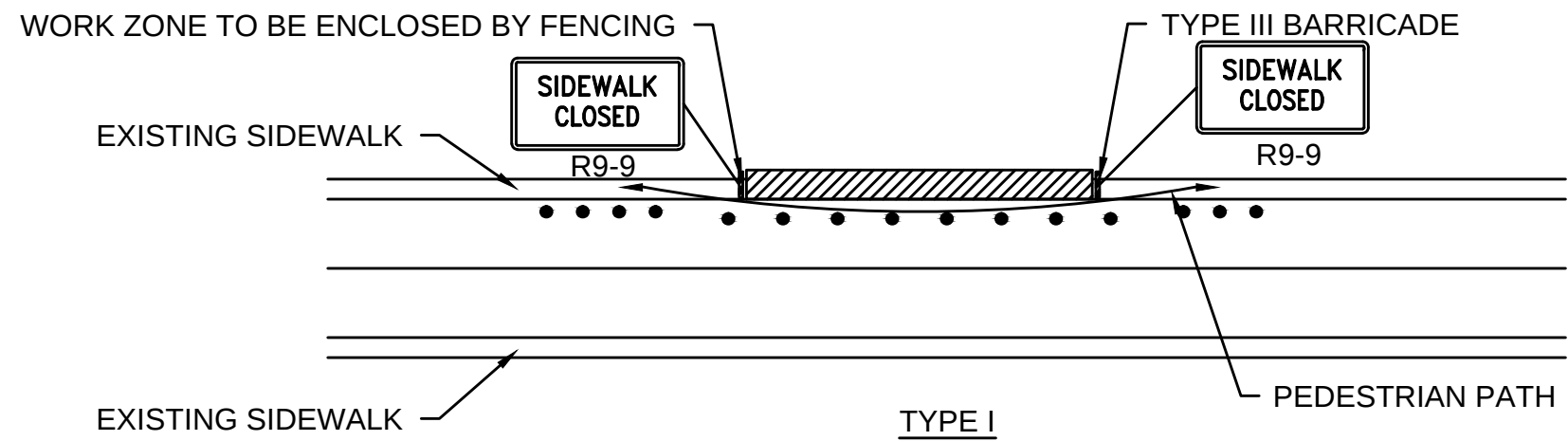
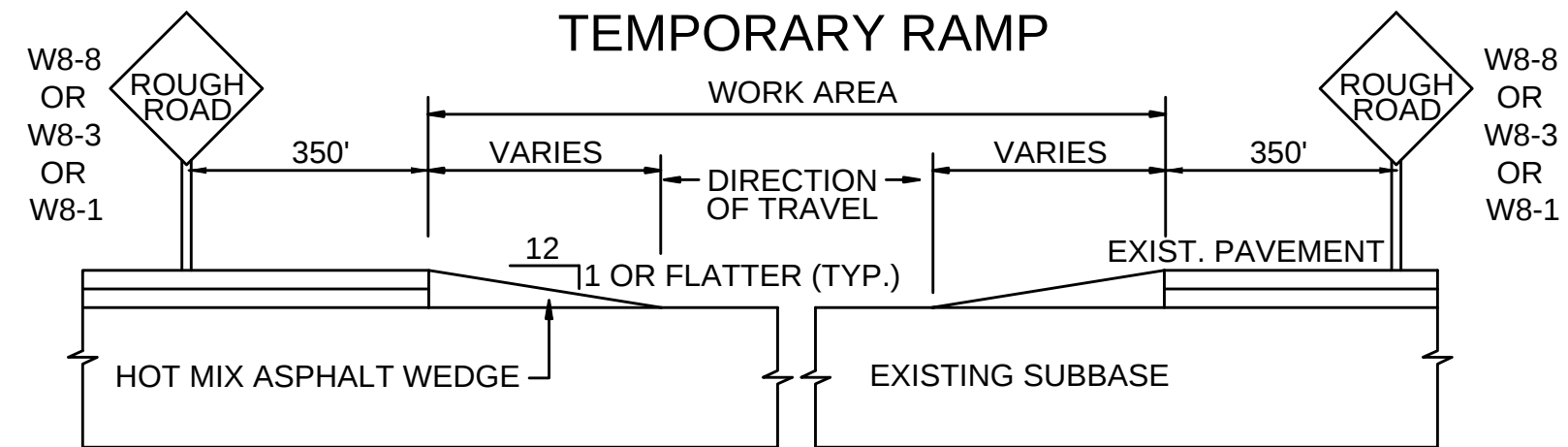
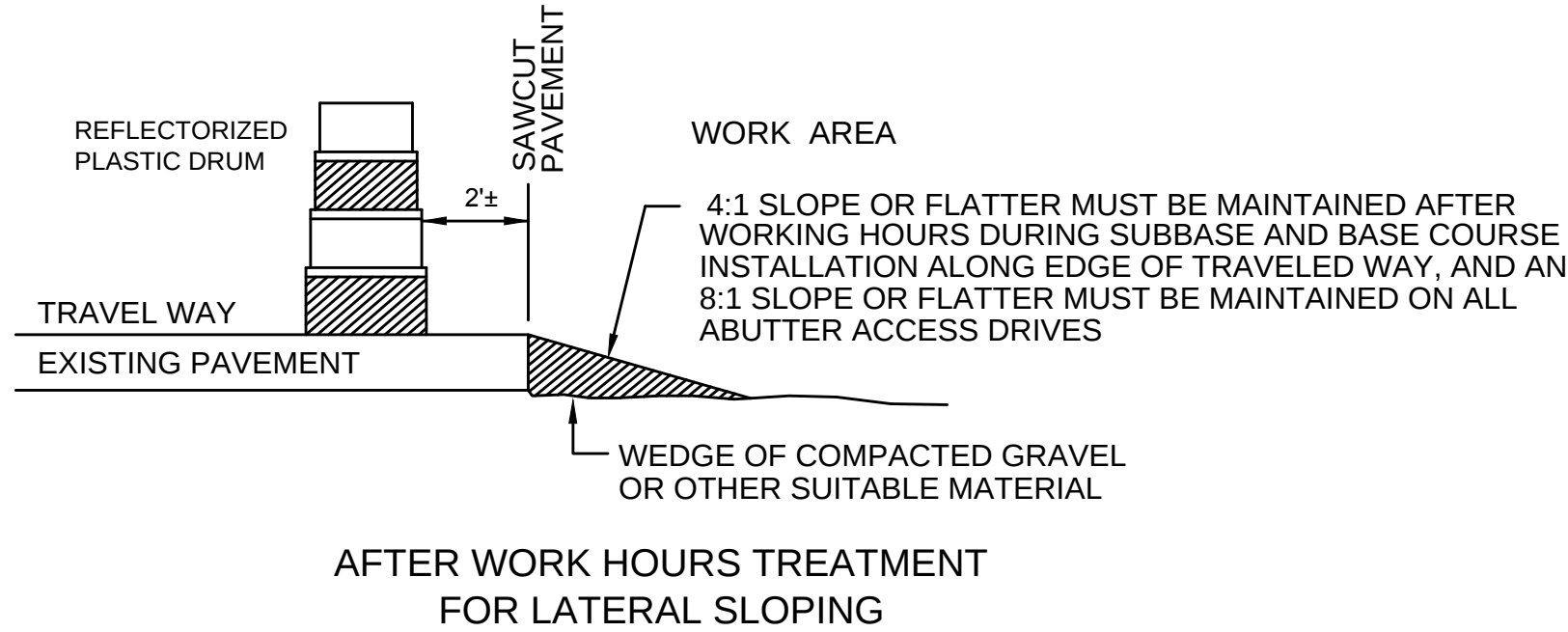
- PAVEMENT MARKINGS WHICH ARE NO LONGER APPLICABLE SHALL BE REMOVED. APPLY TEMPORARY MARKINGS WHERE SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS.
- ON PROJECTS WHERE PAVEMENT OVERLAY IS NOT DESIGNATED, EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROLS SHOULD BE COVERED TEMPORARILY WITH BLACKOUT TAPE, AS DIRECTED BY THE ENGINEER, FOR THE FULL DURATION OF THE PHASE IN PROGRESS. TEMPORARY PAINTED OR REMOVABLE TAPE MARKINGS SHALL BE USED AS NECESSARY FOR ALL PHASES OF CONSTRUCTION.

CHANNELIZATION

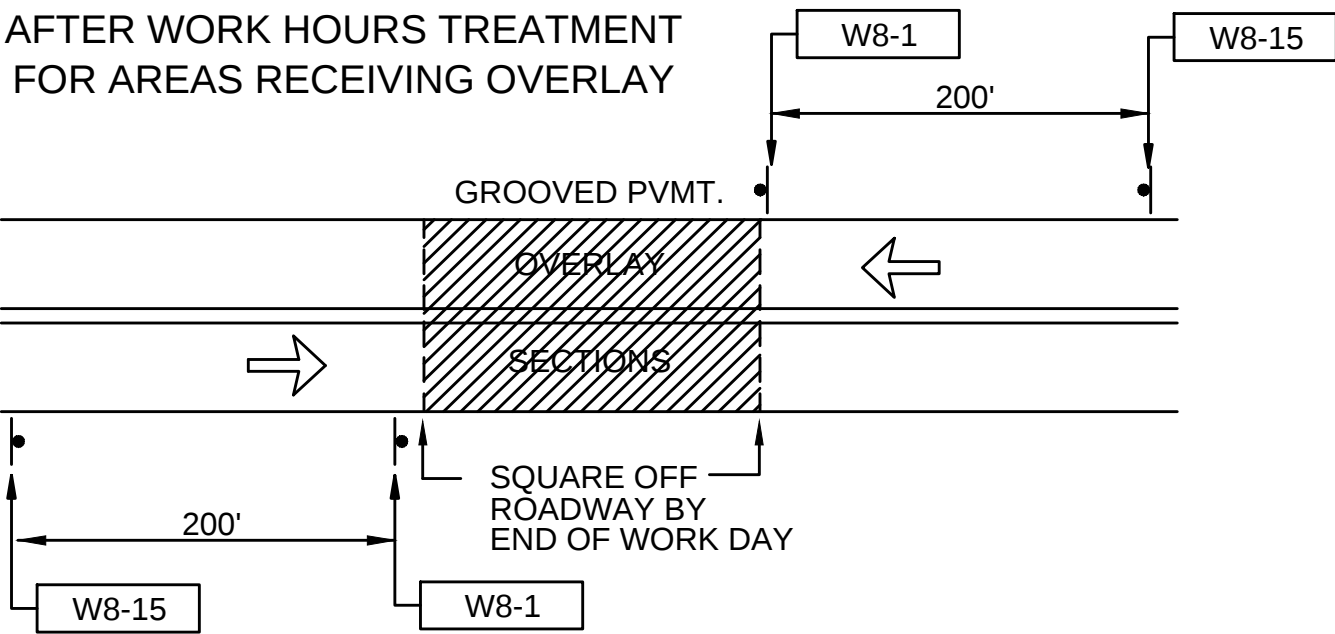
- THE MAXIMUM SPACING BETWEEN CHANNELIZATION DEVICES (DRUMS OR CONES) SHALL BE APPROXIMATELY EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MINIMUM SPACING SHALL BE 20' O.C.
- REFLECTORIZED CONES SHALL BE 36" HIGH.
- FLASHING OR STEADY BURN WARNING LIGHTS SHALL ALSO BE USED ON BARRICADES, JERSEY BARRIERS OR WHERE DIRECTED BY THE ENGINEER. IF USED THEY SHALL MEET THE CRITERIA SET FORTH IN NCHRP 350 "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION IF HIGHWAY FEATURES."
- PLASTIC DRUMS WITH SOME FORM OF LIGHTING DEVICE MOUNTED ON THEM MUST PASS THE CRITERIA SET FORTH IN NCHRP 350 "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES." IF THEY DO NOT MEET THESE CRITERIA, THEY MUST BE REMOVED FROM THE PROJECT.
- SIGNS AND SIGN SUPPORT LOCATED ON OR NEAR THE TRAVELED WAY MUST PASS THE CRITERIA SET FORTH IN NCHRP 350 "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES." IF THEY DO NOT MEET THIS CRITERIA, THEY MUST BE REMOVED FROM THE PROJECT.

TRAFFIC MANAGEMENT LEGEND

	WORK AREA
	DIRECTION OF TRAVEL
	REFLECTORIZED PLASTIC DRUM OR 36" CONE
	REFLECTORIZED PLASTIC DRUM WITH TYPE 'A' FLASHING WARNING LIGHT
	POLICE OFFICER OR FLAGGER CONTROL
	PORTABLE TYPE III BARRICADE (4' WIDE, MIN.)
	FLASHING ARROW BOARD (30"x 60" STD. SIZE WITH 13 LAMPS, MIN.)
	TEMPORARY PRECAST CONCRETE BARRIER WITH TEMPORARY FENCE & WHITE REFLECTORS
	TEMPORARY IMPACT ATTENUATOR
	PAVEMENT MARKINGS TO COVER OR REMOVE (SEE NOTES 23 & 24)
	PORTABLE CHANGEABLE MESSAGE SIGN
	MOVABLE IMPACT ATTENUATOR

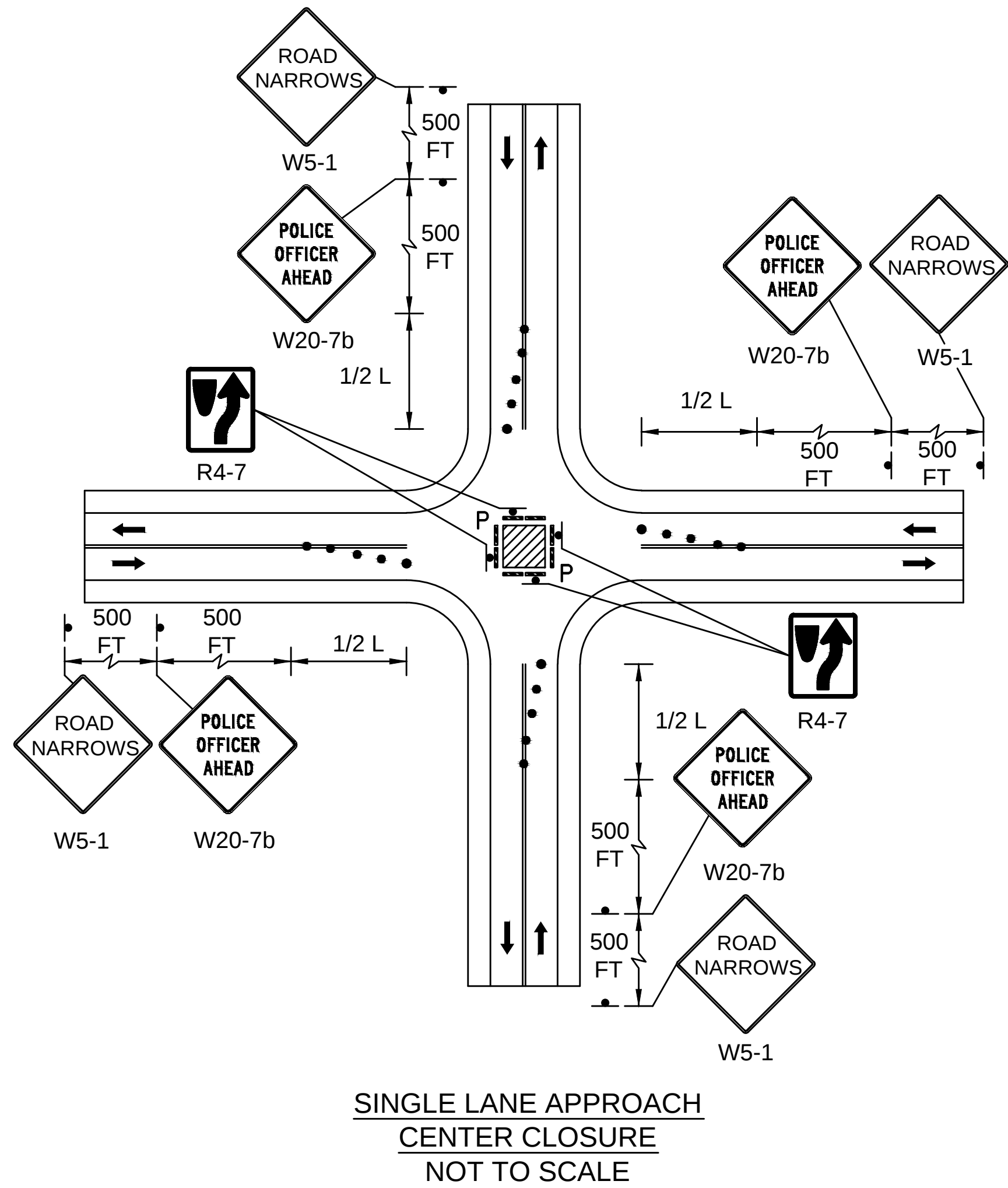
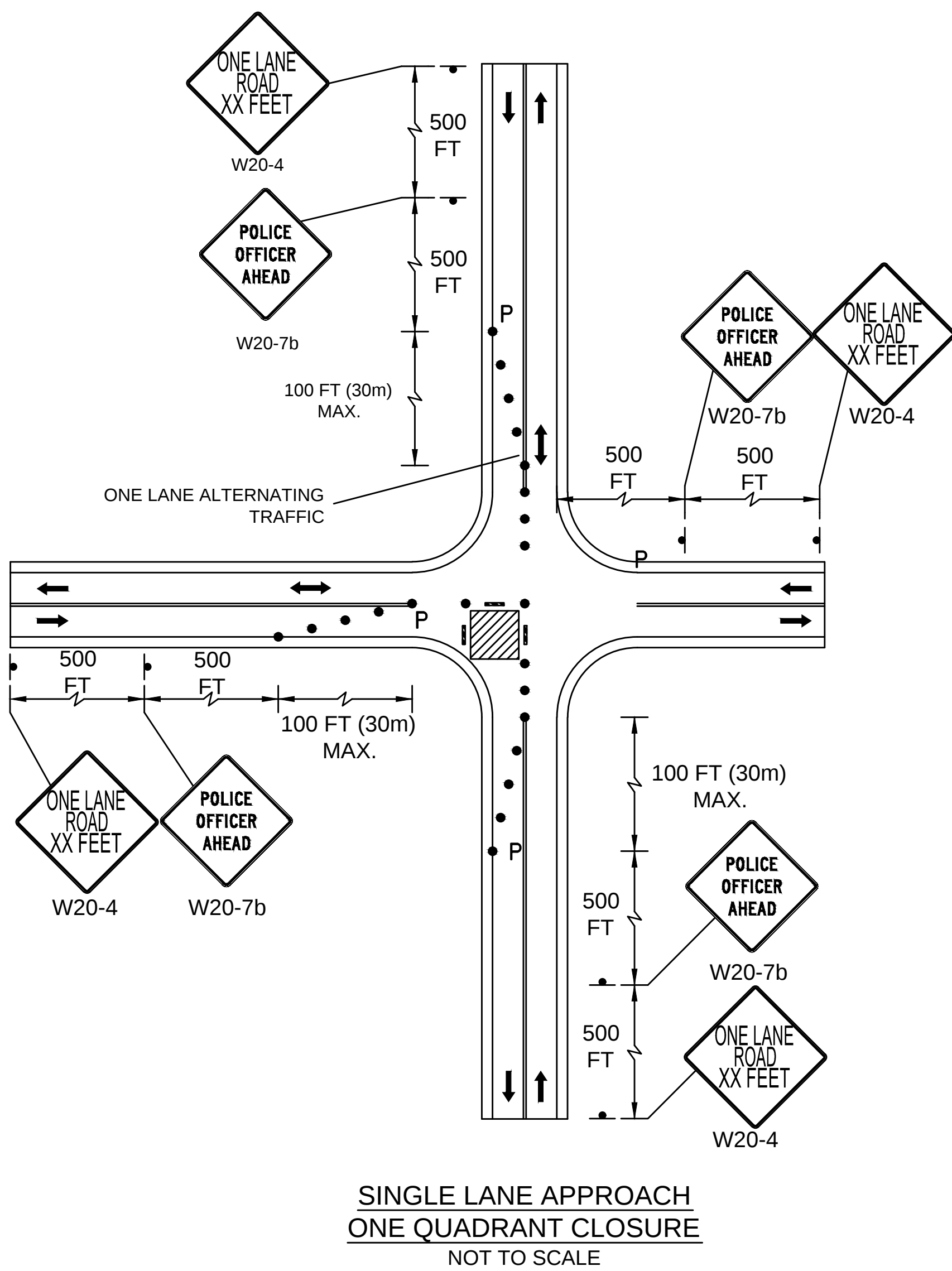
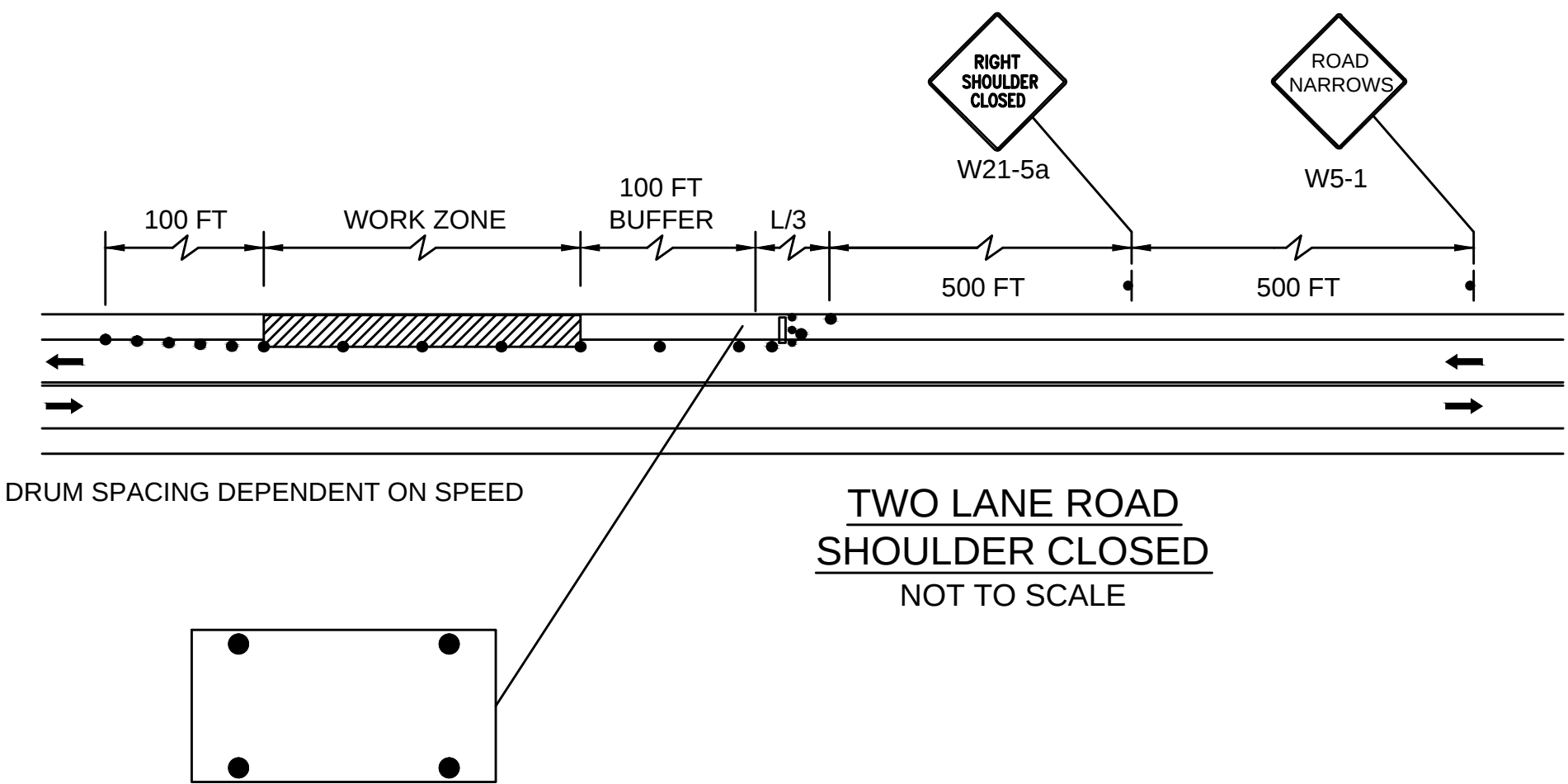
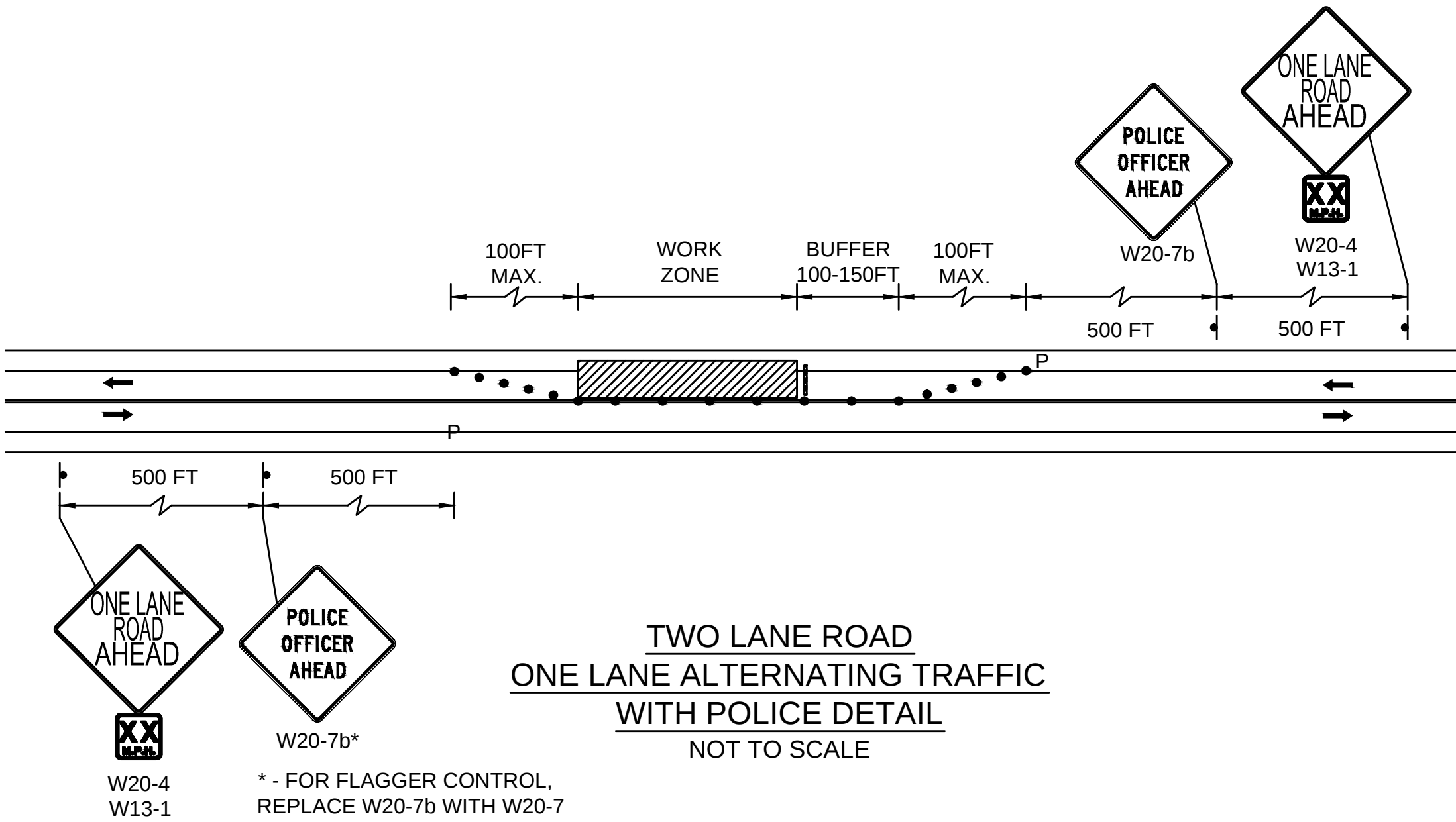
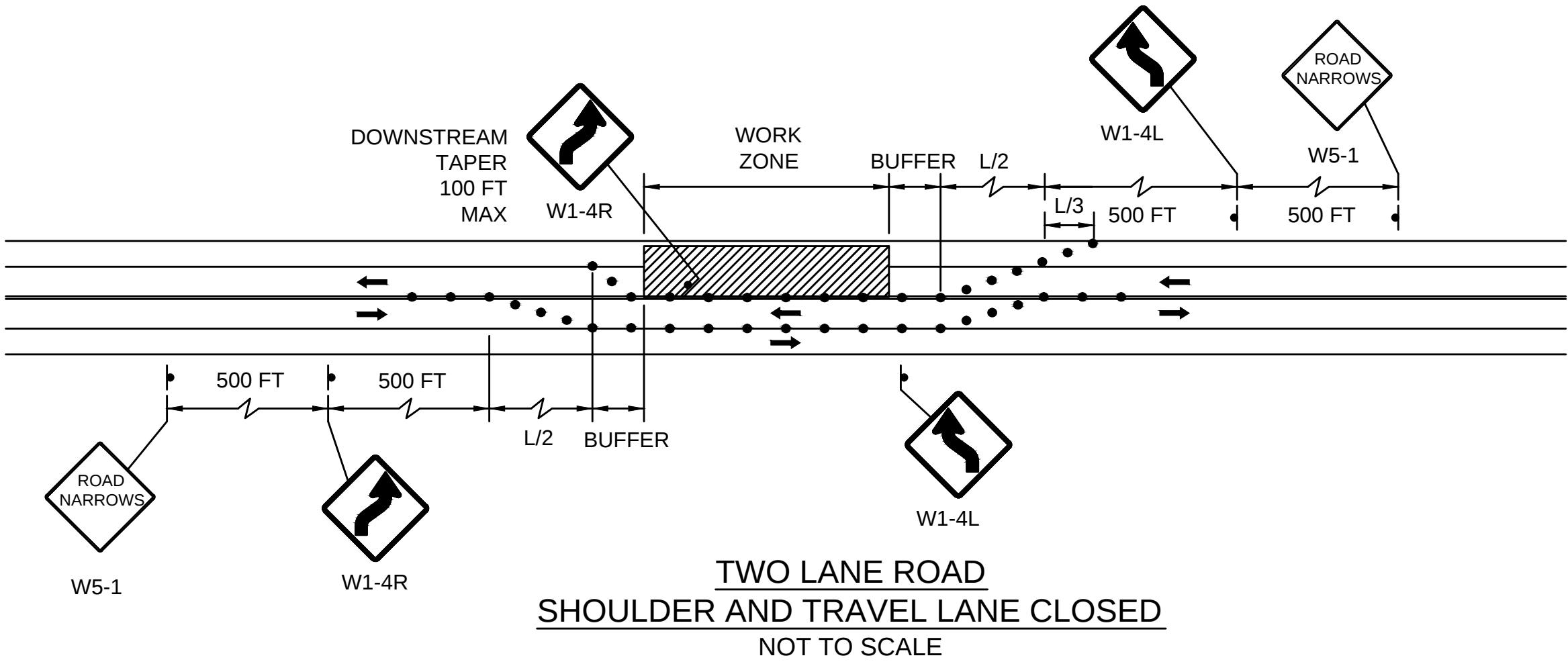


PEDESTRIAN BYPASS
NOT TO SCALE

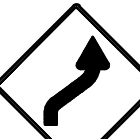
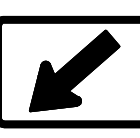


TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	58
PROJECT FILE NO.		607411	

TEMPORARY TRAFFIC
CONTROL PLAN



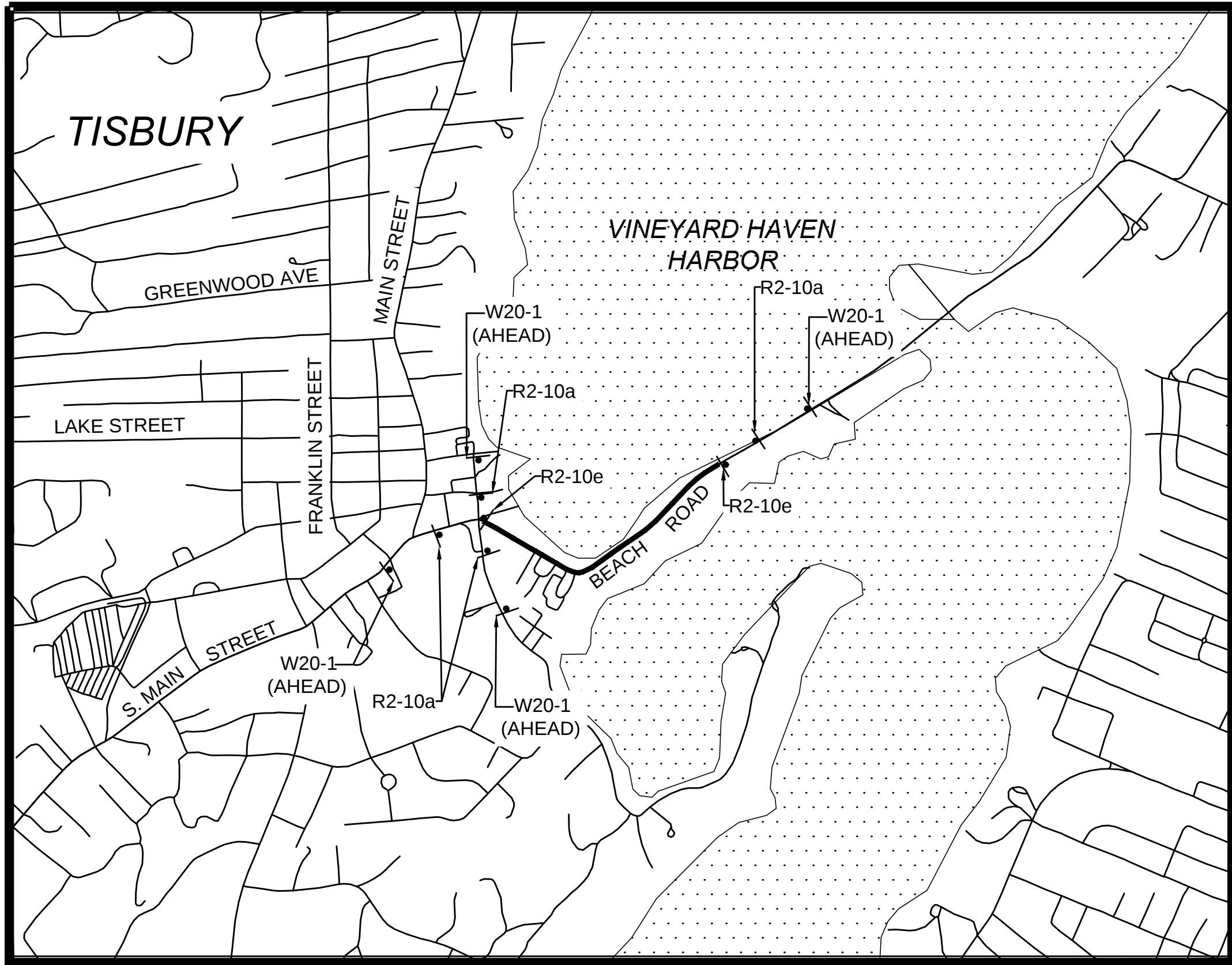
CONSTRUCTION SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER		
R2-10a	48"	36"	WORK ZONE SPEEDING FINES DOUBLED	MASSDOT STANDARD		4	ORANGE	BLACK	BLACK	12.00	48.00
			WHITE				BLACK	BLACK			
R2-10e	36"	48"	END ROAD WORK DOUBLE FINES END	↑ MUTCD STANDARD ↓		2	ORANGE	BLACK	BLACK	12.00	24.00
			WHITE				BLACK	BLACK			
R4-7	30"	30"				4	ORANGE	BLACK	BLACK	6.25	25.00
R9-9	24"	12"	SIDEWALK CLOSED			2	ORANGE	BLACK	BLACK	2.00	4.00
R9-11aL	24"	12"	SIDEWALK CLOSED AHEAD ← CROSS HERE			1	ORANGE	BLACK	BLACK	2.00	2.00
R9-11aR	24"	12"	SIDEWALK CLOSED AHEAD → CROSS HERE			1	ORANGE	BLACK	BLACK	2.00	2.00
W1-4L	30"	30"				2	ORANGE	BLACK	BLACK	6.25	12.50
W1-4R	30"	30"				2	ORANGE	BLACK	BLACK	6.25	12.50
W5-1	36"	36"	ROAD NARROWS			4	ORANGE	BLACK	BLACK	9.00	36.00
W8-1	30"	30"	BUMP			2	ORANGE	BLACK	BLACK	6.25	12.50
W8-3	30"	30"	PAVEMENT ENDS			2	ORANGE	BLACK	BLACK	6.25	12.50
W8-8	30"	30"	ROUGH ROAD	2	ORANGE	BLACK	BLACK	6.25	12.50		
W8-15	30"	30"	GRAVEL PAVEMENT	2	ORANGE	BLACK	BLACK	6.25	12.50		
W11-2	30"	30"		4	ORANGE	BLACK	BLACK	6.25	25.00		
W13-1P	24"	24"	XX M.P.H	2	ORANGE	BLACK	BLACK	4.00	8.00		
W16-7pL	24"	12"		4	ORANGE	BLACK	BLACK	2.00	8.00		
W20-1 (AHEAD)	36"	36"	ROAD WORK AHEAD	4	ORANGE	BLACK	BLACK	9.00	36.00		
W20-4	36"	36"	ONE LANE ROAD (XXX FT)	4	ORANGE	BLACK	BLACK	9.00	36.00		
W20-7	36"	36"		4	ORANGE	BLACK	BLACK	9.00	36.00		
W20-7b	36"	36"	POLICE OFFICER AHEAD	4	ORANGE	BLACK	BLACK	9.00	36.00		
W21-5a	36"	36"	RIGHT SHOULDER CLOSED	1	ORANGE	BLACK	BLACK	9.00	9.00		
TOTAL										410.00	

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	58
PROJECT FILE NO.		607411	

TEMPORARY TRAFFIC
CONTROL PLAN



ADVANCE WARNING SIGN LOCATIONS

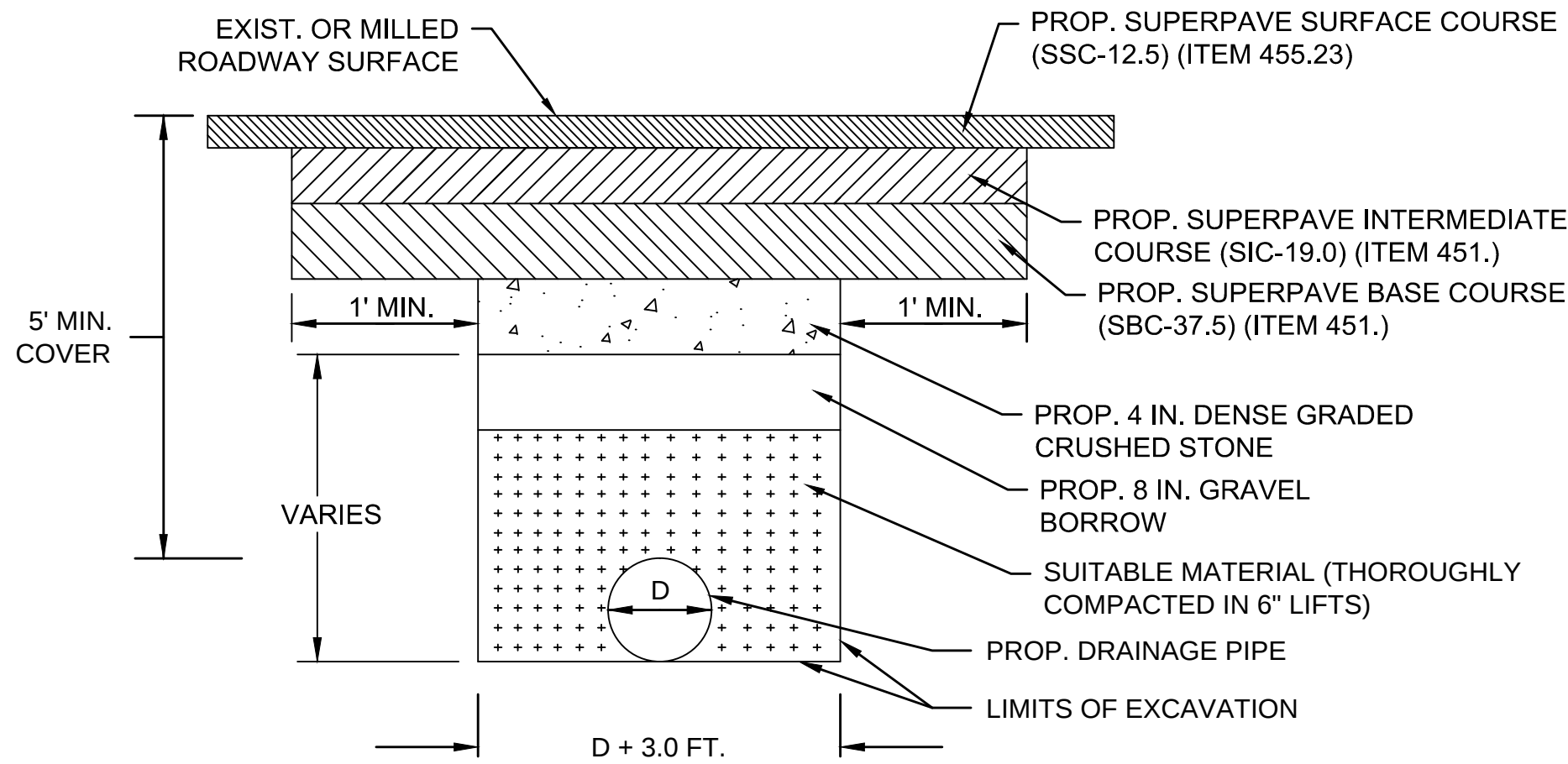
1" = 500'

ALL TEMPORARY TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL MEASURES SHALL CONFORM TO MASSDOT'S "2014 STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS" INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING DETAILS:

- FIGURES GEN-1 THRU GEN-6
- FIGURES PED-1 THRU PED-7
- FIGURE INT-2
- FIGURES TLR-1 THRU TLR-3

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	58
PROJECT FILE NO.		607411	

CONSTRUCTION DETAILS

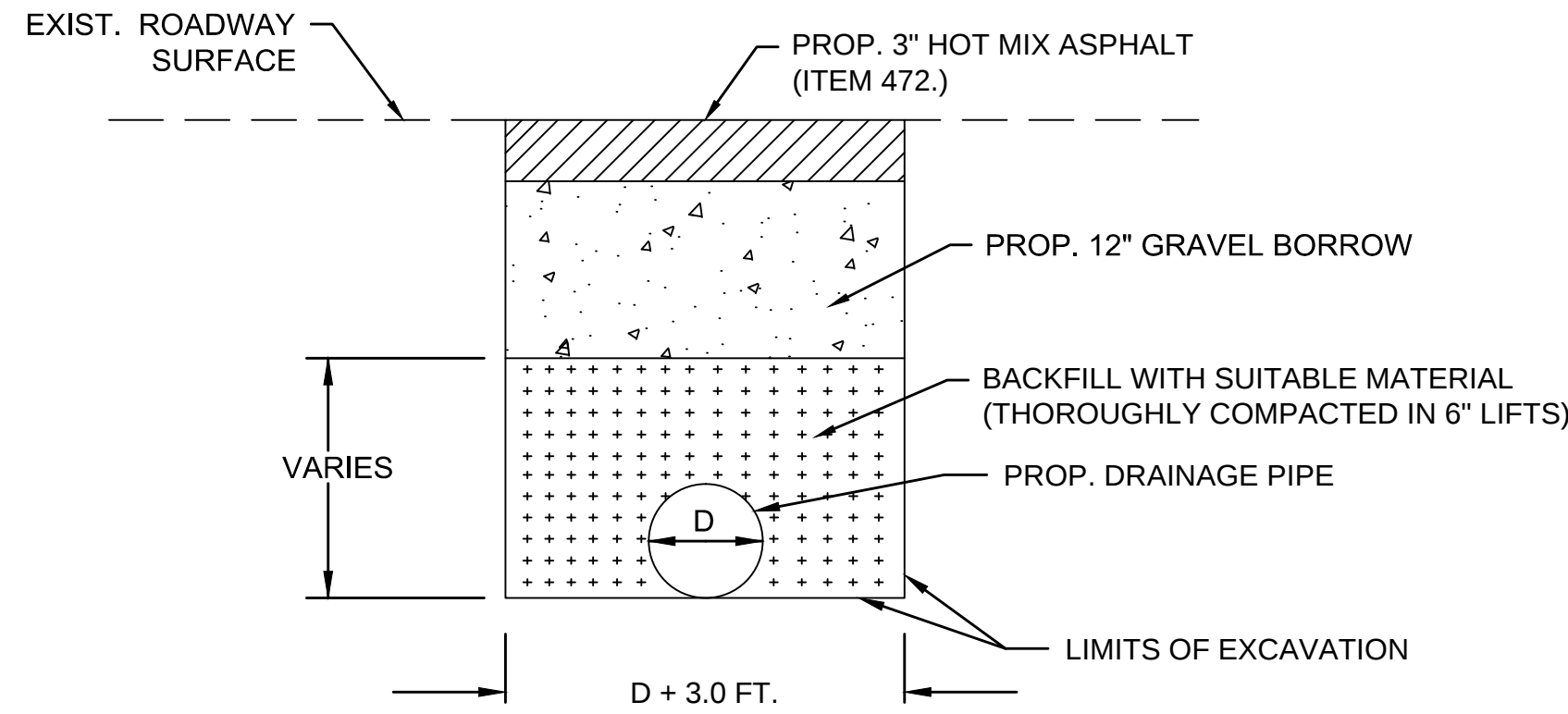


PERMANENT PATCH

(IN AREAS OF MILLING AND PAVEMENT OVERLAY)

1. PLACE TACK COAT BETWEEN ALL HMA COURSES AND SAWCUT SURFACES PRIOR TO PLACING HMA. SEE PAVEMENT NOTES-FULL DEPTH HMA CONSTRUCTION FOR DEPTH OF HMA.

2. IF UNSUITABLE MATERIAL IS ENCOUNTERED AS DETERMINED BY THE ENGINEER, ADDITIONAL BEDDING SHALL BE PAID FOR UNDER ITEMS 151.2 AND 156.

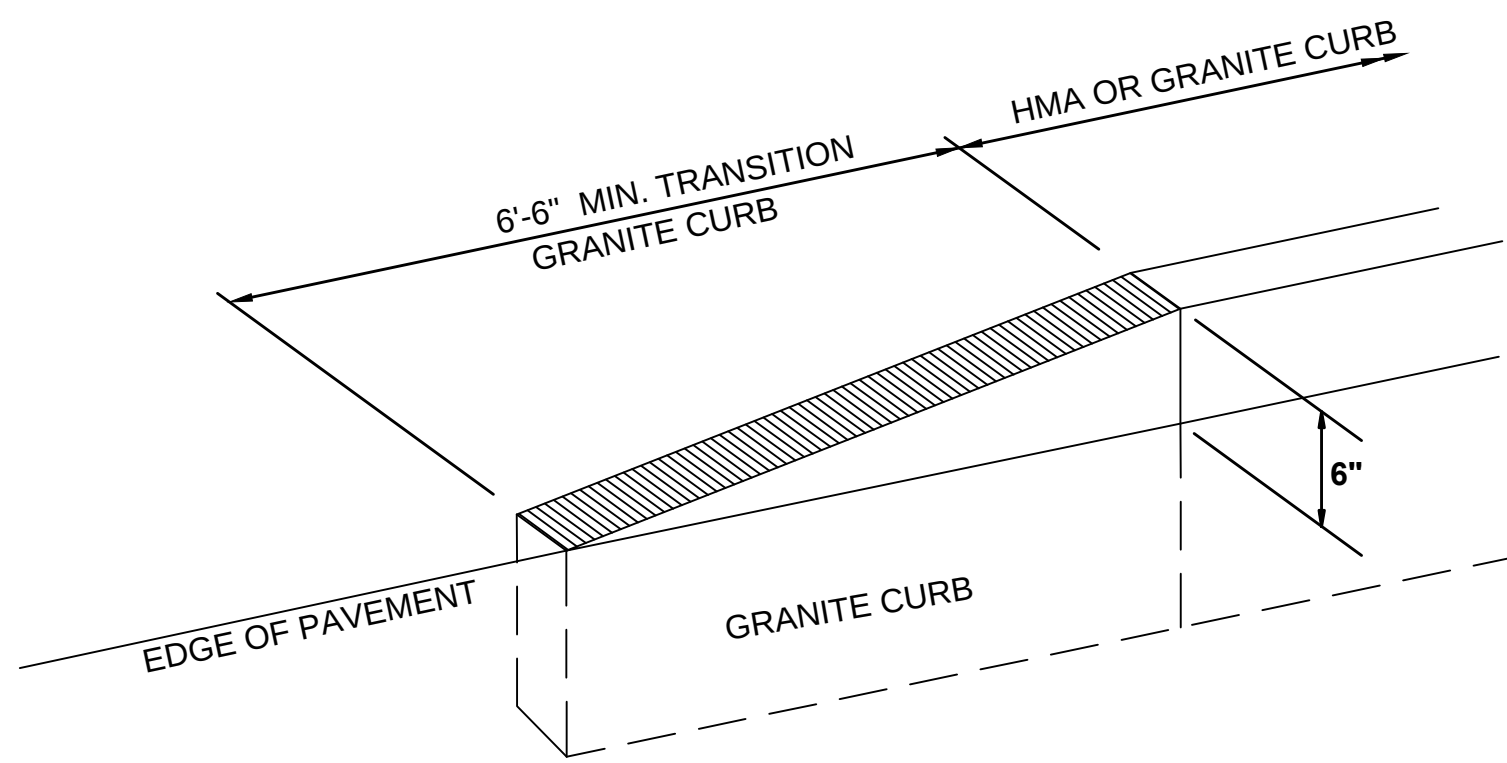


TEMPORARY PATCH

(IN AREAS OF FULL DEPTH PAVEMENT RECONSTRUCTION)

DRAINAGE TRENCH DETAIL

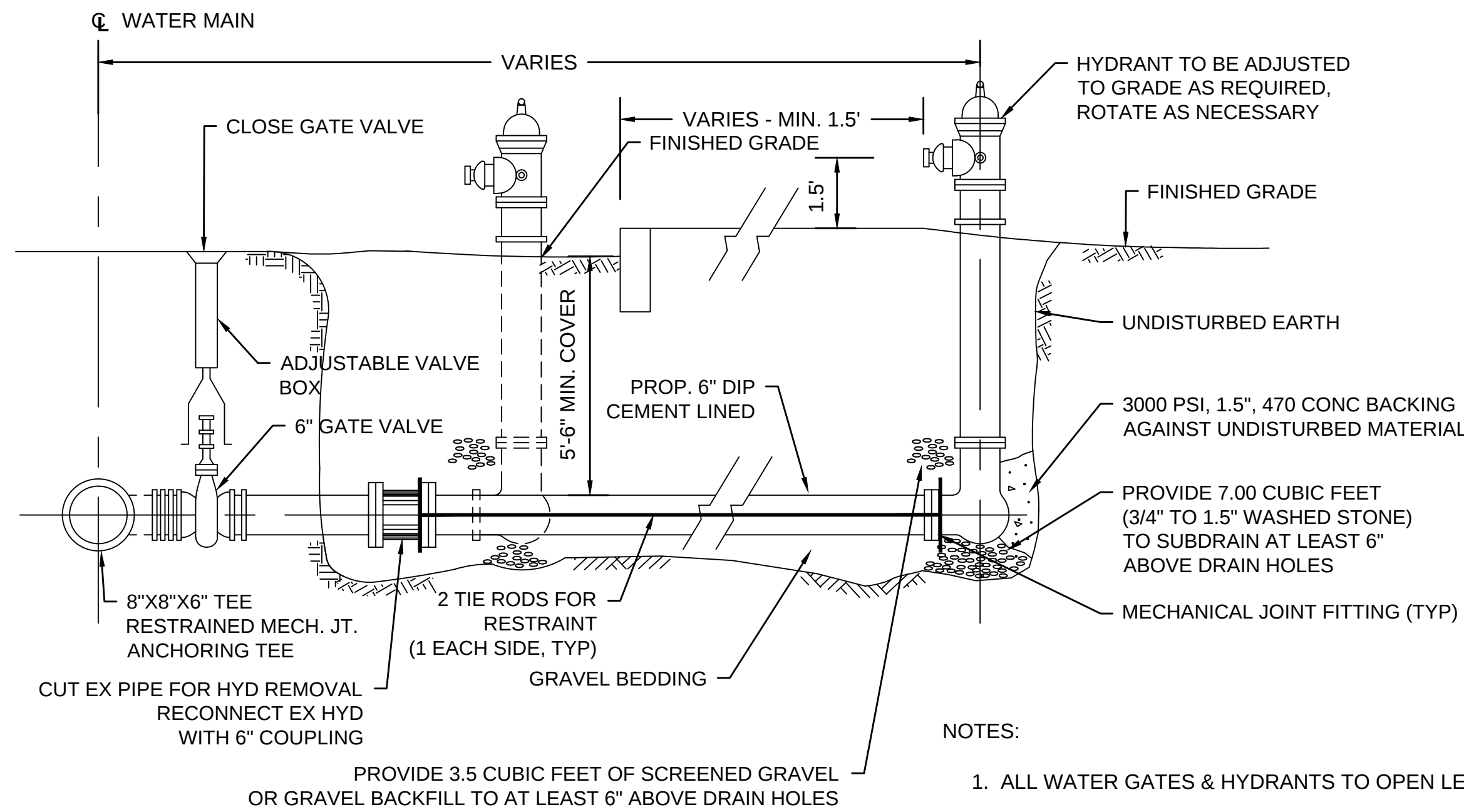
NOT TO SCALE



CURB TRANSITION DETAIL

NOT TO SCALE

TO BE USED FOR TRANSITION FROM HMA CURB OR GRANITE CURB TO EDGE OF PAVEMENT



HYDRANT INSTALLATION
HYDRANT REMOVED AND RESET

NOT TO SCALE

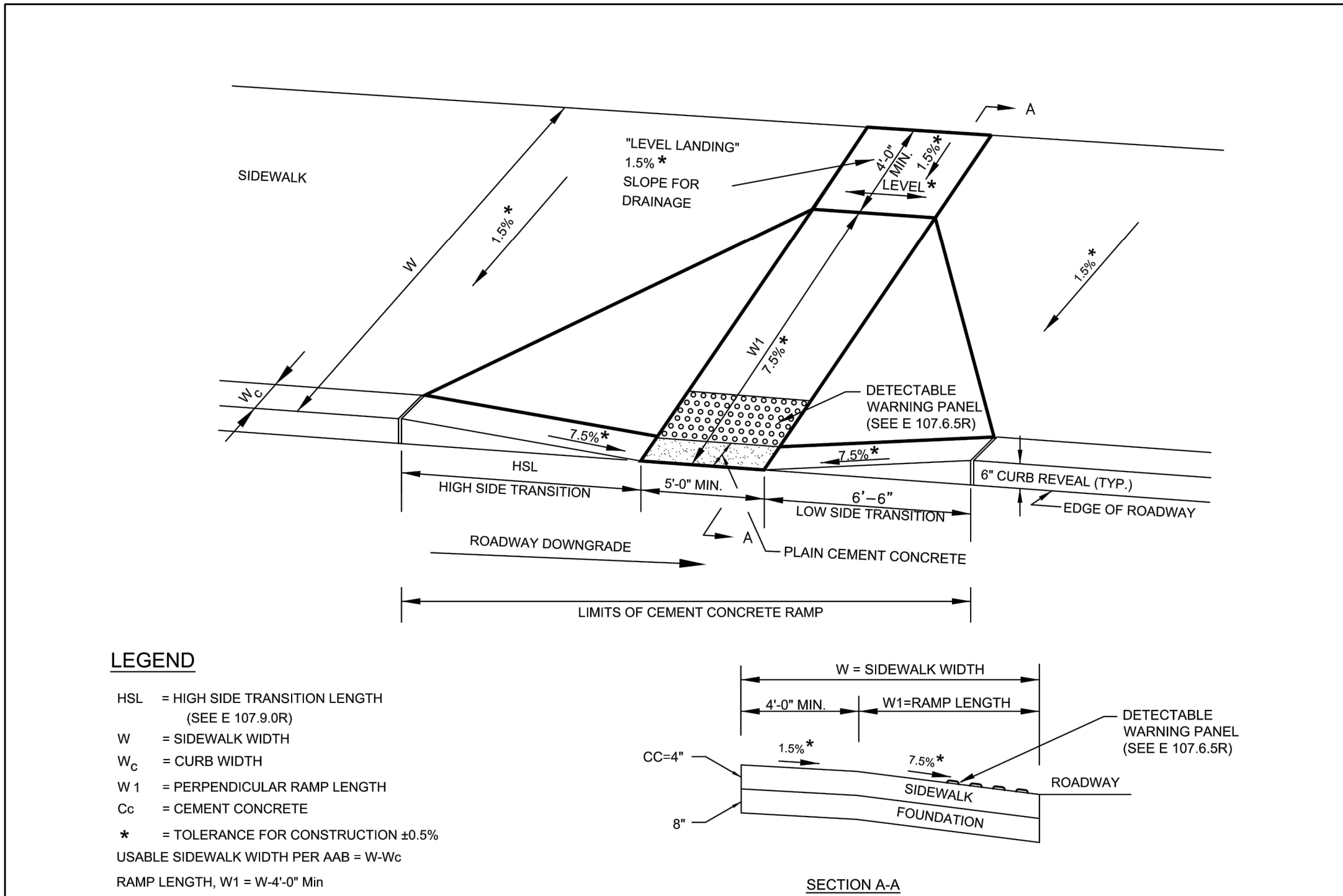
NOTES:

1. ALL WATER GATES & HYDRANTS TO OPEN LEFT
2. ALL MECHANICAL RESTRAINT DEVICES, STONE, GRAVEL, ETC. NECESSARY TO INSTALL OR REMOVE AND RESET HYDRANTS ARE INCIDENTAL TO ITEMS 376., 376.1 AND 376.2.

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	58
PROJECT FILE NO.		607411	

WHEELCHAIR RAMP/DRIVEWAY
DETAILS



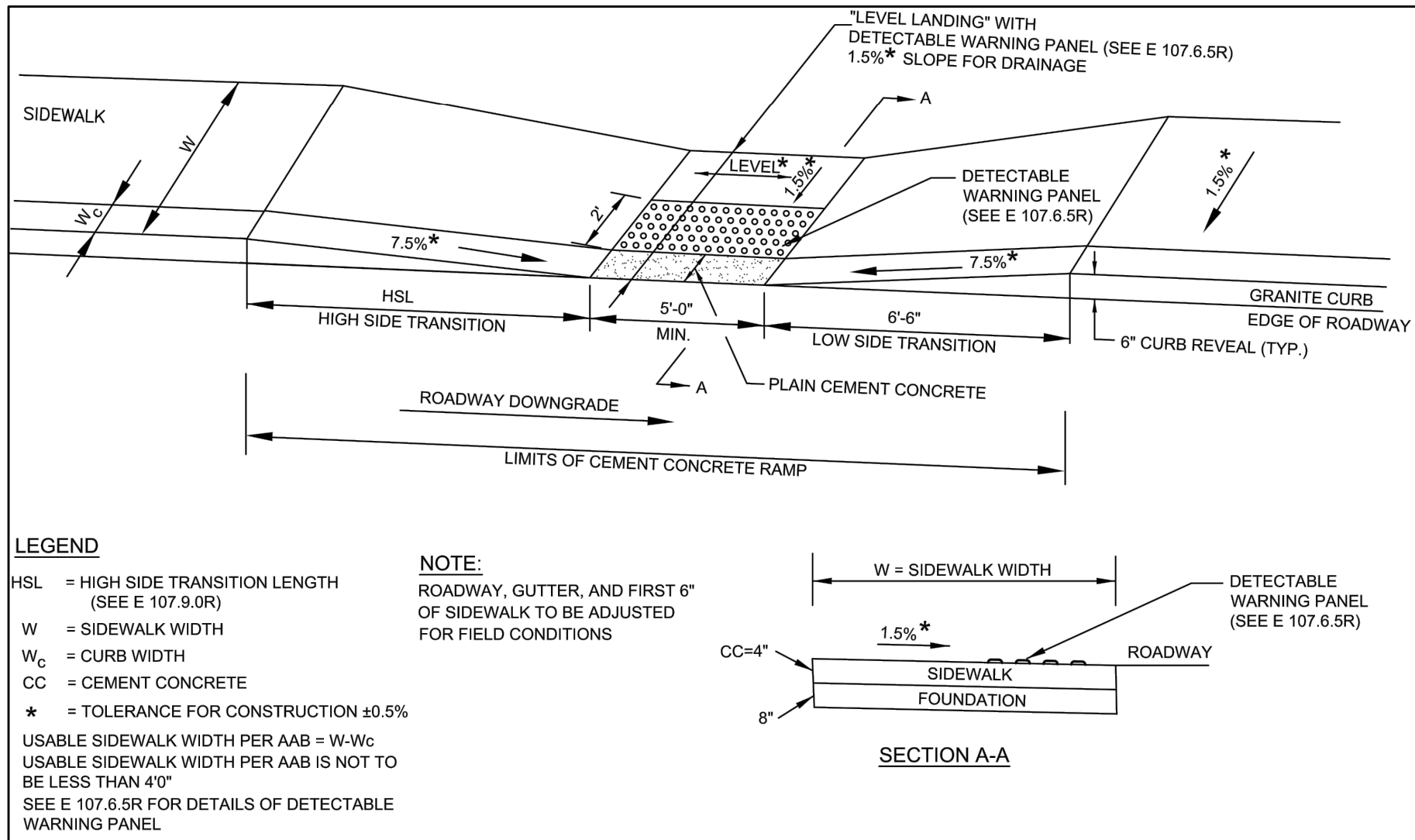
WCR #	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK	WIDTH OF RAMP MIN. 5'-0"	DEPTH OF LEVEL LANDING MIN. 4'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
	BASELINE	STATION	OFFSET						LEFT SIDE	RIGHT SIDE
1*	BEACH RD	10+50	25.18' LT	4'-2"	5'-0"	5'-0"	4'-0"			
2*	BEACH RD	10+61	15.0' LT	4'-2"	5'-0"	5'-0"	6'-0"			
3*	BEACH RD	10+61	15.0' RT	4'-2"	5'-0"	5'-0"	6'-0"			
5	BEACH RD	20+04	15.0' RT	8'-4"	13'-0"	8'-0"	4'-8"			
8	BEACH RD	29+26	12.5' RT	4'-2"	9'-0"	5'-0"	8'-8"			
9	BEACH RD	31+21	12.5' RT	8'-4"	10'-0"	5'-0"	5'-8"			
10	BEACH RD	35+78	15.7' RT	8'-4"	10'-0"	5'-0"	5'-8"			

WHEELCHAIR RAMP GREATER THAN 12'-4" SIDEWALK NOTE: * 3" CURB REVEAL

ROADWAY PROFILE GRADE	*HIGH SIDE TRANSITION LENGTH
	ENGLISH UNITS
%	
=0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" Max

NOTE:

*BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".



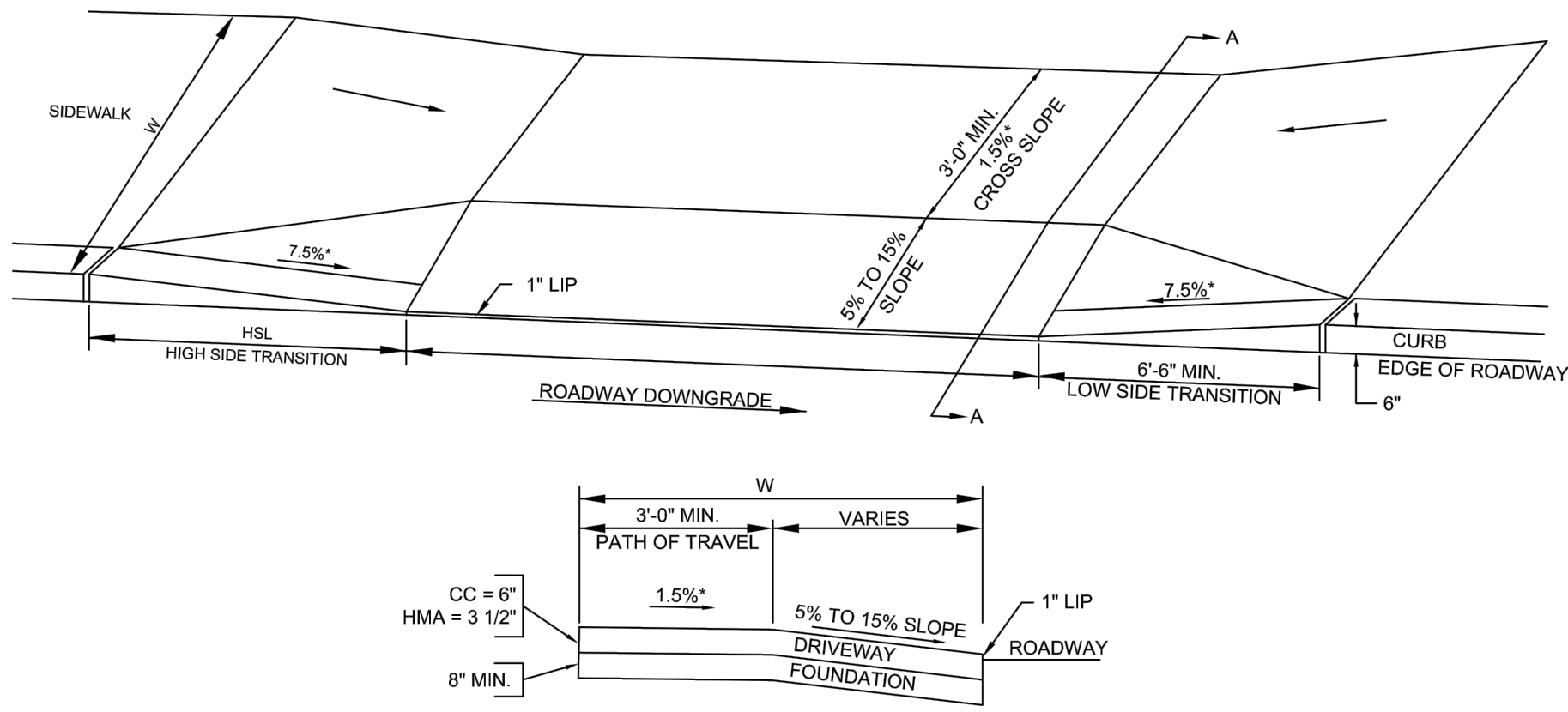
WCR #	RAMP REFERENCE POINT			WIDTH OF SIDEWALK	WIDTH OF RAMP MIN. 5'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
	BASELINE	STATION	OFFSET				LEFT SIDE	RIGHT SIDE
4	BEACH RD	20+03	15.0' LT	5'-6"	5'-0"			
6	BEACH RD	24+19	15.0' LT	5'-6"	5'-0"			
7	BEACH RD	24+19	15.0' RT	5'-6"	5'-0"			

WHEELCHAIR RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	58
PROJECT FILE NO.		607411	

WHEELCHAIR RAMP/DRIVEWAY
DETAILS

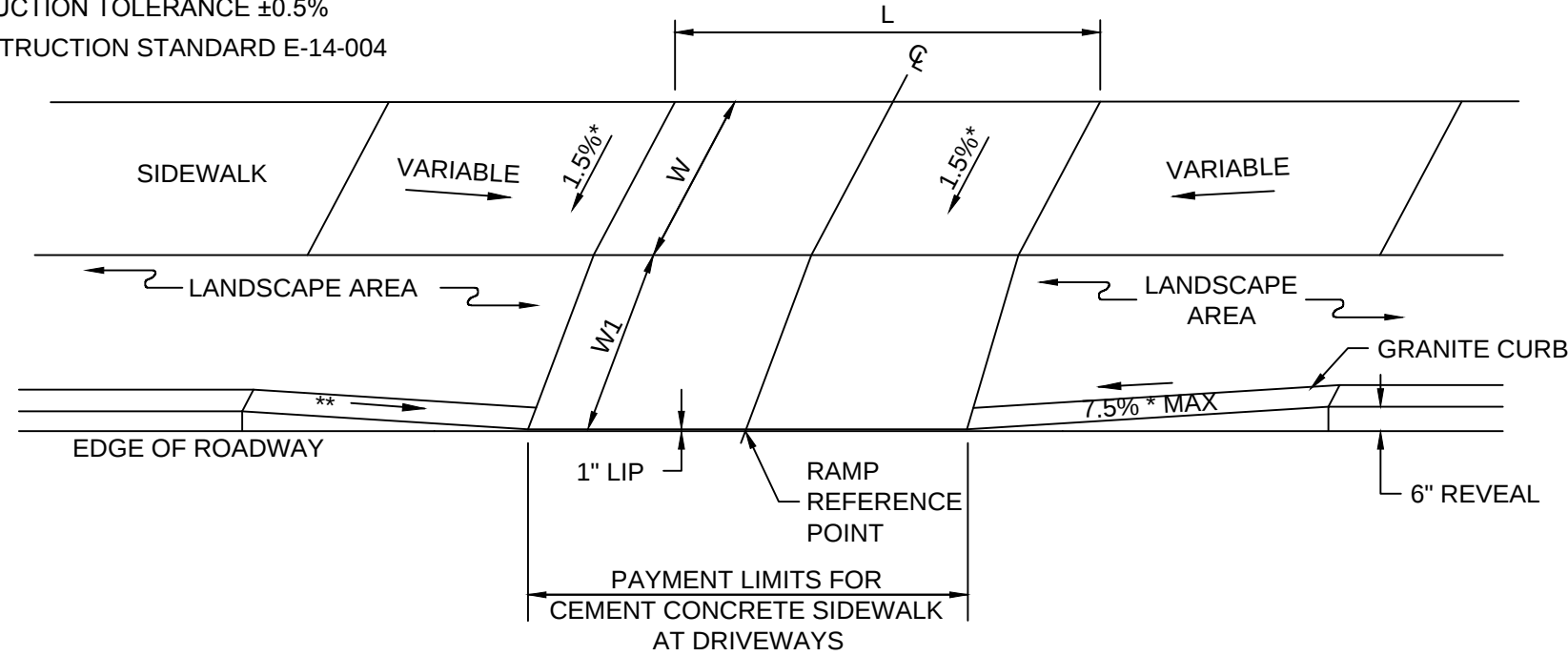


LEGEND
HSL = HIGH SIDE TRANSITION LENGTH. SEE E 107.9.0
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT

DWY #	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF DRIVEWAY (L)	DEPTH OF TRAVEL PATH MIN. 3'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
	BASELINE	STATION	OFFSET						LEFT SIDE	RIGHT SIDE
1	BEACH RD	11+66	15.0' RT	2'-0"	5'-6"	10'-0"	3'-6"			
2	BEACH RD	12+15	15.0' RT	2'-0"	5'-6"	30'-0"	3'-6"			
3	BEACH RD	12+25	15.0' LT	2'-0"	5'-6"	30'-0"	3'-6"			
4	BEACH RD	12+81	15.0' LT	2'-0"	5'-6"	22'-0"	3'-6"			
5	BEACH RD	13+02	15.0' RT	2'-0"	5'-6"	22'-0"	3'-6"			
6	BEACH RD	13+59	15.0' RT	2'-0"	5'-6"	21'-0"	3'-6"			
7	BEACH RD	13+81	15.0' LT	2'-0"	5'-6"	24'-0"	3'-6"			
8	BEACH RD	14+13	15.0' LT	2'-0"	5'-6"	15'-0"	3'-6"			
9	BEACH RD	14+49	15.0' RT	2'-0"	5'-6"	30'-0"	3'-6"			
10	BEACH RD	14+71	15.0' LT	2'-0"	5'-6"	15'-0"	3'-6"			
11	BEACH RD	15+01	15.0' RT	2'-0"	5'-6"	15'-0"	3'-6"			
12	BEACH RD	15+21	15.0' LT	2'-0"	5'-6"	24'-0"	3'-6"			
13	BEACH RD	16+08	15.0' RT	2'-0"	5'-6"	48'-0"	3'-6"			
14	BEACH RD	15+84	15.0' LT	2'-0"	5'-6"	30'-0"	3'-6"			
15	BEACH RD	16+46	15.0' RT	2'-0"	5'-6"	30'-0"	3'-6"			
16	BEACH RD	16+78	15.0' LT	2'-0"	5'-6"	24'-0"	3'-6"			
17	BEACH RD	17+80	15.0' RT	2'-0"	5'-6"	24'-0"	3'-6"			
18	BEACH RD	18+09	15.0' LT	2'-0"	5'-6"	30'-0"	3'-6"			
19	BEACH RD	18+81	15.0' LT	2'-0"	5'-6"	30'-0"	3'-6"			
20	BEACH RD	18+98	15.0' RT	2'-0"	5'-6"	15'-0"	3'-6"			
21	BEACH RD	19+59	15.0' RT	2'-0"	5'-6"	25'-0"	3'-6"			
22	BEACH RD	20+48	14.0' RT	2'-0"	5'-6"	24'-0"	3'-6"			
23	BEACH RD	21+12	12.5' RT	2'-0"	5'-6"	30'-0"	3'-6"			

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS

NOTES:
- * CONSTRUCTION TOLERANCE ±0.5%
- SEE CONSTRUCTION STANDARD E-14-004



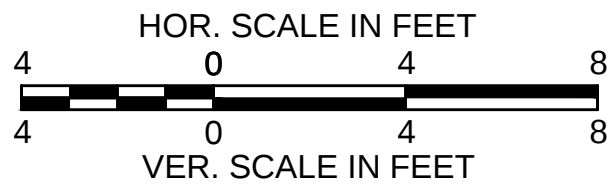
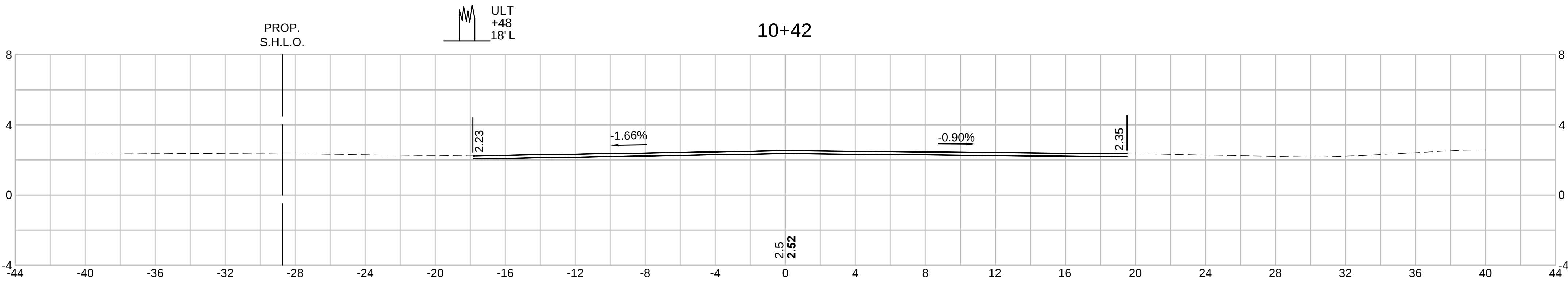
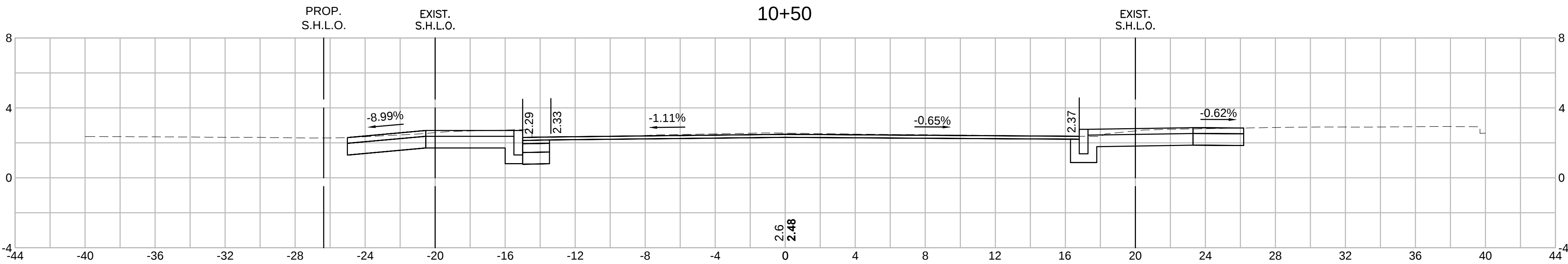
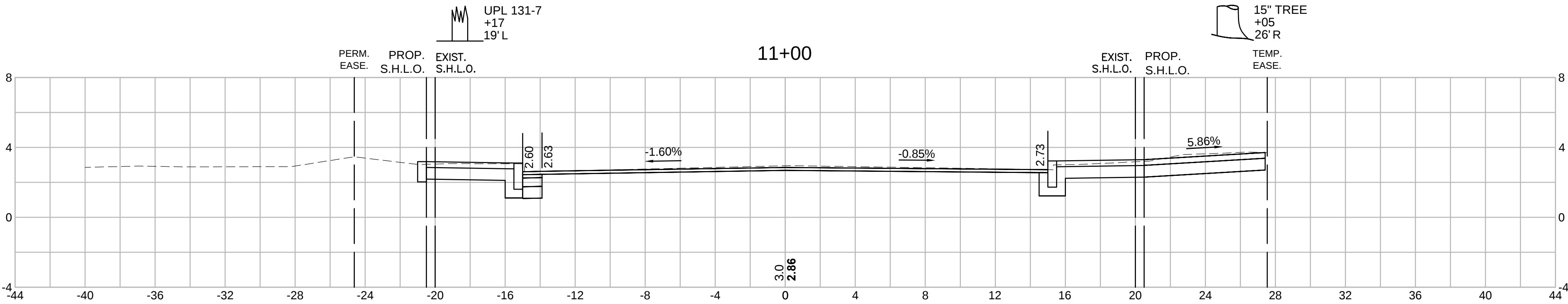
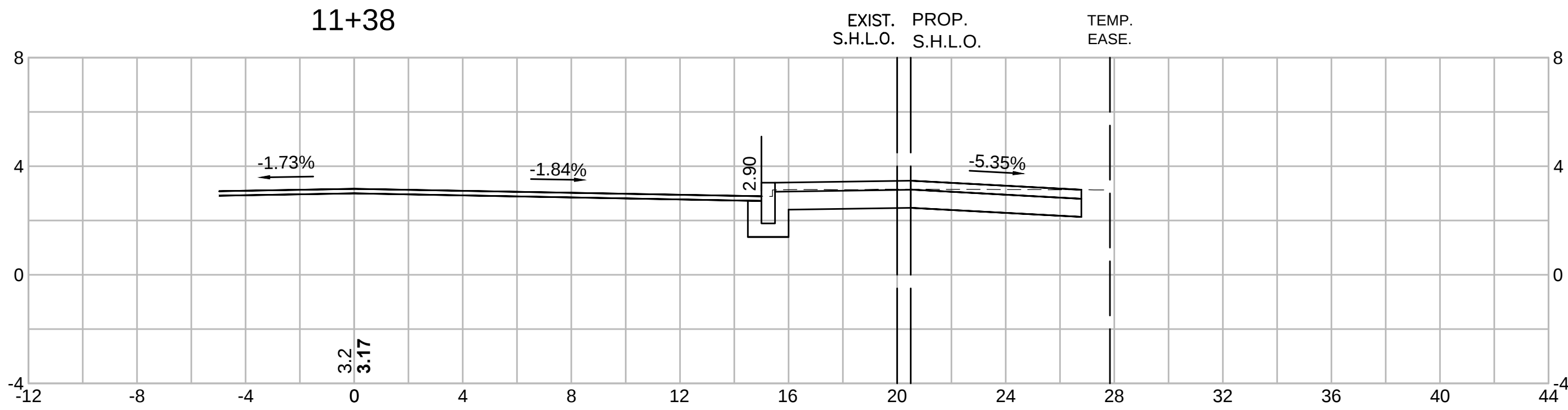
WCR #	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK	WIDTH OF DRIVEWAY	DEPTH OF TRAVEL PATH MIN. 5'-0"	ROADWAY GUTTER SLOPE	TRANSITION LENGTH	
	BASELINE	STATION	OFFSET						LEFT SIDE	RIGHT SIDE
23	BEACH RD	20+90	12.5' LT	1'-6"	9'-0"	24'-0"	9'-0"			
25	BEACH RD	21+69	12.5' RT	1'-6"	9'-0"	15'-0"	9'-0"			
26	BEACH RD	22+60	12.5' RT	1'-6"	9'-0"	15'-0"	9'-0"			
27	BEACH RD	23+33	12.5' RT	1'-6"	9'-0"	30'-0"	9'-0"			
28	BEACH RD	24+45	12.5' RT	1'-6"	9'-0"	15'-0"	9'-0"			
30	BEACH RD	24+67	12.5' RT	1'-6"	9'-0"	12'-0"	9'-0"			
31	BEACH RD	25+13	12.5' RT	1'-9"	9'-0"	15'-0"	9'-0"			
32	BEACH RD	26+21	12.5' RT	3'-0"	10'-0"	40'-0"	10'-0"			
33	BEACH RD	27+72	12.5' RT	3'-0"	10'-0"	24'-0"	10'-0"			
34	BEACH RD	28+35	12.5' RT	3'-0"	10'-0"	30'-0"	10'-0"			
35	BEACH RD	28+97	12.5' RT	3'-0"	10'-0"	24'-0"	10'-0"			
36	BEACH RD	29+51	12.5' RT	3'-0"	10'-0"	24'-0"	10'-0"			
37	BEACH RD	30+87	12.5' RT	4'-0"	10'-0"	24'-0"	10'-0"			
38	BEACH RD	31+79	12.5' RT	4'-0"	10'-0"	30'-0"	10'-0"			
39	BEACH RD	34+03	14.3' RT	4'-0"	10'-0"	30'-0"	10'-0"			
40	BEACH RD	36+16	15.6' RT	4'-0"	10'-0"	30'-0"	10'-0"			

SIDEWALK THROUGH DRIVEWAYS WITH LANDSCAPING

TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	58
PROJECT FILE NO.		607411	

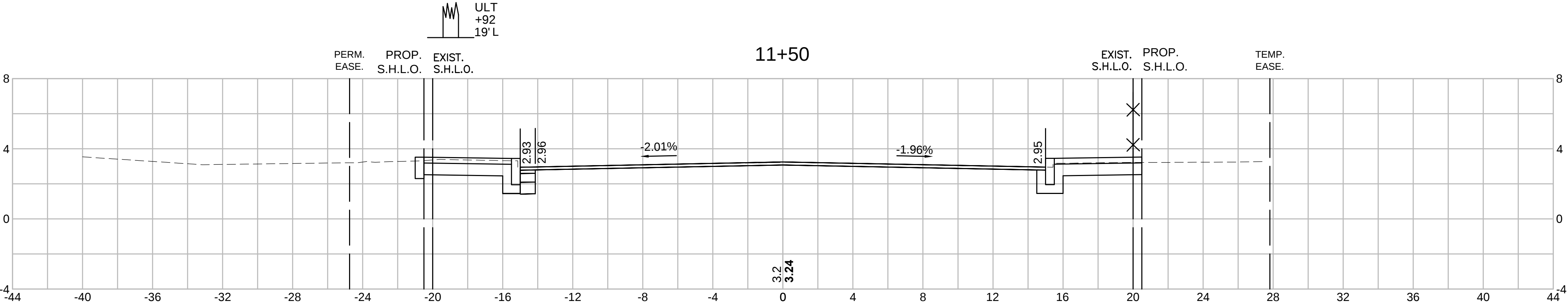
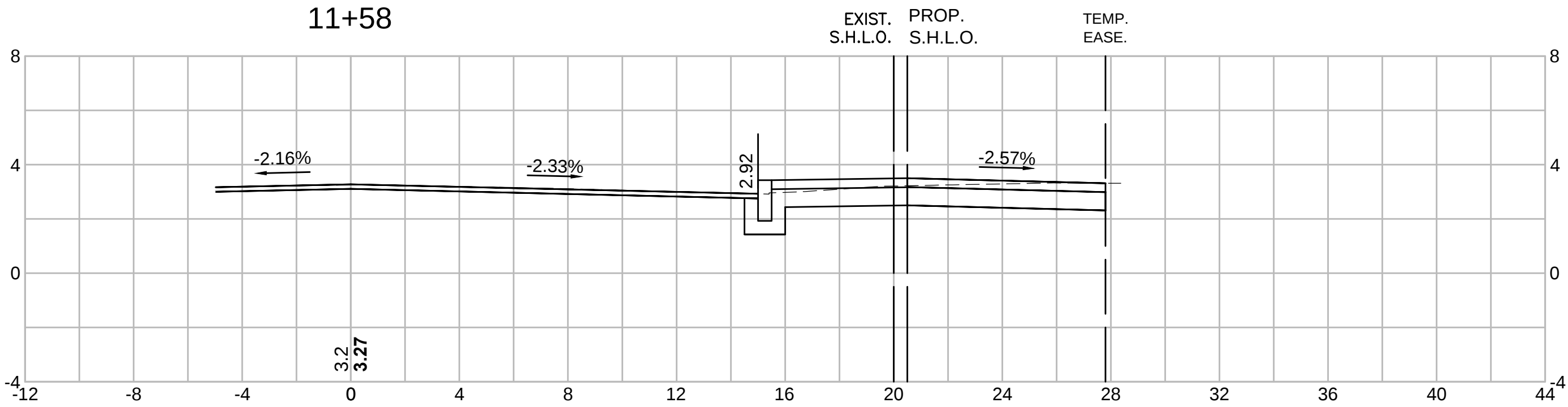
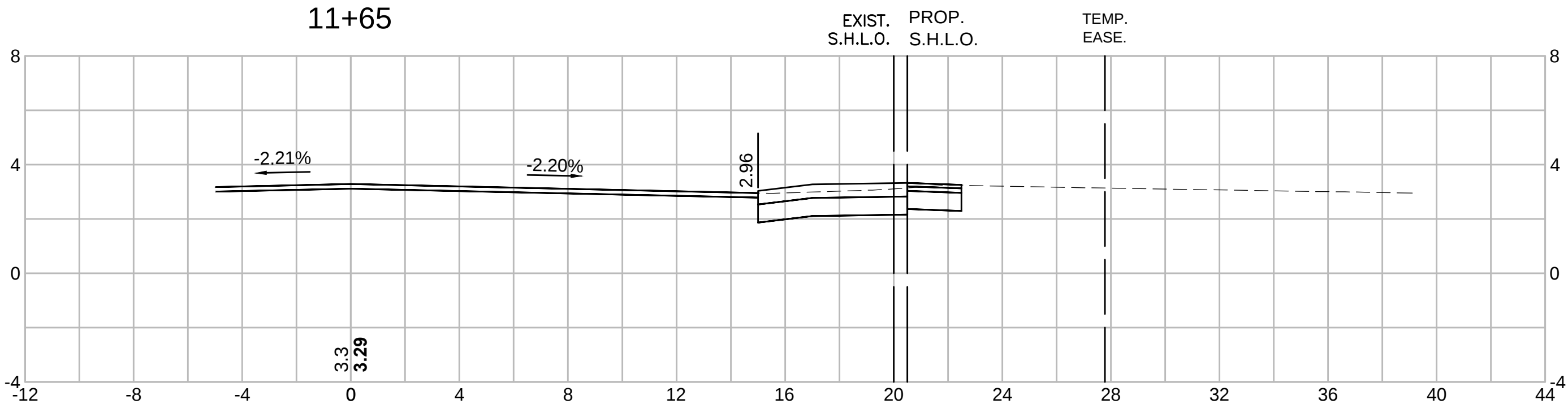
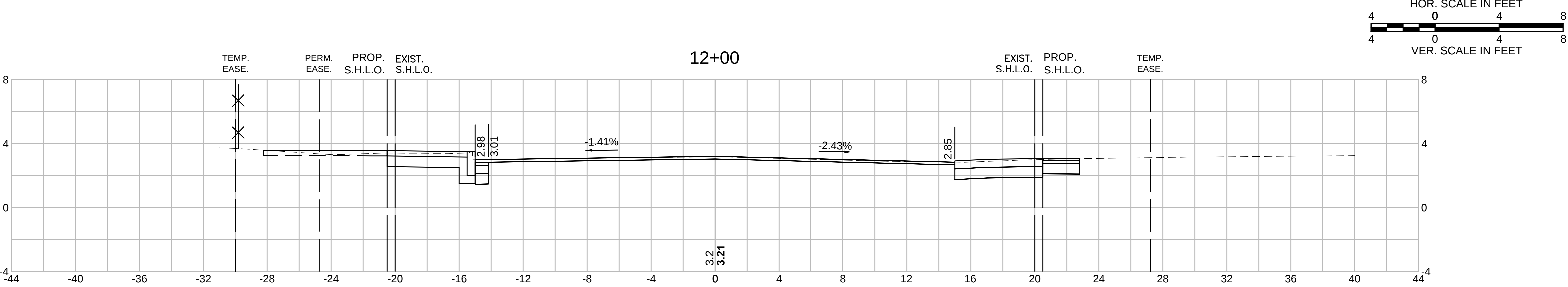
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	58
PROJECT FILE NO.		607411	

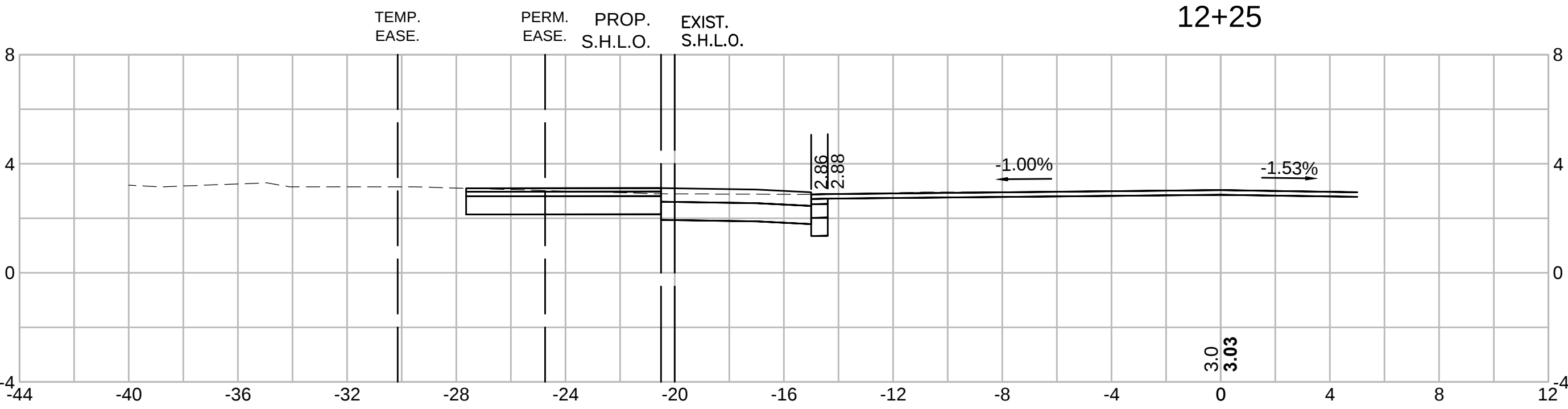
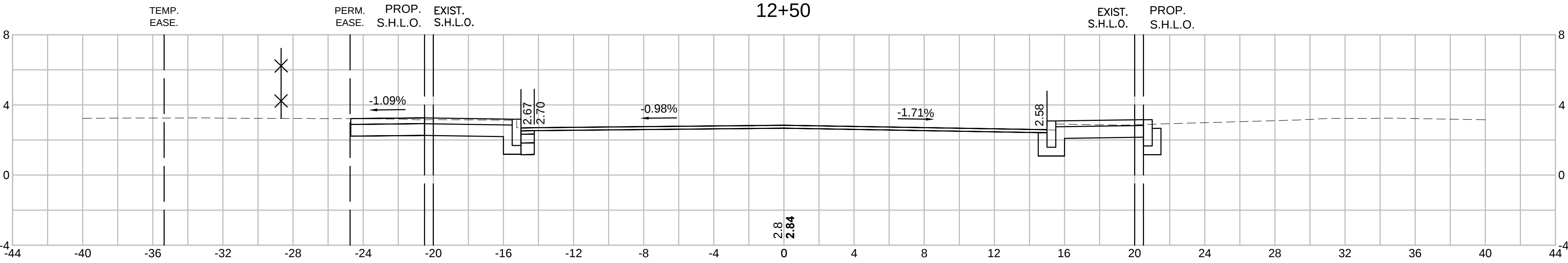
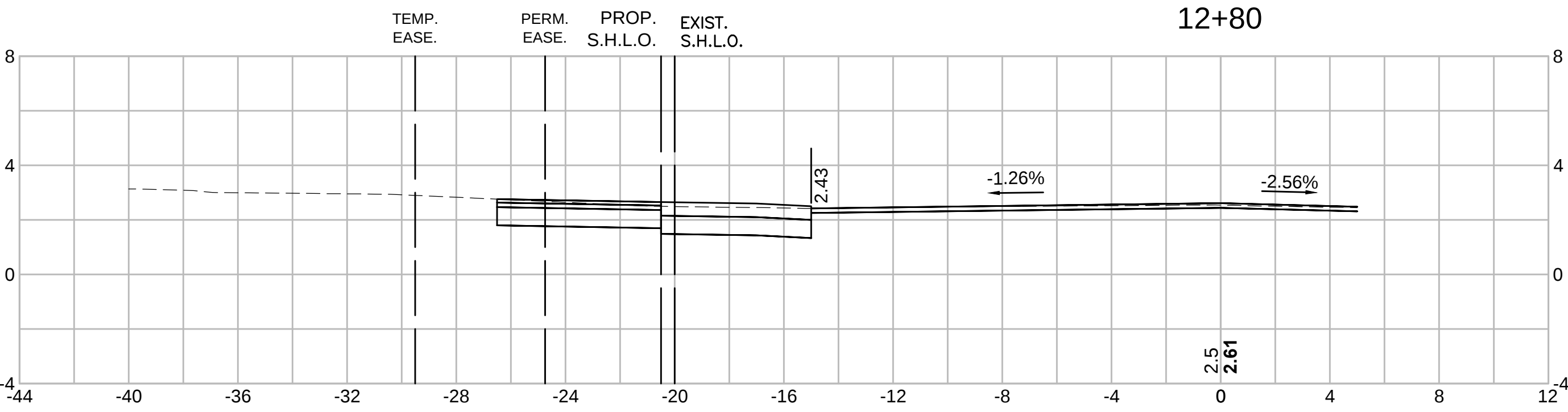
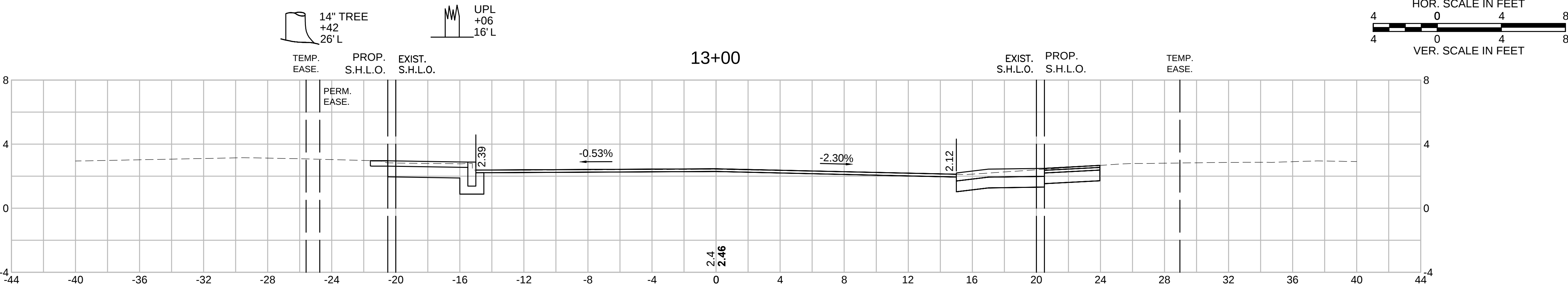
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	58
PROJECT FILE NO.		607411	

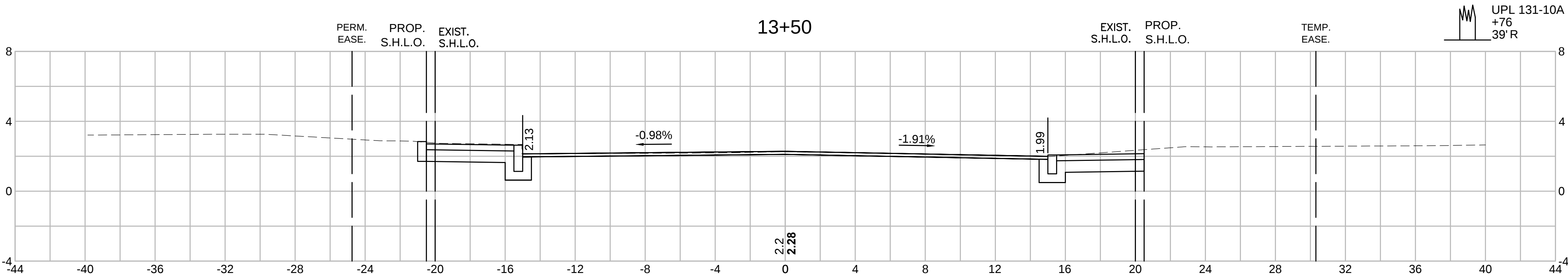
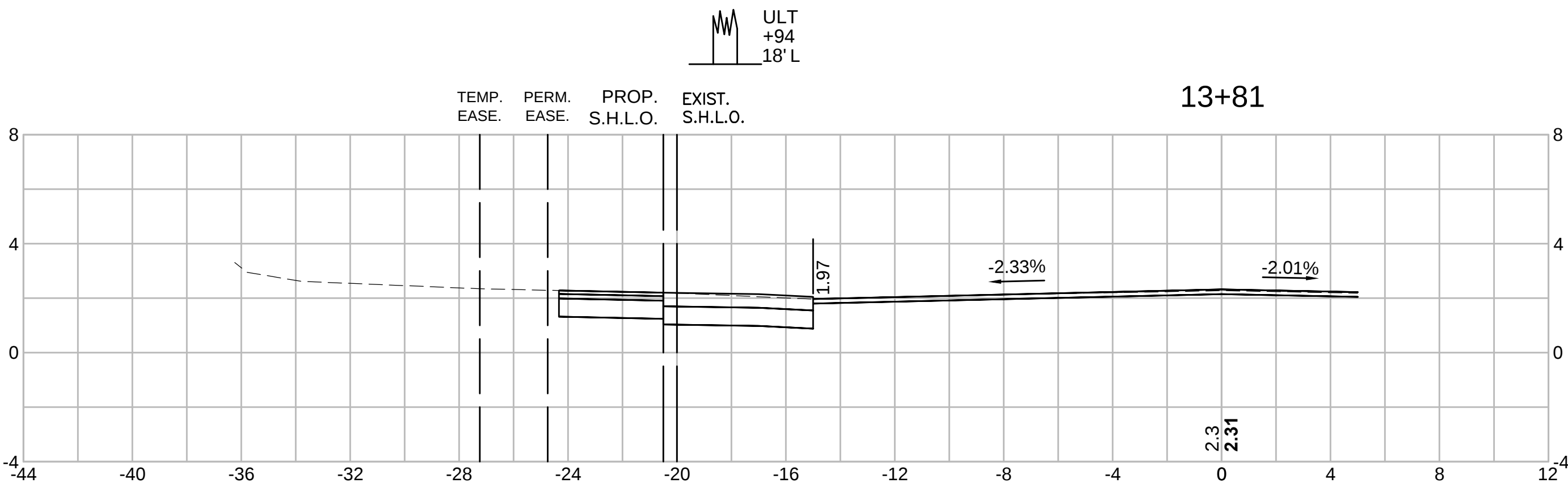
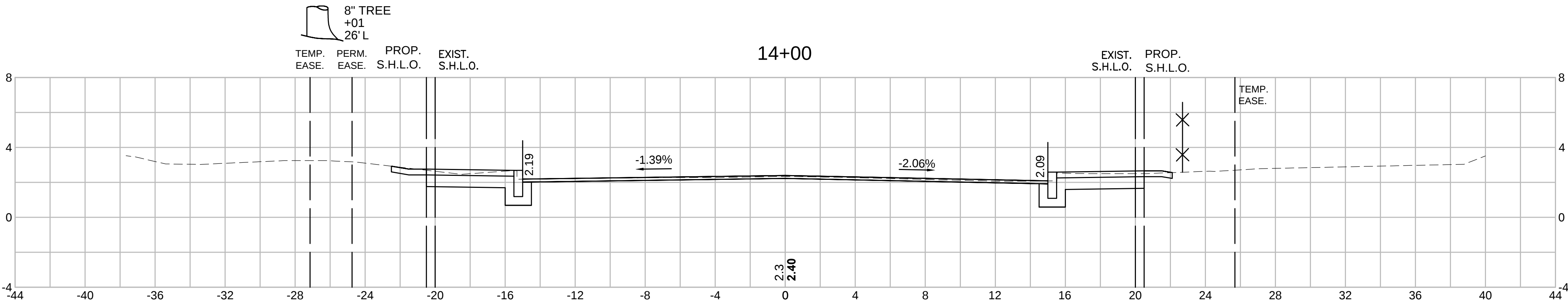
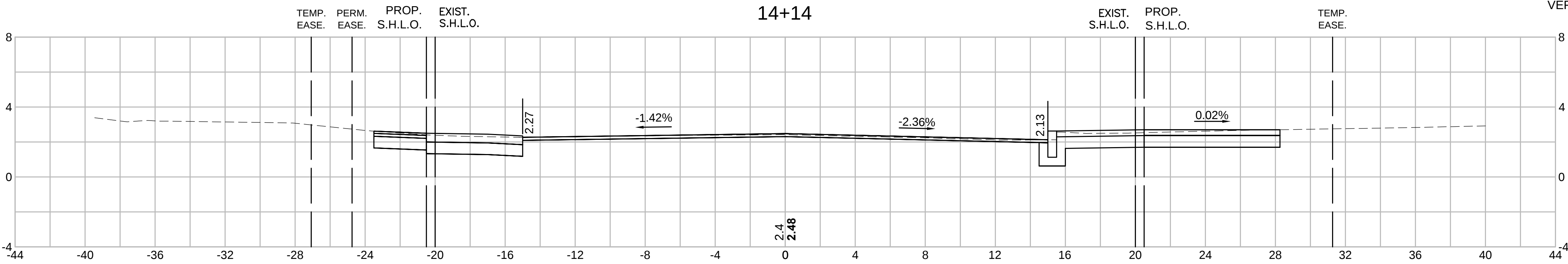
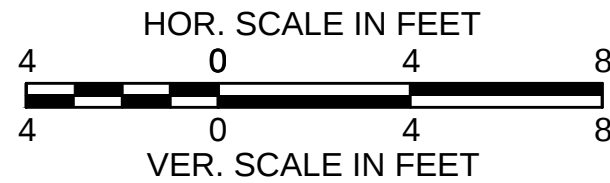
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	58
PROJECT FILE NO.		607411	

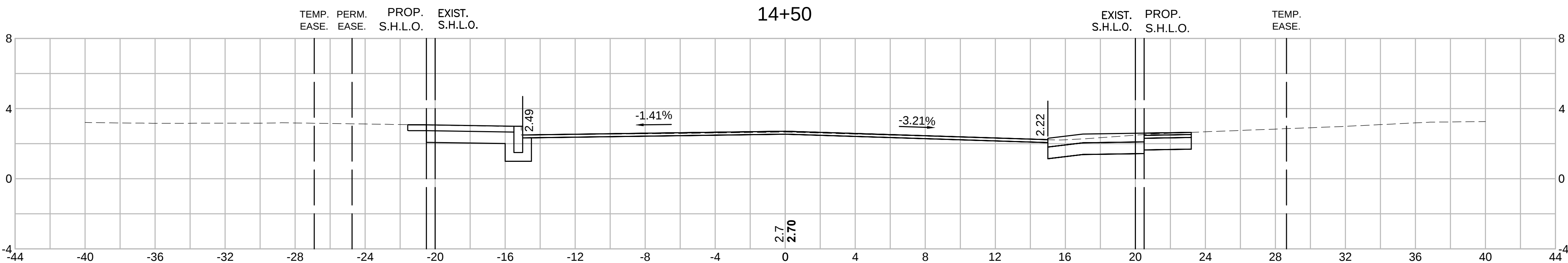
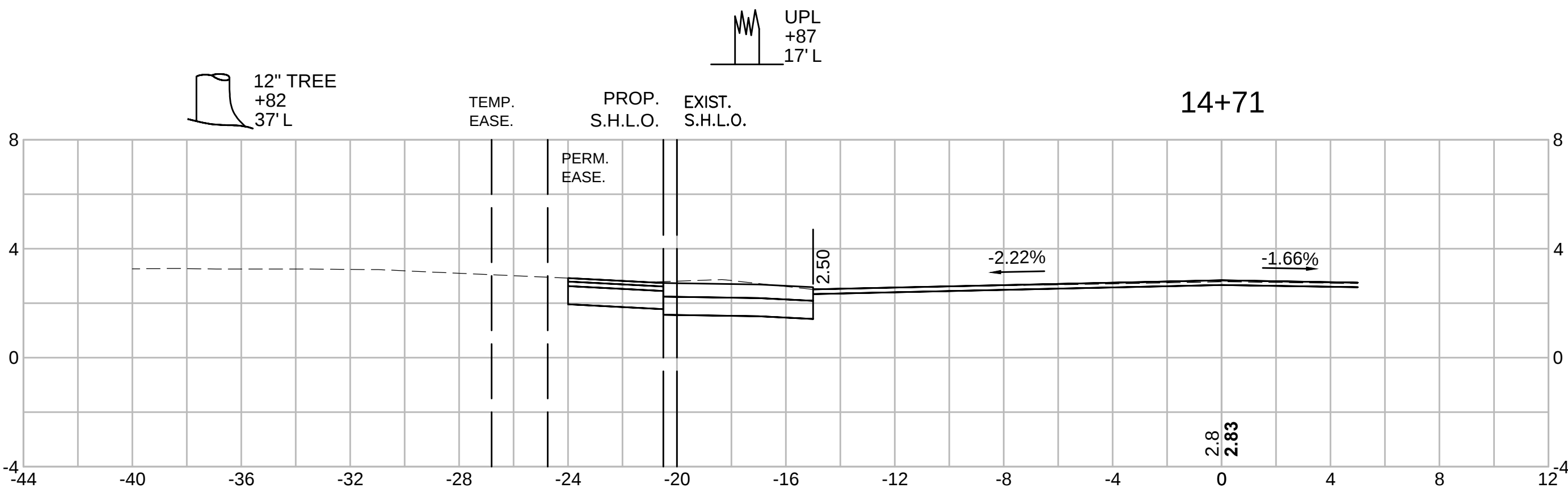
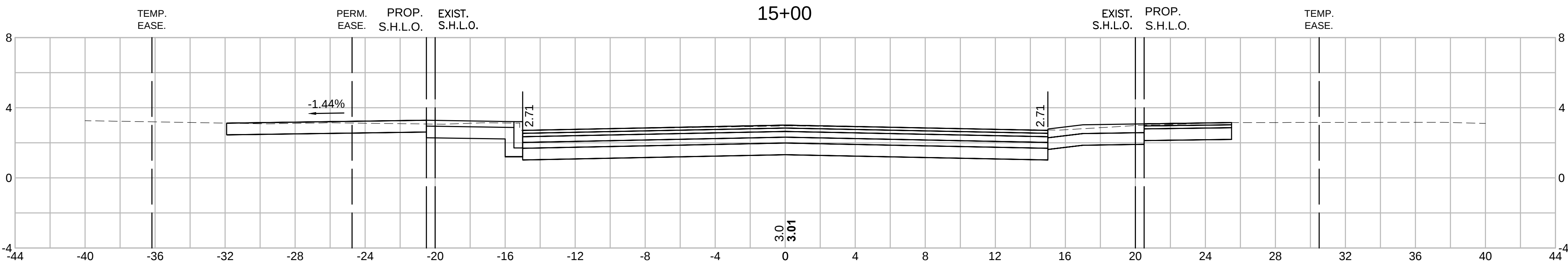
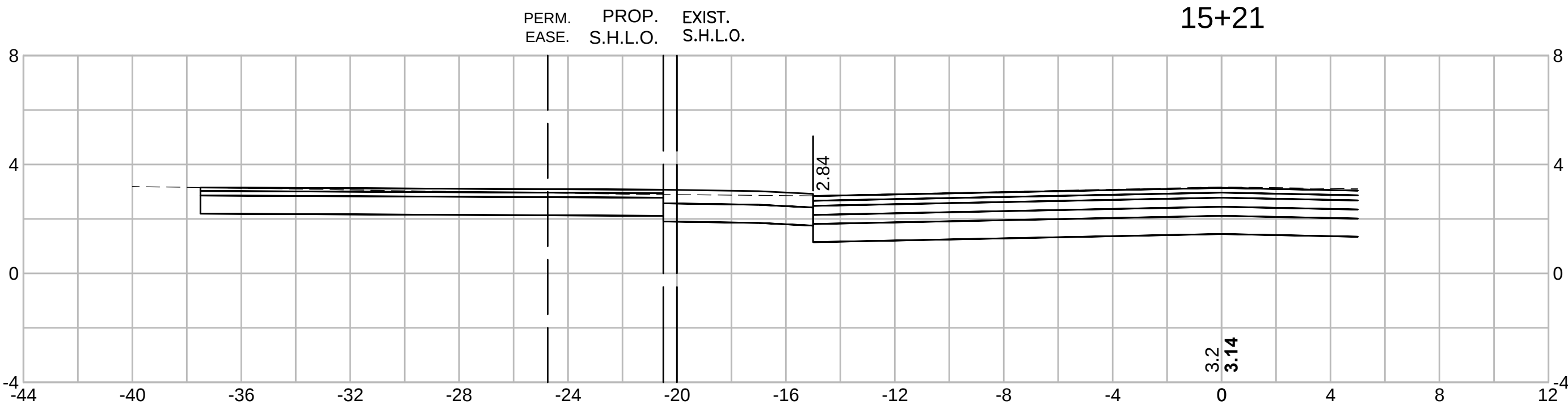
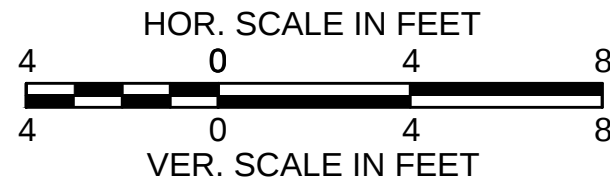
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	58
PROJECT FILE NO.		607411	

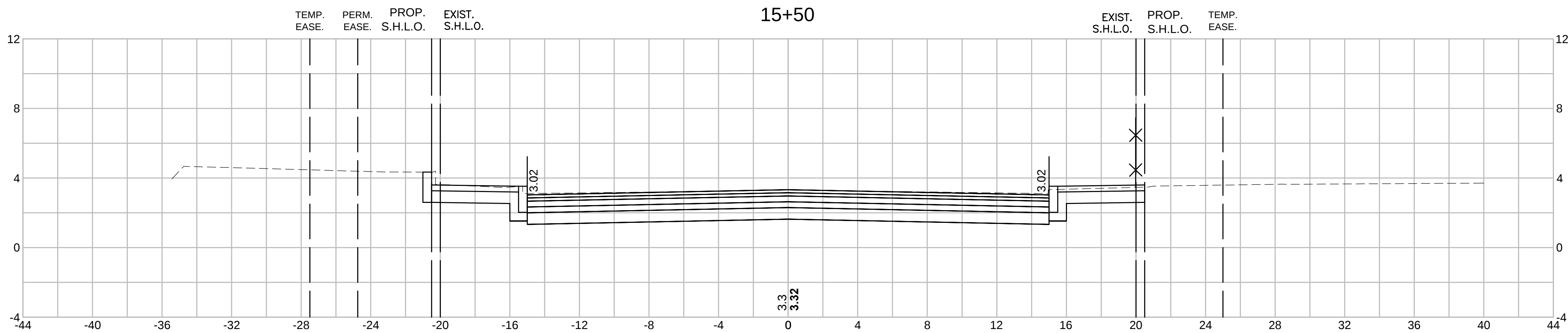
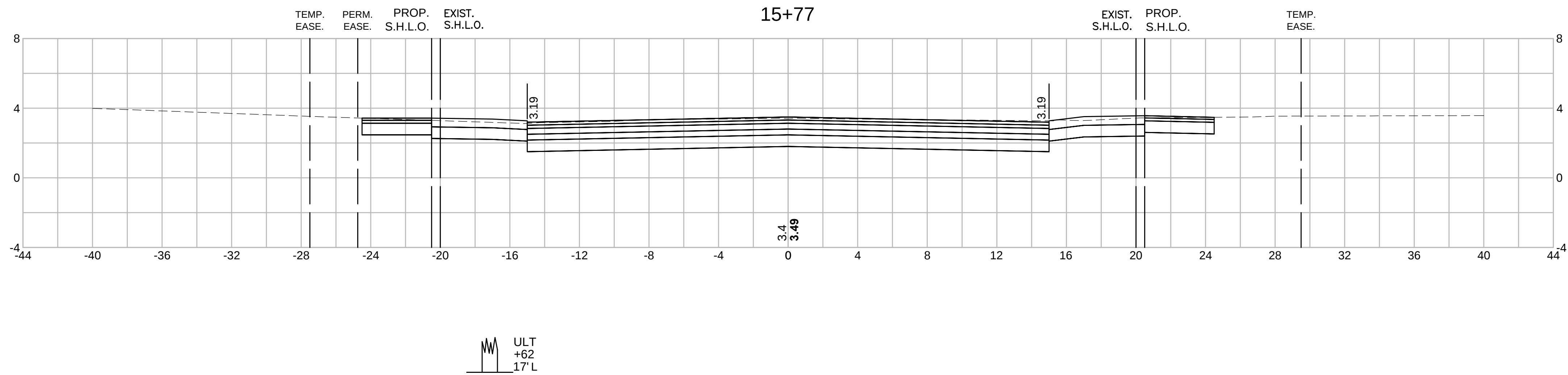
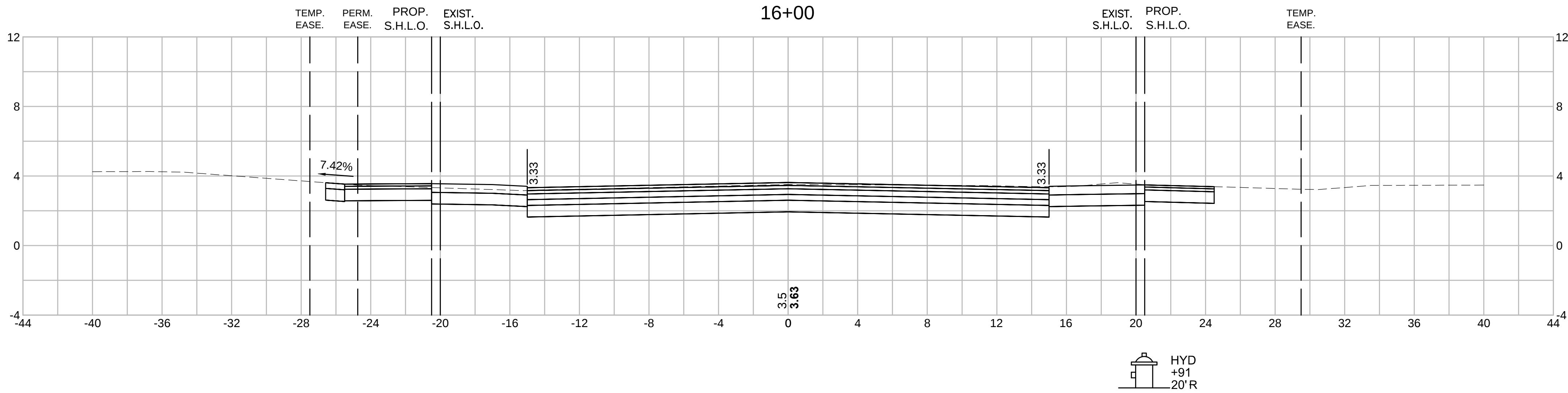
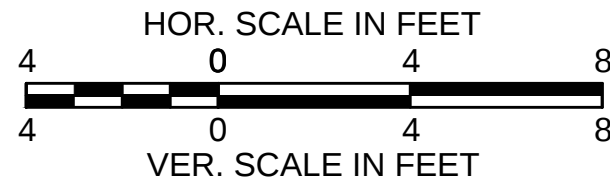
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	58
PROJECT FILE NO.		607411	

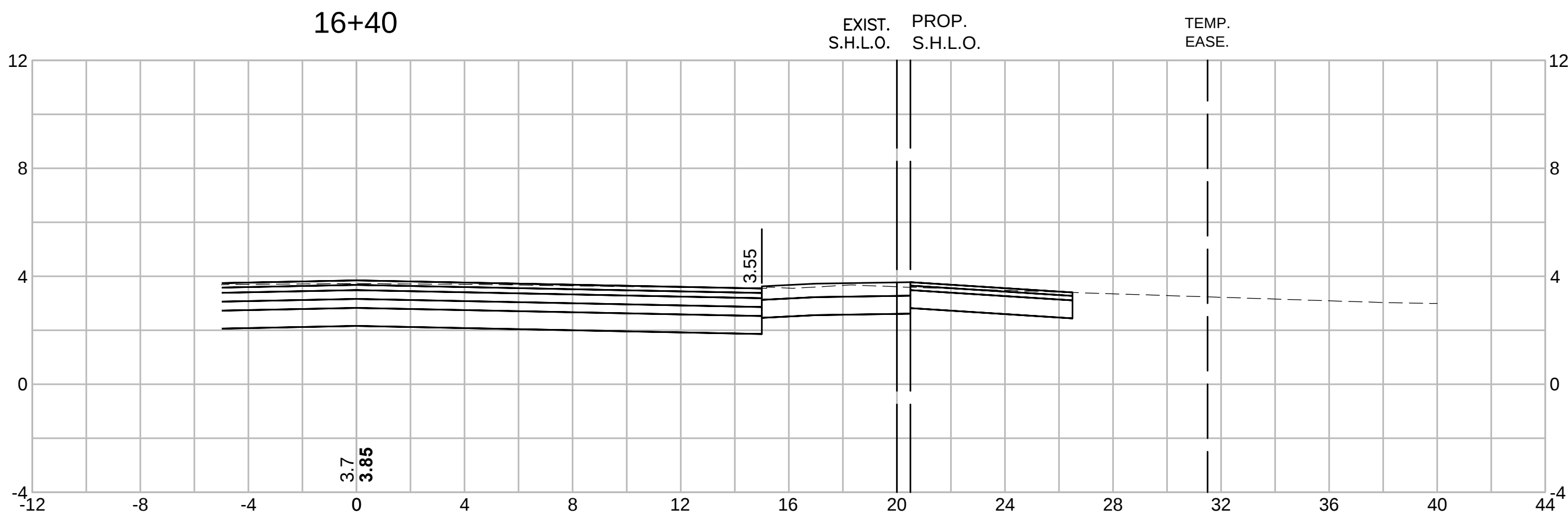
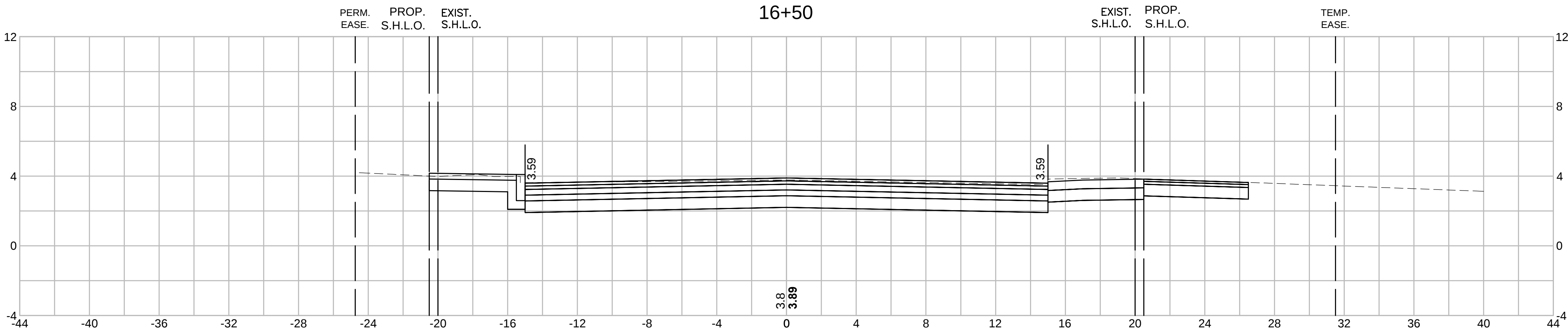
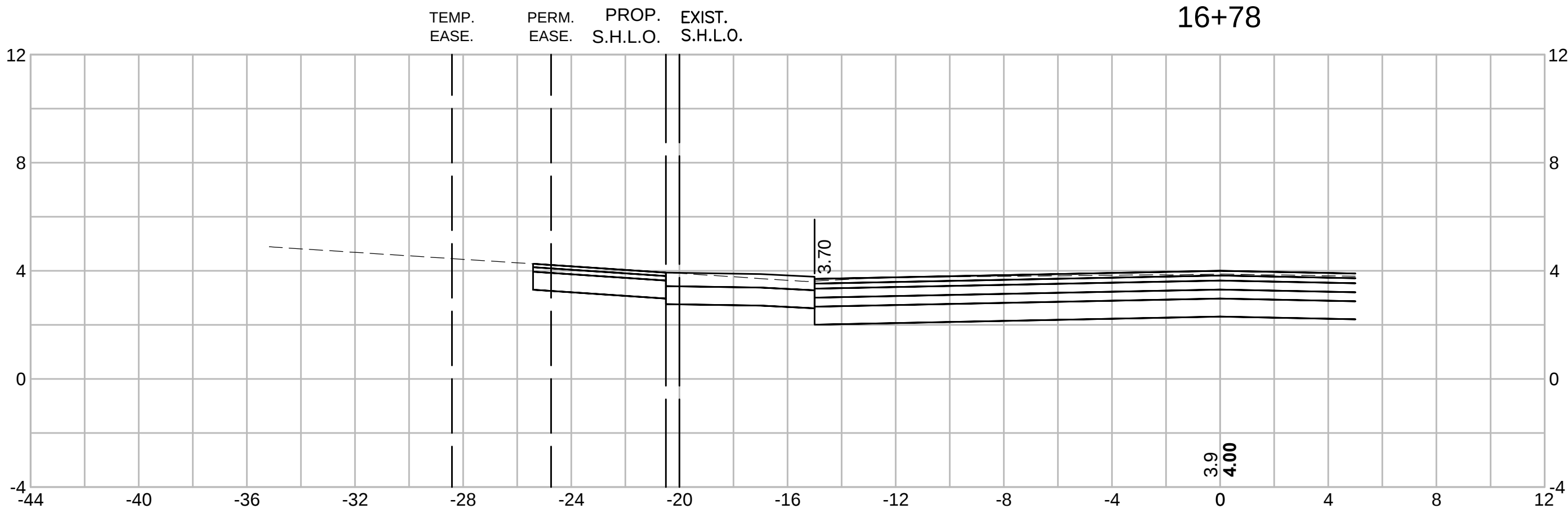
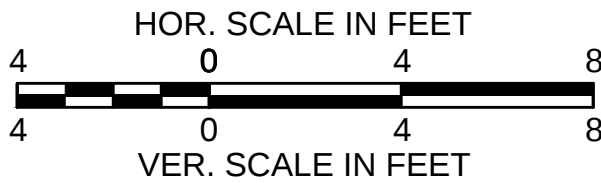
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	58
PROJECT FILE NO.		607411	

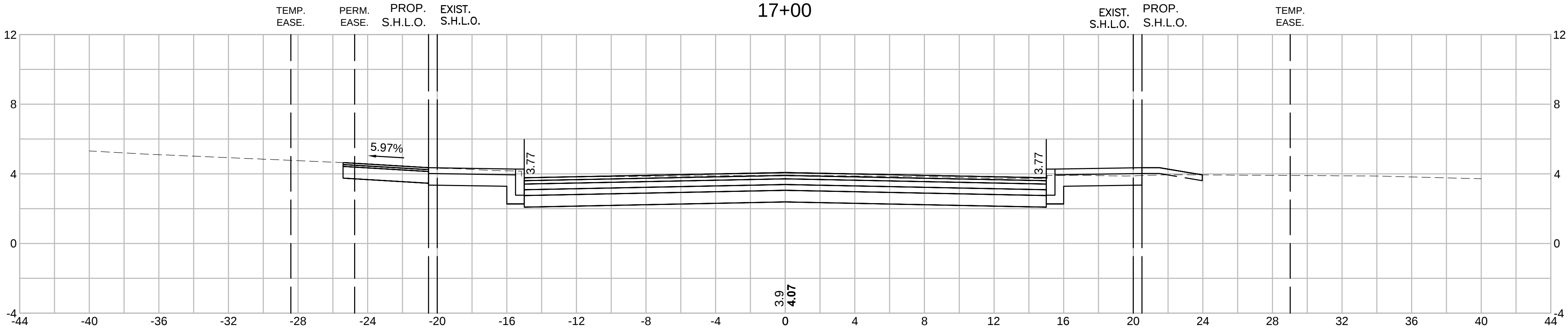
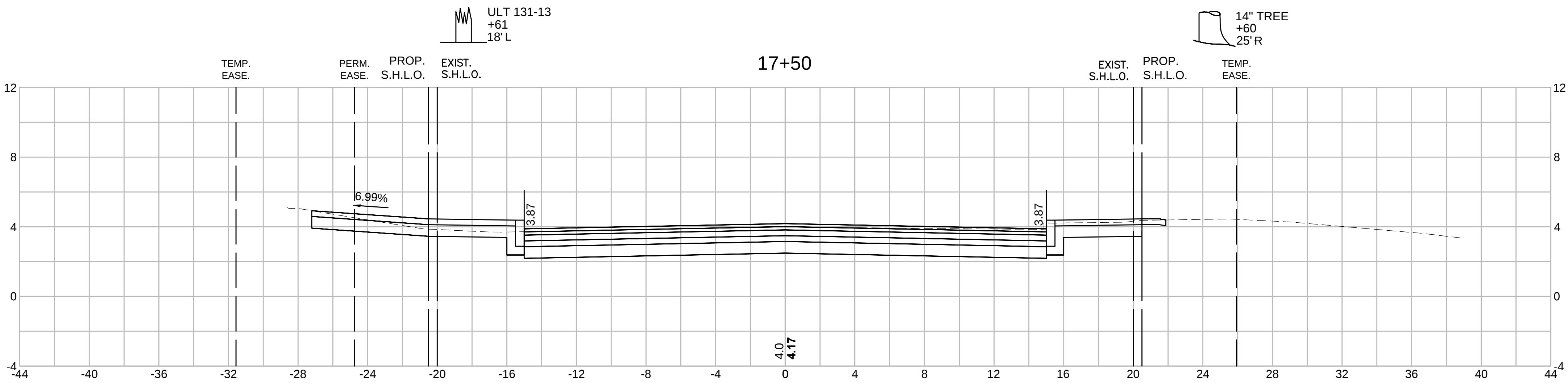
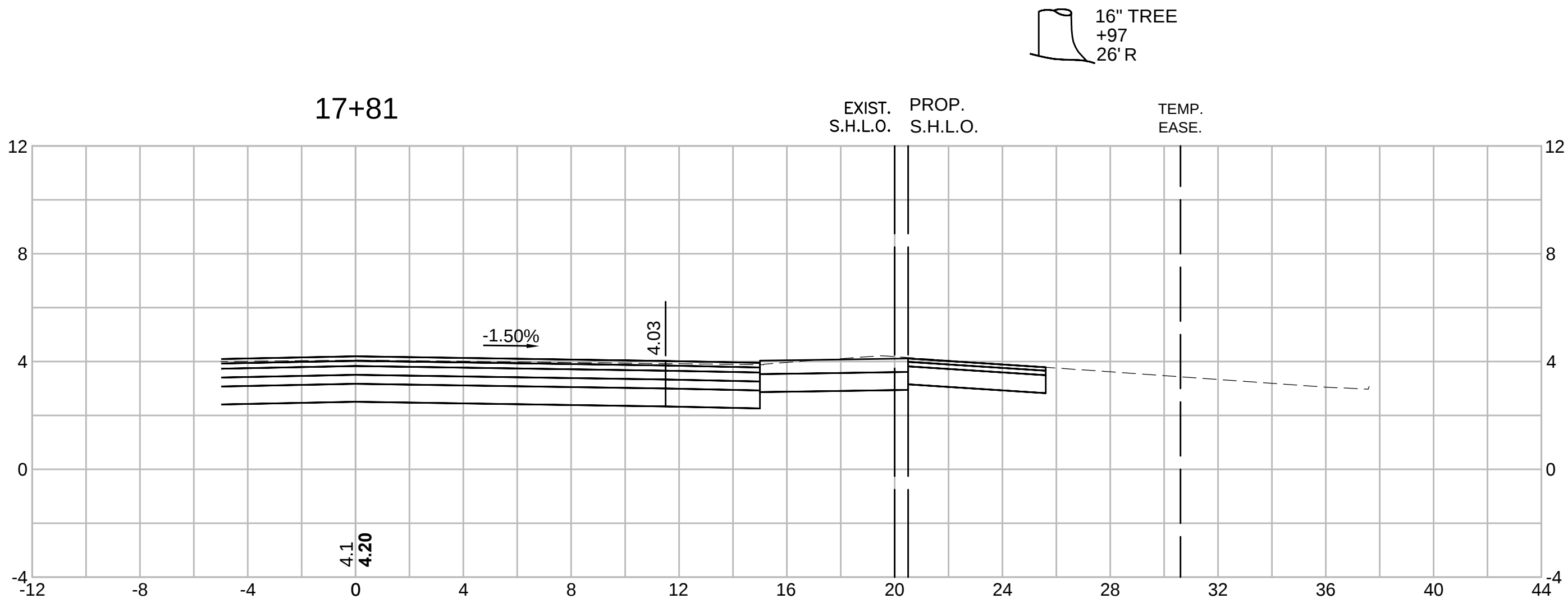
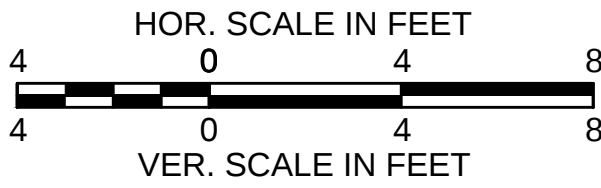
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	58
PROJECT FILE NO.		607411	

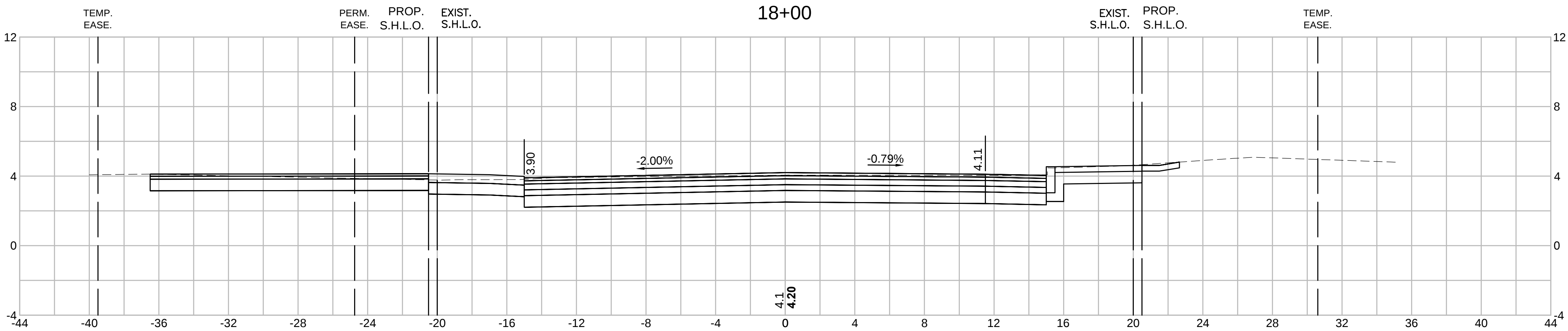
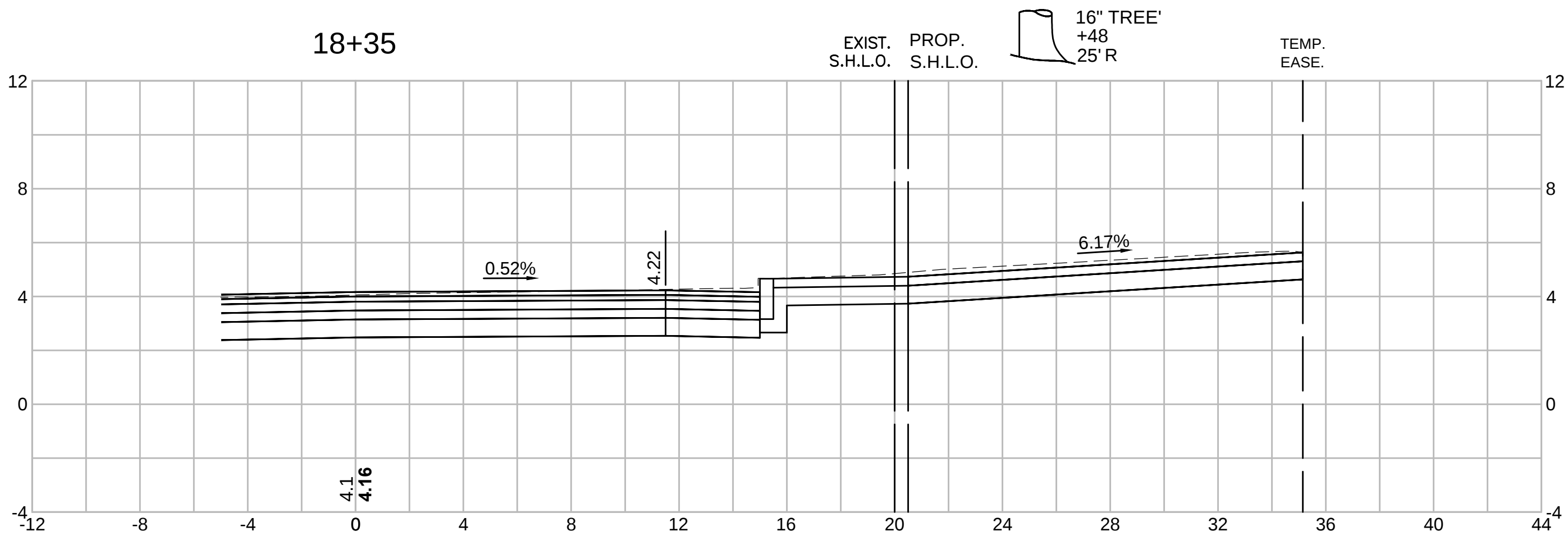
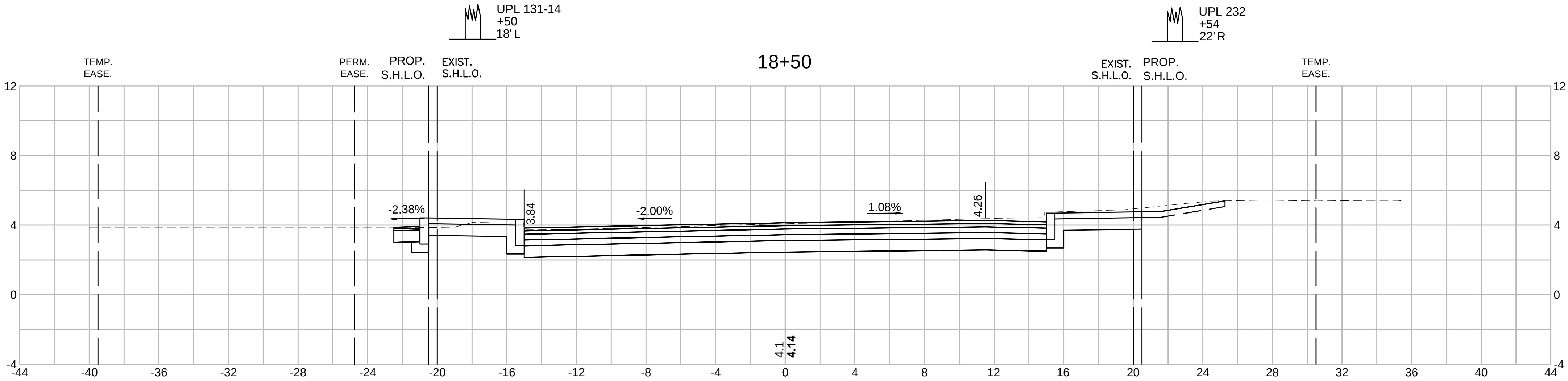
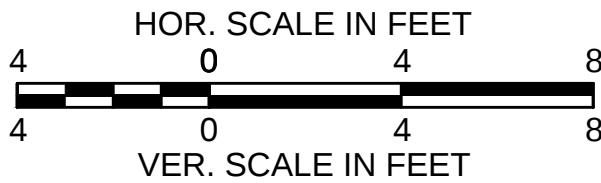
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	58
PROJECT FILE NO.		607411	

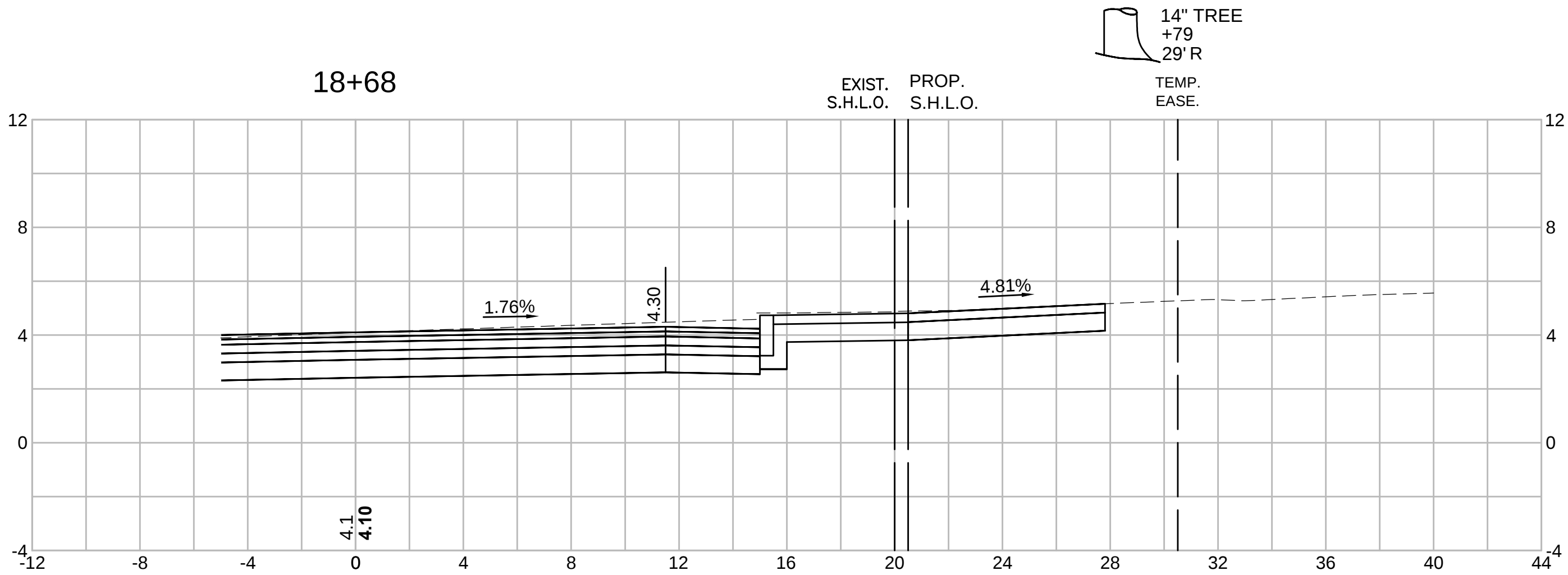
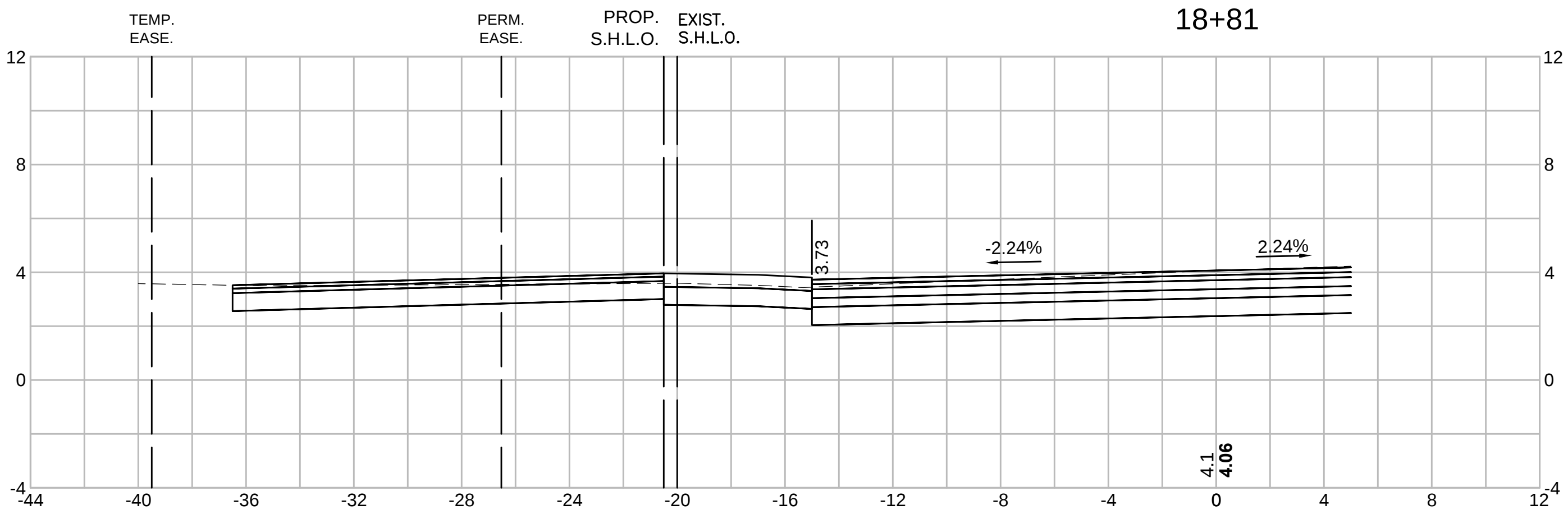
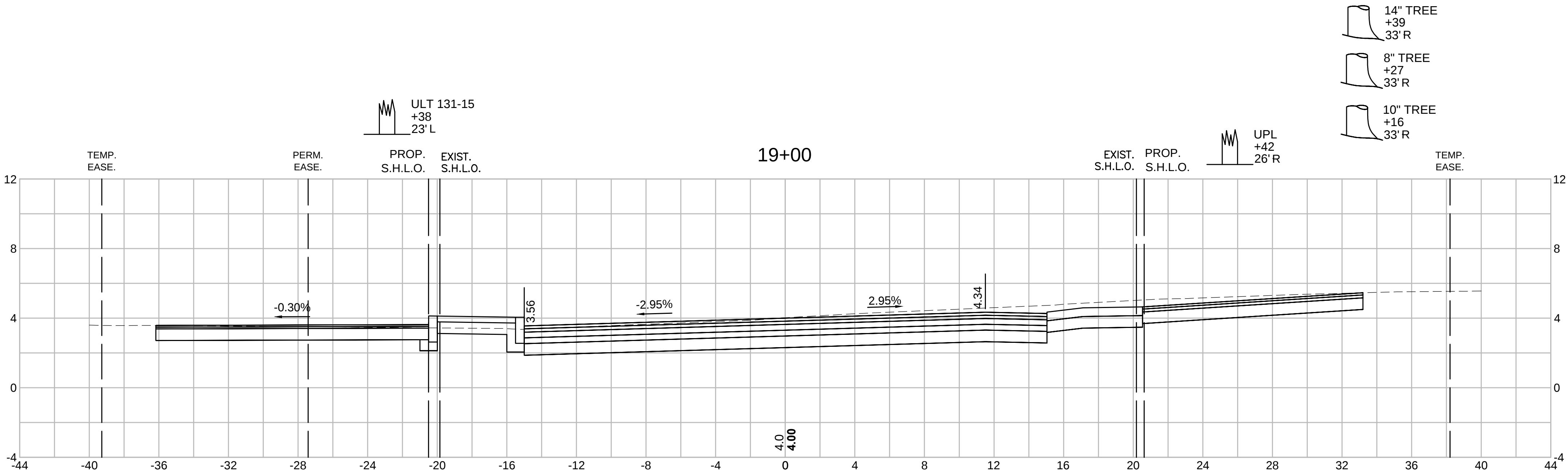
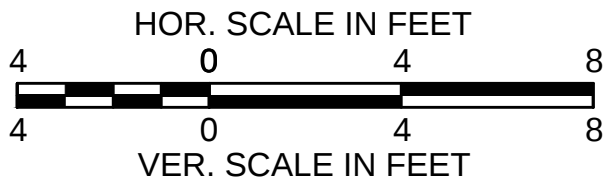
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	58
PROJECT FILE NO.		607411	

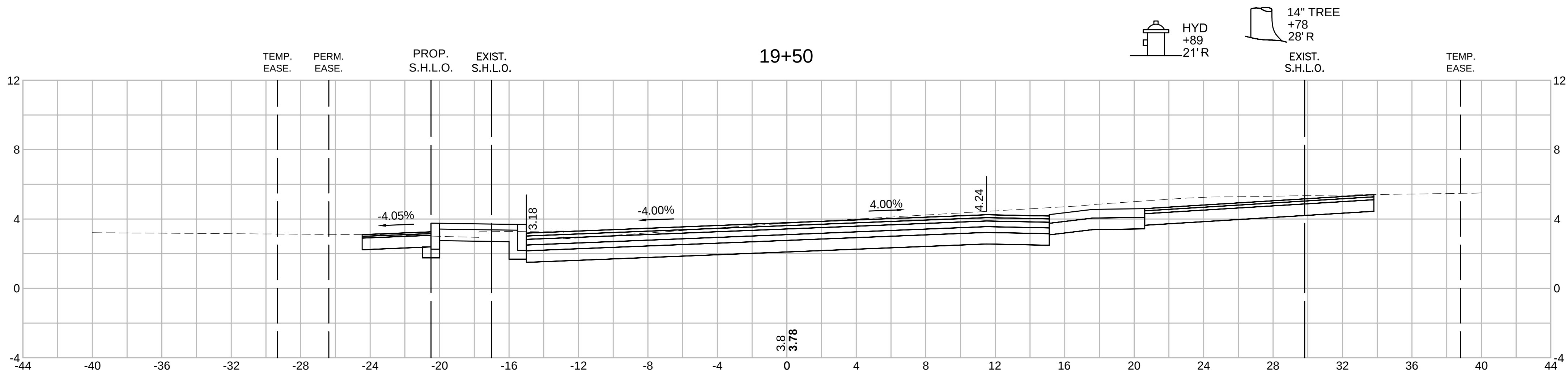
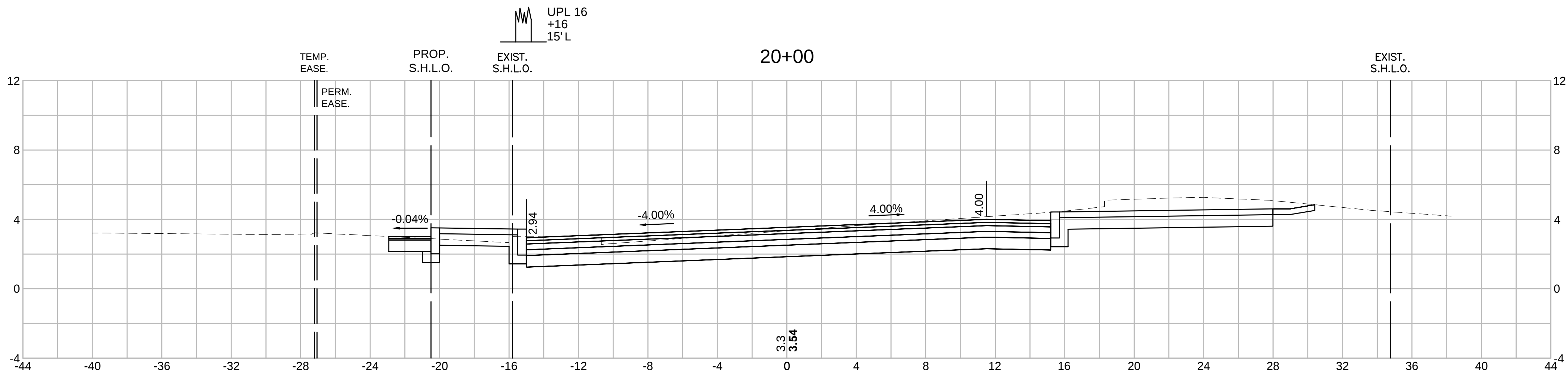
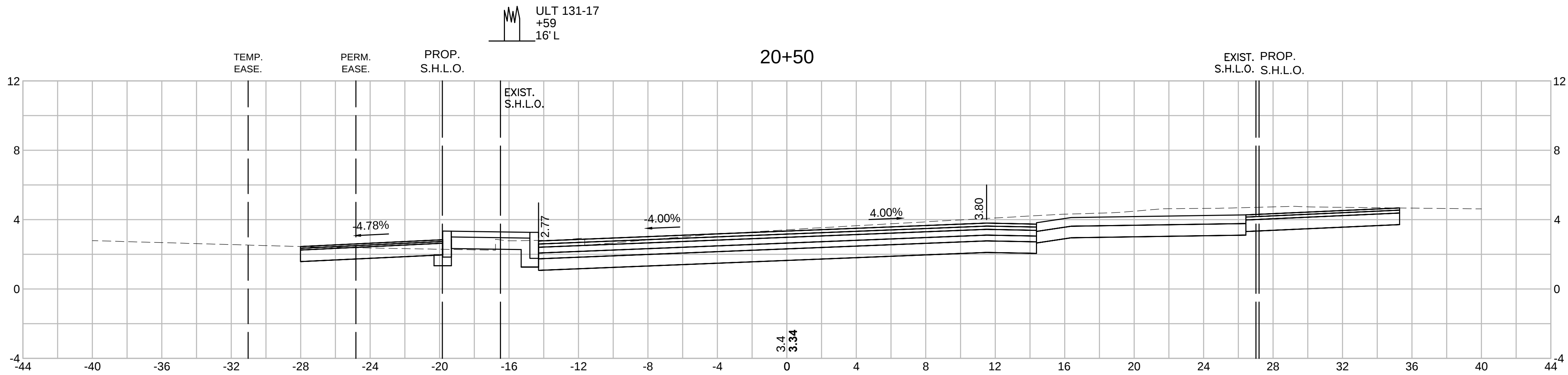
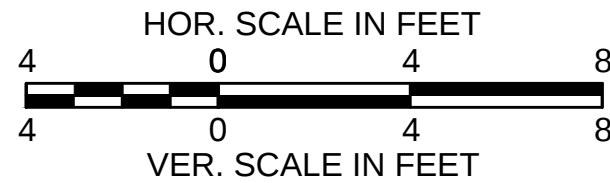
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	58
PROJECT FILE NO.		607411	

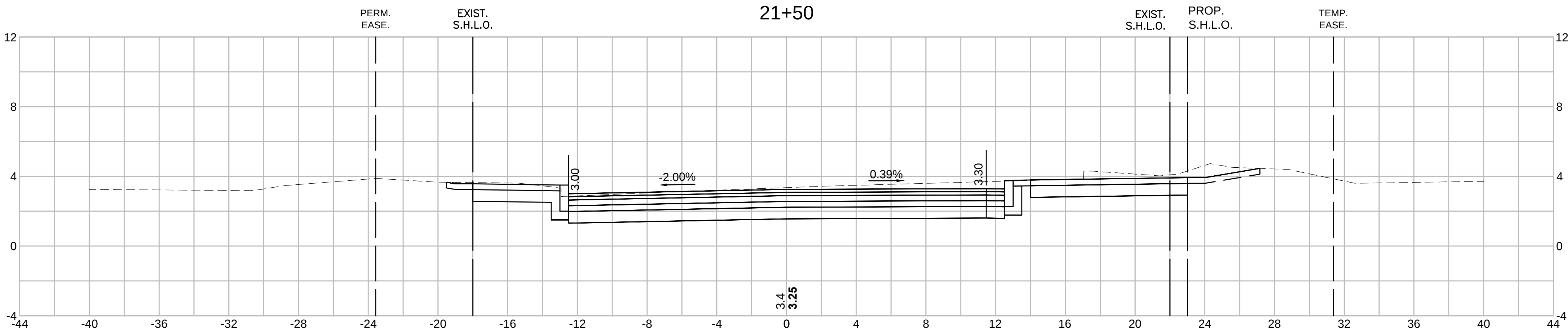
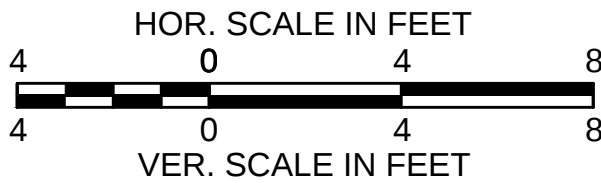
CROSS SECTIONS



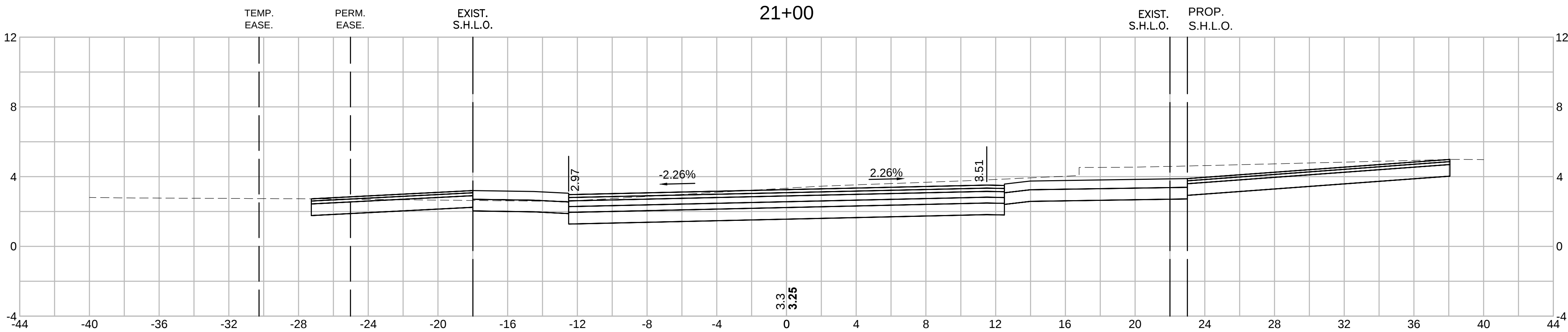
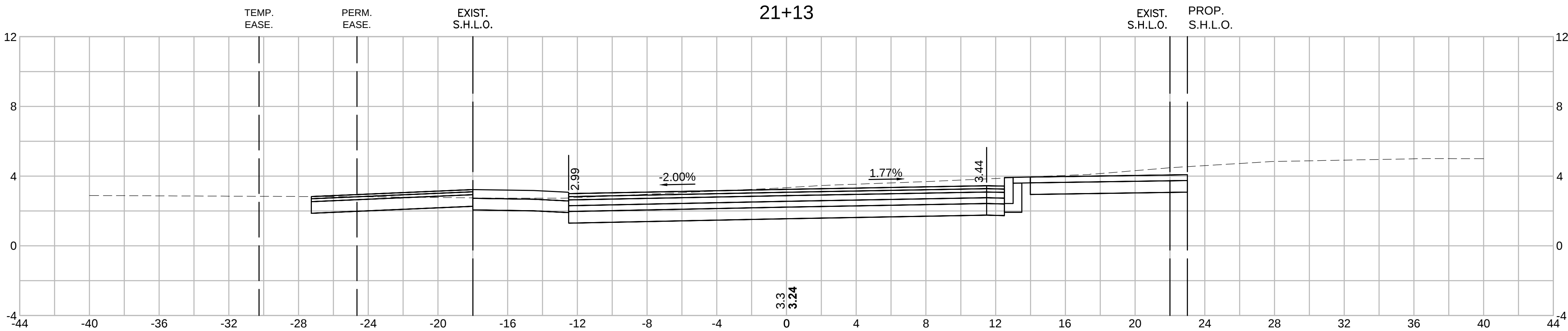
TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	58
PROJECT FILE NO.		607411	

CROSS SECTIONS



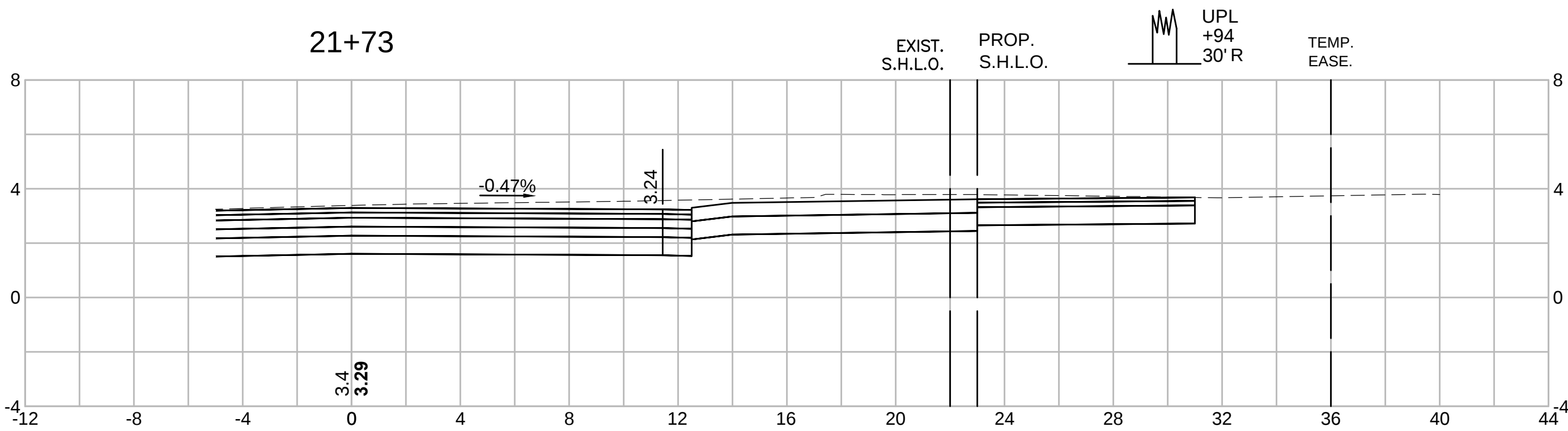
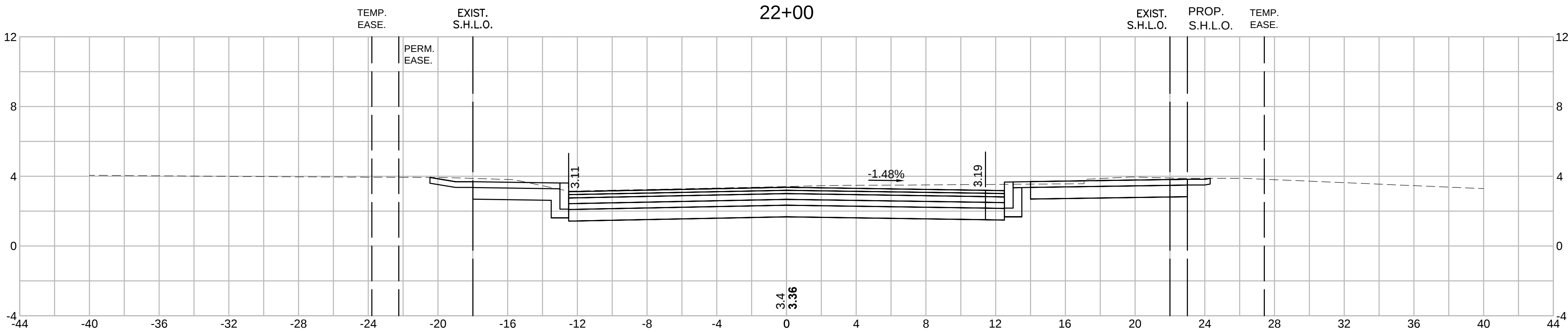
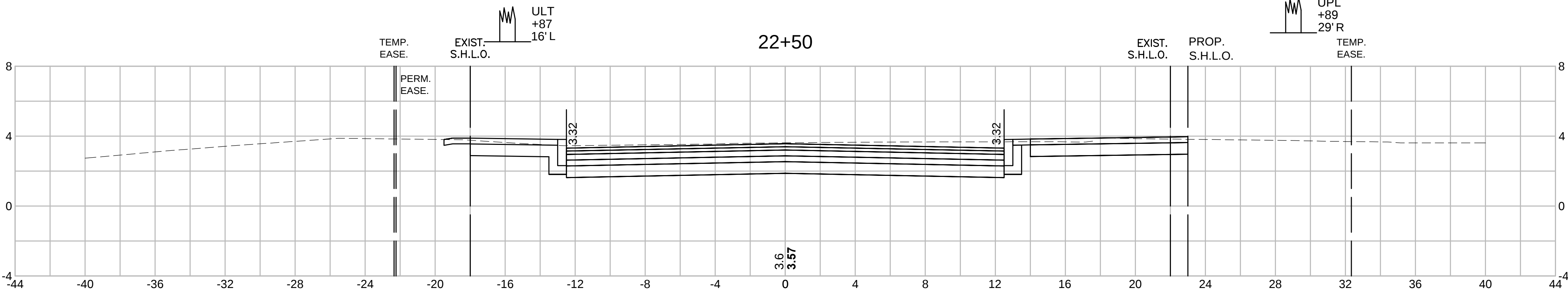
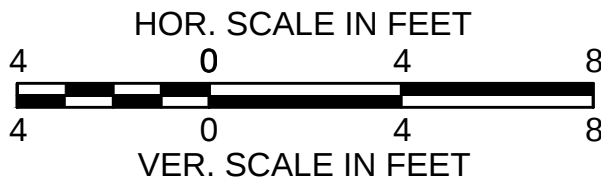
UPL
+21
27' R



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	58
PROJECT FILE NO.		607411	

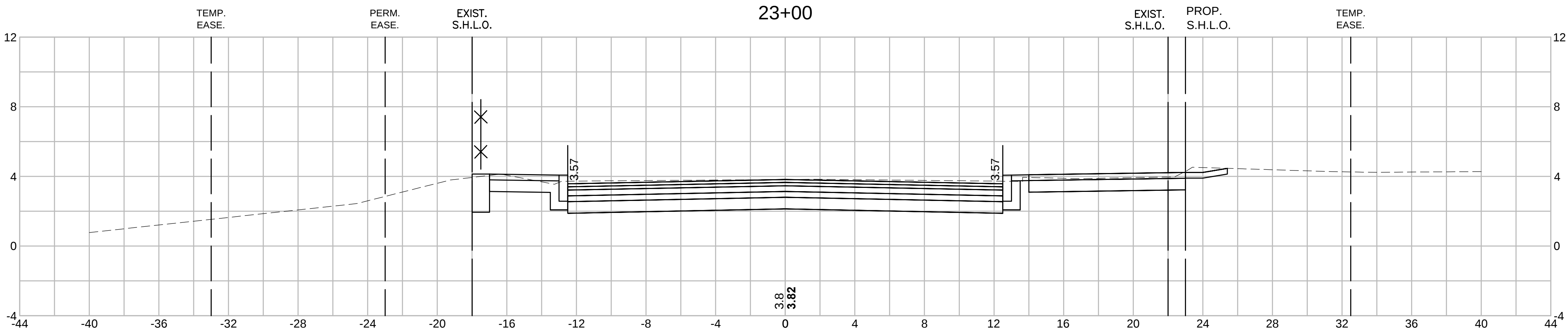
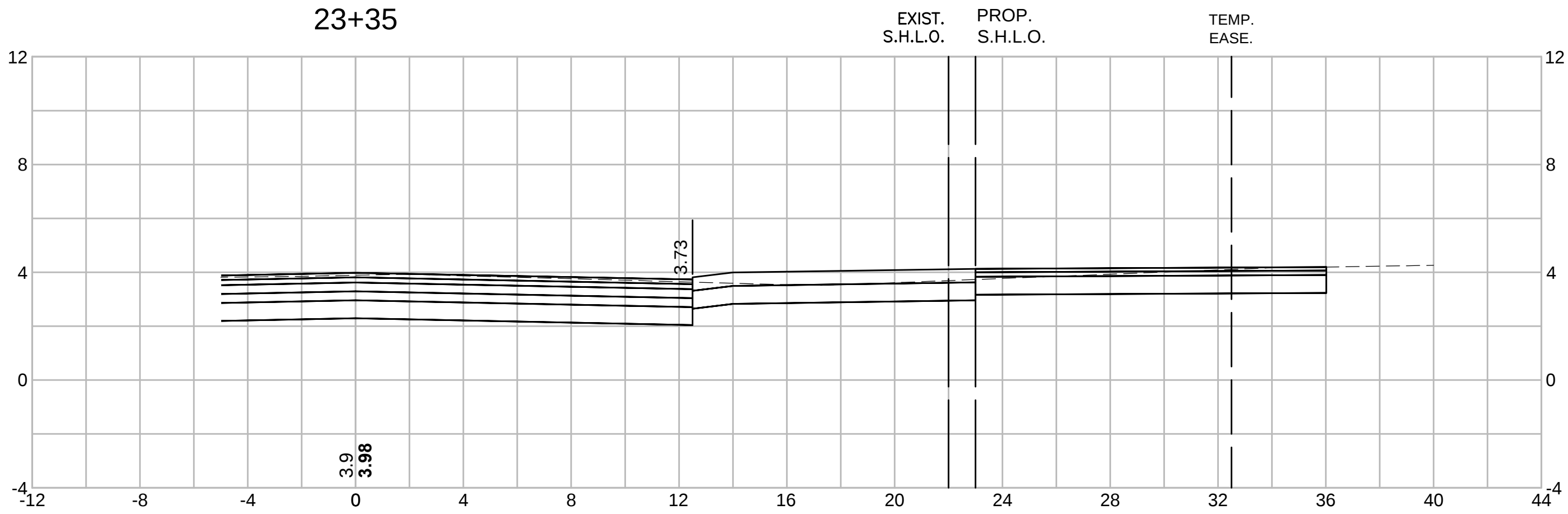
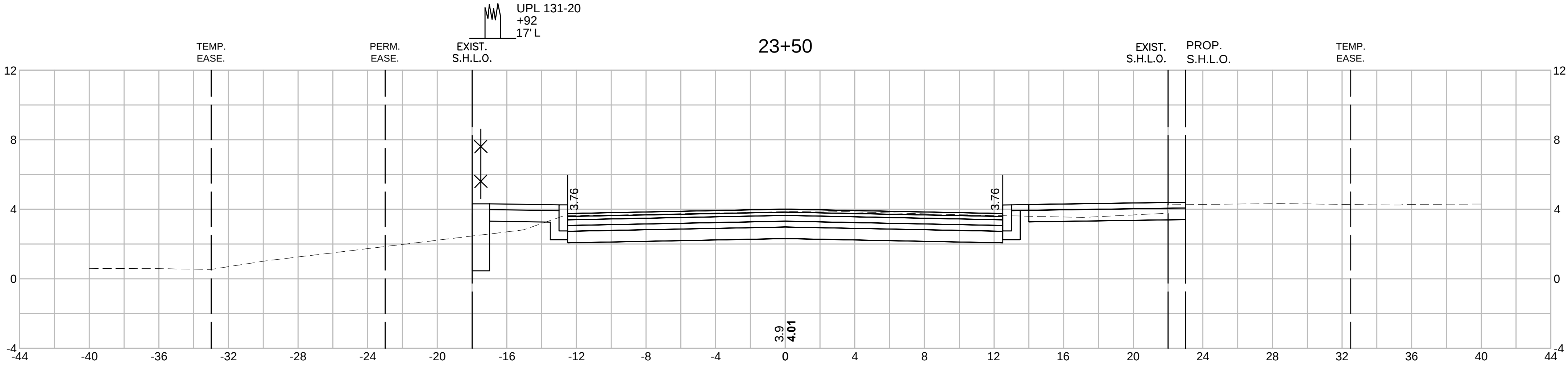
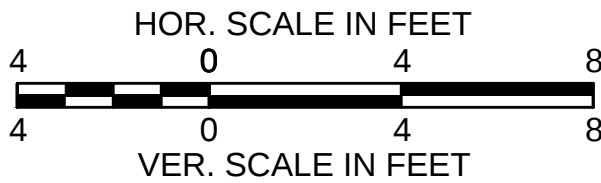
CROSS SECTIONS



TISBURY
BEACH ROAD

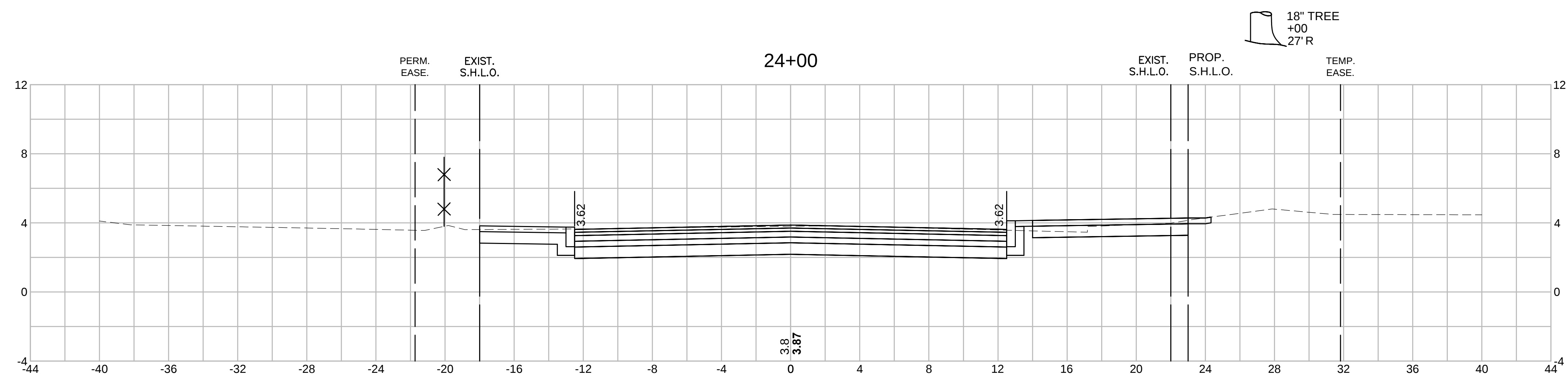
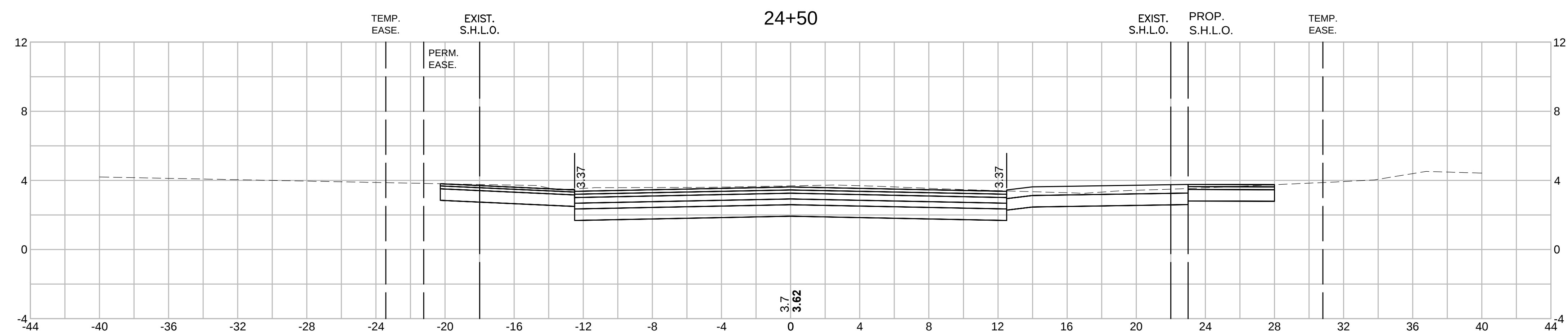
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	58
PROJECT FILE NO.		607411	

CROSS SECTIONS



HOR. SCALE IN FEET

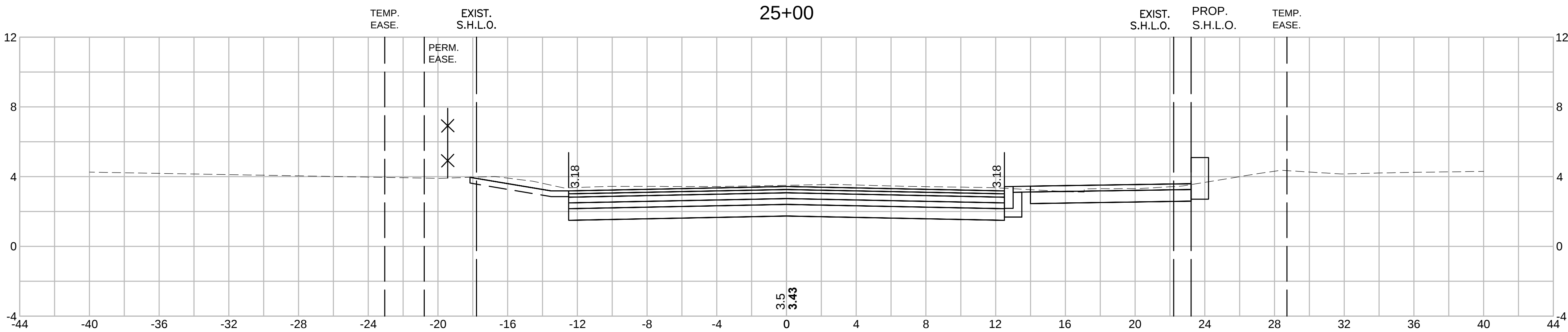
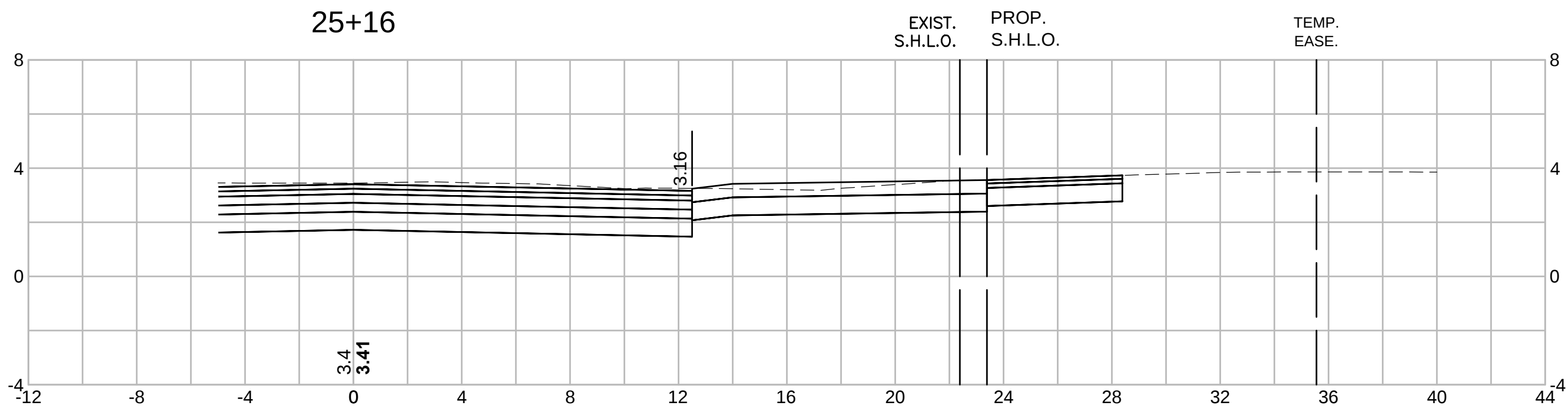
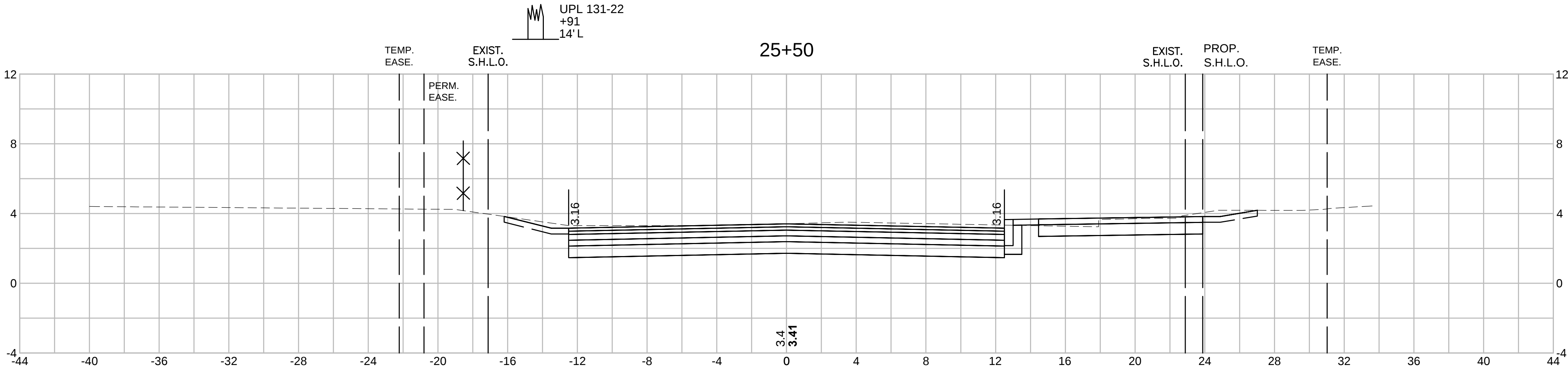
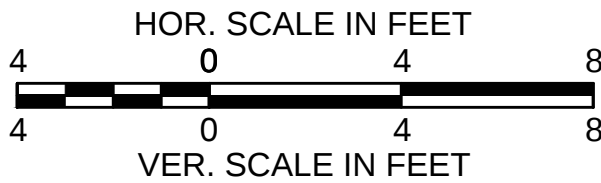
VER. SCALE IN FEET



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	58
PROJECT FILE NO.		607411	

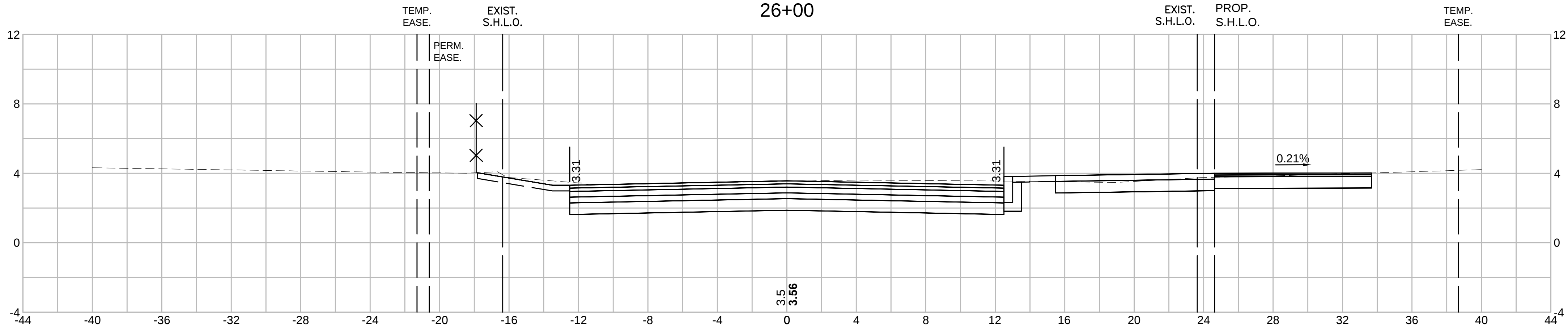
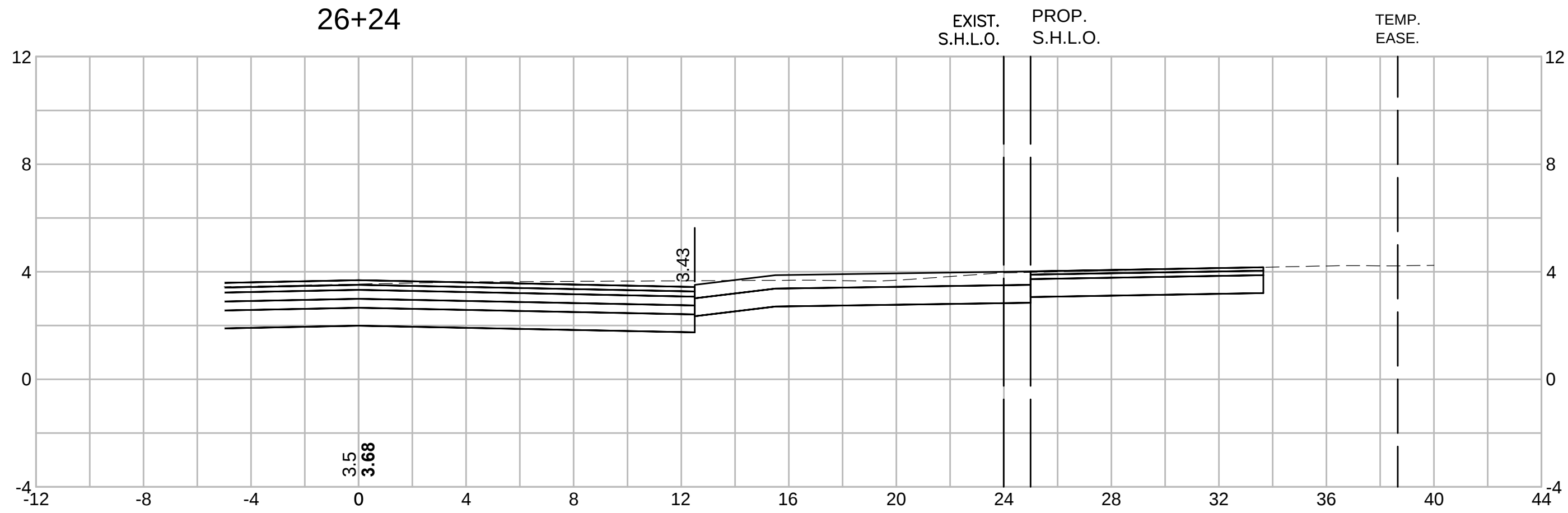
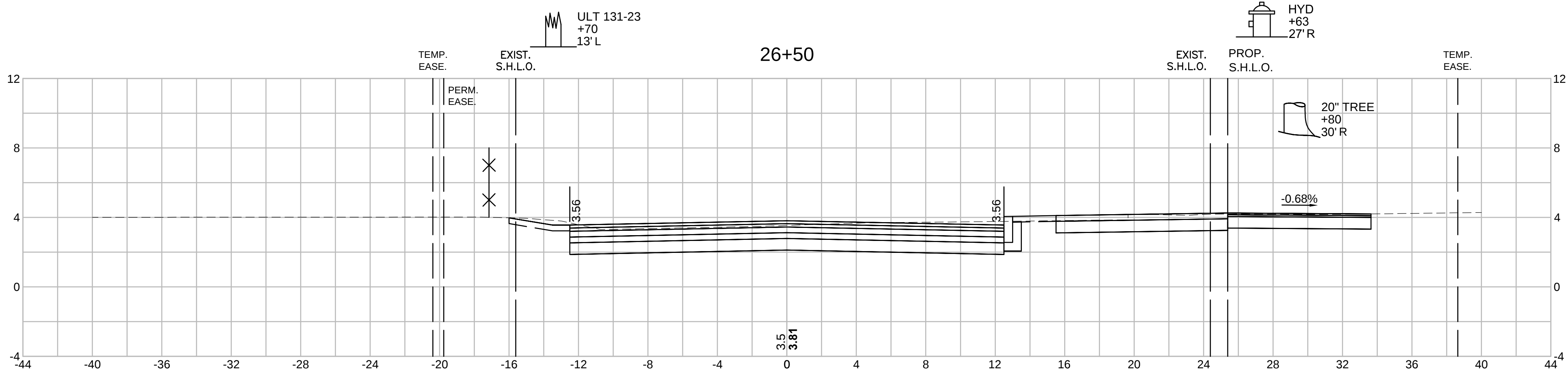
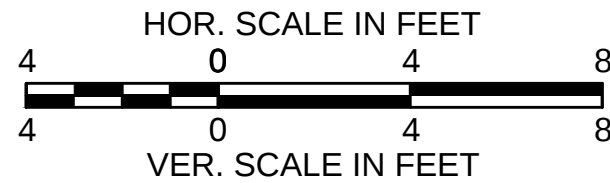
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	50	58
PROJECT FILE NO.		607411	

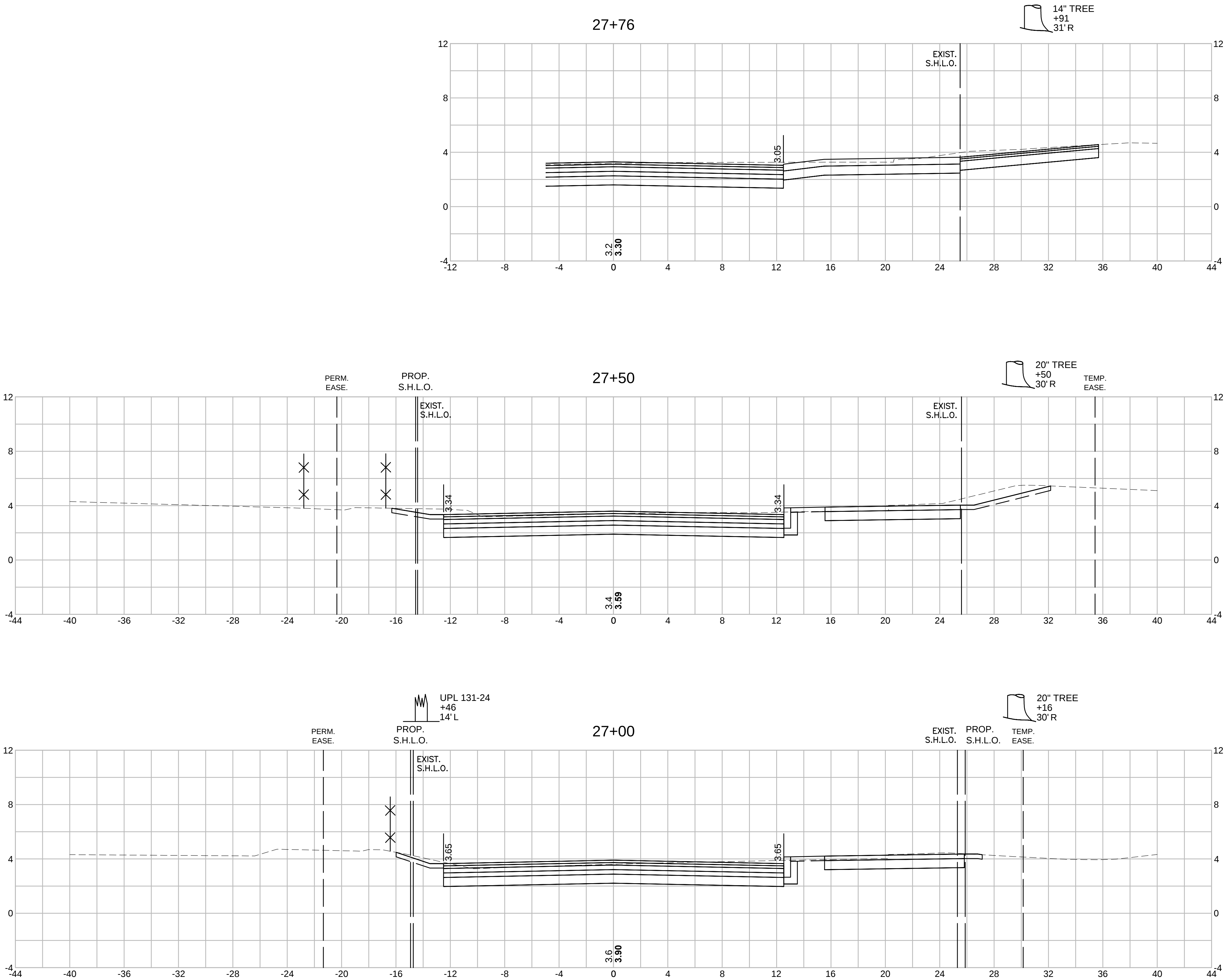
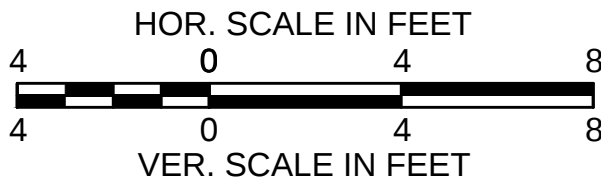
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	51	58
PROJECT FILE NO.		607411	

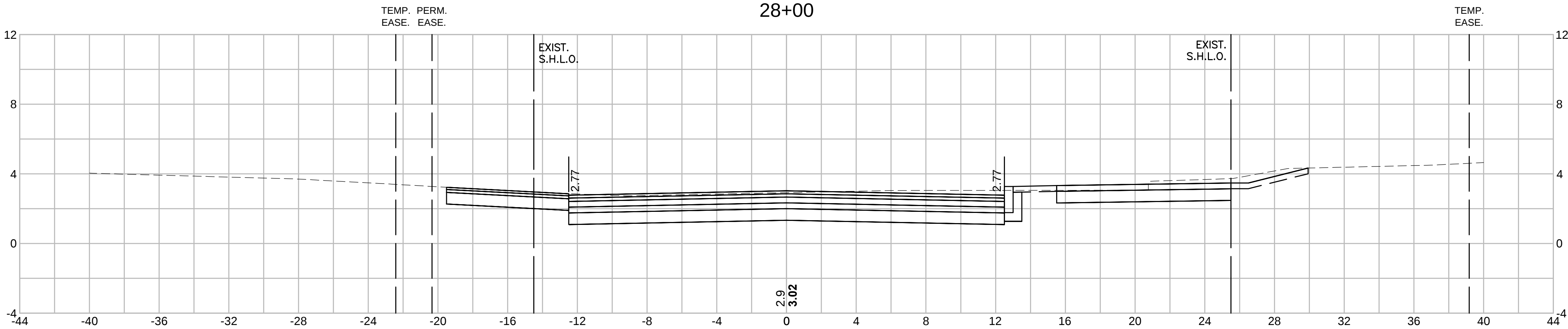
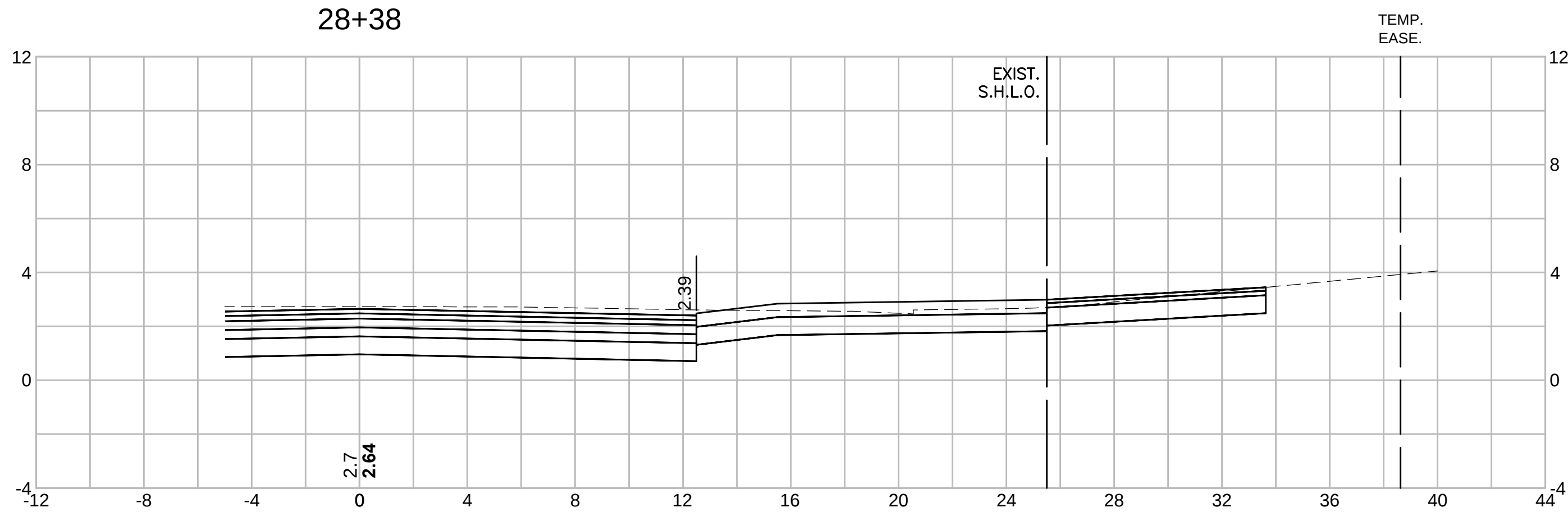
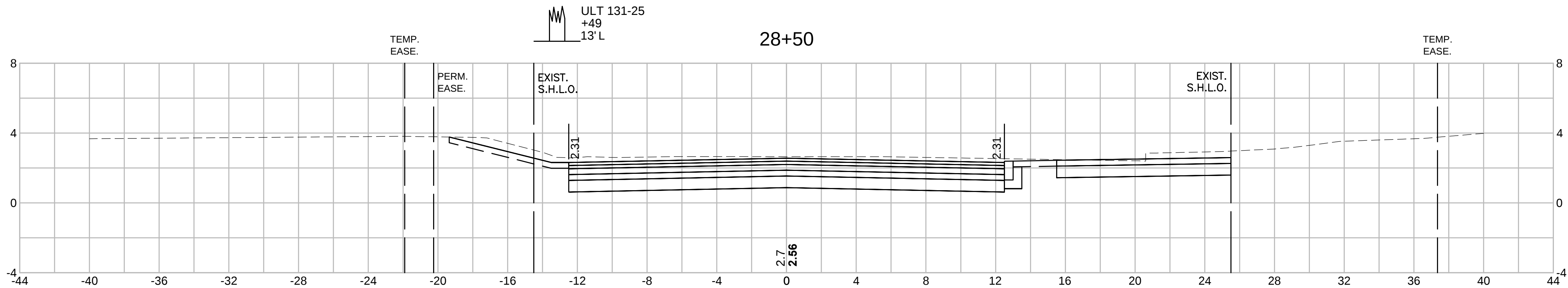
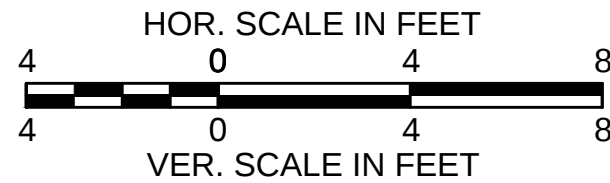
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	52	58
PROJECT FILE NO.		607411	

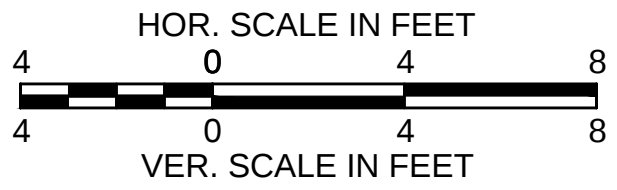
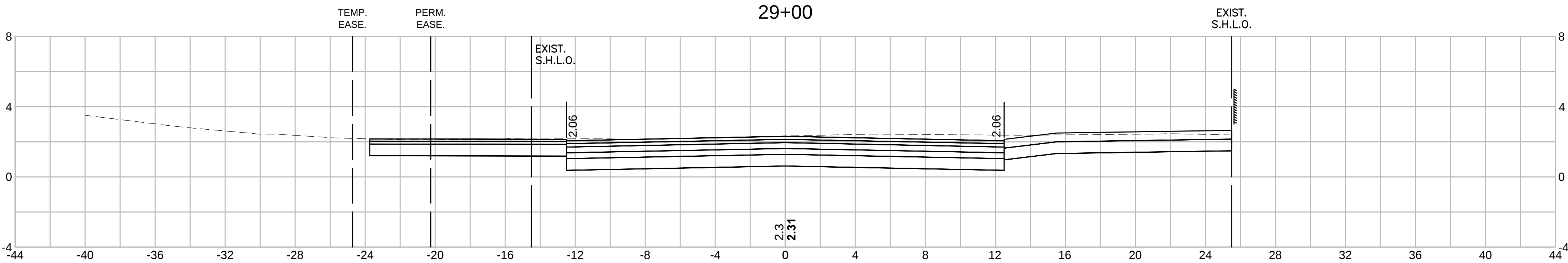
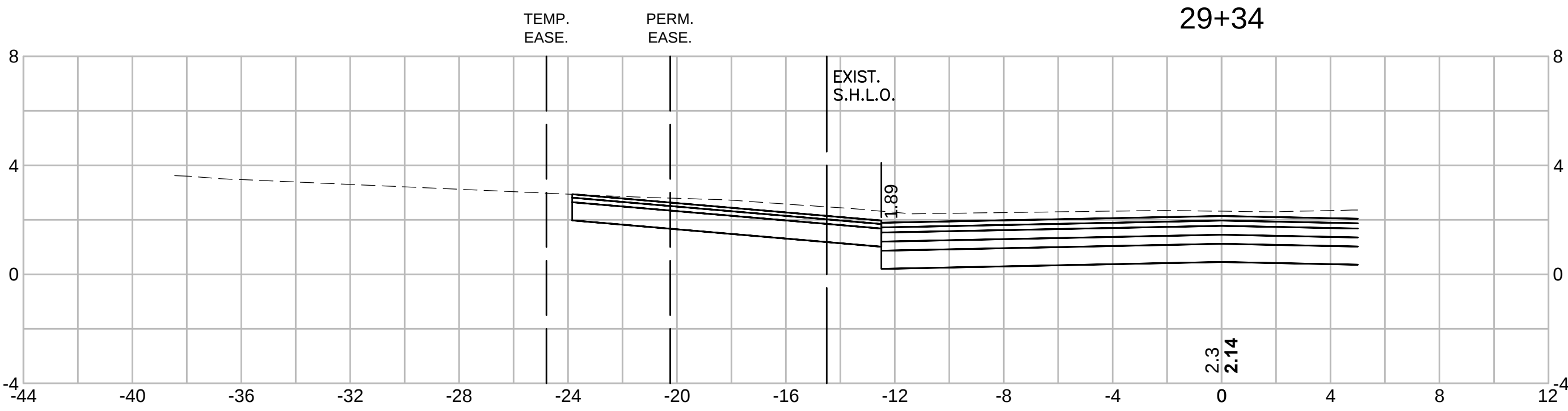
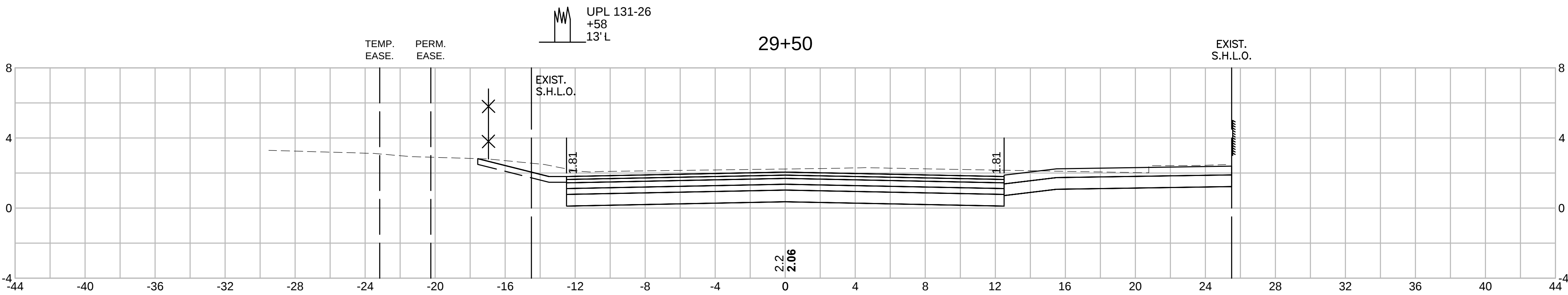
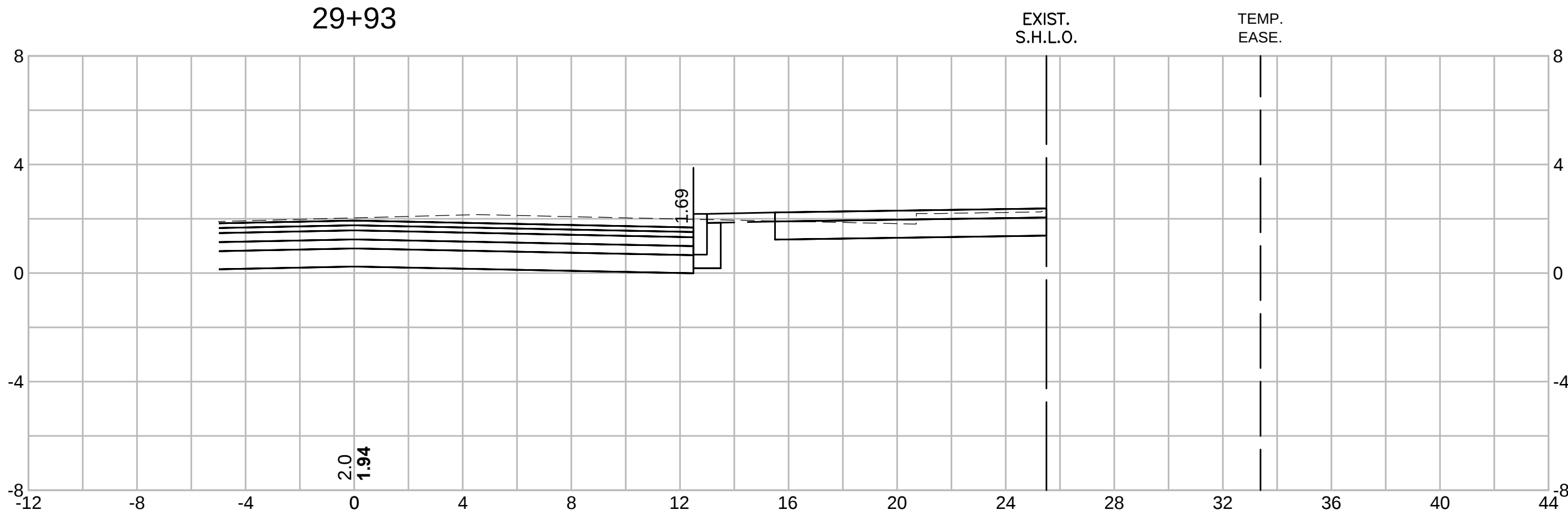
CROSS SECTIONS



TISBURY
BEACH ROAD

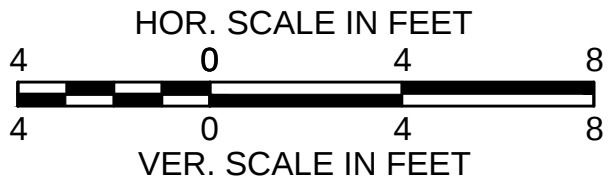
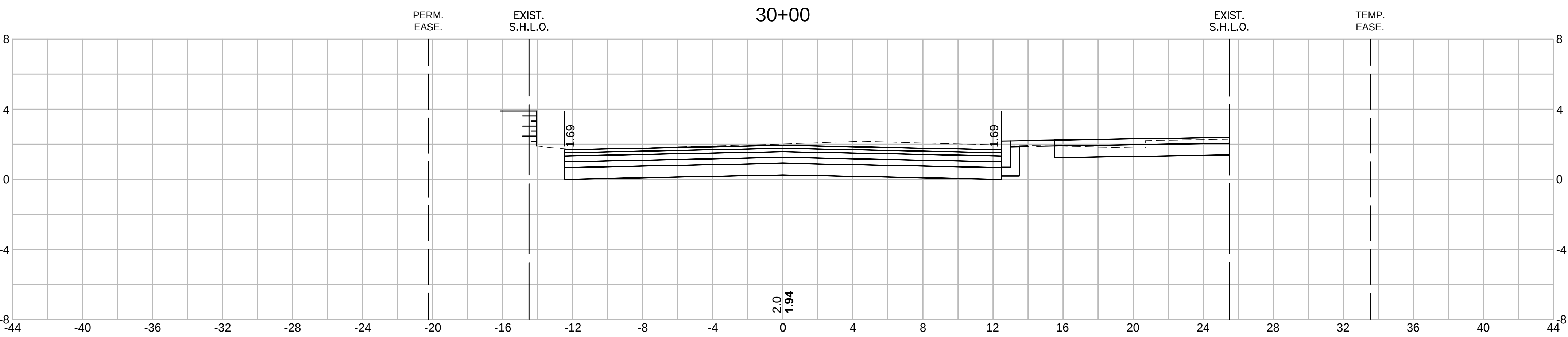
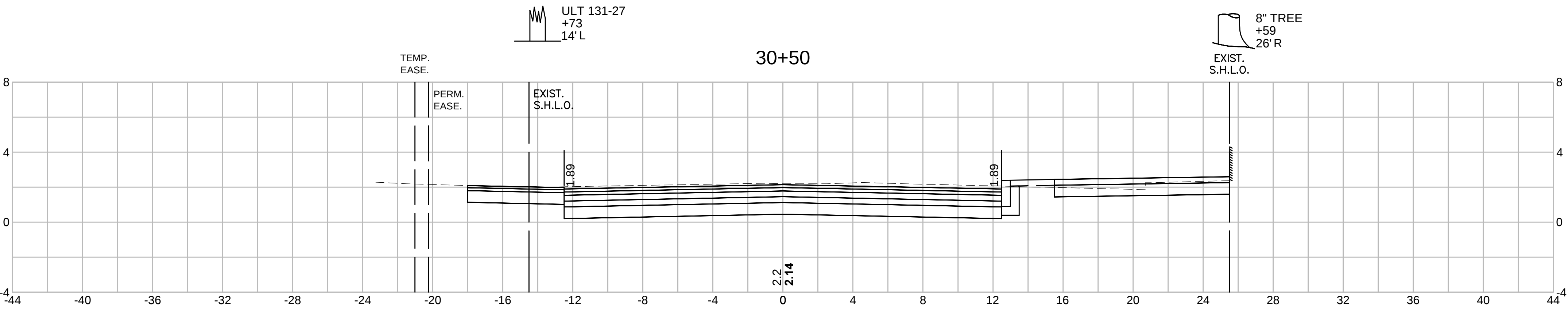
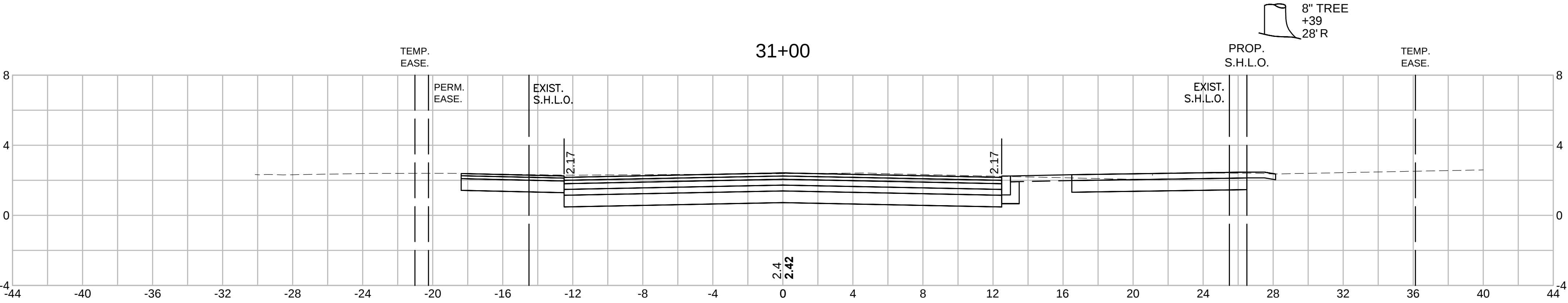
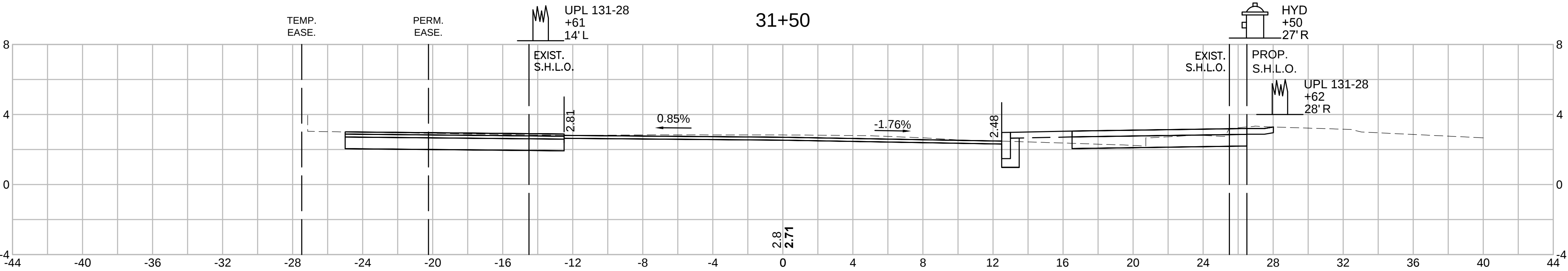
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	53	58
PROJECT FILE NO.		607411	

CROSS SECTIONS



TISBURY BEACH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	54	58
PROJECT FILE NO.		607411	

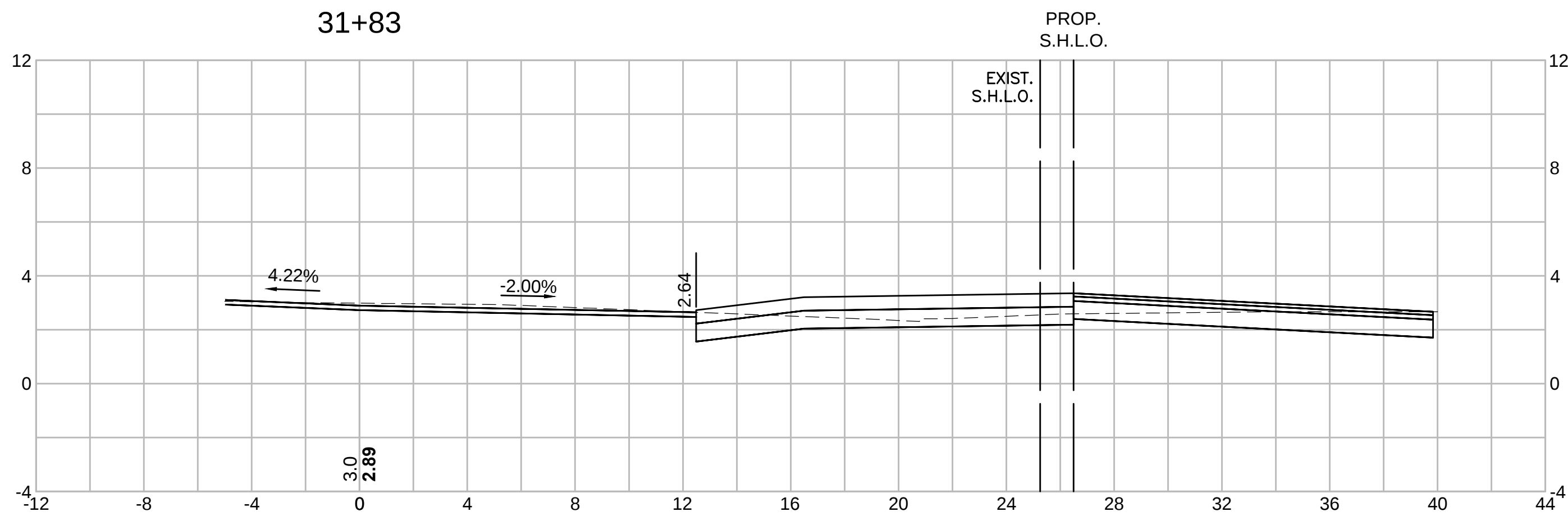
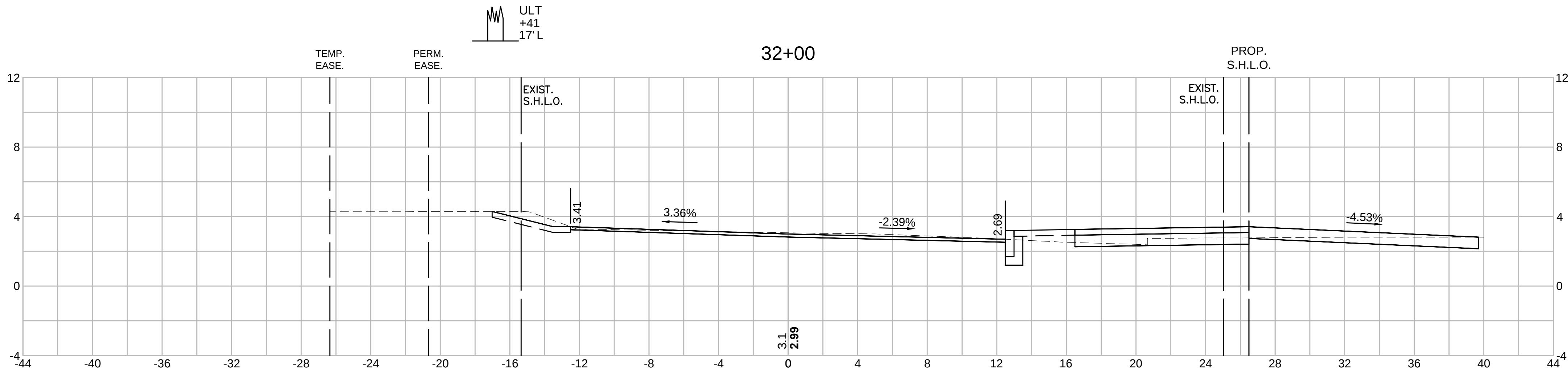
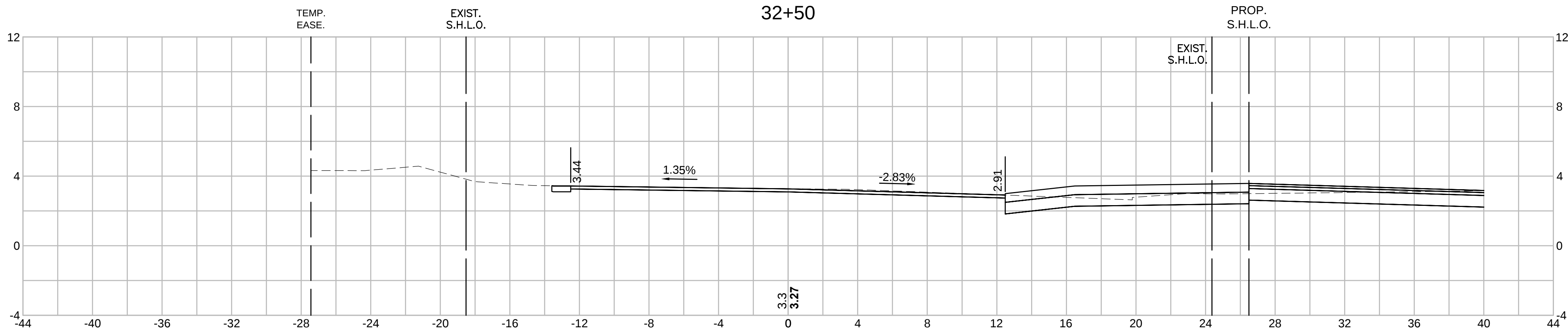
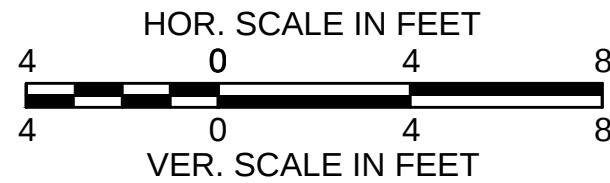
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	55	58
PROJECT FILE NO.		607411	

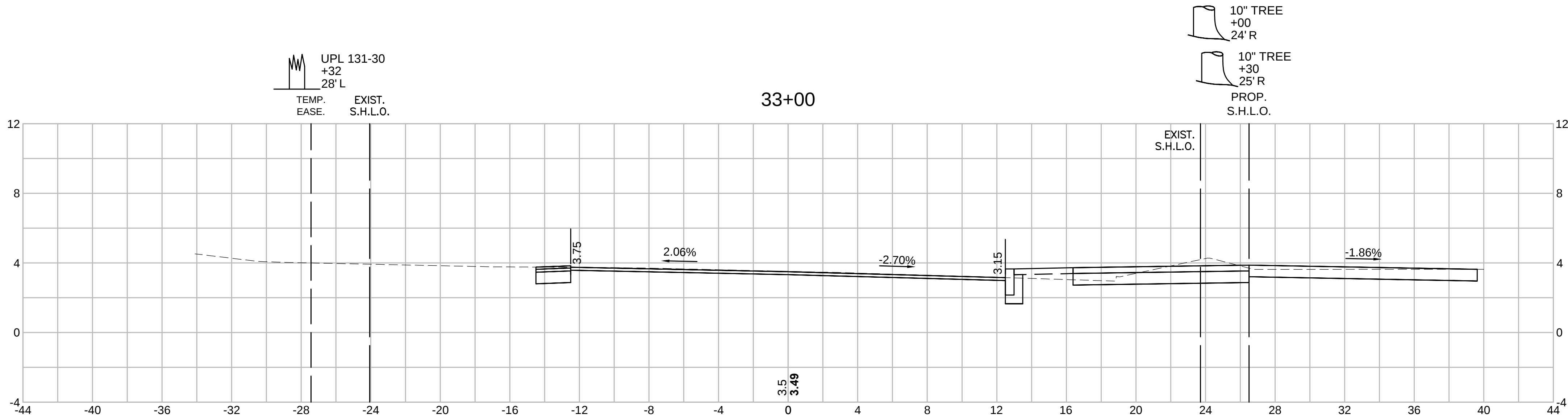
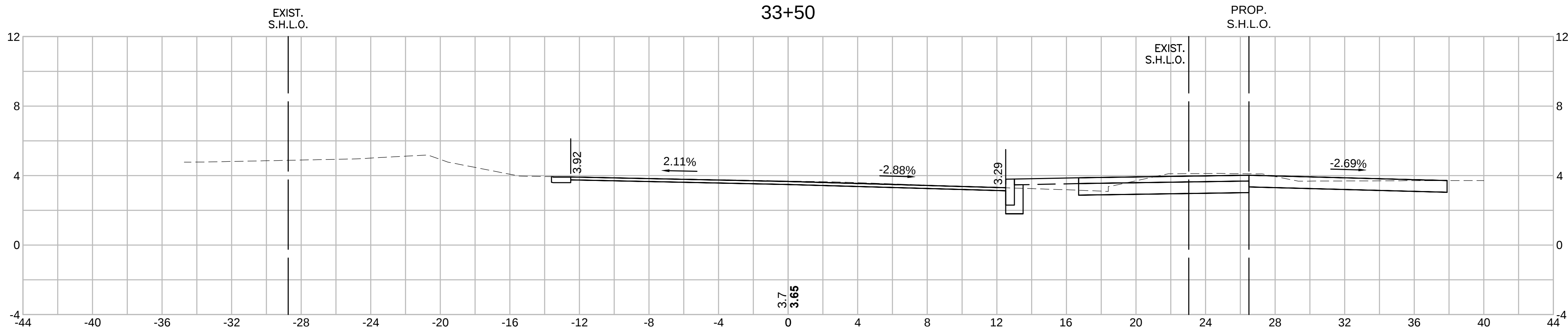
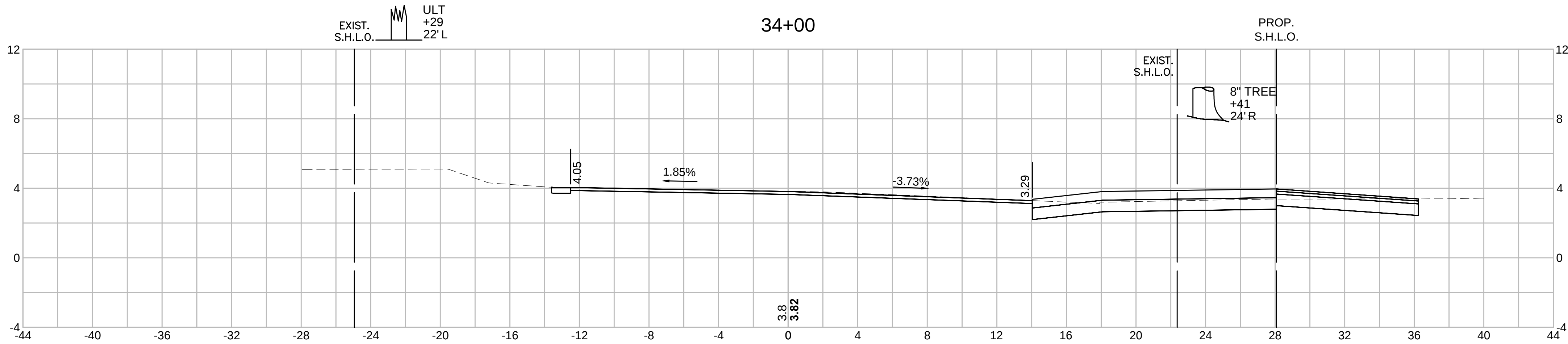
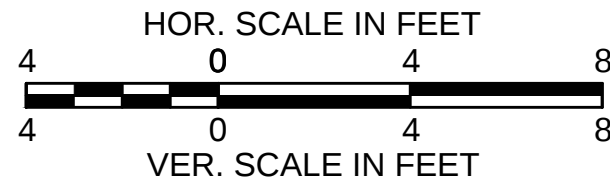
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	56	58
PROJECT FILE NO.		607411	

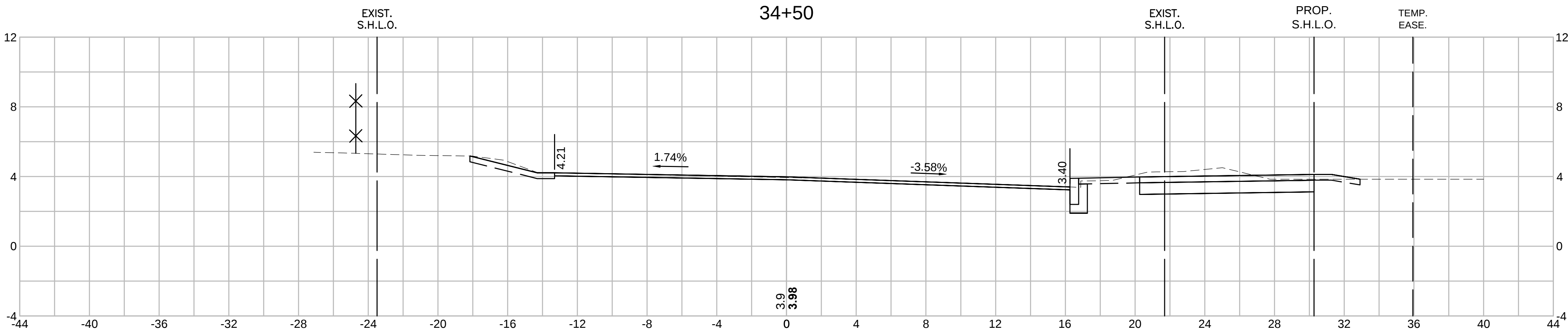
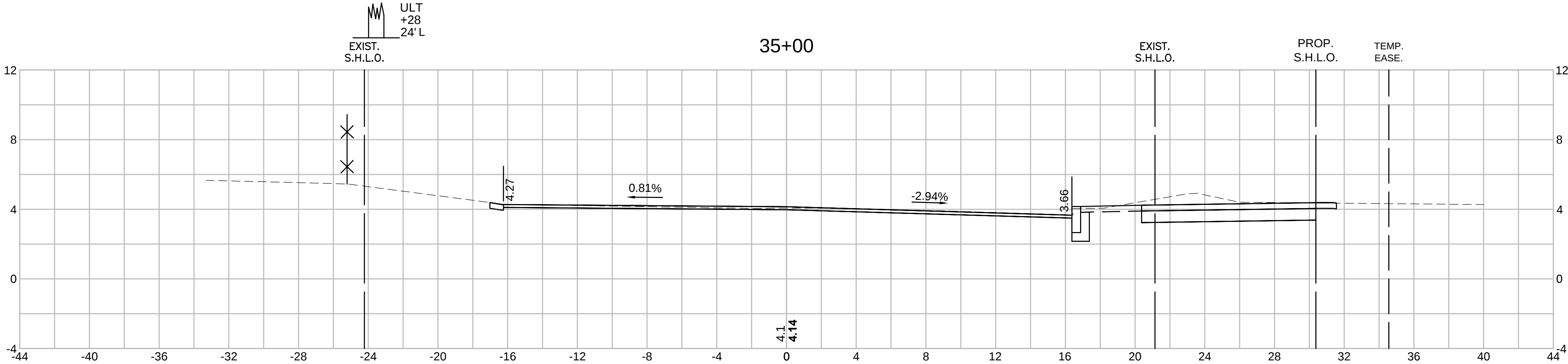
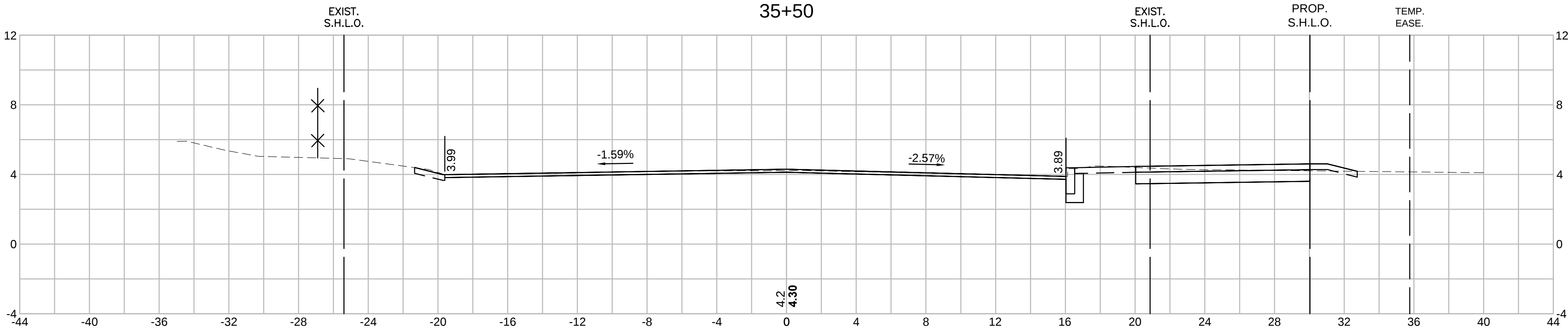
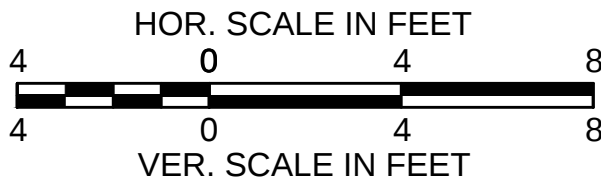
CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	57	58
PROJECT FILE NO.		607411	

CROSS SECTIONS



TISBURY
BEACH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	58	58
PROJECT FILE NO.		607411	

CROSS SECTIONS

