



MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

NANTUCKET IN-TOWN BIKEWAY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	01	13
PROJECT FILE NO. 606433			
TITLE & INDEX SHEET			

PLAN AND PROFILE OF IN-TOWN BIKE PATH IN THE TOWN OF NANTUCKET NANTUCKET COUNTY

FEDERAL AID PROJECT NO:

INDEX

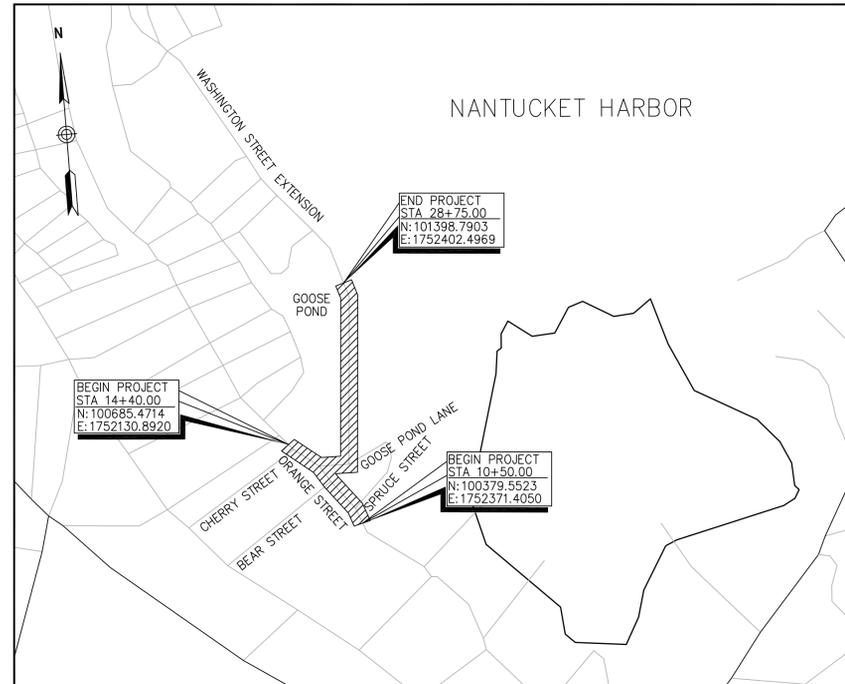
SHEET NO.	DESCRIPTION
1	TITLE & INDEX SHEET
2	LEGEND & GENERAL NOTES
3	KEY PLAN
4	TYPICAL SECTIONS & PAVEMENT NOTES
5-7	CONSTRUCTION DETAILS
8-10	CONSTRUCTION PLAN & PROFILE
11-12	TRAFFIC MANAGEMENT PLANS
13	CRITICAL CROSS SECTIONS

REFERENCE MANUALS

THE 1988 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AS SUPPLEMENTED AND AMENDED, THE 2010 CONSTRUCTION STANDARDS AND THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATE TO TRAFFIC DETAILS), THE 2003 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, AS AMENDED, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING; AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AS AMENDED, WILL GOVERN.

DESIGN DESIGNATION

ROADWAY	IN-TOWN BIKE PATH	ORANGE ST
FUNCTIONAL CLASS =	SHARED USE BIKEWAY	URBAN MINOR ARTERIAL
POSTED SPEED =	N/A	N/A
DESIGN SPEED =	20 mph	30 mph
ADT (2010) =	---	14,951 vpd
ADT (2020) =	---	16,515 vpd
K =	---	0.07
D =	---	54.7% (WB)
T (PEAK HOUR) =	---	---
T (AVERAGE DAY) =	---	---
DHV =	---	1,139 vph
DDHV =	---	623 vph



LENGTH OF PROJECT: 1,265.0 FEET (0.240 MI)

25% SUBMISSION
JANUARY 2012

CONVENTIONAL SIGNS

COUNTY, CITY OR TOWN BOUNDARY	-----										
COUNTY, CITY OR TOWN SIDE LINE	-----										
FENCE LINE	-x-x-x-x-x-										
BASE LINE OR SURVEY LINE	75										
RIGHT OF WAY LINE	N00°-31'-37"W 132.57										
CULVERT	=====										
RETAINING WALL	~ ~ ~ ~ ~										
GUARD RAIL	T T T T T										
STONE WALL	o o o o o										
TREE LINE	~ ~ ~ ~ ~										
POLE	⊙										
ELEVATIONS	<table border="1"> <tr> <td>PROPOSED SURFACE</td> <td>---</td> </tr> <tr> <td>EXISTING SURFACE</td> <td>---</td> </tr> <tr> <td>EXIST 90.7</td> <td>---</td> </tr> <tr> <td>PROP 90.91</td> <td>---</td> </tr> <tr> <td>10+20</td> <td>---</td> </tr> </table>	PROPOSED SURFACE	---	EXISTING SURFACE	---	EXIST 90.7	---	PROP 90.91	---	10+20	---
PROPOSED SURFACE	---										
EXISTING SURFACE	---										
EXIST 90.7	---										
PROP 90.91	---										
10+20	---										



RECOMMENDED FOR APPROVAL

_____ Date	_____ Date
VANASSE HANGEN BRUSTLIN, INC.	CHIEF ENGINEER _____ Date
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION APPROVED	APPROVED
_____ Date	_____ Date
DIVISION ADMINISTRATOR	HIGHWAY ADMINISTRATOR

GENERAL SYMBOLS

EXISTING	PROPOSED	
		CATCH BASIN (OR GUTTER INLET, OR LEACHING BASIN)
		CATCH BASIN (OR GUTTER INLET) WITH CURB INLET (GUTTERMOUTH)
		EDGESTONE-TYPE NOTED
		EDGE OF ROAD
		ELECTRIC HANDHOLE (NUMBER AS NOTED)
		ELECTRIC MANHOLE "
		TELEPHONE MANHOLE "
		WATER MANHOLE "
		SEWER MANHOLE "
		DRAINAGE MANHOLE "
		GAS GATE
		WATER GATE
		CURB STOP
		HYDRANT
		FIRE ALARM BOX
		PARKING METER
		STREET LIGHT POLE
		UTILITY POLE
		GUY POLE
		DRAIN PIPE (UNDER 24")
		DRAIN PIPE (DOUBLE LINE 24" AND OVER)
		SEWER MAIN " "
		ELECTRIC DUCT " "
		GAS MAIN " "
		WATER MAIN " "
		TELEPHONE DUCT " "
		MAIL BOX
		HIGHWAY GUARD (TYPE NOTED)
		FENCE (SIZE AND TYPE NOTED)
		HIGHWAY/PROPERTY BOUND (TYPE NOTED)
		CITY, TOWN, OR COUNTY LAYOUT
		STATE HIGHWAY LAYOUT (S.H.L.O.)
		EASEMENT LINE
		PROPERTY LINE
		CITY, TOWN, OR COUNTY BOUNDARY
		STATE BOUNDARY
		BASE OR SURVEY LINE
		CONSTRUCTION BASELINE
		TREE (SIZE AND TYPE NOTED)
		APPROXIMATE FULL DEPTH AREA
		BORINGS, PAVEMENT CORES
		TEST PIT
		HAYBALE

PAVEMENT MARKINGS AND SIGNING SYMBOLS

EXISTING	PROPOSED	
		PAVEMENT ARROW AND LEGEND
		CROSSWALK, 2-12" WHITE LINES (WIDTH NOTED)
		STOP LINE, 12" WHITE LINE 4.0' BEHIND CW (TYP)
		YIELD LINE, 24" x 36" WHITE TRIANGLE, 36" O.C.
		SOLID WHITE CHANNELIZING LINE-SIZE AS NOTED
		SOLID YELLOW CHANNELIZING LINE-SIZE AS NOTED
		BROKEN WHITE LANE LINE - 4"
		SOLID WHITE LANE LINE - 4"
		DOUBLE YELLOW CENTER LINE - 4"
		SOLID YELLOW EDGE LINE - 4"
		SOLID WHITE EDGE LINE - 4"
		BROKEN YELLOW LANE LINE - 4"
		BICYCLE LANE
		BICYCLE DETECTION LEGEND
		SIGN AND POST
		DELINEATOR

NANTUCKET IN-TOWN BIKEWAY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	02	13
PROJECT FILE NO. 606433			

LEGEND & GENERAL NOTES

GENERAL NOTES

- TOPOGRAPHICAL INFORMATION FROM A PLAN BY GREENMAN-PEDERSEN, INC. ENTITLED "TOWN OF NANTUCKET - IN-TOWN BIKE PATH" (UNDATED).
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS.
- TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF .01 FOOT PER FOOT (MINIMUM) UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- EXISTING GRANITE CURB & EDGING IN SUITABLE CONDITION SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
- ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.

GENERAL

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

UTILITIES

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

ABBREVIATIONS

ALIGNMENT/GRADING

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

PROFILES

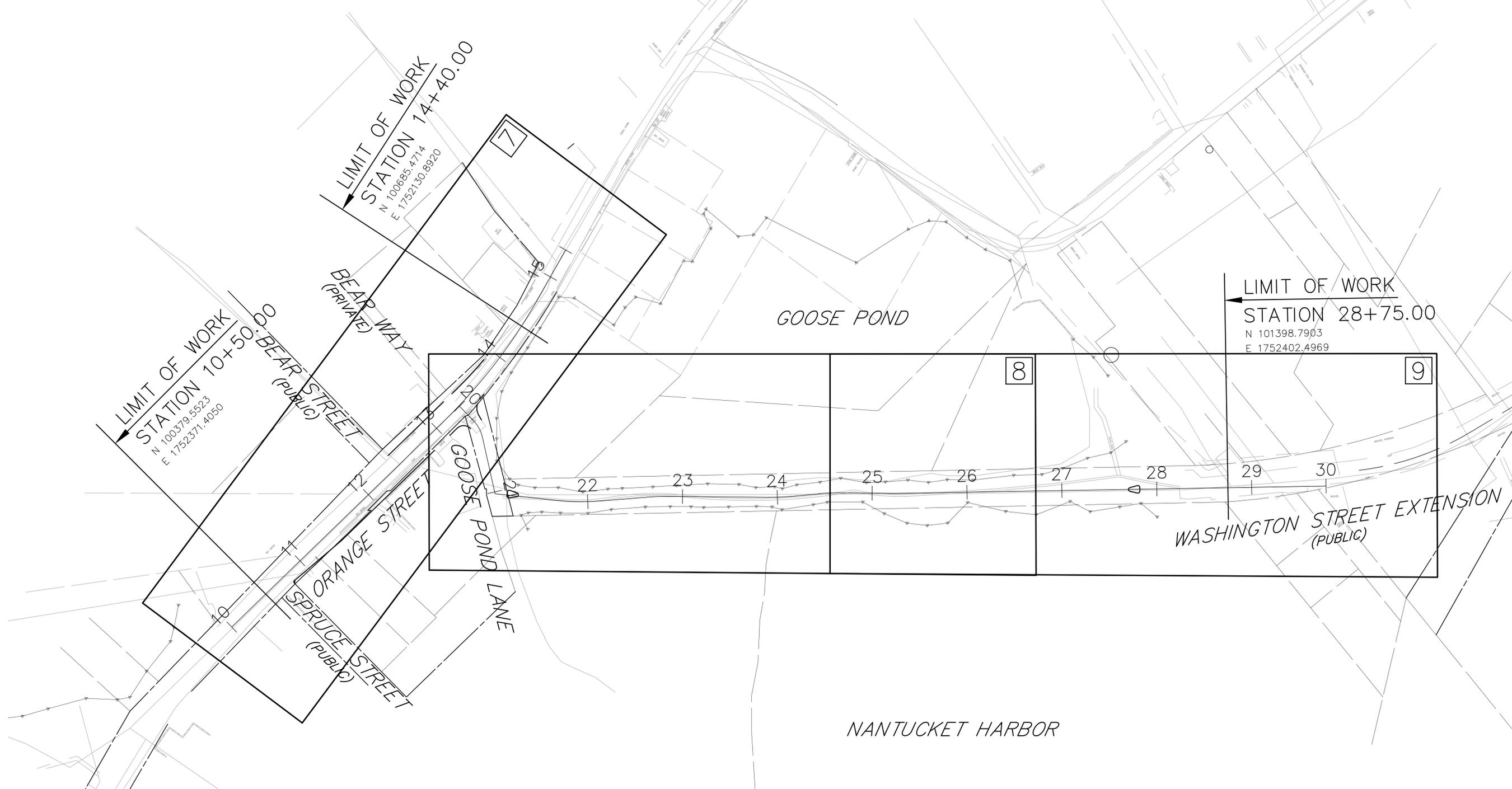
AD	ALGEBRAIC DIFFERENCE IN RATES OF GRADE
ELEV	ELEVATION
HSD	HORIZONTAL SIGHT DISTANCE
K	RATE OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVC	POINT OF VERTICAL CURVE
PVT	POINT OF VERTICAL TANGENT
PVRC	POINT OF VERTICAL REVERSE CURVE
PVCC	POINT OF VERTICAL COMPOUND CURVE
SSD	STOPPING SIGHT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

NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	03	13

PROJECT FILE NO. 606433

KEY PLAN



NOTE: [X] = SHEET NUMBER

NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	04	13

PROJECT FILE NO. 606433

TYPICAL SECTIONS
& PAVEMENT NOTES

PAVEMENT NOTES

PROPOSED FULL DEPTH BIKEWAY PAVEMENT

SURFACE: 1 1/2" HOT MIX ASPHALT SURFACE COURSE TYPE A MATERIAL
 BASE: 2 1/2" HOT MIX ASPHALT INTERMEDIATE COURSE TYPE B MATERIAL
 SUBBASE: 4" (MIN) GRAVEL BORROW, TYPE b BASE COURSE OVER EXISTING TRACK BALLAST
 TACK COAT: BITUMEN FOR TACK COAT (RS-1) AT 0.05 GAL/SY OVER INTERMEDIATE COURSE.

PROPOSED FULL DEPTH PAVEMENT

SURFACE: 3 1/2" HOT MIX ASPHALT (1 1/2" HOT MIX ASPHALT SURFACE COURSE TYPE A MATERIAL OVER 2" HOT MIX ASPHALT INTERMEDIATE COURSE TYPE B MATERIAL)
 BASE: 3 1/2" HOT MIX ASPHALT INTERMEDIATE COURSE TYPE B MATERIAL PLACED IN TWO COURSES
 SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW, TYPE b
 TACK COAT: BITUMEN FOR TACK COAT (RS-1) AT 0.05 GAL/SY OVER INTERMEDIATE AND BASE COURSES.

PROPOSED FULL DEPTH PAVEMENT (LESS THAN 4.0' FEET WIDE)

SURFACE: 1 1/2" HOT MIX ASPHALT (SURFACE COURSE TYPE A)
 BASE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE
 SUBBASE: 12" GRAVEL BORROW, TYPE b.

PROPOSED PAVEMENT MILLING & OVERLAY

SURFACE: 1 1/2" HOT MIX ASPHALT SURFACE COURSE TYPE A MATERIAL
 LEVELING COURSE: VARIABLE DEPTH HOT MIX ASPHALT SURFACE COURSE MATERIAL
 PAVEMENT MILLING 1 1/2" TYP
 BITUMEN FOR TACK COAT (RS-1) AT 0.07 GAL/SY OVER MILLED SURFACE

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMP

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

PROPOSED BRICK WALK

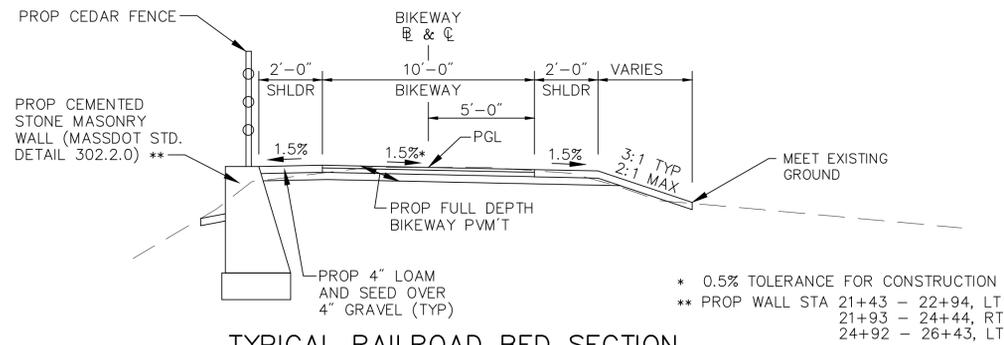
SURFACE: PRECAST CONCRETE PAVERS OVER GEOTEXTILE FABRIC FOR SEPARATION OVER 1" SAND SETTING BED
 FOUNDATION: 8" GRAVEL BORROW, TYPE b

PROPOSED HOT MIX ASPHALT WALK

SURFACE: 2 1/2" HOT MIX ASPHALT PLACED IN TWO LAYERS, 1 1/4" TOP COURSE OVER 1 1/4" BINDER COURSE
 FOUNDATION: 8" GRAVEL BORROW, TYPE b

PROPOSED HOT MIX ASPHALT DRIVE

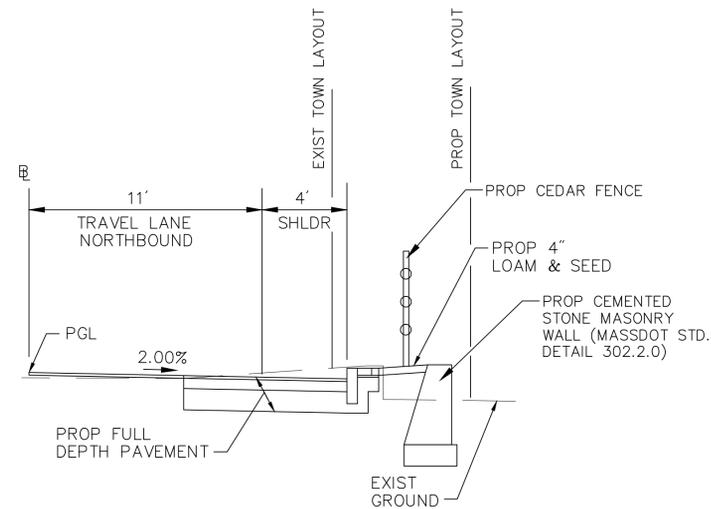
SURFACE: 3 1/2" HOT MIX ASPHALT (1 1/2" TOP COURSE OVER 2" BINDER COURSE)
 FOUNDATION: 8" GRAVEL BORROW, TYPE b



TYPICAL RAILROAD BED SECTION

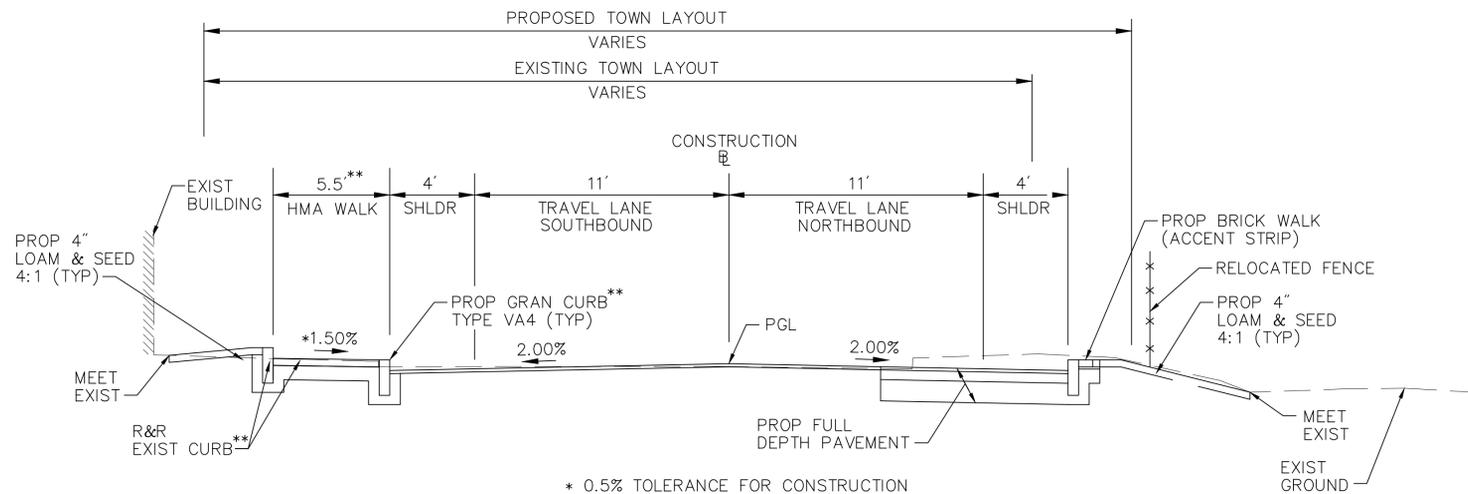
STA 20+40± TO STA 27+60±
NTS

* 0.5% TOLERANCE FOR CONSTRUCTION
 ** PROP WALL STA 21+43 - 22+94, LT
 21+93 - 24+44, RT
 24+92 - 26+43, LT



TYPICAL ORANGE STREET
RETAINING WALL SECTION

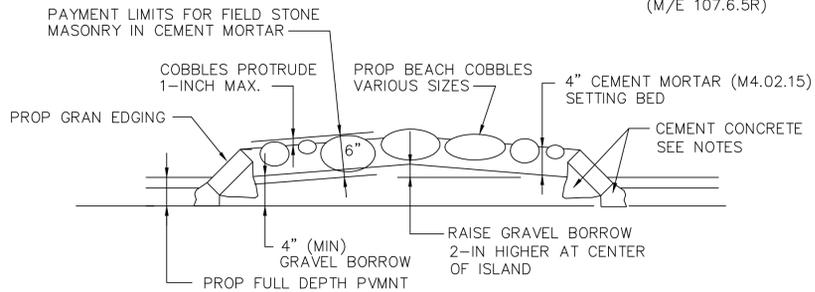
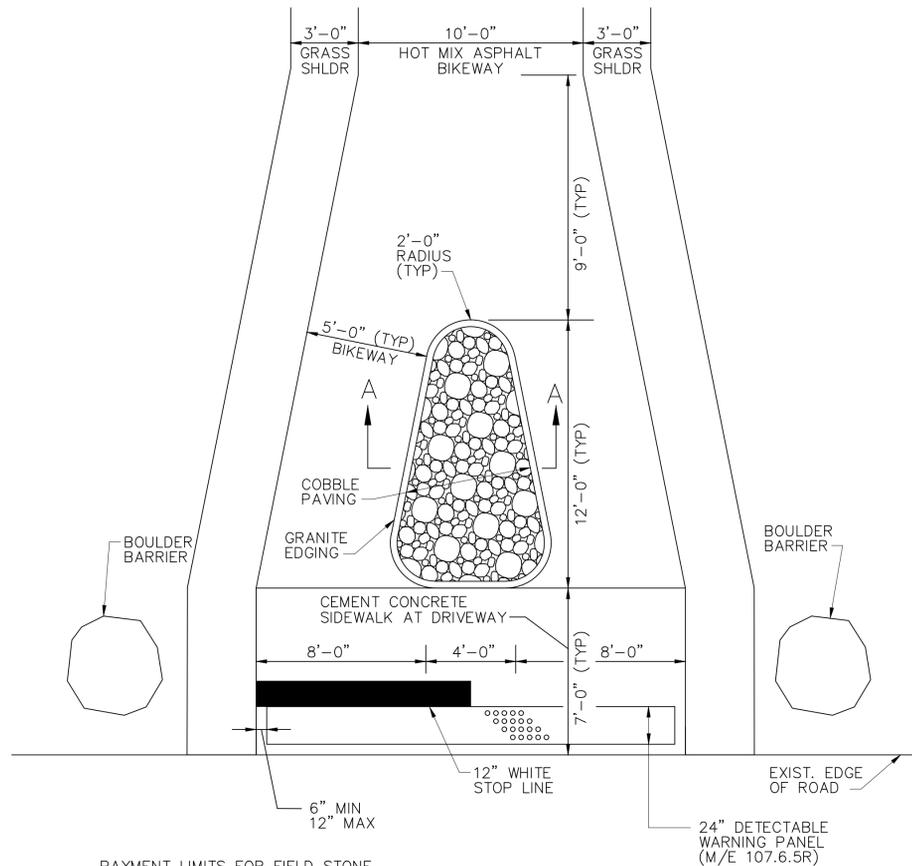
STA 12+09± TO STA 12+75±
NTS



TYPICAL ORANGE STREET SECTION

STA 11+15± TO STA 13+23±
NTS

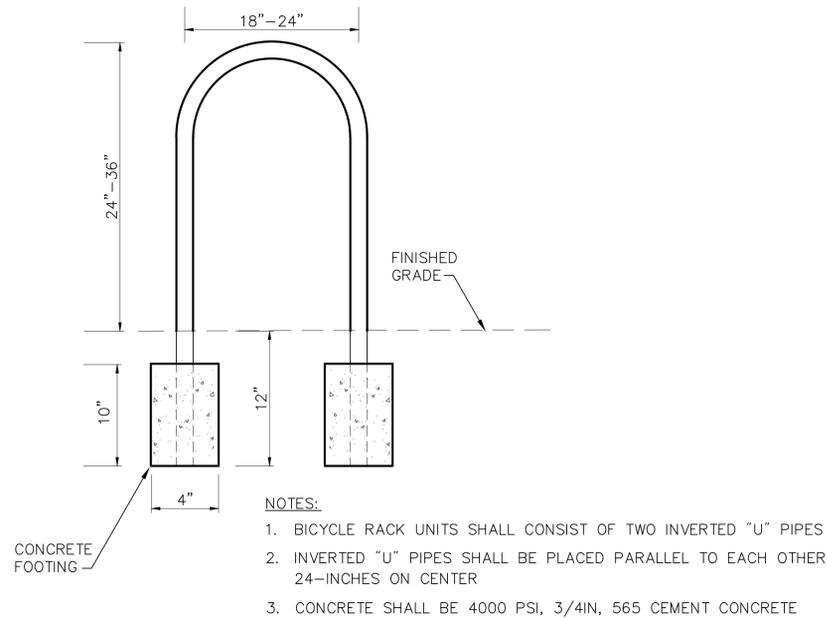
* 0.5% TOLERANCE FOR CONSTRUCTION
 ** RET EXIST CURB & WALK STA 11+15 TO STA 12+43



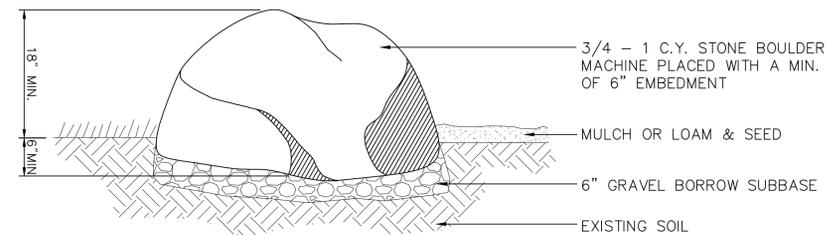
SECTION A-A

NOTE:
PAYMENT FOR CEMENT CONCRETE FOR EDGING INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR GRANITE EDGING.

SPLITTER ISLAND WITH COBBLE PAVING
SCALE: NOT TO SCALE
DATE: DEC 2005
DWG:

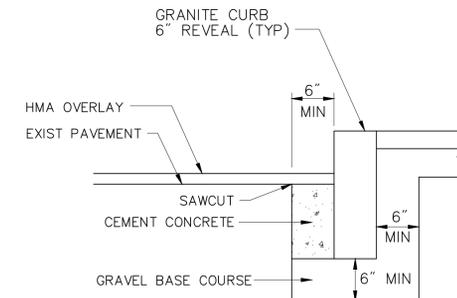


BICYCLE PARKING RACK
SCALE: NOT TO SCALE



NOTE:
TO BE SPACED 6' O.C. WHEN MORE THAN ONE

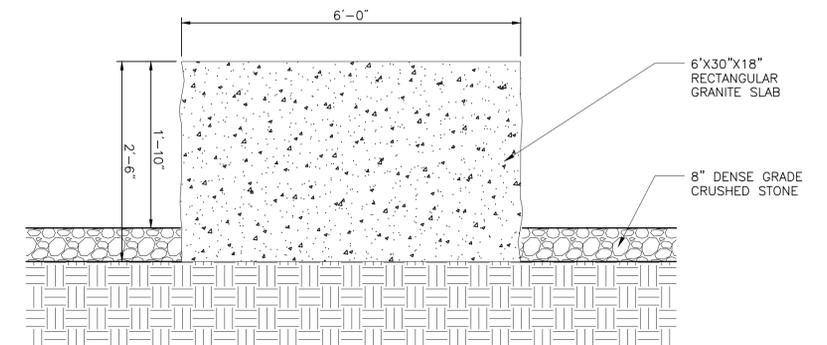
BOULDER BARRIER
SCALE: NTS
S-STD.
H-STD.



NOTES:

- CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
- SAWCUT 6" FROM CURB LINE AND REMOVE EXISTING PAVEMENT AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
- ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

GRANITE CURB IN EXISTING PAVEMENT-WITH OVERLAY
SCALE: NOT TO SCALE
DATE: APRIL 2003
DWG: CURB-04



ELEVATION VIEW

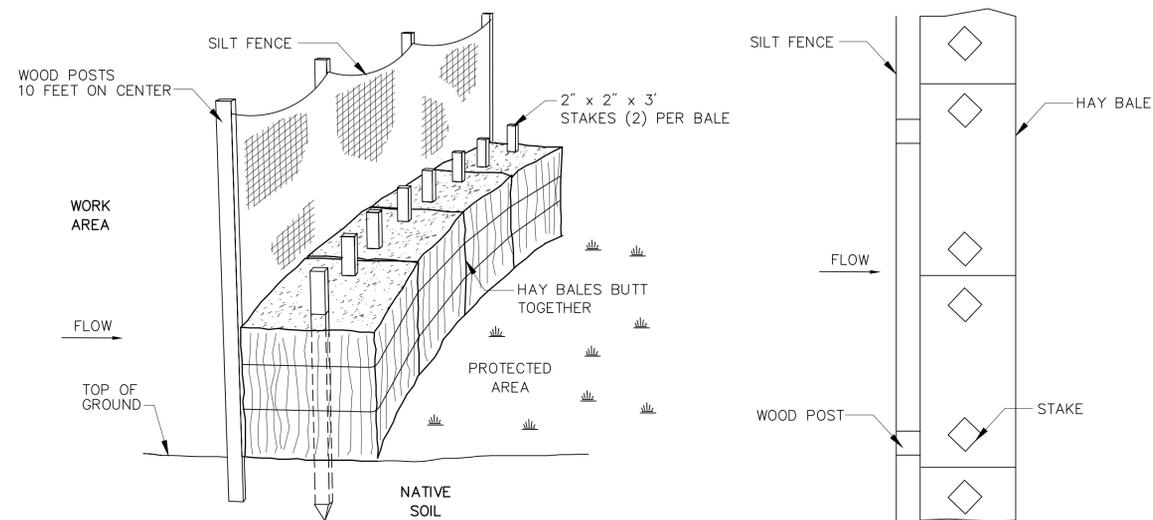
6'-0" GRANITE SLAB BENCH
SCALE: NTS
S-STD.
H-STD.

NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	06	13

PROJECT FILE NO. 606433

CONSTRUCTION DETAILS



CROSS SECTION

PLAN VIEW

CONSTRUCTION NOTES:

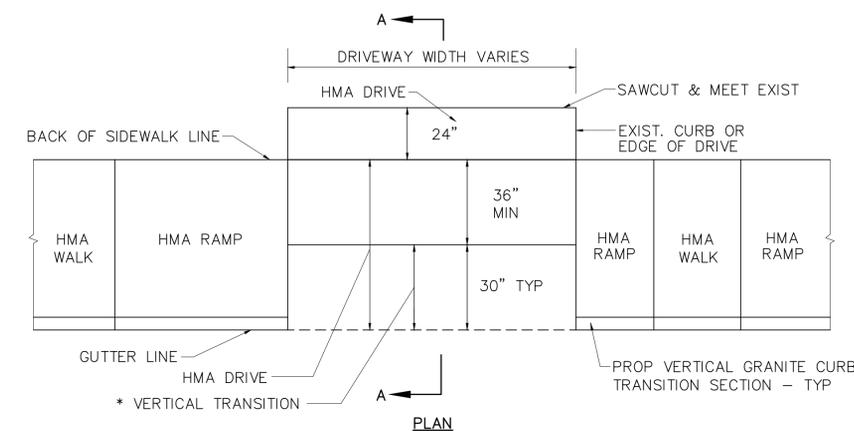
1. FILTER CLOTH SHALL BE FASTENED SECURELY TO POSTS WITH WIRE TIES OR STAPLES AND POSTS SHALL BE SPACED EVERY 10 FEET.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6 INCHES AND FOLDED.
3. ENTRENCH SILT FENCE BUT NOT HAY BALES.
4. INSPECTIONS SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS

EROSION CONTROL BARRIER

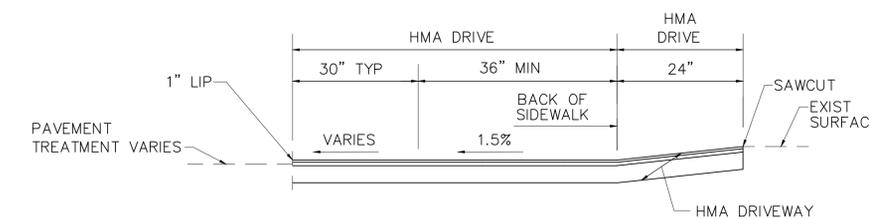
SCALE: NOT TO SCALE

DATE: --

DWG: --



PLAN



SECTION A-A

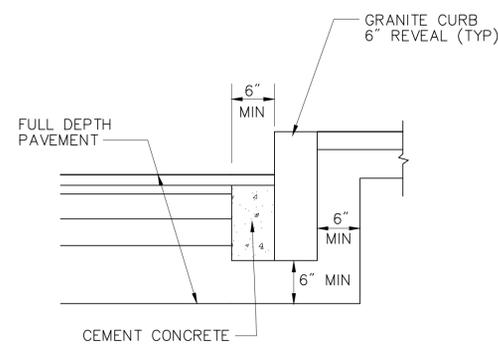
*DRIVEWAY SLOPED TO MEET BACK OF SIDEWALK GRADE

TYPICAL DRIVEWAY WITH FULL DEPTH PAVEMENT CONSTRUCTION - BEAR WAY

SCALE: NOT TO SCALE

DATE: APRIL 2003

DWG: DRIVE-12



NOTES:

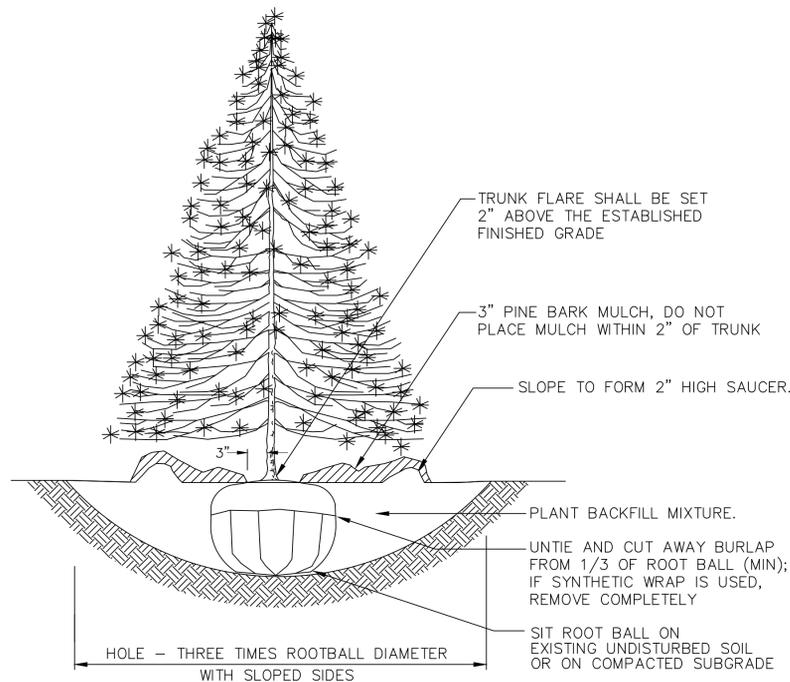
1. TO BE PLACED IF CURB IS INSTALLED AFTER HOT MIX ASPHALT
2. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB

GRANITE CURB IN FULL DEPTH PAVEMENT

SCALE: NOT TO SCALE

DATE: APRIL 2003

DWG: CURB-05



TREE PLANTING

SCALE: NOT TO SCALE

S-STD.

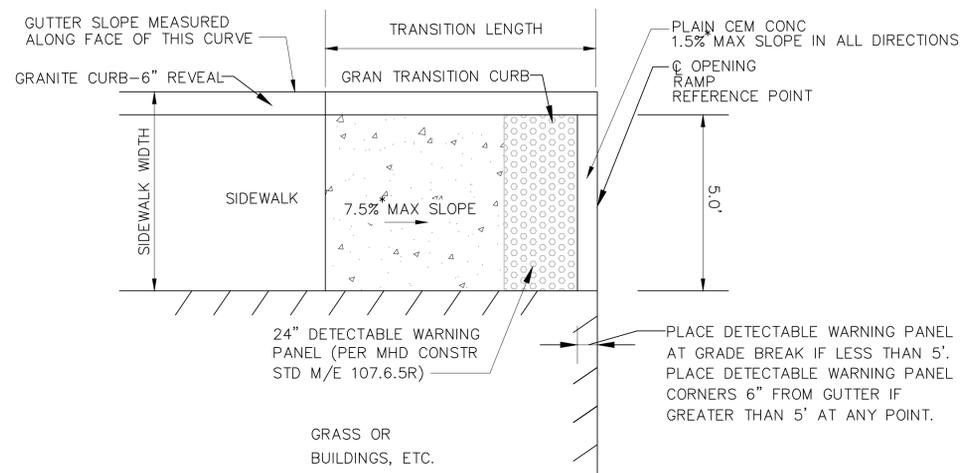
H-STD.

NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	07	13

PROJECT FILE NO. 606433

CONSTRUCTION DETAILS



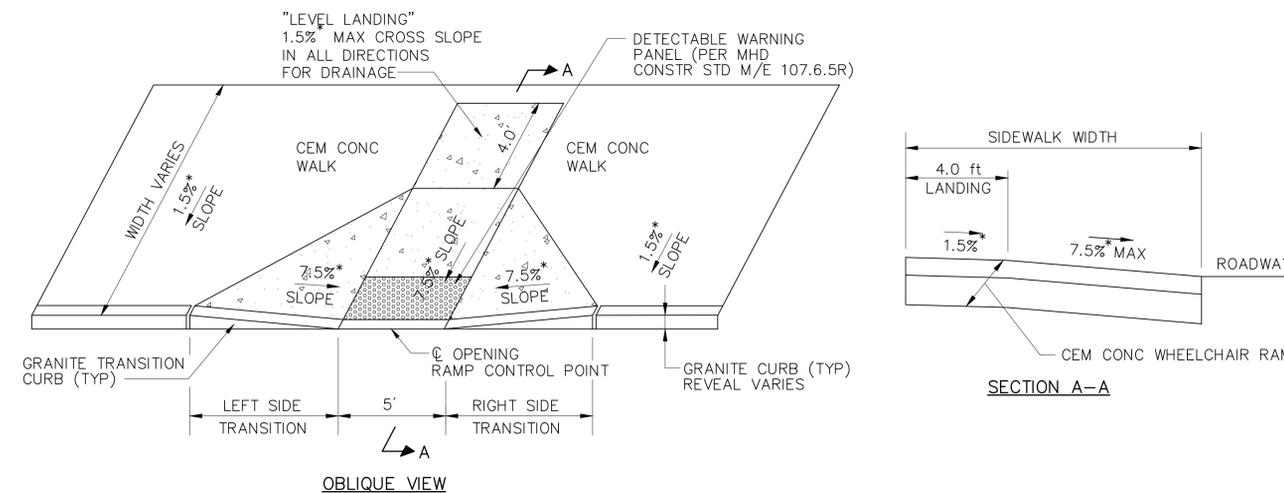
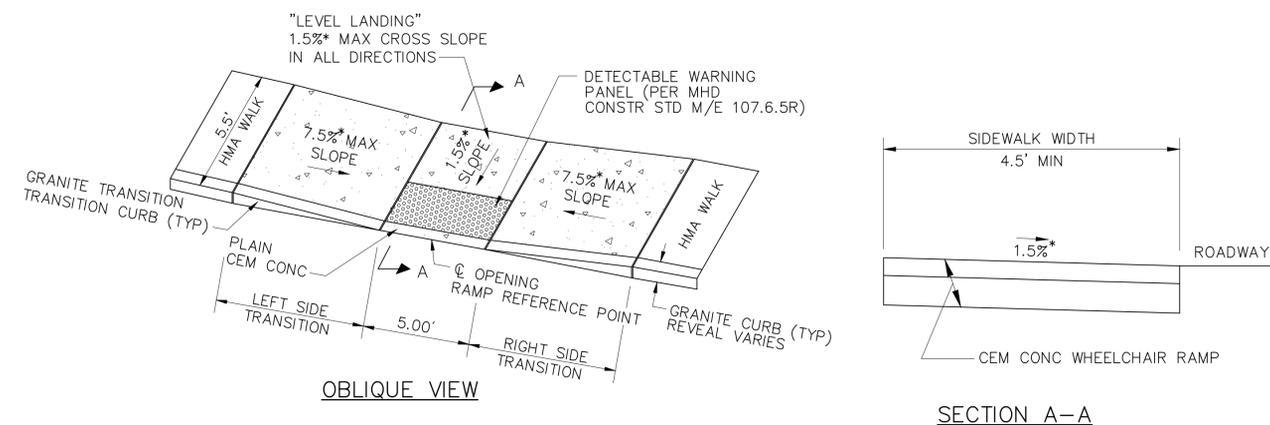
WHEELCHAIR RAMP DATA							
NO.	CONTROL POINT ELEVATION	LOCATION	WIDTH	ROADWAY GUTTER	TRANSITION LEFT	TRANSITION RIGHT	COMMENTS
1	--	12+43.5 17.75 LT	5'-0"	-0.86%	--	7'-8"	
2	--	13+51.6' 13.45 LT	5'-0"	-0.86%	3'-9"	7'-8"	3" REVEAL LEFT TRANSITION
3	--	13+50.8' 11.89 RT	5'-0"	-0.86%	3'-3"	6'-6"	3" REVEAL LEFT TRANSITION
4	--	20+29.6' 6.61 LT	9'-8"	-1.84%	6'-6"	--	MEETING AREA RAMP

NOTES:

1. DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL WHEEL CHAIR RAMPS - SEE MASSDOT 107.6.5
2. CONTROL POINT ELEVATION TO BE DETERMINED AT 75% DESIGN.

WHEELCHAIR RAMP 1
STA 12+43.5 LT

SCALE: NOT TO SCALE
DATE: DEC 2011
DWG: WCR-04



WHEELCHAIR RAMP 2
STA 13+51.6 LT

SCALE: NOT TO SCALE
DATE: OCT 2008
DWG: WCR-03

WHEELCHAIR RAMP 3
STA 13+50.8 RT

SCALE: NOT TO SCALE
DATE: DEC 2011
DWG: WCR-01

HIGHWAY GUARD

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW

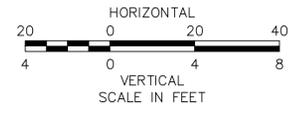
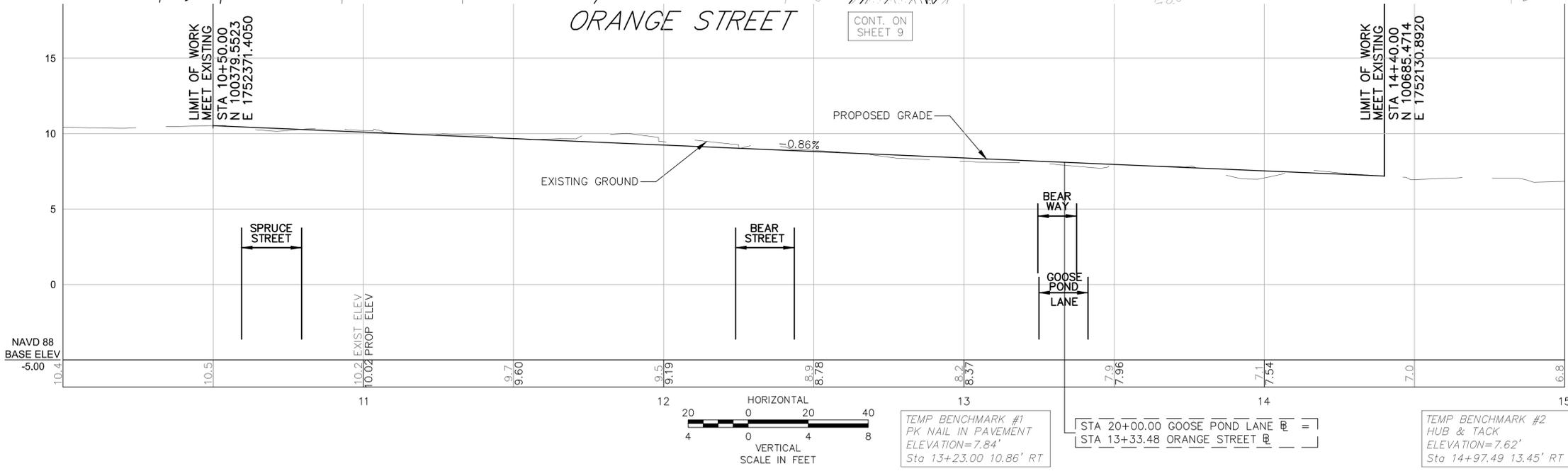
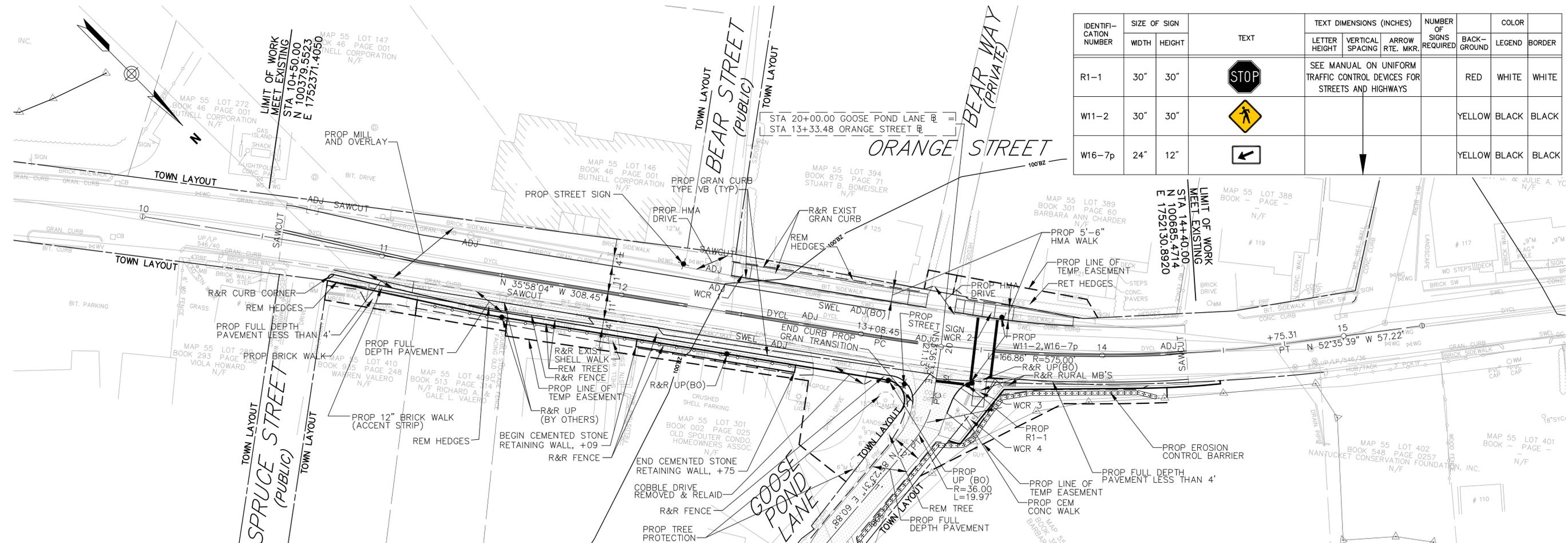
NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	08	13

PROJECT FILE NO. 606433

CONSTRUCTION PLAN
& PROFILE

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR	
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.			
R1-1	30"	30"		SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			RED	WHITE	WHITE
W11-2	30"	30"					YELLOW	BLACK	BLACK
W16-7p	24"	12"					YELLOW	BLACK	BLACK

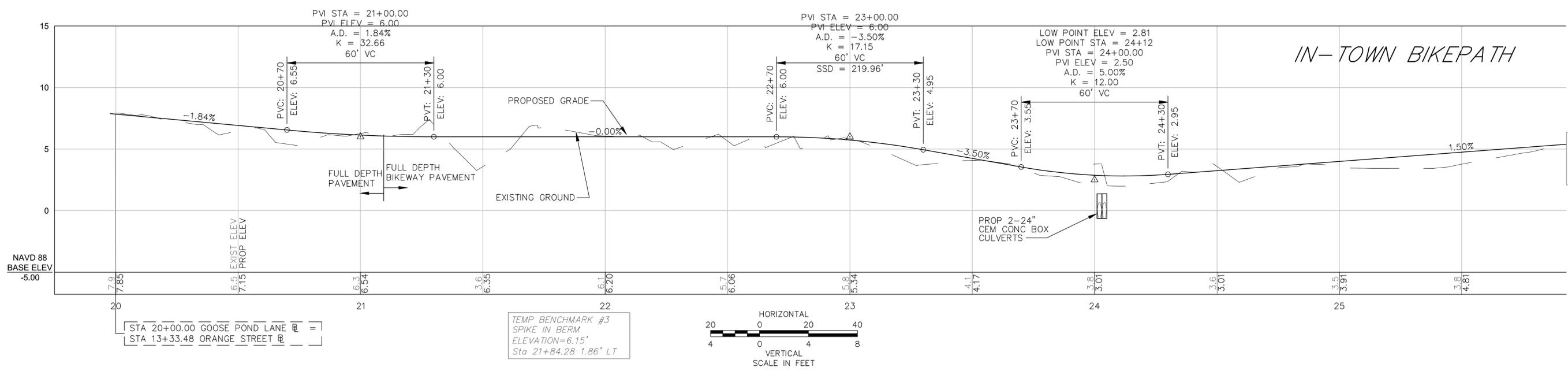
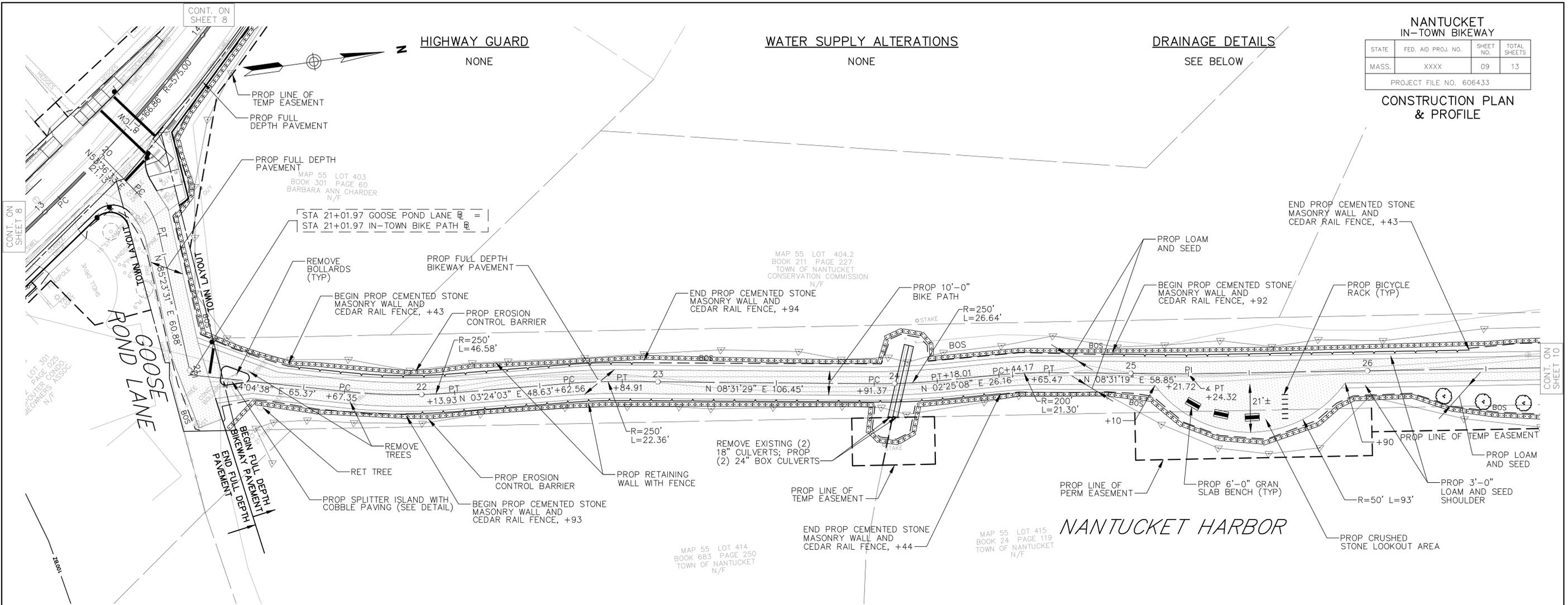


NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	09	13

PROJECT FILE NO. 606433

CONSTRUCTION PLAN
& PROFILE

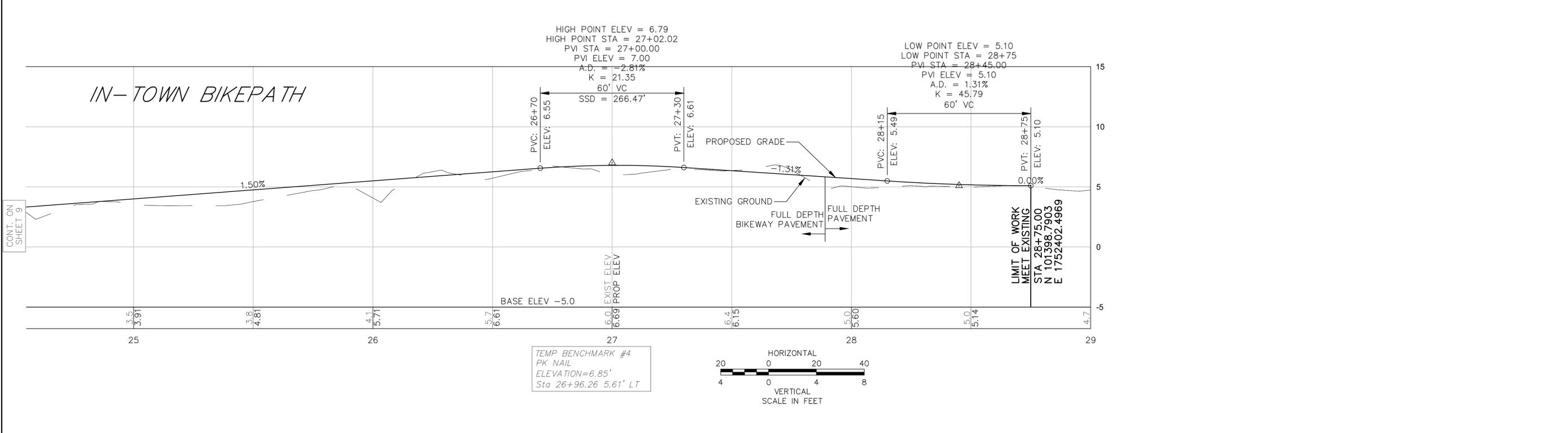
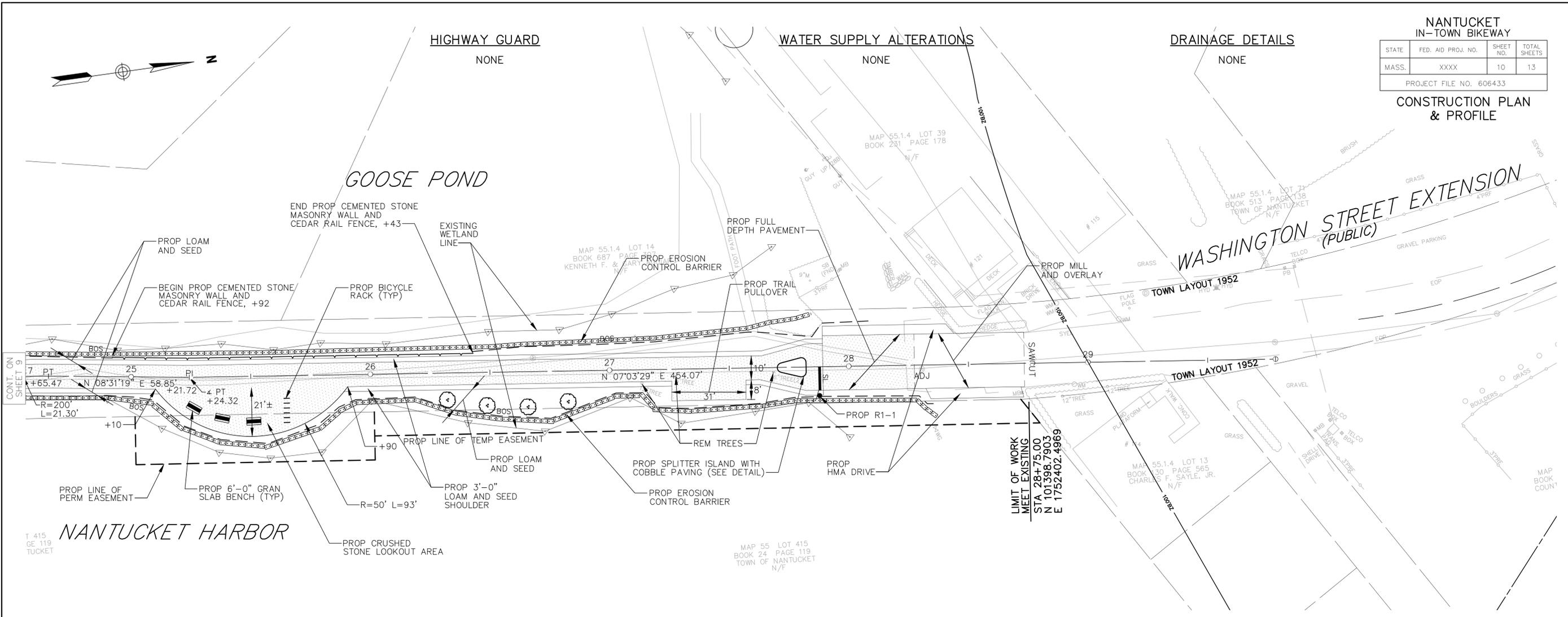


NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	10	13

PROJECT FILE NO. 606433

CONSTRUCTION PLAN
& PROFILE



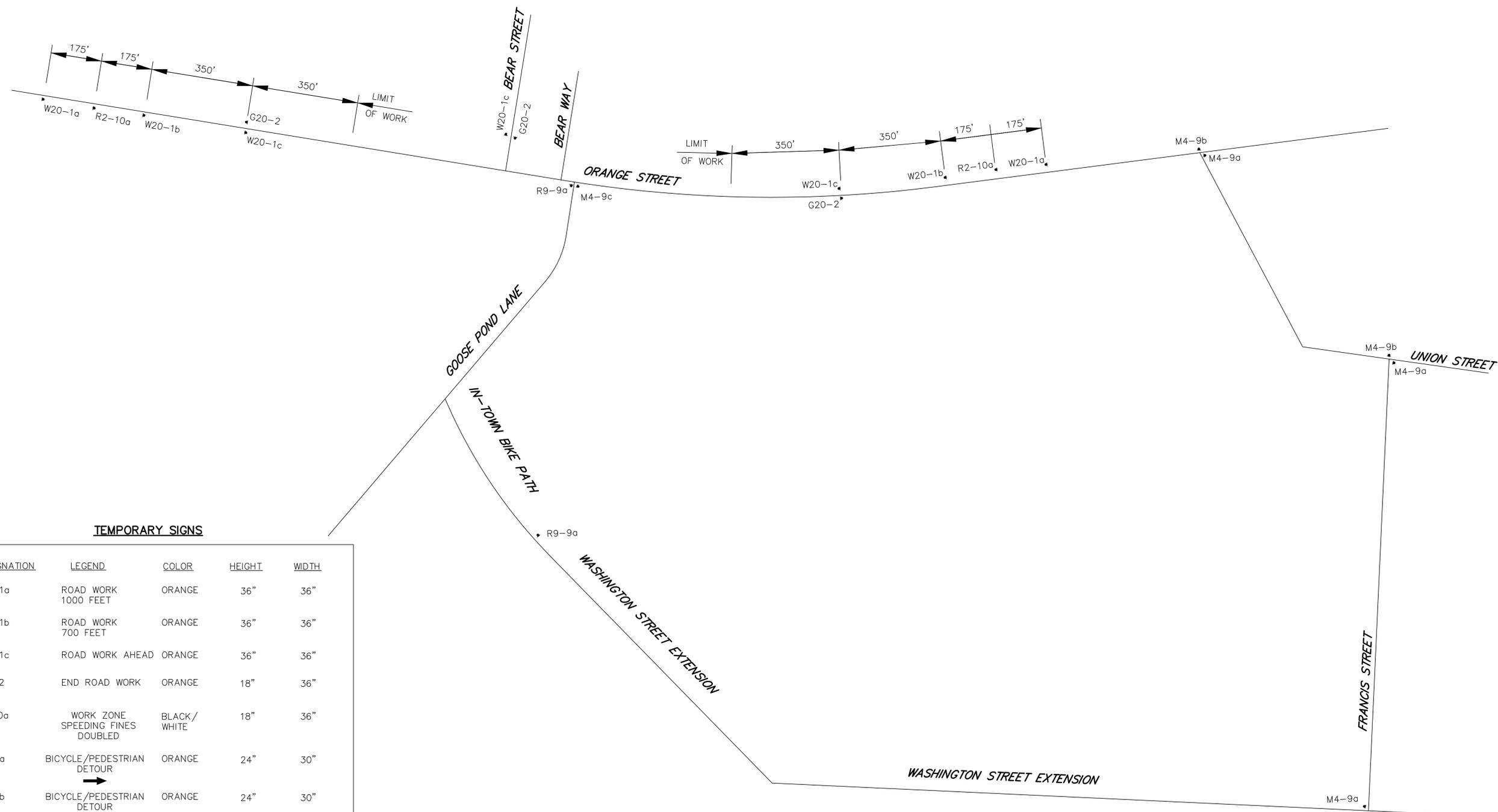
NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	11	13
PROJECT FILE NO. 606433			

TRAFFIC MANAGEMENT PLANS

ADVANCE SIGN SCHEMATIC

N.T.S.
SIGNS TO BE INSTALLED AT THE PROJECT LIMITS AS SHOWN.
ALL ADVANCE SIGNS TO BE IN PLACE FOR THE DURATION OF THE PROJECT.



TEMPORARY SIGNS

SIGN DESIGNATION	LEGEND	COLOR	HEIGHT	WIDTH
W20-1a	ROAD WORK 1000 FEET	ORANGE	36"	36"
W20-1b	ROAD WORK 700 FEET	ORANGE	36"	36"
W20-1c	ROAD WORK AHEAD	ORANGE	36"	36"
G20-2	END ROAD WORK	ORANGE	18"	36"
R2-10a	WORK ZONE SPEEDING FINES DOUBLED	BLACK/ WHITE	18"	36"
M4-9a	BICYCLE/PEDESTRIAN DETOUR →	ORANGE	24"	30"
M4-9b	BICYCLE/PEDESTRIAN DETOUR ←	ORANGE	24"	30"
M4-9c	BICYCLE/PEDESTRIAN DETOUR ↑	ORANGE	24"	30"
R9-9a	PATH CLOSED ↑	ORANGE	12"	24"

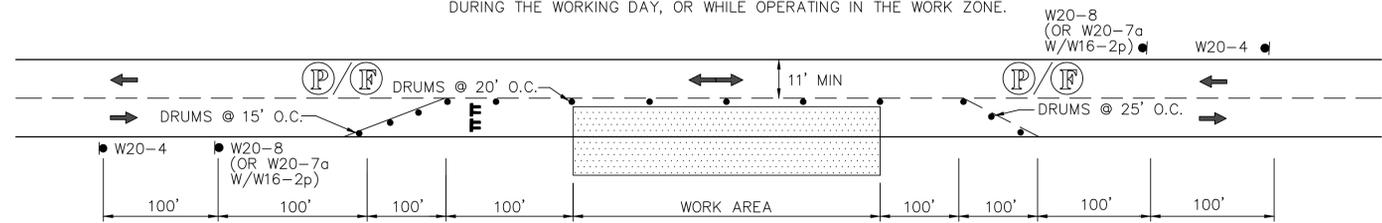
NOTE: THE CONTRACTOR SHALL COVER ANY ADVANCE SIGNAGE IF THE SIGNAGE FROM A DAILY OPERATIONAL SETUP INTERFERES WITH THE ADVANCE SIGNING.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	12	13
PROJECT FILE NO. 606433			

TRAFFIC MANAGEMENT PLANS

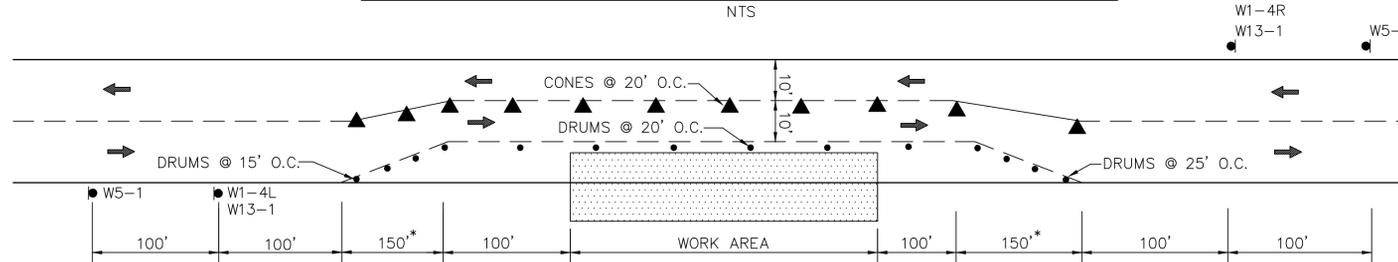
OPERATIONAL SIGNING

LANE CLOSURES SHOWN ARE FOR TEMPORARY CONSTRUCTION.
ALL DRUMS AND SIGNS ARE SHOWN AS THEY SHOULD APPEAR
DURING THE WORKING DAY, OR WHILE OPERATING IN THE WORK ZONE.



TYPICAL TWO WAY STREET LANE CLOSURE

NTS



TYPICAL TWO WAY STREET LANE SHIFT

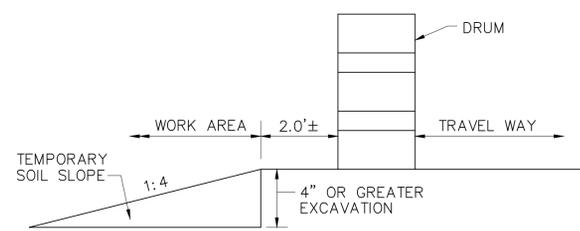
NTS

FOR POSTED SPEEDS OF 40 MPH OR LESS*

$$L = \frac{WS^2}{60}$$

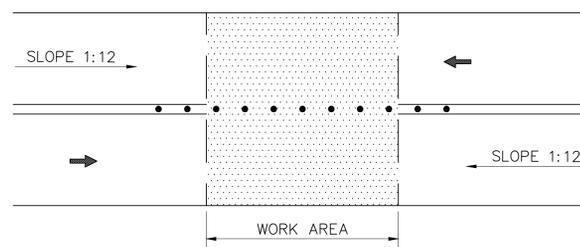
L=TAPER LENGTH
W=WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED
S=POSTED SPEED LIMIT

*(FOR 35 MPH AND 10' SHIFT, L=150')



ROADWAY SLOPE PROTECTION

NOT TO SCALE



SQUARE OFF THE FULL WIDTH OF THE ROADWAY AT THE END OF WORK DAY

TEMPORARY PAVEMENT TRANSITION DETAIL

NOT TO SCALE

TEMPORARY SIGNS

SIGN DESIGNATION	LEGEND	HEIGHT	WIDTH
W20-4	ONE LANE ROAD AHEAD	36"	36"
W20-7a	FLAGGER AHEAD	36"	36"
W20-8	POLICE OFFICER AHEAD	36"	36"
W5-1	ROAD NARROWS	36"	36"
W13-1	ADVISORY SPEED PLATE	18"	18"
W16-2p	XX FEET (PLAQUE)	18"	24"
W1-4R		30"	30"
W1-4L		30"	30"
R9-9	SIDEWALK CLOSED	12"	24"
R9-11	SIDEWALK CLOSED AHEAD CROSS HERE	12"	24"

GENERAL NOTES

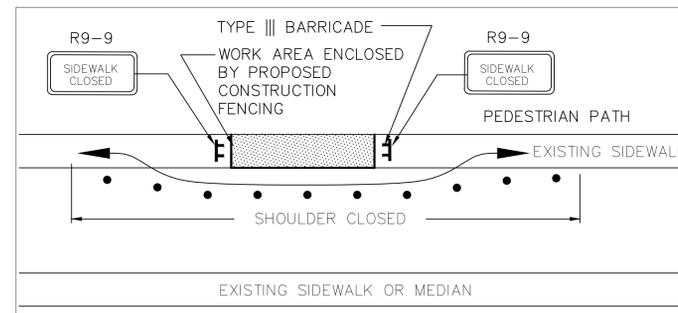
- ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AS AMENDED.
- ALL DRUMS SHALL BE SET AT 20' ON CENTER MAX, UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
- ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.
- THE 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.
- A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON TWO WAY STREETS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT THAT DURING WORKING HOURS, TRAFFIC MAY BE REDUCED TO ONE LANE UNDER POLICE CONTROL, OR CLOSED USING APPROVED DETOUR, FOR SHORT TIME PERIODS WHEN REQUIRED FOR THE WORK, AS SHOWN.
- GRADE SEPARATIONS IN EXCESS OF 2" DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF DRUMS.
- EXCAVATION EDGES IN EXCESS OF 4" DEEP SHALL BE PROTECTED DURING NON-WORKING HOURS BY BACKFILLING WITH A WEDGE OF GRAVEL OR SOIL TO COMPACTED 1:4 SLOPE.
- 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED.
- NON-ESSENTIAL TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
- THE GENERAL SEQUENCE OF WORK IS DEPENDENT UPON THE REMOVAL AND RELOCATION OF THE EXISTING UTILITY POLES AND WIRES THAT ARE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, BY THE UTILITY COMPANIES. THE CONTRACTOR SHALL SCHEDULE THE WORK IN EACH AREA TO COORDINATE WITH THE POLE RELOCATION WORK.
- ADVISORY SPEED PLATES (W13-1) SHALL BE USED IF APPROPRIATE AND AS DIRECTED BY THE ENGINEER.

PEDESTRIAN BYPASS

TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING AND AS DIRECTED BY THE ENGINEER.

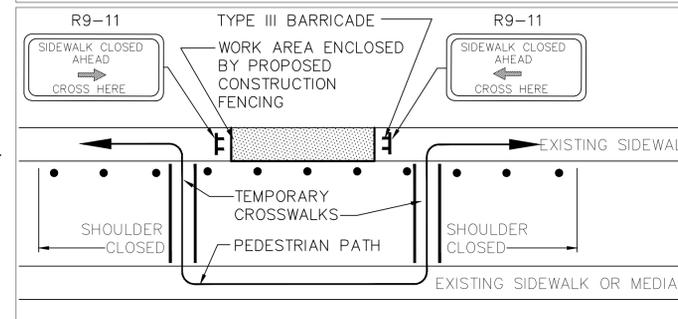
TYPE I

NTS



TYPE II

NTS



- ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
- CONTROLS FOR PEDESTRIAN TRAFFIC ONLY, ARE SHOWN. VEHICULAR TRAFFIC SHALL BE MAINTAINED 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 SHALL 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.

LEGEND

	DRUM		TYPE III BARRICADES
	TRAFFIC CONE		WORK AREA PUBLIC ACCESS RESTRICTED
	POLICE OFFICER		PROPOSED TRAFFIC FLOW
	FLAGGER		SPECIAL LIGHTING UNIT (SLU)
	CONSTRUCTION SIGN	NTS	NOT TO SCALE

NANTUCKET
IN-TOWN BIKEWAY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	XXXX	13	13
PROJECT FILE NO. 606433			

CRITICAL CROSS SECTIONS

