

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

SOMERVILLE/CAMBRIDGE
BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	1	201
PROJECT FILE NO.		607209	

TITLE SHEET & INDEX

PLAN AND PROFILE OF BEACON STREET

IN THE CITY/TOWN OF

SOMERVILLE/CAMBRIDGE MIDDLESEX COUNTY

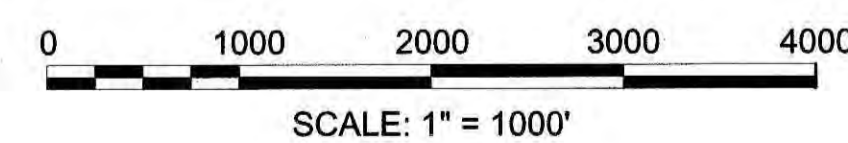
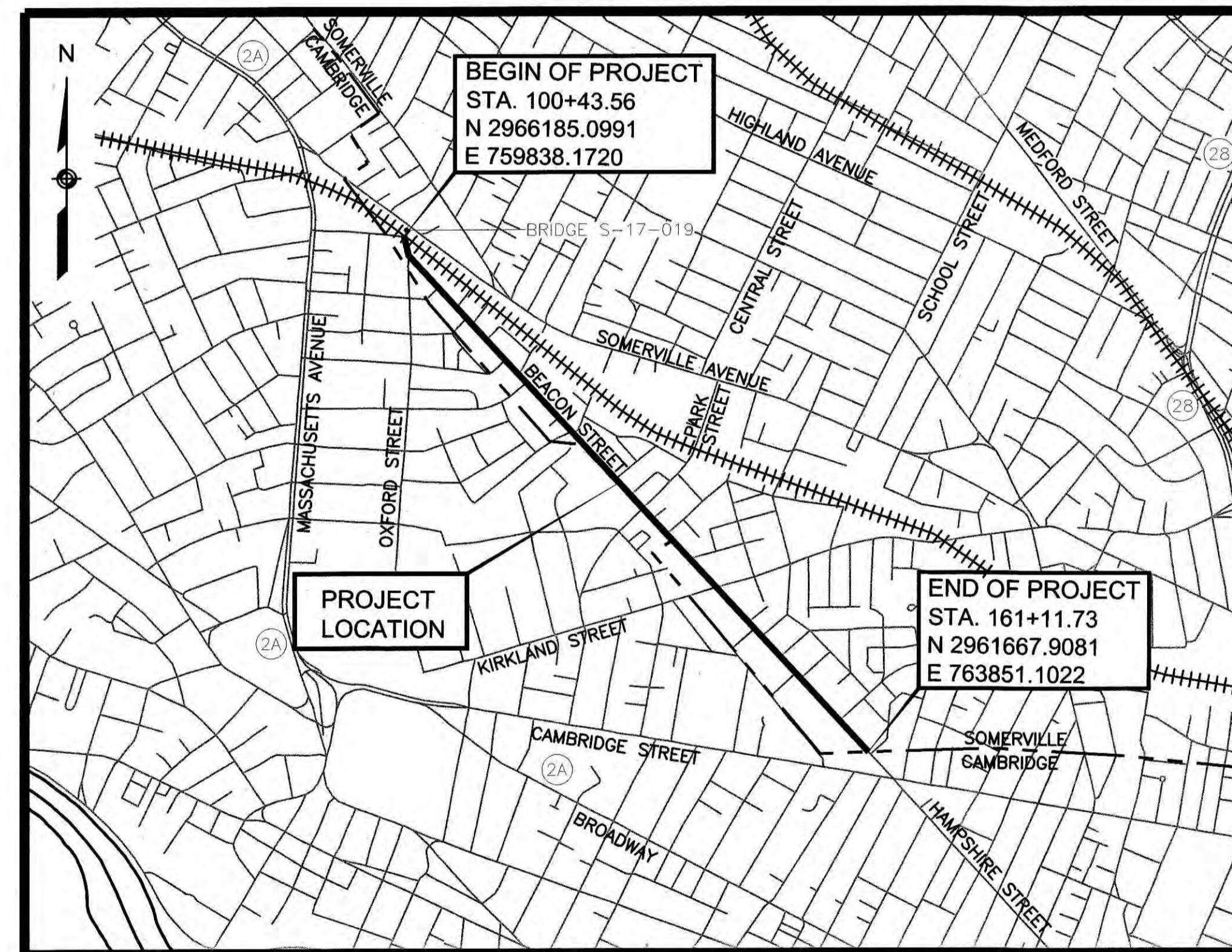
FEDERAL AID PROJECT NO. HP-002S(711)X

JUNE, 2015

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 15, 2012, THE INTERIM SUPPLEMENTAL SPECIFICATIONS DATED MAY 21, 2014, THE JUNE 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.

SHEET NO.	DESCRIPTION
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3	KEY PLAN & BORING LOCATIONS
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5	TYPICAL SECTIONS
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INDEX



LENGTH OF PROJECT = 6,068.17 FEET = 1.149 MILES

DESIGN DESIGNATION (BEACON STREET)

DESIGN SPEED	35 MPH
ADT (2012)	12,500
ADT (2032)	13,750
K	7.7%
D	60%
T (PEAK HOUR)	4%
T (AVERAGE DAY)	5%
DHV	1050
DDHV	630
FUNCTIONAL CLASSIFICATION	URBAN ARTERIAL

DATE	DESCRIPTION	REV #

 Design Consultants, Inc. Consulting Engineers and Surveyors 120 MIDDLESEX AVENUE, SUITE 20 SOMERVILLE, MA 02145 (617) 776-3350	 Massachusetts Department of Transportation Highway Division	
	RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER DATE	
DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION APPROVED: _____ DIVISION ADMINISTRATOR DATE	APPROVED _____ HIGHWAY ADMINISTRATOR DATE	

GENERAL SYMBOLS		
EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER ON BRIDGE OR JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		DROP INLET
		GUTTER INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		PLANTER
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT - R&S
		HYDRANT - RET
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W/1 LIGHT
		UTILITY POLE WITH 1 LIGHT AND RISER
		UTILITY POLE
		UTILITY POLE WITH RISER
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		WATER SERVICE
		PARKING METER
		FIRE ALARM BOX
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCE STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		TREE LINE OR LIMIT OF CLEARING AND GRUBBING
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT
		WHEELCHAIR RAMP NUMBER
		DRIVEWAY NUMBER
		CURVE NUMBER
		DRAINAGE STRUCTURE NUMBER
		DOORWAY

TRAFFIC SYMBOLS		
EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		VIDEO DETECTION CAMERA
		MAGNETOMETER (2 SHOWN)
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
		PEDESTRIAN SIGNAL HEAD, OPTICALLY PROGRAMMED
		PEDESTRIAN SIGNAL POST AND BASE
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS		
EXISTING	PROPOSED	DESCRIPTION
		STOP LINE - 12" WHITE LINE
		CROSSWALK
		SOLID WHITE LANE LINE - 6"
		BROKEN WHITE LANE LINE (10' LINE, 30' SPACE TYP.) - 6"
		SOLID WHITE EDGE LINE - 6"
		YELLOW GORE LINE - 12"
		DOUBLE YELLOW CENTER LINE - 6"
		SOLID WHITE CHANNELIZATION LINE - 12"
		WHITE GORE LINE
		SOLID YELLOW EDGE LINE - 6" & 8"
		BROKEN YELLOW CENTER LINE (10' LINE, 30' SPACE TYP.) - 6"
		SOLID YELLOW CENTER LINE - 6"
		DOTTED WHITE LANE LINE - 6" (2' LINE, 4' SPACE)
		YIELD LINE, 24"Wx36"H TRIANGLE
		ONE WAY WHITE SLOTTED PAVEMENT MARKER
		ONE WAY YELLOW SLOTTED PAVEMENT MARKER
		TWO WAY YELLOW SLOTTED PAVEMENT MARKER
		6" DOTTED DOUBLE YELLOW CENTER LINE (2' LINE, 4' SPACE)
		6" DOTTED WHITE BIKE LANE LINE (2' LINE, 4' SPACE)
		HIGH FRICTION SURFACE TREATMENT (GREEN)

ABBREVIATIONS	
GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND

ABBREVIATIONS (cont.)	
GENERAL	
BKLN	BIKE LOCK
BKRK	BIKE RACK
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BNCH	BENCH
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
C.I.	CAST IRON
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DH	DRILL HOLE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FA	FIRE ALARM
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
L	LENGTH OF CURVE
LB	LEACH BASIN
LI	LOW-INTERMEDIATE
LP	LIGHT POLE
LP	LOW PRESSURE
L.S.	LOW SERVICE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PLASTIC
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PY	POLY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN

SOMERVILLE/CAMBRIDGE BEACON STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	2	201
PROJECT FILE NO. 607209			

LEGEND & ABBREVIATIONS	
ABBREVIATIONS (cont.)	
GENERAL	
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WB	WASTE BASKET
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
WS	WATER SERVICE
X-SECT	CROSS SECTION

TRAFFIC SIGNAL	
CAB.	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY DON'T WALK
FDW	FLASHING DON'T WALK
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FRV	FLASHING RED VERTICAL ARROW
FW	FLASHING WALK
FY	FLASHING CIRCULAR AMBER
FYL	FLASHING AMBER LEFT ARROW
FYR	FLASHING AMBER RIGHT ARROW
FYV	FLASHING AMBER VERTICAL ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
OP	OPTICAL PRE-EMPTION DETECTOR
PED	PEDESTRIAN
PTZ	PAN, TILE, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
RV	STEADY RED VERTICAL ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK
Y	STEADY CIRCULAR AMBER
YL	STEADY AMBER LEFT ARROW
YR	STEADY AMBER RIGHT ARROW
YV	STEADY AMBER VERTICAL ARROW

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	7	201

PROJECT FILE NO. 607209

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

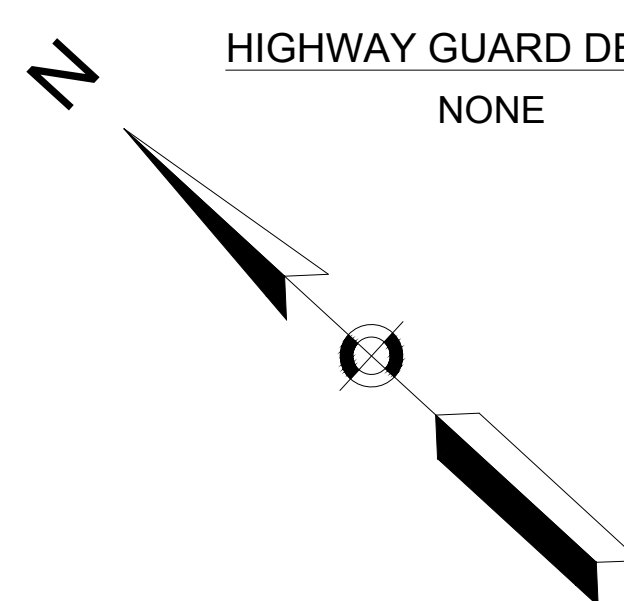
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WATER SUPPLY ALTERATIONS

NONE

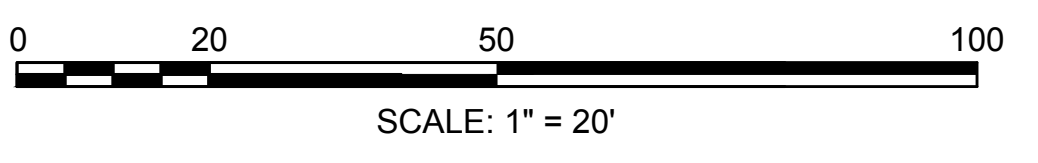
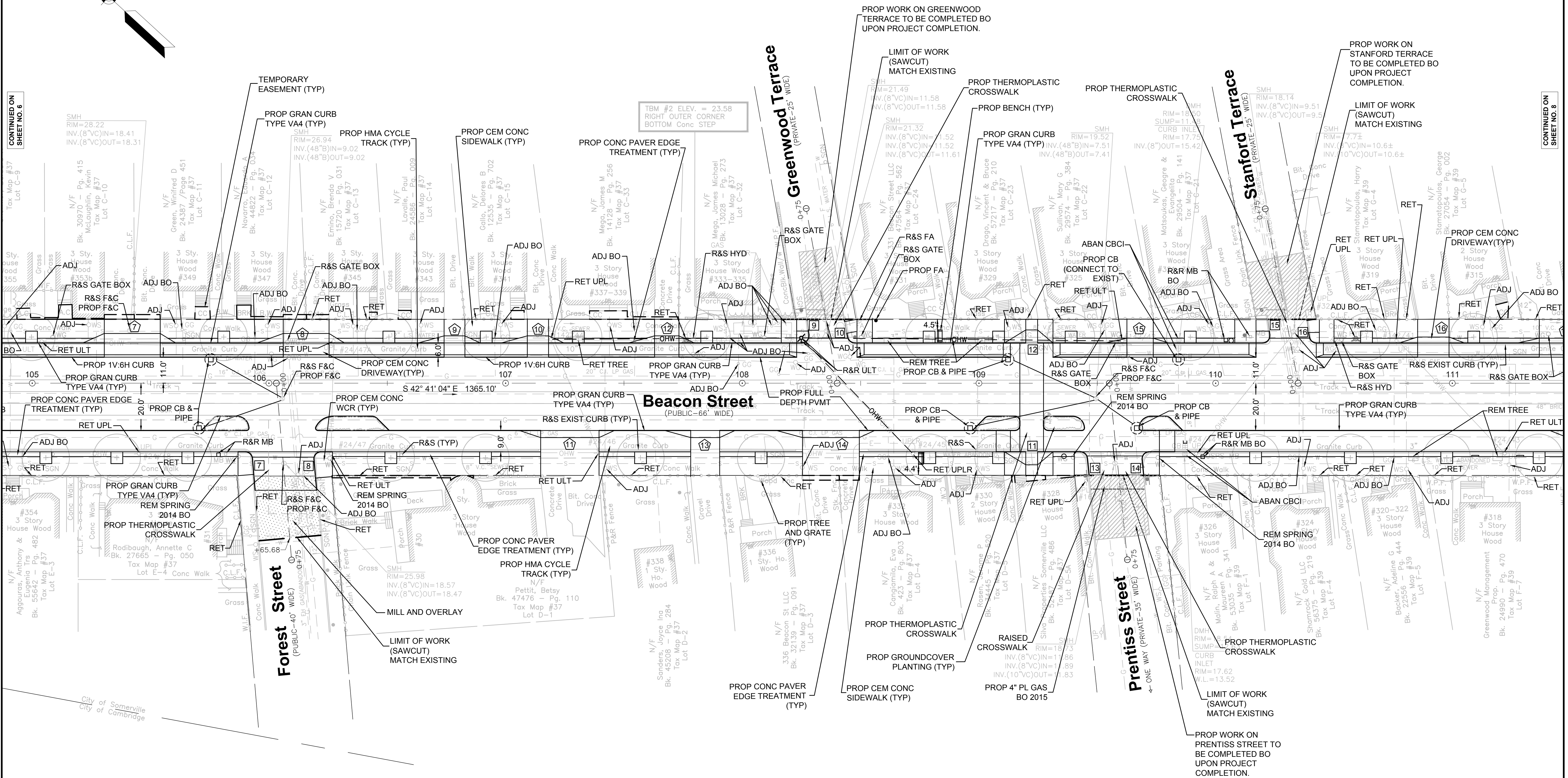
DRAINAGE DETAILS

SEE SHEET NO. 95



CONTINUED ON
SHEET NO. 6

CONTINUED ON
SHEET NO. 8



FOR PROFILE: SEE SHEET NO. 18

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

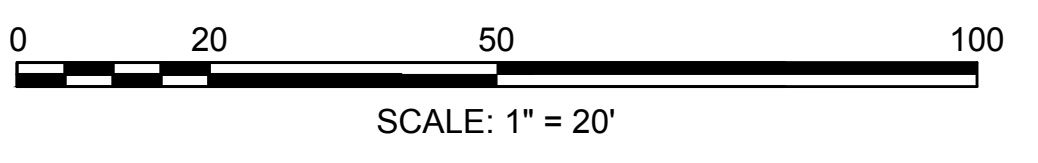
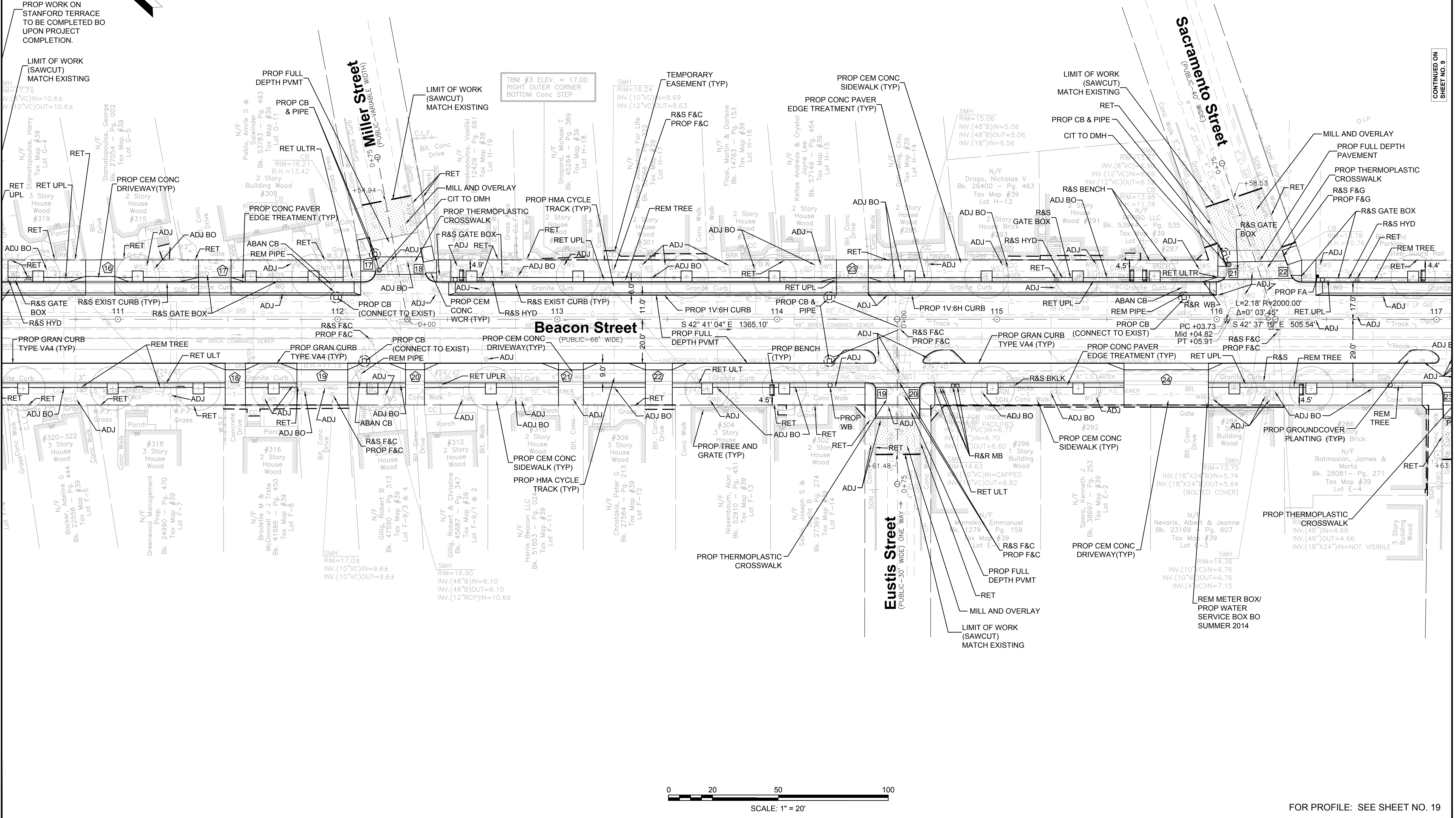
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	8	201
PROJECT FILE NO. 607209			

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS NONE
 TRAFFIC SIGNAL CONDUIT NONE
 WATER SUPPLY ALTERATIONS NONE
 DRAINAGE DETAILS SEE SHEET NO. 96

CONTINUED ON SHEET NO. 7

CONTINUED ON SHEET NO. 9



FOR PROFILE: SEE SHEET NO. 19

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	9	201

PROJECT FILE NO. 607209
CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS
NONE

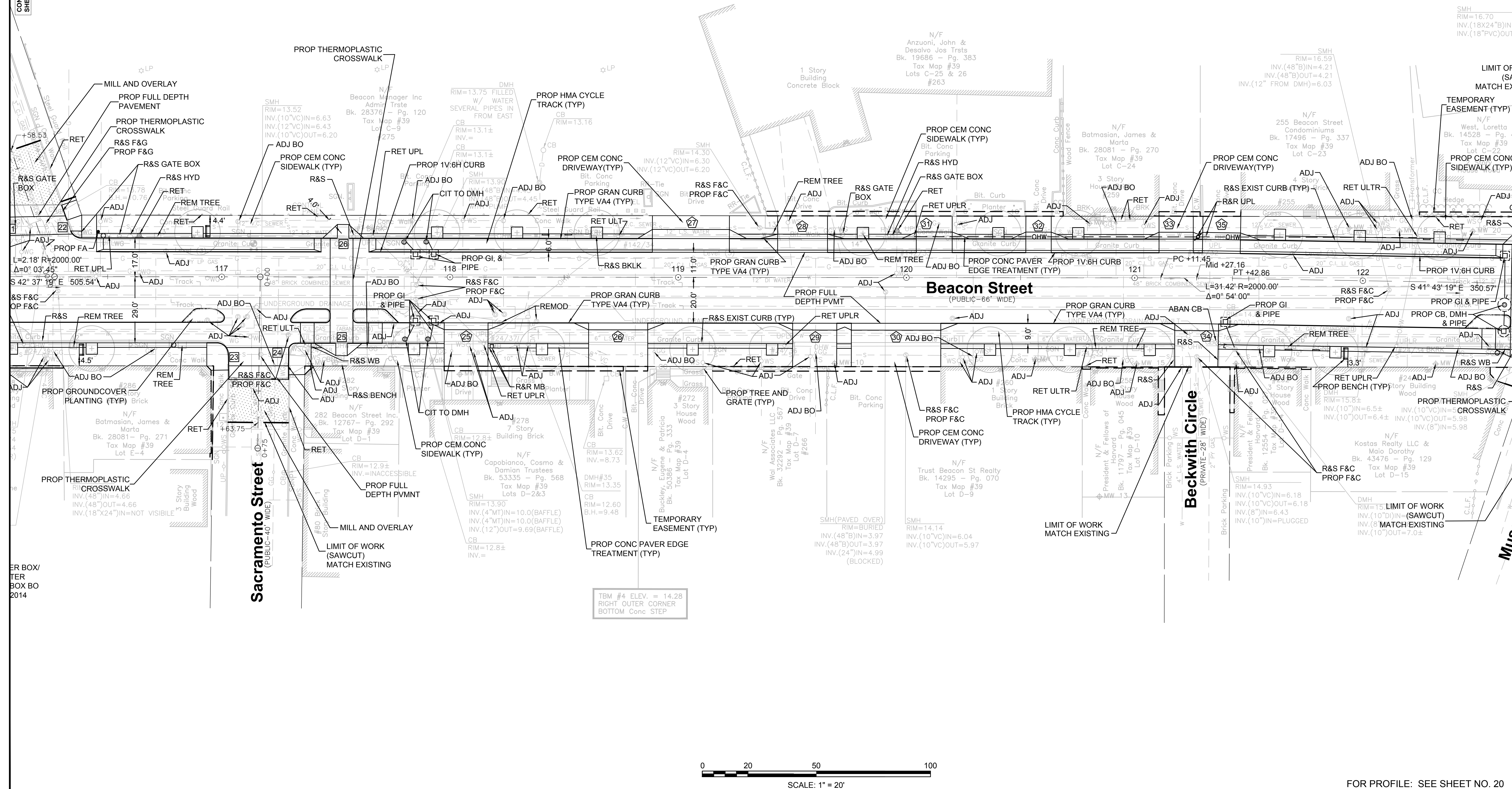
TRAFFIC SIGNAL CONDUIT
SEE SHEET NO. 77

WATER SUPPLY ALTERATIONS
NONE

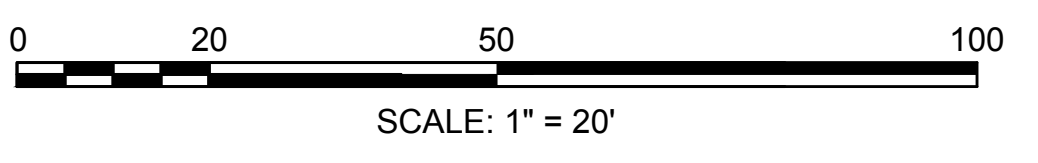
DRAINAGE DETAILS
SEE SHEET NO. 97

CONTINUED ON
SHEET NO. 8

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SHEET NO. 10



TBM #4 ELEV. = 14.28
RIGHT OUTER CORNER
BOTTOM CONC. STEP



FOR PROFILE: SEE SHEET NO. 20

607209/PS&E/HD6 (CONSTRUCTION PLANS).DWG Plotted on 16-Apr-2015 4:43 PM

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	12	201
PROJECT FILE NO. 607209			

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

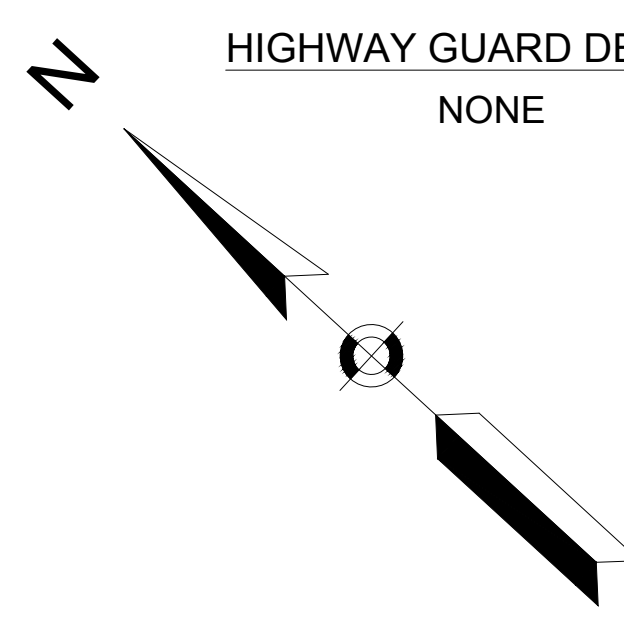
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WATER SUPPLY ALTERATIONS

NONE

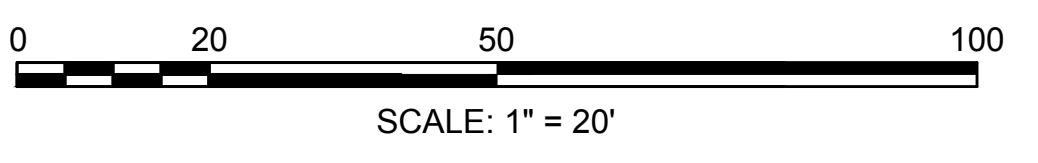
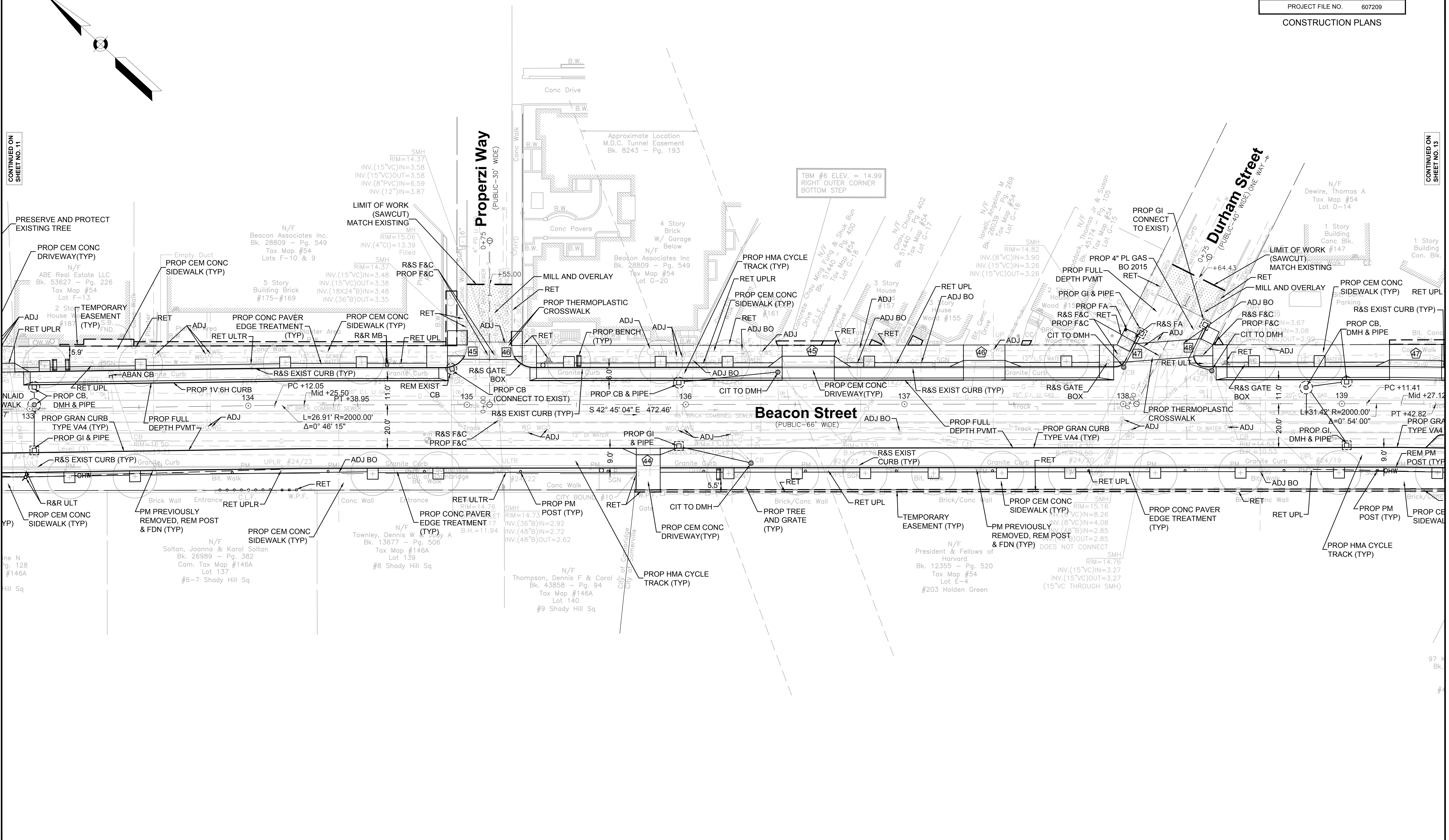
DRAINAGE DETAILS

SEE SHEET NO. 100



CONTINUED ON
SHEET NO. 11

CONTINUED ON
SHEET NO. 13



FOR PROFILE: SEE SHEET NO. 23 & 24

607209(PS&E)HD6 (CONSTRUCTION PLANS).DWG Plotted on 16-Apr-2015 4:43 PM

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	13	201
PROJECT FILE NO. 607209			

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE SHEET NO. 79

WATER SUPPLY ALTERATIONS

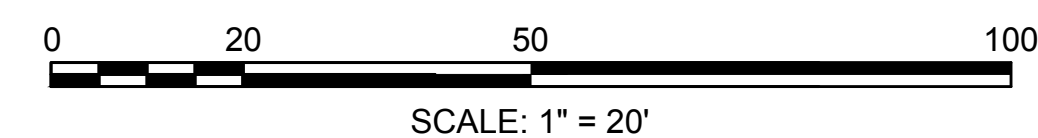
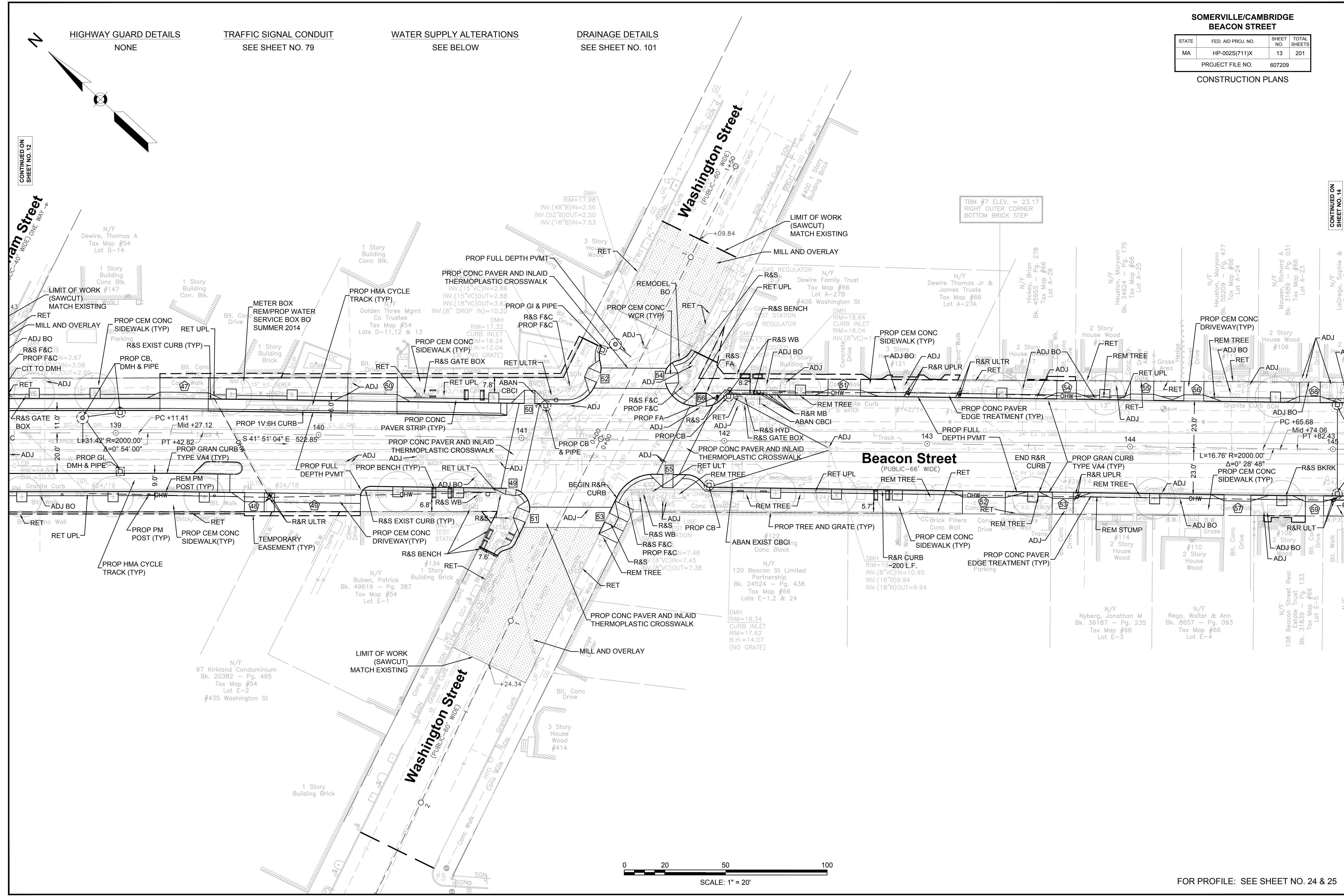
SEE BELOW

DRAINAGE DETAILS

SEE SHEET NO. 101

CONTINUED ON
SHEET NO. 12

CONTINUED ON
SHEET NO. 14



FOR PROFILE: SEE SHEET NO. 24 & 25

607209PS&E\JHD6 (CONSTRUCTION PLANS).DWG Plotted on 16-Apr-2015 4:43 PM

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	14	201
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CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

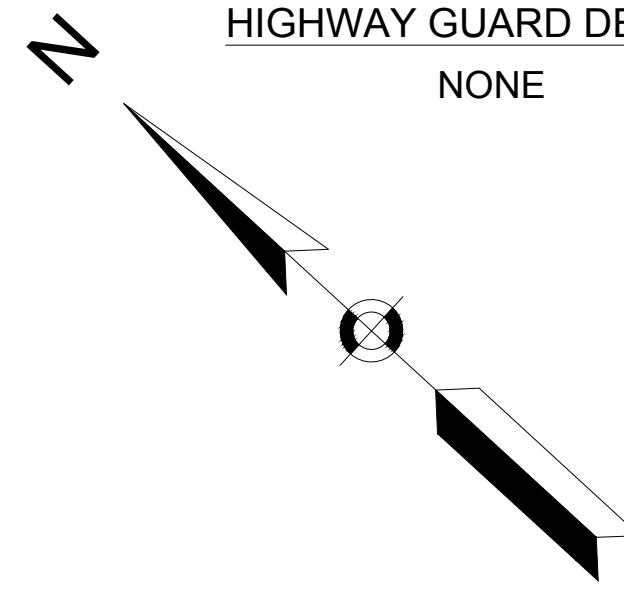
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WATER SUPPLY ALTERATIONS

NONE

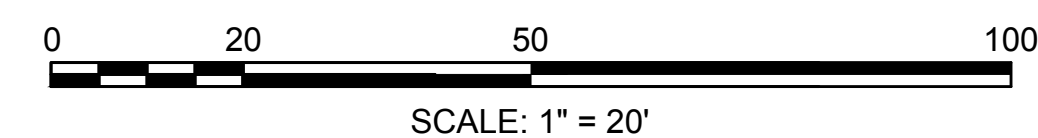
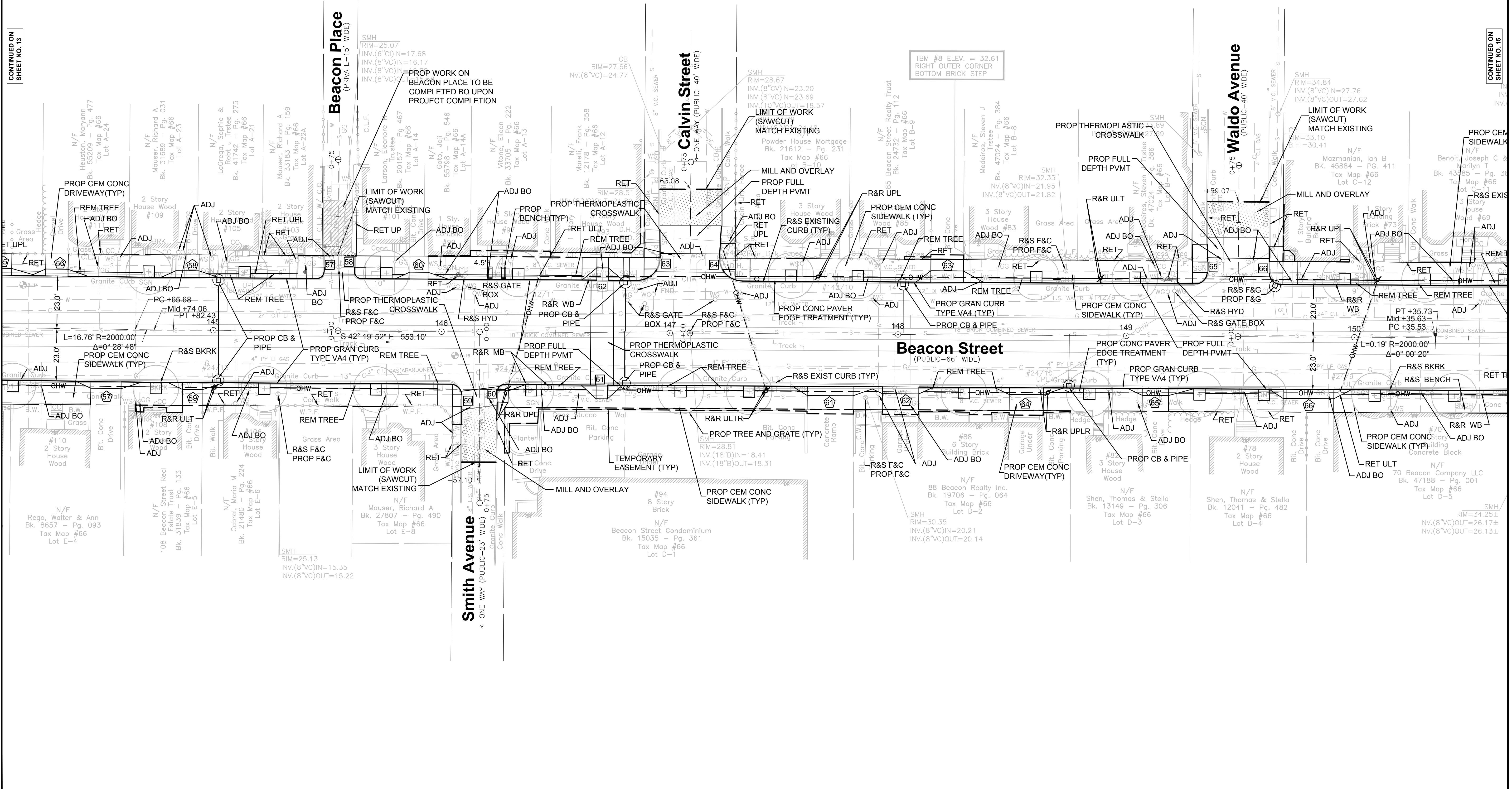
DRAINAGE DETAILS

SEE SHEET NO. 102



CONTINUED ON
SHEET NO. 13

CONTINUED ON
SHEET NO. 15



FOR PROFILE: SEE SHEET NO. 25 & 26

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	16	201

PROJECT FILE NO. 607209

CONSTRUCTION PLANS

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

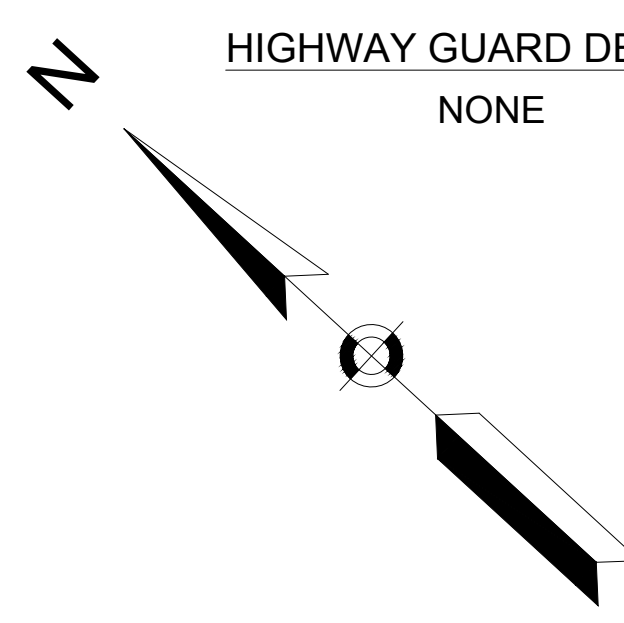
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WATER SUPPLY ALTERATIONS

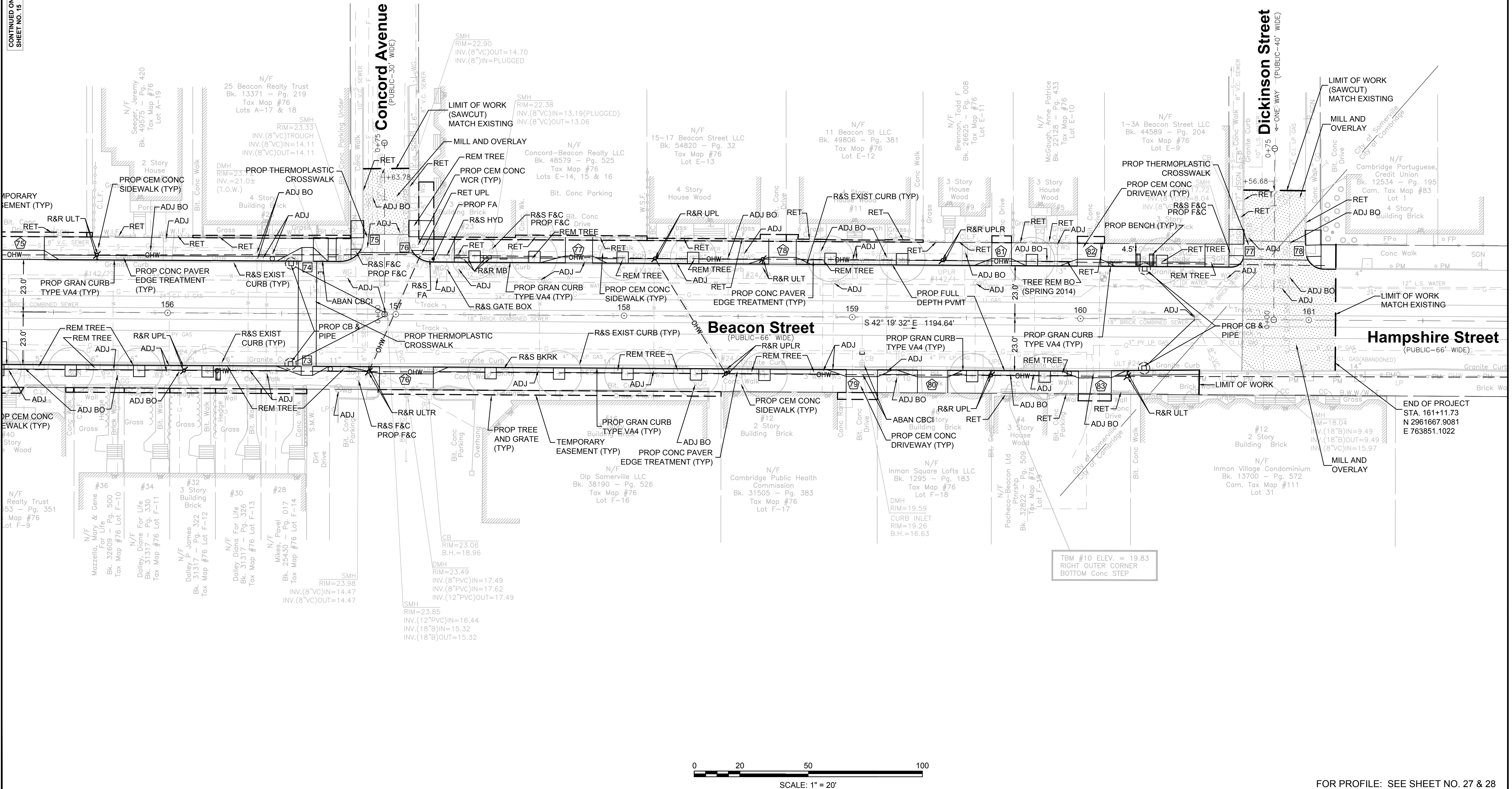
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DRAINAGE DETAILS

SEE SHEET NO. 104



CONTINUED ON
SHEET NO. 15



FOR PROFILE: SEE SHEET NO. 27 & 28

607209(PS&E)HD6 (CONSTRUCTION PLANS).DWG Printed on 16-Apr-2015 4:43 PM

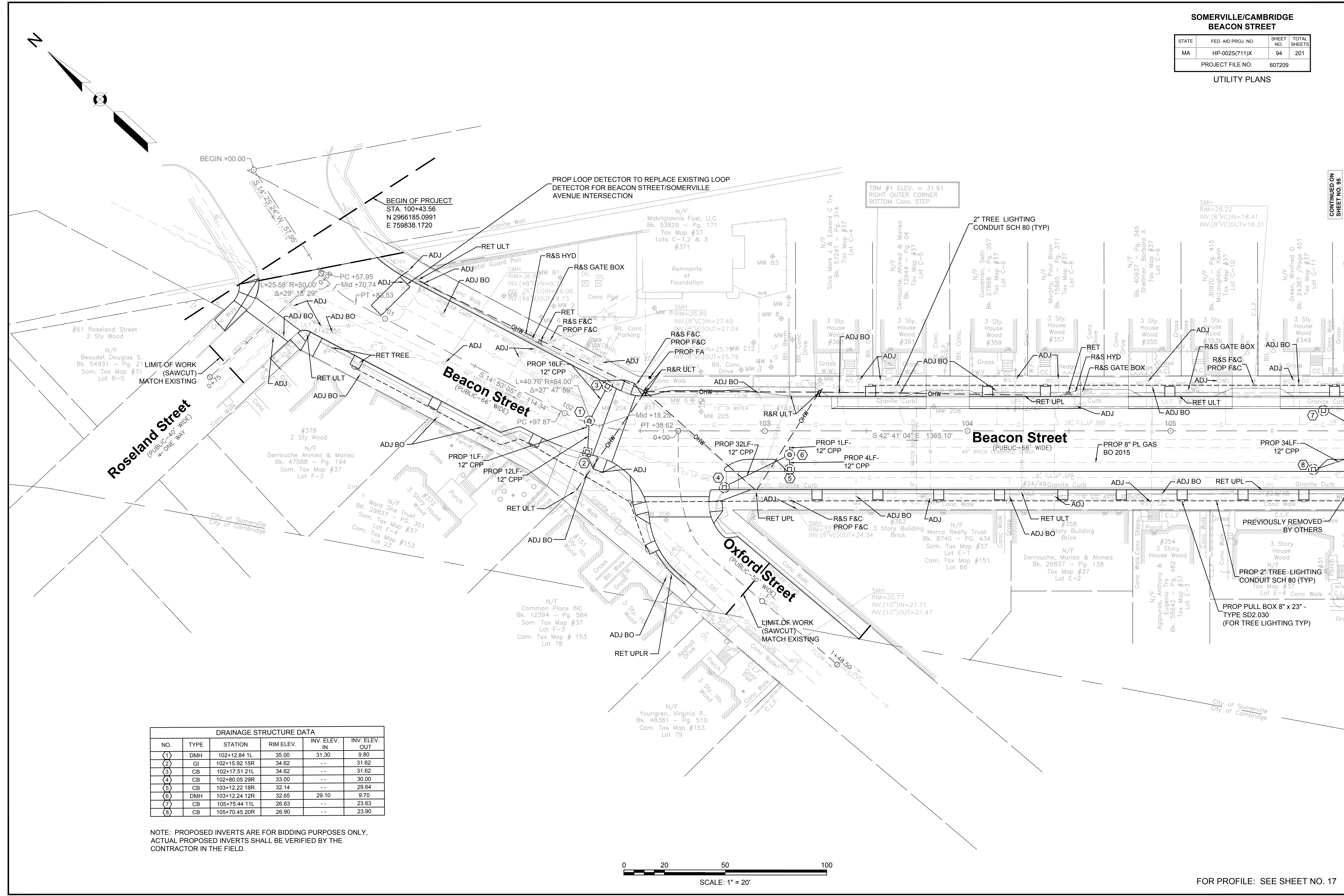
SOMERVILLE/CAMBRIDGE
BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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UTILITY PLANS

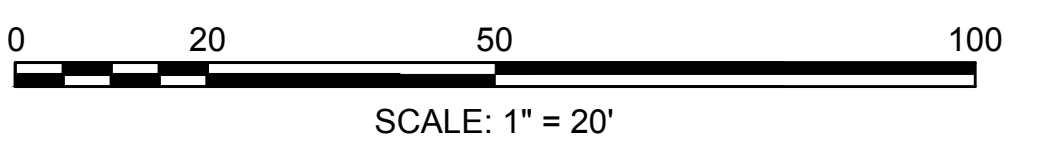
CONTINUED ON SHEET NO. 95

607209(PS&E)PH18 (UTILITY PLANS).DWG Plotted on 18-Apr-2015 4:53 PM



DRAINAGE STRUCTURE DATA					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
(1)	DMH	102+12.84 1L	35.00	31.30	9.80
(2)	GI	102+15.92 15R	34.62	--	31.62
(3)	CB	102+17.51 21L	34.62	--	31.62
(4)	CB	102+80.05 29R	33.00	--	30.00
(5)	CB	103+12.22 18R	32.14	--	29.64
(6)	DMH	103+12.24 12R	32.65	29.10	9.70
(7)	CB	105+75.44 11L	26.63	--	23.63
(8)	CB	105+70.45 20R	26.90	--	23.90

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 17

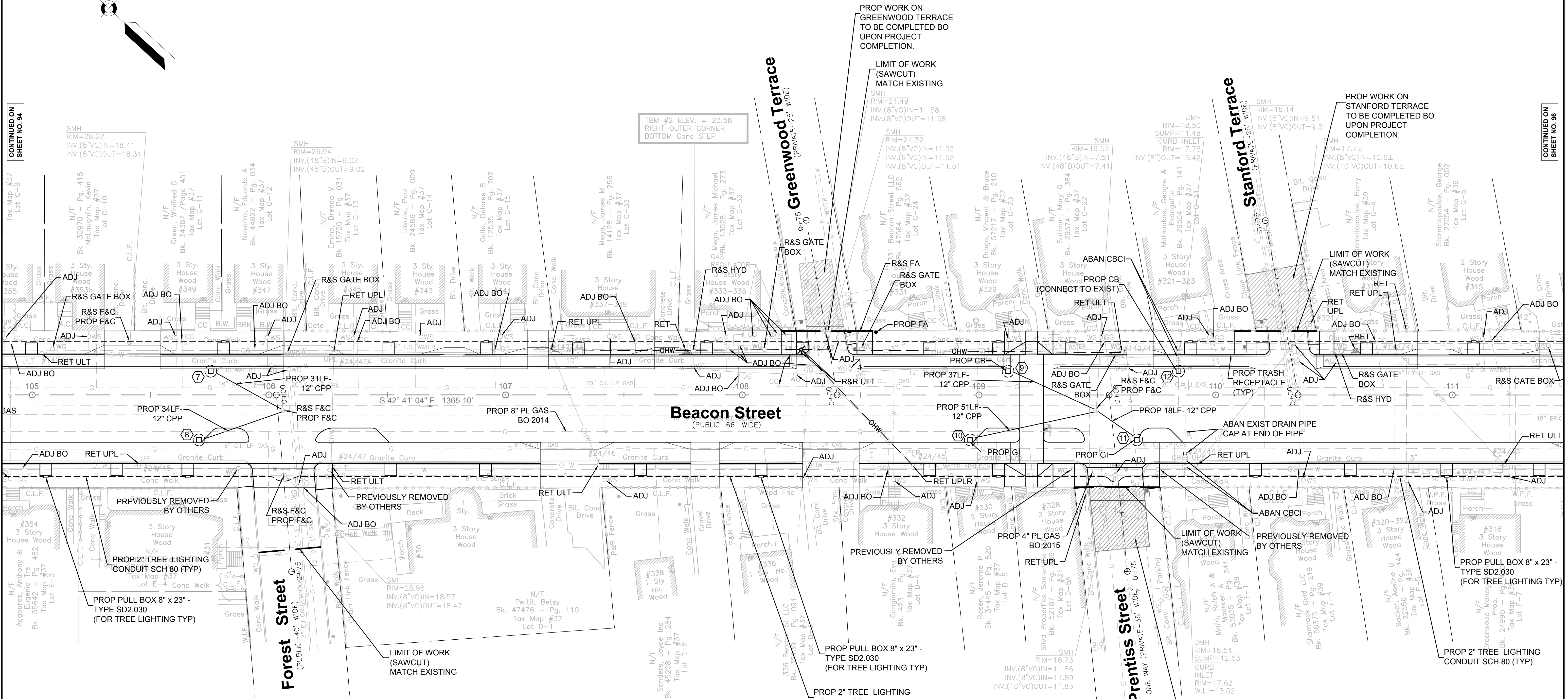
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	95	201
PROJECT FILE NO.		607209	

UTILITY PLANS

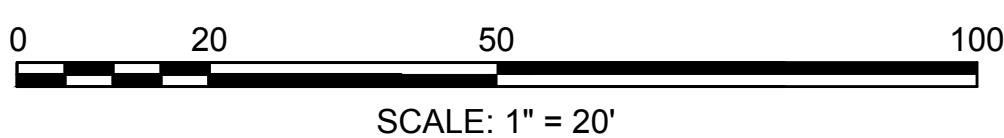
CONTINUED ON
SHEET NO. 94

CONTINUED ON
SHEET NO. 96



DRAINAGE STRUCTURE DATA				
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN / OUT
(9)	CB	109+12.29 11L	19.45	-- / 16.45
(10)	GI	108+96.29 18R	19.60	-- / 17.10
(11)	GI	109+66.69 20R	18.36	-- / 15.86
(12)	CB	109+84.31 11L	18.29	-- / EXIST

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 18

SOMERVILLE/CAMBRIDGE

BEACON STREET

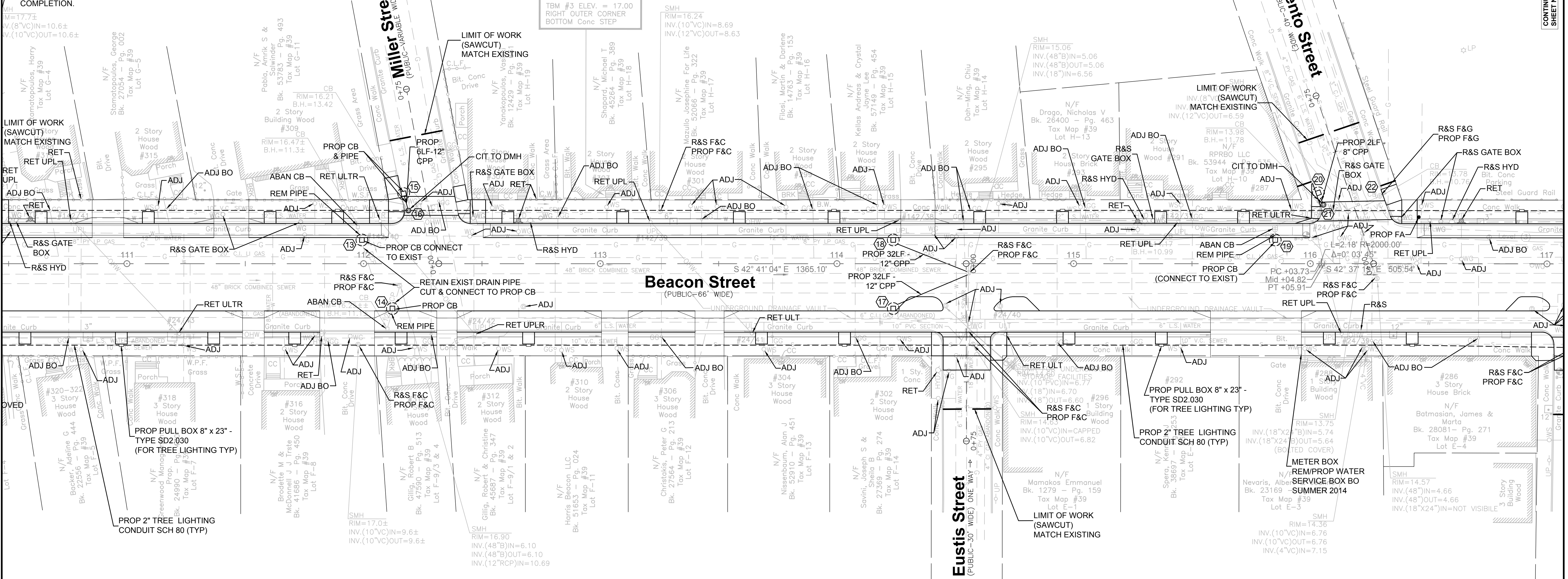
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	96	201
PROJECT FILE NO.		607209	

UTILITY PLANS

CONTINUED ON SHEET NO. 95

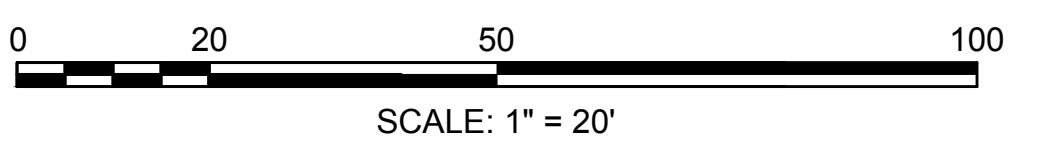
CONTINUED ON SHEET NO. 97

PROP WORK ON STANFORD TERRACE TO BE COMPLETED UPON PROJECT COMPLETION.



DRAINAGE STRUCTURE DATA					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
13	CB	111+99.29 11L	16.58	--	EXIST
14	CB	112+12.19 20R	16.35	--	EXIST
15	CB	112+15.99 29L	16.93	--	13.93
16	CIT TO DMH	112+19.14 22L	16.52	13.80	13.42 (EXIST)
17	CB	114+23.77 20R	14.93	--	11.93
18	CB	114+23.77 11L	15.12	--	12.12
19	CB	115+85.17 11L	14.11	--	EXIST
20	CB	116+02.90 28L	13.85	--	10.85
21	CIT TO DMH	116+05.51 25L	14.00	10.75	10.75
22	EXIST CB	116+29.34 29L	13.80	--	10.76 (EXIST)

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY. ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



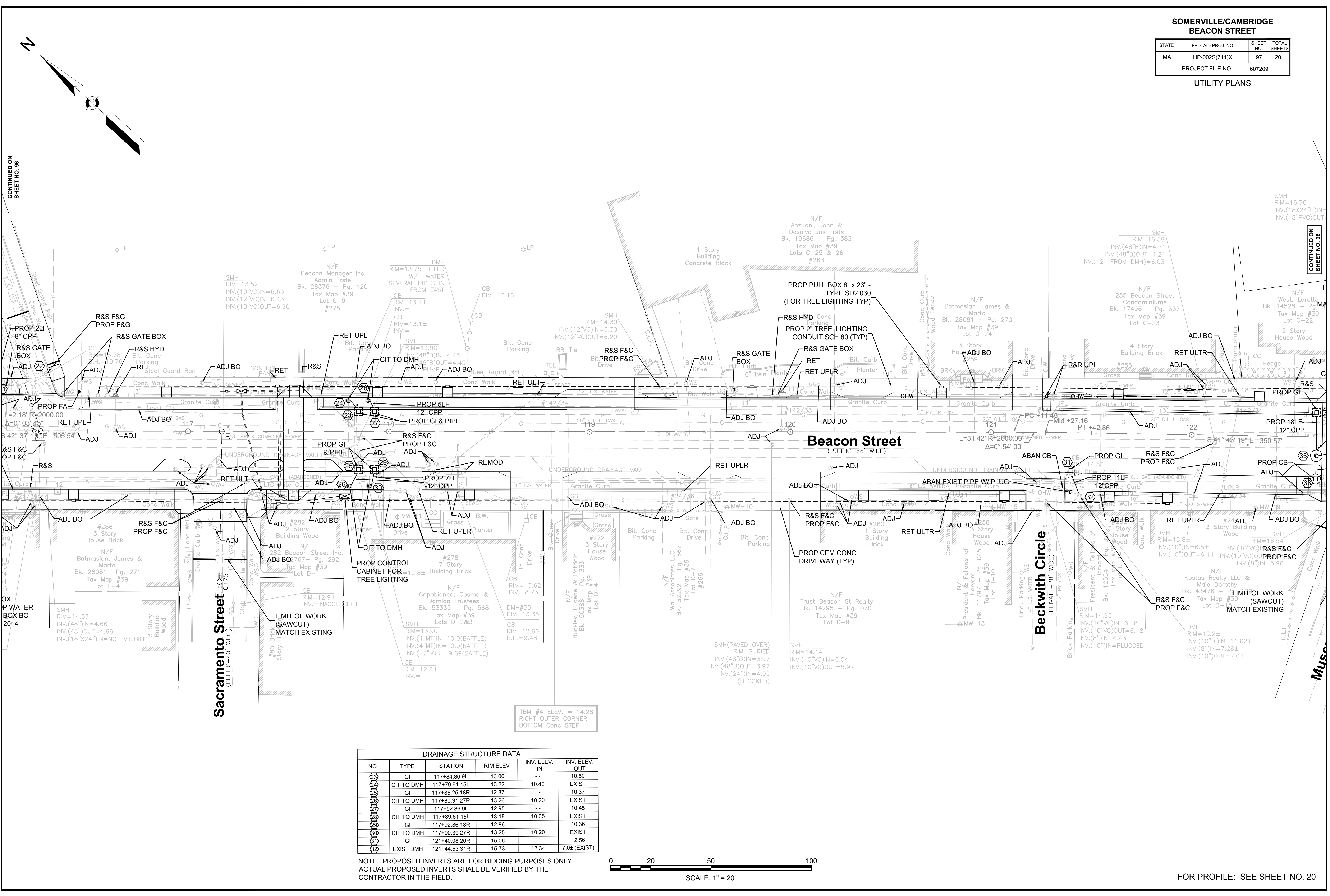
FOR PROFILE: SEE SHEET NO. 19

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	97	201

PROJECT FILE NO. 607209

UTILITY PLANS



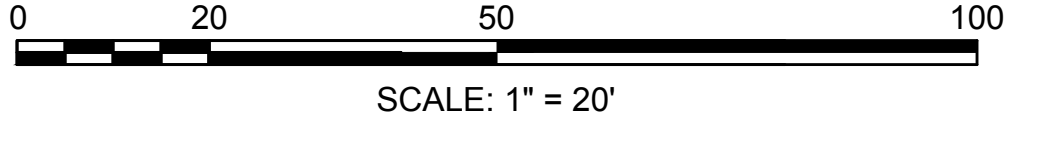
CONTINUED ON SHEET NO. 96

CONTINUED ON SHEET NO. 98

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
23	GI	117+84.86 9L	13.00	--	10.50
24	CIT TO DMH	117+79.91 15L	13.22	10.40	EXIST
25	GI	117+85.25 18R	12.87	--	10.37
26	CIT TO DMH	117+80.31 27R	13.26	10.20	EXIST
27	GI	117+92.86 9L	12.95	--	10.45
28	CIT TO DMH	117+89.61 15L	13.18	10.35	EXIST
29	GI	117+92.86 18R	12.86	--	10.36
30	CIT TO DMH	117+90.39 27R	13.25	10.20	EXIST
31	GI	121+40.08 20R	15.06	--	12.56
32	EXIST DMH	121+44.53 31R	15.73	12.34	7.0± (EXIST)

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 20

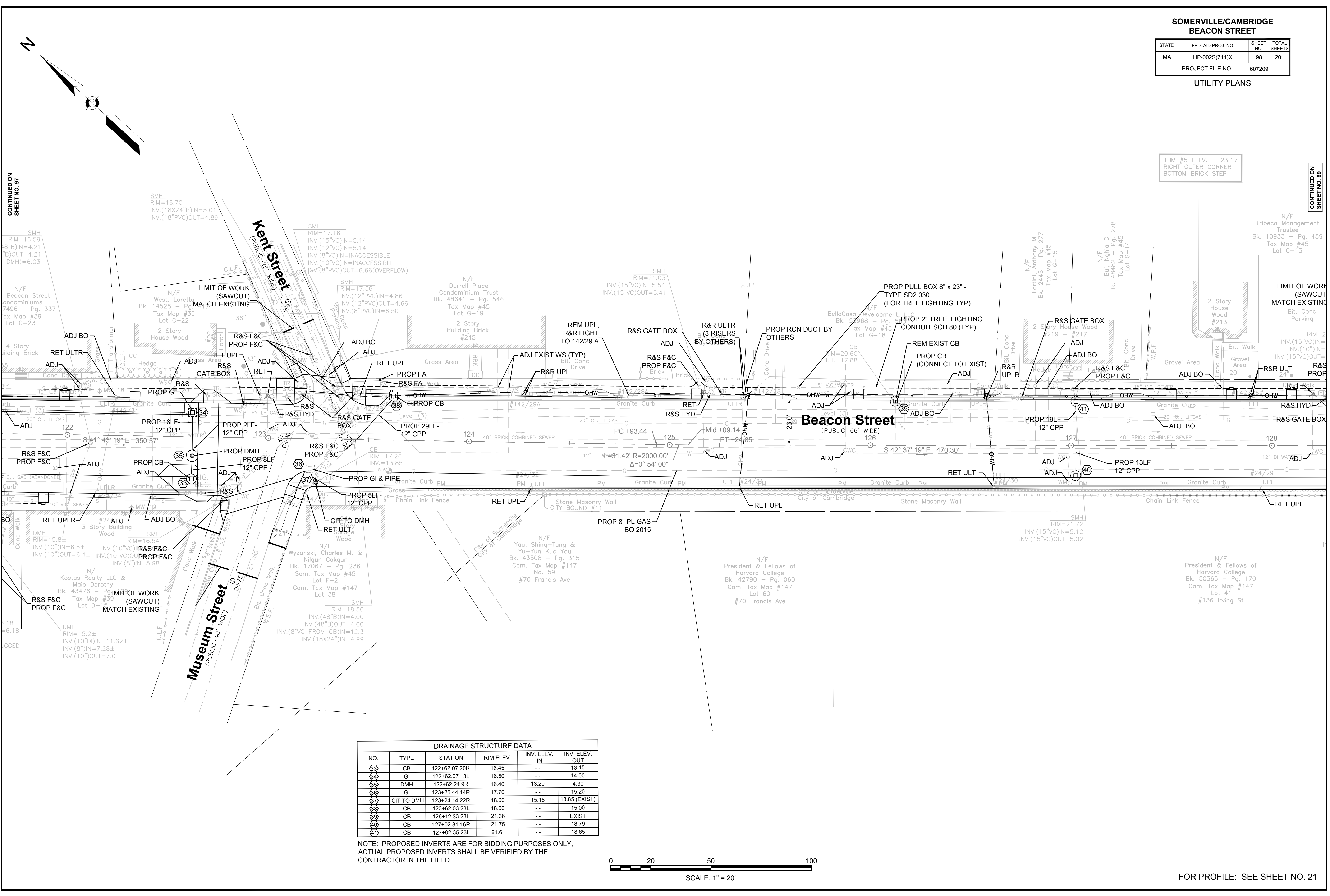
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	98	201
PROJECT FILE NO.		607209	

UTILITY PLANS

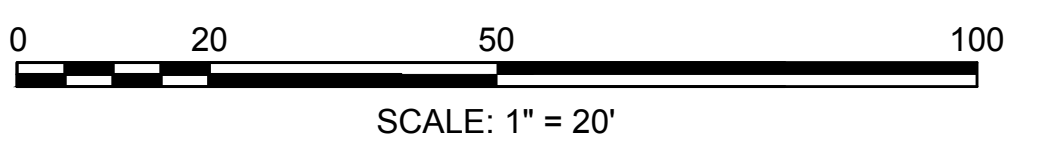
CONTINUED ON
SHEET NO. 97

CONTINUED ON
SHEET NO. 99



DRAINAGE STRUCTURE DATA					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
(33)	CB	122+62.07 20R	16.45	--	13.45
(34)	GI	122+62.07 13L	16.50	--	14.00
(35)	DMH	122+62.24 9R	16.40	13.20	4.30
(36)	GI	123+25.44 14R	17.70	--	15.20
(37)	CIT TO DMH	123+24.14 22R	18.00	15.18	13.85 (EXIST)
(38)	CB	123+62.03 23L	18.00	--	15.00
(39)	CB	126+12.33 23L	21.36	--	EXIST
(40)	CB	127+02.31 16R	21.75	--	18.79
(41)	CB	127+02.35 23L	21.61	--	18.65

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



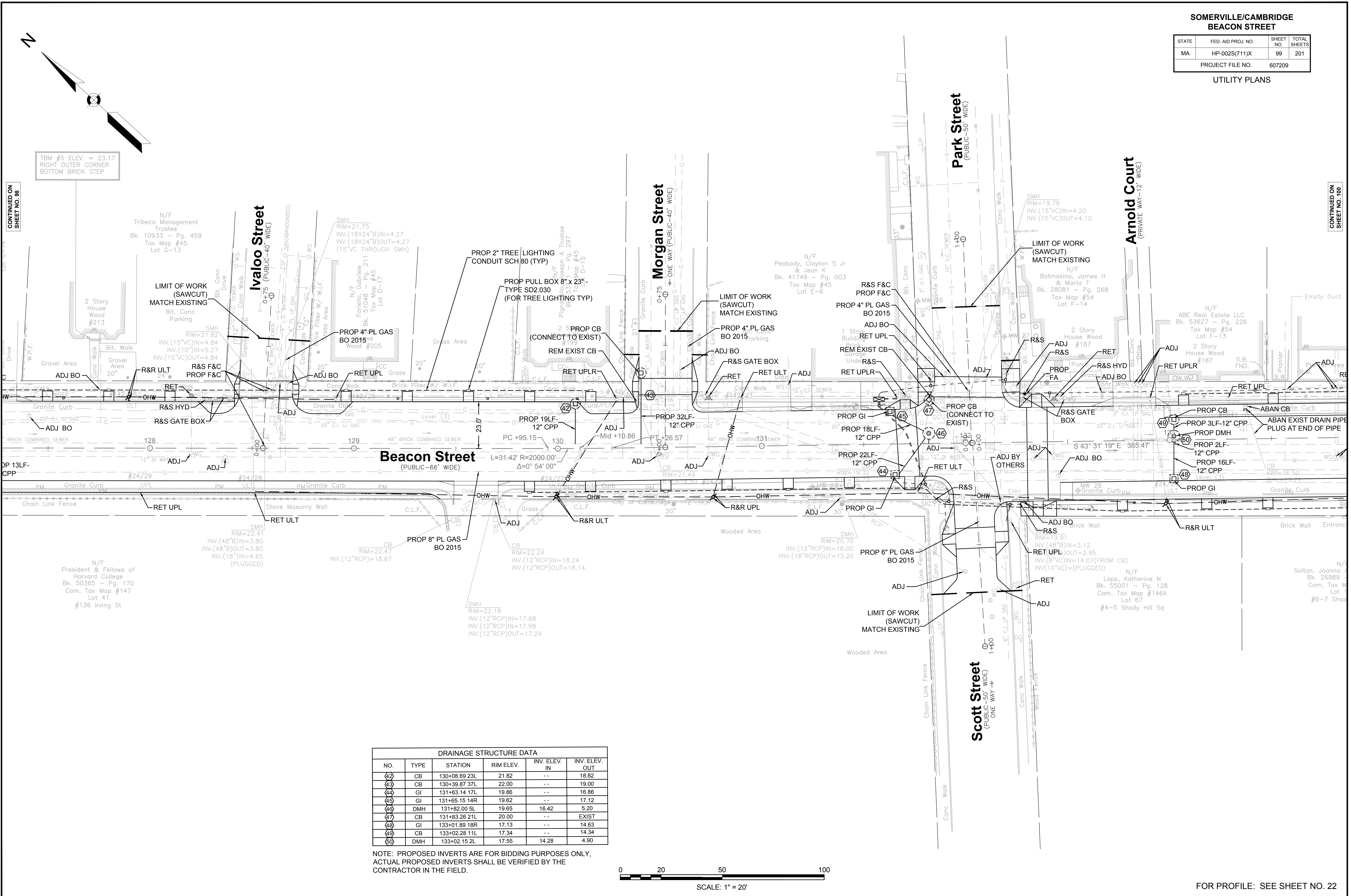
FOR PROFILE: SEE SHEET NO. 21

SOMERVILLE/CAMBRIDGE

BEACON STREET

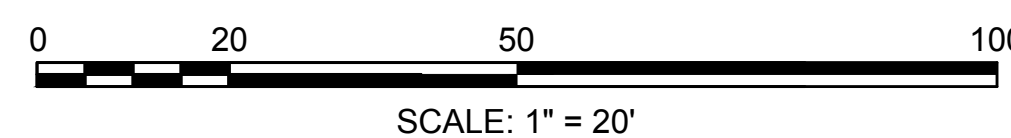
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	99	201
PROJECT FILE NO.		607209	

UTILITY PLANS



DRAINAGE STRUCTURE DATA					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
42	CB	130+08.69 23L	21.82	--	18.82
43	CB	130+39.87 37L	22.00	--	19.00
44	GI	131+63.14 17L	19.86	--	16.86
45	GI	131+65.15 14R	19.62	--	17.12
46	DMH	131+82.00 5L	19.65	16.42	5.20
47	CB	131+83.26 21L	20.00	--	EXIST
48	GI	133+01.89 18R	17.13	--	14.63
49	CB	133+02.28 11L	17.34	--	14.34
50	DMH	133+02.15 2L	17.55	14.28	4.90

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 22

CONTINUED ON SHEET NO. 98

CONTINUED ON SHEET NO. 100

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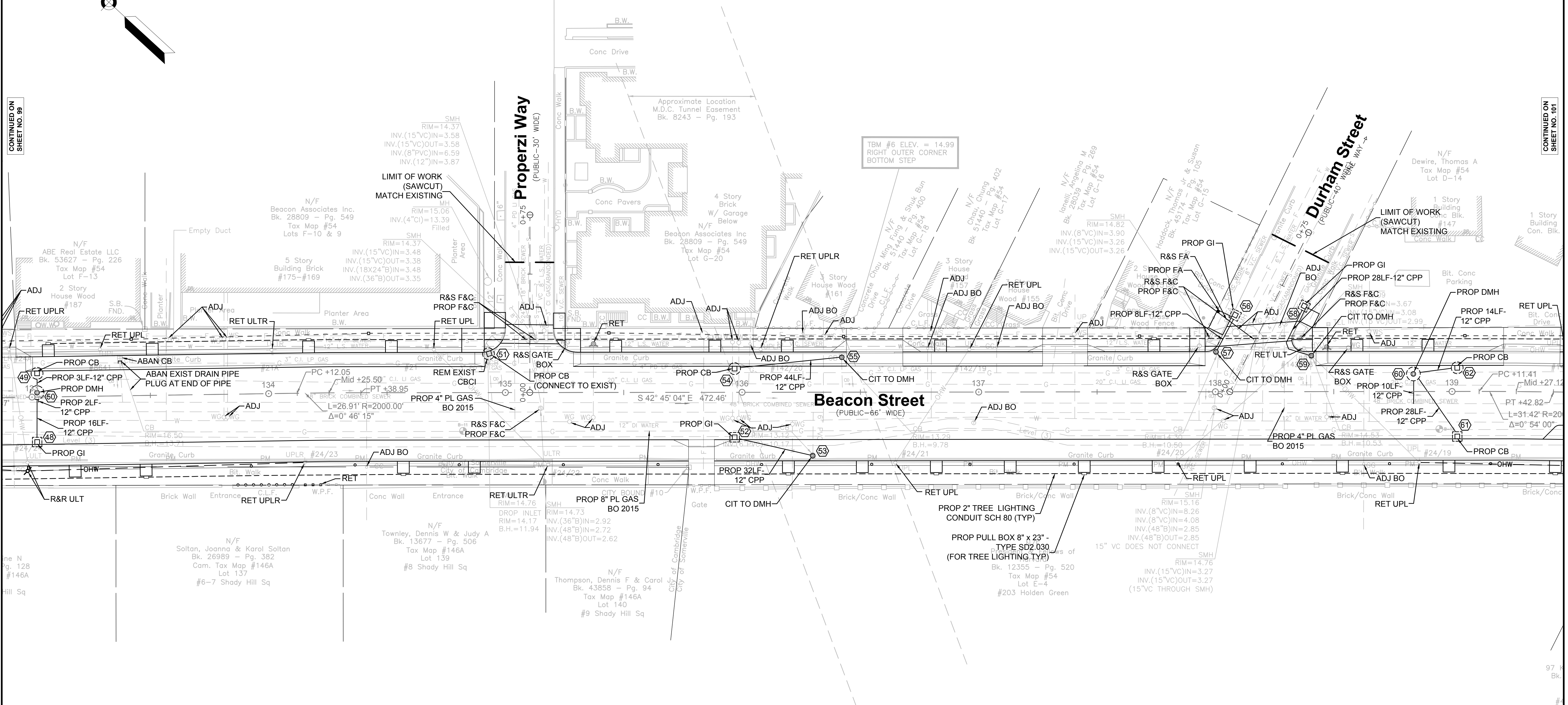
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	100	201
PROJECT FILE NO.		607209	

UTILITY PLANS

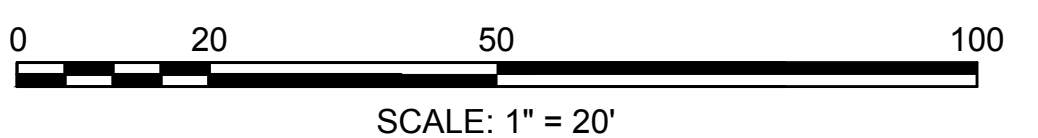
CONTINUED ON
SHEET NO. 99

CONTINUED ON
SHEET NO. 101



DRAINAGE STRUCTURE DATA					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
51	CB	134+92.88 17L	14.19	--	EXIST
52	GI	135+96.85 18R	13.14	--	10.64
53	CIT TO DMH	136+29.83 27R	13.68	10.17	10.17 (EXIST)
54	CB	135+96.85 11L	13.30	--	10.30
55	CIT TO DMH	136+42.15 15L	13.65	9.78	9.78 (EXIST)
56	GI	138+09.30 32L	14.20	--	11.70
57	CIT TO DMH	138+00.29 17L	14.35	11.50	10.50
58	GI	138+36.64 37L	14.40	--	11.90
59	CIT TO DMH	138+40.56 15L	14.68	11.96	10.53
60	DMH	138+83.66 7L	15.00	10.25	10.15
61	GI	139+02.17 20R	14.96	--	12.46
62	CB	139+02.17 11L	15.13	--	12.13

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 23 & 24

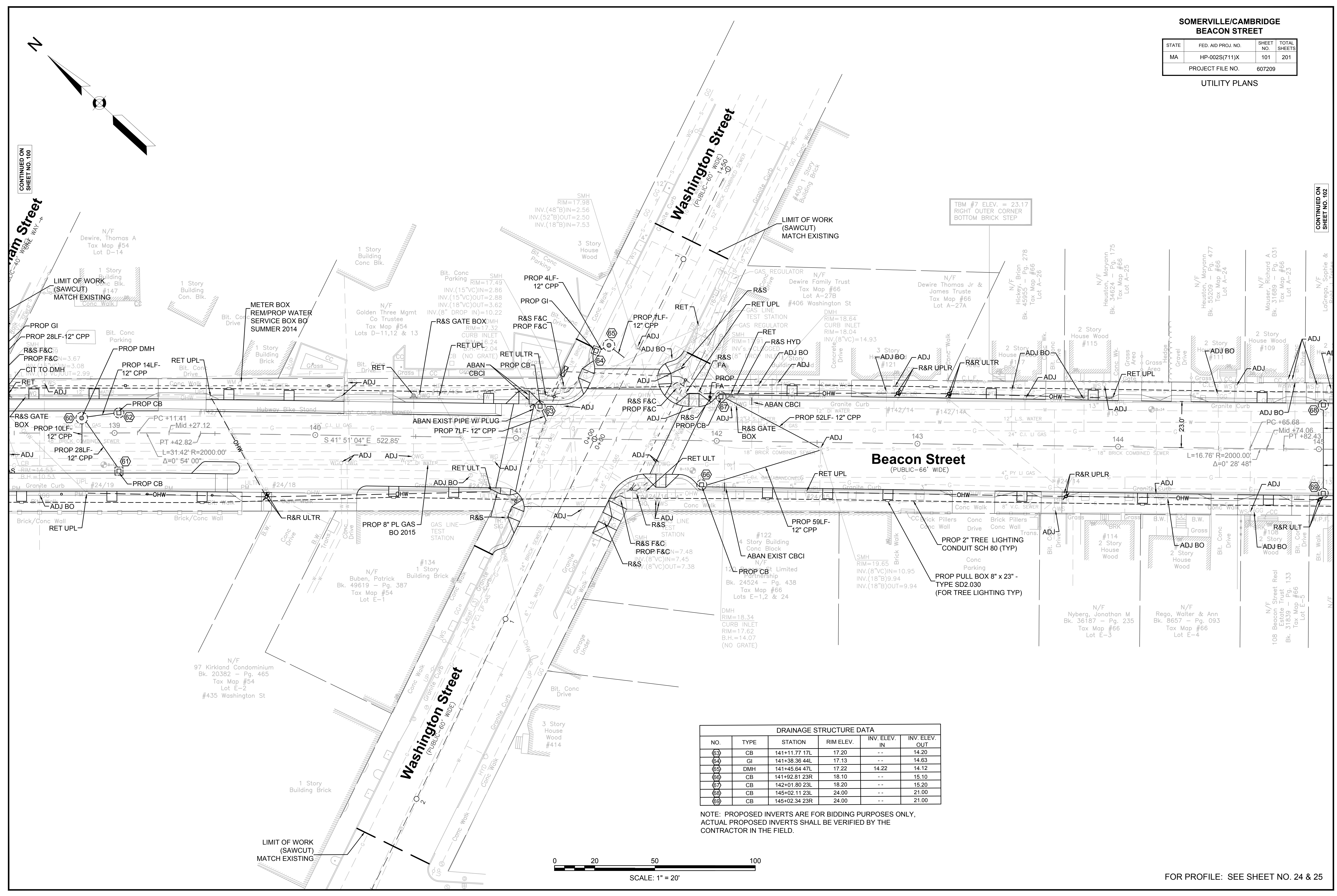
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	101	201

PROJECT FILE NO. 607209
UTILITY PLANS

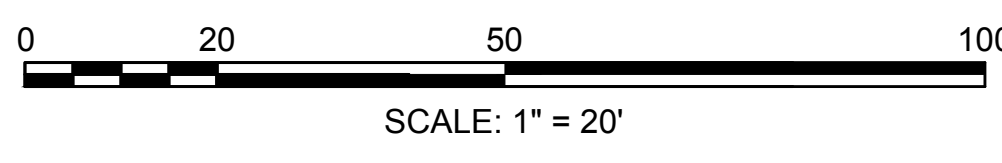
CONTINUED ON
SHEET NO. 100

CONTINUED ON
SHEET NO. 102



DRAINAGE STRUCTURE DATA					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
63	CB	141+11.77 17L	17.20	--	14.20
64	GI	141+38.36 44L	17.13	--	14.63
65	DMH	141+45.64 47L	17.22	14.22	14.12
66	CB	141+92.81 23R	18.10	--	15.10
67	CB	142+01.80 23L	18.20	--	15.20
68	CB	145+02.11 23L	24.00	--	21.00
69	CB	145+02.34 23R	24.00	--	21.00

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY, ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



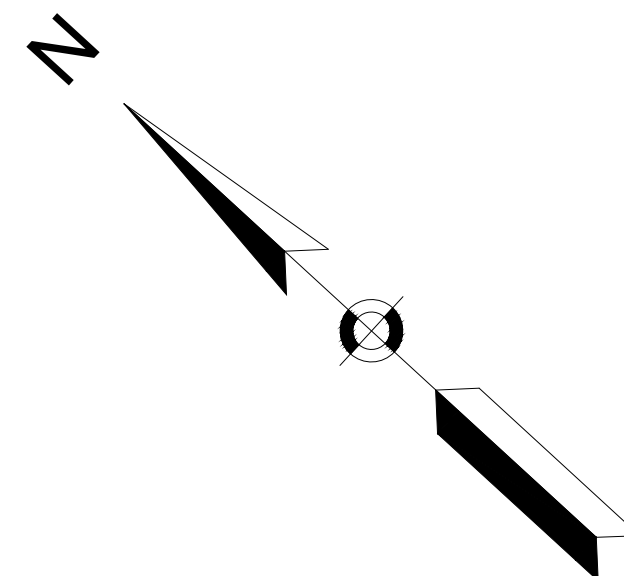
FOR PROFILE: SEE SHEET NO. 24 & 25

SOMERVILLE/CAMBRIDGE

BEACON STREET

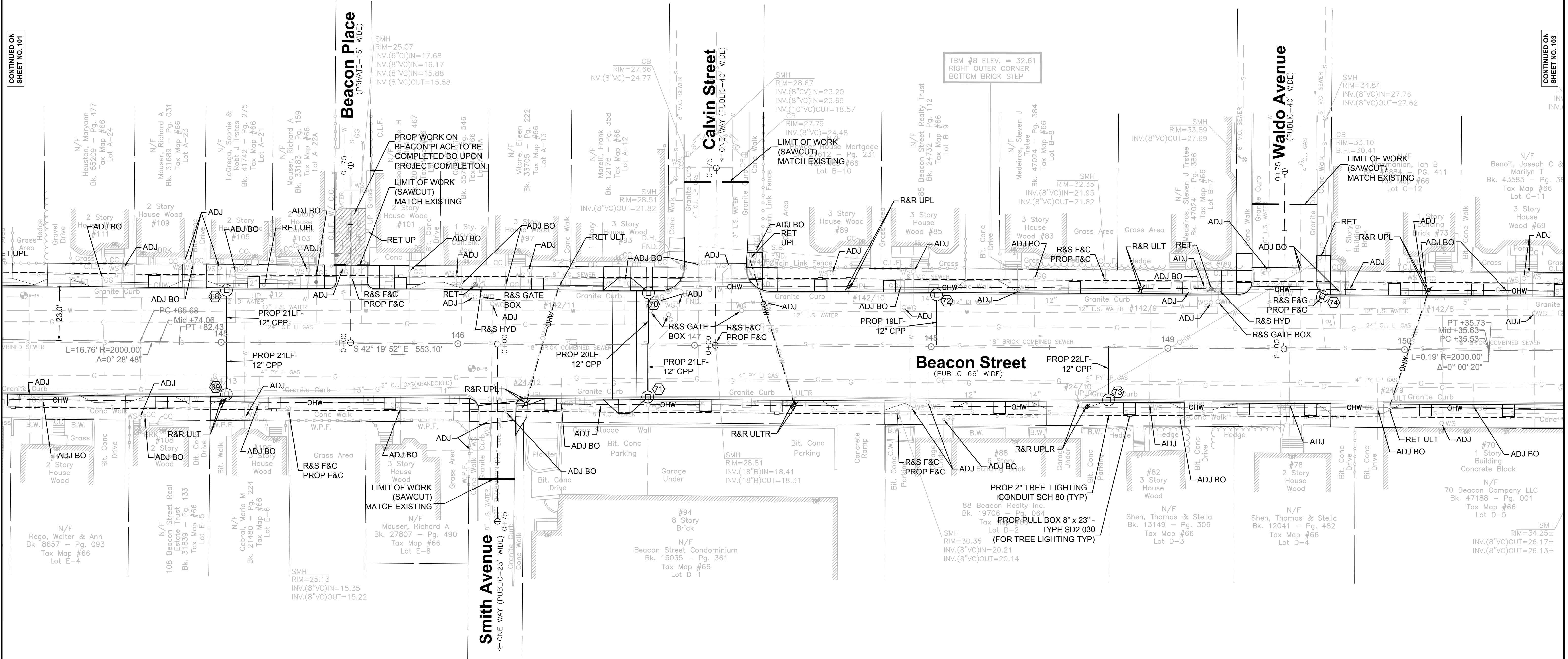
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	102	201
PROJECT FILE NO.		607209	

UTILITY PLANS



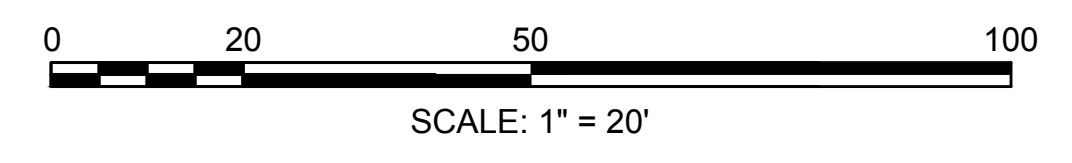
CONTINUED ON SHEET NO. 101

CONTINUED ON SHEET NO. 103



NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
(70)	CB	146+80.40 23L	27.60	--	24.60
(71)	CB	146+80.40 23R	27.60	--	24.60
(72)	CB	148+02.11 23L	30.10	--	27.10
(73)	CB	148+75.00 23R	31.60	--	28.60
(74)	CB	149+65.57 23L	33.20	--	EXIST

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY. ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 25 & 26

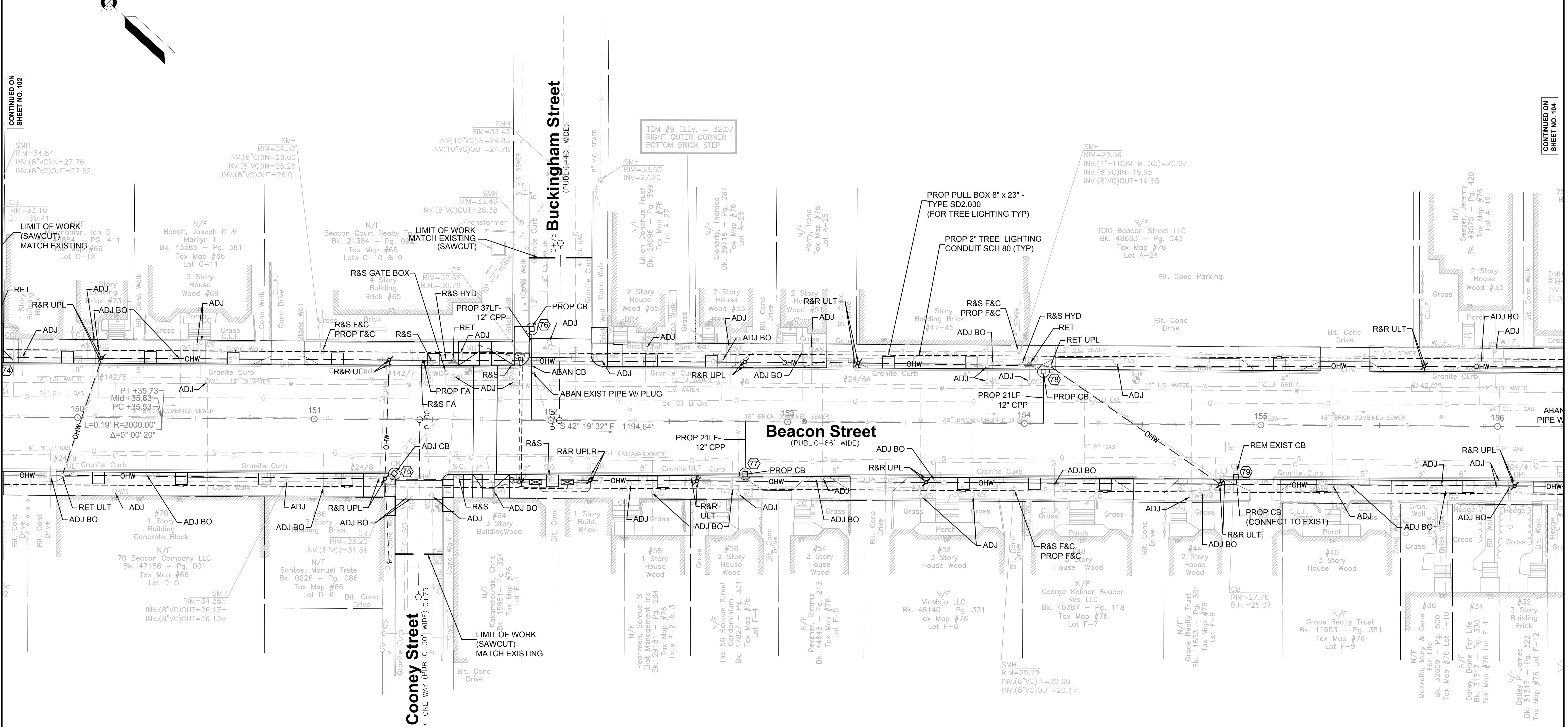
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	103	201
PROJECT FILE NO.		607209	

UTILITY PLANS

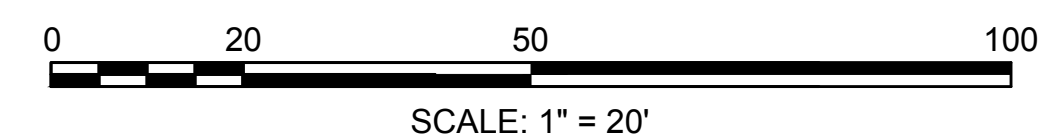
CONTINUED ON
SHEET NO. 102

CONTINUED ON
SHEET NO. 104



NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
79	ADJ CB	151+34.63 22R	33.20	..	EXIST
79	CB	151+91.72 38L	32.78	..	29.78
77	CB	152+82.24 23R	31.10	..	28.10
78	CB	154+05.00 23L	28.78	..	25.78
79	CB	154+89.55 21R	27.16	..	EXIST

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY. ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



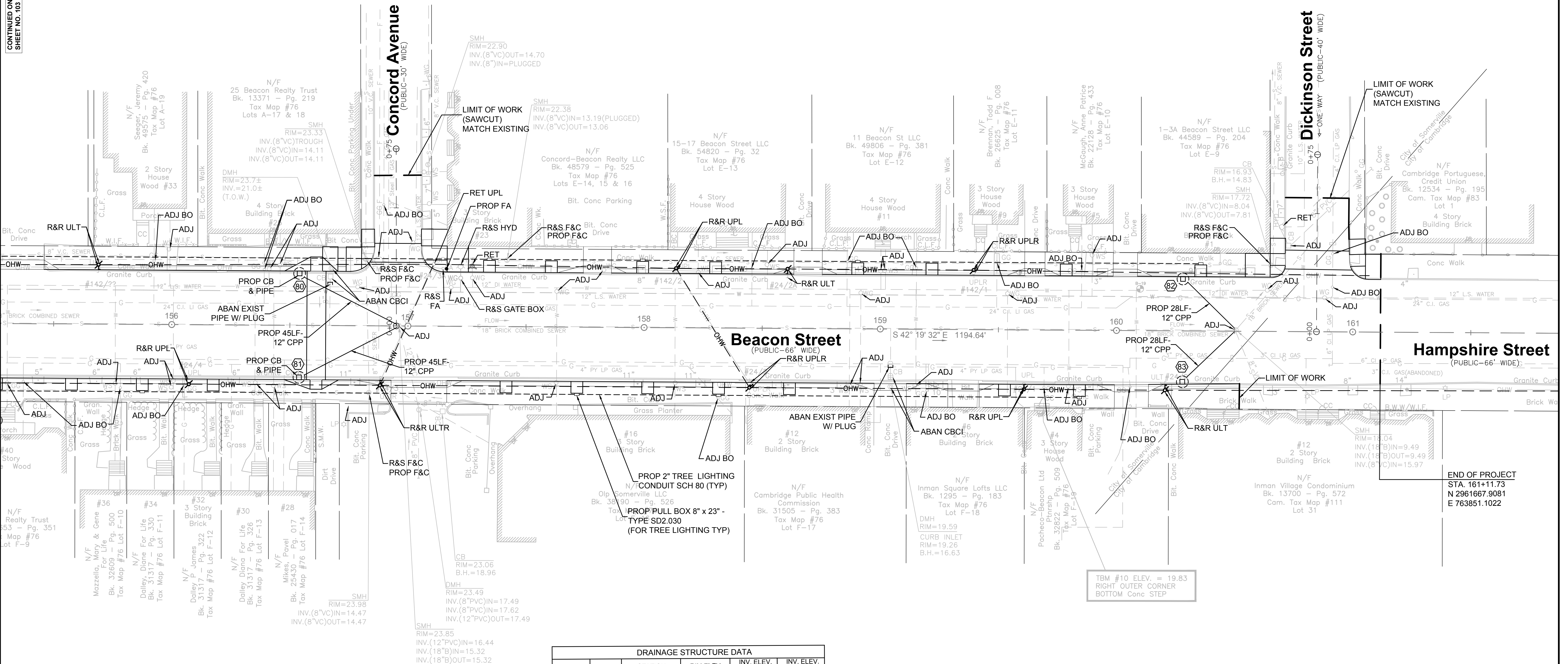
FOR PROFILE: SEE SHEET NO. 26 & 27

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	104	201
PROJECT FILE NO.		607209	

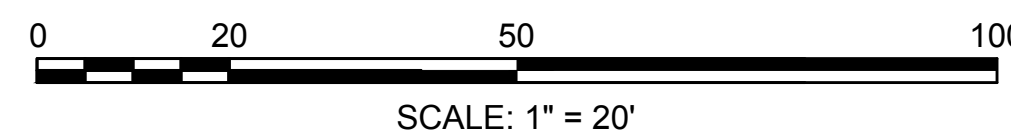
UTILITY PLANS

CONTINUED ON
SHEET NO. 103



NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
80	CB	156+54.00 23L	23.80	--	20.80
81	CB	156+54.00 23R	24.30	--	21.30
82	CB	160+28.00 23L	18.00	--	15.00
83	CB	160.28.00 22R	18.10	--	15.10

NOTE: PROPOSED INVERTS ARE FOR BIDDING PURPOSES ONLY. ACTUAL PROPOSED INVERTS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



FOR PROFILE: SEE SHEET NO. 27 & 28

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	44	201
PROJECT FILE NO.			607209

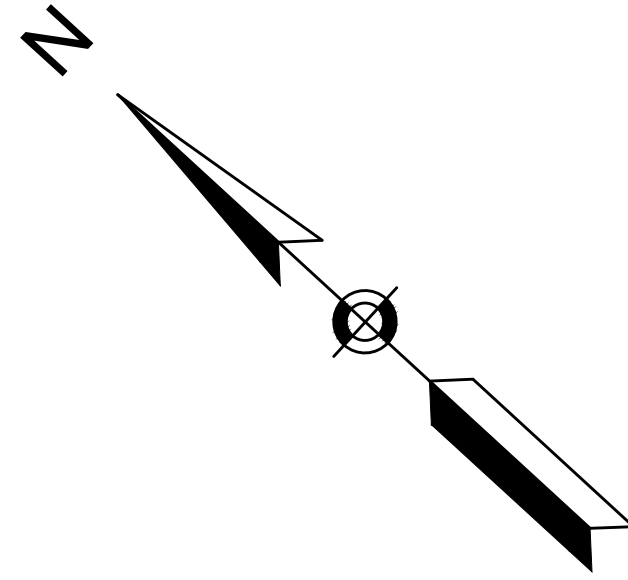
CURB TIE PLANS

ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	TANGENT (FT)	
14	3.00	2.39	45°11'35.59"	1.26
15	5.00	7.34	84°07'58.51"	4.51
16	1.00	1.67	95°52'01.49"	1.11
17	3.00	4.47	85°21'18.64"	2.77
18	3.00	4.98	95°04'35.23"	3.28
19	1.00	1.57	90°00'00.00"	1.00
20	8.00	9.02	64°37'23.00"	5.06
21	3.00	2.36	45°03'46.00"	1.25
22	3.00	5.08	96°57'08.25"	3.39
23	3.00	4.17	79°35'09.36"	2.50
24	3.00	2.39	45°41'35.59"	1.26
25	2.00	3.14	90°00'00.00"	2.00

ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	TANGENT (FT)	
26	2.00	3.14	90°00'00.00"	2.00
27	2.00	3.14	90°00'00.00"	2.00
28	2.00	3.14	90°00'00.00"	2.00
29	5.00	7.37	84°26'31.05"	4.54
30	1.00	1.67	95°33'28.95"	1.10
31	3.00	4.42	84°26'31.05"	2.72
32	5.00	7.85	90°00'00.00"	5.00
33	1.00	1.57	90°00'00.00"	1.00
34	3.00	2.36	45°03'46.00"	1.25
35	3.00	5.00	95°33'28.95"	3.31
36	3.00	5.10	97°21'27.28"	3.41
37	3.00	4.28	81°48'29.93"	2.60

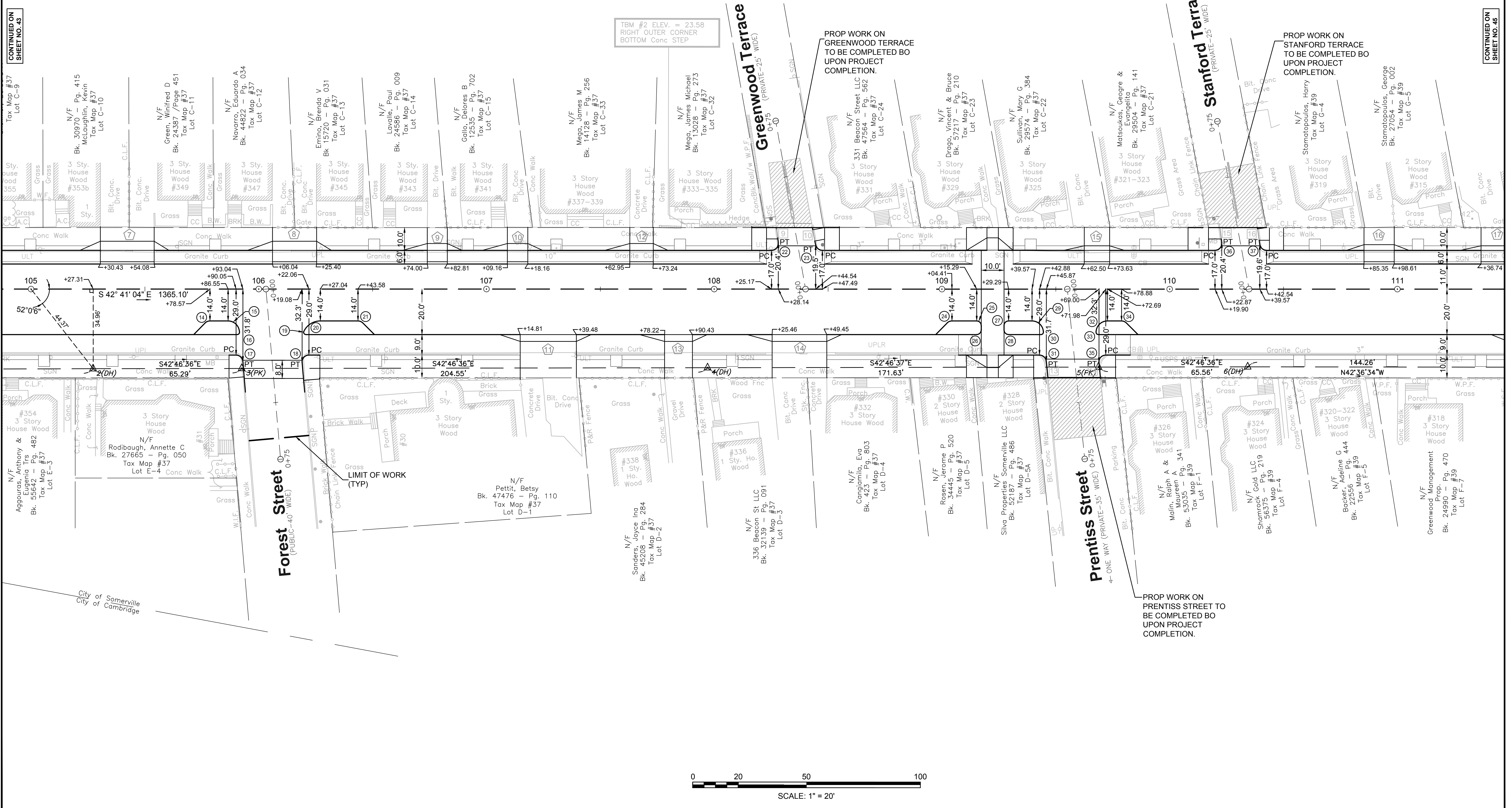
SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
2	28.06	2965762.073	760053.514	DH SET
3	26.21	2965714.152	760097.853	PK SET
4	22.18	2965564.012	760236.771	DH SET
5	18.34	2965438.033	760353.334	PK SET
6	18.18	2965389.914	760397.857	DH SET

CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 102+38.62	1365.10' S42°41'04"E	2965997.991	759883.495
PC STA 116+03.73		2964994.506	760808.982



CONTINUED ON
SHEET NO. 43

CONTINUED ON
SHEET NO. 45



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

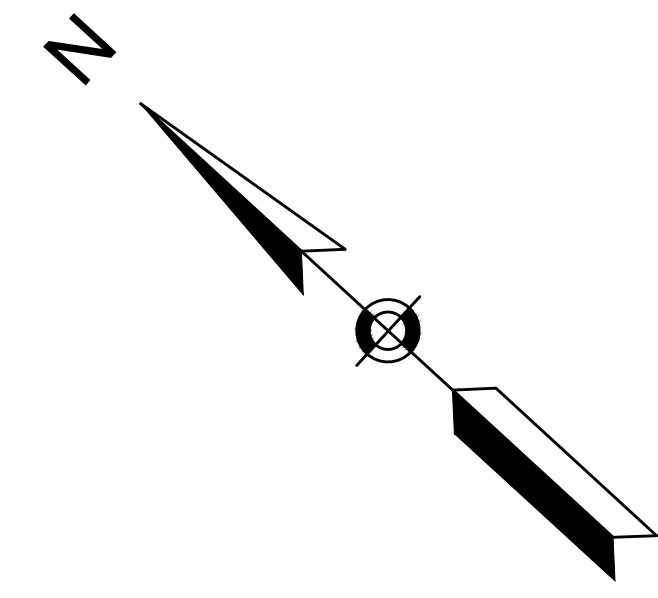
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	45	201
PROJECT FILE NO. 607209			

CURB TIE PLANS

ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
38	5.00	7.80	101°47'06.10"	6.15
39	5.00	6.89	78°57'59.48"	4.12
40	3.00	2.39	45°41'35.59"	1.26
41	5.00	7.85	90°00'00.00"	5.00
42	1.00	1.57	90°00'00.00"	1.00
43	3.00	4.71	90°00'00.00"	3.00
44	3.00	4.71	90°00'00.00"	3.00
45	1.00	2.16	123°44'56.36"	1.87
46	10.00	9.82	56°15'03.64"	5.35
47	3.00	2.36	45°03'46.00"	1.25
48	5.00	9.51	108°57'58.28"	7.01
49	5.00	6.18	70°46'45.91"	3.55

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
7	17.19	2965283.743	760495.518	DH SET
8	14.40	2965087.062	760676.432	PK SET
9	13.78	2964899.808	760845.936	DH SET

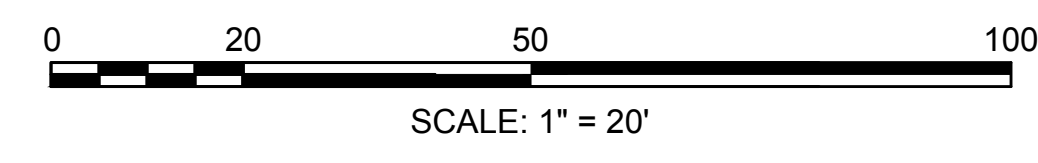
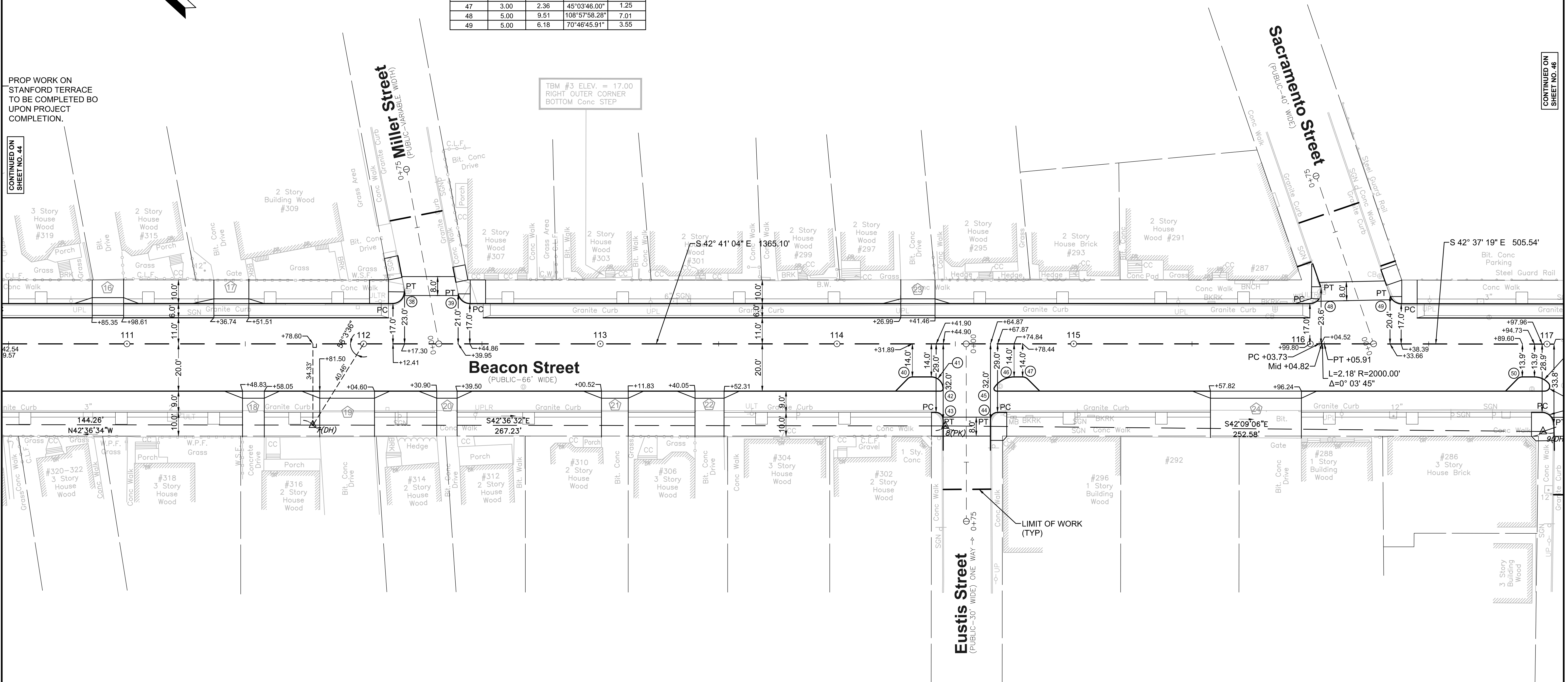
CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 102+38.62	1365.10' S42°41'04"E	2965997.991	759883.495
PC STA 116+03.73	R=2000.00' Δ=0°03'45" L=2.18' T=1.09'	2964994.506	760808.982
PT STA 116+05.91		2964992.901	760810.461
PC STA 121+11.45	505.54' S42°37'19"E	2964620.908	761152.790



PROP WORK ON STANFORD TERRACE TO BE COMPLETED UPON PROJECT COMPLETION.

CONTINUED ON SHEET NO. 44

CONTINUED ON SHEET NO. 46



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	47	201
PROJECT FILE NO.		607209	

CURB TIE PLANS

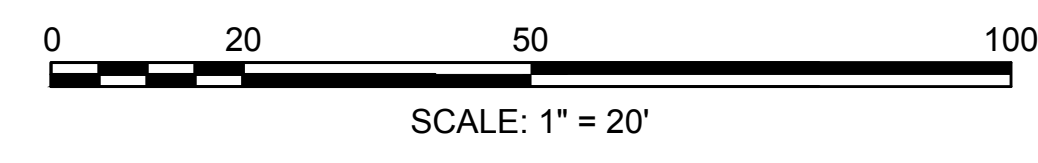
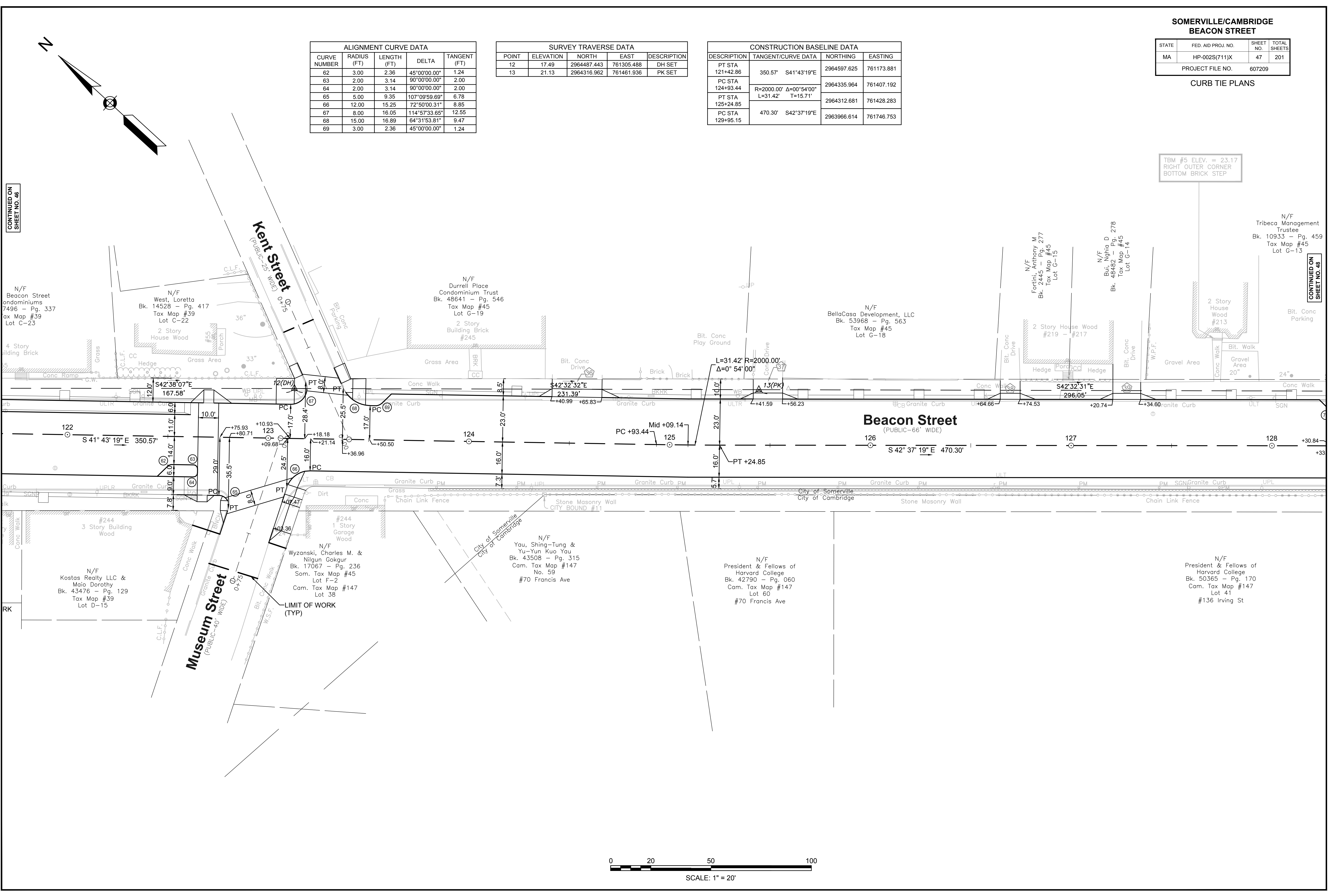
ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
62	3.00	2.36	45°00'00.00"	1.24
63	2.00	3.14	90°00'00.00"	2.00
64	2.00	3.14	90°00'00.00"	2.00
65	5.00	9.35	107°09'59.69"	6.78
66	12.00	15.25	72°50'00.31"	8.85
67	8.00	16.05	114°57'33.65"	12.55
68	15.00	16.89	64°31'53.81"	9.47
69	3.00	2.36	45°00'00.00"	1.24

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
12	17.49	2964487.443	761305.488	DH SET
13	21.13	2964316.962	761461.936	PK SET

CONSTRUCTION BASELINE DATA				
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING	
PT STA 121+42.86	350.57' S41°43'19"E	2964597.625	761173.881	
PC STA 124+93.44	R=2000.00' Δ=00°54'00" L=31.42' T=15.71'	2964335.964	761407.192	
PT STA 125+24.85		2964312.681	761428.283	
PC STA 129+95.15	470.30' S42°37'19"E	2963966.614	761746.753	

CONTINUED ON SHEET NO. 46

CONTINUED ON SHEET NO. 48



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

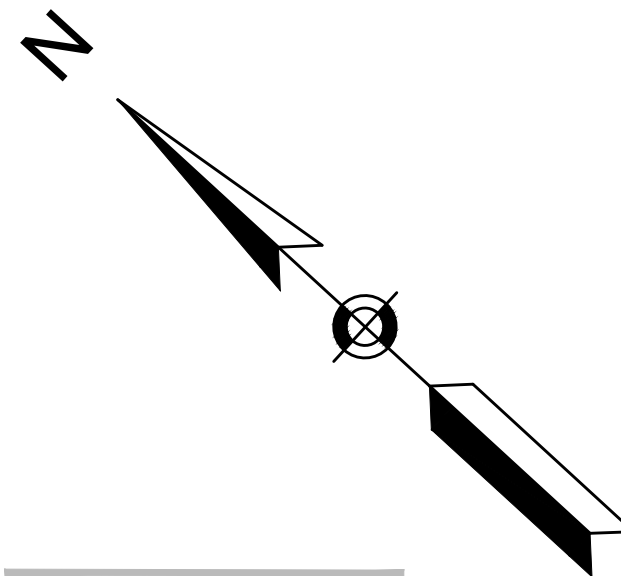
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	48	201

PROJECT FILE NO. 607209
CURB TIE PLANS

ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
70	3.00	2.35	44°56'14.00"	1.24
71	10.00	15.27	87°27'36.09"	9.57
72	10.00	16.14	92°29'47.83"	10.45
73	3.00	2.40	45°45'21.59"	1.27
74	3.00	2.40	45°50'14.00"	1.27
75	5.00	7.70	88°13'09.32"	4.85
76	5.00	7.86	90°05'48.08"	5.01
77	15.00	23.90	91°18'11.02"	15.34
78	10.00	15.60	89°23'15.12"	9.89
79	10.00	15.39	88°11'56.90"	9.69
80	3.00	2.36	45°00'00.00"	1.24
81	3.00	2.36	45°03'46.00"	1.24
82	8.00	12.82	91°48'12.36"	8.26

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
14	21.98	2964098.836	761662.106	DH SET
15	22.11	2963953.724	761797.257	DH SET
16	20.11	2963851.370	761892.586	DH SET

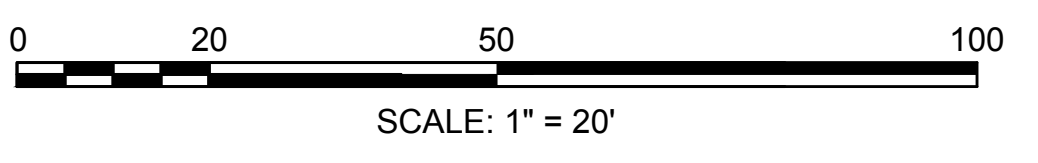
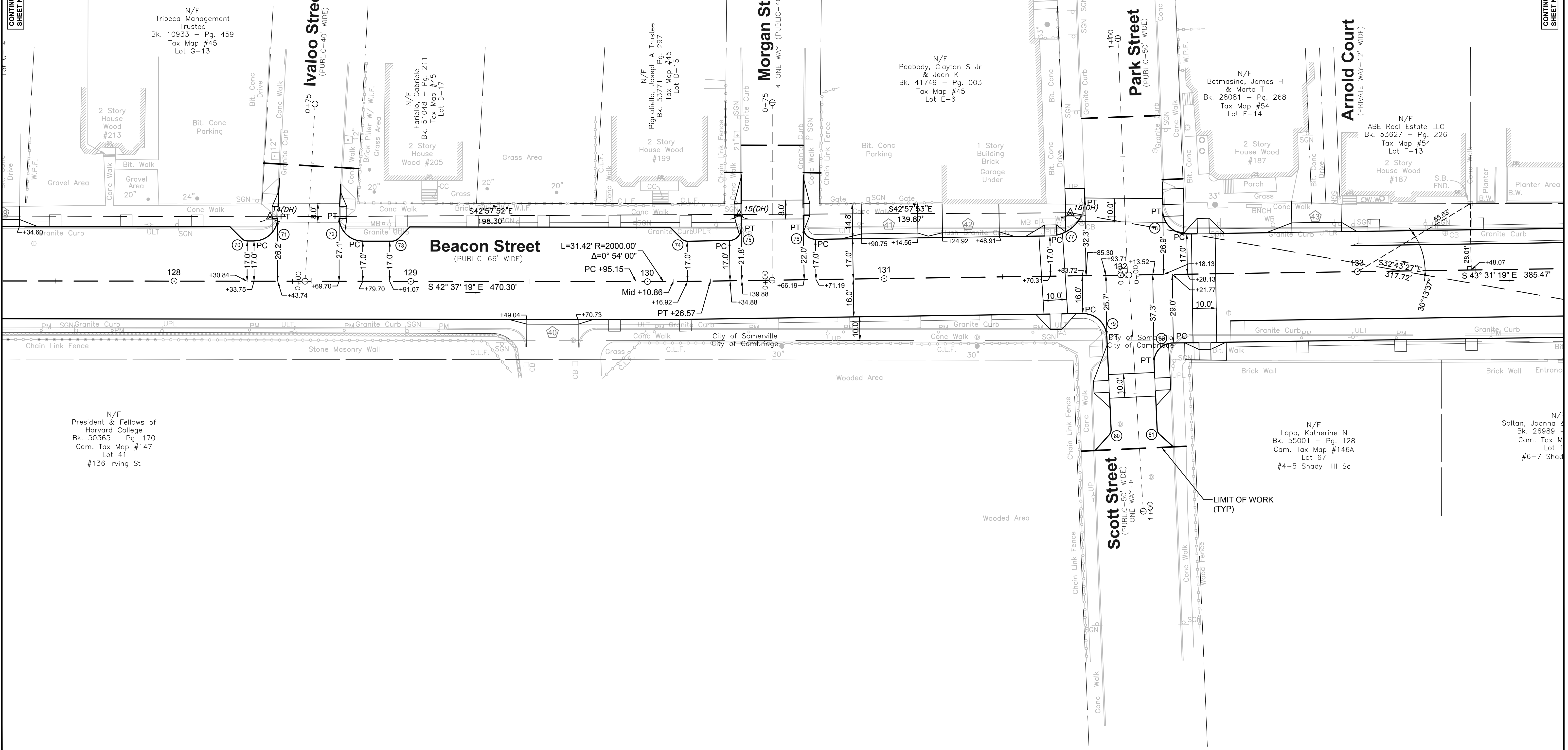
CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 125+24.85	470.30' S42°37'19"E	2964312.681	761428.283
PC STA 129+95.15	R=2000.00' Δ=0°54'00" L=31.42' T=15.71'	2963966.614	761746.753
PT STA 130+26.57		2963943.665	761768.207
PC STA 134+12.05	385.47' S43°31'19"E	2963664.154	762033.658



TBM #5 ELEV. = 23.17
RIGHT OUTER CORNER
BOTTOM BRICK STEP

CONTINUED ON
SHEET NO. 47

CONTINUED ON
SHEET NO. 49



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	49	201

PROJECT FILE NO. 607209

CURB TIE PLANS

ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
86	10.00	15.67	89°46'29.85"	9.96
87	10.00	15.74	90°11'26.73"	10.03
88	5.00	5.54	63°31'17.00"	3.10
89	5.00	10.10	115°47'05.39"	7.97

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
17	14.08	2963584.079	762064.342	PK SET
18	14.93	2963351.942	762276.544	PK SET

CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 130+26.57		2963943.665	761768.207
PC STA 134+12.05	R=2000.00' Δ=0°46'15" L=26.91' T=13.45'	2963664.154	762033.658
PT STA 134+38.95		1963644.519	762052.055
PC STA 139+11.41	R=2000.00' Δ=0°54'00" L=31.42' T=15.71'	2963297.591	762372.766
PT STA 139+42.82		2963274.355	762393.909
PC STA 144+65.68		2962884.893	762742.755

CONTINUED ON SHEET NO. 48

Arnold Court
(PRIVATE WAY-12' WIDE)

N/F
ABE Real Estate LLC
Bk. 53627 - Pg. 226
Tax Map #54
Lot F-13
2 Story House Wood #187

N/F
Beacon Associates Inc.
Bk. 28809 - Pg. 549
Tax Map #54
Lots F-10 & 9
5 Story Building Brick #175-#169

Properzi Way
(PUBLIC-30' WIDE)

Approximate Location
M.D.C. Tunnel Easement
Bk. 8243 - Pg. 193

N/F
Beacon Associates Inc.
Bk. 28809 - Pg. 549
Tax Map #54
Lot G-20
4 Story Brick W/ Garage Below

TBM #6 ELEV. = 14.99
RIGHT OUTER CORNER
BOTTOM STEP

N/F
Chau Chung
Bk. 51449 - Pg. 402
Tax Map #54
Lot G-17
3 Story House Wood #157

N/F
Iapelli, Angelina M.
Bk. 28039 - Pg. 269
Tax Map #54
Lot G-16
3 Story House Wood #155

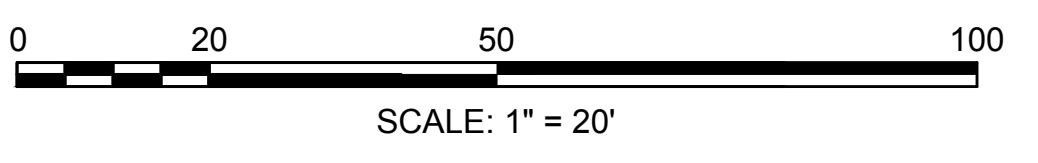
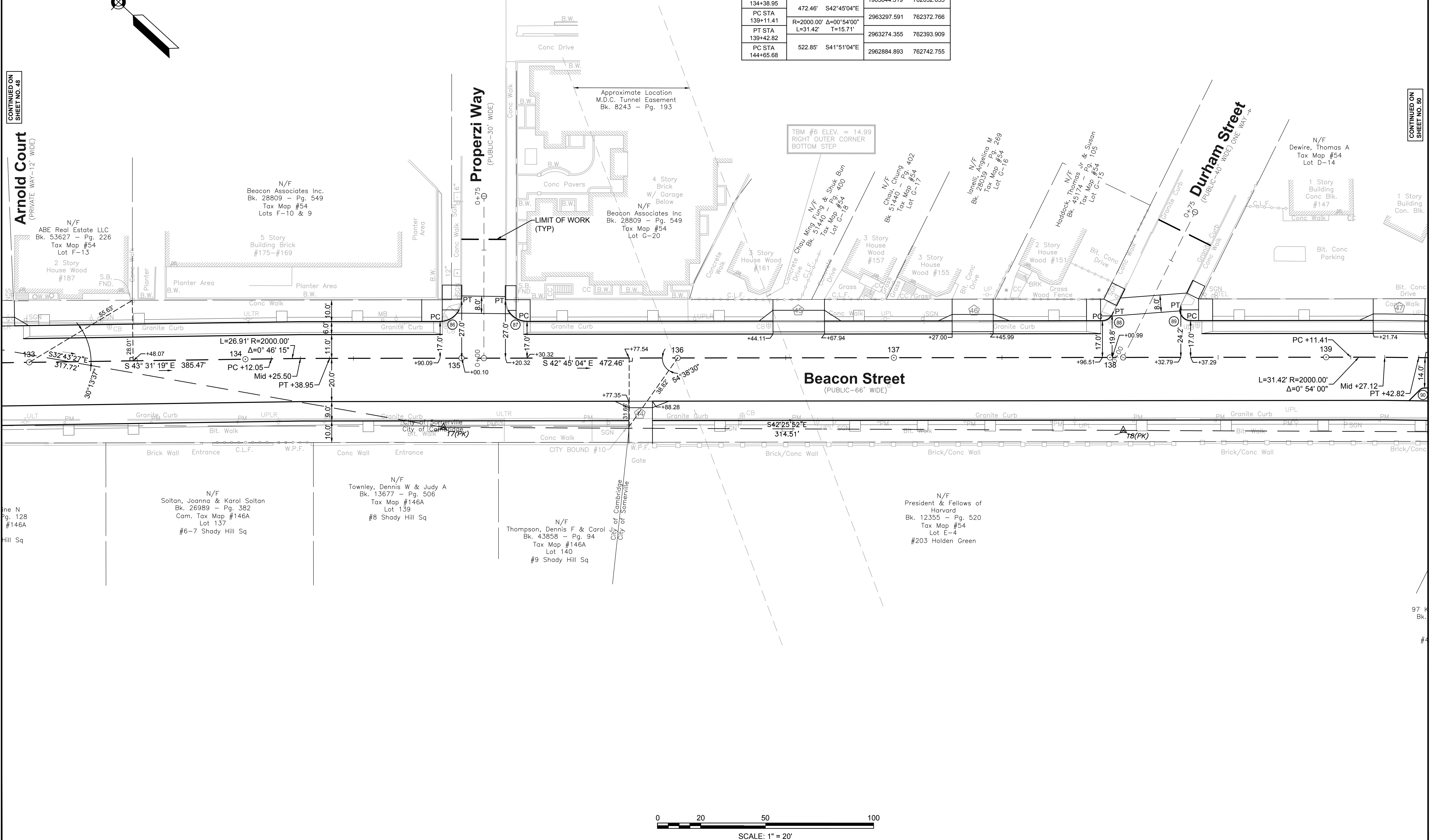
N/F
Hadlock, Thomas Jr. & Susan
Bk. 45174 - Pg. 105
Tax Map #54
Lot G-15
2 Story House Wood #151

Durham Street
(PUBLIC-40' WIDE) ONE WAY

N/F
Dewire, Thomas A.
Tax Map #54
Lot D-14
1 Story Building Conc Blk. #147

CONTINUED ON SHEET NO. 50

607209\$S&E\$INDS (CURB TIE PLANS).DWG Printed on 16-Apr-2015 12:44 PM



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	50	201
PROJECT FILE NO. 607209			

CURB FILE PLANS

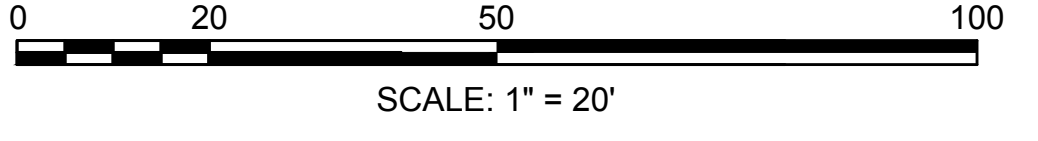
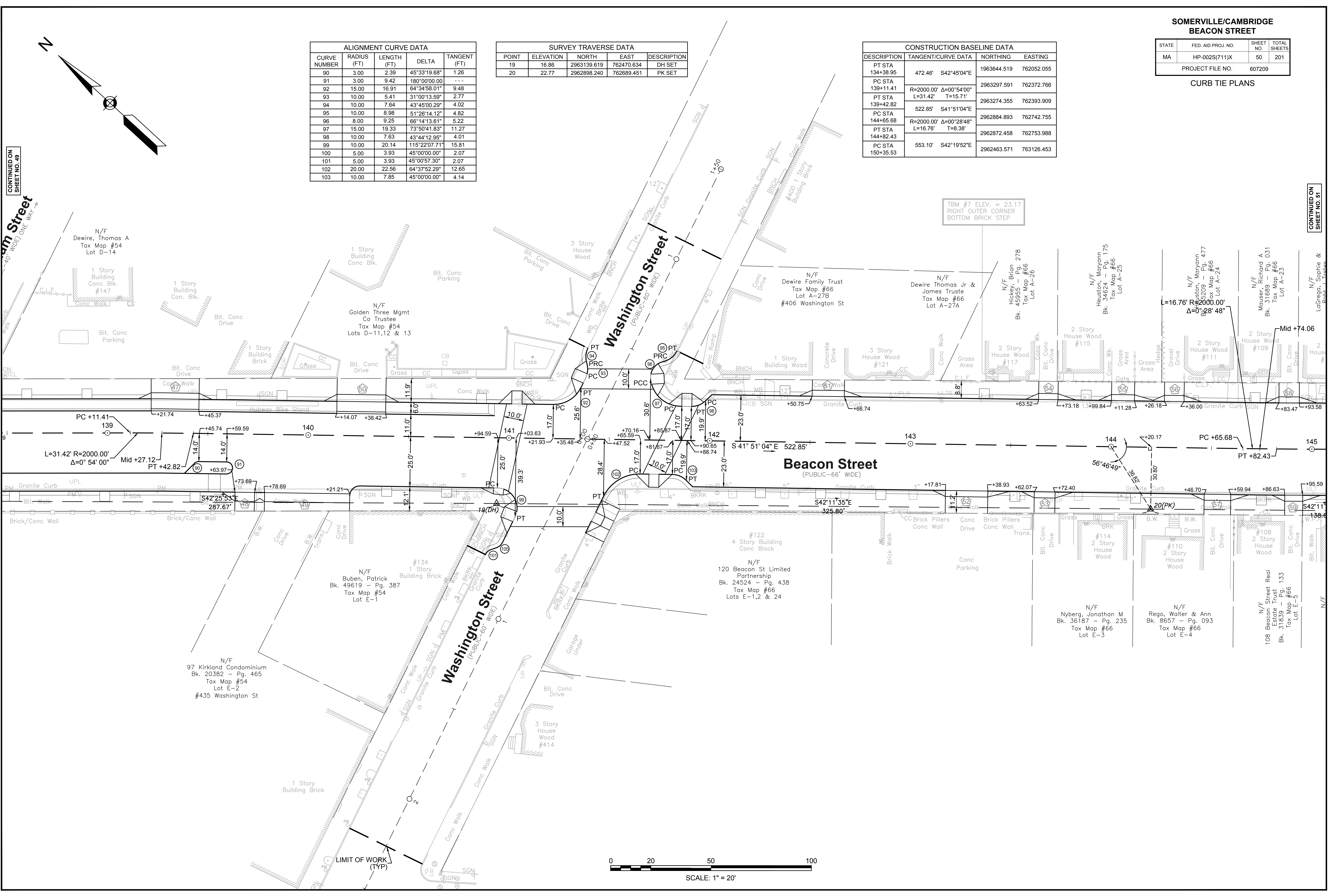
ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
90	3.00	2.39	45°33'19.68"	1.26
91	3.00	9.42	180°00'00.00"	---
92	15.00	16.91	64°34'58.01"	9.48
93	10.00	5.41	31°00'13.59"	2.77
94	10.00	7.64	43°45'00.29"	4.02
95	10.00	8.98	51°26'14.12"	4.82
96	8.00	9.25	66°14'13.61"	5.22
97	15.00	19.33	73°50'41.83"	11.27
98	10.00	7.63	43°44'12.95"	4.01
99	10.00	20.14	115°22'07.71"	15.81
100	5.00	3.93	45°00'00.00"	2.07
101	5.00	3.93	45°00'57.30"	2.07
102	20.00	22.56	64°37'52.29"	12.65
103	10.00	7.85	45°00'00.00"	4.14

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
19	16.86	2963139.619	762470.634	DH SET
20	22.77	2962898.240	762689.451	PK SET

CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 134+38.95	472.46' S42°45'04"E	1963644.519	762052.055
PC STA 139+11.41	R=2000.00' Δ=0°54'00" L=31.42' T=15.71'	2963297.591	762372.766
PT STA 139+42.82	522.85' S41°51'04"E	2963274.355	762393.909
PC STA 144+65.68	R=2000.00' Δ=0°28'48" L=16.76' T=8.38'	2962884.893	762742.755
PT STA 144+82.43		2962872.458	762753.988
PC STA 150+35.53	553.10' S42°19'52"E	2962463.571	763126.453

CONTINUED ON SHEET NO. 49

CONTINUED ON SHEET NO. 51



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	52	201

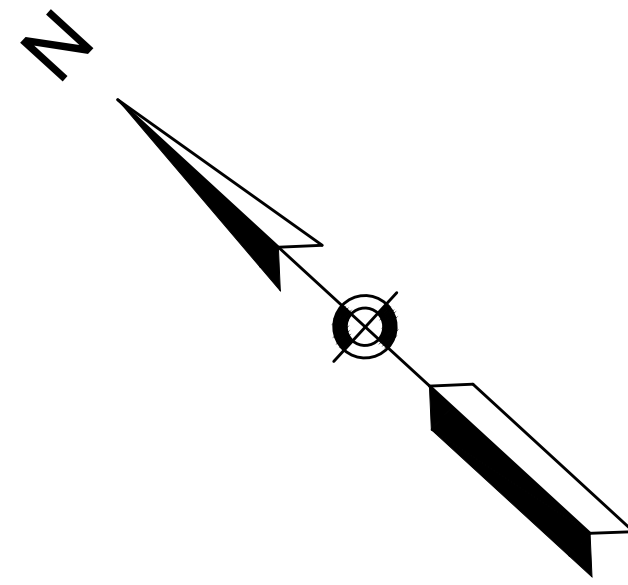
PROJECT FILE NO. 607209

CURB TIE PLANS

ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
112	3.00	4.70	89°42'11.85"	2.99
113	3.00	4.72	90°07'51.47"	3.00
114	5.00	7.90	90°29'05.42"	5.04
115	5.00	7.70	88°12'30.09"	4.85

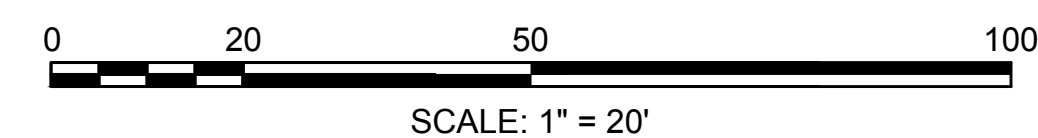
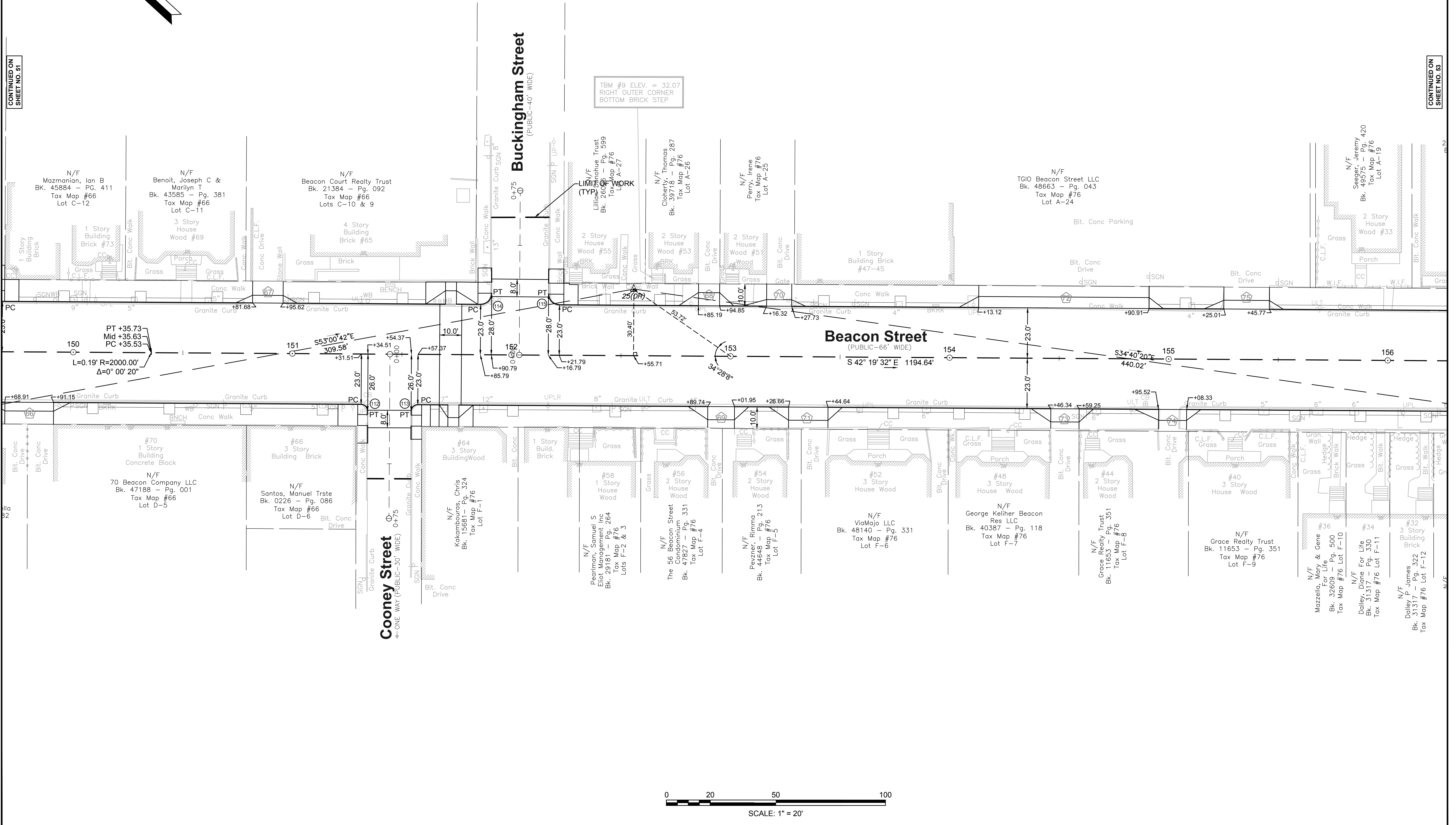
SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
25	32.09	2962321.258	763297.187	DH SET

CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 144+82.43	553.10' S42°19'52"E	2962872.458	762753.988
PC STA 150+35.53	R=2000.00' Δ=0°00'20"	2962463.571	763126.453
PT STA 150+35.73	L=0.19' T=0.10'	2962463.428	763126.584
P.O.E. STA 150+36.20	1194.64' S42°19'32"E	2961580.197	763930.985



CONTINUED ON SHEET NO. 51

CONTINUED ON SHEET NO. 53



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

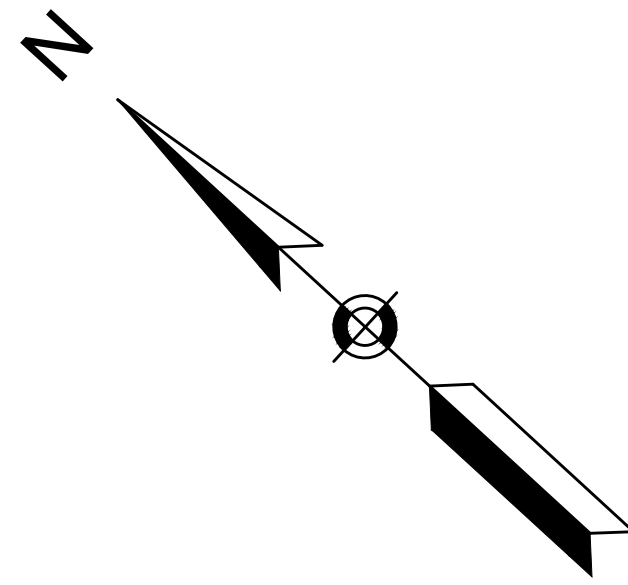
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	53	201
PROJECT FILE NO. 607209			

CURB TIE PLANS

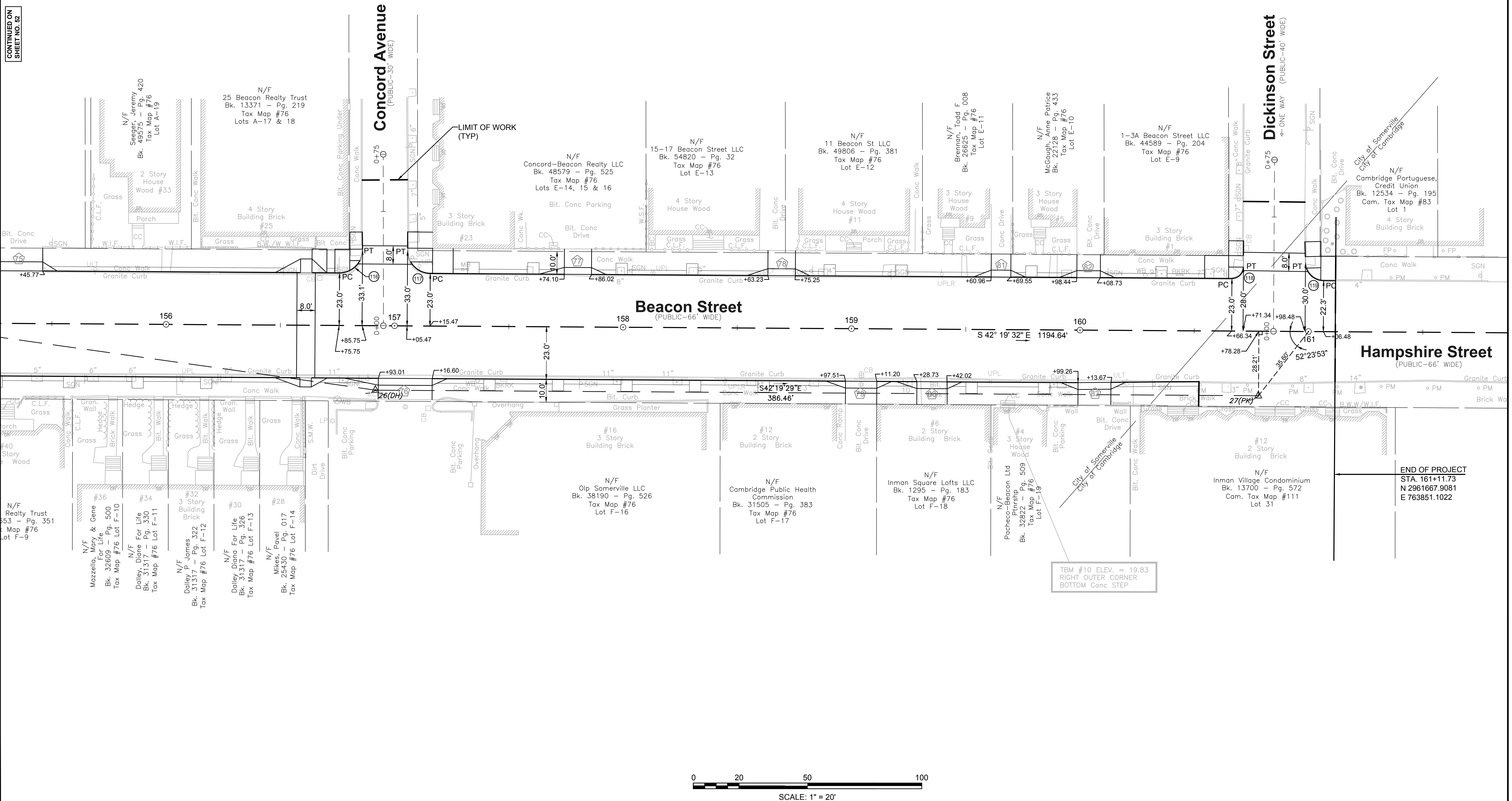
ALIGNMENT CURVE DATA				
CURVE NUMBER	RADIUS (FT)	LENGTH (FT)	DELTA	TANGENT (FT)
116	10.00	16.17	93°34'56.74"	10.47
117	10.00	16.72	94°42'26.28"	10.98
118	5.00	7.86	90°05'44.39"	5.01
119	8.00	9.98	71°29'36.69"	5.76

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTH	EAST	DESCRIPTION
26	23.98	2961959.375	763547.506	DH FND
27	17.94	2961673.647	763807.724	PK SET

CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
PT STA 150+35.73	1194.64' S42°19'32"E	2962463.428	763126.584
P.O.E. STA 150+36.20		2961580.197	763930.985

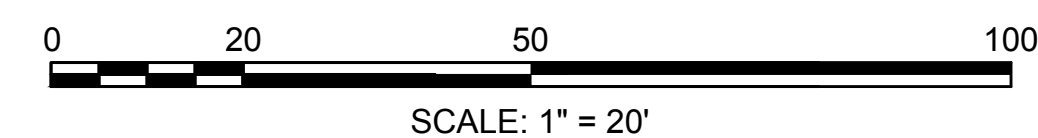


CONTINUED ON
SHEET NO. 52



END OF PROJECT
STA. 161+11.73
N 2961667.9081
E 763851.1022

TBM #10 ELEV. = 19.83
RIGHT OUTER CORNER
BOTTOM CONC STEP



SOMERVILLE/CAMBRIDGE

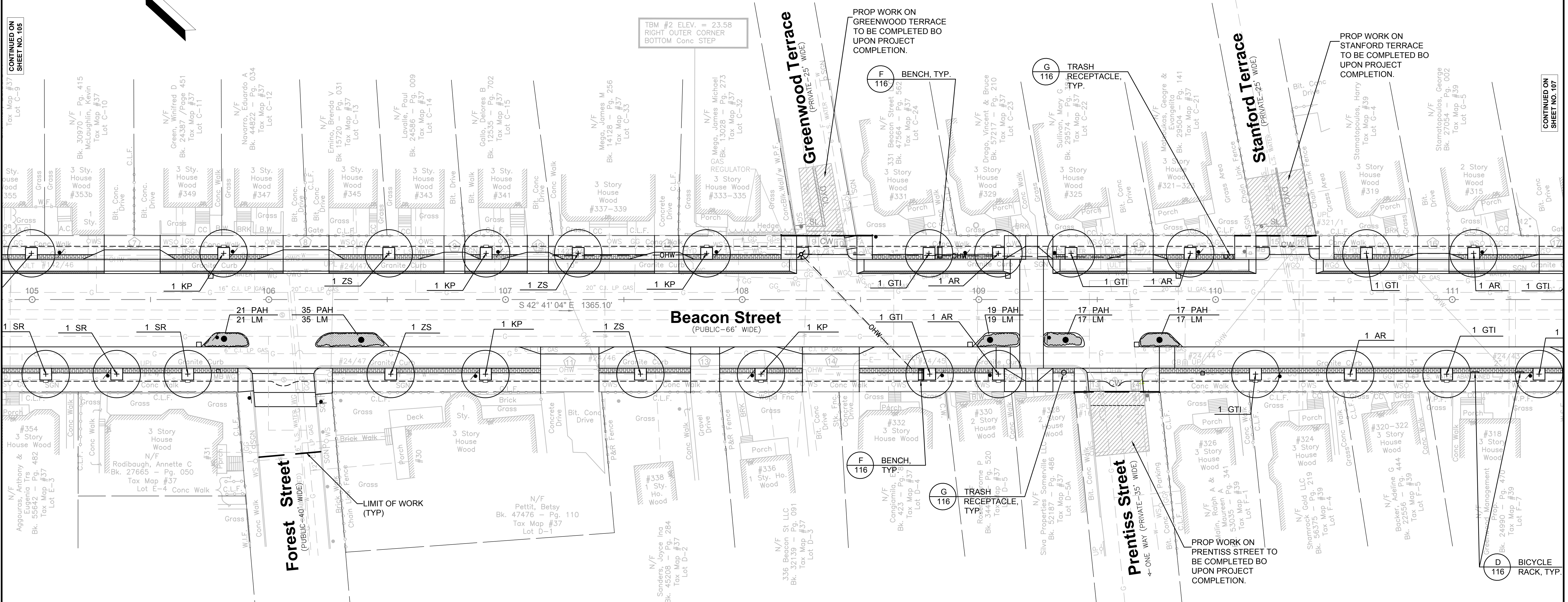
BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	106	201
PROJECT FILE NO. 607209			

LANDSCAPE PLANS

CONTINUED ON SHEET NO. 105

CONTINUED ON SHEET NO. 107



PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscaris</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hamelin'	Hamelin Fountain Grass	1 Gal.	plant at 18" o.c.

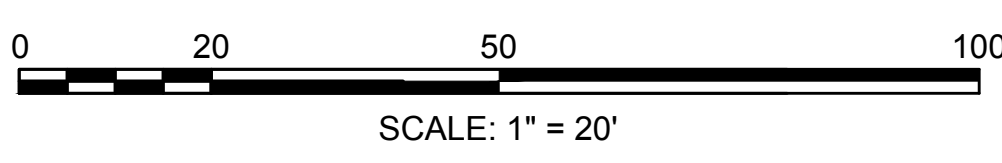
MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

SEE SHEET 105 FOR PLANTING NOTES

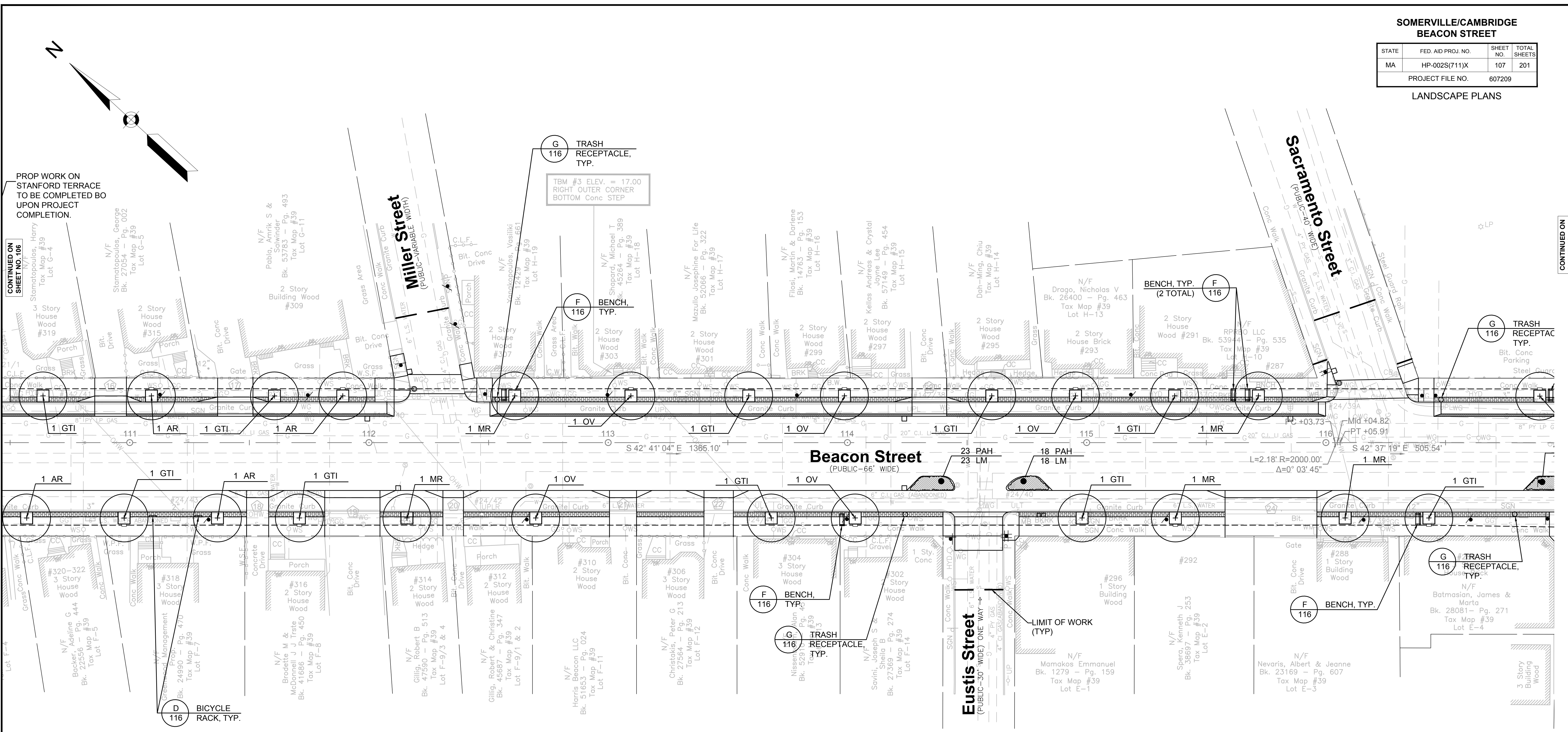


SOMERVILLE/CAMBRIDGE

BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	107	201
PROJECT FILE NO. 607209			

LANDSCAPE PLANS



PROP WORK ON STANFORD TERRACE TO BE COMPLETED UPON PROJECT COMPLETION.

CONTINUED ON SHEET NO. 106

CONTINUED ON SHEET NO. 108

PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenrain tree	2.5" - 3" cal.	B & B
MR	12	<i>Malus 'Radiant'</i>	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass	1 Gal.	plant at 18" o.c.

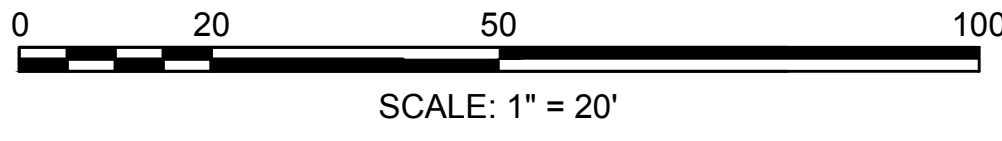
MATERIALS LEGEND

	TREE GRATE, TYP.	(C 116)
	BENCH, TYP.	(F 116)
	BICYCLE RACK, TYP.	(D 116)
	TRASH RECEPTACLE, TYP.	(G 116)

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	(A, E 116)
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	(B 116)

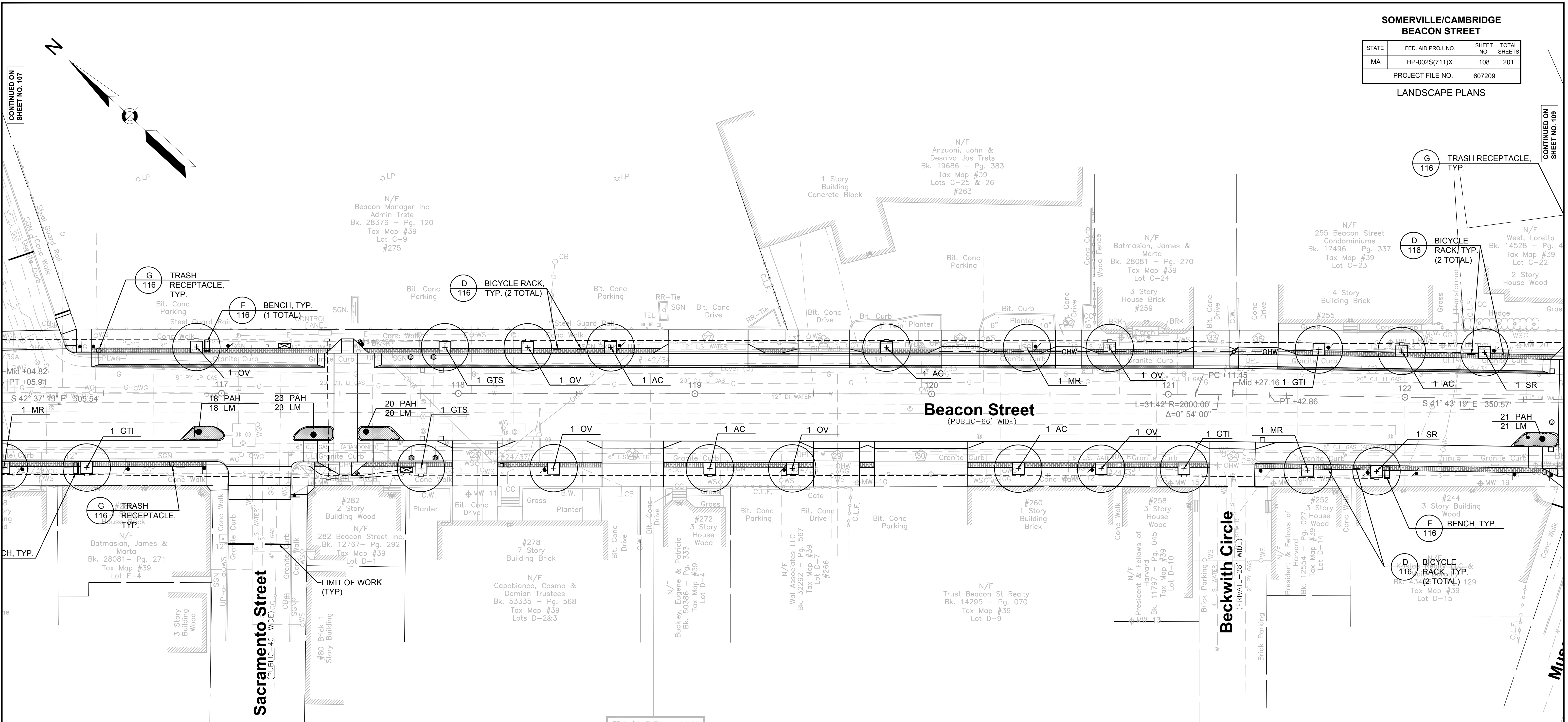
SEE SHEET 105 FOR PLANTING NOTES



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	108	201

LANDSCAPE PLANS



PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass	1 Gal.	plant at 18" o.c.

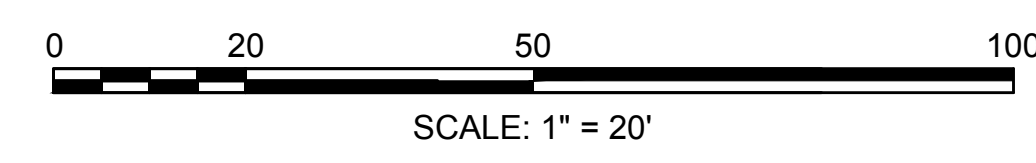
MATERIALS LEGEND

	TREE GRATE, TYP.		C
	BENCH, TYP.		F
	BICYCLE RACK, TYP.		D
	TRASH RECEPTACLE, TYP.		G

PLANTING LEGEND

	DECIDUOUS TREE, TYP.		A, E
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN		
	GROUND COVER PLANTING, TYP.		B

SEE SHEET 105 FOR PLANTING NOTES



CONTINUED ON SHEET NO. 107

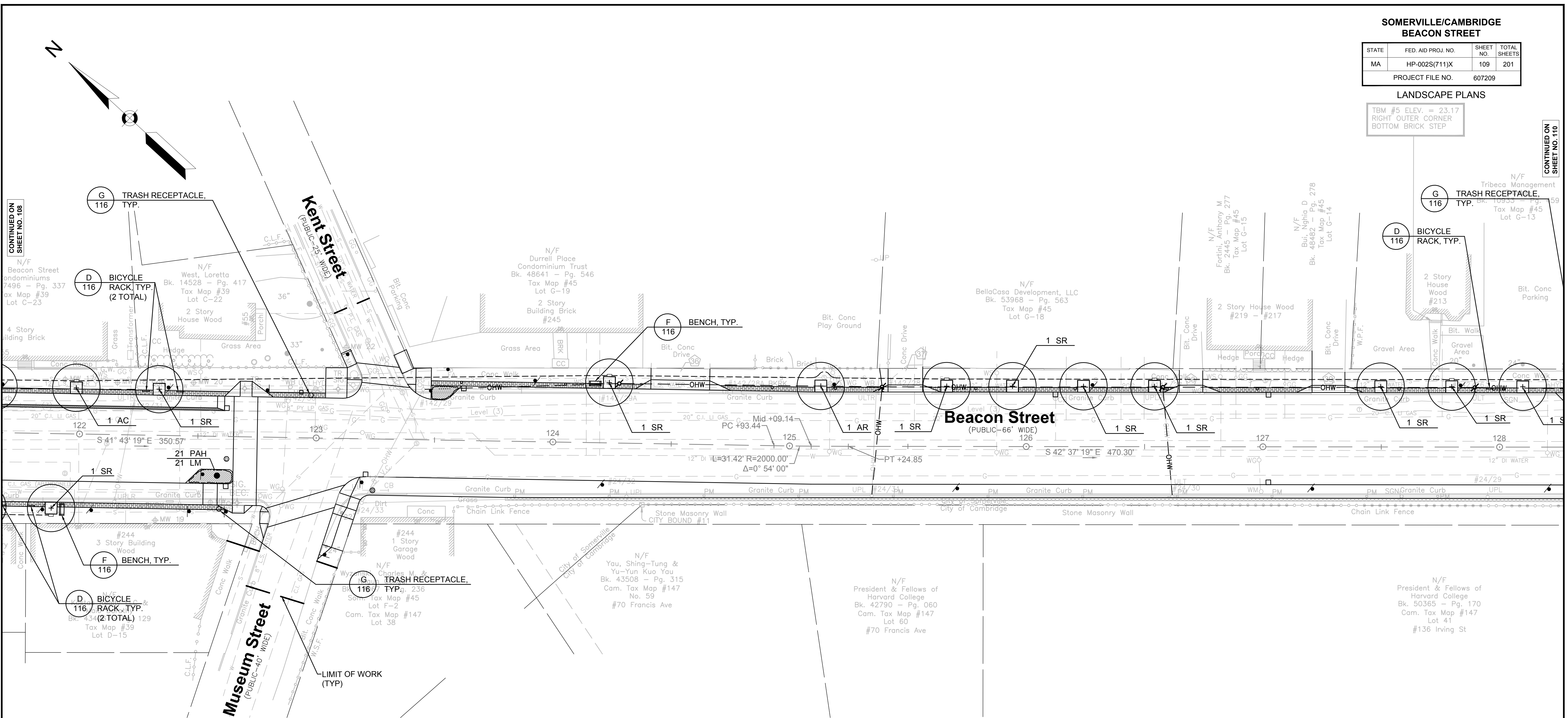
CONTINUED ON SHEET NO. 109

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	109	201
PROJECT FILE NO. 607209			

LANDSCAPE PLANS

TBM #5 ELEV. = 23.17
RIGHT OUTER CORNER
BOTTOM BRICK STEP



PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass	1 Gal.	plant at 18" o.c.

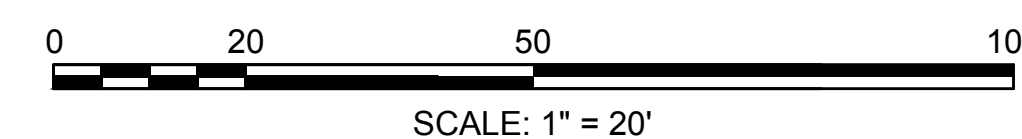
MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

SEE SHEET 105 FOR PLANTING NOTES



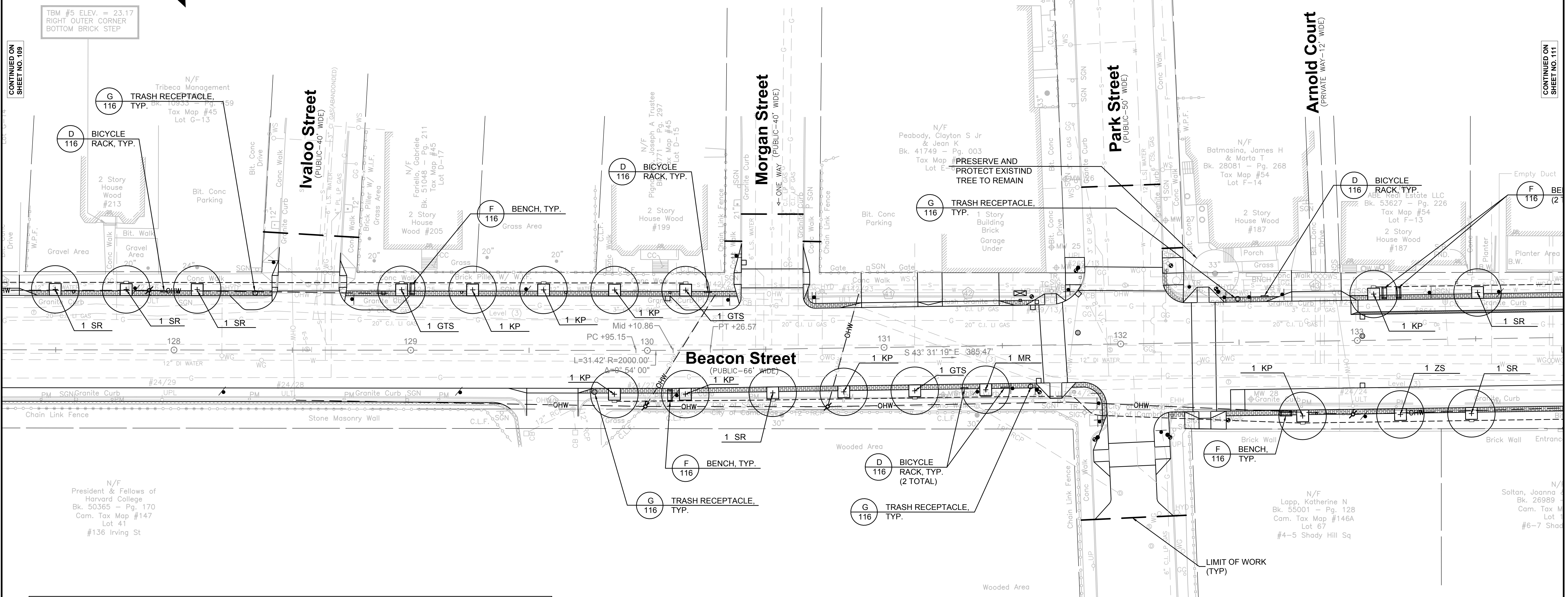
CONTINUED ON SHEET NO. 108

CONTINUED ON SHEET NO. 110

SOMERVILLE/CAMBRIDGE
BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	110	201

PROJECT FILE NO. 607209
LANDSCAPE PLANS



PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTL	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenrain tree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hamel'	Hamel Fountain Grass	1 Gal.	plant at 18" o.c.

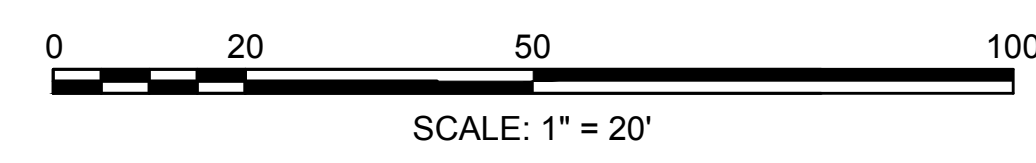
MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

SEE SHEET 105 FOR PLANTING NOTES



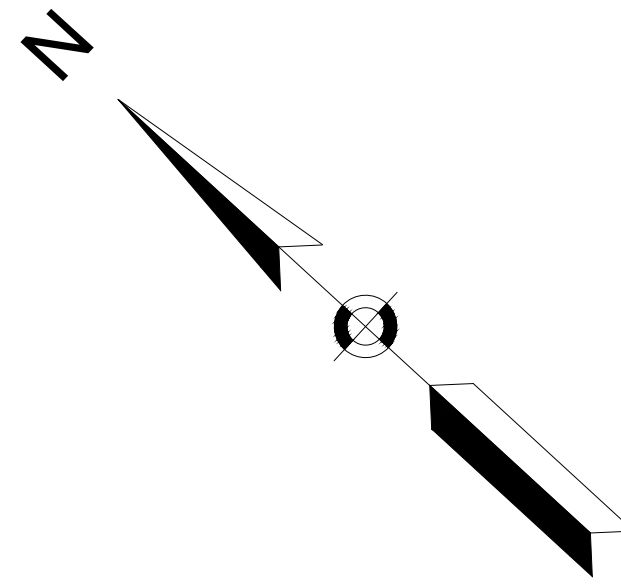
CONTINUED ON SHEET NO. 109

CONTINUED ON SHEET NO. 111

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

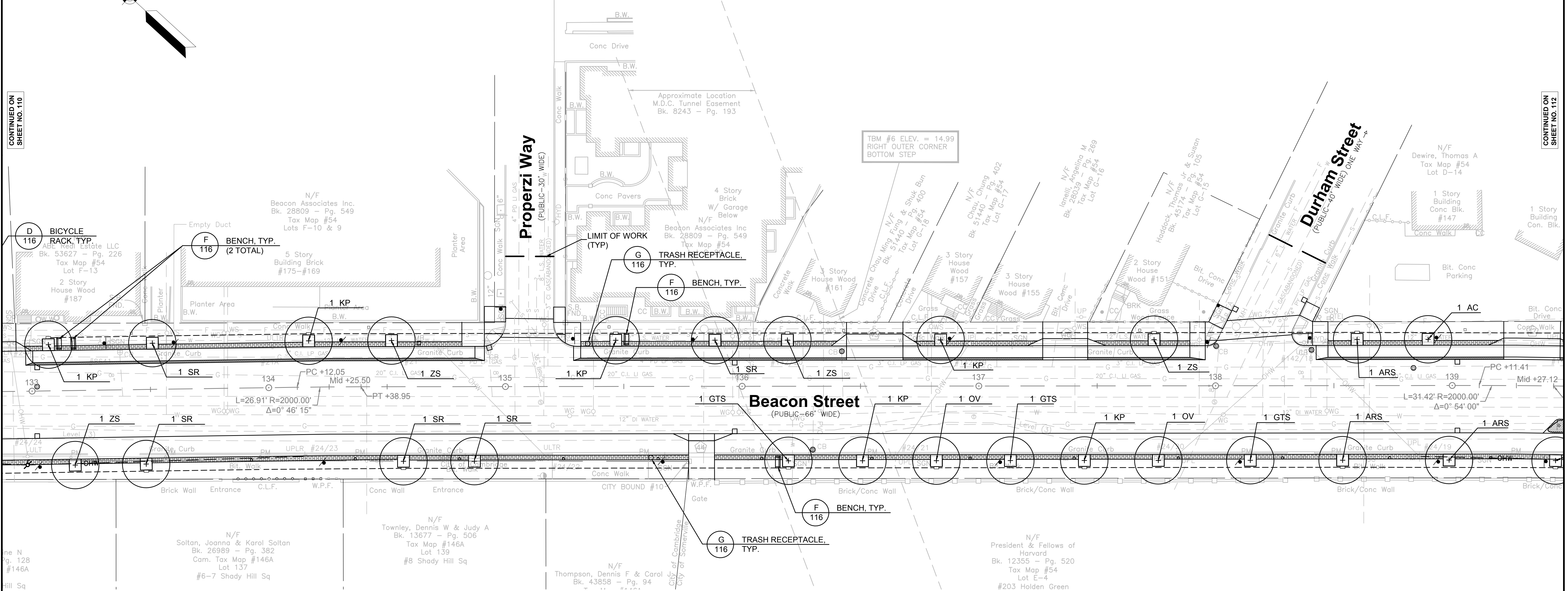
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	111	201

PROJECT FILE NO. 607209
LANDSCAPE PLANS



CONTINUED ON
SHEET NO. 110

CONTINUED ON
SHEET NO. 112



PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTS	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass	1 Gal.	plant at 18" o.c.

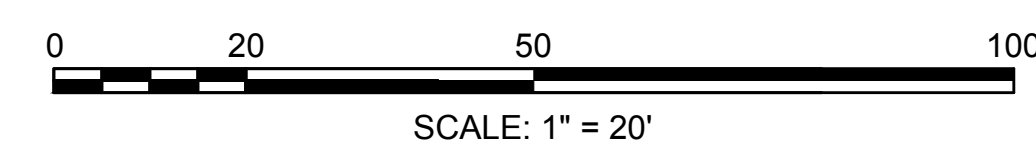
MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

SEE SHEET 105 FOR PLANTING NOTES



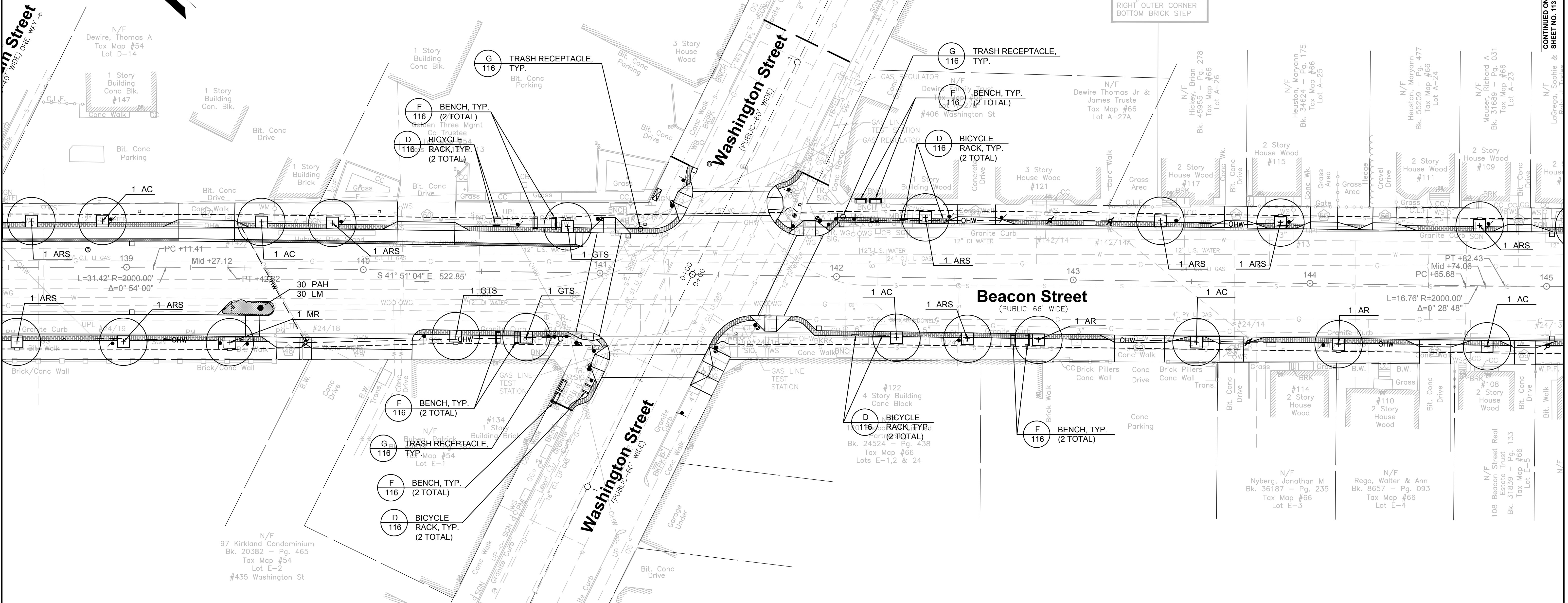
SOMERVILLE/CAMBRIDGE
BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	112	201
PROJECT FILE NO. 607209			

LANDSCAPE PLANS

CONTINUED ON
SHEET NO. 111

CONTINUED ON
SHEET NO. 113



TBM #7 ELEV. = 23.17
RIGHT OUTER CORNER
BOTTOM BRICK STEP

PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass	1 Gal.	plant at 18" o.c.

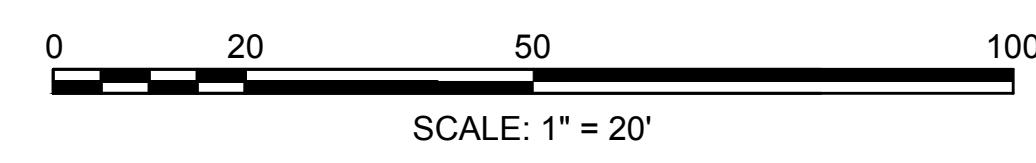
MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

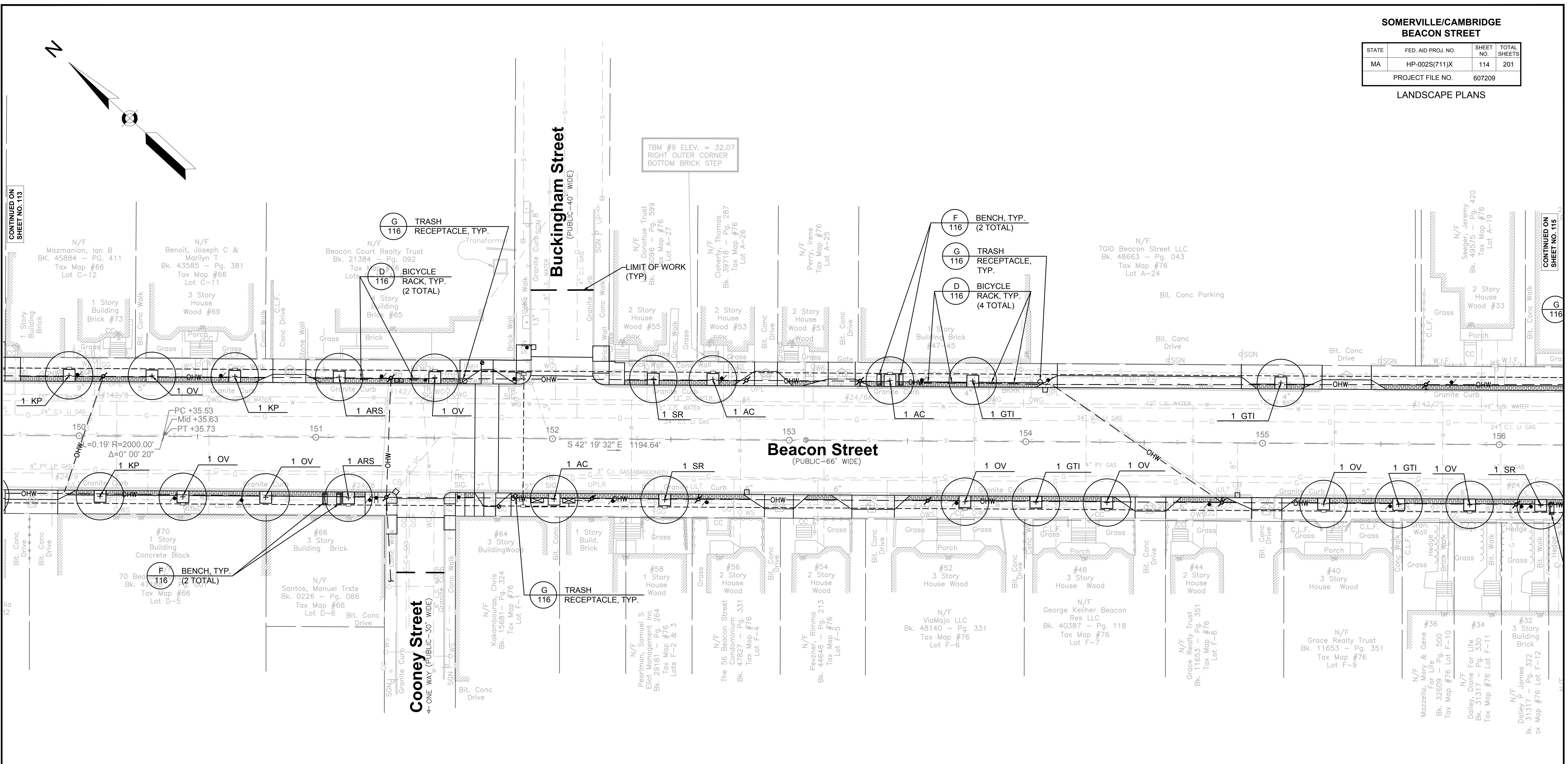
SEE SHEET 105 FOR PLANTING NOTES



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	114	201
PROJECT FILE NO. 607209			

LANDSCAPE PLANS

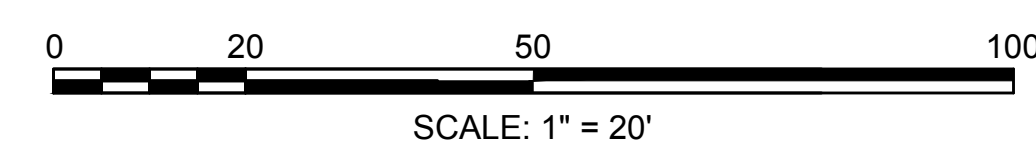


CONTINUED ON SHEET NO. 113

CONTINUED ON SHEET NO. 115

PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	B & B, SINGLE STEM ONLY	
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hameln'	Hameln Fountain Grass	1 Gal.	plant at 18" o.c.



MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

SEE SHEET 105 FOR PLANTING NOTES

PLANTING LEGEND

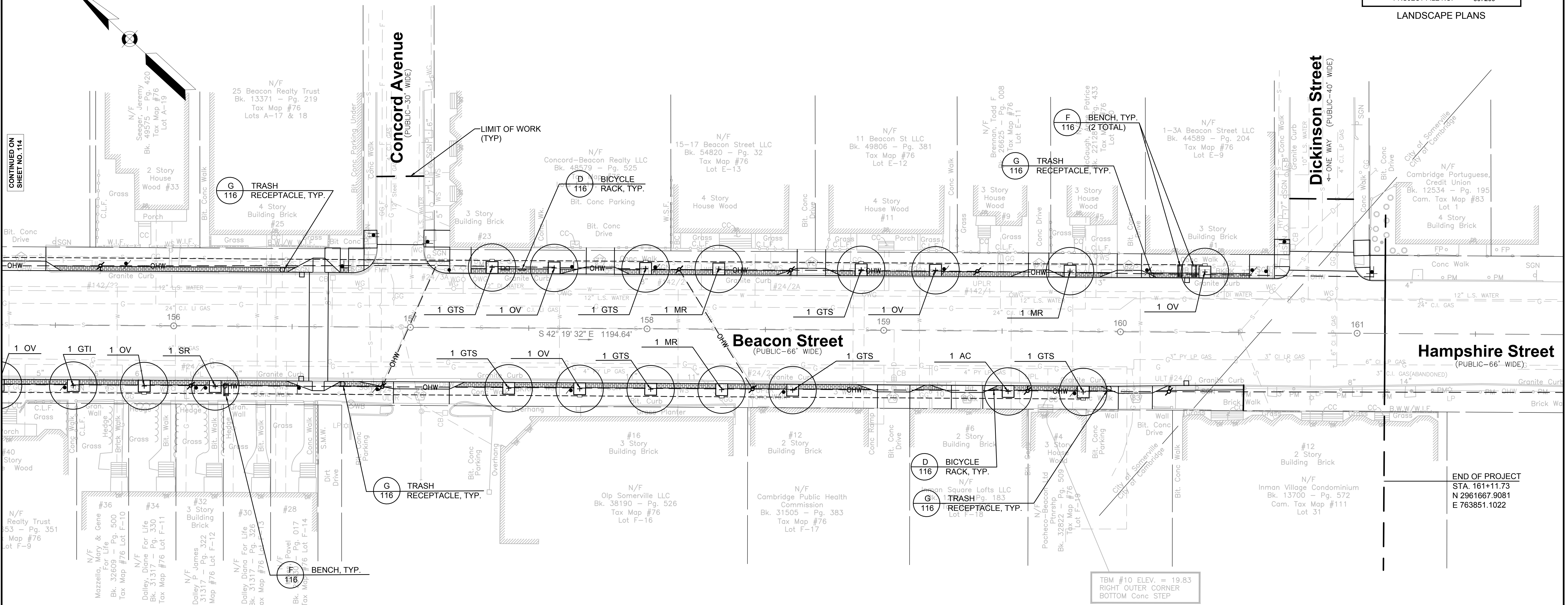
	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

SOMERVILLE/CAMBRIDGE
BEACON STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	115	201
PROJECT FILE NO. 607209			

LANDSCAPE PLANS

CONTINUED ON
SHEET NO. 114



PLANT LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS / SPACING
DECIDUOUS TREES					
AC	18	<i>Acer campestre</i>	Hedge Maple	3" - 3.5" cal.	B & B
ARS	17	<i>Acer rubrum</i> 'Red Sunset'	Red Sunset Maple	3" - 3.5" cal.	B & B
AR	12	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	3" - 3.5" cal.	B & B
GTI	24	<i>Gleditsia triacanthus inermis</i> 'Shademaster'	Shademaster Honey Locust	2" - 2.5" cal.	B & B
GTS	18	<i>Gleditsia triacanthus inermis</i> 'Skyline'	Skyline Honey Locust	2" - 2.5" cal.	B & B
KP	28	<i>Koeleruteria paniculata</i>	Goldenraintree	2.5" - 3" cal.	B & B
MR	12	<i>Malus</i> 'Radiant'	Radiant Crabapple	2.5" - 3" cal.	B & B, SINGLE STEM ONLY
OV	25	<i>Ostrya virginiana</i>	American hophornbeam	2" - 2.5" cal.	B & B, SPRING DUG ONLY
SR	27	<i>Syringa reticulata</i>	Japanese Lilac Tree	2" - 2.5" cal.	B & B, SPRING DUG ONLY
ZS	10	<i>Zelkova serrata</i> 'Green Vase'	Green Vase Japanese Zelkova	2.5" - 3" cal.	B & B, SPRING DUG ONLY
GROUND COVER					
LM	289	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	#2 pot	plant at 18" o.c.
PAH	289	<i>Pennisetum alopecuroides</i> 'Hamel'	Hamel Fountain Grass	1 Gal.	plant at 18" o.c.

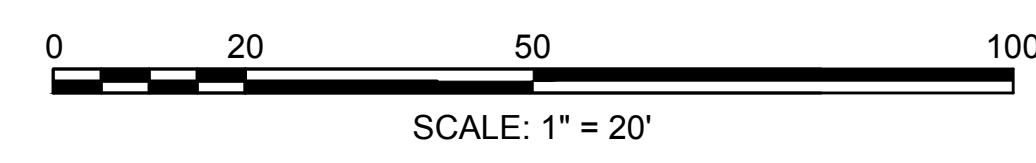
MATERIALS LEGEND

	TREE GRATE, TYP.	
	BENCH, TYP.	
	BICYCLE RACK, TYP.	
	TRASH RECEPTACLE, TYP.	

PLANTING LEGEND

	DECIDUOUS TREE, TYP.	
	PRESERVE AND PROTECT EXISTING TREE TO REMAIN	
	GROUND COVER PLANTING, TYP.	

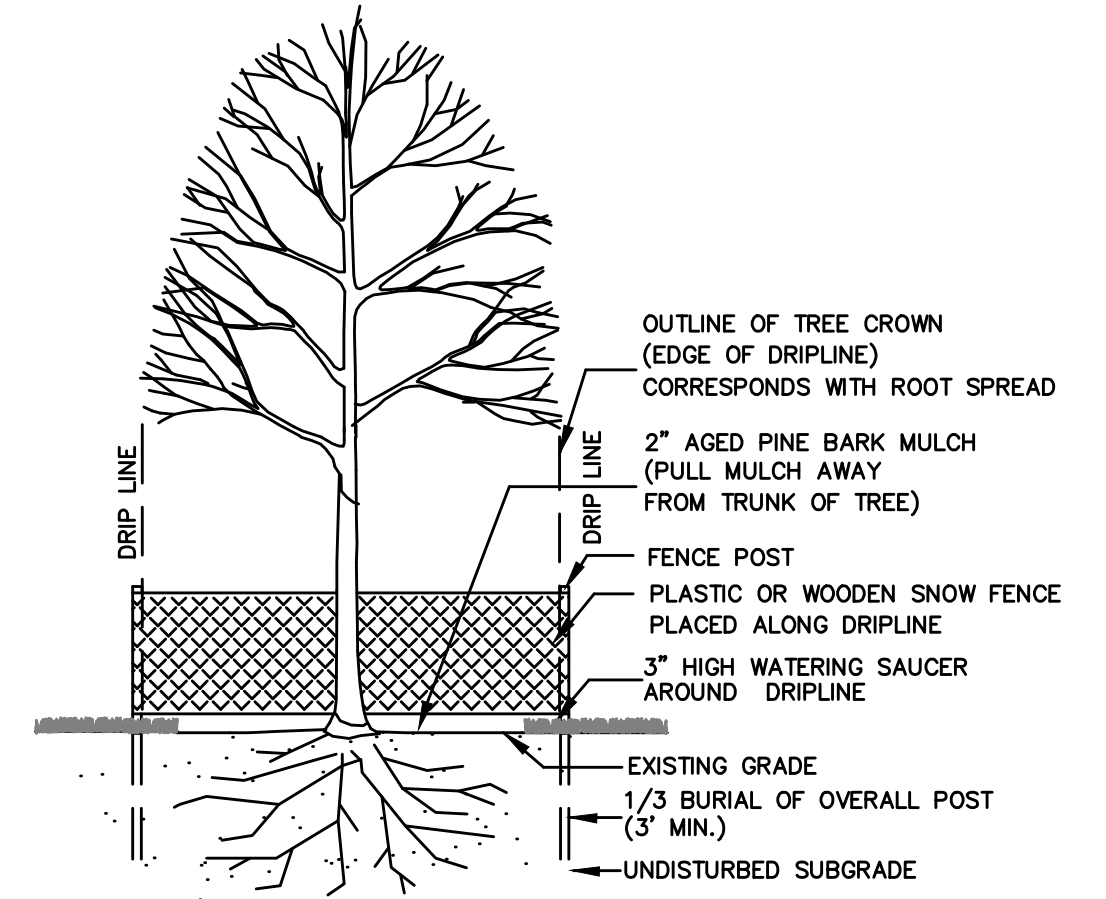
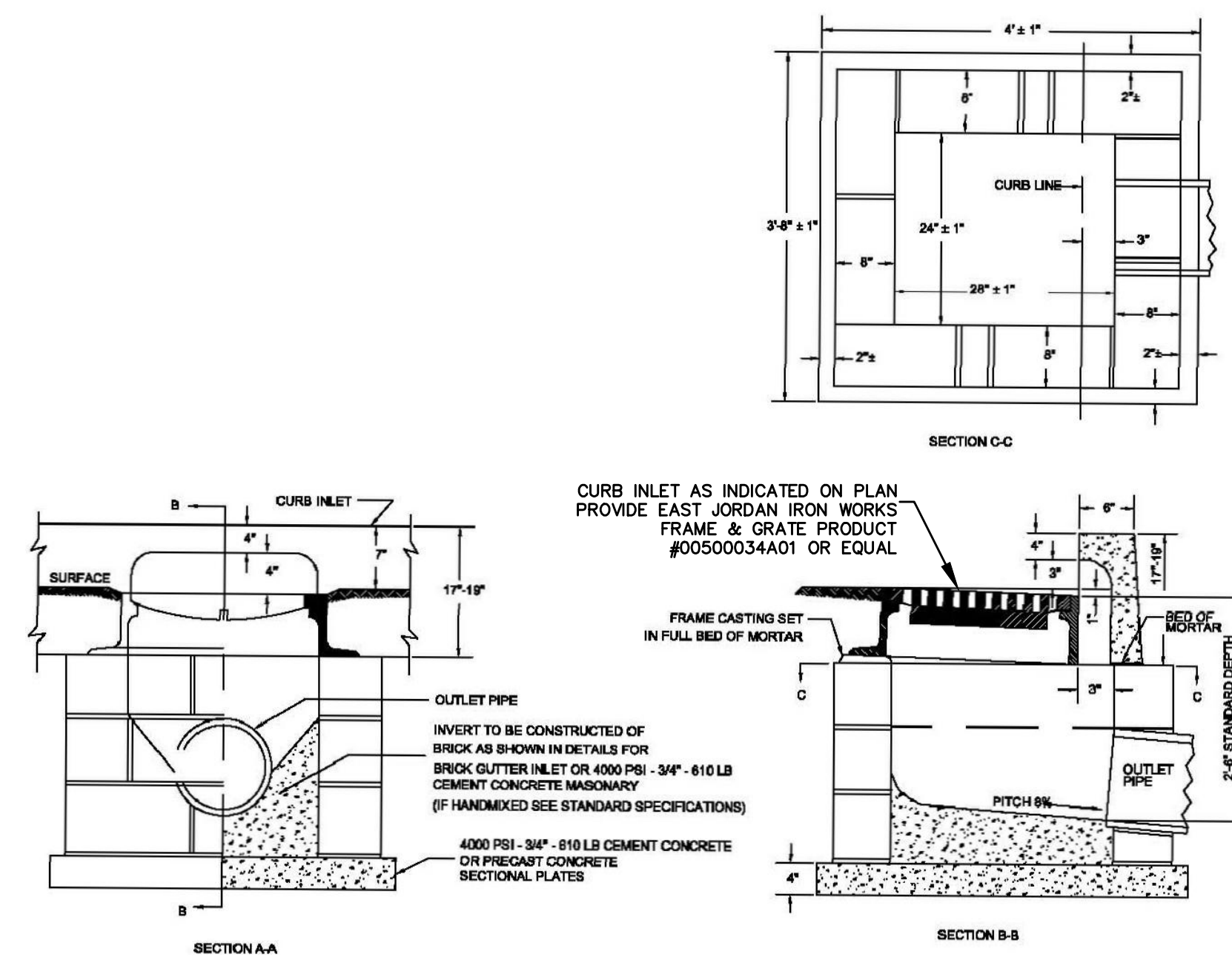
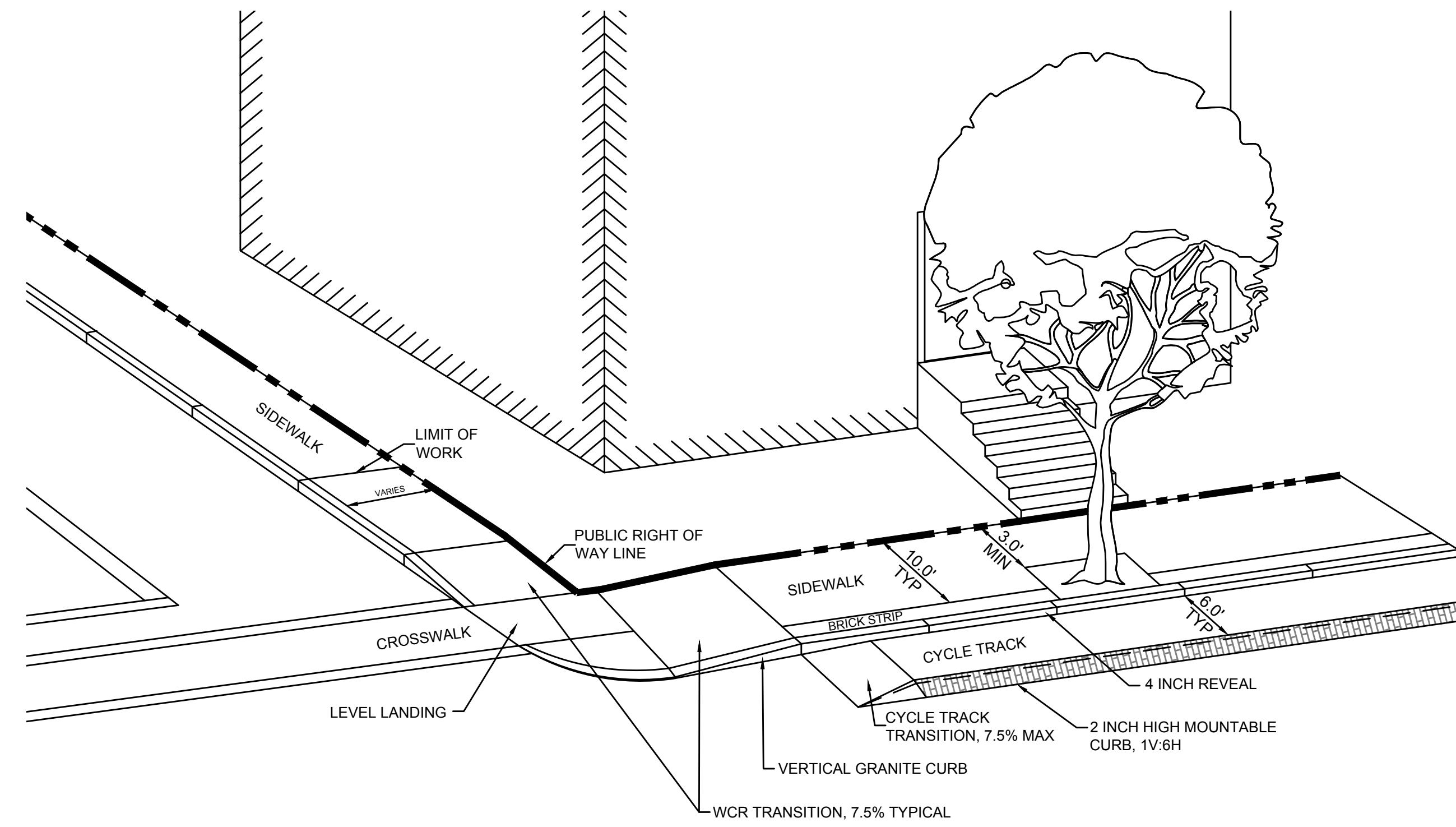
SEE SHEET 105 FOR PLANTING NOTES



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	117	201
PROJECT FILE NO.		607209	

CONSTRUCTION DETAILS

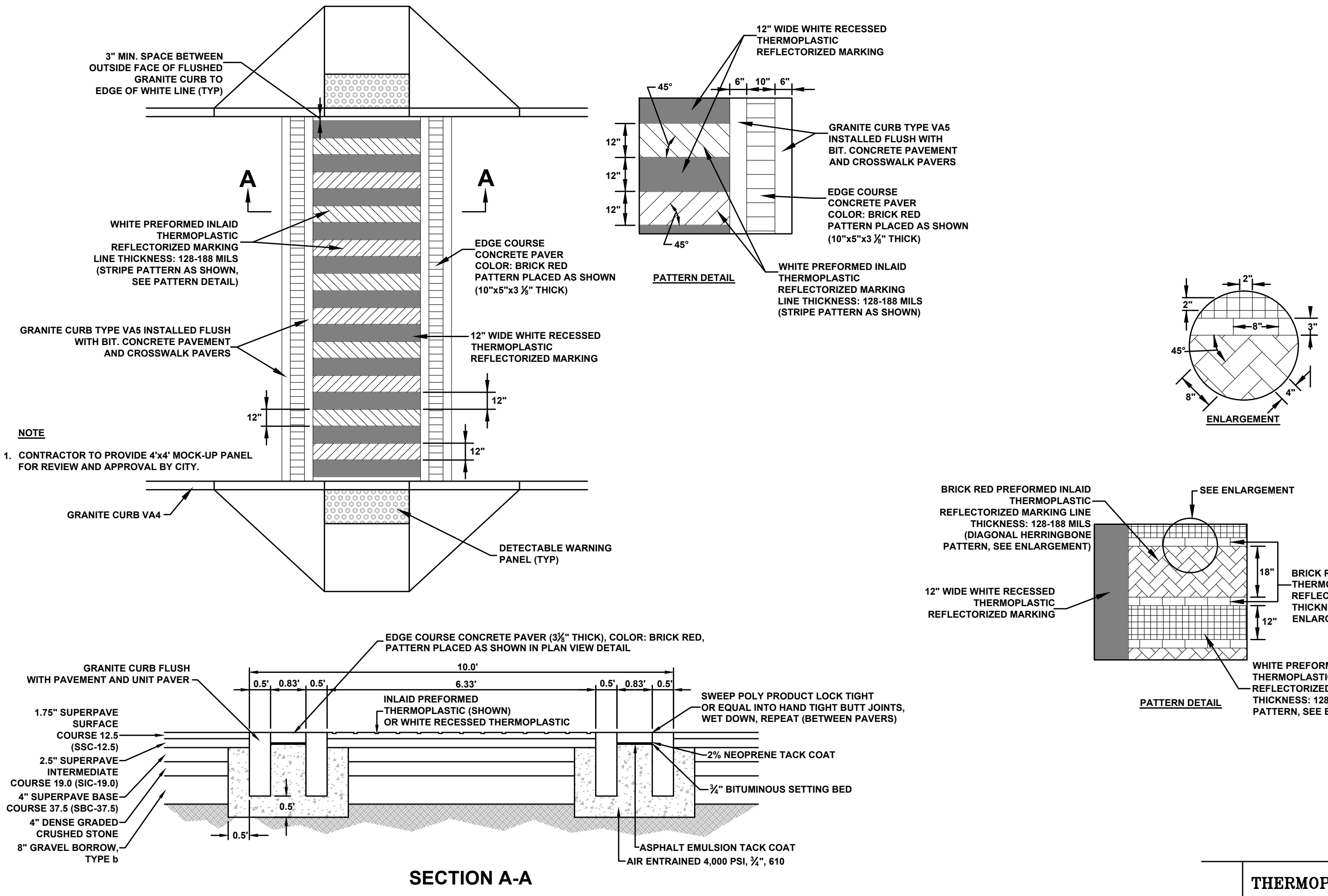


NOTES:
1. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NOT TO DAMAGE ROOT SYSTEM.

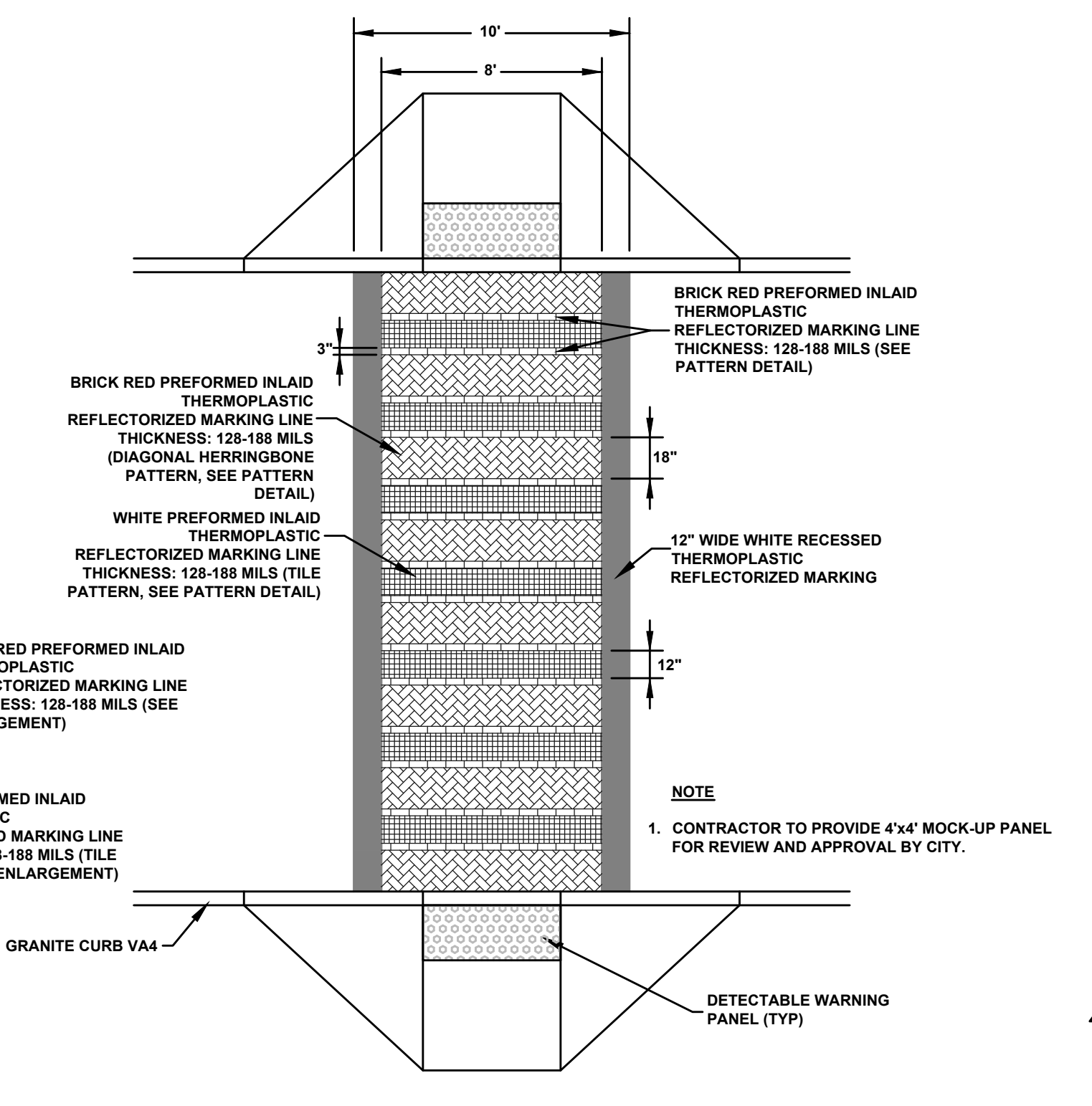
CYCLE TRACK TYPICAL TRANSITION
NOT TO SCALE

GUTTER INLET
NOT TO SCALE

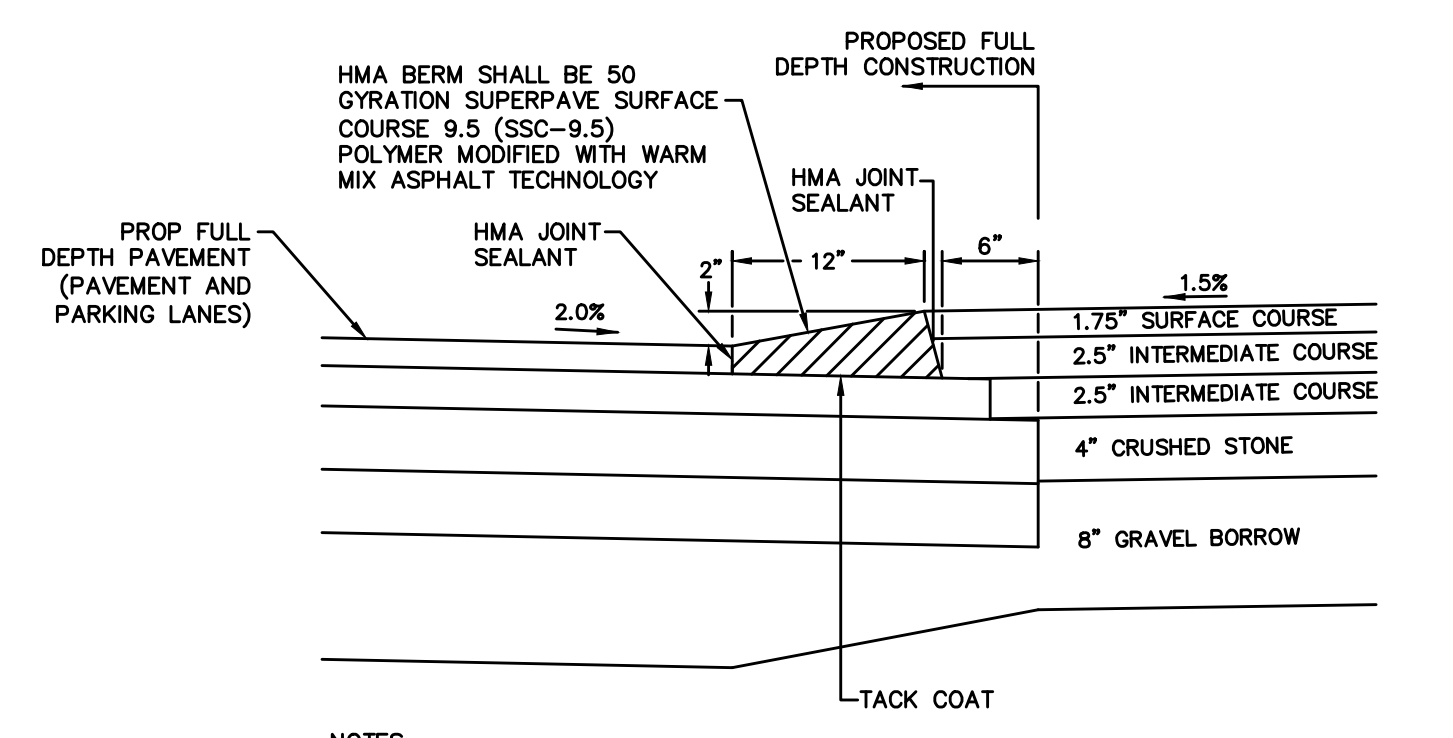
INDIVIDUAL TREE PROTECTION
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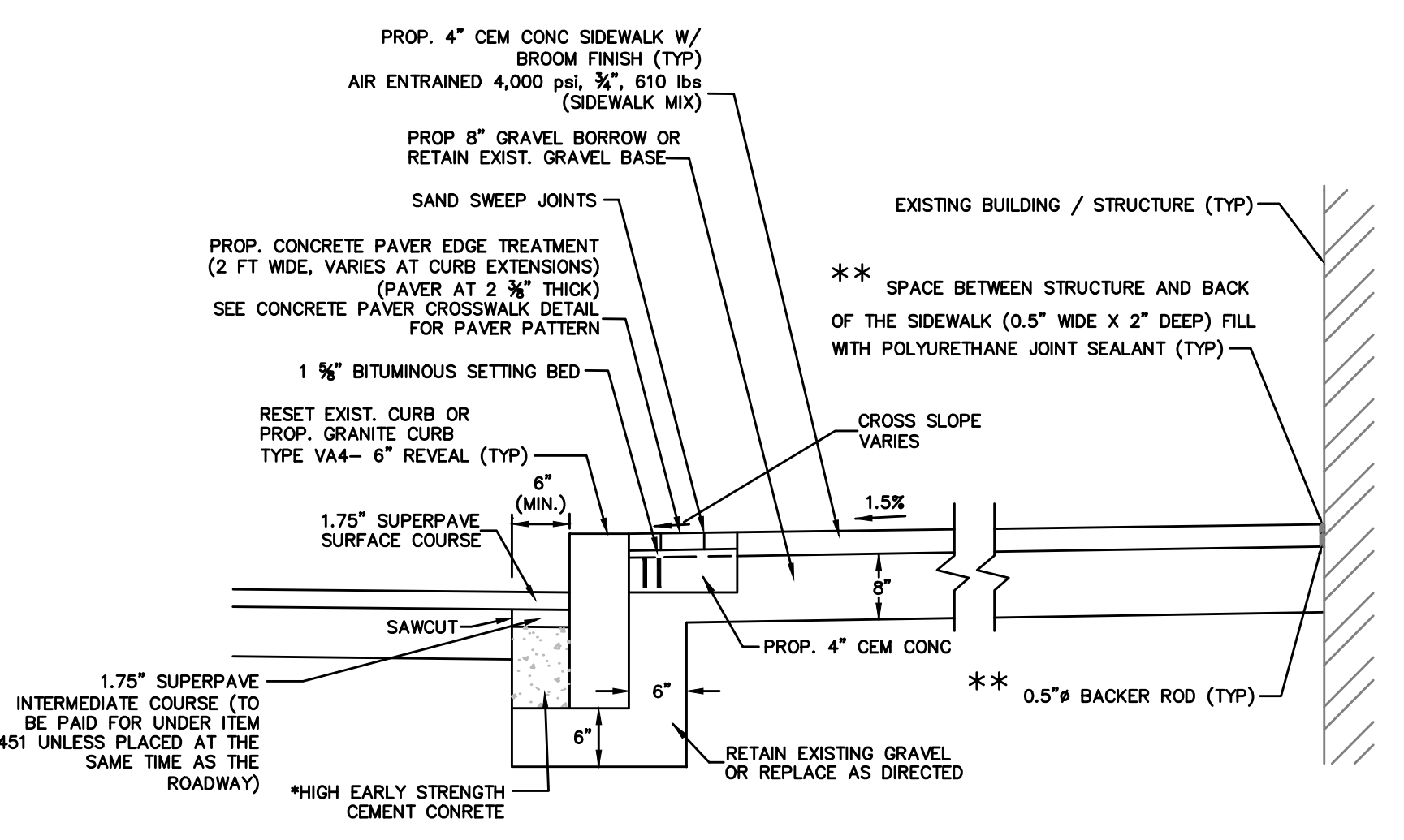
CONCRETE PAVER AND INLAID THERMOPLASTIC CROSSWALK
NOT TO SCALE



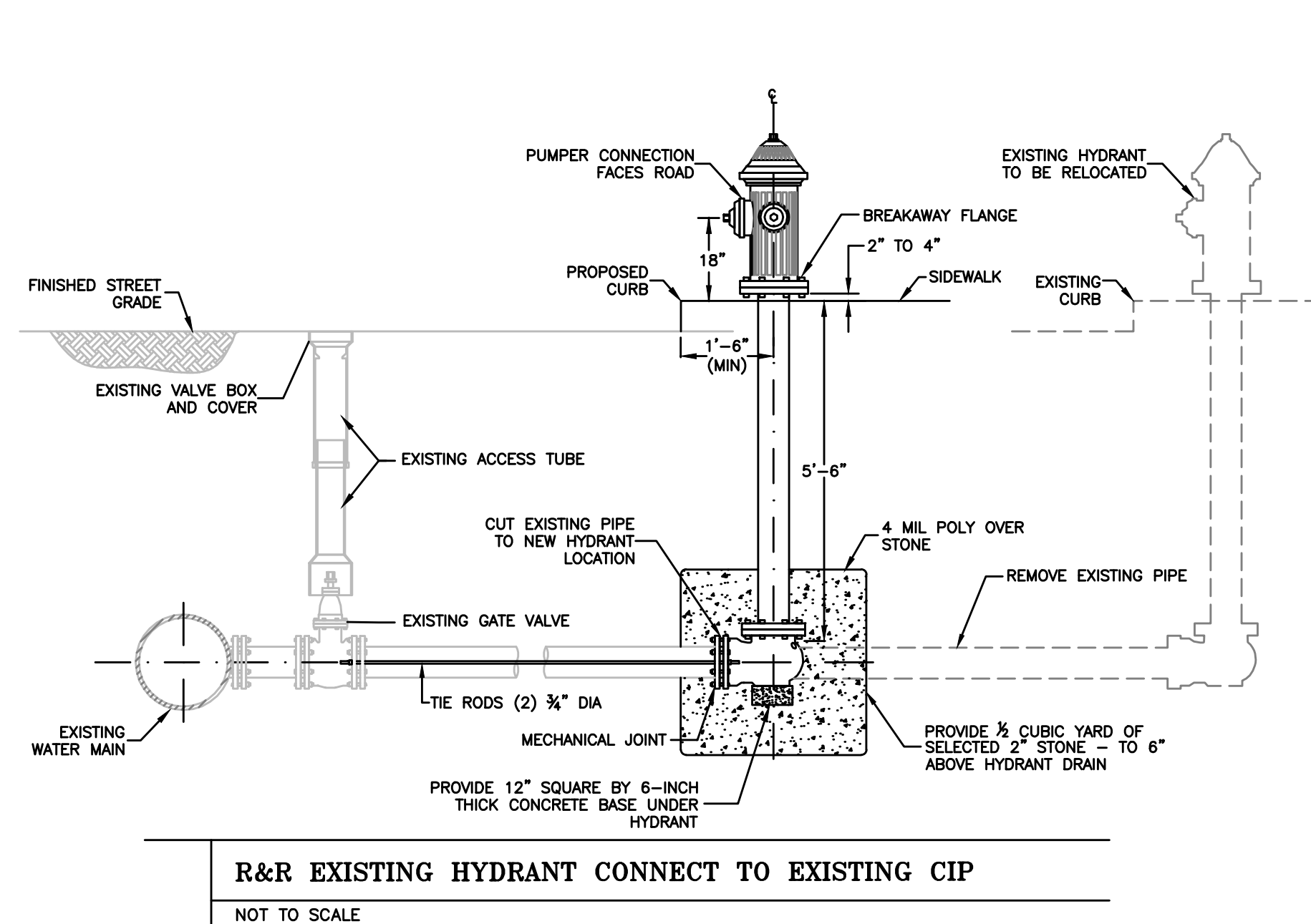
THERMOPLASTIC CROSSWALK
NOT TO SCALE



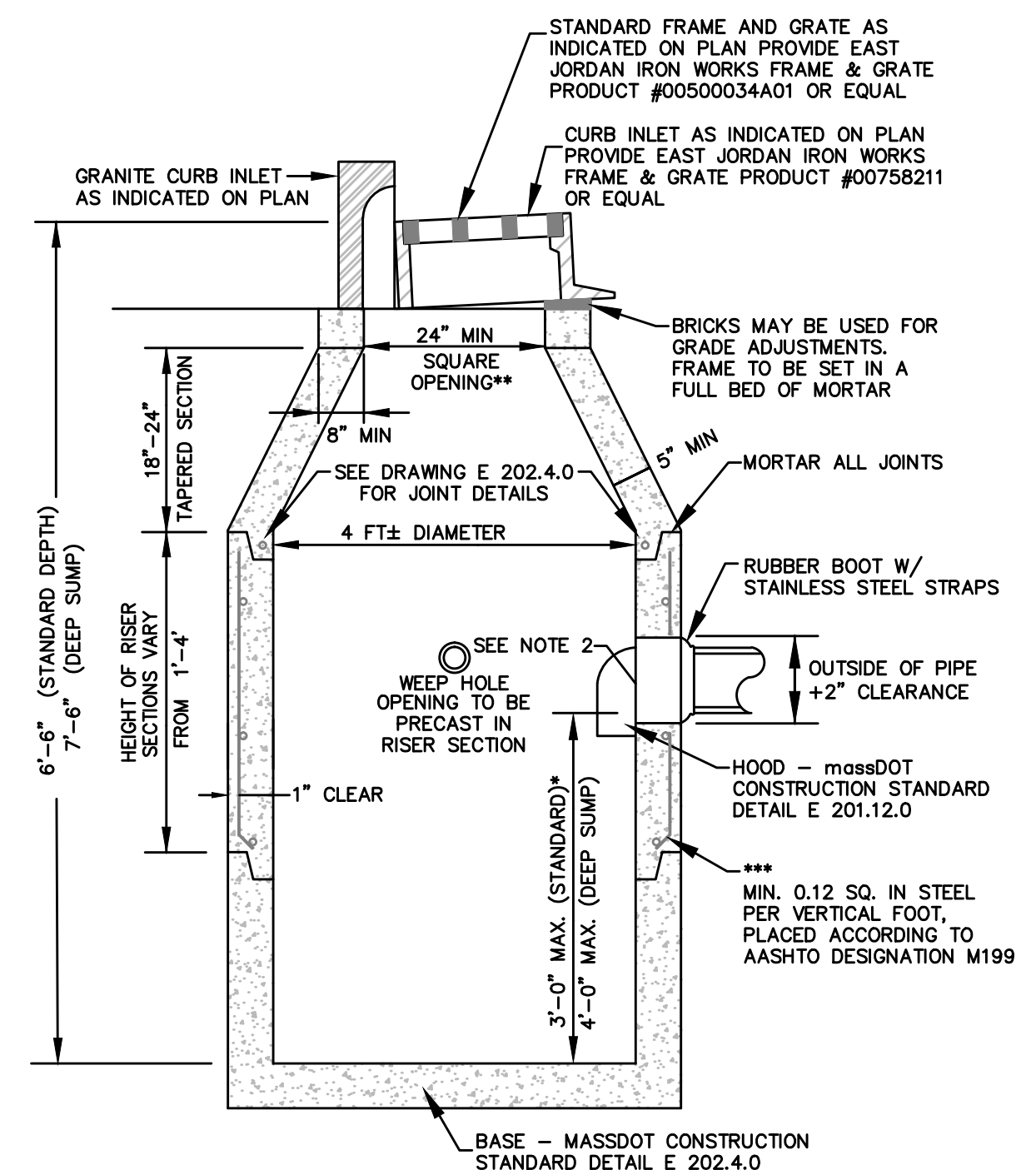
HOT MIX ASPHALT MOUNTABLE CURB
NOT TO SCALE



ROAD PAVEMENT AND SIDEWALK CONSTRUCTION
NOT TO SCALE

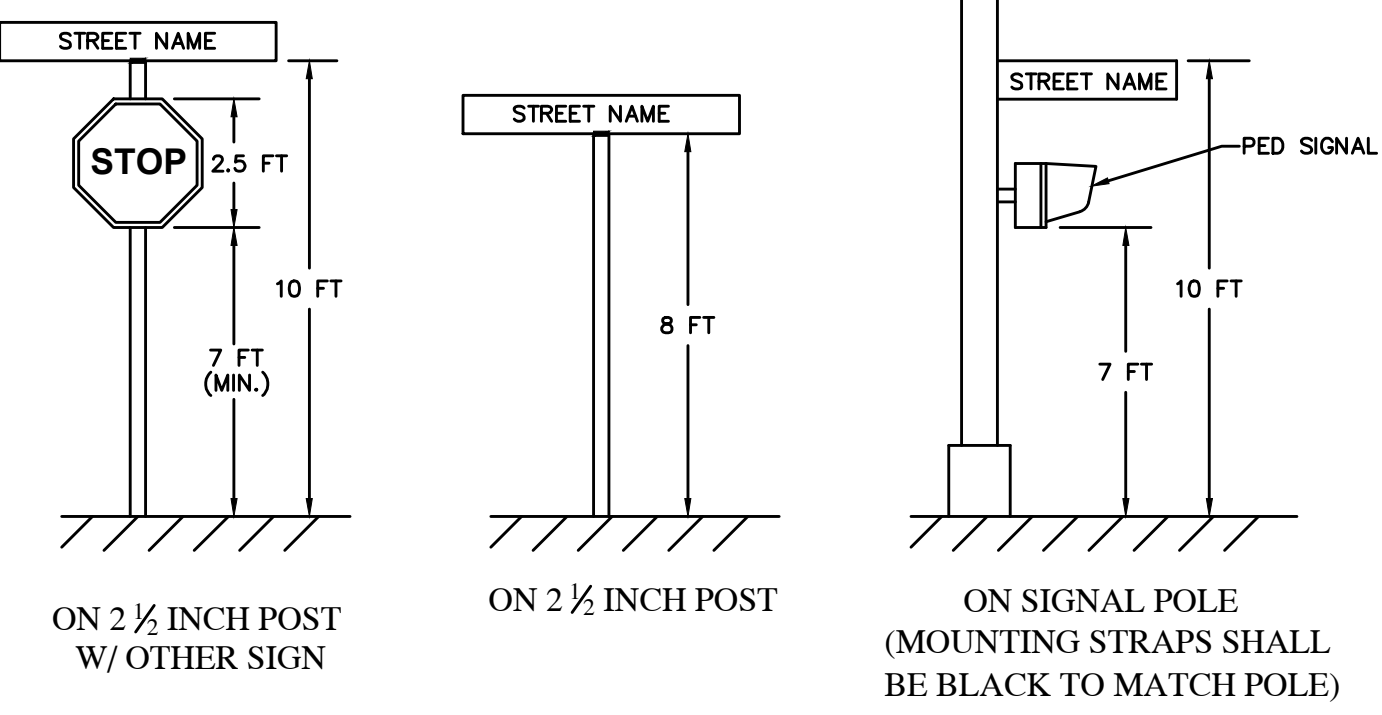


R&R EXISTING HYDRANT CONNECT TO EXISTING CIP
NOT TO SCALE

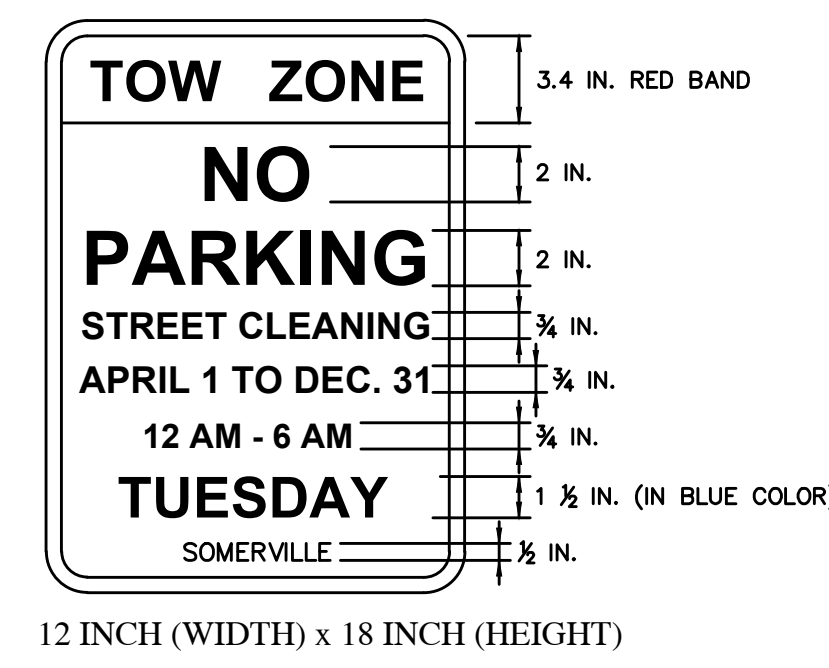


- * MINIMUM DEPTH OF SUMP TO BE 2'
 ** WHEN A CURB INLET IS TO BE INSTALLED, THE OPENING IS TO BE 24"±1" X 27"±1"
 *** REINFORCING STEEL BASED ON A WALL THICKNESS OF 5"
- NOTES:**
1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN ON E 201.3.0
 2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE
 3. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE STANDARD SPECIFICATIONS
 4. ALL CONCRETE TO BE AIR ENTRAINED

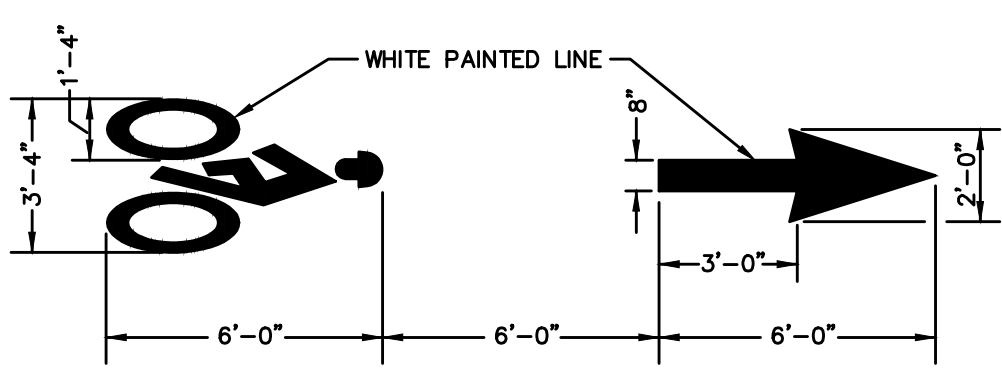
PRECAST CONCRETE CATCH BASIN - MUNICIPAL STANDARD
NOT TO SCALE



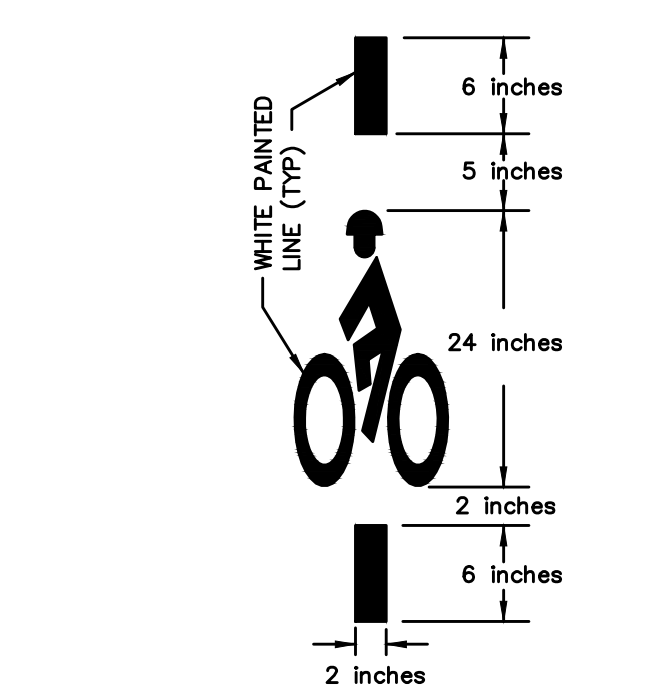
STREET NAME SIGN INSTALLATIONS
NOT TO SCALE



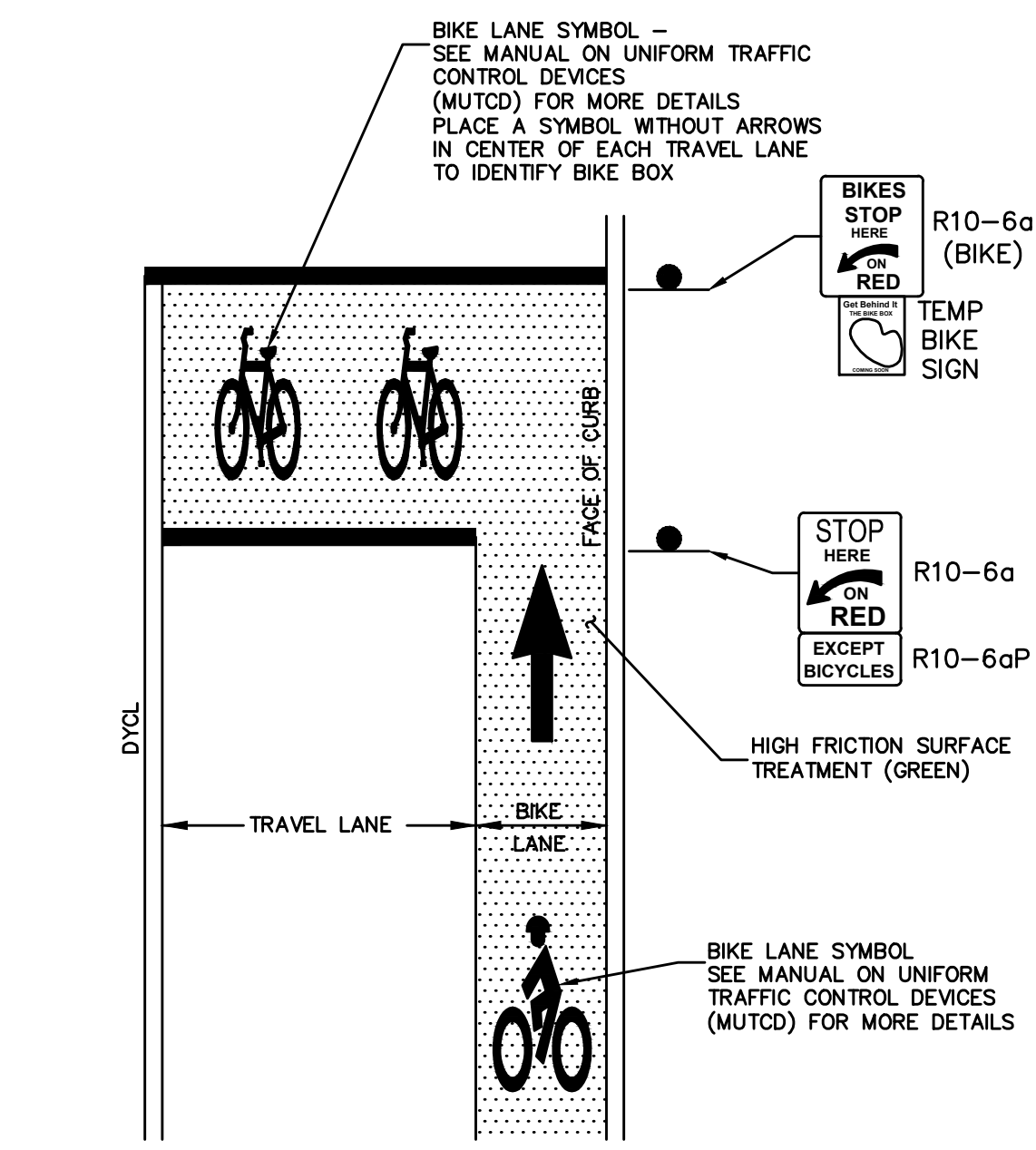
R7-2 (CITY STANDARD)
NOT TO SCALE



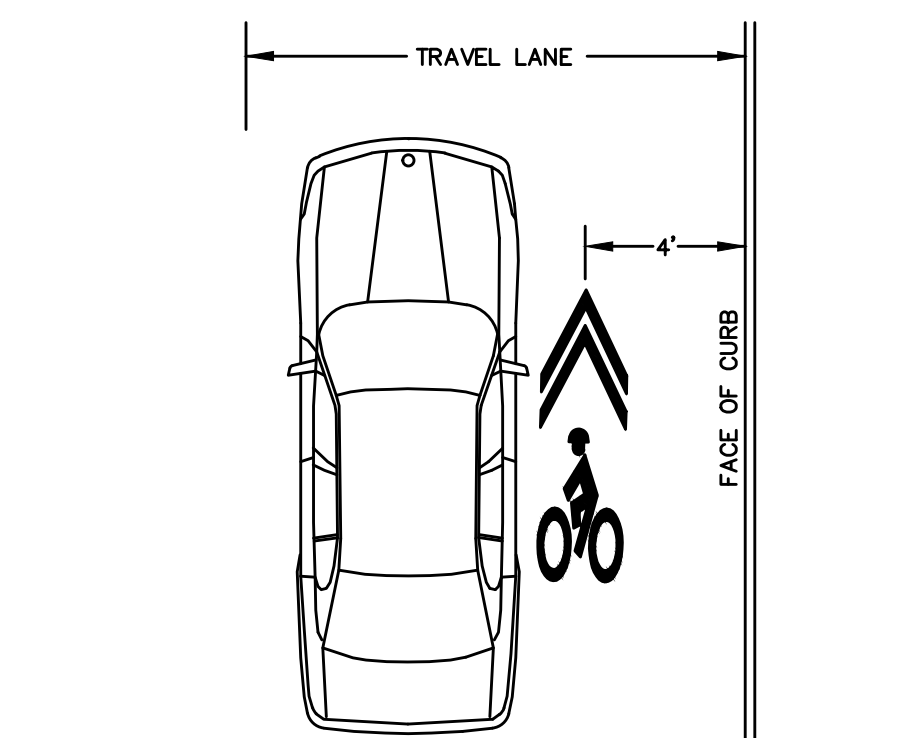
BIKE LANE PAVEMENT MARKINGS
NOT TO SCALE



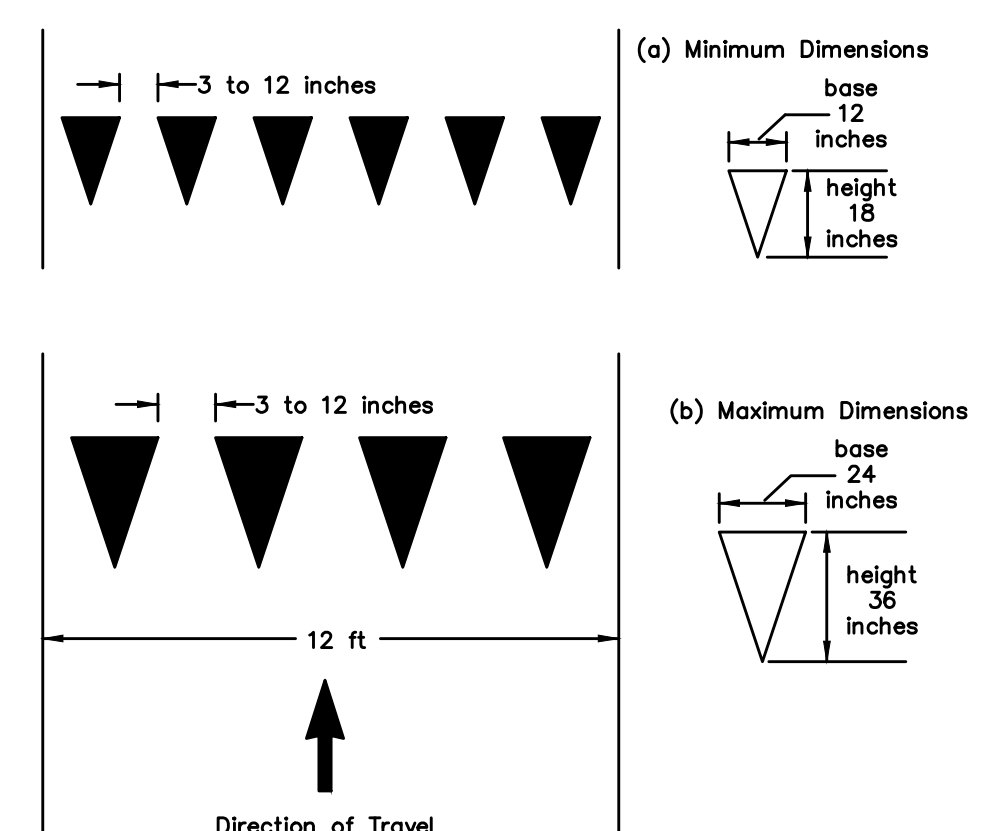
A BICYCLE DETECTOR PAVEMENT MARKING
NOT TO SCALE



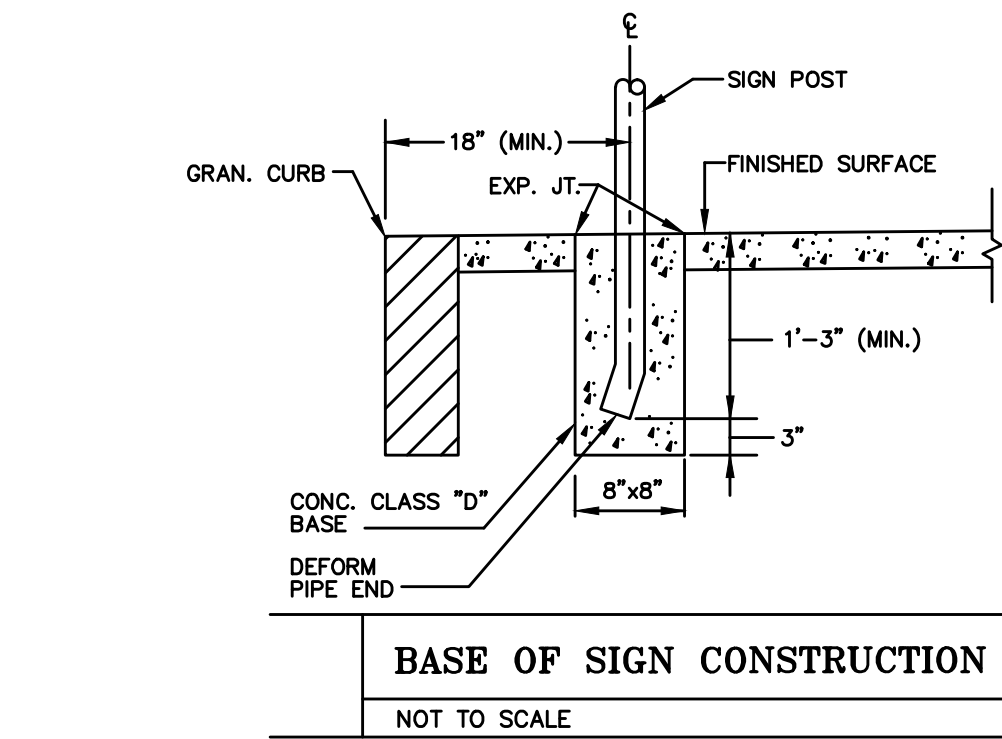
B BIKE BOX PLACEMENT
NOT TO SCALE



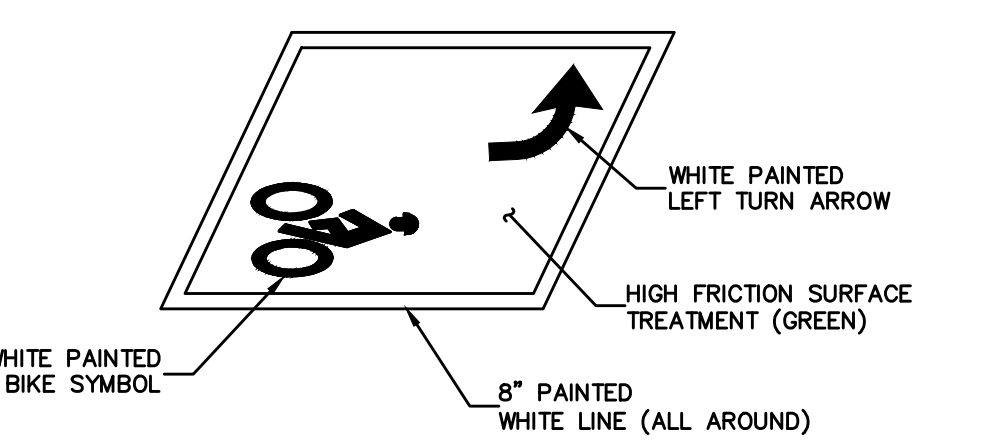
D SHARED LANE SYMBOL PLACEMENT ADJACENT TO CURB WITHOUT PARKING
NOT TO SCALE



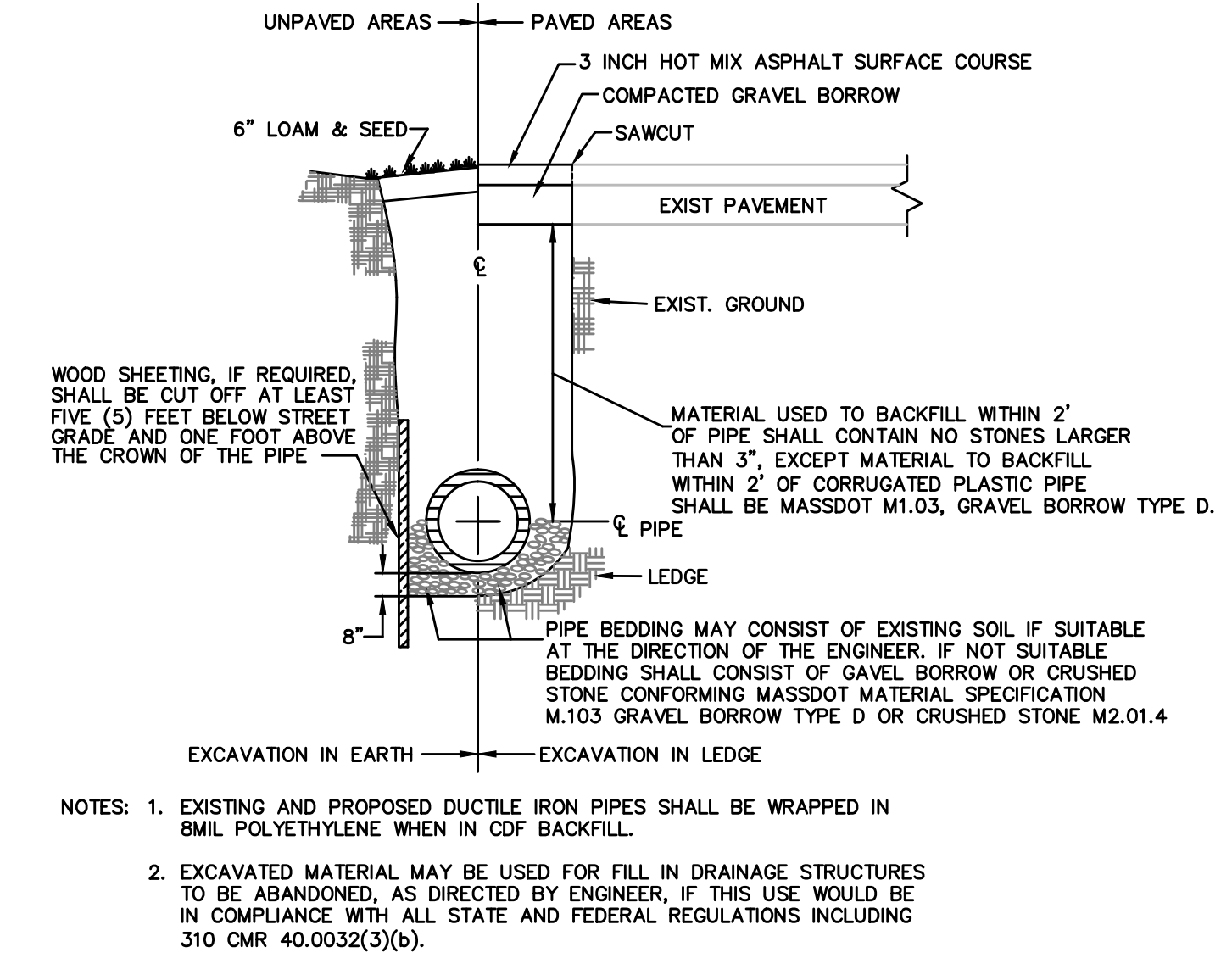
E YIELD MARKINGS
NOT TO SCALE



BASE OF SIGN CONSTRUCTION
NOT TO SCALE



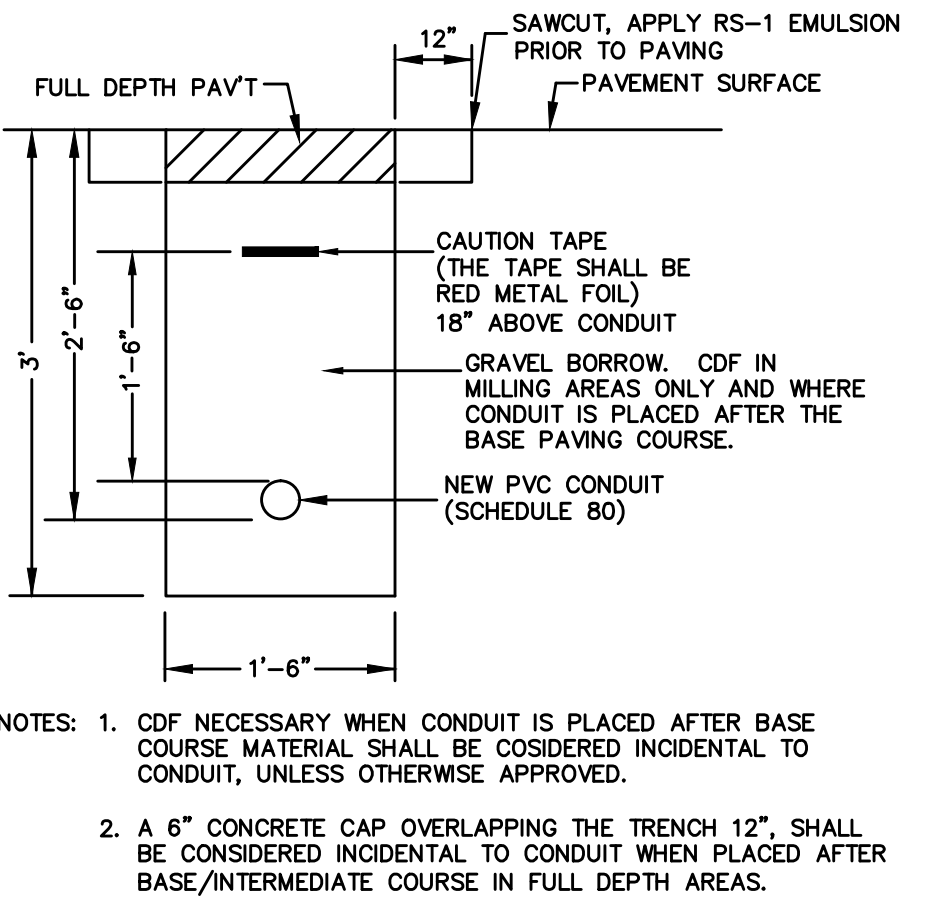
BIKE QUEUE BOX
NOT TO SCALE



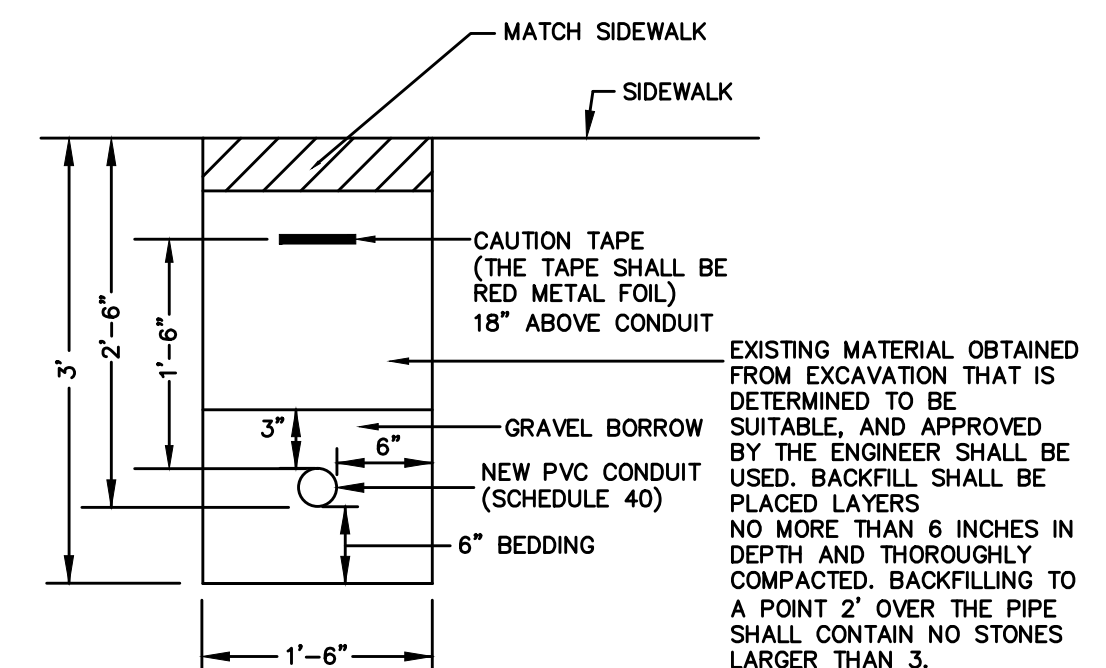
TRENCH EXCAVATION/TEMPORARY PATCH
NOT TO SCALE

SOMERVILLE/CAMBRIDGE BEACON STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	118	201
PROJECT FILE NO.		607209	

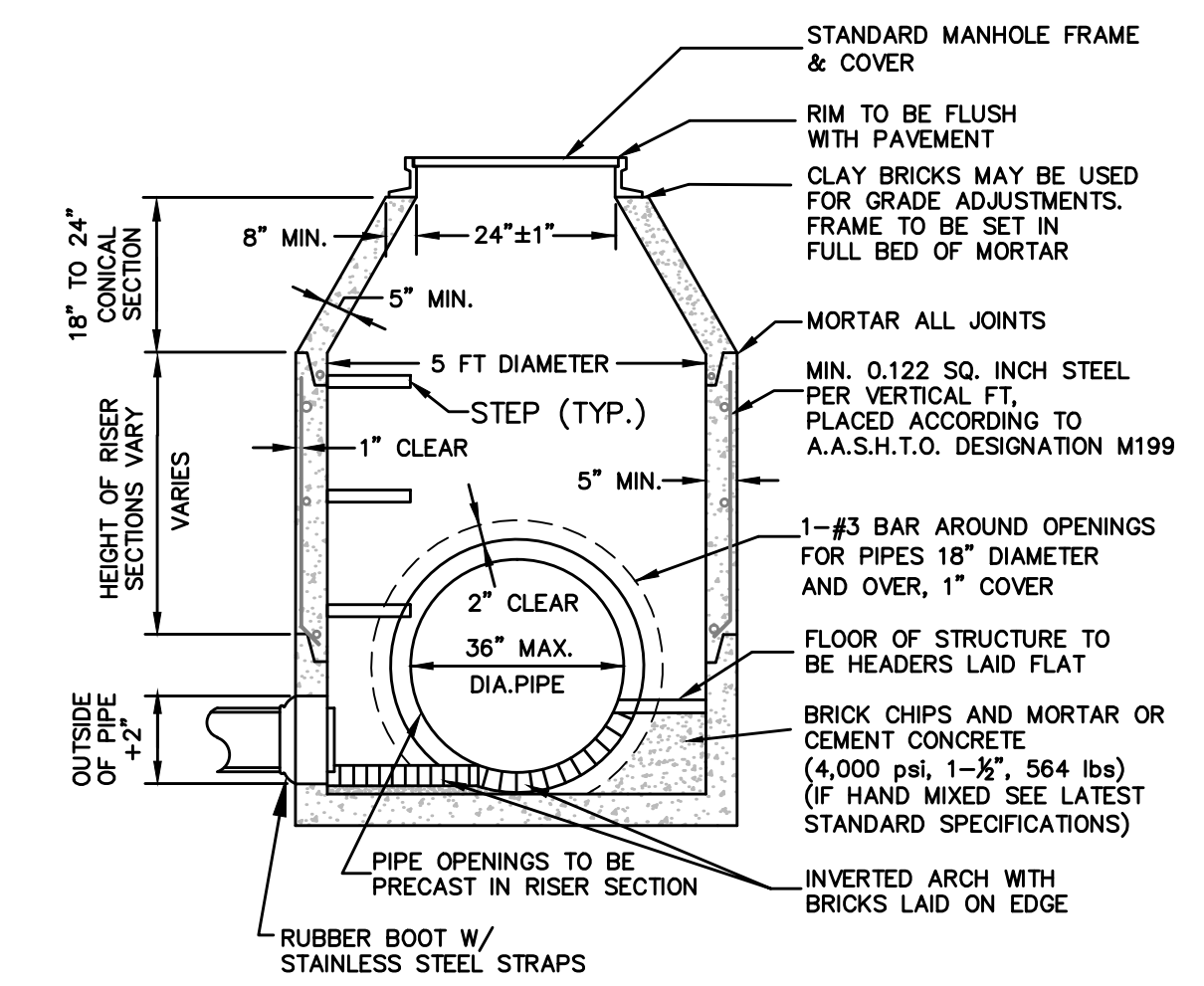
CONSTRUCTION DETAILS



CONDUIT (IN ROADWAY)
NOT TO SCALE



CONDUIT (IN SIDEWALK)
NOT TO SCALE

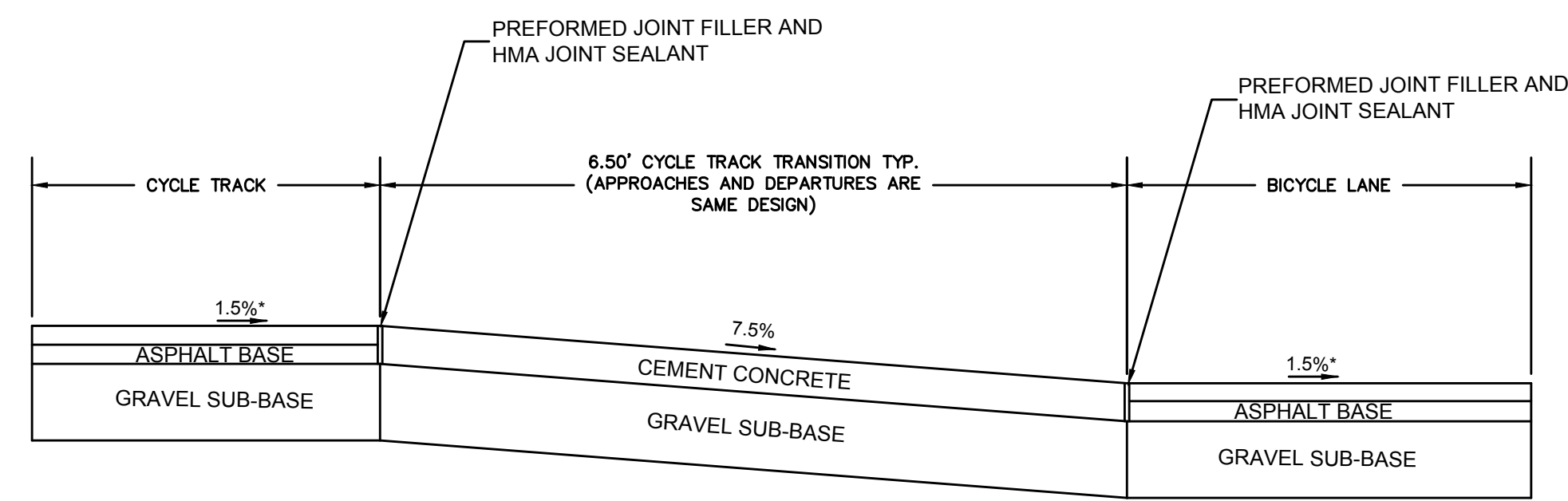


PRECAST CONCRETE SEWER MANHOLE
NOT TO SCALE

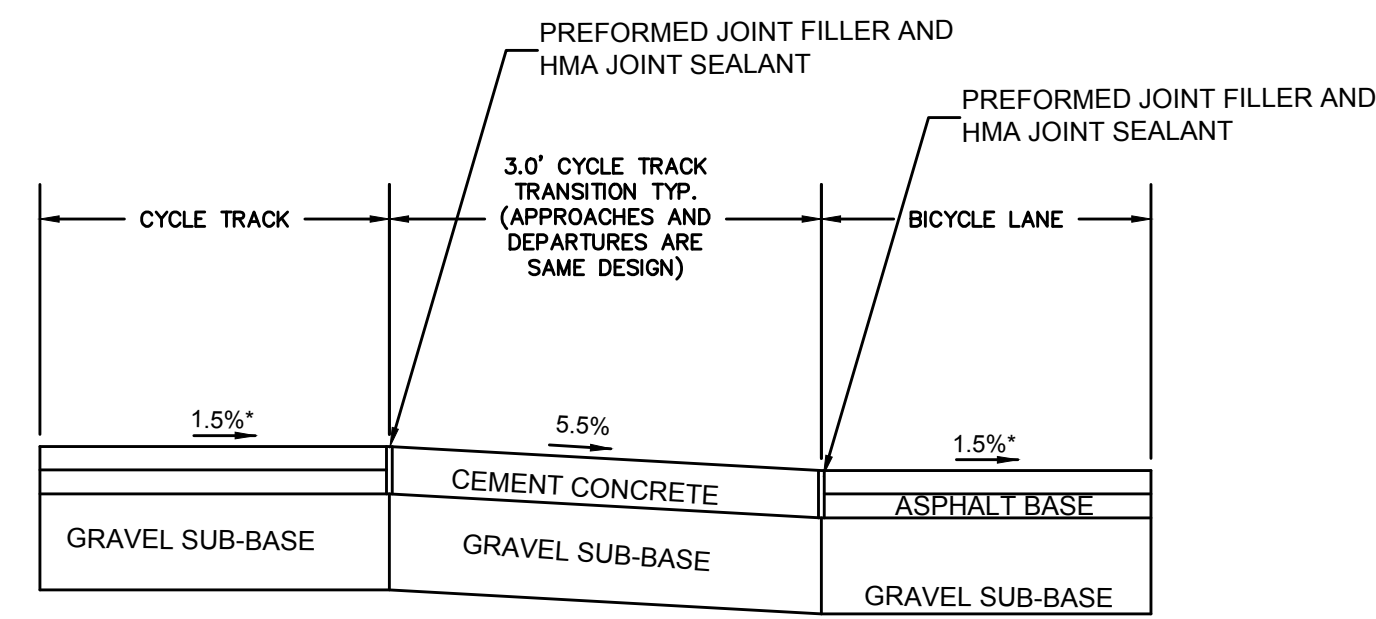
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	119	201
PROJECT FILE NO. 607209			

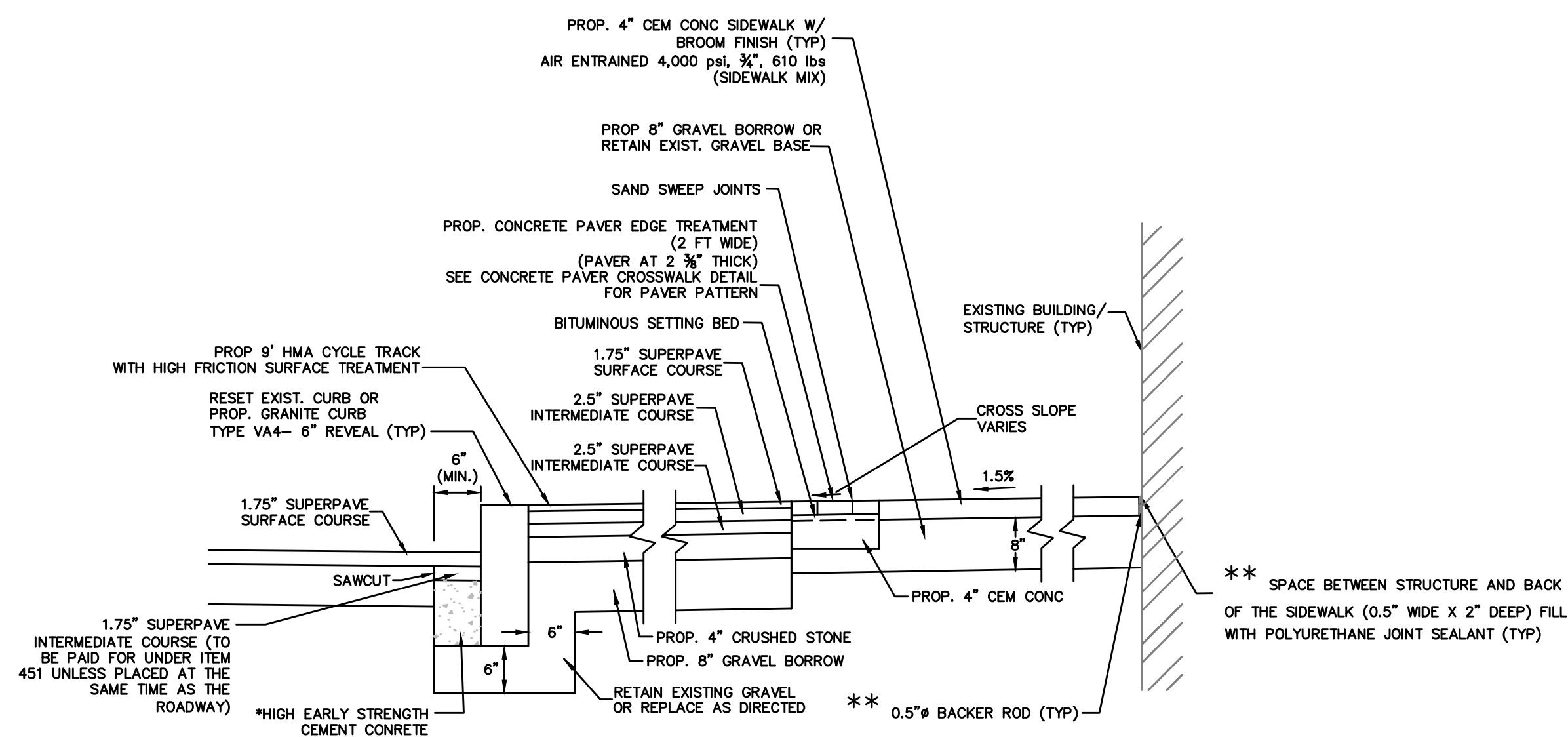
CONSTRUCTION DETAILS



SECTION B-B

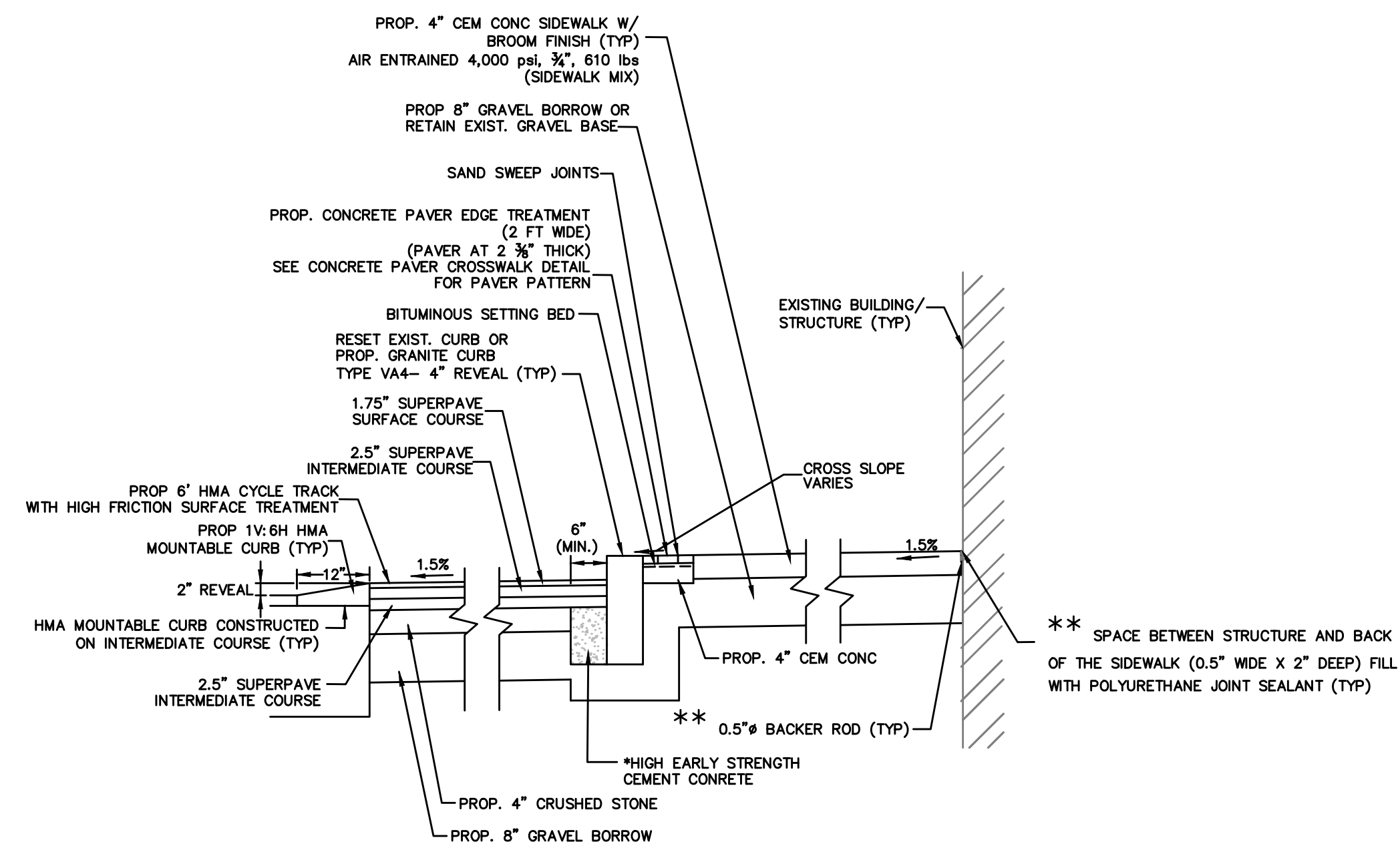


SECTION B-B



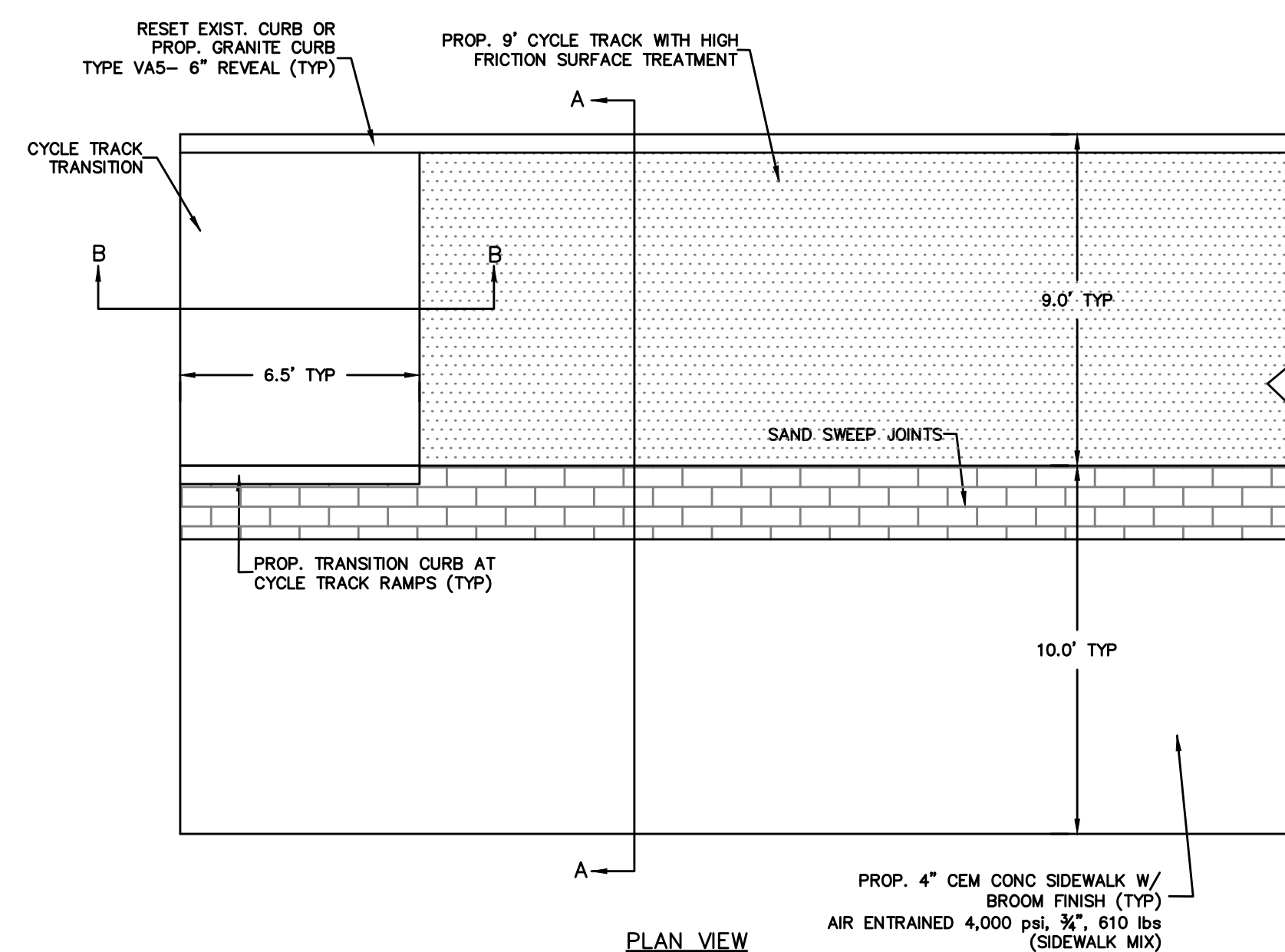
* TO BE INCLUDED IN THE UNIT PRICE OF GRANITE CURB
** TO BE INCLUDED IN THE UNIT PRICE OF CEMENT CONCRETE SIDEWALK

SECTION A-A

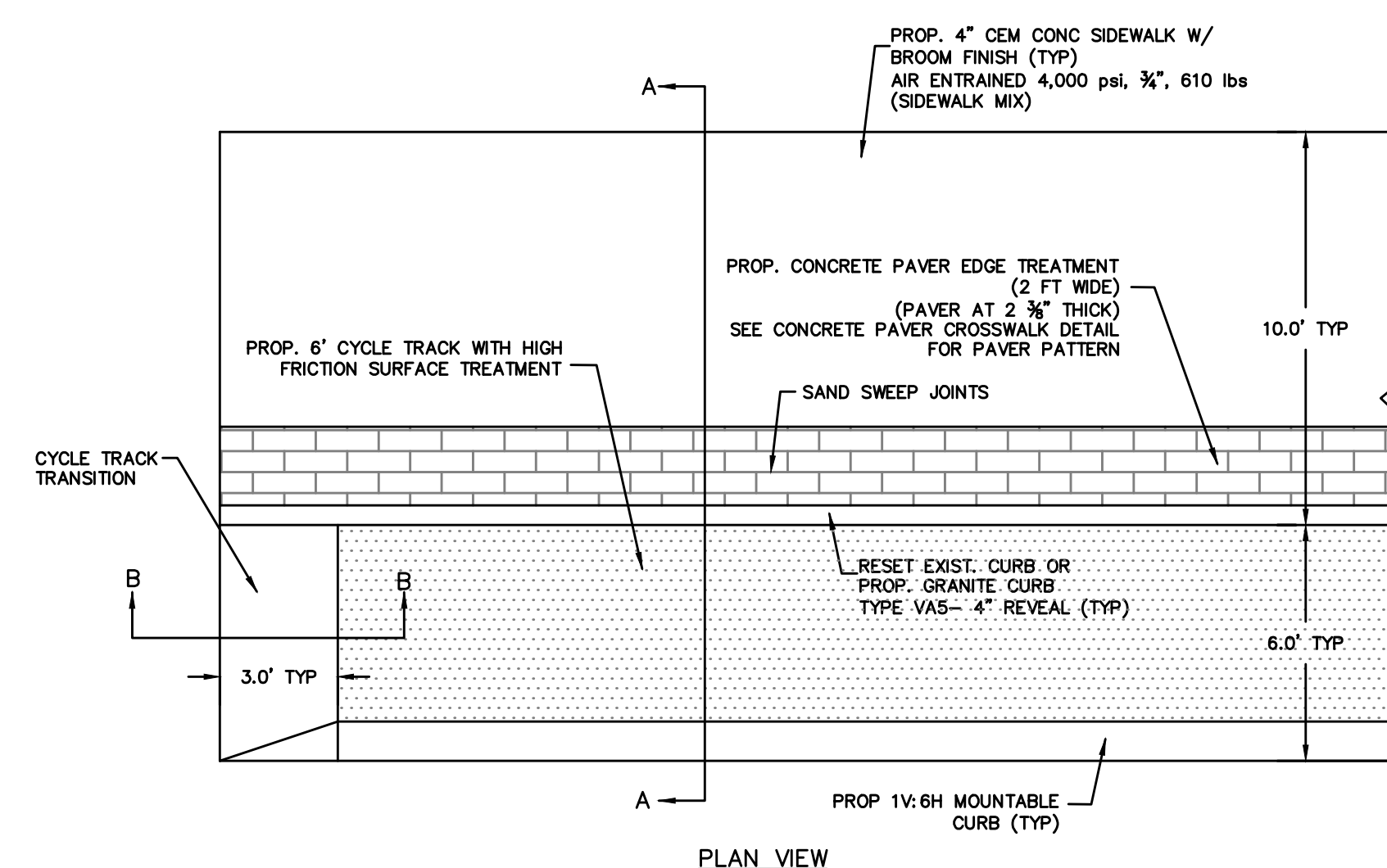


* TO BE INCLUDED IN THE UNIT PRICE OF GRANITE CURB
** TO BE INCLUDED IN THE UNIT PRICE OF CEMENT CONCRETE SIDEWALK

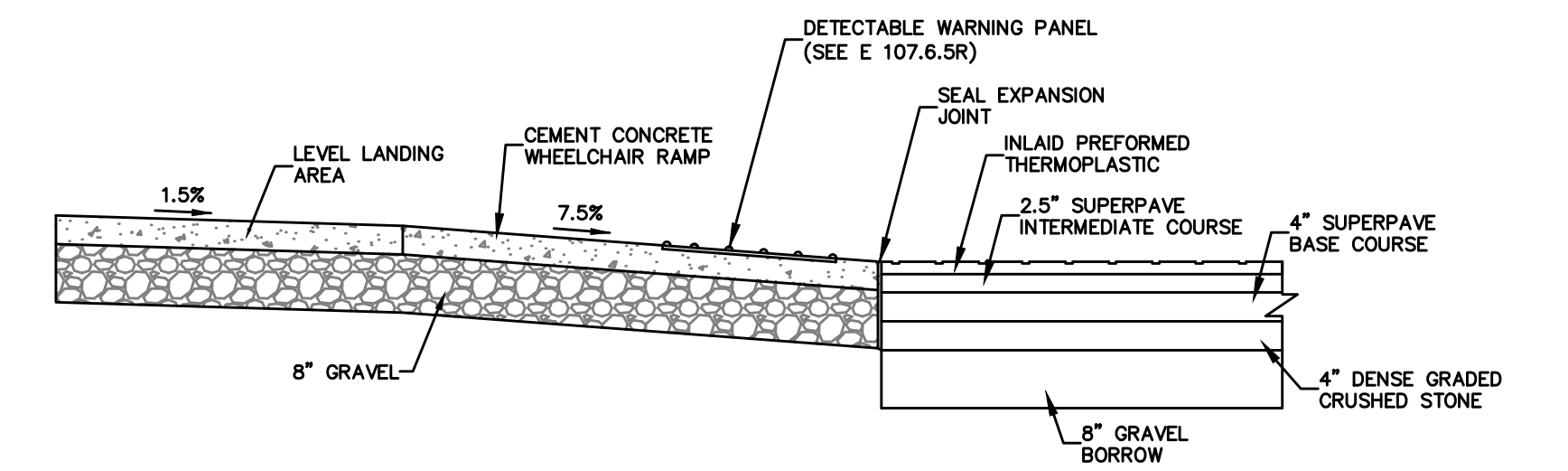
SECTION A-A



9' CYCLE TRACK CONSTRUCTION
NOT TO SCALE



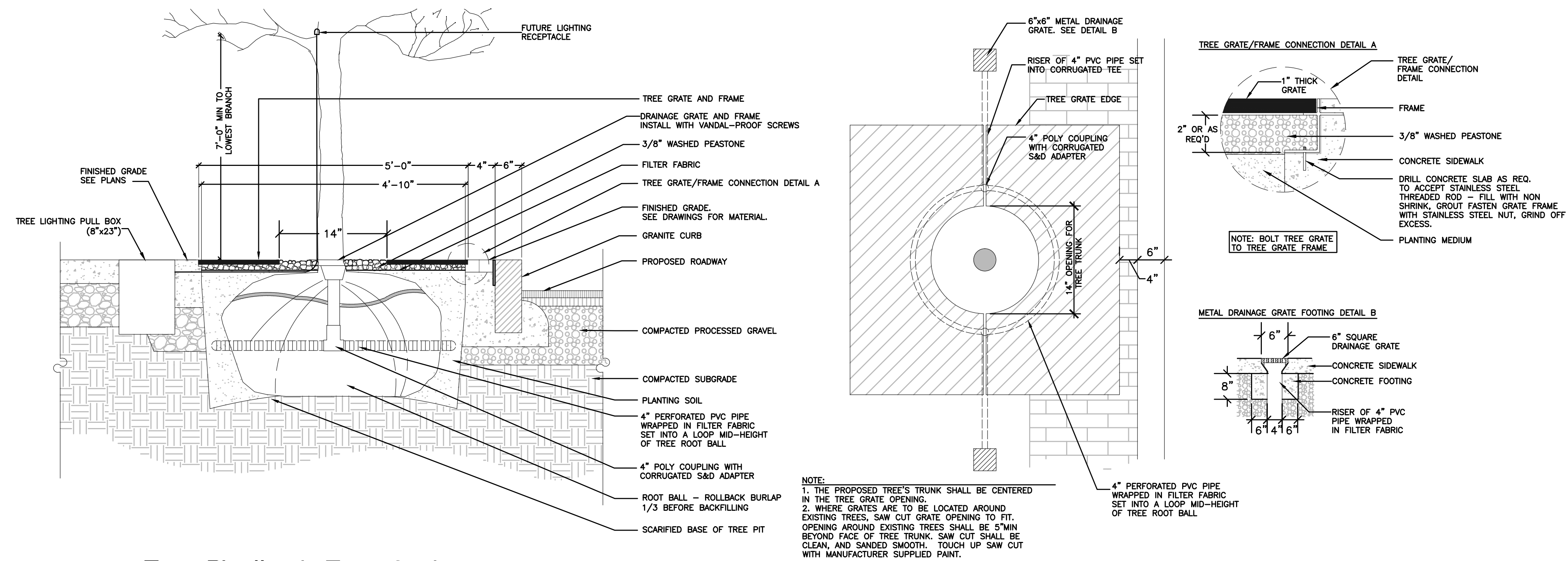
6' CYCLE TRACK CONSTRUCTION
NOT TO SCALE



CEMENT CONCRETE WHEELCHAIR RAMP AND
CONCRETE PAVER CROSSWALK CONSTRUCTION
NOT TO SCALE

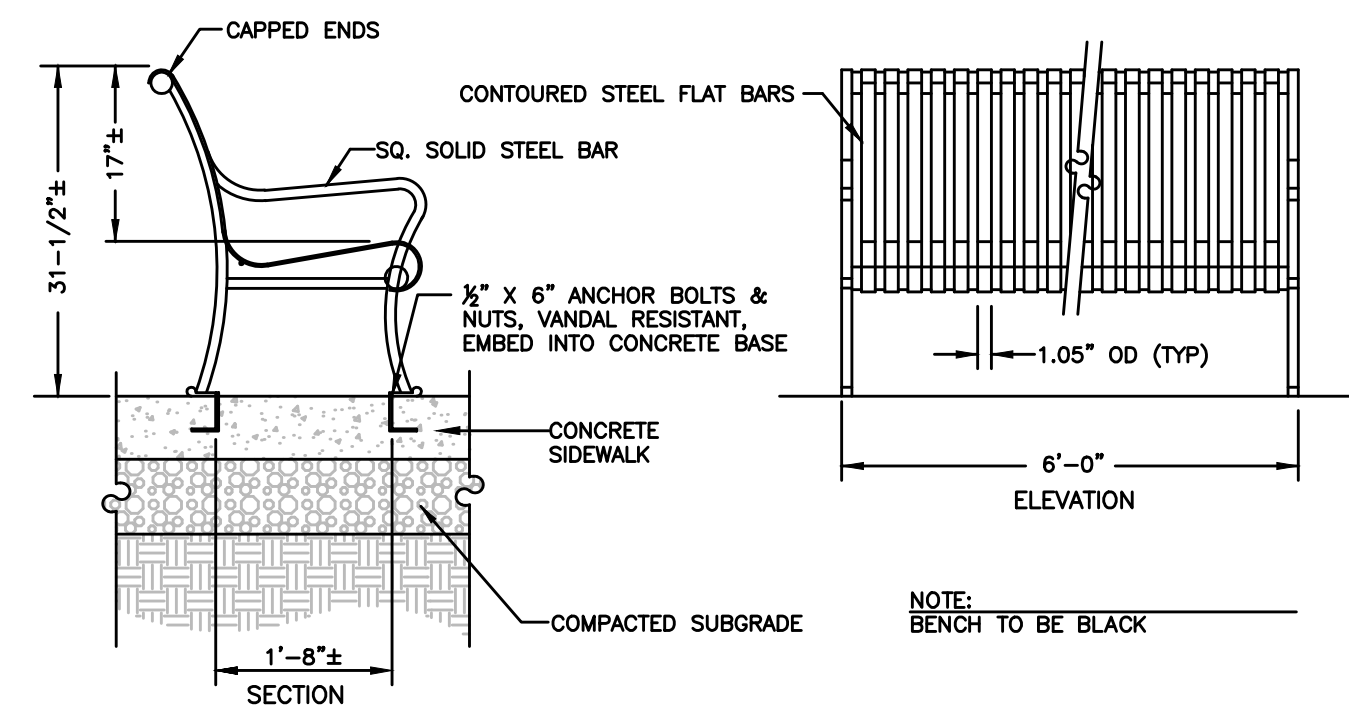
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	116	201
PROJECT FILE NO.		607209	

LANDSCAPE DETAILS

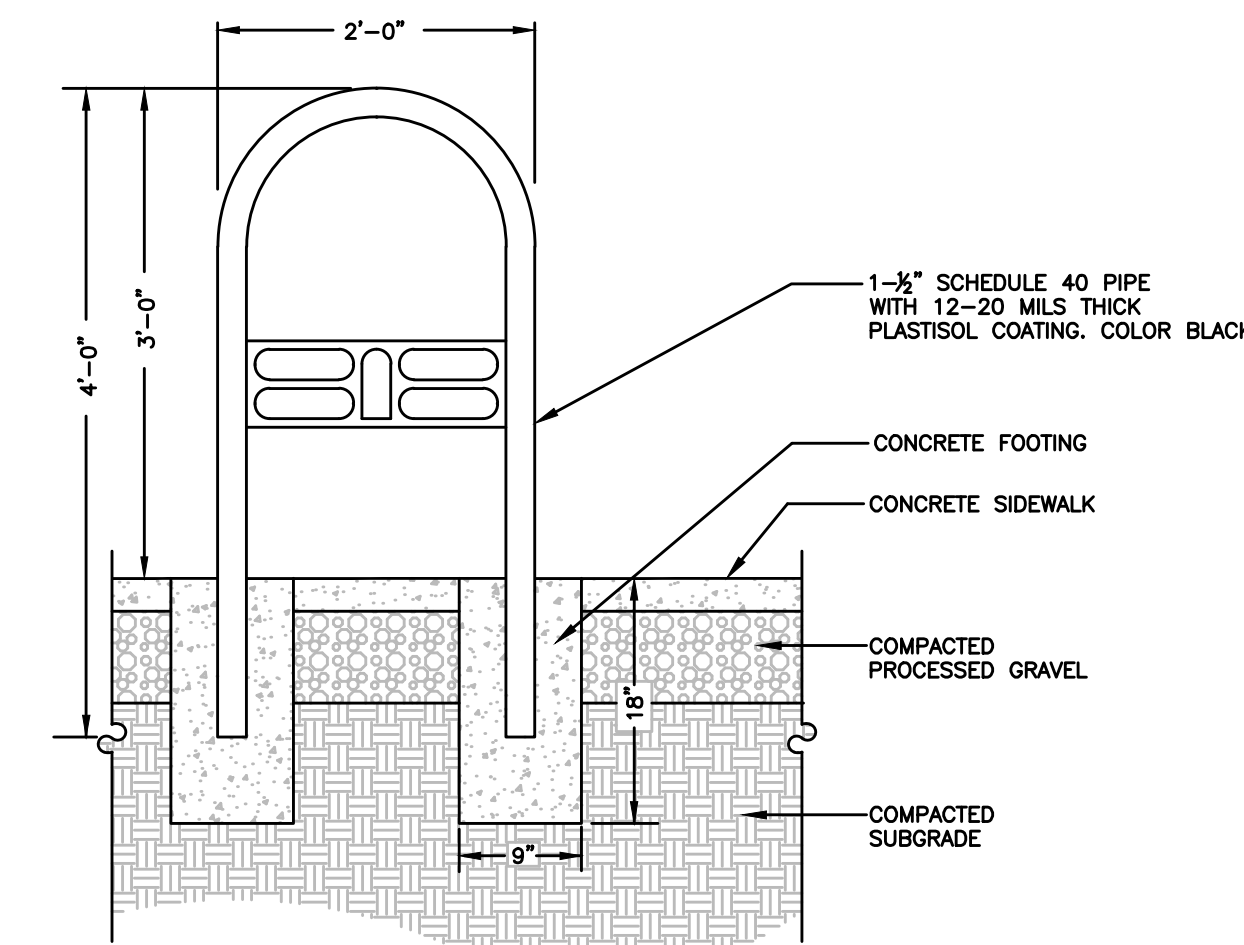


NOTE:
1. THE PROPOSED TREE'S TRUNK SHALL BE CENTERED IN THE TREE GRATE OPENING.
2. WHERE GRATES ARE TO BE LOCATED AROUND EXISTING TREES, SAW CUT GRATE OPENING TO FIT. OPENING AROUND EXISTING TREES SHALL BE 5" MIN BEYOND FACE OF TREE TRUNK. SAW CUT SHALL BE CLEAN, AND SANDED SMOOTH. TOUCH UP SAW CUT WITH MANUFACTURER SUPPLIED PAINT.

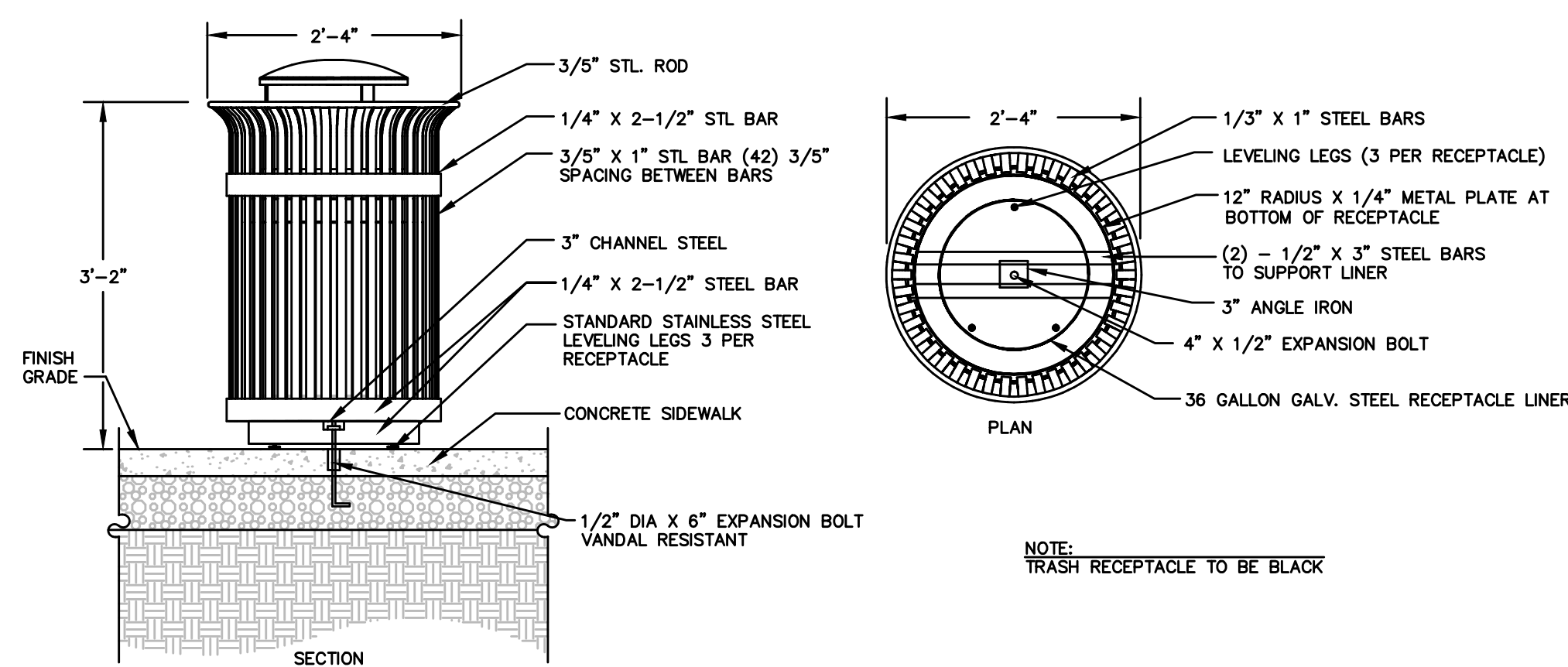
E Tree Planting in Tree Grate with Perforated PVC Pipe and Pull Box
116 NOT TO SCALE



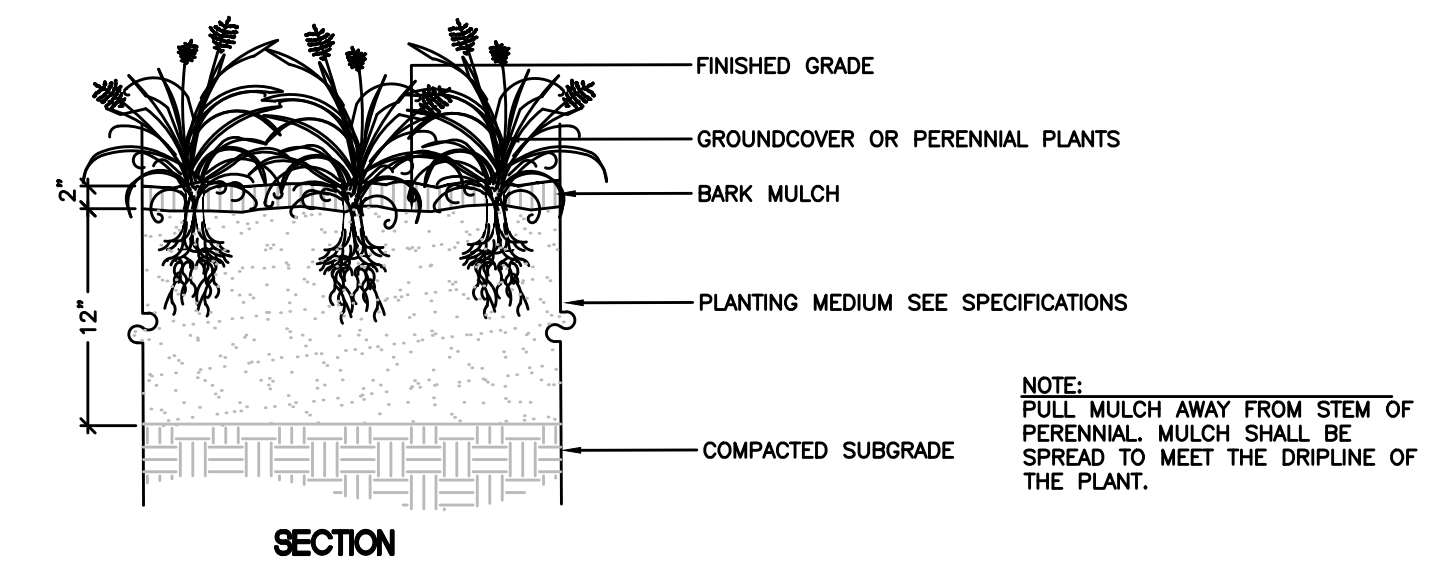
F City of Somerville Standard Bench
116 NOT TO SCALE



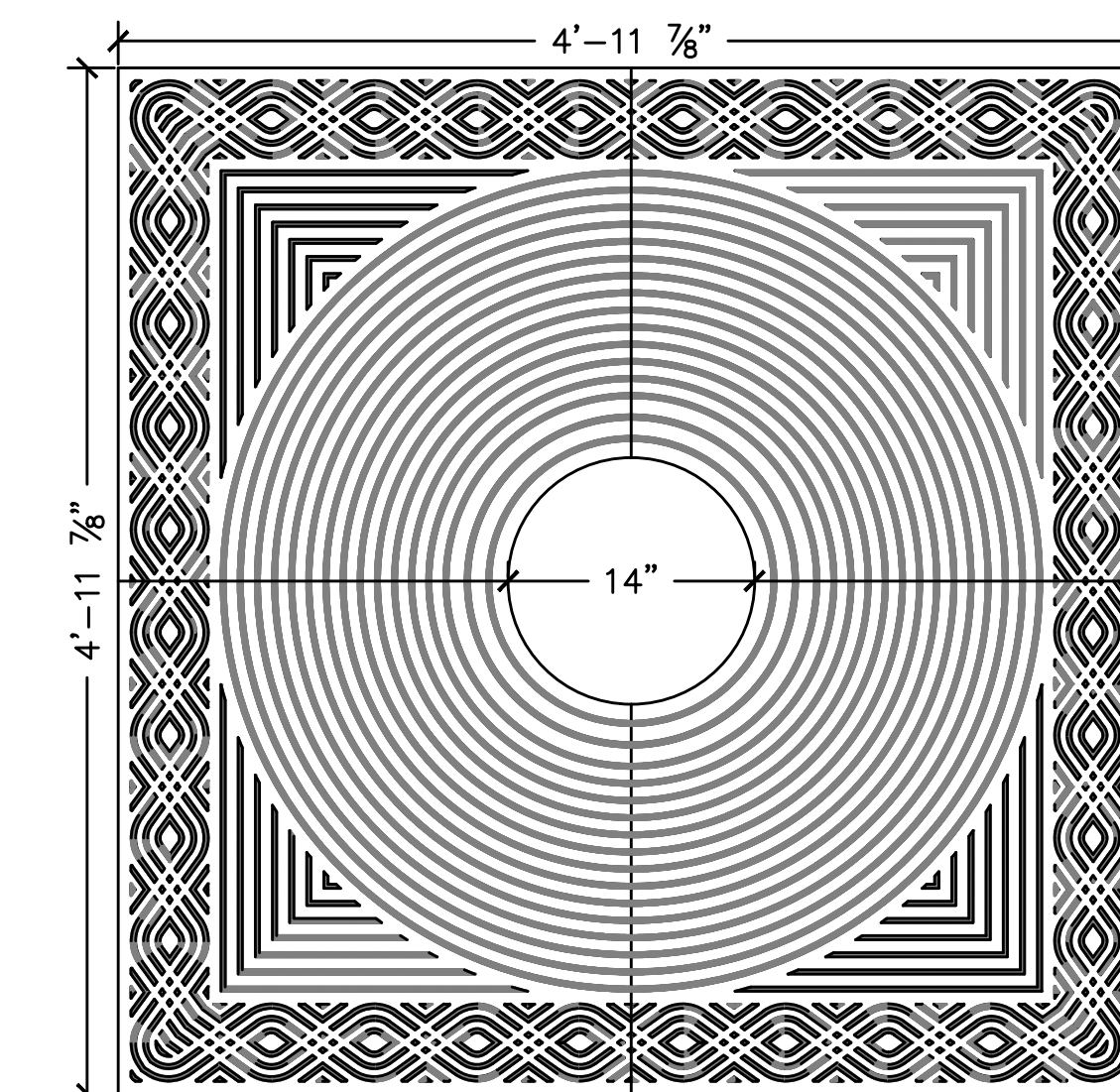
D City of Somerville Standard Bicycle Rack
116 NOT TO SCALE



G City of Somerville Standard Trash Receptacle
116 NOT TO SCALE



B Perennial / Groundcover Planting
116 NOT TO SCALE



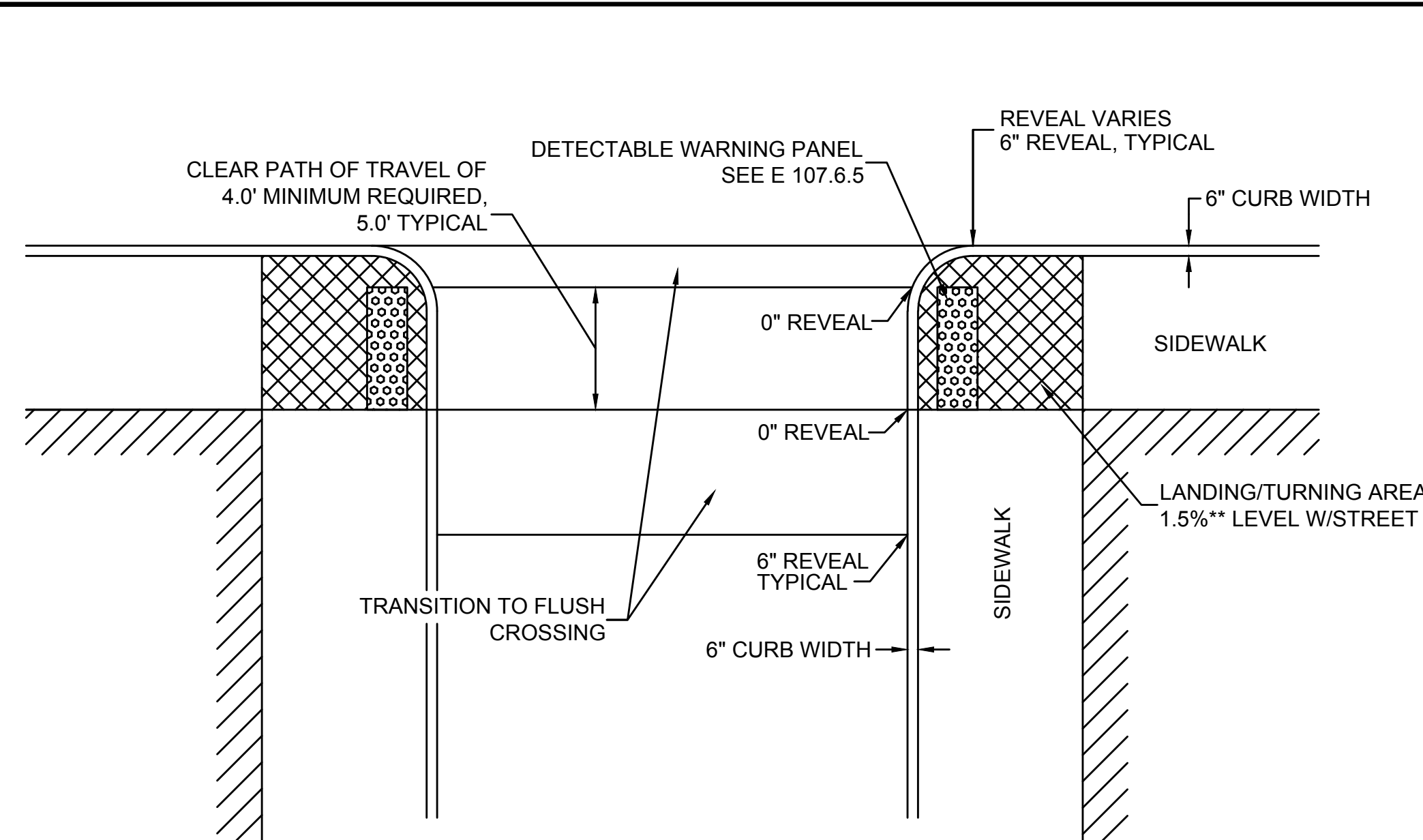
C Tree Grate
116 NOT TO SCALE

NOTE:
1. TREE GRATE TO BE CAST GREY IRON CAST IN 4 PIECES, 1\"/>

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-0025(711)X	120	201
PROJECT FILE NO. 607209			

WHEELCHAIR RAMP DETAILS

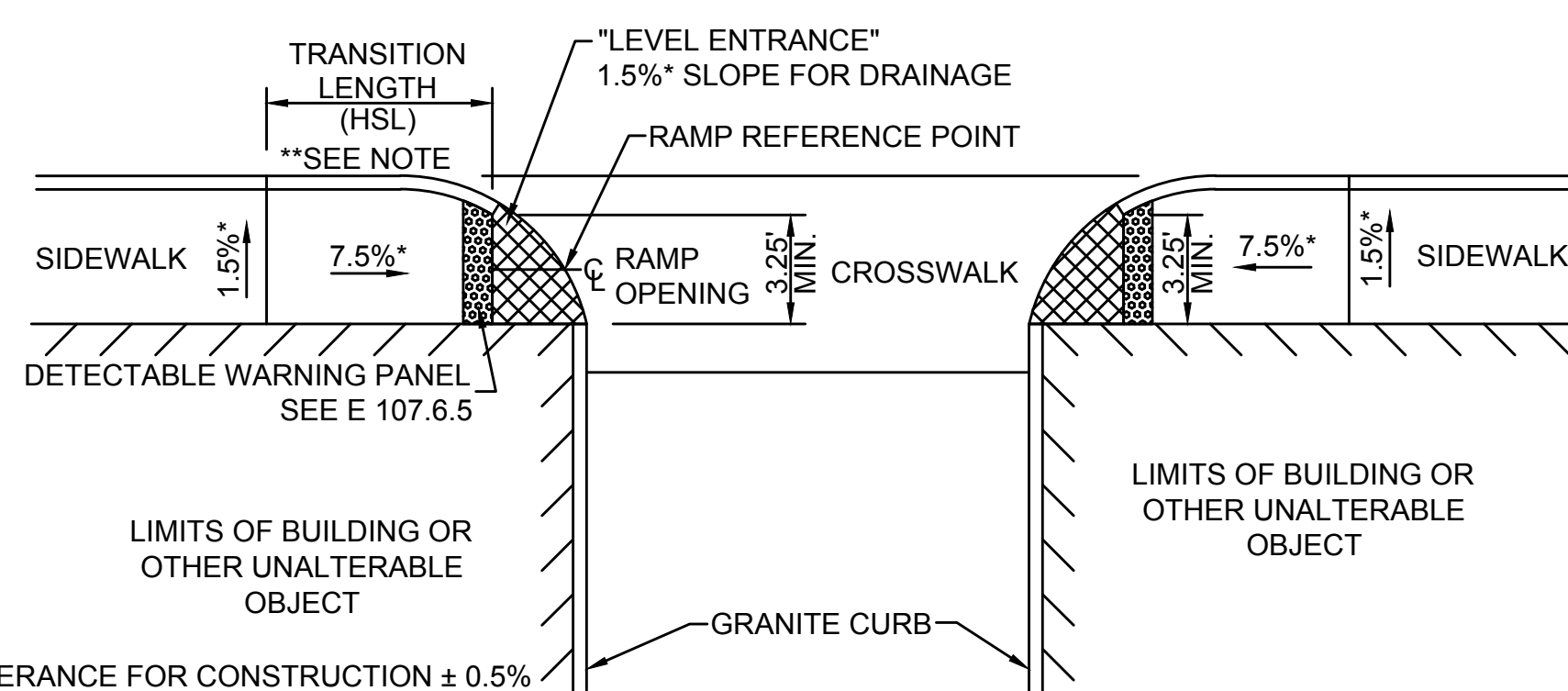


- LEGEND:**
- LANDING AREA - 1.5% ± 0.5% CROSS SLOPE
 - BUILDING OR OTHER UNALTERABLE CONDITION
 - DETECTABLE WARNING PANEL

WCR #	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF ACCESSIBLE ROUTE MIN. 4.00'	CURB REVEAL OTHER THAN 6"	
	STATION	OFFSET			LEFT SIDE	RIGHT SIDE
WCR 7	105+93	35R	10.00'	5.00'	N/A	N/A
WCR 8	106+19	35R	10.00'	5.00'	N/A	N/A
WCR 13	109+46	35R	10.00'	5.00'	N/A	N/A
WCR 14	109+69	35R	10.00'	5.00'	N/A	N/A
WCR 19	114+45	35R	10.00'	5.00'	N/A	N/A
WCR 20	114+65	35R	10.00'	5.00'	N/A	N/A
WCR 23	117+03	35R	10.00'	5.00'	N/A	N/A
WCR 24	117+30	35R	10.00'	5.00'	N/A	N/A

RAISED CROSSWALK

NOT TO SCALE

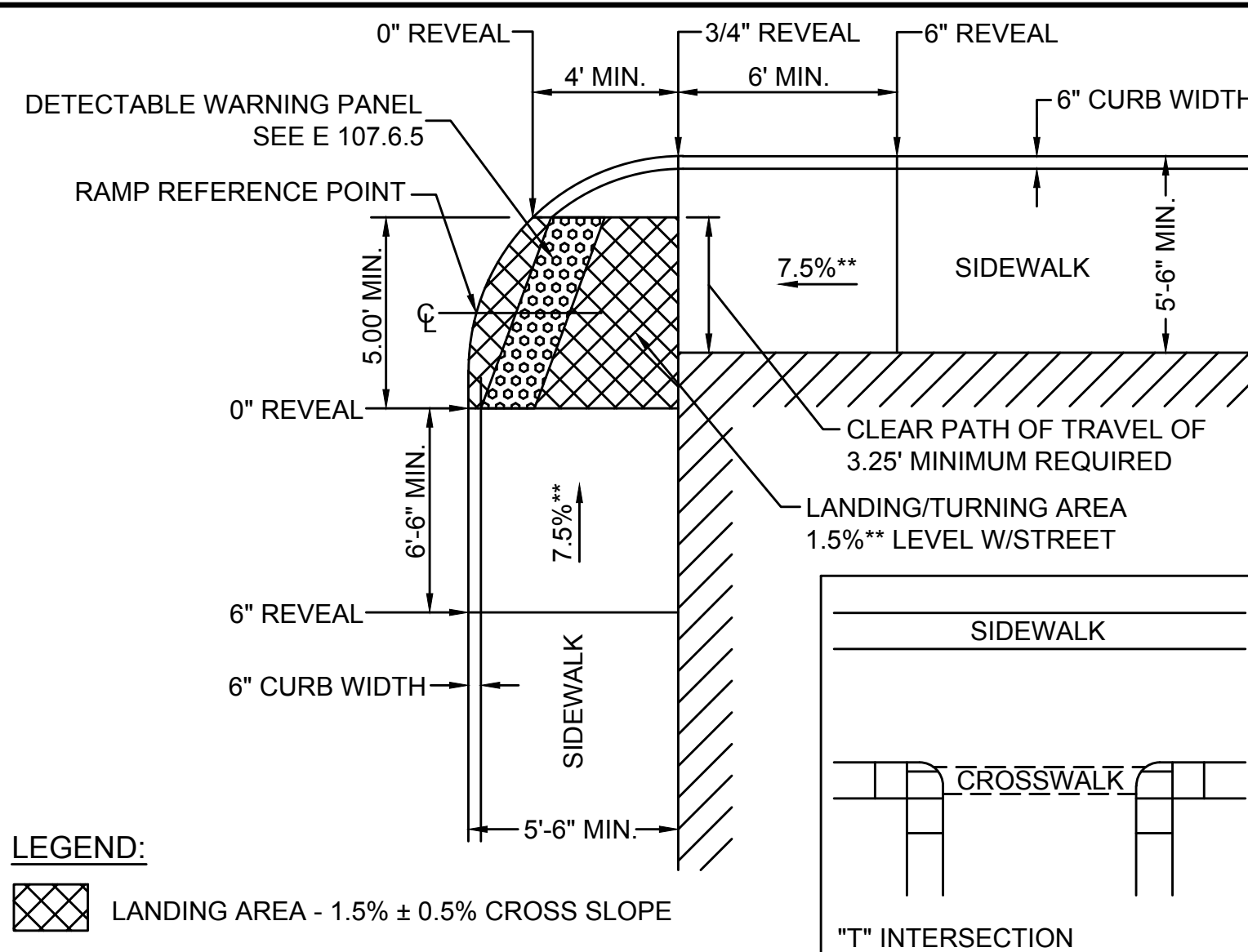


* TOLERANCE FOR CONSTRUCTION ± 0.5%
** HST LENGTH SEE TABLE E 107.9.0

WCR #	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF RAMP ENTRANCE MIN. 3.25'	CLEAR PATH OF TRAVEL MIN. 3.25'	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		CURB REVEAL OTHER THAN 6"	
	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	LEFT SIDE	RIGHT SIDE
WCR 9	108+28	25L	10.00'	5.00'	5.00'	5.18%	6.50'	N/A	4.0"	N/A
WCR 10	108+44	25L	10.00'	5.00'	5.00'	6.04%	N/A	6.50'	N/A	2.0"
WCR 15	110+22	24L	10.00'	5.00'	5.00'	1.12%	8.00'	N/A	2.0"	N/A
WCR 16	110+39	24L	10.00'	5.00'	5.00'	2.70%	N/A	6.50'	N/A	2.0"
WCR 57	145+49	30L	10.00'	5.00'	5.00'	3.67%	6.50'	N/A	N/A	N/A
WCR 58	145+62	30L	10.00'	5.00'	5.00'	4.00%	N/A	6.50'	N/A	4.0"

WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL

NOT TO SCALE



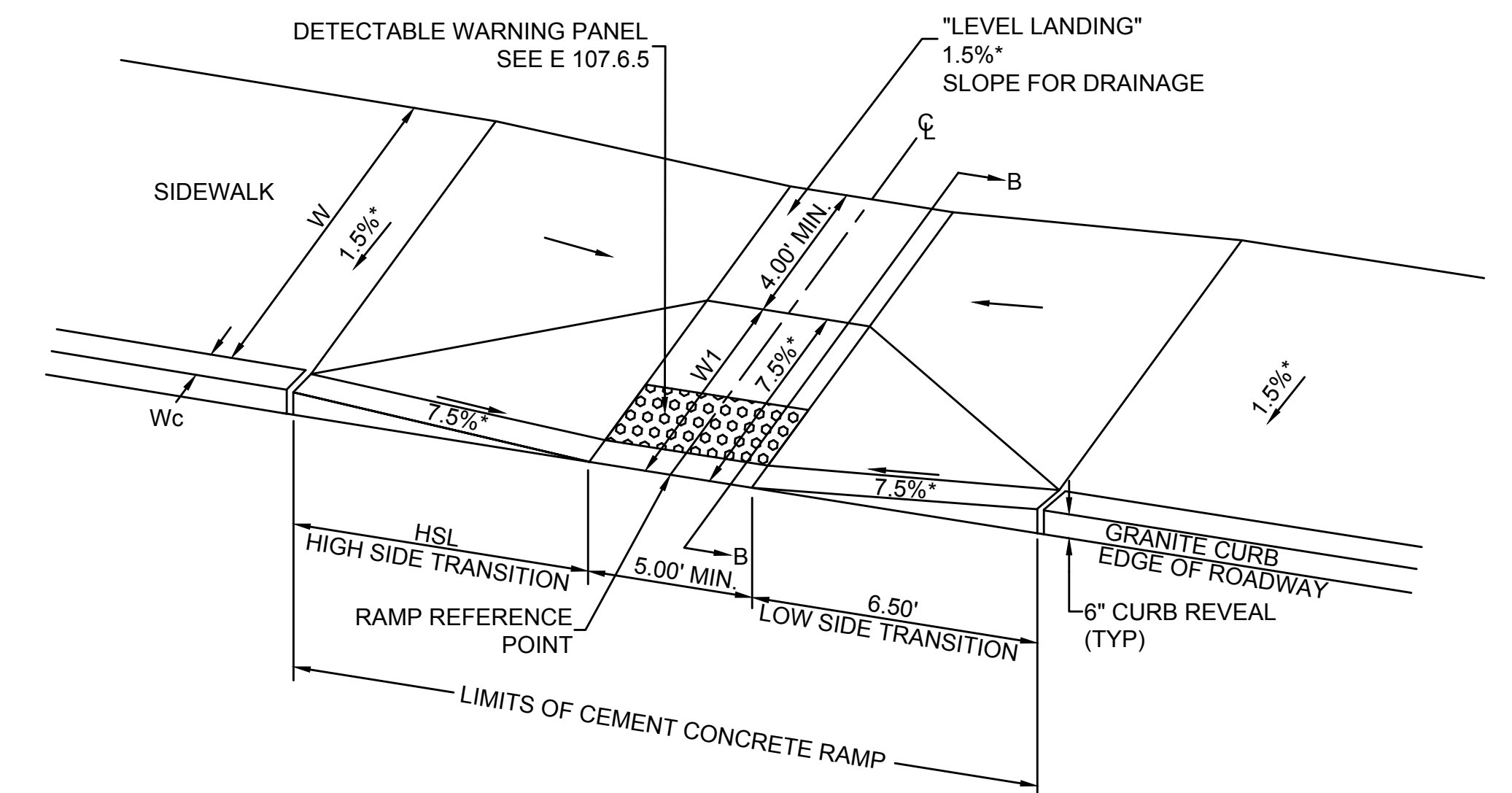
- LEGEND:**
- LANDING AREA - 1.5% ± 0.5% CROSS SLOPE
 - BUILDING OR OTHER UNALTERABLE CONDITION
 - DETECTABLE WARNING PANEL

* TRANSITION LENGTH SHOWN IS MINIMUM. ACTUAL LENGTH DETERMINED FROM TABLE M/E 107.9.0
** TOLERANCE FOR CONSTRUCTION ± 0.5%

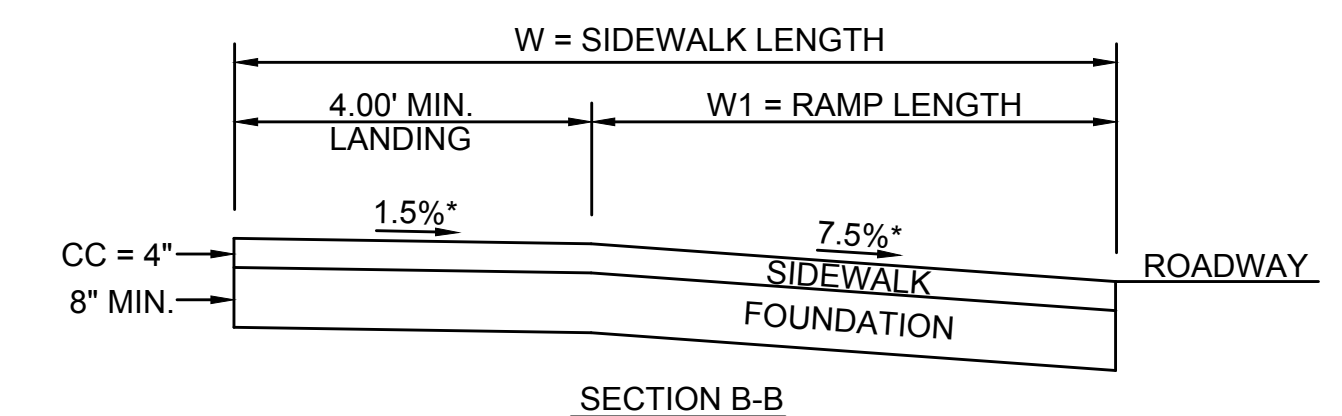
WCR #	RAMP REFERENCE POINT		WIDTH OF SIDEWALK (W)	WIDTH OF RAMP ENTRANCE MIN. 5.00'	CLEAR PATH OF TRAVEL MIN. 3.25'	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		CURB REVEAL OTHER THAN 6"	
	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	LEFT SIDE	RIGHT SIDE
WCR 2	110+72	31R	10.00'	5.00'	5.00'	0.40%	6.50'	13.50'	3.2"	6.5"
WCR 17	112+17	25L	5.83'	5.00'	8.00'	2.64%	8.00'	9.00'	3.0"	5.8" (EX)
WCR 18	112+39	25L	5.25'	5.00'	8.00'	1.41%	6.50'	9.00'	4.5" (EX)	3.0"
WCR 22	116+33	22L	6.83'	5.00'	8.00'	0.68%	6.50'	6.50'	4.7" (EX)	4.8"
WCR 31	123+19	26L	5.50'	5.00'	10.75'	2.00%	6.50'	6.50'	4.8"	4.8" (EX)
WCR 32	123+37	26L	5.33'	5.00'	5.50'	2.08%	8.50'	6.50'	5.3" (EX)	3.6"
WCR 39	131+84	28L	8.28'	5.00'	5.00'	1.00%	9.60'	6.50'	4.0"	0.0"
WCR 40	132+18	27L	8.80'	5.00'	5.00'	1.00%	6.50'	11.70'	4.8"	4.7"
WCR 45	135+00	25L	9.00'	5.00'	8.00'	1.12%	9.00'	6.50'	4.0"	5.0"
WCR 46	135+21	25L	5.00'	5.00'	8.00'	1.11%	6.50'	6.50'	5.0"	4.0"
WCR 47	138+03	24L	6.58'	5.00'	8.00'	1.85%	6.50'	6.50'	2.0"	3.6"
WCR 48	138+33	24L	6.17'	5.00'	8.00'	1.48%	6.50'	6.50'	4.4" (EX)	2.0"
WCR 59	146+09	30R	4.00'	5.00'	7.30'	1.35%	8.00'	6.50'	4.2"	4.2"
WCR 63	146+95	31L	7.00'	5.00'	4.50'	2.63%	6.50'	6.50'	3.8"	3.1"
WCR 64	147+22	31L	7.00'	5.00'	8.00'	3.10%	6.50'	6.50'	5.0"	3.1"
WCR 65	149+35	30L	6.50'	5.00'	8.00'	1.89%	6.50'	6.50'	5.4"	2.4"
WCR 66	149+63	30L	6.00'	5.00'	8.00'	0.60%	6.50'	6.50'	4.0"	4.0"
WCR 67	151+35	30R	4.50'	5.00'	7.50'	0.70%	8.00'	9.00'	4.0"	4.7"
WCR 68	151+54	30R	4.58'	5.00'	4.00'	0.72%	4.00'	6.00'	2.0"	2.0"
WCR 71	151+91	31L	6.17'	5.00'	4.00'	1.90%	10.00'	6.50'	1.2"	2.8" (EX)
WCR 72	152+17	31L	7.00'	5.00'	4.00'	1.89%	6.50'	6.50'	4.0"	4.0"
WCR 75	156+86	31L	5.50'	5.00'	7.30'	2.64%	6.50'	7.50'	4.2"	4.7"
WCR 76	157+06	31L	11.00'	5.00'	9.00'	0.91%	6.50'	9.00'	3.1"	4.0"
WCR 77	160+71	31L	6.50'	5.00'	8.00'	1.63%	10.50'	6.50'	4.0"	4.0"
WCR 78	160+98	30L	6.75'	5.00'	10.00'	1.34%	6.50'	6.50'	4.0"	4.0"

"T" INTERSECTION WHEELCHAIR RAMP

NOT TO SCALE



- LEGEND:**
- HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0R)
 - W = SIDEWALK WIDTH
 - W1 = PERPENDICULAR RAMP LENGTH
 - * = TOLERANCE FOR CONSTRUCTION ± 0.5%
 - USABLE SIDEWALK WIDTH PER AAB = W-Wc
 - RAMP LENGTH, W1=W-4.00' MIN.



WCR #	RAMP REFERENCE POINT		LENGTH OF PRIMARY RAMP (W1)	WIDTH OF SIDEWALK (W)	WIDTH OF RAMP ENTRANCE MIN. 5.00'	DEPTH OF LEVEL LANDING MIN. 4.00'	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		CURB REVEAL OTHER THAN 6"	
	STATION	OFFSET						LEFT SIDE	RIGHT SIDE	LEFT SIDE	RIGHT SIDE
WCR 1	100+55	37R	4.00'	9.00'	5.00'	4.00'	7.43%	15.00'	10.00'	7.2"	7.2"
WCR 3	102+23	15R	6.60'	28.00'	5.00'	4.00'	1.69%	5.50'	5.50'	4.0"	4.0"
WCR 4	102+29	18L	6.60'	11.00'	5.00'	4.00'	1.82%	11.00'	6.00'	3.0"	3.0"
WCR 5	102+42	37R	6.60'	11.00'	5.00'	4.00'	3.92%	6.00'	15.00'	4.0"	4.0"
WCR 6	102+73	37R	6.60'	10.00'	5.00'	4.00'	4.06%	6.00'	6.00'	3.0"	3.0"
WCR 11	109+22	29R	5.50'	10.00'	5.00'	4.00'	2.89%	6.50'	9.00'	1.2"	2.4"
WCR 12	109+22	17L	5.50'	10.00'	5.00'	4.00'	2.54%	9.00'	6.50'	5.4"	4.0"
WCR 21	116+05	22L	3.40'	10.00'	5.00'	4.00'	2.21%	11.00'	9.00'	2.0"	5.4" (EX)
WCR 25	117+53	29R	6.00'	10.00'	5.00'	4.00'	0.94%	6.50'	5.50'	4.0"	2.0"
WCR 26	117+53	17L	6.00'	10.00'	5.00'	4.00'	0.02%	6.50'	6.50'	4.8"	4.8"
WCR 27	122+70	17L	6.50'	12.30'	5.00'	4.00'	1.04%	6.50'	9.00'	4.0"	4.0"
WCR 28	122+70	29L	3.30'	7.80'	5.00'	4.00'	1.04%	3.50'	6.50'	2.8"	5.4"
WCR 29	122+81	34R	4.00'	6.50'	5.00'	4.00'	1.00%	6.50'	3.50'	4.2"	3.0"
WCR 30	123+07	34R	4.65'	9.20'	5.00'	4.00'	4.80%	11.00'	6.50'	1.0"	1.0"
WCR 33	128+44	29R	2.50'	7.00'	5.00'	4.00'	1.78%	6.50'	6.50'	3.6"	5.5"
WCR 34	128+70	29L	3.15'	7.32'	5.00'	4.00'	2.78%	6.50'	6.50'	3.6"	3.6"
WCR 35	130+40	28L	2.80'	7.10'	5.00'	4.00'	2.16%	6.50'	14.00'	4.0"	4.0"
WCR 36	130+66	28L	2.70'	6.90'	5.00'	4.00'	2.90%	14.00'	6.50'	4.0"	4.0"
WCR 37	131+71	17L	5.00'	13.50'	5.00'	4.00'	0.77%	6.50'	4.00'	4.0"	4.0"
WCR 38	131+72	16R	6.50'	11.50'	5.00'	4.00'	1.53%	6.50'	6.50'	4.0"	4.0"
WCR 41	131+94	47L	6.50'	12.70'	5.00'	4.00'	7.96%	6.50'	15.00'	4.0"	4.0"
WCR 42	132+14	46R	6.50'	14.70'	5.00'	4.00'	5.28%	15.00'	6.50'	5.0"	4.0"
WCR 43	132+35	29R	2.90'	7.45'	5.00'	4.00'	0.77%	6.50'	6.00'	5.0"	4.0"
WCR 44	132+35	17L	6.50'	12.50'	5.00'	4.00'	2.53%	6.00'	6.50'	4.7"	4.7"
WCR 49	140+95	25R	3.00'	11.34'	5.00'	4.00'	1.54%	4.00'	6.50'	1.2"	2.6"
WCR 50	141+04	17L	6.50'	12.50'	5.00'	4.00'	0.00%	6.50'	6.50'	4.2"	3.0"
WCR 51	141+04	39R	6.50'	14.90'	5.00'	4.00'	2.61%	6.50'	6.50'	5.0"	1.2"
WCR 52	141+38	30L	6.50'	15.73'	5.00'	4.00'	1.33%	6.50'	6.50'	3.1"	3.1"
WCR 53	141+43	37R	5.00'	10.15'	5.00'	4.00'	1.94%	6.50'	6.50'	5.4"	5.4"
WCR 54	141+70	30L	6.36'	16.50'	5.00'	4.00'	0.83%	6.50'	6.50'	3.6"	2.4"
WCR 55	141+72	17R	5.00'	10.00'	5.00'	4.00'	1.39%	6.50'	6.50'	3.4"	3.0"
WCR 56	141+88	17R	6.50'	13.62'	5.00'	4.00'	0.78%	6.50'	6.50'	2.8"	2.0"
WCR 60	146+25	28L	4.75'	10.00'	5.00'	4.00'	0.68%	13.60'	8.00'	3.0"	3.0"
WCR 61	146+70	23R	6.00'	10.00'	5.00'	4.00'	1.94%	6.50'	6.50'	4.0"	4.0"
WCR 62	146+70	23L	5.40'	10.00'	5.00'	4.00'	1.94%	6.50'	6.50'	4.0"	4.0"
WCR 69	151+72	23R	5.75'	9.75'	5.00'	4.00'	1.42%	6.50'	4.00'	4.1"	4.1"
WCR 70	151+72	23L	6.00'	10.00'	5.00'	4.00'	1.67%	9.00'	10.00'	1.2"	1.2"
WCR 73	156+61	23R	4.00'	8.25'	5.00'	4.00'	2.00%	7.00'	11.00'	4.0"	4.0"
WCR 74	156+61	23L	6.00'	10.00'	5.00'	4.00'	2.04%	11.00'	6.50'	4.2"	4.2"

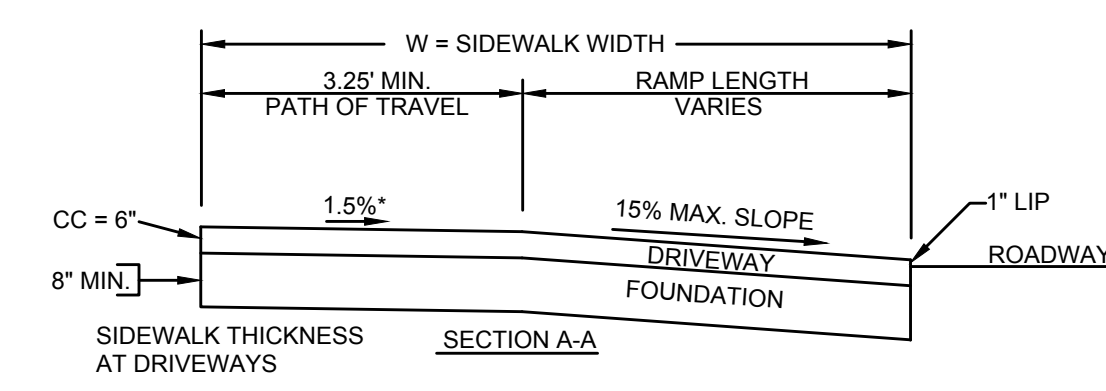
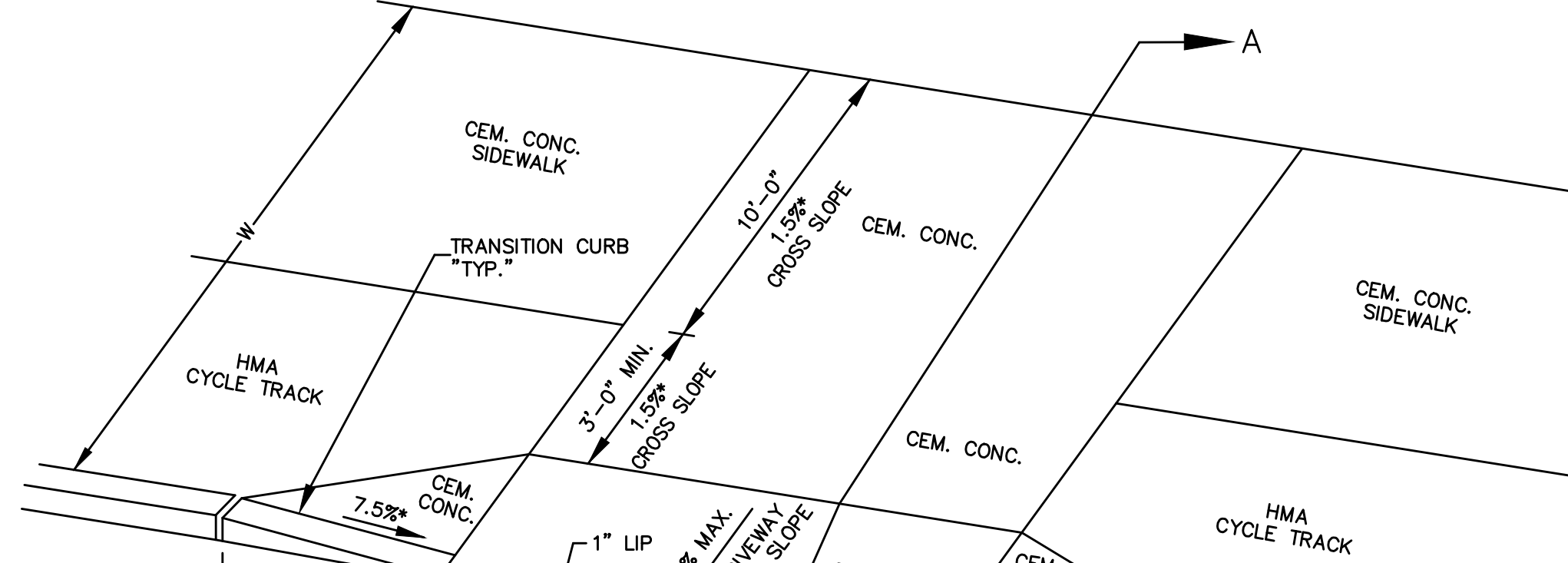
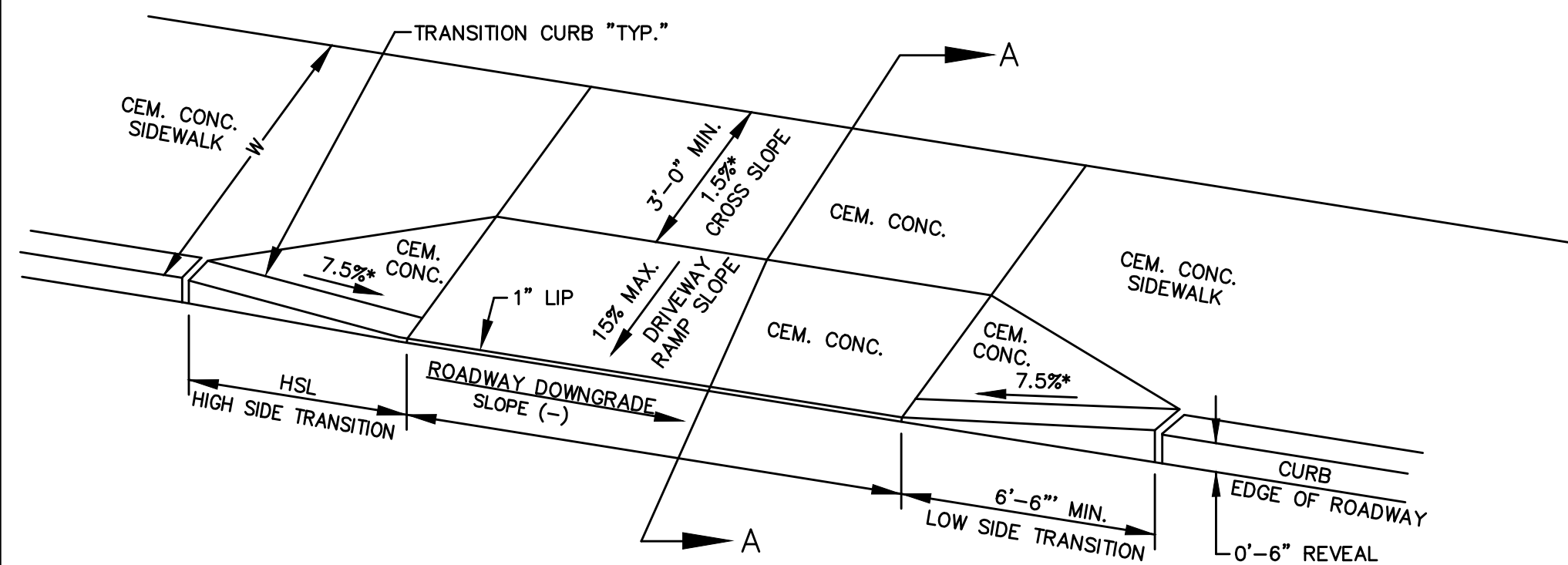
WHEELCHAIR RAMP WITH LESS THAN 12.33' SIDEWALK

NOT TO SCALE

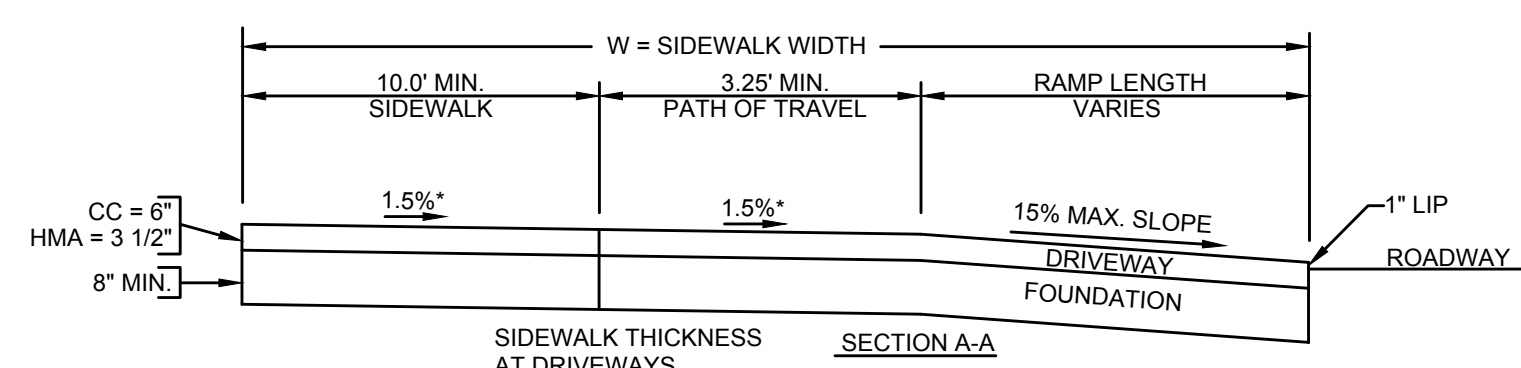
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	121	201
PROJECT FILE NO. 607209			

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

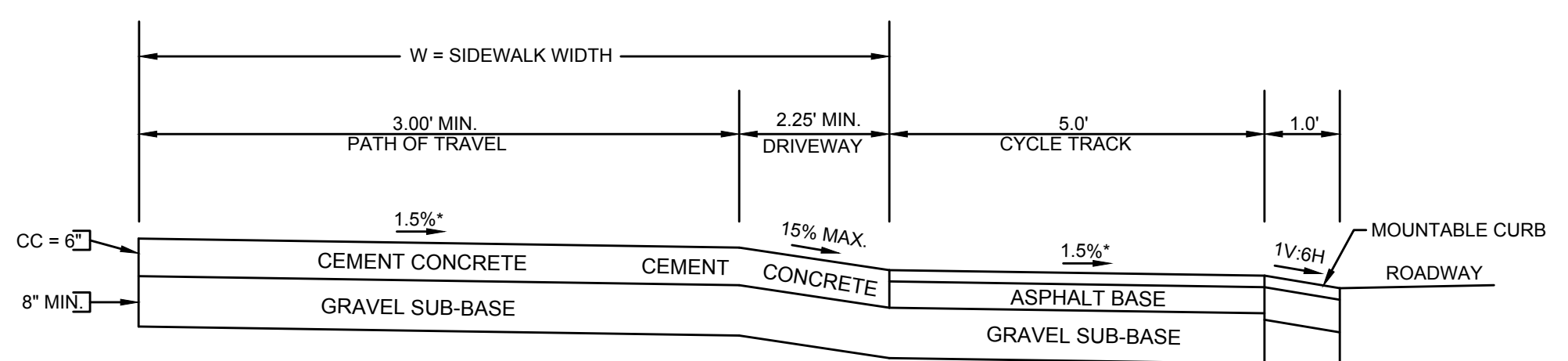
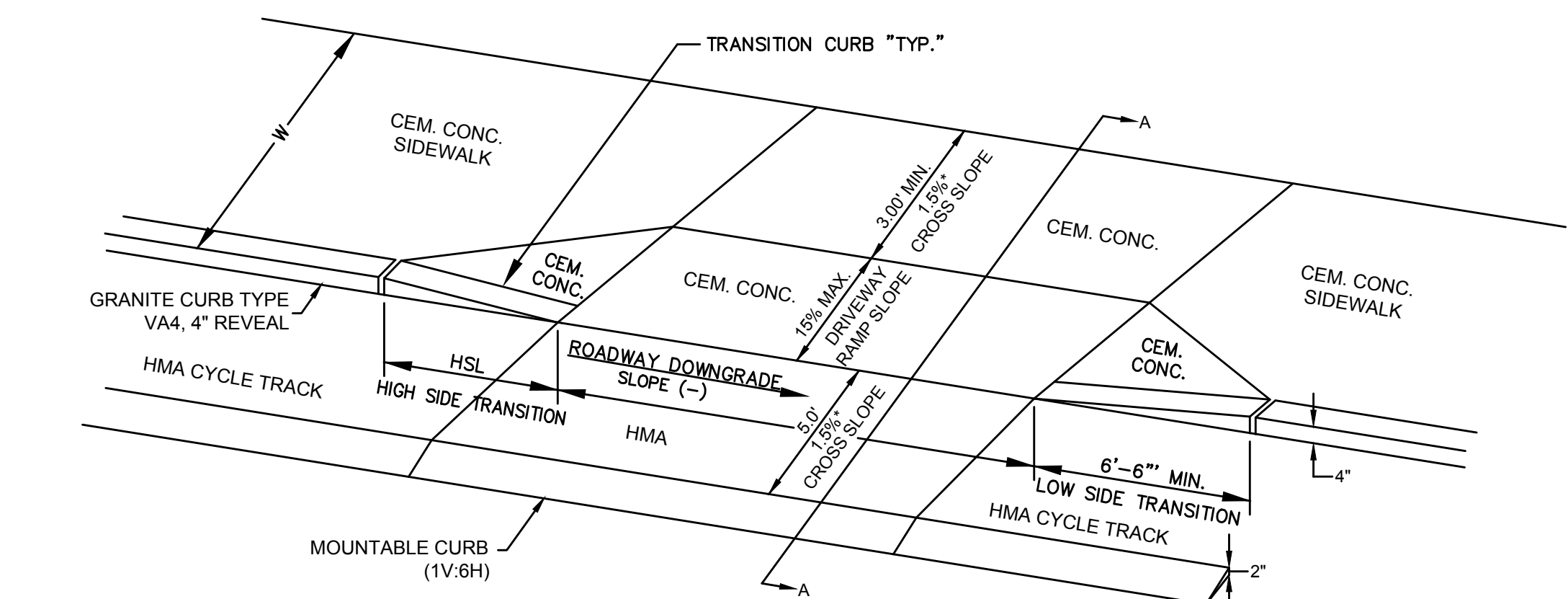


DWY #	RAMP REFERENCE POINT	WIDTH OF SIDEWALK (W)	PATH OF TRAVEL MIN. 3.00'	DRIVEWAY RAMP SLOPE	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		
						LEFT SIDE	RIGHT SIDE	
DWY 1	102+09	15R	20.75'	18.75'	0.8%	6.50'	15.0'	
DWY 2	102+70	82R	8.70'	4.70'	8.7%	0.3%	6.50'	11.0'
DWY 3	103+02	18L	8.60'	5.25'	14.2%	-3.7%	14.0'	NA
DWY 4	103+19	17L	10.00'	5.50'	14.2%	-2.1%	NA	6.50'
DWY 36	124+53	23L	8.75'	5.00'	9.5%	1.6%	6.50'	9.0'
DWY 37	125+49	23L	9.75'	7.00'	6.0%	1.0%	6.50'	7'-8"
DWY 38	126+69	23L	9.00'	7.00'	1.0%	0.4%	6.50'	7'-8"
DWY 39	127+27	23L	8.50'	7.00'	9.3%	0.4%	6.50'	7'-8"
DWY 40	129+60	16R	11.75'	9.50'	1.5%	0.1%	6.50'	7'-8"
DWY 41	131+02	17L	14.75'	12.75'	14.5%	-1.6%	9.0'	6.50'
DWY 42	131+37	17L	14.17'	12.17'	12.5%	-1.6%	9.0'	6.50'
DWY 43	132+83	17L	11.75'	9.75'	13.5%	-1.9%	11.0'	6.50'
DWY 51	142+59	23L	8.25'	5.75'	10.0%	1.8%	6.50'	9.0'
DWY 52	143+28	23R	11.25'	8.25'	7.3%	-2.1%	11.0'	6.50'
DWY 53	143+67	23L	9.00'	7.00'	9.7%	-2.0%	9.0'	6.50'
DWY 54	143+68	23L	10.33'	6.00'	10.0%	1.9%	6.50'	9.0'
DWY 55	144+05	23L	9.33'	6.50'	14.0%	2.0%	6.50'	11.0'
DWY 56	144+31	23L	9.50'	6.75'	7.7%	2.0%	6.50'	9.0'
DWY 57	144+53	23R	10.00'	7.00'	9.7%	-2.0%	9.0'	6.50'
DWY 58	144+88	23L	10.00'	7.00'	9.0%	2.0%	6.50'	9.0'
DWY 59	144+91	23R	10.00'	7.00'	7.3%	-2.0%	9.0'	6.50'
DWY 60	145+90	23L	10.00'	7.00'	10.6%	-2.0%	6.50'	9.0'
DWY 61	147+70	23R	10.00'	7.00'	14.6%	-2.0%	11.0'	6.50'
DWY 62	148+01	23R	10.00'	7.00'	14.6%	-2.0%	9.0'	6.50'
DWY 63	148+21	23L	10.00'	7.00'	14.6%	2.0%	6.50'	9.0'
DWY 64	148+56	23R	10.00'	7.00'	9.3%	-2.0%	9.0'	6.50'
DWY 65	149+13	23R	10.00'	7.00'	10.0%	-2.3%	11.0'	6.50'
DWY 66	149+80	23R	10.00'	6.00'	14.5%	-1.0%	7'-8"	6.20'
DWY 67	150+89	23L	10.00'	6.50'	8.5%	-0.4%	7'-8"	6.50'
DWY 68	152+90	23L	10.00'	4.00'	14.5%	-1.9%	9.0'	6.50'
DWY 69	152+96	23R	9.25'	4.00'	14.5%	1.8%	6.50'	9.0'
DWY 70	153+22	23L	10.00'	7.00'	8.3%	-2.4%	11.0'	6.50'
DWY 71	153+35	23R	4.00'	4.00'	14.5%	1.8%	6.50'	9.0'
DWY 72	154+52	23L	10.00'	5.00'	13.8%	-2.0%	9.0'	6.50'
DWY 73	154+53	23R	9.00'	4.00'	14.5%	0.6%	6.50'	9.0'
DWY 74	155+02	23R	9.00'	5.00'	14.6%	2.0%	6.50'	11.0'
DWY 75	155+35	23L	10.00'	6.00'	14.7%	-2.0%	9.0'	6.50'
DWY 76	157+05	23R	9.17'	7.00'	8.6%	2.0%	6.50'	15.0'
DWY 77	157+80	23L	10.00'	7.00'	9.0%	-2.3%	11.0'	6.50'
DWY 78	158+69	23L	10.00'	7.00'	3.3%	-1.6%	9.0'	6.50'
DWY 79	159+04	23R	10.00'	7.00'	13.8%	1.2%	6.50'	9.0'
DWY 80	159+35	23R	10.00'	7.00'	8.0%	0.8%	6.50'	9.0'
DWY 81	159+65	23L	10.00'	7.00'	1.5%	-0.9%	7'-8"	6.50'
DWY 82	160+03	23L	10.00'	7.00'	5.0%	-0.6%	7'-8"	6.50'
DWY 83	160+06	23R	10.00'	7.00'	4.7%	0.6%	6.50'	7'-8"

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS
NOT TO SCALE

DWY #	RAMP REFERENCE POINT	WIDTH OF SIDEWALK (W)	PATH OF TRAVEL MIN. 3.00'	DRIVEWAY RAMP SLOPE	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		
						LEFT SIDE	RIGHT SIDE	
DWY 11	107+27	20R	19.00'	10.00'	4.0%	1.5%	6.50'	9.0'
DWY 13	107+84	20R	19.00'	10.00'	9.6%	2.1%	6.50'	11.0'
DWY 14	108+37	20R	19.00'	10.00'	4.5%	2.3%	6.50'	11.0'
DWY 18	111+53	20R	19.00'	10.00'	11.3%	0.7%	6.50'	7'-8"
DWY 19	111+93	20R	19.00'	10.00'	13.3%	1.0%	6.50'	7'-8"
DWY 20	112+35	20R	19.00'	10.00'	14.6%	0.6%	6.50'	7'-8"
DWY 21	113+06	20R	19.00'	10.00'	14.0%	0.7%	6.50'	7'-8"
DWY 22	113+46	20R	19.00'	10.00'	5.0%	0.7%	6.50'	7'-8"
DWY 24	115+77	20R	19.00'	10.00'	13.6%	0.6%	6.50'	7'-8"
DWY 25	118+07	20R	19.00'	10.00'	14.3%	-0.1%	7'-8"	6.50'
DWY 26	118+73	20R	19.00'	10.00'	14.3%	-0.6%	7'-8"	6.50'
DWY 29	119+60	20R	19.00'	10.00'	9.0%	-0.7%	7'-8"	6.50'
DWY 30	119+95	20R	19.00'	10.00'	9.0%	-0.7%	7'-8"	6.50'
DWY 34	121+27	20R	19.00'	10.00'	0.79%	-0.2%	9.0'	6.50'
DWY 44	135+83	20R	10.00'	10.00'	2.3%	0.1%	6.50'	7'-8"
DWY 48	139+69	29R	9.25'	4.75'	9.3%	-1.0%	7'-8"	6.50'
DWY 49	139+99	29R	10.25'	4.75'	9.3%	-1.0%	7'-8"	6.50'

SIDEWALK W THROUGH DRIVEWAYS WITHOUT CURB RETURNS AND 9' CYCLE TRACK
NOT TO SCALE



LEGEND:
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ± 0.5%

DRW #	RAMP REFERENCE POINT	WIDTH OF SIDEWALK (W)	PATH OF TRAVEL MIN. 3.00'	DRIVEWAY RAMP SLOPE	ROADWAY GUTTER SLOPE	TRANSITION LENGTH		
						LEFT SIDE	RIGHT SIDE	
DWY 5	103+90	11L	16.00'	7.00'	14.6%	-2.1%	11.0'	6.50'
DWY 6	104+67	11L	15.60'	7.00'	14.6%	-2.2%	11.0'	6.50'
DWY 7	105+42	11L	16.00'	6.00'	14.5%	-1.9%	9.0'	6.50'
DWY 8	106+15	11L	16.00'	6.00'	14.5%	-2.1%	11.0'	6.50'
DWY 9	106+78	11L	16.00'	7.00'	14.3%	-2.2%	11.0'	6.50'
DWY 10	107+14	11L	16.00'	7.00'	11.3%	-2.2%	11.0'	6.50'
DWY 12	107+68	11L	16.00'	7.00'	14.5%	-1.8%	11.0'	6.50'
DWY 15	109+68	11L	16.00'	8.00'	4.4%	-1.4%	9.0'	6.50'
DWY 16	110+92	11L	16.00'	7.50'	11.0%	-0.7%	7'-8"	6.50'
DWY 17	111+44	11L	16.00'	8.00'	2.0%	-1.1%	9.0'	6.50'
DWY 23	114+34	11L	16.00'	8.00'	4.0%	-0.6%	7'-8"	6.50'
DWY 27	119+06	11L	16.00'	6.00'	11.5%	0.7%	6.50'	7'-8"
DWY 28	119+54	11L	16.00'	7.75'	4.3%	0.7%	6.50'	7'-8"
DWY 31	120+12	11L	16.00'	7.00'	12.0%	0.7%	6.50'	7'-8"
DWY 32	120+57	11L	16.00'	7.00'	12.6%	0.7%	6.50'	7'-8"
DWY 33	121+18	11L	16.00'	7.00'	13.3%	0.9%	6.50'	7'-8"
DWY 35	121+38	11L	16.00'	7.00'	10.6%	0.7%	6.50'	9.0'
DWY 45	136+56	11L	10.00'	5.00'	11.0%	0.7%	6.50'	7'-8"
DWY 46	137+36	11L	10.00'	7.00'	14.3%	0.7%	6.50'	7'-8"
DWY 47	139+33	11L	10.00'	7.00'	14.5%	0.7%	6.50'	6.50'
DWY 50	140+26	11L	11.17'	6.50'	13.0%	1.0%	6.50'	6.50'

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS AND 6' CYCLE TRACK
NOT TO SCALE

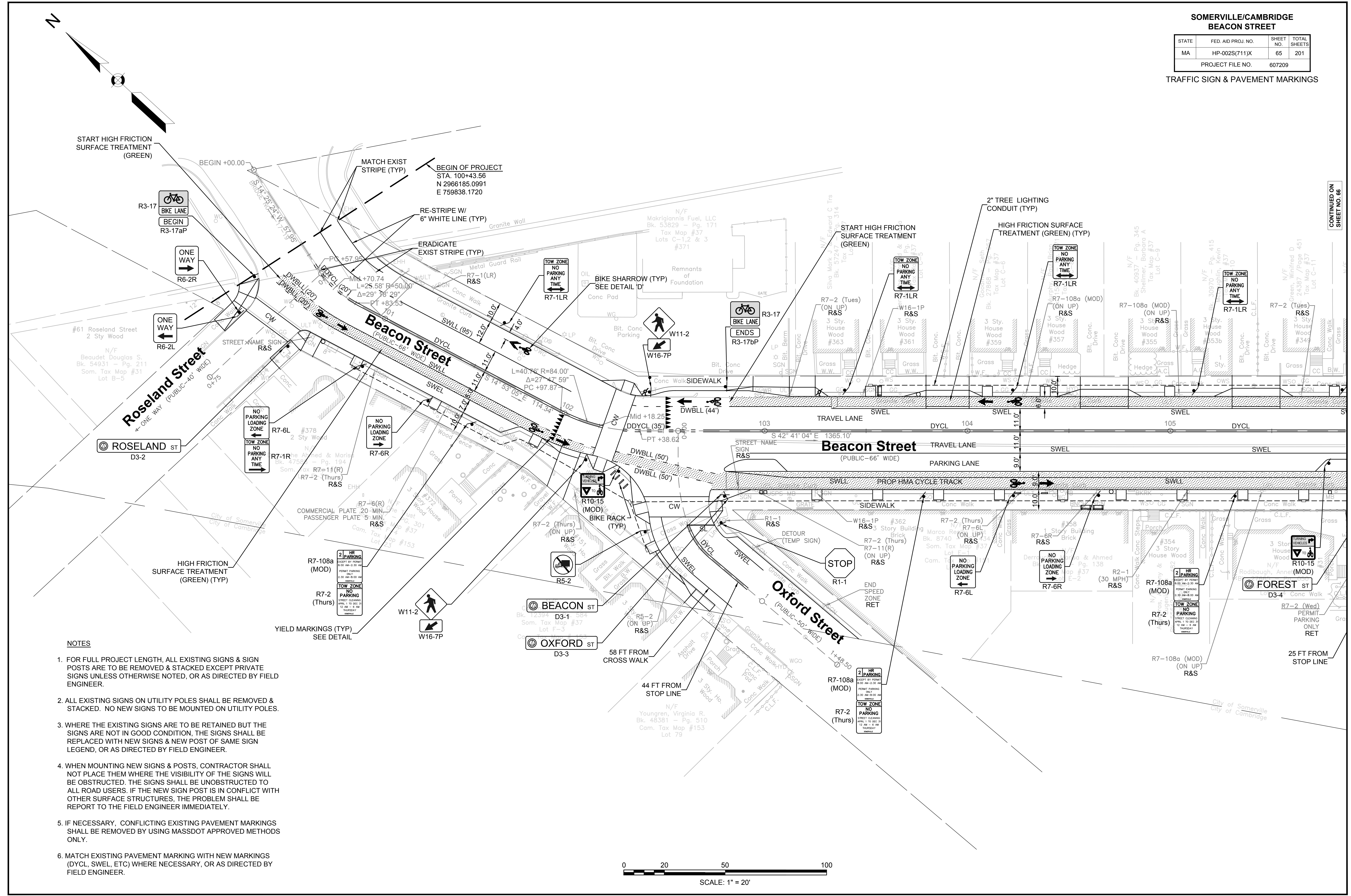
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	65	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS

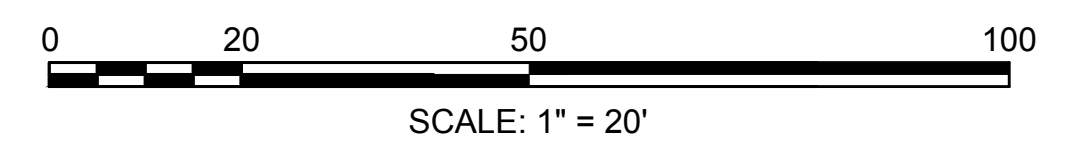
CONTINUED ON
SHEET NO. 66

607209PSEHD11 (TRAFFIC SIGN & PAVEMENT MARKINGS).DWG Plotted on 16-Apr-2015 11:06 AM



NOTES

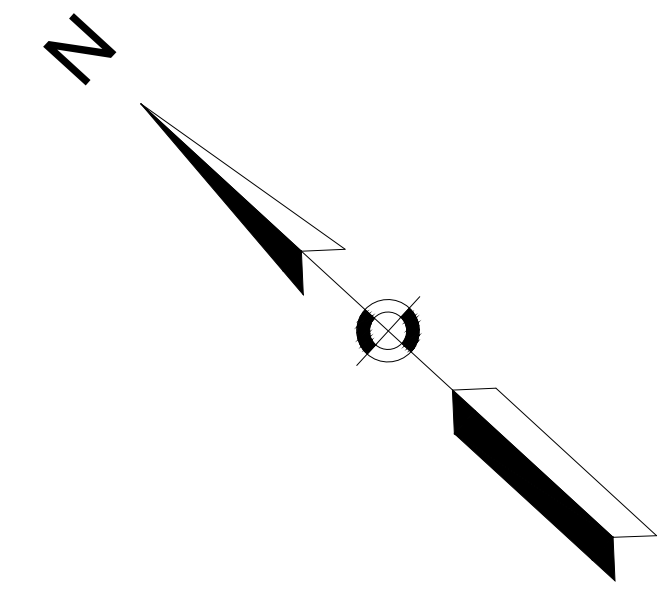
- FOR FULL PROJECT LENGTH, ALL EXISTING SIGNS & SIGN POSTS ARE TO BE REMOVED & STACKED EXCEPT PRIVATE SIGNS UNLESS OTHERWISE NOTED, OR AS DIRECTED BY FIELD ENGINEER.
- ALL EXISTING SIGNS ON UTILITY POLES SHALL BE REMOVED & STACKED. NO NEW SIGNS TO BE MOUNTED ON UTILITY POLES.
- WHERE THE EXISTING SIGNS ARE TO BE RETAINED BUT THE SIGNS ARE NOT IN GOOD CONDITION, THE SIGNS SHALL BE REPLACED WITH NEW SIGNS & NEW POST OF SAME SIGN LEGEND, OR AS DIRECTED BY FIELD ENGINEER.
- WHEN MOUNTING NEW SIGNS & POSTS, CONTRACTOR SHALL NOT PLACE THEM WHERE THE VISIBILITY OF THE SIGNS WILL BE OBSTRUCTED. THE SIGNS SHALL BE UNOBSTRUCTED TO ALL ROAD USERS. IF THE NEW SIGN POST IS IN CONFLICT WITH OTHER SURFACE STRUCTURES, THE PROBLEM SHALL BE REPORT TO THE FIELD ENGINEER IMMEDIATELY.
- IF NECESSARY, CONFLICTING EXISTING PAVEMENT MARKINGS SHALL BE REMOVED BY USING MASSDOT APPROVED METHODS ONLY.
- MATCH EXISTING PAVEMENT MARKING WITH NEW MARKINGS (DYCL, SWEL, ETC) WHERE NECESSARY, OR AS DIRECTED BY FIELD ENGINEER.



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

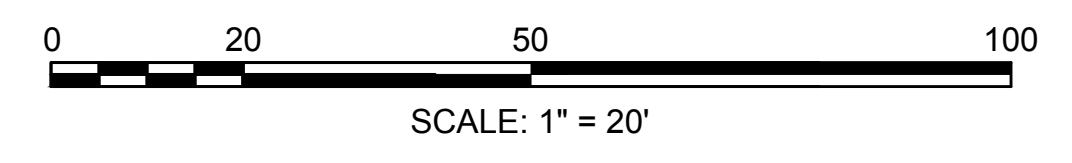
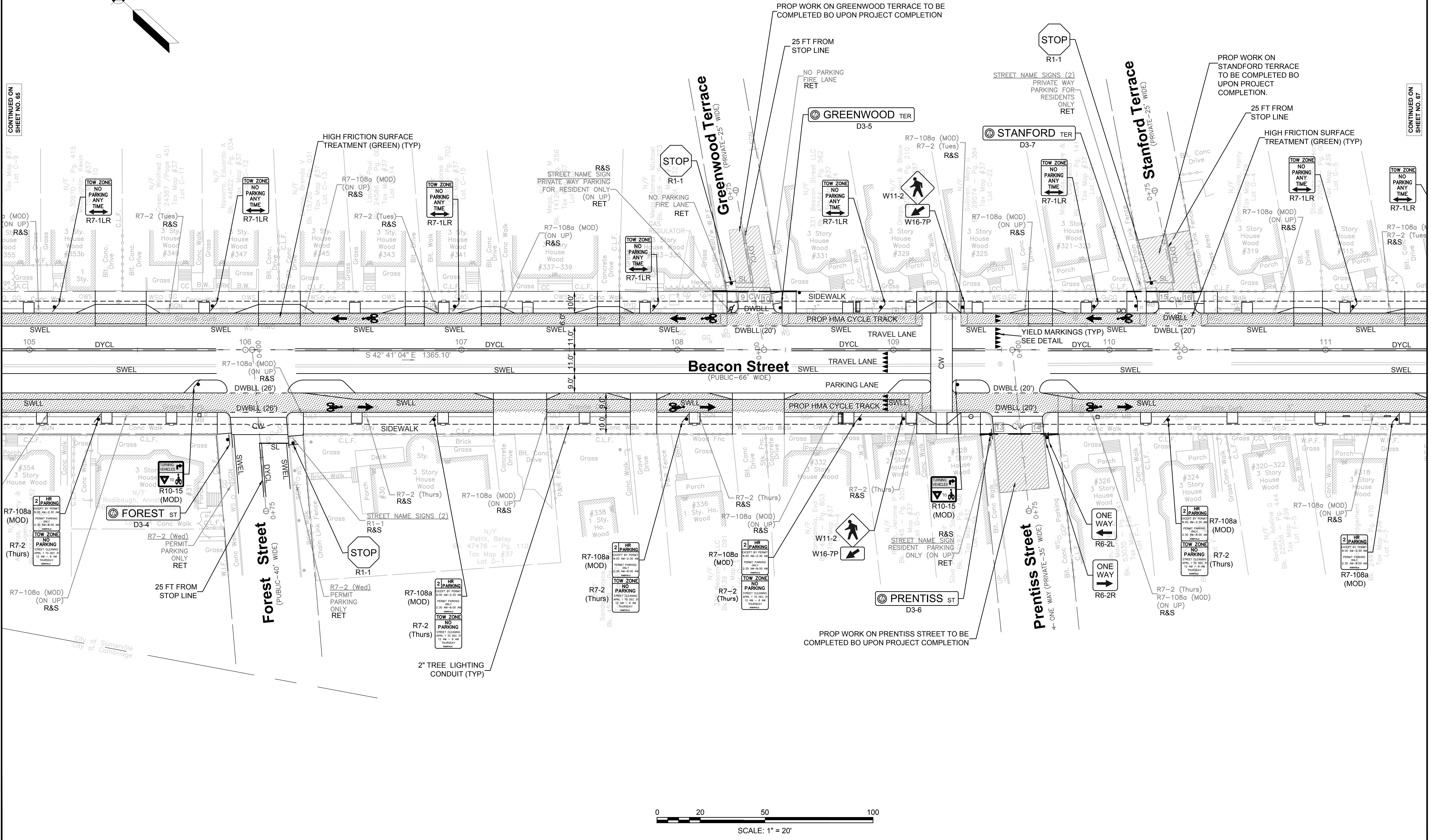
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	66	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS



CONTINUED ON SHEET NO. 65

CONTINUED ON SHEET NO. 67



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

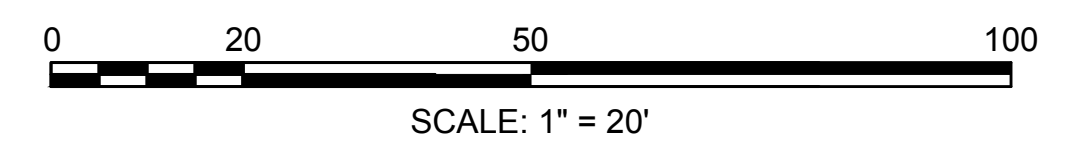
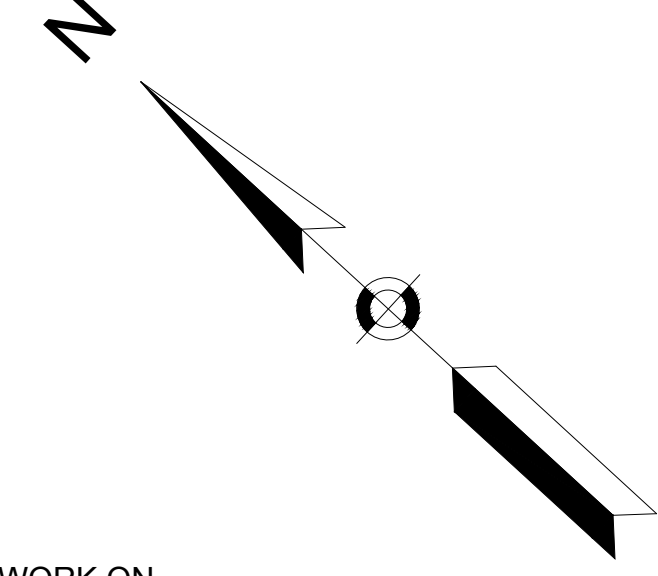
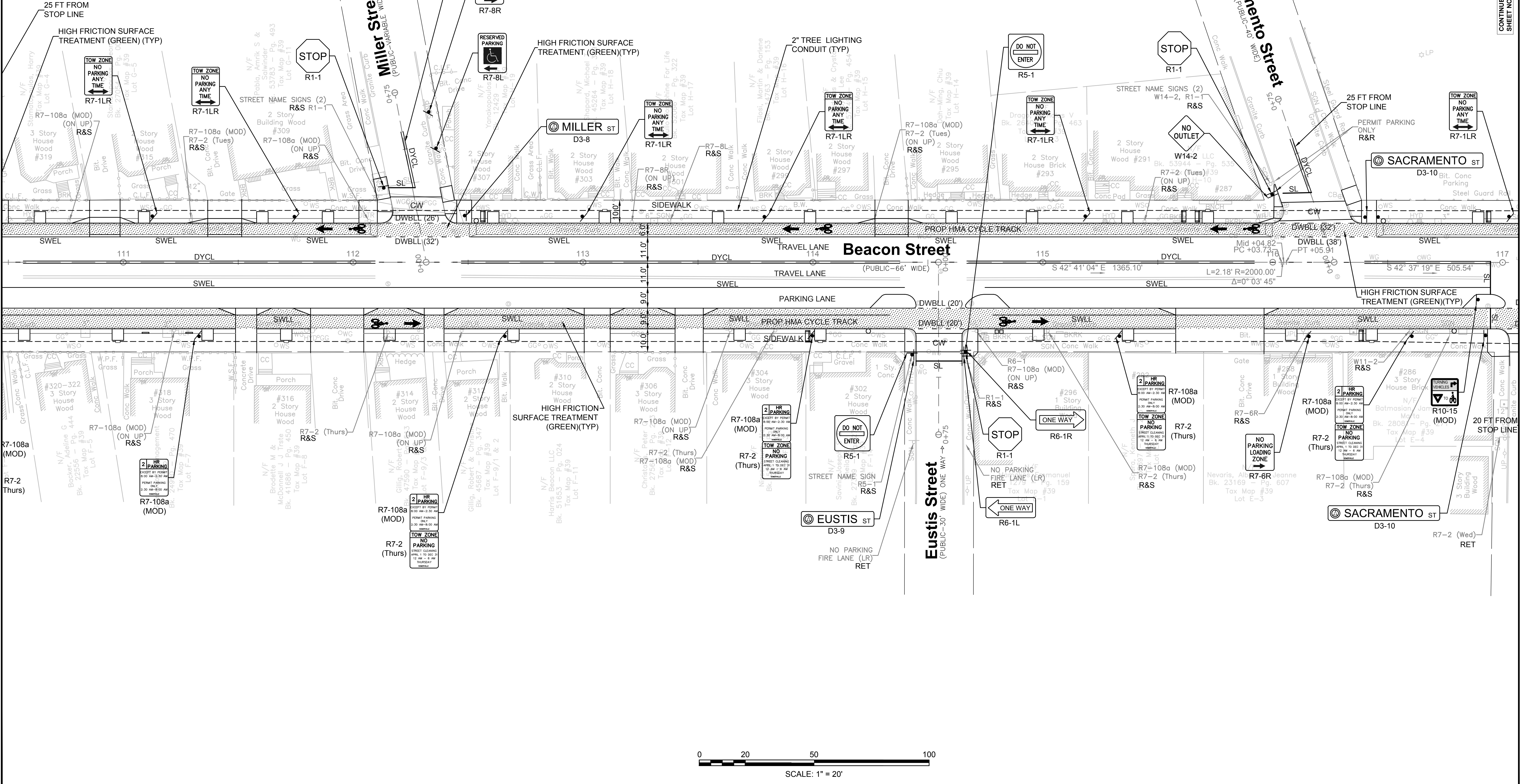
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	67	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS

CONTINUED ON
SHEET NO. 66

CONTINUED ON
SHEET NO. 68

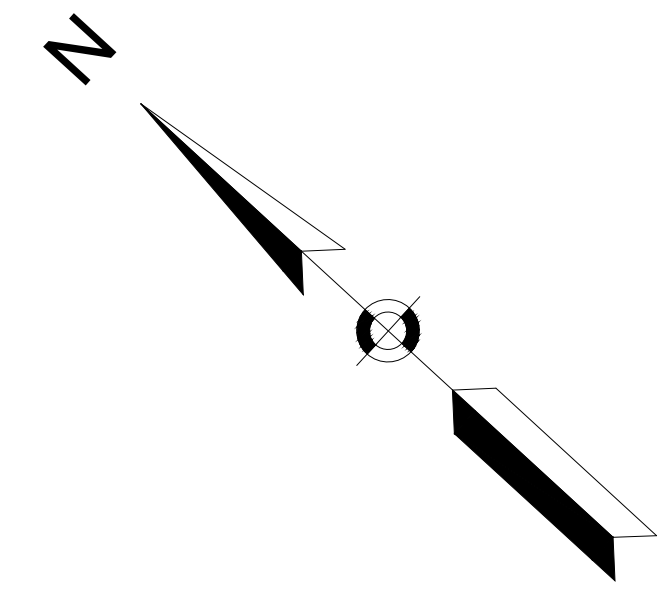
PROP WORK ON
STANDFORD TERRACE
TO BE COMPLETED
UPON PROJECT
COMPLETION.



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

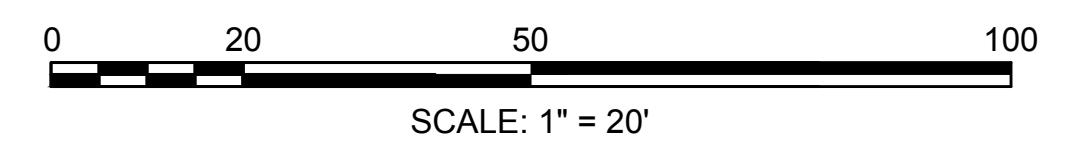
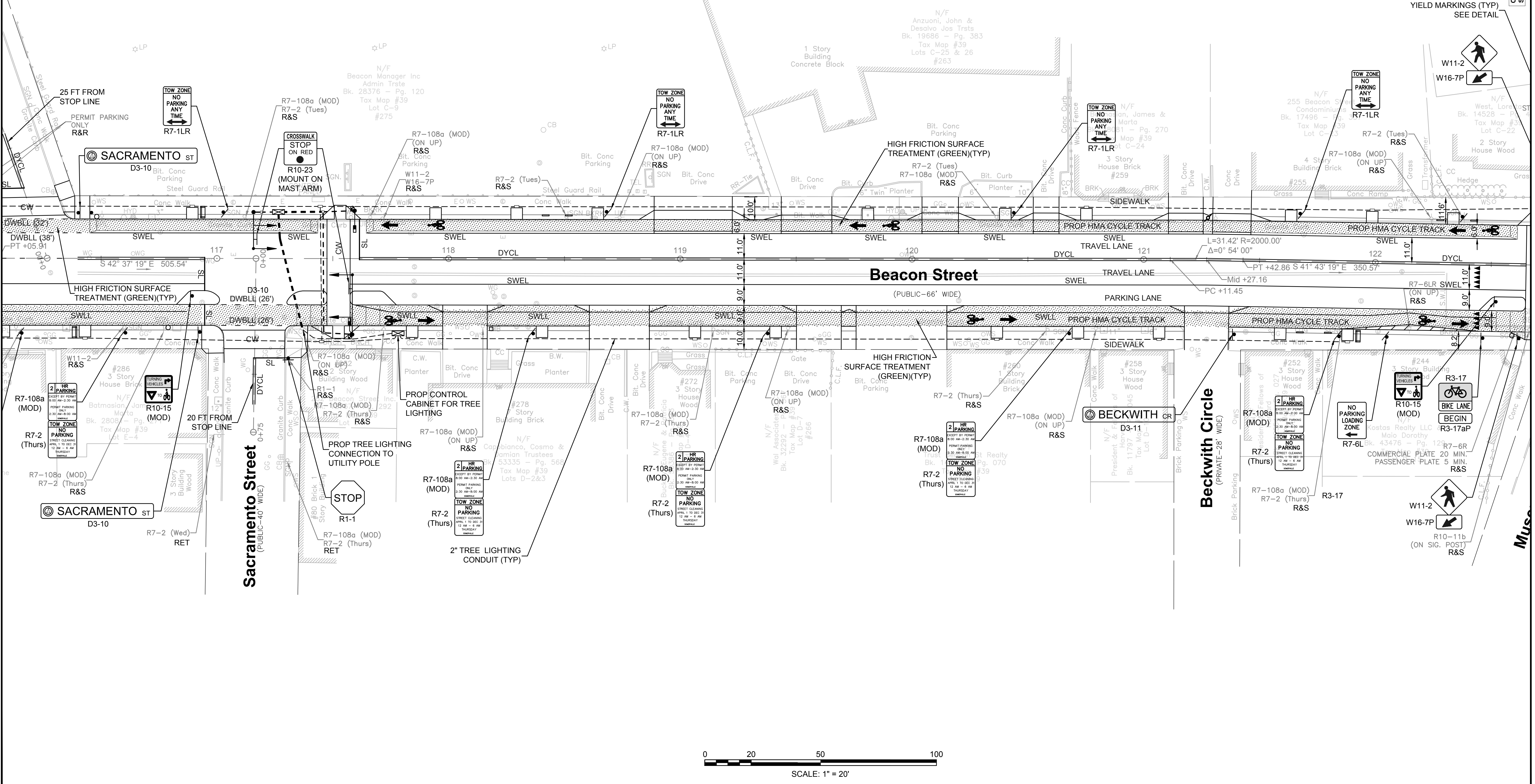
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	68	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS



CONTINUED ON SHEET NO. 67

CONTINUED ON SHEET NO. 69



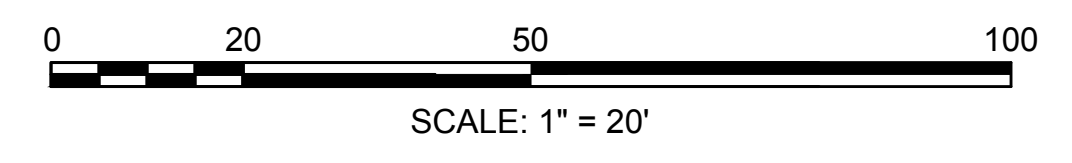
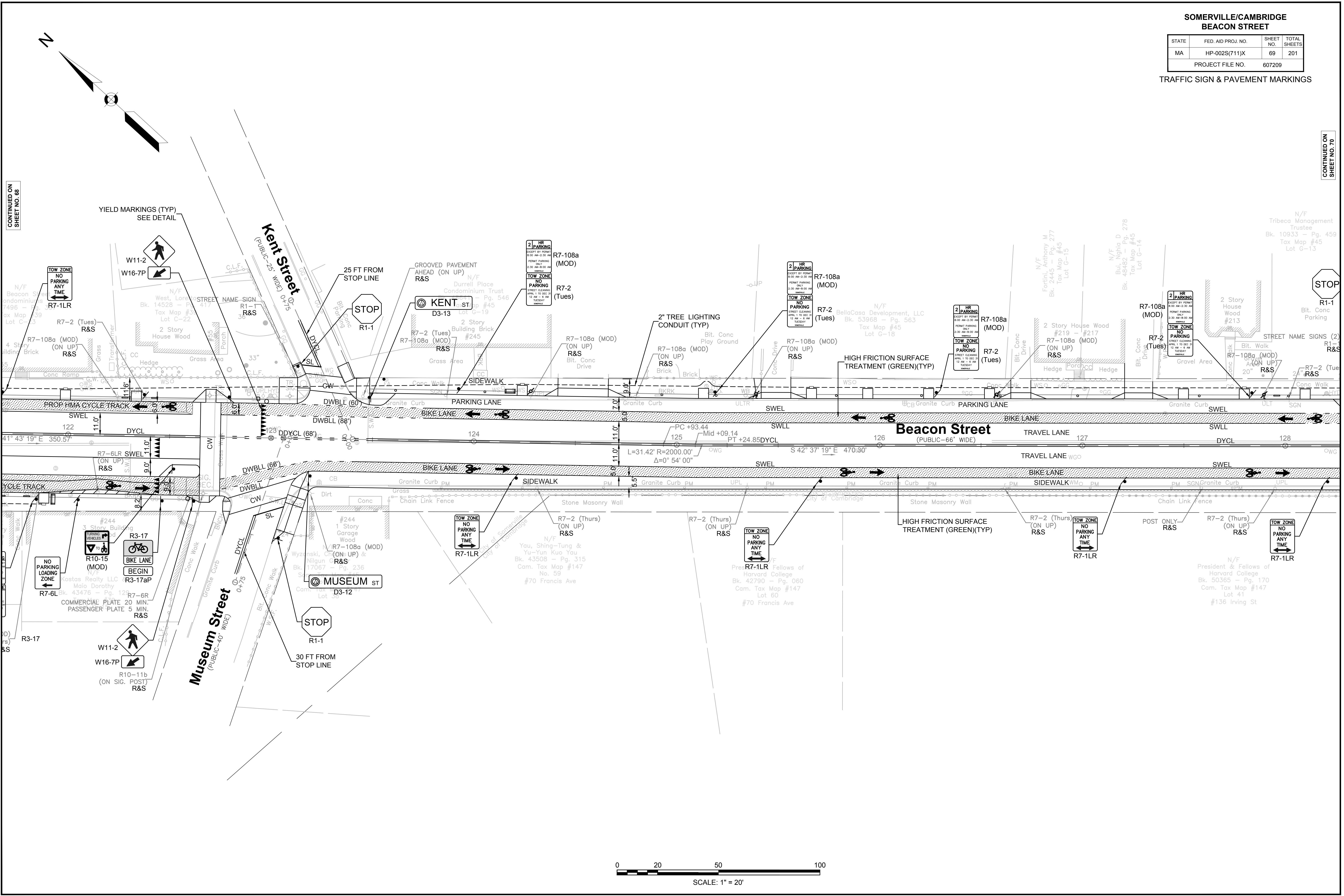
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	69	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS

CONTINUED ON
SHEET NO. 68

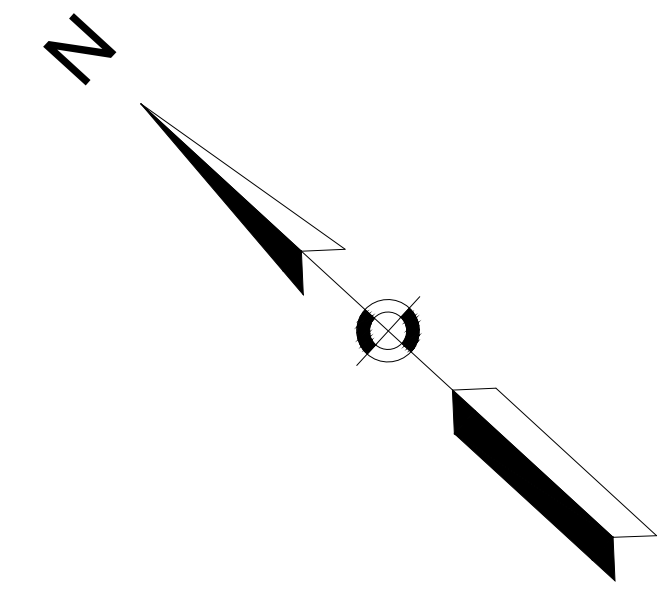
CONTINUED ON
SHEET NO. 70



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

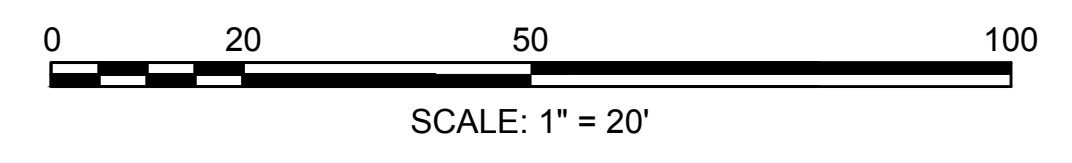
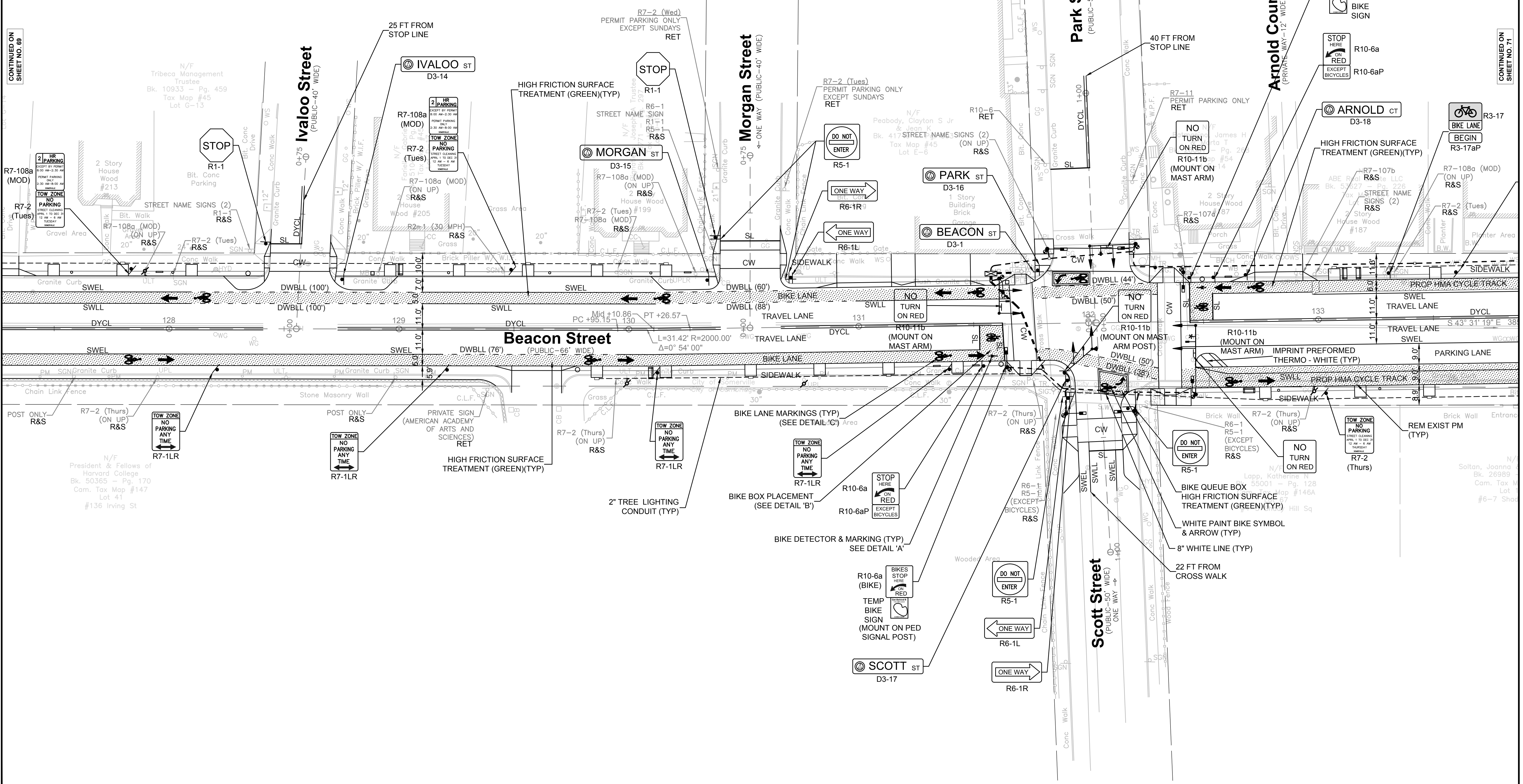
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	70	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS



CONTINUED ON
SHEET NO. 69

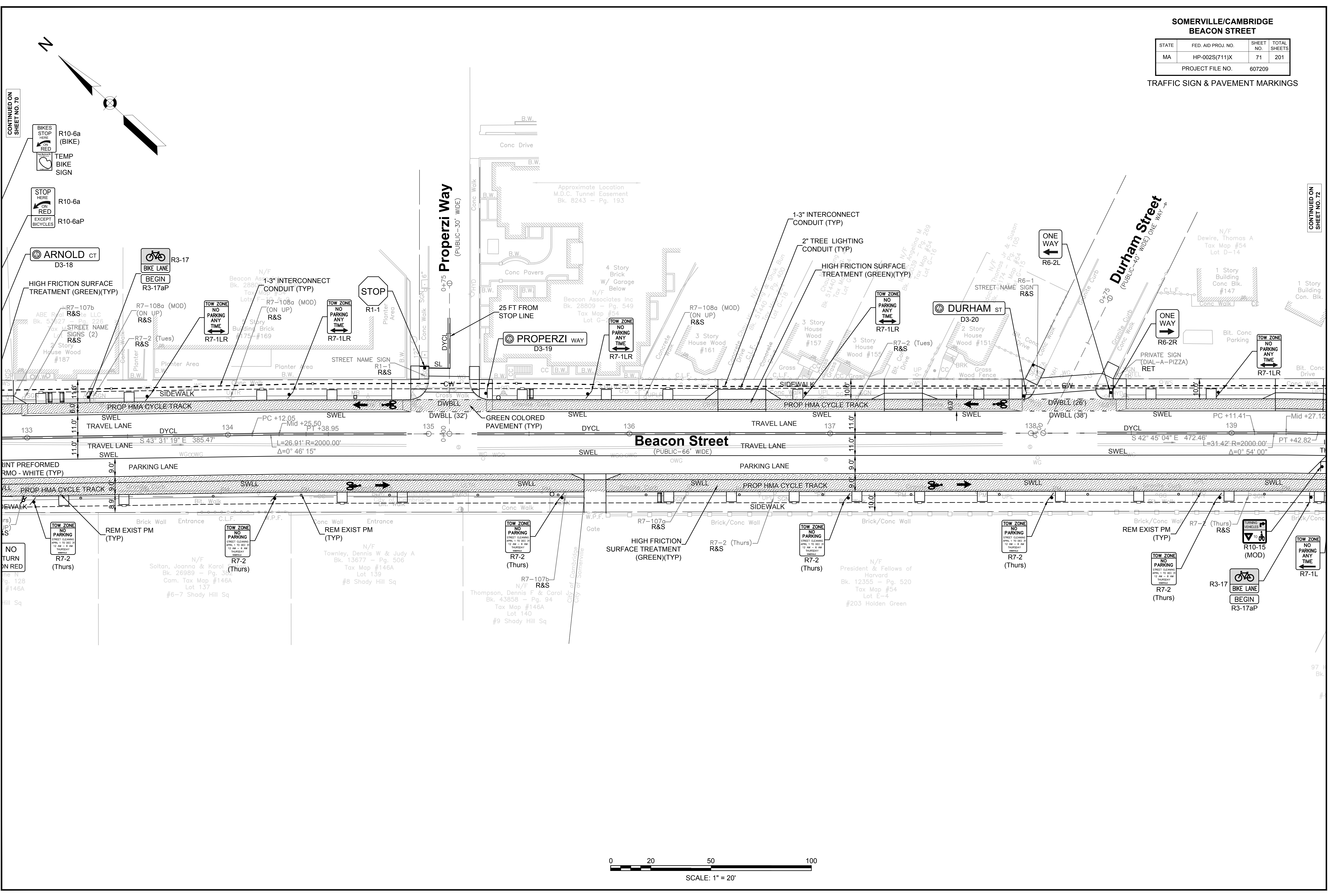
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SHEET NO. 71



**SOMERVILLE/CAMBRIDGE
BEACON STREET**

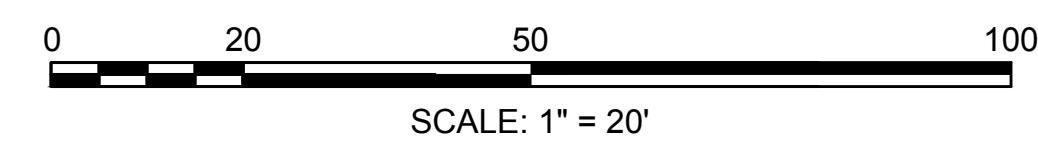
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	71	201
PROJECT FILE NO.		607209	

TRAFFIC SIGN & PAVEMENT MARKINGS



CONTINUED ON SHEET NO. 70

CONTINUED ON SHEET NO. 72

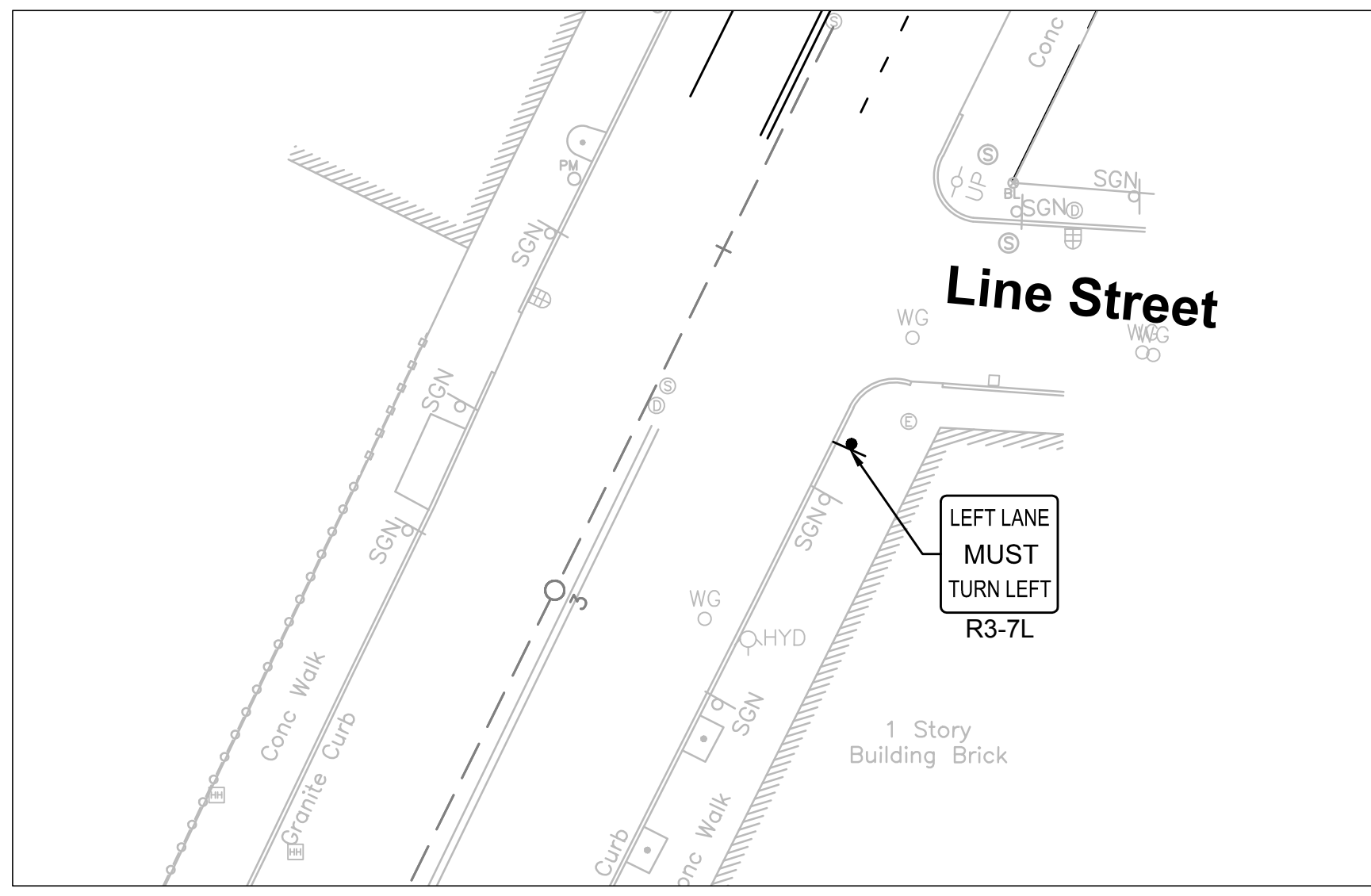
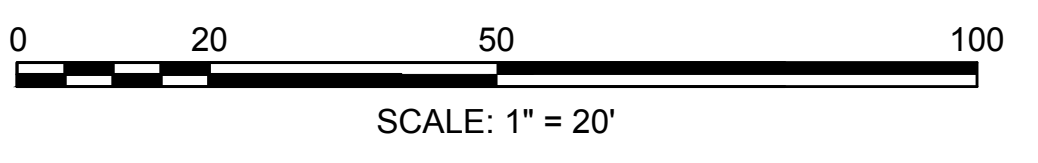
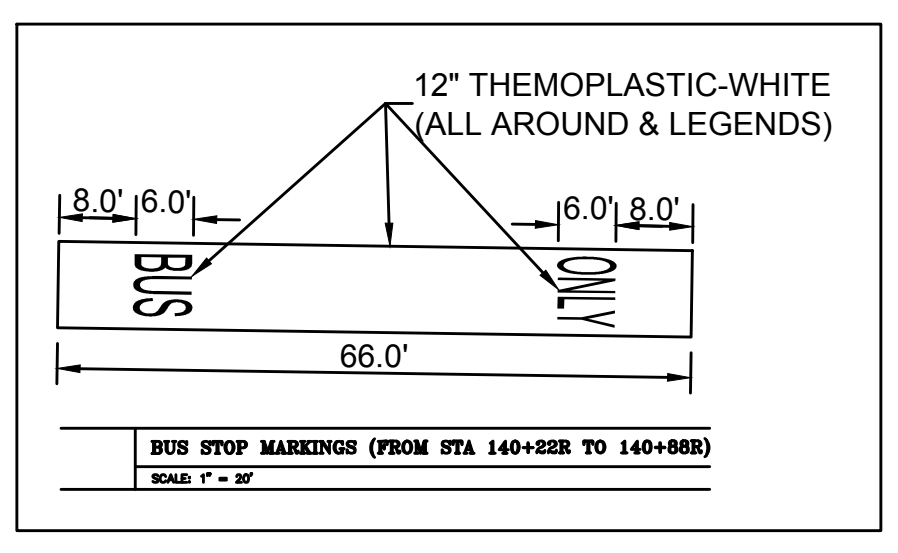
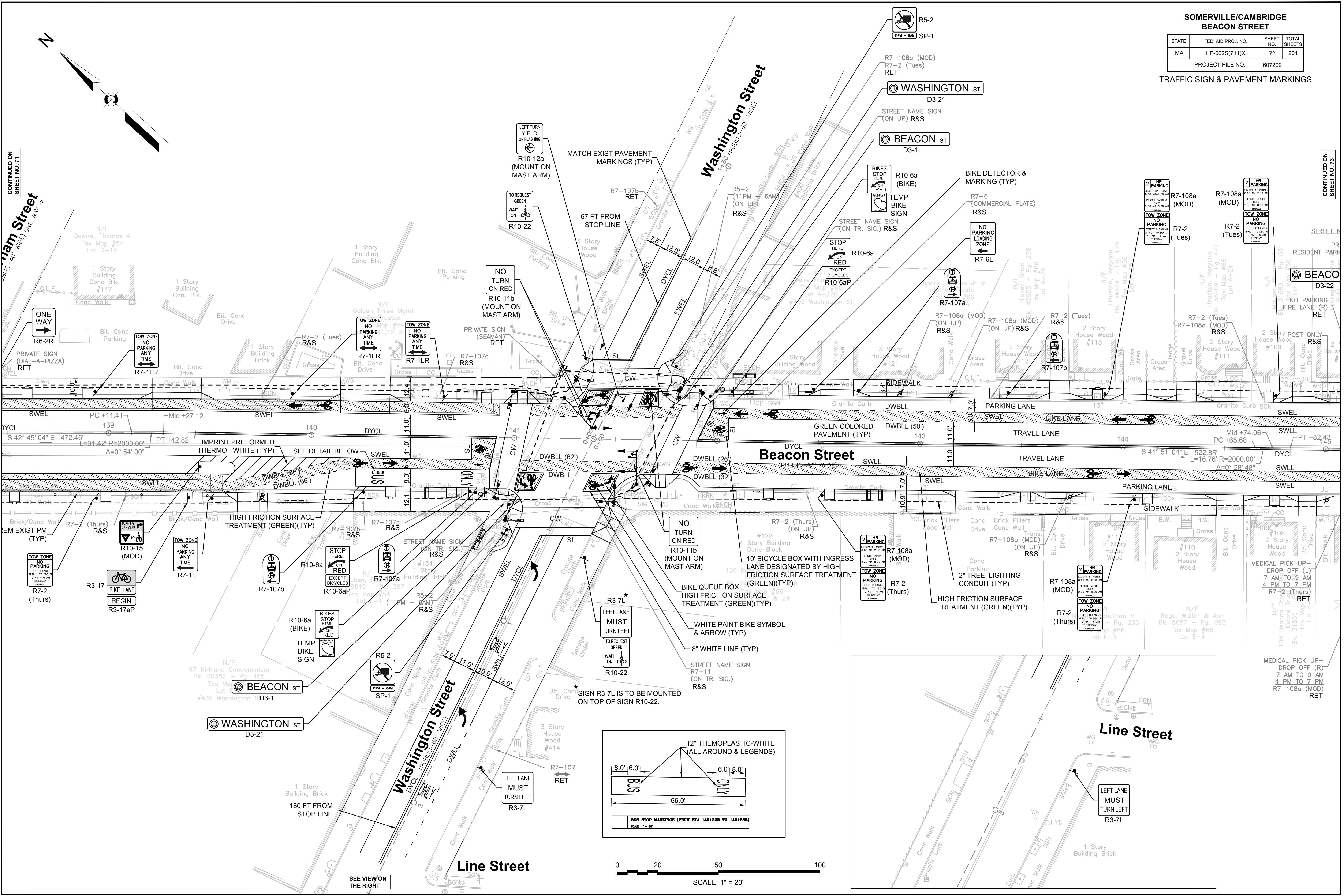


**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	72	201

PROJECT FILE NO. 607209

TRAFFIC SIGN & PAVEMENT MARKINGS



CONTINUED ON SHEET NO. 71

CONTINUED ON SHEET NO. 73

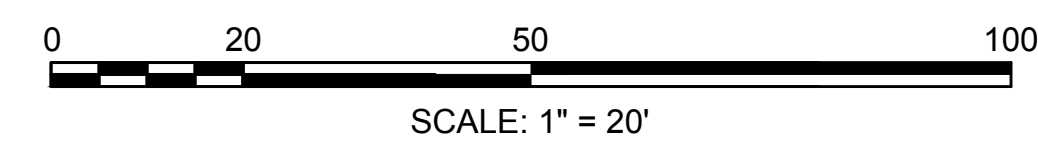
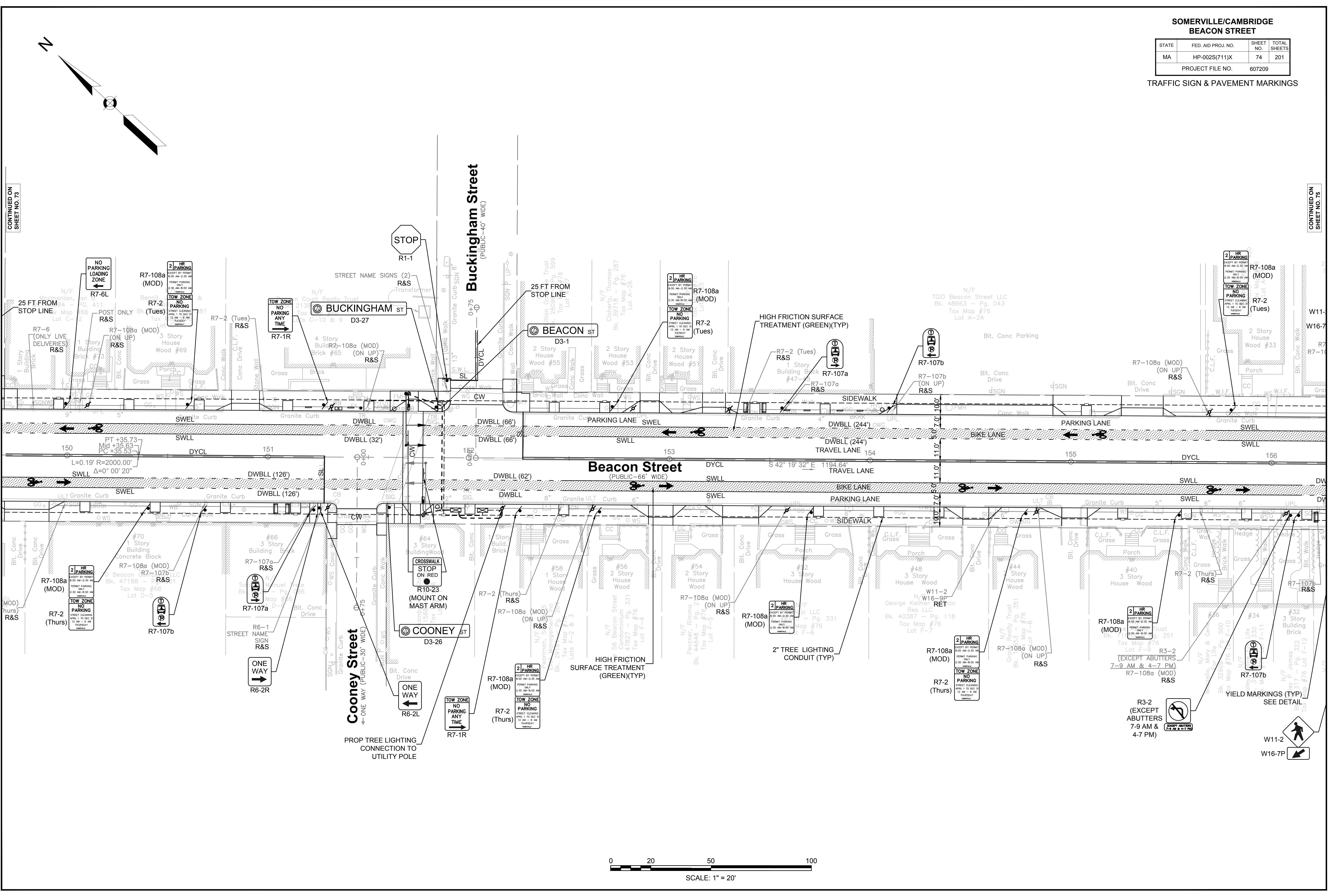
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	74	201

PROJECT FILE NO. 607209
TRAFFIC SIGN & PAVEMENT MARKINGS

CONTINUED ON
SHEET NO. 73

CONTINUED ON
SHEET NO. 75



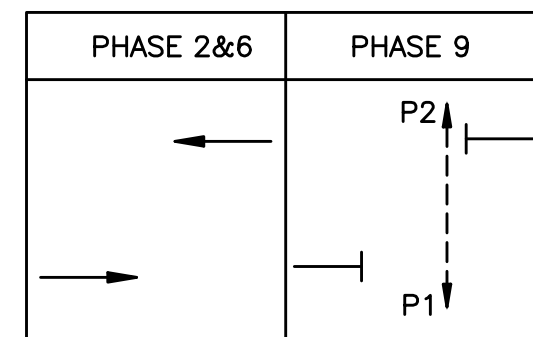
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	77	201
PROJECT FILE NO.		607209	

**TRAFFIC SIGNAL LAYOUT
LOCATION 1**

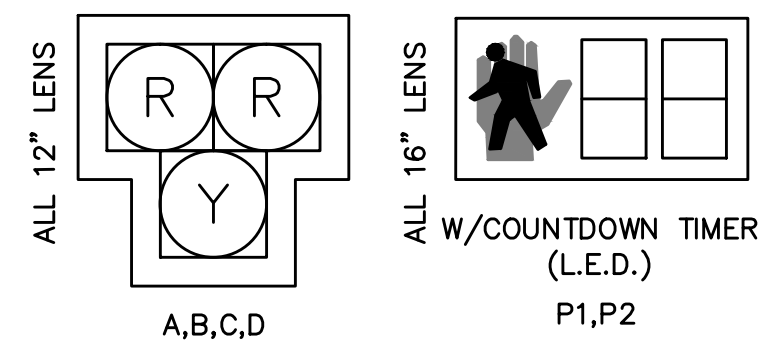
PEDESTRIAN HYBRID BEACON & PEDESTRIAN INDICATION SEQUENCE

	1. DARK UNTIL ACTIVATED.		1. DON'T WALK.
	2. FLASHING YELLOW UPON ACTIVATION.		2. DON'T WALK.
	3. STEADY YELLOW FOR VEHICLE CLEARANCE.		3. DON'T WALK.
	4. STEADY RED DURING PEDESTRIAN WALK INTERVAL.		4. WALK.
	5. ALTERNATING FLASHING RED DURING PEDESTRIAN CLEARANCE INTERVAL.		5. FLASHING DON'T WALK WITH COUNTDOWN.
	6. ALTERNATING FLASHING RED DURING PEDESTRIAN BUFFER INTERVAL.		6. DON'T WALK.
	7. DARK UNTIL ACTIVATED AGAIN.		7. DON'T WALK.



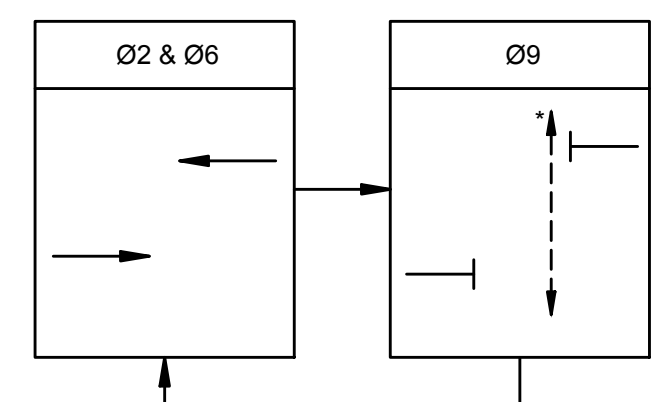
SEQUENCE AND TIMING FOR PEDESTRIAN HYBRID BEACON			PHASE 2&6			PHASE 9		
STREET	DIRECTION	HOUSINGS	1	2	3	1	2	3
BEACON STREET	NB	C,D	DARK	FY	SY	SR	AFR	DARK
BEACON STREET	SB	A,B	DARK	FY	SY	SR	AFR	DARK
ACROSS BEACON STREET	EB-WB	P1,P2	DW	DW	DW	W	FDW/DW	DW
TIMING IN SECONDS								
MIN GREEN (SEC)			30					
FLASHING & STEADY YELLOW (SEC)				4	2			
WALK (W)						7		
PEDESTRIAN CLEARANCE (FDW)							12	
DONT WALK (DW)							3	
RECALL			OFF			OFF		
MEMORY			LOCK			LOCK		

SIGNAL HEAD DATA



- NOTES:
- ALL SIGNALS SHALL HAVE TUNNEL VISORS.
 - ALL SIGNALS SHALL HAVE 12" LED INDICATIONS WITH 5" NON-LOUVERED BACK PLATES WITH A 3 INCH RETROREFLECTIVE BORDER.

PREFERENTIAL PHASING SEQUENCE



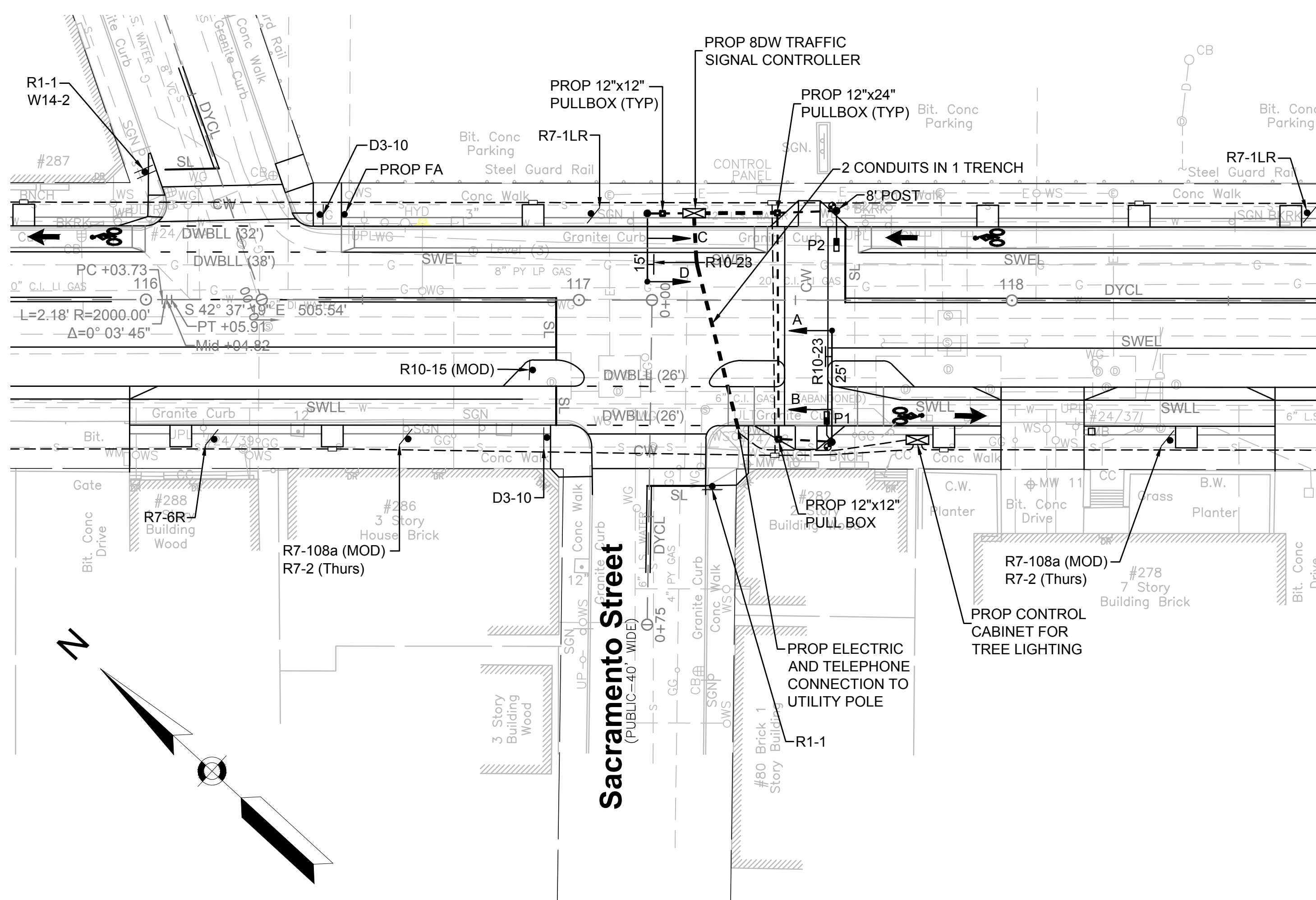
* ONLY UPON PUSH BUTTON ACTIVATION

SEQUENCE AND TIMING NOTES:

- THE VEHICULAR SIGNALS SHALL REMAIN DARK UNTIL THE PEDESTRIAN HYBRID BEACON IS ACTIVATED WITH PUSH BUTTON ACTIVATION.
- THE PEDESTRIAN COUNTDOWN TIMER SHALL ONLY DISPLAY THE COUNTDOWN DURING THE PEDESTRIAN CLEARANCE INTERVAL.

ABBREVIATIONS:

- FY = FLASHING YELLOW
SY = STEADY YELLOW
SR = STEADY RED
(BOTH DUAL RED INDICATIONS ILLUMINATED)
AFR = ALTERNATING FLASHING RED
- W = WALK
FDW = FLASHING DON'T WALK
DW = DON'T WALK



NOTES:

- WORK ON THE TRAFFIC SIGNAL SYSTEM SHALL BE IN ACCORDANCE WITH THE TRAFFIC MANAGEMENT PLANS, STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS AND AS REQUIRED BY THE ENGINEER.
- PROPOSED CONTROLLER SHALL BE AN 8DW, TS-2, TYPE 1, KEYBOARD ENTRY, MENU-DRIVEN TYPE WITH INTERNAL COORDINATION CAPABILITIES.
- POST-MOUNTED SIGNALS SHALL HAVE A TWO FOOT MINIMUM CLEARANCE BETWEEN VERTICAL PROJECTION OF THE CURB LINE AND THE SIGNAL VISOR.
- ALL SIGNAL EQUIPMENT INCLUDED IN THIS PROJECT SHALL BE LISTED ON THE CURRENT MASSDOT APPROVED LIST AND IS SUBJECT TO APPROVAL OF THE ENGINEER.
- THE FINAL LOCATION OF PROPOSED PREEMPTION RECEIVERS AND CONFIRMATION STROBE LIGHT SHALL BE COORDINATED WITH THE SOMERVILLE FIRE DEPARTMENT AND APPROVED BY MASSDOT.
- FIRE PREEMPTION TIMING SHALL BE COORDINATED WITH THE SOMERVILLE FIRE DEPARTMENT AND APPROVED BY MASSDOT.
- THE FINAL LOCATION OF SIGNAL EQUIPMENT MAY BE ADJUSTED IN THE FIELD AS NECESSARY WITH THE APPROVAL OF THE ENGINEER. SIGNAL EQUIPMENT SHALL ALLOW A MINIMUM OF 3'-3" CLEARANCE FOR PEDESTRIAN TRAVEL.
- ALL TRAFFIC SIGNAL CONDUIT SHALL BE 3" TYPE NM PLASTIC (UL) UNLESS OTHERWISE NOTED.
- UTILIZE ONE TRENCH FOR MULTIPLE CONDUITS WHEREVER POSSIBLE.
- CONTRACTOR TO COORDINATE ALL SERVICE CONNECTIONS WITH THE UTILITY COMPANY.

PROPOSED SIGNAL LAYOUT



SCALE 1" = 20'

MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
815.1	1	CONTROLLER 8DW TS-2 TYPE 1 CAB & FDN
	1	SERVICE CONNECTION, TYPE OVERHEAD
	1	TELEPHONE SERVICE CONNECTION
	1	25 FT MAST ARM, TYPE II STEEL BASE & FDN
	1	15 FT MAST ARM, TYPE II STEEL BASE & FDN
	4	1 WAY, 3 SECTION HYBRID SIGNAL BEACON HOUSING (12" LENS)
	1	8 FT TRAFFIC SIGNAL POST, BASE & FDN
	2	PEDESTRIAN COUNTDOWN SIGNAL HOUSING (16" LENS)
	2	APS PEDESTRIAN PUSH BUTTON, SIGN & SADDLE
	2	R10-3e SIGN
811.31	2	PULL BOX 12"x12"
811.22	1	PULL BOX 12"x24"
816.801	1	R&S OLD TRAFFIC SIGNAL & EQUIPMENT AT KENT ST/MUSEUM ST

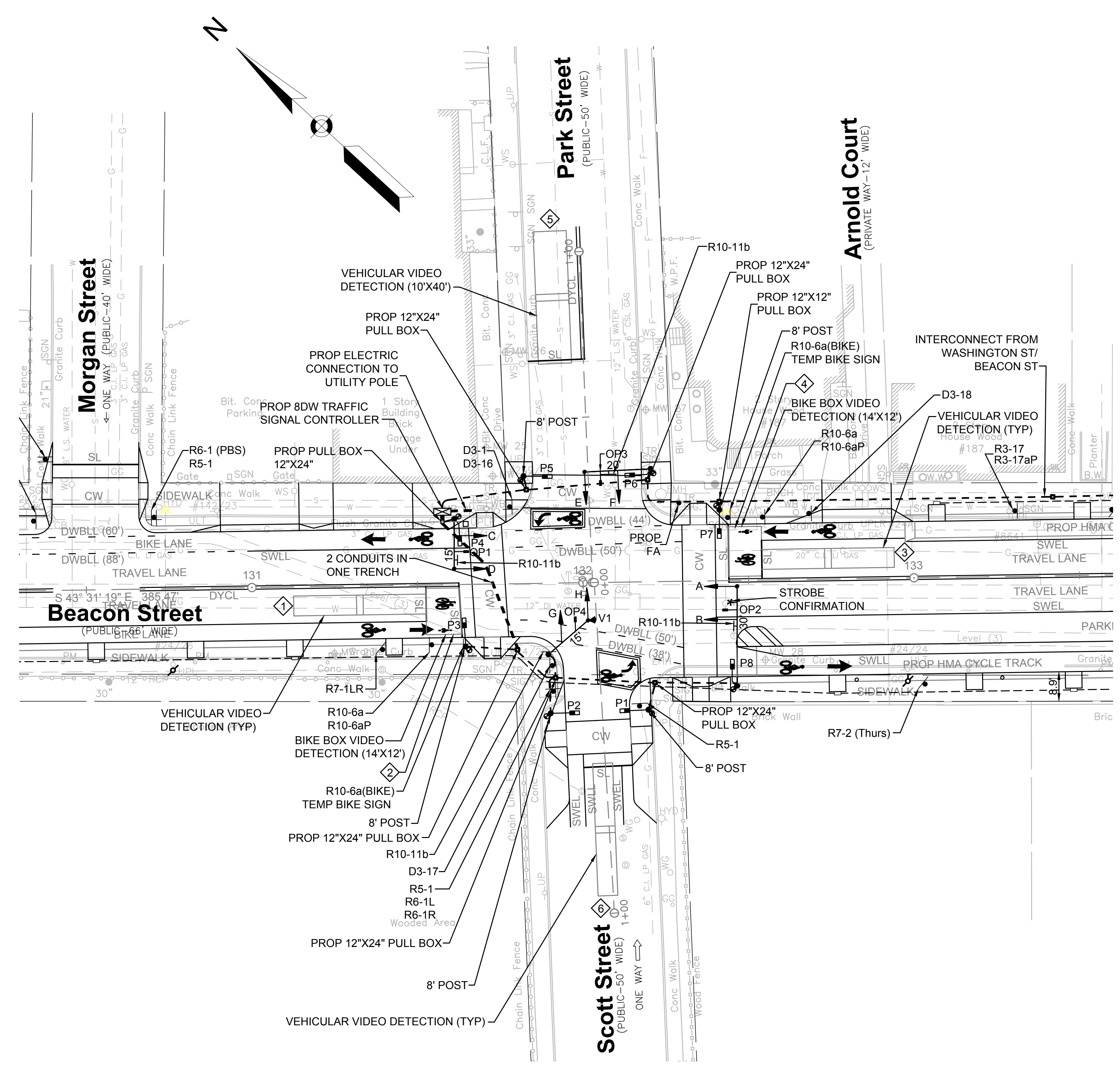
Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.

NOTE: CONDUIT ITEMS COMPENSATED UNDER CONTRACT ITEMS AND ARE NOT INCIDENTAL.

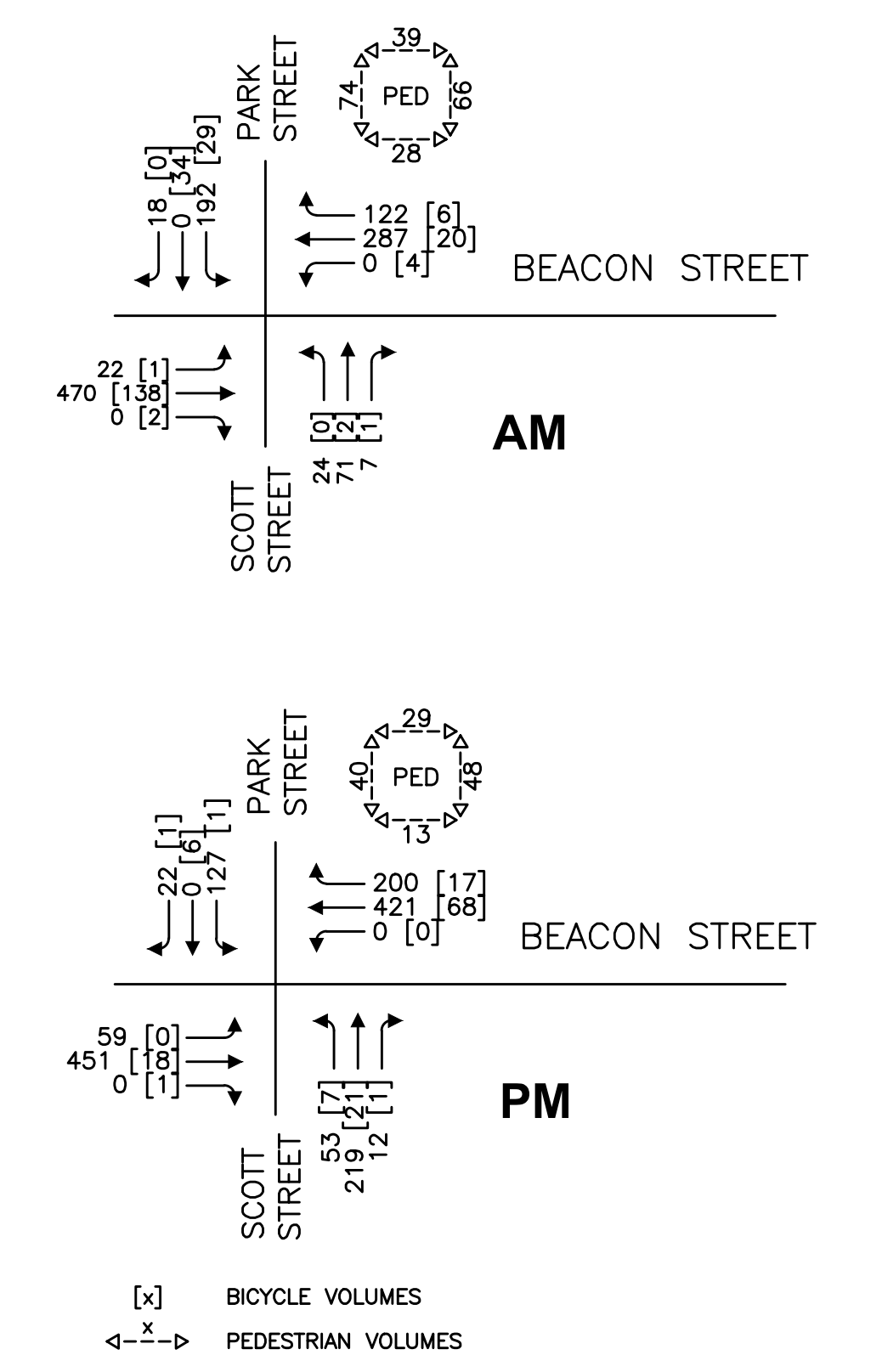
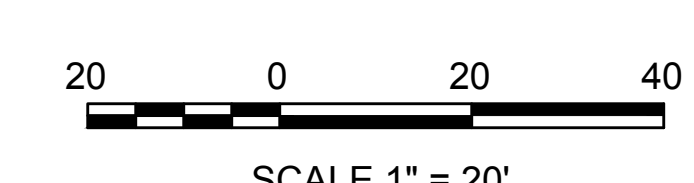
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	78	201
PROJECT FILE NO.		607209	

**TRAFFIC SIGNAL LAYOUT
LOCATION 2**



PROPOSED SIGNAL LAYOUT



**2032 FUTURE CONDITIONS
PEAK HOUR TRAFFIC VOLUMES**

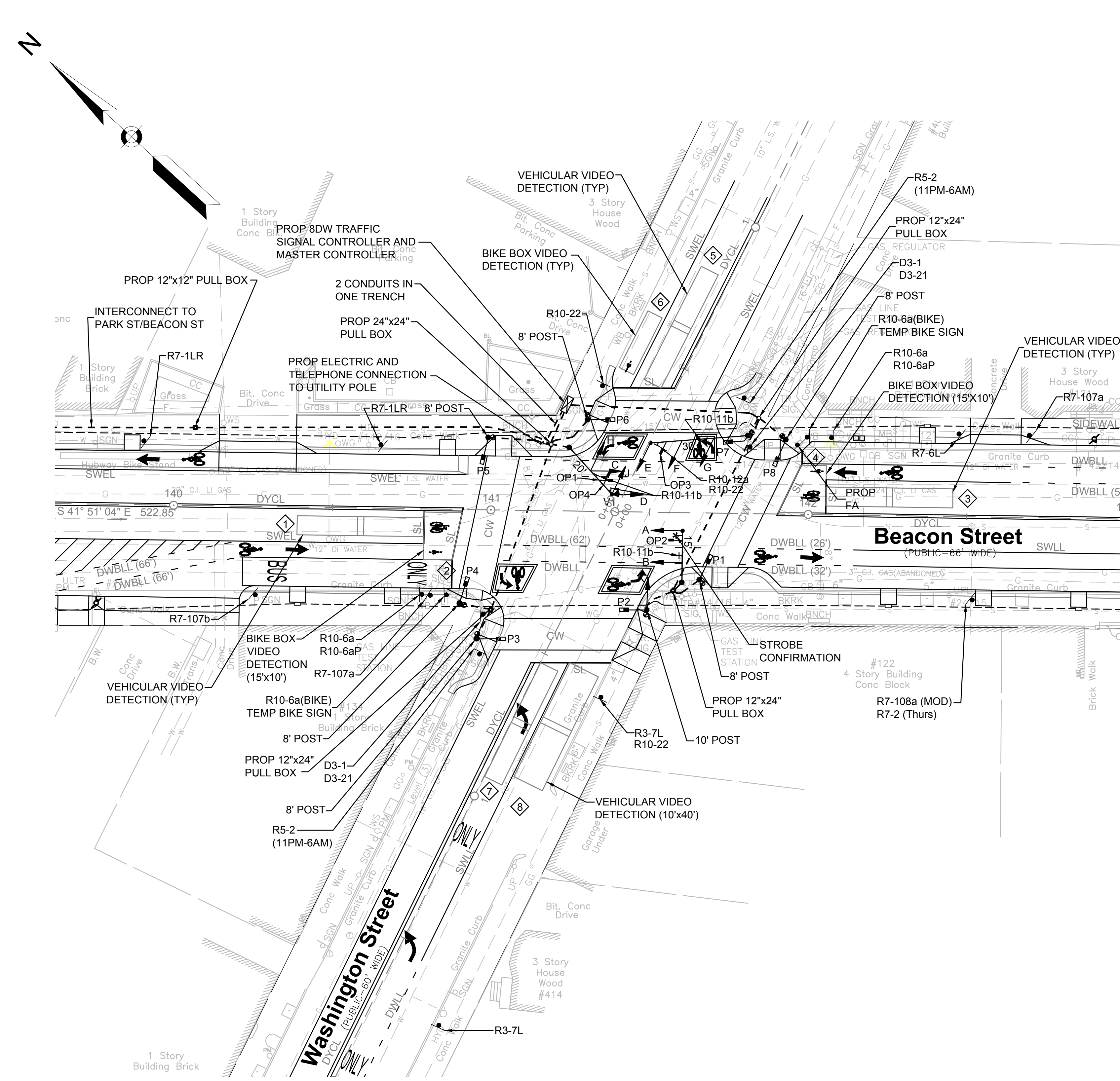
MAJOR ITEMS REQUIRED		
PAY ITEM	QUANTITY	ITEM
816.03	1	CONTROLLER 8DW TS-2 TYPE 1 CAB & FDN
	1	SERVICE CONNECTION, TYPE OVERHEAD
	1	30 FT MAST ARM, TYPE II STEEL BASE & FDN
	1	20 FT MAST ARM, TYPE II STEEL BASE & FDN
	2	15 FT MAST ARM, TYPE II STEEL BASE & FDN
	8	1 WAY, 3 SECTION SIGNAL HOUSING (12" LENS)
	5	8 FT TRAFFIC SIGNAL POST, BASE & FDN
	8	PEDESTRIAN COUNTDOWN SIGNAL HOUSING (16" LENS)
	8	APS PEDESTRIAN PUSH BUTTON, SIGN & SADDLE
	8	R10-3e SIGN
	4	OPTICAL PRE-EMPTION RECEIVER
	2	2 CHANNEL PHASE SELECTOR
	1	CONFIRMATION STROBE (WHITE)
	1	VIDEO DETECTION CAMERA & AUXILIARY EQUIPMENT
811.31	1	PULL BOX 12"X12"
811.22	6	PULL BOX 12"X24"
816.802	1	EXISTING SIGNAL POSTS, SIGNAL HEADS & EQUIPMENT, REMOVED AND STACKED

NOTE: 1. CONDUIT ITEMS COMPENSATED UNDER CONTRACT ITEMS AND ARE NOT INCIDENTAL.
2. PED PHASE ON RECALL. VIBRO-TACTILE PED PUSH BUTTON USED TO CALL AUDIBLE SIGNAL ONLY.

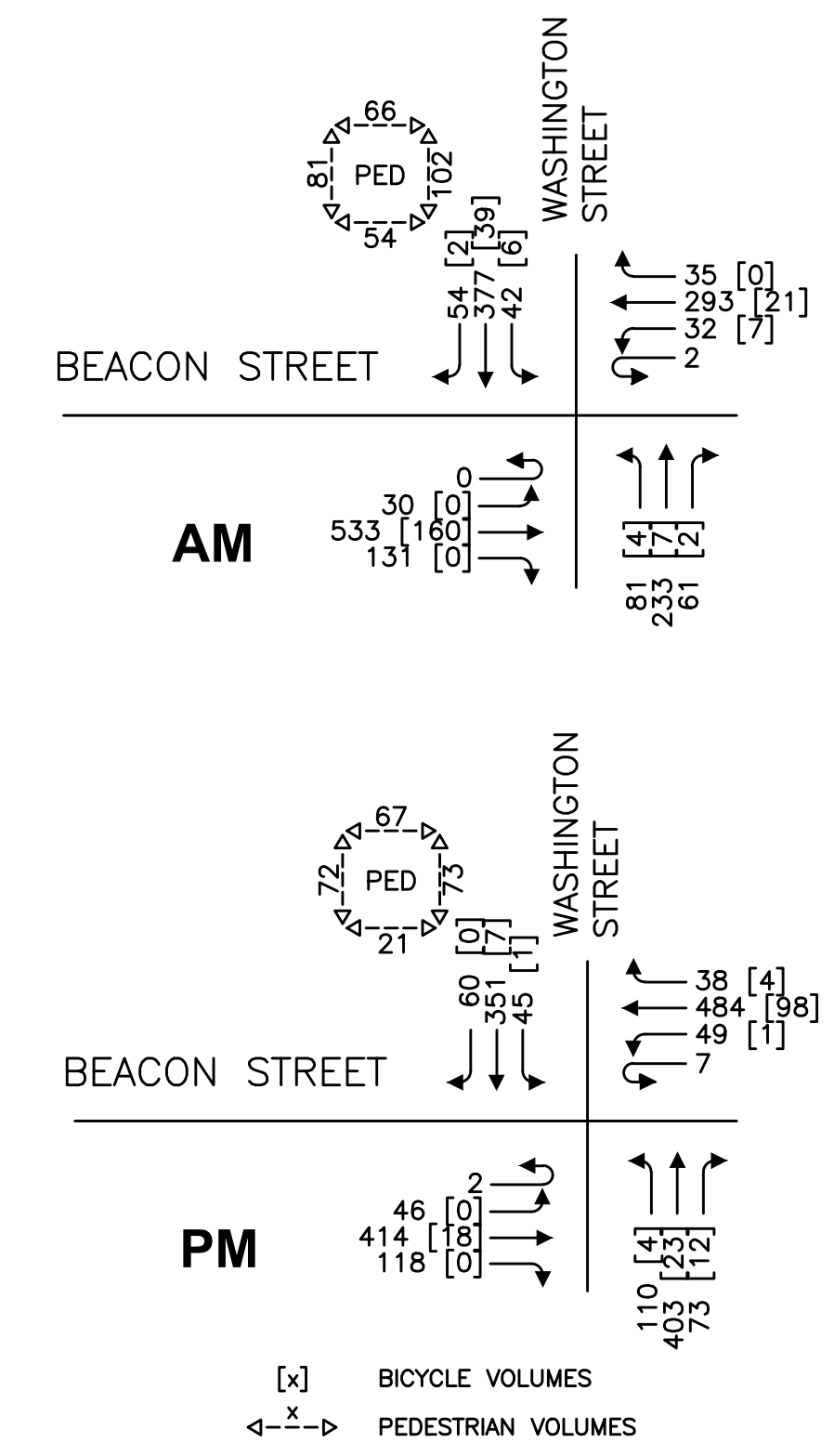
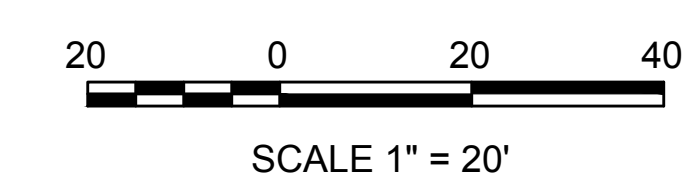
**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	79	201
PROJECT FILE NO.		607209	

**TRAFFIC SIGNAL LAYOUT
LOCATION 3**



PROPOSED SIGNAL LAYOUT



**2032 FUTURE CONDITIONS
PEAK HOUR TRAFFIC VOLUMES**

MAJOR ITEMS REQUIRED		
PAY ITEM	QUANTITY	ITEM
816.04	1	CONTROLLER BDW TS-2 TYPE 1 CAB & FDN
	1	SERVICE CONNECTION, TYPE OVERHEAD
	1	TELEPHONE SERVICE CONNECTION
	1	30 FT MAST ARM, TYPE II STEEL BASE & FDN
	1	20 FT MAST ARM, TYPE II STEEL BASE & FDN
	1	15 FT MAST ARM, TYPE II STEEL BASE & FDN
	9	1 WAY, 3 SECTION SIGNAL HOUSING (12" LENS)
	1	1 WAY, 4 SECTION SIGNAL HOUSING (12" LENS)
	1	10 FT TRAFFIC SIGNAL POST, BASE & FDN
	6	8 FT TRAFFIC SIGNAL POST, BASE & FDN
	8	PEDESTRIAN COUNTDOWN SIGNAL HOUSING (16" LENS)
	8	APS PEDESTRIAN PUSH BUTTON, SIGN & SADDLE
	8	R10-3e SIGN
	4	OPTICAL PRE-EMPTION RECEIVER
	2	2 CHANNEL PHASE SELECTOR
	1	CONFIRMATION STROBE (WHITE)
1	VIDEO DETECTION CAMERA & AUXILIARY EQUIPMENT	
1	MASTER CONTROLLER	
811.31	7	PULL BOX 12"x12" (FOR INTERCONNECT TO PARK ST)
811.22	3	PULL BOX 12"x24"
811.23	1	PULL BOX 24"x24"
816.803	1	EXISTING SIGNAL POSTS, SIGNAL HEADS & EQUIPMENT, REMOVED AND STACKED
Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.		

NOTE: 1. CONDUIT ITEMS COMPENSATED UNDER CONTRACT ITEMS AND ARE NOT INCIDENTAL.
2. PED PHASE ON RECALL. VIBRO-TACTILE PED PUSH BUTTON USED TO CALL AUDIBLE SIGNAL ONLY.

**SOMERVILLE/CAMBRIDGE
BEACON STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HP-002S(711)X	80	201
PROJECT FILE NO. 607209			

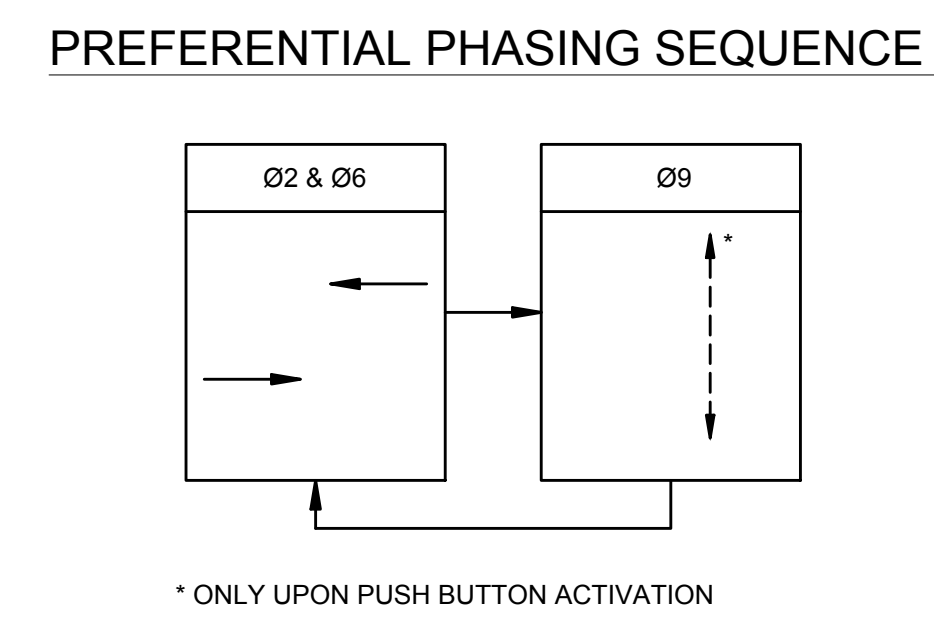
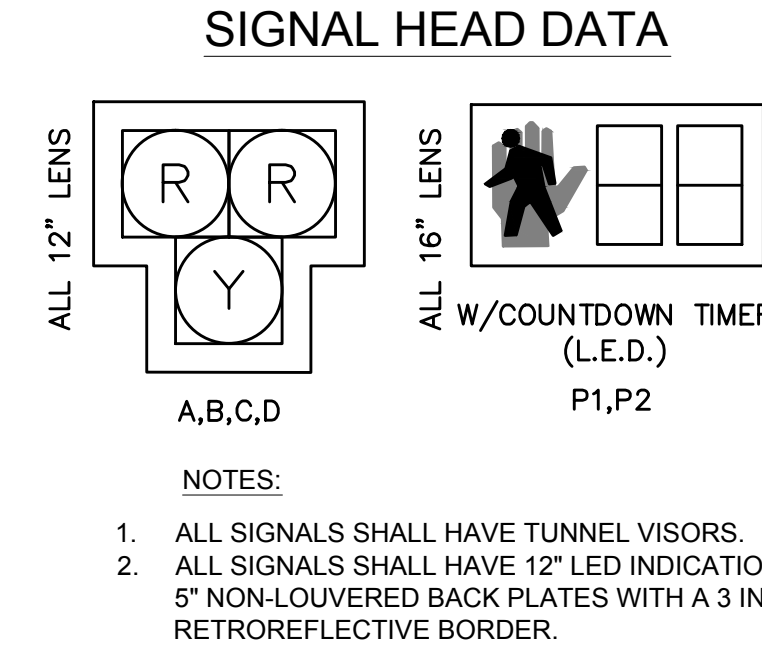
**TRAFFIC SIGNAL LAYOUT
LOCATION 4**

		PHASE 2&6			PHASE 9		
		←			P2 ↑		
		→			P1 ↓		

SEQUENCE AND TIMING FOR PEDESTRIAN HYBRID BEACON								
STREET	DIRECTION	HOUSINGS	1	2	3	1	2	3
BEACON STREET	NB	C,D	DARK	FY	SY	SR	AFR	DARK
BEACON STREET	SB	A,B	DARK	FY	SY	SR	AFR	DARK
ACROSS BEACON STREET			EB-WB	P1,P2	DW	DW	W	FDW/DW
			TIMING IN SECONDS					
MIN GREEN (SEC)			30					
FLASHING & STEADY YELLOW (SEC)			4 2					
WALK (W)			7					
PEDESTRIAN CLEARANCE (FDW)			12					
DONT WALK (DW)			3					
RECALL			OFF					

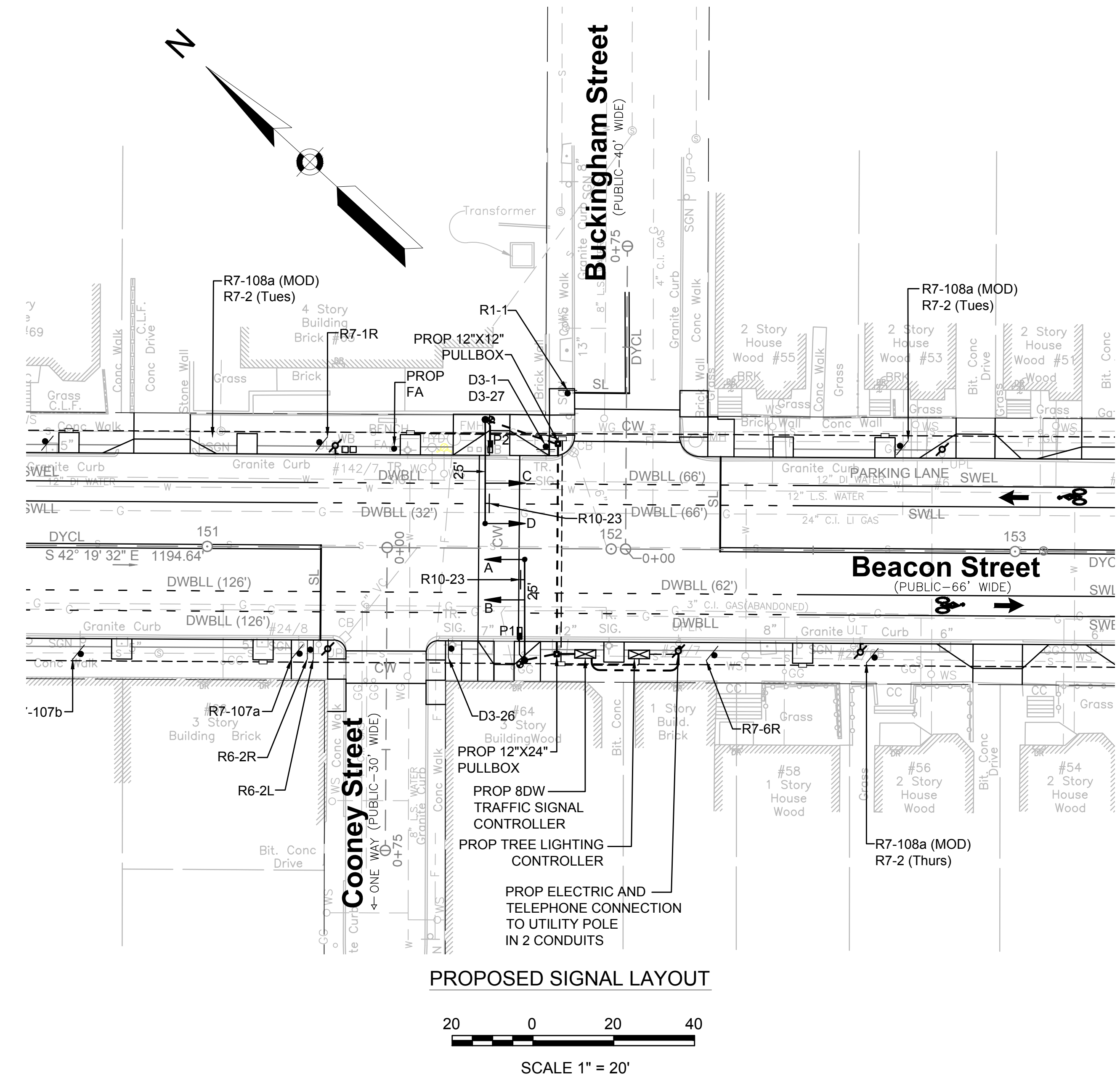
- SEQUENCE AND TIMING NOTES:**
- THE VEHICULAR SIGNALS SHALL REMAIN DARK UNTIL THE PEDESTRIAN HYBRID BEACON IS ACTIVATED WITH PUSH BUTTON ACTIVATION.
 - THE PEDESTRIAN COUNTDOWN TIMER SHALL ONLY DISPLAY THE COUNTDOWN DURING THE PEDESTRIAN CLEARANCE INTERVAL.

- ABBREVIATIONS:**
- FY = FLASHING YELLOW
 - SY = STEADY YELLOW
 - SR = STEADY RED
 - AFR = ALTERNATING FLASHING RED (BOTH DUAL RED INDICATIONS ILLUMINATED)
 - W = WALK
 - FDW = FLASHING DONT WALK
 - DW = DONT WALK



PEDESTRIAN HYBRID BEACON & PEDESTRIAN INDICATION SEQUENCE

	1. DARK UNTIL ACTIVATED.		1. DONT WALK.
	2. FLASHING YELLOW UPON ACTIVATION.		2. DONT WALK.
	3. STEADY YELLOW FOR VEHICLE CLEARANCE.		3. DONT WALK.
	4. STEADY RED DURING PEDESTRIAN WALK INTERVAL.		4. WALK.
	5. ALTERNATING FLASHING RED DURING PEDESTRIAN CLEARANCE INTERVAL.		5. FLASHING DONT WALK WITH COUNTDOWN.
	6. ALTERNATING FLASHING RED DURING PEDESTRIAN BUFFER INTERVAL.		6. DONT WALK.
	7. DARK UNTIL ACTIVATED AGAIN.		7. DONT WALK.



MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
816.05	1	CONTROLLER 8DW TS-2 TYPE 1 CAB & FDN
	1	SERVICE CONNECTION, TYPE OVERHEAD
	1	TELEPHONE SERVICE CONNECTION
	2	25 FT MAST ARM, TYPE II STEEL BASE & FDN
	4	1 WAY, 3 SECTION HYBRID SIGNAL BEACON HOUSING (12" LENS)
	2	PEDESTRIAN COUNTDOWN SIGNAL HOUSING (16" LENS)
	2	APS PEDESTRIAN PUSH BUTTON, SIGN & SADDLE
	2	R10-3e SIGN
811.31	1	PULL BOX 12"x12"
811.22	1	PULL BOX 12"x24"
816.804	1	EXISTING SIGNAL POSTS, SIGNAL HEADS, & EQUIPMENT, REMOVED AND STACKED

Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.

NOTE: CONDUIT ITEMS COMPENSATED UNDER CONTRACT ITEMS AND ARE NOT INCIDENTAL.