

TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: WOODSIDE RD, WILDWOOD ST, FLETCHER ST, BACON ST, MAIN ST (ROUTE 38)
 DATE: MARCH 21, 2019 Permit No.:

TEMPORARY TRAFFIC CONTROL PLAN GENERAL NOTES

- ALL CONSTRUCTION SIGNING, TEMPORARY TRAFFIC CONTROL DEVICES, AND ROADSIDE ELEMENTS SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED, THE MASSDOT STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS, THE LATEST REVISIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (AASHTO) ROADSIDE DESIGN GUIDE, AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AND NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
- ALL TEMPORARY PEDESTRIAN PATHWAYS SHALL COMPLY FULLY WITH ALL REQUIREMENTS OF THE MUTCD AND ALL APPLICABLE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) REQUIREMENTS.
- WORK HOURS SHALL BE AS STATED IN THE APPROVED STREET OCCUPANCY PERMIT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- ALL DRUMS OUTSIDE TAPERS SHALL BE SET AT 20' ON CENTER MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
- ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN SAFE AND REASONABLE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OR RESTRICTION OF ACCESS.
- CONTRACTOR SHALL PLATE OR BACKFILL OPEN EXCAVATION DURING NON-WORKING HOURS IN ACCORDANCE WITH MASSDOT REQUIREMENTS.
- 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- NON-ESSENTIAL TEMPORARY TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS WHEN NOT IN USE.
- SIGNS INSTALLED ON PORTABLE STANDS REQUIRE 12 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
- SIGNS INSTALLED ON PORTABLE STANDS PLACED AMONG CHANNELIZATION DEVICES REQUIRE A 36 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
- SIGNS MOUNTED ON POSTS REQUIRE A MINIMUM 84 INCH MOUNTING HEIGHT FROM THE ROADWAY OR SIDEWALK SURFACE TO THE BOTTOM OF THE SIGN. CONTRACTOR SHALL MAINTAIN A MINIMUM SIDEWALK HORIZONTAL CLEAR WIDTH OF 36" AT ALL TIMES.
- THE FIRST 10 DRUMS ON TAPERS SHALL BE REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AND SHALL BE OPERATING, AT A MINIMUM, BETWEEN DUSK AND DAWN, WHEN TAPER IS DEPLOYED.
- REFLECTORIZED CONES SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.
- CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS.
- NO WORK SHALL OCCUR WITHIN THE PUBLIC WAY ON STATE OR TOWN RECOGNIZED HOLIDAYS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- ARROW BOARD FLASHING CAUTION SHALL FLASH IN FOUR-POINT CAUTION MODE ONLY.
- CONTRACTOR SHALL SECURE WORK AREAS BY APPROPRIATE MEANS, TO PREVENT UNAUTHORIZED ACCESS AT ALL TIMES.
- THERE IS NO DESIGNATED BICYCLE LANE ON THE ROADWAY WITHIN THE PROJECT LIMITS. BICYCLES ARE EXPECTED TO SHARE THE ROAD WITH GENERAL VEHICULAR TRAFFIC.
- CONTRACTOR TO COORDINATE WITH MBTA A MINIMUM OF 30 DAYS PRIOR TO WORKING IN AREAS WHERE BUS STOPS WILL BE IMPACTED TO COORDINATE THE PROPOSED WORK.

SUGGESTED TEMPORARY TRAFFIC CONTROL SETUP APPLICATION			
ROADWAY	STATION (NOTE 1)	TEMPORARY TRAFFIC CONTROL SETUPS	SHEET NUMBER
WOBURN SUBSTATION	4+53 TO 13+00	OFF-ROADWAY WORK	SHEET 02
	MANHOLE #1 (11+35±)	SITE SPECIFIC - MANHOLE #1	SHEET 04
POND STREET	13+00 to 13+80	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC	SHEET 02
	13+80 TO 41+00	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC	SHEET 02
WOODSIDE ROAD	MANHOLE #2 (32+90±)	DETOUR PLAN - WOODSIDE RD CLOSURE AND DETOUR BETWEEN CHESTERFORD ROAD AND WILDWOOD STREET	SHEET 14
	41+00 TO 53+50	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
WILDWOOD STREET	MANHOLE #3 (50+20±)	DETOUR PLAN - WILDWOOD STREET CLOSURE AND DETOUR BETWEEN LAWRENCE STREET AND WARREN STREET	SHEET 15
	53+50 TO 55+00	TYPICAL ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
FLETCHER STREET	55+00 TO 65+00	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC	SHEET 02
BACON STREET	65+00 TO 67+20	TYPICAL ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
	67+20 TO 70+00	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
	MANHOLE #4 (67+35±)	DETOUR PLAN - BACON STREET CLOSURE AND DETOUR BETWEEN CHURCH STREET AND LAGRANGE STREET	SHEET 16
	70+00 TO 77+50	TYPICAL TWO-WAY STREET LANE SHIFT TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
	77+50 TO 79+00	TYPICAL ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
	79+00 TO 86+72	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC TYPICAL PEDESTRIAN BYPASS DETAIL - TYPE II	SHEET 02 SHEET 03
	85+65 TO 88+65	SITE SPECIFIC - BACON STREET AT MYSTIC VALLEY PARKWAY (SEE NOTE 2) - DCR	SHEET 05-06
	88+65 TO 97+80	OFF-ROADWAY WORK	SHEET 02
	MANHOLE #5 (93+65±)	SITE SPECIFIC - MANHOLE #5	SHEET 07
	97+80 TO 98+13 98+21 TO 104+80	TYPICAL ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC	SHEET 02 SHEET 02
MAIN STREET (ROUTE 38)	104+80 TO 109+00	SITE SPECIFIC - BACON STREET AT MAIN STREET (ROUTE 38) DETOUR PLAN - GROVE STREET CLOSURE AND DETOUR AT BACON STREET AND MAIN STREET (ROUTE 38)	SHEET 08 - 13 SHEET 17
	109+00 TO 122+00	TYPICAL TWO-WAY STREET LANE SHIFT	SHEET 02
	MANHOLE #6 (114+40±)	DETOUR PLAN - MAIN STREET (ROUTE 38) CLOSURE AND DETOUR BETWEEN EVERELL ROAD AND HIGHLAND AVE	SHEET 18
	122+00 TO 134+00	TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC	SHEET 02

- NOTES:
- SEE TRANSMISSION LINE PLAN AND PROFILE FOR LOCATION AND STATION.
 - THE INTERSECTION OF MYSTIC VALLEY PARKWAY AT BACON STREET IS UNDER THE DEPARTMENT OF CONSERVATION AND RECREATION (DCR) JURISDICTION. A SEPARATE DCR PERMIT HAS BEEN FILED FOR CONSTRUCTION ON DCR PROPERTY.



LANE TAPER LENGTH FORMULAS	
L= TAPER LENGTH IN FEET	
W= WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED IN FEET	
S= POSTED SPEED LIMIT IN MPH	
POSTED SPEED	
40 MPH OR LESS	GREATER THAN 40 MPH
$L = \frac{WS^2}{60}$	L= WS

ADVANCE SIGN SPACING				
ROAD	DISTANCE BETWEEN SIGNS (FEET)			
	A	B	C	D
MAIN STREET (ROUTE 38)	350	150	350	350
ALL OTHER ROADWAYS	100	50	100	100

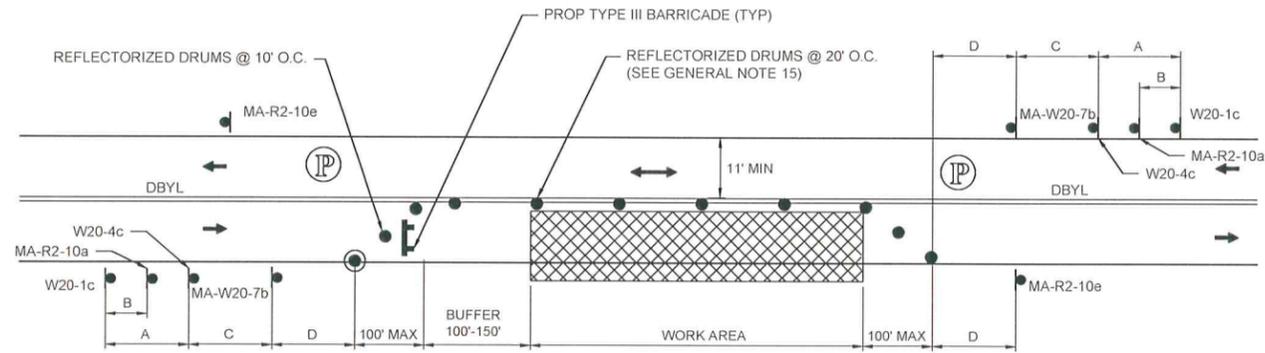
BUFFER SPACING	
SPEED (MPH)	DISTANCE (FEET)
15	80
20	115
25	155
30	200
35	250
40	305
45	360

LEGEND	
	POLICE OFFICER
	REFLECTORIZED DRUM
	REFLECTORIZED DRUM WITH TYPE A FLASHER (SEE NOTE 13)
	TEMPORARY CONSTRUCTION SIGN
	TRAFFIC CONE
	TYPE III BARRICADE
	ARROW BOARD (AB) (RIGHT OR LEFT)
	ARROW BOARD (AB) (CAUTION)
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRAFFIC FLOW
	PEDESTRIAN ROUTE
	CONSTRUCTION FENCE
	TEMPORARY PORTABLE PEDESTRIAN BARRICADE
NTS	NOT TO SCALE

EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION	
MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
GENERAL NOTES AND LEGEND	
SCALE: NOT TO SCALE	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 01 OF 21
APPROVED: MS	JOB #: 12988.11

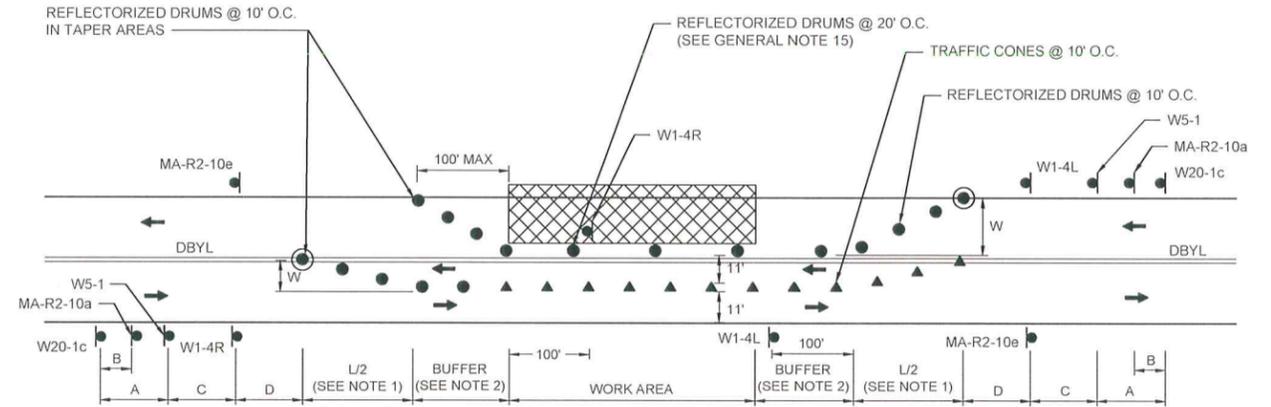
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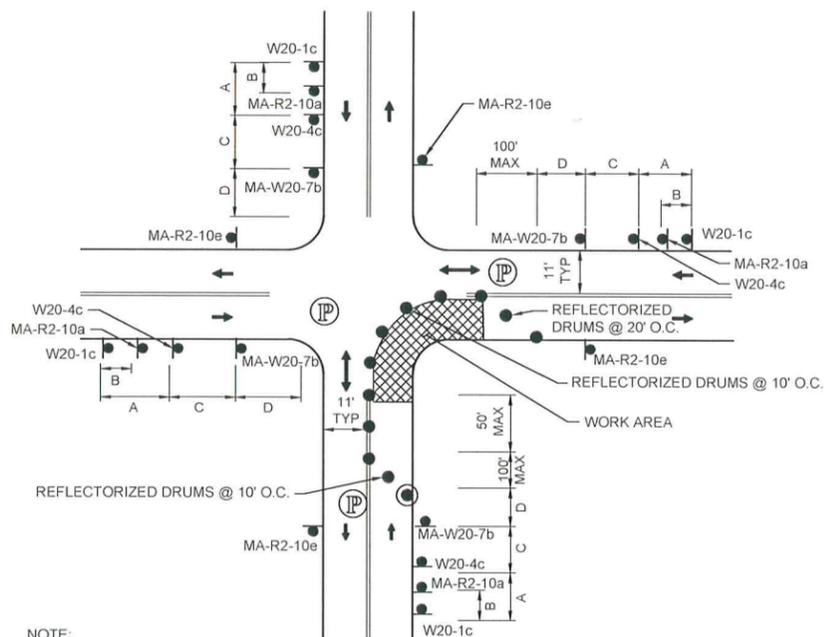
NOTE:
 1. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 01.

TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC
 SCALE: NTS



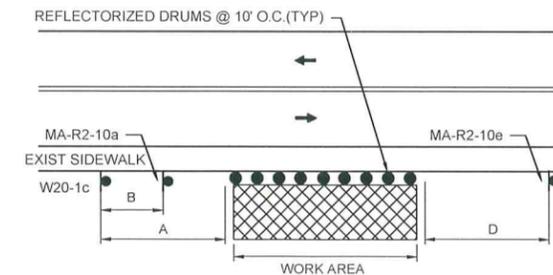
NOTES:
 1. SEE TAPER LENGTH FORMULA ON SHEET 01.
 2. SEE BUFFER SPACING CHART ON SHEET 01.
 3. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 01.

TYPICAL TWO-WAY STREET LANE SHIFT
 SCALE: NTS



NOTE:
 1. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 01.

TYPICAL ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS
 SCALE: NTS



NOTES:
 1. SEE TAPER LENGTH FORMULA ON SHEET 01.
 2. SEE BUFFER SPACING TABLE ON SHEET 01.
 3. SEE TTCP GENERAL NOTES ON SHEET 01.

OFF ROADWAY WORK
 SCALE: NTS

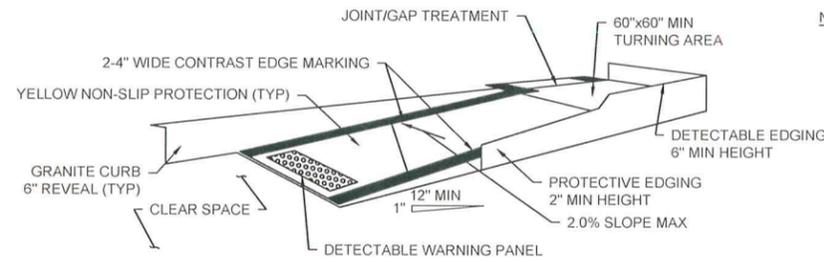


EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

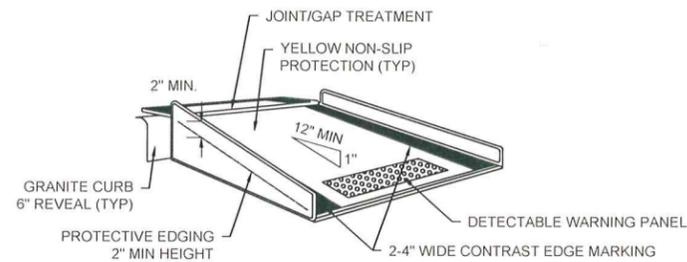
TYPICAL DETAILS	
SCALE: NOT TO SCALE	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 02 OF 21
APPROVED: MS	JOB #: 12988.11

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TEMPORARY CURB RAMP-PARALLEL TO CURB



TEMPORARY CURB RAMP-PERPENDICULAR TO CURB

TEMPORARY CURB RAMPS

SCALE: NTS

NOTES:

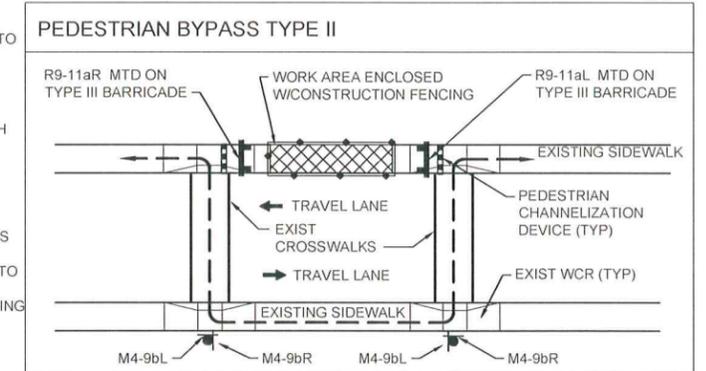
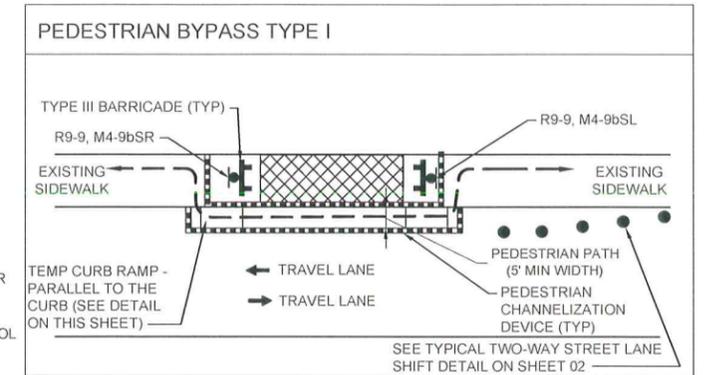
- CURB RAMPS SHALL BE 60" MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE. PROTECTIVE EDGING WITH A 2" MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING WITH 6" MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
- CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
- CLEAR SPACE OF 48"x48" MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5" LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25" HIGH, AND BEVELED AT 1:2 BETWEEN 0.25" AND 0.5" HEIGHT.
- IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.

NOTES:

- ADDITIONAL ADVANCE WARNING SIGNS MAY BE NECESSARY AS DETERMINED BY THE ENGINEER.
- CONTROLS FOR PEDESTRIAN TRAFFIC ONLY, ARE SHOWN. VEHICULAR TRAFFIC SHALL BE MAINTAINED AS SHOWN ELSEWHERE.
- STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
- INDICATES DIRECTION OF PEDESTRIAN TRAVEL.
- IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, THE APPROPRIATE SIGNS SHALL BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AT EXISTING CROSSWALKS AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER.
- ALL TEMPORARY PEDESTRIAN PATHWAYS SHALL COMPLY FULLY WITH ALL REQUIREMENTS OF THE MUTCD AND ALL APPLICABLE MAAB AND ADAAG REQUIREMENTS AND INCLUDE THE USE OF A COMPLIANT TEMPORARY PEDESTRIAN MANAGEMENT GUIDANCE SYSTEM AT ALL TIMES.
- CONTRACTOR SHALL MAINTAIN AS WIDE OF A PEDESTRIAN ACCESS AS POSSIBLE AT ALL TIMES. EXCEPT WHERE NECESSARY, THE CONTRACTOR MAY TEMPORARILY REDUCE PEDESTRIAN PATHWAYS TO 4 FEET IN WIDTH (EXCLUDING CURB) FOR NO MORE THAN 200 LINEAR FEET AT A TIME IN ACCORDANCE WITH ALL STANDARDS. A 5' x 5' PASSING AREA SHALL BE PROVIDED IN INTERVALS NOT EXCEEDING 200 FEET.
- TEMPORARY WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MASSDOT, MAAB, AND ADAAG REQUIREMENTS.

PEDESTRIAN BYPASS DETAIL

SCALE: NTS



EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

TYPICAL DETAILS

SCALE: NOT TO SCALE	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 03 OF 21
APPROVED: MS	JOB #: 12988.11

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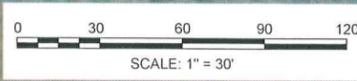
TOWN: WINCHESTER
 LOCATION: BACON ROAD AT MAIN STREET (ROUTE 38)
 DATE: MARCH 21, 2019 Permit No.:



EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

MANHOLE #1	
SCALE: 1"=30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 04 OF 21
APPROVED: MS	JOB #: 12988.11

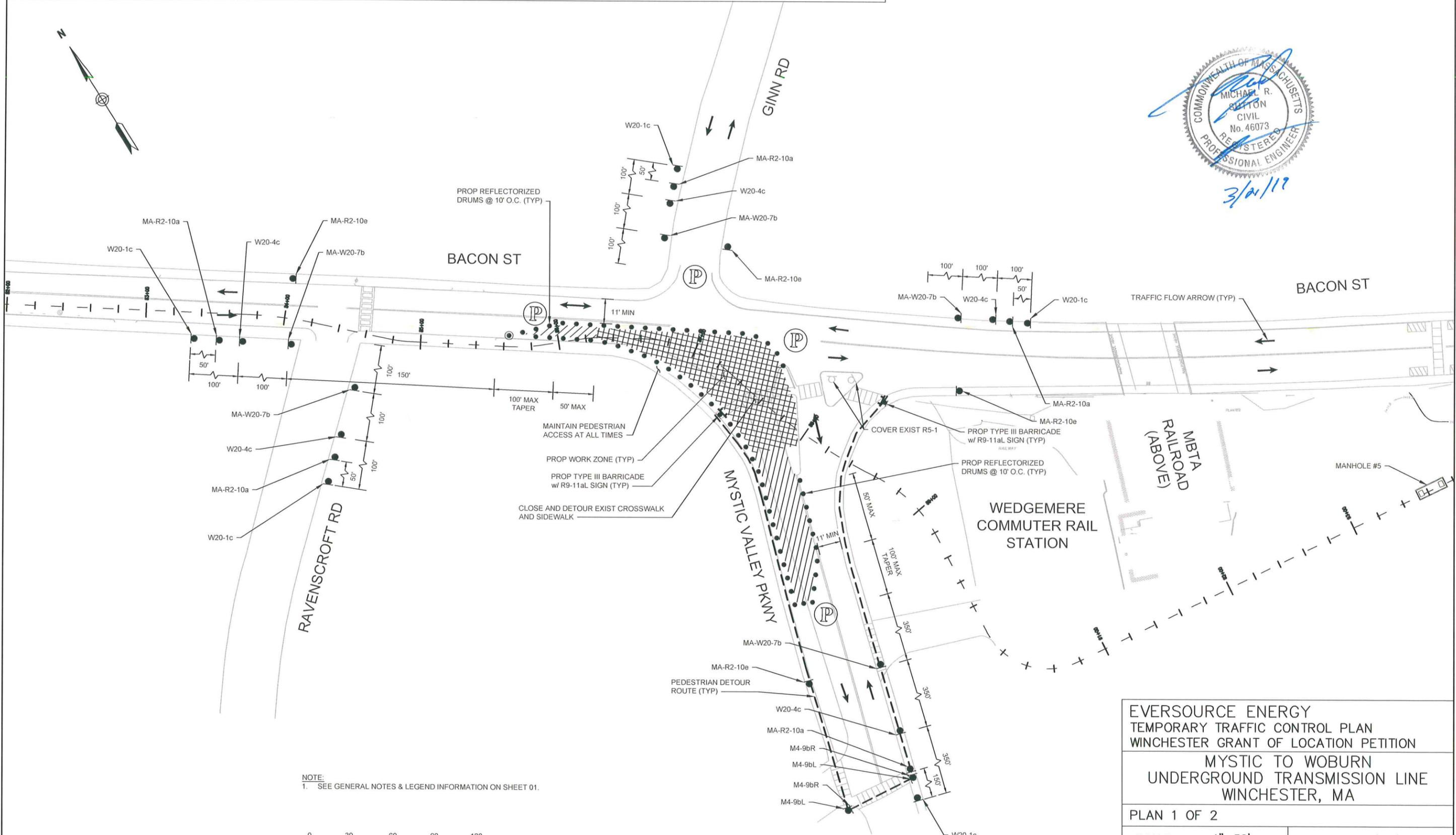
NOTES:
 1. SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 2. SEE OFF-ROADWAY WORK DETAIL ON SHEET 02.



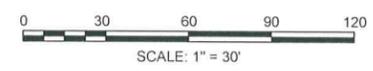
TOWN OF WINCHESTER
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 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: BACON STREET AT MYSTIC VALLEY PARKWAY

DATE: MARCH 21, 2019 Permit No.:



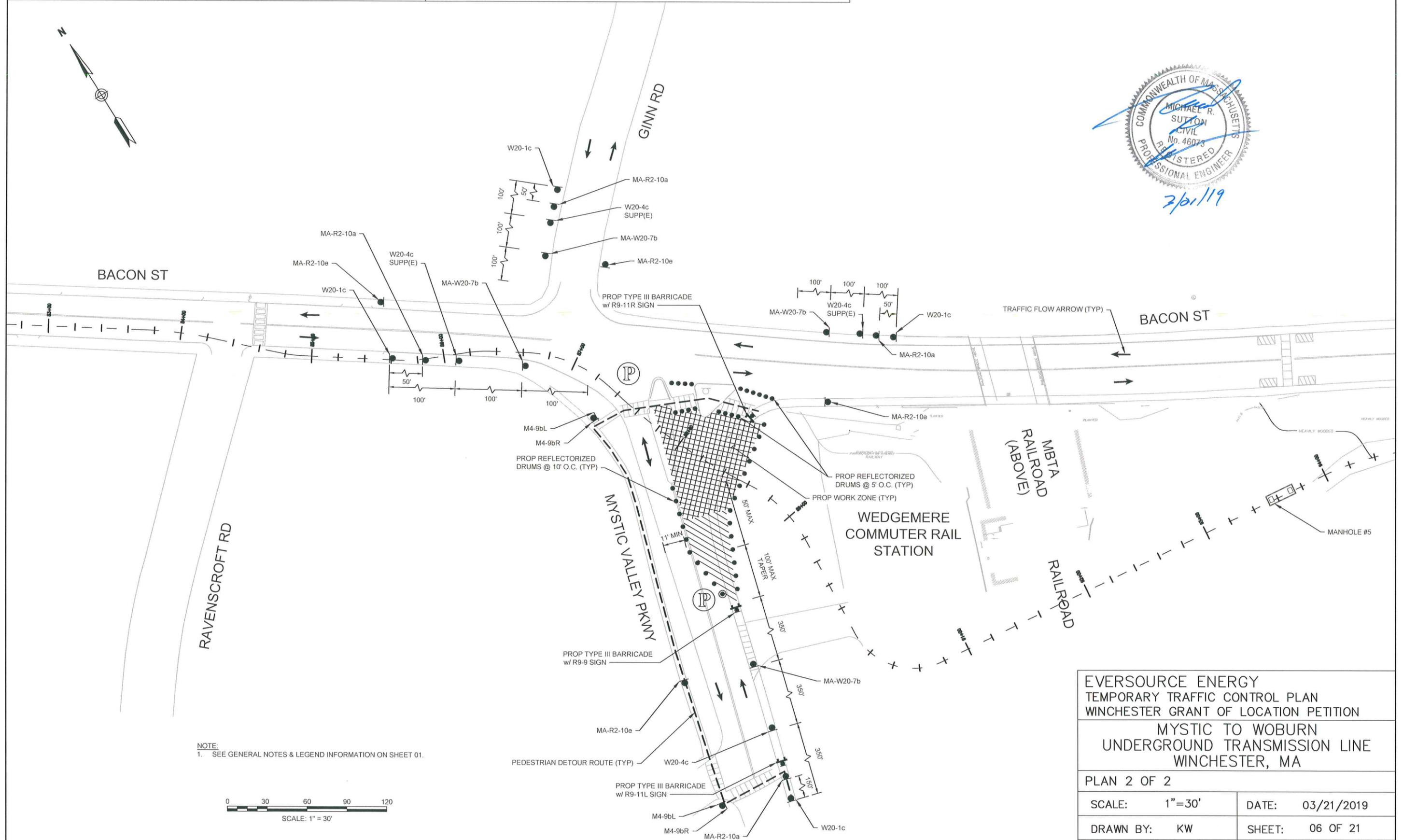
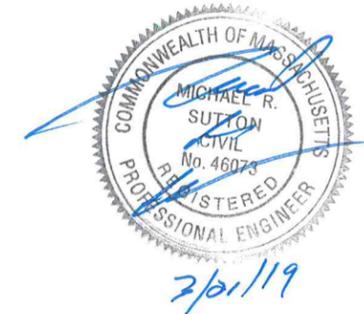
NOTE:
 1. SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.



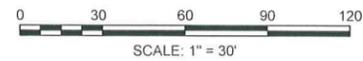
EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
PLAN 1 OF 2	
SCALE: 1"=30'	DATE: 03/21/2019
DRAWN BY: KW	SHEET: 05 OF 21
APPROVED: MS	JOB #: 12988.11

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TOWN: WINCHESTER
 LOCATION: BACON STREET AT MYSTIC VALLEY PARKWAY
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NOTE:
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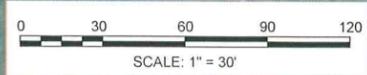
EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION	
MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
PLAN 2 OF 2	
SCALE: 1"=30'	DATE: 03/21/2019
DRAWN BY: KW	SHEET: 06 OF 21
APPROVED: MS	JOB #: 12988.11

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NOTES:
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 2. SEE OFF-ROADWAY WORK DETAIL ON SHEET 02.



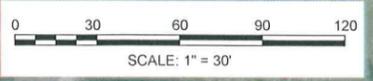
EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION			
MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA			
MANHOLE #5			
SCALE:	1" = 30'	DATE:	03/21/2019
DRAWN BY:	MM	SHEET:	07 OF 21
APPROVED:	MS	JOB #:	12988.11



BACON STREET LANE SHIFT
 TAPER CALCULATIONS

W = 8'
S = 30 MPH
$L = \frac{WS^2}{60} = 120'$
L/2 = 60' MIN

- NOTES:
- SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 - POLICE DETAIL TO MANAGE TRAFFIC AT THE INTERSECTION OF GROVE STREET AND BACON STREET.



EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

PLAN 1 OF 6

SCALE: 1" = 30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 08 OF 21
APPROVED: MS	JOB #: 12988.11

CONTINUED BELOW

CONTINUED ABOVE



GROVE ST EB CLOSED
 (SEE NOTE 3)



EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
PLAN 2 OF 6	
SCALE: 1" = 30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 09 OF 21
APPROVED: MS	JOB #: 12988.11

- NOTES:
- SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 - POLICE DETAIL TO MANAGE TRAFFIC AT THE INTERSECTION OF GROVE STREET AND BACON STREET.
 - SEE GROVE STREET EASTBOUND CLOSURE AND DETOUR AT BROOKS STREET ON SHEET 17.



COMMONWEALTH OF MASSACHUSETTS
 MICHAEL R. SUTTON
 CIVIL
 No. 46073
 REGISTERED
 PROFESSIONAL ENGINEER
 3/21/19

GROVE ST LANE SHIFT TAPER CALCULATIONS	
W =	5'
S =	30 MPH
L =	$\frac{WS^2}{60} = 75'$
L/2 =	40' MIN

NOTES:
 1. SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 2. POLICE DETAIL TO MANAGE TRAFFIC AT THE INTERSECTION OF GROVE STREET AND BACON STREET.

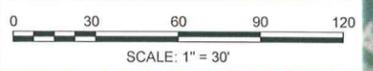
EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

PLAN 3 OF 6	
SCALE: 1" = 30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 10 OF 21
APPROVED: MS	JOB #: 12988.11



COMMONWEALTH OF MASSACHUSETTS
 MICHAEL R. SUTTON
 CIVIL
 NO. 46073
 REGISTERED PROFESSIONAL ENGINEER
 3/21/19

NOTES:
 1. SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 2. POLICE DETAIL TO MANAGE TRAFFIC AT THE INTERSECTION OF SANBORN STREET AND MAIN STREET (ROUTE 38).



EVERSOURCE ENERGY
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 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

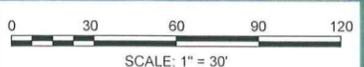
PLAN 4 OF 6	
SCALE: 1" = 30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 11 OF 21
APPROVED: MS	JOB #: 12988.11



MAIN ST LANE SHIFT TAPER CALCULATIONS	
W =	10'
S =	30 MPH
L =	$\frac{WS^2}{60} = 150'$
L/2 =	75' MIN

RIDGEFIELD RD LANE SHIFT TAPER CALCULATIONS	
W =	9'
S =	30 MPH
L =	$\frac{WS^2}{60} = 135'$
L/2 =	67.5' MIN

- NOTES:
- SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 - POLICE DETAIL TO MANAGE TRAFFIC AT THE INTERSECTION OF MAIN STREET AND SANBORN STREET.
 - CONTRACTOR TO COORDINATE WITH MBTA REGARDING BUS STOP RELOCATION DURING CONSTRUCTION.



EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

PLAN 5 OF 6	
SCALE: 1" = 30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 12 OF 21
APPROVED: MS	JOB #: 12988.11



MAIN ST LANE SHIFT TAPER CALCULATIONS	
W =	10'
S =	30 MPH
L =	$\frac{WS^2}{60} = 150'$
L/2 =	75' MIN


 3/21/19

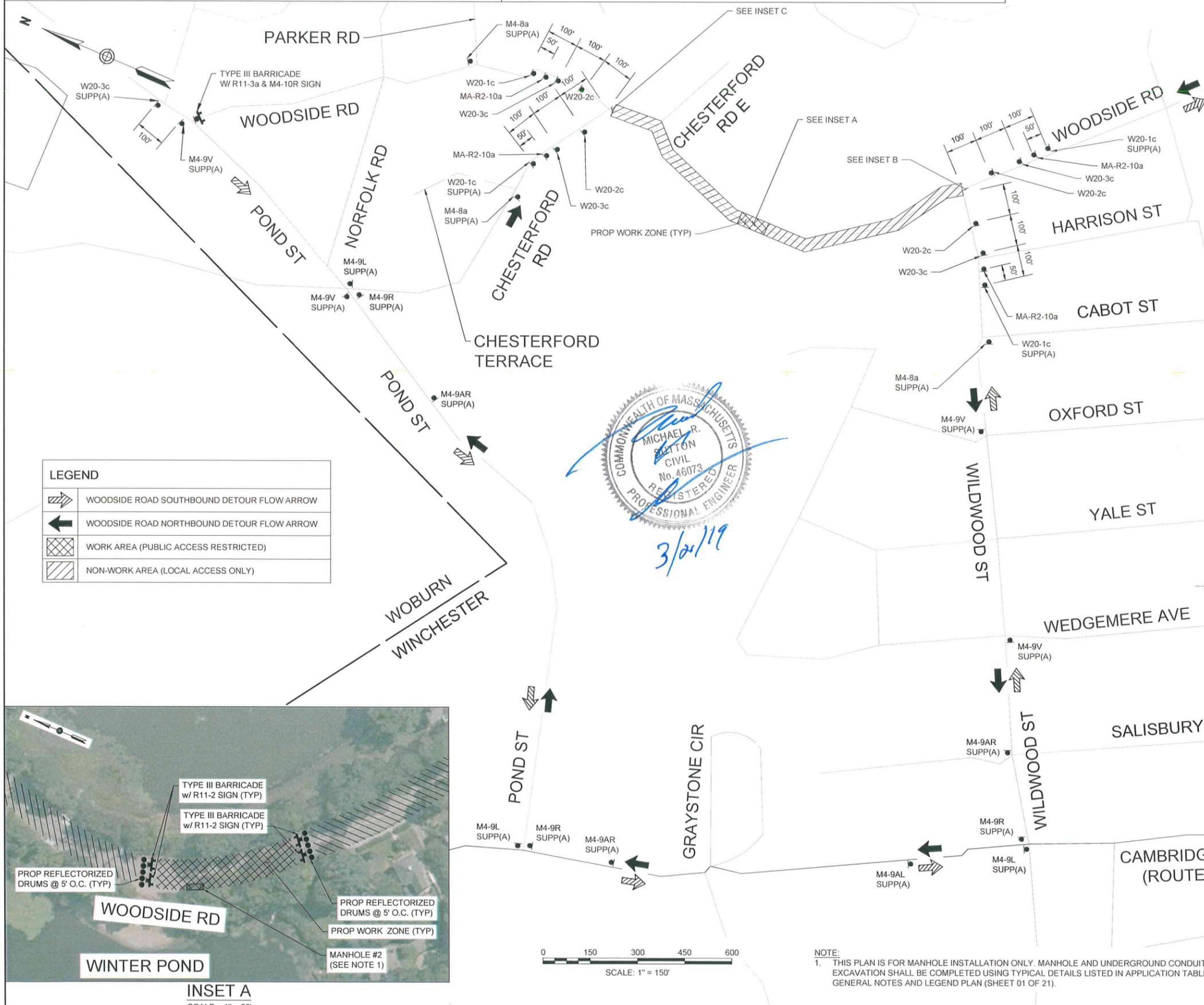
- NOTES:
- SEE GENERAL NOTES & LEGEND INFORMATION ON SHEET 01.
 - POLICE DETAIL TO MANAGE TRAFFIC AT THE INTERSECTION OF GROVE STREET AND BACON STREET.
 - CONTRACTOR TO COORDINATE WITH MBTA REGARDING BUS STOP RELOCATION DURING CONSTRUCTION.

EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

PLAN 6 OF 6	
SCALE: 1" = 30'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 13 OF 21
APPROVED: MS	JOB #: 12988.11

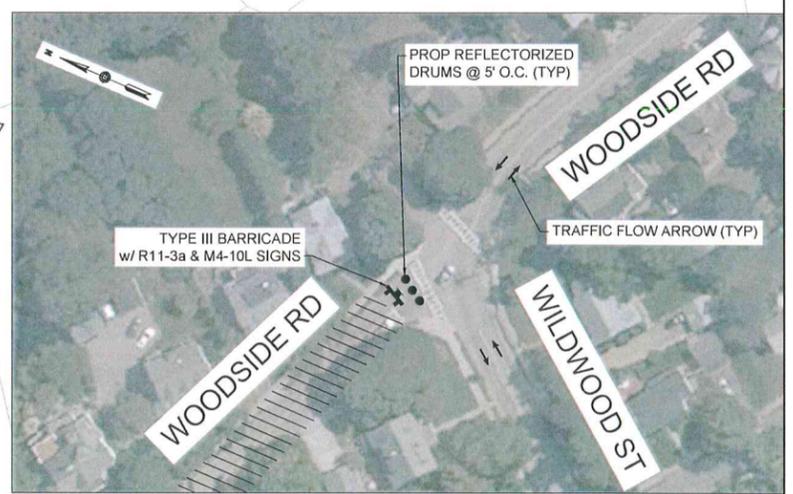
TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: WOODSIDE ROAD BETWEEN CHESTERFORD ROAD AND WILDWOOD STREET
 DATE: MARCH 21, 2019 Permit No.:

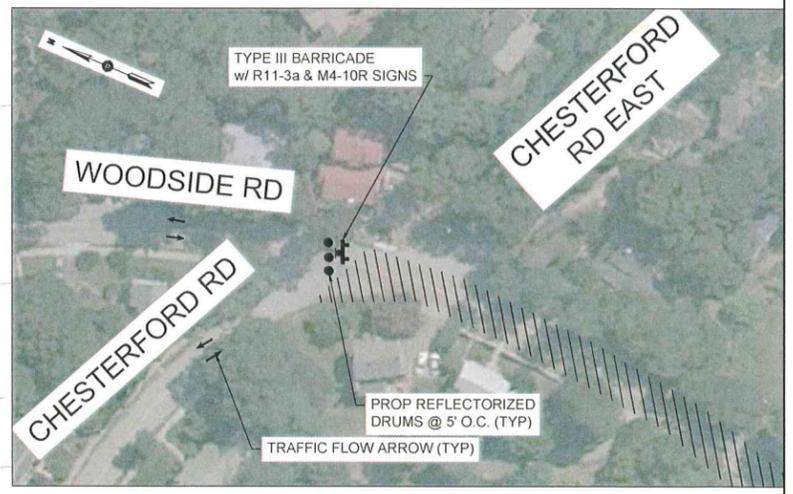


LEGEND	
	WOODSIDE ROAD SOUTHBOUND DETOUR FLOW ARROW
	WOODSIDE ROAD NORTHBOUND DETOUR FLOW ARROW
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	NON-WORK AREA (LOCAL ACCESS ONLY)

COMMONWEALTH OF MASSACHUSETTS
 MICHAEL R. SUTTON
 CIVIL
 No. 46073
 REGISTERED
 PROFESSIONAL ENGINEER
 3/21/19



INSET B
 SCALE: 1" = 60'



INSET C
 SCALE: 1" = 60'



INSET A
 SCALE: 1" = 60'

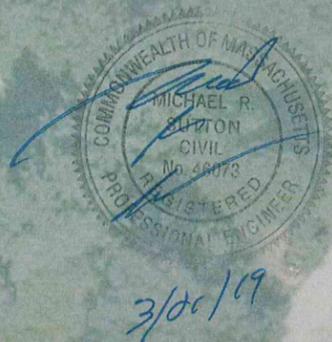


NOTE:
 1. THIS PLAN IS FOR MANHOLE INSTALLATION ONLY. MANHOLE AND UNDERGROUND CONDUIT EXCAVATION SHALL BE COMPLETED USING TYPICAL DETAILS LISTED IN APPLICATION TABLE ON GENERAL NOTES AND LEGEND PLAN (SHEET 01 OF 21).

EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
CLOSURE AND DETOUR PLAN – MANHOLE #2	
SCALE: 1"=150'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 14 OF 21
APPROVED: MS	JOB #: 12988.11

TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: WILDWOOD STREET BETWEEN LAWRENCE STREET
 AND WARREN STREET
 DATE: MARCH 21, 2019 Permit No.:

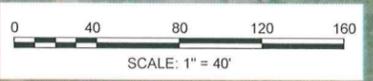


LEGEND	
	WILDWOOD STREET SOUTHBOUND DETOUR FLOW ARROW
	WILDWOOD STREET NORTHBOUND DETOUR FLOW ARROW
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	NON-WORK AREA (LOCAL ACCESS ONLY)

EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

CLOSURE AND DETOUR PLAN – MANHOLE #3	
SCALE: 1" = 40'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 15 OF 21
APPROVED: MS	JOB #: 12988.11

NOTE:
 1. THIS PLAN IS FOR MANHOLE INSTALLATION ONLY. MANHOLE AND UNDERGROUND CONDUIT EXCAVATION SHALL BE COMPLETED USING TYPICAL DETAILS LISTED IN APPLICATION TABLE ON GENERAL NOTES AND LEGEND PLAN (SHEET 01 OF 21).

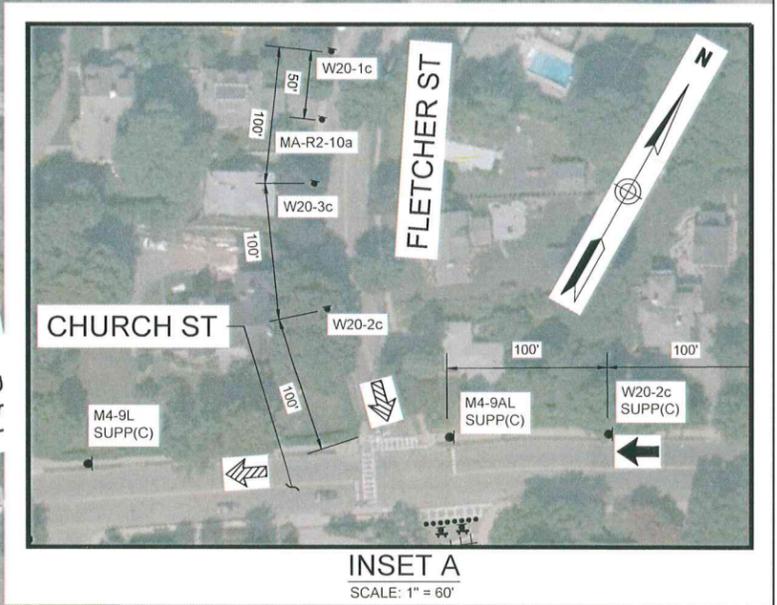


TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: BACON STREET BETWEEN CHURCH STREET AND LAGRANGE STREET
 DATE: MARCH 21, 2019 Permit No.:



Professional Engineer Seal:
 COMMONWEALTH OF MASSACHUSETTS
 MICHAEL R. SUZZON
 CIVIL ENGINEER
 No. 46072
 REGISTERED
 3/21/19

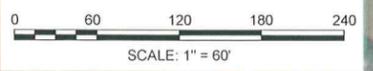


LEGEND	
	BACON STREET SB/ CHURCH ST WB DETOUR FLOW ARROW
	BACON STREET NB DETOUR FLOW ARROW
	CHURCH STREET EB DETOUR FLOW ARROW
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	NON-WORK AREA (LOCAL ACCESS ONLY)

EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA

CLOSURE AND DETOUR PLAN – MANHOLE #4	
SCALE: 1"=60'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 16 OF 21
APPROVED: MS	JOB #: 12988.11

NOTE:
 1. THIS PLAN IS FOR MANHOLE INSTALLATION ONLY. MANHOLE AND UNDERGROUND CONDUIT EXCAVATION SHALL BE COMPLETED USING TYPICAL DETAILS LISTED IN APPLICATION TABLE ON GENERAL NOTES AND LEGEND PLAN (SHEET 01 OF 21).



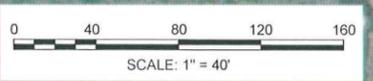


Professional Engineer Seal:
 MICHAEL R. SUTTON
 CIVIL
 No. 46073
 REGISTERED
 PROFESSIONAL ENGINEER
 3/21/19

LEGEND	
	GROVE STREET EASTBOUND DETOUR FLOW ARROW
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	NON-WORK AREA (LOCAL ACCESS ONLY)

EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
CLOSURE AND DETOUR PLAN – GROVE STREET	
SCALE: 1" = 40'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 17 OF 21
APPROVED: MS	JOB #: 12988.11

NOTE:
 1. SEE TEMPORARY TRAFFIC CONTROL PLAN FOR BACON STREET AT MAIN STREET (ROUTE 38) PLAN 2 OF 6 ON SHEET 09.

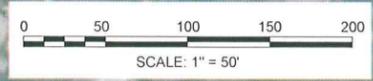




3/21/19

CONTINUED ON SHEET NO. 19

NOTE:
 1. THIS PLAN IS FOR MANHOLE INSTALLATION ONLY. MANHOLE AND UNDERGROUND CONDUIT EXCAVATION SHALL BE COMPLETED USING TYPICAL DETAILS LISTED IN APPLICATION TABLE ON GENERAL NOTES AND LEGEND PLAN (SHEET 01 OF 21).



LEGEND	
	MAIN STREET SOUTHBOUND DETOUR FLOW ARROW
	MAIN STREET NORTHBOUND DETOUR FLOW ARROW
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	NON-WORK AREA (LOCAL ACCESS ONLY)

EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
CLOSURE AND DETOUR PLAN – MANHOLE #6	
SCALE: 1" = 50'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 18 OF 21
APPROVED: MS	JOB #: 12988.11

TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: MAIN ST (ROUTE 38)

DATE: MARCH 21, 2019 Permit No.:

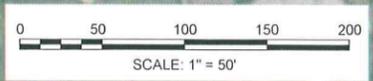


CONTINUED ON SHEET NO. 18

LEGEND	
	MAIN STREET SOUTHBOUND DETOUR FLOW ARROW
	MAIN STREET NORTHBOUND DETOUR FLOW ARROW
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	NON-WORK AREA (LOCAL ACCESS ONLY)

EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
CLOSURE AND DETOUR PLAN – MANHOLE #6	
SCALE: 1" = 50'	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 19 OF 21
APPROVED: MS	JOB #: 12988.11

NOTE:
 1. THIS PLAN IS FOR MANHOLE INSTALLATION ONLY. MANHOLE AND UNDERGROUND CONDUIT EXCAVATION SHALL BE COMPLETED USING TYPICAL DETAILS LISTED IN APPLICATION TABLE ON GENERAL NOTES AND LEGEND PLAN (SHEET 01 OF 21).



TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: WOODSIDE RD, WILDWOOD ST, FLETCHER ST, BACON ST, MAIN ST (ROUTE 38)
 DATE: MARCH 21, 2019 Permit No.:

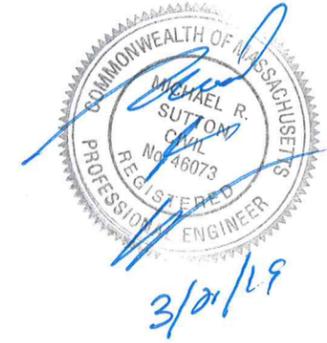
TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
MA-R2-10a	48"	36"		AS PER MASSDOT STANDARD			FLUORESCENT ORANGE	BLACK	BLACK
MA-R2-10e	36"	48"		AS PER MASSDOT STANDARD			FLUORESCENT ORANGE	BLACK	BLACK
R4-7b	24"	30"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			WHITE	BLACK	BLACK
R7-1d	12"	18"				WHITE	RED	RED	
R7-1L	12"	18"				WHITE	RED	RED	
R7-1R	12"	18"				WHITE	RED	RED	
R9-9	24"	12"				WHITE	BLACK	BLACK	
R9-11aL	24"	12"				WHITE	BLACK	BLACK	
R9-11aR	24"	12"				WHITE	BLACK	BLACK	
R9-11L	24"	12"				WHITE	BLACK	BLACK	
R9-11R	24"	12"				WHITE	BLACK	BLACK	
R11-2	48"	30"				WHITE	BLACK	BLACK	
R11-3a	60"	30"				WHITE	BLACK	BLACK	
W1-4L	36"	36"				FLUORESCENT ORANGE	BLACK	BLACK	
W1-4R	36"	36"				FLUORESCENT ORANGE	BLACK	BLACK	
W5-1	36"	36"				FLUORESCENT ORANGE	BLACK	BLACK	
W20-1c	36"	36"				FLUORESCENT ORANGE	BLACK	BLACK	
W20-2c	36"	36"				FLUORESCENT ORANGE	BLACK	BLACK	
W20-3c	36"	36"				FLUORESCENT ORANGE	BLACK	BLACK	

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY (CONTINUED)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
W20-4c	36"	36"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUORESCENT ORANGE	BLACK	BLACK
MA-W20-7b	36"	36"		AS PER MASSDOT STANDARD			FLUORESCENT ORANGE	BLACK	BLACK
MA-W24-2(MOD)	36"	36"		AS PER MASSDOT STANDARD			FLUORESCENT ORANGE	BLACK	BLACK
M4-8a	24"	18"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUORESCENT ORANGE	BLACK	BLACK
M4-9AL	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9AR	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9bL	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9bR	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9bSL	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9bSR	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9bV	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9L	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9R	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9SL	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-9V	30"	24"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-10L	48"	18"				FLUORESCENT ORANGE	BLACK	BLACK	
M4-10R	48"	18"				FLUORESCENT ORANGE	BLACK	BLACK	

NOTES:
 1. HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE 2017 MASSDOT STANDARD SIGNS BOOK, AS AMENDED.
 2. ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.



EVERSOURCE ENERGY
 TEMPORARY TRAFFIC CONTROL PLAN
 WINCHESTER GRANT OF LOCATION PETITION
 MYSTIC TO WOBURN
 UNDERGROUND TRANSMISSION LINE
 WINCHESTER, MA
 SIGN SUMMARY - 1 OF 2

SCALE: NOT TO SCALE	DATE: 03/21/2019
DRAWN BY: MM	SHEET: 20 OF 21
APPROVED: MS	JOB #: 12988.11

TOWN OF WINCHESTER
 DEPARTMENT OF PUBLIC WORKS
 15 LAKE STREET, WINCHESTER, MA 01890

TOWN: WINCHESTER
 LOCATION: WOODSIDE RD, WILDWOOD ST, FLETCHER ST, BACON ST, MAIN ST (ROUTE 38)
 DATE: MARCH 21, 2019 Permit No.:

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY (CONTINUED)									
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
SUPP(A)	VARIES	12"	WOODSIDE RD	SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUORESCENT ORANGE	BLACK	BLACK
SUPP(B)	VARIES	12"	WILDWOOD ST				FLUORESCENT ORANGE	BLACK	BLACK
SUPP(C)	VARIES	12"	BACON ST				FLUORESCENT ORANGE	BLACK	BLACK
SUPP(D)	VARIES	12"	GROVE ST				FLUORESCENT ORANGE	BLACK	BLACK
SUPP(E)	VARIES	12"	MYSTIC VALLEY PKWY				FLUORESCENT ORANGE	BLACK	BLACK
SUPP(F)	VARIES	12"	MAIN ST				FLUORESCENT ORANGE	BLACK	BLACK

- NOTES:
 1. HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE 2017 MassDOT STANDARD SIGNS BOOK, AS AMENDED.
 2. ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.



EVERSOURCE ENERGY TEMPORARY TRAFFIC CONTROL PLAN WINCHESTER GRANT OF LOCATION PETITION	
MYSTIC TO WOBURN UNDERGROUND TRANSMISSION LINE WINCHESTER, MA	
SIGN SUMMARY – 2 OF 2	
SCALE: NOT TO SCALE	DATE: 03/21/2019
DRAWN BY: KW	SHEET: 21 OF 21
APPROVED: MS	JOB #: 12988.11