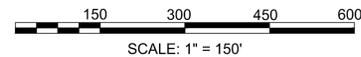
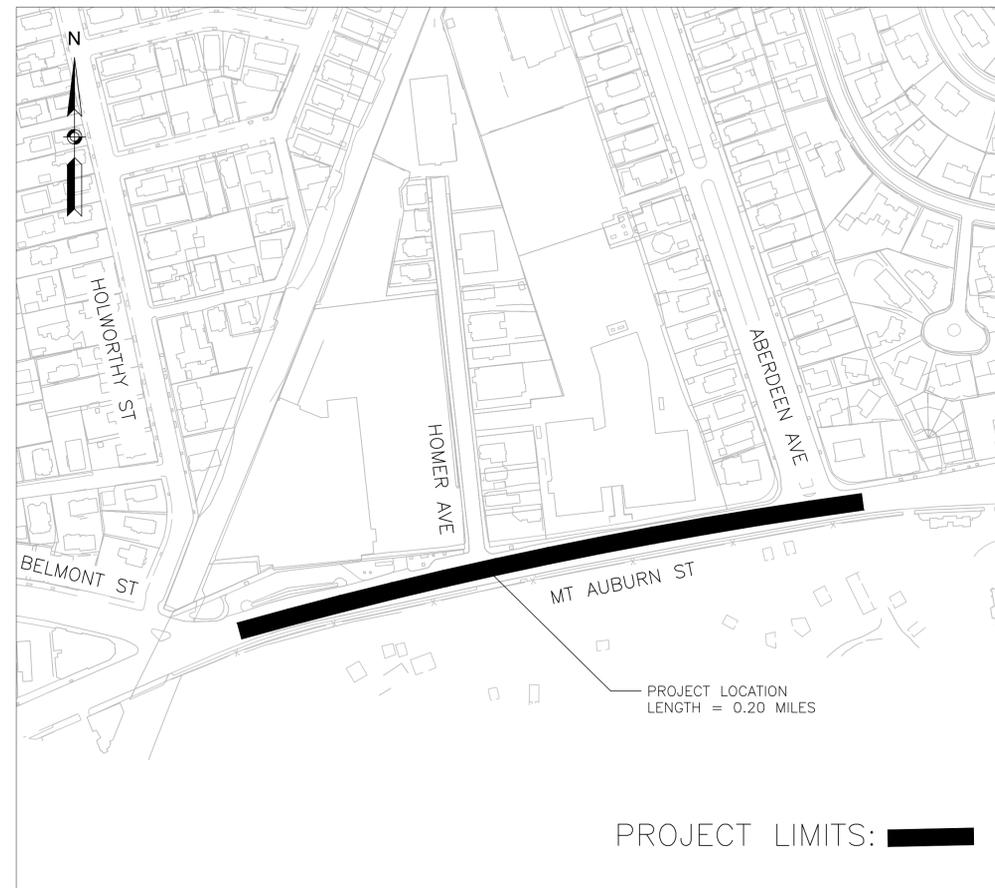


ABERDEEN SIGNAL IMPROVEMENTS

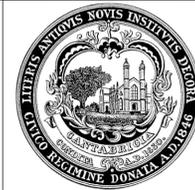
CITY OF CAMBRIDGE
MIDDLESEX COUNTY

| INDEX | |
|-----------|---|
| SHEET NO. | DESCRIPTION |
| 01 | TITLE SHEET & INDEX |
| 02 | LEGEND & ABBREVIATIONS |
| 03 | GENERAL NOTES |
| 04 - 06 | CONSTRUCTION DETAILS |
| 07 - 09 | ERADICATION PLANS |
| 10 - 12 | SIGN AND PAVEMENT MARKING PLANS |
| 13 | TRAFFIC SIGN SUMMARY |
| 14 | TRAFFIC SIGNAL PLAN - HOMER AVE @ MT AUBURN ST |
| 15 | TRAFFIC SIGNAL PLAN - ABERDEEN AVE @ MT AUBURN ST |
| 16 | TRAFFIC SIGNAL SCHEDULE - ABERDEEN AVE @ MT AUBURN ST |



| STANDARDS | | RELEASE DATE |
|--|--|----------------|
| STANDARD | | |
| MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES | | 2023 |
| MASSDOT SUPPLEMENTAL SPECIFICATIONS | | JUNE 2023 |
| MASSDOT CONSTRUCTION STANDARD DETAILS | | OCTOBER 2017 |
| MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATES TO TRAFFIC STANDARD DETAILS ONLY) | | 1996 |
| MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS | | 2015 |
| MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS | | LATEST EDITION |
| MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS | | LATEST EDITION |
| MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS | | 1990 |
| MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING | | 1968 |
| AMERICAN STANDARD FOR NURSERY STOCK | | LATEST EDITION |
| CITY OF CAMBRIDGE PUBLIC WORKS DEPARTMENT CONSTRUCTION STANDARDS | | LATEST EDITION |

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PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: C. MURPHY
DRAFTER: J. VERESPEJ
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| REVISIONS | | REV # | DATE |
|---|--|-------|------|
| TITLE SHEET & INDEX ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 01 | 16 |

GENERAL SYMBOLS

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| | | CB CATCH BASIN |
| | | CB CATCH BASIN CURB INLET |
| | | MB MAIL BOX |
| | | POST SQUARE |
| | | POST CIRCULAR |
| | | HYDRANT |
| | | LIGHT POLE |
| | | FLEX POST |
| | | CABLE MANHOLE |
| | | TELEPHONE MANHOLE |
| | | TRANSMISSION POLE |
| | | UTILITY POLE W/ FIREBOX |
| | | UTILITY POLE WITH DOUBLE LIGHT |
| | | UTILITY POLE W / 1 LIGHT |
| | | UTILITY POLE |
| | | CURBING |
| | | UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER) |
| | | CHAIN LINK OR METAL FENCE |
| | | WOOD FENCE |
| | | TREE LINE |
| | | EDGE OF PAVEMENT |
| | | LIMIT OF MICROMILLING AND OVERLAY |
| | | PROPERTY LINE OR APPROXIMATE PROPERTY LINE |
| | | EASEMENT |

TRAFFIC SYMBOLS

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|--|
| | | VEHICLE DETECTION LOOP |
| | | BIKE DETECTION LOOP |
| | | VIDEO DETECTION LOOP |
| | | VIDEO DETECTION CAMERA |
| | | MICROWAVE DETECTOR |
| | | PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE |
| | | EMERGENCY PREEMPTION BEACON |
| | | VEHICLE AND BIKE SIGNAL HEAD |
| | | VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED |
| | | FLASHING BEACON |
| | | PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED) |
| | | TRAFFIC SIGNAL POST (ALPHA-NUMERIC DESIGNATION NOTED) |
| | | SIGN AND POST |
| | | SIGN AND POST (2 POSTS) |
| | | TRAFFIC SIGNAL MAST ARM |
| | | EMERGENCY OPTICAL PRE-EMPTION DETECTOR |
| | | CONTROL CABINET, GROUND MOUNTED |
| | | CONTROL CABINET, POLE MOUNTED |
| | | LOAD CENTER ASSEMBLY |
| | | PULL BOX 12"x12" (OR AS NOTED) |
| | | ELECTRIC HANDHOLE 12"x24" (OR AS NOTED) |
| | | TRAFFIC SIGNAL CONDUIT |
| | | FLEXPOST |

PAVEMENT MARKINGS SYMBOLS

| EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| | | PAVEMENT ARROW - WHITE |
| | | LEGEND "ONLY" - WHITE |
| | | BIKE LANE WHITE PAVEMENT ARROW AND LEGEND |
| | | VEHICLE STOP LINE - 24" |
| | | BICYCLE STOP LINE - 12" |
| | | CROSSWALK - 24" WHITE |
| | | SOLID WHITE LINE (BUS LANE) - 12" |
| | | SOLID WHITE LINE - 6" |
| | | SOLID YELLOW LINE - 6" |
| | | BROKEN WHITE LINE - 6" 10' MARK - 30' SKIP |
| | | BROKEN YELLOW LINE - 6" 10' MARK - 30' SKIP |
| | | DOTTED WHITE LINE - 6" 2' MARK - 4' SKIP |
| | | DOTTED WHITE LINE EXTENSION - 6" 2' MARK - 4' SKIP |
| | | DOTTED YELLOW LINE EXTENSION - 6" 2' MARK - 4' SKIP |
| | | DOTTED YELLOW CENTER LINE EXTENSION - 4" 2' MARK - 4' SKIP |
| | | DOUBLE YELLOW CENTER LINE - 4" |
| | | SOLID WHITE CHANNELIZATION (15' SPACING @ 45°) - 8" |
| | | SOLID YELLOW CHANNELIZATION (15' SPACING @ 45°) - 8" |
| | | SOLID YELLOW CHANNELIZATION (20' SPACING @ 45°) - 8" |

TRAFFIC SIGNAL ABBREVIATIONS

| | |
|--------|-----------------------------|
| CAB | CABINET |
| DW | STEADY UPRaised HAND |
| FDW | FLASHING UPRaised HAND |
| FR | FLASHING CIRCULAR RED |
| FRL | FLASHING RED LEFT ARROW |
| FRR | FLASHING RED RIGHT ARROW |
| FY | FLASHING CIRCULAR YELLOW |
| FYL | FLASHING YELLOW LEFT ARROW |
| FYR | FLASHING YELLOW RIGHT ARROW |
| G | STEADY CIRCULAR GREEN |
| GL | STEADY GREEN LEFT ARROW |
| GR | STEADY GREEN RIGHT ARROW |
| GV | STEADY GREEN VERTICAL ARROW |
| OL | OVERLAP |
| PED | PEDESTRIAN |
| R | STEADY CIRCULAR RED |
| RL | STEADY RED LEFT ARROW |
| RR | STEADY RED RIGHT ARROW |
| TR SIG | TRAFFIC SIGNAL |
| TSC | TRAFFIC SIGNAL CONDUIT |
| W | STEADY WALKING PERSON |
| Y | STEADY CIRCULAR YELLOW |
| YL | STEADY YELLOW LEFT ARROW |

ABBREVIATIONS

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

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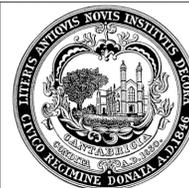
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| REVISIONS | | REV # | DATE |
|--|--|-------|------|
| LEGEND & ABBREVIATIONS ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 02 | 16 |

GENERAL NOTES:

1. THE LOCATION OF EXISTING UNDERGROUND PIPES, CABLES, CONDUITS, AND STRUCTURES AS SHOWN HAS BEEN COLLECTED FROM THE BEST AVAILABLE SOURCES AND THE OWNER TOGETHER WITH ITS AGENTS DOES NOT IMPLY OR GUARANTEE THE DATA AND INFORMATION IN CONNECTION WITH THE UNDERGROUND PIPES, CABLES, CONDUITS, STRUCTURES, AND SUCH OTHER PARTS AS TO THEIR COMPLETENESS NOR THEIR LOCATIONS AS INDICATED. THE CONTRACTOR SHALL CONTACT UTILITY OWNERS AND REQUEST MARKING LOCATION OF ALL THEIR LINES IN THE WORK AREAS. PRIOR TO EXCAVATION THE CONTRACTOR SHALL ASSUME THAT THERE ARE EXISTING WATER, GAS, AND OTHER UTILITY CONNECTIONS TO EACH AND EVERY BUILDING EN ROUTE, WHETHER THEY APPEAR ON THE PLANS OR NOT. ANY EXPENSE AND/OR DELAY OCCASIONED BY THESE UTILITIES AND STRUCTURES OR DAMAGE THERETO, INCLUDING THOSE NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND AT NO ADDITIONAL EXPENSE TO THE OWNER (SEE SPECIAL CONDITIONS).
2. FOUNDATIONS AND LINES FOR SERVICES, POLICE AND FIRE ALARM BOXES, STREET LIGHTS, AND TRAFFIC SIGNALS ARE NOT SHOWN ON THE PLANS. THE APPROPRIATE UTILITY COMPANIES OR AUTHORITIES SHOULD BE CONTACTED AND CONSULTED FOR LOCATIONS OF THE ABOVE PRIOR TO EXCAVATION.
3. THE CONTRACTOR SHALL PREMARK THE EXCAVATION AREA IN WHITE AND NOTIFY THE DIG SAFE CENTER (TEL. NO. 1-888-DIG-SAFE) AT LEAST 72 BUSINESS HOURS PRIOR TO ANY EXCAVATION WORK. IN ADDITION, NOTIFICATION SHALL ALSO BE GIVEN TO ALL AFFECTED PRIVATE AND/OR PUBLIC UTILITIES TO PERMIT STREET MARKING OF THEIR LINES.
4. WHERE TEMPORARY OR PERMANENT UTILITY RELOCATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY 120 DAYS IN ADVANCE OF CONSTRUCTION AND SHALL COORDINATE THE NEW WORK WITH THE UTILITY RELOCATION.
5. INTERRUPTIONS OF SERVICES SHALL NOT BE PERMITTED. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES AND PROVIDE ALL TEMPORARY UTILITIES AND CONNECTIONS TO AVOID INTERRUPTIONS OF WATER, SANITARY, DRAINAGE, ELECTRIC, PHONE, GAS, FIBEROPTICS, AND CABLE SERVICES.
6. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS INFORMATION AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL CONDITIONS TO THE ENGINEER.
7. THE CONTRACTOR SHALL PROTECT ALL TRAVELED WAYS FROM DUST AND CONSTRUCTION DEBRIS AT ALL TIMES. NO PROPOSED WORK SHALL IMPACT PROPERTY OUTSIDE OF THE EXISTING LIMITS OF WORK.
8. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL AREAS ADJACENT TO THE LIMITS OF CONSTRUCTION WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEMOLISHED MATERIALS, RUBBISH, EXCAVATED MATERIAL AND DEBRIS, UNLESS OTHERWISE NOTE, AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS HAVING JURISDICTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL DISPOSAL PERMITS AT NO ADDITIONAL COST TO THE OWNER.
10. THE CONTRACTOR MAY BE ASKED BY THE OWNER TO SUSPEND CONSTRUCTION OPERATIONS TEMPORARILY TO AVOID CONFLICTS WITH LARGE PUBLIC EVENTS OR LARGE STORM EVENTS. THE CONTRACTOR SHALL NOT BE COMPENSATED FOR COSTS RELATED TO SHUTDOWNS FOR THESE REASONS.
11. THE CONTRACTOR SHALL NOT BLOCK ACCESS TO STREET AND PRIVATE PARKING IN THE VICINITY OF THE LIMITS OF CONSTRUCTION AFTER WORK HOURS AND ON WEEKENDS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW PLOWING AND SNOW REMOVAL FROM ALL AREAS WHERE PRESENCE IS MAINTAINED, INCLUDING BUT NOT LIMITED TO, UNPAVED SURFACES, PARKED EQUIPMENT AREAS, OR ANY AREAS OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR STREET SWEEPING, SNOW REMOVAL FROM SIDEWALKS, TRASH REMOVAL, AND RECYCLABLE MATERIAL REMOVAL FROM ALL AREAS WHERE CONSTRUCTION RESTRICTS VEHICULAR OR PEDESTRIAN ACCESS TO STREETS OR SIDEWALKS, AND WHERE THE CONTRACTOR'S PRESENCE INTERFERES WITH MUNICIPAL TRASH REMOVAL, STREET SWEEPING, OR SNOW PLOWING AND REMOVAL.
13. AREAS WITHIN THIS CONTRACT ARE SUBJECT TO THE UTILITY RELATED ABATEMENT MEASURE REGULATIONS OF THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.00 AND SECTIONS 02010, 02080, AND 02095 OF THE SPECIFICATIONS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO ENVIRONMENTAL DATA (SOIL AND GROUNDWATER) FROM BORINGS AND MONITORING WELLS AS REPRESENTATIVE OF SUBSURFACE CONDITIONS IN URBAN AREAS. THE ENVIRONMENTAL DATA ARE APPENDED TO THE SPECIFICATIONS.
14. THE CONTRACTOR SHALL NOT BE PERMITTED TO STARTUP OR OPERATE EQUIPMENT BEFORE OR AFTER ESTABLISHED WORKING HOURS OF **7:00 AM TO 4:00 PM** MONDAY THROUGH FRIDAY WITHOUT WRITTEN APPROVAL OF THE OWNER, UNLESS NOTED OTHERWISE, TO BE CONFIRMED WITH THE CITY OF CAMBRIDGE PRIOR TO THE START OF CONSTRUCTION.
15. EXISTING CONDITIONS ARE SHOWN SCREENED.
16. ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING AND TEMPORARY PAVING OR BY COVERING WITH STEEL PLATES WHEN APPROVED BY THE OWNER.
17. EXISTING UTILITY POLES THAT FALL WITHIN 5 FEET OF THE PROPOSED EDGE OF TRENCH SHALL BE SUPPORTED BY THE UTILITY OWNER DURING EXCAVATION OF THE TRENCH. THE CONTRACTOR SHALL COORDINATE SUPPORT AND BE RESPONSIBLE FOR COSTS AND FEES, WHERE EXISTING GAS, ELECTRIC, AND TELECOM UTILITIES CROSS THE PROPOSED TRENCH LIMITS. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER TO SUPPORT AND BE RESPONSIBLE FOR COSTS AND FEES. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING THE EXISTING UTILITY IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS.
18. ALL PAVEMENT MARKING LINES SHALL BE THERMOPLASTIC (UNLESS OTHERWISE NOTED) EXCEPT AS FOLLOWS: ALL GREEN PAVEMENT MARKINGS SHALL BE GREEN COLORED SURFACE TREATMENT AND ALL RED PAVEMENT MARKINGS SHALL BE RED COLORED SURFACE TREATMENT.

SURVEYING NOTES:

1. SURVEY BASEMAP HAS BEEN PREPARED BY COMBINING A TOPOGRAPHIC SURVEY PREPARED BY BRENNAN CONSULTING DATED SEPTEMBER 22, 2022 AND PROVIDED BY CITY OF CAMBRIDGE WITH SUPPLEMENTAL GIS LINEWORK FROM THE CITY OF CAMBRIDGE DATABASE DATED 2023. LINEWORK REPRESENTING EXISTING UNDERGROUND STRUCTURES AND PIPES HAS BEEN SHOWN HEREON IN ITS APPROXIMATE LOCATION BASED ON AVAILABLE RECORD PLANS. THERE ARE NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, THE PRESENCE OF UTILITY LINEWORK ON THE PLANS DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. UNDERGROUND UTILITIES HAVE NOT BEEN PHYSICALLY LOCATED.
2. RECORD UTILITY INFORMATION FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES ARE APPROXIMATE ONLY AND ACTUAL LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO STARTING.
3. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS), PRIOR TO EXCAVATING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING, OR REPAVING.
4. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
5. PROPERTY LINES AS SHOWN ARE TAKEN FROM GIS INFORMATION AND ARE APPROXIMATE ONLY.

SPECIAL NOTES FOR TREE PROTECTION:

1. REFER TO "CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS-DIVISION OF URBAN FORESTRY, TREE PROTECTION DURING CONSTRUCTION" IN THE CONTRACT DOCUMENTS. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH MASSACHUSETTS STATE LAW CHAPTER 87, SECTION 12.
2. A MASSACHUSETTS OR INTERNATIONAL CERTIFIED ARBORIST SHALL BE SUB-CONTRACTED BY THE CONTRACTOR TO PROVIDE A TREE-PROTECTION PLAN AND PERFORM SPECIFIED WORK.
3. ALL TREES SHALL BE PRUNED PRIOR TO CONSTRUCTION IN ACCORDANCE WITH SPECIFICATION 02100.
4. ALL TREES NOT IDENTIFIED FOR REMOVAL SHALL BE PROTECTED AGAINST CONSTRUCTION AND TRUCKING RELATED DAMAGE TO THEIR TRUNKS, ROOTS, AND LIMBS. TREE TRUNKS SHALL BE WRAPPED AND/OR BARRICADED FOR PROTECTION IF NECESSARY. TREE LIMBS SHALL BE TEMPORARILY SUPPORTED TO AVOID DAMAGE AND/OR PROFESSIONALLY PRUNED IF THEY CANNOT BE AVOIDED. BREAKAGE OF THE LIMBS SHALL NOT BE PERMITTED. IN ADDITION TO THE "CONSTRUCTION PRUNING" SPECIFICALLY IDENTIFIED, ALL TREES WITHIN THE PROJECT AREA AND ALONG TRUCK ROUTE SHALL BE PROTECTED FROM DAMAGE OR PROFESSIONALLY PRUNED. "CONSTRUCTION PRUNING" SHALL CONSIST OF SQUARELY CUTTING LIMBS ONLY WHERE THEY CANNOT BE AVOIDED BY TRUCKS OR EQUIPMENT. (RAISE PRUNING).
5. ALL TREE PROTECTION MEASURES AND OPERATIONS AND ALL ROOT PRUNING, TREE REMOVAL, AND TREE PRUNING SHALL BE SUBJECT TO REVIEW, APPROVAL OR CHANGE BY THE CITY ARBORIST.
6. AT THE OWNER'S DISCRETION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY TREE DAMAGED BY CONSTRUCTION OR TRUCKING OPERATIONS, REMOVAL OF THE STUMP, AND REPLACEMENT OF THE TREE IN KIND AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL FINES MAY ALSO BE IMPOSED FOR DAMAGE AS PER CONTRACT SPECIFICATIONS.
7. BREAKAGE OF TREE ROOTS SHALL NOT BE PERMITTED AND ROOT PRUNING SHALL BE MINIMIZED. TREE ROOTS THAT CANNOT BE AVOIDED DURING CONSTRUCTION SHALL BE PRUNED IN ACCORDANCE WITH THE SPECIFICATIONS AND UNDER SUPERVISION OF THE CITY ARBORIST, INCLUDING ROOT TREATMENT IF REQUIRED.
8. THE CONTRACTOR SHALL COORDINATE WITH DIG SAFE PRIOR TO REMOVING ANY STUMPS. DAMAGE TO EXISTING SIDEWALKS AND UTILITIES SHALL BE REPAIRED AS SPECIFIED AFTER REMOVING STUMPS.
9. TREES AND STUMPS REMOVED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW TREES AS DIRECTED. STUMP REMOVAL SHALL BE SUFFICIENT TO ALLOW PLANTING OF A NEW TREE.

PS&E SUBMISSION



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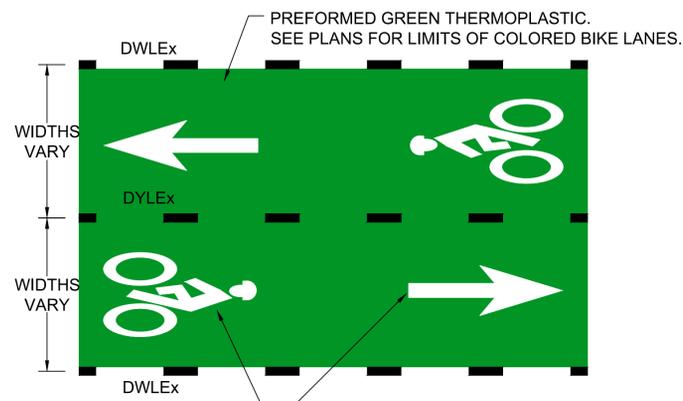
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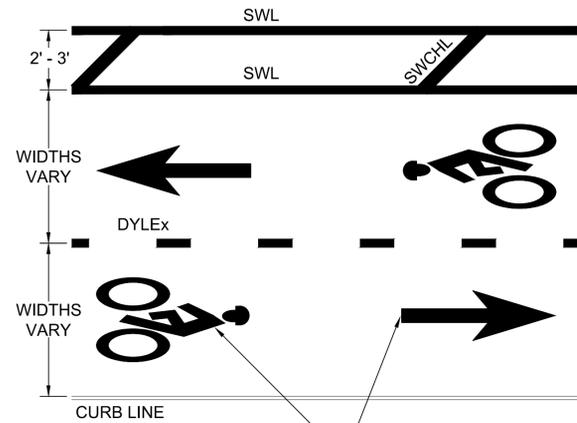
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| DRAFTER: | J. VERESPEJ |
| REVIEWER: | C. MURPHY |

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| GENERAL NOTES | | | |
| ABERDEEN SIGNAL IMPROVEMENTS | | | |
| MOUNT AUBURN STREET | | | |
| CAMBRIDGE, MA | | | |
| SHEET # | 03 | TOTAL SHEETS | 16 |



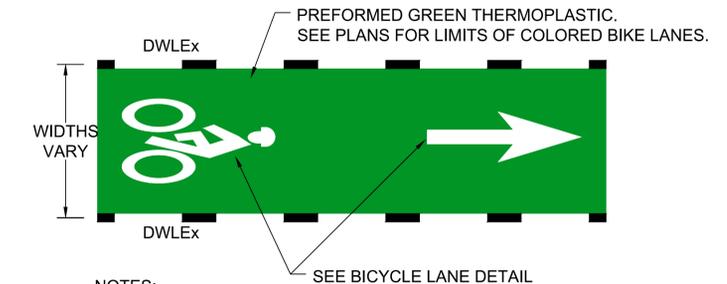
NOTES:
1. CENTER BICYCLE LANE SYMBOLS BETWEEN DWLEx AND DYLEx.

TWO-WAY BIKE LANE CROSSING PVMT. MARKING
SCALE: N.T.S.



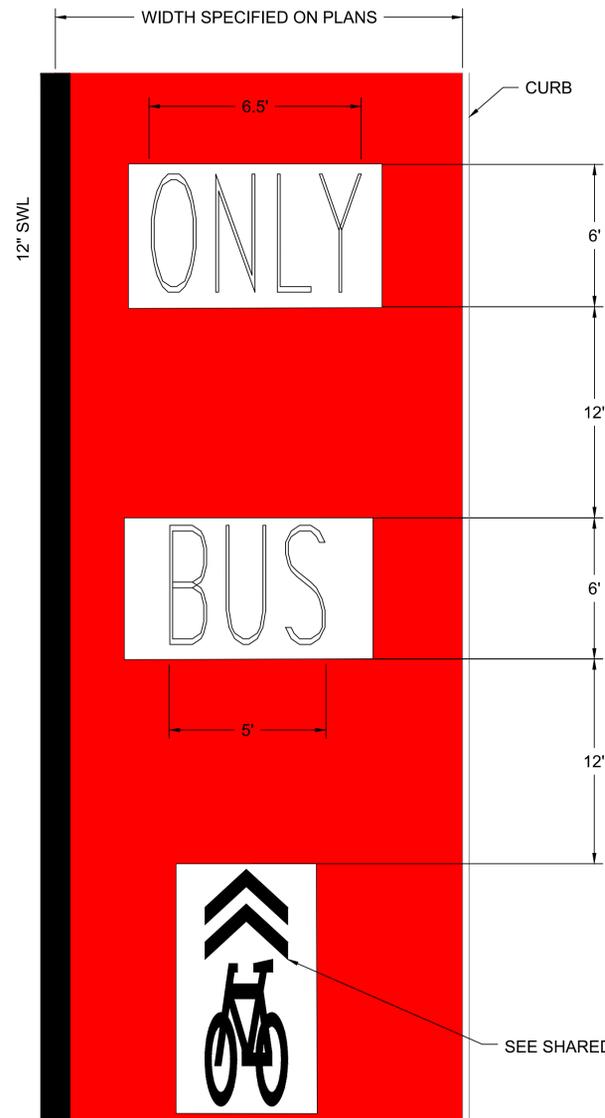
NOTES:
1. REFER TO SIGN AND PAVEMENT MARKING PLAN FOR WIDTH OF BUFFER EXTENTS.
2. CENTER BICYCLE LANE SYMBOLS BETWEEN SWL/CURB AND DYLEx

TWO-WAY BUFFERED BIKE LANE PVMT. MARKING
SCALE: N.T.S.

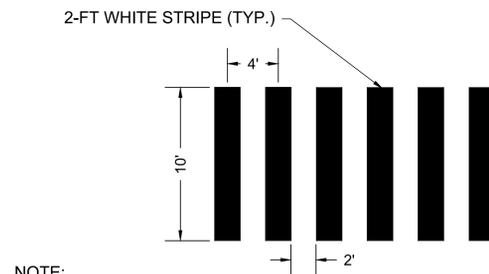


NOTES:
1. CENTER BICYCLE LANE SYMBOLS BETWEEN DWLEx

ONE-WAY BIKE LANE CROSSING PVMT. MARKING
SCALE: N.T.S.

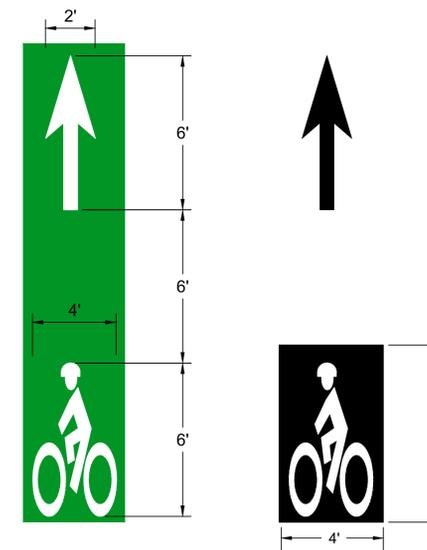


BUS BIKE LANE PAVMENT MARKING DETAIL
SCALE: N.T.S.



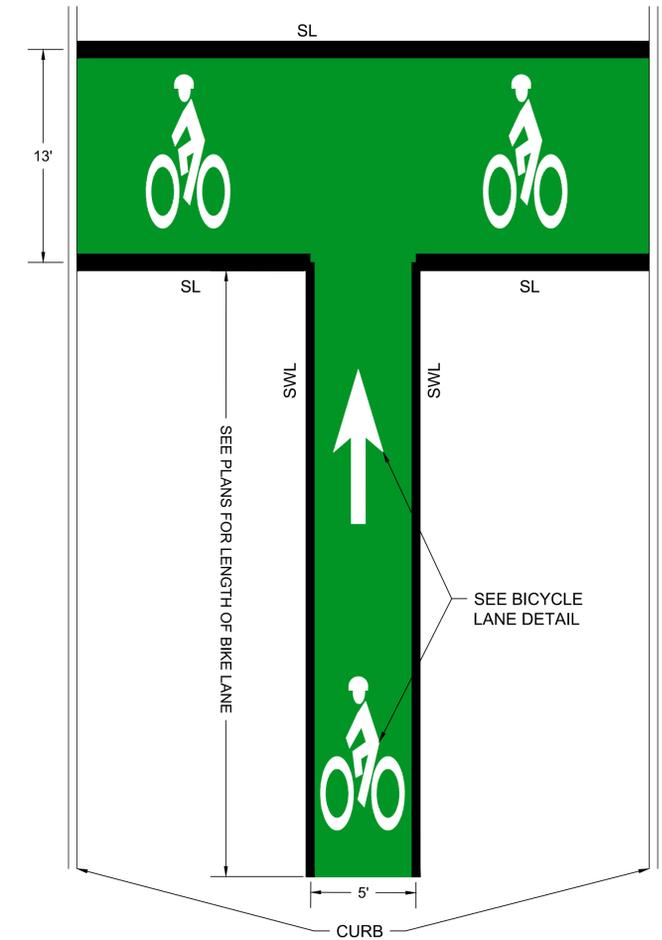
NOTE:
1. CROSSWALK LINE SHOULD BE BETWEEN ONE AND THREE FEET FROM THE CURB.

CAMBRIDGE STANDARD CROSSWALK
SCALE: N.T.S.



NOTES:
1. REFER TO FIGURE 9C-6 IN THE 2009 MUTCD FOR MORE DETAIL.
2. BICYCLE LANE MARKINGS PLACED ON GREEN CROSSING PAVEMENT MARKINGS SHALL BE PREFORMED THERMOPLASTIC.
3. BICYCLE LANE MARKING "BICYCLE RIDER" PLACED ON ROADWAY ASPHALT SHALL BE ENNIS-FLINT PREMARK BIKE CONTRAST PANEL WHITE W/ BLACK ITEM NUMBER PM600847L-BK (FIGURE N - BICYCLE RIDER) OR APPROVED EQUAL.

BICYCLE LANE PVMT. MARKING
SCALE: N.T.S.



NOTES:
1. CENTER BICYCLE LANE SYMBOLS BETWEEN BIKE LANE SWLS
2. PLACE VEHICLE STOP LINE 13' IN ADVANCE OF THE BICYCLE STOP LINE.
3. SEE PLAN SHEETS FOR BICYCLE BOX LOCATIONS AND SYMBOL LOCATIONS.
4. DO NOT PLACE SYMBOLS ON LANE LINES, CROSSWALK LINES, OR STOP LINES.
5. CENTER SYMBOLS BETWEEN VEHICLE STOP LINE AND BICYCLE STOP LINE.
6. INSTALL GREEN PAVEMENT SO THAT CROSSWALK MARKINGS ARE NOT DISTURBED.

BIKE BOX
SCALE: N.T.S.

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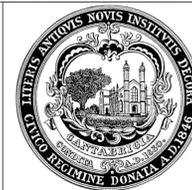
PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: J. VERESPEJ
DRAFTER: J. VERESPEJ
REVIEWER: C. MURPHY

350 MYLES STANDISH BLVD
SUITE 103
TAUNTON, MA
TELE: (508) 823 - 2245

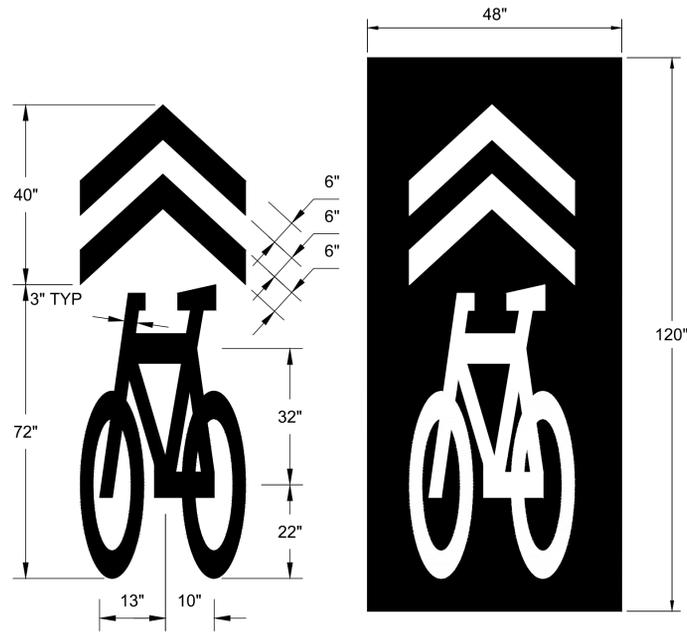
120 WATER ST
4TH FLOOR
BOSTON, MA 02109
TELE: (617) 556 - 0020
FAX: (617) 556 - 0025

14 BREAKNECK HILL RD
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LINCOLN, RI 02865
TELE: (401) 648 - 7200

94 NORTH ELM STREET
SUITE 210
WESTFIELD, MA
TELE: (413) 875 - 8855



| REVISIONS | | REV # | DATE |
|---|--|-------|------|
| CONSTRUCTION DETAILS 01 ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 04 | 16 |

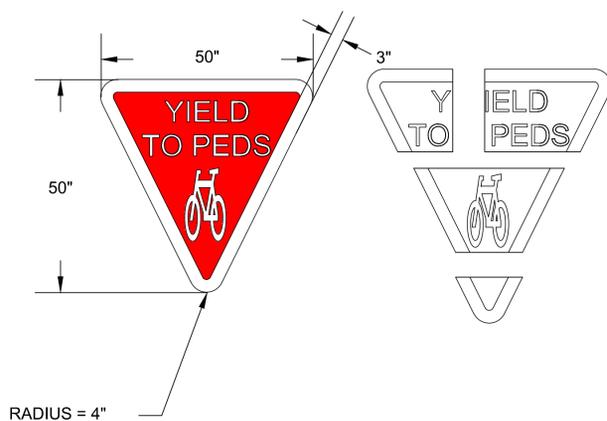


NOTES:

1. REFER TO FIGURE 9C-9 IN THE 2009 MUTCD FOR MORE DETAIL.
2. SHARED LANE MARKINGS PLACED ON RED BUS PAVEMENT MARKINGS SHALL BE PREFORMED THERMOPLASTIC.
3. "SHARED LANE SYMBOL" PLACED ON ROADWAY ASPHALT SHALL BE ENNIS-FLINT PREMARK CONTRAST PANEL WHITE W/ BLACK ITEM NUMBER PM600722L (FIGURE P - SHARED LANE SYMBOL) OR APPROVED EQUAL.

SHARED LANE PVMT. MARKING

SCALE: N.T.S.

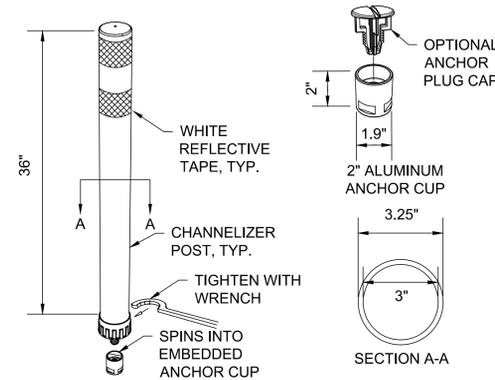


NOTES:

1. BIKES YIELD TO PEDS PAVEMENT MARKING DETAIL SHALL BE MADE BY ENNIS-FLINT OR APPROVED EQUAL.
2. ENNIS-FLINT DETAIL 50" X 50" "YIELD TO PEDS" W/BIKE SYMBOL, DESIGN #21-658-01.

BIKES YIELD TO PEDS PAVEMENT MARKING DETAIL

SCALE: N.T.S.

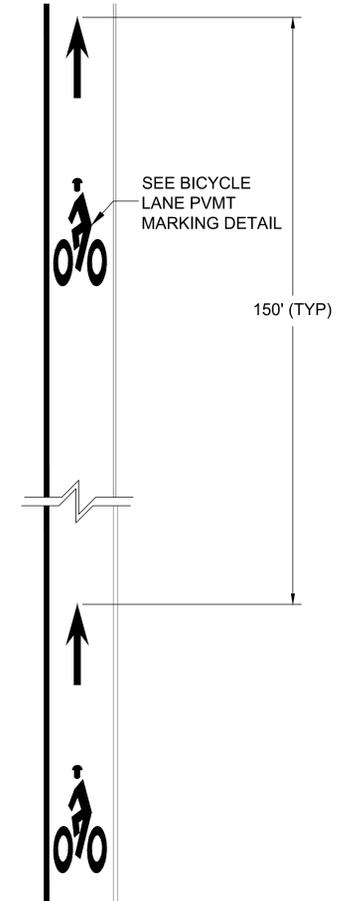


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
3. COLOR OF POST SHALL MATCH COLOR OF APPLICABLE EDGE LINE.
4. MANUFACTURER TO BE ON CURRENT APPROVED LIST OF MASSDOT QUALIFIED TRAFFIC SAFETY EQUIPMENT VENDORS.

36" CORED BASE FLEXPOST DETAIL

SCALE: N.T.S.

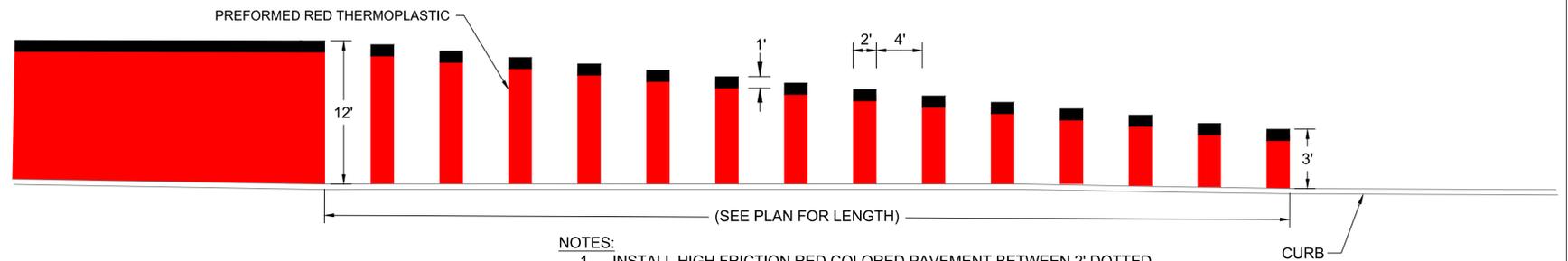


NOTES:

1. DESIGN PLANS SHOULD BE CONSULTED FOR VARIATIONS

BICYCLE LANE SYMBOL SPACING DETAIL

SCALE: N.T.S.



NOTES:

1. INSTALL HIGH FRICTION RED COLORED PAVEMENT BETWEEN 2' DOTTED WHITE LINES AND THE CURB AS SHOWN ON PLANS.
2. INSTALL HIGH FRICTION RED COLORED PAVEMENT SO THAT CROSSWALK MARKINGS ARE NOT DISTURBED.

BUS BIKE LANE END TREATMENT

SCALE: N.T.S.

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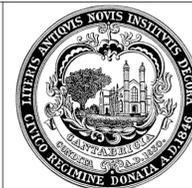


120 WATER ST
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350 MYLES STANDISH BLVD
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TAUNTON, MA
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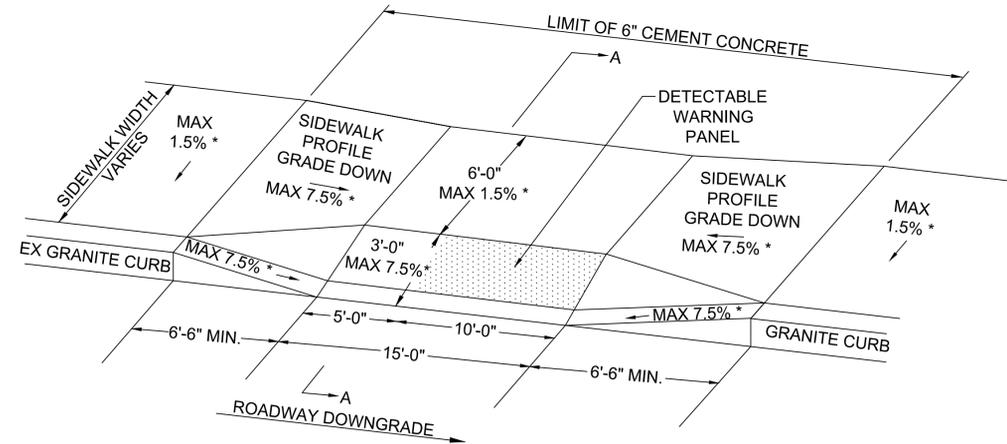
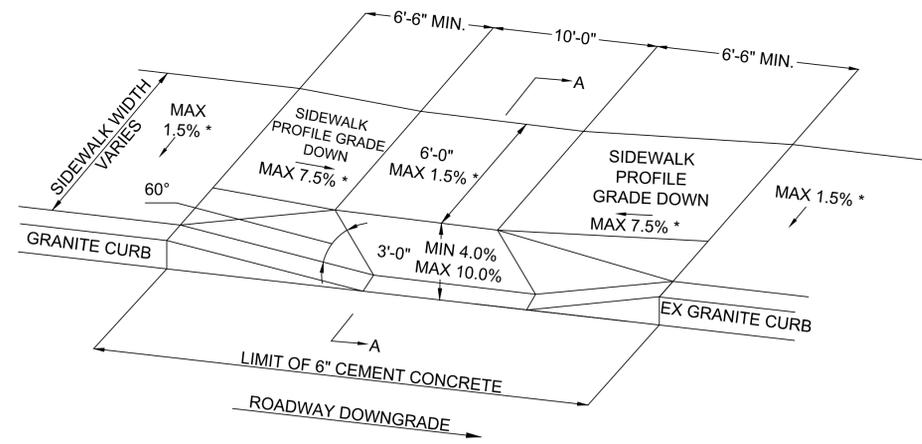
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TELE: (401) 648 - 7200

94 NORTH ELM STREET
SUITE 210
WESTFIELD, MA
TELE: (413) 875 - 8855

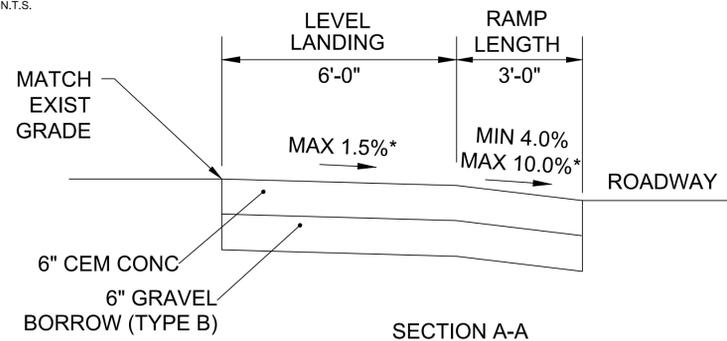


PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: J. VERESPEJ
DRAFTER: J. VERESPEJ
REVIEWER: C. MURPHY

| REVISIONS | | REV # | DATE |
|---|--|-------|------|
| CONSTRUCTION DETAILS 02 ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 05 | 16 |



BICYCLE RAMP
SCALE: N.T.S.



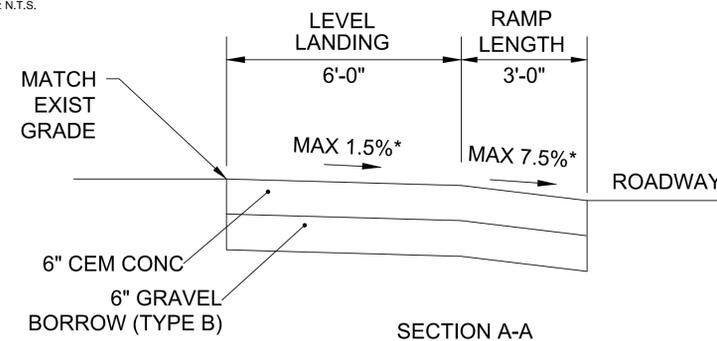
* TOLERANCE FOR CONSTRUCTION = ±0.5%

PEDESTRIAN & BICYCLE RAMP
SCALE: N.T.S.

TRANSITION CHART *

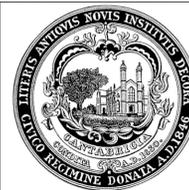
| ROADWAY PROFILE GRADE | LENGTH OF CURB |
|-----------------------|----------------|
| 0.00 | 6'-6" |
| >0.00 TO 0.01 | 7'-8" |
| >0.01 TO 0.02 | 9'-0" |
| >0.02 TO 0.03 | 11'-0" |
| >0.03 TO 0.04 | 14'-0" |
| >0.04 | 15'-0" MAX. |

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



* TOLERANCE FOR CONSTRUCTION = ±0.5%

NOTE:
1. SIDEWALK CURB RAMPS AND BICYCLE RAMPS TO BE CONSTRUCTED BY OTHERS.



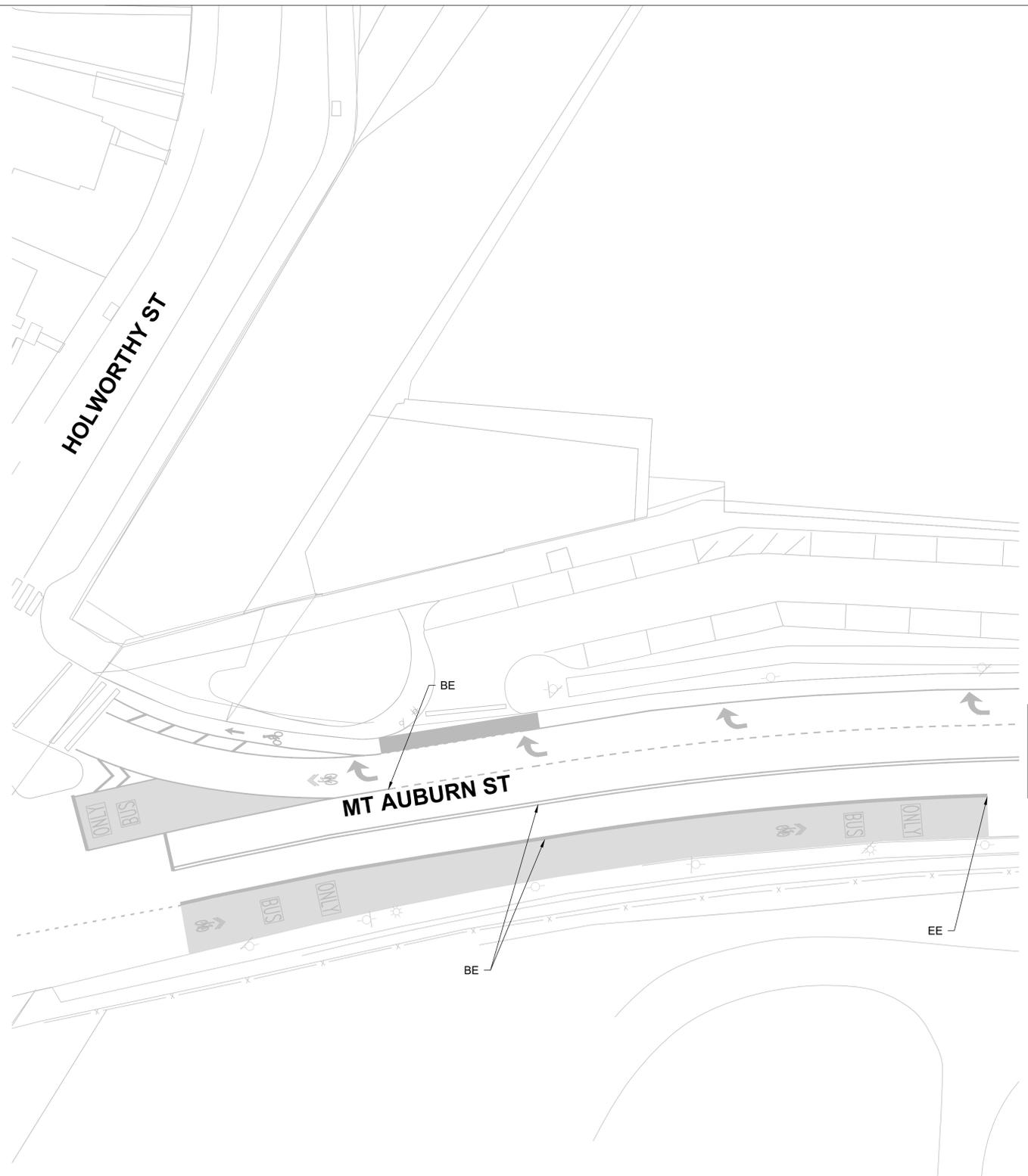
PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: J. VERESPEJ
DRAFTER: J. VERESPEJ
REVIEWER: C. MURPHY

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SUITE 210
WESTFIELD, MA
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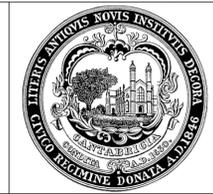
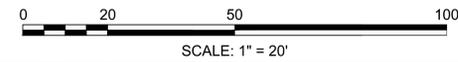
| REVISIONS | | REV # | DATE |
|---|--|-------|------|
| CONSTRUCTION DETAILS 03 ABERDEEN SIGNAL IMPROVEMENTS ABERDEEN AVENUE CAMBRIDGE, MA | | 06 | 16 |



CONTINUED ON SHEET NO. 8

- NOTES:
- EXISTING PAVEMENT MARKINGS SHALL BE REMOVED TO THE FULLEST EXTENT POSSIBLE BY AN APPROVED METHOD AS DEFINED IN MASSDOT SUPPLEMENTAL SPECIFICATIONS OR AS APPROVED BY THE ENGINEER. PAVEMENT MARKING REMOVAL METHODS SHALL NOT CAUSE DAMAGE TO THE PAVEMENT OR CAUSE A DRASTIC CHANGE IN TEXTURE, WHICH COULD BE CONSTRUED AS DELINEATION AT NIGHT, AND SHALL BE APPROVED BY THE ENGINEER. IT IS NOT PERMISSIBLE TO PAINT OVER EXISTING MARKINGS WITH BLACK PAINT IN LIEU OF REMOVAL.
 - ALL EXISTING PAVEMENT MARKING LINES AND SYMBOLS SHALL BE RETAINED UNLESS OTHERWISE NOTED.

ERADICATION PLAN ABBREVIATIONS
 BE BEGIN ERADICATION
 EE END ERADICATION
 ES ERADICATE SYMBOL



PROJECT #: 312638-01-001
 DATE: 01/24
 DESIGNER: J. VERESPEJ
 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

PS&E SUBMISSION



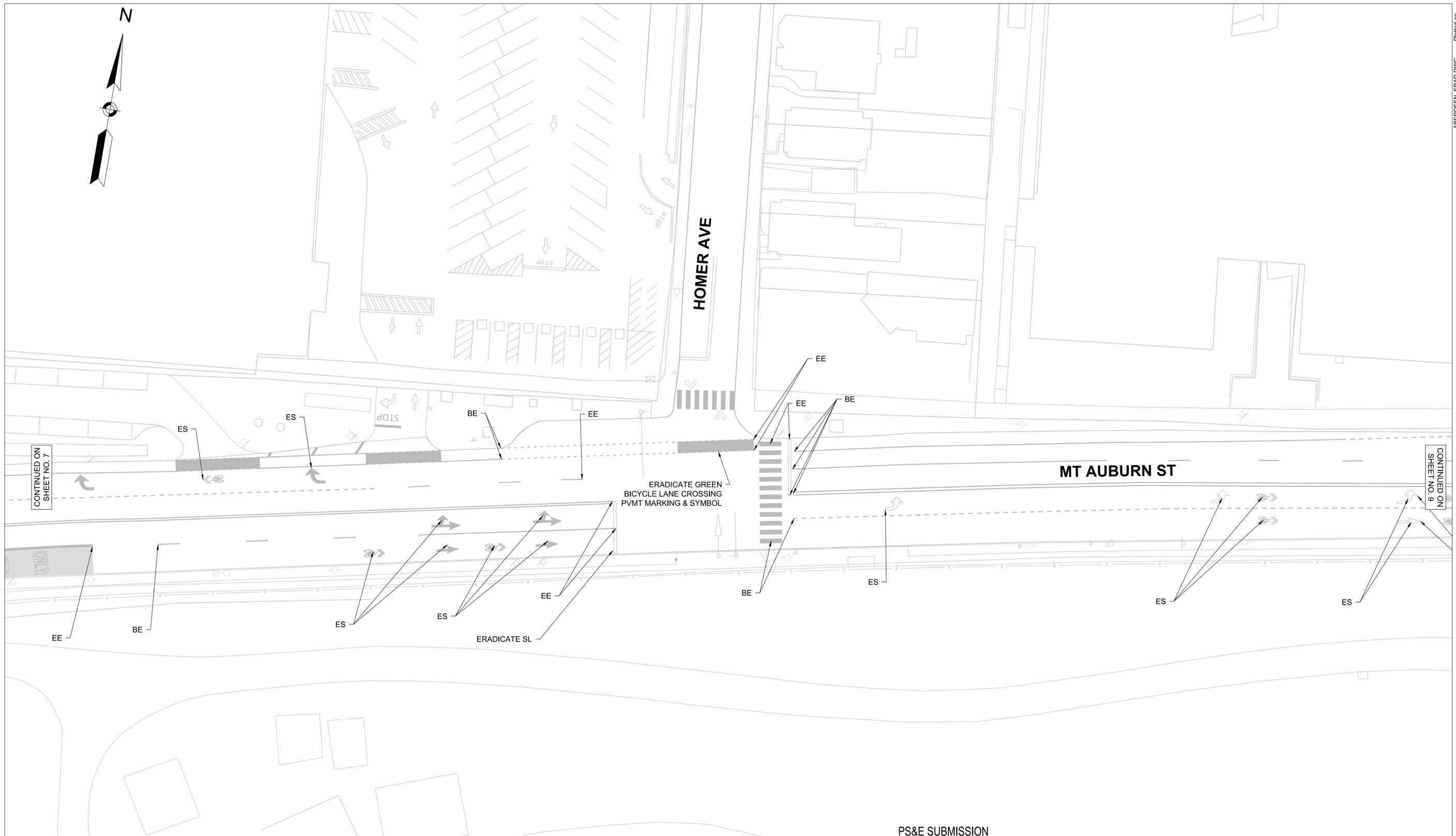
350 MYLES STANDISH BLVD
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 TAUNTON, MA
 TELE: (508) 823 - 2245

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 4TH FLOOR
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 TELE: (617) 556 - 0020
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 WESTFIELD, MA
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|---|--|-------|------|
| ERADICATION PLANS NO. 1 ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 07 | 16 |

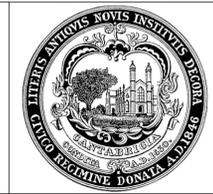
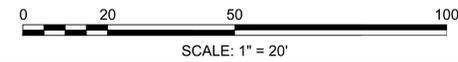


CONTINUED ON SHEET NO. 7

CONTINUED ON SHEET NO. 9

- NOTES:
- EXISTING PAVEMENT MARKINGS SHALL BE REMOVED TO THE FULLEST EXTENT POSSIBLE BY AN APPROVED METHOD AS DEFINED IN MASSDOT SUPPLEMENTAL SPECIFICATIONS OR AS APPROVED BY THE ENGINEER. PAVEMENT MARKING REMOVAL METHODS SHALL NOT CAUSE DAMAGE TO THE PAVEMENT OR CAUSE A DRASTIC CHANGE IN TEXTURE, WHICH COULD BE CONSTRUED AS DELINEATION AT NIGHT, AND SHALL BE APPROVED BY THE ENGINEER. IT IS NOT PERMISSIBLE TO PAINT OVER EXISTING MARKINGS WITH BLACK PAINT IN LIEU OF REMOVAL.
 - ALL EXISTING PAVEMENT MARKING LINES AND SYMBOLS SHALL BE RETAINED UNLESS OTHERWISE NOTED.

ERADICATION PLAN ABBREVIATIONS
 BE BEGIN ERADICATION
 EE END ERADICATION
 ES ERADICATE SYMBOL



PROJECT #: 312638-01-001
 DATE: 01/24
 DESIGNER: J. VERESPEJ
 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

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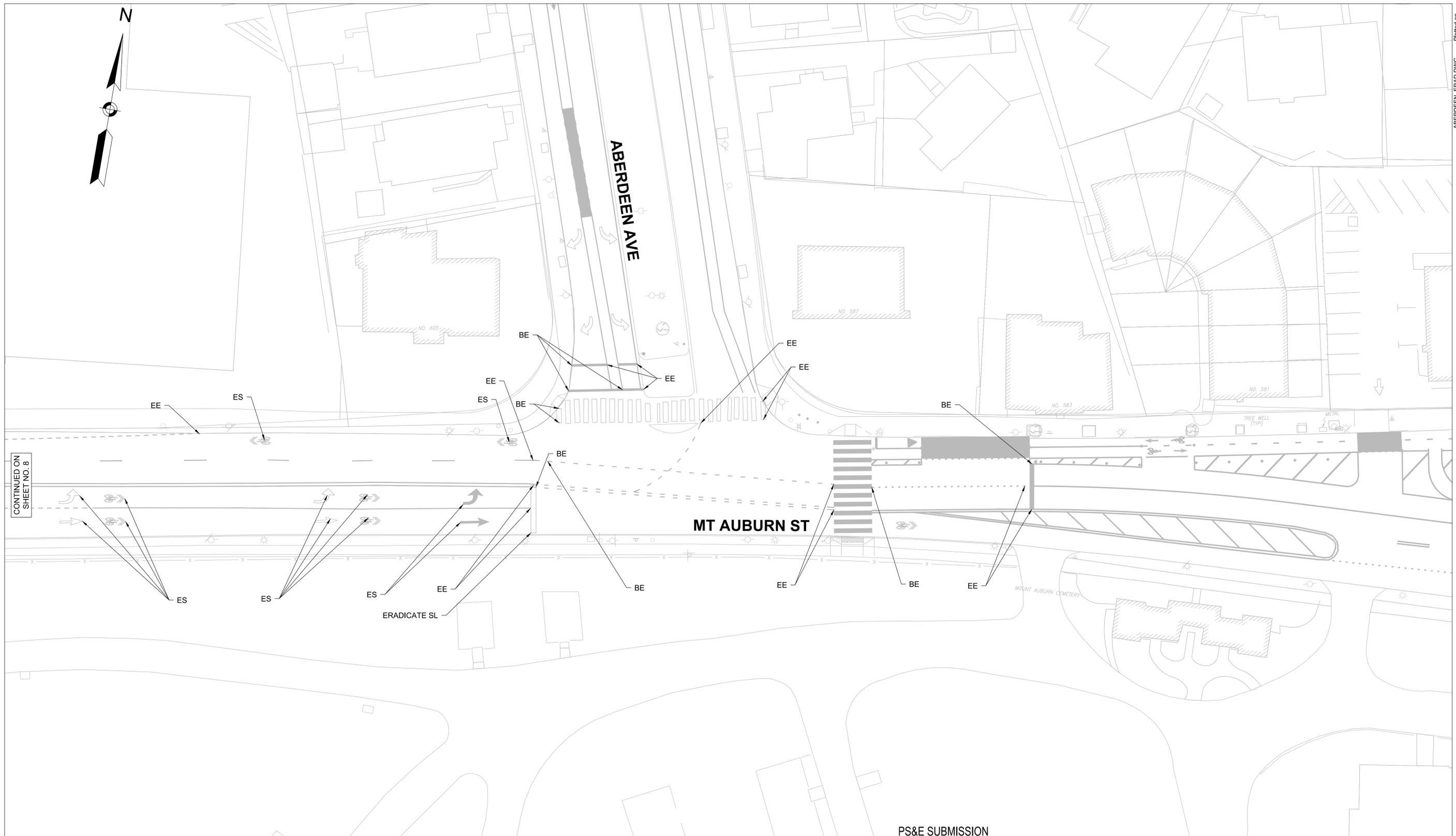
350 MYLES STANDISH BLVD
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 TELE: (617) 556 - 0020
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| REVISIONS | | REV # | DATE |
|---|--|-------|------|
| ERADICATION PLANS NO. 2 ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 08 | 16 |

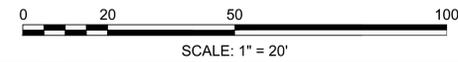


CONTINUED ON SHEET NO. 8

- NOTES:**
- EXISTING PAVEMENT MARKINGS SHALL BE REMOVED TO THE FULLEST EXTENT POSSIBLE BY AN APPROVED METHOD AS DEFINED IN MASSDOT SUPPLEMENTAL SPECIFICATIONS OR AS APPROVED BY THE ENGINEER. PAVEMENT MARKING REMOVAL METHODS SHALL NOT CAUSE DAMAGE TO THE PAVEMENT OR CAUSE A DRASTIC CHANGE IN TEXTURE, WHICH COULD BE CONSTRUED AS DELINEATION AT NIGHT, AND SHALL BE APPROVED BY THE ENGINEER. IT IS NOT PERMISSIBLE TO PAINT OVER EXISTING MARKINGS WITH BLACK PAINT IN LIEU OF REMOVAL.
 - ALL EXISTING PAVEMENT MARKING LINES AND SYMBOLS SHALL BE RETAINED UNLESS OTHERWISE NOTED.

ERADICATION PLAN ABBREVIATIONS

BE BEGIN ERADICATION
 EE END ERADICATION
 ES ERADICATE SYMBOL



PROJECT #: 312638-01-001
 DATE: 01/24
 DESIGNER: J. VERESPEJ
 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

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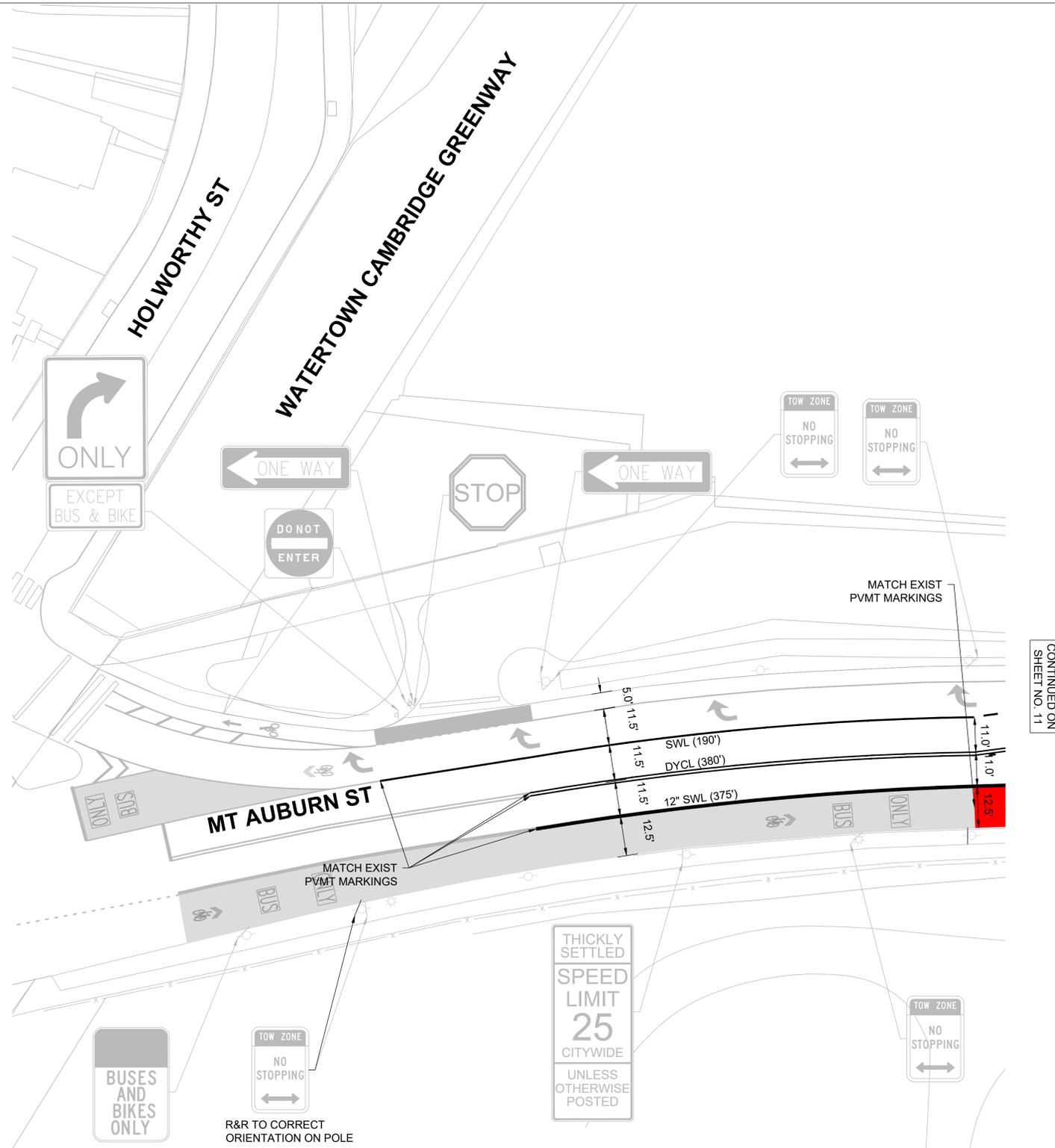
350 MYLES STANDISH BLVD
 SUITE 103
 TAUNTON, MA
 TELE: (508) 823 - 2245

120 WATER ST
 4TH FLOOR
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 TELE: (617) 556 - 0020
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14 BREAKNECK HILL RD
 SUITE 201
 LINCOLN, RI 02865
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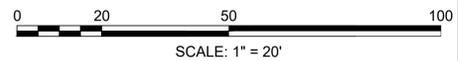
94 NORTH ELM STREET
 SUITE 210
 WESTFIELD, MA
 TELE: (413) 875 - 8855

| REVISIONS | | REV # | DATE |
|-------------------------------------|--|-------|------|
| ERADICATION PLANS NO. 3 | | | |
| ABERDEEN SIGNAL IMPROVEMENTS | | | |
| MOUNT AUBURN STREET | | | |
| CAMBRIDGE, MA | | | |
| SHEET # | | 09 | 16 |
| TOTAL SHEETS | | | |



CONTINUED ON
SHEET NO. 11

R&R TO CORRECT
ORIENTATION ON POLE



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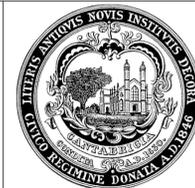


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TAUNTON, MA
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120 WATER ST
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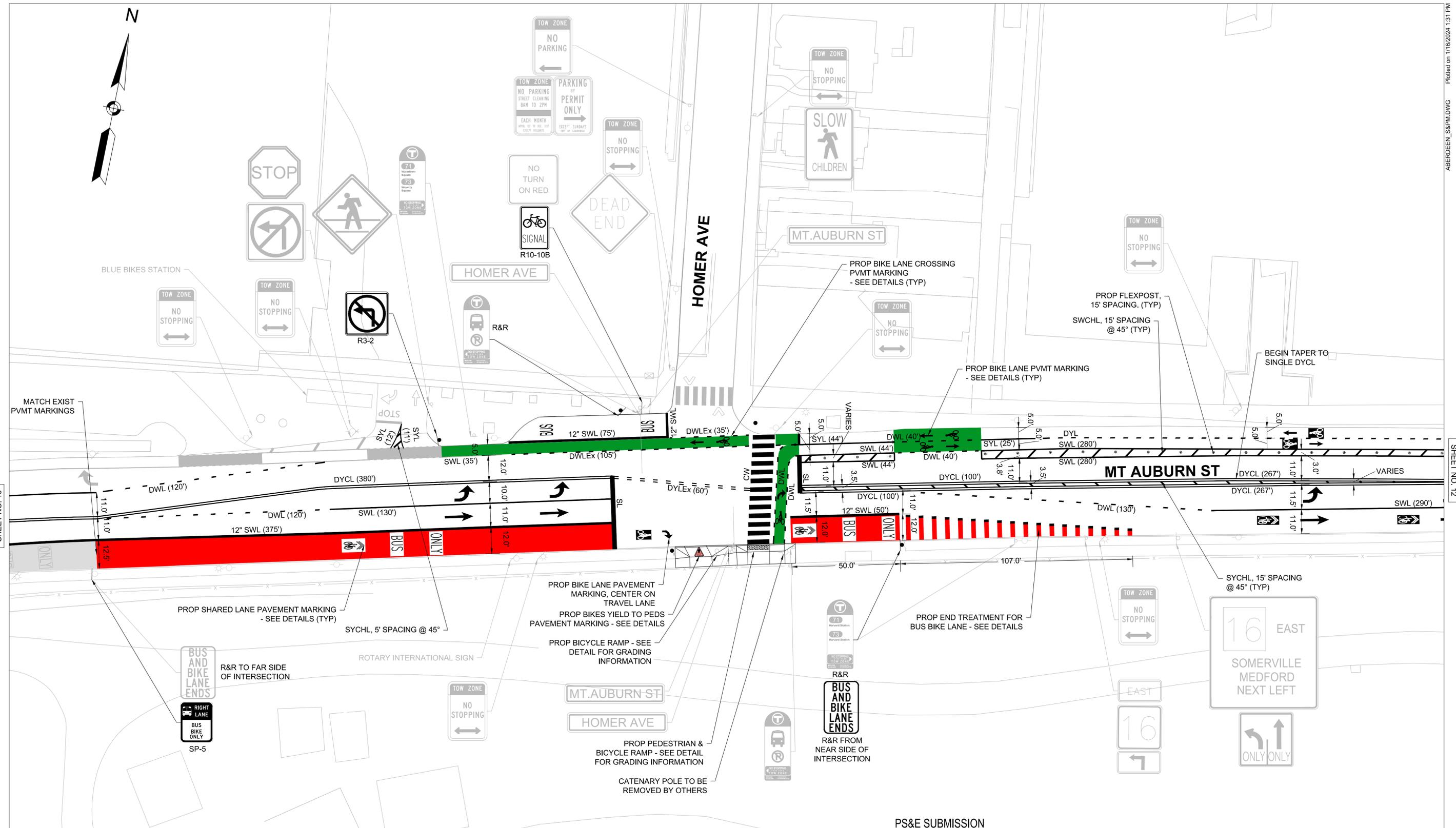
94 NORTH ELM STREET
SUITE 210
WESTFIELD, MA
TELE: (413) 875 - 8855



PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: J. VERESPEJ
DRAFTER: J. VERESPEJ
REVIEWER: C. MURPHY

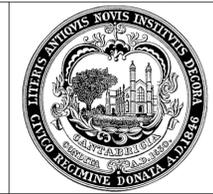
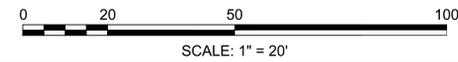
NOTE:
1. ALL EXISTING SIGNS TO BE RETAINED UNLESS OTHERWISE NOTED.

| REVISIONS | | REV # | DATE |
|--|--|-------|------|
| SIGNAGE & PAVEMENT MARKING PLANS NO. 1 ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 10 | 16 |



CONTINUED ON SHEET NO. 10

- NOTE:**
1. ALL EXISTING SIGNS TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. SIDEWALK CURB RAMPS AND BICYCLE RAMPS TO BE CONSTRUCTED BY OTHERS.



PROJECT #: 312638-01-001
 DATE: 01/24
 DESIGNER: J. VERESPEJ
 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

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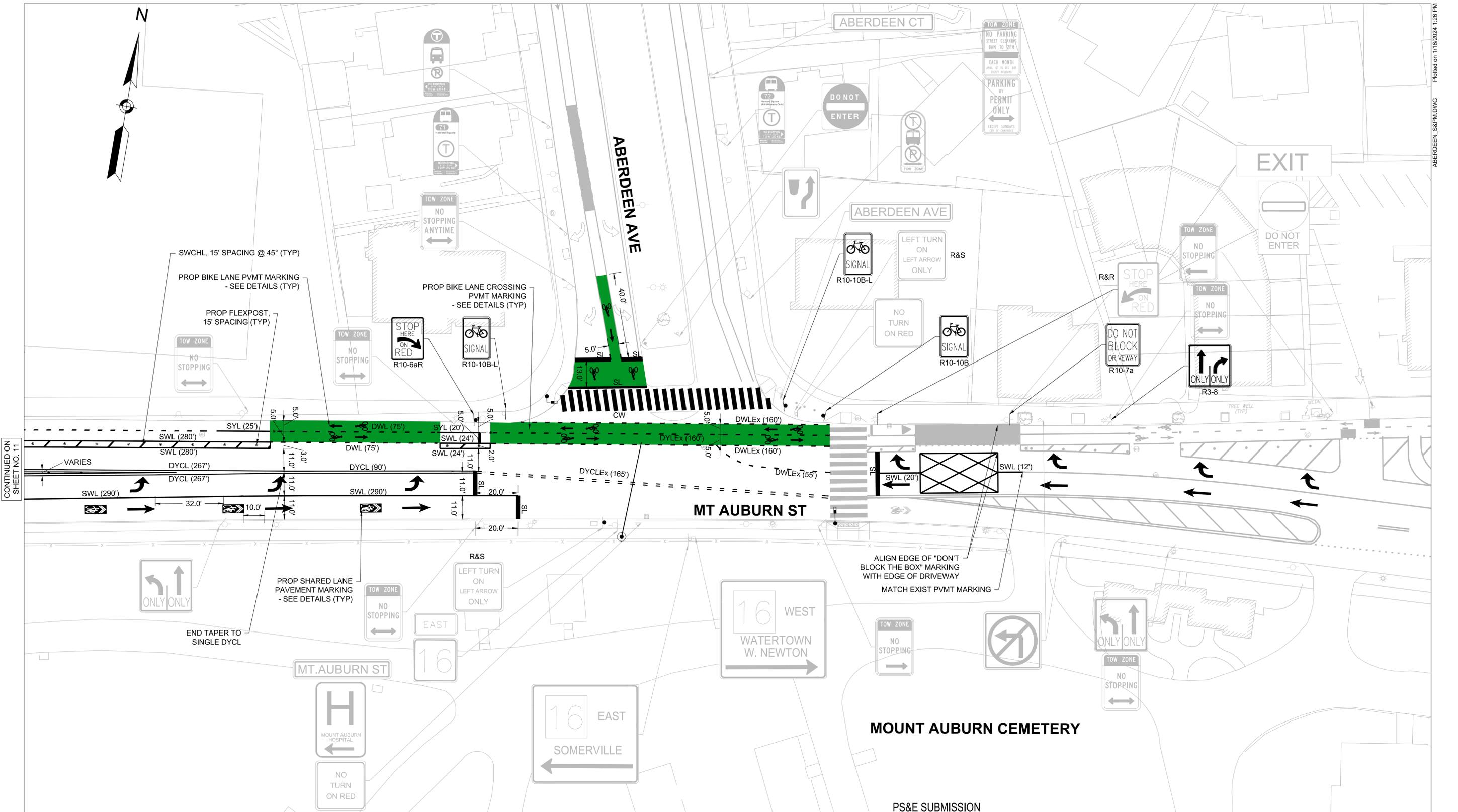
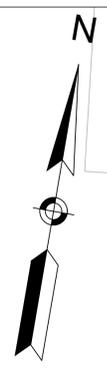
350 MYLES STANDISH BLVD
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|--|--|-------|------|
| SIGNAGE & PAVEMENT MARKING PLANS NO. 2 | | | |
| ABERDEEN SIGNAL IMPROVEMENTS | | | |
| MOUNT AUBURN STREET | | | |
| CAMBRIDGE, MA | | | |
| SHEET # | | 11 | 16 |



CONTINUED ON SHEET NO. 11

SWCHL, 15' SPACING @ 45° (TYP)
 PROP BIKE LANE PVMT MARKING - SEE DETAILS (TYP)
 PROP FLEXPOST, 15' SPACING (TYP)

PROP BIKE LANE CROSSING PVMT MARKING - SEE DETAILS (TYP)
 STOP HERE ON RED R10-6aR
 SIGNAL R10-10B-L

ONLY ONLY

END TAPER TO SINGLE DYCL

PROP SHARED LANE PAVEMENT MARKING - SEE DETAILS (TYP)

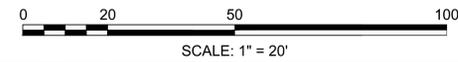
H
 MOUNT AUBURN HOSPITAL

NO TURN ON RED

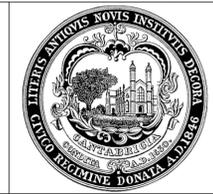
16 EAST
 SOMERVILLE

16 WEST
 WATERTOWN
 W. NEWTON

MOUNT AUBURN CEMETERY



NOTE:
 1. ALL EXISTING SIGNS TO BE RETAINED UNLESS OTHERWISE NOTED.
 2. SIDEWALK CURB RAMPS AND BICYCLE RAMPS TO BE CONSTRUCTED BY OTHERS.



PROJECT #: 312638-01-001
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 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

PS&E SUBMISSION



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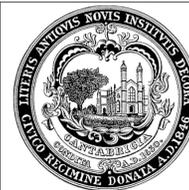
14 BREAKNECK HILL RD
 SUITE 201
 LINCOLN, RI 02865
 TELE: (401) 648 - 7200

94 NORTH ELM STREET
 SUITE 210
 WESTFIELD, MA
 TELE: (413) 875 - 8855

| REVISIONS | | REV # | DATE |
|--|--|-------|------|
| SIGNAGE & PAVEMENT MARKING PLANS NO. 3 | | | |
| ABERDEEN SIGNAL IMPROVEMENTS | | | |
| MOUNT AUBURN STREET | | | |
| CAMBRIDGE, MA | | 12 | 16 |

| TRAFFIC SIGN SUMMARY (CONSTRUCTION) | | | | | | | | | | | | | |
|-------------------------------------|-------------------|--------|---|----------------------|------------------|---------------|--------------------------|---------------------|-------------|--------|--------------------------------|----------------|-----------|
| IDENTIFICATION NUMBER | SIZE OF SIGN (IN) | | TEXT | TEXT DIMENSIONS (IN) | | | NUMBER OF SIGNS REQUIRED | COLOR | | | POST SIZE AND NUMBER REQUIRED | UNIT AREA (SF) | AREA (SF) |
| | WIDTH | HEIGHT | | LETTER HEIGHT | VERTICAL SPACING | ARROW RTE MKR | | BACKGROUND | LEGEND | BORDER | | | |
| R10-10B | 12 | 18 |  | SEE MUTCD STANDARDS | | | 2 | SEE MUTCD STANDARDS | | | TR SIG POST (1) MA POST (1) | 1.50 | 3.00 |
| R10-10B-L | 18 | 24 |  | | | | 2 | | | | TR SIG POST (2) | 3.00 | 6.00 |
| R10-6aR | 18 | 24 |  | | | | 1 | | | | P5-1 | 3.00 | 3.00 |
| R3-2 | 30 | 30 |  | | | | 1 | | | | P5-1 | 6.25 | 6.25 |
| R3-8 | 30 | 30 |  | | | | 1 | | | | LIGHT POST | 6.25 | 6.25 |
| R10-7a | 24 | 30 |  | | | | 1 | | | | LIGHT POST | 5.00 | 5.00 |
| SP-5 | 24 | 30 |  | 3D | 1.3 | | 1 | BLACK/WHITE | WHITE/BLACK | BLACK | UTIL POLE | 5.00 | 5.00 |
| | | | | 3D | 2.2 | | | | | | | | |
| | | | | 3D | 4.5 | | | | | | | | |
| | | | | 3D | 2 | | | | | | | | |
| | | | | 3D | 3 | | | | | | | | |
| | | | | | | | | | | | TOTAL: | 34.50 | |

PS&E SUBMISSION



PROJECT #: 312638-01-001
 DATE: 01/24
 DESIGNER: J. VERESPEJ
 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

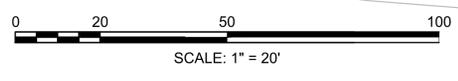
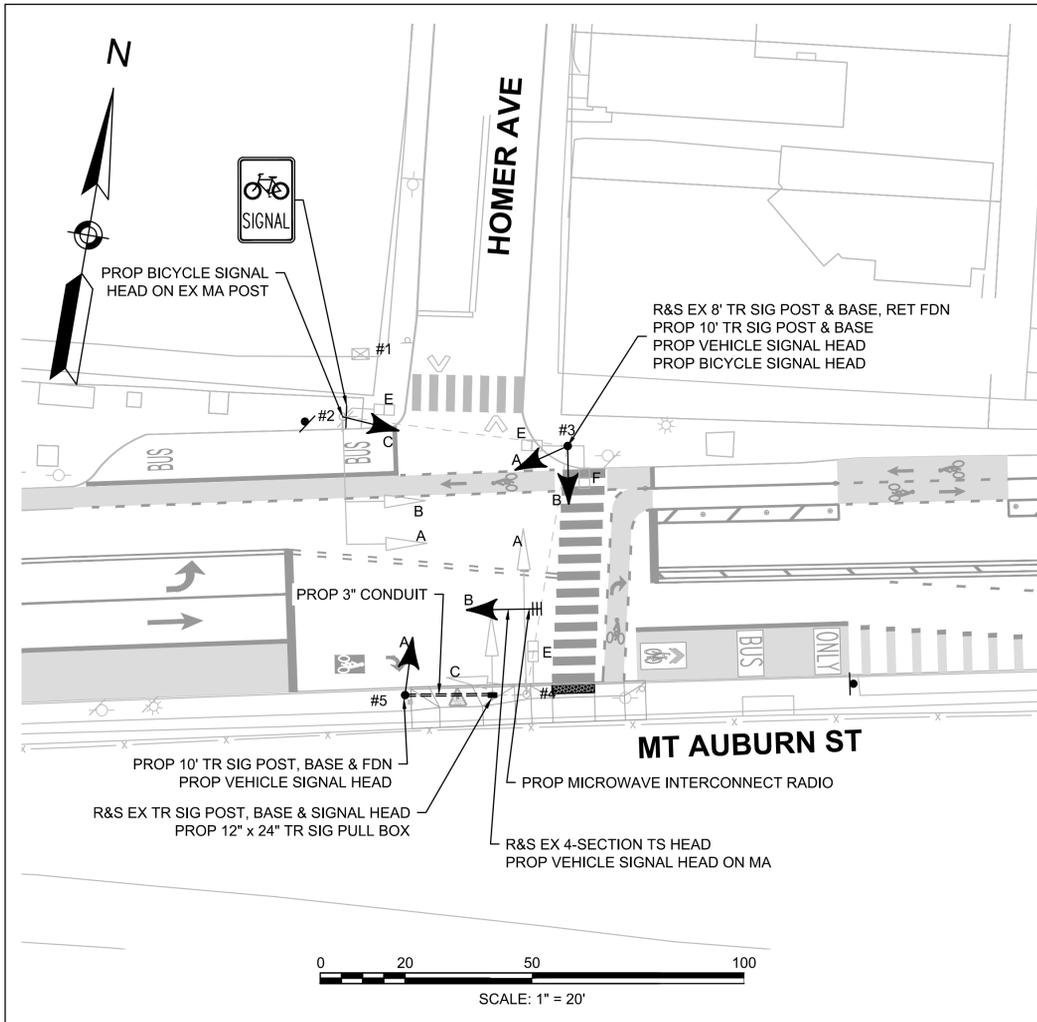
350 MYLES STANDISH BLVD
 SUITE 103
 TAUNTON, MA
 TELE: (508) 823 - 2245

120 WATER ST
 4TH FLOOR
 BOSTON, MA 02109
 TELE: (617) 556 - 0020
 FAX: (617) 556 - 0025

14 BREAKNECK HILL RD
 SUITE 201
 LINCOLN, RI 02865
 TELE: (401) 648 - 7200

94 NORTH ELM STREET
 SUITE 210
 WESTFIELD, MA
 TELE: (413) 875 - 8855

| REVISIONS | | REV # | DATE |
|--|--|-------|------|
| TRAFFIC SIGN SUMMARY NO. 1 ABERDEEN SIGNAL IMPROVEMENTS MOUNT AUBURN STREET CAMBRIDGE, MA | | 13 | 16 |



TIMING AND SEQUENCE CHART

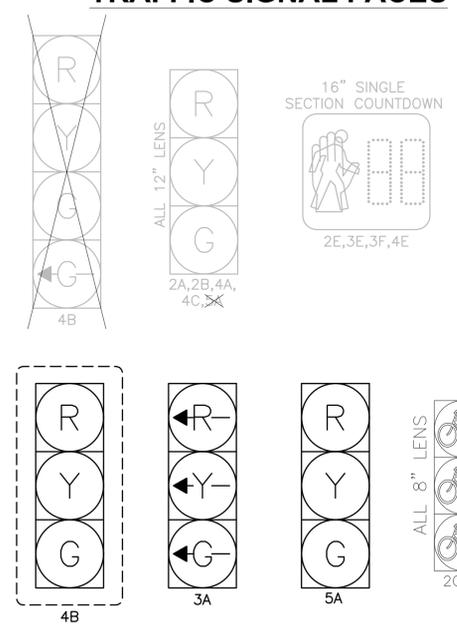
| STREET/DIRECTION/DISPLAY | PHASE SPLITS IN SECONDS | | | | | | | | | OPERATION | |
|---------------------------------|-------------------------|-----|----------|-----|----------|-----|----|----------|----|-----------|-----|
| | ø1 | | | ø2 | | | ø3 | | | | |
| | LPI | GRN | CL | CL | GRN | CL | CL | GRN | CL | CL | |
| MT AUBURN/EB/4B,4C | R | G | Y | R | R | R | R | R | R | R | FY |
| MT AUBURN/EB LT/3A | RL | RL | RL | RL | GL | YL | RL | RL | RL | RL | FRL |
| MT AUBURN/WB/2A,2B | R | G | Y | R | R | R | R | R | R | R | FY |
| HOMER AVE/SB/4A,5A | R | R | R | R | R | R | R | G | Y | R | FR |
| MT AUBURN/WB BIKE/2C | G | G | Y | R | R | R | R | R | R | R | FY |
| MT AUBURN/NB BIKE/3B | R | R | R | R | G | Y | R | R | R | R | FR |
| CROSSWALK/E-W/2E-3E | W | W | FDW | DW | DW | DW | DW | DW | DW | DW | OFF |
| CROSSWALK/N-S/3F-4E | DW | DW | DW | DW | W | FDW | DW | DW | DW | DW | OFF |
| N T R E V A L | MINIMUM GREEN | - | 41 | | 12 | | | 5 | | | |
| | VEHICLE EXTENSION | - | 3 | | 3 | | | 3 | | | |
| | MAXIMUM 1 GREEN | - | 47 | | 17 | | | 8 | | | |
| | MAXIMUM 2 GREEN | - | 59 | | 17 | | | 9 | | | |
| | YELLOW CLEARANCE | | | 3.5 | | 3 | | | 3 | | |
| RED CLEARANCE | | | | 1 | | 1.5 | | | | 2.5 | |
| WALK INTERVAL | 4 | 7 | | | 5 | | | | | | |
| PED. CLEARANCE | | | | 3 | 14 | 3 | | | | | |
| MEMORY | | | NON-LOCK | | NON-LOCK | | | NON-LOCK | | | |
| RECALL (VEH./PED.) | | | MAX/PED | | PED | | | MIN | | | |

| CYCLE NO. | CYCLE LENGTH | OFFSET (SEC.) | PHASE SPLITS IN SECONDS | | | HOURS OF OPERATION |
|-----------|--------------|---------------|-------------------------|----|----|--------------------|
| | | | ø1 | ø2 | ø3 | |
| 1 | 90 | 89 | 52 | 22 | 16 | ALL OTHER TIMES |
| 2 | 100 | 94 | 64 | 22 | 14 | 6:00 AM - 10:30 AM |
| 3 | 105 | 85 | 68 | 22 | 15 | 2:30 PM - 7:30 PM |

| PROGRAM/COORDINATION | | HOURS OF OPERATION |
|-----------------------|------------------|--------------------|
| COORDINATED OPERATION | PROGRAMMED FLASH | |
| | | EVERYDAY |
| | | EMERGENCY ONLY |

| TECHNICAL NOTES | |
|-----------------|--|
| 1. | PEDESTRIAN PHASES REST IN WALK. |
| 2. | IF THE ASSIGNED RIGHT OF WAY FOR ANY MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL. |

TRAFFIC SIGNAL FACES

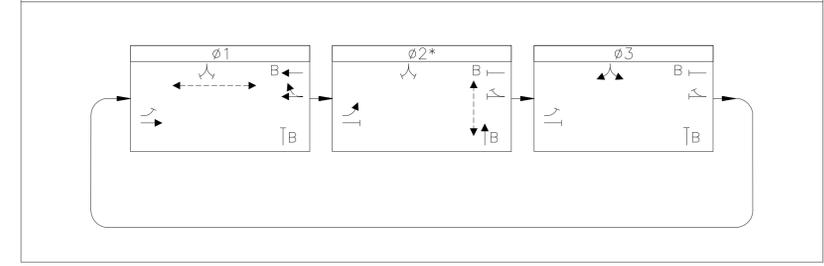


MAJOR ITEMS REQUIRED

| QUANTITY | ITEM |
|----------|--|
| 1 | 3 SECTION - 12" LENS (RL,YL,GL) SIGNAL HEAD |
| 2 | 3 SECTION - 12" LENS (R,Y,G) SIGNAL HEAD |
| 2 | 3-SECTION - 8" LENS (R,Y,G) BIKE SIGNAL HEAD |
| 1 | TRAFFIC SIGNAL BACKPLATE |
| 1 | 10' TRAFFIC SIGNAL POST, BASE, & FOUNDATION (STEEL) WITH BLACK POWDER COAT |
| 1 | 10' TRAFFIC SIGNAL POST & BASE (STEEL) WITH BLACK POWDER COAT |
| 1 | MICROWAVE WIRELESS INTERCONNECT |
| 30 LF | 3" ELECTRICAL CONDUIT TYPE NM - PLASTIC (UL) |
| 1 | PULL BOX 12" X 24" |

PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION.

PREFERENTIAL PHASING SEQUENCE



PS&E SUBMISSION

MCMAHON
a Bowman company

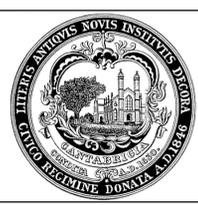
PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: C. MURPHY
DRAFTER: J. VERESPEJ
REVIEWER: C. MURPHY

350 MYLES STANDISH BLVD
SUITE 103
TAUNTON, MA
TELE: (508) 823 - 2245

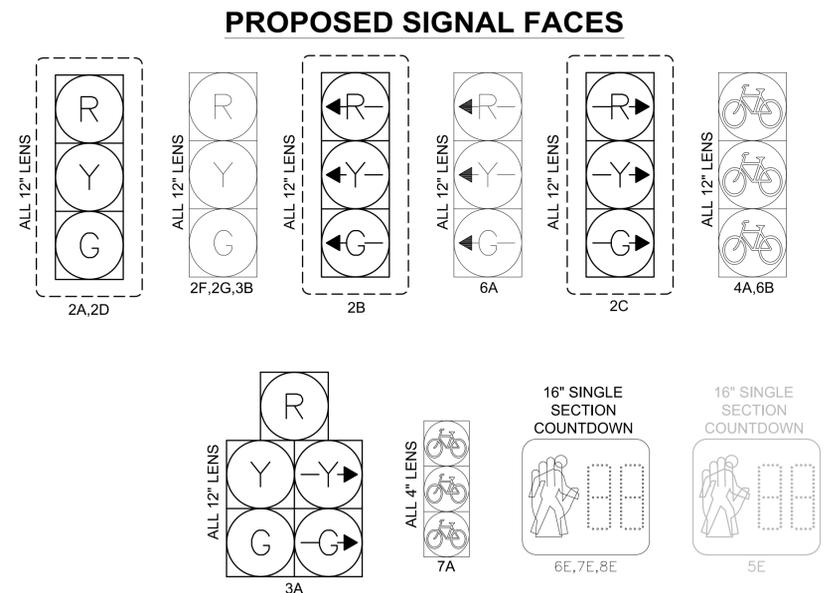
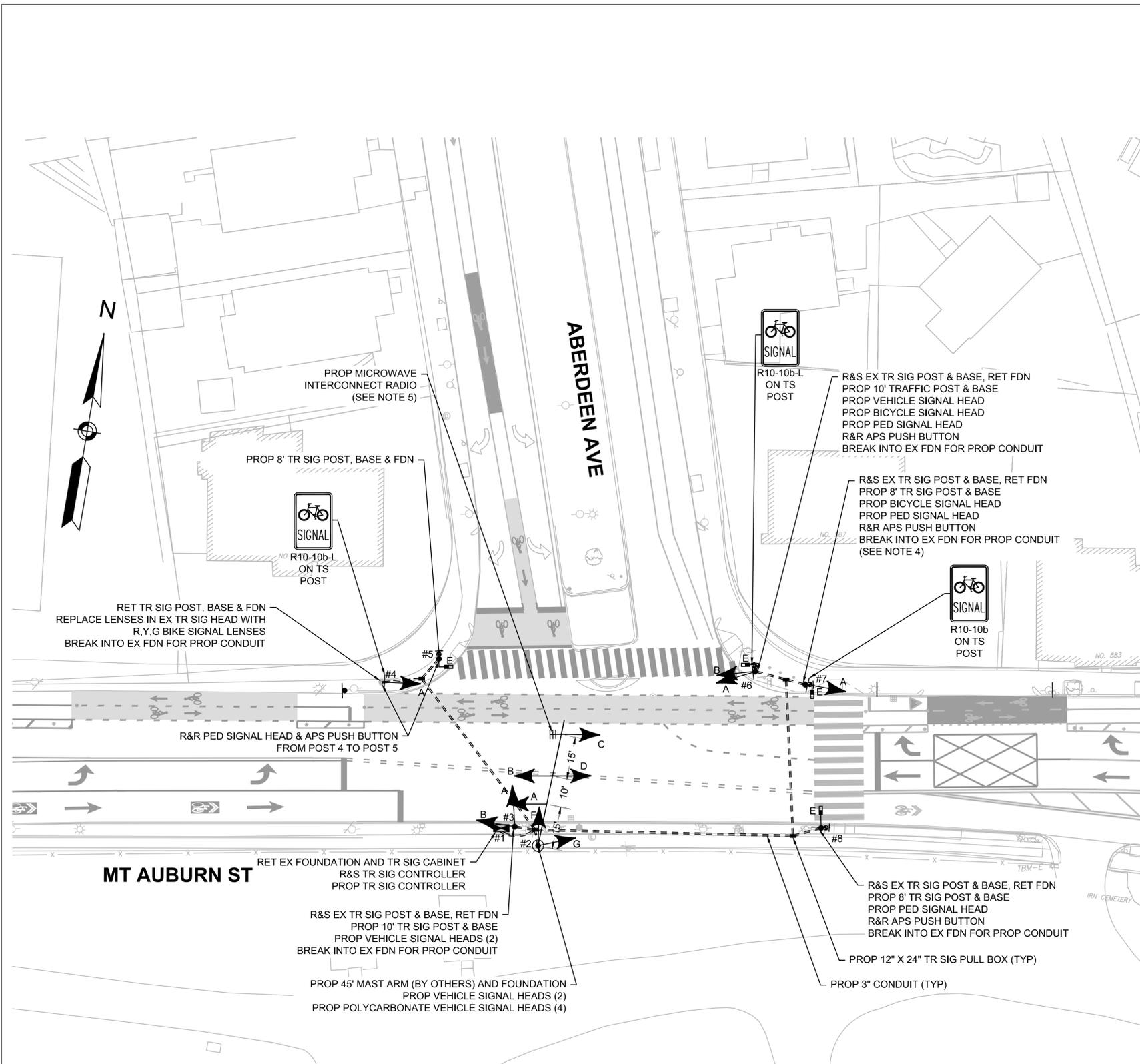
120 WATER ST
4TH FLOOR
BOSTON, MA 02109
TELE: (617) 556 - 0020
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14 BREAKNECK HILL RD
SUITE 201
LINCOLN, RI 02865
TELE: (401) 648 - 7200

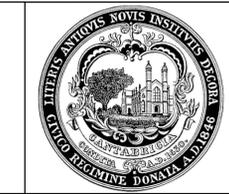
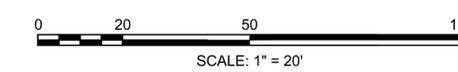
94 NORTH ELM STREET
SUITE 210
WESTFIELD, MA
TELE: (413) 875 - 8855



| REVISIONS | | REV # | DATE |
|---|--|-------|------|
| TRAFFIC SIGNAL PLANS NO. 1 ABERDEEN SIGNAL IMPROVEMENTS HOMER AVE @ MT AUBURN ST CAMBRIDGE, MA | | 14 | 16 |



- NOTES:
- EXISTING SIGNAL SYSTEM TO REMAIN OPERATIONAL UNTIL PROPOSED SIGNAL SYSTEM IS PUT INTO SERVICE.
 - ANY EXISTING CONDUIT SHALL BE ABANDONED IN PLACE.
 - EXISTING SIGNAL EQUIPMENT SHALL BE REMOVED AND STACKED UNLESS OTHERWISE NOTED.
 - TRAFFIC SIGNAL HEAD 7A SHALL BE SIDE MOUNTED AT A HEIGHT OF 4.5' FROM BOTTOM OF SIGNAL HEAD TO TOP OF SIDEWALK.
 - MICROWAVE INTERCONNECT RADIOS SHALL BE COMNET NWK1 RADIOS OR APPROVED EQUAL. MICROWAVE INTERCONNECT RADIO SHALL BE PAIRED WITH PROPOSED MICROWAVE INTERCONNECT RADIO AT INTERSECTION OF MOUNT AUBURN STREET @ HOMER AVENUE. CONTRACTOR TO COORDINATE WITH CITY OF CAMBRIDGE FOR PLACEMENT.



PROJECT #: 312638-01-001
 DATE: 01/24
 DESIGNER: C. MURPHY
 DRAFTER: J. VERESPEJ
 REVIEWER: C. MURPHY

PS&E SUBMISSION



350 MYLES STANDISH BLVD
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 TAUNTON, MA
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94 NORTH ELM STREET
 SUITE 210
 WESTFIELD, MA
 TELE: (413) 875 - 8855

| REVISIONS | | REV # | DATE |
|-------------------------------------|----|--------------|------|
| TRAFFIC SIGNAL PLANS NO. 2 | | | |
| ABERDEEN SIGNAL IMPROVEMENTS | | | |
| ABERDEEN AVE @ MT AUBURN ST | | | |
| CAMBRIDGE, MA | | | |
| SHEET # | 15 | TOTAL SHEETS | 16 |

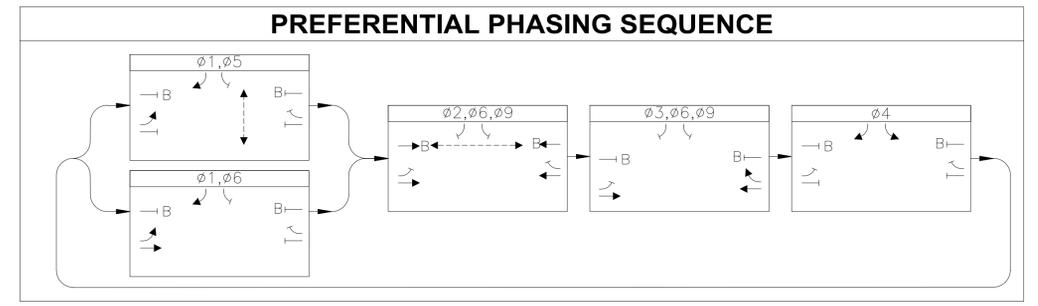
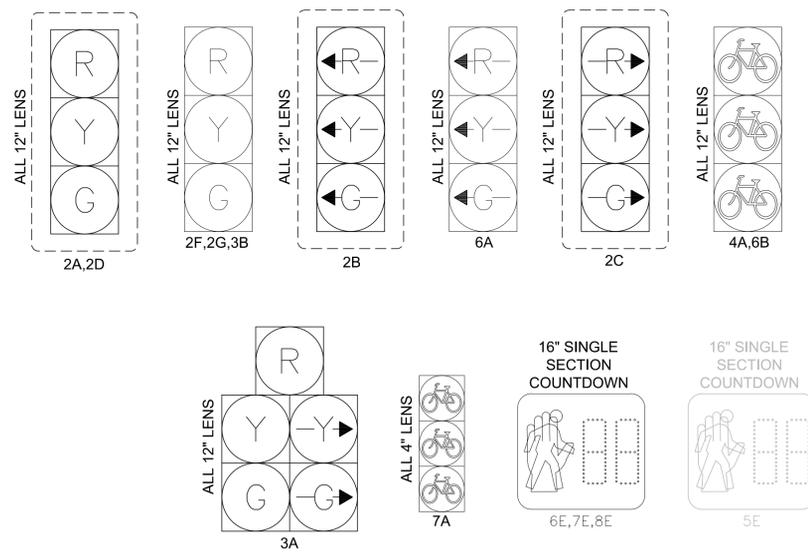
| | | TIMING AND SEQUENCE CHART | | | | | | | | | | | | | | | | | | | | | OPERATION FLASHING | |
|--------------------------------------|-------------------|---------------------------|-------------------------|----------|-------|----------|-----|----------|----|------|-----|----------|----|----------|-----|----|-----|-----|-----|-----|-----|--------------------|-----------------------|--------------------|
| STREET/DIRECTION/DISPLAY | | GRN | CL | CL | GRN | CL | CL | GRN | CL | CL | GRN | CL | CL | GRN | CL | CL | GRN | CL | CL | GRN | CL | CL | | |
| MT AUBURN/EB/2A,3B | | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | R | R | R | FY | |
| MT AUBURN/EB LT/2B,6A | | GL | YL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | RL | FRL | |
| MT AUBURN/WB/2D,2G | | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | FY | |
| MT AUBURN/WB RT/2C | | RR | RR | RR | RR | RR | RR | GR | YR | RR | RR | RR | RR | RR | RR | RR | RR | RR | RR | RR | RR | RR | FRR | |
| ABERDEEN/SB/2F | | R | R | R | R | R | R | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | FR | |
| ABERDEEN/SB RT/3A | | GR | YR | R | R | R | R | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | FR | |
| MT AUBURN/WB BIKE/4A,7A | | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | FR | |
| MT AUBURN/EB BIKE/6B | | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | FR | |
| CROSSWALK/E-W/5E-6E | | DW | DW | DW | W/FDW | FDW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | OFF | |
| CROSSWALK/N-S/7E-8E | | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | DW | W | FDW | DW | DW | DW | DW | DW | DW | DW | OFF | |
| I N T E R V A L | MINIMUM GREEN | 14 | | | 5 | | | 5 | | | 5 | | | - | | | 5 | | | 5 | | | | |
| | VEHICLE EXTENSION | 3 | | | 3 | | | 3 | | | 3 | | | - | | | 3 | | | 3 | | | | |
| | MAXIMUM 1 GREEN | 14 | | | 28 | | | 13 | | | 11 | | | - | | | 48 | | | 48 | | | | |
| | MAXIMUM 2 GREEN | 14 | | | 28 | | | 26 | | | 17 | | | - | | | 61 | | | 61 | | | | |
| | YELLOW CLEARANCE | | 3 | | | 3.5 | | | 3 | | | 3 | | | | | | 3.5 | | | 3.5 | | | |
| | RED CLEARANCE | | | 3 | | | 2.5 | | | 2 | | | 4 | | | | | | 2.5 | | | 2.5 | | |
| | WALK INTERVAL | | | | 5 | | | | | | | | | 5 | | | | | | | | | | |
| PED. CLEARANCE | | | | | 26 | | 3 | | | | | | | 12 | | 3 | | | | | | | | |
| MEMORY | | NON-LOCK | | NON-LOCK | | NON-LOCK | | NON-LOCK | | - | | NON-LOCK | | NON-LOCK | | | | | | | | | | |
| RECALL (VEH./PED.) | | MIN | | MIN | | MIN | | MIN | | NONE | | MIN | | MIN | | | | | | | | | | |
| PROGRAM/COORDINATION | | | | | | | | | | | | | | | | | | | | | | | | |
| CYCLE NO. | CYCLE LENGTH | OFFSET (SEC.) | PHASE SPLITS IN SECONDS | | | | | | | | | | | | | | | | | | | HOURS OF OPERATION | | |
| 1 | 90 | 0 | ø1 | | | ø2 | | | ø3 | | | ø4 | | | ø5 | | | ø6 | | | ø9 | | | ALL OTHER TIMES |
| 2 | 100 | 0 | ø1 | | | ø2 | | | ø3 | | | ø4 | | | ø5 | | | ø6 | | | ø9 | | | 6:00 AM - 10:30 AM |
| 3 | 105 | 0 | ø1 | | | ø2 | | | ø3 | | | ø4 | | | ø5 | | | ø6 | | | ø9 | | | 2:30 PM - 7:30 PM |
| COORDINATED OPERATION | | | | | | | | | | | | | | | | | | | | | | EVERYDAY | | |
| PROGRAMMED FLASH | | | | | | | | | | | | | | | | | | | | | | EMERGENCY ONLY | | |

| MAJOR ITEMS REQUIRED | |
|----------------------|--|
| QUANTITY | ITEM |
| 1 | 45' MAST ARM ASSEMBLY, BASE, & FOUNDATION (STEEL) WITH BLACK POWDER COAT (BY OTHERS) |
| 1 | 8' TRAFFIC SIGNAL POST, BASE, & FOUNDATION (STEEL) WITH BLACK POWDER COAT |
| 2 | 8' TRAFFIC SIGNAL POST & BASE (STEEL) WITH BLACK POWDER COAT |
| 2 | 10' TRAFFIC SIGNAL POST & BASE (STEEL) WITH BLACK POWDER COAT |
| 1 | TS-2 TYPE 1 SIGNAL CONTROLLER (EAGLE SIEMENS M60) |
| 1 | 3 SECTION - 4" LENS (R,Y,G) BIKE SIGNAL HEAD |
| 2 | 3 SECTION - 12" LENS (R,Y,G) BIKE SIGNAL HEAD |
| 1 | 3 SECTION - 12" LENS (RL,YL,GL) SIGNAL HEAD |
| 3 | 3 SECTION - 12" LENS (R,Y,G) SIGNAL HEAD |
| 1 | 5 SECTION - 12" LENS (R,Y,G,YR,GR) SIGNAL HEAD |
| 2 | 3 SECTION - 12" LENS (R,Y,G) POLYCARBONATE SIGNAL HEAD |
| 1 | 3 SECTION - 12" LENS (RL,YL,GL) POLYCARBONATE SIGNAL HEAD |
| 1 | 3 SECTION - 12" LENS (RR,YR,GR) POLYCARBONATE SIGNAL HEAD |
| 4 | TRAFFIC SIGNAL BACKPLATE |
| 3 | 16" - PEDESTRIAN L.E.D SIGNAL COUNTDOWN INDICATION |
| 1 | MICROWAVE WIRELESS INTERCONNECT |
| 300 LF | 3" ELECTRICAL CONDUIT TYPE NM - PLASTIC (UL) |
| 4 | PULL BOX 12" X 24" |

PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION.

- TECHNICAL NOTES
- PEDESTRIAN PHASES REST IN WALK.
 - IF THE ASSIGNED RIGHT OF WAY FOR ANY MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
 - PEDESTRIAN TIMES PROVIDED UPON PEDESTRIAN ACTUATION.

PROPOSED SIGNAL FACES



PS&E SUBMISSION

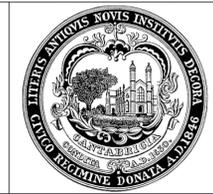
MCMAHON
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94 NORTH ELM STREET
SUITE 210
WESTFIELD, MA
TELE: (413) 875-8855



PROJECT #: 312638-01-001
DATE: 01/24
DESIGNER: C. MURPHY
DRAFTER: J. VERESPEJ
REVIEWER: C. MURPHY

| REVISIONS | | REV # | DATE |
|--|--|-------|------|
| TRAFFIC SIGNAL PLANS NO. 3 ABERDEEN SIGNAL IMPROVEMENTS ABERDEEN AVE @ MT AUBURN ST CAMBRIDGE, MA | | 16 | 16 |