

TOWN OF NATICK, MASSACHUSETTS
BOARD OF SELECTMEN
CONTRACT NO. W-159
PAULINE, STEVEN & BACON
WATER MAIN REPLACEMENT

BOARD OF SELECTMEN

MICHAEL J. HICKEY, CHAIRMAN
SUSAN G. SALAMOFF, VICE CHAIRMAN
JONATHAN H. FREEDMAN, CLERK
KAREN ADELMAN-FOSTER
RICHARD P. JENNETT, JR.

TOWN ADMINISTRATOR

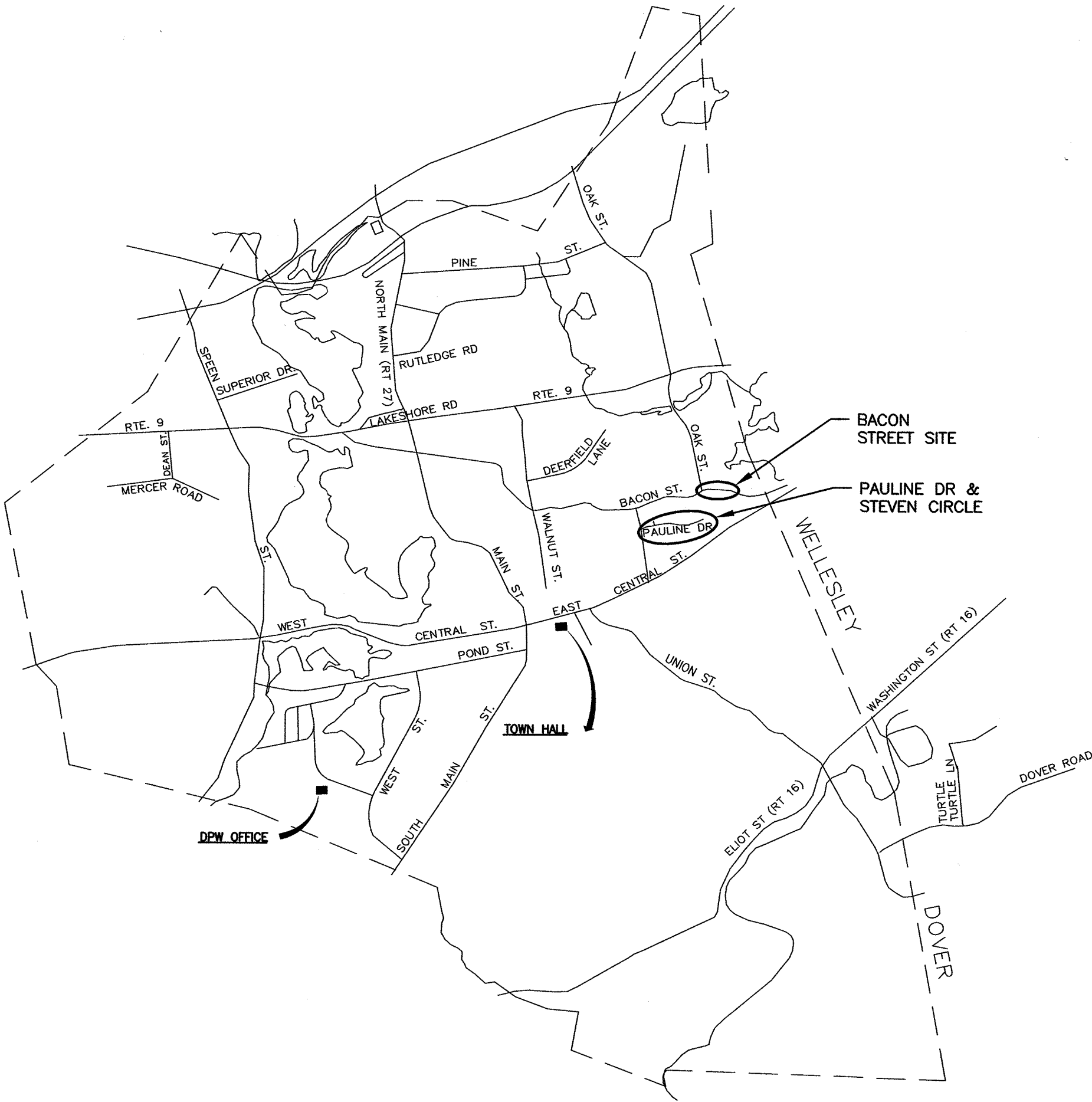
MELISSA MALONE

DIRECTOR OF PUBLIC WORKS

JEREMY MARSETTE

WATER AND SEWER SUPERINTENDENT

ANTHONY COMEAU



SHEET NO.	DRAWING NO.	DRAWING NAME
1	CVR	COVER SHEET
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HALEY AND WARD, INC.
A DIVISION OF CES, INC.
MAYNARD, MASSACHUSETTS
FEBRUARY, 2020

TOWN OF NATICK, MASSACHUSETTS
BOARD OF SELECTMEN

PAULINE, STEVEN & BACON
WATER MAIN REPLACEMENT

1 OF 5

CONTRACT NO.: W-159

SCALE: NONE

DATE DRAWN: FEBRUARY, 2020

DRAWN BY: G.E

FILE NO.: NAT-480-CVR.DWG

CHECKED

DATE

BY

REVISION

DATE

BY

DWG. NO.

CVR

GENERAL NOTES:

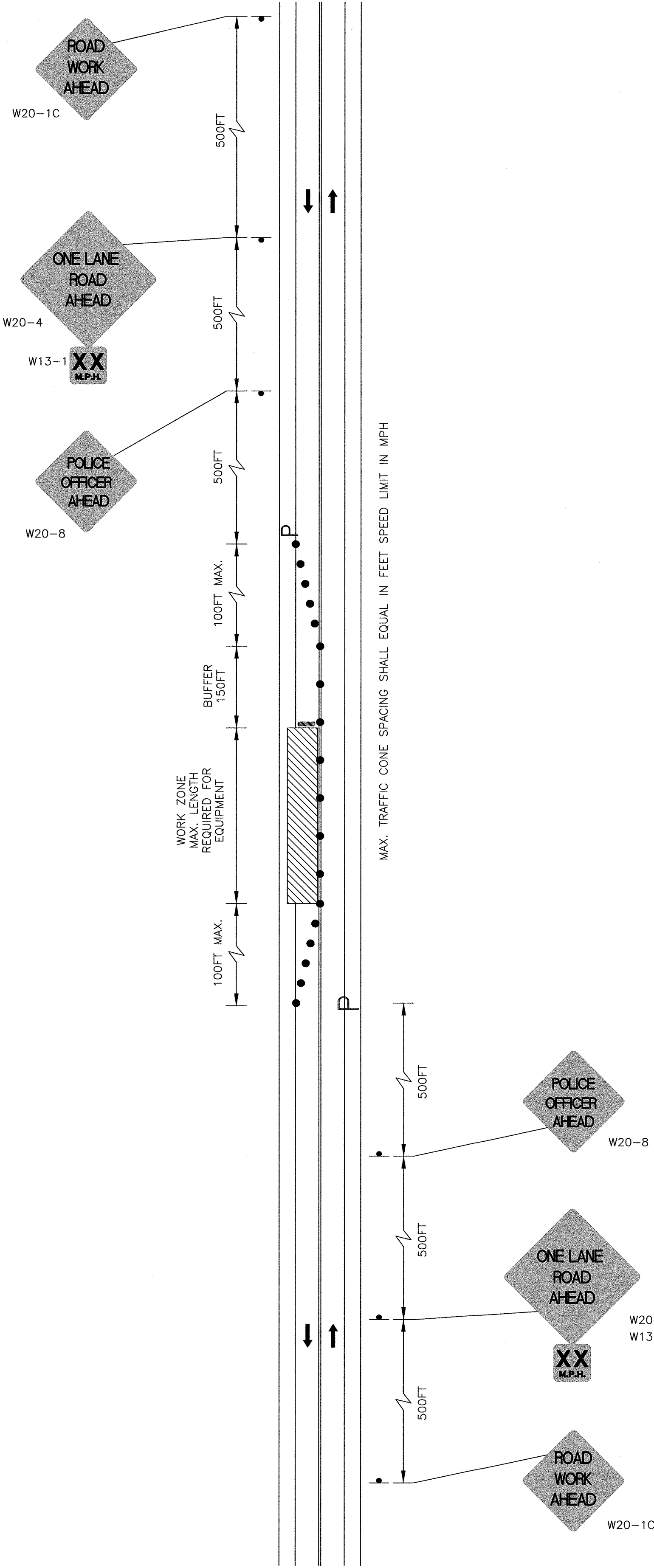
1. THE WORK UNDER THE CONTRACT DOCUMENTS IS LOCATED WITHIN THE LAYOUTS OF THE PUBLIC WAYS IDENTIFIED ON THE DRAWINGS.
2. THE CONTRACTOR TO VIDEO TAPE ALL EXISTING CONDITIONS AT ALL PROJECT SITES PRIOR TO CONSTRUCTION INCLUDING EDGE OF ROAD, SIDEWALKS AND CURBS, LAWN AREAS, WALLS AND FENCES PER SECTION 01550.
3. ALL FITTINGS TO BE RESTRAINED JOINTS AND PROVIDED WITH THRUST BLOCKS.
4. CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE UTILITY COMPANY TO SUPPORT UTILITY POLES WHILE EXCAVATING ADJACENT TO POLES. ALL COSTS ASSOCIATED WITH POLE SUPPORT TO BE INCLUDED IN PIPE ITEM.
5. CONTRACTOR SHALL OBTAIN ROAD OPENING PERMIT, TRENCH SAFETY PERMIT AND NOTIFY DIG-SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO EXCAVATION.
 - 5.1. CONTRACTOR IS TO BE RESPONSIBLE FOR CONFIRMING ALL UTILITY MARK-OUTS PRIOR TO START OF EXCAVATION INCLUDING NOTIFICATION OF DIG-SAFE AND NATICK ENGINEERING DEPARTMENT.
6. ALL UTILITIES AND SERVICES ARE SHOWN TO INDICATE THEIR PRESENCE ONLY, ACTUAL LOCATIONS WILL BE MARKED OUT IN FIELD THROUGH DIG-SAFE MARK OUT AND NATICK ENGINEERING MARK OUT.
 - 6.1. WATER AND SEWER UTILITIES ARE THE PROPERTY OF THE TOWN OF NATICK. LOCATION OF WATER AND SEWER SERVICES AND MAINS IDENTIFIED ON PLANS ARE APPROXIMATE, ACTUAL LOCATIONS WILL BE MARKED OUT BY THE TOWN PRIOR TO START OF CONSTRUCTION. CONTRACTOR TO MAINTAIN MARKINGS THROUGHOUT CONSTRUCTION.
 - 6.2. CONTRACTOR TO ASSUME EACH HOUSE HAS A WATER AND SEWER SERVICE WHERE THERE IS A WATER MAIN OR SEWER MAIN IN FRONT OF THE HOUSE.
 - 6.3. ALL DAMAGE TO EXISTING WATER AND SEWER SERVICES CAUSED BY CONTRACTOR'S OPERATIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - 6.4. ANY CONTRACTOR DAMAGE TO EXISTING WATER AND SEWER SERVICES WILL REQUIRE REPLACEMENT WITH NEW MATERIALS TO A MINIMUM OF 2' OUTSIDE THE MAIN LINE TRENCH.
7. CONTRACTOR TO ASSUME EACH HOUSE HAS A GAS SERVICE WHERE THERE IS A GAS MAIN IN FRONT OF EACH HOUSE. DIG-SAFE MARK-OUT WILL CONFIRM LOCATION OF GAS SERVICES.
8. THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES.
9. GAS MAINS ARE ASSUMED TO HAVE 2-3 FEET OF COVER, THE EXISTING WATER SEWER AND FORCEMAINS ARE ASSUMED TO HAVE 5 TO 6 FEET OF COVER, ELECTRIC DUCT BANKS ASSUMED TO HAVE 2-3 FEET OF COVER, UNLESS OTHERWISE NOTED, OR CROSSING UNDER UTILITIES.
10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY WATER AND SEWER SERVICES THAT ARE IN CONFLICT WITH THE WORK.
11. ALL TRENCHES AND TEST PITS MUST BE BACKFILLED OR COVERED WITH STEEL PLATES, WITH COLD PATCH RAMPS ON ALL SIDES, DURING NON-WORKING HOURS.
12. THE CONTRACTOR MUST MAINTAIN THE FLOW OF TRAFFIC AT ALL TIMES AND IS RESPONSIBLE FOR SCHEDULING POLICE DETAILS. SEE TRAFFIC CONTROL NOTES.
13. OVERHEAD WIRES EXISTING WITHIN THE PROJECT SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE WIRES WHERE NECESSARY. ALL OVERHEAD WIRES ARE NOT SHOWN ON DRAWINGS TO MAINTAIN CLARITY.
14. CONTRACTOR TO MITIGATE PROPERTY OWNER'S ACCESS TO AND FROM THEIR DRIVEWAYS WHEN TRENCHING IN FRONT OF DRIVEWAY. IT IS IMPORTANT TO MINIMIZE IMPACT TO DRIVEWAYS BOTH DURING BUSINESS HOURS AND AFTER HOURS AND WEEKENDS.
15. SEE DETAIL DRAWING FOR TRENCH RESTORATION WORK.
16. ALL EXISTING WATER MAIN PIPE IS CAST IRON UNLESS OTHERWISE NOTED.
17. CONTRACTOR SHALL FURNISH AND INSTALL STEEL PLATES SIZED TO PROTECT TRENCHES FROM HEAVY VEHICLE TRAFFIC WHEN WORK IS NOT OCCURRING IN TRENCH. CONTRACTOR SHALL PIN DOWN EDGES OF PLATES TO PREVENT VEHICLE DAMAGE OR INSTALL "COLD-PATCH" AROUND EDGES OF PLATES TO PREVENT VEHICLE DAMAGE. IF PLATES BOUNCE UNDER VEHICLE TRAFFIC THEN PLATES MUST BE PINNED.
18. CONTRACTOR TO TAKE ALL PRECAUTIONS TO AVOID DAMAGE TO EXISTING LANDSCAPING DURING CONSTRUCTION, IF LANDSCAPING IS DAMAGED DURING CONSTRUCTION THEN CONTRACTOR TO RETURN AREA TO ORIGINAL OR BETTER CONDITION.
19. ALL EXISTING STRUCTURES INCLUDING MAIL BOXES, PAPER BOXES AND FENCING, IF DAMAGED OR REMOVED DURING CONSTRUCTION, MUST BE RE-INSTALLED IF APPROVED BY OWNER/ENGINEER OR REPLACED WITH NEW MATERIALS.
20. CONTRACTOR SHALL NOTIFY ALL BUSINESS AND RESIDENTS OF PLANNED CONSTRUCTION DAILY TO ALLOW ALL VEHICLES TO BE LOCATED OFF THE CONSTRUCTION SITE, WHERE POSSIBLE. ACCESS TO BUSINESS DRIVEWAYS MUST NOT BE CLOSED DURING THEIR BUSINESS HOURS. ALL WORK REQUIRED TO BLOCK DRIVEWAY MUST BE COMPLETED AFTER CLOSING HOURS FOR THAT BUSINESS.
21. CONTRACTOR WILL NOT BE ALLOWED TO CUT AND REMOVE EXISTING UTILITIES TO ALLOW INSTALLATION OF NEW UTILITY, UNLESS EXISTING UTILITY IS IN POOR CONDITION AS APPROVED BY OWNER. SEWER SERVICES ARE ASSUMED TO BE CLAY.

TRAFFIC MANAGEMENT NOTES:

1. BACON STREET: THE CONTRACTOR MUST ALLOW THE FLOW OF TRAFFIC, 2-WAY TRAFFIC IS PREFERRED OR ALTERNATING DIRECTIONS AT ALL TIMES AND IS RESPONSIBLE FOR SCHEDULING POLICE DETAILS. SEE TRAFFIC MANAGEMENT DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. OVERNIGHT LANE CLOSURE WILL NOT BE ALLOWED.
3. CONTRACTOR TO MITIGATE PROPERTY OWNER'S ACCESS TO AND FROM THEIR DRIVEWAYS WHEN TRENCHING IN FRONT OF DRIVEWAY. IT IS IMPORTANT TO MINIMIZE IMPACT TO DRIVEWAYS BOTH DURING BUSINESS HOURS AND AFTER HOURS AND WEEKENDS.
4. SEE THE TRAFFIC MANAGEMENT DRAWINGS AND PLAN VIEW DRAWINGS FOR ADDITIONAL TRAFFIC MANAGEMENT REQUIREMENTS AND NOTES.
5. COMPLETE SHUT DOWN OF ANY ROADWAY WILL NOT BE ALLOWED.
6. CONTRACTOR TO FURNISH AND SETUP ELECTRONIC MESSAGE BOARDS AS REQUIRED BY CONTRACT DOCUMENTS, AT A MINIMUM OF TWO WEEKS PRIOR TO START OF WORK ON BACON STREET, AND REMAIN IN PLACE FOR SEVEN DAYS EACH DIRECTION.
7. CONTRACTOR TO INSTALL CONSTRUCTION SIGNAGE IN ACCORDANCE WITH CONTRACT DOCUMENTS AND MASSDOT TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO "CONSTRUCTION AHEAD 500",, "POLICE DETAIL AHEAD", "STEEL PLATES IN ROADWAY", ETC.. ALL IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS AND THE MASSDOT PERMIT INCLUDED IN THE APPENDIX SECTION OF THE CONTRACT DOCUMENTS.
8. CONTRACTOR'S OPERATIONS SHALL BE SUCH THAT EMERGENCY VEHICLES CAN HAVE ACCESS TO ALL PROPERTIES AND BUILDINGS, COMMERCIAL AND RESIDENTIAL.CONTRACTOR TO MITIGATE PROPERTY OWNER'S ACCESS TO AND FROM THEIR DRIVEWAYS WHEN TRENCHING IN FRONT OF DRIVEWAY.
9. IT IS IMPORTANT TO MINIMIZE IMPACT TO DRIVEWAYS BOTH DURING BUSINESS HOURS AND AFTER HOURS AND WEEKENDS.

WATER MAIN NOTES:

1. VALVE REPLACEMENT MAY BE REQUIRED TO ACHIEVE POSITIVE SHUTDOWN OF SIDE STREET CONNECTIONS. ALL COSTS ASSOCIATED WITH THESE MISCELLANEOUS PITS SHALL BE MEASURED AND PAID FOR UNDER THE MISCELLANEOUS PIT ITEM. VALVE, PIPE, FITTINGS, SOIL AND PAVEMENT TO BE PAID UNDER THE APPROPRIATE ITEMS.
2. ALL VALVES SHALL BE EPOXY COATED WITH STAINLESS STEEL HARDWARE.
3. WATER SERVICE GATE TIE CARDS WILL BE AVAILABLE TO THE CONTRACTOR UPON AWARD OF THE CONTRACT.
4. ALL FITTINGS AND VALVES ARE TO BE FULLY RESTRAINED, THRUST BLOCKED AND SUPPORTED. FITTING AND VALVE RESTRAINT SHALL BE "MEGA-LUG" FOR D.I. PIPE OR "GRIP RING" FOR C.I. PIPE IN ALL INSTALLED LOCATIONS. WHERE NECESSARY CONTRACTOR SHALL USE FOSTER ADAPTERS TO ANCHOR ADDITIONAL VALVES TO TEES.
5. SOLID SLEEVES SHALL BE PROVIDED WHERE FEASIBLE (AT PROPOSED DUCTILE IRON PIPE AND WHERE CAST IRON PIPE O.D. PERMITS); THEY REQUIRE FULL RESTRAINT. FOR WORK AT OVERSIZED CAST IRON PIPE WHERE SOLID SLEEVES ARE NOT AN OPTION, IN THE OPINION OF THE ENGINEER THAT GRINDING THICK SPOTS IS NOT FEASIBLE TO FIT SLEEVE ALTERNATIVE COUPLINGS MAY BE PROVIDED AS OUTLINED IN SECTION 02610, BUT ALSO REQUIRE FULL RESTRAINT.
6. REPLACEMENT HYDRANTS SHALL NOT BLOCK DRIVEWAYS AND SHALL HAVE NO BENDS.
7. WATER SERVICE NOTES:
 - 7.1. NEW EAST CENTRAL WATER SERVICES REQUIRE A 2" DIAMETER PVC SLEEVE ACROSS THE ROADWAY.
 - 7.2. SERVICE LINES SHALL BE FLUSHED PRIOR TO RETURNING TO PERMANENT SERVICE.
8. CONTRACTOR SHALL NOTIFY WATER DEPARTMENT SUPERINTENDENT 48 HOURS IN ADVANCE OF WHEN ANY SHUTDOWN IS REQUIRED. WATER DEPARTMENT PERSONNEL WILL OPERATE GATE VALVES TO ACHIEVE SHUTDOWN. CONTRACTOR TO SCHEDULE FOR AND ALLOW 48 HOURS BEFORE SHUT DOWN IS ACHIEVED.
9. TEST PITS FOR UTILITY INVESTIGATION SHALL BE AS DIRECTED BY OWNER OR ENGINEER.



ONE - LANE
BI-DIRECTIONAL HALF
ROADWAY CLOSURE

LEGEND:

=====	EDGE OF PAVEMENT
-----	RIGHT OF WAY AND APPROXIMATE LOCATION OF PROPERTY LINES
----- 12" RCP -----	EXISTING 12" REINFORCED CONCRETE PIPE STORM DRAIN
----- 4" GAS -----	EXISTING GAS LINE
----- 8" PVC SEWER -----	EXISTING SEWER (type labeled)
----- 8" C.I. WATER -----	EXISTING CAST IRON WATER
----- 8" PVC -----	EXISTING SEWER SERVICE (depth at end labeled)
----- 172 -----	EXISTING WATER SERVICE
-----	EXISTING CONTOUR ELEVATION
-----	EXISTING POST/RAIL FENCE
=====	PROPOSED WATER
=====	PROPOSED SEWER
AI	
BVW BVW BVW BVW	BORDERING VEGETATED WETLAND (BVW)
SS SS SS SS SS	SILT SOCK
-----	BVW 100' BUFFER ZONE
-----	MEAN ANNUAL HIGH WATER LINE
-----	RIVER FRONT AREA BOUNDARY

	EXISTING RIP-RAP		EXISTING FIRE HYDRANT
	DRAIN MANHOLE		EXISTING WATER GATE
	UTILITY POLE		NEW FIRE HYDRANT
	UTILITY POLE W/GUY		NEW WATER GATE
	GAS GATE		NEW SOLID SLEEVE
	EXISTING SEWER MANHOLE		SIGN
	CB WITH GRANITE THROAT STONE		BORING

ABBREVIATIONS

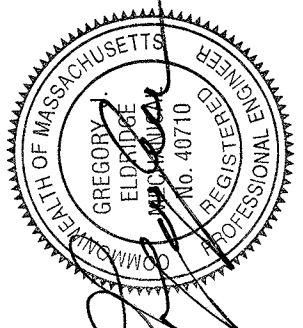
AC = ASBESTOS CEMENT	MJ = MECHANICAL JOINT
BIT = BITUMINOUS	OD = OUTSIDE DIAMETER
CI = CAST IRON	OHW = OVERHEAD WIRES
CL = CEMENT LINED	PE = POLYETHYLENE
CMP = CORRUGATED METAL PIPE	PL = PLASTIC
DI = DUCTILE IRON	PVC = POLYVINYL CHLORIDE
DMH = DRAIN MANHOLES	RCP = REINFORCED CONCRETE PIPE
EOP = EDGE OF PAVEMENT	RG = RETAINER GLAND
EP = EDGE OF PAVEMENT	SMH = SEWER MANHOLE
GALV. = GALVANIZED IRON	ST = STEEL
GRNT = GRANITE CURB	SW = SIDEWALK
GS = GAS SERVICE	T = COMMUNICATIONS DUCT BANK
HDPE = HIGH DENSITY POLYETHYLENE	VC = VITRIFIED CLAY
ID = INSIDE DIAMETER	WS = WATER SERVICE
IP = INTERMEDIATE PRESSURE	6"SS = 6" SEWER SERVICE
	UP = UTILITY POLE

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NOTES AND
LEGEND

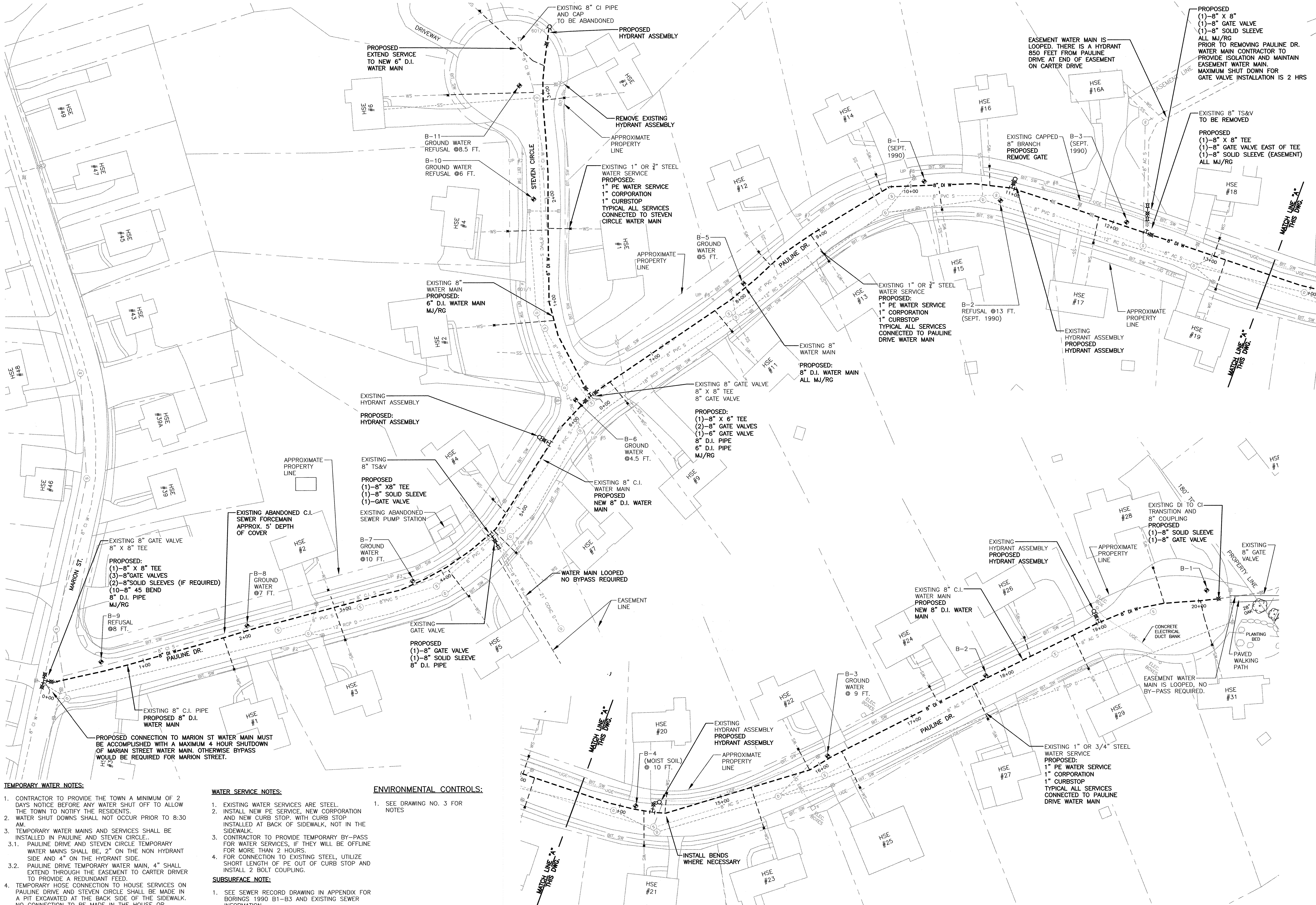
Haley and Ward
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CHECKED	DATE	BY	CHECKED	DATE	BY
SHEET NO.:	2 OF 5				
CONTRACT NO.:	W-159				
SCALE:	NONE				
DATE DRAWN:	JANUARY 2020				
DRAWN BY:	GJE				
FILE NO.:	NAT-480-001 NOTES W-159.DWG				

DWG. NO.

1



TEMPORARY WATER NOTES:

1. CONTRACTOR TO PROVIDE THE TOWN A MINIMUM OF 2 DAYS NOTICE BEFORE ANY WATER SHUT OFF TO ALLOW THE TOWN TO NOTIFY THE RESIDENTS.
2. WATER SHUT DOWNS SHALL NOT OCCUR PRIOR TO 8:30 AM.
3. TEMPORARY WATER MAINS AND SERVICES SHALL BE INSTALLED IN PAULINE AND STEVEN CIRCLE..
- 3.1. PAULINE DRIVE AND STEVEN CIRCLE TEMPORARY WATER MAINS SHALL BE, 2" ON THE NON HYDRANT SIDE AND 4" ON THE HYDRANT SIDE.
- 3.2. PAULINE DRIVE TEMPORARY WATER MAIN, 4" SHALL EXTEND THROUGH THE EASEMENT TO CARTER DRIVER TO PROVIDE A REDUNDANT FEED.
4. TEMPORARY HOSE CONNECTION TO HOUSE SERVICES ON PAULINE DRIVE AND STEVEN CIRCLE SHALL BE MADE IN A PIT EXCAVATED AT THE BACK SIDE OF THE SIDEWALK. NO CONNECTION TO BE MADE IN THE HOUSE OR OUTSIDE SPOUT.
5. CONTRACTOR TO FURNISH BALL VALVES TO THE TOWN, IN CASE THE TOWN MUST REPLACE THE BALL VALVE INSIDE THE HOUSE.
6. ALL WATER SERVICES SHALL BE FLUSHED BY THE TOWN WHEN TEMPORARY HOSE IS CONNECTED AND WHEN NEW PERMANENT SERVICE IS CONNECTED.

WATER SERVICE NOTES:

1. EXISTING WATER SERVICES ARE STEEL.
2. INSTALL NEW PE SERVICE, NEW CORPORATION AND NEW CURB STOP, WITH CURB STOP INSTALLED AT BACK OF SIDEWALK, NOT IN THE SIDEWALK.
3. CONTRACTOR TO PROVIDE TEMPORARY BY-PASS FOR WATER SERVICES, IF THEY WILL BE OFFLINE FOR MORE THAN 2 HOURS.
4. FOR CONNECTION TO EXISTING STEEL, UTILIZE SHORT LENGTH OF PE OUT OF CURB STOP AND INSTALL 2 BOLT COUPLING.

SUBSURFACE NOTE:

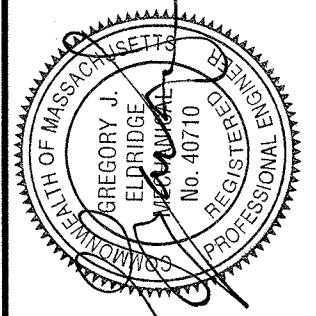
1. SEE SEWER RECORD DRAWING IN APPENDIX FOR BORINGS 1990 B1-B3 AND EXISTING SEWER INFORMATION.
2. 2019 BORING LOGS ARE IN THE APPENDIX.
3. BASED ON TOWN WATER MAIN BREAKS AND BORING LOGS IT CAN BE ANTICIPATED THAT CERTAIN AREAS WILL HAVE THE WATER MAIN SITTING IN A CRADLE OF LEDGE. THIS WILL REQUIRE LEDGE REMOVAL TO THE REQUIRED VERTICAL AND HORIZONTAL SEPARATION BETWEEN PIPE AND LEDGE.

ENVIRONMENTAL CONTROLS:

1. SEE DRAWING NO. 3 FOR NOTES

PLAN VIEW PAULINE DRIVE & STEVEN CIRCLE.

SCALE: 1" = 40'



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SHEET NO.:	3 OF 5
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SCALE:	AS NOTED
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DRAWN BY:	LJC
FILE NO.:	NAT-480-SHEETS 2-3.DWG

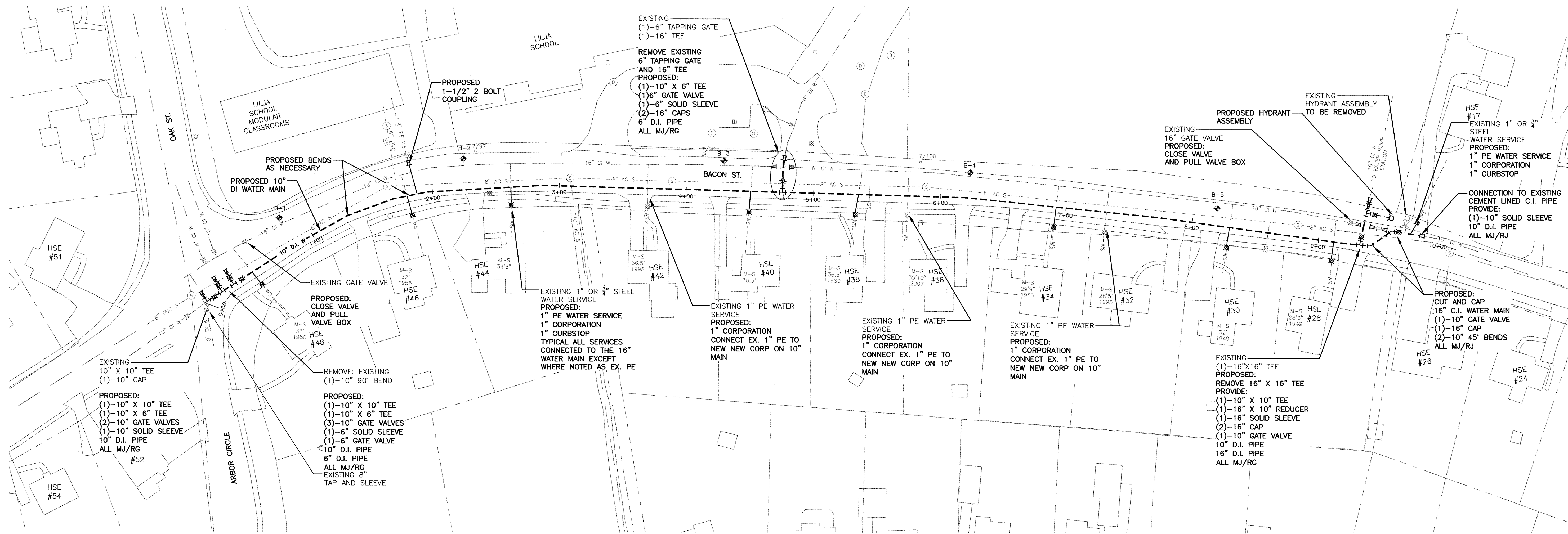
DWG. NO.

2

TOWN OF NATICK, MASSACHUSETTS
BOARD OF SELECTMEN

**PAULINE DRIVE AND
STEVEN CIRCLE**

**PAULINE, STEVEN & BACON
WATER MAIN REPLACEMENT**



PLAN VIEW
BACON STREET

SCALE: 1" = 40'

WATER SERVICE NOTES:

- EXISTING WATER SERVICES ARE EITHER STEEL OR POLYETHYLENE (PE).
- IF SERVICE IS PE THEN INSTALL NEW CORPORATION AND CONNECT EXISTING SERVICE TO NEW CORPORATION.
- IF SERVICE IS OTHER THAN PE THEN INSTALL NEW PE SERVICE, NEW CORPORATION AND NEW CURB STOP.
- CONTRACTOR TO PROVIDE TEMPORARY BY-PASS IF WATER SERVICE WILL BE OFFLINE FOR MORE THAN 3 HOURS.
- NEW CURB STOPS SHALL BE INSTALLED AT THE BACK SIDE OF THE SIDEWALK, NOT IN THE SIDEWALK.
- FOR CONNECTION TO EXISTING STEEL, UTILIZE SHORT LENGTH OF PE OUT OF CURB STOP AND INSTALL 2 BOLT COUPLING.

TEMPORARY WATER NOTES:

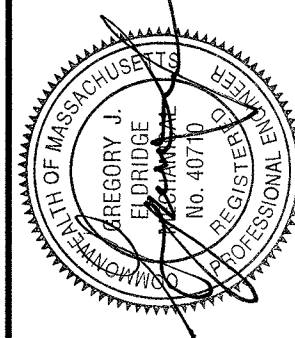
- TEMPORARY WATER MAINS AND SERVICES ARE NOT REQUIRED UNLESS THE WATER SHUT DOWN WILL EXCEED 3 HOURS.
- CONTRACTOR TO PROVIDE THE TOWN A MINIMUM OF 2 DAYS NOTICE BEFORE ANY WATER SHUT OFF TO ALLOW THE TOWN TO NOTIFY THE RESIDENTS.
- WATER SHUT DOWNS SHALL NOT OCCUR PRIOR TO 8:30 AM.

ROADWAY IMPACT NOTES:

- WORK ON BACON STREET WILL NOT START UNTIL SCHOOL IS OFF FOR THE SUMMER. IT IS ANTICIPATED THAT WILL OCCUR BETWEEN JUNE 15 AND JUNE 22, 2020.
- CONTRACTOR SHALL WORK CONTINUOUSLY (WEEKDAYS) ON BACON STREET TO COMPLETE THE WORK PRIOR TO SCHOOL STARTING IN THE SPRING, WHICH IS ANTICIPATED TO BE SEPTEMBER 1, 2020.
- BACON STREET IS A HEAVY COMMUTING ROUTE. THEREFORE, WORK MAY NOT START UNTIL 8:30, UNLESS THE NATICK POLICE REVIEWS THE ROADWAY IMPACT AND APPROVE ALTERNATIVE STARTING TIME.
- CONTRACTOR TO INSTALL AN ELECTRONIC MESSAGE BOARD ON BACON STREET 2 WEEKS PRIOR TO THE WORK STARTING AND REMAIN IN PLACE FOR 1 WEEK IN EACH DIRECTION FOR A TOTAL OF 2 WEEKS. ALTERNATIVELY CONTRACTOR CAN INSTALL 2 ELECTRONIC MESSAGE BOARDS FOR 1 WEEK (BOTH DIRECTION) PRIOR TO THE WORK STARTING.

ENVIRONMENTAL CONTROLS:

- CONSERVATION COMMISSION'S AUTHORIZATION DOES NOT RELIEVE THE CONTRACTOR OR ANY OTHER PERSON OF THE NECESSITY OF COMPLYING WITH ALL OTHER APPLICABLE FEDERAL, STATE, OR LOCAL STATUTES, ORDINANCES, BYLAWS OR REGULATIONS.
- CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT SEDIMENT-LADEN WATER, IF DEWATERING IS REQUIRED, IS APPROPRIATELY SETTLED PRIOR TO DISCHARGE TOWARDS RESOURCE AREAS IN ACCORDANCE WITH ALL APPLICABLE PERMITS, BY-LAWS, STANDARDS AND GUIDELINES.
- PESTICIDES AND HERBICIDES SHALL NOT BE USED WITHIN THE BUFFER ZONE OF ANY WETLAND RESOURCE AREA OR WITHIN THE 200-FOOT RIVERFRONT PROTECTION AREA.
- THE PROPOSED ACTIVITY SHALL COMPLY WITH THE PLANS AS PREPARED BY HALEY AND WARD, INC. ANY PROPOSED OR EXECUTED CHANGES MADE IN THE PLANS SHALL NOT BE MADE UNTIL THE CONTRACTOR HAS INQUIRED, IN WRITING, AND ENGINEER AND OR CONSERVATION COMMISSION HAS FORMALLY MADE A DETERMINATION AS TO THE NATURE OF THE CHANGE OR CHANGES.
- PRIOR TO ANY WORK STARTING ON THE PROJECT SITE, THE CONTRACTOR SHALL INFORM THE OWNER AND ENGINEER, IN WRITING, OF THE NAMES, ADDRESSES, BUSINESS AND HOME PHONE NUMBERS OF BOTH THE PROJECT SUPERVISOR WHO WILL BE RESPONSIBLE FOR ENSURING ON-SITE COMPLIANCE WITH THE ENVIRONMENTAL CONTROLS. THE CONTRACTOR SHALL ALSO NOTIFY THE OWNER AND ENGINEER IN WRITING OF ANY CHANGES IN THIS INFORMATION.
- ACCEPTED ENGINEERING AND CONSTRUCTION STANDARDS AND PROCEDURES SHALL BE FOLLOWED IN THE COMPLETION OF THIS PROJECT.
- MEMBERS OF THE COMMISSION OR THEIR AGENTS SHALL HAVE THE RIGHT TO ENTER UPON AND INSPECT THE PREMISES TO EVALUATE THE ENVIRONMENTAL CONTROL.
- A COPY OF THE CONSTRUCTION PLANS, SHALL BE ON SITE UPON COMMENCEMENT OF ANY SITE WORK AND MADE AVAILABLE TO ANY PERSON DOING WORK ON THE SITE.
- THE CONTRACTOR SHALL ACT WITHIN 12 HOURS TO CONTROL ANY EROSION PROBLEMS THAT OCCUR ON THE SITE. ANY EROSION PREVENTION AND SEDIMENTATION PROTECTION MEASURES FOUND NECESSARY BY THE COMMISSION DURING CONSTRUCTION SHALL BE IMPLEMENTED AT THE DIRECTION OF THE COMMISSION OR ITS AGENT.
- PRIOR TO THE COMMENCEMENT OF THE WORK ON THE PROJECT SITE, EROSION CONTROL MEASURES SHALL BE INSTALLED AND INSPECTED BY THE CONSERVATION COMMISSION AS SHOWN ON THE PROJECT PLANS.
- PRIOR TO ANY EXCAVATION ON THE PROJECT SITE, ALL CATCH BASINS WITHIN THE PROJECT LIMITS AND ANT THAT POTENTIALLY RECEIVE RUNOFF FROM THE PROJECT SITE SHALL BE PROTECTED WITH A SILT BASKET TO ENSURE THAT RUNOFF FROM THE SITE DOES NOT CONVEY SEDIMENT INTO THE DRAINAGE SYSTEM. THE CONTRACTOR SHALL TAKE ADDITIONAL STEPS REQUIRED TO PREVENT THE MOVEMENT OF SEDIMENT FROM THE SITE.
- THE EROSION CONTROLS SPECIFIED ON THE PROJECT PLANS SHALL NOT BE REMOVED UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED AND THE OWNER OR CONSERVATION COMMISSION HAS APPROVED THE REMOVAL. THIS SHALL MEAN THAT ALL DISTURBED AREAS HAVE BEEN COVERED BY BUILDING, PAVEMENT AND/OR COMPLETELY VEGETATED. IF THE APPLICANT INTENDS TO REMOVE THE EROSION CONTROLS PRIOR TO THE EVENTS AS STATED ABOVE, THE CONTRACTOR SHALL MAKE A WRITTEN REQUEST TO THE ENGINEER.
- DURING AND AFTER WORK ON THIS PROJECT, THERE SHALL BE NO DISCHARGE OR SPILLAGE OF FUEL, OIL, OR OTHER POLLUTANTS INTO ANY RESOURCE AREA OR BUFFER ZONE. THE APPLICANT SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT THE RELEASE OF POLLUTANTS BY IGNORANCE, ACCIDENT OR VANDALISM.



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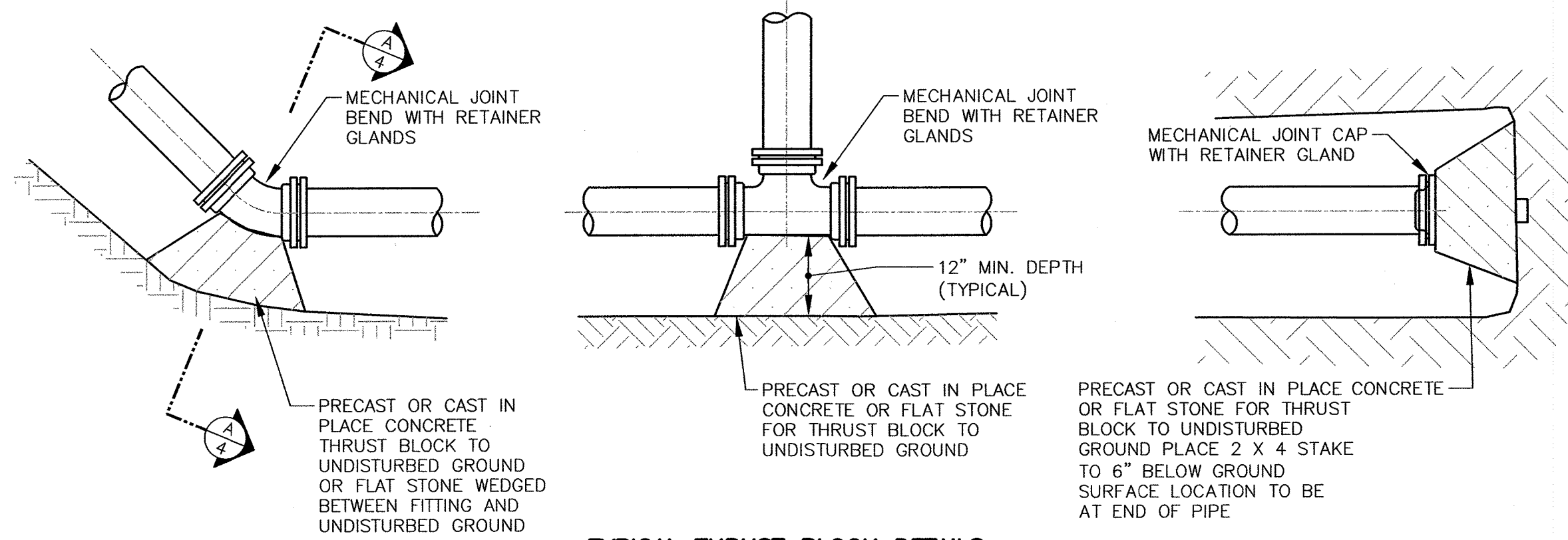
BACON STREET

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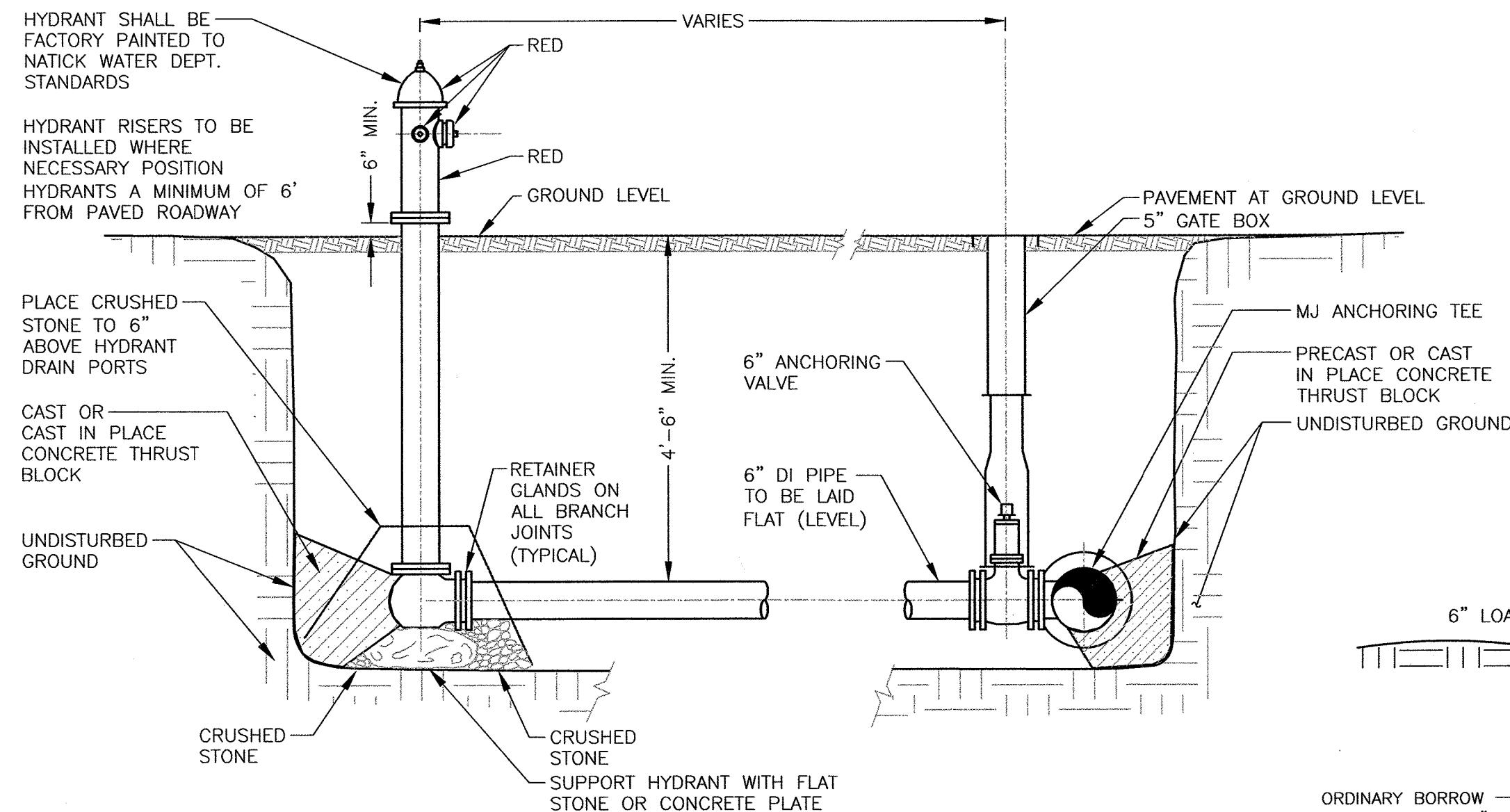
DWG. NO.

3



PIPE DIAMETER	BENDS				TEE
	11.25	22.5	45	90	
6	1	1	1	2	1.5
8	1	1	2	3	2.5
12	1	2	3.5	6.5	5

THRUST BLOCK BEARING AREA (SF)
(BASED UPON 100 PSI WATER PRESSURE
AND 3000 PSF BEARING LOAD CAPACITY)



TYPICAL HYDRANT ASSEMBLY INSTALLATION

NOTES:

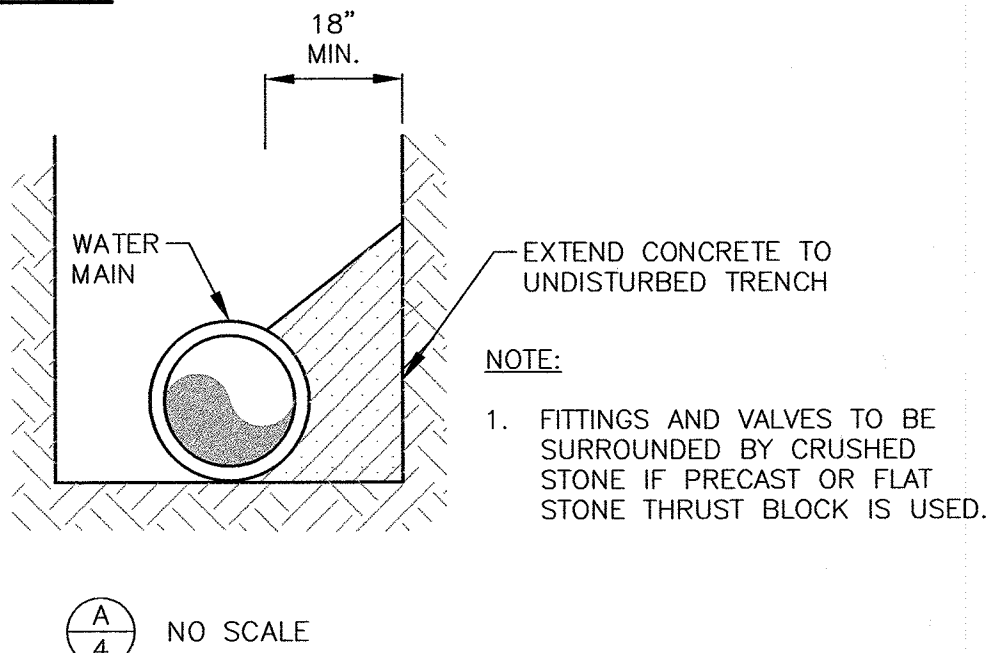
- HYDRANTS ARE TO BE INSTALLED WITHIN THE ROADWAY RIGHT OF WAY.
- FOR HYDRANTS INSTALLED AT DEAD END OF WATER MAINS: INSTALL VALVE WITH RESTRAINED JOINTS AND ONE FULL LENGTH OF PIPE, NO COUPLINGS OR PIPE BELL JOINTS, BETWEEN VALVE AND HYDRANT WITH RESTRAINED JOINTS.

PAVING NOTES:

- SEE THIS DRAWING, SPECIFICATIONS AND NOTES DRAWING FOR SPECIFIC PAVING REQUIREMENTS.
- BACON STREET: WATER MAIN AND WATER SERVICE TRENCHES TO RECEIVE 3" DEPTH OF TEMPORARY PAVEMENT, TYPE I-1 FOR THE WINTER SEASON.
- BACON STREET: FOLLOWING THE WINTER SEASON, CONTRACTOR TO CUT BACK BACON STREET TRENCHES ONE FOOT BOTH SIDES, 5" DEPTH, AND INSTALL 5" DEPTH OF PERMANENT PAVEMENT CONSISTING OF 3 1/2" DEPTH OF BINDER ASPHALTIC CONCRETE (TYPE I-1) AND 1 1/2" DEPTH ASPHALTIC CONCRETE TOP MIX.
- BACON STREET: AFTER THE PERMANENT PATCH IS INSTALLED CONTRACTOR TO MILL FULL ROADWIDTH TO A DEPTH OF 1 1/2" AND INSTALL 1 1/2" DEPTH OF TOP MIX ASPHALTIC CONCRETE PAVEMENT.
- PAULINE DRIVE & STEVENS CIRCLE: WATER MAIN AND WATER SERVICE TRENCHES TO RECEIVE 3" DEPTH OF TEMPORARY PAVEMENT, TYPE I-1. CONTRACTOR TO MAINTAIN TRENCHES FOR 1 YEAR FOLLOWING TRENCH PAVING. TOWN TO COMPLETE PERMANENT ROADWAY PAVEMENT.
- PAULINE DRIVE AND STEVENS CIRCLE: CONTRACTOR TO CUT TRENCHES PRIOR TO EXCAVATION. PRIOR TO TEMPORARY PAVEMENT INSTALLATION CONTRACTOR TO CUT BACK EDGES OF TRENCHES WHERE THERE WAS TRENCH UNDER-MINING OR EDGES OF PAVEMENT HAVE CRACKED.

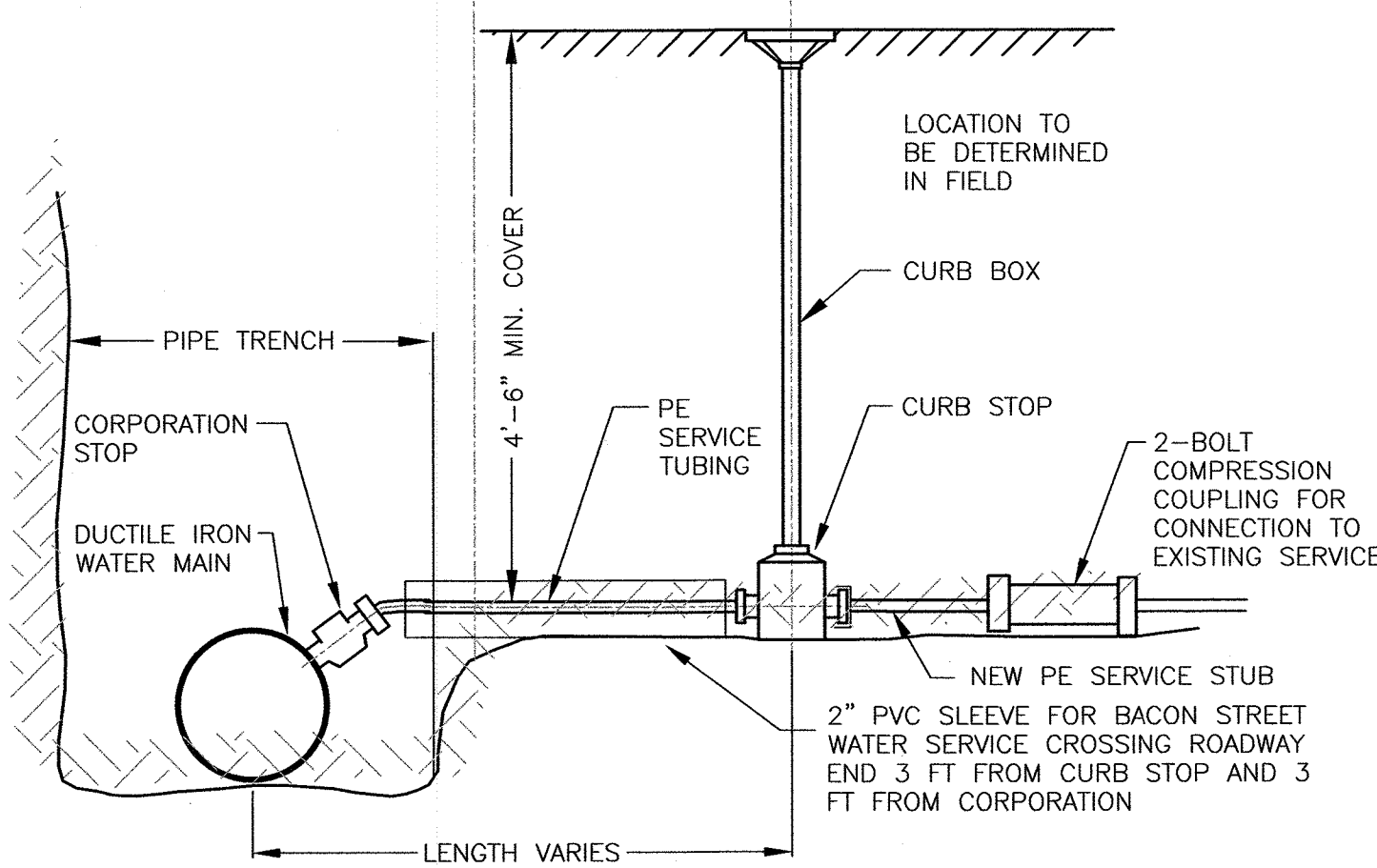
FITTINGS	RESTRAINED LENGTH (ft)
8" 90° BEND	31
8" 60° BEND	18
8" 45° BEND	13
8" 30° BEND	8
8" 22.5° BEND	6
8" 11.25° BEND	3
8" x 8" TEE	52
10" x 8" REDUCER	45
8" x 6" REDUCER	34
6" 90° BEND	26
6" 60° BEND	16
6" 45° BEND	10
6" 30° BEND	8
6" 22.5° BEND	6
6" 11.25° BEND	3

MINIMUM ONE RESTRAINED JOINT



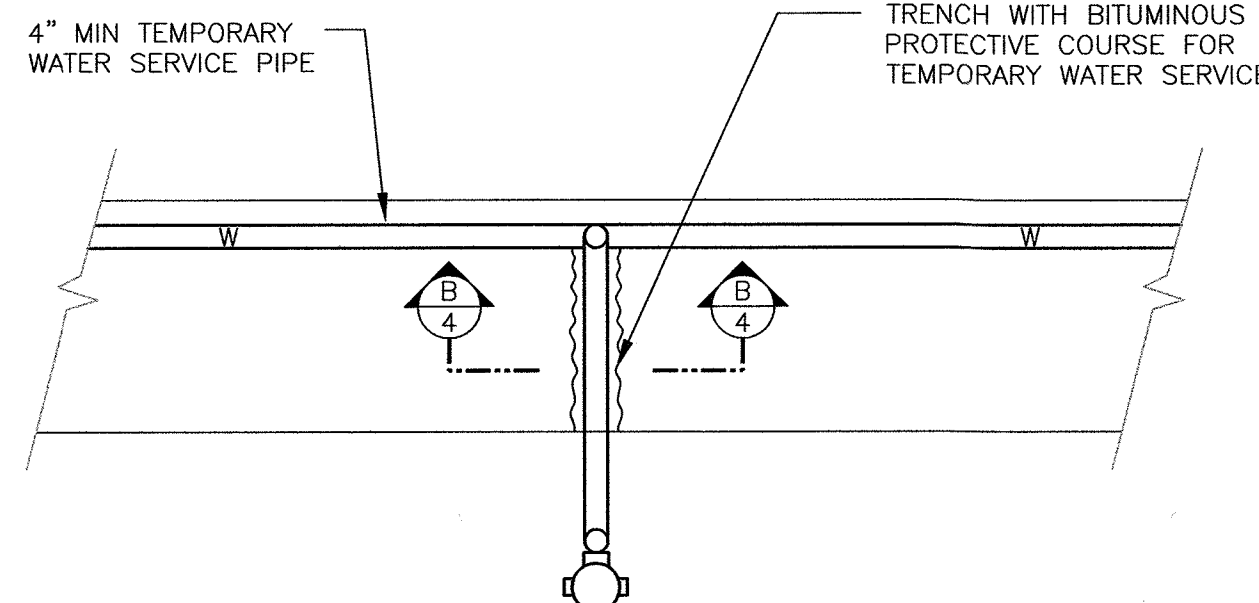
TYPICAL TRENCH SECTION FOR WATER MAINS

NOT TO SCALE



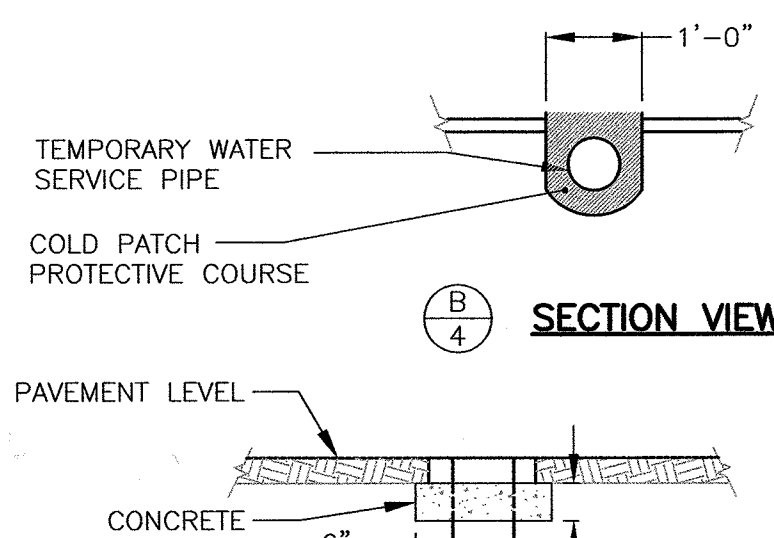
TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

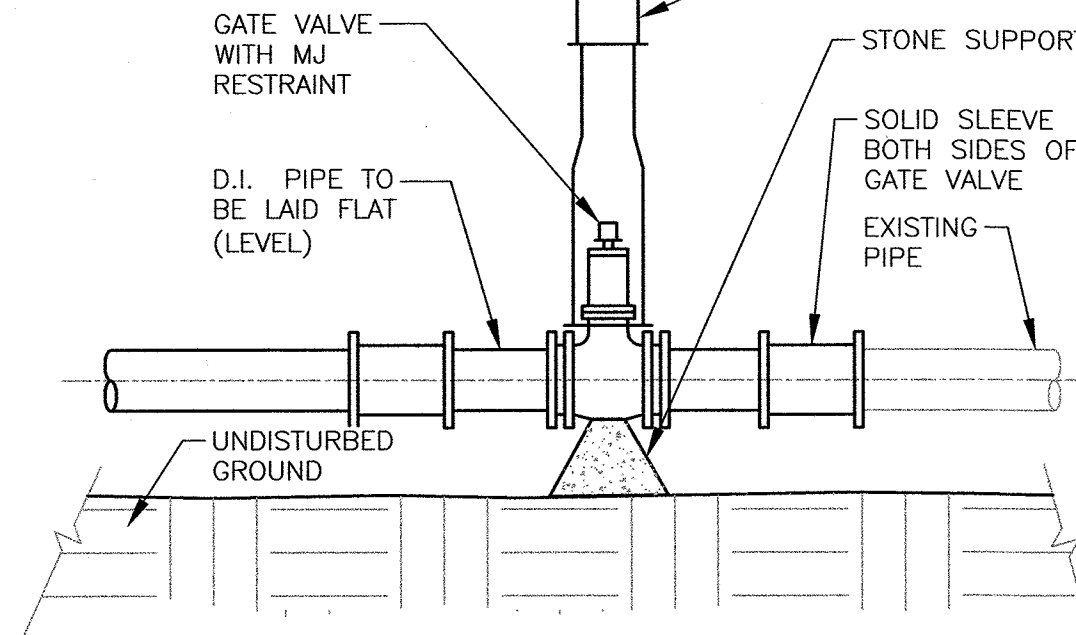


TEMPORARY WATER SERVICE CROSSING ROAD

NOT TO SCALE

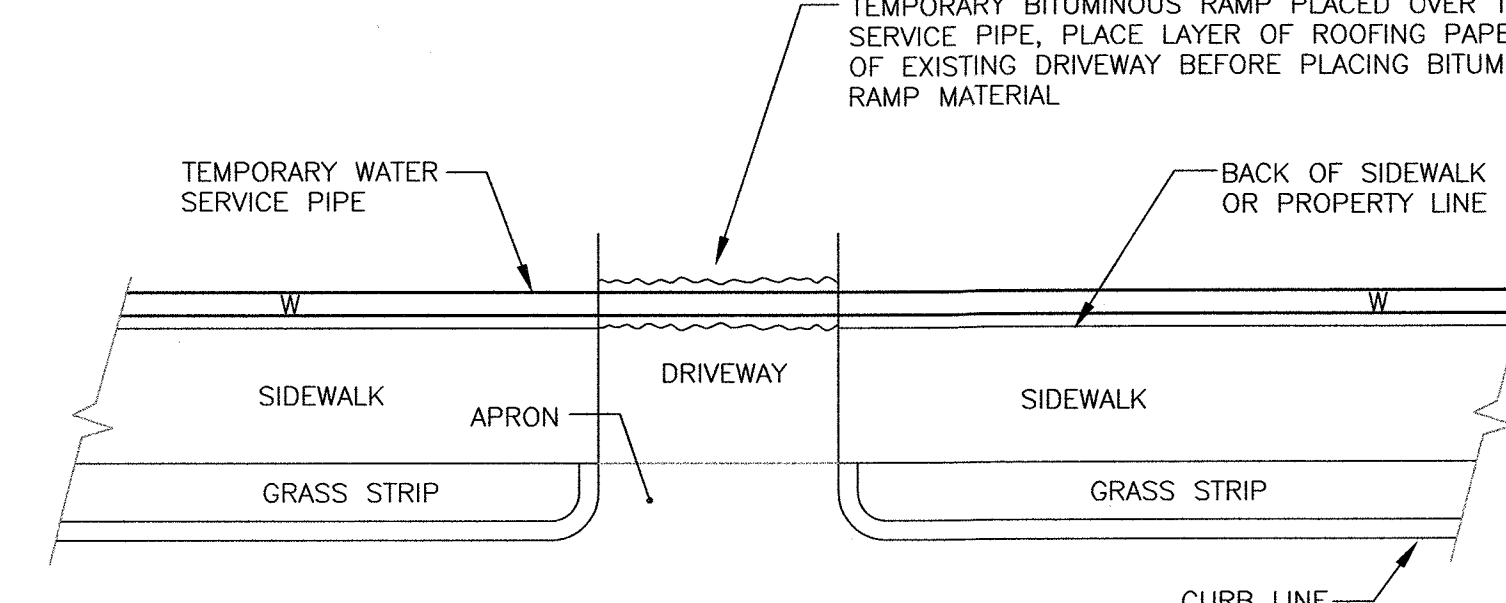


SECTION VIEW



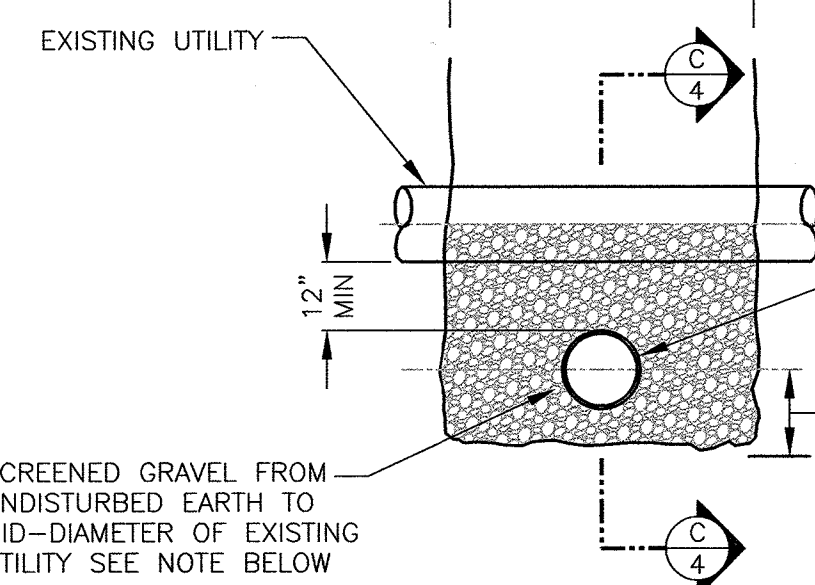
TYPICAL GATE VALVE INSTALLATION

NOT TO SCALE



TEMPORARY WATER SERVICE ALONG BACK OF SIDEWALK

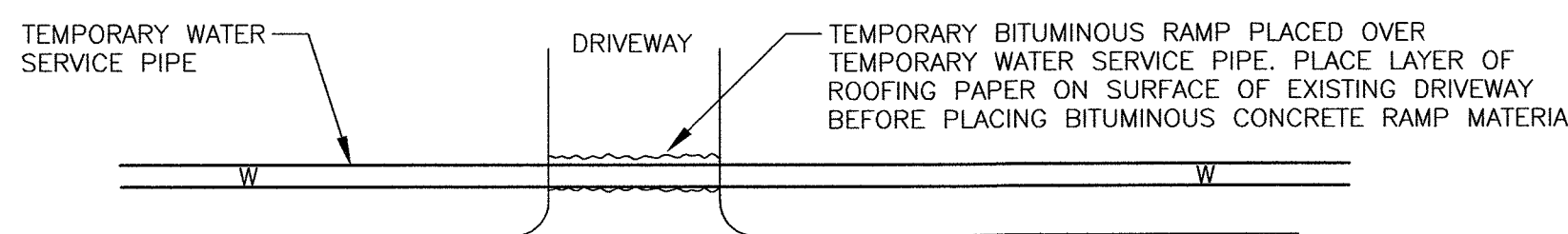
NOT TO SCALE



TYPICAL SECTION

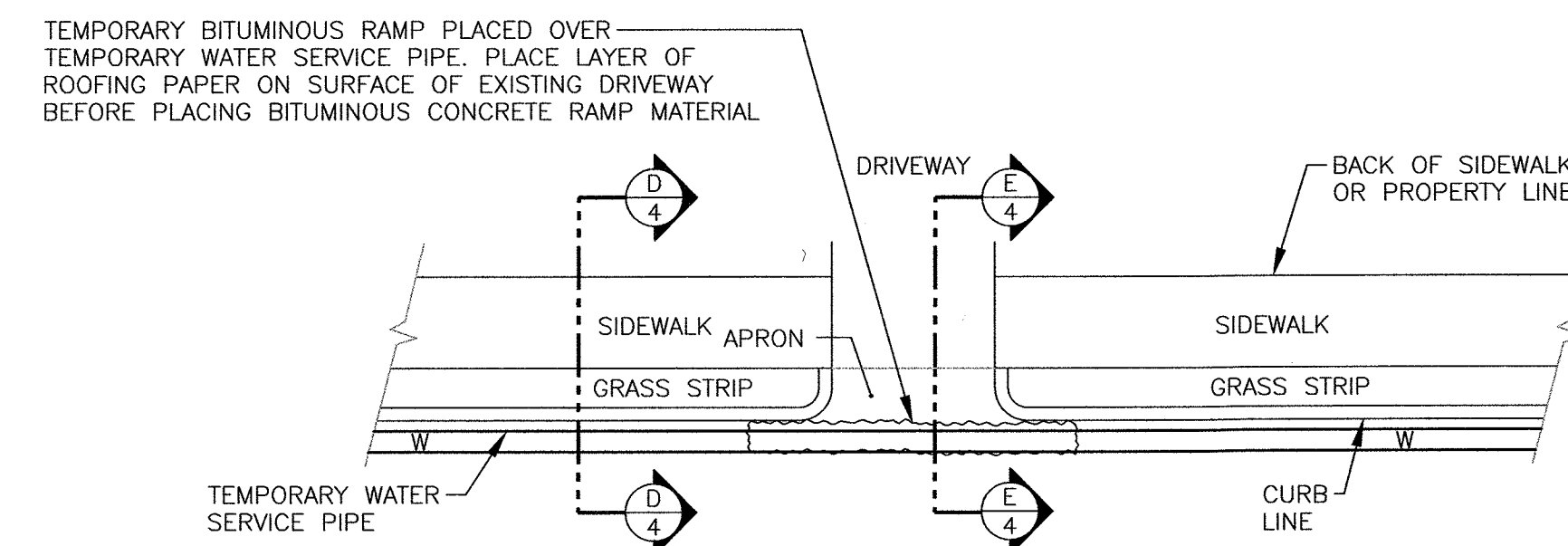
UTILITY CROSSING DETAIL

NOT TO SCALE



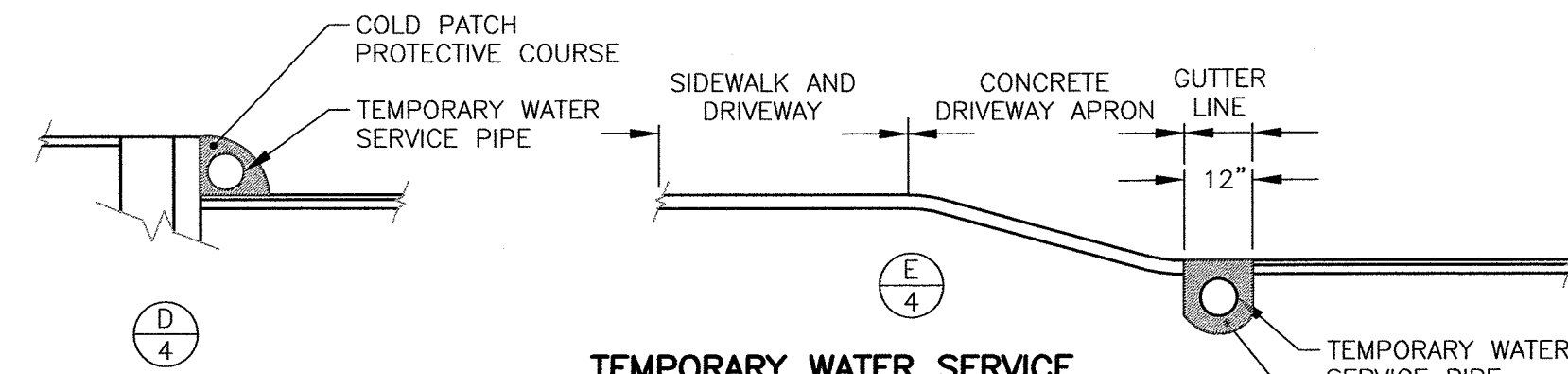
TEMPORARY WATER SERVICE ALONG BACK SIDE OF PAVEMENT

NOT TO SCALE



TEMPORARY WATER SERVICE ALONG EDGE OF PAVEMENT

NOT TO SCALE

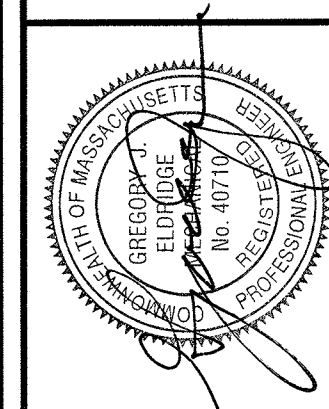


TEMPORARY WATER SERVICE ALONG CURB LINES AT BUSINESS DRIVEWAYS AND SIDE STREETS

NOT TO SCALE

WATER SERVICE NOTES:

- ALL WATER SERVICES TO BE REPLACED, WHERE SHOWN, FROM NEW WATER MAIN TO NEW CURB STOP.
- CURB STOP TO BE LOCATED AT BACK SIDE OF SIDEWALK, NOT IN SIDEWALK.
- IF NO SIDEWALK THEN CURB STOP TO BE LOCATED AT ROADWAY RIGHT OF WAY (PROPERTY LINE).
- ALL SERVICES TO BE CONNECTED TO NEW WATER MAIN WITH NEW CORPORATIONS.
- SEE PLAN VIEW DRAWINGS FOR ADDITIONAL NOTES.



CHECKED	DATE	BY	REVIS	DATE	BY

SHEET NO.:	5 OF 5
CONTRACT NO.:	W-159
SCALE:	AS NOTED
DATE DRAWN:	FEBRUARY 2020
DRAWN BY:	GJE
FILE NO.:	NAT-480-WATER DETAILS.DWG