

TOWN OF PLYMOUTH CAPITAL IMPROVEMENT PLAN REQUEST FORM
FY24 SPRING ANNUAL TOWN MEETING REQUEST FORM

Department: DPW, Engineering Division	Priority #:	1 - Special Town Meeting
Project Title and Description: Bartlett Road Bridge Construction	Total Project Cost:	\$ 3,250,000.00

Department/Division Head: Sheila Sgarzi

Check if project is: New Resubmitted **Cost estimate was developed:** Internally Externally

For project re-submittals, list prior year(s):

List any funding sources and amounts already granted: The Bartlett Road Bridge design was funded through a \$100,000 grant from the Massachusetts Division of Ecological Restoration and a \$124,000 contribution from the Environmental Affairs Fund, as approved at FY22 Fall Town Meeting. The Town is currently exploring grant opportunities for the construction phase of the project. If the Town receives grant funding, those monies will offset the construction costs requested herein.

Basis of Estimated Costs (attach additional information if available)			If project has impact on 5 Year Plan and future operating budgets, insert estimated amounts.		
Capital:	Cost	Comments	Fiscal Year:	Capital	Operations & Maintenance
<i>Planning and Design</i>	\$ 200,000.00	The engineering design has been separately funded (see above). The requested \$200,000 is for bidding phase engineering services, construction administration and full-time construction inspection.	<i>FY23</i>		
<i>Labor and Materials</i>	\$ 2,523,343.00	Refer to the attached construction cost estimate.	<i>FY24</i>		
<i>Administration</i>			<i>FY25</i>		
<i>Land Acquisition</i>			<i>FY26</i>		
<i>Equipment</i>			<i>FY27</i>		
<i>Other</i>					
<i>Contingency</i>	\$ 526,657.00	25% total contingency (rounded) includes standard construction contingency and market uncertainty.			
Total Capital	\$ 3,250,000.00				

Project Justification and Objective: The existing Bartlett Road Bridge has been restricted by a 5-ton weight limit since 2005 and is recommended for full replacement. The Bartlett Road Bridge abuts the Mass Audubon Tidmarsh Wildlife Sanctuary and encompasses the non-jurisdictional Fresh Pond Dam. The Engineering Division, working in conjunction with the Plymouth Department of Marine and Environmental Protection and design consultant, SLR Consulting, Inc., initiated the design of the proposed Bartlett Road Bridge in the fall of 2021. The design and permitting phase of the Bartlett Road Bridge Replacement project is nearing completion, with final plans and specifications anticipated in early spring 2023. The proposed construction project includes the replacement of the bridge with a precast box culvert, stormwater upgrades, a new water main, a 5-foot-wide sidewalk and roadway realignment to improve sight lines and safety. The Town has acquired the necessary easements from Mass Audubon to align the road, install the bridge and locate the stormwater treatment systems. Supporting documentation is attached herein. Addition information about the project can be found on the Plymouth Engineering Division website at <http://www.plymouth-ma.gov/engineering/pages/bartlett-road-bridge-replacement-project>.

For Capital Project Requests:

Will this project be phased over more than one fiscal year? If yes, enter it on the 5 Year Plan

Yes No

Can this project be phased over more than one fiscal year?

Yes No

For Capital Equipment Requests:

Check if equipment requested is replacement and enter the year, make & model, VIN and present condition of existing equipment

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What is the expected lifespan of this new/replacement equipment: _____

Attach backup information, estimates, or justification to support this request.

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Pemit Drawings
Replacement Of Bartlett Road Culvert Over Unnamed Brook
District 5
Plymouth, Massachusetts
#11982.00016
October 31., 2022

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
1	SITE PREPARATION	LUMP SUM	\$34,000.00	1	\$34,000.00
2	INCIDENTIALS	LUMP SUM	\$119,000.00	1	\$119,000.00
3	TRAFFIC MANAGEMENT	LUMP SUM	\$60,000.00	1	\$60,000.00
3	SITE RESTORATION	LUMP SUM	\$34,000.00	1	\$34,000.00
115.1	DEMOLITION OF BRIDGE CULVERT	LUMP SUM	\$ 50,000.00	1	\$50,000.00
120	EARTH EXCAVATION	LUMP SUM	\$ 60,000.00	1	\$60,000.00
120.25	PAVEMENT MILLING	SQUARE YARD	\$ 50.00	40	\$2,000.00
140	BRIDGE EXCAVATION	CUBIC YARD	\$ 60.00	500	\$30,000.00
141.1	TEST PIT FOR EXPLORATION	LUMP SUM	\$ 2,000.00	1	\$2,000.00
151	GRAVEL BORROW	CUBIC YARD	\$ 35.00	325	\$11,375.00
151.01	GRAVEL BORROW - TYPE C	CUBIC YARD	\$ 45.00	450	\$20,250.00
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	CUBIC YARD	\$ 45.00	75	\$3,375.00
156.1	CRUSHED STONE FOR BRIDGE FOUNDATIONS	TON	\$ 50.00	1100	\$55,000.00
170	FINE GRADING AND COMPACTING	SQUARE YARD	\$ 4.00	300	\$1,200.00
201.5	CATCH BASIN - MUNICIPAL STANDARD w/ 4' SUMP	EACH	\$ 5,000.00	8	\$40,000.00
202.01	MANHOLE -MUNICIPAL STANDARD 4' DIAMETER & 2' SUMP	EACH	\$ 7,500.00	5	\$37,500.00
222.3	FRAME AND GRATE (OR COVER) MUNICIPAL STANDARD	EACH	\$ 1,000.00	2	\$2,000.00
241.12	12 INCH REINFORCED CONCRETE PIPE	LINEAR FEET	\$ 125.00	450	\$56,250.00
241.15	15INCH REINFORCED CONCRETE PIPE	LINEAR FEET	\$ 150.00	15	\$2,250.00
241.18	18 INCH REINFORCED CONCRETE PIPE	LINEAR FEET	\$ 175.00	125	\$21,875.00
242.12	12 INCH REINFORCED CONCRETE PIPE FARED END	EACH	\$ 1,000.00	1	\$1,000.00
258.00	STONE FOR PIPE ENDS	SY	\$ 250.00	5	\$1,250.00

OPINION OF PROBABLE CONSTRUCTION COSTS
Based Upon Permit Drawings
Replacement Of Bartlett Road Culvert Over Unnamed Brook
District 5
Plymouth, Massachusetts
#11982.00016
October 31., 2022

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
272	PIPE REMOVED AND ABANDONED	LUMP SUM	\$ 5,000.00	1	\$5,000.00
402.	DENSE GRADED CRUSHED STONE FOR SUB-BASE	CUBIC YARD	\$ 70.00	310	\$21,700.00
443	WATER FOR DUST CONTROL	M GAL	\$ 80.00	150	\$12,000.00
460.	HOT MIX ASPHALT	TON	\$ 200.00	250	\$50,000.00
462	HOT MIX ASPHALT DENSE BINDER COURSE FOR BRIDGES	TON	\$ 200.00	400	\$80,000.00
464	BITUMEN FOR TACK COAT	GAL	\$ 20.00	475	\$9,500.00
482.3	SAWING ASPHALT PAVEMENT	FOOT	\$ 6.00	255	\$1,532.57
504	CURB	FOOT	\$ 25.00	1050	\$26,250.00
620.3	STEEL BACKED TIMBER GUIDERAIL END ANCHORAGE	EACH	\$ 4,000.00	2	\$8,000.00
628.1	STEEL BACKED TIMBER GUIDERAIL BRIDGE ATTACHMENT	EACH	\$ 4,000.00	2	\$8,000.00
701.	CEMENT CONCRETE SIDEWALK	SQUARE YARD	\$ 85.00	275	\$23,375.00
701.1	CEMENT CONCRETE SIDEWALK AT DRIVEWAYS	SQUARE YARD	\$ 50.00	55	\$2,743.60
748.	MOBILIZATION	LUMP SUM	\$169,000.00	1	\$169,000.00
861.04	4 INCH REFLECTORIZED YELLOW LINE (PAINTED)	FOOT	\$ 3.00	775	\$2,325.00
901	4000 PSI, 1.5 IN., 565 CEMENT CONCRETE	CUBIC YARD	\$ 1,500.00	25	\$37,500.00
904.3	5000 PSI, 3/4 IN., 685 HP CEMENT CONCRETE	CUBIC YARD	\$ 1,800.00	40	\$72,000.00
910.1	STEEL REINFORCEMENT FOR STRUCTURES - EPOXY COATED	POUND	\$ 3.50	10000	\$35,000.00
965	MEMBRANE WATERPROOFING FOR BRIDGE DECKS	SQUARE YARD	\$ 150.00	25	\$3,750.00
970.	BITUMINOUS DAMP-PROOFING	SQUARE YARD	\$ 25.00	45	\$1,125.00
975.1	METAL BRIDGE RAILING (3 RAIL), STEEL (TYPE S3-TL4)	FOOT	\$ 1,000.00	40	\$39,500.00
983.2	RIPRAP	CUBIC YARD	\$ 150.00	10	\$1,500.00
991.2	CONTROL OF WATER STRUCTURE	LUMP SUM	\$ 50,000.00	1	\$50,000.00

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District 5
Plymouth, Massachusetts
#11982.00016
October 31., 2022

Item No	Description	Unit of Measure	Unit Price	Total Quantity	Total
995.01	BRIDGE STRUCTURE - THREE-SIDED PRECAST CONCRETE CULVERT	LUMP SUM	\$ 175,000.00	1	\$175,000.00
996	CONDITION SURVEY AND MONITORING	LUMP SUM	\$ 7,500.00	1	\$7,500.00
1000	WATERMAIN & MISCELLANEOUS	LUMP SUM	\$ 250,000.00	1	\$250,000.00
1000	TEMPORARY WATER MAIN RELOCATION	LUMP SUM	\$ 50,000.00	1	\$50,000.00
1000	Miscellaneous Items (20%)	LUMP SUM	\$320,000.00	1	\$320,000.00

PROJECT COST SUBTOTAL =	\$2,106,626.17
CONTINGENCIES 10% =	\$ 210,662.62
INCEDENTIALS 10% =	\$ 210,662.62
MARKET UNCERTAINTY 15% =	\$ 315,993.93

Police Details: \$70/hr x 3 detail officers x 8 hr/day x 120 days = \$201,600.00
TOTAL PROJECT COST (ROUNDED) = \$2,845,000.00

Total Project Cost = \$3,045,545.34
USE = \$3,050,000.00

PROFESSIONAL FEES

The services described above will be performed on a lump sum basis broken down by task as follows:

1.0	Kickoff and Coordination Meetings	\$16,500
2.0	Data Collection and Subsurface Exploration.....	\$26,500
3.0	Preliminary Engineering.....	\$52,000
4.0	Conceptual Design	\$19,000
5.0	Preliminary Design	\$30,000
6.0	Regulatory Permitting Assistance	\$28,000
7.0	Final Design	\$37,000
8.0	Stakeholder Engagement.....	<u>\$15,000</u>
	Subtotal Preconstruction	\$224,000
9.0	Bidding-Phase Services	\$7,500
10.0	Construction Administration	\$26,000
11.0	Project Representation (4-month construction period).....	\$150,000
	Subtotal Construction Phase.....	\$183,500
		\$200,000
		<i>Add 10% to this 2021 total</i>
	ESTIMATED PROJECT TOTAL.....	\$407,500

STANDARD TERMS AND CONDITIONS

This proposal is subject to our Standard Terms and Conditions, which are attached hereto and incorporated herein.

EXCLUSIONS AND LIMITATIONS

In submitting this proposal, we make no representation that the project will receive all necessary regulatory approvals.

The following work items are not included in this scope of work at this time:

1. Payment of permit application fees
2. Historic and/or archaeological surveys
3. A-2 boundary survey and easement maps
4. Utility design, other than water and drainage
5. Natural Diversity Data Base studies

Should any of the above items or any additional services be required, they can be provided on an hourly basis or for an agreed-upon lump sum fee.

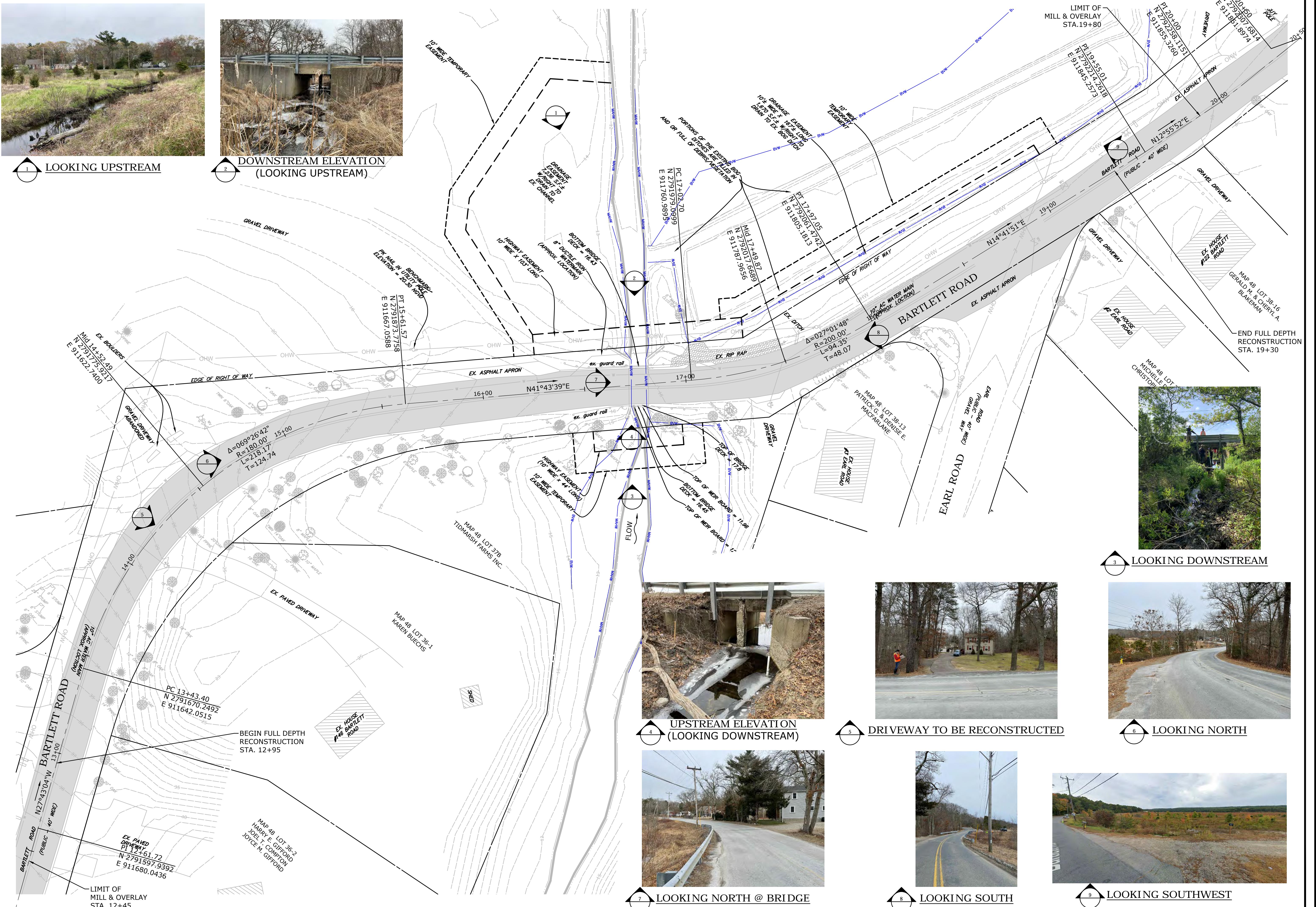




LOOKING UPSTREAM



DOWNSTREAM ELEVATION (LOOKING UPSTREAM)



EXISTING CONDITIONS & BASELINE LAYOUT

**REPLACEMENT OF BARTLETT ROAD CULVERT
OVER UNNAMED BROOK**

111

NOT FOR CONSTRUCTION

100

The logo for SLR Consulting. It features a large, bold, black 'SLR' monogram at the top. Below the monogram, the word 'CONSULTING' is written in a smaller, all-caps, sans-serif font. Underneath 'CONSULTING', the address '199 REALTY DRIVE' is in a smaller font, followed by 'NEW HAMPSHIRE, CT 06410' and the phone number '803.271.1773' on the line below. To the right of the address, the website 'SLRCONSULTING.COM' is written vertically in a smaller font.

BY E

DESCRIPTION	DAT

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11 of 11

NOT FOR CONSTRUCTION

Layout

ULVERT

POSITIONS & BASELINE

OF BARTLETT ROAD C
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EXISTING CONDI

**REPLACEMENT OF
OVER UNNAMED R.
BARTLETT ROAD
PLYMOUTH, MASSAC**

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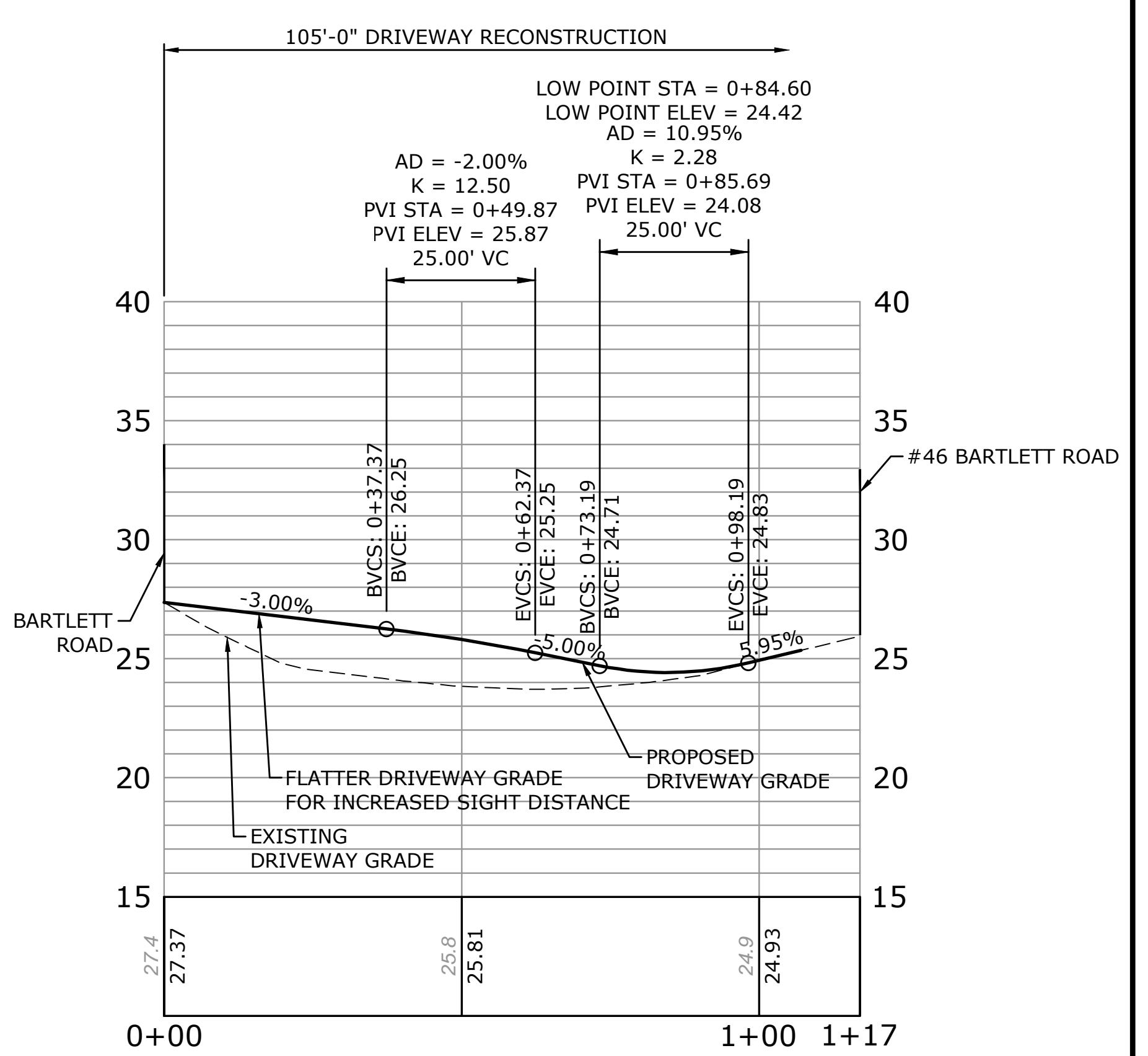
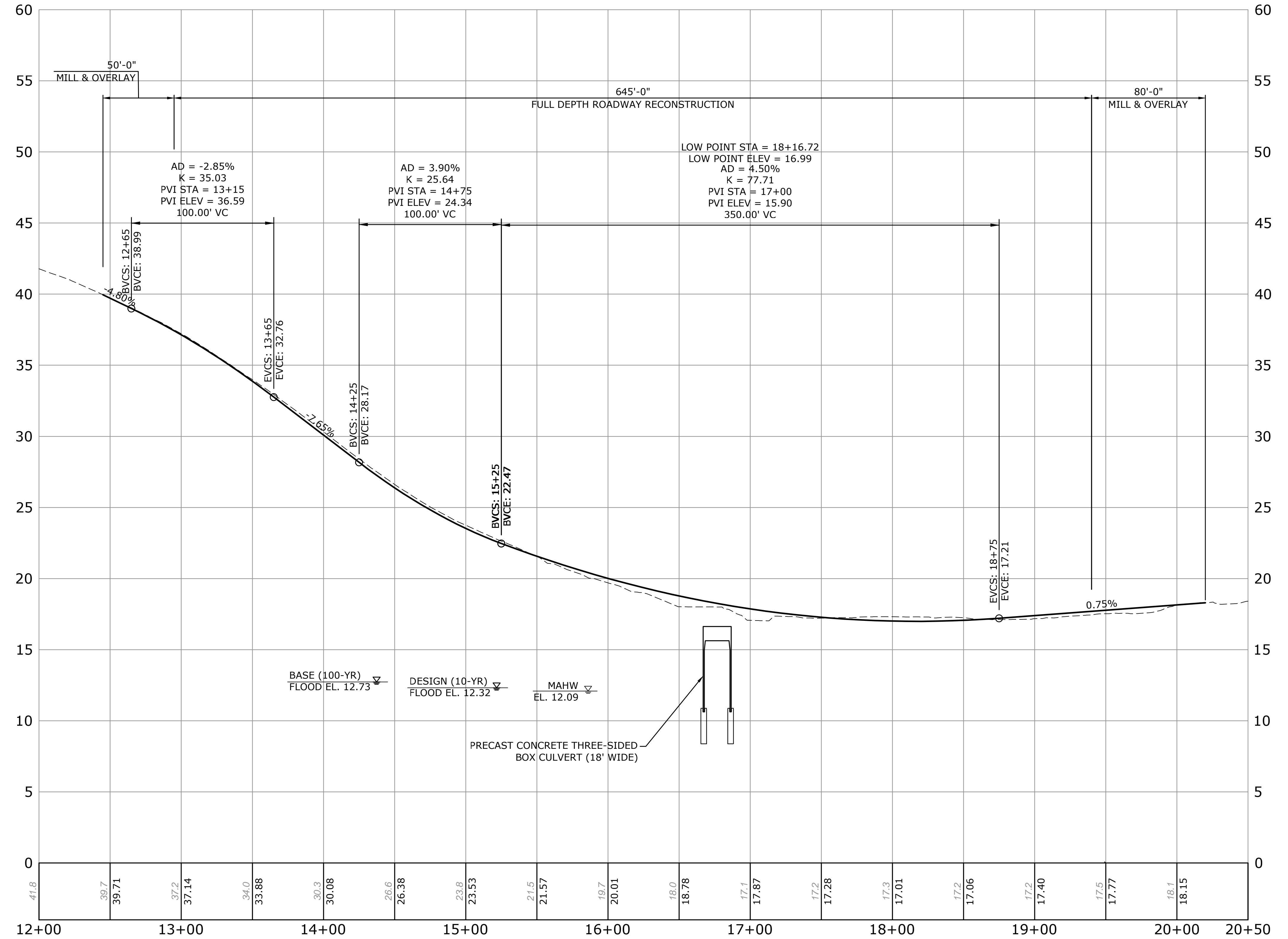
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SHEET NAME _____

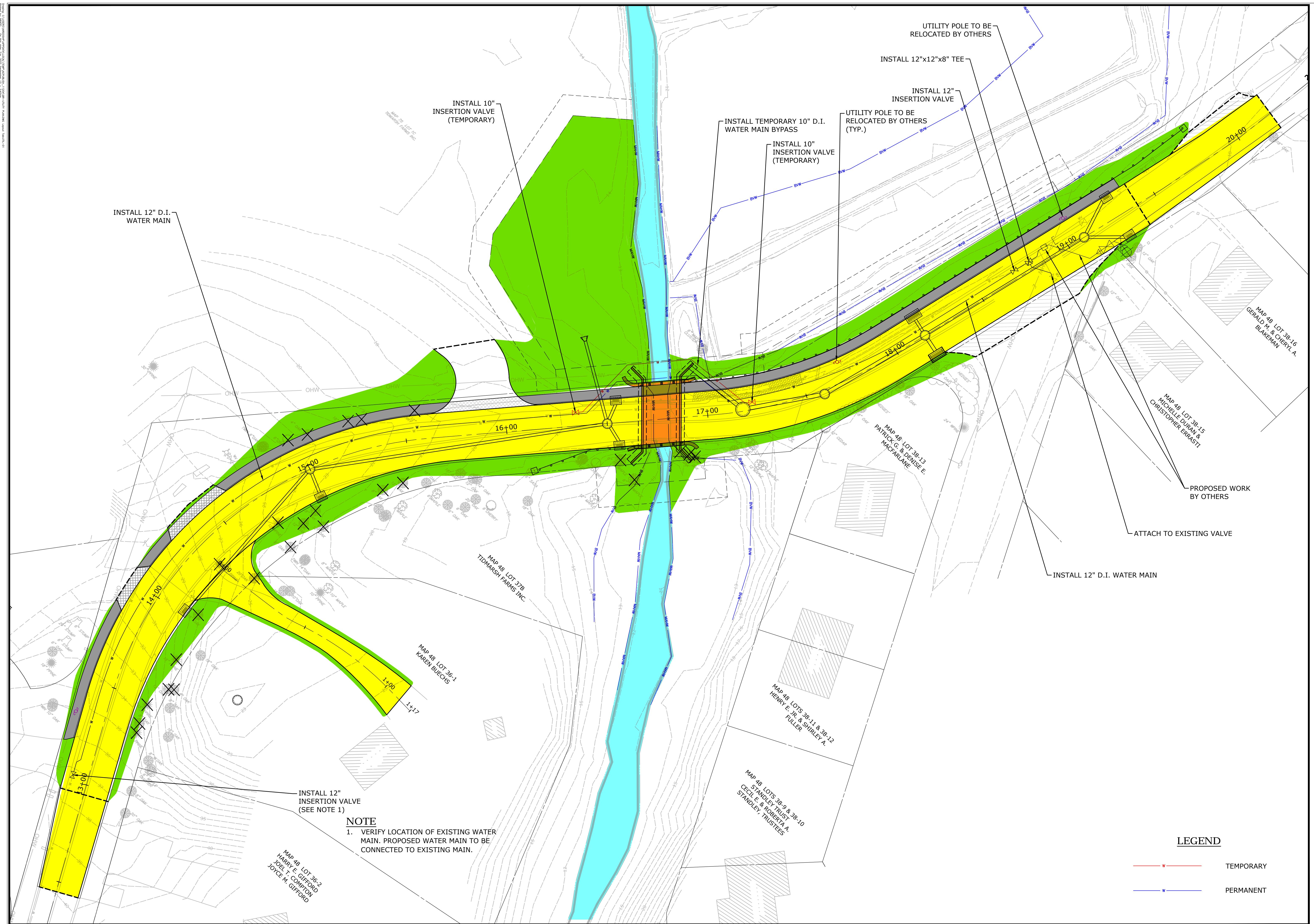
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PRO-01



99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

203.271.1773
SLRCONSULTING.COM

**REPLACEMENT OF BARTLETT ROAD CULVERT
OVER UNNAMED BROOK**

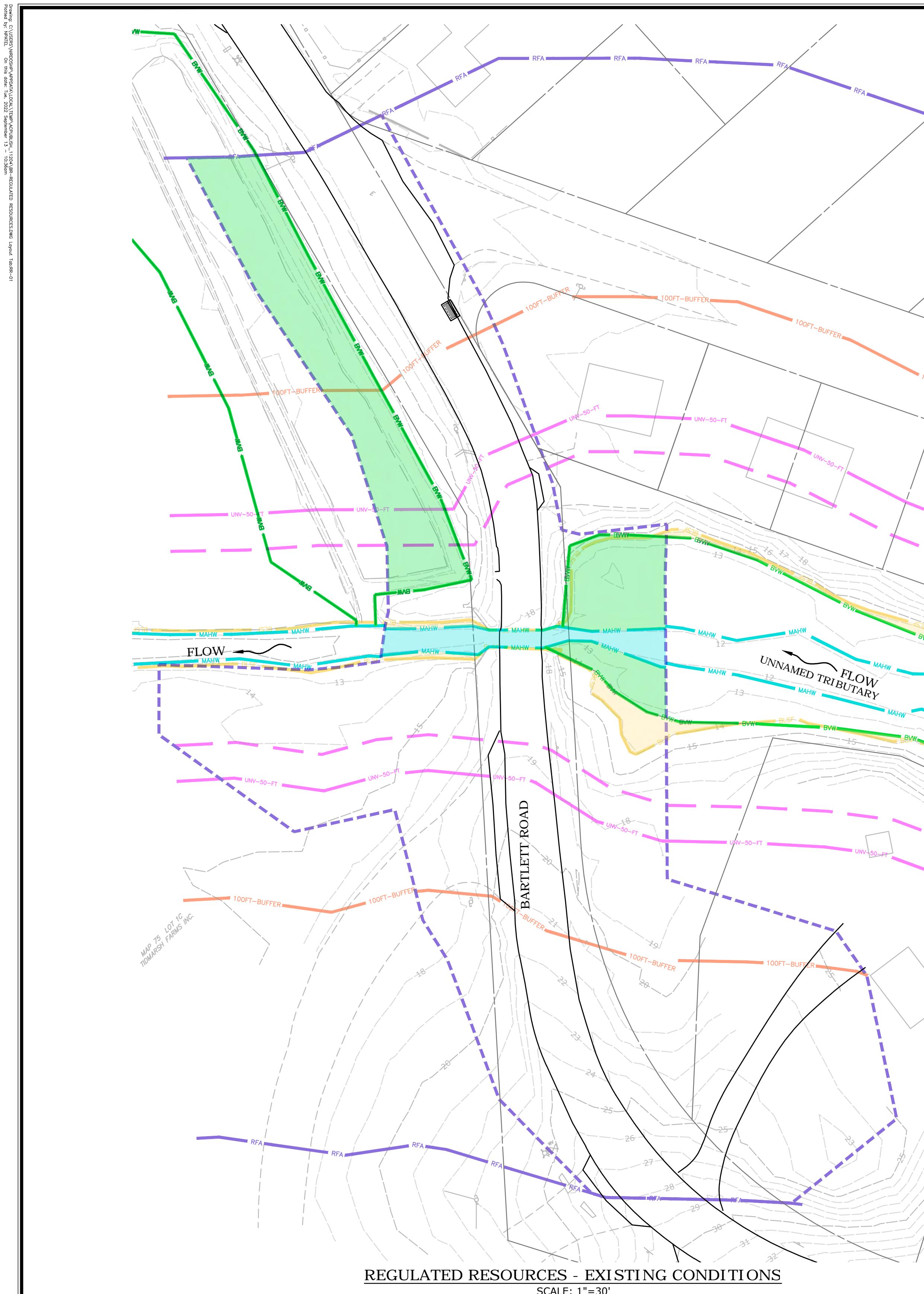
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PLYMOUTH, MASSACHUSETTS

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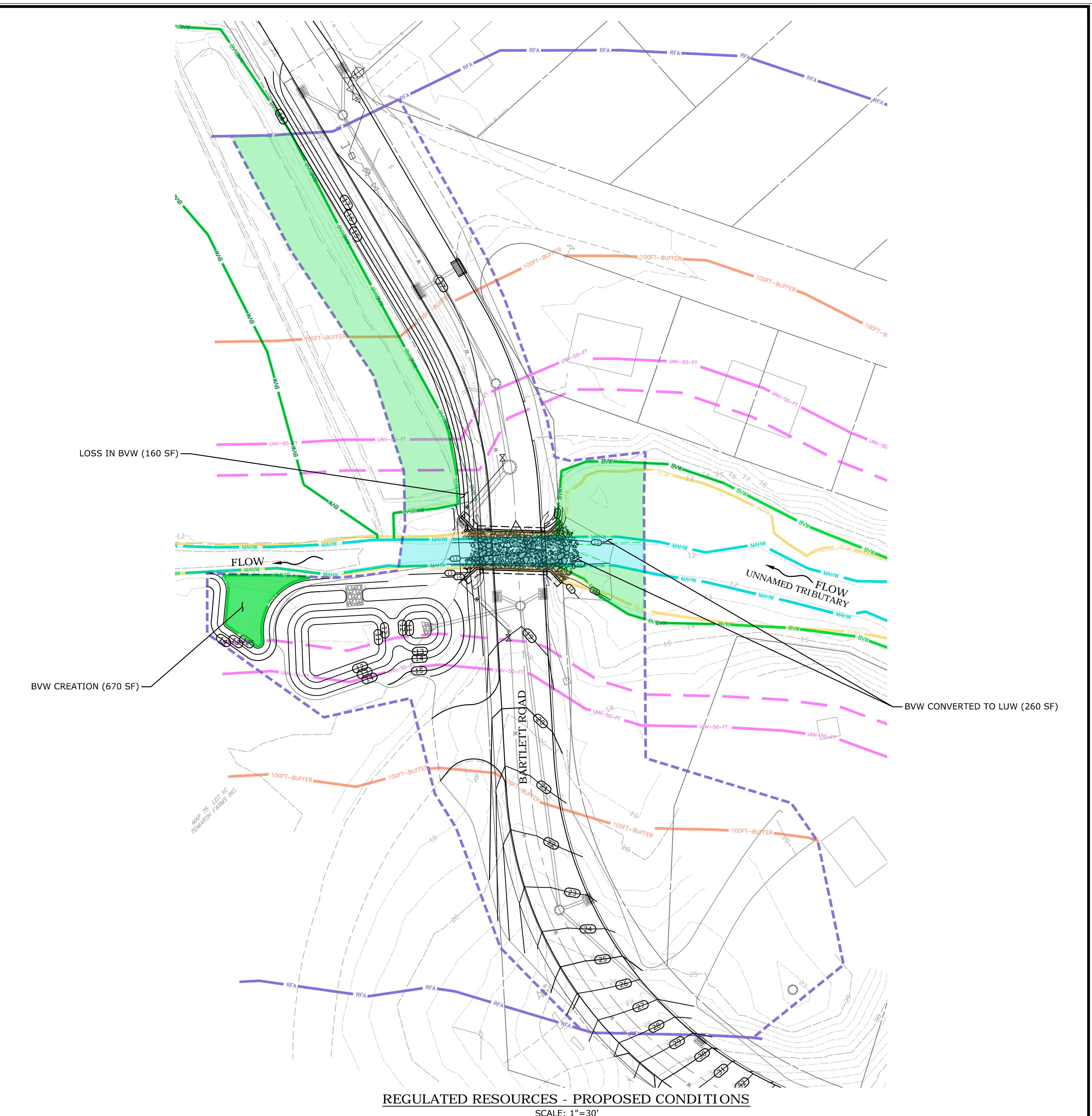
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REGULATED RESOURCE AREAS WITHIN PROJECT LIMITS

REGULATED AREA	EXISTING	PROPOSED	NET CHANGE
INLAND BANK	240 LF	240 LF	+0 LF
LAND UNDER WATER	1,080 SF	1,590 SF	+510 SF
BORDERING VEGETATED WETLAND	7,435 SF	7,685 SF	+250 SF
BORDERING LAND SUBJECT TO FLOODING	1,165 SF	415 SF	-750 SF
RIVERFRONT AREA	55,850 SF	55,850 SF	+0 SF

NOTE: BLSF/100-YEAR FLOODPLAIN EXTENT BASED ON PROJECT-SPECIFIC HYDRAULIC MODEL.



RR-01

NOT FOR CONSTRUCTION

REGULATED RESOURCES	DESCRIPTION	DATE	BY
REPLACEMENT OF BARTLETT ROAD CULVERT COVER UNNAMED BROOK BARTLETT ROAD PLYMOUTH, MASSACHUSETTS			

99 REALTY DRIVE
CHESHIRE, CT 06410
202.271.1773
SLRCONSULTING.COM

Legend:

- TMD DESIGNED
- TMD DRAWN
- JCM CHECKED

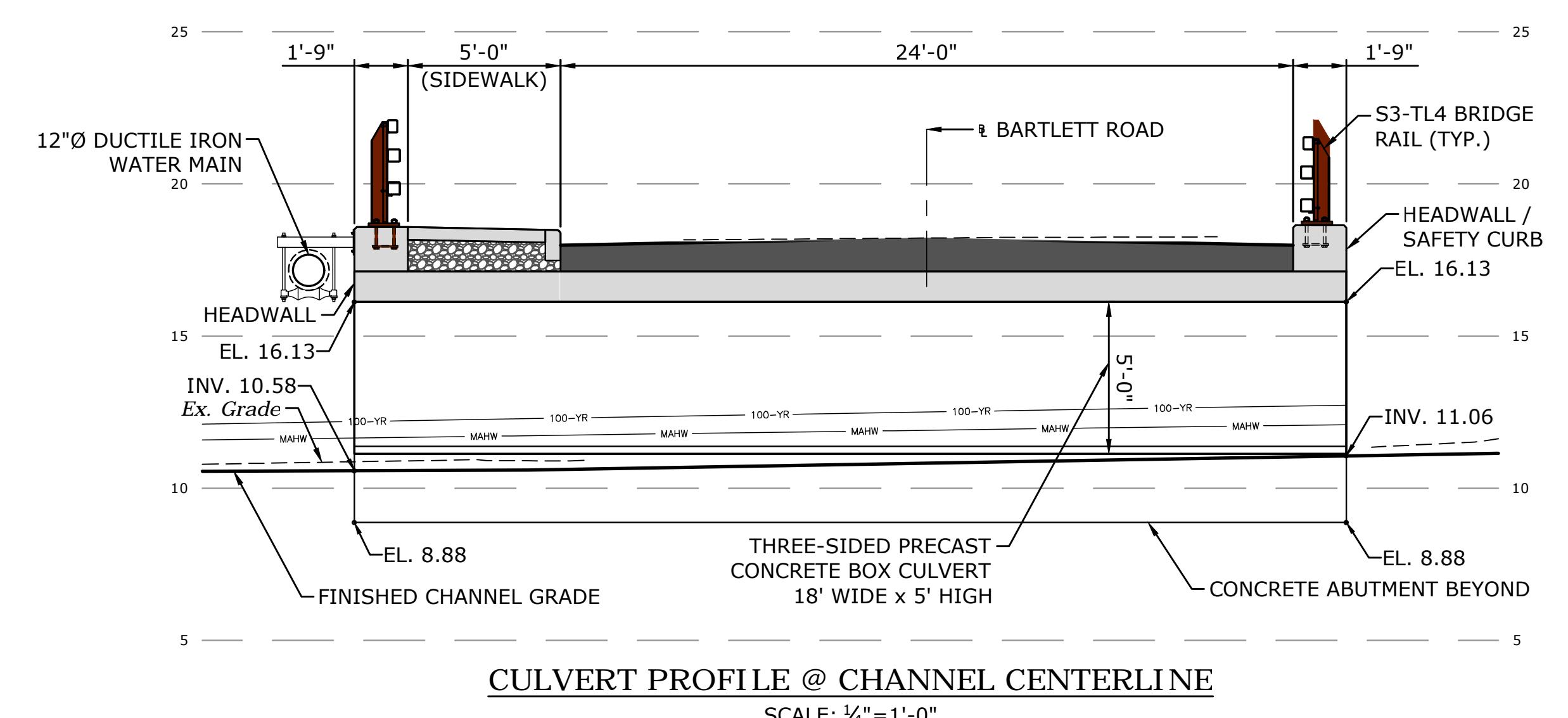
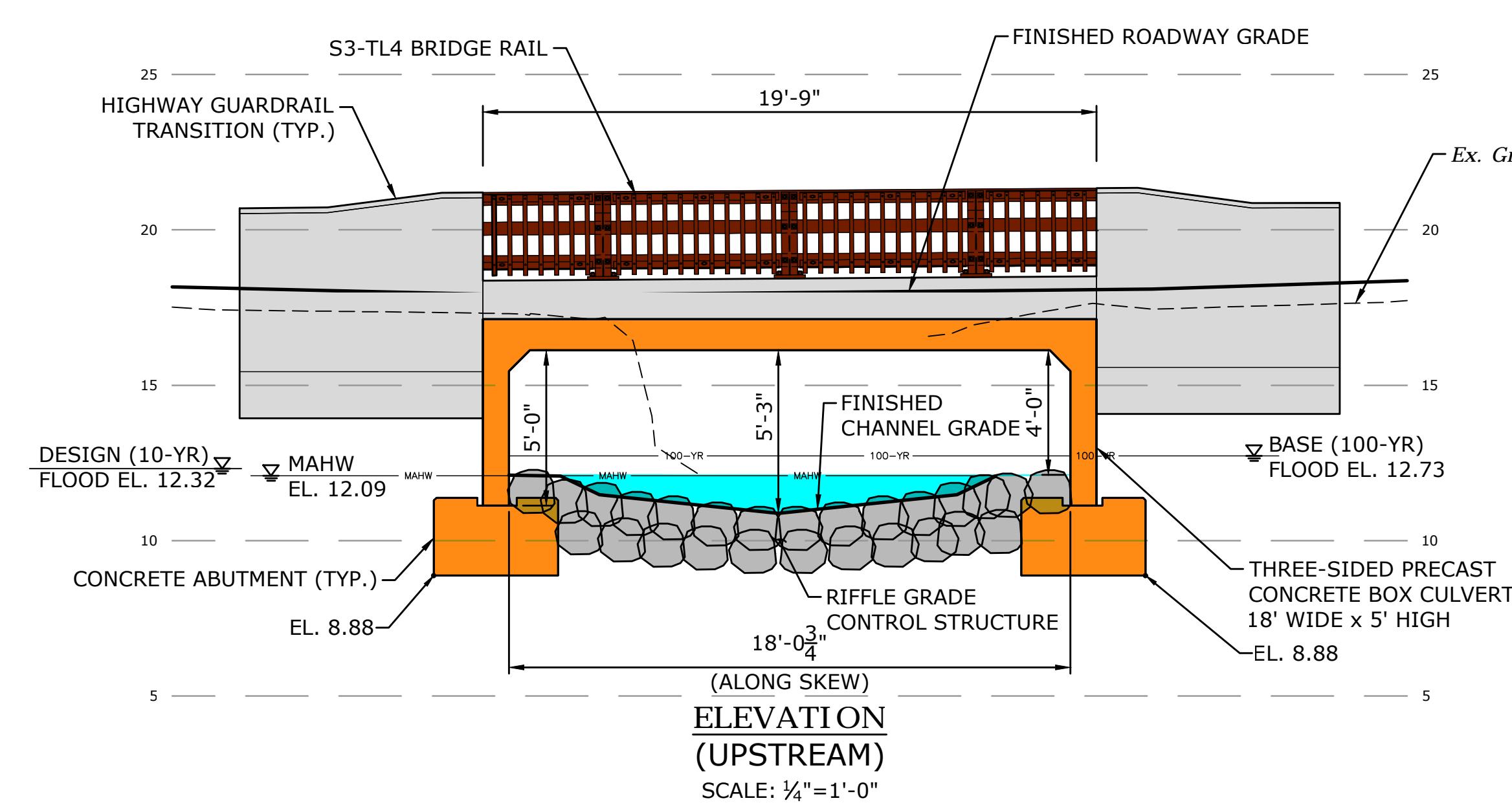
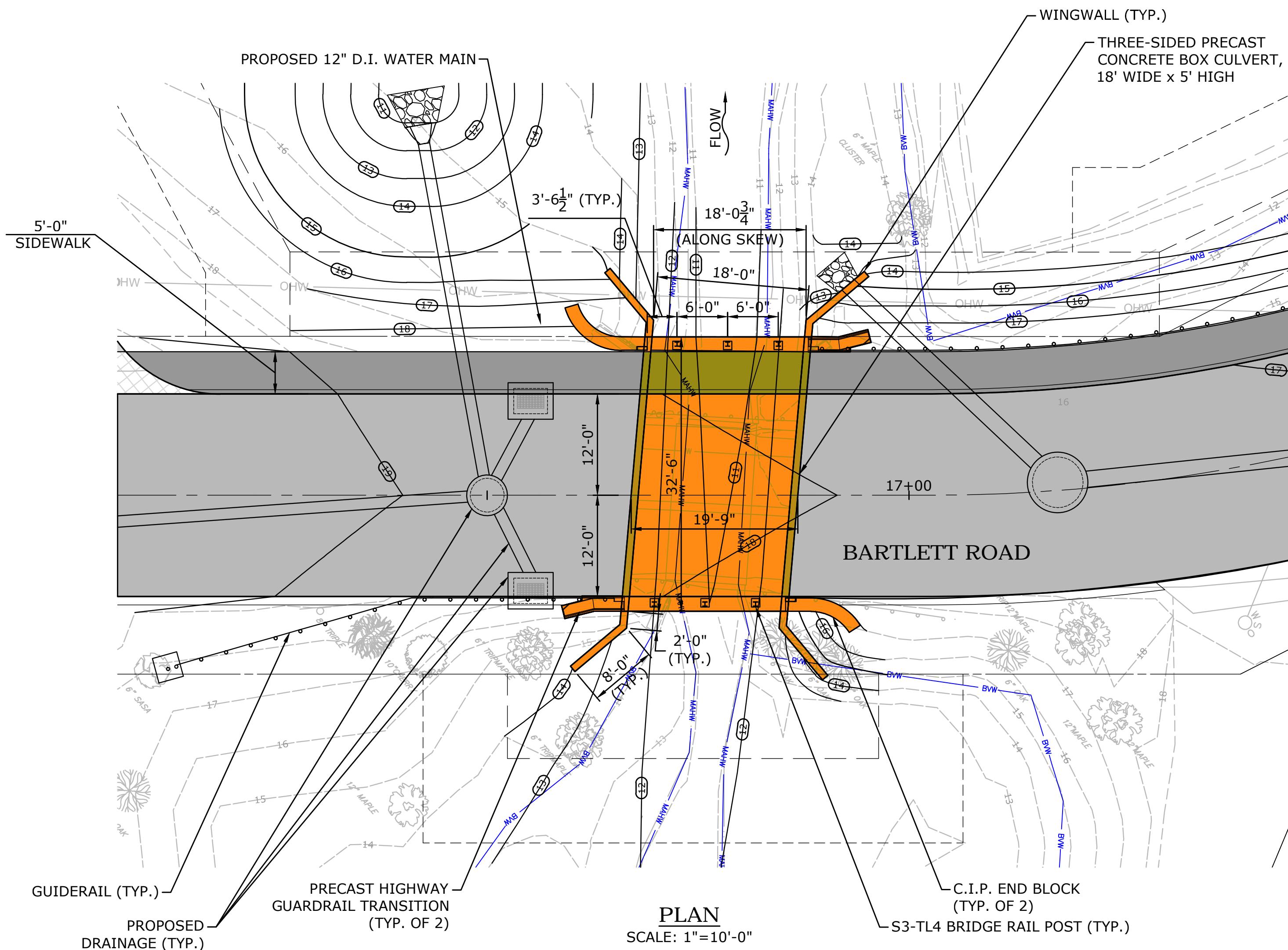
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JUNE 30, 2022

11982.00016

09 OF 21

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STRUCTURAL PLAN

**REPLACEMENT OF BARTLETT ROAD CULVERT
OVER UNNAMED BROOK**

BARTLETT ROAD

PLYMOUTH, MASSACHUSETTS

NP DESIGNED	NP DRAWN	KP CHECKED
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AS NOTED

JUNE 30, 2022

11982 00016

PROJECT NO. 12-05-21

SHEET NO.

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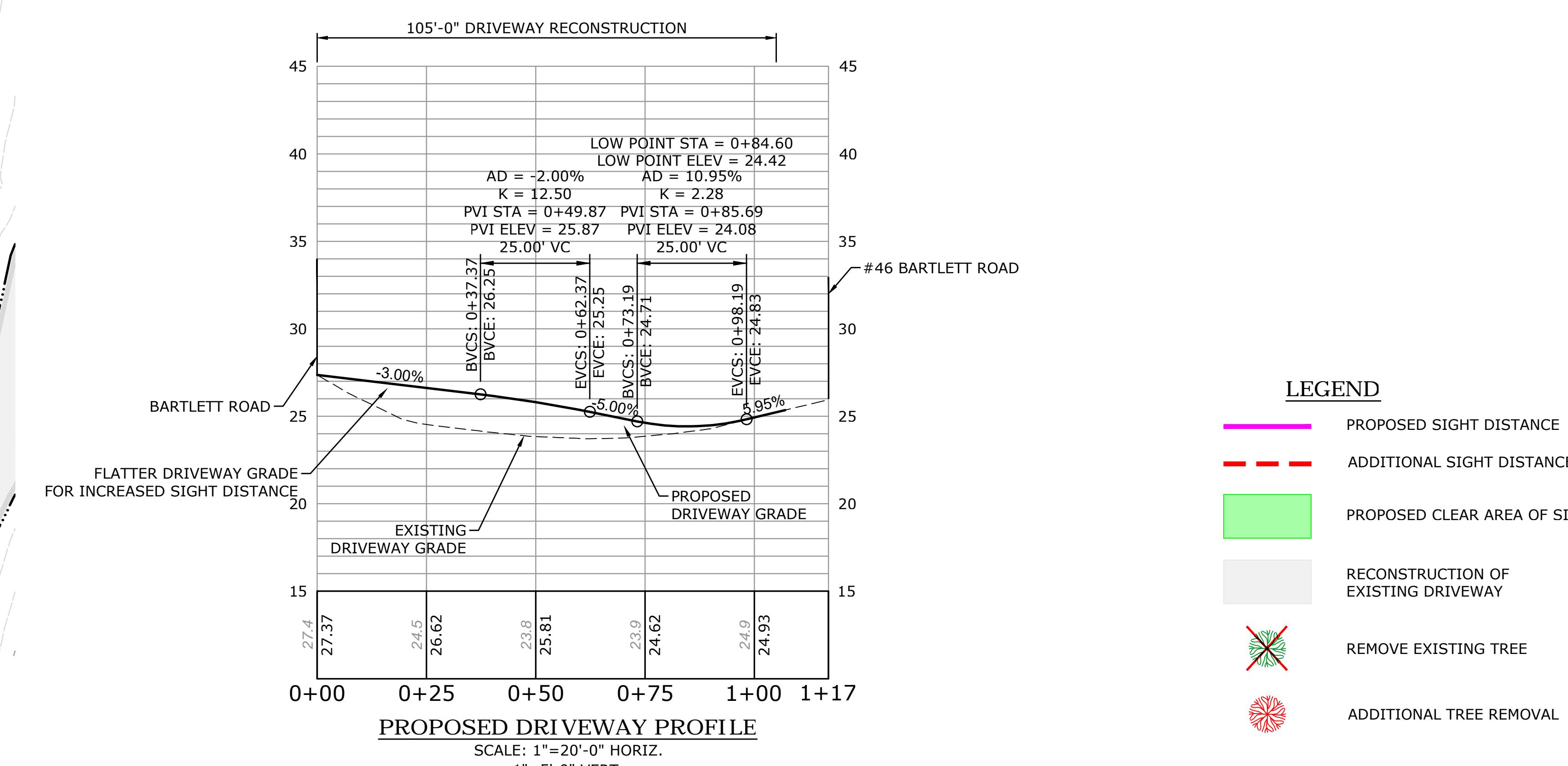
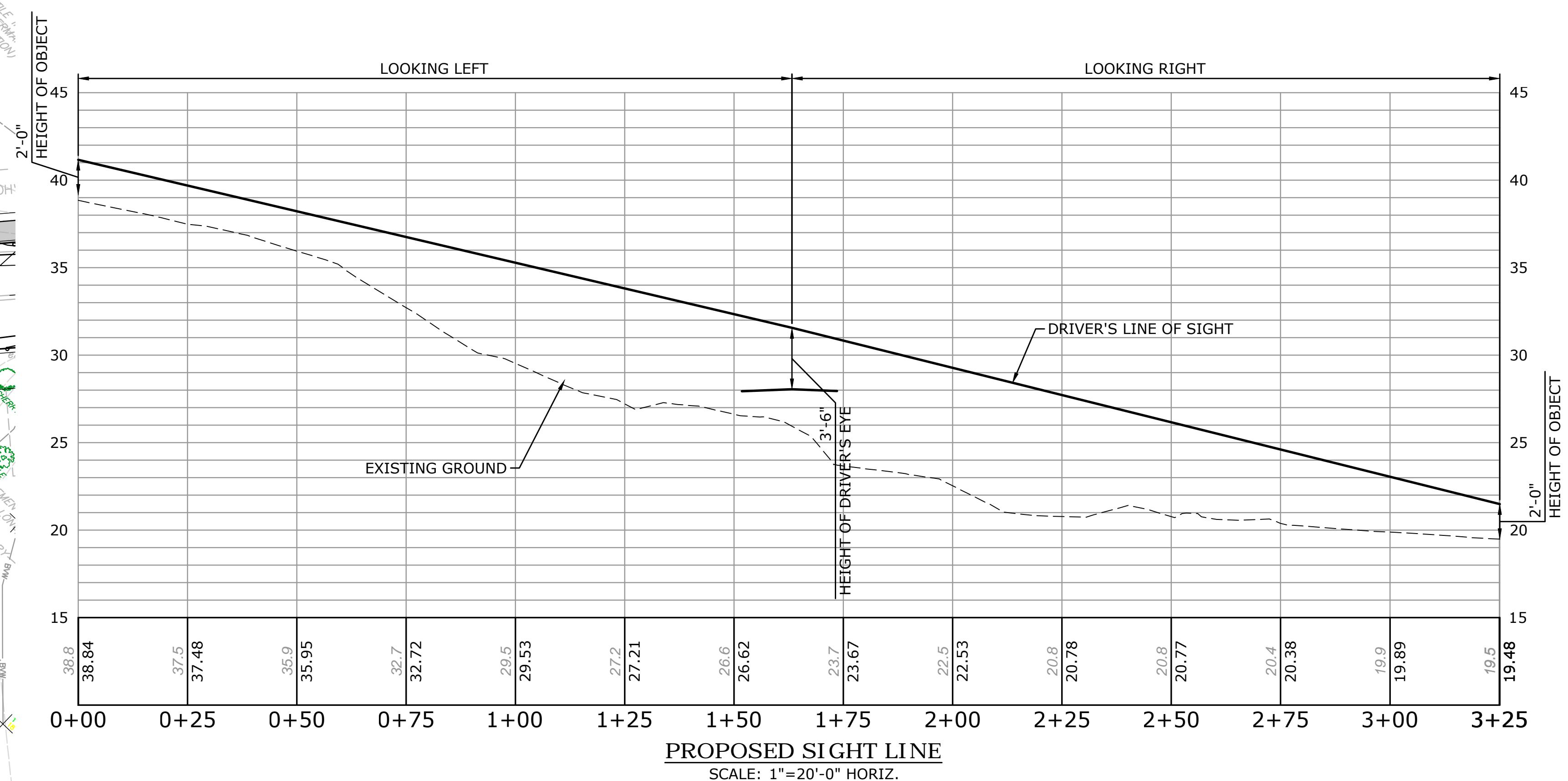
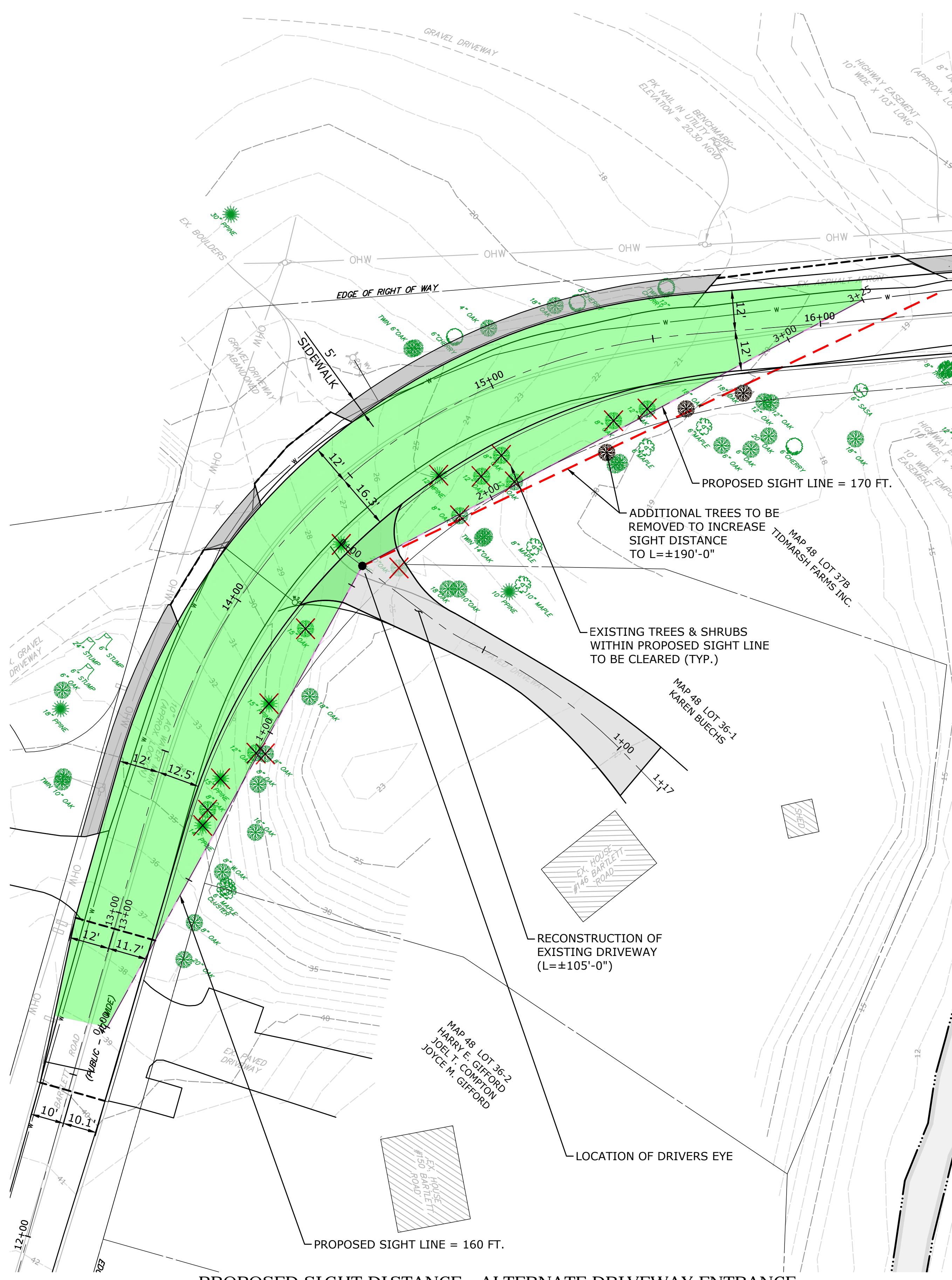
PLYMOUTH
BARTLETT ROAD

STATE	FED. AID PROJ. NO.	HEET NO.	TOTAL SHEETS
MA	-	4	X

PROJECT FILE NO. 11982.00016

SIGHT DISTANCE - ALTERNATE

SIGHT DISTANCE.DWG Plotted on 13-Sep-2022 9:36 AM



LEGEND

- PROPOSED SIGHT DISTANCE
- ADDITIONAL SIGHT DISTANCE
- PROPOSED CLEAR AREA OF SIGHT
- RECONSTRUCTION OF EXISTING DRIVEWAY
- REMOVE EXISTING TREE
- ADDITIONAL TREE REMOVAL

0 20 50 100
SCALE: 1"= 20'