MCTAGGART'S POND DAM (MA00879)
REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

SANDBORN STREET · FITCHBURG · MASSACHUSETTS

PERMITTING PLANS

DECEMBER 2024

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LOCATION MAP

2000 1000 0 2000

THIS PROJECT IS FUNDED IN PART BY THE MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS (WWW.MASS.GOV/GREEN)

PREPARED BY

FUSS & O'NEILL

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PREPARED FOR

CITY OF FITCHBURG
718 MAIN STREET
FITCHBURG, MA 01420

NOT FOR CONSTRUCTION

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

GI-001

File: J:\DWG\P\20200263\D20\Civil\Plan\20200263.D20_COV.01.dwg Layout: GI-001 Plotted: 2024-12-11 4:39 PM Saved: 2024-11-26 3:40 PM User: Sam.Huffman

EXISTING		PROPOSED
	CONTOUR MINOR	
	CONTOUR MAJOR	
	PROPERTY LINE	
W	WATER MAIN	
	EDGE OF VEGETATION	
	EDGE OF HEDGE ROW	
X	WIRE FENCE	
	WOOD FENCE	
	STONEWALL	
	RIPRAP SLOPE	
	RETAINING WALL	
	FIELD DELINEATED NATURAL SOURCE	
	BORDERING VEGETATED WETLAND (DESKTOP DELINEATED)	
	EDGE OF PAVEMENT	
100YR	100-YR FLOOD ZONE	
	UTILITY POLE W/GUY	
	UTILITY POLE	
W.G.	WATER GATE	
	HYDRANT	
	CONIFEROUS TREE	
	SIGN	
	DECIDUOUS TREE	
B-1 (MW)	SOIL BORING/MONITORING WELL	
S-3	SEDIMENT SAMPLE	
S.B. FD.	STONE BOUND FOUND	
R.R. SPK. FD.	RAILROAD SPIKE FOUND	
	TREE REMOVAL	
	TEMPORARY COFFERDAM	
	SEDIMENT DISTRIBUTION ZONE LIMIT	
	SILT FENCE	SF SF
	STRAW BALES	
	TEMPORARY CONSTRUCTION ACCESS	
	ROCK RIFFLE	

ABREVIATIONS

CD	COFFERDAM
LOD	LIMIT OF DISTURBANCE
STRAW	STRAW BALES
SILT	SILT FENCE
TB	TURBIDTIY BARRIER
CE	CONSTRUCTION ENTRANCE
D/S	DOWNSTREAM
U/S	UPSTREAM
EMB	EMBANKMENT
ENG	ENGINEERED
CP	CONTROL POINT
BO	BLOW OFF
R&D	REUSE AND DISPOSE
R&S	REMOVE AND STOCKPILE

CIVIL GENERAL NOTES

GENERAL

1. FOR THE PURPOSE OF THIS PROJECT:
   OWNER: CITY OF FITCHBURG, MA
   ENGINEER: FUSS & O'NEILL, INC.
2. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
3. DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
4. PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
5. BASE PLAN: A TOPOGRAPHIC SURVEY WAS PERFORMED BY SHERMAN AND FRYDRYK, LLC, DATED 11/29/2018 THROUGH 12/03/2018, THE BASE MAP IS SUPPLEMENTED WITH FIELD OBSERVATIONS MADE BY FUSS AND O'NEILL, INC. ON 7/15/2021.
6. TOPOGRAPHIC ELEVATIONS ARE BASED ON NAVD88 DATUM.
7. WETLANDS WERE FLAGGED BY LUCAS ENVIRONMENTAL ON 07/16/2021.
8. PROPERTY LINES SHOWN ARE BASED ON MASS GIS/ASSESSORT'S DATA AND PROPERTY BOUNDARY SURVEYED BY THE CITY OF FITCHBURG.
9. THE BATHYMETRIC SURVEY AND SEDIMENT PROBES WERE PERFORMED BY TIGHE & BOND IN OCTOBER 2019.
10. THE 100-YEAR FLOOD ELEVATIONS WAS DETERMINED AT 637 FEET BASED ON THE FEMA FIS NO. 25027CV010C (VER. 2.6.3.6 DATED 8/13/2021) FLOOD PROFILE FOR PHILLIPS BROOK PANEL 381 P.
11. ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, TECHNICAL SPECIFICATIONS INCLUDED WITH THIS CONTRACT, AND THE MADCR OFFICE OF DAM SAFETY REGULATIONS, AND ALL OTHER REGULATORY PERMITS.
12. COMPOSITE SEDIMENT SAMPLES WERE OBTAINED BY TIGHE & BOND. SEDIMENT SAMPLE S-5 WAS OBTAINED UPGRADIENT OF MCTAGGARTS POND SAMPLES S-1 AND S-2 WERE OBTAINED IN THE DOWNSTREAM AREA.

WORK RESTRICTIONS

1. DO NOT IMPEDE ACCESS TO AND FROM THE SITE BY THE PROPERTY OWNER.

REGULATORY REQUIREMENTS

13. BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
14. DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.

EROSION AND SEDIMENT CONTROL

1. THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICE AS SHOWN ON THE PLANS, OR AS DICTATED BY MADCR AND THE TOWN OF WINDSOR. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT CONSTRUCTION.
2. THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL DEVICES AT THE END OF EACH WORKING DAY, AFTER EACH STORM EVENT, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED. CLEANOUT OF ACCUMULATED SEDIMENT BEHIND THE SILT FENCES IS NECESSARY IF ONE-THIRD OF THE ORIGINAL HEIGHT OF THE BALES OR SILT FENCE BECOMES FILLED WITH SEDIMENT.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION THROUGHOUT CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF PERMANENT MEASURES UNTIL CONSTRUCTION OF THE PROJECT IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE CONTRACT OWNER. THE CONTRACT OWNER IS RESPONSIBLE THEREAFTER.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MUD- AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, WATER AND/OR CRUSHED STONE OR COARSE GRAVEL.
5. THE CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT CONTROL BARRIERS (I.E. SILT FENCE) AS SHOWN ON THE PLANS. A SILT FENCE SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS.
6. THE CONTRACTOR SHALL RESTORE AREAS DISTURBED BY CONSTRUCTION. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY PLACING 6" OF LOAM AND RESEEDED OR OTHERWISE RESTORED TO THEIR ORIGINAL STATE AS CLOSELY AS POSSIBLE.
7. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS. THE RECOMMENDED TEMPORARY SEEDING DATES ARE MARCH 15 TO NOVEMBER 15 WITH APPROVAL OF THE ENGINEER.
8. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15.
9. IF SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD. TEMPORARY MULCHING SHOULD BE PERFORMED AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.
10. ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. WHERE EROSION IS OBSERVED, ADDITIONAL MULCH MUST BE APPLIED. IF ALTERNATIVE COVER SUCH AS EROSION CONTROL MATTING (WITHOUT EMBEDDED NETTING) IS USED, THE MATTING SHALL BE INSPECTED AFTER RAINSTORMS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, THE MATTING MUST BE REINSTALLED AS NECESSARY AFTER REPAIRING DAMAGE TO SLOPE. INSPECTIONS SHALL TAKE PLACE UNTIL PERMANENT VEGETATIVE COVER IS FIRMLY ESTABLISHED. GRASS IS CONSIDERED TO BE FIRMLY ESTABLISHED AT A MINIMUM HEIGHT OF THREE (3) INCHES.
11. STRAW MULCH, WOOD FIBER MULCH, OR HYDROMULCH ARE REQUIRED IN SEEDED OR RESTORED UPLAND AREAS. STRAW MULCH SHOULD BE APPLIED AT A RATE OF 2 TONS PER ACRE, WOOD FIBER MULCH SHOULD BE APPLIED AT A RATE OF 1,500-2,000 POUNDS PER ACRE, OR HYDROMULCH APPLIED AT A RATE OF 1,500 POUNDS PER ACRE. WOOD FIBER MULCH SHOULD NOT BE USED ALONE IN THE WINTER OR DURING HOT, DRY WEATHER. STRAW MULCH MUST BE ANCHORED IMMEDIATELY AFTER SPREADING TO PREVENT WINDBLOWING. MULCH ANCHORING SHOULD ALSO BE USED ON SLOPES GREATER THAN THREE (3) PERCENT. NO MULCH IS TO BE PLACED BELOW NORMAL WATER SURFACE/WITHIN THE RIVERBED.
12. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORMWATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION OR TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.
13. SPILL PREVENTION, INCLUDING AN OIL SPILL KIT WITH OIL ABSORBANT PADS, SHALL BE LOCATED ON ALL CONSTRUCTION EQUIPMENT OPERATED WITHIN THE PROJECT'S LIMIT OF DISTURBANCE. VEHICLES SHALL BE FILLED OUTSIDE OF THE REGULATED AREA.
14. WHERE DEWATERING IS NECESSARY (WITH THE EXCEPTION OF IN-STREAM SEDIMENT DEWATERING) THERE SHALL NOT BE A DISCHARGE DIRECTLY INTO WETLANDS OR WATERCOURSES. PROPER METHODS AND DEVICES SHALL BE UTILIZED TO THE EXTENT PERMITTED BY LAW, SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION TRAP, PUMP SETTLING BASIN, DEWATERING BAG, OR OTHER APPROVED METHODS TO MINIMIZE AND RETAIN THE SUSPENDED SOLIDS. IF A PUMPING OPERATION CAUSES TURBIDITY PROBLEMS, CEASE OPERATIONS UNTIL ALTERNATE METHODS ARE SELECTED OR SHOWN TO BE EFFECTIVE AT REDUCING TURBIDITY.

CONSTRUCTION LAYOUT

1. PROVIDE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED SITE IMPROVEMENTS. FIELD VERIFY EXISTING ELEVATIONS AT THE INTERFACE WITH PROPOSED IMPROVEMENTS BEFORE START OF CONSTRUCTION.
2. IMMEDIATELY INFORM THE ENGINEER IN WRITING IF EXISTING UTILITY CONDITIONS CONFLICT OR DIFFER FROM THAT INDICATED AND IF THE WORK CANNOT BE COMPLETED AS INDICATED.
3. BOUNDS OR MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.

EARTHWORK

1. NOTIFY UTILITY LOCATOR SERVICE AND PROPERTY OWNER AT LEAST 72 HOURS BEFORE STARTING EXCAVATION. CALL MASSACHUSETTS: "DIG SAFE" AT 1-888-344-7233.
2. STOP WORK IN THE VICINITY OF SUSPECTED CONTAMINATED SOIL, GROUNDWATER OR OTHER MEDIA. IMMEDIATELY NOTIFY THE OWNER SO THAT APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN. RESUME WORK IN THE IMMEDIATE VICINITY ONLY UPON DIRECTION BY THE OWNER.
3. LOCATIONS OF UTILITIES SHOWN HERON ARE THE RESULT OF SURFACE EVIDENCE AS LOCATED BY FIELD SURVEY. UTILITIES WERE NOT RESEARCHED FOR THE DEVELOPMENT OF THIS PLAN. THIS PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATIONS OF ALL UTILITIES WHICH MAY EXIST AT THIS TIME WITHIN THE PREMISES SURVEYED.

SITE RESTORATION

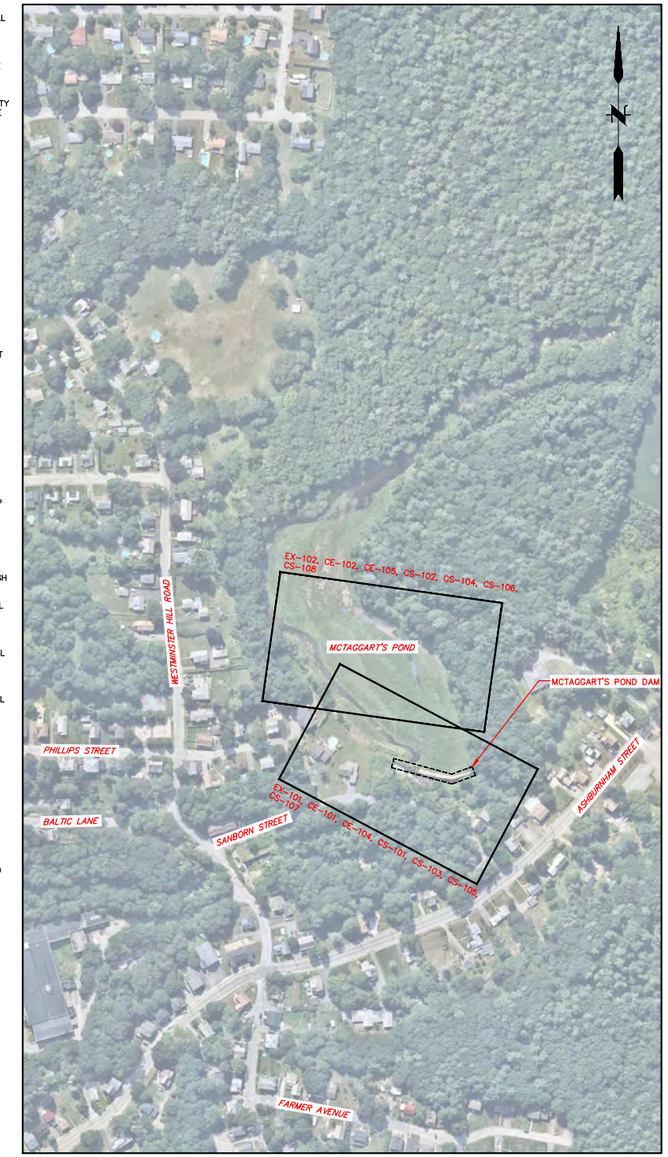
1. PROVIDE 6 INCHES OF TOPSOIL AND SEED TO AREAS DISTURBED DURING CONSTRUCTION UNLESS OTHERWISE NOTED.
2. RESTORE AREAS DISTURBED BY CONSTRUCTION OPERATIONS TO THEIR ORIGINAL CONDITION OR BETTER, AT NO ADDITIONAL COST TO OWNER.

GENERAL CONSTRUCTION REQUIREMENTS

1. THE CONTRACTOR SHALL VERIFY THE EXISTING LOCATION OF THE DAM FEATURES AND ITS RELATIONSHIP TO THE EXISTING CONDITIONS PLAN. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
2. DEVIATIONS OR CHANGES FROM THESE PLANS WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER/OWNER.
3. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE SITE THROUGH THE ENTIRE PERIOD OF CONSTRUCTION WHEN WORK IS ACTIVELY OCCURING.
4. ACCESS, STAGING AND TEMPORARY SEDIMENT STOCKPILING AREAS NOT INDICATED ON THE PLANS SHALL BE DELINEATED BY THE CONTRACTOR FOR APPROVAL PRIOR TO PROJECT INITIATION. ALL DISTURBED AREAS OUTSIDE MODIFIED AREAS SHALL BE STABILIZED AND SUITABLY RESTORED IN ACCORDANCE WITH THE DRAWINGS, OR AS OTHERWISE DIRECTED BY THE ENGINEER.
5. VEHICLE STORAGE, AND FUELING SHALL BE PERFORMED AT LEAST 50' OUTSIDE THE POND AND CHANNEL AND ONLY IN DESIGNATED AREAS SUCH THAT THERE WILL BE NO CONTAMINATION OF SOIL, GROUNDWATER OR SURFACE WATER FROM SPILLS OR LEAKS.
6. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF THE DAM AND SURROUNDING STRUCTURES, INCLUDING ACCESS ROUTES WITHIN 200 FEET OF THE WORK AREA. THIS INSPECTION SHALL INCLUDE PHOTOGRAPHIC AND VIDEO DOCUMENTATION. THE CONTRACTOR SHALL SUBMIT THE INSPECTION TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
7. CONSTRUCTION IS ANTICIPATED BETWEEN SUMMER 2023 TO EARLY WINTER 2023

WATER CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN BASEFLOW TO THE DOWNSTREAM AREA THROUGHOUT THE WORK.
2. THE TEMPORARY COFFERDAM SYSTEM MUST BE MAINTAINED TO ALLOW A DEWATERED CONDITION (NO SEDIMENT PLUME) IN THE WATERCOURSE. SOIL DISTURBANCE WITHIN THE WATERCOURSE MUST TEMPORARILY CEASE IN THE EVENT OF ANY ABNORMALLY HIGH STORMWATER RUNOFF EVENT IF A DRY WORKING CONDITION CANNOT BE MAINTAINED WITH THE USE OF WATER PUMPS OR OTHER MEANS.
3. TEMPORARY COFFERDAM(S) AND WATER DIVERSION STRUCTURE(S) ARE TO BE CONSTRUCTED OF MATERIALS THAT CAN BE COMPLETELY REMOVED FROM THE PROJECT AREA UPON COMPLETION OF CONSTRUCTION. REMOVAL OF THE TEMPORARY COFFERDAM(S) SHALL BE CONDUCTED IN A CONTROLLED MANNER.



INDEX PLAN

NOTES

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1. AERIAL IMAGERY OBTAINED FROM NEARMAP LTD. VERTICAL ORTHOGONAL IMAGERY (OCTOBER 2021)

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CITY OF FITCHBURG

GENERAL INFORMATION AND NOTES

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

GI-002

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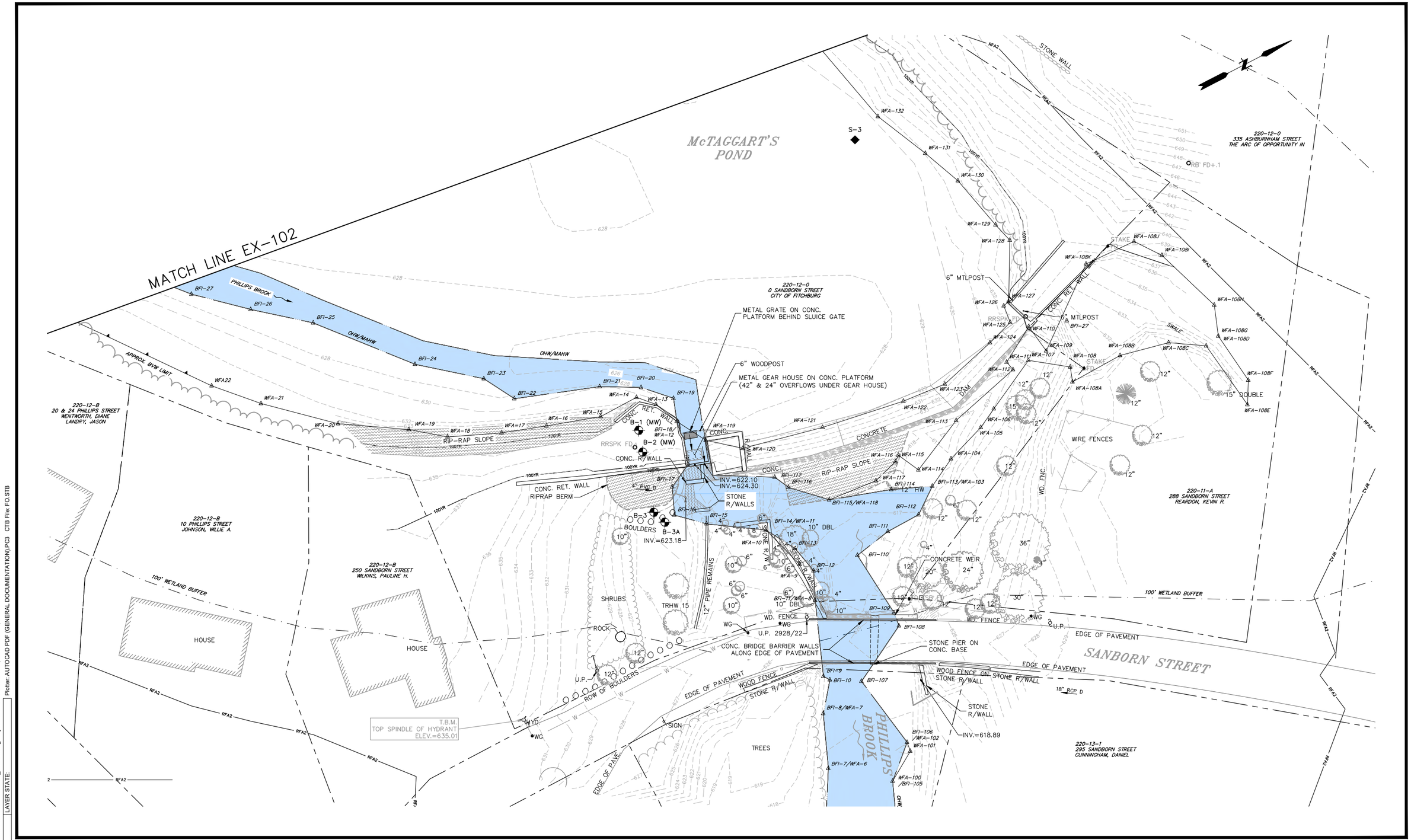

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CITY OF FITCHBURG

EXISTING CONDITIONS PLAN 1

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
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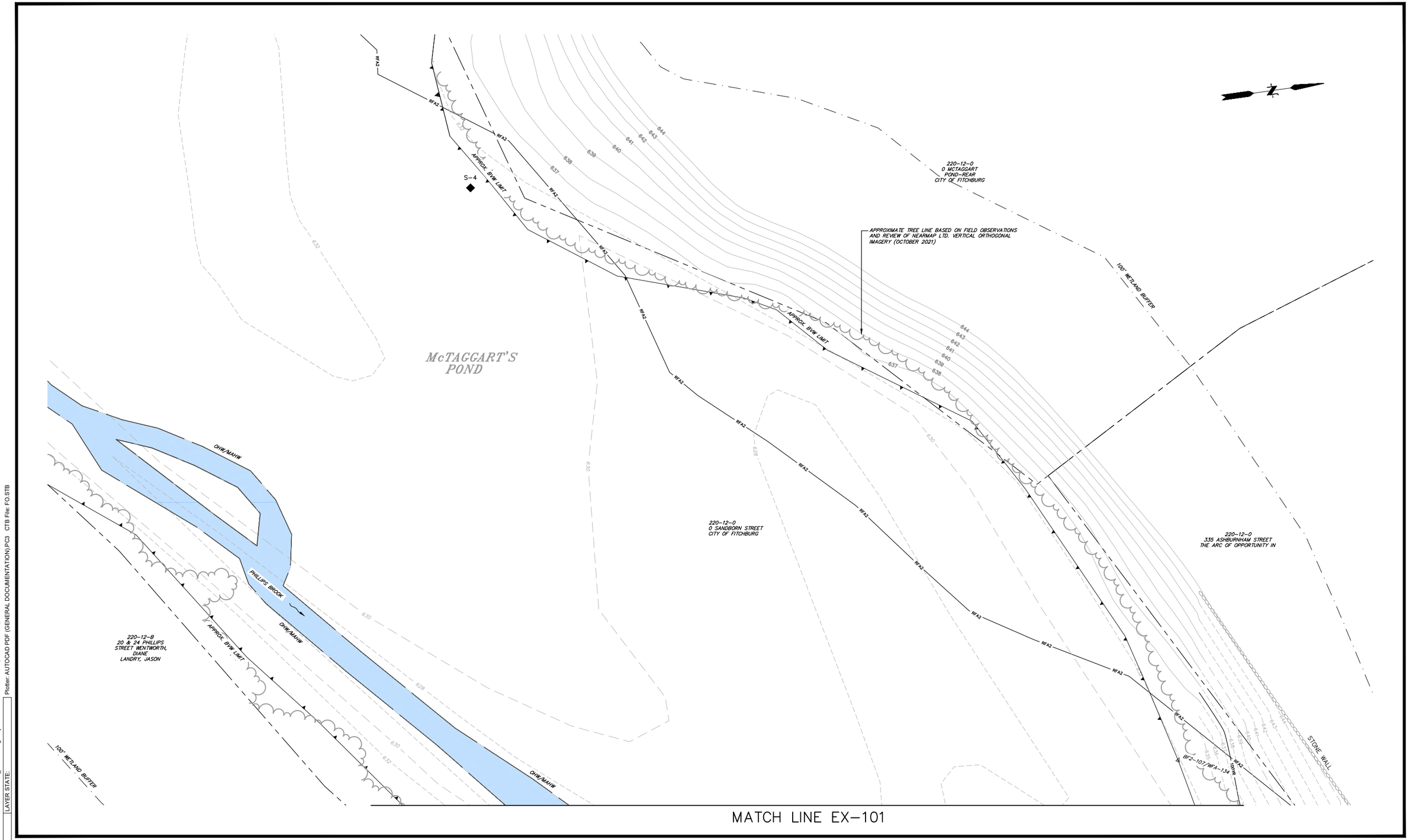
EX-101



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CITY OF FITCHBURG

EXISTING CONDITIONS PLAN 2

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

EX-102

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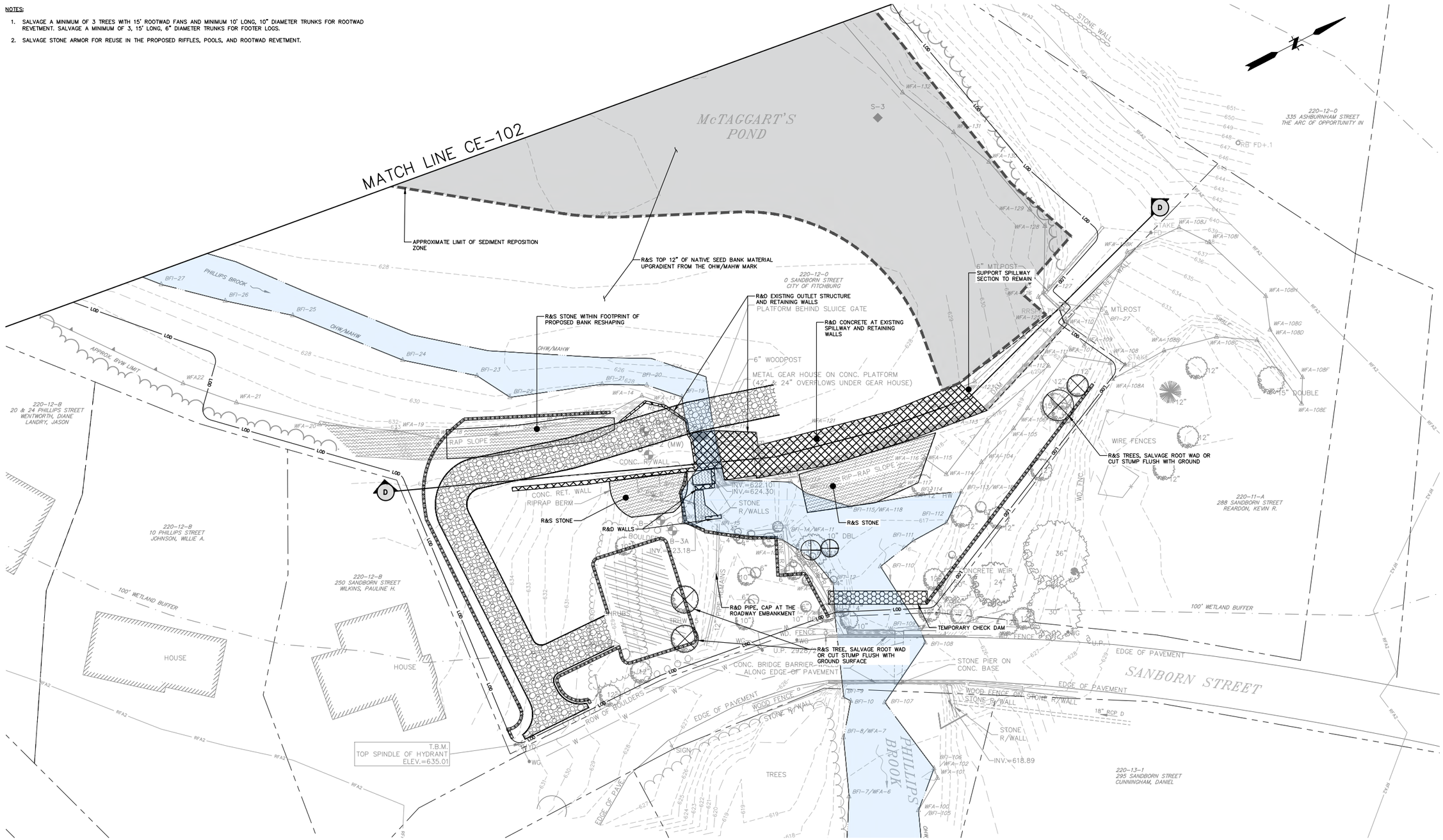
NOTES:

1. SALVAGE A MINIMUM OF 3 TREES WITH 15' ROOTWAD FANS AND MINIMUM 10' LONG, 10" DIAMETER TRUNKS FOR ROOTWAD REVETMENT. SALVAGE A MINIMUM OF 3, 15' LONG, 6" DIAMETER TRUNKS FOR FOOTER LOGS.
2. SALVAGE STONE ARMOR FOR REUSE IN THE PROPOSED RIFFLES, POOLS, AND ROOTWAD REVETMENT.



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CITY OF FITCHBURG

SITE PREPARATION AND DEMOLITION PLAN 1

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
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CE-101

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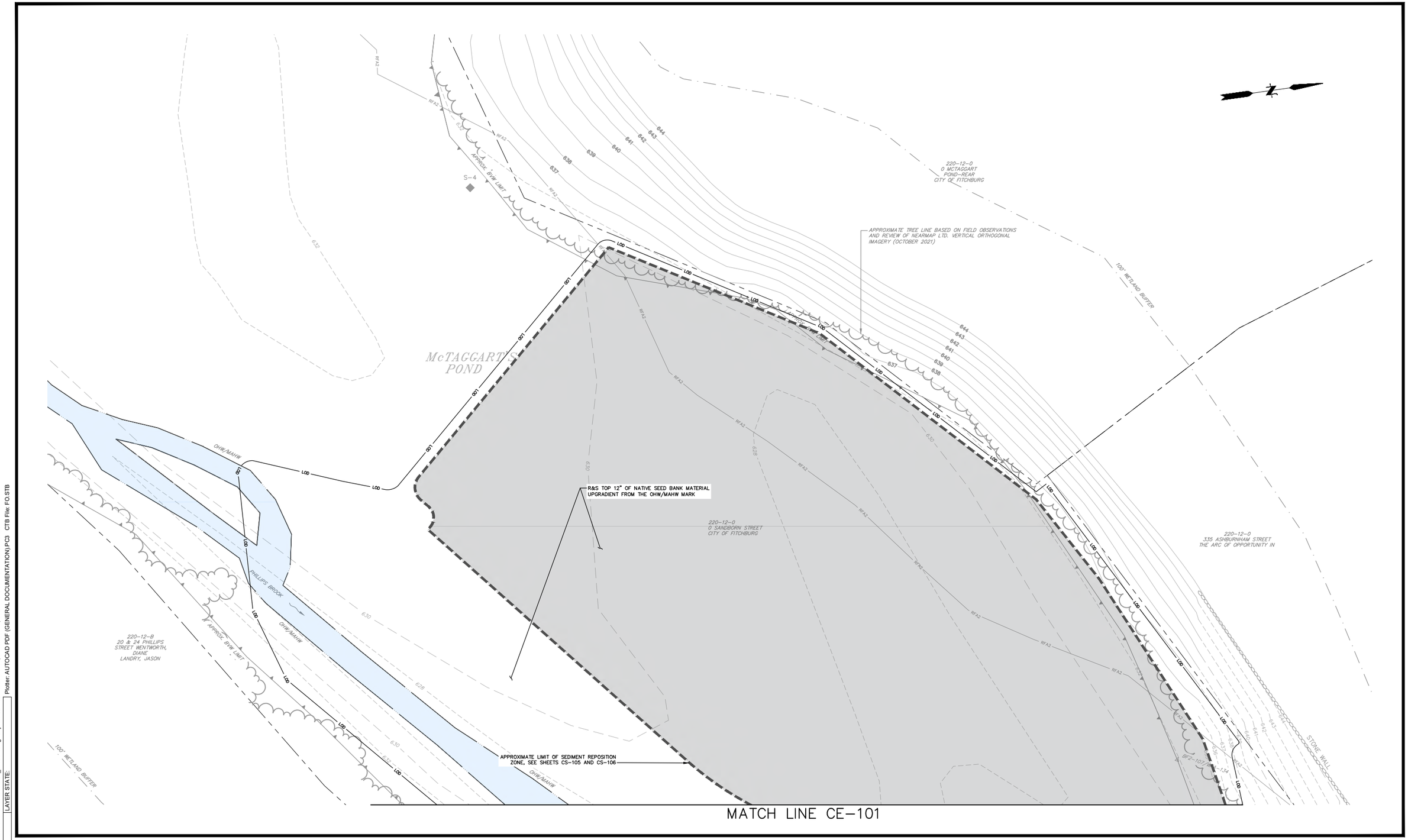

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SITE PREPARATION AND DEMOLITION PLAN 2

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
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CE-102

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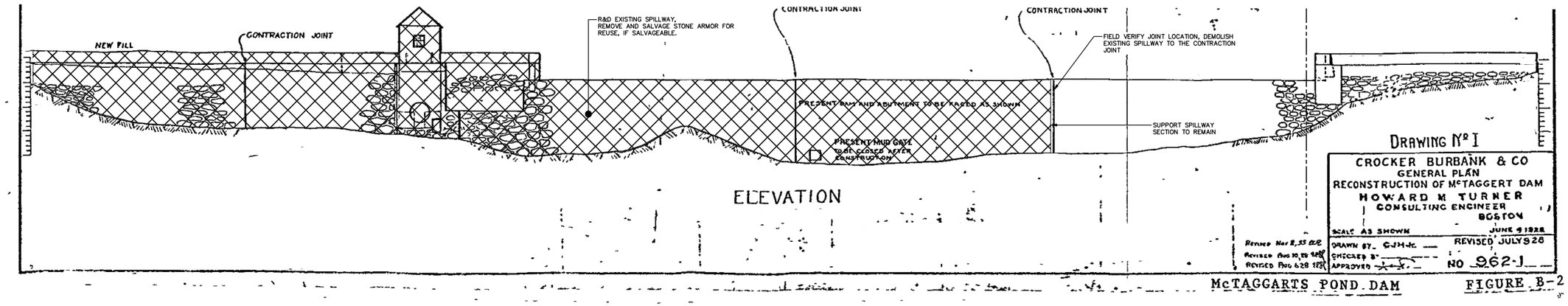

D DAM DEMOLITION SECTION
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CITY OF FITCHBURG

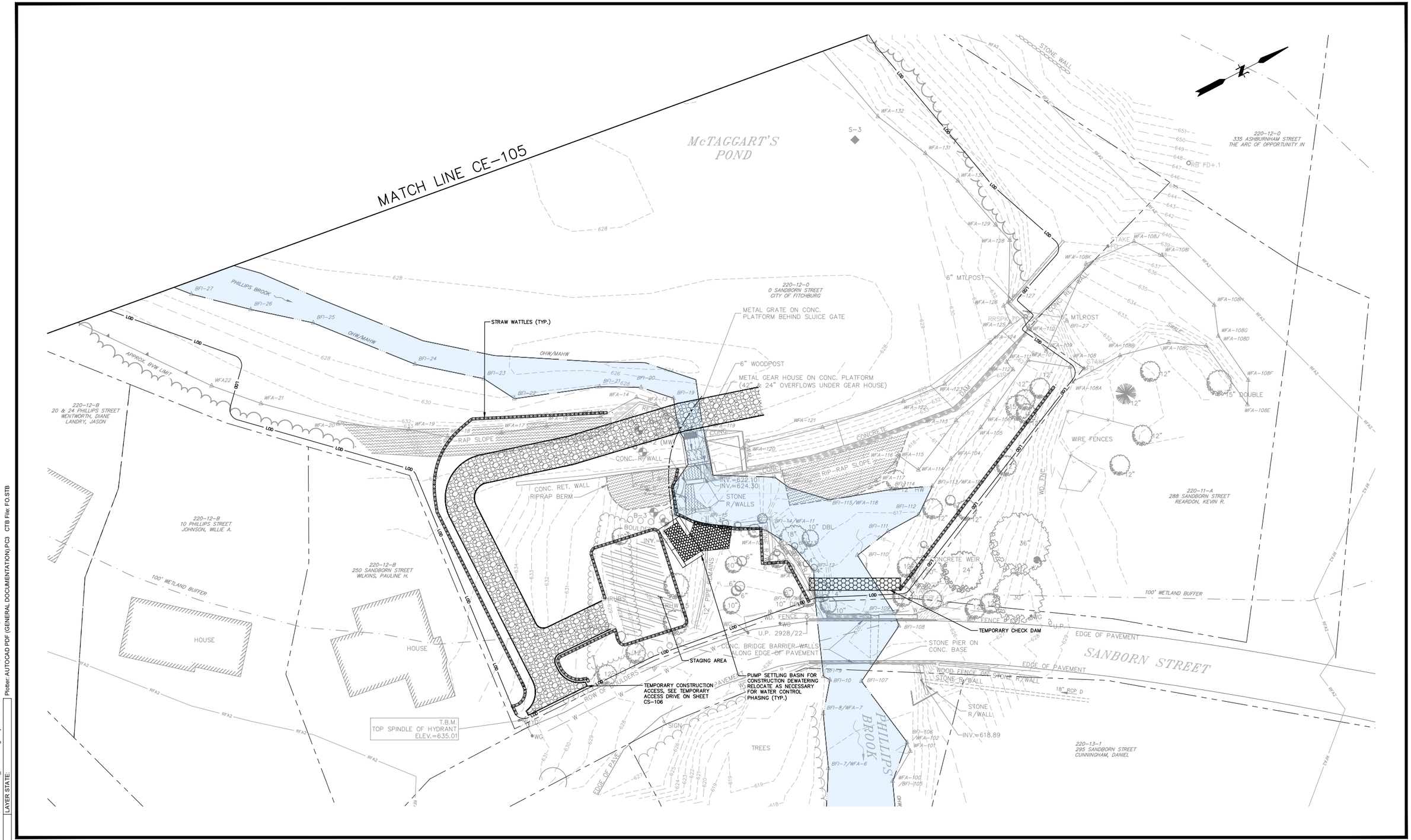
DEMOLITION SECTION

MCTAGGART'S POND DAM REMOVAL AND
PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CE-103



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CITY OF FITCHBURG

EROSION AND SEDIMENTATION CONTROL PLAN 1

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CE-104

File Path: J:\DWG\P2020\0263\D20\Civil\Plan\20200263.D20_ERO01.dwg Layout: CE-104 Plotted: Wed, December 11, 2024 - 4:40 PM User: sam.huffman
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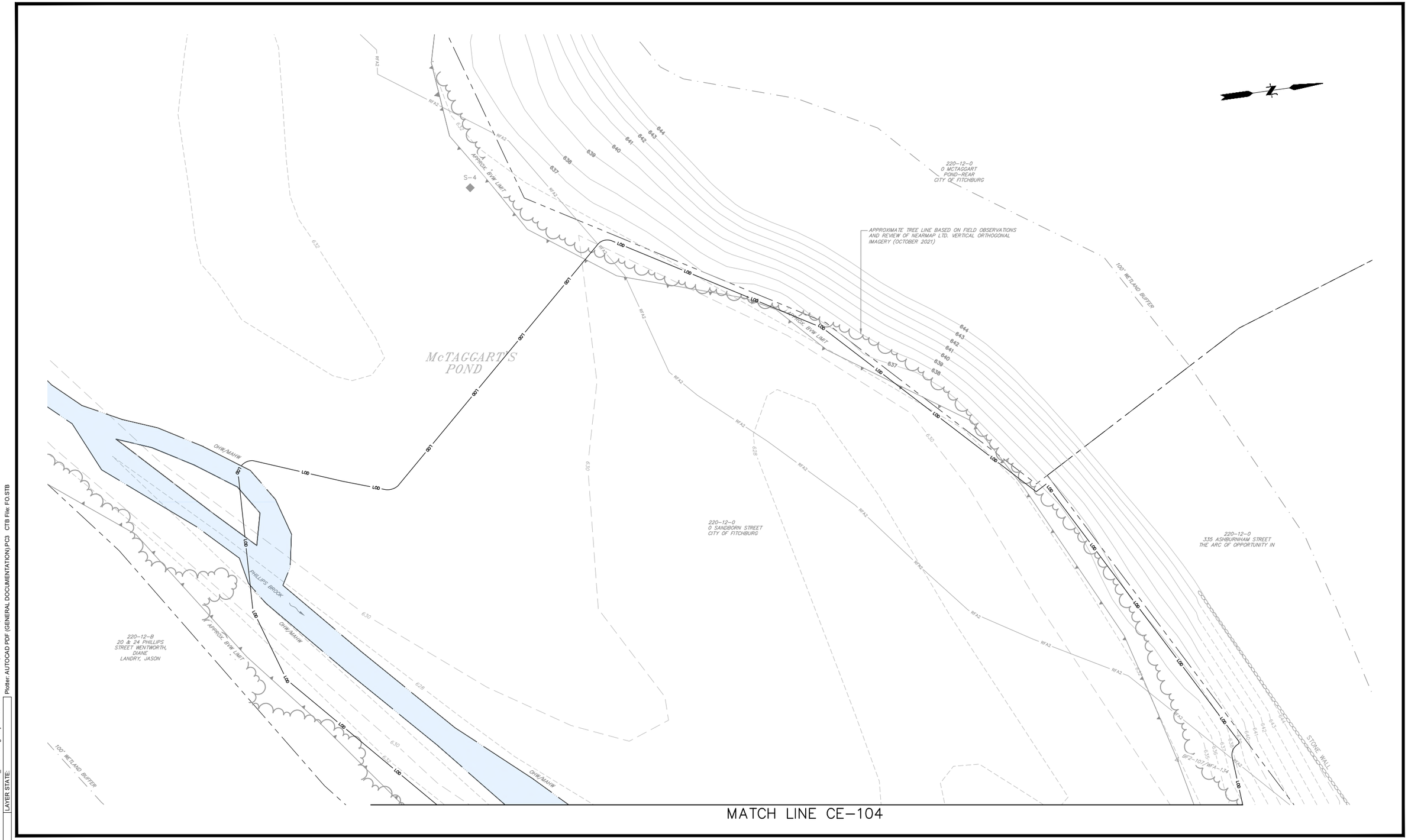

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CITY OF FITCHBURG

EROSION AND SEDIMENTATION CONTROL PLAN 2

MCTAGGART'S POND DAM REMOVAL AND
PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CE-105

File Path: J:\DWG\P2020\0263\D20\Civil\Plan\20200263.D20_ERO01.dwg Layout: CE-105 Plotted: Wed, December 11, 2024 - 4:40 PM User: sam.hoffman
Plotter: AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 CTB File: FO.STB
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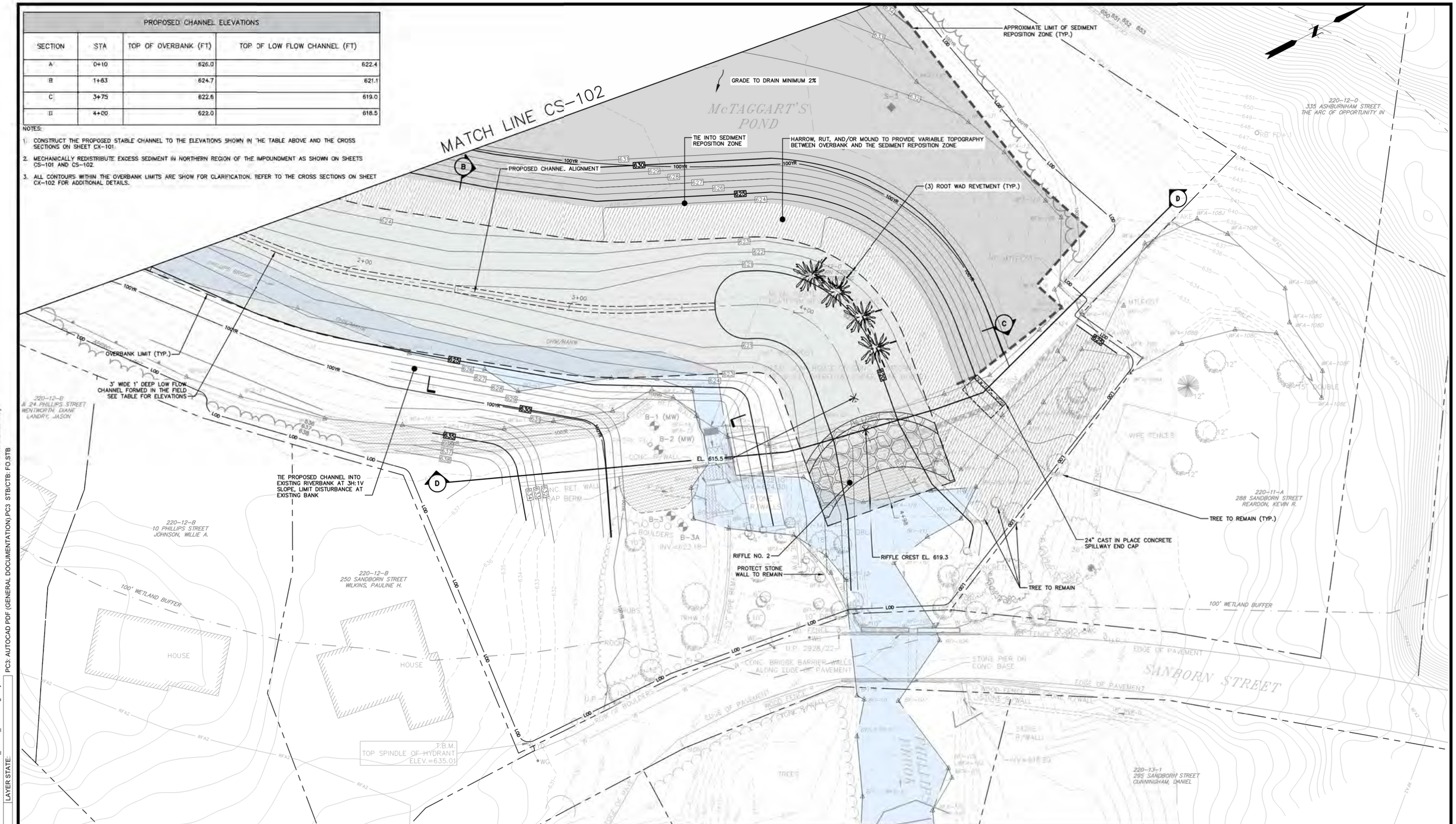
PROPOSED CHANNEL ELEVATIONS			
SECTION	STA	TOP OF OVERBANK (FT)	TOP OF LOW FLOW CHANNEL (FT)
A	0+10	626.0	622.4
B	1+63	624.7	621.1
C	3+75	622.6	619.0
D	4+00	622.0	618.5

NOTES:

1. CONSTRUCT THE PROPOSED STABLE CHANNEL TO THE ELEVATIONS SHOWN IN THE TABLE ABOVE AND THE CROSS SECTIONS ON SHEET CX-101.
2. MECHANICALLY REDISTRIBUTE EXCESS SEDIMENT IN NORTHERN REGION OF THE IMPOUNDMENT AS SHOWN ON SHEETS CS-101 AND CS-102.
3. ALL CONTOURS WITHIN THE OVERBANK LIMITS ARE SHOW FOR CLARIFICATION. REFER TO THE CROSS SECTIONS ON SHEET CX-102 FOR ADDITIONAL DETAILS.



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CITY OF FITCHBURG

PROPOSED CONDITIONS PLAN 1

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CS-101

File: J:\DWG\P2020\0263\D20\Civil\Plan\22x34\20200263.D20_STP01_22x34.dwg Layout: CS-101-22X34 Plotted: 2025-10-07 8:24 AM Saved: 2025-10-07 8:23 AM User: Sarah.Frisby
PC3: AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 STB/CTB: FO.STB
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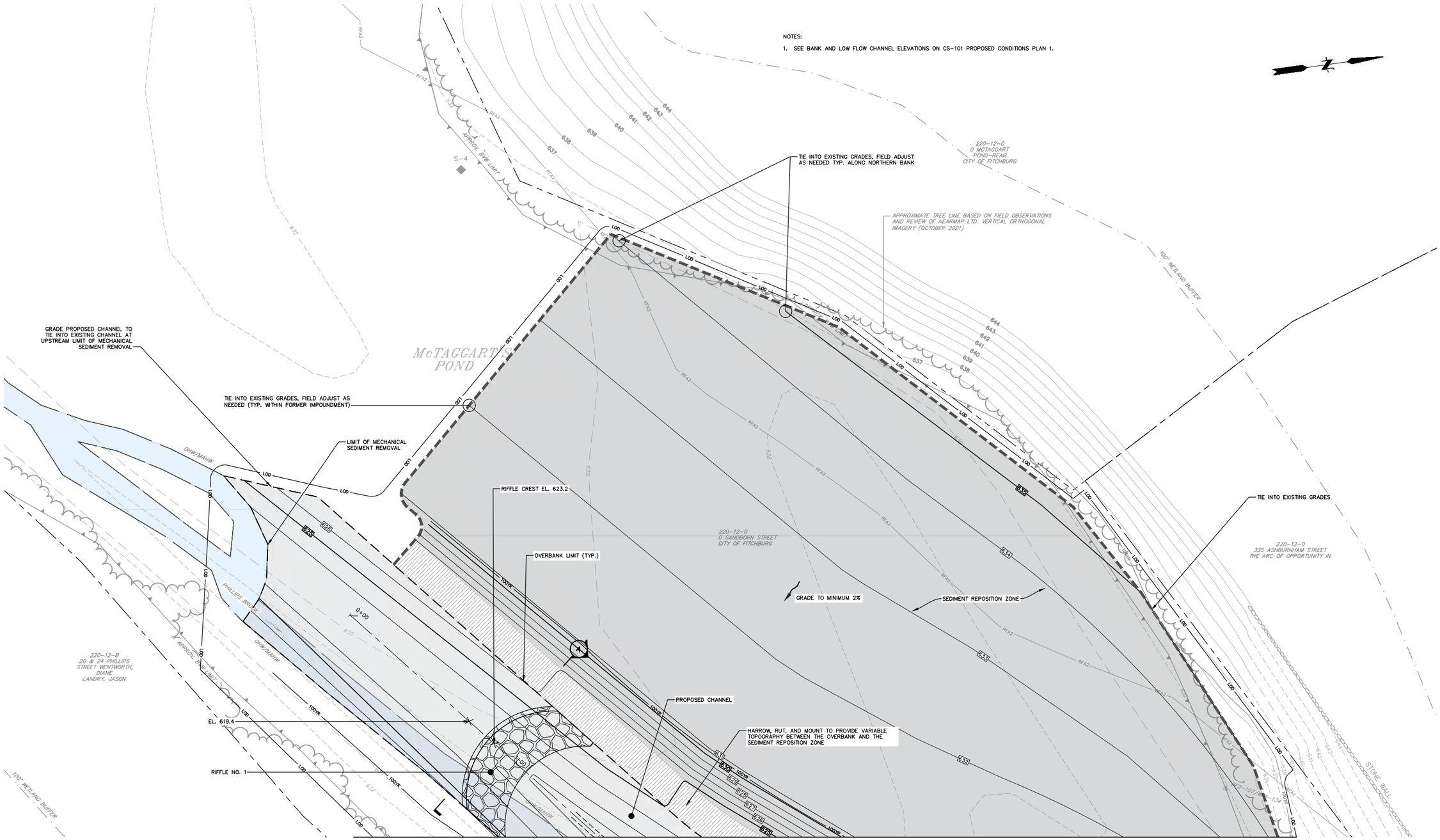
NOTES:

1. SEE BANK AND LOW FLOW CHANNEL ELEVATIONS ON CS-101 PROPOSED CONDITIONS PLAN 1.



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PROPOSED CONDITIONS PLAN 2

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

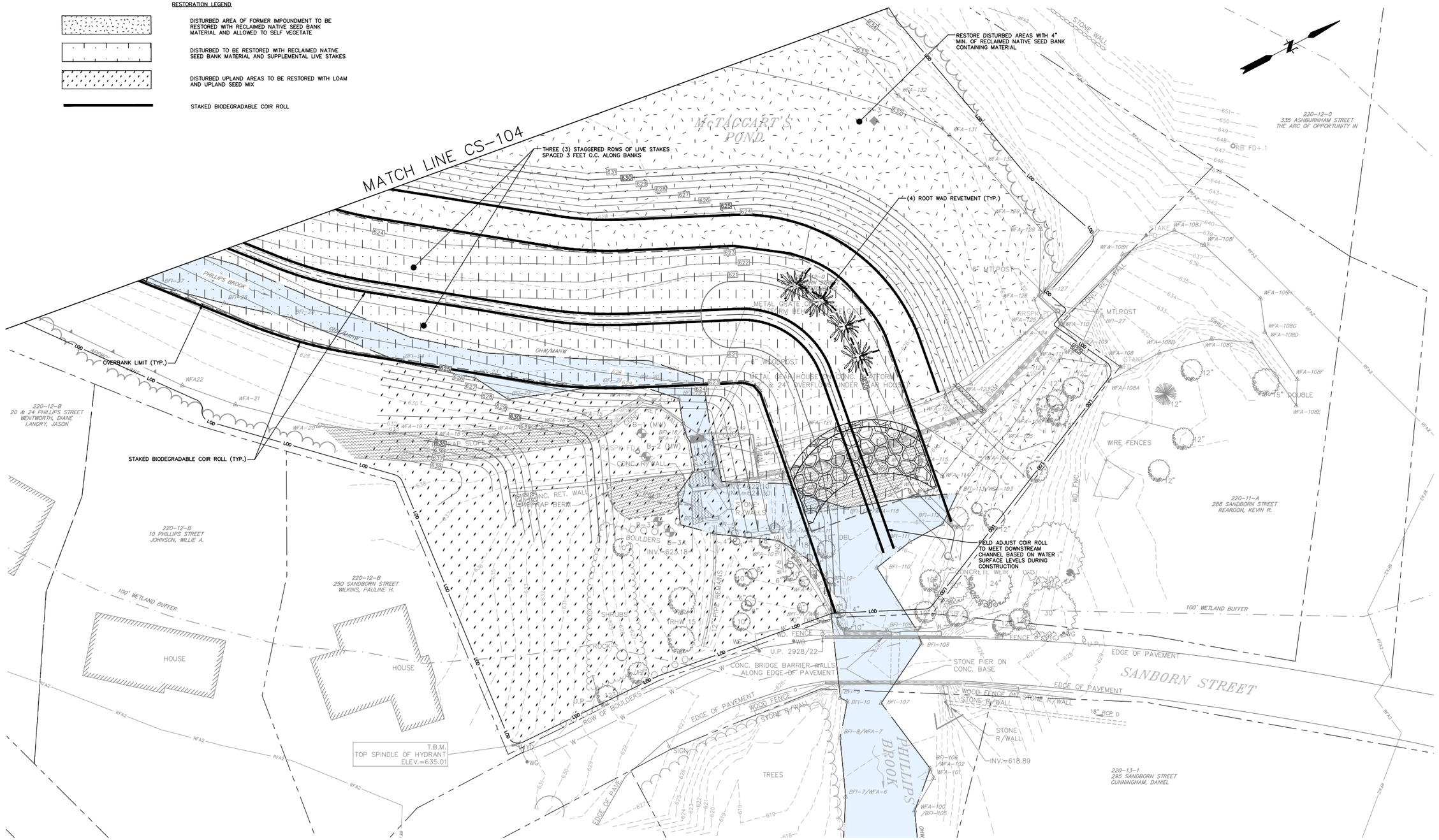
PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CS-102

File Path: J:\DW\GIP2020\0263\D20\Civil\Plan\20200263.D20_STP01.dwg Layout: CS-102 Plotted: Wed, December 11, 2024 - 4:40 PM User: sam.huffman
Plotter: NONE CTB File: FO.STB
LAYER STATE:
MS VIEW:

RESTORATION LEGEND

- DISTURBED AREA OF FORMER IMPOUNDMENT TO BE RESTORED WITH RECLAIMED NATIVE SEED BANK MATERIAL AND ALLOWED TO SELF VEGETATE
- DISTURBED TO BE RESTORED WITH RECLAIMED NATIVE SEED BANK MATERIAL AND SUPPLEMENTAL LIVE STAKES
- DISTURBED UPLAND AREAS TO BE RESTORED WITH LOAM AND UPLAND SEED MIX
- STAKED BIODEGRADABLE COIR ROLL



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MS VIEW: LAYER STATE: Plotter: NONE CTB File: FO.STB

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CITY OF FITCHBURG

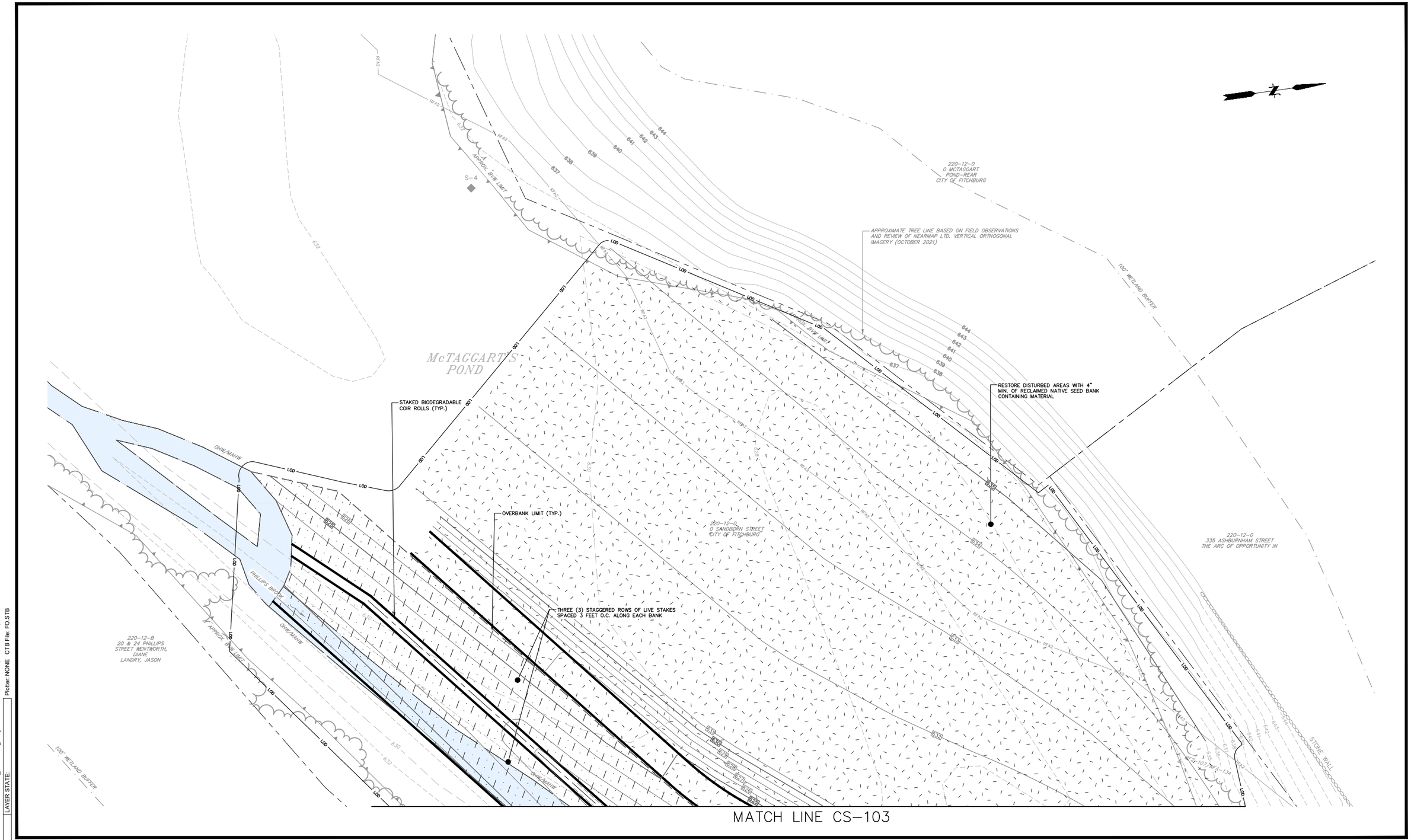
SITE RESTORATION PLAN 1

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CS-103



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CITY OF FITCHBURG

SITE RESTORATION PLAN 2

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CS-104

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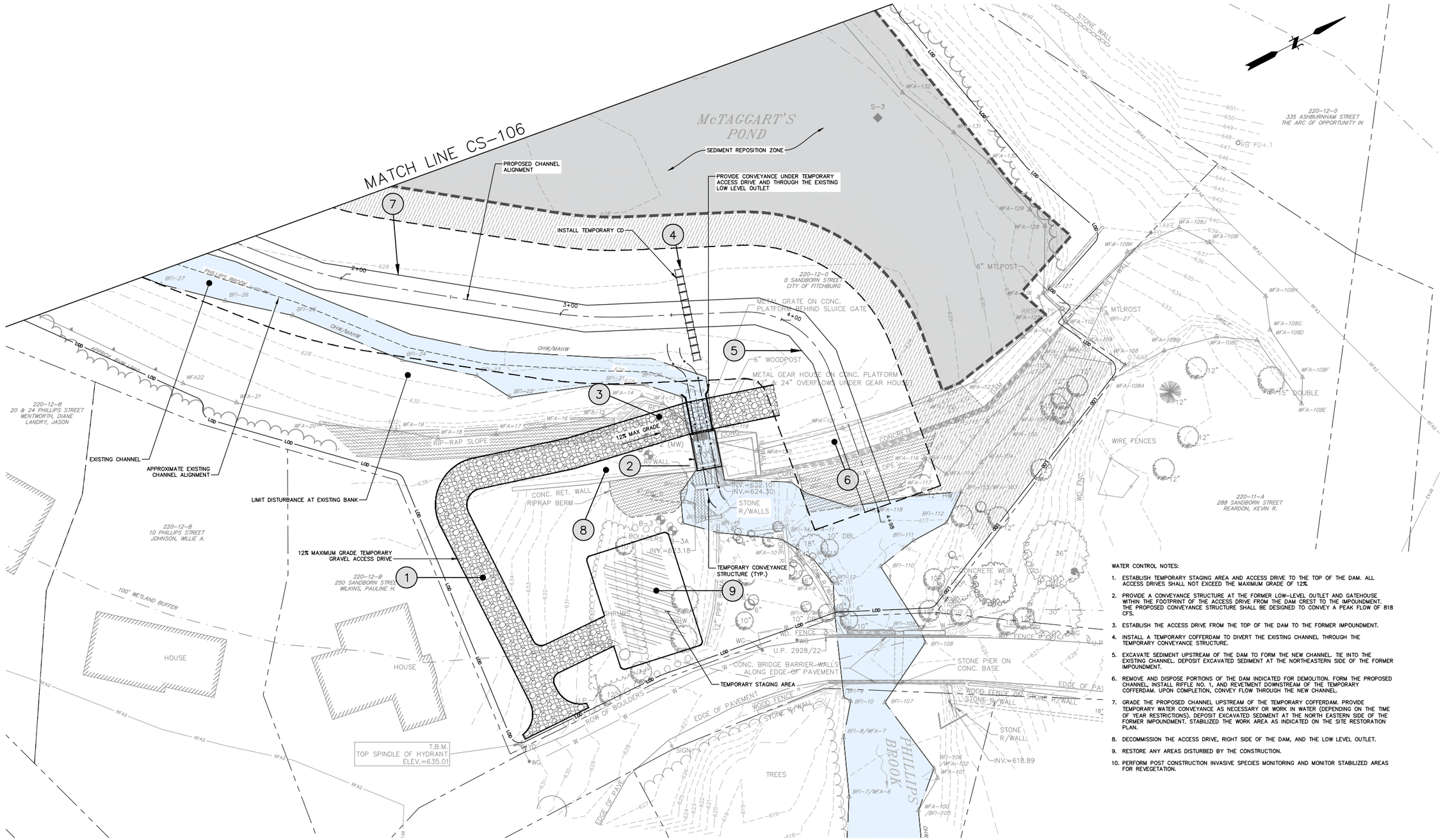

WATER CONTROL NOTES:

1. ESTABLISH TEMPORARY STAGING AREA AND ACCESS DRIVE TO THE TOP OF THE DAM. ALL ACCESS DRIVES SHALL NOT EXCEED THE MAXIMUM GRADE OF 12%.
2. PROVIDE A CONVEYANCE STRUCTURE AT THE FORMER LOW-LEVEL OUTLET AND GATEHOUSE WITHIN THE FOOTPRINT OF THE ACCESS DRIVE FROM THE DAM CREST TO THE IMPOUNDMENT. THE PROPOSED CONVEYANCE STRUCTURE SHALL BE DESIGNED TO CONVEY A PEAK FLOW OF 818 CFS.
3. ESTABLISH THE ACCESS DRIVE FROM THE TOP OF THE DAM TO THE FORMER IMPOUNDMENT.
4. INSTALL A TEMPORARY COFFERDAM TO DIVERT THE EXISTING CHANNEL THROUGH THE TEMPORARY CONVEYANCE STRUCTURE.
5. EXCAVATE SEDIMENT UPSTREAM OF THE DAM TO FORM THE NEW CHANNEL. TIE INTO THE EXISTING CHANNEL. DEPOSIT EXCAVATED SEDIMENT AT THE NORTHEASTERN SIDE OF THE FORMER IMPOUNDMENT.
6. REMOVE AND DISPOSE PORTIONS OF THE DAM INDICATED FOR DEMOLITION. FORM THE PROPOSED CHANNEL, INSTALL RIFFLE NO. 1, AND REVETMENT DOWNSTREAM OF THE TEMPORARY COFFERDAM. UPON COMPLETION, CONVEY FLOW THROUGH THE NEW CHANNEL.
7. GRADE THE PROPOSED CHANNEL UPSTREAM OF THE TEMPORARY COFFERDAM. PROVIDE TEMPORARY WATER CONVEYANCE AS NECESSARY OR WORK IN WATER (DEPENDING ON THE TIME OF YEAR RESTRICTIONS). DEPOSIT EXCAVATED SEDIMENT AT THE NORTH EASTERN SIDE OF THE FORMER IMPOUNDMENT. STABILIZED THE WORK AREA AS INDICATED ON THE SITE RESTORATION PLAN.
8. DECOMMISSION THE ACCESS DRIVE, RIGHT SIDE OF THE DAM, AND THE LOW LEVEL OUTLET.
9. RESTORE ANY AREAS DISTURBED BY THE CONSTRUCTION.
10. PERFORM POST CONSTRUCTION INVASIVE SPECIES MONITORING AND MONITOR STABILIZED AREAS FOR REVEGETATION.

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CITY OF FITCHBURG

CONSTRUCTION PHASING AND WATER CONTROL PLAN 1

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CS-105

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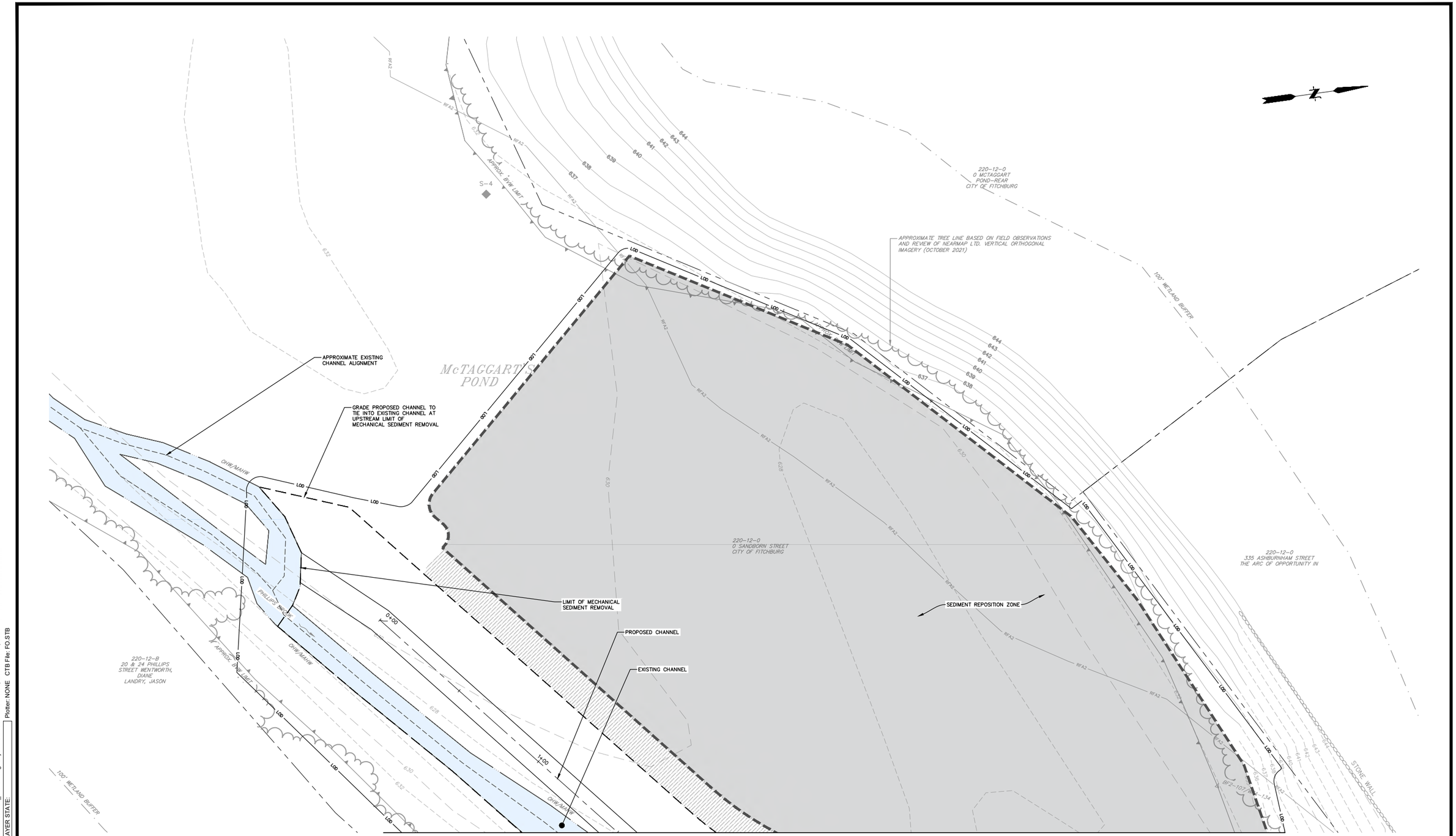

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CONSTRUCTION PHASING AND WATER CONTROL PLAN 2

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
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CS-106

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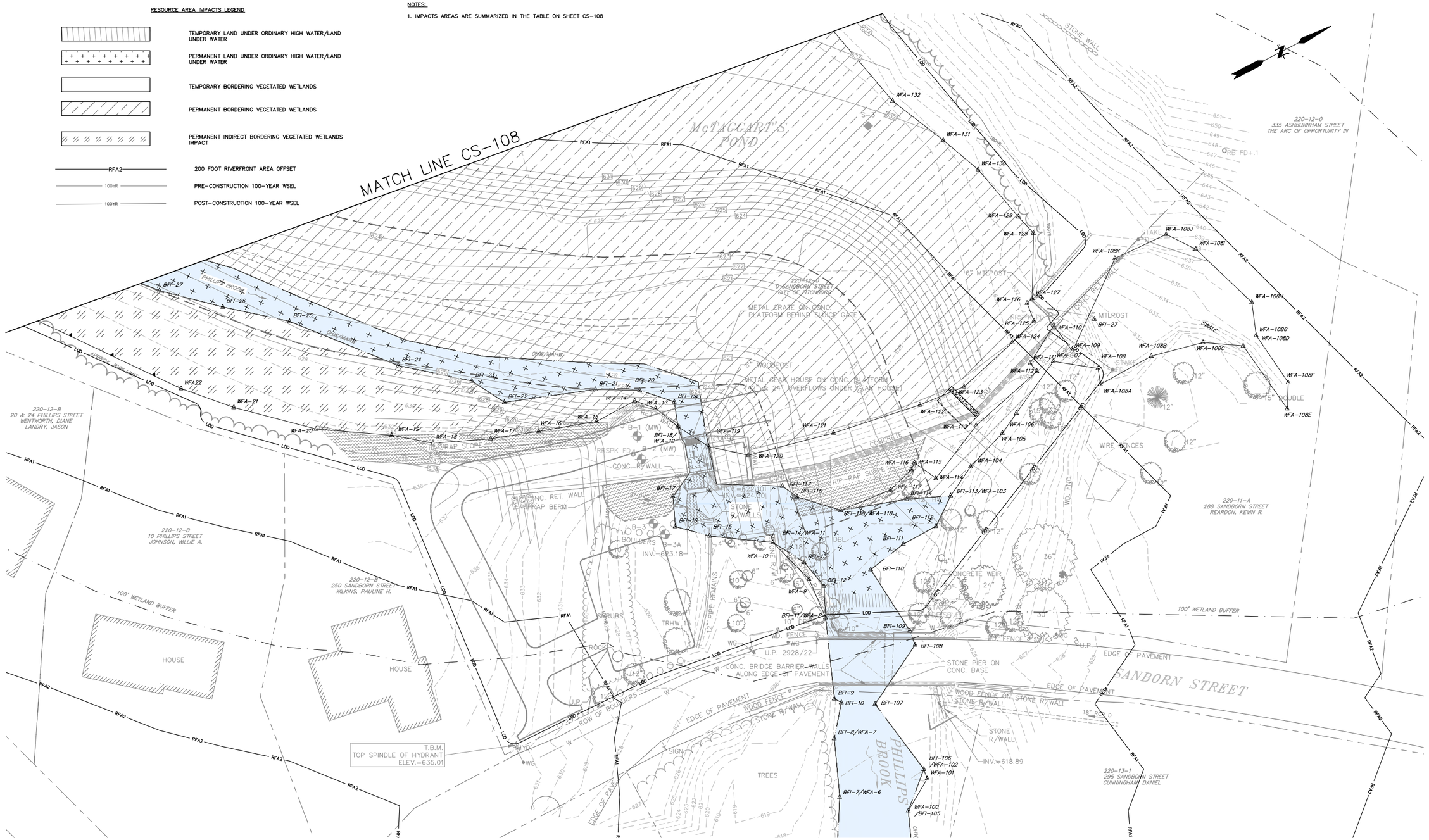
RESOURCE AREA IMPACTS LEGEND

- TEMPORARY LAND UNDER ORDINARY HIGH WATER/LAND UNDER WATER
- PERMANENT LAND UNDER ORDINARY HIGH WATER/LAND UNDER WATER
- TEMPORARY BORDERING VEGETATED WETLANDS
- PERMANENT BORDERING VEGETATED WETLANDS
- PERMANENT INDIRECT BORDERING VEGETATED WETLANDS IMPACT
- RFA2 — 200 FOOT RIVERFRONT AREA OFFSET
- 100YR — PRE-CONSTRUCTION 100-YEAR WSEL
- 100YR — POST-CONSTRUCTION 100-YEAR WSEL

NOTES:

1. IMPACTS AREAS ARE SUMMARIZED IN THE TABLE ON SHEET CS-108



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RESOURCE IMPACT AREA PLAN 1

MCTAGGART'S POND DAM REMOVAL AND
PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CS-107

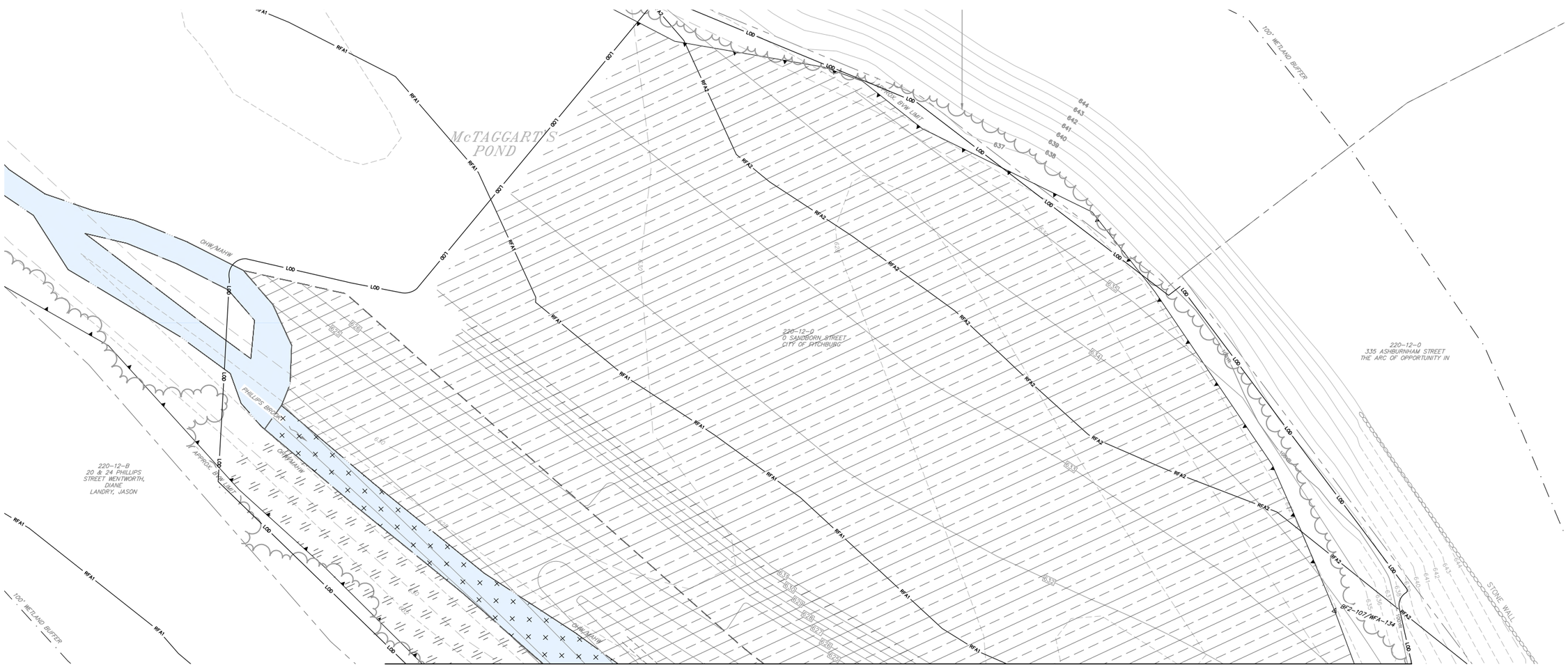
WETLAND RESOURCE AREA IMPACT SUMMARY

RESOURCE AREA	PROJECT AREA	TEMPORARY IMPACT (SF)	PERMANENT IMPACT (SF)	REPLACEMENT (SF)
LAND UNDER ORDINARY HIGH WATER/LAND UNDER WATER	UPSTREAM CHANNEL	0	5,646	30,461
	SEDIMENT REPOSITION ZONE	0	0	0
	DAM AND CONSTRUCTION ACCESS	0	880	0
	DOWNSTREAM CHANNEL	180	2,810	4,231
	TOTAL	180	9,336	34,692
BORDERING VEGETATED WETLANDS (BVW)	UPSTREAM CHANNEL	0	54,018	7,467
	SEDIMENT REPOSITION ZONE	0	69,645	0
	DAM AND CONSTRUCTION ACCESS	0	0	0
	DOWNSTREAM CHANNEL	0	1,137	2,399
	TOTAL	0	124,800	9,866

RESOURCE AREA	PROJECT AREA	TEMPORARY IMPACT (SF)	PERMANENT IMPACT (SF)	REPLACEMENT (SF)
RFA 0–100	UPSTREAM CHANNEL	0	58,932	22,103
	SEDIMENT REPOSITION ZONE	0	9,842	43,370
	DAM AND CONSTRUCTION ACCESS	5,748	0	2,871
	DOWNSTREAM CHANNEL	0	15,158	14,048
	TOTAL	5,748	83,932	82,392
RFA 100–200	UPSTREAM CHANNEL	0	0	0
	SEDIMENT REPOSITION ZONE	0	49,835	36,660
	DAM AND CONSTRUCTION ACCESS	0	2,881	0
	DOWNSTREAM CHANNEL	0	554	0
	TOTAL	0	53,270	36660
TOTAL RIVERFRONT AREA	WITHIN LIMIT OF DISTURBANCE	0.9 ACRES		

RESOURCE AREA	PROJECT AREA	TEMPORARY IMPACT (SF)	PERMANENT IMPACT (SF)	RESTORED (SF)
BORDERING LAND SUBJECT TO FLOODING (BLSF)	UPSTREAM CHANNEL	0	5,667	104,923
	SEDIMENT REPOSITION ZONE	0	0	0
	DAM AND CONSTRUCTION ACCESS	0	0	0
	DOWNSTREAM CHANNEL	0	6,153	7,983
	TOTAL	0	11,820	112,906
INLAND BANK	UPSTREAM CHANNEL	0	925 LF	1033 LF
	DAM	0	64 LF	29 LF
	DOWNSTREAM CHANNEL	0	305 LF	136 LF
	TOTAL	0	1294 LF	1198 LF

MATERIAL DREDGE	STABLE CHANNEL (WITHIN OHW/MAHW MARK)	500 CY
TEMPORARY DISCHARGE TO LUW	DOWNSTREAM CHANNEL (CHECK DAM)	20 CY
DISCHARGE TO WETLAND	SEDIMENT REPOSITION ZONE	7,470 CY
TEMPORARY DISCHARGE TO BVW	UPSTREAM CHANNEL (COFFERDAM)	12 CY
LIMIT OF DISTURBANCE	GENERAL PROJECT AREA	3.94 ACRES



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RESOURCE IMPACT AREA PLAN 2

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
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CS-108

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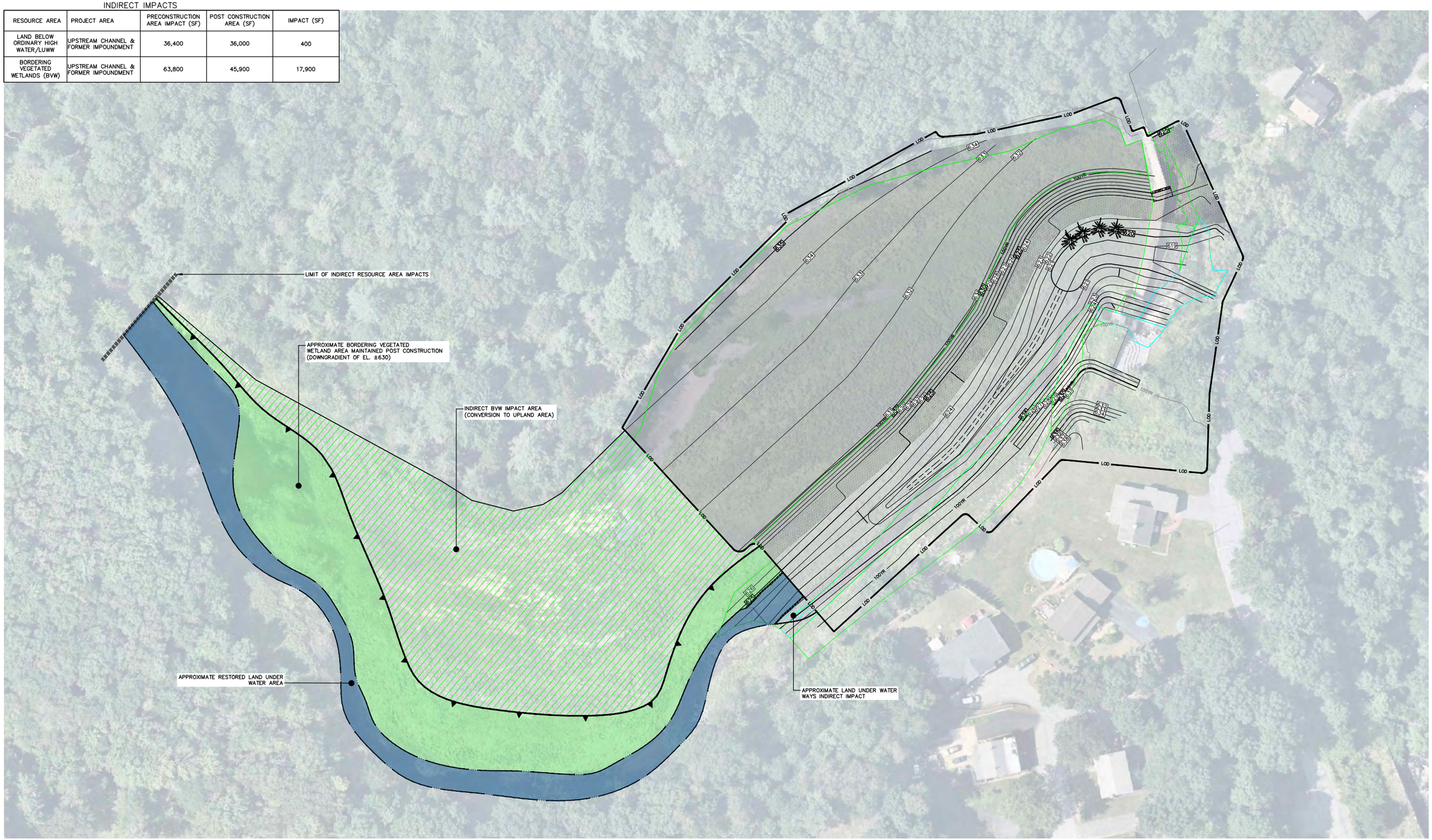
INDIRECT IMPACTS

RESOURCE AREA	PROJECT AREA	PRECONSTRUCTION AREA IMPACT (SF)	POST CONSTRUCTION AREA (SF)	IMPACT (SF)
LAND BELOW ORDINARY HIGH WATER/LUWW	UPSTREAM CHANNEL & FORMER IMPOUNDMENT	36,400	36,000	400
BORDERING VEGETATED WETLANDS (BVW)	UPSTREAM CHANNEL & FORMER IMPOUNDMENT	63,800	45,900	17,900



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INDIRECT RESOURCE AREA IMPACT PLAN

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
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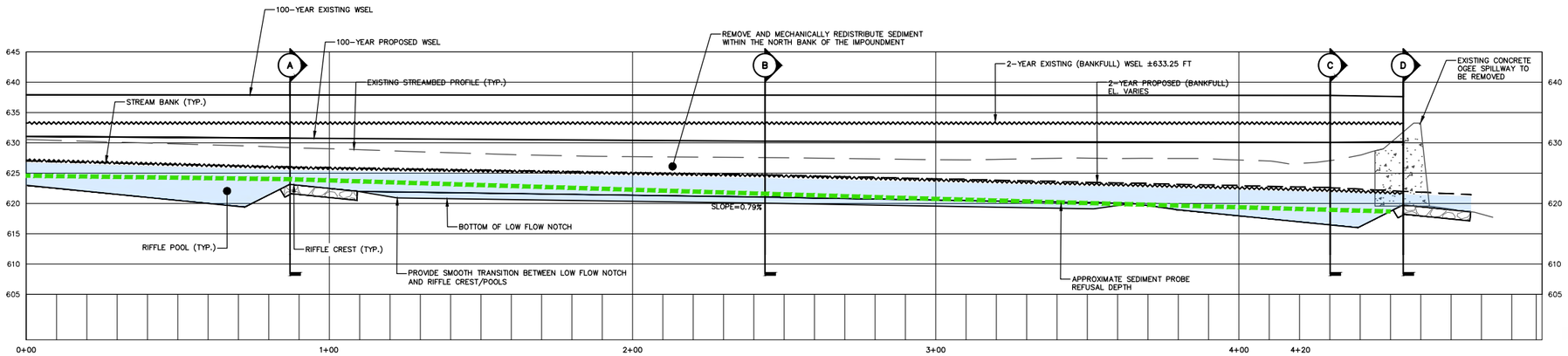
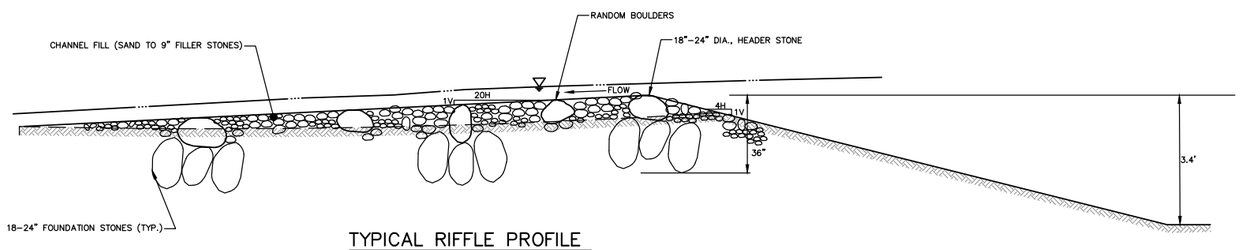
CS-109

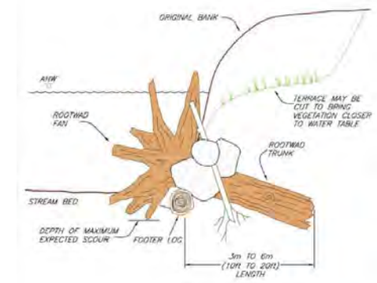


CHANNEL PROFILE



TYPICAL RIFFLE PROFILE

NOT TO SCALE



ROOT WAD DETAIL

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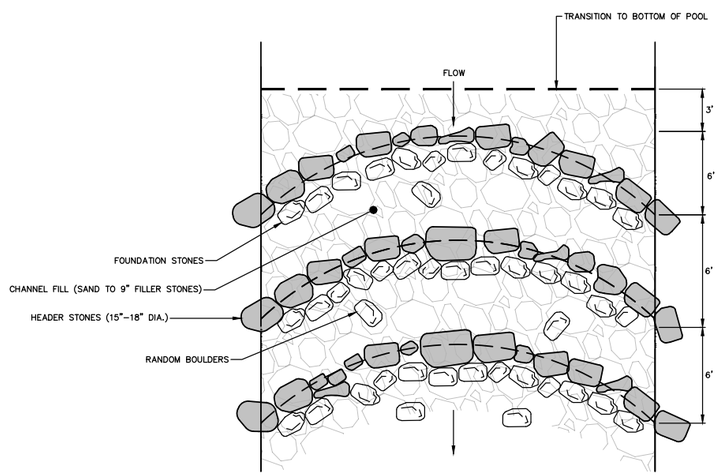
SOURCE: VIRGINIA DOT



TYPICAL RIFFLE PLAN

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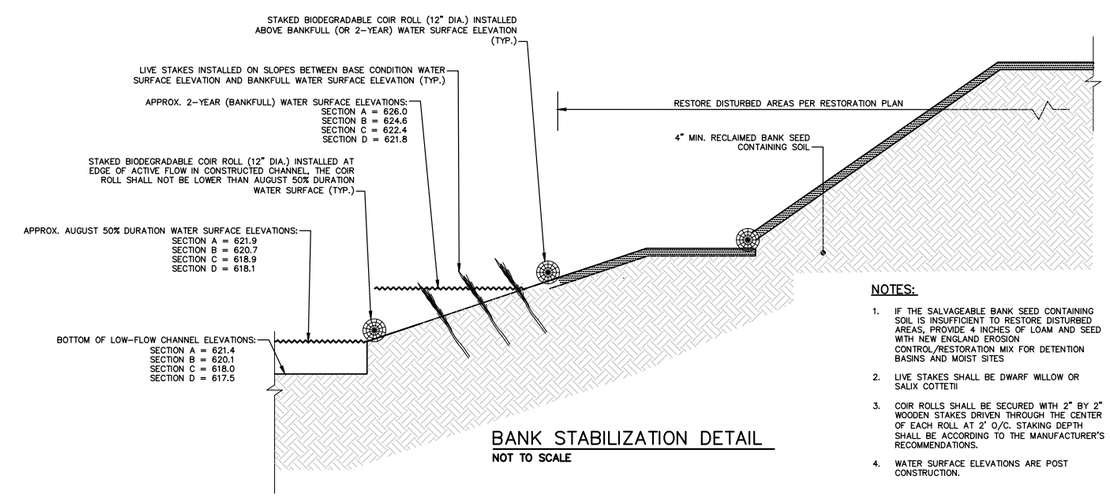

BANK STABILIZATION DETAIL

NOT TO SCALE

NOTES:

1. IF THE SALVAGEABLE BANK SEED CONTAINING SOIL IS INSUFFICIENT TO RESTORE DISTURBED AREAS, PROVIDE 4 INCHES OF LOAM AND SEED WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES
2. LIVE STAKES SHALL BE DWARF WILLOW OR SAUX COTTETII
3. COIR ROLLS SHALL BE SECURED WITH 2" BY 2" WOODEN STAKES DRIVEN THROUGH THE CENTER OF EACH ROLL AT 2' O/C. STAKING DEPTH SHALL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
4. WATER SURFACE ELEVATIONS ARE POST CONSTRUCTION.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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HORZ.: VARIES
VERT.: VARIES
DATUM:
HORZ.: NAD83
VERT.: NAVD88
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GRAPHIC SCALE

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CITY OF FITCHBURG

CHANNEL PROFILE AND DETAILS

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CX-101

File Path: J:\DWG\P2020\0263\D20\Civil\Plan\20200263.D20_STP01.dwg Layout: CX-101 Plotted: Wed, December 11, 2024 - 4:42 PM User: sam.huffman
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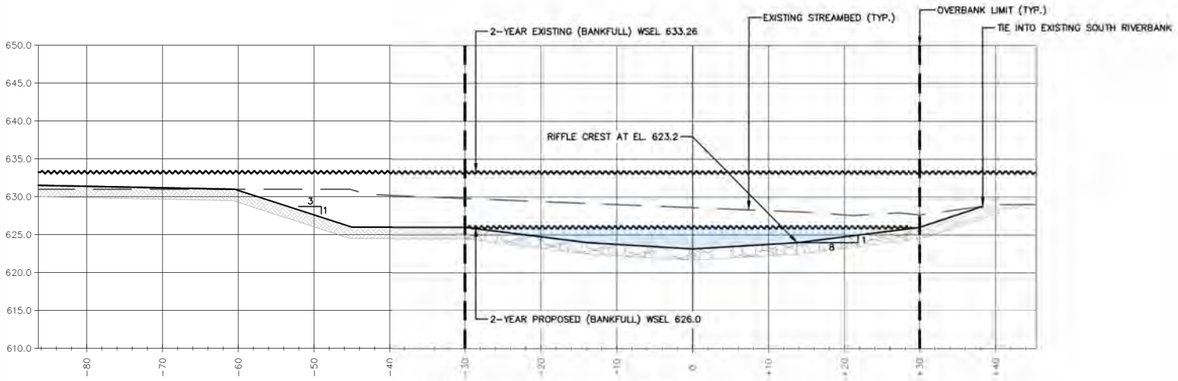
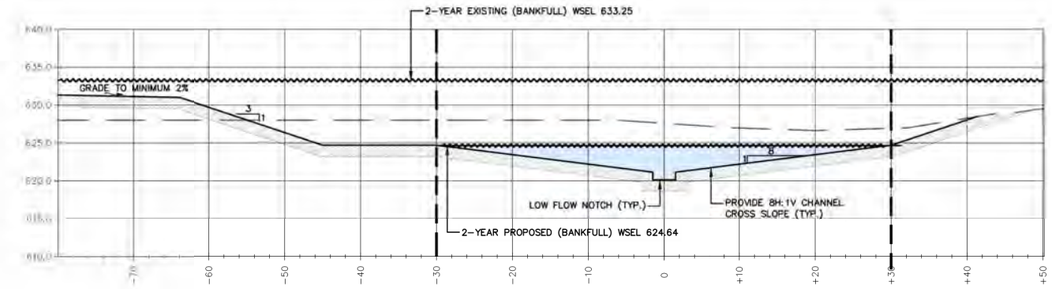
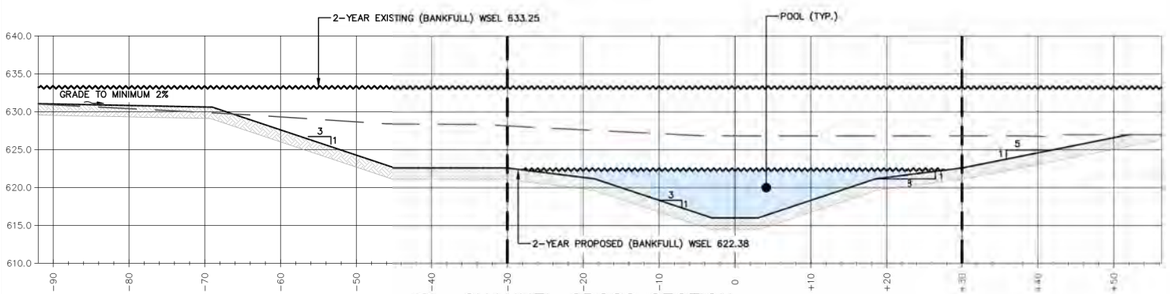


A CHANNEL CROSS SECTION
HORIZ.: 1"=20' VERT.: 1"=20'



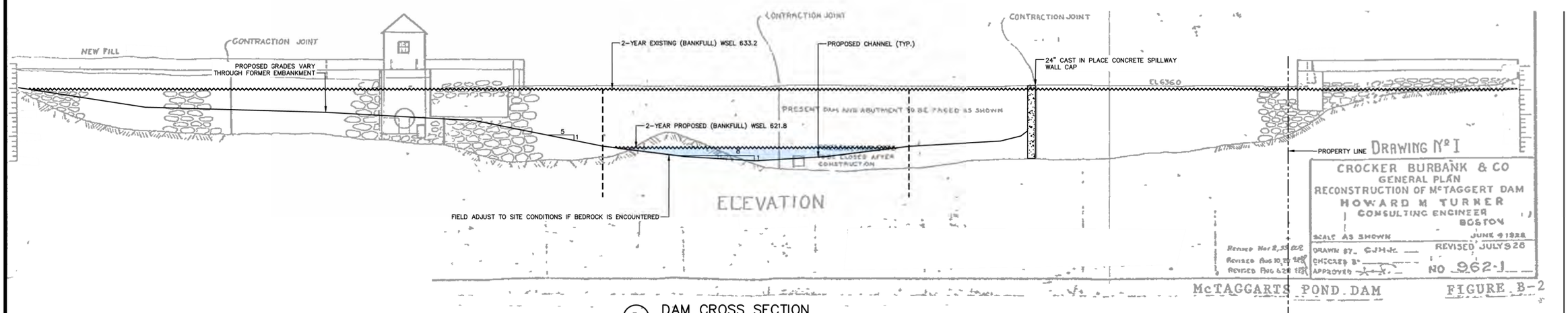
B CHANNEL CROSS SECTION
HORIZ.: 1"=20' VERT.: 1"=20'



C CHANNEL CROSS SECTION
HORIZ.: 1"=20' VERT.: 1"=20'

NOTES:

1. CROSS SECTION D WAS INTERPOLATED BASED OFF THE PROPOSED CHANNEL CONDITIONS AT THE DAM. HISTORICAL DRAWINGS ARE NOT TO SCALE. THIS CROSS SECTION SHOULD BE USED AS A REFERENCE ONLY. THE CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS.
2. THE ELEVATIONS PROVIDED IN THE HISTORICAL DRAWINGS BELOW REFERENCE AN UNKNOWN DATUM.



D DAM CROSS SECTION
NOT TO SCALE

	SEAL	SEAL		SCALE: HORZ.: AS NOTED; VERT.:	FUSS & O'NEILL 1550 MAIN STREET, SUITE 400 SPRINGFIELD, MA 01103 413.452.0445 www.fando.com	CITY OF FITCHBURG PROPOSED CROSS SECTIONS MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT FITCHBURG MASSACHUSETTS
				DATUM: HORZ.: - ; VERT.: -		

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CX-102

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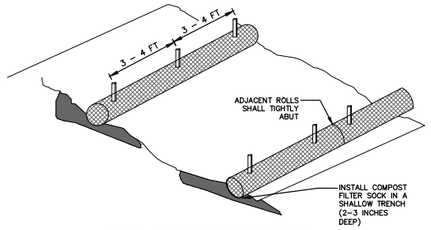
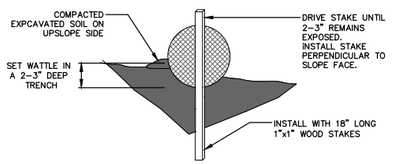


TYPICAL WATTLE INSTALLATION GUIDE



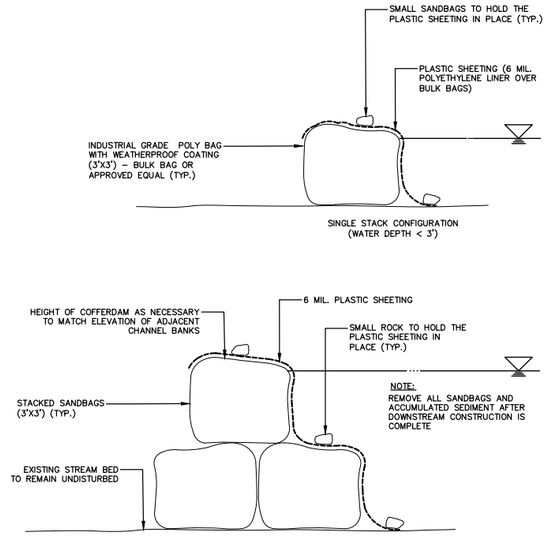
ENTRENCHMENT

NOTES:

1. WATTLES SHALL BE INSTALLED AT LOCATIONS AS INDICATED ON THE DRAWINGS.
2. WATTLES SHALL BE TRENCHED APPROXIMATE 2–3 INCHES AND STAKED SUCH THAT WATTLES DIRECTLY CONTACT SOIL AND PRECLUDE UNDERMINING OR BLOWOUTS. THE TRENCH SHALL BE APPROXIMATELY 9 INCHES WIDE. STAKES SHALL BE DRIVEN THROUGH THE CENTER OF THE WATTLE AT A SPACING OF 3–4 FEET ON CENTER
3. AND NO GREATER THAN 6" FROM THE EACH END OF THE WATTLE. STAKES SHALL BE 1–INCH BY 1–INCH WOODEN STAKES WITH A LENGTH OF 18–24 INCHES. COMPACT SOIL EXCAVATED TO CREATE TRENCH ON UPHILL SIDE SIDE.
4. ENDS OF ADJACENT WATTLES SHALL BE TIGHTLY BUTTED OR OVERLAPPED SO THAT NO OPENING EXISTS FOR WATER TO PASS THROUGH. WATTLES SHALL BE FREE OF DAMAGE OR DEFECTS WHEN DELIVERED TO THE SHIPPER. NO VEHICLES SHALL BE DRIVEN OVER WATTLES.
5. WATTLES SHALL BE 12–INCH WS1210 MANUFACTURED BY NORTH AMERICAN GREEN, OR APPROVED EQUAL.

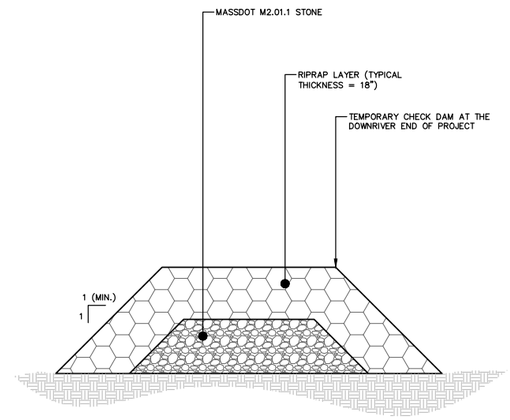
STRAW WATTLES

NOT TO SCALE



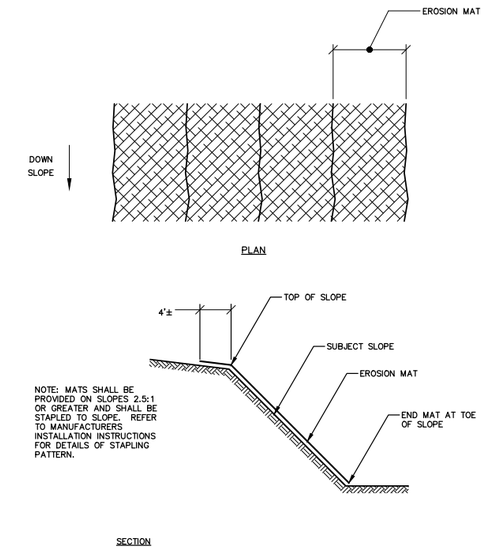
SANDBAG COFFERDAM

NOT TO SCALE



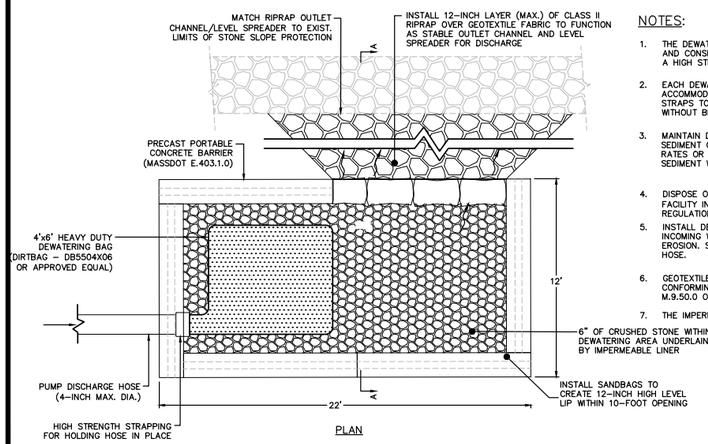
TEMPORARY STONE CHECKDAM

NOT TO SCALE



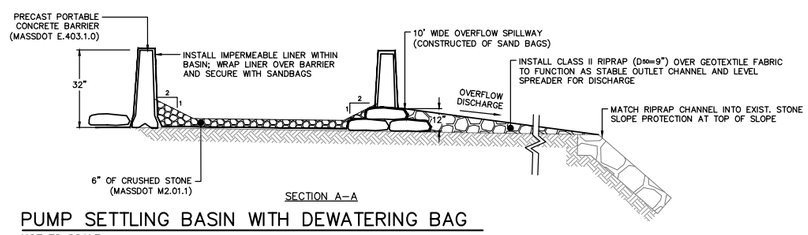
TEMPORARY EROSION CONTROL MAT

NOT TO SCALE



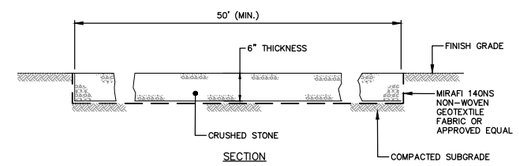
NOTES:

1. THE DEWATERING BAG, DIRTBAG DB 55 OR APPROVED EQUAL, SHALL BE HEAVY DUTY AND CONSIST OF A NONWOVEN BAG SEWN WITH A DOUBLE NEEDLE MATCHING USING A HIGH STRENGTH THREAD.
2. EACH DEWATERING BAG SHALL HAVE A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE A 4–INCH DISCHARGE HOSE. THE BAG SHALL BE PROVIDED WITH STRAPS TO SECURE THE HOSE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
3. MAINTAIN DEWATERING BAG(S) AS NECESSARY TO EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE. USE OF EXCESSIVE FLOW RATES OR OVERFILLING DIRTBAG OF THE HOSE ATTACHMENT STRAPS WITH SEDIMENT WILL CAUSE RUPTURES OF THE BAGS OR FAILURE.
4. DISPOSE OF DEWATERING BAG AND CONTENTS AT OFF–SITE DISPOSAL FACILITY IN ACCORDANCE WITH LOCAL, STATE, AND/OR FEDERAL REGULATIONS.
5. INSTALL DEWATERING BAG AND CRUSHED STONE BEDDING WITH A SLOPE SO INCOMING WATER FLOWS DOWNHILL THROUGH THE BAG WITHOUT CREATING MORE EROSION. STRAP THE NECK OF DEWATERING BAG TIGHTLY TO THE DISCHARGE HOSE.
6. GEOTEXTILE FILTER FABRIC SHALL CONSIST OF A NONWOVEN GEOTEXTILE FABRIC CONFORMING TO TYPE III FABRIC IN ACCORDANCE WITH TABLE III, SECTION M.9.50.0 OF THE MASSDOT STANDARD SPECIFICATIONS.
7. THE IMPERMEABLE LINER SHALL CONSIST OF A 30–MIL THICK PVC LINER.



PUMP SETTLING BASIN WITH DEWATERING BAG

NOT TO SCALE

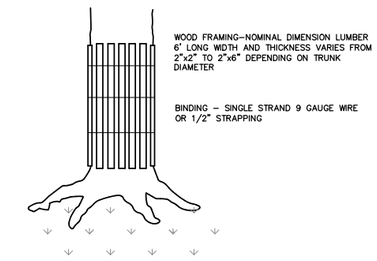


NOTES:

1. MAINTAIN CONSTRUCTION ENTRANCE IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
2. ANY PAVED AREAS, ADJACENT TO THE CONSTRUCTION ENTRANCE SHALL BE SWEPT DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.
3. REMOVE STONE, FABRIC, AND TRACKED MATERIALS FOLLOWING CONSTRUCTION ACTIVITIES AND RESTORE AREA TO ORIGINAL CONDITION.
4. CRUSHED STONE SHALL CONFORM TO THE GRADATION LISTED FOR M2.01.0 OF THE MASSDOT STANDARD SPECIFICATIONS.

TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



TREE PROTECTION DEVICE

NOT TO SCALE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL

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NOT FOR CONSTRUCITON

SCALE:
HORZ.:
VERT.:
DATUM:
HORZ.: NAD83
VERT.: NAVD88
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CITY OF FITCHBURG

CIVIL SITE DETAILS

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

CD-501

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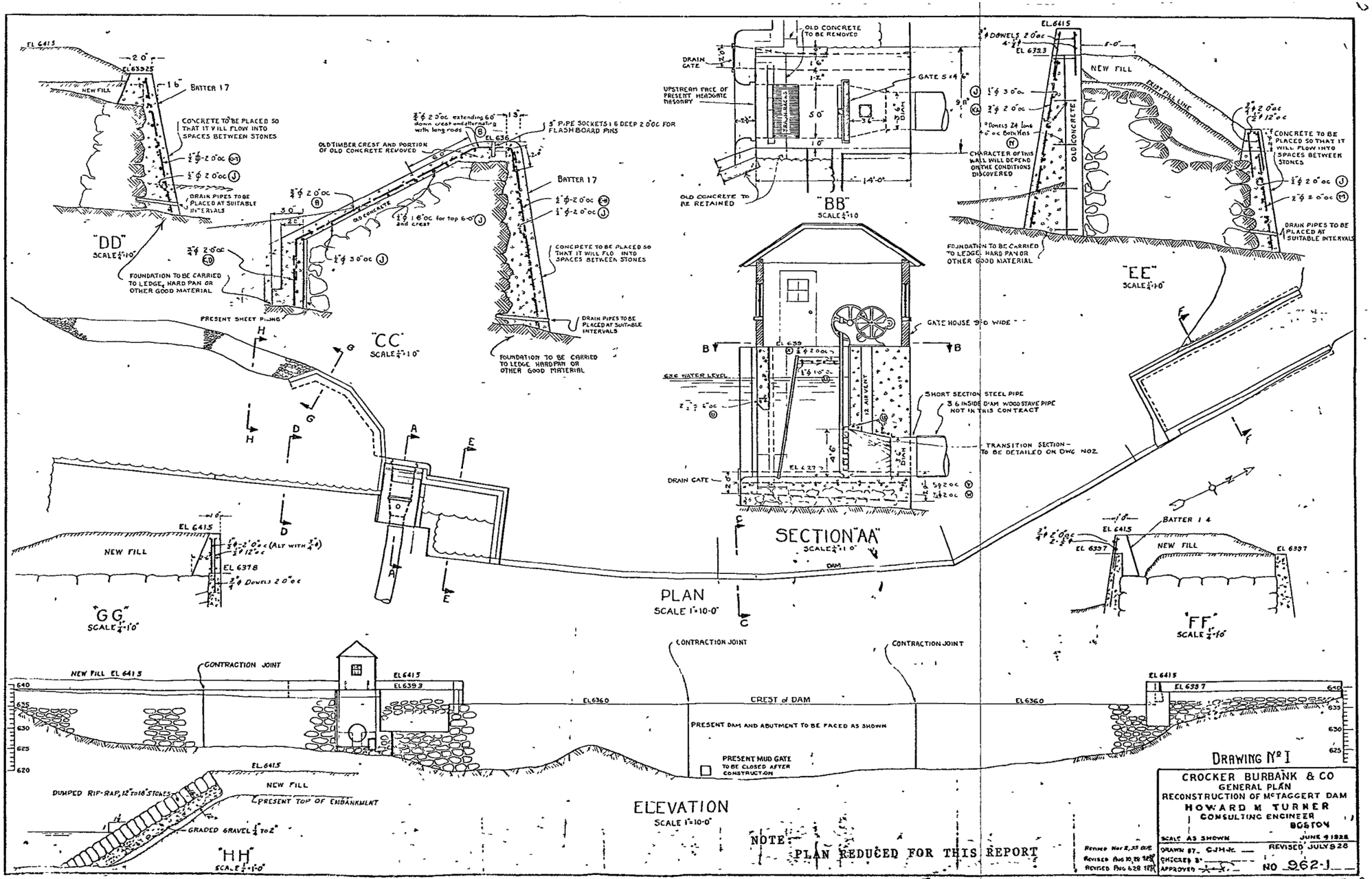

McTAGGARTS POND DAM

FIGURE B-2

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL

SEAL

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SCALE:
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DATUM:
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CITY OF FITCHBURG

HISTORIC RECORD DRAWINGS

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

VR-101

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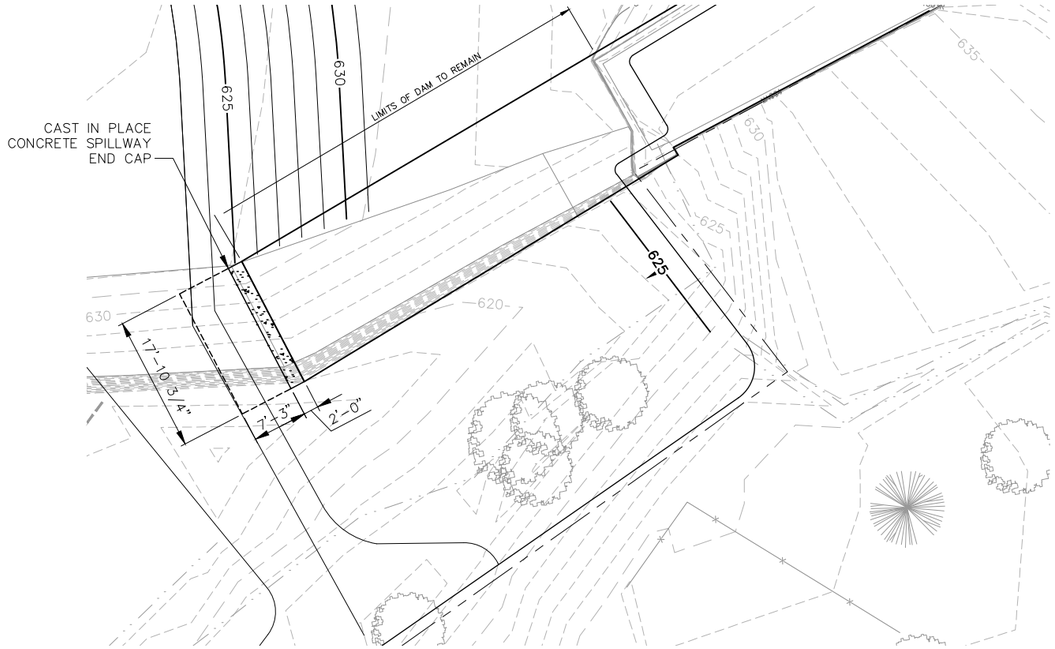
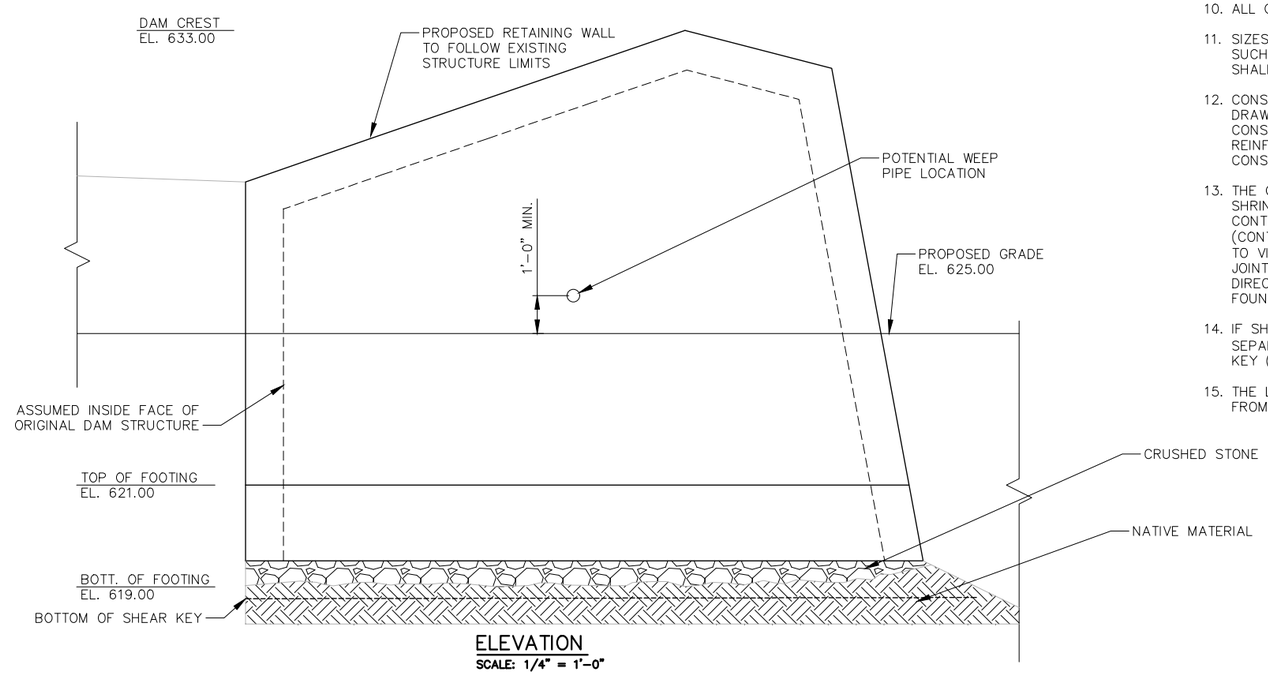


GENERAL PLAN
SCALE: 1" = 20'-0"



ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

UNSUITABLE MATERIAL:
ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE DESIGN ENGINEER OF RECORD.

EXISTING CONSTRUCTION:
DIMENSIONS SHOWN ARE TAKEN FROM SURVEY AND VARIOUS FIELD MEASUREMENTS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE AND NOT ORDER ANY MATERIAL OF COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

CONCRETE MIXES:
THE FOLLOWING CONCRETE MIX UNLESS NOTED ELSEWHERE ARE TO BE USED:
4000 PSI, 1 1/2IN, 565 CEMENT

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 AND BE DETAILED IN ACCORDANCE WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
3. REBARS SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:
   CONCRETE DEPOSITED AGAINST GROUND.....3 IN.
   CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
   FOR BARS #5 AND LARGER.....2 IN.
   FOR BARS SMALLER THAN #5.....1½ IN.
   CONCRETE NOT EXPOSED TO THE WEATHER OR THE GROUND:
   SLABS AND WALLS.....¾ IN.
4. ALL REINFORCING BARS SHALL BE CONTINUOUS AND LAPPED A MINIMUM OF 48 BAR DIAMETERS AT ALL SPLICES, CORNERS, AND INTERSECTIONS UNLESS NOTED OTHERWISE.
5. ALL REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPOSED LOCATION PRIOR TO AND DURING PLACEMENT OF CONCRETE USING APPROVED CHAIRS, SPACERS AND TIE WIRE AS REQUIRED. NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER.
6. CONCRETE PROTECTION FOR REINFORCEMENT SHALL IN ALL CASES BE AT LEAST EQUAL TO THE DIAMETER OF THE BAR EXCEPT FOR CONCRETE SLABS.
7. ALL FOUNDATION CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1½ INCH, A MINIMUM CEMENT CONTENT OF 565 LBS/CU YD., AND A MAXIMUM SLUMP OF 4 INCHES.
8. ALL FOOTINGS AND PIERS SHALL BE CENTERED BELOW THE MEMBERS WHICH THEY SUPPORT UNLESS SHOWN OTHERWISE.
9. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A ¾ INCH CHAMFER UNLESS NOTED OTHERWISE.
10. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED.
11. SIZES AND LOCATIONS OF ALL REQUIRED EMBEDDED ITEMS FOR ALL TRADES SUCH AS ANCHOR BOLTS, PIPING SLEEVES, HOLDOWN ANCHORS, ETC., SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES.
12. CONSTRUCTION JOINTS SHALL BE DETAILED AND LOCATED ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER. UNLESS SHOWN OTHERWISE, CONSTRUCTION JOINTS ARE TO BE KEYED AND PROVIDE FOR CONTINUITY OF REINFORCING STEEL. CONSTRUCTION JOINTS ARE TO BE LOCATED WHERE CONSTRUCTION OPERATIONS ARE SUSPENDED FOR 30 MINUTES OR MORE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING POURS TO MINIMIZE SHRINKAGE CRACKING. IN GENERAL, WALLS SHALL NOT BE POURED IN CONTINUOUS LENGTHS EXCEEDING 30 FEET WITHOUT CONTRACTION (CONTROL) JOINTS. THE LOCATION AND CONFIGURATION OF JOINTS EXPOSED TO VIEW SHALL BE COORDINATED WITH THE ARCHITECT. CONTRACTION JOINTS IN SLAB-ON-GRADE SHOULD NOT EXCEED 20 FEET IN ANY DIRECTION. TYPICAL CONTRACTION JOINT PATTERNS ARE INDICATED ON FOUNDATION PLANS.
14. IF SHALLOW FOUNDATION WALLS, EXTENDED PLATFORMS, ETC. ARE POURED SEPARATELY FROM THE MAIN FOUNDATION WALLS, PROVIDE 2½ INCH DEEP KEY (FULL AREA) AND DOWEL ALL REINFORCEMENT.
15. THE LIFTING MECHANISM SHALL BE SUPPORTED BY SALVAGED TIMBERS FROM THE GATEHOUSE.

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CITY OF FITCHBURG

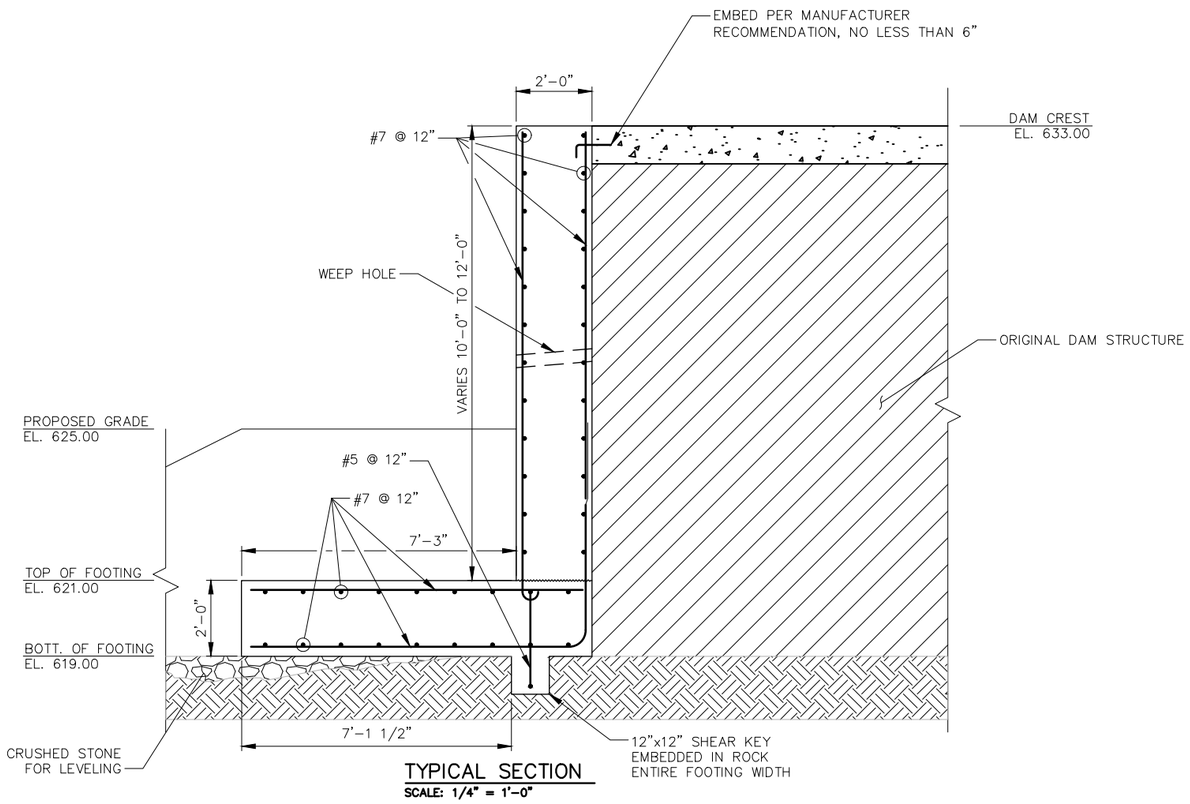
GENERAL PLAN AND ELEVATION

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

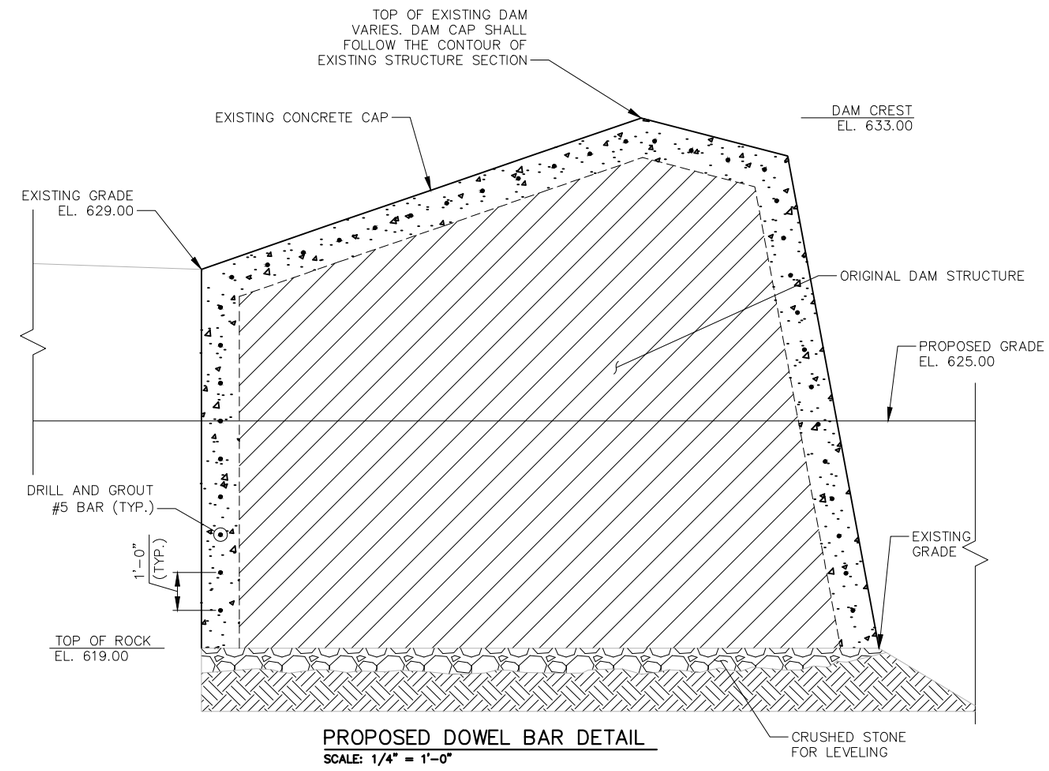
FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

STR-01



TYPICAL SECTION
SCALE: 1/4" = 1'-0"



PROPOSED DOWEL BAR DETAIL
SCALE: 1/4" = 1'-0"

NOTES:

1. RETAINING WALL SHALL BEAR ON ROCK. CRUSHED STONE TO BE USED FOR LEVELING IRREGULARITIES WHERE REQUIRED.

2. WALL DESIGNED FOR MAX. OF 12'-0" STEM FROM TOP OF FOOTING. CONTRACTOR SHALL CONTACT ENGINEER IF FIELD CONDITIONS WARRANT HEIGHTS GREATER THAN 12'-0".

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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HORZ.: AS NOTED
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CITY OF FITCHBURG

PROPOSED DAM END CAP DETAILS

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

STR-02

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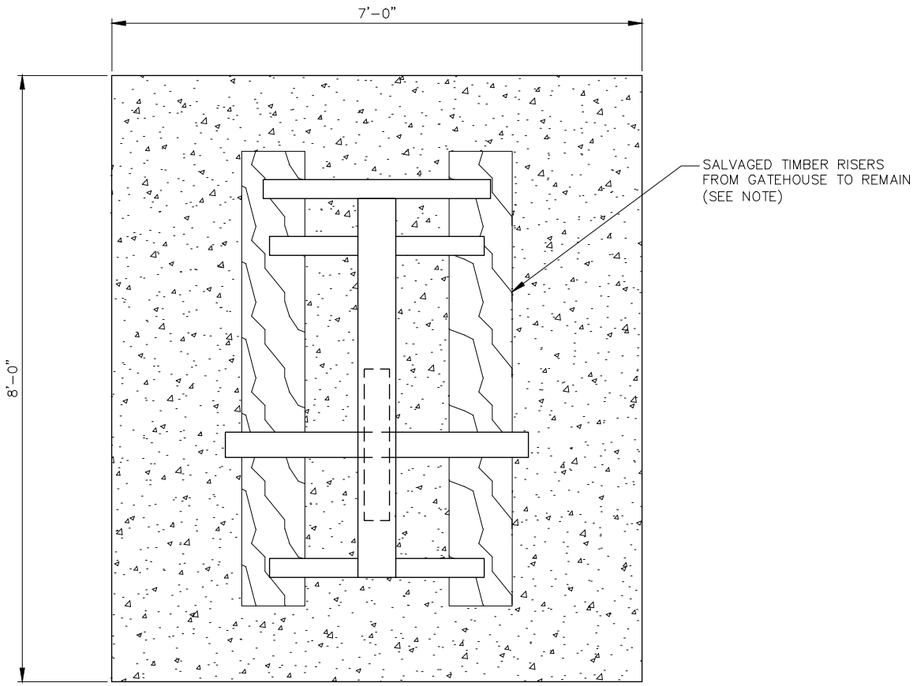
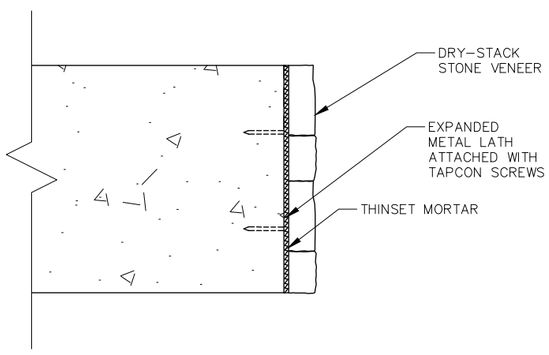
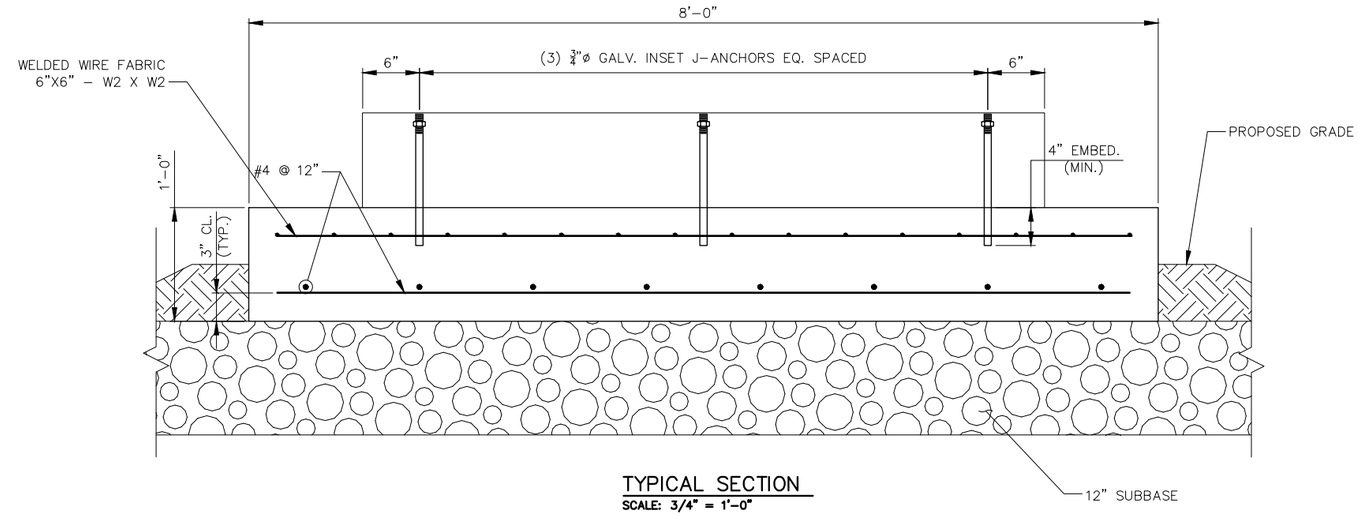


PLAN
SCALE: 1/2" = 1'-0"

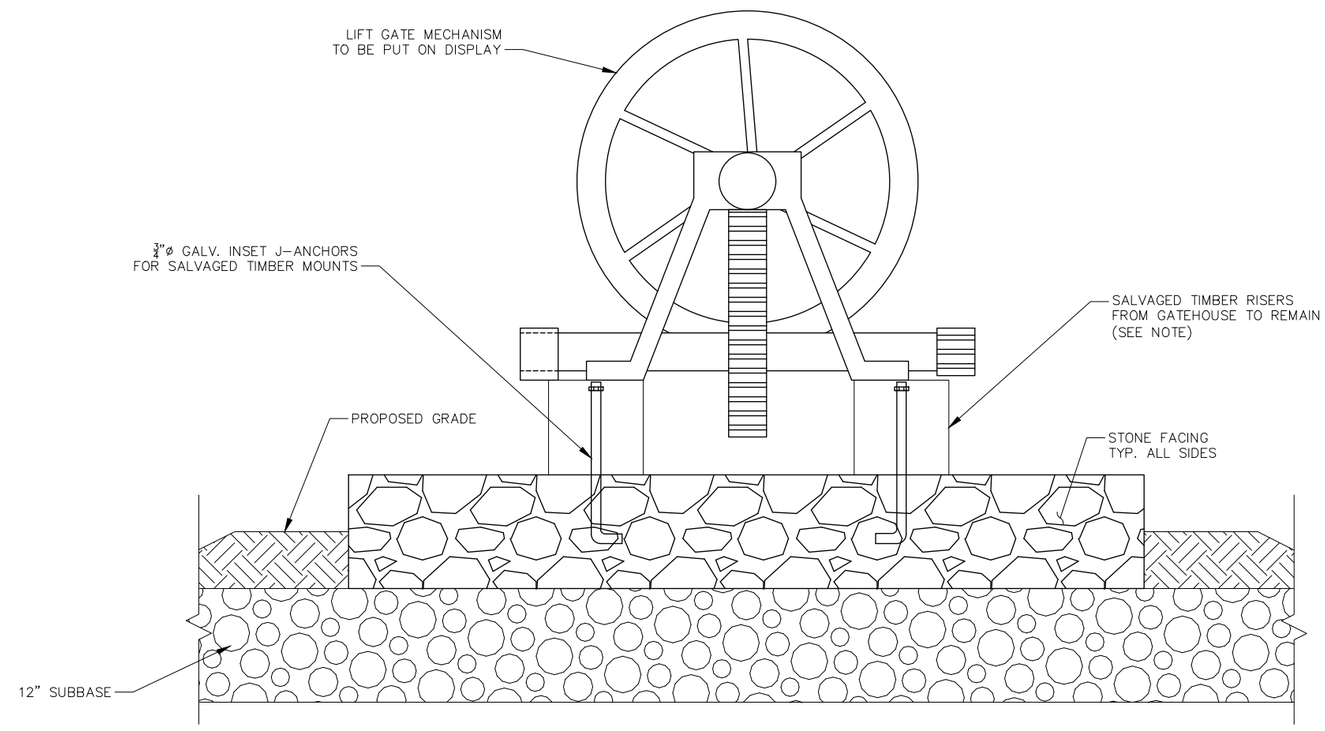
NOTE:
EXISTING TIMBER MOUNTED TO MECHANISM TO BE SALVAGED AND REUSED AS MOUNT ON TOP OF PROPOSED SLAB. CONTRACTOR SHALL THEN USE SALVAGED TIMBER OR PROVIDE NEW TIMBER OR SHIMS TO RAISE MECHANISM AS NEEDED UNTIL ADEQUATE CLEARANCE IS PROVIDED.



STONE FACING DETAIL
N.T.S.



TYPICAL SECTION
SCALE: 3/4" = 1'-0"



FRONT ELEVATION
SCALE: 3/4" = 1'-0"

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
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SEAL

SEAL

SCALE:
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VERT.: -

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CITY OF FITCHBURG

PROPOSED LIFT GATE MECHANISM SLAB

MCTAGGART'S POND DAM REMOVAL AND PHILLIPS BROOK RESTORATION PROJECT

FITCHBURG MASSACHUSETTS

PROJ. No.: 20200263.D20
DATE: DECEMBER 2024

STR-03

File: J:\DWG\P2020\0263\D20\Civil\Plan\22x34\20200263.D20_Details_NEW_22X34.dwg Layout: S-03-22X34-L Plotted: 2025-10-07 8:25 AM Saved: 2025-10-07 8:21 AM User: Sarah.Frisby
PC3: AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 STB/CTB: FO.STB
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