



CITY OF WATERTOWN

Conservation Commission

Leo G. Martin, Chair
Maria Rose, Vice Chair
Charles Bering, Member
Darya Mattes, Member
Rachel Danford, Member

The Conservation Commission of the City of Watertown will hold a public meeting on the 7th day of December, 2022 at 7:00 p.m. This meeting has only remote opportunities for participation with public access provided as follows:

CONSERVATION COMMISSION MEETING WEDNESDAY, DECEMBER 7, 2022 AT 7:00 PM AGENDA

ACCESS INFORMATION:

- A. The meeting will be televised through WCATV (Watertown Cable Access Television):
<http://vodwcatv.org/CablecastPublicSite/?channel=1>
- B. The Public may join the virtual meeting online: <https://watertown-ma.zoom.us/j/99597080710>
- C. Public may join the virtual meeting audio only by phone: (877) 853-5257 or (888) 475-4499 (Toll Free) and enter Webinar ID: 995 9708 0710
- D. Public may comment through email: sjenness@watertown-ma.gov

1. Introduction

- A. Katherine Swan- Environmental Planner and Conservation Agent

2. Public Hearing-

- A. (Continuance was requested to January 4, 2023 meeting)- **Notice of Intent- O Arlington St.** (Williams Pond Parcel)- to construct a 2 story commercial building and parking lot on property known as the Williams Pond parcel: Max Hatziliades, Applicant/Owner, Mickey Marcus, Representative

3. Public Hearing-

- A. (Continuance was requested to the February 1, 2023 meeting)- **Request for Determination of Applicability-** for the proposed parking lot improvements and utility upgrades located at **10-30 Manley Way**, Watertown, Massachusetts. PPF Industrial 20 Seylon, LLC, Owner, Christopher M. Lucas, Representative/Applicant

4. Public Hearing-

- A. **Certificate of Compliance – 330-350 Pleasant St. Project** - Proposed is a mixed use residential and commercial development at 330, 340, 350 Pleasant Street.
Applicant/Owner. Mark Coppola, World Realty & Development, LTD Representative:
John P. Rockwood, ECOTECH, INC.
- 5. Discussion
 - A. Whitney Hill Trail Work with Student Conservation Association, (SCA)
- 6. Agent Report
 - A.
 - 1. CPC Update- Jamie O'Connell
 - 2. Climate and Energy Plan
 - 3. Whitney Hill Signage Update
 - 4. Ongoing Orders of Conditions
 - 5. Arsenal Park
- 7. Acceptance of Minutes
 - A. Review and Acceptance of Minutes from **July 13, 2022, September 14, 2022 and October 12, 2022.**
- 8. Exempt Activity Notice
 - A. Notification of MWRA water pipeline rehabilitation of Section 24 at its crossing of the Charles River

VTP
ASSOCIATES
INC.

LAND SURVEYORS-CIVIL ENGINEERS
MORTGAGE INSPECTION
SPECIALISTS

TEL (617) 332-8271
TELEFAX (617) 969-2330
EMAIL: vtp@vtpassociates.com

132 ADAMS STREET
2ND FLOOR, SUITE 3
NEWTON, MA 02458

June 21, 2021

Town of Watertown
Conservation Commission
Town Hall, Third Floor
149 Main Street
Watertown, MA 02472

Attn: Ms. Susan Jenness, CC/HC Clerk

Re: 330 to 350 Pleasant Street (DEP #321-0087 WWO #01-4)

Dear Commission Members

I hereby affirm that the project at 340 Pleasant Street was complete in substantial compliance with the approved plan.

As Coppola Real Estate Holding Company, LLC has completed the work for the above referenced project in substantial compliance with the Order of Conditions issued by the Town of Watertown Conservation Commission and recorded at the Middlesex South Registry of Deeds in Book 67639 Page 255. On their behalf I am requesting a certificate of compliance.

As usual, if you have any questions or need further information please do not hesitate to contact me.

Very truly yours



Marc Besio, P.E.



EcoTec, Inc.
ENVIRONMENTAL CONSULTING SERVICES
102 Grove Street
Worcester, MA 01605-2629
508-752-9666 – Fax: 508-752-9494

November 1, 2022

Watertown Conservation Commission
Ms. Susan Jenness, CC/HC Clerk
Town Hall, 3rd Floor
149 Main Street
Watertown, MA 02472

RE: Request for Complete Certificate of Compliance for Order of Conditions
Address: 330 to 350 Pleasant Street, Watertown, Massachusetts
Applicant: Mark Coppola, World Realty & Development
Owner: Mark Coppola, Coppola Real Estate Holding Company, LLC
Current Owner: PSCD Trinity, LLC
DEP File No.: 321-0163

To the Commission:

On behalf of the Applicant/Owner, EcoTec, Inc. has submitted this request for a complete Certificate of Compliance for the above-referenced Order of Conditions ("Order") from July 13, 2016 that was recorded at the South Middlesex Registry of Deeds at Book 67639, Page 254 on July 18, 2016. The deeds for 330, 340, and 350 Pleasant Street that are referenced in the Order are recorded at the same Registry at Book 66532, Pages 453, 457, and 460, respectively. The deed for the current owner of the site, PSCD Trinity, LLC, is at the same Registry at Book 68289, Page 265. There is no filing fee under the Act or Ordinance for this Request.

This Request consists of the following:

1. This Cover Letter;
2. WPA Form 8A;
3. As-Built Plan: "Topographic Site Plan, Watertown, Massachusetts Showing As-Built Conditions at #330, 340 & 350 Pleasant Street," Sheets 1 and 2 of 2, prepared by VTP Associates, Inc., dated October 30, 2020; and
4. Engineer's Certification Letter, prepared by VTP Associates, Inc., dated June 21, 2021 indicating project was completed in substantial compliance with Order and Approved Plans.

The plantings and seeding required by the Order were installed/conducted in September/October 2020. John P. Rockwood, Ph.D., SPWS conducted a site visit on June 28, 2021. During that inspection, it was noted that the site was stable and that planting and seeding had occurred within jurisdictional areas as required by the Order and Approved Plan. On October 27, 2022, John P. Rockwood, Ph.D., SPWS conducted a final site visit. Based upon observations made during the current site visit, the site was found to be stable and the planting and seeding required for the project was found to meet the applicable thresholds for shrub plantings and seeding set forth in Special Condition 27 of the Order. Again, this letter demonstrates compliance with Special Condition 27 of the Order which required monitoring of the plantings and seeded area for two years after the planting and seeding was completed. As noted on attached Form 8A, the project is in compliance with the Order, and on behalf of the Applicant/Owner, EcoTec is requesting a complete Certificate of Compliance for the Order.

EcoTec hopes that you find this information useful. The Applicant looks forward to meeting with the Commission to discuss this Request. If you require additional information or have any questions, please feel free to contact me at any time at jrockwood@ecotecinc.com or 508-294-2548. Please let me know when the Commission will hear this matter.

Cordially,
ECOTEC, INC.



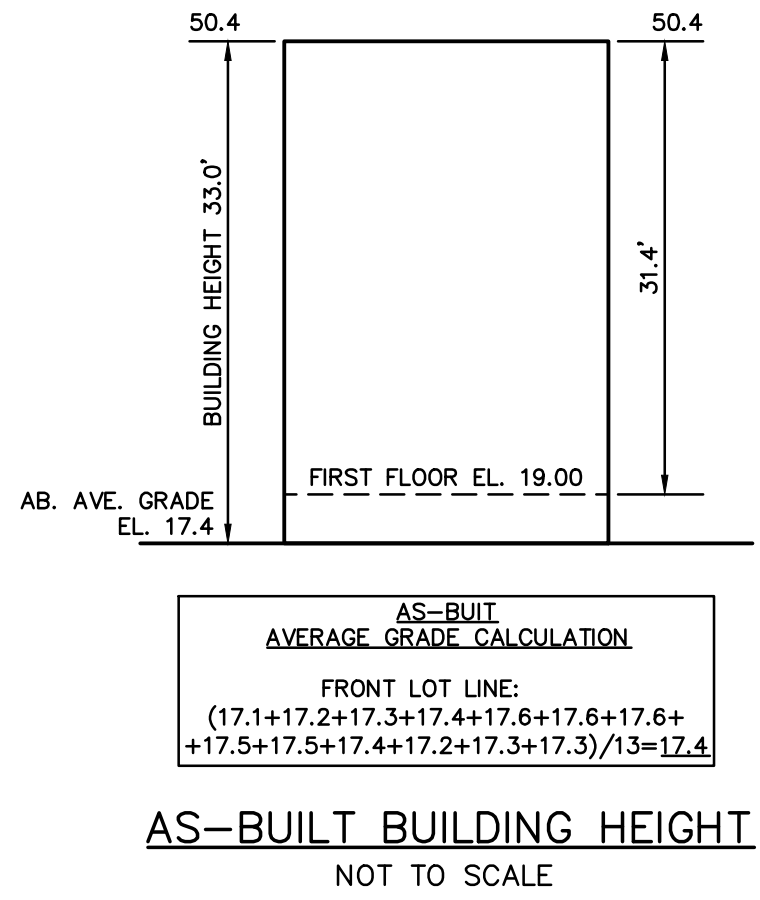
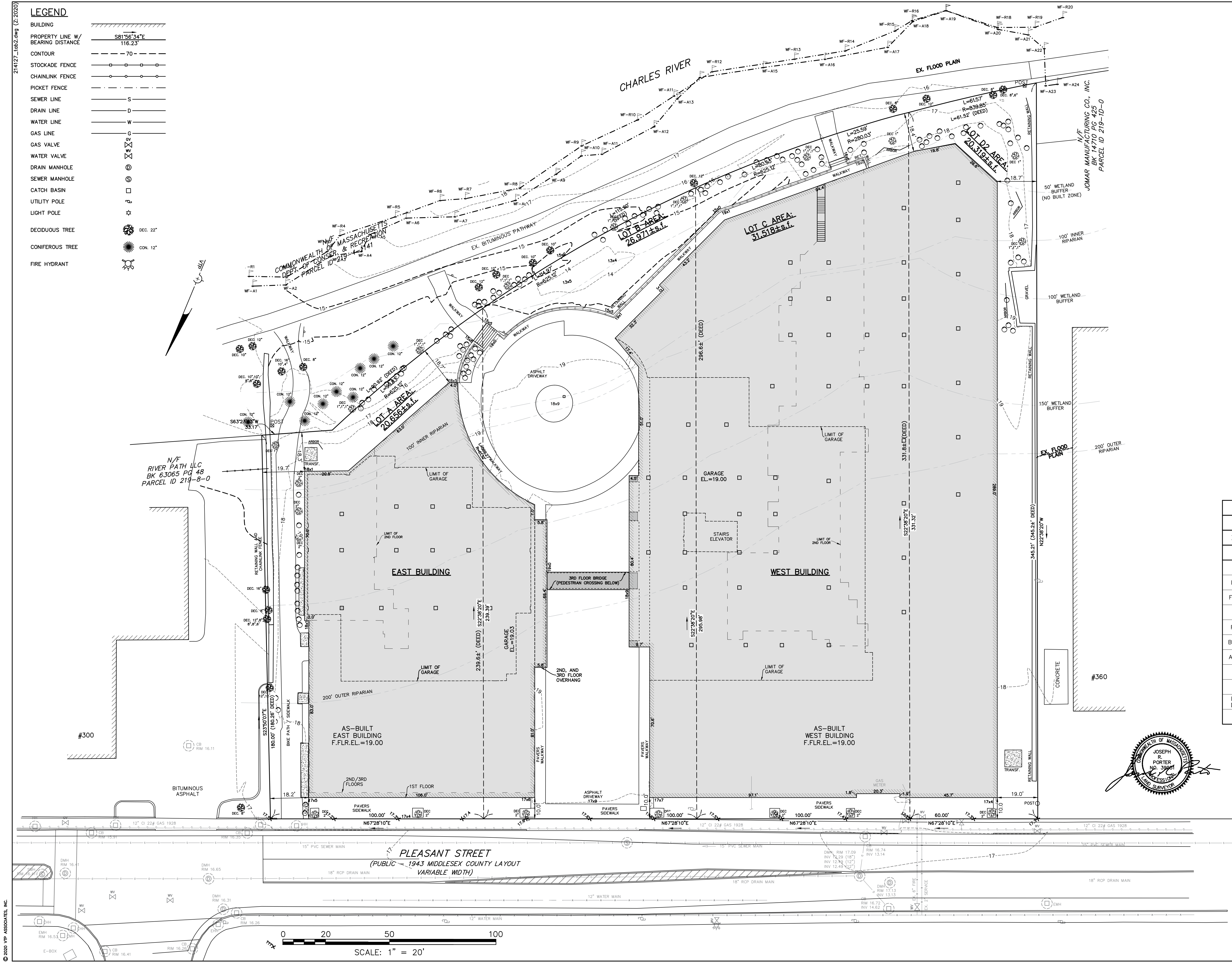
John P. Rockwood, Ph.D., SPWS
Principal Environmental Scientist

18/WATERTOWN 330 350 PLEASANT COMPLETE COC REQUEST COVER LETTER

214127_top2.dwg (Z:2020)
© 2020 VTP ASSOCIATES, INC.

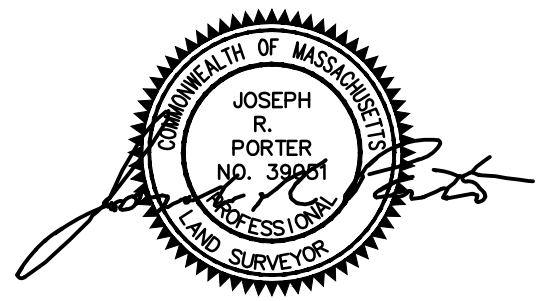
LEGEND

BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	- 70 -
STOCKADE FENCE	
CHAINLINK FENCE	
PICKET FENCE	
SEWER LINE	S
DRAIN LINE	D
WATER LINE	W
GAS LINE	G
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	DEC. 22"
CONIFEROUS TREE	CON. 12"
FIRE HYDRANT	



I CERTIFY, BASED ON FIELD VERIFICATION, THAT THIS SET OF AS-BUILT PLANS ACCURATELY REFLECTS THE CONDITIONS AS THEY EXIST ON THE PROPERTY. I FURTHER CERTIFY THAT THE DEVELOPMENT HAS BEEN CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLAN AND MEETS THE REQUIREMENTS OF THE STORMWATER MANAGEMENT AND EROSION CONTROL PERMIT.

ZONING CHART				
WATERTOWN, MASSACHUSETTS				
ZONE: PSCD		SUBMISSION: AS-BUILT		
REGULATION	REQUIRED	EXISTING	PROPOSED	AS-BUILT
LOT AREA	10,000s.f.	99,464±s.f.	N/C	N/C
LOT FRONTAGE	-	360.0'	N/C	N/C
FRONT SETBACK	10.0'-30.0'	11.4'	10.0'	10.0'
SIDE SETBACK	0' SHARED PARTY WALL OR 18.0'	5.9'	18.0'	18.2'
REAR SETBACK	18.0'	98.3'	18.0'	18.3'
BUILDING HEIGHT	24.0'-54.0' 5 STORIES	25.37'	33.00'	33.0'
AVERAGE GRADE	-	17.4	17.4	17.40
IMPERVIOUS COVERAGE	80.0%	-	79.2%	79.2%
OPEN SPACE	20.0%	47.4%	27.5%	23.2%
LOT AREA PER DWELLING UNIT	1000s.f.	-	-	-
F.A.R.	1, MIXED USE 2	-	-	-



TOPOGRAPHIC SITE PLAN
WATERTOWN, MASSACHUSETTS
SHOWING AS-BUILT CONDITIONS AT
#330, 340 & 350 PLEASANT STREET
SCALE: 1in.=20ft. DATE: OCTOBER 30, 2020

PROJECT: 214127

VTP
ASSOCIATES
INC.

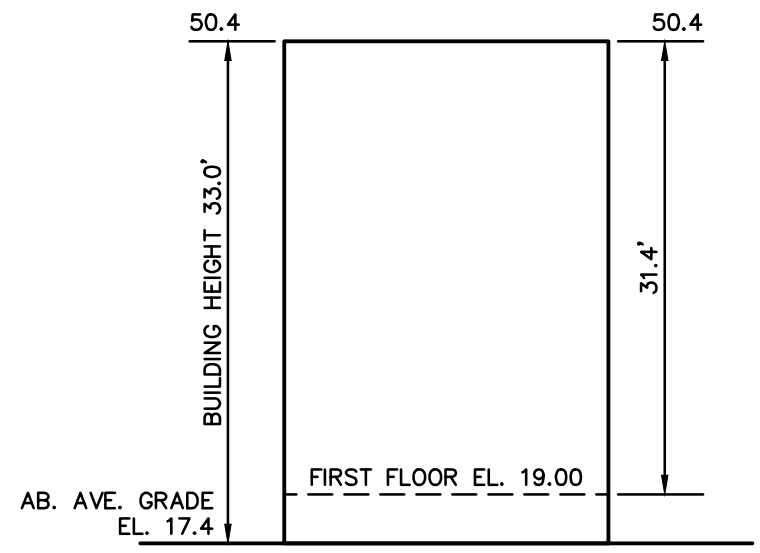
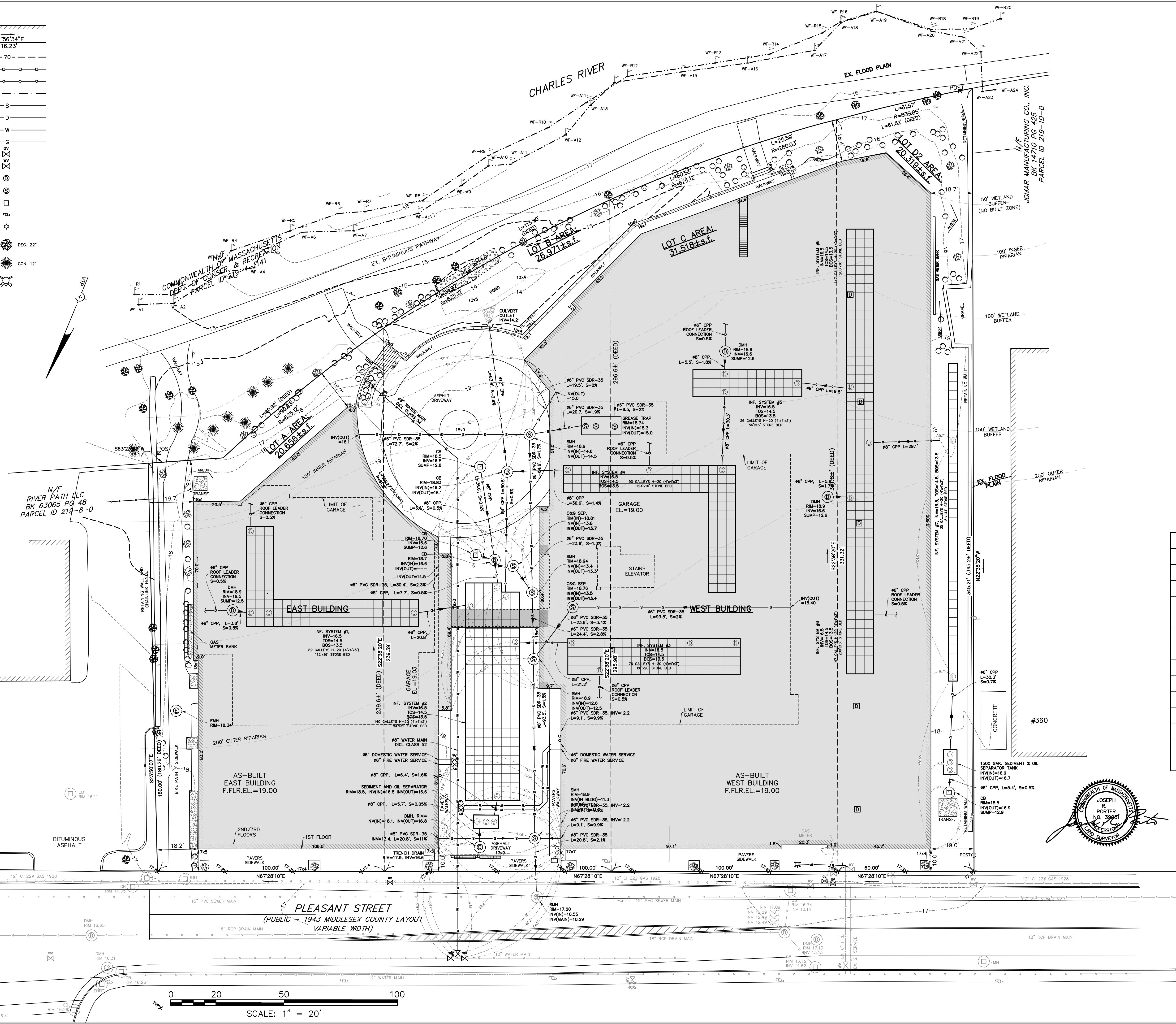
LAND SURVEYORS - CIVIL ENGINEERS. 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271

SHEET 1 OF 2

214127_top2.dwg (Z-2020)

LEGEND

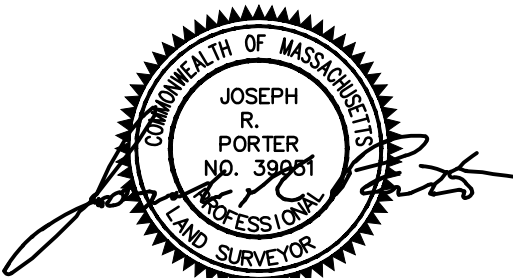
BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	
CONTOUR	
STOCKADE FENCE	
CHAINLINK FENCE	
PICKET FENCE	
SEWER LINE	
DRAIN LINE	
WATER LINE	
GAS LINE	
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	
CONIFEROUS TREE	
FIRE HYDRANT	



AS-BUILT
AVERAGE GRADE CALCULATION
FRONT LOT LINE:
(17.1+17.2+17.3+17.4+17.6+17.6+17.6+17.5+17.5+17.4+17.2+17.3+17.3)/13=17.4
AS-BUILT BUILDING HEIGHT
NOT TO SCALE

I CERTIFY, BASED ON FIELD VERIFICATION, THAT THIS SET OF AS-BUILT PLANS ACCURATELY REFLECTS THE CONDITIONS AS THEY EXIST ON THE PROPERTY. I FURTHER CERTIFY THAT THE DEVELOPMENT HAS BEEN CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLAN AND MEETS THE REQUIREMENTS OF THE STORMWATER MANAGEMENT AND EROSION CONTROL PERMIT.

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WATERTOWN, MASSACHUSETTS				
ZONE: PSCD		SUBMISSION: AS-BUILT		
REGULATION	REQUIRED	EXISTING	PROPOSED	AS-BUILT
LOT AREA	10,000s.f.	99,464±s.f.	N/C	N/C
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LOT AREA PER DWELLING UNIT	1000s.f.	—	—	—
F.A.R.	1, MIXED USE 2	—	—	—



TOPOGRAPHIC SITE PLAN
WATERTOWN, MASSACHUSETTS
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#330, 340 & 350 PLEASANT STREET
SCALE: 1in.=20ft. DATE: OCTOBER 30, 2020

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INC.

LAND SURVEYORS — CIVIL ENGINEERS. 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271

SHEET 2 OF 2



MASSACHUSETTS WATER RESOURCES AUTHORITY

Chelsea Facility
2 Griffin Way
Chelsea, Massachusetts 02150

Telephone: (617) 242-6000
Facsimile: (617) 305-5990

Frederick A. Laskey
Executive Director

October 7, 2022

Laurel Schwab
Watertown Conservation Commission
Department of Community Development & Planning
149 Main Street, 3rd Floor
Watertown, MA 02472-4410

Subject: Massachusetts Water Resources Authority (MWRA)
Contract No. 6956 Intermediate High Water Pipeline Improvements (IHPI)
Construction Package 2 (CP-2): Sections 24 Rehabilitation

Dear Ms. Schwab and Members of the Commission,

The Massachusetts Water Resources Authority (MWRA) will be performing necessary rehabilitation activities on its drinking water infrastructure, specifically on the Section 24 pipeline at its crossing of the Charles River. Section 24 is located within the Charles River Reservation. See the attached the USGS Locus Map in *Figure 1* for the project's location and design Sheet C-101 for project plan and profile.

The Section 24 Rehabilitation Project is scheduled to begin in early 2023. MWRA considers this work to be exempt from Wetlands Protection Act review per 310 CMR 10.02(2)(a) due to the fact that the project entails maintenance and repair of a vital public utility. The purpose of this letter is to provide details about MWRA's proposed work, including the project schedule and erosion and sediment control measures (ESCs) to be implemented in work zones within wetland resource areas and buffer zones.

Project Description

Section 24 is a 20" cast iron water main that is 11,800 feet long. This water main is located in Newton and Watertown and was originally installed in 1897. Section 24 is a critical pipeline in MWRA's southern high-pressure zone and it supplies water to the communities of Boston, Newton, and Watertown. The Section 24 Rehabilitation Project will take place within the northern 3,300-foot segment of Section 24 beginning at St. James Terrace in Newton, crossing the Charles River and Charles River Road in Watertown, and extending up Irving Street to the intersection with Mt. Auburn Street in Watertown. Rehabilitation of this water main will reduce the amount of unlined cast iron water mains in the system and improve water quality within the system.

The pipeline will be cleaned in-situ and rehabilitated by applying a cement-mortar lining to the pipe's interior. The lining will be centrifugally applied and troweled smooth using specially designed equipment. This equipment will be introduced into the pipe at the manhole(s) within the Charles River Reservation shown in attached *Photo 1*. All cleaning and lining work will be

performed from within the 20" pipeline. As a result, there will be minimal excavation associated with the proposed cleaning and lining activity.

MWRA is also planning to remove approximately 15 feet of existing 20" cast iron water main pipe will be replace it with new 20" ductile iron pipe. An existing 20" gate valve, two 8" gate valves, and two 1.5" air valves and chambers will also be removed and replaced. These activities will require excavation within the lawn and the paved multiuse path within the Charles River Reservation. The extents of the trench excavation will be approximately 8 feet wide, 20 feet long, and 10 feet deep.

The Contractor will need to set up a small staging area within the Charles River Reservation around the existing access manhole and work area. The exact location of the staging area will be selected by working closely with the Department of Conservation and Recreation (DCR) and will be located away from the riverbank. However, the staging area will have to be located within the 100-ft Buffer Zone and the 200-ft Riverfront Area due to the access manhole location.

Following pipeline rehabilitation work, all disturbed areas for staging and excavation will be restored to pre-project condition. See the attached construction plans and detail sheet for the information on proposed work and surface restoration. Boundaries of wetland resource areas including Inland Banks, Land Under Water, and Bordering Land Subject to Flooding were delineated by a CDM Smith Professional Wetland Scientist (PWS) on June 5, 2019. The proposed work will not be taking place within any of the delineated resource areas.

Best Management Practices

Through the implementation of appropriate Best Management Practices (BMPs), no permanent impacts to wetland resource areas or associated buffer zones are anticipated. Erosion and sedimentation control measures will be utilized to ensure environmental protection during the proposed scope of work. Silt sacks will be installed on catch basins for sediment control, compost filter tubes will be used for sediment control adjacent to the work zone as shown on Sheet C-508, and any trench dewatering, other than dewatering that is directed to a frac tank, would require a NPDES Construction General Permit (CGP). See the attached detail sheets for erosion and sediment control details.

Schedule

The proposed scope of work is scheduled to begin in January 2023. The entire Section 24 Rehabilitation Project will take approximately 2 years and 6 months to complete. Watertown Conservation Commission will receive written notification prior to commencement of construction activities on the site.

Wetlands Protection Act

As previously stated, MWRA's work to maintain its infrastructure is exempt from filing a Notice of Intent. Per 310 CMR 10.02(2)(a)(2):

- (a) Activities Within the Areas Subject to Protection under M.G.L. c. 131, § 40. Any activity proposed or undertaken within an area specified in 310 CMR 10.02(1), which

will remove, fill, dredge or alter that area, is subject to Regulation under M.G.L. c. 131, § 40 and requires the filing of a Notice of Intent except:

2. activities conducted to maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public and used to provide...water, sewer...provided said work utilizes the best practical measures to avoid or minimize impacts to wetland resource areas outside the footprint of said structure or facility. A project proponent claiming that work to remove, fill, dredge or alter an area specified in 310 CMR 10.02(1) does not require the filing of a Notice of Intent has the burden of establishing that the work is not subject to Regulation under M.G.L. c. 131, § 40.

The MWRA's enabling legislation describes, and its practice has been, that the MWRA is not subject to local wetland bylaws that exceed the Wetlands Protection Act. While these activities are exempt, the MWRA is committed to minimizing any potential for impacts to the adjacent resource areas and looks forward to working with the Town to ensure that the Project is executed in a manner that preserves existing conditions at the sites.

MWRA has consulted with DCR and will obtain necessary approvals prior to beginning construction. The MWRA submitted a Project Notification Form to the Massachusetts Historical Commission, who determined that the project is unlikely to affect significant historical or archeological resources.

We appreciate your time and look forward to working with you on this important Project. Please do not hesitate to contact me at (617) 799-5447 or Patrick Smith at (617) 771-1597 should you have any questions or would like to request a site visit.

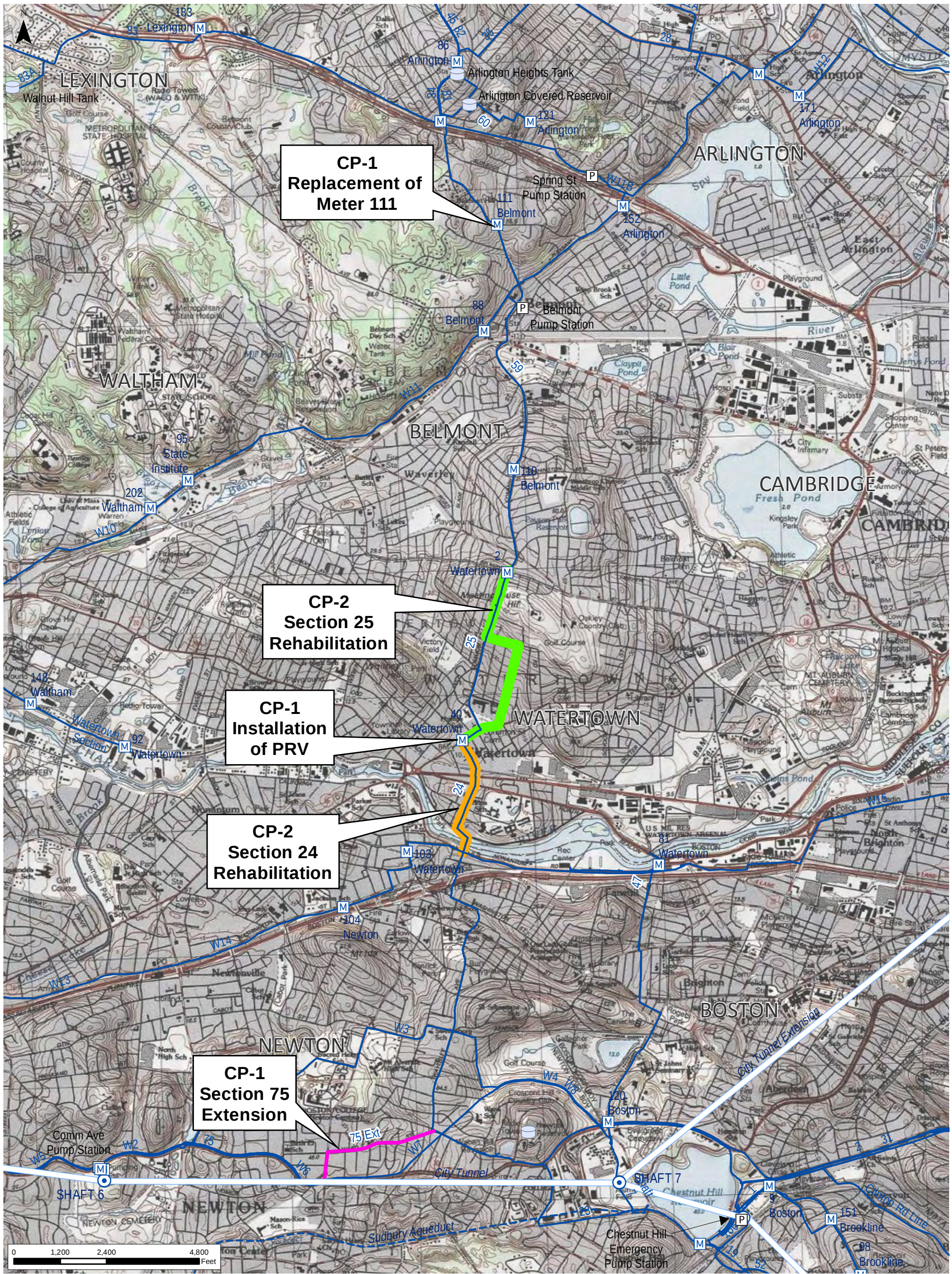
Sincerely,



John Colbert, P.E.
MWRA Chief Engineer, Engineering & Construction

Attachments: *Figure 1*: USGS Locus Map
Photo 1: Charles River Reservation
Construction Plans and Details

cc: Rebecca Weidman, MWRA, Director, Environmental and Regulatory Affairs
Julianne Sullivan, MWRA Project Manager, Environmental and Regulatory Affairs
Patrick Smith, MWRA, Program Manager, Engineering
Sean Navin, MWRA, Director of Intergovernmental Affairs
Angela Moulton, CDM, Project Manager



MWRA INTERMEDIATE HIGH PIPELINE IMPROVEMENTS - CONTRACT 6955

LEGEND

MWRA Water Distribution System

- Meter Facility
- Storage Tank
- Pump Station
- Transmission Shaft
- Sudbury Aqueduct
- Transmission Line
- Water Main

Scope of Work

- CP-1: Section 75 Extension (Proposed Route)
- CP-2: Section 25 Replacement
- CP-2: Section 24 Replacement

Basemap

- Town Boundary

Basemap: USGS 7.5 minute Topographic Quad
Source: MWRA, CDM Smith, and MassGIS
Coordinate System: NAD83 Mass. State Plane Mainland FIPS 2001 Feet

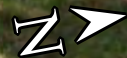
FIGURE 1: USGS
LOCUS MAP

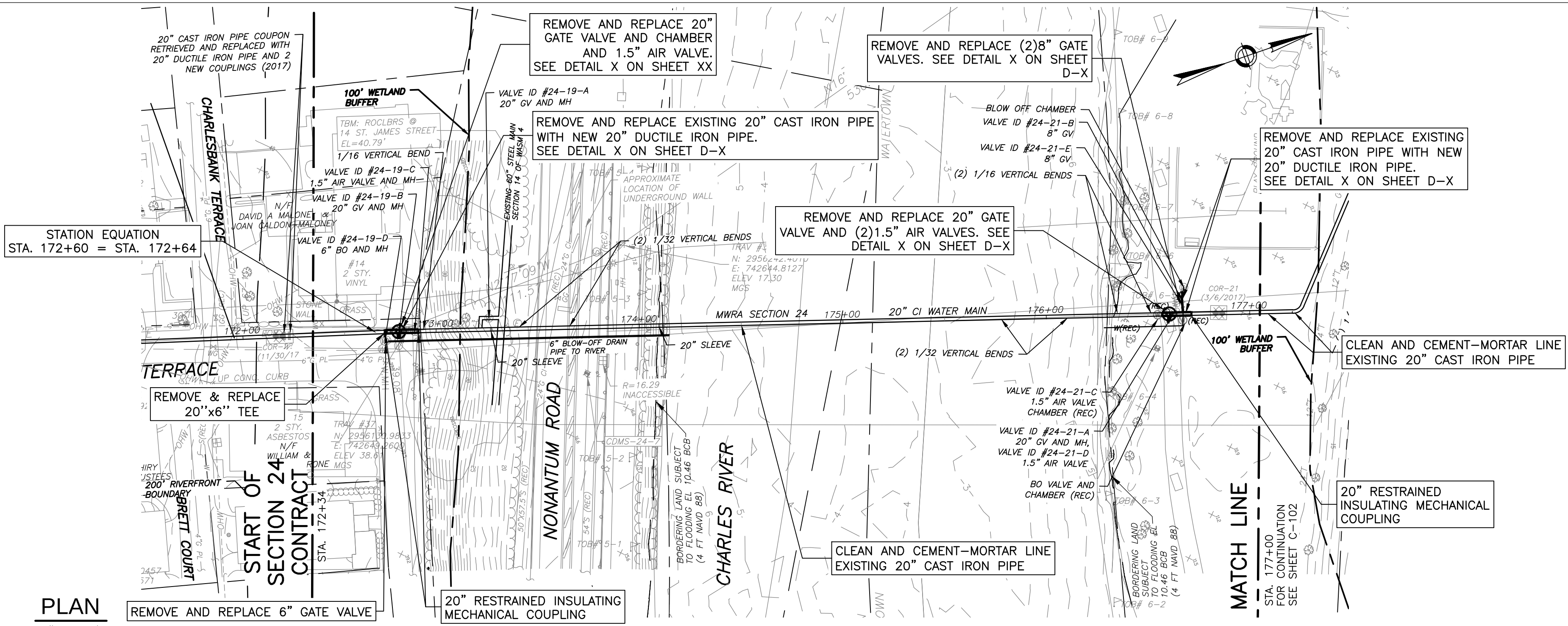


Photo 1: Charles River Reservation

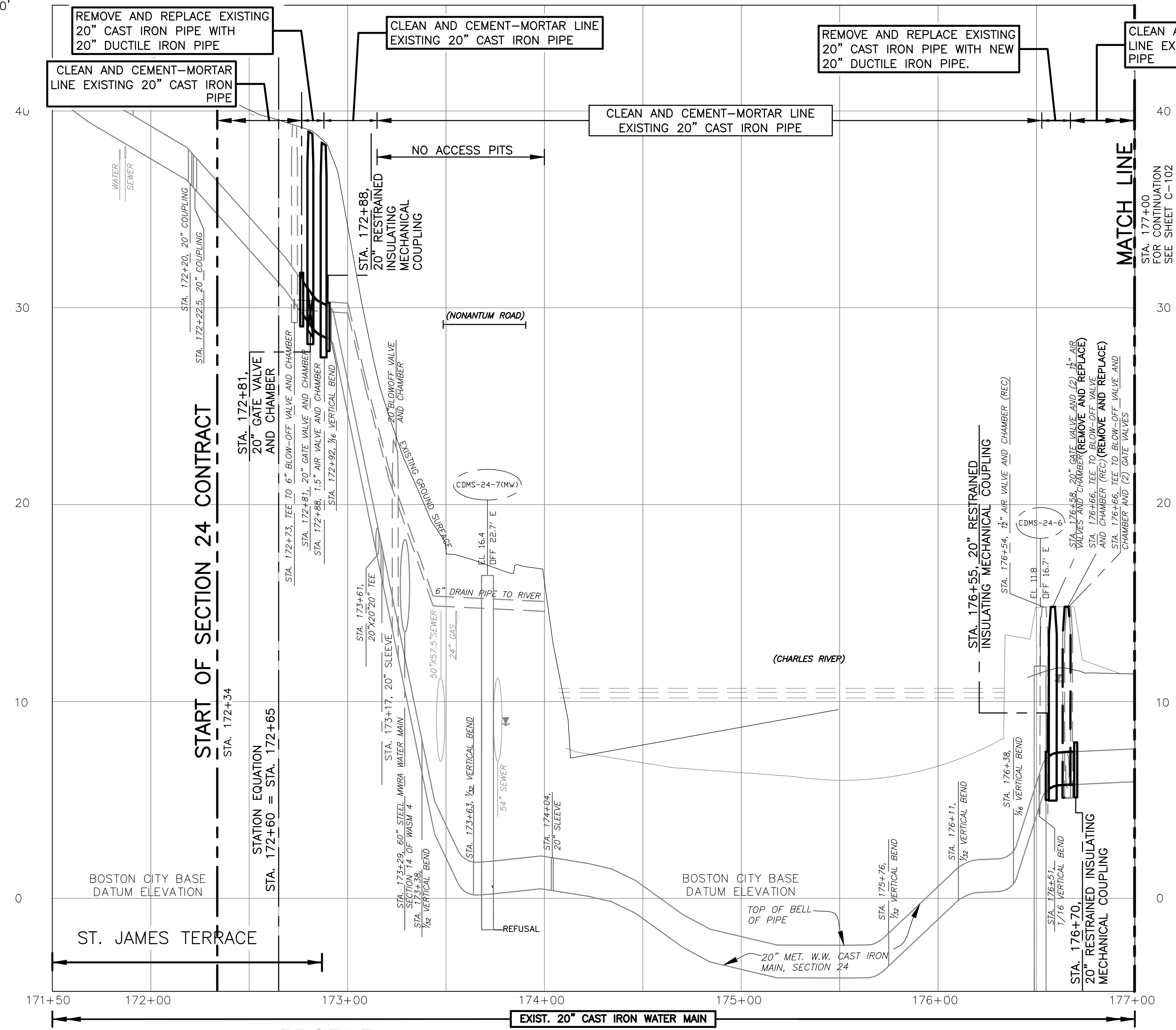


ACCESS MANHOLE

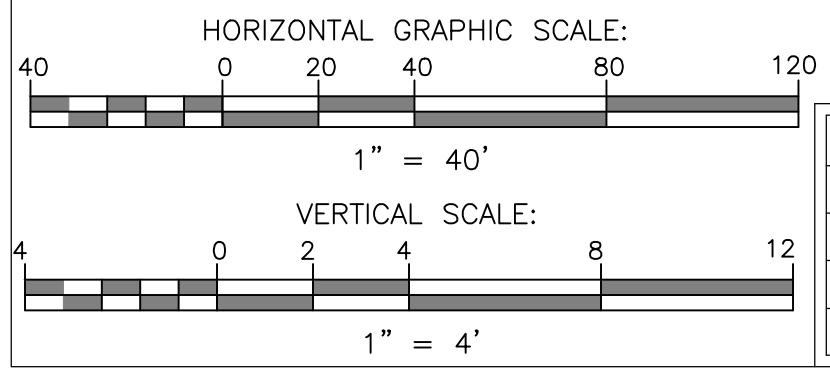




PLAN
1" = 40'



PROFILE
HOR: 1" = 40'
VERT: 1" = 4'



NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6956	CAD FILE NO. : C-101
ACCESSION NO. :	SECTION NO. : 24
DATE: JUNE, 2022	DESIGNED BY: JO/KG
SCALE: AS NOTED	DRAWN BY: VP/SP
	CHECKED BY:
	APPROVED BY:

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :

CDM Smith

GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
100 AMES POND DRIVE
TENKSBURY, MASSACHUSETTS

INTERMEDIATE HIGH PIPELINE IMPROVEMENTS
SECTION 24 & 25-CONSTRUCTION PACKAGE 2
NEWTON & WATERTOWN, MASSACHUSETTS

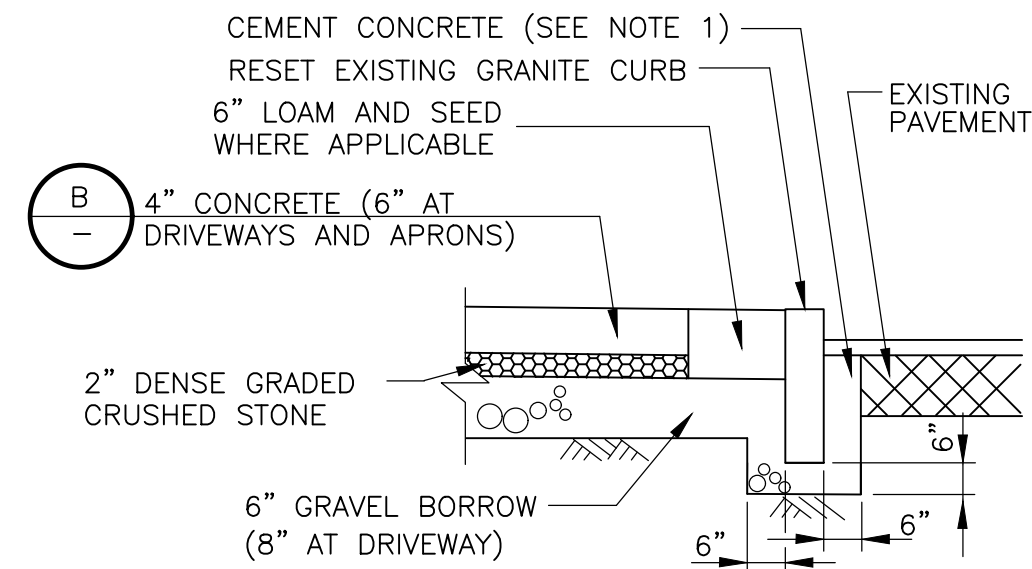
SECTION 24-CHARLES RIVER CROSSING, NEWTON MA
PLAN & PROFILE
STA. 171+50 TO STA. 177+00

DRAWING NO.
C-101

6 of 67

- NOTES:
1. BORING, GEO-PROBE, AND TEST PIT SOIL STRATA ARE SHOWN IN PROFILE FOR INFORMATIONAL PURPOSES. BORING, GEO-PROBE, AND TEST PIT LOGS ATTACHED TO THE SPECIFICATION SHALL GOVERN.

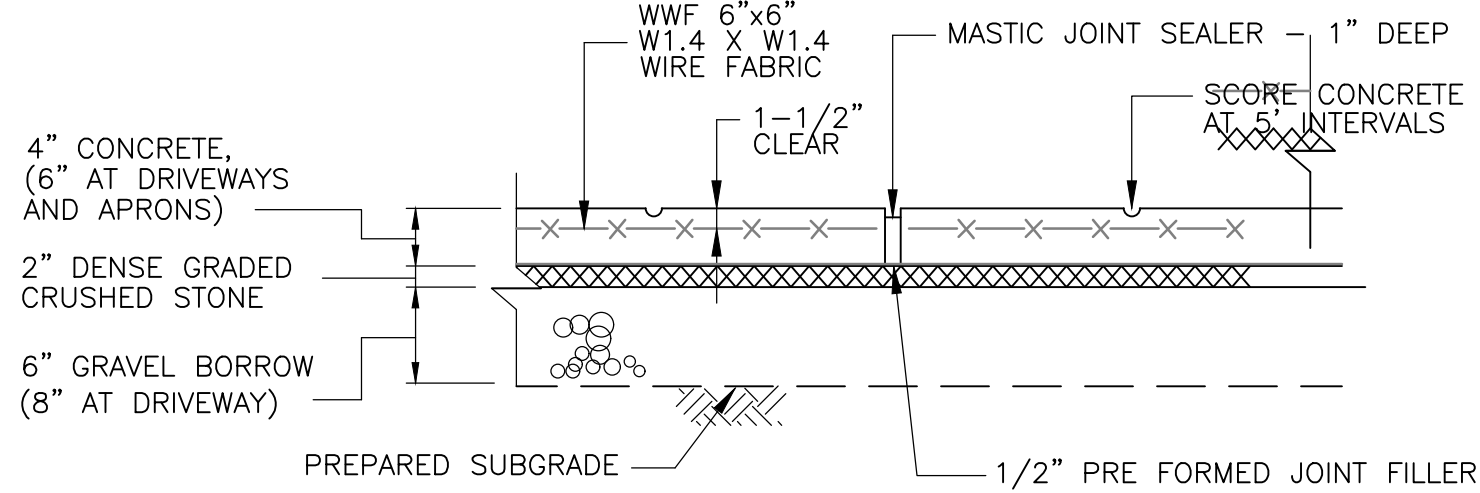
90% DESIGN
NOT FOR CONSTRUCTION



- NOTES:
- CUT NEAT LINE 6" FROM CURB AND REMOVE BINDER, BASE, AND STONE; REPLACE WITH CEMENT CONCRETE.
 - AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3 FEET SHALL BE MAINTAINED.
 - CEMENT CONCRETE FOR SIDEWALK REPLACEMENT SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI USING 3/4-INCH AGGREGATE, AND WITH AN ENTRAINED AIR CONTENT OF 7.0±1.0%. ADD MIXTURES TO BE ORDINARY OR EMULSIFIED CARBON BLACK - 2 POUNDS,

CURB AND SIDEWALK SETTING OR REPLACEMENT
CONCRETE SIDEWALK

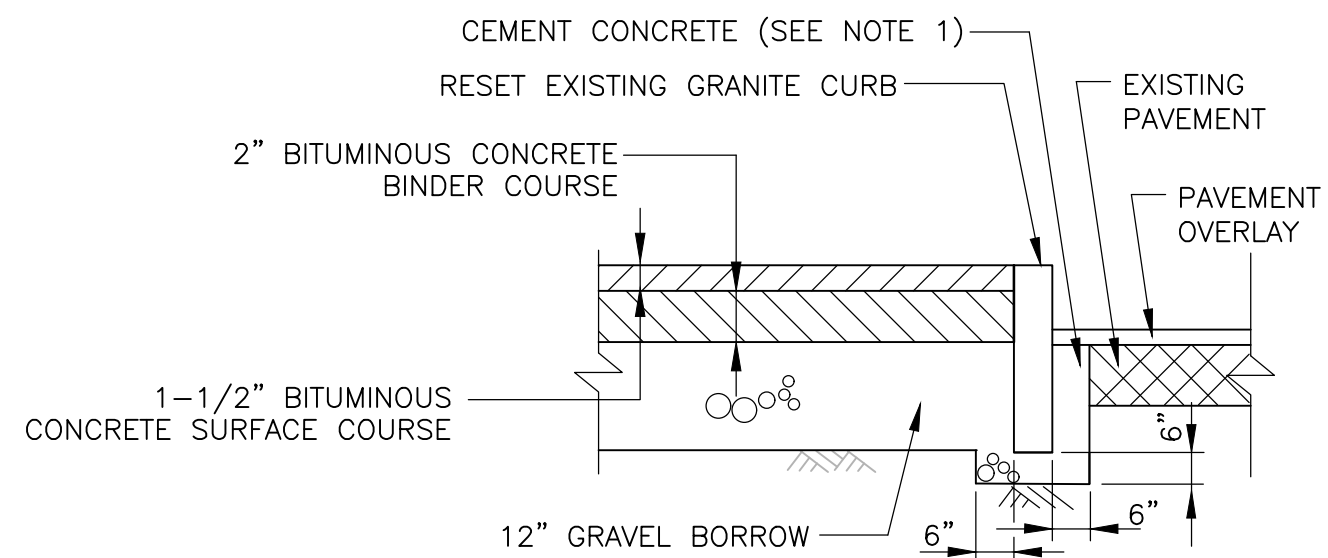
DETAIL A
NTS



- NOTE:
- EXPANSION JOINTS TO BE 25' MAXIMUM, CENTER TO CENTER

CONCRETE WALK

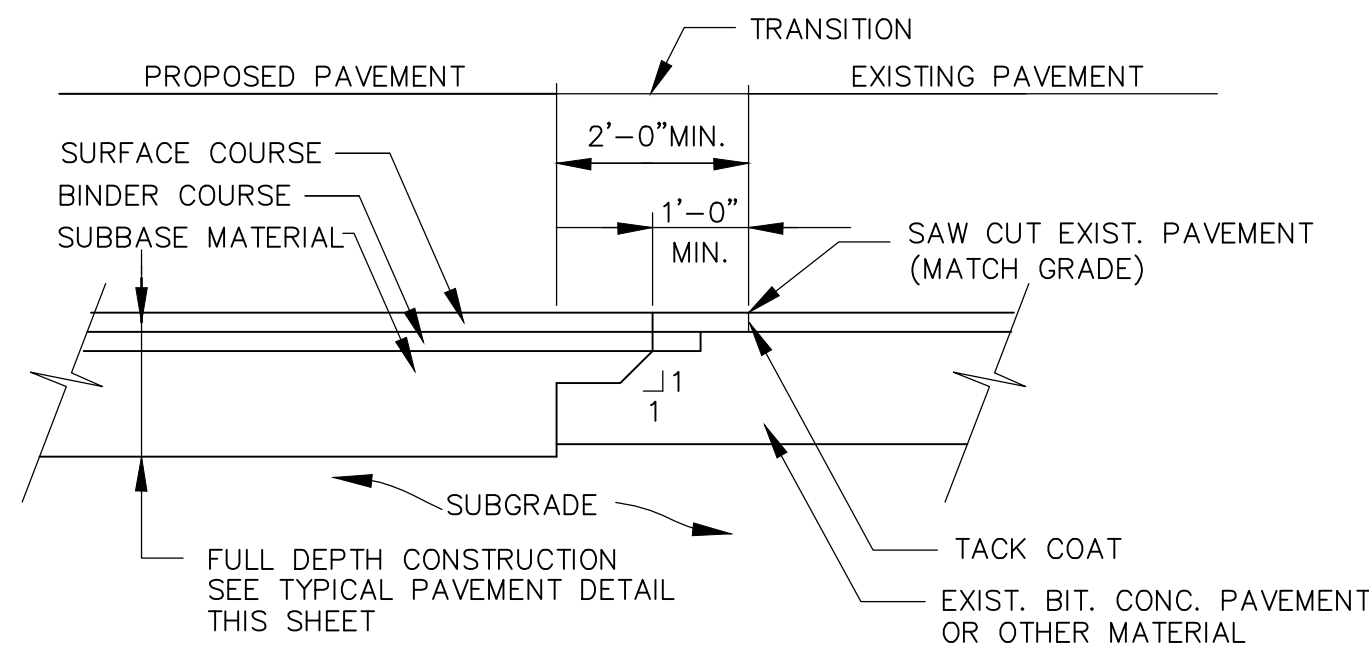
DETAIL B
NTS



- NOTES:
- CUT NEAT LINE 6" FROM CURB AND REMOVE BINDER, BASE, AND STONE; REPLACE WITH CEMENT CONCRETE.
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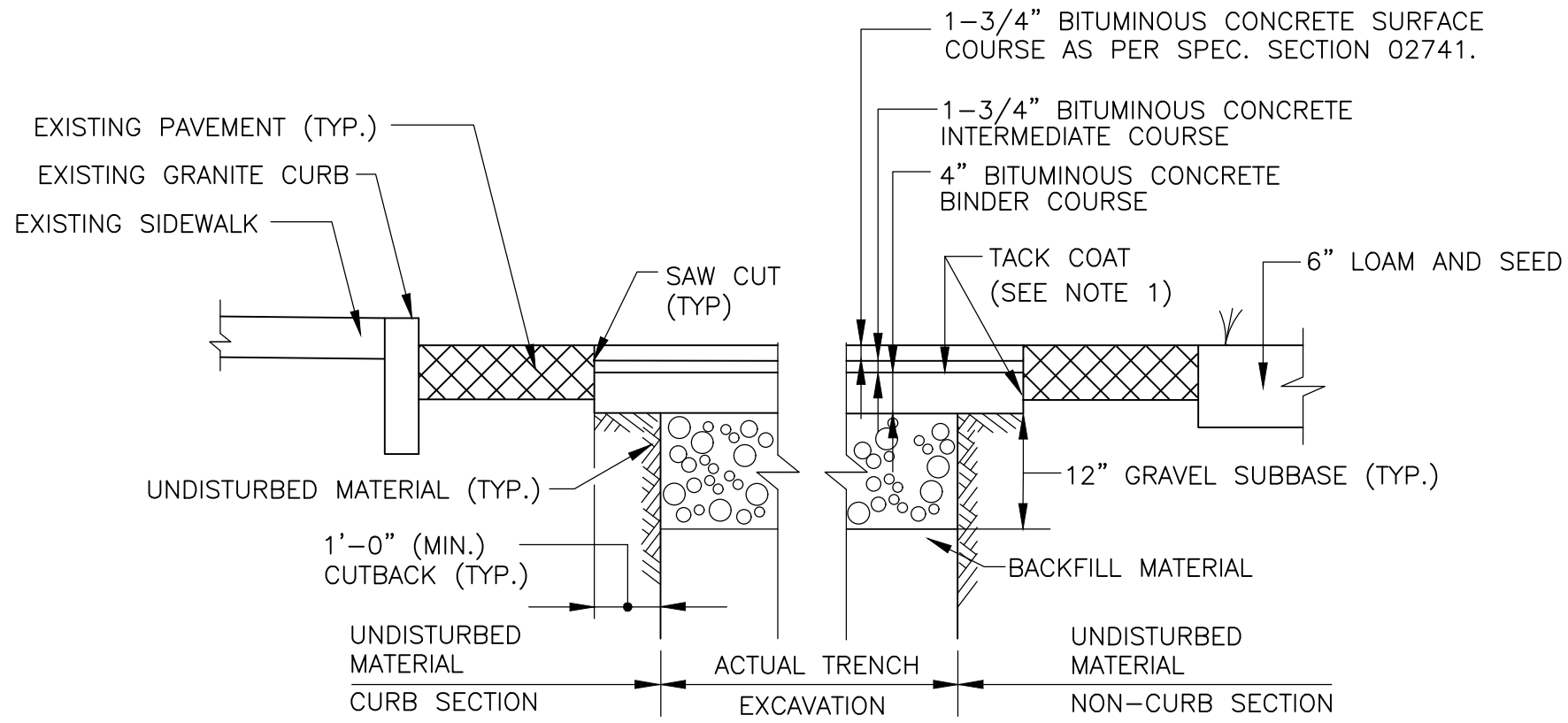
CURB AND SIDEWALK SETTING OR REPLACEMENT
BITUMINOUS CONCRETE SIDEWALK

DETAIL C
NTS



TYPICAL SAW CUT DETAIL

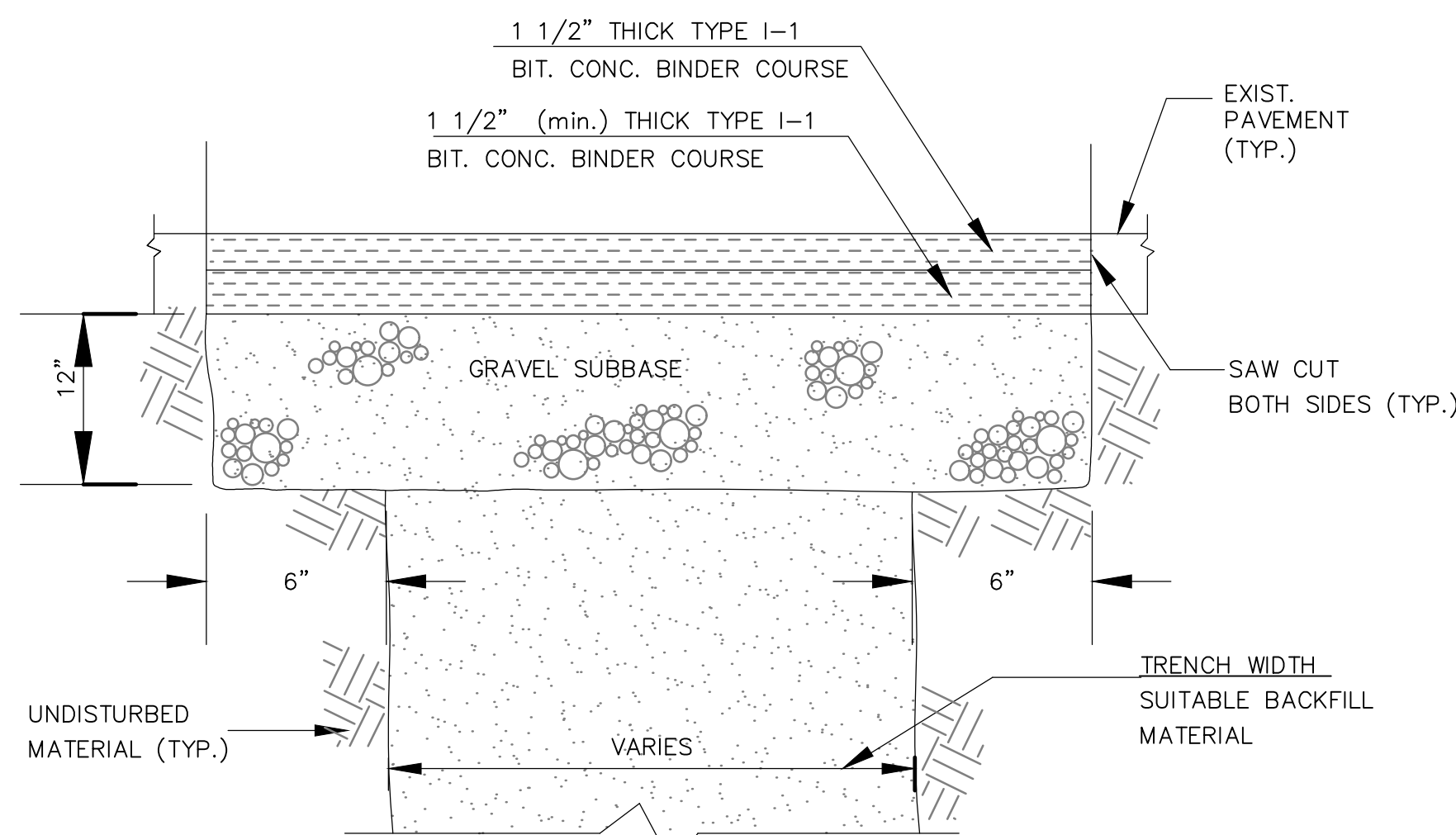
DETAIL D
NTS



- NOTES:
- TACK COAT VERTICAL SURFACES OF EXISTING PAVEMENT MATCH.
 - BITUMINOUS CONCRETE THICKNESSES SHOWN ARE MINIMUMS AND TOTAL PATCH THICKNESS SHALL MATCH EXISTING

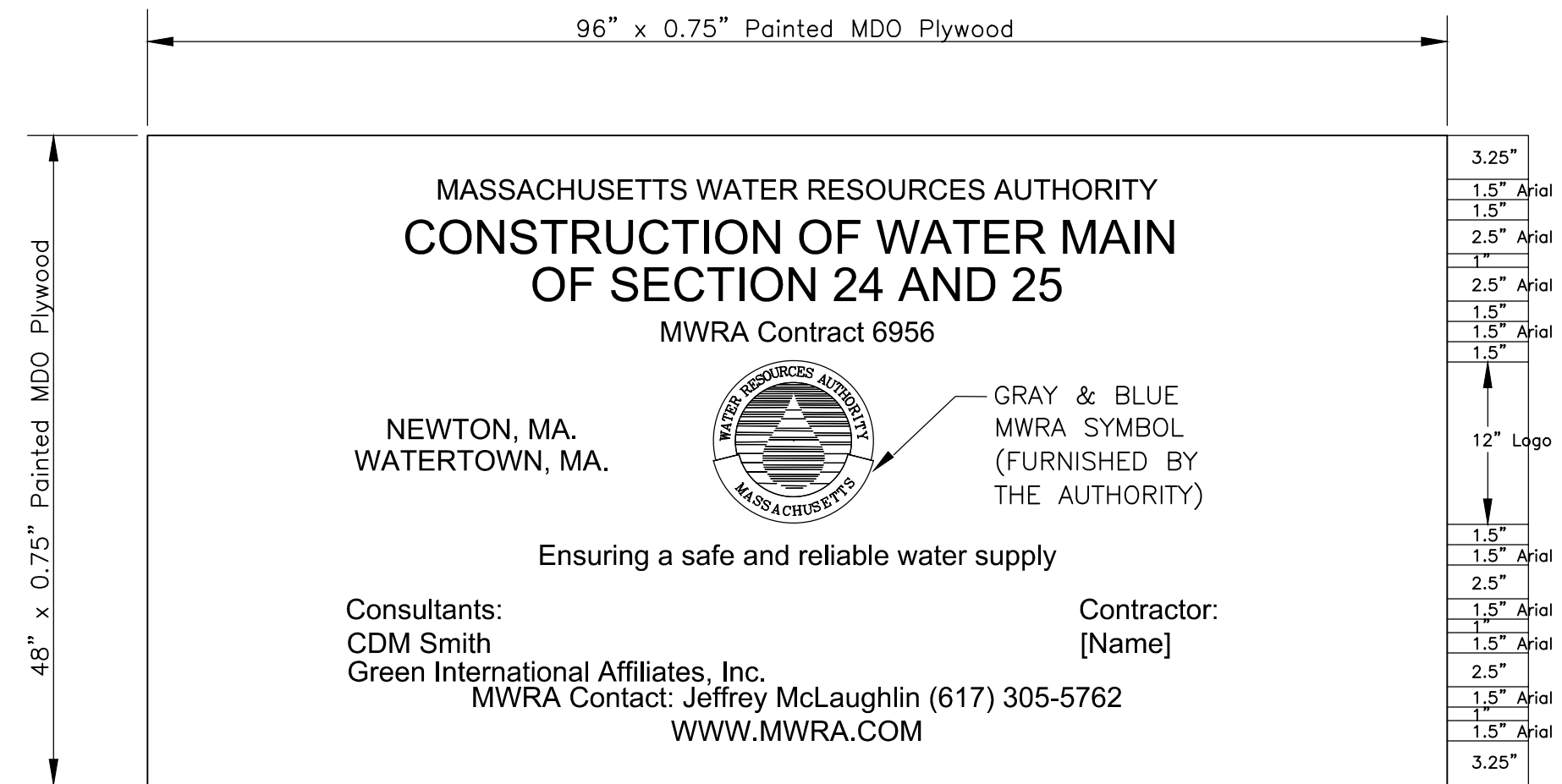
PERMANENT TRENCH PAVEMENT (MASSDOT ROADWAY)

DETAIL E
NTS



TEMPORARY TRENCH PAVEMENT

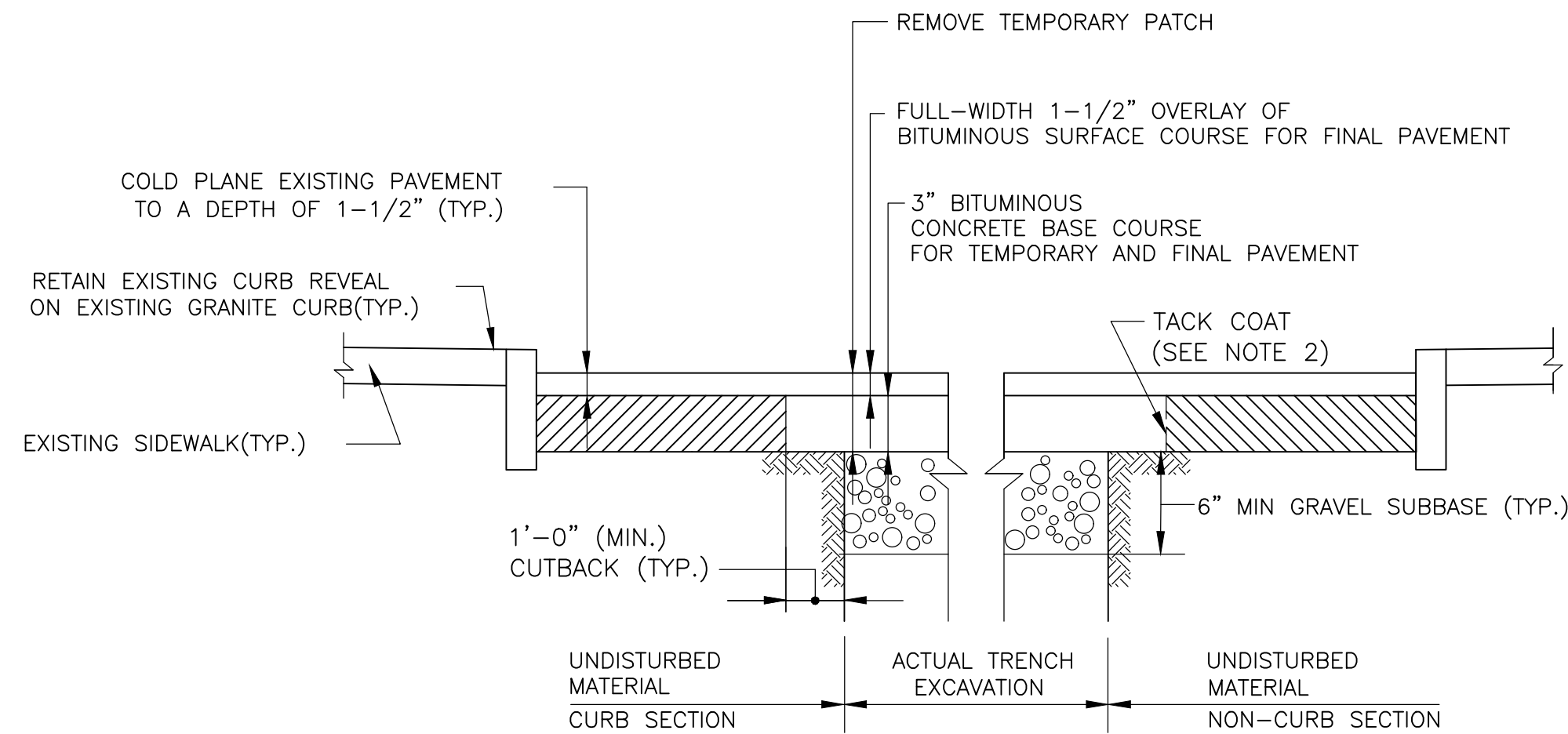
DETAIL F
NTS



- NOTES:
- STRUCTURE AND FRAMING: MAY BE NEW OR USED, WOOD OR METAL, IN SOUND CONDITION SUITABLE FOR SPECIFIED FINISH.
 - SIGN SURFACES SHALL BE EXTERIOR SOFTWOOD PLYWOOD WITH MEDIUM DENSITY OVERLAY, STANDARD LARGE SIZES TO MINIMIZE JOINTS.
 - SIGN THICKNESS SHALL BE AS REQUIRED BY STANDARDS TO SPAN FRAMING MEMBERS AND TO PROVIDE EVEN, SMOOTH SURFACE WITHOUT WAVES OR BUCKLES.
 - HARDWARE SHALL BE WROUGHT, GALVANIZED.
 - APPLY A COAT OF WHITE ALKYD PRIMER WOOD OIL TO ENTIRE WOODWORK OF SIGN.
 - GIVE TWO (2) COATS OF WHITE EXTERIOR LATEX PAINT TO SIGN INCLUDING FRAMEWORK.

PROJECT IDENTIFICATION SIGN

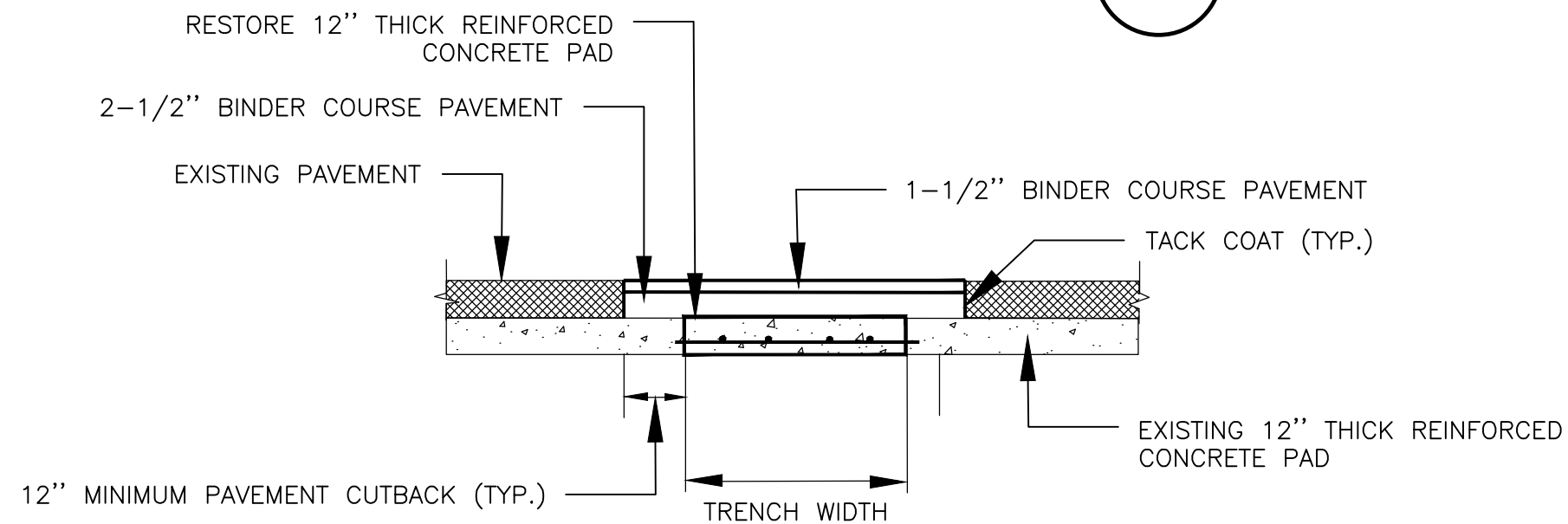
DETAIL G
NTS



- NOTES:
- COLD PLANE EXISTING PAVEMENT TO MAINTAIN EXISTING CURB REVEAL AND MATCH EXISTING GRADES. OVERLAY SHALL CONSIST OF 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE ON TACK COAT OVER EXISTING PAVEMENT.
 - TACK COAT VERTICAL SURFACES OF EXISTING PAVEMENT MATCH.

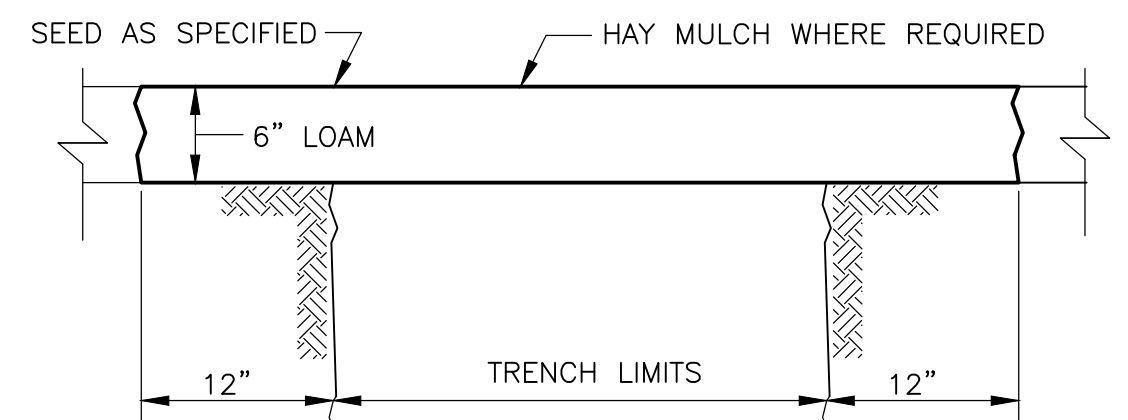
PERMANENT TRENCH PAVEMENT FOR AREAS
WITH FULL WIDTH PAVEMENT OVERLAY

DETAIL H
NTS



TYPICAL TRENCH REPAIR FOR REINFORCED CEMENT CONCRETE BASE

DETAIL I
NTS

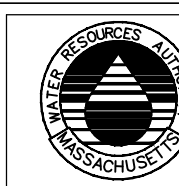


LOAM AND SEED RESTORATION

DETAIL J
NTS

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6956	CAD FILE NO. : C-507
ACCESSION NO. : 703287	SECTION NO. :
DATE: JUNE, 2022	DESIGNED BY: VP
	DRAWN BY: VP
	CHECKED BY: JT
SCALE: AS NOTED	APPROVED BY: SS



MASSACHUSETTS WATER RESOURCES AUTHORITY



GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
100 AMES POND DRIVE
TEWKSBURY, MASSACHUSETTS

INTERMEDIATE HIGH WATER PIPELINE IMPROVEMENTS
SECTION 24 & 25-CONSTRUCTION PACKAGE 2
WATERTOWN & BELMONT MA

SURFACE RESTORATION DETAILS

DRAWING NO.

C-507

27 of 67

90% DESIGN
NOT FOR CONSTRUCTION

SECTION

TEMPORARY SILT SOCK/SILTATION FENCE

DETAIL 
NTS

A top-down diagram of a circular straw bale water treatment system. The system is circular with a diameter of 5'-0" MIN. The outer boundary is a ring of stacked straw bales, with two stakes per bale. A discharge hose from a dewatering pump enters the ring from the right. Inside the ring is a layer of loose straw. In the center is an energy dissipator, represented by a small square with eight arrows pointing outwards towards the straw layer. Arrows indicate the water flow from the center towards the straw ring. Labels include: 5'-0" MIN. (diameter), STAKED STRAW BALES WITH 2 STAKES PER BALE (TYP.), DEWATERING PUMP DISCHARGE HOSE, WOOD POST (TYP.) (pointing to a stake), SILT FENCE (pointing to the straw ring), ENERGY DISSIPATOR, WATER FLOW TYP. (pointing to the flow arrows), and LOOSE STRAW.

DETAIL
NTS

A circular detail callout labeled 'B' is positioned to the right of the main drawing. It is a circle with a horizontal line through its center, and the letter 'B' is written inside the upper half.

Diagram illustrating the installation of a silt fence. The setup includes a stockpile of excavated materials behind a silt fence. The silt fence is constructed using a wood post (typical) driven into the ground, with the fence fabric secured using 1/4" x 1" wood lath strips held by 4d common nails (box nails). The fence is fixed to the post using 1/4" x 1" wood lath strips secured with 4d common nails (box nails). The silt fence is supported by a filter fabric layer, which is further reinforced by staked straw bales with 2 stakes per bale (typical). The ground surface is marked as finished grade, and the area behind the fence is labeled as undisturbed material. A minimum clearance of 6" is indicated between the fence and the stockpile.

ELEVATION

STOCKPILED MATERIAL

DETAIL

NTS

C

A cross-sectional diagram of a catch basin. A grate is positioned at the top, with a polypropylene boot fitted underneath it. The boot has a flange that sits on the sides of the basin. An overflow pipe is shown on the right side of the basin. Labels with leader lines point to the 'GRATE', 'POLYPROPYLENE BOOT', 'CATCH BASIN', and 'OVERFLOW'.

INSTALLATION

NOTE:

1. INSTALL INLET PROTECTION IN EXISTING CATCH BASIN, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER INLET PROTECTION.
3. INLET PROTECTION SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

INLET PROTECTION FILTER BAG

DETAIL
NTS



PRUNE PER ANSI AND NAA STANDARDS
REMOVE DEAD WOOD & DAMAGED
BRANCHES AND TIE UP BRANCHES.

2x4 DIMENSIONAL LUMBER ATTACHED
W/METAL STRAPPING, PLACE BURLAP
BETWEEN LUMBER AND TREE.
DO NOT DAMAGE BARK.

EXISTING TREE

6'-0"

EXISTING GRADE

PRUNE ROOTS EXPOSED &/OR DAMAGED
BY EXCAVATION WITH A SHARP SAW

LIMIT OF WORK
(VARIES- REFER TO PLANS)

PROTECTED ROOT ZONE
(DISTANCE VARIES)

NO STORAGE OF EQUIPMENT OR
STOCKPILING OF MATERIALS

TREE PROTECTION DETAIL

DETAIL 
NTS

A diagram showing a dump trap assembly. It consists of a rectangular box with a lid. The lid is hinged on one side and has a handle on the other. The handle is labeled "DUMP STRAP". The box is labeled "SILT SACK". A cylindrical object, likely a trap, is shown at the bottom of the box.

1 SET CROWN OF ROOT BALL
1" ABOVE FINISH GRADE

2 COVER WITH EROSION CONTROL FABRIC

3 TURN DOWN TOP 1/3 OF BURLAP ON BALL
(WHERE APPLICABLE)

4 MODIFIED LOAM

5 TAMPED MODIFIED LOAM

6 EXISTING SUB GRADE

NOTE: FOR CONTAINER GROWN SHRUBS, SCARIFY ROOT BALL PRIOR TO BACK FILLING

- NOTES:
1. SHRUBS SHALL NOT BE PLANTED WITHIN 10' OF THE AUTHORITY'S MAINS OR APPURTENANCES AS MEASURED FROM MAIN STEM OF SHRUB TO EDGE OF MAIN OR APPURTENANCE.
 2. COORDINATE LOCATIONS AND SPECIES FOR REPLACEMENT SHRUB WITH THE AUTHORITY.

SHRUB PLANTING

DETAIL

NTS

F

Diagram illustrating the tree planting specifications:

- TREE SHALL HAVE A STRAIGHT TRUNK & SINGLE LEADER
NO DOUBLE LEADER TRUNKS SHALL BE ACCEPTED
- DO NOT CUT LEADER
- TREE WRAP SHALL NOT BE USED
- TREE SHALL BE SET PLUMB
- WATERING SAUCER SHALL BE FLOODED TWICE
DURING THE FIRST 24 HOURS AFTER PLANTING
- TREE SHALL BE PLANTED SO THAT CROWN IS 3" ABOVE
FINISHED GRADE AFTER SETTLEMENT
- 2"-3" AGED PINE BARK MULCH (PULL MULCH AWAY
FROM TRUNK OF TREE)
- BACK FILL MIX
- 3" HIGH EARTH WATERING SAUCER AROUND TREE PIT
- THREE 2"x4"x8' WOODEN STAKES, STAINED BROWN WITH DOUBLE
STRANDS OF WIRE TWISTED TOGETHER. STAKES SHOULD BE
PLACED AT 120 DEG. TO ONE ANOTHER. WIRE SHALL BE THREADED
THROUGH BLACK RUBBER HOSE COLLARS
- CUT & ROLL BACK TOP 1/3 OF BURLAP BEFORE BACKFILLING.
COMPLETELY REMOVE PLASTIC, BURLAP & LACING
- COMPACTED OR UNDISTURBED SUB GRADE
- DO NOT EXCAVATE BELOW ROOT BALL
(IN AREAS OF WETLANDS USE 6" MIN. CRUSHED
STONE UNDER TREES FOR SETTLEMENT)
- 6" BELOW
ROOT BALL
- 1'-0"
- 1'-0"
- SECURE TREE WITH
SISAL YARN TO THE
THREE STRANDS OF
TWISTED WIRE

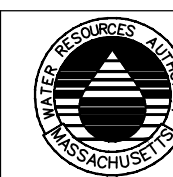
- NOTES:
1. TREES SHALL NOT BE PLANTED WITHIN 10' OF THE AUTHORITY'S MAINS OR APPURTENANCES AS MEASURED FROM C OF TREE TO EDGE OF MAIN OR APPURTENANCE.
 2. COORDINATE LOCATIONS AND SPECIES FOR REPLACEMENT TREE WITH THE AUTHORITY.

TREE PLANTING

DETAIL G

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 6956	CAD FILE NO. C-508
ACCESSION NO. : 703288	SECTION NO. :
DATE: JUNE, 2022	DESIGNED BY: VP DRAWN BY: VP CHECKED BY: JT APPROVED BY: SS
SCALE: AS NOTED	



MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY:

**CDM
Smith**

listen. think. deliver.



GREEN INTERNATIONAL AFFILIATES, INC.
CIVIL & STRUCTURAL ENGINEERS
100 AMES POND DRIVE
TEWKSBURY, MASSACHUSETTS

INTERMEDIATE HIGH WATER PIPELINE IMPROVEMENTS
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WATERTOWN & BELMONT MA

TREE PLANTING, PROTECTION AND EROSION AND SEDIMENTATION CONTROL DETAILS

DRAWING NO.

C-508

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