



LEICESTER WATER SUPPLY DISTRICT, MASSACHUSETTS

Request for Determination of Applicability

FEBRUARY 2023

Water System Interconnection Project Mulberry Street and Marshall Street Water Main

Water System Interconnection Project
Mulberry Street and Marshall Street Water Main
Leicester Water Supply District, Massachusetts

February 2023

Prepared By:

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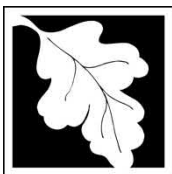
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Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Leicester, MA
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Leicester Water Supply District

joe@lwsd.net

Name

E-Mail Address

124 Pine Street, P.O. Box 86

Mailing Address

Leicester

MA

01524

City/Town

State

Zip Code

508-892-8484

508-892-1812

Phone Number

Fax Number (if applicable)

2. Representative (if any):

Wright-Pierce

Firm

Mariusz Jedrychowski

mariusz.jedrychowski@wright-pierce.com

Contact Name

169 Main Street, 700 Plaza Middlesex

Mailing Address

Middletown

CT

06457

City/Town

State

Zip Code

860-343-8297

N/A

Phone Number

Fax Number (if applicable)

B. Determinations

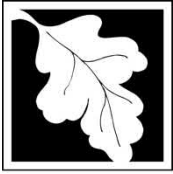
1. I request the Leicester make the following determination(s). Check any that apply:
Conservation Commission

- ☒ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- ☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- ☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- ☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Town of Leicester

Name of Municipality

- ☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



WPA Form 1- Request for Determination of Applicability

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C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

24 Mulberry St. to 0 Marshall St.

Street Address

Leicester, MA

City/Town

Project occurring in Town-owned roads, see plans.

Assessors Map/Plat Number

-

Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

Refer to Section 2 in the attached Report for the area description

- c. Plan and/or Map Reference(s):

Leicester Water Supply District Contract Drawings for Water System
Interconnection Project Mulberry Street and Marshall Street Water Main

February 2023

Date

Title

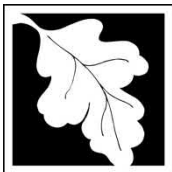
Date

Title

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

Refer to Section 2 in the attached Report for the work description.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Leicester, MA

City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. Project Description (cont.)

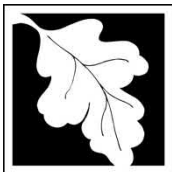
b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

The proposed project is for the installation of a new 12-inch ductile iron water main to be owned and operated by the Leicester Water Supply District for the use of public water service. The Massachusetts Wetland Protection Regulations 310 CMR §10.02 (2)(b)(i) describes that "Installation of underground utilities (e.g., electric, gas, water) within existing paved or unpaved roadways and private roadways/driveways, provided that all work is conducted within the roadway or driveway and that all trenches are closed at the completion of each workday;" are not subject to regulation.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single-family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☐ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Town of Leicester

Name

3 Washburn Square

Mailing Address

Leicester

City/Town

Massachusetts

State

01524

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant

Date

Signature of Representative (if any)

Date

Section 1 Introduction

The purpose of the following report is to service as the Request for Determination of Applicability (RDA) for the Water System Interconnection Project Mulberry Street and Marshall Street Water Main to the Massachusetts Department of Environmental Protection (MassDEP) and Leicester Conservation Commission.

1.1 Introduction

This RDA is prepared for the Water System Interconnection Project Mulberry Street and Marshall Street Water Main. The project is for the construction of a new 12-inch water main to connect the Leicester Water Supply District's (LWSD) public water distribution system to the City of Worcester public water distribution system. The purpose of the project is to increase the LWSD's capacity for providing public water service and to provide resiliency to their system. Due to several culvert crossings, the proposed project may fall under the jurisdiction of the Massachusetts Wetlands Protection Act I M.G.L. c. 131 §40 (WPA) and the Massachusetts Wetland Protection Regulations 310 CMR §10.00 (Wetland Regulations). Portions of the proposed project may also fall within the jurisdiction of the Town of Leicester Conservation Commission Rules and Regulations for Administering the Town of Leicester Wetlands Protection Bylaw (Local Wetland Bylaw), specifically, work within the 100-foot buffer zone for perennial rivers, streams, brooks, and creeks, as well as the 25-foot "No Disturb Zone".

The project location is shown in a locus provided in [Figure 1-1](#) of this report. A certified abutters list was requested from the Town of Leicester Assessor's office and will be included in [Appendix A](#) once received. Per the Conservation Commission bylaws, abutters were obtained for those located directly near and across the work that enters the 100-foot buffer zone. Certified mail notices will be sent to the properties listed in the abutters list and certified mail receipts will be filed with the appropriate authority as required by the bylaws.

1.2 Filing Fees

Per the WPA Form 1 Instructions Form, there are no fees required by MassDEP for the submission of the RDA. However, it is required that a notice of application be placed in a local newspaper and published at least five days prior to the hearing. Submission of the RDA notice to a local newspaper will occur simultaneous to the submission to MassDEP.

Per the Leicester Conservation Commission Rules and Regulations for Administering the Town of Leicester Wetlands Protection Bylaw, an application filing fee of \$100 is required for the submission of the RDA. A check payable to the Town of Leicester is included with this application.

Section 2 Project Description

The following sections discuss the existing and proposed conditions for the Water System Interconnection Project Mulberry Street and Marshall Street Water Main.

2.1 Existing Conditions

The new 12-inch ductile iron water main is proposed to be installed within existing Town of Leicester paved roads and rights-of-way. The water main will be installed from approximately 24 Mulberry Street (STA 0+00) to 0 Marshall Street (STA 100+00). The roadways are mostly bound by the Worcester Municipal Airport to the east and woodlands to the west on Mulberry Street and residential housing to the north and south on Marshall Street. Site photographs showing the existing roadway conditions for Mulberry and Marshall Street are included in [Appendix B](#).

Existing wetlands and associated 100-ft and 25-ft buffer zones were delineated by a wetland scientist, Ecotech Inc. on September 25, 2020. Wetland flags were surveyed by McClure Engineering. The 100-ft buffer zone shown on the plans in a dashed line represents the buffer zone required by the M.G.L. c. 131 §40 Wetlands Protection Act and the buffer zones required by the Leicester Conservation Commission bylaws. Additional zones of concern were reviewed, and the resulting jurisdictions are described below:

- Portions of the site are partially mapped within a NHESP Priority Habitat of Rare Species, Priority Habitat 1157. A figure downloaded from the MassMapper website is included in [Figure 2-1](#);
- The site is not mapped within an Area of Critical Environmental Concern (ACEC);
- The site is located within the vicinity of an Outstanding Resource Water as designated in 314 CMR 4.00. Specifically, the project is within the Lynde Brooke Reservoir, which is a Public Water Supply Watershed. A figure downloaded from the MassMapper website is included in [Figure 2-2](#);
- The site is not located within the vicinity of a DFW Coldwater Fisheries Resource, as designated in 314 CMR 4.00.
- The site is located partially within the vicinity of Zone A, Zone B, and Zone C areas, as designated in 314 CMR 22.00. Figures downloaded from the MassMapper website are included in [Figure 2-3](#), [Figure 2-4](#), and [Figure 2-5](#), respectively.
- A Flood Insurance Rate Map (FIRM) downloaded from the Federal Emergency Management Agency (FEMA) Flood Map Service Center indicates that the project is not located within a designated Special Flood Hazard Area (SFHA). The FEMA FIRM is included in [Figure 2-6](#).

2.2 Proposed Conditions

The proposed project involves the installation of approximately 10,000 feet of 12-inch water main on Mulberry Street and Marshall Street in Leicester, Massachusetts. The project will include trench excavation, laying of pipe, installation of gate valves, installation of hydrants, backfilling, trench paving, and final paving. All trenches resulting from construction will be covered or backfilled daily as required by local and state regulations. All existing curbing and sidewalk altered due to the water main installation will be restored to the original condition existing prior to construction start. The proposed work for the project is depicted on the contract drawings, which are included in [Appendix C](#).

The new water main is proposed to be installed on Mulberry Street and Marshall Street, which is laid out over several culvert crossings. Due to the crossings, portions of the roads in which work will take place are located within the 100-foot and 25-foot buffer zones previously discussed in Section 1.1 and 2.1 in this report. The following table

tabulates the areas on the plans in which work will occur inside or near the 100-foot and 25-foot buffer zones. The stationing depicted mirrors the stationing shown on the plans in [Appendix C](#).

Table 2-1 Areas of Work in Buffer Zone

Stationing	Drawing Number	Zone	Zone Source
30+00 to 33+00	C-5	100-foot buffer zone	Wetlands
47+00 to 49+00	C-7	100-foot buffer zone, 25-foot no disturb zone	Wetlands, culvert crossing
54+00 to 57+00	C-7	100-foot buffer zone	Wetlands
63+00 to 66+00	C-8	100-foot buffer zone, 25-foot no disturb zone	Wetlands, culvert crossing
67+00 to 71+00	C-8	100-foot buffer zone	Wetlands
79+00 to 82+00	C-9	100-foot buffer zone, 25-foot no disturb zone	Wetlands, culvert crossing for Southwick Brook
91+00 to 94+00	C-10	100-foot buffer zone, 25-foot no disturb zone	Wetlands, culvert crossing

Additional plans and details for each culvert crossing can be referenced on pages C-12 and C-13 of the drawings. No work depicted on the plans or otherwise propose include the removal or alteration of existing wetlands or vegetation. All work proposed is solely for the installation of the new water main and related appurtenances.

2.2.1 Stormwater Management

All existing stormwater conveyance infrastructure including manholes, culverts, and pipes will remain in their existing conditions and are not proposed to be altered or removed as part of the project. No additional impervious surfaces are proposed to be constructed for this project as the water main will be installed in pre-existing paved roads.

2.2.2 Erosion and Sediment Controls

Erosion and sedimentation control measures will be required to be installed as part of the proposed project. The measures will be installed according with the "*Massachusetts Erosion and Sediment Control Guideline for Urban and Suburban Areas*", by Franklin, Hampden, Hampshire Conservation Districts, Dated March 1997. Locations for erosion and sedimentation and control measures are depicted on the plans located in [Appendix C](#). Additional information on these measures can be found on page C-14 which highlights erosion and construction sequence notes, wetland notes, mulch anchoring, and details on the necessary erosion and sedimentation control. These measures will be required to be installed prior to construction start and will be checked and maintained through the entirety of the construction period. Erosion controls shall be removed after construction has been completed, with approval from the Commission. It is anticipated that there will not be extensive dewatering required for the installation of the water main. The water main installation over the several culvert crossings will take place in the summer to minimize the construction impact.

If required, the contractor will develop and submit a Stormwater Pollution Prevention Plan (SWPPP), following the EPA NPDES General Permit for Discharge from Construction Activities. The SWPPP will cover soil disturbance, stabilization measures, stockpile locations, construction waste management procedures, and hazardous materials storage procedures.

2.2.3 Construction Sequence

The proposed work near the sensitive wetland areas will be required to be completed during summer months (dry period). In general, the construction scope of work will be as follows:

- Install erosion control (inspection by Conservation Agent);
- Full trench excavation and installation of 12-inch ductile iron water main and related appurtenances;
- Testing and disinfection of new water main;
- Connection of new water main to existing water main;
- Trench repaving;
- Site restoration; and
- Removal of erosion controls (approved by Conservation Agent).



Figure 1-1

Project Locus

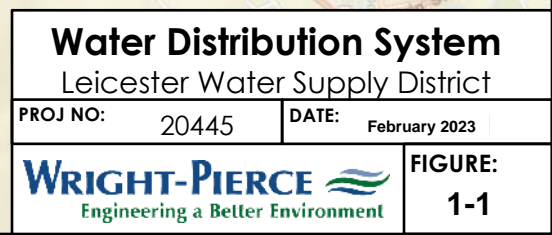




Figure 2-1

MassMapper – NHESP Priority Habitat of Rare Species Map

Mass NHESP Map



NHESP Estimated Habitats of Rare Wildlife



NHESP Priority Habitats of Rare Species



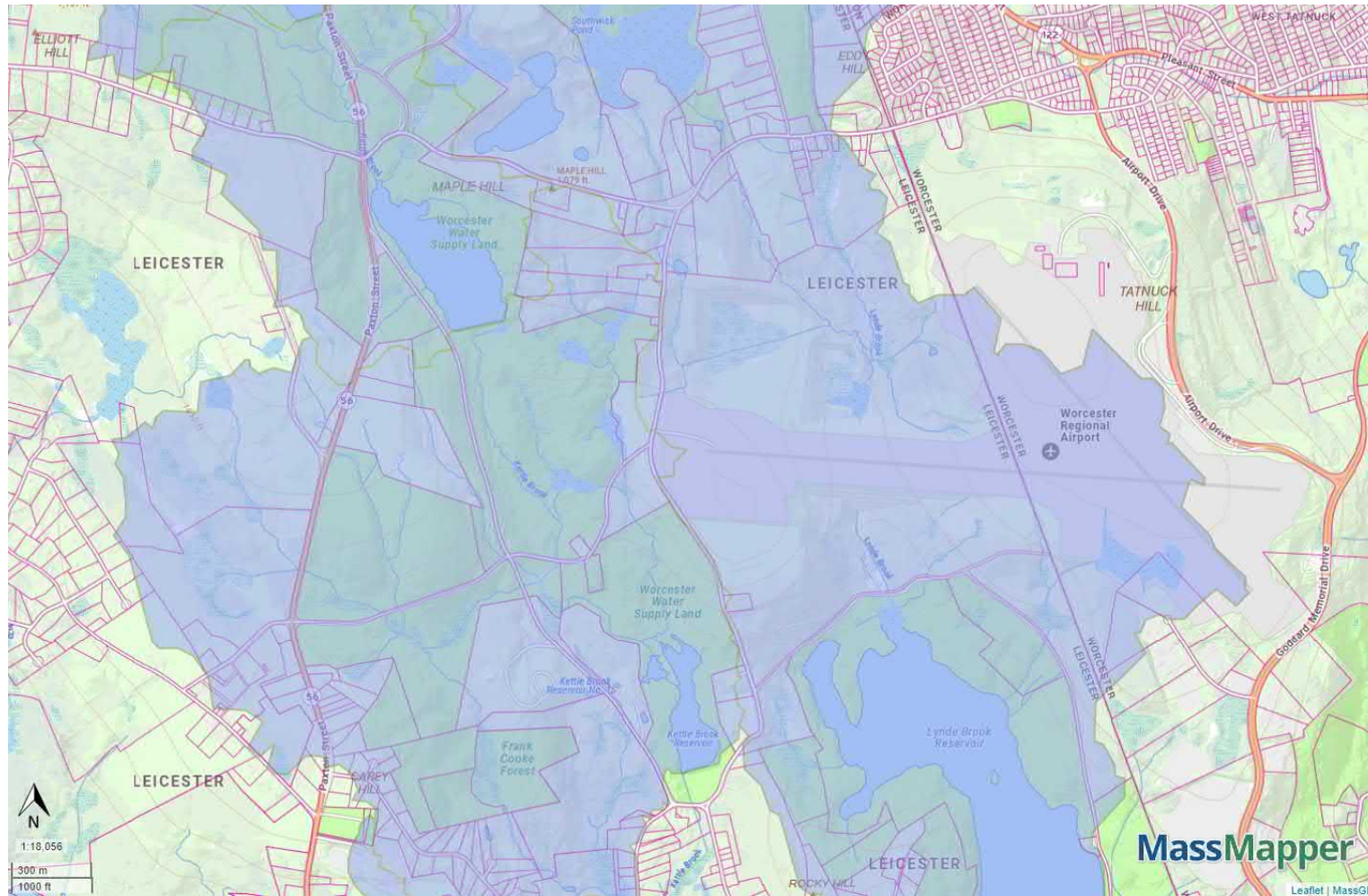
Map Features for Imagery



Figure 2-2

MassMapper – Outstanding Water Resource Map

MassMapper - Outstanding Resource Waters



Outstanding Resource Waters

- ACEC
- Cape Cod National Seashore
- Protected Shoreline
- Public Water Supply Watershed
- Retired Public Water Supply
- Scenic/Protected River
- Wildlife Refuge

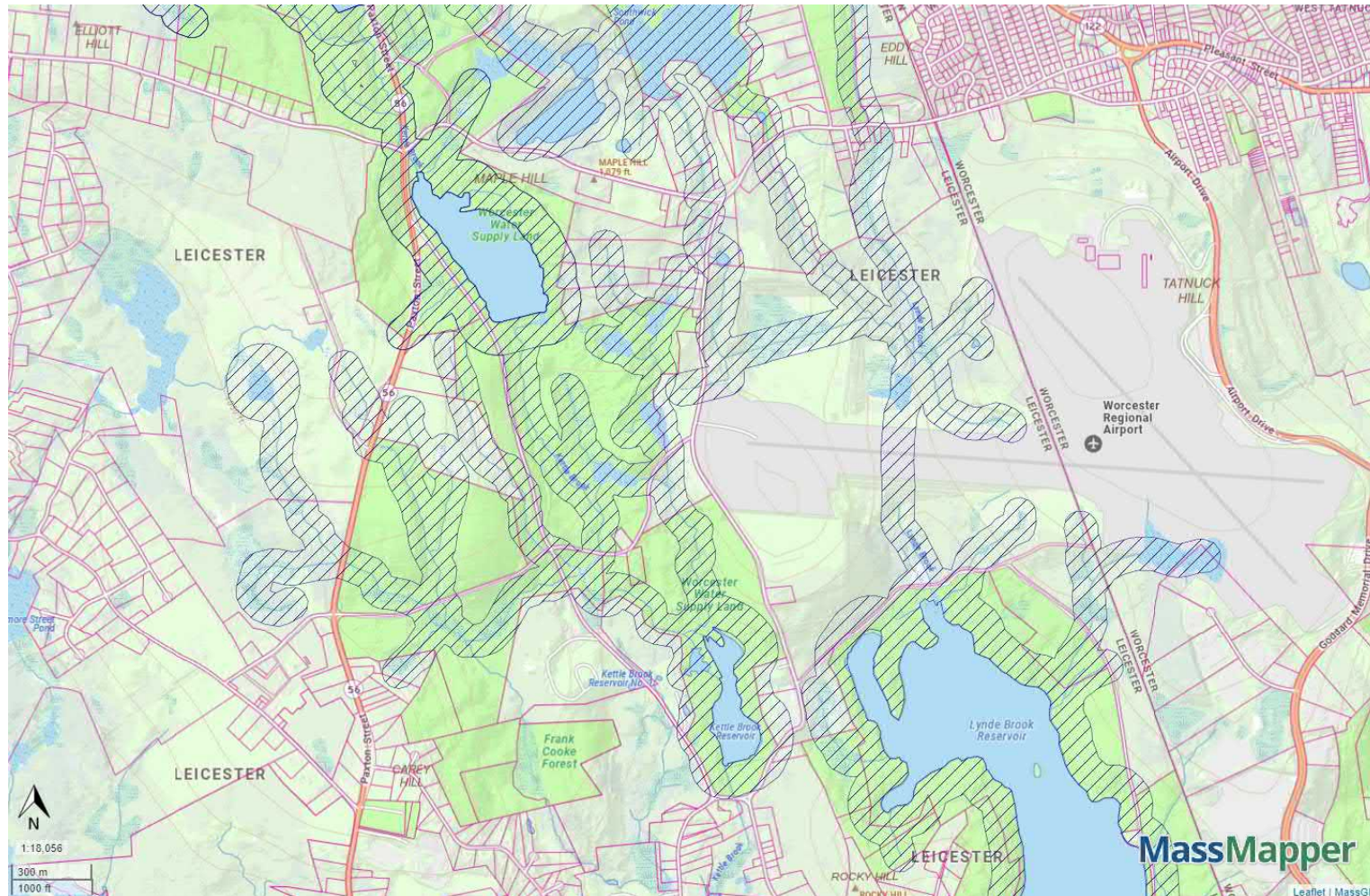
Property Tax Parcels



Figure 2-3

MassMapper – Zone A Map

Mass Mapper - Zone A



Zone A



DFW Coldwater Fisheries Resources



Property Tax Parcels

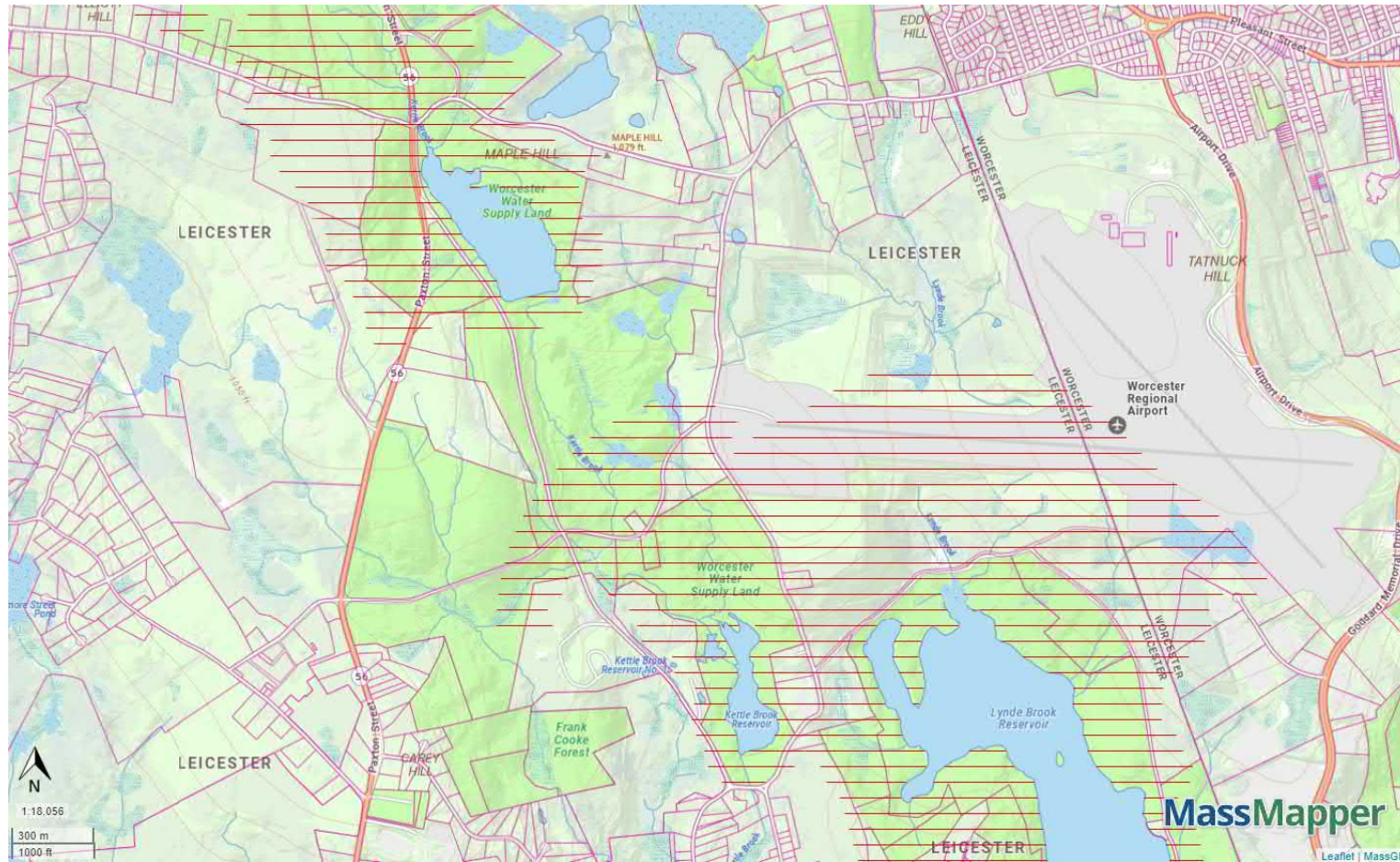


Figure 2-4

MassMapper – Zone B Map



Mass Mapper - Zone B



Zone B

DFW Coldwater Fisheries Resources

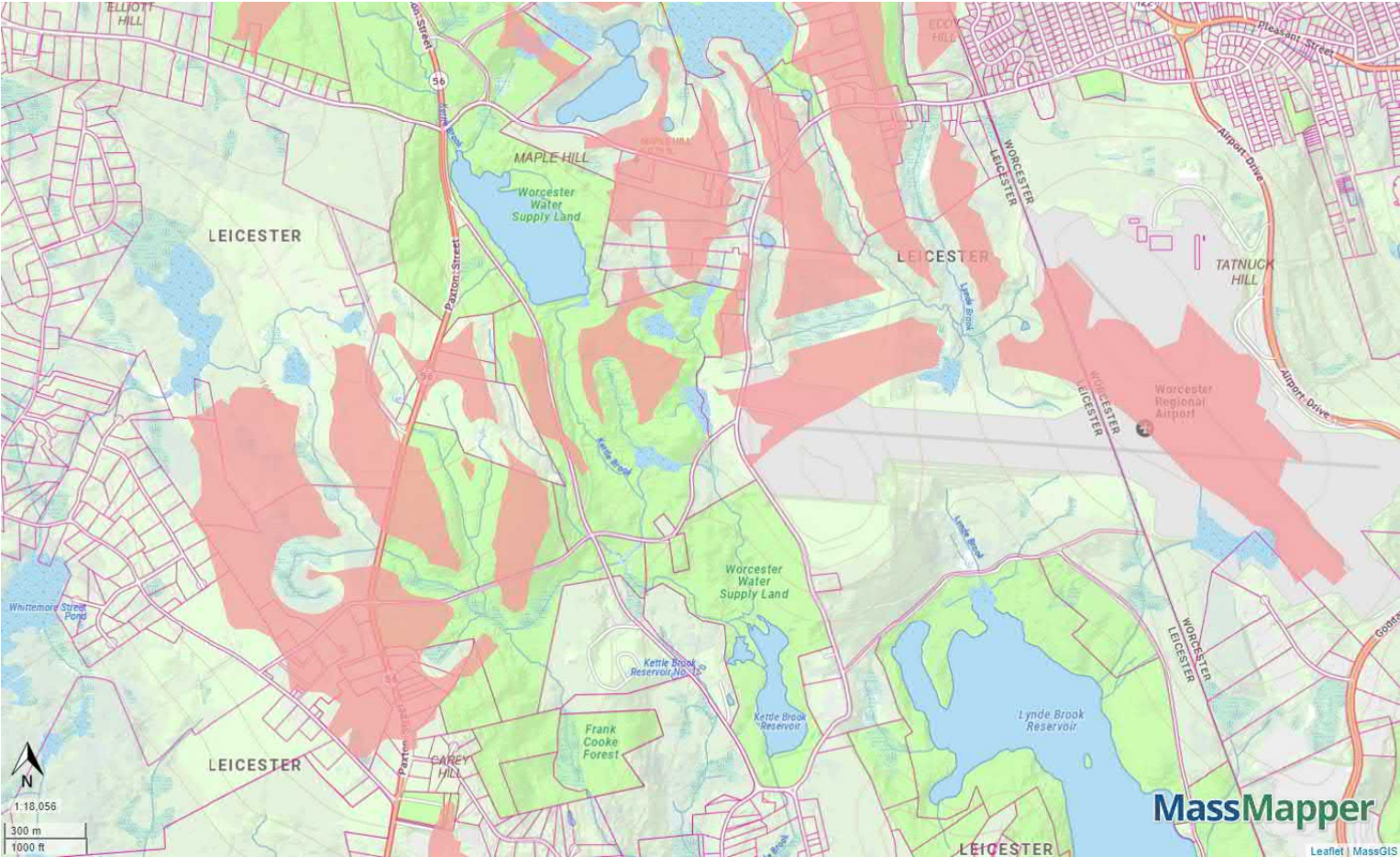
Property Tax Parcels

Figure 2-5

MassMapper Zone C Map



Mass Mapper- Zone C



- Zone C
- DFW Coldwater Fisheries Resources
- Property Tax Parcels

Figure 2-6

FEMA Flood Insurance Rate Map





FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee See Notes <i>Zone X</i>
OTHER AREAS		Area with Flood Risk due to Levee <i>Zone D</i>
		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
OTHER AREAS		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
OTHER FEATURES		8 Coastal Transect
		Coastal Transect Baseline
OTHER FEATURES		Profile Baseline
		Hydrographic Feature
OTHER FEATURES		Base Flood Elevation Line (BFE)
		Limit of Study
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-6627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

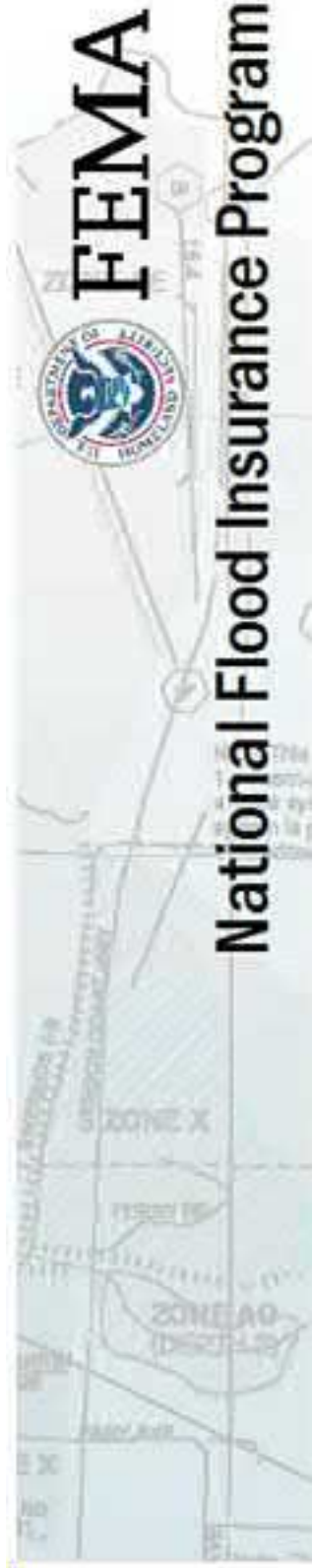
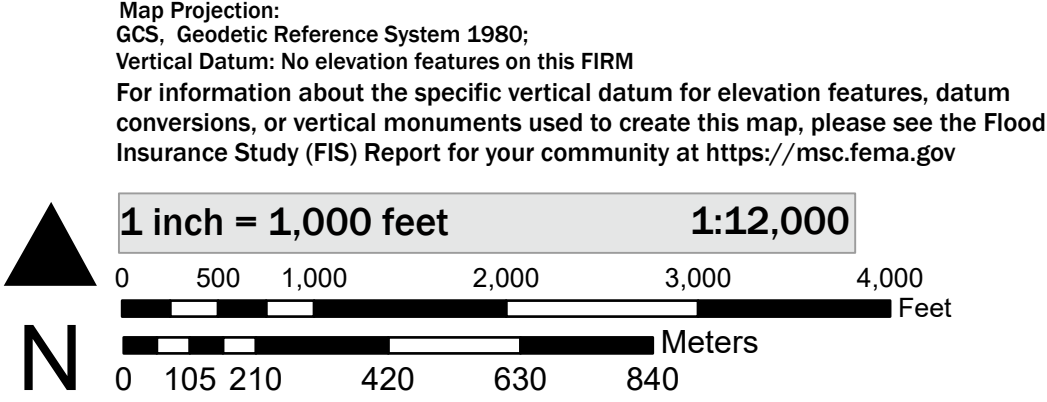
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **2/7/2023 3:20 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

PANEL 595 OF 1055

Panel Contains:

COMMUNITY	NUMBER	PANEL
CITY OF WORCESTER	250349	0595
TOWN OF LEICESTER	250313	0595
TOWN OF PAXTON	250326	0595
TOWN OF HOLDEN	250309	0595

Appendix A Certified Abutters List

A request for a certified abutters list was submitted to the Town of Leicester Assessor's office on February 9th, 2023. A follow up call to the office confirmed that the list was expected to be drafted by Tuesday, February 21st. The list will be filed with the application once received.



Appendix B Site Photographs



On Marshal St looking Northwest



On Marshall crossing #1 looking North



Southwick Pond Brook Culvert Crossing



On Marshall looking East Crystal on left



On Marshall looking East



On Mulberry looking North at Archway School



On Mulberry looking Northeast toward Marshall



Southwick Pond Brook Culvert Crossing



Southwick Pond Brook Culvert Crossing



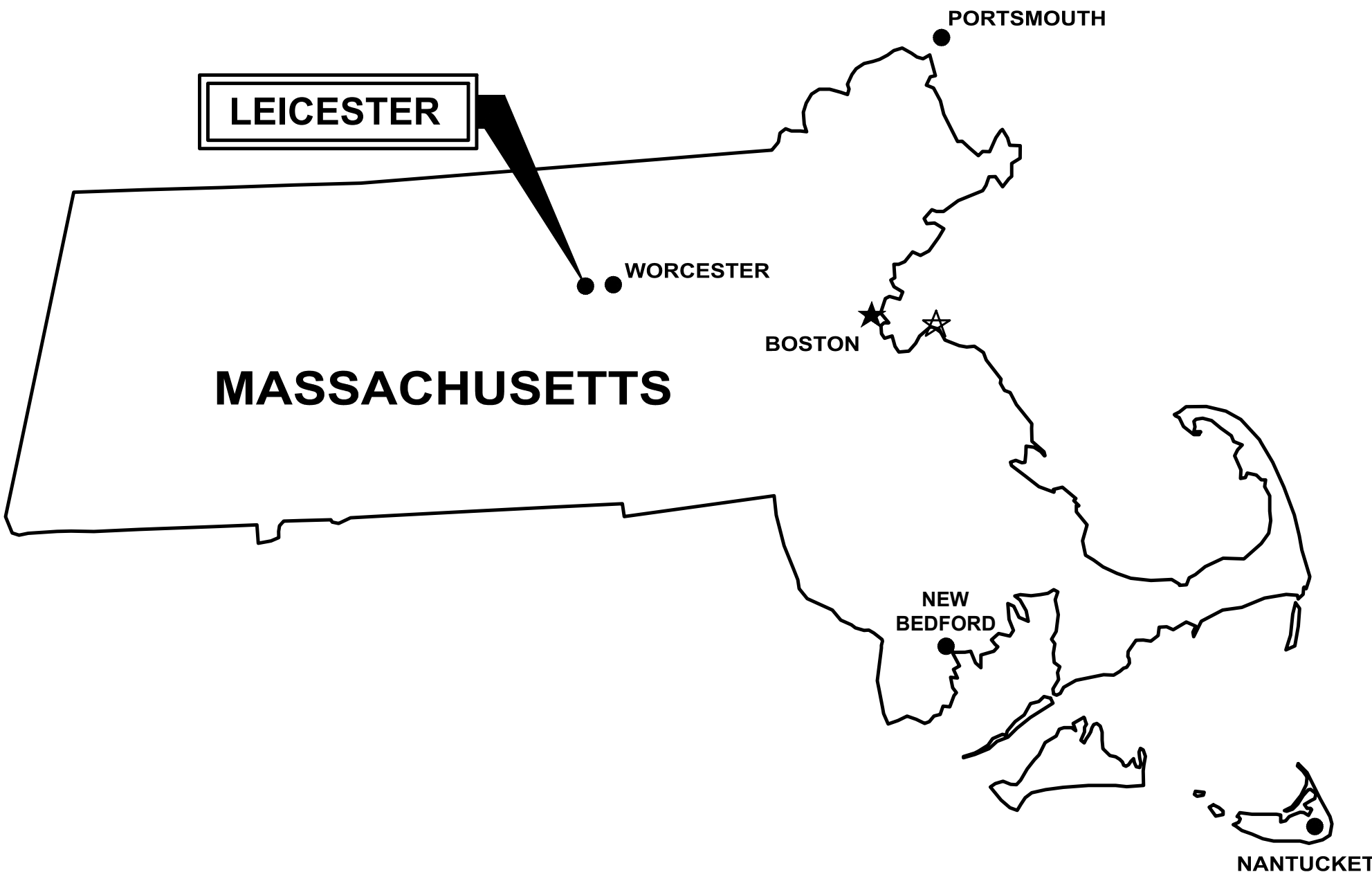
Southwick Pond Brook Culvert Crossing



Appendix C Permitting Plans

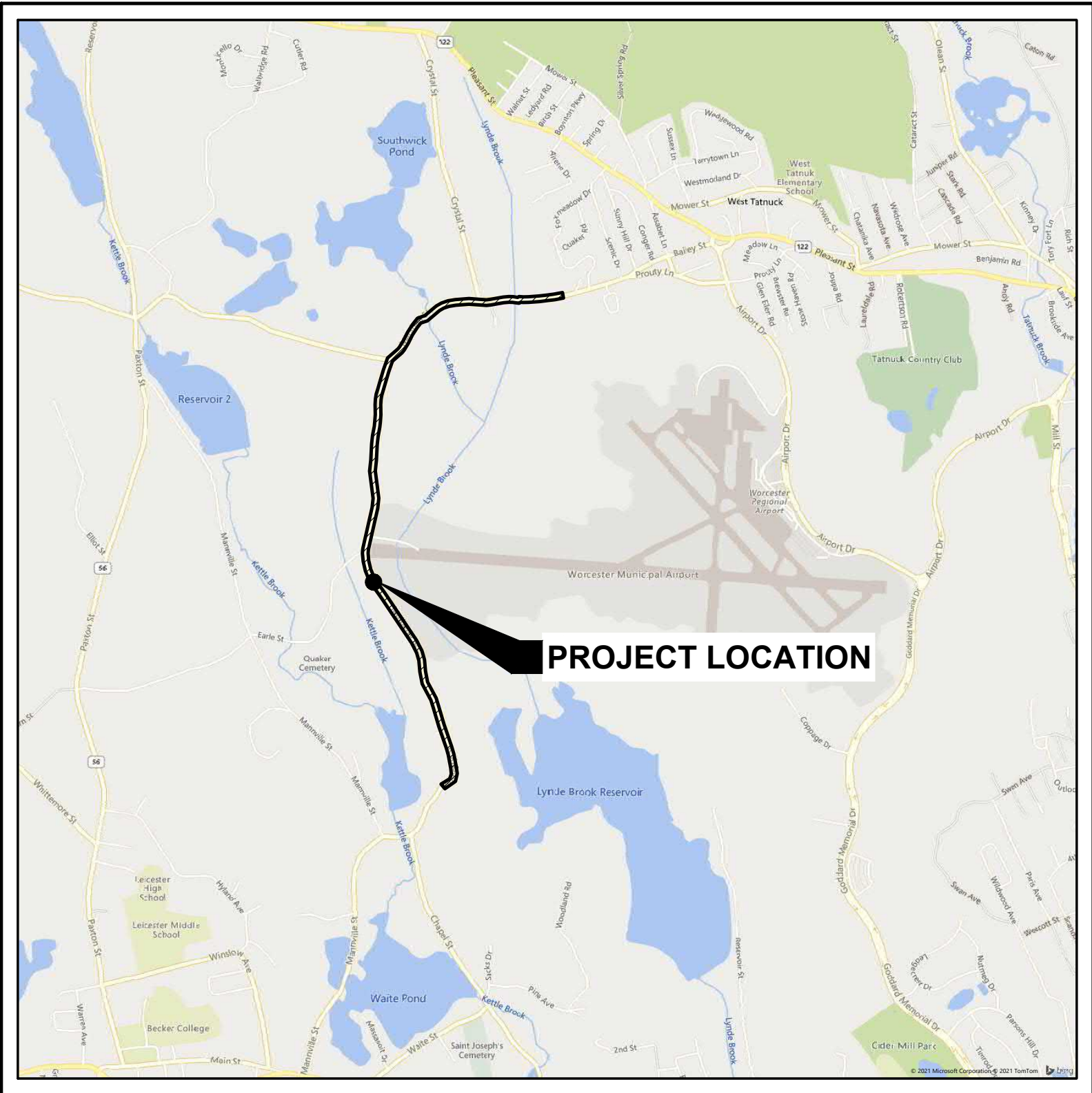
LEICESTER WATER SUPPLY DISTRICT
CONTRACT DRAWINGS FOR
WATER SYSTEM INTERCONNECTION PROJECT
MULBERRY STREET AND MARSHALL STREET WATER MAIN

FEBRUARY 2023
DWSRF# 7051



DRAWING INDEX	
<u>GENERAL</u>	COVER SHEET

<u>CIVIL</u>	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C-1	INDEX SHEET
C-2	SITE PLAN I
C-3	SITE PLAN II
C-4	SITE PLAN III
C-5	SITE PLAN IV
C-6	SITE PLAN V
C-7	SITE PLAN VI
C-8	SITE PLAN VII
C-9	SITE PLAN VIII
C-10	SITE PLAN IX
C-11	PLAN AND PROFILE I
C-12	PLAN AND PROFILE II
C-13	EROSION CONTROL NOTES AND DETAILS
C-14	DETAILS I
C-15	



LOCATION PLAN
SCALE: 1"=2,000'

GENERAL NOTES

1.

THE LEICESTER WATER SUPPLY DISTRICT WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE LEICESTER WATER SUPPLY DISTRICT . ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2.

THE LEICESTER WATER SUPPLY DISTRICT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE LEICESTER WATER SUPPLY DISTRICT . IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION.
3.

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
4.

CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.
5.

CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.
6.

ALL EXISTING SEWER AND STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING SEWERS, STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE LEICESTER WATER SUPPLY DISTRICT , EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW WATER OR WHEN NOT SHOWN OR INDICATED.
7.

ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURE CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.
8.

IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE LEICESTER WATER SUPPLY DISTRICT . NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
9.

ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE PLANS. TESTS PITS ARE REQUIRED WHERE SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG PRIOR TO CONING PROPOSED WATER MAINS TO DETERMINE EXISTING WATER MAINS. THE RESULTS OF TEST PITS DUG TO DETERMINE EXISTING WATER MAIN ELEVATIONS AND LOCATIONS WILL BE REPORTED TO THE ENGINEER. ADJUSTMENTS TO INVERTS, LENGTHS, AND SLOPES OF PROPOSED WATER MAIN MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THE HORIZONTAL ALIGNMENT OF THE NEW WATER MAIN MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR APPROVAL OF THE ENGINEER.
10.

INITIAL PAVING SHALL BE CONDUCTED WITHIN TWO WEEKS OF COMPLETION OF PLACEMENT OF FINAL BACKFILL UNLESS OTHERWISE AUTHORIZED BY ENGINEER. INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF THREE MONTHS BEFORE FINAL PAVEMENT IS PLACED. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVING PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.
11.

WATER MAINS SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN NEW PIPING WILL BE PERMITTED UNLESS OTHERWISE NOTED ON THE DRAWINGS.

EXISTING SITE CONDITIONS

1.

THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.
2.

BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED.

ELECTRIC:		WATER:	
NATIONAL GRID ELECTRIC		WORCESTER DPW (WATER)	
1250 BRAYTON POINT ROAD		18 EAST WORCESTER ST.	
SOMERSET, MA 02725		WORCESTER, MA 01604	
413.582.7424		508.929.1300	
TELEPHONE:		DIG SAFE:	
VERIZON		DIG SAFE SYSTEM, INC.	
385 MYLES STANDISH BLVD.		11 UPTON DR.	
TAUNTON, MA 02780		WILMINGTON, MA 01887	
774.409.3160		888.344.7233	
GAS:		WATER:	
EVERSOURCE GAS		LEICESTER WATER SUPPLY DISTRICT	
157 CORDAVILLE RD., 3113		124 PINE STREET P.O. BOX 86	
SOUTHBOROUGH, MA 01772		LEICESTER, MA 01524	
508.305.6970		508.892.8484	
GAS:		CABLE:	
CROWN CASTLE		CHARTER COMMUNICATIONS	
80 CENTRAL ST		301 BARBER AVENUE	
BOXBOROUGH, MA 01719		WORCESTER, MA 01606	
508.616.7818		774.243.9834	

3.

THERE ARE NO KNOWN HAZARDOUS ENVIRONMENTAL CONDITIONS WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00800-SC-5.06. IF THE PRESENCE OF HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE LEICESTER WATER SUPPLY DISTRICT AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

SITE DEMOLITION

1.

REFER TO THE EXISTING SITE PLAN, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO THE LAYOUT DRAWING FOR LIMITS OF WORK.
2.

REFER TO SPECIFICATION SECTION 01010A, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.
3.

DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES.

4.

ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE LEICESTER WATER SUPPLY DISTRICT AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPES AND CONDUIT DESIGNATED AS "ABANDONED" MAY BE REMOVED BY THE CONTRACTOR SO LONG AS, IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED, AND THE NEW ENDS OF ABANDONED PIPE CAPPED OR PLUGGED WITH CONCRETE.
5.

SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE LEICESTER WATER SUPPLY DISTRICT RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS SHALL BE RETAINED SHOWN IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE LEICESTER WATER SUPPLY DISTRICT /ENGINEER. REFER TO SPECIFICATION SECTION 02050A.
7.

THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01270.
8.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS.

SITE CLEARING, GRUBBING AND GRADING

1.

STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO THE LAYOUT AND GRADING DRAWINGS FOR LIMIT OF WORK AND STRIPPING.
2.

CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS-OF-WAY AND PROPERTY LINES ON STATE OR COUNTY-OWNED PROPERTY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.
3.

THE CONTRACTOR SHALL FOLLOW ALL ENDANGERED SPECIES ACT 4(D) RULES REGARDING THE NORTHERN LONG EARED BAT. THIS INCLUDES AVOIDANCE OF TREE REMOVAL DURING THE MONTHS OF JUNE AND JULY. CONTRACTOR SHALL PLAN ACCORDINGLY.
4.

CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM. CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME. TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.
5.

ALL STORM DRAINAGE INLETS SHALL BE PROTECTED TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.
6.

TEST PIT AND/OR BORING LOGS FOR THE PROJECT SITE ARE INCLUDED IN APPENDIX A OF THE SPECIFICATIONS. THESE ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. PLEASE NOTE THAT THE SOIL DESCRIPTIONS PROVIDED ON THE TEST PIT BORING LOGS DO NOT REPRESENT FIELD CONDITIONS OTHER THAN AT THE SPECIFIC TEST BORING LOCATIONS. THE CONDITIONS BETWEEN BORING LOCATIONS MAY VARY FROM THOSE SHOWN ON THE TEST BORING LOGS.
7.

CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.
8.

CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.
9.

ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.
10.

THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE. THE CONTRACTOR SHALL DISPOSE OF ANY SUCH DISPOSED UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.
11.

CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.
12.

WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.
13.

ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.
14.

ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4-INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LANDSCAPING/LOAM AND SEED.
15.

THE BASE COURSE PAVING SHALL BE INSTALLED PRIOR TO WINTER AND THE FINAL PAVING SHALL BE INSTALLED FOLLOWING SPRING AFTER INSTALLATION OF THE WATER MAIN.

CIVIL SITE LAYOUT

1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
2.

REFER TO THE SITE PLANS AND PLAN AND PROFILE DRAWINGS FOR ADDITIONAL INFORMATION.
3.

IN GENERAL, THE GIVEN STRUCTURE LOCATIONS ARE TO THE OUTSIDE FACE OF THE STRUCTURE FOUNDATION WALL, NOT FOOTINGS. RADII SHOWN FOR ROADS ARE TO EDGE OF PAVEMENT.

4.

THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE LEICESTER WATER SUPPLY DISTRICT AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS.
5.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTling ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS AT NO ADDITIONAL COST TO THE OWNER .
6.

WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
7.

PROPERTY AND STREET LINE INFORMATION AS SHOWN ARE APPROXIMATE ONLY AND ARE BASED UPON ASSESSORS RECORDS.
8.

HORIZONTAL DATUM IS BASED UPON THE NORTH AMERICAN DATUM OF 1983. VERTICAL DATUM IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988. BOTH SYSTEMS ARE DERIVED FROM GPS OBSERVATIONS TAKEN IN THE FIELD AND REFERENCED TO THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK. (MACORS).
9.

UTILITIES AND ALL TOPOGRAPHY AS SHOWN ARE BASED UPON INFORMATION COLLECTED IN THE FIELD BY MCCLURE ENGINEERING BETWEEN THE DATES OF 11-5-20 & 1-7-21.
10.

WETLAND BOUNDARIES DELINEATED BY ECOTECH, INC. ON SEPTEMBER 25, 2020. WETLANDS FLAGS SURVEYED BY MCCLURE ENGINEERING.

CIVIL SITE PIPING

1.

TRENCH INSULATION SHALL BE USED WHERE DEPTH OF COVER IS LESS THAN 5 FEET. REFER TO THE CIVIL DETAIL DRAWINGS FOR THE TRENCH INSULATION DETAIL.
2.

REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.
3.

COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
4.

OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY.
5.

WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.
6.

ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE CIVIL EXISTING CONDITIONS AND DEMOLITION PLAN. ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7.

CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 02050.
8.

OWNER SHALL RETAIN THE RIGHT OF FIRST REFUSAL FOR ALL EXISTING WATER SYSTEM APPURTENANCES.
9.

WHERE POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER OR SLUDGE LINES. A MINIMUM SEPARATION OF 18-INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER OR SLUDGE LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES UNDER A WASTEWATER OR SLUDGE LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.

WATER MAIN GENERAL NOTES

1.

WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.
2.

ANY UNDERGROUND STRUCTURES, CABLES, AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATIONS SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES, CABLES, AND PIPELINES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF OWNER OF THE STRUCTURES, CABLES, AND PIPELINES.
3.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE NEW WATER MAIN. LAYOUT SHALL BE REVIEWED AND ACCEPTED BY THE OWNER AND ENGINEER. THE NEW WATER MAIN MUST BE LOCATED WITHIN THE RIGHTS-OF-WAY SHOWN ON THE DRAWINGS.
4.

MINIMUM DEPTH OF COVER SHALL BE 5'-0" AND MAXIMUM DEPTH OF COVER SHALL BE 7'-0" UNLESS SHOWN OTHERWISE ON THE DRAWINGS. THE NEW MAIN SHALL GENERALLY FOLLOW THE GROUND CONTOUR, HOWEVER, ABRUPT CHANGES IN GRADE SHALL BE AVOIDED. AT LOCAL HIGH POINTS OR WHERE AIR RELEASE VALVES ARE SHOWN, THE CONTRACTOR SHALL SLOPE NEW MAIN AS NEEDED TO MAINTAIN HIGH POINT AT AIR RELEASE VALVE. IF LEDGE IS ENCOUNTERED THE MINIMUM DEPTH OF COVER SHALL BE 5'-0".
5.

NEW HYDRANTS SHALL BE FIELD LOCATED AND APPROVED BY THE LEICESTER WATER SUPPLY DISTRICT AND FIRE DEPARTMENT.
6.

ALL BENDS, TEES, REDUCERS, HYDRANTS AND PLUGS SHALL BE RESTRAINED BY USING CONCRETE THRUST BLOCKS OR OTHER METHOD AS SHOWN ON THE DRAWINGS. ANCHOR TEES SHALL BE USED FOR ALL HYDRANT BRANCHES. REMOVED HYDRANTS AND VALVES SHALL BE RETURNED TO THE LEICESTER WATER SUPPLY DISTRICT.
7.

TEST PRESSURES FOR THE COMBINATION PRESSURE AND LEAKAGE TESTS SHALL BE 150 PSI. TEST DURATION SHALL BE TWO HOURS.
8.

CONNECTIONS TO EXISTING WATER MAIN SHALL BE COORDINATED WITH THE OWNER .
9.

ALL WATER MAINS THAT ARE DISCONNECTED FROM THE WATER SYSTEM AND ARE TO BE LEFT IN PLACE SHALL BE CAPPED WITH A M.J. CAP OR PLUG.
10.

ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED. AT NO ADDITIONAL COST TO THE OWNER THE CONTRACTOR SHALL REPAIR OR COORDINATE WITH THE RESPECTIVE UTILITY ON DAMAGE TO EXISTING UTILITIES.
11.

CONTINUOUS WATER SERVICE MUST BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY PIPING AND SERVICES SUITABLE FOR AN OPERATING PRESSURE OF 100PSI. REACCESS TO ROAD AND DRIVEWAYS SHALL ALSO BE MAINTAINED.
12.

ALL EXISTING WATER SERVICES ARE TO BE CONNECTED TO THE NEW MAIN. EXISTING SERVICES, AS SHOWN ON THE DRAWINGS, ARE FOR THE CONTRACTOR'S REFERENCE. THE CONTRACTOR SHALL VERIFY LOCATION, SIZE AND TYPE OF ALL SERVICES. IF NOT LABELED ON THE PLAN, THE SERVICE SHALL BE ASSUMED TO BE A MINIMUM SERVICE SIZE OF 1-INCH.
13.

ALL VALVES SHALL OPEN RIGHT.

ABBREVIATIONS

A	AIR
BIT.	BITUMINOUS
BND	BOUND
CB	CATCH BASIN
CCB	CAPE COD BERM
C.I.	CAST IRON PIPE
C.L.FE.	CHAINLINK FENCE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CP	CORRUGATED PIPE
CPP	CORRUGATED PLASTIC PIPE
DI	DROP INLET
DMH	DRAIN MANHOLE
E	EAST
EOP	EDGE OF PAVEMENT
FE	FLARED END
FND	FOUND
FM	FORCE MAIN
GS	GALVANIZED STEEL PIPE
HYD	HYDRANT
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INV	INVERT ELEVATION
IP	IRON PIN
MON.	MONUMENT
N/F	NOW OR FORMERLY
OHE	OVERHEAD ELECTRICAL
OHW	OVERHEAD WIRE
OUT	OUTFALL
P.C.	POINT OF CURVATURE
PE	POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
R=	RIM ELEVATION
RAD.=	RADIUS
RCP	REINFORCED CONCRETE PIPE
S	SEWER
SD	STORM DRAIN
SMH	SEWER MANHOLE
SS	STAINLESS STEEL PIPE
UD	UNDERDRAIN
UP	UTILITY POLE
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W	WATER
WCH	WORCESTER COUNTY HIGHWAY
WFR	WETLAND FLAG NUMBER
XFR	TRANSFORMER

EXISTING

LEGEND

PROPERTY/ROW LINE (SURVEYED)
PROPERTY/ROW LINE (GIS BASED)

SETBACK LINE

EASEMENT LINE

CENTERLINE

EDGE OF PAVEMENT

TRENCH PAVEMENT

CURBING

EDGE OF GRAVEL

EDGE OF CONCRETE

CONTOUR

BUILDING

STONEWALL

TREELINE

CHAIN LINK FENCE

STOCKADE FENCE

BARB WIRE FENCE

RETAINING WALL

GUARDRAIL

SEWER

SEWER FORCE MAIN

GAS

WATER

STORM DRAIN

UNDERDRAIN

CULVERT

UNDERGROUND ELECTRIC

OVERHEAD ELECTRIC

IRON PIPE/REBAR

DRILLHOLE

MONUMENT

SURVEY CONTROL POINT

SPOT ELEVATION

SEWER MANHOLE

DRAINAGE MANHOLE

CATCH BASIN

ELECTRIC MANHOLE

TELEPHONE MANHOLE

GATE VALVE

CURB STOP

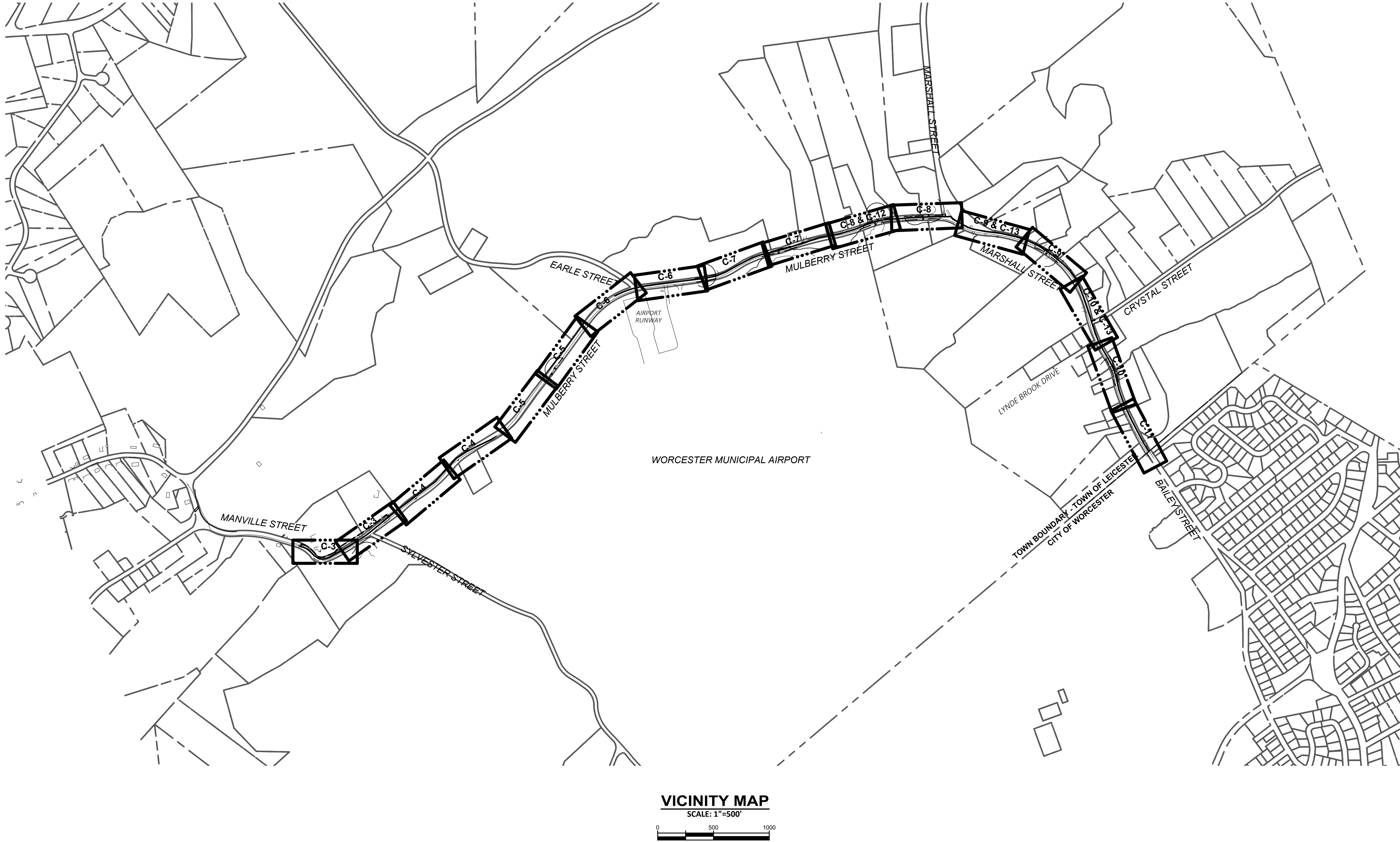
YARD HYDRANT

HYDRANT

UTILITY POLE


UTILITY POLE W/ GUY

UTILITY POLE



LEICESTER WATER SUPPLY DISTRICT
WATER SYSTEM INTERCONNECTION PROJECT
MULBERRY AND MARSHALL STREET

INDEX SHEET



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600 FEDERAL STREET, SUITE 215L, ANDOVER, MA 01810

REVISIONS		PROJECT NO: 20445	SUBMISSION: CONTRACT DRAWINGS	
NO		DESIGNED: M.HORING		
△		CAD COORD: S.COCHRAN		APPD DATE
△		CAD: D.FUDA		
△		CHECKED: M.JERYCHOWSKI		
△		DATE: 02-23		
△		APPROVED: M.JERYCHOWSKI		
△		DATE: 02-23		

NOTES:

1. CONTRACTOR TO LOCATE SERVICE CONNECTIONS IN THE FIELD.

PLAN

SCALE: 1"=20'

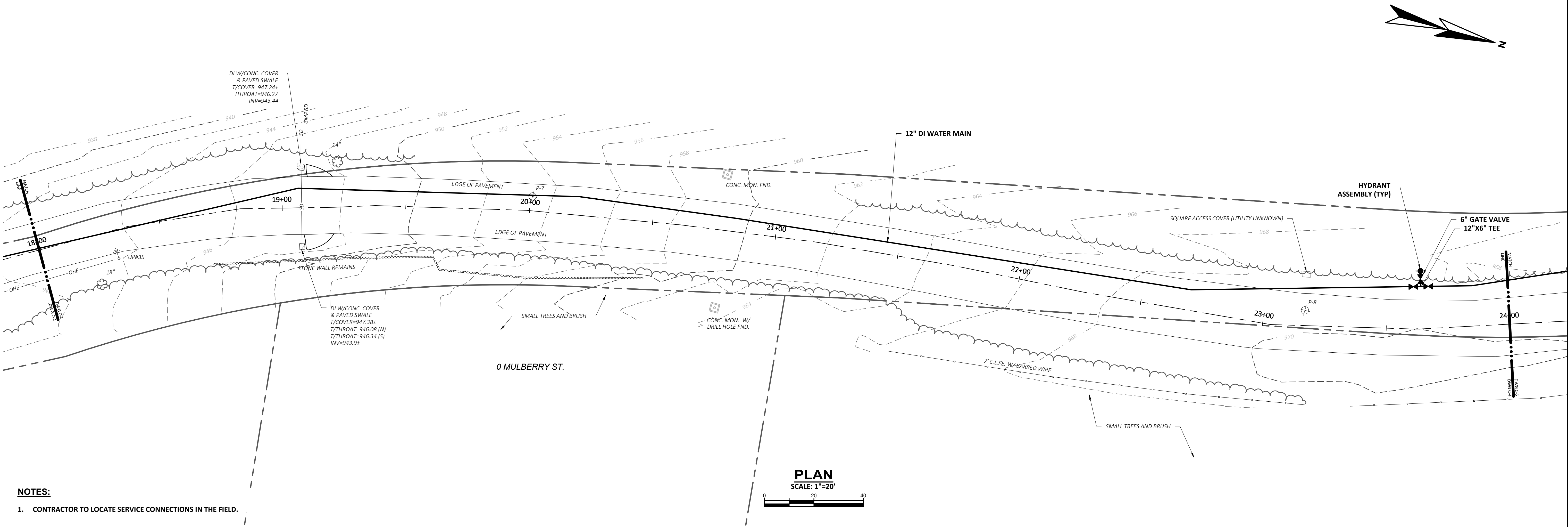
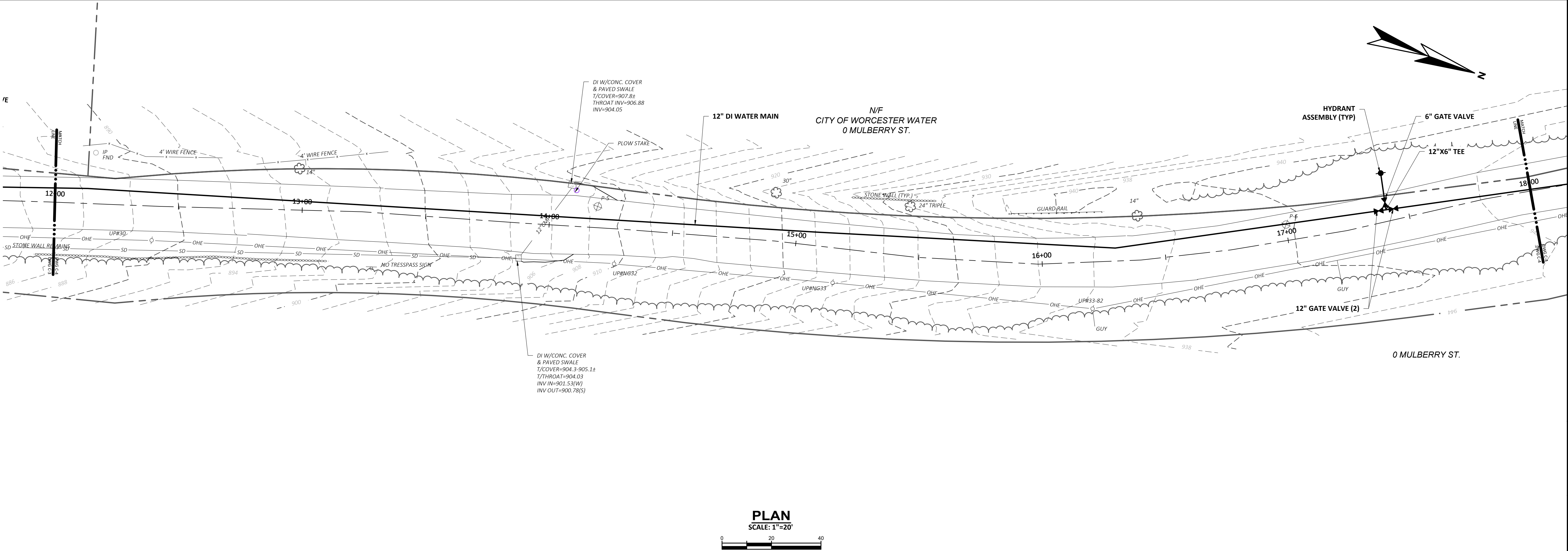


PLAN

SCALE: 1"=20'



REVISIONS		APPD	DATE
NO	Δ		
PROJECT NO: 20445 DESIGNED: M. HORNING CAD COORD: S. COCHRAN CAD: D. FUDA CHECKED: M. JEDRYCHOWSKI DATE: 02-23 APPROVED: M. JEDRYCHOWSKI DATE: 02-23 SUBMISSION: CONTRACT DRAWINGS			
WRIGHT-PIERCE 978.416.8000 www.wright-pierce.com 600 FEDERAL STREET, SUITE 215L, ANDOVER, MA 01810			
LEICESTER WATER SUPPLY DISTRICT WATER SYSTEM INTERCONNECTION PROJECT MULBERRY AND MARSHALL STREET			
SITE PLAN I			
DRAWING C-3			



- NOTES:
- CONTRACTOR TO LOCATE SERVICE CONNECTIONS IN THE FIELD.

PROJECT NO: 20445		DESIGNED: M.HORNING		CAD COORD: S.COCHRAN		CAD: D.FUDA		CHECKED: M.JEDRYCHOWSKI		DATE: 02-23		APPROVED: M.JEDRYCHOWSKI		DATE: 02-23		SUBMISSION: CONTRACT DRAWINGS	
NO		REVISIONS		APPD		DATE											
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LEICESTER WATER SUPPLY DISTRICT

WATER SYSTEM INTERCONNECTION PROJECT

MULBERRY AND MARSHALL STREET

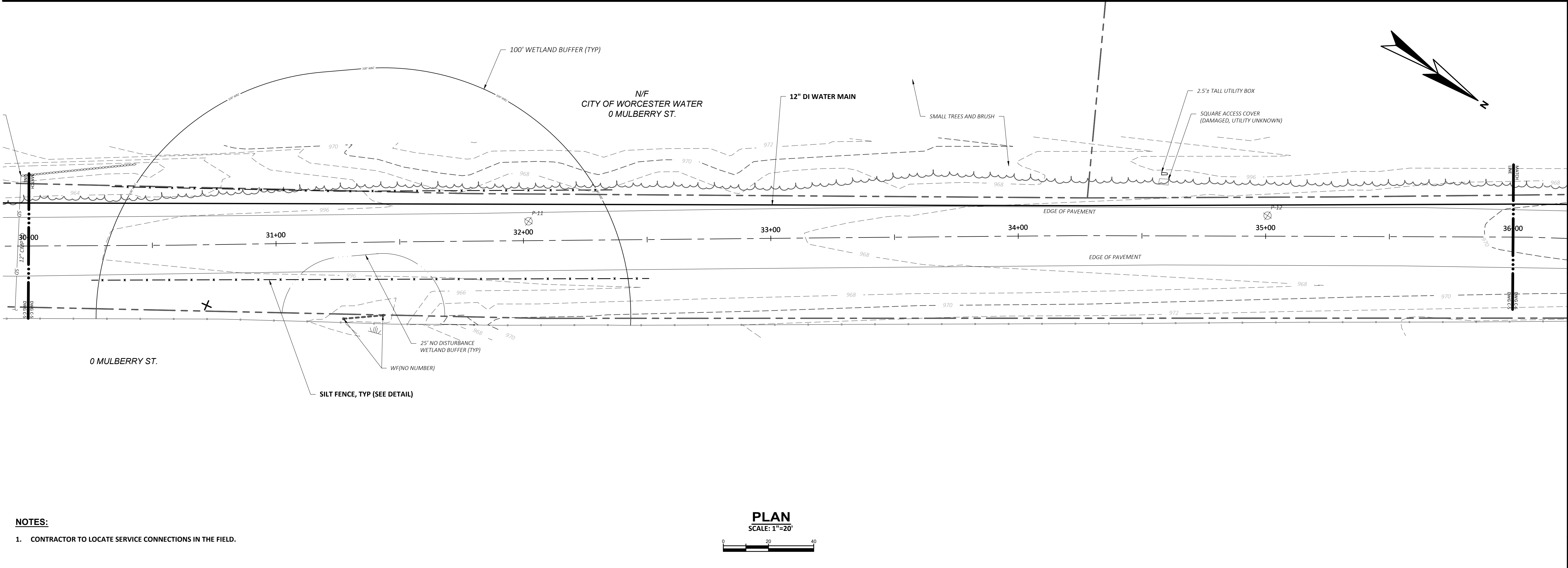
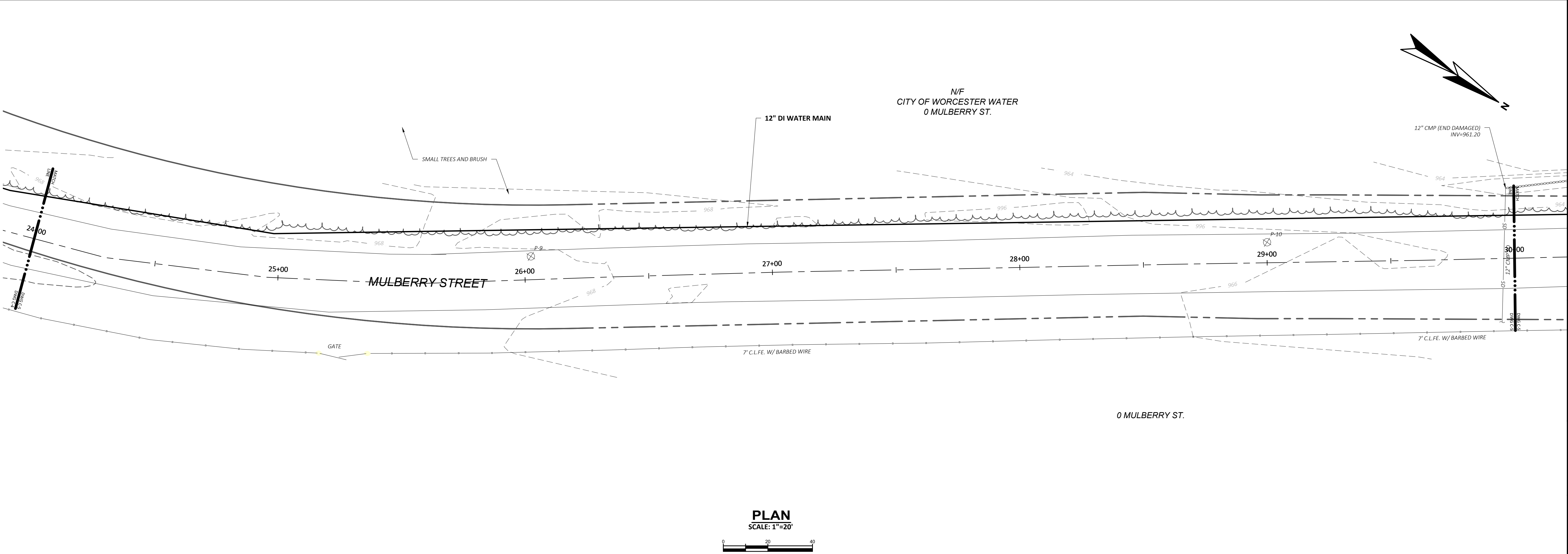
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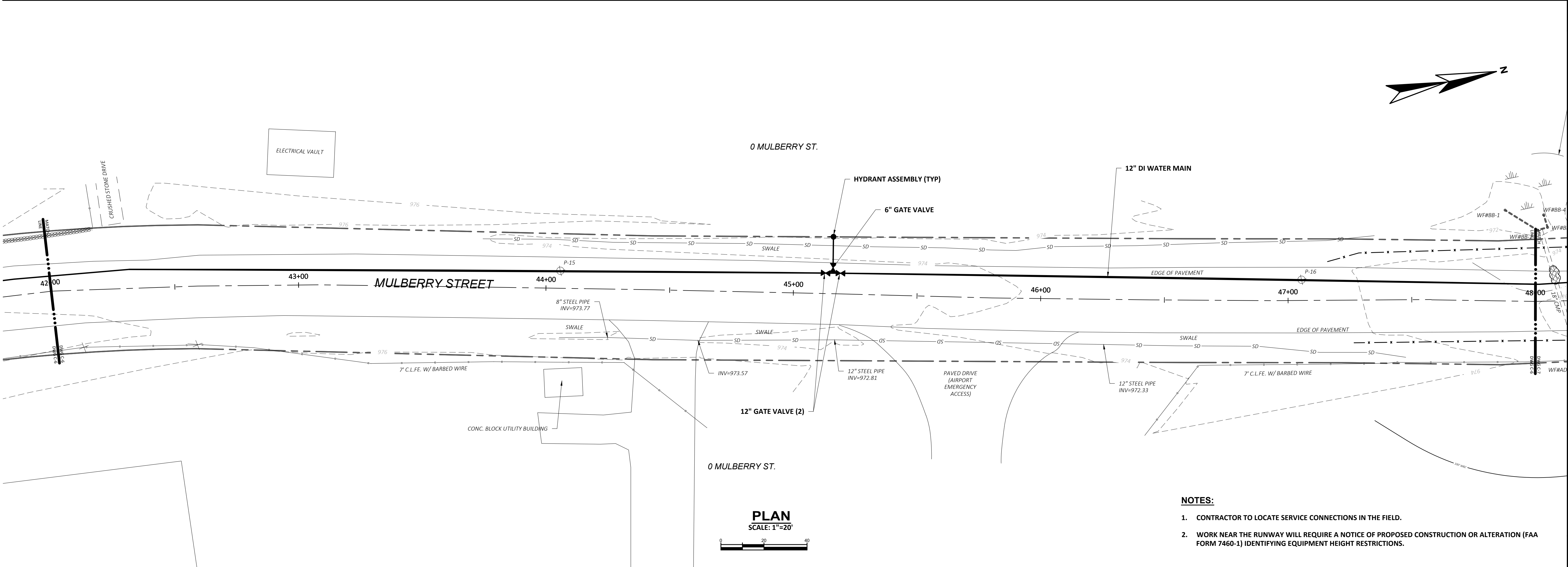
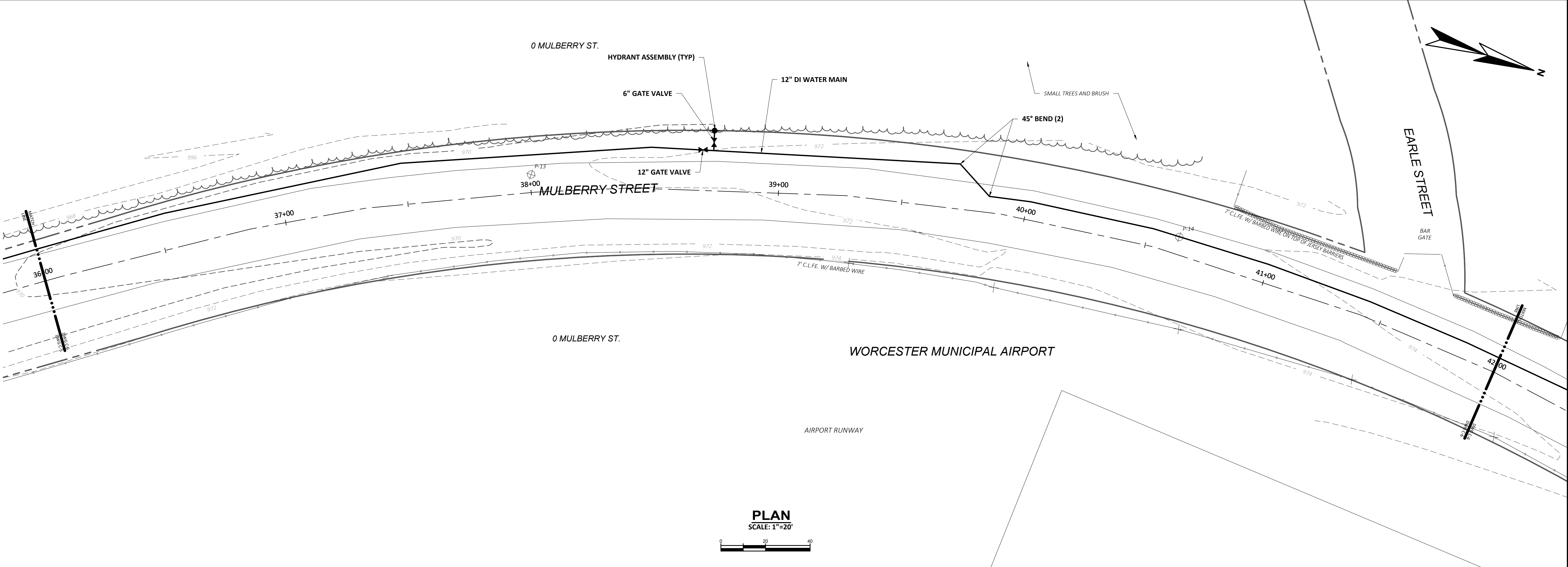
SITE PLAN II

C-4



- NOTES:
- CONTRACTOR TO LOCATE SERVICE CONNECTIONS IN THE FIELD.


REVISIONS		APPD	DATE
NO	Δ		
NO	Δ		
NO	Δ		
NO	Δ		
NO	Δ		
PROJECT NO: 20445 DESIGNED: M.HORING CAD COORD: S.COCHRAN CAD: D.FUDA CHECKED: M.JEDRYCHOWSKI DATE: 02-23 APPROVED: M.JEDRYCHOWSKI DATE: 02-23 SUBMISSION: CONTRACT DRAWINGS			
LEICESTER WATER SUPPLY DISTRICT WATER SYSTEM INTERCONNECTION PROJECT MULBERRY AND MARSHALL STREET			
DRAWING C-5			

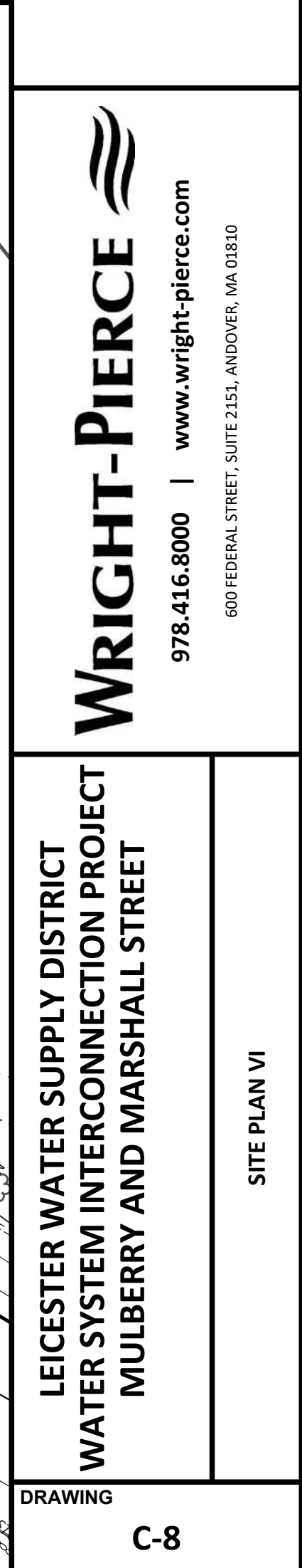
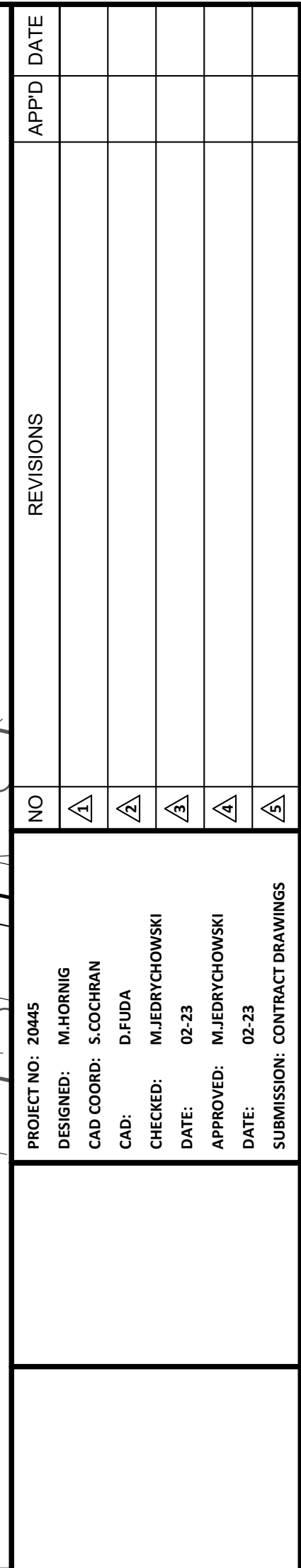


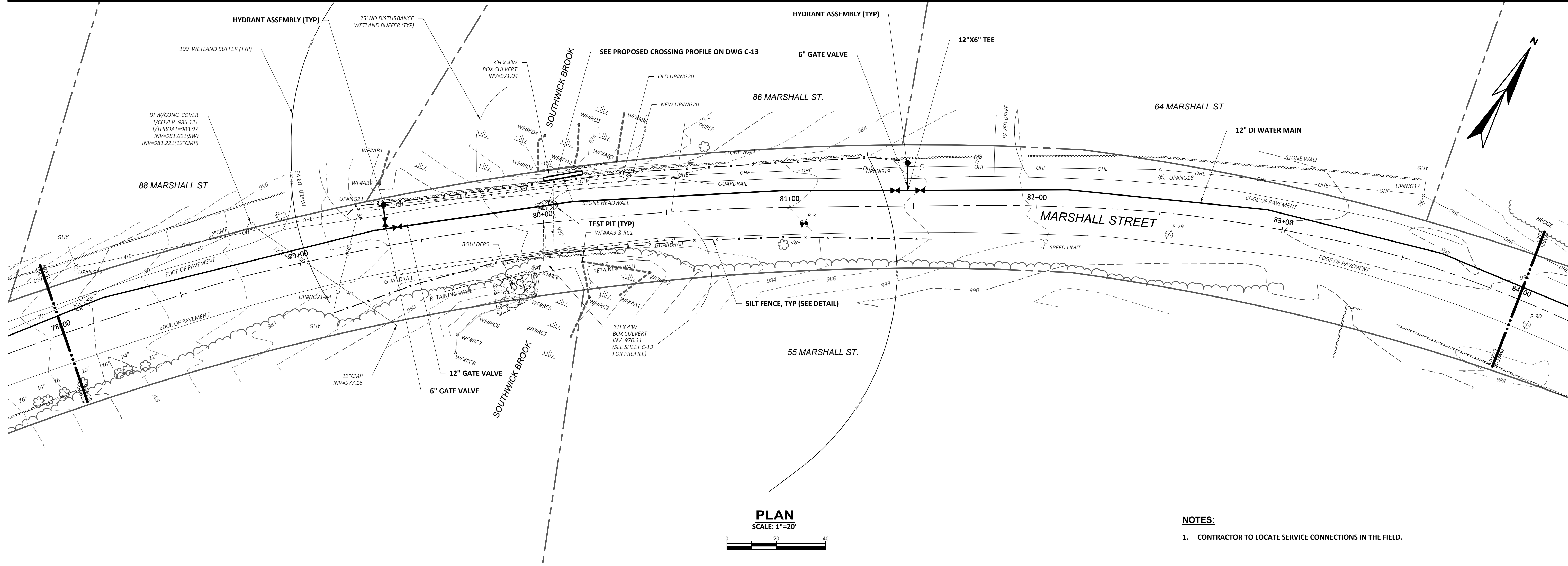
- NOTES:**
- 1. CONTRACTOR TO LOCATE SERVICE CONNECTIONS IN THE FIELD.
 - 2. WORK NEAR THE RUNWAY WILL REQUIRE A NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION (FAA FORM 7460-1) IDENTIFYING EQUIPMENT HEIGHT RESTRICTIONS.


DRAWING	C-6	SITE PLAN IV	LEICESTER WATER SUPPLY DISTRICT WATER SYSTEM INTERCONNECTION PROJECT MULBERRY AND MARSHALL STREET	 978.416.8000 www.wright-pierce.com 600 FEDERAL STREET, SUITE 215L, ANDOVER, MA 01810	PROJECT NO: 20445 DESIGNED: M. HORNIG CAD COORD: S. COCHRAN CAD: D. FUDA CHECKED: M. JEDRYCHOWSKI DATE: 02-23 APPROVED: M. JEDRYCHOWSKI DATE: 02-23 SUBMISSION: CONTRACT DRAWINGS	REVISIONS		APP'D DATE
						NO		

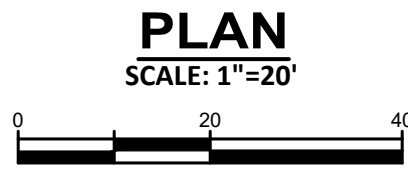
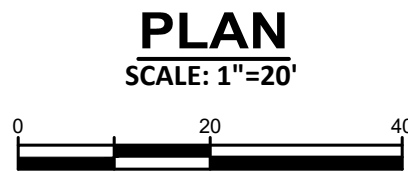


<div> <div> <div>LEICESTER WATER SUPPLY DISTRICT</div> <div>WATER SYSTEM INTERCONNECTION PROJECT</div> <div>MULBERRY AND MARSHALL STREET</div> </div> <div> <div>SITE PLAN V</div> </div> </div>	<div> <div> <div>  <div> <div>978.416.8000</div> <div> </div> <div>www.wright-pierce.com</div> </div> </div> <div> <div>600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810</div> </div> </div> </div>					<div> <div>PROJECT NO: 20445</div> <div>DESIGNED: M.HORNING</div> <div>CAD COORD: S.COCHRAN</div> <div>CAD: D.FUDA</div> <div>CHECKED: M.JEDRIGOWSKI</div> <div>DATE: 02-23</div> <div>APPROVED: M.JEDRIGOWSKI</div> <div>DATE: 02-23</div> <div>SUBMISSION: CONTRACT DRAWINGS</div> </div>	NO	REVISIONS	APPD	DATE
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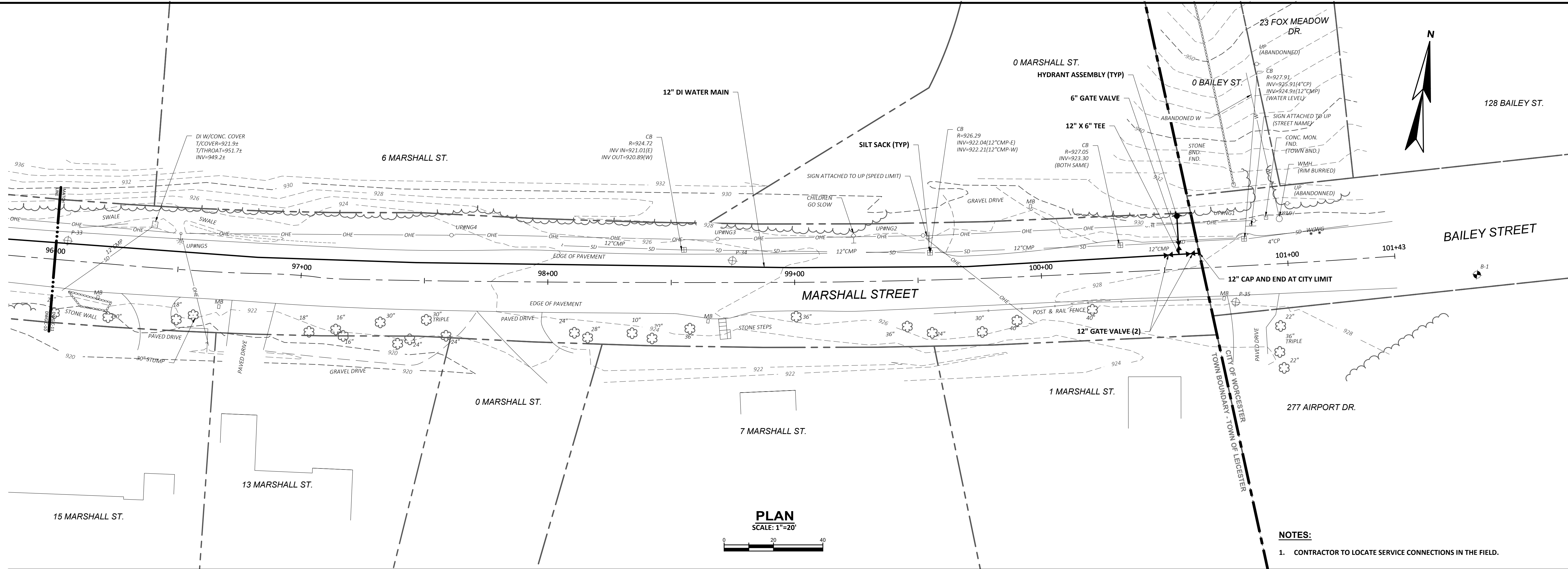
DRAWING	LEICESTER WATER SUPPLY DISTRICT WATER SYSTEM INTERCONNECTION PROJECT MULBERRY AND MARSHALL STREET	<div><p>978.416.8000 www.wright-pierce.com</p><p>600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810</p></div>				PROJECT NO: 20445	NO	REVISIONS	APPD DATE
						DESIGNED: M.HORNING			
						CAD COORD: S.COCHRAN			
						CAD: D.FUDA			
						CHECKED: M.JEDRICHOWSKI			
						DATE: 02-23			
						APPROVED: M.JEDRICHOWSKI			
						DATE: 02-23			
						SUBMISSION: CONTRACT DRAWINGS			




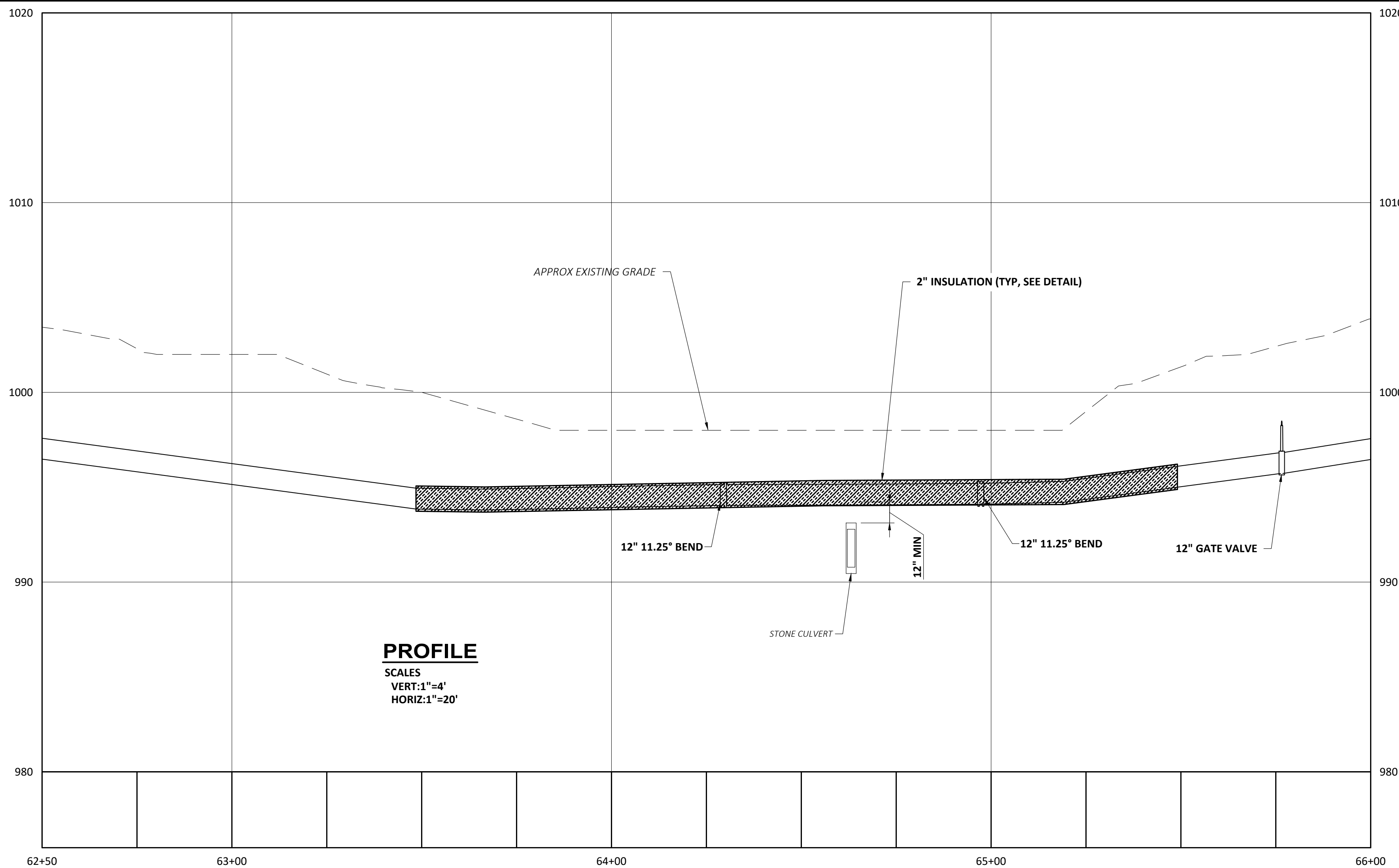
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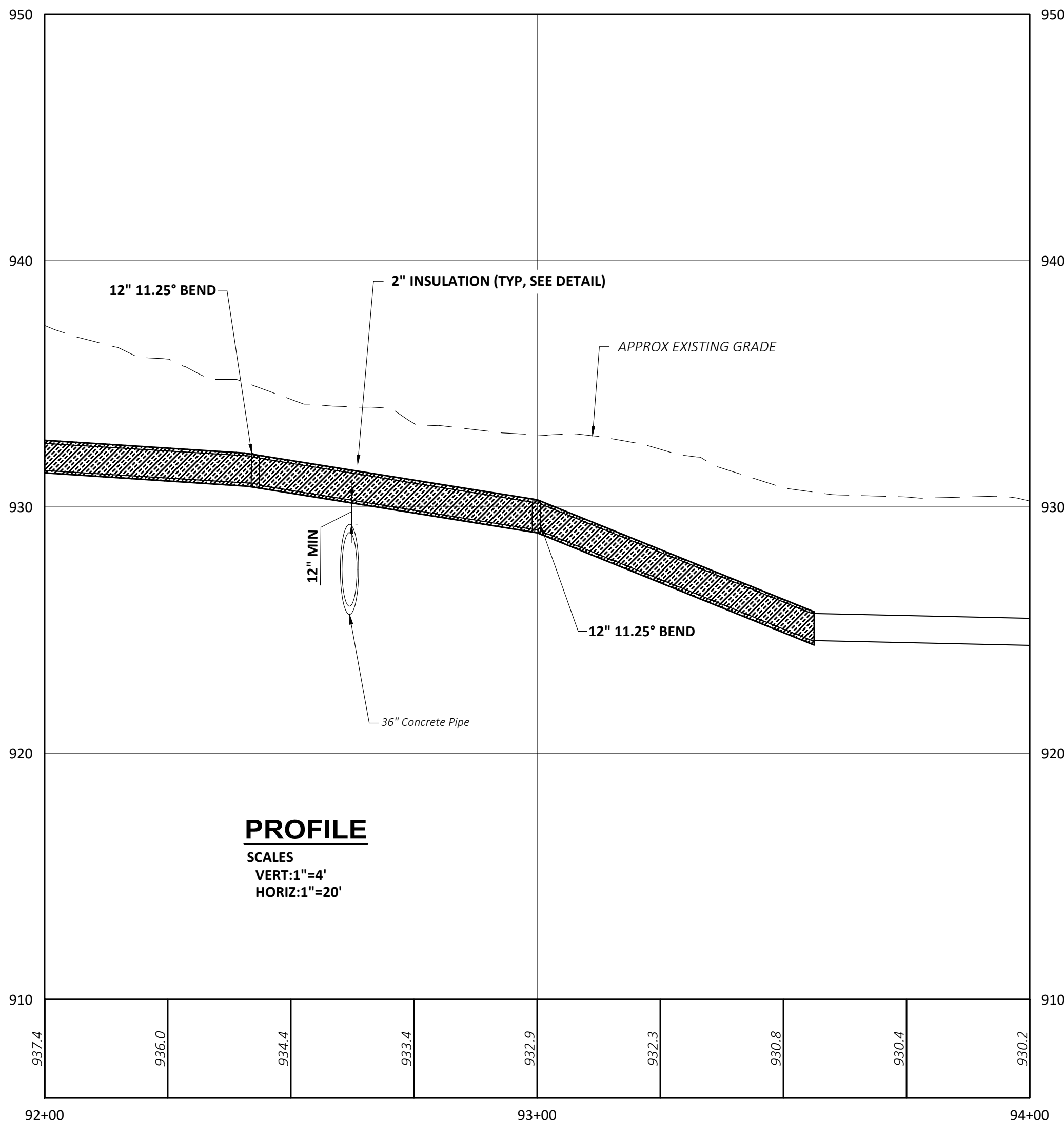
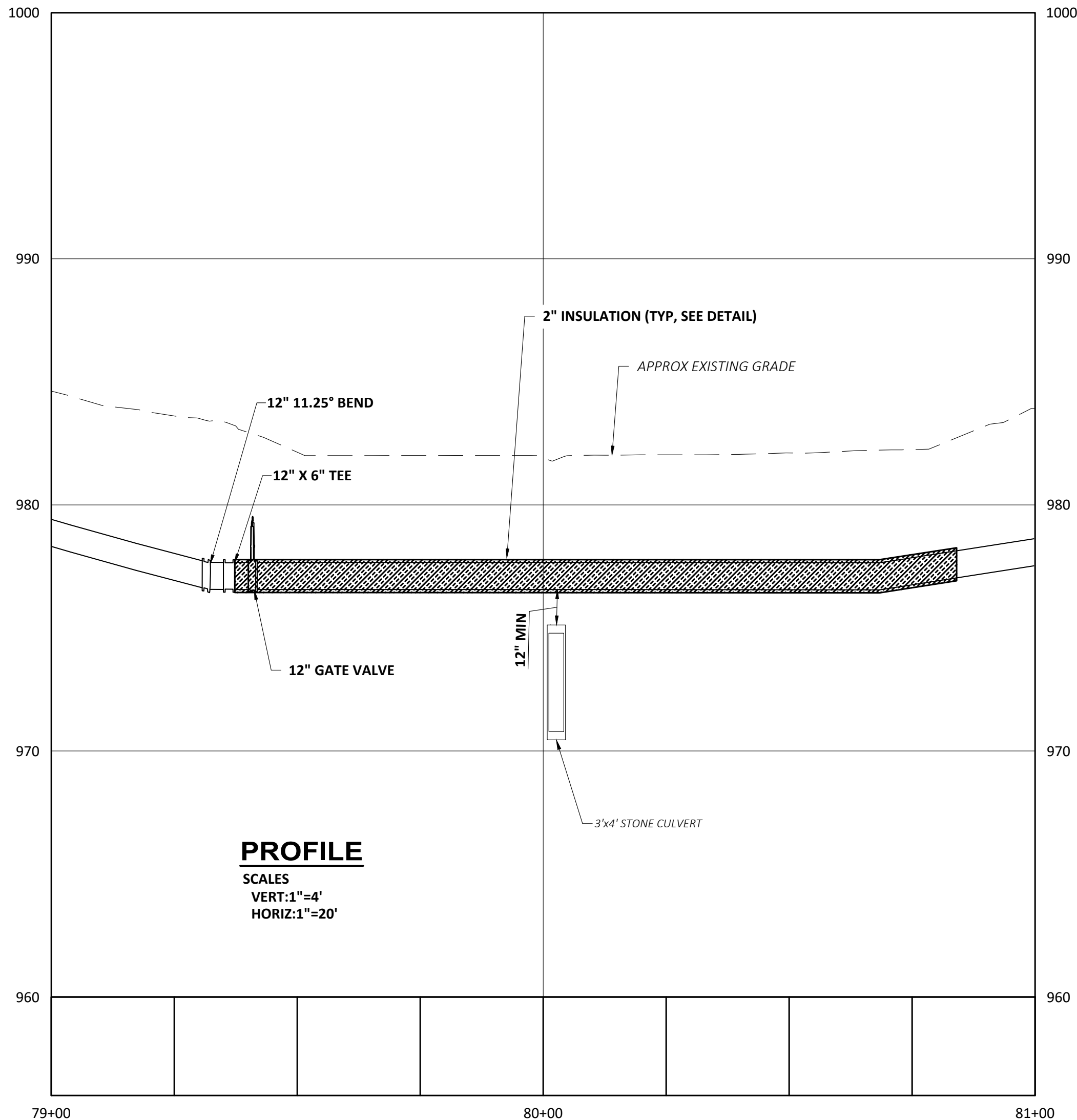
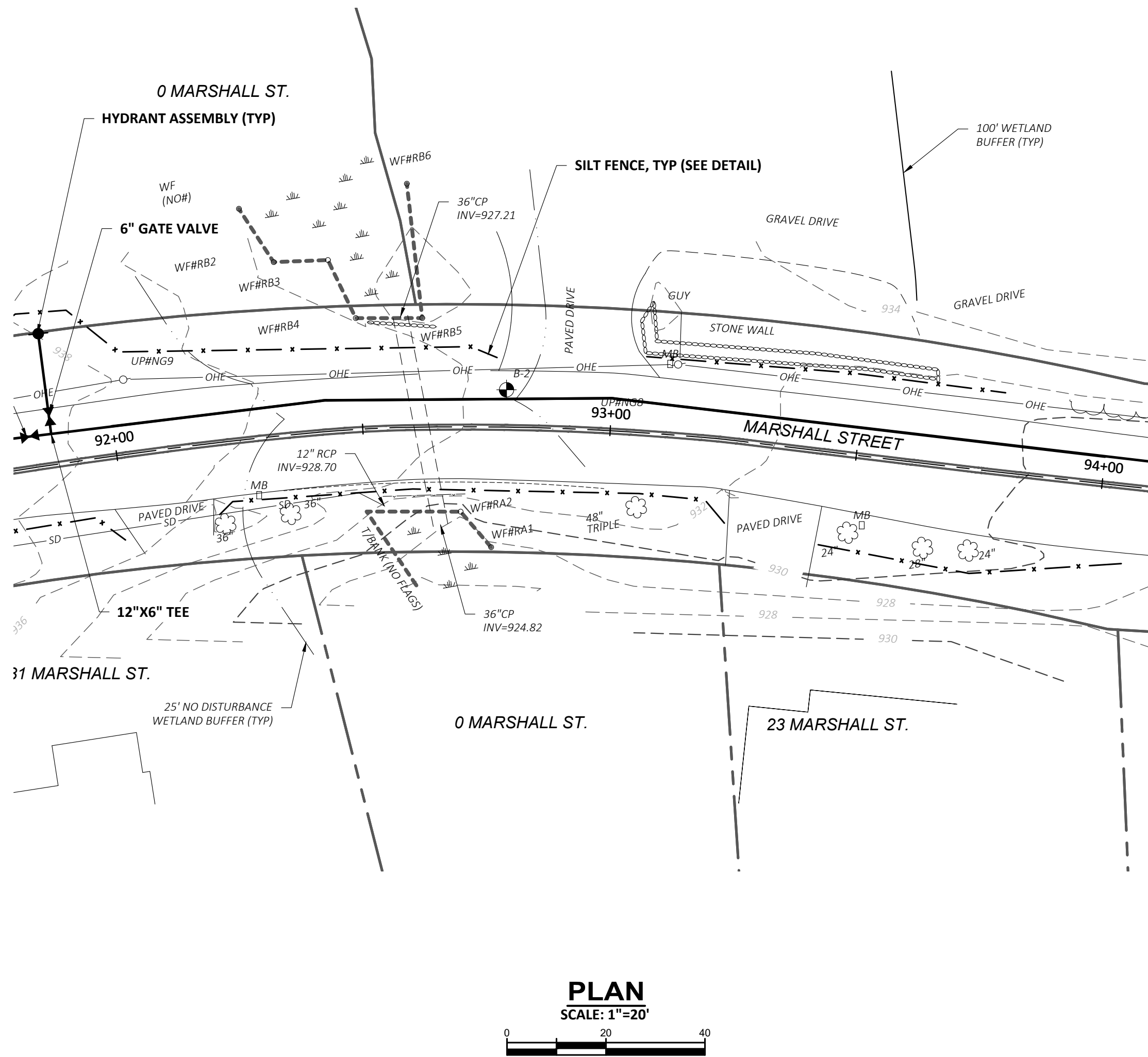
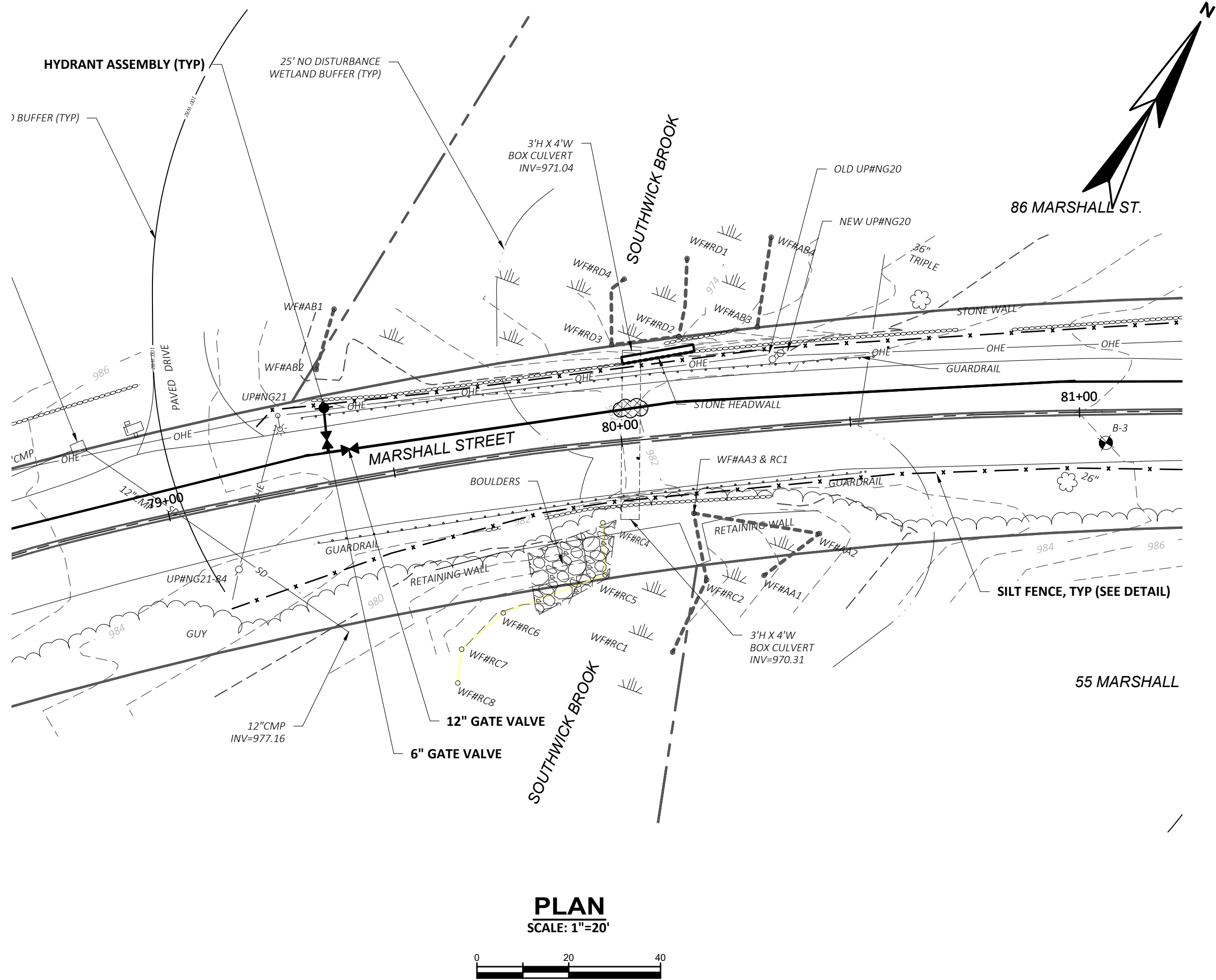
1. CONTRACTOR TO LOCATE SERVICE CONNECTIONS IN THE FIELD.

DRAWING	LEICESTER WATER SUPPLY DISTRICT WATER SYSTEM INTERCONNECTION PROJECT MULBERRY AND MARSHALL STREET	WRIGHT-PIERCE 978.416.8000 www.wright-pierce.com 600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810					PROJECT NO: 20445	NO	REVISIONS	APPD DATE
							DESIGNED: M.HORNING	△		
							CAD COORD: S.COCHRAN	△		
							CAD: D.FUDA	△		
							CHECKED: M.JEDRICHOWSKI	△		
							DATE: 02-23	△		
							APPROVED: M.JEDRICHOWSKI	△		
							DATE: 02-23	△		
							SUBMISSION: CONTRACT DRAWINGS	△		



DRAWING	C-11	LEICESTER WATER SUPPLY DISTRICT WATER SYSTEM INTERCONNECTION PROJECT MULBERRY AND MARSHALL STREET	<div>WRIGHT-PIERCE 978.416.8000 www.wright-pierce.com 600 FEDERAL STREET, SUITE 2151, ANDOVER, MA 01810</div>				PROJECT NO: 20445	NO	REVISIONS	APPD DATE
							DESIGNED: M.HORNING	△		
							CAD COORD: S.COCHRAN	△		
							CAD: D.FUDA	△		
							CHECKED: M.JEDRICHOWSKI	△		
							DATE: 02-23	△		
							APPROVED: M.JEDRICHOWSKI	△		
							DATE: 02-23	△		
							SUBMISSION: CONTRACT DRAWINGS	△		

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REVISIONS		APPD	DATE
NO			
1			
2			
3			
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5			
PROJECT NO: 20445			
DESIGNED: M. HORING			
CAD COORD: S. COCHRAN			
CAD: D. FUDA			
CHECKED: M. JEDRYCHOWSKI			
DATE: 02-23			
APPROVED: M. JEDRYCHOWSKI			
DATE: 02-23			
SUBMISSION: CONTRACT DRAWINGS			
LEICESTER WATER SUPPLY DISTRICT			
WATER SYSTEM INTERCONNECTION PROJECT			
MULBERRY AND MARSHALL STREET			
PLAN AND PROFILE II			
DRAWING			
C-13			

EROSION & CONSTRUCTION SEQUENCE NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN URBAN AND SUBURBAN AREAS AS CONTAINED IN THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES REQUIRED FOR THE PUMP STATION AND WATER METERING STATION ARE SHOWN ON THE GRADING/EROSION CONTROL PLANS. PROVIDE STRAW WATTLES, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE BMP.

1.

ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.
2.

THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3.

SEDIMENT BARRIERS (STRAW WATTLES, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
4.

INSTALL STRAW WATTLES AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE STRAW WATTLES DETAIL FOR PROPER INSTALLATION. STRAW WATTLES WILL REMAIN IN PLACE PER NOTE #5.
5.

ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
6.

NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES.
7.

IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT TO BE COMPLETED 30 DAYS PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING, UNTIL UPGRADIENT AREAS ARE STABILIZED.
8.

WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
9.

DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10.

REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED AS FOLLOWS:

A.

A MINIMUM OF FOUR (4) INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.

B.

APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT DEEMED FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P20S-K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).

C.

FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED WITH A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED WITH A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYE GRASS. SEEDING RATE IS 3.0 LBS PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.

D.

HAY MULCH AT THE RATE OF 100 LBS PER 1000 SQUARE FEET OR A HYDRO- APPLICATION OF CELLULOSE FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER WILL BE USED ON HAY MULCH FOR WIND CONTROL.
11.

ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
12.

WETLANDS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH STRAW WATTLES INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
13.

IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
14.

FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

EROSION CONTROL - WETLAND NOTES

1.

WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15.
2.

WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3.

EXPOSED AREA SHOULD BE LIMITED TO THAT THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
4.

AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
5.

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE 200 - 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
6.

BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE EITHER WOOD CELLULOSE FIBER OR BE ANCHORED WITH MULCH NETTING OR CHEMICAL TACK.
7.

MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
8.

MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
9.

AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
10.

DURING WINTER CONSTRUCTION PERIODS ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

MULCH ANCHORING

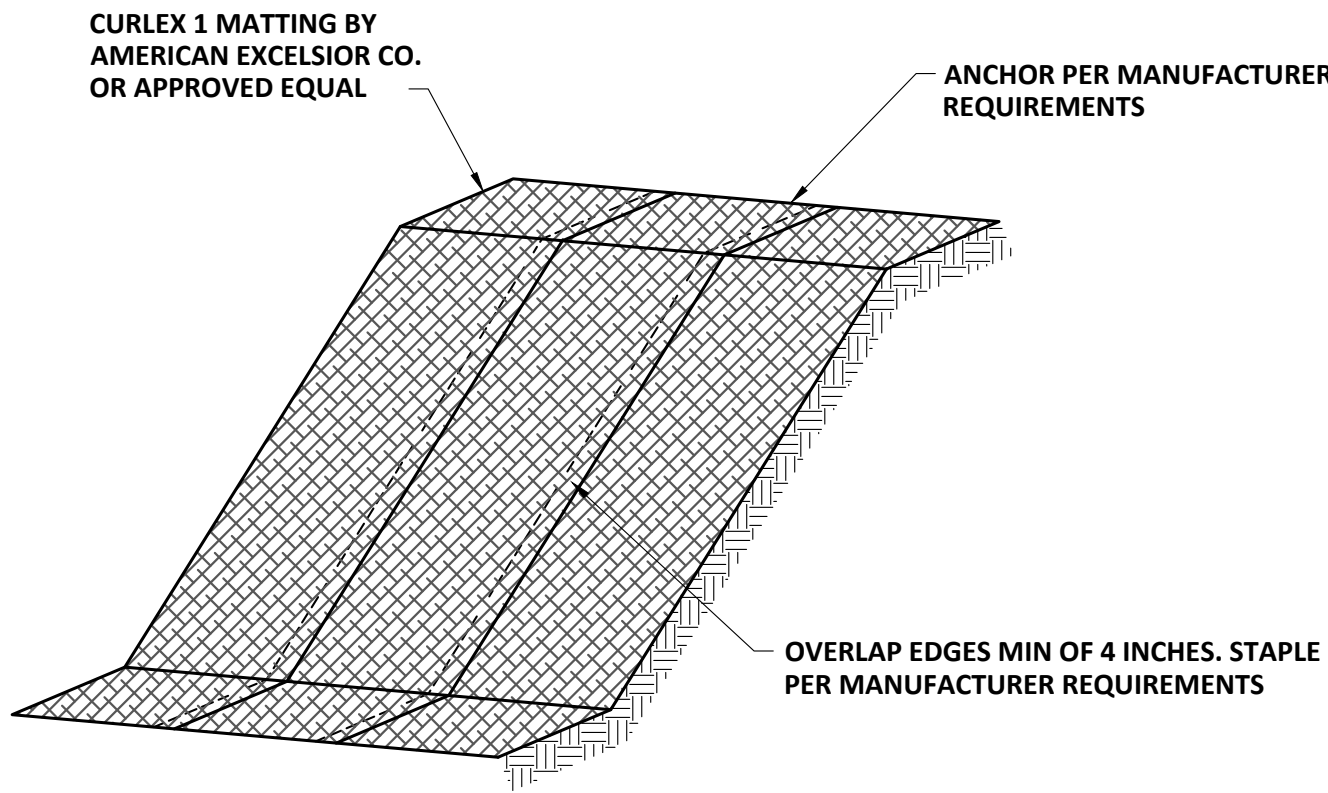
ANCHOR MULCH WITH: MULCH NETTING (AS PER MANUFACTURER); ASPHALT EMULSION (0.05 GALLONS PER SQ. YD.); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); OR BE WOOD CELLULOSE FIBER (2000 LBS/ACRE). WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

ADDITIONAL TEMPORARY SEED MIXTURE (OR PERIODS LESS THAN 12 MONTHS)

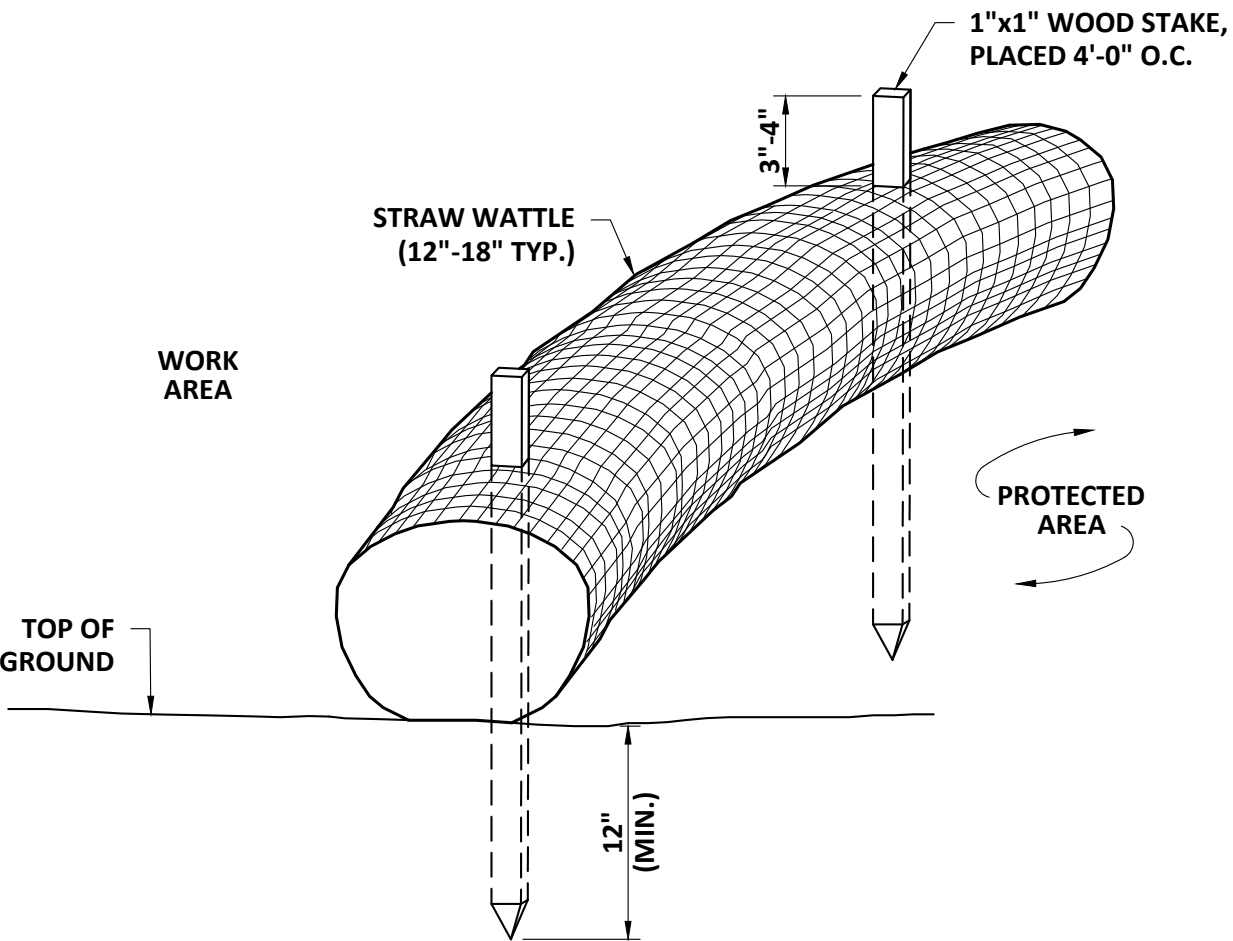
SEED	RATE
OATS	80 LBS/ACRE
ANNUAL RYE GRASS	40 LBS/ACRE
WINTER RYE	120 LBS/ACRE
MULCH W/ DORMANT SEED	80 LBS/ACRE*
FOXTAIL MILLET	30 LBS/ACRE

MULCH AND MULCH ANCHORING

MULCH		
LOCATION	MULCH	RATE (1000 S.F.)
PROTECTED AREA	STRAW OR HAY *	100 POUNDS
WINDY AREAS	STRAW OR HAY (ANCHORED) *	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES (GREATER THAN 3:1)	JUTE MESH, EXCELSIOR MAT OR EQUIV.	AS REQUIRED
* A HYDRO-APPLICATION OF CELLULOSE FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SHALL BE USED ON HAY MULCH FOR WIND CONTROL.		

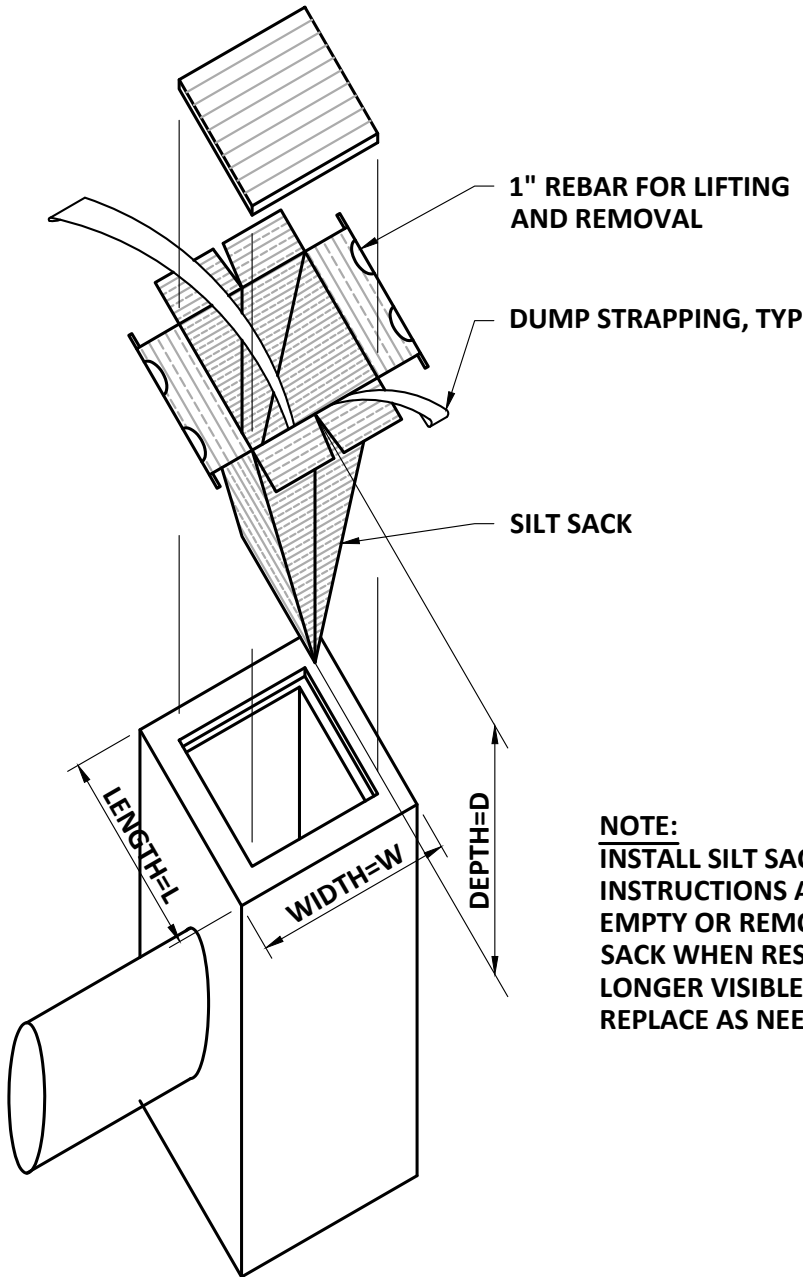


INSTALL ON SLOPES 3:1 OR GREATER
EROSION CONTROL MATTING - SLOPES
NTS

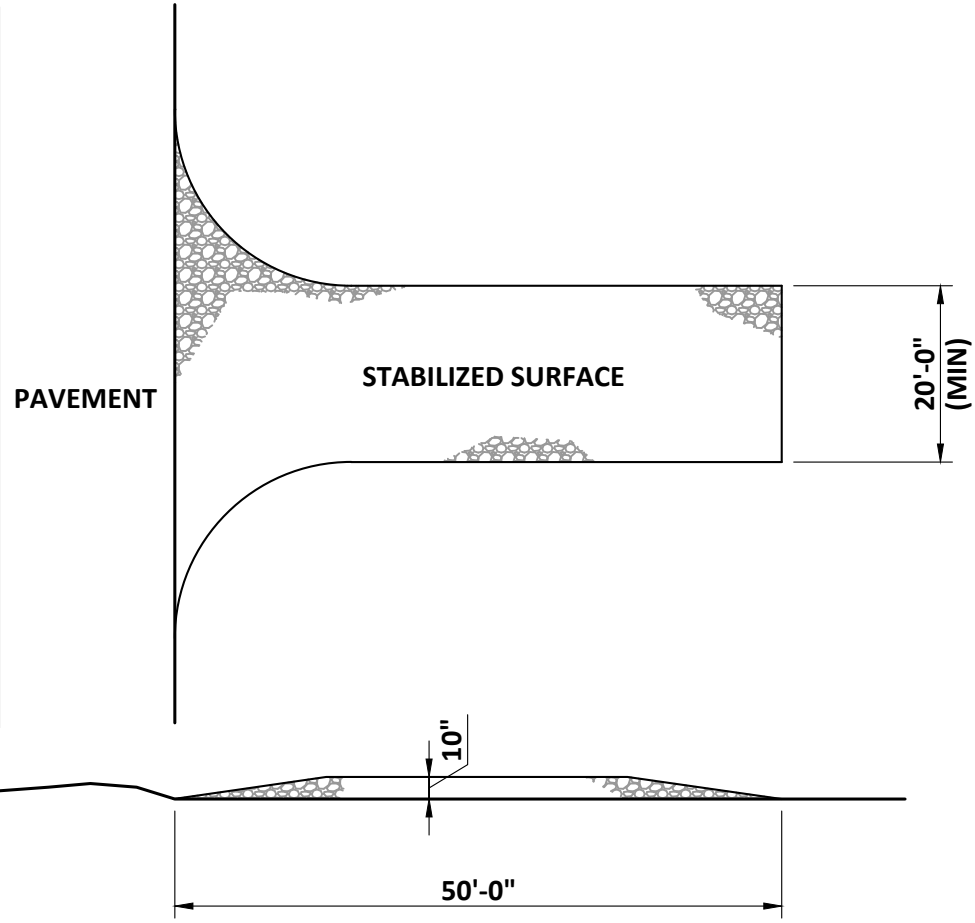


NOTE:
STRAW WATTLE SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

STRAW WATTLE DETAIL
NTS



SILT SACK CATCH BASIN INLET
SCALE: NTS



(TEMPORARY, TO BE REMOVED PRIOR TO FINAL SITE PAVING)

STABILIZED CONSTRUCTION ENTRANCE
SCALE: "NTS"

PROJECT NO: 20445
DESIGNED: M-HORNING
CAD COORD: S-COCHRAN
CAD: D-FUDA
CHECKED: M-JERRYCHOWSKI
DATE: 02-23
APPROVED: M-JERRYCHOWSKI
DATE: 02-23
SUBMISSION: CONTRACT DRAWINGS

LEICESTER WATER SUPPLY DISTRICT
WATER SYSTEM INTERCONNECTION PROJECT
MULBERRY AND MARSHALL STREET

EROSION CONTROL NOTES AND DETAILS

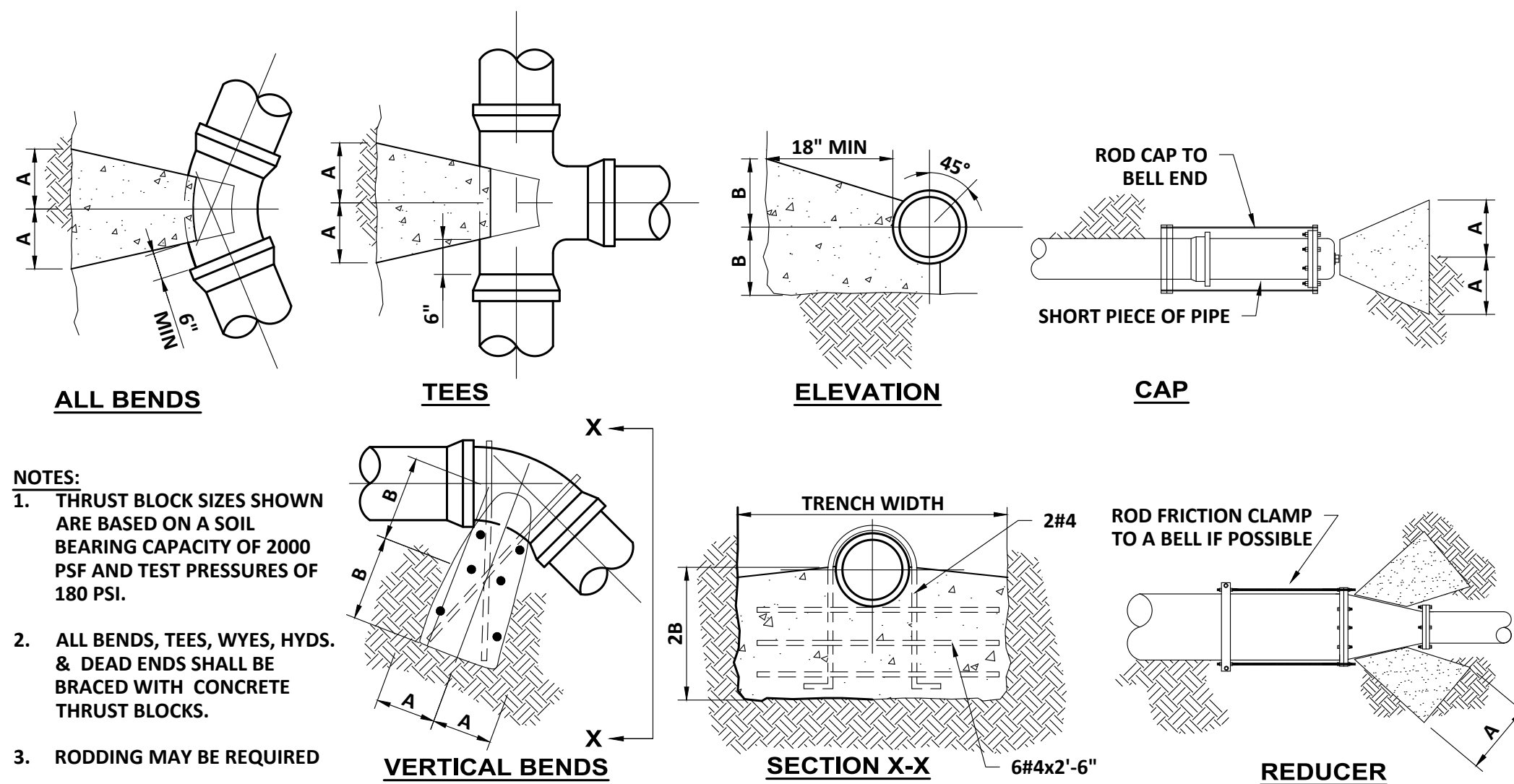
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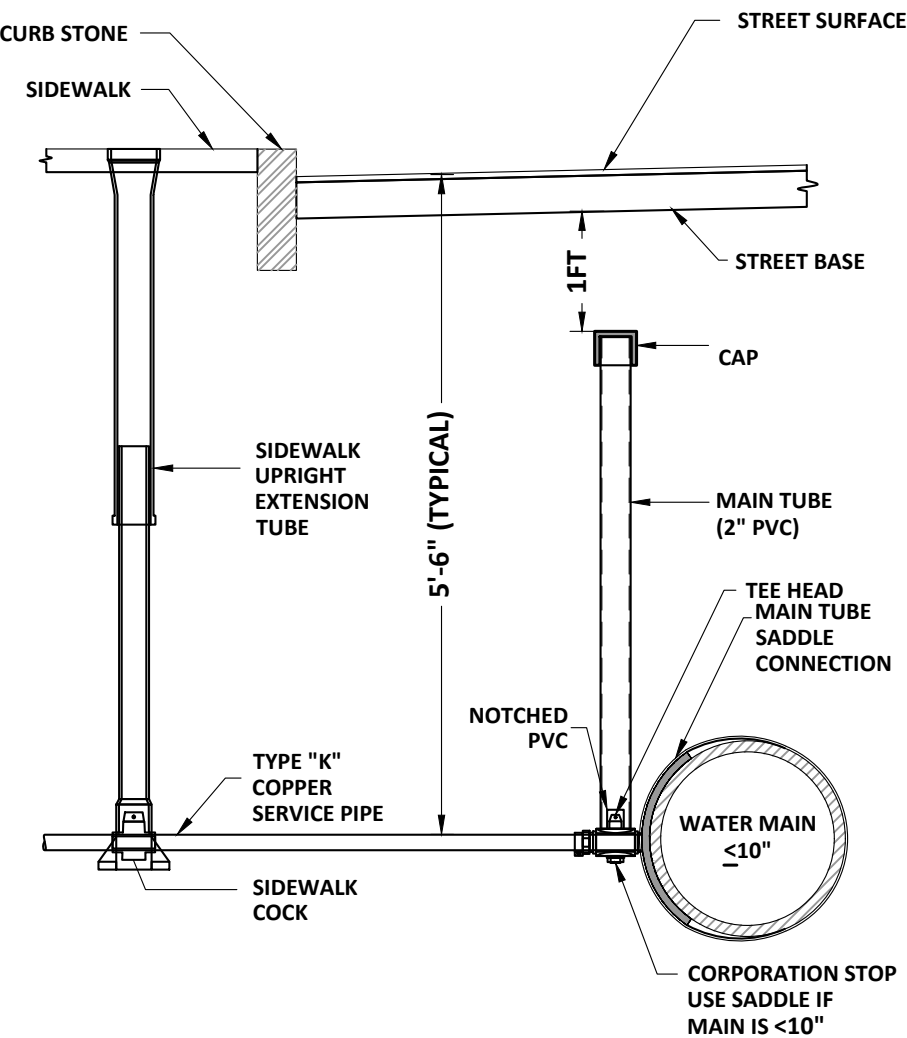
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REVISIONS

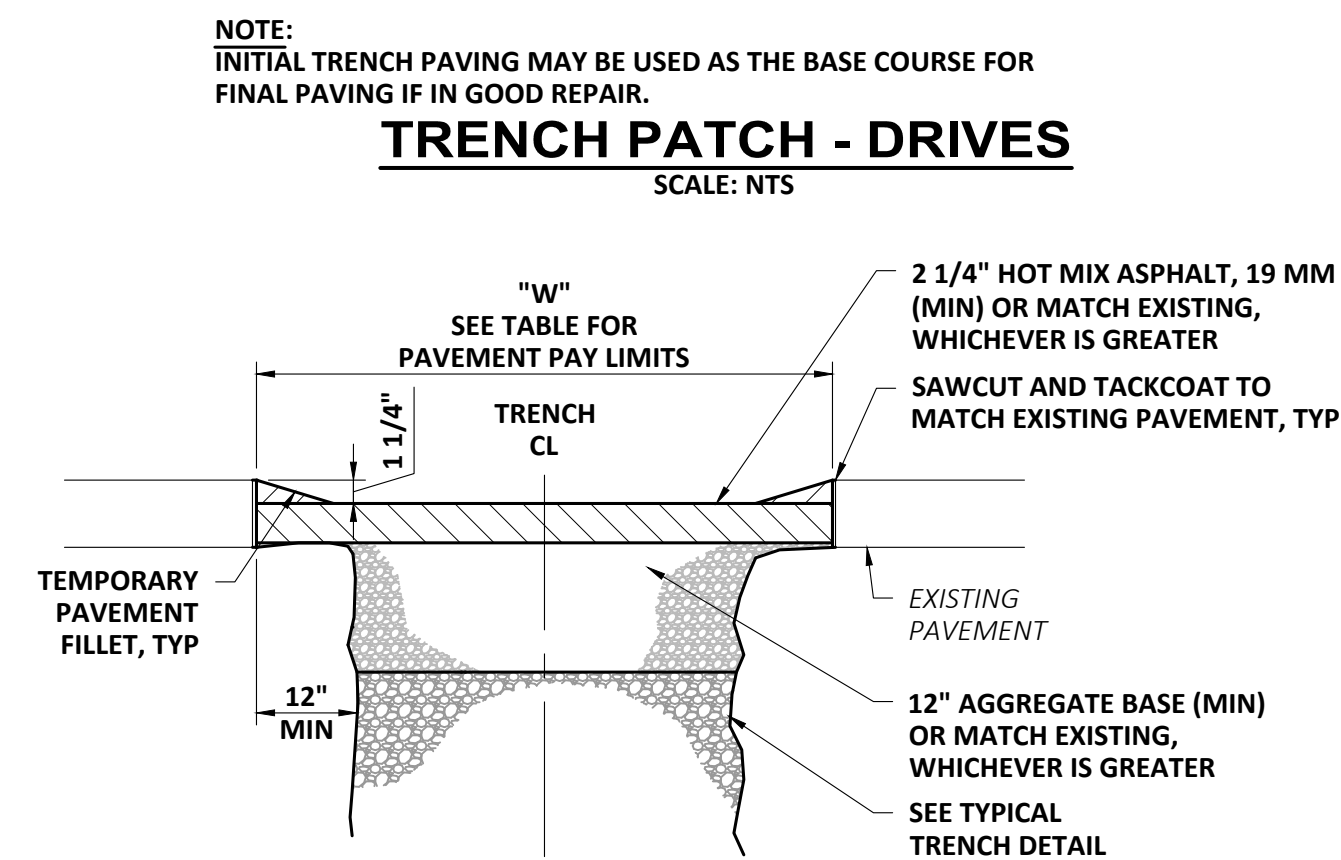
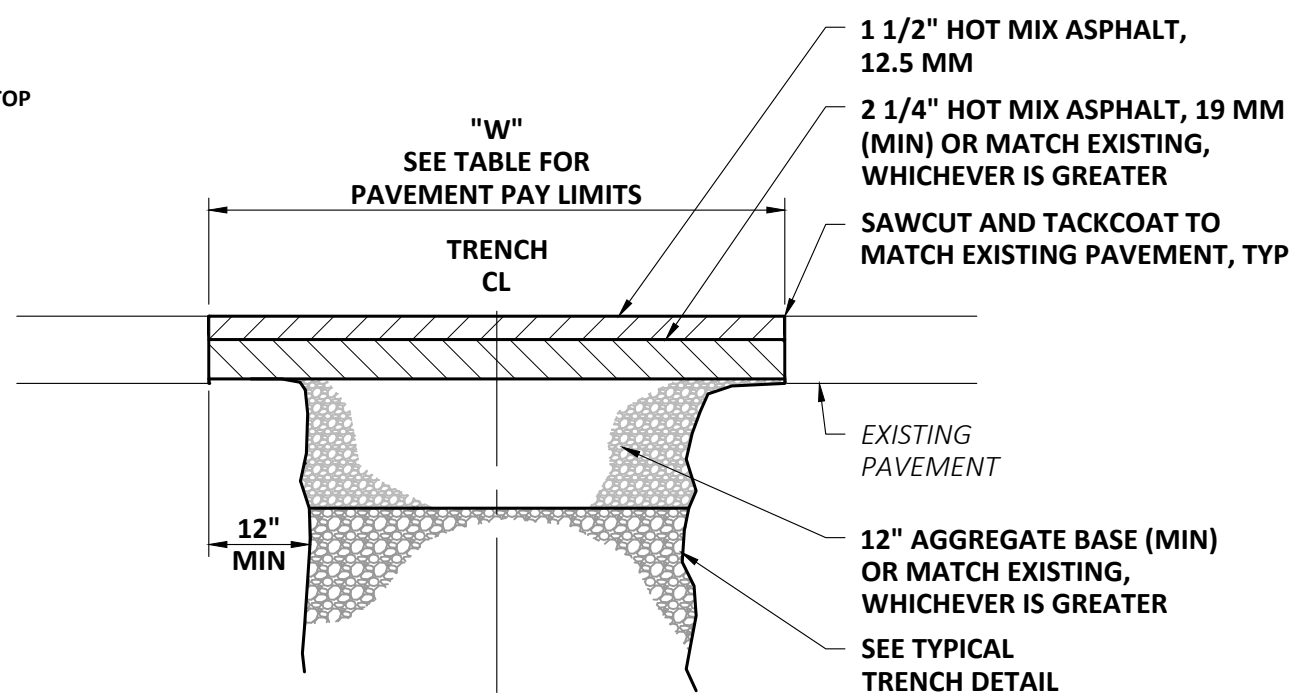
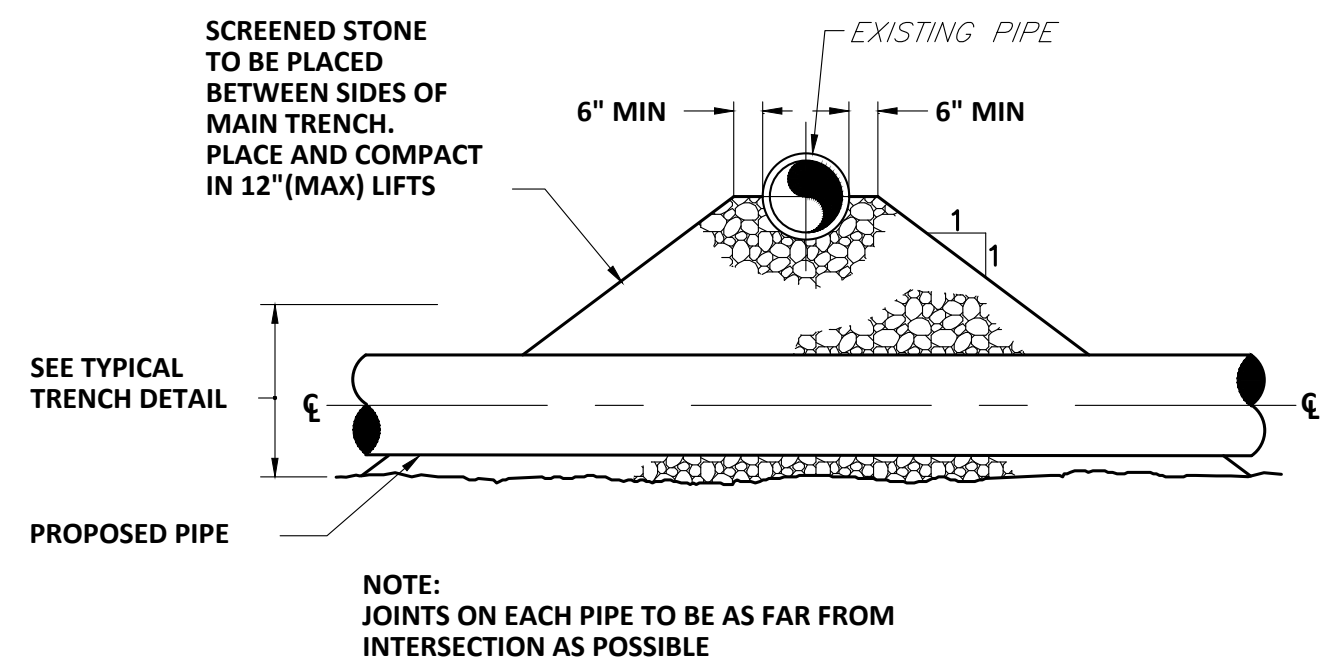
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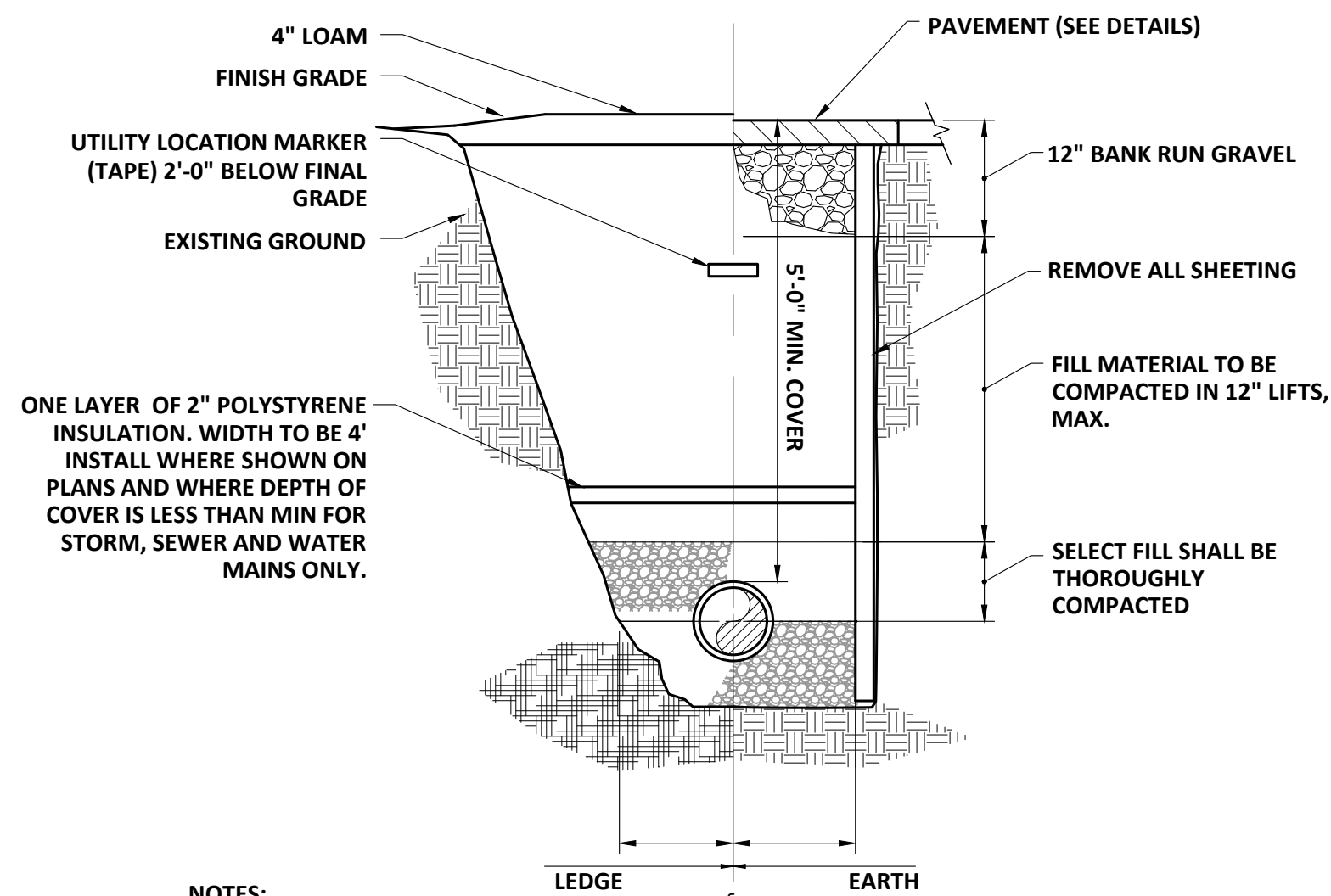
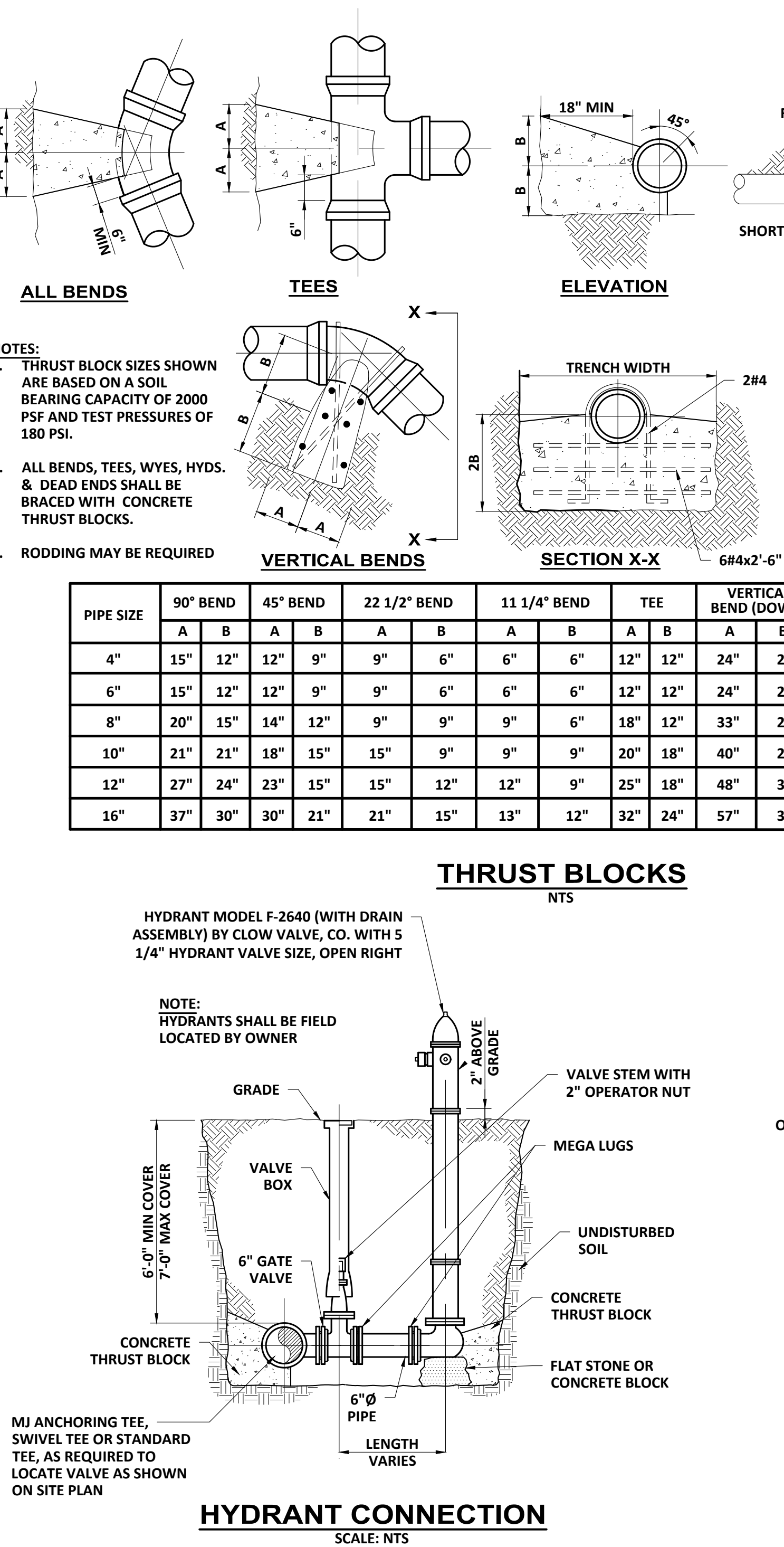
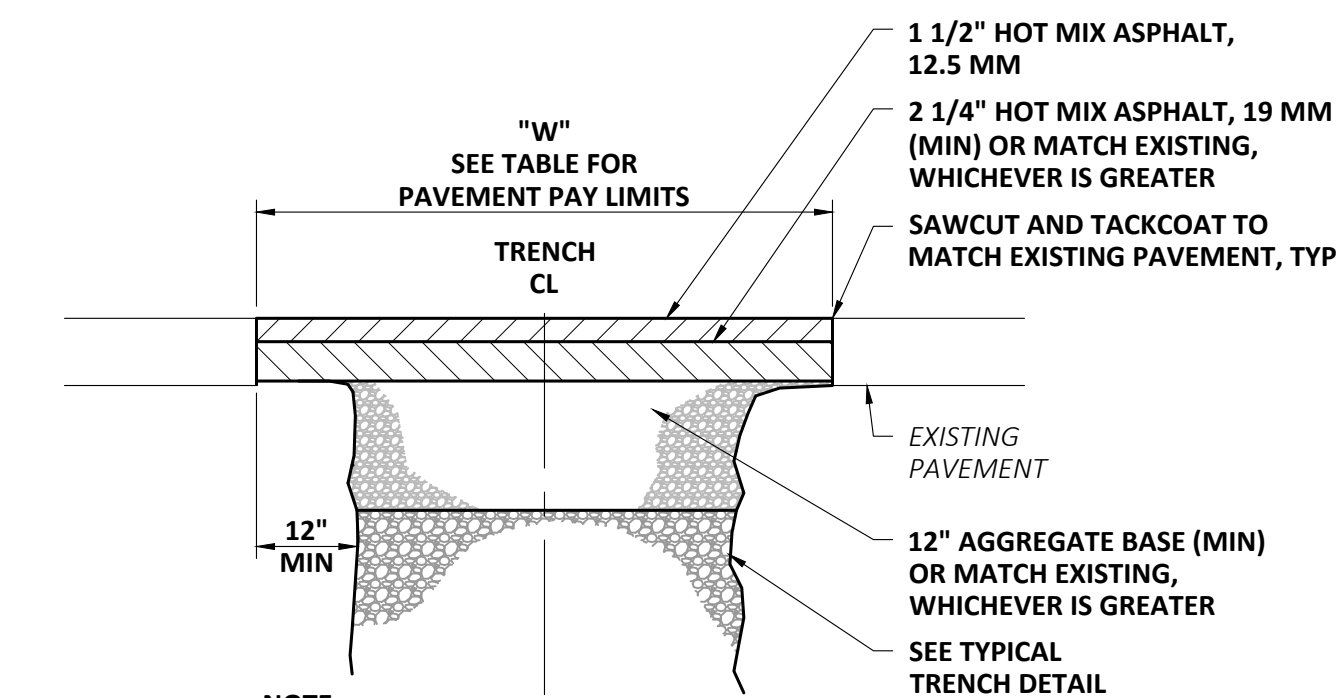
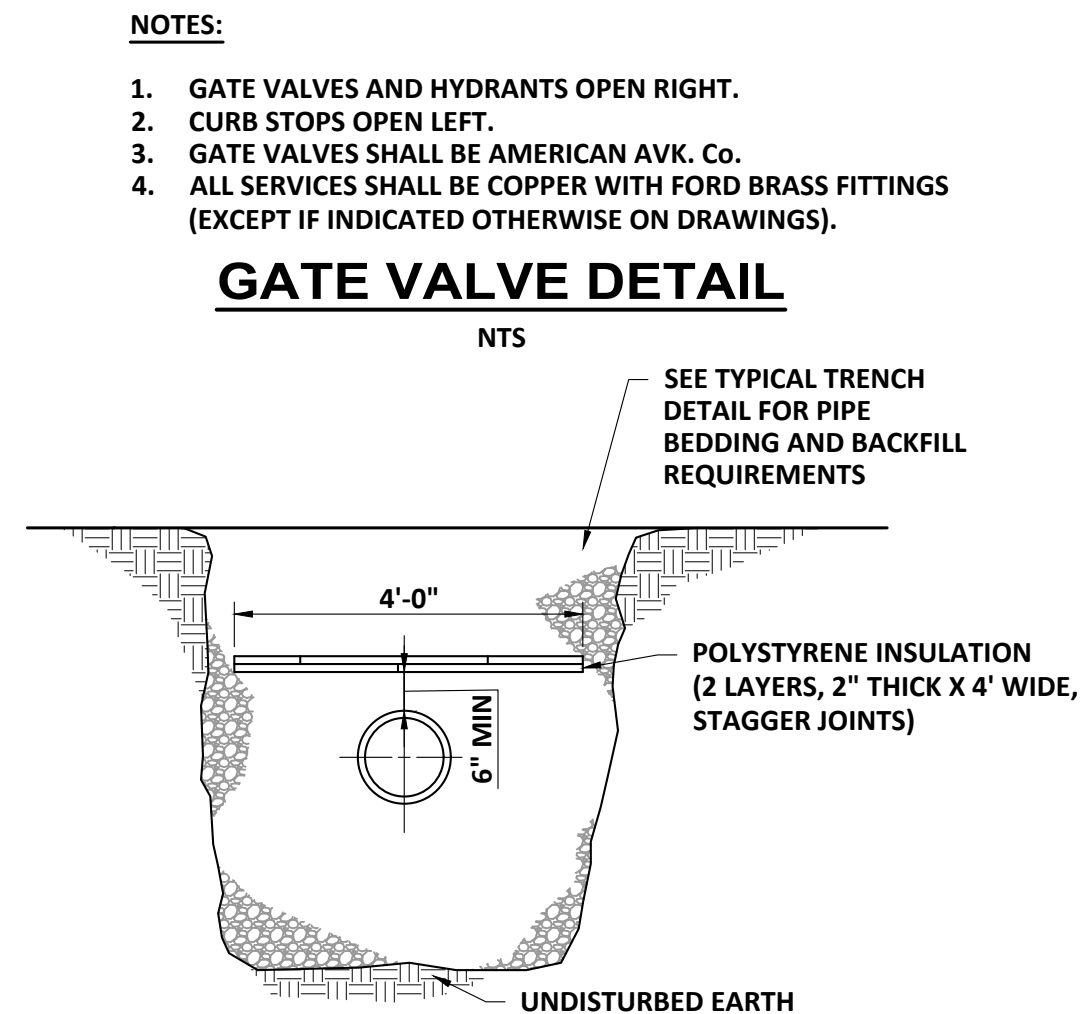
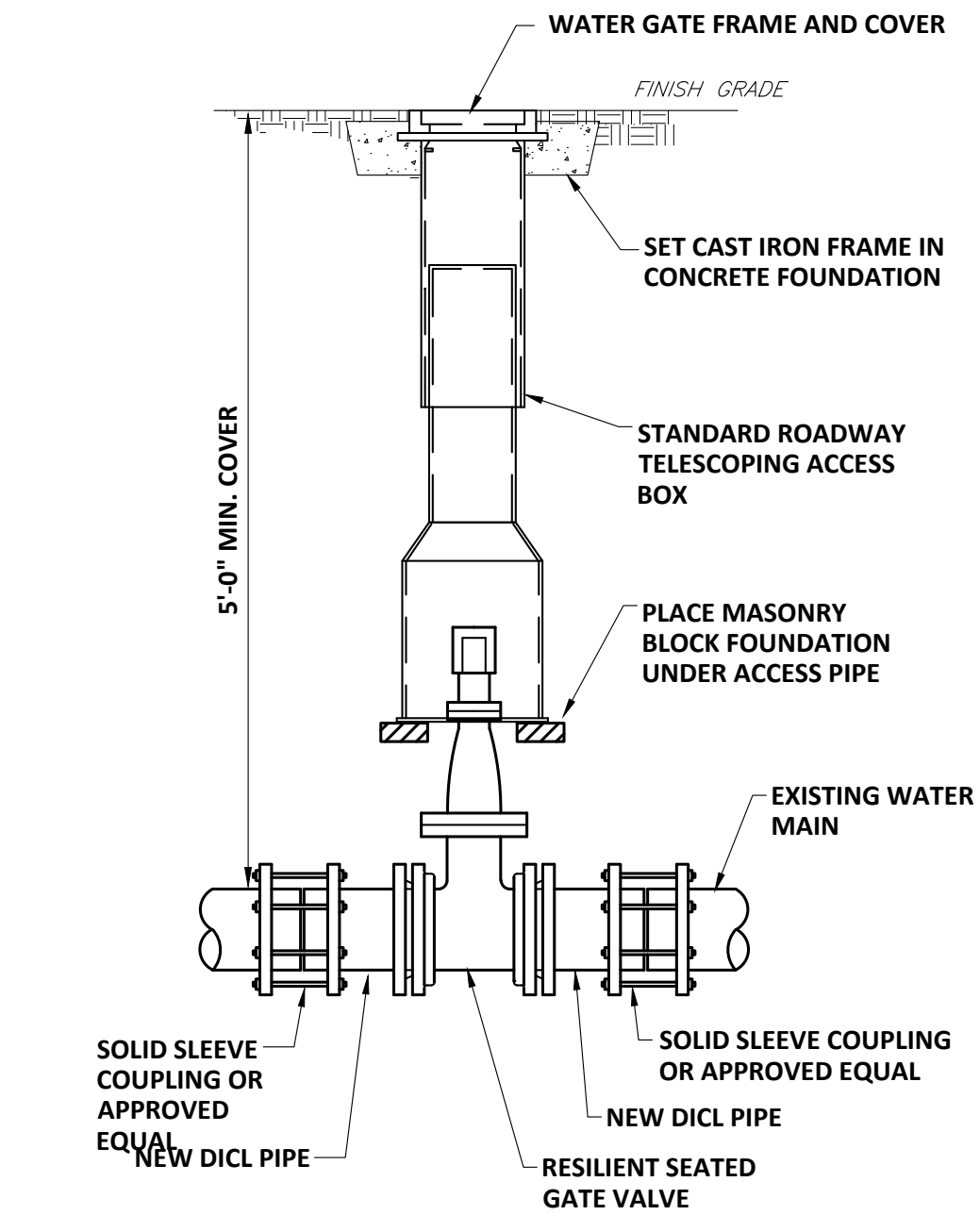
PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		VERTICAL BEND (DOWN)		PLUG		REDUCER	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
6"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	24"	21"	12"	12"	12"	12"
8"	20"	15"	14"	12"	9"	9"	9"	6"	18"	12"	33"	24"	14"	14"	18"	12"
10"	21"	21"	18"	15"	15"	9"	9"	9"	20"	18"	40"	27"	16"	16"	20"	18"
12"	27"	24"	23"	15"	15"	12"	12"	9"	25"	18"	48"	30"	18"	18"	25"	18"
16"	37"	30"	30"	21"	21"	15"	13"	12"	32"	24"	57"	36"	22"	22"	32"	24"



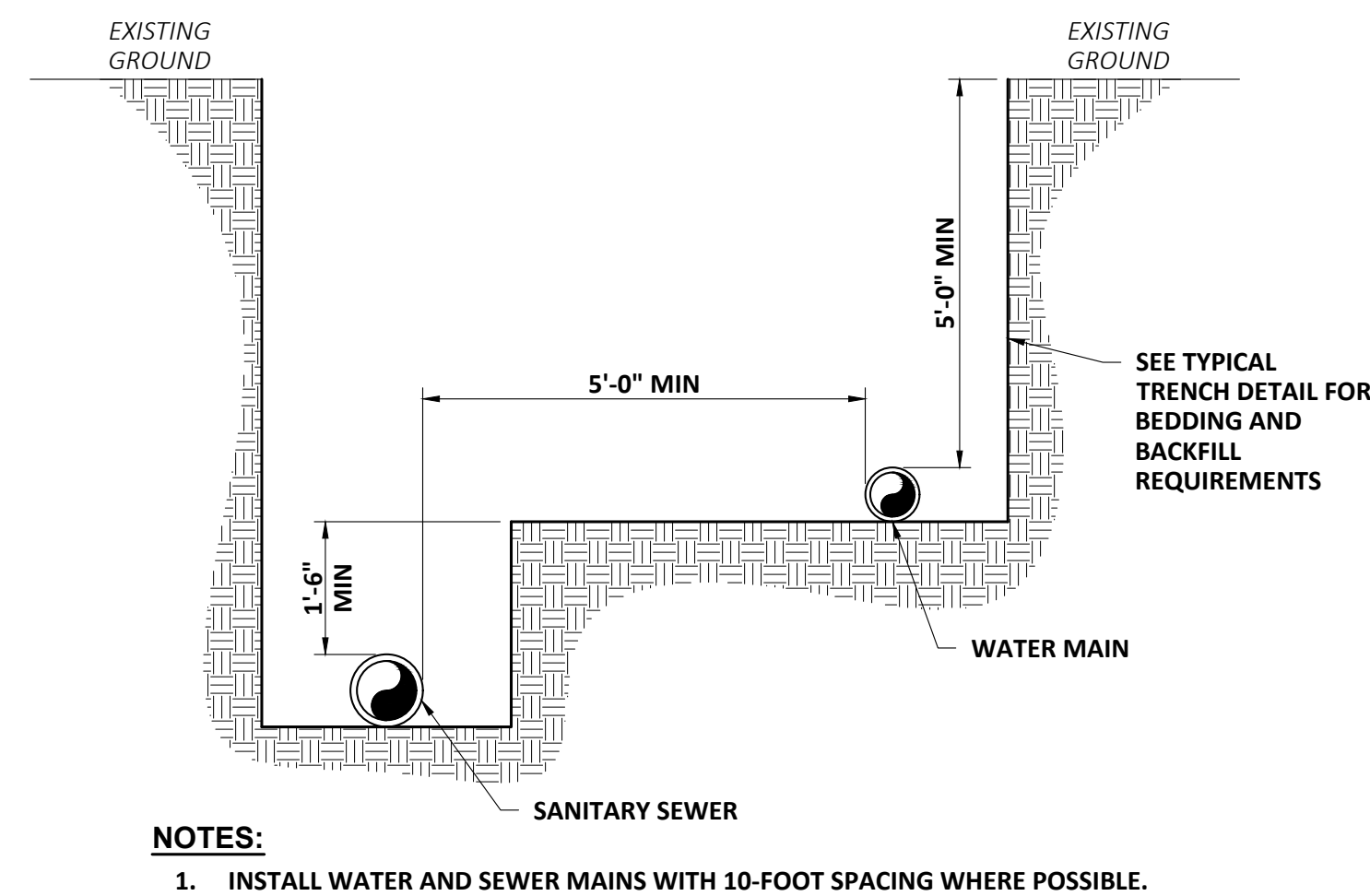
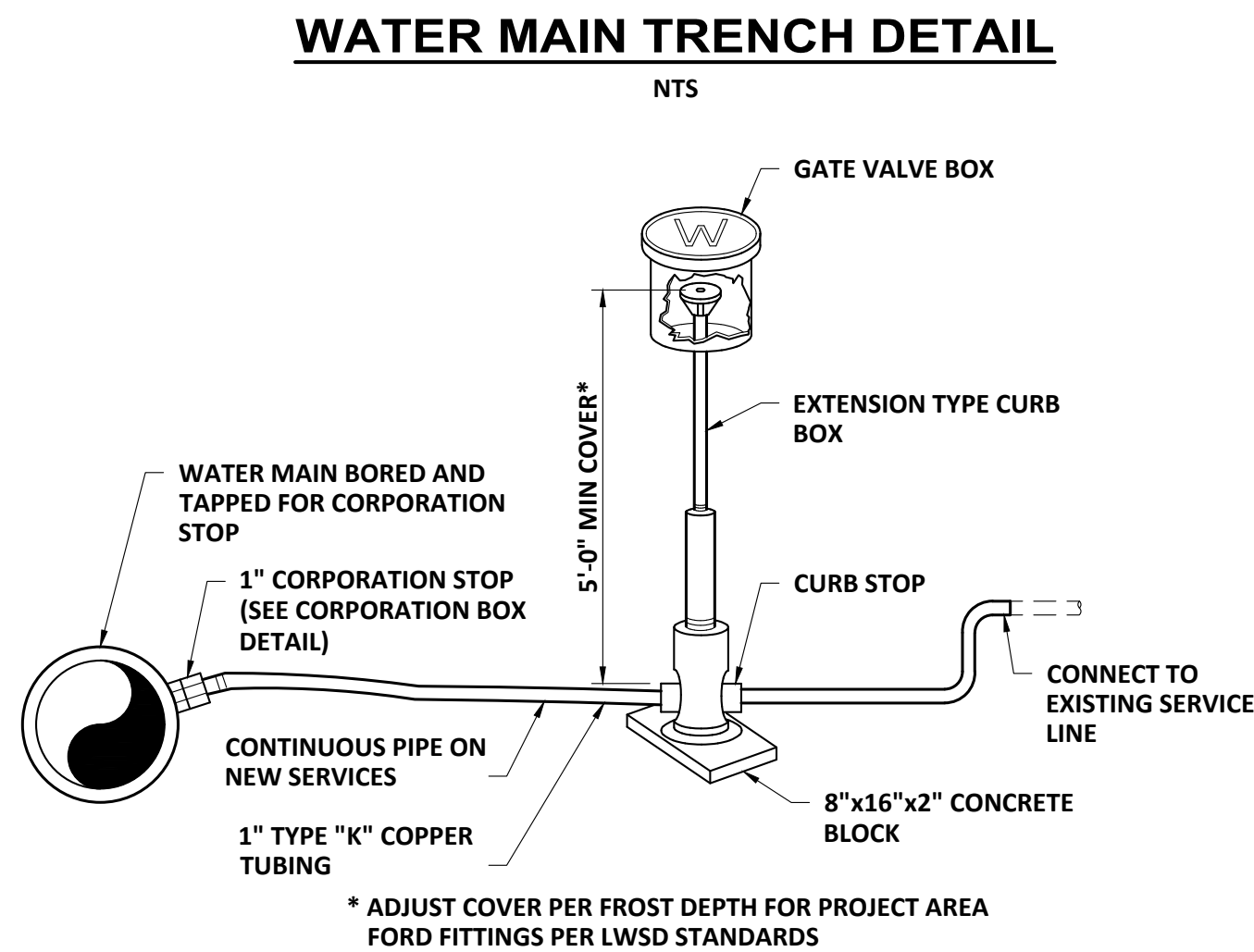
PAVEMENT PAY LIMITS	
<u>PIPE I.D.</u>	"W" (FOR 0' - 10' DEEP)
6" - 15"	7'-0"
16" - 21"	8'-0"
"W" SHALL BE INCREASED BY 1'-0" FOR TRENCHES 10' - 15', AND BY 2'-0" FOR TRENCHES 15' - 20' DEEP.	



PAVEMENT PAY LIMITS	
PIPE I.D.	"W" (FOR 0' - 10' DEEP)
6" - 15"	7'-0"
16" - 21"	8'-0"
<p>"W" SHALL BE INCREASED BY 1'-0" FOR TRENCHES 10' - 15', AND BY 2'-0" FOR TRENCHES 15' - 20' DEEP.</p>	



- | NOTES: | LEDGE | EARTH |
|--------|--|-------|
| 1. | LEICESTER WATER SUPPLY DISTRICT MAY REQUIRE FLOWABLE FILL AT ITS DISCRETION. | |
| 2. | FOR LOCATION WHERE LEDGE IS NOT ENCOUNTERED IN TRENCH, PIPE CAN BE LAY ON UNDISTURBED EARTH, OR ON SAND BEDDING CONSISTENT WITH AWWA GUIDELINES. | |
| 3. | FOR LOCATIONS WHERE LEDGE IS ENCOUNTERED, SAND BEDDING SHALL BE A MINIMUM OF 12" THINK UNDER PIPE. | |
| 4. | FILL MATERIAL SHALL BE COMPACTED TO 95% PROCTOR DENSITY. | |
| 5. | SEE THE TOWN OF LEICESTER STREET OPENING CONSTRUCTION STANDARDS FOR TRENCH BACKFILLING AND PAVEMENT RESTORATION. | |



- NOTES:**
1. INSTALL WATER AND SEWER MAINS WITH 10-FOOT SPACING WHERE POSSIBLE.



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