



RECEIVED
DEC 17 2019

TOWN OF STURBRIDGE

TOWN OF STURBRIDGE
PLANNING BOARD

Planning Board Permit Application

For Official Use:

Date of Receipt: _____ Received By: _____
File Number: _____ Date of Approval: _____
Completed: _____ Not Completed: _____

Application Type

Special Permit Site Plan Review Waiver

Part A General Information

1. NAME OF REGISTERED OWNER Town of Sturbridge Water Dept
Address 65 Whittemore Road
City Sturbridge State MA Zip Code 01566
Telephone No. Sturbridge DPW - (508) 347-2515
Email Address bjackson@town.sturbridge.ma.us
2. NAME OF APPLICANT/ AGENT Town of Sturbridge Water Dept
Address 65 Whittemore Road
City Sturbridge State MA Zip Code 01566
Telephone No. Sturbridge DPW - (508) 347-2515
Email Address bjackson@town.sturbridge.ma.us
3. MATTERS RELATED TO THE APPLICATION SHOULD BE ADDRES TO
(check one or more):
 Owner Applicant/Agent

4. PROOF OF OWNERSHIP ACCOMPANYING APPLICATION: (check one):

Copy of front page of deed Parcel Registry

No Deed of Record could be found for the property.

Part B **Details of Application**

5. Location of Subject Property

Municipal Address: 65 Whittemore Road

Lot(s): _____ Plan: _____

Assessment Lot Number(s): 680-/0 3041/- 065/ /

6. Is the subject property subject to any easements, rights-of-way, or other rights over adjacent properties (i.e. mutual driveway)?

Yes No

7. Existing use of Property: Water Pump Station - Water Tank

8. Date of construction of all existing and proposed buildings and structures on the subject property: 1938-1997

Services available to the subject property:	Existing	Proposed
Type of water services (i.e. municipal water or private well)	Municipal	Municipal
Type of sewage disposal (i.e. municipal sewage disposal or private septic system)	N/A	N/A
Type of storm drainage (i.e. sewers, ditches, swales or other means)	N/A	N/A

9. Project Details

	Total Gross Floor Area		Total Gross Leasable Area		Number of Units	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Industrial	420 s.f.	192 s.f.				
Office						
Commercial						
Institutional						
Residential						
Total	420 s.f.	192 s.f.				

Part C

Project Narrative *Must be completed by applicant or agent*

Describe the proposed project in terms of use, design elements and construction timeframe.

The purpose of the project is to abandon the existing and dated 5,000 gal. hydropneumatic tank and to construct an upgraded water booster station in order to maintain public water supply to 211 homes within the Fisk Hill high service area.

Explain how the design and layout of the development or use constitutes suitable development without detriment to the neighborhood or to the environment.

The abandonment of the existing 5000 Gal. hydropneumatic tank along with the construction of the new booster station will maintain public water supply to 211 homes within the Fiske Hill high service area.

Describe any special processes, mitigation measures or unique circumstances which may have a bearing on project approval

None

10. Please list any technical studies or background material being submitted to support the application.

DEP - Inspection of Hydropneumatic Storage Tanks and Asset Management Plans

11. Please indicate (✓) if the applicant or owner has submitted any of the following applications for all or part of the subject property and complete the following chart:

Other Applications	Required		Submitted		File Number	Status of Application
	Yes	No	Yes	No		
Conservation Commission (Notice of Intent or Request for Determination)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
DPW (Curb Cut Permit)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
DPW (Street entrance, water or sewer tie in)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Board of Health (Septic, food, other)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Zoning Board of Appeals (Special Permit, Variance)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Special Permit - Submitted
Board of Selectmen (Liquor License)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Other (please list below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Other:

MA DEP BRP WS32 - Modification to Water Distribution System Permit

SITE PLAN CHECK LIST

1. Existing Site Plan – note any non-conformance

YES	NO – must give reason below	For Planning Board use
<input checked="" type="checkbox"/>	<input type="checkbox"/> Locus	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> North arrow	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Survey	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Existing Structures	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Existing roads and curbs	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Contours and elevations	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Abutters within 300 feet	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Zone and dimensional requirements	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Setbacks	_____

Additional comments

The existing lot is a pre-existing non conforming lot.

2. Proposed – meets zoning unless noted

YES	NO – must give reason below	For Planning Board use
<input type="checkbox"/>	<input checked="" type="checkbox"/> Lot dimensions	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Proposed buildings	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Percent building & impervious areas	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Sidewalks and buffer areas	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Streets, driveways and access	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Circulation patterns	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Parking spaces and calculations	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Allowed use reference	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Loading areas	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Building mean height	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Dumpsters & screening	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Outdoor storage areas	_____

Additional comments

The lot is a pre-existing non-conforming, The proposed location of booster pump station is placed in a location best fitting to the driveway and the existing water services.

The current front yard setback to the existing pump house is 7.8'. The proposed booster station will have a front setback of 27'. Current lot coverage is 15.12%, proposed lot coverage will be 15.19%. The existing water tank has a height of approximately 76'. The proposed booster station will have a height of approximately 9'. The use requires a ZBA Special Permit.

3. Grading

YES	NO – must give reason below	For Planning Board use
<input type="checkbox"/>	<input checked="" type="checkbox"/> Buffer zones and distances	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Wetlands and vernal pools	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Riparian features	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Flood zones	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Ground water elevations	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Siltation fencing	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Significant species type and habitat	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Detention and Retention Basins	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Grading plan	_____

Additional comments

There are no water features within 200' of the site. There are no existing or proposed detention structures. Existing and proposed grading is shown on the proposed site layout plan.

4. Utilities

YES	NO – must give reason below	For Planning Board use
<input checked="" type="checkbox"/>	<input type="checkbox"/> Water lines and connections	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Hydrants and sprinklers	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Sewer lines and connections	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Electric and wire lines	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Drainage structures	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Oil and propane tanks	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Snow storage area	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Public and private wells	_____

Additional comments

There are no existing or proposed sewer connections. There are no existing or proposed drainage structures. Snow storage will be along the western side of the drive access.

5. Landscaping, Lighting and Signs

YES	NO – must give reason below	For Planning Board use
<input type="checkbox"/>	<input checked="" type="checkbox"/> Landscaping and calculations	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Lighting location, size, type, direction	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Open space as percent of lot	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Sign location size and detail	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Geologic features	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Dust and noise control measures	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Fencing permanent and temporary	_____

Additional comments

The site has an existing 9ft. tall chain link fence enclosing the the water facility. No additional landscaping or site lighting is proposed.

6. Detail Sheets

YES	NO – must give reason below	For Planning Board use
<input type="checkbox"/>	<input checked="" type="checkbox"/> Tree planting	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Shrub planting	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Light poles	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Hydrants	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Catch basins	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Man holes	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Traps	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Trenching	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Road profiles	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Curbing and Burms	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Signs and support	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Sewer fixtures	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Water lines	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Fencing	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Headwalls	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Siltation fencing	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Facades	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> External materials & colors	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/> Fenestration	_____

Additional comments

No landscaping, site lighting, signs, sewer structures, drainage structures, curbing, or additional fencing is proposed.

7. Calculations and Studies unless waived

YES	NO – must give reason below		For Planning Board use
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lot coverage	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ITE trip generation calculations	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Planting calculations and schedule	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Traffic impacts	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Drainage calculations	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water and sewer demands	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Hydrant pressure tests	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water and aquifer studies	_____
<input type="checkbox"/>		Other	_____

Additional comments

The proposed site plan will not impact traffic, drainage, water, or sewer. No landscaping is proposed.

8. Permits applied for / received from other boards, agencies or commissions

Board/Agency	Action or Conditions
ZBA	Special Permit Application has been submitted.
MA DEP	BRP WS32 Permit Application is to be submitted prior to construction.
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

AUTHORIZATION (Must be signed by applicant)

I hereby request that the Town of Sturbridge Planning Board review this application for Site Plan approval, including all plans, documents and information herewith. I represent to the best of my knowledge and belief, this application is being submitted in accordance with the Site Plan Review Regulations of the Planning Board of the Town of Sturbridge.

Vernon J. Jackson
Signature of Applicant

12/12/19
Date

AUTHORIZATION (Must be signed by owner)

I am the record owner of the property for which this application is being filed and as such, I am familiar with the work proposed to be carried out on my property.

I hereby give permission for this application to be filed with the full understanding that certain restrictions may be placed on the property relative to the approval of the proposed work.

I further certify that under the penalties of perjury, I am authorized to sign this application.

[Signature]
Signature of Owner

12/12/2019
Date

If someone is representing the applicant or the owner, the applicant must designate such representative below:

Name of Representative: McClure Engineering, Inc.

Address of Representative: 119 Worcester Rd, Charlton, MA 01507

Telephone No.: 508-248-2005

Relationship of representative to owner or applicant: Engineer

If representing a group, corporation or other organization please attach a copy of the vote authorizing you to act on behalf of such organization for the purposes of this application.

An application will not be considered complete and will not be submitted to the Planning Board for its action until all required documentation/information has been submitted to the Town Planner and filed with the Town Clerk.

Incomplete applications will be automatically rejected and returned to the applicant.

Applications should be submitted to:

Town of Sturbridge Planning Department
Center Office Building
301 Main Street
Sturbridge, MA, 01566
508-347-2508

Applicants are *strongly* encouraged to schedule a submittal meeting with the Town Planner.

December 16, 2019

Mrs. Jean Bubon, Town Planner
Sturbridge Planning Board
Center Office Building
301 Main Street
Sturbridge, MA 01566

R E C E I V E D
DEC 17 2019
TOWN OF STURBRIDGE
PLANNING BOARD

**RE: 65 Whittemore Road
Site Plan Review - Waiver
Assessors' Parcel ID: 680-03041-065**

Dear Board Members:

On behalf of our Client, Town of Sturbridge (Applicant), McClure Engineering, Inc. (McClure) is providing this cover letter to accompany the enclosed Site Plan Review Waiver Application for the proposed site development at 65 Whittemore Road, Sturbridge, MA (Site). The subject 0.25 +/- Acre Site is referenced as Sturbridge Assessor's Parcel ID 680-03041-065.

The property lies on the northern side of Whittemore Road, approximately 500 feet west of Fiske Hill Road. The Site is located within the Suburban Residential zoning district. Currently, the existing site consists of an existing 391,000-gallon above ground water tank, existing water pump house, and existing 5,000-gallon underground hydropneumatic (pressurized) water storage tank. There are no on-site wetland resource areas or any wetland resource areas within 100 feet of the site. There is a wetland approximately 200' to the southwest of the site as indicated in the attached wetland evaluation conducted by EcoTec, Inc. There are no known endangered plant or animal species on the proposed site per the Massachusetts Natural Heritage and Endangered Species Program (NHESP).

The purpose of the requested site plan review waiver is to allow for the construction of a new town owned water booster station to eliminate the need for the existing hydropneumatic tank. On June 23, 2015, a hydropneumatic water storage tank failed at a community public water supply in North Stonington, CT. The failure caused a large explosion and the pump station was totally destroyed. The explosion occurred around 3:00 am and no injuries or loss of life occurred. The distribution system depressurized and significant emergency measures were required to restore and sustain water service. A preliminary analysis indicated that several factors contributed to the tank's catastrophic failure including internal corrosion, age, and construction. Per a notice from MassDEP dated July 24, 2015, there are 970 hydropneumatic tanks operating in water systems in Massachusetts. To avoid catastrophic failure similar to what occurred in Connecticut and other places, MassDEP strongly recommends that all operational hydropneumatic tanks be evaluated and maintained in accordance with manufacturer's specifications. The evaluation should consider structural integrity, manufacturer's pressure ratings, age and expected service life, and condition of internal coating systems. The typical useful life of tanks varies, however, for asset management purposes, hydropneumatic tanks generally have a life expectancy of 10 years. More details are provided in the attached MassDEP notice.

Due to the age of the existing hydropneumatic tank on site, the tank not meeting most of the current DEP hydropneumatic tank requirements, and the difficulty and danger of attempting to inspect and evaluate the condition of such tanks, the Applicant is proposing the construction of a new water booster station to replace the existing water pump house and hydropneumatic water storage tank in order to avoid a similar catastrophe to what happened in CT in 2015. The proposed multi-pump booster station, which has been sized to accommodate daily flow requirements as well as fire flow requirements, will eliminate the necessity to have a pressurized hydropneumatic tank on site to maintain water pressures for the 211 homes located in the Fiske Hill high service water area. The proposed water booster station will be located within a proposed 12'x16' precast building which will be set on site adjacent to the existing above ground water tank. The existing pump house and hydropneumatic tank will remain online while the new booster station is constructed. Once the station is ready to be turned on, the existing system will be taken offline

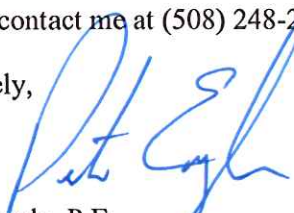
and abandoned. The existing pump house is to remain for storage for the Sturbridge Water Department. The new station will tie into the existing electrical service and SCADA system on site. The existing propane tank and propane emergency generator will be removed and returned to the Sturbridge DPW, and be replaced with a new diesel fuel emergency generator for the new booster station. A paved driveway will be provided for the new station.

The new water booster station is proposed within the front setback (30' required), 27' from the front property line. The existing pump house is located 7.8' from the front property line. All other building setbacks will be met. The maximum lot coverage (15% maximum required) will increase from 15.12% to 15.19%. The proposed use and construction requires a Special Permit from the Zoning Board of Appeals (ZBA). McClure has submitted an Application to the ZBA.

McClure is providing complete project details for your review within our "Town of Sturbridge, Fiske Hill Water Pump Station Replacement Project, 65 Whittemore Road, Sturbridge, MA 01566" date 12/11/19. Plans have been designed and drawn in accordance to the Town of Sturbridge's General Rules and Regulations and Zoning By-Laws.

Please contact me at (508) 248-2005 with any questions or comments. Thank you.

Sincerely,



Peter Engle, P.E.
Senior Engineer

cc: Mr. Butch Jackson, DPW Director, Town of Sturbridge, 308 Main Street, Sturbridge, MA 01566

APPENDIX A

Site Information

USGS Map

Assessors Map

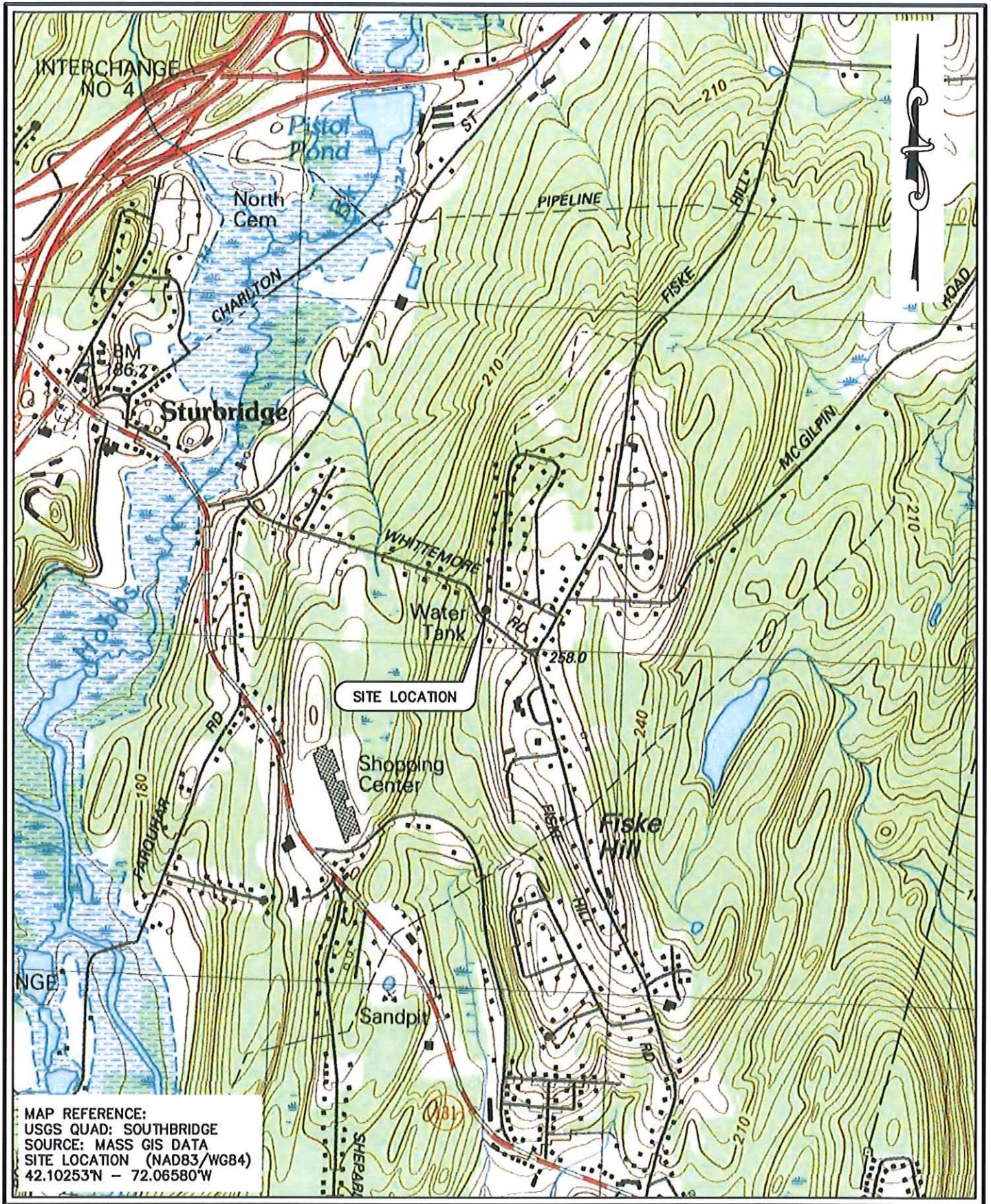
Certified Abutters List

Assessors Property Record Card

Site Photos

Fiske Hill High Service Water Area Map

EcoTec Inc., Site Evaluation, 12/2/19



MAP REFERENCE:
 USGS QUAD: SOUTHBRIDGE
 SOURCE: MASS GIS DATA
 SITE LOCATION (NAD83/WG84)
 42.10253°N - 72.06580°W

DATE:	10/12/2018
DRAWN BY:	MM
APPROVED BY:	CPM
SCALE:	
HORZ:	1"=500'
VERT:	
0	250' 500'

McCLURE
 ENGINEERING, INC

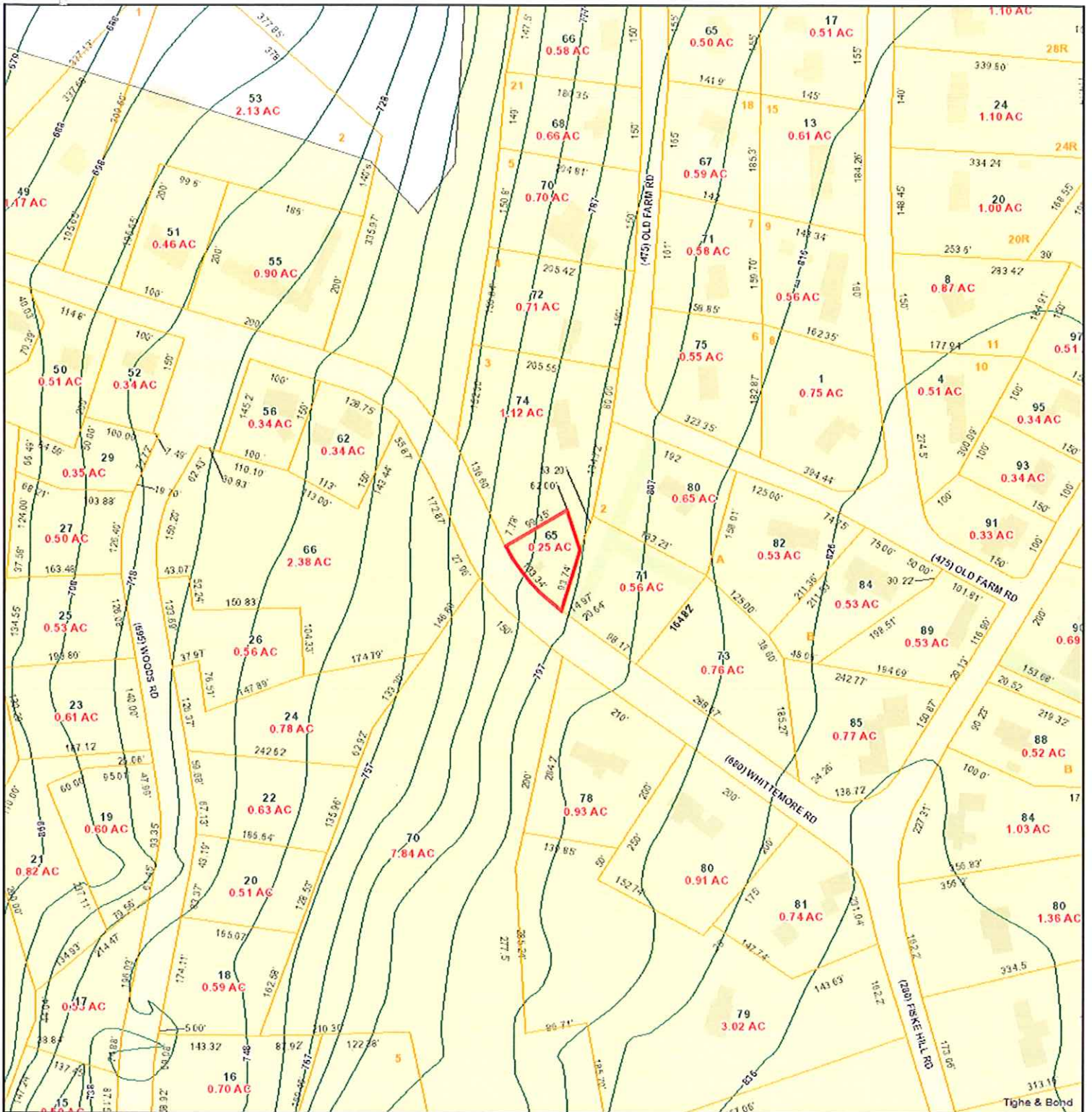
119 Worcester Road
 Charlton, MA 01507
 Email: chris@mcclureengineers.com

Tel: (508) 248-2005
 Fax (508) 248-4887

USGS SITE LOCATION
FISKE HILL WATER BOOSTER STATION
65 WHITTEMORE ROAD
STURBRIDGE, MA 01566
 PREPARED FOR
TOWN OF STURBRIDGE D.P.W.

PROJ. NO. 287-1348-H
 DWG. USGS

FIG
1



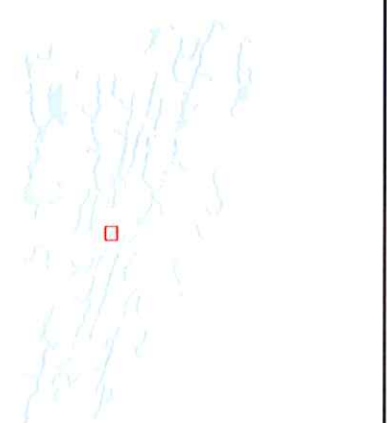
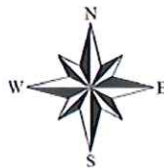
65 WHITTEMORE ROAD

11/14/2019 1:34:37

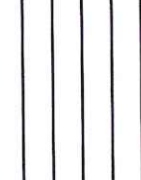
1"=200'

Property Information

Parcel ID	680-03041-065
Address	65 WHITTEMORE
Total Value	\$124,800.00



The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

PARCEL ID	OWNER	OWNER 2	OWNER ADDRESS	CITY	STATE	ZIP	PROPERTY LOCATION
475-03031-001	DUZAK F BLAKE & ELLEN K TRUSTEES	OWNER 2 OF THE DUZAK LIVING TR	1 OLD FARM ROAD	STURBRIDGE	MA	01566	1 OLD FARM ROAD
475-03031-074	BURNS SUSAN N TRUSTEE OF THE	REVOCABLE INDENTURE OF TRUST OF SUSAN N	74 OLD FARM ROAD	STURBRIDGE	MA	01566	74 OLD FARM ROAD
475-03041-080	KORMAN JAMES M		80 OLD FARM ROAD	STURBRIDGE	MA	01566	80 OLD FARM ROAD
475-03041-082	PERREAULT STEVEN	& ERIN	82 OLD FARM ROAD	STURBRIDGE	MA	01566	82 OLD FARM ROAD
680-02938-059	AWAN ROOHI		PO BOX 1031	STURBRIDGE	MA	01566	59 WHITTEMORE ROAD
680-02938-062	MCLEAN JAMES M JR		62 WHITTEMORE RD	STURBRIDGE	MA	01566	62 WHITTEMORE ROAD
680-02948-066	ALDENBERG WILLIAM B	& DEANNA DAVIS	92 FAIRVIEW PARK ROAD	STURBRIDGE	MA	01566	66 WHITTEMORE ROAD
680-02948-070	KINGMAN ROBERT L & MILDRED A TRUSTEE	KINGMAN REALTY TRUST	78 WHITTEMORE ROAD	STURBRIDGE	MA	01566	70 WHITTEMORE ROAD
680-03041-078	KINGMAN ROBERT L & MILDRED A TRUSTEE	KINGMAN REALTY TRUST	78 WHITTEMORE ROAD	STURBRIDGE	MA	01566	78 WHITTEMORE ROAD
680-03041-080	PASSARELLI KEVIN	& ISBELL LINDA	80 WHITTEMORE ROAD	STURBRIDGE	MA	01566	80 WHITTEMORE ROAD
475-03031-072	WILSON-GRILLO CYNTHIA		72 OLD FARM ROAD	STURBRIDGE	MA	01566	72 OLD FARM ROAD
695-02948-024	ALDENBERG WILLIAM B	& DEANNA DAVIS	92 FAIRVIEW PARK ROAD	STURBRIDGE	MA	01566	24 WOODS ROAD
475-03041-084	MANGAN ROBERT A	& MARGARET A	84 OLD FARM ROAD	STURBRIDGE	MA	01566	84 OLD FARM ROAD
680-03041-073	ABDALA DIANNA		6 BEVERLY LANE	AGAWAM	MA	01001	73 WHITTEMORE ROAD
680-03041-071	LAMPREY JEREMY S	BALDASSARRE MARCO F	1330 BOYLSTON STREET	BOSTON	MA	02215	71 WHITTEMORE ROAD
475-03031-075	DONAIIS RAYMOND & ELAINE (LT)	DONAIIS CHRISTOPHER & JENNIFER(RM)	75 OLD FARM ROAD	STURBRIDGE	MA	01566	75 OLD FARM ROAD
	BOARD OF ASSESSORS						
Above persons listed are record owners as they appear on the most recent applicable tax list.							
Assessors are not responsible for errors or omissions. RE: M.G.L. - Chapter 40A, Section 11							
Abutters List - Zoning Board of Appeals - 300'							
RE: 65 Whittemore Road							
Certified Copy							
Assessor:							
							
Date: 11-22-2019							

CURRENT OWNER		TOPO TYPE	UTILITY	STREET	LOCATION	CURRENT ASSESSMENT	
TOWN OF STURBRIDGE		4 Rolling				Code	Assessed
WATER DEPT		TOPO WET	EASEMENT	TRAFFIC	CORNER	9380	57,300
WHITTEMORE ROAD		2 Suburban	DRAINAGE	VIEW	COMMUNITY	9380	65,700
STURBRIDGE MA 01566		SUPPLEMENTAL DATA		1 Paved		Total 123,000	
Alt Prcl ID 680-03041-065		SEPTIC FEATURES				Total 123,000	
Parcel User_		TOPO				Total 124,800	
Parcel User_		WF CHAR				Total 121,900	
Parcel User_		USE				Total 123,000	
POND		Assoc Pld#				Total 123,000	

RECORD OF OWNERSHIP		BK-VOL/PAGE	SALE DATE	Q/U	V/I	SALE PRICE	VC
TOWN OF STURBRIDGE		0 0		U	V	0	

EXEMPTIONS		Year	Code	Assessed	Year	Code	Assessed
Description		2020	9380	57,300	2019	9380	59,100
			9380	65,700	9380	9380	65,700
Total		Total		123,000	Total		124,800

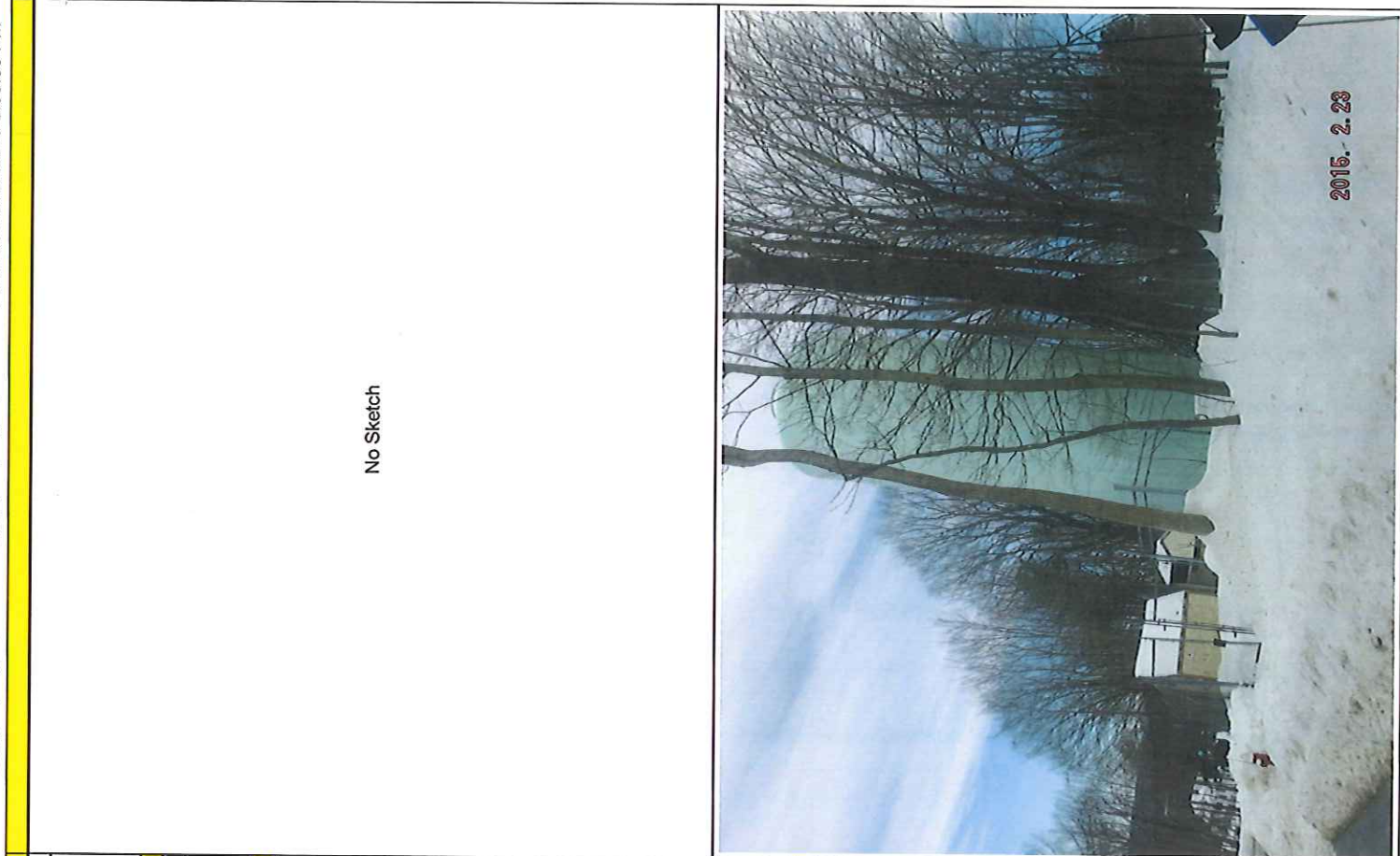
OTHER ASSESSMENTS		Year	Code	Assessed	Year	Code	Assessed
Description		2020	9380	57,300	2019	9380	59,100
			9380	65,700	9380	9380	65,700
Total		Total		123,000	Total		124,800

ASSESSING NEIGHBORHOOD		Nbhd	Description	Number	Amount	Comm Int
6		6	Tracing			
ECO-OVERBUILT/SIZE IE						
TOWN WATER TANK						

BUILDING PERMIT RECORD		Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments
VISIT / CHANGE HISTORY <td>02-23-2015</td> <td>02</td> <td>AJ</td> <td>53 VALUE REVIEW</td> <td></td> <td></td> <td></td> <td></td> <td></td>		02-23-2015	02	AJ	53 VALUE REVIEW					
		01-28-1998		RM	00 Measur+Listed					
		05-29-1986								

LAND LINE VALUATION SECTION		B Use Co	Description	Zone	D	Fronta	Depth	Land Units	Unit Price	I. Fact	S.A.	Ac Di	C. Fact	St. Idx	Adj	Notes	Special Pricing	Size A	Adj Unit Pric	Land Value	
1	9380	Town District V						10,890 SF	4.21	1.250	6	1.000	1.00	1.00	1.00			0	1.000	5.26	57,300
Total Card Land Units		0.250 AC		Parcel Total Land Area: 0.2500		Total Land Value		57,300												57,300	

This signature acknowledges a visit by a Data Collector or Assessor



CONSTRUCTION DETAIL		CONSTRUCTION DETAIL (CONTINUED)											
Element	Description	Element	Description										
94 00	Outbuildings Vacant												
MIXED USE													
Code	Description	Code	Percentage										
9380	Town District V		100										
			0										
			0										
COST / MARKET VALUATION													
Adj Base Rate		0											
Replace Cost													
Net Other Adj		0											
Year Built		0											
Effective Year Built		0											
Depreciation Code													
Remodel Rating													
Year Remodeled													
Depreciation %													
Functional Obsol		0											
Economic Obsol		0											
Cost Trend Factor		1											
Condition		0											
% Complete		0											
Overall % Condition		0											
Deprec Value													
Dep % Ovr													
Dep Ovr Comment													
Misc Imp Ovr													
Misc Imp Ovr Comment													
Cost to Cure Ovr													
Cost to Cure Ovr Comment													
OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)													
Code	Description	Su	Sub Type	Lan	Units	Unit Price	Yr Bilt	%	Dep.	Cond	Gra	Qual	Apprais Va
WAT2	WATER TOW		L	150,		0.50	1986	50	0.00			0.00	37,500
FN4	FENCE-8' C		L	480		11.00	1998	50	0.00			0.00	2,600
SHD2	W/LIGHTSE		L	144		9.00	1998	50	0.00			0.00	600
CGN	COMM GEN		L	1		25000.00		100	0.00			0.00	25,000
BUILDING SUB-AREA SUMMARY SECTION													
Subarea	Description	Living	Gross	Eff Area	Unit Cost	Undeprec Value							
		0	0	0	0	0							
Ttl Gross Liv / Lease Area		0	0	0	0	0							

No Sketch

2015. 2. 23

**Photo Documentation
Fiske Hill Booster Station
65 Whittemore Rd., Sturbridge, MA**



Fiske Hill Water Booster Station (Photo No. 3576)



14' x 10' Pumphouse (Photo No. 132127)



391,000 Gallon Storage Tank (Photo No. 4438)



Storage Tank Control Panel (Photo No. 4444)

Photo Documentation
Fiske Hill Booster Station
65 Whittemore Rd., Sturbridge, MA



Pumphouse Lower Level – Booster Pumps (Photo No. 4492)



Pumphouse Lower Level – Booster Pumps (Photo No. 4502)

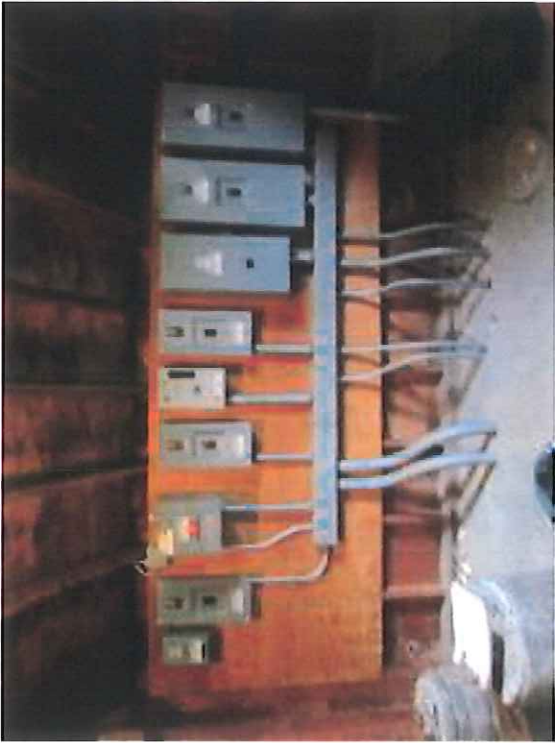


Pumphouse Lower Level – Low Level Cutoff (Photo No. 4477)



Pumphouse Lower Level - Booster Pump Controls/Gauges
(Photo No. 4475)

Photo Documentation
Fiske Hill Booster Station
65 Whittemore Rd., Sturbridge, MA



Pumphouse Upper Level – Electrical Components (Photo No. 4453)



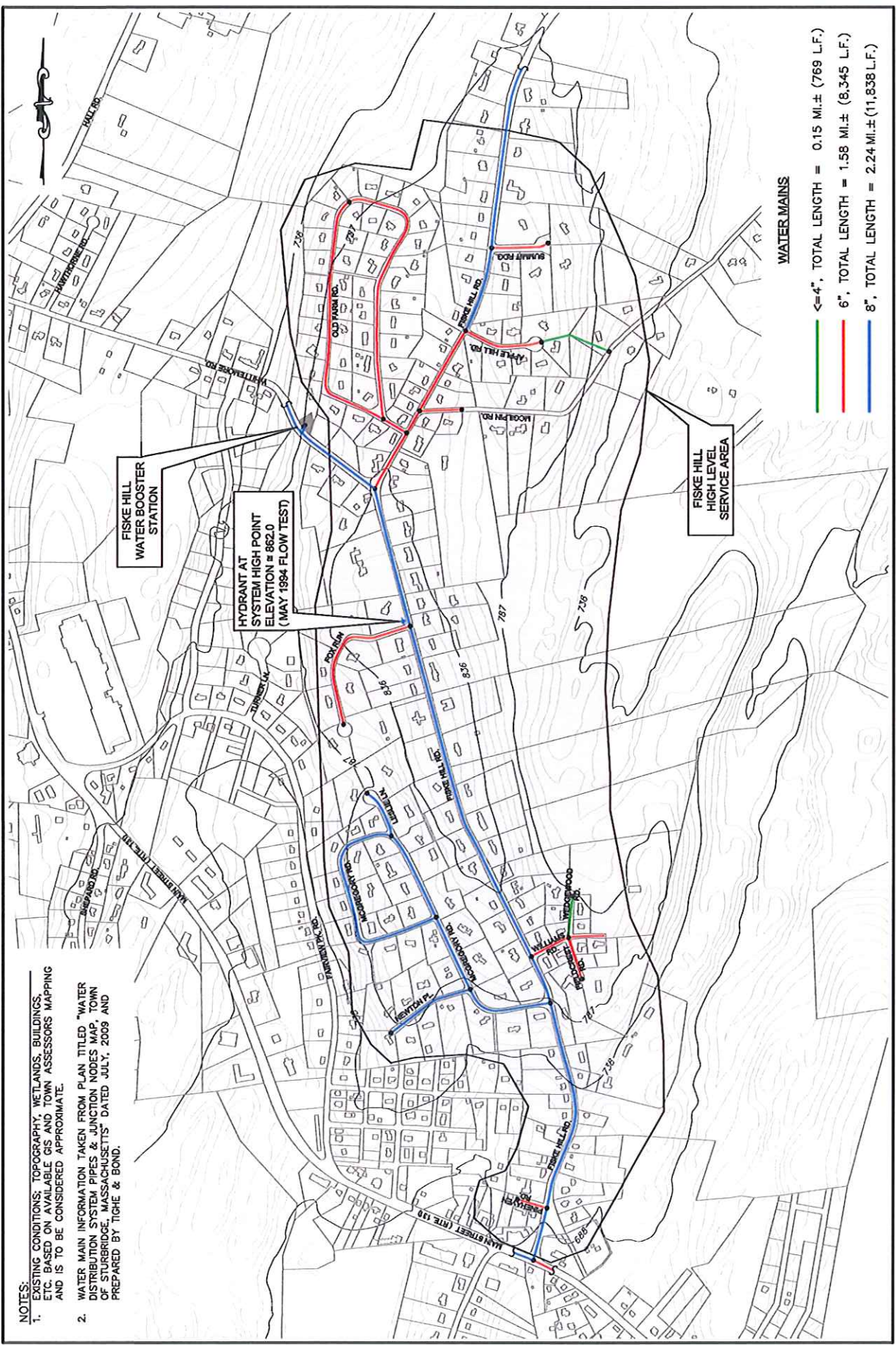
Pumphouse Upper Level – Chemical Storage Area
(Photo No. 4454)



Photo No. 4440



Photo No. 4437



- NOTES:
- EXISTING CONDITIONS, TOPOGRAPHY, WETLANDS, BUILDINGS, ETC. BASED ON AVAILABLE GIS AND TOWN ASSESSORS MAPPING AND IS TO BE CONSIDERED APPROXIMATE.
 - WATER MAIN INFORMATION TAKEN FROM PLAN TITLED "WATER DISTRIBUTION SYSTEM PIPES & JUNCTION NODES MAP, TOWN OF STURBRIDGE, MASSACHUSETTS" DATED JULY, 2009 AND PREPARED BY TIGHE & BOND.

WATER MAINS

- 4" TOTAL LENGTH = 0.15 MI.± (769 L.F.)
- 6" TOTAL LENGTH = 1.58 MI.± (8,345 L.F.)
- 8" TOTAL LENGTH = 2.24 MI.± (11,838 L.F.)

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 – Fax: 508-752-9494

December 2, 2019

Dennis Rice, PE
McClure Engineering, Inc.
119 Worcester Road
Charlton, MA 01507

RE: Wetland Resource Evaluation, 65 Whittemore Road, Sturbridge, Massachusetts

Dear Mr. Rice:

On November 20, 2019, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by: (1) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the "Act") and its implementing regulations (310 CMR 10.00 *et seq.*; the "Regulations"); (2) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands); and (3) the Town of Sturbridge Wetlands Protection Bylaw and regulations. Paul J. McManus, PWS conducted the inspection.

The subject site consists of a 1/4-acre parcel located northeasterly of Whittemore Road in Sturbridge. The site consists of a water tank, building, parking area and forested uplands. The wetland resources observed in the vicinity of the site are described below.

Methodology and Findings

The site was inspected for the presence of areas that may qualify as wetland resources. The site parcel does not contain any vegetated wetlands or jurisdictional streams, and is located high on a hillside, precluding the presence of floodplains.

EcoTec also conducted an inspection of surrounding properties, to the extent feasible from the site and public property, and determined that the closest wetland to the site is located across Whittemore Road in a southwesterly direction approximately 200-feet from the site. This vegetated wetland appears to border a more distant intermittent stream; accordingly, the vegetated wetland would be regulated as Bordering Vegetated Wetlands and the intermittent stream would be regulated as Bank under the Act and Bylaw. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands and Bank under the Act. Therefore, the site is not located within the 100-foot Buffer Zone under the Act.

The Town of Sturbridge Wetlands Protection Bylaw extends jurisdiction by extending the Buffer Zone under the local Bylaw to 200-feet. The project appears to be just at the outer edge of this

65 Whittemore Road, Sturbridge

December 2, 2019

Page 2.

jurisdictional Buffer associated with the off-site wetland described above. As such, under the "Local Wetland Bylaw Buffer," review by the Sturbridge Conservation Commission ("SCC") is recommended to ensure regulatory compliance and prevent significant adverse impact to wetlands. Any work proposed between the 100 and 200-foot Buffer requires the filing of either a Request for Determination of Applicability, a Wetland Bylaw Permit, or a Tree Removal Permit with SCC under the local wetlands bylaw.

We note also that a paved drainage swale abuts the site along the shoulder of Whittemore Road and directs stormwater to drop inlets. It is likely that this drainage system discharges to a wetland resource and therefore EcoTec recommends that the stormwater inlets downgradient of the site be protected during construction to prevent sediment from entering the drainage system.

Bordering Land Subject to Flooding is an area that floods due to a rise in floodwaters from a bordering waterway or water body. Where flood studies have been completed, the boundary of Bordering Land Subject to Flooding is based upon flood profile data prepared by the National Flood Insurance Program. Section 10.57(2)(a)3. states that "The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm." Based upon a review of the Flood Insurance Rate Map #25027C0927E effective July 4, 2011, the site is within a Zone X, which is outside the 100-year flood elevation. The project engineer should evaluate the most recent National Flood Insurance Program flood profile data to confirm that Bordering Land Subject to Flooding does not occur on the site. Bordering Land Subject to Flooding would occur in areas where the 100-year flood elevation is located outside of or upgradient of the Bordering Vegetated Wetlands or Bank boundary. Bordering Land Subject to Flooding does not have a Buffer Zone under the Act.

The Massachusetts Rivers Protection Act amended the Act to establish an additional wetland resource area: Riverfront Area. Based upon a review of the current USGS Map (i.e., Southbridge Quadrangle, dated 1982, attached) and observations made during the site inspection, there are no mapped or unmapped streams located within 200 feet of the site. Accordingly, Riverfront Area would not occur on the site. Riverfront Area does not have a Buffer Zone under the Act.

The Regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the *Massachusetts Natural Heritage Atlas*, 14th edition, Priority Habitats and Estimated Habitats from the NHESP Interactive Viewer, valid from August 1, 2017, and Certified Vernal Pools from MassGIS, there are no Estimated Habitats [for use with the Act and Regulations (310 CMR 10.00 *et seq.*)], Priority Habitats [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; "MESA") and MESA Regulations (321 CMR 10.00 *et seq.*)], or Certified Vernal Pools on or in the immediate vicinity of the site. A copy of this map is attached.

EcoTec, Inc.

65 Whittemore Road, Sturbridge

December 2, 2019

Page 3.

The reader should be aware that the regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. A brief description of my experience and qualifications is attached. If you have any questions, please feel free to contact me at any time.

Cordially,
ECOTEC, INC.

A handwritten signature in cursive script, appearing to read "Paul J. McManus".

Paul J. McManus, PWS
President

Attachments (4, 4 pages)

17/E/SturbridgeWhittemore65Report

EcoTec, Inc.

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 – Fax: 508-752-9494

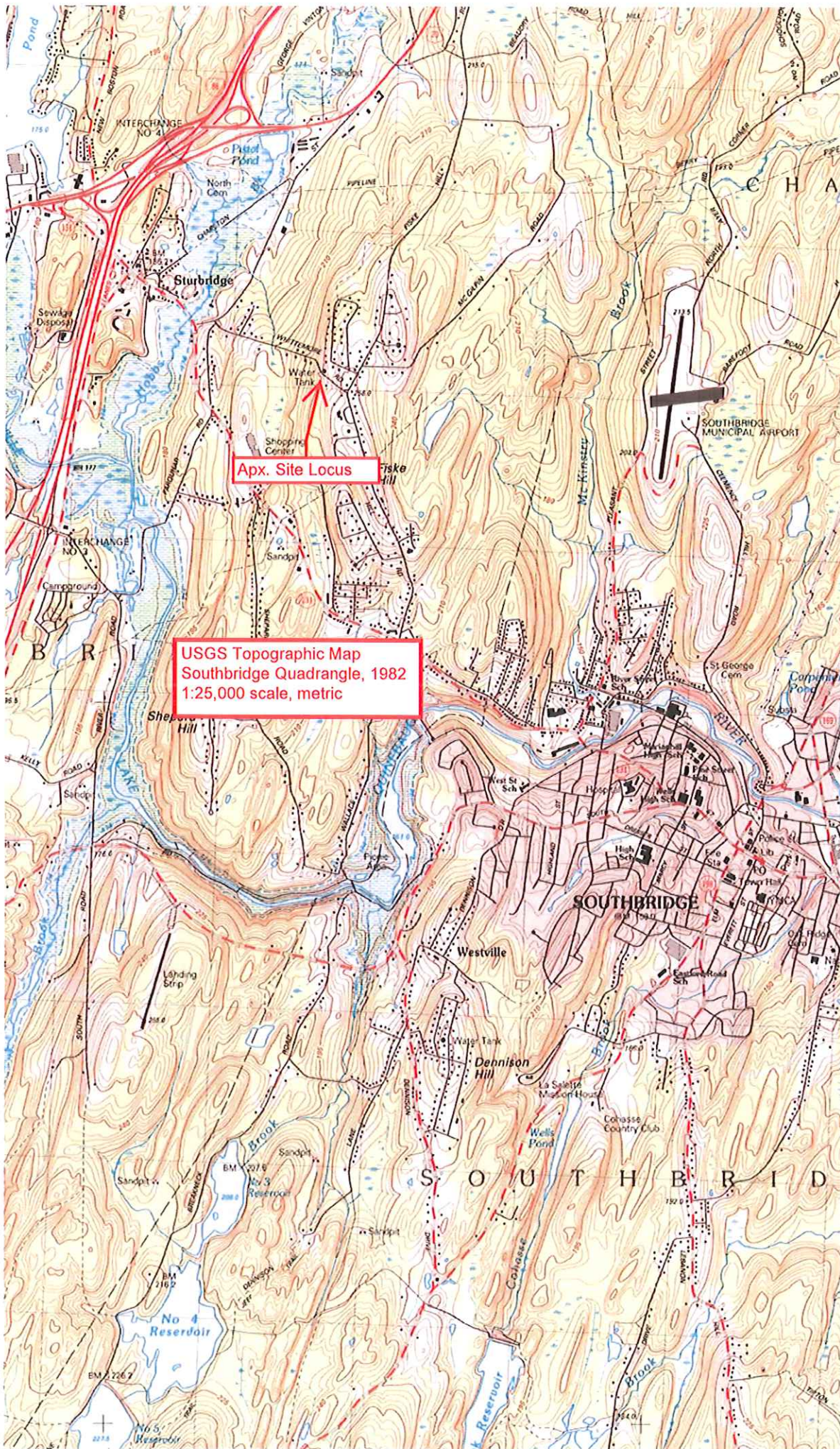
Paul J. McManus, LSP, PWS President

Paul McManus is the President and owner of EcoTec, Inc., which he founded in 1990. He has received certification as a Professional Wetlands Scientist (PWS) from the International Society of Wetlands Scientists (SWS), the leading professional organization in the field. He was elected President of the New England Chapter of SWS, and represented the Chapter on the International Board of Directors for several years, and currently serves as Chapter Past President and Treasurer. Mr. McManus is also a Massachusetts-certified Licensed Site Professional with experience that has included a wide range of site assessment and remediation projects, focused on the field of ecological risk assessment at contaminated sites. Prior to the founding of EcoTec, Mr. McManus was employed as the Senior Scientist at Harborline Engineering Inc. of New Bedford, MA and served for several years as a project manager at the Gulf of Maine Research Center Inc. in Salem, MA. His experience also includes employment as an aquatic ecologist at the Massachusetts Division of Water Pollution Control. Mr. McManus brings a wide variety of environmental consulting experience to EcoTec, including wetland evaluation and delineation, lake and stream assessment, wildlife habitat evaluation, oil and hazardous materials assessment and ecological risk assessment, as well as a variety of other types of environmental impact assessment. Included among the major wetland projects he has completed are detailed wetland community surveys and impact restoration specifications for lengthy pipeline crossings of the Fowl Meadow "Area of Critical Environmental Concern" (ACEC). At the MWRA's Norumbega Reservoir property in Weston, he conducted the state and federal wetland delineations, was project manager for the related town-wide off-site vernal pool mitigation evaluation, and authored the project's wetland mitigation program, including vernal pool replication in support of a Wetlands Protection Act Variance and other environmental permits. He has directed hundreds of other wetlands projects at sites including large and small residential and commercial developments. He has completed all phases of environmental permitting work, including wetland delineation, replication and mitigation design, implementation, and monitoring in freshwater wetlands and salt marsh, as well as general wildlife and rare species assessments and trapping, including marbled salamander, 4-toed salamander, spotted turtle, and eastern box turtle, under the MA Wetlands and Endangered Species Act Regulations. Permitting efforts regularly include federal, local and state permitting, including filings under the Massachusetts Environmental Policy Act (MEPA) regulations. Additional projects he has directed include major biological and chemical marine sampling programs; he has been involved in a variety of freshwater system evaluations, and conducted evaluations and sampling for proposed fresh water and marine dredging projects. He has conducted ecological risk assessments for aquatic and terrestrial biota, including state-listed species, at numerous locations of contamination by oil and hazardous materials. Mr. McManus serves as a consultant on behalf of government, business, major utility companies, the development community, conservation commissions, and concerned citizens' groups. He presently serves on a regular basis as technical wetlands consultant for the Town of Dover Conservation Commission, and works regularly for other Commissions providing peer review expertise on a wide variety of projects.

Education: Master of Science: Applied Marine Ecology - University of Massachusetts/Boston, 1988
Bachelor of Arts: Biology (Ecology emphasis) – College of the Holy Cross, Worcester, MA, 1984
U.S. Fish and Wildlife Service: Habitat Evaluation Procedure (HEP) Certification
Massachusetts Division of Water Pollution Control: Algal Assay (eutrophication) Short Course

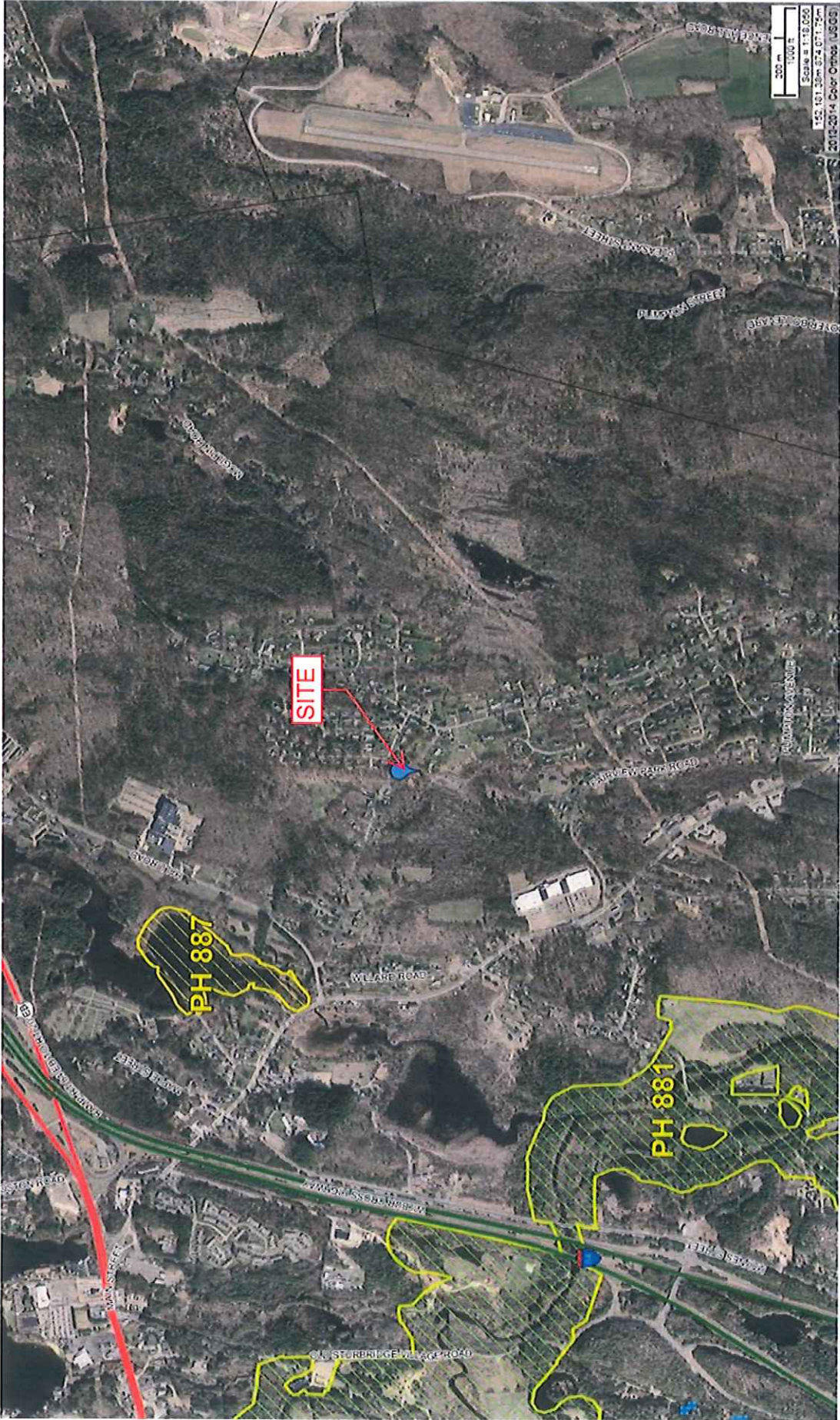
Professional Affiliations: Massachusetts Association of Conservation Commissioners
(Partial list) Society of Wetland Scientists (Past President of the New England Chapter)
Association of Massachusetts Wetlands Scientists
Society of Environmental Toxicology and Chemistry

Certifications: Society of Wetlands Scientists Professional Wetlands Scientist # 962
Commonwealth of Massachusetts Licensed Site Professional # 5711
OSHA Health & Safety Hazardous Waste Safety Training, 29 CFR 1910.120 (40 hr & refresher)



Apx. Site Locus

USGS Topographic Map
Southbridge Quadrangle, 1982
1:25,000 scale, metric



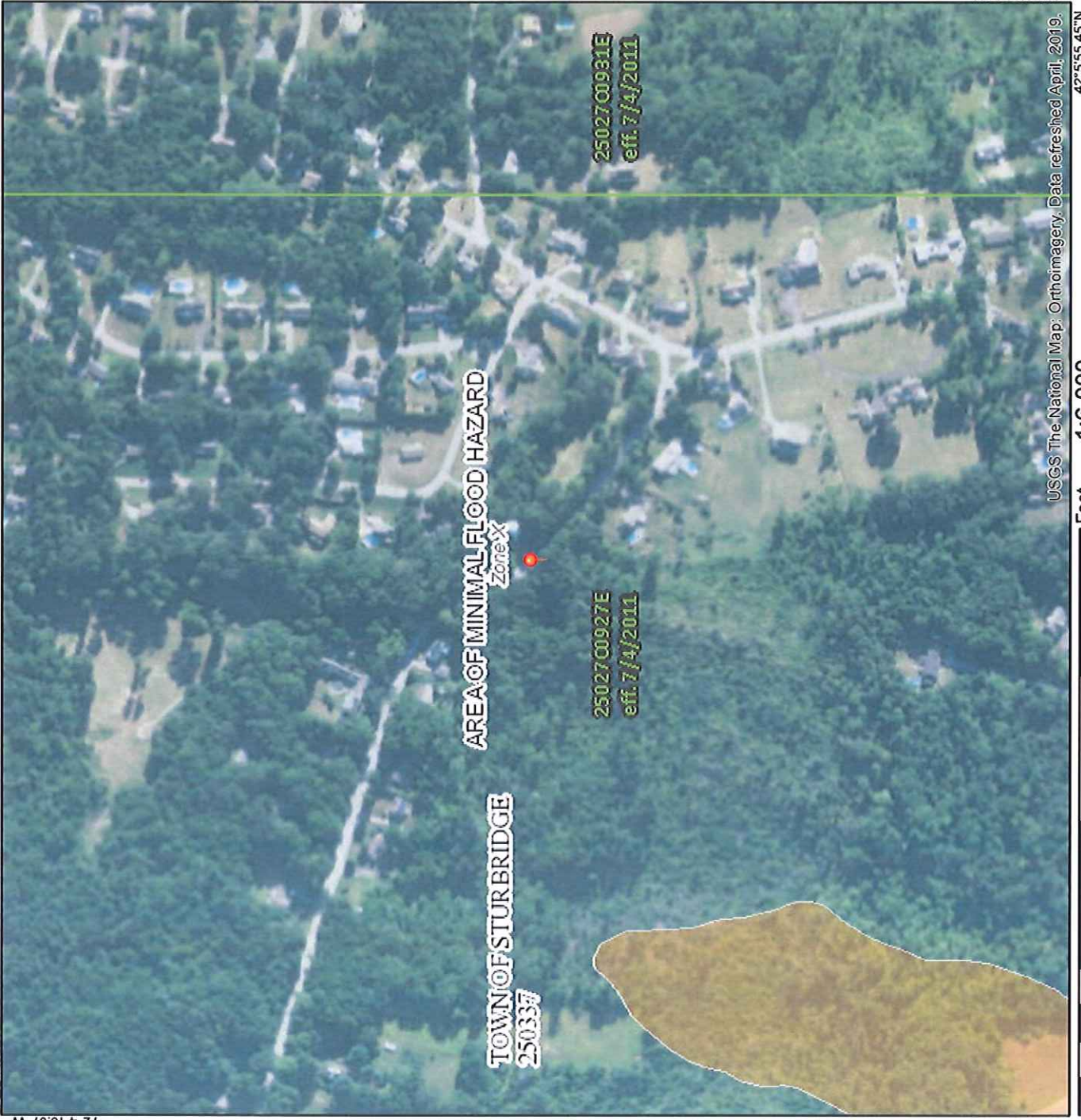
Natural Heritage Atlas Online Data Viewer Output

65 Whittemore Road, Sturbridge- November 22, 2019

National Flood Hazard Layer FIRMette



42°6'22.14"N



USGS The National Map: Orthoimagery. Data refreshed April, 2019. 42°5'55.45"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR 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> Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS	Area of Minimal Flood Hazard <i>Zone X</i> Effective LOMFRs Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation Coastal Transect Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Transect Baseline Profile Baseline Hydrographic Feature
MAP PANELS	Digital Data Available No Digital Data Available Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map compiles 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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/22/2019 at 1:53:59 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.

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. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX B

MassDEP Notice

Inspection of Hydropneumatic Storage Tanks and Asset Management Plans, 7/24/15



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Charles D. Baker
Governor

Matthew A. Beaton
Secretary

Karyn E. Polito
Lieutenant Governor

Martin Suuberg
Commissioner

IMPORTANT NOTICE

TO: Public Water Suppliers

FROM: Yvette DePeiza, Program Director, Drinking Water Program, BWR /MassDEP

DATE: July 24, 2015

RE: Inspection of Hydropneumatic Storage Tanks and Asset Management Plans

The Massachusetts Department of Environmental Protection, Drinking Water Program (MassDEP/DWP) has been notified that a conventional hydropneumatic (pressurized) storage tank failed at a community public water system in North Stonington, Connecticut on June 23, 2015. The failure caused a large explosion and the pump station was totally destroyed. Thankfully, the explosion occurred around 3:00 am and no injuries or loss of life occurred. The distribution system depressurized and significant emergency measures were required to restore and sustain water service. A preliminary analysis indicated that several factors contributed to the tank's catastrophic failure including internal corrosion, age, and construction.

Further research indicated that hydropneumatic water and wastewater tanks have failed similarly in California
http://www.acwajpia.com/filecabinet/rmnopw/hydropneumatic_tank_insp_9-28-12-jh.pdf and regrettably a loss of life occurred in one event.

A review of our records indicated that there are 970 hydropneumatic tanks operating in water systems in Massachusetts. **To avoid catastrophic failure similar to what occurred in Connecticut and other places, MassDEP strongly recommends that all operational hydropneumatic tanks be evaluated and maintained in accordance with manufacturer's specifications.** The evaluation should consider structural integrity, manufacturer's pressure ratings, age and expected service life, and condition of internal coating systems. The typical

useful life of tanks varies; however, for asset management purposes, hydropneumatic tanks generally have a life expectancy of 10 years. Public water systems should verify that pressure relief valves and high pressure alarms are installed and operational. Current operational pressure settings of hydropneumatic tanks should be reviewed to determine if the current operating pressures comply with the manufacturer's recommended range. If a tank is found to be structurally deficient and requires immediate replacement, the system pressure may need to be reduced temporarily to prevent a catastrophic failure of the tank.

MassDEP is working on updating its guidance for hydropneumatic tanks to include recommendations regarding inspections. See current guidance in Section 8.3 of Massachusetts Drinking Water Guidelines located at <http://www.mass.gov/eea/docs/dep/water/laws/a-thru-h/glchpt8.pdf>. The guidance refers to the latest American Society of Mechanical Engineer's (ASME) code requirements or an equivalent requirement of state and local laws and regulations for the construction and installation of unfired pressure vessels. Until that guidance is updated to address inspections, the following is a link to an informative tank inspection and maintenance document from the Association of California Water Agencies Joint Powers Insurance Authority: <http://www.acwaipia.com/filecabinet/rmnopw/Hydropneumatic Tank Insp 9-28-12-JH.pdf>

The catastrophic failure of public water supply infrastructure provides an excellent reminder of the importance of an asset management plan. The plan assesses the age and the condition of water system components to set aside reserve funds to replace aging components before catastrophic failure and the resulting loss of water supply occurs. MassDEP provides capital improvement and asset management planning resources on the MassDEP website at <http://www.mass.gov/eea/agencies/massdep/water/drinking/water-systems-ops.html#3>. You may also contact our Capacity/Asset Management contact below for information on appropriate funding options for replacement of aging infrastructure.

Please use the following contact information to contact the Drinking Water Program for further information on this issue.

Western Regional Office	Deirdre Doherty	413-755-2148
Central Regional Office	Robert Bostwick	508-849-4036
Northeast Regional Office	Thomas Mahin	978-694-3226
Southeast Regional Office	Richard Rondeau	508-946-2816
Capacity /Asset Management	Michael Maynard	508-767-2735
Drinking Water Program	Program.director-dwp@state.ma.us	

APPENDIX C

Proposed Booster Station

Easi-Set Precast Building Brochure

Typical Easi-Set Precast Booster Station Drawing Specs

Typical Easi-Set Precast Booster Station Photos

EASI-SET[®]

TRANSPORTABLE PRECAST
CONCRETE BUILDINGS

Available throughout North
America from EASI-SET[®]
licensed manufacturers

- Weather-tight
- Fast Installation
- No Footing Needed
- Small to Ultra-Large
- Maintenance Free
- Cost Effective
- Secure



www.PrecastBuildings.com

EASI-SET® Steel-Reinforced Precast Concrete Buildings:

The originator of and industry leader in transportable concrete buildings offers patented post-tensioned roof and floor features which provide even greater weather-tightness and impact resistance.

Durable

- **Impact resistant:** upgraded post-tensioned design increases average compressive strengths by 28% and increases distribution of radial compressive forces by 33%.
- **Weather-tight:** special roof and floor design provides superior watertight construction and interior and exterior panel joints are caulked with polyurethane concrete sealant.
- **Maintenance Free:** will not rust, warp, corrode, rot or burn and retains finish without maintenance.
- **Heavy-Duty Construction:** galvanized insulated doors, deluxe door hardware and extruded aluminum threshold with integral seal.



Post-tensioned roof design: Withstands the impact of a 100-pound block of ice dropped from 200 feet without any internal or external damage.



Fallen mature oak tree causes no damage

Secure

- **Vandal resistant:** steel-reinforced precast concrete construction, tamper-proof hinges, deadbolt locks and steel doors.
- **Bullet resistant:** UL 752 — Level 4 bullet resistant. (See page 7)
- **Fire resistant:** standard fire rating of 1.5 hours with additional protection available.
- **Earthquake resistant:** rated Seismic Zone 4.
- **Hurricane resistant:** withstands up to 130 mph wind loads standard (150 mph available).
- **Petrochemical blast resistant.**

Versatile

- **Standard sizes:** 10' x 12', 12' x 16', and 12' x 20' (exterior dimensions) with EASI-SET® transportable custom designs and sizes available.
- **Ultra-large sizes:** EASI-SPAN® Modular Expandable precast concrete buildings are available with 20', 24', 30' and 40' clear spans. (See page 5)
- **Exterior-finish choices:** many options offered to provide compatibility with surrounding or adjacent buildings. (See back cover)
- **Unlimited optional features:** buildings can be provided with gabled roofs and outfitted as required.



Walnut Creek pump station with optional roof detail, Lancaster, NY

EASI-SET®

The nationwide network of licensed manufacturers ensures availability of the highest quality buildings where you want them and when you want them.

Practical

- **Gets your site operational fast:** quick installation and simple site preparation. With built-in floor, no foundations are necessary unless required by local codes. Buildings can also be delivered preassembled, without a floor, and placed on a pre-poured concrete slab.
- **Reduces maintenance expenses:** durable and vandal resistant with lifetime finishes.
- **Saves money:** costs much less than comparable built-in-place construction.
- **Relocatable:** can be moved when needs change.

Weather-tight Features



Turn-Down Roof: Prefabricated turn-down roof caps the walls with an architectural ribbed edge. This design protects the roof joint from direct exposure to driving rain, provides a drip edge which prevents moisture penetration, and ensures a watertight interior.

Above-Door Rain Guard: Drip edge protection increases watertightness.



Galvanized Door and Frame: Specially reinforced for high quality with mechanical hold-open arm.



Raised Aluminum Threshold: Extruded aluminum threshold with integral neoprene seal provides unsurpassed moisture, dust and pest resistance.

Improved Radial Post-Tension Design: Provides superior weather-tight construction.



Quick installation of Navigational Aide Building at Dulles International Airport

It Works!

Thank you for your help in the purchase of two 12' x 16' precast concrete buildings. Due to network expansion, AT&T placed additional equipment at critical locations to satisfy customer requirements. My territory needed building expansion at two sites, and the due dates required quick delivery and short setup.

These buildings provide maximum security for our equipment and require minimum site preparation. They were delivered on time, set quickly and correctly. Within just a few hours the building was ready for HVAC and electrical installations.

All of our due dates were either met or bettered by using your buildings rather than conventional construction. We have used this technique also in West Virginia and western Pennsylvania with the same excellent results.

I plan to utilize EASI-SET® Buildings for our future network needs.

Sincerely,
Gregory A. Carter
Building Engineer, AT&T

EASI-SET® Additional Buildings

Spill Containment

HAZARDOUS MATERIAL STORAGE: Maximum Security and Protection

STANDARD FEATURES

- **Standard building sizes:** 10' x 12' x 8'-8" and 12' x 20' x 8'-8" with storage capacities for 20 and 45, 50-gallon drums, respectively.
- **Maximum protection:** high-strength, thick, steel-reinforced precast concrete.
- **Crack and water penetration resistance:** 4" thick post-tensioned roof and floor slabs.
- **Easy access:** double-steel entry doors.
- **Greater containment capabilities:** secondary spill containment sump holds more than 33% of drum storage capacity (exceeds the minimum EPA required sump capacity specified in 40 CFR Par. 264.175).
- **Safe:** galvanized steel or fiberglass grating elevates containers above floor surface (corrosion resistant fiberglass provides 250 psf loading, skid resistant and spark resistant).

AVAILABLE OPTIONS

- Larger containment capacities.
- Customized duct, pipe or wire openings.
- Special corrosion-resistant epoxy coatings.
- Static grounding systems to prevent sparks.
- Fire rated doors.
- Interior climate controls.
- Fire, security and spill alarm systems.
- Fire protection system with sprinkler and/or dry chemical fire suppression.
- Explosion-proof lighting and electrical systems.
- Custom explosion-relief panels.
- DOT and NFPA warning signs and placards.
- Ventilation systems to prevent hazardous vapor accumulation.
- Roll-up garage doors.
- Non-corrosive doors and hardware.



*Building provides
spill-containment
protection*



Ultra-Large Buildings

EASI-SET® provides the largest, pre



Combination concessions and restrooms



*Unobstructed space allows room for large equipment
Independent Hill, VA*



Electrical Substation, Board of Public Utilities

Buildings EASI-SPAN® EXPANDABLE BUILDINGS

—engineered, transportable precast concrete building in the industry.



- **Self-supporting clear-span roof:** available in widths of 20', 24', 30', and 40'.
- **Sizes:** combine roof sections (in 10' lengths) for overall building lengths up to 200'.
- **Easily transported and installed.**
- **No footing or foundation required.**
- **Expandable length:** the only precast building in the industry with the ability to be lengthened, as needs change, and still maintain the original monolithic structural roof.



Additional sections can be attached to existing structure.

The engineering capabilities of EASI-SET® and its manufacturing network allow the design and production of bigger, more specialized buildings to meet your specific needs.

EASI-SPAN® expandable precast building... assembled in days for a "lifetime of security"

The optional EXPANDABLE building maintains the original structural and water-tight integrity during future expansions.



equipment,



ies, Jamestown, NY



Unobstructed 30' W x 24' H x 60' L space allows room for large hydroturbine equipment, Mesa, AZ

EASI-SET® offers customers the largest selection of sizes, options and custom designs available in the industry.



Communications Equipment Housing, Chicago, IL



Restroom Building, Las Vegas, NV

Communications

- Fiber Optic Regenerator Huts
- Switching Stations
- Microwave Transmission Shelters
- Cellular Phone Sites
- Other Pre-finished Equipment Shelters

Government, School & Municipal

- Weather and Pollution Monitoring Stations
- Military Storage, Equipment Housing and Electronic Operations
- Hazardous and Flammable Materials Storage with Spill Containment
- Park Vending Enclosure, Restrooms and Ticket Kiosks
- Traffic Control Systems
- School Maintenance and Athletic Equipment Storage
- Airport Lighting Control and Transmitter Housing
- Law Enforcement Evidence and / or Ammunition Storage



Generator Building, Oliver City Sanitary Sewer System, Warrenton, VA



Pump Enclosure, Ontario, Canada

Utilities

- Electrical Switching Stations and Transformer Housing
- Gas Control Shelters and Valve Enclosures
- Water and Wastes Treatment Facilities
- Pumping Stations
- Reduced Pressure Zone and Water Meter Enclosures

Commercial & Industrial

- Electromechanical Housing
- Storage of Contaminated Substances
- Emergency Generator Shelters
- Maintenance Equipment Storage
- Irrigation System Housing
- Food or Bottle Storage
- Gate Houses
- Restrooms
- Electrical Controls
- Pump Enclosures

EASI-SET® Specifications

STANDARD EASI-SET® BUILDING

- Meets IBC 2003 requirements; Patented in USA and Canada.
- Standard Building Dimensions:
Exterior: 10' x 12', 12' x 16', 12' x 20'; custom sizes available.
Interior Heights: 8'; custom heights available.
- 5,000 psi steel-reinforced concrete.
- Standard double doors, 6' x 6'-8" x 1³/₄"; 18-gauge galvanized steel; insulated; tamper-proof hinges; deadbolt lock; adjustable mechanical door hold-open arm; door stop and holder; rain guard.
- Extruded aluminum threshold with integral neoprene seal.
- Two 12.5-gauge screened aluminum vents; minimum 7" x 18".
- Post-tensioned roof and floor, each by a single continuous tendon, creating radial compression in the roof and floor.
- Sloped roof panel with prefabricated, architectural ribbed edge*.
- Exclusive turn-down roof with built-in drip edge.
- Roof load capacity: 60 psf standard; higher loadings available.
- Wind load: 130 mph standard; higher loadings available.
- Rated Seismic Zone 4.
- Bullet tested to UL 752, Level 4 (30 caliber rifle fired at 15 feet).
- Floor load: 250 psf standard; additional capacities available.
- Various lifetime finishes available.

*Some standard features are not available on custom-sized buildings.

ADDITIONAL SPECIFICATIONS EASI-SPAN® BUILDING

- Standard Dimensions:
Clear-span widths: 20', 24', 30' and 40'.
Lengths: up to 200' in multiples of 10'.
Interior Heights: 9'; custom heights available.
- Horizontal precast roof and floor joints sealed watertight with polymer concrete grouted keyways and longitudinal post-tensioning. (Post-tensioning creates the equivalence of a monolithic two-way slab design.)
- Field erected on EASI-SPAN® precast concrete floor slab or customer's slab-on-grade, or can be delivered pre-assembled in sections.
- Optional expandable feature: structural integrity and watertightness maintained when expanded.

ADDITIONAL SPECIFICATIONS EASI-SET® HAZARDOUS MATERIAL STORAGE BUILDING

- Meets requirements for: EPA Spill Containment requirements 40 CFR Par.264.175; ACI 318-97 "Building Code Requirements for Reinforced Concrete"; Concrete Reinforcing Institute "Manual of Standard Practice"; and ANSO "Building Code Requirements for Minimum Design Loads in Buildings and Other Structures."
- Larger secondary spill containment sump available.
- Non-corrosive, skid-resistant, clean-out floor grating (may be omitted).
- Extruded aluminum threshold with neoprene seal.
- 6' x 6'-8" x 1³/₄" double-steel doors with standard 1.0 hour fire rating (higher ratings available).

HAZARDOUS MATERIAL STORAGE BUILDING: Since we cannot anticipate all conditions under which this information and our product, or the products of other manufacturers in combination with our products, may be used, we accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product for their own purposes. Unless otherwise agreed in writing, we sell the products without warranty and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of our products, whether used alone or in combination with other products.

Contact your EASI-SET® Manufacturer for detailed specifications.
Autocad specifications available on disk or via e-mail.



Transformer Substation (Pre-assembled building delivered with hole in floor to fit over transformer)



Outback Restroom Building, Midland, VA



Federal Detention Facility Guardhouse, Batavia, NY



Simple site preparation, no footings required

Site Preparation and Installation

EASI-SET® Precast Buildings are easily transported and installed. No foundations or footings are required, only a level six-inch layer of sand or crushed stone on an approved sub-base. Your installation can be completed within a few hours.



Installed in a matter of hours

**The EASI-SET® / EASI-SPAN® Precast Building...
Installed in hours for a "lifetime of protection"**

Finishes

Colors and textures of natural materials may vary by region. Additional colors and finishes available.



Skip Trowel



Broom



Exposed Stone



Split Block



Barnboard



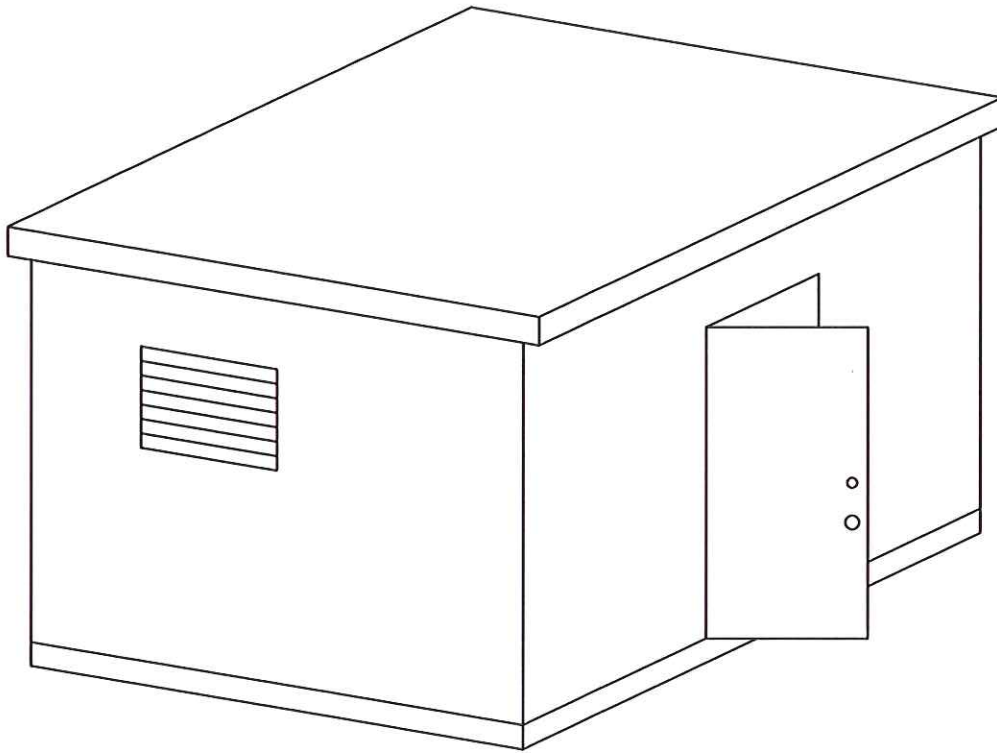
Easi-Brick® Precast Concrete Brick Finish

Manufactured Locally By:



5119 Catlett Road, Midland, VA 22728 • (800) 547-4045 • (540) 439-8911 • fax: (540) 439-1232
www.easiset.com • www.precastbuildings.com • info@easiset.com


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BUILDINGS USED FOR:
 RESTROOMS
 STORAGE
 HAZMAT
 PUMP SYSTEMS
 COMMUNICATIONS
 DUGOUTS
 CONCESSIONS
 ETC...

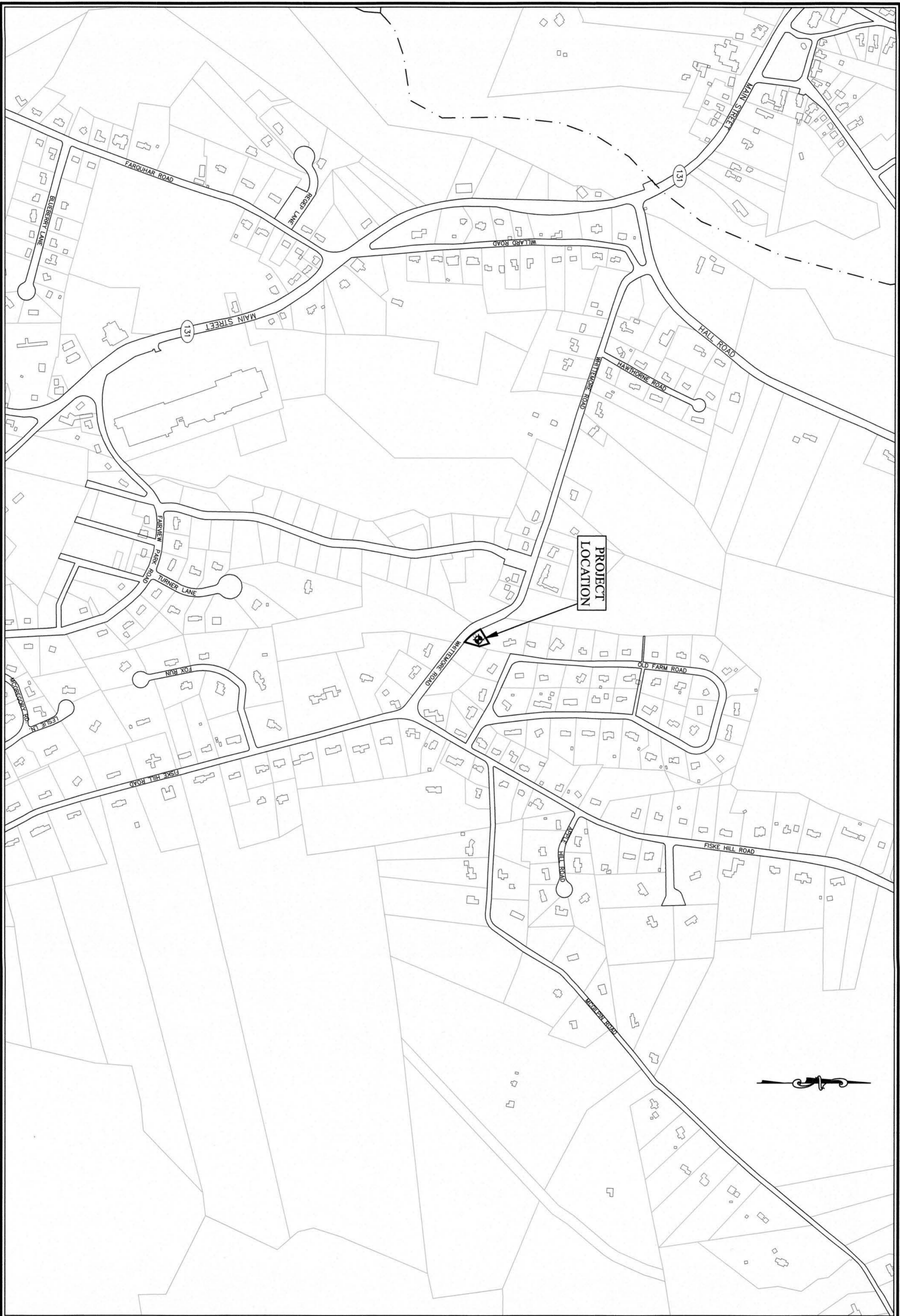
Notes:

1. Concrete strength $f'c=5,000$ psi min.
2. Steel reinforcement yield strength $F_y=60,000$ psi min.
3. All openings for electric, mechanical, louvers, etc. sized as required.
4. Standard Finishes (custom finishes available):
 Exterior: Broom, Brick, Exposed Aggregate, Split Block, Barnboard.
 Interior: Concrete, FRP
5. Standard Dimensions:
 Exterior: 10' x 12', 12' x 16' 12' x 20'; custom sizes available.
 Interior Heights: 8'; custom heights available.
6. Standard double doors, 6' x 6'-8" x 13/4"; 18-gauge galvanized steel;
7. Two 12.5-gauge screened aluminum vents; minimum 7" x 18".
8. Post-tensioned roof and floor.
9. Exclusive turn-down roof with built-in drip edge.
10. Roof load capacity: 60 psf standard; higher loadings available.
11. Wind load: 130 mph standard; higher loadings available.
12. Rated Seismic Zone 4.
13. Bullet tested to UL 752, Level 4 (30 caliber rifle fired at 15 feet).
14. Floor load: 250 psf standard; additional capacities available.
15. For larger sizes Easi-Span Building Standard Dimensions:
 Clear-span widths: 20', 24', 30' and 40'.
 Lengths: up to 200' in multiples of 10'.
 Interior Heights: 9'; custom heights available

SHEA PRODUCT ID:		PREPARED FOR:		FILE NAME: Easi-Set Building.dwg		
WEIGHT (LBS):		DRAWN BY: ARO		DATE: 03/01/2018		
773 Salem Street-Wilmington, MA 153 Cranberry Hwy-Rochester, MA 87 Haverhill Road-Amesbury, MA 160 Old Turnpike Rd-Nottingham, NH						



TOWN OF STURBRIDGE, MASSACHUSETTS
FISKE HILL WATER PUMP STATION REPLACEMENT PROJECT
65 WHITTEMORE ROAD, STURBRIDGE, MA 01566
SDPW 2020-01



SITE LOCUS
 1" = 400'

DRAWING INDEX

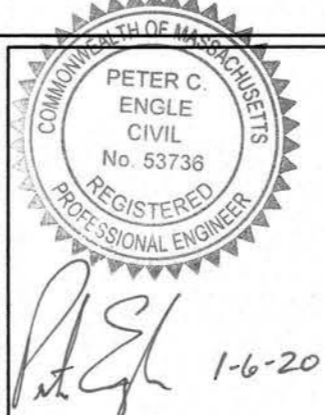
T-1	TITLE SHEET
EX-1	EXISTING CONDITIONS PLAN
C-1	PROPOSED SITE PLAN
D-1	CONSTRUCTION DETAILS
D-2	CONSTRUCTION DETAILS
D-3	FLOOR PLAN & ELEVATIONS

PERMIT SET ONLY - NOT FOR CONSTRUCTION

HOR. SCALE IN FEET: 1"=400'

REVISIONS					
REV	DATE	DESCRIPTION	MADE	APV'D	
1	12.18.19	ADDED WETLAND BUFFERS	AB	PE	
2	1.6.20	REVISED BUILDING SIZE	AB	PE	

PETER C. ENGLE, P.E.
 PROFESSIONAL ENGINEER
 MA LIC. NO. 53736



McCLURE
 ENGINEERING, INC

119 Worcester Road Tel: (508) 248-2005
 Charlton, MA 01507 Fax: (508) 248-4887

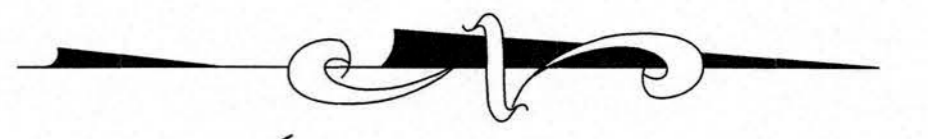
Email: pengle@mcclureengineers.com

FISKE HILL WATER PUMP STATION
REPLACEMENT PROJECT
SDPW 2020-01
65 WHITTEMORE ROAD
STURBRIDGE, MASSACHUSETTS 01566
 PREPARED FOR
STURBRIDGE DEPARTMENT OF PUBLIC WORKS

DRAWN BY: AB
 DATE: 12/11/19
 CHK BY: PE
 SCALE: 1" = 400'
 PROJ. NO.: 28719202K

T-1

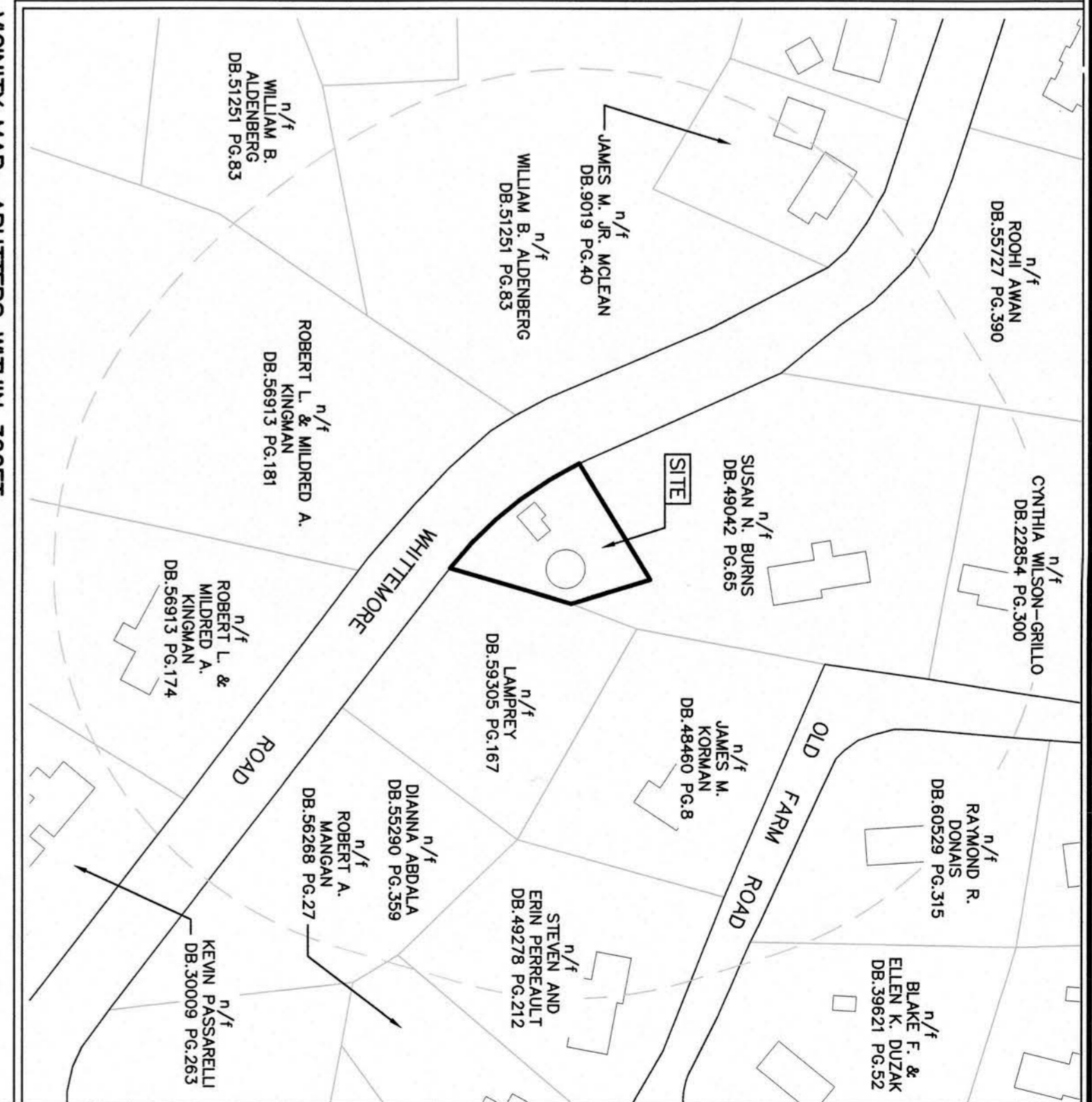
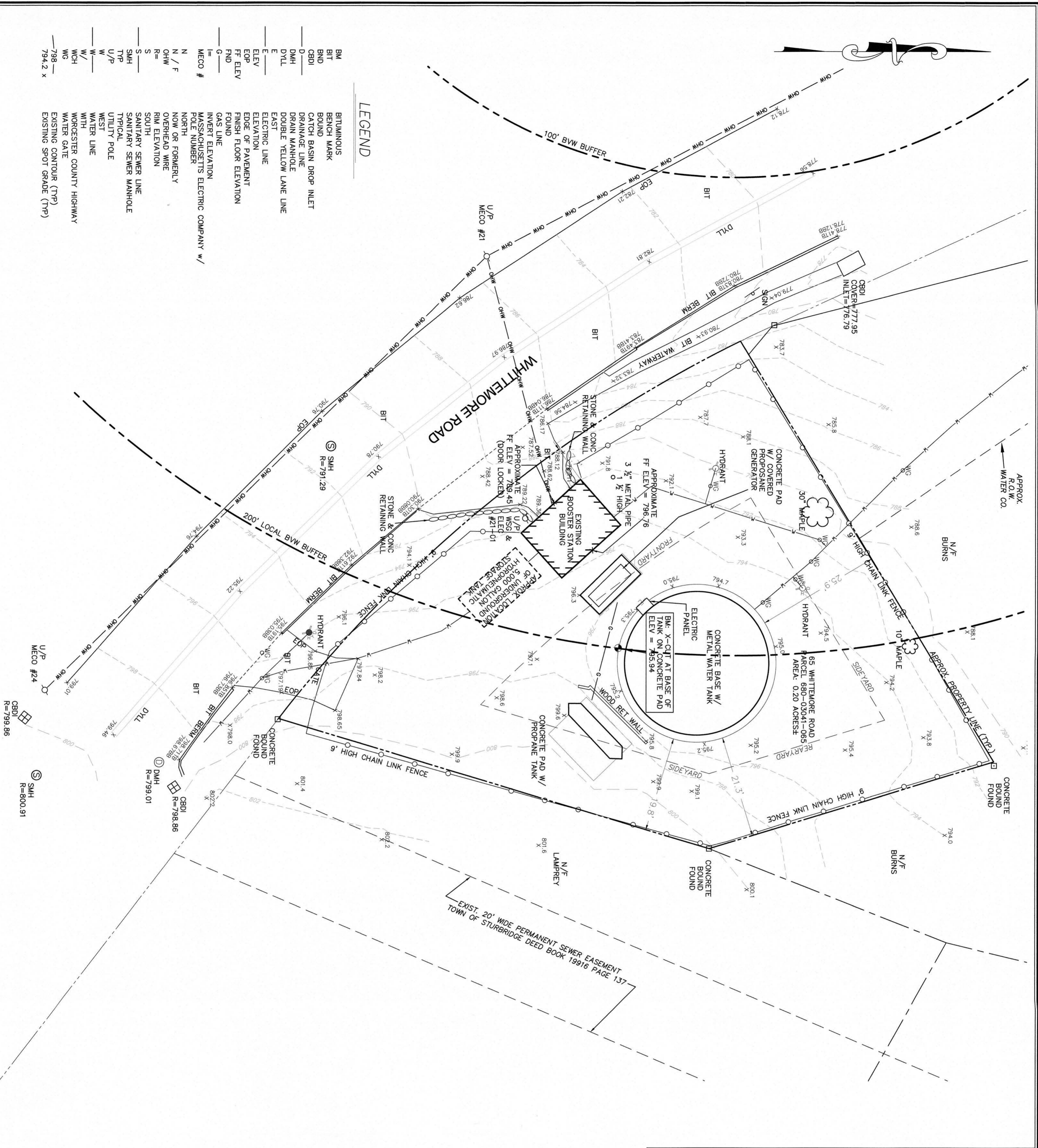
TITLE SHEET



LEGEND

BM	BITUMINOUS
BIT	BENCH MARK
BRD	BOUND
CBDI	CATCH BASIN DROP INLET
D	DRAINAGE LINE
DMH	DRAIN MANHOLE
DYLL	DOUBLE YELLOW LANE LINE
E	EAST
E	ELECTRIC LINE
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
FF ELEV	FINISH FLOOR ELEVATION
FND	FOUND
G	GAS LINE
I	INVERT ELEVATION
MECO #	MASSACHUSETTS ELECTRIC COMPANY W/ POLE NUMBER
N	NORTH
N / F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
R=	RIM ELEVATION
S	SOUTH
SMH	SANITARY SEWER MANHOLE
TYP	TYPICAL
U/P	UTILITY POLE
W	WEST
W	WATER LINE
W/	WITH
WCH	WORCESTER COUNTY HIGHWAY
WG	WATER GATE
798	EXISTING CONTOUR (TYP)
794.2 x	EXISTING SPOT GRADE (TYP)

DIG-SAFE (1-888-344-7233) NOTE:
 CONTRACTOR REQUIRED TO NOTIFY "DIG-SAFE" 72 HOURS PRIOR TO ANY ON-SITE EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.



RECORD OWNER:
 TOWN OF STURBRIDGE
 WATER DEPARTMENT
 WHITTEMORE ROAD
 STURBRIDGE, MA 01566

TAX MAP REFERENCES:
 PARCEL ID: 680-03041-065

- SURVEY NOTES:**
1. SITE EXISTING CONDITIONS AND TOPOGRAPHY ARE BASED UPON A GROUND SURVEY PERFORMED BY LARAD AND SURVING, EAST BROOKFIELD, MA, THE GROUND SURVEY WAS CONDUCTED BETWEEN JUNE 17, 2016 AND JULY 14, 2016.
 2. ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). HORIZONTAL COORDINATES, IN FEET, ARE BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD83).
 3. THE PROJECT SITE IS LOCATED OUTSIDE OF THE FEMA 100-YEAR FLOOD ZONE AS ESTABLISHED FROM FIRM FLOOD INSURANCE RATE MAP, WORCESTER COUNTY MASSACHUSETTS (ALL JURISDICTIONS) PANEL 927 OF 1075 MAP NUMBER 250270927E, EFFECTIVE DATE JULY 4, 2001.
 4. CURRENT PROPERTY OWNER OF PROJECT SITE IS TOWN OF STURBRIDGE, MASSACHUSETTS. SEE TOWN OF STURBRIDGE ASSESSORS PARCEL ID: 680-0 3041-065.
 5. NO PROPERTY LINE SURVEY PERFORMED AT THIS TIME. PROPERTY LINES AS SHOWN LOCATED IN THE FIELD AND PLANS OF RECORD.
 6. EXISTING UTILITY LINES SHOWN ON THE DRAWING ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. MCCLOURE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN, BEFORE PLANNING FUTURE CONNECTIONS. THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.

FROM TOWN OF STURBRIDGE ZONING BYLAWS:
DISTRICT DIMENSIONAL REGULATIONS

DISTRICT	SUBURBAN RESIDENTIAL
USE	MUNICIPAL PUMP STATION
MIN. LOT SIZE	1/2 ACRE* OF 3/4 ACRE
MIN. FRONTAGE	125'
MIN. FRONT YARD DEPTH	30'
MIN. SIDE YARD DEPTH	15'
MIN. REAR YARD DEPTH	15'
MAX. BUILDING HEIGHT	35'
MAX. LOT COVERAGE	15%
MAX. IMPERVIOUS SURF.	N/A
MIN. HABITABLE AREA	750 SF

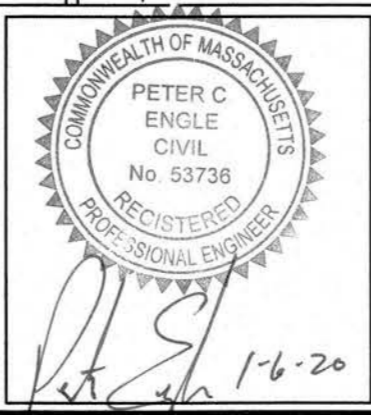
*IF SERVED BY TOWN WATER & SEWER

PERMIT SET ONLY - NOT FOR CONSTRUCTION

HOR. SCALE IN FEET: 1"=10'

REVISIONS				
REV	DATE	DESCRIPTION	MADE BY	APVD
1	12.18.19	ADDED WETLAND BUFFERS	AB	PE
2	1.6.20	REVISED BUILDING SIZE	AB	PE

PETER C. ENGLE, P.E.
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 MA LIC. NO. 53736



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 Chariton, MA 01507
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 Fax: (508) 248-4887

FISKE HILL WATER PUMP STATION REPLACEMENT PROJECT
 SDPW 2020-01
 65 WHITTEMORE ROAD
 STURBRIDGE, MASSACHUSETTS 01566

PREPARED FOR
STURBRIDGE DEPARTMENT OF PUBLIC WORKS

DRAWN BY: MM
 DATE: 12/11/2019
 CHK BY: PE
 SCALE: 1" = 10'
 PROJ. NO.: 287-1920X

EXISTING CONDITIONS PLAN

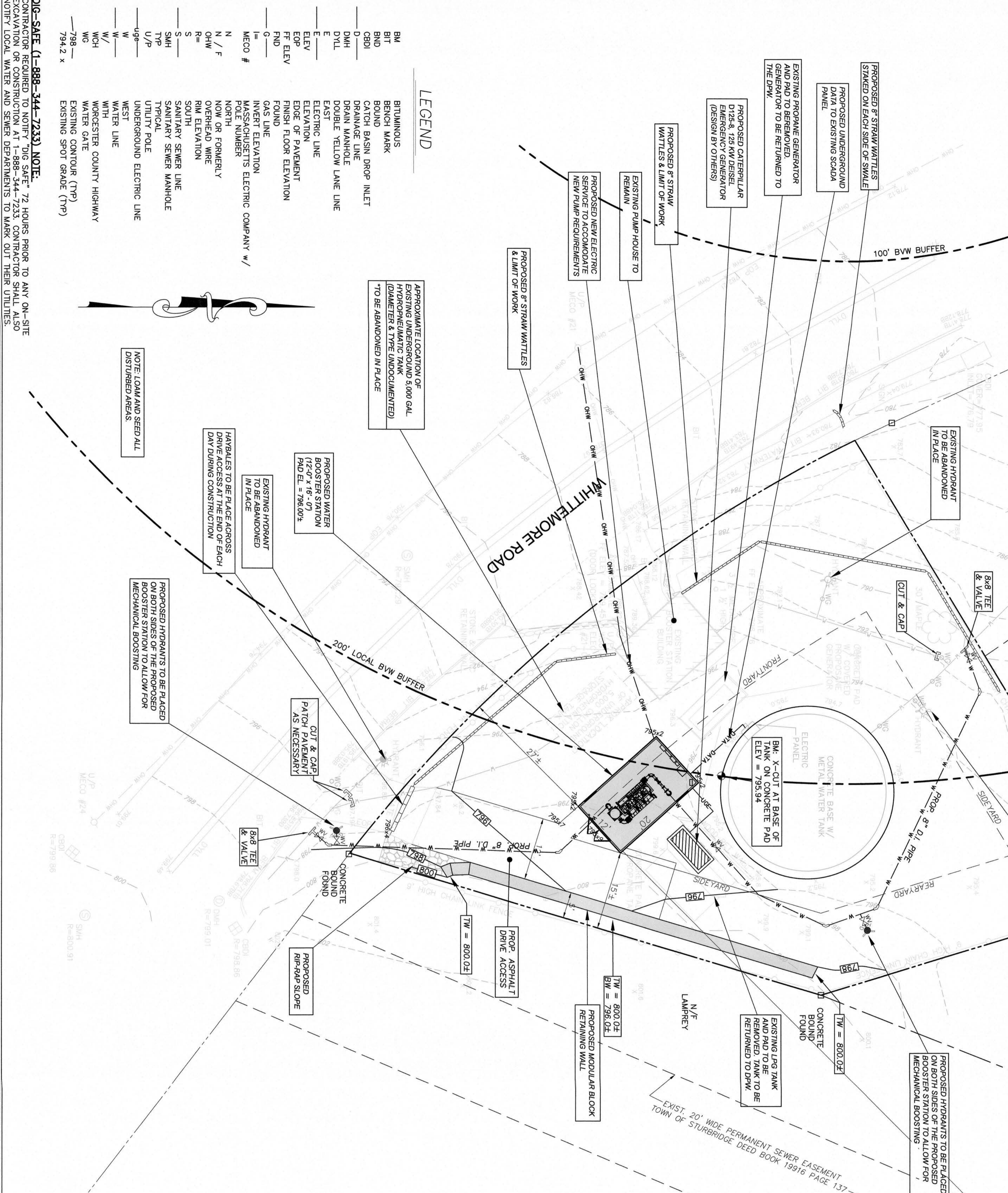
EX-1

FROM TOWN OF STURBRIDGE ZONING BYLAWS:

DISTRICT DIMENSIONAL REGULATIONS			
DISTRICT USE	REQUIRED	EXISTING	PROPOSED
SUBURBAN RESIDENTIAL MUNICIPAL PUMP STATION			
MIN. LOT SIZE	1.2 ACRE	0.20 ACRE	0.20 ACRE
MIN. FRONTAGE	125'	125.56'	125.56'
MIN. FRONT YARD DEPTH	30'	7.8'	7.8'
MIN. SIDE YARD DEPTH	15'	19.8'	16'
MIN. REAR YARD DEPTH	35'	21.3'	21.3'
MAX. BUILDING HEIGHT	15'	76.5' (WATER TOWER)	76.5' (WATER TOWER)
MAX. LOT COVERAGE	15%	15.12%	15.19%
MAX. IMPERVIOUS SURF.	N/A	N/A	N/A
MIN. HABITABLE AREA	750 SF	N/A	N/A

LEGEND

BM	BRITANNIUMS
BIT	BENCH MARK
CB1	BOUND BENCH MARK
D	CATCH BASIN DROP INLET
DMH	DRAINAGE LINE
DTL	DRAIN MANHOLE
E	DOUBLE YELLOW LANE LINE EAST
E	ELECTRIC LINE
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
FF ELEV	FINISH FLOOR ELEVATION
FND	FOUND
G	GAS LINE
I	INVERT ELEVATION
MECO #	MASSACHUSETTS ELECTRIC COMPANY #
N	NORTH
N / F	NORTH OR FORMERLY
OHW	OVERHEAD WIRE
R	RIM ELEVATION
S	SOUTH
S	SANITARY SEWER LINE
SMH	SANITARY SEWER MANHOLE
THP	TYPICAL
U/P	UTILITY POLE
U/P	UNDERGROUND ELECTRIC LINE
W	WEST
W	WATER LINE
W	WITH
W/	WORCESTER COUNTY HIGHWAY
WG	WATER GATE
W	WATER GATE
-798-	EXISTING CONTOUR (TYP)
-794.2 x	EXISTING SPOT GRADE (TYP)



- GENERAL NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PROPOSED ABOVEGROUND WATER BOOSTER PUMP STATION WHICH WILL REPLACE THE EXISTING WATER BOOSTER STATION AND UNDERGROUND HYDRO-PNEUMATIC STORAGE TANK.
 2. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS.
 3. THE BASE MAPPING OF EXISTING CONDITIONS DEPICTED IN THESE DRAWINGS IS BASED UPON A GROUND SURVEY PERFORMED BY LARAD LAND SURVEYING, EAST BROOKFIELD, MA. THE GROUND SURVEY WAS CONDUCTED BETWEEN JUNE 17, 2016 AND JULY 14, 2016.
 4. ELEVATIONS SHOWN REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), HORIZONTAL COORDINATES IN FEET, ARE BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD83).
 5. CURRENT PROPERTY OWNER OF PROJECT SITE IS TOWN OF STURBRIDGE, MASSACHUSETTS. SEE TOWN OF STURBRIDGE ASSESSOR'S PARCEL I.D. 880-0-3041-065.
 6. THE PROJECT SITE IS LOCATED OUTSIDE OF THE FEMA 100-YEAR FLOOD ZONE AS ESTABLISHED FROM FIRM FLOOD INSURANCE RATE MAP, WORCESTER COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 927 OF 1075 MAP NUMBER 25027C0927E, EFFECTIVE DATE JULY 4, 2001.
 7. NO PROPERTY LINE SURVEY PERFORMED AT THIS TIME. PROPERTY LINES AS SHOWN ARE APPROXIMATE ONLY AND ARE BASED UPON MONUMENTS RECOVERED AND LOCATED IN THE FIELD AND PLANS OF RECORD.
 8. LIMITS OF DISTURBANCE LINE, AS INDICATED ON THE PLANS, SHALL BE SURVEYED AND MARKED OUT BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL UTILIZE ONLY THIS AREA DURING CONSTRUCTION UNLESS APPROVED BY THE ENGINEER.
 9. EXISTING UTILITY LINES SHOWN ON THE DRAWING ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. ACQUIRE ENGINEERING ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.
- RESPONSIBILITIES OF CONTRACTOR:**
 THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING EROSION OF THE SITE AND FOR PROTECTING ADJACENT STORM SEWERS AND WATERWAYS FROM SEDIMENTATION. THE CONTRACTOR SHALL: A. INSTALL EROSION CONTROL MEASURES TO PREVENT SOIL EROSION AND SEDIMENT CONTROL. B. COMPLY WITH ALL PERMIT REQUIREMENTS.
- PRE-CONSTRUCTION CONFERENCE:**
 THE PERMITS, OWNER-OF-RECORD, CONTRACTOR, ENGINEER, AND THE TOWN SHALL HOLD A MEETING PRIOR TO CONSTRUCTION TO REVIEW THE PROPOSED SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- GENERAL CONTROLS:**
 1. CLEANING OF STORMWATER STRUCTURES, BUT NOT LIMITED TO, PIPES, SWALES, DETENTION BASINS, SEDIMENT TRAPS, AND RIPRAP APRONS OF SEDIMENT UPON COMPLETION OF THE PROJECT.
 2. WASTE DISPOSAL: THE CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF COVERED WASTE CONTAINERS TO ENSURE THAT NO LITTER, DEBRIS, BUILDING MATERIALS, OR SIMILAR MATERIALS ARE DISCHARGED TO WETLANDS OR WATERCOURSES. THE CONTRACTOR SHALL INSTRUCT SUBCONTRACTORS TO USE THE CONTAINERS FOR WASTE MATERIAL. THE CONTAINERS SHALL BE PROMPTLY EMPTIED WHEN FULL.
- DESCRIPTION AND MAINTENANCE OF EROSION CONTROL MEASURES:**
 TEMPORARY STABILIZATION MEASURES:
 HAYBALES, SILT FENCE, STRAW WATTLE TUBES:
 INSTALL HAYBALES, SILT FENCE, STRAW WATTLE TUBES AT VARIOUS LOCATIONS AS SHOWN ON THE PLANS AND DETAILS. REMOVE SEDIMENT ONCE LEVELS HAVE REACHED 1/4 OF THE EFFECTIVE HEIGHT. REPAIR AND/OR REPLACE HAYBALES, SILT FENCE, STRAW WATTLE TUBES IMMEDIATELY IF DAMAGED OR DETEIORATED.
- PERMANENT STABILIZATION MEASURES:**
 DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LANDSCAPED AREAS, IF TOPSOIL, SEED, AND/OR MULCH IS WASHED AWAY BY RAINFALL. THE CONTRACTOR SHALL RESTORE THE AREA.
- DEWATERING:**
 1. AT NO TIME SHALL EXCAVATION DEWATERING BE DIRECTLY DISCHARGED TO: DRAIN PIPE, WETLAND, STREAM, OR FLOOD PLAIN AREA.
 2. TRENCH & EXCAVATION DE-WATERING WASTE-WATER SHALL BE DISCHARGED THROUGH AN "ULTRA PIPESOCK" OR EQUIVALENT SEDIMENT/OIL FILTER TRAP WITH 12" DEPTH GRAVEL FILTER BERM.
 3. DE-WATERING DISCHARGES SHALL BE DIRECTED TO ON-SITE SEDIMENT CONTROL SYSTEMS AND/OR DRAINAGE SWALES.
- GENERAL CONDITIONS:**
 1. IF EROSION CONTROL MEASURES ARE DAMAGED BY CONSTRUCTION VEHICLES, ACTS OF VANDALISM, OR SEVERE WEATHER CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY REMOVE SEDIMENT IN THE VICINITY OF THE EROSION CONTROL MEASURES AND REPAIR THESE MEASURES TO A FUNCTIONAL CONDITION.
 2. IF DURING OR AFTER CONSTRUCTION, IT BECOMES APPARENT THAT EXISTING EROSION CONTROL MEASURES ARE INADEQUATE OR CONTROLING EROSION BUT NOT LIMITED TO: ADDITIONAL STRAW WATTLES, HAYBALES, SILT FENCE, SEDIMENT BASINS, MECHANICALLY ANCHORED MULCH, OR ENHANCED DEWATERING FILTRATION.
 3. NO CONSTRUCTION SHALL PROCEED UNTIL A WRITTEN PROPOSAL OF METHODS TO PREVENT CONSTRUCTION DEBRIS, PAINT, OR OTHER SUCH CONTAMINATED MATERIALS FROM ENTERING A STORM SEWER, THE WETLAND, OR WATERCOURSE HAS BEEN SUBMITTED BY THE CONTRACTOR TO THE OWNER, APPROVED BY THE OWNER AND SUCH METHODS HAVE BEEN IMPLEMENTED AS THE OWNER DIRECTS. THESE MATERIALS SHALL BE COLLECTED AND DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER IN ACCORDANCE WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF SUCH MATERIALS AND SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF SUCH MATERIALS IN A WATERWAY.
 4. DUMPING OF OIL, CHEMICALS OR OTHER DELETERIOUS MATERIALS ON THE GROUND IS FORBIDDEN. THE CONTRACTOR SHALL PROVIDE A MEANS OF CATCHING, RETAINING, AND PROPERLY DISPOSING OF DRAINED OIL, REMOVED OIL FILTERS, OR OTHER DELETERIOUS MATERIAL. ALL SPILLS OF SUCH MATERIALS SHALL BE REPORTED IMMEDIATELY BY THE CONTRACTOR TO APPROPRIATE TOWN AND STATE AGENCIES.

PERMIT SET ONLY - NOT FOR CONSTRUCTION

C-1

FISKE HILL WATER PUMP STATION REPLACEMENT PROJECT
 SDPW 2020-01
65 WHITTEMORE ROAD
 STURBRIDGE, MASSACHUSETTS 01566
 PREPARED FOR
STURBRIDGE DEPARTMENT OF PUBLIC WORKS

McCLURE
 ENGINEERING, INC

119 Worcester Road
 Chariton, MA 01507
 Email: chris@mcclureengineers.com

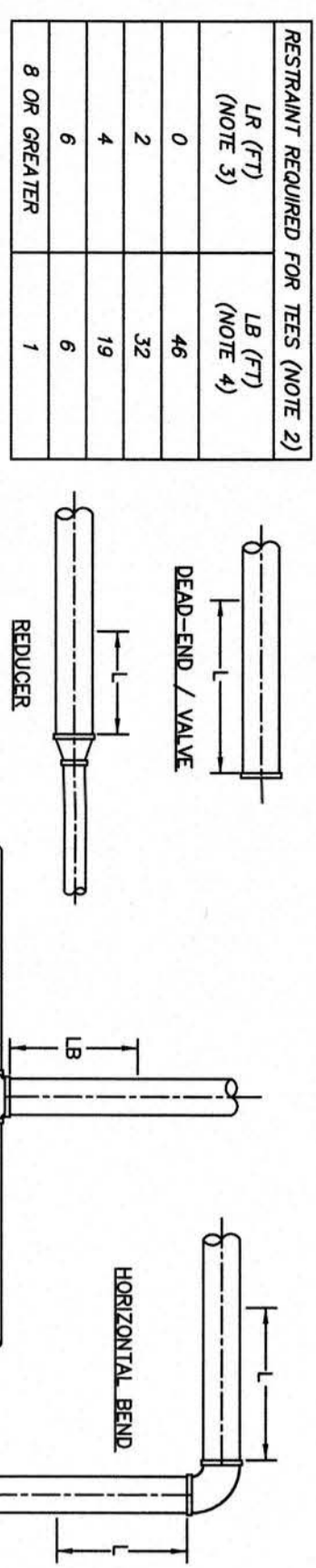
Tel: (508) 248-2005
 Fax (508) 248-4887

PETER C. ENGLE, P.E.
 PROFESSIONAL ENGINEER
 MA LIC. NO. 53736

HOR. SCALE IN FEET: 1" = 10'

REVISIONS				
REV	DATE	DESCRIPTION	MADE	AP'D
1	12.18.19	ADDED WETLAND BUFFERS	AB	PE
2	1.6.20	REVISED BUILDING SIZE	AB	PE

PIPE DIA	LENGTH OF PIPE (L) REQUIRED FOR RESTRAINT OF DUCTILE IRON PIPE (FIT)			
	HORIZONTAL BEND	VERTICAL BEND	DEAD-END / VALVE	REDUCER (RESTRAINED LENGTH FOR LARGER DIA. SIZE)
90 DEG	48 DEG	24-1/2 DEG	UPPER 45 DEG BEND	6"
15	7	3	LOWER 45 DEG BEND	8"
20	9	4	2	19
24	10	5	3	23
10"	24	10	5	10
12"	28	12	6	27
				65



- GENERAL NOTES:**
- 1) LENGTHS SHOWN ARE BASED ON 150 PSI TEST PRESSURE, 4 FOOT BURY, SOIL TYPE SP, TRENCH TYPE 5, RESTRAINT OF BRANCH OF DUCTILE IRON TEES ASSUME A NOMINAL DIAMETER OF 10" AND A BRANCH DIAMETER OF 8"
 - 2) RESTRAINT OF BRANCH OF DUCTILE IRON TEES ASSUME A NOMINAL DIAMETER OF 10" AND A BRANCH DIAMETER OF 8"
 - 3) LENGTH "L" IS THE MINIMUM ATTACHED LENGTH OF PIPE TO EXTEND IN EACH DIRECTION ALONG THE RUN OF THE TEE, AND MUST BE OF SOLID PIPE WITHOUT JOINTS, FITTINGS, ETC.
 - 4) LENGTH "L" IS THE RESTRAINED LENGTH ALONG THE BRANCH.

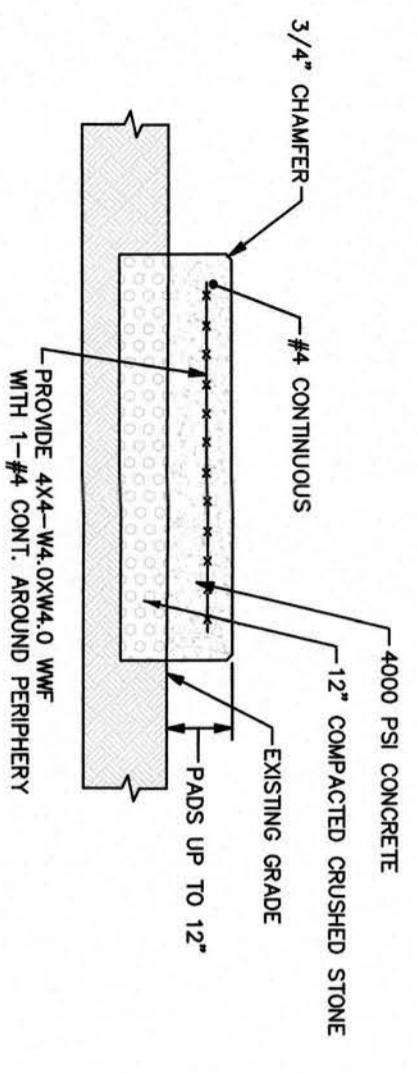
MINIMUM RESTRAINED LENGTHS FOR DUCTILE IRON PIPE JOINTS

PIPE DEFLECTION ALLOWANCES	
PIPE DIA (INCHES)	MAXIMUM PERMISSIBLE DEFLECTION, INCHES
6	27
8	20
10	20
12	20

- GENERAL NOTES:**
- 1) VALUES TAKEN FROM ANSI/AWWA C900-05, DUCTILE-IRON MAINS AND THEIR APPURTENANCES.
 - 2) VALUES IN TABLE APPROPRIATE FOR A PIPE LAYING LENGTH OF 18 FEET.

PIPE DEFLECTION ALLOWANCES

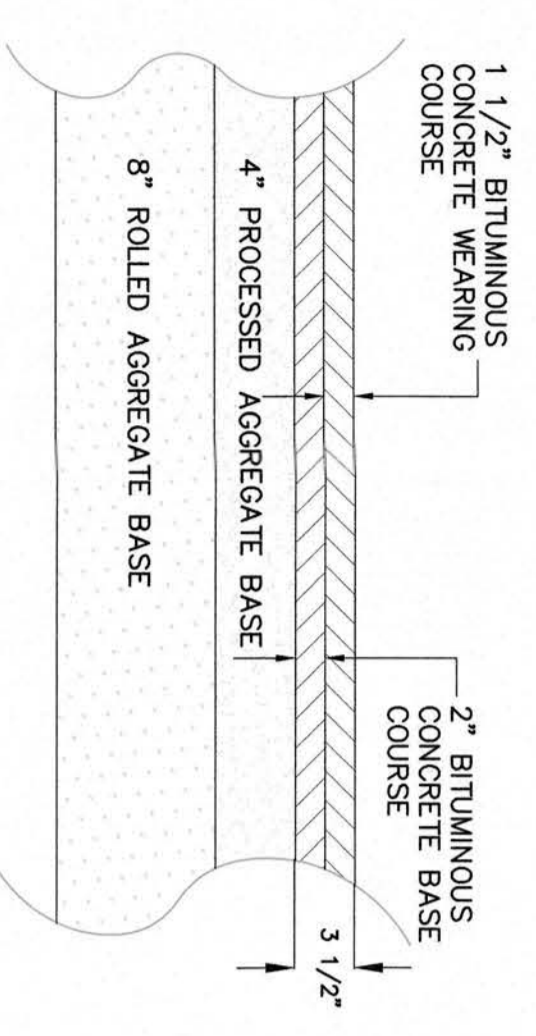
NOT TO SCALE



- NOTES:**
1. THE SIZE OF THE EQUIPMENT PAD SHALL BE PER MANUFACTURER SPECIFICATIONS.
 2. EQUIPMENT PAD SHALL EXTEND 4" BEYOND FOOTPRINT OF THE EQUIPMENT ON ALL SIDES.

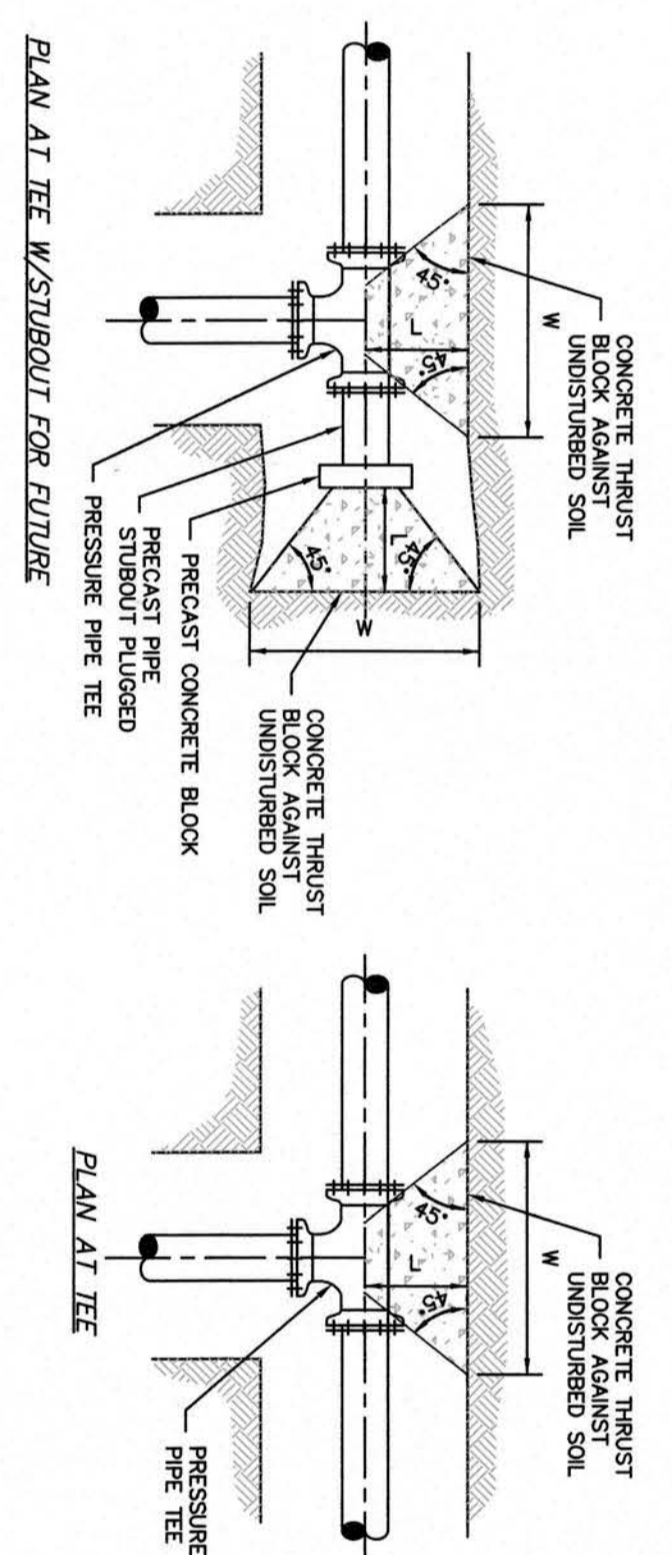
CONCRETE EQUIPMENT PAD DETAIL

NOT TO SCALE

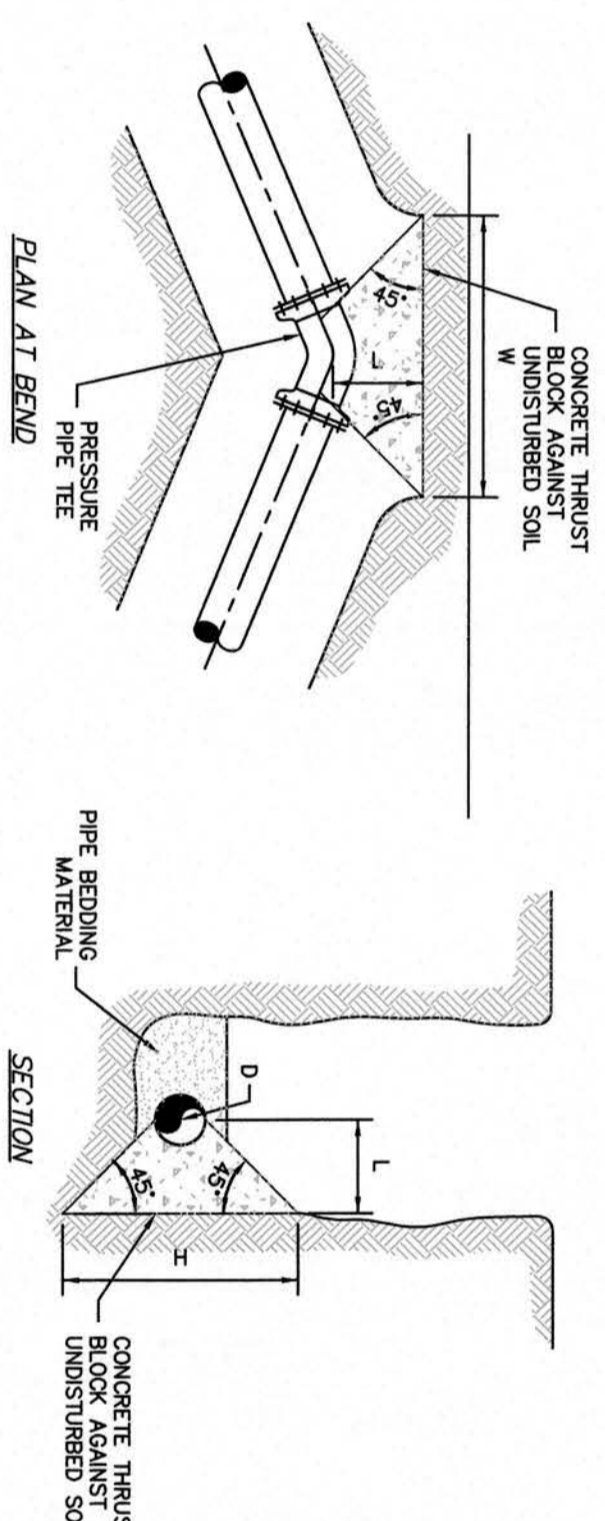


ON-SITE PAVEMENT SECTION

NOT TO SCALE



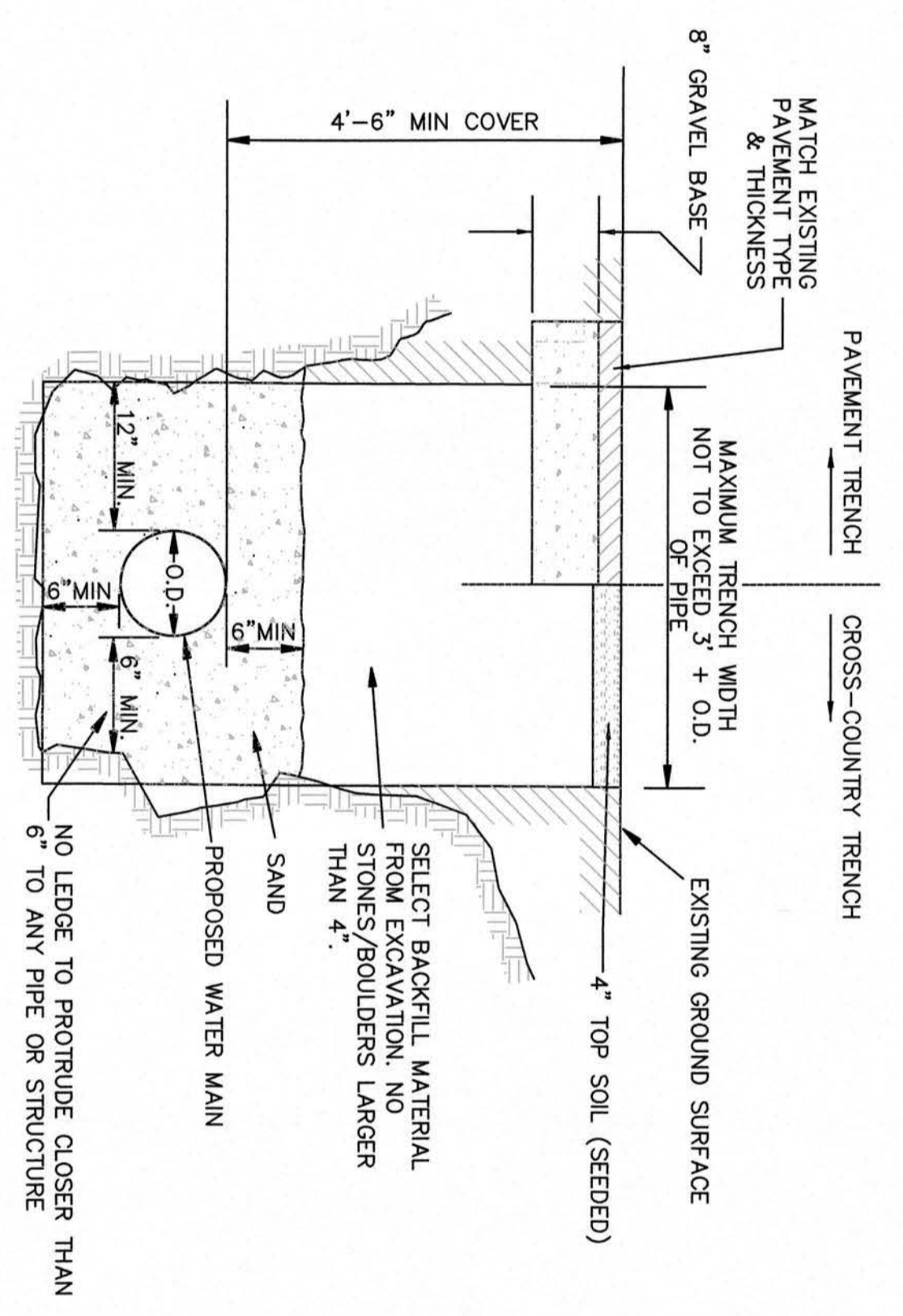
D	22 1/2\"/>	
	W	H
6"	1.5	0.5
8"	2.0	0.75
10"	2.5	1.0
12"	3.0	1.25
15"	4.0	1.75
18"	5.0	2.25
20"	6.0	2.75
24"	7.5	3.5
30"	10.0	4.5
36"	12.0	5.25
42"	14.5	6.25
48"	17.0	7.25
54"	19.5	8.25
60"	22.0	9.25



- GENERAL NOTES:**
- 1) DIMENSIONS SHOWN CALCULATED PER 120 PSI INTERNAL PIPE PRESSURE FOR SOIL BEARING LOADS OF 3,000 PSF.
 - 2) CONCRETE THRUST BLOCKS OF CONCRETE POURED AGAINST UNDISTURBED SOIL.
 - 3) CONCRETE THRUST BLOCKS MAY BE ADJUSTED TO MEET FIELD CONDITIONS PROVIDED THE BEARING AREA REMAINS UNCHANGED.
 - 4) THE HEIGHT OF THE BLOCK (H) SHALL BE LESS THAN OR EQUAL TO HALF THE TRENCH DEPTH.
 - 5) PLACE POLYETHYLENE SHEETING OVER MJ FITTINGS TO PREVENT DIRECT CONTACT BETWEEN CONCRETE AND THE FITTING.
 - 6) THE FITTING AND SENDER COMMISSION RESERVES THE RIGHT TO MODIFY STANDARDS AT THEIR DISCRETION.

CONCRETE THRUST BLOCK FOR HORIZONTAL BENDS AND TEES

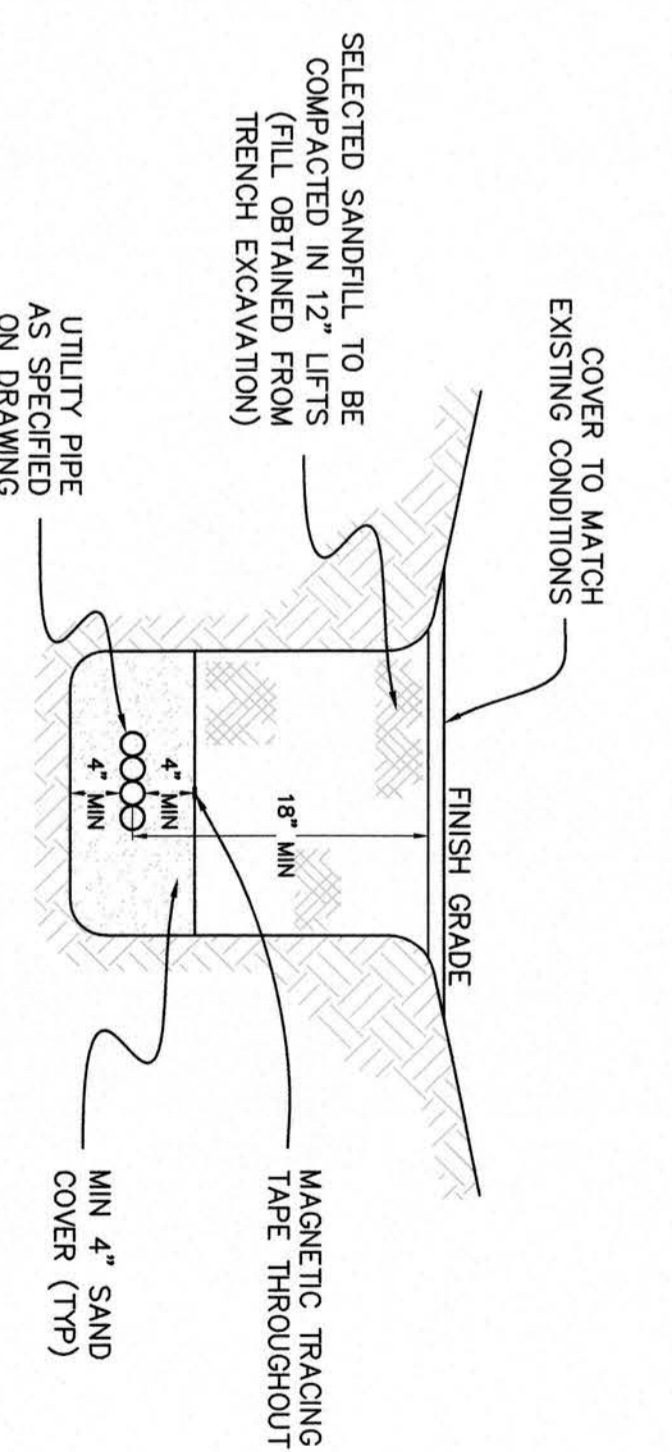
NOT TO SCALE



- NOTE:**
- IF SIGNIFICANT LEDGE IS ENCOUNTERED IN THE COURSE OF ROADWAY OR UTILITY CONSTRUCTION, THE TOWN WILL BE INFORMED AND A PLAN FOR SOIL TEST OR BORINGS AS WELL AS EXPECTED METHODS AND SCHEDULE OF REMOVAL SHALL BE SUBMITTED TO THE TOWN.

TYPICAL WATER MAIN TRENCH SECTION

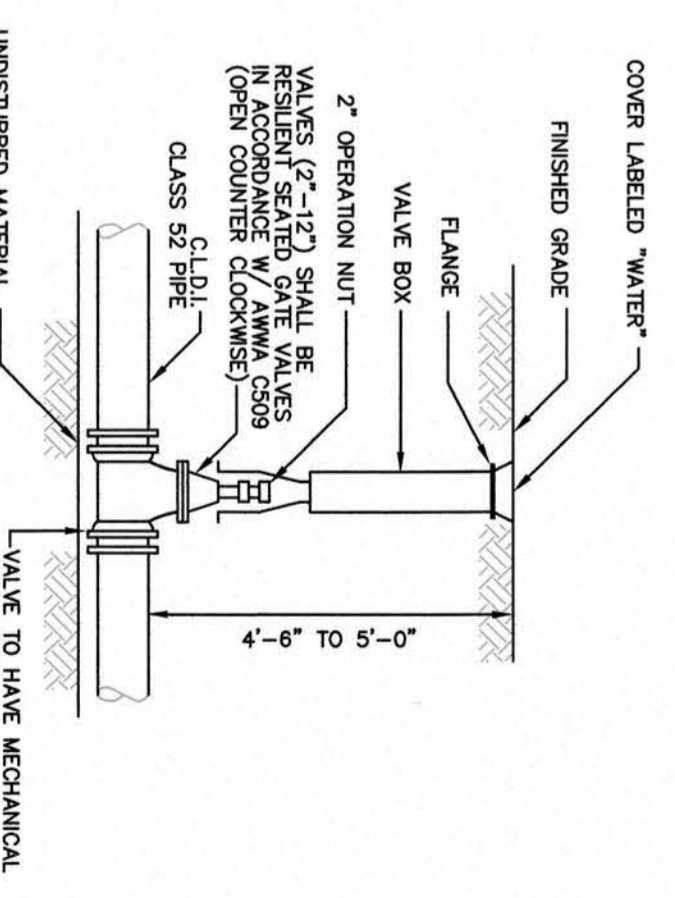
NOT TO SCALE



- NOTES:**
- 1) TRENCH DEWATERING SHALL NOT BE DISCHARGED INTO RESORUCE AREAS.
 - 2) ALL DEWATERING DISCHARGE SHALL BE THROUGH AN "ULTRA PIPESOCK" OR EQUIVALENT SEDIMENT/OIL FILTER TRAP WITH 12" DEPTH GRAVEL FILTER BERM.

COMMUNICATIONS/ ELEC TRENCH DETAIL

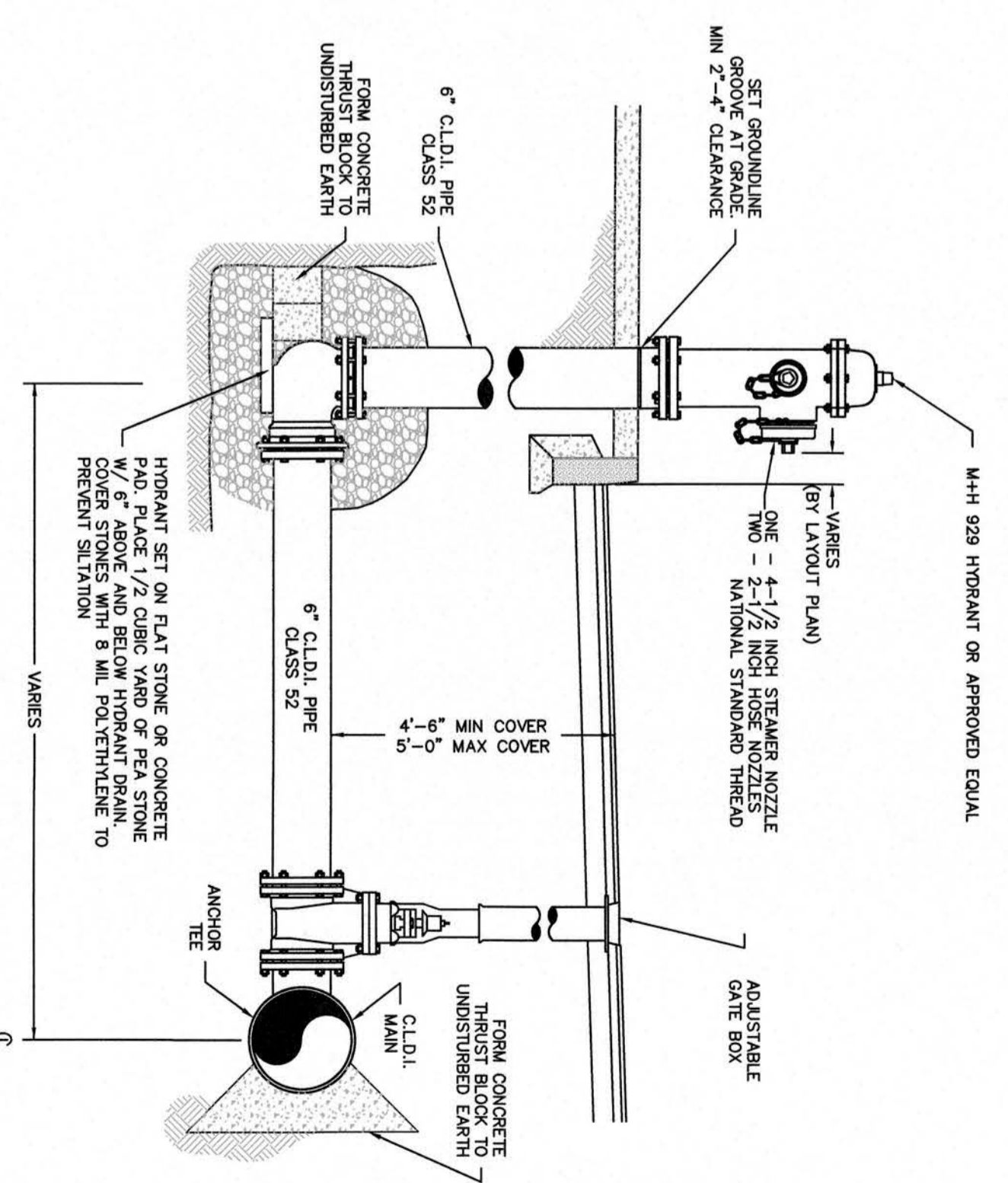
NOT TO SCALE



- NOTE:**
- VALVE BOXES SHALL BE 6/4\"/>

VALVE AND BOX DETAIL

NOT TO SCALE



- GENERAL NOTES:**
- 1) NO WATER PIPE DEPTH OF COVER SHALL EXCEED 5 FEET FROM FINISHED GRADE.
 - 2) CONTRACTOR RESPONSIBLE FOR CONTACTING DIG SAFE PRIOR TO EXCAVATION.
 - 3) TRENCH SHALL NOT BE BACKFILLED UNTIL CONNECTION HAS BEEN INSPECTED.
 - 4) ALL COMPACTION SHALL BE BY MECHANICAL MEANS AT NO GREATER THAN 12 INCH LIFTS.

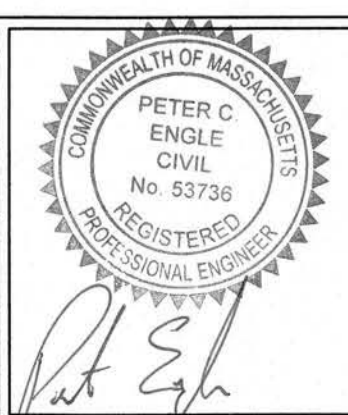
HYDRANT DETAIL

NOT TO SCALE

PERMIT SET ONLY - NOT FOR CONSTRUCTION

REVISIONS				
REV	DATE	DESCRIPTION	MADE	AP'D
1	12.18.19	ADDED WETLAND BUFFERS	AB	PE
2	1.6.20	REVISED BUILDING SIZE	AB	PE

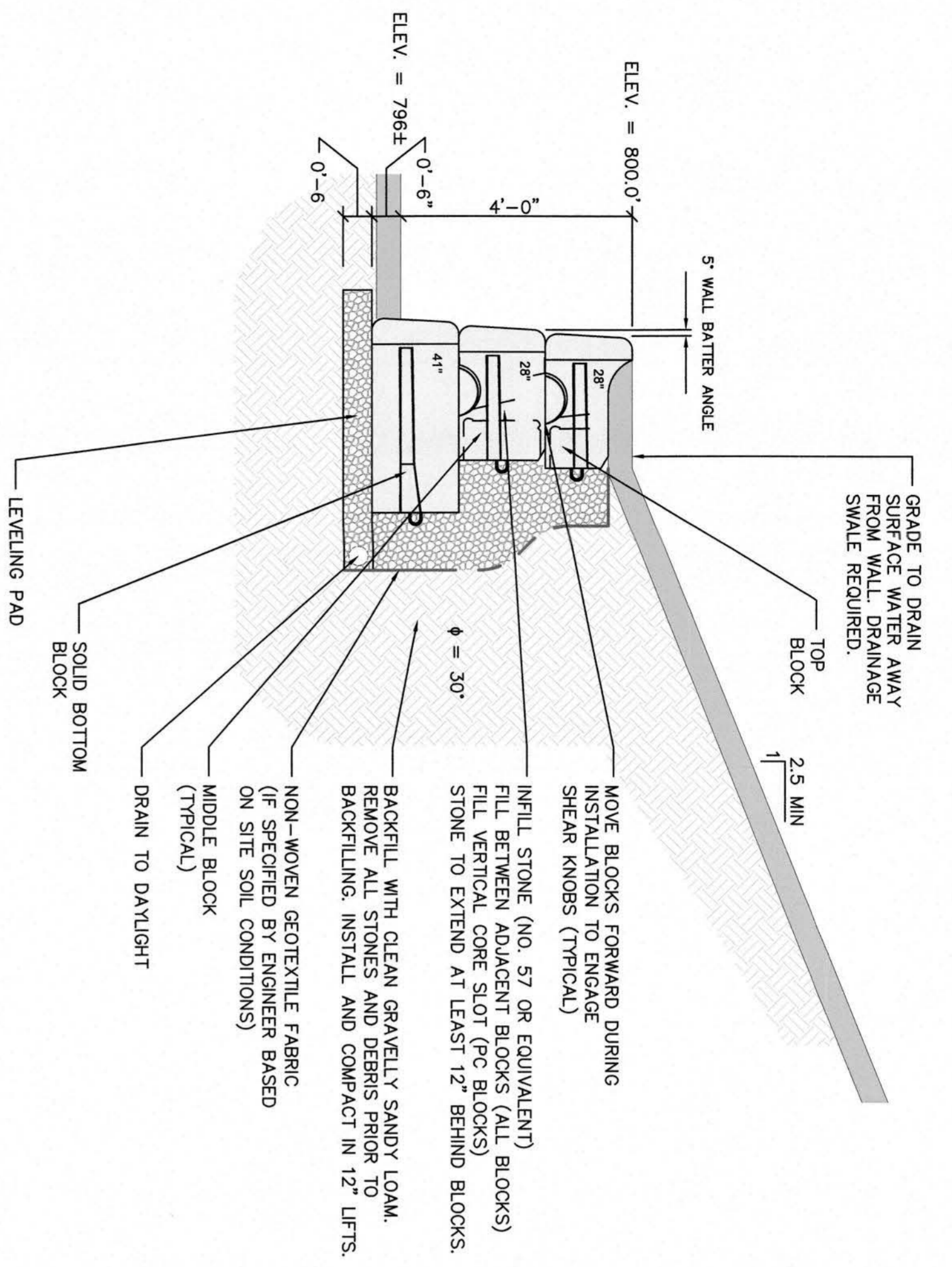
PETER C. ENGLE, P.E.
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McCLURE
ENGINEERING, INC
119 Worcester Road
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Tel: (508) 248-2005
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Email: chris@mcclureengineers.com

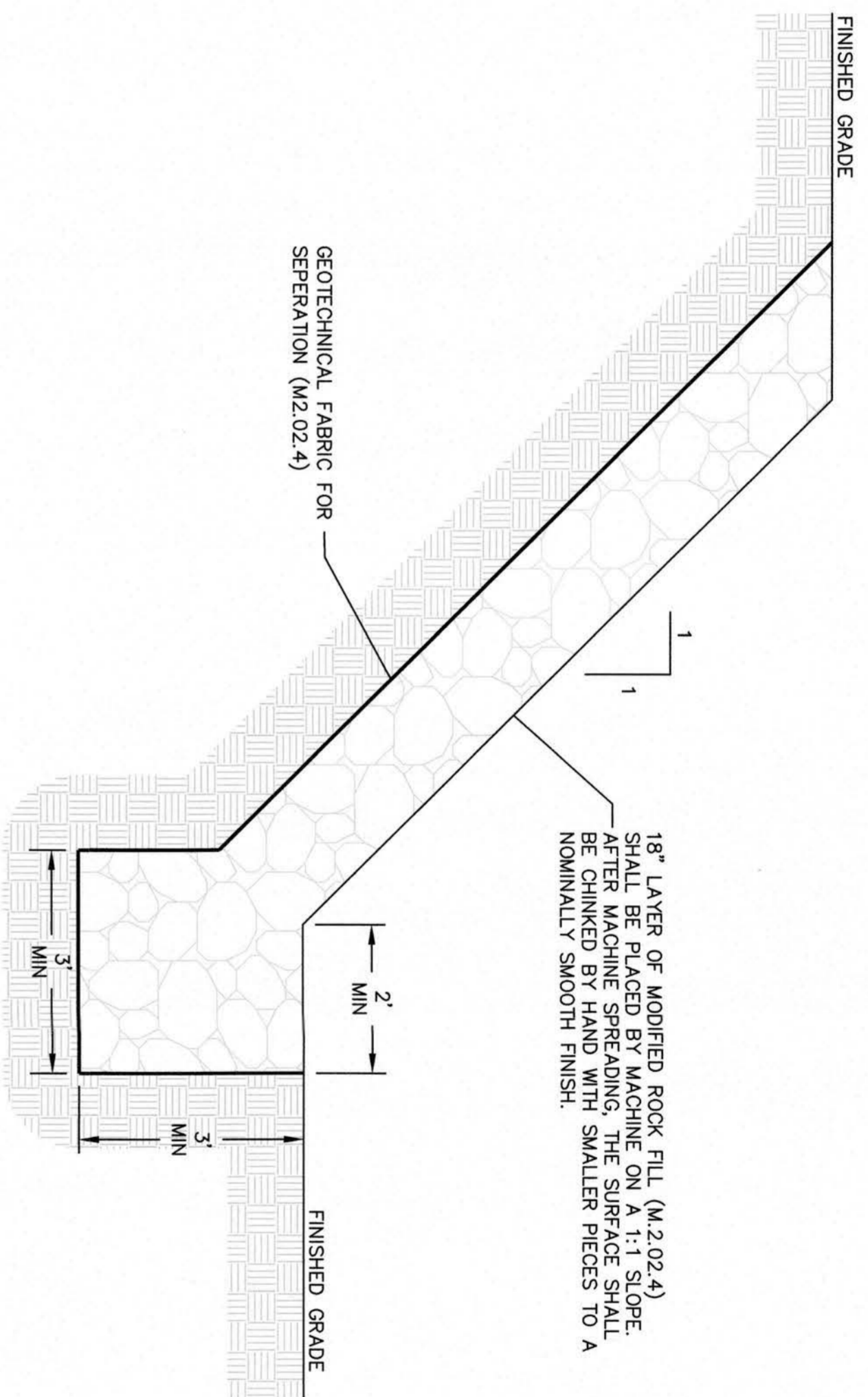
FISKE HILL WATER PUMP STATION
REPLACEMENT PROJECT
SDPW 2020-01
65 WHITTEMORE ROAD
STURBRIDGE, MASSACHUSETTS 01566
PREPARED FOR
STURBRIDGE DEPARTMENT OF PUBLIC WORKS

DETAIL SHEET
D-1



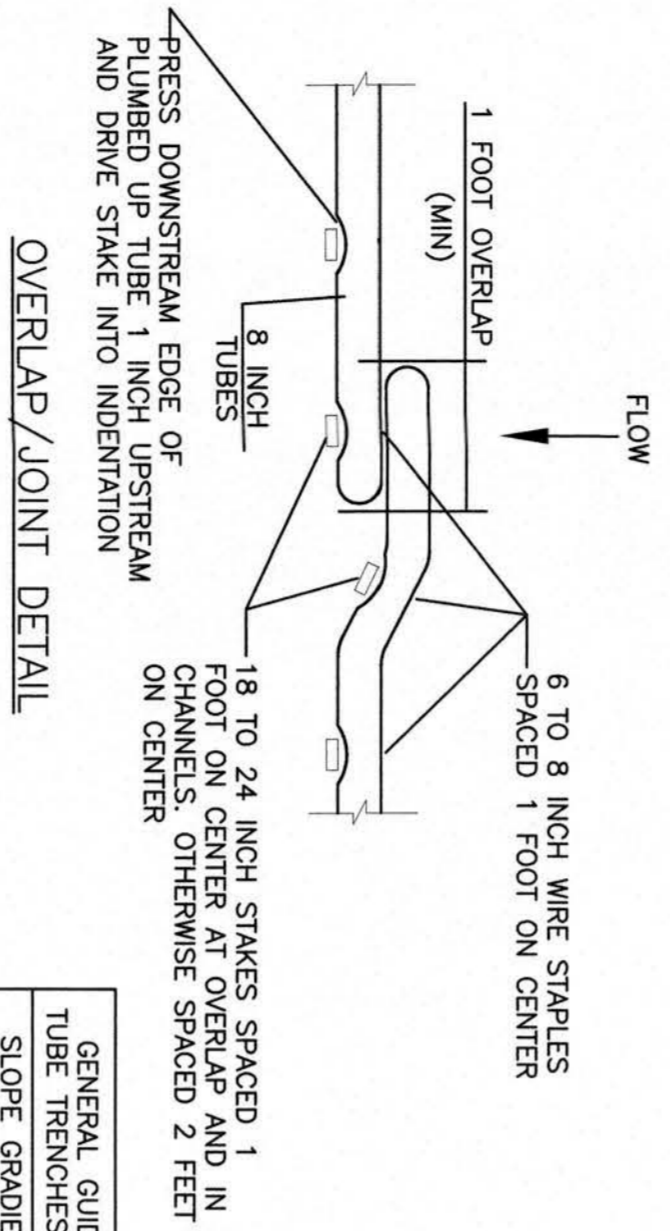
TYPICAL MODULAR BLOCK RETAINING WALL

NOT TO SCALE



1:1 RIP-RAP SLOPE STABILIZATION TREATMENT

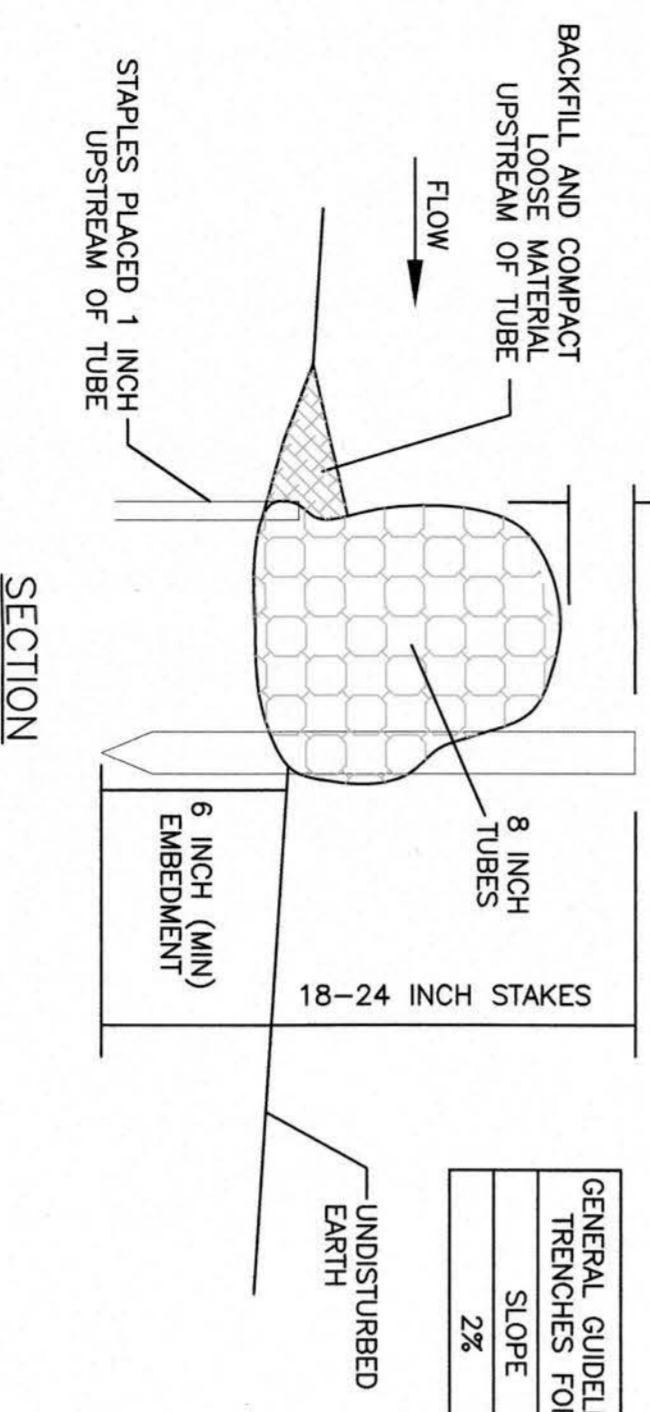
NOT TO SCALE



OVERLAP / JOINT DETAIL

GENERAL GUIDELINES FOR SPACING OF TUBE TRENCHES FOR SLOPE INSTALLATIONS	
SLOPE GRADIENT	TUBE INTERVAL
1H:1V	15 FEET
2H:1V	25 FEET
3H:1V	35 FEET
4H:1V	50 FEET

GENERAL GUIDELINES FOR SPACING OF TUBE TRENCHES FOR CHANNEL INSTALLATIONS	
SLOPE	TUBE INTERVAL
2%	25 FEET



- GENERAL NOTES:**
- BEFORE INSTALLATION OF TUBE, SMOOTH AND SHAPE EARTH SURFACE AND REMOVE ALL STONES, ROOTS, OR OTHER DEBRIS GREATER THAN 2 INCHES IN DIAMETER.
 - IF INSTALLING TUBE ACROSS A DITCH, THEN EXCAVATE A PLACEMENT TRENCH ABOUT 3 INCHES DEEP. TUBES SHALL BE OF 100% BIODEGRADABLE MATERIAL.

PERIMETER EROSION & SEDIMENTATION CONTROL

NOT TO SCALE

DIG-SAFE (1-888-344-7233) NOTE: 72 HOURS PRIOR TO ANY ON-SITE EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

PERMIT SET ONLY - NOT FOR CONSTRUCTION

D-2

DRAWN BY: MM
 DATE: 12/11/2019
 CHK BY: PE
 SCALE: N.T.S.
 PROJ. NO: 287-1920K

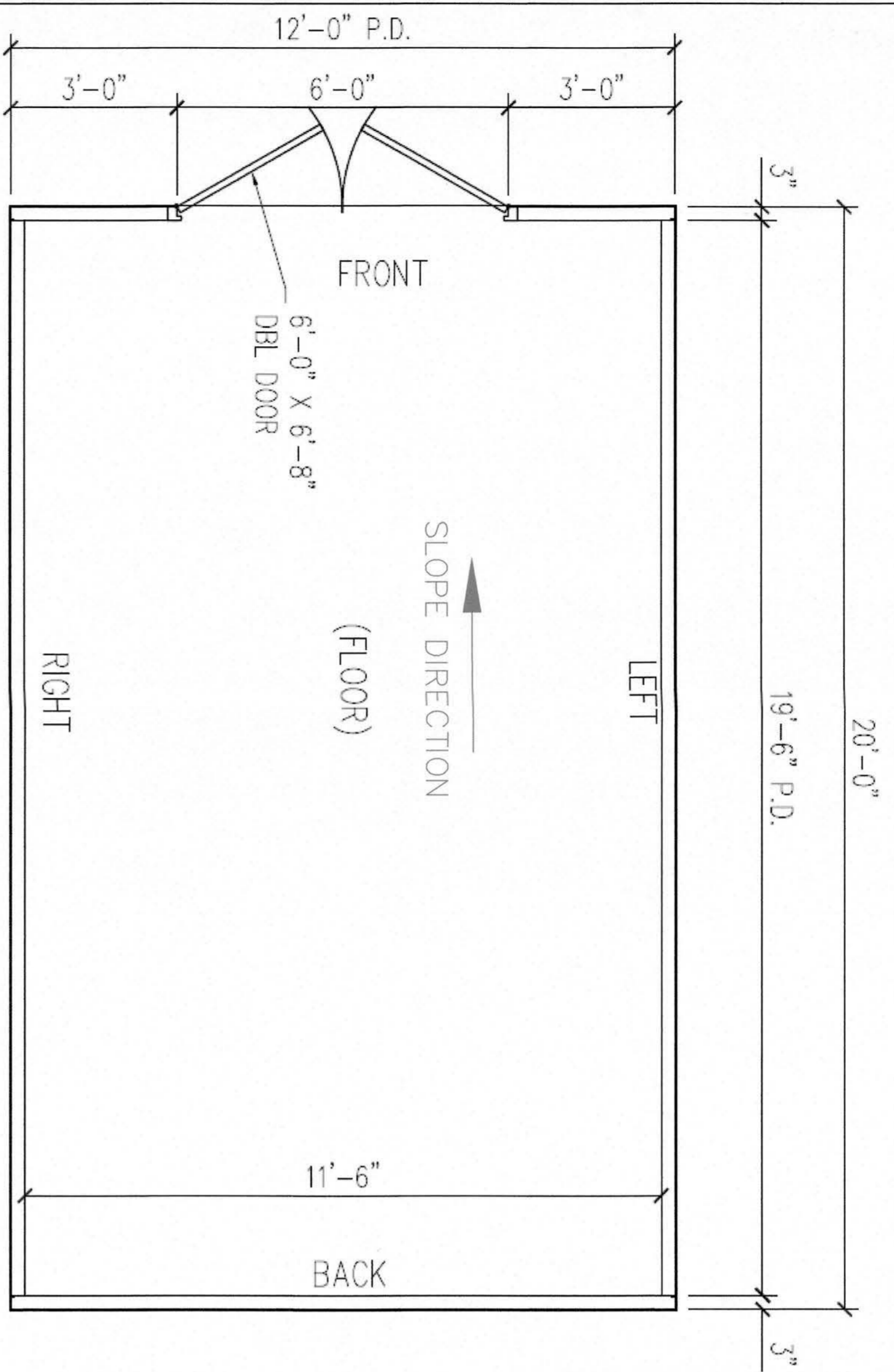
**FISKE HILL WATER PUMP STATION
 REPLACEMENT PROJECT
 SDPW 2020-01
 65 WHITTEMORE ROAD
 STURBRIDGE, MASSACHUSETTS 01566
 PREPARED FOR
 STURBRIDGE DEPARTMENT OF PUBLIC WORKS**

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 119 Worcester Road Tel: (508) 248-2005
 Charlton, MA 01507 Fax (508) 248-4887
 Email: chris@mcclureengineers.com

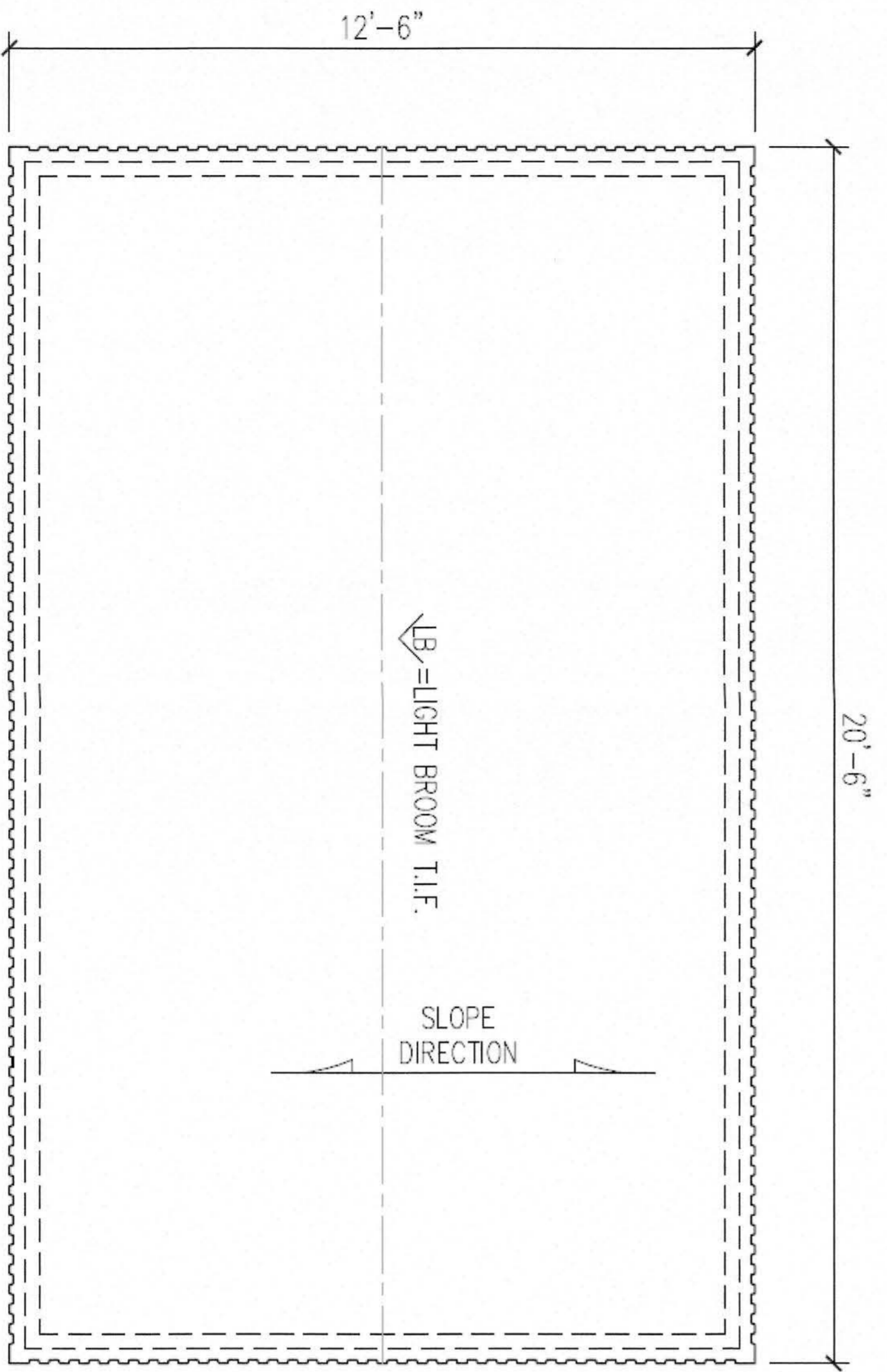


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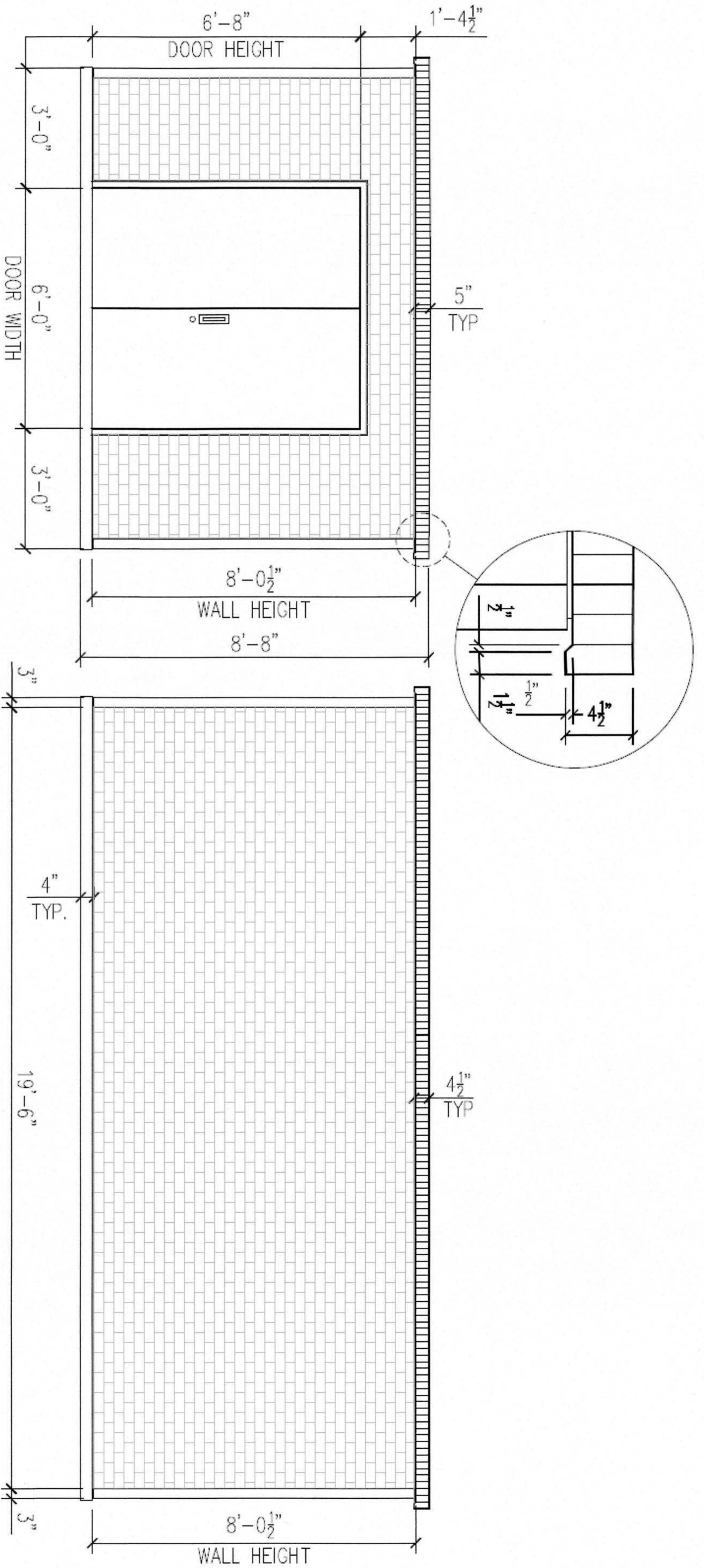
REVISIONS				
REV	DATE	DESCRIPTION	MADE	APV'D
1	12.18.19	ADDED WETLAND BUFFERS	AB	PE
2	1.6.20	REVISED BUILDING SIZE	AB	PE



FLOOR PLAN

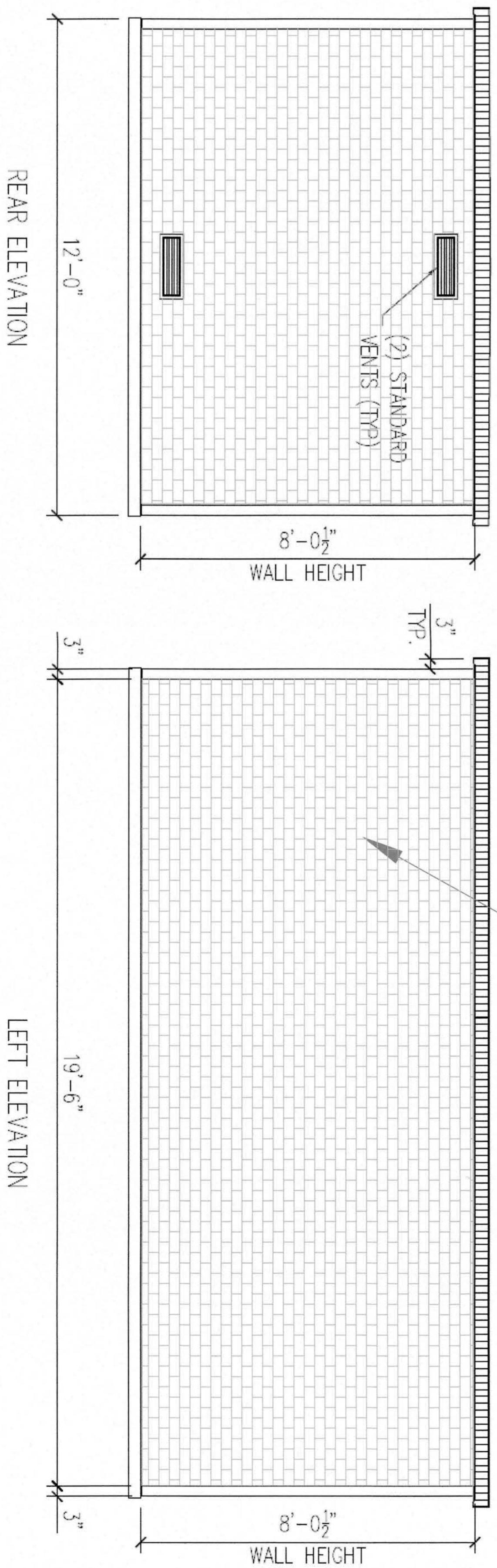


ROOF PLAN



FRONT ELEVATION

RIGHT ELEVATION



REAR ELEVATION

LEFT ELEVATION

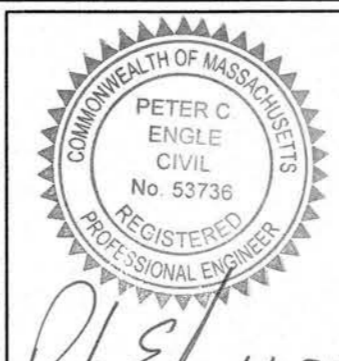
EXTERIOR FINISH TO BE
RED EASI-BRICK OR
APPROVED ALTERNATIVE

DIG-SAFE (1-888-344-7233) NOTE:
CONTRACTOR REQUIRED TO NOTIFY "DIG SAFE" 72 HOURS PRIOR TO ANY ON-SITE
EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO
NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

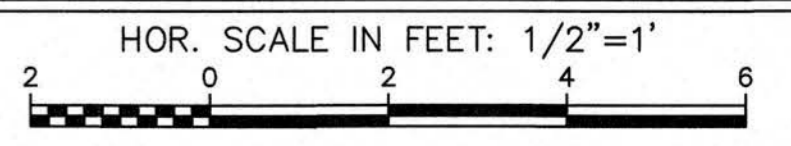
PERMIT SET ONLY - NOT FOR CONSTRUCTION

**FISKE HILL WATER PUMP STATION
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REVISIONS				
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1	12.18.19	ADDED WETLAND BUFFERS	AB	PE
2	1.6.20	REVISED BUILDING SIZE	AB	PE

D-3

**FLOOR PLAN AND
ELEVATIONS**
DRAWN BY: MM
DATE: 12/11/2019
CHK BY: PE
SCALE: 1/2" = 1'
PROJ. NO. 2871920K