Staff Report

Devens Enterprise Commission

Date: 10/26/20

To: **Devens Enterprise Commission**

From: Peter Lowitt, Director and Neil Angus, Environmental Planner

RE: **New Proposed Shabokin Well Water Treatment Facility – Level 2 Unified Permit**

Owner/Applicant: MassDevelopment/Devens Utilities
Project Engineer: James Cray, PE, Wright Pierce jim.cray@wright-pierce.com
Location: 39 and 88 Sheridan Road (Parcel ID#: 2-99-202 and 3-99-203)
Zoning District: Open Space & Rec., Zone I & II Water Resources Protection Overlay District

Proposed Project:
MassDevelopment (Devens Utilities) is seeking a Level 2 Unified Permit for Site Plan Approval and a Wetland Notice of Intent for the construction of a new water treatment plant, parking, driveway, emergency generator, and associated drainage and utility improvements. The project is located within an old Army gravel quarry site between Mirror Lake and Salerno Circle. The project is adjacent to a small isolated wetland resource area. In addition, the project is within a Priority Habitat Area, so the project requires authorization from the Natural Heritage Endangered Species Program.

The proposed treatment facility is being developed in the same location as a previously approved back-up Sheridan well that was approved by the Massachusetts Department of Environmental Protection (MA DEP) back in 2018 and by the DEC in 2019 but never constructed. This project is in close proximity to the recently approved temporary PFAS treatment system that was permitted by the DEC back in April of 2019. Once approved and constructed, this new treatment facility will replace the temporary PFAS treatment system and provide permanent treatment for PFAS, as well as iron and manganese for both the existing Shabokin Well and the approved, but yet to be constructed Sheridan well. Because this project is a public water treatment facility, the Applicant has submitted an Environmental Project Notification Form to the State office of Energy and Environmental Affairs Massachusetts Environmental Policy Act Office.

Key Project Issues:
Access/Safety: The site is within an old gravel quarry off of Sheridan Road which is accessed via Marne Street off of Patton Road (through former Salerno Circle military housing area). There is an existing gravel road off of Sheridan Road that will be used to access the new treatment facility. This gravel road will be upgraded and paved to provide sufficient support for Devens Utilities and emergency vehicle access. The Devens Fire Department requires 20'

solid surface for emergency access so the Applicant modified their original design from an 18' to a 20'-wide paved driveway. If the Applicant does not need 20', they should consider an alternative permeable surface like reinforced turf for a portion of the driveway width to provide a stable but porous surface. This would aid in stormwater management, could reduce grading impacts, and further protect the adjacent wetland resources.

As Sheridan Road is not a public way, the Applicant was able to revise the original plans to reduce the size of the paved apron leading into the site. This is will help reduce runoff and potential wetland impacts, while still providing adequate emergency access to the site. With this change, there still appears to be an opportunity to pull the proposed grading back further from the wetland area and preserve more of the existing vegetated buffer to the wetland area. The proposed facility will have a number of fuels, chemicals, and other materials stored and used on-site. Proper storage, handling, containment and management will be key to protecting water quality. MassDEP requires an Operations and Maintenance Plan Manual be completed for the entire facility prior to giving approval to start pumping to the system. A copy of this manual should be provided to the DEC for its records as well. This could be made a condition of any approval.

Building/Property Boundary: The proposed building straddles the property boundary between parcels 002.0-0099-0202.2 (Lot W-1) and 003.0-0099-203.0 (Parcel 1) and therefore does not comply with the setback requirements of 974 CMR 3.04(1). MassDevelopment will need to alter the property boundary in order to meet setback requirements. This can be done as a condition of any approval since lot boundary adjustments can be handled administratively.

Stormwater Management: The stormwater design incorporates a number of low-impact development techniques to collect, treat, and infiltrate stormwater runoff from the new building and site. The Applicant has revised the plans to address the majority of the DEC's Peer Review Engineers comments on the stormwater design. One open item is the proposal to pave the bottom of the sediment forebays to avoid infiltration prior to treatment. This requirement is usually met by providing a geotextile (fabric) liner covered by soil and vegetation – similar to the proposed vegetated swales being proposed. This method provides more treatment and low-impact stabilization than a concrete pavement surface. Staff would request the Applicant modify the design of the forebays to include a geotextile liner, topsoil and vegetation to fully comply with 974 CMR 4.08.

Wetlands: There is a small existing wetland pocket just off of Sheridan Road and adjacent to the existing gravel access road. This wetland pocket drains to US Fish and Wildlife property under Sheridan Road via an existing 24" concrete culvert. The proposed access road improvements show some minor grading encroaching into the 25' no disturbance zone of the wetland area. 974 CMR 4.06 allows for some encroachments such as roads and public infrastructure but only if absolutely necessary. The Applicant has done a good job of revising the plans to minimize impacts to the wetland resource areas, including reducing the size of the driveway entrance apron. As mentioned previously, there appears to be opportunity to pull some grading back further from the wetlands due to this shift. Construction of the building foundation may require dewatering. No dewatering will be permitted directly into any wetland areas. This would be included as a condition of any approval.

Natural Heritage Endangered Species: The project is within an Area of Critical Environmental Concern and contains Blanding's turtle habitat. The Applicant hired Caron Environmental to prepare a Turtle Protection Plan. A copy of the plan and Application to Natural Heritage Endangered Species Program (NHESP) was provided by the Applicant. Any conditions of NHESP will become part of the DEC's approval.

Lighting: The new well building will require indoor and outdoor lighting. As this location is directly adjacent to the Oxbow National Wildlife Refuge and a large protected natural open space area, light pollution reduction is an important component of this project. The proposed exterior lights will be down lit, recessed and properly shielded to prevent excess light pollution. The exterior lights will also be equipped with photocells and motion sensors to ensure they only provide illumination when necessary. The lighting color was reduced from 5000K to 3000K which will also help reduce the brightness and any impacts to nocturnal wildlife.

Miscellaneous details: Based on the initial review of the Application and the revised submittal, the following items are still outstanding:

1. Erosion and Sediment Control Plan Notes must be updated to include notes as required under 974 CMR 3.02(3)(e)
2. Space for Chairman's signature and date missing from Sheets C-1, C-2, C-4, C-5, and C-7 through C-11.
3. Correct Note on Sheet C-3 re: Air Quality Permit Not required and Diesel generator certification requirements with MA DEP and DEC.
4. FEMA/FIRM Map number to be included on plans
5. Need to provide design details for the loading dock and exterior pads.
6. The Site Data Table on C-3 will need to be updated to reflect the revised parcel area once the lot is reconfigured to meet the setback requirements.
7. Design Review Letter from MassDevelopment
8. Cover sheet, site plan and landscaping plan to be recorded.
9. Because of the DEC's Unified Permitting timeline differing from the MA DEP's Notice of Intent (NOI) application timeline, the Applicant is required to submit a written request to extend the time in which the DEC must render a decision (to accommodate the DEC required thirty-day town comment period).

These are all fairly minor details that could be addressed as conditions of any approval.

Overall Site Design: The Applicant's initial design had a significantly larger impervious surface area, limits of clearing and disturbance within 100 feet of the small pocket wetland near Sheridan Road. Revised plans submitted during the review process have reduced impervious areas, pulled disturbance back from the wetland area, and incorporated more low-impact development techniques to safely manage stormwater on-site.

Recommendation:

The 30-day town comment period ended on October 23, 2020. No public comments were received. There are a few outstanding items that will need to addressed by the Applicant before Staff can prepared a draft Record of Decision for the DEC's consideration. Once the Commission and public have had an opportunity to ask and questions and comments, Staff would recommend the Commission continue the public hearing to the November 5, 2020 meeting at 7:30AM. Staff will work with the Applicant to resolve any remaining issues and draft a record of decision for the Commission's consideration on November 5, 2020.

Attachments:

-Revised Site Plans

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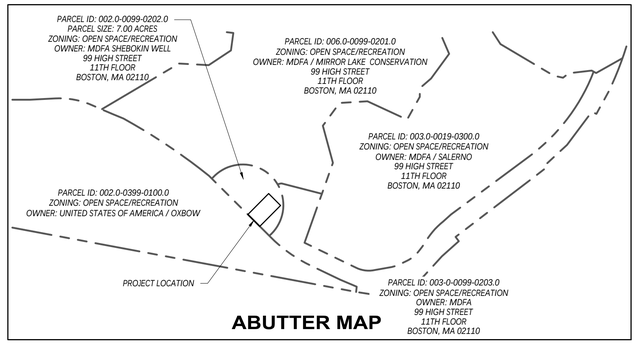

ABUTTER MAP

PLAN
SCALE: 1"=20'

NOTES

1. SEE DEMOLITION NOTES DRAWING C-1 FOR SPECIFIC SITE DEMOLITION NOTES.
2. REFER TO SITE INDIVIDUAL DISCIPLINE DRAWINGS FOR DEMOLITION REQUIREMENTS FOR EACH DISCIPLINE.
3. ALL ELEVATIONS REFER TO NGVD 29.
4. CONTRACTOR TO ANTICIPATE RELOCATION OF STAGING AND STOCKPILE AREAS AS NEEDED FOR WORK TO PROGRESS AS PART OF THE BASE BIDS.
5. LOCATION OF STAGING AND STOCKPILE AREAS TO BE COORDINATED WITH OWNER PRIOR TO START OF CONSTRUCTION.
6. SITE IS LOCATED ON FEMA FIRM MAP 25027C0313E WITH EFFECTIVE DATE JULY 4, 2011 AND IS WITHIN FLOOD ZONE X.
7. PER DEVENS PUBLIC WORKS THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL AND ANY REPAIRS DUE TO CONSTRUCTION VEHICLE DAMAGE TO SHERIDAN ROAD FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PHOTO/VIDEO DOCUMENT THE ROAD CONDITION BEFORE STARTING CONSTRUCTION NOTING ANY AREAS CURRENTLY IN NEED OF REPAIR.

DEMOLITION NOTES

1. CUT, CAP AND ABANDON EXISTING WATER MAIN.
2. LIMITS OF CLEARING AND GRUBBING
3. REMOVE AND RESET CHAIN LINK FENCE
4. REMOVE 26" COTTONWOOD
5. REMOVE 13" RED OAK
6. REMOVE 14" WHITE POPLAR
7. REMOVE 23" WHITE POPLAR
8. REMOVE 20" WHITE POPLAR
9. REMOVE 12" WHITE OAK
10. REMOVE 27" WHITE PINE
11. REMOVE 21" WHITE PINE

0 20 40

APPLICANT: MASSDEVELOPMENT
ADDRESS: 33 ANDREWS PARKWAY
DEVENS, MA, 01434

OWNER OF RECORD: MDFA/SHEBOKIN WELL
ADDRESS: 99 HIGH STREET, 11TH FLOOR
PARCEL# 002.0-0099-0202.0
BOSTON, MA 02110

DESIGNER OF RECORD:
WRIGHT-PIERCE
ATTN: JIM CRAY, PE
600 FEDERAL STREET
ANDOVER, MA 01810

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	UNIFIED PERMIT	J.CRA	10/20

DESIGNED BY: C.DAI
CAD COORD: W.BAI
CAD: C.HIN
CHECKED BY: L.ANT
DATE:
APPROVED BY: J.CRA
DATE:
PROJECT NO.: 14083I

COMMONWEALTH OF MASSACHUSETTS — JAMES E. CRAY — CIVIL — No. 44658 — REGISTERED PROFESSIONAL ENGINEER

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DEVENS, MASSACHUSETTS
SHABOKIN WATER TREATEMENT PLANT

EXISTING CONDITIONS AND DEMOLITION

DRAWING
C-2

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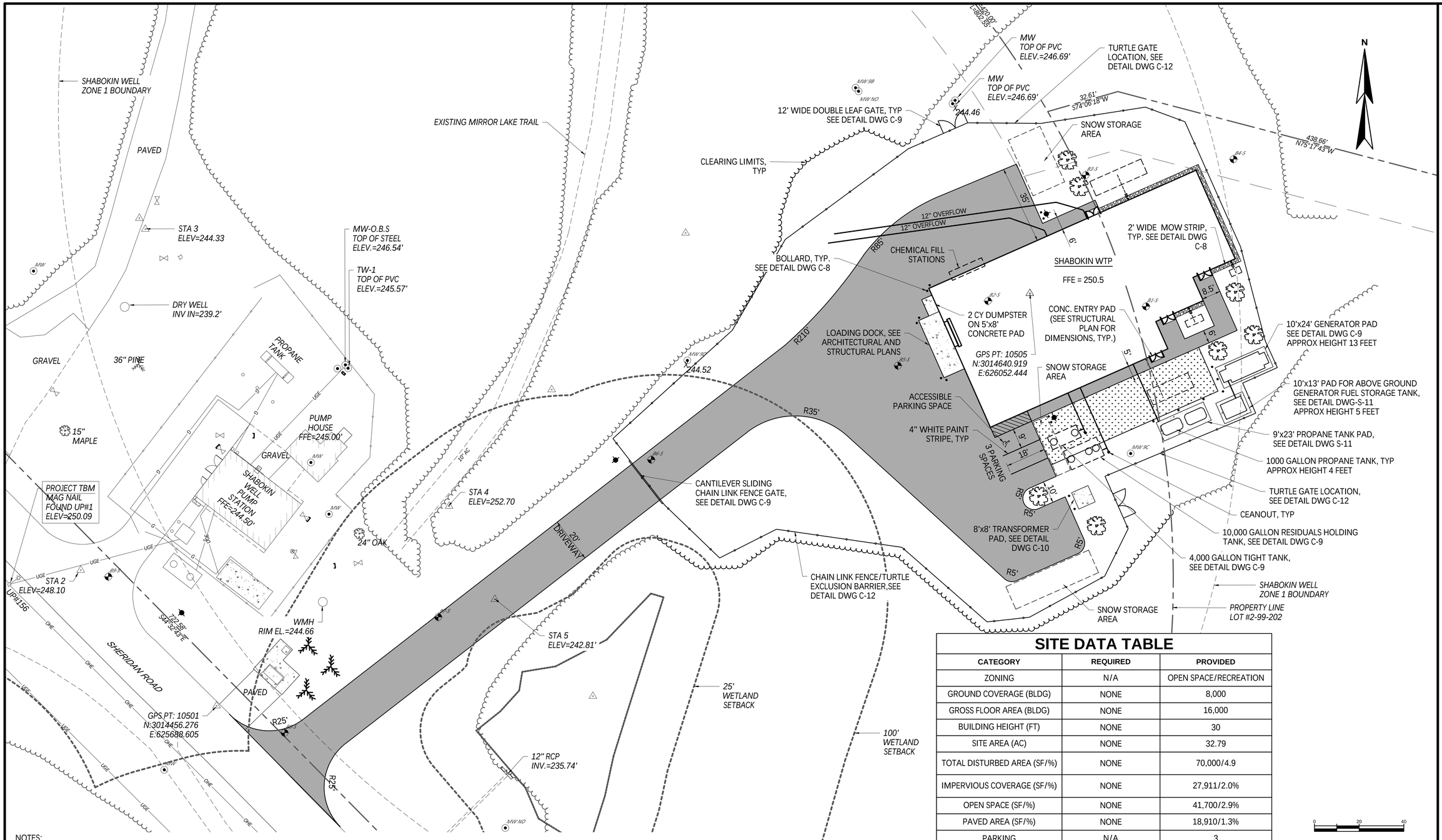

SITE DATA TABLE

CATEGORY	REQUIRED	PROVIDED
ZONING	N/A	OPEN SPACE/RECREATION
GROUND COVERAGE (BLDG)	NONE	8,000
GROSS FLOOR AREA (BLDG)	NONE	16,000
BUILDING HEIGHT (FT)	NONE	30
SITE AREA (AC)	NONE	32.79
TOTAL DISTURBED AREA (SF/%)	NONE	70,000/4.9
IMPERVIOUS COVERAGE (SF/%)	NONE	27,911/2.0%
OPEN SPACE (SF/%)	NONE	41,700/2.9%
PAVED AREA (SF/%)	NONE	18,910/1.3%
PARKING	N/A	3
SETBACKS		
FRONT	25	325
SIDE	10	27
REAR	25	33

NOTES:

1. FOR GENERAL SITE LAYOUT NOTES REFER TO DRAWING C-1.
2. ELECTRONIC FILES OF ENGINEER'S DRAWING WILL BE PROVIDED TO THE SUCCESSFUL CONTRACTOR AFTER CONTRACT AWARD FOR LAYOUT OF THE PROPOSED WORK. ALL LAYOUT INFORMATION PROVIDED ON THE SEALED COPIES OF THE CONTRACT DRAWINGS SHALL PREVAIL IN CASE OF DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE WORK BASED ON EXISTING CONTROL POINTS PROVIDED BY THE ENGINEER AND ITS CONSULTANTS. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
3. EXISTING OR PROPOSED USE WILL NOT GENERATE ELECTROMAGNETIC INTERFERENCE TO ANY SENSITIVE RECEPTOR. INTERFERENCE WITH THE HARVARD-SMITHSONIAN RADIO TELESCOPE (1400-1720 MHz) IS ESPECIALLY PROHIBITED.
4. PROPOSED OR EXISTING USE WILL NOT CAUSE PRONOUNCED, MULTIPLE PATTERS OF NOISE OR VIBRATION NUISANCE TO, OR INTERFERE WITH, ANY SENSITIVE RECEPTOR.
5. EITHER "A MASSACHUSETTS DEPARTMENT OF ENVIRONMENT PROTECTION (DEP) AIR QUALITY PERMIT APPLICATION HAS BEEN MADE" OR "A DEP AIR QUALITY PERMIT IS NOT REQUIRED.
6. ALL DISTURBED AREAS TO RECEIVE 4" LOAM, LIME, SEED AND MULCH.

PLAN
SCALE: 1"=20'

0 20 40

APPLICANT: MASSDEVELOPMENT
ADDRESS: 33 ANDREWS PARKWAY
DEVENS, MA, 01434

OWNER OF RECORD: MDFA/SHEBOKIN WELL
ADDRESS: 99 HIGH STREET, 11TH FLOOR
PARCEL# 002.0-0099-0202.0
BOSTON, MA 02110

DESIGNER OF RECORD:
WRIGHT-PIERCE
ATTN: JIM CRAY, PE
600 FEDERAL STREET
ANDOVER, MA 01810

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

SIGNATURE: _____

APPROVED BY THE DEVENS ENTERPRISE COMMISSION: DATE: _____

CHAIRMAN: _____

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	UNIFIED PERMIT	J.CRA	10/20
1			
2			
3			
4			

DESIGNED BY: C.DAI
CAD COORD.: W.BAI
CAD: C.HIN
CHECKED BY: L.ANT
DATE:
APPROVED BY: J.CRA
DATE:
PROJECT NO.: 14083I

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SITE PLAN

DRAWING
C-3

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PLAN
SCALE: 1"=20'

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	UNIFIED PERMIT	J.CRA	10/20
2			
3			
4			

DESIGNED BY: C.DAI
CAD COORD: W.BAI
CAD: C.HIN
CHECKED BY: L.ANT
DATE:
APPROVED BY: J.CRA
DATE:
PROJECT NO.: 140823I

COMMONWEALTH OF MASSACHUSETTS JAMES E. CRAY CIVIL No. 49669 REGISTERED PROFESSIONAL ENGINEER

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SHABOKIN WATER TREATEMENT PLANT

SITE GRADING PLAN

APPLICANT: MASSDEVELOPMENT
ADDRESS: 33 ANDREWS PARKWAY
DEVENS, MA, 01434

OWNER OF RECORD: MDFA/SHEBOKIN WELL
ADDRESS: 99 HIGH STREET, 11TH FLOOR
PARCEL# 002.0-0099-0202.0
BOSTON, MA 02110

DESIGNER OF RECORD:
WRIGHT-PIERCE
ATTN: JIM CRAY, PE
600 FEDERAL STREET
ANDOVER, MA 01810

DRAWING
C-4

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PROJECT NORTH
TRUE NORTH

ELECTRICAL
103

MECHANICAL
104

LAVATORY
105

OFFICE/LAB
106

STAIR 1
100

GREENSAND FILTER ROOM
107

PFAS WING
003

PUMP ROOM 1
102

SODIUM HYPOCHLORITE (NaOCL)
108

POTASSIUM HYDROXIDE (KOH)
109

PHOSPHATE & SODIUM BISULFITE (PO4 & NaHSO3)
110

FIRST FLOOR
SCALE: 3/16" = 1'-0"

APPROVED BY THE DEVENS ENTERPRISE COMMISSION:

DATE:

CHAIRMAN:

DESIGNER OF RECORD:
WRIGHT-PIERCE
ATTN: JIM CRAY, PE
600 FEDERAL STREET
ANDOVER, MA 0180

APPLICANT: MASSDEVELOPMENT
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DEVENS, MA, 01434

OWNER OF RECORD: MDFA/SHEBOKIN WELL
ADRESS: 99 HIGH STREET, 11TH FLOOR
PARCEL# 002.0-0099-0202.0
BOSTON, MA 02110

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	95% DESIGN REVIEW	J.CRA	9-20
2			
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4			

DESIGNED BY: C.MIC
CAD COORD: W.BAI
CAD: E.SHI
CHECKED BY:
DATE:
APPROVED BY:
DATE:
PROJECT NO: 14083I

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FIRST FLOOR PLAN

DRAWING
A-3

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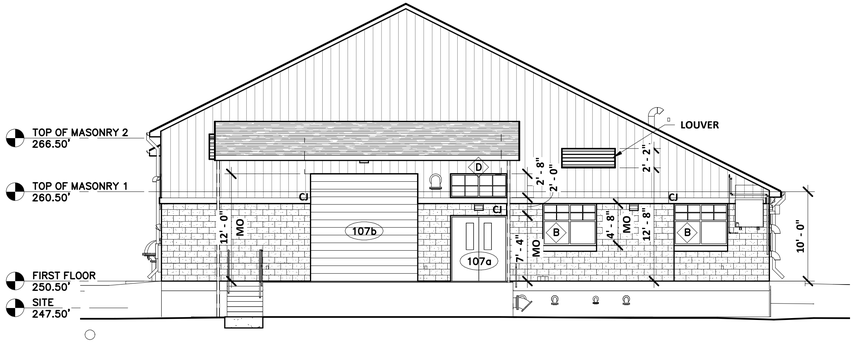
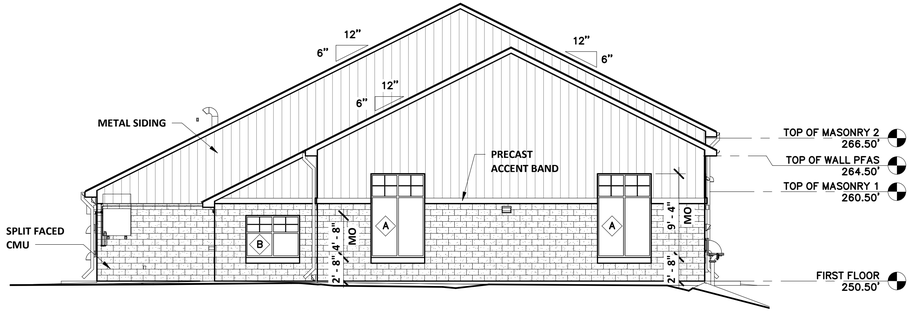


EAST ELEVATION

SCALE: 1/8" = 1'-0"



WEST ELEVATION

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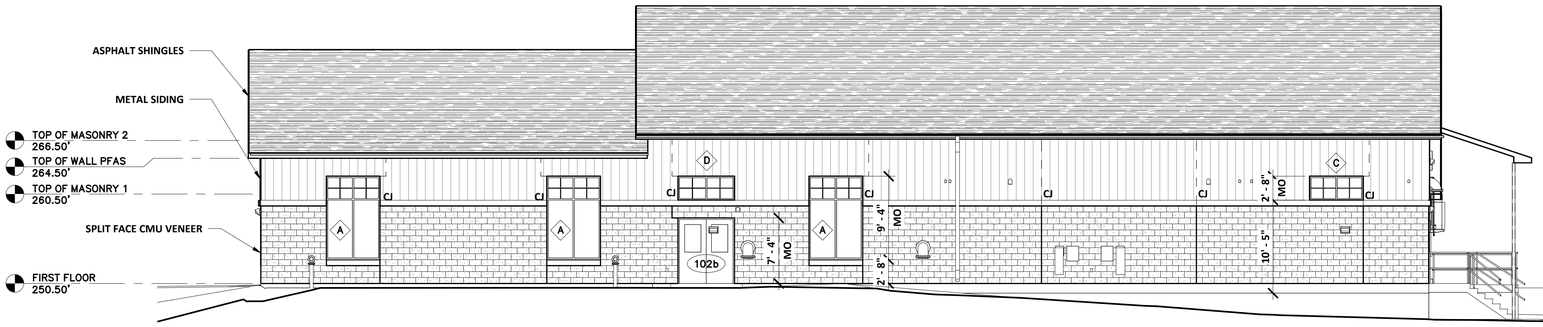

SOUTH ELEVATION

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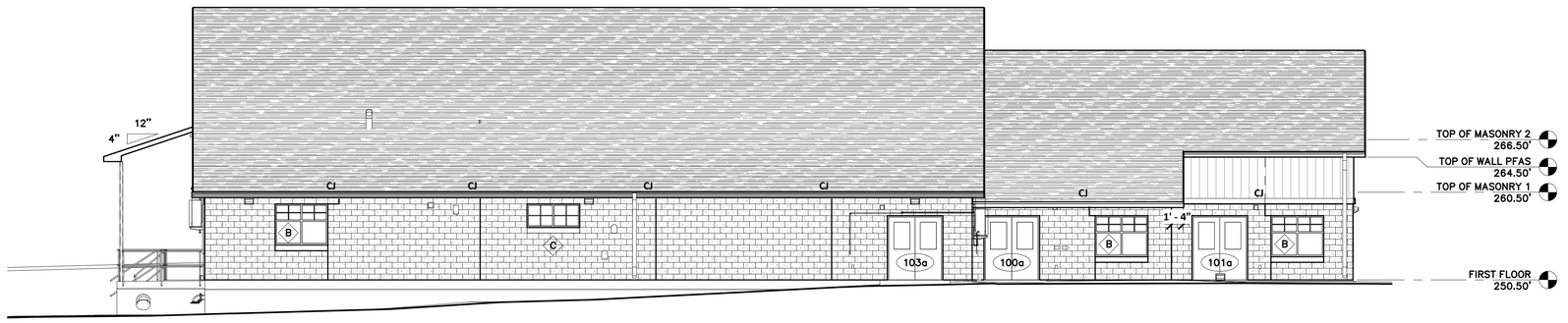

NORTH ELEVATION

SCALE: 1/8" = 1'-0"

APPROVED BY THE DEVENS ENTERPRISE COMMISSION: DATE:_____

CHAIRMAN:_____

DESIGNER OF RECORD:
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BOSTON, MA 02110

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
1	95% DESIGN REVIEW	J.CRA	9-20
2			
3			
4			

DESIGNED BY: C.MIC
CAD COORD: W.BAI
CAD: E.SHI
CHECKED BY:
DATE:
APPROVED BY:
DATE:
PROJECT NO: 14083I

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ELEVATIONS

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