



## **City of Keene Planning Board**

### **AGENDA**

**Monday, September 8, 2025 5:30 PM**

**City Hall, 2<sup>nd</sup> Floor Council Chambers**

#### **A. AGENDA ITEMS**

- 1) **Call to Order** – Roll Call
- 2) **Boundary Line Adjustment**
  - a) **PB-2025-16 – Boundary Line Adjustment – 124-126 & 130 Eastern Ave** – Applicant HG Johnson Real Estate, on behalf of owner Bishop 2024 Revocable Family Trust, proposes to transfer ~0.22-ac of land from the ~0.57-ac parcel at 130 Eastern Ave to the ~0.95-ac parcel at 124-126 Eastern Ave (TMP#s 588-031-000 & 588-032-000). Both parcels are located in the Low Density District.
- 3) **Public Hearings**
  - a) **PB-2025-15 – Cottage Court Conditional Use Permit – Barn Conversion, 429 Elm St** – Applicant HG Johnson Real Estate, on behalf of owner JC&C Rentals LLC, proposes to convert a barn into 2 dwelling units on the property at 429 Elm St (TMP# 520-005-000). The parcel is ~0.48-ac and is located in the Low Density District.
- 4) **Continued Public Hearing**
  - a) **PB-2024-20 – Earth Excavation Permit Major Amendment & Hillside Protection Conditional Use Permit – Gravel Pit, 21 & 57 Route 9** – Applicant Granite Engineering LLC, on behalf of owner G2 Holdings LLC, proposes to expand the existing gravel pit located at 21 & 57 Route 9 (TMP#s 215-007-000 & 215-008-000). A Hillside Protection CUP is requested for impacts to steep slopes. Waivers are requested from Sections 25.3.1.D, 25.3.6, and 25.3.13 of the LDC related to the 250' surface water resource setback, toxic or acid forming materials, and the 5-ac excavation area maximum. The parcels are a combined ~109.1-ac in size and are located in the Rural District.
- 5) **Staff Updates**
- 6) **New Business**
- 7) **Upcoming Dates of Interest**
  - Joint Committee of the Planning Board and PLD – September 8<sup>th</sup>, 7:30 PM
  - Planning Board Steering Committee – September 16<sup>th</sup>, 12:00 PM

- Planning Board Site Visit – September 24<sup>th</sup>, 8:00 AM – To Be Confirmed
- Planning Board Meeting – September 29<sup>th</sup>, 6:30 PM

## **B. MORE TIME ITEMS**

1. Potential Modifications to the Site Plan Review Thresholds
2. Training on Site Development Standards – Snow Storage & Landscaping

## **C. ADJOURNMENT**



## STAFF REPORT

### PB-2025-16 – BOUNDARY LINE ADJUSTMENT – 124-126 & 130 EASTERN AVE

#### **Requests:**

Applicant HG Johnson Real Estate, on behalf of owner Bishop 2024 Revocable Family Trust, proposes to transfer ~0.22-ac of land from the ~0.57-ac parcel at 130 Eastern Ave to the ~0.95-ac parcel at 124-126 Eastern Ave (TMP#s 588-031-000 & 588-032-000). Both parcels are located in the Low Density District.

#### **Background:**

The subject parcels are located on the east side of Eastern Ave., in southeastern Keene, ~1,700 ft from the Marlboro St. intersection to the south and ~350 ft from the Bellevue St intersection to the north. The property at 124-126 Eastern Ave. contains an existing three-unit multi-family building, an existing single-family building, car port, shed, and associated site improvements. There is a stream that runs along the northwest corner of the parcel and under Eastern Ave. The property at 130 Eastern Ave. contains an existing single-family building, detached garage, shed, and associated site improvements.

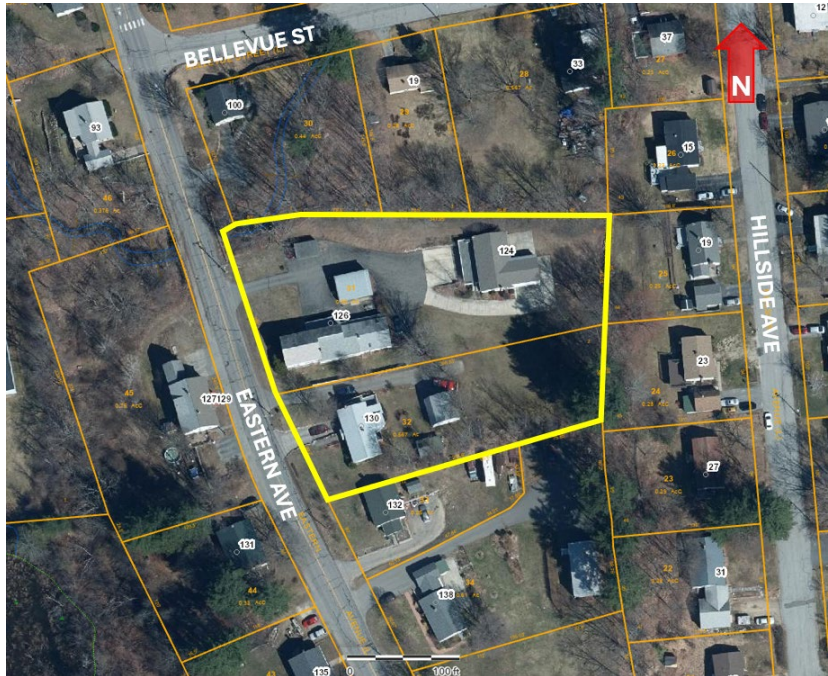


Fig 1: The subject properties at 124-126 & 130 Eastern Avenue outlined in yellow.

The purpose of the application is to adjust the common property boundary between the two subject parcels to accommodate the transfer of ~0.22 ac of land from 130 Eastern Ave. to 124-126 Eastern Ave. There is no new development proposed with this application.

#### **Determination of Regional Impact:**

After reviewing the application, staff have made a preliminary evaluation that the proposed boundary line adjustment does not appear to have the potential for “regional impact” as defined in RSA 36:55. The Board will need to make a final determination as to whether the proposal, if approved, could have the potential for regional impact.

#### **Completeness:**

The applicant has requested an exemption from submitting separate existing and proposed condition plans and all technical reports. After reviewing each request, Planning Staff have made the preliminary determination that granting the requested exemptions would have no bearing on the merits of the application and recommend that the Board accept the application as “complete.”

# STAFF REPORT

## Application Analysis:

**SECTION 20.2.1 – LOTS:** The applicant proposes to transfer ~0.22 ac of land from the ~0.57 ac parcel at 130 Eastern Ave to the ~0.99 ac parcel at 124-126 Eastern Ave. Following this transfer of land, both parcels will still comply with the zoning dimensional requirements for the Low Density District, as shown in Table 1. This standard appears to be met.

Table 1. Area of Land Affected by Proposed Boundary Line Adjustment		
Lot Sizes	124-126 Eastern Ave.	130 Eastern Ave.
	Low Density	Low Density
Required in District	10k SF (~0.23 ac)	10k SF (~0.23 ac)
Before BLA	0.99 ac	0.57 ac
Amount of Land Transferred	+0.22 ac	-0.22 ac
After BLA Parcel Size	1.21 ac	0.34 ac

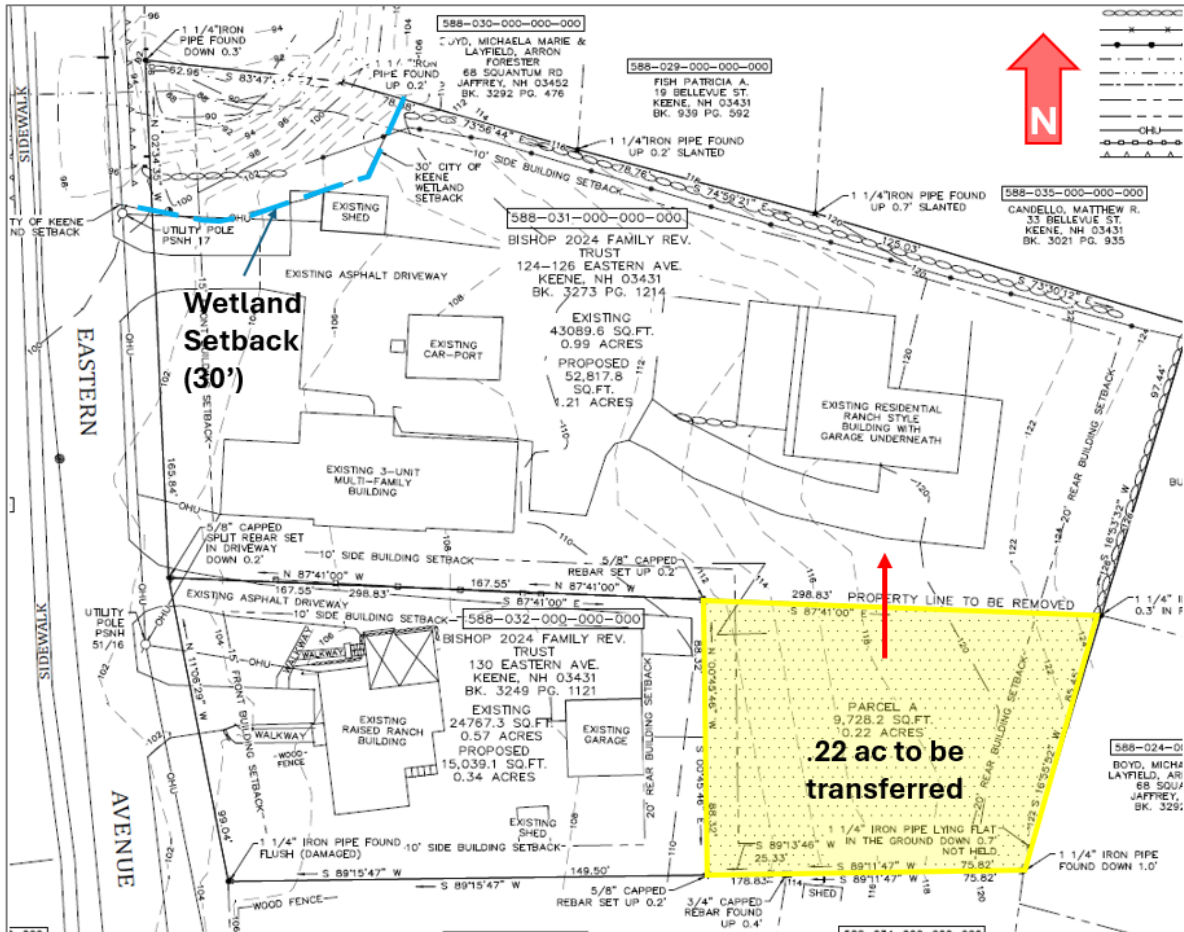


Fig 2: Proposed land to be transferred

## STAFF REPORT

**SECTION 20.2.2 – CHARACTER OF LAND FOR SUBDIVISION:** The plan shows the developed parcels gently sloping towards Eastern Ave with a low point located to the northern edge of 124-126 Eastern Ave. where the stream is located. A portion of the stream is located on the northwestern corner of the parcel, and the plan shows the delineated wetland and 30 ft surface water buffer. The portion of the land to be transferred is a gently sloping open lawn area. No development is currently proposed for this area. This standard appears to be met.

**SECTION 20.2.3 – SCATTERED OR PREMATURE DEVELOPMENT:** Both properties are developed with residential uses and associated site improvements. No new development is proposed with this application. It appears that this standard has been met.

**SECTION 20.2.4 – PRESERVATION OF EXISTING FEATURES:** There will be no impacts to existing site features as no additional development is proposed with the application. It appears that this standard has been met.

**SECTION 20.2.5 – MONUMENTATION:** The submitted plan shows that boundaries will be marked using 5/8" capped rebar posts that will be set at all corners. Planning Staff recommend that the Board include a condition of approval related to the inspection of the lot monuments or the submittal of a security to cover the cost of a lot monument inspection prior to the final approval of this application. This standard appears to be met.

**SECTION 20.2.6 – SPECIAL FLOOD HAZARD AREAS:** The plan states that the subject parcels are not located within a Special Flood Hazard Area as shown on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Maps (FIRM). This standard is not applicable.

**SECTION 20.2.7 – FIRE PROTECTION & WATER SUPPLY:** There is no development proposed that would require the installation of fire protection or additional water supply services. This standard is not applicable.

**SECTION 20.2.8 – UTILITIES:** Both subject parcels are served by municipal water and sewer service with no change proposed to those services. This standard is not applicable.

### **Recommended Motion:**

If the Board is inclined to approve this request, the following motion is recommended:

***"Approve PB-2025-16 as shown on the plan identified as "Boundary Line Adjustment Plan" prepared by Envirespect Land Services, LLC at a scale of 1 inch = 20 feet dated June 28, 2025 and last revised August 2025 with the following conditions precedent prior to final approval and signature of the plans by the Planning Board Chair:***

- 1. Owners' signatures appear on the proposed BLA plan.***
- 2. Submittal of two (2) mylar copies of the plans.***
- 3. Submittal of a check in the amount of \$51 made out to the City of Keene to cover recording fees.***
- 4. Inspection of the lot monuments by the Public Works Director, or their designee, following their installation, or the submittal of a security in a form and amount acceptable to the Public Works Director to ensure that the monuments will be set."***



City of Keene, NH

## Planning Board

# Boundary Line Adjustment (BLA) Application

If you have questions about how to complete this form, please call: (603) 352-5440 or email: [communitydevelopment@keenenh.gov](mailto:communitydevelopment@keenenh.gov)

### SECTION 1: PROJECT INFORMATION

**PROJECT NAME:**

Boundary Line Adjustment - 124-126 Eastern Ave & 130 Eastern Ave

**NUMBER OF PARCELS AFFECTED:** 2

**PROJECT ADDRESS(ES):**

124-126 Eastern Ave., 130 Eastern Ave

### SECTION 2: CONTACT INFORMATION

**PROPERTY OWNER #1**

**NAME/COMPANY:**

Bishop 2024 Revocable Trust

**MAILING ADDRESS:**

124 Eastern Ave., Keene, NH 03431

**PHONE:**

603-748-1232

**EMAIL:**

**SIGNATURE:**

**PRINTED NAME:**

Terry Bishop, Trustee

**PROPERTY OWNER #2**

**NAME/COMPANY:**

Bishop 2024 Revocable Trust

**MAILING ADDRESS:**

124 Eastern Ave., Keene, NH 03431

**PHONE:**

603-748-1232

**EMAIL:**

**SIGNATURE:**

**PRINTED NAME:**

Terry Bishop, Trustee

**APPLICANT / AUTHORIZED AGENT**

**NAME/COMPANY:**

George Hansel/HG Johnson Real Estate

**MAILING ADDRESS:**

17 Elm St, Suite B202, Keene, NH 03431

**PHONE:**

603-903-3677

**EMAIL:**

george@hgjohnson.com

**SIGNATURE:**

**PRINTED NAME:**

George Hansel

**FOR OFFICE USE ONLY:**

**TAX MAP PARCEL #(s):**

588 - 031 - 000 - (124-126 Eastern Ave)

588 - 032 - 000 - (130 Eastern Ave)

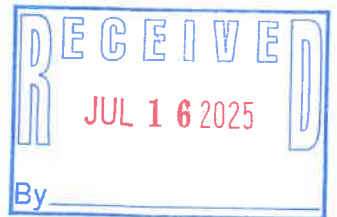
**PARCEL SIZE:** 0.95 ac (124-126 Eastern)

0.57 ac (130 Eastern)

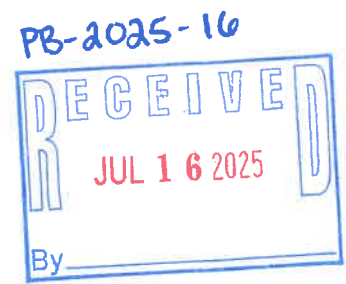
**ZONING:** Low Density  
(Both)

**PROJECT #:**

PB-2025-16







7/15/2025

City of Keene, Community Development Department  
3 Washington St., Keene, NH 03431  
Attn: Planning Staff, Planning Board Chair

Re: 124-126 Eastern Ave., 130 Eastern Ave. – Narrative for Boundary Line Adjustment Review

Project Name: Boundary Line Adjustment - 124-126 Eastern Ave., 130 Eastern Ave.

Chair Farrington and Planning Staff,

HG Johnson Real Estate, on behalf of the property owner Bishop 2024 Revocable Trust, submit the following information to aid in the granting of a boundary line adjustment between 124-126 Eastern Avenue (TMP#: 588-031-000-000-000) and 130 Eastern Avenue (TMP#: 588-032-000-000-000). Both parcels are owned by the Bishop 2024 Revocable Trust and have separate access/frontage along Eastern Avenue. Both properties are served by city water and sewer. 124-126 Eastern Avenue currently has (2) buildings; (1) three-unit multifamily structure, and (1) single-family home. 130 Eastern Avenue has a single-family home and a detached garage.

No new development is anticipated with this request. This boundary line adjustment will transfer 0.22 acres (9,728.2 square feet) from 130 Eastern Avenue to 126-130 Eastern Avenue. The adjusted lots will both conform to the Low-Density zoning district requirements outlined in the Land Development Code (LDC).

The sizes of the existing and proposed lots are as follows:

**124-126 Eastern Avenue**

Existing: 0.99 acres (43,089.6 square feet), Proposed: 1.21 acres (52,817.8 square feet)

**130 Eastern Avenue**

Existing: 0.57 acres (24,767.3 square feet), Proposed: 0.34 acres (15,039.1 square feet)

This boundary line adjustment as proposed complies with Article 20 of the LDC. As no new development or changes of use are being considered, the Site Development Standards outlined in Article 21 of the LDC do not apply to this request.



We request exemptions from providing an existing conditions plan or a proposed conditions plan. The lot line proposed for adjustment is highlighted on the attached survey prepared by Envirespect Land Services LLC and Dated June 28, 2023.

Thank you for your consideration of this application. Please feel free to reach out to me with any questions or concerns.

Best regards,

A handwritten signature in blue ink, appearing to read "George Hansel", written over a horizontal line.

George Hansel, HG Johnson Real Estate

Submitted on behalf of:

A handwritten signature in blue ink, appearing to read "Terry Bishop", written over a horizontal line.

Terry Bishop, Trustee, Bishop 2024 Revocable Trust

Attachments:

- 1) Boundary Line Adjustment Application
- 2) Abutter's list and mailing labels
- 3) Site Survey

REFERENCE PLANS

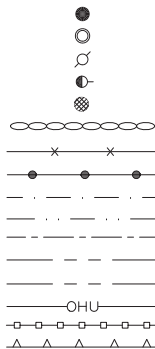
"LAGERBERG PROPERTY 126 EASTERN AVENUE, KEENE, N.H. PLAN FOR SUBDIVISION"; PREPARED BY ARMAND R. PAQUETTE; DATED FEBRUARY 28, 1975; SCALE 1"=50'; RECORDED AT CORD IN PLAN BOOK 32 PAGE 63 (P0032-0063)

"LAGERBERG PROPERTY 126 EASTERN AVENUE, KEENE, N.H. PLAN FOR SUBDIVISION"; PREPARED BY ARMAND R. PAQUETTE; DATED FEBRUARY 28, 1975; SCALE 1"=50'; APPROVED BY KEENE PLANNING BOARD 1976? RECORDED AT CORD IN PLAN BOOK 35 PAGE 69 (P0035-0069)

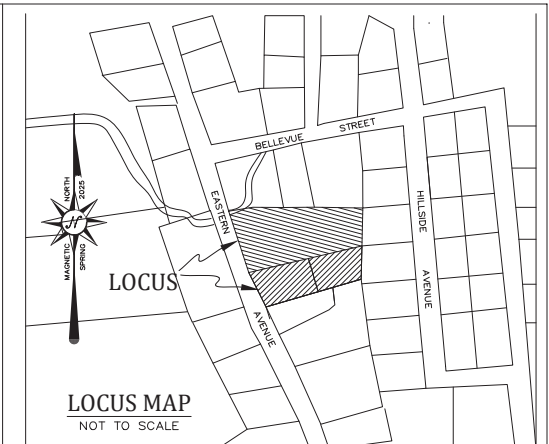
"LOCATION OF PURPOSED STREETS IN SUBDIVISION OWNED BY FORREST L. CAREY ";SCALE 1" = 50'; RECORDED IN PLAN BOOK 7 PAGE 53 (P0007-0053) AT THE CORD.

"PROPOSED SUBDIVISION OF F.L. CAREY BELLEVUE STREET EXTENSION WITH PLAN OF COMPLETE PROJECT WOODSIDE AND HILLSIDE AVENUES"; PREPARED BY G.G. PHILBROOK; DATED AUGUST 1956; SCALE 1"=50'; RECORDED IN PLAN BOOK 9 PAGE 67 (P0009-0067)AT THE CORD.

LEGEND



- PIN FOUND
- REBAR SET
- UTILITY POLE
- GUY ANCHOR
- SEWER MANHOLE
- STONE WALL
- WIRE FENCE
- CHAIN LINK FENCE
- ORDINARY HIGH WATER MARK
- CENTERLINE OF STREAM
- CITY OF KEENE 30' WETLAND SETBACK
- APPROXIMATE ABUTTER LINE
- BUILDING SETBACK LINE
- OVERHEAD UTILITIES
- WHITE PLASTIC FENCE
- WOOD FENCE WITH STEEL POSTS



NOTES

THE PURPOSE OF THIS PLAN IS TO ADJUST THE BOUNDARY LINE BETWEEN PARCEL 588-031-000-000-000 AND 588-032-000-000-000.

OWNERS OF RECORD:  
MAP 588-031-000-000-000 BISHOP 2024 REVOCABLE FAMILY TRUST  
TERRY A. BISHOP & FREDERICA A. BISHOP TRUSTEES  
124-126 EASTERN AVE  
KEENE, NH 03431  
VOLUME 3273 PAGE 1214  
MAP 588-032-000-000-000 BISHOP 2024 REVOCABLE FAMILY TRUST  
TERRY A. BISHOP & FREDERICA A. BISHOP TRUSTEES  
130 EASTERN AVE  
KEENE, NH 03431  
VOLUME 3249 PAGE 1121

EXISTING AREA OF PARCEL 588-031-000-000-000: 43,089.6 SF OR 0.99 ACRES  
EXISTING AREA OF PARCEL 588-032-000-000-000: 24,767.3 SF OR 0.57 ACRES

PROPOSED AREA OF PARCEL 588-031-000-000-000: 52,817.8 SF OR 1.21 ACRES  
PROPOSED AREA OF PARCEL 588-032-000-000-000: 15,039.1 SF OR 0.34 ACRES

AREAS:  
PARCEL 588-031-000-000-000  
EXISTING: 43,089.6 SF OR 0.99 ACRES  
PARCEL A: + 9,728.2 SF OR 0.23 ACRES  
ADJUSTED: 52,817.8 SF OR 1.21 ACRES  
PARCEL 588-032-000-000-000  
EXISTING: 24,767.3 SF OR 0.57 ACRES  
PARCEL A: - 9,728.2 SF OR 0.23 ACRES  
ADJUSTED: 15,039.1 SF OR 0.34 ACRES

MAP AND LOT NUMBERS REFER TO THE CITY OF KEENE PARCEL MAPS.

BOOK & PAGE NUMBERS ARE FOR THE CHESHIRE COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED.

ELEVATIONS ARE ASSUMED

CONTOUR INTERVAL IS 2.0'

CURRENT ZONING: LOW DENSITY

MIN. LOT AREA - 10,000 SQ.FT.  
MIN. FRONTAGE - 60' FEET  
MIN. WIDTH AT BUILDING LINE - 70 FEET

BUILDING SETBACKS:  
FRONT - 15 FEET  
SIDE - 10 FEET  
REAR - 20 FEET

THE RIGHT OF WAY OF EASTERN AVENUE WAS DETERMINED BASED ON THE LAYOUT FROM THE COURT ON MARCH 24, 1868 RECORDED IN VOLUME 3 PAGE 185 ON FILE AT THE CITY OF KEENE CLERK'S OFFICE. THE ORIGINAL LAYOUT WAS FOR 50' WIDE AND ALSO MENTIONED IN THE WADSWORTH FILES FOR THE ORIGINAL LAYOUT.

JURISDICTIONAL WETLANDS WERE OBSERVED.

PARCEL 588-031-000-000-000 AND PARCEL 588-032-000-000-000 ARE NOT WITHIN THE 100 YEAR FLOOD PLAIN.

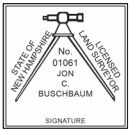
THE PARCEL MAY BE SUBJECT TO OTHER EASEMENTS AS THEY EXIST OF RECORD OR IN FACT. ENVIRESPLECT LAND SERVICES DOES NOT INTEND OR REPRESENT THAT ALL RIGHTS AND EASEMENTS AFFECTING THE SUBJECT PROPERTY ARE SHOWN. A SPECIFIC AND THOROUGH TITLE EXAMINATION IS SUGGESTED TO DETERMINE THE NATURE AND EXTENT OF RIGHTS AND EASEMENTS AFFECTING THE SUBJECT PROPERTY.

THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. ENVIRESPLECT LAND SERVICES MAKES NO CLAIMS TO THE ACCURACY OR COMPLETENESS OF THE UTILITIES SHOWN. FIELD VERIFICATION IS REQUIRED PRIOR TO ANY EXCAVATION ON THE SITE.  
CALL DIG-SAFE @ 811.

SURVEYOR'S CERTIFICATION

THIS SURVEY IS THE RESULT OF A RANDOM TRAVERSE USING AN ELECTRONIC TOTAL STATION AND MEETS THE MINIMUM REQUIREMENTS OF AN URBAN SURVEY AS SPECIFIED IN NH LAN TABLE 500.1.

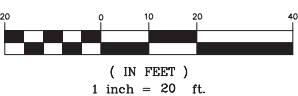
I HEREBY CERTIFY THAT THIS PLAT CONFORMS TO ALL APPLICABLE LOCAL ZONING ORDINANCES AND RULES.



WETLAND DISCLOSURE:

JURISDICTIONAL WETLAND DELINEATION WAS COMPLETED IN THE AREA(S) SHOWN IN THE SPRING, SUMMER, FALL, WINTER OF 20\_\_ ACCORDING TO THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2, JANUARY 2012 (ERDC/EL TR-12-1)

GRAPHIC SCALE



OWNER CERTIFICATIONS

WE, TERRY A. BISHOP AND FREDERICA A. BISHOP, CERTIFY THAT WE ARE THE OWNERS OF PARCEL 588-031-000-000-000 AND PARCEL 588-032-000-000-000, AND APPROVE OF THIS BOUNDARY LINE ADJUSTMENT.

TERRY A. BISHOP DATE  
FREDERICA A. BISHOP DATE

APPROVED AS A \_\_\_\_\_ 2025

IN ACCORDANCE WITH THE PROVISIONS OF RSA 674.

THE CITY OF KEENE PLANNING BOARD

BY \_\_\_\_\_, CHAIRMAN

588-044-000-000-000

ROBLES, ADAM DANIEL  
ROBLES, BRITTANY LEIGH  
131 EASTERN AVE.  
KEENE, NH 03431  
BK. 3101 PG. 325

588-045-000-000-000

SJD PROPERTIES LLC  
PO BOX 381  
SPOFFORD, NH 03462  
BK. 3247 PG. 767

588-033-000-000-000

AUDET PHILIP  
132 EASTERN AVE.  
KEENE, NH 03431  
BK. 3102 PG. 120

588-034-000-000-000

BALLOU, MARY B.  
93 MATTHEWS RD.  
SWANZEY, NH 03446  
BK. 2944 PG. 744

588-023-000-000-000

PIGNATIELLO II, VINCENT M  
HALVORSEN LAURA A.  
27 HILLSIDE AVE.  
KEENE, NH 03431  
BK. 3151 PG. 643

588-024-000-000-000

BOYD, MICHAELA MARIE &  
LAYFIELD, ARRON FORESTER  
68 SQUANTUM RD  
JAFFREY, NH 03452  
BK. 3292 PG. 476

588-025-000-000-000

BUCKLEY, CONNOR & CHICKERELLA,  
RACHEL  
19 HILLSIDE AVE  
KEENE, NH 03431  
BK. 3241 PG. 763

588-026-000-000-000

ROGERS, SCOTT A. &  
MAUREEN N.  
15 HILLSIDE AVE.  
KEENE, NH 03431  
BK. 1486 PG. 836

588-035-000-000-000

CANDELLO, MATTHEW R.  
33 BELLEVUE ST.  
KEENE, NH 03431  
BK. 3021 PG. 935

588-030-000-000-000

BOYD, MICHAELA MARIE &  
LAYFIELD, ARRON  
FORESTER  
68 SQUANTUM RD  
JAFFREY, NH 03452  
BK. 3292 PG. 476

588-029-000-000-000

FISH PATRICIA A.  
19 BELLEVUE ST.  
KEENE, NH 03431  
BK. 939 PG. 592

588-031-000-000-000

BISHOP 2024 FAMILY REV.  
TRUST  
124-126 EASTERN AVE.  
KEENE, NH 03431  
BK. 3273 PG. 1214

## STAFF REPORT

### PB-2025-20 – COTTAGE COURT CONDITIONAL USE PERMIT – 429 ELM ST

#### **Request:**

Applicant HG Johnson Real Estate, on behalf of owner JC&C Rentals LLC, proposes to convert a barn into 2 dwelling units on the property at 429 Elm St (TMP# 520-005-000). The parcel is ~0.48-ac and is located in the Low Density District.

#### **Background:**

The subject parcel is an existing 0.48 ac lot located on the eastern side of Elm St. directly across the street from Fuller Elementary School and ~330 ft from the Timberlane Dr. intersection. The property contains three existing detached single-family residences, a shed, barn, and associated site improvements including a U-shaped gravel driveway with two street access connections.

The purpose of this application is to convert the existing ~1120 SF barn into a duplex with a two bed, one bath unit and a one bed one bath unit. This will increase the total count of residential units on the property to five units. The property contains eight existing parking spaces where only five spaces are required. There is no proposed alteration to site besides the barn conversion. This project does not meet the threshold for site plan review.

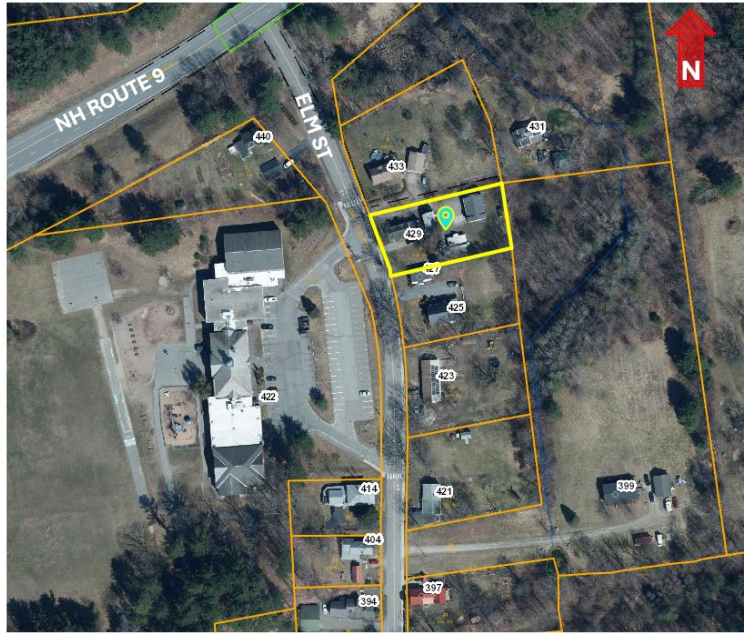


Figure 1. Aerial image of 429 Elm St. (outlined in yellow).

#### **Determination of Regional Impact:**

After reviewing the application, staff have made a preliminary evaluation that the proposed duplex does not appear to have the potential for “regional impact” as defined in RSA 36:55. The Board will need to make a final determination as to whether the proposal, if approved, could have the potential for regional impact.

#### **Completeness:**

The applicant requests exemptions from submitting separate existing and proposed conditions plan, a grading plan, a lighting plan, a landscaping plan, and all technical reports. Staff recommend that the Board grant these exemptions and accept the application as “complete.”



## STAFF REPORT

**Application Analysis:** The following is a review of the Cottage Court Overlay requirements.

### 17.5.1 Development Types Allowed

The proposal is to convert an existing barn into a duplex. The development types allowed under the Cottage Court Overlay for the Low-Density Zoning District include single-family, duplex, triplex, townhome, and dwelling above ground floor. The three existing detached single-family units were constructed between 1936-1940. The existing development pattern of the site is considered legal non-conforming as multiple principal uses are not permitted on a lot in a residential zoning district. Approval of the Cottage Court Conditional Use Permit will bring the property into conformance with the City's Zoning Regulations in terms of allowed uses. All requirements appear to be met.

### 17.5.3 Conditional Use Permit Standards

- A. Dwelling unit size: This standard requires a maximum average size of 1,250 SF gross floor area (gfa) and a maximum building footprint of 900 SF per unit. The proposed project will result in an average gfa of 900 SF per unit with 5 dwelling units. The total building footprint of all existing buildings is 3,185 SF with an average of 637 SF per unit. Each building footprint appears to be less than 900 SF. This standard has been met.
- B. Parking: This standard requires a minimum of one parking space per unit and a maximum of one parking space per bedroom. Each unit within the property has access to one of the eight existing parking spaces on site. This standard has been met.
- C. Building Separation: All buildings are existing on site. The conversion of the barn to a duplex will require a building permit application that meets all applicable building, fire, and life safety codes. This standard has been met.
- D. Driveways: The property contains an existing driveway that appears to be at least 20 ft wide to accommodate vehicular traffic to parking area. This standard appears to have been met.
- E. Internal Roads: No internal roads are proposed; this standard does not apply.
- F. Screening: This standard states that either a six-foot tall fence or a landscaped buffer is required for screening if the proposed building type (not density) is more intense than the adjacent building type. The proposed conversion of an existing barn to a duplex with no significant changes to the overall site does not constitute a more intense building type to the surrounding properties. This standard does not apply.

### 17.5.4 Architectural Guidelines

This section includes guidance to promote developments that are respectful of the context of the surrounding neighborhood. Photos of the existing barn and the other buildings on the property are included below.

## STAFF REPORT



Figure 2. Picture of existing barn



Figure 3. Picture of site from Elm St.



## STAFF REPORT



Figure 4. Picture of single-family unit 2



Figure 5. Picture of single-family unit 3

The applicant proposes the conversion of the existing barn into a duplex. The conversion will include the removal of the garage doors, adding new entrances to the western side of the building, enlargement of the existing dormers, and the installation of new insulated windows. The overall architectural style of the building is not proposed to be altered. The Board will need to determine if this standard has been met.

## STAFF REPORT

### **Recommended Motion:**

If the Board is inclined to approve this request, the following motion is recommended:

**Approve PB-2024-15 as shown on the site plan identified as “429 Elm Street, Keene” prepared by H.G. Johnson Real Estate at a scale of 1 inch = 15’8” dated July 8, 2025 and in the application materials received July 9 2025, and August 4, 2025, with the following conditions:**

- 1. Prior to final approval and signature of the plans by the Planning Board Chair, the following conditions shall be met:**
  - a. Owner’s signature appears on the site plan.**
  - b. Submittal of five (5) paper copies and one digital copy of the site plan.**



City of Keene, NH

# Cottage Court

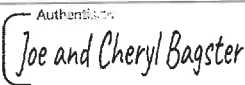
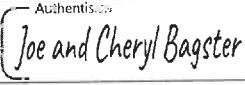
## Conditional Use Permit (CUP) Application

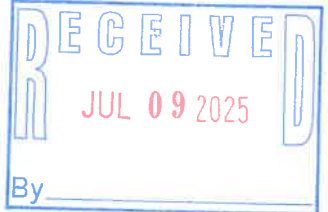
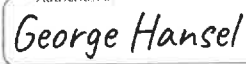
If you have questions about how to complete this form, please call: (603) 352-5440 or email: [communitydevelopment@keenenh.gov](mailto:communitydevelopment@keenenh.gov)

### SECTION 1: PROJECT INFORMATION

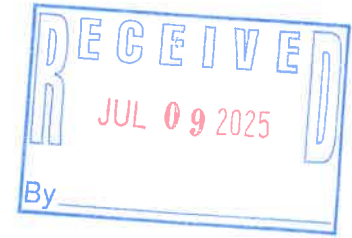
<b>PROJECT NAME:</b> 429 Elm Street	<b>NUMBER OF NEW DWELLING UNITS PROPOSED:</b> 2  <i>(Please note: Proposals that include the creation of 5 or more new units will require concurrent Major Site Plan review. See the Major/Minor Site Plan application for additional information.)</i>
<b>PROJECT ADDRESS(ES):</b> 429 Elm Street Keene, NH 03431	<b>DOES THIS PROJECT INCLUDE A PROPOSAL TO SUBDIVIDE ONE OR MORE PARCELS?</b>  <input type="checkbox"/> YES <input type="checkbox"/> NO  <i>(If yes, a Subdivision application will need to be submitted and reviewed currently with the Cottage Court application. See the Article 20 of the Land Development Code (LDC) for additional information.)</i>
<b>AVERAGE GROSS FLOOR AREA OF ALL PROPOSED UNITS (In SF):</b> 900	

### SECTION 2: CONTACT INFORMATION

PROPERTY OWNER	APPLICANT
<b>NAME/COMPANY:</b> Cheryl & Joe Bagster/JC&C Rentals LLC	<b>NAME/COMPANY:</b> JC&C Rentals LLC
<b>MAILING ADDRESS:</b> 83 Eastern Ave. Keene, NH 03431	<b>MAILING ADDRESS:</b> 83 Eastern Ave. Keene, NH 03431
<b>PHONE:</b> 603-313-5909	<b>PHONE:</b> 603-313-5909
<b>EMAIL:</b> jccb00@aol.com	<b>EMAIL:</b> jccb00@aol.com
<b>SIGNATURE:</b> 	<b>SIGNATURE:</b> 
<b>PRINTED NAME:</b> Joe and Cheryl Bagster	<b>PRINTED NAME:</b> Joe and Cheryl Bagster

AUTHORIZED AGENT (if different than Owner/Applicant)	FOR OFFICE USE ONLY:	
<b>NAME/COMPANY:</b> George Hansel/HG Johnson Real Estate	<b>TAX MAP PARCEL #(s):</b> 520-005-000-_____	
<b>MAILING ADDRESS:</b> 17 Elm Street, Suite 202B, Keene, NH 03431	_____	
<b>PHONE:</b> 603-903-3677	<b>PARCEL SIZE:</b> 0.48	<b>DATE STAMP:</b>  By _____
<b>EMAIL:</b> george@hgjohnson.com	<b>ZONING DISTRICT:</b> Low Density	
<b>SIGNATURE:</b> 	<b>PROJECT #:</b> PB-2025-15	
<b>PRINTED NAME:</b> George Hansel		

PB- 2025- 15



7/8/2025

City of Keene, Community Development Department  
3 Washington St., Keene, NH 03431  
Attn: Evan Clements, Community Development Department

Re: 429 Elm Street – Narrative for Cottage Court CUP Review  
Project Name: 429 Elm Street Project

Mr. Clements,

HG Johnson Real Estate, on behalf of the property owner JC & C Rentals, submit the following information to aid in the granting of a conditional use permit (CUP) to utilize the Cottage Court Overlay district for proposed work on the lot located at 429 Elm Street (TMP#: 520-005-000-000-000).

In accordance with the Conditional Use Permit Standards 17.5.5.B described in the Land Development Code, we offer the following analysis to aid in the consideration of our request:

#### Written Narrative

The property currently has (3) buildings that contain (3) housing units. An unfinished barn and shed are also on the property. This project will involve renovating the interior of the existing barn to create (2) new residential apartments: (1) two-bed, one-bath units and (1) one-bed, one-bath unit. To accommodate this change, new entrances will be added to the western side of the building. Additionally, the existing garage doors will be eliminated, existing dormers will be enlarged or replaced, and new insulated windows will be installed. No other exterior modifications are planned as part of this project. The entire property is served by city water and sewer.

There are (8) existing parking spaces on the property. Once complete, there will be (5) housing units on site with an average gross living area per unit of 900 SF. The total footprint of all buildings on the site is 3,185 SF (637 SF per unit). The parcel is 0.48 acres in size and located in the Low Density (LD) zoning district.

In accordance with the Site Development Standards described in Article 21 of the Land Development Code, we offer the following analysis to aid in the consideration of our request:

#### 21.2 Drainage & Stormwater Management

The existing drainage patterns on the site will be maintained and no major exterior improvements are planned beyond the addition of a new entrance on the southwest side of the building.

#### 21.3 Sediment & Erosion Control

See above.



#### 21.4 Snow Storage & Removal

Snow will continue to be stored in various locations on the property.

#### 21.5 Landscaping

No changes in landscaping are anticipated.

#### 21.6 Screening

No additional screening is anticipated.

#### 21.7 Lighting

New porch lights will be installed at the new entrances. The LED fixture will be dark skies compliant, with a 3000K warm white color temperature (cut sheet attached).

#### 21.8 Sewer & Water

The property is currently served by (1) 6" sewer line and (1) ¾" potable water line connecting to Elm Street. A new water/sewer line will be extended from Elm Street to the barn under the existing driveway. A design flow calculation for the parcel post-development is in Table 2-1 below.

Table 2-1

#### 429 Elm Street

Sewer/Water Design Flow Calculations

	Units	Bedrooms	Bathrooms	Design Flow (GPD)
New 1-bed/1-bath unit	1	1	1	150
New 2-bed/1-bath units	1	2	1	225
Total New	2	3	2	375
Existing 2-bed/1-bath	1	2	1	225
Existing 2-bed/1-bath	1	2	1	225
Existing 2-bed/1-bath	1	2	1	225
Total Existing	3	6	3	675
<b>Total Combined</b>				<b>1050</b>
<b>Net Change</b>				<b>375</b>

\*Unit design flows based on 150 GPD for new one-bedroom units

\*Unit design flows for 2-3 bedroom units based on NH DES Rules, ENV-Wq 1008, Page 55:

As a result of this renovation, we anticipate a net increase of water usage and sewer discharge on the site to be no more than 375 GPD (with peak usage occurring in the early morning and evening hours). Overall, we anticipate that the impact on city water and sewer utilities from this project will be negligible.





#### 21.9 Traffic & Access Management

After consulting the ITE Trip Generation Manual, traffic from the new development is estimated to be between 1-2 vehicle trips per hour. We expect the net difference in trips to and from the site before and after this development to be negligible. Additionally, the trip estimates for these additional units are far below the 100 vehicle trips per hour threshold that would constitute a noticeable impact, based on current ITE and NHDOT methodologies. In other words, standard traffic engineering practice suggests that the proposed development would be expected to result in negligible impacts to the adjacent roadway system.

#### 21.10 Filling & Excavation

N/A. No excavation is anticipated as part of this development.

#### 21.11 Surface Waters & Wetlands

There are wetlands approximately 180' from the rear property line. This proposal will not impact any surface waters or wetlands.

#### 21.12 Hazardous & Toxic Materials

N/A

#### 21.13 Noise

Following construction, no additional noise that is inconsistent with residential uses that already exist on the site and in the surrounding area.

#### 21.14 Architecture & Visual Appearance

No substantial changes to the architecture and visual appearance of the building are anticipated, beyond the addition of new entryways and porch light(s) near the back of the building, replacement of the dormers and windows, and elimination of the garage doors. The new porch light(s) will be a dark skies compliant LED fixture that emits 3000K of warm white light. The new entryway will closely match the existing building features.

We look forward to being granted permission to proceed with this exciting project that will add (4) new affordable housing units to the city's housing stock. Please reach out to me with any questions or concerns. Thank you.

Best regards,

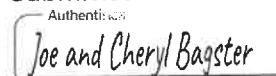


George Hansel, HG Johnson Real Estate

Attachments:

- 1) Cottage Court CUP Application
- 2) Plan Set – 429 Elm Street Project

Submitted on behalf of:

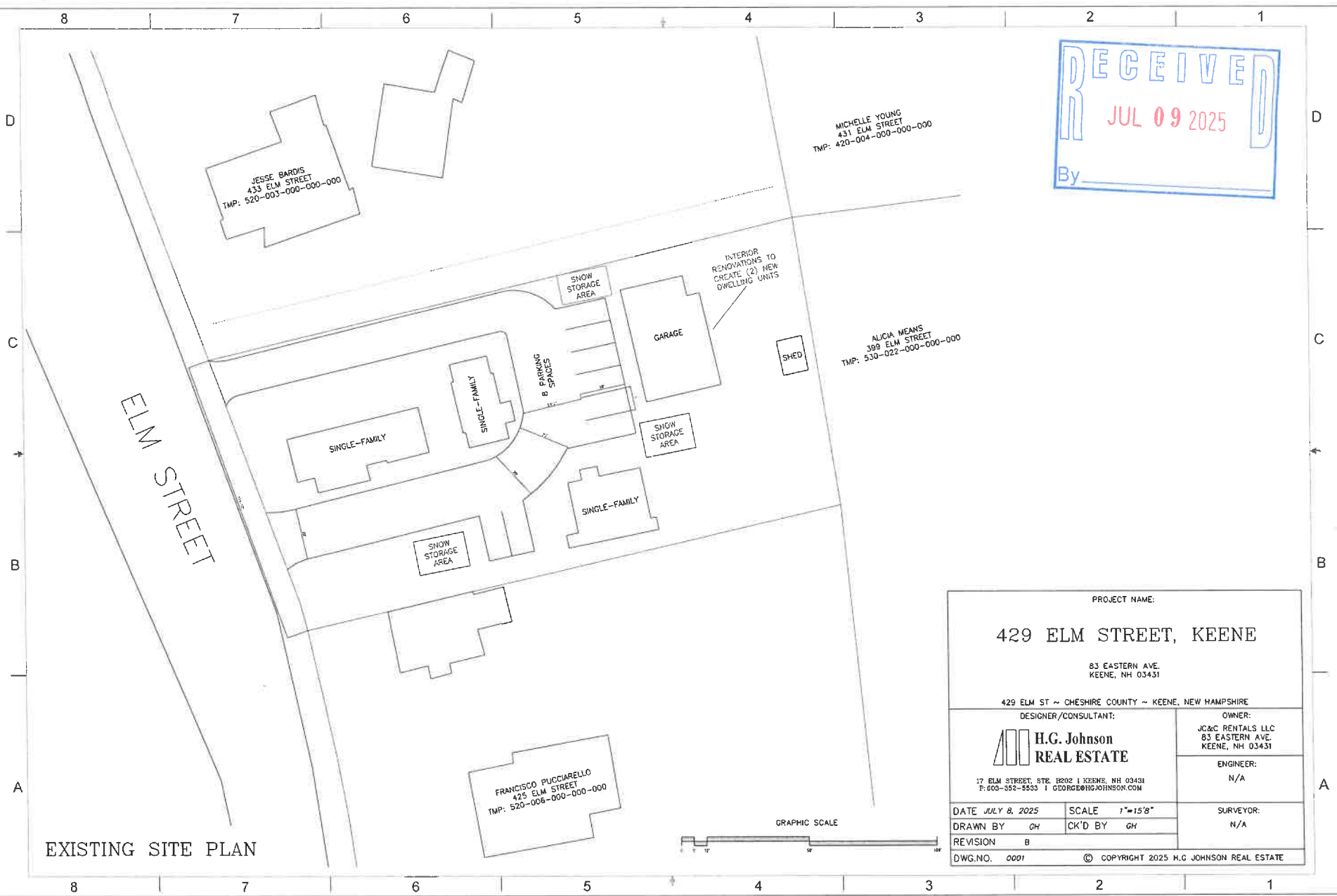


Cheryl & Joe Bagster, Property Owners

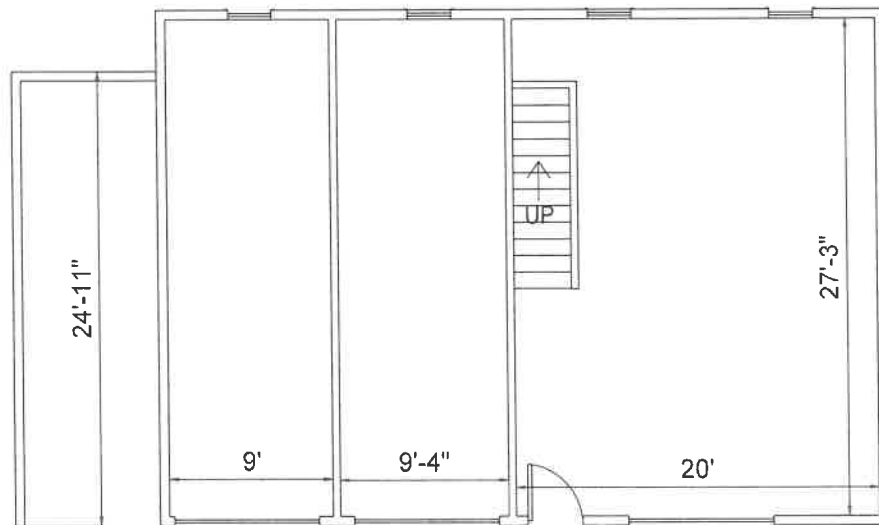
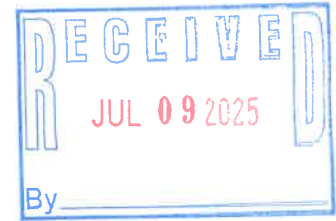
- 3) Manufacturer's cutsheet porch light
- 4) Abutter's List and Mailing Labels



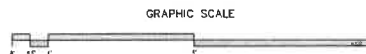
**RECEIVED**  
**JUL 09 2025**  
 By \_\_\_\_\_




PROJECT NAME:	
429 ELM STREET, KEENE	
83 EASTERN AVE. KEENE, NH 03431	
429 ELM ST ~ CHESHIRE COUNTY ~ KEENE, NEW HAMPSHIRE	
DESIGNER/CONSULTANT:	OWNER:
<b>H.G. Johnson REAL ESTATE</b>	JC&C RENTALS LLC 83 EASTERN AVE. KEENE, NH 03431
17 ELM STREET, STE. 1020   KEENE, NH 03431 P: 603-552-5533   G@H.G.JOHNSON.COM	ENGINEER:
	N/A
DATE JULY 8, 2025	SCALE 1"=15'8"
DRAWN BY GH	CK'D BY GH
REVISION B	SURVEYOR:
	N/A
DWG.NO. 0001	© COPYRIGHT 2025 H.G. JOHNSON REAL ESTATE

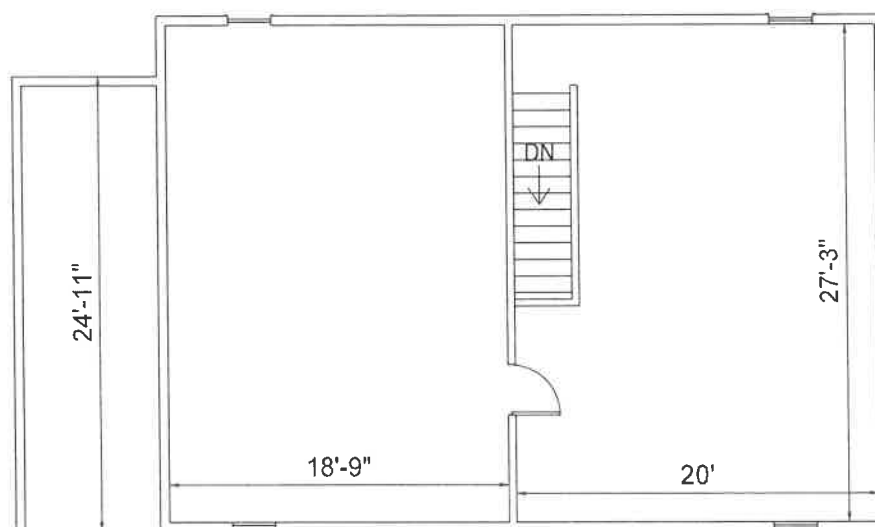
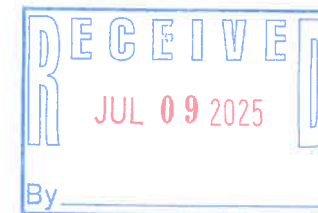


FIRST FLOOR (EXISTING)

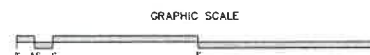



PROJECT NAME:	
429 ELM STREET, KEENE	
83 EASTERN AVE. KEENE, NH 03431	
429 ELM ST ~ CHESHIRE COUNTY ~ KEENE, NEW HAMPSHIRE	
DESIGNER/CONSULTANT:	OWNER:
 <b>H.G. Johnson REAL ESTATE</b>	JC&C RENTALS LLC 83 EASTERN AVE. KEENE, NH 03431
17 ELM STREET, STE. 8002   KEENE, NH 03431 P: 803-352-5633   G: 803-352-5634	ENGINEER:
	N/A
DATE JULY 8, 2025	SCALE 1"=15'-0"
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REVISION B	SURVEYOR:
	N/A
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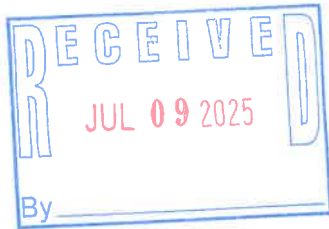


SECOND FLOOR (EXISTING)



PROJECT NAME:			
429 ELM STREET, KEENE			
83 EASTERN AVE. KEENE, NH 03431			
429 ELM ST ~ CHESHIRE COUNTY ~ KEENE, NEW HAMPSHIRE			
DESIGNER/CONSULTANT:		OWNER:	
 <b>H.G. Johnson REAL ESTATE</b>		JC&C RENTALS LLC 83 EASTERN AVE. KEENE, NH 03431	
17 ELM STREET, STE. 2002   KEENE, NH 03431 P. 603-352-5533   GEORGE@H.GJOHNSON.COM		ENGINEER:	
		N/A	
DATE JULY 8, 2025		SCALE 1"=15'8"	
DRAWN BY GH		CK'D BY GH	
REVISION B		SURVEYOR:	
		N/A	
DWG.NO. 0001		© COPYRIGHT 2025 H.G JOHNSON REAL ESTATE	

PB-2025-15  
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TYPE 1 WALL DETAIL:

WALL TYPE 1  
DESIGN # UL 1305  
FIRE RATING: 1 HOUR  
STC RATING: 50  
SOUND TEST: USG-151238  
SYSTEM THICKNESS: 5-1/8"  
LOCATION: INTERIOR  
FRAMING TYPE: WOOD STUD (LOAD-BEARING)

ASSEMBLY REQUIREMENTS  
GYPSUM PANELS: ONE LAYER 5/8" TYPE X GWB  
RESILIENT CHANNEL: ONE LAYER 1/2" RESILIENT CHANNEL, 25 GA.  
WOOD STUDS: 2" X 4" WOOD STUDS, 16" O.C.  
INSULATION: 1 LAYER, 3-1/2" FIBRIC-ASS INSULATION  
GYPSUM PANELS: TWO LAYERS 5/8" TYPE X GWB

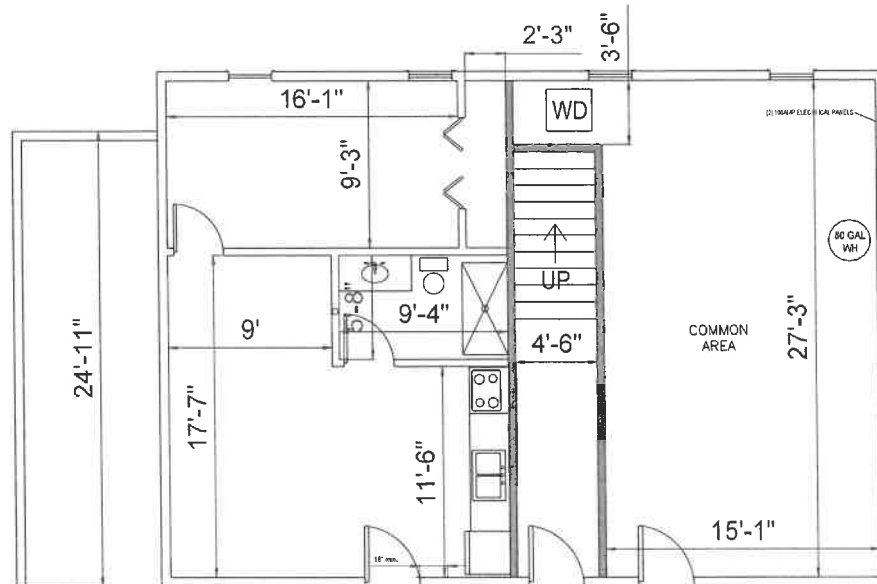
PLAN VIEW  
Scale: 1" = 2'-0"

FLOOR-CEILING ASSEMBLY DETAIL:

FLOOR-CEILING ASSEMBLY (1ST AND 2ND FLOOR)  
DESIGN # FCA-01 WITH FIBERGLASS INSULATION AND  
5/8" TYPE X GWP ADDED TO MEMBRANE  
FIRE RATING: 1 HOUR  
STC RATING: 50  
LOCATION: INTERIOR  
TYPE: WOOD JOIST

ASSEMBLY  
FLOORING: ONE LAYER 1/4" VINYL FLOORING  
DECK: ONE LAYER 2X12" 1&G PL WOOD  
SUBFLOOR: ONE LAYER 1" NOMINAL LUMBER  
INSULATION: FIBERGLASS INSULATION  
JOISTS: 2" X 7" WOOD, 16" O.C.  
GYPSUM PANELS: TWO LAYERS 5/8" TYPE X GWB

PLAN VIEW  
Scale: 1" = 2'-0"



FIRST FLOOR

PROJECT NAME:			
429 ELM STREET, KEENE			
83 EASTERN AVE. KEENE, NH 03431			
429 ELM ST ~ CHESHIRE COUNTY ~ KEENE, NEW HAMPSHIRE			
DESIGNER/CONSULTANT:		OWNER:	
H.G. Johnson REAL ESTATE		JC&C RENTALS LLC 83 EASTERN AVE. KEENE, NH 03431	
17 ELM STREET, STE. D202   KEENE, NH 03431 P: 603-352-5533   GEORGE@HGOJOHNSON.COM		ENGINEER: N/A	
DATE JULY 8, 2025		SCALE 1"=15'-0"	
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REVISION B		SURVEYOR: N/A	
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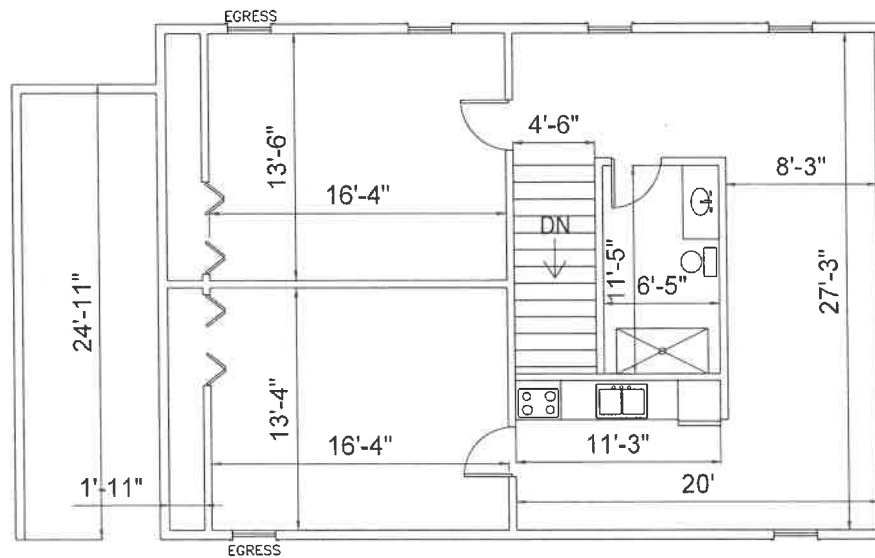
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PROJECT NAME:		
429 ELM STREET, KEENE		
83 EASTERN AVE. KEENE, NH 03431		
429 ELM ST ~ CHESHIRE COUNTY ~ KEENE, NEW HAMPSHIRE		
DESIGNER/CONSULTANT:	OWNER:	
 <b>H.G. Johnson REAL ESTATE</b> 17 ELM STREET, STE. B060   KEENE, NH 03431 P: 603-352-5533   GBJ@HJOHNSON.COM	JC&C RENTALS LLC 83 EASTERN AVE. KEENE, NH 03431	
DATE JULY 8, 2025	SCALE 1"=15'-0"	ENGINEER:
DRAWN BY GH	CK'D BY GH	N/A
REVISION B	SURVEYOR:	
DWG.NO. 0001	N/A	
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GRAPHIC SCALE



SECOND FLOOR

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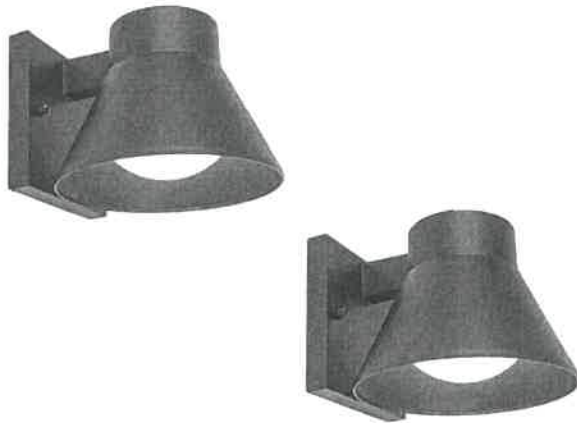
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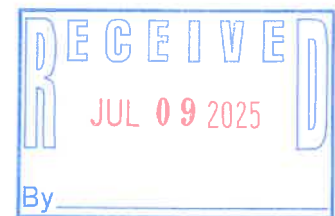
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**PB-2025-15**

## Specifications

General			
Collection Name	N/A	Glass Color	White
Color-Changing	No	Light Color	Warm White
Fixture Color Family	Black	Manufacturer Color/Finish	Black
Fixture Finish	Matte	Type	Wall Lantern
Dimensions			
Back Plate Height (Inches)	4	Fixture Width (Inches)	7
Back Plate Width (Inches)	3.5	Size	Medium
Fixture Depth (Inches)	6.22	Weight (lbs.)	3.6
Fixture Height (Inches)	4.26		
Features			
Bulb Type	LED	Number of Bulbs Required	0
Bulb(s) Included	No	Package Quantity	2
Dark Sky	Yes	Power Source	Hardwired
Dimmable	No	Recommended Light Bulb Shape	N/A
Glass Style	Polycarbonate	Shape	Unicube
Hardware Included	Yes	Style	Transitional
Light Bulb Base Type	Integrated	Usage Rating	Wet rated
Lowes Exclusive	Yes	Warranty	3-year limited
Lumens	350	Wattage	6
Material	Cast aluminum	Wattage Equivalent	6
Maximum Bulb Wattage	60	Weather Resistant	Yes
Maximum Fixture Wattage	60	Weatherproof	Yes
Motion Sensor	No		





**MEMORANDUM - AMENDED**

**TO:** Planning Board  
**FROM:** Megan Fortson, Planner  
**DATE:** August 22, 2025  
**SUBJECT:** PB-2024-20 – Earth Excavation Permit Major Amendment & Hillside Protection Conditional Use Permit – 21 & 57 Route 9

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**Recommendation:**

Planning Staff will provide a recommended motion on the Earth Excavation Permit Major Amendment & Hillside Protection Conditional Use Permit, PB-2024-20, at the Planning Board meeting on August 25, 2025.

**Background:**

Following the distribution of the previous agenda packet and memo for the August 25<sup>th</sup> Planning Board meeting, City Staff met with the applicant's team and the Board's third-party consultants to discuss the revised materials that had been submitted along with the review letters drafted by the consultants. During this meeting, all parties came to the consensus that with a few revisions to existing materials and the submittal of additional information, this application would likely be ready for deliberation at the August Planning Board meeting.

On August 21<sup>st</sup>, the applicant submitted a revised stormwater management report, plan set, a response letter to Fieldstone Land Consultants, and an amended acid mine drainage monitoring plan. Additionally, the results of a "slug test" performed by Front Geoservices on one of the existing bedrock monitoring wells was also submitted. These updated materials were forwarded to the Planning Board's third-party engineering consultant, Fieldstone Land Consultants, as well as their third-party hydrogeology consultant, Sanborn, Head & Associates for review on the same day.

Following their review of the updated materials, Sanborn Head submitted the attached memo dated August 22<sup>nd</sup> stating that the updated materials adequately addressed their comments related to excavation below the water table, acid mine drainage, and stormwater infiltration. Included in the memo were two recommended conditions of approval related to measuring seasonal high water levels in one of the bedrock monitoring wells and installing an additional well in Permit Period 1. Fieldstone agreed with the feedback provided by Sanborn Head and communicated to staff via email that their comments had also been sufficiently addressed.

Included as attachments are the review letter from Sanborn Head as well as the updated materials submitted by the applicant. Links to the applicable Planning Board agenda packets and meeting minutes are included below. Additional information is available on the Planning Board webpage at <https://keenenh.gov/planning-board/>.



**Planning Board Agenda Packets:**

- [February 24, 2025](#)
- [March 24, 2025](#)
- [May 27, 2025](#)
- [July 28, 2025](#)

**Planning Board Meeting Minutes:**

- [February 24, 2025](#)
- [March 24, 2025](#)
- [May 27, 2025](#)

## MEMORANDUM

**To:** Megan Fortson, Planner, City of Keene, NH  
**From:** Russell Abell, PG  
**File:** 6741.00  
**Date:** August 22, 2025  
**Re:** Summary of Hydrogeologic Review of G2 Holdings Keene Quarry Expansion Application – Second Addendum Materials/Updates  
**cc:** Mari Brunner, Evan Clements, Emily Duseau

---

Sanborn Head and Associates, Inc. (Sanborn Head) reviewed revised and additional information provided by G2 Holdings (Applicant) in response to our August 15, 2025 Summary of Hydrogeologic Review of G2 Holdings Keene Quarry Expansion Application Summary Memorandum (August 2025 Memo). As requested, this review of revised/additional information focused on reviewing the following:

- 1) Frontier Geoservices, GORDON SERVICES – KEENE PIT BRW-12 SLUG TEST DATA & RESULTS, 57 Route 9, Keene, New Hampshire, August 21, 2025.
- 2) Frontier Geoservices, GORDON SERVICES – KEENE PIT ACID MINE DRAINAGE MONITORING PROGRAM, 57 Route 9, Keene, New Hampshire, August 21, 2025.
- 3) Granite Engineering, LLC, 2025, Gravel And Earth Removal Plan G2 Holdings LLC, Keene Tax Map 215 Lots 7 & 8, Sullivan Tax Map 5 Lots 46 & 46-1, 57 Route 9, Keene New Hampshire, Cheshire County, Revised August 21.

The following provides the concerns summarized in our August 2025 Memo and Sanborn Head's responses based on review of the information reviewed in items 1-3 above and information stated during an August 18, 2025 meeting (August 2025 Meeting) with the Applicant and their technical/legal team. Each concern from the August 2025 Memo is provided below in italicized text followed by Sanborn Head's response in plain text font.

1. ***Excavation Below the Water Table:*** *The observed water table in newly installed monitoring wells located in proposed excavation area Period 8 represents water table conditions that can be characterized as seasonal low water table conditions. Therefore, the revised Period 8 "Pit Floor" proposed elevation of 860 feet above mean sea level (AMSL) has the potential to be below the water table and/or lower than six feet above the water table during seasonal high water table conditions. This is especially of concern in the northwest portion of the proposed excavation area. In fact, as shown on Figure 2, under current seasonal low water table conditions, the northwest portion of the Period 8 excavation is projected to be below the water table. Seasonal high water conditions may also be a concern for Period 1 as well, especially in the southeastern portion of the*

*excavation area. Additional data collection from Period 1 would be needed to determine the water table conditions there.*

As requested and agreed upon during the August 2025 Meeting, the Applicant has provided a response to the above concern. The applicant stated with respect to Period 8 that they had revised the final proposed grade elevations for the bottom of the excavation in the northern portion of Period 8 to account for water level elevations in that area and the provided site plans appear to confirm these changes. Discussion during the August 2025 meeting and the revised grade elevations in Period 8 satisfy the above concern as long as a condition of the permit requires seasonal high (e.g., spring conditions) water level monitoring in BRW-09 to confirm the revised grades will be in compliance with the 6 feet above the water table requirement in City of Keene Land Development Code (LDC) Article 25.3.3.

For Period 1, as discussed and agreed upon during the August 2025 meeting, a condition of the permit is recommended to install a monitoring well within Period 1 to confirm the seasonal high water table elevation conditions (e.g., spring conditions) in this area as current data are not sufficient. This is needed to confirm that proposed grade elevations of the base of the Period 1 excavation are in compliance with LDC Article 25.3.3. Addition of this condition will satisfy the above concern with respect to the water table elevation in Period 1.

2. **AMD Potential:** *The Application supporting documentation has presented a concern for [acid mine drainage] AMD potential as a result of excavation of bedrock in each of the proposed Periods. The recently observed presence of the mineral pyrite (an iron sulfide mineral with chemical formula  $FeS_2$ ) in drill cuttings generated during the installation of monitoring wells in Period 8 further supports this concern. Although the available information does not allow for a more thorough assessment of AMD development potential, several existing lines of evidence also point to it being a concern. While the Application has provided a monitoring program, best management practice of lining surface water detention and retention ponds with limestone aggregate, and excavation will be terminated if necessary, additional monitoring should be considered and appears warranted.*

As requested and agreed upon during the August 2025 Meeting, the Applicant has provided a revised Acid Mine Drainage Monitoring Plan that includes the additional requested items. These items include:

- installation and monitoring of an additional bedrock monitoring well downgradient (north) of Period 8;
- quarterly monitoring for a year for each monitoring location with a change to semi-annual if results do not indicate a concern for AMD for each excavation area (Period);
- clarification that stormwater basins will be part of the monitoring program as they are constructed; and

- field screening of pH will occur monthly in the active stormwater basins (at the time) and “BRW” series monitoring wells that are identified as part of the program.

The modified monitoring plan satisfies this concern.

3. ***Period 8 Stormwater Infiltration:*** *Although not a focus of this review, another concern identified relates to the stormwater management plan for the proposed project. Based on our preliminary review and understanding, an existing infiltration basin (retention basin) and a newly constructed basin in Period 8 will serve to infiltrate all stormwater that emanates at the Site during the implementation of the project. The documentation appears to show the newly constructed Period 8 retention basin will be constructed on the bedrock pit “floor” (or will be excavated into bedrock), and will exist as the only infiltration basin during the late stages of the project (excavation of Period 8), if it is not also active earlier in the project. With the base located on bedrock, even if saprolite or highly weathered (typically clay-rich) materials are present, it seems unlikely that an infiltration rate of 0.3 inches per hour will be achieved as the Application used to determine stormwater management. It is possible that the actual infiltration rate could be close to zero (if competent, unfractured bedrock), or as much as an order of magnitude lower (if weathered bedrock or saprolite). Therefore, it appears unlikely that stormwater will infiltrate in this Period 8 basin, especially at the rate used to model stormwater management.*

As discussed and requested during the August 2025 Meeting, the Applicant has also responded to this concern with information stated in the meeting and an additional field test completed at the site. The Applicant provided the results of an in-situ hydraulic conductivity test, which measures the capacity of the subsurface materials to transmit water. Sanborn Head has reviewed this information and analysis, which indicates that the underlying material at the approximate elevation of the planned Period 8 stormwater infiltration basin has a similar hydraulic conductivity to a silty sand. The estimated infiltration rate used in the Applicant’s stormwater modeling is for a similar material and estimated at 0.3 inches per hour. Based on the following, this concern is satisfied by the additional information provided:

- The hydraulic conductivity testing results in BRW-12 indicates a conductivity similar to a silty sand material, which is similar to the estimated infiltration rate of the material used in the stormwater model;
- The Applicant’s technical team stated that during the drilling of monitoring wells in Period 8 competent bedrock was not observed;
- The Applicant’s technical team stated that monitoring wells in Period 8 recharged quickly after removal of groundwater for sampling (purging) and well development, which is consistent with the conductivity testing results above; and
- The Applicant’s technical team stated that the current infiltration basin located in Period 8 is in the same material (albeit at a higher elevation), and they have

observed infiltration occurring quickly after significant rain events (e.g., the basin mostly drained within 24 hours after filling during a rain event.)

Based on the above, this concern is satisfied.

At this time, as long as the two recommended conditions are included in the permit, Sanborn Head does not have additional concerns with the proposed excavation permit plans with respect to the two areas we were retained to review: LDC Article 25.3.3.B and LDC Article 25.3.6 waivers. Also, concerns expressed previously regarding the infiltration basin in Period 8 have been satisfied and Sanborn Head does not have further concerns for this item.

We trust this information meets your needs at this time. Please contact me should you have questions regarding this information. We appreciate the opportunity to support the Town's review of the Application.

RHA/SRN: rha



## GRANITE ENGINEERING, LLC

civil engineering • land planning • municipal services

August 21, 2025

City of Keene  
Community Development Department – Planning and Zoning  
3 Washington Street  
Keene, New Hampshire 03431

RE: G2 Holdings, LLC  
Tax Map 215 Lots 7 & 8  
21 & 57 Route 9, Keene, NH  
GE Project No. 2302011

Dear Ms. Fortson,

We are in receipt of a consultant review report, received August 14, 2025, relative to the review of the Earth Excavation Permit application, PB-2024-20, for the G2 Holdings, LLC project located at 21 & 57 Route 9. In addition to responses to your comments, please find the following material in support of the referenced project:

- Three (3) Copies of the revised plans (22" x 34")
- Three (3) Copies of the Stormwater Management Report
- Digital submission of the updated materials

In response to the comments made by Fieldstone Land Consultants, PLLC, we offer the following explanations and/or responses:

Section 25 Earth Excavation Permit:

4. Section 25.3.3: *The third-party hydrogeologist (Sanborn Head) observed the borings and monitoring wells and has represented that there are potential conflicts with the groundwater and/or separation to groundwater in Period 1 and Period 8. This should be reviewed and the design and stormwater management report revised as necessary.*

**The grading for periods 1 and 8 have been adjusted to maintain a minimum of 6' above water table elevations observed. Per the 8/20/2025 meeting, a condition to the permit will require a monitoring well to be installed within period 1 during spring. If the water table is observed within 6' of the proposed grading, the grading will be slightly raised to maintain the required 6' separation.**

*The stormwater report states that the design is relying on test pits performed by TFMoran but those test pits do not reach depths to verify soil materials and adequate separation to seasonal high-water table. The Subsurface Data table on the monitoring plan shows that Test Pit 1 and 2 go to depths of 867.0 and 863 respectively and the infiltration basin in this area has a bottom elevation of 842.0.*

**The stormwater report narrative has been revised to reference the newly drilled well bedrock wells, including BRW-12, which observed water at elevation 830.92. The colored drainage plans have also been revised to show the revised pit grading for periods 1 and 8.**

*SLR-10 which is outside of the infiltration area shows water observed at 841.1 (884-42.9) which would not provide adequate separation to the bottom of the infiltration basin at 842.0. The ground elevation per the topography depicted on the monitoring plan shows SLR-10 at elevation 890+/- not 884 per the table. If the elevation in the plan view is correct this would raise the observed groundwater level to 847.1+/- . BRW-12 which is inside the infiltration basin is not detailed on the monitoring plan but it is my understanding readings from BRW-12 may support. ground water elevations at approximately 830.9 during low flow conditions but the materials are not conducive to infiltration since bedrock was encountered. The table on the monitoring plan should be updated to depict all observations on-site and the data should be verified to ensure that all elevations are represented correctly.*

**SLR 10 was an existing well that was installed during the previous project designed and permitted by another firm. It no longer exists on site due to excavation activities in that area. All references to SLR wells done under the previous project have been removed from the planset, as they are no longer present on site. BRW 12 was shown on the monitoring plan sheet 17 of 23 in lieu of SLR 10. This well was dug to replace SLR 10.**

**As discussed in the 8/20/25 meeting, a hydraulic conductivity slug test was performed at BRW 12 and the data support the infiltration used in the stormwater design. The conversation revolved around the presence of ledge near the infiltration pond which was explained by our team to not be the case. It was agreed that this material was not typical ledge and the infiltration test provided that.**

6. *Section 25.3.4.A.2: The water table drops 22+/- feet between SLR10 and SLR11 and it is a relatively short distance between these two locations. We would recommend an additional test site between the two locations to ensure adequate separation to seasonal high water. This stormwater management area is critical to the design and operation of this site. This additional testing could be done between phases as a condition of approval should the Board feel comfortable with this recommendation.*



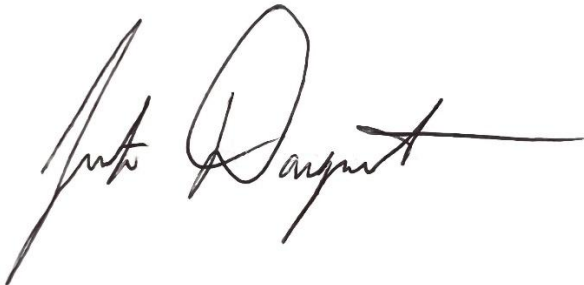
**BRW-12 has been installed between former SLR10 and SLR11 and within the floor of the infiltration pond. The water table was observed at 830.92, and the proposed pit floor is at elevation 840.00.**

- 1. New Comments: Will on-site vibration monitoring be done during blasting and crushing operations? Concerns have been raised regarding adjacent properties and potential damage nearby infrastructure associated with on-site operations. This type of monitoring is typically required to protect adjacent properties and to address liability issues in this industry. Please share how the site operations will address this concern and be consistent with city regulations. We would recommend adding a note to the plan set to document how the site operations will comply with city and industry standards.*

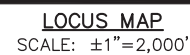
**General Note 21 regarding vibration monitoring has been added on sheet 1.**

We trust the noted plan revisions and/or explanations will adequately address the conditions listed above. Should you have any further questions or comments, please do not hesitate to contact this office.

Best Regards,

A handwritten signature in black ink, appearing to read "Justin Daigneault", with a long horizontal flourish extending to the right.

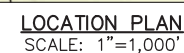
Justin Daigneault  
Project Manager



# KEENE, NEW HAMPSHIRE

## CHESHIRE COUNTY

FRONTIER GEOSERVICES, LLC.  
127 OLD WARNER ROAD  
BRADFORD, NH 03221  
(603) 748-37155



No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JJ
3	5/9/25	REVISED PER CITY COMMENTS	JJ
4	7/9/25	REVISED PER CITY COMMENTS	JJ
5	7/24/25	ADDITIONAL WELL LOCATIONS	JJ
6	8/11/25	REVISED PER CITY COMMENTS	JJ
7	8/22/25	REVISED PER CITY COMMENTS	JJ



GENERAL NOTES:

- THE PURPOSE OF THIS PLAN IS TO ILLUSTRATE THE PROPOSED EXPANSION OF AN EXISTING GRAVEL AND EARTH REMOVAL OPERATION FOR G2 HOLDINGS, LLC ON CITY OF KEENE TAX MAP 215, LOTS 7 AND 8, AND INCLUDING TAX MAP 5, LOTS 46 AND 46-1 IN THE TOWN OF SULLIVAN.
- CURRENT USE OF THE PROPERTY IS FOR GRAVEL AND EARTH REMOVALS.
- AREA OF SUBJECT PARCEL = 101.27 ACRES (CITY OF KEENE), 197.82 ACRES (SULLIVAN).
- OWNERS OF RECORD:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452
- THE SUBJECT PARCEL IS LOCATED WITHIN THE CITY OF KEENE AND TOWN OF SULLIVAN R (RURAL) ZONING DISTRICTS AND SUBJECT TO THE FOLLOWING DIMENSIONAL REGULATIONS:  

KEENE	REQUIRED	EXISTING LOT 7	EXISTING LOT 8
MIN. LOT AREA	2 AC	76.89 AC	24.38 AC
MIN. LOT FRONTAGE	50 FT	1,716.9 FT	545 FT
MIN. FRONT YARD	50 FT	N/A	70 FT
MIN. SIDE YARD	50 FT	N/A	132 FT
MIN. REAR YARD	50 FT	N/A	408 FT
EXCAVATION SETBACK	300 FT	322 FT	N/A

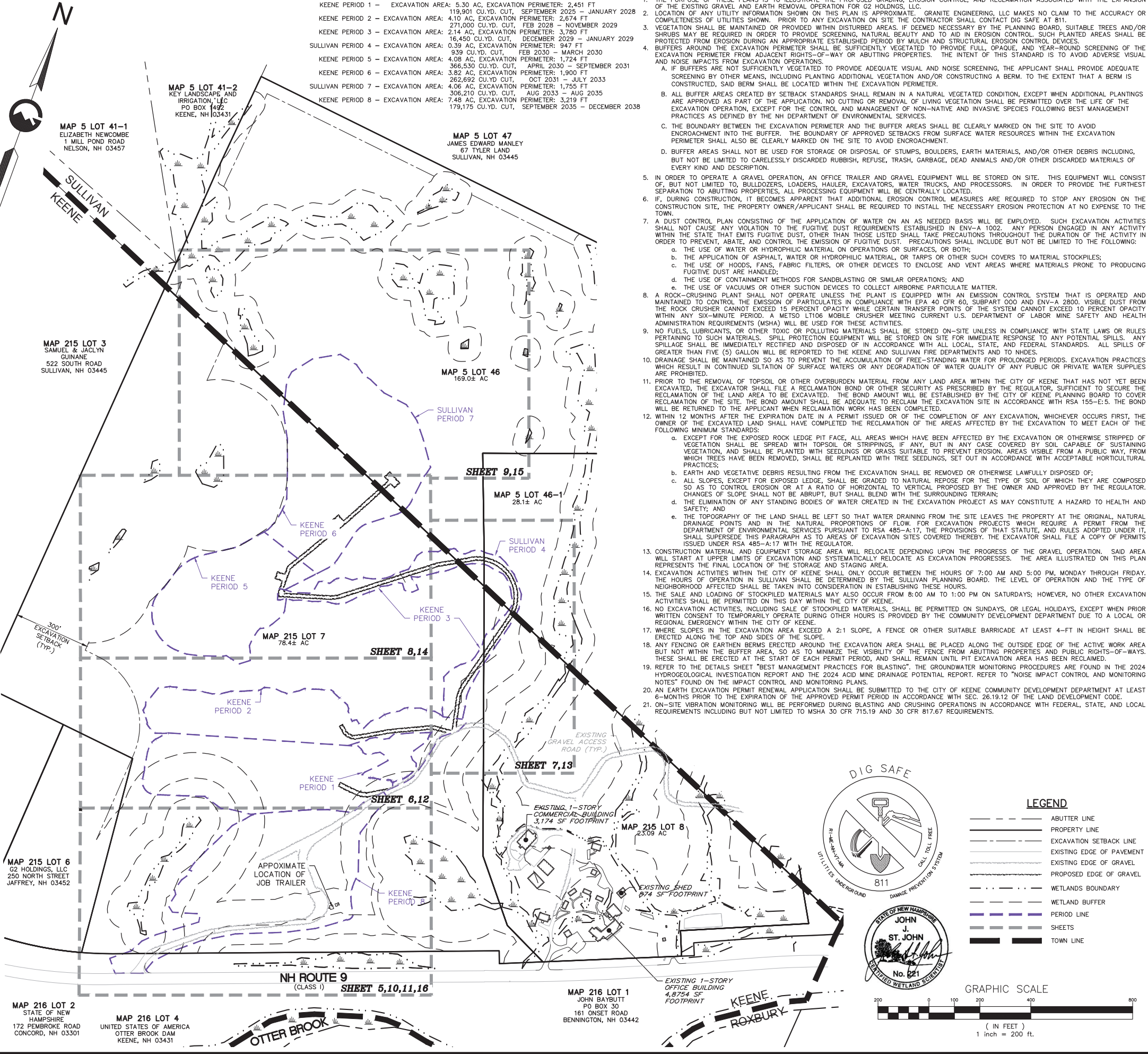
SULLIVAN	REQUIRED	EXISTING LOT 46-1	EXISTING LOT 46
MIN. LOT AREA	2 AC	28.1± AC	169.0± AC
MIN. LOT FRONTAGE	200 FT	N/A	N/A
MIN. FRONT YARD SETBACK	50 FT	N/A	N/A
MIN. SIDE YARD SETBACK	20 FT	N/A	N/A
MIN. REAR YARD SETBACK	20 FT	N/A	N/A
EXCAVATION SETBACK TO BUILDINGS	150 FT	N/A	N/A
MIN. EXCAVATION SETBACK FROM ABUTTERS	50 FT	N/A	371 FT
- BASE SURVEY INFORMATION INCLUDING BOUNDARY, EXISTING FEATURES, AND TOPOGRAPHY SHOWN ON THIS PLAN ARE TAKEN FROM PLAN REFERENCES AND FIELD SURVEY BY SMITH & POSPESIL LAND SURVEYING COMPANY, PLLC IN AUGUST 2022.
- TOPOGRAPHIC INFORMATION SHOWN WITHIN THE AREA OF DISTURBANCE IS TAKEN FROM FIELD SURVEY BY SMITH & POSPESIL LAND SURVEYING COMPANY, PLLC IN OCTOBER 2022 AND MAY OF 2023.
- HORIZONTAL DATUM IS ON THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD83 (2011).
- VERTICAL DATUM IS NAVD 88.
- EXCAVATION SITE, DESIGNED BY TFM WAIVERS APPROVED BY THE KEENE PLANNING BOARD OF ADJUSTMENTS ON AUGUST 22, 2022:
  - 24.3.1.A. (200' PUBLIC ROW SETBACK) - GRANTED
  - 24.3.1.C. (150' ACCESS DRIVEWAY SETBACK) - GRANTED
  - 24.3.1.D. (SURFACE WATER RESOURCE SETBACKS) - GRANTED
  - 24.3.4 (GROUNDWATER QUANTITY BASELINE MEASUREMENTS) - GRANTED
  - 24.3.5 (GROUNDWATER QUALITY BASELINE MEASUREMENTS) - GRANTED
  - 24.3.13 (MAXIMUM EXCAVATION AREA) - GRANTED
- EXCAVATION SITE, DESIGNED BY TFM CONDITIONAL USE PERMIT APPROVED BY THE KEENE PLANNING BOARD OF ADJUSTMENTS ON AUGUST 22, 2022 - KEENE HILLSIDE PROTECTION
- KEENE ZBA SPECIAL EXCEPTION FOR GRAVEL PIT USE - GRANTED 8/22/2022
- THE FOLLOWING ARE REQUESTED FROM THE CITY OF KEENE PLANNING BOARD:
  - 25.3.1.D. (SURFACE WATER RESOURCE SETBACKS) - WAIVER REQUESTED
  - 25.3.13 (MAXIMUM EXCAVATION AREA) - WAIVER REQUESTED
  - 25.3.6 (TOXIC OR ACID FORMING MATERIALS) - WAIVER REQUESTED
- THE PROJECT REQUIRES THE FOLLOWING STATE, FEDERAL, AND LOCAL PERMITS:  
PERMIT STATUS PERMIT NO.  
NHDES AOT PENDING  
KEENE EARTH EXCAVATION PENDING  
KEENE HILLSIDE PROTECTION - CONDITIONAL USE PERMIT PENDING  
KEENE EARTH EXCAVATION PENDING
- WETLAND MAPPING PERFORMED BY JOHN ST. JOHN OF ECOSYSTEMS LAND PLANNING IN OCTOBER-NOVEMBER 2023.
- EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR CHESHIRE COUNTY, NEW HAMPSHIRE (ALL JURISDICTIONS), MAP NUMBER 33005C0165E, EFFECTIVE DATE 05/23/2006 INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA.
- LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. GRANITE ENGINEERING, LLC MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
- THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE, WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (APPLICANT) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.
- AREAS OF DISTURBANCE SHALL NOT EXCEED 5 ACRES. IN ORDER FOR AREAS TO BE EXCLUDED OF THIS 5 ACRE MAXIMUM, THEY MUST BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
  - A. BASE COURSE GRAVELS ARE INSTALLED;
  - B. A MINIMUM OF 65% VEGETATED GROWTH HAS BEEN ESTABLISHED;
  - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR EROSION CONTROL BLANKET HAVE BEEN PROPERLY INSTALLED.
- THE APPROXIMATE AMOUNT OF MATERIAL PROPOSED TO BE EXCAVATED WITHIN THE CITY OF KEENE IS 1,215,748± CUBIC YARDS AND FOR THE TOTAL PROJECT IS 1,522,897± CUBIC YARDS.
- WITHIN THE CITY OF KEENE, NO EXCAVATION WILL BE PERFORMED WITHIN 75' OF MAPPED WETLANDS, NO EXCAVATION WITHIN 250' OF MAPPED WETLANDS WITHOUT APPROVAL FROM THE PLANNING BOARD, ACCESS ROADS WITHIN 150' FROM WETLANDS WITHOUT APPROVAL FROM THE PLANNING BOARD, AND 300' OF ABUTTING PROPERTIES. WITHIN THE TOWN OF SULLIVAN, NO EXCAVATION WILL BE PERFORMED WITHIN 50' OF ABUTTING PROPERTIES THAT DISPROVE, AND 10' FROM ABUTTING PROPERTIES THAT APPROVE OF THE GRAVEL OPERATION. NO EXCAVATION SHALL BE PERMITTED WITHIN 75 FEET OF ANY GREAT POND, NAVIGABLE RIVER, OR ANY OTHER STANDING BODY OF WATER 10 ACRES OR MORE IN AREA, OR WITHIN 25 FEET OF ANY OTHER STREAM, RIVER OR BROOK WHICH NORMALLY FLOWS THROUGHOUT THE YEAR, OR ANY NATURALLY OCCURRING STANDING BODY OF WATER LESS THAN 10 ACRES, PRIME WETLANDS AS DESIGNATED IN ACCORDANCE WITH RSA 482-A:15, I OR ANY OTHER WETLAND GREATER THAN 5 ACRES IN AREA AS DEFINED BY THE WETLANDS BOARD. NO EXCAVATION SHALL BE PERMITTED CLOSER THAN 150' TO AN EXISTING DWELLING OR TO A SITE FOR WHICH A BUILDING PERMIT HAS BEEN ISSUED AT THE TIME THE EXCAVATION PERMIT IS GRANTED. NO EXCAVATION SHALL BE PERMITTED BELOW ROAD LEVELS WITHIN 50 FEET OF THE RIGHT-OF-WAY OF ANY PUBLIC HIGHWAY AS DEFINED IN RSA 229:1 UNLESS SUCH EXCAVATION IS FOR THE PURPOSE OF SAID HIGHWAY VEGETATION. SHALL BE MAINTAINED OR PROVIDED WITHIN THE PERIPHERAL AREAS REQUIRED AS MENTIONED.
- IN ORDER TO OPERATE A GRAVEL OPERATION, GRAVEL EQUIPMENT WILL BE STORED ON SITE. THIS EQUIPMENT WILL CONSIST OF, BUT NOT LIMITED TO, BULLDOZERS, LOADERS, HAULERS, EXCAVATORS, WATER TRUCKS, AND PROCESSORS. IN ORDER TO PROVIDE THE FURTHEST SEPARATION TO ABUTTING PROPERTIES, ALL PROCESSING EQUIPMENT WILL BE CENTRALLY LOCATED.
- A COPY OF THE APPROVED GRAVEL AND EARTH REMOVAL PLAN SHALL BE ON SITE AT ALL TIMES.
- FLOWED SNOW FROM THE OPERATION SHALL BE MAINTAINED AND ON SITE WITHIN THE CONTAINED AREA.
- TRUCKS UTILIZED FOR TRANSPORT OF MATERIAL WILL CONSIST OF TRI-AXLES, 10-WHEELERS, AND TRACTOR TRAILER DUMP TRUCKS. THE ANTICIPATED MAXIMUM NUMBER OF VEHICLE TRIPS PER DAY BASED ON CURRENT PIT OPERATIONS IS 60 TRIPS PER DAY.
- THE ESTIMATED PROJECT TIME FRAME WILL EXCEED FIVE YEARS. THE ANTICIPATED SCHEDULE IS EXPECTED TO START IN JANUARY 2025 AND LAST UNTIL APRIL 2038. THE APPLICANT MUST SUBMIT TO THE DEPARTMENT OF ENVIRONMENTAL SERVICES, THE CITY OF KEENE, AND THE TOWN OF SULLIVAN A WRITTEN UPDATE OF THE PROJECT AND REVISED PLANS DOCUMENTING THE PROJECT STATUS EVERY FIVE YEARS FROM THE DATE OF THE ALTERATION OF TERRAIN PERMIT.
- ALL LOGS REQUIRED TO BE MAINTAINED BY THE APPLICANT/OPERATOR SHALL BE RETAINED BY THE APPLICANT FOR A PERIOD OF NOT LESS THAN 5-YEARS AND SHALL BE MADE AVAILABLE TO THE COMMUNITY DEVELOPMENT DEPARTMENT, OR ITS DESIGNATED AGENT, UPON REQUEST.
- WITHIN THE TOWN OF SULLIVAN, ANY ADDITION, EXPANSION, OR ALTERATION OF AN EXISTING USE FOR WHICH A SPECIAL EXCEPTION HAD BEEN GRANTED MUST RECEIVE A NEW SPECIAL EXCEPTION IF THERE IS AN EXPANSION OF THE AREA OF THE EXISTING STRUCTURE OR EXPANSION INTO NEW LAND FOR WHICH A SPECIAL EXCEPTION HAS NOT BEEN GRANTED

EXCAVATION NOTES:

- KEENE PERIOD 1 - EXCAVATION AREA: 5.30 AC, EXCAVATION PERIMETER: 2,451 FT  
119,901 CU.YD. CUT, SEPTEMBER 2025 - JANUARY 2028
- KEENE PERIOD 2 - EXCAVATION AREA: 4.10 AC, EXCAVATION PERIMETER: 2,674 FT  
271,000 CU.YD. CUT, FEB 2028 - NOVEMBER 2029
- KEENE PERIOD 3 - EXCAVATION AREA: 2.14 AC, EXCAVATION PERIMETER: 3,780 FT  
16,450 CU.YD. CUT, DECEMBER 2029 - JANUARY 2029
- SULLIVAN PERIOD 4 - EXCAVATION AREA: 0.39 AC, EXCAVATION PERIMETER: 947 FT  
939 CU.YD. CUT, FEB 2030 - MARCH 2030
- KEENE PERIOD 5 - EXCAVATION AREA: 4.08 AC, EXCAVATION PERIMETER: 1,724 FT  
366,530 CU.YD. CUT, APRIL 2030 - SEPTEMBER 2031
- KEENE PERIOD 6 - EXCAVATION AREA: 3.82 AC, EXCAVATION PERIMETER: 1,900 FT  
262,692 CU.YD. CUT, OCT 2031 - JULY 2033
- SULLIVAN PERIOD 7 - EXCAVATION AREA: 4.06 AC, EXCAVATION PERIMETER: 1,755 FT  
306,210 CU.YD. CUT, AUG 2033 - AUG 2035
- KEENE PERIOD 8 - EXCAVATION AREA: 7.48 AC, EXCAVATION PERIMETER: 3,219 FT  
179,175 CU.YD. CUT, SEPTEMBER 2035 - DECEMBER 2038

OPERATION NOTES:

- THE PURPOSE OF THESE PLANS IS TO ILLUSTRATE THE PROPOSED GRADING, EROSION CONTROL, AND RECLAMATION ASSOCIATED WITH THE EXPANSION OF THE EXISTING GRAVEL AND EARTH REMOVAL OPERATION FOR G2 HOLDINGS, LLC.
- LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. GRANITE ENGINEERING, LLC MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
- VEGETATION SHALL BE MAINTAINED OR PROVIDED WITHIN DISTURBED AREAS. IF DEEMED NECESSARY BY THE PLANNING BOARD, SUITABLE TREES AND/OR SHRUBS MAY BE REQUIRED IN ORDER TO PROVIDE SCREENING, NATURAL BEAUTY AND TO AID IN EROSION CONTROL. SUCH PLANTED AREAS SHALL BE PROTECTED FROM EROSION DURING AN APPROPRIATE ESTABLISHED PERIOD BY MULCH AND STRUCTURAL EROSION CONTROL DEVICES.
- BUFFERS AROUND THE EXCAVATION PERIMETER SHALL BE SUFFICIENTLY VEGETATED TO PROVIDE FULL, OPAQUE, AND YEAR-ROUND SCREENING OF THE EXCAVATION PERIMETER FROM ADJACENT RIGHTS-OF-WAY OR ABUTTING PROPERTIES. THE INTENT OF THIS STANDARD IS TO AVOID ADVERSE VISUAL AND NOISE IMPACTS FROM EXCAVATION OPERATIONS.
  - A. IF BUFFERS ARE NOT SUFFICIENTLY VEGETATED TO PROVIDE ADEQUATE VISUAL AND NOISE SCREENING, THE APPLICANT SHALL PROVIDE ADEQUATE SCREENING BY OTHER MEANS, INCLUDING PLANTING ADDITIONAL VEGETATION AND/OR CONSTRUCTING A BERM. TO THE EXTENT THAT A BERM IS CONSTRUCTED, SAID BERM SHALL BE LOCATED WITHIN THE EXCAVATION PERIMETER.
  - B. ALL BUFFER AREAS CREATED BY SETBACK STANDARDS SHALL REMAIN IN A NATURAL VEGETATED CONDITION, EXCEPT WHEN ADDITIONAL PLANTINGS ARE APPROVED AS PART OF THE APPLICATION. NO CUTTING OR REMOVAL OF LIVING VEGETATION SHALL BE PERMITTED OVER THE LIFE OF THE EXCAVATION OPERATION, EXCEPT FOR THE CONTROL AND MANAGEMENT OF NON-NATIVE AND INVASIVE SPECIES FOLLOWING BEST MANAGEMENT PRACTICES AS DEFINED BY THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES.
  - C. THE BOUNDARY BETWEEN THE EXCAVATION PERIMETER AND THE BUFFER AREAS SHALL BE CLEARLY MARKED ON THE SITE TO AVOID ENCRoACHMENT INTO THE BUFFER. THE BOUNDARY OF APPROVED SETBACKS FROM SURFACE WATER RESOURCES WITHIN THE EXCAVATION PERIMETER SHALL ALSO BE CLEARLY MARKED ON THE SITE TO AVOID ENCRoACHMENT.
  - D. BUFFER AREAS SHALL NOT BE USED FOR STORAGE OR DISPOSAL OF STUMPS, BOULDERS, EARTH MATERIALS, AND/OR OTHER DEBRIS INCLUDING, BUT NOT BE LIMITED TO CARELESSLY DISCARDED RUBBISH, REFUSE, TRASH, GARBAGE, DEAD ANIMALS AND/OR OTHER DISCARDED MATERIALS OF EVERY KIND AND DESCRIPTION.
- IN ORDER TO OPERATE A GRAVEL OPERATION, AN OFFICE TRAILER AND GRAVEL EQUIPMENT WILL BE STORED ON SITE. THIS EQUIPMENT WILL CONSIST OF, BUT NOT LIMITED TO, BULLDOZERS, LOADERS, HAULER, EXCAVATORS, WATER TRUCKS, AND PROCESSORS. IN ORDER TO PROVIDE THE FURTHEST SEPARATION TO ABUTTING PROPERTIES, ALL PROCESSING EQUIPMENT WILL BE CENTRALLY LOCATED.
- IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE, THE PROPERTY OWNER/APPLICANT SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE TOWN.
- A DUST CONTROL PLAN CONSISTING OF THE APPLICATION OF WATER ON AN AS NEEDED BASIS WILL BE EMPLOYED. SUCH EXCAVATION ACTIVITIES SHALL NOT CAUSE ANY VIOLATION TO THE FUGITIVE DUST REQUIREMENTS ESTABLISHED IN ENV-A 1002. ANY PERSON ENGAGED IN ANY ACTIVITY WITHIN THE STATE THAT EMITS FUGITIVE DUST, OTHER THAN THOSE LISTED SHALL TAKE PRECAUTIONS THROUGHOUT THE DURATION OF THE ACTIVITY IN ORDER TO PREVENT, AVOID, AND CONTROL THE EMISSION OF FUGITIVE DUST. PRECAUTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
  - a. THE USE OF WATER OR HYDROPHILIC MATERIAL ON OPERATIONS OR SURFACES, OR BOTH;
  - b. THE APPLICATION OF ASPHALT, WATER OR HYDROPHILIC MATERIAL, OR TARPS OR OTHER SUCH COVERS TO MATERIAL STOCKPILES;
  - c. THE USE OF HOODS, FANS, FABRIC FILTERS, OR OTHER DEVICES TO ENCLOSE AND VENT AREAS WHERE MATERIALS PRONE TO PRODUCING FUGITIVE DUST ARE HANDLED;
  - d. THE USE OF CONTAINMENT METHODS FOR SANDBLASTING OR SIMILAR OPERATIONS; AND
  - e. THE USE OF VACUUMS OR OTHER SUCTION DEVICES TO COLLECT AIRBORNE PARTICULATE MATTER.
- A ROCK-CRUSHING PLANT SHALL NOT OPERATE UNLESS THE PLANT IS EQUIPPED WITH AN EMISSION CONTROL SYSTEM THAT IS OPERATED AND MAINTAINED TO CONTROL THE EMISSION OF PARTICULATES IN COMPLIANCE WITH EPA 40 CFR 60, SUBPART 000 AND ENV-A 2800. VISIBLE DUST FROM THE ROCK CRUSHER CANNOT EXCEED 15 PERCENT OPACITY WHILE CERTAIN TRANSFER POINTS OF THE SYSTEM CANNOT EXCEED 10 PERCENT OPACITY WITHIN ANY SIX-MINUTE PERIOD. A METSO LT106 MOBILE CRUSHER MEETING CURRENT U.S. DEPARTMENT OF LABOR MINE SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS (MSHA) WILL BE USED FOR THESE ACTIVITIES.
- NO FUELS, LUBRICANTS, OR OTHER TOXIC OR POLLUTING MATERIALS SHALL BE STORED ON-SITE UNLESS IN COMPLIANCE WITH STATE LAWS OR RULES PERTAINING TO SUCH MATERIALS. SPILL PROTECTION EQUIPMENT WILL BE STORED ON SITE FOR IMMEDIATE RESPONSE TO ANY POTENTIAL SPILLS. ANY SPILLAGE SHALL BE IMMEDIATELY RECTIFIED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL STANDARDS. ALL SPILLS OF GREATER THAN FIVE (5) GALLON WILL BE REPORTED TO THE KEENE AND SULLIVAN FIRE DEPARTMENTS AND TO NHDES.
- DRAINAGE SHALL BE MAINTAINED SO AS TO PREVENT THE ACCUMULATION OF FREE-STANDING WATER FOR PROLONGED PERIODS. EXCAVATION PRACTICES WHICH RESULT IN CONTINUED SILTATION OF SURFACE WATERS OR ANY DEGRADATION OF WATER QUALITY OF ANY PUBLIC OR PRIVATE WATER SUPPLIES ARE PROHIBITED.
- PRIOR TO THE REMOVAL OF TOPSOIL OR OTHER OVERBURDEN MATERIAL FROM ANY LAND AREA WITHIN THE CITY OF KEENE THAT HAS NOT YET BEEN EXCAVATED, THE EXCAVATOR SHALL FILE A RECLAMATION BOND OR OTHER SECURITY AS PRESCRIBED BY THE REGULATOR, SUFFICIENT TO SECURE THE RECLAMATION OF THE LAND AREA TO BE EXCAVATED. THE BOND AMOUNT WILL BE ESTABLISHED BY THE CITY OF KEENE PLANNING BOARD TO COVER RECLAMATION OF THE SITE. THE BOND AMOUNT SHALL BE ADEQUATE TO RECLAIM THE EXCAVATION SITE IN ACCORDANCE WITH RSA 155-E:5. THE BOND WILL BE RETURNED TO THE APPLICANT WHEN RECLAMATION WORK HAS BEEN COMPLETED.
- WITHIN 12 MONTHS AFTER THE EXPIRATION DATE IN A PERMIT ISSUED OR OF THE COMPLETION OF ANY EXCAVATION, WHICHEVER OCCURS FIRST, THE OWNER OF THE EXCAVATED LAND SHALL HAVE COMPLETED THE RECLAMATION OF THE AREAS AFFECTED BY THE EXCAVATION TO MEET EACH OF THE FOLLOWING MINIMUM STANDARDS:
  - a. EXCEPT FOR THE EXPOSED ROCK LEDGE PIT FACE, ALL AREAS WHICH HAVE BEEN AFFECTED BY THE EXCAVATION OR OTHERWISE STRIPPED OF VEGETATION SHALL BE SPREAD WITH TOPSOIL OR STRIPPINGS, IF ANY, BUT IN ANY CASE COVERED BY SOIL CAPABLE OF SUSTAINING VEGETATION, AND SHALL BE PLANTED WITH SEEDLINGS OR GRASS SUITABLE TO PREVENT EROSION. AREAS VISIBLE FROM A PUBLIC WAY, FROM WHICH TREES HAVE BEEN REMOVED, SHALL BE REPLANTED WITH TREE SEEDLINGS, SET OUT IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES;
  - b. EARTH AND VEGETATIVE DEBRIS RESULTING FROM THE EXCAVATION SHALL BE REMOVED OR OTHERWISE LAWFULLY DISPOSED OF;
  - c. ALL SLOPES, EXCEPT FOR EXPOSED LEDGE, SHALL BE GRADED TO NATURAL REPOSE FOR THE TYPE OF SOIL OF WHICH THEY ARE COMPOSED SO AS TO CONTROL EROSION OR AT A RATIO OF HORIZONTAL TO VERTICAL PROPOSED BY THE OWNER AND APPROVED BY THE REGULATOR. CHANGES OF SLOPE SHALL NOT BE ABRUPT, BUT SHALL BLEND WITH THE SURROUNDING TERRAIN;
  - d. THE ELIMINATION OF ANY STANDING BODIES OF WATER CREATED IN THE EXCAVATION PROJECT AS MAY CONSTITUTE A HAZARD TO HEALTH AND SAFETY; AND
  - e. THE TOPOGRAPHY OF THE LAND SHALL BE LEFT SO THAT WATER DRAINING FROM THE SITE LEAVES THE PROPERTY AT THE ORIGINAL, NATURAL DRAINAGE POINTS AND IN THE NATURAL PROPORTIONS OF FLOW. FOR EXCAVATION PROJECTS WHICH REQUIRE A PERMIT FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES PURSUANT TO RSA 485-A:17, THE PROVISIONS OF THAT STATUTE, AND RULES ADOPTED UNDER IT, SHALL SUPERSEDE THIS PARAGRAPH AS TO AREAS OF EXCAVATION SITES COVERED THEREBY. THE EXCAVATOR SHALL FILE A COPY OF PERMITS ISSUED UNDER RSA 485-A:17 WITH THE REGULATOR.
- CONSTRUCTION MATERIAL AND EQUIPMENT STORAGE AREA WILL RELOCATE DEPENDING UPON THE PROGRESS OF THE GRAVEL OPERATION. SAID AREA WILL START AT UPPER LIMITS OF EXCAVATION AND SYSTEMATICALLY RELOCATE AS EXCAVATION PROGRESSES. THE AREA ILLUSTRATED ON THIS PLAN REPRESENTS THE FINAL LOCATION OF THE STORAGE AND STAGING AREA.
- EXCAVATION ACTIVITIES WITHIN THE CITY OF KEENE SHALL ONLY OCCUR BETWEEN THE HOURS OF 7:00 AM AND 5:00 PM, MONDAY THROUGH FRIDAY. THE HOURS OF OPERATION IN SULLIVAN SHALL BE DETERMINED BY THE SULLIVAN PLANNING BOARD. THE LEVEL OF OPERATION AND THE TYPE OF NEIGHBORHOOD AFFECTED SHALL BE TAKEN INTO CONSIDERATION IN ESTABLISHING THESE HOURS.
- THE SALE AND LOADING OF STOCKPILED MATERIALS MAY ALSO OCCUR FROM 8:00 AM TO 1:00 PM ON SATURDAYS; HOWEVER, NO OTHER EXCAVATION ACTIVITIES SHALL BE PERMITTED ON THIS DAY WITHIN THE CITY OF KEENE.
- NO EXCAVATION ACTIVITIES, INCLUDING SALE OF STOCKPILED MATERIALS, SHALL BE PERMITTED ON SUNDAYS, OR LEGAL HOLIDAYS, EXCEPT WHEN PRIOR WRITTEN CONSENT TO TEMPORARILY OPERATE DURING OTHER HOURS IS PROVIDED BY THE COMMUNITY DEVELOPMENT DEPARTMENT DUE TO A LOCAL OR REGIONAL EMERGENCY WITHIN THE CITY OF KEENE.
- WHERE SLOPES IN THE EXCAVATION AREA EXCEED A 2:1 SLOPE, A FENCE OR OTHER SUITABLE BARRICADE AT LEAST 4-FT IN HEIGHT SHALL BE ERECTED ALONG THE TOP AND SIDES OF THE SLOPE.
- ANY FENCING OR EARTHEN BERMS ERECTED AROUND THE EXCAVATION AREA SHALL BE PLACED ALONG THE OUTSIDE EDGE OF THE ACTIVE WORK AREA BUT NOT WITHIN THE BUFFER AREA, SO AS TO MINIMIZE THE VISIBILITY OF THE FENCE FROM ABUTTING PROPERTIES AND PUBLIC RIGHTS-OF-WAYS. THESE SHALL BE ERECTED AT THE START OF EACH PERMIT PERIOD, AND SHALL REMAIN UNTIL PIT EXCAVATION AREA HAS BEEN RECLAIMED.
- REFER TO THE DETAILS SHEET "BEST MANAGEMENT PRACTICES FOR BLASTING". THE GROUNDWATER MONITORING PROCEDURES ARE FOUND IN THE 2024 HYDROGEOLOGICAL INVESTIGATION REPORT AND THE 2024 ACID MINE DRAINAGE POTENTIAL REPORT. REFER TO "NOISE IMPACT CONTROL AND MONITORING NOTES" FOUND ON THE IMPACT CONTROL AND MONITORING PLANS.
- AN EARTH EXCAVATION PERMIT RENEWAL APPLICATION SHALL BE SUBMITTED TO THE CITY OF KEENE COMMUNITY DEVELOPMENT DEPARTMENT AT LEAST 6-MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED PERMIT PERIOD IN ACCORDANCE WITH SEC. 28.19.12 OF THE LAND DEVELOPMENT CODE.
- ON-SITE VIBRATION MONITORING WILL BE PERFORMED DURING BLASTING AND CRUSHING OPERATIONS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS INCLUDING BUT NOT LIMITED TO MSHA 30 CFR 715.19 AND 30 CFR 817.67 REQUIREMENTS.



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JD	5/9/25
JD	7/9/25
JD	7/24/25
JD	8/11/25
JD	8/22/25

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

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STATE OF NEW HAMPSHIRE  
JOHN J. ST. JOHN  
Professional Engineer  
No. 14744  
02/22/24

LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES KEENE**

TITLE:  
**OVERVIEW PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 1 OF 23

SCALE:  
HORIZ. 1"=200'









NEW HAMPSHIRE STATE PLANE  
COORDINATE SYSTEM NAD 83  
MAGNETIC DECLINATION: 13° 53' W  
CONVERGENCE ANGLE: -0°22'39"  
OBSERVATION DATE: MAY, 2023  
COMBINED SCALE FACTOR: 0.99995790.

KEY LANDSCAPE &  
IRRIGATION, LLC  
SULLIVAN TM 5  
LOT 41-2

ELIZABETH  
NEWCOMBE  
SULLIVAN TM 5  
LOT 41-1

JAMES MANLEY  
SULLIVAN TM 5  
LOT 47

TOWNLIN MONUMENT  
RED & WHITE PAINTED  
IRON PIPE FOUND IN  
STONE PILE

#### NOTES:

- Owner of Record: G2 Holdings, LLC 250 North Street, Jaffrey, NH 03452.
- The Basis of Bearing is Grid. The Horizontal Datum is on the New Hampshire State Plane Coordinate System NAD83 (2011). The Vertical Datum is NAVD 88. Both horizontal and vertical datums were derived from a static GNSS observation taken during the time of the field survey and processed using the Online Positioning User System (OPUS).
- This plan is based on a field survey completed in October 2022, May of 2023 & January of 2025 using Icuage 8 & 9 dual frequency RTK survey grade GNSS receivers, a Topcon Robotic Total Station and DJI Mavic 3E drone. The survey is classified as Rural and exceeds the minimum positional tolerances for property corners (0.25') and control (0.13') computed using a least squares adjustment at the 95% confidence level.
- The property lies in the Rural Residential Zoning District in Sullivan - Building Setbacks are 50 feet - front, 20 feet side and rear. The property lies in the Rural Zoning District in Keene - R. Building Setbacks are 50 feet - front, side and rear.
- The wetlands shown hereon were delineated by John St. John, NH CWS #221 of Ecosystems Land Planning from August-October of 2023.



SAMUEL & JACLYN  
GUINANE  
KEENE TM 215  
LOT 3

TRIPLE BLAZED  
TREE NO PIN  
FOUND

G2 HOLDINGS, LLC  
KEENE TM 215 LOT 7  
78.4 +/- AC

G2 HOLDINGS, LLC  
SULLIVAN TM 5  
LOT 46-1  
28.1 AC +/-

G2 HOLDINGS, LLC  
SULLIVAN TM 5  
LOT 46  
169.0 AC +/-

G2 HOLDINGS, LLC  
SULLIVAN TM 5  
LOT 46  
169.0 AC +/-

G2 HOLDINGS, LLC  
ROXBURY TM 401  
LOT 6  
28.9 AC +/-

#### LOCATION MAP

1 inch = 2000 feet

#### Reference Plans:

- "Steel Tape and Compass Survey of 3 Lot Subdivision for Wayne W. & Elaine Sargent, Route 9 Keene and Sullivan, NH", By Herbert E. Russell, RLS #21. Dated August, 1979. Recorded at Cheshire County Registry of Deeds Cabinet 2 Pg 94 Roll #305.
- "Boundary Survey: Land of Seafeld Pines Hospital Corporation, Keene, Sullivan & Roxbury, County of Cheshire, State of New Hampshire" By C.T. Male Associates, P. C. Dated June, 1989. Job No. 88-05837. Not Recorded.
- "Charles S. and John W. Towns, 'Nims' Woodlot, Keene, Nh" By William P. House, Dated May, 1965. Recorded at the Cheshire County Registry of Deeds Plan Book 19 Pg 37.
- "Bolles Subdivision, 3 Lot Subdivision & Boundary Line Adjustment Map 5 Lot 42, 469 South Road, Sullivan, NH" By Cardinal Surveying & Land Planning. Recorded at the Cheshire County Registry of Deeds Plans #21048, 21049 and 21087.
- "Plan of Proposed T.L.R. Project No. 14201, NH Project No P-2962-C, Franklin Pierce Highway, City of Keene and Town of Roxbury, County of Cheshire.", By State of New Hampshire Department of Public Works and Highways. Dated November 16, 1956. On file and available on-line with the New Hampshire Department of Transportation, Right of Way Bureau.

BETEAU REVOCABLE  
TRUST OF 2018  
ROXBURY TM 401 LOT 3

HIGH-FOREST  
PARTNERS, LLC  
ROXBURY TM 401 LOT 2

G2 HOLDINGS, LLC  
ROXBURY TM 401 LOT 1

1" IRON PIPE  
FOUND UP 4"  
AT END OF WALL

G2 HOLDINGS, LLC  
KEENE TM 215  
LOT 9  
.95 AC

#### A SURVEY OF LAND FOR G2 HOLDINGS, LLC

TAX MAP 5 LOTS 46 & 46-1  
VOLUME 3079 PAGE 283

IN THE TOWN OF  
SULLIVAN, NEW HAMPSHIRE

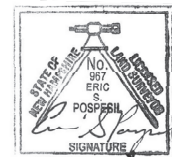
AND  
TAX MAP 215 LOTS 6,7,8 & 9  
VOLUME 3079 PAGE 283 &  
VOLUME 3199 PAGE 1197

IN THE CITY OF

KEENE, NEW HAMPSHIRE

SMITH & POSPESIL  
LAND SURVEYING COMPANY, PLLC  
240 QUEBEC ROAD, LYMAN, N.H. 03585

JUNE 19, 2023  
REVISED JULY 16, 2024  
& JANUARY 27, 2025 39



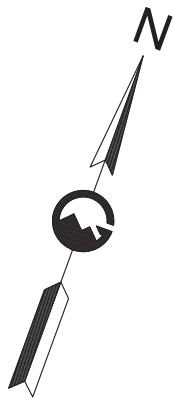
#### LEGEND

- Monument Found
- Highway Bound
- Calculated Point
- Well
- Utility Pole
- Property Line
- Town Line
- Approx Abutters Line
- Limits of Disturbance
- Major Contour Line
- Minor Contour Line
- Edge of Wetland
- Stream

0' 200' 400' 600'

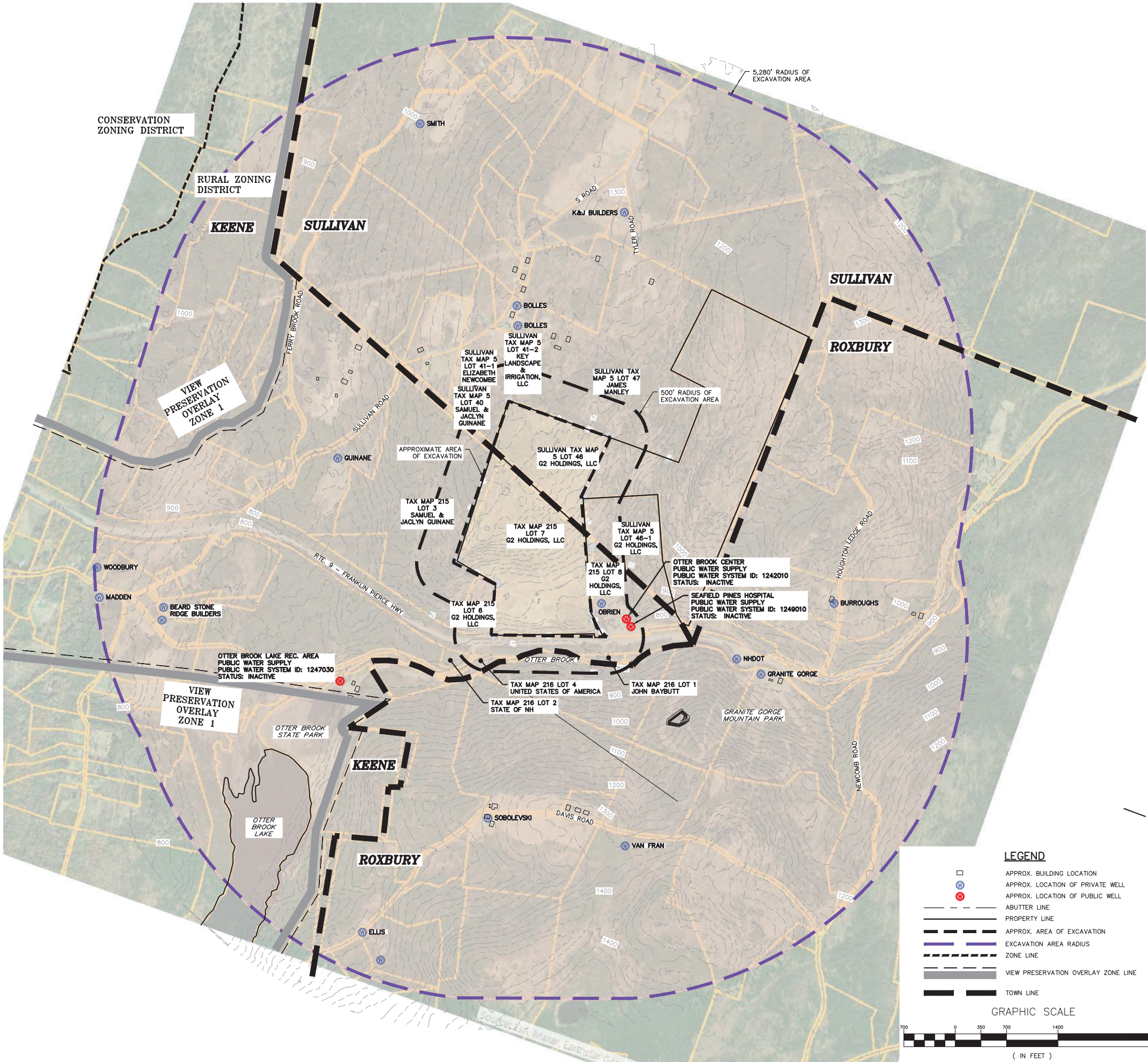
Scale: 1 inch = 200 feet





GENERAL NOTES:

- 500' AND 5,280 (1 MILE) RADII OF THE EXCAVATION AREA ARE SHOWN.
- THE APPROXIMATE LOCATION OF THE 25-FT CONTOURS ARE SHOWN WITHIN A 1 MILE RADIUS OF THE EXCAVATION SITE. THE TOPOGRAPHICAL INFORMATION SHOWN IS FROM NH GRANIT.
- THE APPROXIMATE LOCATION OF ALL BUILDINGS ARE SHOWN. THIS INFORMATION IS FROM NH GRANIT AND KEENE TAX MAP INFORMATION.
- THE APPROXIMATE LOCATION OF NH ROUTE 9 IS SHOWN. THIS INFORMATION IS FROM NH GRANIT.
- THE APPROXIMATE LOCATION OF ALL PROPERTY LINES ARE SHOWN IN KEENE, ROXBURY AND SULLIVAN WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE. THIS INFORMATION COMES FROM NH GRANIT.
- THE ZONE LINE ALONG THE TOWN LINES ARE SHOWN. THE ENTIRETY OF THE 1-MILE RADIUS IS WITHIN THE RURAL ZONE.
- THE LOCATION AND ASSOCIATED INFORMATION FOR ALL PUBLIC WATER SUPPLIES ARE SHOWN WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE. THIS INFORMATION WAS OBTAINED THROUGH NHDES ONESTOP DATA RESEARCH.
- THERE ARE NO WELLHEAD PROTECTION AREAS WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE. THIS INFORMATION COMES FROM A DATA CHECK USING NHDES ONESTOP DATA SEARCH.
- THERE ARE NO KNOWN FUTURE MUNICIPAL WATER SUPPLY SITES WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE.
- ALL SURFACE WATERS ARE SHOWN WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE. THIS INFORMATION COMES FROM NH GRANIT AND NHDES ONESTOP DATA RESEARCH.
- THE APPROXIMATE LOCATIONS OF ALL PUBLICLY RECORDED PRIVATE WELLS ARE SHOWN WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE. THIS INFORMATION COMES FROM KEENE GIS AND NHDES ONE-STOP DATA RESEARCH.
- ALL OTHER PRIVATE WELL ESTIMATION IS AN APPROXIMATION.



**LEGEND**

- APPROX. BUILDING LOCATION
- APPROX. LOCATION OF PRIVATE WELL
- APPROX. LOCATION OF PUBLIC WELL
- ABUTTER LINE
- PROPERTY LINE
- APPROX. AREA OF EXCAVATION
- EXCAVATION AREA RADIUS
- ZONE LINE
- VIEW PRESERVATION OVERLAY ZONE LINE
- TOWN LINE

**GRAPHIC SCALE**

( IN FEET )

1 inch = 700 ft.

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3	5/9/25	JD		REVISED PER CITY COMMENTS
4	7/9/25	JD		REVISED PER CITY COMMENTS
5	7/24/25	JD		ADDITIONAL WELL LOCATIONS
6	8/11/25	JD		REVISED PER CITY COMMENTS
7	8/22/25	JD		REVISED PER CITY COMMENTS

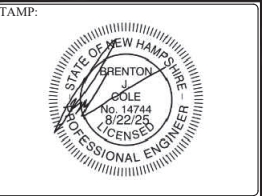
OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

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LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES KEENE**

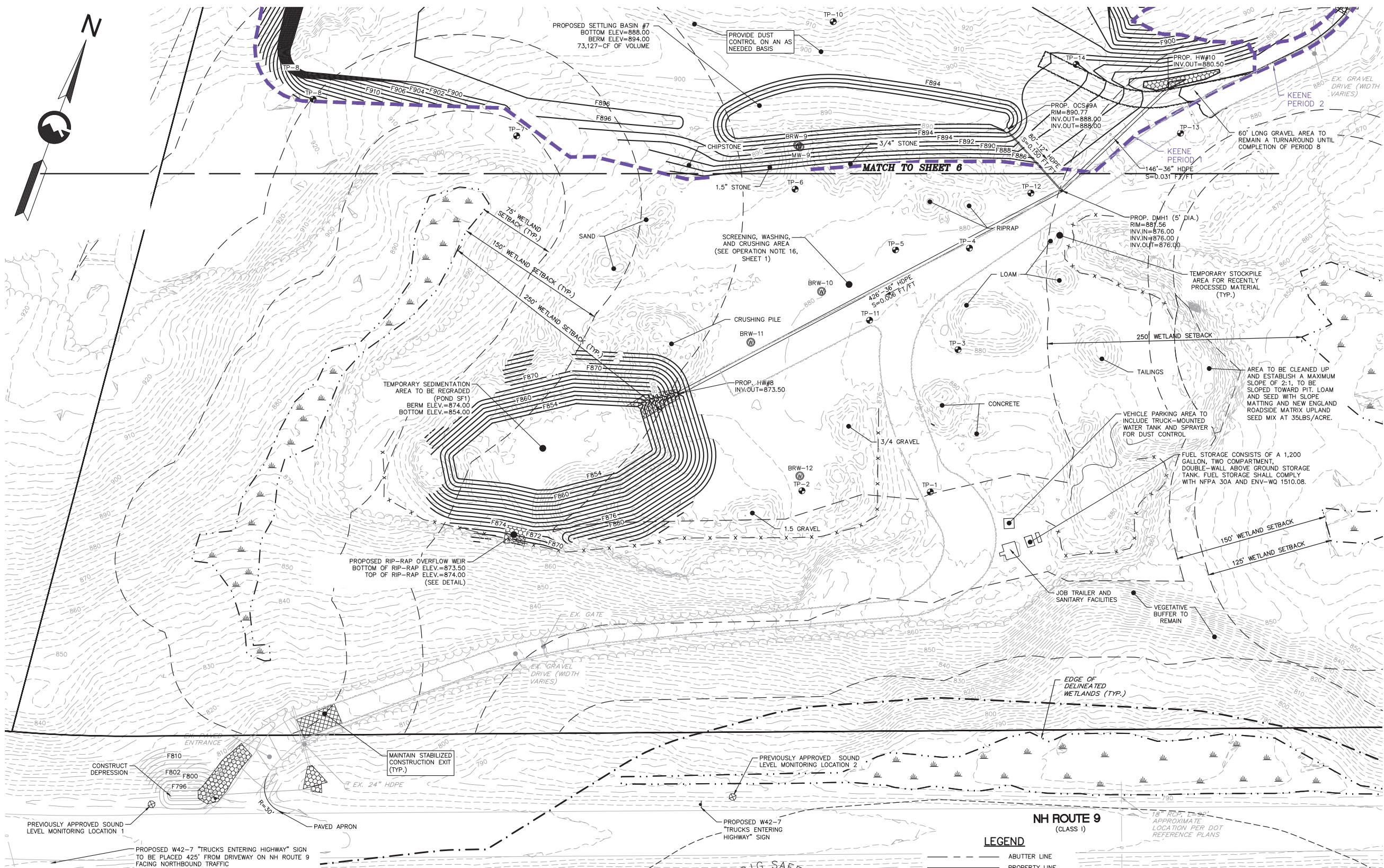
TITLE:  
**CONTEXT PLAN**

PROJECT No. | DATE:  
23-0201-1 | MAY 9, 2025  
SHEET: 4 OF 23

SCALE:  
HORIZ. 1" = 700'







EROSION & SEDIMENT CONTROL LEGEND	
	STONE CHECK DAM
	LIMITS OF CLEARING
	SILT FENCE
	STABILIZED CONSTRUCTION EXIT
	STAGING AND STOCKPILE AREA
	EROSION CONTROL BLANKET

- PHASING NOTES:**
1. INSTALL NECESSARY EROSION CONTROL MEASURES, I.E. SILT FENCE.
  2. REGRADE AND REPLANT BUFFER AREA
  3. INSTALL SIGNAGE
  4. INSTALL PAVED APRON AND CULVERT ENTRANCE INLET DEPRESSION.
  5. INSTALL CULVERT OUTLET PROTECTION AT EXISTING 24" HDPE CULVERT
  6. COMPLETE EXCAVATION OF TEMPORARY SEDIMENTATION AREA SF1.
  7. TEMPORARY SEDIMENTATION POND TO BE LINED WITH 12 INCHES OF CRUSHED LIMESTONE GRAVEL, THEN LOAMED AND SEEDED.
  8. BEGIN EXCAVATION IN PERIOD 1. CONSTRUCT OUTLET STRUCTURE AND CULVERT OF TEMPORARY SEDIMENTATION BASIN #7. CONSTRUCT CLOSED DRAINAGE SYSTEM AND DIRECT DISCHARGE TO TEMPORARY SEDIMENT AREA SF1.
  9. ALL TRUCK TURNAROUND AREAS TO BE MAINTAINED UNTIL THE COMPLETION OF PERIOD 7, THEN THOSE AREAS ARE TO BE RECLAIMED.

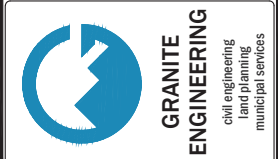
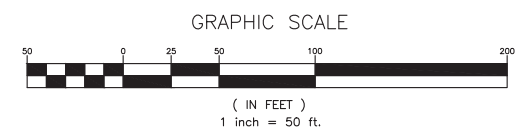
SEE SHEET 6 FOR EROSION CONTROL NOTES (TYP.)

SEE SHEET 1 FOR OPERATION NOTES (TYP.)

LOAM & SEED ALL DISTURBED AREAS (TYP.)



LEGEND	
	ABUTTER LINE
	PROPERTY LINE
	EXCAVATION SETBACK LINE
	EXISTING EDGE OF PAVEMENT
	EXISTING EDGE OF GRAVEL
	WETLANDS BOUNDARY
	WETLAND BUFFER
	PROPOSED EDGE OF GRAVEL
	PERIOD LINE
	EX./PROP. TREELINE
	PROP. GRADE LINE
	EX. MAJOR CONTOUR
	EX. MINOR CONTOUR
	RIP RAP
	EX./PROP. HEADWALL
	PROP. DRAINAGE LINE
	EX. DRAINAGE LINE



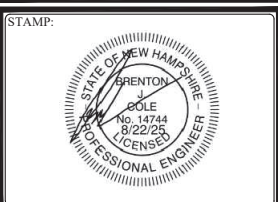
REVISIONS	
NO.	DATE
1	12/20/24
2	2/3/25
3	5/9/25
4	7/9/25
5	7/24/25
6	8/11/25
7	8/22/25

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LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES KEENE**

TITLE:  
**EXCAVATION, DRAINAGE & EROSION CONTROL PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 5 OF 23

SCALE:  
HORIZ. 1"=50'





MATCH TO SHEET 7

EXCAVATION NOTES:

KEENE PERIOD 1 - EXCAVATION AREA: 5.30 AC, EXCAVATION PERIMETER: 2,451 FT  
KEENE PERIOD 2 - EXCAVATION AREA: 4.10 AC, EXCAVATION PERIMETER: 2,674 FT  
271,000 CU.YD. CUT, FEB 2028 - NOVEMBER 2029

ALL INSPECTION AND MAINTENANCE ACTIVITIES AS WELL AS ADVERSE IMPACTS IDENTIFIED DURING INSPECTIONS AND ACTIONS TAKEN TO REMEDIATE THEM SHALL BE RECORDED IN A LOG KEPT ON SITE.



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3	5/9/25	JD	REVISED PER CITY COMMENTS
4	7/9/25	JD	REVISED PER CITY COMMENTS
5	7/24/25	JD	ADDITIONAL WELL LOCATIONS
6	8/11/25	JD	REVISED PER CITY COMMENTS
7	8/22/25	JD	REVISED PER CITY COMMENTS

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250 NORTH STREET  
JAFFREY, NH 03452

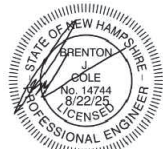
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LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
GORDON SERVICES  
KEENE

TITLE:  
EXCAVATION,  
DRAINAGE & EROSION  
CONTROL PLAN

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 6 OF 23  
SCALE:  
HORIZ. 1"=50'

PHASING NOTES:

1. CONTINUE EXCAVATION IN PERIOD 1. AS PIT FLOOR IS LOWERED, EXCAVATE SEDIMENT BASIN AS REQUIRED. INSTALL OUTLET CULVERT.
2. ONCE PERIOD 1 HAS REACHED FINAL GRADING, RECLAIM ENTIRE AREA. PRIOR TO LOAMING AND SEEDING THE SEDIMENT AREA, REMOVE ALL SILTED MATERIALS. LOAM AND SEED, ENSURE OUTLET CULVERT IS INSTALLED. RECLAIM ACCESS TO THE PIT.
3. BEGIN CONSTRUCTION OF PERIOD 2, STARTING WITH THE ACCESS. INSTALL ALL EROSION CONTROL DEVICES. CONSTRUCT DITCH ALONG WEST SIDE OF EXISTING ACCESS ROAD. INSTALL CULVERTS AT THE INTERSECTION WITH THE NEW ACCESS ROAD RUNNING TO THE NORTH.
4. AS PIT AREA IN PERIOD 1 IS EXCAVATED, PITCH SLOPE TO THE SOUTH OF THE AREA AND BEGIN EXCAVATION OF THE SEDIMENT RETENTION AREA. DIRECT DISCHARGE FROM THE SEDIMENT DOWN THE EASTERN SIDE OF RECLAIMED PERIOD 1. AS THE SEDIMENT AREA IS LOWERED, INSTALL OUTLET CULVERT, AND DIRECT TO THE EXISTING SLOPE TO THE EAST OF PERIOD 1.
5. ONCE PERIOD 2 HAS REACHED FINAL GRADING, RECLAIM ENTIRE AREA. PRIOR TO LOAMING AND SEEDING THE SEDIMENT AREA, REMOVE ALL SILTED MATERIALS. LOAM AND SEED, ENSURE OUTLET CULVERT IS INSTALLED. RECLAIM ACCESS TO THE PIT TO INTERSECTION OF NEW ACCESS RUNNING TO THE NORTH.
6. ALL TRUCK TURNAROUND AREAS TO BE MAINTAINED UNTIL THE COMPLETION OF PERIOD 7, THEN THOSE AREAS ARE TO BE RECLAIMED.

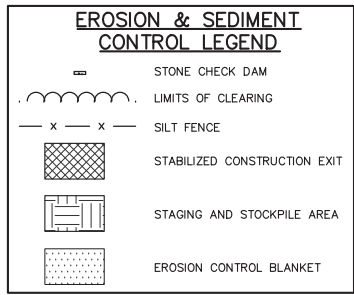


SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

LOAM & SEED ALL  
DISTURBED AREAS (TYP.)

EROSION CONTROL NOTES:

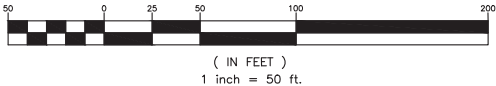
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" AS PUBLISHED AND AMENDED BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
9. THE CITY OF KEENE SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.
10. THE RESPONSIBLE PARTY SHALL INSTALL, INSPECT, REPORT, OPERATE, AND MAINTAIN ALL STORMWATER MANAGEMENT AND EROSION CONTROL MEASURES REQUIRED BY THESE PLANS.
11. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR, MAY WARRANT.
12. ALL DISTURBED AREAS DESIGNATED TO BE TURF, SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS), PRIOR TO FINAL SEEDING AND MULCHING.
13. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
14. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENV-A 1000.
15. IN NO WAY ARE THOSE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
16. GRADED AREAS SHALL BE VEGETATED TO INSURE EROSION CONTROL BY SEEDING, MULCHING, AND FERTILIZING. DISTURBED AREAS SHALL BE PLANTED WITH SUITABLE PLANT MATERIALS.
17. GRADING SHALL NOT EXCEED A RATIO OF 3 HORIZONTAL TO 1 VERTICAL WITHOUT SPECIAL EROSION CONTROL MEASURES. NETTING OR SIMILAR MATERIAL SHALL BE PROVIDED ON SLOPES WITH A RATIO GREATER THAN 3:1 WHILE GROUND COVER IS BEING ESTABLISHED.



LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- WETLANDS BOUNDARY
- WETLAND BUFFER
- PROPOSED EDGE OF GRAVEL
- PERIOD LINE
- EX./PROP. TREELINE
- PROP. GRADE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- RIP RAP
- EX./PROP. HEADWALL
- PROP. DRAINAGE LINE

GRAPHIC SCALE



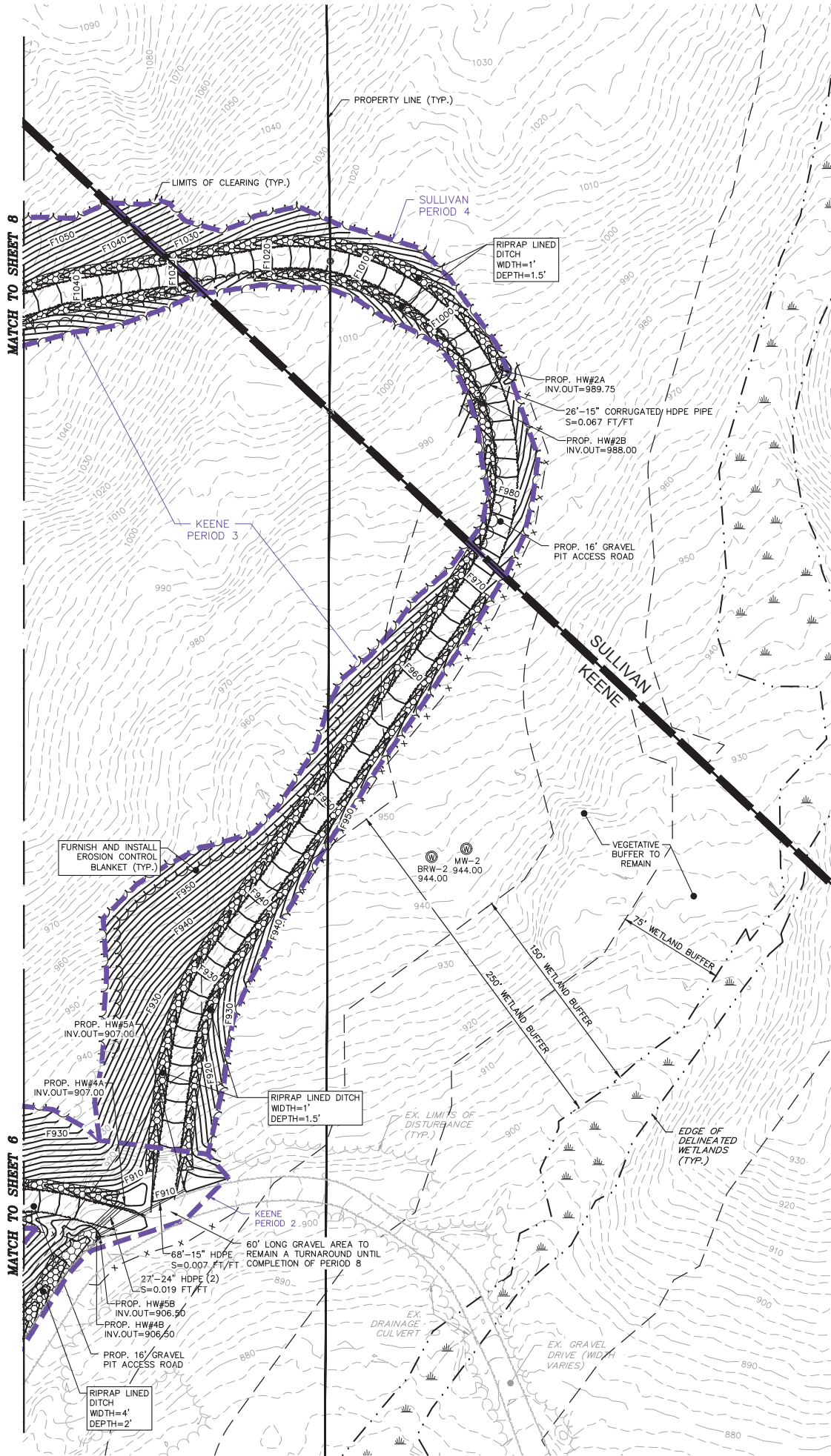


**PHASING NOTES:**  
1. INSTALL ALL NECESSARY EROSION CONTROL ITEMS, I.E. SILT FENCE, STONE CHECK DAMS.  
2. CONSTRUCT PIT ACCESS IN ITS ENTIRETY TO THE START OF PERIOD 5.  
3. INSTALL ALL CULVERTS, RIP RAP CULVERT OUTLETS, AND DITCH PROTECTION.  
4. ALL TRUCK TURNAROUND AREAS TO BE MAINTAINED UNTIL THE COMPLETION OF PERIOD 7, THEN THOSE AREAS ARE TO BE RECLAIMED.

SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

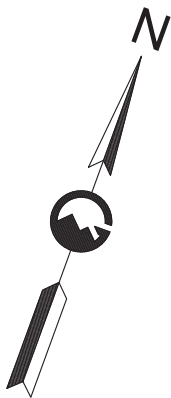
SEE SHEET 6 FOR EROSION  
CONTROL NOTES (TYP.)

LOAM & SEED ALL  
DISTURBED AREAS (TYP.)



**EXCAVATION NOTES:**  
KEENE PERIOD 3 - EXCAVATION AREA: 2.14 AC, EXCAVATION PERIMETER: 3,780 FT  
16,450 CU.YD. CUT, DECEMBER 2029 - JANUARY 2030  
SULLIVAN PERIOD 4 - EXCAVATION AREA: 0.39 AC, EXCAVATION PERIMETER: 947 FT  
939 CU.YD. CUT, FEB 2030 - MARCH 2030

ALL INSPECTION AND MAINTENANCE ACTIVITIES AS WELL AS ADVERSE IMPACTS IDENTIFIED DURING INSPECTIONS AND ACTIONS TAKEN TO REMEDIATE THEM SHALL BE RECORDED IN A LOG KEPT ON SITE.



**LEGEND**

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- WETLANDS BOUNDARY
- WETLAND BUFFER
- PROPOSED EDGE OF GRAVEL
- PERIOD LINE
- EX./PROP. TREELINE
- PROP. GRADE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- RIP RAP
- EX./PROP. HEADWALL
- PROP. DRAINAGE LINE
- EX. DRAINAGE LINE

**EROSION & SEDIMENT CONTROL LEGEND**

- STONE CHECK DAM
- LIMITS OF CLEARING
- SILT FENCE
- STABILIZED CONSTRUCTION EXIT
- STAGING AND STOCKPILE AREA
- EROSION CONTROL BLANKET



**GRAPHIC SCALE**



( IN FEET )  
1 inch = 50 ft.



REVISIONS		BY	DATE	COMMENTS
1	12/20/24	JD		PROJECT SUBMITAL
2	2/3/25	JD		REVISED PER CITY COMMENTS
3	5/9/25	JD		REVISED PER CITY COMMENTS
4	7/9/25	JD		REVISED PER CITY COMMENTS
5	7/24/25	JD		ADDITIONAL WELL LOCATIONS
6	8/11/25	JD		REVISED PER CITY COMMENTS
7	8/22/25	JD		REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
2550 NORTH STREET  
JAFFREY, NH 03452

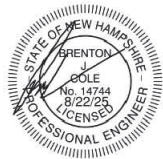
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**STAMP:**



LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES  
KEENE**

TITLE:  
**EXCAVATION,  
DRAINAGE & EROSION  
CONTROL PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 7 OF 23  
SCALE:  
HORIZ.  
1"=50'



REVISIONS		BY	DATE	COMMENTS
1	12/20/24	JD	JD	PROJECT SUBMITTAL
2	2/3/25	JD	JD	REVISED PER CITY COMMENTS
3	5/9/25	JD	JD	REVISED PER CITY COMMENTS
4	7/9/25	JD	JD	REVISED PER CITY COMMENTS
5	7/24/25	JD	JD	ADDITIONAL WELL LOCATIONS
6	8/11/25	JD	JD	REVISED PER CITY COMMENTS
7	8/22/25	JD	JD	REVISED PER CITY COMMENTS

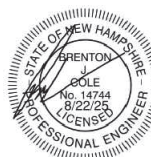
OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

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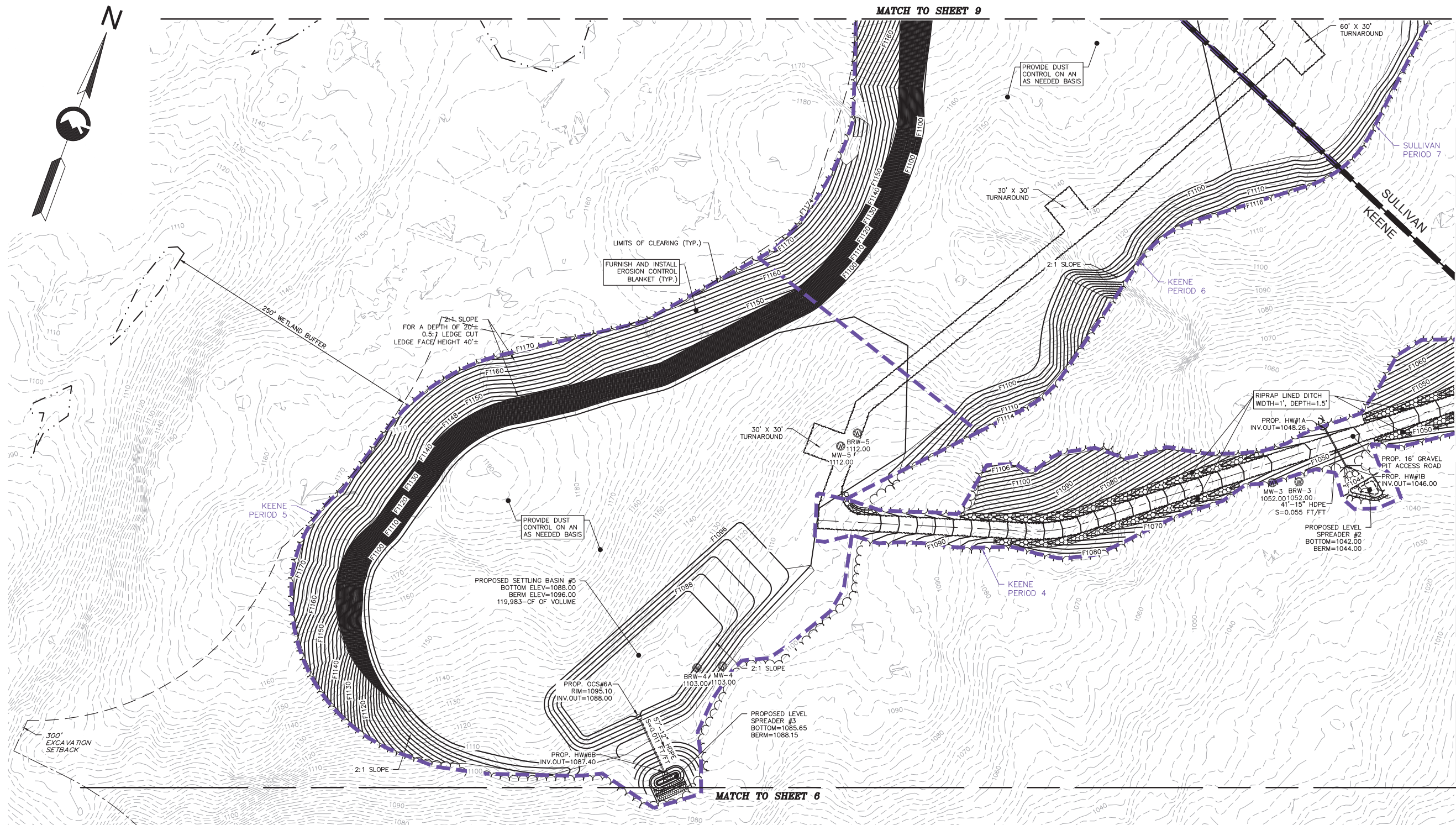


LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES  
KEENE**

TITLE:  
**EXCAVATION,  
DRAINAGE & EROSION  
CONTROL PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 8 OF 23  
SCALE:  
HORIZ. 1"=50'



#### PHASING NOTES:

1. INSTALL NECESSARY EROSION CONTROL MEASURES, I.E. SILT FENCE.
2. BEGIN EXCAVATION IN PERIOD 5. CONSTRUCT TEMPORARY SEDIMENT BASIN AS NEEDED AND DIRECT DISCHARGE TO TEMPORARY SEDIMENT AREA.
3. SLOPE PIT TO RUN TO THE SOUTH TO THE SEDIMENT AREA. AS EXCAVATION PROCEEDS, LOWER SEDIMENT AREA AS NEEDED.
4. ONCE PERIOD 5 HAS REACHED FINAL GRADING, RECLAIM ENTIRE AREA, LEAVING TRUCK AND EQUIPMENT ACCESS TO PERIOD 6. PRIOR TO LOAMING AND SEEDING THE SEDIMENT AREA, REMOVE ALL SILTED MATERIALS. LOAM AND SEED, ENSURE OUTLET CULVERT IS INSTALLED.
5. INSTALL EROSION CONTROL MEASURES FOR PERIOD 6.
6. BEGIN EXCAVATION IN PERIOD 6. SLOPE PIT FLOOR TO THE SOUTH. INSTALL TEMPORARY SEDIMENT BASINS AS NEEDED. DO NOT DISCHARGE SEDIMENT TO RECLAIMED AREA PERIOD 5.
7. ONCE PERIOD 6 HAS REACHED FINAL GRADING, RECLAIM ENTIRE AREA, LEAVING TRUCK AND EQUIPMENT ACCESS TO PERIOD 7.
8. ALL TRUCK TURNAROUND AREAS TO BE MAINTAINED UNTIL THE COMPLETION OF PERIOD 7, THEN THOSE AREAS ARE TO BE RECLAIMED.



LOAM & SEED ALL  
DISTURBED AREAS (TYP.)

SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

SEE SHEET 6 FOR EROSION  
CONTROL NOTES (TYP.)

#### EXCAVATION NOTES:

KEENE PERIOD 5 - EXCAVATION AREA: 4.08 AC, EXCAVATION PERIMETER: 1,724 FT  
366,530 CU.YD. CUT, APRIL 2030 - SEPTEMBER 2031  
KEENE PERIOD 6 - EXCAVATION AREA: 3.82 AC, EXCAVATION PERIMETER: 1,900 FT  
262,692 CU.YD. CUT, OCT 2031 - JULY 2033  
SULLIVAN PERIOD 7 - EXCAVATION AREA: 4.08 AC, EXCAVATION PERIMETER: 1,755 FT  
306,210 CU.YD. CUT, AUG 2033 - AUG 2035

ALL INSPECTION AND MAINTENANCE ACTIVITIES AS WELL AS ADVERSE IMPACTS IDENTIFIED DURING INSPECTIONS AND ACTIONS TAKEN TO REMEDIATE THEM SHALL BE RECORDED IN A LOG KEPT ON SITE.

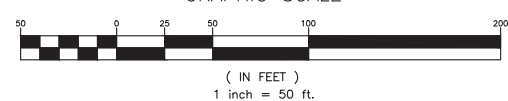
#### LEGEND

---	ABUTTER LINE
---	PROPERTY LINE
---	EXCAVATION SETBACK LINE
---	EXISTING EDGE OF PAVEMENT
---	EXISTING EDGE OF GRAVEL
---	WETLANDS BOUNDARY
---	WETLAND BUFFER
---	PROPOSED EDGE OF GRAVEL
---	PERIOD LINE
---	EX./PROP. TREELINE
---	PROP. GRADE LINE
---	EX. MAJOR CONTOUR
---	EX. MINOR CONTOUR
---	RIP RAP
---	EX./PROP. HEADWALL
---	PROP. DRAINAGE LINE

#### EROSION & SEDIMENT CONTROL LEGEND

---	STONE CHECK DAM
---	LIMITS OF CLEARING
---	SILT FENCE
---	STABILIZED CONSTRUCTION EXIT
---	STAGING AND STOCKPILE AREA
---	EROSION CONTROL BLANKET

#### GRAPHIC SCALE





REVISIONS		BY	DATE	COMMENTS
1	12/20/24	JD		PROJECT SUBMITTAL
2	2/3/25	JD		REVISED PER CITY COMMENTS
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4	7/9/25	JD		REVISED PER CITY COMMENTS
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6	8/11/25	JD		REVISED PER CITY COMMENTS
7	8/22/25	JD		REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452


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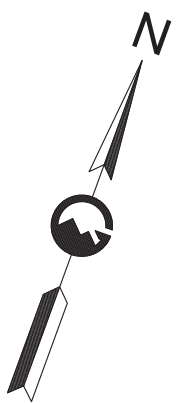
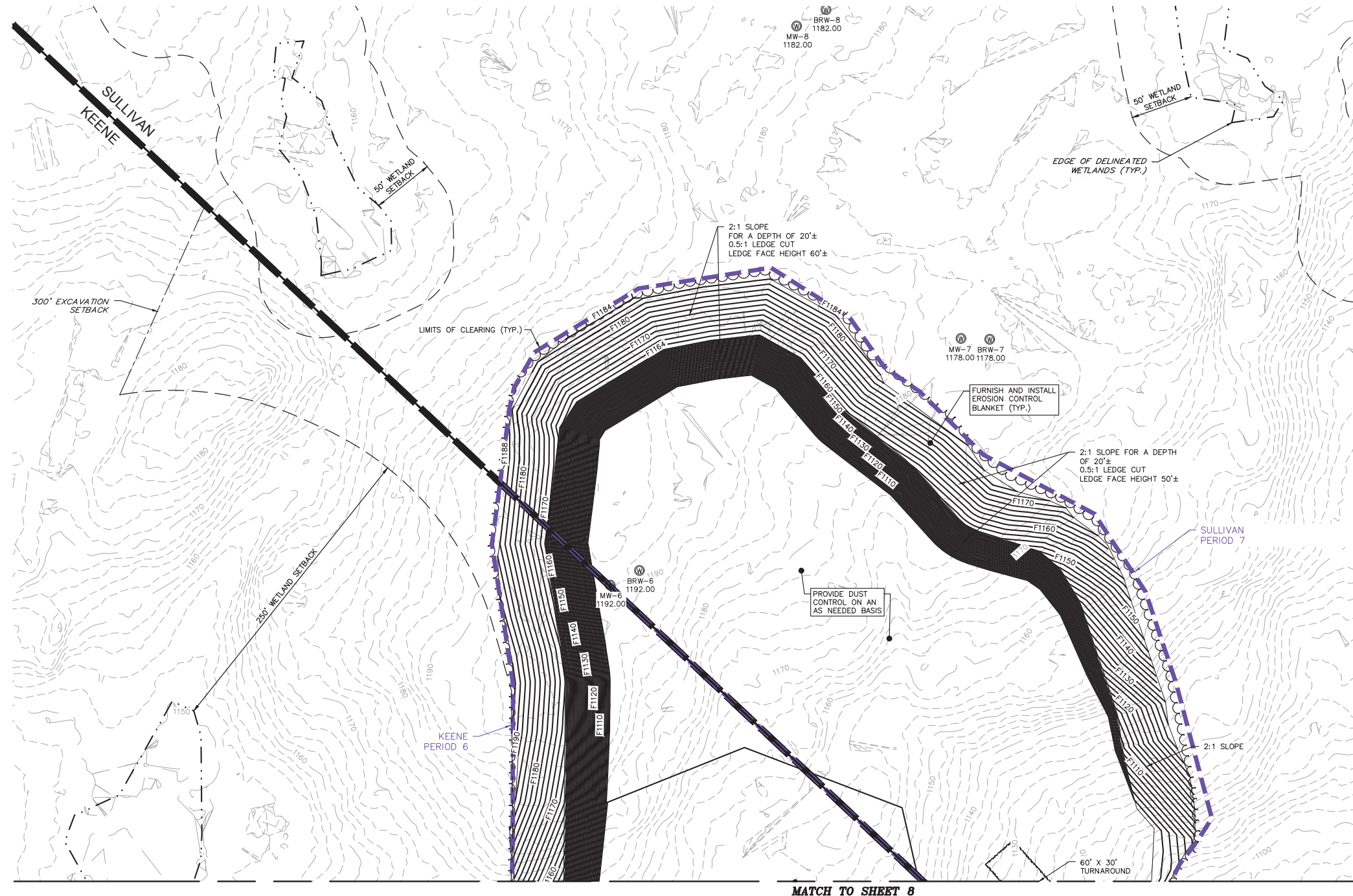


LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
GORDON SERVICES  
KEENE

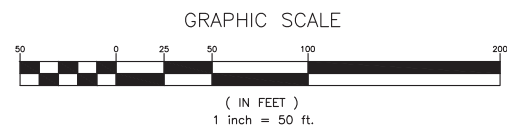
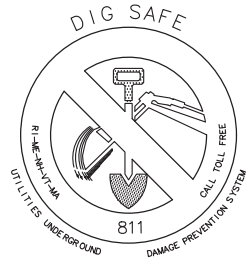
TITLE:  
EXCAVATION,  
DRAINAGE & EROSION  
CONTROL PLAN

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 9 OF 23  
SCALE:  
HORIZ. 1"=50'



- LEGEND**
- ABUTTER LINE
  - PROPERTY LINE
  - EXCAVATION SETBACK LINE
  - EXISTING EDGE OF PAVEMENT
  - EXISTING EDGE OF GRAVEL
  - WETLANDS BOUNDARY
  - WETLAND BUFFER
  - PROPOSED EDGE OF GRAVEL
  - PERIOD LINE
  - TOWN LINE
  - EX./PROP. TREELINE
  - PROP. GRADE LINE
  - EX. MAJOR CONTOUR
  - EX. MINOR CONTOUR
  - RIP RAP
  - EX./PROP. HEADWALL
  - PROP. DRAINAGE LINE

- EROSION & SEDIMENT CONTROL LEGEND**
- STONE CHECK DAM
  - LIMITS OF CLEARING
  - SILT FENCE
  - STABILIZED CONSTRUCTION EXIT
  - STAGING AND STOCKPILE AREA
  - EROSION CONTROL BLANKET



- PHASING NOTES:**
- INSTALL EROSION CONTROL MEASURES FOR PERIOD 7.
  - BEGIN EXCAVATION IN PERIOD 7. SLOPE PIT FLOOR TO THE SOUTH. INSTALL TEMPORARY SEDIMENT BASINS AS NEEDED. DO NOT DISCHARGE SEDIMENT TO RECLAIMED AREA PERIOD 6.
  - ONCE PERIOD 7 HAS REACHED FINAL GRADING, RECLAIM ENTIRE AREA. RECLAIM GRAVEL SURFACE OF ENTIRE HAUL ROAD.
  - ALL TRUCK TURNAROUND AREAS TO BE MAINTAINED UNTIL THE COMPLETION OF PERIOD 7, THEN THOSE AREAS ARE TO BE RECLAIMED.

- LOAM & SEED ALL  
DISTURBED AREAS (TYP.)
- SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)
- SEE SHEET 6 FOR EROSION  
CONTROL NOTES (TYP.)

**EXCAVATION NOTES:**

KEENE PERIOD 6 - EXCAVATION AREA: 3.82 AC, EXCAVATION PERIMETER: 1,900 FT  
262,692 CU.YD CUT, OCT 2031 - JULY 2033

SULLIVAN PERIOD 7 - EXCAVATION AREA: 4.06 AC, EXCAVATION PERIMETER: 1,755 FT  
306,210 CU.YD. CUT, AUG 2033 - AUG 2035

ALL INSPECTION AND MAINTENANCE ACTIVITIES AS WELL AS ADVERSE IMPACTS IDENTIFIED DURING INSPECTIONS AND ACTIONS TAKEN TO REMEDIATE THEM SHALL BE RECORDED IN A LOG KEPT ON SITE.



EXCAVATION NOTES:  
KEENE PERIOD 8 - EXCAVATION AREA: 7.48 AC, EXCAVATION PERIMETER: 3,219 FT  
179,175 CU.YD. CUT, SEPTEMBER 2035 - DECEMBER 2038

ALL INSPECTION AND MAINTENANCE ACTIVITIES AS WELL AS ADVERSE IMPACTS IDENTIFIED DURING INSPECTIONS AND ACTIONS TAKEN TO REMEDIATE THEM SHALL BE RECORDED IN A LOG KEPT ON SITE.



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No.	DATE	BY	COMMENTS
1	12/20/24	JD	PROJECT SUBMITTAL
2	2/3/25	JD	REVISED PER CITY COMMENTS
3	5/9/25	JD	REVISED PER CITY COMMENTS
4	7/9/25	JD	REVISED PER CITY COMMENTS
5	7/24/25	JD	ADDITIONAL WELL LOCATIONS
6	8/11/25	JD	REVISED PER CITY COMMENTS
7	8/22/25	JD	REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

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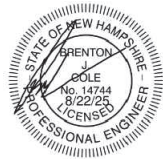
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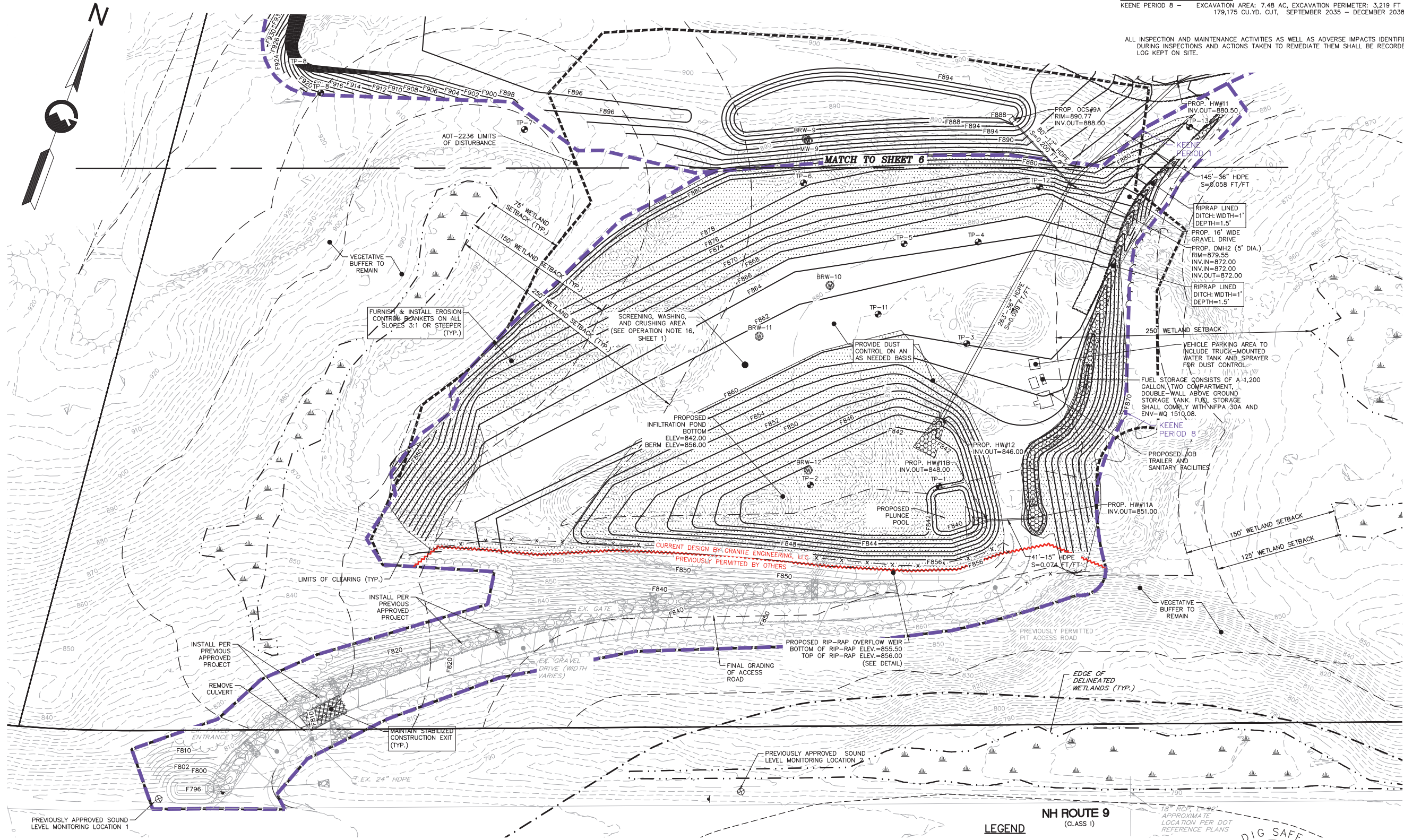


LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
GORDON SERVICES  
KEENE

TITLE:  
EXCAVATION,  
DRAINAGE & EROSION  
CONTROL PLAN

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 10 OF 23  
SCALE:  
HORIZ. 1"=50'



PHASING NOTES:

1. INSTALL EROSION CONTROL MEASURES FOR PERIOD 8.
2. BEGIN EXCAVATION IN PERIOD 8. SLOPE PIT FLOOR TO THE SOUTH.
3. AS PIT FLOOR IS LOWERED, EXCAVATE AND EXPAND TEMPORARY SEDIMENTATION BASIN EASTERLY, AT ALL TIMES MAINTAINING A MINIMUM DEPTH OF 12'.
4. DIRECT RUNOFF TO PROPOSED SEDIMENT AREA AS SHOWN ON THIS PLAN. TO KEEP ACCESS TO THE PIT OPEN, INSTALL A CULVERT TO DIRECT STORMWATER RUNOFF TO THE SEDIMENT RETENTION AREA. BY THE TIME THE PIT FLOOR REACHES ELEVATION 860.00, THE TEMPORARY SEDIMENTATION AREA SHALL HAVE SHIFTED TO THE INFILTRATION LOCATION SHOWN, WITH A FLOOR ELEVATION OF 848.00.
4. WHEN THE 12" OUTLET PIPE FROM SETTLING BASIN #7 HAS REACHED 12" COVER, AND THE PROPOSED GRADE HAS BEEN ESTABLISHED AT DMH#2, INSTALL THE 36" CLOSED DRAINAGE SYSTEM AND DISCHARGE TO THE INFILTRATION POND.
5. AS THE PIT FLOOR IS LOWERED, THE GRADE OF THE MAIN ACCESS ROAD OFF ROUTE 9 WILL NEED TO BE ADJUSTED TO CURRENT PIT FLOOR ELEVATIONS. THE RIP RAP SWALE ON THE WESTERLY SIDE SHALL REMAIN AND ADJUSTED AS NEEDED.
6. ONCE PERIOD 8 HAS REACHED FINAL GRADING, INSTALL FINAL PERMANENT CHECK DAMS IN THE MAIN ACCESS ROAD DITCHLINE. REMOVE EXISTING 24" HDPE CULVERT. INSTALL SURFACE SAND FILTERS. INSTALL 18" HDPE CULVERT, INSTALL RETAINING WALL, AND INSTALL FENCE PER PREVIOUS DESIGN PLANS BY TF MORAN AND APPROVED BY THE CITY OF LEBANON.
7. LINE INFILTRATION POND WITH 12 INCHES OF CRUSHED LIMESTONE GRAVEL, THEN LOAM AND SEED.
8. INSTALL INFILTRATION POND EMERGENCY SPILLWAY.
9. RECLAIM ENTIRE AREA. RECLAIM GRAVEL SURFACE OF ACCESS ROAD. REMOVE TEMPORARY EROSION CONTROL MEASURES.

EROSION & SEDIMENT CONTROL LEGEND

- |  |                              |
|--|------------------------------|
|  | STONE CHECK DAM              |
|  | LIMITS OF CLEARING           |
|  | SILT FENCE                   |
|  | STABILIZED CONSTRUCTION EXIT |
|  | STAGING AND STOCKPILE AREA   |
|  | EROSION CONTROL BLANKET      |

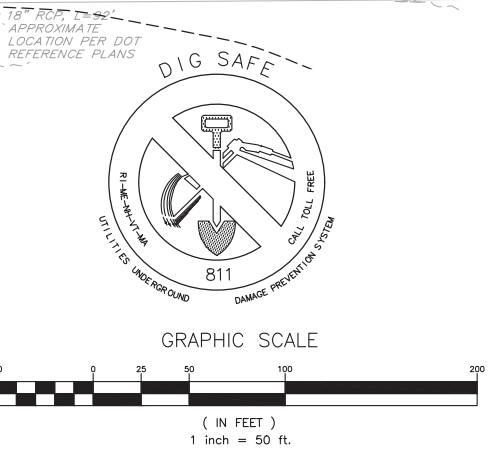
SEE SHEET 6 FOR EROSION  
CONTROL NOTES (TYP.)

SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

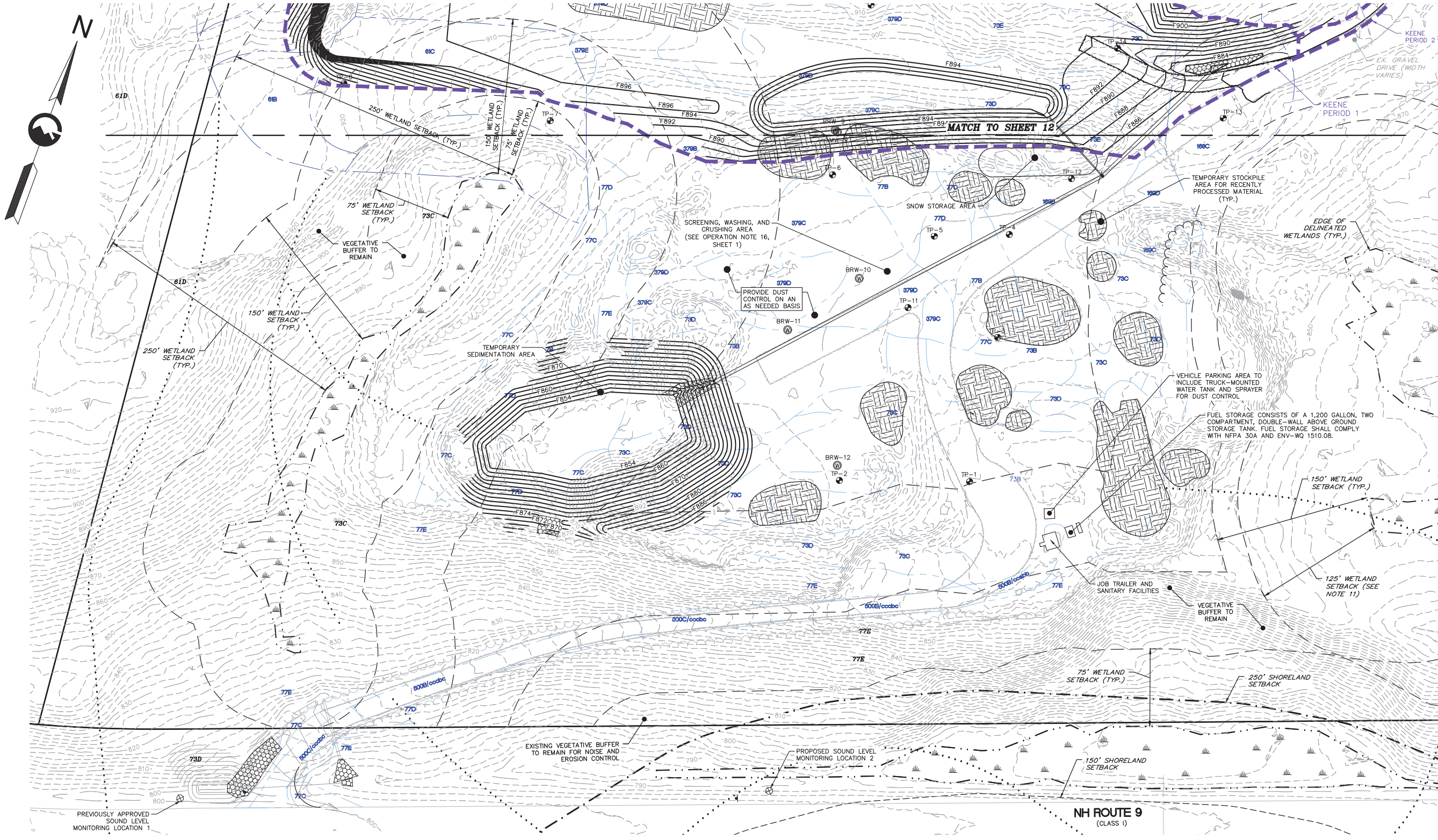
LOAM & SEED ALL  
DISTURBED AREAS (TYP.)

LEGEND

- |  |                           |
|--|---------------------------|
|  | ABUTTER LINE              |
|  | PROPERTY LINE             |
|  | EXCAVATION SETBACK LINE   |
|  | EXISTING EDGE OF PAVEMENT |
|  | EXISTING EDGE OF GRAVEL   |
|  | WETLANDS BOUNDARY         |
|  | WETLAND BUFFER            |
|  | PROPOSED EDGE OF GRAVEL   |
|  | PERIOD LINE               |
|  | EX./PROP. TREE LINE       |
|  | PROP. GRADE LINE          |
|  | EX. MAJOR CONTOUR         |
|  | EX. MINOR CONTOUR         |
|  | RIP RAP                   |
|  | EX./PROP. HEADWALL        |
|  | PROP. DRAINAGE LINE       |
|  | EX. DRAINAGE LINE         |







SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

SEE SHEET 12 FOR IMPACT  
CONTROL & MONITORING PLAN  
NOTES (TYP.)

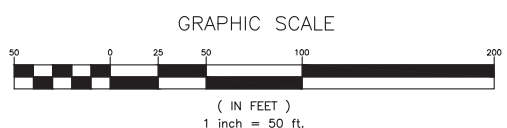
LOAM & SEED ALL  
DISTURBED AREAS (TYP.)

SSSS LEGEND (SURVEYED BY THOMAS SOKOLOSKI) HYDROLOGIC SOIL GROUP

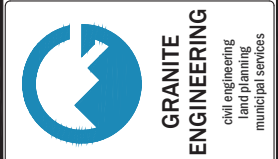
73B	BERKSHIRE FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	B
73C	BERKSHIRE FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	B
73D	BERKSHIRE FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	B
73E	BERKSHIRE FINE SANDY LOAM, 25%+ SLOPES, VERY STONY	B
77B	BERKSHIRE FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	C
77C	BERKSHIRE FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	C
77D	BERKSHIRE FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	C
77E	BERKSHIRE FINE SANDY LOAM, 25%+ SLOPES, VERY STONY	C
100B	SUNAPEE FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	B
100C	SUNAPEE FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	B
100D	SUNAPEE FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	B
379B	DIXFIELD FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	C
379C	DIXFIELD FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	C
379D	DIXFIELD FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	C
500B/cocab	UDORTHENTS, LOAMY, 0-8% SLOPES	B
500B/cocab	UDORTHENTS, LOAMY, 0-8% SLOPES	B
500B/cocab	URBAN LAND, 8-15% SLOPES	B

SUBSURFACE DATA				
LOG	EXISTING GROUND	PROPOSED GRADE	LEDGE	DEPTH TO GROUNDWATER
T-1	881	854.5	NONE TO 867.0	---
T-2	878	854.5	NONE TO 863.0	---
TP-3	872	855.5	NONE TO 858.0	---
TP-4	874.5	870	NONE TO 859.5	---
TP-5	882	876	NONE TO 869.0	---
TP-6	887	887	NONE TO 873.0	---
TP-7	893	893	881	---
TP-8	916	916	913	---
TP-9	927	927	918	---
TP-10	910	910	904.5	---
TP-11	881	865	867	---
TP-12	875	875	867	---
TP-13	882	882	876	---
TP-14	903	903	897	---
TP-15	942	942	936	---
TP-16	980	980	975	---

SUBSURFACE DATA FROM TEST PIT, BORING, AND WELL INSTALLATION LOGS CONTAINED IN THE LIMITED GEOHYDROLOGIC INVESTIGATION BY SLR INTERNATIONAL CORPORATION, DATED MARCH 25, 2022.



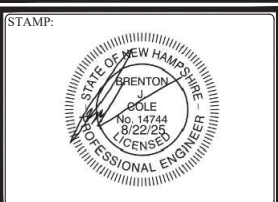
LEGEND	
---	ABUTTER LINE
---	PROPERTY LINE
---	EXCAVATION SETBACK LINE
---	EXISTING EDGE OF PAVEMENT
---	EXISTING EDGE OF GRAVEL
---	PROPOSED EDGE OF GRAVEL
---	WETLANDS BOUNDARY
---	WETLAND BUFFER
---	SOILS SURVEYED BY THOMAS SOKOLOSKI
---	SOILS SURVEYED BY LUKE HURLEY
---	NRCS SOILS
---	EX./PROP. TREELINE
---	PROP. GRADE LINE
---	EX. MAJOR CONTOUR
---	EX. MINOR CONTOUR
---	PERIOD LINE
---	TOWN LINE



REVISIONS	
BY	COMMENTS
1	PROJECT SUBMITTAL
2	REVISED PER CITY COMMENTS
3	REVISED PER CITY COMMENTS
4	REVISED PER CITY COMMENTS
5	ADDITIONAL WELL LOCATIONS
6	REVISED PER CITY COMMENTS
7	REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

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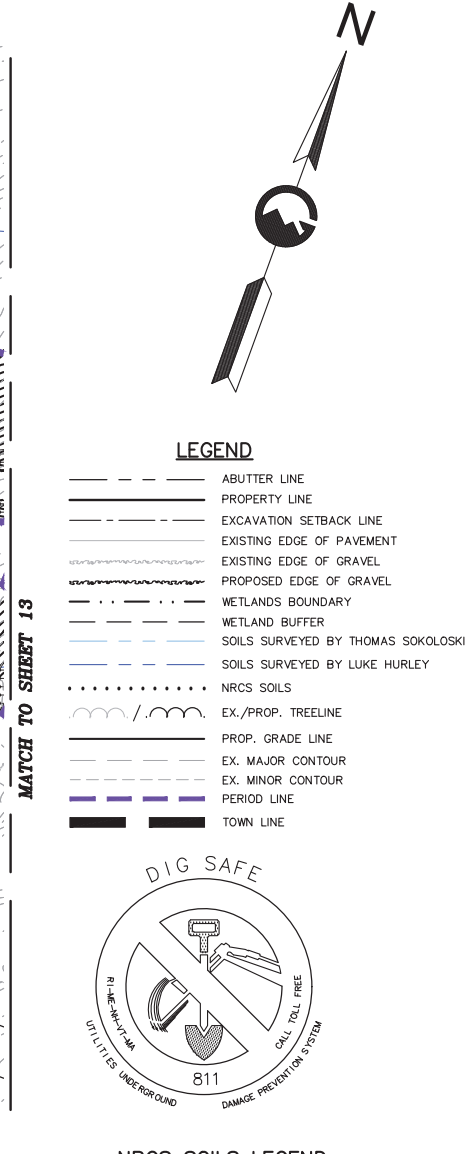
LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES KEENE**

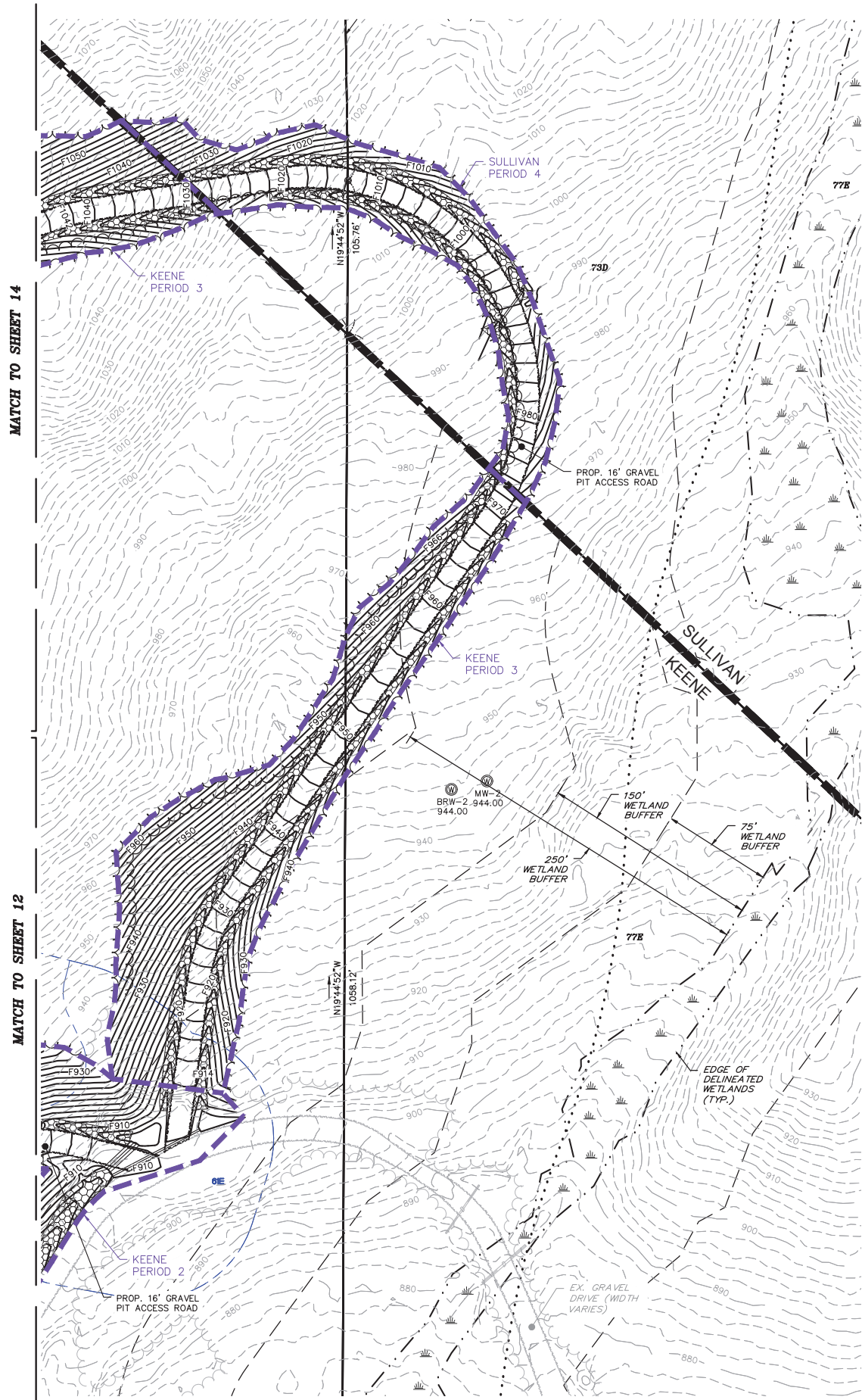
TITLE:  
**IMPACT CONTROL & MONITORING PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 11 OF 23  
SCALE:  
HORIZ. 1"=50'





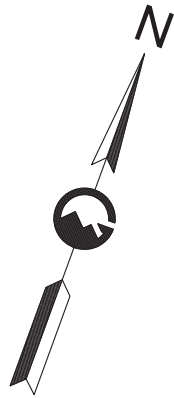




SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

SEE SHEET 12 FOR IMPACT  
CONTROL & MONITORING PLAN  
NOTES (TYP.)

LOAM & SEED ALL  
DISTURBED AREAS (TYP.)



#### LEGEND

---	ABUTTER LINE
---	PROPERTY LINE
---	EXCAVATION SETBACK LINE
---	EXISTING EDGE OF PAVEMENT
---	EXISTING EDGE OF GRAVEL
---	PROPOSED EDGE OF GRAVEL
---	WETLANDS BOUNDARY
---	WETLAND BUFFER
---	SOILS SURVEYED BY THOMAS SOKOLOSKI
---	SOILS SURVEYED BY LUKE HURLEY
---	NRCS SOILS
---	EX./PROP. TREELINE
---	PROP. GRADE LINE
---	EX. MAJOR CONTOUR
---	EX. MINOR CONTOUR
---	PERIOD LINE
---	TOWN LINE

#### NRCS SOILS LEGEND

22	COLTON GRAVELLY SANDY LOAM, RATED A
60	TUNBRIDGE-BERKSHIRE COMPLEX, RATED C
61	TUNBRIDGE-LYMAN-ROCK OUTCROP COMPLEX, RATED C
73	BERKSHIRE FINE SANDY LOAM, RATED B
77	MARLOW FINE SANDY LOAM, VERY STONY, RATED C
161	LYMAN-TUNBRIDGE-ROCK OUTCROP COMPLEX, RATED D
169	SUNAPEE FINE SANDY LOAM, RATED C

#### SITE SPECIFIC SOIL SURVEY NOTES:

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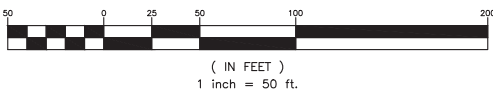
HYDROLOGIC SOIL GROUP FROM KSTAT VALUES FOR NEW HAMPSHIRE SOILS, SOCIETY OF SOIL SCIENTIST OF NEW ENGLAND, SPECIAL PUBLICATION NO. 5, SEPTEMBER, 2009.

HYDROLOGIC SSSM SYM.	SSS MAP NAME	HISS SYM.	SOIL GRP.
168	SUNAPEE	321	B
61	TURNBRIDGE LYMAN ROCK OUTCROP	224/227	C
92	LYMAN	224	D

SLOPE PERIOD:  
0-8% B 8-15% C 15-25% D 25%+ E



#### GRAPHIC SCALE



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REVISIONS		BY	DATE	COMMENTS
1	12/20/24	JD	JD	PROJECT SUBMITTAL
2	2/3/25	JD	JD	REVISED PER CITY COMMENTS
3	5/9/25	JD	JD	REVISED PER CITY COMMENTS
4	7/9/25	JD	JD	REVISED PER CITY COMMENTS
5	7/24/25	JD	JD	ADDITIONAL WELL LOCATIONS
6	8/11/25	JD	JD	REVISED PER CITY COMMENTS
7	8/22/25	JD	JD	REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

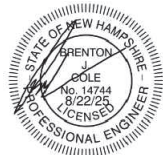
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STAMP:



LOCATION:

KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:

**GORDON SERVICES  
KEENE**

TITLE:

**IMPACT CONTROL &  
MONITORING PLAN**

PROJECT No. | DATE:

23-0201-1 | MAY 9, 2025

SHEET:

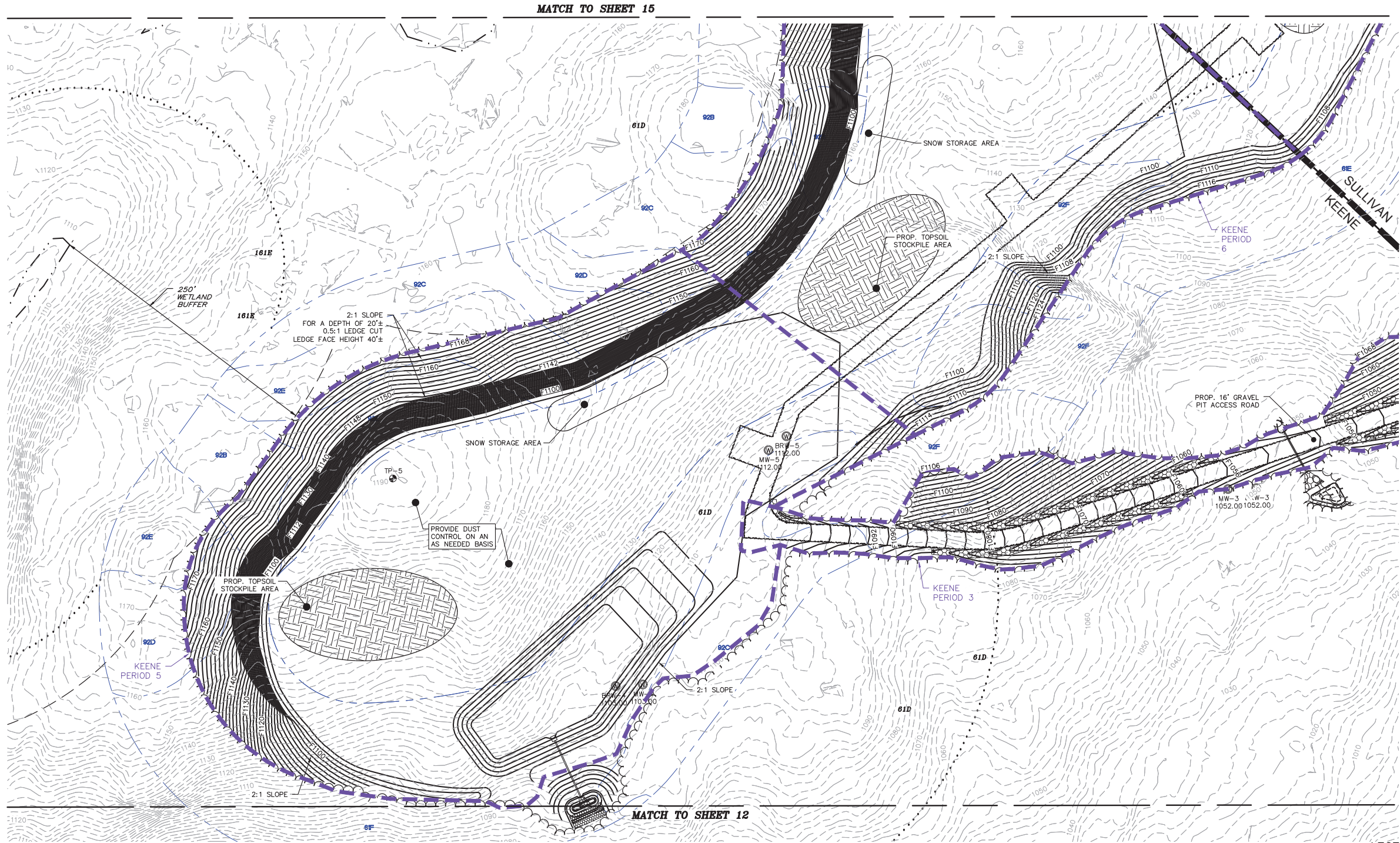
13 OF 23

SCALE:

HORIZ.

1"=50'





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SSSM SYM.	SSS MAP NAME	HISS SYM.	SOIL GRP.
168	SUNAPEE	321	B
61	TURNBRIDGE LYMAN ROCK OUTCROP	224/227	C
92	LYMAN	224	D

SLOPE PERIOD:  
0-8% B 8-15% C 15-25% D 25%+ E

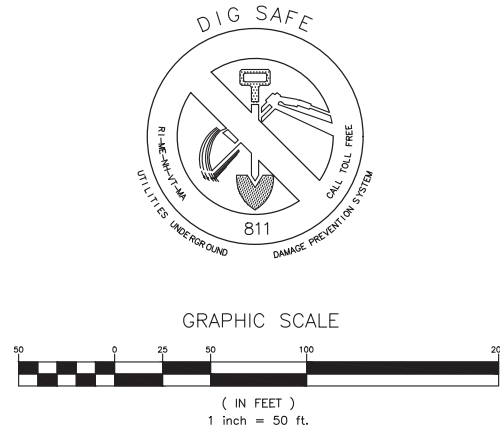


NRCS SOILS LEGEND	
22	COLTON GRAVELLY SANDY LOAM, RATED A
60	TUNBRIDGE-BERKSHIRE COMPLEX, RATED C
61	TUNBRIDGE-LYMAN-ROCK OUTCROP COMPLEX, RATED C
73	BERKSHIRE FINE SANDY LOAM, RATED B
77	MARLOW FINE SANDY LOAM, VERY STONY, RATED C
161	LYMAN-TUNBRIDGE-ROCK OUTCROP COMPLEX, RATED D
169	SUNAPEE FINE SANDY LOAM, RATED C

SEE SHEET 12 FOR IMPACT  
CONTROL & MONITORING PLAN  
NOTES (TYP.)

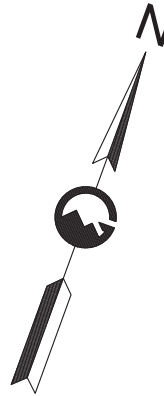
SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

LOAM & SEED ALL  
DISTURBED AREAS (TYP.)



#### LEGEND

---	ABUTTER LINE
---	PROPERTY LINE
---	EXCAVATION SETBACK LINE
---	EXISTING EDGE OF PAVEMENT
---	EXISTING EDGE OF GRAVEL
---	PROPOSED EDGE OF GRAVEL
---	WETLANDS BOUNDARY
---	WETLANDS BUFFER
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---	EX./PROP. TREELINE
---	PROP. GRADE LINE
---	EX. MAJOR CONTOUR
---	EX. MINOR CONTOUR
---	PERIOD LINE
---	TOWN LINE



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REVISIONS	
BY	COMMENTS
JD	PROJECT SUBMITTAL
JD	REVISED PER CITY COMMENTS
JD	REVISED PER CITY COMMENTS
JD	REVISED PER CITY COMMENTS
JD	ADDITIONAL WELL LOCATIONS
JD	REVISED PER CITY COMMENTS
JD	REVISED PER CITY COMMENTS

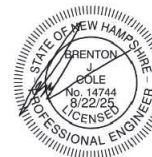
OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

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STAMP:



LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

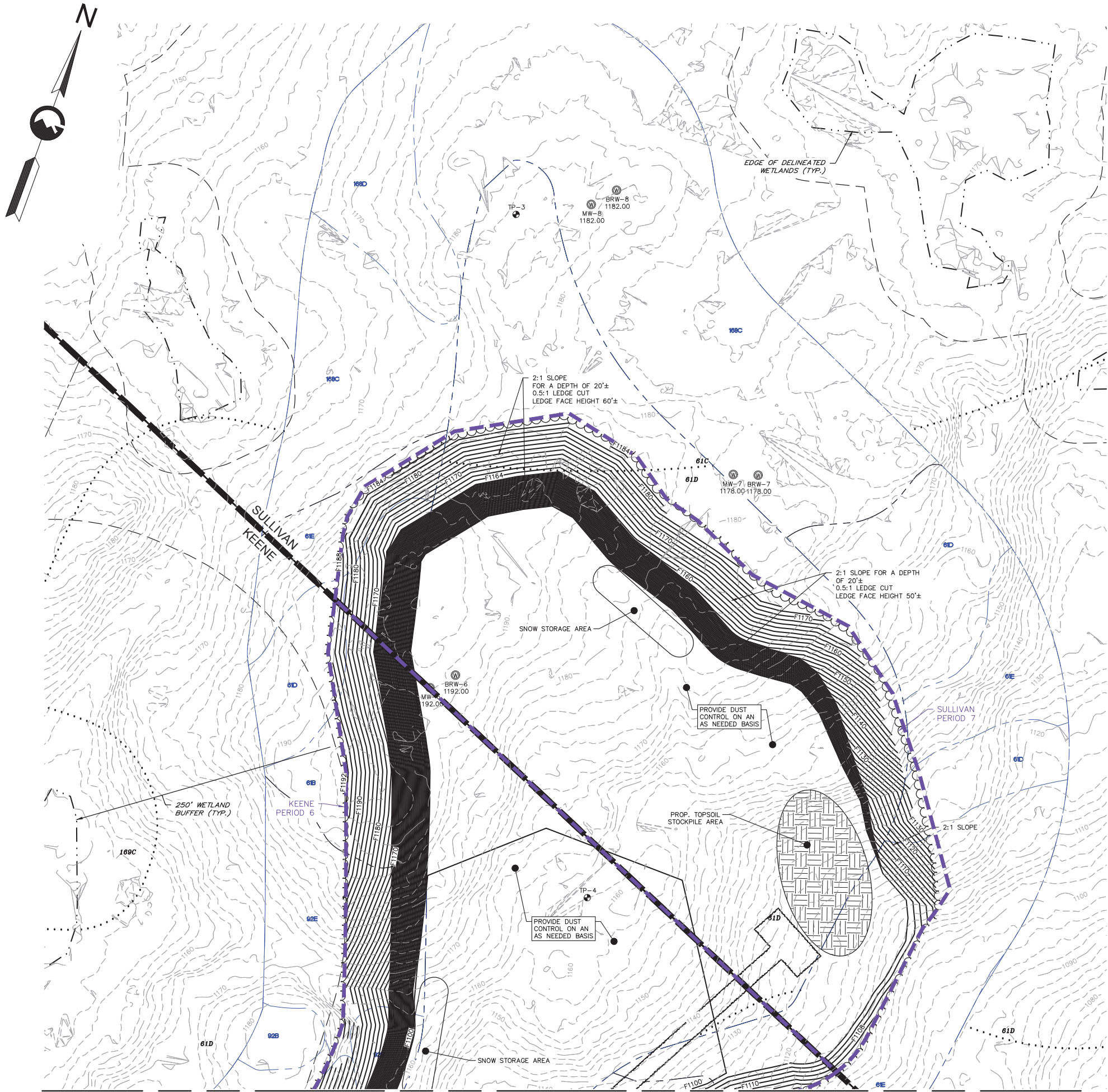
PROJECT:  
**GORDON SERVICES  
KEENE**

TITLE:  
**IMPACT CONTROL &  
MONITORING PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 14 OF 23

SCALE:  
HORIZ.  
1"=50'





**SITE SPECIFIC SOIL SURVEY NOTES:**

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168	SUNAPEE	321	B
61	TURNBRIDGE LYMAN ROCK OUTCROP	224/227	C
92	LYMAN	224	D

SLOPE PERIOD:  
0-8% B 8-15% C 15-25% D 25%+ E



**NRCS SOILS LEGEND**

- 22 COLTON GRAVELLY SANDY LOAM, RATED A
- 60 TUNBRIDGE-BERKSHIRE COMPLEX, RATED C
- 61 TUNBRIDGE-LYMAN-ROCK OUTCROP COMPLEX, RATED C
- 73 BERKSHIRE FINE SANDY LOAM, RATED B
- 77 MARLOW FINE SANDY LOAM, VERY STONY, RATED C
- 161 LYMAN-TUNBRIDGE-ROCK OUTCROP COMPLEX, RATED D
- 169 SUNAPEE FINE SANDY LOAM, RATED C



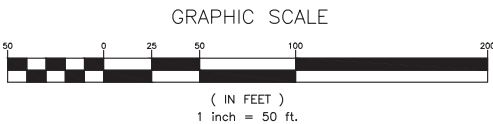
SEE SHEET 12 FOR IMPACT  
CONTROL & MONITORING PLAN  
NOTES (TYP.)

SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

LOAM & SEED ALL  
DISTURBED AREAS (TYP.)

**LEGEND**

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- WETLANDS BOUNDARY
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- NRCS SOILS
- EX./PROP. TREELINE
- PROP. GRADE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PERIOD LINE
- TOWN LINE



BY	DATE	COMMENTS
JD	12/20/24	PROJECT SUBMITTAL
JD	2/3/25	REVISED PER CITY COMMENTS
JD	5/9/25	REVISED PER CITY COMMENTS
JD	7/9/25	REVISED PER CITY COMMENTS
JD	7/24/25	ADDITIONAL WELL LOCATIONS
JD	8/11/25	REVISED PER CITY COMMENTS
JD	8/22/25	REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

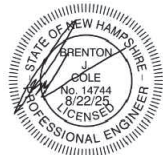
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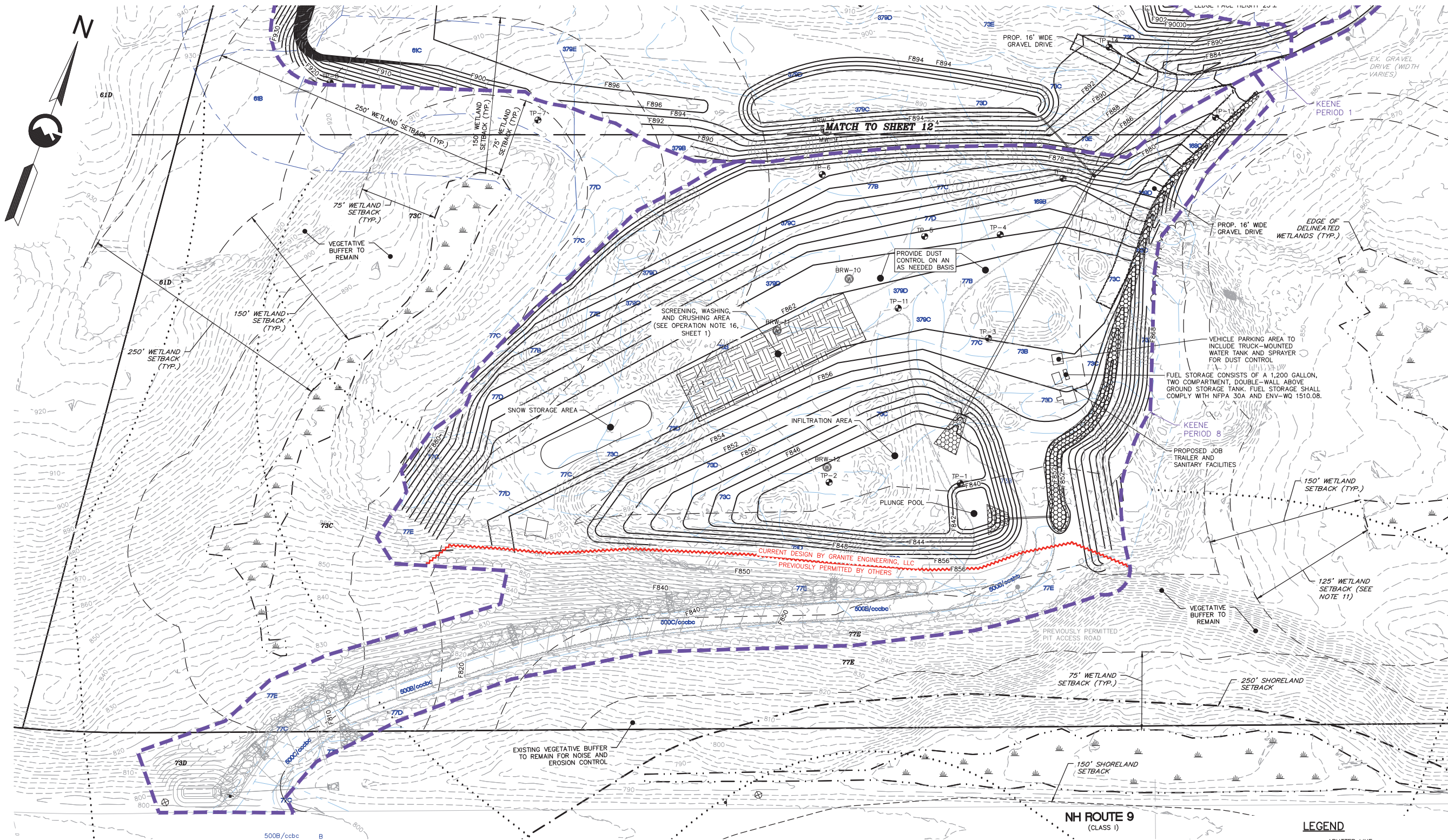
LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES  
KEENE**

TITLE:  
**IMPACT CONTROL &  
MONITORING PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 51 OF 23  
SCALE:  
HORIZ. 1"=50'





SEE SHEET 1 FOR  
OPERATION NOTES (TYP.)

SEE SHEET 12 FOR IMPACT  
CONTROL & MONITORING PLAN  
NOTES (TYP.)

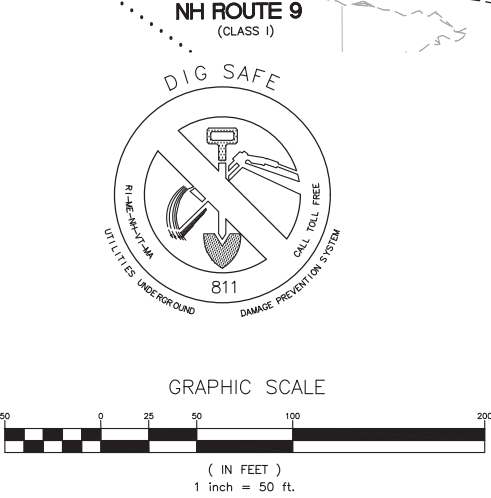
LOAM & SEED ALL  
DISTURBED AREAS (TYP.)

**SSSS LEGEND (SURVEYED BY THOMAS SOKOLOSKI) HYDROLOGIC SOIL GROUP**

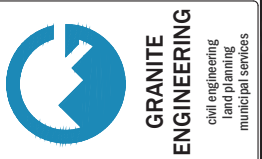
73B	BERKSHIRE FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	B
73C	BERKSHIRE FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	B
73D	BERKSHIRE FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	B
73E	BERKSHIRE FINE SANDY LOAM, 25%+ SLOPES, VERY STONY	B
77B	BERKSHIRE FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	C
77C	BERKSHIRE FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	C
77D	BERKSHIRE FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	C
77E	BERKSHIRE FINE SANDY LOAM, 25%+ SLOPES, VERY STONY	C
109B	SUNAPEE FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	B
109C	SUNAPEE FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	B
109D	SUNAPEE FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	B
379B	DIXFIELD FINE SANDY LOAM, 0-8% SLOPES, VERY STONY	C
379C	DIXFIELD FINE SANDY LOAM, 8-15% SLOPES, VERY STONY	C
379D	DIXFIELD FINE SANDY LOAM, 15-25% SLOPES, VERY STONY	C
500B/cbcb	UDORTHENTS, LOAMY, 0-8% SLOPES	B
500B/cacbb	UDORTHENTS, LOAMY, 0-8% SLOPES	B
500B/cacbb	URBAN LAND, 8-15% SLOPES	B

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SUBSURFACE DATA FROM TEST PIT, BORING, AND WELL INSTALLATION LOGS CONTAINED IN THE LIMITED GEOHYDROLOGIC INVESTIGATION BY SLR INTERNATIONAL CORPORATION, DATED MARCH 25, 2022.



- LEGEND**
- BUTTER LINE
  - PROPERTY LINE
  - EXCAVATION SETBACK LINE
  - EXISTING EDGE OF PAVEMENT
  - EXISTING EDGE OF GRAVEL
  - PROPOSED EDGE OF GRAVEL
  - WETLANDS BOUNDARY
  - WETLAND BUFFER
  - SOILS SURVEYED BY THOMAS SOKOLOSKI
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  - EX. MINOR CONTOUR
  - PERIOD LINE
  - TOWN LINE



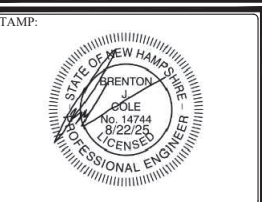
REVISIONS		BY	DATE	COMMENTS
No.	DATE	BY	DATE	COMMENTS
1	12/20/24	JD		PROJECT SUBMITTAL
2	2/3/25	JD		REVISED PER CITY COMMENTS
3	5/9/25	JD		REVISED PER CITY COMMENTS
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7	8/22/25	JD		REVISED PER CITY COMMENTS

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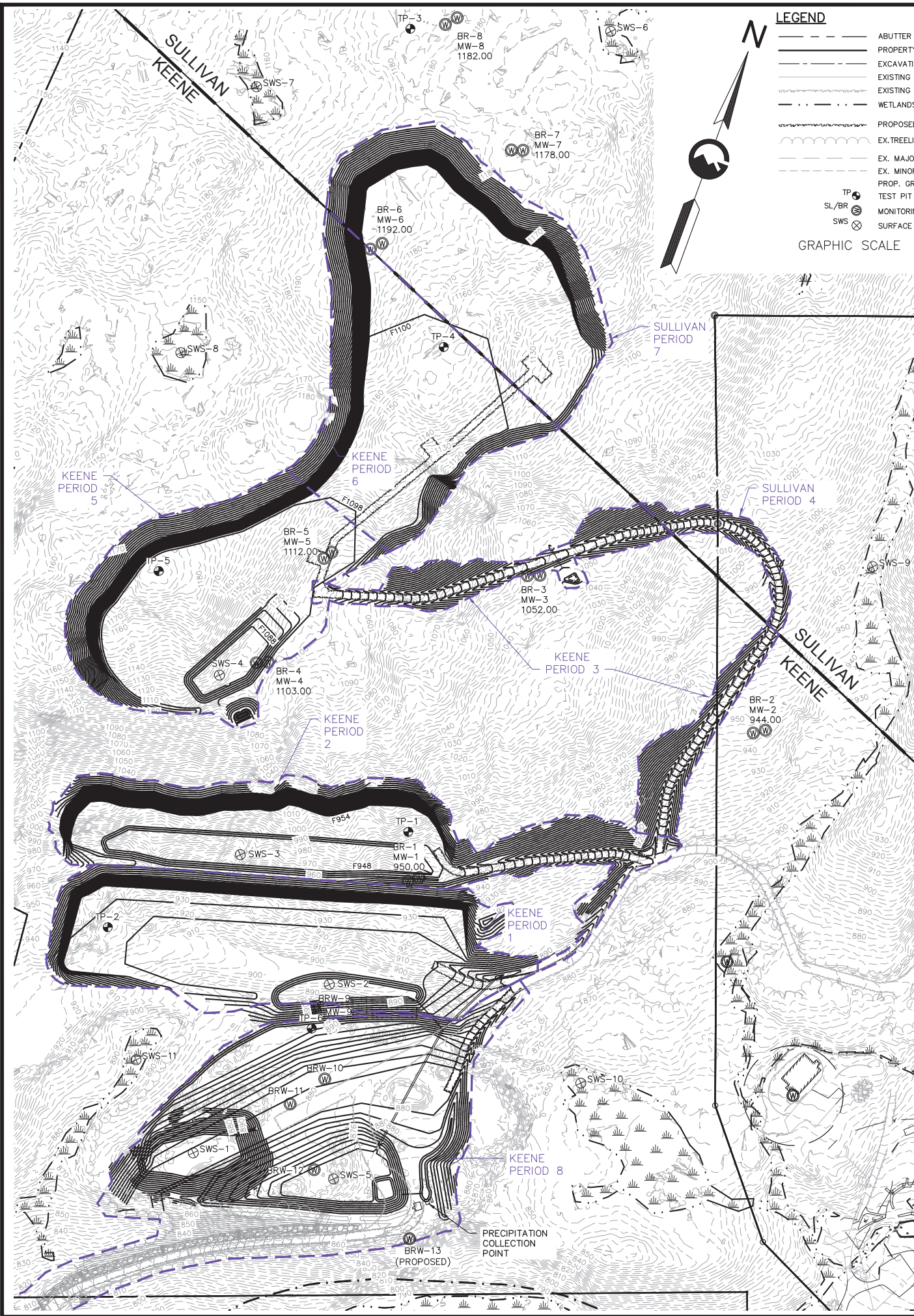
LOCATION:  
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57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES KEENE**

TITLE:  
**IMPACT CONTROL & MONITORING PLAN**

PROJECT No. 23-0201-1 DATE: MAY 9, 2025  
SHEET: 16 OF 23  
SCALE: HORIZ. 1"=50'

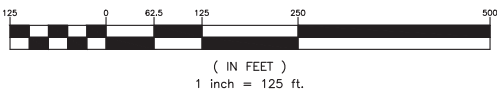




#### LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- WETLANDS BOUNDARY
- PROPOSED EDGE OF GRAVEL
- EX.TREELINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROP. GRADE LINE
- TEST PIT
- MONITORING WELL
- SURFACE WATER SAMPLE LOCATION

#### GRAPHIC SCALE



WATER LEVEL MONITORING	
MONITORING LOCATION	FREQUENCY
MW-2	MONTHLY
MW-4	MONTHLY
BR-7	MONTHLY
BR-8	MONTHLY
BR-9	MONTHLY
BR-12	MONTHLY
BR-13	MONTHLY
SWS-6	MONTHLY
SWS-7	MONTHLY
SWS-8	MONTHLY
SWS-9	MONTHLY
SWS-10	MONTHLY
SWS-11	MONTHLY

AMD FORMATION STANDARDS	
ANALYTE	STANDARD
SPECIFIC CONDUCTANCE	NO STANDARD
OXIDATION REDUCTION POTENTIAL	NO STANDARD
DISSOLVED OXYGEN	75%/5 mg/L
TURBIDITY	10 NTU (BEYOND NATURALLY OCCURRING CONDITIONS)
pH	6.0 SU
ARSENIC	5 µg/L
COPPER	1,300 µg/L
IRON	300 µg/L
MANGANESE	300 µg/L
NICKEL	100 µg/L
LEAD	15 µg/L

#### TEST PITS

ID	EXISTING GRADE	LEDGE	GROUNDWATER	E.S.H.W.T.
TP-1	986.0	3.1'	NONE FOUND	NONE FOUND
TP-2	926.0	NONE	NONE FOUND	20"
TP-3	1180.0	NONE	NONE FOUND	NONE FOUND
TP-4	1158.0	NONE	NONE FOUND	32"
TP-5	1190.0	0.5'	NONE FOUND	NONE FOUND
TP-6	887.0	873.0	NONE FOUND	NONE FOUND

#### OVERBURDEN WELLS

WELL	EXISTING GRADE	LEDGE	GROUNDWATER
MW-1	950.0	3.3'	NONE FOUND
MW-2	944.0	12'	NONE FOUND
M3-3	1052.0	14.2'	NONE FOUND
MW-4	1103.0	3.1'	NONE FOUND
MW-5	1112.0	5'	NONE FOUND
MW-6	1192.0	0.9'	NONE FOUND
MW-7	1178.0	1.9'	NONE FOUND
MW-8	1182.0	1.1'	NONE FOUND
MW-9	884.38	XX	XX

#### BEDROCK WELLS

Well	Ground Elevation (ft AMSL)	Bedrock Depth (feet)	Depth/Bottom Elevation (ft/ft AMSL)	Proposed Floor Elevation (ft AMSL)	Pit Elevation (ft AMSL)	Groundwater Elevation (ft AMSL)
BRW-1	950	3	54/896	950	DRY	
BRW-3	944	12	67/862	940	DRY	
BRW-3	1052	14	51/1,001	1,050	DRY	
BRW-4	1,103	3	81/1,022	1,098	DRY	
BRW-5	1,112	3	141/971	1,098	DRY	
BRW-6	1,192	1	142/1,059	1,098	DRY	
BRW-7	1,178	1.9	141/1,097	1,098*	1,177.04	
BRW-8	1,182	1	141/1,041	1,098*	1,179.16	

\*Well is located outside of project area. The pit floor elevation that is noted is the proposed elevation of the nearest excavation.

WELL	EXISTING GRADE	TOP OF WELL	DEPTH	GROUNDWATER
BRW-9	884.31	886.81	50'	877.91
BRW-10	879.94	884.34	85'	854.44
BRW-11	881.39	885.19	85'	839.96
BRW-12	882.74	886.74	90'	830.92

#### ON-SITE WATER QUALITY MONITORING NOTES (ARD MONITORING)

- PH, SPECIFIC CONDUCTANCE, OXIDATION, REDUCTION POTENTIAL, DISSOLVED OXYGEN AND TURBIDITY, AND LABORATORY ANALYSIS OF DISSOLVED AND TOTAL METALS INCLUDING: ARSENIC, COPPER, IRON, MAGNESE, NICKEL AND LEAD WILL BE TESTED AT EACH LOCATION

#### INITIAL RESPONSE ACTION -- AMD DETECTION

- IF A SURFACE AND/OR GROUNDWATER SAMPLING LOCATION PRESENTS RESULTS THAT ARE INDICATIVE OF THE FORMATION OF ACID MINE DRAINAGE, NHDES AND THE CITY OF KEENE WILL BE NOTIFIED IMMEDIATELY. FURTHERMORE, THE FOLLOWING IMMEDIATE INITIAL RESPONSE ACTIONS WILL BE IMPLEMENTED.
- ALL ACTIVE QUARRYING/MINING OPERATIONS OCCURRING IN THE AFFECTED AREA WILL CEASE AND EXPOSED BEDROCK SURFACES SHALL BE EXPEDITIOUSLY RESTORED TO HAVE A MINIMUM THICKNESS OF 3'-FEET OF COVER MATERIAL. THE COVER MATERIAL SHALL BE CRUSHED, LIME/STONE GRAVEL, COVER MATERIAL SHALL BE COMPACTED IN 1'-FOOT LIFTS. THE INTENT OF THE CLAY CONTENT AND COMPACTION IS TO LIMIT AIR AND SURFACE WATER CONTACT WITH THE SOURCE OF THE ACID MINE DRAINAGE.
  - ANY DOWNSLOPE AFFECTED DRAINAGES WHICH MAY BE CONTRIBUTING/CONVEYING ACID MINE DRAINAGE SHALL BE ARMORED WITH 1'-FOOT OF 2-INCH MINUS, CRUSHED, LIME/STONE GRAVEL.
  - ALL SURFACE WATER WITHIN 1/2-MILE DOWNGRADEMENT OF THE DETECTED ACID MINE DRAINAGE SHALL BE SAMPLED WITHIN 2-WEEKS OF THE INITIAL DETECTION AND BE INCLUDED IN THE SURFACE WATER MONITORING PROGRAM.
  - SAMPLING OF ALL DOMESTIC WATER SUPPLY WELLS WITHIN 1/2-MILE OF THE AFFECTED AREA FOR ACID MINE DRAINAGE PARAMETERS WILL OCCUR WITHIN 2-WEEKS OF THE INITIAL DETECTION AND CONTINUE TO BE SAMPLED ON A QUARTERLY BASIS.
    - IF ACID MINE DRAINAGE IS DETECTED IN A DOMESTIC WATER SUPPLY WELL, THE HOMEOWNER SHALL BE OFFERED TO HAVE A 'POINT-OF-USE' WATER TREATMENT SYSTEM INSTALLED AND MAINTAINED WHILE A NEW, UNIMPACTED, DOMESTIC WATER SUPPLY IS MADE AVAILABLE AT NO COST TO THE HOMEOWNER.
    - A GROUNDWATER QUALITY ASSESSMENT IN THE AREAS ADJACENT TO THE DETECTED ACID MINE DRAINAGE WILL BE INITIATED.
      - THE GROUNDWATER QUALITY ASSESSMENT SHALL INCLUDE THE INSTALLATION OF A MINIMUM OF THREE (3) MONITORING WELLS; ONE UPGRADIENT OF THE AFFECTED SURFACE WATER, AND TWO DOWN-GRADIENT OF THE AFFECTED SURFACE WATER. ADDITIONAL MONITORING WELLS MAY BE REQUIRED TO DETERMINE THE HORIZONTAL AND VERTICAL DISTRIBUTION OF THE GROUNDWATER IMPACTS.
      - GROUNDWATER SAMPLES WILL BE COLLECTED WITHIN 2 WEEKS OF INSTALLATION AND ANALYZED FOR ACID MINE DRAINAGE PARAMETERS LISTED ABOVE. A SECOND, CONFIRMATORY ROUND OF SAMPLING WILL OCCUR 2-WEEKS AFTER THE INITIAL SAMPLING ROUND. MONITORING WELLS WILL BE SAMPLED ON A QUARTERLY BASIS IF ACID MINE DRAINAGE IMPACTS ARE DETECTED.

#### OFF-SITE WATER QUALITY MONITORING NOTES

- LAND OWNERS WITHIN 1/2 MILE OF THE EXCAVATION SITE WILL BE OFFERED GROUNDWATER QUALITY MONITORING.
- NOTIFICATIONS WILL BE MADE TO LANDOWNERS WITH THE OPTION TO ALLOW OR DECLINE MONITORING.
- TWO ROUNDS OF SAMPLING WILL OCCUR A MINIMUM OF 14 CALENDAR DAYS APART.
- SAMPLES WILL BE ANALYZED FOR VOLATILE ORGANIC COMPOUNDS AND NITRATE.
- RESULTS WILL BE SENT TO THE LAND OWNER, THE CITY OF KEENE, & TOWN OF SULLIVAN.
- ON-GOING MONITORING
- BI-ANNUAL BASIS OF WELLS DURING THE TERM OF THE PERMIT.
- BI-ANNUAL BASIS OF WELLS TWO (2) YEARS FOLLOWING THE CEASE OF OPERATIONS AT THE SITE AND RECLAMATION.
- SAMPLES WILL BE ANALYZED FOR VOLATILE ORGANIC COMPOUNDS AND NITRATE.
- RESULTS WILL BE SENT TO THE LAND OWNER, THE CITY OF KEENE, & TOWN OF SULLIVAN.
- ADVERSE IMPACTS
- DRINKING WATER RESULTS WILL BE COMPARED TO THE NHDES AMBIENT GROUNDWATER QUALITY STANDARDS (AGQS).
- IF ADVERSE IMPACTS ARE NOTED, THE APPLICANT WILL IMMEDIATELY BE NOTIFIED TO CEASE BEDROCK EXCAVATION.
- NHDES, THE CITY OF KEENE, AND TOWN OF SULLIVAN WILL BE NOTIFIED.
- IF MONITORING INDICATES THE EXCAVATION ACTIVITIES CAUSED THE IDENTIFIED CONTAMINATION, A LICENSED NH WELL CONTRACTOR WILL BE IMMEDIATELY RETAINED FOR INSTALLATION OF A NEW WATER SUPPLY WELL IN AN AREA THAT HAS NOT BEEN IMPACTED BY CONTAMINATION.
- COST OF WELL WILL BE THE SOLE RESPONSIBILITY OF THE APPLICANT.

#### BEST MANAGEMENT PRACTICES FOR BLASTING

- ALL ACTIVITIES RELATED TO BLASTING SHALL FOLLOW BEST MANAGEMENT PRACTICES (BMPS) TO PREVENT CONTAMINATION OF GROUNDWATER INCLUDING PREPARING, REVIEWING AND FOLLOWING AN APPROVED BLASTING PLAN; PROPER DRILLING, EXPLOSIVE HANDLING AND LOADING PROCEDURES; OBSERVING THE ENTIRE BLASTING PROCEDURES; EVALUATING BLASTING PERFORMANCE; AND HANDLING AND STORAGE OF BLASTED ROCK.
- LOADING PRACTICES. THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:
    - DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE LOGS SHALL INDICATE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS. IF A FRACTURE OR WATER BEARING ZONE IS ENCOUNTERED IN A BOREHOLE, NO BLASTING SHALL OCCUR AT THAT LOCATION.
    - EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE, RETURNED TO THE DELIVERY VEHICLES OR PLACED IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL.
    - SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL.
    - LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BLASTHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED.
    - LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT.
    - EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE NEED TO BE ATTENDED TO.
  - EXPLOSIVE SELECTION. THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:
    - EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION.
    - EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF THE PRODUCT UPON GROUNDWATER.
  - PREVENTION OF MISFIRES. APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT MISFIRES.
  - MUCK PILE MANAGEMENT. MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION BY IMPLEMENTING THE FOLLOWING MEASURES:
    - REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.
    - MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF WATER SUPPLY WELLS OR SURFACE WATER.
  - SPILL PREVENTION MEASURES AND SPILL MITIGATION. SPILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT. THE MEASURES SHALL INCLUDE AT A MINIMUM:
    - THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE
      - STORAGE OF REGULATED SUBSTANCES ON AN IMPERVIOUS SURFACE.
      - SECURE STORAGE AREAS AGAINST UNAUTHORIZED ENTRY.
      - LABEL REGULATED CONTAINERS CLEARLY AND VISIBLY.
      - INSPECT STORAGE AREAS WEEKLY.
      - COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS.
      - WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS.
      - SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
    - THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
      - EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED.
      - PLACE DRIP PANS UNDER SPOUTS, VALVES, AND PUMPS.
      - HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS.
      - USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES.
      - PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
  - THE TRAINING OF ON-SITE EMPLOYEES AND ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
  - FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT WILL COMPLY WITH THE REGULATIONS OF NHDES [NOTE THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWOB-22-6: 'BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT' OR ITS SUCCESSOR DOCUMENT.]

#### AMD MONITORING

Location	Type	Frequency	Parameters	Applicable Standards
BRW-7	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
BRW-8	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
BRW-9	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
BRW-10	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
BRW-11	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
BRW-12	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
BRW-13 (proposed)	Groundwater	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Or 600 AGQS
Period 8 infiltration basin	Surface water	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Wq 1700
Additional infiltration basins (as constructed)	Surface water	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Wq 1700
Downgradient discharge station	Surface water	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Wq 1700
SWS-6	Surface water	Quarterly (Jan, Apr, Jul, Oct); pH monthly	Field + Metals suite	Env-Wq 1700

Notes:

- SC = Specific Conductance; ORP = Oxidation-Reduction Potential; DO = Dissolved Oxygen.
- Baseline monitoring will consist of two (2) rounds, ≥14 days apart, prior to excavation.
- Transition to biannual monitoring (April, October) may occur after four consecutive quarters demonstrate no evidence of AMD.
- pH and DO are evaluated as field indicators, not numeric standards, except where narrative criteria apply in surface water.



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REVISIONS		BY	DATE	COMMENTS
1	12/20/24	JD	JD	PROJECT SUBMITTAL
2	2/3/25	JD	JD	REVISED PER CITY COMMENTS
3	5/9/25	JD	JD	REVISED PER CITY COMMENTS
4	7/9/25	JD	JD	REVISED PER CITY COMMENTS
5	7/24/25	JD	JD	ADDITIONAL WELL LOCATIONS
6	8/11/25	JD	JD	REVISED PER CITY COMMENTS
7	8/22/25	JD	JD	REVISED PER CITY COMMENTS

OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

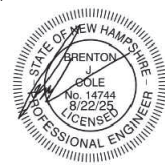
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STAMP:



LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 5  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

PROJECT:  
**GORDON SERVICES  
KEENE**

TITLE:  
**MONITORING PLAN**

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 17 OF 23  
SCALE:  
HORIZ. 1"=125'





LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- WETLANDS BOUNDARY
- WETLAND BUFFER
- PROPOSED EDGE OF GRAVEL
- TOWN LINE
- EX./PROP. TREELINE
- PROP. GRADE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR

VEGETATIVE BUFFER TO REMAIN

RSA 155-E PERMIT CONDITIONS:

- THE PERMIT IS GRANTED SUBJECT TO THE OPERATING AND RECLAMATION STANDARDS OF NH RSA 155-E, IN ADDITION TO THE FOLLOWING:
- ALL WELLS WITHIN 1/2 MILE OF THE BLASTING SITE WILL BE TESTED AND MONITORED ACCORDING TO THE BLASTING PLAN AND GROUNDWATER MONITORING PLAN
  - ASSURANCE THAT THE BLASTING COMPANY WILL PROVIDE INSURANCE COVERAGE FOR THE REMEDIATION OF ANY WELLS THAT MIGHT BE CONTAMINATED BY BLASTING.
  - G2 HOLDINGS WILL PROVIDE A BOND FOR RECLAMATION OF THE EXCAVATION SITE IN THE AMOUNT DETERMINED BY THE CITY OF KEENE.
  - THE BLASTING COMPANY WILL FOLLOW ALL NH DEPARTMENT OF TRANSPORTATION PROTOCOLS FOR SIGNAGE, WARNING, AND CLOSING OF THE HIGHWAY, IF NECESSARY, FOR BLASTING.
  - HOURS OF OPERATION ARE 7 AM TO 5 PM MONDAY TO FRIDAY; AND 7 AM TO 12 PM ON SATURDAY FOR TAKING PRE-PROCESSED MATERIALS OFF SITE. EMERGENCY SITUATIONS ARE EXEMPT FROM THESE STIPULATIONS.
  - G2 HOLDINGS WILL PROVIDE THE PLANNING BOARD WITH A COPY OF ITS REGULAR PROGRESS REPORT TO NH DEPARTMENT OF ENVIRONMENTAL SERVICES.
  - VIOLATION OF ANY CONDITION OF THIS PERMIT MAY RESULT IN REVOCATION OF THE PERMIT BY THE REGULATOR.

RECLAMATION NOTES:

- ANY EXCAVATED AREA OF 5 CONTIGUOUS ACRES OR MORE, WHICH IS DEPLETED OF COMMERCIAL EARTH MATERIALS, EXCLUDING BEDROCK, OR ANY EXCAVATION FROM WHICH EARTH MATERIALS OF SUFFICIENT WEIGHT OR VOLUME TO BE COMMERCIALY USEFUL HAVE NOT BEEN REMOVED FOR A 2-YEAR PERIOD, SHALL BE RECLAIMED IN ACCORDANCE WITH RSA 155-E:2, III, SHALL PREPARE AND SUBMIT FOR THE REGULATOR'S RECORD A RECLAMATION PLAN FOR THE AFFECTED LAND, INCLUDING A TIMETABLE FOR RECLAMATION OF THE DEPLETED AREAS WITHIN THE RECLAMATION SITE.
- AT THE TIME OF RECLAMATION, ALL LANDS THAT ARE NO LONGER BEING USED FOR EXCAVATION ACTIVITIES, INCLUDING EXCAVATION AREAS, PROCESSING AREAS, STOCKPILING AREAS, AND STORMWATER MANAGEMENT AREAS, EXCEPT FOR EXPOSED LEDGE, SHALL BE RECLAIMED.
- AREAS TO BE RECLAIMED SHALL BE GRADED TO A NATURAL REPOSE FOR THE TYPE OF SOIL OF WHICH THEY ARE COMPOSED SO AS TO CONTROL EROSION.
- ONCE RECLAIMED, CHANGES OF SLOPE, EXCEPT FOR EXPOSED LEDGE, SHALL BE SMOOTH AND GRADUATED RATHER THAN SHARP, SUDDEN OR ABRUPT.
- TO ASSURE ADEQUATE DRAINAGE AND SOIL STABILIZATION, AND TO PREVENT EROSION AND SEDIMENTATION, THE TOPOGRAPHY OF THE LAND SHALL BE LEFT SO THAT WATER DRAINING FROM THE SITE LEAVES THE PROPERTY AT THE ORIGINAL, NATURAL DRAINAGE POINTS AND IN THE NATURAL PROPORTIONS OF FLOW.
- EXCEPT FOR EXPOSED ROCK LEDGE, ALL AREAS TO BE RECLAIMED SHALL BE SPREAD WITH NATIVE TOPSOIL TO A DEPTH OF NOT LESS THAN 4 INCHES.
- TOPSOIL OF AT LEAST THE MINIMUM AMOUNT NEEDED TO RESTORE THE SITE SHALL BE STOCKPILED ON THE SITE UNTIL RECLAMATION.
- TOPSOIL AND OVERBURDEN STOCKPILING AREAS SHALL BE STABILIZED TO PREVENT EROSION BY AND SEDIMENTATION OF STORMWATER RUNOFF FOLLOWING BEST MANAGEMENT PRACTICES.
- EXCEPT WHERE LEDGE ROCK IS EXPOSED, ALL AREAS TO BE RECLAIMED AS SPECIFIED IN A RECLAMATION PLAN APPROVED BY THE PLANNING BOARD SHALL HAVE PERMANENT COVER VEGETATION ESTABLISHED TO ASSURE SOIL STABILIZATION AND TO PREVENT EROSION AND SEDIMENTATION, IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES AND AS SET FORTH IN AN APPROVED RECLAMATION PLAN.
- ANY PORTIONS OF LANDS WITHIN THE EXCAVATION PERIMETER THAT ARE VISIBLE FROM ANY PUBLIC WAY, FROM WHICH TREES HAVE BEEN REMOVED, SHALL BE REPLANTED WITH TREE SEEDLINGS IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES.
- RECLAMATION ACTIVITIES THAT INCLUDE PLANTING OF VEGETATION AND/OR COVER CROP SHALL PROVIDE ADEQUATE SOIL CONDITIONING AND MULCHING ACCORDING TO BEST MANAGEMENT PRACTICES.
- SEED AND PLANT SPECIES TO BE USED IN RESTORING THE SITE SHALL BE NATIVE SPECIES SIMILAR TO THOSE SPECIES TYPICALLY FOUND SURROUNDING THE SITE.
- ALL EXCAVATION SITES WHERE RECLAMATION HAS BEEN COMPLETED SHALL BE MONITORED ANNUALLY BY THE APPLICANT OVER A PERIOD OF 2-YEARS FOLLOWING THE COMPLETION DATE TO ENSURE THAT RECLAMATION MEASURES HAVE BEEN EFFECTIVE IN ACCORDANCE WITH THESE STANDARDS AND THAT ALL PLANTED VEGETATION HAS SURVIVED.
- THE PROPERTY OWNER SHALL USE BEST EFFORTS TO REMOVE NON-NATIVE AND INVASIVE SPECIES, AS DEFINED BY THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES, THAT BECOME ESTABLISHED DURING THE MONITORING PERIOD IN THE RECLAIMED AREAS.
- EXCAVATION OPERATIONS THAT CAUSE ADVERSE IMPACTS SHALL ABATE AND/OR REMEDIATE THOSE IMPACTS, RESTORING ALL AFFECTED AREAS TO A PRE-IMPACT CONDITION. RECLAMATION SHALL NOT BE SAID TO BE COMPLETE UNTIL ALL ADVERSELY IMPACTED AREAS HAVE BEEN SUCCESSFULLY REMEDIATED.

COLOR LEGEND:

- RECLAMATION AREA PERIOD 1 (195,375 SF) (2,420 CY)  
LOAM - \$85/CY = \$205,700 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 4.49 = \$7,177. TOTAL COST = \$212,877
- RECLAMATION AREA PERIOD 2 (150,500 SF) (1,860 CY)  
LOAM - \$50/CY = \$158,100 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.46 = \$5,528. TOTAL COST = \$163,628
- RECLAMATION AREA PERIOD 3 (149,500 SF) (1,850 CY)  
LOAM - \$50/CY = \$157,250 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.43 = \$5,492. TOTAL COST = \$162,742
- RECLAMATION AREA PERIOD 4 (132,025 SF) 1,830 CY  
LOAM - \$50/CY = \$155,550 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.03 = \$4,850. TOTAL COST = \$160,400
- RECLAMATION AREA PERIOD 5 (156,410 SF) (1,932 CY)  
LOAM - \$50/CY = \$164,220 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.59 = \$5,746. TOTAL COST = \$169,966
- RECLAMATION AREA PERIOD 6 (134,015 SF) (1,655 CY)  
LOAM - \$50/CY = \$140,675 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.08 = \$4,925. TOTAL COST = \$145,600
- RECLAMATION AREA PERIOD 7 (309,094 SF) (3,816 CY)  
LOAM - \$50/CY = \$324,360 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 7.10 = \$7,441. TOTAL COST = \$331,801

RECLAMATION AREA PERIOD 6 (HAUL ROAD) IS TO BE COMPLETED AFTER THE FINAL EXCAVATION HAS BEEN COMPLETED IN THE NORTHERN PORTION OF THE PIT (SULLIVAN), AND RECLAIMED.

RECLAMATION AREA PERIOD 7. THIS IS THE LAST AREA TO BE RECLAIMED AS IT WILL BE USED FOR PROCESSING MATERIALS AND A STORAGE MATERIAL AREA UNTIL THE PROJECT IS COMPLETE. THE SURFACE WILL BE COMPACTED GRAVEL AND ALL TEMPORARY EROSION CONTROL DEVICES AND STORMWATER MANGEMENT DEVICES WILL REMAIN IN PLACE UNTIL THE PROJECT IS COMPLETE.

GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.



GRANITE  
ENGINEERING  
civil engineering  
land planning  
municipal services

REVISIONS		BY	DATE	COMMENTS
1	12/20/24	JD		PROJECT SUBMITTAL
2	2/3/25	JD		REVISED PER CITY COMMENTS
3	5/9/25	JD		REVISED PER CITY COMMENTS
4	7/9/25	JD		REVISED PER CITY COMMENTS
5	7/24/25	JD		ADDITIONAL WELL LOCATIONS
6	8/11/25	JD		REVISED PER CITY COMMENTS
7	8/22/25	JD		REVISED PER CITY COMMENTS

OWNER/APPLICANT:

G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

GRANITE  
ENGINEERING

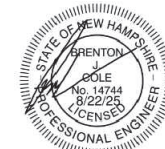
civil engineering • land planning •  
municipal services

150 Dow Street, Tower 2, Suite 421  
Manchester,  
New Hampshire 03101

603.518.8030

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STAMP:



LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

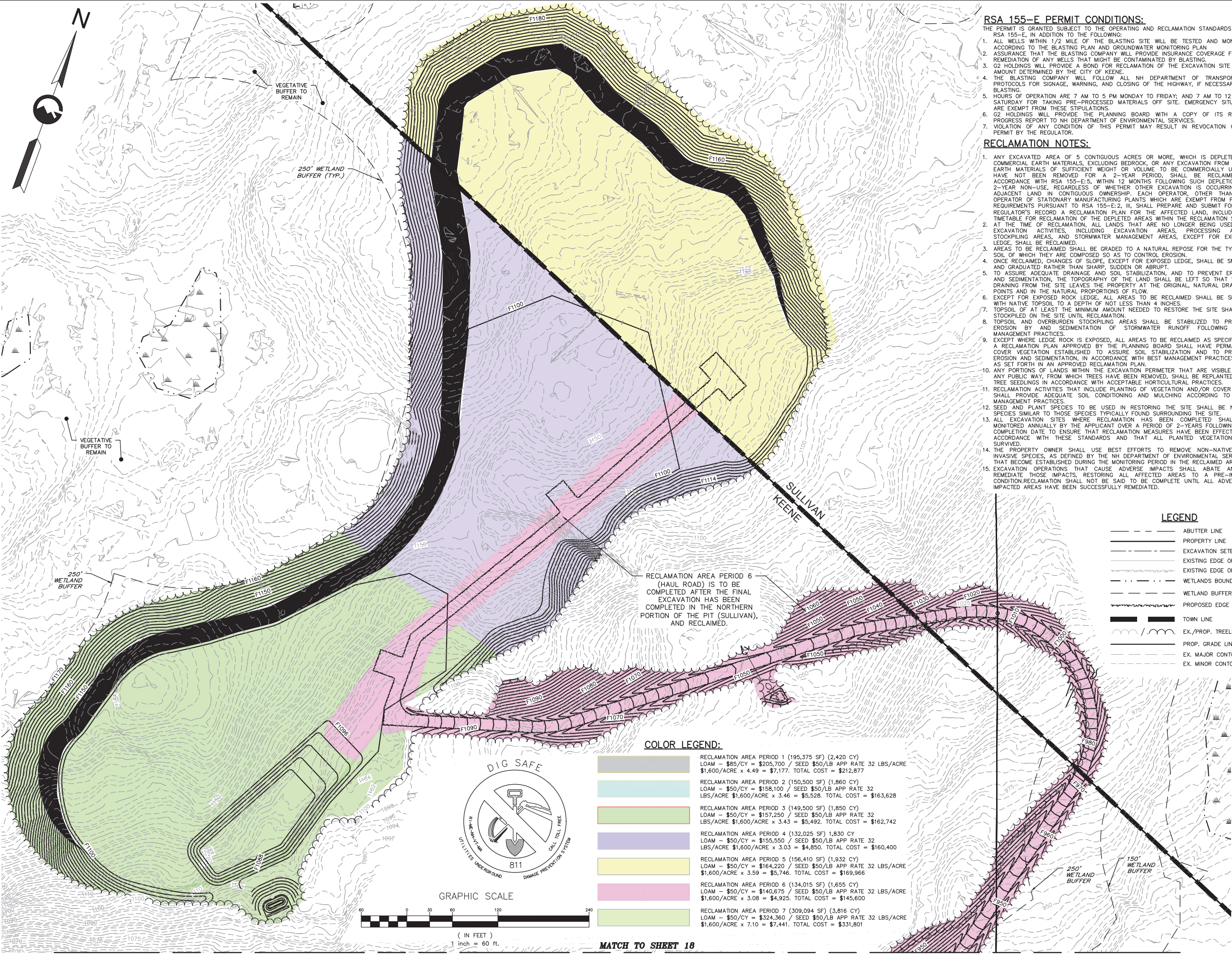
PROJECT:  
GORDON SERVICES  
KEENE

TITLE:  
RECLAMATION PLAN

PROJECT No. DATE:  
23-0201-1 MAY 9, 2025  
SHEET: 18 OF 23

SCALE:  
HORIZ. 1"=60'





- RSA 155-E PERMIT CONDITIONS:**
- THE PERMIT IS GRANTED SUBJECT TO THE OPERATING AND RECLAMATION STANDARDS OF NH RSA 155-E, IN ADDITION TO THE FOLLOWING:
1. ALL WELLS WITHIN 1/2 MILE OF THE BLASTING SITE WILL BE TESTED AND MONITORED ACCORDING TO THE BLASTING PLAN AND GROUNDWATER MONITORING PLAN.
  2. ASSURANCE THAT THE BLASTING COMPANY WILL PROVIDE INSURANCE COVERAGE FOR THE REMEDIATION OF ANY WELLS THAT MIGHT BE CONTAMINATED BY BLASTING.
  3. G2 HOLDINGS WILL PROVIDE A BOND FOR RECLAMATION OF THE EXCAVATION SITE IN THE AMOUNT DETERMINED BY THE CITY OF KEENE.
  4. THE BLASTING COMPANY WILL FOLLOW ALL NH DEPARTMENT OF TRANSPORTATION PROTOCOLS FOR SIGNAGE, WARNING, AND CLOSING OF THE HIGHWAY, IF NECESSARY, FOR BLASTING.
  5. HOURS OF OPERATION ARE 7 AM TO 5 PM MONDAY TO FRIDAY; AND 7 AM TO 12 PM ON SATURDAY FOR TAKING PRE-PROCESSED MATERIALS OFF SITE. EMERGENCY SITUATIONS ARE EXEMPT FROM THESE STIPULATIONS.
  6. G2 HOLDINGS WILL PROVIDE THE PLANNING BOARD WITH A COPY OF ITS REGULAR PROGRESS REPORT TO NH DEPARTMENT OF ENVIRONMENTAL SERVICES.
  7. VIOLATION OF ANY CONDITION OF THIS PERMIT MAY RESULT IN REVOCATION OF THE PERMIT BY THE REGULATOR.

- RECLAMATION NOTES:**
1. ANY EXCAVATED AREA OF 5 CONTIGUOUS ACRES OR MORE, WHICH IS DEPLETED OF COMMERCIAL EARTH MATERIALS, EXCLUDING BEDROCK, OR ANY EXCAVATION FROM WHICH EARTH MATERIALS OF SUFFICIENT WEIGHT OR VOLUME TO BE COMMERCIALY USEFUL HAVE NOT BEEN REMOVED FOR A 2-YEAR PERIOD, SHALL BE RECLAIMED IN ACCORDANCE WITH RSA 155-E:5, WITHIN 12 MONTHS FOLLOWING SUCH DEPLETION OR 2-YEAR NON-USE, REGARDLESS OF WHETHER OTHER EXCAVATION IS OCCURRING ON ADJACENT LAND IN CONTIGUOUS OWNERSHIP. EACH OPERATOR, OTHER THAN THE OPERATOR OF STATIONARY MANUFACTURING PLANTS WHO ARE EXEMPT FROM PERMIT REQUIREMENTS PURSUANT TO RSA 155-E:2, III, SHALL PREPARE AND SUBMIT FOR THE REGULATOR'S RECORD A RECLAMATION PLAN FOR THE AFFECTED LAND, INCLUDING A TIMETABLE FOR RECLAMATION OF THE DEPLETED AREAS WITHIN THE RECLAMATION SITE.
  2. AT THE TIME OF RECLAMATION, ALL LANDS THAT ARE NO LONGER BEING USED FOR EXCAVATION ACTIVITIES, INCLUDING EXCAVATION AREAS, PROCESSING AREAS, STOCKPIPING AREAS, AND STORMWATER MANAGEMENT AREAS, EXCEPT FOR EXPOSED LEDGE, SHALL BE RECLAIMED.
  3. AREAS TO BE RECLAIMED SHALL BE GRADED TO A NATURAL REPOSE FOR THE TYPE OF SOIL OF WHICH THEY ARE COMPOSED SO AS TO CONTROL EROSION.
  4. ONCE RECLAIMED, CHANGES OF SLOPE, EXCEPT FOR EXPOSED LEDGE, SHALL BE SMOOTH AND GRADUATED RATHER THAN SHARP, SUDDEN OR ABRUPT.
  5. TO ASSURE ADEQUATE DRAINAGE AND SOIL STABILIZATION, AND TO PREVENT EROSION AND SEDIMENTATION, THE TOPOGRAPHY OF THE LAND SHALL BE LEFT SO THAT WATER DRAINING FROM THE SITE LEAVES THE PROPERTY AT THE ORIGINAL, NATURAL DRAINAGE POINTS AND IN THE NATURAL PROPORTIONS OF FLOW.
  6. EXCEPT FOR EXPOSED ROCK LEDGE, ALL AREAS TO BE RECLAIMED SHALL BE SPREAD WITH NATIVE TOPSOIL TO A DEPTH OF NOT LESS THAN 4 INCHES.
  7. TOPSOIL OF AT LEAST THE MINIMUM AMOUNT NEEDED TO RESTORE THE SITE SHALL BE STOCKPILED ON THE SITE UNTIL RECLAMATION.
  8. TOPSOIL AND OVERBURDEN STOCKPIPING AREAS SHALL BE STABILIZED TO PREVENT EROSION BY AND SEDIMENTATION OF STORMWATER RUNOFF FOLLOWING BEST MANAGEMENT PRACTICES.
  9. EXCEPT WHERE LEDGE ROCK IS EXPOSED, ALL AREAS TO BE RECLAIMED AS SPECIFIED IN A RECLAMATION PLAN APPROVED BY THE PLANNING BOARD SHALL HAVE PERMANENT COVER VEGETATION ESTABLISHED TO ASSURE SOIL STABILIZATION AND TO PREVENT EROSION AND SEDIMENTATION, IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES AND AS SET FORTH IN AN APPROVED RECLAMATION PLAN.
  10. ANY PORTIONS OF LANDS WITHIN THE EXCAVATION PERIMETER THAT ARE VISIBLE FROM ANY PUBLIC WAY, FROM WHICH TREES HAVE BEEN REMOVED, SHALL BE REPLANTED WITH TREE SEEDLINGS IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES.
  11. RECLAMATION ACTIVITIES THAT INCLUDE PLANTING OF VEGETATION AND/OR COVER CROP SHALL PROVIDE ADEQUATE SOIL CONDITIONING AND MULCHING ACCORDING TO BEST MANAGEMENT PRACTICES.
  12. SEED AND PLANT SPECIES TO BE USED IN RESTORING THE SITE SHALL BE NATIVE SPECIES SIMILAR TO THOSE SPECIES TYPICALLY FOUND SURROUNDING THE SITE.
  13. ALL EXCAVATION SITES WHERE RECLAMATION HAS BEEN COMPLETED SHALL BE MONITORED ANNUALLY BY THE APPLICANT OVER A PERIOD OF 2-YEARS FOLLOWING THE COMPLETION DATE TO ENSURE THAT RECLAMATION MEASURES HAVE BEEN EFFECTIVE IN ACCORDANCE WITH THESE STANDARDS AND THAT ALL PLANTED VEGETATION HAS SURVIVED.
  14. THE PROPERTY OWNER SHALL USE BEST EFFORTS TO REMOVE NON-NATIVE AND INVASIVE SPECIES, AS DEFINED BY THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES, THAT BECOME ESTABLISHED DURING THE MONITORING PERIOD IN THE RECLAIMED AREAS.
  15. EXCAVATION OPERATIONS THAT CAUSE ADVERSE IMPACTS SHALL ABATE AND/OR REMEDIATE THOSE IMPACTS, RESTORING ALL AFFECTED AREAS TO A PRE-IMPACT CONDITION. RECLAMATION SHALL NOT BE SAID TO BE COMPLETE UNTIL ALL ADVERSELY IMPACTED AREAS HAVE BEEN SUCCESSFULLY REMEDIATED.

**LEGEND**

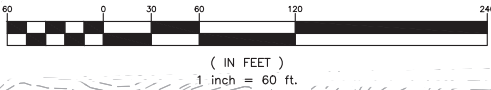
- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- WETLANDS BOUNDARY
- WETLAND BUFFER
- PROPOSED EDGE OF GRAVEL
- TOWN LINE
- EX./PROP. TREELINE
- PROP. GRADE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR

**COLOR LEGEND:**

- RECLAMATION AREA PERIOD 1 (195,375 SF) (2,420 CY)  
LOAM - \$85/CY = \$205,700 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 4.49 = \$7,177. TOTAL COST = \$212,877
- RECLAMATION AREA PERIOD 2 (150,500 SF) (1,860 CY)  
LOAM - \$50/CY = \$158,100 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.46 = \$5,528. TOTAL COST = \$163,628
- RECLAMATION AREA PERIOD 3 (149,500 SF) (1,850 CY)  
LOAM - \$50/CY = \$157,250 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.43 = \$5,492. TOTAL COST = \$162,742
- RECLAMATION AREA PERIOD 4 (132,025 SF) 1,830 CY  
LOAM - \$50/CY = \$155,550 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.03 = \$4,850. TOTAL COST = \$160,400
- RECLAMATION AREA PERIOD 5 (156,410 SF) (1,932 CY)  
LOAM - \$50/CY = \$164,220 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.59 = \$5,746. TOTAL COST = \$169,966
- RECLAMATION AREA PERIOD 6 (134,015 SF) (1,655 CY)  
LOAM - \$50/CY = \$140,675 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 3.08 = \$4,925. TOTAL COST = \$145,600
- RECLAMATION AREA PERIOD 7 (309,094 SF) (3,816 CY)  
LOAM - \$50/CY = \$324,360 / SEED \$50/LB APP RATE 32 LBS/ACRE  
\$1,600/ACRE x 7.10 = \$7,441. TOTAL COST = \$331,801



**GRAPHIC SCALE**



MATCH TO SHEET 18



REVISONS	BY	DATE	COMMENTS
1	JD	12/20/24	PROJECT SUBMITTAL
2	JD	2/3/25	REVISED PER CITY COMMENTS
3	JD	5/9/25	REVISED PER CITY COMMENTS
4	JD	7/9/25	REVISED PER CITY COMMENTS
5	JD	7/24/25	ADDITIONAL WELL LOCATIONS
6	JD	8/11/25	REVISED PER CITY COMMENTS
7	JD	8/22/25	REVISED PER CITY COMMENTS

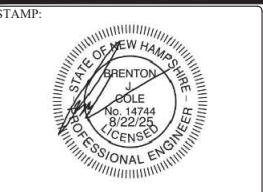
OWNER/APPLICANT:  
G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

**GRANITE ENGINEERING**

civil engineering • land planning • municipal services

150 Dow Street, Tower 2, Suite 421  
Manchester, New Hampshire 03101  
603.518.8030

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LOCATION:  
KEENE TAX MAP 215 LOTS 7 & 8  
SULLIVAN TAX MAP 5 LOTS 46 & 46-1  
57 ROUTE 9  
KEENE & SULLIVAN, NEW HAMPSHIRE  
CHESHIRE COUNTY

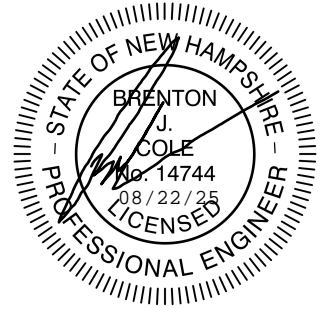
PROJECT:  
**GORDON SERVICES KEENE**

TITLE:  
**RECLAMATION PLAN**

PROJECT No. 23-0201-1 DATE: MAY 9, 2025  
SHEET: 19 OF 23  
SCALE: HORIZ. 1"=60'



# **STORMWATER** **MANAGEMENT REPORT**



## **GRANITE ENGINEERING**

civil engineering • land planning • municipal services

## **GORDON SERVICES - KEENE**

Keene: Map 215; Lots 7 & 8

Sullivan: Map 5; Lots 46 & 46-1

57 Route 9

Keene & Sullivan, New Hampshire

January 22, 2025

Revised: August 6, 2025

Revised: August 22, 2025

### PREPARED FOR:

G2 HOLDINGS, LLC  
250 NORTH STREET  
JAFFREY, NH 03452

### PREPARED BY:

GRANITE ENGINEERING, LLC  
150 DOW STREET, TOWER 2, SUITE 421  
MANCHESTER, NH 03101  
603.518.8030

GE Project No. 23-0201-1

## I. INTRODUCTION

### A. Project Description

The subject properties propose the expansion of an existing gravel and earth removal operation for G2 Holdings, LLC. The properties are located at 57 Route 9 in Keene and Sullivan, New Hampshire. The majority of the site is located within the Keene R (Rural) Zoning District. A proposed gravel road will be constructed to access various points on the site. Stormwater runoff will be managed through a series of sediment basins that connect to an existing infiltration pond.

### B. Existing Site Conditions

Keene Tax Map 215 Lot 7 is approximately 78.4 acres in area. Keene Tax Map 215 Lot 8 is approximately 23.1 acres in area. Sullivan Tax Map 5 Lot 46 is approximately 169.0 acres in area. Tax map 5 Lot 46-1 is approximately 28.1 acres in area. The total area of all four subject properties is therefore 298.6 acres in area. The property is currently developed with a gravel removal operation. There are wetlands on the properties to the north and east. There is an existing, previously permitted, stormwater basin located to the south of the property, closest to Route 9.

According to the Site Specific Soil Survey, the predominant onsite soil types are Sunapee, Tunbridge Lyman Rock Outcrop, and Lyman.

Please refer to sections three (3) and eight (8) of this stormwater report for project specific NRCS soils and SSSS report information.

## II. STORM DRAINAGE ANALYSIS & DESIGN

### A. Methodology

The purpose of this analysis was to determine if the proposed sediment ponds could capture, detain, and release the stormwater flows through small, controlled, outlet pipes to both the existing infiltration area located currently on-site, as well as the proposed infiltration area to be completed during the final phase of the project (Period 8).

In accordance with generally accepted engineering practice, the 2-year, 10-year, 25-year, 50-year and 100-year frequency storm has been used in the various aspects of analysis and design of stormwater management considerations for the subject site. Stormwater-treatment provisions and all drainage facilities have been designed to be fully functional during a 50-year return frequency storm.



In appreciation of the benefits and limitations related to each of the various methods available to design professionals for estimating peak stormwater discharge rates for use in analysis and design, the TR-20 computer model was used. Values for Time of Concentration used in the analysis were estimated using the methodology contained within USDA-S.C.S. publication Urban Hydrology for Small Watersheds Technical Release No. 55 (TR 55).

All proposed stormwater inlet structures were designed to remain under inlet control throughout a design storm of the return frequency noted. Outlet protection for each discharging culvert was designed in accordance with the methodology for the “best management practice”, in accordance with a publication entitled New Hampshire Stormwater Manual Volume 2: Post-Construction Best Management Practices Selection and Design. In addition, this publication served as the primary reference for the numerous temporary and permanent erosion control methods incorporated into the design of this project.

All design and analysis calculations performed using the referenced methodologies are attached to this report. The minimum time of concentrations used for the analysis is 6 minutes. These calculations document each catchment area, a breakdown of surface type, time of concentration, rainfall intensity, peak discharge volume, Manning’s “n” value, peak velocity, and other descriptive design data for each watershed and pipe segment evaluated. In addition, the “Post Development Drainage Area Plans” graphically define and illustrate the extent of each watershed or catchment area investigated.

#### B. Post-Development Drainage Conditions

In order to evaluate the impact of the proposed development, two (2) Point of Analysis (POA) was analyzed to demonstrate that the peak rates of runoff would not increase from the site improvements.

The first POA, Link A, is located in the wetlands adjacent to Route 9 and directly south of the proposed project area. Within the wetlands, there is an 18” culvert directing runoff to the southern side of Route 9. This culvert has been shown on DOT Reference plans.

The second POA, Link B, is located in the wetlands directly to the east of the project area. Within the wetlands, there is an box culvert directing runoff to the southern side of Route 9.

Pre-development peak rates of discharge are identified in Table 2. Further explanation of the post-condition hydrology will show a net decrease to the point of analysis.

For a more visual description of the information presented in this section, please refer to the attached “Pre-Development Drainage Areas Plan” attached in the appendix of this report.

The analysis for the development of the site is broken into two segments, Interim and Final. “Interim Development” is in reference to the development of the site from Period 1 through Period 7. Once Period 7 is completed, the project will proceed with Period 8. In this Period, there is an additional excavation in the area of Period 1. For the construction of Period 8, this is viewed as the “Final Development”.

Stormwater from within the project area is managed by multiple sediment basins/detention ponds around each work area. These detention ponds are represented in the HydroCAD model and are denoted as SF 5, SF6, and SF7. The intent of the grading of the pit areas, as well as the haul roads, was to keep the stormwater self-contained, with no runoff during a 50-year, 24-hour storm event.

Within the HydroCAD Model, all significant grading for the excavation pits and detention basins was assigned as a grass surface and a hydrologic soil group ‘D’.

The detention basins mentioned above are designed to withhold and slowly discharge stormwater runoff to the infiltration basins near the lower portion of the project. During the project, in Period 1, the Infiltration Basin SF1 will be constructed to handle the runoff from the project site and infiltrate into the soil. Once Period 7 is completed, the project will move forward with Period 8. In this Period, Infiltration Basin SF8 will be constructed and will observe the runoff that originally was directed to SF1.

The proposed infiltration area was designed to use exfiltration through the native soils as its only means of outlet. Infiltration rates for the infiltration ponds were calculated by the default method as set forth in Env-Wq 1054.14. The practice is located in an area identified in the Soil Series Survey as Berkshire, Fine Sandy Loam Soils. Using Ksat values for New Hampshire Soils, Soil Scientists of Northern New England, Special Publications No. 5, September 2009, the lowest value associated with Berkshire soils is 0.6 inches per hour. Using a safety factor of 2, the infiltration rate utilized in the drainage analysis is 0.3 inches per hour.

Bedrock monitoring wells SLR3, SLR10, and BRW-12 were used to determine the floor elevation of both the temporary pond in period 1 and the final infiltration pond in period 8, maintaining 6 feet above the water table.

The results of the drainage analysis determined that the stormwater was infiltrated in its entirety during a 50-year, 24-hour storm event. The self-

contained 50-year storm event for both the Interim and Final Development of the project. This was done through capturing stormwater in large sediment basins with small, controlled outlet devices to release stormwater in a controlled manner and by directing stormwater to the infiltration area.

During the 100-yr, 24-hour storm event, both the Interim and Final Development of the project provide a decrease in peak flow rate that discharge to the two points of analysis.

For a more visual description of the information presented in this section, please refer to the attached "Post-Development Drainage Areas Plan" attached in the appendix of this report.

All of these ponds provide adequate storage to offset the peak rates of runoff for the design storms. The detailed hydrologic and hydraulic relationship of each sub-catchment is described within the HydroCAD stormwater modeling, also contained in the appendix of this report.

The peak stormwater runoff rate for the specific storm frequency is presented and analyzed in the subsequent summary section of this report, for the point of analysis (Table 1).

C. Summary:

**TABLE 1: CHANNEL PROTECTION REQUIREMENTS**

<b>Site Pre-Development vs. Post-Development (Storm Volume in Acre-Feet)</b>			
<b>Analysis Point</b>	<b>2-Year</b>		
	<b>Pre</b>	<b>Interim</b>	<b>Post</b>
<b>A</b>	<b>1.011</b>	0.795	0.795
<b>B</b>	<b>5.037</b>	3.902	3.902



**TABLE 2: PEAK RUNOFF (ENV-WQ 1507.06)**

Site Pre-Development vs. Post-Development (Peak Discharge Rate in cfs)									
Analysis Point	2-Year			10-Year			25-Year		
	Pre	Interim	Post	Pre	Interim	Post	Pre	Interim	Post
<b>A</b>	<b>4.07</b>	3.47	3.47	<b>11.06</b>	8.71	8.71	<b>17.43</b>	13.39	13.39
<b>B</b>	<b>19.72</b>	15.86	15.86	<b>61.33</b>	46.94	46.94	<b>101.14</b>	76.24	76.24

Site Pre-Development vs. Post-Development (Peak Discharge Rate in cfs)						
Analysis Point	50-Year			100-Year		
	Pre	Interim	Post	Pre	Interim	Post
<b>A</b>	<b>23.78</b>	17.98	17.98	<b>31.70</b>	23.63	23.63
<b>B</b>	<b>141.45</b>	105.66	105.66	<b>192.17</b>	142.52	142.52

**TABLE 3: PEAK STORMWATER POND ELEVATION**

Site Post Development (Peak Pond Elevation)				
Description	50-Year		100-Year	
	Post - Interim	Final	Post - Interim	Final
<b>Stormwater Basin Berm Elevation</b>	874.00	856.00	874.00	856.00
<b>Peak Water Elevation</b>	873.04	854.40	873.66	855.32

### III. EROSION & SEDIMENTATION CONTROL PROVISIONS

#### A. Temporary Erosion Control Measures

Temporary erosion and sediment control measures are indicated on the design plans, construction details, general notes and within the drainage report. Although not integral with this stormwater report, due to the size of the proposed development both temporary and permanent erosion control measures will also be specified within the project's Stormwater Pollution Prevention Plan (SWPPP). All erosion control measures specified are designed to reduce or eliminate potential soil migration and water quality degradation, both during and after the construction period.

The following temporary erosion control measures will be implemented;

- Silt Fence and/or Silt Logs
- Erosion Control Blankets on slopes 3:1 and steeper
- Riprap Aprons & Spillway Stabilization
- Turf Establishment - Hydroseeding with mulch and tackifiers
- Stone Check Dams
- Temporary Sediment Basins

These temporary erosion control measures are also discussed in the projects. Operation and Maintenance plan contained in the appendices of this report.

In addition to the above-listed erosion control measures, references are made throughout the project documents to the New Hampshire Stormwater Manual; Volume 3: Erosion and Sediment Temporary Controls During Construction for additional measures, as necessary.

#### B. Construction Sequence

A site-specific construction sequence sensitive to limiting soil loss due to erosion and associated water quality degradation was prepared specifically for this project and is shown on the project plans. As pointed out in the erosion control notes, it is important for the contractor to recognize that proper judgment in the implementation of work will be essential if erosion is to be limited and protection of completed work is to be realized. Moreover, any specific changes in sequence and/or field conditions affecting the ability of specific erosion control measures to adequately serve their intended purpose should be reported to this office by the contractor. Furthermore, the contractor is encouraged to supplement specified erosion control measures during the construction period where and when in his/ her best judgment, additional protection is warranted.



### C. Permanent Erosion Control Measures

Similar to temporary erosion control measures, all permanent erosion control measures are indicated on the design plans, construction details, general notes, drainage report, SWPPP and O & M project documents.

The following permanent erosion control measures will be implemented;

- Stone-lined ditches
- Inlet & Outlet Protection - Riprap Stabilization
- Stormwater Basins with multi-stage outlets
- Turf Establishment - Hydroseeding with mulch and tackifiers

Each of the above-mentioned permanent erosion control measures are designed in a project-specific manner within both state and local regulatory compliance standards.



## **GORDON SERVICES – KEENE PIT ACID MINE DRAINAGE MONITORING PROGRAM**



**57 Route 9, Keene, New Hampshire  
City of Keene Tax Map 215 Block 7  
Town of Sullivan Tax Map 583 Lot 46 & 46-1**

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### **Prepared For:**

**Gordon Services  
250 North Street  
Jaffrey, New Hampshire 03452**

---

### **Prepared By:**

**FRONTIER GEOSERVICES  
127 OLD WARNER ROAD  
BRADFORD, NEW HAMPSHIRE 03221**

**Joel Banaszak, P.G.**  
(603) 748-3715  
[Jbanaszak@frontiergeoservices.com](mailto:Jbanaszak@frontiergeoservices.com)

**August 21, 2025  
Frontier Project No. 2024012**





## 1.0 INTRODUCTION

A comprehensive groundwater and surface water monitoring program will be implemented at the Site to evaluate potential impacts from acid mine drainage (AMD). Monitoring will include quarterly sampling at five groundwater wells (BRW-7, BRW-8, BRW-9, BRW-12, and proposed well BRW-13) and at surface water infiltration features, including a downgradient discharge station and an upgradient background station. pH will also be measured monthly at all monitoring wells and drainage basins to provide early detection of AMD.

Baseline conditions will be established through two pre-excavation sampling rounds, and quarterly monitoring will continue in January, April, July, and October. If four consecutive quarters of results confirm that AMD is not being generated, the monitoring frequency may be reduced to biannual sampling in April and October.

All samples will be analyzed for key field parameters (pH, conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity) and dissolved/total metals (arsenic, copper, iron, manganese, nickel, and lead). Results will be compared to NHDES Ambient Groundwater Quality Standards (AGQS) and Env-Wq 1700 Surface Water Quality Regulations. The determination of AMD will be based on trends of decreasing pH and increasing dissolved metals, not isolated exceedances. Monitoring results will be submitted to the City of Keene Community Development Department within forty-five (45) days of collection.

## 2.0 ACID MINE DRAINAGE DEFINITION

Acid mine drainage is defined by highly acidic water (pH < 6 standard units) that is enriched in dissolved heavy metals, including arsenic, copper, iron, manganese, nickel, and lead.

The identification of AMD under this program will be based on:

- Consistent relationships between low pH values and elevated concentrations of dissolved heavy metals, rather than individual exceedances of standards in isolation.
- Observed trends over time indicating a decrease in pH in conjunction with an increase in dissolved metals concentrations, which together are diagnostic of AMD formation.

## 3.0 GROUNDWATER MONITORING

Groundwater samples will be collected on a quarterly basis in January, April, July, and October from the following monitoring wells:

- BRW-7
- BRW-8
- BRW-9
- BRW-12
- BRW-13 (proposed; to be installed downgradient of the entire site between the mining operation and Route 9)

Following four (4) consecutive quarters of analytical results demonstrating that AMD is not being produced, the monitoring frequency may be reduced to a biannual schedule in April and October.

Please refer to **Figure 1** for a **Monitoring Well Location Map**.

#### **4.0 SURFACE WATER AND INFILTRATION FEATURES**

All surface water generated from excavation activities will be directed into infiltration basins. Monitoring of these features will include:

- The infiltration feature currently located in the western portion of Period 8.
- Newly constructed infiltration features, which will be incorporated into the program on an iterative basis as the project progresses.
- A downgradient surface water station located at the primary discharge point of the infiltration system.
- An upgradient background surface water station, SWS-6, to provide baseline comparison data.

#### **5.0 SAMPLING PARAMETERS**

At each quarterly monitoring location (groundwater wells and surface water stations), the following parameters will be measured:

- Field parameters: pH, specific conductance, oxidation-reduction potential, dissolved oxygen, and turbidity.
- Laboratory analyses: dissolved and total metals, including arsenic, copper, iron, manganese, nickel, and lead via EPA Method 200.8 ICP-MS.

#### **6.0 BASELINE MONITORING**

Prior to initiation of excavation activities, two (2) rounds of baseline samples will be collected from all identified monitoring locations. Sampling events will be conducted a minimum of fourteen (14) calendar days apart.

#### **7.0 MONTHLY PH MONITORING**

In addition to the quarterly monitoring described above, pH will be measured on a monthly basis at:

- All surface water drainage basins, including newly constructed infiltration features.
- All groundwater monitoring wells (BRW-7, BRW-8, BRW-9, BRW-12, and BRW-13).

This supplemental monitoring provides an early-warning mechanism to identify AMD generation between comprehensive quarterly sampling events.

#### **8.0 APPLICABLE REGULATORY STANDARDS**

Applicable standards for the monitoring program are established under two regulatory frameworks:

- Groundwater: NHDES Env-Or 600 Contaminated Site Management, Table 600-1 Ambient Groundwater Quality Standards (AGQS).
- Surface Water: NHDES Env-Wq 1700 Surface Water Quality Regulations.

For groundwater, standards for heavy metals are applied to dissolved concentrations, which are considered the most representative measure of bioavailability. Some heavy metals may naturally occur at concentrations exceeding applicable standards. In such cases, baseline sampling will be used to establish background concentrations. The determination that AMD is contributing to elevated



metals will be based on the observance of increasing dissolved metal concentrations coupled with decreasing pH values, rather than on single exceedances.

***Groundwater Quality Standards (Env-Or 600, Table 600-1 AGQS)***

Specific Conductance: No Standard  
Oxidation Reduction Potential (ORP): No Standard  
Dissolved Oxygen: No Numeric Standard (field indicator)  
Turbidity: 10 NTU above natural background  
pH: No Numeric Standard (field indicator)  
Arsenic: 5 µg/L  
Copper: 1,300 µg/L  
Iron: 300 µg/L  
Manganese: 300 µg/L  
Nickel: 100 µg/L  
Lead: 15 µg/L

***Surface Water Quality Standards (Env-Wq 1700)***

Specific Conductance: No Standard  
Oxidation Reduction Potential (ORP): No Standard  
Dissolved Oxygen: Narrative Criterion (generally  $\geq 75\%$  saturation or 5 mg/L to support aquatic life)  
Turbidity: 10 NTU above natural background  
pH: Narrative Criterion (generally 6.5–8.0 SU; not below 6.0 SU)  
Arsenic: 150 µg/L (a,b)  
Copper: 2.3 µg/L (b,c)  
Iron: 1,000 µg/L  
Manganese: No Numeric Standard  
Nickel: 13.3 µg/L (a,c)  
Lead: 0.41 µg/L (a,c)

Footnotes (from Env-Wq 1700):

(a) Metals criteria expressed as a function of the Water Effect Ratio (WER). Values shown correspond to  $WER = 1.0$ ; site-specific criteria shall be determined per EPA (1994) guidance.

(b) Values for aquatic life protection are expressed as dissolved metals and, for hardness-dependent metals, are based on hardness of 20 mg/L. Conversion between dissolved and total recoverable metals must use the equations and tables in Env-Wq 1703.23.

(c) Hardness-dependent metals criteria vary with water hardness (mg/L as  $CaCO_3$ ). The values shown correspond to hardness of 20 mg/L. Criteria for other hardness values shall be calculated using Env-Wq 1703.23 and Env-Wq 1703.24.

## **9.0 DATA REVIEW AND REPORTING**

All analytical results, including quarterly sampling data and monthly pH monitoring results, will be reviewed against the applicable groundwater and surface water quality standards described in Section 8.0.

The determination of AMD will be based on observed trends of decreasing pH and increasing concentrations of dissolved heavy metals, in accordance with the definition provided in Section 2.0.

Results will be submitted to the City of Keene Community Development Department within forty-five (45) days of sample collection.





## **GORDON SERVICES – KEENE PIT BRW-12 SLUG TEST DATA & RESULTS**



**57 Route 9, Keene, New Hampshire  
City of Keene Tax Map 215 Block 7  
Town of Sullivan Tax Map 583 Lot 46 & 46-1**

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### **Prepared For:**

**Gordon Services  
250 North Street  
Jaffrey, New Hampshire 03452**

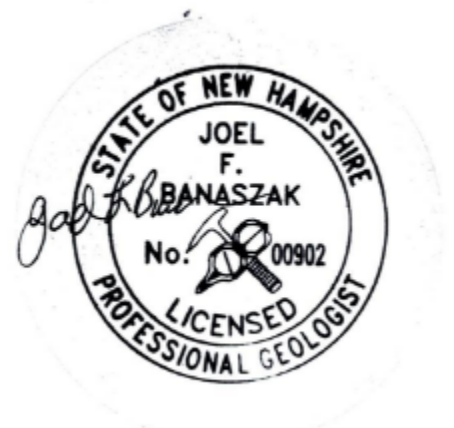
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### **Prepared By:**

**FRONTIER GEOSERVICES  
127 OLD WARNER ROAD  
BRADFORD, NEW HAMPSHIRE 03221**

**Joel Banaszak, P.G.**  
(603) 748-3715  
[Jbanaszak@frontiergeoservices.com](mailto:Jbanaszak@frontiergeoservices.com)

**August 21, 2025  
Frontier Project No. 2024012**



## 1.0 INTRODUCTION

A slug test was performed in monitoring well BRW-12 (2-inch diameter PVC in a 3-inch borehole). The well is 90 ft deep, screened from 30–90 ft bgs. The producing interval extends from 30–78 ft bgs. At the time of testing, static water level was measured at 59.4 ft bgs, yielding an effective saturated thickness of ~18.6 ft. The well screen below the water table therefore fully penetrated the saturated thickness during the test.

## 2.0 METHODS

Head displacement,  $H(t)$ , was defined as the instantaneous change in water level relative to the static condition. The maximum displacement,  $H_0$ , was identified at the start of recovery, and subsequent measurements ( $t \geq t_0$ ) were normalized as the ratio  $H/H_0$ . Recovery data were then plotted as  $\ln(H/H_0)$  versus elapsed time ( $rel$ ), and a straight-line fit was applied over the intermediate range of normalized displacement ( $0.2 \leq H/H_0 \leq 0.8$ ). This mid-range window is standard practice, as it minimizes the influence of early-time turbulence and late-time storage or boundary effects, producing the most reliable estimate of the aquifer response.

### ***Bouwer & Rice Equation***

For a fully penetrating well in an unconfined aquifer, Bouwer & Rice (1976, 1989) give:

$$K = (\alpha \cdot r_c^2 \cdot \ln(R_e/r_w)) / (2L)$$

where:

- $\alpha$  = slope of semilog fit (1/min)
- $r_c$  = casing radius (ft)
- $r_w$  = well radius (ft)
- $R_e$  = effective radius of influence (ft)
- $L$  = submerged screen length (ft)

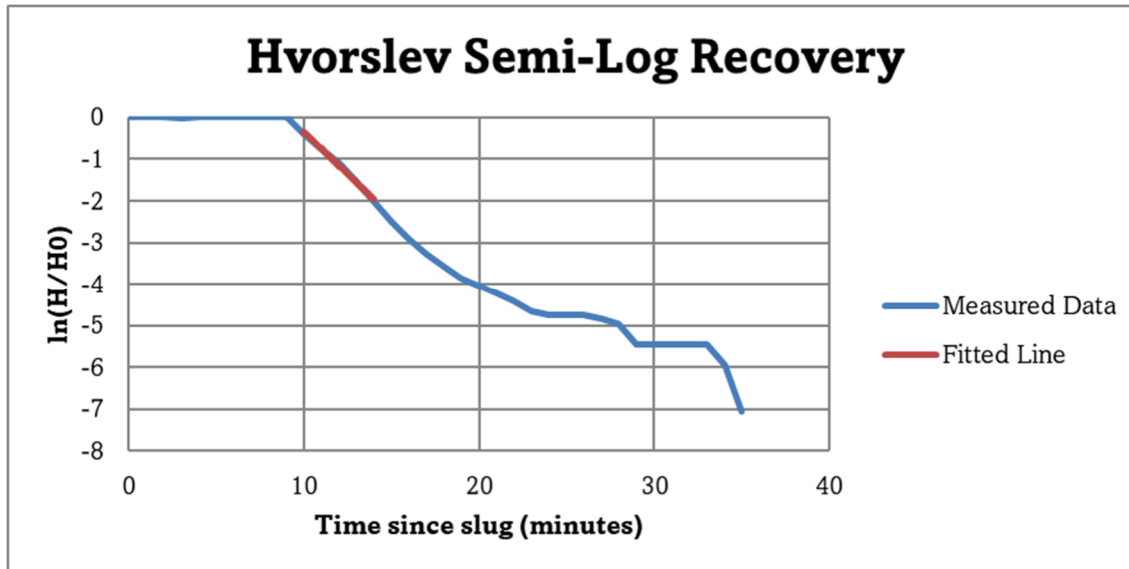
For this test:

- $r_c = 0.0833$  ft
- $r_w = 0.125$  ft;
- $R_e = 1.5 \times b_{eff} = 27.9$  ft.
- $L = b_{eff} = 18.6$  ft;

The regression yielded a decay constant  $\alpha \approx 0.4046 \text{ min}^{-1}$  with  $R^2 = 0.995$ . Substituting into the Bouwer & Rice equation with  $\ln(R_e/r_w) = 5.814$ , the calculated hydraulic conductivity is:

$$K \approx 0.633 \text{ ft/day } (\approx 0.316 \text{ in/hr})$$





### 3.0 CONCLUSION

The slug test at BRW-12 indicates an upper-bound hydraulic conductivity of  $\sim 0.63$  ft/day, equivalent to an infiltration capacity of  $\sim 0.32$  in/hr.

### 4.0 REFERENCES

- Bouwer, H., and R.C. Rice (1976). A slug test for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells. *Water Resources Research*, 12(3), 423–428.
- Bouwer, H. (1989). The Bouwer and Rice slug test—an update. *Ground Water*, 27(3), 304–309.
- Butler, J.J., Jr. (1998). *The Design, Performance, and Analysis of Slug Tests*. Lewis Publishers.
- Hvorslev, M.J. (1951). *Time Lag and Soil Permeability in Ground-Water Observations*. U.S. Army Corps of Engineers, Waterways Experiment Station Bulletin 36.

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**Re: Property Value Analysis Request**

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**From** Jim Manley <jmanley8@outlook.com>

**Date** Thu 7/31/2025 9:25 AM

**To** Mari Brunner <mbrunner@keenenh.gov>

**Cc** Friedrich K. Moeckel <fmoeckel@tarbellbrodich.com>; aham@keenesentinel.com  
<aham@keenesentinel.com>; Liz Newcombe <emnewcombe11@gmail.com>; Evan Clements  
<eclements@keenenh.gov>; Megan Fortson <mfortson@keenenh.gov>; Emily Duseau  
<eduseau@keenenh.gov>

Ideally this could be done for the 25 August meeting. I cannot see how an objective decision can be reached absent this analysis.

Also reviewing the minutes from the April Conservation Commission meeting a 3D visualization should be rendered, again for full transparency and objectivity.

Jim Manley

Sent from my iPhone

On Jul 31, 2025, at 4:12 PM, Mari Brunner <mbrunner@keenenh.gov> wrote:

Good morning Jim,

We will pass this request on to the Planning Board for their consideration.

Thank you,  
Mari

-----Original Message-----

From: Jim Manley <jmanley8@outlook.com>

Sent: Thursday, July 31, 2025 3:17 AM

To: Mari Brunner <mbrunner@keenenh.gov>

Cc: Friedrich K. Moeckel <fmoeckel@tarbellbrodich.com>; aham@keenesentinel.com; Liz  
Newcombe <emnewcombe11@gmail.com>

Subject: Property Value Analysis Request

Good morning,

Given a Planning Board member's comment on 28 July that "expert analysis outweighs citizen input" in the approval decision process, I hear-by request a formal analysis of impact to resident property values, particularly those within the 2500 foot "impact zone for well testing" be performed for years 0-14+.



This is a key analysis assessment which appears to be missing to make a fully informed decision.

Thank you for your consideration.

Best regards,

Jim Manley  
67 Tyler Lane  
Sullivan, NH 03445

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