City of Keene Planning Board

AGENDA

Monday, February 24, 2025 6:30 PM City Hall, 2nd Floor Council Chambers

A. AGENDA ITEMS

1) **Call to Order** – Roll Call

2) **Minutes of Previous Meeting** – January 27, 2024

3) **Final Vote on Conditional Approvals**

4) **Advice & Comment**

   a) **Cedarcrest/Monadnock View Cemetery Solar Array – 91 Maple Ave & 521 Park Ave** – Prospective applicant Revision Energy seeks Planning Board advice and comment regarding the need for a visual buffer for the installation of a medium-scale solar energy system on approximately 1.6 acres of undeveloped land. The parcel is in the Conservation District.

5) **Public Hearings**

   a) **SPR-593, Mod. 2 – Major Site Plan – Bank of America, 20 Central Square** – Applicant Bank of America, on behalf of owner 20 Central Keene LLC, proposes to modify exterior lighting at the property located at 20 Central Square (TMP #568-063-000). Waivers are requested from Section 21.7.3.C, Section 21.7.3.F.1.a, Section 21.7.3.F.1.c, and Section 21.7.4.A.2 of the LDC regarding light trespass levels and lighting hours of operation. The site is 0.68-ac in size and is located in the Downtown Core District.

   b) **PB-2025-01 – 2-lot Subdivision – Keene State College, 238-260 Main Street** – Applicant Huntley Survey & Design, PLLC, on behalf of owner the University System of New Hampshire, proposes a 2-lot subdivision of the ~0.96-ac parcel at 238-260 Main Street (TMP #590-101-000) into two lots ~0.48-ac and ~0.46-ac in size. The property is located in the Downtown Transition District.

   c) **PB-2025-02 – Cottage Court Conditional Use Permit – 36 Elliot Street** – Applicant Sampson Architects, on behalf of owner the Scott Richards Revocable Trust of 2023, proposes the conversion of an existing single-family home into a duplex on the property at 36 Elliot Street (TMP #214-021-000). The parcel is ~0.10-ac in size and is located in the Residential Preservation District.

d) **PB-2025-03 – Major Site Plan – Douglas Company Facility, 0 Black Brook Road** – Applicant Fieldstone Land Consultants PLLC, on behalf of owner Douglas Company Inc., proposes the construction of a ~98,323-sf office and warehouse building on two parcels at 0 Black Brook Rd (TMP#s 221-023-000 & 221-024-00). Waivers are requested from Section 20.14.1, Section 20.14.2, Section 20.14.3.D, and Section 23.5.4.9 of the LDC related to architectural and visual appearance, parking in front of the building, and driveway width. The parcel is ~5.33-ac in size and is located in the Corporate Park District.

6) **Earth Excavation Permit – Determination of Application Completeness:**

a) **PB-2024-20 – Earth Excavation Permit Major Amendment & Hillside Protection Conditional Use Permit – 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 Section 25.3.1.D & Section 25.3.13 of the LDC related to the required 250' surface water resource setback and the 5-ac excavation area maximum. The parcels are a combined ~109.1-ac in size and are located in the Rural District.

7) **Master Plan Update** (https://keenemasterplan.com/)

8) **Staff Updates**

9) **New Business**

10) **Upcoming Dates of Interest**

- Joint Committee of the Planning Board and PLD – March 10th, 6:30 PM
- Planning Board Steering Committee – March 11th, 12:00 PM
- Planning Board Site Visit – March 19th, 8:00 AM – To Be Confirmed
- Planning Board Meeting – March 24th, 6:30 PM

11) MORE TIME ITEMS

a) Training on Site Development Standards – Snow Storage, Landscaping, & Screening

12) ADJOURNMENT

City of Keene
New Hampshire

PLANNING BOARD MEETING MINUTES

Monday, January 27, 2025 **6:30 PM** **Council Chambers, City Hall**

Members Present:
Harold Farrington
Mayor Jay V. Kahn
Councilor Michael Remy
Sarah Vezzani
Armando Rangel
Ryan Clancy
Kenneth Kost
Randyn Markelon, Alternate
Michael Hoefer, Alternate
Stephon Mehu, Alternate

Staff Present:
Mari Brunner, Senior Planner
Evan Clements, Planner
Megan Fortson, Planner

Members Not Present:
Roberta Mastrogiovanni
Tammy Adams, Alternate

I) Call to Order

Chair Farrington called the meeting to order at 6:30 PM and a roll call was taken. The Chair invited Stephon Mehu to join the session as a voting member.

II) Election of Chair, Vice Chair, & Steering Committee

A motion was made by Kenneth Kost to nominate Harold Farrington as Chair of the Board. The motion was seconded by Councilor Remy. The motion carried on a unanimous vote.

A motion was made by Councilor Remy to nominate Roberta Mastrogiovanni as Vice-Chair of the Board. The motion was seconded by Armando Rangel. The motion carried on a unanimous vote.

A motion made by Chair Harold Farrington to nominate Armando Rangel as the third member of the Steering Committee. The motion was seconded by Councilor Remy. The motion carried on a unanimous vote.

III) Minutes of Previous Meeting – December 16, 2024

Chair Farrington noted Upcoming Dates of Interest were not included in the minutes.

A motion was made by Mayor Kahn to approve the December 16, 2024, meeting minutes as amended. The motion was seconded by Councilor Remy and was unanimously approved.

IV) Final Vote on Conditional Approvals

Chair Farrington stated this is a new, standing agenda item in response to the recent "City of Dover" decision issued by the NH Supreme Court. As a matter of practice, the Board will now issue a final vote on all conditionally approved plans after all of the "conditions precedent" have been met. This final vote will be the final approval and will start the 30-day appeal clock.

Mari Brunner, Senior Planner, stated there are two applications ready for final vote this evening.
Project PB-2024-07 – Dinkbee's Gas Station Redevelopment Major Site Plan – 510 Washington Street is one of the applications ready for a final vote.
This is a major site plan that was conditionally approved on August 26, 2024.
There are three conditions of approval that were precedent to final approval: Owner's signature shall appear on the plan; Submittal of security for landscaping, sedimentation and erosion control, and as built plans; Submittal of five full size paper copies and one digital copy of the final plan.
All those conditions have been met.

A motion was made by Councilor Remy that the Planning Board issue final site plan approval for PB-2024-07. The motion was seconded by Mayor Kahn and carried on a unanimous vote.
The Mayor felt this was a great improvement for the east side. Chair Farrington answered in agreement and noted that this would be a benefit for the new dwelling units next door.

Ms. Brunner stated the second item is PB-2024-15 for the Monadnock Conservancy Headquarters, located at 0 Ashuelot Street. This is a major site plan application. This plan was conditionally approved on November 25th, 2024. There were three conditions of approval precedent to final approval: Owner's signature appears on the plan; Submittal five paper copies and one digital copy of the final plan; Submittal of a security to cover the cost of sediment and erosion control, landscaping and as built plans. All of those conditions have been met.

A motion was made by Mayor Kahn that the Planning Board issue final site plan approval for PB-2024-15. The motion was seconded by Councilor Remy and carried on a unanimous vote.

V) Public Hearings

a) PB-2024-21 – 2-lot Subdivision – 141 Old Walpole Road – Applicant and owner, James A. Craig, proposes to subdivide the ~32.17-ac parcel at 141 Old Walpole Rd (TMP #503-006-000) into two lots ~24.61-ac and 7.56-ac in size. The parcel is located in the Rural District.

A. Board Determination of Completeness

Planner Evan Clements stated the applicant has requested an exemption from submitting a traffic analysis, drainage report, soil analysis, and other technical reports and analyses. After reviewing each exemption request, staff have made the preliminary determination that granting the request would have no bearing on the merits of the application and recommend that the Board accept the application as complete.

A motion was made by Councilor Remy that the Board move to find the application PB-2024-21 complete. The motion seconded by Stephon Mehu and was unanimously approved.

B. Public Hearing

Mr. John Bushbaum, surveyor, addressed the Board and introduced Mr. Jim Craig, the property owner.

Mr. Jim Craig, owner of the property at 141 Old Walpole Road, stated that he and his wife purchased this property 48 years ago. He stated that prior to him purchasing this land, it was subdivided into four lots in 1971. He stated that the previous owners had planned to sell a portion of the land to be developed for a Baptist Church. Mr. Craig stated the previous owners had gone through a foreclosure process, during which he purchased some of the property. He noted to the entire area of the property he purchased and explained he did not purchase the farmhouse. David and Kim Bergeron eventually purchased the farmhouse.

Mr. Craig stated they have decided to subdivide their property, as it is getting difficult to maintain the property. The proposal is to subdivide the portion of land on the eastern corner of the property.

He indicated he did have the property surveyed recently, and he learned that he only owned 33 acres—not 38 acres, as he originally thought he did. He stated this subdividing would allow them to continue to live here for several more years.

Mr. Bushbaum addressed the Board next and stated the property has been surveyed and has been subdivided according to the applicants' objectives. He noted to a small wetland area on the property, which is within the 50-foot setback. He noted this does restrict the location of a driveway, and there is still plenty of opportunity for a driveway to be located. This concluded the applicant's comments.

Staff comments were next

Mr. Clements addressed the Board. He stated the parent parcel is an existing roughly 32-acre parcel on old Walpole Road. It is located on the north side of the road, directly adjacent to a low-density residential zoning district and the Hilltop Drive Intersection. It is approximately 2800 feet northwest of the roundabout where 12A intersects. Municipal water and sewer are located roughly 500 feet down Old Walpole Road away from the property. Mr. Clements indicated there are some notable existing features on the site, including an old private road, Aaron Reed Road, and sloping fields.

The proposed new lot is very suitable for development, especially at the proposed 7 1/2-acre size. The parcel is relatively flat. Staff do not believe that this proposed development is scattered or premature.

In regard to the preservation of existing features, there are multiple areas within the lot for a small-scale residential development, which is appropriate for the rural zoning and not overly impacting the other rural aspects of the lot itself.

Regarding monumentation, monumentation is proposed and will be reviewed by the City Engineer. This review is recommended as a condition of approval.

Regarding flooding, the property is not located within any special flood hazard areas.

The applicant states in their narrative that, in regard to Fire Protection and water supply, there are municipal fire hydrants approximately 50 feet from the parent parcel and the fire department had no issues with this proposal.

Regarding utilities, the lot has the capacity for a private well and septic or a future owner can choose at their expense to extend those utilities and hook up to municipal services.

Mr. Clements reviewed the conditions of approval next.

Mayor Kahn asked whether there was adequate soil for a septic system on the property. Mr. Clements stated the applicant was asked to complete a percolation test and test pits as well as a 4K septic area, which this seems to be in order. He added, considering the size of the lot, there is no subdivision approval required, and Staff are confident that sanitary facilities would function on this site.

Mr. Kost referred to the Land Development Code 20.2.4 - Preservation of Existing Features. He noted to the stone walls, rock out cropping, etc. On the site. It says *The applicant has not proposed any permanent restrictions or other legal instruments to protect these notable features.* He asked to clarify if someone wanted to develop this property, they could remove these existing features.

Mr. Clements agreed they could and added there are no proposed restrictive covenants related to these assets. The property owner has control over who they sell the property to. He added based on the conversations staff had with Mr. Craig, Mr. Craig seems motivated to find somebody that would appreciate the land as much as he does.

Mr. Kost stated there is language that states that proposed development be designed to fit the landscape and to minimize significant landscape alteration. He asked whether this statement would go towards the concern he has raised. Mr. Clements stated perhaps an additional condition of approval could be included to encourage something like that. Mr. Clements wasn't sure how

that could be enforced if a single-family development was constructed. Ultimately, that would be up to the Board to decide. Mr. Kost stated he understands private owners can do what they want with their land. However, in this region, walls and such features are part of our environment, and it would be nice if it could be protected.

The Chair asked whether a new buyer could, perhaps, locate three homes on this piece of land or whether there were other frontage and restrictions in Staff review that would limit that. Mr. Clements stated the lot could be further subdivided if they could connect to city water and sewer. They would also be eligible for a Cottage Court development, which would definitely increase the quantity of development on the lot.

Chair Farrington asked about the driveway access. Mr. Clements stated the intent is to have the end user come in for a street access permit for a new driveway. A shared driveway is not currently proposed with this application.

The Mayor asked whether the abandoned street runs in the middle of the Bergeron property. Mr. Clements stated his understanding is that the Craig residence uses it as their driveway and it continues north, beyond where their driveway turns off to access the residence. Ms. Brunner noted it runs in the middle and is outlined by stone walls. She added that the driveway is about 24 to 25 feet wide.

The Chair asked for public comment next.

Mr. Jason Frost of 61 Hilltop Drive addressed the Board and stated he is an abutter and could probably speak for most of the people present today. He stated he always admired the Craigs and the effort that they have put into preserving that area. He talked about walking his dog and ice skating on the vernal pools. He stated he fully supports the Craigs and what they are trying to do.

With no further comment, the Chairman closed the public hearing.

C. Board Discussion and Action

A motion was made by Councilor Michael Remy that the Planning Board approve PB-2024-21 as shown on the plan set identified as “Minor Subdivision Plan” prepared by Envirespect Land Services, LLC at a scale of 1 inch = 100 feet, dated December 18, with the following conditions:

1. Prior to final approval and signature by the Planning Board Chair, the following conditions precedent shall be met:

A. Owner’s signature appears on the plan.

B. Inspection of lot monuments by the Public Works Director or their designee following their installation or the submittal of a security in an amount deemed satisfactory to the Public Works Director to ensure that the monuments will be set.

C. Submittal of four (4) full sized paper copies, two (2) mylar copies, and a digital copy of the final plan set. D. Submittal of a check in the amount of $51.00 made out to the City of Keene to cover recording fees.

The motion was seconded by Mayor Kahn.

Councilor Remy stated it is nice to see an opportunity for increased housing. He stated there is no regional impact from this application.

Ms. Vezzani stated it is nice to see neighbors present to support the development and the applicant, and she was comfortable moving forward with the request.

Mr. Kost stated he likes the idea of the opportunity for increased housing. He stated he also likes the idea of cottage court. He stated he would like to discuss LDC 20.2.4, which states *Proposed development be designed and located to fit into the landscape in order to minimize significant landscape alterations.* Mr. Kost asked whether this is something that could be added as part of the conditions of approval. Ms. Brunner stated the Board could add a condition but, as Mr. Clements had stated, enforcement of the condition would be difficult; once the parcel is subdivided and someone were to construct a single-family home, they wouldn't have to go through any sort of approval before a Board. Hence, it would really be up to the building permit staff who are reviewing the building permit application to notice that there was a condition from the Planning Board. She added, for a condition, it would be difficult for staff to decipher exactly what that means.

Councilor Remy stated what is being suggested seems aspirational and hoped the person who purchases the land fits in with the neighborhood. He also added building single-family homes affordably is difficult and did not want to add any more restrictions.

Ms. Vezzani stated she agrees with Councilor Remy and stated she is uncomfortable placing restrictions on something the city can't commit to following up on.

Mr. Mehu stated, in the event this application is approved, as it is a new lot and a new deed must be written, perhaps the Board could ask if the Craigs are interested in adding this language into their deed.

Ms. Markelon stated her concern would be the Board has not done this before and questioned why the Board is choosing this one parcel to put that note on.

Mr. Clancy stated he looked up the RSA 472-6, which states stone walls that are boundary markers are protected, unless both property owners agree to dismantle them. It is only the internal stone walls that would be at risk from changing. He felt it was the Board's purview to hold the applicant accountable for this.

Chair Farrington clarified cottage court development is permitted in the rural district. Mr. Clements stated it was, as long as there is water and sewer.

This concluded Board comments.

The motion carried on a unanimous vote.

b) <u>PB-2024-22 – 2-lot Subdivision – Monadnock Conservancy, 0 Ashuelot St</u> – Applicant BCM Environmental & Land Law PLLC, on behalf of owner JRR Properties LLC, proposes to subdivide the ~3.53-ac parcel at 0 Ashuelot St (TMP #567-001-000) into two lots ~2.45-ac and ~1.09-ac in size. The parcel is located in the Commerce District.

A. <u>Board Determination of Completeness</u>

Planner Evan Clements stated the applicant has requested exemptions from submitting a traffic study, drainage report, soil analysis, and other technical reports. After reviewing each exemption request, Staff have made the preliminary determination that granting the request would have no bearing on the merits of the application and recommend that the Board accept the application as complete.

A motion was made by Councilor Remy that the Board accept PB-2024-22 as complete. The motion was seconded by Mayor Kahn and was unanimously approved.

B. Public Hearing

Ms. Tara Kessler, Planner Paralegal with BCM Environmental Land Law, addressed the Board and introduced Liza Sergeant of SVE Associates. Ms. Kessler stated they are before the Board representing JRR Properties LLC, who is seeking a two-lot subdivision of its 3.5-acre parcel at 0 Ashuelot Street.

Ms. Kessler noted that in November, the Board approved a site plan for Monadnock Conservancy to build its regional headquarters on the northeast portion of the parcel. The item before the Board today is for a subdivision, which would allow JRR properties to donate about an acre of land to the Monadnock Conservancy at the northeast corner of the parcel and the remaining 2.44 acres to the city for use as a city park.

Next, Ms. Kessler addressed the subdivision standards and outlined how this application meets those standards.

With respect to Lots — Standard 20.2.1 — This parcel is in the commerce district and is 3.5 acres in size. The proposal is to subdivide and create a 1.08-acre lot and a 2.44-acre lot, each with well over 50 feet of road frontage, which is the minimum required in the commerce district. The minimum lot size required in the commerce district is 15,000 square feet. It appears this standard has been met

Character of Land — The parcel is a flat piece of land, currently undeveloped and was used as overflow parking for the Colony Mill. In 2022, it was converted to turf and grass. The site does not have any surface water or wetland. The majority of the property is in the 100-year floodplain.

Ms. Kessler noted a floodplain development permit would be required to develop on this site. The applicant has submitted a floodplain development permit, and the permit hasn't been issued as it is waiting for a few items to be submitted. An Alteration of Terrain Permit has been issued for the development.

Floodplain compensation is required for any development in the floodplain. Monadnock Conservancy has proposed a compensation area, which is going to span some of the Conservancy's parcel and some of the city parcel. There would be easements required for the Conservancy to maintain their flood storage on the city land, which is outlined as a condition of approval.

Scattered or Premature Development — The lot is located on Ashuelot Street, which is a fairly well-travelled road. There is access to sewer and water on Ashuelot Street. The property is in

proximity to the existing fire hydrants and is about 1/2 mile away from the fire station. This standard appears to be met.

Ms. Kessler stated that there is a city storm drain that runs through what will be primarily the city-owned parcel. The city is working with the Conservancy to remove that existing storm drain and replace it with a riparian swale. The riparian swale will be part of the compensation area for floodplain that is required for the development.

Preservation of Existing Features — Aside from the storm drain, there are no significant existing features on the parcel that would warrant preservation.

With respect to the site development standards — Ms. Kessler stated the Board did a thorough review of the proposed development on the site in November. With respect to the subdivision aspect of this project, there is City sewer and water available. There are no wetlands or surface waters that would be impacted. There are no known hazardous materials. This concluded Ms. Kessler's presentation.

The Mayor asked what the process would be to accept this gift of land. In this application, there isn't any assumption that the acceptance is presumed to be approved as a result of this subdivision. Ms. Kessler stated that if the city approved the subdivision tonight, the two lots would remain under the ownership of JRR Properties. There is an agreement between the city and JRR Properties for the donation of the 2.44-acre parcel and a contingency of that agreement is this subdivision tonight.

Councilor Remy noted if the city, for some reason, rejects the donation of land, the 2.44 acres would still be owned by JRR Properties, and it would be a commercial lot with the easements on it.

Ms. Kessler stated her client's primary interest, with respect to the 2.44-acre parcel, is that it be used as a city park. If, for some reason, the city were to reject the donation, JRR Properties does not have anything else intended for that lot.

Staff comments were next

Mr. Clements began by stating that the Planning Board doesn't have statutory authority to accept land on behalf of the city, only City Council can do that.

Mr. Clements went on to say that the purpose of this application is to subdivide the existing 3.5-acre parcel located at 0 Ashuelot Street, which is zoned in the commerce district into two lots. Lot 1 will be just under 1.1-acres in size with 185 feet of frontage along Ashuelot Street. Lot 2 will be a 2.44-acre parcel with 191 feet of frontage along Ashuelot Street.

Mr. Clements reviewed the proposed conditions of approval. This concluded staff comments.

Mr. Peter Hansel, Board member of Monadnock Conservancy, stated he hoped the Board would approve this request. It has been in their plan for a long time.

With no further comment, the Chair closed the public hearing.

C. <u>Board Discussion and Action</u>

A motion was made by Mayor Kahn that the Planning Board approve PB-2024-22 as shown on the plan set identified as "Two Lot Subdivision Land of JRR Properties LLC" prepared by Huntley Survey & Design, PLLC at a scale of 1 inch = 30 feet, dated October 31, 2024 and last revised January, 8 2025 with the following conditions:

1. Prior to final approval and signature by the Planning Board Chair, the following conditions precedent shall be met:

A. Owner's signature appears on the plan.

B. Inspection of lot monuments by the Public Works Director or their designee following their installation or the submittal of a security in an amount deemed satisfactory to the Public Works Director to ensure that the monuments will be set.

C. Submittal of a revised subdivision plat with the proposed flood storage compensation easement shown on the plan.

D. Submittal of draft easement documents for review by the City Attorney.

E. Submittal of four (4) full sized paper copies, two (2) mylar copies, and a digital copy of the final plan set. F. Submittal of a check in the amount of $51.00 made out to the City of Keene to cover recording fees.

F. A check in the amount of $51.00 made out to the City of Keene to cover recording fees.

2. Subsequent to final approval and signature by the Planning Board Chair, the following conditions shall be met:

A. Prior to the issuance of a building permit for new construction, a copy of the executed and recorded easement documents shall be submitted to the Community Development Department.

The motion was seconded by Councilor Remy.

Councilor Remy stated there was no regional impact from this application. Overall, it was a good proposal. He added that he hoped the cost pertaining to the easement could be kept net neutral for the city, specifically for the maintenance of that easement. The Councilor felt this is a much better use of the land.

Chair Farrington felt this was going to be a good show case for one of the connections Keene has for outdoor living.

Mayor Kahn complimented the Monadnock Conservancy. He stated he wanted to advocate for this subdivision and felt this was an asset to the city.

The motion was unanimously approved.

c) PB-2024-23 – Major Site Plan & Surface Water Protection Conditional Use Permit – Shooting Range, 19 Ferry Brook Rd – Applicant SVE Associates, on behalf of owner Cheshire County Shooting Sports Education Foundation Inc., proposes to modify the approved site plan

for the shooting range at 19 Ferry Brook Rd (TMP #214-021-000) to include a gravel shooting berm and an area of constructed wetlands on the southern portion of the site. A Surface Water Protection Conditional Use Permit is requested to allow the berm and other existing site features to be located within the 75' surface water buffer. The parcel is 55-ac in size and is located in the Rural District.

The Chairman recused himself from this application as he is a member of the shooting range.

A motion was made by Mayor Kahn to nominate Armando Rangel as Chair Pro Tem for this item. The motion was seconded by Kenneth Kost and was unanimously approved.

A. Board Determination of Completeness

Planner Megan Fortson stated the applicant has requested exemptions from submitting a landscaping plan, lighting plan, elevations, traffic analysis, historic evaluation, screening analysis, and architectural and visual appearance analysis. After reviewing each request, 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 accepts the application as complete.

A motion was made by Councilor Remy that the Board accept PB-2024-23 as complete. The motion was seconded by Stephan Mehu and was unanimously approved.

B. Public Hearing

Liza Sargent of SVE Associates addressed the Board. Ms. Sargent stated that as part of the site plan approval in 2020, the applicant located their indoor range in the southern portion of the site. When Staff inspected the site, they found a number of items that needed to be addressed. The first was a berm, which was not shown on the approved plan. The berm was constructed a number of years ago. As part of this approval, the berm was located on the plan, which is used as a shooting range. A certified wetland scientist was hired to delineate wetlands, and, during that review, it was realized that the 75-foot wetland buffer includes part of that existing shooting range.

This application is being made in an effort to get the project into compliance. In order to do that, the applicant initially wanted to apply for a CUP for the 30-foot buffer reduction. The area of impact within what would have been the 30-foot buffer is approximately 1,227 square feet. The applicant would propose a constructed wetland in that location, which would be double in size at 2,785 square feet. However, after discussion with Staff, the applicant was advised that the berm structure would not need to be reduced to the 30-foot buffer, but they could maintain the 75-feet and request that the berm be maintained within that area.

Ms. Sargent stated the other item the applicant is requesting is an outlet for the drainage structure to treat the runoff from the indoor shooting range. It was initially approved on the east side but the applicant would like to locate it on the west corner.

The applicant met with the Conservation Commission last week and they had several recommendations on pollinator mix for vegetating the berm, as well as some conditions regarding the plantings in the constructed wetland. This concluded Ms. Sargent's comments.

Councilor Remy asked what the changes are from the current state of this site.

Ms. Sargent stated they are proposing to construct the wetland to offset the impacts of the berm, which has been on the site for several years. She added they are also requesting to relocate the drainage outlet. There is also some topsoil and boulders, which would be removed from the 75-foot buffer.

Mayor Kahn asked to clarify what is being requested to be moved from one side to the other side of the site. Ms. Sargent clarified that as part of the approval in 2020 for the indoor shooting range, there was a level-spreader stormwater structure proposed. The emergency overflow for that structure is being proposed to be moved to the other side of the site. Ms. Sargent stated that the emergency stormwater overflow would flow through the rip-rap apron and eventually into the wetland buffer on the lower part of the property. Mayor Kahn asked to clarify that the berm would remain in place as it is today. Ms. Sargent clarified that it would remain in place, while the applicant needs to ensure that there is sufficient vegetation on the berm.

Mayor Kahn asked whether neighbors have experienced any shooting range targets in the berm. Ms. Sargent referred that question to a member of the Cheshire County Shooting Sports Education Foundation (CCSSEF).

Otto Busher of 20 Bradley Court in Jaffery, Chairman of CCSSEF Board, stated the range has been at this location for a hundred years and CCSSEF is sensitive to their neighbors. There would be no changes to the shooting. They only used the berm twice a week in the summer as an overflow of facility

Mr. Clancy asked how close the road is to the berm. Mr. Busher noted Ferry Brook Road is not shown on the map before the Board, indicating it is quite a distance away with a buffer between the site and the public road. They are proposing to add a wetland and more of a buffer with this application.

Mr. Rangel asked what other options were considered in deciding how to deal with the portions of berm within the surface water buffer. Ms. Sargent stated the amount of earth disturbance, if the berm was removed, would be a lot and would have more negative impacts to wetlands. The wetlands scientist decided this would be the best location for the constructed wetland.

Mr. Kost clarified the idea of the constructed wetlands is to mitigate the amount of the berm that is going into the buffer. Ms. Sargent answered in the affirmative. Mr. Kost asked when the berm was built, and Ms. Sargent stated it was prior to 2020. Mr. Kost asked whether the 75-foot buffer was in place at that time. Ms. Sargent referred this question to staff.

Ms. Brunner stated the berm was not present in the 2015 aerial imagery and the surface water buffer was already in place at that point. Staff believes the berm was built after the Surface Water Protection Ordinance was in place. However, Ms. Brunner noted the applicants did not knowingly construct something in the buffer without going through the approval process. She indicated the applicant has worked with staff readily to try to come into compliance.

Staff comments were next.

Ms. Brunner stated Ms. Fortson will be reviewing the staff report but Ms. Brunner wanted to report on the Conservation Commission's review of this application. She stated the Conservation Commission conducted a site last week and held a meeting to discuss this project. One of the

items that staff asked them to weigh in on was given the fact that this berm has been at this location for nearly 10 years, did the Commission feel keeping the berm at this location and building constructed wetlands would be a better outcome than requiring the applicant to remove the berm. The Commission seemed to be fully in support of this plan and did state that they felt that the mitigation was a better approach than asking the applicant to remove the berm. Removing the berm would have more of a negative impact on the wetland system than keeping it there.

Ms. Brunner stated the Commission did have some comments regarding pollinator-friendly plantings. One of the conditions Staff is recommending is to inspect the landscaping after installation in one year to ensure that it survives. This was another concern raised by the Commission. Ensuring the area stays clear of invasive plant species and ensuring sufficient longevity of the plants was a concern for the Commission.

Ms. Fortson addressed the Board next. This is a 55-acre parcel. The southernmost portion of the parcel is located at the intersection of Ferry Brook Road and Sullivan Road. The northernmost property boundary is right along the Sullivan town line. There are several outdoor features on the site related to its use as an outdoor shooting range. There is a clubhouse, indoor shooting range, a trailer used as classroom space, and the southwestern portion of the parcel is where the shooting range is located.

Ms. Fortson stated that this property is surrounded by single family uses and undeveloped parcels. The property first came before the Planning Board for site plan review in 2013, when the applicant was initially looking to construct a 26,000 square foot indoor shooting range. This approval was followed up with a modification to that approved site plan. The modification was for the removal of some parking spaces to reduce the total amount of impervious surface on the site. This modified approval–Modification 1–was never acted on, and an updated application was submitted in July 2020, including the large level spreader on the site plan. The applicant met all conditions of approval, and the plans were signed by the Chair.

During site inspections after the indoor shooting range was constructed, Staff noticed quite a few deviations from the approved site plan. Engineering Staff visited the site and believed the stormwater level spreader could not function as it was installed. There is also a trailer that has been added to the rear of the site, which Staff were not aware of. Because of the discrepancies between the plan that was approved in 2020 and Staff viewing existing conditions of the site, the applicant came back to the Board and received approval for those site modifications

In December last year, the applicant attended a monthly pre-submission meeting to see what the process would be to allow for portions of the berm within the 75-foot surface water buffer to remain there.

Ms. Fortson noted Article 11 of the Land Development Code, which is the Board's Surface Water Protection Ordinance, the berm is considered a structure that is within the buffer. Thus, the applicant is requesting that the structure continue to be allowed to be maintained within the buffer and other small site modifications.

There is about 9,500 square feet of berm that is proposed to remain as a permanent site feature within the surface water buffer. The applicant is proposing to extend the area of existing

wetlands that are to the west of the berm to offset the impact that the presence of the berm within the surface water buffer may have.

Ms. Fortson explained that as part of the surface water protection process, there are a few options for the applicant. The applicant can obtain a Conditional Use Permit to allow for a structure to be within the buffer, or they can request a buffer reduction. In this case, Staff did not feel a buffer reduction was appropriate. This would have reduced the buffer from 75 feet to 30 feet. Ms. Fortson noted this is only an appropriate process when an applicant wants to have something of a prohibited use within the surface water buffer. In this case, the berm is considered a structure, which is an allowed use. The applicant is going through the approval process, because the berm was constructed without their knowledge. The applicant is also providing mitigation in the form of a constructed wetland, which is not required for a surface water CUP under the City's Land Development Standards.

Staff does not feel there is going to be any regional impact from the application, even though it shares a municipal boundary.

In terms of Staff comments, engineering staff had concerns regarding grading and exemption requests for a drainage analysis and soil analysis. The applicant responded to questions from City Engineering Staff and did submit both of those items. These issues have been resolved.

The zoning Staff had asked the applicant to clarify whether this was a buffer reduction request or CUP. The applicant has indicated it is a CUP.

Ms. Fortson next reviewed the Surface Water CUP Standards and Site Development Standards. The actual uses being reviewed under the CUP Standards are the berm being located within the buffer and the installation of the emergency spillway within the buffer.

Ms. Fortson noted to the aerial imagery where there is reference to trails. These are old, wooded trails that used to access a dam that is shown in black in one of the areas. This dam no longer exists, but the trails are still used by the shooting range, which is an allowed use within the surface water buffer.

Ms. Fortson clarified that almost 3,000 square feet of artificial wetlands are proposed to be added. Ms. Fortson added the wetlands are going to be created by having a wetland scientist perform about 103 cubic square feet of excavation in the area. They will create a series of mounds and pools and install a variety of plantings.

In terms of the recommended conditions of approval, planning Staff are recommending submittal of security to cover the cost of that landscaping as well as the completion of initial landscaping inspection after the wetlands have been constructed and an inspection after the first year to ensure the wetlands are going to thrive. This is something the Conservation Commission had requested as part of their review of the project.

Ms. Brunner stated she wanted to clarify that at the Conservation Commission meeting it was noted that the wetland was going to be manually constructed by volunteers from the shooting range – there is some sweat equity being put into this.

Ms. Fortson reviewed the outlined conditions of approval:

1. Prior to final approval and signature of the plans by the Planning Board Chair, the following conditions precedent shall be met:
    a. Owner's signature appears on the CUP/site plan and constructed wetlands exhibit.
    b. Submittal of five full-sized paper copies of the proposed conditions plan, constructed wetlands exhibit, and wetlands setback exhibit to the Community Development Department.
    c. Submittal of a security in a form and amount acceptable to the Community Development Director and City Engineer to cover the cost of landscaping and sediment/erosion control measures.
    d. Submittal of an approved Alteration of Terrain Permit application, if deemed necessary by NH DES. The approved permit number shall be included on the final plans.
2. Subsequent to final approval and signature of the plans by the Planning Board Chair, the following conditions shall be met:
    a. Prior to the commencement of site work, a pre-construction site visit shall be scheduled with Community Development Staff. In addition, the Community Development Department shall be notified when all erosion control measures are installed and the Community Development Director, or their designee, shall inspect the erosion control measures for compliance with this application and all City of Keene regulations.
    b. With six months of the date of final approval for this application, the topsoil and boulder piles within the 75' surface water buffer shall be removed. The buffer shall be flagged by a wetlands scientist licensed in the State of NH and subject to an inspection by the Community Development Director, or their designee, to confirm that the materials have been sufficiently removed to ensure compliance with the Surface Water Protection Ordinance.
    c. Following the completion of the construction of the artificial wetlands, the applicant shall contact the Community Development Department to schedule initial and final landscaping inspections of the wetlands and stabilized berm.
    d. After all conditions subsequent for the previous site plan application, SPR-01-13 Modification #3, have been completed and all site work has been inspected for compliance with the approved plan and all City of Keene regulations, the security on file for the project shall be released.

This concluded Staff comments.

Mr. Kost stated there was a reference to pollinator plants to stabilize the berm. He asked whether this is also something that gets inspected by staff. Ms. Fortson stated if the applicant was to install pollinator-friendly species on the berm to stabilize it, this would be something that they would need to be included as part of their landscape security that the applicant would need to be submit. Staff at that point would look at the berm during the initial landscaping inspection and follow up to make sure it is thriving to stabilize the berm. She noted the Conservation Commission had their meeting and came up with their recommendations after the staff report had already been sent out. Hence, the staff report did not include recommendations about pollinator-friendly species, but indicated the Board could include this as a condition of approval related to security.

Councilor Remy pointed out that in the recommended motion, there is a comment about final inspection of the wetlands and stabilized berm.

Mr. Clancy asked what an acceptable amount of security was. Ms. Fortson stated the land development code allows for the submittal of a security reviewed by Planning Staff and the City Engineer's office. For the City, this would be a check to cover the cost of sedimentation, erosion control, landscaping and as built plans (if all three are necessary). The amount depends on what type of landscaping is going to be installed, the extent of the project, and the extent of the erosion control measures.

The Mayor clarified there is a 9,500 square-foot portion of the berm that is currently in the buffer. To compensate, the applicant will be constructing a 2,785 square-foot area to be developed as a wetland.

Liza Sargent clarified that the discrepancy is that the berm created 1,227 square-feet of impact on the 30-foot buffer, and the applicant is proposing to construct a wetland at twice that amount of impact. Ms. Sargent continued by stating that they realized it would be better to keep the 75-foot buffer, and the applicant is not proposing to increase the size of the constructed wetland because it would have been cost prohibitive. If this were a DES wetland application, the cost to construct something big enough to compensate for the square-footage of the berm in the 75-foot buffer, 9,500 feet, would have been cost prohibitive.

Ms. Fortson stated that there is over 9,000 square-feet of impact on the 75-foot surface water buffer. The applicant is not requesting a buffer-reduction to 30 feet, so to offset those areas of the berm, they are proposing to construct the artificial wetlands.

The Mayor stated that the decision that is in front of the Board is to accept a smaller amount of square footage, but it is also a deeper with 103 cubic yards of earth being moved, which is the compensation for the buffer reduction. Ms. Brunner stated this is something that the Planning Board doesn't normally see because typically mitigation isn't something the Board requires. When a structure is proposed within the surface water buffer, an applicant will propose the structure and then they are required to address the different criteria. In this case, the applicant on their own has proposed to go above and beyond and address mitigation because the berm has been in the buffer for quite some time. The constructed wetland is not something that is required.

She added wetland mitigation is something New Hampshire DES would require if an applicant was impacting the wetland itself directly. In this case, the constructed wetland is for the impacts to the wetland buffer. This is something the Board hasn't necessarily seen before.

The Mayor stated the intent is to not be equal, but to be equivalent and this is what the Staff has evaluated; that the value of the creation of the wetland is sufficiently compensating for the smaller buffer. Ms. Brunner agreed but added Staff relies pretty heavily on the expertise of the Conservation Commission and they are very comfortable with this proposal.

Mr. Busher stated that they are increasing the wetlands on their property to offset the mitigation for the 75-foot setback. The desired end state here is that they get more wetlands.

Ms. Fortson added that Staff knew of an area of wetlands to the west of the berm, and Ms. Sargent discovered more wetlands to the north of the berm. The Conservation Commission felt

that it is better to leave the berm in its current state, within the 75-feet buffer, and add almost 3,000 square-feet of artificial wetlands, than trying to remove the berm from the buffer.

This concluded Staff comments.

The Chair asked for public comment next. With no comments from the public, the Chair closed the public hearing.

C. Board Discussion and Action

A motion was made by Councilor Remy that the Planning Board approve PB-2024-23 as shown on the plan identified as "CUP/Site Plan; Cheshire County Shooting Sports Education Foundation, Inc; 19 Ferry Brook Road; Keene, New Hampshire" prepared by SVE Associates at a scale of 1 inch = 20 feet on January 5, 2024 and last revised on January 7, 2025 with the following conditions:

1. Prior to final approval and signature of the plans by the Planning Board Chair, the following conditions precedent shall be met:

a. Owner's signature appears on the CUP/site plan and constructed wetlands exhibit.

b. Submittal of five full-sized paper copies of the proposed conditions plan, constructed wetlands exhibit, and wetlands setback exhibit to the Community Development Department.

c. Submittal of a security in a form and amount acceptable to the Community Development Director and City Engineer to cover the cost of landscaping and sediment/erosion control measures.

d. Submittal of an approved Alteration of Terrain Permit application, if deemed necessary by NH DES. The approved permit number shall be included on the final plans.

2. Subsequent to final approval and signature of the plans by the Planning Board Chair, the following conditions shall be met:

a. Prior to the commencement of site work, a pre-construction site visit shall be scheduled with Community Development Staff. In addition, the Community Development Department shall be notified when all erosion control measures are installed and the Community Development Director, or their designee, shall inspect the erosion control measures for compliance with this application and all City of Keene regulations.

b. Within six months of the date of final approval for this application, the topsoil and boulder piles within the 75' surface water buffer shall be removed. The buffer shall be flagged by a soil scientist licensed in the State of NH and subject to an inspection by the Community Development Director, or their designee, to confirm that the materials have been sufficiently removed to ensure compliance with the Surface Water Protection Ordinance.

c. Following the completion of the construction of the artificial wetlands, the applicant shall contact the Community Development Department to schedule initial and final landscaping inspections of the wetlands and stabilized berm.

d. After all conditions subsequent for the previous site plan application, SPR-01-13 Modification #3, have been completed and all site work has been inspected for compliance with

the approved plan and all City of Keene regulations, the security on file for the project shall be released.

The motion was seconded by Mayor Kahn.

Councilor Remy stated there is no regional impact from this application. He stated he is glad to see the applicant trying to come into compliance and going above and beyond by adding additional wetlands, even though the applicant is not actually impacting wetlands.

Mr. Kost stated if the Conservation Commission recommended some kind of pollinator plants, he would request that language be added, rather than language that indicates a generic stabilized berm.

Mr. Kost proposed an amendment to indicate final landscape inspection of the wetlands with vegetated stabilization for the berm with pollinated plants.

Mr. Clements stated there are pollinator seed mixes that are available, as opposed to mature plantings. He added it is common practice as part of lot stabilization and erosion control to seed large piles with grass seed, which he felt was more of what the applicant was thinking as far as stabilizing the berm.

Ms. Brunner stated the Conservation Commission has recommended a specific mix to the applicant, which would be NE pollinator mix.

Mr. Chris Stanforth, Certified Wetland Scientist, stated in his plan he has recommended a location in Northampton, Massachusetts that specializes in wetland seed mixes. They also have a conservation mix with a pollinator added into that mix. This is what the applicant is planning to use.

Mr. Kost asked whether the Board wanted to add this to the motion language. He stated he would like to see this language added.

Councilor Remy stated he was fine with language that just said stabilized berm, but proposed this amended language: *final landscaping inspections of the wetlands and berm stabilized with a suitable mix of pollinator friendly seeds.*

Ms. Fortson proposed the following language: *submittal of security in a form and amount acceptable to the Community Development Director and City Engineer to cover the cost of landscaping, sediment erosion control measures and a pollinator friendly plant mix to stabilize the berm.*

Councilor Remy withdrew his original motion. The Mayor withdrew his second.

Councilor Remy amended the original motion to add item e. to the conditions precedent stating the following: *The inclusion on the plan set of the pollinator friendly seed mix used to stabilize the berm.*

The amendment was seconded by Mayor Kahn.

Mr. Clancy stated he was concerned about that amendment because the applicant is working with the Board to come up with a solution and adding to the plan. The applicant's consultant already has a plan that is going to work. He noted the priority is to stabilize this berm, so it doesn't affect

the wetlands. Their experts have concerns about adding in those type of plantings when they have a plan that will stabilize the berm.

Mr. Hoefer noted the Conservation Commission has already weighed in on this and there is a plan in place to stabilize berm.

Ms. Fortson stated as part of the Surface Water Protection CUP review process, projects go before the Conservation Commission for review. It is then the Planning Board's duty to take those recommendations into consideration as they deliberate the application. If the Board wanted to see a pollinator friendly seed mix used to stabilize the berm, the Board would have to include that in the motion.

Mr. Clements added the Conservation Commission's role is to advise the Planning Board and it doesn't have the authority to require items, rather the Board does.

Mr. Hoefer asked where the pollinators come into this conversation. Mr. Busher stated it is from the Conservation Commission last week.

Mr. Kost stated what he was getting at is because the Conservation Commission made a generic recommendation, and his suggestion is to add their recommendation into the motion language.

Ms. Vezani asked whether the Commission's recommendation is included in the Board's packet. Ms. Brunner clarified that when applications get referred by the Planning Board to the Conservation Commission for review, because the Conservation Commission's meeting is the week prior to the Planning Board meeting, Staff do not have time to include the Conservation Commission's feedback into the Board's motion. This is why it wasn't included in the Board's draft motion this evening. It is up to the Board to determine if they want to include it or not. If they want to include it, it will need to be a condition.

Ms. Vezzani stated in that event, it makes sense to include it.

Councilor Remy noted that, as the person who made the amendment, his motion did not specify "northeast mix" as was recommended by the Conservation Commission. He just said "pollinator friendly mix."

The amendment was unanimously approved.

The overall motion was unanimously approved.

Chair Farrington rejoined the session.

VI) Keene State Colege Master Plan Presentation – Nathalie Houder & Colin Burdick
Master Plan Update (https://keenemasterplan.com/)

Colin Burdick, Assistant Director of Facility Services, addressed the Board and indicated that Keene State College just finished their campus master plan, which provides them with a fourth tool to their Physical Facility Planning Strategy. He noted they have a Master Plan, a Space Utilization Study, Strategic Portfolio–with one of the pillars being building and infrastructure– and the Gordian Sight Lines Facilities Conditions Report.

He indicated members of the campus community, faculty, staff, students, and community members weighed in on the master plan process. The architecture firm hired to complete the master plan is DuMont and Jenks and to accomplish their work, they took all the feedback and came back with a final analysis.

Mr. Burdick stated the hi-listed projects were placed into a “three bucket approach” that the architects used: Priority Projects, Desirable Projects, and Aspirational Projects.

Priority Projects are ones that if the college had funding it should be looked at with serious consideration in the near term.

Desirable Projects are projects that if funding were to become available through donation, fundraising, or other initiatives, could be planned on a three to seven-year time frame.

Aspirational Projects are creative projects from the architects for finding unique opportunities on campus. These project won’t happen unless significant funding comes through.

Priority Projects property de-assession. About 10 years ago, in the last master plan, the campus was growing. A lot has happened in Higher Ed since then. The campus is now looking to scale back. They are looking to sell, demo, rent or lease certain properties that are underutilized.

Key Renovations include certain buildings that were highlighted, such as Morrison Hall and Parker Hall. These two buildings are on the FY 27 plan to be renovated. The Student Center also needs major renovation. The Student Center was constructed in 1994. Buildings from the mid 90’s are starting to catch up and are coming up for deferred maintenance.

Desirable Projects include the following:
Parking – While there are less students on campus, there is currently a different subset of students.
Parking has become a major focus at Keene State. Some of the de-escalation properties could offer parking opportunities.

Open Space System – A pedestrian walkway from north to South. Mr. Burdick noted they have great east to west pedestrian access along Appian Way. However, the north to south Corridor needs some improvement from the pond up to Appian Way. Another highlight the architect suggested was to create some sort of public square, like central square in the student center dining commons area. There are not many places to hold events other than at the student center.

Residential Life Improvements – Some of the Owl's Nests would be planned to be razed to build a residence hall.
It was determined that the west end of Appian Way could provide a good endpoint to Appian Way with the arches on the Main Street, the east side of campus, that provides a nice entrance. This way, there would be a nice entrance and end point.

Aspirational Projects – A new Media Arts Center or student support service. The current Media Art Center is the central part of campus and is a prime real estate spot.

A new academic building where the Thorn Art Gallery is located could help create that north-south corridor

Pond Improvements – Brickyard Pond is not maintained well; however, architects suggested investing in docks, wrap around trails, and other features. These features could provide a great outdoor experience.

Overall View – Elliot and Jocelyn Halls share utilities and you can't have one without the other. Should it be renovated? Should there be a proposed addition? Should $30 million deferred maintenance from the old hospital wing and have it demolished?
Mr. Burdick noted the Elliott Mansion is on the Federal Registry Historic Registry, which cannot be touched. There is however, some deferred maintenance, which would need to be address to retain that significant investment.

The only new buildings presented in this master plan were the residential halls at the end of Appian Way and a proposed addition to the Rec Center to support the varsity weight room. This is a huge recruiting tool for athletics throughout Higher Ed.

Redfern Arts Center is also highlighted for some proposed renovations.
This concluded Mr. Burdick's comments.

Councilor Remy stated he is glad to see Keene State looking to get rid of some of their underutilized buildings as the city is short on its housing needs. He encouraged that conversation.

Mr. Kost asked whether the consultant working on the city's master plan has reached out to Keene State regarding the item of housing. Ms. Brunner noted to the six pillars–housing being one of those–and encouraged Mr. Burdick's participation on the online message boards.

Mayor Kahn asked about the property on Winchester Street where the lot has been cleared. Mr. Burdick stated the college is still actively looking for "suitors." He indicated the discussion with Antioch University did not come to fruition but are still working with Antioch to find space elsewhere on campus for their use. The Mayor stated what he is trying to draw attention to is the interface between the city's master plan and that portion of Winchester Street. Looking at appropriate zoning for that area, in the event this property was sold.

Ms. Natalie Hoder, Vice President for Finance and Administration, stated that, unfortunately, the anticipated transaction with Antioch fell through due to funding issues. She stated this site is a temporary parking lot at the present time but they are certainly working towards making sure that the right party comes along for Keene State to work with. They do plan on bringing the city in on those plans.

Chair Farrington asked how this property is currently zoned. Ms. Brunner stated, in addition to this property being located in the Downtown Historic District, which is an overlay zoning district, it is also in the Downtown Core District. Antioch University, which is a private nonprofit university, would have been subject to zoning. Keene State is a public university and is not

subject to site plan or zoning. However, if they were to lease the land to a user who is not a governmental entity, they would be subject to those zoning rules.

Mr. Clancy referred to the housing issue and the proposed construction of buildings on campus and asked if there was any emphasis on keeping juniors and seniors on campus as well. Ms. Hoder stated they have no plans to require upper classmen to live on campus. The college has tried to make living on campus more attractive. Mr. Burdick stated this year was their lowest first year for the student population, but the residence halls are more heavily occupied than they were last year. He stated they are seeing a lot of off-campus students coming back to campus as they are finding out that off-campus housing is not as big a financial saving as it used to be.

This concluded the presentation.

VII) Master Plan Update (https://keenemasterplan.com/)

Ms. Brunner stated, since the Memo included in the staff report was sent to the Board, there have been a couple of the initial task force meetings. The first Task Force meeting was for the Livable Housing pillar, which was held last week. Today was the second meeting to talk about Connected Mobility and both sessions went well. Tomorrow is Adaptable Workforce. Ms. Brunner stated people who attend these sessions are members of the community who are passionate about a topic and have volunteered their time. She stated she is always impressed by how engaged this community is. There are 90 volunteers participating on these task forces.

In terms of next steps, Staff and the consultants will be working on synthesizing the feedback and ideas generated by these focus groups and bringing ideas and recommendations back to the Master Plan Steering Committee, which will eventually come back to the Board.

The next Future Summit is scheduled for Tuesday, June 3rd at Herberton Hall from 5:00 pm to 7:00 PM. Ms. Brunner encouraged participation.

Discussion Boards are still up and running and still looking for engagement.

VIII) Planning Board Meeting Schedule - Request to reschedule the September meeting date

Chair Farrington noted that Monday, September 22nd is a religious holiday and suggested moving the Planning Board meeting to the 29th. He asked staff for recommendations for changing that date. Ms. Brunner stated, from Staff's perspective, it would be easier if it could be moved to Tuesday, September 23rd. After a discussion between staff and the Board, it was agreed the meeting would be changed to September 29th.

A motion was made by Chair Farrington to change the September 22nd meeting to September 29th. The motion was seconded by Mayor Kahn and was unanimously approved.

IX) Staff Updates

a) Overview of Administrative and Minor Project approvals issued in 2024.

Ms. Brunner stated the only update is that the overview of administrative and minor project approvals that were issued in 2024 are included in Board's packet.

She reminded the Board of the site plan review thresholds. There is a major site plan review, which comes before the Board, and minor site plan review, which goes to a committee made up of Staff. The Board has delegated its site plan review authority to that committee for projects that are below a certain threshold. There is another level below that in which the project does not require any formal site plan review but requires an administrative review of the application to insure compliance with the City's site development standards. This is what the administrative planning approvals are. This list is given to the Board on an annual basis. All these project folders are located on the 4th floor of City Hall for review by the Board.

The agendas for the Minor Project Review Committee are publicly posted but the administrative approvals are not. There is no agenda ahead of time because there is no meeting, but they are posted on the city website as well as the administrative approvals.

Councilor Remy noted to the number of housing projects that have been created without having to come before the Board, which he indicated was impressive.

Chair Farrington encouraged the Board to bring comments to the next meeting or email questions to staff.

Ms. Fortson noted the administrative approvals are only available on the website for about four months.

X) New Business

None

XI) Upcoming Dates of Interest

- Joint Committee of the Planning Board and PLD – February 10, 6:30 PM
- Planning Board Steering Committee – February 11, 11:00 AM
- Planning Board Site Visit –February 19 8:00 AM – To Be Confirmed
- Planning Board Meeting – February 24, 6:30 PM

There being no further business, Chair Farrington adjourned the meeting at 9:06 PM.

Respectfully submitted by,
Krishni Pahl, Minute Taker

Reviewed and edited by,
Emily Duseau, Planning Technician

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CITY OF KEENE
NEW HAMPSHIRE

MEMORANDUM

TO: Planning Board

FROM: Community Development Staff

DATE: February 14th, 2025

SUBJECT: Agenda Item III - Final Vote on Conditional Approvals

Recommendation:

To grant final approval for any projects that have met all their "conditions precedent to final approval."

Background:

This is a standing agenda item in response to the "George Stergiou v. City of Dover" opinion issued by the NH Supreme Court on July 21, 2022. As a matter of practice, the Planning Board issues a final vote on all conditionally approved projects after the "conditions precedent to final approval" have been met. This final vote will be the final approval and will start the 30-day appeal clock.

As of the date of this packet, the following applications are ready for final approval:

1. **PB-2024-21 – 2-lot Subdivision – 141 Old Walpole Road**

If any projects meet their conditions precedent between date of this packet and the meeting, they will be identified and discussed during this agenda item.

All Planning Board actions, including final approvals, are posted on the City of Keene website the day after the meeting at KeeneNH.gov/planning-board.

REVISION ENERGY

City of Keene
Planning Board
3 Washington Street
Keene, NH 03431

RE: Request for Review & Comment for Cedarcrest Solar CUP, Parcel 227-018-000

Dear Chair Farrington,

We are requesting review and comment for our site plan for the installation of a medium-scale ground mounted solar array, which will be submitted for a boundary line adjustment, major site plan review and a solar CUP.

We are seeking advice related to Section 16.2.5 Visual Buffer of the Land Development Code. The project has come together through a unique partnership with the City of Keene, andCedarcrest, and will be installed on lands to be transferred from the City to Cedarcrest via a boundary line adjustment.

Due to the location on the lot, and the existing conditions of the surrounding lots, the project is well hidden from view of the primary abutting uses (Cemetery, First Baptist Church) and we feel the proposal meets the intent of the Land Development Code to reasonably minimize the view of the system from surrounding properties and public rights of way without the addition of additional screening measures (inverters and other AC equipment on the Cedarcrest facility will be screened via a vinyl privacy fence). The City, as the primary abutter, has expressed their agreement with this view and submitted a letter of support. Installing and maintaining an vegetative buffer to further screen the solar array would create outsized costs to Cedarcrest, for limited or no benefits to abutting parcels. For example, the Cemetery already maintains its own screening from this portion of the property which also houses the maintenance building and operations, and, the First Baptist Church lands are enrolled in current use, which indicates the likelihood that they'll remain wooded for the long term. Screening entire lengths of medium scale solar arrays is costly both for installation and long-term maintenance. Given the support for the site plan as proposed, the passive use and unintrusive fencing of the array, the screening of the AC equipment, and the natural limited visibility to existing features, our opinion is that the proposal does satisfy the intent of the code and we would appreciate your advice on this matter. A copy of the site plan and photos are attached.

Thank you for your consideration.

Sincerely,

Megan Ulin
ReVision Energy
603-583-4361
mulin@revisionenergy.com

Agent Authorization

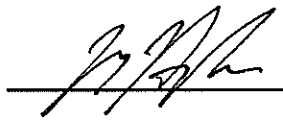
To whom it may concern,

Cedarcrest Inc. hereby authorizes ReVision Energy and Horizons Engineering to act as Agent(s) for the limited purpose of applying for and obtaining any local, state or federal permits that may be required for the installation of a photovoltaic solar system at 91 Maple Ave, Keene, NH 03431 (Parcel ID: 227-018-000). This includes but is not limited to anticipated zoning variances, boundary line adjustment, solar CUP, and building and electric permit applications.

Agent contact information:

Megan Ulin
Solar Project Developer
ReVision Energy
(603) 583-4361
mulin@revisionenergy.com

Ryan Hudock, PE
Civil Engineer
Horizons Engineering
(603) 877-0116 ext. 9972
rhudock@horizonsengineering.com

Signature 

Print Name Jay Hayston

Title President and CEO

Date 1/30/2025

Photo Sheets
91 Maple Avenue (Parcel ID: 227-018-000)

Photo 1: Taken from the West lower corner the proposed array, and looking Northeast at the array location. View of existing vegetative buffer towards the North.

Photo 2: Taken from the West upper corner of the proposed array, looking East towards the existing tree-line and Cemetery Maintenance Shed.

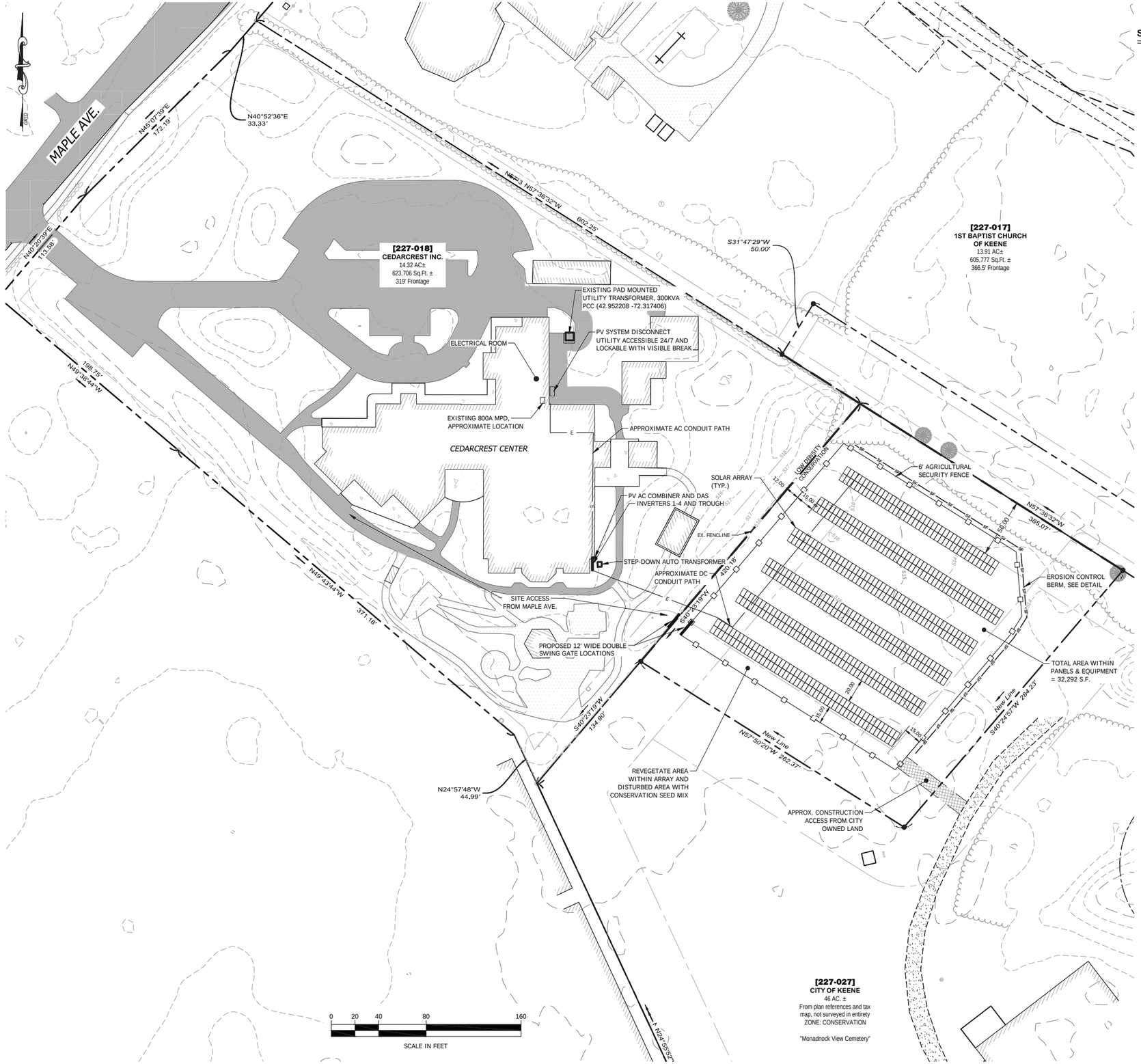
Photo Sheets
91 Maple Avenue (Parcel ID: 227-018-000)

Photo 3: Taken from East corner of the array, looking Southwest to Cedarcrest and 91 Maple Ave.

Photo 4: Center of array location, looking South to buffer along Parkwood Apartments and carports.

Photo Sheets
91 Maple Avenue (Parcel ID: 227-018-000)

Aerial image with solar overlay



SYMBOL LEGEND

- CATCH BASIN
- HYDRANT
- UTILITY POLE
- LIGHT POLE
- TELECOM MANHOLE
- SIGN
- SIGN WITH END POSTS
- POST/BOLLARD
- UNDETERMINED UTILITY BOX
- MAIL BOX
- IRON PIN/PIPE
- STONE/CONCRETE BOUND
- STONE WALL
- EXISTING CHAIN LINK FENCE
- PROPOSED SECURITY FENCE
- PROPOSED ELECTRICAL LINE
- TREE LINE
- EDGE OF PAVEMENT
- CONCRETE
- EXISTING GRAVEL
- PROPOSED GRAVEL ACCESS
- CONIFEROUS TREE
- STONE/CONCRETE BOUND
- *CCRD* — CHESHIRE REGISTRY OF DEEDS
- **[1-2-3]** — TAX MAP PARCEL NUMBER
- *123/456* — DEED VOLUME & PAGE
- *NHHB* — NH HIGHWAY BOUND

SITE PLAN NOTES

1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS.
2. NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
3. ALL WORK SHALL BE PERFORMED WITHIN THE PROPERTY OF, AND EASEMENTS SECURED BY, THE OWNER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DATA COLLECTION AND PREPARATION OF RECORD DRAWINGS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTROLLING EROSION IN ALL AREAS DISTURBED BY HIS ACTIONS. COSTS FOR REQUIRED EROSION CONTROL, REGARDLESS OF WHETHER OR NOT SUCH MEASURES ARE SHOWN ON THE ENGINEERING DRAWINGS, SHALL BE BORNE BY HIM.
6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF EXISTING UTILITIES AND SHALL REPAIR ANY DAMAGE AS QUICKLY AS POSSIBLE AT HIS OWN EXPENSE. ALL UTILITIES ENCOUNTERED SHALL BE LOCATED BY DEPTH AND TIES AND SHOWN BY THE CONTRACTOR ON HIS "AS BUILT" DRAWINGS. HAND EXCAVATION SHALL BE DONE WHEREVER UNDERGROUND UTILITIES ARE ANTICIPATED. THE CONTRACTOR SHALL CONTACT DIG SAFE AND THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION IN ORDER TO VERIFY EXISTING CONDITIONS AND UTILITY LOCATIONS.
7. BASE MAP INFORMATION INCLUDING BOUNDARY AND TOPOGRAPHY ON THIS PLAN IS FROM PLANS PREPARED BY HUNTLEY SURVEY & DESIGN, TITLED " EXISTING CONDITIONS" AND "BOUNDARY LINE ADJUSTMENT", BOTH DATED FEBRUARY 2, 2025.

CONSTRUCTION SEQUENCE

1. INSTALL CONSTRUCTION ENTRANCE, SEE DETAIL.
2. INSTALL PERIMETER EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
3. PROCEED WITH WORK, INSTALLING ARRAY, ELECTRIC EQUIPMENT, AND FENCING, LIMITING THE DURATION OF DISTURBANCE. ANY MINOR POTENTIAL GROUND DISTURBANCES ARE ANTICIPATED TO BE CAUSED BY VEHICLE ACCESS MOVEMENTS PERFORMING THE INSTALLATION OF THE PANELS AND FENCING. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
4. REMOVE CONSTRUCTION ENTRANCE MATERIALS. BEGIN SEEDING AND MULCHING AREAS DISTURBED BY INSTALLATION EQUIPMENT. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 72 HOURS.
5. INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN AND REPAIR ALL MEASURES NO LONGER INSTALLED CORRECTLY.
6. PLACE TOPSOIL, SEED AND MULCH.
7. MONITOR THE SITE AND MAINTAIN STRUCTURES AS NEEDED UNTIL FULL VEGETATION IS ESTABLISHED.

WE CERTIFY THAT THE KEENE PLANNING BOARD GAVE THIS SITE PLAN FINAL APPROVAL ON _____ AND THAT THE BOARD FOUND THAT ALL CONDITIONS PRECEDENT TO FINAL APPROVAL HAD BEEN SATISFIED.

FINAL SUBDIVISION PLAN
APPROVED
PLANNING BOARD
Keene, New Hampshire

DATE _____ CHAIRMAN _____

OWNER SIGNATURES:

_____ _____
_____ _____
_____ _____
_____ DATE:

DATE OF PRINT
FEBRUARY 12, 2025
HORIZONS ENGINEERING

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

SURVEYED BY:	HEI
ENGINEERED BY:	RJH
DRAWN BY:	DMW
CHECKED BY:	RJH/WTD

horizons Engineering

REVISION ENERGY
SOLAR SITE DEVELOPMENT
KEENE, NEW HAMPSHIRE

SITE PLAN

ISSUED FOR:
REVIEW

PROJECT #:	240705
DATE:	FEBRUARY 2025
SHEET	C2.0

STAFF REPORT

SPR-593, MODIFICATION #2 – MAJOR SITE PLAN – BANK OF AMERICA EXTERIOR LIGHTING, 20 CENTRAL SQUARE

Request:

Applicant Bank of America, on behalf of owner 20 Central Keene LLC, proposes to modify exterior lighting on the property at 20 Central Square (TMP #568-063-000). Waivers are requested from Section 21.7.3.C, Section 21.7.3.F.1.a, Section 21.7.3.F.1.c, and Section 21.7.4.A.2 of the LDC regarding light trespass levels and lighting hours of operation. The site is 0.68-ac in size and is located in the Downtown Core District.

Background:

The subject parcel is located at the northeastern corner of Central Square and is currently used by Bank of America. The parcel has frontage and access from Washington St to the east while its primary frontage is located along Central Square to the south. Commercial uses abut this property on all sides, including mixed-use apartment buildings to the north and northeast, City Hall to the southeast, the United Church of Christ to the west, and the former Fire Station and Monadnock Peer Support buildings to the north. Central Square is located directly to the south. The parcel is located in the Downtown Core District.

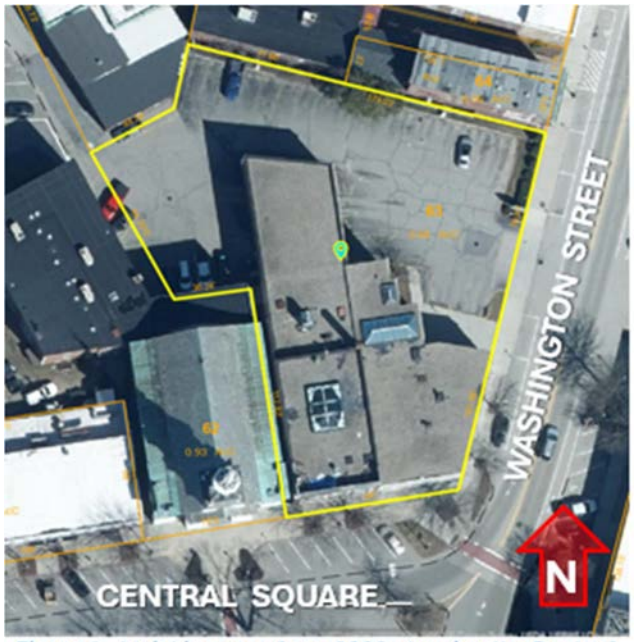


Figure 1. Aerial imagery from 2020 showing the Bank of America site located at 20 Central Square.

The applicant proposes to remove the existing exterior light fixtures in the parking and drive-through area and replace them with 12 new fixtures, as shown in Figure 1. The applicant requests waivers from Section 21.7.3.C, Section 21.7.3.F.1.a, Section 21.7.3.F.1.c, and Section 21.7.4.A.2 of the Land Development Code (LDC) related to light trespass, lighting hours of operation, and parking lot lighting levels.

Determination of Regional Impact:

After reviewing the application, staff have made a preliminary evaluation that the proposed site plan 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 exemptions from submitting a grading plan, landscaping plan, elevations, and all technical reports. After reviewing each request, staff have made the preliminary determination that the requested exemptions would have no bearing on the merits of the application and recommend that the Board accept the application as "complete."

Departmental Comments:

- **Code Enforcement Staff:** Please be aware that a building permit application will need to be submitted and approved prior to the commencement of any work.

APPLICATION ANALYSIS: *The following is an analysis of the lighting standards outlined under Section 21.7 of the LDC. This is the only Site Development Standard relevant to the review of this application.*

Section 21.7.1 – Applicability: This section of the code states that, *"When 50% or more of the light fixtures or poles of an existing outdoor lighting installation are being modified, extended, expanded, or added to, the entire outdoor lighting installation shall be subject to the requirements of this Development Standard."*

The applicant is proposing to remove 9 existing light fixtures on the northern portion of the site and install 12 new light fixtures, including 2 pole lights, 4 wall-mounted fixtures, and 6 fixtures near the drive-through ATMs as shown in Figure 2. The applicant has requested waivers from standards with which they cannot comply given the context of the site in the downtown. Each of these waivers is addressed under the corresponding section of the lighting standards in the following staff report.

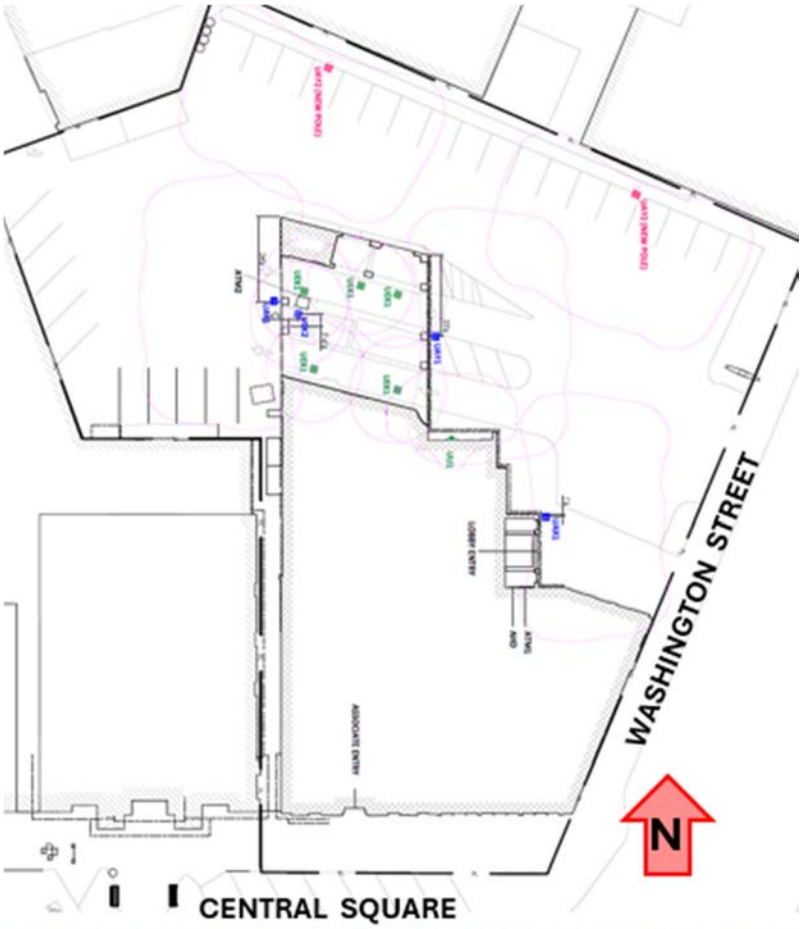


Figure 2. A snippet from the photometric plan set showing the proposed light fixture locations in blue, green, and pink.

Section 21.7.2 – Prohibited: The applicant is not proposing any floodlighting or uplighting. This standard is not applicable.

Section 21.7.3 – General Standards:

A. **Shielding:** The submitted product specification sheets show that all proposed light fixtures are full cut-off with no portion of the bulb visible. This standard appears to be met.

B. **Glare:** The project narrative states that none of the light fixtures are proposed to installed or directed in a manner that will create glare on or off the property and that lights located near property lines will be equipped with backlight shields. This standard appears to be met.

C. **Light Trespass:** This section of the code allows for 0.1-footcandles (fc) of light trespass at property lines and 1-fc of light trespass at right-of-way lines. The submitted photometric plan shows light trespass levels above 0.1-fc at the northwestern corner of the property adjacent to the United Church of Christ. The project narrative states that a waiver is requested from this standard due to the close proximity of the Bank of America parking lot proposed to be illuminated in relation to the adjacent parcels and buildings. The waiver request goes on to state that these existing site conditions make it difficult to comply with the lighting standards, so the proposal has, *"been designed to meet the bank's lighting needs to the extent practical while still meeting the intent and spirit of the Keene Land Development Code."*

The full waiver request is included in the project narrative, which is an attachment to this staff report. In making a determination as to whether or not to grant the waiver, the Board will need to consider the waiver criteria outlined under Section 26.12.14.A of the LDC, which are included below.

> ***"Section 26.12.14.A – Waivers:*** *Unless otherwise set forth in this LDC, the Planning Board may grant a waiver from strict compliance with provisions of the Site Development Standards in Article 21 or site plan review standards in Section 26.12, on a case by case basis, so long as the Board finds, by majority vote, that:*
>
> 1. *Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulations; or,*
> 2. *Specific circumstances relative to the site plan, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.*
> 3. *In granting a waiver, the Planning Board may require any mitigation that is reasonable and necessary to ensure that the spirit and intent of the standard being waived will be preserved, and to ensure that no increase in adverse impacts associated with granting the waiver will occur"*

D. **Illumination:** The project narrative and light fixture specification sheets show that all light fixtures will have a color rendering index (CRI) greater than 70 and a color temperature of 3,000K. This standard appears to be met.

E. **Height:** The luminaire schedule on the first page of the photometric plan shows that all light fixtures will have a maximum mounting height of 20', which is the maximum height allowed in the Downtown Core District. This standard appears to be met.

F. **Hours of Operation:** This standard states that outdoor lighting shall not be illuminated between the hours of 10:00 pm and 6:00 am with a few exceptions, including security lighting; for the operation of normal business uses during these hours; and for 24-hour businesses. The project narrative states that the bank's ATMs are operated 24 hours per day, 7 days per week. It goes on to state that the purpose of the proposed lighting upgrades is to upgrade existing outdated fixtures with LED fixtures and to bring the lighting levels on the property in line with the security requirements mandated by Bank of America.

The applicant has requested a waiver from Section 21.7.3.F.1.a of the LDC to allow for average security lighting levels of 1.62-fc instead of the maximum average of 1-fc allowed under this section of the LDC. Additionally, the applicant has also requested a waiver from

Section 21.7.3.F.1.c of the LDC to allow for normal lighting levels during these hours instead of the 50% reduction in lighting levels required for 24-hour businesses. In deciding whether or not to grant these waivers, the Board will need to evaluate each of these requests in relation to the waiver criteria included earlier in this staff report.

G. **Wiring:** The Board may wish to ask the applicant to confirm that all wiring for outdoor lighting will be placed underground.

Section 21.7.4 – Use Specific Standards:

A. **Parking Lots:** This section of the code states that parking lots must have an average illumination level of 3.5-fc or less. Additionally, the uniformity ratio (the ratio of the average to the minimum lighting levels) cannot exceed 5:1 in footcandles. The lighting specification table on the second page of the plan set shows that the parking lot will have an average lighting level of 2.24-fc and a uniformity ratio of 22.40-fc.

In their request for a waiver from Section 21.7.4.A.2 of the LDC, the applicant stated that the uniformity ratio is above 5:1 footcandles due to the fact that the existing parking area extends to and through the abutting properties. The waiver request goes on to state that the uniformity of lighting within the proposed area of lighting improvements is generally consistent with the uniformity ratio guidelines of the LDC. The Board may wish to ask the applicant to clarify how existing light fixtures on adjacent buildings/sites, such as the United Church of Christ, may impact the uniformity ratio of the lighting on the site.

B. **Canopies & Vehicle Fueling Stations Islands:** This proposal does not involve the installation of lighting on a canopy or vehicle fueling station. This standard is not applicable.

C. **Walkways:** This application does not propose any lighting specifically designed for walkways, alleyways, or pedestrian paths. This standard is not applicable.

Recommended Motion:

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

> ***"Approve SPR-593, Modification #2 as shown on the plan set identified as "Bank of America, Exterior Lighting Program" prepared by GMR Facility Analysis & Engineering at varying scales with the following conditions prior to final approval and signature by the Planning Board Chair:***
>
> 1. ***Owner's signature appears on the plan.***
> 2. ***Submittal of five full-sized paper copies of the final plan set."***

City of Keene, NH

Site Plan Application

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

SECTION 1: PROJECT INFORMATION

PROJECT NAME: Bank of America - Exterior Lighting

PROJECT ADDRESS(ES): 20 Central Square

TYPE OF APPLICATION BEING SUBMITTED:
- [x] MAJOR PROJECT APPLICATION
- [ ] MINOR PROJECT APPLICATION

EXISTING OR PREVIOUS USE: Bank of America

PROPOSED USE: No Change - Exterior Lighting Improvements

GROSS FLOOR AREA OF NEW CONSTRUCTION (in square feet): N/A

GROSS FLOOR AREA OF EXISTING BUILDINGS/STRUCTURES (in square feet): 18,206± SF (No Change)

AREA OF PROPOSED NEW IMPERVIOUS SURFACES (in square feet): N/A

TOTAL AREA OF LAND DISTURBANCE (in square feet): N/A

SECTION 2: CONTACT INFORMATION

PROPERTY OWNER

NAME/COMPANY: 20 Central Keene LLC

MAILING ADDRESS: PO Box 760, Norwalk, CT 06852

PHONE: (203) 855-9485

EMAIL: Thomas@sbmainc.com

SIGNATURE: Thomas Tucciarone

PRINTED NAME: Thomas Tucciarone

APPLICANT

NAME/COMPANY: Bank of America c/o CBRE

MAILING ADDRESS: 101 East River Drive, East Hartford, CT 06108

PHONE: 860-244-4062

EMAIL: Marisa.Cavaliere@cbre.com

SIGNATURE: Marisa Cavaliere

PRINTED NAME: Marisa Cavaliere

AUTHORIZED AGENT (if different than Owner/Applicant)

NAME/COMPANY: Bohler

MAILING ADDRESS: 352 Turnpike Road, Southborough, MA

PHONE: 508-480-9900

EMAIL: mbombaci@bohlereng.com

SIGNATURE: Matthew Bombaci, BOHLER

PRINTED NAME: Matthew Bombaci

FOR OFFICE USE ONLY:

TAX MAP PARCEL #(s): ___-___-___-___-___ / ___-___-___-___-___

PARCEL SIZE:

ZONING DISTRICT:

PROJECT #:

DATE STAMP:

352 Turnpike Road
Southborough, MA 01772
508.480.9900

February 7, 2025

City of Keene
Planning Board
3 Washingston Street
Keene, NH 03431

Attention: Megan Fortson, Planner

Re: Project Narrative to Accompany Major Site Plan Application
Exterior Lighting Improvement – Bank of America
20 Central Square, Keene, NH 03431

Dear Board Members:

On behalf of the Applicant, CBRE, agent for Bank of America, we respectfully submit the enclosed materias in support of a Major Site Plan Application for exterior lighting improvements at the subject site. The following materials are enclosed in support of this request:

- Two (2) copies of the Minor Site Plan Application, dated October 31, 2024 (previously propovided under separate cover);
- Two (2) full size copies of the Bank of America Exterior Lighting Program Plans (v9 250121), prepared by GMR;
- Two (2) copies of the Light Fixture Specification Sheets:
    - CREE THE EDGE Series LED Area/Flood Luminaire Specification Sheet;
    - CREE ZR Series LED Troffers Specification Sheet;
    - Lithonia WDGE2 LED Wall Sconce Specification Sheet.
- Two (2) Sets of Mailing Labels (previously provided under separate cover);
- $439.42 Application Fee Check (previously provided under separate cover).

The subject site is located on the northwest side of Central Square and on the west side of Washington Street, located opposite of Keene City Hall. The site currently contains an existing Bank of America building with drive-thru on the first floor and office space on the second floor of the building. The site also contains associated paved parking areas with a shared access connecting through the adjacent property, United Church of Christ, to Vernon Street. The existing bank is bordered to the south by Central Square, to the east by City Hall, to the north by a deli, and to the west by the United Church of Christ. The existing bank ATM facilities are open 24-hours a day, 7-days a week.

The proposed exterior lighting improvements are being proposed by Bank of America (BOA) and BOA's lighting consultant, GMR, in an effort to replace existing light fixtures with energy efficient LED fixtures, and to bring lighting levels at the facility to meet BOA's minimum security standards to the extent practicable. In general, BOA's minimum security standards require, but are not limited to, a minimum of ten (10) foot candle power at the face of an ATM or after-hour depository extending outward five (5) feet outward from same, a minimum of two (2) foot candle power in defined parking

areas extending outward sixty (60) feet from the face of an ATM or after-hour depository. BOA's minimum lighting standards are generally consistent with the Illuminating Engineering Society Guide for Security Lighting for People, Property, and Critical Infrastructure (IES G-1-16), which recommends similar light candle power for ATMs and after-hour depositories.

The following exterior lighting improvements are proposed at the subject location, as shown on the enclosed Bank of America Exterior Lighting Program Plans:

- Removal of two (2) existing light poles north of the existing parking area which each consist of two (2) floodlight fixtures. The project proposes to replace same with new single LED luminaires with backlight shields (denoted as fixtures UAY2 on the Exterior Lighing Program Plans). The light pole fixtures are proposed to have a mounting height of twenty (20) feet.

- Removal of five (5) canopy light fixtures within the existing drive-thru canopy north of the existing building and the replacement of same with six (6) downcase LED troffer lights (denoted as fixtures UEK1 & UEK2 on the Exterior Lighting Program Plans).

- Installation of one (1) LED wall mount luminaire adjacent to the buildings main entrance facing Washington Street (denoted as fixtures UAX1 on the Exterior Lighting Program Plans). The fixture is proposed to have a mounting height of twenty (20) feet.

- Installation of two (2) LED wall mount luminaires above the drive-through entrance and exit (denoted as fixtures UAY1 on the Exterior Lighting Program Plans). The fixture is proposed to have a mounting height of twenty (20) feet.

The proposed Exterior lighting improvements have been designed to meet the Site Development Standards in Article 21 of the Land Development Code to the extent practiciable, including but not limited to the below design considerations:

- The project proposes to remove existing floodlight fixtures and all light fixtures proposed are fully downcast / dark-sky compliant.

- Where light pole fixtures are proposed to be replaced proximate to property lines, they are proposed to be equipped with backlight shields and to be directed away from abutting properties.

- Existing low efficiency lighting is proposed to be replaced by high energy efficient LED lighting. All light fixtures are proposed with a color temperature of 3000K and have a color rendering index greater than 70.

- All light fixtures are proposed to have a mounting height of twenty (20) feet or less.

- All lighting is proposed to result in a calculated light level of less than one (1) footcandle measured at the right-of-way line of a street.

Although the proposed lighting improvements have been designed to meet the requirements to the extent practical, the following waivers are respectfully requested from the Site Development Standards in Article 21 of the Land Development Code:

§21.7.3.C - Light Trespass:

Required: The maximum light level of any light fixture cannot exceed 0.1-footcandle measured at the property line.

Requested: Light levels at perimeter property lines exceeding 0.1-footcandle where the property line coincides with the perimeter of the parking area or concides with commercial buildings on abutting properties.

Support: Proposed light fixtures have been designed and located such that they are not anticipated to glare or otherwise represent a nuisance to abutting properties and streets. Where light fixtures are proposed to be replaced proximate to property

lines, they have been designed to be forward throw fixtures with backlight shields to reduce light impacts on abutting properties. Lighting improvements have been designed to meet the bank's lighting needs to the extent practical while still meeting the intent and spirit of the Keene Land Development Code.

§21.7.3.F.1.a – Hours of Operation:

Required: Security lighting shall have an average illumination on the ground not to exceed 1-footcandle.

Requested: Average on-site illuminance of approximately 1.62 footcandles, including areas under the proposed drive-through canopy.

Support: The proposed light levels throughout the site have been designed such that the meet the bank's security standards to the extent practical, with a proposed lighting program that is not anticipated to glare or otherwise represent a nuisance to abutting properties and streets. Lighting improvements have been designed to meet the bank's lighting needs to the extent practical while still meeting the intent and spirit of the Keene Land Development Code.

§21.7.3.F.1.c – Hours of Operation:

Required: For 24-hour businesses, lighting levels shall be reduced by a minimum of 50% between the hours of 10:00pm and 6:00am.

Requested: Normal light levels 24-hours a day to serve the existing bank / ATM use.

Support: The proposed light levels throughout the site have been designed such that the meet the bank's security standards to the extent practical, with a proposed lighting program that is not anticipated to glare or otherwise represent a nuisance to abutting properties and streets. Lighting improvements have been designed to meet the bank's lighting needs to the extent practical while still meeting the intent and spirit of the Keene Land Development Code.

§21.7.4.A.2 – Hours of Operation:

Required: The ratio of the average to the minimum illumination level (i.e. uniformity ratio) shall not exceed 5:1 in foot-candles.

Requested: A uniformity ratio exceeding 5:1 foot-candles as a result of the existing parking area extending to/through abutting property boundaries.

Support: The proposed uniformity ratio exceeds 5:1 foot-candles as a result of the existing parking area extending to/through abutting property boundaries. The uniformity of lighting within the proposed area of lighting improvements is generally consistent with the uniformity ratio guidelines of the Land Development Code.

We trust that this information is sufficient for your needs at this time. We look forward to discussing the proposed site improvements with the Board at an upcoming meeting. Please do not hesitate to contact us at (508) 480-9900 should you have any questions or wish to discuss further.

Sincerely,

BOHLER ENGINEERING

Matthew Bombaci

Bank of America®

EXTERIOR LIGHTING PROGRAM

GMR
Facility Analysis † Engineering
Office: (972) 771-6038
1629 Smirl Drive, Suite 200, Heath, Texas 75032
www.gmr1.com

LUMINAIRE SCHEDULE			**SEE FIXTURE CLARIFICATION NOTE #9			(NP) = NEW POLE (CBO) CONTROLLED BY OTHERS	** CONTRACTOR TO VERIFY MOUNTING ACCESSORIES BEFORE ORDERING**				
SYMBOL	QTY	LABEL	FIXTURE ARRANGEMENT	TOTAL FIXTURE COUNT	NEW POLE COUNT	FIXTURE TYPE / MOUNTING / MANUFACTURER	BUG RATING	MOUNTING HEIGHT	MOUNTING ACCESSORIES	NOTES	EXISTING HEIGHT
	1	UAX1	SINGLE	1	-	(UAX) ARE-EDG-4MB-DA-06-E-UL-BZ-700-30K / WALL MOUNT / CREE	B1-U0-G2	20' AFG	-	ADD NEW FIXTURE	
	2	UAY1	SINGLE	2	-	(UAY) ARE-EDG-4MB-DA-10-E-UL-BZ-525-30K / WALL MOUNT / CREE	B1-U0-G2	20' AFG	-	ADD NEW FIXTURE	
	2	UAY2	SINGLE	2	2	(UAY) ARE-EDG-4MB-DA-10-E-UL-BZ-525-30K / POLE MOUNT / CREE	B1-U0-G2	20' AFG	-	REMOVE POLE, BASE & FIXTURE - ADD NEW POLE, BASE & FIXTURE	27' AFG
	5	UEK1	SINGLE	5	-	(EK) ZR22-40L-830-10V5-UNV / RECESSED CANOPY MOUNT / CREE	B2-U1-G1	MATCH EXISTING	-	ADD NEW FIXTURE - MATCH EXISTING CANOPY HEIGHT	8' - 6" AFG
	1	UEK2	SINGLE	1	-	(EK) ZR22-40L-830-10V5-UNV / RECESSED CANOPY MOUNT / CREE	B2-U1-G1	8' - 6" AFG	-	REPLACE EXISTING FIXTURE	
	1	UU1	SINGLE	1	-	WDGEZ-LED-P3-30K-80CRI-T4M-MVOLT-SRM-DDBXD / WALL MOUNT / LITHONIA	B1-U0-G1	MATCH EXISTING	-	REPLACE EXISTING FIXTURE	7' AFG

CONTRACTOR RESPONSIBILITY NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITTING, INCLUDING COORDINATION WITH THE LOCAL JURISDICTION AND ANY ASSOCIATED PERMIT FEES OR PROCESSING. CONTRACTOR SHALL NOTIFY GMR UPON RECEIPT OF PERMIT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITTING DOCUMENTS THAT ARE NOT INCLUDED IN THE LIGHTING DESIGN PACKAGE. THESE INCLUDE, BUT ARE NOT LIMITED TO, STAMPED ELECTRICAL DRAWINGS, STAMPED POLE BASE DRAWINGS, AND PROFESSIONAL SURVEYS.
3. SHOULD STAMPED PHOTOMETRIC DRAWINGS BE REQUIRED, CONTRACTOR SHALL ENGAGE LOCAL ENGINEER OR LIGHTING DESIGNER AS REQUIRED TO PROVIDE STAMP ON GMR PHOTOMETRIC DESIGN DOCUMENTS.
4. CONTRACTOR SHALL PROVIDE THE BANKING CENTER NOTIFICATION AT LEAST ONE WEEK IN ADVANCE OF VISITING SITES OR STARTING WORK.
5. CONTRACTOR SHALL VERIFY VOLTAGE REQUIREMENTS FOR FIXTURES PRIOR TO PLACEMENT OF FIXTURE ORDERS.
6. CONTRACTOR TO VERIFY LIGHTING CONTROLS PRIOR TO BEGINNING CONSTRUCTION. SEE LIGHTING CONTROL NOTES.
7. CONTRACTOR SHALL RECEIVE FORMAL APPROVAL FROM GMR ON ANY FIXTURE MODIFICATIONS OR VARIATIONS FROM THE LUMINAIRE SCHEDULE.
8. CONTRACTOR SHALL VERIFY EXISTING AND PROPOSED FIXTURE MOUNTING CONDITIONS IN FIELD. ANY SPECIAL MOUNTING REQUIREMENTS FOR PROPOSED FIXTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. CONTRACTOR SHALL SUPPLY ALL NEW LIGHT POLES. NEW LIGHT POLES SHALL MATCH EXISTING CONDITIONS ON SITE FOR POLE TYPE AND PAINT COLOR.
10. CONTACT SHALL ORDER ALL FIXTURES FROM BORDER STATES IN ACCORDANCE WITH BANK OF AMERICA NATIONAL ACCOUNT. CONTACT NATIONAL ACCOUNT QUOTES DEPARTMENT AT BOA@BORDERSTATES.COM OR 704-372-3040.
11. CONTRACTOR SHALL PERFORM ALL NECESSARY PATCHING OR REPAINTING FOR ADDED, REMOVED, OR REPLACED FIXTURES.
12. CONTRACTOR SHALL REPAIR ANY DISTURBED AREAS BACK TO EXISTING CONDITION INCLUDING PAVED AREAS, LANDSCAPED AREAS, ETC.
13. CONTRACTOR SHALL VERIFY AND DOCUMENT COMPLETED WORK DURING NIGHT HOURS. ALL FIXTURES MUST BE FUNCTIONAL DURING NIGHT HOURS PRIOR TO SCHEDULING A FINAL SURVEY WITH GMR.
14. CONTRACTOR SHALL PROVIDE BEFORE AND AFTER NIGHT TIME PHOTOS OF THE SITE.
15. CONTRACTOR SHALL UTILIZE THE "BOA ELP INCENTIVE SITE SURVEY FORM" TO DOCUMENT THE EXACT DETAILS OF EACH FIXTURE BEING REMOVED FOR REBATE AND ENERGY SAVINGS CALCULATION PURPOSES.
16. CONTRACTOR SHALL RECEIVE A PUNCHLIST FROM GMR UPON FINAL SURVEY FOR ANY REMAINING ITEMS TO BE COMPLETED.

CONTROLS & ADDITIONAL NOTES:

LIGHTING CONTROL NOTES:

THE CONTRACTOR SHALL VERIFY THE CONTROLS FOR ALL EXTERIOR LIGHTING AND ATM/AHD INTERIOR LOBBIES ON THE SITE (EXCLUDING SIGNAGE) AND ADJUST ACCORDING TO THE FOLLOWING:

- IC3 CONTROL:
  CONTRACTOR SHALL VERIFY THAT EXTERIOR LIGHTING CIRCUITS ARE CONTROLLED BY THE CORRECT IC3 CIRCUIT. WHERE EXTERIOR LIGHTING IS INCLUDED ON CONTROL CIRCUITS FOR INTERIOR SYSTEMS, INTERIOR LIGHTING, OR EXTERIOR SIGNAGE, CONTRACTOR SHALL ADJUST EXTERIOR LIGHTING TO THE CORRECT CONTROL CIRCUIT AS REQUIRED.
- PHOTOCELL CONTROL:
  CONTRACTOR SHALL REPLACE EXISTING PHOTOCELLS WITH NEW AND INSTALL IN A LOCATION BEST SUITED TO PROVIDE APPROPRIATE LIGHT EXPOSURE SUCH THAT EXTERIOR LIGHTS ARE ON DURING DARKNESS.
- TIME CLOCK CONTROL:
  CONTRACTOR SHALL VERIFY LOCATION OF TIME CLOCK. IF TIME CLOCK IS IN ELECTRICAL ROOM ALONG WITH IC3 CONTROLS, CONTRACTOR SHALL ADJUST CIRCUIT TO BE CONTROLLED BY IC3 EXTERIOR LIGHTING CONTROLS. IF TIME CLOCK IS IN A REMOTE LOCATION NOT IN CLOSE PROXIMITY TO THE IC3 CONTROLS, CONTRACTOR SHALL VERIFY TIME CLOCK IS SET PROPERLY AND LEAVE CIRCUIT ON TIME CLOCK CONTROL.
- MANUAL CONTROL:
  CONTRACTOR SHALL VERIFY THAT NO EXTERIOR LIGHTING IS CONTROLLED MANUALLY. IF ANY EXTERIOR LIGHTING IS ON A MANUALLY CONTROLLED CIRCUIT, CONTRACTOR SHALL ADJUST TO BE CONTROLLED BY PHOTOCELL OR IC3, WHICHEVER IS MOST ECONOMICALLY ACCOMPLISHED.

ADDITIONAL CONTRACTOR NOTES:

CONSTRUCTION COMPLETION VERIFICATION

UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROVIDE VERIFICATION IN WRITING TO THE BANK OF AMERICA PM THAT ALL WORK IS COMPLETE ACCORDING TO THE CONSTRUCTION DOCUMENTS, AND THAT ALL EXTERIOR LIGHTING IS FUNCTIONING DURING NIGHTTIME HOURS. COMPLETION PHOTOS, TAKEN AT NIGHT, SHALL BE PROVIDED IN THE FOLLOWING FORMAT:

PROVIDE A SINGLE DOCUMENT CONTAINING THE FOLLOWING:

- SITE PHOTOS FROM ALL SIDES OF BUILDING
- MINIMUM OF 3 PHOTOS OF EACH COMPLIANCE AREA (ATM(S), AFTER-HOUR DEPOSITORIES, ASSOCIATE ENTRY) FROM DIFFERENT ANGLES
- MINIMUM OF 2 PHOTOS OF ALL NON-COMPLIANCE AREAS FROM DIFFERENT ANGLES

FIXTURE CLARIFICATION NOTES:

1. OUT OF SCOPE - EXISTING FIXTURES TO REMAIN ON SITE WITHOUT MODIFICATION. NO ACTION REQUIRED UNLESS NOTED OTHERWISE.
2. REMOVE AND PATCH - EXISTING FIXTURES TO BE FULLY REMOVED AND ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED IS TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
3. REPLACE EXISTING FIXTURE - EXISTING FIXTURE TO BE FULLY REMOVED AND REPLACED IN THE SAME LOCATION WITH A NEW FIXTURE. CONTRACTOR TO VERIFY IF POLE AND/OR POLE BASE IS SUFFICIENT FOR THE NEW FIXTURES. ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED IS TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
4. ADD NEW FIXTURE - NEW FIXTURES TO BE ADDED. ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
5. ADD NEW POLE & FIXTURE - A NEW POLE AND FIXTURE TO BE ADDED. CONTRACTOR TO SPECIFY POLE TO MATCH EXISTING STYLE AND COLOR AND, IF NOT PROVIDED, POLE BASE DATA FOR NEW POLE LOCATIONS. CONTRACTOR TO VERIFY IF POLE AND POLE BASE IS SUFFICIENT FOR THE HEIGHT, LOCATION AND FIXTURE SPECIFIED.
6. GMR DOES NOT SPECIFY MOUNTING HARDWARE FOR ANY SPECIFIED FIXTURES. CONTRACTOR IS TO WORK WITH DISTRIBUTOR AND/OR MANUFACTURER ON A CASE BY CASE BASIS TO IDENTIFY AND ORDER REQUIRED MOUNTING HARDWARE.
7. CONTRACTOR TO VERIFY WHETHER EXISTING WIRING LOCATIONS OR THE ADDITION OF WIRING FOR NEW FIXTURE LOCATIONS IS SUFFICIENT FOR THE DESIGNATED FIXTURE LOCATION.
8. CONTRACTOR TO SPECIFY POLE COLOR AND TYPE PRIOR TO ORDERING.
9. ALL FIXTURES ARE ASSUMED BRONZE IN COLOR UNLESS NOTED OTHERWISE IN THE LUMINAIRE SCHEDULE. CONTRACTOR TO CONFIRM PRIOR TO ORDERING.

GENERAL NOTES:

1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON A LIMITED AMOUNT OF INFORMATION AVAILABLE TO THE ENGINEER. ALL SUCH CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING THE BID AND ADJUSTED IF NECESSARY. NO ADDITIONAL COMPENSATION SHALL BE GRANTED AFTER AWARDING A BID FOR ANY EQUIPMENT, MATERIAL OR LABOR REQUIRED TO REWORK OR OTHERWISE MODIFY EXISTING CONDITIONS.
2. THIS LIGHTING DESIGN IS BASED ON A COMBINATION OF STATE STANDARDS, THE BANK'S CURRENT SECURITY POLICY FOR EXTERIOR ATM AND AFTER-HOUR DEPOSITORIES AND BANK GUIDELINES FOR NON-SECURITY COMPLIANCE ZONES.
3. TRIM ALL TREES/LANDSCAPING TO MINIMIZE IMPEDING LIGHT FROM ANY LIGHT FIXTURES THAT IMPACT THE 60' RADIUS AROUND ALL ATMS AND A RADIUS OF 50' AROUND ALL AFTER-HOUR DEPOSITORIES. CONSIDERATION MUST BE GIVEN TO TREES/LANDSCAPING IN A STATE OF FULL FOLIAGE/BLOOM AND FUTURE GROWTH. ALL LANDSCAPING WORK WILL BE PERFORMED BY OTHERS WITH A SEPARATE PERMIT (IF REQUIRED).
4. ALL MOUNTING HEIGHTS ARE INTENDED TO THE BOTTOM OF THE FIXTURE.
5. CONTRACTOR TO FIELD VERIFY FIXTURE PLACEMENT DIMENSIONS PRIOR TO CONSTRUCTION.
6. DIMENSIONING PROVIDED IS FOR PROPOSED FIXTURE LOCATIONS ONLY, UNLESS OTHERWISE NOTED ON THE DRAWING.
7. THE CONTRACTOR SHALL ATTEMPT TO ELIMINATE THE USE OF EXPOSED CONDUIT WHERE POSSIBLE. IF EXPOSED CONDUIT IS NECESSARY, THE CONTRACTOR SHALL VERIFY USE WITH PROJECT MANAGER.
8. ALL EXISTING LIGHTS WILL BE REPLACED WITH LED LIGHTS AND ALL PROPOSED LIGHTS WILL ALSO BE LED, UNLESS OTHERWISE NOTED.
9. ALL FIXTURES ARE TO BE MOUNTED ABOVE FINISH GRADE.
10. UNLESS OTHERWISE NOTED, MATCH EXISTING POLE BASES.

SITE ABBREVIATIONS:

PL = PROPERTY LINE
AFG = ABOVE FINISHED GRADE
FC = FOOTCANDLE
CBO = CONTROLLED BY OTHERS
AHD = AFTER HOUR DEPOSITORY

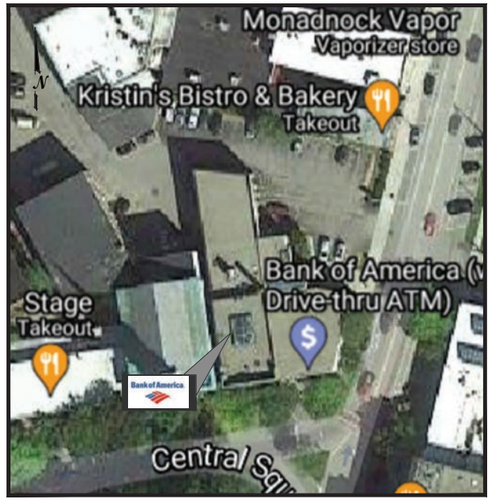
NOTE: THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINARIES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

SITE NOTES:

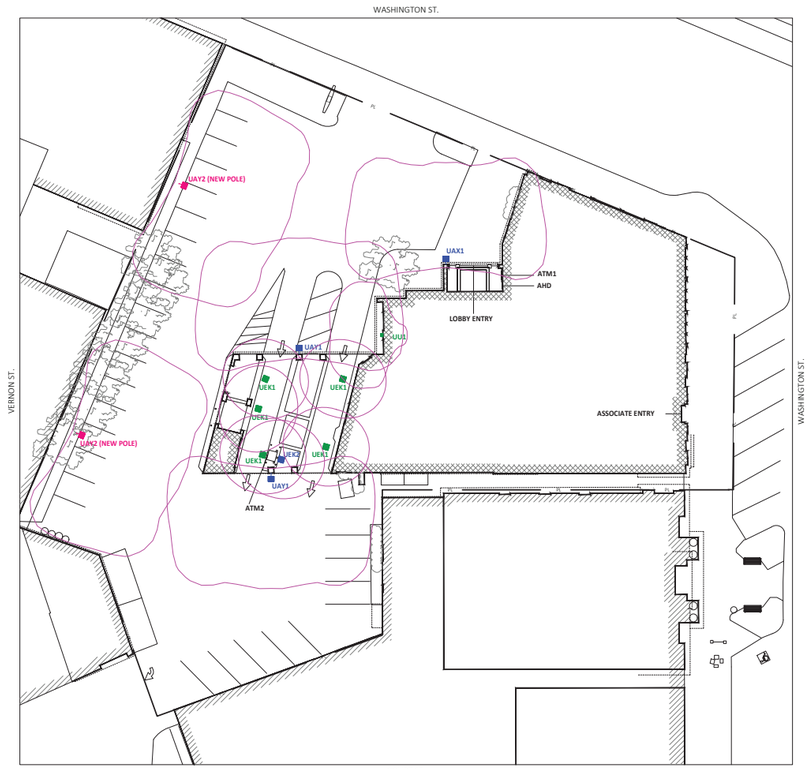
1. LIGHTING IS REQUIRED FOR COMPLIANCE AND WILL REQUIRE LANDLORD APPROVAL PRIOR TO INSTALLATION. BANK MUST HAVE LANDLORD AGREE TO LEAVE FIXTURES ON ALL HOURS OF DARKNESS.

EXISTING CONDITIONS:

1. EXISTING POLES - ROUND - STEEL
2. EXISTING POLE BASES - 3' - 6"
3. EXISTING DRIVE THRU CEILING - HARD



VICINITY MAP



SCALE: 1/24" = 1'-0"

Bank of America®

BLUE = NEW FIXTURE
GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED
ORANGE = EXISTING FIXTURE TO REMAIN
TURQUOISE = FIXTURE TO BE REMOVED
PINK = REPLACE WITH NEW POLE AT NEW HEIGHT
= INDICATES NEW SECURITY FENCE
PL = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION

v9 250121

REVISION NO.	DESCRIPTION	REVISED BY
1		
2		
3		KRM

GMR
Facility Analysis † Engineering

Keene Main
NH2-120
20 Central Sq
Keene, NH

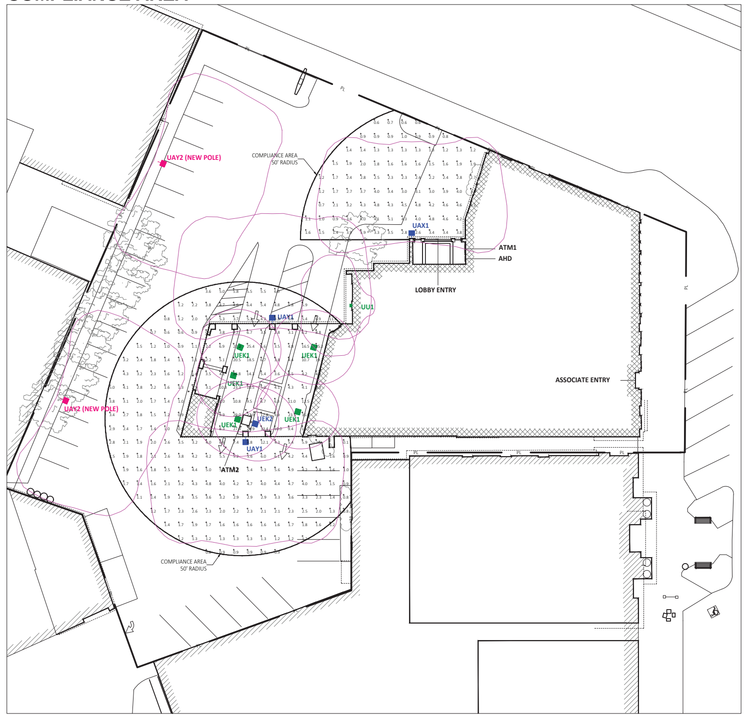
SITE PLAN

DESIGN BY:	CAS	DRAWN BY:	RCS
REVIEWED BY:	AJH	APPROVED BY:	KRM

SHEET NO.

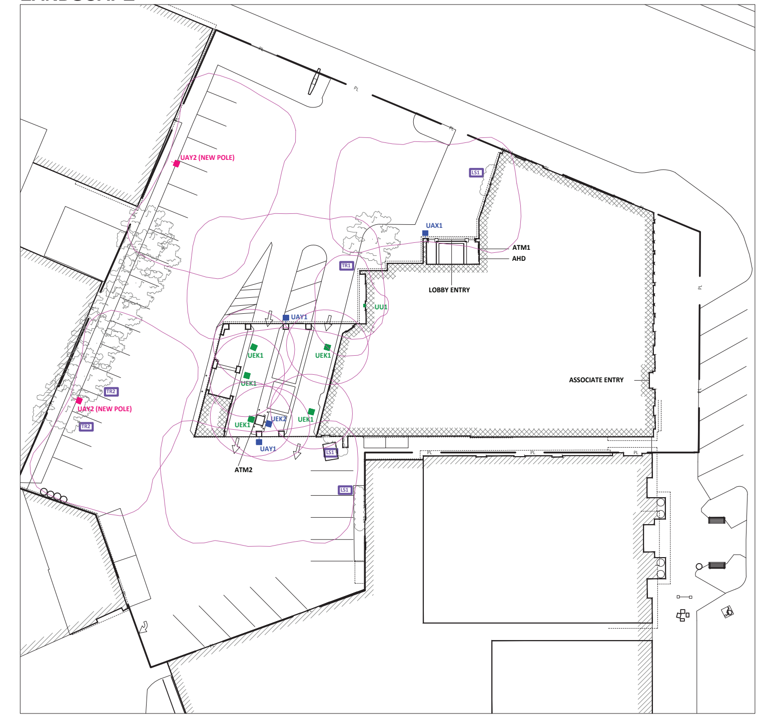
COVER

COMPLIANCE AREA



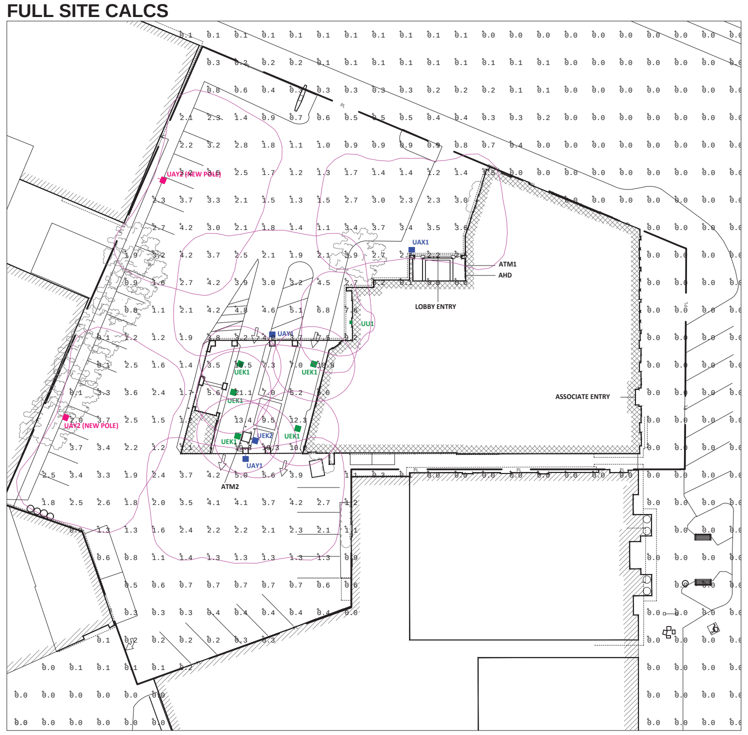
SCALE: 1/32" = 1'-0"

LANDSCAPE



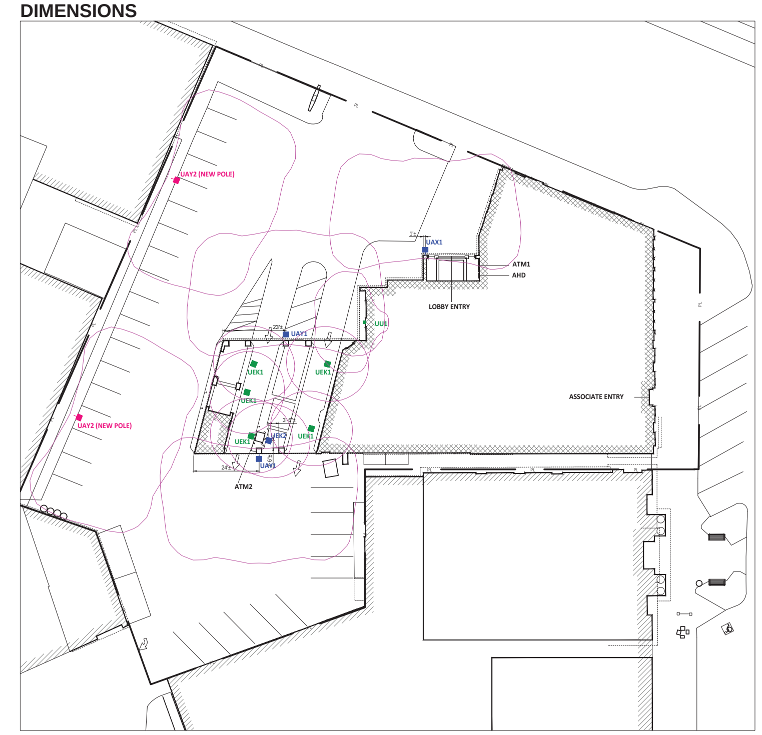
SCALE: 1/32" = 1'-0"

FULL SITE CALCS



SCALE: 1/32" = 1'-0"

DIMENSIONS



SCALE: 1/32" = 1'-0"

LABEL	NOTES	MOUNTING HEIGHT
UAX1	ADD NEW FIXTURE	20' AFG
UAY1	ADD NEW FIXTURE	20' AFG
UAY2	REMOVE POLE, BASE & FIXTURE - ADD NEW POLE, BASE & FIXTURE	20' AFG
UEK1	ADD NEW FIXTURE - MATCH EXISTING CANOPY HEIGHT	MATCH EXISTING
UEK2	REPLACE EXISTING FIXTURE	8' - 6" AFG
UU1	REPLACE EXISTING FIXTURE	MATCH EXISTING

UNIT CALCS 50'

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ATM 2 50' @ 36"	Illuminance	Fc	4.98	36.8	0.1	49.80	368.00
LOBBY ENTRY 50' @ 36"	Illuminance	Fc	2.48	5.1	0.6	4.13	8.50

NOTES:

1. READINGS ARE MEASURED AT 36" (3') ABOVE GRADE.

FULL SITE CALCS

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
FULL SITE @ GRADE	Illuminance	Fc	1.46	21.1	0.0	N.A.	N.A.
CANOPY @ GRADE	Illuminance	Fc	11.52	21.1	3.5	3.29	6.03
PARKING @ GRADE	Illuminance	Fc	2.24	4.2	0.1	22.40	42.00
UNIFORMITY @ GRADE	Illuminance	Fc	2.60	21.1	0.0	N.A.	N.A.

NOTES:

1. THE SCOPE OF WORK FOR THIS PROJECT IS LIMITED TO EXTERIOR LIGHTING RENOVATIONS AS SHOWN ON THE PLANS.
2. REFERENCE THE LUMINAIRE SCHEDULE FOR ADDITIONAL LIGHT FIXTURE INFORMATION.

SITE NOTES:

1. LIGHTING IS REQUIRED FOR COMPLIANCE AND WILL REQUIRE LANDLORD APPROVAL PRIOR TO INSTALLATION. BANK MUST HAVE LANDLORD AGREE TO LEAVE FIXTURES ON ALL HOURS OF DARKNESS.

EXISTING CONDITIONS:

1. EXISTING POLES - ROUND - STEEL
2. EXISTING POLE BASES - 3' - 6"
3. EXISTING DRIVE THRU CEILING - HARD

LANDSCAPE SCHEDULE CM = CRAPE MYRTLE UNK = UNKNOWN

SYMBOL	QTY	NOTES
TR1	1	TRIM TREE UP TO 10' AND THIN OUT TREE CANOPY
TR2	2	TRIM TREE FROM LIGHT FIXTURE TO ENSURE THAT IT DOES NOT INTERFERE WITH INTENDED ILLUMINATION
LS1	-	TRIM LANDSCAPING DOWN TO 36"

GC TO VERIFY WITH LOCAL AUTHORITY HAVING JURISDICTION ON TREE TRIMMING AND/OR REMOVAL PRIOR TO COMMENCING WORK

NOTE: THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINARIES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

Bank of America®

BLUE = NEW FIXTURE
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TURQUOISE = FIXTURE TO BE REMOVED
PINK = REPLACE WITH NEW POLE AT NEW HEIGHT
= INDICATES NEW SECURITY FENCE
PL = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION

N.T.S.

v9 250121

REVISION NO.	DESCRIPTION	REVISED BY
3		
2		
1		KRM

GMR Facility Analysis + Engineering

Keene Main
NH2-120
20 Central Sq
Keene, NH

SITE DETAILS

DESIGN BY: CAS	DRAWN BY: RCS
REVIEWED BY: AJH	APPROVED BY: KRM

SHEET NO. **LU-1**

FIXTURES DENOTED AS 'UAX1', 'UAY1', & 'UAY2'

THE EDGE® Series

LED Area/Flood Luminaire

Rev. Date: V14 06/24/2024

Product Description

THE EDGE® Series has a slim, low profile design. Its rugged cast aluminum housing minimizes wind load requirements and features an integral, weathertight LED driver compartment and high performance aluminum heat sinks. Various mounting choices: Adjustable Arm, Direct Arm, Direct Arm Long, or Side Arm (details on page 2). Includes a leaf/debris guard.
Applications: Parking lots, walkways, campuses, car dealerships, office complexes, and internal roadways

Performance Summary

Patented NanoOptic® Product Technology

Assembled in the USA by Cree Lighting from US and imported parts

Initial Delivered Lumens: Up to 33,946 lumens

Input Power: 19 - 263 Watts

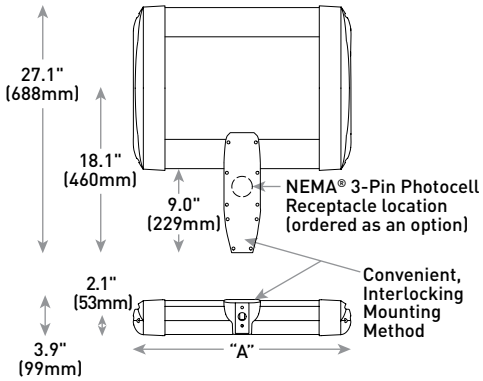
CRI: Minimum 70 CRI (4000K & 5700K); 80 CRI (3000K); 90 CRI (5000K)

CCT: Turtle Friendly Amber, 3000K (+/- 300K), 4000K (+/- 300K), 5000K (+/- 500K), 5700K (+/- 500K) standard

Limited Warranty†: 10 years for luminaire/10 years for Colorfast DeltaGuard® finish/5 years for PML sensors/1 year on accessories

† See https://www.creelighting.com/resources/warranties/ for warranty terms

DA Mount



LED Count (x10)	Dim. "A"	Weight
02	12.1" (306mm)	21 lbs. (10kg)
04	12.1" (306mm)	24 lbs. (11kg)
06	14.1" (357mm)	27 lbs. (12kg)
08	16.1" (408mm)	28 lbs. (13kg)
10	18.1" (459mm)	32 lbs. (15kg)
12	20.1" (510mm)	34 lbs. (15kg)
14	22.1" (560mm)	37 lbs. (17kg)
16	24.1" (611mm)	41 lbs. (19kg)

AA/DL/SA Mount - see page 22 for weight & dimensions

Accessories

Field-Installed

Bird Spikes
XA-BRDSPK
Hand-Held Remote
XA-SENSREM
- For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

Backlight Control Shields
XA-20BLS-4
- Four-pack
- Unpainted stainless steel
Shorting Cap
XA-XSLSHRT
NEMA® 3-Pin Photocell
C-ACC-A-PCELL-NEMA3-LV
- On/off functionality only
- Available with UL voltage only

Ordering Information

Example: ARE-EDG-2M-AA-12-E-UL-SV-350

					E				
Family	**Optic**			**Mounting***	**LED Count (x10)**	**Series**	**Voltage**	**Finish**	**Drive Current**	**Options**
ARE-EDG	**2M** Type II Medium **2MB** Type II Medium w/BLS **2MP** Type II Medium w/Partial BLS **3M** Type III Medium	**3MB** Type III Medium w/BLS **3MP** Type III Medium w/Partial BLS **4M** Type IV Medium **4MB** Type IV Medium w/BLS	**4MP** Type IV Medium w/Partial BLS **5M** Type V Medium **5S** Type V Short	**AA** Adjustable Arm **DA** Direct Arm **DL** Direct Long Arm	**02** **04** **06** **08** **10** **12** **14** **16**	**E**	**UL** Universal 120-277V **UH** Universal 347-480V	**BK** Black **BZ** Bronze **SV** Silver **WH** White	**350** 350mA **525** 525mA **700** 700mA - Available with 20-60 LEDs	**DIM 0-10V Dimming** - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current - Not available with PML options **F Fuse** - Compatible only with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PML spec sheet for availability with PML options - When code dictates fusing, use time delay fuse **HL Hi/Low (Dual Circuit Input)** - Refer to HL spec sheet for details - Sensor not included **P Button Photocell** - Refer to PML spec sheet for availability with PML options - Available with UL voltage only **PML Programmable Multi-Level, 20-40' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt **PML2 Programmable Multi-Level, 10-30' Mounting Height** - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt **R NEMA® 3-Pin Photocell Receptacle** - 3-pin receptacle per ANSI C136.10 - Not available with SA mount - Intended for downlight applications with maximum 45° tilt - Requires photocell or shorting cap by others - Refer to PML spec sheet for availability with PML options **30K 3000K Color Temperature** - Minimum 80 CRI - Color temperature per luminaire **40K 4000K Color Temperature** - Minimum 70 CRI - Color temperature per luminaire **50K 5000K Color Temperature** - Minimum 90 CRI - Color temperature per luminaire **TRL Amber Turtle Friendly LEDs** - Available only with 350mA - 600nm dominant wavelength - Additional shielding (by others) may be required for Florida Fish and Wildlife Conservation Commission compliance
FLD-EDG	**25** 25° Flood **40** 40° Flood	**70** 70° Flood **SN** Sign	**N6** NEMA® 6	**AA** Adjustable Arm **SA** Side Arm - Available with 20-60 LEDs						

* Reference EPA and pole configuration suitability data beginning on page 19

FIXTURES DONOTED AS 'UU1'

WDGE2 LED

Architectural Wall Sconce
Visual Comfort Optic

Catalog Number

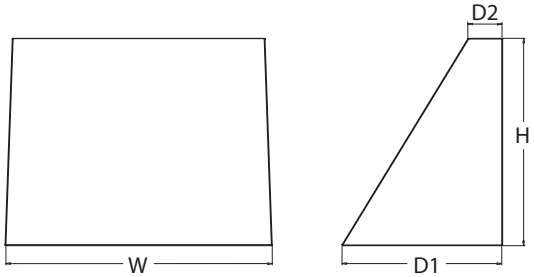
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 7"
Depth (D2): 1.5"
Height: 9"
Width: 11.5"
Weight: (without options) 13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	--	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package		Color Temperature		CRI	Distribution		Voltage	Mounting	
WDGE2 LED	P1[1]	P1SW	27K	2700K	80CRI	VF	Visual comfort forward throw	MVOLT	**Shipped included**	**Shipped separately**
	P2[1]	P2SW	30K	3000K	90CRI	VW	Visual comfort wide	347[3]	SRM Surface mounting bracket	AWS 3/8inch Architectural wall spacer
	P3[1]	P3SW	35K	3500K				480[3]	ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[7]	PBBW S urface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.
	P4[1]	Door with small window (SW) is required to accommodate sensors. See page 2 for more details.	40K	4000K						
	P5[1]		50K[2]	5000K						

Options

- **E4WH** Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)
- **E10WH** Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min)
- **E20WC** Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)
- **PE**[4] Photocell, Button Type
- **DS**[5] Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
- **DMG**[6] 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
- **BCE** Bottom conduit entry for back box (PBBW). Total of 4 entry points.
- **BAA** Buy America(n) Act Compliant

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

- **PIR** Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
- **PIRH** Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
- **PIR1FC3V** Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
- **PIRH1FC3V** Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

- **NLTAIR2 PIR** nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
- **NLTAIR2 PIRH** nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Finish

- **DDBXD** Dark bronze
- **DBLXD** Black
- **DNAXD** Natural aluminum
- **DWHXD** White
- **DSSXD** Sandstone
- **DDBTXD** Textured dark bronze
- **DBLBXD** Textured black
- **DNATXD** Textured natural aluminum
- **DWHGXD** Textured white
- **DSSTXD** Textured sandstone

FIXTURES DENOTED AS 'UEK1' & 'UEK2'

ZR Series

ZR14™, ZR22™, and ZR24™ LED Troffers - Version D

Rev. Date: V7 10/18/2024

Product Description

The ZR LED troffer provides energy productivity and code compliance – all with installation that's so intuitive and simple. The ZR Series delivers from 2,600 to 10,000 lumens and 80 CRI quality light and is perfect for both new construction and renovation. Multiple control options (0-10V, SmartCast® Technology, Lutron Athena) some of which incorporate integrated ambient and occupancy sensing and wireless communication which results in lower electricity bills, reduced maintenance and an improved total cost of ownership over traditional lighting control systems. The ZR LED troffer embodies a breakthrough in balancing energy savings, visual comfort and project budgets.

Performance Summary

Efficacy: Up to 159 LPW

Initial Delivered Lumens: 2,600 - 10,000

Input Power: 18-70W

CRI: 80+

CCT: 3000K, 3500K, 4000K, 5000K

Input Voltage: 120-277 VAC, 120-347 VAC, 347VAC

Limited Warranty†: 5 years standard for luminaire, SmartCast controls, and Lutron AWNR and AWNS controls; up to 5 years for SmartCast® accessories; 1 year for luminaire accessories

Limited Warranty Emergency Back Up (EB) Battery: 1 year for Battery Back Up. Test regularly in accordance with local code

Controls: 0-10V, SmartCast Wireless, Lutron Athena

Mounting: Recessed (Designed for use in most ceiling grids including standard 1 ½", 9/16", 15/16", hard ceiling, and surface mounting)

Room-side accessible removable lens

Assembled in the USA by Cree Lighting from US and imported parts

†See https://www.creelighting.com/resources/warranties/ for warranty terms. For SmartCast accessories, consult SmartCast spec sheets for details on warranty terms.

Accessories

Field-Installed

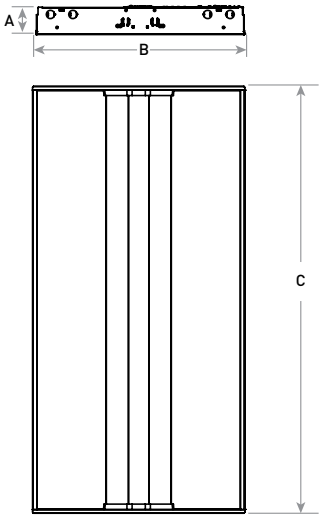
Drywall Grid Adapter
DGA14-WHT 1x4, Single Pack
DGA14-WHT-10PK 1x4, 10-Pack
DGA22-WHT 2x2, Single Pack
DGA22-WHT-10PK 2x2, 10-Pack
DGA24-WHT 2x4, Single Pack
DGA24-WHT-10PK 2x4, 10-Pack
Surface Mount Kit
SMK-FLX14 (1x4)
SMK-FLX22 (2x2)
SMK-FLX24 (2x4)
- Not for use with AWNR control

SmartCast® Technology Configuration Tool
CCT-CWC-1
- One required per project when SC1 control is selected
SmartCast® Technology Face Plates
CFP-1-WH
- Matching face plate, 1-gang, white
CFP-2-WH
- Matching face plate, 2-gang, white
SmartCast® Technology Wireless Dimmer
CSC-CWD-UNVN-WH (neutral wire required)
CSC-CWD-UNV-WH (no neutral required)

SmartCast® Technology Wireless Switch
CSC-CWS-UNVN-WH (neutral wire required)
CSC-CWS-UNV-WH (no neutral required)
SmartCast® 5-Button Wireless Scene Controller
CSC-SC-A-5B-UNVN-WH (w/o text)
CSC-SC-A-5S-UNVN-WH (w/scene text)
CSC-SC-A-5X-UNVN-WH (w/custom text)
SmartCast® Technology Wireless Plug Load Controller
CPLC-JB-CWC
SmartCast® 10V Zone Controller
CSC-ZC-10V-CWC
- Intelligent sensing and control of 0-10V luminaires

Shown with CRV Lens

10V1/10V5 CONTROL
Shown with ARC Lens



10V1/10V5 Dimensions						
	DIM "A"	DIM "A" w/EB	DIM "B"	DIM "C"	Weight	Weight w/EB
1x4	4.1" (104mm)	4.0" (101mm)	11.7" (298mm)	47.7" (1213mm)	11.0 lbs. (5.0kg)	16.0 lbs. (7.3kg)
2x2	4.1" (104mm)	3.3" (84mm)	23.7" (603mm)	23.8" (604mm)	9.0 lbs. (4.1kg)	14.0 lbs. (6.4kg)
2x4	4.1" (104mm)	3.3" (84mm)	23.7" (603mm)	47.7" (1213mm)	15.0 lbs. (6.8kg)	20.0 lbs. (9.1kg)

Refer to page 6 for lens assembly images and dimensions as well as dimensional information for SC1, AWNR, and AWNS controls.

Ordering Information

Example: ZR24-D-60L-835-CV-UNV-10V5

ZR		D						
Family	**Size**	**Series**	**Lumen Package**	**CRI/CCT**	**Lens***	**Voltage**	**Controls**	**Factory Installed Options****
ZR	**14**	**D**	**30L** 3,000 Lumens **40L** 4,000 Lumens **50L** 5,000 Lumens **60L** 6,000 Lumens	**830** 80 CRI, 3000K **835** 80 CRI, 3500K **840** 80 CRI, 4000K **850** 80 CRI, 5000K	**AR** FLX Arc **CV** ZR Curve **SQ** Square	**UNV** - Universal 120-277V **UC** - 120-347V - Not available with 26L or 30L lumen packages - Available only with10V5 control **34** - 347V - Not available with 10V5 control	**10V1** - 0-10V 1% Dimming **10V5** - 0-10V 5% Dimming **SC1** - SmartCast Wireless Technology with 1% Dimming, Integral motion and ambient sensors - Utilizes a multifunction sensor **AWNR*** - Lutron Athena Wireless Integral Fixture Control (RF only) with 1% Dimming - Utilizes a DALI2 driver **AWNS*** - Lutron Athena Wireless Integral Fixture Control with 1% Dimming, Occupancy and Daylight Sensing - Utilizes a DALI2 driver - Utilizes a multifunction sensor	**EB Emergency Backup** - Available with UNV voltage only - Provides 10W & 90 minutes of emergency operation - GT and EB cannot be used together **GT Generator Transfer Device** - Available with UNV voltage only - GT and EB cannot be used together
	22		**26L** 2,600 Lumens **30L** 3,000 Lumens **40L** 4,000 Lumens **50L** 5,000 Lumens					
	24		**30L** 3,000 Lumens **40L** 4,000 Lumens **50L** 5,000 Lumens **60L** 6,000 Lumens **70L** 7,000 Lumens **80L** 8,000 Lumens **100L** 10,000 Lumens					

* Refer to page 6 for lens images.
**Consult factory for other options.
†More information on Lutron controls can be found at lutron.com.

SMARTCAST® TECHNOLOGY Athena

Website: creelighting.com
US: (800) 236-6800 **Canada:** (800) 473-1234

CREE LIGHTING®

STAFF REPORT

PB-2025-01 – SUBDIVISION – TWO LOT SUBDIVISION – 238-260 MAIN ST

Request:

Applicant Huntley Survey & Design, PLLC, on behalf of owner the University System of New Hampshire, proposes a 2-lot subdivision of the ~0.96-ac parcel at 238-260 Main Street (TMP #590-101-000) into two lots ~0.48-ac and ~0.46-ac in size. The property is located in the Downtown Transition District.

Background:

The subject parcel is an existing, 0.942 ac parcel located on the east side of Main St at 238-260 Main St, directly south of the Main St, Winchester St, and Marlboro St roundabout. The parcel is a "U" shape that straddles the Historical Society of Cheshire County (HSCC) at 246 Main St. The parcel contains two buildings, a parking area, and associated drive aisles. The parking area is located between the two buildings and directly behind the HCSS building and parking area.

The purpose of this application is to subdivide the existing developed parcel into two lots. Lot 1 will be 0.480 ac in size with 70' of frontage on Main St and street access from Main St. Lot 2 will be 0.463 ac in size with 63' of frontage on Main St and 172' ft on Proctor Ct and street access from Proctor Ct.

Fig.1. Subject parcel outlined in yellow.

The proposed subdivision creates a unique situation in that the proposed lot line will make the parking area non-conforming in regard to the pavement setback requirement in Section 9.4.2, table 9-2 of the Land Development Code (LDC). The subdivision will also make Lot 1 non-conforming in regard to the impervious surface requirement in Section 4.6.2 of the LDC.

If the subject parcel were private property, this subdivision would not be allowed to proceed without first addressing these non-conformities by either obtaining variances for them or altering the site to remove them. Since the property is currently owned and used by Keene State College, the application is protected from these non-conformities by RSA 674:54 "Governmental Land Use" and can proceed to the Planning Board. However, it is important to note that any future non-governmental users of either parcel will have to remedy these non-conformities, and any other non-conformities created by this application, before a change of use can be permitted. The approval of this plan by the Planning Board will not cure the non-conformities created by this application. A note regarding this issue has been added to the plan to make any future owner and/or user of these properties aware of the situation. The note reads as follows:

"This subdivision is of governmentally owned land and was therefore made pursuant to RSA 674:54, Governmental Land Uses. The subdivision creates potential nonconformities with section 4.6.2

Buildout of the Land Development Code in regard to the impervious surface maximum on Lot 1 and section 9.4.2 Dimensions & Siting, Table 9-2 of the Land Development Code in regard to the parking area pavement setback on Lots 1 & 2. Planning Board approval of this plat shall not be deemed to cure any non-conformity with existing local land use ordinances. Any future use of either lot that is not governmental use will be subject to these provisions and may necessitate correction of the nonconformities or variances from the Zoning Board of Adjustment."

Determination of Regional Impact:

After reviewing the application, staff have made a preliminary evaluation that the proposed subdivision 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 a traffic analysis, drainage report, soil analysis, and other technical reports and analyses. After reviewing each exemption request, staff have made the preliminary determination that granting the request would have no bearing on the merits of the application and recommend that the Board accept the application as complete.

Application Analysis: The following is a review of the Planning Board development standards relevant to this application.

20.2.1 Lots: The proposed lots are greater than the minimum required area of 8,000 SF and both have greater than 50' of frontage on a class V roadway. As noted previously in this staff report, this subdivision would create new nonconformities with respect to maximum impervious surface coverage for Lot 1 and the parking area and pavement setback for both Lot 1 and Lot 2. This standard has not been met; however, State Statute pre-empts the Planning Board's authority to enforce this standard on lots that are used by a governmental entity.

20.2.2 Character of Land for Subdivision: The applicant states in their narrative that the land for the proposed subdivision is already completely developed in the urban compact area. The proposed subdivision is intended to separate an existing building into its own lot for future sale. This standard does not apply.

20.2.3 Scattered or Premature Development: The applicant states in their narrative that the subject parcel is already developed and located within the urban compact. No additional development is proposed at this time. Due to the built-up nature of the downtown area, this proposal is not scattered or premature as municipal facilities and services are readily available in the area. It appears that this standard has been met.

20.2.4 Preservation of Existing Features: The applicant states in their narrative that the subject parcel is already developed, and no additional development is proposed with this application. This standard is not applicable.

20.2.5 Monumentation: The applicant states in their narrative that proposed monumentation will be either 5/8" rebar with aluminum caps, railroad spikes, or brass disks. The

monumentation will meet the requirements of Article 23 of the Land Development Code. It appears that this standard has been met.

20.2.6 Special Flood Hazard Areas: The subject parcel is not located within any special flood hazard zone. This standard is not applicable.

20.2.7 Fire Protection & Water Supply: The applicant states in their narrative that the subject parcel is located within the downtown area where there are fire protection facilities such as fire hydrants and the fire station nearby. There is adequate water supply in the area for fire protection. It appears that this standard has been met.

20.2.8 Utilities: The subject parcel is located within the downtown area where municipal water and sewer is available. The existing buildings are served by these utilities. No new development is proposed with this application. It appears that this standard has been met.

Recommended Motion:
If the Board is inclined to approve this request, the following language is recommended for a motion:

"Approve PB-2025-01 as shown on the plan set identified as "Two Lot Subdivision" prepared by Huntley Survey & Design, PLLC at a scale of 1 inch = 20 feet, dated August 20, 2024 and last revised February 11, 2025 with the following conditions:

1. **Prior to final approval and signature by the Planning Board Chair, the following conditions precedent shall be met:**
    - **A. Owner's signature appears on the plan.**
    - **B. Inspection of lot monuments by the Public Works Director or their designee following their installation or the submittal of a security in an amount deemed satisfactory to the Public Works Director to ensure that the monuments will be set.**
    - **C. Submittal of four (4) full sized paper copies, two (2) mylar copies, and a digital copy of the final plan set.**
    - **D. Submittal of a check in the amount of $51.00 made out to the City of Keene to cover recording fees."**

City of Keene, NH
Planning Board
Subdivision Application

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

SECTION 1: PROJECT INFORMATION

PROJECT NAME: Two Lot Subdivision, Land of University System of NH	**NUMBER OF LOTS PROPOSED:** 2
PROJECT ADDRESS(ES): 238-260 Main Street	

SECTION 2: CONTACT INFORMATION

PROPERTY OWNER	APPLICANT
NAME/COMPANY: Keene State College / University System of NH	**NAME/COMPANY:** Keene State College / University System of NH
MAILING ADDRESS: 229 Main St, Keene, NH 03435 ~~5 CHENELL DR #301 CONCORD, NH 03301~~	**MAILING ADDRESS:** 229 Main Street, Keene, NH 03435
PHONE: 603-358-2014	**PHONE:** 603-358-2014
EMAIL: nathalie.houder@keene.edu	**EMAIL:** nathalie.houder@keene.edu
SIGNATURE: Nathalie Houder	**SIGNATURE:** Nathalie Houder
PRINTED NAME: Nathalie Houder (VPFA)	**PRINTED NAME:** Nathalie Houder (VPFA)

AUTHORIZED AGENT (if different than Owner/Applicant)	FOR OFFICE USE ONLY:
NAME/COMPANY: Russell Huntley	**TAX MAP PARCEL #(s):** 590-101-000-000-000
MAILING ADDRESS: 659 West Road, Temple, NH, 03084	___-___-___-___-___
PHONE: (603) 924-1669	___-___-___-___-___
EMAIL: russ@huntleysurvey.com	**PARCEL SIZE:** 0.96 acr.
SIGNATURE:	**ZONING:** Downtown Transition
PRINTED NAME: Russell Huntley	**PROJECT #:** PB-2025-01

DATE STAMP: RECEIVED JAN 10 2025 By

Two Lot Subdivision
Land of The University System of NH
238-260 Main Street Keene, NH

February 6, 2025

Project Narrative

The University System of NH currently owns a .942-acre parcel of land, tax map parcel 590-101-000, located at 238 and 260 Main Street in Keene. They wish to subdivide the parcel into two lots. The proposed lots are as follows: The first proposed lot contains the existing building at 238 Main Street along with the parking lot directly behind said building. The second proposed lot contains the existing building at 260 Main Street, at the intersection of Main Street and Proctor Court, along with the section of the parking lot which falls within the original parcel that is located directly behind the Cheshire Historical Society (tax map parcel 590-100-000).

The parcel lies within the Downtown Transition Zone, which requires a minimum of 8,000 square feet per lot and 50’ of road frontage on a Class V or better highway. The proposed lots are in keeping with the current development in the area.

Colin Burdick, Assistant Director of Facilities Services at Keene State College, retained Huntley Survey & Design to perform the necessary boundary & topographic surveys for the project. Huntley survey has prepared the subdivision plat and application. If approved, the proposed subdivision will be monumented with 5/8” rebar with aluminum caps, railroad spikes, or brass disks at each new corner and all existing, unmarked corners.

Lot 1, with the existing building, driveway, and parking lot, will have 70’ feet of frontage on Main Street, and .480 acres (20,903 Sq.Ft.). Access will be the driveway off Main Street.

Lot 2, with the existing building, parking lot, and driveway, will have 63’ feet of frontage on Main Street and 172’ feet on Proctor Court, and will contain .463 acres (20,148 Sq.Ft.). Access will be the driveway off Proctor Court.

Both lots are currently serviced by town water and sewer.

No development beyond the division of the lots is proposed at this time.

Subdivision Review Standards 19.2

The City of Keene Subdivision review standards will be met, or waivers will be requested as follows:

19.2.1 Lots

There are no minimum lot size, depth or frontage requirements. The standard is met.

19.2.2 Character of Land

This standard does not apply. The land is already developed in a downtown setting. The proposal is only to divide the parcel into two lots.

19.2.3 Scattered or Premature Development

The same as Standard 19.2.2

19.2.4 Preservation of Existing Features

There are no currently proposed changes to the site.

19.2.5 Monumentation

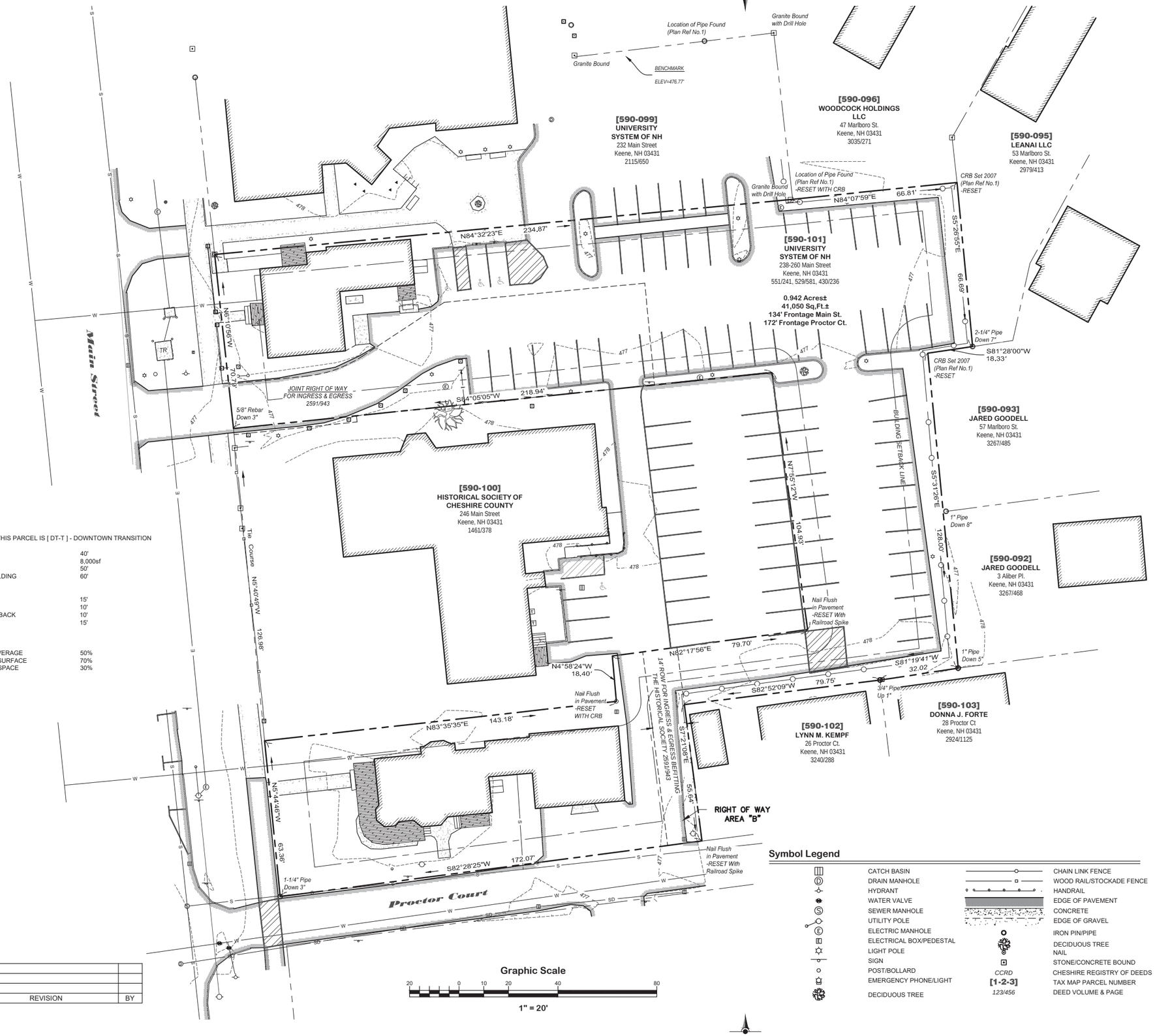
If approved, the proposed adjustment will be monumented with 5/8” rebar with aluminum caps, railroad spikes, or brass disks

19.2.6 Special Flood Hazard Areas

The subject parcels do not lie within a special flood hazard area.

19.2.7 Fire Protection and Water Supply

The subject parcels lie within the Downtown area and are served by municipal water supply. There are a number of fire hydrants within the vicinity and no new development is proposed, so the project meets this standard.



Zoning

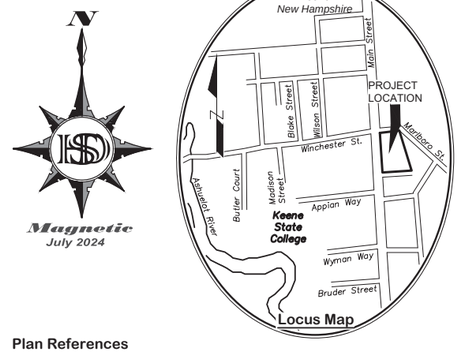
THE ZONING FOR THIS PARCEL IS [DT-T] - DOWNTOWN TRANSITION

MAX HEIGHT	40'
LOT SIZE	8,000sf
FRONTAGE	50'
LOT WIDTH AT BUILDING	60'
SETBACKS	
FRONT SETBACK	15'
SIDE SETBACK	10'
SIDE CORNER SETBACK	10'
REAR SETBACK	15'
COVERAGE	
MAX BUILDING COVERAGE	50%
MAX IMPERVIOUS SURFACE	70%
MIN GREEN/OPEN SPACE	30%

NO.	DATE	REVISION	BY

Symbol Legend

	CATCH BASIN		CHAIN LINK FENCE
	DRAIN MANHOLE		WOOD RAIL/STOCKADE FENCE
	HYDRANT		HANDRAIL
	WATER VALVE		EDGE OF PAVEMENT
S	SEWER MANHOLE		CONCRETE
	UTILITY POLE		EDGE OF GRAVEL
E	ELECTRIC MANHOLE		IRON PIN/PIPE
	ELECTRICAL BOX/PEDESTAL		DECIDUOUS TREE
	LIGHT POLE		NAIL
	SIGN		STONE/CONCRETE BOUND
	POST/BOLLARD	CCRD	CHESHIRE REGISTRY OF DEEDS
	EMERGENCY PHONE/LIGHT	[1-2-3]	TAX MAP PARCEL NUMBER
	DECIDUOUS TREE	123/456	DEED VOLUME & PAGE



Magnetic
July 2024

Plan References

REFERENCES INCLUDE ALL INFORMATION REFERRED TO ON ANY OF THE FOLLOWING PLANS

1. KEENE STATE COLLEGE, EXISTING CONDITION PLAN, ALONG MAIN STREET, MARLBORO STREET & PROCTOR COURT, KEENE, NH, DATED AUGUST 9, 2007; BY RUSSELL J. HUNTLEY, SVE ASSOCIATES. (Obtained From SVE & used with Permission.)
2. ALUMNI-ADVANCEMENT BUILDING UTILITY PLAN C-100, DATED NOVEMBER 19, 2007, BY SVE ASSOCIATES.(Obtained From SVE & used with Permission.)

Notes

1. NORTH SHOWN ON THIS PLAN IS REFERENCED TO NAD83 NH STATE PLANE GRID, BASED ON A STATIC GPS SURVEY PERFORMED IN CONJUNCTION WITH PLAN REFERENCE No.1.
2. THE BOUNDARY LINES SHOWN ON THIS PLAN WERE CALCULATED FROM DEEDS, RECORD PLANS & PHYSICAL EVIDENCE FOUND DURING THE FIELD SURVEY. THE SURVEYED PARCEL IS SUBJECT TO ANY RIGHTS AND EASEMENTS OF RECORD AND ANY STATEMENT OF FACTS THAT AN UP TO DATE TITLE REPORT MAY REVEAL.
3. TOPOGRAPHY SHOWN ON THIS PLAN WAS DEVELOPED FROM AN ACTUAL FIELD SURVEY BY HUNTLEY SURVEY & DESIGN, PLLC PERFORMED DURING THE MONTH OF AUGUST, 2024. THE VERTICAL DATUM IS NAVD88 BASED ON N.H.D.O.T. DISK #237-0030, LOCATED ON THE EASTERLY SIDE OF MAIN STREET, ON THE WESTERLY END OF A CONCRETE HEADER ON THE BRIDGE OVER BEAVER BROOK WITH AN ELEVATION OF 471.71'. CONTOUR INTERVAL IS ONE (1) FOOT.
4. TOTAL LOT AREA: 0.942 ACRES± (41,050 Sq.Ft.±)
   FRONTAGE: MAIN STREET 134' PROCTOR COURT 172'
5. UNDERGROUND UTILITIES, STRUCTURES AND FACILITIES HAVE BEEN PLOTTED FROM FIELD SURVEY OF SURFACE LOCATIONS AND DATA OBTAINED FROM PREVIOUS MAPS AND RECORDS. THEIR EXISTENCE AND LOCATIONS MUST BE CONSIDERED APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITIES THE EXISTENCE OF WHICH WERE NOT KNOWN OR INVESTIGATED AT THE TIME OF SURVEY. THE SIZE AND LOCATION OF ALL UTILITIES AND STRUCTURES MUST BE VERIFIED PRIOR TO ANY AND ALL CONSTRUCTION. CALL DIG-SAFE PRIOR TO ANY CONSTRUCTION.
6. THERE WERE NO JURISDICTIONAL WETLANDS OBSERVED BY HUNTLEY SURVEY & DESIGN ON THIS SITE.
6. THE PARCEL(S) SHOWN ARE LOCATED IN ZONE X AND ARE NOT WITHIN A SPECIAL FLOOD HAZARD AREA. SEE FEMA PANEL 3305C0267E EFFECTIVELY DATED MAY 23, 2006.
7. THE PARCELS SURVEYED ARE SERVICED BY MUNICIPAL UTILITIES AND HAVE EXISTING DRIVEWAYS.

Surveyor's Certification

PURSUANT TO RSA 676: 18 III AND RSA 672: 14, I CERTIFY THAT THIS SURVEY AND PLAT WERE PRODUCED BY ME OR THOSE UNDER MY DIRECT SUPERVISION FROM A TOTAL STATION AND DATA COLLECTOR TRAVERSE WITH A POSITION TOLERANCE THAT MEETS OR EXCEEDS NH LAN 500 AND THE ALLOWABLE RELATIVE POSITIONAL ACCURACY REQUIRED BY THE STATE OF NEW HAMPSHIRE IN TABLE 500.1, "ACCURACY MEASUREMENTS, LOCAL ACCURACY OF CONTROL SUPPORTING THE SURVEY," AND IS BASED ON INFORMATION RECORDED AT THE CHESHIRE COUNTY REGISTRY OF DEEDS AS REFERENCED HEREON, INFORMATION PROVIDED BY THE CLIENT AND PHYSICAL EVIDENCE FOUND.

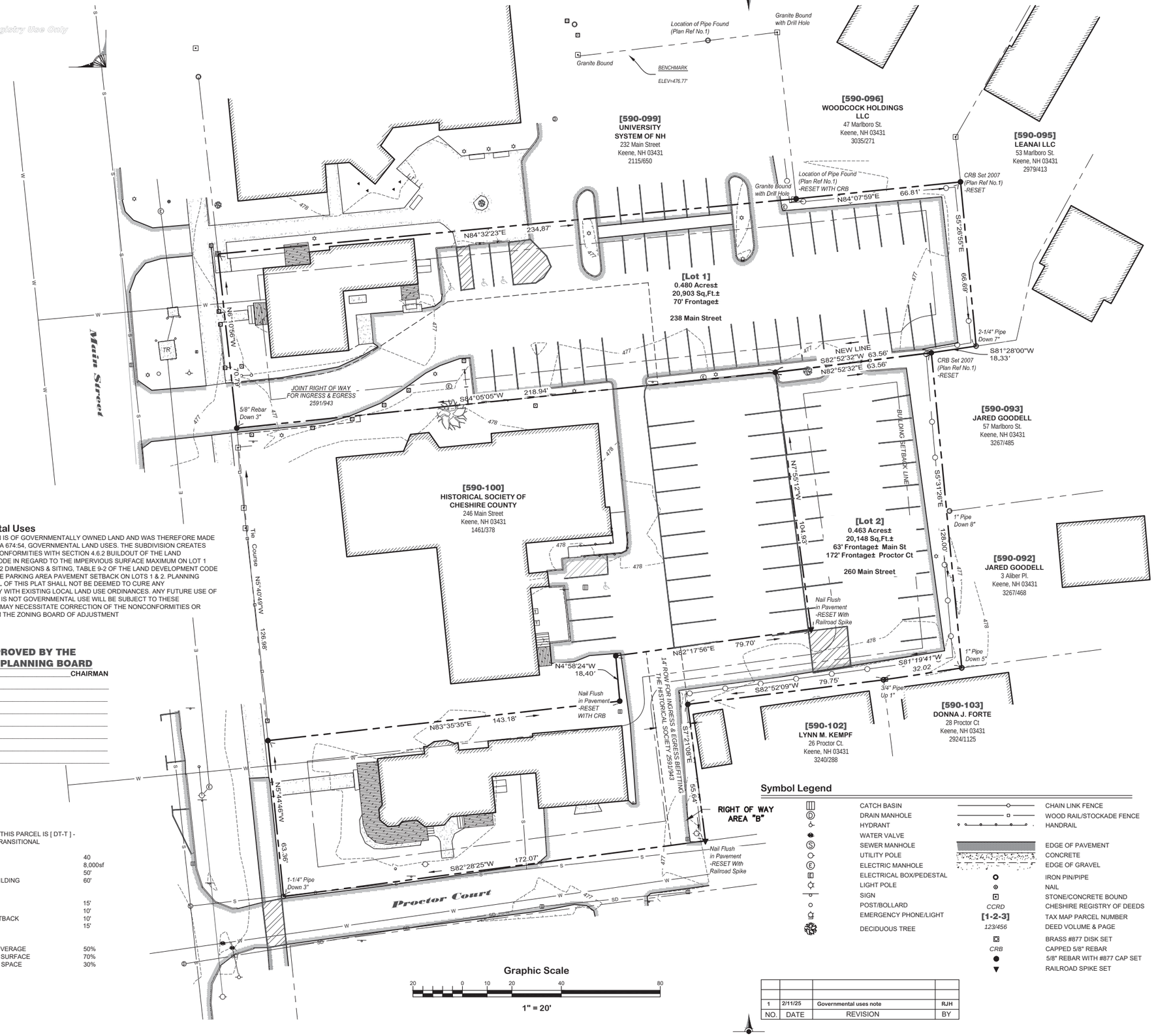
Existing Conditions
Two Lot Subdivision

LAND OF
University System of NH
located at
Tax Map 590 Lot 101
238-260 Main Street, Keene, Cheshire County, New Hampshire
551/241, 529/581, 430/236

Surveyed 08/2024 Plan prepared 08/20/2024
Project No. H24-044 Cad File No. H24-044 Sub.dwg

Huntley Survey & Design, PLLC
NH & VT Land Surveying, Wetlands & NH Septic System Design
659 West Road, Temple, NH 03084 (603) 924-1669 www.huntleysurvey.com

For Registry Use Only



Governmental Uses

THIS SUBDIVISION IS OF GOVERNMENTALLY OWNED LAND AND WAS THEREFORE MADE PURSUANT TO RSA 674:54, GOVERNMENTAL LAND USES. THE SUBDIVISION CREATES POTENTIAL NONCONFORMITIES WITH SECTION 4.6.2 BUILDOUT OF THE LAND DEVELOPMENT CODE IN REGARD TO THE IMPERVIOUS SURFACE MAXIMUM ON LOT 1 AND SECTION 9.4.2 DIMENSIONS & SITING, TABLE 9-2 OF THE LAND DEVELOPMENT CODE IN REGARD TO THE PARKING AREA PAVEMENT SETBACK ON LOTS 1 & 2. PLANNING BOARD APPROVAL OF THIS PLAT SHALL NOT BE DEEMED TO CURE ANY NON-CONFORMITY WITH EXISTING LOCAL LAND USE ORDINANCES. ANY FUTURE USE OF EITHER LOT THAT IS NOT GOVERNMENTAL USE WILL BE SUBJECT TO THESE PROVISIONS AND MAY NECESSITATE CORRECTION OF THE NONCONFORMITIES OR VARIANCES FROM THE ZONING BOARD OF ADJUSTMENT

APPROVED BY THE KEENE PLANNING BOARD

BY:_____CHAIRMAN

ON:_____

Zoning

THE ZONING FOR THIS PARCEL IS [DT-T] - DOWNTOWN TRANSITIONAL

MAX HEIGHT	40
LOT SIZE	8,000sf
FRONTAGE	50'
LOT WIDTH AT BUILDING	60'
SETBACKS	
FRONT SETBACK	15'
SIDE SETBACK	10'
SIDE CORNER SETBACK	10'
REAR SETBACK	15'
COVERAGE	
MAX BUILDING COVERAGE	50%
MAX IMPERVIOUS SURFACE	70%
MIN GREEN/OPEN SPACE	30%

Graphic Scale

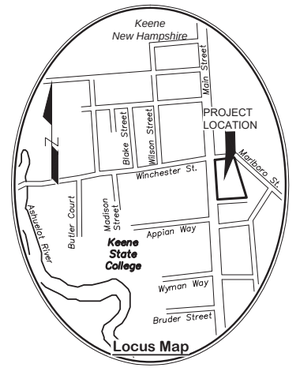
20 0 10 20 40 80

1" = 20'

Symbol Legend

CATCH BASIN		CHAIN LINK FENCE	
DRAIN MANHOLE		WOOD RAIL/STOCKADE FENCE	
HYDRANT		HANDRAIL	
WATER VALVE			
SEWER MANHOLE		EDGE OF PAVEMENT	
UTILITY POLE		CONCRETE	
ELECTRIC MANHOLE		EDGE OF GRAVEL	
ELECTRICAL BOX/PEDESTAL		IRON PIN/PIPE	
LIGHT POLE		NAIL	
SIGN		STONE/CONCRETE BOUND	
POST/BOLLARD	CCRD	CHESHIRE REGISTRY OF DEEDS	
EMERGENCY PHONE/LIGHT	[1-2-3]	TAX MAP PARCEL NUMBER	
DECIDUOUS TREE	123/456	DEED VOLUME & PAGE	
		BRASS #877 DISK SET	
	CRB	CAPPED 5/8" REBAR	
		5/8" REBAR WITH #877 CAP SET	
		RAILROAD SPIKE SET	

NO.	DATE	REVISION	BY
1	2/11/25	Governmental uses note	RJH



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4. LOT TOTALS:

   [LOT 1]
   TOTAL AREA: .480 ACRES± (20,903 Sq.Ft.±)
   FRONTAGE: MAIN STREET 70'

   [LOT 2]
   TOTAL AREA: .463 ACRES± (20,148 Sq.Ft.±)
   FRONTAGE: MAIN STREET 63'
   PROCTOR COURT 172'

5. UNDERGROUND UTILITIES, STRUCTURES AND FACILITIES HAVE BEEN PLOTTED FROM FIELD SURVEY OF SURFACE LOCATIONS AND DATA OBTAINED FROM PREVIOUS MAPS AND RECORDS. THEIR EXISTENCE AND LOCATIONS MUST BE CONSIDERED APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITIES THE EXISTENCE OF WHICH WERE NOT KNOWN OR INVESTIGATED AT THE TIME OF SURVEY. THE SIZE AND LOCATION OF ALL UTILITIES AND STRUCTURES MUST BE VERIFIED PRIOR TO ANY AND ALL CONSTRUCTION. CALL DIG-SAFE PRIOR TO ANY CONSTRUCTION.
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6. THE PARCEL(S) SHOWN ARE LOCATED IN ZONE X AND ARE NOT WITHIN A SPECIAL FLOOD HAZARD AREA. SEE FEMA PANEL 3305C0267E EFFECTIVELY DATED MAY 23, 2006.
7. THE PARCELS SURVEYED ARE SERVICED BY MUNICIPAL UTILITIES AND HAVE EXISTING DRIVEWAYS.

Owner Certification

I CERTIFY THAT I/WE AM/ARE THE CURRENT OWNER(S) OF THE TRACTS SHOWN HEREON AND THAT I APPROVE OF THE SUBDIVISION.

_____
OWNER'S SIGNATURE DATE

Owners of Record

[590-101] ~ 238-260 MAIN STREET
UNIVERSITY SYSTEM OF NH
5 CHENELL DRIVE #301
CONCORD, NH 03301
551/241, 529/581, 430/236

Surveyor's Certification

PURSUANT TO RSA 676: 18 III AND RSA 672: 14, I CERTIFY THAT THIS SURVEY AND PLAT WERE PRODUCED BY ME OR THOSE UNDER MY DIRECT SUPERVISION FROM A TOTAL STATION AND DATA COLLECTOR TRAVERSE WITH A POSITION TOLERANCE THAT MEETS OR EXCEEDS NH LAN 500 AND THE ALLOWABLE RELATIVE POSITIONAL ACCURACY REQUIRED BY THE STATE OF NEW HAMPSHIRE IN TABLE 500.1, "ACCURACY MEASUREMENTS, LOCAL ACCURACY OF CONTROL SUPPORTING THE SURVEY," AND IS BASED ON INFORMATION RECORDED AT THE CHESHIRE COUNTY REGISTRY OF DEEDS AS REFERENCED HEREON, INFORMATION PROVIDED BY THE CLIENT AND PHYSICAL EVIDENCE FOUND.

Two Lot Subdivision

LAND OF

University System of NH

located at

Tax Map 590 Lot 101

238-260 Main Street, Keene, Cheshire County, New Hampshire

551/241, 529/581, 430/236

Surveyed 08/2024 **Plan prepared 08/20/2024**
Project No. H24-044 **Cad File No. H24-044 Sub.dwg**

Huntley Survey & Design, PLLC
NH & VT Land Surveying, Wetlands & NH Septic System Design
659 West Road, Temple, NH 03084 (603) 924-1669 www.huntleysurvey.com

STAFF REPORT

PB-2025-02 – COTTAGE COURT CONDITIONAL USE PERMIT – DUPLEX, 36 ELLIOT ST

Request:

Applicant Sampson Architects, on behalf of owner the Scott Richards Revocable Trust of 2023, proposes to convert an existing single-family home into a duplex on the property at 36 Elliot St (TMP #214-021-000). The parcel is ~0.10-ac in size and is located in the Residential Preservation District.

Background:

The subject parcel is the site of an existing single-family home and is ~4,356-sf in size. It is located on the north side of Elliot Street about 335 feet east of Main St and ~200 feet west of Wheelock Elementary School. Single-family homes directly abut the subject parcel to the east, north, west, and southwest. Two duplexes are located directly across Elliot St to the south and southeast of the subject parcel, as shown in Figure 1. The larger neighborhood is surrounded by a mix of commercial and residential uses including the Keene State College campus to the west and northwest, a nursing home to the south, and Wheelock School to the east. The parcel is in the Residential Preservation District.

Figure 1. Aerial imagery from 2020 showing the development density of the parcels surrounding 36 Elliot St.

The applicant proposes to convert the existing single-family home into a duplex by turning the workshop/studio space at the northeastern corner of the building into a second dwelling unit. There are no changes proposed to the building exterior or site as part of this proposal. The Residential Preservation District allows for two-family dwellings through the Cottage Court Conditional Use Permit (CUP) process. Site plan review is not required for this application because it involves fewer than five dwelling units.

Determination of Regional Impact:

After reviewing the application, staff have made a preliminary evaluation that the proposed Cottage Court CUP 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 exemptions from submitting a grading plan, landscaping plan, lighting plan, elevations, and all technical reports. After reviewing each request, 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."

Departmental Comments:

- **Code Enforcement Comments:** Please be aware that a building permit application will need to be submitted for the addition of a second dwelling unit to ensure that all work has been completed in accordance with the current state building code requirements. Upon reviewing the file for the building permit application referenced in the narrative (permit #XB13-2008-0496), it is evident that this permit was not issued for the addition of another dwelling unit or an Accessory Dwelling Unit (ADU), but rather for the construction of a workshop and studio. There are no issues concerning the Floodplain.

- **Fire Department Comments:** Please be aware that as part of the building permit review process, all construction work will be reviewed for compliance with NH RSA 153:10-a regarding smoke and carbon monoxide detection as well as egress requirements.

APPLICATION ANALYSIS: *The following is a review of the Cottage Court CUP standards outlined under Section 17 of the City's Land Development Code (LDC).*

Section 17.5.1 – Development Types Allowed:

The proposal is for the creation of a second unit in a building currently used as a single-family home on a single lot. This standard appears to be met.

Section 17.5.2 – Dimensional Standards:

Table 1 shows the required dimensional standards for a cottage court development located in the Residential Preservation District as well as the dimensional standards proposed as part of this application. The existing single-family home shown in Figure 2 was constructed around 1900 and has ~1,865-sf of gross floor area (GFA). The project narrative states that the building layout shown on the submitted plan is existing and that there are no changes proposed to the building exterior or site as part of this application.

Figure 2. A photo submitted by the applicant showing the building exterior.

The property owner is seeking to allow for the existing workshop/studio space at the northeastern corner of the building to be converted into a second unit that can be rented out. It should be noted that although this space is already laid out as an apartment complete with bathrooms, bedrooms, and a kitchen, it was never properly permitted with the City of Keene and is considered an illegal unit. As was mentioned in the staff comments from both Code

Enforcement & the Fire Department Staff, the property owner will need to go through the necessary building permit review process and inspections before this is considered a legal second unit that can be occupied by a new tenant.

While the existing structure does not comply with the required building setbacks and does not have the required lot width at the building line, these are existing nonconformities and no changes are proposed to the building or site that would increase these nonconformities. In addition, the building's setback from the road matches the established building line along the road, which is allowed within the Cottage Court Overlay. The structure blends in with the established development patterns in this neighborhood and will continue to do so after its conversion to two units. This standard appears to be met.

Table 9-1: Required vs. proposed dimensional standards.

	Required	**Proposed**
Minimum tract size	None	0.10-ac (~4,356-sf)
Minimum tract frontage	30'	~57'
Perimeter setback from road	Setbacks from existing roads external to the development may be less than the underlying zoning district in order to match an established building line along the road.	~13.5'
Perimeter setback from other tract boundaries	Rear: 20' Side: 10'	Rear: ~7' (existing) Side: ~8' (existing)
Density	None	2 units per 0.10-ac (20 units per acre)
Height	2.5 stories or 35' max	1.75 stories

Section 17.5.3 – Conditional Use Permit Standards:

A. **Dwelling Unit Size:** This standard states that all new units within a development shall have a maximum average size of 1,250-sf of gross floor area (gfa) and a maximum building footprint of 900-sf per unit (excluding porches and garages). The proposed unit will have a gross floor area of 920-sf. This standard appears to be met.

B. **Parking:** This standard states that a minimum of one parking space per unit is required and a maximum of one parking space per bedroom is allowed. The submitted plan shows two parking spaces. This standard appears to be met.

C. **Building Separation:** This proposal does not involve the construction of multiple buildings. This standard is not applicable. However, it should be noted that while the floorplan shown on the submitted plan reflects the existing building layout; this construction was never approved/permitted with the City. The appropriate permits will need to be obtained from the Community Development & Fire Departments to ensure that all work complies with the applicable building code & life-safety requirements before the second unit is occupied by a tenant.

D. **Driveways:** This standard outlines the driveway width requirements for projects involving three or more units. The existing driveway shown on the plan is ~14'-4"-wide and the narrative states that it is not proposed to be altered as part of this application. Given that this proposal only involves two units, this standard is not applicable.

E. **Internal Roads:** There are no internal roads proposed as part of this application. This standard is not applicable.

F. **Screening:** This standard states that a 6'-tall semi-opaque or opaque fence shall be required if the proposed building type (not density) is more intense than the adjacent building type. The narrative includes photos of adjacent homes that share the same 1.75-story gable end design and similar architectural characteristics as the existing building. This standard is not applicable.

G. **Architectural Guidelines:** The narrative states that there are no changes proposed to the building exterior or site and includes pictures showing other buildings in the neighborhood with similar architectural characteristics. This standard is not applicable.

Recommended Motion:

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

> ***"Approve PB-2025-02 as shown on the plan identified as "Cottage Court Application, 36 Elliot St, Keene, NH 03431" prepared by Sampson Architects at varying scales on January 15, 2025 and last revised on February 12, 2025 with the following conditions prior to final approval and signature by the Planning Board Chair:***
>
> 1. ***Owner's signature appears on the plan.***
> 2. ***Submittal of five full-sized paper copies of the final 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

SECTION 1: PROJECT INFORMATION

PROJECT NAME:
Cottage Court Application
36 Elliot St

NUMBER OF NEW DWELLING UNITS PROPOSED: 0

(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.)

PROJECT ADDRESS(ES):
36 Elliot St, Keene, NH, 03431

DOES THIS PROJECT INCLUDE A PROPOSAL TO SUBDIVIDE ONE OR MORE PARCELS?

☐ YES
☑ NO

(If yes, a Subdivision application will need to be submitted and re-viewed currently with the Cottage Court application. See the Article 20 of the Land Development Code (LDC) for additional information.)

SECTION 2: CONTACT INFORMATION

PROPERTY OWNER	APPLICANT
NAME/COMPANY: Scott Richard REVOC Trust of 2023	**NAME/COMPANY:** Sampson Architects
MAILING ADDRESS: 26 Kelleher St, Keene, NH	**MAILING ADDRESS:** 11 King Court, Suite 1E, Keene, NH
PHONE:	**PHONE:** 6037697736
EMAIL:	**EMAIL:** tim@sampsonarchitects.com
SIGNATURE:	**SIGNATURE:** Tim P Sa
PRINTED NAME: Scott Richard Richard Scott	**PRINTED NAME:** Timothy Sampson

AUTHORIZED AGENT (if different than Owner/Applicant)	FOR OFFICE USE ONLY:	
NAME/COMPANY:	**TAX MAP PARCEL #(s):** 214-021-000-____-____	
MAILING ADDRESS:	____-____-____-____-____	
PHONE:	**PARCEL SIZE:** 0.10 acr	**DATE STAMP:** RECEIVED JAN 17 2025 By
EMAIL:	**ZONING DISTRICT:** Residential Preservation	
SIGNATURE:		
PRINTED NAME:	**PROJECT #:** PB-2025-02	

Descriptive Narrative

Ownership:

Owner of Record: Richard R Scott Revocable Trust of 2023
Contact: Richard Scott
Address: 26 Kelleher Street, Keene, NH 03431
Phone Number: (603) 520-4150
Email: Rickee09@gmail.com

Existing / Proposed Uses:

The proposed project is located at 36 Elliot Street. The rear unit was permitted in 2009 as a studio with a full bathroom located on the second floor. This proposal is to have the city recognize this as a residential use that anybody will be allowed to occupy. The proposal requires no exterior renovation or expansion to the existing footprint.

The rear unit was permitted by the city in early 2009 with the condition that it is not a rentable dwelling unit. Construction was completed that same year and has been in use ever since.

Description of Size / Intensity of Use:

The lot is approximately .10 acres. The lot is located in the residential preservation district. Two dwelling units are currently existing. There is no work being proposed or required to have the two units meet the newly adopted Cottage Court overlay standards. All existing setback, lot coverage, frontage requirements are to remain unchanged.

Description of Proposed Development:

This application proposes get the second unit to the rear of the property recognized by the city of Keene as a legal dwelling unit.. Two units are existing at the property currently, but only one is occupiable by someone other than the property owner.

Management:

There is a property manager that currently maintains the property. Once recognized as a mutli-family building this will not change.

Parking:

Although not striped, there ae currently four parking spaces available. This proposal would maintain the four existing available spots.

Description of Parking Demand / Impact:

All required parking for the new dwelling units will be on site and exist currently

Location of access points:

Access to both existing units will be from a single driveway cut in the existing location.

Other Descriptive Information:
This proposal is limited in scope and is consistent with the neighborhood. The proposal will change how one of the two units is recognized by the city.

Drainage & Stormwater Management:
There are no changes being proposed to the lot. The intent is to maintain current drainage patterns.

Sedimentation Control:
There will be no need for sedimentation control. No work is being proposed..

Snow Storage and Removal:
There will be room to store snow on site behind the existing parking areas as is currently being done.

Landscaping:
There are no proposed changes to the existing landscaping.

Screening:
There are no proposed changes to the existing screening

Lighting:
There are no proposed changes to the existing exterior lighting..

Water & Sewer:
The existing building is currently connected to city water and sewer.

Traffic & Access Management:
There will be no change to existing traffic counts , flow or access.

Filling & Excavation:
There is no proposed filling or excavating

Surface Waters & Wetland:
There will be no changes to existing drainage. There are no wetlands on the site.

Hazardous & Toxic Materials:
There are no hazardous or toxic materials involved with this proposal.

Noise:
Noise impact from the proposed project will be unchanged and consistent with adjacent residential uses.

Architectural & Visual Appearance:
There are no proposed changes in the architecture or visual appearance of the existing building. The following photos depict the subject property as well as the adjacent properties.

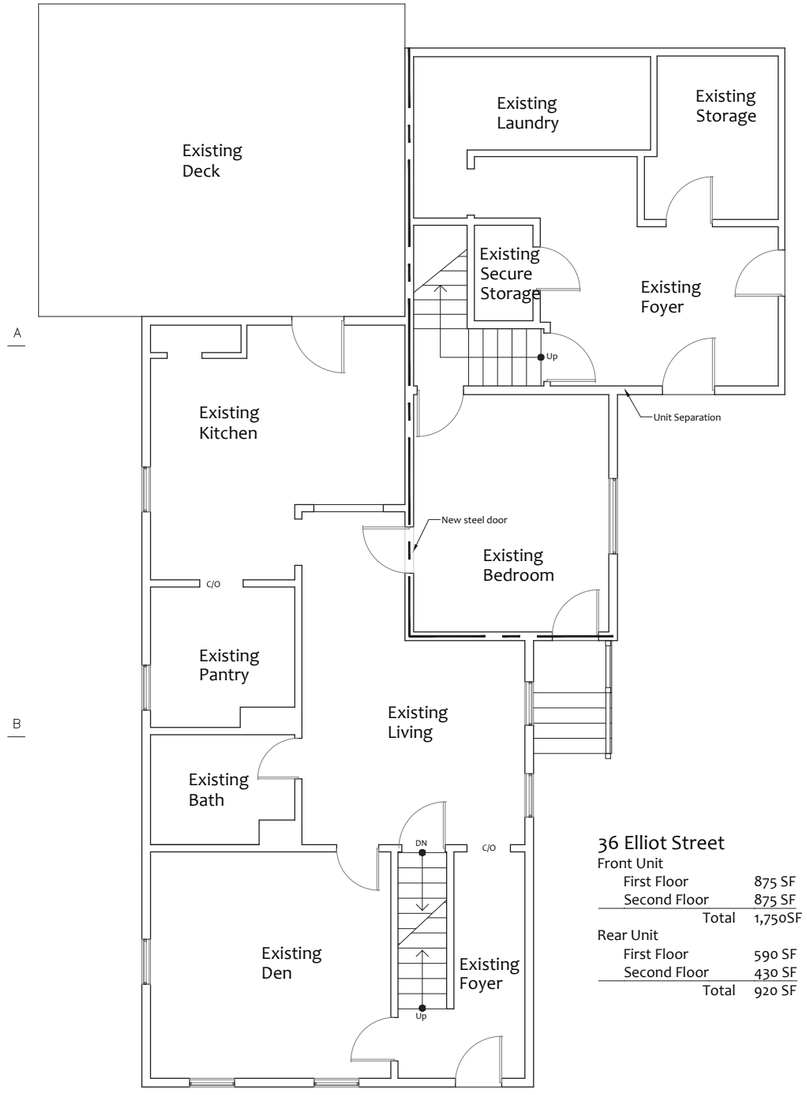
36 Elliot Street – Subject Property

32 Elliot Street

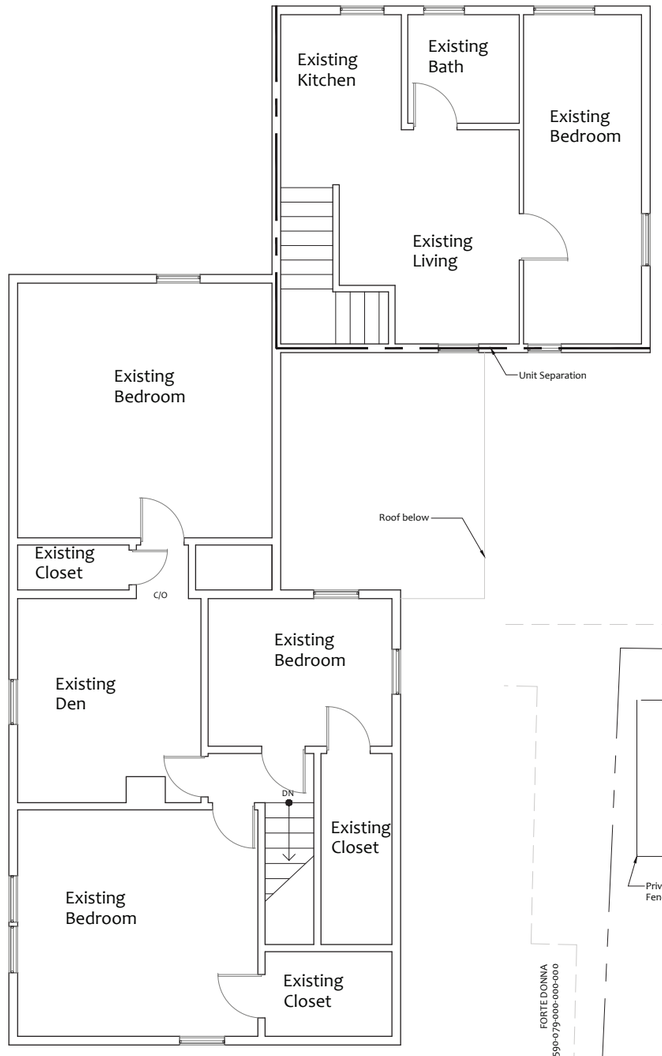
35 Elliot Street

41 Elliot St

42 Elliot St

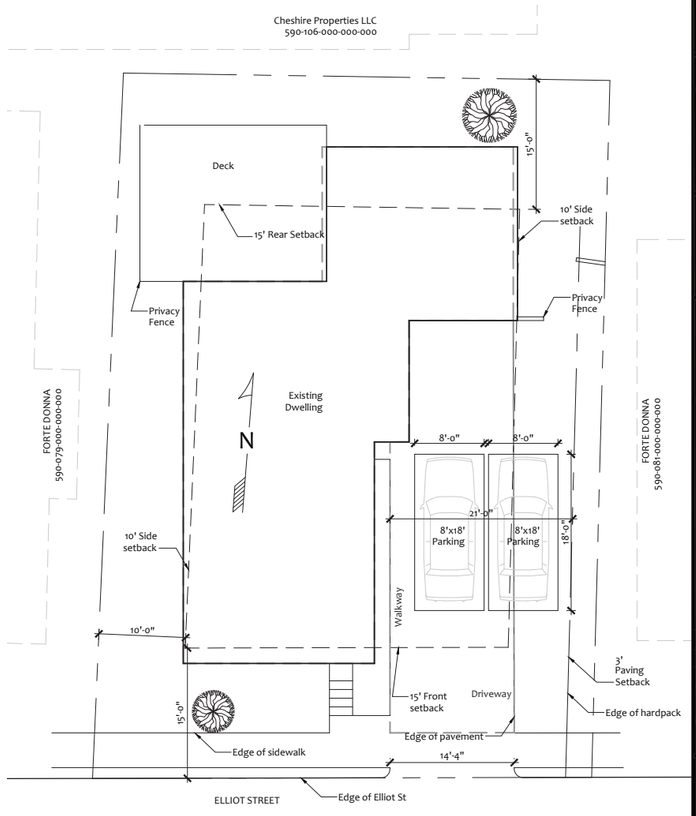


First Floor Plan
Scale: 1/4" = 1'-0"



Second Floor Plan
Scale: 1/4" = 1'-0"

Location Map
Scale: Not to Scale



Site Plan
Scale: 1/8"=1'-0"

36 Elliot Street

Front Unit	
First Floor	875 SF
Second Floor	875 SF
Total	1,750SF
Rear Unit	
First Floor	590 SF
Second Floor	430 SF
Total	920 SF

Zoning Data:

Parcel ID:	590-080-000-000-000
Owner:	Scott Richard R Revoc Trust of 2023
Zoning:	Residential Preservation
Lot Area:	4,356 sf (.1 acres)

	Required	Existing Structure	Proposed Structure
Max. Building Height:	2 Stories / 35 feet	2 Stories / 28 feet	2 Stories / 28 feet
Min. Lot Area:	8,000 SF	4,356 SF	4,356 SF
Min. Lot area per Dwelling unit:	.	2,178 SF	2,178 SF
Min lot width at building line:	60 feet	57 feet	57 feet
Min. Front Setback:	15 feet	13 feet	13 feet
Min. Rear Setback:	20 feet	7 feet	7 feet
Min. Side Setback:	10 feet	8 ft	8 ft
Max. Percentage of Lot Occupied by Structures:	35%	31%	31%
Max. Percentage Impermeable Materials:	45%	45%	45%
Min. Percentage of green space	55%	55%	55%

Owner Certification
I certify that my assigns or successors will seek approval by the planning board prior to making any changes to this site plan and approved drawings.

Owner/
Authorized agent

Date

Approval
City of Keene
Planning Board

Date

Chairman

These drawings are LIMITED SCOPE and are intended only to describe general design intent, scale, overall spatial relationships and material where indicated.
These drawings shall be considered preliminary for purposes of design review, comment, or budget pricing only, unless expressly released for other purposes as indicated in the issue log.
The architect assumes responsibility for errors in the information provided, and not for omissions.

Architect:
Sampson Architects
Timothy Sampson
NCARB, LEED AP
11 King Court
Suite 1E
Keene, NH
603 769 7736

Engineer:

SAMPSON ARCHITECTS
2024 WO# 24-058

Prepared For
Richard R Scott
26 Kelleher St
Keene, NH 03431

PROJECT
Cottage Court Application
36 Elliot St
Keene, NH 03431

TITLE
Floor Plans
Zoning
Site Plan

Date:	Revisions:
1.15.25	Planning Board
2.12.25	Planning Board Revisions
-	-

SCALE as noted

DATE 2.12.25

SHEET NUMBER
A1

STAFF REPORT

PB-2025-03 – SITE PLAN REVIEW– DOUGLAS CUDDLE TOY WAREHOUSE & OFFICE – 0 BLACK BROOK RD

Request:

Applicant Fieldstone Land Consultants PLLC, on behalf of owner Douglas Company Inc., proposes the construction of a ~98,323-sf office and warehouse building on two parcels at 0 Black Brook Rd (TMP#s 221-023-000 & 221-024-00). Waivers are requested from Section 21.14.1, Section 21.14.2, Section 21.14.3.D, and Section 23.5.4.9 of the LDC related to architectural and visual appearance, parking in front of the building, and driveway width. The parcel is ~5.33-ac in size and is located in the Corporate Park District.

Background:

The subject properties located at 0 Black Brook Rd are two existing undeveloped parcels located to the east of the Black Brook Rd cul-de-sac, directly north of Black Brook. The parcels are 5.3 ac and 7.24 ac in size. The properties have street access from Black Brook Rd and are surrounded by parcels in the Corporate Park zoning district. The two parcels will be merged to accommodate the development.

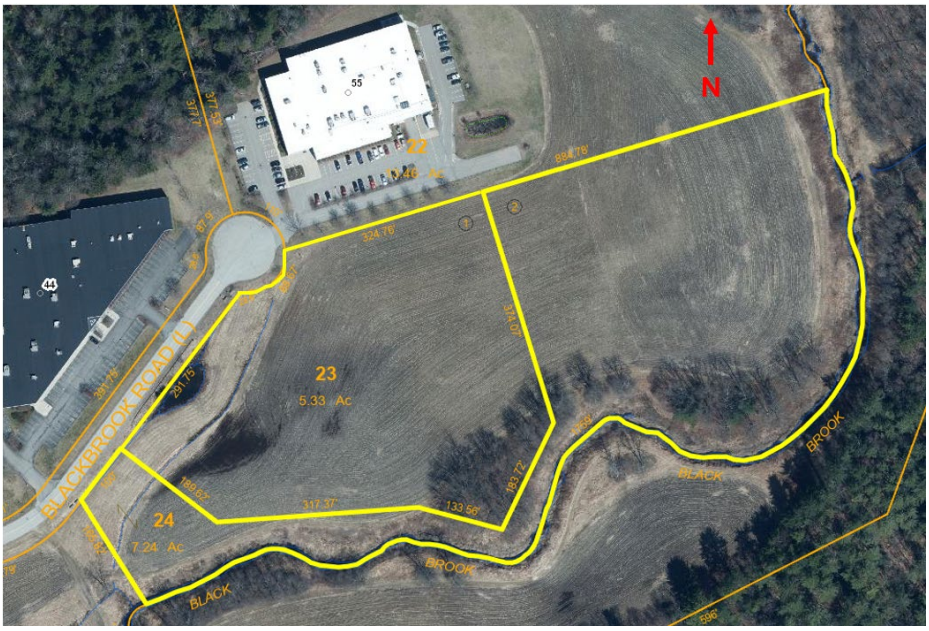


Fig 1. Subject parcels outlined in yellow.

The purpose of this application is to construct an approximately 98,000 SF warehouse and distribution facility with associated office space and site improvements to accommodate the relocation of Douglas Cuddle Toys from their current location on Krif Rd. Site features will include parking areas, drive aisles and stormwater management systems. The proposed development will be constructed in two phases. Phase 1 consists of the middle portion of the building, which is approximately 57,000 SF and the associated site improvements. Phase 2 will consist of the larger office space and warehouse, approximately 41,000 SF of building area. A tentative phasing schedule anticipates phase 1 beginning in 2025 and phase 2 beginning roughly 4-5 years after the completion of phase 1, depending on the market conditions. A condition of approval related to active and substantial development of the phased project is suggested in the recommended motion.

The proposed development will require a Floodplain Development Permit and flood compensation as well as an Alteration of Terrain Permit from NHDES for disturbance greater than 100,000 SF.

The applicant has requested waivers from section 21.14.1.B, 21.14.2.A, and 21.14.3.D of the Land Development Code related to architectural and visual appearance and parking in front of the building. A fourth waiver related to driveway width was also submitted; however, per Section 23.5.4.A.9, the Planning Board can approve the request without a waiver if a geometric analysis of the driveway entrance is reviewed and approved by the City Engineer.

Determination of Regional Impact:

After reviewing the application, staff have made a preliminary evaluation that the proposed Site Plan 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 exemptions from submitting a historic evaluation and traffic analysis. After reviewing each request, staff have made the determination that the requested exemptions would have no bearing on the merits of the application and recommend that the Board accept the application as "complete."

Application Analysis: The following is a review of the Planning Board development standards relevant to this application.

21.2 Drainage: The plan proposes a combination closed drainage system in the form of two underground chamber systems and 11 catch basins as well as an open drainage culvert that will drain to a treatment grass swale along the northern portion of the building area. Overflow outlets for the chamber system are proposed to drain into the flood compensation area and are proposed to be installed above 100-year flood plain elevation. A soil berm will sperate the drainage system and the flood compensation system. The applicant states in their narrative that the system has been designed to meet requirements of the NHDES Alternation of Terrain Permit and City of Keene Regulations. The submitted stormwater report states that the proposed system will reduce pre-condition flow rate and volume of stormwater on the property. It appears that this standard has been met.

21.3 Sediment & Erosion Control: The plan proposes the installation of temporary erosion control measures such as silt fence around most of the site to protect Black Brook and the wetland system located to the west of the development area from siltation during site development. The applicant states in their narrative that a stabilized construction entrance will be utilized in addition to stone check dams, erosion matting, and rip-rap stone aprons as needed. It appears that this standard has been met.

21.4 Snow Storage & Removal: The Site Plan proposes snow storage areas around the perimeter of the parking areas. These areas do not appear to conflict with proposed drainage structures. It appears that this standard has been met.

21.5 Landscaping: The proposed landscaping includes the installation of 12 trees, 57 shrubs, and a mix of perennial flowers in the parking area landscape islands. These flowers include daylilys, hostas, and coneflower. The proposed shrubs include rhododendrons, dogwood, and winterberry. The plan proposes to install red maple and hawthorn trees

around the parking areas. The plan also proposes to install weeping willows trees within the flood compensation area. Over 3,476 SF of parking area landscaping is proposed where 217 SF of landscaping is required.

The applicant requests the approval of an alternative landscape plan, as allowed per section 9.4.5.B.5 of the Land Development Code. The applicant states that the proposed design of the parking areas are in keeping with the industrial nature of the use. This includes the omission of planting islands at midway points for parking rows and 8' deep planting areas in some locations. The Planning Board will need to determine if the proposed alternative landscaping design generally meets the intent of section 9.4.5 of the Land Development Code.

21.6 Screening: The applicant states in their narrative that the proposed dumpster area will be contained in a dumpster enclosure and that it will not be visible from the public right-of-way. The HVAC system for the project has not been designed but will be set at least 10' from the roof edge and comply with all screening standards. It appears that this standard has been met.

21.7 Lighting: The plan proposes the installation of 26 light fixtures including 4 pole mounted parking area lights and 22 wall mounted sconce light fixtures. The pole lights will be installed 20' from grade. The applicant states in their narrative that all proposed light fixtures will be full cut-off LEDs with motion sensor activated security lighting after hours. All proposed lighting will be 3000K color temperature and have a color rendering index greater than 70. It appears that this standard has been met.

21.8 Sewer & Water: The applicant states in their narrative that the project will connect to City water and sewer service located at Black Brook Rd. The proposed building will be fully sprinkled with a separate fire service line from the water main. A NHDES Sewer Connection Permit will be required. It appears that this standard has been met.

21.9 Traffic & Access Management: The applicant states in their narrative that all site access will come from Black Brook Rd. This includes the creation of a new street access point for this site and the utilization of an existing access point on the adjacent property to the north where there is an existing shared driveway easement.

A 25' wide, two-way drive aisle is proposed to circumnavigate the site and connect the parking areas, loading docks, and Black Brook Rd. Truck turning exhibits have been submitted to demonstrate that tractor trailers and emergency vehicles can navigate the site. A pavement width of 31' at the property line is proposed where 25' of pavement is the normally allowed maximum. The truck turning exhibit serves as a geometric analysis of the proposed pavement width and staff believe that it is appropriate.

The proposal includes pedestrian pathways around the building for both phases of the project. Temporary pedestrian connections from the parking areas to the phase 1 warehouse will be removed during construction of phase 2. A bike rack is proposed to be installed near the entrance of the office building addition that is part of phase 2. A mix of cape cod and granite curbing is proposed to protect pedestrians, landscaping, and the building from vehicles encroaching past the end of parking spaces.

The proposed warehouse and office use requires 57 parking spaces. The plan proposes to provide 74 parking spaces, including 3 accessible spaces and 2 van spaces. Parking areas are located on the western side and eastern side of the property.

The applicant has requested an exemption from submitting a traffic analysis and has provided ITE trip generation estimates to support the request. The manual estimates 77.7 trips per weekday with approximately 42 trips per each peak hour. The applicant states in their narrative that the Black Brook Corporate Park was designed to accommodate traffic associated with larger-scale business uses. The Douglas Company is currently seeing 5 trucks per day and around 25 trucks per week at their current location on Krif Rd. It appears that this standard has been met.

21.10 Filling & Excavation: Earthwork associated with site development will utilize existing fill on site as the flood compensation area is created. Any leftover fill will be hauled off site. Black Brook Rd is located adjacent to NH RT 12 which provides a clear path for construction vehicles with limited impact to the surrounding neighborhood. It appears that this standard has been met.

21.11 Surface Waters & Wetlands: The site is adjacent to Black Brook along its southern boundary. There is a small, narrow wetland that runs along the western portion of the property near Black Brook Rd. The proposed site development does not include impact to any surface water or wetland system. The only proposed development within the wetland buffer is related to the construction of required flood compensation and is a permitted use within the buffer. It appears that this standard has been met.

21.12 Hazardous & Toxic Materials: The applicant states in their narrative that the proposed use does not utilize hazardous or toxic materials. It appears that this standard has been met.

21.13 Noise: The applicant states in their narrative that the noise generated by the use will be similar to surrounding businesses. The site is located in an area suitable for the intended use and will not conflict with other properties. It appears that this standard has been met.

21.14 Architecture & Visual Appearance: The applicant states in their narrative that the proposed building will be a gray and cream metal panel structure with split concrete blocks along the bottom four feet. The applicant submitted a video that shows the proposed colors; a still frame from the video that shows the office portion of the building that would face east is shown in Figure 2, along with the west building elevation. The building façade is broken up with modules of vertical stacks of windows that are located approximately 12 ft apart. Each window module is spaced approximately 40 ft apart.

The applicant has submitted three waiver requests related to this standard. The first is a waiver from section 21.14.1.B for the massing and scale of the building. This standard states, *"For buildings of 150-ft in length of more, facades shall be divided into multiple "modules," expressed through significant architectural changes such as a change in materials, a change in pattern elements (e.g. fenestration, columns, pilasters, etc.), or a change in building setback through recesses or projections. Such modules shall be no wider than 50-ft."*

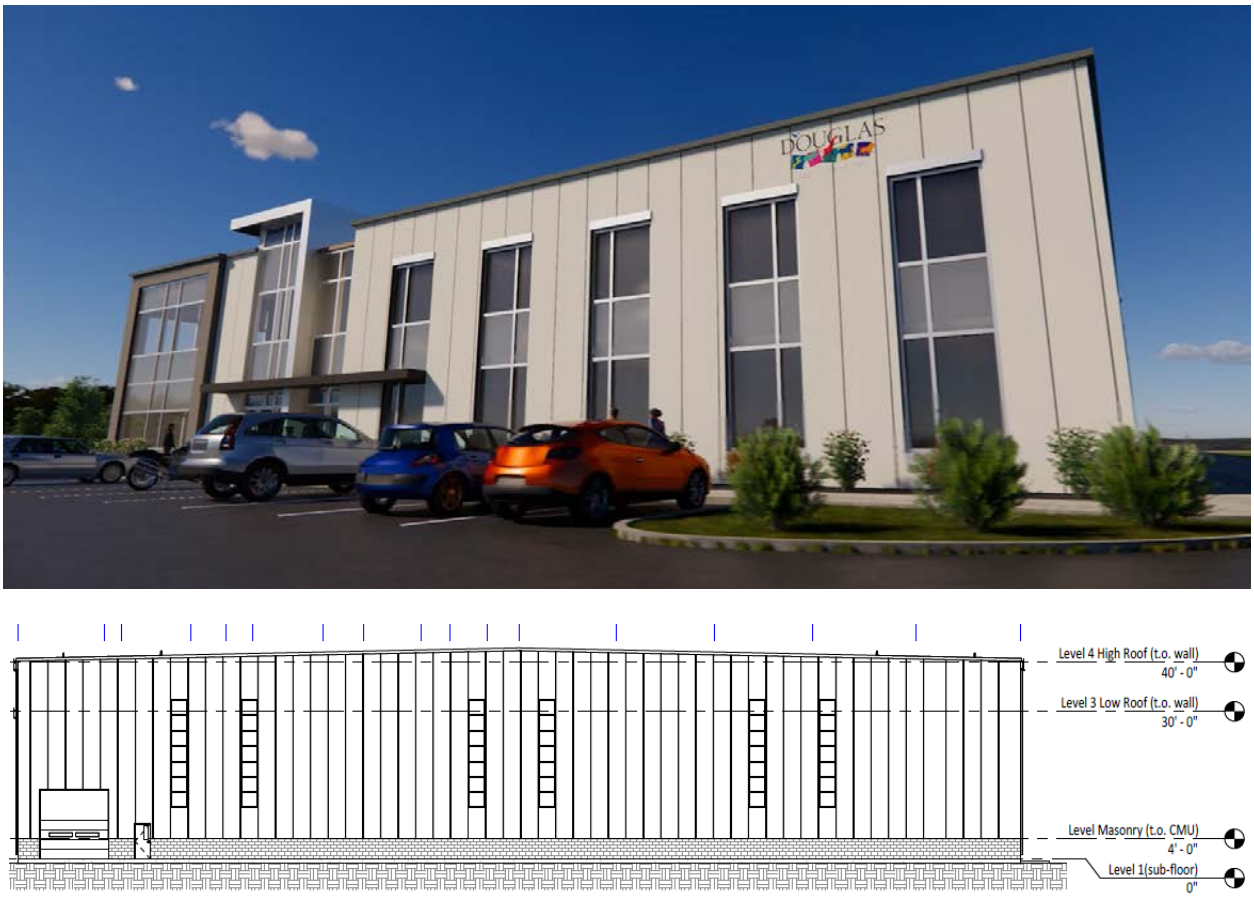


Fig. 2. Color rendering of the east façade of the building (top) and the west building elevation of Phase 1 (bottom).

The second waiver request pertains to Section 21.14.2.A of the LDC, which requires the architectural identity of the building to avoid a uniform appearance of the building. The standard states, *"Front facades and exterior walls shall be articulated to express an architectural identity to avoid a uniform appearance, and architectural details shall give the impression of being integral to and compatible with the overall design."*

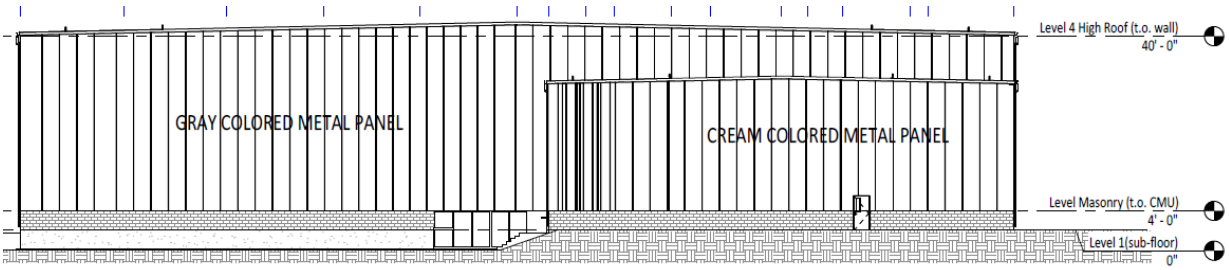


Fig. 3 South east building elevation of Phase 1.

The third waiver is from section 21.14.3.D for parking to be located in the front of the building. The standard states, *"All required off-street parking shall be to the side or rear of*

buildings on the proposed site…" Figure 4 shows the location of the proposed parking in front of the building.

The Board should use the Planning Board waiver criteria listed in Section 26.12.14 of the LDC, listed below, to evaluate each of the waiver requests:

"1. Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulations; or,

2. Specific circumstances relative to the site plan, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.

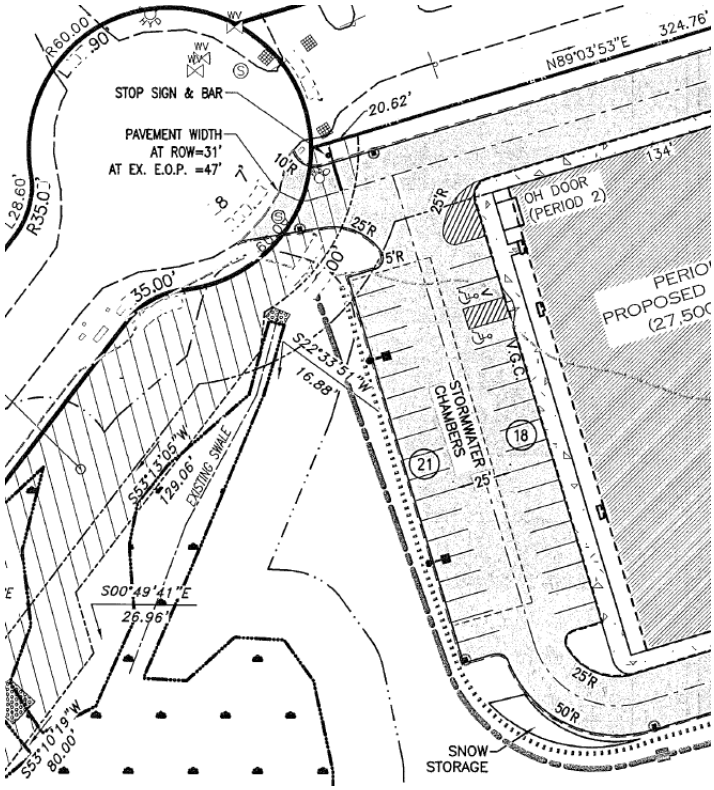


Fig. 4. Parking area in front of building.

3. In granting a waiver the Planning Board may require any mitigation that is reasonable and necessary to ensure that the spirit and intent of the standard being waived will be preserved, and to ensure that no increase in adverse impacts associated with granting the waiver will occur."

Recommended Motions:

If the Board is inclined to grant the requested waivers and approve this request, the following language is recommended for the motions:

Waiver Request #1:

"Grant a waiver from Section 21.14.1.B "Massing and Scale" of the Land Development Code to allow a building of 150-ft in length or more to have facades that are not divided into multiple "modules."

Waiver Request #2:

"Grant a waiver from Section 21.14.2.A "Visual Interest" of the Land Development Code to allow for a uniform appearance of the building."

Waiver Request #3:

"Grant a waiver from Section 21.14.3.D "Site Design and Relationship to Surrounding Community" of the Land Development Code to allow for off street parking to be located in front of the building where parking is normally required to be located on the sides and rear of buildings."

Overall Request

"Approve PB-2025-03 as shown on the plan identified as "Douglas Company, Inc. Warehouse Facility" prepared by Fieldstone Land Consultants at a scale of 1 in. = 50 ft. dated January 17, 2025 and last revised February 10, 2025 and the architectural elevations prepared by BTH Architects at a scale of 1/16 in. = 1 ft. dated January 15, 2025 with the following conditions:

1. Prior to final approval and signature by the Planning Board Chair, the following conditions precedent shall be met:

    A. The owner's signature shall appear on the plan.

    B. Submittal of security for landscaping, sedimentation and erosion control and "as built" plans in a form and amount acceptable to the City Engineer.

    C. The Alteration of Terrain Permit number shall appear on the plan set.

    D. Submittal of five full-size paper copies and one digital copy of the final plan.

2. Subsequent to final approval and signature by the Planning Board Chair, the following conditions shall be met:

    A. Prior to the commencement of site work, the Community Development Department shall be notified when all erosion control measures are installed and the Community Development Director, or their designee, shall inspect the erosion control measures to ensure compliance with this site plan and all City of Keene regulations."

    B. The timeline to achieve Active and Substantial Development for Phase 2 shall be five years and shall commence on the date of issuance of a Certificate of Occupancy for Phase 1.

City of Keene, NH
Site Plan Application

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

SECTION 1: PROJECT INFORMATION

PROJECT NAME: Douglas Company, Inc.

PROJECT ADDRESS(ES): 0 Black Brook Road

TYPE OF APPLICATION BEING SUBMITTED:
■ MAJOR PROJECT APPLICATION
□ MINOR PROJECT APPLICATION

EXISTING OR PREVIOUS USE: Undeveloped Lot	**PROPOSED USE:** Light Industrial - Warehouse facility
GROSS FLOOR AREA OF NEW CONSTRUCTION (in square feet) 98,323 SF	**GROSS FLOOR AREA OF EXISTING BUILDINGS/STRUCTURES** (in square feet) 0
AREA OF PROPOSED NEW IMPERVIOUS SURFACES (in square feet) 144,005 SF	**TOTAL AREA OF LAND DISTURBANCE** (in square feet) 250,000 +/- SF

SECTION 2: CONTACT INFORMATION

PROPERTY OWNER	APPLICANT
NAME/COMPANY: Douglas Company, Inc.	**NAME/COMPANY:** Same as owner
MAILING ADDRESS: Box D, Keene, NH 03431-0716	**MAILING ADDRESS:**
PHONE: 800-992-9002 ext. 1005	**PHONE:**
EMAIL: Sclarke@douglastoys.com	**EMAIL:**
SIGNATURE: John Noonan SEE L.O.A.	**SIGNATURE:**
PRINTED NAME: Scott Clarke	**PRINTED NAME:**

AUTHORIZED AGENT (if different than Owner/Applicant)	FOR OFFICE USE ONLY:
NAME/COMPANY: Fieldstone Land Consultants, PLLC	**TAX MAP PARCEL #(s):** 221-023-000-____-____
MAILING ADDRESS: 45 Roxbury St., Keene, NH 03431	____-____-____-____-____
PHONE: 603-672-5456	**PARCEL SIZE:** 5.33 acr
EMAIL: jenoonan@fieldstonelandconsultants.com	**ZONING DISTRICT:** Corporate Park
SIGNATURE: John Noonan	
PRINTED NAME: John Noonan	**PROJECT #:** PB-2025-03

DATE STAMP:

RECEIVED
JAN 17 2025
By _____

FIELDSTONE
LAND CONSULTANTS, PLLC
Surveying ✦ Engineering
Land Planning ✦ Septic Designs
206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

Site Plan Preliminary Narrative

Douglas Company, Inc.
Light Industrial Facility
Tax Map Parcels 221-023 & 024
Black Brook Road
Keene, New Hampshire

January 17, 2025

Project Narrative:

Fieldstone Land Consultants, on behalf of Douglas Company, Inc., is submitting this narrative as part of the Planning Board Site Plan review application. The proposal consists of merging two building lots, constructing one manufacturing building, one driveway, and associated parking. The building would be 98,323 square feet with office and warehousing space to accommodate the relocation of the existing business, currently on Krif Road. The applicant is looking to construct the building in two phases; Phase 1 would include the middle portion of the building, approximately 57,323 square feet with parking lots, driveways and utilities to service the business. Phase 2 would include a larger office and warehouse expansion on each end of the Phase 1 building. The applicant anticipates the two phases to be built approximately four years apart.

The site is located on Tax Map Parcels 221-023 and 221-024 with the street access from Black Brook Road. The lot size of parcel 221-023 is 5.33 Acres, and parcel 221-024 is 7.24 Acres, creating a merged lot size of 12.57 Acres. The zoning district of both lots is Industrial: Corporate Park (CP). The site is currently owned by Douglas Company, Inc., who purchased the properties to relocate and expand their existing business, which is light manufacturing of toys (stuffed animals). The proposed use would be considered light industrial and allow the applicant to expand their business, while remaining in Keene. The building will be fully sprinklered and provide ADA access into the building from each parking lot. Parking will be provided for staff at the front and rear of the building. The driveway access has been designed to accommodate tractor trailer truck access to the loading docks at the rear of the Phase 1 building. There are two driveway access points proposed with one off the mutual driveway to the north and the second off the cul-de-sac at the end of Black Brook Road. Tractor trailer trucks would utilize the access off the cul-de-sac; passenger cars would utilize both the cul-de-sac entrance and the shared driveway entrance.

The southern border of the property is defined by the Black Brook. A large portion of the site is located within the 100-year flood plain, Zone AE, following the Black Brook water course. The site is also in the City's Surface Water Overlay Protection District with a 30' buffer requirement from the Black Brook and the delineated wetlands. The proposed building and parking lots will encroach the 100-year floodplain and require a Floodplain Development Permit along with FEMA approval. Any fill that is

proposed will be offset by a flood compensation basin that will be based on total volume calculations. The finish floor elevations of the buildings will be a minimum of 1 foot above the 100 Year floodplain elevation (Minimum Finish Floor Elevation = 519.5', Proposed Finish Floor Elevation = 523.0'). The impacts to the wetland 30' buffer will be for flood compensation grading and for stormwater water management grading. There are no proposed structures or pavement within the wetland buffer.

Below is an outline of the Site Development Standards on the application and how each is addressed.

20.2 Drainage & Stormwater Management:
The stormwater is managed according to NHDES Alteration of Terrain standards and will require this permit, as the project impacts more than 100,000 square feet of land. The storm runoff will be treated according to the state standards and utilize subsurface chamber systems to ensure the post development runoff matches or is less than the pre development runoff.

20.3 Sediment and Erosion Control:
Sediment and erosion control measures are outlined and detailed on the site plans. There will be a combination of silt fence, erosion control matting, stone check dams, rip-rap stone aprons, and a stabilized construction entrance as part of the construction plans. These measures are also reviewed under the NHDES Alteration of Terrain permit.

20.4 Snow Storage & Removal
The site is large enough to store snow on site and areas are shown on the plan.

20.5 Landscaping
The site will have landscaping installed per the landscaping plan. The parking lot will have parking islands to provide internal green space and trees have been provided to shade the parking lot. Shrubs have been provided throughout the site. The flood compensation basin will be seeded with pollinator friendly seed mix and willow trees.

20.6 Screening
There is a double dumpster enclosure to the rear of the site. This location is not visible from the public way and the dumpsters will be enclosed in a fence enclosure to keep the area looking neat. HVAC equipment is not designed at this time, but it is noted that it must meet the City screening standards once installed and be setback a minimum of ten feet from the edge of the roofline.

20.7 Lighting
The lighting is shown on the lighting plan and meets the City standards. Wall mounted lights will be used at each unit and two pole mounted lights in the parking lot. All fixtures are energy efficient LEDs that are full-cutoff. It is noted for hours of operation and 50% of the lights will be on motion sensors to provide security lighting. There are no lights proposed near property lines or public ways.

20.8 Sewer & Water
The site will be serviced by municipal water and sewer. The building will be fully sprinklered and the sewer and water will be connected on Black Brook Road. The sewer connection will require a City sewer connection permit and an NHDES Sewer Connection Permit. We will work with City Engineering staff to verify inverts and connection methods prior to submitting these permits applications.

20.9 Traffic & Access Management
All traffic and access to the site will be off the Black Brook Road. This road was designed to handle traffic from the Corporate Park. The proposed driveway will be 24 feet wide and easily accommodate traffic in and out of the site onto the City road.

20.10 Filling & Excavation
This site falls within the 100 year floodplain and will require fill within the floodplain. The fill will be

offset by excavation to provide compensatory storage on site for the floodwaters.

20.11 Surface Water & Wetlands

The property is adjacent to the Black Brook, which defines the southern border. There are delineated wetlands following the brook and along the Black Brook Road. There are no associated impacts to the delineated wetlands and the only work within the buffer is for Floodplain compensation grading.

20.12 Hazardous & Toxic Materials

There are no hazardous or toxic materials associated with the proposed business use.

20.13 Noise

The noise associated with this business would be minimal, and would be similar to the surrounding businesses in the corporate park. There could be noise associated with the business operations, such as truck traffic and emptying of dumpsters. The site is located far enough from other properties and businesses, that noise would not impact other properties or the general public.

20.14 Architecture & Visual Appearance

The building will be a metal panel structure with the bottom 4-feet as split-faced concrete block. The colors of the building will be outlined on the architectural plans, as supplied by the manufacturer of the insulated metal panels. The building façade is broken up by providing vertical stacks of windows.

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www.FieldstoneLandConsultants.com

City of Keene Planning Board

January 17, 2025

Attn: Community Dev. Planner
City of Keene
3 Washington St – 4th Floor
Keene, NH 03431

RECEIVED
JAN 17 2025
By

PB-2025-03

RE: WAIVER REQUEST
Douglas Company, Inc.

Mr. Chairman:

On behalf of our client, Douglas Company, Inc., we are hereby submitting these waiver requests for Planning Board approval. Based on the Community Development preliminary review meeting, we are hereby seeking waivers for following standards in the Land Development Code (LDC):

Waiver #1: ***BUILDING ARCHITECTURE*** § *20.14.1 "Massing/Scale," sub-section B states "For buildings of 150-ft in length of more, facades shall be divided into multiple "modules," expressed through significant architectural changes such as a change in materials, a change in pattern elements (e.g. fenestration, columns, pilasters, etc.), or a change in building setback through recesses or projections. Such modules shall be no wider than 50-ft.".*:

1. *Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulation.*: The proposed building does not have "modules" as presented; however there is a change in pattern elements, based on the window locations along the façade. The use and type of building is well suited to the location in the Corporate Park, and the massing or scale of the building will not adversely impact the neighborhood. The strict conformity would impose an unnecessary monetary and functional hardship on the applicant to have a custom shaped warehouse to meet this standard.
2. *Specific circumstances relative to the site plan, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.*: A large portion of the property is within the 100 year floodplain, and this limits the footprint of the building and site plan layout. In order to change the building setback via recesses and projections, the building footprint would be larger for the same amount of square footage. The projects' footprint to the south is very restrictive based on the floodplain, the compensation required, and the river. The 100 year floodplain is very restrictive and this is a specific circumstance that is relative to the site plan.
3. *In granting a waiver, the Planning Board may require any mitigation that is reasonable and necessary to ensure that the spirit and intent of the standard being waived will be preserved and to ensure that no increase in adverse impacts associated with granting the waiver will occur.*: Based on the use of light industrial and the location of the project in the corporate park zone, we believe that the building style is in harmony with the neighborhood. The buildings are not located in the center of

Keene or in a highly visible location from public City streets. The existing and proposed landscaping will break up the mass of the buildings, as viewed from the City street – Black Brook Road.

Waiver #2: ***BUILDING ARCHITECTURE*** § *20.14.2 "Visual Interest," sub-section A states "Front facades and exterior walls shall be articulated to express an architectural identity to avoid a uniform appearance, and architectural details shall give the impression of being integral to and compatible with the overall design." In addition, sub-section B states "Structures shall have architectural features (e.g. dominant gable ends, cornices, granite sills, arched openings, large windows framed with architecturally consistent trim, etc.) and patterns that provide visual interest at the pedestrian scale, reduce massive aesthetic effects, and harmonize with the City's distinctive architectural identity, unique character, and prevailing scale.":*

1. *Strict conformity…*: As described in Waiver #1, the architectural design and layout is based on providing efficiency in creating a linear building for a warehouse use. The east side of the building, the office, has been designed to meet this requirement by providing articulation and architectural details suitable for an industrial office building. There would be significant hardship on the applicant if all sides of the industrial building had to have these design elements.
2. *Specific circumstances …*: The limiting functions of the 100-year floodplain on the property is a specific circumstance, along with the property being located on the outskirts of the city. The requirement for articulated walls would require that the building footprint be larger, which would require additional fill in the floodplain. The use of light industrial and warehousing, should be considered for the type of architecture warranted in this location. The site development is already hindered by the floodplain, which brings a substantial cost to development as a hardship. The added cost of custom construction for a building of this use would add to that hardship to develop this particular building lot.
3. *In granting a waiver …*: The spirit and intent of the ordinance would be upheld, as the style of buildings would fit the harmony of the corporate park. The landscaping proposed and existing trees to remain, will break up the buildings, as viewed from the public roads. The applicant has provided vertically stacked windows to provide visual interest and the office end of the building meets this requirement.

Waiver #3: **PARKING IN FRONT OF BUILDING** § *20.14.3.D "Site Design and Relationship to Surrounding Community": States All required off-street parking shall be to the side or rear of buildings…:* We are requesting the waiver from the LDC Section 20.14.3.D for the requirement that parking be located to the side or rear of a building. The site has various constraints with the floodplain, floodway, and wetlands located on the property. The parking lots were located on each end of the facility with access aisles along the longest sides of the facility. The location of the parking lot in front of the building will match the surrounding businesses on Black Brook Road.

1. *Specific circumstances …;* The specific circumstance is that the facility is located in the CP District on a dead-end road and all the surrounding businesses have parking in front of the building. The layout will match the harmony of the CP neighborhood.

2. *Granting the waiver …;* The granting of this waiver will not create any adverse impacts to the abutters, community or environment. The parking will be similar to the surrounding businesses.

3. *In granting a waiver …;* If the regulation was enforced with strict conformity, the applicant would have an unnecessary hardship placed upon them. The hardship would be in the form of re-design, a longer timeframe for approvals, construction scheduling, and disturbing more land to place all parking behind the building.

Waiver #4: **DRIVEWAY WIDTH** *Section 23.5.4.9. "Standards for Review," states "Street access for uses other than single family dwellings and two-family dwellings or temporary street access shall not be more than 25-ft wide at the property line and 50-ft wide at the curbline, unless additional width or lanes are required as the result of a traffic study and/or geometric analysis prepared by an NH licensed engineer25-ft wide ."*:

1. Strict conformity…: The driveway as proposed is 31-ft wide at the property line and 45-ft wide tat the curbline. The strict conformity of 25-ft width at the property line would require that the driveway be narrower at the intersection of the property line to offset the curvature of the right-of-way. The other existing driveways in the corporate park all exceed 25-ft in width at the property line.
2. Specific circumstances …: The location of the property at the end of Black Brook results in a driveway intersecting the cul-de-sac circle. To provide adequate width for tractor trailer traffic, the driveway will exceed the width at the right-of-way due to the curvature and 25-ft driveway width. The location and use of the property are the specific circumstances that require a waiver.
3. In granting a waiver …: Granting a waiver of this requirement will not impact the general welfare or safety of the public, and the driveway width will be similar to the adjacent driveways of the abutting businesses.

Thank you for your consideration in granting the waivers outlined above.

Best Regards,
Fieldstone Land Consultants, PLLC

John Noonan
Project Manager

SITE DEVELOPMENT PLANS

DOUGLAS COMPANY, INC.
WAREHOUSE FACILITY

- TAX MAP 221, LOTS 23 & 24 -

(BLACK BROOK ROAD)

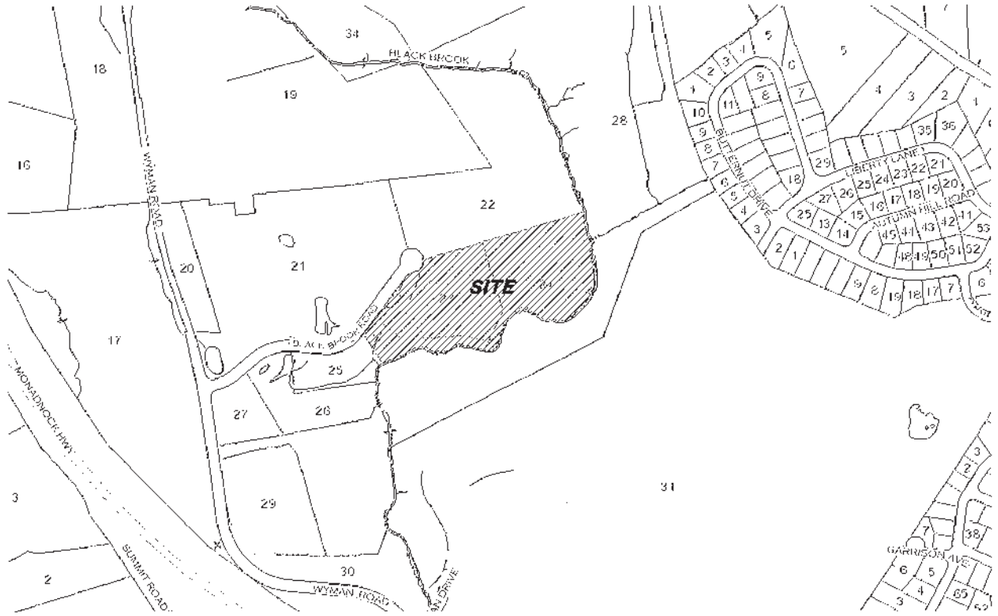
KEENE, NEW HAMPSHIRE

JANUARY 17, 2025

LAST REVISED: FEBRUARY 10, 2025

WILDLIFE PROTECTION NOTES

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2401 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NHB23-1959, DOUGLAS COMPANY, NLOLIFE SPECIES OBSERVATION.
- PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHF&G IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE.
- IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHF&G AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHF&G, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN RSA 1032:94
- THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT



SCALE: 1"=400'

SHEET INDEX

PREPARED FOR:

DOUGLAS COMPANY, INC.

DOUGLAS COMPANY BOX D, KEENE, NH 03431

LAND OF:

DOUGLAS COMPANY, INC.

DOUGLAS COMPANY BOX D, KEENE, NH 03431

PERMITS/APPROVALS REQUIRED: DATE/PERMIT #

1. CITY OF KEENE PLANNING BOARD: STE PLAN APPROVAL: PENDING
2. CITY OF KEENE FLOODPLAIN DEVELOPMENT PERMIT: PENDING
3. CITY OF KEENE BUILDING PERMIT: PENDING
4. CITY OF KEENE VOLUNTARY LOT MERGER: PENDING
5. NHDES SEWER CONNECTION PERMIT: PENDING
6. NHDES ALTERATION OF TERRAIN PERMIT: PENDING
7. FEMA LETTER OF MAP REVISION (LOMR-F) AND ELEVATION CERTIFICATE: PENDING

OWNER'S SIGNATURE:_____ DATE:_____

APPROVED BY THE KEENE, NH PLANNING BOARD FOR PHASE _____

ON DATE: _____

CERTIFIED BY:

811 DigSafe MA-ME-NH-RI-VT

1. THE LOCATION OF THE UTILITIES SHOWN ARE APPROXIMATE IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PRESERVE ALL UTILITY SERVICES.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND COORDINATING WITH ALL JURISDICTIONAL AGENCIES AND UTILITY COMPANIES PRIOR TO AND DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND PROPOSED WORK PRIOR TO CONSTRUCTION

CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION

DIGSAFE.COM

OR DIAL 811

KNOW WHAT'S BELOW

Surveying ϕ Engineering ϕ Land Planning ϕ Permitting ϕ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055

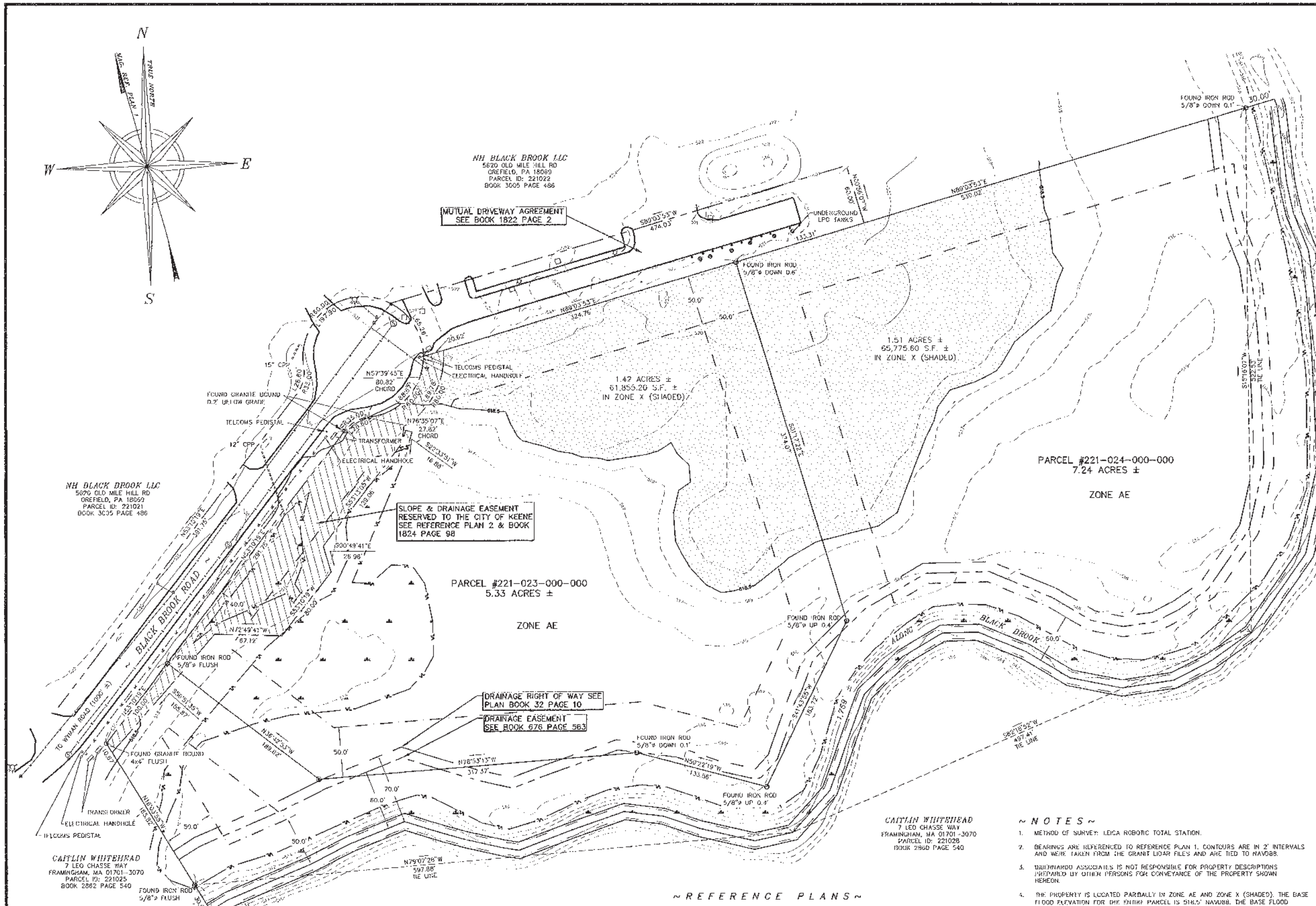
Phone: (603)-672-5456 Fax: (603)-413-5456

www.FieldstoneLandConsultants.com

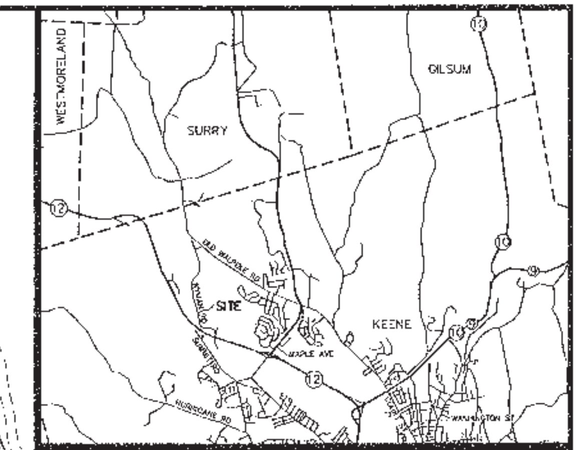
CHAD E. BRANON No. 12191 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 2/10/2025

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	NEWS PER STAFF COMMENTS		CJC	JFM

FILE: 3459CV01A.dwg | PROJ. NO. 3459.01 | SHEET: CV-1 | PAGE NO. 1 OF 14



N
S
E
W
TRUE NORTH
MAG. REF. PLAN 1
NH BLACK BROOK LLC
5620 OLD MILE HILL RD
OREFIELD, PA 18069
PARCEL ID: 221022
BOOK 3005 PAGE 486
MUTUAL DRIVEWAY AGREEMENT
SEE BOOK 1822 PAGE 2
NH BLACK BROOK LLC
5620 OLD MILE HILL RD
OREFIELD, PA 18069
PARCEL ID: 221021
BOOK 3005 PAGE 486
SLOPE & DRAINAGE EASEMENT
RESERVED TO THE CITY OF KEENE
SEE REFERENCE PLAN 2 & BOOK
1824 PAGE 98
PARCEL #221-023-000-000
5.33 ACRES ±
ZONE AE
1.42 ACRES ±
61,855.20 S.F. ±
IN ZONE X (SHADED)
1.51 ACRES ±
65,775.60 S.F. ±
IN ZONE X (SHADED)
PARCEL #221-024-000-000
7.24 ACRES ±
ZONE AE
BLACK BROOK ROAD
TO WYMAN ROAD
ALONG BLACK BROOK
DRAINAGE RIGHT OF WAY SEE
PLAN BOOK 32 PAGE 10
DRAINAGE EASEMENT
SEE BOOK 676 PAGE 563
CAITLIN WHITEHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
PARCEL ID: 221026
BOOK 2860 PAGE 540
CAITLIN WHITEHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
PARCEL ID: 221025
BOOK 2862 PAGE 540
FOUND IRON ROD
5/8"ø DOWN 0.1'
FOUND IRON ROD
5/8"ø DOWN 0.6'
FOUND IRON ROD
5/8"ø UP 0.4'
FOUND IRON ROD
5/8"ø FLUSH
FOUND GRANITE BOUND
4x4" FLUSH
TELCOMS PEDISTAL
ELECTRICAL HANDHOLE
TRANSFORMER
UNDERGROUND LPG TANKS
GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.



~LOCATION MAP~

~LEGEND~

- PROPERTY LINE
- RIGHT OF WAY LINE
- TIE LINE, NOT PROPERTY LINE
- IRON PIN FOUND
- IRON PIN TO BE SET
- UTILITY POLE
- BROOK
- SEWER MANHOLE
- GATE VALVE
- CURB STOP
- CATCH BASIN
- FIRE HYDRANT
- BOLLARD
- LIGHT POLE
- LPG TANK RISER
- WATER LINE
- SEWER LINE
- UNDERGROUND POWER LINE
- DELINEATED WETLANDS
- BUILDING SETBACKS

~NOTES~

1. METHOD OF SURVEY: LEICA ROBOTIC TOTAL STATION.
2. BEARINGS ARE REFERENCED TO REFERENCE PLAN 1. CONTOURS ARE IN 2' INTERVALS AND WERE TAKEN FROM THE GRANIT LIDAR FILES AND ARE TIED TO NAVD88.
3. DIBERNARDO ASSOCIATES IS NOT RESPONSIBLE FOR PROPERTY DESCRIPTIONS PREPARED BY OTHER PERSONS FOR CONVEYANCE OF THE PROPERTY SHOWN HEREON.
4. THE PROPERTY IS LOCATED PARTIALLY IN ZONE AE AND ZONE X (SHADED). THE BASE FLOOD ELEVATION FOR THE ENTIRE PARCEL IS 518.5' NAVD88. THE BASE FLOOD ELEVATION WAS CALCULATED FROM THE FLOOD INSURANCE STUDY VOLUME 1 CHESHIRE COUNTY, NEW HAMPSHIRE (ALL JURISDICTIONS) DATED MAY 23, 2006 BLACK BROOK PROFILE FOUND ON PAGE 71.
5. THE WETLANDS WERE DELINEATED AND LOCATED BY JONATHAN SISSON AT BEAVER TRACKS, LLC. (603.313.4925).
6. ALL UTILITY LINES ARE SHOWN AS APPROXIMATE. NO UNDERGROUND EXPLORATION WAS CONDUCTED BY THIS FIRM. CALL 1-800-DIG-SAFE PRIOR TO CONSTRUCTION. LINES ARE PRESUMED TO RUN IN A STRAIGHT LINE FROM SURFACE STRUCTURE TO SURFACE STRUCTURE.
7. THE PROPERTY IS LOCATED IN THE CORPORATE PARK (CP) ZONE. SEE SHEET TWO FOR DETAILS.
8. GROSS LAND AREA – 12.57 ACRES ± OR 547,549.20 S.F. ±.
9. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WAS OBSERVED DURING THE COURSE OF THE SURVEY.

~REFERENCE PLANS~

1. PLAN ENTITLED "6 LOT SUBDIVISION OF LAND DESCRIBED IN BOOK 1530 PAGE 512 PREPARED FOR KEENE ECONOMIC DEVELOPMENT & REVITALIZATION CORPORTAION 20 CENTRAL SQUARE, SUITE 1, KEENE, NEW HAMPSHIRE 03431", DATED SEPTEMBER 1997. PROJ NO. 6754, RECORDED IN CAB. 12 DR. 3 NO. 90, PREPARED BY CLOUGH, HARBOUR & ASSOCIATES LLP.
2. PLAN ENTITLED "PROPOSED SLOPE & DRAINAGE EASEMENTS PLAN BLACK BROOK ROAD PREPARED FOR KEENE ECONOMIC DEVELOPMENT & REVITALIZATION CORPORATION 20 CENTRAL SQUARE, SUITE 1, KEENE, NEW HAMPSHIRE 03431", DATED NOVEMBER 1997, PROJ NO. 6764, RECORDED IN CAB. 12 DR. 3 NO. 91, PREPARED BY CLOUGH, HARBOUR & ASSOCIATES LLP.
3. PLAN ENTITLED "TWO LOT SUBDIVISION LOCATED AT TAX MAP 919-09, LOT 26.03 KEENE, NEW HAMPSHIRE PREPARED FOR MONADNOCK ECONOMIC DEVELOPMENT CORPORATION 39 CENTRAL SQUARE, SUITE 201, KEENE, NEW HAMPSHIRE 03431", DATED APRIL 2, 2001, PROJ. NO. 10452, RECORDED IN CAB. 12 DR. 6 NO. 150, PREPARED BY CLOUGH, HARBOUR & ASSOCIATES LLP.
4. PLAN ENTITLED "PLAN ASH SWAMP WATERSHED CHESHIRE COUNTY N.H. 1960 PREPARED BY CITY OF KEENE ENG. DEPT.", RECORDED IN PLAN BOOK 32 PAGE 10.

~REFERENCE DEEDS~

1. DEED FROM MONADNOCK ECONOMIC DEVELOPMENT CORPORATION TO NEW ENGLAND INTERCONNECT SYSTEMS, INC. RECORDED IN BOOK 1824 PAGE 98 ON AUGUST 1, 2001.

~ CHAPTER 676:18 SECTION III CERTIFICATION ~

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

JOSEPH A. DIBERNARDO, N.H. L.L.S #963 — 8/24/22 DATE

EXISTING CONDITIONS PLAN
PROPERTY OF

NEW ENGLAND INTERCONNECT SYSTEMS INC

130 NORTH MAIN ST.
LISBON, NH 03585
PARCEL ID: 221023
BOOK 1824 PAGE 98

BLACKBROOK ROAD ~ CHESHIRE COUNTY ~ KEENE, NEW HAMPSHIRE

DIBERNARDO ASSOCIATES, LLC
VT NH
LICENSED LAND SURVEYORS
119 CHURCH STREET
NORTH WALPOLE, NH 03609
802-463-3031 ~ 603-358-5509

STATE OF NEW HAMPSHIRE
No. 963
JOSEPH A. DIBERNARDO
LICENSED LAND SURVEYOR

DATE AUGUST 24, 2022	SCALE 1" = 50'
DRAWN BY JAD	CK'D BY JTW
SURVEYED BY BG	
DWG.NO. 3474-1	SHEET: EX-1

LEGEND:

EXISTING FEATURES
- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EXISTING EASEMENT LINE
- BLACK BROOK

PROPOSED FEATURES
- EDGE OF PAVEMENT
- CURBLINE (CAPE COD BERM)
- ASPHALT PAVED AREA
- BUILDING
- TRAFFIC FLOW (PAINTED ARROWS)
- CONCRETE PAD/SIDEWALK
- HANDICAP PARKING STALL
- 100 YEAR FLOODPLAIN (518.6')
- DELINEATED WETLAND AREAS

PROPOSED FEATURES
- TEMPORARY SILT FENCE
- 2 FT CONTOUR
- 10 FT CONTOUR
- 519.5 SPOT GRADE ELEVATION
- 519.5 519.2 SPOT ELEVATION AT CURB
- STORM WATER DRAINAGE
- DRAIN MANHOLE
- SILT SOCK FOR ALL CATCH BASINS
- TP. 1 L=LEDGE S=WATER ELEV. SOIL TEST PIT
- PROPOSED SANITARY SEWER
- CULVERT W/ END SECTION & RIP-RAP
- HYDRANT, GATE VALVE & WATER MAIN
- G.V.
- GAS LINE, PROPANE
- UGE ELECTRICAL TRANSFORMER & UNDERGROUND
- POLE & BUILDING MOUNTED LIGHTS
- SIGN

PERMITS/APPROVALS REQUIRED: DATE/PERMIT #

1. CITY OF KEENE PLANNING BOARD: SITE PLAN APPROVAL
2. CITY OF KEENE FLOODPLAIN DEVELOPMENT PERMIT:
3. CITY OF KEENE BUILDING PERMIT:
4. CITY OF KEENE VOLUNTARY LOT MERGER:
5. NHDES SEWER CONNECTION PERMIT:
6. NHDES ALTERATION OF TERRAIN PERMIT:
7. FEMA LETTER OF MAP REVISION (LOMR-F) AND ELEVATION CERTIFICATE:

TOTAL PROPOSED BUILDING (98,323 S.F.)

221021
NH BLACK BROOK LLC
5620 OLD MILE HILL RD
OREFIELD, PA 18069
BK 3005 PG 486

LOT 1
12.57 ACRES
547,549 SQ.FT.

PERIOD 1 PROPOSED BUILDING (97,323 S.F.)

PERIOD 2 PROPOSED BUILDING (27,500 S.F.)

PERIOD 2 PROPOSED OFFICE BUILDING (13,500 S.F.)

CARDBOARD COMPACTOR

DUMPSTER

STORMWATER CHAMBERS

SNOW STORAGE

BIKE RACK

PROPOSED 100 YEAR FLOODPLAIN ELEV=518.6'

FLOOD COMPENSATION AREA

SLOPE & DRAINAGE EASEMENT RESERVED TO THE CITY OF KEENE SEE REFERENCE PLAN 2 & BOOK 1824 PAGE 98

MUTUAL DRIVEWAY AGREEMENT SEE BOOK 1822 PAGE 2

STOP SIGN & BAR

PAVEMENT WIDTH AT ROW=31' AT EX. E.O.P. =43'

BLACK BROOK ROAD

TO WINCHESTER ROAD (1000' ±)

221021
NH BLACK BROOK LLC
5620 OLD MILE HILL RD
OREFIELD, PA 18069
BK 3005 PG 486

221025
CAITLIN WHITHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
BK 2862 PG 543

221028
CAITLIN WHITHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
BK 2860 PG 540

DRAINAGE RIGHT OF WAY SEE PLAN BOOK 37 PAGE 10

DRAINAGE EASEMENT SEE BOOK 676 PAGE 563

CAPE COD BERM

CONSTRUCT SOIL BERM

SIDEWALK W/ V.G.C.

FOUND IRON ROD 5/8"ø FLUSH

FOUND IRON ROD 5/8"ø NUSH

20' WETLAND BUFFER

ZONE X
ZONE AE

OWNER SIGNATURE

OWNER: _____ DATE: _____

APPROVED BY THE KEENE PLANNING BOARD

ON _____ CERTIFIED BY

CHAIRMAN: _____ AND

SECRETARY: _____

PARKING REQUIREMENTS:

PARKING: (TABLE 9-1)

WAREHOUSE = 1 SP / 2,000 SF GFA + 4 SP / 1,000 SF GFA OF OFFICE SPACE

85,680 SF / 2,000 SF = 42.4
13,350 SF (OFFICE) /1,000 SF = 13.3

TOTAL REQUIRED 57 SPACES
TOTAL PROVIDED 74 SPACES

A.D.A. SPACES REQ'D: 74 SPACES = 3 A.D.A., 1 BEING A.D.A VAN ACCESSIBLE

A.D.A. PROVIDED: 5 SPACES, 3 REGULAR + 2 VAN SPACES

N

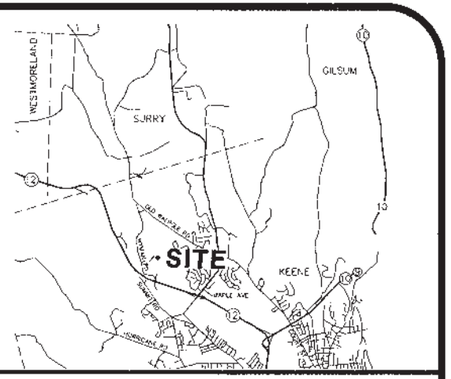
FLC

MAY 2025

GRAPHIC SCALES

50' 25' 0 50' 100' 150'

IMPERIAL 1"=50'



NOTES:

1. THE OWNER OF RECORD FOR PARCEL 221-023 & 024 IS NEW ENGLAND INTERCONNECT SYSTEMS, INC. OF 130 NORTH MAIN ST. LISBON, NH 03585.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A SITE LAYOUT FOR A WAREHOUSE FACILITY WITH OFFICE SPACE AND ASSOCIATED SITE IMPROVEMENTS ON TAX MAP 221 PARCELS 023 & 024 AS SHOWN. THE PROPOSAL IS BASED ON BOTH LOTS BEING MERGED INTO ONE LOT.
3. ZONING FOR THE PARCEL IS CORPORATE PARK (CP). REQUIREMENTS INCLUDE:

   MINIMUM LOT AREA: 2 ACRES (AFTER MERGER LOT = 12.57 ACRES)
   MINIMUM LOT WIDTH: 200 FT.
   MINIMUM FRONTAGE: 150 FT. (AFTER MERGER FRONTAGE = 599.02')
   MINIMUM FRONT SETBACK: 40 FT.
   MINIMUM SETBACKS: 50 FT. REAR AND SIDE (40' FOR ONE SIDE W/OUT PARKING)
   MAXIMUM BUILDING & IMPERVIOUS COVERAGE: 80%
   MIN. GREEN/OPEN SPACE: 20%
   MAX. BUILDING HEIGHT: 60 FT.

   PROPOSED:
   IMPERVIOUS COVERAGE (BUILDING INCLUDED) = 33.7%
   GREEN/OPEN SPACE = 66.3%
   BUILDING HEIGHT = 40 FT.
4. THE BOUNDARY AND BASE PLAN INFORMATION SHOWN IS FROM SURVEY DATA PREPARED BY BERNARDO ASSOCIATES, LLC. THE UTILITIES LOCATED IN BLACK BROOK ROAD ARE COMBINED FROM DIBERNARDO ASSOCIATES, LLC. SURVEY AND INFORMATION FROM "ASBUILT PLAN, BLACK BROOK ROAD" BY CLOUGH, HARBOUR & ASSOCIATES LLP, DATED 3/28/00.
5. THE TOPOGRAPHIC ELEVATIONS ARE BASED ON GRANIT LIDAR CONTOURS AND NAVD88 DATUM.
6. WETLANDS SHOWN WERE DELINEATED BY JONATHAN SESSION, CWS, CSS, OF BEAVER TRACKS, LLC. WETLANDS WERE VERIFIED BY CHRISTOPHER A. GUIDA BY FIELDSTONE LAND CONSULTANTS, PLLC.
7. THE PROPERTY IS LOCATED PARTIALLY IN ZONE AE AND ZONE X. THE BASE FLOOD ELEVATION FOR THE ENTIRE PARCEL IS 518.6' NAVD88. THE BASE FLOOD ELEVATION WAS CALCULATED USING ON-SITE TOPOGRAPHY. THE BASE FLOODWAY IS PER FEMA FIRMETTE 33005C0954G DATED MAY 23, 2006.
8. FACILITY TO BE SERVICED BY MUNICIPAL WATER AND SEWER ON BLACK BROOK ROAD.
9. ALL BUILDINGS WILL HAVE FIRE SUPPRESSION SPRINKLER SYSTEMS AND EXISTING FIRE HYDRANTS ARE LOCATED ON BLACK BROOK ROAD, ALONG WITH ONE PROPOSED FIRE HYDRANT.
10. CONSTRUCTION OF PERIOD 1 SHOWS VESTING AND SUBSTANTIAL COMPLETION OF THE PROJECT. IT IS PLANNED FOR PERIOD 2 TO START CONSTRUCTION 4 YEARS AFTER PERIOD 1. THIS IS BASED ON MARKET CONDITIONS AND IS SUBJECT TO CHANGE.
11. ALL MATERIAL HAULED OFFSITE SHALL USE BLACK BROOKE RD. TO NH. ROUT 12. AN NHDOT AND CITY DPW PERMIT IS REQUIRED FOR OVER 8 TONS OF HAULED MATERIAL

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	REVS PER STAFF COMMENTS		CJC	JEN

MASTER SITE PLAN

TAX MAP PARCEL 221-023 & 221-024
(BLACK BROOK ROAD)
KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.
DOUGLAS COMPANY BOX D, KEENE, NH 03431

SCALE: 1" = 50' JANUARY 17, 2025

Surveying ✦ Engineering ✦ Land Planning ✦ Permitting ✦ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055
41 Roxbury Street, Keene, NH 03431
Phone: (603) 672-5456 Fax: (603) 413-5456
www.FieldstoneLandConsultants.com

FILE: 3459SP01A.dwg | PROJ. NO. 3459.01 | SHEET: MP-1 | PAGE NO. 1 OF 1

LEGEND:

EXISTING FEATURES

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EXISTING EASEMENT LINE
- BLACK BROOK

PROPOSED FEATURES

- EDGE OF PAVEMENT
- CURBLINE (CAPE COD BERM)
- ASPHALT PAVED AREA
- BUILDING
- TRAFFIC FLOW (ADA PAINTED ARROWS)
- CONCRETE PAD/SIDEWALK
- HANDICAP PARKING STALL
- 100 YEAR FLOODPLAIN (518.5')
- DELINEATED WETLAND AREAS

PROPOSED FEATURES

- TEMPORARY SILT FENCE
- 2 FT. CONTOUR
- 10 FT. CONTOUR
- SPOT GRADE ELEVATION
- SPOT ELEVATION AT CURB
- STORM WATER DRAINAGE
- DRAIN MANHOLE
- SILT SOCK FOR ALL CATCH BASINS
- TP-1 SOIL TEST PIT
- EDGE SW=WATER ELEV
- PROPOSED SANITARY SEWER
- CULVERT w/ END SECTION & RIP-RAP
- HYDRANT, GATE VALVE & WATER MAIN
- GAS LINE, PROPANE
- ELECTRICAL TRANSFORMER & UNDERGROUND
- POLE & BUILDING MOUNTED LIGHTS
- SIGN

PERMITS/APPROVALS REQUIRED:

1. CITY OF KEENE PLANNING BOARD: SITE PLAN APPROVAL
2. CITY OF KEENE FLOODPLAIN DEVELOPMENT PERMIT:
3. CITY OF KEENE BUILDING PERMIT:
4. CITY OF KEENE VOLUNTARY LOT MERGER:
5. NHDES SEWER CONNECTION PERMIT:
6. NHDES ALTERATION OF TERRAIN PERMIT:
7. FEMA LETTER OF MAP REVISION (LOMR-F) AND ELEVATION CERTIFICATE:

PERIOD 1 TOTAL PROPOSED BUILDING (57,323 S.F.)

221021
NH BLACK BROOK LLC
5620 OLD MILE HILL RD
OREFIELD, PA 18069
BK 3005 PG 486

S.L.O.P.E. & DRAINAGE EASEMENT RESERVED TO THE CITY OF KEENE SEE REFERENCE PLAN 2 & BOOK 1824 PAGE 98

LOT 1
12.57 ACRES
547,549 SQ.FT.

PROPOSED 100 YEAR FLOODPLAIN ELEV=518.5'

PERIOD 1 PROPOSED BUILDING (57,323 S.F.)

PERIOD 1 ASPHALT SIDEWALK

CARDBOARD COMPACTOR

DUMPSTER

PERIOD 1 AS S/W

STORMWATER CHAMBERS

SNOW STORAGE

BIKE RACK

MUTUAL DRIVEWAY AGREEMENT SEE BOOK 1822 PAGE 2

STOP SIGN & BAR

PAVEMENT WIDTH AT ROW=31' AT EX. E.O.P. =47'

SIDEWALK W/ V.G.C.

CAPE COD BERM

CONSTRUCT SOIL BERM

SNOW STORAGE

FLOOD COMPENSATION AREA

FLOOD COMPENSATION AREA

ZONE X
ZONE AE

ZONE A
ZONE AE

BLACK BROOK ROAD

TO WYMAN ROAD (1000' ±)

EASE. DRAINAGE EASEMENT

EASE. SPILLWAY

WETLAND FLAG

WETLAND BOUNDARY

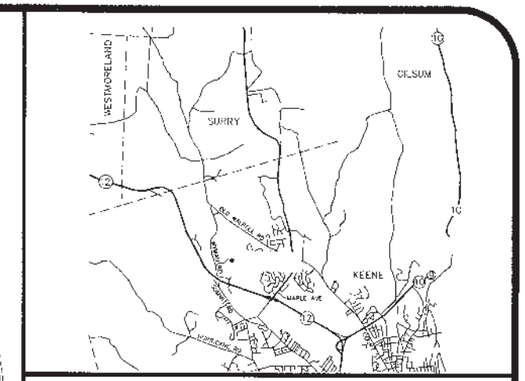
DRAINAGE RIGHT OF WAY SEE PLAN BOOK 33 PAGE 10

DRAINAGE EASEMENT SEE BOOK 675 PAGE 563

221025
CAITLIN WHITEHEAD
7 LO CHASSE WAY
FRAMINGHAM, MA 01701-3079
BK 7882 PG 540

221028
CAITLIN WHITEHEAD
7 LO CHASSE WAY
FRAMINGHAM, MA 01701-3079
BK 2850 PG 540

GRAPHIC SCALES
50' 25' 0 50' 100'
IMPERIAL: 1"=50'



NOTES:

1. THE OWNER OF RECORD FOR PARCEL 221-023 & 024 IS NEW ENGLAND INTERCONNECT SYSTEMS, INC. OF 130 NORTH MAIN ST., LISBON, NH 03585.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A SITE LAYOUT FOR A WAREHOUSE FACILITY WITH OFFICE SPACE AND ASSOCIATED SITE IMPROVEMENTS ON TAX MAP 221 PARCELS 023 & 024 AS SHOWN. THE PROPOSAL IS BASED ON BOTH LOTS BEING MERGED INTO ONE LOT.
3. ZONING FOR THE PARCEL IN CORPORATE PARK (CP). REQUIREMENTS INCLUDE:

   MINIMUM LOT AREA: 2 ACRES (AFTER MERGER LOT = 12.57 ACRES)
   MINIMUM LOT WIDTH: 200 FT.
   MINIMUM FRONTAGE: 130 FT. (AFTER MERGER FRONTAGE = 509.02')
   MINIMUM FRONT SETBACK: 40 FT.
   MINIMUM SETBACKS: 50 FT. REAR AND SIDE (40' FOR ONE SIDE W/OUT PARKING)
   MAXIMUM BUILDING & IMPERVIOUS COVERAGE: 80%
   MIN. GREEN/OPEN SPACE: 20%
   MAX. BUILDING HEIGHT: 60 FT.

   PROPOSED:
   IMPERVIOUS COVERAGE (BUILDING INCLUDED) = 26.3% (144,095 SF)
   GREEN/OPEN SPACE = 73.7% (399,710 SF)
   BUILDING HEIGHT = 40 FT.
4. THE BOUNDARY AND BASE PLAN INFORMATION SHOWN IS FROM SURVEY DATA PREPARED BY DIBERNARDO ASSOCIATES, LLC.
5. THE TOPOGRAPHIC ELEVATIONS ARE BASED ON GRANIT LIDAR CONTOURS AND NAVD88 DATUM.
6. WETLANDS SHOWN WERE DELINEATED BY JONATHAN SISSON, CWS, CSS, OF BEAVER TRACKS, LLC. WETLANDS WERE VERIFIED BY CHRISTOPHER A. GUIDA BY FIELDSTONE LAND CONSULTANTS, PLLC.
7. THE PROPERTY IS LOCATED PARTIALLY IN ZONE AE AND ZONE X. THE BASE FLOOD ELEVATION FOR THE ENTIRE PARCEL IS 518.5' NAVD88. THE BASE FLOOD ELEVATION WAS CALCULATED USING ON-SITE TOPOGRAPHY. THE BASE FLOODWAY IS PER FEMA FIRMETTE 33090C0254J DATED MAY 23, 2006.
8. FACILITY TO BE SERVICED BY MUNICIPAL WATER AND SEWER ON BLACK BROOK ROAD.
9. ALL BUILDINGS WILL HAVE FIRE SUPPRESSION SPRINKLER SYSTEMS AND EXISTING FIRE HYDRANTS ARE LOCATED ON BLACK BROOK ROAD, ALONG WITH ONE PROPOSED HYDRANT ON SITE.

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	REVS PER STAFF COMMENTS		CJC	JEN

PERIOD 1 - SITE PLAN

TAX MAP PARCEL 221-023 & 221-024
(BLACK BROOK ROAD)
KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.
DOUGLAS COMPANY BOX D, KEENE, NH 03431

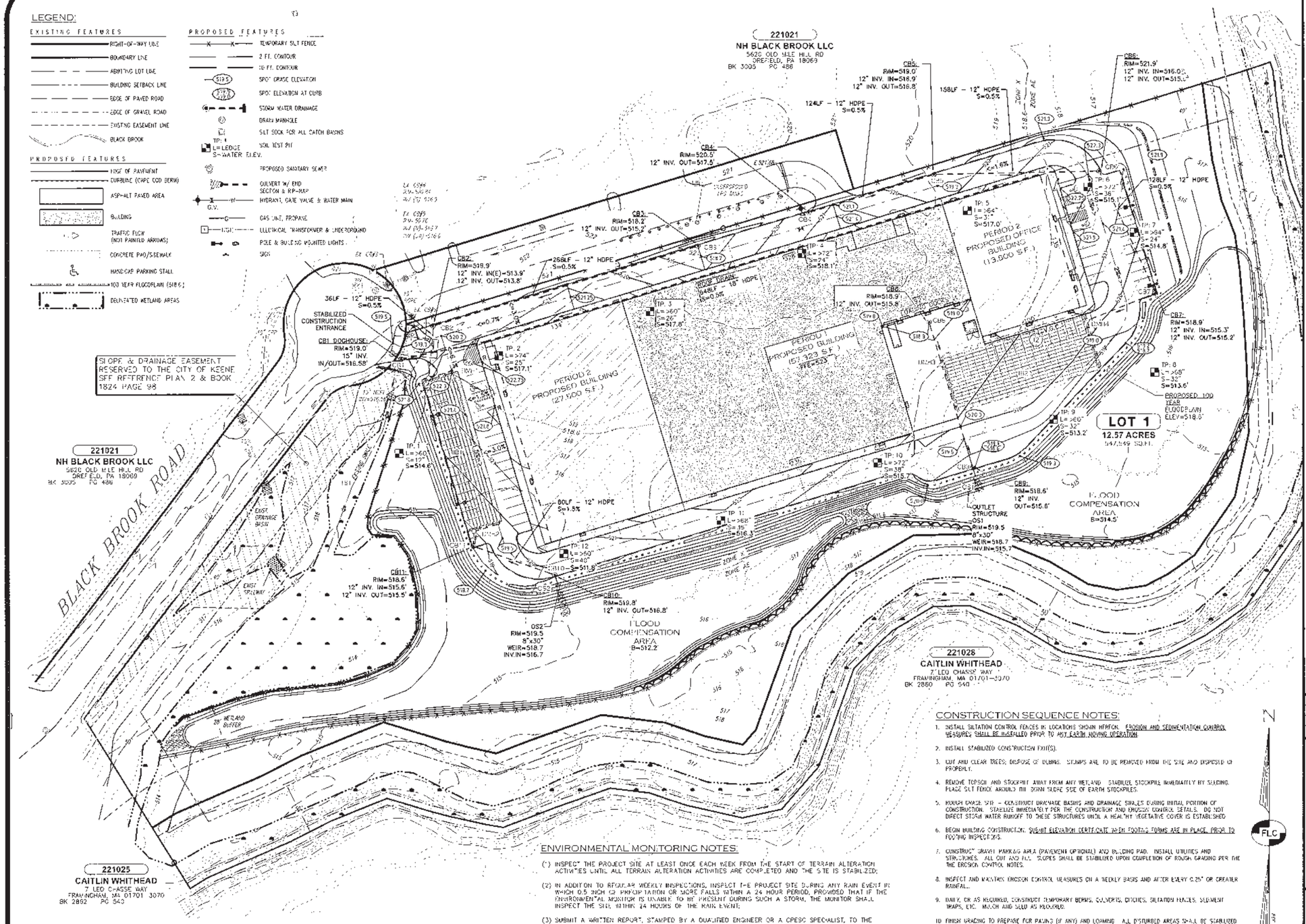
SCALE: 1" = 50' JANUARY 17, 2025

Surveying ✦ Engineering ✦ Land Planning ✦ Permitting ✦ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055
45 Roxbury Street, Keene, NH 03431
Phone: (603) 672-5456 Fax: (603) 413-5456
www.fieldstonelandconsultants.com

FILE: 3459SP01A.dwg | PROJ. NO. 3459.01 | SHEET: SP-1 | PAGE NO. 1 OF 14



ENVIRONMENTAL MONITORING NOTES:

(1) INSPECT THE PROJECT SITE AT LEAST ONCE EACH WEEK FROM THE START OF TERRAIN ALTERATION ACTIVITIES UNTIL ALL TERRAIN ALTERATION ACTIVITIES ARE COMPLETED AND THE SITE IS STABILIZED;

(2) IN ADDITION TO REGULAR WEEKLY INSPECTIONS, INSPECT THE PROJECT SITE DURING ANY RAIN EVENT IN WHICH 0.5 INCH OR MORE PRECIPITATION OR SNOW FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE ENVIRONMENTAL MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT;

(3) SUBMIT A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, TO THE DEPARTMENT WITHIN 24 HOURS OF EACH INSPECTION THAT:

a. DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET;

b. IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED; AND

c. INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT; AND

(4) RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (3), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS.

CONSTRUCTION SEQUENCE NOTES:

1. INSTALL SILTATION CONTROL FENCES IN LOCATIONS SHOWN HEREON. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATION.
2. INSTALL STABILIZED CONSTRUCTION EXIT(S).
3. CUT AND CLEAR TREES; DISPOSE OF DEBRIS. STUMPS ARE TO BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
4. REMOVE TOPSOIL AND STOCKPILE AWAY FROM ANY WET LAND. STABILIZE STOCKPILE IMMEDIATELY BY SEEDING. PLACE SILT FENCE AROUND THE DOWN SLOPE SIDE OF EARTH STOCKPILES.
5. ROUGH GRADE SITE - CONSTRUCT DRAINAGE BASINS AND DRAINAGE SWALES DURING INITIAL PORTION OF CONSTRUCTION. STABILIZE IMMEDIATELY PER THE CONSTRUCTION AND EROSION CONTROL DETAILS. DO NOT DIRECT STORM WATER RUNOFF TO THESE STRUCTURES UNTIL A HEALTHY VEGETATIVE COVER IS ESTABLISHED.
6. BEGIN BUILDING CONSTRUCTION. SUBMIT ELEVATION CERTIFICATE WHEN FOOTING FORMS ARE IN PLACE, PRIOR TO FOOTING INSPECTION.
7. CONSTRUCT GRAVEL PARKING AREA (PAVEMENT OPTIONAL) AND BUILDING PAD. INSTALL UTILITIES AND STRUCTURES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED UPON COMPLETION OF ROUGH GRADING PER THE THE EROSION CONTROL NOTES.
8. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER EVERY 0.25" OR GREATER RAINFALL.
9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, COVERTS, DITCHES, SILTATION FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
10. FINISH GRADING TO PREPARE FOR PAVING (IF ANY) AND LOAMING. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
11. FINISH PAVING (IF ANY). PERMANENT SEEDING SHALL BE PERFORMED UPON COMPLETION OF PARKING AREA (SEE EROSION CONTROL NOTES).
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED.
14. ALL STRUCTURES SHALL BE CLEANED OF SEDIMENTS ONCE CONSTRUCTION IS COMPLETE.
15. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

FLOODPLAIN - COMPENSATORY STORAGE:

1. FLOODPLAIN ELEVATION = 518.6' AND ANY FILL AT THIS ELEVATION OR LOWER ELEVATION IS CONSIDERED FILL IN THE FLOODPLAIN. ALL FILL MUST BE FREE OF HAZARDOUS OR TOXIC MATERIALS.

2. FLOOD COMPENSATION IS PROVIDED BY A TOTAL VOLUME AMOUNT, AS ELEVATIONS ON SITE WILL NOT ALLOW FOR COMPENSATION AT EACH FOOT OF ELEVATION CHANGE (FOOT BY FOOT ANALYSIS).

3. BUILDING FINISH FLOOR ELEVATIONS (FFE) MUST BE 1 FOOT ABOVE THE FLOODPLAIN ELEVATION (518.6'), REQUIRING A FFE AT/ABOVE 519.6. BUILDING FFE = 523.0'

4. LOWEST ES-WT = 511.8' (TP-12). LOWEST PROPOSED EXCAVATION = 512.2'

TOTAL CUT: 189,918.42 C.F., 7,034.02 C.Y. (COMPENSATION IN FLOODPLAIN)
TOTAL FILL: 171,788.46 C.F., 6,362.94 C.Y.(FILL IN FLOODPLAIN)
EXCESS COMP.: 671.48 C.Y.

Area in Cut : 95,669.2 S.F., 2.20 Acres
Area in Fill: 98,176.5 S.F., 2.31 Acres
Total inclusion area: 191,794.4 S.F., 4.40 Acres

FOOT-BY-FOOT VOLUMES:

Zone: 511.600 to 512.600
Cut Volume : 17,183.33 C.F., 636.42 C.Y.
Fill Volume : 0.00 C.F., 0.00 C.Y.

Zone: 512.600 to 513.600
Cut Volume : 45,235.92 C.F., 1,675.40 C.Y.
Fill Volume : 0.00 C.F., 0.00 C.Y.
Running Totals:
Cut Volume : 62,419.27 C.F., 2,311.82 C.Y.
Fill Volume : 0.00 C.F., 0.00 C.Y.

Zone: 513.600 to 514.600
Cut Volume : 47,068.90 C.F., 1,743.29 C.Y.
Fill Volume : 1,184.14 C.F., 43.86 C.Y.
Running Totals:
Cut Volume : 109,488.12 C.F., 4,055.12 C.Y.
Fill Volume : 1,184.14 C.F., 43.86 C.Y.

Zone: 514.600 to 515.600
Cut Volume : 51,007.08 C.F., 1,891.37 C.Y.
Fill Volume : 10,555.93 C.F., 390.96 C.Y.
Running Totals:
Cut Volume : 160,555.20 C.F., 5,946.49 C.Y.
Fill Volume : 11,740.07 C.F., 434.82 C.Y.

Zone: 515.600 to 516.600
Cut Volume : 16,723.82 C.F., 619.40 C.Y.
Fill Volume : 34,014.13 C.F., 1,261.27 C.Y.
Running Totals:
Cut Volume : 177,278.02 C.F., 6,565.89 C.Y.
Fill Volume : 45,754.37 C.F., 1,696.09 C.Y.

Zone: 516.600 to 517.600
Cut Volume : 8,520.54 C.F., 315.58 C.Y.
Fill Volume : 55,999.45 C.F., 2,072.94 C.Y.
Running Totals:
Cut Volume : 185,798.56 C.F., 6,881.47 C.Y.
Fill Volume : 101,753.81 C.F., 3,769.03 C.Y.

Zone: 517.600 to 518.600
Cut Volume : 4,118.86 C.F., 152.55 C.Y.
Fill Volume : 70,024.63 C.F., 2,593.50 C.Y.
Running Totals:
Cut Volume : 189,918.42 C.F., 7,034.02 C.Y.
Fill Volume : 171,788.46 C.F., 6,362.94 C.Y.

GRADING & DRAINAGE NOTES:

1. THE PROPOSED DRIVEWAY IS A PRIVATE DRIVEWAY AND IS GRADED TO NOT DIRECT WATER INTO THE CITY STREET.
2. DRIVEWAY MAXIMUM GRADES ARE 15% PER CITY REGS. THE GRADES PROPOSED ARE WELL BELOW THIS LIMIT AND RELATIVELY FLAT IN SLOPE.
3. ALL ROAD DITCHES OVER 5% GRADE SHALL HAVE STONE CHECK DAMS AND LINED WITH 4" MINUS RIP RAP STONE WHERE APPLICABLE.
4. DUE TO THE CLOSE PROXIMITY OF THE WETLANDS TO THE SITE, THE WETLAND BUFFER MUST BE FLAGGED PRIOR TO INSTALLING SILT FENCE AND STARTING THE SITE GRADING.
5. ALL ADA SPACES MEET ADA REGULATIONS AND PARKING SPACES ARE LOCATED CLOSE TO THE ENTRYWAYS.
6. GRADING PROVIDES FOR FLOOD COMPENSATION OF ANY FILL WITHIN THE 100 YEAR FLOODPLAIN. BUILDING FINISH FLOOR ELEVATIONS MUST BE AT ELEVATION 519.6' OR HIGHER TO MEET CITY FLOODPLAIN REGULATIONS.

GRAPHIC SCALES
50' 25' 0 50' 100' 150'
IMPERIAL: 1"=50'

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	REVS PER STAFF COMMENTS		CJC	JEN

GRADING PLAN

TAX MAP PARCEL 221-023 & 221-024
(BLACK BROOK ROAD)
KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.
DOUGLAS COMPANY BOX D, KEENE, NH 03431

SCALE: 1" = 50' JANUARY 17, 2025

Surveying ❖ Engineering ❖ Land Planning ❖ Permitting ❖ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC
206 Elm Street, Milford, NH 03055
45 Roxbury Street, Keene, NH 03431
Phone: (603) 672-5456 FAX: (603) 413-5456
www.fieldstoneLandConsultants.com

FILE: 3459SP01A.dwg | PROJ. NO. 3459.01 | SHEET: GR-1 | PAGE NO. 5 OF 14

LEGEND:

EXISTING FEATURES

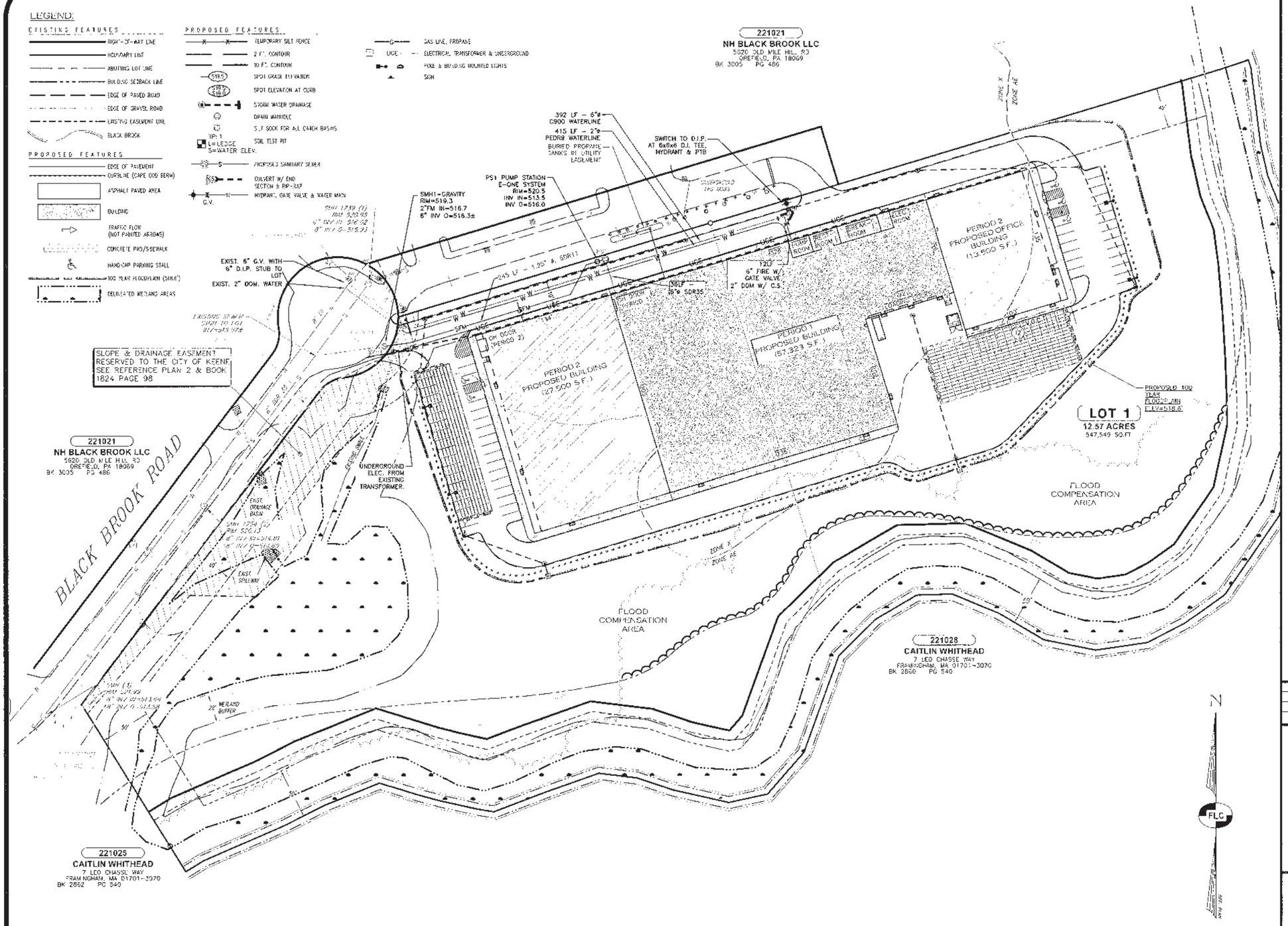
- RIGHT-OF-WAY LINE
- BOUNDARY LIST
- ABUTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EXISTING EASEMENT LINE
- BLACK BROOK

PROPOSED FEATURES

- EDGE OF PAVEMENT
- CURBLINE (CAPE COD BERM)
- ASPHALT PAVED AREA
- BUILDING
- TRAFFIC FLOW (NOT PAINTED AROAS)
- CONCRETE PAD/SIDEWALK
- HANDICAP PARKING STALL
- 100 YEAR FLOODPLAIN (SHALE)
- DELINEATED WETLAND AREAS

PROPOSED FEATURES

- TEMPORARY SILT FENCE
- 2 FT. CONTOUR
- 10 FT. CONTOUR
- SPOT GRADE ELEVATION
- SPOT ELEVATION AT CURB
- STORM WATER DRAINAGE
- DRAIN MANHOLE
- S.I.F. SOCK FOR ALL CATCH BASINS
- TP: 1 L=LEDGE S=WATER ELEV. — SOIL TEST PIT
- PROPOSED SANITARY SEWER
- CULVERT W/ END SECTION & RIP-RAP
- HYDRANT, GATE VALVE & WATER MAIN
- GAS LINE, PROPANE
- UGE — ELECTRICAL TRANSFORMER & UNDERGROUND
- POLE & BUILDING MOUNTED LIGHTS
- SIGN



UTILITY NOTES:

1. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF KEENE AND SHALL BE BUILT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CITY OF KEENE DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS FOR ROAD CONSTRUCTION AND SEWERS AND DRAINS AND THE NHDOT STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION APPROVED AND ADOPTED 2010 ARE HEREBY INCORPORATED BY REFERENCE.
2. ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS AND THE SPECIFICATIONS NOTED ABOVE. ANY ALTERATION OF THIS DESIGN OR CHANGE DURING CONSTRUCTION MAY REQUIRE APPROVAL OF VARIOUS CITY BOARDS OR AGENCIES AND SHALL BE DISCUSSED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES SHOWN OR NOT SHOWN ON THESE PLANS AND SHALL VERIFY THAT ALL THE INFORMATION SHOWN HEREON IS CONSISTENT, COMPLETE, ACCURATE, AND CAN BE CONSTRUCTED PRIOR TO AND/OR DURING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES, ERRORS, OMISSIONS, OR EXISTING UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION SO THAT REMEDIAL ACTION MAY BE TAKEN BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACT "DIGSAFE" AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION (1-888-344-7233)
5. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE TOWN DEPARTMENTS PRIOR TO CONSTRUCTION TO ARRANGE FOR NECESSARY INSPECTIONS. THE WATER AND SEWER CONNECTIONS IN BLACK BROOK ROAD WILL REQUIRE AN EXCAVATION PERMIT AND COORDINATION WITH KEENE PUBLIC WORKS.
6. BLASTING, IF REQUIRED, SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF KEENE FIRE DEPARTMENT REGULATIONS. BASED ON TEST PITS, THIS IS UNLIKELY TO BE PRESENT.
7. ALL DISTURBED NON-PAVED AREAS SHALL BE LOAMED AND SEEDED IMMEDIATELY UPON BEING CONSTRUCTED. THE RETAINING WALLS SHOWN SHALL BE DESIGNED BY OTHERS UNLESS OTHERWISE NOTED.
8. ALL TRAFFIC SIGNS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION
9. EXISTING PAVEMENT SHALL BE SAW-CUT AS NECESSARY. THE CONSTRUCTION SHALL ENSURE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW PAVEMENT.
10. ALL POWER WORK SHALL CONFORM TO EVERSOURCE STANDARDS. THE POWER SERVICE SIZES SHALL BE VERIFIED BY AN ELECTRICAL ENGINEER AND EVERSOURCE.
11. ALL TELEPHONE WORK SHALL CONFORM TO CONSOLIDATED COMMUNICATIONS SPECIFICATIONS.
12. ALL PROPANE GAS WORK SHALL CONFORM TO THE SUPPLIER'S GAS SPECIFICATIONS. PROVIDE SHUTOFF VALVE AND REGULATOR FOR THE BUILDING. THE PROPANE TANKS SHALL BE INSTALLED BELOW GRADE & HAVE ANTI-FLOTATION BLOCKS INSTALLED.
13. WATER AND SEWER SERVICES TO TIE INTO THE KEENE MUNICIPAL SERVICE IN BLACK BROOK ROAD. CONTRACTOR TO CONFIRM SIZE AND LOCATION OF EXISTING STUB TO THE PROPERTY.
14. SEWER SERVICE SHALL HAVE INDIVIDUAL CLEAN-OUT INSIDE THE BUILDING.
15. CONTRACTOR TO COORDINATE WITH CITY DPW ON SEWER TIE-IN ON BLACK BROOK RD. THE EXISTING SEWER FLOW MUST BE MAINTAINED AND PUMP AROUND MANHOLE DURING TIE IN.
16. CONTRACTOR SHALL OBTAIN STRUCTURAL DESIGN PLANS, DETAILS AND SPECIFICATIONS FOR ANY RETAINING WALLS SHOWN ON THIS PLAN PRIOR TO CONSTRUCTION.
17. ALL BUILDINGS WILL HAVE FIRE SUPPRESSION SPRINKLER SYSTEMS, A PROPOSED FIRE HYDRANT AS SHOWN, AND EXISTING FIRE HYDRANTS ARE LOCATED ON BLACK BROOK ROAD.
18. ALL HVAC EQUIPMENT SHALL MEET THE SCREENING STANDARDS OF THE L.D.C.: ROOF MOUNTED EQUIPMENT SHALL BE SETBACK 10' FROM EDGE. GROUND-MOUNTED EQUIPMENT TO BE LOCATED SO AS NOT TO BE VISIBLE FROM THE PUBLIC WAY - SCREEN IF VISIBLE.
19. FIRE ALARM & SPRINKLER SYSTEM TO BE HANDLED AS PART OF THE BUILDING PERMIT. SPRINKLER BOOSTER PUMP MAY BE REQUIRED AND WILL BE INSIDE THE BUILDING.
20. AN EXCAVATION PERMIT AND UTILITY CONNECTION PERMIT FROM THE KEENE PUBLIC WORKS IS REQUIRED FOR THE UTILITY IMPROVEMENTS SHOWN
21. ALL UTILITIES LOCATED ON THE SUBJECT PROPERTY, INCLUDING WATER AND SEWER LINES, MANHOLES AND VALVES, SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER

SANITARY SEWER CALCULATIONS:

1. DAILY FLOW RATE: 20 GPD/EMPLOYEE X 80 EMPLOYEES = 1,600 GPD
2. INFILTRATION: 36 LF 6"ø SDR 35 (0.007 MILE)
   ((6"x0.007 MI)) x 300 GPD/INCH-MILE = 13 GPD
3. AVERAGE DAILY FLOW: 1700 + 13 = 1,813 GPD
4. PEAK DESIGN FLOW: PEAKING FACTOR = 6 (< 100,000 GPD)
   6 x 1813 GPD = 9,378 GPD

GRAPHIC SCALES

50' 25' 0 50' 100' 150'

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UTILITY PLAN

TAX MAP PARCEL 221-023 & 221-024

(BLACK BROOK ROAD)

KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

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SCALE: 1" = 50' JANUARY 7, 2025

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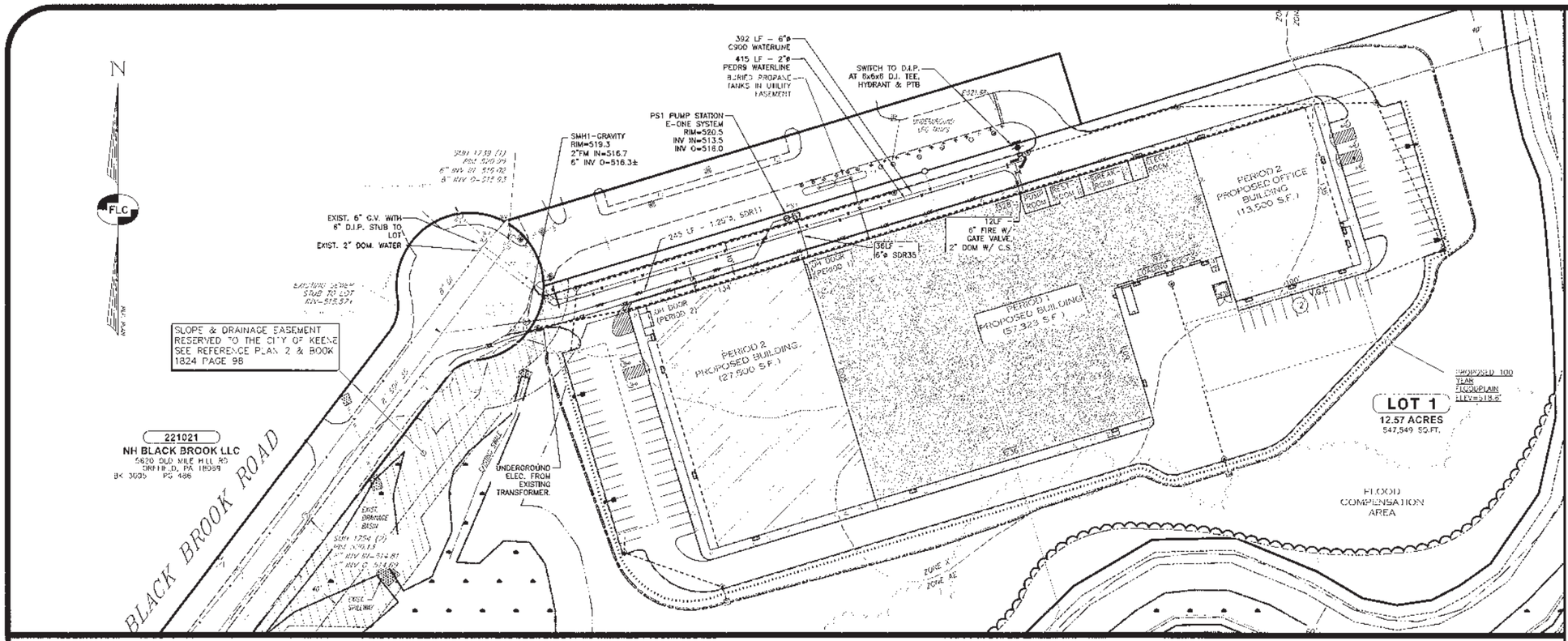

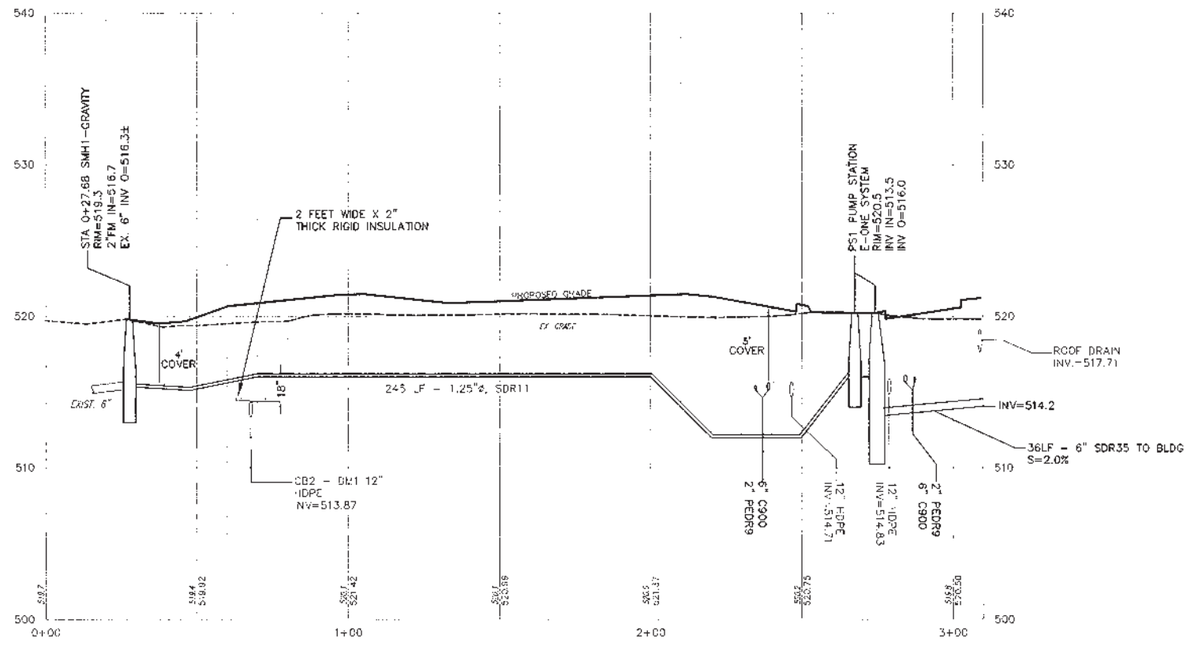

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4. PEAK DESIGN FLOW: PEAKING FACTOR = 6 (< 100,000 GPD)
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GRAPHIC SCALES

50' 25' 0 50' 100' 150'

IMPERIAL: 1"=50'

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	SHEET ADDED PER STAFF COMMENTS		CJC	JEN

SEWER PROFILE

TAX MAP PARCEL 221-023 & 221-024

(BLACK BROOK ROAD)

KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.

DOUGLAS COMPANY BOX D, KEENE, NH 03431

SCALE: 1" = 50' FEBRUARY 10, 2025

Surveying ✦ Engineering ✦ Land Planning ✦ Permitting ✦ Septic Designs

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LEGEND:

EXISTING FEATURES

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EXISTING EASEMENT LINE
- BLACK BROOK

PROPOSED FEATURES

- EDGE OF PAVEMENT
- CURB LINE (CAPE COD BERM)
- ASPHALT PAVED AREA
- BUILDING
- TRAFFIC FLOW (LOT PAINTED ARROWS)
- CONCRETE PAD/SIDEWALK
- HANDICAP PARKING STALL
- 100 YEAR FLOODPLAIN (518.6')
- SEEDED AS LAND AREAS

PROPOSED FEATURES

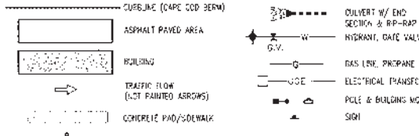
- TEMPORARY SILT FENCE
- 2 FT. CONTOUR
- 10 FT. CONTOUR
- 515.5 — SPOT GRADE ELEVATION
- 515.5 / 515.0 — SPOT ELEVATION AT CURB
- STORM WATER DRAINAGE
- DRAIN MANHOLE
- SILT SOCK FOR ALL CATCH BASINS
- TP-1 = LEDGE S=WATER ELEV. — SOIL TEST PIT
- S — PROPOSED SANITARY SEWER
- CULVERT W/ END SECTION & RIP-RAP
- W — HYDRANT, GATE VALVE & WATER MAIN
- G.V.
- G — GAS LINE, PROPANE
- UGE — ELECTRICAL TRANSFORMER & UNDERGROUND
- POLE & BUILDING MOUNTED LIGHTS
- SIGN

OVERVIEW	
Lumen Package	6,000 - 27,000
Wattage Range	36 - 178
Efficacy Range (LPW)	142 - 171
Weight lbs(kg)	20 (9.1)
Control Options	IMSBT, ALB, ALS, 7-Pin, PCI

V-Locity Small (VALS)

Outdoor LED Area Light

POLE MOUNTED LIGHTS:



OVERVIEW	
Lumen Package	3,000 - 21,000
Wattage Range	23 - 175
Efficacy Range (LPW)	125 - 158
Weight lbs(kg)	27 (12.2)
Control Options	IMSBT, ALB, ALS, PCI

Mirada Medium Wall Sconce (XWM)

Outdoor Wall Sconce

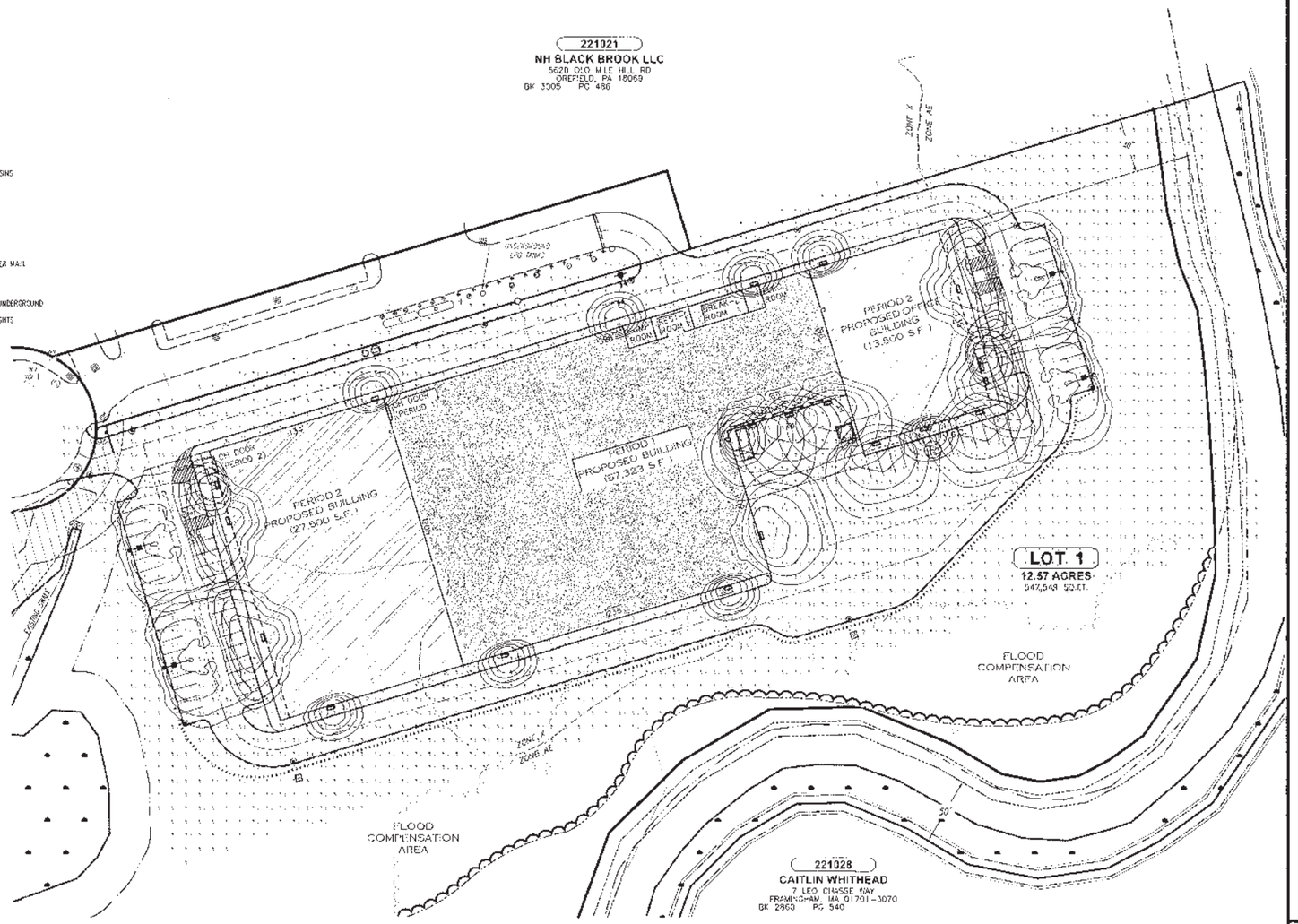
BUILDING MOUNTED LIGHTS:

OVERVIEW	
Lumen Package (lm)	1,000 - 6,000
Wattage Range (W)	10 - 52
Efficacy Range (LPW)	119 - 163
Weight lbs (kg)	8 (3.6)

Mirada Small Wall Sconce Visual Comfort (XWS VC)

Outdoor LED Wall Light

BUILDING MOUNTED LIGHTS:



DESIGN NOTES:

1. LIGHTING REQUIREMENTS:

PARKING LOTS	REQUIRED	PROPOSED
AVERAGE	3.5 Fc MAX	3.0 Fc AVG.
MINIMUM	0.33 Fc	0.3 Fc
U. RATIO (AVG/MIN)	5:1	3.6
MAX AT PROP. LINE	0.1 Fc	0.0 Fc
MAX AT R.O.W.	1.0 Fc	0.0 Fc
SIDEWALKS		
MINIMUM	0.5 Fc	N.A.
MAXIMUM	5.0 Fc	N.A.
LUMENS	1200 L MAX	N.A.

2. ALL PROPOSED LIGHTING MUST BE GREATER THAN 70 (CRI) COLOR RENDERING INDEX.
3. ALL PROPOSED LIGHTING MUST BE 3500 KELVIN COLOR-TEMPERATURE OR LESS

LIGHTING NOTES:

1. LIGHTING SHALL BE INSTALLED AND ARRANGED SO AS NOT TO REFLECT OR CAUSE GLARE UPON ABUTTING LAND, HIGHWAYS AND ROADS.
2. ALL FIXTURES ARE FULL CUTOFF, LED FIXTURES. FLOOD LIGHTING AND UP LIGHTING ARE PROHIBITED.
3. LIGHTING IS PROVIDED VIA BUILDING MOUNTED LIGHTS AND POLE MOUNTED LIGHTS.
4. MOUNTING HEIGHT OF ALL PROPOSED WALL MOUNT LIGHTING FIXTURES SHALL BE 15 FEET ABOVE FINISH GRADE ON THE BUILDINGS, LOCATED AT EACH BUILDING UNIT.
5. POLE MOUNTED LIGHTS ARE TO BE MOUNTED 20.0 FEET ABOVE FINISH GRADE.
6. ALL LIGHTS ARE TO BE SETUP ON PHOTOCELLS TO AUTOMATICALLY TURN OFF DURING DAYLIGHT HOURS. TIMER SHALL BE INSTALLED TO LIMIT HOURS FROM 6 AM – 10 PM. IF OPERATING 24/7 THE LIGHTING MUST REDUCE BY 50% FOR SECURITY LIGHTING, HALF OF THE WALLPACKS SHALL BE INSTALLED WITH MOTION SENSORS.
7. ALL FIXTURES AND HARDWARE ARE TO BE DARK BRONZE IN COLOR TO MATCH.
8. LIGHT FIXTURES ARE AVAILABLE THROUGH EXPOSURE 2 LIGHTING. ANY CHANGE IN FIXTURE MUST BE APPROVED BY THE OWNER, DESIGN ENGINEER, AND CITY OF KEENE.

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	REVS. PER STAFF COMMENTS		CJC	JEN

LIGHTING PLAN

TAX MAP PARCEL 221-023 & 221-024
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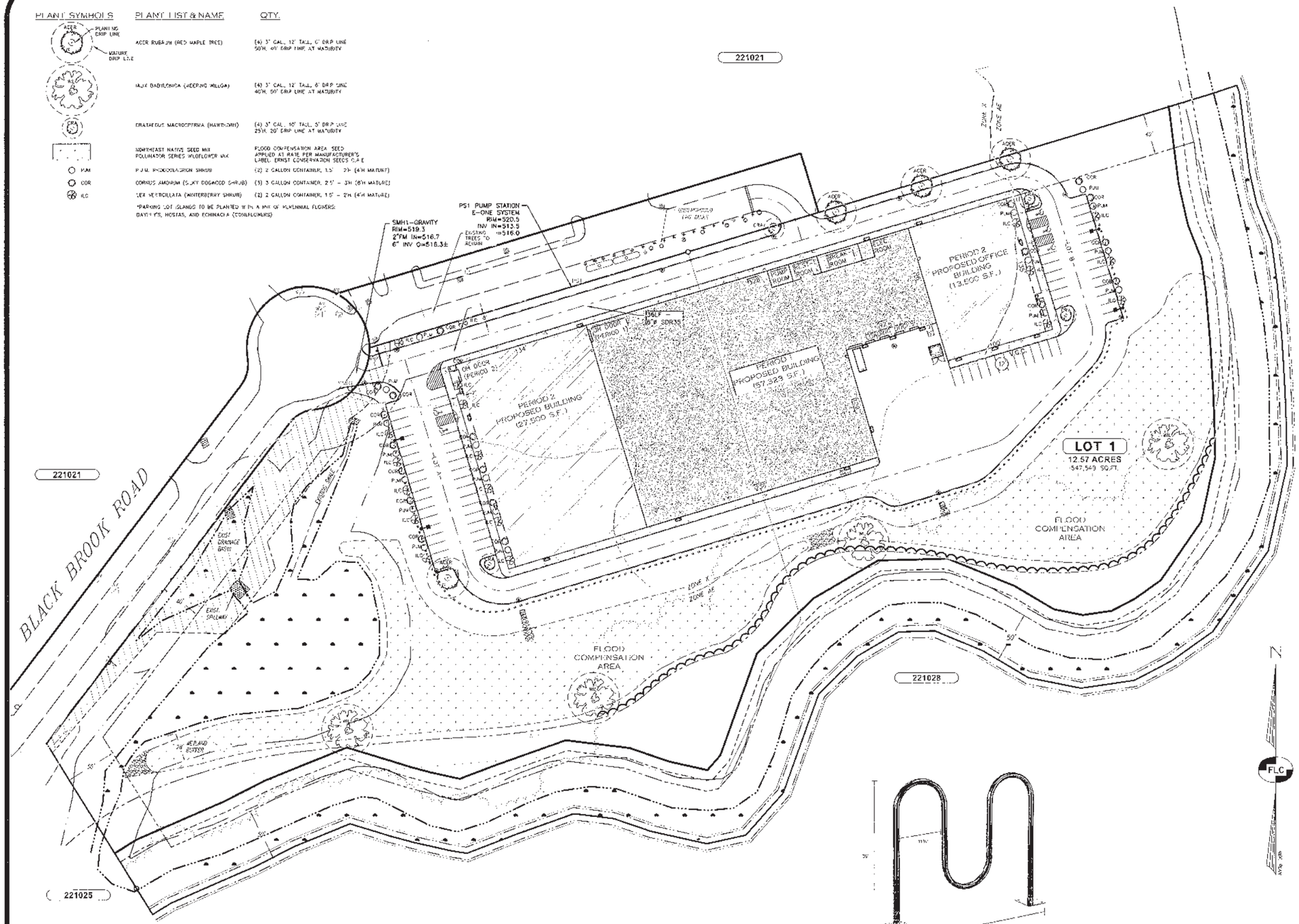
PLANT SYMBOLS	PLANT LIST & NAME	QTY.
ACER — PLANTING DRIP LINE; MATURE DRIP LINE	ACER RUBRUM (RED MAPLE TREE)	(6) 3" CAL., 12' TALL, 6' DRIP LINE 50'H, 60' DRIP LINE AT MATURITY
	SALIX BABYLONICA (WEEPING WILLOW)	(4) 3" CAL., 12' TALL, 8' DRIP LINE 40'H, 50' DRIP LINE AT MATURITY
	CRATAEGUS MACROSPERMA (HAWTHORN)	(4) 3" CAL., 10' TALL, 5' DRIP LINE 25'H, 20' DRIP LINE AT MATURITY
	NORTHEAST NATIVE SEED MIX POLLINATOR SERIES WILDFLOWER MIX	FLOOD COMPENSATION AREA SEED APPLIED AT RATE PER MANUFACTURER'S LABEL. ERNST CONSERVATION SEEDS O.A.E
PJM	P.J.M. RHODODENDRON SHRUB	(2) 2 GALLON CONTAINER, 1.5' - 2'H (4'H MATURE)
COR	CORNUS AMOMUM (SILKY DOGWOOD SHRUB)	(5) 3 GALLON CONTAINER, 2.5' - 3'H (8'H MATURE)
ILC	ILEX VERTICILLATA (WINTERBERRY SHRUB)	(2) 2 GALLON CONTAINER, 1.5' - 2'H (4'H MATURE)
	*PARKING LOT ISLANDS TO BE PLANTED WITH A MIX OF PERENNIAL FLOWERS: DAYLILYS, HOSTAS, AND ECHINACEA (CONEFLOWERS)	



5 - BIKE WAVE BIKE RACK

DESIGN NOTES:

1. LANDSCAPING REQUIREMENTS:

	REQUIRED	PROPOSED
TREES (SITE): SCREENING: 1 TREE / 30LF	5.7 TREES(171LF)	12 TREES
SHRUBS: SCREENING: 1 SHRUBS / 3LF	57	57

PARKING OVER 50 SPACES:	REQUIRED	PROPOSED
10% PARKING AREA LANDSCAPED		
LOT A	64.8 SF	1858 SF
LOT B	96.7 SF	1340 SF
PARKING ISLAND SIZE MIN.	95 SF	276 SF

LANDSCAPING NOTES:

1. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG-SAFE AND FOR VERIFICATION OF ALL UTILITIES AND SHALL NOTIFY THE OWNERS REPRESENTATIVE OF ANY CONFLICTS PRIOR TO COMMENCING.
2. EXISTING TREES TO REMAIN SHALL BE PRESERVED AND PROTECTED DURING CONSTRUCTION. TEMPORARY FENCING SHALL BE INSTALLED PRIOR TO THE START OF SITE WORK TO PROTECT ROOT MASSES
3. EXISTING TREES THAT ARE TO BE REMOVED, SHALL BE REMOVED ENTIRELY FROM THE SITE, INCLUDING STUMPS. NO STUMP-DUMPS ARE ALLOWED ON SITE.
4. UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED WITHIN THE IMMEDIATE AREA NO PLANT MATERIAL SHALL BE INSTALLED.
5. UNLESS OTHERWISE NOTED OR APPROVED, ALL TREES MUST BE BALLED AND BURLAPPED
6. ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF "THE AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
7. ANY PROPOSED PLANT MATERIAL SUBSTITUTIONS MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE.
8. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE INSTALLER FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE. ANY PLANT MATERIAL THAT IS SIGNIFICANTLY DAMAGED, MISSING, DISEASE RIDDEN, OR DEAD SHALL BE REPLACED WITHIN 1-YEAR OR BEFORE THE END OF THE FOLLOWING PLANTING SEASON, WHICHEVER OCCURS FIRST.
9. IN AREAS OF STONE MULCH LAY 6 MIL SHEETS OF "SOILSEPT" TYPE POLYETHYLENE OR COMPACTED SUBGRADE BEFORE PLACING STONE, MINIMUM 6" OVERLAP. PERFORATE SHEETING IN PLANTING BEDS BEFORE PLACING STONE.
10. UNLESS OTHERWISE NOTED LOAM AND SEED ALL DISTURBED AREAS WITH A MINIMUM 4" OF SUITABLE LOAM. SLOPES GREATER THAN 3:1 SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET. SEE SITE PLAN.
11. WHERE APPLICABLE, THE CONTRACTOR SHALL SAVE ALL PLANT TRANSPLANTING HAZARD PLANTS DUG IN THE SPRING AND STORED FOR FALL PLANTING.
12. PLANTS SHALL BE INSTALLED WITHIN ONE YEAR OF COMMENCEMENT OF CONSTRUCTION
13. ALL LANDSCAPING SHALL BE LOCATED AND MAINTAINED SO AS NOT TO IMPEDE THE LINES OF SIGHT AT THE ENTRANCE AND INTERNAL INTERSECTIONS TO PROVIDE SAFE PASSAGE OF PEDESTRIANS, BICYCLISTS, AND MOTORISTS.
14. ALL LANDSCAPED AREAS WILL BE MAINTAINED TO HAVE A SUFFICIENT AMOUNT OF WATER TO MAINTAIN VIABILITY EITHER BY IRRIGATION OR BY OTHER MEANS.
15. PROPOSED PLANTINGS SHALL NOT CONFLICT WITH SNOW STORAGE AREAS, LIGHT FIXTURES OR UNDERGROUND UTILITIES.
16. ALL LANDSCAPING APPROVED AS PART OF THE SITE PLAN SHALL BE CONSIDERED AS ELEMENTS OF THE SITE, IN THE SAME MANNER AS PARKING, BUILDING MATERIALS, AND OTHER SITE DETAILS. ANY CHANGES WILL REQUIRE APPROVAL BY THE OWNER AND CITY COMMUNITY DEVELOPMENT DIRECTOR.
17. A BIKE RACK IS PROPOSED AT THE OFFICE PARKING LOT.
18. ALL HVAC EQUIPMENT SHALL BE ROOF MOUNTED OR NOT BE VISIBLE FROM THE PUBLIC RIGHT OF WAY.
19. THIS PLAN IS BASED ON AN ALTERNATIVE DESIGN TO BE APPROVED BY THE PLANNING BOARD.

GRAPHIC SCALES

50' 25' 0 50' 100' 150'

IMPERIAL: 1"=50'

REV.	DATE	DESCRIPTION	C/C	DR	CK
A	2/10/25	REVS PER STAFF COMMENTS		CJC	JEN

LANSCAPING PLAN

TAX MAP PARCEL 221-023 & 221-024

(BLACK BROOK ROAD)

KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.

DOUGLAS COMPANY BOX D, KEENE, NH 03431

SCALE: 1" = 50' JANUARY 17, 2025

Surveying ◆ Engineering ◆ Land Planning ◆ Permitting ◆ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

206 Elm Street, Milford, NH 03055
40 Roxbury Street, Keene, NH 03431
Phone: (603) 672-5456 Fax: (603) 413-5456
www.fieldstoneLandConsultants.com

FILE: 3459SP01A.dwg	PROJ. NO. 3459.01	SHEET: LS-1	PAGE NO. 9 OF 14

LEGEND:

EXISTING FEATURES

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EXISTING EASEMENT LINE
- BLACK BROOK

PROPOSED FEATURES

- EDGE OF PAVEMENT
- CURBLINE (CAPE COD BERM)
- ASPHALT PAVED AREA
- BUILDING
- TRAFFIC FLOW (WITH PAINTED ARROWS)
- CONCRETE PAD/SIDEWALK
- HANDICAP PARKING SIGN
- 100 YEAR FLOODPLAIN (516.6')
- DELINEATED WETLAND AREAS

PROPOSED FEATURES

- TEMPORARY SILT FENCE
- 2 FT. CONTOUR
- 10 FT. CONTOUR
- 516.3 — SPOT GRADE ELEVATION
- 515.5 / 519.0 — SPOT ELEVATION AT CURB
- STORM WATER DRAINAGE
- DRAIN MANHOLE
- SILT SOCK FOR ALL CATCH BASINS
- TP. 1 L=LEDGE W=WATER ELEV. — SOIL TEST PIT
- PROPOSED SANITARY SEWER
- CULVERT W/ END SECTION & RIP-RAP
- HYDRANT, GATE VALVE & WATER MAIN
- G.V.
- GAS LINE, PROPANE
- UGE — ELECTRICAL TRANSFORMER & UNDERGROUND
- POLE & BUILDING MOUNTED LIGHTS
- SIGN

PERMITS/APPROVALS REQUIRED:

1. CITY OF KEENE PLANNING BOARD: SITE PLAN APPROVAL
2. CITY OF KEENE FLOODPLAIN DEVELOPMENT PERMIT:
3. CITY OF KEENE BUILDING PERMIT:
4. CITY OF KEENE VOLUNTARY LOT MERGER:
5. NHDES SEWER CONNECTION PERMIT:
6. NHDES ALTERATION OF TERRAIN PERMIT:
7. FEMA LETTER OF MAP REVISION (LOMR-F) AND ELEVATION CERTIFICATE:

TOTAL PROPOSED BUILDING (98,323 S.F.)

221021
NH BLACK BROOK LLC
5823 OLD MILE HILL RD
GRIFFITH, PA 18069
BK 3035 PG 486

SLOPE & DRAINAGE EASEMENT RESERVED TO THE CITY OF KEENE SEE REFERENCE PLAN 2 & BOOK 1824 PAGE 98

PERIOD 1 PROPOSED BUILDING (27,323 S.F.)

PERIOD 2 PROPOSED BUILDING (27,500 S.F.)

PERIOD 2 PROPOSED OFFICE BUILDING (13,500 S.F.)

PROPOSED 100 YEAR FLOODPLAIN ELEV=516.6'

LOT 1
12.57 ACRES
547,549 SQ.FT.

FLOOD COMPENSATION AREA

FLOOD COMPENSATION AREA

ZONE X / ZONE AE

BLACK BROOK ROAD

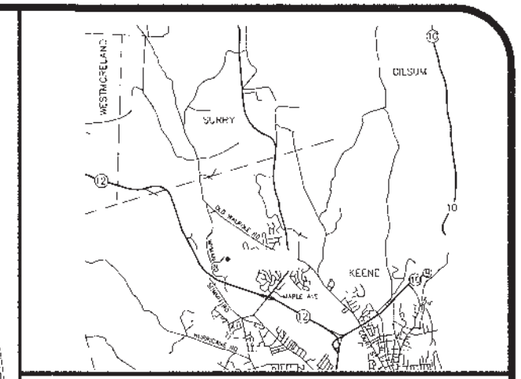
EXIST. DRAINAGE BASIN

EXIST. SPILLWAY

28' WETLAND BUFFER

221028
CAITLIN WHITEHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
BK 2860 PG 540

221025
CAITLIN WHITEHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
BK 2862 PG 540



NOTES:

1. THE OWNER OF RECORD FOR PARCEL 221-023 & 024 IS NEW ENGLAND INTERCONNECT SYSTEMS, INC. OF 136 NORTH MAIN ST., USBON, NH 03585.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A SITE LAYOUT FOR A WAREHOUSE FACILITY WITH OFFICE SPACE AND ASSOCIATED SITE IMPROVEMENTS ON TAX MAP 221 PARCELS 023 & 024 AS SHOWN. THE PROPOSAL IS BASED ON BOTH LOTS BEING MERGED INTO ONE LOT.
3. ZONING FOR THE PARCEL IS CORPORATE PARK (CP). REQUIREMENTS INCLUDE.

   MINIMUM LOT AREA: 2 ACRES (AFTER MERGER LOT = 12.57 ACRES)
   MINIMUM LOT WIDTH: 200 FT.
   MINIMUM FRONTAGE: 100 FT. (AFTER MERGER FRONTAGE = 909.02')
   MINIMUM FRONT SETBACK: 40 FT.
   MINIMUM SETBACKS: 50 FT. REAR AND SIDE (40' FOR ONE SIDE W/OUT PARKING)
   MAXIMUM BUILDING & IMPERVIOUS COVERAGE: 80%
   MIN. GREEN/OPEN SPACE: 20%
   MAX. BUILDING HEIGHT: 60 FT

   PROPOSED:
   IMPERVIOUS COVERAGE (BUILDING INCLUDED) = 33.7%
   GREEN/OPEN SPACE = 66.3%
   BUILDING HEIGHT = 40 FT
4. THE BOUNDARY AND BASE PLAN INFORMATION SHOWN IS FROM SURVEY DATA PREPARED BY DIBERNARDO ASSOCIATES, LLC.
5. THE TOPOGRAPHIC ELEVATIONS ARE BASED ON GRANIT LIDAR CONTOURS AND NAVD88 DATUM.
6. WETLANDS SHOWN WERE DELINEATED BY JONATHAN SISSON, CWS, CSS, OF BEAVER TRACKS, LLC. WETLANDS WERE VERIFIED BY CHRISTOPHER A. GUIDA BY FIELDSTONE LAND CONSULTANTS, PLLC
7. THE PROPERTY IS LOCATED PARTIALLY IN ZONE AE AND ZONE X. THE BASE FLOOD ELEVATION FOR THE ENTIRE PARCEL IS 518.5' NAVD88. THE BASE FLOOD ELEVATION WAS CALCULATED USING ON-SITE TOPOGRAPHY. THE BASE FLOODWAY IS PER FEMA FIRMETTE 33005C0254J DATED MAY 23, 2006.
8. BUILDINGS SEVERED BY MUNICIPAL WATER AND SEWER ON BLACK BROOK ROAD.
9. ALL BUILDINGS WILL HAVE FIRE SUPPRESSION SPRINKLER SYSTEMS (ESFR SPRINKLERS) AND EXISTING FIRE HYDRANTS ARE LOCATED ON BLACK BROOK ROAD.

REV.	DATE	DESCRIPTION	C/O	DR	CK
A	2/10/25	REVS PER STAFF COMMENTS		CJC	JEN

TRUCK TURNING EXHIBIT PLAN

TAX MAP PARCEL 221-023 & 221-024
(BLACK BROOK ROAD)
KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.
DOUGLAS COMPANY BOX D, KEENE, NH 03431

SCALE: 1" = 50' JANUARY 17, 2025

GRAPHIC SCALES
50' 25' 0 50' 100' 150'
IMPERIAL: 1"=50'

Surveying ✦ Engineering ✦ Land Planning ✦ Permitting ✦ Septic Designs

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www.fieldstoneLandConsultants.com

FILE: 3459SP01A.dwg | PROJ. NO. 3459.01 | SHEET: EH-1 | PAGE NO. 1 OF 2

LEGEND:

EXISTING FEATURES

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ABUTTING LOT LINE
- BUILDING SETBACK LINE
- EDGE OF PAVED ROAD
- EDGE OF GRAVEL ROAD
- EXISTING EASEMENT LINE
- BLACK BROOK

PROPOSED FEATURES

- EDGE OF PAVEMENT
- CURBLINE (CAPE COD BERM)
- ASPHALT PAVED AREA
- BUILDING
- TRAFFIC FLOW (NOT PAINTED ARROWS)
- CONCRETE PAD/SIDEWALK
- HANDICAP PARKING STALL
- 100 YEAR FLOODPLAIN (518.6')
- DELINEATED WETLAND AREAS

PROPOSED FEATURES

- TEMPORARY SILT FENCE
- 2 FT. CONTOUR
- 10 FT. CONTOUR
- 519.5 — SPOT GRADE ELEVATION
- 519.5 / 519.0 — SPOT ELEVATION AT CURB
- STORM WATER DRAINAGE
- DRAIN MANHOLE
- S.I.T. SOCK FOR ALL CATCH BASINS
- TP: 1 L=LEDGE S=WATER ELEV — SOIL TEST PIT
- PROPOSED SANITARY SEWER
- CULVERT w/ END SECTION & RIP-RAP
- HYDRANT, GATE VALVE & WATER MAIN
- G.V.
- GAS LINE, PROPANE
- UGE — ELECTRICAL TRANSFORMER & UNDERGROUND
- POLE & BUILDING MOUNTED LIGHTS
- SIGN

PERMITS/APPROVALS REQUIRED:

1. CITY OF KEENE PLANNING BOARD, SITE PLAN APPROVAL
2. CITY OF KEENE FLOODPLAIN DEVELOPMENT PERMIT:
3. CITY OF KEENE BUILDING PERMIT:
4. CITY OF KEENE VOLUNTARY LOT MERGER:
5. NHDES SEWER CONNECTION PERMIT.
6. NHDES ALTERATION OF TERRAIN PERMIT:
7. FEMA LETTER OF MAP REVISION (LOMR-F) AND ELEVATION CERTIFICATE:

221021
NH BLACK BROOK LLC
5620 C/O MILE HILL RD
ORFIELD, PA 19069
BK 3005 PG 486

TOTAL PROPOSED BUILDING (98,323 S.F.)

S. OFF & DRAINAGE EASEMENT RESERVED TO THE CITY OF KEENE SEE REFERENCE PLAN 2 & BOOK 1824 PAGE 98

PERIOD 1 PROPOSED BUILDING (57,323 S.F.)

PERIOD 2 PROPOSED BUILDING (27,500 S.F.)

PERIOD 2 PROPOSED OFFICE BUILDING (13,500 S.F.)

ON FOOR (PERIOD 2)

MAIN ROOM | REST ROOM | FIRE RM | ELEC ROOM

CANOPY

LOT 1
12.57 ACRES
547,549 SQ.FT.

PROPOSED 100 YEAR FLOODPLAIN ELEV=518.6'

FLOOD COMPENSATION AREA

ZONE X / ZONE AE

40'

BLACK BROOK ROAD

EXIST DRAINAGE DITCH

EXIST SPILLWAY

KEENE LADDER 1

FLOOD COMPENSATION AREA

28' WETLAND BUFFER

50'

221021
NH BLACK BROOK LLC
5620 C/O MILE HILL RD
ORFIELD, PA 19069
BK 3005 PG 486

221028
CAITLIN WHITHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
BK 2860 PG 540

221025
CAITLIN WHITHEAD
7 LEO CHASSE WAY
FRAMINGHAM, MA 01701-3070
BK 2862 PG 540

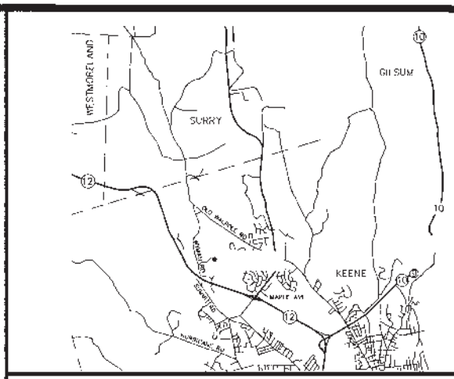
N

FLC

GRAPHIC SCALES

50' 25' 0 50' 100' 150'

IMPERIAL: 1"=50'



NOTES:

1. THE OWNER OF RECORD FOR PARCEL 221-023 & 024 IS NEW ENGLAND INTERCONNECT SYSTEMS, INC. OF 130 NORTH MAIN ST., LISBON, NH 03585.
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   MINIMUM FRONTAGE: 100 FT. (AFTER MERGER FRONTAGE = 509.02')
   MINIMUM FRONT SETBACK: 40 FT.
   MINIMUM SETBACKS: 50 FT. REAR AND SIDE (40' FOR ONE SIDE W/OUT PARKING)
   MAXIMUM BUILDING & IMPERVIOUS COVERAGE: 80%
   MIN. GREEN/OPEN SPACE: 20%
   MAX. BUILDING HEIGHT: 60 FT.

   PROPOSED:
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   GREEN/OPEN SPACE = 66.3%
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9. ALL BUILDINGS WILL HAVE FIRE SUPPRESSION SPRINKLER SYSTEMS (ESFR SPRINKLERS) AND EXISTING FIRE HYDRANTS ARE LOCATED ON BLACK BROOK ROAD.

REV.	DATE	DESCRIPTION	C/D	DR	CK
A	2/10/25	REVS PER STAFF COMMENTS		C.C	JEN

KEENE FIRE ACCESS EXHIBIT PLAN

TAX MAP PARCEL 221-023 & 221-024
(BLACK BROOK ROAD)
KEENE, NEW HAMPSHIRE

PREPARED FOR AND LAND OF:

DOUGLAS COMPANY, INC.
DOUGLAS COMPANY BOX D, KEENE, NH 03431

SCALE: 1" = 50' JANUARY 17, 2025

Surveying ✣ Engineering ✣ Land Planning ✣ Permitting ✣ Septic Designs

FIELDSTONE LAND CONSULTANTS, PLLC

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45 Roxbury Street, Keene, NH 03431
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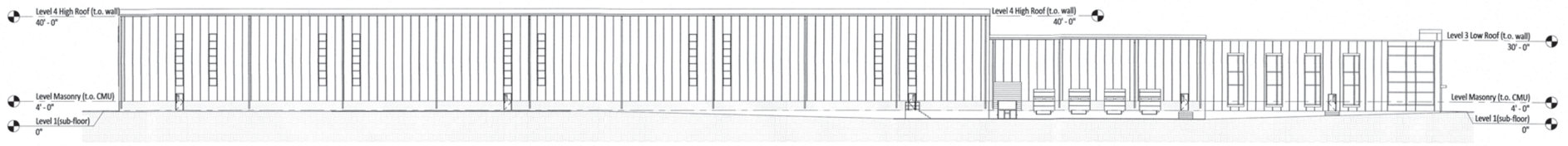
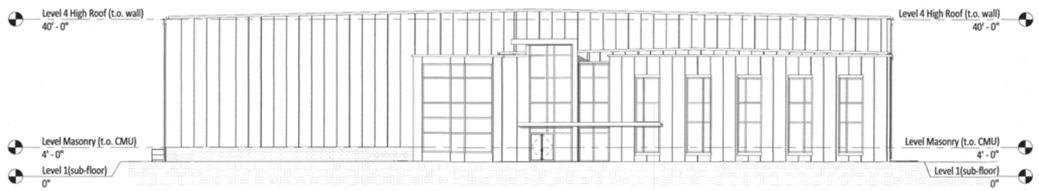
www.fieldstonelandconsultants.com

FILE: 3459SF01A.dwg | PROJ. NO. 3459.01 | SHEET: E1-2 | PAGE NO. 2 OF 2



A200 FRONT ELEVATION - PROPOSED1 E5
SCALE: 1" = 20'-0"



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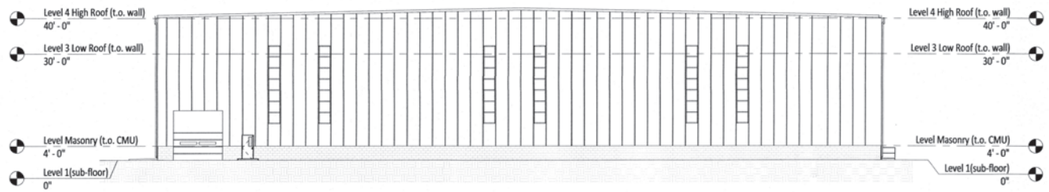

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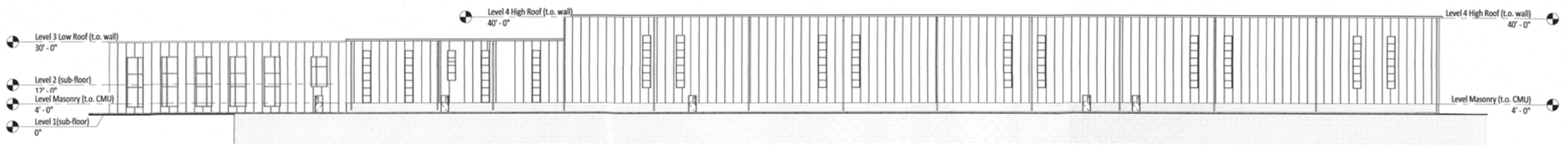

A200 REAR ELEVATION - PROPOSED A5
SCALE: 1" = 20'-0"

The Design Studio of

BTH
Architects
538 Electric Avenue, Unit # 1
Fitchburg, MA 01420
(P) 978-400-7732
www.bthassoc.com

PB-2025-03

Project Name:
NEW WAREHOUSE - FULL BUILD OUT
PROJECT STREET
KEENE, NH
R.P. MASIELLO INC. 38 MAIN STREET BOYLSTON, MA 01505

Issue Record:

	EXISTING CONDITION SET
	BID SET
NFC	PERMIT SET
	CONSTRUCTION SET
	CONVEYANCE/LEASING SET
	AS-BUILT SET

Revisions:

No.	Description	Date

Drawn by:	Checked by:
BTH	BTH

Project No:
BTH-1525

Drawing Name:
Buidling Elevations

Sheet No:
A201

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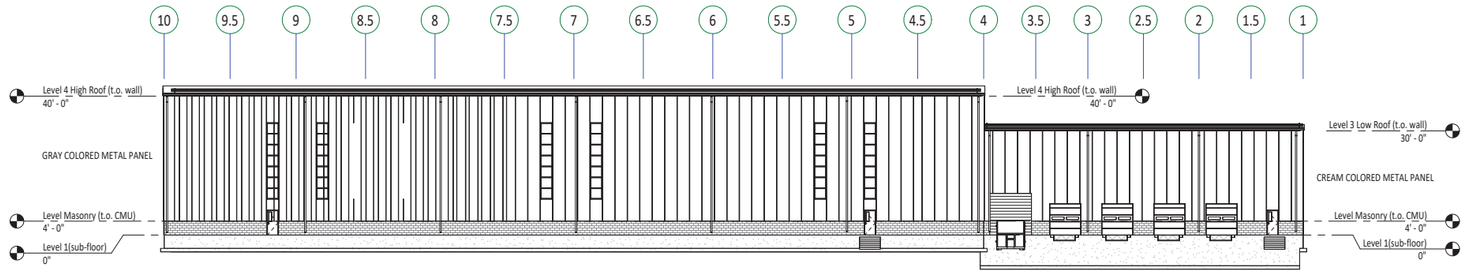
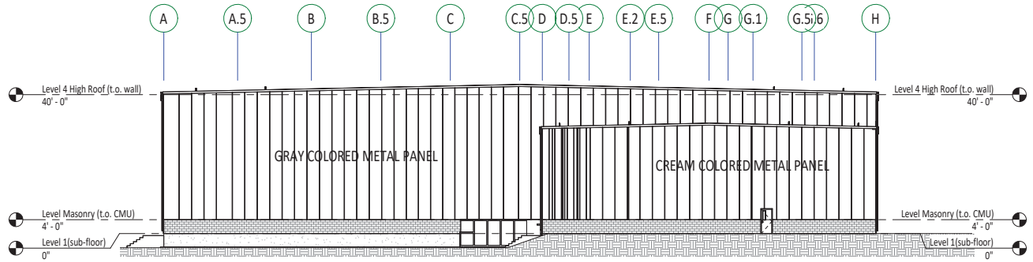
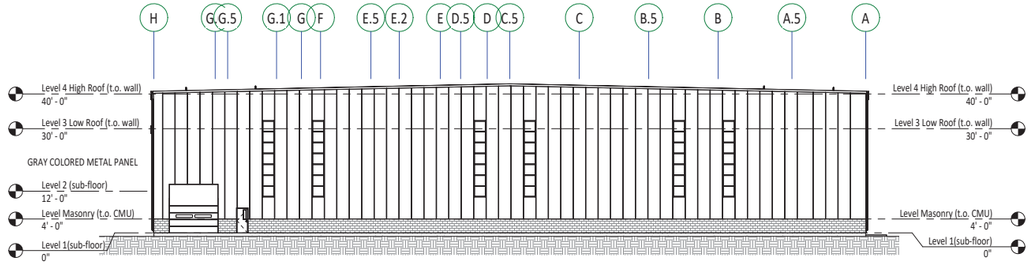


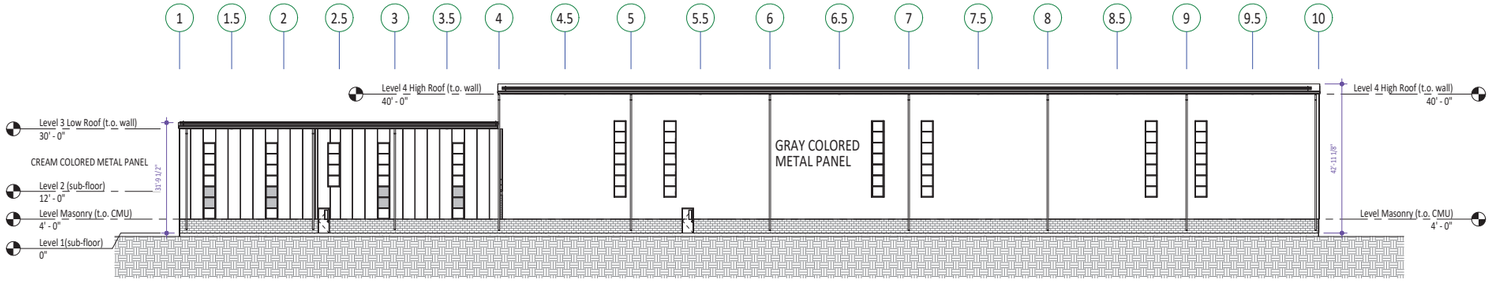
A200 FRONT ELEVATION - PROPOSED1 E5
SCALE: 1/16" = 1'-0"



A200 RIGHT SIDE ELEVATION - PROPOSED1 C5
SCALE: 1/16" = 1'-0"



A200 LEFT SIDE ELEVATION - PROPOSED B5
SCALE: 1/16" = 1'-0"



A200 REAR ELEVATION - PROPOSED A5
SCALE: 1/16" = 1'-0"

The Design Studio of
BTH
Architects
538 Electric Avenue, Unit # 1
Fitchburg, MA 01420
(P) 978-400-7732
www.bthassoc.com

Project Name:
NEW WAREHOUSE
BLACK BROOK ROAD
KEENE, NH
R.P. MASIELLO INC. 38 MAIN STREET BOYLSTON, MA 01505

Issue Record:

	EXISTING CONDITION SET
	BID SET
NFC	PERMIT SET
	CONSTRUCTION SET
	CONVEYANCE/EASING SET
	AS-BUILT SET

Revisions:

No.	Description	Date

Drawn by: BTH
Checked by: BTH
Project No: BTH-1525
Drawing Name:

Buidling Elevations

Sheet No:

A201

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Storm Water Management Report

DOUGLAS COMPANY, INC.

Project Location:
Tax Map Parcels 221-023 & 024
0 Black Brook Road
Keene, NH 03431

Prepared for:
Douglas Company, Inc.
69 Krif Road, Box D
Keene, NH 03431-0716

Date: February 10, 2025

Surveying ◆ Engineering ◆ Land Planning ◆ Permitting ◆ Septic Designs

W E

FIELDSTONE
LAND CONSULTANTS, PLLC

206 Elm Street, Milford NH 03055
Phone: (603)-672-5456 Fax: (603)-413-5456
www.FieldstoneLandConsultants.com

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www.FieldstoneLandConsultants.com

STORM WATER MANAGEMENT REPORT
DOUGLAS COMPANY, INC.
KEENE, NEW HAMPSHIRE

Prepared for:
Douglas Company, Inc.

REVISED February 10, 2025

I) INTRODUCTION

This storm-water management report was conducted for a proposed site development for a Corporate Park – Light Industrial/Warehouse Facility in Keene, NH. The property is located on Black Brook Road, specifically on City of Keene Assessor's Map 221, Parcels 023 and 024. The site is currently undeveloped and both lots were intended for the corporate park development. The applicant is proposing to develop the site and construct a business park facility with one building, parking lots and paved drive aisles. The purpose of the facility is to provide a new warehousing and distribution center for an existing business in Keene. The company assembles, warehouses, and distributes stuffed animal toys.

The proposed plan is to merge the two lots, and construct the building with site amenities. A substantial portion of the site lies within the 100 year floodplain of the Black Brook, which defines the southern boundary of the property. The finish floor elevations of the buildings must be a minimum of 1 foot above the base flood elevation of 518.6' to meet City Floodplain standards. The building elevations drive the site design and require fill within the floodplain of the Black Brook. This fill in the floodplain is offset by excavating the same volume to provide compensation for the floodwaters.

The purpose of this report is to analyze the qualitative and quantitative impacts of the proposed development on stormwater runoff. The objective of the proposed stormwater management system for this project is to mitigate any increases resulting from the proposed development and to meet the drainage guidelines set forth in the City of Keene's Site Plan Review and the NHDES Alteration of Terrain (AOT) regulations. The overall area of disturbance exceeds the NHDES Alteration of Terrain permit threshold of 100,000 square feet of disturbance; therefore an AOT permit is required for the project, along with approval from FEMA for the work within the floodplain. These permits were obtained with previously approved site plan for this property. The changes are significant enough to require a new Alteration of Terrain with NHDES.

II) SITE DESCRIPTION (EXISTING)

The subject property consists of two lots, 5.33 acres and 7.24 acres in size, with frontage along Black Brook Road and the lots are undeveloped. The lots are mostly open farm field, with heavy

brush and woods along the perimeter of the brook. There is a portion of wetland that is parallel to the Black Brook Road.
The NRCS websoil survey indicates that the dominant soils present on the site are Croghan loamy fine sand (613B), Rippowam fine sandy loam (5) and Greenwood mucky peat (295). These soils are respectively Hydrologic Group (HSG) "B" soils, HSG "C" soils and HSG "D" along the brook. Test pits have been conducted on the property, and a Site-Specific Soils Map will be completed as part of the AOT permit.

III) METHODOLOGY

The quantity of runoff and the conveyance of that flow through the site are determined using the software package HydroCAD r 10.0 by HydroCAD Software Solutions, LLC. HydroCAD is a computer aided design program for modeling storm water hydrology based on the Soil Conservation Service (SCS) TR-20 method combined with standard hydraulics calculations used to model stormwater systems, such as detention basins, culverts, swales, and catch basins.

The stormwater management systems are designed in accordance with the methodology for the "Best Management Practices" (BMP's), as outlined in the New Hampshire Storm Water Manual, Volume 2.

IV) DRAINAGE DESIGN

In accordance with the NHDES Alteration of Terrain, there will be no increase in the peak flow of surface runoff. In order to demonstrate this the two (2), ten (10), twenty-five (25) and fifty (50) year frequency storm events have been evaluated. The values for each storm modeled match the Extreme Precipitation Estimates, as listed by the Northeast Regional Climate Center, specifically for Keene NH (see below). These design storms have been analyzed to compare the Pre and Post-development peak flow rates for the site (see attached comparison tables below).

2 Year = 2.75" 10 Year = 3.96" 25 Year = 4.88" 50 Year = 5.72"

Pre-Development Drainage Conditions:
The Pre-Development Drainage Area Plan outlines the area where water flows across the property. The high point of the property is along the northern boundary, along the roadway. The property is relatively flat and drains to the southeast corner of the property, where it drains to the Black Brook.

Post-Development Drainage Conditions:
The proposed drainage systems were designed to capture runoff from the buildings and paved areas, and direct the flow to stormwater management systems. The existing condition has all water flowing to the Black Brook. Therefore, the post-development condition will require mitigating the runoff velocities and out flowing to the Black Brook. There are 4 Subcatchments modeled in the post-development condition, in addition to one existing Subcatchment (E1S) to model the unaltered portion of the site flowing to Black Brook. The majority of the site utilizes

closed drainage structures that are connected to subsurface chamber systems (Ponds 2P & 3P). The northern portion of the roof is tied into a culvert and run to an existing grass swale in the northwest corner of the property where the existing road drainage outlets. The two chamber systems will outlet into the flood compensation basin providing further treatment and detention during storms less than the 100 year event. The outlets for the chamber systems are above the 100 year flood plain elevation and a soil berm provides separation between the floodplain and the drainage systems.

The net result is that virtually all of the new impervious areas will receive qualitative treatment and there will be a reduction of peak rates of runoff leaving this site for all storm events.

V) SUMMARY

The intent of the stormwater management system for this project is to address the qualitative and quantitative aspects of the stormwater runoff so that there are no downstream adverse impacts created by the project. To mitigate the resulting increases in runoff peak rates due to the development of Lots 221-023 and 221-024, this project proposes that a stormwater management system consisting of eleven (11) catch basins, two (2) chamber systems, one (1) treatment swale and one (1) flood compensation basin to be constructed. The net result is that new buildings and paved areas will receive qualitative treatment and there will be no increase in the peak rates of runoff leaving the site. The areas of fill in the floodplain have been offset by cut in the floodplain.

The stormwater management design for this project therefore complies with the standards set forth in the City of Keene's Site Plan Review Regulations and meets the NHDES Alteration of Terrain regulations.

The following table is a summary of the attached calculations and shows a comparison of the peak flow rates at the summary point for the site. The values presented are based on Pre- and Post-development conditions.

Table 1.1: Peak Flow Rates (CFS)/Volume (AF) to Observation Point 1 (OP1) – PRE VS. POST DEVELOPMENT

STORM FREQUENCY	PRE-DEV. RUNOFF (CFS/AF)	POST-DEV. RUNOFF (CFS/AF)	CHANGE (CFS/AF)
2-YEAR	4.49/0.604	3.34/0.410	-1.15/-0.194
10-YEAR	11.08/1.331	6.11/0.752	-4.97/-0.579
25-YEAR	16.86/1.974	8.49/1.046	-8.37/-0.928
50-YEAR	22.49/2.606	10.99/1.332	-11.5/-1.274

MEMORANDUM

TO: Planning Board

FROM: Megan Fortson, Planner

DATE: February 14, 2025

SUBJECT: **PB-2024-20 – Earth Excavation Permit Major Amendment & Hillside Protection Conditional Use Permit – 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 Section 25.3.1.D & Section 25.3.13 of the LDC related to the required 250' surface water resource setback and the 5-ac excavation area maximum. The parcels are a combined ~109.1-ac in size and are located in the Rural District.

Recommendation:

That the Planning Board vote to accept the Earth Excavation Major Amendment application, PB-2024-20, as "complete" and set a date for the public hearing on this project for the next Planning Board meeting on Monday, March 24, 2025 at 6:30 pm in the Council Chambers on the 2nd Floor of City Hall.

Background:

At the December 16, 2024 Planning Board meeting, the Board voted to make a determination that the Earth Excavation Permit Major Amendment Application, PB-2024-20, for the expansion of the existing gravel pit on the properties at 21 & 57 Route 9 be noticed as a development of regional impact (DRI). Following this meeting, the adjacent Town of Sullivan and Southwest Region Planning Commission were granted abutter status and provided with a copy of the meeting minutes in accordance with NH RSA 36:55.

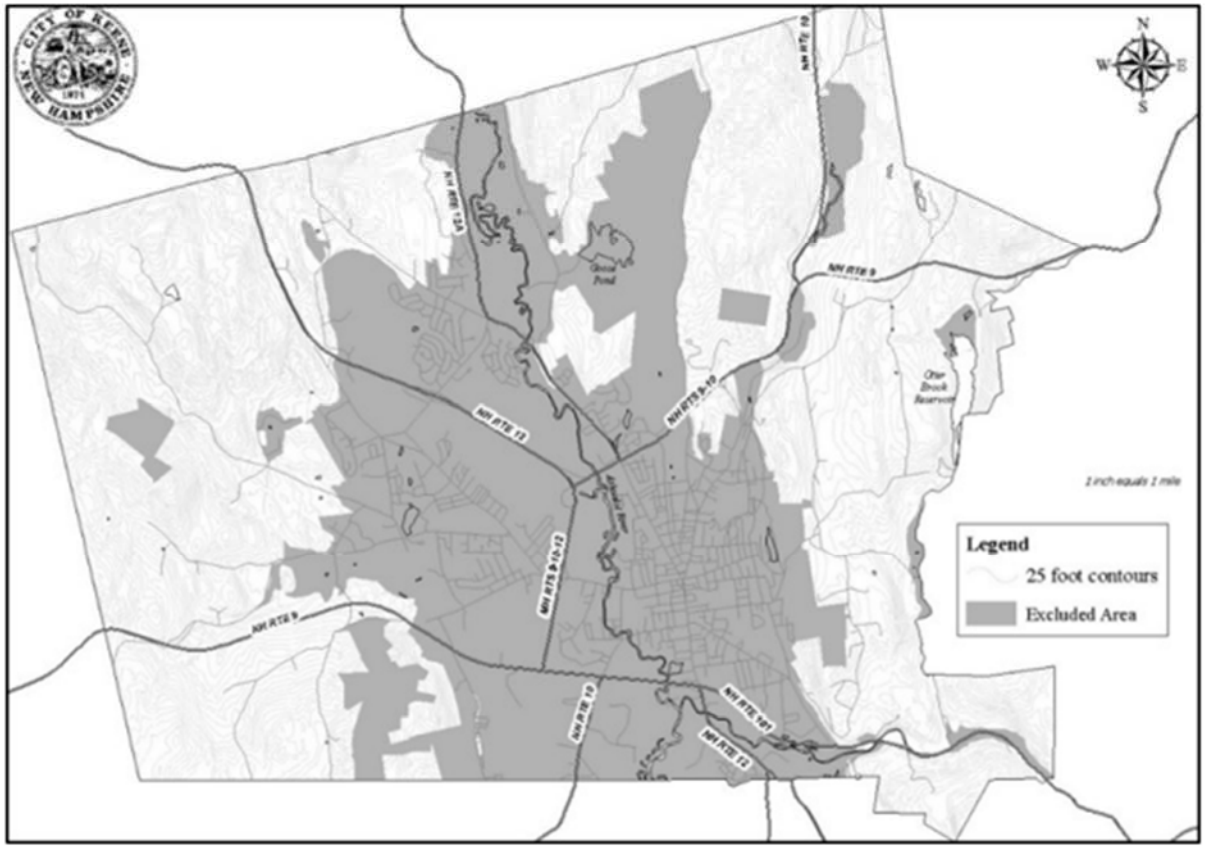
The excavation of earthen material for commercial sale ("gravel pits") is regulated by RSA 155- E at the state level. Enacted in 1979, RSA 155-E grants municipalities the authority to regulate earth excavation operations within their communities. The statute also enables municipalities to enact more stringent standards than those in RSA 155-E itself. The City of Keene regulates Earth Excavation activities under Articles 25 and Article 26, Section 26.19 of the Land Development Code.

Section 25 of the Land Development Code defines its purpose to *"Provide reasonable opportunities for the excavation of earth materials from land situated within the City; Minimize safety hazards created by excavation activities; Safeguard the public health and welfare; Preserve and protect natural resources and the aesthetic quality of areas located near excavation sites; Prevent land, air, and water pollution; and, Promote soil stabilization."* The Section identifies areas of the City in which a Gravel Pit is permitted in Figure 25-1 (see next page).

The City's regulations specify that *"Upon receipt of a completed Earth Excavation Permit application, the Planning Board shall retain a consultant, at the expense of the applicant, for the purpose of reviewing the application for completeness and compliance with NH RSA 155-E and the Earth Excavation Regulations in Article 25 of this LDC. This consultant shall review all aspects of the submittal."*

In accordance with the section above, staff retained the services of Fieldstone Land Consultants, PLLC on behalf of the Board to review the submitted application materials for completeness and compliance with all applicable standards. After receiving comments from the consultant, the Applicant met with staff and the consultant to discuss revisions to the application. Revised application materials were submitted on Monday, February 3, 2025. On Friday, February 14, 2025, Chad Branon, P.E. of Fieldstone Land Consultants sent Planning Staff the attached memo stating that he believes the applicant, Granite Engineering, has provided sufficient materials for the application to be accepted as "complete."

Figure 25-1 Earth Excavation Excluded Areas and Access Routes



Once the Board accepts the application as complete, per Section 25.19.7.F of the LDC, *"the application and any associated materials shall be forwarded to the City of Keene Conservation Commission for review and comment. The Conservation Commission may provide written comment to the Planning Board prior to the closing of the public hearing on the application."*

In addition, within 30 days of a determination of completeness, the Planning Board shall hold a public hearing in accordance with RSA 155-E-7. Within 20 days following the closing of the public hearing, the Planning Board must render a decision on the application (approve, approve with conditions, or deny).

FIELDSTONE
LAND CONSULTANTS, PLLC
Surveying ⌖ Engineering
Land Planning ⌖ Septic Designs
206 Elm Street, Milford, NH 03055 - Phone: 603-672-5456 - Fax: 603-413-5456
www.FieldstoneLandConsultants.com

February 14, 2025

City of Keene – Planning Board
Community Development Department
3 Washington Street
Keene, NH 03431
Attn: Megan Fortson, Planner
Evan Clements, Planner
Mari Brunner, Senior Planner

RE: G2 Holdings LLC - Excavation Permit Package Review
Tax Map 215 Lots 7 & 8 – 57 Route 9 – Keene, NH

Dear Board Members,

As requested, Fieldstone Land Consultants, PLLC (Fieldstone) has performed a review of the documents submitted for the above referenced project for completeness to the applicable City of Keene Land Development Code. The following documents were submitted for our review:

- Transmittal Letter prepared by Granite Engineering LLC, dated December 19, 2024.
- Earth Excavation Permit Application, dated December 12, 2024
- Community Development Department Certified Notice List, dated December 12, 2024
- Owner Affidavit
- Project Narrative
- Natural Heritage Bureau Environmental Review, dated February 6, 2024
- Hydrogeologic Investigation Report, dated December 18, 2024
- Acid Mine Drainage Report, dated December 18, 2024
- Request for waivers to Article 25.3.1.D and Article 25.3.13 with exhibits
- Gravel and Earth Removal Plan Set, dated December 20, 2024
- Hillside Protection Conditional Use Permit Application with Exhibits
- Copy of Alteration of Terrain Permit and Stormwater Management Application, dated December 20, 2024

- City Response Letter, dated February 3, 2025
- Stormwater Pollution Prevention Plan, Dated January 30, 2025
- Stormwater Management Report, dated January 22, 2025
- Revised Plan Set, last revised February 3, 2024

Fieldstone has completed a review of the materials provided against Section 26.19.4 of the Earth Excavation Submittal Requirements. Section 26.19 of the City Land Development Code addresses the requirements for the submission of and Earth Excavation Permit. We believe the material provided satisfies the threshold for the application to be deemed complete. The technical elements of the materials submitted will need to be reviewed against the applicable regulations and standards. Fieldstone will commence with the technical review as requested.

This concludes our completeness review for the above referenced project. Please feel free to contact us should you have any questions or require additional information.

Sincerely,
FIELDSTONE LAND CONSULTANTS, PLLC

Chad E. Branon, P.E.
Civil Engineer/Principal

City of Keene, NH

Earth Excavation Permit Application

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

SECTION 1: PROJECT INFORMATION

PROJECT NAME: G2 Holdings, LLC

PROJECT ADDRESS(ES): 57 Route 9

TYPE OF APPLICATION BEING SUBMITTED:
- ☐ EARTH EXCAVATION PERMIT
- ■ MAJOR AMENDMENT
- ☐ MINOR AMENDMENT
- ☐ PERMIT RENEWAL

SECTION 2: CONTACT INFORMATION

PROPERTY OWNER	APPLICANT
NAME/COMPANY: G2 Holdings, LLC	**NAME/COMPANY:** G2 Holdings, LLC
MAILING ADDRESS: 250 North Street, Jaffrey, NH 03452	**MAILING ADDRESS:** 250 North Street, Jaffrey, NH 03452
PHONE: 603-325-8457	**PHONE:** 603-325-8457
EMAIL: cody@mygordonservices.com	**EMAIL:** cody@mygordonservices.com
SIGNATURE:	**SIGNATURE:**
PRINTED NAME: Cody Gordon	**PRINTED NAME:** Cody Gordon

AUTHORIZED AGENT (if different than Owner/Applicant)	FOR OFFICE USE ONLY:	
NAME/COMPANY: Granite Engineering, LLC	**TAX MAP PARCEL #(s):** ___-___-___-___-___ ___-___-___-___-___	
MAILING ADDRESS: 150 Dow Street, Suite 421, Manchester, NH 03101		
PHONE: 603-518-8030	**PARCEL SIZE:**	**DATE STAMP:**
EMAIL: jdaigneault@graniteeng.com	**ZONING DISTRICT:**	
SIGNATURE:		
PRINTED NAME: Justin Daigneault	**PROJECT #:**	

City of Keene, NH

Hillside Protection 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

SECTION 1: PROJECT INFORMATION

PROJECT NAME: GRAVEL AND EARTH REMOVAL PLAN, G2 HOLDINGS, LLC	**AREA OF PRECAUTIONARY SLOPES TO BE IMPACTED:** *(in square feet)* Lot 7 = 202,015 SF
PROJECT ADDRESS(ES): 57 ROUTE 9, TAX MAP 215, LOTS 7 & 8	

SECTION 2: CONTACT INFORMATION

PROPERTY OWNER	APPLICANT
NAME/COMPANY: G2 Holdings, LLC	**NAME/COMPANY:** G2 Holdings, LLC
MAILING ADDRESS: 250 North Street, Jaffrey, NH 03452	**MAILING ADDRESS:** 250 North Street, Jaffrey, NH 03452
PHONE: 603-325-8457	**PHONE:** 603-325-8457
EMAIL: cody@mygordonservices.com	**EMAIL:** cody@mygordonservices.com
SIGNATURE:	**SIGNATURE:**
PRINTED NAME: Cody Gordan	**PRINTED NAME:** Cody Gordan

AUTHORIZED AGENT (if different than Owner/Applicant)	FOR OFFICE USE ONLY:	
NAME/COMPANY: Granite Engineering, LLC	**TAX MAP PARCEL #(s):** ___-___-___-___-___ ___-___-___-___-___	
MAILING ADDRESS: 150 Dow Street, Suite 421, Manchester, NH 03101		
PHONE: 603-518-8030	**PARCEL SIZE:**	**DATE STAMP:**
EMAIL: jdaigneault@graniteeng.com	**ZONING DISTRICT:**	
SIGNATURE:		
PRINTED NAME: Justin Daigneault	**PROJECT #:**	

Narrative

As part of the application for the City of Keene Earth Excavation Permit, the following are narrative descriptions detailing how each development standard outlined in Article 25.19.4.B, of the Land Development Code has been addressed:

1. **The location, boundaries, and zoning district**
   The applicant and the property owner, G2 Holdings LLC, propose expansion at the existing Route 9 gravel pit located on Tax Map 215, lot 7. The expansion is proposed on Map 215; Lots 7 & 8 in the City of Keene and extends into the town of Sullivan on Map 5, lots 46 and 46-1. The lots within the City of Keene are situated in the Rural 'R' zoning district. Access to the existing operation is off NH Route 9. The proposed expansion will utilize the same access roadway.

2. **Types of materials to be excavated and means**
   Bedrock will be the primary material excavated from the site. Eight overburden wells were drilled within the perimeter of the proposed excavation and determined that bedrock was shallow, less than 5' in most cases. 6 bedrock wells were then drilled within the perimeter to measure groundwater. Processing of the excavated materials (crushing, screening, sorting, and stockpiling) to create marketable construction materials will occur onsite. The construction material and equipment storage area will be relocated depending on the progress of the gravel operation. Said area will start at the upper limits of current excavation and systematically relocate as excavation progresses. Excavation activities are proposed between the hours of 7:00 am and 5:00 pm, Monday through Friday. The sale and loading of stockpiled materials are anticipated to occur from 8:00 am to 1:00 pm on Saturdays; however, no other excavation activities are expected on this day. No excavation activities, including the sale of stockpiled materials, are proposed 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.

3. **Project duration and phasing**
   Based on discussion with the City on March 4, 2024, the project is proposed to be permitted in its entirety. The project will be broken out into eight (8) permit periods. Six months prior to a period being completed, the applicant will submit to the Planning Board for an amendment for the next phase.

   Each period is based on a maximum "open area" of 5 acres. The breakout is a recommendation to the contractor and does not necessarily reflect the order in which the project will be completed. Phase 1 consisted of the original gravel pit that was previously permitted 2022, exceeded the 5-acre maximum, and received a waiver approval by the City of Keene Planning Board on August 22, 2022. Each period

as part of Phase 2 will expand upon that area and be reclaimed as it's exhausted. The estimated project timeline will exceed five years and is estimated at 13 years. The applicant must submit to the Department of Environmental Services and the city of Keene 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. Below is an anticipated breakout for each:

- Permit Period 1 – 4.99 AC, Volume – 358,800 CY January 2025 – May 2027
- Permit Period 2 – 4.10 AC, Volume – 271,000 CY June 2027 – March 2029
- Permit Period 3 – 2.14 AC, Volume – 16,450 CY April 2029 – May 2029
- Permit Period 4 – 0.39 AC, Volume – 939 CY (Sullivan) June 2029 – July 2029
- Permit Period 5 – 4.08 AC, Volume – 366,530 CY August 2029 – January 2031
- Permit Period 6 – 3.82 AC, Volume – 262,692 CY Feb. 2031 – November 2032
- Permit Period 7 – 4.06 AC, Volume – 306,210 CY (Sullivan) Dec. 2032 – December 2034
- Permit Period 8 – 7.62 AC, Volume – 496,500 CY January 2035 – April 2038

Phasing notes:

A. Sheet Existing Conditions plan reflects the current conditions of the earth excavation materials and processing area. The area will be used for material stockpiling, storage, rock crushing, cleaning, and processing for the project's entirety. There is a large sedimentation area in the western portion of the site that stormwater drains to and infiltrates. This area is also used to provide water for material processing and dust control devices. It will also provide infiltration from associated excavation areas during the excavation process.

B. Period 1, located directly north of this area is where excavation will begin. Access will be off the existing gravel haul road located in the lower eastern portion of the site. As excavation begins, the contractor will excavate a sediment area in the southern portion of the pit area. This sediment area will be used to hold any stormwater runoff associated with the current pit phase. As the excavation footprint increases, so will the size and depth of the sediment retention area. The floor of the pit will slope to the south to the sediment pond located within the pit's floor. The sediment basin will be required to be dredged after accumulative sediment has reduced its ability to adequately infiltrate any stormwater it captures. In the event the pond does not have the ability to infiltrate, it will act as a sediment retention pond, and an outlet structure will be located within the floor of the pond. The stormwater will be held and released at a slow rate, and directed to the existing sediment retention pond to the south. Once Period 1 has been excavated to final grade, all limits of disturbance within the pit

will be reclaimed by being loamed and seeded. Sediment shall be removed from the retention pond prior to loaming and seeding.

C. The proposed haul road and associated culverts will be constructed connecting phase 1 and 2 along with erosion control measures including stone lined ditches, check dams, silt fence, and erosion control blankets.
D. Period 2 construction will commence like the procedures outlined for Period 1. A sediment retention pond will be constructed in the southern portion of the pit. As the pit is excavated, the floor will be sloped to capture runoff and detain it in the pond. If it becomes apparent that this pond is not able to infiltrate stormwater, then an outlet device will be installed and directed to the now completed and reclaimed sediment area in the previous phase.
E. Once period 2 has been completed to finish grade, the area is to be reclaimed. Sediment shall be removed from the retention pond prior to loaming and seeding. The haul road that runs east to west and connects period 2 to the proposed haul road running north to south) will also be reclaimed. The 15" and 24" culverts, along with the ditch that was constructed along the west side of the existing haul road up to the start of period 3 must remain.
F. Period 3 and 4 include the construction of the haul road that accesses the northern portion of the site that extends into the town of Sullivan, periods 5,6, and 7. Erosion control devices and culverts are to be installed.
G. Period 5 involves construction of a sediment retention pond in the southern portion of the pit. As the pit is excavated, the floor will be sloped to capture runoff and detain it in the pond. If it becomes apparent that this pond is not able to infiltrate stormwater, then an outlet device will be installed and directed to the now completed and reclaimed sediment area in period 2. Once period 5 has been completed to finish grade, the area is to be reclaimed. An access through period 5 to access period 6 will remain open for truck movements to the haul road constructed in periods 3 and 4.
H. Period 6 will be a continuation of Period 5. The pit floor will be sloped to the south, and temporary sediment basins will be used to control and minimize sediment transport from the excavation site to the reclaimed area of Period 5. Once Period 6 has been completed to finish grade, the area is to be reclaimed. An access through period 6 to access period 7 will remain open for truck movements to the haul road constructed in periods 3 and 4.
I. Period 7 will be a continuation of Period 6. The pit floor will be sloped to the south, and temporary sediment basins will be used to control and minimize sediment transport from the excavation site to the reclaimed area of Period 6. Once Period 7 has been completed to finish grade, the entire excavation area is to be reclaimed.
J. The haul road will be reclaimed. Associated ditches and culverts are to remain, however the gravel portion of the road will be loamed and seeded.

K. Period 8 is the final phase of the project. As the pit floor is excavated, the existing sediment area will remain and be used for control of stormwater. As the pit floor approaches the proposed final grade, the infiltration pond will be constructed, loamed and seeded. Stormwater directed to this pond will be captured in sediment traps and slowly released to this area while construction continues. Once final grades have been completed, all areas are to be reclaimed. The infiltration area will remain in place. The access road will be loamed and seeded.

4. **The number of Acres impacted**
   The work area in the City of Keene is 26.75 Acres

5. **Volume of earth material to be removed**
   Total volume removed is approximately 1,771,972 cubic yards at a rate of 102,000 cubic yards of material per year.

6. **Description of maximum breadth, depth, and slope**
   - Permit Period 1 – Average Breadth = 250’ Depth = 66’ +/- Slope = 1:2
   - Permit Period 2 – Average Breadth = 180’ Depth = 70’ +/- Slope = 1:2
   - Permit Period 5 – Average Breadth = 350’ Depth = 60’ +/- Slope = 1:2
   - Permit Period 6 – Average Breadth = 435’ Depth = 80’ +/- Slope = 1:2
   - Permit Period 7 – Average Breadth = 290’ Depth = 80’ +/- Slope = 1:2 (Sullivan)
   - Permit Period 8 – Average Breadth = 375’ Depth = 32’ +/- Slope = 2:1

7. **Location and Access and perimeter visual barriers**
   Access to the existing operation is off NH Route 9. The proposed expansion will utilize the same access roadway and maintain the same visual barriers that were permitted during the previous phase of development. A NHDOT driveway permit was approved for this location and access has already been constructed. No glare or odor impacts are expected from the proposed gravel pit use. The project is remotely located, separated primarily from abutters with woodlands. The gravel pit observes the appropriate setbacks from property lines. The nearest property lines of parcels not owned by the applicant are as follows:
   - North: 830 feet
   - South: 300 feet
   - East: 2,260 feet
   - West: 455 feet

8. **Elevation of estimated highest annual average groundwater table.**
   Eight overburden wells were performed within the excavation area and the water table was not found in these locations. Six bedrock monitoring wells were drilled within the proposed footprint of the excavation a minimum of 50’ below the proposed pit bottom, and water was not found in those wells. Four test pits were dug within the

perimeter of the excavation area and the estimated seasonal high water table was found in two of the pits, at 20" and 32", with ledge directly below within five to six feet. The ESHWT observed in the test pits is interpreted to be the result of a very low residence time groundwater. The overburden is relatively thin across most of the site. As rain falls or snow melts, the water infiltrates into the ground. Due to the relatively high hydraulic conductivity of the sand and gravel overburden the groundwater doesn't stick around long. It moves downgradient to a discharge point, i.e. seep, creek, Otter Brook, and generally presents itself as surface water discharge. Additionally, some of this water is taken up through evapotranspiration.

9. **Proposed methods of disposal of boulders, stumps, vegetation, and other debris**
   Except for the exposed rock ledge face, all areas that have been affected by the excavation or otherwise stripped of vegetation shall be spread with topsoil or stripping, 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. Earth and vegetative debris resulting from the excavation shall be removed or otherwise lawfully disposed of. All slopes, except for exposed ledge, shall be graded to natural repose for the type of soil of which they are composed 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. Stumps, vegetation, and leaf debris will be stored, ground, and processed into mulch for use in perimeter erosion control measures as needed, or surface composted on site for use in enriching loam for site reclamation.

10. **Proposed methods for controlling stormwater, drainage, erosion, and sedimentation**
    The elimination of any standing bodies of water created in the excavation project that may constitute a hazard to health and safety; and 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 that 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. During construction, grading of pit floors will slope to the pit face, and stormwater will be directed to within the pit footprint, collected, retained, and infiltrated on-site. The surface water is collected, settled, and allowed for use in material processing, dust control, and rock cleaning. The proposed operation will be self-contained to retain all stormwater and prevent any potential erosion on site, within the limits of disturbance. Drainage shall be maintained so as to prevent the accumulation of free-standing water for prolonged periods. Excavation practices that result in continued siltation of surface waters or any degradation of water quality of any public or private

water supplies are prohibited. Construction shall proceed such that there is no runoff from the excavation area leaving the site at any time.

Large sediment retention areas have been designed within the floor of each pit area. The intent of these is to capture runoff, and sediment, associated with the excavation and contain it within the pit floor. As the pit expands, so too will the sediment retention areas. These retention areas hold back the stormwater and allow it to exit thru a small culvert, and slowly discharge to an existing infiltration area within the current material storage, processing, and equipment area at the southerly end of the project. This area will be enlarged during the initial phase to eventually capture and infiltrate construction periods 1-7. During the final phase of the project, period 8, a large infiltration area will be excavated. The floor of this pond will be set above the estimated seasonal high water table. Stormwater will collect in this pond and eventually infiltrate into the ground. The sediment areas and infiltration areas have been sized to capture, contain, and infiltrate the 50-year, 24 hour rain event.

A stormwater analysis has been provided to include these calculations, along with culvert and stone rip rap calculations.

11. Means to avoid and/or mitigate adverse impacts caused by dust, noise, and traffic

The site shall operate in a manner that prevents fugitive dust emissions pursuant to New Hampshire Code of Administrative rules env-a 1002, fugitive dust. Dust control practices are outlined in the stormwater pollution prevention plans (SWPPP). Dust control activities and devices shall be incorporated into the excavation operation, on the site, and on the access driveway, in a manner that minimizes the generation of airborne dust or transportation of dust or mud off the site onto the adjacent roadways. Visual monitoring of airborne dust shall be done on an ongoing basis. Dust control measures such as applying water to access driveways and other areas within the excavation perimeter, washing dirt from truck tires, or other measures as may be deemed necessary, shall be employed to minimize the generation of airborne dust, and/or the transportation of dirt/mud off the site onto adjacent roadways. Dust control will be accomplished using a truck-mounted water tank and spray system as needed. Inspection of access driveway stabilized construction entrances and other erosion control measures, designed to eliminate the deposit of dust or mud onto public streets, shall be conducted on a weekly basis to ensure proper functioning. The maintenance of these entrances shall be performed as necessary and any dirt or mud deposited on public streets shall be removed. The applicant shall maintain a log documenting dust control activities, inspection and maintenance of dust and dirt control structures and devices and cleanup of dirt deposited on roadways leading from the site. The construction SWPPP shall be used for instructions of how to inspect and maintain erosion and sediment control practices.

Traffic: This project, while expanding on the previously permitted gravel pit, does not anticipate an increase in trucks operating at the site. An onsite speed limit of 15 mph has been established via signage. A stop sign has been added at the exit from the site, onto Route 9. As noted in the previous permit application by TFMoran, Inc. we note the following: *As established in the TFMoran Traffic Memorandum submitted to the City of Keene on 2/18/2022, the proposed excavation is located on a State Highway, operations are not expected to negatively impact traffic conditions – 40 trucks per day represents less than a 1% increase compared to the 2019 AADT of 9,707 vehicles*.

12. **Precautions to be taken by the applicant to protect the safety and welfare of the persons on site**

The access is gated to secure the site during after business hours. Signage is posted to include speed limit reductions, hard hat requirements, and personal safety equipment requirements for specified areas. All equipment is inspected daily and forms completed regarding backup alarms, brakes, tires, mirrors, etc. The crushing equipment has safety cables and buttons for emergency stopping procedures, guards on all pulleys, belts, etc. The shed contains an emergency first aid kit, fire extinguishers, body board, eye wash station, and MSDS sheets.

Stock pile areas have berms for safety. Proposed ledge face will be inspected daily, material will be used to create berms at the bottom, this will deter people from entering or getting within close proximity to the pit face. The property boundary will have signage stating private property, active blasting, do not enter. All stumps and brush will be put on the boundary of each phase to keep people outside of work areas. Once the pit area has been completely excavated and reclaimed, fencing will be installed along the top of all slopes greater than 2:1.

The work will be conducted by trained personnel, in accordance with OSHA and MSHA worksite safety standards. All staff is MSHA and first-aid certified. MSHA inspects the site annually for compliance.

13. **The proposed methods for handling, transporting, and disposing of fuel and/or chemicals on site**

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) gallons will be reported to the Keene Fire Department and to NHDES.

14. **The means by which earth materials are proposed to be transported from the excavation site, and the proposed load limits and number of vehicle trips per day**

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 the current pit operations is 40-60 trips per day.

15. Extent of blasting and the name and classification of any explosives

Based on the data from the 6 bedrock monitoring wells, blasting will be used for most of the excavation on the site. Blasting operations will be conducted by a well-versed contractor. The applicant shall identify drinking water wells located within 1/2 mile of the proposed blasting activities. Develop a groundwater quality sampling program to monitor for nitrate either in the drinking water supply wells or in other wells that are representative of the drinking water supply wells in the area. The plan must include pre and post-blast water quality monitoring and be approved by The City of Keene and NHDES prior to initiating blasting. The groundwater sample program must be implemented once approved by The City of Keene and NHDES. 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.

Waivers

The applicant requests the following waivers in accordance with Article 26.19.13:

1. **Which Requirement:**
   Article 25.3.1.D – Surface Water Resource Setback – The excavation perimeter shall be set back at least 250 feet, and the access driveway shall be set back at least 150 feet from any surface water resource.

   Please refer to the attached exhibit entitled "Surface Water Resources Setback Plan" for a graphic of this encroachment.

   Why the waiver is needed:
   There is an existing wetland 75' to the west of the excavation perimeter. To the east, there is another forested wetland 150' feet away. These two wetlands at their closest proximity area approximately 800' apart. The 250' setbacks from the two wetlands prohibits a significant amount of excavation material directly to the north of the gravel pit. The City of Keene Planning Board previously approved reduction in the surface water setback to 75' on August 22, 2022 in this area. The applicant is requesting further excavation to the north of the site, while maintaining the previously approved 75' setback. The surface water resource impacted would be around the small, isolated wetland to the west of the gravel operation. The existing wooded vegetation around the wetland will remain. This wetland is not connected to another surface water as it's an isolated wetland roughly 0.35 acres in size. This is considered a low value water resource due to its size and lack of connectivity to adjacent surface waters. This wetland forms a natural channel with steep slopes on both sides, captures runoff from adjacent areas and eventually dissipates. The runoff infiltrates into the soils, thus the wetland terminates prior to entering any drainage along NH Route 9. Due to the excess slopes and the entire eastern edge of this wetland currently being excavated as part of the permitted pit activity, this resource setback has limited, if any use, as a wildlife corridor. Please refer to the attached Wetland Functional Assessment report that was performed by EcoSystems Land Planning, which documents this wetland ranked low on most wetland functions and values criteria.

   Alternative Standard:
   The alternative to the proposed would result in significantly less excavation to the north. There is an naturally wooded earthen berm approximately 8 to 16 feet high between the wetland and the pit excavation. After the project has been reclaimed, this berm height would increase to over 35 feet high on its exaction height.

   Not in Violation:

The granting of this waiver will not be in violation with NH RSA 155:E because the state regulation does not establish buffers for forested wetlands under 5 acres in size. This wetland is 0.35 acres. Granting of this waiver/exemption shall not cause violations to the intent of the City of Keene's Article 25. This waiver was previously approved by the Planning Board during the previous project phase.

Adverse Impacts:
Reduction in the setback will not have adverse impacts because both wetlands have natural wooded buffers and forested berms between them and the gravel excavation. Most of the wetland associated with the setback reduction is higher in elevation than the pit excavation.

Purpose and Intent:
The purpose of this regulation is to protect the buffers associated with wetlands. The 250' buffer for this wetland has been altered in a previous approval by the Board. The berm associated with the wetland remains and acts as its true buffer. The further explanation of the 250' wetland buffer but not closer than 75' is consistent with the purpose and intent of Article 25. The waiver was previously approved in this location by the Planning Board. The buffer will be reclaimed upon the conclusion of the gravel operation.

Not Unduly Injurious:
Granting this waiver will not be unduly injurious to public or environmental welfare because 75-foot wooded buffers will remain along the excavation perimeter. Wetlands will be further protected as the earth excavation is happening below the existing grade eliminating surface runoff of the gravel excavation into the wetland.

Unique Site Characteristics :
This area is unique in having only 800 feet between existing wetlands located east and west of the excavation area. The remaining wetlands on the site are separated by enough distance that the 250 setback can be maintained. This is the only area on the property seeking a waiver from the setback.

2. **Which Requirement:**
Article 25.3.13 – (Maximum Excavation Area) – The total of any unclaimed, inactive and active excavation areas shall not exceed 5-acres at any time.

Why the waiver is needed:
For a gravel pit to function properly, a significant amount of area is needed for material storage processing, equipment, vehicle movement, temporary stockpiles of rock for processing, etc. The applicant was not able to fully excavate all the material that was proposed in the previous approval without having an additional material and processing area somewhere else off-site. The area that is currently open to allow for material storage and processing is 6.8 acres. A waiver was previously approved by

the Planning Board for this project for an area of 7 acres. The applicant is requesting that this 6.8-acre area remain open, while material is being excavated from each period moving forward. Once the material has been removed from each phase, those areas will be reclaimed before moving on to the next phase. Given the 8 periods proposed, with period 2 being 4.99 acres, this would require a maximum area open during a given period of 12 acres.

Alternative Standard:
The alternative to the proposal would prohibit any additional earth excavation on-site. It would require hauling material to another site that can store and process this material. Trucking costs to haul the material to be stored and processed would increase truck traffic on state roads. Hauling materials would drive the cost of the product up and would result in a net increase in cost to the consumer.

Not in Violation:
The granting of this waiver will not be in violation of NH RSA 155:E. Temporary erosion control measures are to be maintained on-site during the time this area is active. Stormwater has been detained within this area via a sediment retention area. Most of this area is gravel surface, including the pit access road of NH Route 9, as well as the material handling and processing area. New Hampshire Department of Environment Service (NHDES) defines stable areas to include compacted graveled areas. During the construction of each phase, temporary erosion control measures will be in place, and during pit excavation, stormwater flows will be contained within the pit area.

Adverse Impacts:
Approving this 12-acre open area would not have adverse impacts. The BMP's onsite are designed to handle the flows and the sediment retention areas will ensure stormwater remains on-site. The 7-acre landing area is considered "stabile" by NHDES definition which has minimal erosion potential.

Purpose and Intent:
This proposal is consistent with the intent of Article 25 as it relates to stormwater and erosion control best management practices.

Not Unduly Injurious:
Granting this variance will not be unduly injurious to the public or environmental welfare. A majority of this area is considered stable by the state of NH, and the necessary erosion control measures and grading practices have been used to ensure stormwater management is maintained.

Unique Site Characteristics :
As previously mentioned, the area that was permitted during the previous planning board approval did not take into account an area on-site to store and process the material associated with the pit excavation. Given there are eight periods and over 31

acres of disturbance within the City of Keene and Town of Sullivan combined, the overall scale of this project makes it unique.

Sincerely,

Justin Daigneault
Project Manager

Photo #1

Existing Site Entrance from NH Route 9, Looking East
December 12, 2024

Photo #2

Existing Access Road from NH Route 9, Looking North
December 12, 2024

150 Dow Street, Tower 2, Suite 421, Manchester, NH 03101
(603) 518-8030 ● www.GraniteEng.com

Photo #3

Existing Woodland Buffer from NH Route 9, Looking West
December 12, 2024

Photo #4

Existing Material and Processing Area, Looking North
December 12, 2024

Photo #5

Existing Material and Processing Area, Looking West
December 12, 2024

Photo #6

Looking at Current Gravel Operation
August 3, 2024

Photo #7

Looking Uphill at Period 1 from Current Landing Area Previously Permitted
August 3, 2024

Photo #8

Current Landing Area – 2023 (Area Since Stabilized)
August 3, 2024

Photo #9

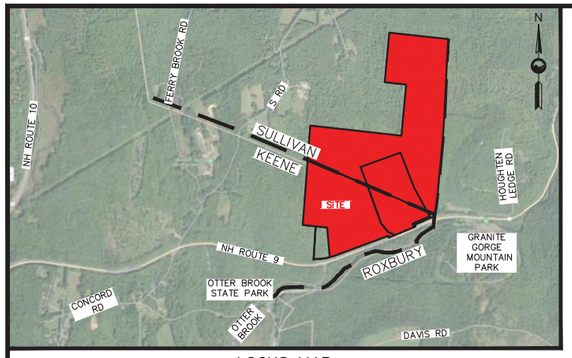
Looking at Existing Logging Road
August 3, 2024

150 Dow Street, Tower 2, Suite 421, Manchester, NH 03101
(603) 518-8030 ● www.GraniteEng.com

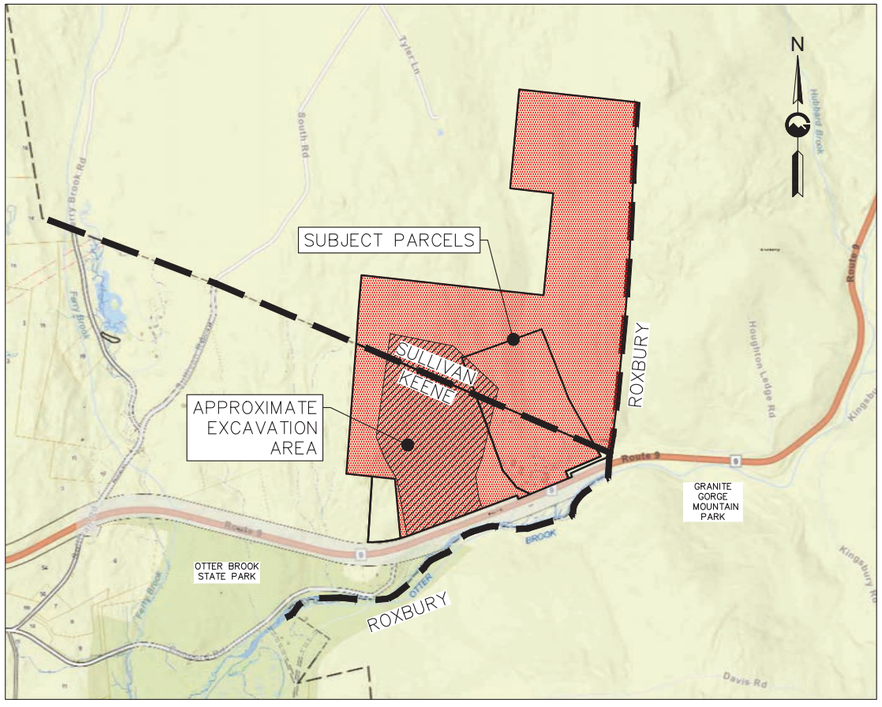
GRAVEL AND EARTH REMOVAL PLAN

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



LOCUS MAP
SCALE: ±1"=2,000'



LOCATION PLAN
SCALE: 1"=1,000'

SHEET NO.	TABLE OF CONTENTS
1	OVERVIEW PLAN
2–3	EXISTING CONDITIONS PLAN WITH BOUNDARY LINES
4	CONTEXT PLAN
5–10	EXCAVATION, DRAINAGE & EROSION CONTROL PLAN
11–16	IMPACT CONTROL & MONITORING PLAN
17–18	RECLAMATION PLAN
19–22	DETAILS

GRANITE ENGINEERING
civil engineering • land planning • municipal services
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New Hampshire 03101
603.518.8030
www.GraniteEng.com

STAMP:

OWNER & APPLICANT:
G2 HOLDINGS, LLC
250 NORTH STREET
JAFFREY, NH 03452
PHONE 603–325–8457

CIVIL ENGINEER:
GRANITE ENGINEERING, LLC
150 DOW STREET, TOWER 2, STE 421
MANCHESTER, NH 03101
(603) 518–8030

WETLAND SCIENTIST:
ECOSYSTEMS LAND PLANNING
36 DUNKLEE STREET
CONCORD, NH 03301
(603) 224–6244

SURVEYOR:
SMITH & POSPESIL LAND SURVEYING, PLLC
240 QUEBEC ROAD
LYMAN, NH 03585
(603) 838–6494

SOIL SCIENTIST:
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(603) 583–1745

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

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

DIG SAFE

811

RI-ME-MAY-JAM

UTILITIES UNDERGROUND

CALL TOLL FREE

DAMAGE PREVENTION SYSTEM

N

GENERAL NOTES:

1. 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.
2. CURRENT USE OF THE PROPERTY IS FOR GRAVEL AND EARTH REMOVALS.
3. AREA OF SUBJECT PARCEL (CITY OF KEENE) = 101.27 ACRES.
4. OWNERS OF RECORD:
   G2 HOLDINGS, LLC
   250 NORTH STREET
   JAFFREY, NH 03452
5. THE SUBJECT PARCEL IS LOCATED WITHIN THE CITY OF KEENE R (RURAL) ZONING DISTRICT AND SUBJECT TO THE FOLLOWING DIMENSIONAL REGULATIONS:

	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

6. 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 OCTOBER 2022 AND MAY OF 2023.
7. 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.
8. HORIZONTAL DATUM IS ON THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD83 (2011).
9. VERTICAL DATUM IS NAVD 88.
10. 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.E. (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
11. EXCAVATION SITE, DESIGNED BY TFM CONDITIONAL USE PERMIT APPROVED BY THE KEENE PLANNING BOARD OF ADJUSTMENTS ON AUGUST 22, 2022 – KEENE HILLSIDE PROTECTION
12. ZBA SPECIAL EXCEPTION FOR GRAVEL PIT USE – GRANTED 8/22/2022
13. THE FOLLOWING ARE REQUESTED FROM THE CITY OF KEENE PLANNING BOARD:
    - 25.3.1.D. (SURFACE WATER RESOURCE SETBACKS) – WAIVER REQUIRED
    - 25.3.13 (MAXIMUM EXCAVATION AREA) – WAIVER REQUIRED
14. THE PROJECT REQUIRES THE FOLLOWING STATE, FEDERAL, AND LOCAL PERMITS:

PERMIT	STATUS	PERMIT NO.
NHDES AOT	PENDING	
KEENE HILLSIDE PROTECTION – CONDITIONAL USE PERMIT	PENDING	
KEENE EARTH EXCAVATION	PENDING	

15. WETLAND MAPPING PERFORMED BY JOHN ST. JOHN OF ECOSYSTEMS LAND PLANNING IN OCTOBER–NOVEMBER 2023.
16. 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.
17. 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.
18. 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.
19. AREAS OF DISTURBANCE SHALL NOT EXCEED 5 ACRES AT A TIME. 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 85% 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 BLANKETS HAVE BEEN PROPERLY INSTALLED.
20. THE APPROXIMATE AMOUNT OF MATERIAL PROPOSED TO BE EXCAVATED WITHIN THE CITY OF KEENE IS IS 1,771,972± CUBIC YARDS AND FOR THE TOTAL PROJECT IS 2,079,121± CUBIC YARDS.
21. NO EXCAVATION WILL BE PERFORMED WITHIN 75' OF MAPPED WETLANDS, 300' OF ABUTTING PROPERTIES.
22. 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, HAULER, EXCAVATORS, WATER TRUCKS, AND PROCESSORS. IN ORDER TO PROVIDE THE FURTHEST SEPARATION TO ABUTTING PROPERTIES, ALL PROCESSING EQUIPMENT WILL BE CENTRALLY LOCATED.
23. A COPY OF THE APPROVED GRAVEL AND EARTH REMOVAL PLAN SHALL BE ON SITE AT ALL TIMES.
24. PLOWED SNOW FROM THE OPERATION SHALL BE MAINTAINED AND ON SITE WITHIN THE CONTAINED AREA.
25. 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.
26. 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 AND TO THE CITY OF KEENE 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.

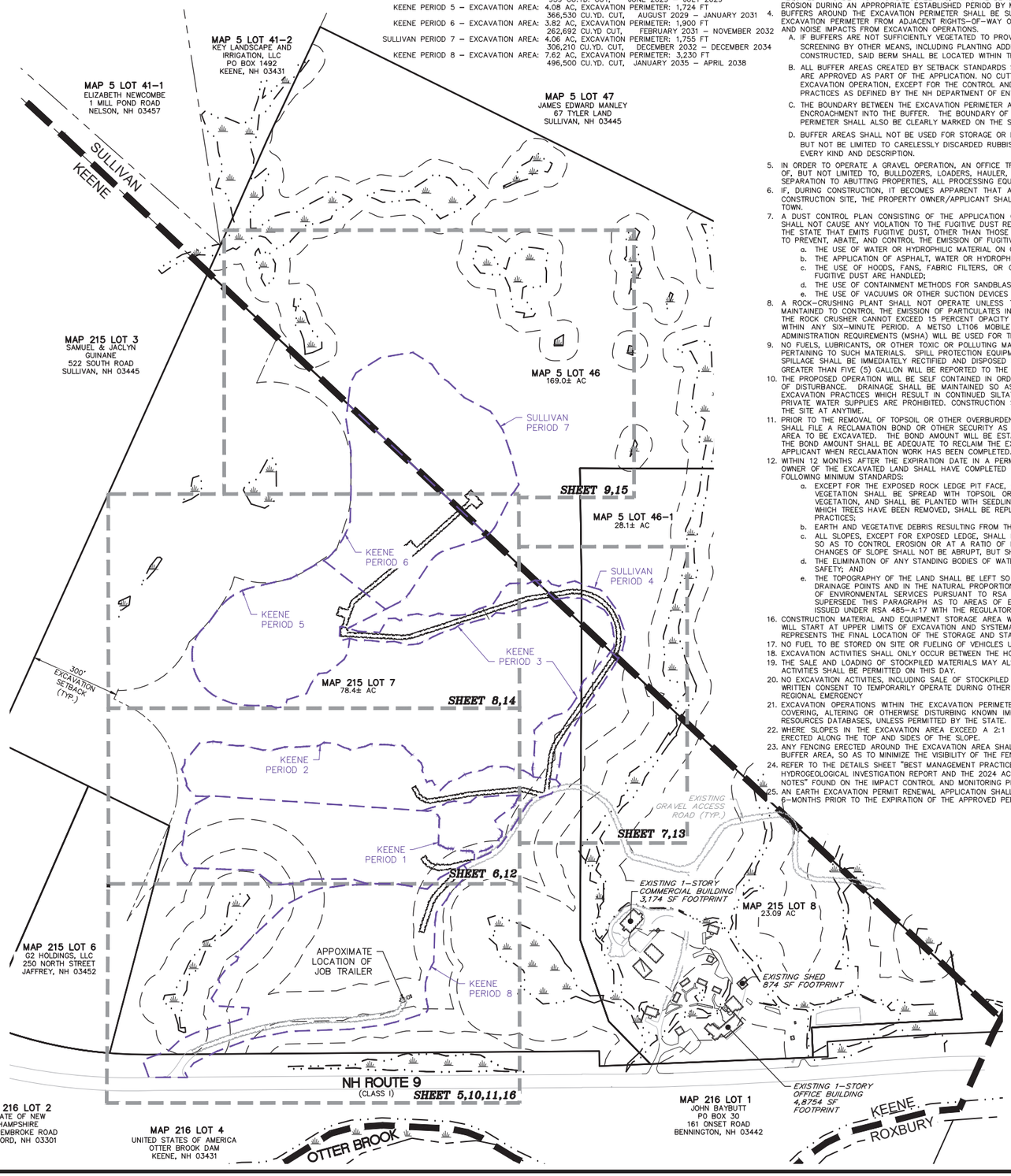
STATE OF NEW HAMPSHIRE
JOHN J. ST. JOHN
No. 221
CERTIFIED WETLAND SCIENTIST

EXCAVATION NOTES:

KEENE PERIOD 1 – EXCAVATION AREA:	4.99 AC, EXCAVATION PERIMETER: 2,324 FT	358,800 CU.YD. CUT, JANUARY 2025 – MAY 2027
KEENE PERIOD 2 – EXCAVATION AREA:	4.10 AC, EXCAVATION PERIMETER: 2,674 FT	271,000 CU.YD. CUT, JUNE 2027 – MARCH 2029
KEENE PERIOD 3 – EXCAVATION AREA:	2.14 AC, EXCAVATION PERIMETER: 3,780 FT	16,450 CU.YD. CUT, APRIL 2029 – MAY 2029
SULLIVAN PERIOD 4 – EXCAVATION AREA:	0.39 AC, EXCAVATION PERIMETER: 947 FT	939 CU.YD. CUT, JUNE 2029 – JULY 2029
KEENE PERIOD 5 – EXCAVATION AREA:	4.08 AC, EXCAVATION PERIMETER: 1,724 FT	366,530 CU.YD. CUT, AUGUST 2029 – JANUARY 2031
KEENE PERIOD 6 – EXCAVATION AREA:	3.82 AC, EXCAVATION PERIMETER: 1,900 FT	262,692 CU.YD. CUT, FEBRUARY 2031 – NOVEMBER 2032
SULLIVAN PERIOD 7 – EXCAVATION AREA:	4.06 AC, EXCAVATION PERIMETER: 1,755 FT	306,210 CU.YD. CUT, DECEMBER 2032 – DECEMBER 2034
KEENE PERIOD 8 – EXCAVATION AREA:	7.62 AC, EXCAVATION PERIMETER: 3,230 FT	496,500 CU.YD. CUT, JANUARY 2035 – APRIL 2038

OPERATION NOTES:

1. 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 HOLDNGS, LLC.
2. 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.
3. NO EXCAVATION WILL BE PERFORMED WITHIN 75' OF MAPPED WETLANDS, 300' OF ABUTTING PROPERTIES THAT DISAPPROVE, 300' FROM ABUTTING PROPERTIES THAT APPROVE OF THE GRAVEL OPERATION, OR 150' FROM ANY EXISTING DWELLINGS. VEGETATION SHALL BE MAINTAINED OR PROVIDED WITHIN THE PERIPHERAL AREAS PREVIOUSLY LISTED. 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.
4. 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.
5. 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.
6. 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.
7. 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, ABATE, 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.
8. 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 OOO 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.
9. 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 FIRE DEPARTMENT AND TO NHDES.
10. THE PROPOSED OPERATION WILL BE SELF CONTAINED IN ORDER TO RETAIN ALL STORMWATER AND ANY POTENTIAL EROSION ON SITE, WITHIN THE LIMITS OF DISTURBANCE. 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. CONSTRUCTION SHALL PROCEED SUCH THAT THERE IS NO RUNOFF FROM THE EXCAVATION AREA LEAVING THE SITE AT ANYTIME.
11. PRIOR TO THE REMOVAL OF TOPSOIL OR OTHER OVERBURDEN MATERIAL FROM ANY LAND AREA 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.
12. 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.
16. 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.
17. NO FUEL TO BE STORED ON SITE OR FUELING OF VEHICLES UNLESS A SOURCE CONTROL PLAN IS SUBMITTED TO NHDES AOT.
18. EXCAVATION ACTIVITIES SHALL ONLY OCCUR BETWEEN THE HOURS OF 7:00 AM AND 5:00 PM, MONDAY THROUGH FRIDAY.
19. 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.
20. 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
21. EXCAVATION OPERATIONS WITHIN THE EXCAVATION PERIMETER AND THE ACCESS DRIVEWAY SHALL BE LOCATED AND DESIGNED TO AVOID REMOVING, COVERING, ALTERING OR OTHERWISE DISTURBING KNOWN IMPORTANT ARCHEOLOGICAL SITES AS MAY BE LISTED IN THE NH DIVISION OF HISTORICAL RESOURCES DATABASES, UNLESS PERMITTED BY THE STATE.
22. 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.
23. ANY FENCING 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.
24. 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.
25. 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. 26.19.12 OF THE LAND DEVELOPMENT CODE.



LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- PROPOSED EDGE OF GRAVEL
- WETLANDS BOUNDARY
- WETLAND BUFFER
- PERIOD LINE
- SHEETS
- TOWN LINE

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET) 1 inch = 200 ft.

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REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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
www.GraniteEng.com

STAMP:

STATE OF NEW HAMPSHIRE
BRENTON J. COLE
No. 14744
2/2/25
LICENSED PROFESSIONAL ENGINEER

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:	SCALE:
23–0201–1	FEBRURARY 3, 2025	HORIZ. 1"=200'
SHEET	1 OF 22	

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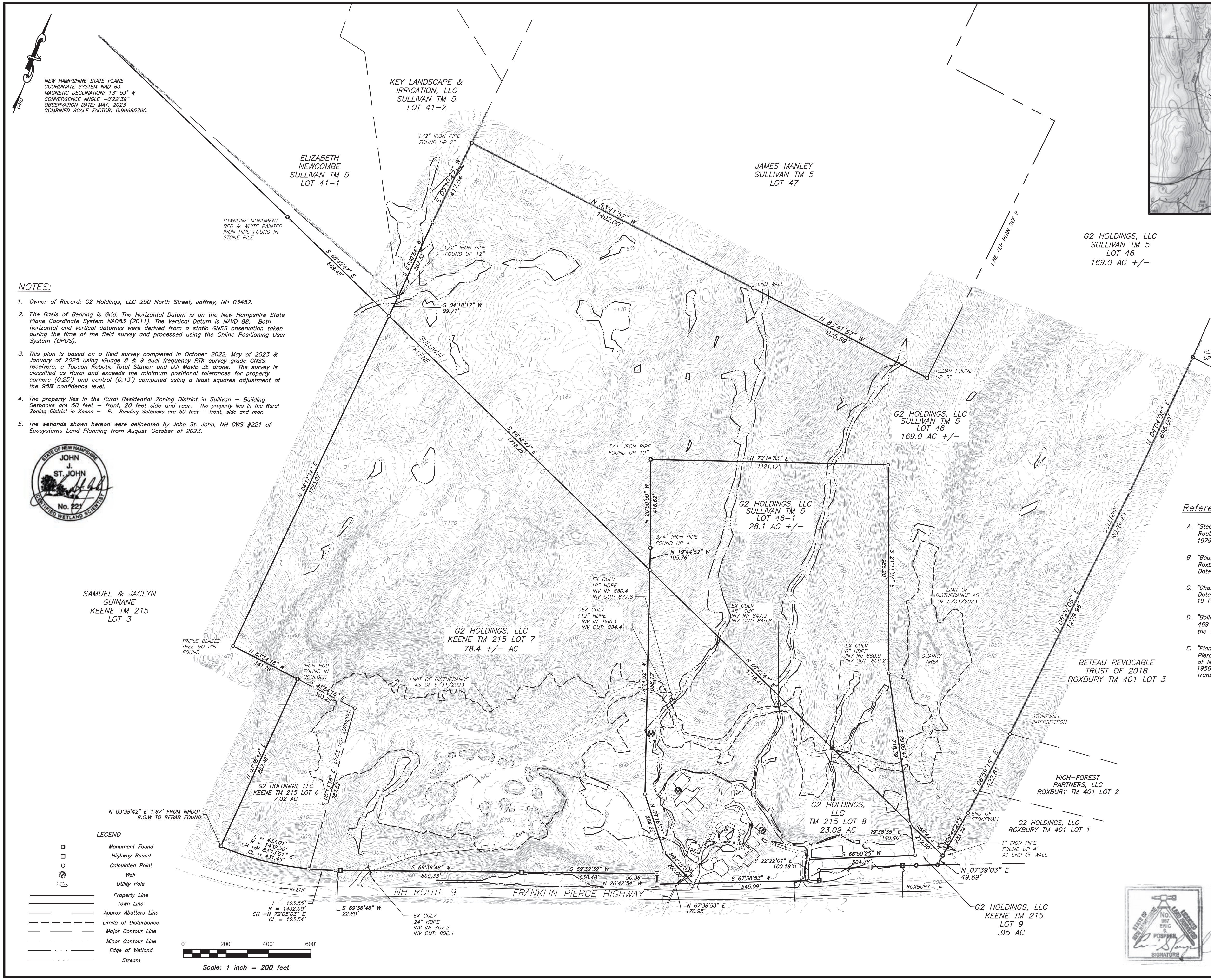
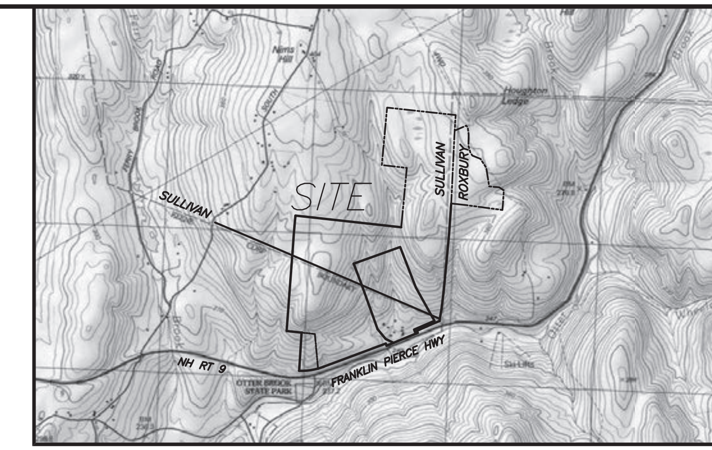




LOCATION MAP

1 inch = 2000 feet

NOTES:

1. Owner of Record: G2 Holdings, LLC 250 North Street, Jaffrey, NH 03452.
2. 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 datumes were derived from a static GNSS observation taken during the time of the field survey and processed using the Online Positioning User System (OPUS).
3. This plan is based on a field survey completed in October 2022, May of 2023 & January of 2025 using IGuage 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.
4. 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.
5. The wetlands shown hereon were delineated by John St. John, NH CWS #221 of Ecosystems Land Planning from August–October of 2023.

STATE OF NEW HAMPSHIRE JOHN J. ST. JOHN No. 221 CERTIFIED WETLAND SCIENTIST

Reference Plans:

A. "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 Cabniet 2 Pg 94 Roll #305.
B. "Boundary Survey: Land of Seafield 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.
C. "Charles S. and John W. Towns, "Nims" Woodlot, Keene, Nh" By William P. House, Dated May, 1965. Recorded at the Cheshire Country Registry of Deeds Plan Book 19 Pg 37.
D. "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.
E. "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.

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 17, 2025

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.

LIMIT OF DISTURBANCE
AS OF 5/31/2023

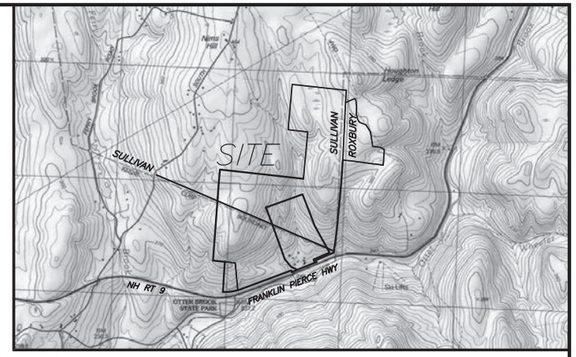
G2 HOLDINGS, LLC
KEENE TM 215 LOT 7
78.4 +/- AC

LINES NOT SURVEYED

S 05°13'18" E
787.52'

G2 HOLDINGS, LLC
KEENE TM 215 LOT 6
7.02 AC

CHIPSTONE
1 1/2" STONE
3/4" STONE
STOCKPILES
RIP RAP
RIP RAP
SAND
PROCESSING EQUIPMENT
CRUSHING PILE
NO TRESPASS
LOAM
LOAM
STOCKPILES
LOAM
BERM
3/4" STONE
CONCRETE
ROUGH LOAM
1 1/2" GRAVEL
FUEL STORAGE
TEMP. OFFICE
GATE
GAURDRAIL
SIGN 10 MPH
S 69°36'46" W
22.80'
L = 123.55'
R = 1432.50'
CH =N 72°05'03" E
CL = 123.54'
BUSINESS SIGN
S 69°36'46" W
855.33'
S 69°32'32" W
638.48'
PAVED ENTRANCE
NH ROUTE 9
FRANKLIN PIERCE HIGHWAY
EX. CULV
24" HDPE
INV IN: 807.2
INV OUT: 800.1



LOCATION MAP
1 inch = 2000 feet

Reference Plans:

A. "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 Cabniet 2 Pg 94 Roll #305.

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NOTES:

1. Owner of Record: G2 Holdings, LLC 250 North Street, Jaffrey, NH 03452.
2. 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 datumes were derived from a static GNSS observation taken during the time of the field survey and processed using the Online Positioning User System (OPUS).
3. This plan is based on an updated field survey completed in January of 2025 using 10uuage dual frequency RTK survey grade GNSS receivers, and a 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.
4. 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.
5. The wetlands shown hereon were delineated by John St. John, NH CWS #221 of Ecosystems Land Planning from August-October of 2023.
6. The purpose of this plan sheet is to show the current conditions of Phase I excavation as of January 22, 2025.

STATE OF NEW HAMPSHIRE
JOHN J. ST. JOHN
No. 221
CERTIFIED WETLAND SCIENTIST

LICENSED LAND SURVEYOR
STATE OF NEW HAMPSHIRE
No. 967
ERIC S. POSPESIL
SIGNATURE

LEGEND
- Monument Found
- Highway Bound
- Calculated Point
- Utility Pole
- Property Line
- Limits of Disturbance
- Stockpile
- Major Contour Line
- Minor Contour Line
- Edge of Wetland
- Stream

0' 50' 100' 150'
Scale: 1 inch = 50 feet

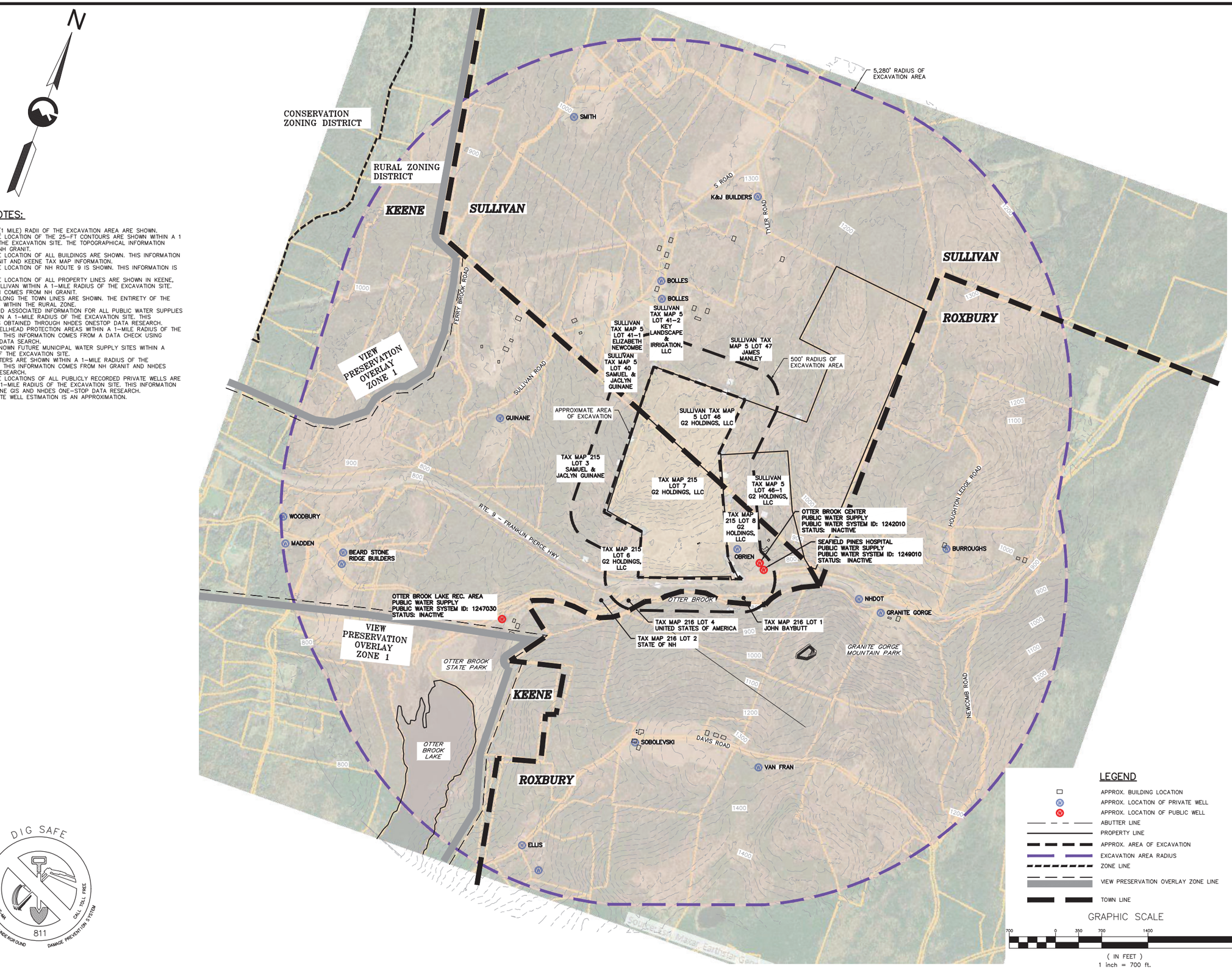
EXISTING CONDITIONS PHASE I PIT

G2 HOLDINGS, LLC

TAX MAP 215 LOTS 6&7
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 23, 2025



GENERAL NOTES:

1. 500' AND 5,280 (1 MILE) RADII OF THE EXCAVATION AREA ARE SHOWN.
2. 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.
3. THE APPROXIMATE LOCATION OF ALL BUILDINGS ARE SHOWN. THIS INFORMATION IS FROM NH GRANIT AND KEENE TAX MAP INFORMATION.
4. THE APPROXIMATE LOCATION OF NH ROUTE 9 IS SHOWN. THIS INFORMATION IS FROM NH GRANIT.
5. 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.
6. THE ZONE LINE ALONG THE TOWN LINES ARE SHOWN. THE ENTIRETY OF THE 1-MILE RADIUS IS WITHIN THE RURAL ZONE.
7. 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.
8. 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.
9. THERE ARE NO KNOWN FUTURE MUNICIPAL WATER SUPPLY SITES WITHIN A 1-MILE RADIUS OF THE EXCAVATION SITE.
10. 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.
11. 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.
12. ALL OTHER PRIVATE WELL ESTIMATION IS AN APPROXIMATION.

DIG SAFE
811
CALL TOLL FREE
UTILITIES UNDERGROUND
DAMAGE PREVENTION SYSTEM

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REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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

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civil engineering • land planning • municipal services
130 Dow Street, Tower 2, Suite 421
Manchester,
New Hampshire 03101
603.518.8030
www.GraniteEng.com

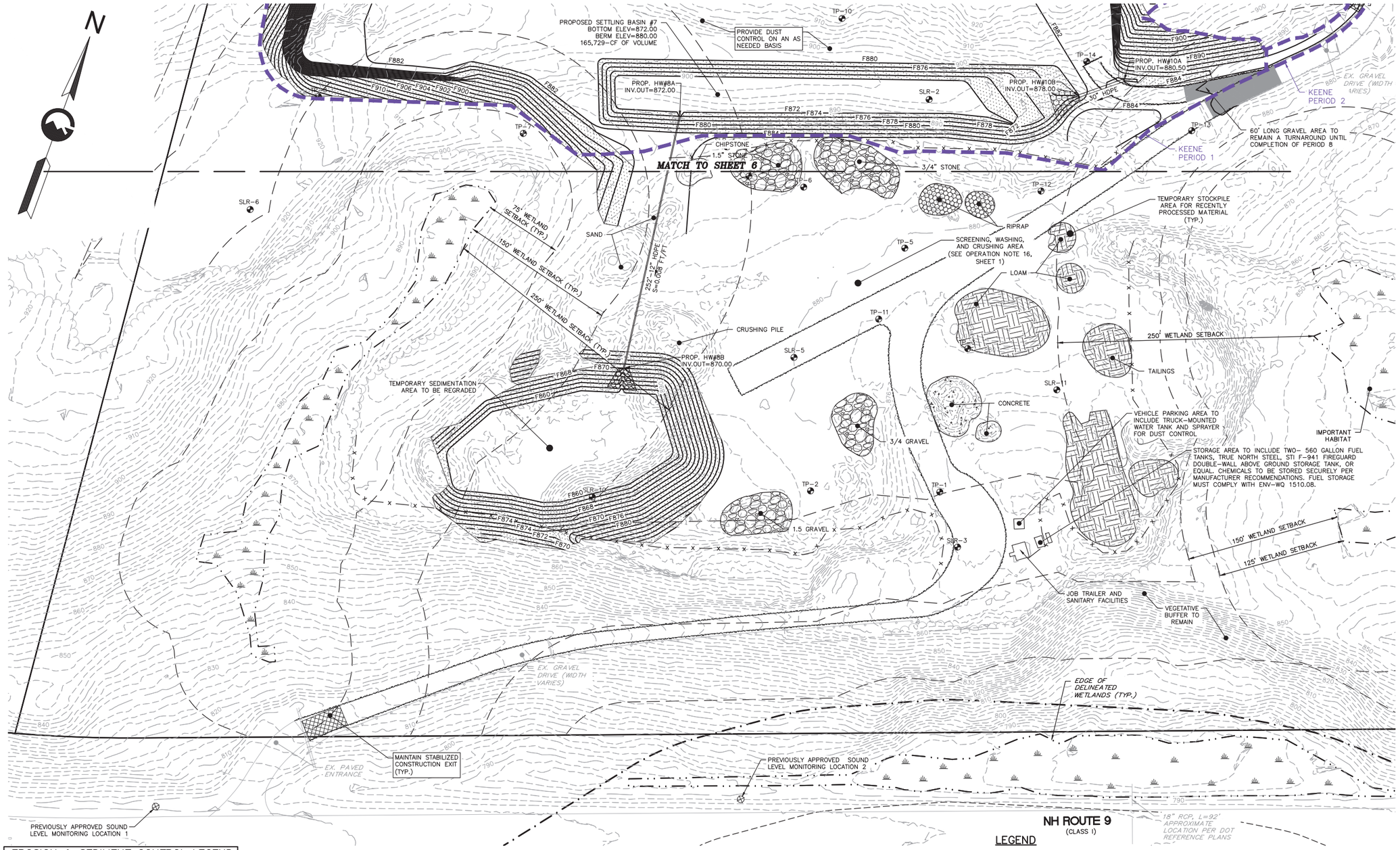
STAMP:
STATE OF NEW HAMPSHIRE
JOSEPH R. BRENTON
No. 14744
2/3/25
LICENSED
PROFESSIONAL ENGINEER

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:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=700'
SHEET: 4 OF 22		



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. COMPLETE EXCAVATION OF TEMPORARY SEDIMENTATION AREA.
3. LOAM AND SEED TEMPORARY SEDIMENTATION AREA.
4. BEGIN EXCAVATION IN PERIOD 1. CONSTRUCT TEMPORARY SEDIMENT BASIN AS NEEDED AND DIRECT DISCHARGE TO TEMPORARY SEDIMENT AREA.
5. ALL TRUCK TURNAROUND AREAS TO BE MAINTAINED UNTIL THE COMPLETION OF PERIOD 7, THEN THOSE AREAS ARE TO BE RECLAIMED.

DIG SAFE
811
CALL TOLL FREE
DAMAGE PREVENTION SYSTEM
UTILITIES UNDERGROUND

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

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

SEE SHEET 6 FOR EROSION CONTROL NOTES (TYP.)

SEE SHEET 1 FOR OPERATION NOTES (TYP.)

LOAM & SEED ALL DISTURBED AREAS (TYP.)

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REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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

GRANITE ENGINEERING
civil engineering • land planning • municipal services
130 Dow Street, Tower 2, Suite 421
Manchester,
New Hampshire 03101
603.518.8030
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STAMP:
STATE OF NEW HAMPSHIRE
BRENTON
COLE
No. 14744
2/3/25
LICENSED
PROFESSIONAL ENGINEER

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

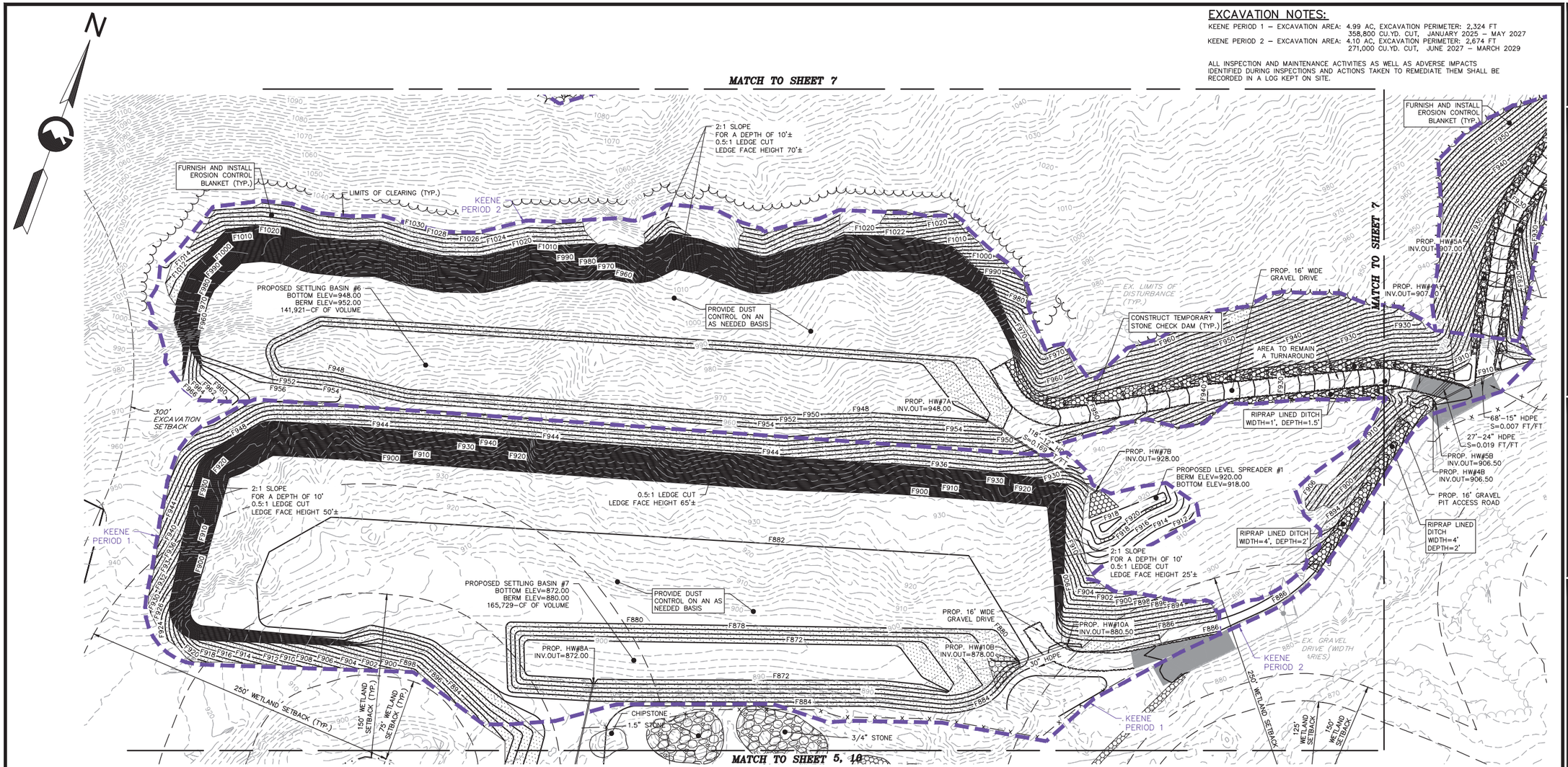
TITLE:
EXCAVATION, DRAINAGE & EROSION CONTROL PLAN

PROJECT No.	DATE:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET: 5 OF 22		

EXCAVATION NOTES:

KEENE PERIOD 1 – EXCAVATION AREA: 4.99 AC, EXCAVATION PERIMETER: 2,324 FT
358,800 CU.YD. CUT, JANUARY 2025 – MAY 2027
KEENE PERIOD 2 – EXCAVATION AREA: 4.10 AC, EXCAVATION PERIMETER: 2,674 FT
271,000 CU.YD. CUT, JUNE 2027 – MARCH 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.



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 IS EXCAVATED, PITCH SLOPE TO THE SOUTH OF THE AREA AND BEGIN EXCAVATION OF THE SEDIMENT RETENTION AREA. DIRECT DISHARGE FROM THE SEDIMENT DOWN THE EASTERN SIDE OF RECLAIMED PHASE 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.

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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.

EROSION & SEDIMENT CONTROL LEGEND

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

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
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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

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STAMP:
STATE OF NEW HAMPSHIRE
JOHN R. BRENTON
No. 14744
2/3/25
LICENSED
PROFESSIONAL ENGINEER

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:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET	6 OF 22	

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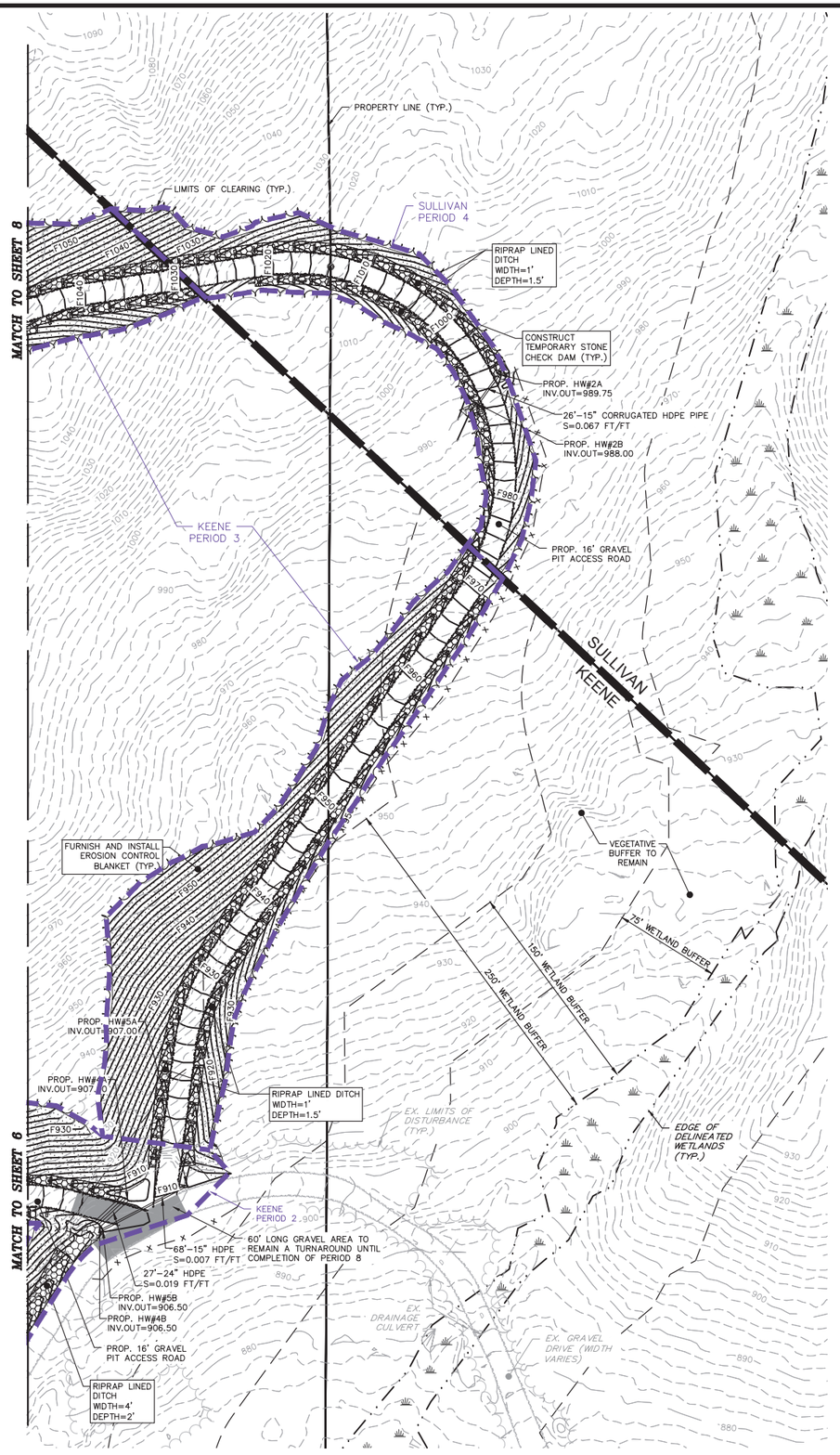
PHASING NOTES:

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, APRIL 2029 – MAY 2029
SULLIVAN PERIOD 4 – EXCAVATION AREA: 0.39 AC, EXCAVATION PERIMETER: 947 FT
939 CU.YD. CUT, JUNE 2029 – JULY 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.

N

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

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UTILITIES UNDERGROUND

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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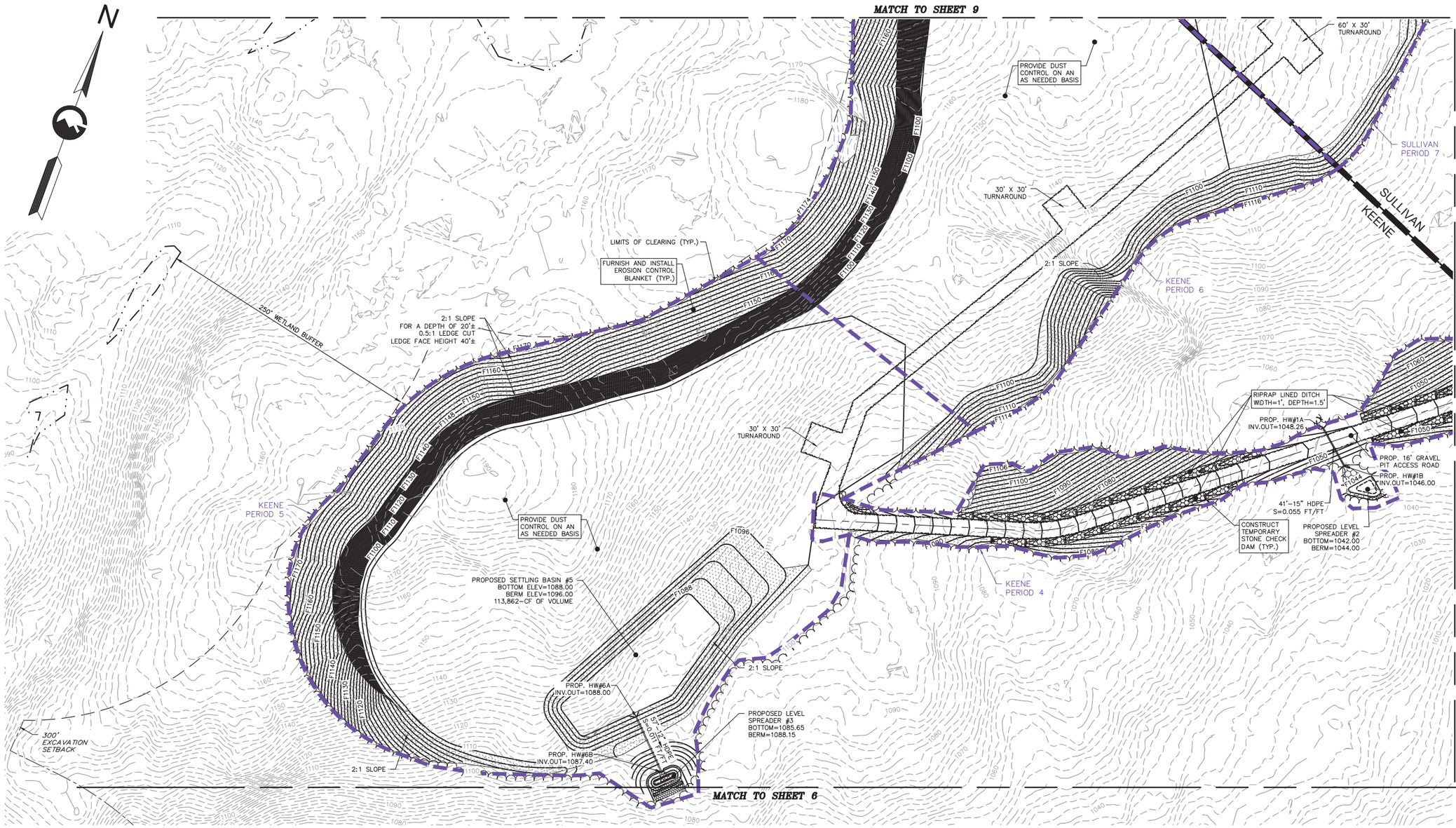
PROJECT No.	DATE:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET	7 OF 22	



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 PROCEDES, 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.)

DIG SAFE — 811 — UTILITIES UNDERGROUND — CALL TOLL FREE — DAMAGE PREVENTION SYSTEM

EXCAVATION NOTES:

KEENE PERIOD 5 – EXCAVATION AREA: 4.08 AC, EXCAVATION PERIMETER: 1,724 FT
366,530 CU.YD. CUT, AUGUST 2029 – JANUARY 2031

KEENE PERIOD 6 – EXCAVATION AREA: 3.82 AC, EXCAVATION PERIMETER: 1,900 FT
262,692 CU.YD CUT, FEBRUARY 2031 – NOVEMBER 2032

SULLIVAN PERIOD 7 – EXCAVATION AREA: 4.06 AC, EXCAVATION PERIMETER: 1,755 FT
306,210 CU.YD. CUT, DECEMBER 2032 – DECEMBER 2034

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
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- 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

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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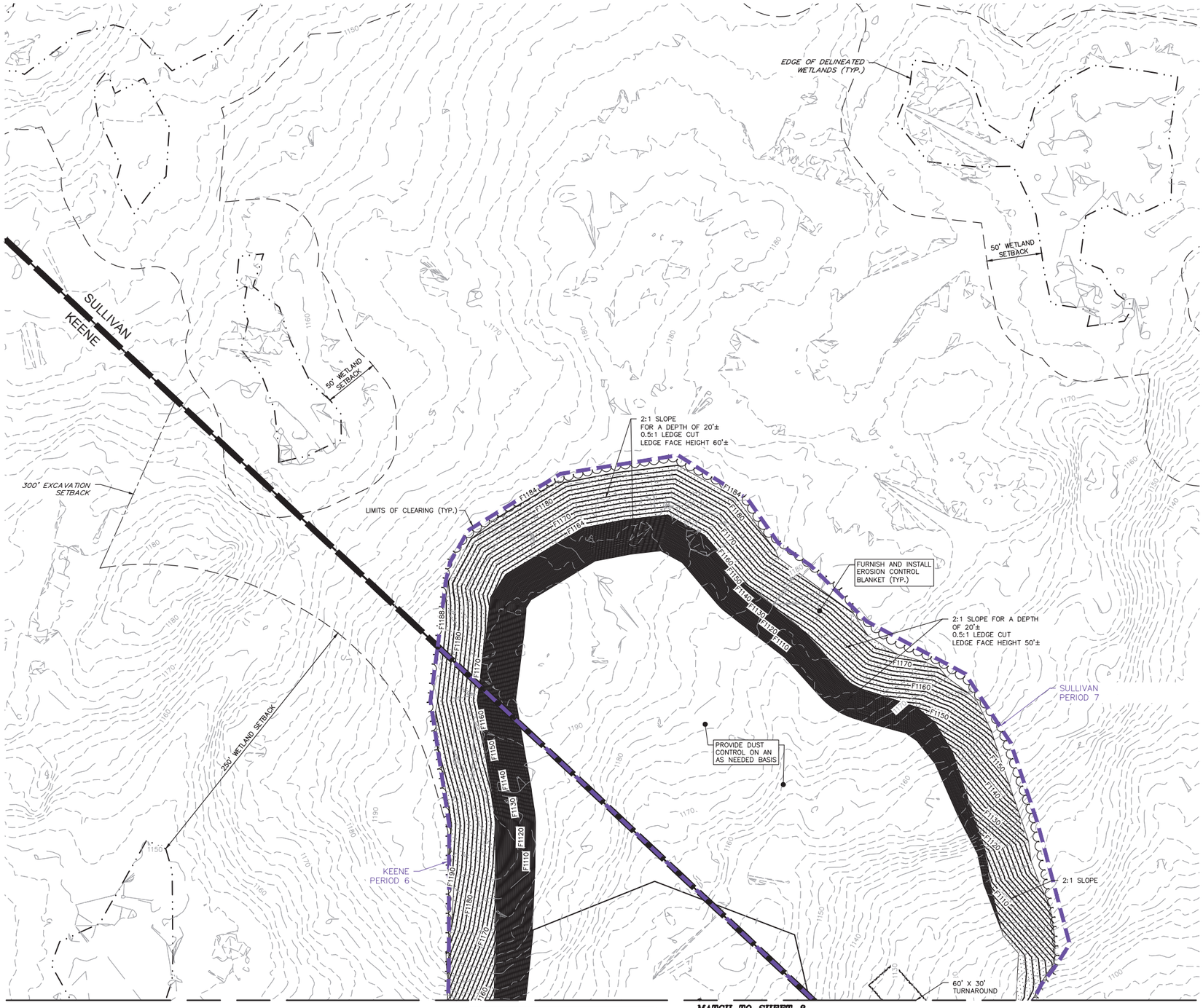
LOCATION:
KEENE TAX MAP 215 LOTS 7 & 8
SULLIVAN TAX MAP 5 LOTS 46 & 46-1
57 ROUTE 9
KEENE & SULLIVAN, NEW HAMPSHIRE
CHESHIRE COUNTY

PROJECT:
GORDON SERVICES KEENE

TITLE:
EXCAVATION, DRAINAGE & EROSION CONTROL PLAN

PROJECT No.	DATE:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET	8 OF 22	



PHASING NOTES:

1. INSTALL EROSION CONTROL MEASURES FOR PERIOD 7.
2. 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.
3. ONCE PERIOD 7 HAS REACHED FINAL GRADING, RECLAIM ENTIRE AREA. RECLAIM GRAVEL SURFACE OF ENTIRE HAUL ROAD.
4. 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, FEBRUARY 2031 – NOVEMBER 2032

SULLIVAN PERIOD 7 – EXCAVATION AREA: 4.06 AC, EXCAVATION PERIMETER: 1,755 FT
306,210 CU.YD CUT, DECEMBER 2032 – DECEMBER 2034

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N

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- PROPOSED EDGE OF GRAVEL
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- 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

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UTILITIES UNDERGROUND

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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PROJECT No.	DATE:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET	9 OF 22	

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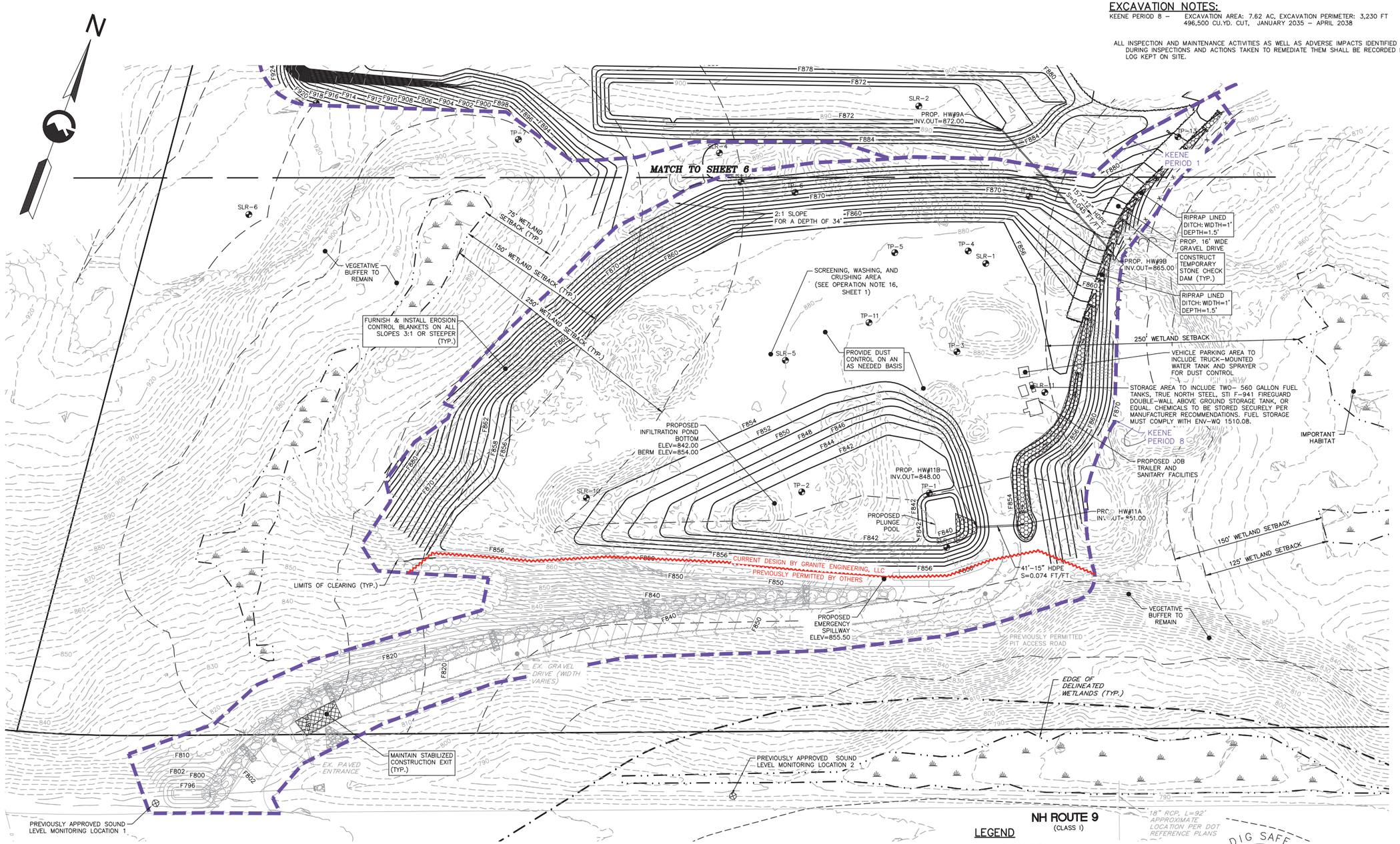
EXCAVATION NOTES:

KEENE PERIOD 8 – EXCAVATION AREA: 7.62 AC, EXCAVATION PERIMETER: 3,230 FT
496,500 CU.YD. CUT, JANUARY 2035 – APRIL 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.



PHASING NOTES:

1. INSTALL EROSION CONTROL MEASURES FOR PERIOD 8.
2. BEGIN EXCAVATION IN PERIOD 8. SLOPE PIT FLOOR TO THE SOUTH. INSTALL TEMPORARY SEDIMENT BASINS AS NEEDED.
3. AS PIT FLOOR IS LOWERED, EXCAVATE AND DIRECT STORMWATER TO THE FINAL SEDIMENT RETENTION AREA.
4. AS THE PIT FLOOR IS LOWERED, THE GRADE OF THE MAIN ACCESS ROAD OFF ROUTE 9 WILL NEED TO BE AJUSTYED TO CURRENT PIT FLOOR ELEVATIONS.
5. PLUG EXISTING 12" OUTLET PIPE THAT WAS INSTALLED IN THE SEDIMENT RETENTION AREA CONSTRUCTED IN PHASE 1. PLUG INLET WITH FLOWABLE FILL.
6. CONSTRUCT 12" OUTLET CULVERT AND HW#9A AND HW#9B AS SHOWN ON THIS SHEET.
7. CONSTRUCT ACCESS WITH STONE LINED DITCHES. 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.
8. ONCE PERIOD 8 HAS REACHED FINAL GRADING, 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. TREELINE
- PROP. GRADE LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- RIP RAP
- EX./PROP. HEADWALL
- PROP. DRAINAGE LINE
- EX. DRAINAGE LINE

DIG SAFE — RI-ONE-CALL-UTILITIES UNDERGROUND — CALL TOLL FREE 811 — DAMAGE PREVENTION SYSTEM

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/13/25	REVISED PER CITY COMMENTS	JD

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

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Manchester, New Hampshire 03101
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STATE OF NEW HAMPSHIRE — BRENTON S. COLE — No. 14744 — 2/3/25 — LICENSED PROFESSIONAL ENGINEER

LOCATION:
KEENE TAX MAP 215 LOTS 7 & 8
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PROJECT:
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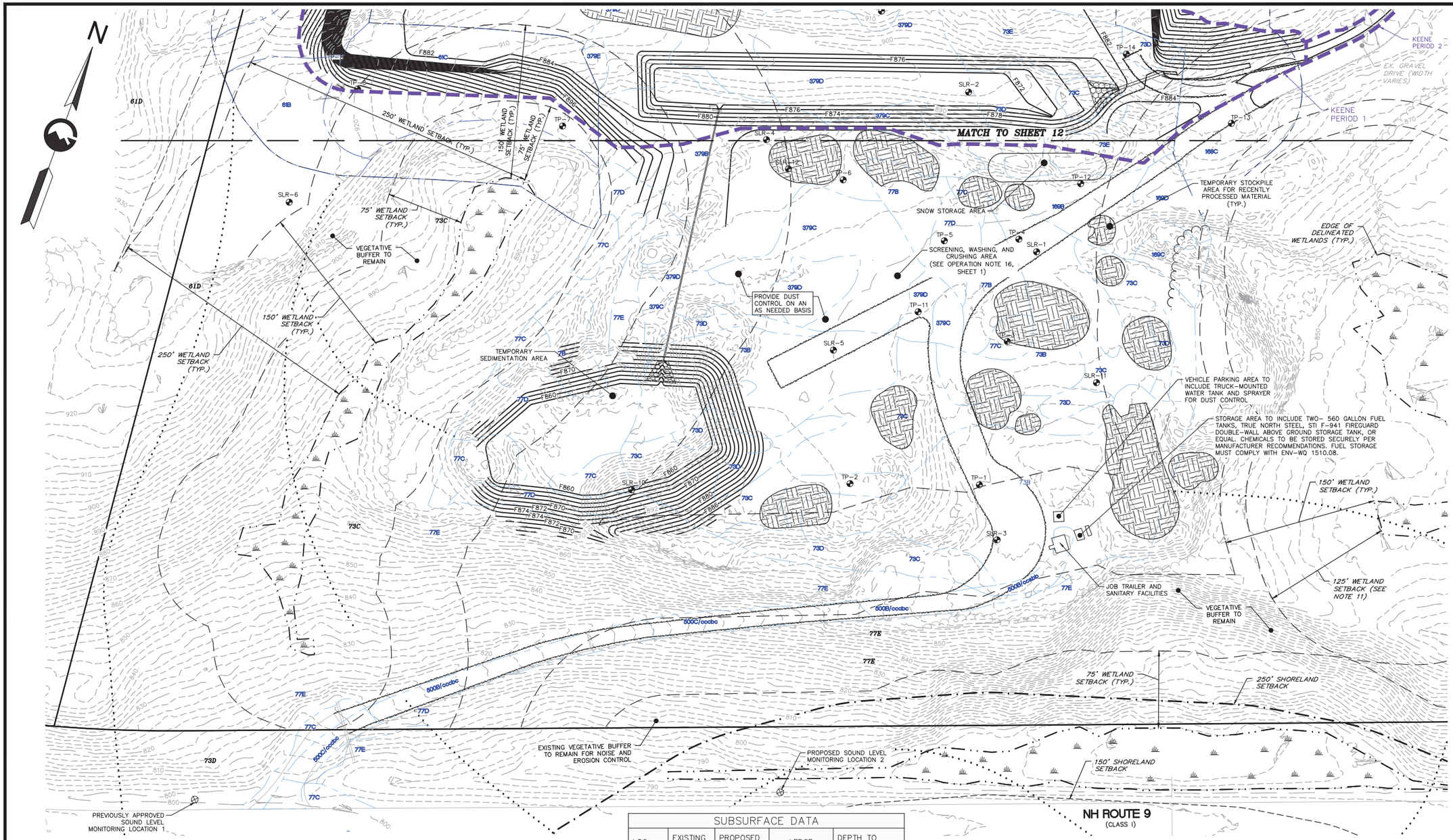

SEE SHEET 1 FOR OPERATION NOTES (TYP.)

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
169B	SUNAPEE FINE SANDY LOAM, 0–8% SLOPES, VERY STONY	B
169C	SUNAPEE FINE SANDY LOAM, 8–15% SLOPES, VERY STONY	B
169D	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/ccabb	UDORTHENTS, LOAMY, 0–8% SLOPES	B
500B/ccabb	UDORTHENTS, LOAMY, 0–8% SLOPES	B
500B/ccabb	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	---
SLR-1	874	865	NONE TO 853.5	---
SLR-2	894	894	889	---
SLR-3	867	852	NONE TO 842	---
SLR-4	888	888	873	---
SLR-5	890	886	862	---
SLR-6	920	920	910	---
SLR-10	884	854	NONE TO 829.0	42.9
SLR-11	871.5	855	NONE TO 795.5	NONE TO 45.2
SLR-12	888.5	888.5	877.5	1.5

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

DIG SAFE
811
CALL TOLL FREE
DAMAGE PREVENTION SYSTEM
UTILITIES UNDERGROUND

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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

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municipal services

REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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

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150 Dow Street, Tower 2, Suite 421
Manchester,
New Hampshire 03101
603.518.8030
www.GraniteEng.com

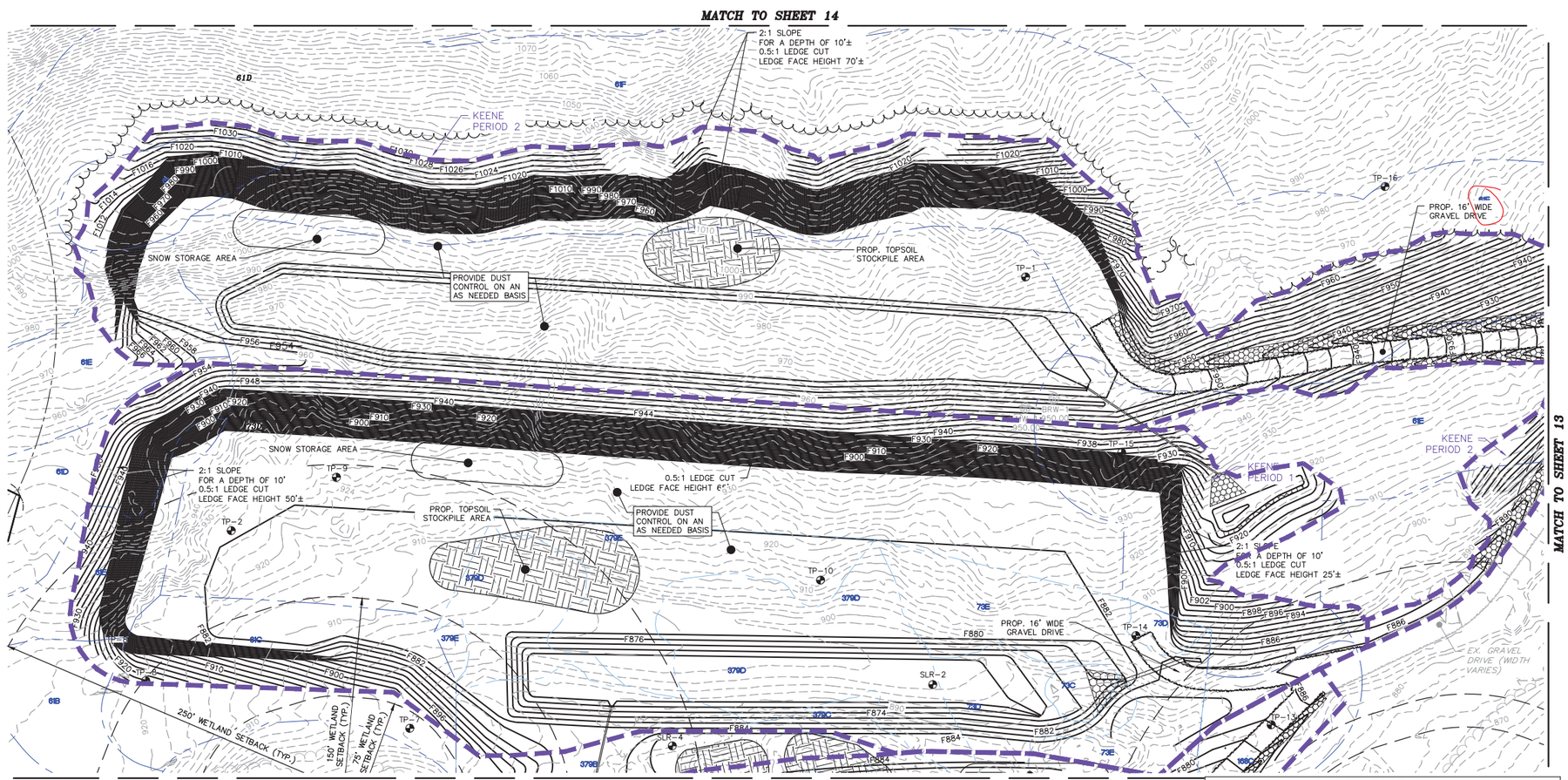
STAMP:
STATE OF NEW HAMPSHIRE
BRENTON J. COLE
No. 14744
2/3/25
LICENSED
PROFESSIONAL ENGINEER

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:	SCALE:
23-0201-1	FEBRURARY 3, 2025	HORIZ. 1"=50'
SHEET	11 OF 22	



LEGEND

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- PERIOD LINE
- TOWN LINE

DIG SAFE — CALL TOLL FREE 811 — UTILITIES UNDERGROUND — DAMAGE PREVENTION SYSTEM

NOISE IMPACT CONTROL AND MONITORING NOTES:

1. NOISE LEVELS GENERATED FROM EXCAVATION ACTIVITIES SHALL NOT EXCEED THE BACKGROUND AMBIENT 'A' WEIGHTED SOUND PRESSURE LEVEL EXCEEDED 90% OF THE TIME DURING THE SOUND LEVEL SAMPLING PERIOD, (HEREINAFTER 'DB(A) L(90)') BY MORE THAN 10 DB(A) AND IN ANY EVENT SHALL NOT EXCEED 55 DB(A) HEREINAFTER 'L(MAX)').
2. MONITORING DEVICES. ALL SOUND LEVEL MONITORING DEVICES SHALL MEET AMERICAN NATIONAL STANDARDS INSTITUTE S 1.4 TYPE 1 OR 2 STANDARDS, WITH THE DEVICE SET TO "FAST" RESPONSE. MONITORING DEVICES SHALL BE PROPERLY CALIBRATED AND MAINTAINED IN GOOD WORKING ORDER. MONITORING DEVICES SHALL INCLUDE DATA RECORDING CAPABILITIES THAT ENABLE CONTINUOUS DOCUMENTATION OF SOUND LEVELS DURING THE OPERATING DAY.
3. MONITORING LOCATIONS. SOUND LEVELS SHALL BE MONITORED FROM AT LEAST 2 LOCATIONS AS DETERMINED BY THE COMMUNITY DEVELOPMENT DIRECTOR, OR THEIR DESIGNEE, WITH THE ADVICE OF OTHER CITY STAFF AND THE PLANNING BOARD'S CONSULTANT.
   A. IF A MONITORING LOCATION IS SELECTED AT A POINT BEYOND THE PROPERTY BOUNDARY, WRITTEN PERMISSION TO USE THAT LOCATION FOR MONITORING SHALL BE OBTAINED FROM THE PROPERTY OWNER OF THE MONITORING SITE.
   B. AS NOISE-GENERATING EQUIPMENT IS RELOCATED WITHIN THE APPROVED EXCAVATION PERIMETER, NEW MONITORING LOCATIONS MAY BE SELECTED TO HELP ENSURE CONTINUED COMPLIANCE WITH THE NOISE STANDARD.
   C. THE EXCAVATION OPERATOR SHALL MAINTAIN A LOG OF ALL MONITORING ACTIVITIES INDICATING THE DATE, TIME PERIOD AND LOCATION OF THE RECORDED MEASUREMENTS; THE OPERATIONS BEING PERFORMED ON THE SITE AT THE TIME OF MONITORING; THE WEATHER CONDITIONS AT THE TIME OF THE MEASUREMENT, INCLUDING TEMPERATURE, WIND DIRECTION, WIND SPEED, CLOUD COVER AND PRECIPITATION; AND THE RESULTS OF THE MONITORING, INCLUDING A GRAPH OF THE CONTINUOUS MONITORING RECORD, THE CALCULATED 'A' WEIGHTED SOUND PRESSURE LEVEL EXCEEDED 90% OF THE MEASUREMENT TIME (HEREINAFTER 'DB(A) L(90)') AND THE CALCULATED MAXIMUM DB(A) SOUND LEVEL (HEREINAFTER 'L(MAX)').
4. AMBIENT SOUND LEVELS: THE BACKGROUND AMBIENT SOUND LEVELS SHALL BE MEASURED PRIOR TO THE COMMENCEMENT OF THE INITIAL OPERATION.
   A. THE BACKGROUND SOUND LEVELS SHALL BE MEASURED ON THE DB(A) SCALE, BY RECORDING CONTINUOUS MEASUREMENTS DURING PROPOSED OPERATING HOURS OVER 5 CONSECUTIVE BUSINESS DAYS PRIOR TO THE COMMENCEMENT OF SITE PREPARATION ACTIVITIES, AND CALCULATING THE DB(A) L(90) FOR THE ENTIRE MONITORING PERIOD. SUCH MEASUREMENTS SHALL BE PERFORMED BY A CONSULTANT HIRED BY THE PLANNING BOARD AT THE APPLICANT'S EXPENSE.
   B. THE APPLICANT/OPERATOR MAY REQUEST THAT THE BACKGROUND SOUND LEVEL BE RE-MEASURED. SUCH RE-MEASUREMENT SHALL BE DONE AT A TIME SELECTED BY THE COMMUNITY DEVELOPMENT DIRECTOR IN CONSULTATION WITH THE APPLICANT AND A CONSULTANT HIRED BY THE PLANNING BOARD TO PERFORM THE MEASUREMENT AT THE APPLICANT'S EXPENSE.
5. ONGOING MONITORING: THE APPLICANT SHALL MONITOR AT THE SELECTED MONITORING LOCATIONS THE SOUND LEVELS GENERATED BY THE OPERATION, AS FOLLOWS.
   A. ON AN ANNUAL BASIS, AT A TIME SELECTED BY THE COMMUNITY DEVELOPMENT DIRECTOR, IN CONSULTATION WITH THE APPLICANT, SOUND LEVELS SHALL BE MONITORED AND RECORDED CONTINUOUSLY DURING OPERATING HOURS FOR A PERIOD OF NOT LESS THAN 20 CONSECUTIVE OPERATING DAYS. MONITORING SHALL BE MADE USING THE DB(A) SCALE AND THE DB(A) L(90) DURING THE OPERATING HOURS FOR EACH DAY AND THE L(MAX) SOUND LEVEL THROUGHOUT EACH DAY SHALL BE CALCULATED AND ENTERED INTO A NOISE MONITORING LOG MAINTAINED BY THE APPLICANT.
   B. AT ANY TIME WHEN NEW OR ADDITIONAL NOISE GENERATING EQUIPMENT IS PLACED INTO OPERATION FOLLOWING THE INITIAL 20-DAY MONITORING PERIOD, OR WHEN NOISE GENERATING EQUIPMENT IS RELOCATED WITHIN THE APPROVED EXCAVATION PERIMETER, SOUND LEVELS SHALL ALSO BE MONITORED CONTINUOUSLY AND RECORDED DURING OPERATING HOURS FOR A PERIOD OF NOT LESS THAN 5 CONSECUTIVE OPERATING DAYS. THE DB(A) L(90) DURING THE OPERATING HOURS FOR EACH DAY AND THE L(MAX) SOUND LEVEL THROUGHOUT EACH DAY SHALL BE CALCULATED AND ENTERED INTO A NOISE MONITORING LOG MAINTAINED BY THE APPLICANT.
   C. WHEN NEW OR ADDITIONAL NOISE GENERATING EQUIPMENT OR ACTIVITIES INCLUDING BUT NOT LIMITED TO DRILLING OR BLASTING ACTIVITIES WERE NOT MEASURED DURING THE INITIAL 20-DAY MONITORING PERIOD AND ARE TO BE USED ONLY FOR SHORT DURATIONS RANGING FROM A PERIOD OF HOURS TO SEVERAL DAYS, NOT EXCEEDING 5 OPERATING DAYS, SOUND LEVELS SHALL BE MONITORED AND RECORDED CONTINUOUSLY FOR THE DURATION OF THE ACTIVITIES.
   D. IN THE EVENT THAT THE MEASUREMENTS EXCEED THE NOISE STANDARDS IN THIS ARTICLE, THE APPLICANT SHALL BRING THE OPERATION INTO COMPLIANCE BY REDUCING THE NUMBER OF SOUND SOURCES CONTRIBUTING TO THE SOUND LEVEL, BY RELOCATING EQUIPMENT ON THE SITE, BY ADDING NOISE ATTENUATING STRUCTURES AROUND OR ATTACHMENTS TO THE EQUIPMENT, OR BY TAKING WHATEVER OTHER ACTIONS MAY BE NECESSARY TO BRING THE OPERATION INTO COMPLIANCE.
      a) ANY CORRECTIVE ACTION TAKEN SHALL BE CLEARLY DESCRIBED IN THE NOISE MONITORING LOG ALONG WITH A RECORD OF THE NOISE LEVEL MEASUREMENTS BEFORE AND AFTER SAID CORRECTION.
      b) ADDITIONAL NOISE LEVELS SHALL BE MONITORED FOR NO LESS THAN 5 CONSECUTIVE DAYS AFTER THE CORRECTIVE ACTION IS TAKEN.
6. COMPLAINTS REGARDING THE LEVEL OF NOISE GENERATED FROM EXCAVATION OPERATIONS SHALL BE RESOLVED PER THE PROCEDURES OUTLINED IN 24.3.15.E OF THE CITY OF KEENE LAND DEVELOPMENT CODE.

HAZARDOUS AND TOXIC SPILL RESPONSE NOTES:

1. SPILL CONTROL PRACTICES ARE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLANS (SWPPP).
2. THE CHEMICALS EMPLOYED ON-SITE WILL VARY THROUGHOUT THE EXCAVATION PROCESS, PRIMARILY CONSISTING OF PETROLEUM-BASED OILS, LUBRICANTS, AND GASOLINE-BASED FUELS. THESE SUBSTANCES MUST BE STORED SECURELY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND MUST BE ACCOMPANIED BY MATERIAL SAFETY DATA SHEETS AND SPILL RESPONSE MATERIALS.
3. STRICT PRECAUTIONS MUST BE TAKEN DURING ON-SITE FUELING OPERATIONS TO PREVENT SPILLS AND OVERFILLING.

DUST CONTROL & MONITORING NOTES:

1. THE SITE SHALL OPERATE IN A MANNER THAT PREVENTS FUGITIVE DUST EMISSIONS PUSUANT TO NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES ENV-A 1002, FUGITIVE DUST.
2. DUST CONTROL PRACTICES ARE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLANS (SWPPP).
3. DUST CONTROL ACTIVITIES AND DEVICES SHALL BE INCORPORATED INTO THE EXCAVATION OPERATION, ON THE SITE AND ON THE ACCESS DRIVEWAY, IN A MANNER THAT MINIMIZES GENERATION OF AIRBORNE DUST OR TRANSPORTATION OF DUST OR MUD OFF THE SITE ONTO THE ADJACENT ROADWAYS.
   A. VISUAL MONITORING OF AIRBORNE DUST SHALL BE DONE ON AN ONGOING BASIS.
   B. DUST CONTROL MEASURES SUCH AS APPLYING WATER TO ACCESS DRIVEWAYS AND OTHER AREAS WITHIN THE EXCAVATION PERIMETER, WASHING DIRT FROM TRUCK TIRES, OR OTHER MEASURES AS MAY BE DEEMED NECESSARY, SHALL BE EMPLOYED TO MINIMIZE THE GENERATION OF AIRBORNE DUST, AND/OR THE TRANSPORTATION OF DIRT/MUD OFF THE SITE ONTO ADJACENT ROADWAYS.
   C. DUST CONTROL WILL BE ACCOMPLSHED USING A TRUCK-MOUNTED WATER TANK AND SPRAY SYSTEM AS NEEDED.
   D. INSPECTION OF ACCESS DRIVEWAY STABILIZED CONSTRUCTION ENTRANCES AND OTHER EROSION CONTROL MEASURES, DESIGNED TO ELIMINATE THE DEPOSIT OF DUST OR MUD ONTO PUBLIC STREETS, SHALL BE CONDUCTED ON A WEEKLY BASIS TO ENSURE PROPER FUNCTIONING. MAINTENANCE OF THESE ENTRANCES SHALL BE PERFORMED AS NECESSARY AND ANY DIRT OR MUD DEPOSITED ON PUBLIC STREETS SHALL BE REMOVED.
   E. THE APPLICANT SHALL MAINTAIN A LOG DOCUMENTING DUST CONTROL ACTIVITIES, INSPECTION AND MAINTENANCE OF DUST AND DIRT CONTROL STRUCTURES AND DEVICES, AND CLEAN UP OF DIRT DEPOSITED ON ROADWAYS LEADING FROM THE SITE. THE OPERATION AND MAINTENANCE MANUAL, LOCATED WITHIN THE STORMWATER MANAGEMENT REPORT, SHALL BE USED FOR INSTURCTIONS OF HOW TO INSPECT AND MAINTAIN EROSION AND SEDIMENT CONTROL PRACTICES.

FUELING NOTES:

1. FUELING AND MAINTENANCE OF EQUIPMENT OR VEHICLE PRACTICES ARE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLANS (SWPPP).
2. FUELS AND REGULATED SUBSTANCES WILL BE STORED IN A SEALED AND CLEARED LABELED CONTAINER WITHIN THE ENCLOSED CHEMICAL STORAGE AREA.
3. THE ENCLOSED CHEMICAL STORAGE AREA WILL BE STABLE, LEVEL AND IMPERVIOUS.
4. SECONDARY CONTAINMENT WILL BE PROVIDED FOR FUELING ACTIVITIES ON SITE.
5. MOBILE FUELING WILL BE USED DURING EXCAVATION ACTIVITIES.
6. ALL FUELING AND STORAGE OF FUELS ON SITE WILL COMPLY WITH STATE AND FEDERAL REQUIREMENTS.
7. EMPLOYEES WHO PARTAKE IN FUELING ACTIVITIES SHALL BE TRAINED ON SPILL PREVENTION AND CONTROL.
8. ANY SPILL THAT IS: 25 GALLONS OR MORE, NOT IMMEDIATELY CONTAINED, REMOVED WITHIN 24-HRS, A POTENTIAL SURFACE WATER OR GROUNDWATER IMPACT, SHALL BE REPORTED TO NHDES AT (603) 271-3899 OR STATE POLICE AT (603) 223-4381.
9. CONTAMINATED SOILS OR MATERIALS SHALL BE STORED AND DISPOSED OF IN ACCORDANCE WITH ALL STATE AND FEDERAL REQUIREMENTS. CONTACT NHDES HAZARDOUS WASTE MANAGEMENT BUREAU'S COMPLIANCE SECTION AT (603) 271-2942 FOR INFORMATION REGARDING HAZARDOUS MATERIALS.
10. THE CHEMICAL STORAGE AREA SHALL BE KEPT LOCKED WHEN NOT IN USE.
11. ALL FUELING RELATED ACTIVITIES SHALL BE AT LEAST 50' AWAY FROM ANY CATCH BASIN OR SURFACE WATER.

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	---
SLR-1	874	865	NONE TO 853.5	---
SLR-2	894	894	889	---
SLR-3	867	852	NONE TO 842	---
SLR-4	888	888	873	---
SLR-5	890	886	862	---
SLR-6	920	920	910	---
SLR-10	884	854	NONE TO 829.0	42.9
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SLR-12	888.5	888.5	877.5	1.5

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

DEICING NOTES:

A. RECORDS FOR TRACKING THE USE OF SALT AND OTHER DEICERS FOR EACH STORM EVENT SHALL BE MAINTAINED UNTIL ALL AREAS HAVE BEEN RECLAIMED. THE DEICING APPLICATION RATE GUIDELINES SHALL FOLLOW THE RECOMMENDATIONS IN THE NH STORMWATER MANUAL: VOLUME 2, LATEST EDITION.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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:

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR INFILTRATION REQUIREMENTS BY THE NH DES ALTERATION OF TERRAIN BUREAU. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCES CONSERVATION SERVICE. THERE IS A REPORT THAT ACCOMPANIES THIS MAP.

THE SITE SPECIFIC SOIL SURVEY (SSSS) WAS PRODUCED JULY 15, 2024, AND WAS PREPARED BY LUKE HURLEY, CSS #095M, HURLEY ENVIRONMENTAL AND LAND PLANNING, LLC.

SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE #10, JANUARY 2011. THE NUMERIC LEGEND WAS AMENDED TO IDENTIFY THE CORRECT SOIL COMPONENTS OF THE COMPLEX.

HYDROLOGIC SOIL GROUP FROM KSAT 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

LOAM & SEED ALL DISTURBED AREAS (TYP.)

SEE SHEET 1 FOR OPERATION NOTES (TYP.)

SEE SHEET 4 FOR EROSION CONTROL NOTES (TYP.)

REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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

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STAMP:

LUKE HURLEY — No. 095 — 7/5 — STATE OF NEW HAMPSHIRE — PROFESSIONAL SOIL SCIENTIST

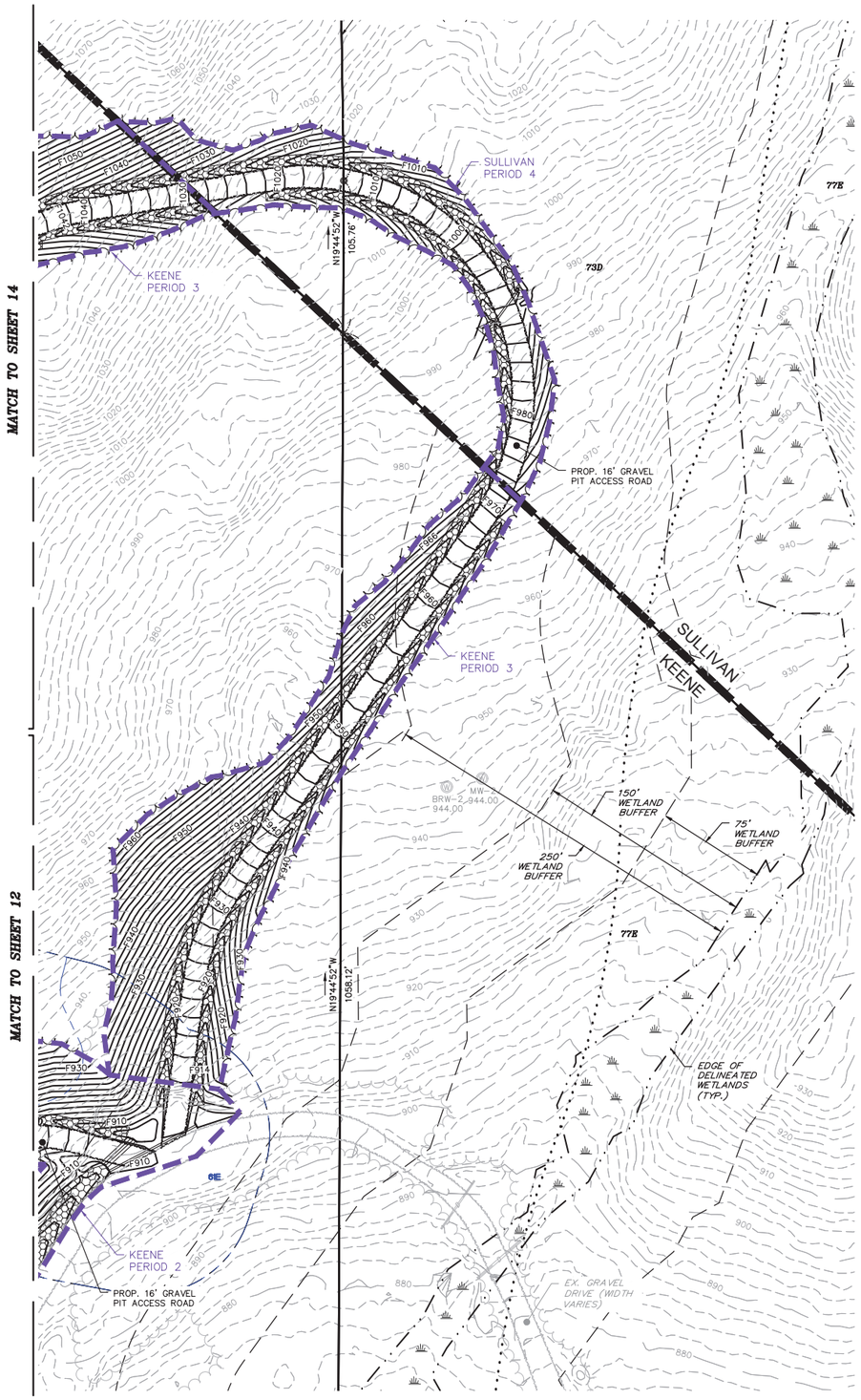
STATE OF NEW HAMPSHIRE — JOHN ERIC COLE No. 14744 2/3/25 LICENSED PROFESSIONAL ENGINEER

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:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET: 12 OF 22		



SEE SHEET 1 FOR OPERATION NOTES (TYP.)

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

LOAM & SEED ALL DISTURBED AREAS (TYP.)

N

LEGEND

- ABUTTER LINE
- PROPERTY LINE
- EXCAVATION SETBACK LINE
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HYDROLOGIC

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92	LYMAN	224	D

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

DIG SAFE
811
IT'S ALL ELSE UNDERGROUND
CALL TOLL FREE
DAMAGE PREVENTION SYSTEM

GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

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REVISIONS

No.	DATE	COMMENTS	BY
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2	2/3/25	REVISED PER CITY COMMENTS	JD

OWNER/APPLICANT:
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STAMP:

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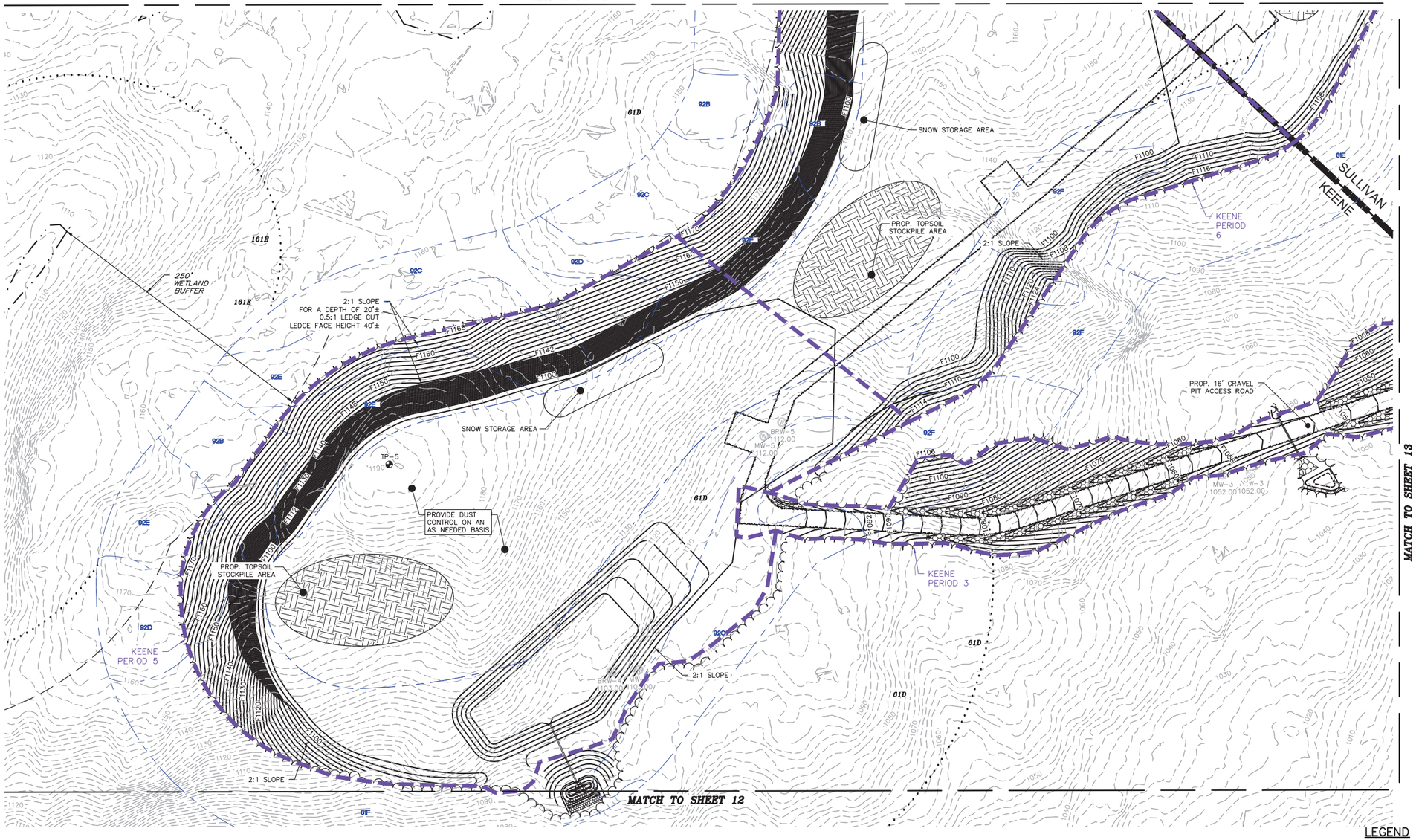
57 ROUTE 9
KEENE & SULLIVAN, NEW HAMPSHIRE
CHESHIRE COUNTY

PROJECT:
GORDON SERVICES KEENE

TITLE:
IMPACT CONTROL & MONITORING PLAN

PROJECT No.	DATE:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET	13 OF 22	



SITE SPECIFIC SOIL SURVEY NOTES:

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOIL SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, INTENDED FOR INFILTRATION REQUIREMENTS BY THE NH DES ALTERATION OF TERRAIN BUREAU. IT WAS PRODUCED BY A PROFESSIONAL SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCES CONSERVATION SERVICE. THERE IS A REPORT THAT ACCOMPANIES THIS MAP.

THE SITE SPECIFIC SOIL SURVEY (SSSS) WAS PRODUCED JULY 15, 2024, AND WAS PREPARED BY LUKE HURLEY, CSS #095M, HURLEY ENVIRONMENTAL AND LAND PLANNING, LLC.

SOILS WERE IDENTIFIED WITH THE NEW HAMPSHIRE STATE-WIDE NUMERICAL SOILS LEGEND, USDA NRCS, DURHAM, NH. ISSUE #10, JANUARY 2011. THE NUMERIC LEGEND WAS AMENDED TO IDENTIFY THE CORRECT SOIL COMPONENTS OF THE COMPLEX.

HYDROLOGIC SOIL GROUP FROM KSAT 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

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

LUKE D. HURLEY No. 095M 7/15

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

SEE SHEET 1 FOR OPERATION NOTES (TYP.)

LOAM & SEED ALL DISTURBED AREAS (TYP.)

DIG SAFE — CALL TOLL FREE 811 — DAMAGE PREVENTION SYSTEM — RHODE ISLAND UTILITIES UNDERGROUND

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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

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REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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

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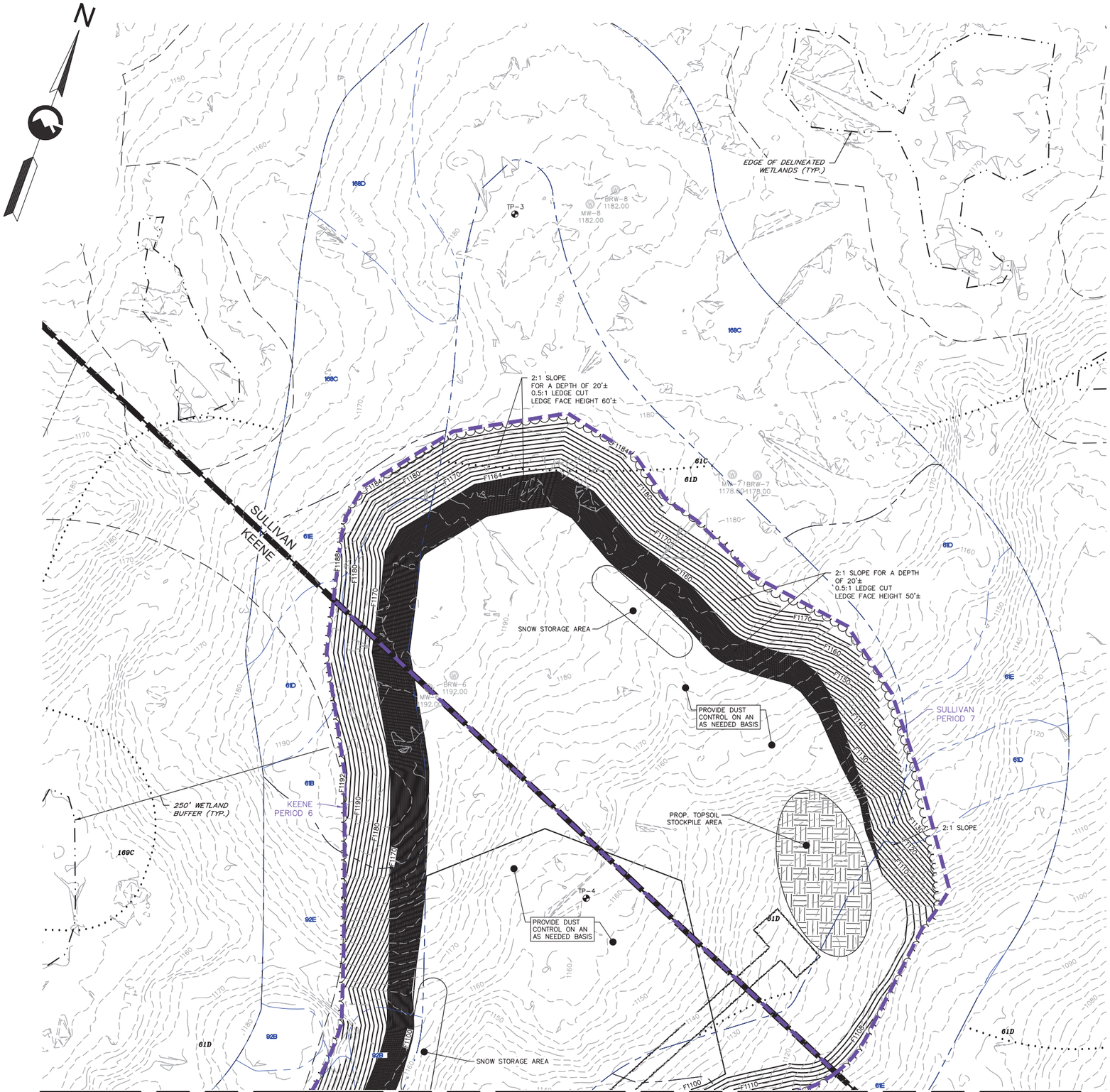
STAMP:
STATE OF NEW HAMPSHIRE — BRENTON S. COLE — No. 14744 — 2/3/25 — LICENSED PROFESSIONAL ENGINEER

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:	SCALE:
23-0201-1	FEBRURARY 3, 2025	HORIZ. 1"=50'
SHEET	14 OF 22	



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STATE OF NEW HAMPSHIRE
LUKE D. HURLEY
No. 095
CERTIFIED SOIL SCIENTIST

NRCS SOILS LEGEND

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UTILITIES UNDERGROUND

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

SEE SHEET 1 FOR OPERATION NOTES (TYP.)

LOAM & SEED ALL DISTURBED AREAS (TYP.)

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GRAPHIC SCALE
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1 inch = 50 ft.

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PROJECT:
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PROJECT No.	DATE:	SCALE:
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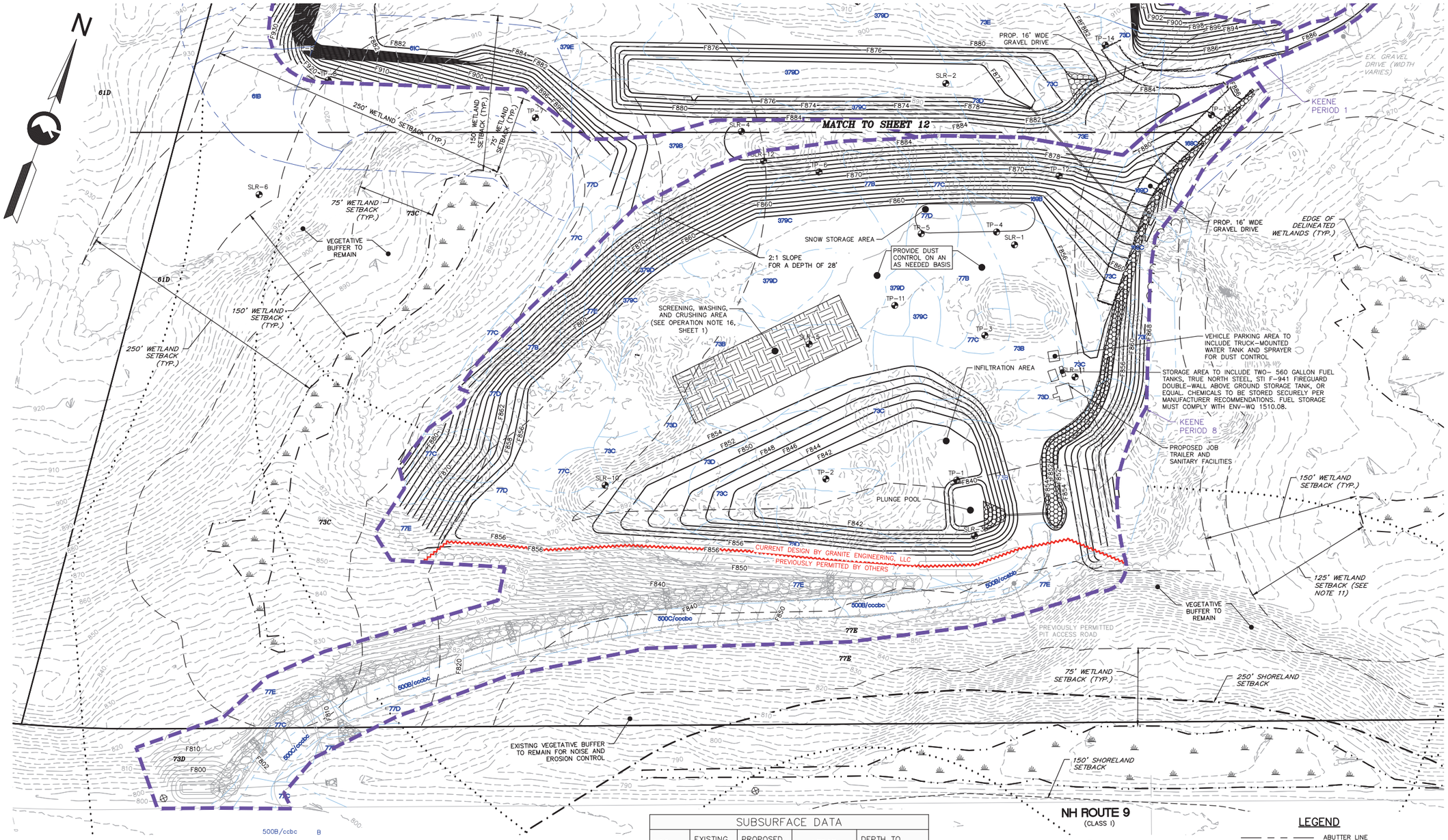
SHEET	15 OF 22	



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
159B	SUNAPEE FINE SANDY LOAM, 0–8% SLOPES, VERY STONY	B
159C	SUNAPEE FINE SANDY LOAM, 8–15% SLOPES, VERY STONY	B
159D	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/ccabb	UDORTHENTS, LOAMY, 0–8% SLOPES	B
500B/ccabb	UDORTHENTS, LOAMY, 0–8% SLOPES	B
500B/ccabb	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	---
SLR–1	874	865	NONE TO 853.5	---
SLR–2	894	894	889	---
SLR–3	867	852	NONE TO 842	---
SLR–4	888	888	873	---
SLR–5	890	886	862	---
SLR–6	920	920	910	---
SLR–10	884	854	NONE TO 829.0	42.9
SLR–11	871.5	855	NONE TO 795.5	NONE TO 45.2
SLR–12	888.5	888.5	877.5	1.5

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

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UTILITIES UNDERGROUND
RHEMMOT-MA

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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SCOTT
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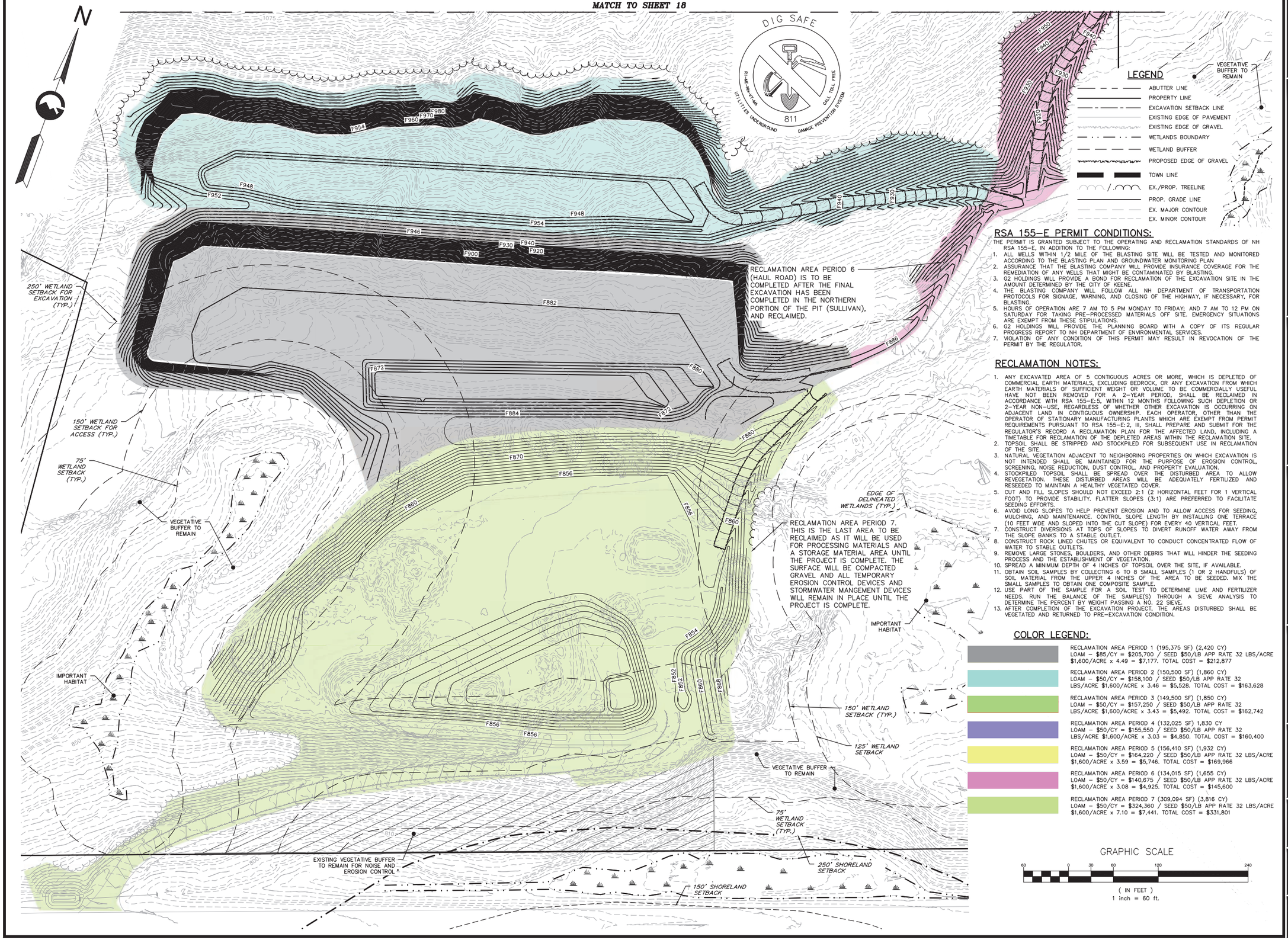
TITLE:
IMPACT CONTROL & MONITORING PLAN

PROJECT No.	DATE:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=50'
SHEET: 16 OF 22		

MATCH TO SHEET 18



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 COMMERCIALLY 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 WHICH 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. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR SUBSEQUENT USE IN RECLAMATION OF THE SITE.
3. NATURAL VEGETATION ADJACENT TO NEIGHBORING PROPERTIES ON WHICH EXCAVATION IS NOT INTENDED SHALL BE MAINTAINED FOR THE PURPOSE OF EROSION CONTROL, SCREENING, NOISE REDUCTION, DUST CONTROL, AND PROPERTY EVALUATION.
4. STOCKPILED TOPSOIL SHALL BE SPREAD OVER THE DISTURBED AREA TO ALLOW REVEGETATION. THESE DISTURBED AREAS WILL BE ADEQUATELY FERTILIZED AND RESEEDED TO MAINTAIN A HEALTHY VEGETATED COVER.
5. CUT AND FILL SLOPES SHOULD NOT EXCEED 2:1 (2 HORIZONTAL FEET FOR 1 VERTICAL FOOT) TO PROVIDE STABILITY. FLATTER SLOPES (3:1) ARE PREFERRED TO FACILITATE SEEDING EFFORTS.
6. AVOID LONG SLOPES TO HELP PREVENT EROSION AND TO ALLOW ACCESS FOR SEEDING, MULCHING, AND MAINTENANCE. CONTROL SLOPE LENGTH BY INSTALLING ONE TERRACE (10 FEET WIDE AND SLOPED INTO THE CUT SLOPE) FOR EVERY 40 VERTICAL FEET.
7. CONSTRUCT DIVERSIONS AT TOPS OF SLOPES TO DIVERT RUNOFF WATER AWAY FROM THE SLOPE BANKS TO A STABLE OUTLET.
8. CONSTRUCT ROCK LINED CHUTES OR EQUIVALENT TO CONDUCT CONCENTRATED FLOW OF WATER TO STABLE OUTLETS.
9. REMOVE LARGE STONES, BOULDERS, AND OTHER DEBRIS THAT WILL HINDER THE SEEDING PROCESS AND THE ESTABLISHMENT OF VEGETATION.
10. SPREAD A MINIMUM DEPTH OF 4 INCHES OF TOPSOIL OVER THE SITE, IF AVAILABLE.
11. OBTAIN SOIL SAMPLES BY COLLECTING 6 TO 8 SMALL SAMPLES (1 OR 2 HANDFULS) OF SOIL MATERIAL FROM THE UPPER 4 INCHES OF THE AREA TO BE SEEDED. MIX THE SMALL SAMPLES TO OBTAIN ONE COMPOSITE SAMPLE.
12. USE PART OF THE SAMPLE FOR A SOIL TEST TO DETERMINE LIME AND FERTILIZER NEEDS. RUN THE BALANCE OF THE SAMPLE(S) THROUGH A SIEVE ANALYSIS TO DETERMINE THE PERCENT BY WEIGHT PASSING A NO. 22 SIEVE.
13. AFTER COMPLETION OF THE EXCAVATION PROJECT, THE AREAS DISTURBED SHALL BE VEGETATED AND RETURNED TO PRE–EXCAVATION CONDITION.

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
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

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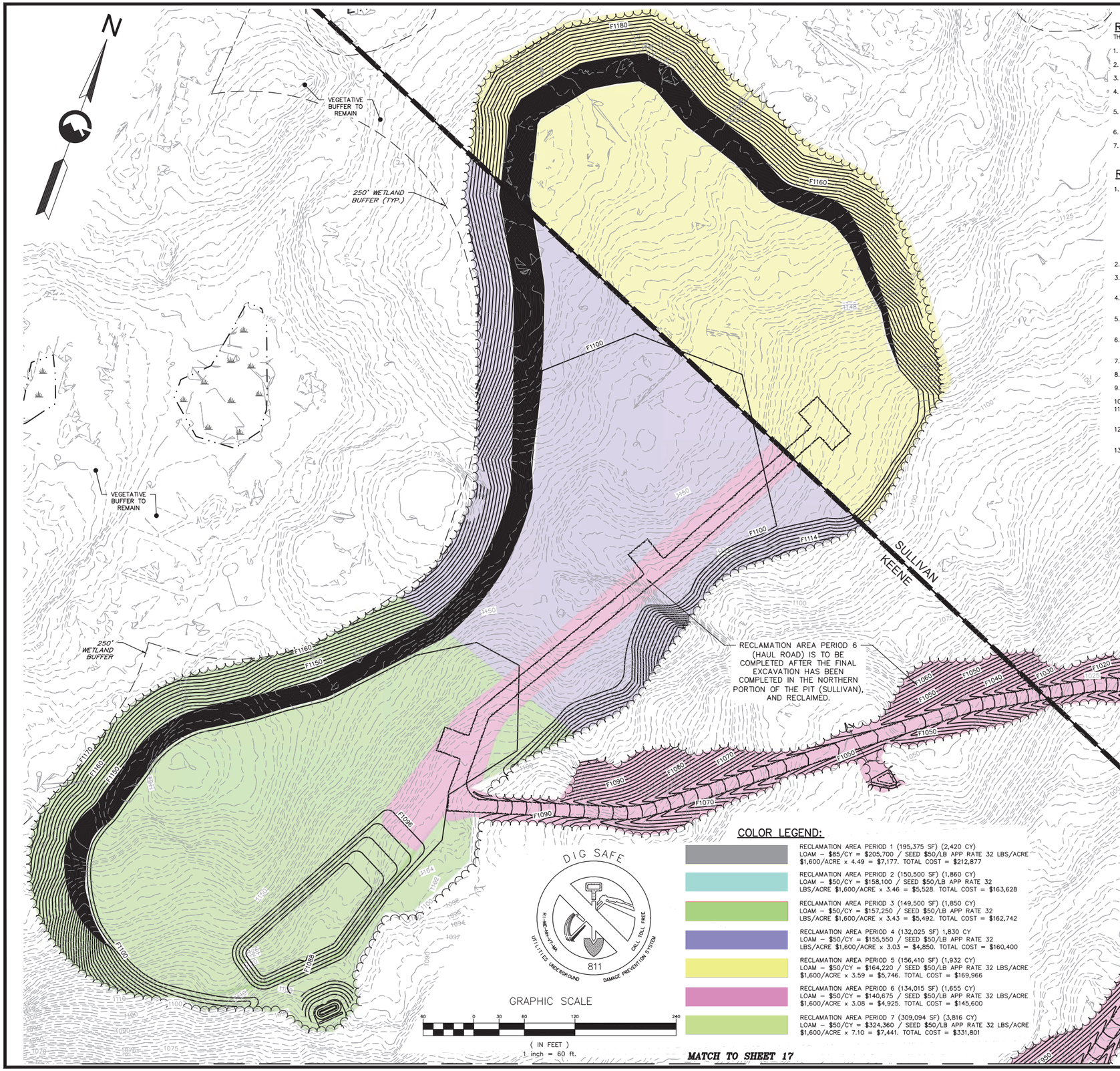

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2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR SUBSEQUENT USE IN RECLAMATION OF THE SITE.
3. NATURAL VEGETATION ADJACENT TO NEIGHBORING PROPERTIES ON WHICH EXCAVATION IS NOT INTENDED SHALL BE MAINTAINED FOR THE PURPOSE OF EROSION CONTROL, SCREENING, NOISE REDUCTION, DUST CONTROL, AND PROPERTY EVALUATION.
4. STOCKPILED TOPSOIL SHALL BE SPREAD OVER THE DISTURBED AREA TO ALLOW REVEGETATION. THESE DISTURBED AREAS WILL BE ADEQUATELY FERTILIZED AND RESEEDED TO MAINTAIN A HEALTHY VEGETATED COVER.
5. CUT AND FILL SLOPES SHOULD NOT EXCEED 2:1 (2 HORIZONTAL FEET FOR 1 VERTICAL FOOT) TO PROVIDE STABILITY. FLATTER SLOPES (3:1) ARE PREFERRED TO FACILITATE SEEDING EFFORTS.
6. AVOID LONG SLOPES TO HELP PREVENT EROSION AND TO ALLOW ACCESS FOR SEEDING, MULCHING, AND MAINTENANCE. CONTROL SLOPE LENGTH BY INSTALLING ONE TERRACE (10 FEET WIDE AND SLOPED INTO THE CUT SLOPE) FOR EVERY 40 VERTICAL FEET.
7. CONSTRUCT DIVERSIONS AT TOPS OF SLOPES TO DIVERT RUNOFF WATER AWAY FROM THE SLOPE BANKS TO A STABLE OUTLET.
8. CONSTRUCT ROCK LINED CHUTES OR EQUIVALENT TO CONDUCT CONCENTRATED FLOW OF WATER TO STABLE OUTLETS.
9. REMOVE LARGE STONES, BOULDERS, AND OTHER DEBRIS THAT WILL HINDER THE SEEDING PROCESS AND THE ESTABLISHMENT OF VEGETATION.
10. SPREAD A MINIMUM DEPTH OF 4 INCHES OF TOPSOIL OVER THE SITE, IF AVAILABLE.
11. OBTAIN SOIL SAMPLES BY COLLECTING 6 TO 8 SMALL SAMPLES (1 OR 2 HANDFULS) OF SOIL MATERIAL FROM THE UPPER 4 INCHES OF THE AREA TO BE SEEDED. MIX THE SMALL SAMPLES TO OBTAIN ONE COMPOSITE SAMPLE.
12. USE PART OF THE SAMPLE FOR A SOIL TEST TO DETERMINE LIME AND FERTILIZER NEEDS. RUN THE BALANCE OF THE SAMPLE(S) THROUGH A SIEVE ANALYSIS TO DETERMINE THE PERCENT BY WEIGHT PASSING A NO. 22 SIEVE.
13. AFTER COMPLETION OF THE EXCAVATION PROJECT, THE AREAS DISTURBED SHALL BE VEGETATED AND RETURNED TO PRE-EXCAVATION CONDITION.

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

GRANITE ENGINEERING
civil engineering
land planning
municipal services

REVISIONS

No.	DATE	COMMENTS	BY
1	12/20/24	PROJECT SUBMITTAL	JD
2	2/3/25	REVISED PER CITY COMMENTS	JD

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
www.GraniteEng.com

STAMP:
STATE OF NEW HAMPSHIRE
BRENTON
SCOTT
No. 14744
2/3/25
LICENSED
PROFESSIONAL ENGINEER

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:	SCALE:
23-0201-1	FEBRUARY 3, 2025	HORIZ. 1"=60'
SHEET: 18 OF 22		

NHB DataCheck Results Letter
NH Natural Heritage Bureau
Please note: maps and NHB record pages are **confidential** and shall be redacted from public documents.

To: Jeffrey Merritt, Granite Engineering, LLC
150 Dow Street Suite 421
Manchester, NH 03101
jmerritt@graniteeng.com

From: NHB Review
NH Natural Heritage Bureau
Main Contact: Ashley Litwinenko - nhbreview@dncr.nh.gov

cc: NHFG Review

Date: 02/06/2024 (valid until 02/06/2025)
Re: DataCheck Review by NH Natural Heritage Bureau and NH Fish & Game
Permits: MUNICIPAL POR - Keene, Sullivan, NHDES - Alteration of Terrain Permit, NHDES - Wetland Standard Dredge & Fill - Minor, USEPA - Stormwater Pollution Prevention

NHB ID: NHB24-0314

Town: Keene and Sullivan
Location: Route 9

Project Description: This project proposes the expansion of the existing gravel operations taking place on Keene Tax Map 215 Lot 7 along Route 9. The gravel operations will expand into Sullivan Tax Map 5 Lot 46 and consist of 8 phases. Existing stream crossings along the access road that connects Keene lots 7 and 8, and Sullivan lots 46 and 46-1 will be repaired and permitted. Stream crossing work will only take place on the northern portion of Keene Map 215 Lot 8.
This project is associated with 2 previously submitted NHBs, NHB#23-2849 and NHB#22-3432.

Next Steps for Applicant:

NHB's database has been searched for records of rare species and exemplary natural communities. Please carefully read the comments and consultation requirements below.

NHB Comments: No comments at this time.

NHFG Comments: Please refer to NHFG consultation requirements below.

NHB Consultation
If this NHB DataCheck letter includes records of rare plants and/or natural communities/systems, please contact NHB and provide any requested supplementary materials by emailing nhbreview@dncr.nh.gov.

If this NHB DataCheck letter DOES NOT include any records of rare plants and/or natural communities/systems, no further consultation with NHB is required.

NH Fish and Game Department Consultation

If this NHB DataCheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB DataCheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to https://www.wildlife.nh.gov/wildlife-and-habitat/nongame-and-endangered-species/environmental-review. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB DataCheck results letter number and "Fis 1004 consultation request" in the subject line**.

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule*), coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email NHFGreview@wildlife.nh.gov, and include the NHB DataCheck results letter number and "review request" in the email subject line.
Contact NH Fish & Game at (603) 271-0467 with questions.

NHB Database Records:
The following record(s) have been documented in the vicinity of the proposed project.
Please see the map and detailed information about the record(s) on the following pages.

Vertebrate species	State[1]	Federal	Notes
Wood Turtle (*Glyptemys insculpta*)	SC	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list.
An asterisk (*) indicates that the most recent report for that occurrence was 20 or more years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section above.

Disclaimer: NHB's database can only tell you of known occurrences that have been reported to NHFG/NHB. Known occurrences are based on information gathered by qualified biologists or members of the public, reported to our offices, and verified by NHB/NHFG.
However, many areas have never been surveyed, or have only been surveyed for certain species.
NHB recommends surveys to determine what species/natural communities are present onsite.

GORDON SERVICES – KEENE PIT
2024 ACID MINE DRAINAGE POTENTIAL REPORT

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

Prepared For:

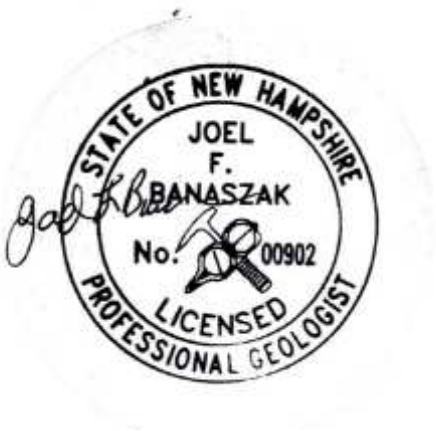
Gordon Services
250 North Street
Jaffrey, New Hampshire 03452

Prepared By:

FRONTIER GEOSERVICES
127 OLD WARNER ROAD
BRADFORD, NEW HAMPSHIRE 03221

Joel Banaszak, P.G.
(603) 748-3715
Jbanaszak@frontiergeoservices.com

December 18, 2024
Frontier Project No. 2024012



1.0 INTRODUCTION

Frontier Geoservices, LLC. (Frontier) has completed a acid mine drainage potential investigation at the property located at 57 Route 9, in the City of Keene, Cheshire County, New Hampshire The parcels comprising the Site are identified by the City of Keene's Assessor's office on Tax Map 215 as Block 7 (102.7-acres) and the Town of Sullivan, New Hampshire, Assessor's office on Tax Map 5 Lot 46 (172-acres) and 46-1 (25.82-acres.) The Site is currently owned by G2 Holdings, LLC. of 250 North Street, Jaffrey, New Hampshire. Please refer to **Figure 1** for a **Site Location Map**.

Currently, the Site operates as a gravel and earth removal operation for Gordon Services. The current operations are permitted to only encompass one area, Phase 1, of the Site. Gordon Services wishes to expand their current operations to include additional excavation in Period 8 and new excavations in Periods 1 – 7. Please refer to **Figure 2** for a **Site Plan**.

Applicants proposing Earth Excavation are required to provide the information requested in The City of Keene's Article 25 Earth Excavation Regulation. This report provides the information requested in the City of Keene's Article 25.3.6 Toxic or Acid Forming Materials. Investigation activities included the sampling of materials from eight (8) bedrock monitoring wells.

2.0 SITE GEOLOGICAL SETTING

Based on review of the *Bedrock Geologic Map of New Hampshire*, 1997, bedrock in the vicinity of the target property is classified as the Silurian-aged Rangeley Formation which is rusty weathering schist, and gray quartz-biotite, muscovite-plagioclase schist that contain local calc-silicate layers. It also has rare quartz-rich layers that appear sandy. A **Bedrock Geologic Map** is included in **Appendix A**.

3.0 OCTOBER 2024 BEDROCK MONITORING WELL INSTALLATION AND SAMPLING

Bedrock groundwater monitoring wells were installed at eight (8) locations on October 17 and 18, 2024. Monitoring wells were installed using a 3-inch diameter air hammer to a depth that was greater than or equal to 50-feet below the proposed pit elevation at the respective location. Lithology, water content and fracture occurrence were logged for each bedrock well while drilling. Samples were collected from the drill cuttings at each location for laboratory analysis of acid mine drainage potential which included acid base accounting and shake-flask extraction. Laboratory analysis was performed by SGS Canada, Inc. of Lakefield, Ontario.

Pleaser refer to **Figure 2** for a **Monitoring Well Location Map**.

3.1 Bedrock Well Installation

BRW-1

Monitoring well BRW-1 was installed in the on the boundary between proposed Period 1 and 2 adjacent to MW-1. Bedrock was encountered at a depth of 3.3-feet bgs. The bedrock well was installed as an open borehole to a depth of 54-feet bgs. The ground elevation at this location is 950-feet AMSL. The bottom of the borehole is at an elevation of 896-feet AMSL. The proposed pit floor elevation at this location is 950-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-2
Monitoring well BRW-2 was installed east of the central portion of Period 3 adjacent to the proposed quarry access road. Bedrock was encountered at a depth of 12.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 62-feet bgs. The ground elevation at this location is 944-feet AMSL. The bottom of the borehole is at an elevation of 882-feet AMSL. The proposed pit floor elevation at this location is 940-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-3
Monitoring well BRW-3 was installed in the western portion of Period 3 along the proposed quarry access road. Bedrock was encountered at a depth of 14.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 51-feet bgs. The ground elevation at this location is 1,052-feet AMSL. The bottom of the borehole is at an elevation of 1,001-feet AMSL. The proposed pit floor elevation at this location is 1050-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-4
Monitoring well BRW-4 was installed in the southeastern portion of Period 5. Bedrock was encountered at a depth of 5.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,103-feet AMSL. The bottom of the borehole is at an elevation of 962-feet AMSL. The proposed pit floor elevation at this location is 1,098-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-5
Monitoring well BRW-5 was installed in the northeastern portion of Period 5. Bedrock was encountered at a depth of 3.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,112-feet AMSL. The bottom of the borehole is at an elevation of 971-feet AMSL. The proposed pit floor elevation at this location is 1,098-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-6
Monitoring well BRW-6 was installed in the northwestern portion of Period 6. Bedrock was encountered at a depth of 1.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 142-feet bgs. The ground elevation at this location is 1,192-feet AMSL. The bottom of the borehole is at an elevation of 1,050-feet AMSL. The proposed pit floor elevation at this location is 1,098-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-7
Monitoring well BRW-7 was installed upgradient of the central portion of Period 7. This well is located outside of the proposed project area. Bedrock was encountered at a depth of 1.9-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,178-feet AMSL. The bottom of the borehole is at an elevation of 1,037-feet AMSL. The proposed pit floor elevation in Period 7, located approximately 70-feet to the south of BRW-7 is 1,098-feet AMSL. A water bearing fracture was encountered at a depth of 5.0' bgs. The fracture produced less than 5-gpm based on airlift testing conducted during drilling. A water level of 0.96-feet bgs was recorded on the day of drilling. No other fractures or water bearing zones were encountered below a depth of 5.0-feet bgs.

BRW-8

Monitoring well BRW-8 was installed upgradient of the northern portion of Period 7. This well is located outside of the proposed project area. Bedrock was encountered at a depth of 1.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,182-feet AMSL. The bottom of the borehole is at an elevation of 1,041-feet AMSL. The proposed pit floor elevation in Period 7, located approximately 125-feet to the southwest of BRW-8 is 1,098-feet AMSL. A water bearing fracture was encountered at a depth of 9.0' bgs. The fracture produced less than 5-gpm based on airlift testing conducted during drilling. A water level of 0.84-feet bgs was recorded on the day of drilling. No other fractures or water bearing zones were encountered below a depth of 9.0-feet bgs.

Below is a table summarizing the bedrock elevations, depths, and proposed pit floor elevations.

Well	Ground Elevation (ft AMSL)	Bedrock Depth (feet)	Depth/Bottom Elevation (feet/ ft AMSL)	Proposed Pit Floor Elevation (ft AMSL)
BRW-1	950	3	54/896	950
BRW-2	944	12	62/882	940
BRW-3	1052	14	51/1,001	1,050
BRW-4	1,103	3	81/1,022	1,098
BRW-5	1,164	3	141/1,023	1,098
BRW-6	1,162	1	122/1,040	1,098
BRW-7	1,178	1.9	141/1,037	1,098*
BRW-8	1,180	1	1,039	1,098*

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

Please refer to **Appendix B** for **Bedrock Boring and Monitoring Well Construction Logs.**

3.0 ACID MINE DRAINAGE POTENTIAL OVEVIEW

Acid Mine Drainage (AMD) occurs when water reacts with sulfur bearing minerals creating sulfuric acid. The acidic water can contain high concentrations of metals dissolved from the rock including arsenic, copper, iron, manganese, nickel and lead depending upon the parent-bedrock.

A variety of chemical reactions can contribute to AMD, however oxidation of pyrite (FeS_2) is the common driver for contributing to acid mine drainage. The chemical equation for this process is:

$$2\ FeS_2 + 7\ O_2 + 2\ H_2O \rightarrow 2\ Fe^{2+} + 4\ SO_4^{2-} + 4\ H^+$$

Oxidation of the pyrite solubilizes ferrous iron which then oxidizes to ferric iron. The chemical equation for this process is:

$$4\ Fe^{2+} + O_2 + 4\ H^+ \rightarrow 4\ Fe^{3+} + 2\ H_2O$$

Ferric cations produced in the above reaction have the potential to oxidize additional pyrite which is reduced into ferrous ions. The chemical equation for this process is:

$$FeS_2 + 14\ Fe^{3+} + 8\ H_2O \rightarrow 15\ Fe^{2+} + 2\ SO_4^{2-} + 16\ H^+$$

The overall result of the chemical reactions is the release of H^+. This lowers the pH of the water and retains the solubility of ferric ion.

Additionally, low pH waters at mining sites can contain high levels of toxic metals specifically arsenic, copper, iron, manganese, nickel and lead. The potential for the existence of these metals is dependent upon the consistency of the parent-bedrock.

To predict the potential for acid mine drainage at a Site, bedrock samples are laboratory analyzed for their acid producing potential and metals content.

4.0 ACID PRODUCING POTENTIAL ANALYSIS

Acid based accounting (ABA) is a widely used method in predicting the potential for acid mine drainage. ABA analysis measures the reactive sulfur in a sample to determine the Maximum Potential Acidity (MPA) and the content of reactive carbonate to determine the Neutralizing Potential (NP). The MPA of a sample is calculated by multiplying the percent mass of SO_4 in a sample by a constant of 31.25. This constant is derived from the understanding that it requires 31.25 metric tons of $CaCO_3$ to neutralize 1,000 metric tons of rock containing 1% sulfur. The NP of a sample is calculated by multiplying the percent mass of $CaCO_3$ by a constant of 83.34 to convert the $CaCO_3$ percent mass into units of kg CaCO3/ton. The ratio of the NP/MPA predicts the potential for the sample to produce acid mine drainage. Research conducted by diPretoro and Rauch (1988) demonstrated that NP/MPA ratios of <2.4 typically resulted in acid mine drainage and ratios of >2.4 resulted in alkaline discharge.

4.1 ACID BASED ACCOUNTING RESULTS

BRW-1

The percent mass of SO_4 in the sample collected from BRW-1 was calculated to be 27.3% and the percent mass of $CaCO_3$ was calculated to be 11.99%. The calculated MPA of the sample was 8.53 kg SO_4/ton. The calculated NP of the sample was 9.95 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 1.17. Based on these results this location has the potential to produce acid mine drainage.

BRW-2

The percent mass of SO_4 in the sample collected from BRW-2 was calculated to be 29.1% and the percent mass of $CaCO_3$ was calculated to be 9.11%. The calculated MPA of the sample was 9.11 kg SO_4/ton. The calculated NP of the sample was 2.56 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 0.28. Based on these results this location has the potential to produce acid mine drainage.

BRW-3

The percent mass of SO_4 in the sample collected from BRW-3 was calculated to be 31.4% and the percent mass of $CaCO_3$ was calculated to be 3.0%. The calculated MPA of the sample was 9.81 kg SO_4/ton. The calculated NP of the sample was 2.49 kg $CaCO_3$/ton. The ratio of NP/MPA was

calculated to be 0.25. Based on these results this location has the potential to produce acid mine drainage.

BRW-4

The percent mass of SO_4 in the sample collected from BRW-4 was calculated to be 36.1% and the percent mass of $CaCO_3$ was calculated to be 8.7%. The calculated MPA of the sample was 11.27 kg SO_4/ton. The calculated NP of the sample was 7.25 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 0.64. Based on these results this location has the potential to produce acid mine drainage.

BRW-5

The percent mass of SO_4 in the sample collected from BRW-5 was calculated to be 9.1% and the percent mass of $CaCO_3$ was calculated to be 48.0%. The calculated MPA of the sample was 2.83 kg SO_4/ton. The calculated NP of the sample was 40.02 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 14.12. Based on these results this location does not have the potential to produce acid mine drainage.

BRW-6

The percent mass of SO_4 in the sample collected from BRW-6 was calculated to be 39.0% and the percent mass of $CaCO_3$ was calculated to be 10.0%. The calculated MPA of the sample was 12.18 kg SO_4/ton. The calculated NP of the sample was 8.33 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 0.68. Based on these results this location has the potential to produce acid mine drainage.

BRW-7

The percent mass of SO_4 in the sample collected from BRW-7 was calculated to be 56.4% and the percent mass of $CaCO_3$ was calculated to be 0.08%. The calculated MPA of the sample was 17.63 kg SO_4/ton. The calculated NP of the sample was 0.67 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 0.04. Based on these results this location has the potential to produce acid mine drainage.

It should be noted that this location is outside of the proposed project area.

BRW-8

The percent mass of SO_4 in the sample collected from BRW-8 was calculated to be 66.1% and the percent mass of $CaCO_3$ was calculated to be 1.1%. The calculated MPA of the sample was 20.67 kg SO_4/ton. The calculated NP of the sample was 0.92 kg $CaCO_3$/ton. The ratio of NP/MPA was calculated to be 0.04. Based on these results this location has the potential to produce acid mine drainage.

It should be noted that this location is outside of the proposed project area.

Please refer to **Appendix C** for **Tabulated Summary of Acid Based Accounting Results**.

5.0 BEDROCK METALS CONCENTRATION ANALYSIS

The shake flask extraction laboratory method is a commonly used analysis to determine the potential for metals to leach from a bedrock sample. In this method the sample is saturated in water or a weak acid and shook to dissolve the metals into solution. The solution is then analyzed to determine the

concentrations of dissolved metals. This method is used to predict the potential how much of a particular metal may be released under acid mine drainage conditions. For this report metals including; arsenic, copper, iron, manganese, nickel and lead were found to be the primary potential contaminants associated with AMD.

5.1 Shake Flask Extraction Results

BRW-1
The sample collected from BRW-1 had reported concentrations of arsenic at 1.4 µg/g, copper at 69 µg/g, iron at 61,000 µg/g, manganese at 510 µg/g, nickel at 54 µg/g and lead at 20 µg/g.

BRW-2
The sample collected from BRW-2 had reported concentrations of arsenic at 1.0 µg/g, copper at 67 µg/g, iron at 62,000 µg/g, manganese at 850 µg/g, nickel at 57 µg/g and lead at 18 µg/g.

BRW-3
The sample collected from BRW-3 had reported concentrations of arsenic at 1.2 µg/g, copper at 77 µg/g, iron at 65,000 µg/g, manganese at 730 µg/g, nickel at 56 µg/g and lead at 17 µg/g.

BRW-4
The sample collected from BRW-4 had reported concentrations of arsenic at 1.4 µg/g, copper at 63 µg/g, iron at 62,000 µg/g, manganese at 710 µg/g, nickel at 56 µg/g and lead at 19 µg/g.

BRW-5
The sample collected from BRW-5 had reported concentrations of arsenic at 0.6 µg/g, copper at 6.6 µg/g, iron at 7,700 µg/g, manganese at 210 µg/g, nickel at 8.9 µg/g and lead at 45 µg/g.

BRW-6
The sample collected from BRW-6 had reported concentrations of arsenic at 1.2 µg/g, copper at 59 µg/g, iron at 59,000 µg/g, manganese at 560 µg/g, nickel at 53 µg/g and lead at 24 µg/g.

BRW-7
The sample collected from BRW-7 had reported concentrations of arsenic at 1.3 µg/g, copper at 64 µg/g, iron at 60,000 µg/g, manganese at 570 µg/g, nickel at 63 µg/g and lead at 22 µg/g.

It should be noted that this location is outside of the proposed project area.

BRW-8
The sample collected from BRW-8 had reported concentrations of arsenic at 1.5 µg/g, copper at 40 µg/g, iron at 33,000 µg/g, manganese at 330 µg/g, nickel at 19 µg/g and lead at 26 µg/g.

It should be noted that this location is outside of the proposed project area.

Please refer to **Appendix D** for **Tabulated Summary of Shake Flask Extraction Results.**

6.0 PROPOSED WATER QUALITY MONITORING

Due to the potential for water at the Site to be affected by acid mine drainage it is proposed that wells SRL-10, SRL-12, BRW-7 and BRW-8 be monitored on a bi-annual basis in the months of April and October. Additionally, samples will be collected from surface water infiltration features constructed throughout the project. All surface water being conveyed from the proposed excavation is to be directed into a surface water infiltration basin. The construction and placement of surface water infiltration features will be iterative based on project progression. Currently there is one surface water infiltration feature located in the western area of Period 8. As new infiltration features are constructed at the Site they will be added to the sampling program. Field parameters including pH, specific conductance, oxidation reduction potential, dissolved oxygen and turbidity and laboratory analysis of dissolved and total metals including; arsenic, copper, iron, manganese, nickel and lead will be performed at each sampling location. Baseline, pre-excavation monitoring will consist of the collection of two (2) rounds of samples collected a minimum of 14 calendar days apart. Results will be reviewed in comparison to the New Hampshire Department of Environmental Services (NHDES) Ambient Groundwater Quality Standards (AGQS). All results will be forwarded to the City of Keene Community Development Department within 45 days of sample collection.

Please refer to **Figure 3** for a **Proposed Water Quality Monitoring Location Map**.

7.0 REFERENCES

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GORDON SERVICES – KEENE PIT
2024 HYDROGEOLOGIC INVESTIGATION REPORT

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

Prepared For:

Gordon Services
250 North Street
Jaffrey, New Hampshire 03452

Prepared By:

FRONTIER GEOSERVICES
127 OLD WARNER ROAD
BRADFORD, NEW HAMPSHIRE 03221

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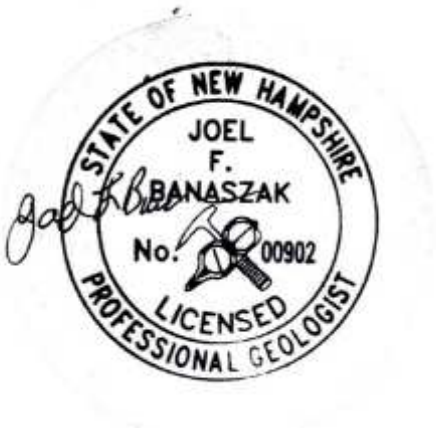
December 18, 2024
Frontier Project No. 2024012



1.0 INTRODUCTION

Frontier Geoservices, LLC. (Frontier) has completed a hydrogeological investigation at the property located at 57 Route 9, in the City of Keene, Cheshire County, New Hampshire The parcels comprising the Site are identified by the City of Keene's Assessor's office on Tax Map 215 as Block 7 (102.7-acres) and the Town of Sullivan, New Hampshire, Assessor's office on Tax Map 5 Lot 46 (172-acres) and 46-1 (25.82-acres. The Site is currently owned by G2 Holdings, LLC. of 250 North Street, Jaffrey, New Hampshire. Please refer to **Figure 1** for a **Site Location Map**.

Currently, the Site operates as a gravel and earth removal operation for Gordon Services. The current operations are permitted to only encompass one area, Period 8, of the Site. Gordon Services wishes to expand their current operations to include additional excavation in Period 8 and new excavations in Periods 1 – 7. Please refer to **Figure 2** for a **Site Plan/Monitoring Well Location Map**.

Applicants proposing Earth Excavation are required to provide the information requested in The City of Keene's Article 25 Earth Excavation Regulation. This report provides the information required to fulfill The City of Keene's Article 25.3.4 Groundwater Quantity. Site activities included the installation of eight (8) overburden monitoring wells and eight (8) bedrock monitoring wells. Monitoring groundwater elevations in the wells was conducted over a minimum of a 2-week period. Additional information was provided through a Limited Hydrogeologic Investigation Report completed by SLR International Corporation of Bedford, New Hampshire, dated March 25, 2022.

It should be noted that based on the results of this investigation and the previous, dewatering of the proposed excavation is not required.

2.0 SITE SETTING

The Site consists of a total of 300.52 acres of undeveloped land. The Site has a central latitude of 42°58'27.03" north and longitude of 72°13'34.66" west. The Site currently operates as a gravel and earth removal operation for Gordon Services. As previously mentioned, the Site currently only operates within the limits of Period 8 as shown on the Site Plan.

2.1 Description of Structures, Roads and other Improvements

The Site is accessed from the northern side of Route 9 in Keene, New Hampshire via a gravel driveway. The gravel driveway directs traffic to the east and west when entering the pit area. Prior to entering the pit area there is a fueling area, storage shed, and porta-potty located to the east. The current pit area has an elevation of 880-ft above mean sea level (AMSL). Earth removal and processing equipment is staged on the pit floor. Surface water drainage is currently directed to an infiltration basin located on the western side of the current Period 8 excavation. The proposed project area is accessed via former logging roads which were recently cleared.

2.2 Current Use of Adjoining Properties

South of the Site is New Hampshire State Route 9. To the east of the Site is a property which consists of various buildings which are occasionally used by the Habitat for Humanity. This property is also owned by G2 Holdings, LLC. There are no other developed properties located to the east of the Site. Several residential properties exist approximately 1,000-feet northwest of the northern property boundary. There are no developed parcels abutting to the east of the Site.

2.3 Site Physical Setting

The target property is depicted on the Marlborough, New Hampshire United States Geological Survey (USGS) 7.5 Minute Topographic Map dated 2018 at approximately 42°58'27.03" north and 72°13'34.66" west with a current pit floor elevations of 880-feet above the North American Datum (NAD) of 1983.

Based on review of the *Bedrock Geologic Map of New Hampshire*, 1997, bedrock in the vicinity of the target property is classified as the Silurian-aged Rangeley Formation which is a rusty weathering schist, gray quartz-biotite and muscovite-plagioclase schist that contain local calc-silicate layers. It also has rare quartz-rich layers that appear sandy. A **Bedrock Geologic Map** is included in **Appendix A**.

According to the United States Department of Agriculture's Natural Resource Conservation Service (NRCS) Web Soil Survey (http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx), soil beneath the target property consists of eight (8) soil types; the Colton gravelly sandy loam, 8 to 15 percent slopes, the Turnbridge-Berkshire complex, 15 to 25 percent slopes, very stony, the Turnbridge-Lyman-rock outcrop complex 8 to 15 percent slopes, the Turnbridge-Lyman-rock outcrop complex 15 to 25 percent slopes, the Turnbridge-Lyman-rock outcrop complex 25 to 60 percent slopes, the Berkshire fine sandy loam 15 to 25 percent slopes, the Marlow fine sandy loam 25 to 50 percent slopes, the Sunapee fine sandy loam 8 to 15 percent slopes. The soils identified at the Site are described as being excessively drained to well drained and having a depth to water of greater than 80-inches. Soil types at the Site are depicted in the **NRCS Soil Map** included in **Appendix A** which includes the **NRCS Soil Descriptions.**

The target property is located on the National Flood Insurance Program Flood Insurance Rate Map (FIRM) – Map Number 33005C0280E, effective May 23, 2006. The **FIRM Image** was available in the Federal Emergency Management Agency (FEMA) online database and was reviewed as part of this assessment and is included in **Appendix A**. The map depicts the Site in an area of Minimal Flood Hazard.

3.0 PREVIOUS HYDROGEOLOGIC INVESTIGATIONS

As previously mentioned, SLR International of Bedford, New Hampshire completed a Limited Hydrogeologic Investigation Report dated March 25, 2022. The investigation documented the completion of sixteen (16) test pits (TP-1 through TP-16), six (6) soil borings (SRL-1 through SLR-6) and the installation of three (3) groundwater monitoring wells (SRL-10 through SRL-12).

The test pits were excavated to depths ranging from a maximum of 15.5-feet below ground surface (bgs) at TP-4 to a minimum of 3-feet bgs at TP-8. Probable bedrock was encountered in test pits TP-7, TP-8, TP-9 and TP-10. The primary purpose of the test pits was to collect samples for gradation analyses performed in accordance with ASTM D442/D1140. Materials encountered in test pits TP-1, TP-2, TP-3, TP-5, TP-6, TP-7, TP9, TP-10, TP-13 and TP-14 were classified as glacial till. Materials encountered in test pits TP-4 and TP-12 were classified as glacial outwash. Samples were not collected from test pits TP-8, TP-11, TP-15 and TP-16. None of the test pits encountered saturated groundwater conditions.

Soil borings SRL-1 through SRL-6 were advanced to depths ranging from a maximum of 28-feet bgs at SRL-5 to a minimum of 2-feet bgs at SRL-2. Probable bedrock was encountered in soil borings

SRL-1, SRL-2, SRL-4, SRL-5 and SRL-6. The primary purpose of the soil borings was to collect samples for gradation analyses performed in accordance with ASTM D6913. Materials encountered in soil boring SRL-1 were classified as glacial till. Materials encountered in soil borings in soil borings SRL-4 and SRL-6 were classified as glacial outwash. SRL-5 materials had a combined consistency of glacial till and glacial outwash. Samples were not collected from SRL-2 and SRL-3. None of the soil borings encountered saturated groundwater conditions. SRL-6 did have "wet" materials at the bottom of the soil boring at 10-feet bgs. However, it should be noted that this boring was completed outside of the proposed project area.

Monitoring well SRL-10 was installed in the southwest corner of Period 8 to a depth of 55-feet bgs in overburden materials. Bedrock was not encountered at this location. The screened interval of the well was from 5-feet to 55-feet bgs. A water level of 42.9-feet bgs was recorded on March 22, 2022. This is interpreted to be the seasonal high for well SRL-10. More recently, a water level of 52.85-feet bgs was recorded on December 12, 2024.

Monitoring well SRL-11 was installed in the eastern section of the Period 8 area to a depth of 45.2-feet bgs in overburden materials. The advanced prior to the installation of the monitoring well was advanced to a depth of 76-feet bgs. Bedrock was not encountered at this location. The screened interval of the well was from 5-feet to 45.2-feet bgs. Groundwater was not encountered in the soil boring or observed during the March 22, 2022 gauging event. This well has since been destroyed.

Monitoring well SRL-12 was installed in bedrock in the north-central section of the Period 8 to a depth of 39.5-feet bgs. Bedrock was encountered at a depth of 11-feet bgs. The screened interval of the well was from 4.5-feet to 39.5-feet bgs. It should be noted that this well is cross-screened between the overburden and bedrock materials. A water bearing fracture was reportedly encountered at 28-feet bgs. A water level of 1.5-feet bgs was recorded on March 22, 2022. This is interpreted to be the seasonal high for well SRL-12. More recently, a water level of 7.5-feet bgs was recorded on December 12, 2024.

Please refer to **Appendix B** for a copy of the **SLR International Limited Hydrogeologic Investigation Report**.

4.0 JULY 2024 OVERBURDEN MONITORING WELL INSTALLATION

A total of eight (8) overburden locations were investigated for the potential of installation of a groundwater monitoring well on July 22 and 23, 2024. Prior to installation of a monitoring well a soil boring was conducted to refusal depth. Soils retrieved from the boring were logged for their lithologic and water content and also screened for volatile organic compounds (VOCs) using a MiniRae 3000 photo-ionization detector (PID). Monitoring wells were installed by advancing 4-inch diameter steel casing at the boring location. The casing was then "washed" using clean water. 2-inch diameter poly-vinyl chloride (PVC) screen and riser of varying lengths were used in construction of the wells. The annulus surrounding the screen portion of the monitoring wells was filled using clean silica sand to a level of 1-foot above the screen/riser interface. Bentonite chips were emplaced around the riser to a depth of 1-foot bgs and the remaining portion of the borehole was filled with native materials.

Please refer to **Figure 2** for a **Monitoring Well Location Map**.

4.1 Overburden Monitoring Well Installations

MW-1

Monitoring well MW-1 was installed in the on the boundary between proposed Period 1 and 2. Overburden materials consisted of dry, brown, sandy gravel. Bedrock was encountered at a depth of 3.3-feet bgs. A monitoring well was installed to a depth of 3.3-feet bgs and constructed using approximately 2-feet of PVC screen and 1.5-feet of solid riser. Groundwater was not encountered at this location.

MW-2

Monitoring well MW-2 was installed east of the central portion of Period 3 adjacent to the proposed quarry access road. Overburden materials consisted of dry, brown, sandy gravel. Bedrock was encountered at a depth of 12.0-feet bgs. A monitoring well was installed to a depth of 12.0' bgs and constructed using approximately 10-feet of PVC screen and 2-feet of solid riser. Groundwater was not encountered at this location.

MW-3

Monitoring well MW-3 was installed in the western portion of Period 3 along the proposed quarry access road. Overburden materials consisted of dry, brown, sandy gravel with occasional cobbles. Bedrock was encountered at a depth of 14.2-feet bgs. A monitoring well was installed to a depth of 14.2-feet bgs and constructed using approximately 10-feet of PVC screen and 5-feet of solid riser. Groundwater was not encountered at this location.

MW-4

Monitoring well MW-4 was installed in the southeastern portion of Period 5. Overburden materials consisted of dry, brown, sandy gravel. Bedrock was encountered at a depth of 3-feet bgs. A monitoring well was installed to a depth of 3-feet bgs and constructed using approximately 2-feet of PVC screen and 1-foot of solid riser. Groundwater was not encountered at this location.

MW-5

Monitoring well MW-5 was installed in the northeastern portion of Period 5. Overburden materials consisted of dry, brown, sandy gravel. Bedrock was encountered at a depth of 5-feet bgs. A monitoring well was installed to a depth of 5-feet bgs and constructed using approximately 4-feet of PVC screen and 1-foot of solid riser. Groundwater was not encountered at this location.

MW-6

Monitoring well MW-6 was installed in the northwestern portion of Period 6. Overburden materials consisted of dry, brown, silty sand, sand, gravel and fragmented bedrock. Bedrock was encountered at a depth of 0.9-feet bgs. A monitoring well was not installed at this location.

MW-7

Monitoring well MW-7 was installed upgradient of the central portion of Period 7. Overburden materials consisted of dry, brown, silty sand, sand, gravel and fragmented bedrock. Bedrock was encountered at a depth of 1.9-feet bgs. A monitoring well was not installed at this location.

MW-8

Monitoring well MW-8 was installed upgradient of the northern portion of Period 7. Overburden materials consisted of dry, brown, silty sand, sand, gravel and fragmented bedrock. Bedrock was encountered at a depth of 1.0-feet bgs. A monitoring well was not installed at this location.

Please refer to **Appendix C** for **Overburden Boring and Monitoring Well Construction Logs**.

4.1 Overburden Monitoring Well Groundwater Levels

Groundwater levels were measured on July 23, 2024, August 5, 2024 and October 17, 2024. Groundwater was not observed in any of the overburden groundwater monitoring wells.

5.0 OCTOBER 2024 BEDROCK MONITORING WELL INSTALLATION

Bedrock groundwater monitoring wells were installed at eight (8) locations on October 17 and 18, 2024. Monitoring wells were installed using a 3-inch diameter air hammer to a depth that was greater than or equal to 50-feet below the proposed pit elevation at the respective location. Lithology, water content and fracture occurrence were logged for each bedrock well. Samples were collected from the drill cuttings at each location for laboratory analysis of acid mine drainage potential which included acid base accounting and shake flask extraction. The results from the acid mine drainage potential analyses are included in a separate report titled "Gordon Services – Keene – Acid Mine Drainage Potential Report", dated December 18, 2024.

Please refer to **Figure 2** for a **Monitoring Well Location Map**.

5.1 Bedrock Well Installation

BRW-1
Monitoring well BRW-1 was installed in the on the boundary between proposed Period 1 and 2 adjacent to MW-1. Bedrock was encountered at a depth of 3.3-feet bgs. The bedrock well was installed as an open borehole to a depth of 54-feet bgs. The ground elevation at this location is 950-feet AMSL. The bottom of the borehole is at an elevation of 896-feet AMSL. The proposed pit floor elevation at this location is 950-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-2
Monitoring well BRW-2 was installed east of the central portion of Period 3 adjacent to the proposed quarry access road. Bedrock was encountered at a depth of 12.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 62-feet bgs. The ground elevation at this location is 944-feet AMSL. The bottom of the borehole is at an elevation of 882-feet AMSL. The proposed pit floor elevation at this location is 940-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-3
Monitoring well BRW-3 was installed in the western portion of Period 3 along the proposed quarry access road. Bedrock was encountered at a depth of 14.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 51-feet bgs. The ground elevation at this location is 1,052-feet AMSL. The bottom of the borehole is at an elevation of 1,001-feet AMSL. The proposed pit floor elevation at this location is 1050-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-4
Monitoring well BRW-4 was installed in the southeastern portion of Period 5. Bedrock was encountered at a depth of 5.0-feet bgs. The bedrock well was installed as an open borehole to a depth

of 141-feet bgs. The ground elevation at this location is 1,103-feet AMSL. The bottom of the borehole is at an elevation of 962-feet AMSL. The proposed pit floor elevation at this location is 1,098-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-5

Monitoring well BRW-5 was installed in the northeastern portion of Period 5. Bedrock was encountered at a depth of 3.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,112-feet AMSL. The bottom of the borehole is at an elevation of 971-feet AMSL. The proposed pit floor elevation at this location is 1,098-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-6

Monitoring well BRW-6 was installed in the northwestern portion of Period 6. Bedrock was encountered at a depth of 1.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 142-feet bgs. The ground elevation at this location is 1,192-feet AMSL. The bottom of the borehole is at an elevation of 1,050-feet AMSL. The proposed pit floor elevation at this location is 1,098-feet AMSL. No fractures or water bearing zones were encountered at this location.

BRW-7

Monitoring well BRW-7 was installed upgradient of the central portion of Period 7. This well is located outside of the proposed project area. Bedrock was encountered at a depth of 1.9-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,178-feet AMSL. The bottom of the borehole is at an elevation of 1,037-feet AMSL. The proposed pit floor elevation in Period 7, located approximately 70-feet to the south of BRW-7 is 1,098-feet AMSL. A water bearing fracture was encountered at a depth of 5.0' bgs. The fracture produced less than 5-gpm based on airlift testing conducted during drilling. A water level of 0.96-feet bgs was recorded on the day of drilling. No other fractures or water bearing zones were encountered below a depth of 5.0-feet bgs.

BRW-8

Monitoring well BRW-8 was installed upgradient of the northern portion of Period 7. This well is located outside of the proposed project area. Bedrock was encountered at a depth of 1.0-feet bgs. The bedrock well was installed as an open borehole to a depth of 141-feet bgs. The ground elevation at this location is 1,182-feet AMSL. The bottom of the borehole is at an elevation of 1,041-feet AMSL. The proposed pit floor elevation in Period 7, located approximately 125-feet to the southwest of BRW-8 is 1,098-feet AMSL. A water bearing fracture was encountered at a depth of 9.0' bgs. The fracture produced less than 5-gpm based on airlift testing conducted during drilling. A water level of 0.84-feet bgs was recorded on the day of drilling. No other fractures or water bearing zones were encountered below a depth of 9.0-feet bgs.

Below is a table summarizing the bedrock elevations, depths, groundwater levels and proposed pit floor elevations.

Well	Ground Elevation (ft AMSL)	Bedrock Depth (feet)	Depth/Bottom Elevation (feet/ ft AMSL)	Proposed Pit Floor Elevation (ft AMSL)	Groundwater Elevation (ft AMSL)
BRW-1	950	3	54/896	950	DRY
BRW-2	944	12	62/882	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	142/1,050	1,098	DRY
BRW-7	1,178	1.9	141/1,037	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.

Please refer to **Appendix D** for **Bedrock Boring and Monitoring Well Construction Logs.**

5.1 Bedrock Monitoring Well Groundwater Levels

Groundwater levels were measured on October 18, 2024, November 1, 2024 and November 8, 2024. All bedrock wells were found to be dry with the exception of wells BRW-7 and BRW-8. Water levels recorded at those locations during each sampling event were all less than 1-foot below ground surface.

6.0 HYDROGEOLOGICAL CONCEPTUAL MODEL

A hydrogeologic conceptual model has been developed based on the previous hydrogeologic investigation report and results from the installation and monitoring of the eight (8) overburden monitoring wells and eight (8) bedrock wells installed for the proposed project.

None of the overburden monitoring wells installed for this project had any observable groundwater. Previously installed overburden monitoring well SRL-10, located in Period 8 of the project area most recently had a groundwater elevation of 831.85 ft AMSL. An elevation of 841.8 ft AMSL.

It is interpreted that recharge to the overburden aquifer is limited at the Site due to the relatively steep topography. Much of the atmospheric water which falls on the Site either runs off as surface water drainage or taken up through plant water uptake (transpiration). Furthermore, the materials encountered in the soil borings advanced prior to the installation of the overburden monitoring wells consisted primarily of a sand and gravel assortment. These materials are generally of very high hydraulic conductivity, suggesting that they have a high capacity to transmit water. Water which does infiltrate into the subsurface has a low residence time due to the steep topography and sloping bedrock interface. Water which may infiltrate into the overburden materials is transported relatively quickly to a base elevation for overburden groundwater which is interpreted to be demonstrated by the water levels observed in SRL-10.

Bedrock groundwater at the Site is controlled by fracture flow due to the crystalline nature of the bedrock which does not have any pore space. Fractures or groundwater bearing zones were not encountered at monitoring wells BRW-1 through BRW-6. A water bearing fracture was encountered during the previous hydrogeologic investigation at SRL-12 at a depth of 28-feet bgs, elevation 862-feet AMSL. The proposed grading in Period 1 does not encounter this elevation. The proposed grading from Period 1 to Period 8 located to the south maintains a separation of approximately 150-feet from the fracture. Water levels observed in SRL-12 are suspect to interference between overburden groundwater and bedrock groundwater due to the cross-screening of the overburden/bedrock interface. However, the proposed grading of the project does not call for excavation into the area of SRL-12 and therefore groundwater is unlikely to be encountered in Period 1.

Bedrock monitoring wells BRW-7 and BRW-8 encountered fractures at shallow depth of 5-feet and 9-feet respectively. These fractures yielded less than 5 gallons per minute. These wells are in an area where the topography slopes to the north, as opposed to the rest of the Site which slopes to the south. It is interpreted that groundwater flow from these wells is to the north, towards the adjacent wetlands.

7.0 PROPOSED WATER LEVEL MONITORING

Based on the results of the previous hydrogeologic investigation and the most recent it is proposed that groundwater level monitoring be conducted monthly at the Site in accordance with the City of Keene's Article 25.3.4C, although no groundwater dewatering is proposed at the Site. Overburden groundwater level monitoring is to be conducted at Site wells including; SRL-10, SRL-12, MW-2 and MW-4. Bedrock groundwater level monitoring is proposed to be conducted SRL-12, BRW-7 and BRW-8. Surface water levels are proposed to be collected from the six (6) wetland areas located adjacent to the project area. Additionally, precipitation data will be collected from a central location at the Site.

Please refer to **Figure 3** for a **Proposed Water Level Monitoring Location Map**.

Water levels will be reviewed in comparison to the precipitation data and noted for anomalous readings which do not align with the conceptual hydrogeologic model of the Site. Results from water level monitoring will be forwarded to the City of Keene on an annual basis in January of each calendar year. If anomalous groundwater levels are encountered the City of Keene will be notified with 24-hours and groundwater level monitoring of all domestic wells within ½-mile of the Site will be initiated. If water quantity disruptions have been observed in a domestic water supply well with 1/2-mile of the Site as a result of excavation activities, a licensed New Hampshire Well Contractor will be immediately retained for installation of a new water supply well in an unaffected area.

8.0 PROPOSED SITE GROUNDWATER QUALITY MONITORING

Due to the potential for groundwater at the Site to be affected by blasting activities, it is proposed that wells SRL-10, SRL-12, BRW-7 and BRW-8 be monitored on a bi-annual basis in the months of April and October for field parameters including; pH, specific conductance, oxidation reduction potential, dissolved oxygen and turbidity and laboratory analysis of volatile organic compounds and nitrate. Baseline, pre-excavation monitoring will consist of the collection of two (2) rounds of samples collected a minimum of 14 calendar days apart. Results will be reviewed in comparison to the New Hampshire Department of Environmental Services (NHDES) Ambient Groundwater Quality

Standards (AGQS). All results will be forwarded to the City of Keene Community Development Department within 45 days of sample collection.

9.0 PROPOSED OFF-SITE GROUNDWATER QUALITY MONITORING

In accordance with Article 25.3.5 all landowners with ½ -mile of the Site will be offered groundwater quality monitoring. Notification will be made to all landowners via United States Postal Service Certified Mail. The notification will include a description of the requirement to offer sampling and analysis of the landowner's domestic drinking water supply well and an option to decline the offer. It should be noted that landowners may opt in or opt out for sampling at any time during the term of the permit.

Baseline, pre-excavation monitoring of participating landowner wells will consist of the collection of two (2) rounds of drinking water samples collected a minimum of 14 calendar days apart. The samples will be analyzed for volatile organic compounds and nitrate. Sample results will be provided to the landowner via standard United State Postal Service mailing. Additionally, baseline results will be forwarded to the City of Keene Community Development Department within 45 days of sample collection.

On-going, post-excavation monitoring of participating landowner wells will consist of the collection of drinking water samples on a bi-annual basis during the term of the permit and 2 years following the cease of operations at the Site and reclamation. Results will be forwarded to landowners and the City of Keene Community Development Department similarly as noted above.

Drinking water results will be compared to the NHDES AGQS. If adverse impacts are noted, the applicant will immediately be notified to cease bedrock excavation. Additionally, NHDES and the City of Keene will be notified. If monitoring indicates that the excavation activities caused the identified contamination, a licensed New Hampshire Well Contractor will be immediately retained for installation of a new water supply well in an area that has not been impacted by contamination.

10.0 PROPOSED GROUNDWATER OCCURRENCE MONITORING

As previously mentioned, bedrock groundwater at the Site is controlled by fracture flow due to the crystalline nature of the bedrock. The blast hole driller shall maintain a log of all boreholes at the Site and note the location of the borehole, depth of the borehole and any fractures or water bearing zones encountered. If a fracture or water bearing zone is encountered in a borehole no blasting shall occur at that location.

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

PREPARED FOR:
G2 HOLDINGS, LLC
250 NORTH STREET
JAFFREY, NH 03452

PREPARED BY:
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150 DOW STREET, TOWER 2, SUITE 421
MANCHESTER, NH 03101
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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, detail, 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 50-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, one (1) Point of Analysis (POA) was analyzed to demonstrate that the peak rates of runoff would not increase from the site improvements.

The primary POA, Link A, is located at the outlet of the existing stormwater basin, toward the southern end of the property, closest to Route 9.

Stormwater from these areas 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, SF7, and SF8. 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. The proposed infiltration area was designed to use exfiltration though 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.

Test pit data performed by TF Moran was used to determine the floor elevation of the pond, keeping it above the estimated seasonal high 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. 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.

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: PEAK RUNOFF (ENV-WQ 1507.06)

Site Post Development (Peak Discharge Rate in cfs)		
Description	**50-Year**	
24-hr Rainfall	5.86"	
	Post - Interim	Post - Final
A	0.00	0.00

TABLE 2: PEAK STORMWATER POND ELEVATION

Site Post Development (Peak Pond Elevation)		
Description	**50-Year**	
	Post - Interim	Final
Stormwater Basin Berm Elevation	874.00	854.00
Peak 50-Year Storm Elevation	873.69	852.63

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

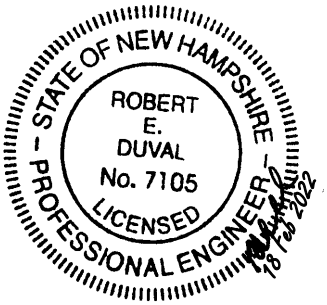
Similar to temporary erosion control measures, all permanent erosion control measures are indicated on the design plans, construction details, general notes, drainage report, SWPPP and O & M project documents.

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.

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists



TRAFFIC MEMORANDUM

Date: February 18, 2022

To: City of Keene
3 Washington Street
Keene, NH 03431

From: Robert Duval, PE

Re: Proposed Gravel Pit
Route 9, Keene, NH
TFM Project No. 82549-00

INTRODUCTION

TFMoran has prepared this traffic memo on behalf of G2 Holdings, LLC to describe trip generation and the existing roadway network associated with a proposed gravel pit in Keene, NH. The site (Map 215 Lot 7) is located within the Rural Zoning District on the north side of Franklin Pierce Highway (NH 9).

The parcel currently has a gravel access drive into a small clearing. G2 Holdings, LLC is currently using the clearing as a laydown area for their landscape and sitework business. The remaining site consists of woods, steep slopes, and wetlands.

PROPOSAL

G2 Holdings, LLC is proposing to construct and operate a 10 +/- acre gravel pit located on The initial phase of the operation will be approximately 5 acres. The gravel driveway will be widened and brush trimmed as necessary to accommodate two-way traffic with adequate sight distance in both directions to support the operation.

DESCRIPTION OF ROADWAYS AND INTERSECTIONS

Franklin Pierce Highway (NH 9)

- Classification. Franklin Pierce Highway is a State-maintained principal arterial that provides east-west travel across the state from Vermont to Maine.
- Lane widths and usage. In the project vicinity, the roadway provides one 12' travel lane in each direction, with 7-8' paved shoulders.
- Pedestrian facilities. There are no sidewalks in the study area.
- Signage and markings. The posted speed limit is 55 mph. Adjacent to the existing driveway is an intersection warning sign. The road has white shoulder markings on both sides. An

eastbound passing zone begins about 300' to the west and extends about 600' east of the driveway, followed by a two-way passing zone.

- Lighting. No roadway lighting is provided in the study area.
- Sight Distance: The existing driveway is located on a straight segment of Franklin Pierce Highway with a gentle curve right approximately 250' west of the site and remains straight approximately 2,000' to the east. The alignment is relatively flat and provides sufficient sight distance in both directions.
- Road conditions. The roadway has moderate grade change, open drainage, and normal crown. The pavement is in good condition with minimal to no cracking, little or no ruts, soft spots, potholes, or other structural defects evident.
- There are minimal other developments in the area. Adjacent uses and driveways consist of:
    - Approximately 350' to the west on the opposite side of the road is the entrance to Otter Brook Beach State Park. No other driveways are present until Sullivan Road, approximately 4,350' from the existing site driveway.
    - Approximately 2100' to the east is a driveway to small commercial home/office development. Another 1500' east of the office development is the entrance to Granite Gorge Ski Area.
- There are no other intersections in the study area.

TRIP GENERATION

Trip generation was calculated based on the applicant's anticipated pit operation schedule. Site operations will be 7am-5pm Monday through Friday, with Saturday operations 7am-12pm. The site will be occupied by 3 employees. All employees will arrive prior to AM peak hours (7-9am) and leave during PM peak hours (4-6pm).

Trucking operations are expected at 40 trucks per day or less, with arrivals on average at fifteen minute intervals. While one truck is arriving, the previous will be leaving. The last load out will typically leave around 330pm (1130am on Saturday). Employees will leave after site cleanup and equipment shutdown.

Employee & Truck Schedule

Time	Employee In	Employee Out	Truck In	Truck Out	Total Trips
Before 7 AM	3				3
7 AM – 8 AM			4	3	7
8 AM – 9:AM			4	4	8
9 AM – 10 AM			4	4	8
10 AM – 11 AM			4	4	8
11 AM – 12 PM			4	4	8
12 PM – 1 PM			4	4	8
1 PM – 2 PM			4	4	8
2 PM – 3 PM			4	4	8
3 PM – 4 PM			2	3	5
After 4 PM		3			3

Total Peak Hour Trips (Adjacent Street)	Trips In	Trips Out	Total Trips
Weekday AM (7-9am)	4	4	8
Weekday PM (4-6pm)	0	3	3
SAT (11am-1pm)	2	3	5

CONCLUSION

Based on the minimal scale of operations described above, traffic impacts associated with the project will be negligible. The traffic from this development will add 8 trips or less during all peak hours. Total weekday trips are expected to be on the order of 80 to 90 trips per day (40 - 50 on a Saturday). Most of these trips occur outside peak travel times.

The AADT of NH 9 in 2019 was 9,707 vehicles. Thus the percentage increase is less than 1%, with typically 15 minutes between successive arrivals and departures. The roadway alignment and wide shoulders will facilitate safe access and egress from the site.

We therefore find the traffic associated with this proposal can be safely accommodated by the adjacent roadway without need for improvements. Please let me know if you have any questions in regard to these items.

TFMORAN, INC.

Robert Duval, PE
Chief Engineer

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WETLAND AREA 1

G2 HOLDINGS, LLC

Map 215, Lot 7

KEENE, NH

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1.0 INTRODUCTION

1.1 ROLES AND RESPONSIBILITIES

Ecosystems Land Planning was commissioned by Granite Engineering to provide this Functions and Values Assessment of Wetland Area 1, to support a request of a waiver to Article 25.3.1.D – Surface Water Resource Setback. Wetland boundaries were originally delineated by Chris Danforth, CWS # 077, in August of 2022, and confirmed on-site by John St. John CWS #222 in July of 2024. This work is based upon information gathered in August of 2024 and in January of 2025.

1.2 TERMS

Wetland functions and values refer to the roles and importance of a wetland, determined by its characteristics and surrounding watershed. Functions are inherent to the wetland ecosystem, while values are based on its significance to society.

2.0 ASSESSMENT PROCEDURES

The "The Highway Methodology Workbook Supplement: Wetland Functions and Values - A Descriptive Approach" by the US Army Corps of Engineers New England District in September 1999, referred to here as "The Highway Method," was used to assess wetland functions and values of Wetland Area 1, on the above referenced parcel. This method uses qualitative characteristics to determine if a wetland is suitable for specific functions and values. A set list of considerations from The Highway Methodology guided the evaluation process.

Functions and values are designated as "Suitable" if they exhibit some of the qualifying characteristics listed in the method. However, a wetland may be deemed "Not Suitable" the if wetland shows only a few or weak qualifiers of the function or value.

Functions and values are designated as "Principal" if they are crucial to a wetland ecosystem or hold special societal value. The decision on principal functions or values was made using professional judgment without numerical weightings, rankings, or averaging to avoid bias. The Highway Method evaluates 13 of the 14 functions and values required to be assessed by New Hampshire State Law RSA 482A:2. The considerations for assessing each potential function or value are detailed in an excerpt from the "The Highway Methodology Workbook Supplement".

For determinations regarding "Ecological Integrity", as required by RSA 482-A:2, XI:, the "Method for Inventorying and Evaluating Freshwater Wetlands In New Hampshire" (NH Method) was used. See www.nhmethod.org. for additional details.

Please note: the NH Method establishes numerical values only. And, does not ascribe terms such as "Suitable" or "Principle" to wetland functions and values.

2.1 GENERAL SITE DESCRIPTION

Soils and Hydrology

Most of the surrounding area consists of upland soils such as Berkshire and Dixfield Fine Sand Loams. These soils are well-drained, with slopes between 0-25%.

Wetland Area 1 has shallow, poorly drained soils which range from 0-15% slopes. Wetland Hydrology is derived from hillslope seepage at the northern end of the valley. Soils are generally saturated due to a restrictive layer near the surface. Surface water and saturation generally decreases from north to south, infiltrating deep underground, causing conditions to revert to upland before reaching the access road to the south.

Plant Community

The primary tree species in the wetland area consist of eastern Hemlock, Red Maple, and Beech. The shrub/sapling layer includes Red Maple, Eastern Hemlock, and Beech. The dominant herbaceous vegetation consists of Sensitive Fern in most areas, with a small patch of Cattail in the northernmost area.

2.2 FUNCTIONS AND VALUES ASSESSMENT

Overall, this wetland got low scores in most of the wetland functions and values criteria. As a small, isolated hill side seepage wetland, that is located at the bottom of a steep ravine, that is partially surrounded by a berm, that is to be expected. The surrounding land use and altered topology further reduces the value of this wetland to wildlife as habitat and restricts human access.

The highest scores for this wetland were associated with Groundwater Recharge and Ecological Integrity. These scores are due primarily due to the lack of encroachment and despoliation within the wetland boundary.

This wetland also exhibits weak characteristics normally attributed for the function of “Sediment Trapping”. However, the existing contours of the land greatly (intentionally) restricts surface water flow into this wetland. And the high permeability of surrounding area all but eliminates the possibility this wetland would receive sediment laden surface water necessary for this function to occur.

Detailed characteristics and analysis of this wetland relative to the 14 functions and values listed in RSA 482:A are detailed in the Functions and Values Assessment Form, below.