



**LEBANON PLANNING BOARD
MAY 20, 2024 - 7:00 PM
COUNCIL CHAMBERS, CITY HALL OR
REMOTE VIA VIRTUAL PLATFORM
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1. Call to Order

- A. To participate in this meeting, please [join live via Microsoft Teams](#) or call 929-229-5356 (access code: 213 236 438#). If you have trouble accessing this meeting, please [email tim.corwin@lebanonnh.gov](mailto:tim.corwin@lebanonnh.gov).

2. Notice of Regional Impact

3. Public Hearing Items

- A. **Impact Fee Schedule Update 2024-** The Lebanon Planning Board, pursuant to Section 213.5.C of the Zoning Ordinance, will be conducting a Public Hearing for the purpose of taking public input and considering adoption of the "City of Lebanon Impact Fee Update 2024" report dated January 15, 2024, and a revised Impact Fee Schedule for collecting fees associated with development in the City.
- B. **Dartmouth Hitchcock Medical Center, 1 Medical Center Drive (Tax Map 10, Lot 8), zoned MC:** Applicant requests a Site Plan amendment to expand and reconfigure four existing parking lots and to widen a driveway, together with associated site improvements. **PB2024-12-SPA**
- C. **Adimab, LLC, 7 Lucent Drive (Tax Map 10, Lot 11, Plot 2600), zoned IND-L:** Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved Site Plan (PB2020-14-SPR) to change the parking lot surface material, to reduce the tree shading required, and to amend the approved landscaping and lighting plans. **PB2024-10-SPA**
- D. **The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25, zoned IND-L:** Request for approval of a Boundary Line Adjustment. **PB2024-17-BLA**

4. Study Items

- A. **Review and Comment** - A Joint Statement by the City of Lebanon Planning Board and the City of Lebanon Diversity, Equity, and Inclusion Commission on Community Housing Solutions
- B. **Rules of Procedure Discussion**

5. Committee Reports

- A. **City Council Subcommittees:**
--Class VI Roads Advisory Committee
--Lebanon Energy Advisory Committee

- B. **Other Subcommittees:**
 - City Council Representative
 - Heritage Commission
 - Pedestrian & Bicyclist Advisory Committee
 - Upper Valley Lake Sunapee Regional Planning Commission
 - UV Subcommittee of the Connecticut River Joint Commissions
 - Upper Valley Transportation Management Association
 - Mascoma River Local Advisory Committee
 - West Lebanon Revitalization Advisory Committee
 - Planning & Development Department – Task Status
- C. Minor Site Plan Committee
- 6. **Other Business**
 - A. **Choice Storage, LLC, 0 Etna Road, (Tax Map 26, Lot 17), zoned IND-L, RL-3:** Conceptual review per Section 7.3 of the Subdivision Regulations, Section 4.3 of the Site Plan Regulations and Section 501.1.D of the Zoning Ordinance of a proposed Planned Business Park. **PB2024-20-CON**
- 7. **Approval of Minutes**
 - A. April 15, 2024
 - B. April 22, 2024
 - C. April 29, 2024
 - D. May 6, 2024 - Site Walk
- 8. **Adjournment**

The order of agenda items is subject to change.

Meetings are open for in-person and remote attendance. Members of the public that wish to attend remotely may do so by going to LebanonNH.gov/Live where you will find instructions on how to enter the meeting. Members of the public will be able to participate and ask questions through the City's virtual platform or by phone. Please note: Should technical difficulties occur during the meeting that disrupts virtual or phone connection(s), the meeting will continue without remote access capabilities.



CITY OF LEBANON ~ PLANNING & DEVELOPMENT

MEMORANDUM

TO: Lebanon Planning Board

FROM: Tim Corwin, Deputy Director of Planning & Development

RE: Update of Impact Fee Schedule and Basis for Assessment

DATE: May 16, 2024

To Planning Board members,

Section 213 of the Lebanon Zoning Ordinance sets forth the City's regulations with respect to the assessment, collection, and distribution of Impact Fees. Section 213.6, in particular, states:

The impact fee assessment schedules shall be reviewed periodically by the Planning Board, along with the foundation documents that provide the basis for the assessment schedules. Such review may result in recommended adjustments in one or more of the fees based on the most recent data as they affect the variables in the fee calculations. Changes in the impact fee assessment schedules shall be effective only where the change in the basis of assessment or the fee schedule is adopted following a public hearing on the proposed change.

In December 2023, the City engaged Bruce Mayberry of BCM Planning, LLC to complete the review and update of the Impact Fee schedule and the basis of assessment report. On March 25, 2024, Mr. Mayberry presented the latest data and calculations along with recommendations for appropriate adjustments to the Impact Fee schedule. Subsequently, Mr. Mayberry prepared a final "Basis for School, Recreation, Police and Fire Department Impact Fees" report, dated January 15, 2024, based on his discussion with the Planning Board at the March 25th meeting. *See attached.* On April 22nd, the Planning Board discussed Mr. Mayberry's report and additional information provided by Mr. Mayberry and staff as requested by the Board relative to understanding the proposed rate changes and comparisons with other New Hampshire communities.

As noted in Section 213.6 above, the Board must hold a duly-noticed public hearing in order to adopt or enact any change in the Impact Fee schedule or Basis of Assessment. A public hearing has been scheduled and advertised for May 20th.

Attachment

City of Lebanon Impact Fee Update 2024

Basis for School, Recreation, Police and Fire Department Impact Fees

January 15, 2024

Prepared for:

City of Lebanon, New Hampshire
Planning Department

Prepared by:



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Executive Summary

This report provides a series of updated impact fee calculations for school, recreation, police and fire department capital facilities. The proportionate basis for each assessment has been revised to reflect the latest available data, and capital costs have been indexed to represent October 2023 values.

The impact fees supportable by this update are summarized in the chart below. The City's impact fees are assessed per square foot of living area for residential uses and per square foot of gross floor area for non-residential development. The assessment and administration of impact fees is governed by Section 213 of the Lebanon Zoning Ordinance.

Supportable Impact Fees Per Square Foot - 2024 Update - Lebanon, NH					
Structure Type or Use	Schools	Recreation	Police Dept	Fire Dept	Total
Residential Development					
<i>Per Sq. Ft. Gross Living Area</i>					
Single Family Detached	\$3.12	\$0.98	\$0.40	\$0.68	\$5.18
All Other Housing Units	\$2.06	\$1.22	\$0.49	\$1.01	\$4.78
Non-Residential Development					
<i>Per Sq. Ft. Gross Floor Area</i>					
Retail, Restaurants and Lodging	---	\$0.09	\$0.55	\$0.95	\$1.59
Offices and Commercial Services	---	\$0.13	\$0.39	\$0.94	\$1.46
Industrial, Transp, Whse, Commun.	---	\$0.07	\$0.16	\$0.18	\$0.41
Nursing & Licensed Care Facilities	---	\$0.17	\$0.08	\$1.19	\$1.44
Other Institutional Uses	---	\$0.09	\$0.43	\$0.64	\$1.16

This update to the impact fee system involved a review of all of the component variables of the methods used to compute each of the four impact fee categories. Because the fees are based on a number of variables other than cost adjustment, changes from prior years will not generally occur at a uniform percentage. Changes in the fee schedules are outlined below:

- School impact fees, beginning with the 2021 update, are based on capital investments in school facilities *for all grade levels*. This update reflects changes in public school enrollment per 1000 square feet of living area as of 2023. Replacement costs of facilities have been held constant from the 2021 update (based on insured values that have not changed). Credit allowances within the impact fee calculations have been updated to account for a portion of new debt service costs for improvements to the Hanover Street School and Lebanon High School.
- Recreation impact fees have increased in part due to the progress made toward completion of the Mascoma River Greenway, and a higher share of related costs is now allocated to non-residential development. Residential fees have also been modified by updating estimates of the average living area of dwelling units in Lebanon. This review indicated that the floor area to employment ratios assigned to various non-

residential uses were outdated. The updated ratios applied in this update resulted in changes to the average capital costs assigned to the sub-categories of non-residential development.

- Police Department impact fees have been updated principally with respect to the replacement cost of the Poverty Lane police station and associated capital improvements to the building and site. Other improvements to LPD facilities reflected in the fee include recent investments in the communications and dispatch systems. The proportionate costs allocated to residential vs. commercial sectors changed slightly to a 55% / 45% split between non-residential and residential uses.
- Fire Department impact fees. The Fire Department impact fee calculations now include a proportionate share of the cost to construct the new Central Fire Station as well as the long term replacement costs of vehicles and apparatus. The fee model distributes capital costs across a projected 2050 service base. The fee calculation includes a credit allowance to recognize pre-existing deficiencies in the floor area of the old station. The update of factors used to assign demand to major land use sectors for the Fire Department resulted in the same ratios applied to the Police Department: 55% / 45% non-residential vs. residential shares of service demand. The fees for sub-categories of non-residential uses shifted with an updated estimates of relative call volume per 1000 square feet. In the residential sector, the 2024 model assigns impact fees based on average household size in single family vs. other housing units rather than prior modeling that adjusted fees based on relative call rates per 1000 square feet.

The dollar values of the City's capital investments have been indexed to reflect costs adjusted to October 2023. The capital cost basis of each of the impact fee categories is described below:

- The School Impact Fee includes recovery of facility capacity costs for all grades. Replacement costs assigned to the schools reflect 2023 insured values (which remain the same those in effect in 2021). The proportionate demand on school capacity is measured by 2023 data on the average number of resident pupils per 1000 square feet of living area at all grade levels. Credit allowances for future debt service costs are now higher due to the recent bond issue for Hanover Street School and Lebanon High School expansion and improvement.
- The Recreation Impact Fee is based on recovery of a proportionate share of City capital expenditures that center on implementation of the 1998 long term Recreation Master Plan. The fee acts to recoup a portion of capital investments made since 2000 as well the anticipated costs for selected facility improvements through 2030 that are incorporated into the 2024-2029 Capital Improvements Program.
- The Police Department Impact Fee is based on the recoupment of a proportionate share of the cost to develop the Lebanon police station and its communications systems.

Based on its original design assumptions, the facility has some remaining capacity to support new development until the City population reaches 16,000 persons. In the future, a new station may be designed under different spatial standards with greater capacity assumptions. However, it is premature to modify the impact fee to reflect other space assumption until a new design is completed.

- The Fire Department Impact Fee now incorporates both the recovery of a portion of the capital cost to construct the new Central Fire Station, as well as a share of the replacement cost of major vehicles and apparatus to accommodate the existing and projected service base of the City (residential and commercial floor area) through 2050.

The periodic review and adjustment of the fee schedules is both necessary and desirable to ensure that fees are equitably assessed over time, and that the fees reflect capital facility cost assumptions that are reasonably commensurate with the value of the City's actual capital investments.

Scope of Impact Fees in Lebanon

Impact fees are authorized under New Hampshire RSA 674:21, V and enabled within the City of Lebanon by the Lebanon Zoning Ordinance (Section 213). This impact fee update documents a proportionate basis of assessment for the City's public school, recreation and public safety impact fees. The report builds on earlier studies of impact fee potential completed by BCM Planning, LLC during the period 2006 to 2021.

In review of prior work by BCM Planning, the City Council and Planning Board recommended that the City's impact fees be based on realistic levels of capital investment, supported either by evidence of actual appropriations or past investments, capital expenditures that implement an adopted long term plan, or projects that comprise part of the Capital Improvement Program (CIP).

In this context, BCM Planning, LLC has assumed that the most supportable basis for impact fee assessment in Lebanon should reflect: (1) evidence of actual progress in appropriations for related capital facilities; (2) existing or planned facility capacity adequate to serve the demands of new development; and/or (3) specific indications from long-term facility plans or the CIP that such investments are forthcoming. Under NH RSA 674:21, V impact fees may be assessed in advance of anticipated capital improvements, or assessed as a recoupment of capital expenditure made in the past where the related facility has the capacity to support new development.

Other categories of impact fee assessment may also be supportable where there is evidence of available facility capacity (or that such capacity will be created) to support new development under existing or proposed facility standards. Adoption of fees should be based on improvements that are in place of that have a high probability of being implemented within six years.

As stated in prior reports by BCM Planning, other forms of investment fees, system development charges, or other capital cost assessments for *public water, sewer or storm water facilities* should be implemented under the authority of utility ordinances, rather than through the impact fee provisions of the zoning ordinance.

New Hampshire RSA 149-I provides statutory authority for sewer and storm water system assessments, and RSA 38 authorizes assessments for water utilities. Fees for utility infrastructure are typically charged to users as they connect to a utility system, or when they increase the size of their service connection. In contrast, impact fees assessed under RSA 674:21, V are applied to new development through the land use regulatory process.

It is recommended impact fees be applied to the costs of construction, renovation, improvement, or expansion of major capital facilities including buildings, related building systems and capital equipment.

There is sometimes a concern with the use of impact fees to fund renovations to existing facilities because of a particular phrase within the governing statute. RSA 674:21, V (a) states: *“Upgrading of existing facilities and infrastructures, the need for which is not created by new development, shall not be paid for with impact fees.”*

While this statutory language was once viewed by some as a prohibition on using impact fees for the improvement or renovation of existing facilities, a 2008 NH Supreme Court opinion¹ indicates that this phrase, in the context of the entire statute, does not mean that impact fees cannot be applied to improve or renovate existing facilities. Rather, the phrase was interpreted as a reiteration of the statutory requirement that all impact fees be assessed proportionately.

The opinion indicated that if new development derives a proportionate benefit from an improvement or upgrade, and the fee has been computed as a proportionate amount, it is likely consistent with the statutory purpose.

¹ See NH Supreme Court decision issued April 8, 2008 in Barry O. Upton v. Town of Hopkinton.

Part A: Public School Impact Fee

The public school impact has four components that define the proportionate capital cost to accommodate school enrollment generated by average housing units in the City:

- Enrollment per 1000 sq. ft. of living area in the dwelling unit
- School facility floor are per pupil capacity
- Replacement cost of facilities per square foot
- Credit allowances for pre-existing space deficiencies

1. Enrollment Ratios in 2023

BCM Planning, LLC matched the number of resident students (by grade level) in 2023 to the characteristics of the housing they occupy (as reflected in City property assessment data). That process enabled a detailed cross-tabulation of the number of Lebanon resident pupils by grade level by structure type, the age of the housing unit, and its living area. Age-restricted housing is excluded from the calculation of the ratios since such units are exempt from the school impact fee. The same method was used to define proportionate enrollment ratios in the 2015 and 2021 studies.

Average K-12 Resident Enrollment Per 1,000 Sq.Ft. Living Area			
Type of Structure	2015	2021	2023
Single Family Detached	0.174	0.168	0.176
All Other Housing Units	0.155	0.120	0.116
Average All Housing Units	0.167	0.147	0.145
<i>(Ratios computed after excluding age-restricted housing units)</i>			



In 2023, estimated total resident enrollment averaged 0.176 pupils per 1000 square feet in single family homes, and 0.116 per 1000 square feet in all other units. “All other” units include townhouse, two unit, multifamily and manufactured housing. Enrollment per 1000 square feet of living area has been updated to 2023 for elementary, middle school, and high school grade levels.

2. Capacity Assumptions and School Floor Area

The second proportionate measure is the floor area of school facilities required per pupil capacity. These space standards are derived by dividing the floor area of the schools by their estimated functional capacity.

Maximum educational capacity can be estimated by the number of pupils that can be accommodated in general classroom space based on NH Department of Education minimum floor area requirements per pupil, and a maximum number of pupils per room acceptable under school district policy. This generally produces a maximum capacity number that is higher than most school districts will accept as adequate space for modern educational programs.

In most estimates a “functional capacity” is derived by applying a utilization ratio to adjust maximum capacity to a more practical level (not all classrooms will have a uniform number of students, and scheduling will not allow 100% use of the space at all times). Utilization ratios of 90% for elementary schools and 80-85% for other schools are commonly used adjustments.

During the 2021 fee update, in consultation with the professional staff at SAU 88, a series of capacity estimates were derived for the Lebanon schools. The goal was to arrive at reasonable functional capacity estimates under 2021 conditions. Expansions since that time included the addition of a new cafeteria and four classrooms at the Hanover Street School and a band/music room at the Lebanon High School. The floor area of both schools increased, but classroom capacity was added only at the elementary school. Those changes have been reflected in the chart below and the related average floor areas per pupil capacity were adjusted accordingly.

Lebanon Public School Facilities - Existing Conditions Fall 2023								
School Facilities	Original Construction Year	Grades Served	Site Acreage	Building Area Gross Sq. Ft. (1)	Functional Capacity Estimate (2)	Square Feet Per Pupil Capacity	November 2023 Enrollment (3)	2023 Enrollment as % of Capacity
ELEMENTARY SCHOOLS								
Hanover Street Elementary	1952	K-4	Shared with LHS	55,607	473	118	311	66%
Mt. Lebanon Elementary	1953	Pre K-4	5.3	32,580	310	105	260	84%
Total Elementary (Pre K-4)		Pre K-4	5.3	88,187	783	113	571	73%
MIDDLE SCHOOL								
Lebanon Middle School (5-8)	2012	5-8	30.0	104,717	600	175	457	76%
Average for Pre K-8 Facilities		Pre-K - 8	35.3	192,904	1,383	139	1,028	74%
HIGH SCHOOL								
Lebanon High School	1958	9-12	35.8	108,303	720	150	615	85%
Total Facilities in Service		K-12	71.1	301,207	2,103	143	1,643	78%
(1) Building area based on CAD drawings on file with SAU Facilities Director in 2021, plus square feet added to Hanover Street School and High School as of 2023. (2) Capacity estimate for HSS increased from 2021 estimate of 383 to 473 based on new 4 classrooms added. Maximum capacity estimated at 25 students per classroom with functional capacity @ 90% utilization ratio. (3) Students in Pre-K programs included in enrollment totals								

For the purpose of the school impact fee assessment, the floor area ratios for 2024 are:

2024 Spatial Standards – Lebanon - Square Feet per Pupil by Grade Level

<u>Elementary</u>	<u>Middle</u>	<u>High</u>	
113	175	150	square feet per pupil capacity

3. Capital Cost Assignment

A capital cost basis for school facilities has been assigned using the estimated replacement costs of existing facilities using the School District insurance schedule. The insured value is based on building and content values only, and will not reflect land acquisition or site development costs. The schedule of insured values of the Lebanon schools as of 2023 is the same as it was in 2021 update and those values have been held constant for this update:

\$230 per square foot for the elementary schools;
\$234 per square foot for the middle school; and
\$238 per square foot for the high school

While the insured values have not increased since 2021, these replacement cost estimates seem reasonable for application in the 2024 update when compared with construction cost allowances used by the NH Department of Education for determining State Building Aid:

**Grafton County Maximum Allowable Costs Indexed to January 2024
Per Square Foot for Determining State Building Aid**

\$237 Elementary School
\$236 Middle School
\$234 High School

Note that the State's allowable costs for computing Building Aid for school construction exclude a number of cost components, representing only a portion of total development costs.²

Replacement cost values provide a basis for assigning a reasonable capital value to the schools that can be updated periodically. The use of an average replacement cost allows the impact fee to recover an average total facility cost, rather than the marginal cost of individual expansion or renovation projects.

² These maximum allowable costs applicable to State Building Aid projects were in effect as of the date of this report. The maximum allowable costs do not include the purchase of land, site work, utilities, planning and design, legal and administrative fees, furniture, seating, fixtures, lockers, bleachers, clock systems, sound systems, commissioning fees, kitchen equipment, and other equipment which is not part of a building system.

4. State Building Aid and Net Local Cost

In the impact fee calculation, a certain proportion of principal costs for the existing schools is assumed to have been absorbed by State Building Aid (SBA) at historical levels. State Building Aid for projects has been assumed at 30% for elementary schools, at 40% for the high school, and at the actual SBA assistance level received (44% of principal due on bonded debt) for the Middle School.

Effective State Building Aid Support to Development of Lebanon Schools					
School Facility	Pre Existing Sq. Ft.	Historic SBA Available to Original Construction	Space Added 2023 (No SBA Support)	Total Space with Additions 2023	Effective SBA Funded Share of Total Space
Hanover Street School	45,712	30%	9,895	55,607	25%
Mt. Lebanon School	32,580	30%	0	32,580	30%
Total Elementary Schools	78,292	30%	9,895	88,187	27%
Middle School	104,717	44%	0	104,717	44%
High School	103,553	40%	4,750	108,303	38%

However, recent projects that expanded the Hanover Street School and the Lebanon High School *did not benefit* from State Building Aid. Effective SBA proportions applicable to the schools has been adjusted based on the building floor area that existed before the HSS/LHS additions and the new additions that received no building aid. The SBA proportions applicable to Lebanon elementary school costs is therefore adjusted to 27%, and to 38% for the high school. (See above chart.)

5. Credit Allowances

a. Middle School

In prior school impact fee calculations, credit allowances were computed for pre-existing space deficiencies that already existed prior to the construction of the new Middle School. Debt service costs were incurred for development of the new Middle School for grades 5-8 (completed in 2012). The remaining debt amortization period extends to 2032.

The construction of a new middle school enabled the elimination of five modular classrooms and an increase in the space per pupil capacity available to grade K-8 students, as some of the students were moved from elementary schools into the new middle school.

The additional space and capacity of the new Middle School effectively raised the space standard of the K-8 system from 117 square feet to 144 square feet per pupil capacity, increasing the floor area per pupil capacity by 27 square feet per pupil overall.

Based on this approach, 34% of the cost of the new middle school was estimated to be attributable a change in the facility spatial standard (square feet per pupil capacity) of K-8 facilities as the net result of middle school construction.

Facility Component	K-8 Facilities Average
Increased K-8 Space (Sq. Ft.) Per Pupil Capacity with new Middle School	27
x Grade K-8 Pupils in 2009 (base year)	1,105
= Sq. Ft. Upgrade of Space Per Pupil in K-8 Facilities	29,835
+ Replace 5 Modular Classrooms @ Approximately 1200 sq. ft. each	6,000
Total Floor Area Upgrade for Pre-Existing K-8 Enrollment	35,835
Area as % of New Middle School floor area (105,578 sq. ft.)	34%

Middle School Debt Service

Original Bond Amount : 23,650,600.00
Interest Rate 3% to 4% (Refunding of original bond in 2019 & 2020 reduced scheduled interest costs in calendar years 2023 & later)
State Building Aid % of Principal 44%

Calendar Year	Middle School (New Building, 2012) Debt Service & Building Aid				Net School District Cost
	Principal	Interest	Total	Less Est. State Building Aid	
Past Payments					
2012	\$ -	\$ 550,152	\$ 550,152	\$ -	\$ 550,152
2013	\$ 1,180,600	\$ 925,409	\$ 2,106,009	\$ (521,296)	\$ 1,584,713
2014	\$ 1,185,000	\$ 884,000	\$ 2,069,000	\$ (521,296)	\$ 1,547,704
2015	\$ 1,185,000	\$ 836,600	\$ 2,021,600	\$ (521,296)	\$ 1,500,304
2016	\$ 1,185,000	\$ 789,200	\$ 1,974,200	\$ (521,296)	\$ 1,452,904
2017	\$ 1,185,000	\$ 741,800	\$ 1,926,800	\$ (521,296)	\$ 1,405,504
2018	\$ 1,185,000	\$ 694,400	\$ 1,879,400	\$ (521,296)	\$ 1,358,104
2019	\$ 1,185,000	\$ 641,075	\$ 1,826,075	\$ (521,296)	\$ 1,304,779
2020	\$ 1,185,000	\$ 581,825	\$ 1,766,825	\$ (521,296)	\$ 1,245,529
2021	\$ 1,185,000	\$ 522,575	\$ 1,707,575	\$ (521,296)	\$ 1,186,279
2022	\$ 1,185,000	\$ 475,175	\$ 1,660,175	\$ (521,296)	\$ 1,138,879
2023	\$ 1,185,000	\$ 377,896	\$ 1,562,896	\$ (521,296)	\$ 1,041,600
2024	\$ 1,180,000	\$ 336,521	\$ 1,516,521	\$ (521,296)	\$ 995,225
Future Payments					
2025	\$ 1,180,000	\$ 289,321	\$ 1,469,321	\$ (521,296)	\$ 948,025
2026	\$ 1,180,000	\$ 253,495	\$ 1,433,495	\$ (521,296)	\$ 912,199
2027	\$ 1,180,000	\$ 206,295	\$ 1,386,295	\$ (521,296)	\$ 864,999
2028	\$ 1,180,000	\$ 159,095	\$ 1,339,095	\$ (521,296)	\$ 817,799
2029	\$ 1,180,000	\$ 111,895	\$ 1,291,895	\$ (521,296)	\$ 770,599
2030	\$ 1,180,000	\$ 39,415	\$ 1,219,415	\$ (521,296)	\$ 698,119
2031	\$ 1,180,000	\$ 20,446	\$ 1,200,446	\$ (521,296)	\$ 679,150
2032	\$ 1,180,000	\$ -	\$ 1,180,000	\$ (521,296)	\$ 658,704
Total	\$ 23,650,600	\$ 9,436,590	\$ 33,087,190	\$ (10,425,912)	\$ 22,661,278

Present Worth Past Payments @ 5%	\$ 22,388,183
Portion of Cost Attributed to Pre Existing Space Deficiencies	34%
Credited Portion of Costs	\$ 7,611,982
City Assessed Valuation 2023	\$2,744,378,645
Past Payment Credit Per \$1000 Raw Land Valuation	\$ 2.77
Net Present Value Future Payments @ 5%	\$5,203,527
Portion of Cost Attributed to Pre Existing Space Deficiencies	34%
Credited Portion of Costs	\$1,769,199
City Assessed Valuation 2023	\$ 2,744,378,645
Future Payment Credit Per \$1000 Assessed Value of Home	\$0.64

IMPACT FEE CREDIT ALLOWANCES PER SQ. FT. OF LIVING AREA FOR INCREASE IN SPACE FOR PRE-EXISTING ENROLLMENT AT TIME OF CONSTRUCTION				
Structure Type	Assessed Value Assigned Per Square Foot 2023	Raw Land Value Per Sq. Ft. @ 13% of Total Valuation	Past Pymt Credit	Future Payment Credit
Single Family Det. (SFD)	\$232	\$30	(\$0.08)	(\$0.15)
All Other Housing Units	\$138	\$18	(\$0.05)	(\$0.09)

The credit allowance is based on the portion of development costs needed to increase the amount of space per student to meet base year space need in 2009 when the Middle School was designed.

The credit allowance (a deduction from the total capital cost assigned to new development) treats this amount as the cost to rectify a pre-existing space deficiency.

In this update, credits for “past payments” include payments made up to and including calendar year 2024; “future payments” are those due from 2025 through the end of the bond amortization period.

b. Hanover Street School (HSS) and Lebanon High School (LHS)

New debt services was incurred to fund expansion and renovation of the HSS/LHS facilities. Included in the improvements were the construction of a new dedicated cafeteria and four new classrooms at HSS, and construction of a band room/music room at LHS. Construction of the dedicated separate cafeteria for the elementary school and the band room addition to the high school are treated here as pre-existing deficiencies in core space, for which we have computed a credit allowance for a portion of related debt service costs. To compute a reasonable credit, we have estimated that 40% of the bonded debt costs relate to correcting pre-existing core space deficiencies.³

Hanover Street School and HS Renovation and Construction

Original Bond Amount : \$12,899,900
Interest Rate 4.1%-5.1% Total proceeds: \$14,341,000, less premium to reduce loan
True Interest Rate w/Premium 3.38% of \$1,441,100 = loan amount of \$12,899,900 over 20 yrs
State Building Aid % of Principal 0%

Calendar Year	Principal	Interest	Total	Less Est. State Building Aid	Net District Cost
Past Payments					
2023	\$ 645,000	\$ 681,259	\$ 1,326,259	\$ -	\$ 1,326,259
2024	\$ 645,000	\$ 592,751	\$ 1,237,751	\$ -	\$ 1,237,751
Future Payments					
2025	\$ 645,000	\$ 559,856	\$ 1,204,856	\$ -	\$ 1,204,856
2026	\$ 645,000	\$ 526,961	\$ 1,171,961	\$ -	\$ 1,171,961
2027	\$ 645,000	\$ 494,066	\$ 1,139,066	\$ -	\$ 1,139,066
2028	\$ 645,000	\$ 461,171	\$ 1,106,171	\$ -	\$ 1,106,171
2029	\$ 645,000	\$ 428,276	\$ 1,073,276	\$ -	\$ 1,073,276
2030	\$ 645,000	\$ 395,381	\$ 1,040,381	\$ -	\$ 1,040,381
2031	\$ 645,000	\$ 362,486	\$ 1,007,486	\$ -	\$ 1,007,486
2032	\$ 645,000	\$ 329,591	\$ 974,591	\$ -	\$ 974,591
2033	\$ 645,000	\$ 296,696	\$ 941,696	\$ -	\$ 941,696
2034	\$ 645,000	\$ 263,801	\$ 908,801	\$ -	\$ 908,801
2035	\$ 645,000	\$ 230,906	\$ 875,906	\$ -	\$ 875,906
2036	\$ 645,000	\$ 198,011	\$ 843,011	\$ -	\$ 843,011
2037	\$ 645,000	\$ 165,116	\$ 810,116	\$ -	\$ 810,116
2038	\$ 645,000	\$ 132,221	\$ 777,221	\$ -	\$ 777,221
2039	\$ 645,000	\$ 105,776	\$ 750,776	\$ -	\$ 750,776
2040	\$ 645,000	\$ 79,331	\$ 724,331	\$ -	\$ 724,331
2041	\$ 645,000	\$ 52,886	\$ 697,886	\$ -	\$ 697,886
2042	\$ 644,900	\$ 26,441	\$ 671,341	\$ -	\$ 671,341
Total	\$ 12,899,900	\$ 6,382,981	\$ 19,282,881	\$ -	\$ 19,282,881

Present Worth Past Payments @ 5% \$ 2,630,323
Est. Portion of Cost Attributed to Pre Existing Space Deficiencies 40%
Credited Portion of Costs \$ 1,052,129
City Assessed Valuation 2023 \$ 2,744,378,645
Past Payment Credit Per \$1000 Raw Land Valuation \$ 0.38

Net Present Value Future Payments @ 5% \$ 11,342,501
Est. Portion of Cost Attributed to Existing Space Deficiencies 40%
Credited Portion of Costs \$4,537,000
City Assessed Valuation 2023 \$ 2,744,378,645
Future Payment Credit Per \$1000 Assessed Value of Home \$1.65

IMPACT FEE CREDIT ALLOWANCES PER SQ. FT. OF LIVING AREA FOR PORTION OF PROJECT COST TO CURE DEFICIENCIES IN CORE SPACE				
Structure Type	Assessed Value Assigned Per Square Foot 2023	Raw Land Value Per Sq. Ft. @ 13% of Total Valuation	Past Pymt Credit	Future Payment Credit
Single Family Det. (SFD)	\$232	\$30	(\$0.01)	(\$0.38)
Units Other Than SFD	\$138	\$18	(\$0.01)	(\$0.23)

³ This proportion has been estimated. A breakdown of actual project costs between construction costs for the additions versus other renovation costs funded by the bond was not available from SAU 88.

6. School Impact Fee 2024

The school impact fee is computed as:

$$\begin{aligned}
 &\text{Average pupils per 1000 square feet of living area by grade by housing type} \\
 &\times \text{Facility square feet per pupil capacity at elementary, middle and high school levels} \\
 &\times \text{Cost per square foot of facility space for each of the three facility categories} \\
 &(-) \text{Portion of principal cost of schools offset by State Building Aid} \\
 &(-) \text{Credit allowances per square foot} \\
 &= \text{Impact fee assessment per square foot of living area in dwelling}
 \end{aligned}$$

The components of the impact fee calculation are summarized here, resulting in a supportable impact fee assessment of **\$3.12** per square foot for single family detached homes, and **\$2.06** for all other housing types. ⁴

LEBANON SCHOOL IMPACT FEE COMPUTATION PER SQUARE FOOT BY DWELLING UNIT TYPE - 2024												
Capital Cost Assigned at Insured Value of Facilities												
Type of Structure	Enrollment Per 1000 Sq.Ft. Living Area				School Floor Area Per Pupil Capacity (Existing)				School Facility Cost Per Sq. Ft. (See Text)			Capital Cost Per Sq. Ft. Residential Living Area
	Elementary Schools	Middle School	High School	Total Schools	Elementary Schools	Middle School	High School	Total Schools	\$230	\$234	\$238	
									Elementary Schools	Middle School	High School	
Single Family Detached	0.0642	0.0532	0.0586	0.1760	113	175	150	144	\$1.67	\$2.18	\$2.09	\$5.94
All Other Housing Units	0.0525	0.0329	0.0310	0.1164	113	175	150	140	\$1.36	\$1.35	\$1.11	\$3.82
Type of Structure	State Building Aid (% of Principal) and Net District Cost (See Text)				Credit Allowances for Property Taxes Paid For Pre-Existing Capacity Needs							School Impact Fee Per Sq. Ft. of Living Area
	27%	44%	38%	Net District Cost After State Building Aid	Past Payments HSS and LHS	Past Pymts for Middle School	Future Payments HSS and LHS	Future Payments Middle School	Total Credit Allowances			
	Net District Cost Elementary Schools	Net District Cost middle School	Net District Cost High School									
Single Family Detached	\$1.22	\$1.22	\$1.30	\$3.74	(\$0.01)	(\$0.08)	(\$0.38)	(\$0.15)	(\$0.62)		\$3.12	
All Other Housing Units	\$0.99	\$0.76	\$0.69	\$2.44	(\$0.01)	(\$0.05)	(\$0.23)	(\$0.09)	(\$0.38)		\$2.06	

⁴ In 2021, the same fee model supported a school impact fee of **\$3.19** per square foot for single family homes and **\$2.31** per square foot for all other housing types. The Planning Board elected to discount the school impact fees in 2021 such that a single family detached home would be assessed at **\$2.00 per square foot** (62.7% of the calculated value). A similar proportionate reduction resulted in a 2021 impact fee assessment of **\$1.45 per square foot** for all other housing.

Part B: Public Recreation Impact Fee

1. Structure of Fee Model

Beginning in 2013, the City adopted a modified recreation impact fee that included assessments to both residential and non-residential development. At the same time, residential fee categories were reduced from five to two structural categories. The revised recreation fee basis was designed to respond to the following guidance expressed by the Planning Director and the Planning Board in 2013:

1. The fee should continue to reflect realistic levels of capital spending by the City on recreation facilities that further the goals of the 1998 Recreation Master Plan and plans for the Mascoma River Greenway. Impact fees should be based either on recapture of actual past investments, or future improvements with high likelihood of implementation, such as inclusion within the CIP or an approved plan for facilities.
2. The Greenway is the City's principal new recreation facility investment. Non-residential development will benefit from the Greenway and recreation sites that connected to it. Since these connected facilities will be more readily accessible to employees working within commercial developments in Lebanon than other recreation sites, a portion of their capital cost should be attributable to non-residential sources of demand and reflected in the recreation impact fee.

The 2024 update to the recreation fee is based on the value of the City's recreation capital investment from the year 2000 to the time that the City reaches the 1998 Recreation Master Plan's design population of 16,500.

Since a non-residential recreation impact fee is to be calculated, the updated model requires a projection of the non-residential building floor area that would be proportionate to the design population (16,500) that was used for the 1998 Recreation Master Plan.

Changes in the recreation impact fee from the last update include the following:

- Past recreation investments have been updated to include improvements through calendar year 2023, based on fixed asset values of related projects or estimates provided by the Recreation Director;
- All capital costs for past and planned projects have been adjusted to October 2023 replacement costs based on either construction cost or CPI indexes;
- The value of grants and donations in support of the Mascoma River Greenway have been updated to recognize contributions of non-City funds to the project;

- Revised long term growth of non-residential floor of residential living area and non-residential gross floor area has been projected based on long term trends;
- Updated the floor area per employee ratios have been assigned to adjust the average capital cost per square foot of non-residential development to compute impact fees for the several sub-categories of commercial and industrial uses.

2. Recreation Capital Investments 2000-2023

ESTIMATED REPLACEMENT COST SELECTED RECREATION FACILITIES						
Asset No.	Description	Source (1)	Year Placed in Service	Cost Year Placed in Service	ENR Base for indexing	Cost Adjusted to Oct 2023 ENR = 13498
MASTER PLAN FOR GREENWAY		REC DIR	2010	\$ 50,000	N.A. (used CPI)	\$ 70,534
MASCOMA GREENWAY DEVELOPMENT						
MRG 189	189 RR BRIDGE PEDESTRIAN RAILW	FAR	2016	\$ 39,904	10531	\$ 51,147
MRG	MASCOMA RIVER GREENWAY	FAR	2020	\$ 1,820,451	11625	\$ 2,112,506
MRG21C1	MASCOMA RIVER GNWY 2021 (CWIP)	FAR	2021	\$ 8,361	12482	\$ 9,042
MRG21C2	MASCOMA RIVER GNWY 2022 (CWIP)	FAR	2021	\$ 170,000	12482	\$ 183,838
91/237.I3	PARKING LOT / RAIL TUNNEL	FAR	2022	\$ 4,050,381	13175	\$ 4,149,681
TOTAL GREENWAY DEVELOPMENT (2)				\$ 6,089,097		\$ 6,506,214
RIVERSIDE PARK						
116/6.B1	PAVILION	FAR	2002	\$ 10,800	6538	\$ 22,297
116/6.I2	SKATE PARK	FAR	2003	\$ 71,346	6782	\$ 141,998
116/6.I3	PLAYGROUND	FAR	2004	\$ 20,483	7308	\$ 37,832
116/6.I1	RIVERSIDE PARK LANDSCAPING	FAR	2004	\$ 25,037	7308	\$ 46,244
116-6-I2A1	SKATE PARK IMP	FAR	2019	\$ 44,013	11381	\$ 52,200
TOTAL RIVERSIDE PARK				\$ 171,679		\$ 300,571
MEMORIAL POOL COMPLEX						
108/23B3	BATHHOUSE	FAR	2002	\$ 390,733	6538	\$ 806,686
108/23B4	FILTER BUILDING	FAR	2002	\$ 438,180	6538	\$ 904,643
108/23I1	LAP POOL	FAR	2002	\$ 647,036	6538	\$ 1,335,835
108/23B5	LIFE GUARD HOUSE	FAR	2002	\$ 73,805	6538	\$ 152,374
108/23I2	TRAINING POOL	FAR	2002	\$ 341,116	6538	\$ 704,250
TOTAL MEMORIAL POOL				\$ 1,890,870		\$ 3,903,788
LOWER MEADOWS						
117/15.C1	LOWER MEADOWS FIELDS '2007'	FAR*	2007	\$ 35,436	8090	\$ 59,124
117/15.C2	LOWER MEADOWS FIELDS '2008'	FAR*	2008	\$ 6,891	8550	\$ 10,879
117.15.C3	LOWER MEADOWS FIELDS '2009'	FAR*	2009	\$ 7,077	8641	\$ 11,055
	ENGINEERING SERVICES	REC DIR	2019	\$ 12,917	11381	\$ 15,320
TOTAL LOWER MEADOWS				\$ 62,321		\$ 96,378
WESTBORO PARK						
REC004C1	WESTBORO PARK '2007'	FAR*	2007	\$ 84,383	8090	\$ 140,791
REC004C2	WESTBORO PARK '2008'	FAR*	2008	\$ 11,193	8550	\$ 17,671
REC004C3	WESTBORO PARK '2009'	FAR*	2009	\$ 56,256	8641	\$ 87,877
TOTAL WESTBORO PARK				\$ 151,832		\$ 246,339
MAPLE STREET PLAYGROUND						
59/19I1	MAPLE ST PLAYGROUND(SMITH FLD)	FAR	2020	\$ 86,015	11625	\$ 99,874
59/19I2	MAPLE ST PLYGRD PARKING LOT	FAR	2020	\$ 53,515	11625	\$ 62,137
TOTAL MAPLE ST. PLAYGROUND				\$ 139,530		\$ 162,011
CIVIC PARK						
planned 2024	CIVIC PARK PLAYGROUND	REC DIR	2024	\$ 264,000	13498	\$ 264,000
COLBURN PARK						
92/11I1	COLBURN PARK PLAYGROUND	FAR	2018	\$ 23,402	11186	\$ 28,239
COLBURN001	COLBURN PARK SIDEWALKS/BENCHES	FAR	2021	\$ 123,112	12482	\$ 133,133
COLBURN PARK TOTAL				\$ 146,514		\$ 161,372
ELDRIDGE PARK						
92/30.B1	ELDRIDGE PK R/R & STG FAC	FAR	2008	\$ 120,340	8550	\$ 189,982
STORRS HILL						
120/2.I3	STORRS HILL ELECTRICAL UPGRADE	FAR	2011	\$ 201,938	9172	\$ 297,183
TOTAL RECREATION FACILITIES PLACED IN SERVICE SINCE 2000				\$ 9,288,121		\$ 12,198,372
(1) FAR = Fixed Asset Record; FAR* = Past Fixed Asset Record, Not in Current File; REC DIR = Recreation Director						
(2) Total asset value shown in this chart for Mascoma River Greenway includes amounts funded by donations						

The value of existing recreation facilities has been estimated primarily from the City's fixed asset inventory. Original costs have been updated to October 2023 using the Engineering News Record (ENR) construction cost index (CCI). The table also includes the cost of the original design study for the Greenway (original cost adjusted using the Consumer Price Index).

The cost of the Civic Park playground, programmed for 2024, is based on cost information from the Recreation Director. As it is expected to be built this year, it is shown as an existing facility in this table.

The October 2023 replacement cost of the listed recreation facilities placed in service since 2000 is estimated here at about **\$12.2 million**.

The amounts derived from the fixed asset figures may include grants or donations that comprised revenue sources for some of the improvements such as the Greenway.

Donations to the earlier phases of the Greenway project are estimated to have an adjusted 2023 value of about **\$1.67 million**.

Mascoma River Greenway Past Donations	
Total Amount of Contributions	\$ 1,306,570
CPI-Adjusted Contributions Oct 2023	\$ 1,668,280

Based on Recreation Director's list of donations by year, adjusted to October 2023 using the Consumer Price Index (CPI)

After deducting the estimated value of these contributions, the net municipal investment in recreation capital facilities after donations to the Greenway is estimated at about **\$10.5 million** for projects already placed in service, plus the anticipated Civic Park Playground in 2024.

3. Anticipated Expenditures and Total Investment (2025 to 2030)

Future facility investments included in the recreation fee model include continuation of the Mascoma River Greenway project per the estimates contained in the 2024-2029 CIP. The total estimated cost for the next phase of Greenway improvements is \$2.4 million, less an estimated \$106,000 in donations, and an anticipated CMAQ⁵ grant for 80% of the total cost. This segment will expand the Greenway path to reach NH Route 12A

A second major recreation project programmed in the CIP is a \$1.8 million investment in improvements within the Westboro Rail Yard site, to include design, permitting and construction of the West Lebanon Gateway riverfront trail, Bridge Street Park, and a multi-purpose recreational field.

The planned improvements to Bagley Park remain the only remaining project envisioned in the 1998 Recreation Master Plan that has yet to be initiated. The Recreation Master Plan anticipated improvements to the site including a softball diamond, a small soccer field, horseshoes, a pavilion, parking, lights and walking paths. Because this project is not programmed within the current CIP (2024-2029) we have not included its cost within the impact fee basis. However, a place in the fee model is reserved should it become active.

The October 2023 adjusted cost for *future improvements* within the scope of the impact fee, less grants and donations, totals **\$2.2 million** in net City costs.

The combined 2023 value of past City investments in public recreation facilities and the new investments anticipated through 2030 total **\$12.7 million**. The impact fee model allocates 85% of the \$12.7 million investment in recreation facilities to residential demand and 15% to non-residential property based on relative access of employees to the Mascoma River Greenway and improvements to connected recreation sites.

⁵ CMAQ refers to a Congestion Mitigation and Air Quality grant from the Federal Highway Administration

ALLOCATION OF RESIDENTIAL VS. NON-RESIDENTIAL RECREATION FACILITY COSTS - 2024								
FACILITY INVESTMENTS INCLUDING RECREATION MASTER PLAN COMPONENTS	Past Facility Costs Adjusted to Oct 2023	Anticipated Investment 2025-2030 Per CIP	Total City Cost 2023 Dollars	Basis for Cost Estimate	% Residential Allocation	% Non-Residential Allocation	Capital Cost Residential Benefit	Capital Cost Non-Residential Benefit
Mascoma Corridor								
* Mascoma River Greenway								
Mascoma Greenway Action Plan	\$ 70,534	\$ -	\$ 70,534	Actual 2010 cost adjusted to Oct 2023 CPI				
Greenway Development, Rail Tunnel & Parking Total Costs	\$ 6,506,214	\$ 2,400,000	\$ 8,906,214	Past improvements plus CIP estimated future cost				
Less Grants (80% CMAQ Grant)		\$ (1,920,000)	\$ (1,920,000)	Less anticipated 80% CMAQ Grant				
Less Donations @ 2023 Adjusted Values	\$ (1,668,280)	\$ (106,000)	\$ (1,774,280)	Donation amounts adjusted to Oct 2023 (CPI adj)				
Total Mascoma Greenway Costs to City	\$ 4,908,468	\$ 374,000	\$ 5,282,468	Estimated net City Expenditure for Greenway	76%	24%	\$ 4,014,676	\$ 1,267,792
* Westboro Park (City park portion of 22-ac.site)	\$ 246,339	\$ 1,820,451	\$ 2,066,790	Past expenditures adjusted to Oct 2023 (ENR). Future cost reflects CIP estimate.	76%	24%	\$ 1,570,760	\$ 496,030
Central Lebanon								
* Bagley Park (Or Other Field Expansion Sites)	\$ -	[reserved]	[reserved]	1998 Rec Plan Estimate adj to Oct 2023 (ENR)	76%	24%	[reserved]	[reserved]
Colburn Park Playground Improvements	\$ 161,372	\$ -	\$ 161,372	Original cost adjusted to Oct 2023 (ENR)	100%	0%	\$ 161,372	\$ -
Eldridge Park Improvements	\$ 189,982	\$ -	\$ 189,982	Original cost adjusted to Oct 2023 (ENR)	100%	0%	\$ 189,982	\$ -
West Lebanon								
Maple St. Playground & Parking(Adjacent to Smith Field)	\$ 162,011	\$ -	\$ 162,011	Original cost adjusted to Oct 2023 (ENR)	100%	0%	\$ 162,011	\$ -
* Riverside Park (Incl. Skatepark Redevelopment)	\$ 300,571	\$ -	\$ 300,571	Original cost adjusted to Oct 2023 (ENR)	76%	24%	\$ 228,434	\$ 72,137
Civic Park (Playground - 2024)	\$ 264,000	\$ -	\$ 264,000	As budgeted for 2024	100%	0%	\$ 264,000	\$ -
Intensive/Special Use								
Memorial Pool Area Reconstruction (Completed)	\$ 3,903,788	\$ -	\$ 3,903,788	Original costs adjusted to October 2023 (ENR)-CCI)	100%	0%	\$ 3,903,788	\$ -
* Lower Meadows (past expenditures only - not continued)	\$ 96,378	\$ -	\$ 96,378		76%	24%	\$ 73,247	\$ 23,131
Storrs Hill Electrical Upgrade (Completed)	\$ 297,183	\$ -	\$ 297,183		100%	0%	\$ 297,183	\$ -
Recreation Facilities Investment 2000 to 2030	\$10,530,092	\$ 2,194,451	\$ 12,724,543	Total of past and anticipated City investment	85.4%	14.6%	\$ 10,865,453	\$ 1,859,090
* Recreation facility accessible from Mascoma Greenway, assumed to be of benefit to non-residential development								

4. Commercial Development and Access to Greenway-related Facilities

The recreation impact fee model allocates a portion of the cost to construct the Greenway and connected facilities between residential and commercial sectors. Since this allocation cannot be documented by actual usage of recreation facilities, the *relative access* to listed facilities is estimated based on their *availability* to the resident population and to non-resident employees working in Lebanon. The allocation is made based on daytime access to residents and to non-resident workers employed in Lebanon. The variables used to allocate these costs have been updated based on the most recent Census Bureau American Community Survey (ACS) data, and employment counts from NH Employment Security. The split cost allocation (residential/non-residential) is applied only to the recreation facility costs of the Mascoma River Greenway and the parks linked to it.

MODEL TO ESTIMATE AVERAGE DAILY ACCESS TO RECREATION FACILITIES LINKED BY MASCOMA GREENWAY - 2024 UPDATE (City Residents By Age Group, and Non-Resident Workers Employed in Lebanon)											
Population/Employment Component	Pre-School Population 2022 ACS Estimate	School Age Population (Age 5-17) 2022 ACS Estimate	Working Residents Age 16+ (2022 ACS)				Senior Residents Age 65+ (2022 ACS Estimate)	Total Resident Population 2022 ACS Estimate	Total 2022 Employment in Lebanon (NH Employment Security)	Est. Non- Resident Workers Employed in City (ACS 2022)	Total Allocation Base (Residents Plus Non- Resident Workers)
			Total Residents Working	Not Working From Home	Work in City Outside of Home	Commute Out					
Lebanon Resident Population	691	1,493	8,626	7,076	4,402	2,674	3,215	14,515	19,475	13,438	27,953
Hours Per Day Per Person Recreation Access Time Academic Year (September through May)										Est. 69% of those working in Lebanon commute in	
Weekdays	2	2			3	2	8			2	
Weekends	8	8			8	8	8			0	
Summer Season (June through August)											
Weekdays	2	8			3	2	8			2	
Weekends	8	8			8	8	8			0	
Annual Person-Hours Facility Access (Millions)	0.94	2.61			7.11	3.62	9.39	22.73		7.01	29.75
Hours Per Person Per Year	1,354	1,750			1,615	1,354	2,920	1,566		522	2,088
Avg Access - Hrs/Person/Day	3.7	4.8			4.4	3.7	8.0	4.3 per day		2.0 per workday	
								Resident Access		Non-Resident Worker Access	Total
								76%		24%	100%
CALENDAR DAYS BY PERIOD:											
Workdays Sept through May	195		General Assumptions: Workers in City have limited hours of access due to work and commuting hours Non-resident workers primary access periods before work, lunch break, after work Pre-school population - practical access limited by parental schedule School age population - has more access during summer months than academic year								
Weekend Days Sept through May	78										
Workdays June through August	66										
Weekend Days June through August	26										
Total Calendar Days	365										

For the selected Greenway and connected facilities, the availability ratio estimated for 2023 is 76% for residents and 24% for non-resident workers employed in the City.

5. Cost Allocation to Design Population and Projected Non-Residential Floor Area

The 1998 Recreation Master Plan assumed a total population horizon of about 16,500 for long term facility planning purposes. This number is used to assign a maximum service population associated with improvements made since 2000, and those projects anticipated by the 2024-2029 CIP.

With this as a target population to represent the future residential service base of the improvements included in the fee basis, BCM Planning has estimated the non-residential building gross floor area that would be proportionate to a design population of 16,500. Projected households for the design year assume that average household size remains constant at the 2020 Census average of 2.05 persons per household (100% count data).

Based on those relationships a future residential population of 16,500 would be consistent with an inventory of about 14.16 million square feet of gross floor area in all non-residential uses, and a subtotal of about 13.37 million square feet of private sector commercial development.

HISTORIC AND PROJECTED POPULATION, HOUSING, AND EMPLOYMENT FOR COST ALLOCATION						
Development Sector	1990	2000	2010	2020	US Census Pop. Est. 2022 and NHOPD Housing Est.	Rec Plan Horizon Population @ 16,500 Persons
RESIDENTIAL BASE						
Total Population	12,183	12,568	13,151	14,282	15,044	16,500
Persons in Group Quarters	166	290	144	316	306	350
Persons in Households	12,017	12,278	13,007	13,966	14,738	16,150
Total Households	5,173	5,500	6,186	6,805	7,181	7,869
Average Household Size	2.32	2.23	2.10	2.05	2.05	2.05
Total Housing Units	5,718	5,707	6,649	7,201	7,625	8,327
NON-RESIDENTIAL BASE						
Number of Persons Working In Lebanon (Source - NH Employment Security)						
Total Covered & Government Jobs in City *	9,703	16,880	18,929	18,878	19,392	21,539
Private Sector Jobs in City *	8,547	15,996	18,014	18,098	18,589	20,648
Total Jobs Per Capita	0.80	1.34	1.44	1.32	1.29	1.31
Private Sector Jobs Per Capita	0.70	1.27	1.37	1.27	1.24	1.25
						(constant @ 2020-2022 Averages)
Gross Floor Area of Non-Residential Uses (From Property Assessment Data By Year Built)						
Total Including Government	8,892,107	10,664,484	11,377,607	12,903,000	12,912,049	14,157,000
Private Only	8,350,044	10,095,418	10,844,485	12,194,815	12,194,815	13,370,612
						(projection)
Square Feet Per Employee All Non-Res Devel	916	632	601	683	666	657
Square Feet Per Employee (Private Only)	977	631	602	674	656	648
						(constants)
Total Non-Res Square Feet Per Capita	730	849	865	903	858	858
* NH Employment Security data for 1990, 2000, 2010, 2020 and 2022 (covered employment)						

6. Impact Fee Assessment

The total recreation facility investment (past and projected) for the period 2000 through completion of listed projects is estimated at just over \$12.7 million. This total is allocated at 85% to residential demand and 15% to non-residential uses.

a. Residential Impact Fees. The resulting capital investment attributable to the horizon year household population averages **\$673 per capita** in recreation capital improvements. That per capita investment is assigned to residential development based on average household size by type of dwelling.⁶

The amount is then converted to an impact fee per square foot based on the average living area of dwelling units in Lebanon. The residential impact fee based on this update would be **\$0.98** per square foot for single family homes and **\$1.22** per square foot for all other dwellings.

b. Non Residential Impact Fees. Costs to service non-residential demands are distributed across a projected 14,157,000 gross square feet (in all non-residential buildings) resulting in an average capital cost of **\$0.13** per square foot (rounded) to serve design year demand.

At the current estimated average of 657 square feet of non-residential building area per job in Lebanon, the average non-residential impact fee is equivalent to **\$85** per employee.

Because various commercial sectors tend to have different ratios of employees to floor area, the impact fee is adjusted from the average so that development sectors that have more employees per square foot pay higher fees than those with fewer employees per square foot.

The ratios of floor area per employee in Lebanon for non-residential sub-categories were estimated by comparing the square footage of non-residential buildings in the City to the total 2022 employment within the industrial classification of those jobs.

⁶ In this report, average household size for single family housing and “all other housing” have been based on the averages for ownership vs. rental housing units, respectively, as indicated by the 2020 U.S. Census 100% count data. See the Appendix for further data and a comparison of the 2020 100% count data to estimates from the ACS 5-year samples.

2024 IMPACT FEE BASED ON SELECTED RECREATION MASTER PLAN INVESTMENTS 2000 TO DESIGN POPULATION SERVING PROJECTED SERVICE BASE WITH TOTAL POPULATION OF 16,500

RESIDENTIAL COST ALLOCATION Residential Share
\$ 10,865,453

Total Population Plan Horizon Year 16,500
Household Population Plan Horizon Year 16,150
Recreation Plan Capital Investment Per Capita \$673

Residential Structure Type	Est. Average Household Size 2020	Average City Investment Per Housing Unit	Avg Sq. Ft. Existing Dwelling Units 2023	Recreation Impact Fee Per Sq. Ft.
Average Housing Unit	2.05	\$1,380	1,200	\$1.15
Single Family Detached	2.34	\$1,575	1,600	\$0.98
All Other Housing	1.81	\$1,218	1,000	\$1.22

NON-RESIDENTIAL COST ALLOCATION

Non Residential Share
Recreation Facility Investments - Non-Res Share \$1,859,090
Sq. Ft. Non-Residential @ Plan Design Population 14,157,000 (projected in proportion to design population)
Average Cost Per Sq. Ft. Commercial Use \$0.13
Average Square Feet Per Employee (Total) 657
Average Cost Per Employee (Total)) \$85

Non-Residential & Institutional Uses	Est. Average Sq. Ft. Per Employee	Impact Fee Per Square Foot
Retail, Restaurants and Lodging	1,000	\$0.09
Offices and Commercial Services	650	\$0.13
Industrial, Transportation, Whse, Communic.	1,200	\$0.07
Nursing Homes & Licensed Care Facilities	500	\$0.17
Other Institutional Uses	1,000	\$0.09
Average for Non-Residential Uses 2023	657	\$0.13

Options & Alternatives:

Residential fee per square foot at 2022 ACS estimated average household at 2.34, single family at 2.82 and “all other” housing units at 1.85 persons per household:

Average Housing Unit \$1.13 per sq. ft.
Single Family Detached \$1.19
All Other Housing Units \$1.25

Assess all non-residential development at the average rate of \$0.13 per square foot. This approach would disregard differences among subcategories of commercial development, but the fee would be proportionate relative to the fees assessed to the residential sector.

Part C: Police Department Impact Fee

1. Facility Standards

The Lebanon Police Department headquarters located on Poverty Lane is a facility of about 14,000 square feet of space that was constructed principally in 1991. At the time impact fees were first researched by BCM Planning in Lebanon in 2006, an interview with the Chief of Police indicated that the facility was constructed with the intent of supporting staffing of up to 40 sworn personnel. At the time the building was designed, an International Association of Chiefs of Police (IACP) guideline of about 350 square feet per officer was used to size the facility.

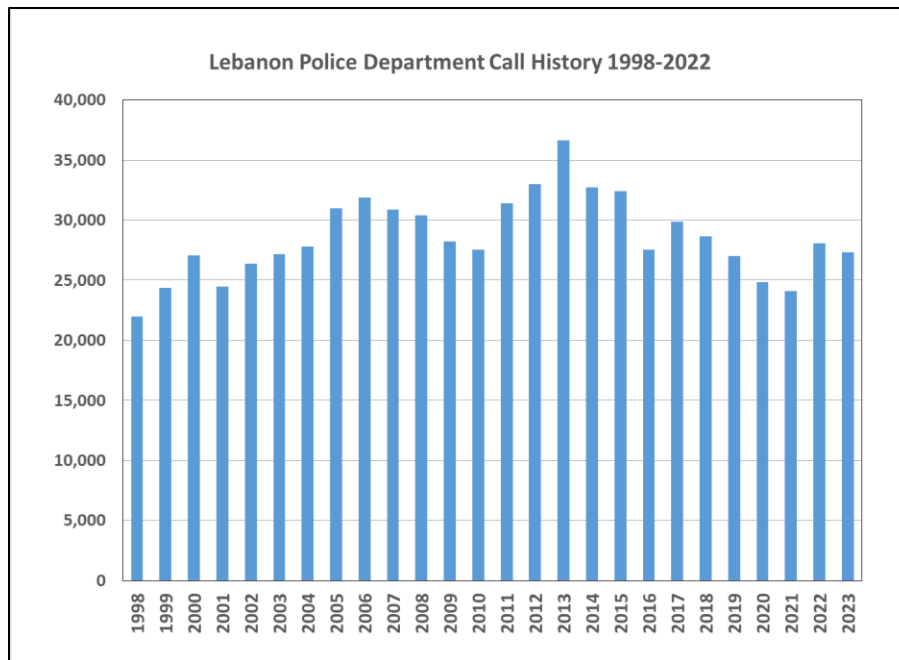
In a 2019 a space needs assessment for the City's public safety buildings, Lavallee-Brensinger Architects estimated that the facility is undersized for meeting desired program needs projected for a 20-year horizon. The report recommended eventual expansion of the facility to about 23,000 square feet to meet long term needs (2039). However, the Lebanon CIP for 2024-2029 does not envision such an expansion within this period.

When it appears probable that a new or expanded station will be developed, a new space standard can be used to re-define the Police Department impact fee using a new design population, department staffing ratios, or other factors. Once the City is confident of the acceptance of a plan for an expanded station, the fee should be recalculated.

The Lebanon Police Department responds to service demands from non-residential development that influence its staffing needs in comparison with other communities of a similar size, including:

- Location at the confluence of north-south and east-west interstate highways;
- A regional work destination with a high ratio of in-bound commuter traffic;
- A border community to Vermont that is a regional shopping destination with no sales tax;
- A growing retail and commercial development sector and the locus of a unique and large scale medical facility (Dartmouth-Hitchcock and related facilities).

Because of these and other influences, the ratio of officers to resident population in Lebanon may be high in comparison to communities that are predominantly residential, or that do not support a large number of jobs or a substantial commercial presence.



The Lebanon Police Department typically responds to over 28,000 calls per year.

While it is clear that population alone is insufficient to define the personnel needs of any jurisdiction, a relative service standard is required to assign proportionate impacts and related capital costs.

As of November 2023, the Lebanon Police Department had an approved (budgeted) staff level of 35 full time officers, or about 2.5 per 1000 residents. (At present, actual staffing includes 31 officers, with 4 vacancies). The ratio of officers to population should in no way be construed as a limitation on the personnel the police department may find necessary to provide adequate services now or in the future.

Based on a target ratio of 2.5 uniformed officers per 1,000 persons, the floor area within the buildings of the department, the original planning standard for the police station would support a maximum population of 16,000. The most recent population estimates available for Lebanon at the time this study was prepared were 15,108 (2022 estimate from the New Hampshire Office of Planning and Development) and 15,044 (July 2022 estimate by the U. S. Census Bureau).

Using the original design standards, the estimated supportable population of the Police Station remains higher than this current population, indicating that a modest reserve capacity remains available to support demand from new development. In such case, an impact fee may be used to recoup a proportion of the City's past investment in the facility.

2. Proportionate Demand by Sector

Police services provide general protection to all classes of property as well as direct responses to call demands as they occur. Proportionate measures are needed to allocate related capital costs between residential and non-residential demand. The impact fee basis uses measures of proportionate demand that reflect the mission of protecting persons and property: calls for service, number of offenses, assessed valuation of property, square footage of buildings, and the relationship between local employment and the City's resident population.

a. Call Volume by Geographic Sector. The chart below shows the call volume history of the Police Department for geographic sectors used by the department. Not all calls have a geographic reference, and associations of call volume with residential vs. commercial demand must be generalized based on the general land use orientation of these portions of the City. There are three sectors that are viewed as predominantly commercial areas (Sectors 4, 6 and 7).

Number of Calls by Sector - Lebanon Police Department - and Estimated Non-Residential Share of Calls									
LPD Reporting Sector	Predominant Land Use	NUMBER OF CALLS BY SECTOR - LEBANON POLICE DEPARTMENT					5-YR HISTORY 2019-2023	10-YR HISTORY 2014-2023	20-YR HISTORY 2004-2023
		2019	2020	2021	2022	2023			
Sector 1 - N. of Mascoma River	Residential	8,515	8,272	7,752	8,938	8,958	42,435	81,700	209,192
Sector 2 - S. of Mascoma River	Mixed - Residential + Downtown S. of Mascoma River	4,737	3,251	4,446	4,451	4,486	21,371	42,071	115,014
Sector 3 - (W. Lebanon to E. Wilder)	Rte 10 N - Mostly Residential & Northern Part of West Leb.	5,057	4,907	4,307	5,557	4,946	24,774	47,858	118,250
Sector 4 - (Includes Rte 12-A, S. of Route 4; Airport)	Commercial & Airport	5,842	6,080	4,843	5,773	5,890	28,428	57,347	158,664
Sector 6 - Rte 120 N of Etna Rd	Commercial	1,520	264	307	391	388	2,870	10,739	28,984
Sector 7 - LaHaye/Medical Center Dr	Commercial	919	1,092	1,261	1,773	1,424	6,469	8,478	17,732
Sector 5 (at Police HQ)	Mixed - no geographic reference	320	851	1,098	1,128	1,194	4,591	6,512	19,865
All Other		119	103	93	80	53	448	944	2,035
Total		27,029	24,820	24,107	28,091	27,339	131,386	255,649	669,736
Allocation of Calls to Estimate Residential Vs. Non-Residential Share of Activity									
Sector 1, 50% of Sector 2, Sector 3	Mostly Residential	15,941	14,805	14,282	16,721	16,147	77,895	150,594	384,949
50% of Sector 2, Sectors 4, 6, 7	Mostly Non-Residential	10,650	9,062	8,634	10,163	9,945	48,453	97,600	262,887
Total (Excludes Sector 5 (Police HQ) and "All Other"	Total	26,590	23,866	22,916	26,883	26,092	126,347	248,193	647,836
Estimated Non-Residential Share of Local Calls		40%	38%	38%	38%	38%	38%	39%	41%

For purposes of estimating proportionate call volume, we have used a ratio of 39% residential and 61% non-residential based on the most recent 10 years (2014 through 2023).⁷

⁷ Sector 1, 50% of Sector 2, and Sector 3 assumed to represent predominantly residential demand. All calls in Sectors 4, 6 and 7 and 50% of calls from Sector 2 assumed to be predominantly commercial demand. Calls to the station (Sector 5) and all other calls excluded from estimating the call ratio.

b. Offenses by Property Type. Another response-based demand factor shown below is the number of *offenses* associated with various classes of property. Offenses involving crimes or arrests will generally require more staff time per case than general call activity. The categories available in the LPD record have been summarized by BCM Planning to approximate residential vs. non-residential property groupings. The data for 2016-2023 indicate that department activity relating to crimes and arrests is more heavily associated with non-residential property locations (about 64%) than with residential sites (about 36%).

Offenses by Property Type

Lebanon Police Department - Offenses by Property Type 2016 through 2023 (YTD Nov 4)										
Property Use Grouping	2016	2017	2018	2019	2020	2021	2022	2023 YTD 11-04-2023	Total For Period 2016-2023	% of Period Total
Residential Uses	703	629	602	511	593	632	643	499	4,812	21.9%
Private Commercial & Institutional	1,234	1,091	1,011	1,170	855	1,063	1,249	1,032	8,705	39.6%
Retail & Lodging	996	879	792	973	680	897	1,015	870	7,102	32.3%
Office	100	99	99	70	87	88	129	84	756	3.4%
Other Commercial/Parking	112	93	99	109	65	63	72	40	653	3.0%
Industrial/Transp/Storage	22	14	15	14	17	12	33	31	158	0.7%
Private Institutional	4	6	6	4	6	3	0	7	36	0.2%
Public Institutional	364	452	396	437	343	306	438	270	3,006	13.7%
Other/Unknown	931	775	698	735	601	628	662	438	5,468	24.9%
Highway-Street-Alley	735	614	615	592	484	513	541	315	4,409	20.0%
Open Space - Other	196	161	83	143	117	115	121	123	1,059	4.8%
Total	3,232	2,947	2,707	2,853	2,392	2,629	2,992	2,239	21,991	100.0%
Offenses (Excluding Public Uses and "Other/Unknown")										
Residential Locations	703	629	602	511	593	632	643	499	4,812	35.6%
Non-Residential Locations	1,234	1,091	1,011	1,170	855	1,063	1,249	1,032	8,705	64.4%
Total Excluding Public/Other/Unknown	1,937	1,720	1,613	1,681	1,448	1,695	1,892	1,531	13,517	100.0%
Non-Residential Share	63.7%	63.4%	62.7%	69.6%	59.0%	62.7%	66.0%	67.4%	64.4%	

c. Other Factors and Average of Indicators. Police Department services provide not only emergency response, and regular patrols serve all types of development with the mission of protecting persons and property. Therefore other factors are also appropriate to estimate the residential vs. non-residential share of demand on the Lebanon Police Department. These other factors include assessed valuation, employment and population, and building floor area. When these factors are considered, along with calls for service and offense statistics, the average non-residential share of service demand is estimated at 55% and the residential share at 45%.

Proportionate Demand Factors for Police Department						
Development Sector	Share of Assessed Value 2023 (1)	Estimated Share of Total PD Calls Based on Zone Characteristics Last 10 Yrs	Estimated Share of PD Offenses by Property Type 2016 - 2023	Local Jobs & Resident Population 2022	Share of Building Floor Area 2023 (2)	Average of Factors (Rounded)
Non-Residential Including Government	56%	39%	64%	56%	59%	55%
Residential Uses - All Housing Types	44%	61%	36%	44%	41%	45%
(1) Based on 2023 total valuation of developed property including non-taxable property, but excluding utilities and vacant land						
(2) Floor area measured by living area for residential, gross area for non-residential (2023)						

3. Projected Non-Residential Space as Function of Service Population

We have previously estimated a current ratio of 858 square feet of gross floor area in non-residential buildings per resident (see Recreation Fee analysis). For the purpose of the impact fee calculation, this amount of non-residential floor area per capita is applied to the maximum service population (16,000) assumed for the existing police station. This yields a maximum non-residential service base of about 13.7 million square feet that could be in place when the population reached 16,000.

4. Allocation of Capital Cost by Property Type

a. Capital Values Assigned. The Police Department impact fee is based on the recoupment of the City's investment in the department headquarters, accessory buildings and related communications equipment and facilities at the site. Total capital facility costs include the value of land at the site, and the original cost of building construction adjusted to October 2023 using the R.S. Means square foot cost index.

To these values, we have added the adjusted cost of station improvements to the building and communications equipment based on the City's fixed asset records, adjusted to October 2023 using the same cost index. The adjusted value of these improvements is about **\$3.4 million**:

Other Improvements and Capital Assets of Police Department Included in Fee Basis				
City Asset No.	Description	Year Placed in Service	Original Cost	Cost Adjusted to October 2023 Using ENR Const. Cost Index
LPD004.U1	PRIMARY DISPATCH CONSOLE SYS	2015	\$ 130,263	\$ 173,487
LPD005.U1	SECONDARY DISPATCH CONSOLE SYS	2015	\$ 90,837	\$ 120,979
117/1.B1I1	LPD FACILITY IMPROVEMENTS	2018	\$ 388,999	\$ 469,400
LPD001	SECURITY CAMERA SYSTEM	2020	\$ 21,720	\$ 25,219
LPD008C1	REPEATER SYSTEM 2019-2020	2020	\$ 987,995	\$ 1,147,179
LPD042	RF SYSTEM UPGRADE	2021	\$ 1,073,692	\$ 1,160,158
117-1.I2	POLICE PARKING LOT EXPANSION	2022	\$ 331,376	\$ 339,500
	Total Improvements Included		\$ 3,024,883	\$ 3,435,922

b. Residential Fees Per Square Foot. An average capital cost to serve the design population is indicated at **\$273** per capita for residential uses and **\$0.39** per square foot for non-residential uses. The residential fees are computed by multiplying \$273 per capita times estimated average household size, divided by average living area per housing unit, to yield an impact fee per square foot for two structural categories.

The 2020 Census (100% count) for Lebanon indicated an average household size of 2.05 persons. Estimates for single family homes versus other units are based on average household sizes for ownership vs. rental units. BCM Planning estimates 2.34 persons per unit for single family homes and 1.81 persons per unit for all other housing based on the 2020 Census full count data.⁸

Using property tax assessment data for 2023, BCM Planning estimated the average single family home size at 1,600 square feet of living area, and the average for all other units at 1,000 square feet. The average for all dwelling units was estimated at 1,200 square feet of living area.

For residential uses, the fee is calculated by multiplying the average residential capital cost per person times the estimated number of persons per household, then dividing that result by the average living area assigned to each residential structure category. Resulting residential impact fees are then:

Single Family Homes: $(\$ 273 \text{ per capita} \times 2.34 \text{ persons}) / 1,600 = \0.40 per sq. ft.

All Other Housing: $(\$ 273 \text{ per capita} \times 1.81 \text{ persons}) / 1,000 = \0.49 per sq. ft.

c. Non-Residential Fees Per Square Foot. For this sector, an average cost per square foot for all non-residential uses is first computed at **\$0.39** per square foot (gross floor area or GFA). Some categories of commercial use, such as retail, are associated with above average demands on public safety services per 1000 square feet, while others such as industrial and warehouse uses have a lower number of calls per 1000 square feet.

Local data for Lebanon is not available to assign relative call ratios to various commercial uses. BCM Planning has based its adjustment for various sub-categories of the non-residential sector on its analysis of dispatch data for police and fire calls by property address from the City of Dover, NH as compiled for two prior impact fee studies there (2008 and 2017).

We compared Dover's relative call rates for the Police Department to that of its Fire Department based on those two survey years. In Lebanon, we have good information on Fire Department responses by property use category. The relative call demand on the Police Department has been estimated for Lebanon as a function of the frequency of the City's Fire Department responses per 1000 square feet. The resulting ratios are used as an index to adjust the average cost per square foot assigned to the various subcategories of commercial development.

⁸ See comparison of 2020 Census 100% count data with ACS sample estimates pertaining to average household size found in the Appendix.

The impact fee model below summarizes the assumptions for the capital cost allocation of the Police Department facilities by residential vs. non-residential development.

POLICE DEPARTMENT IMPACT FEE - LEBANON, NH - 2024		
Demand Base for Services	Population	Non-Residential Property GFA
Base Year Population (2022 Census Est.) and 2022 Non-Res GFA	15,044	12,912,049
		(@ 858 Sq. Ft. Per Capita)
Capacity of PD Headquarters @ Original Space Standard (Population)	16,000	13,732,570
Supportable New Population & Non-Residential Floor Area	956	820,521
Number of Sworn Officers in Department	Total	Officers Per 1000 Persons
Full Time Police Officers 2023 * (Approved Positions)	35.0	2.3
Number of Sworn Officers Needed @ 2022 Est. Population	37.6	2.5
Planning Basis for Maximum Building Capacity	40.0	2.5
Support for New Development (additional officers)	2.4	@ Original Design Std
<i>* 35 current approved/budgeted positions with 4 vacancies as of November 8, 2023</i>		
Building Floor Area and Replacement Cost	Police Dept	
Floor Area Of Police Headquarters & Storage Outbuilding	14,596	Original Cost Adjusted from Base Year Using RS Means Cost Index October 2023
Planning Standard at Time of Construction - GFA Per Officer	350	
Current Space Demand at Officers/1000 Pop. Standard	13,164	
Space Available to Support New Development	1,432	
Station Development Cost in Base Year (1993)	\$1,764,234	\$5,406,284
Evidence Garage (1998)	\$43,328	\$114,636
Total 2023 Equivalent Development Cost		\$5,520,920
Estimated 2023 Development Cost Per Sq. Ft.		\$378
Land Value of Site (7.66 Acres) - 2023 Assessed Value		\$761,300
Total Land and Buildings		\$6,282,220
Communications, Dispatch, Building and Site Improvements		\$3,435,922
Total Facilities Investment		\$9,718,142
Allocation of Facility Cost By Sector		
Non-Residential Share @ Station Planned Capacity	55%	\$5,344,978
Residential Share @ Station Planned Capacity	45%	\$4,373,164
Average Unit Costs for Capital Facilities		
Average Non-Residential Development Per Sq. Ft.		\$0.39
Average Residential Cost Per Capita		\$273

Original planning standards for the facility assumed 350 square feet per officer.

Allocated costs include the total estimated investment in the facility at current replacement cost.

The residential impact fees per square foot of living area are computed at **\$273** per capita, and the commercial fees at an average of **\$0.39** per square foot.

5. Police Department Impact Fee Schedule

The resulting impact fees are assessed per square foot of building area (gross living area for residential property, and gross floor area for non-residential development).

The residential fees are computed at \$273 per capita times the average number of persons per household. The resulting amount is divided by the average living area of Lebanon dwelling units in two structural categories (single family detached homes and all other units).

The non-residential fees are computed using the average for all non-residential property of \$0.39 per square foot times the estimated relative call demand within the subcategories of property.

The updated Police Department impact fee schedule is shown below.

Police Department Impact Fee 2024			
Residential Impact Fee Per Sq. Ft. Living Area	Average Household Size Estimated 2020	Capital Cost Per Dwelling Unit	Impact Fee Per Sq. Ft. Living Area
Average Housing Unit 2023 (1,200 Sq. Ft.)	2.05	\$560	\$0.47
Single Family Detached (SFD) - 2023 Avg. 1,600 Sq. Ft.	2.34	\$639	\$0.40
Other Housing Units 2023 - Avg. 1,000 Sq. Ft.	1.81	\$494	\$0.49
Non-Residential Fee Per Square Foot Gross Area		Estimated Demand Relative to Average	Fee Per Sq. Ft.
Average Non-Residential	<i>Avg non-res.</i>	1.0	\$0.39
Retail, Restaurants, Lodging	<i>cost per square</i>	1.4	\$0.55
Offices and Commercial Services	<i>foot multiplied</i>	1.0	\$0.39
Industrial, Transportation, Whse, Communic.	<i>by relative call</i>	0.4	\$0.16
Nursing Homes & Licensed Care Facilities	<i>demand factor</i>	0.2	\$0.08
Other Institutional Uses	<i>by sector = fee</i>	1.1	\$0.43

Alternatives:

Residential fee per square foot at 2022 ACS estimated average household at 2.34, single family at 2.82 and “all other” housing units at 1.85 persons per household⁹:

Average Housing Unit	\$0.52 per sq. ft.
Single Family Detached	\$0.48
All Other Housing Units	\$0.49

Assess all non-residential development at the average rate of \$0.39 per square foot. This approach would disregard differences among subcategories of commercial development, but the fee would be proportionate relative to the fees assessed to the residential sector.

⁹ See discussion of average household size estimated by the 2020 U.S. Census 100% count compared with the results of American Community Survey (ACS) sample data.

Part D: Fire Department Impact Fee

1. Scope of Impact Fee

Fire Department impact fees are often based on the total cost of capital facilities including fire station space and major equipment and apparatus. In 2016 a new impact fee was added for the Lebanon Fire Department that recovers a proportionate share of the replacement cost of its major capital equipment.

The existing Central Station has been in service for 70 years. In 2024, construction will begin on a new Central Station that will fully replace the existing station (to be razed). The new facility will have a floor area that is about 70% greater than that of the old station.

Since the new Central Station is designed to accommodate long term needs, and will rectify existing deficiencies in space, the impact fee model has been updated to incorporate a proportionate cost of the new station.

A building condition and space needs assessment of Lebanon public safety buildings¹⁰ was prepared by Lavallee-Brensinger Architects in 2019 with a final report issued in 2020. The assessment found that both the downtown fire station (Central Station) and the West Lebanon fire station were undersized for meeting existing needs, and would require significantly more space to meet 20-year projected needs by 2039. The study indicated:

- The existing Central Station provides 14,987 square feet of space
- Existing space needs as of 2019 required at least 17,890 square feet
- A base year deficiency of at least 2,903 square feet was indicated
- New Central Station to provide 22,930 square feet for 2039 needs

The most recent design for the new Central Station provides for an even larger facility of 25,683 square feet. Given that fire stations are often in service for 40-50 years, it is likely that the new facility will be sufficient to accommodate the City's needs for more than 20-25 years.

The scope of the impact fee computed in this report also includes the value of major capital equipment, principally in vehicles, which as having an estimated replacement cost of \$10.85 million. The inventory of equipment must be replaced periodically as the individual units approach the end of their useful service life.

¹⁰ See City of Lebanon Public Safety Buildings, Phase 1: Existing Conditions Assessment and Space Needs Assessment, final report dated January 15, 2020 by Lavallee|Brensinger Architects.

The basis of assessment described in this section is designed to recoup from new development a proportionate share of the City's capital investment in the new Central Station, and the major vehicles and apparatus of the Fire Department.

2. Proportionate Demand Measures

The scope of Fire Department services includes fire prevention, safety inspections, emergency preparedness, and responses to fire, rescue and ambulance demands throughout the City. These services provide coverage for all classes of property. A number of proportionate measures are used in the fee basis to allocate capital costs to residential and non-residential land uses.

a. Lebanon Fire Department Response Data (NFIRS). The Lebanon Fire Department reports its response data to the National Fire Incident Reporting Service (NFIRS). Each response entry is associated with a property use code and description. Counts of the number of responses by property use code provide a direct proportionate measure of actual runs made by the Fire Department. The response data can then be organized into more general use categories for a proportionate demand analysis. The NFIRS data provided by the Lebanon Fire Department reviewed in this report includes data from prior reports that classified responses by type of property for two five year periods: 2011-2015 and 2016-2020.

LEBANON FIRE DEPARTMENT RESPONSE BREAKDOWN BY PROPERTY USE 2011 to 2023								
Property Use Categories	Fire Department Responses 2011 to 2015	Fire Department Responses 2016 to 2020	Fire Department Responses 2021 to 2023	Total for 2011 to 2023 (to 11-09-23)	2011-2015 % Within Group	2016-2020 % Within Group	2021-2023 % Within Group	2011-2023 % Within Group
Period in Years	5 yrs	5 yrs	3 yrs	13 yr total				
RESIDENTIAL	5,923	7,962	5,403	19,288	100%	100%	100%	100%
One and Two Family	2,573	3,245	1,825	7,643	43%	41%	34%	40%
Multifamily	3,058	4,359	3,357	10,774	52%	55%	62%	56%
Residential Street, Driveway, Oth. Res.	292	358	221	871	5%	4%	4%	5%
NON-RESIDENTIAL	6,409	7,345	4,287	18,041	100.0%	100.0%	100.0%	100.0%
Retail, Restaurant, Lodging, Entertain.	1,787	2,142	1,339	5,268	27.9%	29.2%	31.2%	29.2%
Offices Including Financial, Medical	1,068	1,479	731	3,278	16.7%	20.1%	17.1%	18.2%
Industrial, Storage, Transportation & Communications	481	406	236	1,123	7.5%	5.5%	5.5%	6.2%
Street or Road in Commercial Area	212	251	192	655	3.3%	3.4%	4.5%	3.6%
Hospitals and Mental Health Facilities	859	1,166	718	2,743	13.4%	15.9%	16.7%	15.2%
Nursing Homes, Boarding and Care	1,377	1,332	792	3,501	21.5%	18.1%	18.5%	19.4%
Public Uses and Other Institutional	625	569	279	1,473	9.8%	7.7%	6.5%	8.2%
OTHER NOT ASSIGNABLE BY USE	990	2,787	1,671	5,448				
TOTAL FOR CALLS ASSIGNED BY PROPERTY USE	12,332	15,307	9,690	37,329	100.0%	100.0%	100.0%	100.0%
Residential	5,923	7,962	5,403	19,288	48%	52%	56%	52%
Non-Residential	6,409	7,345	4,287	18,041	52%	48%	44%	48%

* Source: Lebanon Fire Department records entered in National Fire Incident Reporting Service file. Use groupings by BCM Planning, LLC based on property use codes and descriptions within the NFIRS data.

This update adds the most recent data on responses by property classification for the years 2021-2023. In the chart below, the history of responses is summarized by various property use groupings. This information is one of the factors used to estimate proportionate demand

on the department by land use. For the period 2011-2023, **52%** of responses within the City were to residential locations, and **48%** were to non-residential properties.

b. Other Proportionate Measures and Average of Factors. As with the Police Department impact fee, proportionate measures of the demand on related services should include factors other than actual response data, because all properties benefit from public safety coverage even if they do not generate significant call volume. These other indirect measures include total assessed valuation of property, the square footage of buildings, and the relationship between local employment and the City’s resident population.

Proportionate Demand Factors for Fire Department					
Development Sector	Share of Assessed Value 2023 (1)	Share of Fire Department Calls From 2011 to 2023 NFIRS	Local Jobs & Resident Population 2022	Share of Building Floor Area 2023 (2)	Average of Factors (Rounded)
Non-Residential Including Government	56%	48%	56%	59%	55%
Residential Uses - All Housing Types	44%	52%	44%	41%	45%
(1) Based on 2023 total valuation of developed property including non-taxable property, but excluding utilities and vacant land					
(2) Floor area measured by living area for residential, gross area for non-residential (2023)					

When these other factors are averaged with the response data, the proportionate demand ratio for Fire Department services is **55%** non-residential and **45%** residential. These proportions are used in the impact fee model to allocate Fire Department capital costs between the two major use categories.

c. Estimated Response Rates Per 1000 Square Feet of Building Area. Taking this response data a step further, BCM Planning, LLC compared the NFIRS response data for general property classes with building floor areas in similar use categories. This enables a rough estimate of response rates per 1,000 square feet of building floor area, and indicates the relative frequency of Fire Department activity by property type

For residential uses, over the period 2011-2023, the average housing unit generated an average annual response rate of about 0.159 responses per 1000 square feet of living area. The annual estimated response rate for single family homes was 0.113 per 1000 square feet, and twice that at 0.222 per 1000 square feet for “all other” housing (predominantly multifamily housing).

Fire Department Annual Responses Per 1000 Sq. Ft. Residential Living Area				
Residential Grouping	Annualized 2011 to 2015	Annualized 2016 to 2020	Annualized 2021 to 2023	Average for Periods
One and Two Family	0.101	0.115	0.122	0.113
All Other Structure Types	0.194	0.224	0.250	0.222
Total/ Average All Housing	0.137	0.160	0.180	0.159

Non-residential response rates were estimated based on gross floor area within the land use categories. During the 2011-2023 period, the average annual response rate for all non-residential uses was 0.13 responses per 1,000 square feet of gross floor area.

Higher than average response rates were indicated for nursing and licensed care facilities, retail, and offices. Below average response frequency in found among industrial and institutional categories.

Annual Fire Department Responses Per 1000 Sq. Ft. Non-Residential Uses	Period 2011-2015	Period 2016 to 2020	Period 2021 to 2023	Average of Periods
Retail, Restaurant, Lodging	0.114	0.141	0.172	0.157
Office & Commercial Services	0.088	0.155	0.215	0.185
Industrial, Warehouse, Transp, Communications	0.035	0.028	0.036	0.032
Nursing Homes, Licensed Care	0.142	0.172	0.216	0.194
Government & Other Institutional	0.109	0.067	0.153	0.110
Total Non-Residential Uses	0.099	0.114	0.150	0.132
Index of Fire Dept Response Rates to Average Non Residential Property	Annualized 2011 to 2015	Annualized 2016 to 2020	Annualized 2021 to 2023	Average of Periods
Retail, Restaurant, Lodging	1.16	1.24	1.14	1.18
Office & Commercial Services	0.89	1.37	1.43	1.23
Industrial, Warehouse, Transp, Communications	0.36	0.24	0.24	0.28
Nursing Homes, Licensed Care	1.44	1.52	1.44	1.47
Government & Other Institutional	1.11	0.59	1.01	0.90
Total Non-Residential Uses	1.00	1.00	1.00	1.00

In the lower half of the above table, the relative response rates per 1000 square feet for three sample periods have been indexed relative to the average for all non-residential uses. The index numbers are used later in the report to adjust average capital costs per square foot to sub-groups of non-residential development based on relative call frequency.

3. Capital Costs Allocated for New Central Station

The allocation of a portion of station development costs to new development requires the assignment of a spatial standard from which to measure the quantity of space needed to support existing vs. new development. To estimate this ratio, we first presume that the new Central Station will have adequate capability to support its role in Fire Department services through the year 2050.

Linear projections of floor area in non- residential buildings, based on trends from 1990-2003, indicate a 2050 potential service base of just over 17 million square feet (GFA) Central Station space, at 25,683 square feet would represent **1.50 square feet** of Central Station space per

1000 square feet of non-residential GFA. This ratio will be used as a standard for estimating existing deficiencies in station size relative to the base year population, and to estimate the amount of space in the new station that is reasonably attributable to new (future) development.

Applying the same ratio of 1.50 square feet of Central Station space to base year non-residential GFA as of a 2022 base year¹¹ of 12.9 million square feet, the space standard indicates a base year need for 19,368 square feet of Central Station space. At this spatial standard, the old Central Station has an existing deficiency of 4,381 square feet

At the spatial standard shown, a subtotal of 6,315 square feet (25% of the floor area of the new Central Station) is reasonably related to accommodation of new development. (The balance of the floor area would replace the existing floor area of the old station, and rectify the existing deficiency in space that already exists.)

SPATIAL STANDARDS FOR IMPACT FEE ALLOCATION - NEW CENTRAL FIRE STATION		
Derived Space Ratios and New Station Capacity	Base Year 2022	Supportable Service Base
Central Station Floor Area Base Year and Projection Year	14,987	25,683
Non-Residential Gross Floor Area Actual, Projected *	12,912,049	17,178,000
Station Floor Area Per 1000 Sq. Ft. GFA Non-Residential	1.16	1.50
Estimated Base Year Deficiency in Space Using 2050 Standard	Sq. Ft. Needed in 2022	Indicated Base Year Space Deficiency
Base Year Need at 1.50 Sq. Ft. Station Space per 1000 GFA Non-Residential	19,368	4,381
Total Floor Area New Central Station	25,683	% of Total Floor Area
Replace Existing Space (Old Station)	14,987	58%
Rectify Base Year Deficiency in Space	4,381	17%
Additional Space Needed for Projection Year	6,315	25%
Residential Sector Service Capacity Assumptions *	Base Year 2023	Supportable Service Base
Total Housing Units	7,625	10,144
Households	7,189	9,564
Average Household Size (Held Constant at 2020 Average)	2.05	2.05
Household Population	14,738	19,607
Group Quarters Population	306	407
Total Population	15,044	20,014
* Residential projections assume that the pace of residential development remains in proportion to non-residential development (square feet) at base year (2022) ratios. It is a proportionate estimate of the maximum service population supportable by the new station.		

The impact fee model will assign 25% of capital costs of the new Central Station to new development, and a credit allowance will be provided for the cost to construct space needed to rectify a need to expand station size by 4,381 square feet relating to existing needs.

¹¹ Base year needs are computed here as of 2022 because it is the most recent year for which population and housing unit counts are currently available.

Portion of Central Station Development Costs Allocated in Impact Fee		
Selected Development Cost Components *	2023 Cost Estimate	With Construction Cost Escalation to 2024 @ 5.2%
Architectural Services Subtotal	\$ 1,051,370	\$ 1,051,370
Site Work Including Demolition	\$ 1,095,685	\$ 1,152,661
Construction of New Station	\$ 14,678,804	\$ 15,442,102
Total Design Construction Cost Subtotal	\$ 16,825,859	\$ 17,646,133
<i>* Excludes construction of temporary station, owner costs, and contingency allowance</i>		
<i>Source of component costs: Project budget worksheet Rev 5, 09-26-2023, Lavallee Brensinger Architects</i>		

The total development cost of the new Central Station is expected to be \$22.7 million. For the purpose of impact fee assessment, we have limited the cost basis of the fee to include

only selected construction costs within the budget. The cost of architectural services, site work, and construction of the new station is estimated to cost **\$17.65 million**, which excludes construction of a temporary fire station, owner costs, and a contingency allowance.

4. Major Capital Equipment Costs Allocated

Lebanon Fire Department Capital Assets - Vehicles and Emergency Traffic Control System					
Model Year	Item Description	Age	Replacement Year	Replacement Cost	Years Service Life
2016	Car 3 - Ford Explorer	7	2024	\$ 60,000	8
2024	Ambulance 3 Ford F-550 Ambulance	0	2024	\$ 460,000	6
2017	Car 5 - Ford Explorer	6	2025	\$ 90,000	8
2015	Car 6 - Ford Explorer	8	2025	\$ 75,000	9
2025	Ladder 1 - Emergency One Hurricane 110' Aerial Ladder	Ordered	2025	\$ 1,700,000	30
2006	Engine 2 - E-One Contender Pumper	Ordered	2026	\$ 1,200,000	20
2016	Ambulance 2 F-450	7	2027	\$ 450,000	11
2017	Car 4 - Ford F250	5	2028	\$ 60,000	11
2020	AMB 1 - Ford F-550 Ambulance	2	2028	\$ 450,000	8
2021	Car 1 Ford Expedition	1	2029	\$ 95,000	8
2021	Ford F350 Utility 1	2	2029	\$ 105,000	8
2010	John Deere Gator	13	2030	\$ 18,000	20
2010	Achilles Boat With Trailer	13	2030	\$ 20,000	20
2015	Utility 2 Ford Utility Bucket Truck	8	2030	\$ 135,000	15
2023	Car 2 - Chevy Tahoe	0	2031	\$ 95,000	8
2025	Ambulance 4 F-550 Ambulance	Planned	2031	\$ 460,000	6
2014	2014 E-One Quint	9	2039	\$ 1,500,000	25
2017	Engine 9 - E-One Cyclone	6	2042	\$ 1,400,000	25
2018	E-One Typhoon Heavy Rescue	5	2043	\$ 1,000,000	25
2020	Engine 7 - E-ONE	3	2045	\$ 1,300,000	25
2021	Traffic Intersection Control - Emergency Pre-emption System and Traffic Cameras (City Share only @ 50% of total; balance paid by DHMC)	2	City share of cost adjusted to 2023 based on ENR	\$ 178,929	
Total Vehicles & Emergency Traffic Control System				\$ 10,851,929	
Sources:	Estimated vehicle replacement costs from Fire Chief, Lebanon Fire Department, November 2023. City cost share of Traffic Control System based on City Fixed Asset file, less DHMC contribution of \$180,000, adjusted to 2023 using the Engineering News Record Construction Cost Index.				

Based on information provided by the Lebanon Fire Department, the total replacement cost of fire and ambulances vehicles (plus a portion of the cost of emergency traffic intersection controls) totals about **\$10.85 million**. It is assumed that all of the listed capital equipment, if periodically replaced or updated, will be available to support Fire Department needs through 2050.

5. Allocation of Capital Cost by Property Type

Total capital costs of Fire Department facilities allocated within the impact fee comprise nearly \$28.5 million for construction costs of the Central Station and the replacement cost of principal vehicles and traffic controls. The long term service base for the new Central Station is estimated using a linear projection of non-residential floor area to the year 2050 (just over 17 million square feet). For the residential portion of the impact fee allocation, a commensurate maximum service population is needed.

In the base year 2022, there were 858 square feet of non-residential floor area per capita. Applying this ratio to the 2050 non-residential floor area, a supportable residential service base of about 20,000 persons is assigned.¹² Neither projection assumes any regulatory or land availability constraints.

25% of total capital investment is assumed to the associated with serving new development. 55% of costs are allocated to the non-residential sector, and 45% are assigned to residential uses.

2024 FIRE DEPARTMENT IMPACT FEE WITH NEW CENTRAL STATION LEBANON, NH			
Demand Base for Services	Total Population	Non-Residential Property Sq. Ft. GFA	Non Residential Sq. Ft. Per Capita
US Census Pop. Estimate 2022 and 2022 Non-Residential GFA	15,044	12,912,049	858
Estimated Supportable Service Base New Central Station	20,014	17,178,000	858
Base Year Demand as Percentage of 2050 Demand	Population	Non-Res GFA	Average
	75%	75%	75%
Floor Area of Buildings	Replacement of Existing Central Station with Expanded Facility on Same Site		
Total Floor Area of New Central Station	25,683	Share of Floor Area in New Station	
Station Space Per 1000 Sq. Ft. Non-Residential GFA in 2050	1.50		
Base Year Space Needs @ Same Standard	19,368		
Existing Floor Area (Replaces Sq. Footage in Old Station)	14,987		
Indicated Base Year Deficiency in Space	4,381	58%	
Balance Attributable to New Development	6,315	17%	
		25%	
Cost Allocation to New Development	Total Costs	% Existing Development	% New Development
Construction Cost of New Central Station	\$17,646,133	75%	25%
Replacement Cost Major Vehicles and Apparatus	\$10,851,929	75%	25%
Total Capital Costs Allocated	\$28,498,062	\$21,402,874	\$7,095,188
Non-Residential @ 55%	\$15,673,934	\$11,771,580	\$3,902,354
Residential @ 45%	\$12,824,128	\$9,631,294	\$3,192,834
Non Residential Development Gross Floor Area	17,178,000	12,912,049	4,265,951
Population (Residential Demand Base)	20,014	15,044	4,970
Non Residential Development Cost Per Sq. Ft. GFA	\$0.91	\$0.91	\$0.91
Residential Cost Per Capita	\$641	\$640	\$642

The dollar values assigned to new development are divided by the increments in non-residential floor area and population to derive capital costs per square foot for non-residential uses at an average capital cost of **\$0.91** per square foot GFA, and **\$642 per capita** for residential uses. The residential costs per capita are then assigned to average household size and average dwelling unit living area to arrive at a cost per square foot for single family and all other housing types. The average non-residential cost per square foot is later adjusted for several sub-categories based on relative frequency of Fire Department responses per 1000 square feet.

¹² The future service base assumptions for non-residential floor area and resident population are not likely to be realized at the same time. A population estimate computed as a function of non-residential development is necessary to keep the fees between the two sectors proportionate. The population shown here is not a forecast; it is solely to define a supportable service population that is proportionate to the non-residential sector.

6. Credit Allowance for Pre-Existing Space Deficiency

Credit Allowance for Existing Space Deficiency in Old Central Station Space		
Credit Allowance Base Year Space Deficiency	4,381	Square Feet
Station Construction Cost Plus Architectural	\$687	Cost Per Sq. Ft.
Cost to Rectify Base Year Space Deficiency	\$3,009,747	
City Assessed Valuation November 2023	\$2,744,378,645	
Credit Allowance Per \$1,000 Assessed Valuation	\$1.10	
Development Category	Avg Valuation Per Sq. Ft.	Credit Allowance Per Sq. Ft.
Residential		
Average Housing Unit	\$183	(\$0.20)
Single Family Detached	\$232	(\$0.26)
All Other Housing	\$138	(\$0.15)
Non-Residential		
Retail, Restaurants, Lodging	\$130	(\$0.14)
Offices and Commercial Services	\$140	(\$0.15)
Industrial, Transportation, Whse, Communic.	\$80	(\$0.09)
Nursing Homes, Licensed Care	\$160	(\$0.18)
Other Institutional Uses	\$160	(\$0.18)

An existing space deficiency of 4,381 square feet was estimated earlier for the old Central Station facility.

A credit allowance for the construction cost of that amount of floor area is computed here, since new development will pay to correct deficiencies that already existed prior to establishment of the fee.

7. Impact Fee Assessment for Fire Department Facilities

The residential impact fees are computed at the per capita cost of **\$642** times the average number of persons per household, with the result divided by the 2023 average living area of dwelling units to arrive at a capital cost per square foot of living area. The credit allowance is then deducted from that result to arrive at the impact fee per square foot. Non-residential fees are computed by the average non-residential cost of **\$0.91** per square foot times a multiplier based on relative Fire Department response rates, less the credit allowance.

Fire Department Impact Fees					
Residential Cost Per Sq. Ft. Living Area	Estimated Average Persons Per Household 2020	Average Living Area Per Unit	Capital Cost Per Sq. Ft. Living Area	Less Credit Allowance	Impact Fee Assessment Per Sq. Ft. Living Area
Average Housing Unit 2023 (1,200 Sq. Ft.)	2.05	1,200	\$1.10	(\$0.20)	\$0.90
Single Family Detached (SFD) - 2023 Avg. 1,600 Sq. Ft.	2.34	1,600	\$0.94	(\$0.26)	\$0.68
Other Housing Units 2023 - Avg. 1,000 Sq. Ft.	1.81	1,000	\$1.16	(\$0.15)	\$1.01
Non-Residential Impact Fees Per Sq. Ft. Gross Area	Local Rate Multiplier Relative to Avg Non Residential Calls Per 1000 Sq. Ft. Gross Area		Capital Cost Per Sq. Ft. Gross Area	Less Credit Allowance	Impact Fee Per Sq. Ft. Gross Area
Average Non-Residential	1.0		\$0.91		
Retail, Restaurants, Lodging	1.2		\$1.09	(\$0.14)	\$0.95
Offices and Commercial Services	1.2		\$1.09	(\$0.15)	\$0.94
Industrial, Transportation, Whse, Communic.	0.3		\$0.27	(\$0.09)	\$0.18
Nursing Homes, Licensed Care	1.5		\$1.37	(\$0.18)	\$1.19
Other Institutional Uses	0.9		\$0.82	(\$0.18)	\$0.64

Alternatives:

Residential fee per square foot at 2022 ACS estimated average household at 2.34, single family at 2.82 and “all other” housing units at 1.85 persons per household.¹³

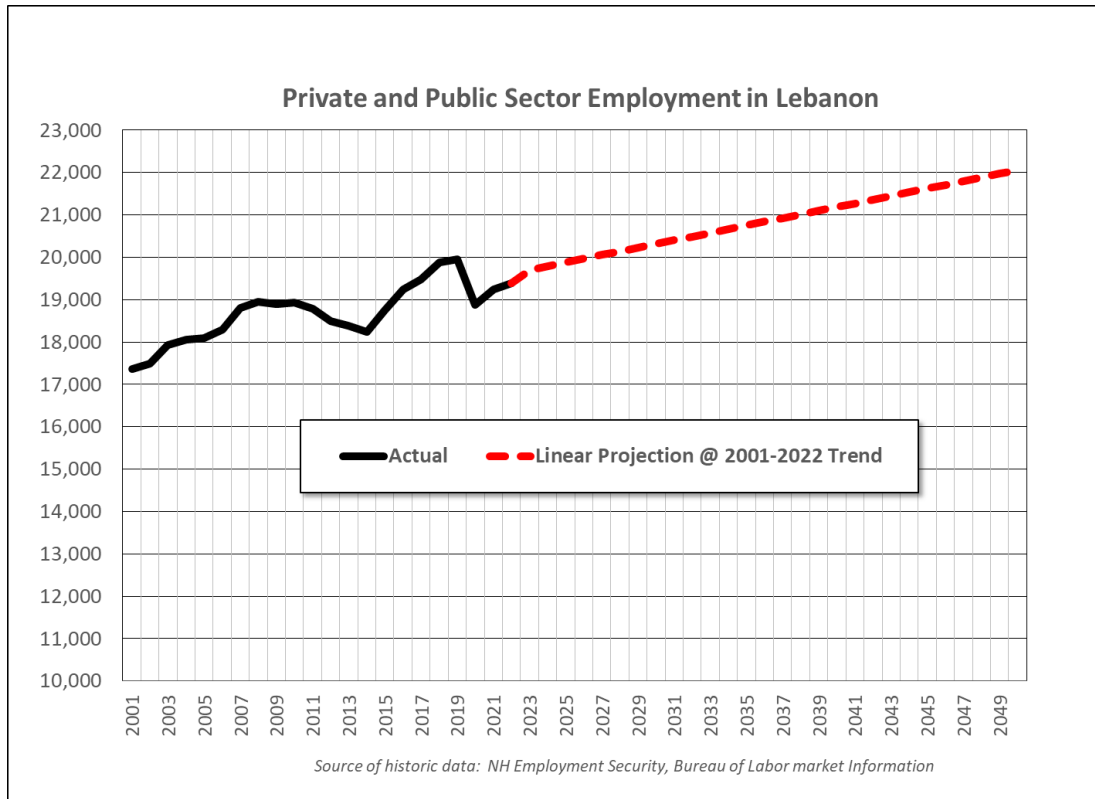
Average Housing Unit	\$ 1.05 per sq. ft.
Single Family Detached	\$ 0.87
All Other Housing Units	\$ 1.04

Assess all non-residential development at the average rate of \$0.91 per square foot. This approach would disregard differences among subcategories of commercial development, but the fee would be proportionate relative to the fees assessed to the residential sector.

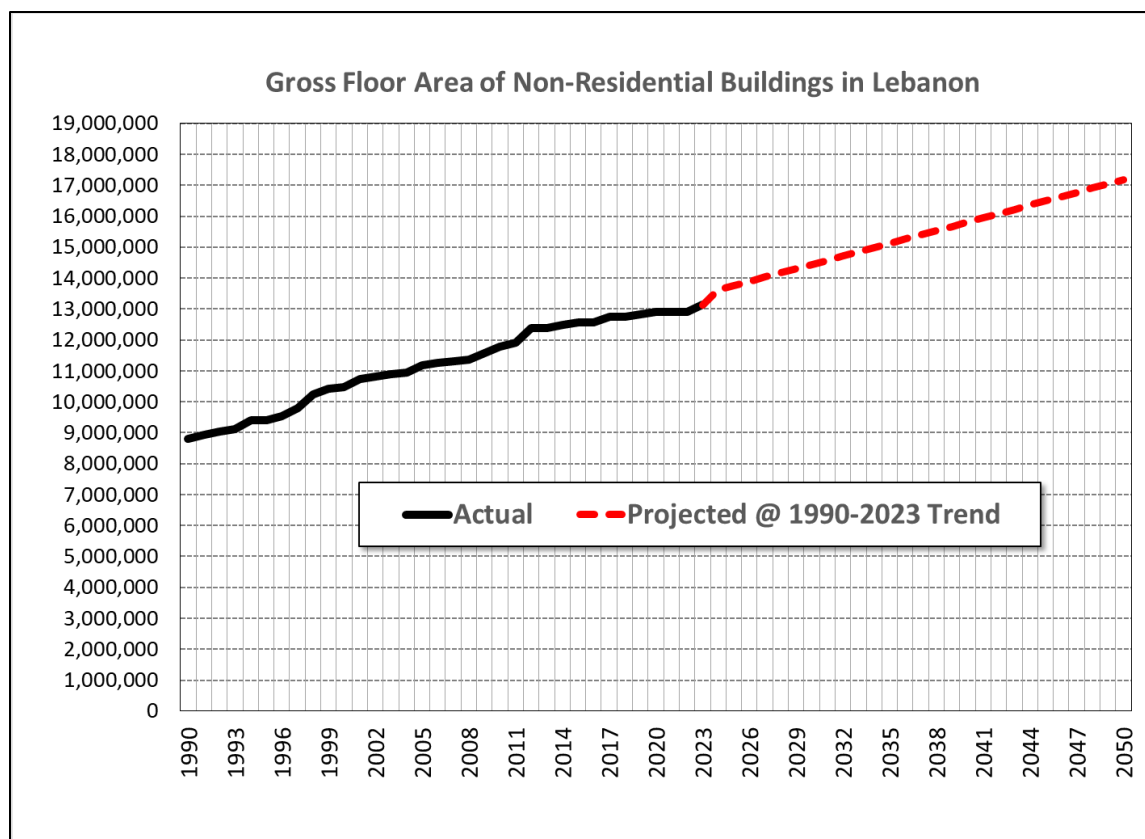
¹³ See discussion of U. S. Census 2020 average household size from 100% count information vs. average household size indicated by recent American Community Survey (ACS) sample data.

Appendix

1. Trends in Employment, Non-Residential Gross Floor and Residential Living Area

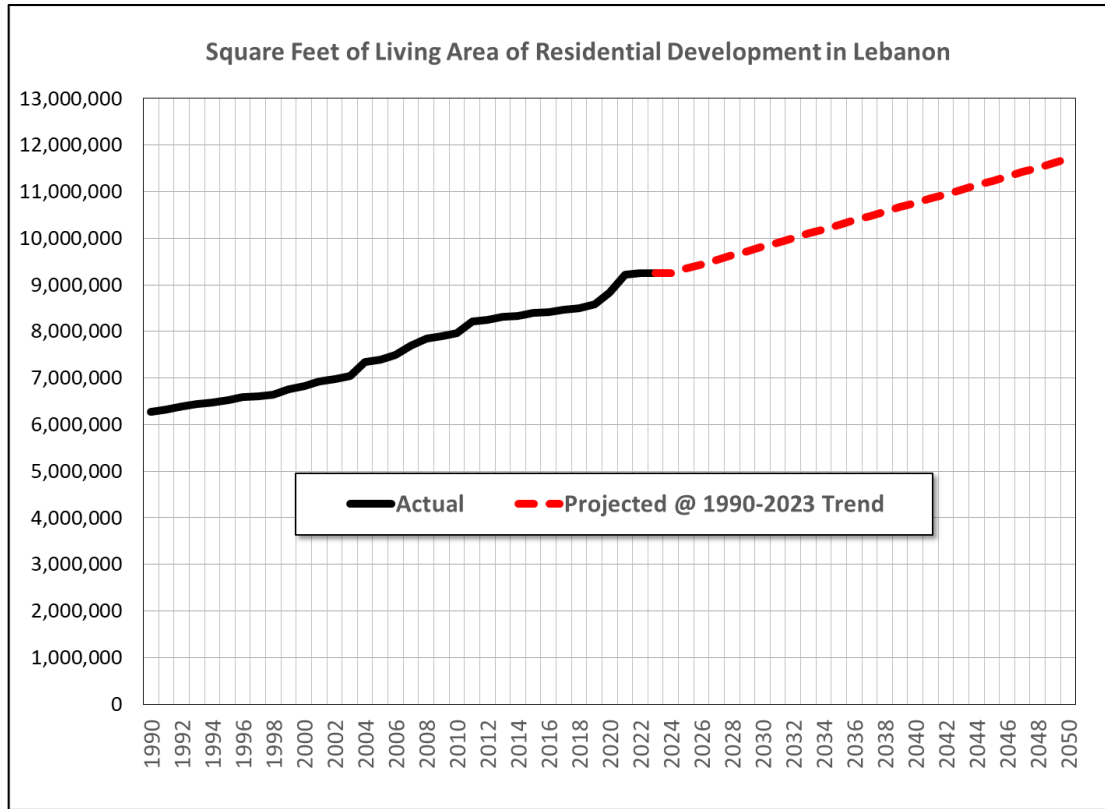


Year	Employed in Lebanon
2001	17,358
2010	18,929
2020	18,878
2022	19,392
2030 (p)	20,316
2040 (p)	21,186
2050 (p)	22,057



Year	Gross Floor Area Non-Residential Buildings (1)
1990	8,794,669
2000	10,468,119
2010	11,773,757
2020	12,902,993
2021	12,908,593
2022	12,912,049
2023	13,130,679
2030(p)	14,439,129
2040 (p)	15,808,668
2050 (p)	17,178,207

(1) Cumulative historical data estimated from 2023 property assessment records and year built assigned to buildings. Includes tax exempt property and government uses. Projections based on linear trend from 1990-2023



Year	Residential Living Area Sq. Ft. (1)	Total Housing Units (2)	Average Living Area Per Unit Sq. Ft.
1990	6,278,429	5,718	1,098
2000	6,818,705	5,707	1,195
2010	7,966,092	6,649	1,198
2020	8,834,179	7,201	1,227
2023 *	9,252,873	7,617	1,215
2030(p)	9,817,916	8,182	1,200
2040 (p)	10,760,354	8,967	1,200
2050 (p)	11,702,792	9,752	1,200

(1) Living area estimates based on 2023 assessment data and indicated "year built".
Projections (p) based on linear trend from 1990-2023.

(2) 1990-2020 housing units are U.S. Census 100% counts; 2023 units based on
assessment data, excludes units in mixed use buildings; includes accessory units.
Projections based on average living area per unit of 1,200 square feet.

2. Use of U.S. Census 2020 data vs. American Community Survey (ACS) Samples

Average household size is used to compute residential impact fees for Recreation, Police Department, and Fire Department fees.

The ACS 5-year sample data estimates a much higher average household size for average households and owner occupied units than the 100% 2020 Census.

Comparison of the 2020 Census column to the 2022 ACS below indicates that the ACS estimated housing occupancy rate is only 84% vs. 94.5% in the 2020 Census.

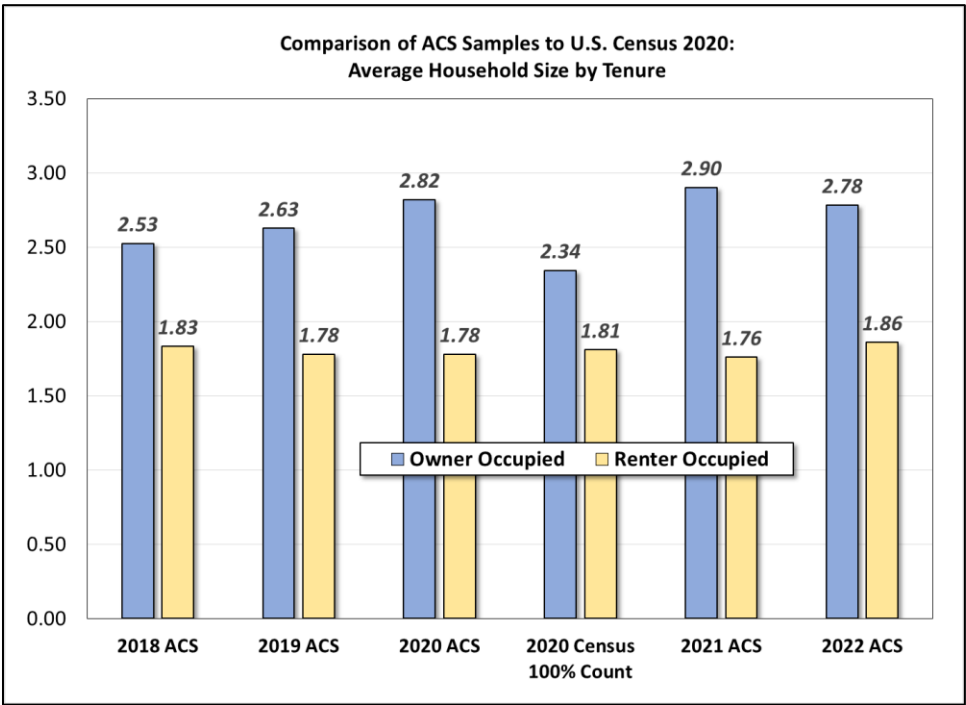
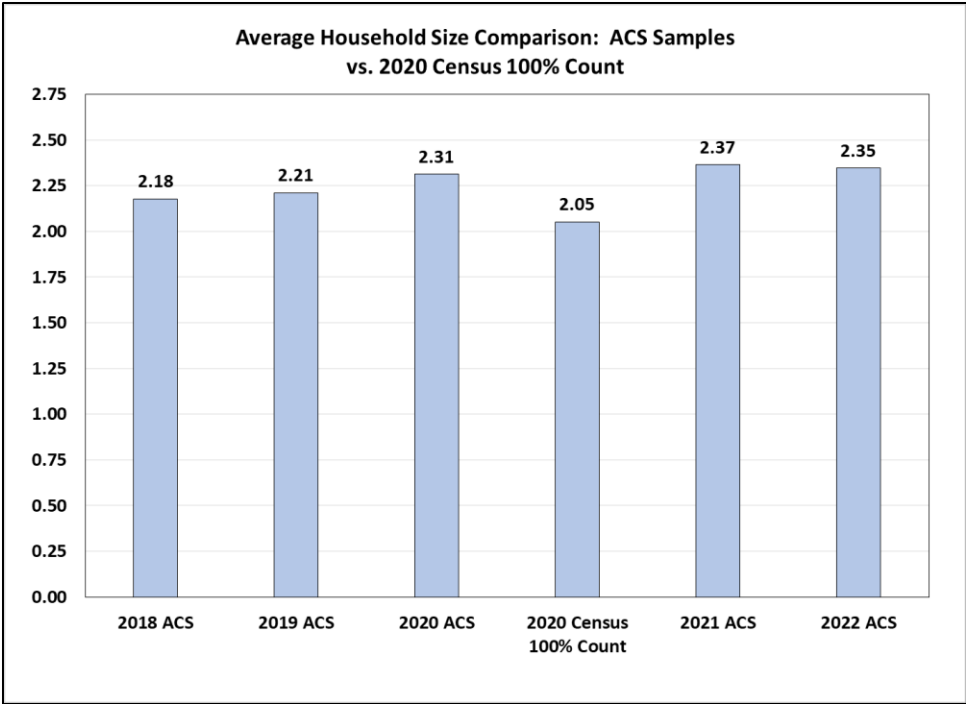
ACS data indicates that 47.5% of households are renters, while the 2020 Census shows that it is 54%. The 2022 ACS estimates only 2,909 renter occupied units, which is nearly 800 fewer units than counted in 2020 by the Census.

Average household size has been declining over the long term, and it seems unlikely that average household size has recently increased, particularly since most recent residential development has been in multifamily units.

The use of the ACS sample estimate average household size estimates may result in a less equitable assignment of costs between single and multifamily units.

DEMOGRAPHIC HISTORY				ACS Estimate 2022 (Sample 2018-2022)
LEBANON, New Hampshire	U. S. Census 100% Count Data			
	2000	2010	2020	
Population	12,568	13,151	14,282	14,515
Less Group Quarters	290	144	316	232
Population in Households	12,278	13,007	13,966	14,283
Housing Units Total	5,707	6,649	7,201	7,258
% Occupied	96.4%	93.0%	94.5%	84.0%
Households (All Occupied Units)	5,500	6,186	6,805	6,099
Owner Occupied	2,893	3,050	3,102	3,190
Renter Occupied	2,607	3,136	3,703	2,909
Percent Renter Occupied	47.4%	50.7%	54.4%	47.7%
Average Household Size	2.23	2.10	2.05	2.34
Population Under Age 5	803	828	707	691
Population Age 5-17 (School Age)	1,753	1,684	1,542	1,493
School Age Per Household	0.319	0.272	0.227	0.245

The charts and tables that follow below compare the average household size estimates of the ACS samples over the past five years to that of the U. S. Census 100% count. The differences are particularly pronounced for owner occupied housing.



Comparison of Housing and Household Size: ACS Samples to 2020 Census 100% Count

Housing and Occupancy	ACS 5-Year Sample Data for Year Ending:					2020 Census 100% Count
	2018	2019	2020	2021	2022	
Total Housing Units (Occupied and Vacant)	6,602	6,597	6,742	7,000	7,258	7,201
Persons in Occupied Units	13,443	13,449	13,540	14,157	14,283	13,966
Owner Occupied	7,763	8,138	8,463	9,213	8,876	7,270
Renter Occupied	5,680	5,311	5,077	4,944	5,407	6,696
Number of Occupied Units	6,175	6,083	5,855	5,986	6,089	6,805
Owner Occupied	3,074	3,099	3,002	3,175	3,190	3,102
Renter Occupied	3,101	2,984	2,853	2,811	2,909	3,703
% Own	49.8%	50.9%	51.3%	53.0%	52.4%	45.6%
% Rent	50.2%	49.1%	48.7%	47.0%	47.8%	54.4%
Persons Per Occupied Unit	2.18	2.21	2.31	2.37	2.35	2.05
Owner Occupied	2.53	2.63	2.82	2.90	2.78	2.34
Renter Occupied	1.83	1.78	1.78	1.76	1.86	1.81

2020 Census 100% Count	2000 Census	2020 Census Less 2020 ACS	2020 ACS as % of 2020 Census
Total Housing Units	7,201	459	94.0%
Persons in Occupied Units	13,966	426	97.0%
Occupied Units	6,805	950	86.0%
Owner Occupied	3,102	100	97.0%
Renter Occupied	3,703	850	77.0%
% Owner	45.6%	5.7%	112.5%
% Renter	54.4%	-5.7%	89.5%
Average Household Size	2.05	0.26	112.8%
Owner Occupied *	2.34	0.48	120.5%
Renter Occupied *	1.81	-0.03	98.3%

* Estimated from 2020 Census household count by tenure by persons in household

ACS 2022 Estimates of Average Household Size by Tenure and Structure Type in Lebanon

Based on American Community Survey (ACS) Estimates 2018-2022 Sample Data

Tenure and Structure Type	Persons in Occupied Units	Occupied Units	Persons Per Occupied Unit
Owner Occupied	8,876	3,190	2.78
Single Family Detached or Attached	7,747	2,691	2.88
Two to Four Family	137	84	1.63
Five or More Family	359	181	1.98
Mobile Home	633	234	2.71
Renter Occupied	5,407	2,909	1.86
Single Family Detached or Attached	941	387	2.43
Two to Four Family	1,223	692	1.77
Five or More Family	3,200	1,814	1.76
Mobile Home	43	16	2.69
Total Occupied	14,283	6,099	2.34
Single Family Detached or Attached	8,688	3,078	2.82
Two to Four Family	1,360	776	1.75
Five or More Family	3,559	1,995	1.78
Mobile Home	676	250	2.70
All Occupied Units	14,283	6,099	2.34
Single Family Detached or Attached	8,688	3,078	2.82
All Other Occupied Units	5,595	3,021	1.85

CITY OF LEBANON
APPLICATION FOR

SPECIAL EXCEPTION	☐	☒	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☐	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☐	CONDITIONAL USE PERMIT

☐ OTHER _____**PROPERTY OWNER (APPLICANT):**

NAME: Mary Hitchcock Memorial Hospital TEL.#: 603-650-5741

MAILING ADDRESS: attn: David Stiger, One Medical Center Drive, Lebanon, NH 03756

E-MAIL ADDRESS: David.L.Stiger@hitchcock.org

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Engineering Ventures, P.C. TEL.#: 603-442-9333

MAILING ADDRESS: attn: Nicholas Fiore, 85 Mechanic Street, Suite E2-3, Lebanon, NH 03766

E-MAIL ADDRESS: nikf@engineeringventures.com

PROJECT LOCATION:

TAX MAP #: 10 LOT#: 8 PLOT #: ZONE: MC

STREET ADDRESS OF PROJECT: One Medical Center Drive, Lebanon

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES ☒ NO **HISTORIC DISTRICT** ☐ YES ☒ NO

FLOOD PLAIN ☐ YES ☒ NO

SCOPE OF PROJECT:

Minor expansions to existing parking lots.

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL

PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL

IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC**

USE: Medical center

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on _____, 20____, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY

OWNER: David L StigerDATE: 3.7.2024

NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

PROPERTY

OWNER: David L StigerDATE: 3.7.2024

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #			
3/11/2024	10-8	PB2024-12-SPA			

April 30, 2024

City of Lebanon Planning Board
c/o Tim Corwin, Senior Planner and Zoning Administrator
51 North Park St
Lebanon, NH 03766

RE: Site Plan Review Application
DHMC Parking Lot Expansions
Tax Map 10 Lots 8

Dear Chair Faunce & the Lebanon Planning Board,

On behalf of Mary Hitchcock Memorial Hospital, Engineering Ventures, PC (EV) is pleased to submit the enclosed Site Plan Review application package for parking lot expansions to four (4) parking lots of the Dartmouth Hitchcock Medical Center campus. Three of the lot expansions will better meet staff parking needs, and the fourth will provide needed additional parking for the hospital's emergency department. Additionally, the project includes some widening of the driveway in the compressed natural gas (CNG) area to better accommodate access for the delivery vehicles.

Lot 2, near the north end of campus will be expanded in 3 locations and gain a total of 26 spaces.

Lot 4, south of Borwell Building, will receive a small addition of 6 parking spaces.

Lots 8, also south of Borwell Building, will be expanded to add 16 spaces.

The Emergency Department parking lot, Lot E, will be reconfigured somewhat and expanded. The existing lot will be widened by 2 feet, lengthened to add spaces, configured with angled parking, and made one way. The driveway will be reconfigured to remove a slip lane and reduce conflicting turning movements. An additional lot will be added east of the main driveway. In total, the parking area will expand from 28 existing spaces to 52.

Construction is slated to begin in June of this year. The hope is to have it completed this year as well, but it might not be completed until spring or summer of 2025, depending on contractor and materials availabilities.

We look forward to discussing this project with you at the staff review on Monday, May 13, 2024. Please let us know if you need any else in the meantime.

Best Regards,
ENGINEERING VENTURES, PC

A handwritten signature in blue ink, appearing to read 'Nicholas A. Fiore', with a long horizontal flourish extending to the right.

Nicholas A. Fiore, PE
Vice President

Cc: Dave Stiger, DH

Enc: SPR Application Form, Checklist, Certified Notification List, & Waivers Application
Written Responses to Staff Comments
Full set of revised plans: 1 @ 24x36 and 6 @ 11x17
Drainage Analysis
Electric Vehicle Parking Memo (by DH)



City of Lebanon, New Hampshire APPLICATION FOR WAIVERS

Office Use Only

Date Received: _____

File No.: _____

PROJECT INFORMATION

Name of Applicant: Mary Hitchcock Memorial Hospital

Project Name: DHMC Parking Lot Expansions

Project Address: 1 Medical Center Drive, Lebanon, NH 03756

WAIVER REGULATIONS

In order to grant a Waiver from a requirement of the City of Lebanon Site Plan Review or Subdivision Regulations, the Planning Board must find that the Waiver is justified under one of the following criteria (See Article VII of the Site Plan Review Regulations and Section 7.15 of the Subdivision Regulations):

Criteria A. Strict conformity would pose an unnecessary hardship to the Applicant and waiver would not be contrary to the spirit and intent of the regulations;

OR

Criteria B. 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.

WAIVER REQUEST(S)

I (we) hereby request a Waiver from:

[You can respond in the space provided, or attach a separate statement. Please be prepared to address each request during your public hearing. You must show that you have justified granting the Waiver(s).]

5.1.E(5)

1. Section 5.1.E(5) of the (circle one) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (circle one) **Criteria A / Criteria B** because A topographic survey of the project sites was conducted for this project, but the site is such a small portion of the entire property that it would have been impractical to survey the whole property. A current boundary survey is on file with the City. The project will have no effect of any rights-of-way or easements on the property.
2. Section All of the (circle one) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (circle one) **Criteria A / Criteria B** because This project is limited to a relatively small portion of a large property. The Applicant request a general waiver from having to satisfy the Site Plan Review Regulations outside the portion of the property that is proposed to be redeveloped.

3. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
4. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
5. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
6. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
7. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
8. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____

SIGNATURE

I (we) hereby submit this application to the Planning Board and attest that to the best of my (our) knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As the applicant or as the agent of the applicant, I attest that I am duly authorized to act in this capacity.

Signature of Applicant:  Date: 03/11/2024

CITY OF LEBANON, NH SITE PLAN REVIEW REGULATIONS TECHNICAL CHECKLIST	
PROJECT NAME: DHMC Parking Lot Expansions	
APPLICANT: Mary Hitchcock Memorial Hospital	DATE: 04/30/2024
GENERAL SUBMISSION REQUIREMENTS:	

All applications to the Planning Board for Site Plan Review must be submitted by 12:00 Noon on the day of the filing cutoff. [§4.7.B] Submissions must be accompanied by the following information or review of the application may be delayed:

A properly completed and signed Application Form *(available at www.lebanonnh.gov)*. [§5.1.A]

The appropriate filing fees. [§5.1.B]

A written project description. [§5.1.C]

A list of the names and mailing addresses of all persons to be notified, by certified mail, of the public hearing. [§5.1.D]

A completed and signed Application for Waivers *(available at www.lebanonnh.gov)* [§5.1.G.3]

A completed and signed Technical Checklist *(available at www.lebanonnh.gov)*. [§4.7.B]
[Applicants must complete the entire checklist to ensure that all necessary information and materials have been provided with the application or that written requests for waivers have been properly provided in accordance with Article VII of the Site Plan Review Regulations, as appropriate.]

Two (2) full-size sets of the Site Plan set. [§5.1.E]

A digital copy of the Site Plan set in .PDF format. [§5.1.F]

NOTE: Applications shall contain sufficient information to enable the City Staff and the Planning Board to evaluate the proposed development for compliance with the Zoning Ordinance, the Planning Board's Regulations, and other applicable City Codes, and for the Planning Board to make an informed decision.

All required application materials shall be submitted as a single inclusive package, including any appropriate waiver requests as permitted by the Regulations. Submission of a complete application package ensures that the review process by City Staff is as efficient and effective as possible.

The purpose of the filing deadline is to provide adequate time for City review of the proposal. Submission of any altered, additional, or substitute application materials required by Article V of these Regulations, subsequent to the filing deadline, other than as directed by City Staff, shall cause the application to be deemed untimely filed, and such application shall not be heard until a subsequent month.

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

PLAN SUBMITTAL TECHNICAL CHECKLIST:

NOTE: Site plan drawings shall include the information described below pursuant to Article V of the Lebanon Site Plan Review Regulations. Plans shall be submitted on sheets no larger than 24" x 36". Plan sets with multiple sheets shall include sheets of uniform size and be bound on the left edge. When more than three (3) sheets are required, an additional cover sheet shall be attached including a table of contents. A scale of not smaller than one (1) inch equals 40 feet is suggested. All lettering shall be of a size and type that is legible.

In order to facilitate the use of the City's Geographic Information System (GIS) for planning purposes, all surveys and engineered plans submitted for Site Plan Review shall utilize the NH State Plane Coordinate system and shall reference the North American Vertical Datum of 1988 (NAVD 88), unless prior approval to use an alternate coordinate system and/or vertical datum is granted by the Planning & Development Department.

A written request for waiver shall be required, pursuant to Article VII of the Site Plan Review Regulations, for any submission requirement for which the information or data is not provided by the applicant. [§5.1.G(4)] NOTE: The submission requirements described in paragraphs 5.1.E(1) through 5.1.E(4) shall not be waivable under the procedures of Article VII of the Site Plan Review Regulations. [§5.1.E]

[Checklist begins on following page]

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

[illegible]

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(6) - Existing and proposed grades, including topographic contours, with spot elevations. Where the grade is less than 20%, the contours shall be at 2-foot intervals; otherwise they shall be at 5-foot intervals. All contours shall be referenced to USGS or FEMA Flood Insurance Rate Map (FIRM) datums, as appropriate. Existing topographic information shall be prepared by a professional engineer registered in New Hampshire or land surveyor licensed in New Hampshire.	☒	☐
5.1.E(7) - Shape, size, height, and location of all existing structures located on site and within 200 feet of site.	☒	☐
5.1.E(7) - Elevation views indicating shape, size, height, and location of all proposed structures, including expansions of or additions to existing buildings. Such elevation views shall provide sufficient detail to allow for review by the Board and City staff of the adequacy of proposed access and egress points, walkways, lighting, and other site-related improvements.	☐	☐
5.1.E(8) - Location of existing natural features such as streams, marshes, lakes, ponds, wetlands, rock outcrops, or wooded areas, and existing man-made features such as roads and structures. Indicate those natural and man-made features that are to be removed, retained, or altered.	☒	☐
5.1.E(8) - Wetlands on the property shall be delineated by a NH Certified Wetlands Scientist, whose seal and signature shall appear on the plan. Documentation in the form of U.S. Army Corps of Engineers New England District Wetlands Delineation Data Sheets and/or other field notes and materials concerning the delineation shall be submitted.	N/A ☐	☐
5.1.E(9) - Zoning District, Tax Map and Lot number, and use of abutting properties within 200 feet of property.	☒	☐
5.1.E(9) - Location of streets, pedestrian paths/trails, and bicycle routes within 200 feet of the site boundary; and the location of curb cuts and vehicle accesses within 200 feet of the site boundary.	☒	☐
5.1.E(10) - Proposed streets, driveways, emergency vehicle accesses, parking spaces, and sidewalks, with indication of dimensions and direction of travel. Show required sight distances at curb cuts and dimensions for the inside radii of all curves.	☒	☐
5.1.E(10) - Vehicle and bicycle parking spaces shall be numbered.	N/A ☐	☐
5.1.E(10) - Loading spaces and facilities used in connection with any structures on the site shall be shown	N/A ☐	☐
5.1.E(10) - Total square footage and percentage of the lot covered by impervious cover shall be shown.	☒	☐
5.1.E(11) - Parking area safety measures including raised crosswalks/speed tables, signage, walkway lighting, striping and similar markings such as dedicated pedestrian/bicycle crossings and lanes through parking areas, fire lanes, compact and/or electric vehicle parking/charging, parking wayfinding, ADA signage and access aisles.	☒	☐
5.1.E(12) - Size and location of all existing and proposed public and private utilities. <i>(Note: the applicant is encouraged to submit a Sewer Use Permit Application and obtain a Notice of Permitted Allocation, and to obtain a Water Use Permit prior to submission of the Site Plan Review application.)</i>	☒	☐

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(13) - Plan for outdoor lighting showing proposed location, mounting height, fixture type, lamp type, color correlated temperature (CCT), and wattage of all exterior free-standing lighting or building-mounted fixtures.	☒	☐
5.1.E(13) - Analyses and illuminance-level diagrams, to include average and minimum foot-candle measurements, showing that proposed installation conforms to the lighting-level standards in Site Plan Review Regulations.	☒	☐
5.1.E(13) - Manufacturer's specification information for each proposed light fixture and lamp (NOTE: This information may be provided on the plan or as a separate attachment).	☒	☐
5.1.E(13) - Drawings of all relevant building elevations showing location and height of all building-mounted fixtures, the portions of any walls or architectural features to be illuminated, illumination levels of walls or architectural features, and aiming points for any remote light fixtures.	N/A ☐	☐
5.1.E(14) - Plan for location of free-standing or building-mounted signs, including location, mounting, aiming, and shielding of any remote light fixtures for externally-lit signs.	N/A ☐	☐
5.1.E(14) - For internally-lit signs, relevant information concerning the method of illumination and the opacity of the sign background, showing that the proposed installation conforms to the requirements of the Regulations.	N/A ☐	☐
5.1.E(15) - The location and boundaries of any Overlay Districts established pursuant to Article IV of the Zoning Ordinance (including but not limited to the Wetlands Conservation District, Riverbank Protection District, Steep Slopes District, and Floodplain District) and, if applicable, protected shorelands pursuant to the Shoreland Water Quality Protection Act (NH RSA 483-B).	N/A ☐	☐
5.1.E(15) - For properties located within the Floodplain District, the 100-year flood elevation, floodway, shoreland protection zone, and flood plain limits shall be identified.	N/A ☐	☐
5.1.E(16) - Landscaping plan showing proposed new plantings to be installed and existing natural vegetation to be retained. Plan shall show in detail the number, size (height and/or caliper), and species (botanical and common names) of all proposed shrubs and trees.	☒	☐
5.1.E(16) - Existing trees over 12 inches in diameter (measured 4.5 feet above ground surface) within 25 feet of the disturbed area, must be counted and shown on the plan, if included towards fulfilling landscaping requirements.	N/A ☐	☐
5.1.E(16) - Calculations for square footage of perimeter landscaping.	N/A ☐	☐
5.1.E(16) - Parking lot shading calculations shall be provided by depicting new trees and shrubs at 10-year crown size.	☒	☐
5.1.E(17) - Existing and proposed surface and subsurface storm drainage facilities, including City storm drainage facilities located within 200' of site.	☒	☐
5.1.E(17) - Plans for retention, detention, slow release, and treatment of storm water shall be provided shall be provided in accordance with the requirements of Section 6.6.	☒	☐
5.1.E(18) - Section 6.6. Stormwater Management submission requirements.	See Stormwater Checklist	
5.1.E(19) - Plans for snow removal and storage.	☒	☐

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(20) - A plan for the development showing provisions for automobile, transit, bicyclist, and pedestrian access and circulation. Such plan shall show both existing and proposed means of access to the site including connections with, public streets, sidewalks, transit stops, and formal paths/trails. Plans shall include any traffic calming and traffic control devices necessary in conjunction with the site development, as well as the location of all existing transit routes and transit stops located or passing within 1/4 mile (1,320 feet) of the property.	☒	☐
5.1.E(21) - Construction detail drawings including, but not limited to, pavements, walks, steps, curbing, drainage structures, water and/or sewer utilities, ground-mounted signage (e.g., fire lanes, ADA parking, commercial), surface treatments, transit shelters, energy generation units (e.g., solar), bike rack style, electric vehicle charging, outdoor lighting, outdoor furniture, retaining walls, tree boxes and other site systems or structures. Accompanying specifications and cutsheets may be required.	☒	☐
5.1.E(21) - Where applicable, roadway, drainage, water and sewer utility profile drawings shall be provided at a scale of 1"=40 feet (horizontal) and 1"=4 feet (vertical) and typical cross-section drawings shall be provided at a scale of 1"=5 feet (horizontal and vertical), unless prior approval to use an alternate scale is granted by the Reviewing Engineer. (NOTE: Ordinarily, only two (2) sets of such construction drawings shall be provided to the Planning and Development Department with the application submission.)	N/A ☐	☐
5.1.E(22) - Depict any current and proposed easements, rights-of-way, and deed restrictions including those related to sewer, electrical utility, shared access, etc.	☒	☐
5.1.E(23) - For multi-family structures, plans for on-site recreational facilities.	N/A ☐	☐
5.1.E(24) - Where a fire, emergency equipment, or similar vehicle turnaround area is provided, it must have an adequate turn radius. Provide CAD Autoturn data or a similar basis of design for the turn radius, if requested by Lebanon Fire or Engineering staff. City staff may also ask for this information at any time.	N/A ☐	☐
Supporting Documents and Information, Where Applicable	Info. Provided	Not Applicable
5.1.G(1) - An estimated timetable, to include phasing schedules, for construction and completion of buildings, parking, facilities, landscaping, and other required improvements.	☒	☐
5.1.G(2) - Any development estimated to generate a net increase of 100 peak hour trips or 1,000 average daily trips (based upon the most current edition of the ITE Trip Generation Manual) shall prepare and submit a Traffic Impact Study in accordance with standard traffic analysis conventions as set forth by the NHDOT. The Board may, at its discretion, require the submission of a Traffic Impact Study for developments estimated to generate less than 100 peak hour trips or 1,000 average daily trips if the Board has reason to believe such development could adversely affect levels of service or have other adverse impacts.	N/A ☐	☐
5.1.G(3) - Written requests for waivers from all applicable provisions of these Regulations shall be provided pursuant to Article VII - "Waiver Procedure". (note: use Application for Waivers form).	☒	☐
5.1.G(4) - For multi-family dwelling developments and mixed-use developments resulting in a net increase of 50 dwelling units or more, the application shall include the information and impact statements identified in Section 6.9.B.	N/A ☐	☐

NOTE: THE APPLICANT IS RESPONSIBLE FOR PROVIDING THE REQUIRED INFORMATION PURSUANT TO ARTICLE V OF THE SITE PLAN REVIEW REGULATIONS. PLEASE BE AWARE THAT THIS CHECKLIST IS FOR INFORMATION AND GUIDANCE ONLY AND DOES NOT REPRESENT THE LAW DICTATING SUBMITTAL REQUIREMENTS NOR IS IT COMPLETE AND INCLUSIVE THEREOF.

Completed By: Engineering Ventures - Nicholas A. Fiore

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

CITY OF LEBANON, NH STORMWATER REVIEW REGULATIONS TECHNICAL CHECKLIST	
PROJECT NAME: DHMC Parking Lot Expansions	
APPLICANT: Mary Hitchcock Memorial Hospital	DATE: 04/30/2024

NOTE: Stormwater plans shall include the information described below pursuant to Article VI of the Lebanon Site Plan Review Regulations. Plans shall be submitted on sheets no larger than 24" x 36". Plan sets with multiple sheets shall include sheets of uniform size and be bound on the left edge. When more than three (3) sheets are required, an additional cover sheet shall be attached including a table of contents. A scale of not smaller than one (1) inch equals 40 feet is suggested. All lettering shall be of a size and type that is legible.

In order to facilitate the use of the City's Geographic Information System (GIS) for planning purposes, all surveys and engineered plans submitted shall utilize the NH State Plane Coordinate system and shall reference the North American Vertical Datum of 1988 (NAVD 88), unless prior approval to use an alternate coordinate system and/or vertical datum is granted by the Planning Office.

A written request for waiver shall be required, pursuant to Article VII of the Site Plan Review Regulations, for any submission requirement for which the information or data is not provided by the applicant. [§6.6.I]

[Stormwater checklist begins on following page]

CITY OF LEBANON, NH SITE PLAN REVIEW REGULATIONS TECHNICAL CHECKLIST & STORMWATER CHECKLIST

[illegible]

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
g. Plan references and notes (including sequence of soil disturbance) h. Proposed and existing public and private utilities i. Proposed project components to become property of or the responsibility of the City shall be labeled as such j. Existing and proposed impervious cover, with areas used to calculate effective impervious cover (EIC, as defined herein) clearly identified and the square footage of each type identified and labeled. k. Test Pit(s) locations and data where stormwater practices are proposed, as appropriate. l. Details of individual design elements shown on separate plan sheets following the Proposed Conditions SMP. The Existing Conditions SMP & the Proposed Conditions SMP shall be provided on sheets no larger than 24" x 36", at a scale of one (1) inch = 20 feet for urban areas, and one (1) inch = 40 feet for non-urban areas. The City Engineer will make the final determination as to the appropriate scale, ensuring that all important site and hydrologic features are easily recognized. If plan shall encompass more than two (2) sheets, at the required 1:40 or 1:20 scale, a separate large scale representation plan sheet (e.g. 1:100) is required to be provided, so as to show entirety of site, as well as off-site contributing areas.	☒ ☒ ☐ N/A ☒ ☐ N/A ☒	☐ ☐ ☐ ☐ ☐ ☐
6.6.C.2 - In addition to the above described SMP plan sheets, the following SMP supplemental information is required: 1. A drainage analysis that includes calculations comparing pre- and post-development stormwater runoff rates (cubic feet per minute) and volumes (cubic feet) based on a 1-inch rainstorm, and the 2-year, 25-year, 50-year, and 100-year, 24-hour frequency storms. Calculations shall include, but not be limited to, the sizing of all structures and BMPs, including sizing of emergency overflow structures based on the 50-year 24-hour frequency storm discharge rate, with 1-foot of free-board. Storm rates shall be based on current design depths from the Northeast Regional Climate Center - http://precip.eas.cornell.edu. <i>Any site that was primarily wooded in the last five years shall be considered undisturbed woods Any site from which wooded vegetation has been removed within 5 years prior to the first submission to the planning board with respect to a proposed development, or upon which, at some earlier time, clearing has occurred in anticipation of development, shall be treated as undisturbed woodland for purposes of calculating pre-development runoff volumes. For purposes of this paragraph any tree cutting which occurred without leaving stands of healthy, growing trees within areas near waters and highways, as required by RSA 227-J:9, I, shall be presumed to have occurred in anticipation of development</i>	☒	☐

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

Plan Requirements (cont.)	Info. Provided	Waiver Sought
2. A drainage analysis results summary tabulated (pre & post) for each proposed outfall or catchment outlet point including runoff rates and volumes for each storm event analyzed above.	☒	☐
3. An Erosion and Sediment Control Plan for all proposed construction activities in accordance with the NH Stormwater Management Manual Volume 3, (December 2008 or current revision; downloadable from the website)	☒	☐
4. A comprehensive Operation and Maintenance Plan for long-term maintenance of all proposed stormwater management elements and BMPs including the proposed schedule of inspections and anticipated maintenance (see section H.2 Operations & Maintenance Plan for detailed requirements).	☒	☐
<u>6.6.D</u> - Phased Development: For phased developments, the plans and calculation requirements under this section (6.6) shall apply as though the development of the entire parcel were being proposed in one single application. The review and approval process for phased development applications is provided in section 4.9 of the Lebanon Site Plan Regulations.	☐ N/A	☐

NOTE: THE APPLICANT IS RESPONSIBLE FOR PROVIDING THE REQUIRED INFORMATION PURSUANT TO ARTICLE VI OF THE SITE PLAN REVIEW REGULATIONS. PLEASE BE AWARE THAT THIS CHECKLIST IS FOR INFORMATION AND GUIDANCE ONLY AND DOES NOT REPRESENT THE LAW DICTATING SUBMITTAL REQUIREMENTS NOR IS IT COMPLETE AND INCLUSIVE THEREOF.

Completed By: Engineering Ventures - Nicholas A. Fiore

(Last Revised 9/20/2021)

Planning office Use Only:

Date Received ___/___/___ Checklist Complete YES or NO Checked by: _____

April 29, 2024

City of Lebanon Planning & Development Department
Attn: Tim Corwin, Senior Planner and Zoning Administrator
51 North Park St
Lebanon, NH 03766

RE: DHMC Main Campus Parking Expansion
City of Lebanon, New Hampshire
Planning & Zoning Review

Dear Mr. Corwin,

On behalf of DHMC please find below written responses to comments provided by your office on the above referenced Site Plans Review application. All the comments are repeated below. The highlighted comments are the ones you asked us to specifically address. Our responses are provided in red.

STAFF COMMENTS MISSED BY AI:

- *Site Plan Regs:*
 - 5.1.E.4.e.8 – heights of existing buildings
 - 5.1.E.10 – plans shall indicate direction of travel –
 - EV added flow direction arrows to landscape plans; sheets C209-C212
 - 5.1.E.13 – lighting plan missing –
 - The revised plan set now includes lighting plans.
 - 5.1.E.18 – section 6.6. submission requirements (drainage report / stormwater calculations not provided)
 - This resubmission package includes a drainage report and stormwater calculations.
 - Section 6.2.E.1 – parking area shading requirements
 - EV added shading calc table to landscape plans; sheets C209-C212.
 - Section 6.5.I.3 – bicycle parking requirements
- *General plan comments:*
 - Sheet numbers missing from some of the plan sheets
 - Cover sheet:
 - Zoning chart note 4 – indicate that wetland areas are located outside areas of proposed disturbance
 - The Zoning Chart is revised accordingly.
 - “Applicants” should be singular
 - Revised accordingly.
 - *Recommendation:* Identify prior site plans that the property is currently subject to
 - *Recommendation:* Identify Planning Board application number
 - *Recommendation:* Identify Site Plan Review Regulations that that plan is subject to (ie adoption date and revision date of current SPRs)
 - Sheet 3 (C002)
 - Is abutter’s list up to date?
 - The abutter’s list has been verified and revised as needed.

- If E4H Architects is a project consultant, add to the cover sheet, if not, remove from abutter's list and remove the corresponding footnote –
 - e4h has been removed from the table.
- Footnote (E) to the abutter's list is non-sensical – please reword –
 - Footnote (E) has been revised.
- **Recommendation: Delineate limits of disturbance on existing plan sheets**
 - Demo items have been added to existing conditions plans; sheets C101-C104
- **Sheet 8 (C104) is mislabeled along the bottom of the sheet as "SITE PLAN"**
 - The mislabeling has been corrected.
- *Recommendation for site plan sheets: identify total area of net new paving and/or impervious coverage for each project area*
- **Sheet 10 (C201)**
 - Note C7 points to a light pole instead of the stop sign
 - The C7 tag has been corrected.
 - The Stormwater Schedule identifies a note "C4" but "C4" does not seem to appear anywhere on the plan
 - The Stormwater Schedule includes D1 thru D3, but not C4. There is a C4 in the Site Schedule and it is used twice on the walkways associated with Lot 8. No action taken.
- **Sheet 11 (C202)**
 - Please label the signs at the exit from the new parking lot (C8?)
 - Callout tags for C8 "stop sign" have been added accordingly.
 - The Site Schedule identifies a note "D3" but "D3" does not seem to appear anywhere on the plan
 - The site schedule includes C1 thru C 12, but no D3. The stormwater schedule include a D3 and a D3 tag points to a stormwater manhole. The revised plans have manhole D3 in a different location.
 - Please remove existing features that will be eliminated or changed (e.g. the plan shows light poles straddling the edge of the existing parking lot that's proposed to be widened
 - Plans have been updated accordingly.
- **Sheet 14 (C205) – the driveway entrance is mismarked "E4" instead of "E5"**
 - The "E4" tag has been revised to "E5".
- **Sheet 18 (C209) –**
 - the plant schedule identifies 16 new plants where only 7 are shown
 - The schedule has been revised to clearly indicate schedule is a combination of all sites. This will make things easier for the contractor.
 - parking lot shading calculations not provided
 - This sheet now includes a table showing shade calculations.
- **Sheet 19 (C210) –**
 - the plant schedule identifies 16 new plants where only 5 are shown
 - The schedule has been revised to clearly indicate schedule is a combination of all sites. This will make things easier for the contractor.
 - parking lot shading calculations not provided

- This sheet now includes a table showing shade calculations.

- o Sheet 20 (C211) –

- the plant schedule identifies 16 new plants where only 4 are shown
 - The schedule has been revised to clearly indicate schedule is a combination of all sites. This will make things easier for the contractor.
- parking lot shading calculations not provided
 - This sheet now includes a table showing shade calculations.

AUTOREVIEW AI COMMENTS [Except as we may have discussed during our staff review meeting, please address only those comments highlighted below in yellow]

1. 5.1.E Table of Contents:

The cover sheet shall include a table of contents.

The PDF does not contain C302, but it includes two instances of C301.

- The sheet numbering has been revised to change the second C301 to C302.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

2. 5.1.E(2) Contact Information:

The plan only partially addresses the following. Please provide the names and mailing addresses of the Holders of any easements, rights of way, or other restrictions, based on the current records of the City Assessor available at City Hall.

Please indicate location of all easements on subject property.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Overview Plan

3. 5.1.E(3) Contact Information:

Names and Address of the following information is missing/incorrect/incomplete:

Soil Scientist

Wetland Scientist

Landscape Architect

Please include this information on the Cover Sheet

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

4. 5.1.E(4)(e)(5) Parking:

The plan only partially addresses the following. Number of existing and proposed on- and off-street parking spaces as a table.

The table must identify:

- the permitted (maximum) number of parking spaces and the calculations for each,
 - future proposed, and
 - existing parking capacity.
- The Zoning Chart has been revised to include the maximum number of parking spaces allowed, the future proposed parking spaces, and the existing parking spaces.

If the site is part of an existing development or subdivision, the master table must provide such information for all related sites and phases, individually and as a project total

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

5. 5.1.E(4)(e)(9) Building Stories:

The Plan does not address the following. Gross Square Footage of Each Story.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

6. 5.1.E(4)(e)(11) Setbacks:

The plan only partially addresses the following. Required and proposed front, side, and rear yard setbacks.

- The revised Zoning Table now includes setback distances in the “Existing” and “Proposed Total” columns. Setbacks area also dimensioned on sheet C002.

Note 5 has been referenced in the Site Data Table on the Cover Sheet; however, Note 5 has not been included within the provided Notes section.

- The revised Cover Sheet now includes Note 5 and Note 6.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

7. 5.1.E(4)(e)(12) Lot Coverage:

The plan only partially addresses the following. Max. allowable lot coverage w/ existing and proposed calculations.

The Existing and Proposed Total percentages for Impervious Area Lot have been provided. However, the percentage for Proposed Work has not been included, even though the Proposed Total Percentage has been updated.

- The revised Zoning Table now includes the 0.20% value under the proposed work column.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

8. 5.1.E(5) Current Survey:

The plan does not address the following. A current survey certified by a land surveyor licensed in New Hampshire, depicting the perimeter boundaries of the lot(s) of the proposed site, including compass bearings, distances, and lot areas, and depicting the location of any existing improvements on the property and the width and location of any rights-of-way and/or easements on the property.

Add surveyor stamp confirming compliance with Section 5.1.E.5 requiring a current survey certified by a land surveyor licensed in New Hampshire.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Overall Existing Site Plan Layout

9. 5.1.E(8) – Natural and Man-Made Features:

The plan only partially addresses the following. The location of existing natural features such as streams, marshes, lakes, ponds, wetlands, rock outcrops, or wooded areas, and existing man-made features such as roads and structures. The plan shall indicate those natural and man-made features that are to be removed, retained, or altered. Wetlands on the property shall be delineated by an NH Certified Wetlands Scientist, whose seal and signature shall appear on the plan. In addition, documentation in the form of the U.S. Army Corps of Engineers New England District Wetlands Delineation Data Sheets and/or other field notes and materials concerning the delineation shall be submitted to the Planning Office.

Identify natural and man-made features to be removed with parking expansions.

- The revised existing conditions plans now include demolition items.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Site Legend and Notes

10. 5.1.E(10) Proposed Streets, Driveways, Emergency Vehicle Accesses, Parking Spaces, And Sidewalks:

Show required sight distances at curb cuts – Sight triangle is not present on the Site Plan. There shall be no obstruction to vision between the heights of three (3) feet and ten (10) feet above the street surface within any triangular area formed by: 1. The intersection of two street lines and a third line joining them at points 25 feet away from their intersection. 2. The intersection of a driveway and a street line and a third line joining them at points 25 feet away from their intersection.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on C209, C210

11. 5.1.G(1) Timetable and Phasing:

The plan does not provide the following information. An estimated timetable, to include phasing schedules (where applicable), for construction and completion of buildings, parking facilities, landscaping, and other required improvements.

Provide an estimated timetable for construction and completion of buildings, parking facilities, landscaping, and other required improvements.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://www.lebanonnh.gov/DocumentCenter/View/1111/Site-Plan-Regulations-PDF)

Flag located on Site Legend and Notes

12. 5.1.E(10) Proposed Streets, Driveways, Emergency Vehicle Accesses, Parking Spaces, And Sidewalks:

Proposed streets, driveways, emergency vehicle accesses, parking spaces, and sidewalks, with indication of dimensions and direction of travel. Show required sight distances at curb cuts and dimensions for the inside radii of all curves. Vehicle and bicycle parking spaces shall be numbered. Loading spaces and facilities used in connection with any structures on the site shall be shown. The total square footage and percentage of the lot covered by impervious cover shall also be shown.

All parking spaces must be numbered. There is a misnumbering observed on the indicated parking space. Kindly rectify the numbering to align with the surrounding numbering scheme.

- The parking spaces have been renumbered. Please note that the Lot 2 work includes repaving two (2) existing parking spaces, and they are labeled as E1 and E2 on sheet C203.

The percentage of impervious cover on the proposed lot in the Site Data Table within the Cover Sheet requires updating with a variable.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://www.lebanonnh.gov/DocumentCenter/View/1111/Site-Plan-Regulations-PDF)

Flag located on Cover Sheet, C203

13. 6.5.E Groundwater Protection Requirements:

Please provide a statement identifying how this project complies with Section 6.5.g Ground Water protection.

- Note No. 18 has been added to sheet C001. Additionally, the project includes new and expanded rain gardens which provide treatment for of stormwater from the expanded parking areas so that runoff is cleaned for it becomes groundwater.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.5 Coordination of Roads, Parking, Loading, Recreation, and Safety:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://www.lebanonnh.gov/DocumentCenter/View/1111/Site-Plan-Regulations-PDF)

Flag located on Site Legend and Notes

14. 607.3.A Maximum Off-Street Parking Requirement:

The plan does not address the maximum off-street parking allowance. The maximum off-street parking allowed is 120% of the minimum requirement set forth in Section 607.2.

The minimum requirement for parking spaces is 5,470. Currently, there are 5,618 parking spaces on the subject parcel, with a proposed increase to 5,691 by the applicant. The maximum allowable parking for the development is 6,837. Kindly include this information in the Site Data Table on the Cover Sheet.

- The revised Zoning Chart indicates minimum required and maximum allowable parking spaces.

5470 Minimum Stalls * 1.25 = 6837.5 Maximum Stalls

- Equation is incorrect. Should be $5470 * 1.20 = 6,564$ maximum stalls.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF?bidId=)

City of Lebanon, New Hampshire: Planning & Development Department: Zoning Ordinance: Article VI Additional Standards for Specific Uses: Section 607 Parking: Section 607.3 Maximum Off-Street Parking Requirements:

<https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF?bidId=>

Flag located on Cover Sheet

15. 6.2.E.2 Parking Islands:

The plan only partially addresses the following. The end of each row of parking shall have a landscape bed to protect any vehicle parked next to a travel lane. End beds shall be at least 8 feet in width, except for corner radii, shall be long enough to protect tree roots and vehicles parked in the adjacent parking spaces, and shall be planted with deciduous trees for shade.

Not all parking islands feature deciduous trees, and not all are 8 feet wide.

- The only lot that has a true island is Lot 8 and that island is 8 feet wide and will have a tree planted as part of this project. Lots 2, 4 and Lot E do not have parking islands. Areas flagged as #15 on Lots 2, 4 and E are actually the ends of the parking itself and not an island.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF?bidId=)

Flag located on C209, C210, C211

16. 6.2.E.4 Parking Row Length:

The plan does not address the following. Any single or double row of parking longer than 100 feet shall be dispersed every 100 feet or less by a landscaped bed that is at least 8 feet by 8 feet, exclusive of curbing.

The indicated parking zones exceed 100 feet in length and fail to include the mandated dispersion of landscaped beds, each measuring at least 8 feet by 8 feet, spaced every 100 feet or less. See sheet C211

- Sheet C211 consists of two separate lots that have been misinterpreted as one continuous parking row. The longest row in each added parking area is 81 feet.

- The reconfiguration of the existing ED parking lot on C210 does exceed 100 feet. Islands have been omitted here to maximize parking spaces in the location of the campus's most critical needs, reduce potential conflicts for drivers helping patients out of cars, and reduce obstructions for snow removal. Additionally, these parking rows abut landscaped areas for their full length so the project is requesting that the Planning Board exclude this requirement per the last sentence of 6.2.E.4.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on C210, C211

17. 6.2.E.6 Tree Maturity Requirements:

The plan does not address the following. The number of trees required to meet the 30% shading requirement for parking areas shall be calculated at a minimum crown diameter of 30 feet, which each tree shall have attained within 10 years from planting. Trees at maturity must have a trunk diameter of at least 12 inches, measured 4 feet above the ground surface.

Provide a statement on the Landscape Plan addressing tree maturity requirements.

- Sheets C209 – C211 of the revised plan set include shade calculations for the parking areas.
- Tree diameters at maturity are as follows:
 - Amur Maple: 12" – 20"
 - Honeylocust: 24"-36"
 - Hawthorne: 6" x 3 trunks
 - Red Pine: 30" – 40"

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Site Legend and Notes

18. 6.2.H.2 Plants Tolerant to Dusty, Salty Locations:

The plants intended for placement near the proposed parking zones do not belong to the list of species known for their tolerance to dusty and salty environments. It is recommended to utilize salt-tolerant plants in areas prone to dust and salt exposure, such as parking lots or driveways.

Proposed Plants not on the Suggested Salt-Tolerant Species:

October Glory Maple – Replaced with Amur Maple

Red Oak – Replaced with Hawthorne

Northern White Cedar – Replaced with Red Pine

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on C209, C210, C211

Shade Trees for Dusty, Salty Locations

<i>Acer ginnala</i>	Amur maple
<i>Crataegus spp.</i>	Hawthorne
<i>Gleditsia triacanthos</i>	Honey locust
<i>Pinus resinosa</i>	Red pine

19. 6.5.E.3 Parking Stall Sizing:

Parking spaces shall measure a minimum of 9 x 18 feet. Where the parking spaces are perpendicular to a landscape bed, they should measure 16 feet in length on the pavement, with an additional 2 feet of unobstructed overhang into the landscape bed, in order to reduce paved impervious surface area. Parking spaces perpendicular to a sidewalk area may overhang the sidewalk, provided that the sidewalk is a minimum of 6 feet wide, excluding curbing.

In response to the parking space requirements outlined, it's noted that there are 16 spaces measuring 8 x18 feet. This information is provided for reference purposes.

– EV revised dimensions to show the correct 9'x18' dimensions

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.5. Coordination of Roads, Parking, Loading, Recreation, and Safety:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://www.lebanonnh.gov/DocumentCenter/View/1000/Site-Plan-Regulations-PDF)

Flag located on C201

20. Discrepancy – Parking Counts:

There is an inconsistency between the text in the Site Data Table on the Cover Sheet and the visual representation on the plan concerning proposed parking spaces. The Site Data Table indicates a total of 73 new parking spots distributed among Lot 4 & 8 with 22 spaces, Lot 'E' with 25 spaces, and Lot 2 with 26 spaces. However, the plan displays 76 new parking spaces, with Lot 'E' having 27 new spaces for a total of 53, and Lot 2 having 27 new spaces.

– EV revised sheets C201, C202, and C203 to include “parking notes” which clearly summarize the parking count for each lot and the table on the cover sheet has been revised to reflect these numbers.

Flag located on Cover Sheet

Thank you for your time and consideration with this project. Please do not hesitate to call or email if you have any questions or need additional information.

Sincerely,
 ENGINEERING VENTURES, PC



Nicholas A. Fiore, PE
 Vice President

April 30, 2024

Attn: Tim Corwin
City of Lebanon – Planning and Zoning
51 North Park Street
Lebanon, NH 03766

RE: Dartmouth-Hitchcock Medical Center
Main Campus Parking Expansion 2024 - EV Charging Stations

VIA: E-mail

Dear Mr. Corwin

We are working with Nik Fiore at Engineering Ventures to expand our parking capacity at our main campus in Lebanon. This expansion includes additional parking for Emergency Department patients and visitor as well as additional staff parking where we can best fit it in. This letter is to address our approach to the Lebanon Zoning Ordinance section 607.8 regarding accommodations for Electric Vehicles. Our intent is to address this need with charging stations at other locations on our campus which are best served with power and which best serve the needs of our current and future electric vehicle users.

This project will add (73) parking space to our facility. The requirements and our approach to address are as follows:

- ② EVSE-installed spaces (2% = 2 spaces): DH will add charging at 2 spaces in our Colburn Hill Parking lot.
- ② EV-Ready spaces (10% = 8 spaces): DH has these spaces on site now at our Inpatient Pavilion.
- ② EV-Capable Spaces (50% = 37 spaces): DH has previously provided (33) EV charging stations in Lebanon.
- ② All DH installed charging stations are Level 2, each provided with a 40 amp service per parking space. This exceeds the Lebanon requirement which allows one 40 amp circuit to serve (2) parking spots.
- ② We have attached a plan that shows our current and proposed charging stations as well as a summary list of our current charging stations.

We believe DH has been a leader in providing EV charging capacity over the years, prior to any requirements being put in place that mandate EV charging capabilities for projects. The infrastructure required to support the zoning ordinance is extensive. We respectfully ask that the City consider our past efforts and currently built EV infrastructure as meeting the intent of Zoning ordinance 607.8 for this project.

Please contact me at (603) 650-5741 if there are any questions or if additional information is needed. We would be glad to meet with you to review the project documents in more detail if helpful.

Sincerely,



David Stiger
DHMC Facilities

EV Charging stations requirements and existing information

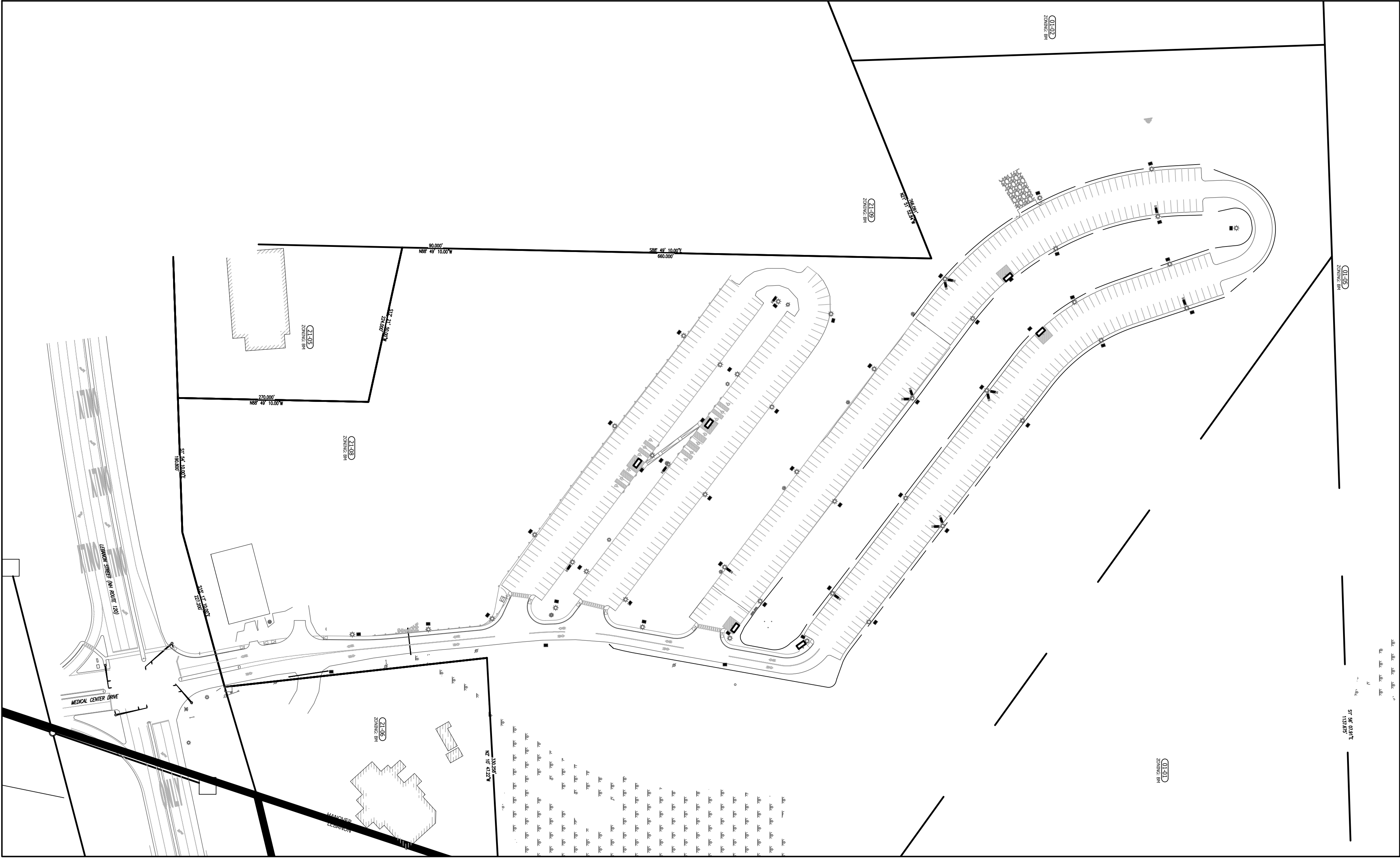
Parking expansion requirements per current zoning regulations:

- ? (73) spaces being added
- ? EV installed space = 2%, thus (2) parking spaces
- ? EV Ready space = 10%, thus (8) parking spaces
- ? EV Capable space = 50%, thus (37) parking spaces
- ? Charging to support Level 2 charger (40 amp, 208V).
- ? One circuit can support two charging stations.

Existing DH EV charging stations

- ? Parking Garage
 - o 16 parking spaces served by (16) single level 2 stations
- ? Inpatient Pavilion
 - o 8 parking spaces served by (4) double stations level 2, with (8) dedicated 40 Amp service.
 - o 1 parking space served by (1) single station level 2
 - o 8 parking spaces EV Ready for (4) double stations w/ (8) dedicated 40 amp service
 - o Panel is set up with (18) circuits
 - o 208 3 phase 400 amp panel w/ 112.5 kva Isolation transformer
- ? Medical Office Building
 - o 2 parking spaces served by (2) single stations level 2
- ? Outpatient Surgery
 - o 2 parking spaces served by (1) double stations level 2
- ? Hospice
 - o 4 parking spaces served by (2) double stations level 2
- ? Colburn Hill
 - o DH to add Level 2 charging for (2) parking spots as part of 2024 parking expansion

DHMC
EV Parking stations
4/30/24



LOT 9 INSET

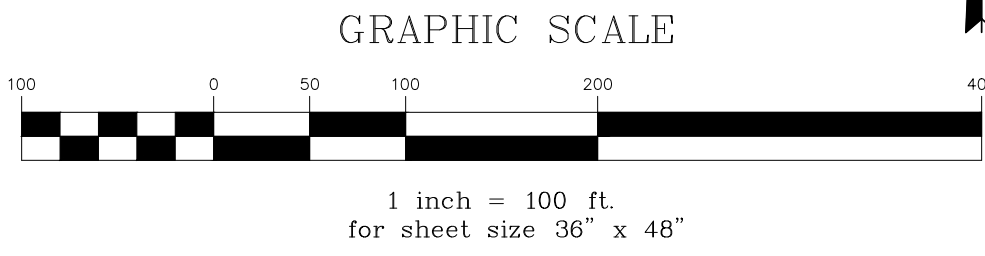
Hospice
(2) double Level 2 chargers = (4) parking spaces

Patient Pavilion
(1) single Level 2 space for ADA parking
(4) double Level 2 spaces = (8) parking spots
(4) future double Level 2 spaces = (8) parking spaces

Two parking spaces to be provided with Level 2 Charging stations

Parking Garage
(16) single Level 2 Charging stations = (16) parking spots

Outpatient Surgery Center
(1) Double Level 2 charging stations = (2) parking spaces



CERTIFIED NOTIFICATION LIST

Notice shall be sent by certified mail to the Owner; Applicant, if different from Owner; Abutters; Holders of conservation, preservation, or agricultural preservation restrictions (as defined under RSA 477:45) on the subject property; the holders of easements, rights-of-way, and other restrictions; and every engineer, architect, land surveyor, or soil or wetlands scientist whose seal appears on any plan submitted to the Board; and any other persons required by RSA 676:4, I(d). The names and mailing addresses shall be furnished by the Applicant.

672:3 Abutter. – "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B:3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A:1, II, the term "abutter" includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.

Source. 1983, 447:1. 1986, 33:2. 2002, 216:1, eff. July 15, 2002.

PLEASE PROVIDE NAMES & MAILING ADDRESSES FOR ALL PERSONS LISTED ABOVE.

Map & Lot Number: 10-8	Map & Lot Number: 10-8
Property Owner: 10-8-100, -200, -300 10-8-70100 Dartmouth Hitchcock Med Center Mary Hitchcock Memorial Hospital 10-10, -21, -22, -23, -25 The Hitchcock Clinic 24-6 c/o David Stiger, DHMC Facilities One Medical Center Drive, Lebanon, NH 03756	Applicant, Co-Applicant, Agent, or Lessee: Dartmouth Hitchcock Med Center c/o David Stiger, DHMC Facilities One Medical Center Drive Lebanon, NH 03756
Map & Lot Number: 5-1, 22-2, 24-4	Map & Lot Number:
Dartmouth College Trustees 10-11-1500 c/o Dan Justynski, Real Estate Office 10-11-1600 PO Box 5188 10-8-7020 Hanover, NH 03755 10-24-100 10-24-200	
Map & Lot Number: 6-1	Map & Lot Number: 10-9 & Hanover 21-6
Liberty Utilities 15 Buttrick Road Londonderry, NH 03053	Route 120 Realty Company c/o Mark Milowsky PO Box 92 Hanover, NH 03755

Map & Lot Number: 10-6-100	Map & Lot Number: 10-6-200
Northern NE Tele Oper LLC Fairpoint Communications Inc 770 Elm St, Tax Dept 2nd Floor Manchester, NH 03101	David's House Inc. Jaye Olmstead, Executive Director 461 Mount Support Road Lebanon, NH 03766
Map & Lot Number: 10-7	Map & Lot Number: 10-7-101
Hanover Road Professional Center PO Box 682 Hanover, NH 03755	Route 102 A-1 Holdings, LLC 10-7-102 Route 102 B-1 Holdings, LLC 10-7-201 Route 102 A-2 Holdings, LLC 1 Pine Drive Hanover, NH 03755
Map & Lot Number:	Map & Lot Number: 10-7-105
	MDM Land Company 1800 West Loop South Houston, TX 77027
Map & Lot Number:	Map & Lot Number: 10-7-202
	Caldwell, MW & TW Ttees 10-7-602 PO Box 176 Lyme Center, NH 03769
Map & Lot Number: 10-7-203	Map & Lot Number: 10-7-204
AJSNH LLC 1046 Goose Pond Rd Canaan, NH 03741	Tiempo de Vals Properties LLC 216 Whitaker Rd Meriden, NH 03770
Map & Lot Number: 10-7-205	Map & Lot Number: 10-7-302
Rentacs LTD Partnership 10-7-502 PO Box 177 Etna, NH 03750	SHUJAA LLC 367 NH Route 120, Unit B3 Lebanon, NH 03766
Map & Lot Number: 10-7-305	Map & Lot Number: 10-7-402
JCP LLC 367 NH Route 120, Unit E3 Lebanon, NH 03766	Geiling, Karen & James Ttees 19 Hollenbeck Ln Hanover, NH 03755

(Revised 2/8/2024)

Map & Lot Number: 10-7-405	Map & Lot Number: 10-7-702
Hanover Oral Surgery, PLLC 367 NH Route 120, Unit B5 Lebanon, NH 03766	BTA Real Estate LLC PO Box 730 Lebanon, NH 03766
Map & Lot Number: 10-7-802	Map & Lot Number: Hanover 21-1
Rumford Street Properties, LLC 210 Rumford St Concord, NH 03301	Jolley Assoc. P.O. Box 671 St. Albans, VT 05474
Map & Lot Number: Hanover 20-1	Map & Lot Number: Hanover 20-2
Town of Hanover c/o Dartmouth Real Estate Office PO Box 5188 Hanover, NH 03755	Town of Hanover PO Box 483 Hanover, NH 03755
Map & Lot Number:	Map & Lot Number:
Engineering Ventures PC c/o Nicholas Fiore 85 Mechanic St., Suite E2-3 Lebanon, NH 03766	City of Lebanon 51 N Park St Lebanon, NH 03766
Map & Lot Number:	Map & Lot Number:
Map & Lot Number:	Map & Lot Number:
Map & Lot Number:	Map & Lot Number:

(Revised 2/8/2024)

FEE SCHEDULE LEBANON PLANNING BOARD

Adopted January 24, 2022

LOT LINE ADJUSTMENT (Boundary Line Adjustment)		
		TOTALS
FILING FEE	\$25.00	\$25.00
ADVERTISING FEE	\$100	\$100
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE		\$ _____

MINOR SUBDIVISION		
		TOTALS
FILING FEE	\$150.00	\$150.00
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE AT TIME OF FILING		\$ _____

**Engineering Review fees may also be required. See note on page 2.

PRELIMINARY REVIEW OF A MAJOR SUBDIVISION		
		TOTALS
FILING FEE	\$200.00	\$200.00
NUMBER OF LOTS* _____	\$30.00 per lot*	
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE AT TIME OF FILING		\$ _____

*Or units when the subdivision does not create individual lots.

**Engineering Review fees will also be required. See note on page 2.

FINAL REVIEW OF A MAJOR SUBDIVISION		
		TOTALS
FILING FEE	\$500.00	\$500.00
FIRST FIVE (5) LOTS*	\$75.00 per lot*	
NUMBER OF LOTS 6+*	\$150.00 per lot*	
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE TIME OF FILING		\$ _____

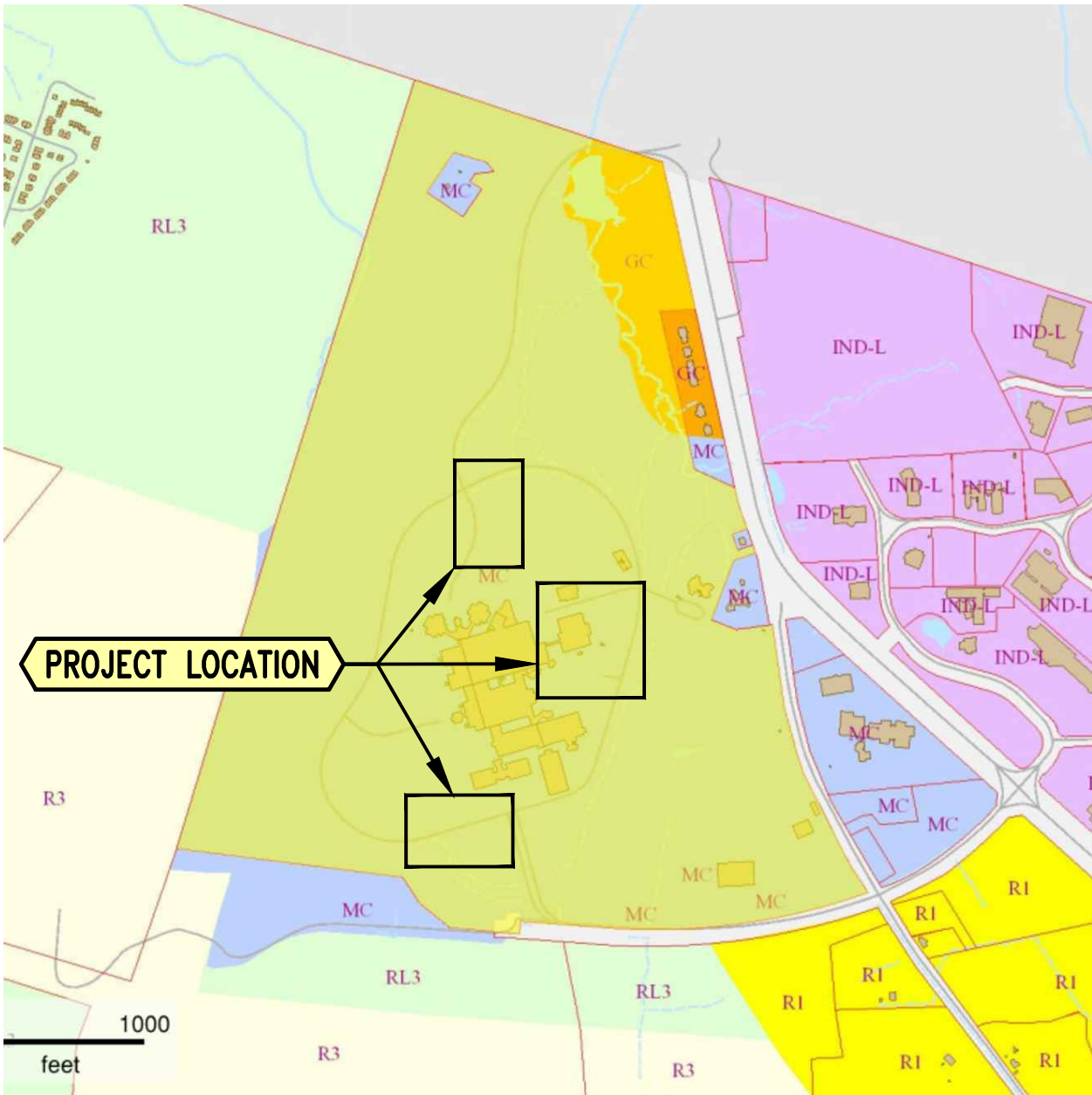
*Or units when the subdivision does not create individual lots.

**Engineering Review fees will also be required. See note on page 2.

SITE PLAN REVIEW		
		TOTALS
FILING FEE	\$250.00	\$250.00
SQUARE FOOTAGE _____ OSF	\$75.00 per 1,000 sq. ft. (gross floor area)	\$0.00
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X <u>26</u> <u>22</u> notices	\$5.00 \$ <u>131.04</u> (abutter certified)

DARTMOUTH-HITCHCOCK MEDICAL CENTER

MAIN CAMPUS PARKING EXPANSION



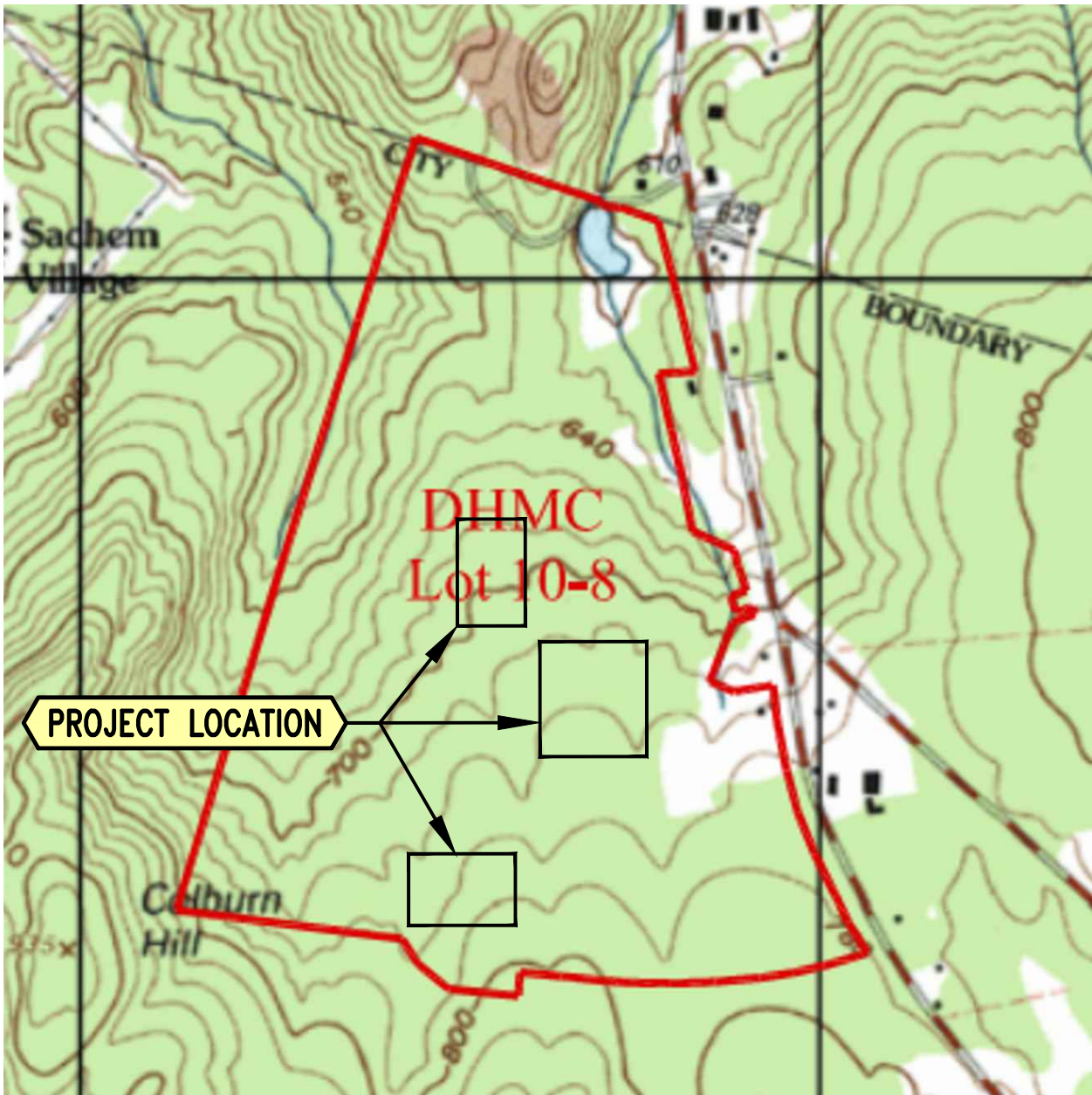
ZONING MAP

1"=1000'



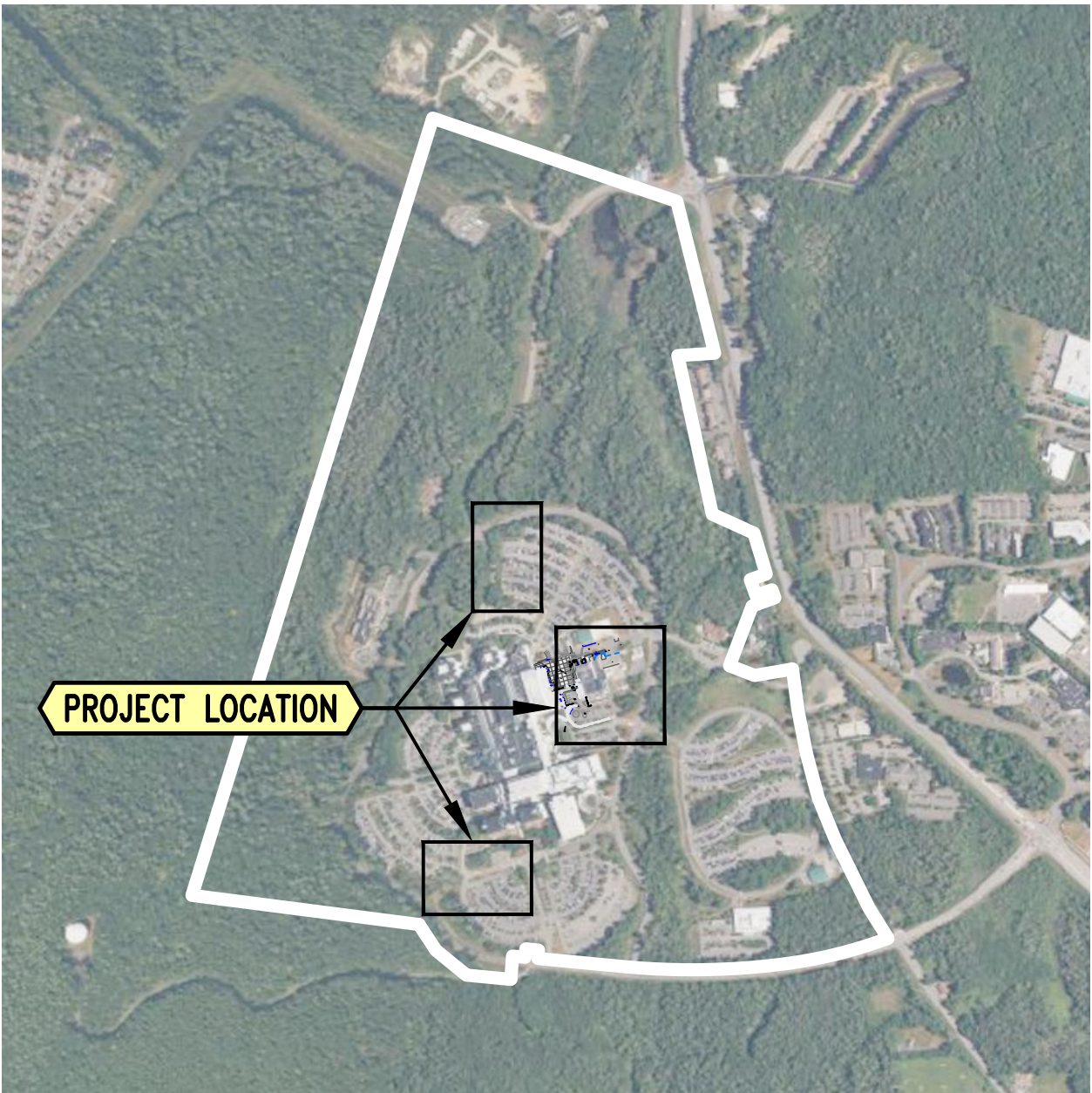
ADVANCE TRANSIT BLUE ROUTE

NO SCALE



USGS MAP

1"=1000'



LOCATION MAP

1"=1000'

ZONING CHART

	Zoning Limit	Existing	Proposed Work	Proposed Total	Notes
Zoning District		MC		MC	
Tax Map / Lot #		10 / 8		10 / 8	
Use		Medical Center		Medical Center	
Area of Lot (acres)	75,000 s.f. min.	288.6	0	288.6	1
Building Footprint (s.f.)		611,778	0	611,778	3
Building Coverage	50% max.	4.87%	0%	4.87%	
Building Gross Floor Area (s.f.)		2,324,815	0	2,324,815	
Building Height	100' max.	Varies. Up to 104'	0	Varies. Up to 104'	
Number of Stories		Varies. Up to 6	0	Varies. Up to 6	
Parking Spaces Provided		5,618	72	5,690	2
Lots 4 and 8			22		
Lot "E"			24		
Lot 2			26		
Min. Parking Spaces Required	1 space / 425 s.f.	5,470	No Change	5,470	
Max. Parking Spaces Allowed	120% of Min.	6,564	No Change	6,564	
Loading Spaces		2	0	2	
Bicycle Parking Spaces		114	0	114	
Long-Term		100	0	100	
Short-Term		14	0	14	
Impervious Area (s.f.)		2,813,615	25,326	2,838,941	3
Lots 4 and 8			8,052		
Lot "E"			8,880		
Lot 2			7,800		
CNG Facility			594		
Impervious Area (% of lot)		22.38%	0.20%	22.58%	3
Setbacks					
Front	40'	190'	NA	190'	5,6
Rear	20'	458'	NA	458'	5,6
Side	20'	53'	NA	53'	5,6
City Overlay Districts		Wetlands	NA	Wetlands	4
NHDES Shorland Jurisdiction		NA	NA	NA	

Notes:

- Area of Lot per survey of Record on file with City of Lebanon
- Number of parking spaces includes 614 spaces at Lot 9 (located in Hanover)
- Existing areas noted include the patient towers, emergency department, and OSC expansions currently under construction
- All wetlands are adjacent to site, outside areas of proposed disturbance, and are classified as Medium-Low Value in the City of Lebanon Natural Resources Inventory
- Setbacks vary due to multiple buildings being on the same parcel
- Project does not include any new buildings therefore building setbacks do not change from what currently exists

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SHEET	SHEET #	TITLE	CONSULTANT
1	C000	COVER SHEET	ENGINEERING VENTURES
2	C001	SITE LEGEND AND NOTES	ENGINEERING VENTURES
3	C002	OVERVIEW PLAN	ENGINEERING VENTURES
4	C100	OVERALL EXISTING CONDITIONS PLAN	ENGINEERING VENTURES
5	C101	EXISTING CONDITIONS – LOTS 4 AND 8	ENGINEERING VENTURES
6	C102	EXISTING CONDITIONS – LOT E	ENGINEERING VENTURES
7	C103	EXISTING CONDITIONS – LOT 2	ENGINEERING VENTURES
8	C104	EXISTING CONDITIONS – CNG FACILITY	ENGINEERING VENTURES
9	C200	OVERALL SITE PLAN	ENGINEERING VENTURES
10	C201	SITE PLAN – LOTS 4 AND 8	ENGINEERING VENTURES
11	C202	SITE PLAN – LOT E	ENGINEERING VENTURES
12	C203	SITE PLAN – LOT 2	ENGINEERING VENTURES
13	C204	SITE PLAN – CNG FACILITY	ENGINEERING VENTURES
14	C205	EPSC PLAN – LOTS 4 AND 8	ENGINEERING VENTURES
15	C206	EPSC PLAN – LOT E	ENGINEERING VENTURES
16	C207	EPSC PLAN – LOT 2	ENGINEERING VENTURES
17	C208	EPSC PLAN – CNG FACILITY	ENGINEERING VENTURES
18	C209	LANDSCAPE PLAN – LOTS 4 AND 8	ENGINEERING VENTURES
19	C210	LANDSCAPE PLAN – LOT E	ENGINEERING VENTURES
20	C211	LANDSCAPE PLAN – LOT 2	ENGINEERING VENTURES
21	C212	LANDSCAPE PLAN – CNG FACILITY	ENGINEERING VENTURES
22	C301	SITE DETAILS	ENGINEERING VENTURES
23	C302	STORMWATER DETAILS	ENGINEERING VENTURES
24	C303	EROSION PREVENTION AND SEDIMENT CONTROL DETAILS	ENGINEERING VENTURES
25	SL101	DHMC – AREAS 4 & 8 LIGHTING PLAN	TCI THOMPSON CONSULTING INC.
26	SL102	DHMC – AREA E LIGHTING PLAN	TCI THOMPSON CONSULTING INC.
27	SL103	DHMC – AREA 2 LIGHTING PLAN	TCI THOMPSON CONSULTING INC.

SUBJECT PROPERTY:

TAX MAP 10 LOT 8
ONE MEDICAL CENTER DRIVE
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE 03756

OWNER\APPLICANT:

DARTMOUTH-HITCHCOCK MEDICAL CENTER
ONE MEDICAL CENTER DRIVE
LEBANON, NH 03756

CONSULTANTS:

CIVIL ENGINEER
ENGINEERING VENTURES, PC
NICHOLAS A. FIORE, PE
85 MECHANIC ST. SUITE B2-2
LEBANON, NH 03766

TOPOGRAPHIC SURVEY
ROCKWOOD LAND SERVICES, LLC
TIM ROCKWOOD, PLS
PO BOX 347
HARTLAND, VT 05048

Stamp

Date

Description

No.

ENGINEERING VENTURES PC

208 Flynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225

85 Mechanic Street, Suite E2-3, Lebanon, NH 03766 • 603-442-9333

414 Union Street, Schenectady, NY 12305 • 518-630-9614

www.engineeringventures.com

DARTMOUTH - HITCHCOCK MEDICAL CENTER

1 MEDICAL CENTER DRIVE

LEBANON, NEW HAMPSHIRE 03766

COVER SHEET

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

AS NOTED

Date:

03/11/2024

C000

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LINETYPE LEGEND

PROPOSED FEATURES	EXISTING FEATURES
100 MAJOR CONTOUR	100 MAJOR CONTOUR
98 MINOR CONTOUR	98 MINOR CONTOUR
EDGE OF RIVER	EDGE OF RIVER
EDGE OF POND	EDGE OF POND
PROPERTY LINE	PROPERTY LINE
RIGHT OF WAY	RIGHT OF WAY
SETBACK	SETBACK
EASEMENT	EASEMENT
LOC LIMIT OF CONSTRUCTION	LOC LIMIT OF CONSTRUCTION
LOD LIMIT OF DISTURBANCE	LOD LIMIT OF DISTURBANCE
SF SILT FENCE	SF SILT FENCE
DEMOLITION WORK	DEMOLITION WORK
CENTERLINE	CENTERLINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
EDGE OF GRAVEL	EDGE OF GRAVEL
EDGE OF CONCRETE	EDGE OF CONCRETE
CURB	CURB
X FENCE (BARBED WIRE)	X FENCE (BARBED WIRE)
O FENCE (CHAIN LINK)	O FENCE (CHAIN LINK)
□ FENCE (WOODEN)	□ FENCE (WOODEN)
GUARD RAIL	GUARD RAIL
TREE LINE	TREE LINE
STONE WALL	STONE WALL
S SANITARY SEWER	S SANITARY SEWER
FM SEWER FORCEMAIN	FM SEWER FORCEMAIN
SS SEWER SERVICE	SS SEWER SERVICE
SLA DISPOSAL AREA LATERAL	SLA DISPOSAL AREA LATERAL
SD STORM LINE	SD STORM LINE
UD UNDER DRAIN	UD UNDER DRAIN
FD FOUNDATION DRAIN	FD FOUNDATION DRAIN
RD ROOF DRAIN	RD ROOF DRAIN
DITCH/SWALE	DITCH/SWALE
T TELECOMM	T TELECOMM
UGT UNDERGROUND TELECOMM	UGT UNDERGROUND TELECOMM
OHT OVERHEAD TELECOMM	OHT OVERHEAD TELECOMM
E ELECTRIC LINE	E ELECTRIC LINE
UGE UNDERGROUND ELECTRIC	UGE UNDERGROUND ELECTRIC
OHE OVERHEAD ELECTRIC	OHE OVERHEAD ELECTRIC
SL ELECTRICAL SITE LIGHTING	SL ELECTRICAL SITE LIGHTING
W WATER LINE	W WATER LINE
WV WATER APPROX.	WV WATER APPROX.
WS WATER SERVICE	WS WATER SERVICE
GAS GAS LINE	GAS GAS LINE
GV GAS APPROX.	GV GAS APPROX.
CATV CABLE TV	CATV CABLE TV
UGTV UNDERGROUND CABLE TV	UGTV UNDERGROUND CABLE TV
OGTV OVERHEAD CABLE TV	OGTV OVERHEAD CABLE TV

SURVEY NOTES

- EXISTING PHYSICAL FEATURES AND TOPOGRAPHY SHOWN HERE REPRESENTS A COMPILATION OF A SURVEYS PREPARED BY ROCKWOOD LAND SERVICES, LLC AND OVERALL CAMPUS MAPPING MADE AVAILABLE BY THE OWNER. SOURCE ROCKWOOD SURVEY PLANS ARE AS FOLLOWS:

BOREWELL HANDICAP PARKING EXISTING CONDITIONS, NOVEMBER 14, 2023
 NORTH PARKING LOT EXISTING CONDITIONS, NOVEMBER 14, 2023
 SOUTHERLY PORTION OF LOT 20 EXISTING CONDITIONS, NOVEMBER 14, 2023
 MERGENCY PARKING LOT EXISTING CONDITIONS, NOVEMBER 8, 2023
- FIELD SURVEY DATA COLLECTED IN NOVEMBER 2023.
- THE HORIZONTAL AND VERTICAL DATUMS ARE DERIVED FROM GPS OBSERVATION AND TIED TO PREVIOUS ONSITE PROJECTS. THE HORIZONTAL DATUM IS NEW HAMPSHIRE'S STATE PLAN COORDINATE GRID AND THE VERTICAL DATUM IS NAVD 1988.
- UNDERGROUND UTILITY INFORMATION IS SHOWN BASED ON STRUCTURE OBSERVATION. UNABLE TO PULL COVERS, CONNECTIONS BETWEEN STRUCTURE AND DIRECTION OF UNDERGROUND PIPES ARE APPROXIMATE LOCATIONS. CATCH BASIN INVERTS MEASURED AS CLOSELY AS POSSIBLE. CULVERT SIZES ARE ESTIMATED. ALL UNDERGROUND PIPE SIZES SHOULD BE VERIFIED.
- UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
- EXISTING UTILITIES SHOWN ON PLANS WERE TAKEN FROM FIELD OBSERVATIONS OF VISIBLE UTILITIES AND AS-BUILT DATA PROVIDED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING UTILITY LOCATIONS PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN UTILITIES AS SHOWN AND AS FOUND. THE CONTRACTOR SHALL CONTACT DIG SAFE (811 or 888-344-7233) A MINIMUM OF 72 HOURS, BUT NOT INCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO ANY CONSTRUCTION.

SYMBOL LEGEND

PROPOSED FEATURES	EXISTING FEATURES
BOUND	BOUND
BENCHMARK	BENCHMARK
DRILL HOLE	DRILL HOLE
SURVEY POINT	SURVEY POINT
IRON PIN	IRON PIN
TP1	TP1
B1	B1
BORING	BORING
P1	P1
PERC TEST	PERC TEST
CATCH BASIN (SQUARE)	CATCH BASIN (SQUARE)
CATCH BASIN (ROUND)	CATCH BASIN (ROUND)
HEADWALL	HEADWALL
FLARED END SECTION	FLARED END SECTION
STONE APRON	STONE APRON
① DRAIN MANHOLE (DMH)	① DRAIN MANHOLE (DMH)
○ C/O DRAINAGE CLEAN OUT	○ C/O DRAINAGE CLEAN OUT
③ SANITARY SEWER MANHOLE (SMH)	③ SANITARY SEWER MANHOLE (SMH)
○ C/O SANITARY CLEAN OUT	○ C/O SANITARY CLEAN OUT
HYDRANT	HYDRANT
WATER SHUTOFF	WATER SHUTOFF
TAPPING SLEEVE & VALVE	TAPPING SLEEVE & VALVE
GATE VALVE	GATE VALVE
WELL	WELL
UTILITY POLE	UTILITY POLE
GUY POLE	GUY POLE
⑩ ELECTRICAL MANHOLE	⑩ ELECTRICAL MANHOLE
BUILDING MOUNTED LIGHT	FLOOD LIGHT
LIGHT POST	LIGHT POST
TELEPHONE MANHOLE	TELEPHONE MANHOLE
NATURAL GAS MANHOLE	NATURAL GAS MANHOLE
COMMUNICATION MANHOLE	COMMUNICATION MANHOLE
BOLLARD	BOLLARD
SINGLE POLE SIGN	SINGLE POLE SIGN
DOUBLE POLE SIGN	DOUBLE POLE SIGN
SPOT ELEVATION	SPOT ELEVATION
ACCESSIBLE PARKING STALL	ACCESSIBLE PARKING STALL
DRAINAGE FLOW	DRAINAGE FLOW
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE

STANDARD ABBREVIATIONS

BENCHMARK	BM	END OF VERTICAL CURVE ELEVATION	EVCE	LIMITS OF CONSTRUCTION	LOC	REINFORCED CONCRETE PIPE	RCP
BEGINNING OF VERTICAL CURVE ELEVATION	BVCE	END OF VERTICAL CURVE STATION	EVCS	LIMITS OF DISTURBANCE	LOD	RIGHT-OF-WAY	ROW
BEGINNING OF VERTICAL CURVE STATION	BVCS	EXISTING	EX	MAXIMUM	MAX	SANITARY	SAN
CAST-IN-PLACE	CIP	EXISTING GRADE/GROUND	EG	MINIMUM	MIN	SANITARY MANHOLE	SMH
CAST IRON	CI	FINISHED FLOOR	FF	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	MUTCD	SEPTIC TANK	ST
CATCH BASIN	CB	FINISHED GRADE/GROUND	FG	MONITORING WELL	MW	SILT FENCE	SF
CENTERLINE	CL	FIELD INLET	FI	MONUMENT	MON	SLOPE	S=
CLEAN OUT	C/O	FLARED END SECTION	FES	NOT IN CONTRACT	NIC	STATION	STA
CORRUGATED METAL PIPE	CMP	FOOT, FEET	FT	NOT TO SCALE	NTS	STORM MANHOLE	DMH
CUBIC FEET	CF	FOOTING	FTG	POINT OF CURVATURE	PC	TANGENT	TAN
CUBIC FEET PER SECOND	CFS	FOUNDATION	FND	POINT OF INTERSECTION	PI	TANGENT TO CURVE	TC
CUBIC YARD	CY	GALLONS PER MINUTE	GPM	POLYETHYLENE, PROFESSIONAL ENGINEER	PE	TAPPING SLEEVE AND VALVE	TS&V
DIAMETER	DIA	GATE VALVE	GV	PROPERTY LINE	PL	TEMPORARY BENCHMARK	TBM
DISTRIBUTION BOX	D-BOX	HEADWALL	HW	PERC TEST, POINT OF TANGENCY	PT	TEST PIT	TP
DUCTILE IRON	DI	HIGH DENSITY POLYETHYLENE	HDPE	POLYVINYL CHLORIDE	PVC	TOP OF BANK	TOB
EDGE OF CONCRETE	EOC	HYDRANT	HYD	POLYNYL CHLORIDE	PVC	TOP OF CURB	TOC
EDGE OF GRAVEL	EOG	INTERSECTION	INT	POND	PND	TOP OF WALL	TOW
EDGE OF PAVEMENT	EOP	INVERT	INV	QUANTITY	QTY	TYPICAL	TYP
ELECTRIC	ELEC	IRON PIN	IP	QUALITY ASSURANCE	QA	VERIFY IN FIELD	VIF
ELECTRIC MANHOLE	EMH	IRON PIPE SIZE	IPS	QUALITY CONTROL	QC	WATER VALVE	WV
ELEVATION	ELEV	LENGTH	L=	RADIUS	R=		

GENERAL NOTES

- EXACT OBJECT LOCATIONS MAY DIFFER FROM THAT AS SHOWN, AND ADDITIONAL SUB-SURFACE AND SURFACE UTILITIES AND STRUCTURES MAY EXIST. THE CONTRACTOR IS TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK.
- UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER. SITE CONTRACTOR SHALL CALL UTILITY LOCATOR SERVICE AND UTILITY OWNERS 72 HOURS, EXCLUSIVE OF WEEKENDS AND HOLIDAYS, PRIOR TO ANY DIGGING, DRILLING, OR BLASTING:

A. DIG SAFE (TEL: #811)
 B. NON DIG SAFE MEMBER FACILITY OPERATORS IF KNOWN. A LIST OF DIG SAFE MEMBERS BY STATE CAN BE FOUND ON THE DIG SAFE WEB SITE WWW.DIGSAFE.COM
 C. CITY OF LEBANON PUBLIC WORKS DEPARTMENT (TEL: 448-3112)
- THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL FROM THE ENGINEER.
- THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
- THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO EXISTING CONDITIONS OR BETTER AS DETERMINED BY THE ENGINEER. ANY DAMAGED TREES, SHRUBS AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
- THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, AND CERTIFICATES.
- THE CONTRACTOR WILL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW HAMPSHIRE STATE LICENSED LAND SURVEYOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS, AND COORDINATE WORK WITH ALL CONTRACTS FOR THE SITE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT EXPLORATORY TEST PITS AS MAY BE REQUIRED TO DETERMINE UNDERGROUND CONDITIONS.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS FOR CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE.
- ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR TO GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND IMPERVIOUS SURFACES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES AND INVERTS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION, MONITORING, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES AND TAKING PRECAUTIONARY STEPS TO AVOID ANY SEDIMENT TRANSFER TO NEIGHBORING SITES OR WATERS OF THE STATE.
- THE QUALITY OF GROUNDWATER SHALL NOT BE ADVERSELY AFFECTED BY THE PROPOSED DEVELOPMENT. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE NEW HAMPSHIRE DIVISION OF WATER SUPPLY AND POLLUTION CONTROL WITH REGARD TO GROUNDWATER.

EPA 2022 CONSTRUCTION GENERAL PERMIT

- THIS PROJECT IS SUBJECT TO AN EPA 2022 CONSTRUCTION GENERAL PERMIT (CGP) FOR STORMWATER DISCHARGES FROM THE SITE FROM START OF CONSTRUCTION THROUGH FINAL COMPLETION.
- CONTRACTOR SHALL FUNCTION AS AND MEET ALL REQUIREMENTS FOR ELIGIBILITY AS AN OPERATOR AS DEFINED BY THE CGP AND SHALL FOLLOW THESE KEY REQUIREMENTS AT A MINIMUM:

A. DEVELOP A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND KEEP IT UP TO DATE.
 B. COMPLETE AND SUBMIT A NOTICE OF INTENT (NOI) TO EPA VIA THE NPDES EREPORTING TOOL (NET).
 C. IMPLEMENT EROSION AND SEDIMENT CONTROLS AND POLLUTION PREVENTION PRACTICES THROUGHOUT THE ENTIRE CONSTRUCTION PROJECT
 D. CONDUCT REQUIRED INSPECTIONS TO VERIFY COMPLIANCE WITH PERMIT. INSPECTIONS MAY ONLY BE CONDUCTED BY A QUALIFIED PERSON WHO HAS EITHER: (1) COMPLETED THE EPA CONSTRUCTION INSPECTION COURSE AND PASSED THE EXAM, OR (2) HOLDS A CURRENT CONSTRUCTION INSPECTION CERTIFICATION OR LICENSE FROM A PROGRAM THAT COVERS THE SAME CORE MATERIAL AS EPA'S INSPECTION COURSE.
 E. CONDUCT ROUTINE MAINTENANCE AND TAKE CORRECTIVE ACTION TO FIX PROBLEMS WITH CONTROLS OR DISCHARGES.
 F. COMPLETE DOCUMENTATION OF ALL SITE INSPECTIONS, DEWATERING INSPECTIONS, AND CORRECTIVE ACTIONS.
 G. COMPLY WITH TURBIDITY MONITORING REQUIREMENTS FOR DEWATERING DISCHARGES TO SENSITIVE WATERS (IF APPLICABLE).
 H. COMPLY WITH ANY STATE, TRIBAL, OR TERRITORY-SPECIFIC REQUIREMENTS IN PART 9 OF THE PERMIT.

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 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NH824-0890, DHMC PARKING EXPANSION, WILDLIFE 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 FIS 1002.04
- THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

Stamp

Date					
Description					
No.					

ENGINEERING VENTURES PC

208 Fynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225
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DARTMOUTH - HITCHCOCK MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

SITE LEGEND AND NOTES

MAIN CAMPUS
PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

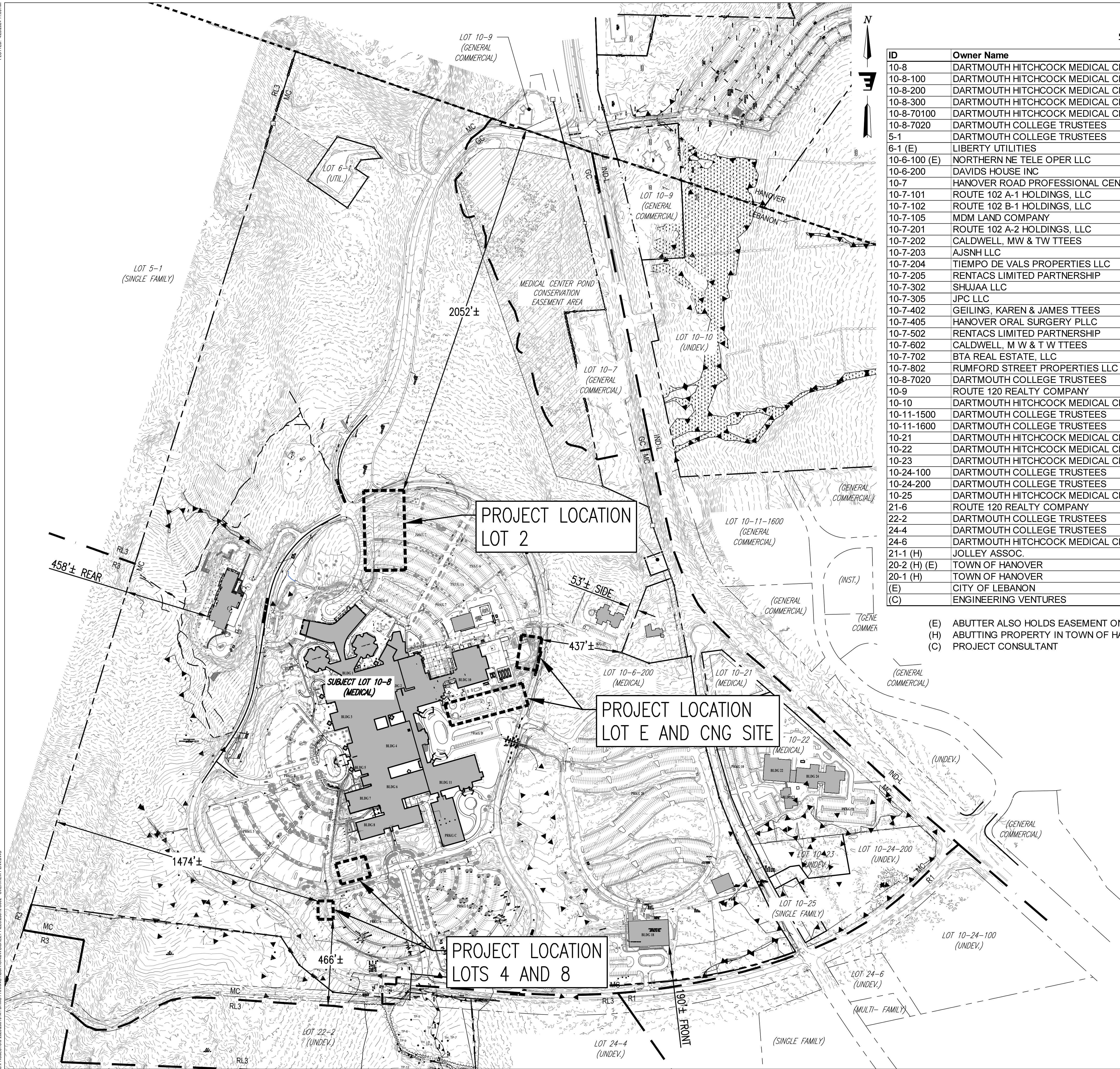
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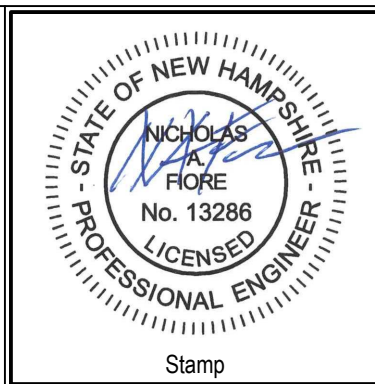
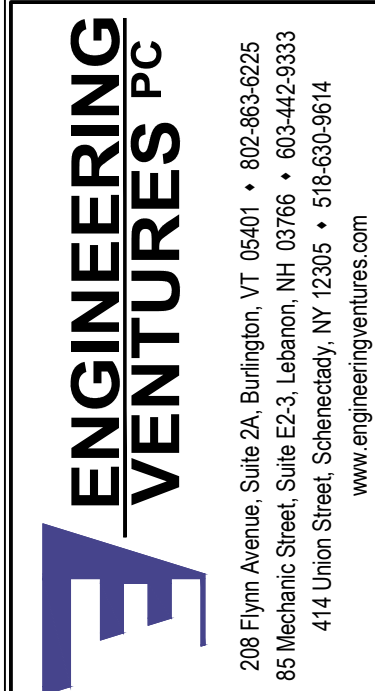


GRAPHIC SCALE

1 inch = 250 ft.
for sheet size 24" X 36"

ID	Owner Name	Owner Address	City	State	Zip
10-8	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-100	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-200	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-300	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-70100	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-7020	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
5-1	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
6-1 (E)	LIBERTY UTILITIES	15 BUTTRICK RD	LONDONDERRY	NH	03053
10-6-100 (E)	NORTHERN NE TELE OPER LLC	770 ELM ST, TAX DEPT 2ND FL	MANCHESTER	NH	03101
10-6-200	DAVIDS HOUSE INC	461 MOUNT SUPPORT RD	LEBANON	NH	03766
10-7	HANOVER ROAD PROFESSIONAL CENTER	PO BOX 682	HANOVER	NH	03755
10-7-101	ROUTE 102 A-1 HOLDINGS, LLC	1 PINE DR	HANOVER	NH	03755
10-7-102	ROUTE 102 B-1 HOLDINGS, LLC	1 PINE DR	HANOVER	NH	03755
10-7-105	MDM LAND COMPANY	1800 WEST LOOP SOUTH	HOUSTON	TX	77027
10-7-201	ROUTE 102 A-2 HOLDINGS, LLC	1 PINE DR	HANOVER	NH	03755
10-7-202	CALDWELL, MW & TW TTEES	PO BOX 176	LYME CNTR	NH	03769
10-7-203	AJSNH LLC	1046 GOOSE POND RD	CANAAN	NH	03741
10-7-204	TIEMPO DE VALS PROPERTIES LLC	216 WHITAKER RD	MERIDEN	NH	03770
10-7-205	RENTACS LIMITED PARTNERSHIP	PO BOX 177	ETNA	NH	03750
10-7-302	SHUJAA LLC	367 NH ROUTE 120, UNIT B3	LEBANON	NH	03766
10-7-305	JPC LLC	367 NH ROUTE 120, UNIT E3	LEBANON	NH	03766
10-7-402	GEILING, KAREN & JAMES TTEES	19 HOLLENBECK LN	HANOVER	NH	03755
10-7-405	HANOVER ORAL SURGERY PLLC	367 ROUTE 120, UNIT B5	LEBANON	NH	03766
10-7-502	RENTACS LIMITED PARTNERSHIP	PO BOX 177	ETNA	NH	03750
10-7-602	CALDWELL, M W & T W TTEES	PO BOX 176	LYME CNTR	NH	03769
10-7-702	BTA REAL ESTATE, LLC	PO BOX 730	LEBANON	NH	03766
10-7-802	RUMFORD STREET PROPERTIES LLC	210 RUMFORD ST	CONCORD	NH	03301
10-8-7020	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-9	ROUTE 120 REALTY COMPANY	PO BOX 92	HANOVER	NH	03755
10-10	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-11-1500	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-11-1600	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-21	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-22	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-23	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-24-100	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-24-200	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-25	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
21-6	ROUTE 120 REALTY COMPANY	PO BOX 92	HANOVER	NH	03755
22-2	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
24-4	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
24-6	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
21-1 (H)	JOLLEY ASSOC.	PO BOX 671	ST. ALBANS	VT	05474
20-2 (H) (E)	TOWN OF HANOVER	PO BOX 483	HANOVER	NH	03755
20-1 (H)	TOWN OF HANOVER	PO BOX 5188	HANOVER	NH	03755
(E)	CITY OF LEBANON	51 N PARK ST	LEBANON	NH	03766
(C)	ENGINEERING VENTURES	85 MECHANIC ST, STE E2-3	LEBANON	NH	03766

(E) ABUTTER ALSO HOLDS EASEMENT ON SUBJECT PROPERTY
(H) ABUTTING PROPERTY IN TOWN OF HANOVER
(C) PROJECT CONSULTANT

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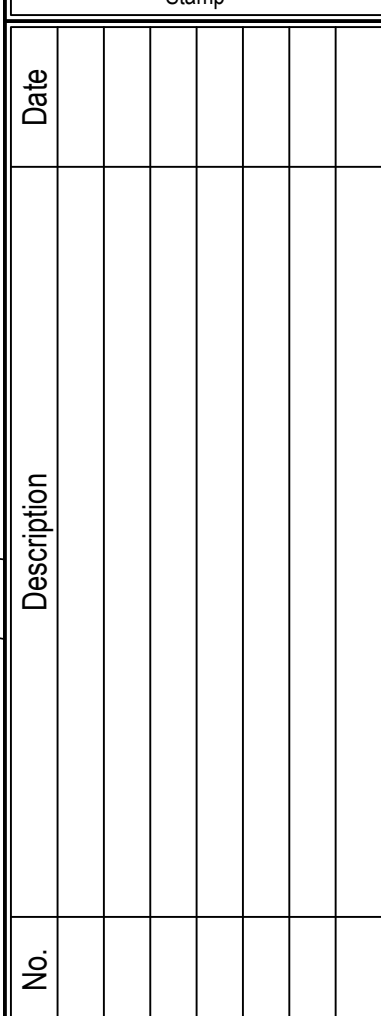
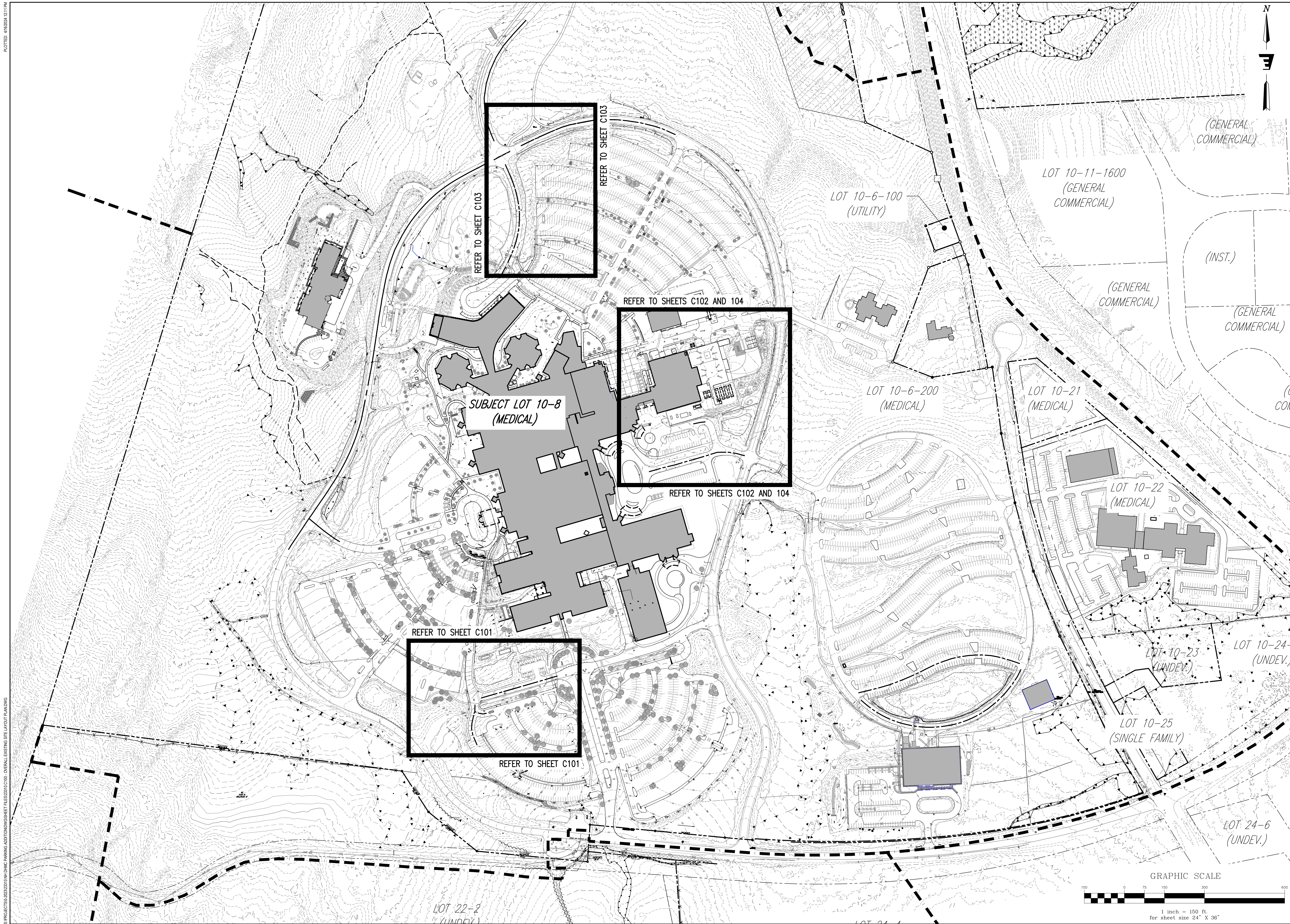
DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

OVERVIEW PLAN

**MAIN CAMPUS
PARKING EXPANSION**

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 250'
Date:	03/11/2024

C002
Page 3 of 27



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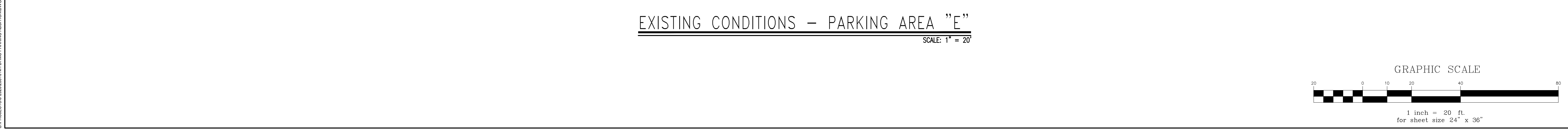
DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

OVERALL EXISTING SITE LAYOUT PLAN

Sheet Title:	Project Title:
EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 150'
Date:	03/11/2024

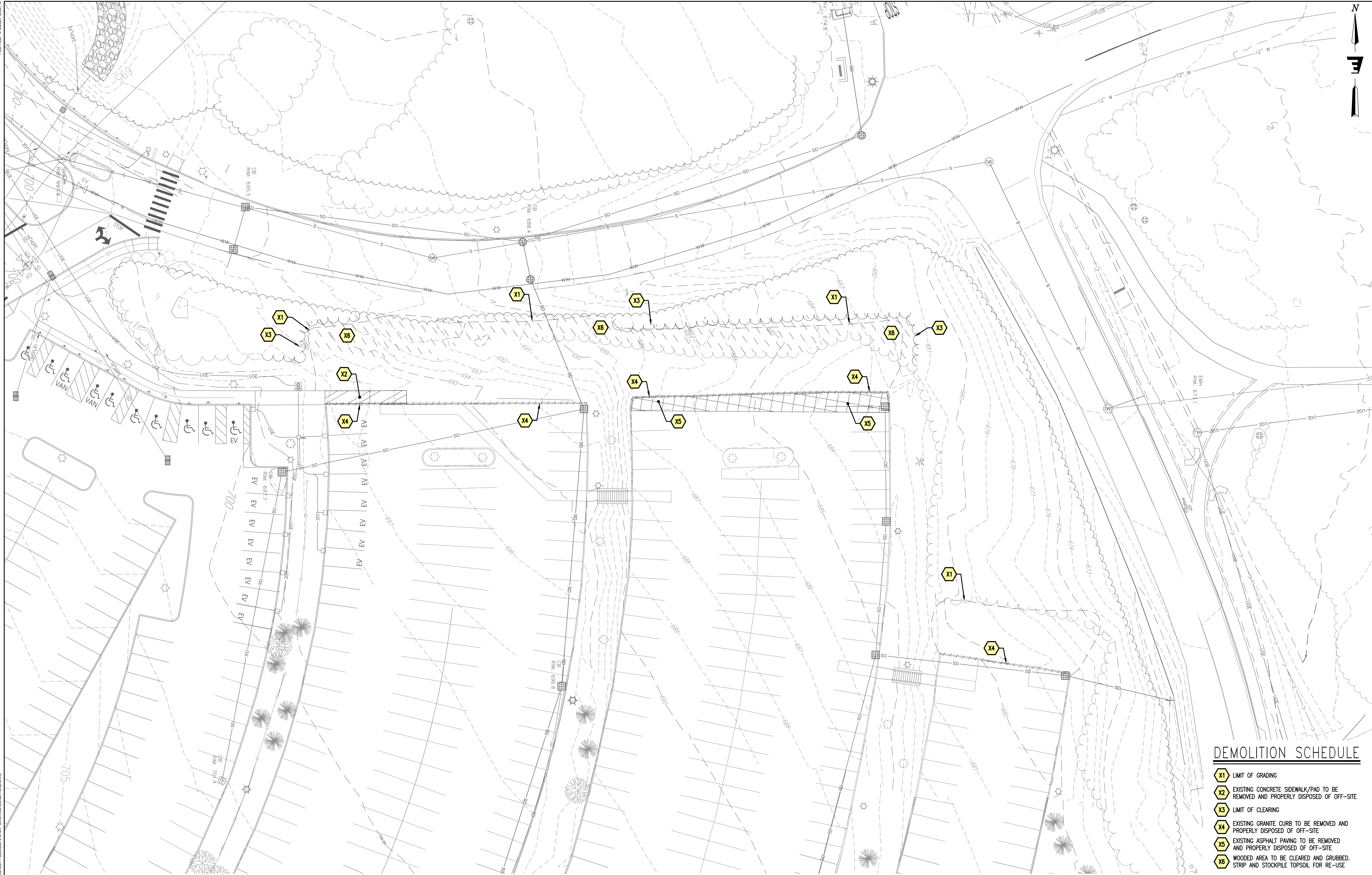
C100
Page 4 of 27



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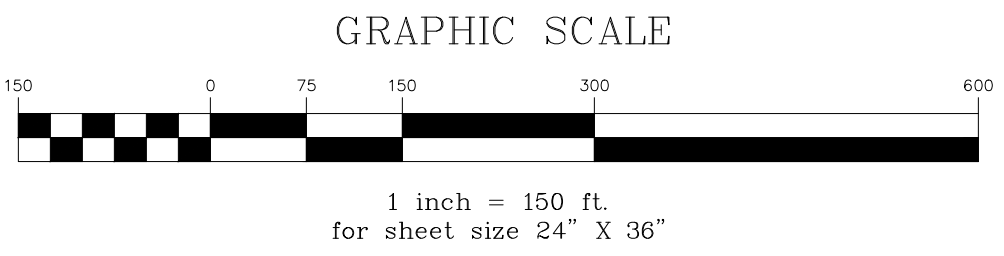
S:\PROJECTS\2022\2310 NH DMAC PARKING ADDITION\DWGSHEET FILES\2310 CIVIL - EXISTING CONDITIONS.DWG

PLOTTED: 4/16/2024 12:08 PM



EXISTING CONDITIONS - PARKING AREA "2"

SCALE: 1" = 20'



STATE OF NEW HAMPSHIRE

NOELAN FIORE

No. 13286

LICENSED PROFESSIONAL ENGINEER

Stamp

Date

No.

Description

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1 MEDICAL CENTER DRIVE

LEBANON, NEW HAMPSHIRE 03766

EXISTING CONDITIONS PARKING AREA "2"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title:

EV Project # 23310

Drawn By: JWF

Checked By: NAF

Scale: 1" = 20'

Date: 03/11/2024

C103

Page 7 of 27

Page 88 of 311



EXISTING CONDITIONS – CNG FACILITY

SCALE: 1" = 10'

DEMOLITION SCHEDULE

- X1 LIMIT OF GRADING
- X2 EXISTING CONCRETE SIDEWALK/PAD TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X3 SAWCUT EDGE, TYP.
- X4 EXISTING GRANITE CURB TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X5 EXISTING ASPHALT PAVING TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X6 EXISTING LIGHT POLE TO BE REMOVED AND RELOCATED (REFER TO SITE PLAN)
- X7 EXISTING TREE TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X8 WOODED AREA TO BE CLEARED AND GRUBBED. STRIP AND STOCKPILE TOPSOIL FOR RE-USE
- X9 EXISTING GRAVEL PATH TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE

Stamp

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DARTMOUTH - HITCHCOCK MEDICAL CENTER
 1 MEDICAL CENTER DRIVE
 LEBANON, NEW HAMPSHIRE 03766

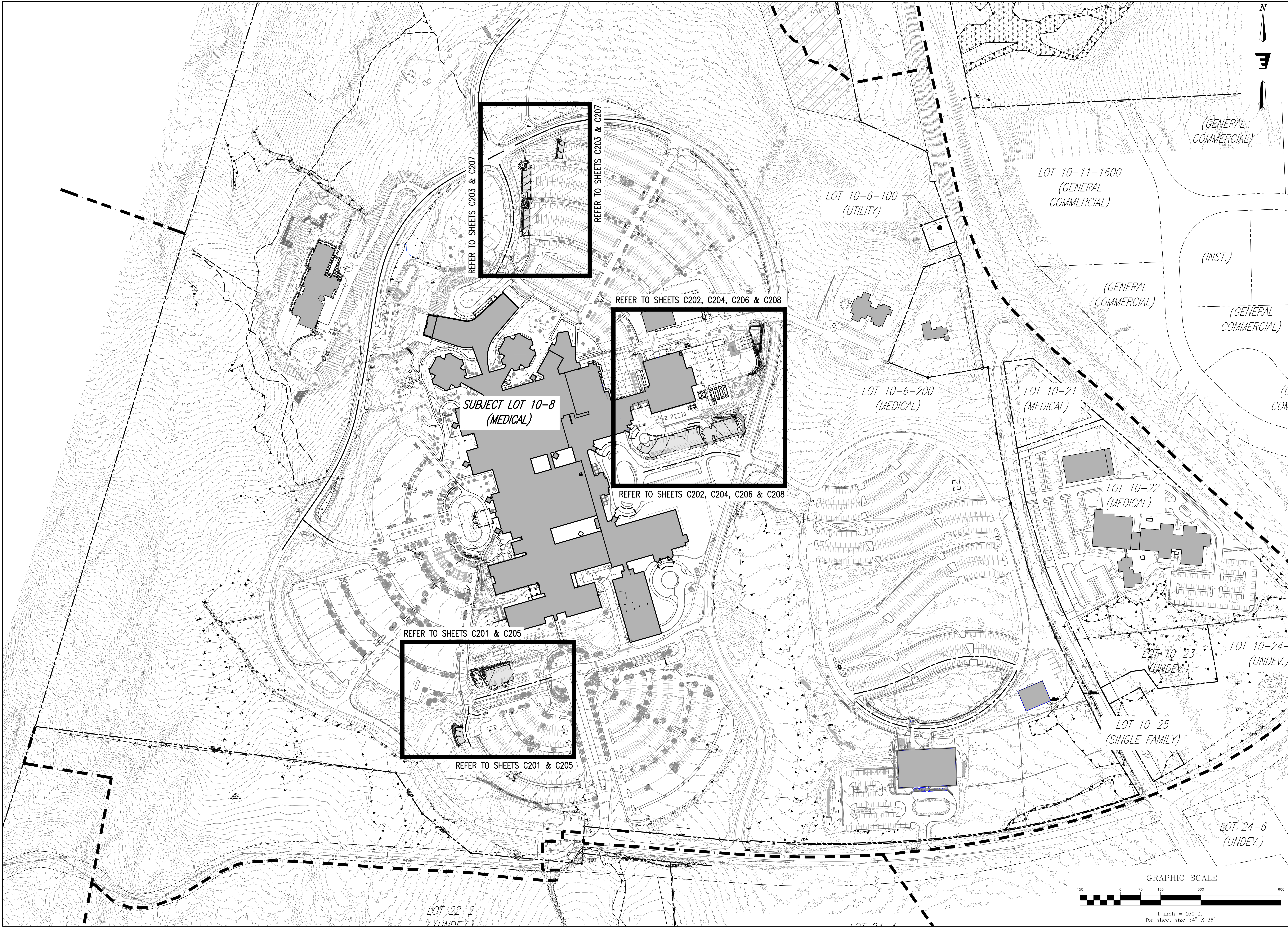
Sheet Title: EXISTING CONDITIONS CNG FACILITY

Project Title: MAIN CAMPUS PARKING EXPANSION
 LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 10'
Date:	03/11/2024

C104

Page 8 of 27



STATE OF NEW HAMPSHIRE

NOTARIS PUBLICUS

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PROFESSIONAL ENGINEER

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DARTMOUTH • HITCHCOCK

MEDICAL CENTER

1 MEDICAL CENTER DRIVE

LEBANON, NEW HAMPSHIRE 03766

OVERALL SITE LAYOUT PLAN

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

1" = 150'

Date:

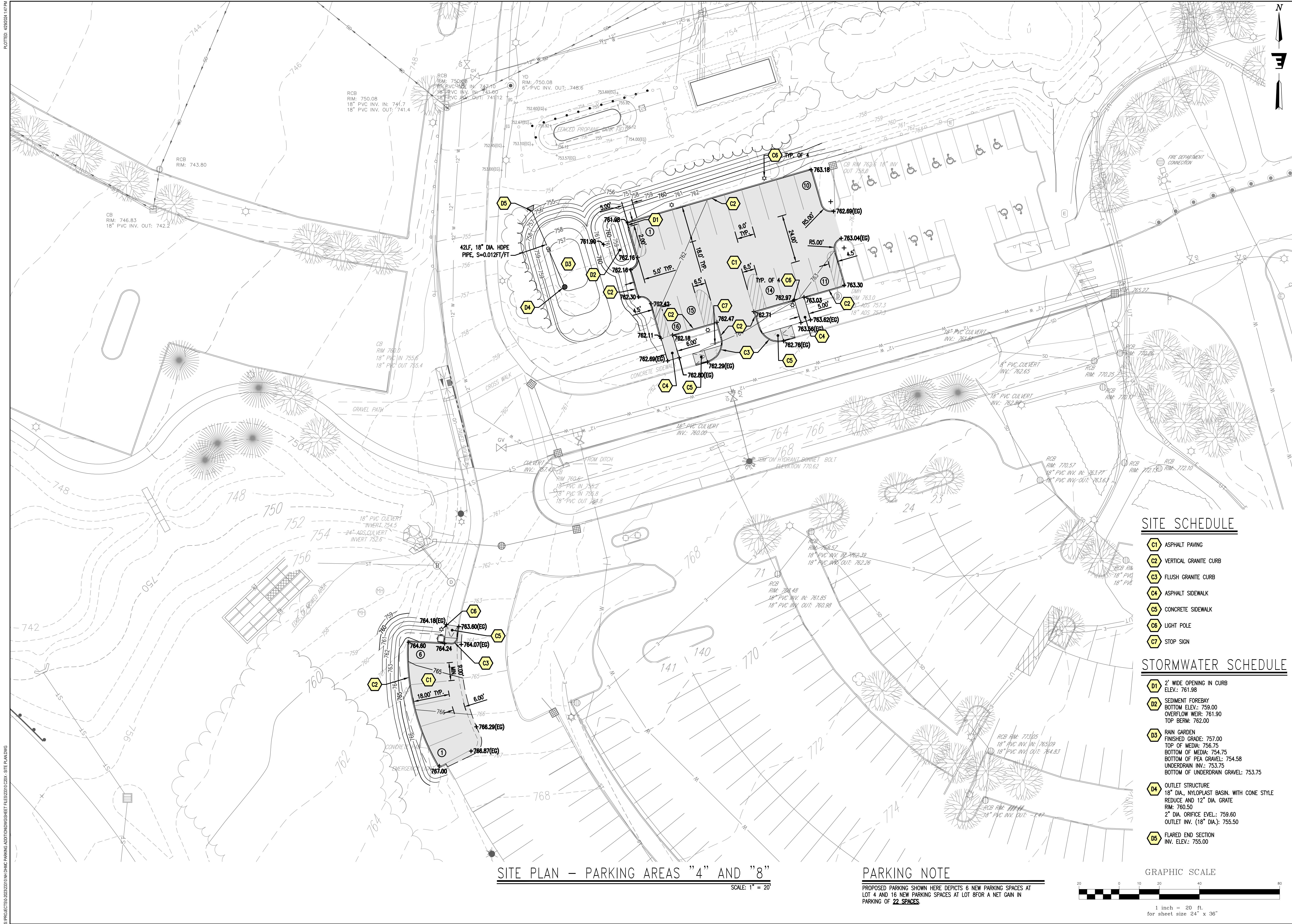
03/11/2024

Sheet Title:

Project Title:

C200

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SITE PLAN – PARKING AREAS "4" AND "8"
SCALE: 1" = 20'

PARKING NOTE

PROPOSED PARKING SHOWN HERE DEPICTS 6 NEW PARKING SPACES AT LOT 4 AND 16 NEW PARKING SPACES AT LOT 8 FOR A NET GAIN IN PARKING OF 22 SPACES.

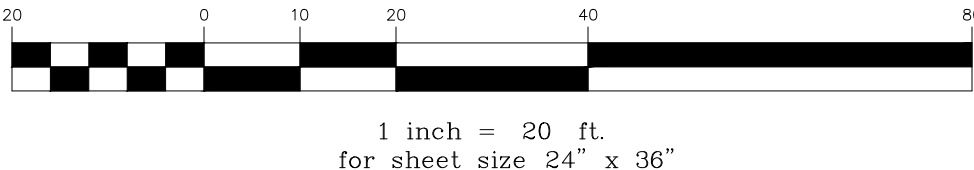
SITE SCHEDULE

- C1 ASPHALT PAVING
- C2 VERTICAL GRANITE CURB
- C3 FLUSH GRANITE CURB
- C4 ASPHALT SIDEWALK
- C5 CONCRETE SIDEWALK
- C6 LIGHT POLE
- C7 STOP SIGN

STORMWATER SCHEDULE

- D1 2' WIDE OPENING IN CURB
ELEV.: 761.98
- D2 SEDIMENT FOREBAY
BOTTOM ELEV.: 759.00
OVERFLOW WEIR: 761.90
TOP BERM: 762.00
- D3 RAIN GARDEN
FINISHED GRADE: 757.00
TOP OF MEDIA: 756.75
BOTTOM OF MEDIA: 754.75
BOTTOM OF PEA GRAVEL: 754.58
UNDERDRAIN INV.: 753.75
BOTTOM OF UNDERDRAIN GRAVEL: 753.75
- D4 OUTLET STRUCTURE
18" DIA. NYLOPLAST BASIN, WITH CONE STYLE
REDUCE AND 12" DIA. GRATE
RIM: 760.50
2" DIA. ORIFICE EVEL.: 759.60
OUTLET INV. (18" DIA): 755.50
- D5 FLARED END SECTION
INV. ELEV.: 755.00

GRAPHIC SCALE



STATE OF NEW HAMPSHIRE

NOELAN FIORE

No. 13286

LICENSED PROFESSIONAL ENGINEER

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1 MEDICAL CENTER DRIVE

LEBANON, NEW HAMPSHIRE 03766

SITE PLANS - PARKING AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

1" = 20'

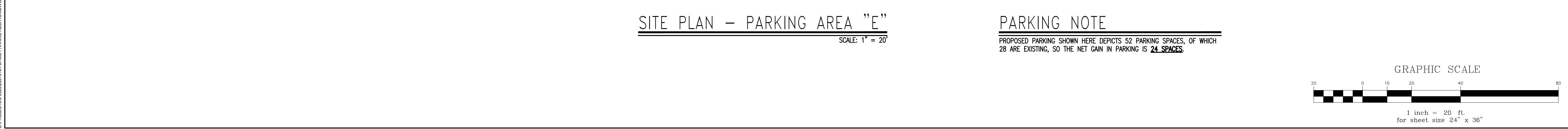
Date:

03/11/2024

C201

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SITE PLAN – PARKING AREA “2”
SCALE: 1" = 20'

PARKING NOTE
PROPOSED PARKING SHOWN HERE DEPICTS 26 NEW PARKING SPACES AND THE RE-PAVING OF TWO EXISTING PARKING SPACES ("E1" AND "E2"), SO THE NET GAIN IN PARKING IS 26 SPACES.

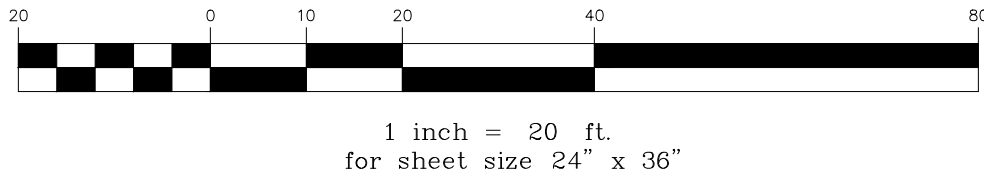
SITE SCHEDULE

- C1 ASPHALT PAVING
- C2 VERTICAL GRANITE CURB
- C3 LIGHT POLE

STORMWATER SCHEDULE

- D1 2' WIDE OPENING IN CURB
ELEV.: 693.61
- D2 2' WIDE OPENING IN CURB
ELEV.: 693.34
- D3 2' WIDE OPENING IN CURB
ELEV.: 682.85
- D4 2' WIDE OPENING IN CURB
ELEV.: 681.99
- D5 SEDIMENT FOREBAY
BOTTOM ELEV.: 690.00
OVERFLOW WEIR: 691.90
TOP BERM: 692.00
- D6 RAIN GARDEN
FINISHED GRADE: 691.00
TOP OF MEDIA: 690.75
BOTTOM OF MEDIA: 688.75
BOTTOM OF PEA GRAVEL: 688.58
UNDERDRAIN INV.: 687.75
BOTTOM OF UNDERDRAIN GRAVEL: 687.75
- D7 OUTLET STRUCTURE
12" DIA., NYLOPLAST BASIN, WITH DOMED GRATE
RIM: 691.75
1" DIA. ORIFICE INV: 687.75
OUTLET INV. (12" DIA.): 683.24
- D8 6 LF OF 12" PVC PIPE, S=0.010 FT/FT
- D9 PROVIDE FITTINGS AND ADAPTERS, AS NEEDED,
TO TIE TO EXISTING PVC DRAIN LINE, INV.
ELEV.: 683.18
- D10 GRASS LINED SWALE
- D11 SEDIMENT FOREBAY
BOTTOM ELEV.: 679.50
OVERFLOW WEIR: 781.40
TOP BERM: 781.50
- D12 RAIN GARDEN
FINISHED GRADE: 680.50
TOP OF MEDIA: 680.25
BOTTOM OF MEDIA: 678.25
BOTTOM OF PEA GRAVEL: 678.08
UNDERDRAIN INV.: 677.25
BOTTOM OF UNDERDRAIN GRAVEL: 677.25
- D13 OUTLET STRUCTURE
12" DIA., NYLOPLAST BASIN, WITH DOMED GRATE
RIM: 681.33
2" DIA. ORIFICE INV: 681.00
1" DIA. ORIFICE INV: 677.25
OUTLET INV. (12" DIA.): 677.00
- D14 44 LF OF 12" PVC PIPE, S=0.045 FT/FT
- D15 FLARED END SECTION
INV. ELEV.: 675.00

GRAPHIC SCALE



STATE OF NEW HAMPSHIRE

NICHOLAS FIORE

No. 13286

PROFESSIONAL ENGINEER

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No.

Date

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1 MEDICAL CENTER DRIVE

LEBANON, NEW HAMPSHIRE 03766

SITE PLAN - PARKING AREA "2"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

1" = 10'

Date:

03/11/2024

C203

Page 12 of 27

Page 93 of 311



SITE PLAN - CNG FACILITY

SCALE: 1" = 10'

SITE SCHEDULE

- C1** ASPHALT PAVING
- C2** RELOCATE EXISTING CHAINLINK FENCE, ADD ADDITIONAL FENCE AS NEEDED TO MATCH LAYOUT SHOWN
- C4** RELOCATE EXISTING 5' WIDE GRAVEL WALKWAY TO ALIGNMENT SHOWN HERE
- C5** RELOCATE EXISTING SITE LIGHTING AS SHOWN, PROVIDE ADDITIONAL CONDUITS AND WIRING AS NEEDED
- C6** EVALUATE LOCATION OF EXISTING LIGHT POLE AND IF NEEDED RELOCATE EXISTING SITE LIGHTING AS SHOWN TO PROVIDE ADDITIONAL SPACE FOR TRUCK TURNING, PROVIDE ADDITIONAL CONDUITS AND WIRING AS NEEDED

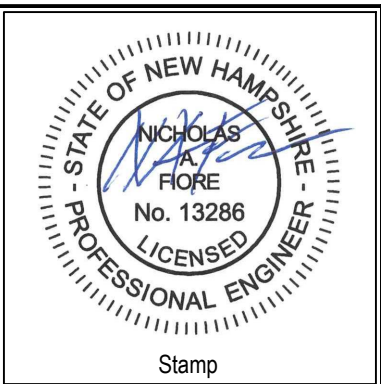
SITE SCHEDULE

- D1** EXPAND EXISTING RAIN GARDEN
FINISHED SURFACE: 713.25
TOP OF MEDIA: 713.00
BOTTOM OF MEDIA: 711.25
BOTTOM OF PEA GRAVEL: 711.00
UNDERDRAIN INV.: 710.17
BOTTOM OF UNDERDRAIN GRAVEL: 710.17
- D2** SEDIMENT FOREBAY
BOTTOM ELEV.: 711.25
OVERFLOW WEIR: 713.50
TOP BERM: 715.00
- D3** FLARED END SECTION
INV. ELEV.: 713.50
- D4** 4' DIA., PRECAST CONCRETE, MANHOLE
RIM: 718.67
INV. IN (12" HDPE): 714.67
INV. OUT (12" HDPE): 714.42
- D5** RELOCATE EXISTING DRAINAGE SWALE TO ALIGNMENT SHOWN HERE

GRAPHIC SCALE



1 inch = 10 ft.
for sheet size 24" x 36"



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MEDICAL CENTER
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SITE PLAN - CNG FACILITY

**MAIN CAMPUS
PARKING EXPANSION**

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 10'
Date:	03/11/2024

C204

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EROSION CONTROL LEGEND

EROSION PREVENTION AND SEDIMENT CONTROL STRATEGY
THE FOLLOWING TECHNIQUES WILL BE UTILIZED AS PART OF A SEDIMENT AND EROSION CONTROL PROGRAM. THE SEDIMENT AND EROSION CONTROL PROGRAM WILL BE IMPLEMENTED IN STAGES. CERTAIN ITEMS FROM ONE STAGE WILL LIKELY OVERLAP OR TAKE PLACE CONCURRENTLY WITH ITEMS FROM OTHER STAGES.

TEMPORARY INLET PROTECTION — INSTALL AS INDICATED ON PLANS. STONE TO BE REMOVED AND REPLACED WITH CLEAN STONE WHEN SEDIMENT IS $\leq 1/2$ DEPTH OF STONE. REMOVE ALL SEDIMENT IF COLLECTED IN STRUCTURE AS SOON AS POSSIBLE.

PERMANENT EROSION CONTROL NETTING
THIS STRUCTURAL MEASURE IS INSTALLED IN AREAS THAT HAVE SLOPES 3:1 AND GREATER AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO STABILIZE THE SLOPE AND REDUCE THE EROSION POTENTIAL. THE NETTING IS TYPICALLY IMPREGNATED WITH GRASS SEED AND SOMETIMES STAPLED TO THE EXPOSED SOIL. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

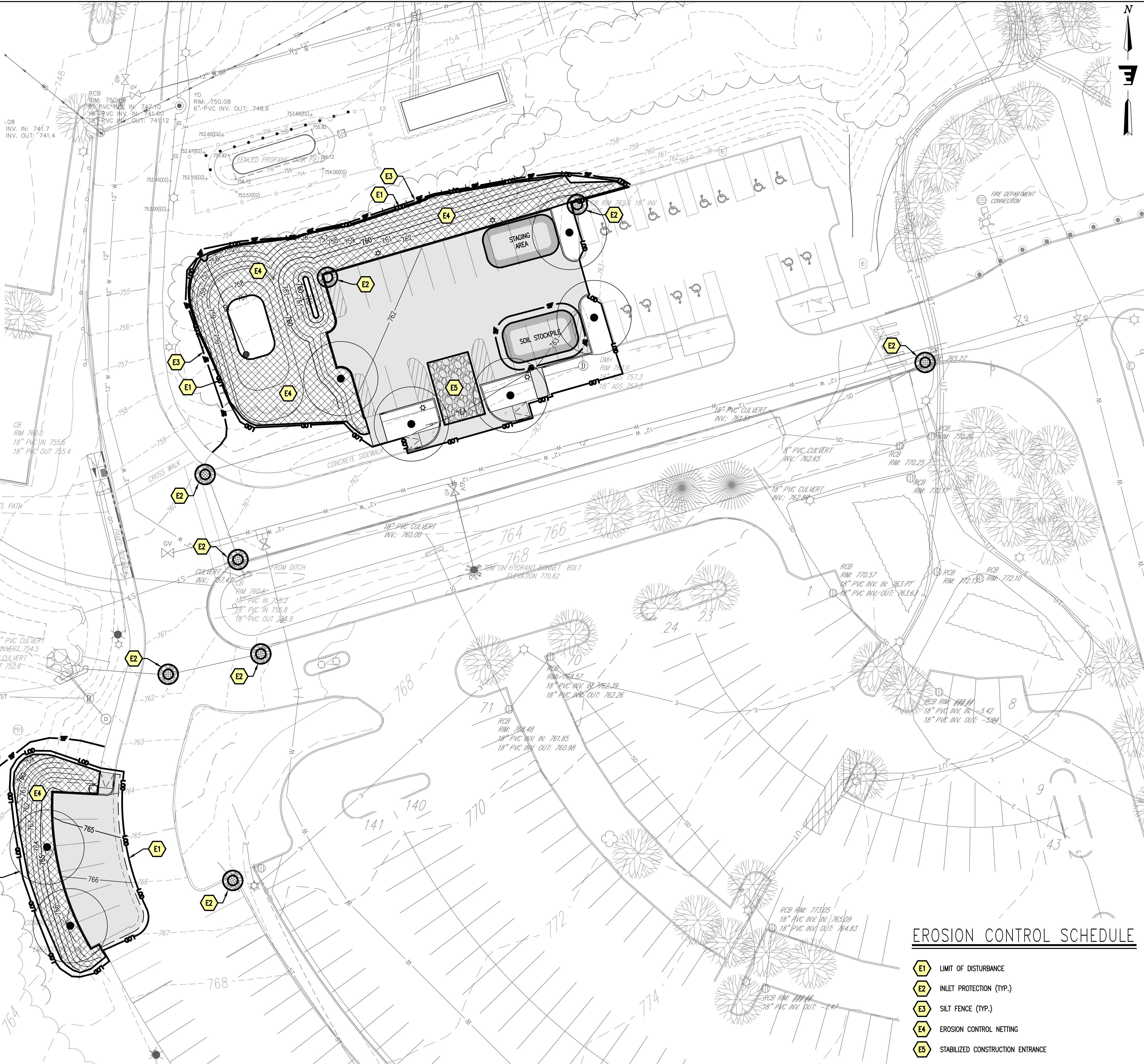
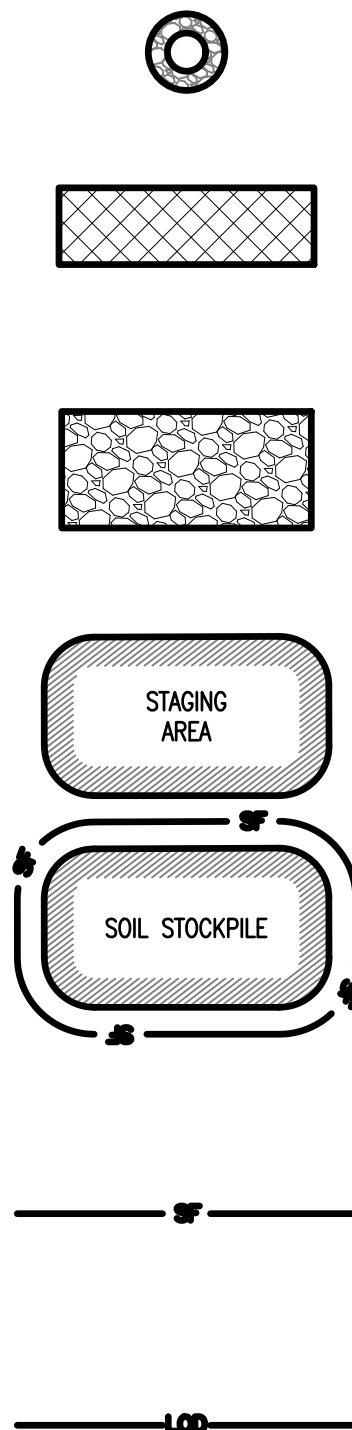
TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE REMOVED, THE IMPACTED AREA SHALL BE SEEDED AND MULCHED.

TEMPORARY STAGING AND WASTE AREAS (APPROXIMATE)
THESE ARE APPROVED LOCATIONS WHERE NON-SOIL, NON-ERODIBLE MATERIALS MAY BE STORED. SOILS SHALL NOT BE STORED IN THESE AREAS.

TEMPORARY SOIL STOCKPILE AREAS (APPROXIMATE)
THESE ARE APPROVED LOCATIONS WHERE TOPSOIL AND OTHER SOIL MATERIALS MAY BE STORED. THESE STOCKPILES WILL BE PROTECTED FROM EROSION BY A NUMBER OF METHODS, INCLUDING INSTALLING SILT FENCING AROUND THE DOWN GRADIENT PERIMETER OF THE STOCKPILE AND SEEDING AND MULCHING THE STOCKPILE WHEN NOT IN USE FOR MORE THAN FIVE DAYS.

TEMPORARY SILT FENCING
THIS STRUCTURAL MEASURE IS A TEMPORARY BARRIER OF GEOTEXTILE FABRIC USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. IT IS INSTALLED ALONG THE PERIMETER OF IMPACTED AREAS AND ALONG THE BASE OF THE FILL SLOPES. ADDITIONALLY, WHEN DESIGNATED ALONG THE LIMITS OF DISTURBANCE, INSTALL CONSTRUCTION FENCE BEHIND THE SILT FENCE. SILT FENCING IS EFFECTIVE IN REDUCING STORMWATER RUNOFF VELOCITIES, ASSIST IN THE DEPOSITION OF TRANSPORTED SEDIMENT LOAD AND PREVENT EROSION OF SOILS ONTO ADJACENT AREAS. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

LIMITS OF DISTURBANCE
THE CONTRACTOR SHALL CONTAIN ANY EARTH MOVING ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON THIS PLAN. THE ENGINEER SHALL REVIEW THE SITE TO MAKE ANY ADJUSTMENTS TO ACCOUNT FOR ENVIRONMENTALLY SENSITIVE AREAS, SPECIMEN TREES AND SPECIAL AREAS OF CONCERN.



SITE PLAN – PARKING AREAS "4" AND "8"

SCALE: 1" = 20'

EROSION CONTROL SCHEDULE

- E1 LIMIT OF DISTURBANCE
- E2 INLET PROTECTION (TYP.)
- E3 SILT FENCE (TYP.)
- E4 EROSION CONTROL NETTING
- E5 STABILIZED CONSTRUCTION ENTRANCE

GRAPHIC SCALE



1 inch = 20 ft.
for sheet size 24" x 36"

STATE OF NEW HAMPSHIRE

NOTAR PUBLIC

NO. 13286

PROFESSIONAL ENGINEER

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Date

No.

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EROSION PREVENTION AND SEDIMENT CONTROL PLAN - AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title:

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

1" = 20'

Date:

03/11/2024

C205

Page 14 of 27

S:\PROJECTS\2022\2310 NH DMAC PARKING ADDITION\DWG\SHEET FILES\2310 C205 - EROSION PLAN.DWG

Page 95 of 311

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EROSION CONTROL LEGEND

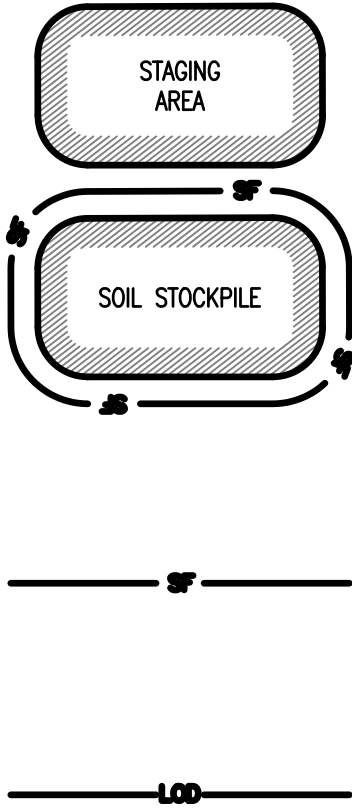
EROSION PREVENTION AND SEDIMENT CONTROL STRATEGY
THE FOLLOWING TECHNIQUES WILL BE UTILIZED AS PART OF A SEDIMENT AND EROSION CONTROL PROGRAM. THE SEDIMENT AND EROSION CONTROL PROGRAM WILL BE IMPLEMENTED IN STAGES. CERTAIN ITEMS FROM ONE STAGE WILL LIKELY OVERLAP OR TAKE PLACE CONCURRENTLY WITH ITEMS FROM OTHER STAGES.

TEMPORARY INLET PROTECTION – INSTALL AS INDICATED ON PLANS. STONE TO BE REMOVED AND REPLACED WITH CLEAN STONE WHEN SEDIMENT IS $\leq 1/2$ DEPTH OF STONE. REMOVE ALL SEDIMENT IF COLLECTED IN STRUCTURE AS SOON AS POSSIBLE.

STONE CHECK DAM
THIS STRUCTURAL MEASURE IS ALONG DITCHES/ SWALES AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO SLOW STORMWATER RUNOFF AND TRAP SEDIMENT PARTICLES. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

PERMANENT EROSION CONTROL NETTING
THIS STRUCTURAL MEASURE IS INSTALLED IN AREAS THAT HAVE SLOPES 3:1 AND GREATER AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO STABILIZE THE SLOPE AND REDUCE THE EROSION POTENTIAL. THE NETTING IS TYPICALLY IMPREGNATED WITH GRASS SEED AND SOMETIMES STAPLED TO THE EXPOSED SOIL. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE REMOVED, THE IMPACTED AREA SHALL BE SEEDED AND MULCHED.



TEMPORARY STAGING AND WASTE AREAS (APPROXIMATE)
THESE ARE APPROVED LOCATIONS WHERE NON-SOIL, NON-ERODIBLE MATERIALS MAY BE STORED. SOILS SHALL NOT BE STORED IN THESE AREAS.

TEMPORARY SOIL STOCKPILE AREAS (APPROXIMATE)
THESE ARE APPROVED LOCATIONS WHERE TOPSOIL AND OTHER SOIL MATERIALS MAY BE STORED. THESE STOCKPILES WILL BE PROTECTED FROM EROSION BY A NUMBER OF METHODS, INCLUDING INSTALLING SILT FENCING AROUND THE DOWN GRADIENT PERIMETER OF THE STOCKPILE AND SEEDING AND MULCHING THE STOCKPILE WHEN NOT IN USE FOR MORE THAN FIVE DAYS.

TEMPORARY SILT FENCING
THIS STRUCTURAL MEASURE IS A TEMPORARY BARRIER OF GEOTEXTILE FABRIC USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. IT IS INSTALLED ALONG THE PERIMETER OF IMPACTED AREAS AND ALONG THE BASE OF THE FILL SLOPES. ADDITIONALLY, WHEN DESIGNATED ALONG THE LIMITS OF DISTURBANCE, INSTALL CONSTRUCTION FENCE BEHIND THE SILT FENCE. SILT FENCING IS EFFECTIVE IN REDUCING STORMWATER RUNOFF VELOCITIES, ASSIST IN THE DEPOSITION OF TRANSPORTED SEDIMENT LOAD AND PREVENT EROSION OF SOILS ONTO ADJACENT AREAS. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

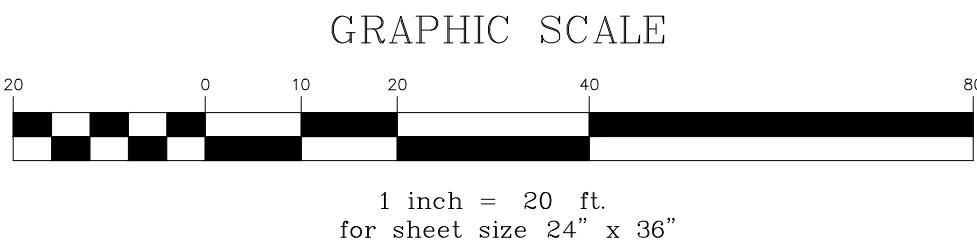
LIMITS OF DISTURBANCE
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SITE PLAN – PARKING AREA “E”
SCALE: 1" = 20'

EROSION CONTROL SCHEDULE

- E1 LIMIT OF DISTURBANCE
- E2 INLET PROTECTION (TYP.)
- E3 SILT FENCE (TYP.)
- E4 EROSION CONTROL NETTING
- E5 STABILIZED CONSTRUCTION ENTRANCE
- E6 CHECK DAM (TYP.)



STATE OF NEW HAMPSHIRE
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EROSION PREVENTION AND SEDIMENT
CONTROL PLAN - PARKING AREA "E"
MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

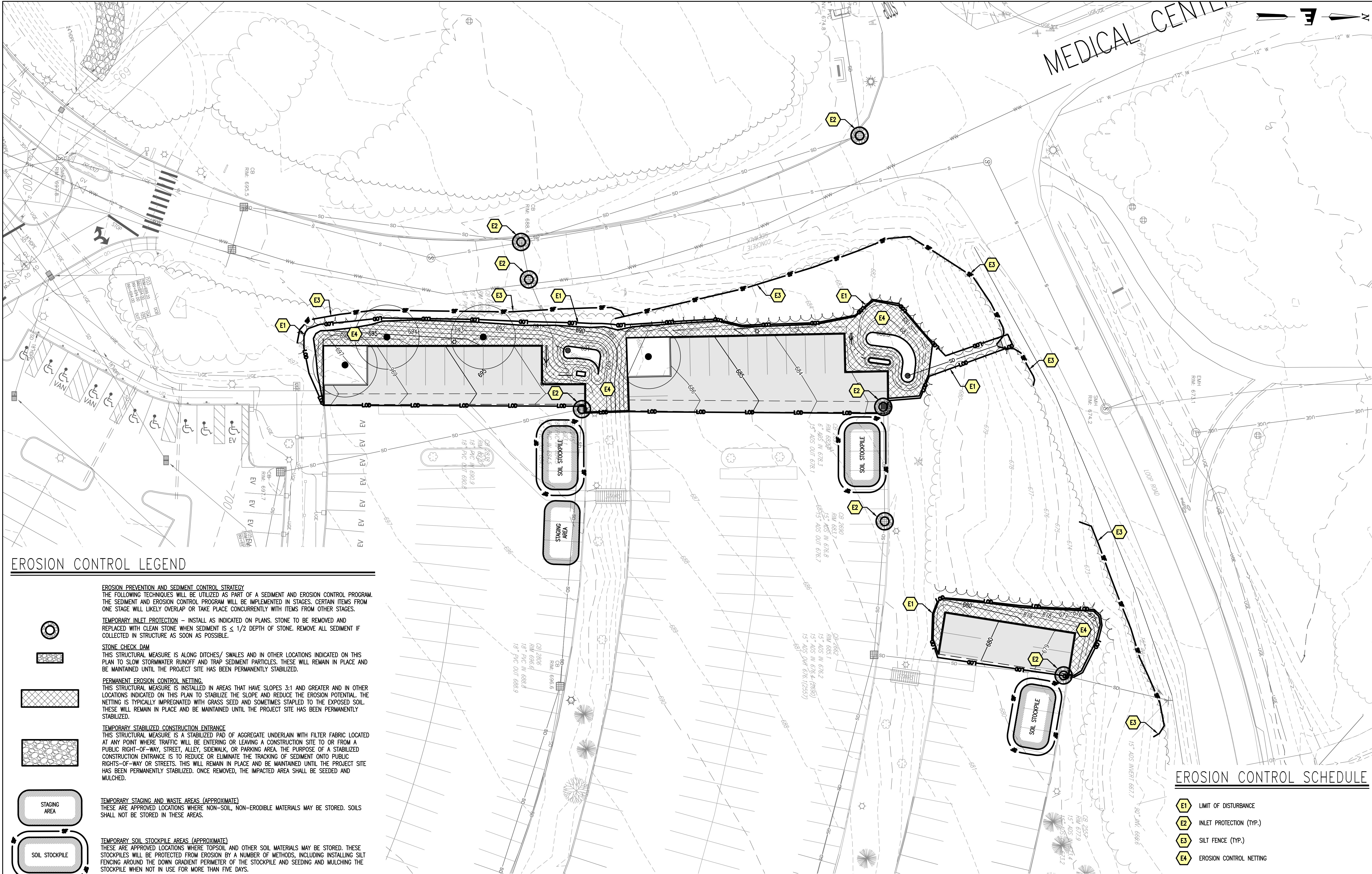
Sheet Title

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 20'
Date: 03/11/2024

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EROSION CONTROL LEGEND

STONE CHECK DAM
THIS STRUCTURAL MEASURE IS ALONG DITCHES/ SWALES AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO SLOW STORMWATER RUNOFF AND TRAP SEDIMENT PARTICLES. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

PERMANENT EROSION CONTROL NETTING
THIS STRUCTURAL MEASURE IS INSTALLED IN AREAS THAT HAVE SLOPES 3:1 AND GREATER AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO STABILIZE THE SOIL AND REDUCE THE EROSION POTENTIAL. THE NETTING IS TYPICALLY IMPREGNATED WITH GRASS SEED AND SOMETIMES STAPLED TO THE EXPOSED SOIL. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE REMOVED, THE IMPACTED AREA SHALL BE SEEDED AND MULCHED.

TEMPORARY STAGING AND WASTE AREAS (APPROXIMATE)
THESE ARE APPROVED LOCATIONS WHERE NON-SOIL, NON-ERODIBLE MATERIALS MAY BE STORED. SOILS SHALL NOT BE STORED IN THESE AREAS.

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THESE ARE APPROVED LOCATIONS WHERE TOPSOIL AND OTHER SOIL MATERIALS MAY BE STORED. THESE STOCKPILES WILL BE PROTECTED FROM EROSION BY A NUMBER OF METHODS, INCLUDING INSTALLING SILT FENCING AROUND THE DOWN GRADIENT PERIMETER OF THE STOCKPILE AND SEEDING AND MULCHING THE STOCKPILE WHEN NOT IN USE FOR MORE THAN FIVE DAYS.

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LIMITS OF DISTURBANCE
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SITE PLAN – PARKING AREA "2"

SCALE: 1" = 20'

EROSION CONTROL SCHEDULE

- E1

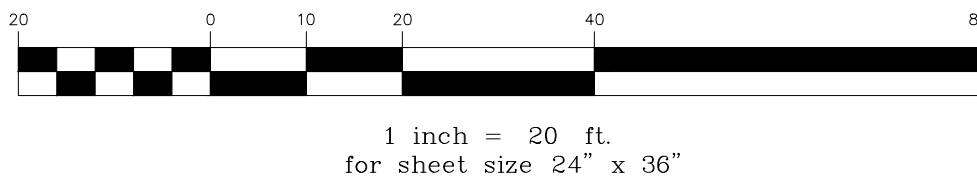
LIMIT OF DISTURBANCE
- E2

INLET PROTECTION (TYP.)
- E3

SILT FENCE (TYP.)
- E4

EROSION CONTROL NETTING

GRAPHIC SCALE



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EROSION PREVENTION AND SEDIMENT
CONTROL PLAN - PARKING AREA "2"

MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title:

EV Project # 23310

Drawn By: JWF

Checked By: NAF

Scale: 1" = 10'

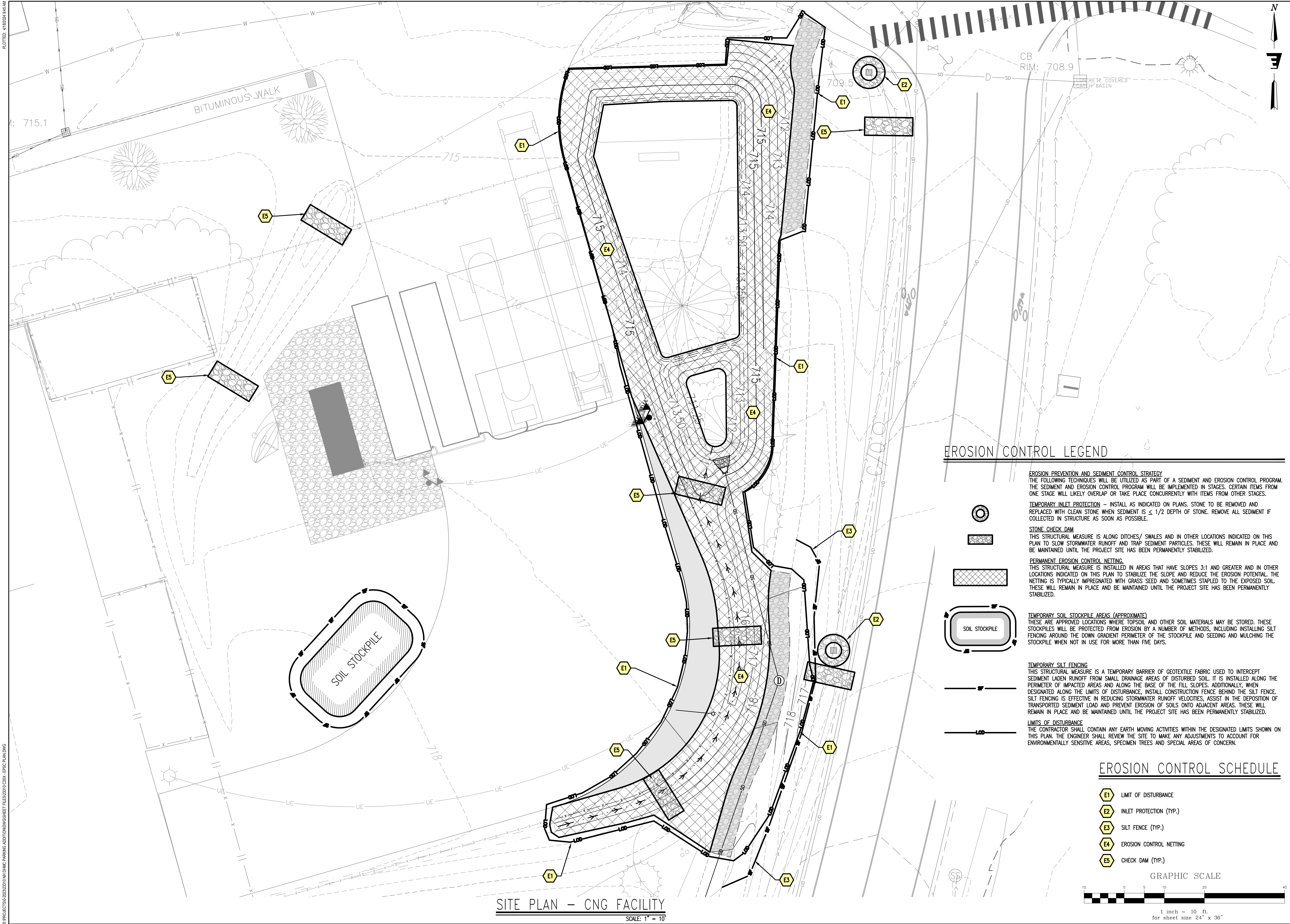
Date: 03/11/2024

C207

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PLOTTED: 4/10/2024 9:45 AM

S:\PROJECTS\2022\2310 NH DMAC PARKING ADDITION\DWGSHEET FILES\2310 C208 - EPSF PLAN.DWG

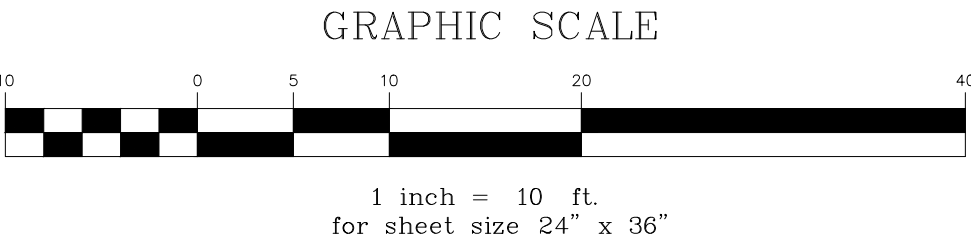


EROSION CONTROL LEGEND

- EROSION PREVENTION AND SEDIMENT CONTROL STRATEGY**
THE FOLLOWING TECHNIQUES WILL BE UTILIZED AS PART OF A SEDIMENT AND EROSION CONTROL PROGRAM. THE SEDIMENT AND EROSION CONTROL PROGRAM WILL BE IMPLEMENTED IN STAGES. CERTAIN ITEMS FROM ONE STAGE WILL LIKELY OVERLAP OR TAKE PLACE CONCURRENTLY WITH ITEMS FROM OTHER STAGES.
- TEMPORARY INLET PROTECTION** - INSTALL AS INDICATED ON PLANS. STONE TO BE REMOVED AND REPLACED WITH CLEAN STONE WHEN SEDIMENT IS $\leq 1/2$ DEPTH OF STONE. REMOVE ALL SEDIMENT IF COLLECTED IN STRUCTURE AS SOON AS POSSIBLE.
- STONE CHECK DAM**
THIS STRUCTURAL MEASURE IS ALONG DITCHES/ SWALES AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO SLOW STORMWATER RUNOFF AND TRAP SEDIMENT PARTICLES. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.
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EROSION CONTROL SCHEDULE

- E1 LIMIT OF DISTURBANCE
- E2 INLET PROTECTION (TYP.)
- E3 SILT FENCE (TYP.)
- E4 EROSION CONTROL NETTING
- E5 CHECK DAM (TYP.)



STATE OF NEW HAMPSHIRE

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PROFESSIONAL ENGINEER

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Date

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EROSION PREVENTION AND SEDIMENT CONTROL PLAN - CNG FACILITY

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title:

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

1" = 10'

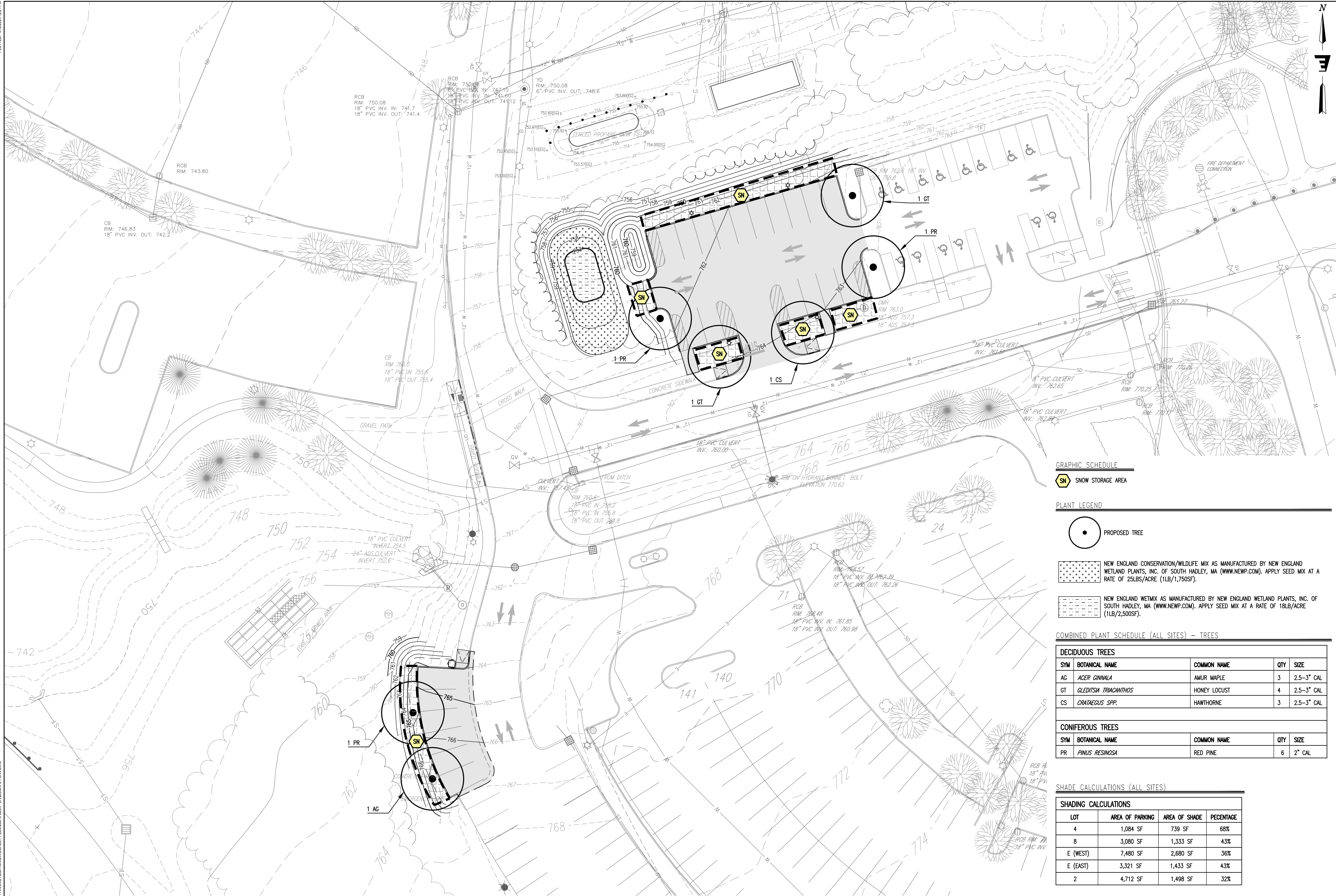
Date:

03/11/2024

C208

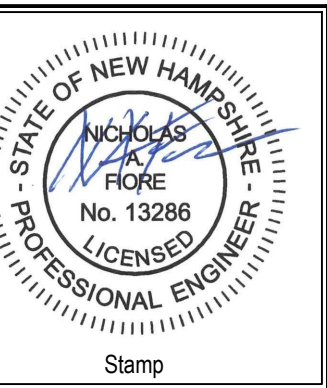
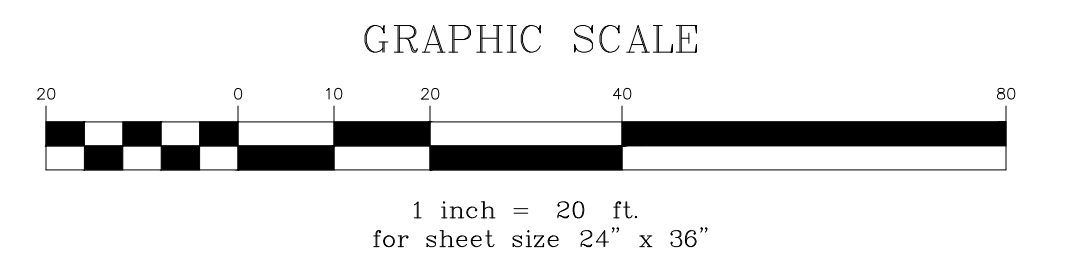
Page 17 of 27

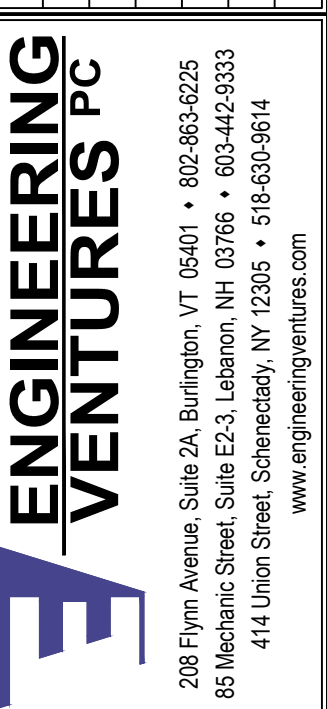
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SITE PLAN - PARKING AREAS "4" AND "8"

SCALE: 1" = 20'





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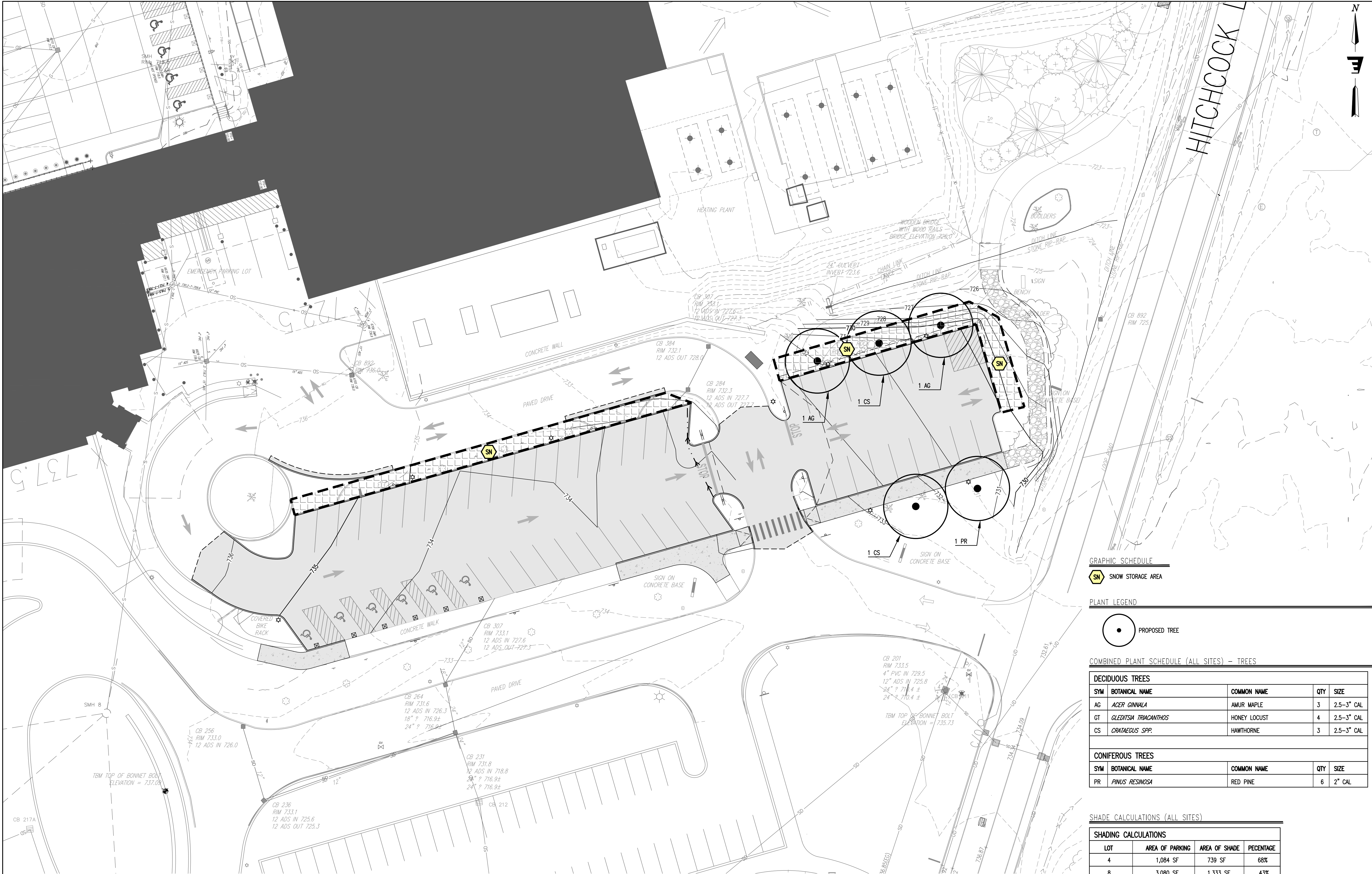
LANDSCAPE PLAN - PARKING
AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBAIN, GRAFION COUNTY, NEW HAMPSHIRE

Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 20'
Date:	03/11/2024

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SITE PLAN – PARKING AREA "E"
 SCALE: 1" = 20'

GRAPHIC SCHEDULE

SN SNOW STORAGE AREA

PLANT LEGEND

PROPOSED TREE

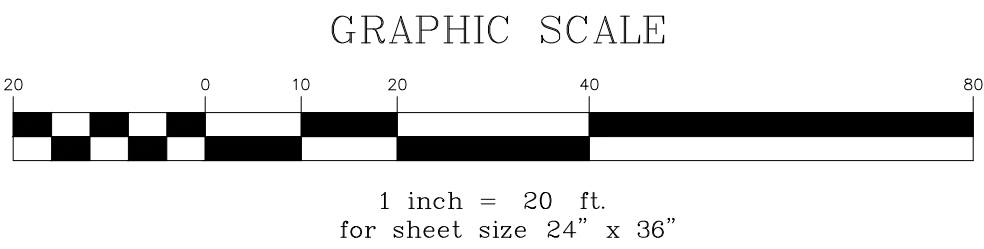
COMBINED PLANT SCHEDULE (ALL SITES) – TREES

DECIDUOUS TREES				
SYM	BOTANICAL NAME	COMMON NAME	QTY	SIZE
AG	ACER GINNALA	AMUR MAPLE	3	2.5–3" CAL
GT	GLEDITSIA TRIACANTHOS	HONEY LOCUST	4	2.5–3" CAL
CS	CRATAEGUS SPP.	HAWTHORNE	3	2.5–3" CAL

CONIFEROUS TREES				
SYM	BOTANICAL NAME	COMMON NAME	QTY	SIZE
PR	PINUS RESINOSA	RED PINE	6	2" CAL

SHADE CALCULATIONS (ALL SITES)

SHADING CALCULATIONS			
LOT	AREA OF PARKING	AREA OF SHADE	PERCENTAGE
4	1,084 SF	739 SF	68%
8	3,080 SF	1,333 SF	43%
E (WEST)	7,480 SF	2,680 SF	36%
E (EAST)	3,321 SF	1,433 SF	43%
2	4,712 SF	1,498 SF	32%



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LANDSCAPE PLAN - PARKING AREA "E"

MAIN CAMPUS
 PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
 Drawn By: JWF
 Checked By: NAF
 Scale: 1" = 20'
 Date: 03/11/2024

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 Page 19 of 27

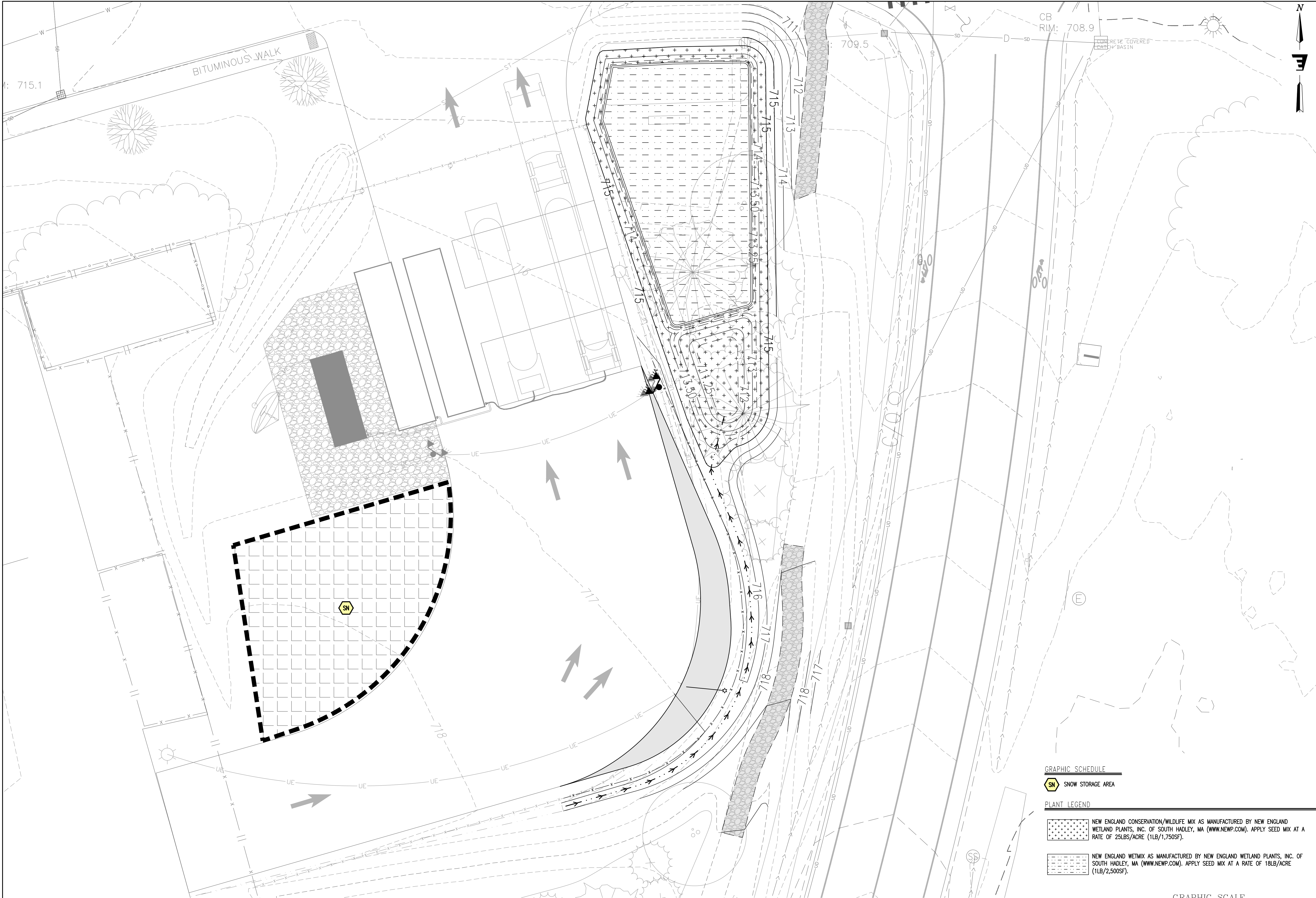


GRAPHIC SCALE

20 0 10 20 40 60



1 inch = 20 ft.
for sheet size 24" x 36"



SITE PLAN - CNG FACILITY

SCALE: 1" = 10'

GRAPHIC SCHEDULE

SN SNOW STORAGE AREA

PLANT LEGEND

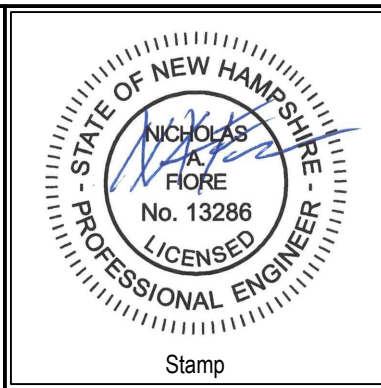
NEW ENGLAND CONSERVATION/WILDLIFE MIX AS MANUFACTURED BY NEW ENGLAND WETLAND PLANTS, INC. OF SOUTH HADLEY, MA (WWW.NEWP.COM). APPLY SEED MIX AT A RATE OF 25LBS/ACRE (1LB/1,750SF).

NEW ENGLAND WETMIX AS MANUFACTURED BY NEW ENGLAND WETLAND PLANTS, INC. OF SOUTH HADLEY, MA (WWW.NEWP.COM). APPLY SEED MIX AT A RATE OF 18LB/ACRE (1LB/2,500SF).

GRAPHIC SCALE



1 inch = 10 ft.
for sheet size 24" x 36"



No.	Description	Date

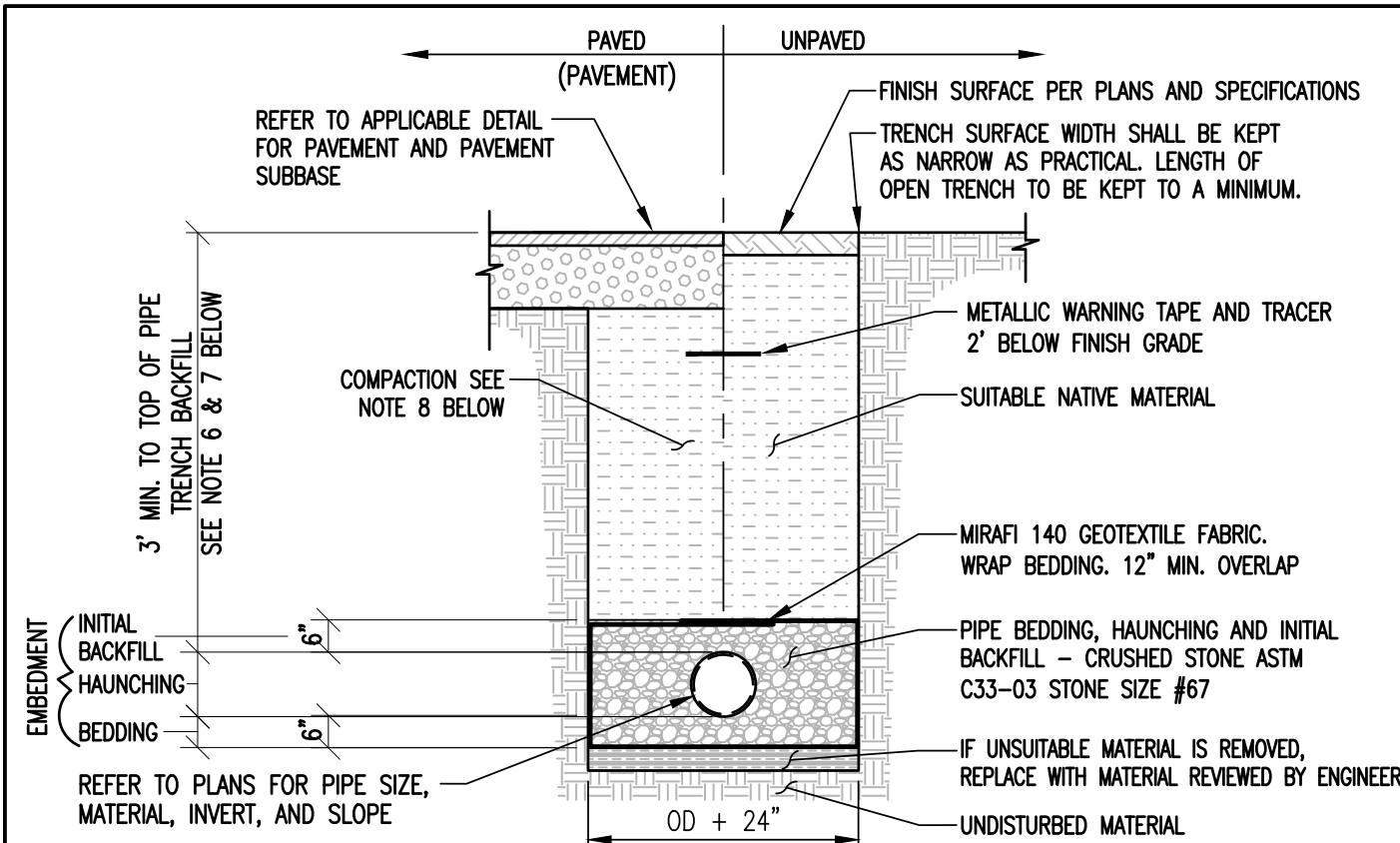
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LANDSCAPE PLAN - CNG FACILITY
MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 10'
Date:	03/11/2024

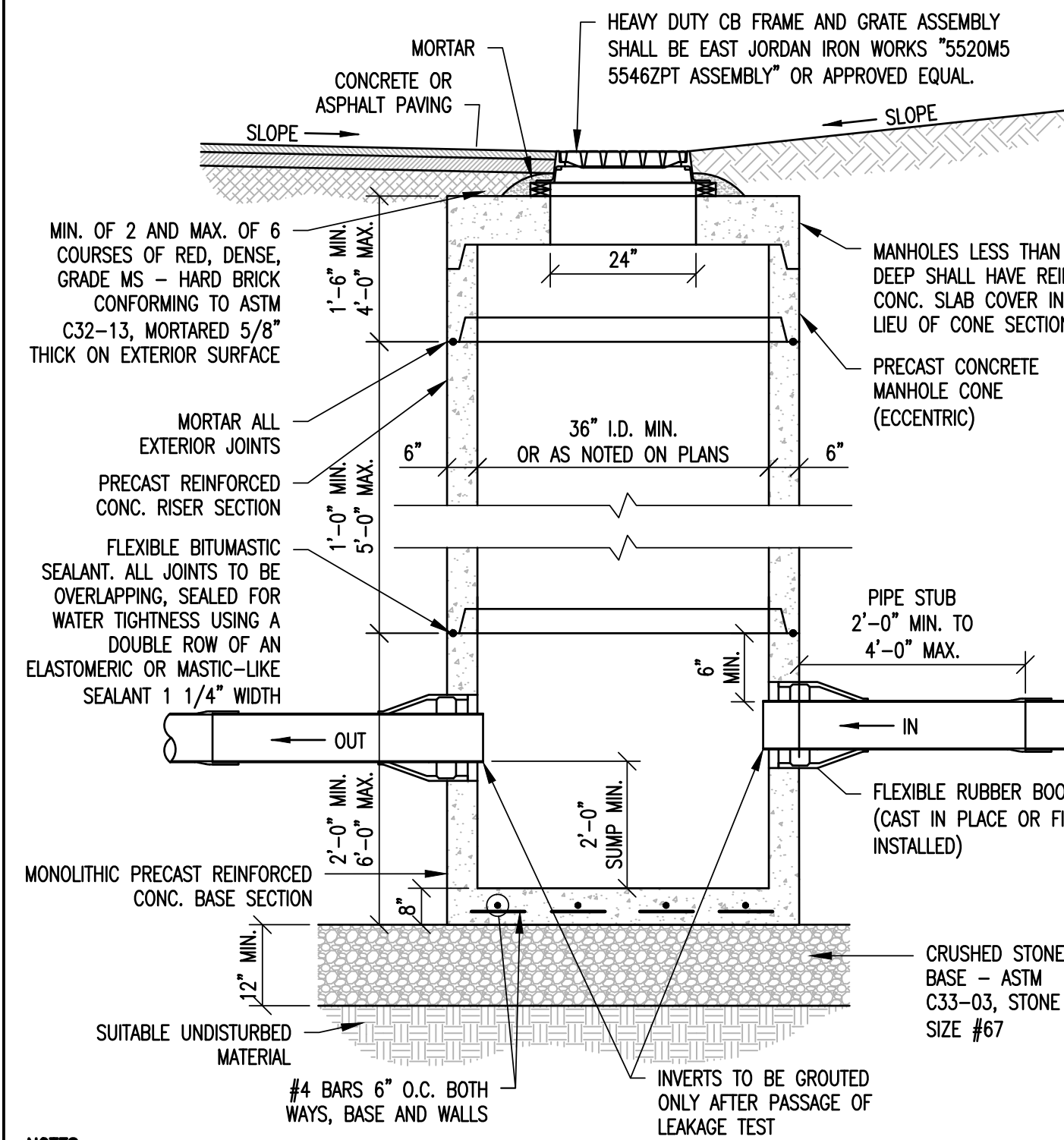
C212
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- NOTES:**
1. UNLESS OTHERWISE NOTED, ASSUME CLASS "C" SOILS. PERFORM ALL EXCAVATIONS TO OSHA REQUIREMENTS.
 2. BEDDING TO PROVIDE A FIRM, STABLE, CONTINUOUS AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.
 3. PROVIDE 6" OF COVER OVER DRAIN PIPE IN PAVED AREAS AND 12" OF COVER OVER PIPE IN UNPAVED AREAS.
 4. OTHERWISE, REFER TO THE FOLLOWING DRAIN LINE DETAIL.
 5. WHEN APPLICABLE, INSTALL PIPE WITH BELL ENDS DOWN SLOPE. PREVENT SEDIMENT FROM ENTERING NEW STORM DRAIN SYSTEM DURING CONSTRUCTION.
 6. NO MECHANICAL TAMPERS SHALL BE USED DIRECTLY OVER PIPE TO INSURE PIPE IS NOT DAMAGED.
 7. TRENCH BACKFILL MATERIAL, INCLUDING ROADWAY LOCATIONS, SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION AND FREE OF UNSUITABLE MATERIALS AS DEFINED BY NHDOT 203.2.7, WWW-WQ-704.09(1), AND THE EARTHWORK SPECIFICATIONS INCLUDED ON THESE PLANS.
 8. LEGGE, ROCK, Boulders AND LARGE STONES SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF SIX INCHES BELOW AND ON EACH SIDE OF ALL PIPES.
 9. BACKFILL MATERIALS SHALL BE COMPACTED, IN 12" LAYERS, TO 92% OF MODIFIED PROCTOR (ASTM 1557) TO WITHIN 3 FEET OF THE TOP OF THE UNDER ROWWAYS, AREAS, AND PARKING LOTS. ABOVE 3 FEET SHALL BE COMPACTED, IN 6" LAYERS, TO 95% MODIFIED PROCTOR (ASTM 1557) AND IN LAWN OR OTHER UNDEVELOPED SPACE THE UPPER 3 FEET SHALL BE COMPACTED TO 92% MODIFIED PROCTOR.

TYPICAL STORM DRAIN TRENCH

NOT TO SCALE 1

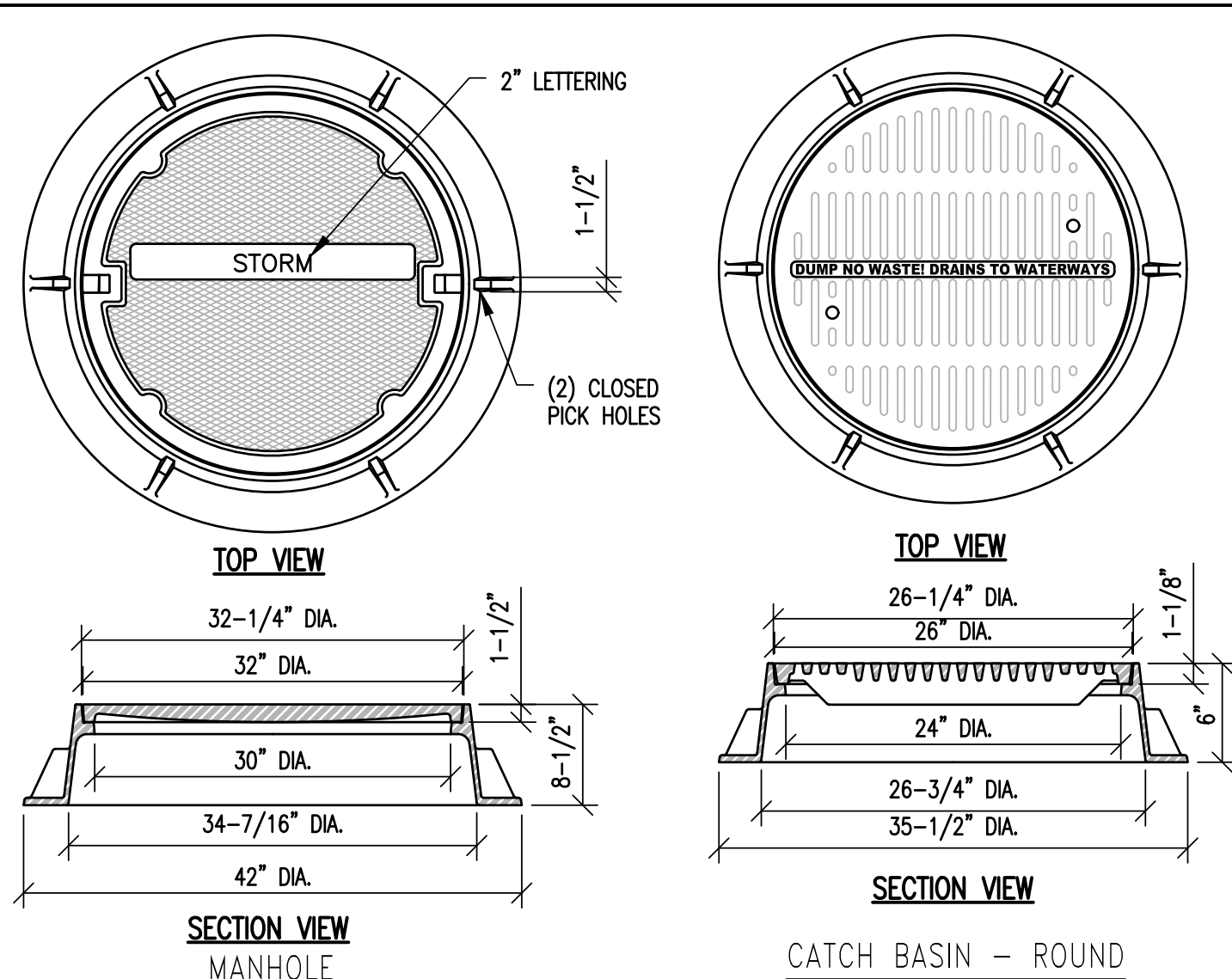


- NOTES:**
1. IF DEPTH OF MANHOLE IS 6 FT. OR LESS FROM RIM TO CENTERLINE INVERT, THEN A FLAT TOP WILL BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 6 FT., THEN AN ECCENTRIC CONICAL TOP WILL BE INSTALLED.
 2. CATCH BASIN AND GRATE SHALL BE DESIGNED FOR H2O LOADING.

CATCH BASIN

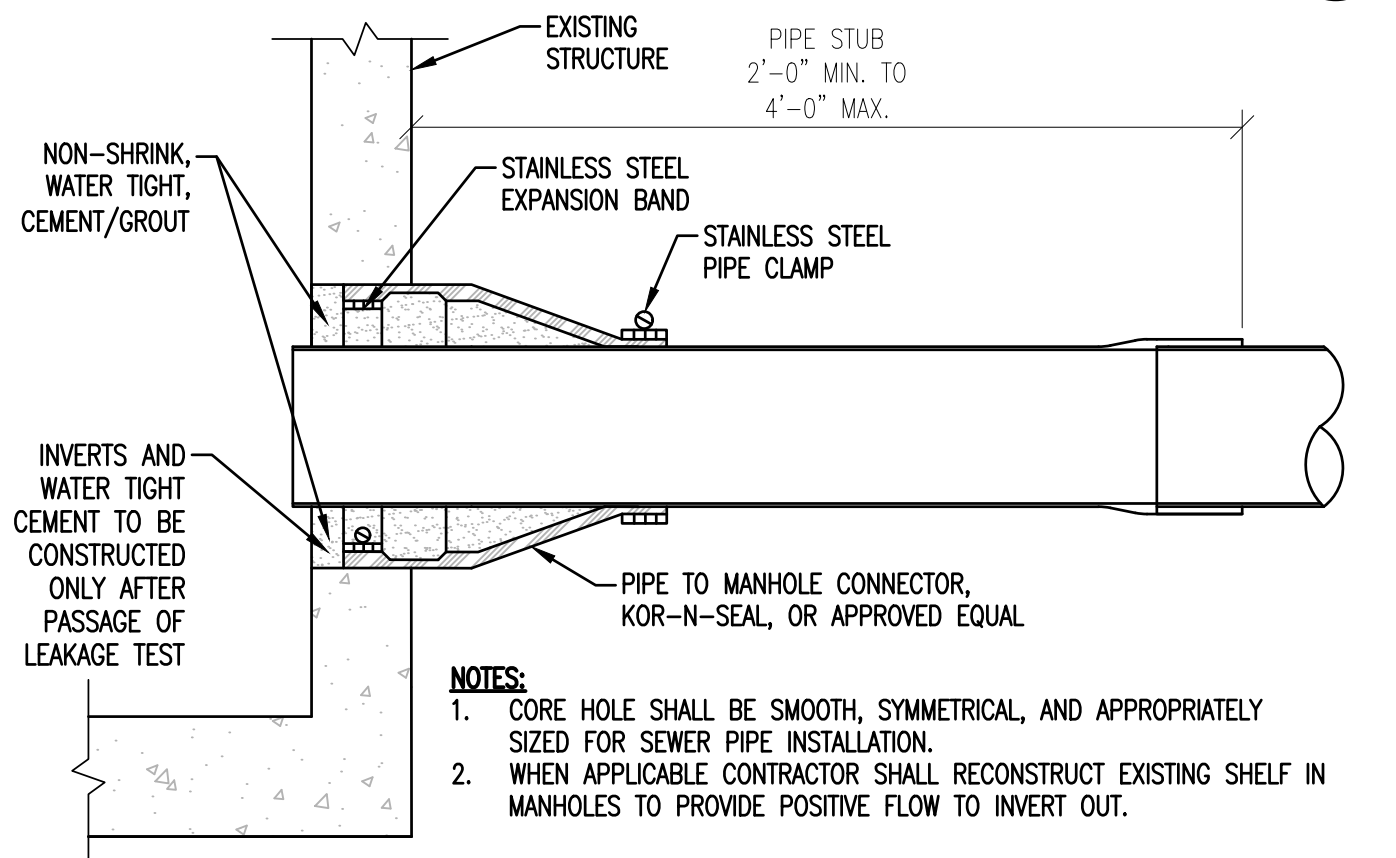
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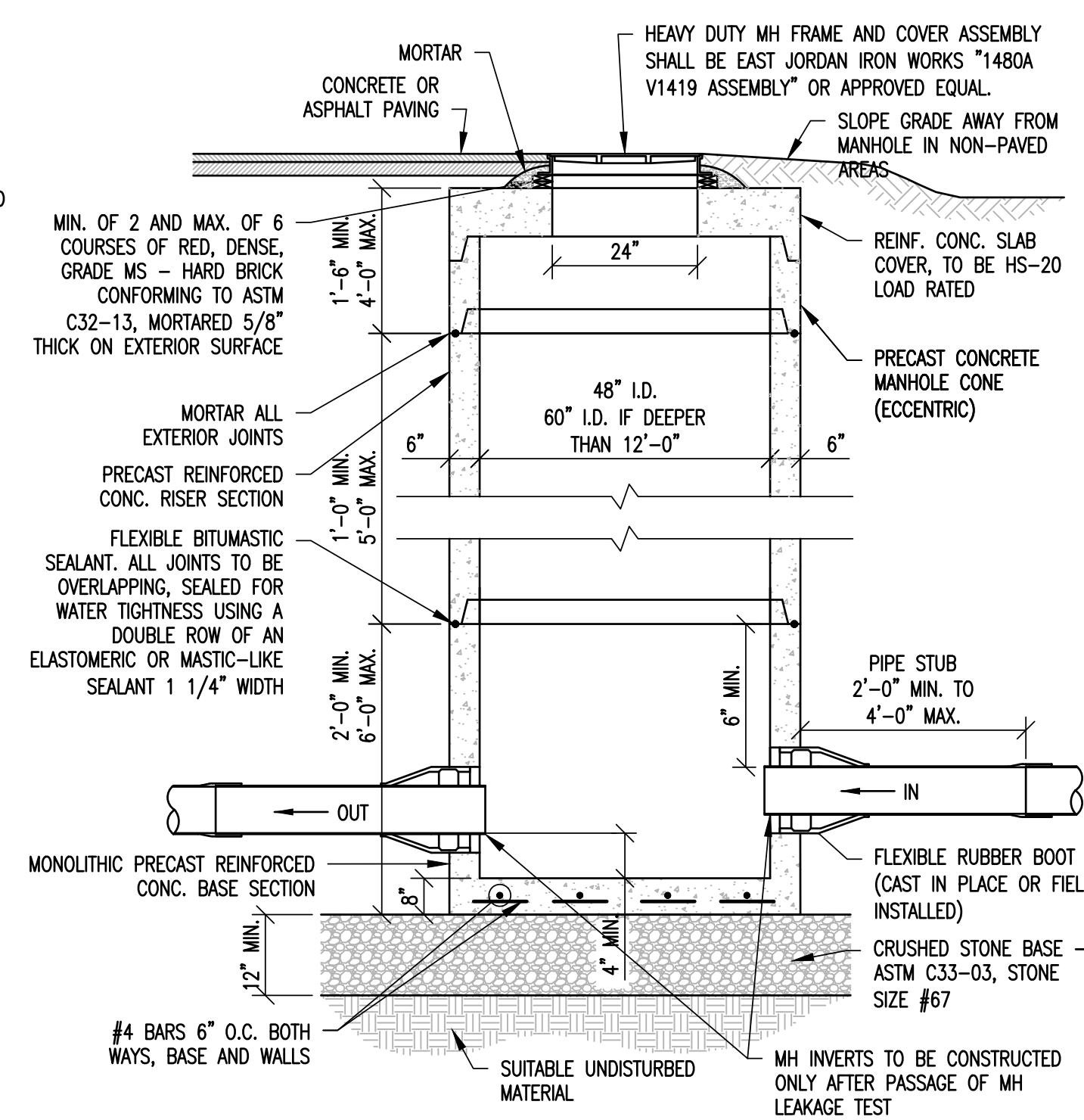
- NOTES:**
1. ALL DIMENSIONS SHOWN HERE ARE NOMINAL.
 2. COVER SHALL BE HEAVY DUTY (H-20) LOAD RATED.
 3. CATCH BASIN (ROUND) FRAME AND GRATE ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "2266Z 1040M3 SET" (PRODUCT NUMBER 0211033205) OR APPROVED EQUAL.
 4. MANHOLE (MH) FRAME AND COVER ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "1480A V1419 ASSEMBLY" OR APPROVED EQUAL.

STORMWATER MH COVERS AND CB GRATES



- NOTES:**
1. CORE HOLE SHALL BE SMOOTH, SYMMETRICAL, AND APPROPRIATELY SIZED FOR SEWER PIPE INSTALLATION.
 2. WHEN APPLICABLE CONTRACTOR SHALL RECONSTRUCT EXISTING SHELF IN MANHOLES TO PROVIDE POSITIVE FLOW TO INVERT OUT.

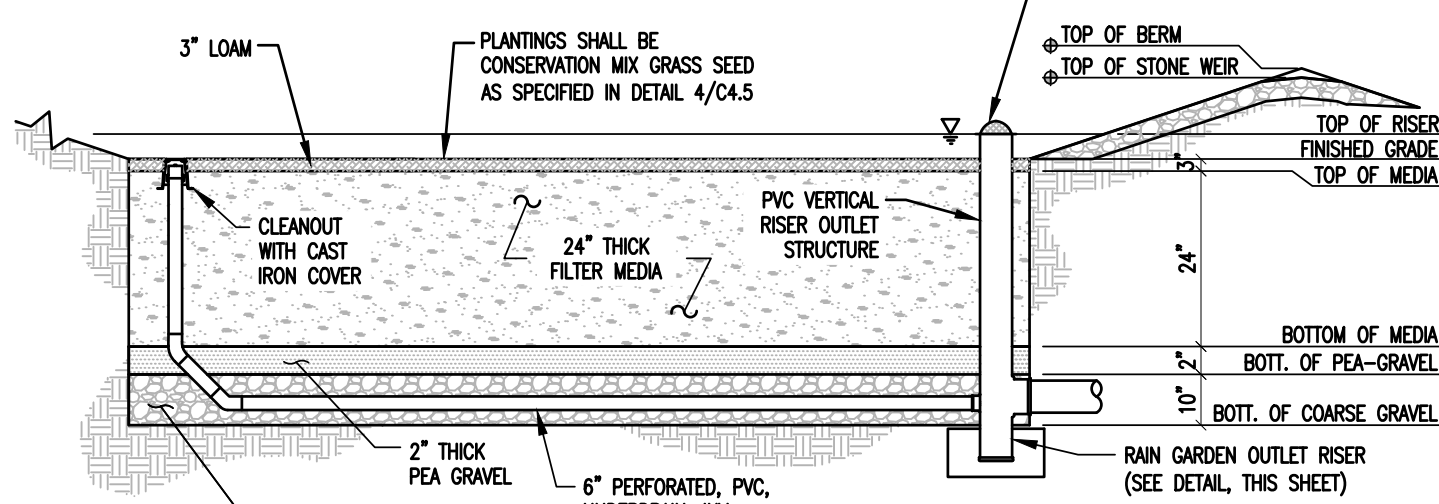
STRUCTURE PIPE CONNECTION



- NOTES:**
1. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INTERSECTING PIPE.
 2. IF DEPTH OF MANHOLE IS 6 FT. OR LESS FROM RIM TO CENTERLINE INVERT, THEN A FLAT TOP WILL BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 6 FT., THEN AN CONICAL TOP WILL BE INSTALLED.
 3. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
 4. MANHOLE AND COVER SHALL BE DESIGNED FOR H2O LOADING.

DRAINAGE MANHOLE DETAIL (FLAT TOP)

- NOTES:**
1. UPGRADIENT AREAS DRAINING TO RAIN GARDEN SHALL BE FINAL STABILIZED PRIOR TO DIRECTING RUNOFF INTO THE PROPOSED RAIN GARDEN.
 2. A DENSE AND VIGOROUS VEGETATIVE COVER MUST BE ESTABLISHED PRIOR TO USE.



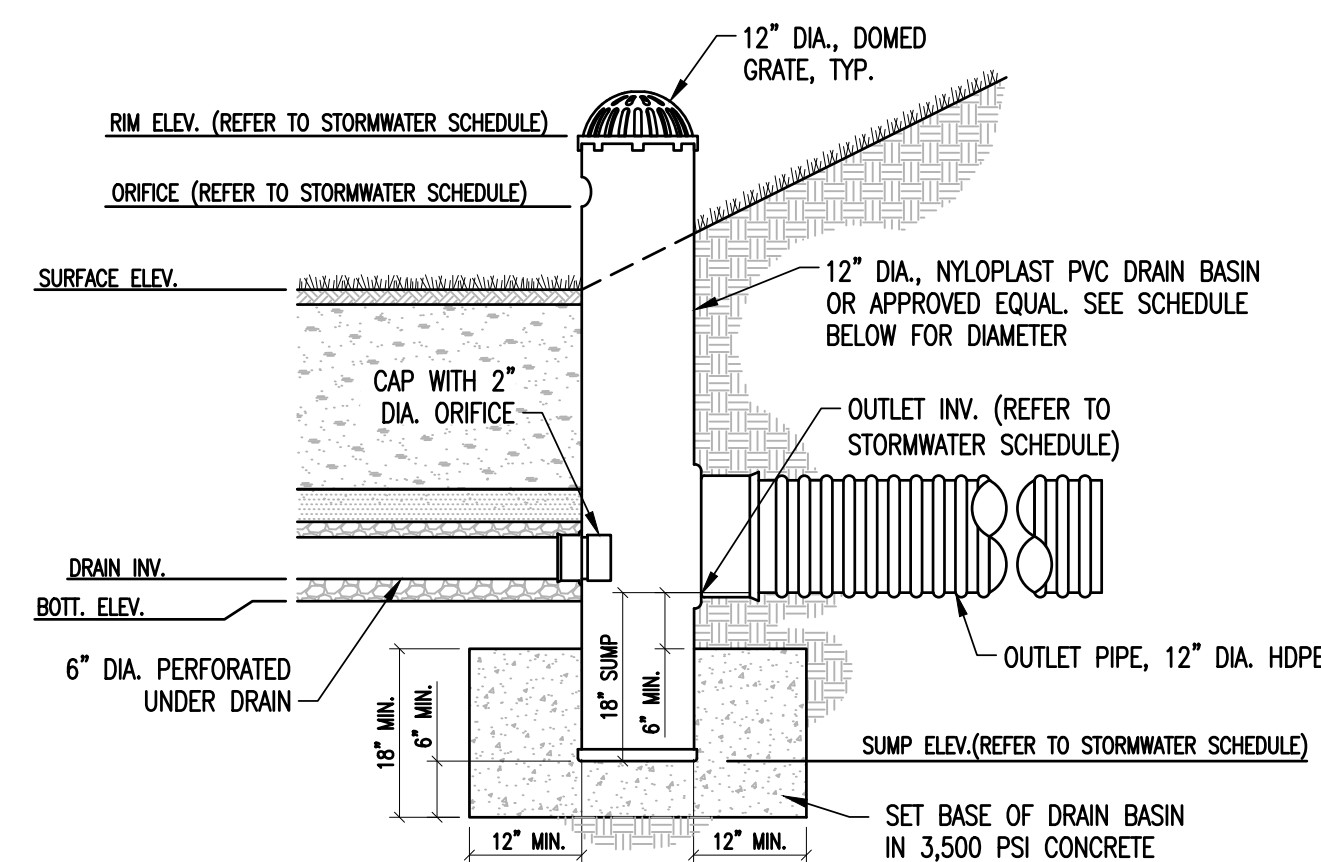
- | UNDERPANEL GRAVEL | | FILLER MEDIA | |
|--|--|--|--|
| 1. DO NOT PLACE THE BOREHOLETEST SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND THE SURROUNDING AREAS HAVE BEEN FULLY STABILIZED. | | THE SOIL SHOULD BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHOULD BE MIXED OR FOUND WITHIN THE BOREHOLETEST SYSTEM. IT SHOULD BE HARMFUL TO NANTU GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE FILLER MEDIA SHOULD BE FREE OF NOXIOUS WELDS. | |
| 2. DO NOT DISCHARGE SEDIMENT-LADEN WATER FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE BOREHOLETEST AREA DURING ANY STAGE OF CONSTRUCTION. | | THE FILTER MEDIA SHOULD BE TESTED AND SHOULD MEET THE FOLLOWING CRITERIA:
PH: 5.2 - 5.7
ORGANIC MATTER: 0.5% - 4%
MAGNESIUM 35 LB./AC.
PHOSPHORUS P205 75 LB./AC.
POTASSIUM K2O 85 LB./AC.
SOLUBLE SALT NO TEST FOR EXCEED 500 PPM | |
| 3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF NECESSARY, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM. | | | |

PARAMETER	SPECIFICATION	MATERIAL SPECIFICATIONS		NOTES
		SIZE	GRADATION OF MATERIAL	
PELLE MEDIA [2" DEEP]	COMPONENT MATERIAL: BARK MULCH	PERCENT OF MATERIAL BY VOLUME: 20% TO 30%	SIZE NO. 200 % PASSING <5	BARK MULCH SHALL BE MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED. USDA SOIL TYPE FOR LOAMY COARSE SAND
	LOAMY COARSE SAND	70% TO 80%	10 85 to 100 20 70 to 100 60 15 to 40 200 8 to 15	
PEA GRAVEL	ASTM C33-03		NO. 8 (3/8" TO #8)	
COARSE GRAVEL	ASTM C33-03		NO. 6 (3/4" TO 3/8")	

TYPICAL RAIN GARDEN

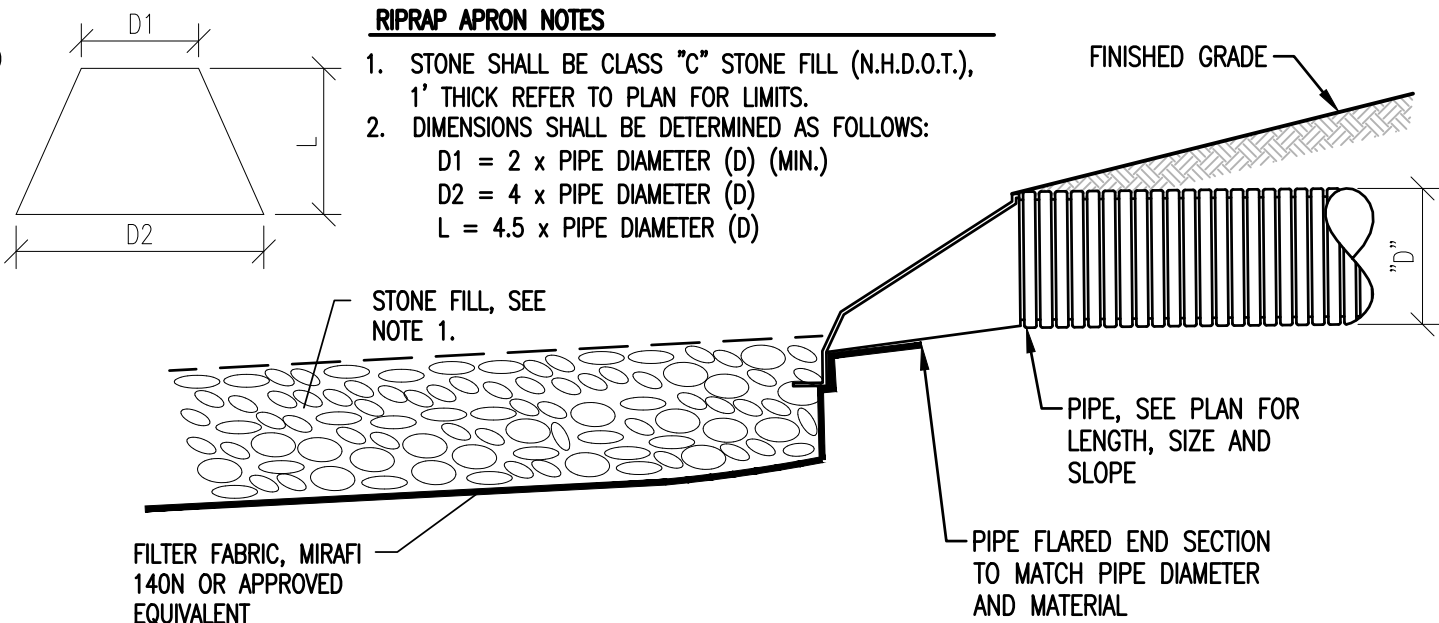
NOT TO SCALE

1

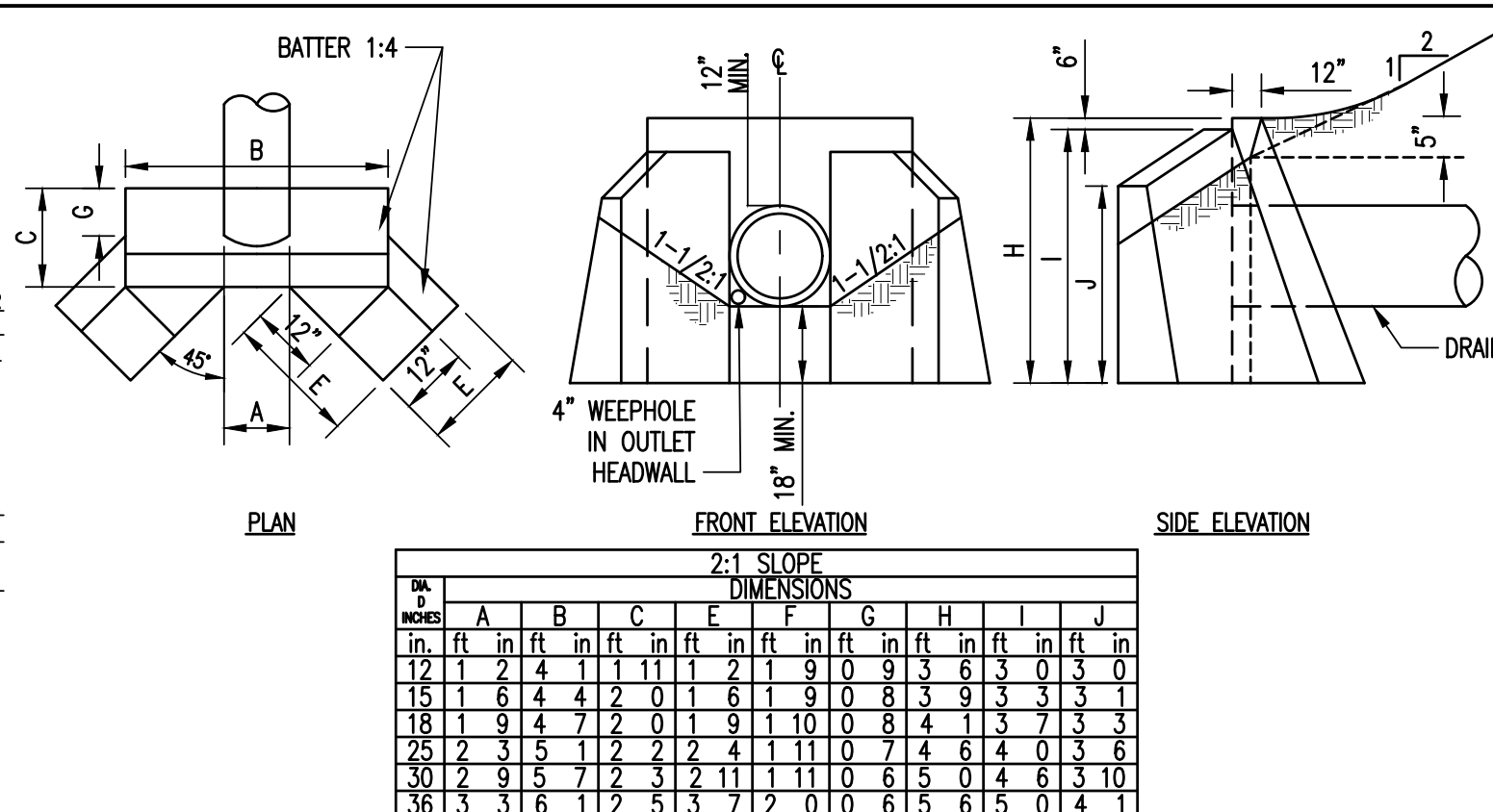


RAIN GARDEN OUTLET RISER

- RIPRAP APRON NOTES**
1. STONE SHALL BE CLASS "C" STONE FILL (N.H.D.O.T.), 1' THICK REFER TO PLAN FOR LIMITS.
 2. DIMENSIONS SHALL BE DETERMINED AS FOLLOWS:
D1 = 2 x PIPE DIAMETER (D) (MIN.)
D2 = 4 x PIPE DIAMETER (D)
L = 4.5 x PIPE DIAMETER (D)



FLARED END SECTION W/STONE APRON



STONE MASONRY HEADWALL NOTES

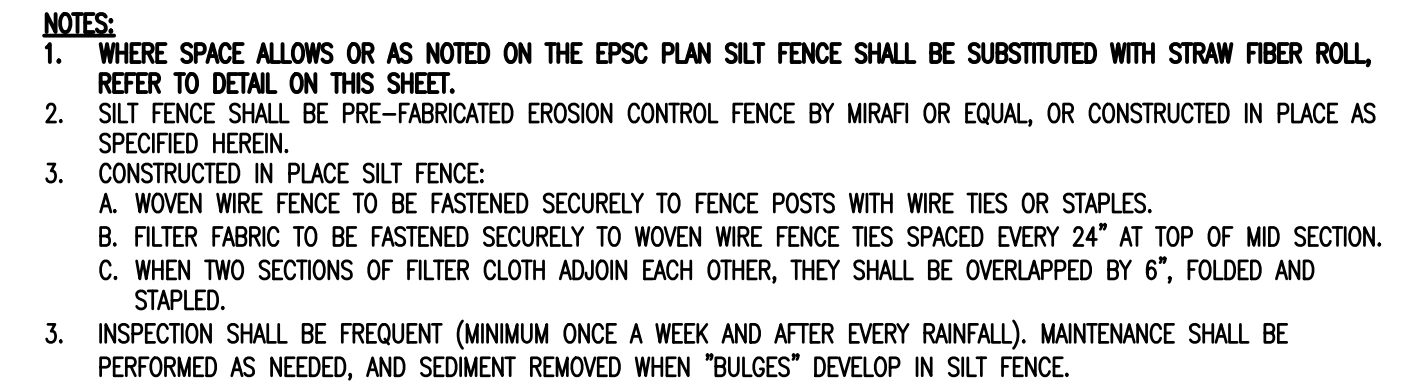
1. STONE MATERIALS TO MATCH COLOR, SHAPE SIZE AND TYPE OF ANY EXISTING HEADWALLS ON SITE.
2. MASONRY WORK TO MATCH EXISTING HEADWALLS ON SITE.

STONE MASONRY HEADWALL

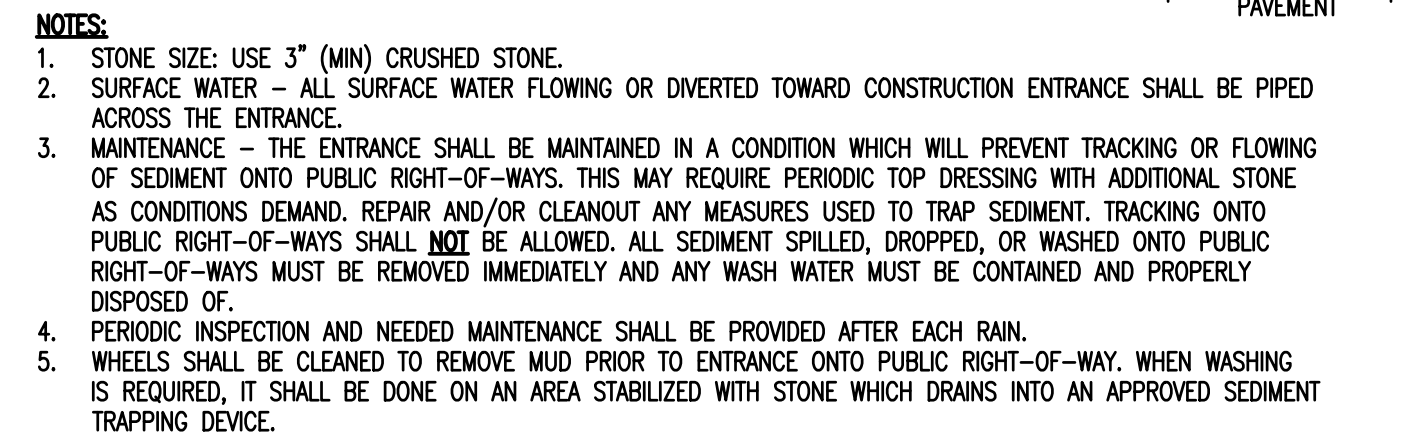
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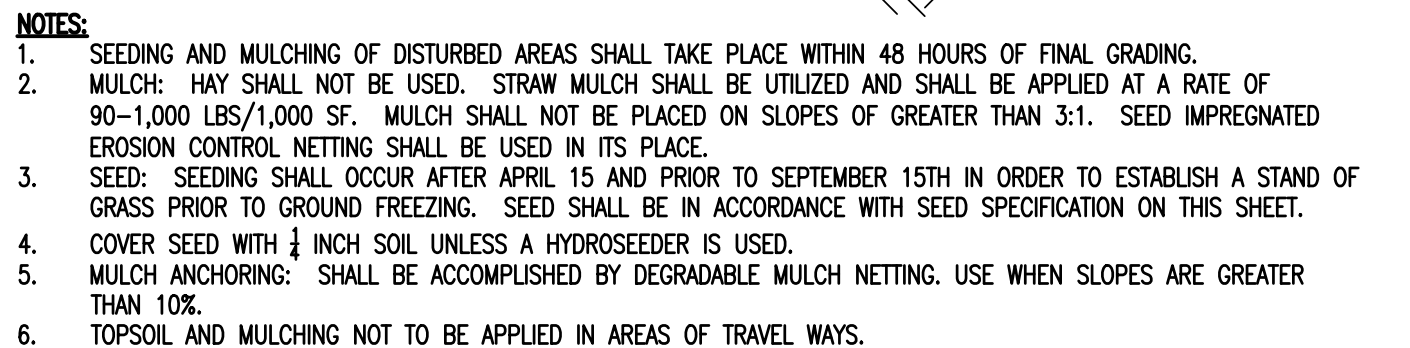
SLOPE DIMENSIONS		SLOPE DIMENSIONS																														
		A			B			C			E			F			G			H			I			J						
INCHES	FEET	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT	IN	FT			
12	1	2	4	1	1	11	1	2	1	6	1	9	0	9	3	6	3	6	3	3	0	1	0	1	0	1	0	1	0	1		
15	1	6	4	1	2	0	0	1	2	1	6	1	9	0	8	3	9	3	3	3	0	1	0	1	0	1	0	1	0	1		
18	1	9	4	1	7	2	0	0	1	9	1	10	0	8	4	1	3	7	7	3	3	0	1	0	1	0	1	0	1	0	1	
25	2	3	5	1	2	2	2	2	4	1	11	0	7	4	6	4	0	8	3	6	3	0	1	0	1	0	1	0	1	0	1	
30	2	9	5	7	2	3	2	1	11	1	11	0	6	5	0	4	6	3	3	10	0	1	0	1	0	1	0	1	0	1	0	1
36	3	3	6	1	2	5	3	7	2	0	0	6	5	6	5	6	5	0	4	6	3	10	0	1	0	1	0	1	0	1	0	1



NOT TO SCALE



NOT TO SCALE (2)



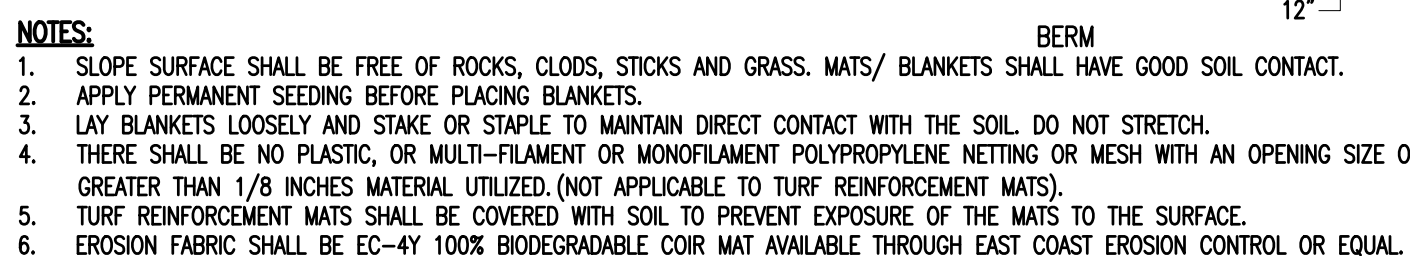
NOT TO SCALE (3)

FERTILIZER- 10 LBS. PER 1000S.F.
SPRING SEEDING
FALL SEEDING

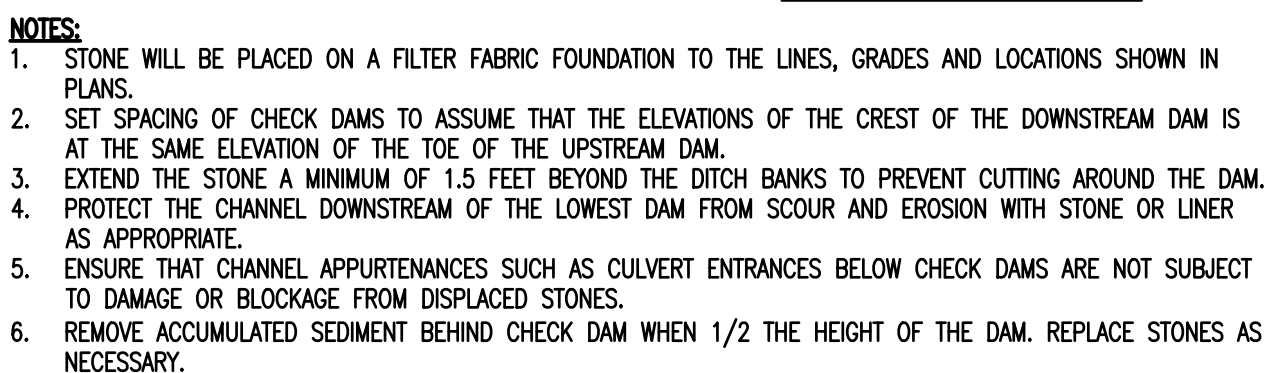
LIME- 90 LBS. PER 1000S.F.
DOLOMITIC GROUND LIMESTONE
NOT LESS THAN 85% OF THE TOTAL
CARBONATE

TOP SOIL
4" MINIMUM APPROVED TOPSOIL

NOT TO SCALE 4



NOT TO SCALE (6)



NOT TO SCALE



3. THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE THE GENERAL CONTRACTOR, THIS INDIVIDUAL SHALL BE PRESENT ON-SITE FROM DAY-TO-END, SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ONSITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
4. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS DISTURBED, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE OWNER'S REP.
5. DUST SHALL BE CONTROLLED WITH WATER DISTRIBUTED BY A TRUCK MOUNTED SPRAY BAR. CALCIUM CHLORIDE (AASHTO M 144) OR SODIUM CHLORIDE (AASHTO M 43) SHALL BE USED AS DIRECTED BY THE OWNER'S REP.
6. ALL EROSION AND STORMWATER CONTROL SYSTEMS SHALL BE INSPECTED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE OCCURRENCE OF A STORM EVENT OF 0.5" OR GREATER. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED AS THEY ACCUMULATE AND PLACED IN AREAS WHERE FURTHER EROSION IS UNLIKELY.
7. A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, SHALL BE SUBMITTED TO THE NHDES 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
8. RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (5), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS
9. ALL PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
10. DETENTION BASINS AND SWALES SHALL BE INSTALLED PRIOR TO ROUGH GRADING THE SITE.
11. ALL DITCHES AND SWALES SHALL BE STABLED PRIOR TO DIRECTING RUNOFF TO THEM.
12. ALL ROADWAYS AND PARKING LOTS SHALL BE STABLED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
13. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
14. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
15. APPROPRIATE SILTATION/EROSION/TURBIDITY CONTROLS SHALL BE IN PLACE PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND REMAIN IN PLACE UNTIL THE AREA IS STABILIZED. SILT FENCE(S) MUST BE REMOVED ONCE THE AREA IS STABILIZED.
16. DISCHARGE FROM Dewatering of WORK AREAS SHALL BE TO SEDIMENT BASINS THAT ARE:
 - A) LOCATED IN UPLANDS;
 - B) LINED WITH HAY BALES OR OTHER ACCEPTABLE SEDIMENT TRAPPING LINERS;
 - C) SET BACK AS FAR AS POSSIBLE FROM WETLANDS AND SURFACE WATERS, IN ALL CASES WITH A MINIMUM OF 20 FEET OF UNDISTURBED VEGETATED BUFFER.
17. WITHIN THREE DAYS OF FINAL GRADING, ALL EXPOSED SOIL AREAS SHALL BE STABILIZED BY SEEDING AND MULCHING DURING THE GROWING SEASON, OR IF NOT WITHIN THE GROWING SEASON, BY MULCHING WITH TACK OR NETTING AND PINNING ON SLOPES STEEPER THAN 3:1.
18. WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED WITHIN THE GROWING SEASON, ALL EXPOSED SOIL AREAS SHALL BE STABILIZED WITHIN 14 DAYS BY SEEDING AND MULCHING.
19. WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED OUTSIDE THE GROWING SEASON, ALL EXPOSED AREAS SHALL BE STABILIZED WITHIN 14 DAYS BY MULCHING AND TACK. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED BY MATTING AND PINNING.
20. PROPER HEADWALLS SHALL BE CONSTRUCTED WITHIN SEVEN DAYS OF CULVERT INSTALLATION.
21. CULVERT OUTFALLS SHALL BE PROTECTED IN ACCORDANCE WITH THE DES BEST MANAGEMENT PRACTICES FOR URBAN STORMWATER RUNOFF MANUAL (JANUARY 1996) AND THE STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE (AUGUST 1992).
22. THE CONTRACTOR RESPONSIBLE FOR COMPLETION OF THE WORK SHALL UTILIZE TECHNIQUES DESCRIBED IN THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION (DECEMBER 2008).
23. NO FOOT PANE BIORETENTION SYSTEM INTO SERVICE UNTIL ALL BMPs HAVE BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
24. DO NOT DISCHARGE SEDIMENT+LADEN WATERS FROM THE CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
25. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

EROSION CONTROL CONSTRUCTION SEQUENCE:

1. THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE THE GENERAL CONTRACTOR, THIS INDIVIDUAL SHALL BE PRESENT ON SITE FROM DAY TO DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ONSITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
2. HOLD PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION, WITH THE CONTRACTOR, OWNER, AND ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL EROSION CONTROL MEASURES DELINEATED ON THE PLANS AND ANY ADDITIONAL MEASURES THAT ARE NECESSARY TO MINIMIZE EROSION. THE CONTRACTOR SHALL HAVE EROSION CONTROL MATERIALS AND INSTALLATION EQUIPMENT ON SITE AT ALL TIMES.
3. IF POSSIBLE, ALL TEMPORARY EROSION CONTROL MEASURES REQUIRED FOR WORK PROPOSED DURING THE WINTER (BETWEEN OCTOBER 15 AND MAY 1), SHALL BE INSTALLED PRIOR TO OCTOBER 1.
4. PRIOR TO ANY OTHER WORK, SILT FENCES SHALL BE INSTALLED GENERALLY 10 FEET FROM THE BASE OF THE FILL SLOPES, OR AS SHOWN ON THE EROSION CONTROL PLAN. THESE SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 6 INCHES DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
5. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT.
6. INSTALL INLET PROTECTION ON EXISTING AND NEW CHUTE BASINS.
7. ROUGH GRADE AND STOCKPILE TOPSOIL SURROUNDED BY SILT FENCE.
8. STABILIZE EXPOSED SLOPES AND SOILS AS SOON AS GRADED, AND MAINTAIN UNTIL ADEQUATELY VEGETATED.
9. COMPLETE FINAL GRADING OF SITE. PLACE TOPSOIL AND PERMANENTLY VEGETATE, LANDSCAPE, AND MULCH.
10. AFTER THE SITE IS APPROVED BY THE ENGINEER AS ADEQUATELY STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.

TEMPORARY/CONSTRUCTION EROSION CONTROL MEASURES:

1. LIMIT LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.
2. HAY SHALL NOT BE USED.
3. DOUBLE ROW OF STRAW WATTLES SHALL BE INSTALLED ALONG THE WETLAND BOUNDARY. THESE SHALL REMAIN IN PLACE UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRAW WATTLES WHEN IT BECOMES 6 INCHES DEEP. THE PERIMETER CONTROL WILL BE PREPARED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
4. INSTALL STONE CHECK DAMS IN GRASS-LINED SWALES 50 FEET ON CENTER TO PREVENT SILT FROM WASHING INTO THE DRAINAGE SYSTEM DURING CONSTRUCTION. SEDIMENT SHALL BE REMOVED FROM BEHIND THE DAMS WHEN IT BECOMES 6 INCHES DEEP. STONE CHECK DAMS SHALL BE REMOVED WHEN VEGETATION IS ESTABLISHED.
5. DROPPLET PROTECTION SHALL BE PROVIDED AROUND ALL EXISTING AND PROPOSED CATCH BASINS. PROTECTION SHALL REMAIN UNTIL ALL DISTURBED AREAS ARE STABILIZED. SEDIMENT SHALL BE REMOVED FROM DROP INLET PROTECTION WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN IT NO LONGER DRAINS PROPERLY.
6. EXCAVATED MATERIAL FROM EARTH EXCAVATION AND DITCH DIGGING SHALL BE DISPOSED OF OFFSITE OR USED FOR PROJECT FILL MATERIAL IF DETERMINED SUITABLE BY THE OWNER'S REPRESENTATIVE.
7. STOCKPILED MATERIAL (TOPSOIL, BORROW, ETC.) SHALL HAVE SILT FENCE CONSTRUCTED AROUND THE PERIMETER. THE STOCKPILED MATERIAL SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO PREVENT SOIL EROSION AND SEDIMENTATION OFF SITE. LOCATE STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, IF POSSIBLE. DURING WINDY CONDITIONS, STOCKPILED MATERIAL SHALL BE COVERED OR WATERED APPROPRIATELY TO PREVENT WIND EROSION.

PERMANENT EROSION CONTROL MEASURES:

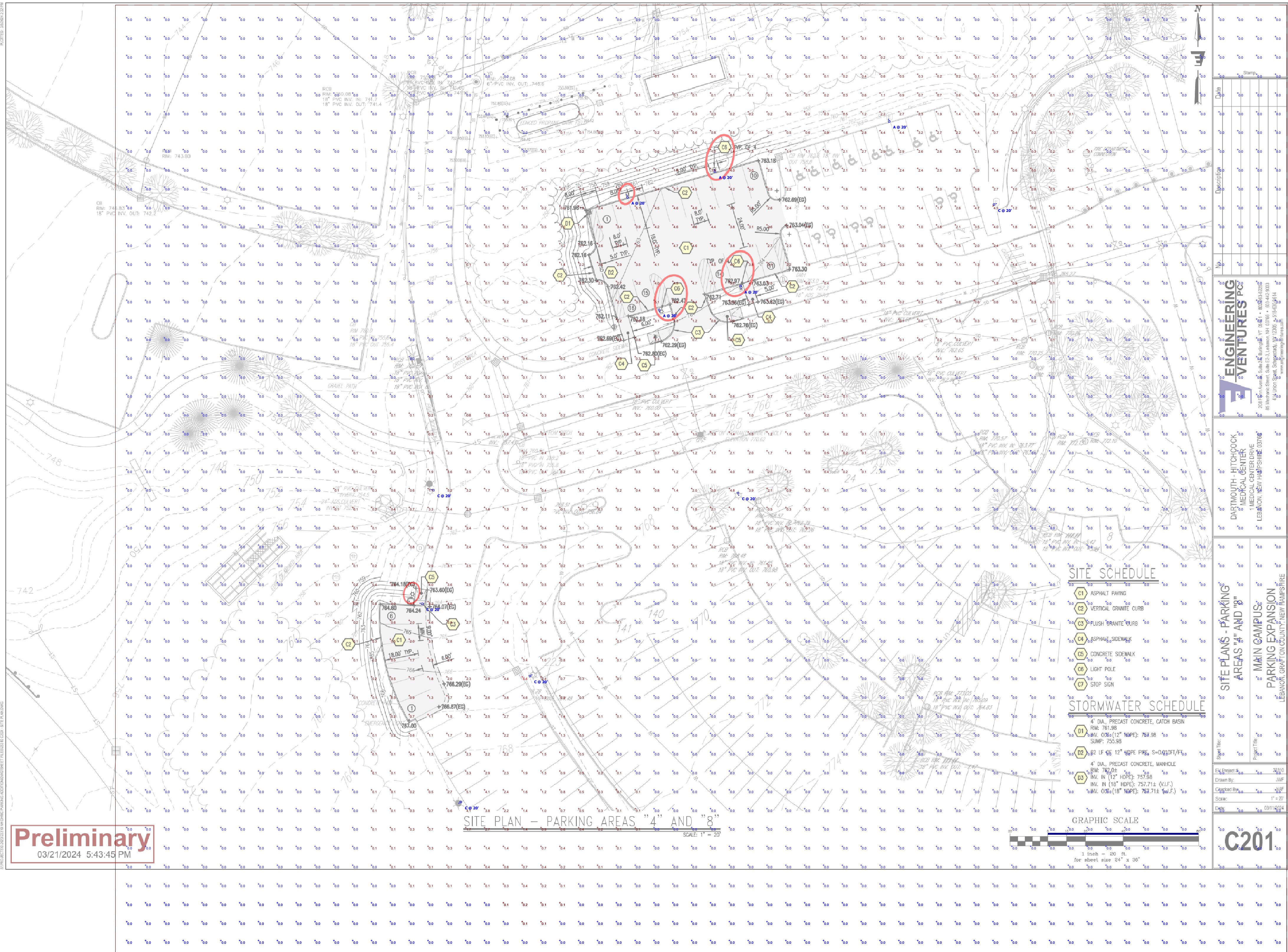
1. GRASS LIEN SWALES SHALL BE TOP SOILED, SODDED AND FERTILIZED AREAS WHICH EXHIBIT SIGNS OF EROSION SHALL BE RE-SODDED IMMEDIATELY AND MAINTAINED UNTIL SOIL HAS PERMANENT HOLD AND IS HEALTHY.
2. WHEN RESEEDING IS COMPLETED IN AN AREA, IT SHALL BE IMMEDIATELY TOP SOILED, SEEDDED, FERTILIZED AND MULCHED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUED MAINTENANCE OF ALL DISTURBED AREAS, INCLUDING WATERING, UNTIL THE AREA IS INSPECTED AND ACCEPTED BY THE OWNER OR ENGINEER.
4. AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.
5. RE-SEEDING SHALL BE DONE UNTIL ALL AREAS ARE COMPLETELY COVERED WITH A MATURE STRAND OF GRASS. AN AREA SHALL BE CONSIDERED RESEEDING WHEN THE ENTIRE SURFACE CONTAINS A VERDANT STAND OF GRASS. AREAS THAT, IN THE OPINION OF THE ENGINEER, ARE PREVIOUSLY RESEEDING SHALL BE RE-TOP SOILED, FERTILIZED AND RE-SEEDING IN THE MANNER SPECIFIED PREVIOUSLY, EXERCISING CAUTION NOT TO CAUSE DAMAGE TO NEW OR EXISTING PLANT MATERIAL.



Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lumens per Lamp	LLF	Wattage	Notes
	A	5 4 PROPOSED 1 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R3	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R3 Distribution	10991	0.9	72.06	
	C	6 1 PROPOSED 5 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R4	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R4 Distribution	11135	0.9	72.06	

Light Level Illuminance Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	0.3 fc	5.4 fc	0.0 fc	N/A	N/A



Plan View
Scale: 1" = 20ft
SCALE REDUCED: 1"=30'+/-

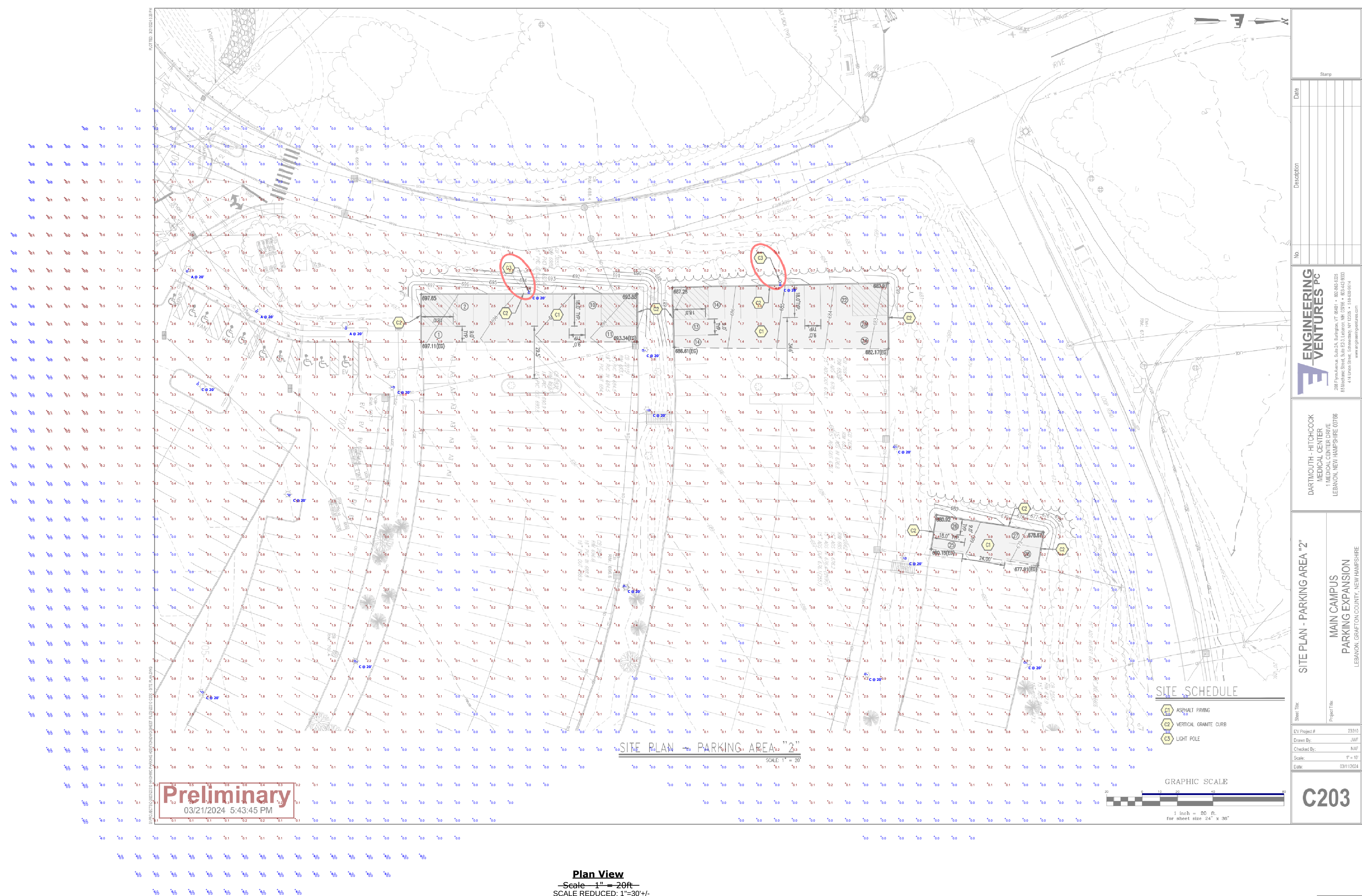
DISCLAIMER:
These drawings are provided for conceptual reference only and are not intended for construction purposes. The values presented are approximations derived from manufacturers' photometric in-house or independent laboratory tests, utilizing data supplied by lamp manufacturers. Contractors are advised not to use these drawings for fixture counts or installation, as they are not designed for such purposes.



Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lumens per Lamp	LLF	Wattage	Notes
	A	3 3 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R3	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R3 Distribution	10991	0.9	72.06	
	C	14 2 PROPOSED 12 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R4	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R4 Distribution	11135	0.9	72.06	

Light Level Illuminance Statistics

Description	Symbol	Avg	Max	Max/Min	Avg/Min	Min
Calc Zone #2	+	0.7 fc	5.9 fc	N/A	N/A	0.0 fc



Plan View
Scale 1" = 20'
SCALE REDUCED: 1"=30'+/-

DISCLAIMER:
These drawings are provided for conceptual reference only and are not intended for construction purposes. The values presented are approximations derived from manufacturers' photometric in-house or independent laboratory tests, utilizing data supplied by lamp manufacturers. Contractors are advised not to use these drawings for fixture counts or installation, as they are not designed for such purposes.



PARKING LOT EXPANSION
DARTMOUTH-HITCHCOCK MEDICAL CENTER
CITY OF LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

DRAINAGE ANALYSIS
APRIL 30, 2024

Prepared For:

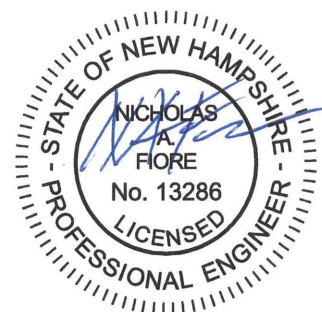
DARTMOUTH-HITCHCOCK MEDICAL CENTER
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Lebanon, NH 03756
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Prepared By:



85 Mechanic Street, Suite E2-3
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Tel: 603-442-9333

EV Project # 21147



PARKING LOT EXPANSION DARTMOUTH-HITCHCOCK MEDICAL CENTER

DRAINAGE ANALYSIS

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DHMC Parking Lot Expansions

Lebanon, NH

Stormwater Narrative

EV Project # 23310

April 30, 2024

The DHMC Parking Lot Expansions project at Dartmouth-Hitchcock Medical Center (Tax Map 10 Lot 8) includes adding parking spaces to four (4) of DHMC's parking lots. Three of the lot expansions will better meet staff parking needs, and the fourth will provide needed additional parking for the hospital's emergency department. Additionally, the project includes a slight widening of the driveway in the compressed natural gas (CNG) area to better accommodate access for the delivery vehicles.

The parking revisions to each lot, the stormwater controls to be provided for each lot, and the results of the stormwater modeling are presented in the following paragraphs. Stormwater analysis was conducted using HydroCAD Version 10.20-5a to compare the existing and post-construction conditions for the 2-year, 10-year, and 50-year 24-hour storms. This program uses the TR-20 stormwater calculation method.

Lot 2

Located north of the new patient towers at the hospital's north end, Lot 2 has three tiers of parking. Tier A and B have four rows of parking. The eastern half of Tier C has four rows, and the western half has two rows. This project will expand the western edge of all three tiers with Tier A gaining 11 spaces and 2,333± square feet of impervious area, Tier B gaining 11 spaces and 2,610± square feet of impervious area, and Tier C adding 4 space and 1,185± square feet of impervious area, for a total of 26 additional spaces and 6,128± additional square feet of impervious area. These expansions are into areas that are a mix of grassed and wooded spaces.

Lot 2 Tier A

The project adds a 94± square foot rain garden at this expansion's northwest corner. This rain garden, referred to as Rain Garden 2A in the stormwater modeling reports, is sized to treat the Water Quality Volume of the runoff generated by the expansion's added asphalt. An underdrain routes treated water from the bottom of the rain garden to an existing stormwater pipe and an overflow pipe will convey excess runoff from very large storms to the same existing pipe. The existing pipe routes stormwater north along the hospital's North Entrance driveway, which then empties into a swale along Hitchcock Loop Road. The swale is routed to a stormwater detention area adjacent to Hitchcock Loop Road. The outlet control structure of the detention area was modified during the recent patient tower project to control flow.

Based on EV's experience with the soils around the DHMC campus and the Site Specific Soil Mapping completed for the patient tower project, the Rain Garden 2A design does not account for infiltration from the system. Infiltration testing will be conducted at the rain garden's location prior to installation and the design will be modified if it can be improved upon.

DHMC Parking Lot Expansions

Stormwater Narrative

April 30, 2024

Page 2 of 4

Table 1 shows the results of stormwater modeling on the outlet control structure of the existing detention area.

Table 1

Pond 3P: Existing Basin-mod	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
VHB Design - Existing	8.08	1.714	14.21	3.239	20.32	5.787
EV Design - Post	8.09	1.732	14.25	3.260	20.33	5.810
Δ	0.01	0.018	0.04	0.021	0.01	0.023

These results show very minor increases in the system's discharges. It is my professional opinion that these increases will be imperceptible and are attributed to the limitation of the HydroCAD software.

Lot 2 Tier B & C

The project adds a 205± square foot rain garden at this Tier B expansion's northwest corner. This rain garden, referred to as Rain Garden 2B in the stormwater modeling reports, is sized to treat the Water Quality Volume of the runoff generated by the added asphalt of both the Tier B and Tier C expansions. The Tier C expansion abuts some steeper slopes near Hitchcock Loop Road so its location is not well suited to also including a stormwater treatment area, hence over sizing Rain Garden 2B. An underdrain will collect treated water from the bottom of the rain garden and an overflow pipe will collect excess runoff from very large storms. Runoff will then be routed to a drainage swale adjacent to Hitchcock Loop Road, from which it will follow the campus's stormwater conveyances to the pond at the north end of the property.

Based on EV's experience with the soils around the DHMC campus and the Site Specific Soil Mapping completed for the patient tower project, the Rain Garden 2B design does not account for infiltration from the system. Infiltration testing will be conducted at the rain garden's location prior to installation and the design will be modified if it can be improved upon.

Table 2 shows the results of stormwater modeling at the discharge point of Rain Garden 2B.

Table 2

PR2B	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
Existing	0.01	0.001	0.07	0.004	0.21	0.010
Rain Garden 2B Post	0.05	0.018	0.09	0.027	0.44	0.040
Δ	0.04	0.02	0.02	0.02	0.23	0.03

As stated above, discharge from Rain Garden 2B eventually flows to the pond at the north end of the property. That pond's catchment area includes 148.5± acres of DHMC land, of which 38.7± acres are impervious. The very minor increases in runoff of clean stormwater will have imperceptible impacts on the campus's larger stormwater system.

DHMC Parking Lot Expansions

Stormwater Narrative

April 30, 2024

Page 3 of 4

Lot 4

Located south of Borwell Building and north of Lahaye Dr/Hitchcock Loop Rd, Lot 4 will receive a small addition of 6 parking spaces and 1,460± square feet of additional impervious area at its northwestern corner. The expansion is into a grasses area and will also include the relocation of a blue-light emergency call station.

The Lot 4 expansion will rely on existing stormwater controls for treatment and attenuation. Existing stormwater ponds adjacent to Lot 4 have a catchment area of approximately 9.4 acres. Approximately 3.8 acres of that is impervious. The ponds are sized such that the small alterations to their catchment area will have no discernible effect on their performance.

Table 3 shows the results of stormwater modeling at the discharge point of the existing stormwater ponds adjacent to Lot 4.

Table 3

Pond 3P: West Pond #2	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
EV Design - 2013	1.17	0.495	8.16	1.188	20.14	2.297
EV Design - 2024	1.17	0.496	8.17	1.189	20.15	2.298
Δ	0.00	0.001	0.01	0.001	0.01	0.001

Lot 8

Located between Lot 4 and Borwell Building, the Lot 8 expansion will replicate the existing Lot 8 footprint to the west of the existing lot. This expansion will be into a mostly wooded area and will add 16 parking spaces and 6,560± square feet of additional impervious area.

The project adds a 353± square foot rain garden at this expansion's northwest corner. This rain garden, referred to as Rain Garden 8P in the stormwater modeling reports, is sized to treat the Water Quality Volume of the runoff generated by the expansion's added asphalt. An underdrain will collect treated water from the bottom of the rain garden and an overflow pipe will collect excess runoff from very large storms. Runoff will then be discharged to woods north of the rain garden, matching existing drainage patterns.

During design efforts for previous projects in the general area of Lot 8, EV did find soils with a capacity for infiltration at a rate of 0.64 in/hr. The Lot 8 rain garden design uses a slightly more conservative rate of 0.5 in/hr. Infiltration testing will be conducted at the rain garden's location prior to installation and the design will be modified if appropriate.

Table 4 shows the results of stormwater modeling at the discharge point of Rain Garden 8P.

DHMC Parking Lot Expansions

Stormwater Narrative

April 30, 2024

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Table 4

8P	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
Existing	0.01	0.003	0.19	0.011	0.64	0.030
Post Construction	0.01	0.003	0.07	0.021	0.45	0.051
Δ	0.00	0.000	-0.12	0.010	-0.19	0.021

Lot E

The Emergency Department parking lot will receive two improvements. First, the existing lot will be widened by two feet, lengthened to add spaces, configured with angled parking, and made one way. The driveway will be reconfigured to remove a slip lane and reduce conflicting turning movements. Second, an additional 17-space lot will be added east of the main driveway. Additionally, the work will also add sidewalks and realign gravel walking path. In total, the parking area will expand from 28 existing spaces to 52, a 24-space gain, and add 7,865± square feet of additional impervious area.

The stormwater design for Lot E takes advantage of its proximity to the CNG facility which has a rain garden adjacent to it, referred to as Rain Garden RG1 in the stormwater modeling reports. This project will expand that rain garden from 940± square feet to 1,990± square feet. Stormwater from the eastern third of the existing Lot E and the whole of the additional parking area is routed to this expanded rain garden. The surrounding areas maintain existing drainage patterns but with smaller areas resulting in less runoff. The revised Rain Garden RG1 will also accommodate the additional runoff generated by the widening of the CNG driveway.

Table 5 shows the results of stormwater modeling at the discharge point of Rain Garden RG1.

Table 5

RG1	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
Exist (2013 Design)	0.19	0.073	0.91	0.130	2.51	0.221
Post 2024	0.19	0.121	0.48	0.202	2.38	0.326
Δ	0.00	0.05	-0.43	0.07	-0.13	0.11

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	72.268 degrees West
Latitude	43.673 degrees North
Elevation	0 feet
Date/Time	Mon, 23 May 2022 16:40:49 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.66	0.82	1.02	1yr	0.71	0.93	1.17	1.44	1.76	2.15	2.41	1yr	1.90	2.32	2.69	3.29	3.79	1yr
2yr	0.31	0.48	0.59	0.78	0.98	1.22	2yr	0.85	1.11	1.40	1.71	2.07	2.50	2.80	2yr	2.21	2.70	3.15	3.76	4.31	2yr
5yr	0.37	0.57	0.72	0.96	1.23	1.54	5yr	1.06	1.40	1.76	2.14	2.57	3.06	3.47	5yr	2.71	3.33	3.86	4.54	5.17	5yr
10yr	0.41	0.65	0.82	1.12	1.46	1.84	10yr	1.26	1.68	2.10	2.55	3.03	3.58	4.07	10yr	3.17	3.92	4.51	5.24	5.94	10yr
25yr	0.49	0.79	1.00	1.38	1.83	2.31	25yr	1.58	2.12	2.65	3.19	3.77	4.40	5.04	25yr	3.89	4.84	5.54	6.34	7.15	25yr
50yr	0.56	0.91	1.16	1.62	2.18	2.76	50yr	1.88	2.52	3.16	3.79	4.45	5.14	5.92	50yr	4.55	5.69	6.48	7.32	8.22	50yr
100yr	0.64	1.04	1.34	1.90	2.59	3.30	100yr	2.24	3.02	3.78	4.51	5.25	6.01	6.96	100yr	5.32	6.69	7.57	8.45	9.46	100yr
200yr	0.74	1.21	1.57	2.24	3.09	3.93	200yr	2.66	3.61	4.50	5.34	6.19	7.04	8.18	200yr	6.23	7.87	8.86	9.77	10.88	200yr
500yr	0.89	1.47	1.91	2.78	3.89	4.97	500yr	3.35	4.57	5.67	6.70	7.70	8.67	10.15	500yr	7.67	9.76	10.91	11.84	13.11	500yr

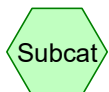
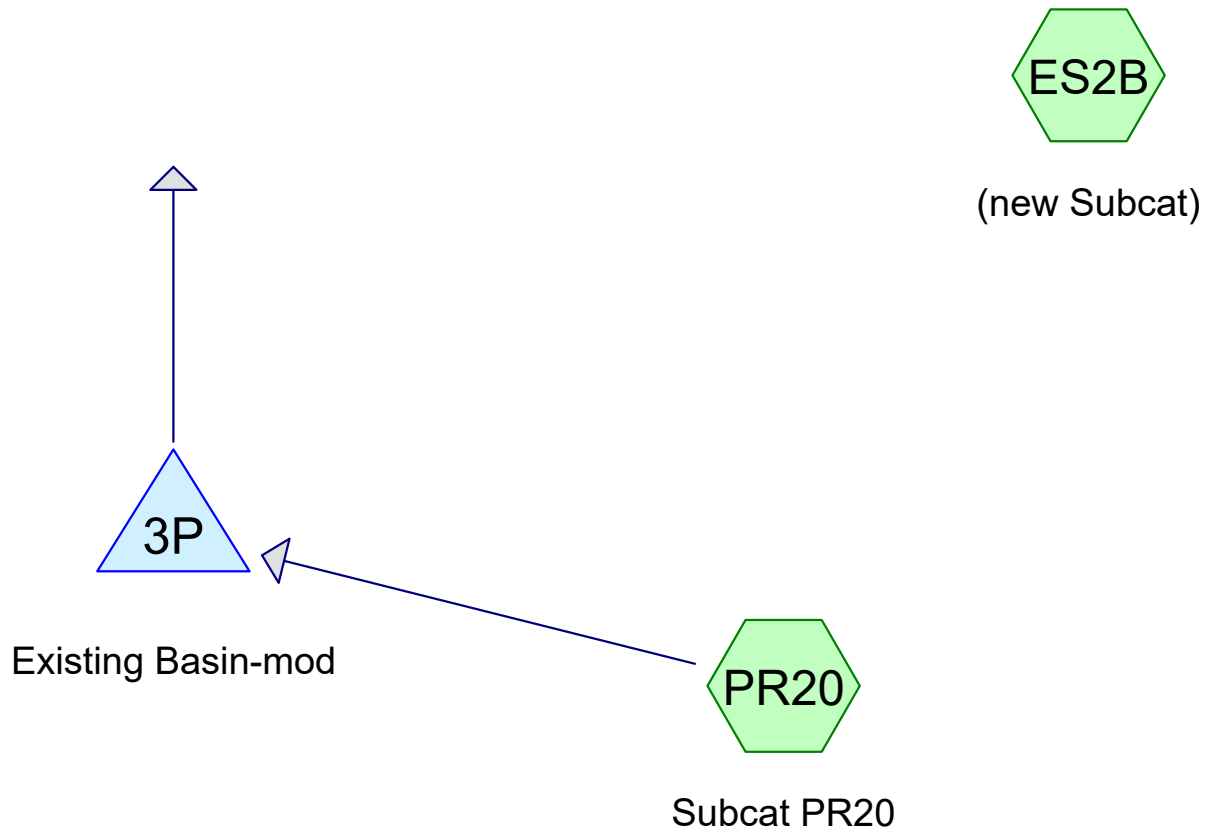
Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.61	0.75	0.83	1yr	0.65	0.81	1.00	1.19	1.58	1.97	2.23	1yr	1.75	2.15	2.49	3.01	3.55	1yr
2yr	0.30	0.46	0.57	0.77	0.94	1.11	2yr	0.82	1.08	1.24	1.61	2.06	2.45	2.75	2yr	2.17	2.65	3.08	3.70	4.23	2yr
5yr	0.34	0.52	0.65	0.89	1.14	1.32	5yr	0.98	1.30	1.49	1.90	2.42	2.92	3.28	5yr	2.58	3.15	3.66	4.30	4.92	5yr
10yr	0.38	0.58	0.72	1.00	1.30	1.51	10yr	1.12	1.47	1.69	2.16	2.70	3.32	3.75	10yr	2.94	3.60	4.16	4.82	5.53	10yr
25yr	0.43	0.66	0.82	1.17	1.54	1.78	25yr	1.33	1.74	1.98	2.52	3.13	3.96	4.48	25yr	3.50	4.31	4.93	5.59	6.43	25yr
50yr	0.48	0.72	0.90	1.30	1.75	2.03	50yr	1.51	1.98	2.22	2.85	3.52	4.51	5.13	50yr	3.99	4.93	5.61	6.24	7.21	50yr
100yr	0.53	0.80	1.01	1.45	1.99	2.29	100yr	1.72	2.24	2.49	3.19	3.96	5.15	5.86	100yr	4.56	5.63	6.38	6.97	8.08	100yr
200yr	0.59	0.89	1.12	1.63	2.27	2.60	200yr	1.96	2.54	2.79	3.60	4.49	5.88	6.70	200yr	5.20	6.44	7.29	7.79	9.06	200yr
500yr	0.68	1.01	1.30	1.89	2.69	3.05	500yr	2.32	2.99	3.21	4.19	5.27	7.02	8.02	500yr	6.21	7.71	8.69	9.01	10.54	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.44	0.54	0.73	0.90	1.03	1yr	0.77	1.01	1.19	1.51	1.88	2.29	2.60	1yr	2.03	2.50	2.86	3.49	3.99	1yr
2yr	0.32	0.49	0.61	0.82	1.01	1.19	2yr	0.87	1.17	1.36	1.73	2.17	2.56	2.87	2yr	2.26	2.76	3.22	3.86	4.40	2yr
5yr	0.40	0.62	0.76	1.05	1.33	1.57	5yr	1.15	1.53	1.73	2.16	2.70	3.22	3.65	5yr	2.85	3.51	4.06	4.76	5.42	5yr
10yr	0.48	0.74	0.92	1.28	1.65	1.95	10yr	1.43	1.91	2.14	2.60	3.20	3.85	4.39	10yr	3.41	4.22	4.86	5.61	6.36	10yr
25yr	0.62	0.94	1.16	1.66	2.19	2.62	25yr	1.89	2.57	2.86	3.33	4.01	4.87	5.62	25yr	4.31	5.40	6.14	6.97	7.86	25yr
50yr	0.74	1.13	1.40	2.01	2.71	3.28	50yr	2.34	3.21	3.56	4.00	4.76	5.81	6.76	50yr	5.15	6.50	7.34	8.23	9.25	50yr
100yr	0.90	1.35	1.70	2.45	3.36	4.11	100yr	2.90	4.02	4.45	4.82	5.67	6.95	8.17	100yr	6.15	7.85	8.77	9.74	10.88	100yr
200yr	1.08	1.63	2.07	2.99	4.17	5.16	200yr	3.60	5.04	5.57	5.82	6.74	8.30	9.84	200yr	7.34	9.46	10.51	11.52	12.81	200yr
500yr	1.40	2.09	2.69	3.91	5.56	6.99	500yr	4.79	6.83	7.51	7.44	8.44	10.51	12.62	500yr	9.31	12.14	13.32	14.41	15.91	500yr

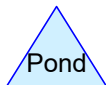
Lot 2 Drainage Analysis



Subcat



Reach



Pond



Link

Routing Diagram for 23310_Lot 2 VHB Design
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.451	61	>75% Grass cover, Good, HSG B (ES2B, PR20)
0.019	74	>75% Grass cover, Good, HSG C (PR20)
1.432	98	Paved parking, HSG B (PR20)
0.385	98	Paved parking, HSG C (PR20)
0.062	55	Woods, Good, HSG B (ES2B, PR20)
2.348	90	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.944	HSG B	ES2B, PR20
0.404	HSG C	PR20
0.000	HSG D	
0.000	Other	
2.348		TOTAL AREA

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Lot 2 - Existing
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES2B: (new Subcat)

Runoff Area=4,242 sf 0.00% Impervious Runoff Depth=0.13"
Tc=5.0 min CN=58 Runoff=0.01 cfs 0.001 af

SubcatchmentPR20: Subcat PR20

Runoff Area=2.251 ac 80.72% Impervious Runoff Depth=1.61"
Tc=6.0 min CN=91 Runoff=6.10 cfs 0.302 af

Pond 3P: Existing Basin-mod

Peak Elev=668.74' Storage=19,500 cf Inflow=33.80 cfs 1.714 af
Outflow=8.08 cfs 1.714 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.303 af Average Runoff Depth = 1.55"
22.63% Pervious = 0.531 ac 77.37% Impervious = 1.817 ac

23310_Lot 2 VHB Design

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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES2B: (new Subcat)

Runoff Area=4,242 sf 0.00% Impervious Runoff Depth=0.48"
Tc=5.0 min CN=58 Runoff=0.07 cfs 0.004 af

SubcatchmentPR20: Subcat PR20

Runoff Area=2.251 ac 80.72% Impervious Runoff Depth=2.62"
Tc=6.0 min CN=91 Runoff=9.67 cfs 0.491 af

Pond 3P: Existing Basin-mod

Peak Elev=670.01' Storage=42,294 cf Inflow=61.11 cfs 3.239 af
Outflow=14.21 cfs 3.239 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.495 af Average Runoff Depth = 2.53"
22.63% Pervious = 0.531 ac 77.37% Impervious = 1.817 ac

23310_Lot 2 VHB Design

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Lot 2 - Existing
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES2B: (new Subcat)

Runoff Area=4,242 sf 0.00% Impervious Runoff Depth=1.25"
Tc=5.0 min CN=58 Runoff=0.21 cfs 0.010 af

SubcatchmentPR20: Subcat PR20

Runoff Area=2.251 ac 80.72% Impervious Runoff Depth=4.12"
Tc=6.0 min CN=91 Runoff=14.80 cfs 0.772 af

Pond 3P: Existing Basin-mod

Peak Elev=671.51' Storage=81,395 cf Inflow=104.27 cfs 5.787 af
Outflow=20.32 cfs 5.787 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.783 af Average Runoff Depth = 4.00"
22.63% Pervious = 0.531 ac 77.37% Impervious = 1.817 ac

23310_Lot 2 VHB Design

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Lot 2 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment ES2B: (new Subcat)

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.07 cfs @ 11.99 hrs, Volume= 0.004 af, Depth= 0.48"

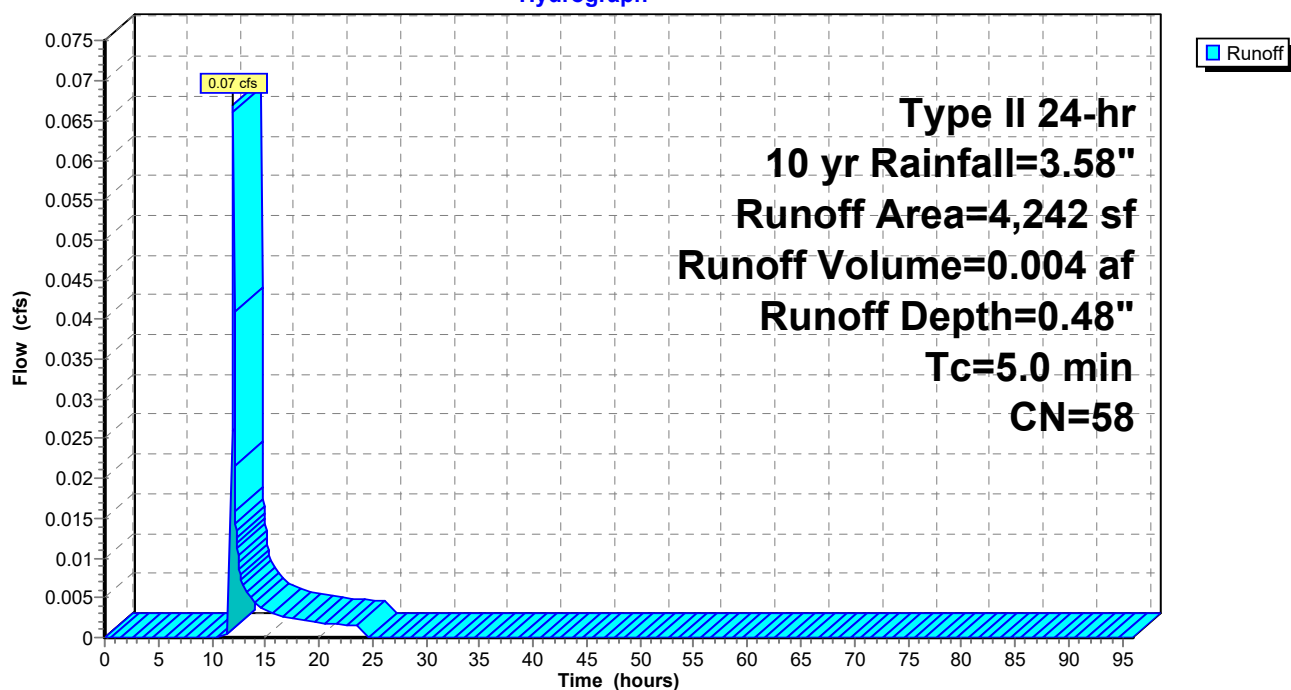
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, $dt=0.05$ hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
2,121	55	Woods, Good, HSG B
2,121	61	>75% Grass cover, Good, HSG B
4,242	58	Weighted Average
4,242		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment ES2B: (new Subcat)

Hydrograph



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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR20: Subcat PR20

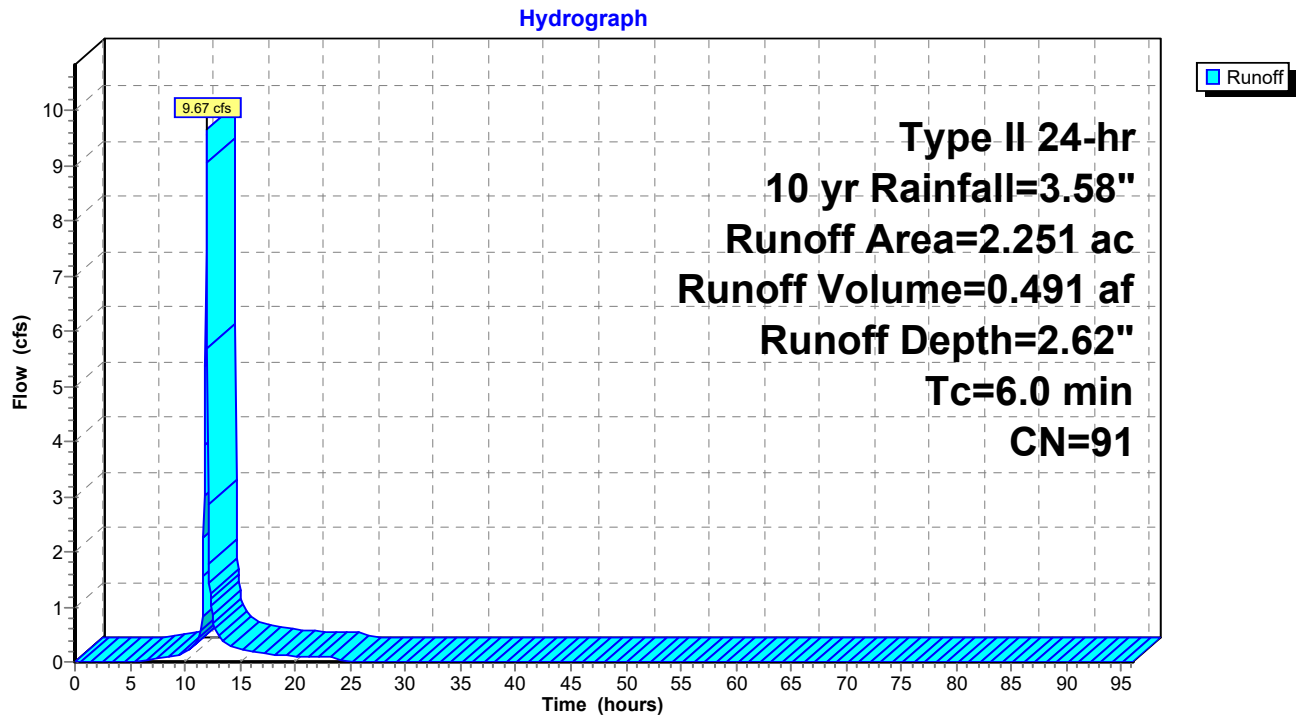
Runoff = 9.67 cfs @ 11.97 hrs, Volume= 0.491 af, Depth= 2.62"
Routed to Pond 3P : Existing Basin-mod

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.402	61	>75% Grass cover, Good, HSG B
0.019	74	>75% Grass cover, Good, HSG C
1.432	98	Paved parking, HSG B
0.385	98	Paved parking, HSG C
0.013	55	Woods, Good, HSG B
2.251	91	Weighted Average
0.434		19.28% Pervious Area
1.817		80.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PR20: Subcat PR20



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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: Existing Basin-mod

Inflow Area = 22.802 ac, 53.29% Impervious, Inflow Depth = 1.70" for 10 yr event
 Inflow = 61.11 cfs @ 11.98 hrs, Volume= 3.239 af
 Outflow = 14.21 cfs @ 12.17 hrs, Volume= 3.239 af, Atten= 77%, Lag= 11.4 min
 Primary = 14.21 cfs @ 12.17 hrs, Volume= 3.239 af
 Routed to Link 1L : Stormwater Management Area Outlet

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 670.01' @ 12.17 hrs Surf.Area= 20,787 sf Storage= 42,294 cf

Plug-Flow detention time= 26.9 min calculated for 3.237 af (100% of inflow)
 Center-of-Mass det. time= 26.9 min (852.2 - 825.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	665.10'	140,263 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
665.10	10	15.0	0	0	10
666.00	75	111.0	34	34	974
668.00	12,597	701.0	9,096	9,130	39,107
670.00	20,735	845.0	32,996	42,125	56,890
672.00	35,435	1,425.0	55,517	97,643	161,686
672.16	37,810	1,212.0	5,859	103,501	206,384
673.00	50,000	2,000.0	36,761	140,263	407,804

Device	Routing	Invert	Outlet Devices
#1	Primary	663.90'	24.0" Round Culvert L= 98.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 663.90' / 654.20' S= 0.0986 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	665.12'	15.0" Round Culvert L= 12.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 665.12' / 663.95' S= 0.0929 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 1	669.50'	1.0" x 8.0" Horiz. Existing Overflow X 12.00 columns X 2 rows C= 0.600 in 24.0" Grate (42% open area) Limited to weir flow at low heads
#4	Device 2	665.12'	11.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	666.50'	48.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Device 2	667.50'	2.1" x 4.1" Horiz. Orifice/Grate X 8.00 columns X 4 rows C= 0.600 Limited to weir flow at low heads
#7	Primary	672.15'	18.0' long x 30.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

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Lot 2 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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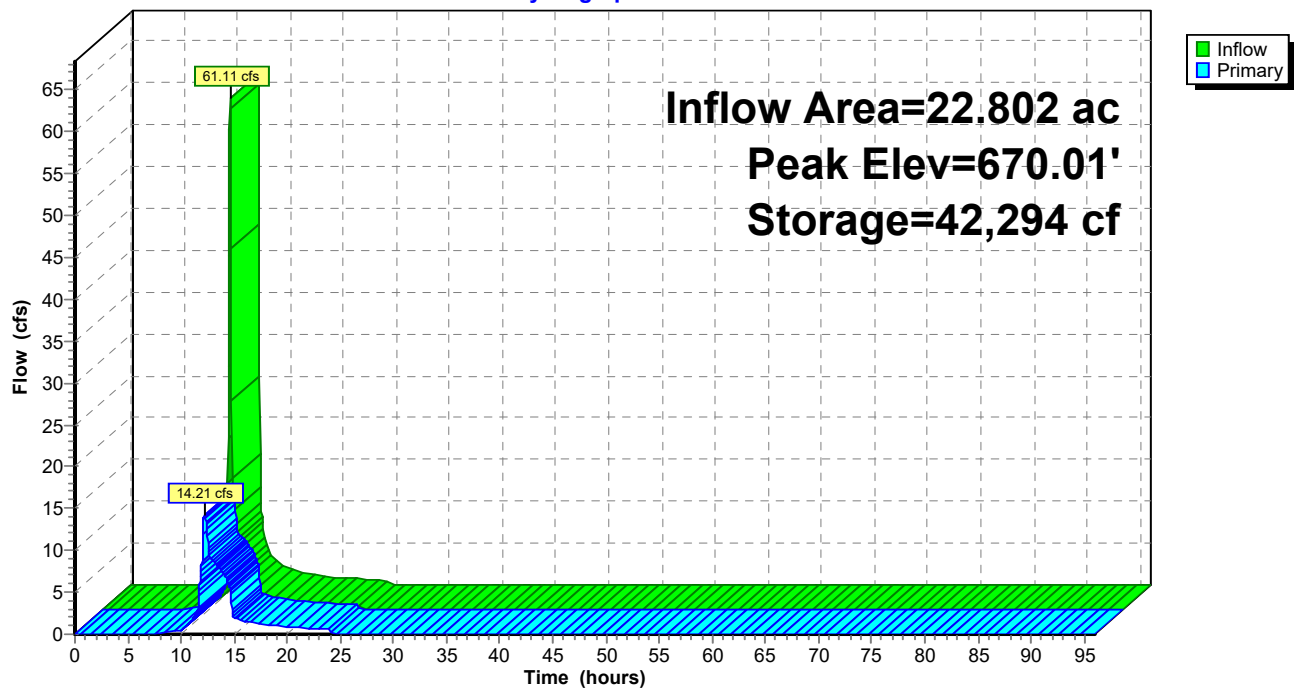
Page 10

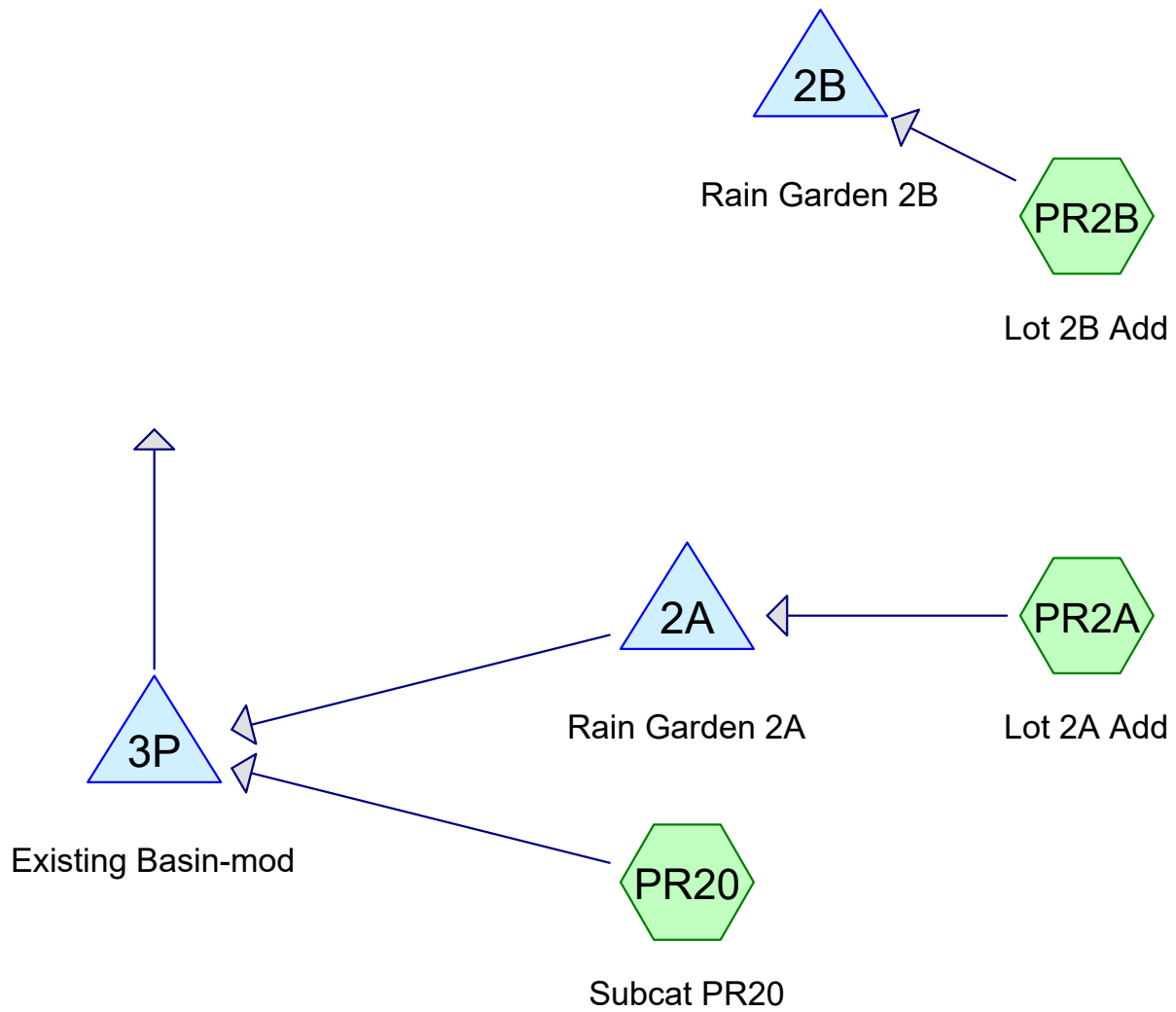
Primary OutFlow Max=14.17 cfs @ 12.17 hrs HW=670.00' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 14.17 cfs of 46.59 cfs potential flow)
- 2=Culvert (Inlet Controls 9.62 cfs @ 7.84 fps)
- 4=Orifice/Grate (Passes < 6.68 cfs potential flow)
- 5=Orifice/Grate (Passes < 11.72 cfs potential flow)
- 6=Orifice/Grate (Passes < 14.57 cfs potential flow)
- 3=Existing Overflow (Orifice Controls 4.54 cfs @ 3.41 fps)
- 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3P: Existing Basin-mod

Hydrograph





23310_Lot 2 VHB Design-EV Post

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.355	61	>75% Grass cover, Good, HSG B (PR20)
0.019	74	>75% Grass cover, Good, HSG C (PR20)
1.576	98	Paved parking, HSG B (PR20, PR2A, PR2B)
0.385	98	Paved parking, HSG C (PR20)
0.013	55	Woods, Good, HSG B (PR20)
2.348	92	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.944	HSG B	PR20, PR2A, PR2B
0.404	HSG C	PR20
0.000	HSG D	
0.000	Other	
2.348		TOTAL AREA

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Lot 2 - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPR20: Subcat PR20

Runoff Area=2.204 ac 82.44% Impervious Runoff Depth=1.69"
Tc=6.0 min CN=92 Runoff=6.23 cfs 0.311 af

SubcatchmentPR2A: Lot 2A Add

Runoff Area=0.047 ac 100.00% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.009 af

SubcatchmentPR2B: Lot 2B Add

Runoff Area=0.097 ac 100.00% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=98 Runoff=0.34 cfs 0.018 af

Pond 2A: Rain Garden 2A

Peak Elev=691.29' Storage=90 cf Inflow=0.17 cfs 0.009 af
Outflow=0.05 cfs 0.009 af

Pond 2B: Rain Garden 2B

Peak Elev=680.96' Storage=255 cf Inflow=0.34 cfs 0.018 af
Outflow=0.05 cfs 0.018 af

Pond 3P: Existing Basin-mod

Peak Elev=668.76' Storage=19,695 cf Inflow=33.96 cfs 1.732 af
Outflow=8.09 cfs 1.732 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.338 af Average Runoff Depth = 1.73"
16.48% Pervious = 0.387 ac 83.52% Impervious = 1.961 ac

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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPR20: Subcat PR20 Runoff Area=2.204 ac 82.44% Impervious Runoff Depth=2.71"
Tc=6.0 min CN=92 Runoff=9.72 cfs 0.498 af

SubcatchmentPR2A: Lot 2A Add Runoff Area=0.047 ac 100.00% Impervious Runoff Depth=3.35"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.013 af

SubcatchmentPR2B: Lot 2B Add Runoff Area=0.097 ac 100.00% Impervious Runoff Depth=3.35"
Tc=5.0 min CN=98 Runoff=0.50 cfs 0.027 af

Pond 2A: Rain Garden 2A Peak Elev=691.65' Storage=155 cf Inflow=0.24 cfs 0.013 af
Outflow=0.05 cfs 0.013 af

Pond 2B: Rain Garden 2B Peak Elev=681.24' Storage=389 cf Inflow=0.50 cfs 0.027 af
Outflow=0.09 cfs 0.027 af

Pond 3P: Existing Basin-mod Peak Elev=670.01' Storage=42,432 cf Inflow=61.19 cfs 3.260 af
Outflow=14.25 cfs 3.260 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.539 af Average Runoff Depth = 2.75"
16.48% Pervious = 0.387 ac 83.52% Impervious = 1.961 ac

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Lot 2 - Post
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPR20: Subcat PR20

Runoff Area=2.204 ac 82.44% Impervious Runoff Depth=4.23"
Tc=6.0 min CN=92 Runoff=14.72 cfs 0.776 af

SubcatchmentPR2A: Lot 2A Add

Runoff Area=0.047 ac 100.00% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=98 Runoff=0.35 cfs 0.019 af

SubcatchmentPR2B: Lot 2B Add

Runoff Area=0.097 ac 100.00% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=98 Runoff=0.72 cfs 0.040 af

Pond 2A: Rain Garden 2A

Peak Elev=691.83' Storage=198 cf Inflow=0.35 cfs 0.019 af
Outflow=0.25 cfs 0.019 af

Pond 2B: Rain Garden 2B

Peak Elev=681.43' Storage=499 cf Inflow=0.72 cfs 0.040 af
Outflow=0.44 cfs 0.040 af

Pond 3P: Existing Basin-mod

Peak Elev=671.52' Storage=81,547 cf Inflow=104.36 cfs 5.810 af
Outflow=20.33 cfs 5.810 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.835 af Average Runoff Depth = 4.27"
16.48% Pervious = 0.387 ac 83.52% Impervious = 1.961 ac

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Lot 2 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR20: Subcat PR20

Runoff = 9.72 cfs @ 11.96 hrs, Volume= 0.498 af, Depth= 2.71"
Routed to Pond 3P : Existing Basin-mod

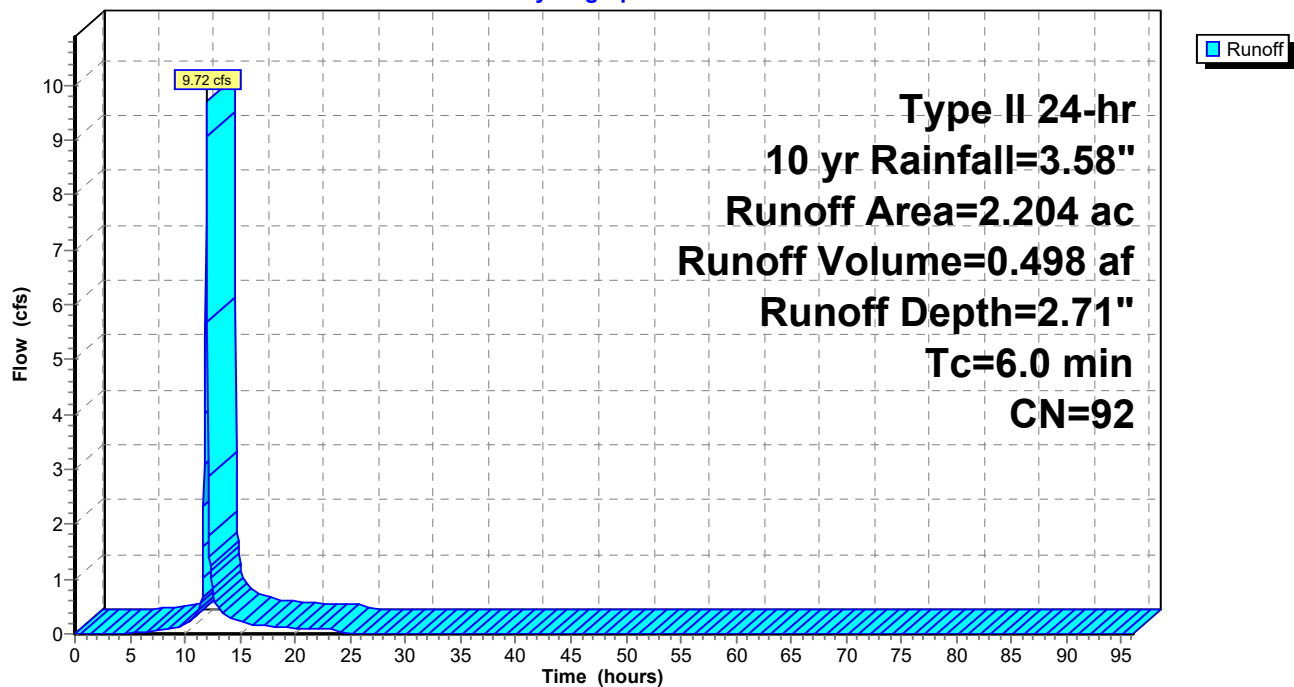
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.355	61	>75% Grass cover, Good, HSG B
0.019	74	>75% Grass cover, Good, HSG C
1.432	98	Paved parking, HSG B
0.385	98	Paved parking, HSG C
0.013	55	Woods, Good, HSG B
2.204	92	Weighted Average
0.387		17.56% Pervious Area
1.817		82.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment PR20: Subcat PR20

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR2A: Lot 2A Add

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.24 cfs @ 11.95 hrs, Volume= 0.013 af, Depth= 3.35"
Routed to Pond 2A : Rain Garden 2A

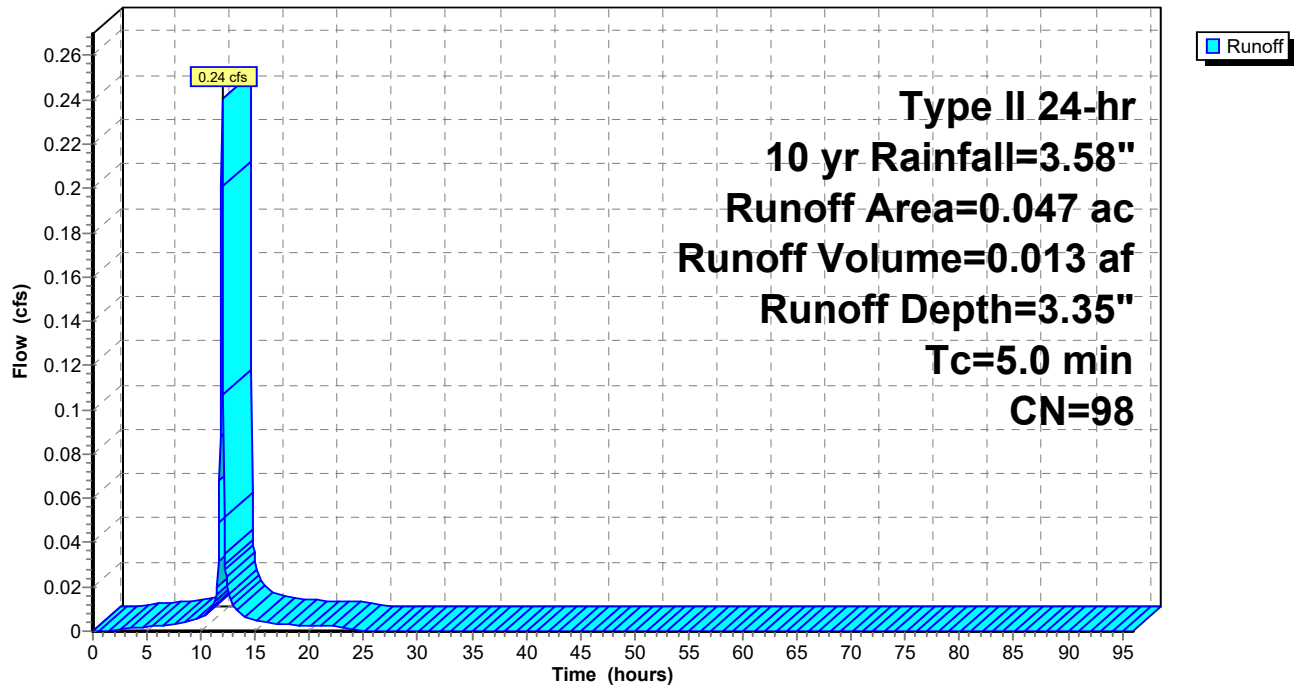
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, $dt=0.05$ hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.047	98	Paved parking, HSG B
0.047		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment PR2A: Lot 2A Add

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR2B: Lot 2B Add

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.50 cfs @ 11.95 hrs, Volume= 0.027 af, Depth= 3.35"
Routed to Pond 2B : Rain Garden 2B

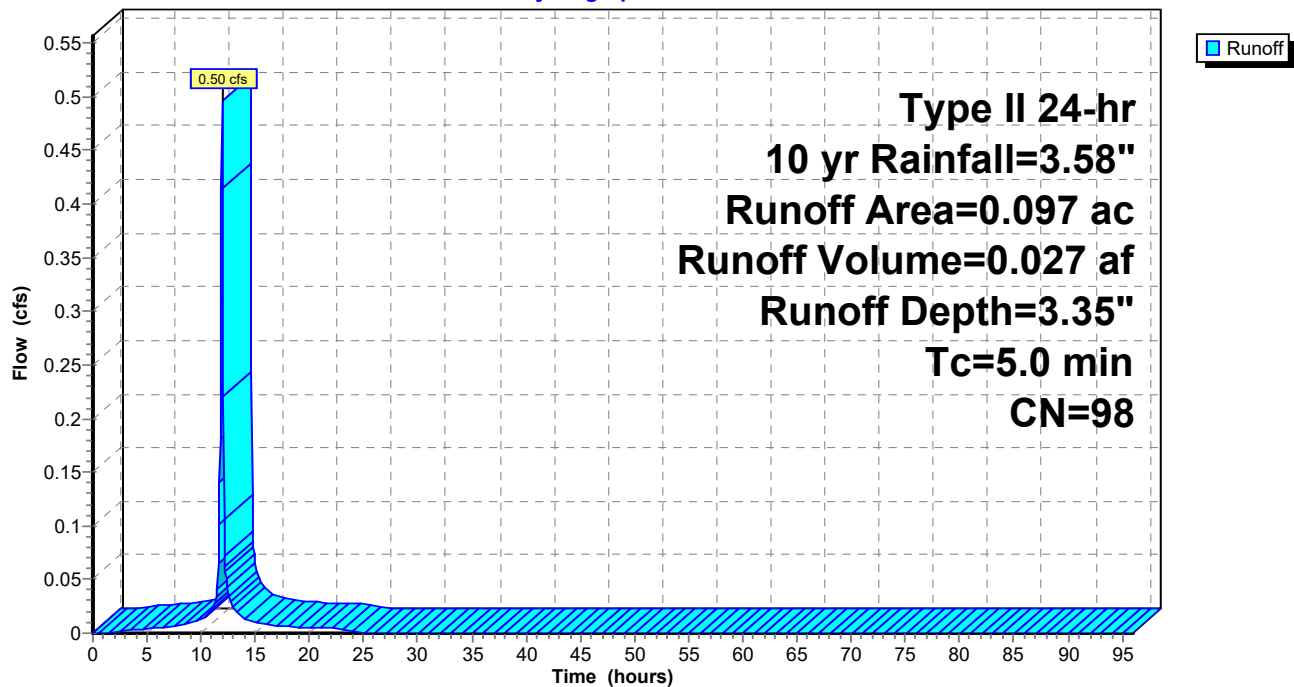
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, $dt=0.05$ hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.097	98	Paved parking, HSG B
0.097		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment PR2B: Lot 2B Add

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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 2A: Rain Garden 2A

[44] Hint: Outlet device #2 is below defined storage

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=103)

Inflow Area = 0.047 ac, 100.00% Impervious, Inflow Depth = 3.35" for 10 yr event
Inflow = 0.24 cfs @ 11.95 hrs, Volume= 0.013 af
Outflow = 0.05 cfs @ 12.12 hrs, Volume= 0.013 af, Atten= 79%, Lag= 9.9 min
Primary = 0.05 cfs @ 12.12 hrs, Volume= 0.013 af
Routed to Pond 3P : Existing Basin-mod

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 691.65' @ 12.12 hrs Surf.Area= 215 sf Storage= 155 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 16.3 min (765.5 - 749.2)

Volume	Invert	Avail.Storage	Storage Description	
#1	689.00'	243 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
689.00	93	0.0	0	0
691.00	93	30.0	56	56
691.50	184	100.0	69	125
692.00	289	100.0	118	243

Device	Routing	Invert	Outlet Devices
#1	Primary	683.50'	12.0" Round Culvert L= 4.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 683.50' / 683.20' S= 0.0652 ' S= 0.0652 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	688.00'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	691.75'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 12.12 hrs HW=691.65' TW=669.97' (Dynamic Tailwater)

1=Culvert (Passes 0.05 cfs of 10.46 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.05 cfs @ 9.14 fps)
3=Orifice/Grate (Controls 0.00 cfs)

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Lot 2 - Post

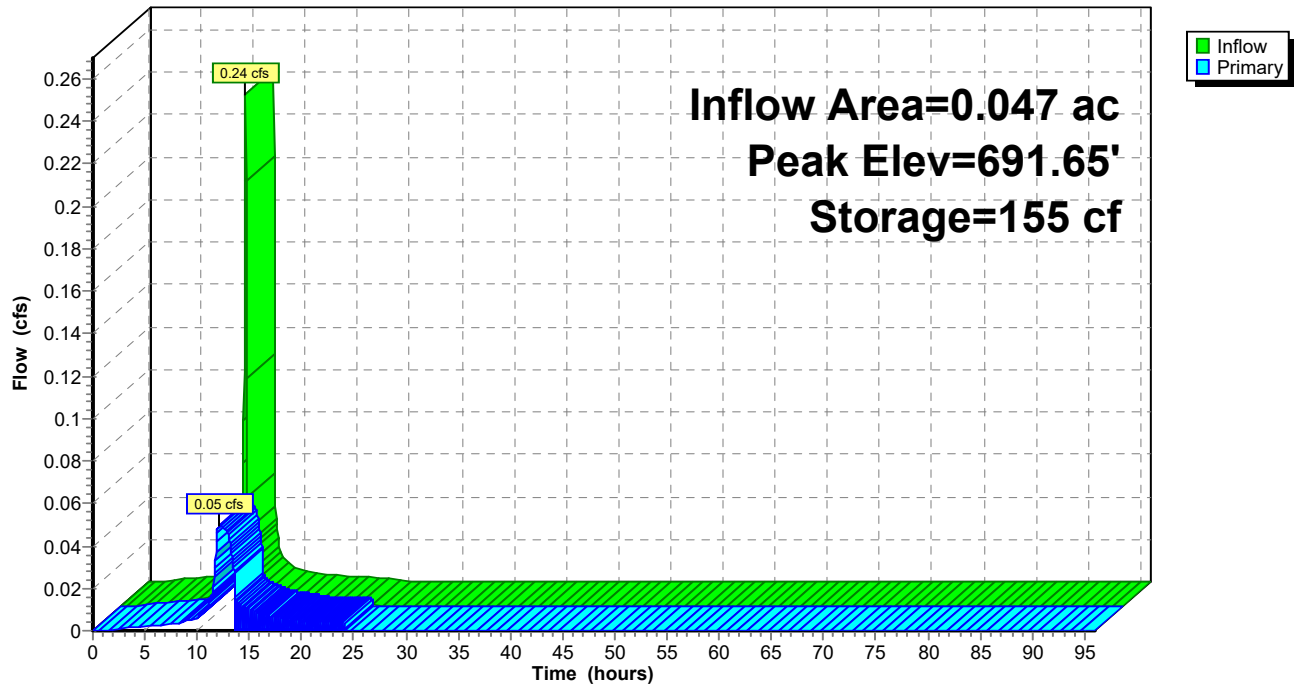
Type II 24-hr 10 yr Rainfall=3.58"

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Pond 2A: Rain Garden 2A

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 2B: Rain Garden 2B

[44] Hint: Outlet device #2 is below defined storage

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=82)

Inflow Area = 0.097 ac, 100.00% Impervious, Inflow Depth = 3.35" for 10 yr event
Inflow = 0.50 cfs @ 11.95 hrs, Volume= 0.027 af
Outflow = 0.09 cfs @ 12.12 hrs, Volume= 0.027 af, Atten= 81%, Lag= 10.4 min
Primary = 0.09 cfs @ 12.12 hrs, Volume= 0.027 af
Routed to nonexistent node POI-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 681.24' @ 12.12 hrs Surf.Area= 538 sf Storage= 389 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.3 min (787.5 - 749.2)

Volume	Invert	Avail.Storage	Storage Description			
#1	678.50'	545 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.50	203	77.2	0.0	0	0	203
680.50	203	77.2	30.0	122	122	357
681.00	414	93.1	100.0	151	273	577
681.50	686	111.8	100.0	272	545	886

Device	Routing	Invert	Outlet Devices	
#1	Primary	677.32'	12.0" Round Culvert L= 43.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 677.32' / 676.00' S= 0.0303 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf	
#2	Device 1	677.42'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads	
#3	Device 1	681.00'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads	
#4	Device 1	681.33'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads	

Primary OutFlow Max=0.09 cfs @ 12.12 hrs HW=681.24' (Free Discharge)

- 1=Culvert (Passes 0.09 cfs of 6.99 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.05 cfs @ 9.36 fps)
- 3=Orifice/Grate (Orifice Controls 0.04 cfs @ 1.91 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

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Lot 2 - Post

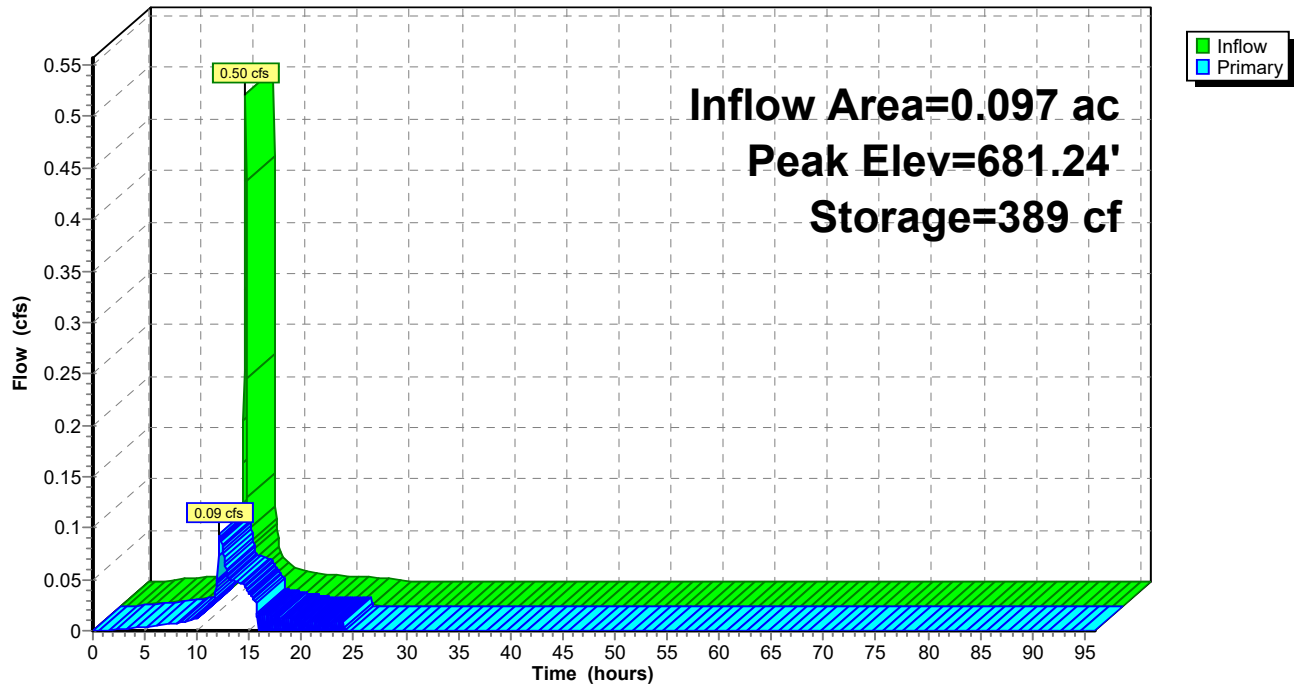
Type II 24-hr 10 yr Rainfall=3.58"

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Pond 2B: Rain Garden 2B

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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: Existing Basin-mod

Inflow Area = 22.802 ac, 53.50% Impervious, Inflow Depth = 1.72" for 10 yr event
 Inflow = 61.19 cfs @ 11.98 hrs, Volume= 3.260 af
 Outflow = 14.25 cfs @ 12.17 hrs, Volume= 3.260 af, Atten= 77%, Lag= 11.4 min
 Primary = 14.25 cfs @ 12.17 hrs, Volume= 3.260 af
 Routed to Link 1L : Stormwater Management Area Outlet

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 670.01' @ 12.17 hrs Surf.Area= 20,829 sf Storage= 42,432 cf

Plug-Flow detention time= 28.0 min calculated for 3.260 af (100% of inflow)
 Center-of-Mass det. time= 26.9 min (851.2 - 824.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	665.10'	140,263 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
665.10	10	15.0	0	0	10
666.00	75	111.0	34	34	974
668.00	12,597	701.0	9,096	9,130	39,107
670.00	20,735	845.0	32,996	42,125	56,890
672.00	35,435	1,425.0	55,517	97,643	161,686
672.16	37,810	1,212.0	5,859	103,501	206,384
673.00	50,000	2,000.0	36,761	140,263	407,804

Device	Routing	Invert	Outlet Devices
#1	Primary	663.90'	24.0" Round Culvert L= 98.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 663.90' / 654.20' S= 0.0986 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	665.12'	15.0" Round Culvert L= 12.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 665.12' / 663.95' S= 0.0929 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 1	669.50'	1.0" x 8.0" Horiz. Existing Overflow X 12.00 columns X 2 rows C= 0.600 in 24.0" Grate (42% open area) Limited to weir flow at low heads
#4	Device 2	665.12'	11.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	666.50'	48.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Device 2	667.50'	2.1" x 4.1" Horiz. Orifice/Grate X 8.00 columns X 4 rows C= 0.600 Limited to weir flow at low heads
#7	Primary	672.15'	18.0' long x 30.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

23310_Lot 2 VHB Design-EV Post

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Lot 2 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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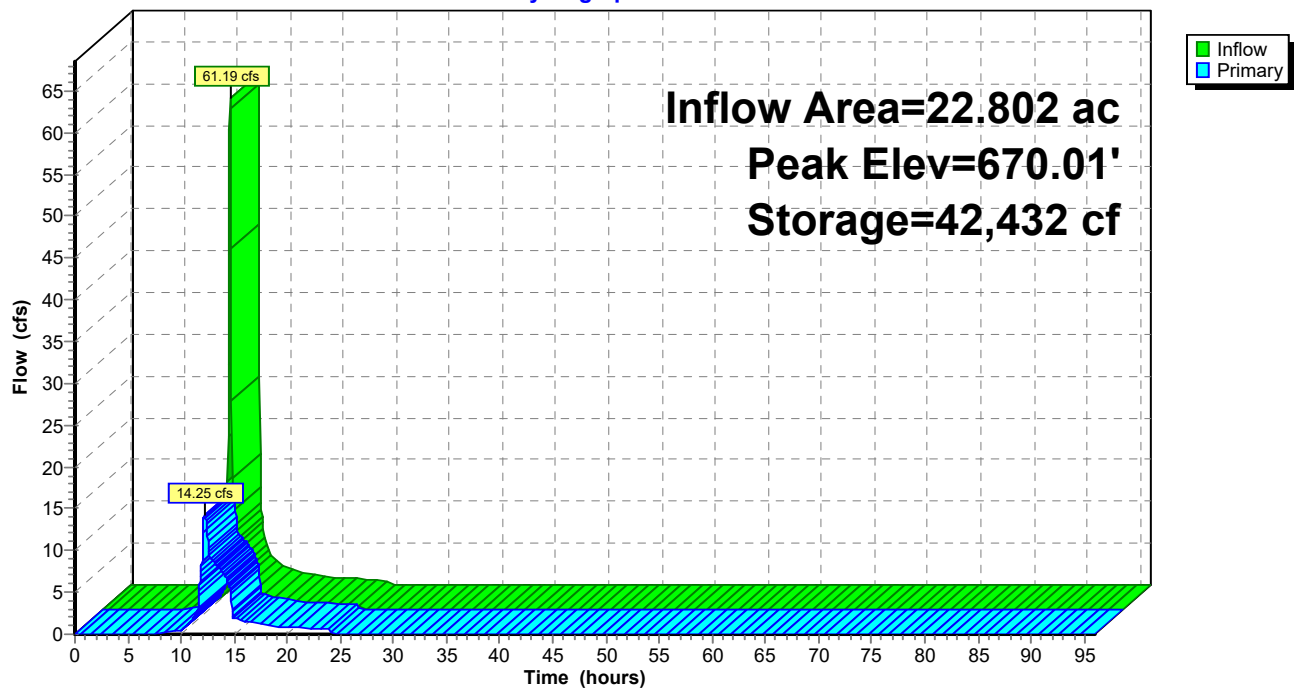
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Primary OutFlow Max=14.20 cfs @ 12.17 hrs HW=670.01' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 14.20 cfs of 46.62 cfs potential flow)
- 2=Culvert (Inlet Controls 9.63 cfs @ 7.85 fps)
- 4=Orifice/Grate (Passes < 6.69 cfs potential flow)
- 5=Orifice/Grate (Passes < 11.73 cfs potential flow)
- 6=Orifice/Grate (Passes < 14.59 cfs potential flow)
- 3=Existing Overflow (Orifice Controls 4.57 cfs @ 3.43 fps)
- 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3P: Existing Basin-mod

Hydrograph



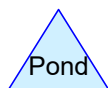
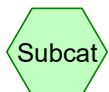
Lot 4 Drainage Analysis



West Pond #2



Lot 4



Routing Diagram for 23310_Lots 4 & 8 Existing
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.963	74	Grass, Good, HSG C (PS5)
3.162	98	Paved parking (PS5)
0.081	70	Woods, Good, HSG C (PS5)
4.206	92	TOTAL AREA

23310_Lots 4 & 8 Existing

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.044	HSG C	PS5
0.000	HSG D	
3.162	Other	PS5
4.206		TOTAL AREA

23310_Lots 4 & 8 Existing

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Lot 4 - Existing
Type II 24-hr 2 yr Rainfall=2.50"
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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,229 sf 75.18% Impervious Runoff Depth=1.69"
Tc=10.0 min CN=92 Runoff=10.72 cfs 0.593 af

Pond 3P: West Pond #2

Peak Elev=740.94' Storage=14,211 cf Inflow=6.03 cfs 0.708 af
Outflow=1.17 cfs 0.495 af

Total Runoff Area = 4.206 ac Runoff Volume = 0.593 af Average Runoff Depth = 1.69"
24.82% Pervious = 1.044 ac 75.18% Impervious = 3.162 ac

23310_Lots 4 & 8 Existing

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Lot 4 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,229 sf 75.18% Impervious Runoff Depth=2.71"
Tc=10.0 min CN=92 Runoff=16.76 cfs 0.951 af

Pond 3P: West Pond #2

Peak Elev=741.48' Storage=17,982 cf Inflow=12.05 cfs 1.404 af
Outflow=8.16 cfs 1.188 af

Total Runoff Area = 4.206 ac Runoff Volume = 0.951 af Average Runoff Depth = 2.71"
24.82% Pervious = 1.044 ac 75.18% Impervious = 3.162 ac

23310_Lots 4 & 8 Existing

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Lot 4 - Existing
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,229 sf 75.18% Impervious Runoff Depth=4.23"
Tc=10.0 min CN=92 Runoff=25.42 cfs 1.481 af

Pond 3P: West Pond #2

Peak Elev=742.12' Storage=22,862 cf Inflow=31.98 cfs 2.514 af
Outflow=20.14 cfs 2.297 af

Total Runoff Area = 4.206 ac Runoff Volume = 1.481 af Average Runoff Depth = 4.23"
24.82% Pervious = 1.044 ac 75.18% Impervious = 3.162 ac

23310_Lots 4 & 8 Existing

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Lot 4 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Page 7

Summary for Subcatchment PS5: Lot 4

Runoff = 16.76 cfs @ 12.01 hrs, Volume= 0.951 af, Depth= 2.71"
Routed to Pond 47P : Upper Pond

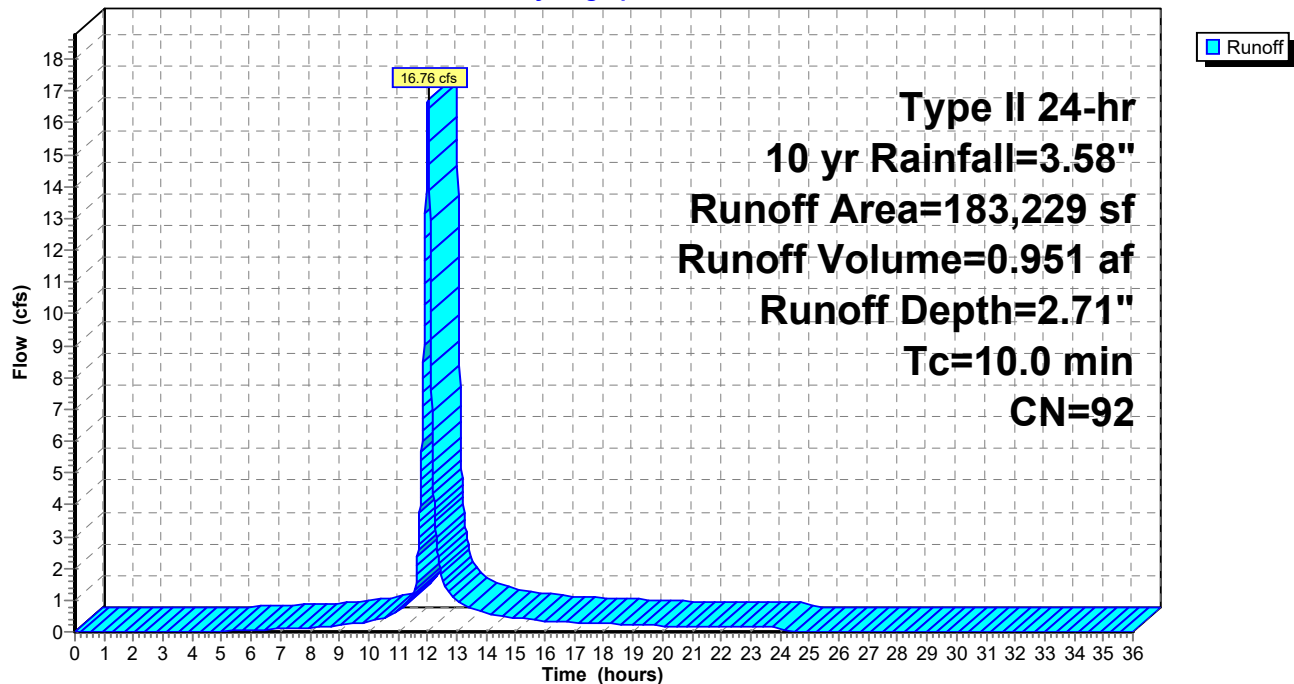
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

	Area (sf)	CN	Description
	3,517	70	Woods, Good, HSG C
*	41,961	74	Grass, Good, HSG C
*	137,751	98	Paved parking
	183,229	92	Weighted Average
	45,478		24.82% Pervious Area
	137,751		75.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Matching pond design Tc

Subcatchment PS5: Lot 4

Hydrograph



23310_Lots 4 & 8 Existing

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Lot 4 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: West Pond #2

3P design is as it appears in Pathways Consulting's HydroCAD model titled "10001.DHMC Loop Rd Proposed", dated 2/8/2007, provided to EV by DHMC.

Outlet control modified to provide extended detention. 4" orifices reduced to 1.3" orifices and invert of wier raised from 740.00 to 740.36 reducing weir oriface from 24" x 48" to 19.68" x 48".

Inflow Area = 9.378 ac, 40.94% Impervious, Inflow Depth = 1.80" for 10 yr event
Inflow = 12.05 cfs @ 12.19 hrs, Volume= 1.404 af
Outflow = 8.16 cfs @ 12.56 hrs, Volume= 1.188 af, Atten= 32%, Lag= 22.6 min
Primary = 8.16 cfs @ 12.56 hrs, Volume= 1.188 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 741.48' @ 12.56 hrs Surf.Area= 7,285 sf Storage= 17,982 cf

Plug-Flow detention time= 193.6 min calculated for 1.188 af (85% of inflow)
Center-of-Mass det. time= 119.2 min (990.9 - 871.7)

Volume	Invert	Avail.Storage	Storage Description
#1	737.00'	30,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
737.00	1,331	0	0
738.00	1,837	1,584	1,584
739.00	3,503	2,670	4,254
740.00	5,278	4,391	8,645
741.00	6,680	5,979	14,624
742.00	7,937	7,309	21,932
743.00	9,579	8,758	30,690

Device	Routing	Invert	Outlet Devices
#1	Primary	739.00'	24.0" Round Culvert L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 739.00' / 736.75' S= 0.0098 ' S= 0.0098 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	739.00'	1.3" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Device 1	740.75'	48.0" W x 15.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.16 cfs @ 12.56 hrs HW=741.48' (Free Discharge)

1=Culvert (Passes 8.16 cfs of 18.41 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.14 cfs @ 7.50 fps)
3=Orifice/Grate (Orifice Controls 8.03 cfs @ 2.74 fps)

23310_Lots 4 & 8 Existing

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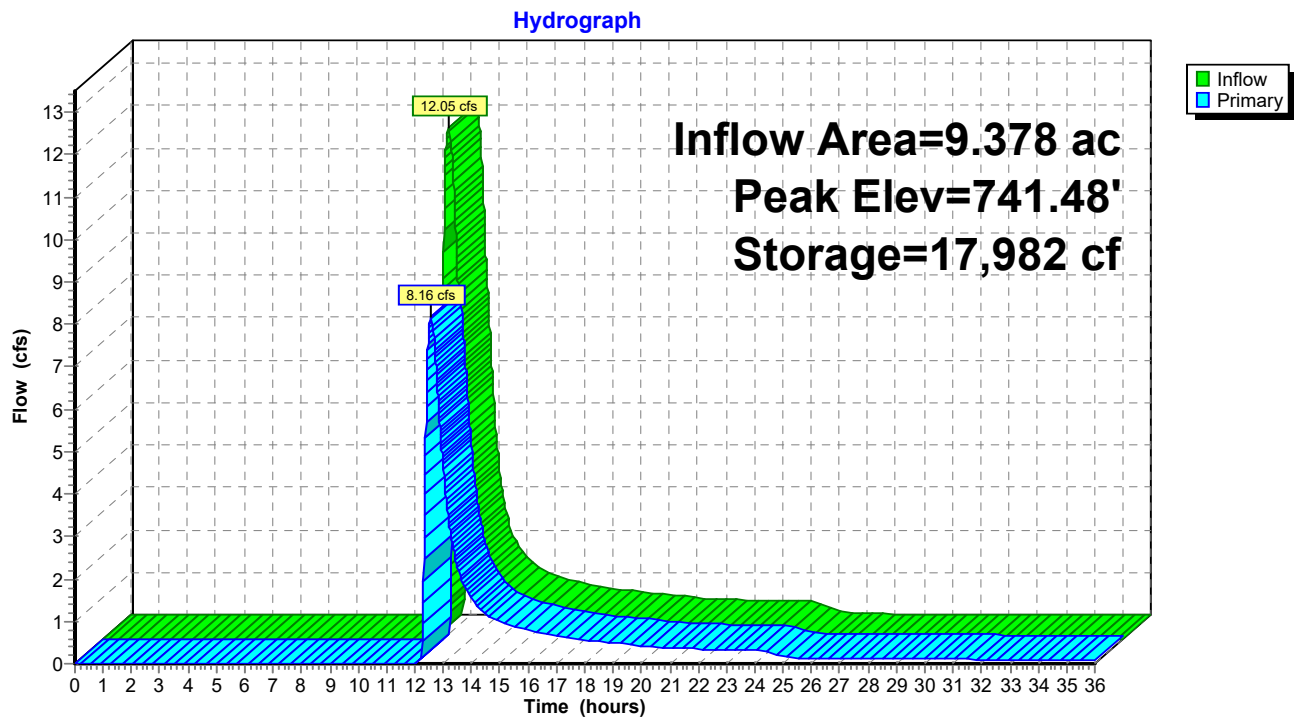
Lot 4 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Pond 3P: West Pond #2



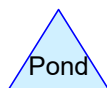
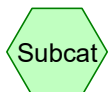


West Pond #2



PS5

Lot 4



Routing Diagram for 23310_Lots 4 & 8 Post 2024
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23310_Lots 4 & 8 Post 2024

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.940	74	Grass, Good, HSG C (PS5)
3.188	98	Paved parking (PS5)
0.081	70	Woods, Good, HSG C (PS5)
4.209	92	TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.021	HSG C	PS5
0.000	HSG D	
3.188	Other	PS5
4.209		TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,357 sf 75.74% Impervious Runoff Depth=1.69"
Tc=10.0 min CN=92 Runoff=10.73 cfs 0.594 af

Pond 3P: West Pond #2

Peak Elev=740.94' Storage=14,213 cf Inflow=6.03 cfs 0.709 af
Outflow=1.17 cfs 0.496 af

Total Runoff Area = 4.209 ac Runoff Volume = 0.594 af Average Runoff Depth = 1.69"
24.26% Pervious = 1.021 ac 75.74% Impervious = 3.188 ac

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,357 sf 75.74% Impervious Runoff Depth=2.71"
Tc=10.0 min CN=92 Runoff=16.77 cfs 0.952 af

Pond 3P: West Pond #2

Peak Elev=741.48' Storage=17,985 cf Inflow=12.05 cfs 1.404 af
Outflow=8.17 cfs 1.189 af

Total Runoff Area = 4.209 ac Runoff Volume = 0.952 af Average Runoff Depth = 2.71"
24.26% Pervious = 1.021 ac 75.74% Impervious = 3.188 ac

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,357 sf 75.74% Impervious Runoff Depth=4.23"
Tc=10.0 min CN=92 Runoff=25.44 cfs 1.482 af

Pond 3P: West Pond #2

Peak Elev=742.12' Storage=22,867 cf Inflow=32.00 cfs 2.515 af
Outflow=20.15 cfs 2.298 af

Total Runoff Area = 4.209 ac Runoff Volume = 1.482 af Average Runoff Depth = 4.23"
24.26% Pervious = 1.021 ac 75.74% Impervious = 3.188 ac

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Lot 4 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS5: Lot 4

Runoff = 16.77 cfs @ 12.01 hrs, Volume= 0.952 af, Depth= 2.71"
Routed to Pond 47P : Upper Pond

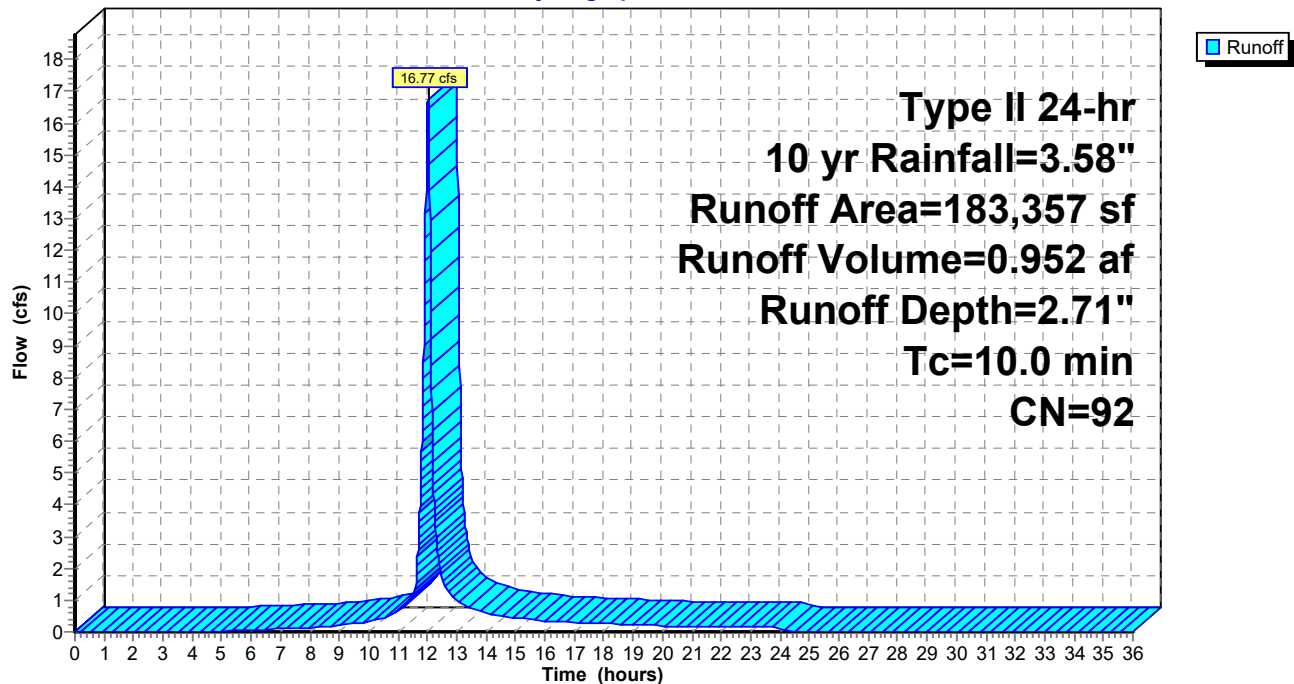
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

	Area (sf)	CN	Description
	3,517	70	Woods, Good, HSG C
*	40,960	74	Grass, Good, HSG C
*	138,880	98	Paved parking
	183,357	92	Weighted Average
	44,477		24.26% Pervious Area
	138,880		75.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Matching pond design Tc

Subcatchment PS5: Lot 4

Hydrograph



23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: West Pond #2

3P design is as it appears in Pathways Consulting's HydroCAD model titled "10001.DHMC Loop Rd Proposed", dated 2/8/2007, provided to EV by DHMC.

Outlet control modified to provide extended detention. 4" orifices reduced to 1.3" orifices and invert of wier raised from 740.00 to 740.36 reducing weir oriface from 24" x 48" to 19.68" x 48".

Inflow Area = 9.378 ac, 41.22% Impervious, Inflow Depth = 1.80" for 10 yr event
Inflow = 12.05 cfs @ 12.19 hrs, Volume= 1.404 af
Outflow = 8.17 cfs @ 12.56 hrs, Volume= 1.189 af, Atten= 32%, Lag= 22.5 min
Primary = 8.17 cfs @ 12.56 hrs, Volume= 1.189 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 741.48' @ 12.56 hrs Surf.Area= 7,285 sf Storage= 17,985 cf

Plug-Flow detention time= 193.5 min calculated for 1.189 af (85% of inflow)
Center-of-Mass det. time= 119.2 min (990.8 - 871.7)

Volume	Invert	Avail.Storage	Storage Description
#1	737.00'	30,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
737.00	1,331	0	0
738.00	1,837	1,584	1,584
739.00	3,503	2,670	4,254
740.00	5,278	4,391	8,645
741.00	6,680	5,979	14,624
742.00	7,937	7,309	21,932
743.00	9,579	8,758	30,690

Device	Routing	Invert	Outlet Devices
#1	Primary	739.00'	24.0" Round Culvert L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 739.00' / 736.75' S= 0.0098 ' S= 0.0098 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	739.00'	1.3" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Device 1	740.75'	48.0" W x 15.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.17 cfs @ 12.56 hrs HW=741.48' (Free Discharge)

1=Culvert (Passes 8.17 cfs of 18.41 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.14 cfs @ 7.50 fps)
3=Orifice/Grate (Orifice Controls 8.03 cfs @ 2.75 fps)

23310_Lots 4 & 8 Post 2024

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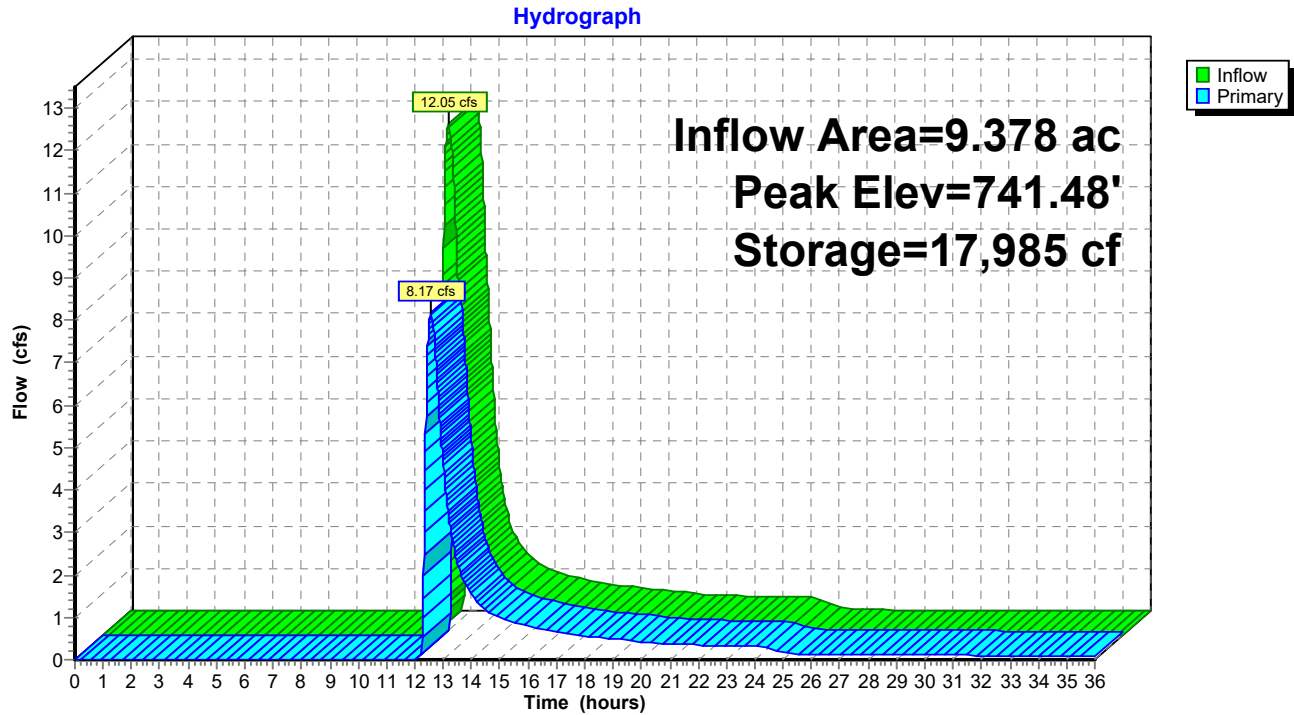
Lot 4 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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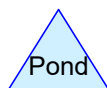
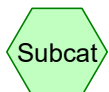
Pond 3P: West Pond #2



Lot 8 Drainage Analysis



(new Subcat)



Routing Diagram for 23310_Lots 4 & 8 Existing
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23310_Lots 4 & 8 Existing

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.110	61	>75% Grass cover, Good, HSG B (ES8)
0.199	55	Woods, Good, HSG B (ES8)
0.309	57	TOTAL AREA

23310_Lots 4 & 8 Existing

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.309	HSG B	ES8
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.309		TOTAL AREA

23310_Lots 4 & 8 Existing

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Lot 8 - Existing
Type II 24-hr 2 yr Rainfall=2.50"
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Page 4

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES8: (new Subcat)

Runoff Area=13,460 sf 0.00% Impervious Runoff Depth=0.12"
Tc=5.0 min CN=57 Runoff=0.01 cfs 0.003 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.003 af Average Runoff Depth = 0.12"
100.00% Pervious = 0.309 ac 0.00% Impervious = 0.000 ac

23310_Lots 4 & 8 Existing

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Lot 8 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES8: (new Subcat)

Runoff Area=13,460 sf 0.00% Impervious Runoff Depth=0.45"

Tc=5.0 min CN=57 Runoff=0.19 cfs 0.011 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.011 af Average Runoff Depth = 0.45"
100.00% Pervious = 0.309 ac 0.00% Impervious = 0.000 ac

23310_Lots 4 & 8 Existing

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Lot 8 - Existing

Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES8: (new Subcat)

Runoff Area=13,460 sf 0.00% Impervious Runoff Depth=1.18"

Tc=5.0 min CN=57 Runoff=0.64 cfs 0.030 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.030 af Average Runoff Depth = 1.18"

100.00% Pervious = 0.309 ac 0.00% Impervious = 0.000 ac

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Lot 8 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Page 7

Summary for Subcatchment ES8: (new Subcat)

Runoff = 0.19 cfs @ 11.99 hrs, Volume= 0.011 af, Depth= 0.45"

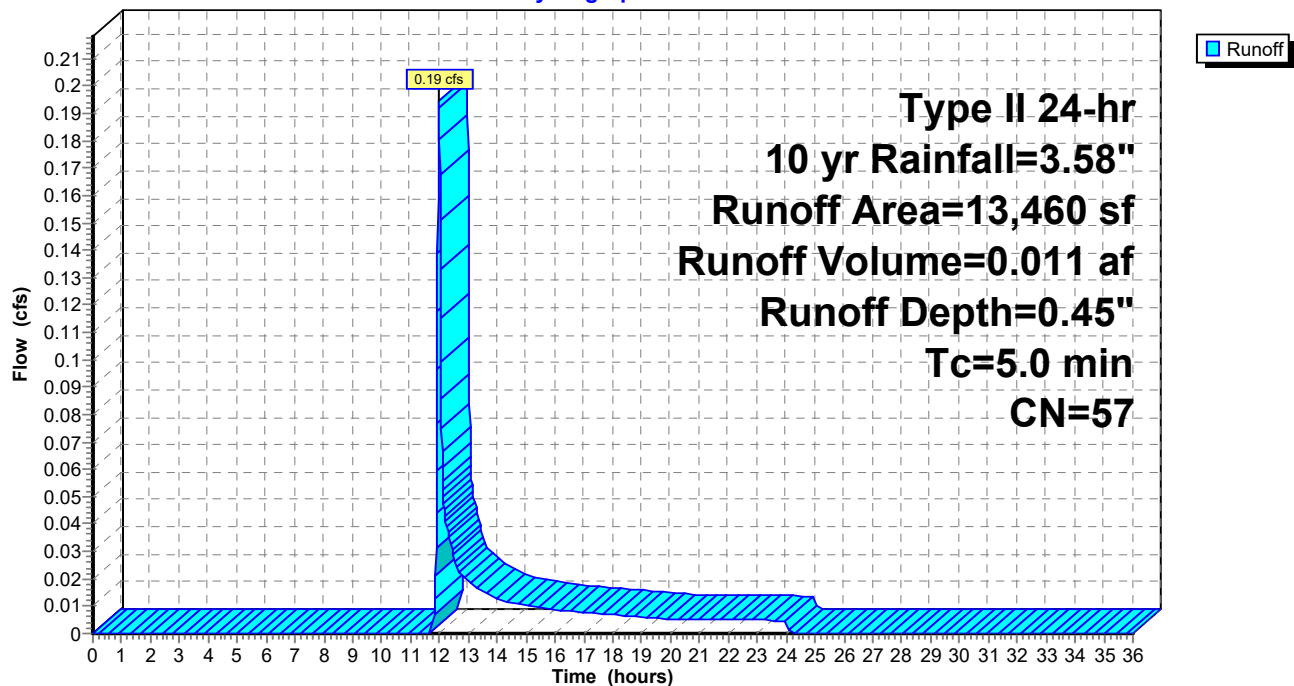
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

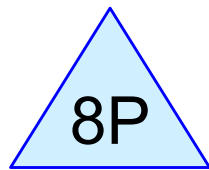
Area (sf)	CN	Description
8,650	55	Woods, Good, HSG B
4,810	61	>75% Grass cover, Good, HSG B
13,460	57	Weighted Average
13,460		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment ES8: (new Subcat)

Hydrograph

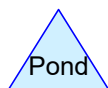
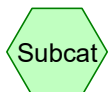




Rain Garden 8P



Lot 8 Add



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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.163	61	>75% Grass cover, Good, HSG B (PS8)
0.146	98	Paved parking, HSG B (PS8)
0.309	78	TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.309	HSG B	PS8
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.309		TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Page 4

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS8: Lot 8 Add

Runoff Area=13,460 sf 47.23% Impervious Runoff Depth=0.79"
Tc=5.0 min CN=78 Runoff=0.45 cfs 0.020 af

Pond 8P: Rain Garden 8P

Peak Elev=759.64' Storage=487 cf Inflow=0.45 cfs 0.020 af
Discarded=0.01 cfs 0.012 af Primary=0.01 cfs 0.003 af Outflow=0.02 cfs 0.015 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.020 af Average Runoff Depth = 0.79"
52.77% Pervious = 0.163 ac 47.23% Impervious = 0.146 ac

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Page 5

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS8: Lot 8 Add

Runoff Area=13,460 sf 47.23% Impervious Runoff Depth=1.56"
Tc=5.0 min CN=78 Runoff=0.90 cfs 0.040 af

Pond 8P: Rain Garden 8P

Peak Elev=760.05' Storage=784 cf Inflow=0.90 cfs 0.040 af
Discarded=0.01 cfs 0.014 af Primary=0.07 cfs 0.021 af Outflow=0.08 cfs 0.035 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.040 af Average Runoff Depth = 1.56"
52.77% Pervious = 0.163 ac 47.23% Impervious = 0.146 ac

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post

Type II 24-hr 50 yr Rainfall=5.14"

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Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS8: Lot 8 Add

Runoff Area=13,460 sf 47.23% Impervious Runoff Depth=2.83"

Tc=5.0 min CN=78 Runoff=1.61 cfs 0.073 af

Pond 8P: Rain Garden 8P

Peak Elev=760.60' Storage=1,381 cf Inflow=1.61 cfs 0.073 af

Discarded=0.02 cfs 0.016 af Primary=0.45 cfs 0.051 af Outflow=0.47 cfs 0.067 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.073 af Average Runoff Depth = 2.83"

52.77% Pervious = 0.163 ac 47.23% Impervious = 0.146 ac

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS8: Lot 8 Add

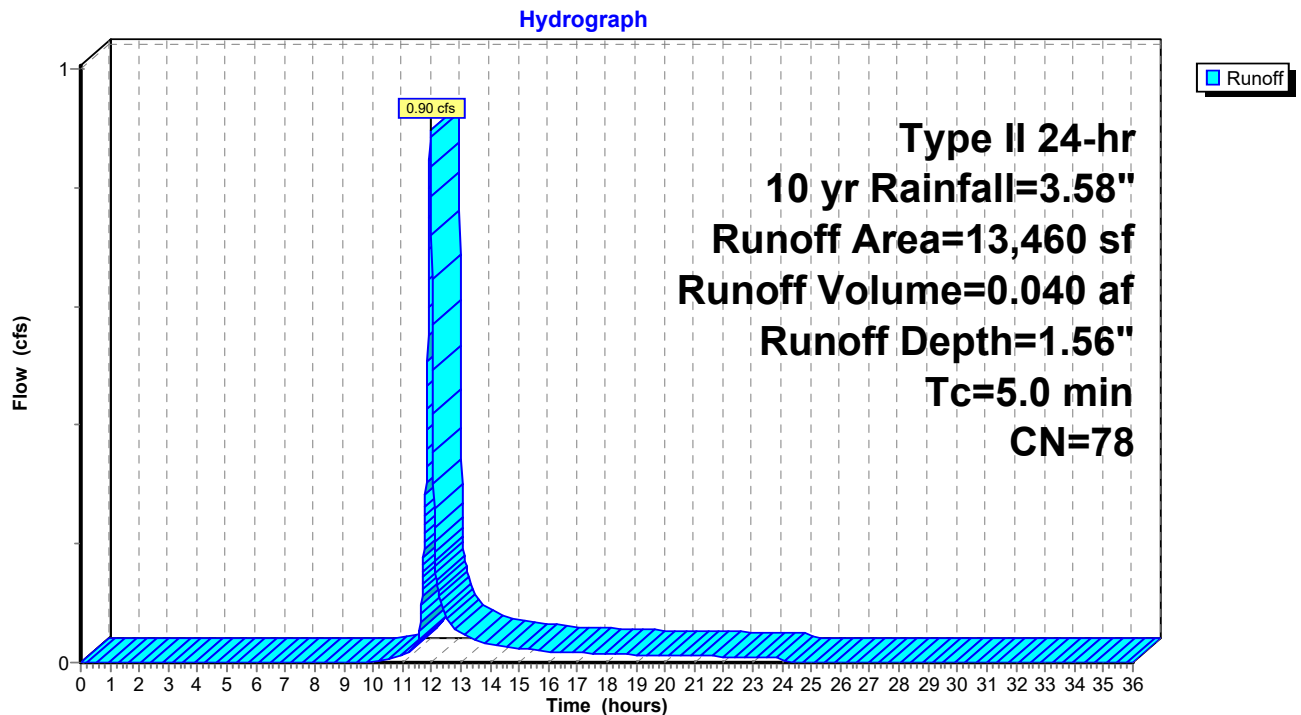
Runoff = 0.90 cfs @ 11.96 hrs, Volume= 0.040 af, Depth= 1.56"
Routed to Pond 8P : Rain Garden 8P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
7,103	61	>75% Grass cover, Good, HSG B
6,357	98	Paved parking, HSG B
13,460	78	Weighted Average
7,103		52.77% Pervious Area
6,357		47.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment PS8: Lot 8 Add



23310_Lots 4 & 8 Post 2024

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Lot 8 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 8P: Rain Garden 8P

Inflow Area = 0.309 ac, 47.23% Impervious, Inflow Depth = 1.56" for 10 yr event
Inflow = 0.90 cfs @ 11.96 hrs, Volume= 0.040 af
Outflow = 0.08 cfs @ 12.48 hrs, Volume= 0.035 af, Atten= 91%, Lag= 30.8 min
Discarded = 0.01 cfs @ 12.48 hrs, Volume= 0.014 af
Primary = 0.07 cfs @ 12.48 hrs, Volume= 0.021 af
Routed to nonexistent node POI-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 760.05' @ 12.48 hrs Surf.Area= 871 sf Storage= 784 cf

Plug-Flow detention time= 281.3 min calculated for 0.035 af (86% of inflow)
Center-of-Mass det. time= 216.3 min (1,055.3 - 839.0)

Volume	Invert	Avail.Storage	Storage Description
#1	757.00'	1,945 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

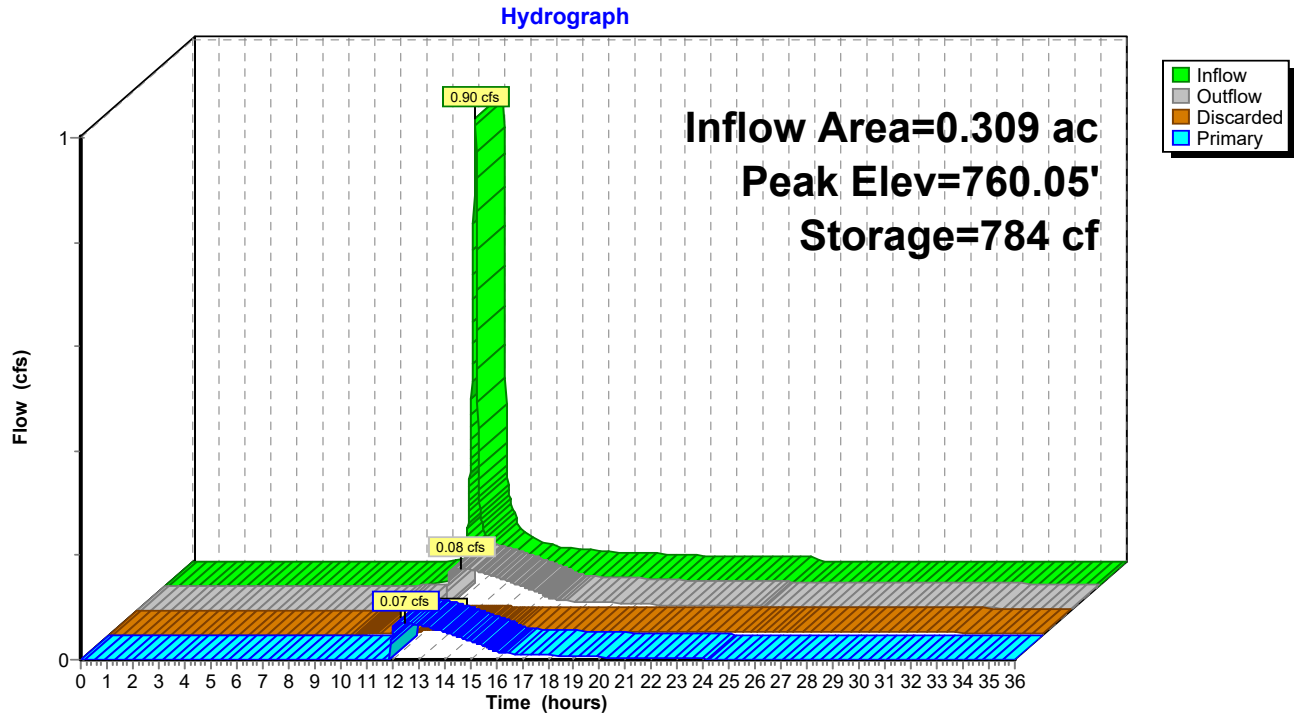
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
757.00	353	0.0	0	0
759.00	353	30.0	212	212
759.50	467	100.0	205	417
761.00	1,570	100.0	1,528	1,945

Device	Routing	Invert	Outlet Devices
#1	Discarded	757.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 734.50'
#2	Primary	755.50'	18.0" Round Culvert L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 755.50' / 755.00' S= 0.0417 ' S= 0.0417 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	759.60'	2.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 2	760.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

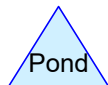
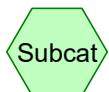
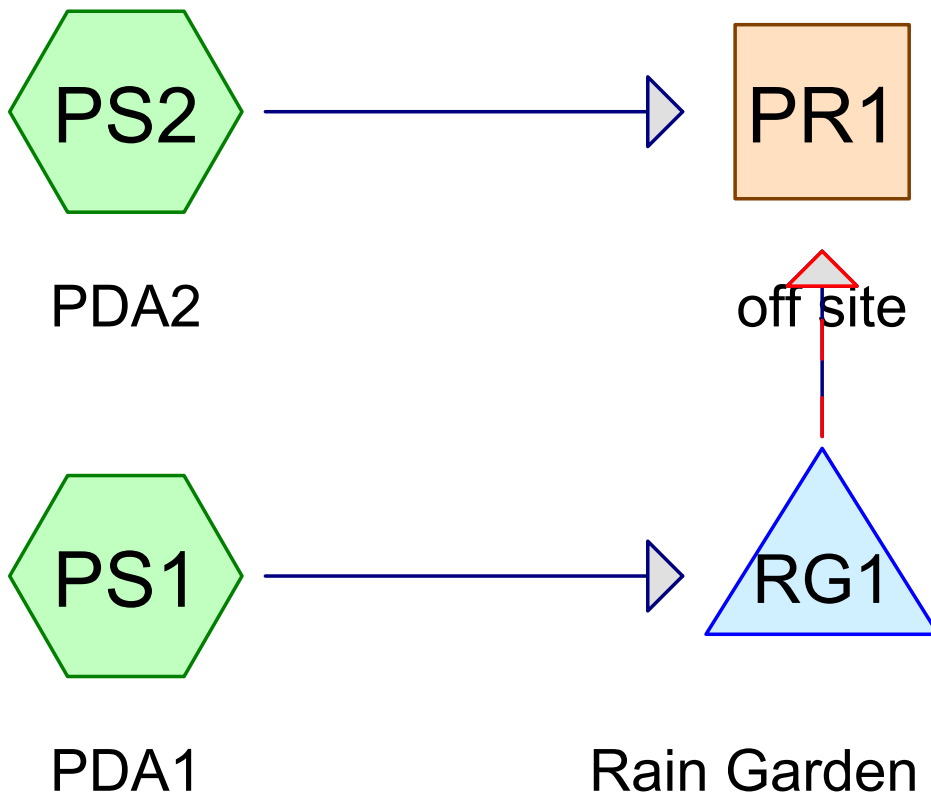
Discarded OutFlow Max=0.01 cfs @ 12.48 hrs HW=760.05' (Free Discharge)
↑ **1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.07 cfs @ 12.48 hrs HW=760.05' (Free Discharge)
↑ **2=Culvert** (Passes 0.07 cfs of 16.58 cfs potential flow)
↑ **3=Orifice/Grate** (Orifice Controls 0.07 cfs @ 3.23 fps)
↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Pond 8P: Rain Garden 8P



Lot E/CNG Drainage Analysis



Routing Diagram for 12280_CNG Pro 13.05.03
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12280_CNG Pro 13.05.03

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.616	74	>75% Grass cover, Good, HSG C (PS1, PS2)
0.300	98	Driveway, HSG C (PS1, PS2)
0.069	98	Gravel Walkway, HSG C (PS1, PS2)
0.014	98	Path, HSG C (PS2)
0.018	98	Unconnected roofs, HSG C (PS1, PS2)
1.017	83	TOTAL AREA

12280_CNG Pro 13.05.03

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.017	HSG C	PS1, PS2
0.000	HSG D	
0.000	Other	
1.017		TOTAL AREA

12280_CNG Pro 13.05.03

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Lot E - Existing
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPS1: PDA1Runoff Area=34,005 sf 42.58% Impervious Runoff Depth=1.12"
Flow Length=316' Tc=11.4 min CN=84 Runoff=1.28 cfs 0.073 af**SubcatchmentPS2: PDA2**Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=0.94"
Flow Length=262' Tc=5.3 min CN=81 Runoff=0.41 cfs 0.019 af**Reach PR1: off site**Inflow=0.53 cfs 0.091 af
Outflow=0.53 cfs 0.091 af**Pond RG1: Rain Garden RG1**Peak Elev=713.53' Storage=1,202 cf Inflow=1.28 cfs 0.073 af
Primary=0.19 cfs 0.073 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.073 af**Total Runoff Area = 1.017 ac Runoff Volume = 0.091 af Average Runoff Depth = 1.08"**
60.52% Pervious = 0.616 ac 39.48% Impervious = 0.401 ac

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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPS1: PDA1

Runoff Area=34,005 sf 42.58% Impervious Runoff Depth=2.01"
Flow Length=316' Tc=11.4 min CN=84 Runoff=2.29 cfs 0.130 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=1.77"
Flow Length=262' Tc=5.3 min CN=81 Runoff=0.77 cfs 0.035 af

Reach PR1: off site

Inflow=1.02 cfs 0.165 af
Outflow=1.02 cfs 0.165 af

Pond RG1: Rain Garden RG1

Peak Elev=714.13' Storage=1,986 cf Inflow=2.29 cfs 0.130 af
Primary=0.91 cfs 0.130 af Secondary=0.00 cfs 0.000 af Outflow=0.91 cfs 0.130 af

Total Runoff Area = 1.017 ac Runoff Volume = 0.165 af Average Runoff Depth = 1.95"
60.52% Pervious = 0.616 ac 39.48% Impervious = 0.401 ac

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Lot E - Existing
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPS1: PDA1Runoff Area=34,005 sf 42.58% Impervious Runoff Depth=3.40"
Flow Length=316' Tc=11.4 min CN=84 Runoff=3.82 cfs 0.221 af**SubcatchmentPS2: PDA2**Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=3.11"
Flow Length=262' Tc=5.3 min CN=81 Runoff=1.32 cfs 0.061 af**Reach PR1: off site**Inflow=2.96 cfs 0.282 af
Outflow=2.96 cfs 0.282 af**Pond RG1: Rain Garden RG1**Peak Elev=714.52' Storage=2,638 cf Inflow=3.82 cfs 0.221 af
Primary=2.51 cfs 0.221 af Secondary=0.00 cfs 0.000 af Outflow=2.51 cfs 0.221 af**Total Runoff Area = 1.017 ac Runoff Volume = 0.282 af Average Runoff Depth = 3.33"**
60.52% Pervious = 0.616 ac 39.48% Impervious = 0.401 ac

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Lot E - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS1: PDA1

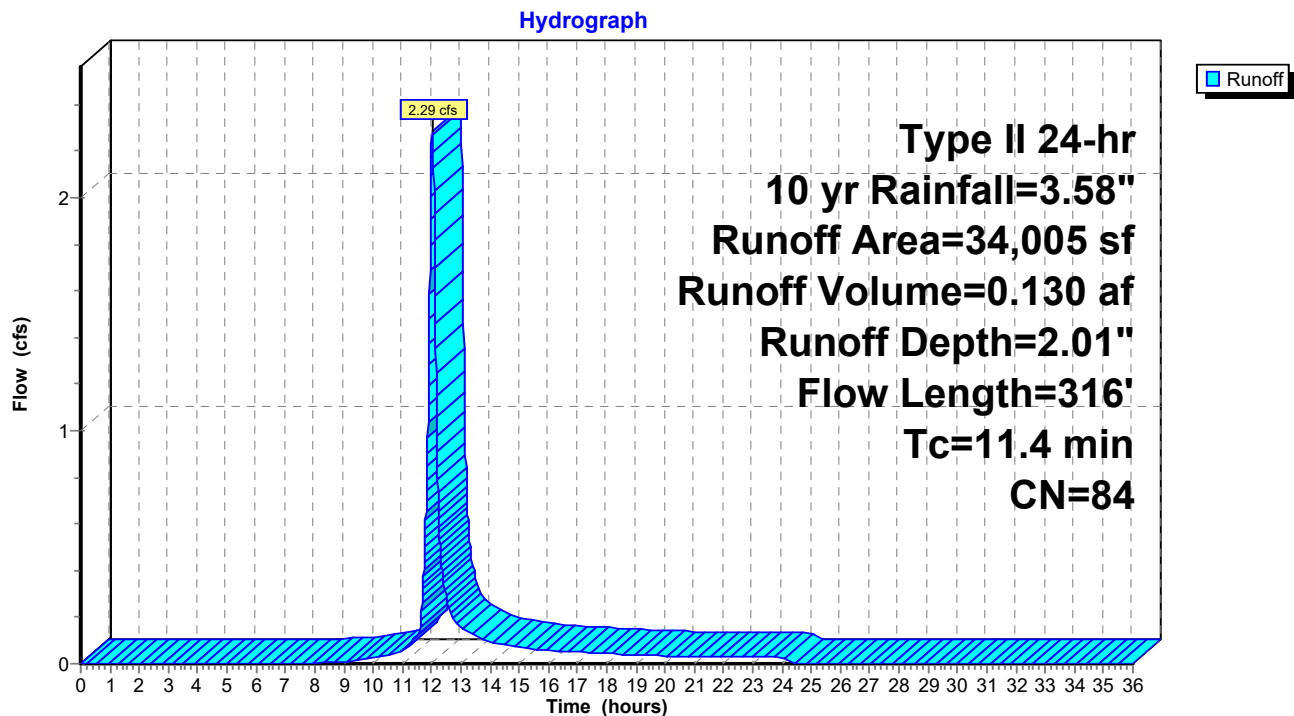
Runoff = 2.29 cfs @ 12.03 hrs, Volume= 0.130 af, Depth= 2.01"
 Routed to Pond RG1 : Rain Garden RG1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
19,524	74	>75% Grass cover, Good, HSG C
754	98	Unconnected roofs, HSG C
* 2,856	98	Gravel Walkway, HSG C
* 10,871	98	Driveway, HSG C
34,005	84	Weighted Average
19,524		57.42% Pervious Area
14,481		42.58% Impervious Area
754		5.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0225	0.16		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.6	65	0.0731	1.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.4	151	0.0331	6.42	32.08	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
11.4	316	Total			

Subcatchment PS1: PDA1



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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS2: PDA2

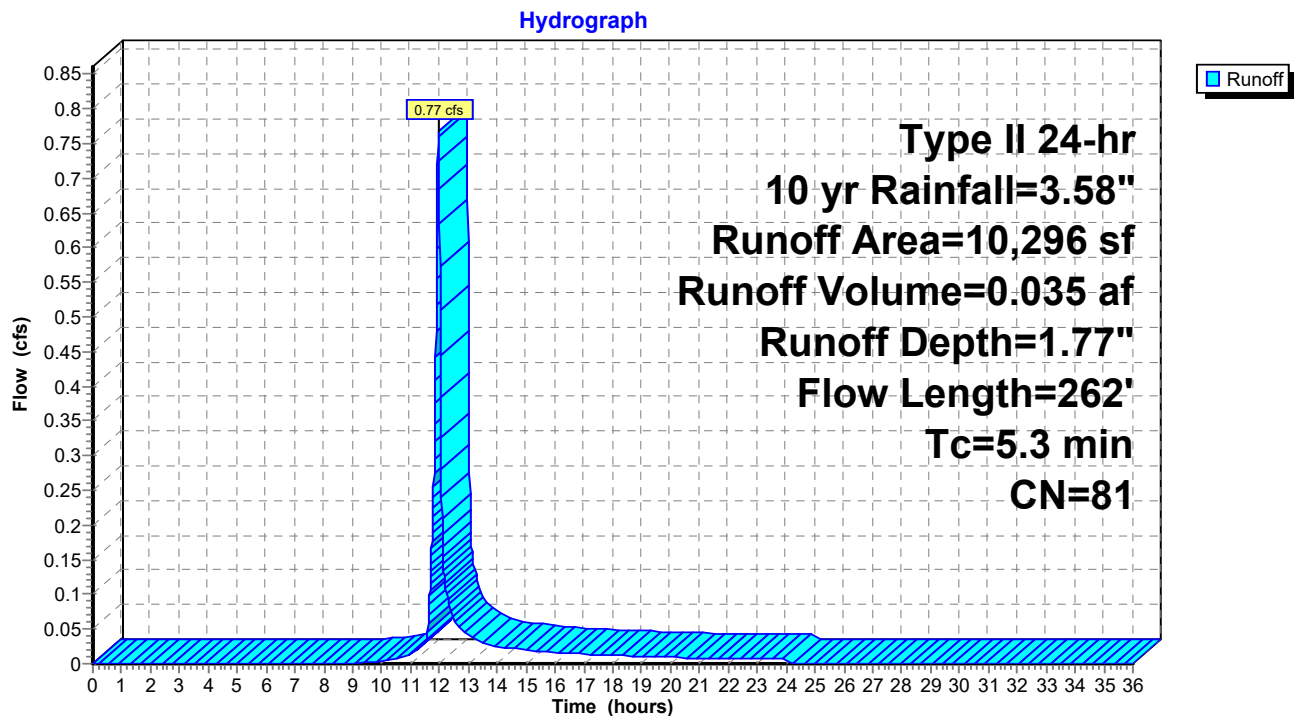
Runoff = 0.77 cfs @ 11.97 hrs, Volume= 0.035 af, Depth= 1.77"
 Routed to Reach PR1 : off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
7,289	74	>75% Grass cover, Good, HSG C
* 150	98	Gravel Walkway, HSG C
* 2,202	98	Driveway, HSG C
* 609	98	Path, HSG C
46	98	Unconnected roofs, HSG C
10,296	81	Weighted Average
7,289		70.79% Pervious Area
3,007		29.21% Impervious Area
46		1.53% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	59	0.0508	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.3	102	0.0294	6.05	30.23	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
0.1	72	0.0278	8.19	6.44	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	29	0.1034	10.57	52.86	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=1.00' Z= 4.0 '/' Top.W=9.00' n= 0.030
5.3	262	Total			

Subcatchment PS2: PDA2



Summary for Reach PR1: off site

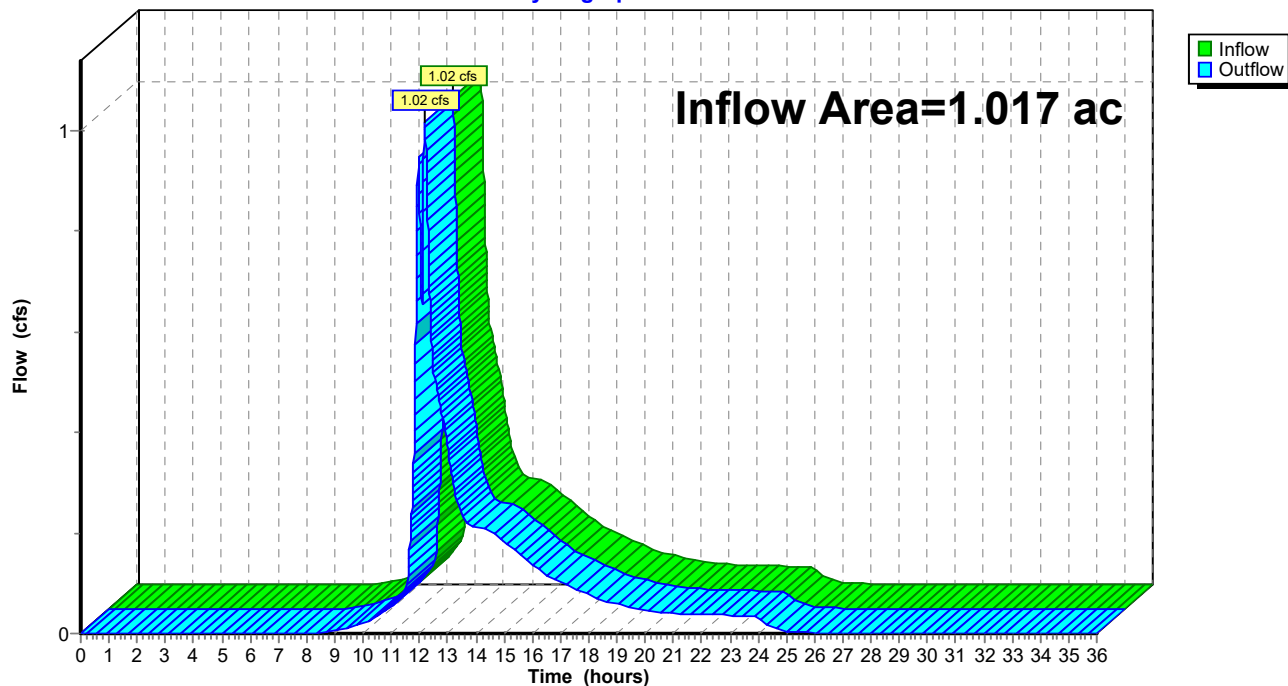
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.017 ac, 39.48% Impervious, Inflow Depth = 1.95" for 10 yr event
 Inflow = 1.02 cfs @ 12.19 hrs, Volume= 0.165 af
 Outflow = 1.02 cfs @ 12.19 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach PR1: off site

Hydrograph



12280_CNG Pro 13.05.03

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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond RG1: Rain Garden RG1

[42] Hint: Gap in defined storage above volume #1 at 711.24'

[92] Warning: Device #4 is above defined storage

Inflow Area = 0.781 ac, 42.58% Impervious, Inflow Depth = 2.01" for 10 yr event
 Inflow = 2.29 cfs @ 12.03 hrs, Volume= 0.130 af
 Outflow = 0.91 cfs @ 12.19 hrs, Volume= 0.130 af, Atten= 60%, Lag= 9.6 min
 Primary = 0.91 cfs @ 12.19 hrs, Volume= 0.130 af
 Routed to Reach PR1 : off site
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach PR1 : off site

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 714.13' @ 12.19 hrs Surf.Area= 3,195 sf Storage= 1,986 cf

Plug-Flow detention time= 60.3 min calculated for 0.130 af (100% of inflow)
 Center-of-Mass det. time= 60.3 min (886.7 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	710.17'	347 cf	Pea Stone (Prismatic) Listed below (Recalc) 867 cf Overall x 40.0% Voids
#2	711.25'	510 cf	Filter Media (Prismatic) Listed below (Recalc) 1,698 cf Overall x 30.0% Voids
#3	713.00'	613 cf	Forebay (Prismatic) Listed below (Recalc)
#4	713.25'	2,733 cf	Pond (Prismatic) Listed below (Recalc)
		4,202 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
710.17	795	0	0
711.24	825	867	867

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
711.25	825	0	0
713.24	882	1,698	1,698

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.00	113	0	0
714.00	317	215	215
714.75	743	398	613

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.25	882	0	0
714.00	1,063	729	729
715.00	1,330	1,197	1,926
715.50	1,898	807	2,733

12280_CNG Pro 13.05.03

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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"
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Device	Routing	Invert	Outlet Devices
#1	Primary	710.17'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	713.50'	2.8" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Primary	714.00'	10.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	715.50'	10.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.90 cfs @ 12.19 hrs HW=714.13' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.21 cfs @ 9.48 fps)

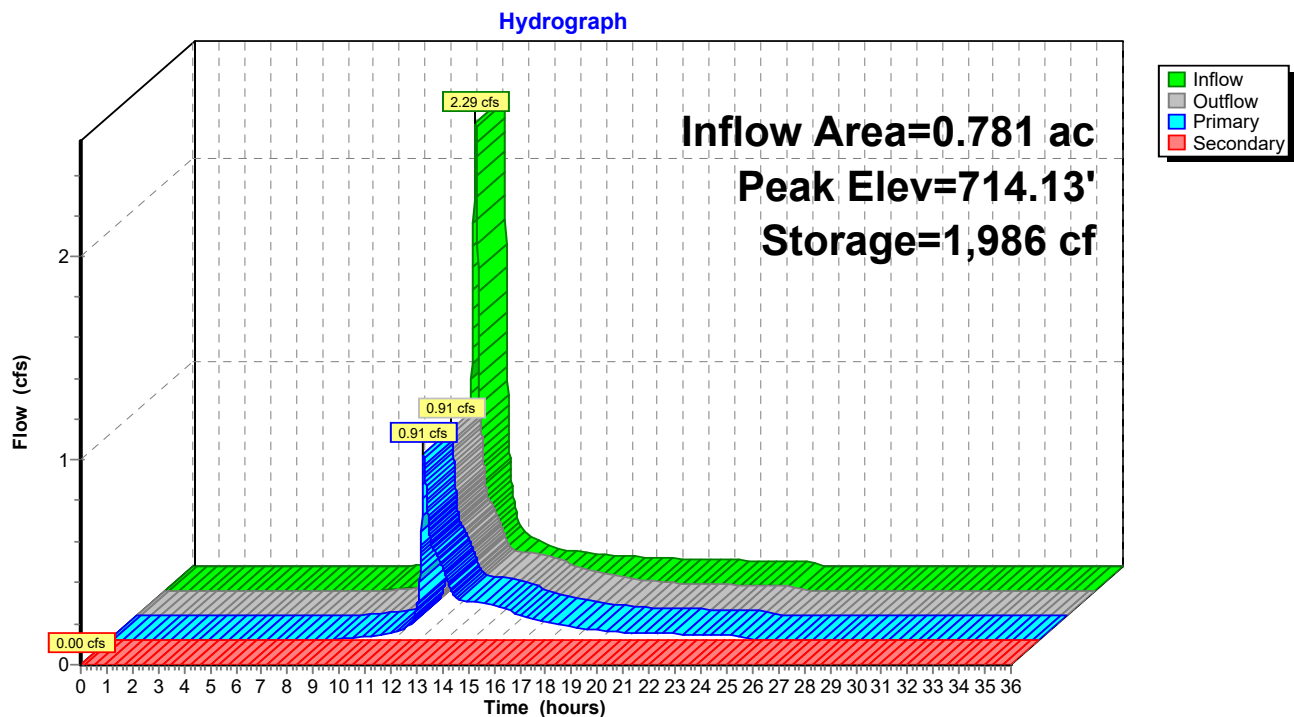
2=Orifice/Grate (Orifice Controls 0.29 cfs @ 3.45 fps)

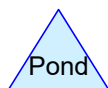
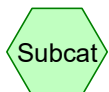
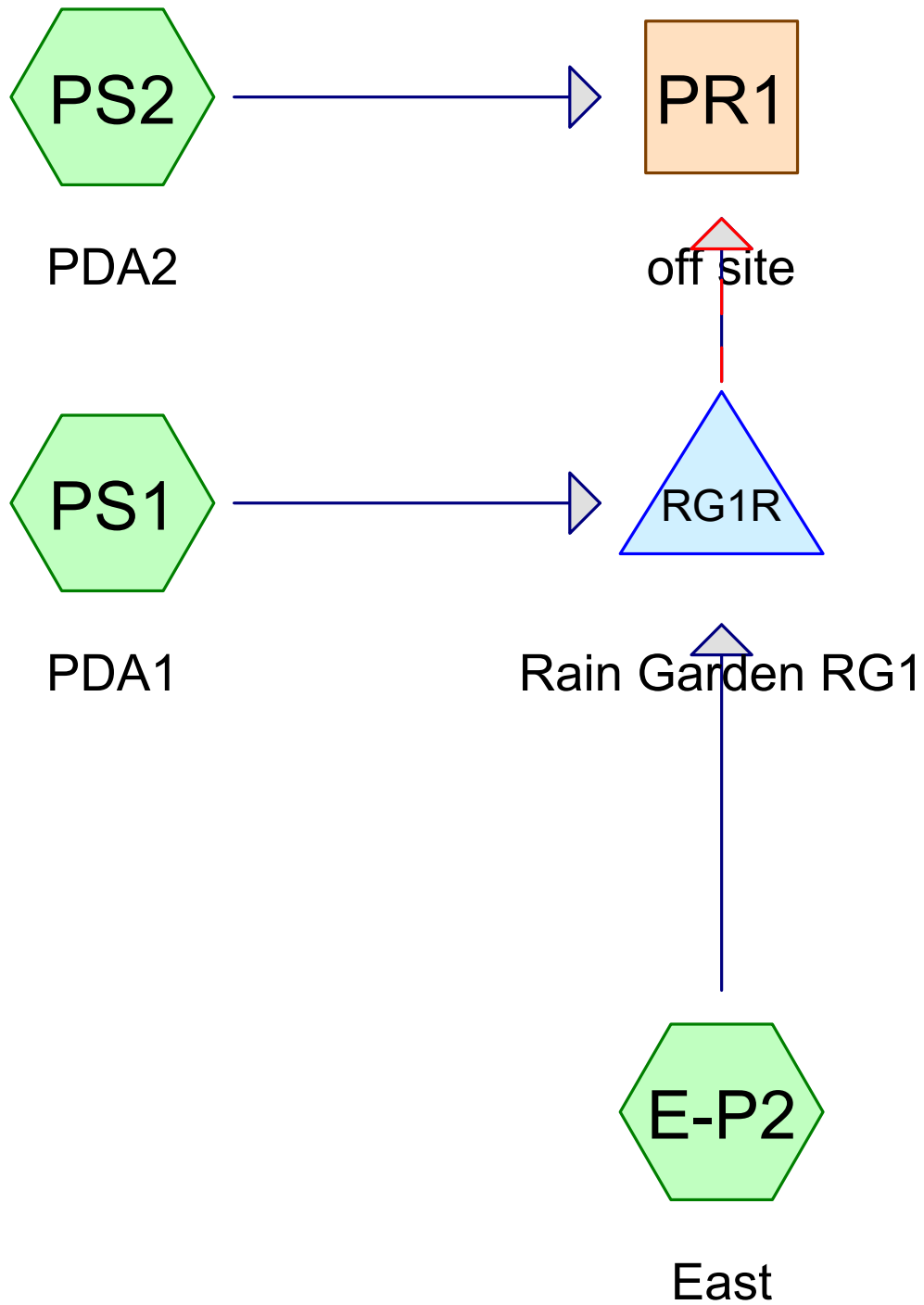
3=Orifice/Grate (Weir Controls 0.40 cfs @ 1.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=710.17' (Free Discharge)

4=Sharp-Crested Rectangular Weir(Controls 0.00 cfs)

Pond RG1: Rain Garden RG1





Routing Diagram for 12280_CNG Pro - Plus ED
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.619	74	>75% Grass cover, Good, HSG C (E-P2, PS1, PS2)
0.314	98	Driveway, HSG C (PS1, PS2)
0.069	98	Gravel Walkway, HSG C (PS1, PS2)
0.014	98	Path, HSG C (PS2)
0.243	98	Paved parking, HSG C (E-P2)
0.018	98	Unconnected roofs, HSG C (PS1, PS2)
1.277	86	TOTAL AREA

12280_CNG Pro - Plus ED

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.277	HSG C	E-P2, PS1, PS2
0.000	HSG D	
0.000	Other	
1.277		TOTAL AREA

12280_CNG Pro - Plus ED

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Lot E - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentE-P2: East

Runoff Area=10,751 sf 98.60% Impervious Runoff Depth=2.27"

Tc=5.0 min CN=98 Runoff=0.89 cfs 0.047 af

SubcatchmentPS1: PDA1

Runoff Area=34,599 sf 43.57% Impervious Runoff Depth=1.12"

Flow Length=316' Tc=11.4 min CN=84 Runoff=1.30 cfs 0.074 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=0.94"

Flow Length=262' Tc=5.3 min CN=81 Runoff=0.41 cfs 0.019 af

Reach PR1: off site

Inflow=0.56 cfs 0.139 af

Outflow=0.56 cfs 0.139 af

Pond RG1R: Rain Garden RG1

Peak Elev=713.42' Storage=2,082 cf Inflow=1.96 cfs 0.121 af

Primary=0.19 cfs 0.121 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.121 af

Total Runoff Area = 1.277 ac Runoff Volume = 0.139 af Average Runoff Depth = 1.31"
48.46% Pervious = 0.619 ac 51.54% Impervious = 0.658 ac

12280_CNG Pro - Plus ED

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Lot E - Post
Type II 24-hr 10 yr Rainfall=3.58"

Printed 4/30/2024

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentE-P2: East

Runoff Area=10,751 sf 98.60% Impervious Runoff Depth=3.35"

Tc=5.0 min CN=98 Runoff=1.29 cfs 0.069 af

SubcatchmentPS1: PDA1

Runoff Area=34,599 sf 43.57% Impervious Runoff Depth=2.01"

Flow Length=316' Tc=11.4 min CN=84 Runoff=2.33 cfs 0.133 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=1.77"

Flow Length=262' Tc=5.3 min CN=81 Runoff=0.77 cfs 0.035 af

Reach PR1: off site

Inflow=0.95 cfs 0.236 af

Outflow=0.95 cfs 0.236 af

Pond RG1R: Rain Garden RG1

Peak Elev=714.01' Storage=3,539 cf Inflow=3.29 cfs 0.202 af

Primary=0.48 cfs 0.202 af Secondary=0.00 cfs 0.000 af Outflow=0.48 cfs 0.202 af

Total Runoff Area = 1.277 ac Runoff Volume = 0.236 af Average Runoff Depth = 2.22"
48.46% Pervious = 0.619 ac 51.54% Impervious = 0.658 ac

12280_CNG Pro - Plus ED

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Lot E - Post
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentE-P2: East Runoff Area=10,751 sf 98.60% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=98 Runoff=1.86 cfs 0.101 af

SubcatchmentPS1: PDA1 Runoff Area=34,599 sf 43.57% Impervious Runoff Depth=3.40"
Flow Length=316' Tc=11.4 min CN=84 Runoff=3.89 cfs 0.225 af

SubcatchmentPS2: PDA2 Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=3.11"
Flow Length=262' Tc=5.3 min CN=81 Runoff=1.32 cfs 0.061 af

Reach PR1: off site Inflow=2.70 cfs 0.387 af
Outflow=2.70 cfs 0.387 af

Pond RG1R: Rain Garden RG1 Peak Elev=714.46' Storage=4,815 cf Inflow=5.28 cfs 0.326 af
Primary=2.38 cfs 0.326 af Secondary=0.00 cfs 0.000 af Outflow=2.38 cfs 0.326 af

Total Runoff Area = 1.277 ac Runoff Volume = 0.387 af Average Runoff Depth = 3.64"
48.46% Pervious = 0.619 ac 51.54% Impervious = 0.658 ac

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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment E-P2: East

Runoff = 1.29 cfs @ 11.96 hrs, Volume= 0.069 af, Depth= 3.35"
Routed to Pond RG1R : Rain Garden RG1

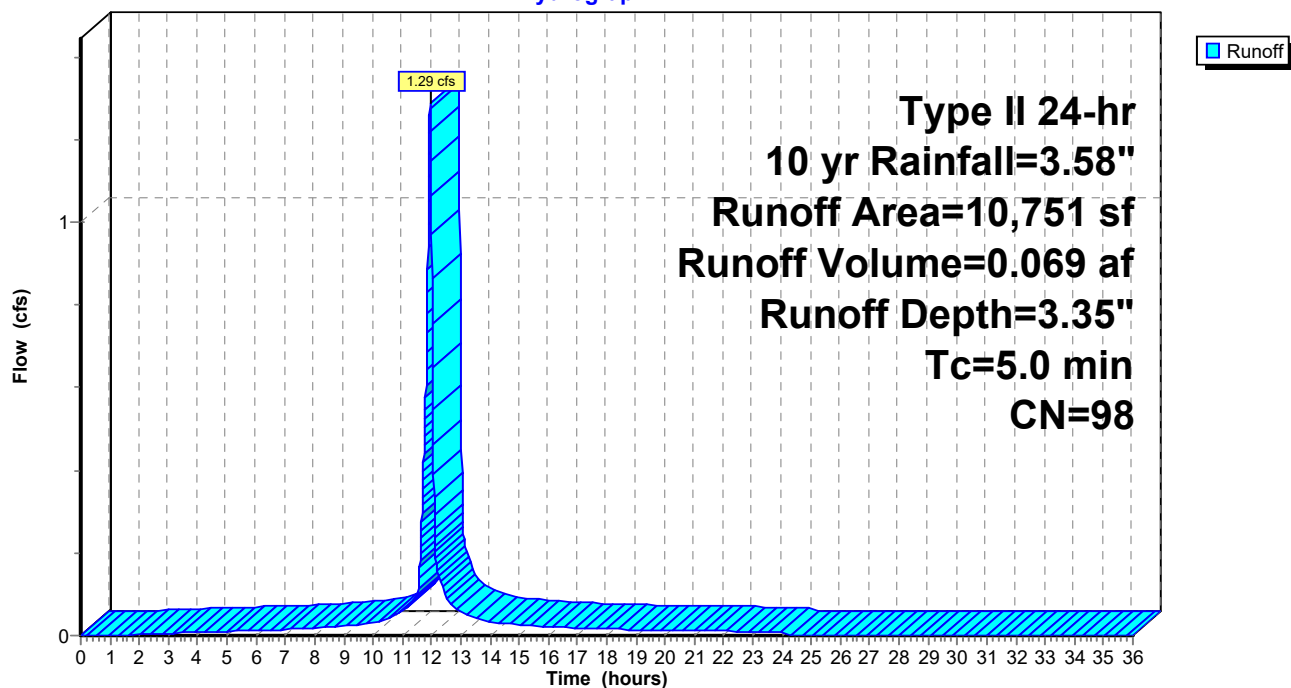
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
151	74	>75% Grass cover, Good, HSG C
10,600	98	Paved parking, HSG C
10,751	98	Weighted Average
151		1.40% Pervious Area
10,600		98.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment E-P2: East

Hydrograph



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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS1: PDA1

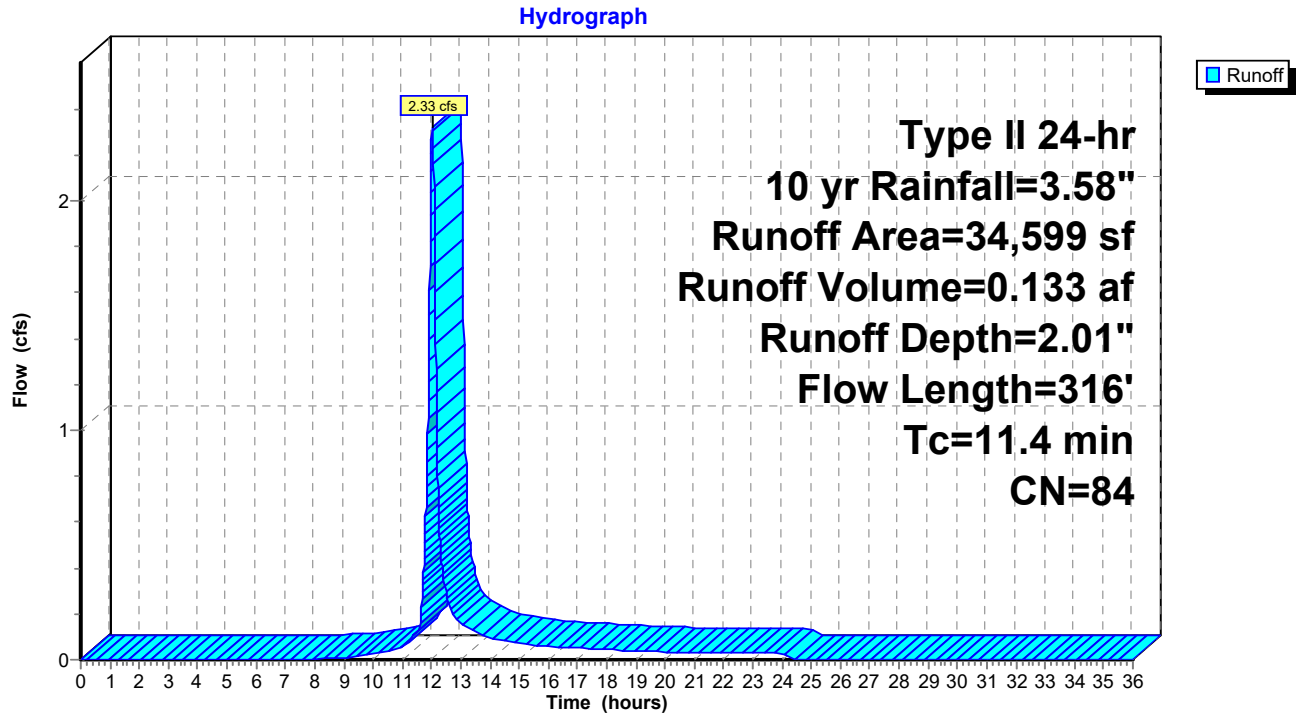
Runoff = 2.33 cfs @ 12.03 hrs, Volume= 0.133 af, Depth= 2.01"
 Routed to Pond RG1R : Rain Garden RG1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
19,524	74	>75% Grass cover, Good, HSG C
754	98	Unconnected roofs, HSG C
* 2,856	98	Gravel Walkway, HSG C
* 11,465	98	Driveway, HSG C
34,599	84	Weighted Average
19,524		56.43% Pervious Area
15,075		43.57% Impervious Area
754		5.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0225	0.16		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.6	65	0.0731	1.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.4	151	0.0331	6.42	32.08	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
11.4	316	Total			

Subcatchment PS1: PDA1



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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS2: PDA2

Runoff = 0.77 cfs @ 11.97 hrs, Volume= 0.035 af, Depth= 1.77"
 Routed to Reach PR1 : off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
7,289	74	>75% Grass cover, Good, HSG C
* 150	98	Gravel Walkway, HSG C
* 2,202	98	Driveway, HSG C
* 609	98	Path, HSG C
46	98	Unconnected roofs, HSG C
10,296	81	Weighted Average
7,289		70.79% Pervious Area
3,007		29.21% Impervious Area
46		1.53% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	59	0.0508	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.3	102	0.0294	6.05	30.23	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
0.1	72	0.0278	8.19	6.44	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	29	0.1034	10.57	52.86	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=1.00' Z= 4.0 '/' Top.W=9.00' n= 0.030
5.3	262	Total			

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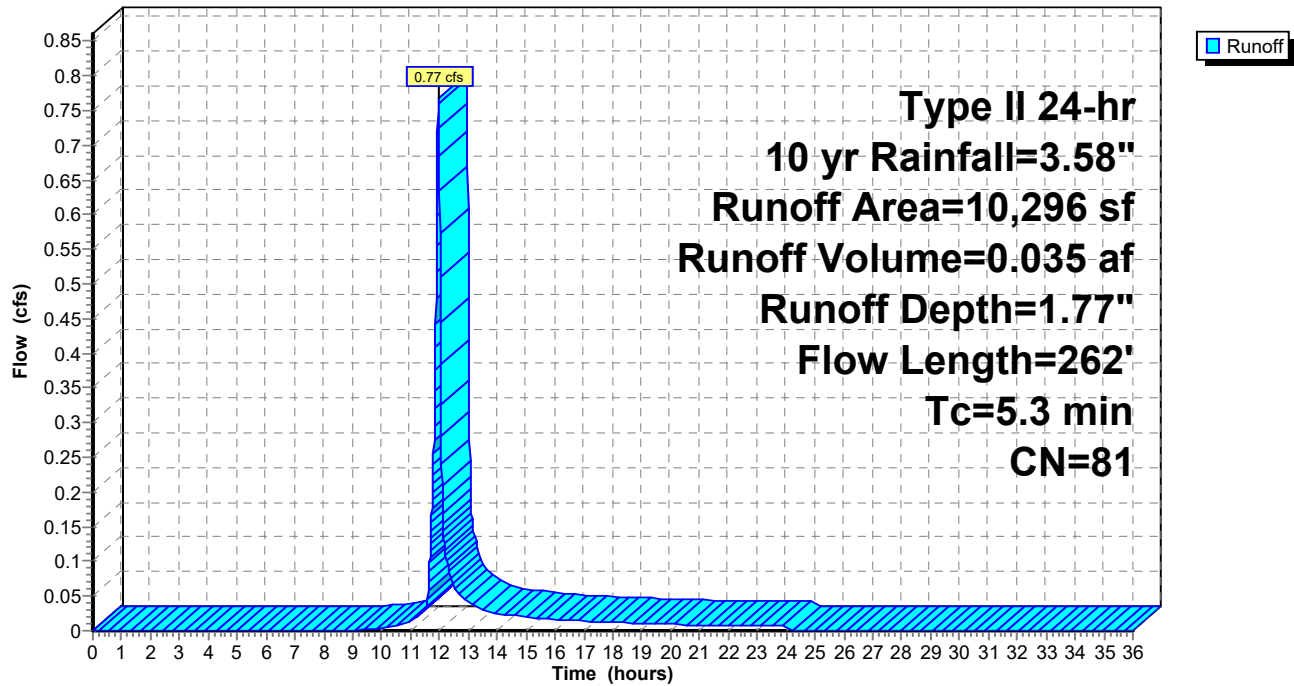
Type II 24-hr 10 yr Rainfall=3.58"

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Subcatchment PS2: PDA2

Hydrograph

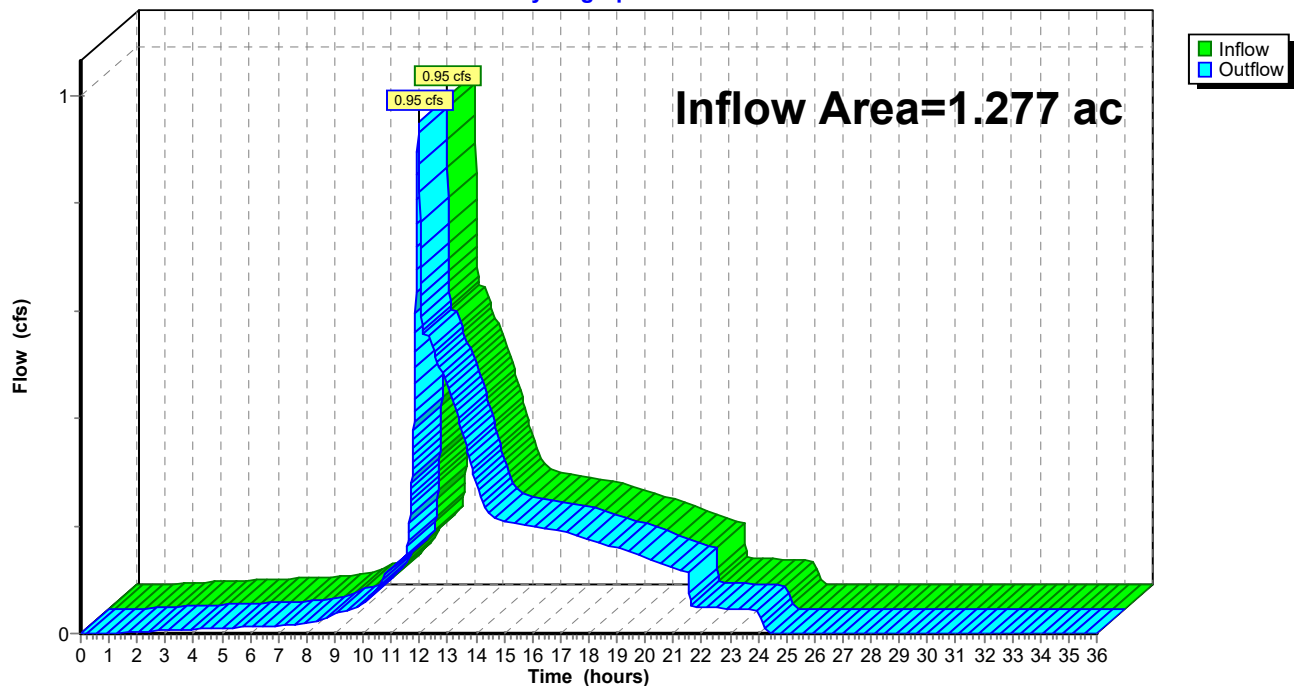


Summary for Reach PR1: off site

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.277 ac, 51.54% Impervious, Inflow Depth = 2.22" for 10 yr event
Inflow = 0.95 cfs @ 11.97 hrs, Volume= 0.236 af
Outflow = 0.95 cfs @ 11.97 hrs, Volume= 0.236 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach PR1: off site**Hydrograph**

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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond RG1R: Rain Garden RG1

[44] Hint: Outlet device #1 is below defined storage

[92] Warning: Device #4 is above defined storage

Inflow Area = 1.041 ac, 56.62% Impervious, Inflow Depth = 2.32" for 10 yr event
 Inflow = 3.29 cfs @ 11.99 hrs, Volume= 0.202 af
 Outflow = 0.48 cfs @ 12.40 hrs, Volume= 0.202 af, Atten= 85%, Lag= 24.3 min
 Primary = 0.48 cfs @ 12.40 hrs, Volume= 0.202 af
 Routed to Reach PR1 : off site
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach PR1 : off site

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 714.01' @ 12.40 hrs Surf.Area= 3,140 sf Storage= 3,539 cf

Plug-Flow detention time= 108.7 min calculated for 0.201 af (100% of inflow)
 Center-of-Mass det. time= 108.7 min (908.7 - 800.0)

Volume	Invert	Avail.Storage	Storage Description
#1	711.24'	7,583 cf	Rain Garden (Prismatic) Listed below (Recalc)
#2	711.25'	655 cf	Forebay (Prismatic) Listed below (Recalc)
		8,238 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
711.24	1,806	0.0	0	0
711.25	1,806	30.0	5	5
713.24	1,895	30.0	1,105	1,110
713.25	1,895	100.0	19	1,129
714.00	2,682	100.0	1,716	2,845
715.00	3,331	100.0	3,007	5,852
715.50	3,593	100.0	1,731	7,583

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
711.25	140	0	0
713.25	408	548	548
713.50	449	107	655

Device	Routing	Invert	Outlet Devices
#1	Primary	710.17'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	713.50'	2.8" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Primary	714.00'	10.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	715.50'	10.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

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Type II 24-hr 10 yr Rainfall=3.58"

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Primary OutFlow Max=0.48 cfs @ 12.40 hrs HW=714.01' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.20 cfs @ 9.34 fps)

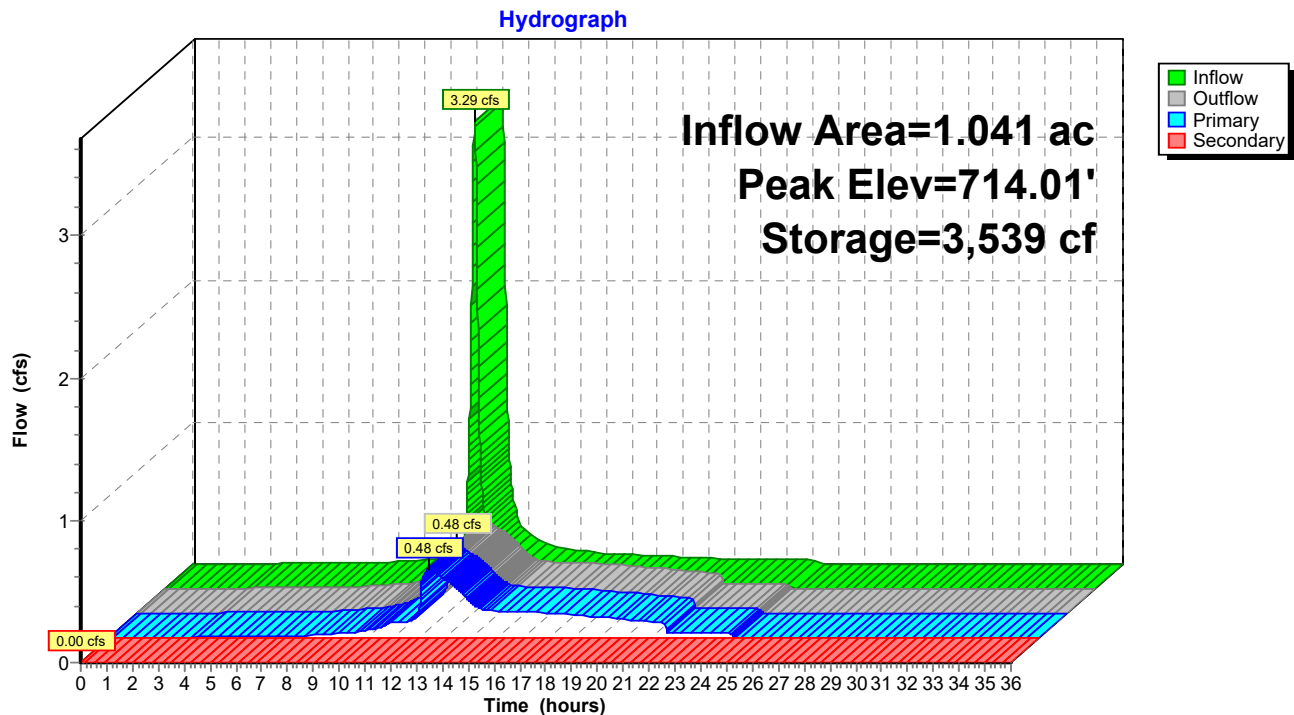
2=Orifice/Grate (Orifice Controls 0.26 cfs @ 3.04 fps)

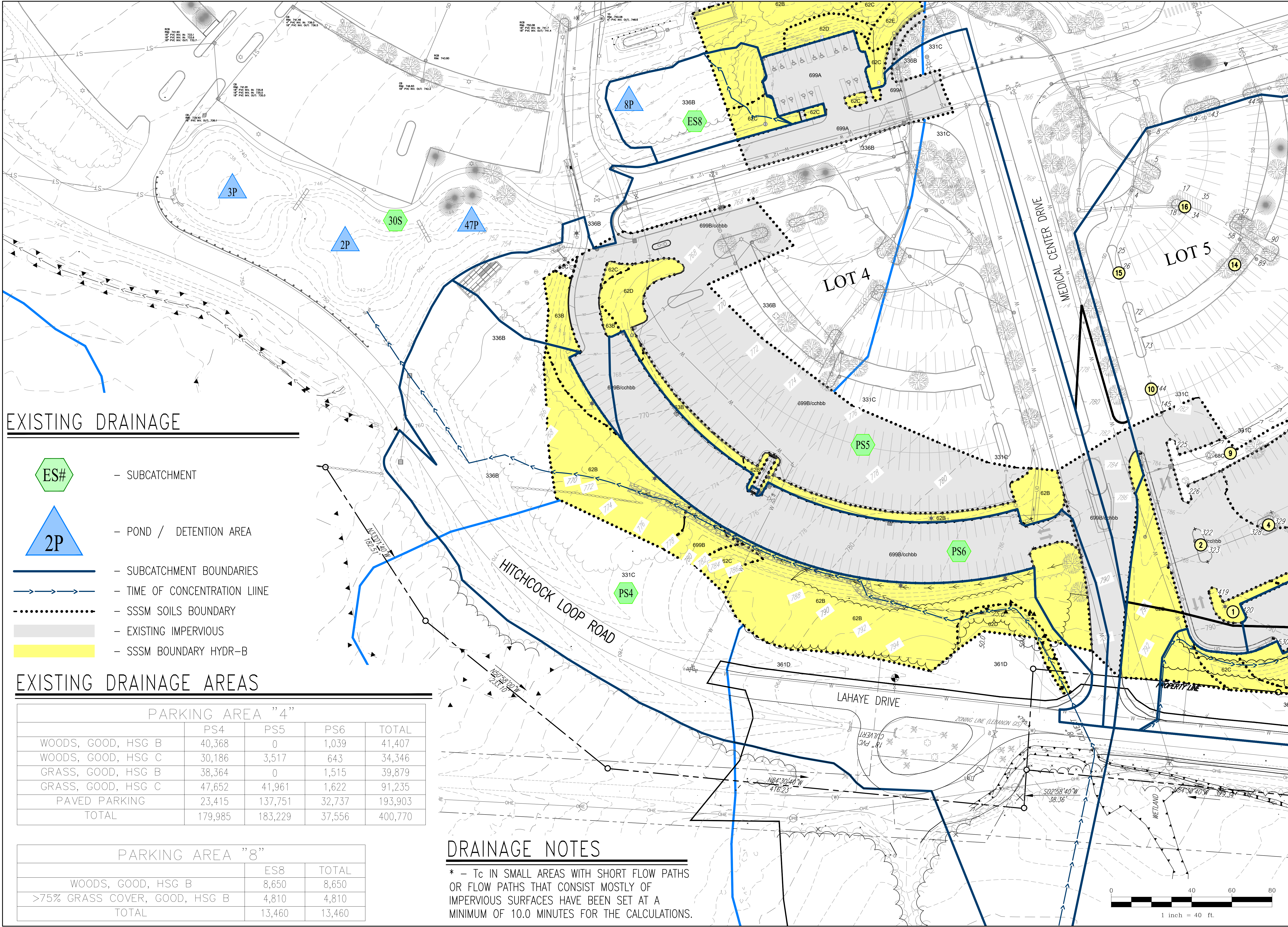
3=Orifice/Grate (Weir Controls 0.01 cfs @ 0.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=711.24' (Free Discharge)

4=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RG1R: Rain Garden RG1





EXISTING DRAINAGE

- ES#

— SUBCATCHMENT
- 2P

— POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LIINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-B

EXISTING DRAINAGE AREAS

PARKING AREA "4"				
	PS4	PS5	PS6	TOTAL
WOODS, GOOD, HSG B	40,368	0	1,039	41,407
WOODS, GOOD, HSG C	30,186	3,517	643	34,346
GRASS, GOOD, HSG B	38,364	0	1,515	39,879
GRASS, GOOD, HSG C	47,652	41,961	1,622	91,235
PAVED PARKING	23,415	137,751	32,737	193,903
TOTAL	179,985	183,229	37,556	400,770

PARKING AREA "8"		
	ES8	TOTAL
WOODS, GOOD, HSG B	8,650	8,650
>75% GRASS COVER, GOOD, HSG B	4,810	4,810
TOTAL	13,460	13,460

DRAINAGE NOTES

* — T_c IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

Stamp

Date

Description

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EXISTING DRAINAGE PARKING AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

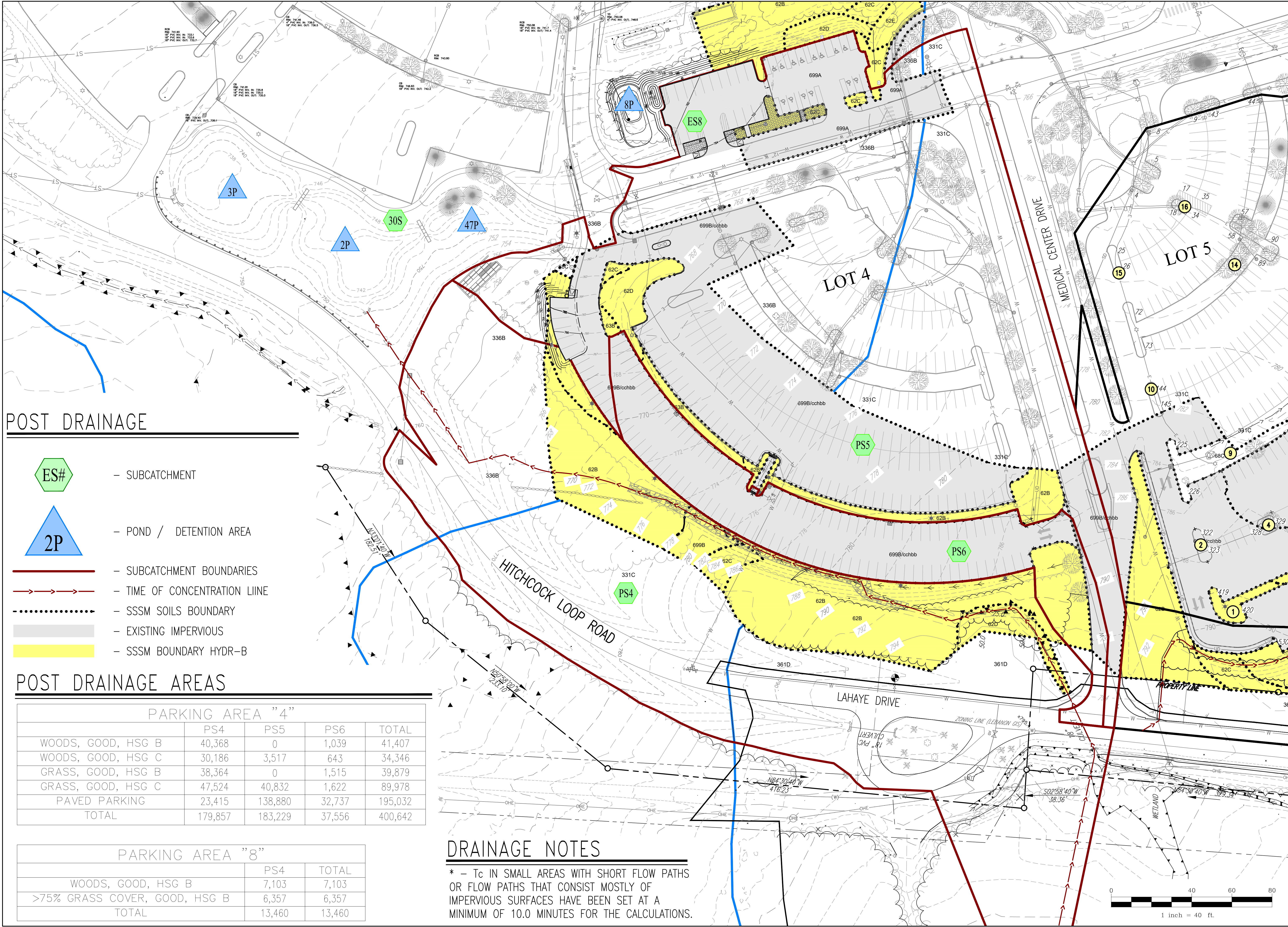
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04/29/2024

D1.1



POST DRAINAGE

- ES# - SUBCATCHMENT
- 2P - POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-B

POST DRAINAGE AREAS

PARKING AREA "4"				
	PS4	PS5	PS6	TOTAL
WOODS, GOOD, HSG B	40,368	0	1,039	41,407
WOODS, GOOD, HSG C	30,186	3,517	643	34,346
GRASS, GOOD, HSG B	38,364	0	1,515	39,879
GRASS, GOOD, HSG C	47,524	40,832	1,622	89,978
PAVED PARKING	23,415	138,880	32,737	195,032
TOTAL	179,857	183,229	37,556	400,642

PARKING AREA "8"		
	PS4	TOTAL
WOODS, GOOD, HSG B	7,103	7,103
>75% GRASS COVER, GOOD, HSG B	6,357	6,357
TOTAL	13,460	13,460

DRAINAGE NOTES

* - T_c IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

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POST DRAINAGE PARKING AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

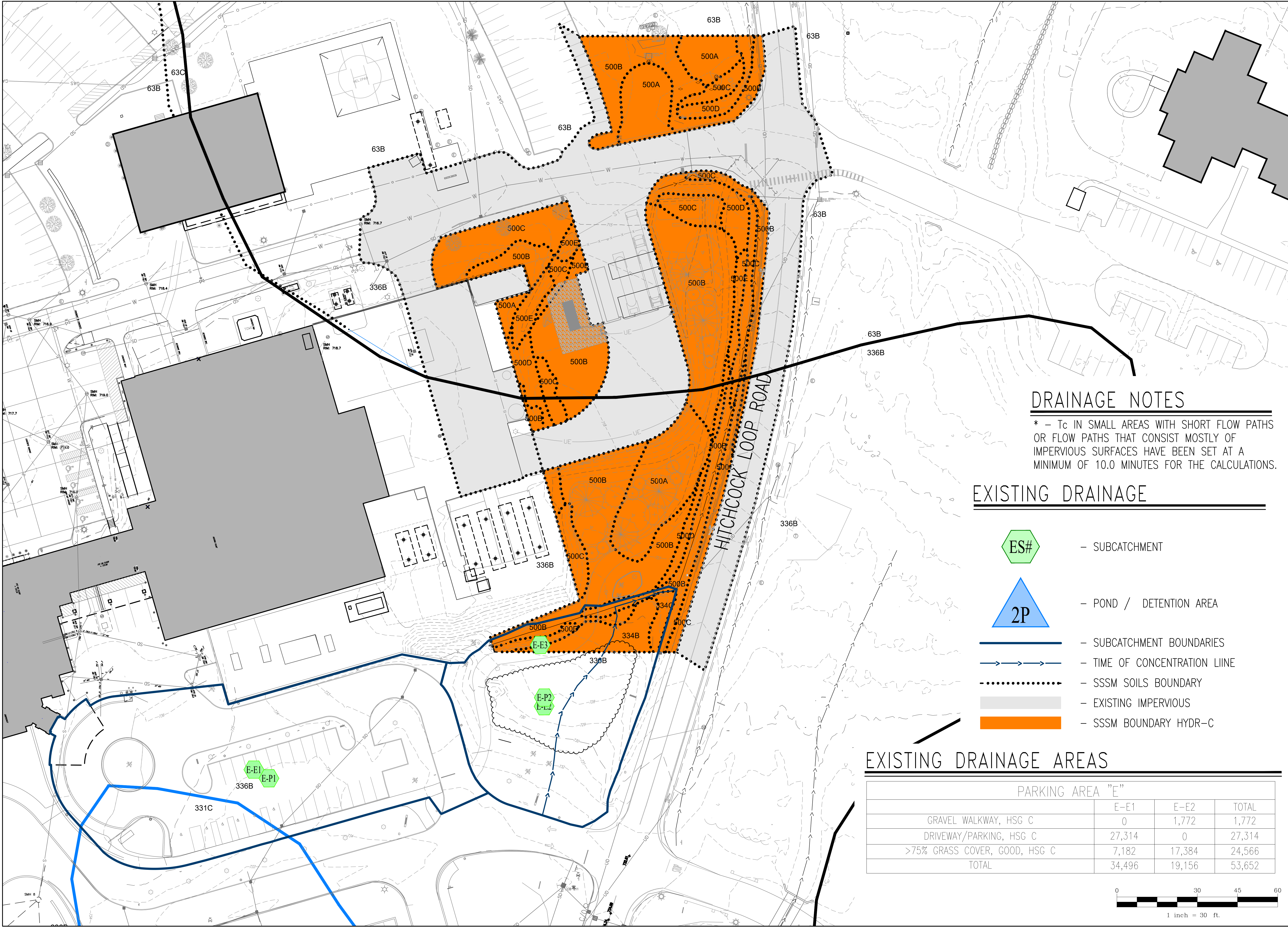
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04/29/2024

D1.2



DRAINAGE NOTES

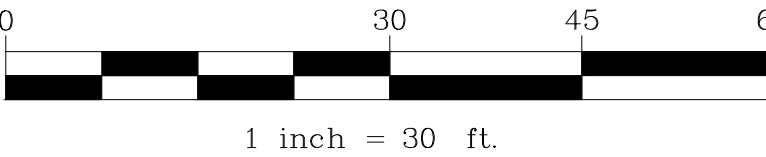
* - Tc IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

EXISTING DRAINAGE

- ES# - SUBCATCHMENT
- 2P - POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-C

EXISTING DRAINAGE AREAS

PARKING AREA "E"			
	E-E1	E-E2	TOTAL
GRAVEL WALKWAY, HSG C	0	1,772	1,772
DRIVEWAY/PARKING, HSG C	27,314	0	27,314
>75% GRASS COVER, GOOD, HSG C	7,182	17,384	24,566
TOTAL	34,496	19,156	53,652



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EXISTING DRAINAGE

PARKING AREA "E" AND CNG SITE

MAIN CAMPUS

PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title

EV Project #

Drawn By:

Checked By:

Scale:

Date:

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JWF

NAF

1" = 30'

04/29/2024

D2.1



DRAINAGE NOTES

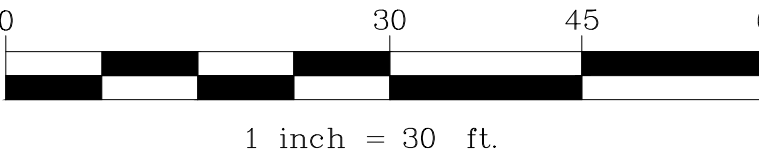
* - Tc IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

POST DRAINAGE

- ES# - SUBCATCHMENT
- 2P - POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-C

EXISTING DRAINAGE AREAS

PARKING AREA "E"				
	E-P1	E-P2	E-E3	TOTAL
GRAVEL WALKWAY, HSG C	0	0	974	974
DRIVEWAY/PARKING, HSG C	25,377	10,600	0	35,977
>75% GRASS COVER, GOOD, HSG C	5,255	150	11,296	16,701
TOTAL	30,632	10,750	12,270	53,652



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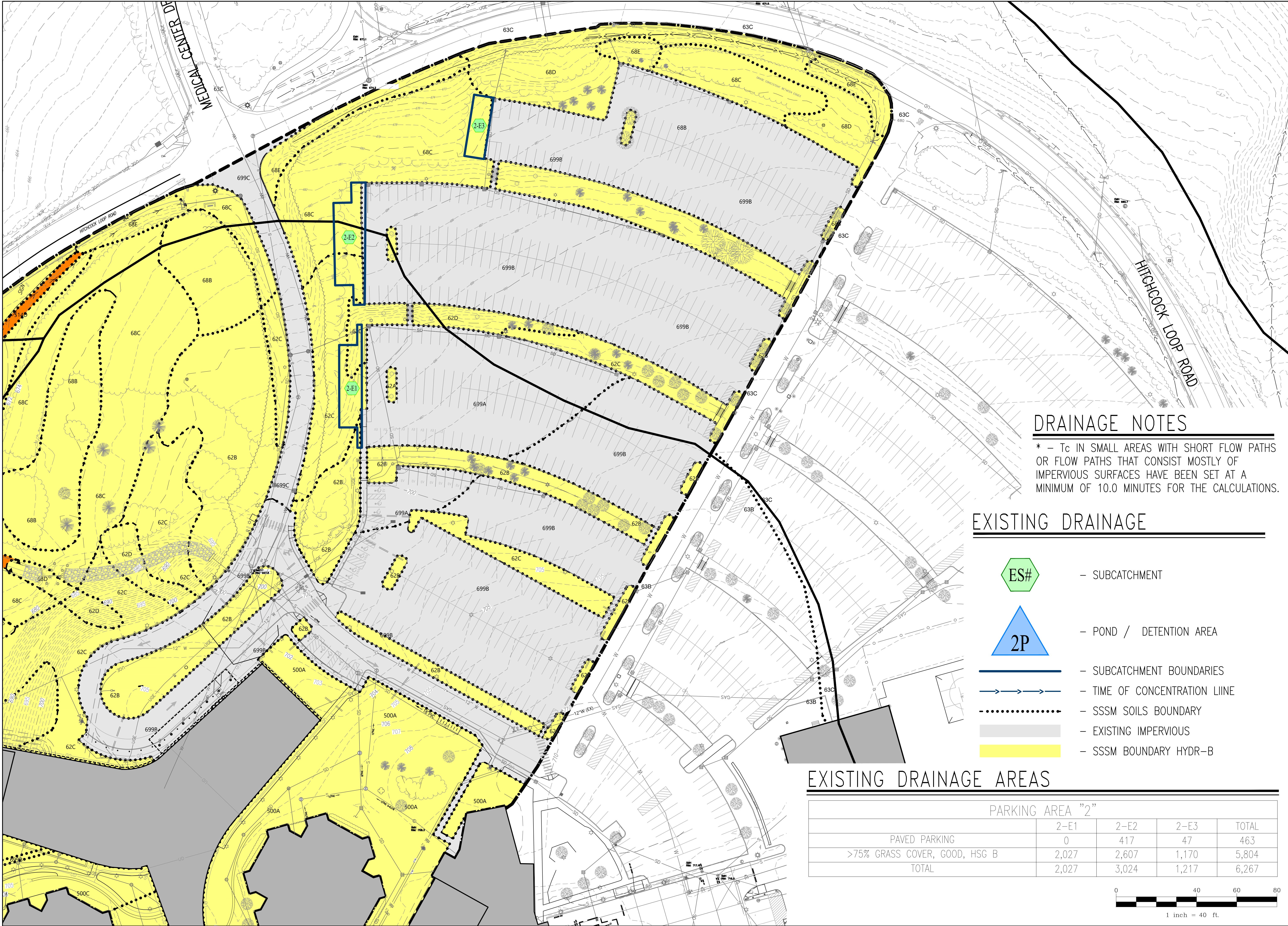
POST DRAINAGE
PARKING AREA "E" AND CNG SITE
MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

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Date: 04/29/2024

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S:\PROJECTS\2023\210 NH DMAC PARKING ADDITION\DWG\210 SS&L.DWG



DRAINAGE NOTES

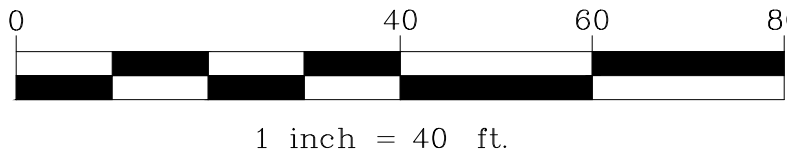
* - T_c IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

EXISTING DRAINAGE

- SUBCATCHMENT
- POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-B

EXISTING DRAINAGE AREAS

PARKING AREA "2"				
	2-E1	2-E2	2-E3	TOTAL
PAVED PARKING	0	417	47	463
>75% GRASS COVER, GOOD, HSG B	2,027	2,607	1,170	5,804
TOTAL	2,027	3,024	1,217	6,267



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Date	
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Description	

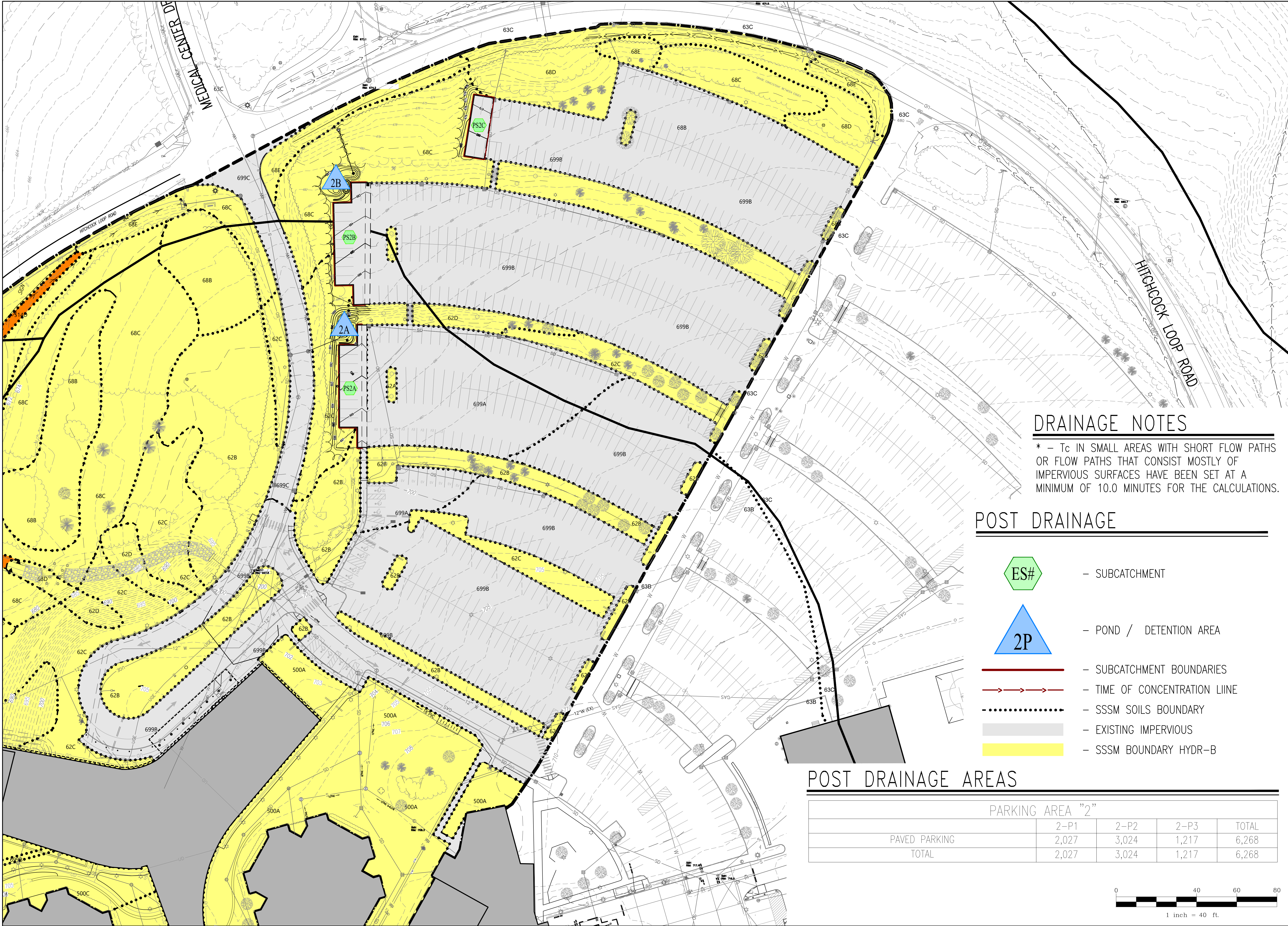
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EXISTING DRAINAGE PARKING AREA "2"
MAIN CAMPUS PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 40'
Date: 04/29/2024

D3.1





CITY OF LEBANON ~ PLANNING & DEVELOPMENT

PLANNING BOARD

May 20, 2024 Meeting

Staff Memorandum – PB2024-10-SPA

APPLICATION INFORMATION

Agenda Item:

3.C

Application ID:

PB2024-10-SPA

Application Type:

Amendment to site plan approved for a proposed 27,300 sq. ft. addition to an existing industrial building

Property Location & Tax Map:

7 Lucent Drive (Tax Map 10, Lot 11-2600)

Property Owner/Applicant:

Adimab, LLC

Property Sizes:

+/-5.19 acres

Zoning District(s):

Light Industrial (IND-L)

Future Land Use Map:

Mixed Use

Overlay Districts:

Wetlands Conservation District

Staff Attachments:

- June 22, 2020 Notice of Action for PB2020-14-SPR (3 pages)

LEGAL NOTICE

Adimab, LLC, 7 Lucent Drive (Tax Map 10, Lot 11, Plot 2600), zoned IND-L: Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved Site Plan (PB2020-14-SPR) to change the parking lot surface material, to reduce the tree shading required, and to amend the approved landscaping and lighting plans. PB2024-10-SPA

PLANS AND APPLICATION MATERIALS

- ▶ Application form (1 page)
- ▶ Amendment Application Narrative dated April 2, 2024 (project description; 6 pages)
- ▶ Application for Waivers
- ▶ Lighting fixture specifications by Artemide, BEGA, Hunza, and Klus (5 pages)
- ▶ Certified Notification List (1 page)
- ▶ Revised plan sheets:
 - Geometric Plan last revised 4/4/24
 - Proposed Bioretention Filter Plan and Details last revised 4/4/24
 - Site Lighting Plan last revised 4/2/24
 - Site Landscaping Plan last revised 4/2/24

COMPLETENESS REVIEW & STAFF COMMENTS

In order to accept jurisdiction and commence review of the applicant's proposal, the Planning Board must first determine that the application is complete. NH RSA 676:4, I(c)(1). The Planning and Development Department reviewed the application in accordance with the Lebanon Site Plan Review Regulations and, per Section 4.7.C.3.b, requested additional information from the applicant in order to make a recommendation to the Board with respect to completeness. Upon review of the applicant's revised submission, staff discovered that the plan does not comply with Section 6.2.B.3 (requiring "landscape islands placed between each double row of parking spaces [...] planted with deciduous trees for shade"). In order to accept the application as complete, the plans will either need to be brought into compliance with Section 6.2.B.3 or a waiver will need to be requested, in writing. Prior to

making a determination, the Board must give the applicant a reasonable opportunity to be heard on the limited issue of completeness, as required per Section 4.7.C.3.c.

BACKGROUND

7 Lucent Drive is a +/-5.19 acre property located within the Industrial Sector of the Centerra planned business park, and is improved with an industrial building owned and operated by Adimab LLC. On June 22, 2020, the Planning Board granted site plan approval for a 27,300 sq. ft. addition to what was then Adimab's existing +/-22,272 sq. ft. building, together with a new parking lot and other associated site improvements (PB2020-14-SPR) (a copy of the Board's Notice of Action is attached for reference). The project is nearly complete and a Temporary Certificate of Occupancy was authorized in April. In connection with the Certificate of Occupancy, the applicant has provided security in an amount sufficient to cover the cost of completing all remaining site plan improvements required to be constructed pursuant to the approved plan. The remaining site improvements primarily include landscaping and paving of the parking lot. At this time, the new parking lot has been finished with a gravel surface.

APPLICATION OVERVIEW

The applicant is requesting several modifications to the approved site plan. Most significantly, the applicant proposes to change the surface of the new parking lot to gravel (which is the current condition of the parking lot) in lieu of pavement as required per the approved site plan. Photos of the gravel parking lot, taken by staff at the Planning Board's site visit held on May 6, 2024, are included as Figure 1 below. A construction detail of the gravel parking lot is included on the attached "Proposed Bioretention Filter Plan and Details" plan sheet.

To be clear, the applicant has constructed the parking lot in accordance with the approved site plan except that instead of paving the lot, a gravel ledge pack surface has been installed instead. The applicant is requesting a site plan amendment to allow the gravel surface to remain.

Figure 1. Existing Gravel Parking Lot.



The applicant also requests approval of the following changes to the approved site plan as outlined on page 1 of the attached "Amendment Application Narrative":

- Site plan - (5) electric vehicle charging stations added
- Site plan - (2) exterior ground hydrants added
- Site plan - Exterior stair relocated from south to north near building joint
- Landscaping, shrubs - Species changes and slight relocation, same count
- Landscaping, trees - Species changes and slight relocation, added (43)
- Landscaping, parking shading - Fewer trees at parking, still over 30% shaded
- Landscaping, footpaths - 40" wide pea stone footpaths added at egress doors
- Lighting, foot path lights - Relocated, same fixture and count
- Lighting, pedestrian bridge - (2) fixtures added, 1 FC at walking surface
- Lighting, exterior stairs - (11) fixtures added, 10 FC at stairs
- Lighting, egress doors - (4) fixtures added, 1 FC at walking surface

Other than the landscaping, the requested changes have already been constructed (consequently, if the Board were to deny the amendment, the applicant would need to bring the site into conformance with the original approved plan.)

STAFF COMMENTS

PLANNING

A. Jurisdiction

The applicant's request is a modification to an approved site plan pursuant to Section 9.1 of the Site Plan Review Regulations, as follows:

Section 9.1 – Modifications to an Approved Site Plan

Once a plan has received approval from the Board and prior to the issuance of a Certificate of Occupancy, no modification shall take place unless the modification of the plan has been approved by the Board, except as provided by Section 9.2 ("Minor Alternations to an Approved Site Plan") below. [...]

Modifications shall normally be treated by the Board as a new plan application, which will require notification of abutting property owners, a public hearing, staff review, and formal Board action. [...]

Note that Section 9.2 allows "minor alterations" to an approved plan that do not constitute a "material change" (Section 9.2.A also requires that the alterations are "necessitated by unforeseen or unanticipated circumstances"). Section 9.2.B.1 provides that a change shall be deemed a minor alteration only if, "it is relatively minor, in light of the overall scope of the proposal."

The proposed changes are significant enough that staff was unable to conclude the Section 9.2.B.1 criteria has been met to allow review as a "minor alteration". Moreover, as discussed below, only the Planning Board can authorize the applicant's request to allow the parking lot to have a gravel surface instead of a paved surface. Consequently, the applicant was advised to apply to the Planning Board to approve the changes outlined in the "Application Overview" section above.

B. Parking Lot Surface

Per Section 6.5.E.2 of the Site Plan Review Regulations, parking areas are required to be finished with improved materials – typically pavement or porous pavement (the use which is highly encouraged in the Site Plan Review Regulations). To deviate from a requirement of the Regulations, a waiver per Section 7.1 must be requested in writing and granted. Accordingly, at staff's direction, the applicant has submitted a request to waive Section 6.5.E.2 to allow a gravel surface. Just recently, however, staff noticed Section 6.5.E.5 which provides as follows:

5. Alternative parking designs may be considered as recommended by the Reviewing Engineer. The Board may modify the requirements contained herein when it is appropriate to use a substitute for paving because of water quality, drainage, and/or aesthetic considerations, so long as the safety of pedestrian and vehicular traffic is assured.

It is not known when the last time (if ever) this provision has been utilized. Nevertheless, it clearly gives the Board the authority to approve a parking lot design that deviates from the "default" requirements set forth in Section 6.5.E.2. Consequently, it is staff's view that the applicant's waiver request is moot. Instead, the applicant's proposal should be evaluated in light of Section 6.5.E.5. Specifically, the Board may allow a gravel surface instead of paving if it finds that the gravel surface is *"appropriate [...] because of water quality, drainage and/or aesthetic considerations,"* and provided that *"safety of pedestrian and vehicular traffic is assured."* Note that with respect to the latter, staff has no concerns.

C. Waiver Request – Landscaping

Section 6.2.E.3 provides as follows:

3. Any parking area containing three or more rows of parking shall be planted along the perimeter as stated above, and also shall have landscape islands placed between each double row of parking spaces, exclusive of aisles. **These landscape islands shall have a minimum width of 8 feet, shall extend the length of the row of parking spaces, shall be planted with deciduous trees for shade,** and shall terminate on each end with a landscape bed. [...] (emphasis added)

As noted in the "Completeness Review" section above, the proposed revised landscaping plan (attached) does not comply with Section 6.2.E.3 insofar as the interior landscaping island in the parking lot is not planted with deciduous trees. Staff has informed the applicant that the landscaping plan will either need to be revised to add the required trees (this could be addressed as a condition of approval), or a written waiver request from Section 6.2.E.3 will need to be submitted (in which case the Board will need to determine whether the request meets the waiver standards set forth in Section 7.1 ("Waiver of Regulations")).

ZONING

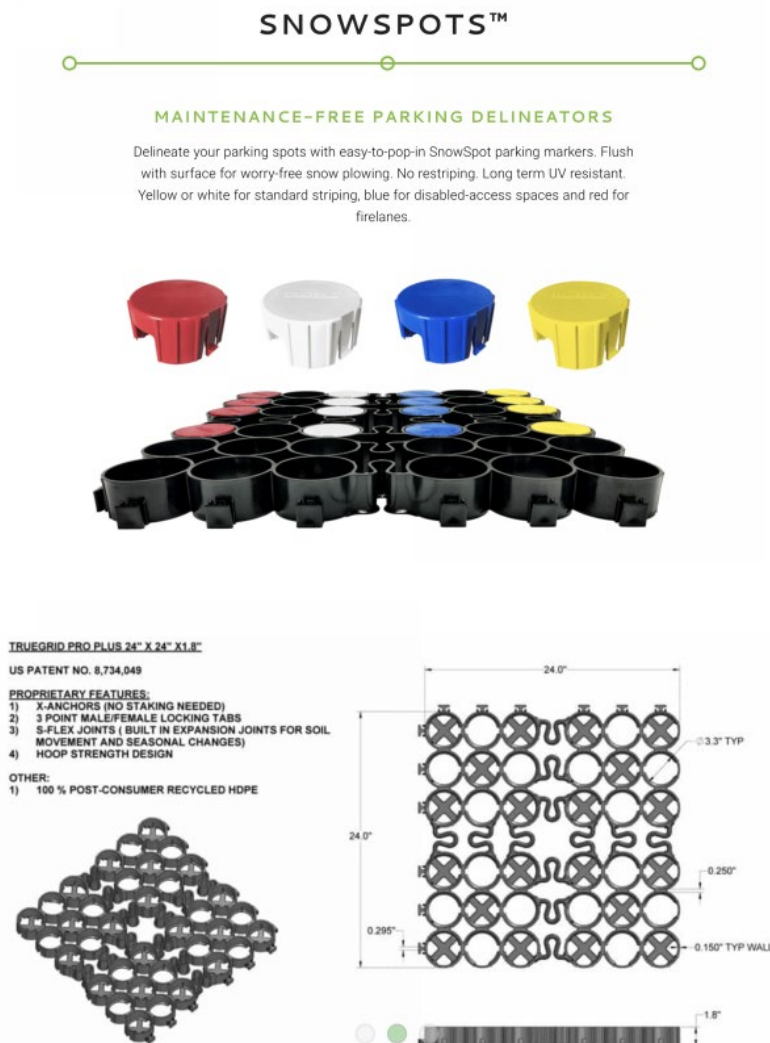
The Zoning Ordinance requires that a minimum number of off-street parking spaces are provided on-site. The number of required spaces is determined based on the use (see Section 607 of the Zoning Ordinance). "Off-street parking space" is defined in Appendix A of the Zoning Ordinance as follows:

PARKING SPACES, OFF-STREET: For the purpose of these regulations, an off-street parking space shall consist of a space adequate for parking an automobile with room for

opening doors on both sides, together with properly related access to a public street or alley and maneuvering room. [...] **[R]equired off-street parking areas for three or more automobiles shall have individual spaces marked**, and shall be so designed, maintained, and regulated that no parking or maneuvering incidental to parking shall be on any public street, walk, or alley, and so that any automobile may be parked without moving another. (emphasis added)

The accessible parking spaces and adjacent access aisles in the applicant's parking lot have been marked with flush markers set into a recessed grid system embedded in the gravel surface. An illustration of this design, provided by the applicant in correspondence with staff, is shown in Figure B below. However, pursuant to the Zoning Ordinance definition of "off-street parking space", all required parking spaces must be marked -- not just the accessible spaces. Otherwise, the parking spaces will not qualify as "off-street parking spaces" and the project will be in violation of the minimum parking requirements of the Zoning Ordinance. Staff recommends that, as a condition of approval, the remainder of the parking lot is marked with the same product identified in Figure 2 or a similar product if proposed by the applicant and accepted by the City Engineer.

Figure 2. Parking Markers Detail.



CITY ASSESSOR

No comment provided.

BUILDING INSPECTOR

No comment provided.

ENGINEERING/PUBLIC WORKS

The City Engineer has reviewed the application materials and notes the following:

- A revised Stormwater Operations and Maintenance Plan ("O&M Plan") should be provided as a condition of approval.
- Striping of spaces – the applicant should explain how the required parking space striping will be maintained in a gravel parking lot.
- The gravel parking lot could create maintenance concerns and issues relative to the stormwater infrastructure installed beneath the surface. The O&M Plan should address cleaning frequency to ensure proper operation.

FIRE DEPARTMENT

The Lebanon Fire Department has reviewed this application and has no concerns or comments regarding the proposal.

POLICE DEPARTMENT

No comment provided.

STAFF RECOMMENDATIONS

If the Planning Board moves to approve this request, then based on the information reviewed by City staff, the Planning and Development Department recommends that the Planning Board approve the application with the conditions noted below:

A. General Conditions

1. This approval shall automatically expire and be considered void upon failure to meet any of the conditions of approval set forth herein within the timeframes specified.
2. The applicant shall satisfy and comply with the Planning Board Notice of Action for PB2020-14-SPR, dated June 22, 2020, and all conditions of approval thereof except as may be superseded by the conditions herein. The plan set identified in the June 20, 2020 Notice of Action shall remain in force except as modified pursuant to this approval.
3. Substantial completion of the project shall be achieved by no later than June 22, 2025 (Section 8.4.B.2). Substantial completion shall be deemed to have occurred when all improvements specified in the Site Plan approval have been constructed or installed by the applicant and inspected and approved by the City Engineer (Section 8.4.B.1).

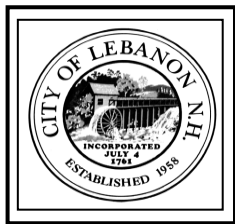
B. Conditions to be Satisfied Prior to the Issuance of a Final Certificate of Occupancy

1. Within 30 days of the Planning Board's approval, the applicant shall update the plan sheets as follows to the satisfaction of the Planning & Development Department:

- a. Add a plan note to the Geometric Plan that all parking spaces shall be marked with parking delineators and provide a construction detail of the same;
 - b. *[Condition relative to Section 6.2.E.3 compliance - TBD]*
- and shall provide the Planning and Development Department with a digital copy of the revised plan sheets saved in a PDF-A format for archival purposes.
2. Within 30 days of the Planning Board's approval, the applicant shall submit a revised Stormwater Operations and Maintenance Plan for review and approval by the City Engineer.

Attachments

cc: Adimab, LLC (via e-mail)
Jason Yehle (via e-mail)
File



CITY OF LEBANON ~ PLANNING & DEVELOPMENT

LEBANON PLANNING BOARD NOTICE OF ACTION #PB2020-14-SPR

Notice is hereby given that on **JUNE 16, 2020**, the following action was taken by a majority of the Lebanon Planning Board in accordance with the City of Lebanon Site Plan Review Regulations:

Matthew Hall moved that the Lebanon Planning Board finds the application of **ADIMAB, LLC** for a Site Plan Review, #PB2020-14-SPR, is complete enough to accept jurisdiction and commence review.

The motion was seconded by Kathie Romano. The vote on the motion was 7-0.

Notice is hereby given that on **JUNE 22, 2020**, the following action was taken by a majority of the Lebanon Planning Board in accordance with the City of Lebanon Site Plan Review Regulations:

A MOTION by Matthew Hall that the Lebanon Planning Board **APPROVE** waivers for the application of **ADIMAB, LLC**, #PB2020-14-SPR, from the following sections of the Site Plan Review Regulations:

- **Section 5.1.E.15** – “(The plans shall depict existing) trees over 12 inches in diameter, measured 4.5 feet above the ground surface, and within 25 feet of the disturbed area, must be counted and shown on the plan, if included towards fulfilling the landscaping requirements. All calculations for square footage of perimeter landscaping shall be shown.”
- **Section 6.2.B** – site perimeter landscaping requirements.
- **Section 6.2.D.1** – “Landscaping around buildings shall be provided to a minimum width of 10 feet and planted with trees, shrubs, and ground cover appropriate to the architecture in order to buffer parking areas, define entrances, provide foundation planting, and soften large expanses of walls or long roof lines.”
- **Section 6.5.B.4** – “All projects proposed for [...] shall install sidewalks along the street frontage(s).”
- **Section 6.5.B.5** – “Minimum access requirements shall include a 50-foot turning radius and 22-foot fire lanes at the rear of the buildings.”

The motion was seconded by Joan Monroe. The vote on the motion was 7-0.

Notice is hereby given that on **JUNE 22, 2020**, the following action was taken by a majority of the Lebanon Planning Board in accordance with the City of Lebanon Site Plan Review Regulations:

A MOTION by Matthew Hall that the Lebanon Planning Board **APPROVE** the application of **ADIMAB, LLC** for Site Plan Review of a proposed 27,300 sq. ft. addition to an existing industrial building, together with associated parking, utilities, landscaping, access, and other related site improvements at 7 LUCENT DRIVE (Tax Map 10, Lot 11, Plot 2600), zoned IND-L, #PB2020-14-SPR, as shown on a plan set titled “Adimab, LLC Building and Parking Expansion” prepared by Engineering Ventures, PC, dated May 15, 2020, EV# 19584 (15 sheets), including any and all submissions and testimony provided for and during the public hearing, with the following conditions:

Conditions to be Satisfied Prior to Application for a Building Permit

1. The Boundary Line Adjustment plat approved by the Planning Board on April 27, 2020 (#PB2020-12-BLA) shall be recorded pursuant to and in conformance with the Notice of Action.
2. The applicant shall continue working with the Department of Public Works to revise the drainage plans to the reasonable satisfaction of the City Engineer.
3. Prior to the start of any construction activities on the property for which construction inspection is required pursuant to this decision or any applicable ordinance or code, the applicant shall provide two (2) revised plans sets depicting the following revisions to the satisfaction of the Planning & Development Department and the City Engineer, as follows:
Any changes made pursuant to Conditions of Approval #2.
Incorporate all other revised plan sheets and changes submitted during the course of the hearing and update all other plan sheets as necessary to reflect the changes.
4. The applicant shall provide a digital copy of the plan set and any revised application materials depicting any changes made pursuant to Condition of Approval #2, to the satisfaction of the Planning & Development Department and the City Engineer. The digital copy of the plan set shall use a PDF-A format for archival purposes.
5. Prior to the start of any construction activities on the property for which construction inspection is required pursuant to this decision or any applicable ordinance or code, the applicant shall schedule and hold a pre-building permit application meeting with the Planning Department, City Building Inspectors, City Engineer/Department of Public Works, and Fire Department, in order to help streamline the building permit review process.
6. The applicant shall obtain approval from the City Council or the City Manager's office for any additional water and/or sewer flows in accordance with the applicable Chapter 136 and 182 of the City Code.
7. Prior to the start of any construction activities on the property, the applicant shall obtain or update (if appropriate) any required State approvals including, but not limited to, the following:
NHDES Wetland Impact Permit, if necessary
NHDES Alteration of Terrain Permit, if necessary
NHDES Sewer Connection Permit, if necessary
8. All outstanding engineering review fees shall be paid in full as required by Section 4.7.E.1 of the Site Plan Review Regulations.

Conditions to be Satisfied Prior to the Issuance of a Building Permit

9. The development shall be subject to City of Lebanon Impact Fees, pursuant to Section 213 of the Zoning Ordinance. The Impact Fee shall be calculated at the time of Building Permit issuance based on the Impact Fee Schedule adopted on August 13, 2018. In accordance with RSA 674:39, the approved site plan shall be exempt from any future changes in impact fees and methodology for five years from the date of approval; however, any building permits which are issued after the end of that five-year period shall be fully subject to whatever impact fees and methodology are in effect at the time of building permit issuance.
10. The City shall retain the services of an independent third-party inspector, for which the applicant shall be responsible for all inspection fees related to the construction and installation of on- and off-site roadways, parking, sidewalks, water and sewer utilities, storm drainage, and erosion control, in accordance with Chapters 136 and 182 of the City Code and Section 8.2 of the Site Plan Review Regulations. The applicant shall provide funding for inspection services in a form and amount acceptable to the City and shall sign a Water & Sewer Extension and Inspection Agreement in accordance with Chapters 136 and 182 of the City Code.

11. Construction or installation of any new driveway(s) shall require a Driveway Permit and Excavation Permit from the City.
12. Edge-of-disturbance fencing shall be installed and maintained before and during any site work, to be verified by the City Engineer or City's third-party inspector on site.
13. All water and sewer fees shall be paid as set forth in City Code Chapter 68.

Conditions to be Satisfied Prior to the Issuance of a Certificate of Occupancy

14. Third-party engineer or design engineer inspection reports and as-built drawings provided by the applicant (PDF format and CAD .dwg format, using the NH State Plane Coordinate System), including tie sheets, shall be reviewed and approved by the City Engineer prior to acceptance of any utility improvements by the City.
15. The impact fee calculated pursuant to Condition of Approval #8 shall be paid.
16. All improvements depicted on the plan shall be completed, and shall be constructed as depicted on the approved plan, including any modifications to the plan as may be approved by the Planning Board in accordance with the Subdivision Regulations and Site Plan Review Regulations.

General Conditions

17. The applicant shall obtain an Excavation Permit from the Department of Public Works for any site work in the public right-of-way prior to any work in the right-of-way.
18. All required landscape plantings shall meet the minimum size requirements for such plantings set forth in Section 6.2.B of the Site Plan Review Regulations at the time of installation.
19. The applicant shall implement and maintain NHDES Site Specific Best Management Practices before, during, and after construction.
20. The property owner is responsible for the maintenance and operation of the stormwater management system in accord with the O&M plan, and such responsibility shall run with the land. (Section 6.6.H.2.b of the Site Plan Review Regulations).

The motion was seconded by Joan Monroe. The vote on the motion was 7-0.

THE CITY OF LEBANON PLANNING BOARD

By: _____
Bruce Garland, Chair

DATE: _____

**CITY OF LEBANON
APPLICATION FOR**

SPECIAL EXCEPTION	☐	☐	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☐	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☐	CONDITIONAL USE PERMIT

☐ OTHER Siteplan Amendment

PROPERTY OWNER (APPLICANT):

NAME: Adimab TEL.#: 603.643.7110

MAILING ADDRESS: 7 Lucent Drive, Lebanon NH 03766

E-MAIL ADDRESS: Ryan.Mcgovern@adimab.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Jason Yehle TEL.#: 207.831.4161

MAILING ADDRESS: 7 Lucent Drive, Lebanon NH 03766

E-MAIL ADDRESS: jason.yehle@adimab.com

PROJECT LOCATION:

TAX MAP #: 10 LOT#: 2600 11 PLOT #: 11-2600 ZONE: INDL

STREET ADDRESS OF PROJECT: 7 Lucent Drive

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☒ YES ☐ NO **HISTORIC DISTRICT** ☐ YES ☒ NO
FLOOD PLAIN ☐ YES ☒ NO

SCOPE OF PROJECT:

Application for site plan ammendment that requires waivers

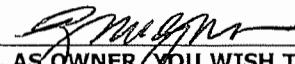
TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONEFAMILY ☐ TWOFAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL
PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL
IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC**
USE: R&D Building

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on 03.11.2024, 20__, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

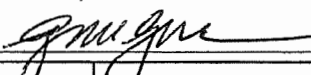
PROPERTY

OWNER:  DATE: 2.12.2024

NOTE: IF, AS OWNER YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ

THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

PROPERTY

OWNER:  DATE: 2.12.2024

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #		
2/12/2024	10-11-2600	PB2024-10-SPA		

(Last Revised 4/04/18)

April 2, 2024

Adimab, 7 Lucent Drive - Addition, auxiliary parking and related site improvements
2024-03-18_PB2024-10-SPA_Amendment Application Narrative

Adimab is a biotechnology company and industry leader in the discovery of new medicines based on human antibodies. Adimab has been based in Lebanon NH since its founding in 2007 and collaborates with major pharmaceutical companies from all over the world.

Adimab received planning approval for a 27,000 s.f. building addition, auxiliary parking area and related site improvements in June of 2020. Adimab's project is nearing completion and is scheduled to finish in early summer of 2024.

Adimab requests the following amendments, they are due to code requirements of the city building permit, and slight design revisions over the past three years:

- Site plan - (5) electric vehicle charging stations added
- Site plan - (2) exterior ground hydrants added
- Site plan - Exterior stair relocated from south to north near building joint
- Landscaping, shrubs - Species changes and slight relocation, same count
- Landscaping, trees - Species changes and slight relocation, added (43)
- Landscaping, parking shading - Fewer trees at parking, still over 30% shaded
- Landscaping, footpaths - 40" wide pea stone footpaths added at egress doors
- Lighting, foot path lights - Relocated, same fixture and count
- Lighting, pedestrian bridge - (2) fixtures added, 1 FC at walking surface
- Lighting, exterior stairs - (11) fixtures added, 10 FC at stairs
- Lighting, egress doors - (4) fixtures added, 1 FC at walking surface

Adimab is requesting one waiver to change the approved surface material for their new remote parking lot from asphalt to compacted stone 'ledge pack.' The requested change is only regarding the new parking area. The 130' long entrance driveway access connecting this auxiliary parking lot to the dead end of Lucent Drive is paved with asphalt.

“Section 6.5 E 2, Criteria B. 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.”

- Adimab’s new addition and auxiliary parking area are located in a forested wetland area. The overall project has been carefully designed to minimize impact to the existing forest and wetlands. Adimab is concerned about the negative health and environmental impacts of asphalt and concrete paving in this natural setting.
- Adimab’s proposal to use a ledge pack surface will carry out the spirit and intent of the planning regulations.
- This ledge pack surface will be located 130’ from Lucent drive. No ledge pack material or water from this parking area will encroach onto Lucent Drive.
- The parking lot surface material is not visible from Lucent Drive.
- Adimab is a private biotechnology company, and employees have the choice to park in one of several existing asphalt paved lots; the new auxiliary parking lot is not open for use by the general public and is not the main entrance to Adimab.
- The ledge pack surface will drain to the existing bioretention filters and underground detention system as previously engineered.

BACKGROUND

Adimab’s growth over the years has necessitated more laboratory, office, and meeting spaces. Since its founding, the management of the company has consistently and significantly invested in creating healthy and comfortable environments for its employees, which are recruited nationwide. Attracting a young, dynamic, and highly skilled workforce to New Hampshire has required the company to be on the forefront of design and sustainability goals. With this new building project, management added a design directive to make the most sustainable choices wherever possible. This directive was considered throughout the design process and can be seen in the choice of building materials, in the heating and cooling systems, and the consideration of the land.

THE PARKING LOT

Adimab’s project requires a remote parking lot with 80+ spaces. This resulted in researching the most sustainable options for parking surface materials. Drainage, maintenance, aesthetics, and function were also considered. The design team reviewed asphalt, concrete, and compacted ledge pack surfaces. Given the negative human health risks of asphalt and the environmental damage of concrete, Adimab chose compacted ledge pack as the safest, most sustainable choice. The forest and wetland setting of this parking lot is an ideal location for a

low impact parking surface. The size of this new parking area represents less than a quarter of Adimab's total parking areas; all other parking areas are paved with asphalt.

“WHAT’S WRONG WITH USING ASPHALT?”

Asphalt paving is a mixture of heavy crude oil, sand, and gravel. Two recent scientific research papers have documented the air pollution released by both new and old asphalt paving. These pollutants are a significant source of air pollution, and harmful to human health. In addition to this health hazard, asphalt paving reaches temperatures of 120° - 150° during summer weather. This heat is then transferred to the surrounding air and stormwater, exacerbating heat waves and adding to air and land pollutants. These studies show that asphalt is an overlooked major source of hazardous airborne pollutants.

“a main finding is that asphalt-related products emit a substantial and diverse mixtures of organic compounds into the air, with a strong dependence on temperature and other environmental conditions.”

“AND WHY NOT USE CONCRETE?”

Adimab also considered using a concrete surface for the parking lot. Concrete is a mixture of cement, sand, stone, and water. Carbon dioxide is a major byproduct of the cement making chemical reaction. Compounding this, additional CO₂ is produced when making cement, due to burning fuel to heat the manufacturing kilns. Using concrete at this parking lot would produce 1.5 million pounds of CO₂. This is equivalent to the pollutants released by the average car driving 1.7 million miles or driving around the globe 68 times.

Using crushed stone ‘ledge pack’ as a parking lot surface minimizes site heat gain, produces no hazardous pollution, and is a locally sourced material.

THE NEW ADDITION

Adimab's new addition uses wood, in the form of 'mass timber' for the structural system. Mass timber construction uses small pieces of wood, glued together to create large, strong timbers. The wood used for Adimab's structure was sourced from Quebec, processed into sheets, beams, and columns precisely cut for the building, and then trucked to the site for efficient assembly.

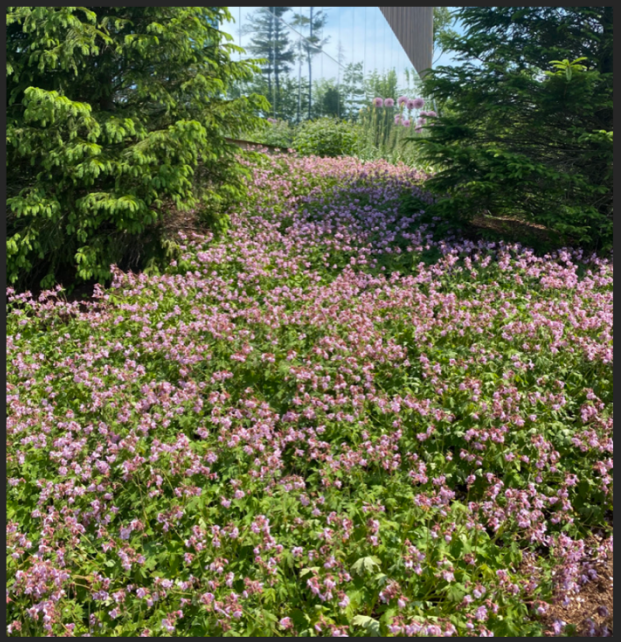
As a biotechnology company, Adimab has unique requirements for air filtering and changing to ensure a safe and comfortable interior environment. The new air handling systems are exceptionally resource efficient and maximize renewable energy use. Those systems are paired with a high-performance building 'envelope'. This envelope consists of a super-insulated and tightly air sealed building shell that works in tandem with the mechanical systems to allow for high efficiency heating and cooling, excellent user comfort, and minimal energy use.

Adimab's heating, cooling, and ventilation systems are highly energy efficient, supply 100% fresh air with minimal energy waste, use HEPA filtration for health and safety, and create far less combustion pollution than standard systems.

THE LANDSCAPE

Adimab's project is located in a forested wetland, and as such the addition's small footprint was designed to minimize impact on the natural area. A pedestrian footbridge delicately crosses the wetlands zone between the building and remote parking area. A design goal for the entire site was to minimize disturbance to the existing natural setting. For example, the working construction zone around the addition was limited to only 15 feet off the structure. All trees outside of that 15-foot zone were protected. During the design process of the pedestrian bridge, all trees were digitally mapped, and the resulting bridge was threaded through the trees. Adimab has a track record of valuing its landscape and has consistently invested in beautifying its land. Adimab currently has several garden areas with native species, as well as on-site employee-maintained vegetable gardens. Overall, the landscape design intent around the new building is to return the remaining forested land to a natural state using native species that benefit wildlife.

The landscape has been protected to limit the disruption of wildlife, to help shade the building from solar heat gain, to provide employees with lovely views of nature from within the building, and to remove the need for mowing and maintenance.







City of Lebanon, New Hampshire APPLICATION FOR WAIVERS

Office Use Only

Date Received: _____

File No.: _____

PROJECT INFORMATION

Name of Applicant: _____ Adimab
Project Name: _____ Adimab Addition
Project Address: _____ 7 Lucent Drive

WAIVER REGULATIONS

In order to grant a Waiver from a requirement of the City of Lebanon Site Plan Review or Subdivision Regulations, the Planning Board must find that the Waiver is justified under one of the following criteria (See Article VII of the Site Plan Review Regulations and Section 7.15 of the Subdivision Regulations):

Criteria A. Strict conformity would pose an unnecessary hardship to the Applicant and waiver would not be contrary to the spirit and intent of the regulations;

OR

Criteria B. 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.

WAIVER REQUEST(S)

I (we) hereby request a Waiver from:

[You can respond in the space provided, or attach a separate statement. Please be prepared to address each request during your public hearing. You must show that you have justified granting the Waiver(s).]

6.5 E 2

1. Section ____ of the (circle one) **Site Plan Review** / Subdivision Regulations. A Waiver of this Section meets (circle one) **Criteria A** / **Criteria B** because _____
See additional statement included in narrative.

2. Section ____ of the (circle one) **Site Plan Review** / Subdivision Regulations. A Waiver of this Section meets (circle one) **Criteria A** / **Criteria B** because _____

3. Section ____ of the (*circle one*) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (*circle one*) Criteria A / Criteria B because _____

4. Section ____ of the (*circle one*) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (*circle one*) Criteria A / Criteria B because _____

5. Section ____ of the (*circle one*) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (*circle one*) Criteria A / Criteria B because _____

6. Section ____ of the (*circle one*) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (*circle one*) Criteria A / Criteria B because _____

7. Section ____ of the (*circle one*) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (*circle one*) Criteria A / Criteria B because _____

8. Section ____ of the (*circle one*) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (*circle one*) Criteria A / Criteria B because _____

SIGNATURE

I (we) hereby submit this application to the Planning Board and attest that to the best of my (our) knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As the applicant or as the agent of the applicant, I attest that I am duly authorized to act in this capacity.

Signature of Applicant:  Date: 02.12.24

S:\PLN\FORMS - APPLICATION\Planning Board Applications\WAIVER\Waiver Application.docx

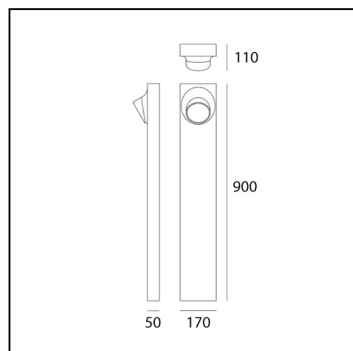
Ciclope Floor 90 Monolaterale

Anthracite gray

Alessandro Pedretti



IP65   



LUMINAIRE

- Power Supply: **Electronic**
- Watt: **6,5W**
- Voltage: **220-240V**
- Delivered lumen output: **383lm**
- CCT: **3000K**
- Efficiency: **64%**
- Efficacy: **63.79lm/W**
- CRI: **90**

DESCRIPTION

Lighting system with diffuse unilateral or bilateral emission, with high-performance LED light sources. Light emission is obtained by the combination of six monochromatic LED light sources, a reflector and an opaline diffuser. Floor, wall or recessed installation. Available in two finishes: light grey and rust painted.

FEATURES

- Product Code: **T081120**
- Colour: **Anthracite gray**
- Installation: **BollardFloor**
- Material: **Composite technopolymer, polycarbonate, steel, aluminum**
- Series: **Architectural Outdoor**
- Environment: **Outdoor**
- Area contract: **null, Outdoor, Residential**
- Emission: **Direct**
- design by: **Alessandro Pedretti**

DIMENSIONS

- Length: **170 mm**
- Width: **110 mm**
- Height: **900 mm**

SOURCES INCLUDED

- Category: **Led**
- Number: **1**
- Watt: **6,5W**
- Color temperature (K): **3000K**
- CRI: **80**

Application

Pole-top luminaire with adjustable, indirect light distribution. A symmetric distribution is produced when the top reflector is set in the horizontal position and becomes asymmetric when the reflector is adjusted from 0° to 30°.

Materials

Clear safety glass
Marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
High temperature silicone gasket
Pure anodized aluminum reflector surface

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65

Weight: 33.0 lbs.

EPA (Effective projection area): 3.2 sq. ft.

Electrical

Operating voltage 120-277V AC
Minimum start temperature -30° C
LED module wattage 35.7 W
System wattage 43.0 W
Controllability 0-10V dimmable
Color rendering index Ra > 80
Luminaire lumens 1742 lm
LED service life (L70) 60000 hrs

LED color temperature

4000K (K4)
3500K (K35)
3000K (K3)
2700K (K27)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

Available colors

Black (BLK) Bronze (BRZ)
Silver (SLV) White (WHT)
RAL: CUS:

Type:

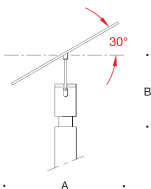
BEGA Product:

Project:

Modified:

Available options

CUS Custom finish
MGU Marine grade undercoat
RAL RAL finish



Indirect pole-top luminaire · Adjustable

	LED	A	B
B77208	35.7 W	31 1/2	19 7/8

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
© copyright BEGA 2024 Updated 05/03/23

Application

Compact floodlight with mounting canopy and outrigger arm. Designed to illuminate architectural features and signage. Pair with a variety of optical accessories.

Materials

Clear safety glass
Marine grade, copper free ($\leq 0.3\%$ copper content) A360.0 aluminum alloy
Mechanically captive stainless steel fasteners
High temperature silicone gasket
304 stainless steel outrigger arm
Pure anodized aluminum reflector

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65

Weight: 7.5 lbs.

EPA (Effective projection area): 0.6 sq. ft.

Electrical

Operating voltage 120-277VAC
Minimum start temperature -30°C
LED module wattage 17.7 W
System wattage 21.0 W
Controllability 0-10V, TRIAC, and ELV dimmable
Color rendering index $R_a > 80$
Luminaire lumens 2135 lm
LED service life (L70) 60000 hrs

LED color temperature

4000K (K4)
3500K (K35)
3000K (K3)
2700K (K27)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

Available colors

Black (BLK) Bronze (BRZ)
Silver (SLV) White (WHT)
RAL: CUS:

Type:

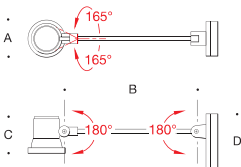
BEGA Product:

Project:

Modified:

Available options

B70060 Elliptical spread lens
B70757 Glare shield · 180°
CUS Custom finish
FSC Fusing
MGU Marine grade undercoat
RAL RAL finish



Compact floodlight · Wide beam

	LED	□	A	B	C	D
B77665	17.7 W	47°	$6\frac{1}{4}$	$27\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$



BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
© copyright BEGA 2024 Updated 05/03/23

NPS Spot Light with PURE LED

PROJECT:

TYPE:

SOURCE:

NOTES:

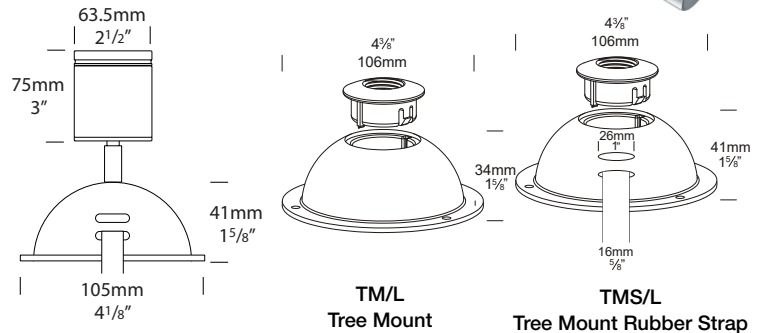
SPECIFICATIONS

IP66



LED Chip	Cree XHP-50-2 Plug and Play field replaceable LED board
Luminaire Output*	600 Lumens @ 1050mA (6 watts), 420 Lumens @ 700mA (4 watts), 240 Lumens @ 350mA (2 watts)
Lumens Per Watt*	100 Lumens @ 6 watts minimum
LED Life Expectancy	50,000 hours L70
CRI (3000K)	90+
Colour Temperatures	2700K, 3000K, 4000K
Beam Angles	15, 25, 38, 60
Ingress Protection	IP66
Warranty	Electronics = 5 years Aluminium = 5 years Body Cop/ SS = 10 years
Standards	AS/NZS 61046 cUL 1838, 2108 CSA C22.2 No. 250.7, No. 250.0-08 CE

*Delivered from the Luminaire with unobstructed beam



TM/L
Tree Mount

TMS/L
Tree Mount Rubber Strap

PRODUCT CONFIGURATION

Please fill in appropriate codes into boxes provided

Cat. No. TM/L or TMS/L

Luminaire	Power	Material/Finish	Beam	Colour	Accessories
TM/L	D10	EBK	38	3000	CJK
TMS/L					GG
S	1050mA Input, Series Wired 6W	ALUMINIUM	EBK BLACK	15 15°	2 2700K
D3	12VAC Input, Parallel Wired 2W	EBZ BRONZE	30 25°	3 3000K	CJK Cable Joint Kit
D7	12VAC Input, Parallel Wired 4W	EOGR OLIVE GREEN	38 38°	4 4000K	LF Frosted Lens
D10	12VAC Input, Parallel Wired 6W	EGR OLIVE GREEN	60 60°		HCL Hex Cell Louvre
		EGW WHITE			GG Glare Guard
		EWB WHITE BIRCH			SNT Snoot
		EDG DARK GREY			LKN Locking Knuckle
		ESTAR SILVER STAR			
		ECT CORTEN			
		COP Copper			
		SS Stainless Steel			

S - Series Driver

Power Supply: Constant current driver
REQUIRED - NOT SUPPLIED
Wiring Method: Wired in series
Fixture Input: Individual fixtures require 6Vf @ 1050mA maximum 6 Watts

D3 D7 D10 - 12VAC Input

Power Supply: Line/Mains to 12VAC
Transformer REQUIRED - NOT SUPPLIED
Wiring Method: Parallel
Fixture Input: 9-15VAC,
D3 = 6Vf @ 350mA 2W
D7 = 6Vf @ 700mA 4W
D10 = 6Vf @ 1050mA 6W
(1050mA limited to ≤ 40°C (104°F) ambient temperature in stainless steel)

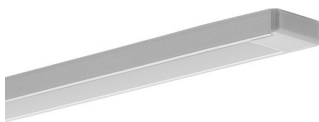
OTHER LAMP OPTIONS:

TM/H or TMS/H - MR16 Halogen 12V Lamp
TM/SL or TMS/SL - MR16 LED Retrofit 12V Lamp (lamps vary by market - please refer to supplier for details)
TM/GUH or TMS/GUH - GU10 120/240V Halogen Lamp (body length increases for all GU10 lamps)
TM/GUSL or TMS/GUSL - GU10 LED Retrofit 120/240V Lamp (lamps vary by market - please refer to supplier for details)

Additional Comments:

With WM100 transformer

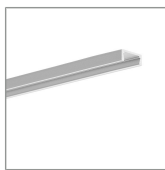
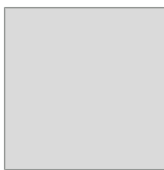
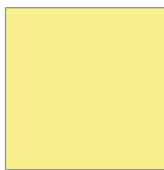
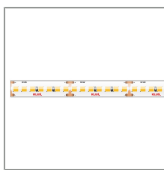
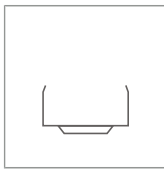
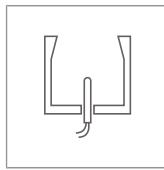
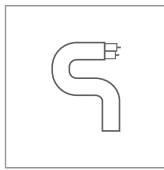
*Due to continued product enhancements, specifications may change without notification.



MICRO-ALU Fixture

LED fixture number: B1888-A-FC-30-1910/1-24-TBD-SS-72-IP67

Power supply **ULTRA Series**

IP rating  IP67	Fixture  MICRO-ALU Extrusion	Finish  Silver anodized	Cover  HS Cover frosted	LED color  3000 K	LED output  MEDIUM -259lm/ft 1910/1
input voltage  24 V	Length  TBD to be determined	Mounting  SS	Wire lead  Wire out back of extrusion	length of wire lead  Wet Rated 72"	

CERTIFIED NOTIFICATION LIST

THE CITY OF LEBANON IS REQUIRED UNDER NH RSA 672:3 TO NOTIFY THE FOLLOWING PERSONS OF PUBLIC HEARINGS BEFORE THE PLANNING BOARD: ALL ABUTTERS; THE APPLICANT; PROPERTY OWNER; HOLDER OF CONSERVATION, PRESERVATION, OR AGRICULTURAL PRESERVATION RESTRICTION(S); AND EVERY ENGINEER, ARCHITECT, LAND SURVEYOR, OR SOIL SCIENTIST WHOSE PROFESSIONAL SEAL APPEARS ON ANY PLAT SUBMITTED TO THE BOARD.

PLEASE PROVIDE NAMES & MAILING ADDRESSES FOR ALL PERSONS LISTED ABOVE.

MAP & LOT NUMBER: <u>10-11-2600</u>	MAP & LOT NUMBER: <u>10-11-2600</u>
PROPERTY OWNER: Adimab 7 Lucent Drive Lebanon, NH 03766	APPLICANT: Adimab 7 Lucent Drive Lebanon, NH 03766
MAP & LOT NUMBER: <u>10-10</u>	MAP & LOT NUMBER: <u>10-11-2500</u>
ABUTTER/OTHER: The Hitchcok Clinic One Medical Center Drive Lebanon, NH 03766	ABUTTER/OTHER: 37 Lafayette Centerra LLC 7 Lucent Drive Lebanon, NH 03766
MAP & LOT NUMBER: <u>10-11-2100</u>	MAP & LOT NUMBER: <u>10-11-2700</u>
ABUTTER/OTHER: 11 Lafayette Centerra LLC 7 Lucent Drive Lebanon, NH 03766	ABUTTER/OTHER: Luminescents Systems INC 4 Lucent Drive Lebanon, NH 03766
MAP & LOT NUMBER: <u>10-11-2300</u>	MAP & LOT NUMBER: _____
ABUTTER/OTHER: Centerratech LLC 46 Centerra Pkwy Rm 310 Lebanon, NH 03766	ABUTTER/OTHER: Singletree Engineering LLC 790 White Rd Corinth, VT 05039-9415
MAP & LOT NUMBER: _____	MAP & LOT NUMBER: <u>10-11-3400</u>
ABUTTER/OTHER: Christopher T. Smith, AIA 248 Hogback Road Norwich VT 05055	ABUTTER/OTHER: HOCO C LLC 46 Centerra Pkwy Rm 310 Lebanon, NH 03766
MAP & LOT NUMBER: _____	MAP & LOT NUMBER: _____
ABUTTER/OTHER:	ABUTTER/OTHER:

SITE PLAN REVIEW		
TOTAL DUE AT TIME OF FILING		\$
**Engineering Review fees will also be required. See note on page 2.		

SITE PLAN REVIEW AMENDMENT (WITH STRUCTURAL CHANGES)		
		TOTALS
FILING FEE	\$250.00	\$250.00
SQUARE FOOTAGE	\$75.00 per 1,000 sq. ft. (gross floor area)	
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note below)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE AT TIME OF FILING		\$
**Engineering Review fees may also be required. See note below.		

OTHER		
-SITE PLAN REVIEW AMENDMENT (WITH NO STRUCTURAL CHANGES) -EXTENSION REQUESTS -CONDITIONAL USE PERMITS		
<i>Adimab PB2024-10-SPA</i>		
		TOTALS
FILING FEE	\$250.00	\$250.00
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note below)	\$5.00 + Current USPS rate per certified notice (see below) X <u>9</u> notices	\$5.00 \$ <u>45.36</u> (abutter certified)
TOTAL DUE AT TIME OF FILING		\$ <u>400.36</u>
**Engineering Review fees may also be required. See note below.		

MINOR SITE PLAN REVIEW		
		TOTALS
FILING FEE	\$150.00	\$150.00
NOTIFICATION FEE (see note below)	Current USPS rate per certified notice (see below) X _____ notices	\$ _____ (abutter certified)
TOTAL DUE		\$

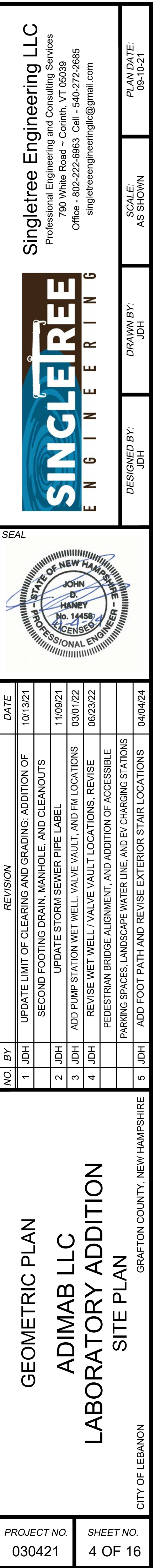
ENGINEERING REVIEW FEES:

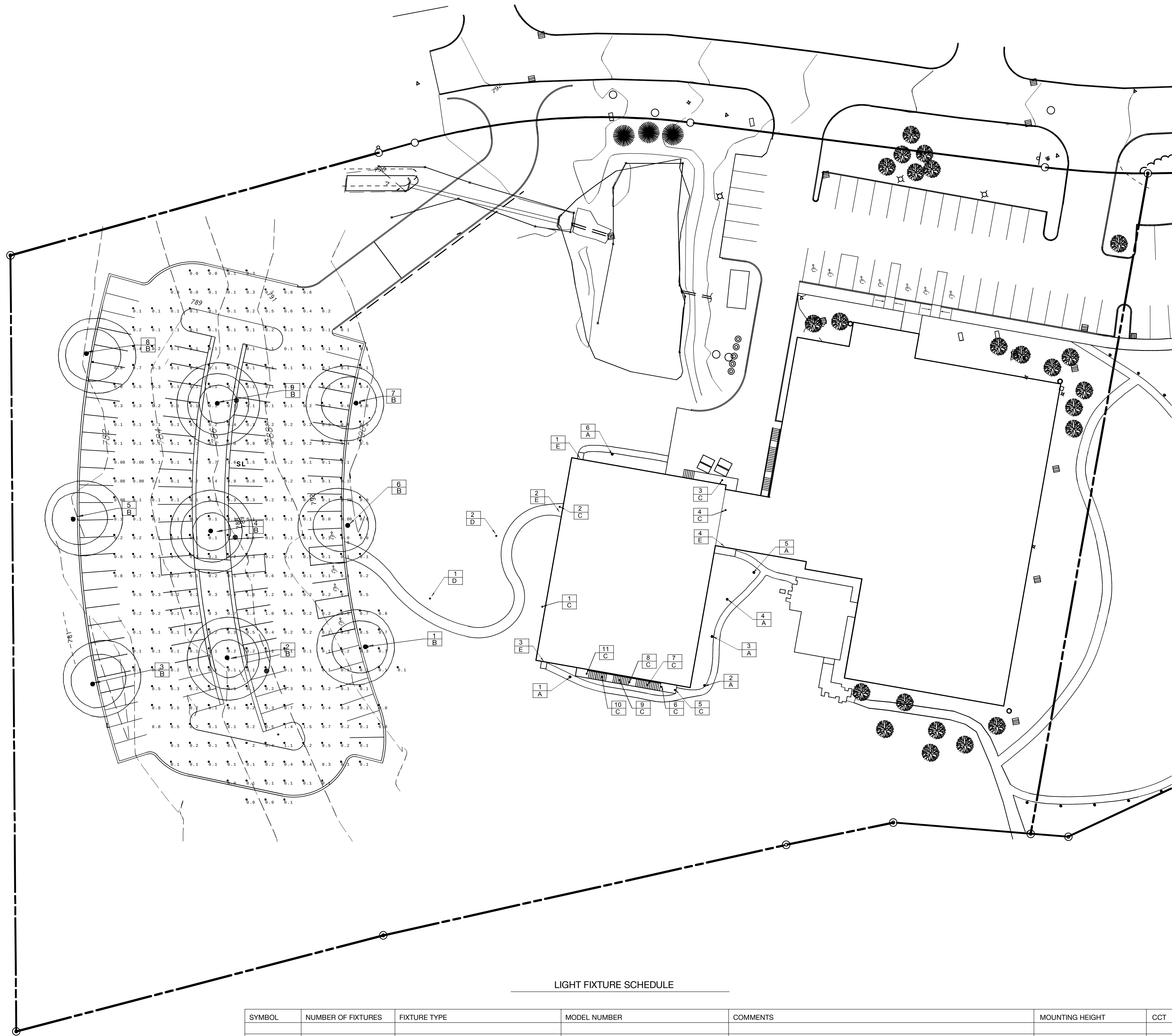
After an application to the Planning Board is submitted and the filing fees identified above have been paid, the Planning & Development Department will determine the scope of required engineering review and will obtain an estimated cost from the reviewing engineer. A cost estimate of the review fees will usually be generated within two (2) – three (3) business days. Once conveyed to the applicant, the estimated review fees shall be paid by the applicant within five (5) business days, and an escrow account shall be established by the Planning & Development Department. No plans will be reviewed unless and until the review fee estimate is paid, if required.

Please note that escrow fees are only an estimate of what services will cost and actual costs of review may be less or more than the amount initially estimated. Any unused portion of the escrow will be returned to the applicant at the end of the approval process if such a surplus remains. Additionally, in the event the escrow amount does not cover the full cost of services the Applicant shall pay any remaining costs as a condition of approval. See also Section 4.7 of the Site Plan Review Regulations and Section 7.7 of the Subdivision Regulations.

NOTIFICATION FEE: CURRENT FEE as of January 2024 is \$5.04 per certified notice

THE CERTIFIED NOTIFICATION FEE IN ALL SECTIONS ABOVE INCLUDES THE FOLLOWING: ALL ABUTTERS, THE APPLICANT, PROPERTY OWNER, HOLDER OF CONSERVATION, PRESERVATION, OR AGRICULTURAL PRESERVATION RESTRICTION(S); AND EVERY ENGINEER, ARCHITECT, LAND SURVEYOR OR SOIL SCIENTIST WHOSE PROFESSIONAL SEAL APPEARS ON ANY PLAT SUBMITTED TO THE BOARD AND ANY OTHER PERSONS REQUIRED BY RSA 676:4, I(d).





LIGHT FIXTURE SCHEDULE

SYMBOL	NUMBER OF FIXTURES	FIXTURE TYPE	MODEL NUMBER	COMMENTS	MOUNTING HEIGHT	CCT	WATTAGE
A	6	34" H. GROUND MOUNT EGRESS PATH LIGHT	ARTIMEDE ATDY10420 LED		GROUND / 34"	3000	6
B	9	POLE MOUNT PARKING DOWN LIGHT	BEGA LIGHTING 77 208 K3	16" POLE SETBACK A MINIMUM OF 48" FROM BOUNDARY	16'	3000	42.6
C	11	ROOF MOUNT EGRESS LIGHT	BEGA LIGHTING 77 665	CODES / FIRE DEPARTMENT REQUIREMENT 1.0 FC AT PATHS, 10.0 FC AT STAIRS	ROOF, 35'- 40' ABOVE GRADE	3000	17.7
D	2	TREE MOUNT EGRESS LIGHT	HUNZA LIGHTING TMLD10EBK383000	CODES / FIRE DEPARTMENT REQUIREMENT 1.0 FC AT PATHS	16'	3000	6
E	4	LED STRIP LIGHT AT EGRESS DOORS	KLUS B888-A-FC-30-1910/1-24-TBD-SS-72-IP67	LED STRIP DOOR LIGHTS 8W AT N + S, 22W AT WEST, 28W AT SOUTH CONNECTOR DOOR	DOOR, 7'-16' ABOVE GRADE	3000	8 TO 25

- 3

SAME COUNT, RELOCATED
- 3

NEW FIXTURES
- 3

NEW FIXTURES
- 3

NEW FIXTURES

LIGHTING NOTES

LIGHTING INSTALLATIONS SHALL INCLUDE TIMERS, DIMMERS, SENSORS, AND / OR OTHER ENERGY-
SAVING TECHNOLOGIES TO REDUCE OVERALL ENERGY CONSUMPTION. NON-ESSENTIAL LIGHTING SHALL
BE TURNED OFF OR REDUCED AFTER NORMAL BUSINESS HOURS, LEAVING ONLY NECESSARY LIGHTING
FOR SECURITY PURPOSES. (NON-ESSENTIAL LIGHTING INCLUDES, BUT MAY NOT BE LIMITED TO, DISPLAY,
AESTHETIC, PARKING, AND / OR SIGN LIGHTING AS DETERMINED BY THE BOARD.)

LIGHT FIXTURES SHALL BE ENERGY EFFICIENT LED TYPE FIXTURES.

LIGHTING LEVELS: AVERAGE = 0.25, MAXIMUM = 1.6, MINIMUM = 0.08, AVERAGE / MINIMUM RATIO = 3.125

ADIMAB

7 Lucent Drive
Lebanon, NH 03766
603.643.7110

Revision #/Date:
#1 19 MAY 2020
#2 02 APR 2024

scale: 1" = 30'-0"
Sheet Title
SITE LIGHTING PLAN

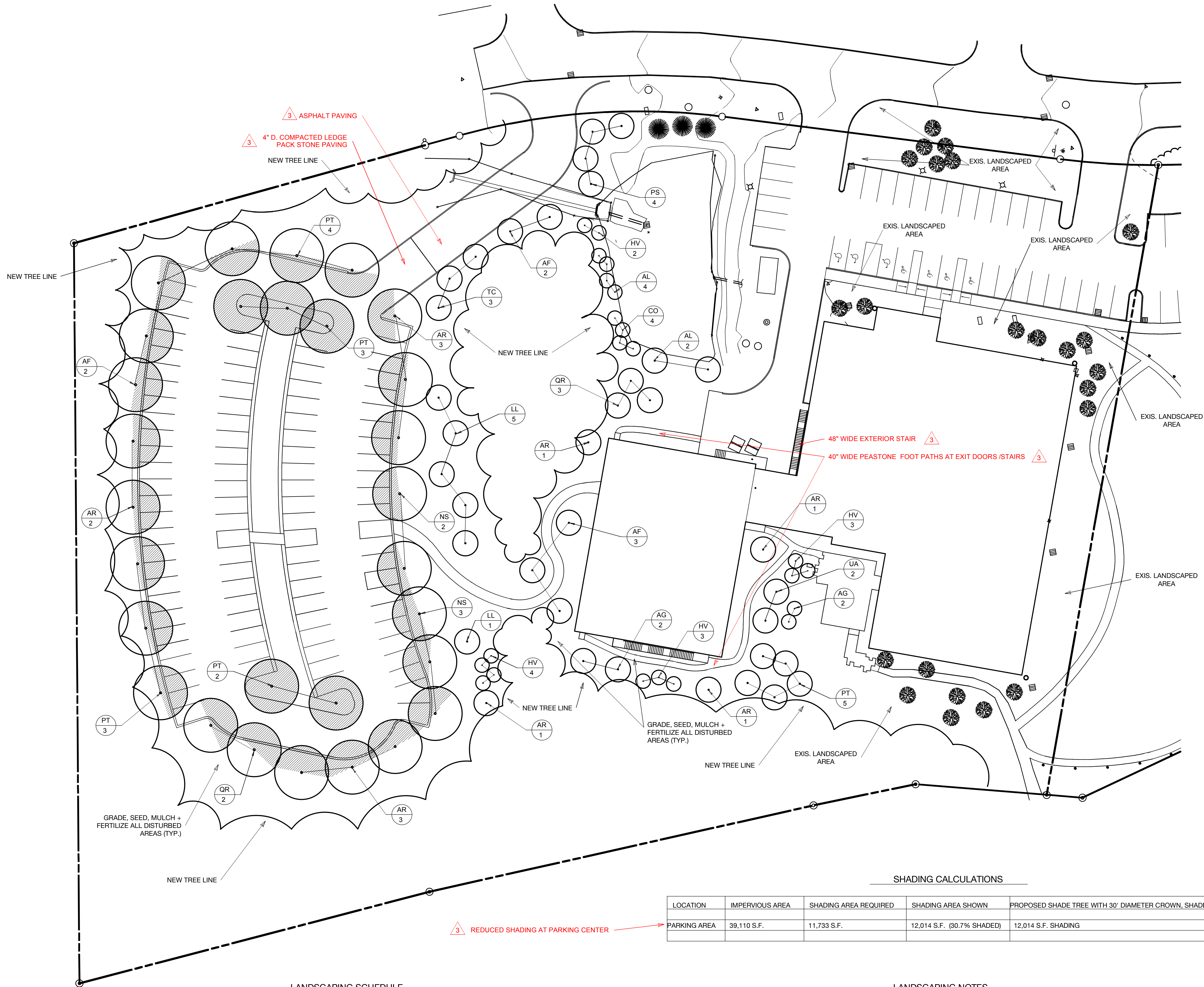
Date: 06 MAR 2020

Sheet No.

SL-1

SITE LIGHTING PLAN





3 REDUCED SHADING AT PARKING CENTER

SHADING CALCULATIONS				
LOCATION	IMPERVIOUS AREA	SHADING AREA REQUIRED	SHADING AREA SHOWN	PROPOSED SHADE TREE WITH 30' DIAMETER CROWN, SHADE AREA HATCHED
PARKING AREA	39,110 S.F.	11,733 S.F.	12,014 S.F. (30.7% SHADED)	12,014 S.F. SHADING

LANDSCAPING SCHEDULE

KEY (TREES)	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE
PT	17	QUAKING ASPEN	POPULUS TREMULOIDES	2 1/2"-3" CAL. BALL & BURLAP
AF	7	FREEMAN MAPLE	ACER FREEMANII "AUTUMN BLAZE"	2 1/2"-3" CAL. BALL & BURLAP
UA	2	ELM	ULMUS AMERICANA "PRINCETON"	2 1/2"-3" CAL. BALL & BURLAP
AR	12	RED MAPLE	ACER RUBRUM "RED SUNSET"	2 1/2"-3" CAL. BALL & BURLAP
TC	3	CANADIAN HEMLOCK	TSUGA CANADENSIS	2 1/2"-3" CAL. BALL & BURLAP
AG	6	SERVICEBERRY	AMELANCHIER GRANDIFLORA	2 1/2"-3" CAL. BALL & BURLAP
QR	5	RED OAK	QUERCUS RUBRA	2 1/2"-3" CAL. BALL & BURLAP
NS	5	TUPELO	NYSSA SYLVATICA	2 1/2"-3" CAL. BALL & BURLAP
LL	6	TAMARACK	LARIX LARICINIA	2 1/2"-3" CAL. BALL & BURLAP
AL	6	SPECKLED ALDER	ALNUS RUGOSA	2 1/2"-3" CAL. BALL & BURLAP
PS	4	WHITE PINE	PINUS STROBUS	2 1/2"-3" CAL. BALL & BURLAP

3 INCREASED TREE COUNT FROM (30) TO (73), SPECIES CHANGE

KEY (SHRUBS)	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE
HV	16	WITCH HAZEL	HAMAMELIS VIRGINIANA	2"-3" H. BALL & BURLAP
CO	4	BUTTON BUSH	CEPHALANTHUS OCCIDENTALIS	2"-3" H. BALL & BURLAP

3 SAME TOTAL SHRUB COUNT (20) SPECIES CHANGE

LANDSCAPING NOTES

PERIMETER LANDSCAPING, A WAIVER FROM SECTION 6.2.B HAS BEEN REQUESTED. THE INTENT IS TO LEAVE EXISTING TREES AND VEGETATION AS-IS IN ALL AREAS EXCEPT THE NEW PARKING AREA AND BUILDING ADDITION.

ALL NEW PLANT MATERIAL SHALL BE NURSERY GROWN STOCK.

AT THE TIME OF PLANTING, ALL DECIDUOUS TREES SHALL BE A MINIMUM 2.5 TO 3 INCHES IN CALIPER, MEASURED 6 INCHES ABOVE THE FINISH GRADE LEVEL; ALL EVERGREEN TREES SHALL BE A MINIMUM OF 6 TO 7 FEET IN HEIGHT.

SHRUBS SHALL BE PLANTED AS A MIX, RANGING FROM 50% TO 70% FLOWERING, WITH THE REMAINDER BEING EVERGREEN. AT THE TIME OF PLANTING, ALL SHRUBS WHETHER DECIDUOUS OR EVERGREEN, SHALL BE 24 TO 30 INCHES IN HEIGHT AND / OR 18 TO 24 INCHES IN SPREAD.

THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING, TO INCLUDE GRASS AND MULCH, IN GOOD, HEALTHY CONDITION SO AS TO PRESENT A NEAT AND ORDERLY APPEARANCE. THE PROPERTY OWNER SHALL REPLACE ANY UNHEALTHY OR DEAD PLANT MATERIALS IN CONFORMANCE WITH THE LANDSCAPE PLAN APPROVED BY THE BOARD AS PART OF THE SITE PLAN.

GRADED AREAS SHALL BE VEGETATED TO INSURE EROSION CONTROL BY SEEDING, MULCHING AND FERTILIZING. DISTURBED AREAS SHALL BE PLANTED WITH SUITABLE PLANT MATERIALS.

GRADING SHAL 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.

AFTER THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE STORAGE, DISPLAY, OR PARKING OF MOTOR VEHICLES, BOATS, MOBILE HOMES, TRAILERS, OR CONSTRUCTION EQUIPMENT WITHIN LANDSCAPED AREAS, BUFFERS, OR SCREENS, SHOWN AS SUCH ON THE APPROVED LANDSCAPE PLAN, IS EXPRESSLY PROHIBITED AND A VIOLATION OF THE NOTICE OF ACTION.

SITE LANDSCAPING PLAN

ADIMAB
7 Lucent Drive
Lebanon, NH 03766
603.643.7110

Revision #/Date:
#1 19 MAY 2020
#2 02 APR 2024

scale: 1" = 30'-0"
Sheet Title
SITE LANDSCAPING
PLAN

Date: 06 MAR 2020
Sheet No.

SLA-1



CITY OF LEBANON ~ PLANNING & DEVELOPMENT

PLANNING BOARD

May 20, 2024 Meeting

Staff Memorandum – PB2024-17-BLA

APPLICATION INFORMATION

Agenda Item: 3.D

Application ID: PB2024-17-BLA

Application Type:
Boundary Line Adjustment

Property Location & Tax Map:

- 25 Labombard Road (Tax Map 64, Lot 25)
- 33 Labombard Road (Tax Map 51, Lot 15)

Applicants/Property Owners:

The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC

Property Sizes (existing):

- 25 Labombard Road (Tax Map 64, Lot 25): +/-2.01 acres *per boundary line adjustment plat*
- 33 Labombard Road (Tax Map 51, Lot 15): +/-3.39 acres *per boundary line adjustment plat*

Property Sizes (proposed):

- 25 Labombard Road (Tax Map 64, Lot 25): +/-2.85 acres *per boundary line adjustment plat*
- 33 Labombard Road (Tax Map 51, Lot 15): +/-2.55 acres *per boundary line adjustment plat*

Zoning District:

Light Industrial (IND-L)

Zoning Overlay District(s):

- Wetlands Conservation District

LEGAL NOTICE

The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25, zoned IND-L: Request for approval of a Boundary Line Adjustment. PB2024-17-BLA

PLANS AND APPLICATION MATERIALS

- ▶ Application forms (2 pages)
- ▶ Letter dated April 4, 2024, from Noah Lynd and Josh Garrison (project description; 1 page)
- ▶ Fee Schedule (1 page)
- ▶ Subdivision Regulations - Technical Checklist, dated 4/4/24 (3 pages)
- ▶ Public hearing notification list (1 page)
- ▶ Plat titled "Boundary Line Adjustment Plat, Lands of Chaloux Properties, LLC," prepared by Latitudes Land Surveying, dated January 20, 2022, Project #2210.

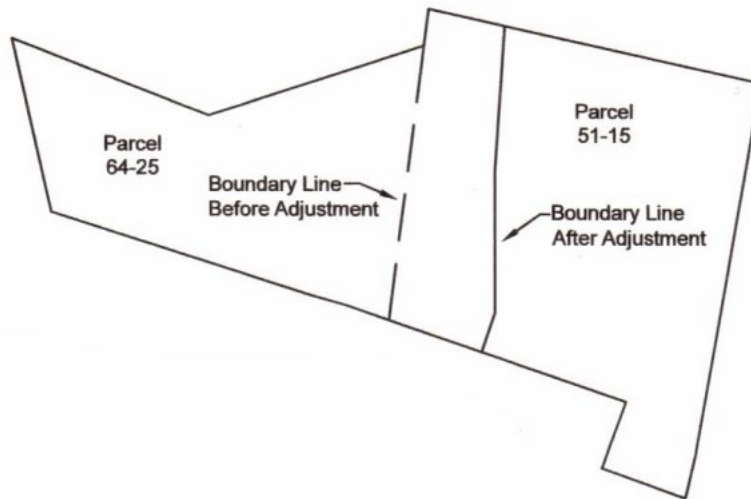
COMPLETENESS REVIEW

This application has been reviewed in accordance with the Lebanon Subdivision Regulations. The Planning and Development Department recommends that the Board find that the application is complete enough to accept jurisdiction and to commence review.

APPLICATION OVERVIEW

This is a request for a Boundary Line Adjustment between lands located at 25 Labombard Road (Tax Map 64, Lot 25) and 0 Labombard Road (now 33 Labombard Road) (Tax Map 51, Lot 15). As proposed, the changes resulting from the Boundary Line Adjustment are as follows:

- ▶ Map/Lot 64-25 will increase by a net of +/-0.84 acres, from +/-2.01 acres to +/-2.85 acres.
- ▶ Map/Lot 51-15 will decrease by a net of +/-0.84 acres, from +/-3.39 acres to +/-2.55 acres.

**STAFF COMMENTS****ASSESSING**

No comment provided.

BUILDING INSPECTION

No comment provided.

FIRE

The Lebanon Fire Department has reviewed this application and has no fire code related concerns.

POLICE

No comment provided.

PUBLIC WORKS/CITY ENGINEER

No comment.

PLANNING

- An identical request was approved by the Planning Board on February 23, 2022 (PB2022-04-BLA). However, the applicant recorded the plat without the Planning Board Chair's signature in violation of Section 7.11 of the Subdivision Regulations. As such, the plat was recorded "illegally," which was only discovered by staff in March of this year. Section 7.12.B provides that the Board's approval "shall be considered void unless [...] the plat has been recorded in the Registry of Deeds, within two (2) years from the date of the Notice of Action[.]" Here, because the plat approved on February 23, 2022 was not (legally) recorded within two (2) years, the Board's approval automatically expired by virtue of Section 7.12.B. Consequently, a new application is required (Note that the Planning Board is authorized to grant an extension provided the extension request is submitted prior to the expiration date – see Section 7.12.C).
- The original boundary line adjustment plat (PB2022-04-BLA) was approved in connection with the development of a climbing gym on 33 Labombard Road, which is currently under construction. Condition of Approval #1 for the climbing gym site plan approval (as set forth on the Board's

Notice of Action dated February 23, 2022 for PB2022-05-SPR) required the Boundary Line Adjustment plat approved by the Planning Board on February 23, 2022 to be recorded prior to submitting a building permit application for the climbing gym project. Consequently, the applicant is technically in violation of the site plan approval since the Boundary Line Adjustment plat was not legally recorded prior to the submission of a building permit application. Therefore, since construction of the gym is well underway, staff recommends that the applicant satisfy the conditions of approval and that the plat is recorded within a relatively short period of time in order to resolved the site plan violation as expeditiously as possible (see staff recommendations below).

- As an aside, prompted by questions from the applicant, staff has discovered some anomalies in the Subdivision Regulations relative the procedural and submission requirements for boundary line adjustments. For example, while a public hearing is not required for a boundary line adjustment application, the plat still must be approved by the Board at a public meeting upon receipt of a complete application (see Section 8.1.A). Requiring a public hearing confers certain rights on abutters and other interested parties, but aside from that there is no practical difference between requiring a public hearing on the one hand and following the BLA approval procedures as currently set forth in the Subdivision Regulations on the other hand. As a future work session item, staff recommends that the Board review the BLA procedural and submission requirements and evaluate the need for updating/amending.

ZONING

Both lots currently conform to the applicable minimum lot sizes and dimensional requirements as set forth in the Zoning Ordinance and will continue to after reconfiguration.

STAFF RECOMMENDATIONS

If the Board moves to approve this application, then based on the information reviewed by City staff, the Planning and Development Department recommends that the Board approve the application with the following conditions:

A. General Conditions

1. This approval shall be considered void unless all conditions precedent are met and the plat is recorded in the Registry of Deeds within two (2) years from the date of the Notice of Action (Section 7.12.B). The plat shall be recorded by the Planning & Development Department in accordance with Planning & Development Department recording procedures.
2. This approval shall automatically expire and be considered void upon failure to meet any of the conditions of approval set forth herein within the timeframes specified.

B. Conditions to be Satisfied Prior to the Signing and Recording of the Plat

1. Within 20 days of the issuance of the Notice of Action, the applicant shall provide a revised plat depicting the following changes to the satisfaction of the Planning & Development Department:
 - a. Update the name of the property owner of Tax Map 51, Lot 15 to "The Notch Climbing Real Estate, LLC," and update plat throughout as needed including but not limited to the deed reference for Tax Map 51, Lot 15 and Note 1.
 - b. Correct misspelling of "public" in Note 8.
 - c. Retitle the plat to include the names of the owners of both lots. (8.2.A.8)
 - d. Provide the date and description of the plat revisions. (8.2.A.1)

2. Within 20 days of the issuance of the Notice of Action, the applicant shall provide to the City draft copies of the deeds of the land transfer for review to ensure the transfer will be completed properly for Assessing and recording purposes.
3. Within 45 days of the issuance of the Notice of Action, the applicant shall provide a digital record drawing of the revised plat (Cad .dwg format using NH State Plane Coordinate system or an alternative approved by the City's GIS Coordinator).
4. Within 45 days of the issuance of the Notice of Action, the applicant shall submit two (2) mylars of the approved plat and applicable recording fees to the Planning & Development Department in accordance with Planning & Development Department recording procedures. (8.1.D & 7.11)
5. Within 45 days of the issuance of the Notice of Action, the applicant shall submit the executed deeds of the land transfer together with applicable recording fees to the Planning & Development Department to be recorded contemporaneously with the plat.

Attachments

cc: The Notch Climbing Real Estate, LLC
Chaloux Properties, LLC
File

APPLICATION FOR

SPECIAL EXCEPTION	☐	☐	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☒	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☐	CONDITIONAL USE PERMIT

☐ OTHER _____

PROPERTY OWNER (APPLICANT):

NAME: The Notch Climbing Real Estate, LLC TEL.#: 603-252-0367

MAILING ADDRESS: PO Box 302 Meriden, NH 03770

E-MAIL ADDRESS: noah.lynd40@gmail.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: TEL.#:

MAILING ADDRESS:

E-MAIL ADDRESS:

PROJECT LOCATION: 64-25 + 51-15

TAX MAP #: 64-25 and 51-15 LOT#: PLOT #: ZONE: IND-L

STREET ADDRESS OF PROJECT: LaBombard Rd. 33 + 25 LaBombard Rd.

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☒ YES ☐ NO **HISTORIC DISTRICT** ☐ YES ☐ NO
FLOOD PLAIN ☐ YES ☐ NO

SCOPE OF PROJECT: Boundary Line Adjustment

Reapproval of Boundary Line Adj.
2 lots to 2 lots

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL
PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL
IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC**
USE: Climbing Gym

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on May 13, 2024, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY OWNER: [Signature] DATE: 4/8/2024

NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

PROPERTY OWNER: _____ DATE: _____

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #		
4/8/2024	64-25 + 51-15	PB2024-17-BLA		

CITY OF LEBANON APPLICATION FOR

SPECIAL EXCEPTION	☐	☐	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☒	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☐	CONDITIONAL USE PERMIT

☐ OTHER _____

PROPERTY OWNER (APPLICANT):

NAME: Chaioxx Properties LLC TEL.#: 603 252 5974

MAILING ADDRESS: PO Box 4430 Manchester, NH 03108

E-MAIL ADDRESS: jay.campion@gmail.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: The Notch Climbing Real Estate, LLC TEL.#: 603-252-0367

MAILING ADDRESS: PO Box 302, Meriden, NH 03770

E-MAIL ADDRESS: noah.lynd40@gmail.com

PROJECT LOCATION:

TAX MAP #: 64-25 and 51-15 LOT#: _____ PLOT #: _____ ZONE: IND-L

STREET ADDRESS OF PROJECT: _____

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☒ YES ☐ NO **HISTORIC DISTRICT** ☐ YES ☐ NO
FLOOD PLAIN ☐ YES ☐ NO

SCOPE OF PROJECT: Boundary Line Adjustment

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL
PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL

IF USE IS COMMERCIAL OR INDUSTRIAL, PLEASE NOTE SPECIFIC

USE: Climbing Gym

SIGNATURE BLOCK: X

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on May 13, 2024, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY OWNER: X

DATE: X 4/8/24

NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

PROPERTY OWNER: _____

DATE: _____

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #	FEE - \$ AMOUNT	DATE PAID	VOUCHER #

April 4, 2024

Lebanon Planning Board
City of Lebanon
51 North Park Street
Lebanon, NH
03766

Re: The Notch Climbing Gym
LaBombard Rd.
Subject parcels 64-25 and 51-15
IND-L Zone
Boundary Line Adjustment Request

Dear Lebanon Planning Board,

As a part of the above referenced project, we applied for and received approval for a lot line adjustment in February 2022. We regret that the approved plan was not properly recorded with the City of Lebanon and that the deadline to apply for an extension has passed. As such, we are resubmitting the same plan that has previously been approved by the Planning Board with the intention to make sure the final plan is properly recorded with the City.

Project Description:

The Notch Climbing Gym will be a 10,000 sq ft building with a 2,500 sq ft mezzanine. Improvements to the property will include this building as well as a parking lot and access road. The site plan was approved by the Planning Board in February of 2022.

Sincerely,
Noah Lynd and Josh Garrison

Fee Schedule:

Filing fee: \$25

Advertising fee: \$100

Notification fee: $17 \times \$5.04 = \85.68

Total fees: \$210.68

CITY OF LEBANON, NH SUBDIVISION REGULATIONS – TECHNICAL CHECKLIST MINOR LOT LINE ADJUSTMENT / BOUNDARY LINE AGREEMENT	
PROJECT NAME: The Notch Climbing Gym	
APPLICANT: The Notch Climbing Real Estate, LLC	DATE: 04/04/2024
GENERAL SUBMISSION REQUIREMENTS:	

All applications to the Planning Board for Subdivision Review must be submitted by 12:00 Noon on the day of the filing cutoff. [§7.7.C] Submissions must be accompanied by the following information or review of the application may be delayed:

- ☒ A properly completed and signed Application Form. [§7.7.A(1)]
- ☒ The appropriate filing fees. [§7.7.A(2)]
- ☒ A written project description. [§7.7.A(3)]
- ☒ A list of the names and mailing addresses of all persons to be notified, by certified mail, of the public hearing. [§7.7.A(4)]
- ☒ A completed and signed Technical Checklist. [§7.7.B]
[Applicants must complete the entire checklist to ensure that all necessary information and materials have been provided with the application or that written requests for waivers have been properly provided in accordance with Section 7.15 of the Subdivision Regulations, as appropriate.]
- ☐ Eight (8) sets of project plans to be distributed for Staff Review. [§8.2.A]
[A Staff Review meeting is held at City Hall one (1) week following the cutoff date. Staff Review meetings begin at 2:00PM, unless otherwise noted. All revised and/or additional information or materials must be submitted within one (1) week following the Staff Review meeting.]
- ☒ A digital copy of Subdivision plan in .PDF format. [§8.2.B]

See note
on page 3

NOTE: Applications shall contain sufficient information to enable the City Staff and the Planning Board to evaluate the proposed development for compliance with the Zoning Ordinance, the Planning Board's Regulations, and other applicable City Codes, and for the Planning Board to make an informed decision.

All required application materials shall be submitted as a single inclusive package, including any appropriate waiver requests as permitted by the Regulations. Submission of a complete application package ensures that the review process by City Staff is as efficient and effective as possible.

The purpose of the filing deadline is to provide adequate time for City review of the proposal. Submission of any altered, additional, or substitute application materials required by the Regulations, subsequent to the filing deadline, other than as directed by City Staff, shall cause the application to be deemed untimely filed, and such application shall not be heard until a subsequent month.

CITY OF LEBANON, NH
SUBDIVISION REGULATIONS - TECHNICAL CHECKLIST
MINOR LOT LINE ADJUSTMENT / BOUNDARY LINE AGREEMENT

PLAN SUBMITTAL TECHNICAL CHECKLIST:

NOTE: Minor Lot Line Adjustment / Boundary Line Agreement plans shall include the information described below pursuant to Section 8 of the Lebanon Subdivision Regulations. Plans shall be submitted on sheets no larger than 24" x 36". Plan sets with multiple sheets shall include sheets of uniform size and be bound on the left edge. When more than three (3) sheets are required, an additional cover sheet shall be attached including a table of contents. The scale of the plans shall be appropriate to the size of the overall development. All lettering shall be of a size and type that is legible.

In order to facilitate the use of the City's Geographic Information System (GIS) for planning purposes, all surveys and engineered plans submitted for Subdivision Review shall utilize the NH State Plane Coordinate system and shall reference the North American Vertical Datum of 1988 (NAVD 88), unless prior approval to use an alternate coordinate system and/or vertical datum is granted by the Planning Office.

A written request for waiver shall be required, pursuant to Section 7.15 of the Subdivision Regulations, for any submission requirement for which the information or data is not provided by the applicant. [§8.2.C]

Plan Requirements	Info. Provided	Waiver Sought
8.2.A(1) - - Name of the City and County in which the subdivision is proposed; - A Locus map; - North arrow; - Scale of the plat; - Date of the plat and of any revisions to the plat; (NOTE: The date on the plat at the time of initial submission for application review shall be included on all subsequent submissions to the City. Any subsequent change(s) to the plat shall include a revision date and description of the revision(s).)	☒ ☒ ☒ ☒ ☒	☐ ☐ ☐ ☐ ☐
8.2.A(2) - Names and mailing addresses of Applicant(s); Owner(s) of Record of subject properties; Owners of abutting properties, including tax map and lot references; and Holders of any easements, rights-of-way, or other restrictions.	☒	☐
8.2.A(3) - Names and business addresses of the surveyor, including license number and seal, and of every engineer, architect, soil scientist, or wetlands scientist whose professional seal appears on any plan or document submitted to the Board.	☒	☐
8.2.A(4) - Zoning District in which the subject lots are located, including district boundaries if in more than one district.	☒	☐
8.2.A(5) - Location of all existing structures on the subject lots.	☒	☐
8.2.A(6) - Site location map showing the original boundaries of the subject lots and adjacent lots.	☒	☐
8.2.A(7) - The new surveyed property line(s) as a result of the application, including bearings and distances, as determined by an actual field survey by a licensed land surveyor, including the date of the completion of the survey. All dimensions shall be shown in feet and decimals, and the area of the altered lots shall be shown in square feet and acres.	☒	☐

CITY OF LEBANON, NH
SUBDIVISION REGULATIONS - TECHNICAL CHECKLIST
MINOR LOT LINE ADJUSTMENT / BOUNDARY LINE AGREEMENT

Plan Requirements (cont.)	Info. Provided	Waiver Sought
8.2.A(8) - The plat shall be titled to include the names of the owners of all lots altered by the application.	☒	☐
8.2.A(9) - A statement shall be placed on the plat as follows: "This plan shows Minor Lot Line Adjustments / Boundary Line Agreements and does not require the approval of the Lebanon Planning Board as a subdivision."	☒	☐

NOTE: THE APPLICANT IS RESPONSIBLE FOR PROVIDING THE REQUIRED INFORMATION PURSUANT TO SECTION 8 OF THE SUBDIVISION REGULATIONS. PLEASE BE AWARE THAT THIS CHECKLIST IS FOR INFORMATION AND GUIDANCE ONLY AND DOES NOT REPRESENT THE LAW DICTATING SUBMITTAL REQUIREMENTS NOR IS IT COMPLETE AND INCLUSIVE THEREOF.

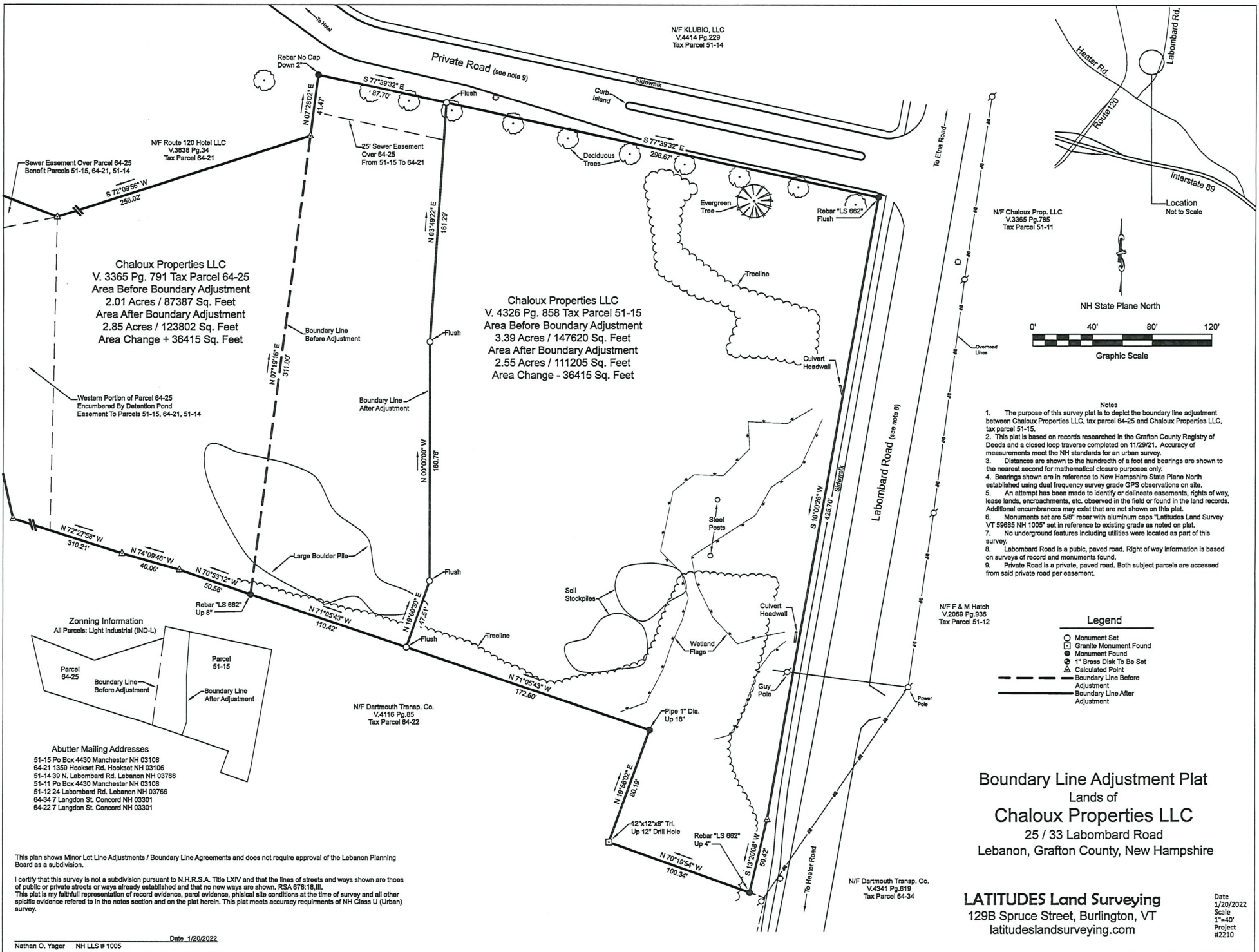
Completed By: Noah Lynd

Note: Applicant has been informed that one copy is required

Planning office Use Only:		
Date Received ___/___/___	Checklist Complete YES or NO	Checked by: _____

(Last Revised 05/22/13)

ID	Site Address	Owner Name	Co-Owner Name	Owner Address	Owner City	Owner State	Owner Zip
51-11	33 LABOMBARD RD	CHALOUX PROP LLC		PO BOX 4430	MANCHESTER	NH	03108
64-22	13 LABOMBARD RD	DARTMOUTH TRANSP CO INC		7 LANGDON ST	CONCORD	NH	03301
51-12	24 LABOMBARD RD	HATCH, FREDERIC & MARGARET		24 LABOMBARD RD	LEBANON	NH	03766
64-9	18 OLD ETNA RD	MARY HITCHCOCK MEM HOSPITAL		ONE MEDICAL CENTER DR	LEBANON	NH	03756
64-19	135 NH ROUTE 120	PRITI HOSPITALITY, LLC		440 BEDFORD ST	LEXINGTON	MA	02420
64-21	35 LABOMBARD RD	ROUTE 120 HOTEL LLC		1359 HOOKSETT RD	HOOKSETT	NH	03106
51-1	41 LABOMBARD RD	KOERIER, LLC		PO BOX 2172	LEBANON	NH	03766
64-34	0 LABOMBARD RD	DARTMOUTH TRANSP CO INC		7 LANGDON ST	CONCORD	NH	03301
64-25	25 LABOMBARD RD	CHALOUX PROP LLC		PO BOX 4430	MANCHESTER	NH	03108
51-15	0 LABOMBARD RD	THE CLIMBING REAL ESTATE, LLC		PO BOX 302	MERIDEN	NH	03770
51-14	39 LABOMBARD RD	KULBIO, LLC		39 LABOMBARD RD	LEBANON	NH	03766
		ENGINEERING VENTURES		85 MECHANIC ST	LEBANON	NH	03766
		LATITUDES LAND SURVEYING		129 B SPRUCE ST	BURLINGTON	VT	05401
		MARA LANDSCAPE DESIGN		16 MYRTLE AVE	NEWBURYPORT	MA	01950
		BANWELL ARCHITECTS		6 SOUTH PARK ST	LEBANON	NH	03766
		AUDRA KLUMB		34 CENTENIAL DR	WEBSTER	NH	03303
		NOAH LYND & JOSH GARRISON		PO BOX 302	MERIDEN	NH	03770



A Joint Statement by the City of Lebanon Planning Board and the City of Lebanon Diversity, Equity, and Inclusion Commission on Community Housing Solutions

WHEREAS the City of Lebanon, as elsewhere in the country, is facing a severe shortage of affordable housing, especially but not limited to workforce housing; and

WHEREAS the shortage of housing has powerful equity implications for the present and future residents of the City; and

WHEREAS rapid expansion of housing stock has and will have implications for the sustainability, longevity, and resilience of the City; and

WHEREAS informed decisionmaking and transparency are integral to the democratic process of charting a course for the future of the City; and

WHEREAS the Lebanon City Council has demonstrated a laudable willingness to address the housing crisis to the fullest extent possible, in considering and taking actions to create the needed changes in a timely manner; now, therefore

BE IT RESOLVED that the City of Lebanon Planning Board and DEI Commission, having jointly drafted this resolution and having agreed upon its language and the priorities it sets out, recommend that the Lebanon City Council work with representatives from the DEI Commission and Planning Board to **create a task force on community housing solutions, with the stated goals of producing a report and, based upon the findings of that report, recommending drafted changes to (i) the Housing chapter of the City of Lebanon Master Plan and (ii) the Neighborhood and Housing functional area of the City of Lebanon Strategic Plan no later than 1 July 2026 at which time it will be dissolved unless other action is taken. The task force shall be named the Lebanon Housing Task Force.**

BE IT FURTHER RESOLVED that the City of Lebanon Planning Board and DEI Commission recommend that **said report should include, but not be limited to:** the identification and quantification of the drivers affecting Lebanon's current housing shortage; the gathering and interpretation of housing and population data for the City, including housing ownership rates, housing type, demographics, and quality of life considerations like accessibility to transit, communal resources, and green spaces; the forecasting of future housing and related needs of the City according to the same; an analysis of current and potential equity issues in Lebanon's housing supply; an analysis of the implications for the City and its current residents on other changes created by rapid population growth; the potential for regional partnerships as a part of the solution to what is a regional issue; and potential solutions for City Council implementation, including estimated costs. Also included in the conclusion of the report should be a judgement on whether, if

feasible, the City of Lebanon would be best served by the creation of a standing Housing Commission, pursuant to NH RSA 674:44-I.

BE IT FURTHER RESOLVED that the City of Lebanon Planning Board and DEI Commission recommend that the City Council, in the formation of this task force, should work with representatives of the Planning Board and DEI Commission to **invite various community stakeholders to join or take part in the work**. The task force should consist of 11 members: the City Manager or designee; a representative of the Upper Valley/Lake Sunapee Regional Planning Commission; a representative of Advance Transit; a representative designated by the Lebanon School Board; a representative from Dartmouth Health; a member of the Lebanon Planning Board; a member of the Lebanon DEI Commission; a member of the Lebanon Conservation Commission; a representative of the Lebanon Housing Authority; a member representing a business in the City; and a resident of the City who shall be appointed by the City Council. If members from these bodies cannot be found, others representing similar perspectives may be considered. The Lebanon Housing Task Force (LHTF) would be a public body and would need to comply with the provisions of RSA 91-A, related state statutes, City Charter, City Code and applicable policies. Members of the LHTF would serve until the task force is dissolved and without compensation other than reimbursement for allowable expenses.

BE IT FURTHER RESOLVED that the Task Force should **meaningfully engage the public** through such means deemed feasible and appropriate by the Task Force, such as public hearings, listening sessions, surveys, and/or other means.

Signed this [X] Day of [Month], at Lebanon, New Hampshire,

Andrew Faunce, Chair, Lebanon Planning Board

Alisha Robinson, Chair, Lebanon Diversity, Equity and Inclusion Commission

CITY OF LEBANON
APPLICATION FOR

SPECIAL EXCEPTION	☐	☒ SITE PLAN REVIEW
VARIANCE	☐	☒ SUBDIVISION
MOTION FOR REHEARING	☐	☐ LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☒ CONDITIONAL USE PERMIT

☒ OTHER Conceptual

PROPERTY OWNER (APPLICANT):

NAME: James Campion/Choice Storage TEL #: 603 643 6607
MAILING ADDRESS: 44 So. Main St. #14, Hanover, NH 03755
E-MAIL ADDRESS: jay.campion@gmail.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: _____ TEL #: _____
MAILING ADDRESS: _____
E-MAIL ADDRESS: _____

PROJECT LOCATION:

TAX MAP #: 26 LOT #: 17 PLOT #: _____ ZONE: IND-L/RL-3
STREET ADDRESS OF PROJECT: 0 Etna Road

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES ☐ NO **HISTORIC DISTRICT** ☐ YES ☐ NO
FLOOD PLAIN ☐ YES ☐ NO

SCOPE OF PROJECT:

See attached Conceptual review
for Planned Business Park

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL
PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☐ INDUSTRIAL
IF USE IS **COMMERCIAL OR INDUSTRIAL**, PLEASE NOTE SPECIFIC
USE: COMMERCIAL USE 150000 SQ FT

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on _____, 20____, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY

OWNER: _____

DATE: 4/14/24

NOTE: IF AS OWNED YOU WISH TO RESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by an official decision made on the basis of such representation.

PROPERTY

OWNER: _____

DATE: _____

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #
<u>4/25/2024</u>	<u>26-17</u>	<u>PB 2024-20-CON</u>

To the Members of the Planning Board, City staff and Management.

My Name is Jay Campion. I am bringing forward an application to form a Planned Business Park uniting multiple properties along route 120 and Etna Road, between Hanover and Lebanon.

I am no stranger to this neighborhood. My family settled in the area in 1887, and I live less than a mile as the crow flies from this corner of Lebanon, and this spot where I began aggregating properties twenty-six years ago.

Since that time, I have added a Conference Center, a hotel, a high tec employer and a climbing gym to this location, adding millions to the City's tax base.

I am putting forward an application for Conditional Use Permit to allow the formation of a Planned Business Park, that will produce long term positive development for Lebanon. Signal Park will bring much needed recreation fields and facilities to the City, it will increase housing options for residents and provide commercial goods and services for the throng that come here daily for work or play.

With the help and guidance of City staff, we have already created a zoning permitted space for the Cities recreational opportunities to exist, and a potential footprint for exciting new housing options and services, should the Planning board agree that this site is appropriate for this type of development.

The next step in the process is to recognize and promote this spot as appropriate, perhaps ideal for this purpose by creating a zoning approved district where it can happen.

I have followed up with staff to refine the details of my proposal and put forward what they suggested is required to move ahead with the establishment of a Planned Business Park with these properties, proximate to the Etna Road and route 120.

If approved, the result, expressed over the years ahead, should create a dynamic malleable mix of uses that can address the City's need for commercial, industrial and service development as well as the documented need for more housing options for Lebanon.

One major achievement for the City will to be to create a new home for Lebanon and Upper Valley recreational activities. The City wants to operate Recreation Department activities on fields and property owned and controlled by the City.

For that to occur, a funding mechanism needs to be in place to cover the cost of creating recreation fields and facilities.

The proposed funding mechanism is a TIFD (Tax increment Finance District) at Signal Park with new revenue added to the tax base with the creation of new housing options for residents, and other development.

The most direct route to take toward that goal would be to get a Planned Business Park in place that will allow putting residential units in what is currently the Ind-L zone.

Phase I of Signal Park needs to be permitted through some waivers, along with the Conceptual approval of Phase 2. It is Phase 2 that will involve all new engineering from top to bottom.

The proposed Phase 1 represents the creation of 4 subdivided properties that are required by code and deemed necessary to form a Planned Business Park. Phase 1 is based on the engineering for AoT #1389. That is, empty lots accessed on a planned and fully engineered roadway. These lots will be Contractors' Yards, used to temporarily house the contractors and materials to create phase 2.

The proposed Phase 1 operation will have no need for sidewalks with granite curbing or any City utilities.

The proposed Phase 1 Business Park designation, by code aggregates potential residential building capacity while constructing a funding mechanism to build the recreation facilities. At the same time, it increases general fund revenue and makes it possible to create flexible intensification of other uses on this critical corridor, which in turn creates TIFD revenue quickly.

Phase 2 will be ready to shoot ahead with plans and engineering to lay out the specific residential real estate proposed. This planning will also detail the projected revenue stream from property taxes, and the proposed infrastructure build-out including recreation fields. The City's planning, engineering and design expenses to create the infrastructure required ideally would be considered a TIFD covered expense.

It is for that reason that the Planning Board should approve the Phase 1 subdivision and waive those requirements that exceed the actual needs of the Phase 1 proposed use. That is, as a Contractors' Yard, and defer those requirements beyond an access road, to the production of detailed planning and engineering documentation of Phase 2.

Doing this would also involve the City in the full process of planning for both access and services to its property and the recreation facilities.

This, I believe, is the shortest distance between the proposed two points. Now, and playing soccer on City fields.

I have attached a detailed waivers request list, a Phase 2 rendering overlay and a Business Park Use Map.

Thank you for your consideration. Best, Jay Campion

CITY OF LEBANON, NH
SUPPORT STATEMENT FOR CONCEPTUAL REVIEW
SUBDIVISIONS

In accordance with Section 7.3 of the City of Lebanon Subdivision Regulations, the applicant shall submit the following information to the Planning Office at least two weeks before the date of the scheduled Conceptual Review:

- ☒ A project description.
- ☒ A written statement addressing how the concept conforms with the Master Plan.
- ☒ A sketch plan, based on a USGS or similar map of sufficient accuracy and quality, showing:
 - ◇ Existing property lines of the parcel(s) under review;
 - ◇ General topography, highlighting slopes in excess of 25%;
 - ◇ Prominent natural features of the site, such as tree lines, watercourses, floodplains, wetlands, and ledge outcrops;
 - ◇ Conceptual location and size of proposed lots, building envelopes, roadways, and open space areas;
 - ◇ Any other major issues or conceptual improvements to be discussed with the Board.

The Conceptual Review shall be directed at review of the basic concept of the proposal and suggestions which might be of assistance in resolving problems with meeting requirements during Final Plat Review. The Board and the applicant may discuss proposals in conceptual form only and in general terms, such as the desirability of types of development and proposals under the Master Plan. The conceptual plan shall be reviewed by the Board by consulting the Master Plan, its accompanying maps, diagrams, charts and descriptions, and other appropriate documents to determine if the area is generally suitable for development and to analyze how well the proposed subdivision meets the goals and objectives of the City.

The Board shall consult the future land use map and any plans for existing or future roads, utilities, and facilities, and open space to determine how well the proposed subdivision conforms with the Plan's pattern of growth. The Board shall focus on the characteristics of the site and its relationship to the surrounding area to determine how well the proposed subdivision fits into both the natural and man-made environments. The Board shall look for any indication of areas of historical, cultural, or environmental importance which should be considered. The Board may also advise whether a proposed subdivision should be delayed until public services have been extended or infrastructure upgraded as set forth in the Master Plan.

While a Conceptual Review is optional, it is strongly recommended, particularly for Major Subdivisions, as it can help identify and resolve issues at an early stage and save the applicant the time and cost of changes at a later date.

The Applicant may end the Conceptual Review at any time. Public notice of the Conceptual Review is not required, but such discussions shall only take place at a formal meeting of the Board. Such Conceptual Review shall not bind either the applicant or the Board in any manner and statements made by Board members shall not be the basis for disqualifying said members or invalidating any action taken.

(Last Revised 05/22/13)

AGREEMENT and AGENT DESIGNATION

This Agreement is made by and among the following parties:

- A. CWM All Waste LLC¹;
- B. Chaloux Properties LLC;
- C. Route 120 Hotel LLC;
- D. Choice Storage, LLC;
- E. Klubio, LLC;
- F. TLL Realty LLC; and
- G. Notch Climbing Real Estate LLC

Each of the foregoing is referred to individually as a “Party” and collectively as the “Parties”.

Preliminary Statement. The Parties have reviewed the benefits of establishing a Planned Business Park (the “Park”) within the meaning of Section 508 of the City of Lebanon Zoning Ordinance #2 for all of the properties owned by the Parties and identified on Exhibit A attached hereto. The Parties further wish to designate by this Agreement their agent for purpose of applying for approval of the Park by the Lebanon Planning Board.

Agreement. For good and valuable consideration, the mutual receipt of which is hereby acknowledged, the parties agree as follows:

1. Subject Properties. The Parties are the respective owners of the real properties identified on Exhibit A (collectively, the “Properties”).
2. Intent to Seek Park Designation. The Parties wish to have the Properties designated as a Planned Business Park within the meaning of Section 508 of the City of Lebanon Zoning Ordinance #2. The designation contained in Section 3 below is made solely for the purposes of obtaining designation as a Planned Business Park, and not for any construction or other purpose.
3. Designation of Agent for Planned Business Park Conditional Use Permit Application:

By signature below, each of the undersigned property owners hereby designate James W. (Jay) Campion, IV as its agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

¹ NH Secretary of State records shown as dissolved.

4. Representation; Costs. Each Party is entitled to participate in any hearings regarding establishment of the Park and is responsible for its own costs in doing so, including any legal fees.

5. General. This Agreement is binding on each of the Parties and their successors and assigns. This Agreement is and shall be deemed to be made under and pursuant to the laws of the State of New Hampshire and shall, in all respects, be governed, construed and enforced in accordance with the laws of that state, without resort to principles of conflicts of laws. This Agreement may not be amended, changed, modified, altered or terminated except by written instrument executed and delivered by the parties. This Agreement may be executed in any number of counterparts, each counterpart shall constitute an original agreement, and all counterparts taken together shall constitute a single agreement. Confirmation of execution of this Agreement by facsimile or electronic signature shall be binding upon any party so confirming.

[Signature pages follow]

Property Owner

Signature

Date

CWM All Waste LLC

By: _____,
Duly authorized agent

_____, 2024

Chaloux Properties LLC

By: _____,
Duly authorized agent

_____, 2024

Route 120 Hotel LLC

By: _____,
Duly authorized agent

_____, 2024

Choice Storage, LLC

By: _____,
Duly authorized agent

_____, 2024

Klubio, LLC

By: _____,
Duly authorized agent

_____, 2024

TLL Realty LLC

By: _____,
Duly authorized agent

_____, 2024

Notch Climbing Real
Estate LLC

By: _____,
Duly authorized agent

_____, 2024

Signal Park Waiver Requests Phase 1

WAIVER REGULATIONS In order to grant a Waiver from a requirement of the City of Lebanon Site Plan Review or Subdivision Regulations, the Planning Board must find that the Waiver is justified under one of the following criteria (See Article VII of the Site Plan Review Regulations and Section 7.15 of the Subdivision Regulations):

Criteria A. Strict conformity would pose an unnecessary hardship to the Applicant and waiver would not be contrary to the spirit and intent of the regulations.

OR

Criteria B. 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.

Each of the waivers referenced requirement by requirement below, share Criteria A. and B. justifications.

It would be an unnecessary hardship to produce a full set of plans for Phase 2 of Signal Park when none of the development proposed therein can be permitted in the InD-L zone unless it is being proposed as part of a Planned Business Park. The Phase 1 subdivision and PBP designation must precede Phase 2 design submission.

Since proposed Phase 1 subdivision and PBP designation has the prerequisite engineering to function with the uses proposed, completing many of the additional designing and engineering requirements logically should be pushed to Phase 2 after the PBP is formed.

This also directly relates to Criteria B.

Criteria B. Specific circumstances relative to the site plan, (existing full engineering for AOT #1389 and) or conditions of the land in such site plan,(with all development shown in Phase 2) indicate that the short term waiver for Phase 1 will properly carry out the spirit and intent of the regulations.

10.4 Submission Requirements

A. A complete application for all Major Subdivisions, whether for Design Review or Final Plat Review, shall include the items listed in Section 7.7 of these Regulations as well as the following:

1. Paper copies of the proposed subdivision plat (the number to be determined by the Planning Office on an as-needed basis.) Plans shall be submitted on sheets no larger than 24" x 36". Plan sets with multiple pages shall include sheets of uniform size and be bound on the left edge. When more than three (3) sheets are required, an additional cover sheet of the same size shall be attached including a table of contents. The scale of the plans shall be appropriate to the size of the overall development. All lettering shall be of a size and type that is legible. All Major Subdivision plans shall include and depict the following baseline information as well as the more detailed design information listed in Sections 10.4.B or 10.4.C of these Regulations, as appropriate: [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

a. The proposed subdivision name or identifying title, the name of the City and County in which the subdivision is located, a Locus map, north point, scale, date of the plat, and the date and description of any revisions. If a cover sheet is provided, the date of the plat and the date(s) of any subsequent revisions shall be shown on the cover sheet.

NOTE: The date on the plat at the time of the initial submission to the City for application review shall be included on all subsequent . [Included](#)

City of Lebanon - Subdivision Regulations Page 29 of 55

submissions to the City. Any subsequent change to the plat shall include a revision date and description of the revision. [Included](#)

b. The names and addresses of the Applicant(s); the Owner(s) of record of the subject properties; the Owners of abutting properties, including tax map and lot number references; and the Holders of any easements, rights-of-way, or other restrictions, based on the current records of the City Assessor available at City Hall, not more than 5 days before the filing of the application. [Included](#)

c. The name and business address of the surveyor, including license number and seal, and of every engineer, architect, soil scientist, or wetlands scientist whose professional seal appears on any plan or document submitted to the Board. [Included](#)

d. The zoning district(s) in which the subdivision is located, including district boundaries if in more than one district. [Included in AoT#1389 for Phase 1. Included in the Conceptual for Phase 2](#)

e. The boundary lines of the overall tract, and for each of the proposed lots, including bearings and distances, as determined by an actual field survey certified by a licensed land surveyor and bearing the date of the completion of the survey. Surveys shall utilize

the NH State Plane Coordinate system, unless prior approval to use an alternate coordinate system is granted by the Planning Office. All dimensions shall be shown in feet and decimals thereof. Referenced on the plat shall be monuments as required under Section 13.5(A) of these Regulations. [Included](#)

f. Topographic contours, at intervals of five (5) feet or less, including spot elevations on existing roads and a grading plan, if natural contours are to be changed by more than two (2) feet. All contours and spot elevations shall be referenced to USGS or FEMA Flood Insurance Rate Map (FIRM) datums, as appropriate. Existing topographic information shall be prepared by a professional engineer registered in New Hampshire or by a land surveyor licensed in New Hampshire. [Included in AoT#1389 for Phase 1 with LIDAR updates. Full redesign for Phase 2](#)

g. The location of existing structures, roads, easements, and trails located on the property and within 200 feet of the property. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

h. The location of existing natural features, including, but not limited to, permanent or intermittent watercourses, marshes, lakes, ponds, flood plains, wetlands, rock outcrops, wooded areas, and other significant features on the property and within 200 feet of the property. The plan shall indicate the approximate limits of clearing necessary for the development and those natural features that are to be removed, retained, or altered. NOTE: Wetlands on the property shall be delineated by a Certified Wetlands Scientist, whose seal and signature shall appear on the plan.

City of Lebanon - Subdivision Regulations Page 30 of 55

i. The location of existing water and wastewater mains, culverts, and drains on the property and within 200 feet of the property with sufficient information to allow City Staff and the Board to view the proposed subdivision in the context of existing City utilities, with pipe sizes, and direction of flow. [not applicable.](#)

j. If the application covers only a part of the Applicant's entire holding, a map of the entire tract shall be drawn at a scale of not smaller than four hundred (400) feet to the inch showing all existing streets and an outline of the platted area with its proposed streets. 2. Digital copies of the overall Subdivision plat (in both .PDF and CAD .dwg format) shall be provided depicting the information required under Paragraph 1 above. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

3. Any request(s) for waiver(s) or modification(s) pursuant to Section 7.15 of these Regulations.

B. Design Review - Specific Submission Requirements

1. Major Subdivision plans submitted for Design Review shall include and depict the following information in addition to the baseline information listed in Paragraph 10.4.A(1) above:

- a. The proposed lot lines and rights-of-way with bearings and distances and areas of each lot in square feet and acres. [Included](#)
- b. The approximate width, location, and grades of all streets or road rights-of-way proposed by the Applicant. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)
- c. The preliminary profile of streets and cross-sections for construction of streets and sidewalks. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)
- d. The approximate location and size of all proposed water lines, valves, hydrants, wastewater lines, manholes, and connections to existing public or private utility lines. Alternate means of water supply or wastewater disposal and treatment, including data on soil tests and preliminary designs and locations, shall be provided if existing municipal systems are not available. [Waiver requested for Phase 1. Full redesign for Phase 2](#)
- e. The preliminary storm drainage plan indicating the approximate location and size of proposed catch basins, manholes, drainage lines, ditches, retention, detention, or infiltration systems and their profiles, connections to existing lines or ditches, and all other means of storm water management. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)
- f. The location and preliminary design of any proposed bridges or culverts. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

City of Lebanon - Subdivision Regulations Page 31 of 55 g.

The preliminary plan for existing and proposed telephone, cable, and electric utilities, including municipal fire alarm systems. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

- h. The preliminary location of proposed recreational or open space areas, including land proposed to be dedicated to public use. The Applicant shall also indicate the location of all existing publicly accessible recreation or open space areas within 1/4 mile (1,320 feet) of the property. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

i. The location of any proposed traffic control devices necessary in conjunction with the subdivision, as well as the location of all existing transit routes and transit stops located or passing within 1/4 mile (1,320 feet) of the property. [Waiver requested for Phase 1.](#)
[Full redesign for Phase 2](#)

j. Phasing lines, where applicable.

2. The following supporting documents and information shall be provided for Design Review:

a. A preliminary statement of the anticipated work required on existing streets and other off-site improvements to meet the minimum standards set forth herein. [Waiver requested for Phase 1.](#) [Full redesign for Phase 2](#)

b. The information and impact statements required by all applicable portions of Section 12 of these Regulations. The Board may require the Applicant to pay reasonable fees to cover the City's administrative expenses and costs of investigative studies and/or peer reviews with regard to the impact statements as provided in Section 7.7.F of these Regulations.

c. Soil Tests: Where private individual wastewater systems are proposed, the Applicant shall perform soil tests complying with requirements of Section 13.4 of these Regulations. For all proposed lots less than five (5) acres in size, the Applicant shall have a soil investigation made and a report prepared to establish the existence of at least 4,000 square feet of contiguous area meeting New Hampshire Department of Environmental Services (NHDES) requirements. NHDES approval of all subdivision lots less than five (5) acres in size shall be obtained and a copy of such approval shall be provided to the Board prior to the recording of the approved Final Plat. The soil maps and information shall be in accordance with the most current USDA Natural Resource Conservation Service County Soil Maps. Maps prepared by field investigation shall be stamped by a Certified Soil Scientist. All costs of preparing soil data shall be borne by the Applicant. d. If a subdivision is to be served by public wastewater services, the Applicant shall submit a Sewer Use Permit Application and obtain a Notice of Permitted Allocation pursuant to City Code Chapter 136 to verify the availability of sewer capacity and to reserve such capacity for the proposed development. [Included in AoT#1389 no lots under 5 acres for Phase 1.](#) [Full redesign for Phase 2](#) The Applicant shall also

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provide a statement of methods of sanitary wastewater estimations and computations therefor. [Waiver requested for Phase 1.](#) [Full redesign for Phase 2](#)

e. If a subdivision is to be served by public water supply, the Applicant shall apply for and obtain a Water Use Permit pursuant to City Code Chapter 182 to verify the availability of water capacity and to reserve such capacity for the proposed development. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

f. Any development estimated to generate in excess of 100 peak hour trips or 1,000 average daily trips (based upon the most current edition of the Institute of Transportation Engineers' Trip Generation Manual) shall prepare and submit a Traffic Impact Study in accordance with standard traffic analysis conventions as set forth by the NH Department of Transportation. The Board may, in its discretion, require the submission of a Traffic Impact Study for a development estimated to generate less than 100 peak hour trips or 1,000 average daily trips if the Board has reason to believe such development could adversely affect levels of service or have other adverse impacts. [Waiver requested for Phase 1 not applicable. Full redesign for Phase 2](#)

g. For any subdivision of 20 or more lots, plats, sites, units, or other divisions of land, the Applicant shall request a letter from Advance Transit, or other local public transportation providers, stating whether, in the opinion of the transit provider, public transportation service can be adequately provided to the development. [Waiver requested for Phase 1 not applicable. Full redesign for Phase 2](#)

h. A drainage analysis map and computations for the watershed area appropriate to the scale of the development and the scope of the project as determined by the Board. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

i. Where a phased development is proposed, a preliminary schedule for construction and completion of streets, utilities, and other required infrastructure improvements. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

j. If requested by Lebanon Fire or Engineering staff, CAD Autoturn data or a similar basis of design for the turn radius shall be provided in order to demonstrate adequate turn radius for emergency vehicle and equipment access. [Full redesign for Phase 2](#)

C. Final Plat Review - Specific Submission Requirements

1. Major Subdivision plans submitted for Final Plat Review shall include and depict the following information in addition to the baseline information listed in Paragraph 10.4.A(1) above: a. The final proposed lot lines and rights-of-way with bearings and distances and areas of each lot in square feet and acres. b. The final width, location, and grades of all streets or road rights-of way proposed by the Applicant. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

c. The final profile of streets and cross-sections for construction of streets and sidewalks. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

d. Names of all proposed streets.

e. The final design, location, and size of all proposed water lines, valves, hydrants, wastewater lines, manholes, and connections to existing public or private utility lines. Alternate means of water supply or wastewater disposal and treatment, including data on soil tests and final designs and location, shall be provided if existing municipal systems are not available. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

f. The typical lot layout(s) with building envelopes and location for on-site wastewater disposal facilities, if applicable. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

g. The final storm drainage plan, indicating the location and size of proposed catch basins, manholes, drainage lines, ditches, retention, detention, or infiltration systems and their profiles, connections to existing drainage lines or ditches, and all other means of storm water management. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

h. The final design and location of any proposed bridges and/or culverts. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

i. The final plan for existing and proposed telephone, cable, and electric utilities, including municipal fire alarm systems. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

j. The final location of proposed recreational or open space areas, including land proposed to be dedicated to public use. The Applicant shall also indicate the location of all existing publicly accessible recreation or open space areas within 1/4 mile (1,320 feet) of the property. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

k. The final location and design of any proposed traffic control devices necessary in conjunction with the subdivision, as well as the location of all existing transit routes and transit stops located or passing within 1/4 mile (1,320 feet) of the property. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

l. Phasing lines, where applicable.

m. Where applicable, there shall be shown on each lot on the plat whether or not there will be easements for water or wastewater mains, storm drainage of the proposed

streets, or other improvements. [Included in AoT#1389 for Phase 1. Full redesign for Phase 2](#)

2. The following supporting documents and information shall be provided for the Final Review Phase:

a. A final statement of the work required on existing streets and other off-site improvements to meet the minimum standards set [Waiver requested for Phase 1. Full redesign for Phase 2](#)

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forth herein, including cost estimates and the method of meeting such costs.

b. Cost estimates for the completion of all on- and off-site improvements which shall be subject to a Performance Security Agreement pursuant to Section 7.10 of these Regulations. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

c. Temporary Control Plan(s) to be implemented during the proposed construction period, including, but not limited to, traffic control, erosion control, dust control, and hours of operation. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

d. A copy of such proposed covenants or deed restrictions, including Owners Association documents and Bylaws as described in Section 12.8 of these Regulations, as may be intended to apply to the property in whole or in part. Where applicable, such Owners Association documents or other legal instruments shall include provisions for the ownership and maintenance of open space as described in Section 12.2 of these Regulations. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

e. Where a phased development is proposed, a final schedule for construction and completion of streets, utilities, and other required infrastructure improvements, as further set forth in Section 7.13.C of these Regulations. [Waiver requested for Phase 1. Full redesign for Phase 2](#)

f. Any proposed street or roadway access to a State highway shall be approved by the NH Department of Transportation and such written approval shall be provided to the

Board prior to the recording of the approved final plat. [Waiver requested for Phase 1.](#)
[Full redesign for Phase 2](#)

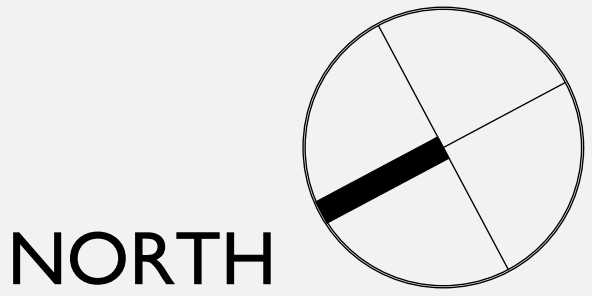
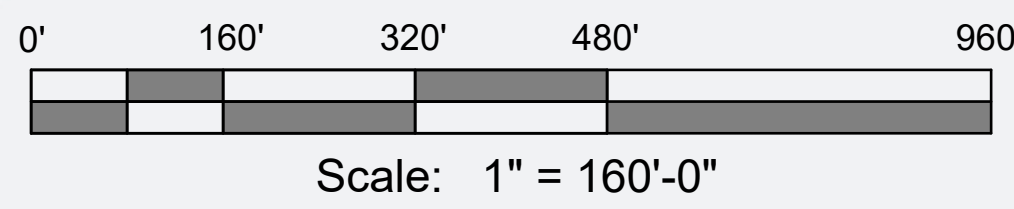
g. Other Approvals: Approvals, as prescribed by law, from any other City agency which may have jurisdiction, including but not limited to, wetland permits (see Section 7.4).

h. Where applicable to a specific subdivision, the Board may require a statement from telephone, cable, and electric utilities stating that services will be furnished and that arrangements have been made for installation of such utilities according to the plat as submitted by the Applicant.

i. If requested by Lebanon Fire or Engineering staff, CAD Autoturn data or a similar basis of design for the turn radius shall be provided in order to demonstrate adequate turn radius for emergency vehicle and equipment access.- [Waiver requested for Phase 1.](#)
[Full redesign for Phase 2](#)

SIGNAL PARK
CONCEPTUAL
SUBDIVISION AND
USE ALLOCATION PLAN

DRAFT SUBDIVISION
BUSINESS PARK DISTRICT
PHASE I



APRIL 2024

KEY:

- LIMITS OF PROPOSED BUSINESS PARK DISTRICT
- LIMITS OF PROPOSED SUBDIVISION PARCEL

PLANNED 26-17 SUBDIVISION PARCELS

PARCEL ID	SITE ADDRESS	OWNER NAME / USE	ACRES
26 - 17	0 ETNA RD	CHOICE STORAGE, LLC (ENTIRE PARCEL)	± 182.00
26 - 17	0 ETNA RD	AREA OF PLANNED BUSINESS PARK DISTRICT	± 94.80
LOT #3	0 ETNA RD (LOT #3)	USE: CONTRACTORS YARD (WITHIN PBP)	± 4.53
LOT #4	0 ETNA RD (LOT #4)	USE: CONTRACTORS YARD (WITHIN PBP)	± 5.85
-----	(BETWEEN LOT 3 & 4)	PROPOSED ROW AREA (WITHIN PBP)	± 1.08
LOT #5	0 ETNA RD (LOT #5)	CHOICE STORAGE, LLC (WITHIN PBP)	± 83.34
LOT #5	0 ETNA RD (LOT #5)	CHOICE STORAGE, LLC (ENTIRE LOT)	± 165.00
LOT #6	0 ETNA RD (LOT #6)	USE: ATHLETIC FIELD (WITHIN RL3)	± 5.54
TOTAL ACREAGE OF 26-17 PARCELS:			± 182.00

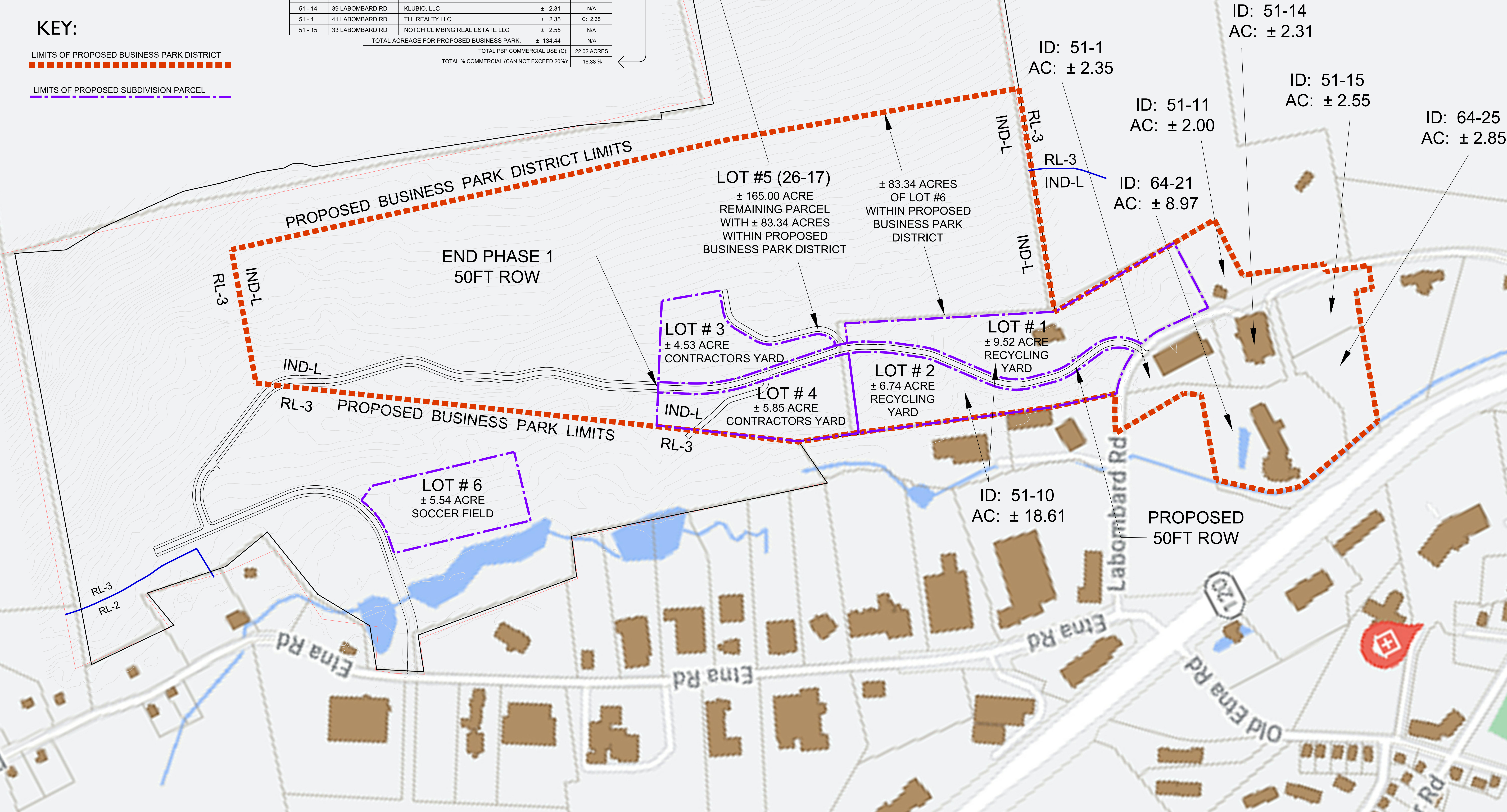
PLANNED BUSINESS PARK PARCELS

PARCEL ID	SITE ADDRESS	OWNER NAME	ACRES	PBP USE
51 - 10	40 N LABOMBARD RD	CWM ALL WASTE LLC	± 18.61	N/A
51 - 10 A	40A N LABOMBARD RD	LOT #1 PROPOSED RECYCLING YARD:	± 9.61	N/A
51 - 10 B	40B N LABOMBARD RD	LOT #2 PROPOSED RECYCLING YARD:	± 6.74	
-----	(BETWEEN LOT 1 & 2)	PROPOSED ROW AREA	± 1.80	
51 - 11	32 LABOMBARD RD	CHALOUX PROPERTIES LLC	± 2.00	C: 2.00
64 - 21	35 LABOMBARD RD	ROUTE 120 HOTEL LLC	± 8.97	C: 8.97
64 - 25	25 LABOMBARD RD	CHALOUX PROPERTIES LLC	± 2.85	C: 2.85
26 - 17	0 ETNA RD	CHOICE STORAGE, LLC (WITHIN PBP DISTRICT)		
26 - 17A	0A ETNA RD	LOT #3 PROPOSED CONTRACTORS YARD:	± 4.53	C: 5.85
26 - 17B	0B ETNA RD	LOT #4 PROPOSED CONTRACTORS YARD:	± 5.85	
26 - 17C	0C ETNA RD	LOT #5 PORTION WITHIN PBP DISTRICT:	± 83.34	
51 - 14	39 LABOMBARD RD	KLUBIO, LLC	± 2.31	N/A
51 - 1	41 LABOMBARD RD	TLL REALTY LLC	± 2.35	C: 2.35
51 - 15	33 LABOMBARD RD	NOTCH CLIMBING REAL ESTATE LLC	± 2.55	N/A
TOTAL ACREAGE FOR PROPOSED BUSINESS PARK:			± 134.44	N/A
TOTAL PBP COMMERCIAL USE (C):			22.02 ACRES	
TOTAL % COMMERCIAL (CAN NOT EXCEED 20%):			16.38 %	

PLANNED BUSINESS PARK REQUIREMENTS

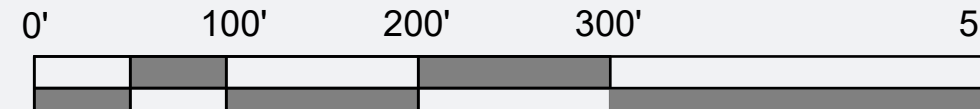
- 508.2 GENERAL REQUIREMENT. A PLANNED BUSINESS PARK IS A USE PERMITTED IN THE LIGHT INDUSTRIAL DISTRICT AND THE INDUSTRIAL RAIL ACCESS DISTRICT.
- 508.3 LOT AREA. A PLANNED BUSINESS PARK SHALL INCLUDE A MINIMUM OF TWENTY (20) CONTIGUOUS ACRES WITH AT LEAST FOUR (4) LOTS. 508.4 SECTORS.
- ALLOWED USES. A. THE PLANNED BUSINESS PARK SHALL BE SHOWN ON AN APPROVED SUBDIVISION PLAN AND USE ALLOCATION PLAN. THE SUBDIVISION PLAN AND USE ALLOCATION PLAN APPROVED BY THE PLANNING BOARD SHALL DESIGNATE THE ALLOCATION OF THE INDUSTRIAL/OFFICE, COMMERCIAL AND RESIDENTIAL USES WITHIN THE PARK.
- NO MORE THAN 20% OF THE NET LAND AREA NOT PLANNED FOR OPEN SPACE, ROADS, OR UTILITIES SHALL BE USED FOR THE COMMERCIAL SECTOR.
- C. UNLESS LIMITED BY THE PLANNING BOARD AT THE TIME OF SUBDIVISION APPROVAL, THE FOLLOWING USES SHALL BE PERMITTED.
1. THE FOLLOWING USES SHALL BE PERMITTED BY RIGHT FOR ANY PLANNED BUSINESS PARK INDUSTRIAL/OFFICE SECTOR: LIGHT INDUSTRY; WAREHOUSE; TRUCKING TERMINAL; PUBLISHING/PRINTING; PLUMBING, ELECTRICAL OR CARPENTRY SHOP; RESEARCH LABORATORY; LOCAL GOVERNMENT USE; ESSENTIAL SERVICE; OUTDOOR STORAGE PER SECTION 303.4 (LESS THAN 20%); GROUP DAY CARE FACILITY PER SECTION 604; GENERAL BUSINESS OFFICES; RESEARCH FACILITIES; MEDICAL OFFICE BUILDINGS; HEALTH CLUBS; EDUCATIONAL FACILITY; COLLEGE/UNIVERSITY; EDUCATIONAL FACILITY; VOCATIONAL SCHOOL; AND ACCESSORY USES TO A PERMITTED USE. RETAIL SHOWROOMS PER SECTIONS 303.5 AND 303.5 SHALL BE ALLOWED BY CONDITIONAL USE PERMIT.
2. THE FOLLOWING USES SHALL BE PERMITTED BY RIGHT FOR ANY PLANNED BUSINESS PARK COMMERCIAL SECTOR: RETAIL STORES UP TO A CUMULATIVE MAXIMUM OF 30,000 SQ. FT. OF GROSS FLOOR AREA; PERSONAL SERVICE; BANK, BRANCH BANK; RESTAURANT, SANDWICH SHOP/DELI; REFRESHMENT STAND; OFFICE; MOTEL; HOTEL; MOVIE THEATER; MEMBERSHIP CLUB; AMUSEMENTS (INDOOR); PRINTING (I.E. RETAIL COPY STORE); RADIO OR TV STUDIO; GROUP DAY CARE FACILITY PER SECTION 604; LOCAL GOVERNMENT USE; AND HEALTH CLUBS.

PHASE I

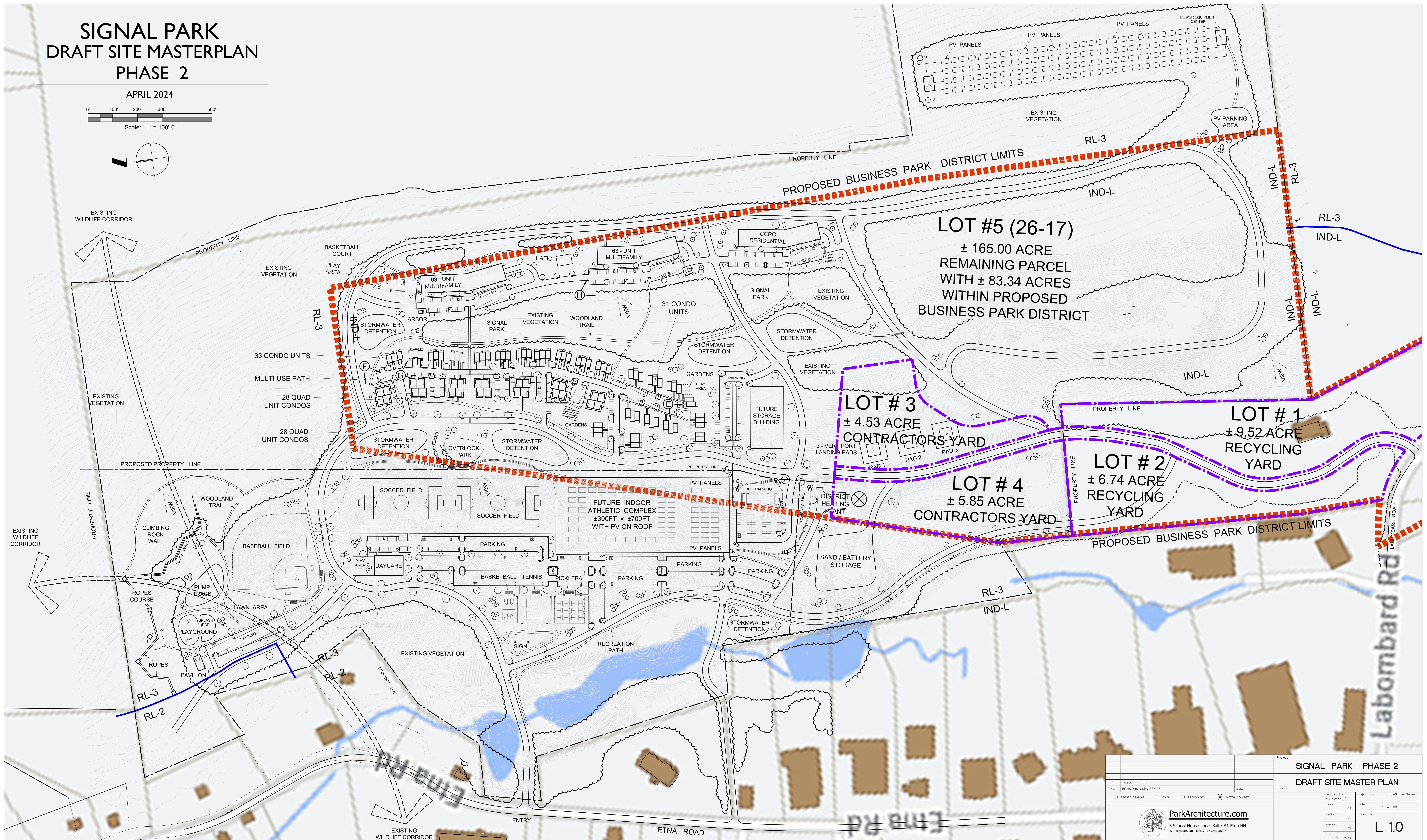
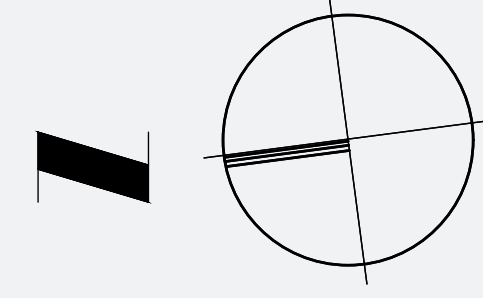


SIGNAL PARK DRAFT SITE MASTERPLAN PHASE 2

APRIL 2024



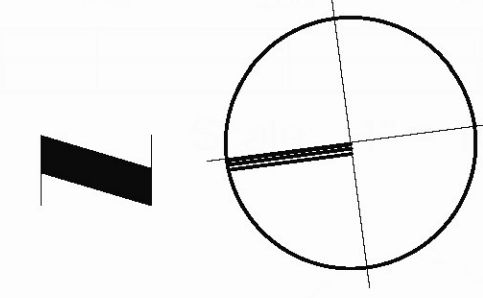
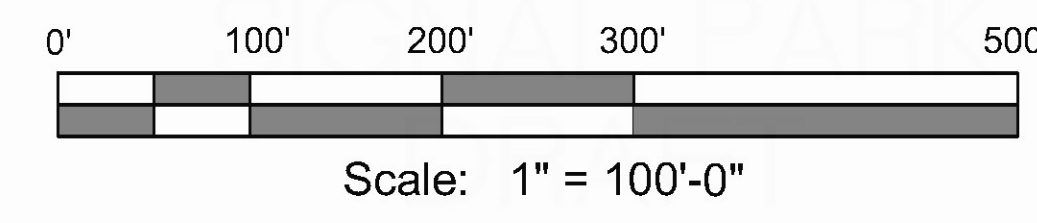
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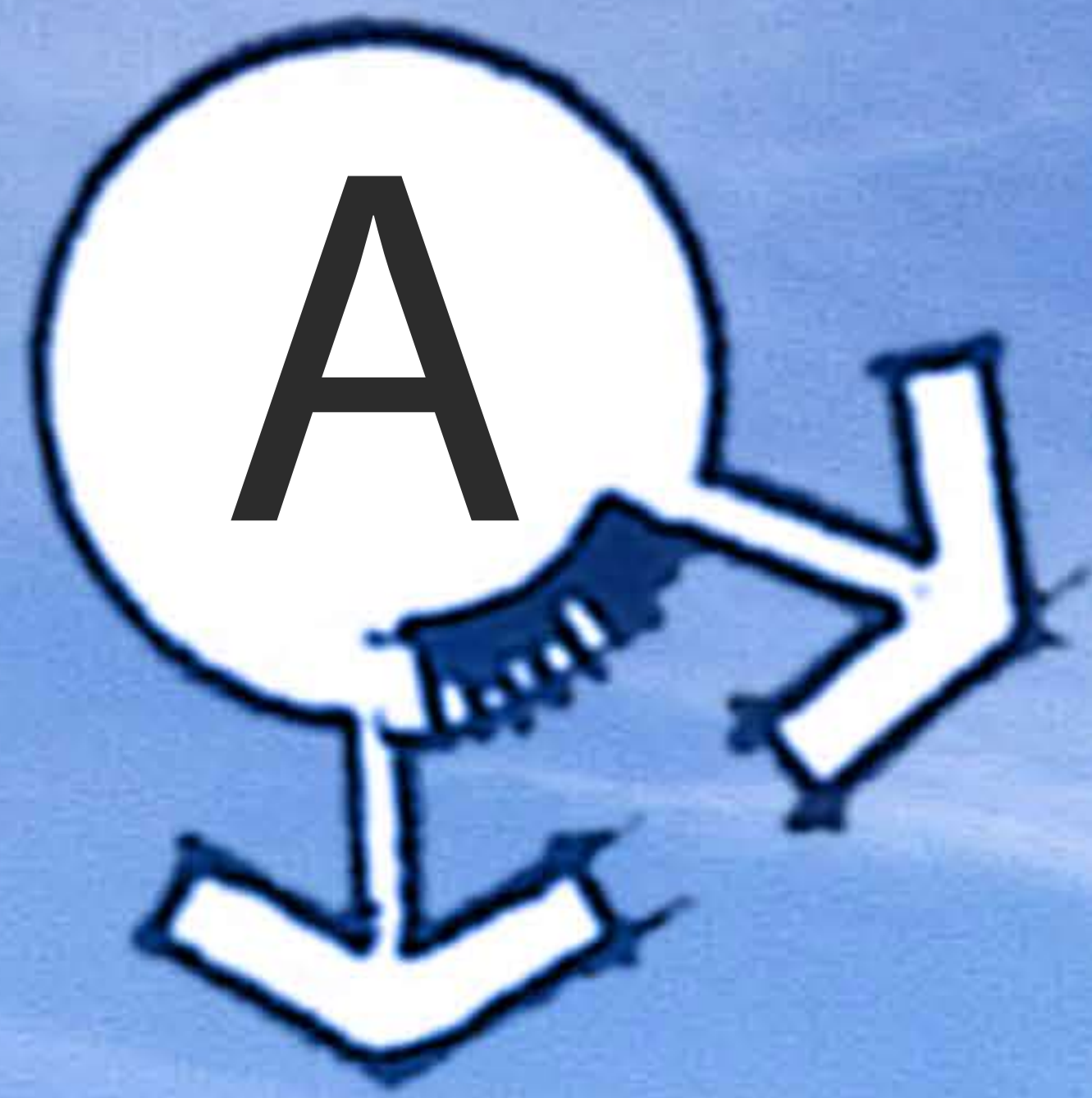
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				DRAFT SITE MASTER PLAN			
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☐ RECORD DRAWING ☐ FINAL ☐ PRELIMINARY ☒ SKETCH/CONCEPT				Prepared by: <u>Rouli Simon / PS</u> Project No. _____ DWG File Name _____ Drawn: _____ PS Scale: _____ 1" = 100FT Checked: _____ JC Drawing No. _____ Reviewed: _____ PS L 1.0 Date: _____ APRIL, 2024			
 ParkArchitecture.com 3 School House Lane, Suite #1 Etna NH Tel: 603-663-3400 Mobile: 603-655-0487							

SIGNAL PARK DRAFT SITE MASTERPLAN PHASE 3

APRIL 2024

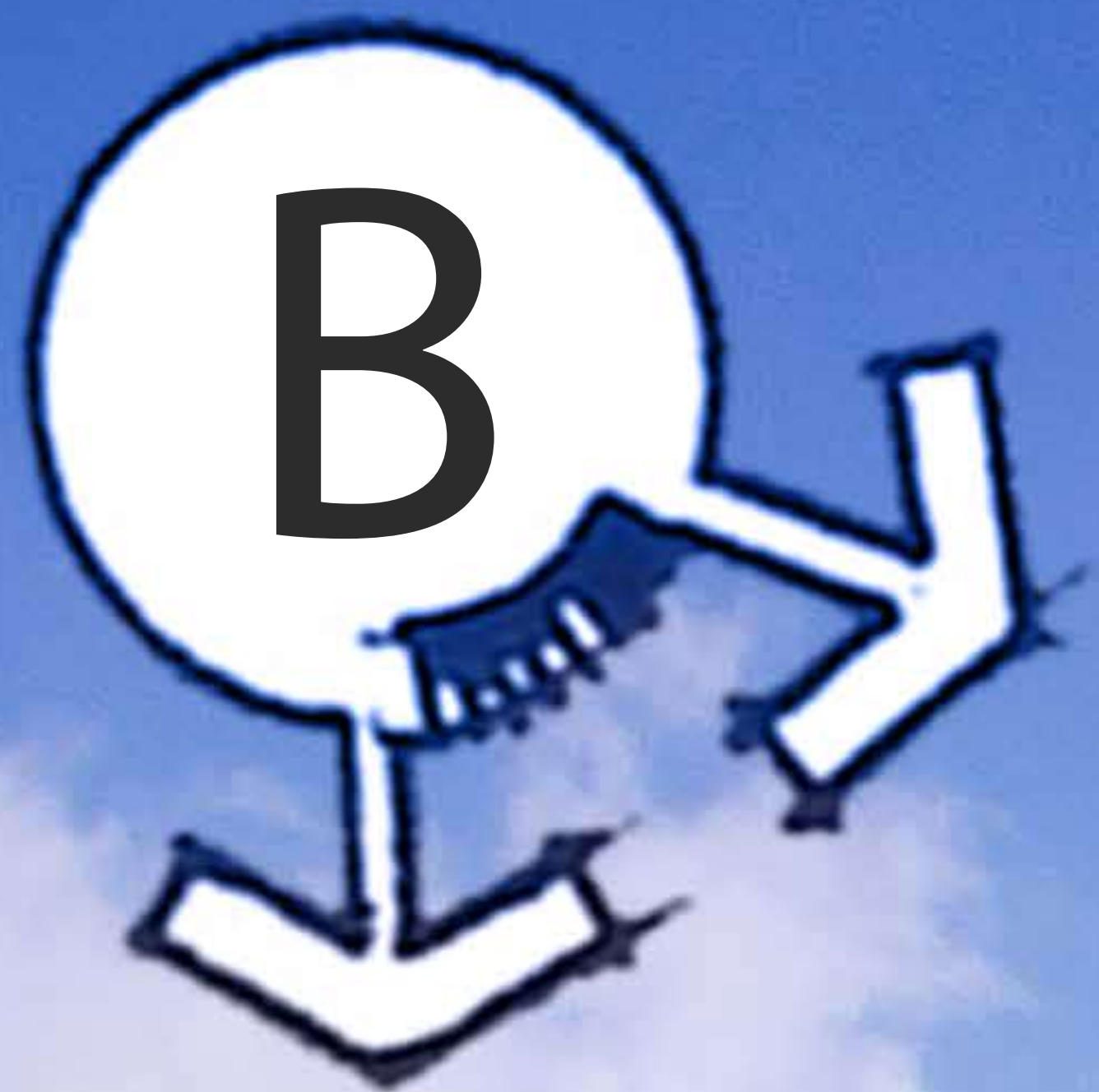


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0	INITIAL ISSUE						
No.	REVISIONS/SUBMISSIONS			Date			
☐ RECORD DRAWING ☐ FINAL ☐ PRELIMINARY ☒ SKETCH/CONCEPT							
					Title		
 ParkArchitecture.com 3 School House Lane, Suite #1 Etna NH Tel: 603-643-3400 Mobile: 617-665-0467					Prepared by: Aqui Simao / PS	Project No.	DWG File Name
					Drawn PS	Scale 1" = 100FT	
					Checked JC	Growing No.	
					Reviewed PS	L 1.0	
					Date APRIL 1, 2024		



SIGNAL PARK MULTI-FAMILY BUILDING





SIGNAL PARK MULTI-FAMILY BUILDING





SIGNAL PARK MULTI-FAMILY BUILDING





SIGNAL PARK MULTI-FAMILY BUILDING





SIGNAL PARK MULTI-FAMILY BUILDING





SIGNAL PARK QUAD UNIT CONDOS





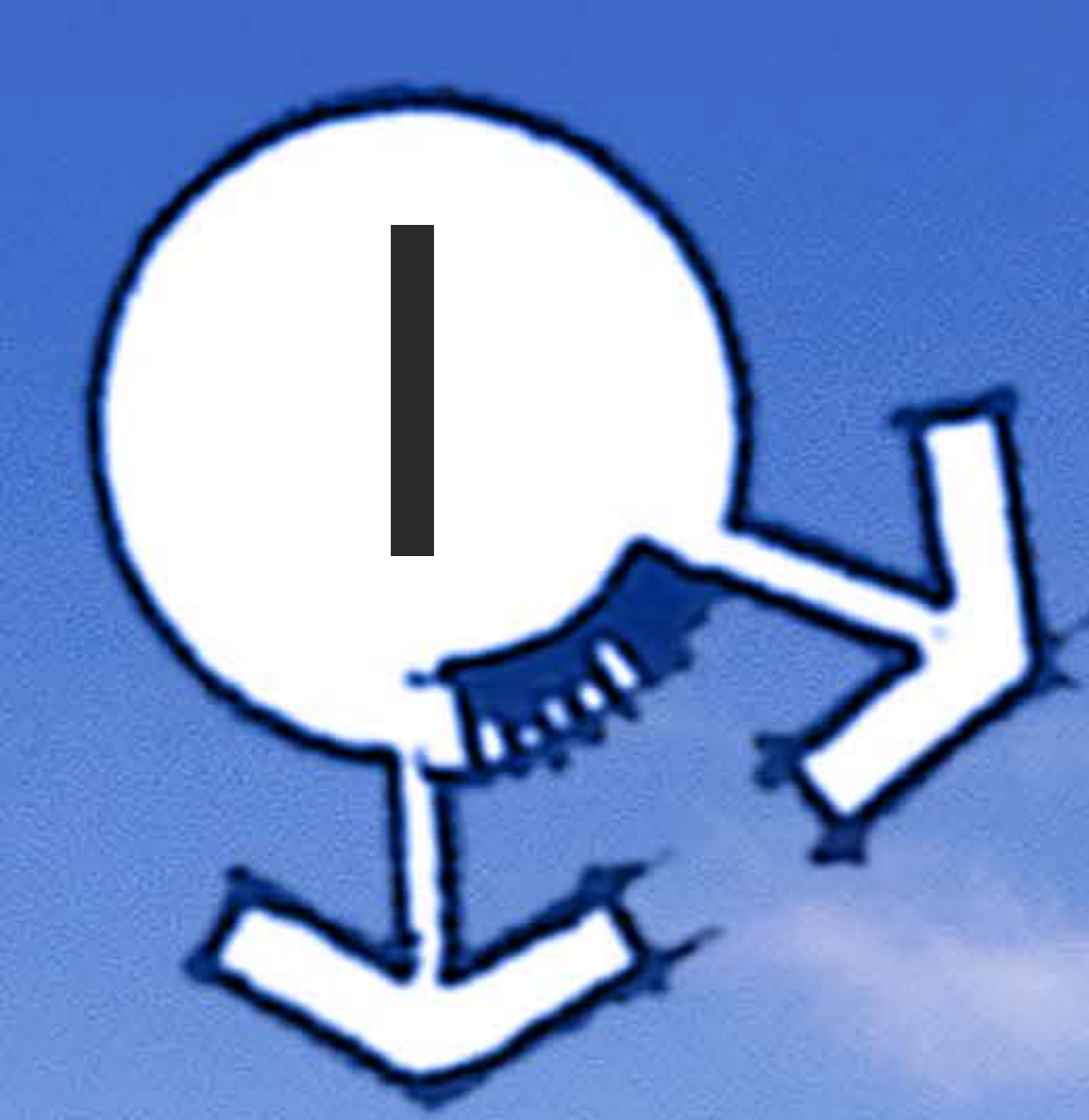
SIGNAL PARK CONDO UNITS





SIGNAL PARK MULTI-FAMILY BUILDING





SIGNAL PARK CONDO UNITS





SIGNAL PARK POOL AND PLAYGROUND



DRAFT

**LEBANON PLANNING BOARD
COUNCIL CHAMBERS, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, APRIL 15, 2024, 7:00 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair), Jeremy Rutter, Patrick Kennelly, Brandon Hill, Kathie Romano, Karen Zook (City Council Rep)

MEMBERS ABSENT: None

STAFF PRESENT: Tim Corwin (Deputy Planning Director), Nate Reichert (Director of Planning & Development/Zoning Admin), Brian Vincent (City Engineer)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 7:01pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

Mr. Rutter joined the meeting at 7:03pm.

2. NOTICE OF REGIONAL IMPACT

Chair Faunce said this would be postponed to the next meeting.

3. PUBLIC HEARING ITEMS

A. Liberty Utilities - Request for scheduled vegetation management for the safety and reliability of the electric distribution system on Poverty Lane, a designated scenic road. PB2024-11-SCR

Ms. Heather Green, certified arborist, of Liberty Utilities and Mr. Richard Clark, utility forester, of ECI Environmental Consultants, were present on behalf of the applicant.

Ms. Green said, every 4-5 years, Liberty Utilities cuts vegetation near and around its power lines as part of its vegetation management process. She said customers whose trees may be cut are notified by a mailer and a door hanger. She said homeowner consent is required to do the work.

1 She said the Public Utilities Commission (PUC) requires the following space be maintained
2 around primary conductors:

- 3 • 15 feet above
- 4 • 8 feet to the side
- 5 • 10 feet below

6
7 She said the current project is to flat cut or brush cut (mowing flat to the ground) the vegetation
8 in the space identified along the scenic road of Poverty Lane. She said she and Mr. Clark drove
9 along the route and noted three failed trees and some saplings that should be removed as well.
10 She said the tree removal was not in the original proposal, so that work can be held until the next
11 cycle for vegetation management.

12
13 Ms. Green explained the Liberty Utilities' process for situations when consent is not given by
14 homeowners to cut vegetation on their property.

15
16 Chair Faunce opened the public hearing and invited public comment.

17 Chair Faunce closed the public hearing.

18
19 *A MOTION was made by Jeremy Rutter that the Lebanon Planning Board, pursuant to NH*
20 *RSA 231:158, approves the request of Liberty Utilities (PB2024-11-SCR) to perform scheduled*
21 *vegetation management for the safety and reliability of the electric distribution system on*
22 *Poverty Lane, a designated scenic road, as described in application materials dated February*
23 *26, 2024, prepared by Heather Green, ISA Certified Arborist for Liberty Utilities.*

24
25 *The motion was seconded by Kathie Romano.*

26
27 **The MOTION was approved (7-0).*

28
29
30 **B. Edwards Properties, LLC, 135 Heater Road (Tax Map 78, Lot 41), zoned IND-**
31 **L: Request for a Conditional Use Permit pursuant to Article III, Section 303.2 and**
32 **302.4 of the Zoning Ordinance for a proposed office use. PB2024-02-CUP –**
33 **Continued from March 18, 2024**
34

35 Mr. Dan Nash (Advanced Geomatics & Design), Ms. Amy Stebbins and Mr. Ben Stebbins
36 (Aslan Maintenance), and Attorney Barry Schuster were present on behalf of the applicant.

37
38 Mr. Nash said the application materials that were included in the agenda packet for this meeting
39 address the outstanding questions and deficiencies that were identified at the last meeting.

40
41 He confirmed that the project is to convert a two-family dwelling into a two-bedroom apartment
42 and an office with accessory warehouse space in the garage. He said the septic system is
43 designed to accommodate a two-bedroom apartment. Ms. Romano said the application materials
44 show a septic tank behind the deck and a tank on the east side of the property. She said it was
45 unclear which photos were of the existing design and which ones were of the proposed design.
46 Mr. Nash said the existing septic tanks (wherever located on the property) will be removed.

1
2 Mr. Corwin confirmed that the wetlands issue is not part of this conditional use permit and is
3 more relevant during the site plan review. Mr. Ford Burley suggested that a condition be added
4 to the Conditional Use permit that it should be updated to match the outcome of the site plan
5 review.

6
7 Mr. Nash said an ADA lift will be located at the back of the building in the enclosed porch area.
8 He said the design for the lift has not been completed yet and will be reviewed during the
9 Building Permit process.

10
11 Chair Faunce opened the public hearing and invited public comment.

12 Chair Faunce closed the public hearing.

13
14 Mr. Nash confirmed that the existing water service should be adequate, but they will not know
15 what the water needs will be until the building permit work is done.

16
17 ***A MOTION was made by Richard Ford Burley that, on January 8, 2024, March 18, 2024, and***
18 ***April 15, 2024, at duly-noticed meetings of the Lebanon Planning Board, there appeared***
19 ***representatives of property owner Edwards Properties, LLC, regarding 135 Heater Road (Tax***
20 ***Map 78, Lot 41), zoned IND-L, regarding a requested Conditional Use Permit pursuant to***
21 ***§303.2 of the Zoning Ordinance for a proposed office use. PB2024-02-CUP***

22
23 ***I. FINDINGS OF FACT***

24 ***Based on testimony given, application materials presented, and supporting documents***
25 ***submitted, the Planning Board makes the following findings of fact:***

- 26
27 1. ***The property is located within the IND-L District on the south side of Heater Road,***
28 ***and abuts the Hypertherm facility to the rear. The property is currently improved with***
29 ***a two (2)-story, two-family dwelling constructed in 1950 (per the City's Assessing***
30 ***records). The two-family dwelling is not an allowed use in the IND-L District and,***
31 ***therefore, is considered "legal non-conforming".***
32
33 2. ***The applicant proposes to convert the existing two-family dwelling to a mixed-use***
34 ***building containing (i) a dwelling unit and (ii) an office use with accessory warehouse***
35 ***space in the basement and attached garage. Site improvements include a proposed***
36 ***parking lot to the rear.***
37
38 3. ***"Office," which is allowed in the IND-L District by Conditional Use Permit from the***
39 ***Planning Board. Per Section 302.4.B of the Zoning Ordinance, the Planning Board***
40 ***may grant a Conditional Use Permit if it finds that the proposal meets the Enhanced***
41 ***Performance Standards set forth in Section 302.4.D.***
42
43 4. ***The applicant has submitted testimony addressing the Section 302.4.D criteria in an***
44 ***application received by the Planning and Development Department on December 4,***
45 ***2023, as well as in supplemental written materials provided by the applicant.***
46

II. CONCLUSIONS OF LAW

As a result of the above findings of fact and based on testimony given, application materials presented, and supporting documents submitted, the Planning Board concludes the following with respect to the Enhanced Performance Standards set forth in §302.4.D of the Zoning Ordinance:

- 1. The site is suitable for the proposal. (§302.4.D.1)*
- 2. The external impacts of the proposed use on abutting properties and the neighborhood is commensurate with the impacts of adjacent existing uses or other uses permitted in the zoning district. (§302.4.D.2)*
- 3. The proposed layout and design of the site is not incompatible with the established character of the neighborhood and shall mitigate any external impacts on abutters, the neighborhood, and nearby public ways and infrastructure. (§302.4.D.3)*
- 4. The criteria set forth in Section 302.4.D.4 relates to new building construction and, since no new building construction is proposed, is inapplicable to the subject application.*
- 5. The proposed use and layout of the site, including all related development activities, does to the greatest extent practicable preserve identified natural, cultural, historic, and scenic resources on the site and shall not degrade such identified resources on abutting properties. (§302.4.D.5)*

III. DECISION

Now therefore be it resolved, the Planning Board, on this 15th day of April, 2024, hereby grants the request of Edwards Properties, LLC, for a Conditional Use Permit per Section 303.2 of the Zoning Ordinance to convert a portion of the existing building at 135 Heater Road (Tax Map 78, Lot 41) to an office use as set forth above and per testimony, plans, and materials submitted, and per the following conditions:

- 1. No outdoor storage is permitted other than 2 trailers which are required to be parked in the proposed rear parking lot.*
- 2. Impact fees calculated pursuant to Section 213 of the Zoning Ordinance shall be assessed prior to the issuance of a building permit and shall be paid prior to the issuance of a Certificate of Occupancy.*
- 3. The Conditional Use Permit is contingent on approval of the site plan application of Edwards Properties, LLC, for 135 Heater Road (Tax Map 78, Lot 41), PB2024-14-SPR, currently pending before the Board. If the site plan is approved, all conditions of approval for application PB2024-14-SPR are incorporated herein and shall be considered conditions of approval for the requested Conditional Use Permit.*

- 1
2 **4. If the site plan for application PB2024-14-SPR is approved, the site plan provided as a**
3 **part of this conditional use permit application will be updated through the approved**
4 **site plan.**
5

6 ***The motion was seconded by Brandon Hill.***
7

8 ****The MOTION was approved (7-0).***
9

10
11 **C. Edwards Properties, LLC, 135 Heater Road (Tax Map 78, Lot 41), zoned IND-L: In**
12 **conjunction with a pending Conditional Use Permit application (PB2024-02-CUP),**
13 **applicant requests Site Plan Review for a conversion of the existing two-family**
14 **dwelling to a mixed-use building for a proposed office use and a dwelling unit,**
15 **together with associated site improvements including additional parking spaces and**
16 **a handicap ramp. PB2024-14-SPR**
17

18 Mr. Corwin stated that Staff recommends that the application is complete enough for the
19 Planning Board to accept jurisdiction and commence review.
20

21 Chair Faunce stated that the application materials dated March 28 supersedes the earlier
22 materials dated March 7.
23

24 ***A MOTION by Kathie Romano that the application of Edwards Properties, LLC, 135 Heater***
25 ***Road (Tax Map 78, Lot 41), zoned IND-L: In conjunction with a pending Conditional Use***
26 ***Permit application (PB2024-02-CUP), applicant requests Site Plan Review for a conversion of***
27 ***the existing two-family dwelling to a mixed-use building for a proposed office use and a***
28 ***dwelling unit, together with associated site improvements including additional parking spaces***
29 ***and a handicap ramp is complete enough for the Planning Board to accept jurisdiction and***
30 ***commence review. The motion was seconded by Richard Ford Burley.***
31

32 Mr. Nash stated that the application materials include a letter written by Mr. Peter Spear that
33 states there are no jurisdictional wetlands on the property.
34

35 The group went through each part of the site plan and discussed them in detail:
36

37 C1 (Parking area):

- 38 • 24-foot aisle is located between the end of the parking spaces and the curbing
- 39 • The aisle begins where the driveway ends
- 40 • Total width of parking lot is 42 feet
- 41 • A 9-foot area of pervious pavers will provide drainage - curbing holds in the water so it can
- 42 be absorbed by the pavers
- 43 • 8-foot privacy fence is represented by a dashed line on the site plan
- 44 • Equipment vehicles will be parked in parking spaces 8 and 9 when not used on job sites
- 45 • ADA lift will be located on the Heater Road side of the building
- 46

1 Mr. Rutter said it would be helpful to have two maps to compare the existing site plan and the
2 proposed site plan.

3
4 The group discussed whether a number of trees would be removed from the site and if they
5 would be replaced. Mr. Ford Burley stated that the site plan is not just a picture of what the
6 applicant plans to do, it also provides a plan for what the site will continue to look like after the
7 project is finished. Ms. Romano said the removal and replacement of trees could be made a
8 condition of approval. Mr. Corwin confirmed that he and Mr. Vincent will visit the site when the
9 project is completed and ensure the number of trees on the site matches what's in the site plan.

10
11 The group discussed the parking area drainage plan involving the pavers and suggested the
12 maintenance of this feature could be made a condition of approval.

13
14 C3 (Stormwater plan):

15 Mr. Vincent said he reviewed the stormwater management plan and he is comfortable with the
16 design.

17
18 L1 (Landscaping)

- 19 • No defined set-back for fence
- 20 • 8-foot set-back from property line for trees
- 21 • The site has public water

22
23 Mr. Rutter asked if the parking lot could be moved further to the east to allow more space
24 between the west edge of the parking lot and the property line for trees to be planted. Mr. Nash
25 said there is limited space between the garage and the property line.

26
27 L2 (Lighting)

28 Light at back of property has falloff that exceeds the recommended 1 to 4 ratio

29 Light at back of property is angled down more than 45 degrees

30
31 The group discussed whether the proposed lighting is adequate and whether the lighting could be
32 motion activated. Mr. Nash discussed the uniformity of the lighting, noting that it is difficult to
33 achieve uniformity in a small space. Ms. Stebbins said the parking lot is used mostly by
34 employees during daylight hours, so lighting is not critical to employee safety. Mr. Ford Burley
35 suggested that small bollard lights could be added along the front edges of the parking spaces.
36 Mr. Nash said another motion-activated light fixture could be added above the cars to provide
37 illumination.

38
39 Chair Faunce opened the public hearing and invited public comment.

40
41 The group went through the waiver requests and discussed them in detail.

42
43 Mr. Corwin confirmed that the plan's wall-mounted building light fixture triggered the
44 requirement to show the building elevations. He also said a 15-foot perimeter landscape buffer is
45 required on the side, back and front of the property. The group agreed that the additional lighting

for the parking area (suggested earlier in the discussion) could eliminate the need for the parking area lighting waiver.

A MOTION was made by Richard Ford Burley that, for the application of Edwards Properties, LLC, PB2024-14-SPR, the Lebanon Planning Board approves waivers from the following sections of the Site Plan Review Regulations:

- ***5.1.E.13*** – requiring building elevations depicting proposed lighting fixtures
- ***6.2.B.1*** – requiring a 15 ft. wide perimeter landscaping buffer
- ***6.2.B.10*** – requiring trees at 40 ft. intervals along property frontage
- ***6.7.C.1*** – parking area lighting requirements (average horizontal illuminance and uniformity ratio)
- ***6.2.B.6*** – requiring an additional 5 ft. of perimeter landscaping along the side of the property adjoining the neighboring residential use, together with an opaque screen

The motion was seconded by Kathie Romano.

****The MOTION was approved (7-0).***

Chair Faunce closed the public hearing.

A MOTION was made by Richard Ford Burley that the Lebanon Planning Board approves the Site Plan Review application of Edwards Properties, LLC, regarding 135 Heater Road (Tax Map 78, Lot 41), zoned IND-L, PB2024-14-SPR, for a conversion of the existing two-family dwelling to a mixed-use building for a proposed office use and a dwelling unit, together with associated site improvements including additional parking spaces, as shown on a plan set titled set titled, “99 Heater Road,” prepared by Advanced Geomatics and Design, dated January 30, 2024, last revised March 28, 2024 (11 sheets), including any and all submissions and testimony provided for and during the public hearing.

In support of its decision, the Board finds that the applicant has submitted plans, testimony, technical data, information, reports, and studies that together satisfactorily demonstrate compliance with the applicable requirements of the Site Plan Review Regulations, except as may reasonably be addressed through the imposition of certain conditions of approval, set forth below, and except as may have been waived pursuant to Section 7.1.

This approval is subject to the following conditions:

General Conditions

1. ***It shall be the applicant’s responsibility to be familiar with and aware of these conditions of approval, and it shall be the applicant’s responsibility to satisfy these conditions of approval and to satisfy them within the relevant timeframes outlined below.***

2. *The development is subject to the Site Plan Review Regulations adopted May 13, 1991, last revised January 23, 2023, and the Zoning Ordinance adopted January 16, 2013, last amended February 7, 2024, which are the regulations in effect at the time the application was submitted.*
3. *A building permit must be applied for and issued within two (2) years of the date of this approval (4.10.A), subject to an extension if applied for by the applicant and if approved by the Planning Board per Section 4.10.B.*
4. *“Active and substantial development,” as defined in Section 8.4.A.1 of the Site Plan Review Regulations, shall be achieved within two (2) years of the date of this approval (8.4.A.2), subject to an extension if applied for by the applicant and if approved by the Planning Board per Section 8.4.A.3. If active and substantial development is not achieved within two (2) years of the date of the Planning Board’s approval, the development shall be subject to any changes in the City’s land use regulations.*
5. *“Substantial completion,” as defined in Section 8.4.B.1 of the Site Plan Review Regulations, shall be achieved within five (5) years of the date of this approval. If substantial completion is not achieved within five (5) years of the date of the Planning Board’s approval, the development shall be subject to any changes in the City’s land use regulations.*
6. *All required landscape plantings shall meet the minimum size requirements for such plantings set forth in Section 6.2.B of the Site Plan Review Regulations at the time of installation.*
7. *The applicant shall implement and maintain NHDES Site Specific Best Management Practices before, during, and after construction.*
8. *Edge-of-disturbance fencing shall be installed and maintained before and during any site work, to be verified by the City Engineer or City’s third-party inspector on site.*
9. *The property owner is responsible for the maintenance and operation of the stormwater management system in accordance with the O&M plan, and such responsibility shall run with the land. (Section 6.6.H.2.b of the Site Plan Review Regulations).*

Conditions to be Satisfied Prior to Application for a Building Permit and Prior to the Start of Any Construction Activities

1 **10. Within 30 days of the Planning Board's approval, the applicant shall make the**
2 **following revisions to the plan set to the satisfaction of the Planning and Development**
3 **Department:**

4 a) *Add a note that the property does not contain wetlands and reference the March*
5 *7, 2024 letter from Peter Spear.*

6 b) *On the Cover Sheet:*

7 i. *Update title of plan set and property address information on cover sheet*
8 *to 135 Heater Road.*

9 ii. *In the "Zoning Comparison" table on the cover sheet:*

10 1. *clarify that 9 parking spaces are proposed including two spaces*
11 *for the outdoor storage of two trailers for the office use.*

12 2. *add a footnote that the office use is permitted pursuant to a*
13 *Conditional Use Permit approved on April 15, 2024 (PB2024-02-*
14 *CUP)*

15 3. *provide description of plan revisions made pursuant to the*
16 *Planning Board's approval (5.1.E.4.d).*

17 c) *On Sheet 5 (C-1):*

18 i. *add a note identifying how trash pickup will be handled.*

19 ii. *provide a legend identifying various symbology.*

20 iii. *identify proposed uses of the existing building (staff note: instead of "ex.*
21 *Garage" and "ex house" which would be more appropriate for an*
22 *existing conditions plan, not a site plan that is intended to depict future*
23 *conditions).*

24 d) *On Sheet 8 (L-1), remove Landscape Note #10 which is duplicative of Note #9.*

25 e) *On Sheet 9 (L-2), clearly identify the color correlated temperature (CCT) and*
26 *wattage of the proposed building-mounted light fixture.*

27 f) *Make such alteration to Sheets 5 (C-1) and 8 (L-1) as necessary to depict only*
28 *the proposed conditions after the completion of the proposed work and provide*
29 *equally detailed plans of the same size and scale depicting only the existing*
30 *conditions prior to the proposed work.*

31 g) *On Sheet 9 (L-2), add a second light fixture on the eastern edge of the parking*
32 *lot to improve lighting conditions and show the revised lighting levels.*
33

34 **11. Once approved by staff pursuant to Condition of Approval #10, the applicant shall**
35 **provide the Planning and Development Department with a digital copy of the final**
36 **revised plan set saved in a PDF-A format for archival purposes.**
37

38 **12. The applicant shall schedule and hold a pre-building permit application meeting with**
39 **the Planning and Development Department, City Building Inspectors, City**
40 **Engineer/Department of Public Works, and Fire Department, in order to help**
41 **streamline the building permit review process and to review applicable code**
42 **requirements.**
43

1 **13. The applicant shall obtain approval from the City Council or the City Manager's office**
2 **for any additional water and/or sewer flows in accordance with the applicable Chapter**
3 **136 and 182 of the City Code.**
4

5 **14. All engineering review fees shall be paid in full as required by Section 4.7.E.1 of the**
6 **Site Plan Review Regulations. (Staff note: applicant can request an invoice from the**
7 **Department of Public Works).**
8

9 **Conditions to be Satisfied Prior to the Issuance of a Building Permit**

10 **15. The development shall be subject to City of Lebanon Impact Fees, pursuant to Section**
11 **213 of the Zoning Ordinance. The Impact Fee shall be calculated at the time of**
12 **Building Permit issuance based on the Impact Fee Schedule adopted on October 12,**
13 **2021. In accordance with RSA 674:39, the approved site plan shall be exempt from any**
14 **future changes in impact fees and methodology for five years from the date of**
15 **approval; however, any building permits which are issued after the end of that five-**
16 **year period shall be fully subject to whatever impact fees and methodology are in effect**
17 **at the time of building permit issuance.**
18

19 **16. All water and sewer fees shall be paid as set forth in City Code Chapter 68.**
20

21 **17. Prior to the start of any construction activities on the property, the applicant shall**
22 **obtain or update (if appropriate) any required State approvals.**
23

24 **Conditions to be Satisfied Prior to the Issuance of a Certificate of Occupancy**

25 **18. The impact fee calculated pursuant to Condition of Approval #15 shall be paid.**
26

27 **19. All improvements depicted on the plan shall be completed and shall be constructed as**
28 **depicted on the approved plan, including any modifications to the plan as may be**
29 **approved by the Planning Board in accordance with the Site Plan Review Regulations.**
30

31 **The motion was seconded by Jeremy Rutter.**
32

33 ***The MOTION was approved (7-0).**
34
35

36 **D. Seale Properties, LLC, 50 Maple Street (Tax Map 73, Lot 65), zoned R-3: Request**
37 **for approval of a proposed two (2)-lot Minor Subdivision. PB2024-13-MIN**
38

39 **Mr. Ian MacKenzie, Vermont civil engineer, and Mr. Perry Seale, managing member of Seale**
40 **Properties, were present on behalf of the applicant.**

1
2 Mr. Corwin stated that Staff recommends that the application is complete enough for the
3 Planning Board to accept jurisdiction and commence review.

4
5 ***A MOTION by Patrick Kennelly that the application of Seale Properties, LLC for a proposed***
6 ***two (2)-lot Minor Subdivision of 50 Maple Street (Tax Map 73, Lot 6) PB2024-13-MIN is***
7 ***complete enough for the Planning Board to accept jurisdiction and commence review.***

8
9 ***The motion was seconded by Brandon Hill.***

10
11 ****The MOTION was approved (7-0).***

12
13 Mr. MacKenzie gave an overview of the project. He said a shared driveway will provide right of
14 way for a single-family residence and the existing multi-family structure. He said he may sell the
15 properties to his children. The group discussed the trend in the City toward pattern zoning as an
16 alternative housing solution.

17
18 Ms. Romano asked about the size of the parking lot and whether it meets the 10,000 square feet
19 requirement for subdivisions in the R3 district. She also asked if there is a limit to the number of
20 properties that can be accessed from a common driveway.

21
22 Mr. Corwin explained that the property includes a two-family structure that is allowed by special
23 exception. He said the new dwelling could not be built as a two-family dwelling because, in the
24 R3 district, a two-family dwelling is only permitted by conversion. He said the owner could
25 build the one-family structure, obtain a Certificate of Occupancy, and then apply to the Zoning
26 Board of Adjustments for a special exception to convert the single-family dwelling to a two-
27 family dwelling.

28
29 Mr. MacKenzie said he added space around the driveway to achieve the required five-foot set-
30 back from the property line. The group discussed the frontage and width of the lot.

31
32 Ms. Romano asked if the owner of the single-family property would need approval if he
33 eventually wants to install a private driveway. Mr. Corwin said the subdivision plat would have
34 to be amended to make a change like that.

35
36 Mr. Vincent asked how the back lot will access water and sewer. Mr. MacKenzie said he worked
37 with Rick Brown of the DPW to determine how the water and sewer lines will run from Maple
38 Street to the new lot.

39
40 Chair Faunce opened the public hearing and invited public comment.

41
42 Ms. Bonnie Barber (Dana Street) asked how many trees will be retained on the property border.
43 She said there is one very tall, beautiful oak tree that she was curious about in particular. Mr.
44 MacKenzie said he is looking to retain the oak tree in question.

45
46 Chair Faunce closed the public hearing.

1
2 ***A MOTION was made by Patrick Kennelly that the Lebanon Planning Board approves the***
3 ***application of Seale Properties, LLC, for a proposed two (2)-lot Minor Subdivision of 50***
4 ***Maple Street (Tax Map 73, Lot 65), PB2024-13-MIN, as shown on a plat titled “Minor***
5 ***Subdivision Plat for Seale Properties, LLC,” prepared by Rockwood Land Services, LLC,***
6 ***dated March 15, 2024, last revised April 5, 2024, Project No: 1661, including any and all***
7 ***supplemental submissions and testimony provided during the public hearing.***

8 ***In support of its decision, the Board finds that the applicant has submitted plans, testimony,***
9 ***and technical data prepared by a licensed land surveyor that together satisfactorily***
10 ***demonstrate compliance with the applicable requirements of the Subdivision Regulations***
11 ***except as may reasonably be addressed through the imposition of certain conditions of***
12 ***approval, set forth below.***

13 ***This approval is subject to the following conditions:***

14 **Conditions to be Satisfied Prior to the Signing and Recording of the Plat**

- 15 ***1. The applicant shall provide a revised plat depicting the following changes to the***
16 ***satisfaction of the Planning and Development Department:***
17 ***a. Add addresses to Lot 1 (50 Maple Street) and to Lot 2 (48 Maple Street).***
18 ***b. Shift the surveyor’s stamp and signature to uncover obscured text underneath.***
19 ***c. Provide the date and description of the plat revisions. (9.5.A.1)***
20
21 ***2. The applicant shall provide a digital record drawing of the revised plat (Cad .dwg***
22 ***format using NH State Plane Coordinate system or an alternative approved by the***
23 ***City’s GIS Coordinator).***
24

25 **General Conditions**

- 26 ***3. This approval shall be considered void unless all conditions precedent have been met,***
27 ***and the plat has been recorded in the Registry of Deeds, within two (2) years from the***
28 ***date of the Notice of Action (Section 7.12.B). The plat shall be recorded in accordance***
29 ***with Planning & Development Department procedures. The Warranty Deeds submitted***
30 ***with the application materials shall be executed and submitted together with the plat***
31 ***for contemporaneous recording by the Planning & Development Department.***
32
33 ***4. Future development on the new lots shall be subject to City of Lebanon Impact Fees,***
34 ***pursuant to Section 213 of the Zoning Ordinance. The Impact Fee shall be calculated***
35 ***at the time of Building Permit issuance based on the Impact Fee Schedule adopted on***
36 ***October 12, 2021, and such fees shall be due and payable at the time of issuance of a***
37 ***Certificate of Occupancy. In accordance with RSA 674:39, development shall be***
38 ***exempt from any future changes in impact fees and methodology for five years from***
39 ***the date of approval; however, any building permits which are issued after the end of***

that five-year period shall be fully subject to whatever impact fees and methodology are in effect at the time of building permit issuance.

- 5. All future construction shall substantially conform with and shall be subject to the requirements and specifications of the recorded plat (Section 7.9.A.2).**

The motion was seconded by Jeremy Rutter.

**The MOTION was approved (7-0).*

A MOTION was made by Patrick Kennelly that the Lebanon Planning Board authorizes the Chair to sign the Minor Subdivision plat of Seale Properties, LLC, PB2024-13-MIN, titled “Minor Subdivision Plat for Seale Properties, LLC,” prepared by Rockwood Land Services, LLC, dated March 15, 2024, last revised April 5, 2024, Project No: 1661, and as further revised per the Planning Board’s conditions of approval.

The motion was seconded by Richard Ford Burley.

**The MOTION was approved (7-0).*

4. OTHER BUSINESS

5. APPROVAL OF MINUTES

March 18, 2024

Amendments: Page 3, Line 23: Insert “a” before “Conditional Use permit”
 Page 3, Line 28: Remove “Parking tot”
 Page 4, Line 19: Change “construction is completed.” to “new fire station has been completed.”
 Page 4, Line 29: Edit to read: “He said that once the buildings have been taken down, the spaces they occupied will”
 Page 4, Lines 5-20: Remove map image
 Page 5, Line 14: Change “Aidmab” to “Adimab”

A MOTION was made by Kathie Romano to approve the Planning Board Minutes of March 18, 2024, as amended. The motion was seconded by Patrick Kennelly.

**The MOTION was approved (6-0; Mr. Ford Burley abstained from the vote).*

March 26, 2024

Amendments: Heading of Minutes: Change “March 26” to “March 25”
 Page 2, Line 8: Insert “a” after “has”
 Page 2, Line 11: Insert “said” after “Mr. Mayberry”
 Page 2, Line 16: Change “license care” to “licensed care”
 Page 2, Line 30: Insert “those of” before “neighboring towns”
 Page 2, Line 37: Change “the criteria is” to “the criteria are”

Page 3, Line 33: Change “are” to “cost”

Page 3, Lines 34-35: Change “of” to “about”

A MOTION was made by Kathie Romano to approve the Planning Board Minutes of March 26, 2024, as amended. The motion was seconded by Patrick Kennelly.

****The MOTION was approved (6-0; Mr. Ford Burley abstained from the vote).***

6. ADJOURNMENT

A MOTION was made by Jeremy Rutter to adjourn the meeting at 9:08pm. The motion was seconded by Richard Ford Burley.

****The MOTION was approved (7-0).***

The meeting was adjourned at 9:08pm.

Respectfully submitted,

Paula Roux

Recording Secretary

DRAFT

**LEBANON PLANNING BOARD
COUNCIL CHAMBERS, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, APRIL 22, 2024, 6:30 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair), Jeremy Rutter, Patrick Kennelly, Brandon Hill, Kathie Romano, Karen Zook (City Council Rep)

MEMBERS ABSENT: None

STAFF PRESENT: Tim Corwin (Deputy Planning Director), Nate Reichert (Director of Planning & Development/Zoning Admin), Catheryn Hembree (Associate Planner)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 6:31pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

2. NOTICE OF REGIONAL IMPACT

The following applications were received by the Planning and Development Department on or before April 8, 2024:

- **The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25), zoned IND-L: Request for approval of a Boundary Line Adjustment. PB2024-17-BLA**
- **CP Centerra LLC, 12 Centerra Parkway (Tax Map 10, Lot 11, Plot 100), zoned IND-L: Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved site plan (PB2022-45-SPR) for a restaurant with a drive through together with associated site improvements. Applicant proposes changes to the site circulation, parking, landscaping, and utilities. PB2024-18-SPA**

Mr. Corwin said staff recommends the applications do not have the potential for regional impact.

A MOTION was made by Richard Ford Burley that the applications of The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25), zoned IND-L, and CP Centerra LLC, 12 Centerra Parkway (Tax

1 **Map 10, Lot 11, Plot 100), zoned IND-L do not have the potential for regional impact. The**
2 **motion was seconded by Patrick Kennelly.**

3
4 ***The MOTION was approved (7-0).**

5
6 **3. STUDY ITEMS**

7
8 **A. Review and Comment for the Proposed Zoning Amendment for Section 214**
9 **(Governmental Uses) of the Zoning Ordinance**

10
11 Mr. Corwin said Section 214 (Governmental Uses) of the zoning ordinance currently states that
12 governmental use projects are (by default) subject to the zoning ordinance unless exempted by
13 the City Council. He said some recent public works projects that have a general benefit to the
14 City have had impacts on adjacent properties that triggered review by the Zoning Board of
15 Adjustments under the City's wetlands regulations. He said the additional review/approval
16 process creates delays and additional costs, particularly when the City Public Works employees
17 are not aware that the review is needed and must get the wetlands permit after work has started.
18 He said the Planning Department also had to get a wetlands permit for an Airport expansion
19 project that was well underway, which he said added more than \$16,000 to that project.

20
21 He said the proposed zoning amendment would exempt Public Works projects that are for the
22 public good from compliance with the City's zoning ordinance. He said these projects would still
23 require state wetland approval and all other state and local regulations if the zoning ordinance is
24 changed.

25
26 The group discussed the differences between the City's and the state's wetlands regulations. Mr.
27 Corwin said the City requires a 150-buffer to be maintained for all wetlands areas and the state
28 does not. He noted that wetlands impacts identified on projects are reviewed by the Conservation
29 Commission. He said the City Council can vote to grant an exemption of the zoning ordinance
30 for these projects. Chair Faunce said that Lebanon and Nashua are the only New Hampshire
31 cities that require local ZBA review. Mr. Corwin noted that public improvement projects provide
32 ample chances for public hearing through public hearings.

33
34 The group discussed how detrimental this additional level of review might be to Public Works
35 projects. Mr. Ford Burley asked, if the Board decides in favor of amending the zoning ordinance,
36 if that decision could be revisited in 24 months, so the impact of the decision could be assessed.
37 Mr. Corwin said that could be included in the Board's recommendation to the City Council.

38
39 **A MOTION was made by Richard Ford Burley that the Planning Board authorizes the**
40 **Planning Board's City Council Representative to convey that, in the Planning Board's**
41 **discussion of the proposed Zoning Amendment [to Section 214 (Governmental Uses)], the**
42 **Members expressed concerns over the potential impact of removing a step in the regulatory**
43 **review process, and suggested that, if the City Council were to pass the proposed amendment,**
44 **it should revisit the language of Section 214 in no more than two years' time, taking into**
45 **account any new data that arises. The motion was seconded by Jeremy Rutter.**



Roll Call Vote:**Voting in Favor –Mr. Faunce, Mr. Ford Burley, Mr. Hill, Mr. Kennelly, Mr. Rutter****Voting Against – Ms. Romano****Abstaining from the Vote: Ms. Zook*****The MOTION was approved (5-1, with Ms. Zook abstaining).****B. Master Plan Discussion**

Ms. Hembree gave an overview of the current Master Plan update process, and the group reviewed the outline and update timeframes of the Master Plan Chapters. She said the plan is to update a small number of chapters each year and to do a complete rewrite of the Master Plan in 2030. She said the following chapters are under review this year:

- Natural Resources (by the Conservation Commission)
- Energy (by the Lebanon Energy Advisory Committee)
- Economic Development (by the Lebanon Economic Development Committee)

She said each committee can decide how it solicits public input; for example, she said LEAC plans to have a kiosk at the Lebanon Farmers Market to encourage the public to provide input.

The group discussed the importance of the Housing and Land Use Chapters at length, and whether those chapters/sections should be reviewed sooner and before other chapters. Ms. Hembree noted that, since the Housing Chapter will need a complete overhaul, the Planning Department has already begun contacting consultants to help in that effort. Mr. Ford Burley said the Land Use Chapter review needs to start much earlier than 2029. Chair Faunce said Land Use review should be ongoing and the Master Plan should be an interactive, living document. He noted that the public's ability to access and comment on the Master Plan has been a challenge. Mr. Reichert said the City needs to encourage increased and consistent public engagement in the Master Plan process. Mr. Rutter asked if the Board could receive status/updates on the huge housing projects that have been approved by the City Council in recent years.

The group discussed the upcoming Route 120 Corridor Study. Ms. Hembree said there is a Route 120 Corridor Study meeting on April 24 at 5:00pm at DHMC in Auditorium E (3rd Floor), which will include a public charrette.

C. Discussion and Set Public Hearing: Impact Fees

Mr. Corwin provided the following to the Board members:

- Red line comparison of 2024 supportable Impact Fee rates compared with existing Impact Fee rates (adopted in October 2021)
- Impact Fee schedules for 2018, 2016, and 2010
- Community comparison of Impact Fee rates (assembled by consultant Bruce Mayberry) including Thedford, Dover, Newmarket, Rochester, and Salem

1 Chair Faunce reminded Board members that their decision affects either the people developing
2 property, who will pay the full and fair impact fee, or taxpayers, who will pay instead down the
3 road. He said, in the current climate of rising tax rates for residents, he proposes that the former
4 is a more favorable result than the latter. Mr. Kennelly said raising development fees will
5 probably cause developers to increase rates for renters and owners.

6
7 Mr. Hill said he thought these fees may not be high enough to meet the increased costs due to
8 inflation. Mr. Ford Burley said he believed consultant Bruce Mayberry did his best to calculate a
9 good, justifiable set of Impact Fees and the Board's options are either accept them or try to
10 calculate a lower amount, which is not favorable. Mr. Corwin confirmed that the fees, which are
11 assessed on new developments in the City, go to the departments identified and not to the general
12 fund for the City. Ms. Zook explained the fees are assessed based on the anticipated use of City
13 services.

14
15 ***A MOTION was made by Richard Ford Burley that the Planning Board sets the Public***
16 ***Hearing to discuss the Impact Fees for May 28, 2024, at 6:30pm. The motion was seconded by***
17 ***Kathie Romano.***

18
19 ****The MOTION was approved (7-0).***

20
21 The group realized that there would not be enough members to achieve a quorum for that date
22 and time.

23
24 ***A MOTION was made by Richard Ford Burley that the Planning Board sets the Public***
25 ***Hearing to discuss the Impact Fees for May 20, 2024, at 7:00pm. The motion was seconded by***
26 ***Patrick Kennelly.***

27
28 ****The MOTION was approved (7-0).***

29 30 **4. COMMITTEE REPORTS**

31
32 ***A MOTION was made by Kathie Romano that Chair Faunce of the Planning Board appoints***
33 ***Mr. Patrick Kennelly as the Planning Board Representative for the Lebanon Energy Advisory***
34 ***Committee. The motion was seconded by Richard Ford Burley.***

35
36 ****The MOTION was approved (6-0, with Mr. Kennelly abstaining).***

37
38 Ms. Romano noted that the Mascoma Advisory Committee no longer has members and no longer
39 meets. She said it is an important committee and should be reinstated.

40 Mr. Ford Burley suggested that members of subcommittees could come to a Planning Board
41 meeting and talk about their committees. Mr. Corwin said other committees that do not have
42 Planning Board representatives are the Pedestrian & Bike Committee and the Regional Planning
43 Committee.

1 **5. OTHER BUSINESS**

2 Mr. Corwin said the Planning Department received a site plan application for 7 Lucent Drive
3 several weeks ago that is ready to come before the Board on May 13. He said the applicants
4 have submitted a waiver request for a paved parking lot and suggested a site visit prior to the
5 meeting so the Board members can understand the reasons for the waiver request. The group
6 agreed to conduct a site visit on May 6, 2024, at 5:30pm at 7 Lucent Drive.

7
8 **6. APPROVAL OF MINUTES**

9 None

10
11 **7. ADJOURNMENT**

12
13 *A MOTION was made by Richard Ford Burley to adjourn the meeting at 9:05pm. The motion*
14 *was seconded by Jeremy Rutter.*

15
16 **The MOTION was approved (7-0).*

17
18 The meeting was adjourned at 9:05pm.

19
20 Respectfully submitted,

21 Paula Roux

22 Recording Secretary

DRAFT

**LEBANON PLANNING BOARD
MEETING ROOM ONE, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, APRIL 29, 2024, 6:30 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Jeremy Rutter, Patrick Kennelly, Brandon Hill, Kathie Romano

MEMBERS ABSENT: Richard Ford Burley (Vice Chair), Karen Zook (City Council Rep)

STAFF PRESENT: Tim Corwin (Deputy Planning Director), Nate Reichert (Director of Planning & Development/Zoning Admin), Erica Douglas (Solid Waste Manager)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 6:31pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

Chair Faunce said the group would discuss Agenda Item 3.A. first, which is out of the order of the agenda for this meeting.

3. OTHER BUSINESS

A. Public Hearing Determination Per RSA 674:54 - City of Lebanon Landfill Gas to Energy Project

Mr. Corwin explained that the Planning Board can decide whether to have a public hearing for Government Use projects. He said this project had undergone an extensive public review process in 2020. He said the project has not changed since 2020. Solid Waste Manager Erica Douglas said the City Council held a public hearing on this project recently because the Council reviewed a request for additional funding. She said the project has been publicized in the Valley News and on local TV stations as well.

Ms. Douglas gave an overview of the project, which involves the conversion of methane gas currently burned at the Landfill into power to be used by the City.

The Board Members decided to decline to hold a public hearing for this project.

2. STUDY ITEMS

A. Rules of Procedure Discussion

The group reviewed the current Rules of Procedure information, which was provided in the agenda packet for the meeting. Mr. Corwin asked the group to discuss items that may be unclear, incomplete, or irrelevant.

The following items were discussed:

Item 2.2 Alternate

Members – Mr. Rutter asked why an alternate would not be appointed in the absence of the ex-officio member of the

2.2 ALTERNATE MEMBERS. Alternate members of the Board shall be appointed by the City Council, by majority vote, upon nomination by the City Manager. Alternate members shall join the regular members in all presentations, public hearings, and discussions except that such alternates may not vote on any proposal or motion before the Board unless so directed by the Chair. In the absence of any regular member, except the ex-officio member of the City Council, the Chair shall appoint an alternate member to fill such vacancy. Said alternate shall then act as a regular member.

City Council. Mr. Corwin explained that there are three (possible) Board Member alternates that would be appointed for an absent Board Member, and one alternate City Council Representative that would be appointed for the City Council Representative. He noted that there are some inconsistencies between the current make-up of the Lebanon Planning Board (per City Code) and what the statute provides. He said he is going to review the issue with the City's legal counsel.

Item 2.4 Attendance – The group discussed whether non-attendance includes remote attendance, given that remote attendees do not “count”

2.4 ATTENDANCE. A Board member may be excused for non-attendance of a meeting or hearing for valid reasons if he or she notifies the Chair or Clerk prior to the meeting or hearing. Any Board member may leave the Board chambers for pressing business while in regular session after notice to the Chair.

toward a quorum and can only vote on motions if a quorum is present in person.

The group discussed how many unexcused absences should be allowed, and whether members can be removed prior to the end of their term if they are consistently absent from meetings. Mr. Corwin said most boards have a rule that members can be removed if they have three consecutive unexcused absences from meetings. He said a request like this would be made to the City Council by the City Manager.

Item 2.5 Training – Mr.

Corwin said this should be “Planning and Development Director” not “Planning and Zoning Director.”

2.5 TRAINING. All newly-appointed Board members shall attend one (1) orientation meeting with the Planning and Zoning Director, prior to sitting as a member of the Board, unless waived or extended by the Chair at the request of the Planning and Zoning Director.

Item 3.2 Duties of the Chair

The group discussed the meaning of the third paragraph and whether it should be removed. They discussed the difference between roll call votes and straw polls. The group agreed to leave the paragraph in because it may be beneficial to record how the Board voted for applicants, and residents. The group agreed that the language of the final paragraph could be revised.

3.2 DUTIES OF THE CHAIR. The Chair shall call the meeting together, preside over all meetings and hearings of the Board, put all questions to a vote, maintain order, decide all questions of order and procedure, subject to these rules, and shall appoint any committees found necessary to carry out the business of the Board.

The Chair may present to the Board such matters as in the Chair's judgment require attention.

At the request of any Board member, the Chair shall direct that the yeas and nays be taken and entered on the record on any question before the Board.

When the Board has no established rule of parliamentary practice, the Chair shall be guided as nearly as may be by Robert's Rules of Order, which may be simplified by the Chair as deemed necessary and appropriate. In the event of a challenge by a Board member of any modification of Robert's Rules by the Chair, Robert's Rules shall prevail.

The Chair shall exercise a general supervision over the business, papers, and property of the Board and shall execute all formal documents on behalf of the Board.

Item 3.4 Clerk – Mr. Corwin suggested that the word "Clerk" be changed to "Staff."

The Recording Secretary confirmed that draft minutes must be provided to the City within five business days. The group suggested that "144 hours" should be changed to "120 business hours."

3.4 CLERK. With the approval of the City Manager, the Director of Planning & Zoning, through the Department of Planning & Zoning, shall function as the Clerk for the Board. The Clerk shall administer official correspondence, subject to these rules and at the direction of the Board; shall issue the proper forms, compile all information, maps, and records for the Board's review; shall send all notices required by law; shall keep the minutes of all Board actions and proceedings; shall prepare reports and perform other duties as directed by the Chair; and, shall keep records of its examinations and other official actions.

The Clerk shall direct the recording secretary to take complete and accurate minutes, to tape record all meetings, to prepare in writing the official minutes of all meetings; to show the vote of each regular member upon every question, or if absent, disqualified, or failing to vote so indicate; to include in the minutes the names and addresses of all witnesses, a summary of the facts on which the decision is based and the decision rendered; and to deliver to the Clerk within 144 hours the completed document for submission to the Board for acceptance.

The Clerk, in consultation with the Chair, shall prepare the agenda for each meeting, provide all supportive documentation, and deliver said materials to each Board member no later than the Thursday preceding any scheduled Monday meeting. The Clerk shall

The group discussed the completeness of applicants' materials and how important it is that applicants provide all materials to be reviewed by the Board. A suggestion was made to add "Staff should have agenda packets to the Board Members by the Thursday before the meeting" to this item, and, if the full materials are not provided, the application will be postponed until the following meeting.

Ms. Romano noted that the Board rarely (if ever) goes against the staff's recommendation that an application is complete and ready for review, but many times, applicants do not provide all the information they need, and the application discussion is continued at the next (or even more) meeting(s). Mr. Reichert suggested the Board could approve the established calendar and filing deadlines for applicants for the year at the annual meeting.

Item 4.5 Place of Meeting – Mr. Corwin suggested that site visits, which are mentioned in Item 4.5, should have a

separate section, which should elucidate how site visits should be conducted, how are questions handled, whether the public can participate, etc.

4.5 PLACE OF MEETING. Meetings of the Board shall normally be held at City Hall, in the City of Lebanon, or at some other public place in the City of Lebanon, or at the site of a proposed project for the express purpose of inspecting said site as part of the review for a proposed project.

Item 4.6 Open Meetings -

Mr. Corwin said this Item should mention RSA 91:A.

4.6 OPEN MEETINGS. All meetings of the Board and its committees shall be open to the public except as stipulated by State Law.

Items 5.4 Presentations During Public Hearings -

The group discussed the idea that perhaps a member of the Staff

5.4 PRESENTATIONS DURING PUBLIC HEARINGS. The Chair shall request that before the start of each Public Hearing a representative of the proposal give a brief presentation of the request before the Board. The brief presentation shall be adequate so as to inform all abutters and members of the public as to the nature of the project in order that they may comment on the proposed project.

could provide the Board with the initial overview/presentation of the application. Chair Faunce said this would provide clarity for the Board and Mr. Reichert said it would help provide focus on pertinent issues. The group discussed whether Staff could provide a recommendation on whether the Board should approve the application. Mr. Hill said he felt it is better for the applications to be presented in a neutral way initially and the Board can ask questions to determine Staff opinion.

Item 5.5 Permission to Address the Board –

The group suggested the language could be reworded to indicate it should not be required to submit subject matter prior to the meeting for review during Open Discussion, but the Chair could require prior submittal, if desired.

5.5 PERMISSION REQUIRED TO ADDRESS THE BOARD. Persons other than members of the Board shall not be permitted to address the Board except by consent of the Chair. Anyone wishing to address the Board during Open Discussion should indicate their intent and subject matter to the Chair prior to the meeting. A time limit of 3 minutes shall normally be in effect. The speaker shall not enter into any debate with anyone present and shall speak only to the subject matter indicated. A group may have one person act as its spokesperson and shall follow the same rules.

Items 6.1-6.2

Mr. Corwin suggested that, if the Board is happy with how votes are currently handled, the rule should be rewritten to match how it is currently being done.

6.1 MOTION TO BE STATED BY THE CHAIR. When a motion is made and seconded, it shall be stated by the Chair before debate. At the request of the Chair or any member of the Board, the motion shall be in writing. A motion may not be withdrawn or amended by the mover without the consent of the second.

6.2 MAJORITY VOTE REQUIRED. Determinations on any matter before the Board shall require the concurrence of a majority of the regular members present.

The group agreed that Item 6.2 is unclear and confusing and should be rewritten. Mr. Corwin said if a quorum is five members, then at least five in-person members need to be present. In that case, he said three members would be considered the majority.

Item 6.4 Conflicts of Interest –

Mr. Reichert said this item should include references from the City's ethics training (which was provided by the City Manager) regarding how it should handle conflicts of interest.

6.4 CONFLICT OF INTEREST or PREJUDGEMENT. In accordance with RSA 673:14, no Board member shall participate in deciding or shall sit upon the hearing of any question if that member has a direct personal or pecuniary interest in the outcome which differs from the interests of other citizens, or if that member would be disqualified for any cause to act as a juror upon the trial of the same matter in any action at law.

Item 6.6 Extension of Time -

Mr. Reichert suggested this item needs to be rewritten to better reflect the Planning Board's current procedures regarding extensions of time for deliberation on applications.

6.6 EXTENSION OF TIME. Any three Board members may request an extension of time before voting on any proposal before the Board. If such an extension is requested, the Board shall schedule a special meeting not more than two weeks from the date of the request to take action on the proposal or otherwise such special meeting may be scheduled for a date agreeable by all requestors. There shall be no new business placed on the agenda of any special meeting scheduled under this section.

Item 7.2 Definition of Committee -

Mr. Reichert suggested this definition should match the description of the function of committee discussed earlier in the document.

7.2 DEFINITION OF COMMITTEE. A group of Board members delegated by the Chair to perform a function.

Item 7.5 Committee Chair –

The group agreed to rewrite this item.

7.5 COMMITTEE CHAIR. The first Board member named on the Committee shall be the Chair thereof.

Item 8.3 Activities Between Meetings-

The group discussed instances where this might happen. Ms. Romano noted that members would be required to present research they have done outside of the meeting. Mr. Reichert said, if a board member attains evidence or information that may affect the judgment on the application, they are required to disclose it and enter that into the record. Mr. Hill said there should be general guidelines added to clarify what kind of information should be disclosed.

8.3 ACTIVITIES BETWEEN MEETINGS OF INDIVIDUAL MEMBERS. Individual Board members may, between meetings, prepare drafts of motions or other potential Board actions. They may also research or investigate general or specific factual issues. However, if the research pertains to a case, the Board member shall, at the public hearing, report all findings to the Board, and parties to the case shall be given a meaningful opportunity to respond.

Item 8.4 Distributions -

The group discussed how to communicate via email outside of meetings. Mr. Hill explained how he is handling conveying information to the Conservation Commission members for a Trail Maintenance project that he is working on. He said no discussion about his reports has been generated between committee members or himself. Mr. Reichert said it is probably a better practice to communicate this kind of information via the Planning Department Staff, and the group agreed that should be added to the language of this Item.

8.4 DISTRIBUTIONS. A Distribution may be made to any number of Board members, so long as it does not become an Exchange. Whenever a Board member makes a Distribution concerning a pending or future case and it involves a quorum of the Board (counting all senders and recipients):

- A. A copy shall be forwarded to the Director of Planning & Zoning, who shall determine, under RSA 91-A or other applicable law, whether the Distribution is subject to public disclosure and shall place the copy in the appropriate file;
- B. The Board member making the Distribution shall report on it, and its contents, at the public hearing on the case unless the information is exempt from disclosure under RSA 91-A; and,
- C. Parties to the case shall be given a meaningful opportunity to respond to the information in the Distribution.

Item 8.5 Exchanges –

The group discussed whether a quorum is based on the number of meeting members present, or the total number of Board Members. Mr. Corwin said the quorum is five members for the Planning Board.

8.5 EXCHANGES. Exchanges involving a quorum or more of the Board or of any Planning Board Committee are prohibited. Such Exchanges shall be considered deliberations and shall occur only at meetings noticed in accordance with RSA 91-A. An Exchange pertaining to any activity allowed under Subsection 8.3 is permitted if the number of Board or Committee members involved is less than a quorum; however:

- A. Each Board member involved shall be responsible for preventing the number of members involved from reaching a quorum;
- B. Information discussed in, or generated by, an Exchange between Board members shall not be subject to further Distribution; and
- C. No Exchange shall include any vote or straw vote, or any Ex Parte Communication.

1 The group discussed the importance of engaging more residents to serve on committees to ensure
2 enough members are available at each meeting to achieve a quorum. Ms. Romano suggested an
3 article in the Valley News to encourage participation.
4

5 The group discussed at length whether discussions can be had between Board members outside a
6 meeting. Mr. Rutter and Ms. Romano said they have been chastised in the past if they discussed
7 anything about an application after a meeting when a quorum was not present. Mr. Corwin said
8 that rule will stand but there could be more details added to the rules regarding the type of
9 discussion that can be had. He said an application can be discussed if it is closed.
10

11 **Rules of Decorum -**

12 The group discussed situations where staff or Board members have been verbally attacked by
13 applicants/residents during the deliberation of an application, which should never be allowed.
14 Mr. Reichert asked the Board members to speak to anyone who launches a verbal attack in a
15 meeting to curtail that behavior immediately.
16
17

18 **3. APPROVAL OF MINUTES**

19 None
20

21 **4. ADJOURNMENT**

22

23 *A MOTION was made by Brandon Hill to adjourn the meeting at 9:26pm. The motion was*
24 *seconded by Jeremy Rutter.*
25

26 **The MOTION was approved (5-0).*
27

28 The meeting was adjourned at 9:26pm.
29

30 Respectfully submitted,
31 Paula Roux
32 Recording Secretary

DRAFT

**LEBANON PLANNING BOARD
SPECIAL MEETING – SITE WALK
MONDAY, MAY 6, 2024
7 LUCENT DRIVE, LEBANON, NH
5:00 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair), Karen Zook (Council Representative), Kathie Romano, Patrick Kennelly, Brandon Hill

MEMBERS ABSENT: Jeremy Rutter

STAFF PRESENT: Tim Corwin (Deputy Director of Planning & Development)

1. CALL TO ORDER:

Chair Faunce called the meeting to order at 5:00 pm. The meeting convened within the front parking area of 7 Lucent Drive.

2. SITE WALK

- A. Adimab, LLC, 7 Lucent Drive (Tax Map 10, Lot 11, Plot 2600), zoned IND-L:** Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved Site Plan (PB2020-14-SPR) to change the parking lot surface material, to reduce the tree shading required, and to amend the approved landscaping and lighting plans. PB2024-10-SPA

Jason Yehle of Adimab, Christopher Smith, AIA, and Sylvia Richards, AIA, were present on behalf of the applicant. No one from the public was in attendance. Mr. Yehle explained that Adimab's current application is to amend a site plan that was approved by the Planning Board in 2020, that the project is nearly complete, and that a Temporary Certificate of Occupancy has been issued. Mr. Yehle further explained that the applicant's requested amendments include minor changes to the site layout, landscaping and lighting, as well as a waiver request to leave the parking area that was approved in connection with the building addition as a hard-pack gravel surface in lieu of pavement.

Mr. Yehle led the Board through the building addition to the second story in order to observe the newly constructed parking lot from an oblique perspective, and then outside to the parking lot where the Board asked questions relating to parking lot maintenance, drainage, and shading. Mr. Yehle then led the Board back to the front parking lot where the meeting commenced.

3. ADJOURNMENT:

*A MOTION by Mr. Ford Burley to adjourn the meeting.
Seconded by Ms. Romano.*

**The Motion was approved (6-0)*

The meeting was adjourned at 5:30 pm.

Respectfully submitted,
Tim Corwin
Deputy Director of Planning & Development