



CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room – City Hall, Dover NH
Meeting Date: **Thursday, February 18, 2021**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:15 AM: Site Review for Tobin Farwell – Farwell Engineering Services, (Owner: 33 Littleworth Road LLC), Assessor's Map G, Lot 6D, zoned IT, located at 33 Littleworth Road. (Proposal is to construct a single story 60'x120' metal accessory storage building and a 14'x36' addition to the existing building). (P20-68)



City of Dover, New Hampshire SITE REVIEW APPLICATION

[Revision Date: June 4, 2019]

RECEIVED
Planning Office

Office Use Only

Project #:

P20-68

Date Received:

OCT 19 2020

Amount Paid:

Time Received:

Dover, New Hampshire

APPLICANT AND OWNER INFORMATION

Name of Applicant: Tobin Farwell- Farwell Eng. Serv. Telephone # 603-292-5787

Address of Applicant: 265 Wadleigh Falls Rd - Lee NH 03861

E-Mail Address: T_farwell@farwellengineering.com

Name of Property Owner (if different from applicant): 33 Littleworth Road LLC Telephone # 603-396-9514

Address of Property Owner: PO Box 522 - Sommersworth, NH 03878

PROPERTY INFORMATION

Address of Property: 33 Littleworth Rd

Assessor's Map # G Lot(s) # 6D

Zoning District(s) IT Overlay District(s) _____

Size of Parcel: 2.3 sq. ft. 100,135 ac. Property Deed: Book 4732 Page: 893

Existing Use of Property: Business - Crane rental

SITE PLAN INFORMATION

Describe Proposed Use: Proposed 60x120 storage building and 16 x 36 addition to existing building

Area of Parcel to be Developed: redevelopment sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: _____

Number of Parking Spaces: Existing 9 Proposed 9

Highway Access (check where applicable): _____ City Street x State Highway

Number of Employees Total: 14 In Maximum Shift: 20

Disposition of Parcel: Ex. Pro.

Building Setbacks:

Building Footprint 2914 576+7200 sq. ft.

Front Yard 50 ft.

Total Building Area 10,690 sq. ft.

Rear Yard 10 ft.

Paved Area 26127 sq. ft.

Side Yard: Right _____ ft. Left _____ ft.

City Water? ☒ Yes ☐ No How far is city water from the property? _____City Sewer? ☐ Yes ☒ No How far is city sewer from the property? _____**BUILDING INFORMATION**Type of Building to be Built: steelHeight of Building: 25 Finished Floor Elevation: 129.5

Number of Seats (where applicable) _____

Estimated value of construction: _____ Refuse removal: Public/Private (circle one)

WAIVER REQUESTSSite Review Regulations section(s) to be waived: noneJustification for waiver request(s) (*attach additional sheets as needed*):

SURVEYOR INFORMATIONName of Surveyor and Company (Licensed in N.H.) Kevin McEneaney - McEneaney Survey Assoc.Address 24 Chestnut Street - Dover NH Telephone #: 603-742-0911Professional License #: 661 E-mail address: _____**ENGINEER INFORMATION**Name of Engineer and Company (Licensed in N.H.) TOBIN FARWELL - FARWELL ENGINEERING SERVAddress 265 Wadleigh Falls Rd - Lee NH 03861 Telephone #: 603-292-5787Professional License #: 9649 E-mail address: T_farwell@farwellengineering.com**ARCHITECT INFORMATION**

Name of Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: _____ Telephone # _____

Address Easement Holder: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: Thaddeus Moore Date: Oct 15th 2020

Signature of Applicant (if different from owner): _____ Date: _____

Signature of Agent: John Powell Date: 10/15/20

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Thaddeus Moore Date: Oct 15th 2020

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: Thaddeus Moore Date: Oct 15th 2020

Signature of Applicant (if different from owner): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: Thaddeus Moore Date: Oct 15th 2020

Signature of Applicant (if different from owner): _____ Date: _____

PLANNING BOARD FEE SCHEDULE

(Revised July 1, 2020)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover."

A. Plan Review Fees

1. Application fee for the following **(SELECT ALL THAT APPLY):**

- ☐ SUBDIVISION Application fee \$200.00 + \$150.00 x # _____ new lots created = \$ _____
- ☐ LOT LINE ADJUSTMENT Application fee \$200.00 + \$100.00 X # _____ of lots involved = \$ _____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee \$200.00 = \$ _____
- ☐ SITE REVIEW – RESIDENTIAL Application fee \$200.00+ \$100.00 x # _____ per dwelling unit = \$ _____
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee \$200.00 + (not to exceed \$10,000)
 - ☐ New construction \$.15 sq. ft. x # 7200 sq. ft. = \$ 1280
 - ☐ Additions (new floor space) \$.10 per sq. ft. x # 576 sq. ft. = \$ 58
- ☐ MOTEL/HOTEL \$35.00 x # _____ per lodging unit = \$ _____
- ☐ CHANGE OF USE Application fee \$200.00 + (not to exceed \$5,000)
 - ☐ Existing floor spaces \$.10 per sq. ft. x # _____ sq. ft. = \$ _____
- ☐ CONDITIONAL USE PERMIT Application fee \$200.00 x # _____ per Application = \$ _____
- ☐ GRAVEL PIT/ EXCAVATIONS
 - ☐ Application fee \$50.00 = \$ _____
 - ☐ Permit fee \$75.00 = \$ _____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee \$200.00 = \$ _____
- ☐ REQUEST FOR REZONING Application fee \$200.00 = \$ _____
- ☐ DRIVEWAY WAIVER Application fee \$200.00 = \$ _____

SUB TOTAL= \$ _____

AND

2. IMPERVIOUS PAVED AREA (for new development or additions to existing parking lots
(not to exceed \$10,000) Application fee \$200.00 + \$.07 sq. ft. x # 6000 = \$ 620

TOTAL PLAN REVIEW FEE= \$ 1958

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will need to review the list and provide to this office the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
 - ☐ Certified letters fee # 3 of x \$8.00 = \$ 24
- ☐ Certified letters fee: # of abutters 5 X \$8.00 = \$ 40
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X \$1.00 = \$ _____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet 2 x \$10.00 = \$ 20

SUB TOTAL= \$ 84

- C. Foster's newspaper public notice fee \$100.00 x # 1 applications = \$ 100

TOTAL NOTICE FEE= \$ 184

The above amount must be paid 28 hours prior to the Planning Board meeting, to be heard.



City of Dover, New Hampshire SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1"=100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: Farwell Engineering Services, LLC File Number: _____

PROJECT TITLE: Moore's Crane Rental

PROPERTY LOCATION: 33 Littleworth Rd Tax Map: G Lot: 6D

	Where/How Provided	Reviewed
1. Completed and signed Application form		
2. Plan Review Fees are provided		
3. Electronic copy of the engineered/surveyed plan layout		
4. Electronic copy of supplementary materials and application		
5. Traffic Impact Assessment and Analysis (Standard or Advanced)		
6. Waiver requests to the Site Plan Review Regulations, with written justification		
7. Conditional Use Permit applications		
8. A colored rendering of the streetscape that will be created along the existing public right-of-way		
9. A colored architectural plan showing all sides of buildings		
10. Folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:		
Location map at appropriate scale		
Proposed Project name and title and Planning File #		
Date, north arrow and scale		
Names of all abutting property owners		
Name and address of owners and/or applicants		
Signature & stamp of NH licensed land surveyor and/or engineer		
Zoning District boundaries, including any special or overlay districts		
Location of Conservation District areas		
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks		
Location and widths of existing & proposed easements & right of ways		
Location and width of existing and proposed access/egress ways		

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access		
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system		
Existing and proposed topographic information at two foot intervals		
Existing and proposed buildings and structure locations		
Minimum building setbacks or build to lines on all lots		
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities		
Existing and proposed water lines and fire hydrants, including materials and capacity needed		
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load		
Existing and proposed stormwater lines and facilities		
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots		
Location of Flood Hazard Zone		
Location of all bodies of water and watercourses		
Location of wetlands and buffers		
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set		
Existing natural features and/or significant vegetation on property		
Depict existing contours up to 100 ft. beyond project limits		
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect		
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces		
Location, material and size of existing and proposed pavement area		
Location of proposed fire lanes		
Specify finished floor elevations of buildings		
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening		
Depict all service, storage, loading bays and utility areas		
All applicable Dover Common Site Plan notes		
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis		
Stormwater Management System Operation and Maintenance Plan		
Letter to Serve from Public and Private Utilities		
Erosion and Sedimentation Control Plan		
Landscape Operation and Maintenance Plan		
Proposed restrictive covenants or homeowners association documents		
Dates and permit numbers of all required state and federal permits		
If wetland buffer, indicate placards locations, as applicable		
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs		
Location of proposed drive-in facilities		
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required		

REVIEWED BY: _____ DATE _____ TRC DATE _____

Moores Crane Rental-Storage Building
Site Plan
TAX MAP G, LOT 6D
33 Littleworth Road
DOVER, NEW HAMPSHIRE

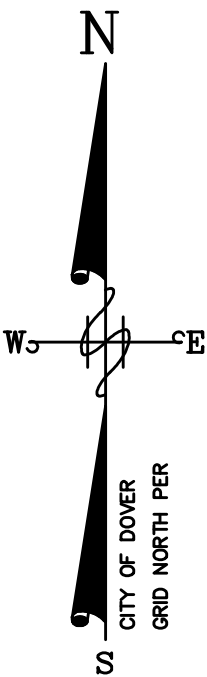
ABUTTERS LIST

MAP-LOT	OWNER OF RECORD
G-4-A-1	BEARINGS INC 6920 POINT INVERNESS WAY STE 301 FORT WAYNE, IN 46804
G-4-G-2	LITTLEWORTH/INDUSTRIAL PARK PROPERTIES L PO BOX 118 DOVER, NH 03821-0118
G-6-O-0	29 LITTLEWORTH ROAD LLC C/O NORTHERN POOL & SPA 291 HAROD DOW HIGHWAY ELIOT, ME 03903
G-6-B-0	HUTCHINGS WILLIS E 184 W HIGH ST SOMERSWORTH, NH 03878
G-28-1-D	THIBODEAU RAYMOND G & THIBODEAU JENNIFER C 37 LITTLEWORTH RD DOVER, NH 03820

CONSULTANTS

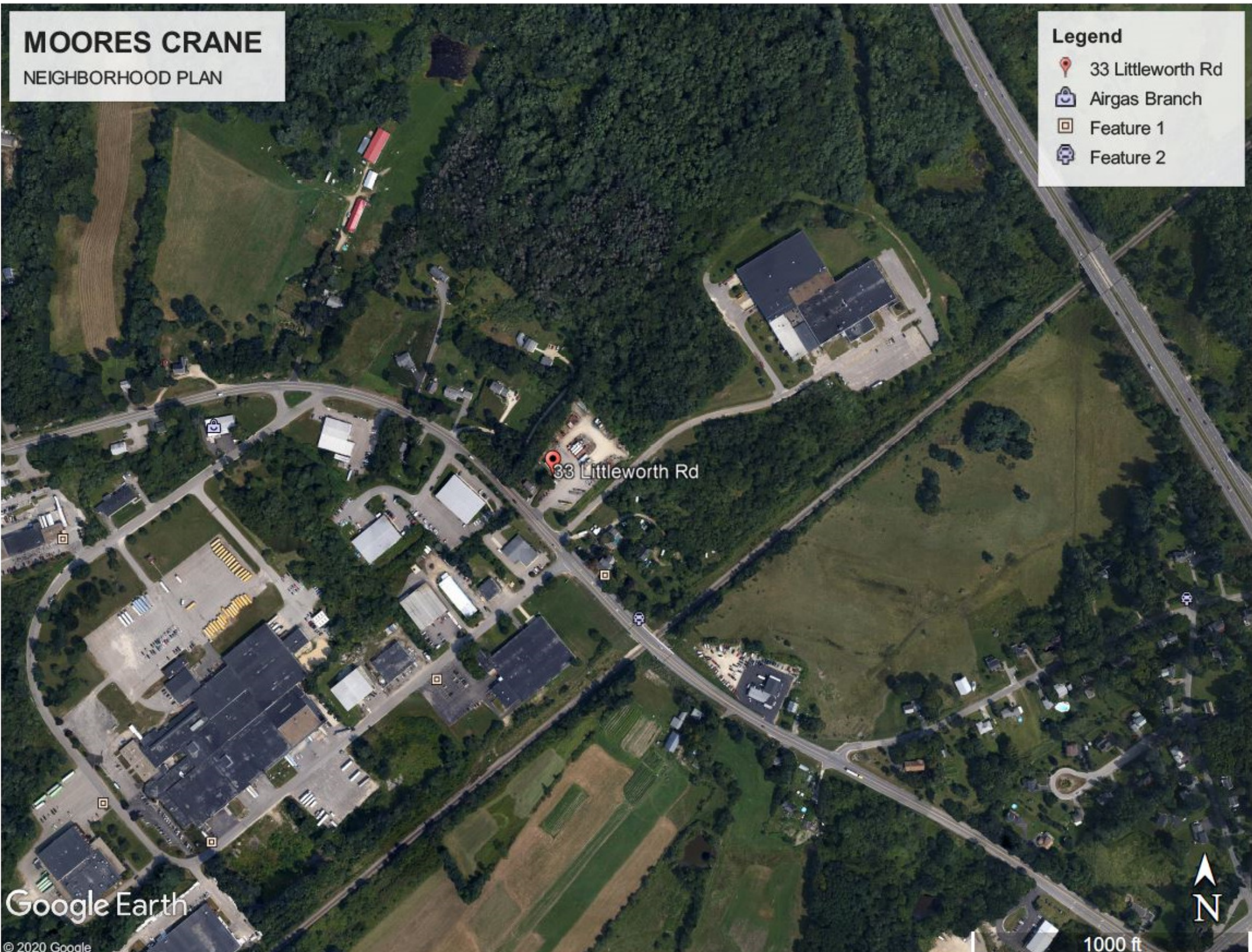
Surveyor:
McEneaney Survey Associates, Inc.
24 Chestnut St - PO Box 681
Dover, NH 03820
Tel: (603) 742-0911

Engineer:
Farwell Engineering Services, LLC
265 Wadleigh Falls Rd
Lee, NH 03861
603-552-2784



PLAN INDEX:

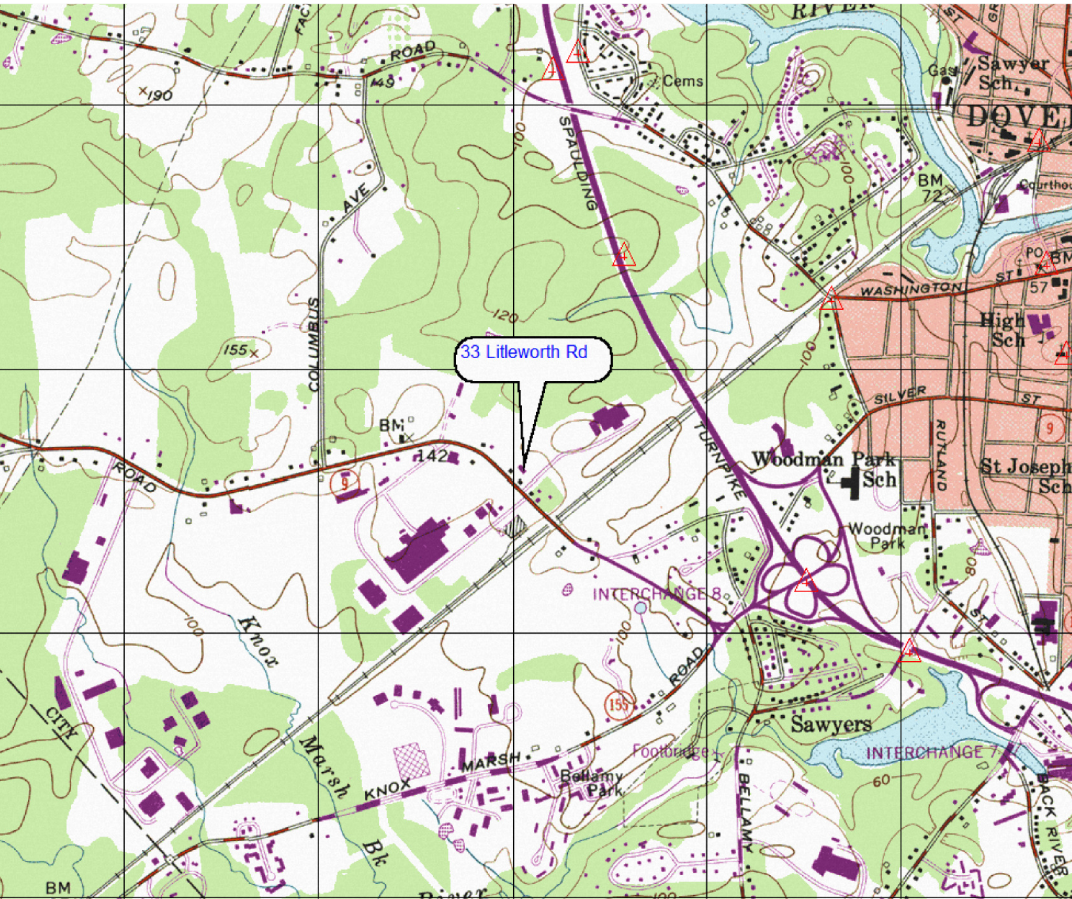
COVER SHEET	C-1
EXISTING CONDITIONS	
SITE PLAN	C-2
DETAIL SHEET	D-1
DETAIL SHEET	D-2



NOT TO SCALE



TAX MAP - NOT TO SCALE



LOCUS
1" = 2000'

NOTES:

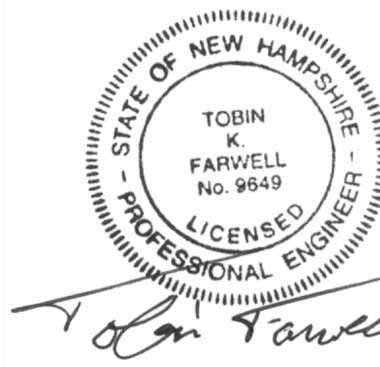
- THE PURPOSE OF THIS PLAN IS TO CONSTRUCT A SINGLE STORY 60'X120' METAL ACCESSORY STORAGE BUILDING A 16' X 36' ADDITION TO THE EXISTING BUILDING.
- OWNER OF RECORD, TAX MAP G, LOT 6D:
33 LITTLEWORTH ROAD, LLC
33 LITTLEWORTH ROAD
DOVER, NH 03820
SCRD 4732/893
- THE PROJECT PARCEL CONTAINS 100135 SF - 2.30 AC.
- ALL APPLICABLE RIGHT OF WAY, CONSERVATION, SLOPE, CONSTRUCTION, POWER LINE, CROSS TRAVEL, OR OTHER EASEMENTS ARE NOTED ON THE EXISTING CONDITIONS PLAN.
- THE SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA AS SHOWN ON FLOOD INSURANCE RATE MAP 33017C03100; EFFECTIVE DATE MAY 17, 2005..
- SUBJECT PARCEL IS LOCATED IN THE INOVATIVE TECHNOLOGY DISTRICT (IT).
PRINCIPAL BUILDING:

FRONT BUILDING TO LINES	50 FEET
SIDE BUILDING TO LINE	50 FEET
REAR BUILDING	50 FEET
MAX. BUILDING HEIGHT	55 FEET
OUTBUILDING/ACCESSORY USE	
FRONT SETBACK	50 FEET
ABUT A STREET SETBACK	50 FEET
SIDE SETBACK	10 FEET
REAR SETBACK	10 FEET
PARKING	25 FEET
MAXIMUM LOT COVERAGE	33%
- PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES INC. IN OCTOBER OF 2016 WITH AN ERROR OF CLOSURE OF LESS THAN 1 IN 10,000. TOPO GRAPHIC INFORMATION OBTAINED AT THE SAME TIME. ELEVATION BASED ON NGVD 1929.
- PARKING SPACES REQUIRED.
OFFICE SPACE 1440 SF - 1/300 = 5 SPACES
INDUSTRIAL 2160 SF+ 7200 SF = 9360 SF
PARKING 1/800 SF = 12 SPACES
TOTAL MAX PARKING = 17 SPACES

- AS-BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON A REPRODUCIBLE MYLAR MEDIUM AND IN A DIGITAL DXF FORMAT ON DISK TO THE CITY OF DOVER ENGINEERS OFFICE UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED CORRECT BY A LLS OR PE.
- EXTERIOR LIGHTING SHALL BE MOUNTED ON THE BUILDING AND SHALL PROVIDE LIGHTING DIRECTED ON SITE ONLY.
- THE PROPOSED STRUCTURE WILL NOT BE SERVED BY A SPRINKLER SYSTEM.
- A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.
- A SECURITY ALARM SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I SECTION 58-2 OF THE CODE OF THE CITY OF DOVER.
- ALL ON SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
- THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER - SEWER IS AN ONSITE LEACHING SYSTEM.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
- BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.



265 WADLEIGH FALLS ROAD
LEE, NEW HAMPSHIRE 03824
PH: 603-292-5787
WWW.FARWELLENGINEERING.COM



ISSUED FOR: SITE PLAN REVIEW

ISSUE DATE: AUGUST 12, 2020

FILE NAME: 2044-MOORES

NO.	DATE	DATE	INITIAL SUBMISSION	DESCRIPTION	TKF	BY
1						

SCALE: 1" = 20'

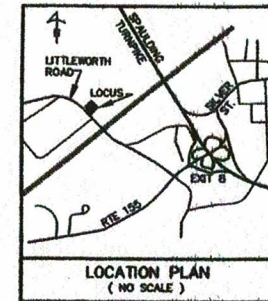
OWNER/APPLICANT:
**MOORES CRANE RENTAL
33 LITTLEWORTH RD
DOVER NH 03861**

PROJECT:
**STORAGE
BUILDING
33 LITTLEWORTH RD
TAX MAP G
LOT 6D
DOVER, NEW HAMPSHIRE**

TITLE:
COVER SHEET

SHEET NUMBER:
C-1

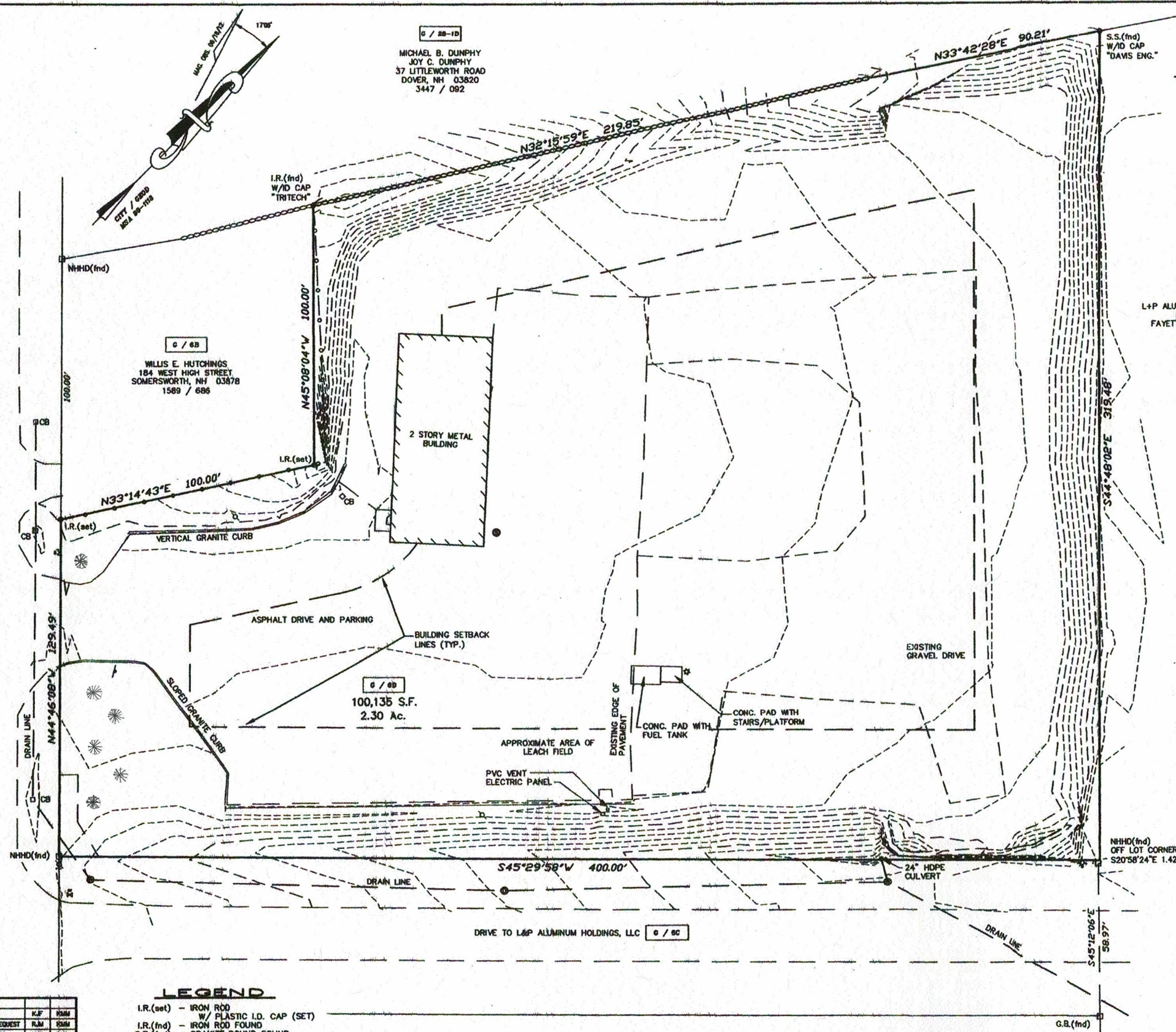
- LANDSCAPE PLAN -



G / 46-2
LITTLEWORTH / INDUSTRIAL
PARK PROPERTIES
185 IND. PARK DRIVE
DOVER, NH 03820
3561 / 972

G / 4A-1
BEARINGS, INC.
c/o PT COUNCELORS
P.O. Box 3525
McKINNEY, TX 75070
1671 / 029

LITTLEWORTH ROAD



LEGEND

- I.R.(set) - IRON ROD
- W/ PLASTIC I.D. CAP (SET)
- I.R.(ind) - IRON ROD FOUND
- G.B.(ind) - GRANITE BOUND FOUND
- NHHD(ind) - NH HIGHWAY DEPT. CONCRETE BOUND
- UP - UTILITY POLE
- OHU - OVERHEAD UTILITIES
- CMP - CORRUGATED METAL PIPE
- SIGN POST
- STONEWALL
- S.F. - SQUARE FEET
- Ac. - ACRE
- ± - MORE OR LESS
- (TYP.) - TYPICAL
- S.C.R.D. - STRAFFORD COUNTY
- REGISTRY OF DEEDS
- CB □ - CATCH BASIN
- - SEWER MANHOLE
- ⊙ - DRAIN MANHOLE
- ⊙ - GAS VALVE
- FENCE
- ☆ - POLE MOUNTED LUMINAIRE

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

"I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN." RSA 676:18
10/15/20
DATE: / KEVIN M. McNEANEY LLS 651

- ### REFERENCE PLANS:
- 1.) PLAN OF LAND, DOVER, N.H., GENERAL ELECTRIC COMPANY TO CRT DEVELOPMENT; SCALE: 1" = 100'; DATED: JUNE 1993; BY: NORWAY PLAINS ASSOCIATES, INC.; RECORDED S.C.R.D. PLAN 42-34.
 - 2.) BOUNDARY PLAN, DOUGLAS S. & TERRY A. ROGERS, LITTLEWORTH ROAD, DOVER, NEW HAMPSHIRE; SCALE: 1" = 30'; DATED: AUGUST 3, 1993; BY: TRITECH ENGINEERING CORPORATION; NOT RECORDED.
 - 3.) SUBDIVISION PLAN, LIONHEART INVESTMENT PROPERTY, LLC., LITTLEWORTH ROAD, DOVER, NEW HAMPSHIRE; SCALE: 1" = 60'; DATED: OCTOBER 31, 2003; RECORDED S.C.R.D. PLAN 74-86.
 - 4.) PROPOSED SUBDIVISION, LAND OF PENELOPE GROSSMAN FOR JAMES K. HORNE, LITTLEWORTH ROAD, DOVER, N.H.; SCALE: 1" = 100'; DATED: OCTOBER 3, 1988; BY: BERRY SURVEYING & ENGINEERING; RECORDED S.C.R.D. PLAN 35-16.
 - 5.) NEW HAMPSHIRE HIGHWAY DEPARTMENT, PLAN OF DOVER, BRP-X-222(001), 13042.

G / 6C
L+P ALUMINUM HOLDINGS, LLC
P.O. Box 309
FAYETTEVILLE, AR 72702
3631 / 839

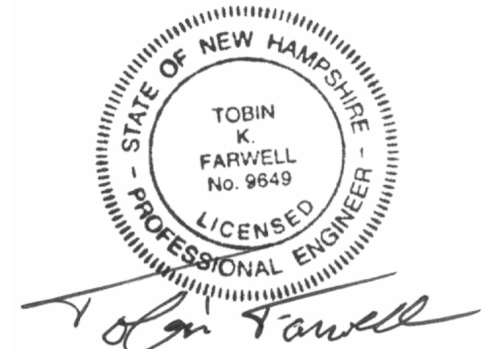
- ### NOTES:
- 1.) OWNERS OF RECORD: HADLEY S. MOORES
33 LITTLEWORTH ROAD
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 4732, PAGE 893
 - 2.) **G / 6D** - DENOTES TAX MAP AND PARCEL NUMBER.
 - 3.) ZONING DISTRICT: INNOVATIVE TECHNOLOGY (IT)
MINIMUM LOT SIZE = 2 Ac.
MINIMUM FRONTAGE = 200 FEET
BUILDING SETBACK REQUIREMENTS:
FRONT = 50 FEET
BACK AND SIDE = 50 FEET
BACK AND SIDE (R.O.W.) = 50 FEET
MAX. BLDG. HEIGHT = 55 FEET
 - 4.) THE SUBJECT PARCEL IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX D; MAP NUMBER 33017003100; EFFECTIVE DATE MAY 17, 2005.
 - 5.) BASIS OF BEARINGS IS CITY OF DOVER GRID SYSTEM. VERTICAL DATUM IS NGVD 1929. CONTOUR INTERVAL IS 1 FOOT.
 - 6.) NO WETLAND DELINEATION HAS BEEN PERFORMED FOR THE SUBJECT PARCEL.
 - 7.) THE PARCEL IS SUBJECT TO A DRAINAGE EASEMENT GRANTED TO THE STATE OF NEW HAMPSHIRE AS DESCRIBED IN S.C.R.D. VOLUME 3502, PAGE 146.
 - 8.) CITY OF DOVER TAX PARCELS G/6A & G/6D WERE MERGED INTO ONE PARCEL, G/6D. SEE NOTICE OF LOT MERGER RECORDED S.C.R.D. VOLUME 3298, PAGE 164, DATED OCTOBER 25, 2005.

EXISTING CONDITIONS PLAN
PREPARED FOR
HADLEY S. MOORES
TAX MAP G, LOT No. 6D
33 LITTLEWORTH ROAD
CITY OF DOVER
COUNTY OF STRAFFORD
STATE OF NEW HAMPSHIRE

DRAWN BY: KJP
SCALE: 1" = 20'
FILE: VR CP\1988\16-1988.DWG
DATE: OCTOBER 31, 2016



McNeaney
Survey
Associates, inc.
P.O. Box 681 - 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911
SURVEYING - PLANNING - CONSULTING



ISSUED FOR:
SITE PLAN REVIEW

ISSUE DATE: AUGUST 12, 2020

FILE NAME: 2044-MOORES

[illegible]

SCALE: $1'' = 20'$

OWNER/APPLICANT:
MOORES CRANE RENTAL
33 LITTLEWORTH RD
DOVER NH 03861

PROJECT:

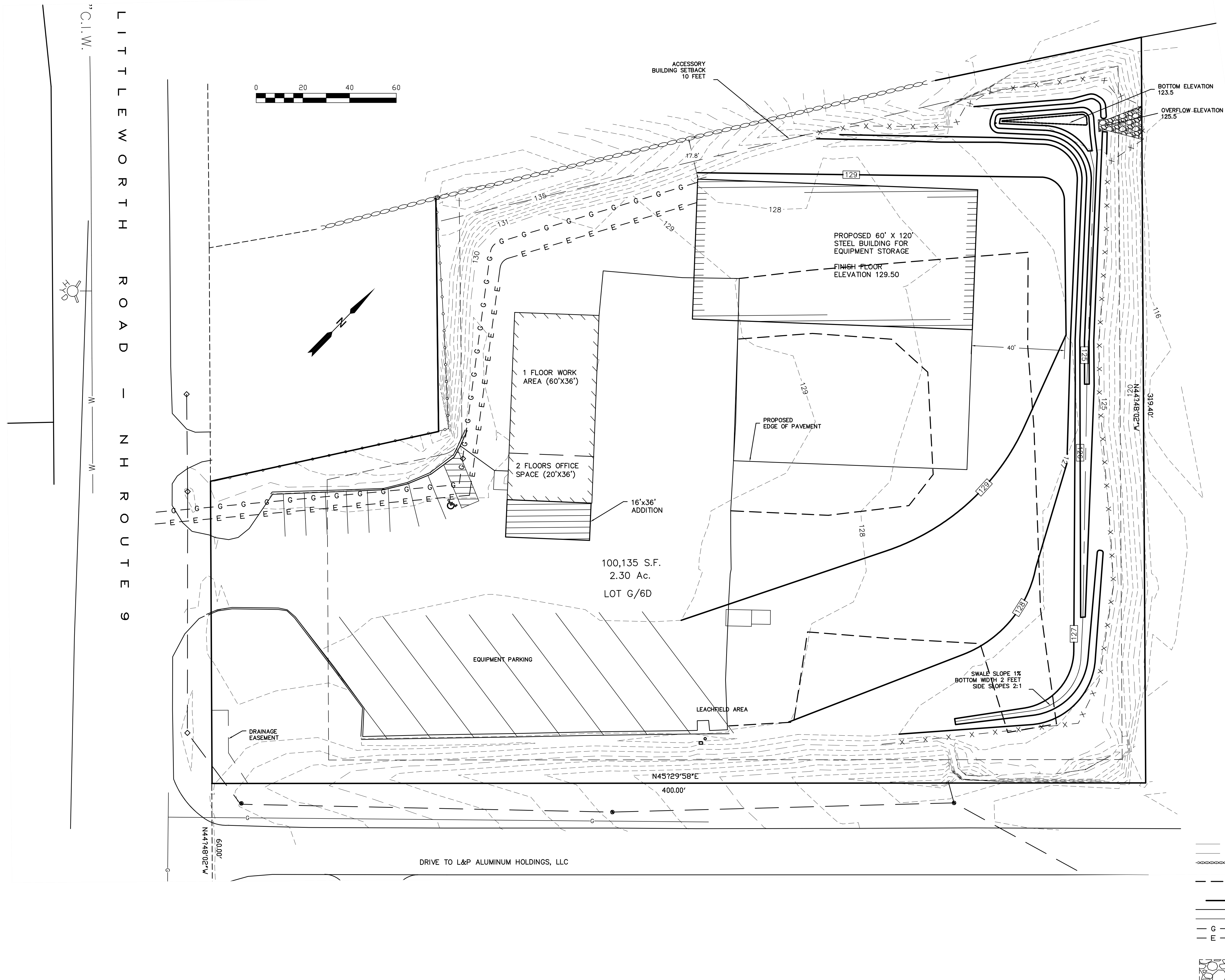
*STORAGE
BUILDING
33 LITTLEWORTH RD
TAX MAP G
LOT 6D
DOVER, NEW HAMPSHIRE*

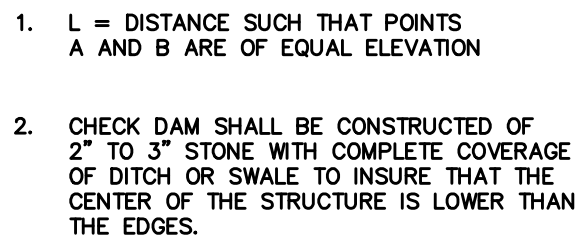
TITLE:

SITE PLAN

SHEET NUMBER:

C-2





TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED, AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR EROSION CONTROL, IT DOES PROVIDE A MEANS TO ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

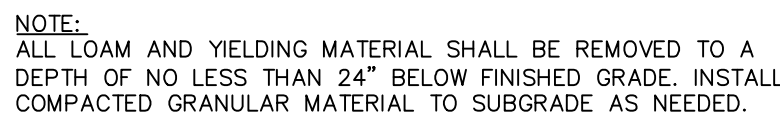
1. STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.
3. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.
4. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

NOT TO SCALE

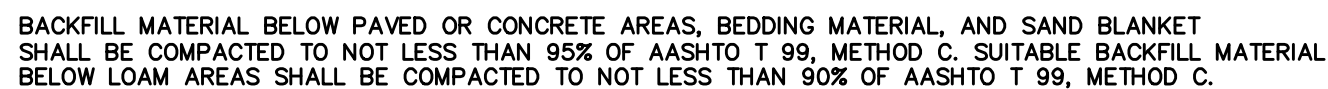


1. THE FOUNDATION AREA OF THE WATERWAY SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. MATERIALS REMOVED SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OR PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE WATERWAY SHALL BE FREE OF IRREGULARITIES WHICH WILL IMPED NORMAL FLOW.
3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNDESIRABLE SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED WATERWAY. EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH FOR INSTALLATION.
5. VEGETATION SHALL BE ESTABLISHED IN THE SWALE PRIOR TO ALLOWING STORMWATER RUNOFF TO FLOW THROUGH THE SWALE.
6. MAINTENANCE OF THE VEGETATION IN THE GRASSSED WATERWAY IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE WATERWAY. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP THE GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE WATERWAY.
7. THE WATERWAY SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE WATERWAY. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.
8. PERIODIC APPLICATIONS OF LIMES AND FERTILIZER MAY BE NEEDED TO MAINTAIN VIGOROUS GROWTH.

NOT TO SCALE



NOT TO SCALE



SAND, BLANKET & BEDDING		CRUSHED STONE BEDDING *	
SIEVE SIZE	% FINER BY WEIGHT	SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 - 100	1"	100
200	0 - 15	3/4"	90 - 100
		3/8"	20 - 55
		# 4	0 - 10
		# 8	0 - 5

* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

NOT TO SCALE

SHEET NUMBER:

 $D-1$

DRAINAGE ANALYSIS

Prepared for

Moore's Crane Rental

Tax Map G
Lot 6D
33 Littleworth Road
Dover, New Hampshire

Submitted
October, 2020

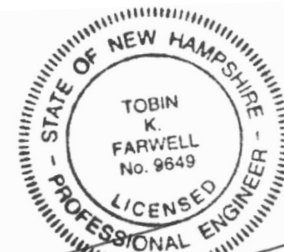
Prepared by



265 Wadleigh Falls Road
Lee, NH 03861
Phone: 603-292-5787

Email: t_farwell@farwellengineering.com

2044.ds.doc



A handwritten signature in black ink that reads "Tobin K. Farwell".

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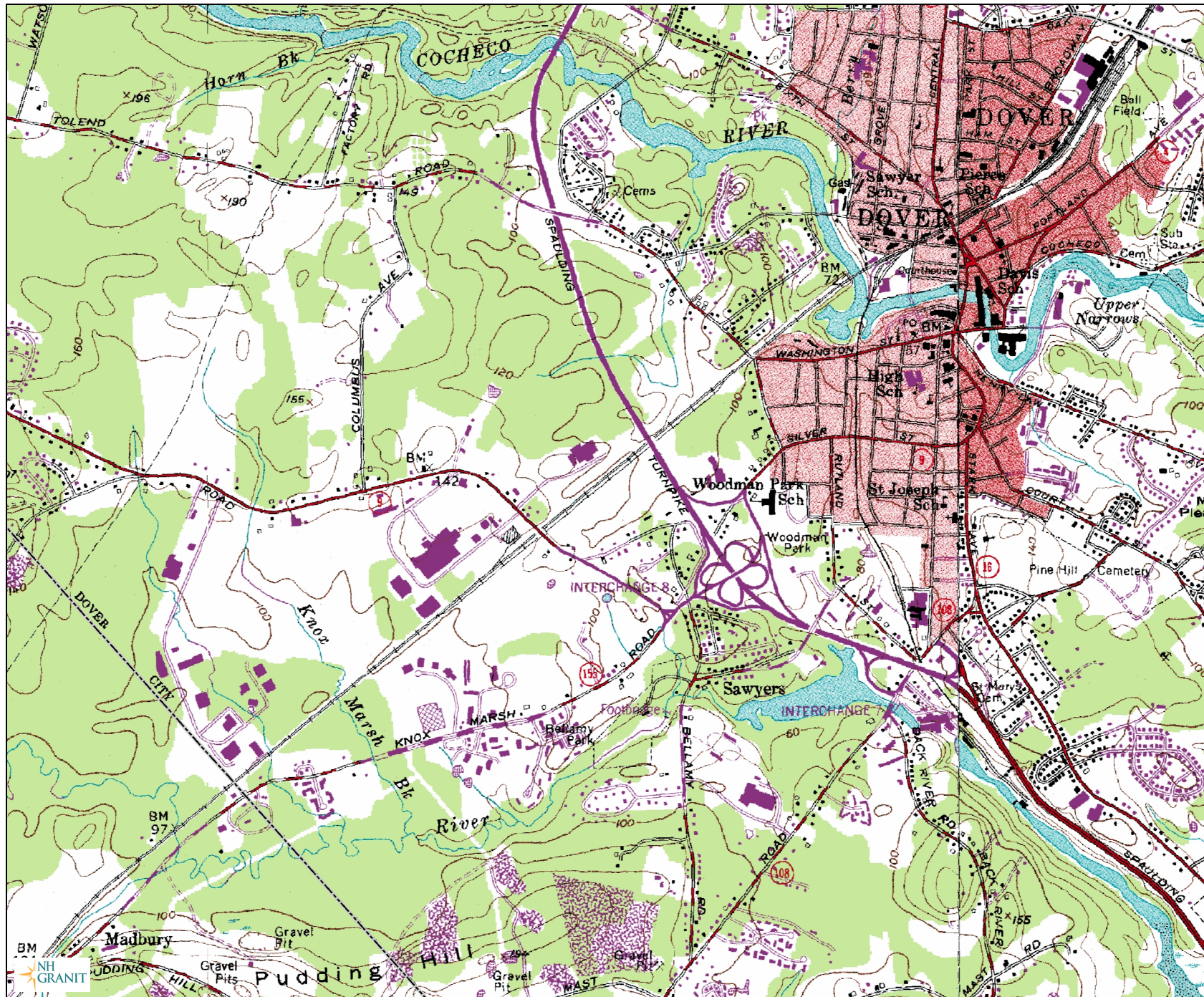
NRCS Soil Information

Appendix C: PRE – DEV plan
POST –DEV plan

Map by NH GRANIT

Legend

- State
- County
- City/Town



Map Scale

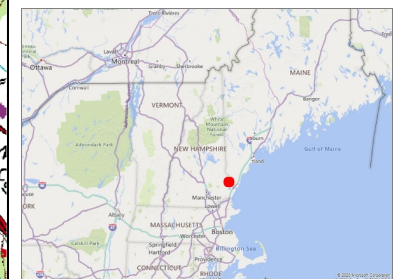
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Map Generated: 10/14/2020



Notes



PROJECT DESCRIPTION

The project is to construct a metal storage building that is 60 feet x 120 feet and a 16 foot by 36 foot addition to the existing building. The project will include a swale and small detention pond.

CALCULATION METHODS

The drainage study was completed using HydroCAD. The program generates runoff hydrographs for specified storm distributions, and performs reservoir routing using the storage indication method. The criteria used for this drainage analysis is the 2, 5, and 50 24-hour Type III frequency storm events. Flow depths are based on extreme precipitation data.

The accuracy of stormwater management modeling is limited. The peak flow rates and flood elevations provided herein should not be considered absolute due to the number of variables involved in their determination. Surface roughness coefficient (n), entrance loss coefficients (k_e), velocity factors (k_v), time of concentration (T_c) and tail water conditions are subjective to field observation and engineering judgment. Curve Numbers (CN) describes the average conditions useful for design purposes. Modeling to simulate an actual storm event requires additional knowledge of antecedent runoff conditions (ARC). Curve numbers will vary from storm to storm dependent on the ARC.

SUMMARY

Site Soils

Soils on site are based on NRCS soil mapping. CfB Charlton fine sandy loam. 3-8% slopes Hydrolgical soil group “B” and BzB Buxton Silt loam 8-15% slopes. Hydrolgical soil Group “C”.

Pre- and Post-Development

Approximately ½ the site flows to the access road drainage structure to the southeast the other half flows to the north east off site. The site surface consists of gravel, pavement woods and grass area. The majority is gravel. Currently the runoff is to the south east goes through a considerable length of grassed swale to the drainage structure. The flow to the North east is untreated and flows off site.

The proposed site plan calls for capturing runoff from the north east in a grassed lined swale and directing it to a small detention pond in the Northern corner of the property. The runoff will be released from the pond over a rip rap covered overflow area. The flow to the southeast is unchanged and no increase in runoff is proposed in this area.

Study Point 1 – Drainage structure

Study point 2. – North east side

Drainage Analysis

A complete summary of the flow conditions is included in Appendix A. The following compares pre- and post-development peak flow rates of runoff leaving the site.

2-year Storm Event (3.14 inches)

	Pre- Development	Post Development	
Point of Analysis	Peak Flow(cfs)	Peak Flow(cfs)	Difference (cfs)
SP-1	2.24	2.24	0
SP-2	3.13	2.45	-0.68

10-year Storm Event (4.74 inches)

	Pre- Development	Post Development	
Point of Analysis	Peak Flow(cfs)	Peak Flow(cfs)	Difference (cfs)
SP-1	4.0	4.0	0.0
SP-2	5.33	4.43	-0.9

25-year Storm Event (5.99 inches)

	Pre- Development	Post Development	
Point of Analysis	Peak Flow(cfs)	Peak Flow(cfs)	Difference (cfs)
SP-1	5.39	5.39	0.0
SP-2	7.04	6.01	-1.03

50-year Storm Event (7.16 inches)

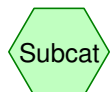
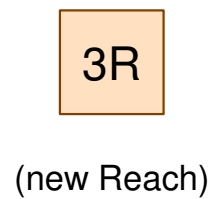
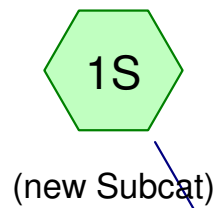
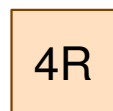
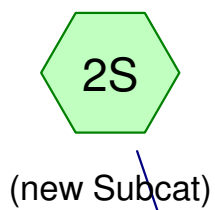
	Pre- Development	Post Development	
Point of Analysis	Peak Flow(cfs)	Peak Flow(cfs)	Difference (cfs)
SP-1	6.69	6.69	0
SP-2	8.63	7.50	-1.13

Conclusion

The site cover is highly impervious. This development proposes a modest treatment and detention of stormwater from the site.

APPENDIX A:
SUPPORTING CALCULATIONS

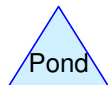
PRE-DEVELOPMENT ANALYSIS



Subcat



Reach



Pond



Link

Routing Diagram for 1681-PRE

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1681-PRE

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.258	55	Woods, Good, HSG B (1S, 2S)
0.123	61	>75% Grass cover, Good, HSG B (2S)
0.125	70	Woods, Good, HSG C (2S)
0.043	74	>75% Grass cover, Good, HSG C (2S)
0.146	77	Woods, Poor, HSG C (1S)
0.405	96	Gravel surface, HSG B (1S)
0.670	96	Gravel surface, HSG C (1S, 2S)
0.560	98	Paved parking, HSG B (1S, 2S)
0.117	98	Paved parking, HSG C (2S)
0.065	98	Unconnected roofs, HSG B (1S, 2S)
2.511	88	TOTAL AREA

1681-PRE

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.410	HSG B	1S, 2S
1.101	HSG C	1S, 2S
0.000	HSG D	
0.000	Other	
2.511		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.123	0.043	0.000	0.000	0.166	>75% Grass cover, Good	2S
0.000	0.560	0.117	0.000	0.000	0.677	Paved parking	1S, 2S
0.000	0.065	0.000	0.000	0.000	0.065	Unconnected roofs	1S, 2S
0.000	0.405	0.670	0.000	0.000	1.075	Gravel surface	1S, 2S
0.000	0.000	0.146	0.000	0.000	0.146	Woods, Poor	1S
0.000	0.258	0.125	0.000	0.000	0.383	Woods, Good	1S, 2S
0.000	1.410	1.101	0.000	0.000	2.511	TOTAL AREA	

1681-PRE

Type III 24-hr 2 YR Rainfall=3.14"

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Summary for Subcatchment 1S: (new Subcat)

Runoff = 3.13 cfs @ 12.10 hrs, Volume= 0.217 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.14"

Area (sf)	CN	Description
22,635	96	Gravel surface, HSG C
6,351	77	Woods, Poor, HSG C
17,639	96	Gravel surface, HSG B
3,710	98	Paved parking, HSG B
2,079	98	Unconnected roofs, HSG B
7,112	55	Woods, Good, HSG B
59,526	89	Weighted Average
53,737		90.27% Pervious Area
5,789		9.73% Impervious Area
2,079		35.91% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	15	0.5000	0.19		Sheet Flow,
					Woods: Light underbrush n= 0.400 P2= 3.10"
5.1	295	0.0370	0.96		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
6.4	310	Total			

Summary for Subcatchment 2S: (new Subcat)

Runoff = 2.24 cfs @ 12.11 hrs, Volume= 0.159 af, Depth> 1.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.14"

Area (sf)	CN	Description
6,532	96	Gravel surface, HSG C
2,890	98	Paved parking, HSG C
5,453	70	Woods, Good, HSG C
1,883	74	>75% Grass cover, Good, HSG C
2,201	98	Paved parking, HSG C
2,329	55	Woods, Good, HSG B
1,779	55	Woods, Good, HSG B
5,344	61	>75% Grass cover, Good, HSG B
1,152	98	Paved parking, HSG B
19,527	98	Paved parking, HSG B
0	96	Gravel surface, HSG B
755	98	Unconnected roofs, HSG B
49,845	86	Weighted Average
23,320		46.79% Pervious Area
26,525		53.21% Impervious Area
755		2.85% Unconnected

1681-PRE

Type III 24-hr 2 YR Rainfall=3.14"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.10"
1.9	315	0.0350	2.81		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
7.6	365	Total			

Summary for Reach 3R: (new Reach)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.367 ac, 9.73% Impervious, Inflow Depth > 1.90" for 2 YR event
 Inflow = 3.13 cfs @ 12.10 hrs, Volume= 0.217 af
 Outflow = 3.13 cfs @ 12.10 hrs, Volume= 0.217 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 4R: (new Reach)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.144 ac, 53.21% Impervious, Inflow Depth > 1.66" for 2 YR event
 Inflow = 2.24 cfs @ 12.11 hrs, Volume= 0.159 af
 Outflow = 2.24 cfs @ 12.11 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

1681-PRE*Type III 24-hr 10 YR Rainfall=4.74"*

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Page 1

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: (new Subcat)Runoff Area=59,526 sf 9.73% Impervious Runoff Depth>3.33"
Flow Length=310' Tc=6.4 min CN=89 Runoff=5.33 cfs 0.379 af**Subcatchment 2S: (new Subcat)**Runoff Area=49,845 sf 53.21% Impervious Runoff Depth>3.03"
Flow Length=365' Tc=7.6 min CN=86 Runoff=4.00 cfs 0.289 af**Reach 3R: (new Reach)**Inflow=5.33 cfs 0.379 af
Outflow=5.33 cfs 0.379 af**Reach 4R: (new Reach)**Inflow=4.00 cfs 0.289 af
Outflow=4.00 cfs 0.289 af**Total Runoff Area = 2.511 ac Runoff Volume = 0.668 af Average Runoff Depth = 3.19"**
70.45% Pervious = 1.769 ac 29.55% Impervious = 0.742 ac

1681-PRE*Type III 24-hr 25 YR Rainfall=5.99"*

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Page 2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: (new Subcat)Runoff Area=59,526 sf 9.73% Impervious Runoff Depth>4.47"
Flow Length=310' Tc=6.4 min CN=89 Runoff=7.04 cfs 0.509 af**Subcatchment 2S: (new Subcat)**Runoff Area=49,845 sf 53.21% Impervious Runoff Depth>4.15"
Flow Length=365' Tc=7.6 min CN=86 Runoff=5.39 cfs 0.396 af**Reach 3R: (new Reach)**Inflow=7.04 cfs 0.509 af
Outflow=7.04 cfs 0.509 af**Reach 4R: (new Reach)**Inflow=5.39 cfs 0.396 af
Outflow=5.39 cfs 0.396 af**Total Runoff Area = 2.511 ac Runoff Volume = 0.904 af Average Runoff Depth = 4.32"**
70.45% Pervious = 1.769 ac 29.55% Impervious = 0.742 ac

1681-PRE*Type III 24-hr 50 YR Rainfall=7.16"*

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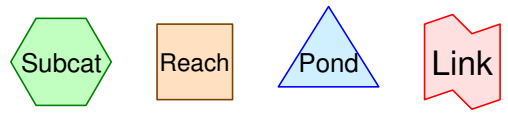
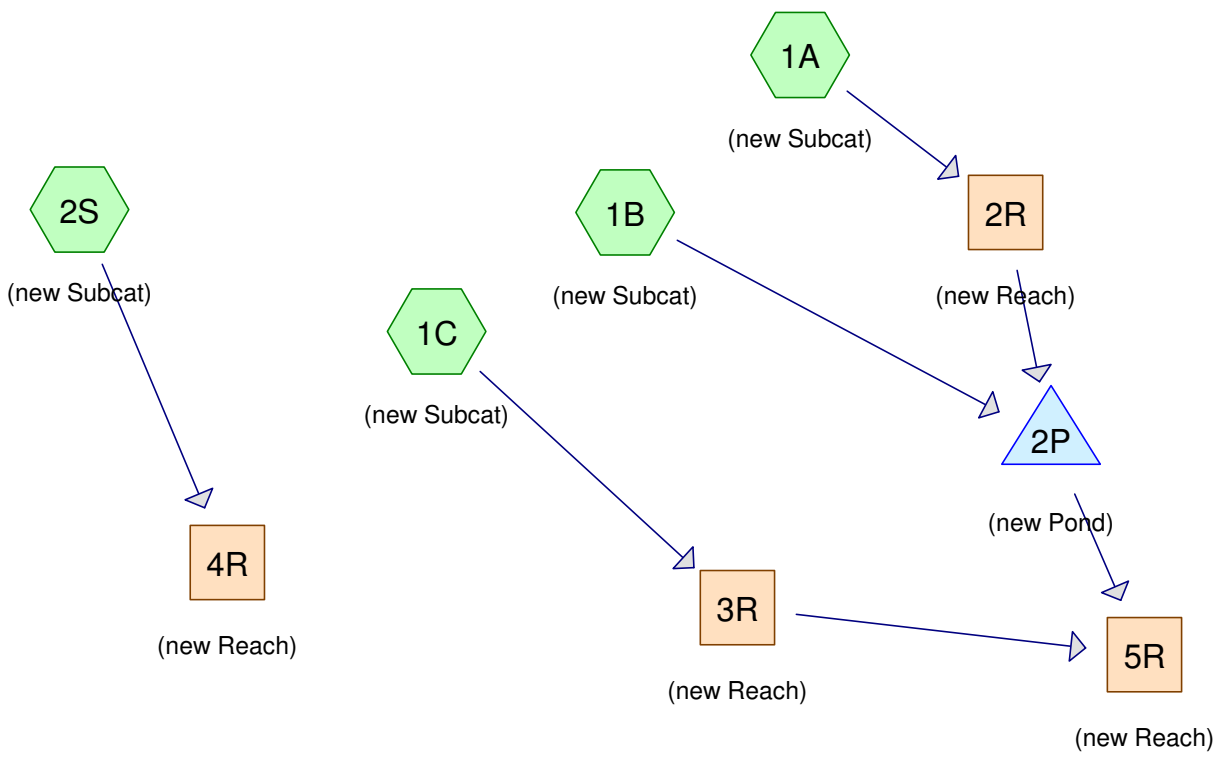
Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: (new Subcat)Runoff Area=59,526 sf 9.73% Impervious Runoff Depth>5.54"
Flow Length=310' Tc=6.4 min CN=89 Runoff=8.63 cfs 0.631 af**Subcatchment 2S: (new Subcat)**Runoff Area=49,845 sf 53.21% Impervious Runoff Depth>5.21"
Flow Length=365' Tc=7.6 min CN=86 Runoff=6.69 cfs 0.497 af**Reach 3R: (new Reach)**Inflow=8.63 cfs 0.631 af
Outflow=8.63 cfs 0.631 af**Reach 4R: (new Reach)**Inflow=6.69 cfs 0.497 af
Outflow=6.69 cfs 0.497 af**Total Runoff Area = 2.511 ac Runoff Volume = 1.128 af Average Runoff Depth = 5.39"**
70.45% Pervious = 1.769 ac 29.55% Impervious = 0.742 ac

POST-DEVELOPMENT ANALYSIS



1681-POST

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.258	55	Woods, Good, HSG B (1C, 2S)
0.141	61	>75% Grass cover, Good, HSG B (1B, 2S)
0.125	70	Woods, Good, HSG C (2S)
0.129	74	>75% Grass cover, Good, HSG C (1A, 1B, 2S)
0.146	77	Woods, Poor, HSG C (1C)
0.166	96	Gravel surface, HSG B (1B, 1C)
0.518	96	Gravel surface, HSG C (1A, 1B, 2S)
0.598	98	Paved parking, HSG B (1A, 1C, 2S)
0.187	98	Paved parking, HSG C (1A, 2S)
0.244	98	Unconnected roofs, HSG B (1C, 2S)
2.511	87	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.406	HSG B	1A, 1B, 1C, 2S
1.105	HSG C	1A, 1B, 1C, 2S
0.000	HSG D	
0.000	Other	
2.511		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.141	0.129	0.000	0.000	0.270	>75% Grass cover, Good	1A, 1B, 2S
0.000	0.598	0.187	0.000	0.000	0.785	Paved parking	1A, 1C, 2S
0.000	0.244	0.000	0.000	0.000	0.244	Unconnected roofs	1C, 2S
0.000	0.166	0.518	0.000	0.000	0.684	Gravel surface	1A, 1B, 1C, 2S
0.000	0.000	0.146	0.000	0.000	0.146	Woods, Poor	1C
0.000	0.258	0.125	0.000	0.000	0.383	Woods, Good	1C, 2S
0.000	1.406	1.105	0.000	0.000	2.511	TOTAL AREA	

1681-POST

Type III 24-hr 2 YR Rainfall=3.14"

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Summary for Subcatchment 1A: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 1.41 cfs @ 12.05 hrs, Volume= 0.093 af, Depth> 2.35"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, $dt = 0.05$ hrs
Type III 24-hr 2 YR Rainfall=3.14"

Area (sf)	CN	Description
3,038	98	Paved parking, HSG C
12,543	96	Gravel surface, HSG C
2,290	74	>75% Grass cover, Good, HSG C
2,770	98	Paved parking, HSG B
20,641	94	Weighted Average
14,833		71.86% Pervious Area
5,808		28.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		Sheet Flow, Smooth surfaces $n = 0.011$ $P2 = 3.10"$
1.1	150	0.0200	2.28		Shallow Concentrated Flow, Unpaved $K_v = 16.1$ fps
2.1	191	0.0100	1.50		Shallow Concentrated Flow, Grassed Waterway $K_v = 15.0$ fps
3.6	366	Total			

Summary for Subcatchment 1B: (new Subcat)[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.36 cfs @ 12.03 hrs, Volume= 0.022 af, Depth> 1.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, $dt = 0.05$ hrs
Type III 24-hr 2 YR Rainfall=3.14"

Area (sf)	CN	Description
837	96	Gravel surface, HSG B
790	61	>75% Grass cover, Good, HSG B
3,497	96	Gravel surface, HSG C
1,454	74	>75% Grass cover, Good, HSG C
6,578	87	Weighted Average
6,578		100.00% Pervious Area

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Type III 24-hr 2 YR Rainfall=3.14"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.03		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"
0.2	27	0.0200	2.28		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
1.1	100	0.0100	1.50		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
1.7	152	Total			

Summary for Subcatchment 1C: (new Subcat)

Runoff = 1.38 cfs @ 12.10 hrs, Volume= 0.094 af, Depth> 1.52"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.14"

Area (sf)	CN	Description
6,351	77	Woods, Poor, HSG C
6,406	96	Gravel surface, HSG B
3,185	98	Paved parking, HSG B
7,200	98	Unconnected roofs, HSG B
2,079	98	Unconnected roofs, HSG B
7,112	55	Woods, Good, HSG B
32,333	84	Weighted Average
19,869		61.45% Pervious Area
12,464		38.55% Impervious Area
9,279		74.45% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	15	0.5000	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.10"
5.1	295	0.0370	0.96		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
6.4	310	Total			

Summary for Subcatchment 2S: (new Subcat)

Runoff = 2.24 cfs @ 12.11 hrs, Volume= 0.159 af, Depth> 1.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.14"

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Type III 24-hr 2 YR Rainfall=3.14"

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Area (sf)	CN	Description
6,532	96	Gravel surface, HSG C
2,890	98	Paved parking, HSG C
5,453	70	Woods, Good, HSG C
1,883	74	>75% Grass cover, Good, HSG C
2,201	98	Paved parking, HSG C
2,329	55	Woods, Good, HSG B
1,779	55	Woods, Good, HSG B
5,344	61	>75% Grass cover, Good, HSG B
1,152	98	Paved parking, HSG B
18,951	98	Paved parking, HSG B
0	96	Gravel surface, HSG B
576	98	Unconnected roofs, HSG B
755	98	Unconnected roofs, HSG B
49,845	86	Weighted Average
23,320		46.79% Pervious Area
26,525		53.21% Impervious Area
1,331		5.02% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	50	0.0200	0.15		Sheet Flow, Grass: Short n= 0.150 P2= 3.10"
1.9	315	0.0350	2.81		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
7.6	365	Total			

Summary for Reach 2R: (new Reach)

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.474 ac, 28.14% Impervious, Inflow Depth > 2.35" for 2 YR event
 Inflow = 1.41 cfs @ 12.05 hrs, Volume= 0.093 af
 Outflow = 1.17 cfs @ 12.17 hrs, Volume= 0.092 af, Atten= 17%, Lag= 6.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.40 fps, Min. Travel Time= 4.1 min

Avg. Velocity= 0.14 fps, Avg. Travel Time= 11.6 min

Peak Storage= 300 cf @ 12.10 hrs

Average Depth at Peak Storage= 0.82'

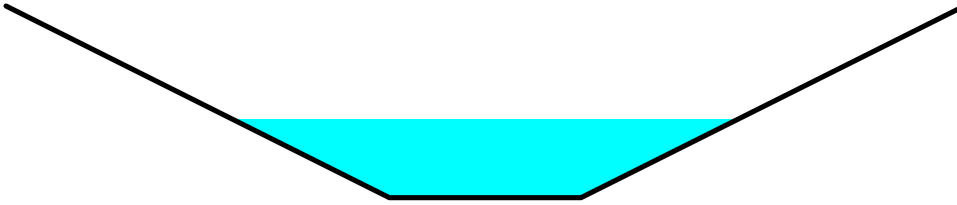
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 7.90 cfs

2.00' x 2.00' deep channel, n= 0.240 Sheet flow over Dense Grass

Side Slope Z-value= 2.0 '/' Top Width= 10.00'

Length= 100.0' Slope= 0.0100 '/'

Inlet Invert= 125.00', Outlet Invert= 124.00'



Summary for Reach 3R: (new Reach)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.742 ac, 38.55% Impervious, Inflow Depth > 1.52" for 2 YR event
 Inflow = 1.38 cfs @ 12.10 hrs, Volume= 0.094 af
 Outflow = 1.38 cfs @ 12.10 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 4R: (new Reach)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.144 ac, 53.21% Impervious, Inflow Depth > 1.66" for 2 YR event
 Inflow = 2.24 cfs @ 12.11 hrs, Volume= 0.159 af
 Outflow = 2.24 cfs @ 12.11 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach 5R: (new Reach)

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.367 ac, 30.68% Impervious, Inflow Depth > 1.64" for 2 YR event
 Inflow = 2.45 cfs @ 12.12 hrs, Volume= 0.187 af
 Outflow = 2.45 cfs @ 12.12 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 2P: (new Pond)

[63] Warning: Exceeded Reach 2R INLET depth by 0.44' @ 19.95 hrs

Inflow Area = 0.625 ac, 21.34% Impervious, Inflow Depth > 2.19" for 2 YR event
 Inflow = 1.33 cfs @ 12.16 hrs, Volume= 0.114 af
 Outflow = 1.28 cfs @ 12.20 hrs, Volume= 0.093 af, Atten= 4%, Lag= 2.2 min
 Primary = 1.28 cfs @ 12.20 hrs, Volume= 0.093 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 125.76' @ 12.20 hrs Surf.Area= 1,070 sf Storage= 1,186 cf

Plug-Flow detention time= 88.9 min calculated for 0.092 af (81% of inflow)
 Center-of-Mass det. time= 39.1 min (808.3 - 769.2)

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Type III 24-hr 2 YR Rainfall=3.14"

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Volume	Invert	Avail.Storage	Storage Description
#1	123.50'	1,457 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
123.50	90	0	0
124.00	237	82	82
125.00	657	447	529
126.00	1,200	929	1,457

Device	Routing	Invert	Outlet Devices
#1	Primary	125.50'	4.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.27 cfs @ 12.20 hrs HW=125.76' (Free Discharge)

1=Broad-Crested Rectangular Weir (Weir Controls 1.27 cfs @ 1.22 fps)

1681-POST*Type III 24-hr 10 YR Rainfall=4.74"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: (new Subcat)	Runoff Area=20,641 sf 28.14% Impervious Runoff Depth>3.83" Flow Length=366' Tc=3.6 min CN=94 Runoff=2.24 cfs 0.151 af
Subcatchment 1B: (new Subcat)	Runoff Area=6,578 sf 0.00% Impervious Runoff Depth>3.13" Flow Length=152' Tc=1.7 min CN=87 Runoff=0.63 cfs 0.039 af
Subcatchment 1C: (new Subcat)	Runoff Area=32,333 sf 38.55% Impervious Runoff Depth>2.85" Flow Length=310' Tc=6.4 min CN=84 Runoff=2.55 cfs 0.176 af
Subcatchment 2S: (new Subcat)	Runoff Area=49,845 sf 53.21% Impervious Runoff Depth>3.03" Flow Length=365' Tc=7.6 min CN=86 Runoff=4.00 cfs 0.289 af
Reach 2R: (new Reach)	Avg. Flow Depth=1.04' Max Vel=0.46 fps Inflow=2.24 cfs 0.151 af n=0.240 L=100.0' S=0.0100 '/' Capacity=7.90 cfs Outflow=1.92 cfs 0.150 af
Reach 3R: (new Reach)	Inflow=2.55 cfs 0.176 af Outflow=2.55 cfs 0.176 af
Reach 4R: (new Reach)	Inflow=4.00 cfs 0.289 af Outflow=4.00 cfs 0.289 af
Reach 5R: (new Reach)	Inflow=4.43 cfs 0.344 af Outflow=4.43 cfs 0.344 af
Pond 2P: (new Pond)	Peak Elev=125.86' Storage=1,293 cf Inflow=2.20 cfs 0.190 af Outflow=2.12 cfs 0.168 af

Total Runoff Area = 2.511 ac Runoff Volume = 0.656 af Average Runoff Depth = 3.13"
59.05% Pervious = 1.483 ac 40.95% Impervious = 1.028 ac

1681-POST*Type III 24-hr 25 YR Rainfall=5.99"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: (new Subcat)	Runoff Area=20,641 sf 28.14% Impervious Runoff Depth>4.98" Flow Length=366' Tc=3.6 min CN=94 Runoff=2.87 cfs 0.197 af
Subcatchment 1B: (new Subcat)	Runoff Area=6,578 sf 0.00% Impervious Runoff Depth>4.26" Flow Length=152' Tc=1.7 min CN=87 Runoff=0.84 cfs 0.054 af
Subcatchment 1C: (new Subcat)	Runoff Area=32,333 sf 38.55% Impervious Runoff Depth>3.94" Flow Length=310' Tc=6.4 min CN=84 Runoff=3.48 cfs 0.244 af
Subcatchment 2S: (new Subcat)	Runoff Area=49,845 sf 53.21% Impervious Runoff Depth>4.15" Flow Length=365' Tc=7.6 min CN=86 Runoff=5.39 cfs 0.396 af
Reach 2R: (new Reach)	Avg. Flow Depth=1.18' Max Vel=0.49 fps Inflow=2.87 cfs 0.197 af n=0.240 L=100.0' S=0.0100 '/' Capacity=7.90 cfs Outflow=2.51 cfs 0.196 af
Reach 3R: (new Reach)	Inflow=3.48 cfs 0.244 af Outflow=3.48 cfs 0.244 af
Reach 4R: (new Reach)	Inflow=5.39 cfs 0.396 af Outflow=5.39 cfs 0.396 af
Reach 5R: (new Reach)	Inflow=6.01 cfs 0.471 af Outflow=6.01 cfs 0.471 af
Pond 2P: (new Pond)	Peak Elev=125.93' Storage=1,369 cf Inflow=2.90 cfs 0.249 af Outflow=2.80 cfs 0.228 af

Total Runoff Area = 2.511 ac Runoff Volume = 0.890 af Average Runoff Depth = 4.25"
59.05% Pervious = 1.483 ac 40.95% Impervious = 1.028 ac

1681-POST*Type III 24-hr 50 YR Rainfall=7.16"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: (new Subcat)	Runoff Area=20,641 sf 28.14% Impervious Runoff Depth>6.06" Flow Length=366' Tc=3.6 min CN=94 Runoff=3.47 cfs 0.239 af
Subcatchment 1B: (new Subcat)	Runoff Area=6,578 sf 0.00% Impervious Runoff Depth>5.33" Flow Length=152' Tc=1.7 min CN=87 Runoff=1.04 cfs 0.067 af
Subcatchment 1C: (new Subcat)	Runoff Area=32,333 sf 38.55% Impervious Runoff Depth>4.99" Flow Length=310' Tc=6.4 min CN=84 Runoff=4.35 cfs 0.309 af
Subcatchment 2S: (new Subcat)	Runoff Area=49,845 sf 53.21% Impervious Runoff Depth>5.21" Flow Length=365' Tc=7.6 min CN=86 Runoff=6.69 cfs 0.497 af
Reach 2R: (new Reach)	Avg. Flow Depth=1.30' Max Vel=0.52 fps Inflow=3.47 cfs 0.239 af n=0.240 L=100.0' S=0.0100 '/' Capacity=7.90 cfs Outflow=3.06 cfs 0.238 af
Reach 3R: (new Reach)	Inflow=4.35 cfs 0.309 af Outflow=4.35 cfs 0.309 af
Reach 4R: (new Reach)	Inflow=6.69 cfs 0.497 af Outflow=6.69 cfs 0.497 af
Reach 5R: (new Reach)	Inflow=7.50 cfs 0.592 af Outflow=7.50 cfs 0.592 af
Pond 2P: (new Pond)	Peak Elev=125.98' Storage=1,435 cf Inflow=3.55 cfs 0.305 af Outflow=3.45 cfs 0.283 af

Total Runoff Area = 2.511 ac Runoff Volume = 1.112 af Average Runoff Depth = 5.31"
59.05% Pervious = 1.483 ac 40.95% Impervious = 1.028 ac

APPENDIX B:

Supporting Data

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	70.898 degrees West
Latitude	43.187 degrees North
Elevation	0 feet
Date/Time	Thu, 15 Dec 2016 13:39:42 -0500

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	0.65	0.81	1.03	1yr	0.70	0.98	1.20	1.54	2.00	2.60	2.86	1yr	2.30	2.75	3.15	3.87	4.44	1yr
2yr	0.32	0.49	0.61	0.81	1.01	1.29	2yr	0.88	1.17	1.50	1.91	2.44	3.14	3.49	2yr	2.78	3.36	3.85	4.59	5.22	2yr
5yr	0.37	0.57	0.72	0.96	1.23	1.58	5yr	1.06	1.44	1.85	2.38	3.07	3.97	4.47	5yr	3.51	4.30	4.92	5.79	6.55	5yr
10yr	0.40	0.63	0.80	1.09	1.42	1.84	10yr	1.22	1.69	2.18	2.82	3.65	4.74	5.40	10yr	4.19	5.19	5.93	6.92	7.78	10yr
25yr	0.46	0.74	0.94	1.29	1.72	2.27	25yr	1.48	2.09	2.69	3.52	4.60	5.99	6.93	25yr	5.30	6.66	7.58	8.75	9.78	25yr
50yr	0.51	0.83	1.06	1.48	2.00	2.66	50yr	1.72	2.46	3.17	4.18	5.48	7.16	8.36	50yr	6.34	8.04	9.13	10.45	11.62	50yr
100yr	0.58	0.93	1.20	1.70	2.32	3.11	100yr	2.00	2.88	3.74	4.95	6.52	8.56	10.11	100yr	7.58	9.72	11.01	12.49	13.83	100yr
200yr	0.64	1.05	1.36	1.95	2.69	3.66	200yr	2.32	3.39	4.42	5.88	7.78	10.24	12.21	200yr	9.06	11.74	13.27	14.94	16.45	200yr
500yr	0.75	1.24	1.62	2.35	3.29	4.52	500yr	2.84	4.21	5.48	7.36	9.80	12.98	15.70	500yr	11.49	15.09	17.00	18.94	20.72	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	0.60	0.74	0.90	1yr	0.64	0.88	0.91	1.25	1.56	2.08	2.47	1yr	1.85	2.37	2.91	3.35	4.04	1yr
2yr	0.31	0.49	0.60	0.81	1.00	1.18	2yr	0.86	1.16	1.36	1.83	2.36	3.04	3.39	2yr	2.69	3.26	3.74	4.46	5.06	2yr

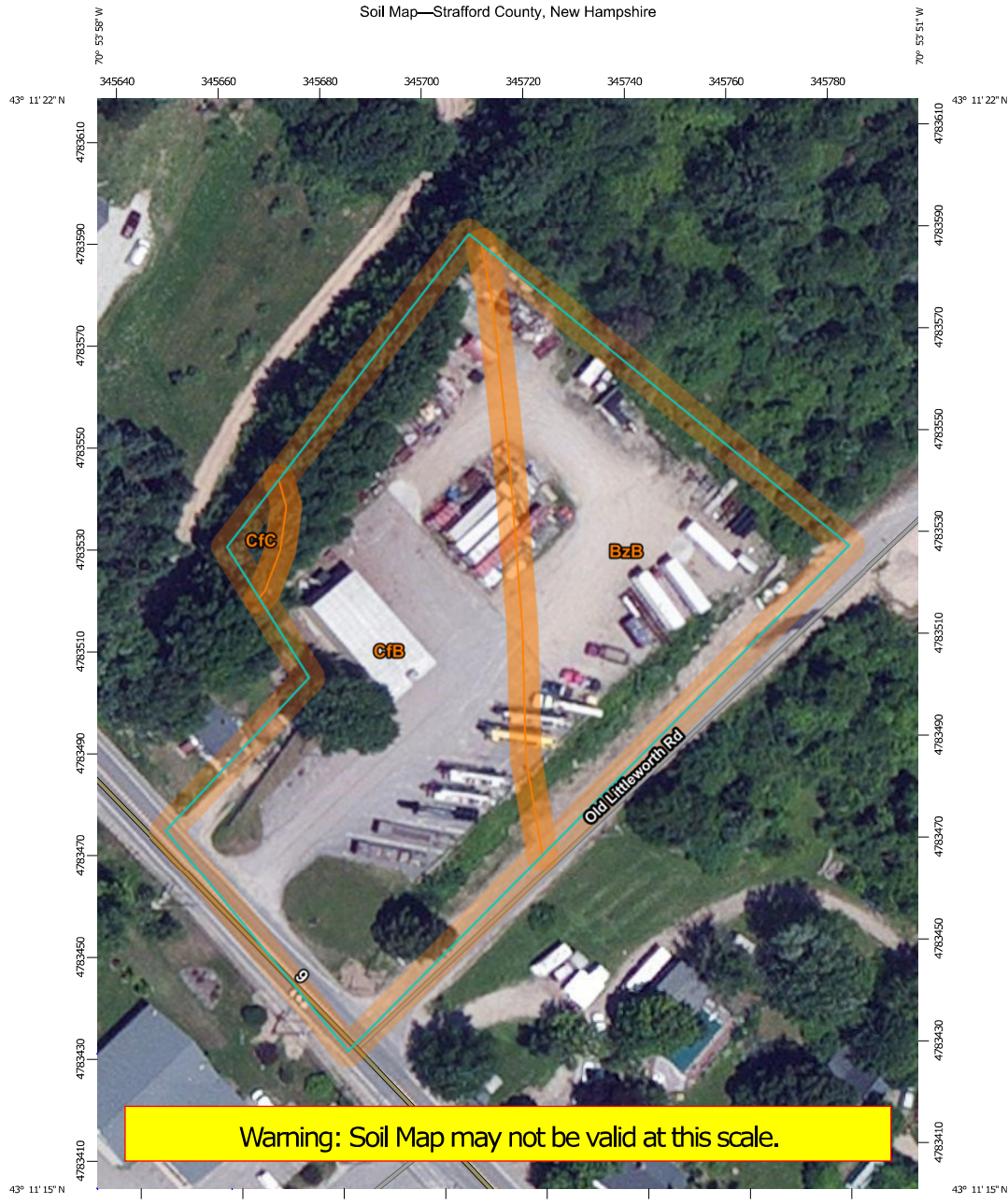
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
5yr	0.35	0.54	0.67	0.91	1.16	1.40	5yr	1.00	1.37	1.61	2.15	2.78	3.70	4.12	5yr	3.28	3.96	4.60	5.40	6.11	5yr
10yr	0.38	0.59	0.73	1.02	1.32	1.60	10yr	1.14	1.56	1.82	2.45	3.13	4.26	4.78	10yr	3.77	4.60	5.31	6.24	7.01	10yr
25yr	0.44	0.66	0.83	1.18	1.55	1.91	25yr	1.34	1.87	2.11	2.84	3.66	4.99	5.79	25yr	4.42	5.57	6.48	7.55	8.42	25yr
50yr	0.48	0.73	0.91	1.31	1.76	2.19	50yr	1.52	2.14	2.35	3.20	4.11	5.71	6.68	50yr	5.06	6.42	7.53	8.72	9.66	50yr
100yr	0.54	0.81	1.02	1.47	2.01	2.51	100yr	1.74	2.45	2.63	3.58	4.59	6.52	7.70	100yr	5.77	7.41	8.75	10.06	11.06	100yr
200yr	0.60	0.90	1.14	1.65	2.29	2.87	200yr	1.98	2.81	2.93	4.01	5.13	7.45	8.88	200yr	6.59	8.54	10.15	11.62	12.68	200yr
500yr	0.70	1.04	1.33	1.93	2.75	3.46	500yr	2.37	3.38	3.40	4.65	5.97	8.84	10.71	500yr	7.82	10.30	12.37	14.07	15.15	500yr

Upper Confidence Limits

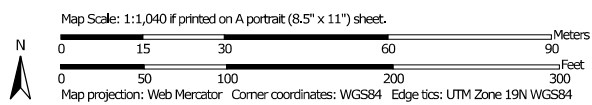
	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.08	1yr	0.75	1.05	1.23	1.74	2.21	2.85	3.07	1yr	2.52	2.95	3.40	4.20	4.78	1yr
2yr	0.33	0.51	0.62	0.84	1.04	1.25	2yr	0.90	1.22	1.47	1.95	2.50	3.27	3.61	2yr	2.89	3.47	3.98	4.73	5.42	2yr
5yr	0.39	0.60	0.75	1.03	1.31	1.58	5yr	1.13	1.55	1.85	2.49	3.19	4.23	4.83	5yr	3.74	4.64	5.26	6.20	6.97	5yr
10yr	0.46	0.70	0.87	1.21	1.57	1.92	10yr	1.35	1.87	2.23	3.04	3.85	5.20	6.02	10yr	4.60	5.79	6.61	7.61	8.50	10yr
25yr	0.55	0.84	1.05	1.50	1.97	2.47	25yr	1.70	2.42	2.87	3.95	4.94	6.99	8.08	25yr	6.19	7.77	8.83	10.02	11.07	25yr
50yr	0.64	0.97	1.21	1.74	2.34	2.99	50yr	2.02	2.92	3.48	4.82	5.99	8.63	10.12	50yr	7.64	9.73	11.02	12.32	13.53	50yr
100yr	0.74	1.12	1.41	2.03	2.79	3.61	100yr	2.41	3.52	4.23	5.89	7.28	10.65	12.67	100yr	9.43	12.19	13.73	15.17	16.55	100yr
200yr	0.86	1.30	1.64	2.38	3.32	4.37	200yr	2.86	4.27	5.14	7.20	8.83	13.19	15.89	200yr	11.68	15.28	17.13	18.67	20.28	200yr
500yr	1.05	1.57	2.01	2.93	4.16	5.61	500yr	3.59	5.48	6.63	9.42	11.43	17.53	21.43	500yr	15.51	20.60	22.97	24.60	26.54	500yr



Soil Map—Strafford County, New Hampshire



Warning: Soil Map may not be valid at this scale.



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

12/15/2016
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 16, Sep 15, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 20, 2010—Jul 18, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



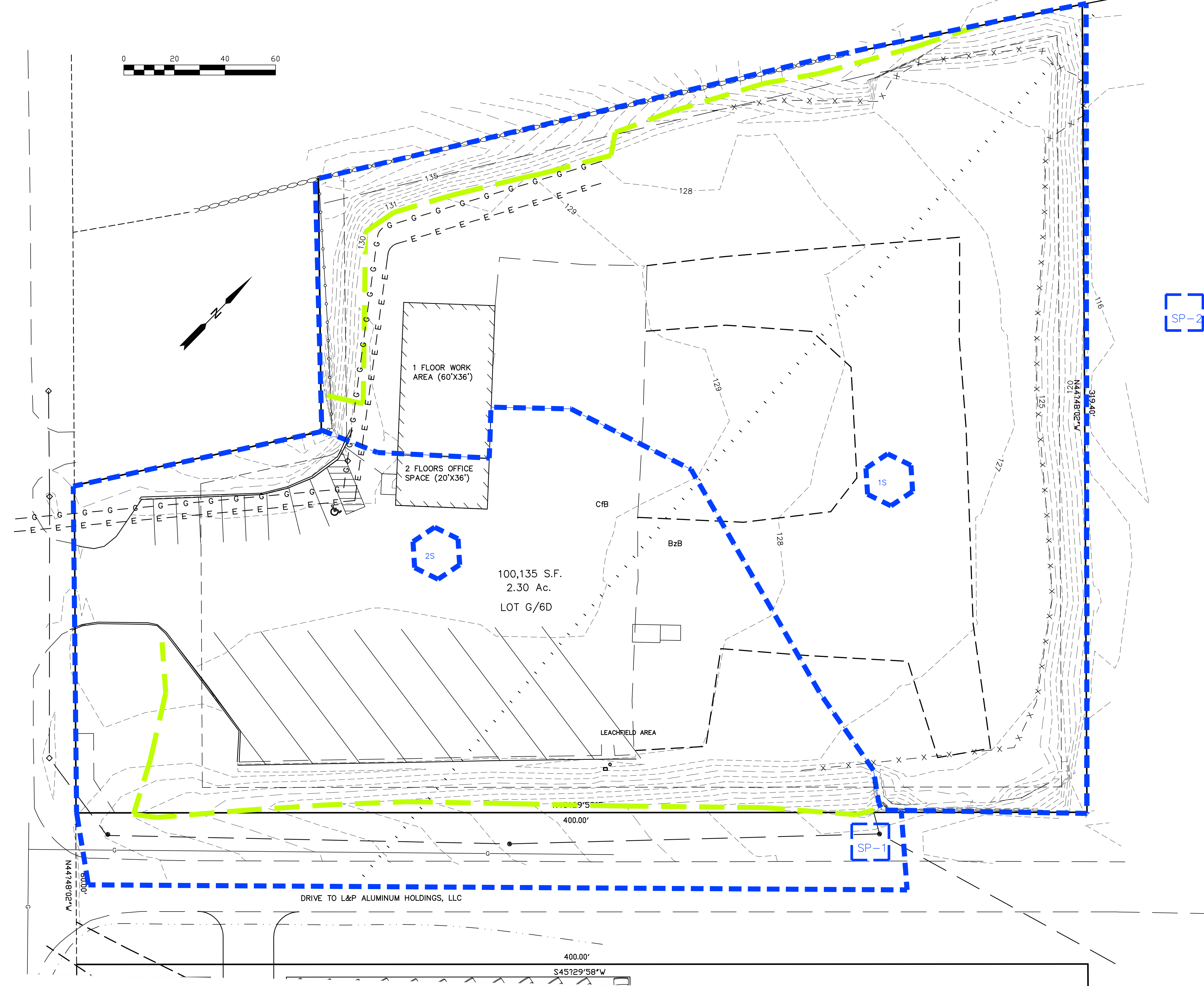
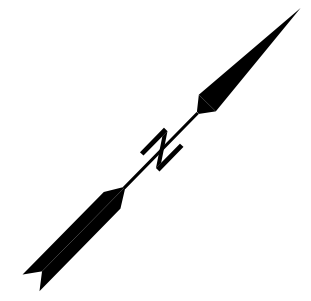
Map Unit Legend

Strafford County, New Hampshire (NH017)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BzB	Buxton silt loam, 3 to 8 percent slopes	1.0	37.6%
CfB	Charlton fine sandy loam, 3 to 8 percent slopes	1.6	61.1%
CfC	Charlton fine sandy loam, 8 to 15 percent slopes	0.0	1.3%
Totals for Area of Interest		2.6	100.0%

APPENDIX C:

DRAINAGE PLANS

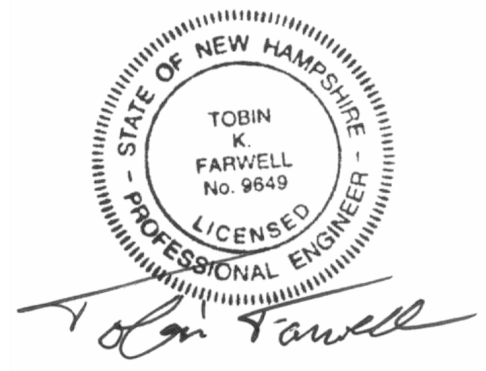
LITTLEWORTH ROAD - NH ROUTE 9



SOIL Notes:
BzB = BUXTON SOILS 3-8% SLOPE HYDROLOGIC SOIL GROUP "B"
CFB = CHARLTON SOILS 3-8% SLOPE HYDROLOGIC SOIL GROUP "C"
CFC = CHARLTON SOILS 8-15% SLOPE HYDROLOGIC SOIL GROUP "C"

FARWELL
ENGINEERING
SERVICES, LLC

265 WADLEIGH FALLS ROAD
LEE, NEW HAMPSHIRE 03824
PH: 603-292-5787
WWW.FARWELLENGINEERING.COM



ISSUED FOR: **SITE PLAN REVIEW**

ISSUE DATE: **DECEMBER 18, 2016**

FILE NAME: **1681-MOORES**

NO.	DATE	DATE	INITIAL	SUBMISSION	DESCRIPTION	TRF	BY
1							

SCALE: **1" = 20'**

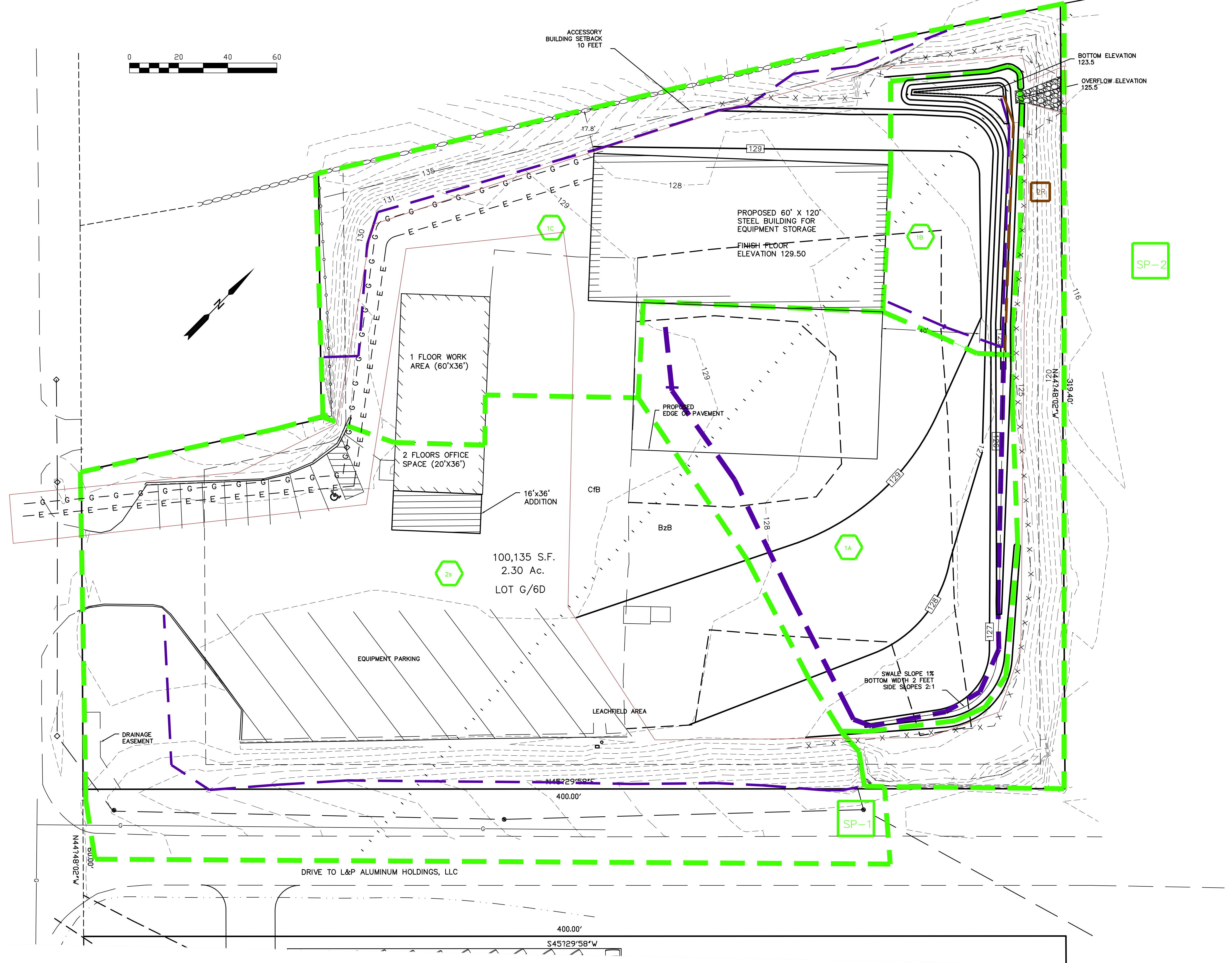
OWNER/APPLICANT:
MOORES CRANE RENTAL
33 LITTLEWORTH RD

PROJECT:
STORAGE BUILDING
33 LITTLEWORTH RD
TAX MAP G
LOT 6D
DOVER, NEW HAMPSHIRE

TITLE:
DRAINAGE - PRE

SHEET NUMBER:
DR-1

LITTLEWORTH ROAD - NH ROUTE 9



FARWELL
ENGINEERING
SERVICES, LLC

265 WADLEIGH FALLS ROAD
LEE, NEW HAMPSHIRE 03824
PH: 603-292-5787
WWW.FARWELLENGINEERING.COM

ISSUED FOR: SITE PLAN REVIEW
ISSUE DATE: OCTOBER 14, 2020
FILE NAME: 1681-MOORES

INITIAL SUBMISSION		TRF	
DATE	DATE	NO.	BY

SCALE: 1" = 20'

OWNER/APPLICANT:
MOORES CRANE RENTAL
33 LITTLEWORTH RD

PROJECT:
STORAGE BUILDING
33 LITTLEWORTH RD
TAX MAP G
LOT 6D
DOVER, NEW HAMPSHIRE

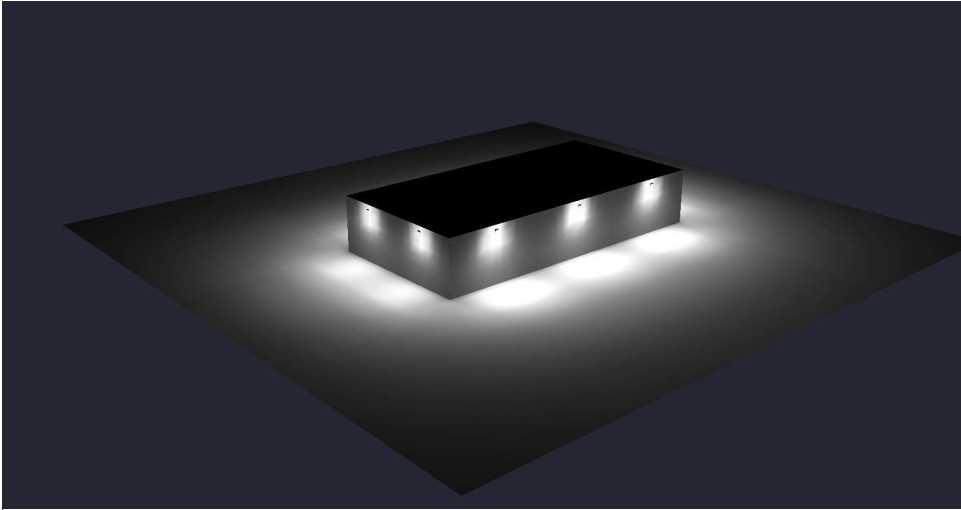
TITLE:
DRAINAGE -
Post

SHEET NUMBER:
DR-1

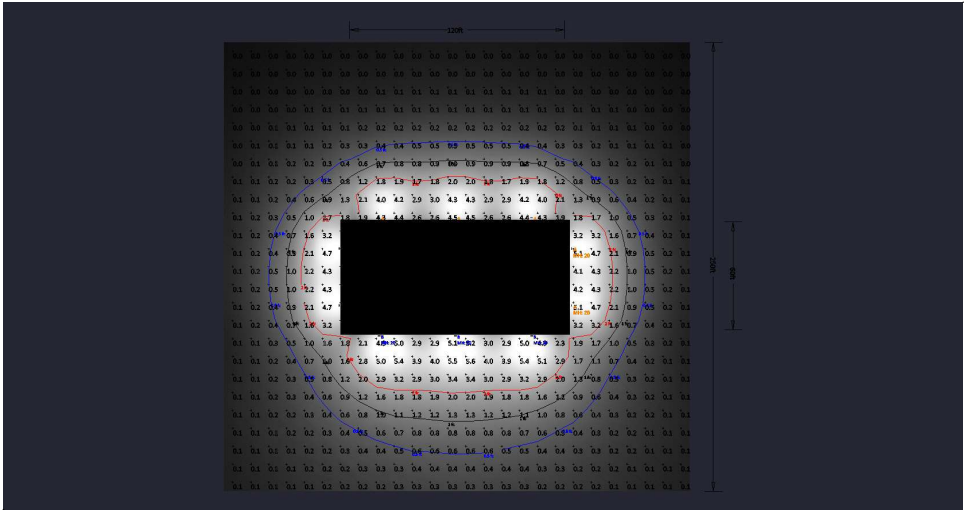
Calculation Summary											
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description	PtSpcLr	PtSpcTb	Meter Type
Ground_Planar	Illuminance	Fc	0.91	5.6	0.0	N.A.	N.A.	Readings Taken @ 0'-0" AFG	10	10	Normal

Luminaire Schedule								All quotes/orders generated from this layout must be forwarded to the Local Rep Agency			
Symbol	Qty	Tag	Label	Arrangement	LLF	Description				BUG Rating	
	7	A	W34-55L-830	SINGLE	1.000	W34 WALL PACK 50W 5400LM LED 120-277V 3K 80 CRI BRONZE				B1-U3-G2	
	3	B	X34-100LSF-830 U	SINGLE	1.000	X34 FLOOD 87W 10000LM 3000K 80CRI SLIPFITTER 120-277V DIM BRONZE				B3-U0-G2	

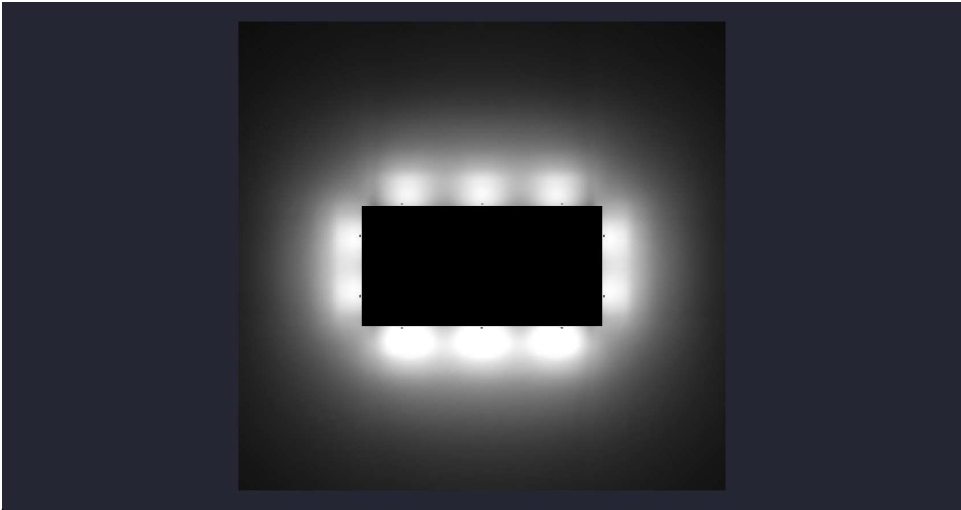
Expanded Luminaire Location Summary							
LumNo	Label	X	Y	MTG HT	Orient	Tilt	
1	X34-100LSF-830 U	60	59	20	270	60	
2	X34-100LSF-830 U	100	59	20	270	60	
3	X34-100LSF-830 U	140	59	20	270	60	
4	W34-55L-830	161	75	20	0	0	
5	W34-55L-830	161	105	20	0	0	
6	W34-55L-830	39	75	20	180	0	
7	W34-55L-830	39	105	20	180	0	
8	W34-55L-830	100	121	20	90	0	
9	W34-55L-830	60	121	20	90	0	
10	W34-55L-830	140	121	20	90	0	
Total Quantity: 10							



Render Image - Side View



Render Image - Top View Calc



Render Image - Top View

- NOTES:
- * The light loss factor (LLF) is a product of many variables, only lamp lumen depreciation (LLD) has been applied to the calculated results unless otherwise noted. The LLD is the result (quotient) of mean lumens / initial lumens per lamp manufacturers' specifications.
 - * Illumination values shown (in footcandles) are the predicted results for planes of calculation either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.
 - * The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of Holbrook-Associated.
 - * Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.
 - * It is the Owner's responsibility to confirm the suitability of the existing or proposed poles and bases to support the proposed fixtures, based on the weight and EPA of the proposed fixtures and the owner's site soil conditions and wind zone. It is recommended that a professional engineer licensed to practice in the state the site is located be engaged to assist in this determination.
 - * The landscape material shown hereon is conceptual, and is not intended to be an accurate representation of any particular plant, shrub, bush, or tree, as these materials are living objects, and subject to constant change. The conceptual objects shown are for illustrative purposes only. The actual illumination values measured in the field will vary.
 - * Photometric model elements such as buildings, rooms, plants, furnishings or any architectural details which impact the dispersion of light must be detailed by the customer documents for inclusion in the Holbrook-Associated lighting design model. Holbrook-Associated is not responsible for any inaccuracies caused by incomplete information on the part of the customer, and reserves the right to use best judgement when translating customer requests into photometric studies.
 - * RAB Lighting Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending apply.



Prepared For:
Northeast Electrical
Steve Moulton
36 Littleworth Rd
Dover, NH 03820

Job Name:
Morse's Crane
Dover, NH

Project ID:
167383

Scale: as noted

Inside Rep: RDeane

Date: 1/25/2021

Outside Rep: SLeary

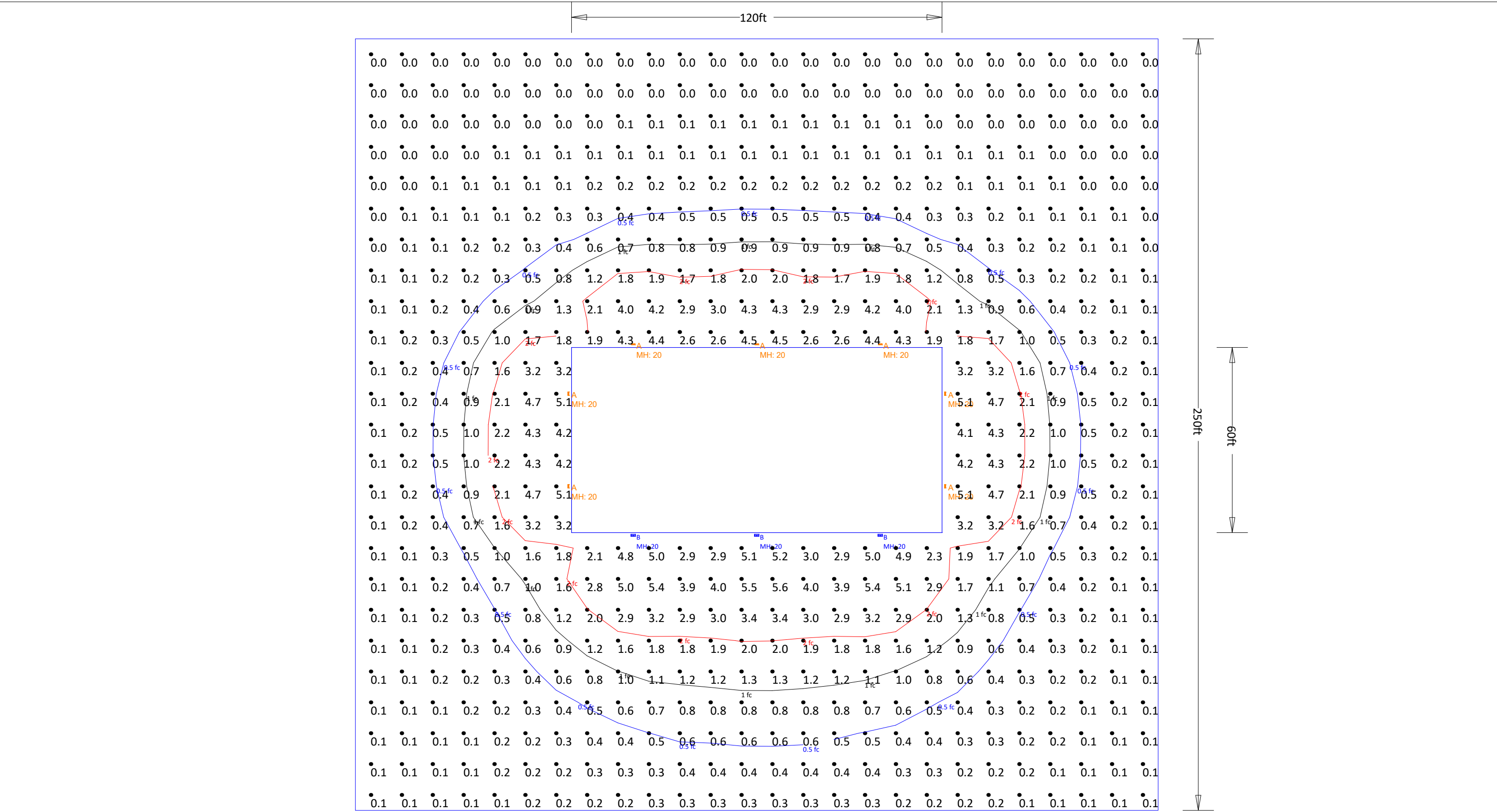
Filename: Moores Crane.AGI

Drawn By: JHolbrook

The Lighting Analysis, e2Layout, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by Holbrook-Associated represent an anticipated prediction of lighting system performance based upon design parameters and information supplied by others. These design parameters and information provided by others have not been field verified by Holbrook-Associated and therefore actual measured results may vary from the actual field conditions. Holbrook-Associated recommends that design parameters and other information be field verified to reduce variation.

Holbrook-Associated neither warranties, either implied or stated with regard to actual measured light levels or energy consumption levels as compared to those illustrated by the Lighting Design. Holbrook-Associated neither warranties, either implied or stated, nor represents the appropriateness, completeness or suitability of the Lighting Design intent as compliant with any applicable regulatory code requirements with the exception of those specifically stated on drawings created and submitted by Holbrook-Associated. The Lighting design is issued, in whole or in part, as advisory documents for informational purposes and is not intended for construction nor as being part of a project's construction documentation package.

Filename: C:\Users\jholbrook\Documents\AGI32 - Designs\2021 Designs\Steve Leary\Moores Crane - NORTHEAST\Moores Crane.AGI



Scale: 1 inch= 30 Ft.



Prepared For:
Northeast Electrical
Steve Moulton
36 Littleworth Rd
Dover, NH 03820

Job Name:
Morse's Crane
Dover, NH

Project ID:
167383

Scale: as noted

Date: 1/25/2021

Filename: Moores Crane.AGI

Drawn By: JHolbrook

Inside Rep: RDeane

Outside Rep: SLeary

The Lighting Analysis, eZLayout, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by Holbrook-Associated represent an anticipated prediction of lighting system performance based upon design parameters and information supplied by others. These design parameters and information provided by others have not been field verified by Holbrook-Associated and therefore actual measured results may vary from the actual field conditions. Holbrook-Associated recommends that design parameters and other information be field verified to reduce variation.

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General purpose lighting that's pocket friendly.

Color: Bronze

Weight: 7.3 lbs

Project:

Type:

Prepared By:

Date:

Driver Info

Type	Constant Current
120V	0.7A
208V	0.4A
240V	0.4A
277V	0.3A
Input Watts	86.6W

LED Info

Watts	87W
Color Temp	3000K (Warm)
Color Accuracy	82 CRI
L70 Lifespan	50,000 Hours
Lumens	10,460
Efficacy	120.8 lm/W

Technical Specifications

Compliance

UL Listed:

Suitable for wet locations. Suitable for ground mounting.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

Electrical

Driver:

Constant Current, 120-277V, 50/60 Hz, 120V: 0.7A, 208V: 0.4A, 240V: 0.4A, 277V: 0.3A

Dimming Driver:

Driver includes wiring for 0-10V dimming systems. Dim as low as 10%.

THD:

2.4% at 120V, 7.8% at 277V

Power Factor:

99.6% at 120V, 95.7% at 277V

Note:

All values are typical (tolerance +/- 10%)

Optical

NEMA Type:

NEMA Beam Spread of 7H x 7V

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

IP Rating:

Ingress Protection rating of IP65 for dust and water

EPA:

0.9

Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

Maximum Ambient Temperature:

Suitable for use in up to 40°C (104°F)

Technical Specifications (continued)

Construction

Housing:

Precision die-cast aluminum

Mounting:

Trunnion with tilt angle in 30° increments

Lens:

Tempered glass

Finish:

Formulated for high durability and long-lasting color

Green Technology:

Mercury and UV free. RoHS-compliant components.

Performance

Lifespan:

50,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Other

5 Yr Limited Warranty:

The RAB 5-year, limited warranty covers light output, driver performance and paint finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Buy American Act Compliance:

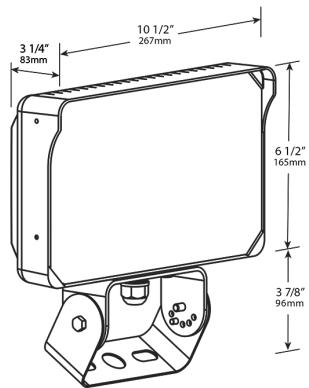
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Listings

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PV30GXHX

Dimensions



Features

Versatile, general-purpose floodlight

7H x 7V NEMA distribution

0-10V dimming

IP65 rating protects against dust and water

50,000-Hour LED lifespan

Ordering Matrix

Family	Lumen Packages (values are nominal)	Mounting	CRI/Color Temp	Finish	Driver/Voltage
X34	-	100L	T	-830	/U
100L = 10,000 Lumens, 87W 150L = 15,000 Lumens, 130W 195L = 19,500 Lumens, 160W		SF = Slipfitter T = Trunnion	Blank = 80 CRI, 5000K -830 = 80 CRI, 3000K	Blank = Bronze W = White	/U = 120-277V, 0-10V Dimming



Ultra-economy wall pack with traditional look.

Color: Bronze

Weight: 9.4 lbs

Project:

Type:

Prepared By:

Date:

Driver Info

Type	Constant Current
120V	0.43A
208V	0.26A
240V	0.22A
277V	0.19A
Input Watts	51.1W

LED Info

Watts	50W
Color Temp	3000K (Warm)
Color Accuracy	82 CRI
L70 Lifespan	50,000 Hours
Lumens	5,270
Efficacy	103.1 lm/W

Technical Specifications

Compliance

UL Listed:

Suitable for wet locations. Suitable for mounting within 4 feet of the ground.

Performance

Lifespan:

50,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Electrical

Driver:

Constant Current, Class 2, 120-277V, 50/60Hz, 120V: 0.43A, 208V: 0.26A, 240V: 0.22A, 277V: 0.19A

THD:

6.1% at 120V, 7% at 277V

Power Factor:

99.7% at 120V, 96.7% at 277V

Note:

All values are typical (tolerance +/- 10%)

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

Housing:

Die-cast aluminum

Lens:

Glass

Reflector:

Specular aluminum

Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

Maximum Ambient Temperature:

Suitable for use in up to 40°C (104°F)

Mounting:

Die-cast backbox with four (4) conduit entry points and knockout pattern for junction box or direct wall mounting. Hinged door for easy re-assembly.

Technical Specifications (continued)

Construction

Green Technology:

Mercury and UV free. RoHS-compliant components.

Finish:

Formulated for high durability and long-lasting color

Other

Replacement:

Replaces up to 175W Metal Halide

Equivalency:

Equivalent to 150W Metal Halide

5 Yr Limited Warranty:

The RAB 5-year, limited warranty covers light output, driver performance and paint finish.

RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Buy American Act Compliance:

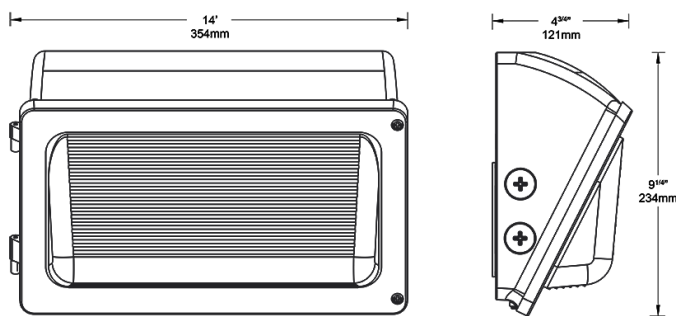
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Listings

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PL2UFGR7

Dimensions



Features

- Economy-grade wall pack with traditional look
- Covers footprint of medium-sized HID wall packs
- Available in various lumen packages
- Integrated 0-10V dimming
- 50,000-Hour LED lifespan

Ordering Matrix

Family		Lumen Package		CRI/Color Temp	Voltage	Options
W34	-	55L	-	830		
		55L = 5400lm, 51W 70L = 7200lm, 69W 90L = 9100lm, 87W		Blank = 80 CRI / 5000K 830 = 80 CRI / 3000K	Blank = 120-277V, 0-10V Dimming /480 = 480V, 0-10V Dimming	Blank = No Option /PCU = 120-277V Button Photocell /MVS = 120-277V Microwave Sensor /LC = 120-277V Lightcloud® Control



General purpose lighting that's pocket friendly.

Color: Bronze

Weight: 7.3 lbs

Project:

Type:

Prepared By:

Date:

Driver Info

Type	Constant Current
120V	0.7A
208V	0.4A
240V	0.4A
277V	0.3A
Input Watts	86.6W

LED Info

Watts	87W
Color Temp	3000K (Warm)
Color Accuracy	82 CRI
L70 Lifespan	50,000 Hours
Lumens	10,460
Efficacy	120.8 lm/W

Technical Specifications

Compliance

UL Listed:

Suitable for wet locations. Suitable for ground mounting.

IESNA LM-79 & LM-80 Testing:

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

Electrical

Driver:

Constant Current, 120-277V, 50/60 Hz, 120V: 0.7A, 208V: 0.4A, 240V: 0.4A, 277V: 0.3A

Dimming Driver:

Driver includes wiring for 0-10V dimming systems. Dim as low as 10%.

THD:

2.4% at 120V, 7.8% at 277V

Power Factor:

99.6% at 120V, 95.7% at 277V

Note:

All values are typical (tolerance +/- 10%)

Optical

NEMA Type:

NEMA Beam Spread of 7H x 7V

LED Characteristics

LEDs:

Long-life, high-efficacy, surface-mount LEDs

Color Uniformity:

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Construction

IP Rating:

Ingress Protection rating of IP65 for dust and water

EPA:

1

Cold Weather Starting:

Minimum starting temperature is -40°C (-40°F)

Maximum Ambient Temperature:

Suitable for use in up to 40°C (104°F)

Technical Specifications (continued)

Construction

Housing:

Precision die-cast aluminum

Mounting:

Slipfitter with tilt angle in 10° increments

Lens:

Tempered glass

Finish:

Formulated for high durability and long-lasting color

Green Technology:

Mercury and UV free. RoHS-compliant components.

Tilt Increment:

Rotates in 6 degree increments

Performance

Lifespan:

50,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

Other

5 Yr Limited Warranty:

The RAB 5-year, limited warranty covers light output, driver performance and paint finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

Buy American Act Compliance:

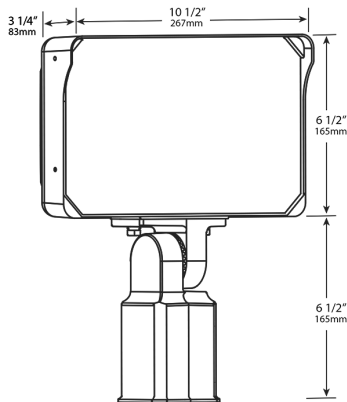
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Listings

DLC Listed:

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PV30GXHX

Dimensions



Features

Versatile, general-purpose floodlight

7H x 7V NEMA distribution

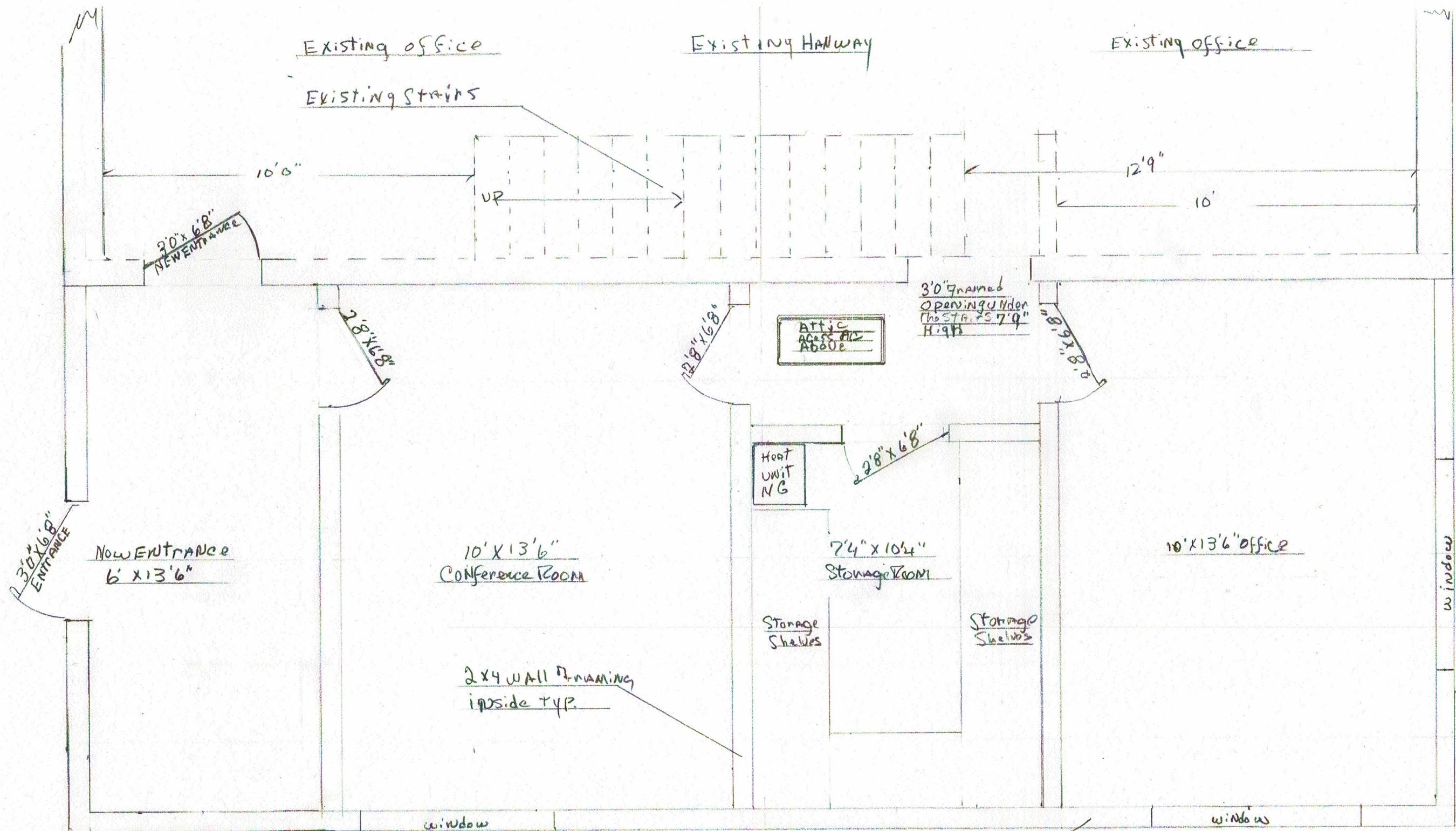
0-10V dimming

IP65 rating protects against dust and water

50,000-Hour LED lifespan

Ordering Matrix

Family	Lumen Packages (values are nominal)	Mounting	CRI/Color Temp	Finish	Driver/Voltage
X34	-	100L	SF	-830	/U
	100L = 10,000 Lumens, 87W 150L = 15,000 Lumens, 130W 195L = 19,500 Lumens, 160W	SF = Slipfitter T = Trunnion	Blank = 80 CRI, 5000K -830 = 80 CRI, 3000K	Blank = Bronze W = White	/U = 120-277V, 0-10V Dimming



Floor plan for the
 New 14' x 36' office
 Addition 33 Littleworth RD, LLC
 Dover NH 03820



TRAFFIC IMPACT ASSESSMENT REPORT

MOORES CRANE RENTAL

INDUSTRIAL IMPROVEMENTS

33 LITTLEWORTH ROAD

DOVER, NEW HAMPSHIRE

JANUARY 11, 2021

Project Number: C006-21

Scope- This report provides a Standard Analysis for the proposed improvements to 33 Littleworth Road, Dover, New Hampshire. Proposed improvements consist of a one story 540 square foot office addition to the existing building and a new 7,200 square foot storage building. The locations of both are shown on the site plan "Storage Building, 33 Littleworth Road" dated August 12, 2020 prepared by Farewell Engineering Services LLC.

- 1) Description of the site: The 2.3-acre site is in the new IT zoning district. The site is bounded by Littleworth Road (Route 9) and the property of Willis Hutchings to the west, Pace Industries to the south and east and the property of Raymond and Jennifer Thibodeau to the north. The site slopes gradually from Littleworth Road to the east from elevation 129' to elevation 127'.
- 2) Description of Roadways: Littleworth, Route 9 is a two-lane improved State Highway, approximately 47 feet wide (two travel lanes and two breakdown lanes). The posted speed limit is 35 MPH. There are no sidewalks or granite curbs adjacent to the parcel or to the northeast of the entrance to Pace Industries and the intersection of Industrial Park Road to the south.
- 3) Sight Distance: The sight distance looking north is 465' (675' during the winter months without leaf growth) and 675' looking south. No changes to the existing entrance to the site are anticipated or warranted. The sight distance is satisfactory for the posted speed limit of 35 MPH.
- 4) Trip Generation: Trip Generation has not been estimated because there is no anticipated change (increase) in the number of vehicles and or personnel on the site. The current facility does not adversely impact the existing trip distribution.
- 5) Trip Distribution: Average Annual Daily Vehicle Trips. (AADT) on Route 9, Littleworth Road have averaged from 8,000 trips (2011) to 10,000 (2008). Source: State of New Hampshire, Department of Transportation, Bureau of Traffic. Growth rate ranges from -7% (2011) to 12% (2017) with the most recent year 2018, showing a 2% growth rate. Trips are generally split between eastbound and westbound: for 2018 AADT was 10,859 trips with 5,444

eastbound and 5,415 westbound. No traffic mitigation is anticipated; there are no capacity concerns and adequate sight distance is provided in both directions at the existing entrance.

- 6) Certifications: Kenneth A. Wood, P.E. (N.H. P.E. 6917) has been licensed to practice in the State of New Hampshire since 1987; in addition, he is licensed to practice engineering in Maine and Massachusetts. He is also licensed as a state of New Hampshire Natural Scientist and he holds a National Council of Engineering (NCEE) certificate. He formed Attar Engineering, Inc. in April, 1988; the firm practices civil, structural and marine engineering and has accomplished many commercial, residential projects including traffic related items.



SIGHT DISTANCE LOOKING NORTHERLY



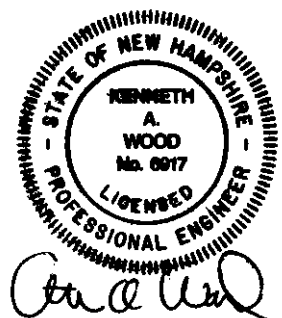
SIGHT DISTANCE LOOKING SOUTHERLY

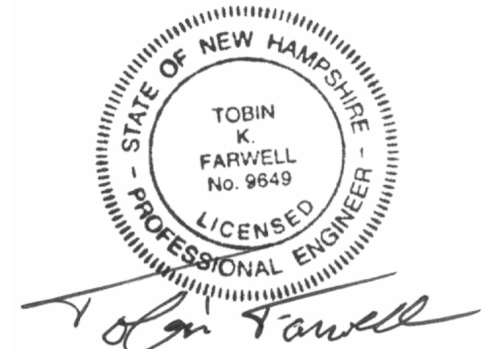
Prepared by;

A handwritten signature in black ink, appearing to read "Ken Wood".

Kenneth A. Wood, P.E.

President





ISSUED FOR:	SITE PLAN REVIEW
ISSUE DATE:	AUGUST 12, 2020
FILE NAME:	2044-MOORES

[illegible]

SCALE: $1'' = 20'$

OWNER/APPLICANT:

MOORES CRANE RENTAL
33 LITTLEWORTH RD
DOVER NH 03861

PROJECT:

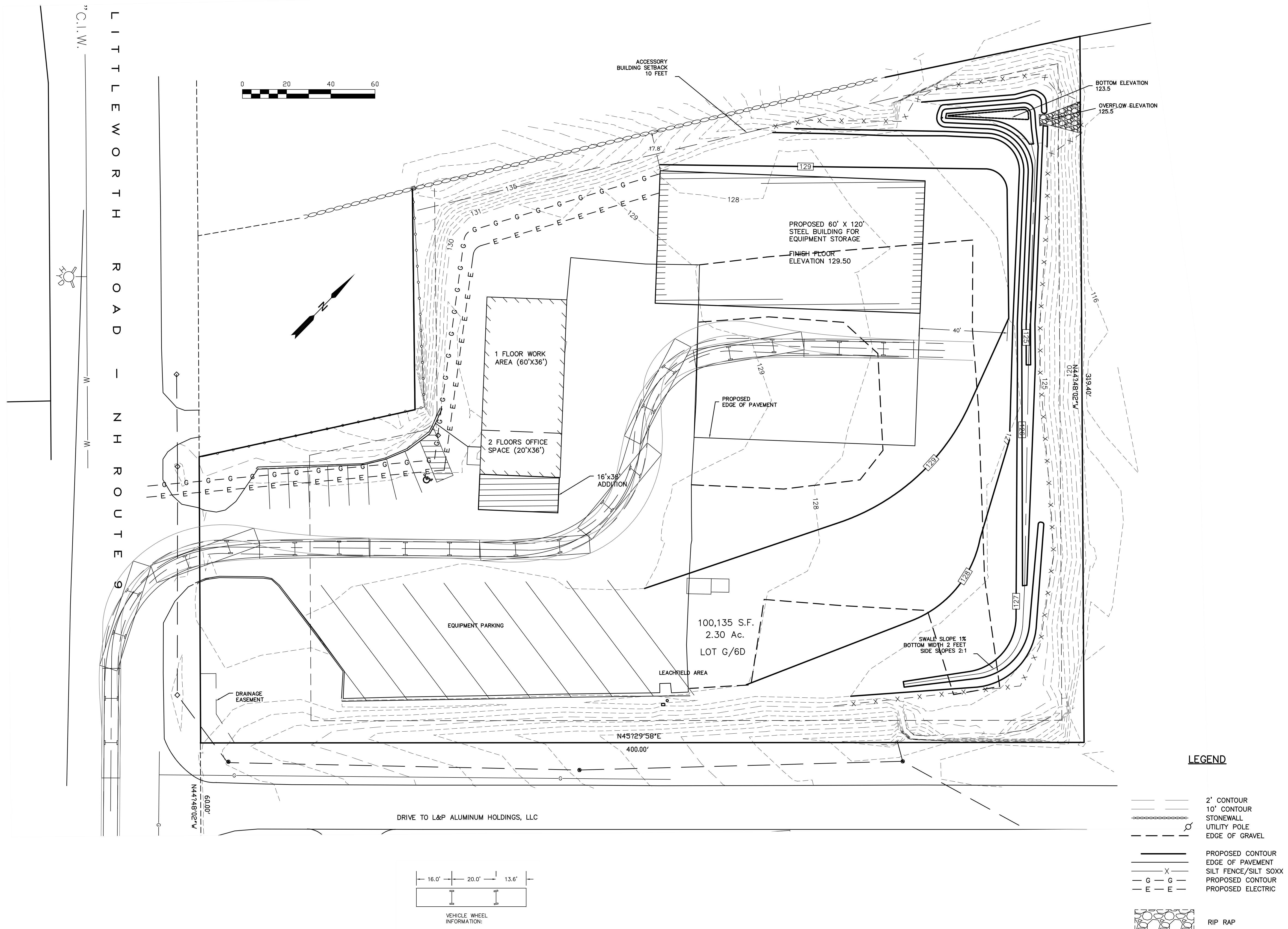
*STORAGE
BUILDING
33 LITTLEWORTH RD
TAX MAP G
LOT 6D
DOVER, NEW HAMPSHIRE*

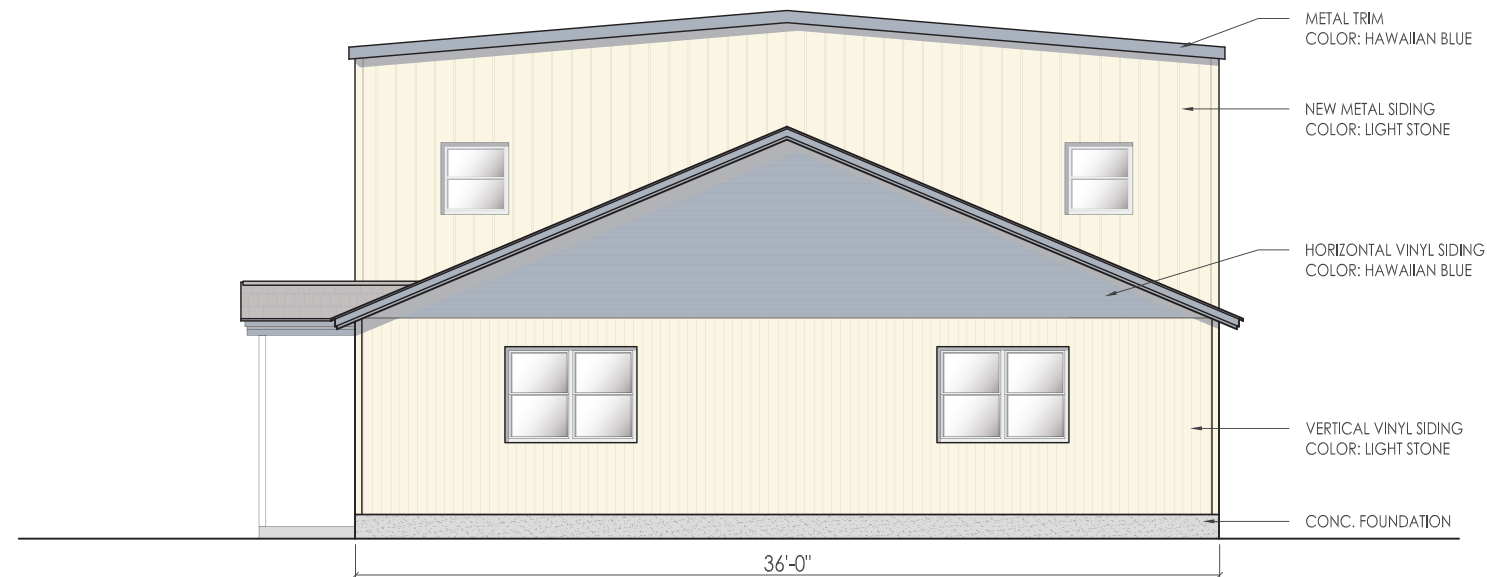
TITLE:

*FIRE TRUCK
PATH*

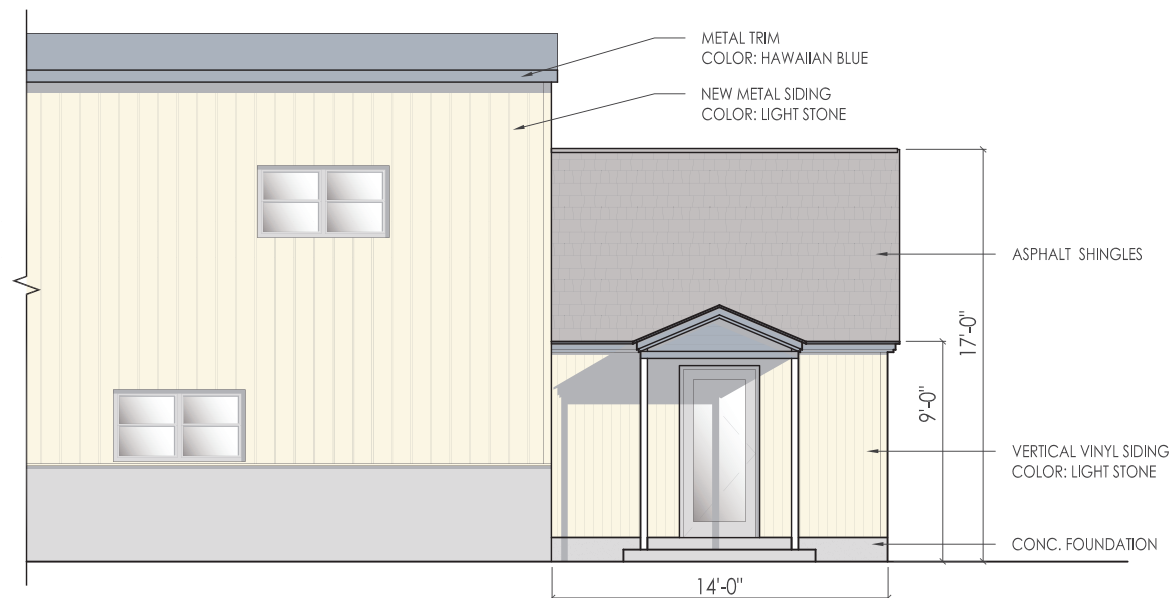
SHEET NUMBER:

C-3

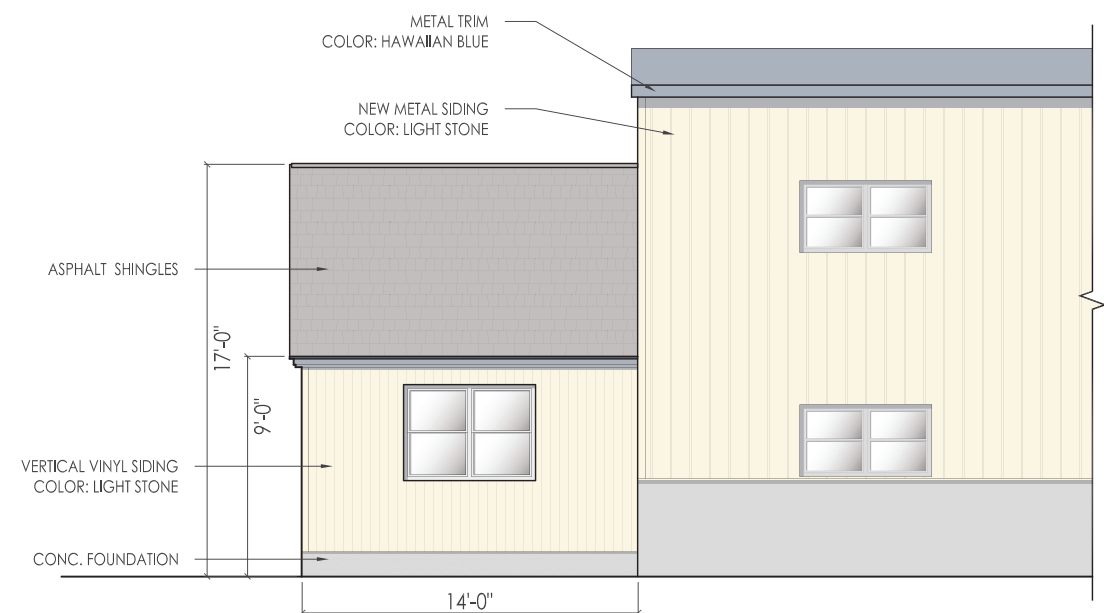




3 SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"



2 SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"

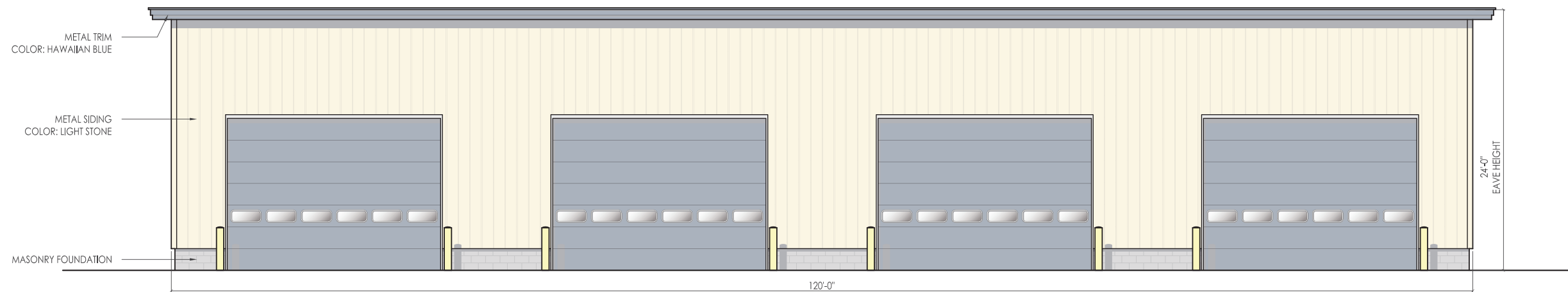


1 NORTHEAST ELEVATION
SCALE: 1/8" = 1'-0"

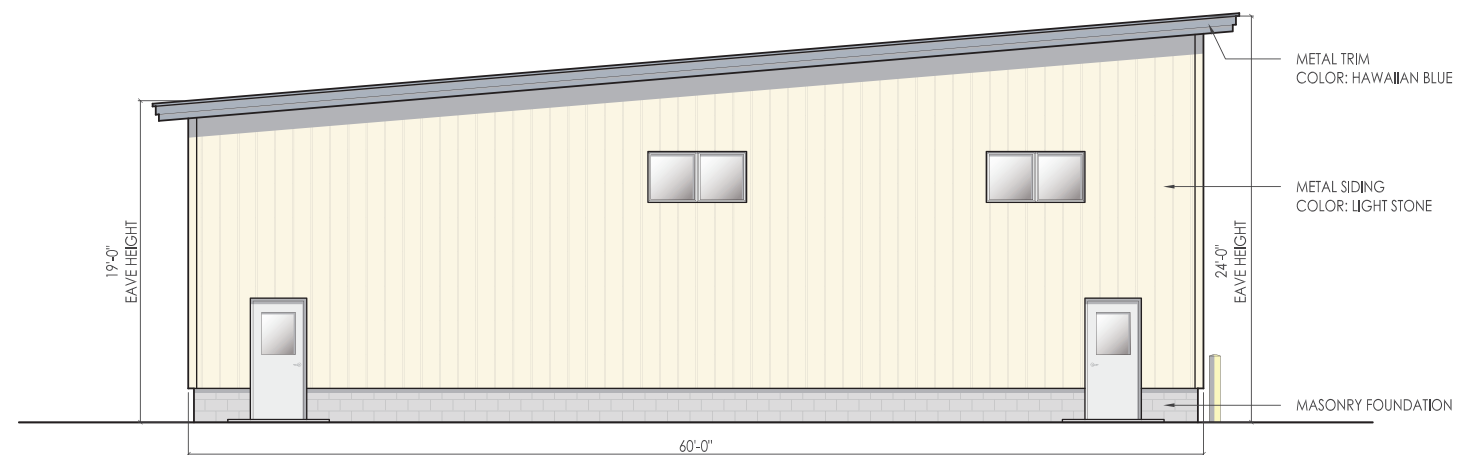


MOORES CRANE RENTAL
33 LITTLEWORTH ROAD,
DOVER, NH 03820

NEW BUILDING ADDITION



2 SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"

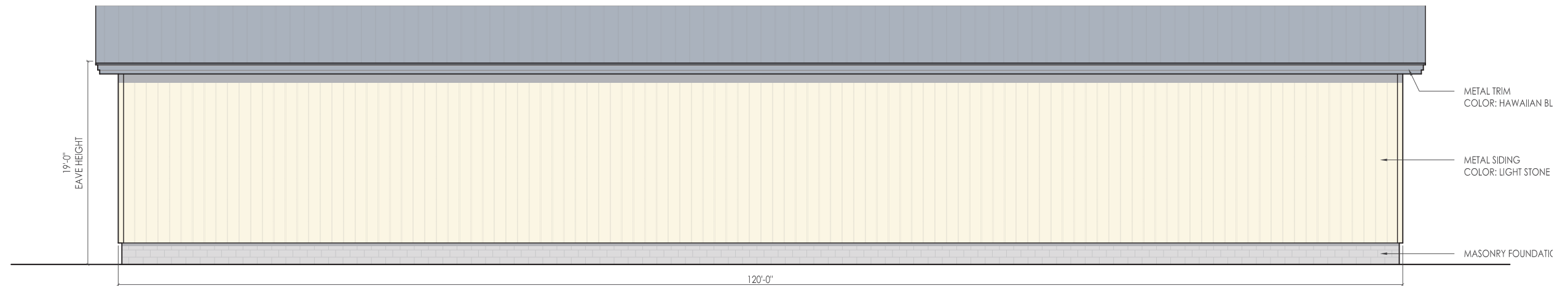


1 SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"

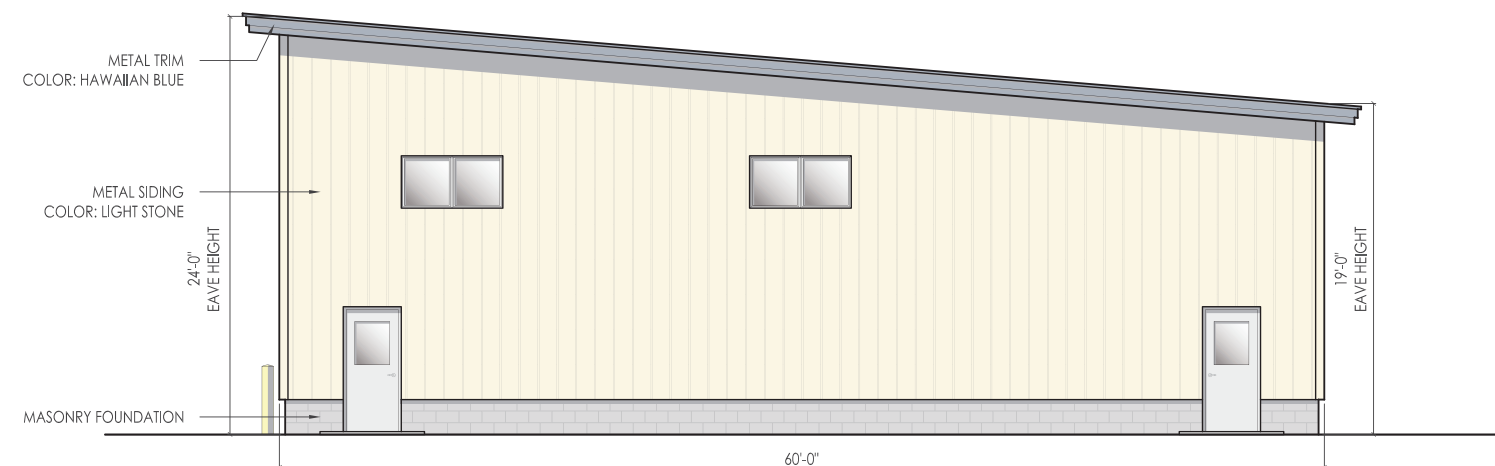


MOORES CRANE RENTAL
33 LITTLEWORTH ROAD,
DOVER, NH 03820

NEW METAL BUILDING



2 NORTHWEST ELEVATION
SCALE: 1/8" = 1'-0"



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



MOORES CRANE RENTAL
33 LITTLEWORTH ROAD,
DOVER, NH 03820

NEW METAL BUILDING



MOORES CRANE RENTAL
33 LITTLEWORTH ROAD,
DOVER, NH 03820

STREETSCAPE PERSPECTIVE

P20-68

33 Littleworth Road

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
G0004-000000	14 16 INDUSTRIAL PARK RD	16 INDUSTRIAL PARK LLC		273 CORPORATE DR STE 150	PORTSMOUTH	NH	03801
G0004-A00001	1 INDUSTRIAL PARK RD	BEARINGS INC		6920 POINT INVERNESS WAY STE 301	FORT WAYNE	IN	46804
G0004-G00002	36 LITTLEWORTH RD	LITTLEWORTH/INDUSTRIAL PARK PROPERTIES L		PO BOX 118	DOVER	NH	03821-0118
G0006-000000	29 LITTLEWORTH RD	29 LITTLEWORTH ROAD LLC	C/O NORTHERN POOL & SPA	291 HAROD DOW HIGHWAY	ELIOT	ME	03903
G0006-B00000	35 LITTLEWORTH RD	HUTCHINGS WILLIS E		184 W HIGH ST	SOMERSWORTH	NH	03878
G0006-C00000	29 1/2 LITTLEWORTH RD	STOREMASTER FUNDING III LLC	C/O PACE INDUSTRIES LLC	67 FAULKNER ST	NORTH BILLERICA	MA	01862
G0028-001C00	39 LITTLEWORTH RD	KRUSPKI DAVID J &	KRUSPKI APRIL M	39 LITTLEWORTH RD	DOVER	NH	03820-4314
G0028-001D00	37 LITTLEWORTH RD	THIBODEAU RAYMOND G &	THIBODEAU JENNIFER C	37 LITTLEWORTH RD	DOVER	NH	03820
G0006-D00000	33 LITTLEWORTH RD	33 LITTLEWORTH ROAD LLC		33 LITTLEWORTH RD	DOVER	NH	03820
		TOBIN FARWELL-FARWELL ENG. SERV.		265 WADLEIGH FALLS ROAD	LEE	NH	03861
		MCENEANEY SURVEY ASSOC.	KEVIN MCENEANEY	24 CHESTNUT STREET	DOVER	NH	03820