



**LEBANON PLANNING BOARD
JANUARY 8, 2024 - 6:30 PM
COUNCIL CHAMBERS, CITY HALL OR
REMOTE VIA VIRTUAL PLATFORM
LEBANONNH.GOV/LIVE**

1. Call to Order

- A. To participate in this meeting, please [join live via Microsoft Teams](#) or call 929-229-5356 (access code: 122 330 189#). If you have trouble accessing this meeting, please [email tim.corwin@lebanonnh.gov](mailto:tim.corwin@lebanonnh.gov).

2. Election of Officers

- A. Chair and Vice Chair

3. Notice of Regional Impact

4. Public Hearing Items

- A. **City of Lebanon (applicant), Mary Hitchcock Memorial Hospital (property owner), 1 Medical Center Drive (Tax Map 10, Lot 8), zoned MC:** Request for Site Plan Review to install a water system interconnection and a water booster pump station. **PB2024-01-GOV** (NOTE: This application will be reviewed as a Governmental Land Use pursuant to RSA 674:54)
- B. **Edwards Properties, LLC, 99 Heater Road (Tax Map 78, Lot 41), zoned IND-L:** Request for a Conditional Use Permit pursuant to Section 303.2 of the Zoning Ordinance for a proposed office use. **PB2024-02-CUP**
- C. **Pike Industries, Inc, 335 Plainfield Road (Tax Map 157, Lot 5), zoned IND-H:** Request for a Site Plan amendment and a Conditional Use Permit pursuant to Section 304.2 of the Zoning Ordinance to expand the existing asphalt plant with the installation of additional storage tanks and associated site work. **PB2024-03-CUPSPR**
- D. **Lebanon Opera House (applicant), City of Lebanon (property owner), 51 North Park Street (Tax Map 91, Lot 246), zoned LD:** Request for Site Plan Review for proposed exterior building lighting. **PB2024-04-SPR**

5. Other Business

6. Approval of Minutes

- A. December 11, 2023

7. 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](https://lebanonnh.gov/Live) where you will find instructions on how to enter the meeting. Members of the

Lebanon Planning Board Agenda
January 8, 2024

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

PLANNING BOARD

January 8, 2024 Meeting

Staff Memorandum – PB2024-01-GOV

APPLICATION INFORMATION

Agenda Item: 4.A

Application ID#:
PB2024-01-GOV

Application Type:
Governmental Use Site Plan
Review (advisory only)

Property Location:
1 Medical Center Drive (Tax Map
10, Lot 8)

Property Owner/Applicant:
Mary Hitchcock Memorial
Hospital/City of Lebanon

Existing Improvements & Use:
Medical Center Complex

Proposed Improvements:
water system interconnection and
a water booster pump station

Property Size:
+/-289 acres

Future Land Use Map:
Medical Office

Zoning District:
Medical Center

Overlay Districts:
Wetlands Conservation District

LEGAL NOTICE

City of Lebanon (applicant), Mary Hitchcock Memorial Hospital (property owner), 1 Medical Center Drive (Tax Map 10, Lot 8), zoned MC: Request for Site Plan Review to install a water system interconnection and a water booster pump station. PB2024-01-GOV

NOTE: This application will be reviewed as a Governmental Land Use pursuant to NH RSA 674:54).

APPLICATION MATERIALS

- ▶ Application form
- ▶ Letter dated December 21, 2024, from Rod Finley, PE, City Engineer (project description; 2 pages)
- ▶ Plan set titled, "Construction Plans for City of Lebanon - Hanover Water System Interconnection, Water Booster Pump Station and Pressure Reducing Bypass," prepared by the City of Lebanon, dated July 2023, (9 sheets)

COMPLETENESS REVIEW

This application is being reviewed in accordance with New Hampshire RSA 674:54, Governmental Land Uses. As such, there is no completeness review for this project. In addition, any comments on the proposal by the Planning Board and City staff are considered non-binding on the applicant.

APPLICATION OVERVIEW

The subject property is owned by the Mary Hitchcock Memorial Hospital and occupied by the Dartmouth-Hitchcock Medical Center; however, the property's water system infrastructure is owned by the City of Lebanon. In an emergency, a backup water supply is available from the Town of Hanover, but is only accessible by utilizing a fire truck to pump water between two fire hydrants. Moreover, in utilizing this method there is not enough pressure to pump water to the top floors of the hospital.

To provide a reliable back up water supply capable of supplying the entire hospital, the City of Lebanon proposes to construct an interconnection vault with a pump station in the location marked by the red star in Figure 1 below. The pump station will allow Hanover to supply water to Lebanon and to have sufficient pressure to fill the water tank that normally supplies water to the area. The water tank will then function as it normally does supplying water at its normal pressure to the hospital, in the event that the back up water supply from Hanover is ever utilized in an emergency.

The project's estimated permanent disturbance is 1,636 sq. ft. and the estimated temporary disturbance is 8,400 sq. ft. for a total project disturbance of 10,036 sq. ft. As such, the project constitutes a "minor change" that would ordinarily require minor site plan review. However, when the applicant is the City of Lebanon, it is staff's practice to send the application to the full Planning Board for review to avoid a conflict of interest (given that the Minor Site Plan Committee consists of City staff members).

Because the water system improvements will be owned and operated by the City of Lebanon, the project qualifies as a Governmental Land Use pursuant RSA 674:54 and, therefore, is not subject to the Site Plan Review Regulations. Nevertheless, the Planning Board is permitted to conduct a public hearing on the project, as set forth in NH RSA 674:54, II:

The [...] city [...] shall give written notification to the [...] planning board [...] of a municipality of any proposed governmental use of property within its jurisdiction, which constitutes a substantial change in use or a substantial new use. Written notification shall contain plans, specifications, explanations of proposed changes available at the time, a statement of the governmental nature of the use as set forth in paragraph I, and a proposed construction schedule. Such notification shall be provided at least 60 days prior to the beginning of construction. Either the governing body or planning board of the municipality may conduct a public hearing relative to the proposed governmental use. A representative of the governmental entity which provided notice shall be available to present the plans, specifications, and construction schedule, and to provide explanations. The governing body or planning board may issue nonbinding written comments relative to conformity or nonconformity of the proposal with normally applicable land use regulations to the sponsor of the governmental use within 30 days after the hearing.

Although the Planning Board's review and comments (if any) are advisory only, note that all improvements/structures will need to comply with all other applicable rules and regulations including but not limited to the Building Code.

Figure 1.



STAFF MEMORANDUM

PB2024-01-GOV
1 Medical Center Dr (10-8)
Agenda Item 4.A
January 8, 2024 PB Mtg
Page 3 of 3

Figure 2.



Attachments

Cc (via e-mail): Rod Finley, PE, City Engineer
Jay Cairelli, Director of Public Works
David Stiger, DHMC

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: Dartmouth Hitchcock Medical Center TEL.#: (603) 650-5741
 MAILING ADDRESS: One Medical Center Drive Lebanon, NH 03756
 E-MAIL ADDRESS: David.L.Stiger@hitchcock.org

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Department of Public Works / City of Lebanon TEL.#: (603) 558-7123
 MAILING ADDRESS: 193 Dartmouth College Highway Lebanon NH 03766
 E-MAIL ADDRESS: Red.Finley@lebanonnh.gov

PROJECT LOCATION:

TAX MAP #: 10 LOT#: 8 PLOT #: _____ ZONE: MC
 STREET ADDRESS OF PROJECT: One Medical Center Drive
 IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES ☒ NO **HISTORIC DISTRICT** ☐ YES ☒ NO
FLOOD PLAIN ☐ YES ☒ NO

SCOPE OF PROJECT:

Hanover water system interconnection - Water Booster Pump Station and Pressure Reducing Valve Bypass

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: Dartmouth Health / Water Booster Pump Station

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 January 8, 2024, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY David Stiger
 OWNER: David Stiger (Dec 4, 2023 13:17 EST)

DATE: Dec 4, 2023

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 David Stiger
 OWNER: David Stiger (Dec 4, 2023 13:17 EST)

DATE: Dec 4, 2023

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #		
<u>12/4/2023</u>	<u>10-8</u>	<u>PB2024-01-SPR</u>		



CITY OF LEBANON
DEPARTMENT OF PUBLIC WORKS
193 Dartmouth College Highway
Lebanon, NH 03766
Rodrick J. Finley, P.E.
City Engineer

December 21, 2023

RE: Site Plan Review Application - Hanover Water System Interconnection - Water Booster Pump Station and Pressure Reducing Valve

Dear Planning Board Members:

We are pleased to present this site plan application for the Hanover Water System Interconnection - Water Booster Pump Station and Pressure Reducing Valve project. The City of Lebanon has received a grant through the State of New Hampshire Department of Environmental Services (NHDES) Drinking Water and Groundwater Trust Fund (DWGTF) to finance a portion of the water infrastructure improvements project. Dartmouth Health is financing the remainder of project construction.

The City of Lebanon and the Town of Hanover water systems are interconnected through an underground vault constructed in 1989 near the intersection of Medical Center Drive and Route 120. A 12-inch ductile iron water main enters the existing pressure reducing valve from the Lebanon side and exits through an 8-inch ductile iron water main to Hanover. The current infrastructure can only provide water from the Lebanon system to the Hanover system. The Dartmouth Hitchcock Medical Center campus is located within Lebanon's Dartmouth Health/Centerra pressure zone and is supplied water from the DHMC booster pump station and the 3 million-gallon (MG) DHMC storage tank.

The proposed project would provide a fail-safe for either municipality in the event of an emergency or maintenance need. Water would be able to be pumped from the Hanover water system to Lebanon's Dartmouth Health/Centerra high pressure zone or back fed through a pressure reducing valve into Hanover's water system. The installation of the new pump station and enhanced interconnection with Hanover would maintain sprinkler flow in the event of fire, non-potable water service (flushing, sinks, steam system) and potable water service in the event of mechanical failures in Lebanon's water system or reduced flow due to severe drought or other emergencies.

The project consists of furnishing and installing a 12' x 20' pre-manufactured, skid-mounted water booster pump station and pressure reducing valve bypass. The pump station will be mounted on a cast-in-place reinforced concrete foundation consisting of frost walls and a slab on grade. Equipment will include two horizontal end suction water pumps, a pressure reducing valve, butterfly valves, silent check valves, flow meter, power and control panel, PLC controller, variable speed drives, transformer, manual transfer switch, portable generator plug-in, pressure transmitters, low temperature sensor, and building flood sensor. The modular building will be 2" x 6" wood stud construction, wood truss roof system, polyurethane insulation, plywood backing, FRP interior covering, red cedar clapboard siding, standing seam metal roof, aluminum fascia and soffits, and 36"

insulated double steel doors with hardware. The pump station will be supplied with an HVAC unit, heater, dehumidifier, and interior and exterior LED lights.

Additional work includes primary electric service conduits and communication conduit, transformer pad and bollards, secondary electric service, and meter box. Site work including driveway, infiltration basin, headwalls, grading, and landscaping. Water main extensions include fittings, valves, hydrant, and interconnections to the existing systems.

Sincerely,

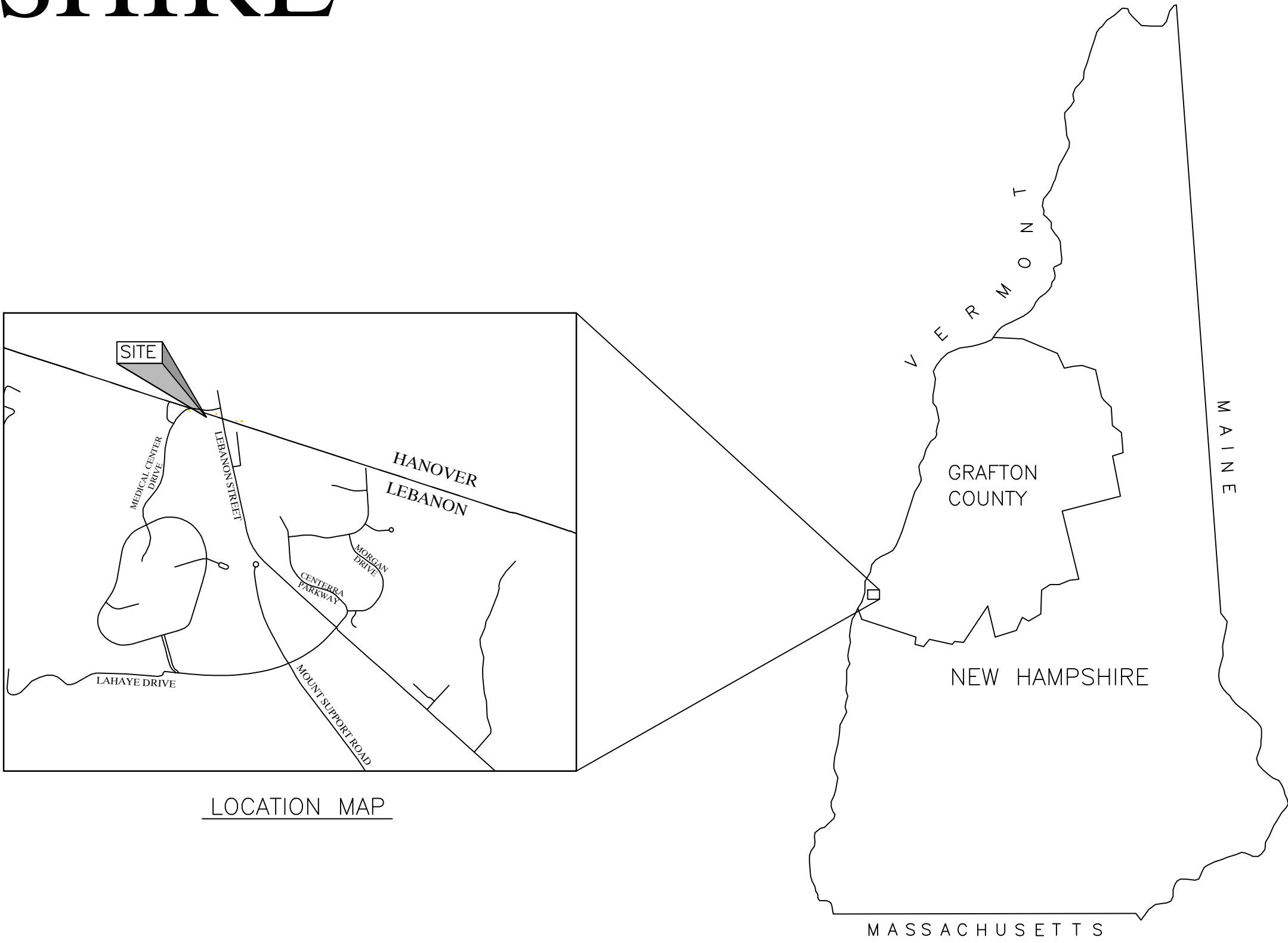


Rodrick J. Finley, P.E.
City Engineer

Cc: Tim Corwin, Deputy Planning and Development Director
Jay Cairelli, Public Works Director
Shaun Mulholland, City Manager

CONSTRUCTION PLANS FOR
CITY OF LEBANON
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING BYPASS
MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE
JULY, 2023

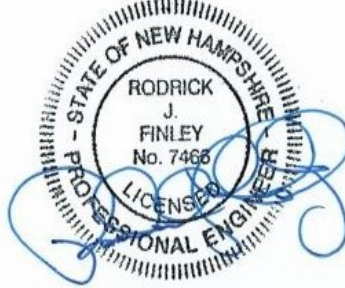
INDEX OF SHEETS	
SHEET 1	COVER SHEET & LOCATION MAP
SHEET 2	NOTES, CONSTRUCTION SEQUENCE, AND PROJECT RECORDS
SHEET 3	OVERALL SITE PLAN
SHEET 4	SITE PLAN
SHEET 5	BUILDING LAYOUT, PIPING SCHEDULE, AND EQUIPMENT SCHEDULE
SHEET 6	BUILDING DETAILS, MECHANICAL NOTES, AND ELECTRICAL NOTES
SHEET 7	WATER NOTES, WATER LINE TESTING, DISINFECTION, AND WATER DETAILS
SHEET 8	EROSION CONTROL, GENERAL NOTES, AND DETAILS
SHEET 9	MISCELLANEOUS DETAILS



PROGRESS PRINT -
NOT FOR CONSTRUCTION

RECORD OWNER

CITY OF LEBANON
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112



GENERAL CONSTRUCTION NOTES:

3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED DRAWINGS, SPECIFICATIONS, AND ANY ISSUED ADDENDA.
2. THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY PRIOR TO PROCEEDING WITH WORK.
3. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND SPECIFICATION, THE CITY SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
4. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH EXCAVATION IS COMPLETED. ANY DAMAGE CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION, OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.
5. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48 HOUR NOTIFICATION TO LIBERTY UTILITIES, COMCAST, OR CONSOLIDATED COMMUNICATIONS. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES. THE CONTRACTOR SHALL COORDINATE RELOCATION OF TELEPHONE POLES WITH LIBERTY UTILITIES, CONSOLIDATED COMMUNICATIONS, COMCAST AND OTHER UTILITIES AS NEEDED. NO ADDITIONAL PAYMENT WILL BE PROVIDED TO THE CONTRACTOR DUE TO DELAYS CAUSED BY THE UTILITY COMPANIES.
6. THE CONTRACTOR SHALL INSTALL AND MAINTAIN PERMANENT AND TEMPORARY TRAFFIC CONTROL DEVICES AS NECESSARY AND IN MANNER CONSISTENT WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY PRIOR TO THE START OF CONSTRUCTION. THE LEBANON POLICE DEPARTMENT (448-1212) AND FIRE DEPARTMENT (448-8810) ARE TO BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. UNIFORM TRAFFIC OFFICERS ARE ANTICIPATED FOR THIS PROJECT. THE CONTRACTOR SHALL PROVIDE NECESSARY CERTIFIED FLAGGERS NEEDED TO SAFELY CONTROL THE FLOW OF TRAFFIC AND COMPLY WITH CITY EXPECTATIONS.
8. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF EACH WORKDAY, UNLESS PERMISSION TO LEAVE THEM OPEN IS GIVEN IN WRITING BY THE CITY. TEMPORARY PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
9. COMPACTION TESTS SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT. ANY SETTLEMENT OCCURRING WITHIN TWO YEARS OF SUBSTANTIAL COMPLETION OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL MITIGATE FUGITIVE DUST TO A TOLERABLE LIMIT. A WATER TRUCK IS EXPECTED TO BE ON-SITE AT ALL TIMES DURING THE WORK WITH APPLICATION SEVERAL TIMES A DAY AS NEEDED TO CONTROL DUST. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH AND DEBRIS ON PUBLIC STREETS WITHIN AND/OR OUTSIDE THE PROJECT AREA. STREETS OPENED TO THE PUBLIC SHALL BE KEPT SWEEP AND FREE OF DEBRIS.
11. ALL AREAS THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH GRAVEL OR RIPRAP SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED. ALL AREAS TO RECEIVE 6" MINIMUM OF SCREENED TOPSOIL. TOPSOIL SAMPLES MUST BE LIMITED TO ONE ANALYSIS BY A CERTIFIED LABORATORY EARLY IN CONSTRUCTION FOR DETERMINATION OF REQUIRED AMENDMENTS AND ORGANIC CONTENT. TOPSOIL FROM A MINIMUM OF 2 SOURCES SHALL BE PROVIDED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTLE ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY THEIR OPERATIONS AT NO EXPENSE TO THE CITY. THE WORK IS TO BE DONE BY A LAND SURVEYOR LICENSED IN THE STATE OF NEW HAMPSHIRE. PROPERTY BOUNDS FOUND ARE SHOWN ON LAYOUT PLANS AND MAY NOT BE INCLUSIVE OF ALL BOUNDS THAT EXIST IN THE PROJECT AREA. IF ANY ADDITIONAL BOUNDS ARE FOUND, THE CONTRACTOR SHALL DOCUMENT THE LOCATION AND NOTIFY THE ENGINEER.
13. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY OF ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT. EXCESS MATERIAL IS TO BE TAKEN TO 370 PLAINFIELD ROAD (LEBANON LANDFILL) IF CITY SO DESIRES, AT NO ADDITIONAL COST. THE CONTRACTOR SHALL NOT UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT AND ALL STATE, FEDERAL, AND LOCAL REGULATIONS.
14. THE CONTRACTOR IS TO TAKE SPECIAL CARE NOT TO DAMAGE TREES, SHRUBS, OR OTHER PLANTINGS WITHIN THE CONSTRUCTION AREA UNLESS THEY ARE NOTED TO BE REMOVED.
15. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING PROPER NOTICE TO PROPERTY OWNERS IN ADVANCE OF AN EXPECTED SHUTDOWN OF WATER SERVICE, IMPACT TO TRAFFIC, AND BLOCKING OF DRIVEWAYS. WRITTEN NOTICES SHALL BE PLACED ON DOORS AT A MINIMUM OF 48 HOURS PRIOR TO EXPECTED WORK. NOTIFYING THEM OF ANTICIPATED IMPACT. DAILY COORDINATION WITH PROPERTY OWNERS IS VERY IMPORTANT AND IS INCIDENTAL TO THE WORK. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY THEIR WORK AT ALL TIMES. TWO LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR UNLESS OTHERWISE APPROVED BY THE CITY.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS PREPARED BY THE CITY DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR CITY'S REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), LOCAL REGULATIONS, AND/OR THE BOARD OF LABOR.
17. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AREA AND ALL EXISTING CONDITIONS SURROUNDING IT THEREON.
18. THE CITY SHALL BE NOTIFIED PRIOR TO CONSTRUCTION IF ANY DISCREPANCIES IN PLANS OR EXISTING DATA. CONSTRUCTION SHALL NOT PROCEED WITHOUT WRITTEN PERMISSION FROM THE CITY.
19. PAVEMENT IS TO BE SAW-CUT ALONG MEDICAL CENTER DRIVE. SAW-CUTTING IS INCIDENTAL TO EXCAVATION WORK.
20. IF THE CONTRACTOR ANTICIPATES AN OVERAGE IN MATERIAL QUANTITIES INCLUDED IN THE CONTRACT, THE CONTRACTOR MUST NOTIFY THE CITY IMMEDIATELY PRIOR TO PROCEEDING.
21. ANY SURFACE OR SUBSURFACE FEATURES DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO THE BEGINNING OF CONSTRUCTION. ALL COSTS ASSOCIATED WITH THE RESTORATION SHALL BE AT THE CONTRACTORS SOLE EXPENSE.
22. NO BLASTING SHALL OCCUR ON THIS PROJECT WITHOUT PRIOR COMPLETION OF A PRE-BLAST SURVEY AND PROOF OF ADDITIONAL INSURANCES TO BE PROVIDED TO THE OWNER. THE PRE-BLAST SURVEY SHALL BE COMPLETED BY A LICENSED INSURANCE COMPANY WITH EXPERIENCE WITH PRE-BLAST SURVEYS. ADDITIONAL INSURANCE SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. HYDRAULIC HAMMERING IS AN ACCEPTABLE METHOD OF SOLID ROCK REMOVAL. THE SOLID ROCK REMOVAL PANT TENTED ALLOWANCE FOR PURPOSES OF COMING BIDS. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETING VIBRATION TESTING DURING ALL BLASTING OPERATIONS ON THE PROJECT. DATA FROM VIBRATION TESTING SHALL BE PROVIDED TO THE CITY SHOWING BASELINE CONDITIONS PRE AND POST BLAST AS WELL AS DURING BLASTING.
23. THE CITY ASSUMES NO RESPONSIBILITY FOR WORK COMPLETED BY THE CONTRACTOR.

EXISTING UTILITY NOTES

1. UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM THE BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, THAT IS NOT SHOWN HEREON. THE CONTRACTOR SHALL CONTACT THE CITY OF LOS ANGELES AT THE NEAREST ADDRESS TO THE PROJECT LOCATION WITH THE UTILITY OWNER. EXPLORATORY EXCAVATION SHALL BE REQUIRED TO VERIFY LOCATION AND SIZE OF EXISTING UTILITIES AND APPURTENANCES.
2. THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING UTILITY SERVICE (PRIVATE OR PUBLIC) WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER.
3. SUBSURFACE FEATURES SUCH AS ELECTRIC AND TELEPHONE LINES, WATER LINES, SEWER LINES, STORM DRAIN AND CULVERTS, ETC., ENCOUNTERED IN THE CONSTRUCTION OF THE PROJECT SHALL BE PROTECTED, SUPPORTED, OR REMOVED AND REPLACED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT UNLESS PAYMENT IS SPECIFICALLY NOTED AS A SEPARATE PAY ITEM. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AND/OR HIGHWAY DEPARTMENTS WHEN THE WORK INVOLVES THEIR RESPECTIVE FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF LOS ANGELES. IF THE CONTRACTOR DETERMINES THAT ANY UTILITY CONSTRUCTION, THE CITY SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION AGREED TO BY THE CITY BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING DIG-SAFE® (886-462-3454) AT LEAST 72 HOURS PRIOR TO DIGGING.
4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.

UTILITY CONTACTS AS FOLLOWS:

ELECTRIC: LIBERTY UTILITIES
MEL EMERSON, 407 MIRACLE MILE #2, LEBANON, NH 03766, 603-306-8215

WATER DRAINAGE: CITY OF LEBANON
JAY CAIRELLI, ASSISTANT PUBLIC WORKS DIRECTOR 603-448-3112

TELEPHONE: CONSOLIDATED COMMUNICATIONS
JOHN POMEROY, 119 GATES STREET, WRJ, VT 05001, 802-295-8187 AND 802-735-7029

FIRE DEPARTMENT: LEBANON FIRE DEPARTMENT
JEFFREY LIBBY, 802-448-8810

CABLE TELEVISION: COMCAST
DAN DEZAFRA, 166 HANOVER STREET, LEBANON, NH 03766, 603-678-8271

GENERAL EARTHWORK NOTES:

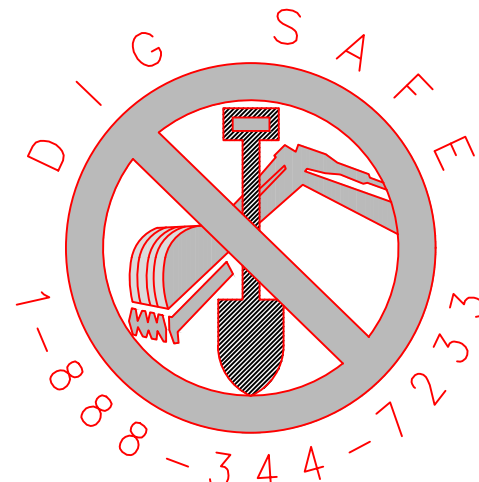
- A. ALL MATERIAL SPECIFIED, BUT NECESSARY REVIEW OF THE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NHDOT STANDARDS AND SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION.
- B. COMMON EXCAVATION SHALL CONSIST OF ALL EXCAVATION OTHER THAN ROCK AND BOULDER EXCAVATION THAT IS NOT SPECIFICALLY CLASSIFIED.
- C. EXCAVATION TO SUBGRADE SHALL BE DONE SO THAT THE SUBGRADE MATERIAL DOES NOT BECOME SATURATED WITH WATER OR CONTAMINATED WITH ORGANIC MATTER TO A DEGREE THAT SUBGRADE IS UNSTABLE.
- D. SUBGRADE SOILS MADE UNSTABLE BY ERROR OR NEGLIGENCE OF THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY SELECT BACKFILL AT THE CONTRACTOR'S EXPENSE.
- E. UNSUITABLE MATERIAL SHALL CONSIST OF DEPOSITS OF SATURATED OR UNSATURATED MIXTURES OF SOILS AND ORGANIC MATTER NOT SUITABLE FOR FOUNDATION MATERIAL REGARDLESS OF MOISTURE CONTENT. UNSUITABLE MATERIALS ENCOUNTERED DURING ROADWAY EXCAVATION SHALL BE REMOVED AND REPLACED BY COMMON OR SELECT BACKFILL, AS DIRECTED BY THE ENGINEER.
- F. SUBGRADE SURFACES SHALL BE DRY AND FIRM BEFORE PLACING GRANULAR SURFACE MATERIALS. SUBGRADE MATERIAL DISTURBED DURING EXCAVATION SHALL BE THOROUGHLY COMPACTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- G. ALL FILL MATERIAL SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
- H. BASE COURSE MATERIAL SHALL BE PLACED IN 8" MAXIMUM LIFTS AND THOROUGHLY COMPACTED AS REQUIRED PRIOR TO SUCCESSIVE LIFTS. CARE SHALL BE TAKEN TO PREVENT SEPARATION OF GRANULAR MATERIALS DURING PLACEMENT. SEGREGATED MATERIALS SHALL BE REMOVED AND REPLACED USING METHODS CALCULATED TO REDUCE THE SEPARATION OF AGGREGATES.
- I. GRAVEL (NHDOT ITEM 304.2): THE MAXIMUM SIZE OF STONE PARTICLES SHALL NOT EXCEED THREE-FOURTHS OF THE COMPACTED THICKNESS OF THE LAYER BEING PLACED BUT IN NO CASE LARGER THAN 6 INCHES. GRAVEL IS CHARACTERIZED AS HARD, DURABLE STONE WITH COARSE TO FINE SAND. SIEVE ANALYSIS BY WEIGHT AS FOLLOWS:
- | SIEVE SIZE | % PASSING BY WEIGHT |
|------------|--|
| 6" | 100% |
| No. 4 | 25-70% |
| * NO 200 | 0-12% (*BASED ON THE FRACTION PASSING NO. 4) |
- J. CRUSHED GRAVEL (NHDOT ITEM 304.3): AT LEAST 50 PERCENT OF THE MATERIAL RETAINED ON THE 1 INCH SIEVE SHALL HAVE A FRACTURED FACE. SIEVE ANALYSIS BY WEIGHT AS FOLLOWS:
- | SIEVE SIZE | % PASSING BY WEIGHT |
|------------|--|
| 3" | 100% |
| 2" | 95-100% |
| 1" | 55-85% |
| No. 4 | 27-52% |
| * NO 200 | 0-12% (*BASED ON THE FRACTION PASSING NO. 4) |
- K. SAND (NHDOT ITEM 304.1): THE MAXIMUM SIZE OF ANY STONE OR FRAGMENT SHALL NOT EXCEED THREE-FOURTHS OF THE COMPACTED DEPTH OF THE LAYER BEING PLACED BUT IN NO CASE LARGER THAN 6 INCHES. SAND SHALL CONSIST OF CLEAN, SHARP MINERAL PARTICLES FREE OF ORGANIC MATTER. SIEVE ANALYSIS BY WEIGHT AS FOLLOWS:
- | SIEVE SIZE | % PASSING BY WEIGHT |
|------------|--|
| 6" | 100% |
| No. 4 | 70-100% |
| * NO 200 | 0-12% (*BASED ON THE FRACTION PASSING NO. 4) |
- L. COARSE CRUSHED STONE (NHDOT ITEM 304.5) AND FINE CRUSHED STONE (NHDOT 304.4): SHALL BE CLEAN ANGULAR ROCK FRAGMENTS OBTAINED BY BREAKING AND CRUSHING ROCK MATERIAL. SIEVE ANALYSIS BY WEIGHT AS FOLLOWS:
- | NHDOT 304.4 | | NHDOT ITEM 304.5 | |
|-------------|---------------------|------------------|---------------------|
| SIEVE SIZE | % PASSING BY WEIGHT | SIEVE SIZE | % PASSING BY WEIGHT |
| 2" | 100% | 3 1/2" | 100% |
| 1-1/2" | 85-100% | 3" | 85-100% |
| 3/4" | 45-75% | 1 1/2" | 60-90% |
| No. 4 | 10-45% | 3/4" | 40-70% |
| NO 200 | 0-5% | NO. 4 | 15-40% |
| | | NO. 200 | 0-5% |
2. PAVING
- A. ALL PAVING SHALL CONFORM TO THE REQUIREMENTS OF THE NHDOT STANDARDS AND SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, AS WELL AS APPLICABLE TOWN STANDARDS.
- B. A PRE-PAVING MEETING MUST BE SCHEDULED PRIOR TO ALL PAVING OPERATIONS ON THE PROJECT. CONTRACTOR TO REQUEST MEETING TO REVIEW THE WORK WITH THE CITY, AND PAVING CONTRACTOR ONE WEEK PRIOR TO PAVING OPERATIONS.
- C. THE CONTRACTOR SHALL PAVE THE WATER MAIN TRENCH WITH 6" OF BASE PAVEMENT INSTALLED IN TWO 3" LAYERS. ADJUSTMENT OF COVERS, VALVE BOXES, AND FRAMES AND GRATES IS INCIDENTAL TO THE CONTRACT WORK.
- D. BASE PAVEMENT SHALL NOT BE INSTALLED WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 45 DEGREES FAHRENHEIT, NOR WHEN THE ROAD BASE TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT. WEARING COURSE PAVEMENT SHALL NOT BE INSTALLED WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 55 DEGREES FAHRENHEIT, NOR WHEN THE ROAD BASE TEMPERATURE IS BELOW 50 DEGREES FAHRENHEIT. PAVEMENT SHALL NOT FALL BELOW 185 DEGREES FAHRENHEIT PRIOR TO COMPLETION OF THE ROLLING PROCESS. PAVEMENT SHALL NOT BE INSTALLED WHEN THE SUBGRADE IS FROZEN OR THE GRADES ARE INCORRECT. TRAFFIC SHALL NOT BE ALLOWED UNTO NEWLY PAVED SURFACES UNTIL COMPACTION IS COMPLETED AND PAVEMENT SURFACE TEMPERATURE IS LESS THAN 150 DEGREES FAHRENHEIT. PAVING OPERATIONS WILL NOT BE ALLOWED WHEN IT IS RAINING OR FOLLOWING RAIN THAT LEAVES THE SUBGRADE SOFT, WET, OR WITH STANDING WATER. WEARING COURSE PAVEMENT WILL NOT BE ALLOWED AFTER OCTOBER 1 OR BEFORE MAY 1. THE CONTRACTOR SHALL PROVIDE 24 HOURS NOTICE TO THE CITY PRIOR TO PAVING OPERATIONS WITH CLARIFICATION OF WEATHER FORECAST. ASPHALT, AIR, AND SURFACE TEMPERATURES ARE TO BE MONITORED BY THE CONTRACTOR, ENGINEER AND/OR A THIRD-PARTY TESTING AGENCY DURING INSTALLATION. THE PAVING CONTRACTOR SHALL HAVE THEIR OWN DESIGNATED REPRESENTATIVE PRESENT AT ALL TIMES VERIFYING AND MANAGING QUALITY CONTROL OF THE WORK. FAILURE TO DO SO MAY RESULT IN DELAY OR REJECTION OF WORK.
- E. SWEEPING FOR BASE PAVEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- F. PAVEMENT CORE TESTING WILL BE COMPLETED BY THE CITY'S THIRD-PARTY TESTING AGENCY. CORE SAMPLES ARE TO BE COLLECTED AT LOCATIONS DETERMINED BY THE ENGINEER. COMPACTION AND THICKNESS MUST COMPLY WITH THE DESIGN DRAWINGS AND NHDOT STANDARD SPECIFICATIONS. FAILURE TO MEET THE STANDARDS MAY RESULT IN REJECTION OF WORK OR REQUIRED ADJUSTMENTS TO PAYMENT AS DETERMINED BY THE CITY ENGINEER.

CONSTRUCTION SEQUENCE/REQUIREMENTS:

1. ONCE THE CONTRACT IS SIGNED, THE PRIME CONTRACTOR IS RESPONSIBLE FOR PROVIDING A DETAILED CONSTRUCTION SCHEDULE TO THE CITY FOR REVIEW PRIOR TO THE PRE-CONSTRUCTION MEETING.
2. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING FOR THE PROJECT WITH THE CITY, AND OTHER PROJECT PARTIES PRIOR TO MOBILIZING TO THE SITE TO BEGIN CONSTRUCTION. THE PRIME CONTRACTOR'S MAJOR SUBCONTRACTORS ON THE PROJECT MUST ATTEND THE PRE-CONSTRUCTION MEETING.
3. THE CONTRACTOR SHALL SUBMIT ALL MATERIAL SUBMITTALS AND SHOP DRAWINGS TO THE CITY FOR APPROVAL PRIOR TO ANY MATERIALS BEING DELIVERED TO THE PROJECT SITE.
4. THE CONTRACTOR SHALL COMPLETE A PRE-CONSTRUCTION PHOTOGRAPHIC SURVEY OF THE ENTIRE PROJECT SITE, INCLUSIVE OF BUT NOT LIMITED TO, ALL DRIVEWAYS, ADJACENT ACCESS ROADS, STONE OR CONCRETE WALLS, AND OFF-SITE STAGING AREAS PRIOR TO THE START OF CONSTRUCTION. THE PURPOSE OF THIS SURVEY IS TO IDENTIFY CONDITIONS FOR THE PURPOSE OF DISJUNCT RESOLUTION OF COMPLAINTS AND REPORTED DAMAGES DURING THE FOLLOWING CONSTRUCTION. ONE THUMB DRIVE CONTAINING ALL PHOTOS SHALL BE PROVIDED TO THE CITY PRIOR TO CONSTRUCTION. ALL PHOTOGRAPHS SHALL BE DATE STAMPED.
5. THE PRIME CONTRACTOR SHALL ATTEND WEEKLY MEETINGS TO BE HELD AT THE CITY OF LEBANON DEPARTMENT OF PUBLIC WORKS. THE CONTRACTOR AND MAJOR SUBCONTRACTOR'S ARE REQUIRED TO ATTEND ALL MEETINGS TO PROVIDE UPDATES AND DISCUSS OUTSTANDING ITEMS. THE CITY WILL BE RESPONSIBLE FOR MEETING AGENDAS AND RECORD MEETING MINUTES AS NEEDED.
6. REQUIRED EROSION CONTROL BEST MANAGEMENT PRACTICES MUST BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION. INLET PROTECTION DEVICES MUST BE INSTALLED IN ALL STRUCTURES WITH SURROUNDING EARTH DISTURBANCES OR ADJACENT TO CONSTRUCTION TRACKING ON-SITE.
7. ALL LAWN AND GRASS AREAS MUST BE MAINTAINED TO 85% AS DETERMINED BY THE CITY PRIOR TO FINAL COMPLETION OF THE PROJECT.
8. ALL STAGING AND LAYDOWN AREAS MUST BE RESTORED TO ORIGINAL CONDITION OR BETTER PRIOR TO FINAL COMPLETION ON THE PROJECT.
9. ALL TEMPORARY EROSION CONTROL COMPONENTS (I.E. SILT SOXX) MUST BE REMOVED AND DISPOSED OF OFF SITE FOLLOWING PERMANENT STABILIZATION AS DETERMINED BY THE ENGINEER.

PROJECT RECORDS:

1. THE CONTRACTOR MUST PROVIDE PROPER INSTRUMENTATION TO RECORD ACCURATE COORDINATES AS WELL AS ELEVATIONS TO WITHIN 0.01' FOR ALL NEW INFRASTRUCTURE. THIS SHALL INCLUDE, WATER VALVES, FITTINGS, HYDRANTS, SERVICE TAPS, CONNECTIONS TO EXISTING SERVICES, AND ALL CHANGES IN DIRECTION. WATER PIPE AND FITTINGS TO BE RECORDED AT TOP OF PIPE. THIS INFORMATION MUST BE SUBMITTED IN AUTOCAD (DWG) FORMAT AND GIS FORMAT TO THE CITY OF DENVER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ACCURACY OF THIS INFORMATION THROUGHOUT CONSTRUCTION. IF THE CONTRACTOR IS NOT CAPABLE OF COMPLETING THE RECORD WORK LISTED ABOVE, THEY MUST CONTRACT THIS WORK TO AN APPROPRIATE PARTY THAT HAS THE CAPABILITY AS SUBSIDIARY TO THIS WORK. SUBSTANTIAL COMPLETION WILL NOT BE AWARDED IF THIS IS NOT COMPLETED AND THE CONTRACTOR WILL BE SUBJECT TO LIQUIDATED DAMAGES.
2. THE CONTRACTOR SHALL PROVIDE FOUR (4) COPIES OF EACH MANUFACTURER'S DETAILED INSTRUCTIONS FOR MAINTENANCE AND OPERATION OF ALL MAJOR EQUIPMENT, MACHINERY, INSTRUMENTATION AND MONITORING DEVICES, CONTROLS AND INCIDENTALS PROVIDED UNDER THE CONTRACT. PREPARE ALL SUCH MANUALS IN ACCORDANCE WITH THE PROJECT CLOSEOUT REQUIREMENTS OF THE CONTRACT. SUCH MANUALS MUST BE PROVIDED PRIOR TO STARTUP AND ACTIVATION OF THE SYSTEMS WITH THE CITY.



CONTACT DIG SAFE 72 HOURS
PRIOR TO CONSTRUCTION

72 HOURS PRIOR TO ANY EXCAVATION ON SITE, THE CONTRACTOR SHALL CONTACT DIG-SAFE AT 1-888-DIG-SAFE.

PROGRESS PRINT -
NOT FOR CONSTRUCTION

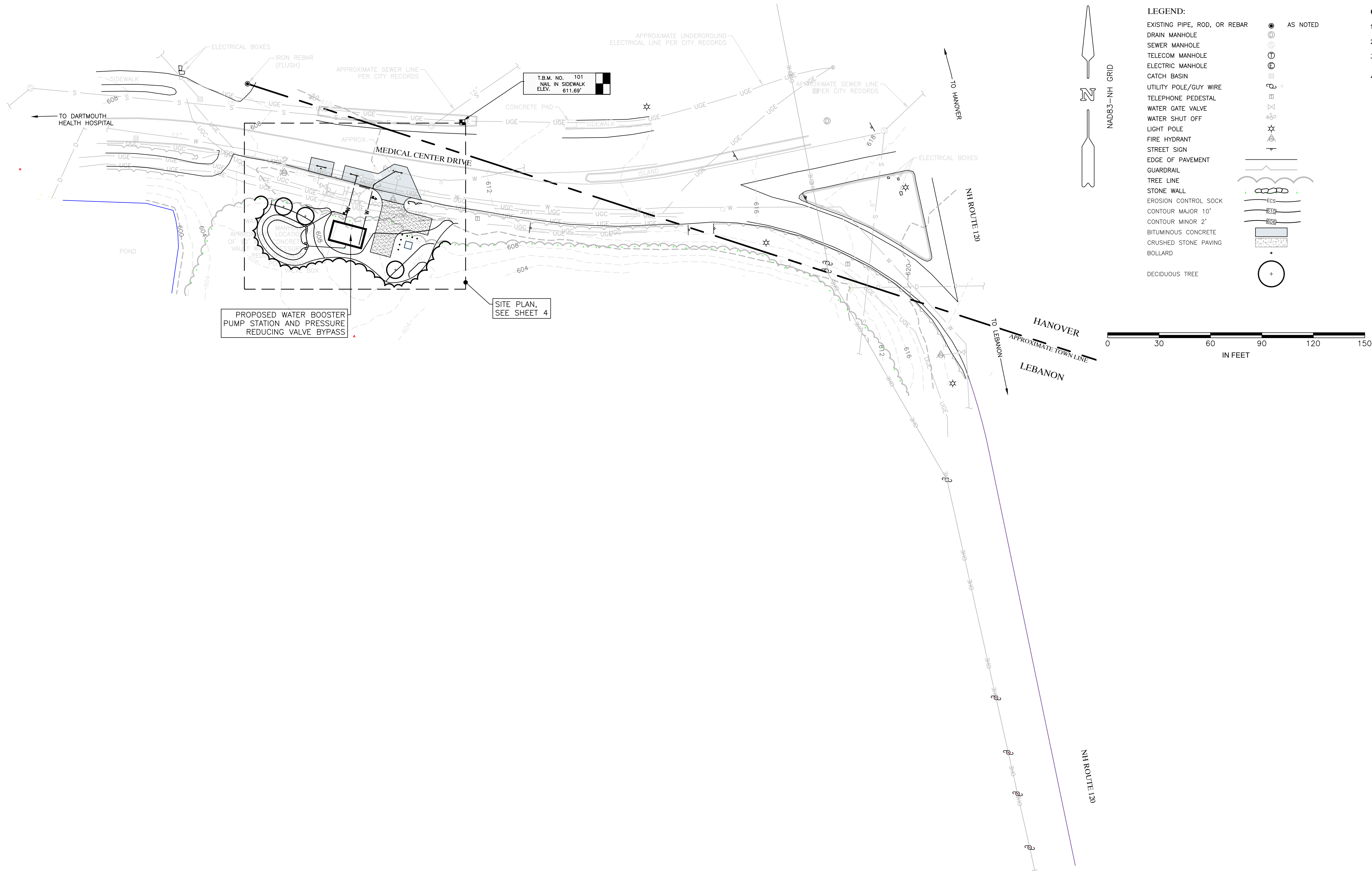
NOTES, CONSTRUCTION SEQUENCE, AND PROJECT RECORDS

**HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS**

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE:	NTS
DESIGNED BY:	RJF
DRAWN BY:	TD
CHECKED BY:	RJF
DATE:	7/11/2023
PROJECT:	2022-21

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- GENERAL SURVEY NOTES:
1. HORIZONTAL DATUM: NH STATE PLANE GRID NAD83 (SURVEY FEET) FROM GPS OBSERVATION.
 2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAV88) FROM GPS OBSERVATION.
 3. UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT WARRANTED TO BE EXACT OR COMPLETE AND ARE TO BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR SITE MODIFICATIONS.
 4. PATHWAYS CONSULTING, LLC COLLECTED DATA FOR THIS PLAN IN NOVEMBER 2022.

PROGRESS PRINT -
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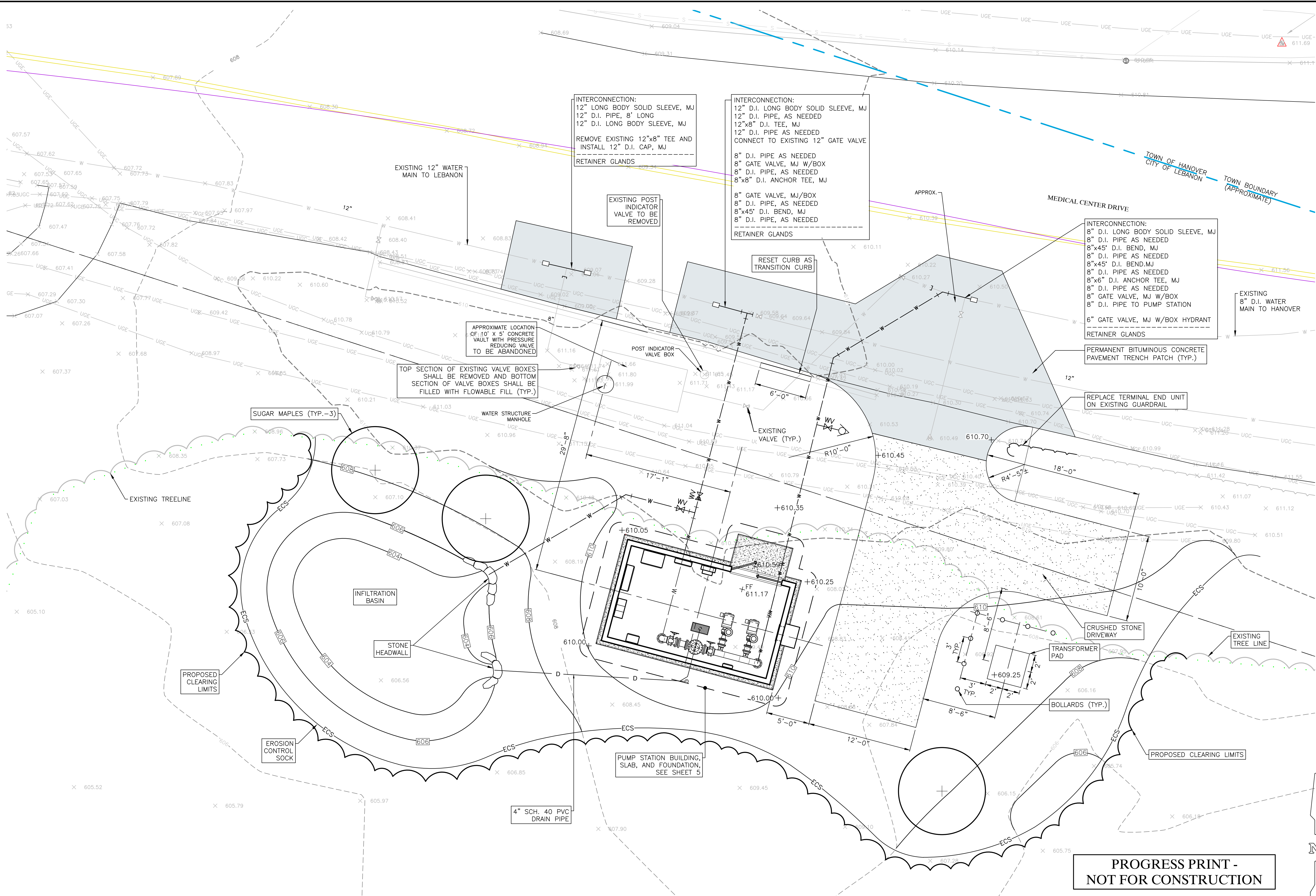
OVERALL SITE PLAN
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE: 1"=30'
DESIGNED BY: RJF
DRAWN BY: TD
CHECKED BY: RJF
DATE: 7/11/2023
PROJECT: 2022-21

3
SHEET NO. 3 OF 9

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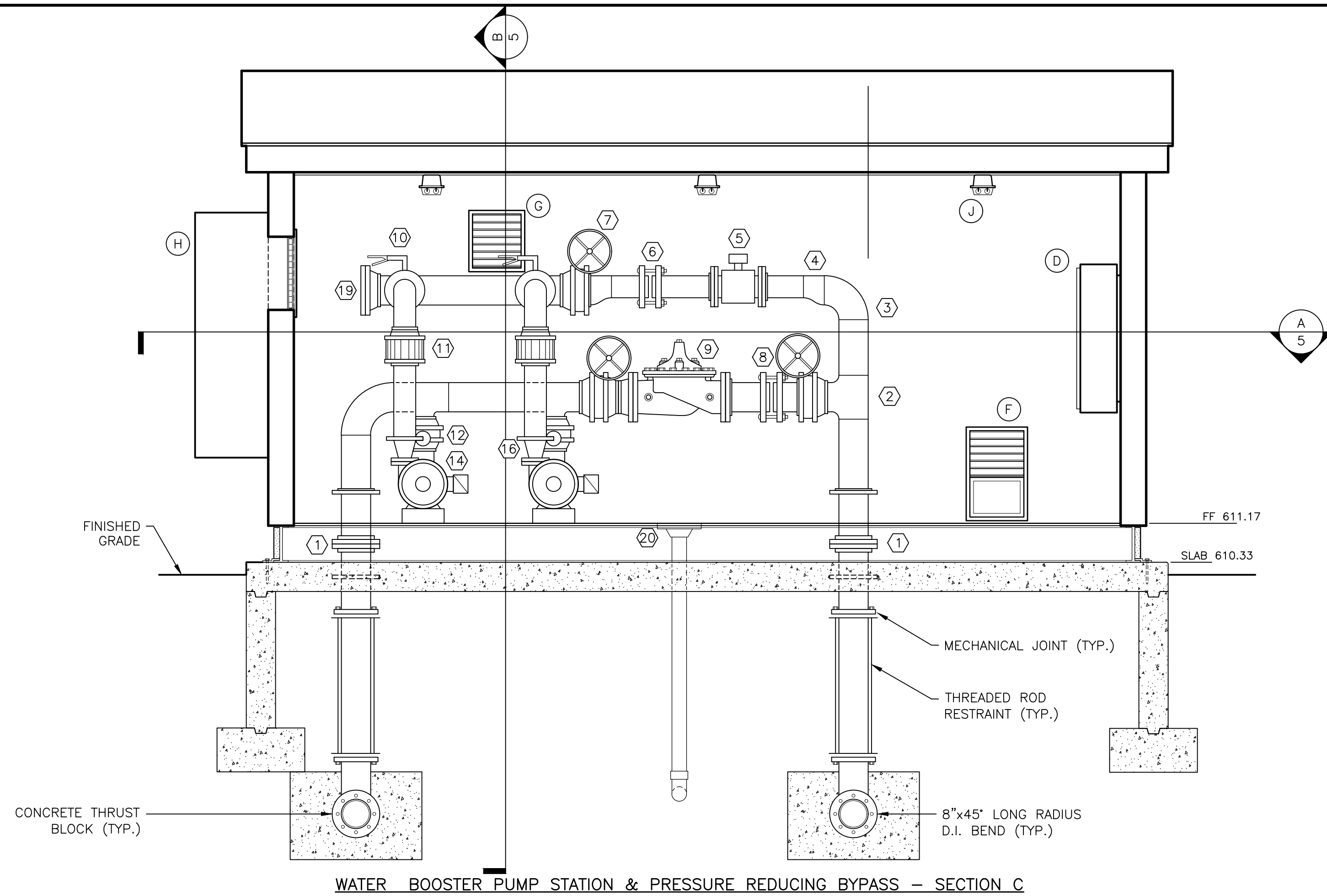


SITE PLAN
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

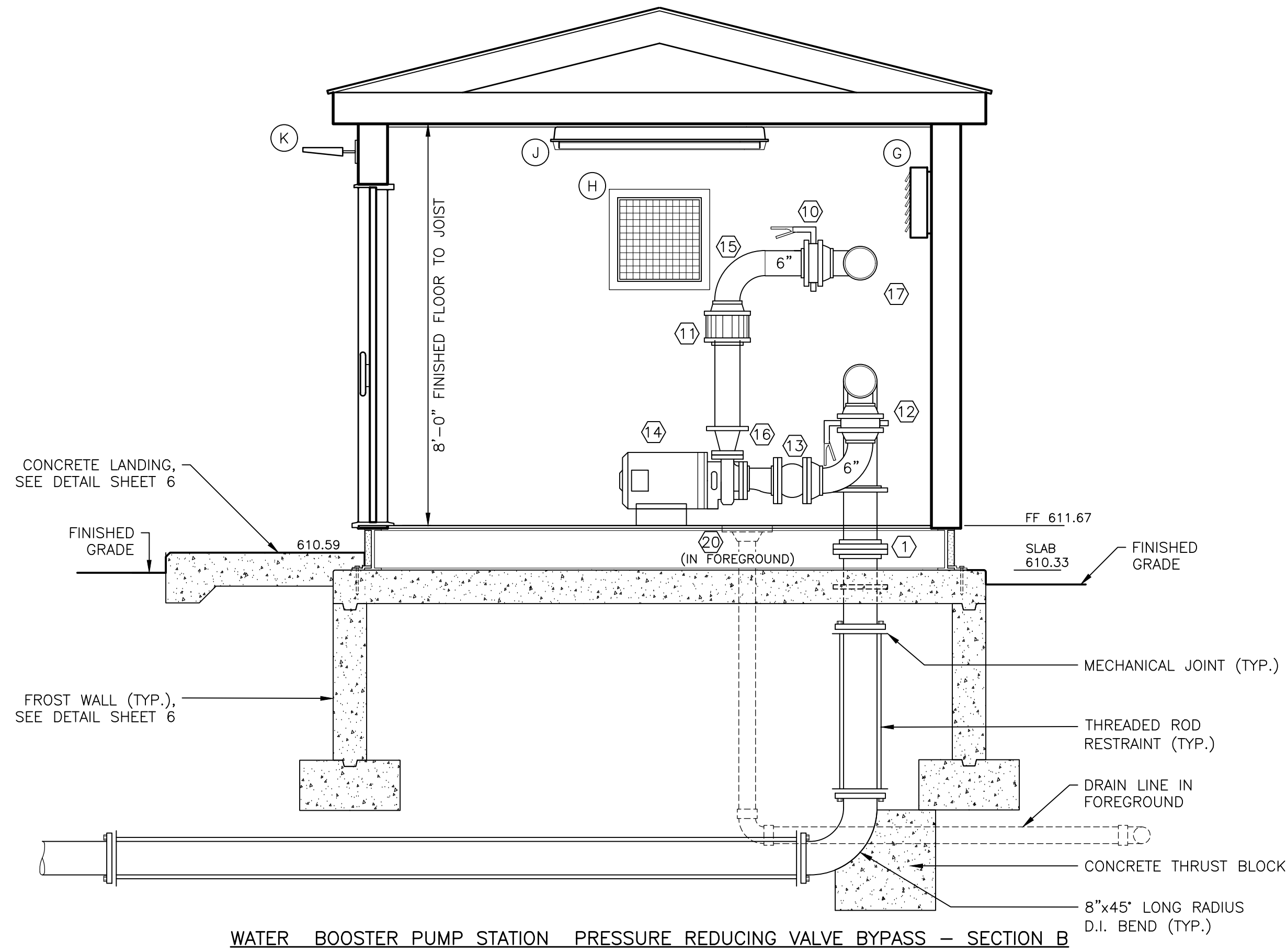
CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE:	1"=5'
DESIGNED BY:	RJF
DRAWN BY:	TD
CHECKED BY:	RJF
DATE:	7/11/2023
PROJECT:	2022-21

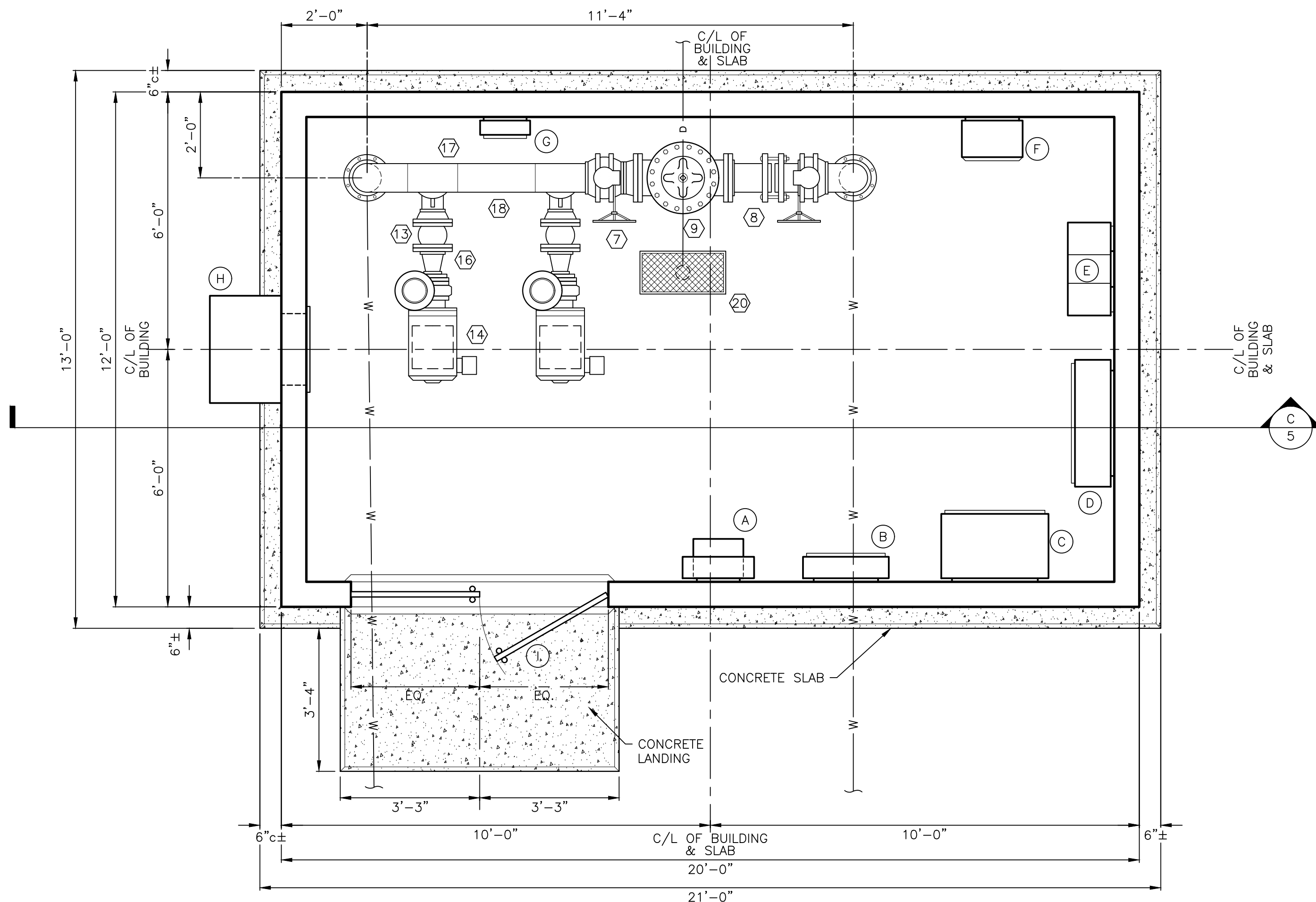
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WATER BOOSTER PUMP STATION & PRESSURE REDUCING BYPASS – SECTION C



WATER BOOSTER PUMP STATION & PRESSURE REDUCING VALVE BYPASS – SECTION B



WATER BOOSTER PUMP STATION & PRESSURE REDUCING BYPASS – PLAN VIEW / SECTION A

ITEM	QUANTITY	PIPING SCHEDULE
1	2	8" DI WALL PIPE, MU X PE, 18" LONG
2	1	8" x 8" STEEL TEE
3	2	8" X 90-DEGREE STEEL BEND
4	2	8" X 6" STEEL REDUCER
5	1	6" MAGNETIC FLOW METER
6	1	6" COUPLING
7	3	8" BUTTERFLY VALVES WITH GEAR AND LEVER OPERATORS
8	1	8" COUPLING
9	1	8" PRESSURE RELIEF VALVE
10	2	6" BUTTERFLY VALVES WITH GEAR AND LEVER OPERATORS
11	2	6" RUBBER COUPLING
12	2	6" BUTTERFLY VALVES WITH GEAR AND LEVER OPERATORS
13	2	6" SILENT CHECK VALVES
14	2	HORIZONTAL END-SUCTION WATER PUMPS
15	4	6" X 90-DEGREE STEEL BEND
16	4	STEEL REDUCER
17	4	8" X 6" STEEL TEE
18		8" STEEL PIPE
19	1	8" BLIND FLANGE
20		FLOOR DRAIN ASSEMBLY & 4" SCH. 40 DRAIN PIPE & FITTINGS

ITEM	QUANTITY	EQUIPMENT SCHEDULE
A	1	LOAD CENTER & TRANSFORMER
B	1	POWER PANEL
C	1	MANUAL TRANSFER SWITCH
D	1	CONTROL PANEL
E	2	VARIABLE FREQUENCY DRIVE
F	1	DEHUMIDIFIER
G	1	HEATER
H	1	HVAC UNIT
I	2	36" INSULATED METAL DOOR AND FRAME
J	3	INTERIOR LINEAR LED FIXTURE
K	1	EXTERIOR LED LIGHT

PROGRESS PRINT -
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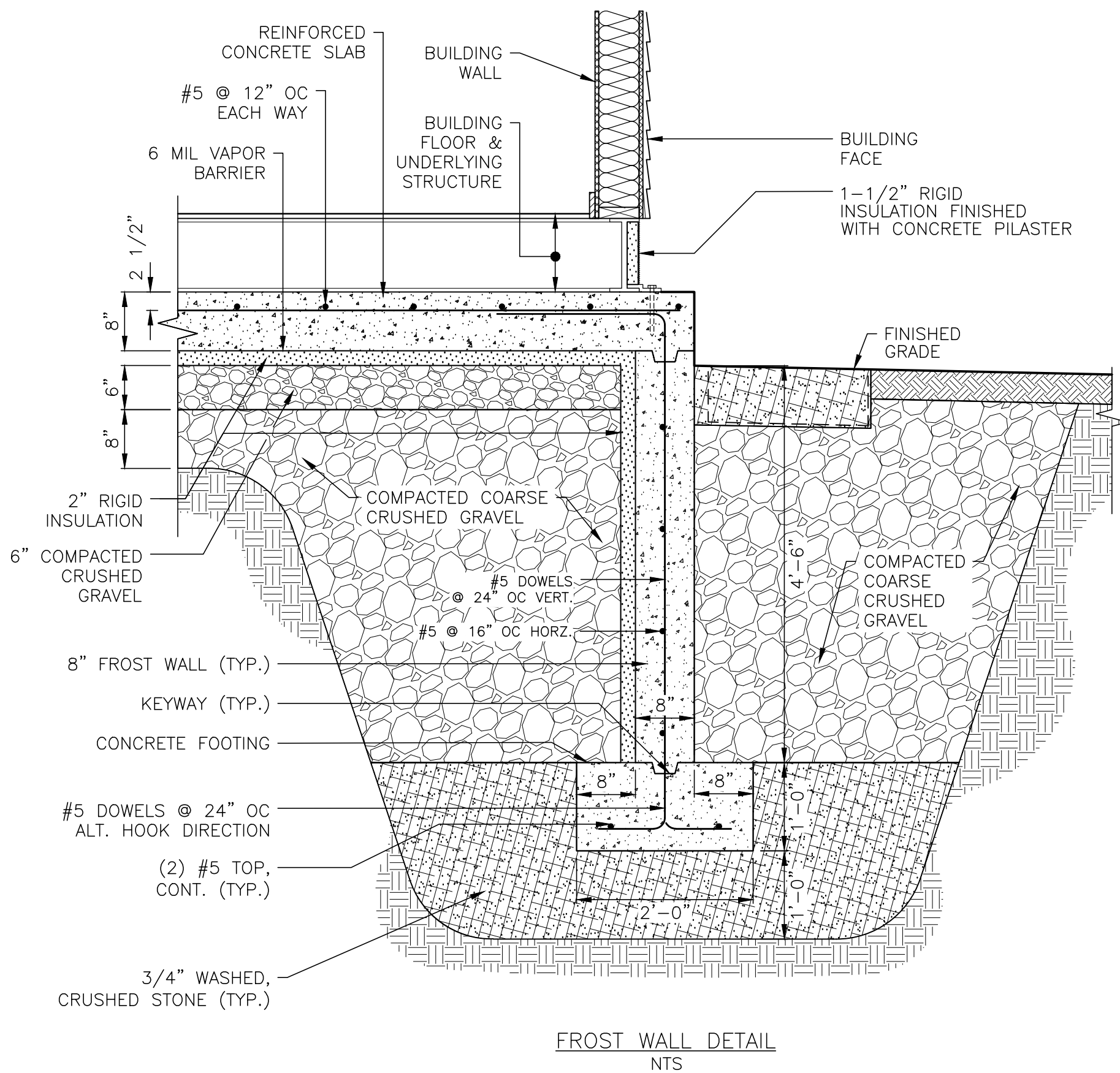
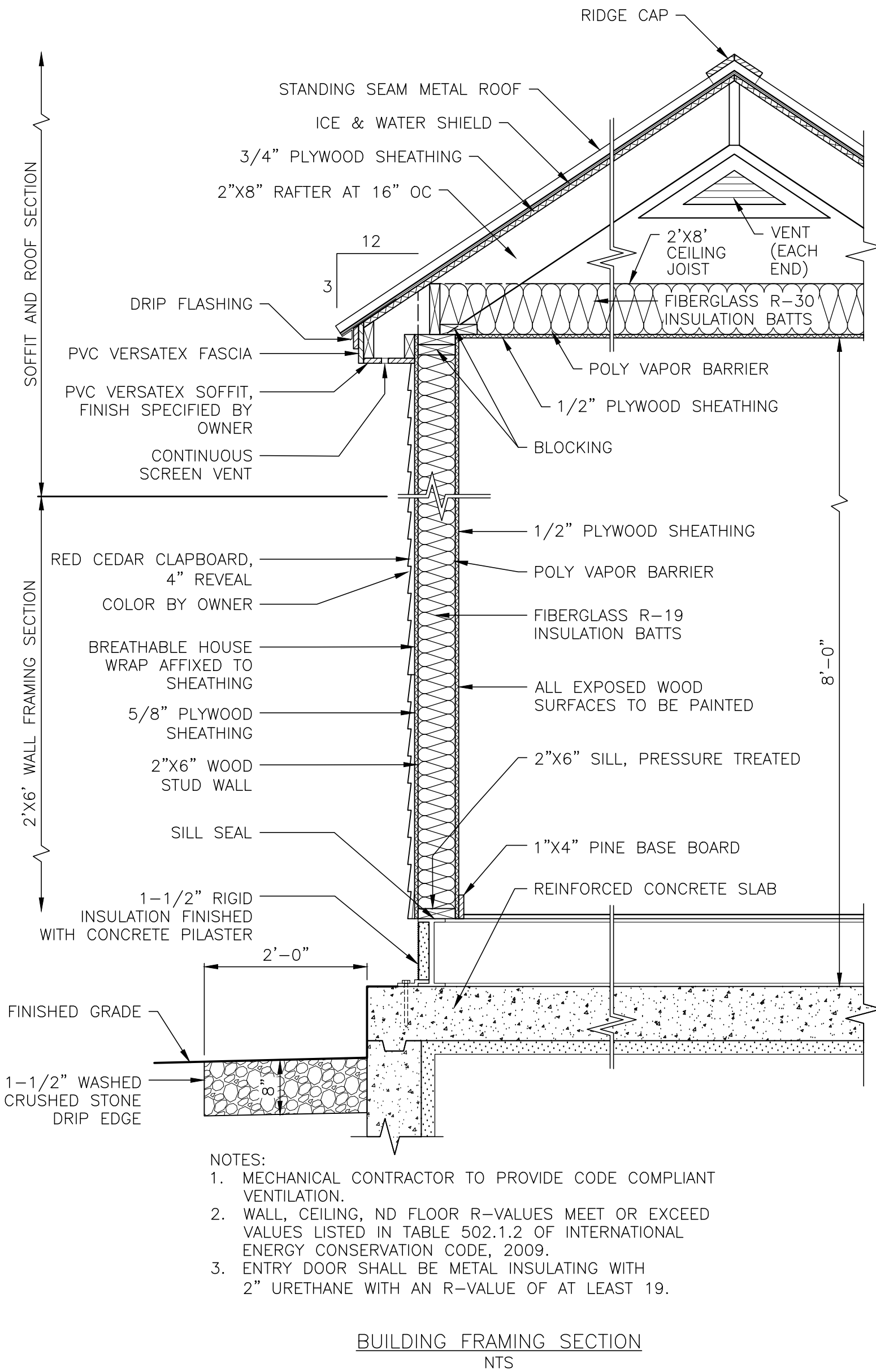
BUILDING LAYOUT, PIPING SCHEDULE, AND EQUIPMENT SCHEDULE
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE: 1/2"=1'-0"
DESIGNED BY: RJF
DRAWN BY: TD
CHECKED BY: RJF
DATE: 7/11/2023
PROJECT: 2022-21

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SHEET NO 5 OF 9

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY



- GENERAL MECHANICAL NOTES:
1. CONTRACT DOCUMENTS ARE IN PART DIAGRAMMATIC, INTENDED TO CONVEY SCOPE & ARRANGEMENT OF WORK. CONSULT CONSTRUCTION DOCUMENTS FOR FAMILIARITY WITH ALL CONDITIONS AFFECTING WORK. VERIFY ALL SPACES IN WHICH WORK WILL BE PERFORMED BY ON-SITE MEASUREMENTS. DO NOT SCALE DRAWINGS.
 2. TAKE ALL NECESSARY MEASUREMENTS AT THE BUILDING AND FABRICATE CONDUITS ON THE SITE, IF REQUIRED, TO ENSURE AN APPROVABLE INSTALLATION.
 3. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS REQUIRED FOR THE MECHANICAL WORK.
 4. WORKMANSHIP SHALL BE OF THE BEST QUALITY AND DONE BY COMPETENT MECHANICS SKILLED IN THEIR TRADES. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND EQUIPMENT UNDER THIS DIVISION SHALL BE NEW AND EACH ARTICLE OF ITS KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.
 5. ALL SYSTEMS SHALL COMPLY WITH SMACNA, NFPA, ASME, UL, BOCA, IMC, AND ASHRAE STANDARDS.
 6. MECHANICAL CONTRACTOR TO PROVIDE CODE COMPLIANT VENTILATION.
 7. THE MECHANICAL CONTRACTOR SHALL SEAL ALL PENETRATIONS AS A PART OF THE MECHANICAL WORK IN ALL FIRE RATED BARRIERS.
 8. THE MECHANICAL CONTRACTOR SHALL MAINTAIN AN ACCURATE SET OF DRAWINGS INDICATING ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS AND ACCURATELY SHOW THE INSTALLED LOCATIONS OF CONCEALED OR REMOTE EQUIPMENT. THESE "RECORD" DRAWINGS SHALL BE SUBMITTED TO THE OWNER UPON COMPLETION OF THE WORK.
 9. LABEL PIPING & EQUIPMENT BY THE TYPE OF SERVICE.
 10. COORDINATE WITH ELECTRICAL CONTRACTOR THE LOCATIONS AND NUMBERS OF ALL DISCONNECTS TO BE MOUNTED ON EQUIPMENT. PROVIDE START UP AND CHECK OUT OF ALL SYSTEMS PRIOR TO TURNOVER.
 11. PROVIDE TWO (2) PAPER COPIES AND TWO (2) ELECTRONIC COPIES OF THE OPERATION & MAINTENANCE MANUALS AND AS-BUILT DRAWINGS TO THE CITY. AS-BUILTS SHALL BE IN AUTOCAD FORMAT.
 12. ENGINEER TO BE PROVIDED WITH SIX (6) COPIES OF SUBMITTALS FOR APPROVAL PRIOR TO ORDERING EQUIPMENT.

- GENERAL ELECTRICAL NOTES:
1. ALL WORK SHALL BE IN COMPLIANCE WITH LOCAL, STATE, AND NATIONAL ELECTRICAL CODES.
 2. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO ASCERTAIN EXISTING CONDITIONS.
 3. THESE DRAWINGS ARE DIAGRAMMATIC AND FUNCTIONAL ONLY. PROVIDE ALL MATERIALS NECESSARY FOR A COMPLETE/FUNCTIONAL INSTALLATION. DO NOT SCALE DRAWINGS.
 4. UNLESS OTHERWISE SPECIFIED ALL MATERIAL AND EQUIPMENT UNDER THIS DIVISION SHALL BE NEW AND EACH ARTICLE OF ITS KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.
 5. ELECTRICAL CONTRACTOR SHALL OBTAIN ALL PERMITS FOR THE INSTALLATION OF THE ELECTRICAL WORK.
 6. COORDINATE WORK WITH OTHER BUILDING AND SITE TRADES PRIOR TO EQUIPMENT INSTALLATION.
 7. PROVIDE GROUNDING PER NEC 250.
 8. TOP OF PANEL BOARD SHALL NOT BE MOUNTED HIGHER THAN 6'-0" AFF.
 9. NO CONDUIT OR RACEWAY SHALL CONTAIN MORE THAN 6 CONDUCTORS OR 8 WIRES UNLESS SPECIFICALLY SHOWN.
 10. THE ELECTRICAL CONTRACTOR SHALL SEAL ALL PENETRATIONS MADE AS PART OF ELECTRICAL WORK IN FIRE RATED BARRIERS.
 11. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN AN ACCURATE SET OF DOCUMENTS AND ACCURATELY SHOW THE INSTALLED LOCATION OF THE UNDERGROUND AND CONCEALED OR REMOTE EQUIPMENT. THESE "RECORD" DRAWINGS SHALL BE SUBMITTED TO THE CITY UPON COMPLETION OF THE WORK.
 12. DO NOT SWITCH EMERGENCY OR EXIT LIGHT. ALL EXIT AND EMERGENCY LIGHTS SHALL BE POWERED FROM THE NEAREST LIGHTING CIRCUIT IN THE AREA LIGHTED BY THE EMERGENCY LIGHT OR SERVED BY THE EXIT SIGN OR AS INDICATED ON THE DRAWINGS.
 13. REVIEW SHOP DRAWINGS TO DETERMINE LOCATION AND METHOD OF WRING FOR EQUIPMENT SUPPLIED BY OTHERS.
 14. ALL ELECTRICAL LOADS SHALL BE BALANCED EQUALLY.
 15. SEE MECHANICAL PLANS SUBMITTALS FOR EXACT LOCATION OF EQUIPMENT AND DISCONNECTS TO BE MOUNTED ON EQUIPMENT.
 16. THERE SHALL BE NO SHARED NEUTRALS.
 17. PROVIDE LOCAL MEANS OF DISCONNECT IF NOT FURNISHED WITH OR AS PART OF THE EQUIPMENT.
 18. CHECK OUT AND VERIFY PROPER OPERATION OF ALL ELECTRICAL SYSTEMS PRIOR TO TURN OVER TO THE CITY.
 19. PROVIDE TWO (2) PAPER COPIES AND TWO (2) ELECTRONIC COPIES OF THE OPERATION & MAINTENANCE AND AS-BUILT DRAWINGS TO THE CITY. AS-BUILTS SHALL BE IN AUTOCAD FORMAT.
 20. SWITCHES TO BE LOCATED 4" OFF DOOR JAMB AND 48" TO CENTER AFF.
 21. RECEPTACLES TO BE LOCATED 48" TO CENTER AFF.
 22. PROVIDE SIX (6) SETS OF SUBMITTALS TO THE ENGINEER FOR APPROVAL ON LIGHTING & SWITCHGEAR.
 23. LIGHT FIXTURES SHALL BE SECURELY FASTENED TO STRUCTURAL BUILDING MEMBERS, PER BUILDING CODES AND NEC REQUIREMENTS.
 24. MINIMUM WIRE SIZE SHALL BE #14 CU. UNLESS OTHERWISE SPECIFIED.
 25. NM CABLE WILL BE APPROVED ON THIS PROJECT.
 26. ALL OUTLETS, JUNCTION AND PULL BOXES WILL BE GALVANIZED STAMPED STEEL PRODUCTS IN ALL AREAS.
 27. ALL PANELS WILL HAVE COPPER BREAKERS, FULL SIZE CIRCUIT BUS ONLY AND HAVE 20% SPACE.

PROGRESS PRINT -
NOT FOR CONSTRUCTION

BUILDING DETAILS, MECHANICAL NOTES, AND ELECTRICAL NOTES
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE: NTS
DESIGNED BY: RJF
DRAWN BY: TD
CHECKED BY: RJF
DATE: 7/11/2023
PROJECT: 2022-21

6
SHEET NO 6 OF 9

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

WATER GENERAL NOTES:

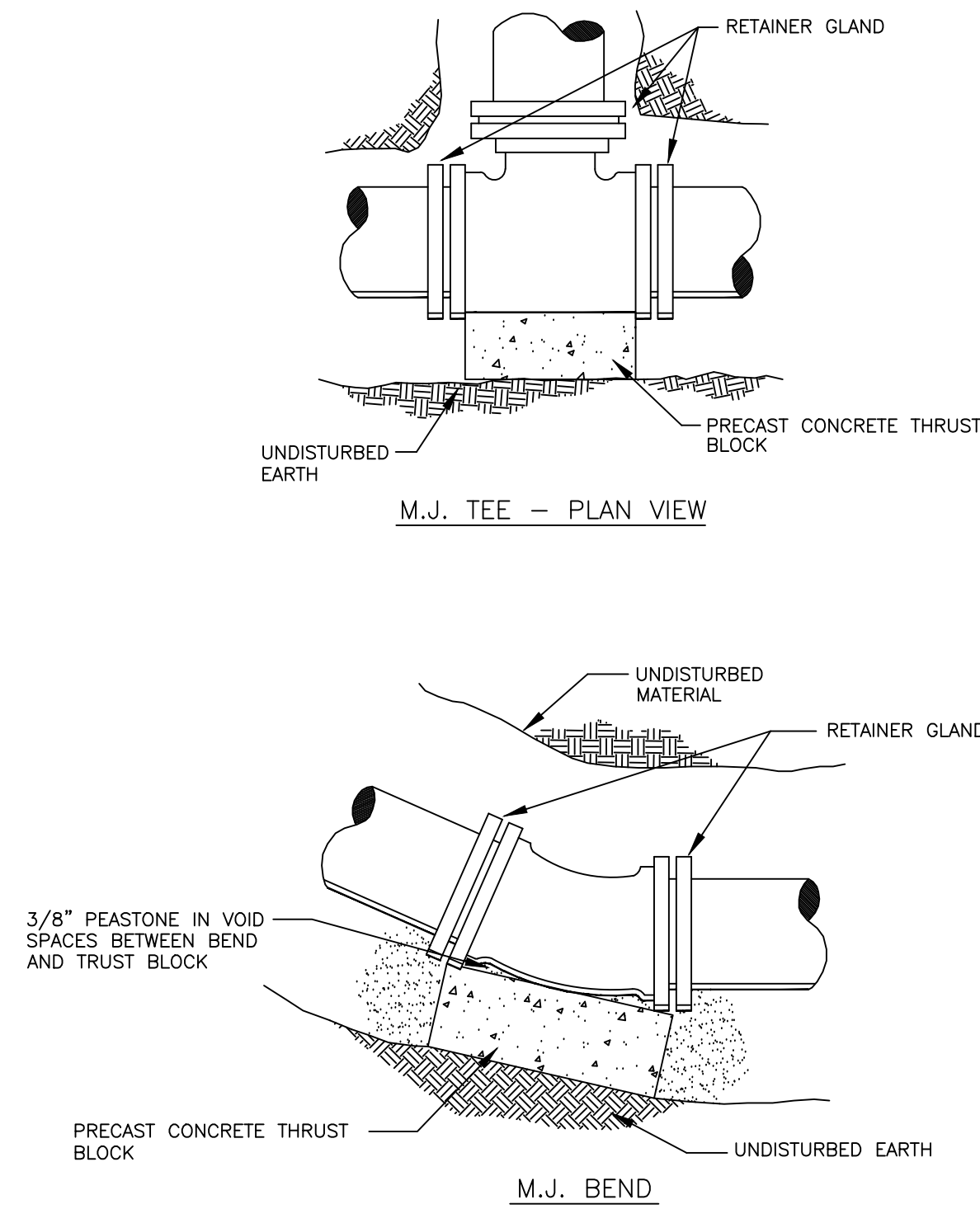
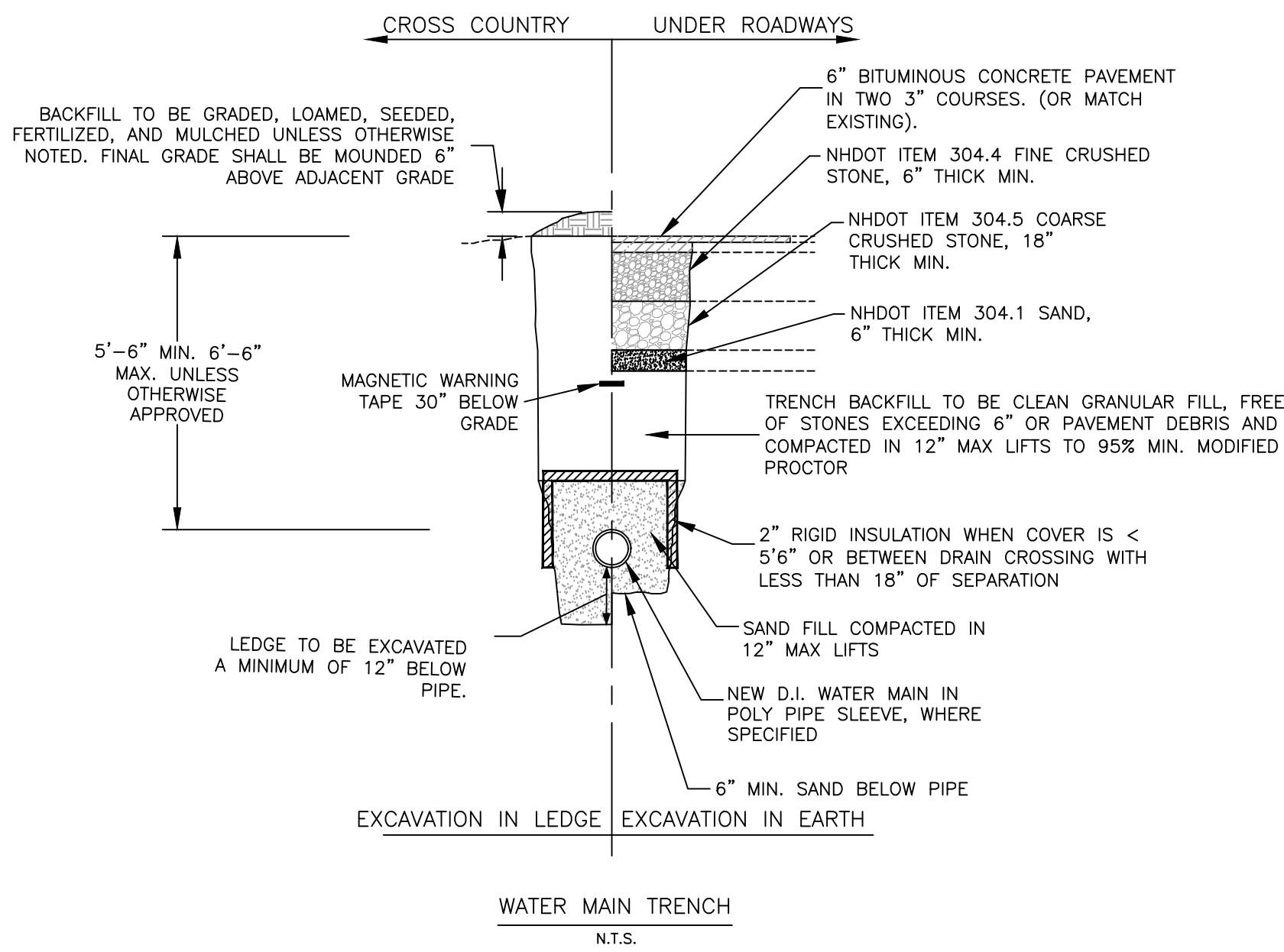
- A. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES OR HYDRANTS WITHIN THE LEBANON WATER SYSTEM. ALL VALVES AND OR HYDRANTS SHALL BE OPERATED ONLY BY CITY OF LEBANON UTILITY MAINTENANCE DEPARTMENT PERSONNEL.
- B. ALL WATER MAIN SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF LEBANON AND AWWA STANDARDS.
- C. PRIOR TO BACKFILLING, ALL WATER MAIN WORK AND SERVICES SHALL BE OBSERVED BY THE CITY.
- D. ALL WATER MAIN VALVES AND FITTINGS SHALL BE MECHANICAL JOINT CONSTRUCTION AND INSTALLED WITH RETAINER GLANDS AND THRUST BLOCKS.
- E. DUCTILE IRON PIPE MEETS AWWA SPECIFICATION C-151, CLASS 52. PIPE LENGTHS ARE TWENTY (20) FEET IN LENGTH. ALL PIPE IS PUSH ON JOINTS WITH RUBBER GASKET COMPLYING WITH AWWA C-111. ALL PIPE AND FITTINGS HAVE A CEMENT MORTAR LINING AND ONE (1) MILLIMETER THICK BITUMINOUS SEAL COATING ON THE INSIDE AND ONE (1) MILLIMETER THICK BITUMINOUS SEAL COATING ON THE OUTSIDE. THE CEMENT LININGS IS IN ACCORDANCE WITH AWWA C104 AND IS $\frac{1}{8}$ " THICKNESS.
- F. ALL VALVES SHALL BE OPEN COUNTER CLOCKWISE "LEFT".
- G. ALL BELL JOINTS SHALL HAVE TWO SILICONE BRONZE SERRATED WEDGES INSTALLED FOR CONDUCTIVITY.
- H. DUCTILE IRON FITTINGS CONFORM TO AWWA SPECIFICATIONS C-153 OR C-110. SOLID SLEEVES ARE LONG BODY MECHANICAL JOINT.
- I. ALL HYDRANT BRANCHES SHALL BE INSTALLED WITH ANCHOR TEES. ALL HYDRANTS SHALL BE INSTALLED PLUMB, WITH THE BREAKAWAY MARKINGS SET EVEN WITH FINISH GRADE. GRADE ADJUSTMENT RISERS FOR HYDRANTS SHALL BE INCIDENTAL TO THE HYDRANT PAYMENT ITEMS AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- J. HYDRANT DRAIN PLUGS SHALL BE PULLED UNLESS OTHERWISE DIRECTED BY THE CITY. THE CITY REQUIRES DRAIN PLUGS TO REMAIN IN PLACE IF GROUNDWATER IS PRESENT.
- K. CHLORINATION/TESTING TAPS SHALL BE INSTALLED WITHIN 5' OF VALVES AND SHALL BE REMOVED FOLLOWING COMPLETION OF TESTING.
- L. LEDGE AND LOOSE ROCK IN TRENCHES SHALL BE REMOVED TO 1' BELOW WATER MAIN AND SERVICE PIPING. LEDGE OR ROCK REMOVED SHALL NOT BE PLACED BACK INTO THE TRENCH.
- M. WATER LINE BEDDING/BLANKET MATERIAL (SAND) ASTM C.33, FINE AGGREGATE. MATERIAL SHALL BE OBTAINED FROM APPROVED SOURCES, AND SHALL CONSIST OF SATISFACTORY GRADED, FREE DRAINING MATERIAL, REASONABLY FREE FROM LOAM, SILT, CLAY, AND ORGANIC MATERIAL. SIEVE ANALYSIS BY WEIGHT AS FOLLOWS:
- | SIEVE SIZE | % PASSING BY WEIGHT |
|------------|--|
| NO. 4 | 100% |
| *NO 200 | 0-12% (*BASED ON THE FRACTION PASSING NO. 4) |
- N. A MINIMUM VERTICAL SEPARATION OF 12 INCHES SHALL BE MAINTAINED BETWEEN WATER AND DRAINAGE UTILITIES, INCLUDING SERVICES. RIGID INSULATION SHALL BE INSTALLED BETWEEN THE CROSSING.
- O. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS 48 HOURS IN ADVANCE OF DISRUPTION OF SERVICE.

WATER LINE TESTING

- A. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 24 HOURS AND THE OWNER AT LEAST 48 HOURS IN ADVANCE OF BEGINNING TESTING OR DISINFECTION.
- B. THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMENT AND LABOR FOR CARRYING OUT A PRESSURE TEST AND LEAKAGE TEST ON THE PIPELINE IN ACCORDANCE WITH AWWA STANDARDS.
- C. THE PIPE SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE OF ONE AND ONE-HALF (1½) TIMES THE WORKING PRESSURE, OR THE RATED PRESSURE, WHICHEVER IS GREATER, AND THIS PRESSURE MAINTAINED FOR AT LEAST TWO HOURS. THE LEAKAGE TEST SHALL BE CONDUCTED AT A PRESSURE AS DETERMINED BY THE ENGINEER AND THIS PRESSURE SHALL BE MAINTAINED FOR AT LEAST 120 MINUTES DURING THE TEST.
- D. THE CONTRACTOR SHALL MAKE ANY TAPS AND FURNISH ALL NECESSARY CAPS, PLUGS, ETC., AS REQUIRED IN CONJUNCTION WITH TESTING. HE SHALL ALSO FURNISH A MOTORIZED TEST PUMP, GAUGES AND ANY OTHER EQUIPMENT REQUIRED IN CONJUNCTION WITH CARRYING ON THE HYDROSTATIC TESTS. HE SHALL AT ALL TIMES PROTECT THE NEW WATER MAINS AND THE EXISTING WATER MAINS AGAINST THE ENTRANCE OF POLLUTING MATERIAL.
- E. TESTS TO BE MADE ONLY AFTER PARTIAL OR COMPLETE BACKFILLING OF TRENCHES.
- F. POSITION OF ALL VALVES (FULLY OPENED OR CLOSED) IN SECTION OF LINE TO BE TESTED SHALL BE CHECKED IN THE PRESENCE OF THE CITY TO INSURE THAT:
1. ALL HYDRANT BRANCH CONNECTIONS ARE OPEN TO THE HYDRANT (HYDRANT CLOSED, BRANCH CONNECTION VALVE OPEN).
 2. ALL MAIN LINE VALVES ARE PROPERLY POSITIONED FOR SECTION OF LINE BEING TESTED.
- G. TESTS NOT TO BE PERFORMED FOR AT LEAST SEVEN (7) DAYS AFTER LAST CONCRETE BLOCK OR ANCHOR HAS BEEN CAST.
- H. FILL PIPELINES, FITTINGS, AND APPURTENANCES WITH WATER FOR TESTING SLOWLY.
- I. EXPEL ALL AIR FROM PIPELINES, FITTINGS AND APPURTENANCES PRIOR TO PERFORMING TESTS. IF PERMANENT AIR VENTS ARE NOT LOCATED AT ALL HIGH POINTS, THE CONTRACTOR SHALL INSTALL CORPORATION STOPS AT HIS EXPENSE AT SUCH POINTS SO THAT THE AIR CAN BE EXPELLED AS THE LINE IS FILLED WITH WATER. THESE STOPS SHALL BE PROTECTED WITH A MASONRY BRIDGE TO PREVENT BREAKAGE DURING BACKFILLING. SUCH POINTS ARE TO BE REMOVED DOWN TO THE CORPORATION ONCE TESTING IS COMPLETE.
- J. EXAMINATION UNDER PRESSURE: ALL EXPOSED PIPES, FITTINGS, VALVES, HYDRANTS, JOINTS SHALL BE EXAMINED CAREFULLY DURING THE HYDROSTATIC AND LEAKAGE TESTS.
- K. ALLOWABLE LEAKAGE IN GALLONS PER HOUR SHALL BE AS DETERMINED BY THE FOLLOWING FORMULA:
- $$L = \frac{SDP}{148,000}$$
- WHERE L = ALLOWABLE LEAKAGE
S = LENGTH OF PIPE TESTED
D = PIPE DIAMETER IN INCHES
P = TEST PRESSURE
- FOR FLANGED JOINTS: NO LEAKAGE ALLOWABLE.
- THE CONTRACTOR AND THE ENGINEER SHALL COMPUTE THE ALLOWABLE LEAKAGE FOR EACH SECTION TO BE TESTED AND AGREE ON THE ALLOWABLE AMOUNT PRIOR TO PERFORMING ANY TESTS.
- L. EVALUATION OF RESULTS/CORRECTIVE ACTIONS:
1. EXAMINATION UNDER PRESSURE: ALL EXPOSED PIPES, FITTINGS, VALVES, HYDRANTS, JOINTS SHALL BE EXAMINED CAREFULLY DURING THE HYDROSTATIC AND LEAKAGE TESTS.
ANY DAMAGED OR DEFECTIVE PIPE, FITTINGS, VALVES OR HYDRANTS THAT ARE DISCOVERED DURING OR FOLLOWING THE HYDROSTATIC AND LEAKAGE TEST SHALL BE REPAIRED AT HIS EXPENSE AND THE TESTS SHALL BE REPEATED UNTIL THEY ARE SATISFACTORY TO THE ENGINEER.
 2. EXAMINATION OF LEAKAGE: IF ANY LEAKAGE TEST OF SECTION OF THE SYSTEM DISCLOSES A LEAKAGE GREATER THAN THAT SPECIFIED HEREIN, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE AND REPAIR OR REPLACE THE DEFECTIVE OR DAMAGED MATERIALS. HE SHALL THEN REPEAT THE ENTIRE TEST AND MAKE ADDITIONAL REPAIR AND TEST AND CONTINUE TO REPEAT UNTIL THE LEAKAGE IS WITHIN THE SPECIFIED ALLOWANCE.
 3. ALL VISIBLE LEAKS ARE TO BE REPAIRED BY THE CONTRACTOR, AT HIS OWN EXPENSE, REGARDLESS OF THE AMOUNT OF LEAKAGE.

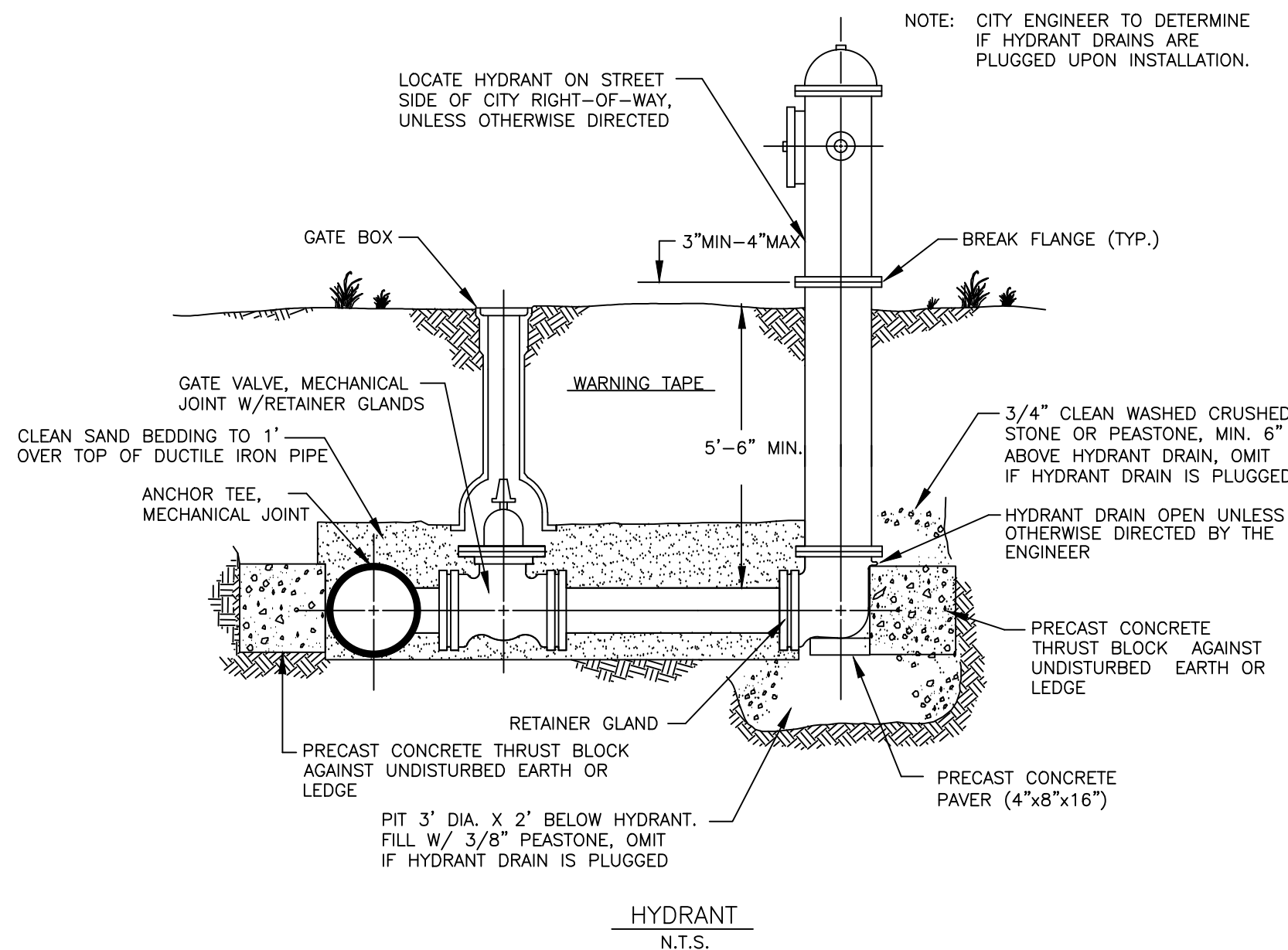
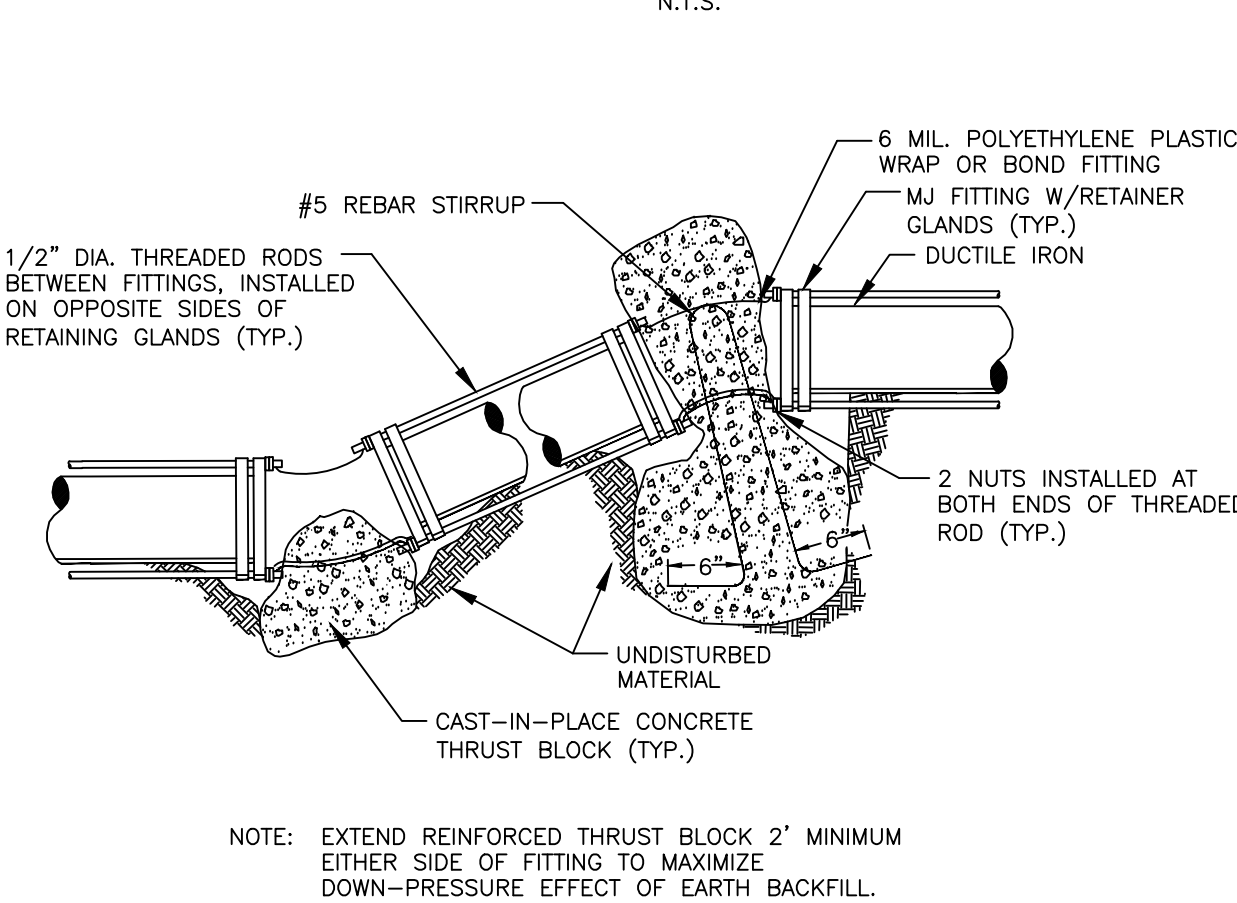
DISINFECTION

- A. BEFORE BEING PLACED IN SERVICE, ALL NEW WATER PIPELINES SHALL BE CHLORINATED IN ACCORDANCE WITH ANSA/AWWA C-651 (RESENT REVISION), "STANDARD FOR DISINFECTING WATER MAINS." THE PROCEDURE SHALL BE DISCUSSED WITH THE CITY BEFORE DOING THE WORK AND SHALL BE APPROVED.
- B. THE LOCATION OF THE CHLORINATION AND SAMPLING POINTS WILL BE DETERMINED BY THE CITY IN THE FIELD. TAPS FOR CHLORINATION AND SAMPLING SHALL BE UNCOVERED AND BACKFILLED BY THE CONTRACTOR AS REQUIRED. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1,200 FT OF THE NEW WATER MAIN, PLUS ONE SET FROM THE END OF THE LINE AND AT LEASE ONE SET FROM EACH BRANCH. ADDITIONAL SAMPLES MAY BE REQUIRED BY THE OWNER.
- C. THE GENERAL PROCEDURE FOR CHLORINATION SHALL BE FIRST TO FLUSH ALL DIRTY OR DISCOLORED WATER FROM THE LINES AT A RATE OF AT LEAST 2.5 FPS. CHLORINE SHALL BE INTRODUCED THROUGH A TAP AT ONE END, WHILE WATER IS BEING WITHDRAWN AT THE OTHER END OF THE LINE. THE CHLORINE SOLUTION OF 50 PPM FREE CHLORINE SHALL REMAIN IN THE PIPELINE FOR ABOUT 24 HOURS. AT THE END OF THIS PERIOD THE RESIDUAL CHLORINE SHALL BE AT LEAST 10 PPM.
- D. FOLLOWING THE CHLORINATION PERIOD, ALL WATER SHALL BE FLUSHED FROM THE LINES AT THEIR EXTREMITIES, AND REPLACED WITH WATER FROM THE DISTRIBUTION SYSTEM. BACTERIOLOGICAL SAMPLING OF THE REPLACEMENT WATER SHALL THEN BE COLLECTED BY THE CONTRACTOR AND TESTED BY THE APPROVED LABORATORY IN FULL ACCORDANCE WITH THE AWWA MANUAL 0601. THE CONTRACTOR WILL BE REQUIRED TO RE-CHLORINATE AT THEIR COST, IF NECESSARY, AND THE LINE SHALL NOT BE PLACED IN SERVICE UNTIL THE REQUIREMENTS OF THE STATE WATER SUPPLY DIVISION ARE MET. A WRITTEN COPY THAT THE WATER SAMPLE PASSES THE BACTERIOLOGICAL TEST SHALL BE PROVIDED TO THE ENGINEER AND OWNER PRIOR TO ALLOWING THE MAIN TO BE ACTIVATED.
- E. SPECIAL DISINFECTION PROCEDURES, SUCH AS SOAKING OR SWABBING, APPROVED BY THE CITY, SHALL BE USED IN CONNECTIONS TO EXISTING MAINS AND WHERE THE METHOD OUTLINED ABOVE IS NOT PRACTICABLE.
- F. THE CONTRACTOR SHALL PROVIDE FOR AND ARRANGE FOR LABORATORY TO TEST ALL SAMPLES (2 SAMPLES FROM EACH LOCATION, ONE 24 HOURS AFTER THE LINE IS DISINFECTED AND THE SECOND AT 24 HOURS AFTER THE FIRST SAMPLE IS OBTAINED) FOR BACTERIOLOGICAL TESTING AS REQUIRED BY THIS SPECIFICATION AND REFERENCE STANDARDS INCLUDED THEREIN. THE APPROVED LAB IS ENDYNE LABORATORIES IN LEBANON, NH. ONCE THE SAMPLES ARE COLLECTED BY THE CONTRACTOR AND OBSERVED BY THE ENGINEER, SAMPLE BOTTLES ARE TO BE DELIVERED TO ENDYNE LABS BY THE ENGINEER. THE CONTRACTOR SHALL FILL OUT ALL NECESSARY FORMS AND CHAIN OF CUSTODY IN RELATION TO THE SAMPLES. COPIES OF ALL RESULTS SHALL BE FURNISHED IMMEDIATELY UPON RECEIPT TO THE ENGINEER AND OWNER.
- G. DURING THE 24 HOUR STANDING PERIOD, ALL GATE VALVES WITHIN THE SECTION BEING TESTED SHALL BE OPERATED TO DISINFECT THE MECHANISM.



THRUST BLOCK BEARING AREA IN SQ. FT. (PRESSURE = 150 PSI, FACTOR OF SAFETY = 2.0)						
FITTINGS	WET SILT & SOFT CLAY	SILT	SAND	COARSE SAND & GRAVEL	HARDPAN	
16\"	TEE, CAP	60.3	30.2	20.1	15.1	12.1
1/4\"	BEND	85.3	42.7	28.4	21.3	17.1
1/8\"	BEND	46.2	23.1	15.4	11.5	9.2
1/16\"	BEND	23.5	11.8	7.8	5.9	4.7
1/32\"	BEND	11.8	5.9	3.9	3.0	2.4
12\"	TEE, CAP	33.9	17.0	11.3	8.5	6.8
1/4\"	BEND	48.0	24.0	16.0	12.0	9.6
1/8\"	BEND	26.0	13.0	8.7	6.5	5.2
1/16\"	BEND	13.2	6.6	4.4	3.3	2.6
1/32\"	BEND	6.7	3.3	2.2	1.7	1.5
10\"	TEE, CAP	23.6	11.8	7.9	5.9	4.7
1/4\"	BEND	33.3	16.7	11.1	8.3	6.7
1/8\"	BEND	18.0	9.0	6.0	4.5	3.6
1/16\"	BEND	9.2	4.6	3.1	2.3	1.8
1/32\"	BEND	4.6	2.3	1.5	1.5	1.5
8\"	TEE, CAP	15.1	7.5	5.0	3.8	3.0
1/4\"	BEND	21.3	10.7	7.1	5.3	4.3
1/8\"	BEND	11.5	5.8	3.8	2.9	2.3
1/16\"	BEND	5.9	2.9	2.0	1.5	1.5
1/32\"	BEND	3.0	1.5	1.5	1.5	1.5
6\"	TEE, CAP	8.5	4.2	2.8	2.1	1.7
1/4\"	BEND	12.0	6.0	4.0	3.0	2.4
1/8\"	BEND	6.5	3.2	2.2	1.6	1.3
1/16\"	BEND	3.3	1.7	1.1	1.0	1.0
1/32\"	BEND	1.7	1.0	1.0	1.0	1.0
4\"	TEE, CAP	3.8	1.9	1.3	0.9	0.8
1/4\"	BEND	5.3	2.7	1.8	1.3	1.5
1/8\"	BEND	2.9	1.4	1.0	0.7	0.6
1/16\"	BEND	1.5	0.7	0.5	0.5	0.5
1/32\"	BEND	0.7	0.5	0.5	0.5	0.5
3\"	TEE, CAP	2.1	1.1	0.7	0.5	0.5
1/4\"	BEND	3.0	1.5	1.0	0.7	0.6
1/8\"	BEND	1.6	0.8	0.5	0.5	0.5
1/16\"	BEND	0.8	0.5	0.5	0.5	0.5
1/32\"	BEND	0.5	0.5	0.5	0.5	0.5
2\"	TEE, CAP	0.9	0.5	0.5	0.5	0.5
1/4\"	BEND	1.3	0.7	0.5	0.5	0.5
1/8\"	BEND	0.7	0.5	0.5	0.5	0.5
1/16\"	BEND	0.5	0.5	0.5	0.5	0.5
1/32\"	BEND	0.5	0.5	0.5	0.5	0.5
SOIL TYPE		BEARING CAPACITY (psf)				
MUCK						0
WET SILT & SOFT CLAY						1000
SILT						2000
SAND						3000
COARSE SAND & GRAVEL						4000
HARDPAN						5000

TYPICAL BEARING TRUST BLOCK



PROGRESS PRINT -
NOT FOR CONSTRUCTION

WATER NOTES, WATER LINE TESTING, DISINFECTION, AND WATER DETAILS
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE:	NTS
DESIGNED BY:	RJF
DRAWN BY:	TD
CHECKED BY:	RJF
DATE:	7/11/2023
PROJECT:	2022-21
SHEET NO	7 OF 9

EROSION CONTROL SPECIFICATIONS

1. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH "NEW HAMPSHIRE EROSION CONTROL MANUAL" VOLUMES 1, 2, & 3, LATEST EDITION. THE CONTRACTOR SHALL HAVE REFERENCE TO THESE PUBLICATIONS.
2. IMMEDIATE ATTENTION TO EROSION CONTROL PRACTICES DRAMATICALLY IMPROVES SOIL AND MOISTURE CONSERVATION. IMPROVED SOIL AND MOISTURE QUALITY IMPROVES WATER QUALITY. THE CONTRACTOR SHALL GIVE PRIORITY TO THE TIMELY INSTALLATION OF BOTH TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES.
3. THE EROSION AND SEDIMENT CONTROL PRACTICES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIRED FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE PRACTICES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS.
4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE PLANS SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION.
5. A CONSTRUCTION SEQUENCE HAS BEEN DEVELOPED TO FACILITATE INSTALLATION OF EROSION CONTROL MEASURES AND THE COMPLETION OF GRADING, SEEDING, AND LANDSCAPING AS SOON AS POSSIBLE WITHIN A DISTURBED AREA. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
- B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
- C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED.
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- E. NON-VEGETATIVE COVER, SUCH AS HYDROMULCH AND EROSION CONTROL BLANKETS, RIPRAP, STONE FILL, GABIONS AND/OR GEOTEXTILES HAVE BEEN PROPERLY INSTALLED.
6. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH-PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT. ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE REMOVED BY THE END OF THE SAME WORK DAY IT IS NOTED, AND IF NOTED ON A NON-WORK DAY, NOT LATER THAN THE END OF THE NEXT WORK DAY.
7. EARTH STOCKPILES SHALL BE SEEDDED AND MULCHED AND HAVE A SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE, AT A MINIMUM. STOCKPILES SHALL BE COVERED WITH IMPERVIOUS TARPS AND/OR STABILIZED WITH TEMPORARY SEED AND MULCH TO PROTECT MATERIALS IN THE EVENT THAT THEY WILL REMAIN FOR LONGER THAN 1 MONTH.
8. INSTALL EROSION CONTROL MEASURES AS SHOWN. CLEAN ACCUMULATED SEDIMENT AS NECESSARY. LEAVE IN PLACE UNTIL DISTURBED AREAS HAVE BEEN ADEQUATELY STABILIZED.
9. DISTURBED AREAS RESULTING FROM SILT FENCE REMOVAL SHALL BE PERMANENTLY SEEDDED. CUT AND FILL SLOPES CALL FOR INTENSIVE EROSION CONTROL MEASURES. INSTALL MULCH NETTING OR OTHER SLOPE STABILIZATION MEASURES AS SHOWN ON NHDOT CONSTRUCTION PLANS FOR ALL SLOPES 3:1 (1 RISE ON 3 RUN) AND STEEPER.
10. ALL DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED WITH MULCH AND/OR MULCH NETTING BEFORE THE END OF EACH WORK DAY.
11. ROADWAYS SHALL BE STABILIZED WITH BASE COURSE AND BINDER WITHIN 3 WEEKS OF INITIAL DISTURBANCE OF THE SLOPES ON A SECTION OF ROADWAY, IN ADDITION TO COMPLETING DISTURBED SLOPES TO FINAL GRADE WITH FINAL SEEDING OR OTHER PRESCRIBED STABILIZATION.
12. WHEN WORK IS SUSPENDED WITHIN THE GROWING SEASON, ALL DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED WITH SEED AND MULCH WITHIN 14 DAYS. OUTSIDE THE GROWING SEASON, ALL DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED WITH MULCH, MULCH AND TACK ON SLOPES STEEPER THAN 3:1; OR EROSION MATING ON SLOPES STEEPER THAN 2:1.
13. TEMPORARY STABILIZATION OF DISTURBED AREAS:

SEED BED PREPARATION: TILL THREE INCHES DEEP MIXING IN FERTILIZER. APPLY 2 TONS/ACRE (100#/1,000 SQ. FT.)

FERTILIZE: UNIFORMLY APPLY NOT LESS THAN 300#/ACRE (7#/1,000 SQ. FT.)

SEEDING: SELECT APPROPRIATE SEEDING MIXTURE FROM TABLE 1 BELOW. SPREAD SEED UNIFORMLY. FIRM SOIL BY ROLLING OR PACKING; IF NOT FEASIBLE, THEN RAKE LIGHTLY TO COVER SEEDS.

MULCHING: MULCH ALL DISTURBED AREAS WITH 1-2 TONS OF HAY OR STRAW PER ACRE (70-90#/1,000 SQ. FT.). ANCHOR ON ALL SLOPES 3:1 OR STEEPER AND ON SLOPES SUBJECT TO WASH OR WIND BLOWN CONDITIONS. JUTE OR OTHER BIODEGRADABLE NETTING, STAKING AND STABILING MAY BE REQUIRED.

TABLE 1			
SPECIES	PER ACRE	PER 1,000SQ. FT.	REMARKS
WINTER RYE	2 BU OR 112 LBS	2.5 LBS.	BEST FOR FALL SEEDING. SEED AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO DEPTH OF ONE INCH.
OATS	2-1/2 BU OR 80 LBS.	2 LBS.	BEST FOR SPRING SEEDINGS. LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO DEPTH OF ONE INCH.
ANNUAL RYE	40 LBS.	1 LB.	GROWS QUICKLY, BUT IS SHORT GRASS DURATION. USE WHERE APPEARANCES ARE IMPORTANT. COVER SEED WITH NO MORE THAN 1/4 INCH OF SOIL. WITH MULCH, SEEDING MAYBE DONE THROUGHOUT GROWING SEASON. OTHERWISE, SEED EARLY SPRING OR BETWEEN AUGUST 15 & SEPTEMBER 15.

14. PERMANENT STABILIZATION OF DISTURBED AREAS:

SEED BED PREPARATION: TOPSOIL (SANDY LOAM, LOAM, OR SILT LOAM), FRIABLE, FREE OF STUMPS, WOOD, AND ROOTS. STONES MORE THAN 1/2 INCH IN DIAMETER OR LENGTH SHALL BE PLACED OVER ALL DISTURBED AREAS IN A 4" (MINIMUM) THICK LAYER. TOPSOIL SHALL BE FREE OF HERBICIDES AND TOXIC MATERIALS. TOPSOIL SHALL HAVE A ORGANIC CONTENT BETWEEN 3-5%. TILL THREE INCHES DEEP MIXING IN THE FERTILIZER AND LIME. SOIL TO BE TESTED PRIOR TO APPLICATION FOR RECOMMENDATION OF AMENDMENTS. AMENDMENTS TO BE REVIEWED WITH THE ENGINEER.

FERTILIZE: IN ACCORDANCE WITH AMENDMENT RECOMMENDATIONS FROM TESTING LABORATORY. LIME PER THE RECOMMENDED RATE FOR OPTIMUM PH.

SEEDING: SPREAD SEED UNIFORMLY. FIRM SOIL BY ROLLING OR PACKING; IF NOT FEASIBLE, THEN RAKE LIGHTLY TO COVER SEEDS.

BONDED FIBER MATRIX: APPLY PROFILE HYDROBLANKET BFM OR APPROVED EQUIVALENT BASED ON APPLICATION RATE FOR 3500 LB/ACRE MIN. PER MANUFACTURERS REQUIREMENTS. BFM ALTERNATES MUST BE ON NHDOT APPROVED PRODUCTS LIST.

GRASS SEED (SHADY GENERAL LAWN MIX)

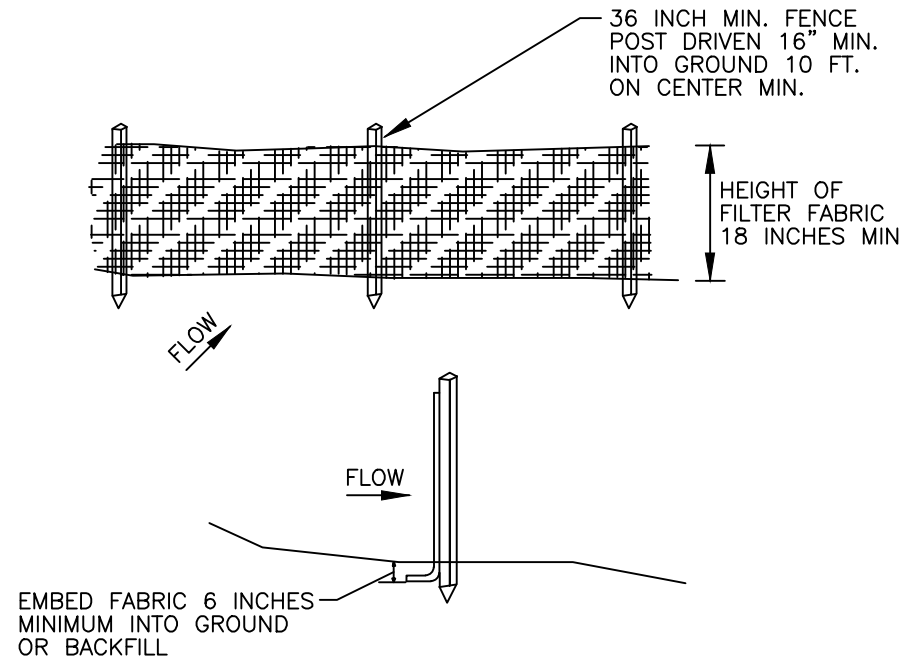
GRASS SEED SHALL BE FRESH, CLEAN, NEW-CROP SEED AND SHALL MEET THE PROVISIONS OF THE NEW HAMPSHIRE AGRICULTURAL AND VEGETABLE SEEDS LAW. SEED SPECIFIED IN THIS SECTION SHALL MEET THE FOLLOWING ANALYSIS:

	MINIMUM PURITY %	MINIMUM GERM. %	LBS/ACRE
CREeping RED FESCUE	96	85	45
PERENNIAL RYEGRASS	98	90	55
KENTUCKY BLUEGRASS	97	80	30
RENTOP	95	80	5
	130	130	135 POUNDS/ACRE

LAWN SEED MIX SHALL BE BLENDED WITH ANNUAL RYE, DOUBLE JUMP MIX, AVAILABLE FROM NORTHERN NURSERIES ON ROUTE 5 IN WHITE RIVER JCT. VERMONT. APPLY AT 20% THE RECOMMENDED MANUFACTURER APPLICATION RATE PER ACRE.

OTHER SEED MIXTURES AND SEEDING RATES AS RECOMMENDED BY THE USDA - SOIL CONSERVATION SERVICE AND APPROVED BY OWNER MAY BE UTILIZED ONLY UPON PRIOR WRITTEN PERMISSION FROM THE ENGINEER.

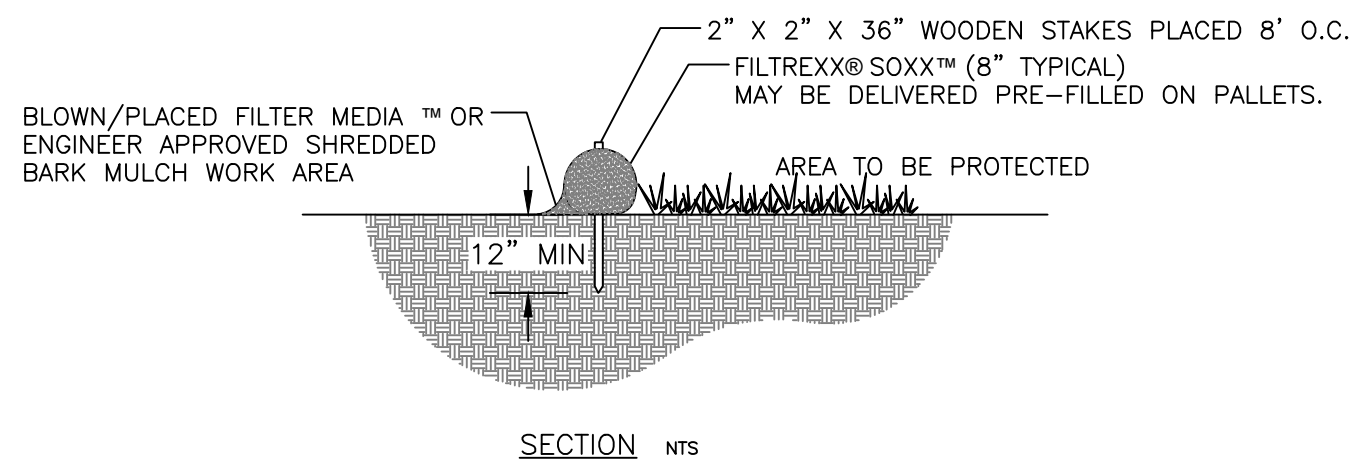
16. MAINTENANCE: REGULAR MAINTENANCE SHALL OCCUR DURING THE CONSTRUCTION PERIOD UNTIL SUCH TIME AS PERMANENT STABILIZATION IS ESTABLISHED. MAJOR MAINTENANCE ACTIVITIES RECOMMENDED ON REGULAR INSPECTION REPORTS SHALL BE ADDRESSED BY THE END OF THE NEXT WORK DAY. ADDITIONAL MAINTENANCE MAY INCLUDE:
- A. DISTURBED AREAS WILL BE FERTILIZED AND RE-SEEDED, WHERE NECESSARY.
- B. CATCH BASINS WILL BE CHECKED AND CLEANED AS NECESSARY.
- C. DRAINAGE SWALES SHALL BE CHECKED FREQUENTLY AND CLEANED AS REQUIRED.
- D. THE SILT FENCES AND HAY BALE DIKES WILL BE CHECKED ON A REGULAR BASIS AND REPAIRED AS NECESSARY TO CORRECT ANY DAMAGE, DETERIORATION, AND SHORT CIRCUITING.
- E. THE SILT FENCES AND HAY BALE DIKES WILL BE CHECKED ON A REGULAR BASIS AND REPAIRED AS NECESSARY TO CORRECT ANY DAMAGE, DETERIORATION, AND SHORT CIRCUITING.
- F. THE BOTTOM OF SEDIMENT BASINS SHALL BE PERIODICALLY CLEANED, WITH THE SEDIMENT REMOVED TO A SECURE LOCATION.
17. ALL PERMANENT DITCHES, SWALES AND DRAINAGE STRUCTURES SHALL BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPs PRIOR TO DIRECTING RUNOFF TO THEM.
18. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROLS DAILY AND PRIOR TO ANY ANTICIPATED RAIN EVENTS.
19. ALL AREAS SHALL BE STABILIZED WITHIN 45 CALENDAR DAYS OF INITIAL DISTURBANCE. ALL AREAS NOT CURRENTLY BEING WORKED, SHALL BE STABILIZED WITHIN 7 CALENDAR DAYS.
20. THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES. "INVASIVE SPECIES" MEANS AN ALIEN SPECIES WHOSE INTRODUCTION CAUSES OR IS LIKELY TO CAUSE ECONOMIC OR ENVIRONMENTAL HARM OR HARM TO HUMAN HEALTH. NO PERSON SHALL COLLECT, TRANSPORT, IMPORT, EXPORT, MOVE, BUY, SELL, DISTRIBUTE, PROPAGATE, OR TRANSPLANT ANY LIVING AND VARIETIES, LISTED IN TABLE 3800.1, NEW HAMPSHIRE PROHIBITED INVASIVE SPECIES LIST WITHOUT PROPER DEVELOPMENT OF AN INVASIVE SPECIES MANAGEMENT PLAN IN ACCORDANCE WITH NHDOT AND NHDES REQUIREMENTS. THE CONTRACTOR SHALL VERIFY THAT ALL IMPORTED SOILS ARE FREE FROM INVASIVE SPECIES. THE OWNER SHALL ORDER ANY PERSON WHO HAS BEEN FOUND IN VIOLATION OF THESE RULES TO TAKE SUCH MEASURES TO ERADICATE OR CONTROL THE INVASIVE SPECIES AS THE OWNER MAY DEEM NECESSARY. THE REQUIRED ERADICATION OR CONTROL MEASURES SHALL BE PROMPTLY IMPLEMENTED WITHIN THE TIME PERIOD DESIGNATED IN THE ORDER. IF THE ORDER IS NOT IMPLEMENTED WITHIN THE DESIGNATED TIME FRAME, ADMINISTRATIVE FINES, PENALTIES, OR BOTH, PURSUANT TO RSA 430:57, SHALL BE LEVIED. THE CONTRACTOR MAY ALSO BE REQUIRED TO MONITOR THE SITE FOR INVASIVE SPECIES FOR FIVE YEARS FOLLOWING COMPLETION OF THE WORK. THE OWNER MAY WITHHOLD FUNDS FROM THE CONTRACTOR TO ADDRESS ANY ISSUES THAT MAY ARISE. FAILURE TO COMPLY WITH SECTION AGR 3802.06(A) MAY RESULT IN THE ASSESSMENT OF ADMINISTRATIVE FINES.
21. WINTER CONSTRUCTION NOTES:
- A. TEMPORARY SEEDING SHALL OCCUR PRIOR TO SEPTEMBER 15.
- B. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH NETTING SHALL OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- C. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- D. ALL DISTURBED PAVEMENT SURFACES SHALL BE AT A MINIMUM BASE PAVED PRIOR TO NOVEMBER 1, FOR WINTER SHUTDOWN. PAVING AFTER NOVEMBER 1 WILL BE CONSIDERED TEMPORARY (AT THE COST OF THE CONTRACTOR) UNLESS OTHERWISE APPROVED BY THE CITY AND WILL BE REPLACED IN THE SPRING WITH PERMANENT PAVEMENT SURFACES.
22. SEQUENCING/SITE MANAGEMENT:
- A. ALL PROJECT LIMITS OF DISTURBANCE MUST BE STAKED ADJACENT TO WETLAND IMPACTS PRIOR TO THE START OF CONSTRUCTION.
- B. TREE CLEARING AND TRIMMING LIMITS MUST BE FLAGGED AND REVIEWED WITH THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- C. INSTALL NECESSARY EROSION CONTROLS DOWN-GRADIENT OF EARTH DISTURBANCES PRIOR TO EARTHWORK ACTIVITIES. INSTALL CONSTRUCTION TRACK OUT CONTROLS AND ACCESS WAYS AS NEEDED FROM STAGING AREAS. OBTAIN ADDITIONAL PERMITS AS NEEDED FOR ANY STAGING AREA REQUIRING A LOCAL STATE OR FEDERAL PERMIT PRIOR TO THE START OF CONSTRUCTION.
- D. STOCKPILES SHALL BE REMOVED FROM THE SITE DAILY. NO STOCKPILING WILL BE ALLOWED IN THE CITY RIGHT-OF-WAY UNLESS APPROVED BY THE CITY ENGINEER.
- E. REMOVE AND DISPOSE OF ALL CONSTRUCTION RELATED TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- F. INSTALL AND MAINTAIN DEWATERING CONTROLS WHILE DEWATERING IS IN PROGRESS. ALL DEWATERING DISCHARGES SHALL FLOW THROUGH A MINIMUM OF 30 FOOT UNDISTURBED VEGETATED SURFACE PRIOR TO DISCHARGE FROM THE SITE. THE USE OF STABILIZED TEMPORARY SUMPS, SETTLING BASINS AND FILTER BAGS IS REQUIRED. DEWATERING CONTROLS SHALL NOT BE INSTALLED OUTSIDE OF THE LIMIT OF WORK.
- G. STABILIZE ALL DISTURBANCE AREAS (PERMANENT AND TEMPORARY) WITHIN TIMEFRAME REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT.
- H. ALL DITCHES AND SWALES ARE TO BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- I. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS AFTER VEGETATIVE STABILIZATION IS ACCEPTED BY THE ENGINEER.



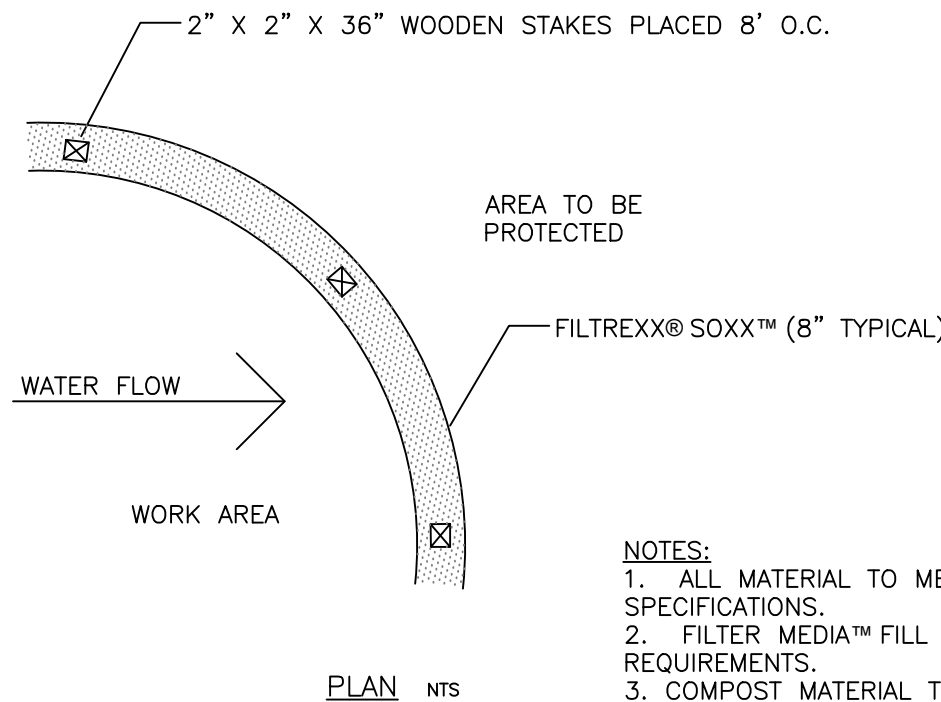
CONSTRUCTION SPECIFICATIONS

1. SILT FENCE MAY BE EITHER PREMANUFACTURED OR PREPARED ON SITE. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. SILT FENCE SHALL BE LOCATED AS SHOWN ON THE PLAN AND WHEREVER CONSTRUCTION ACTIVITIES MAY RESULT IN A TEMPORARY RUNOFF TO A STREAM OR WETLAND WHICH MAY CARRY SILT OR SEDIMENT.
3. THE TRENCH SHALL BE TOED IN PLACE BY PLACEMENT IN A 6 INCH TRENCH AND BACKFILLING WITH A SUITABLE MATERIAL.
4. WHEN A TRENCH CANNOT BE CONSTRUCTED, THE FABRIC MAY BE FOLDED AT THE BASE IN A MANNER SUCH THAT A MINIMUM OF 6 INCHES OF FABRIC LIES ON THE GROUND TOWARD THE DIRECTION OF FLOW. THE FOLDED FABRIC SHALL BE COVERED TO A DEPTH OF 6 INCHES WITH SUITABLE MATERIAL EXTENDING A MINIMUM OF 4 INCHES BEYOND THE FABRIC.
5. SUPPORTING STAKES SHALL BE PLACED NO MORE THAN 10 FEET APART.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED. FENCING SHALL BE REPLACED WHEN TORN, WHEN TRENCHING IS DISTURBED, WHEN THE FENCE DISPLAYS PLUGGING AS EVIDENCED BY SILT-LADEN APPEARANCE, WHEN WATER IS EXCESSIVELY RETARDED BY THE FENCE, OR WHENEVER "BULGES" APPEAR.

SILT FENCE
N.T.S.



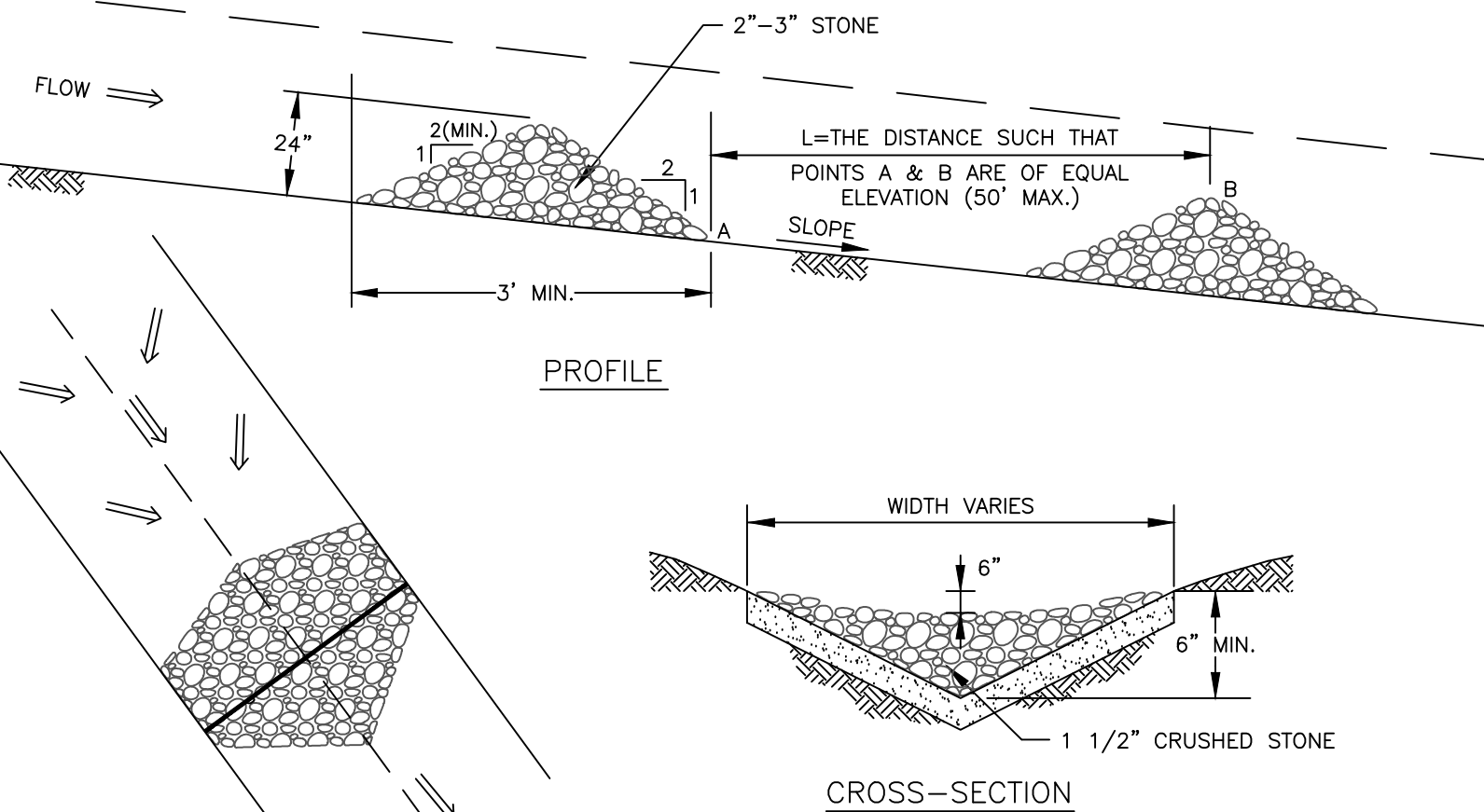
SECTION NTS



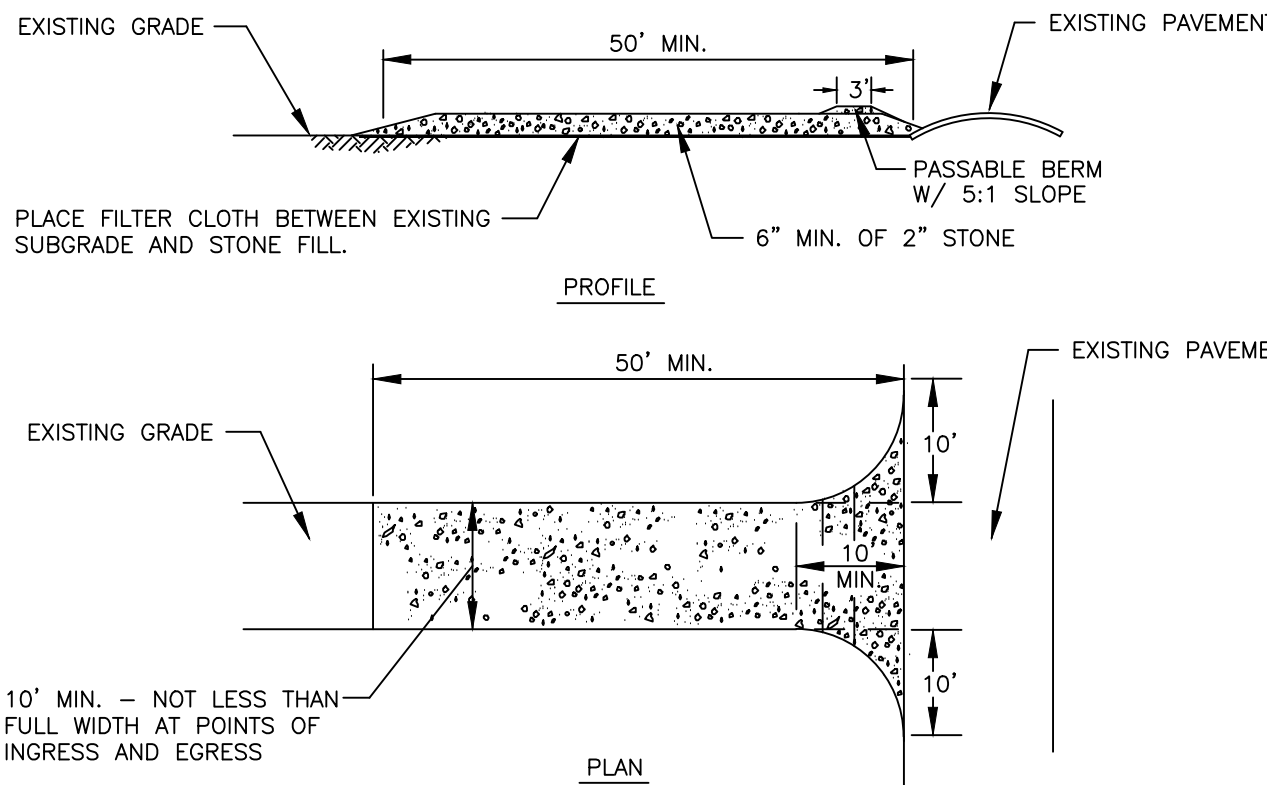
PLAN NTS

FILTREXX® SEDIMENT CONTROL
NTS

- NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPersed ON SITE, OR SOXX MAY BE DELIVERED ON PALLETS.

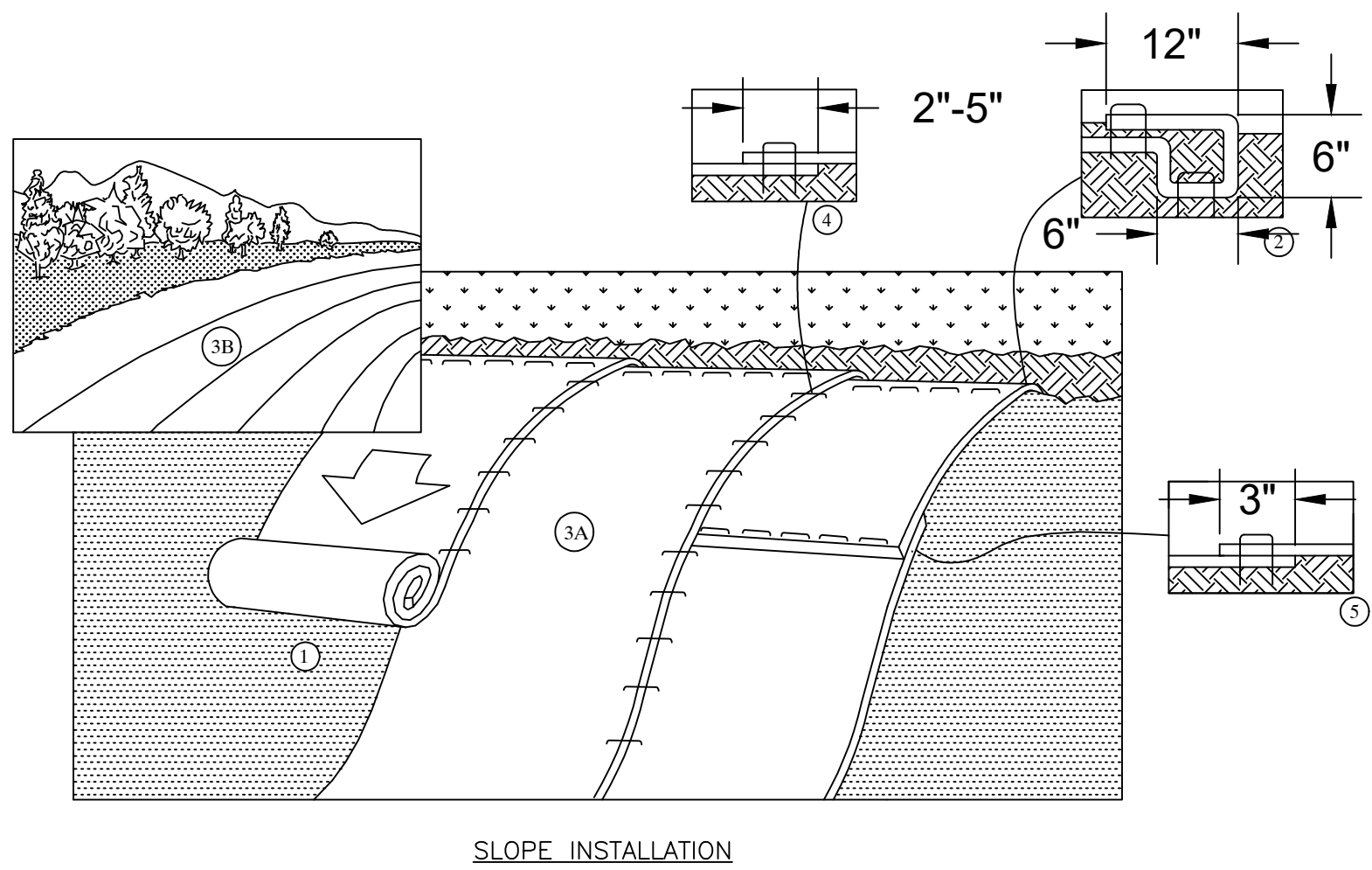


STONE CHECK DAMS
N.T.S.



STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

- NOTES:
- 1.) MAINTAIN ENTRANCE TO PREVENT TRACKING OF SEDIMENT INTO PUBLIC R.O.W. REDUCE TRACKING OF SILTS ONTO PUBLIC R.O.W. BY CLEANING OR TOP DRESSING STONE FILL.
- 2.) PROVIDE SEPARATE WHEEL CLEANING AREA WITH SUITABLE SEDIMENTATION BASIN.



SLOPE INSTALLATION

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
- NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACES BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS BY SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP, STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
- NOTE:
- *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

EROSION CONTROL BLANKETS - SLOPE INSTALLATION
N.T.S.

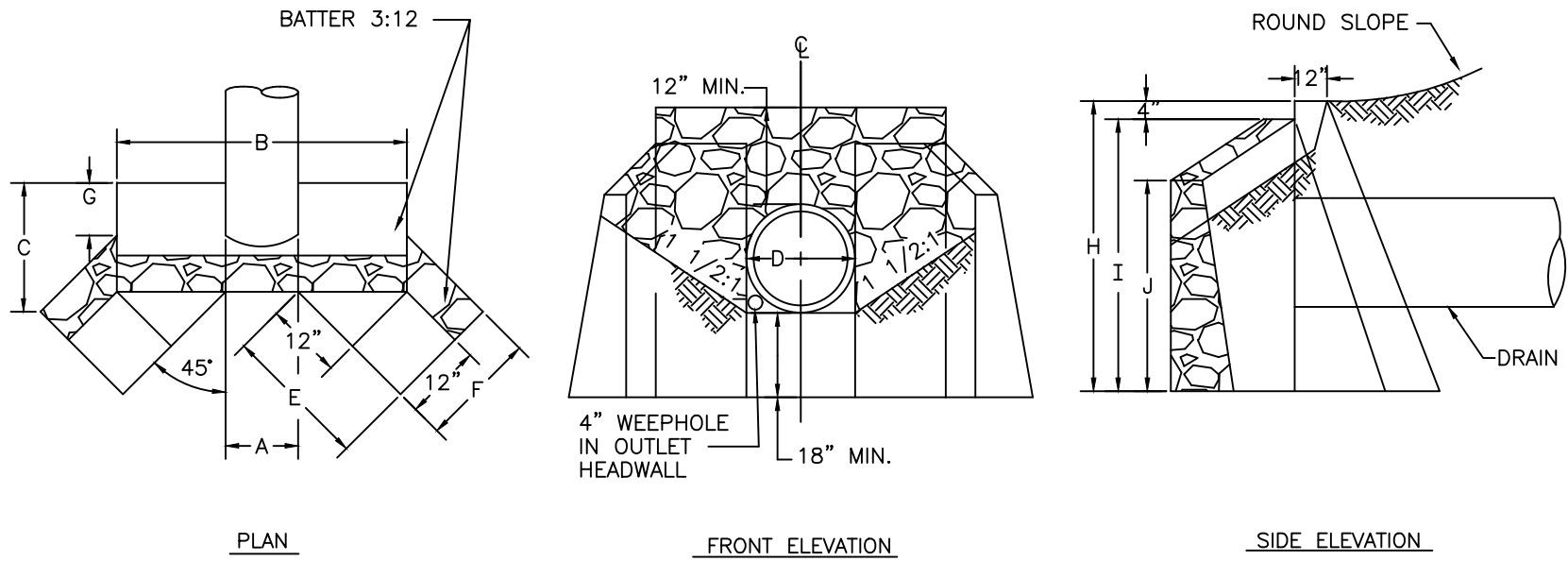
PROGRESS PRINT -
NOT FOR CONSTRUCTION

EROSION CONTROL, GENERAL NOTES, AND DETAILS
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

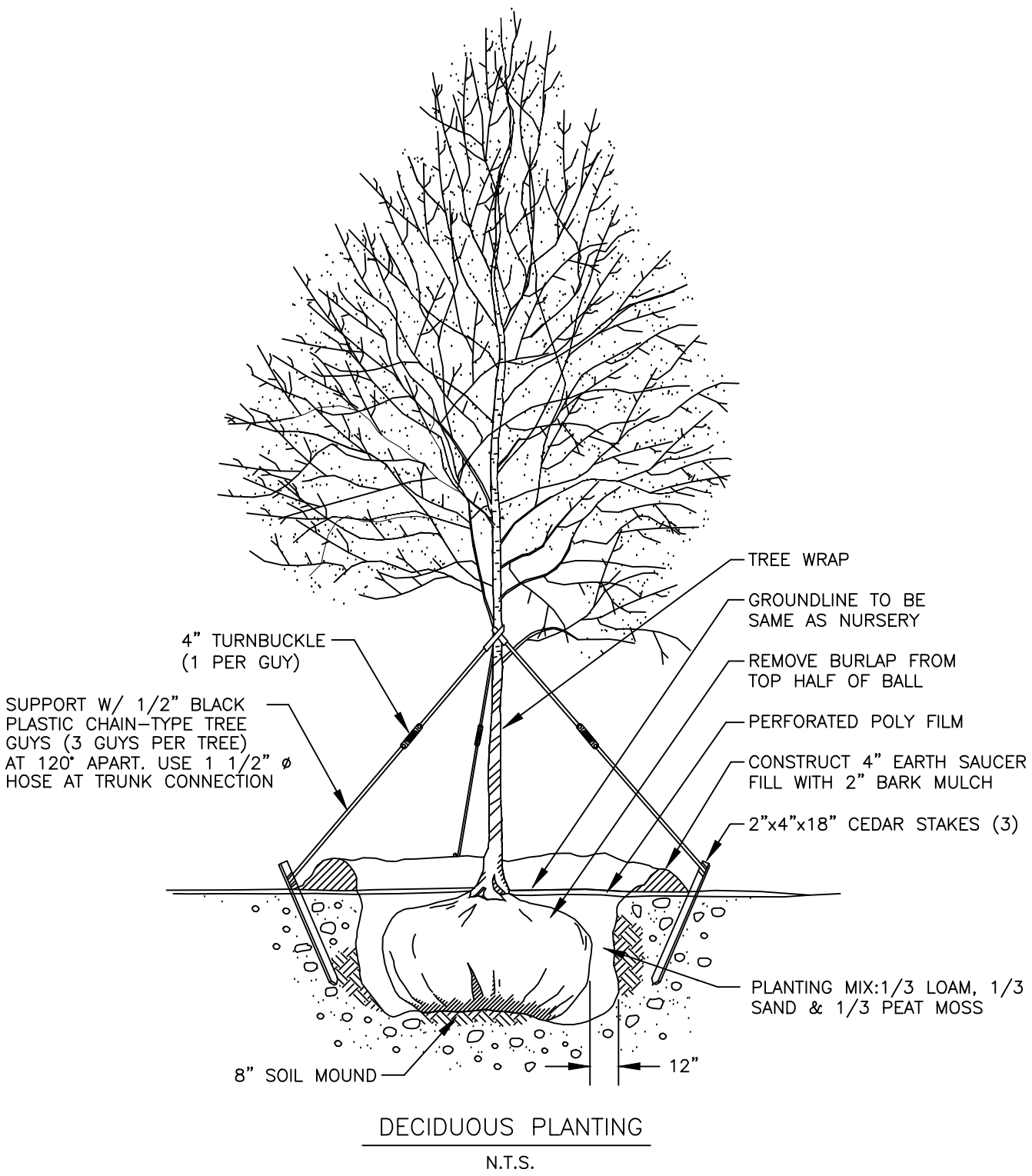
SCALE: NTS
DESIGNED BY: R/JF
DRAWN BY: TD
CHECKED BY: R/JF
DATE: 7/11/2023
PROJECT: 2022-21

8
SHEET NO 8 OF 9



DIA. D INCHES	DIMENSIONS									
	A	B	C	E	F	G	H	I	J	
12"	1'-3"	4'-0"	2'-2"	2'-4"	1'-10"	0'-2"	4'-0"	3'-8"	3'-0"	
15"	1'-6"	4'-3"	2'-2"	2'-4"	1'-10"	0'-7"	4'-0"	3'-8"	3'-0"	
18"	1'-9"	4'-6"	2'-2"	2'-4"	1'-10"	0'-7"	4'-0"	3'-8"	3'-0"	
24"	2'-3"	5'-0"	2'-2"	3'-0"	2'-0"	0'-6"	4'-6"	4'-0"	3'-4"	
36"	3'-3"	6'-1"	2'-5"	3'-7"	2'-0"	0'-6"	5'-6"	5'-0"	4'-1"	

PRECAST CONCRETE HEADWALL DETAILS
N.T.S.



PROGRESS PRINT -
NOT FOR CONSTRUCTION

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

MISCELLANEOUS DETAILS
HANOVER WATER SYSTEM INTERCONNECTION
WATER BOOSTER PUMP STATION
AND PRESSURE REDUCING VALVE BYPASS

CITY OF LEBANON, NH
DEPARTMENT OF PUBLIC WORKS
193 DARTMOUTH COLLEGE HIGHWAY
LEBANON, NEW HAMPSHIRE 03766
(603) 448-3112

SCALE:	NTS
DESIGNED BY:	RJF
DRAWN BY:	TD
CHECKED BY:	RJF
DATE:	7/11/2023
PROJECT:	2022-21

9

SHEET NO 9 OF 9



CITY OF LEBANON ~ PLANNING & DEVELOPMENT

PLANNING BOARD

January 8, 2024 Meeting

Staff Memorandum – PB2024-02-CUP

APPLICATION INFORMATION

Agenda Item: 4.B

Application Type: Conditional Use Permit per §303.2 of the Zoning Ordinance for a proposed office use

Property Location & Tax Map:
99 Heater Road (Tax Map 78, Lot 41)

Applicant/Property Owner:
Edwards Properties, LLC

Zoning District:
Light Industrial (IND-L)

Future Land Use Map: Mixed Use

Property Size (per City Assessor):
+/- .35 acres (15,246 sq. ft.) (the property is non-conforming to the minimum 2-acre lot size required for lots in the IND-L District per §303.3 of the ZO)

Existing Improvements and Use:
1,700 sq. ft. (net) two (2)-story two-family dwelling constructed in 1950 (per City Assessing records) with an attached 528 sq. ft. garage

Proposed Use: A mixed use building with a one-bedroom apartment and an office

Overlay Districts (located to the rear of the property – not impacted by proposed use):
Wetlands Conservation Districts

Other Approvals Required:
Building & Zoning Permit

Attachments:
• Application (8 pgs)

LEGAL NOTICE

Edwards Properties, LLC, 99 Heater Road (Tax Map 78, Lot 41), zoned IND-L: Request for a Conditional Use Permit pursuant to §303.2 of the Zoning Ordinance for a proposed office use. PB2024-02-CUP

COMPLETENESS REVIEW

In order to accept jurisdiction and commence review of the applicants' proposal, the Planning Board must first determine that the application is complete. NH RSA 676:4, I(c)(1). The Planning and Development Department has reviewed the application and recommends that the Board find that the application is complete enough to accept jurisdiction and to commence review.

SUMMARY OF REQUEST

The property is located within the IND-L District on the south side of Heater Road, and abuts the Hypertherm facility to the rear. The property is currently improved with a two (2)-story, two-family dwelling constructed in 1950 and containing 1,700 sq. ft. of net living area (per the City's Assessing records). The two-family dwelling is not an allowed use in the IND-L District and, therefore, is considered "legal non-conforming".

From the materials provided, it appears the applicant proposes to convert the existing two-family dwelling to a mixed use building containing (i) a one-bedroom apartment and (ii) an office use for "Aslan's" with accessory warehouse space in the garage. It appears that no site changes are proposed. Presumably, the "Aslan's" that the applicant refers to in their Conditional Use Permit Support Statement is "Aslan's Maintenance" which is currently located at 5 Edwards Street, depicted in the following aerial photograph taken on 4/4/21:

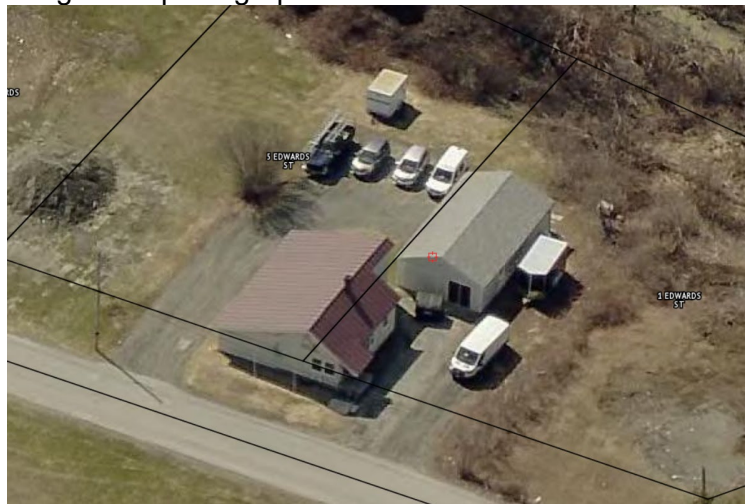


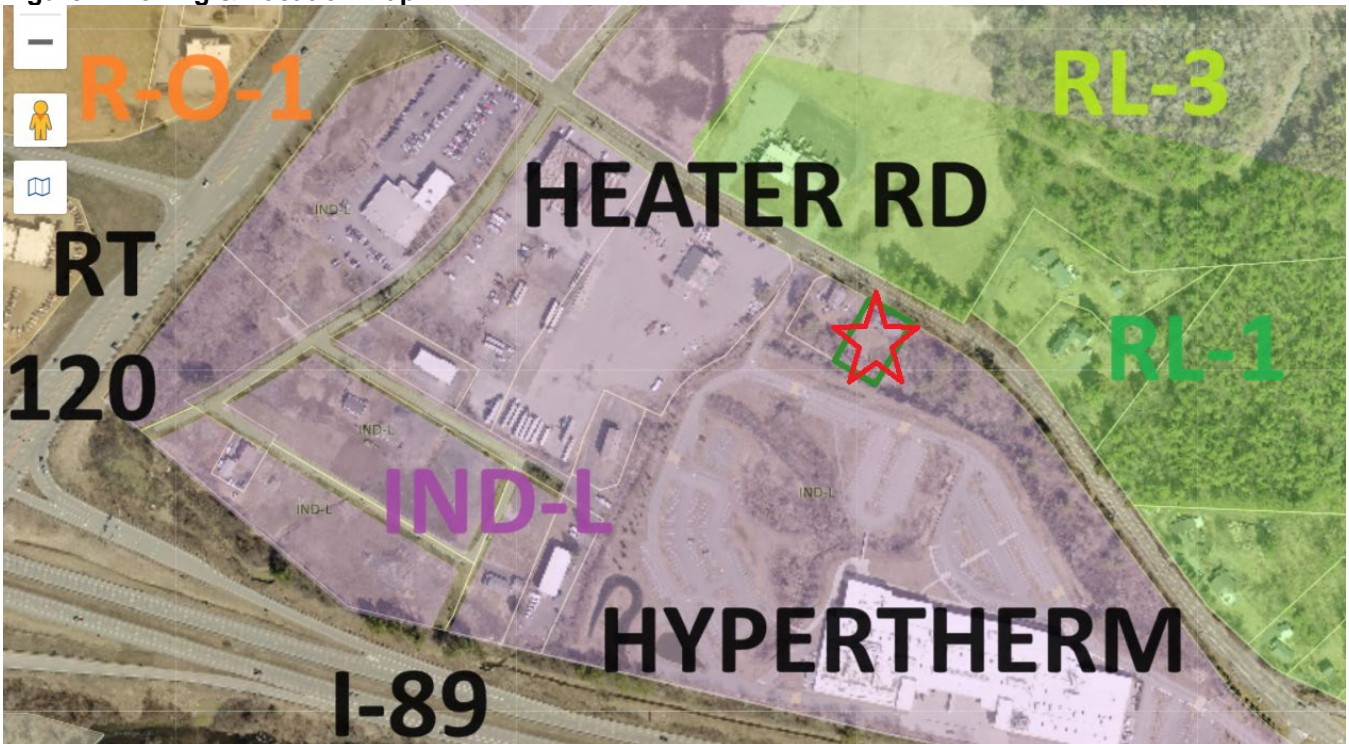
Figure 1. Street view of property.



©2023 Google, <https://lebanonnh.mapgeo.io/> (image date: August 2023)

Keyboard shortcuts © 2024 Google - Image Date: August 2023

Figure 2. Zoning & Location Map.



Presumably, one of the two existing dwelling units will be converted into the office space. However, the applicant has not provided any information as to the size of the existing dwelling units and so it is not clear whether the dwelling unit to remain is proposed to be altered or enlarged. Staff recommends that the applicant clarify at the public hearing; an enlargement of the dwelling unit proposed to remain may require additional zoning review.

Very little information has been provided by the applicant with respect to the nature of the proposed office use other than it appears that the garage is proposed to be used as accessory “warehouse” space for the office use.

In the Conditional Use Support statement, the applicant notes that “[a]t its current location, Aslan’s has vehicles parked in the street and 99 Heater Road will provide more suitable parking.” As shown on their site plan submitted with the Conditional Use application, the applicant proposes to provide 4 parking spaces at 99 Heater Road. One of the four (4) spaces will be for the one-bedroom dwelling, leaving only three (3) for the office use. However, in the photo of Aslan’s maintenance provided above, there are five (5) vehicles and two (2) trailers parked on-site (and no vehicles on the street).

ZONING ORDINANCE REQUIREMENTS

“Office”, which is allowed in the IND-L District by Conditional Use Permit from the Planning Board per Section 303.2 of the Zoning Ordinance, is defined in Appendix A of the Zoning Ordinance as follows:

A room or group of rooms used for the carrying on, conducting or managing of a business or for the practice of a profession. This term includes, but is not limited to: offices for lawyers, engineers, architects, attorneys, accountants, insurance, real estate, or investment agencies, or any similar type of profession, as well as medical offices including offices of a physician, dentist, psychologist, optometrist or other licensed health care provider, which does not include any hospital or ambulatory surgical care facilities.

Per Section 302.4.B of the Zoning Ordinance, the Planning Board may grant a Conditional Use Permit if it finds that the proposal meets the Enhanced Performance Standards set forth in Section 302.4.D as follows:

1. The site is suitable for the proposal. This includes:
 - a. Adequate vehicular and pedestrian access for the intended use.
 - b. The availability of adequate public services to serve the intended use including emergency services, pedestrian facilities, safe access, and other municipal services.
 - c. The absence of environmental constraints (floodplain, steep slope, etc.) proposed to be impacted by the intended use.
 - d. The availability of appropriate utilities to serve the intended use including water, sewage disposal, stormwater treatment, electricity, and similar utilities.
2. External impacts: The external impacts of the proposed use on abutting properties and the neighborhood shall be commensurate with the impacts of adjacent existing uses or other uses permitted in the zoning district. This shall include, but not be limited to, water runoff, drainage, traffic, noise, odors, vibrations, dust, fumes, hours of operation, and exterior lighting and glare. In addition, the location, nature, design, and height of the structure and its appurtenances, its scale with reference to its surroundings, and the nature and intensity of the use, shall not have an adverse effect on the surrounding environment nor discourage the appropriate and orderly development and use of land

and buildings in the neighborhood. The proportion of the site proposed to be occupied by impervious surfaces shall be minimized to the extent necessary to preclude unreasonable risk of runoff, erosion, sedimentation, and other potentially adverse on-site or off-site effects.

NOTE: The criteria set forth in Section 302.4.D.3, 4 and 5 relate to new construction and, since no new construction is proposed, are inapplicable to the subject application.

The applicant has submitted testimony addressing the Section 302.4.D criteria in an application received by the Planning and Development Department on December 4, 2023 (see attached).

STAFF COMMENTS

- As noted above, the applicant should clarify the size of the existing dwelling units. Staff also recommends that the applicant provide a floor plan of the apartment to remain in order to verify that it is not proposed to be altered (which may require additional zoning review) and to confirm that it is a one-bedroom apartment (needed to verify the minimum required parking for the proposed mixed use building).
- Per the City's Assessing records, the building contains 1,700 sq. ft. of living area. However, per the applicant's parking calculations, the applicant's use will consist of a 1,200 sq. ft. one-bedroom apartment and 450 sq. ft. office, for a total of 1,650 sq. ft. This discrepancy should be clarified since the 50 ft. delta impacts the applicant's parking calculations and the minimum number of on-site parking spaces that are required.
- Staff recommends that the applicant demonstrate how, with only 3 parking spaces, the parking for the proposed office use will be sufficient given that at its current location, "Aslan's has vehicles parked in the street" (the vehicles parked in the street at Aslan's current location are presumably in addition to all of the vehicles and the equipment that are able to be parked on-site at Aslan's current location, as shown in the photo above taken on 4/4/21).
- If the Board moves to approve the application, staff recommends that the Board include the following conditions:
 - "A floor plan shall be submitted identifying the 450 sq. ft. office space within the building and the 1,200 sq. ft. one-bedroom dwelling."
 - "The 450 sq. ft. office space may be used only for uses that satisfy the definition of "office" as set forth in Appendix A of the Zoning Ordinance."
 - "No outdoor storage is permitted."
 - "No parking or equipment storage shall be permitted within the City's right-of-way depicted on the plot plan titled, "Site Plan for Lot 78-41," dated 12/21/23, prepared by Advanced Geomatics & Design."
 - "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."
- Per Section 302.4.E of the Zoning Ordinance, the Planning Board "may impose conditions as it finds reasonably appropriate to safeguard the neighborhood and the general public or otherwise serve the purposes of this Ordinance, including such measures as set forth in Section 802.4 ("Special Conditions")." Section 802.4.B of the Zoning Ordinance provides as follows:

[T]he Board may attach whatever conditions it deems necessary to the approval decision in order to assure compliance with the purposes of this Ordinance. Such conditions may include but are not necessarily limited to:

1. Increasing the required lot size or yard dimensions in order to protect the adjacent properties.
2. Limiting the coverage or height of building because of obstruction to view and reduction of light and air to adjacent properties.
3. Controlling the location and number of vehicular access points to the property.
4. Increasing the street width adjacent to the property.
5. Increasing the number of on-site off street parking or loading spaces required.
6. Requiring suitable on-site landscaping and screening where necessary to reduce noise and glare and to maintain the property in character and keeping with the surrounding area.
7. Specifying a time limit for initiation of construction, alteration, or enlargement of a structure to house an exception.
8. Providing for specific layout of facilities on the property such as location of the building, parking areas, access to the building so as to minimize effect on adjoining property.
9. Specifying standards for operation of this [conditional use] so that it will be no more objectionable to the neighborhood by reasons of noise, odors, vibrations, flashing lights or hours of operation than will be the operation of a permitted use at that site.
10. Specifying the length of time of the [conditional use] and time of occupancy during the year, or hours of operation.

cc: Edwards Properties, LLC (via e-mail)
Dan Nash, Advanced Geomatics & Design (via e-mail)
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: Edwards Properties, LLC TEL.#: Tel#: 603-448-6363
 MAILING PO Box 600, Lebanon, NH 03766
 E-MAIL ADDRESS: jcicotte1@aol.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Dan Nash TEL.#: 802-356-4928
 MAILING ADDRESS: 105 Bank St, Lebanon, NH 03766
 E-MAIL ADDRESS: AdvancedGeomatics@comcast.net

PROJECT LOCATION:

TAX MAP #: 78 LOT#: 41 PLOT #: ZONE: IND-L
 STREET ADDRESS OF PROJECT: 99 Heater Road

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

SCOPE OF PROJECT:

Establish office use for Lot 78-41 for local cleaning business

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: office

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 8 January, 2024, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY
OWNER:

DATE: 12/4/2023

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: 12/4/2023

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #		
12/4/2023	78-41	PB2024-02-CUP		



City of Lebanon, New Hampshire

APPLICATION FOR CONDITIONAL USE PERMIT SUPPORT STATEMENT

Office Use Only Date Received: _____ Application No.: _____

I. APPLICATION CHECKLIST

- Application form
- Public Hearing Notification List
- Filing fee
- *This form, including written responses to the Section 302.4.D requirements, outlined below*
- *A site plan*
- Optional: photos and any other materials in support of your application

II. PROJECT DESCRIPTION

I (we) hereby request a Conditional Use Permit as provided for in Article(s) III, Section(s) 303.2 and 302.4 of the Lebanon Zoning Ordinance.

Please describe your proposed project with as much detail as possible. You can respond in the space provided below or on a separate sheet of paper.

To relocate the existing Aslan's Cleaning business office from 5 Edwards Street to 99 Heater Rd
so that the building will have one existing residential unit along with the office

III. CONDITIONAL USE PERMIT CRITERIA

In order to obtain a Conditional Use Permit, you must demonstrate to the Planning Board that the proposal satisfies the applicable criteria set forth in Sections A and B below. You must address each criteria in the space provided or on a separate sheet of paper.

A. Specific Criteria

The Conditional Use Permit is authorized by Article III, Section 303.2 of the Zoning Ordinance which requires the applicant to demonstrate that *(please address any criteria set forth in the Zoning Ordinance that specifically apply to your proposed use or project)*:

There are no specific criteria that apply for an office in the IND-L zone

B. General Criteria per Section 302.4.D

A conditional use permit shall be granted only if the Planning Board determines that the proposal conforms to all of the following standards:

1. The site is suitable for the proposal. This includes:

- a. Adequate vehicular and pedestrian access for the intended use.

Aslan's has been in business for many years at 5 Edwards Street. The location at 99 Heater Road will provide a more efficient office, better access, and convenient location for its operations. At its current location, Aslan's has vehicles parked in the street and 99 Heater Road will provide more suitable parking. The street is served by sidewalks.

- b. The availability of adequate public services to serve the intended use including emergency services, pedestrian facilities, safe access, and other municipal services.

The property is served by public water and sewer and is easily accessible by all municipal services.

- c. The absence of environmental constraints (floodplain, steep slope, etc.) proposed to be impacted by the intended use.

As no changes are intended for the site which is currently developed with a structure with paved parking, there will be no impacts on the site or the area. The property is not in the floodplain and does not have steep slopes.

- d. The availability of appropriate utilities to serve the intended use including water, Sewage disposal, storm water treatment, electricity, and similar utilities.

The site is currently served with municipal water and sewer, and is on a well-developed section Heater Road. No additional utilities are required for the operation of the Aslan office.

2. External impacts: The external impacts of the proposed use on abutting properties and the neighborhood shall be commensurate with the impacts of adjacent existing uses or other uses permitted in the zoning district. This shall include, but not be limited to, water runoff, drainage, traffic, noise, odors, vibrations, dust, fumes, hours of operation, and exterior lighting and glare. In addition, the location, nature, design, and height of the structure and its appurtenances, its scale with reference to its surroundings, and the nature and intensity of the use, shall not have an adverse effect on the surrounding environment nor discourage the appropriate and orderly development and use of land and buildings in the neighborhood. The proportion of the site proposed to be occupied by impervious surfaces shall be minimized to the extent necessary to preclude unreasonable risk of runoff, erosion, sedimentation, and other potentially adverse on-site or off-site effects.

The only abutting properties are the Hypertherm facility on the south side, a multifamily building to the west, and across the street is the Elks Lodge. The office generates no external noise, dust, odors, and its hours of operation are early morning to evening, similar to the other business along Heater Road.

CONDITIONAL USE PERMIT APPLICATION

Checklist and Support Statement

Last Revised 2/4/2020

Page 3 of 3

3. Character of the site development: The proposed layout and design of the site shall not be incompatible with the established character of the neighborhood and shall mitigate any external impacts on abutters, the neighborhood, and nearby public ways and infrastructure. This shall include, but not be limited to, the relationship of the building(s) to the street, the amount, location, and screening of off-street parking, the treatment of yards and setbacks, the buffering of adjacent properties, and provisions for vehicular and pedestrian access to and within the site.

No changes are anticipated to the existing site layout. The use of the property for an office is compatible with the Hypertherm facility, the Elks Lodge, and nearby Fort Harry's truck stop.

4. Character of the buildings and structures: The design of any new buildings or structures and the modification of existing buildings or structures on the site shall not be incompatible with the established character of the neighborhood. This shall include, but not be limited to, the scale, height, and massing of the building or structure, the roof line, locations of access, and visual compatibility with the area.

No new buildings are anticipated or required. The existing brick building is a feature of the established neighborhood which is primarily a through street for traffic from Enfield and Lebanon which is headed to DHMC, Centerra or Hanover.

5. Preservation of natural, cultural, historic, and scenic resources: The proposed use and layout of the site, including all related development activities, shall 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. This shall include, but not be limited to, identified wetlands, floodplains, significant wildlife habitat and documented wildlife corridors, stonewalls, mature tree lines, identified historic buildings or sites, scenic views, and viewsheds.

The existing site will be maintained with no expected changes to the site or the building which is usable for an office.

E # 23013466 12/05/2023 09:01 AM
Book 4842 Page 55 Page 1 of 2
Register of Deeds, Grafton County



LCHIP FEE	GRA194810	25.00
TRANS TAX	GR082646	6,225.00

WARRANTY DEED

Know all by these presents that I, Lisa Purinton f/k/a Lisa Lefebvre, married, of Melbourne, Florida, for consideration paid, grant to Edwards Properties, LLC, of Lebanon, County of Grafton and State of New Hampshire, with a mailing address of PO Box 600, Lebanon, NH 03766, with WARRANTY COVENANTS:

A certain tract or parcel of land, with all the buildings and improvements thereon, situate in Lebanon, in the County of Grafton and State of New Hampshire, on the southerly side of the Heater Road, bounded and described as follows, to wit:

Beginning at a drill hole in a granite monument set in the ground on the southerly side of the Branch of the Fourth New Hampshire Turnpike, leading from Lebanon northerly to Hanover, now known as the Heater Road, said point being 33 feet southerly from the center line of said Heater Road as now used, and 445 feet easterly from a stone bound at the southeasterly corner of premises formerly owned by Edmund C. and Augusta Fisher;

Thence making an interior angle of 90° with said Heater Road and leading South 45° 30' West a distance of 150 feet to a drill hole in a granite monument;

Thence making an interior angle of 90° and leading South 44° 30' East a distance of 100 feet to a drill hole in a granite monument;

Thence making an interior angle of 90° and leading North 45° 30' East a distance of 150 feet to a drill hole in a granite monument on the southerly side of said Heater Road 33 feet southerly from the center line of said Heater Road as now used;

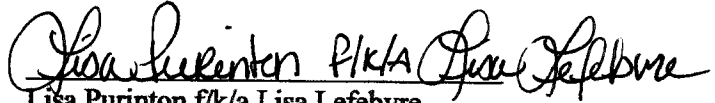
And thence making an interior angle of 90° and leading North 44° 30' West in a line parallel with and 33 feet southerly from said center line a distance of 100 feet to the point of beginning.

The Bearings as given are Magnetic (1949); all distances are to be more or less.

Meaning and intending hereby to describe and convey all and the same premises as conveyed to Lisa LeFebvre n/k/a Lisa Purinton by warranty deed of Guy Daniels, Raymond S. Daniels, Jennifer Walker, Ganna L. Moore, Donald Daniels and John S. Daniel, dated September 15, 1995 and recorded in the Grafton County Registry of Deeds at Book 2159, Page 625.

This is not homestead property of the grantor or grantor's spouse.

DATED this the 27 day of November, 2023.

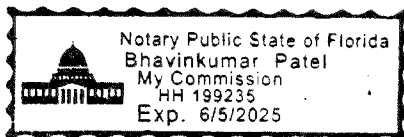

Lisa Purinton f/k/a Lisa Lefebvre

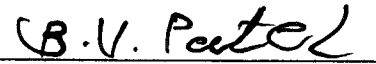
STATE OF Florida

COUNTY OF Brevard

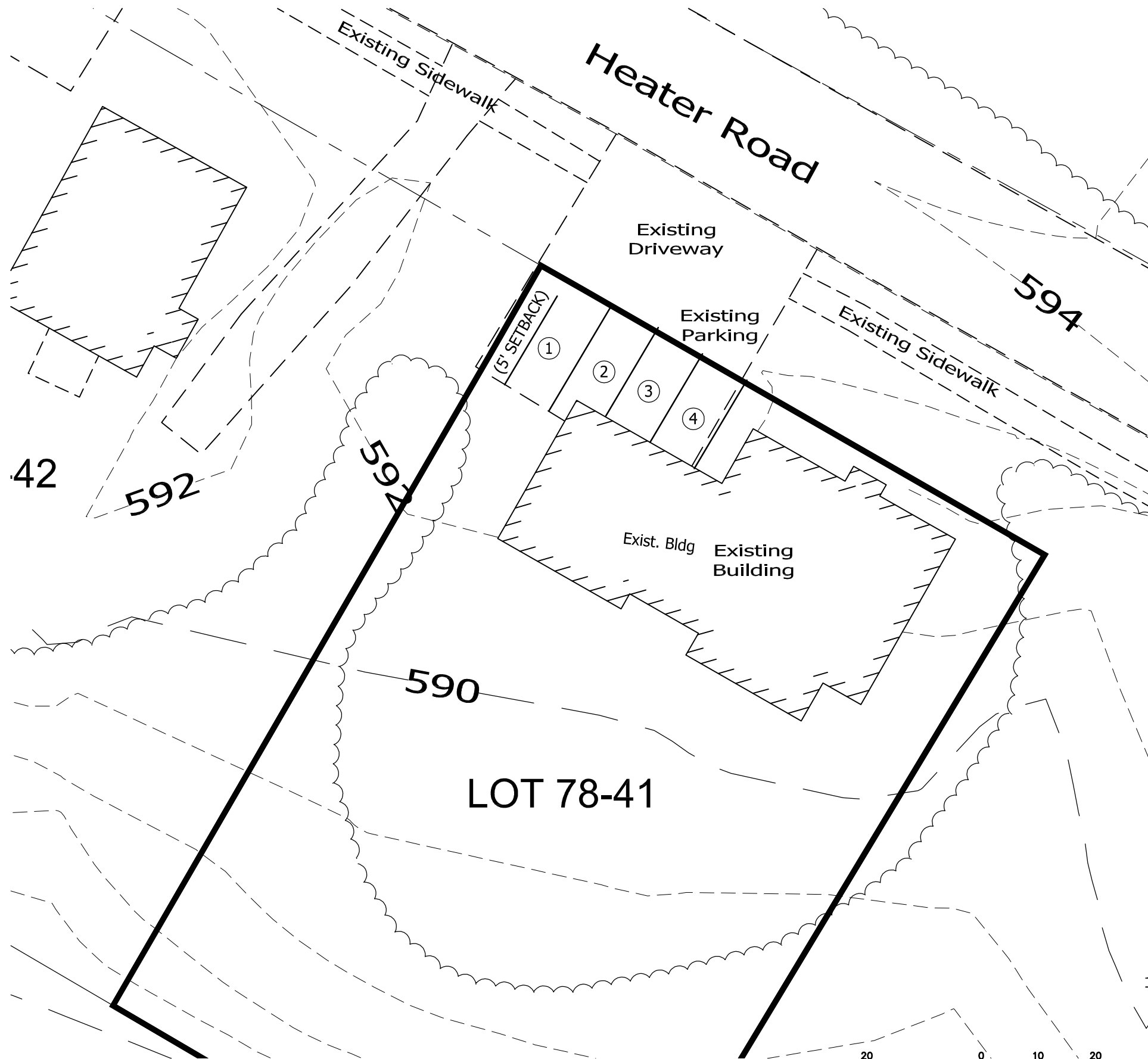
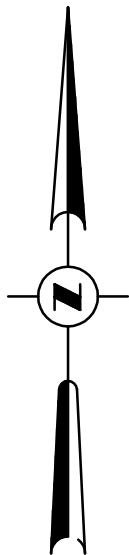
On this the 27 day of Nov, 2023, personally appeared before me Lisa Purinton f/k/a Lisa Lefebvre, known to me, or satisfactorily proven, to be the person whose name is subscribed to the foregoing instrument, and acknowledged that she executed same, as her free act and deed, for the purposes therein contained.

seal:




Notary Public
My commission expires: 6/5/2025

EDWARDS Properties					
99 HEATER ROAD					
LEBANON, NH					
<u>PARKING CALCULATIONS</u>					
	Existing				
	Area				Spaces
<u>99 Heater Road</u>	(sf)	Use	Rate	Units	Required
Office	450	office	1/250sf	450	1.8
warehouse(garage)	528	warehouse	1/1,000sf	528	0.5
One BR apartment	1,200	residential	1.5/unit	1	1.5
			sub-total		3.8
				(round up)_	
			Total required=		4.0
			Total Provided=		4



SITE PLAN



SCALE: 1" = 20'

NOTE:
1. PARKING SPACES 9X18.

ADVANCED GEOMATICS & DESIGN

105 BANK STREET - PO BOX 512
LEBANON, NEW HAMPSHIRE 03766

PHONE: (603) 448-6295

E-MAIL: advancedgeomatics@comcast.net

SITE PLAN
FOR
LOT 78-41
IN
LEBANON, NEW HAMPSHIRE

SURVEYED: GIS

DESIGNED: DAN

DRAWN: DAN

CHECKED: DAN

DATE: 12/21/2023

DWG: C:\23017\23017-OA.dwg

SK-1

CITY OF LEBANON APPLICATION FOR

SPECIAL EXCEPTION	☐	x	SITE PLAN REVIEW <i>Minor</i>
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☐	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	x	CONDITIONAL USE PERMIT
☐ OTHER _____			

PROPERTY OWNER (APPLICANT):

NAME: Pike Industries, Inc. TEL.#: 603-527-5100

MAILING ADDRESS: 3 Eastgate Park Rd, Belmont, NH 03220

E-MAIL ADDRESS: www.pikeindustries.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: TEL.#:

MAILING ADDRESS:

E-MAIL ADDRESS:

PROJECT LOCATION:

TAX MAP #: 157 LOT#: 5 PLOT #: ZONE: IND-H

STREET ADDRESS OF PROJECT: 335 Plainfield Rd, West Lebanon, NH 03784

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES xNO **HISTORIC DISTRICT** ☐ YES xNO
FLOOD PLAIN ☐ YES xNO

SCOPE OF PROJECT:

Addition of an asphalt cement tank and a used oil for recycle tank at the existing hot mix
asphalt plant.

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONEFAMILY ☐ TWOFAMILY ☐ MULTI-FAMILY ☐ COM M ER CIAL x INDUSTRIAL
PROPOSED ☐ VACANT ☐ ONEFAMILY ☐ TWOFAMILY ☐ MULTI-FAMILY ☐ COM M ER CIAL x INDUSTRIAL
IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC**
USE: paving plant

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 January 8, 2024, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY

OWNER: Cory Gucwa DATE: 12/11/2023

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 #
12/11/2023	157-5	PB2024-03-CUPSPR



City of Lebanon, New Hampshire

APPLICATION FOR CONDITIONAL USE PERMIT

SUPPORT STATEMENT

Office Use Only Date Received: _____ Application No.: _____

I. APPLICATION CHECKLIST

- Application form
- Public Hearing Notification List
- Filing fee
- *This form, including written responses to the Section 302.4.D requirements, outlined below*
- *A site plan*
- Optional: photos and any other materials in support of your application

II. PROJECT DESCRIPTION

I (we) hereby request a Conditional Use Permit as provided for in Article(s) III,
Section(s) 304.2, of the Lebanon Zoning Ordinance.

Please describe your proposed project with as much detail as possible. You can respond in the space provided below or on a separate sheet of paper.

Please see attached.

III. CONDITIONAL USE PERMIT CRITERIA

In order to obtain a Conditional Use Permit, you must demonstrate to the Planning Board that the proposal satisfies the applicable criteria set forth in Sections A and B below. You must address each criteria in the space provided or on a separate sheet of paper.

A. Specific Criteria

The Conditional Use Permit is authorized by Article III, Section 302.4 of the Zoning Ordinance which requires the applicant to demonstrate that (*please address any criteria set forth in the Zoning Ordinance that specifically apply to your proposed use or project*):

Please see attached.

CONDITIONAL USE PERMIT APPLICATION

Support Statement
Last Revised 3/8/2022
Page 2 of 3

B. General Criteria per Section 302.4.D

A conditional use permit shall be granted only if the Planning Board determines that the proposal conforms to all of the following standards:

1. The site is suitable for the proposal. This includes:

- a. Adequate vehicular and pedestrian access for the intended use.

Please see attached.

- b. The availability of adequate public services to serve the intended use including emergency services, pedestrian facilities, safe access, and other municipal services.

Please see attached.

- c. The absence of environmental constraints (floodplain, steep slope, etc.) proposed to be impacted by the intended use.

Please see attached.

- d. The availability of appropriate utilities to serve the intended use including water, sewage disposal, stormwater treatment, electricity, and similar utilities.

Please see attached.

2. External impacts: The external impacts of the proposed use on abutting properties and the neighborhood shall be commensurate with the impacts of adjacent existing uses or other uses permitted in the zoning district. This shall include, but not be limited to, water runoff, drainage, traffic, noise, odors, vibrations, dust, fumes, hours of operation, and exterior lighting and glare. In addition, the location, nature, design, and height of the structure and its appurtenances, its scale with reference to its surroundings, and the nature and intensity of the use, shall not have an adverse effect on the surrounding environment nor discourage the appropriate and orderly development and use of land and buildings in the neighborhood. The proportion of the site proposed to be occupied by impervious surfaces shall be minimized to the extent necessary to preclude unreasonable risk of runoff, erosion, sedimentation, and other potentially adverse on-site or off-site effects.

Please see attached.

CONDITIONAL USE PERMIT APPLICATION

Checklist and Support Statement

Last Revised 2/4/2020

Page 3 of 3

3. Character of the site development: The proposed layout and design of the site shall not be incompatible with the established character of the neighborhood and shall mitigate any external impacts on abutters, the neighborhood, and nearby public ways and infrastructure. This shall include, but not be limited to, the relationship of the building(s) to the street, the amount, location, and screening of off-street parking, the treatment of yards and setbacks, the buffering of adjacent properties, and provisions for vehicular and pedestrian access to and within the site.

Please see attached.

4. Character of the buildings and structures: The design of any new buildings or structures and the modification of existing buildings or structures on the site shall not be incompatible with the established character of the neighborhood. This shall include, but not be limited to, the scale, height, and massing of the building or structure, the roof line, locations of access, and visual compatibility with the area.

Please see attached.

5. Preservation of natural, cultural, historic, and scenic resources: The proposed use and layout of the site, including all related development activities, shall 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. This shall include, but not be limited to, identified wetlands, floodplains, significant wildlife habitat and documented wildlife corridors, stonewalls, mature tree lines, identified historic buildings or sites, scenic views, and viewsheds.

Please see attached.



T +1 (603) 527-5100

F +1 (603) 527-5101

www.pikeindustries.com

December 11th, 2023

Tim Corwin, Planning Office
City of Lebanon
51 North Park Street
Lebanon, NH 03766

Re: Conditional Use Permit Application
Lot 157-5
335 Plainfield Rd

Dear Mr. Corwin:

Below please find our supporting documentation for Conditional Use Permit Application for parcel 157-5.

Conditional Use Permit

II. Project Description

The project scope includes the addition of two (2) 25,000-gallon tanks to our tank farm. One will specifically be used to Asphalt Cement (AC), the other may be used for either AC or Specification Used Oil for Recycle (RFO). AC is a liquid used in the mix for pavement products, and the RFO is used as a fuel source for operation of the plant. To accommodate these tanks we will be adding a wall extension at our existing tank farm so the tanks would sit within the same diked containment area as our other tanks that are solely used in the production of asphalt paving mixtures.

III. Conditional Use Permit Criteria

A. Specific Criteria

As will be detailed in Section (B) below, this application meets all General Criteria per Section 302.4.D as applied by Section 304.2 'Uses by Conditional Use Permit: Commercial/Non-residential (1.) Bituminous paving plant'. Project lot 157-5 is classified as IND-H by section 300 and 301, Establishment of Use Districts and Zoning Map, respectively.

B. General Criteria per Section 302.4.D

1. The site is suitable for the proposal

a. Adequate vehicular and pedestrian access for the intended use.

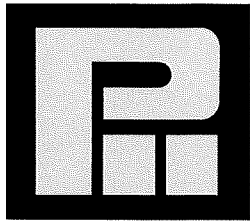
There is adequate vehicular access on site. Proposed changes do not constitute a change in use, merely an expansion of preexisting materials storage, therefore vehicular traffic flow has long been established at the site and will not be altered. Pedestrians are discouraged from entering our site for safety reasons. If there is a reason for such pedestrian traffic, ie consultant or inspector visitors, then each individual is required to first sign in at the scalehouse, which requires a safety briefing before entering the rest of the site.

b. The availability of adequate public services to serve the intended use including emergency services, pedestrian facilities, safe access, and other municipal services.

Employee or pedestrian foot traffic is minimized when and where possible; designated crossing and foot traffic areas are painted and or demarcated on the pavement; and all onsite persons are required to wear certain personal protective equipment when not inside buildings. The general public is discouraged from entering our site. Public service access is adequate, the proposed changes will not alter the accessibility for appropriate public, municipal, or emergency services.

c. The absence of environmental constraints (floodplain, steep slope, etc.) proposed to be impacted by the intended use.

There are no environmental constraints within the proposed project area. The expansion area for the two tanks will be installed on a currently paved surface, and will not add to impervious surface area. The page 35 of 99



PIKE INDUSTRIES

A CRH COMPANY

expansion area is not on a steep slope.

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F +1 (603) 527-5101

www.pikeindustries.com

d. The availability of appropriate utilities to serve the intended use including water, sewage disposal, stormwater treatment, electricity, and similar utilities.

Required utilities are already available within easy access to the proposed project area.

2. External impacts

The double tank expansion will create no external impacts. Both tanks are simply for additional storage of products which are already being stored and used onsite for preexisting business practices.

3. Character of the site development

The site has been used for heavy, industrial uses since the construction of the interstate in the 1960's. The site fulfills the crucial need of aggregate products, concrete, and paving needed for creation and upkeep of our infrastructure.

4. Character of the buildings and structures

The proposed pair of tanks will look very similar to the existing trio of Asphalt Cement tanks which are already within the diked containment area we are proposing to expand upon. There will be no adverse impact from these additional tanks.

5. Preservation of natural, cultural, historic, and scenic resources

The additional tanks will not adversely impact any of these resources.

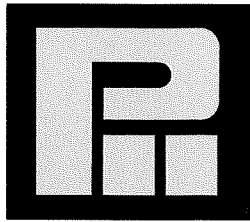
The paving plant was approved in 2005 as a special exception. The plan received site plan approval. In January of 2018 the city council approved changes to the zoning ordinance which moved our business under the general criteria for conditional use permit from special exceptions. We submit that the proposal to construct these two tanks within an expansion of existing diked containment area meets all the criteria for a conditional use permit.

Site Plan Review

We understand that the project is a modification to an approved site plan. We understand this project to fall under the category of Land Development subject to Minor Site Plan Review as outlined in Article III 3.1.C.1 Column A: New Improved Surfaces between 500 and 2,500 sq. ft. (project expansion area approximately 780 sq. ft.) and definitions provided in Article II of the Site Plan Review Regulations dated 1/23/2023. The proposed project is not a building or dwelling.

Per 3.2.B.7.e.iv the provided site plan documentation will show that we are expanding upon preexisting impervious surface area, therefore there are no changes to stormwater from increasing impervious area.

Please let us know if you need any additional materials to support this application. We look forward to meeting with you and the Board to answer any questions you may have.



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INDUSTRIES**

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F +1 (603) 527-5101

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Fee Payment:

Filing Fee CUP	\$ 250.00
Minor Site Plan Review	\$ 150.00
Advertising Fee	\$ 100.00
Notification Fee	\$ 189.62 (\$5x19 notifications + \$4.98x19 notifications)
Owner/App.	1
Abutters	17
Consultant	1
	19
Total Application Fee	\$ 689.62

Sincerely,

Cory Guca
Environmental Manager
Pike Industries, Inc.
T + 1 (603) 393 3535
E cguca@pikeindustries.com



T +1 (603) 527-5100

F +1 (603) 527-5101

www.pikeindustries.com

January 2nd, 2024

Tim Corwin, Planning Office
City of Lebanon
51 North Park Street
Lebanon, NH 03766

Re: PB2024-03-CUPSPR
Lot 157-5
335 Plainfield Rd

Dear Mr. Corwin:

Please find included the Technical Checklist, our Request for Waivers, as well as the Stormwater Permit which Pike maintains for the subject site. These should finalize and complete our application for Site Plan Review and Conditional Use Permit, to be heard by the Planning Board on the evening of January 8th, 2024.

Fee Payment:

Total Application Fee \$ 414.76

- As identified by Crystal Taplin, email dated 12/20/2023
- includes costs associated with notifying 12 abutters

Thank you, we look forward to working with you and the City during this process.

Sincerely,

Cory Gucwa
Environmental Manager
Pike Industries, Inc.
T + 1 (603) 393 3535
E cgucwa@pikeindustries.com



City of Lebanon, New Hampshire APPLICATION FOR WAIVERS

Office Use Only

Date Received: _____

File No.: _____

PROJECT INFORMATION

Name of Applicant: Pike Industries, Inc.

Project Name: Tank Farm Expansion / App PB2024-03-CUPSPR

Project Address: 335 Plainfield Rd, West Lebanon, NH 03784

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).]

1. Section E.5 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because _____

Project proximity to property lines is 200ft or greater.
Setback infringement will not be a potential issue during
completion of project.

2. Section E.13 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because _____

Proposed project expansion
will be visually similar to existing site conditions and tanks nearby.
No significant changes to site illumination will occur. Elevations are
provided in Site Plan, however.

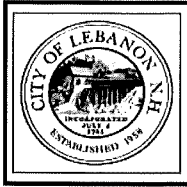
3. Section E.14 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because No additional Signage will be added, or removed, relative to project beyond tank-mounted placards to comply with NFPA requirements. See p6 for details, in Site Plan.
4. Section E.16 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because No landscaping will be affected by this project; project only within limits of pre-existing impervious surface.
5. Section 6.6.6 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because Proposed changes to the site will not affect stormwater quality or quantity. Proposed impervious surfaces are already impervious. Pike maintains Permit NHR053144 SWPPP with the EPA. The Plan is included for the City's reference.
6. Section 6.6.7 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because No Phased Development with this project.
7. Section E.23 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because Not applicable to this project.
8. Section E.14 of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because Flow-able surface area to decrease a small amount; existing methods not to change in any sizeable amount.

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: [Signature]

Date: 1/2/2024



City of Lebanon, New Hampshire

APPLICATION FOR MINOR SITE PLAN REVIEW SUPPORT STATEMENT

Office Use Only Date Received: _____ Application No.: _____

I. APPLICATION CHECKLIST [per §3.2.B.7 of the Site Plan Review Regulations]

An Application, completed in full and signed by the property owner [§3.2.B.7.a]

This Support Statement, completed in full and signed by the applicant [§3.2.B.7.b]

Payment of the appropriate filing fees [§3.2.B.7.c]

A completed Public Hearing Notification List [§3.2.B.7.d]

A digital copy of the site plan set, prepared in accordance with the requirements of §3.2.B.7.e, in .PDF format

Optional: photos and any other materials in support of your application

II. PROJECT DESCRIPTION

Describe your proposed project with as much detail as possible, including but not limited to changes to the use(s), to the exterior of the building, and to the site. You can respond in the space provided below or on a separate sheet of paper.

Please see attached CUP Supplemental document for full project details.

III. SITE PLAN TECHNICAL CHECKLIST

The site plan shall:	Info. Provided
<u>3.2.B.7.e</u> - Be scaled	☒
<u>3.2.B.7.e</u> - Be prepared utilizing the current approved site plan as a base map, if available	☒
<u>3.2.B.7.e</u> - Identify all abutters	☒
<u>3.2.B.7.e.i</u> - Indicate the site location	☒
<u>3.2.B.7.e.i</u> - Indicate the address of the subject property	☒
<u>3.2.B.7.e.i</u> - Indicate the zoning classification of the subject property	☒
<u>3.2.B.7.e.ii</u> - Describe the size, shape, and use of the subject property	☒
<u>3.2.B.7.e.ii</u> - Describe relevant information about existing site topography, drainage, hydrologic features, vegetation, and other natural features	☒
<u>3.2.B.7.e.ii</u> - Describe proposed changes to site topography, drainage, hydrologic features, vegetation, and other natural features	☐

Support Statement
Page 2 of 2

I hereby attest that to the best of my knowledge all of the information on this Support Statement and in the accompanying Minor Site Plan application materials and documentation is true and accurate.

Date 12/11/2023

CITY OF LEBANON, NH SITE PLAN REVIEW REGULATIONS TECHNICAL CHECKLIST	
PROJECT NAME: Tank Farm Expansion / App PB2024-03-CUPSPR	
APPLICANT: Pike Industries, Inc.	DATE: 1/2/2024
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.	☒	☐
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.	☐	☐
5.1.E(10) - Loading spaces and facilities used in connection with any structures on the site shall be shown	☒	☐
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. (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.)	☒	☐

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

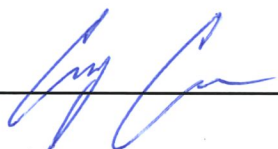
Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(13) - Plan for outdoor lighting showing proposed location, mounting height, fixture type, lamp type, color correlated temperature (CCT), and wattage of all exterior free-standing lighting or building-mounted fixtures.	☐	☒
5.1.E(13) - Analyses 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.	☐	☒
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.	☐	☒
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.	☐	☒
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).	☒	☐
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.	☒	☐
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.	☐	☒
5.1.E(16) - Calculations for square footage of perimeter landscaping.	☐	☒
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.	☐	☒

see attached site-specific stormwater plan

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.)	☒	☐
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.	☒	☐
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.	☐	☒
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.	☐	☒

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: 

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

CITY OF LEBANON, NH STORMWATER REVIEW REGULATIONS TECHNICAL CHECKLIST	
PROJECT NAME: Tank Farm Expansion / App PB2024-03-CUPSPR	
APPLICANT: Pike Industries, Inc.	DATE: 1/2/2024

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.	☐ ☐ ☐ ☐ ☐ ☐	☒ ☐ ☐ ☐ ☐ ☐
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.	☐	☒

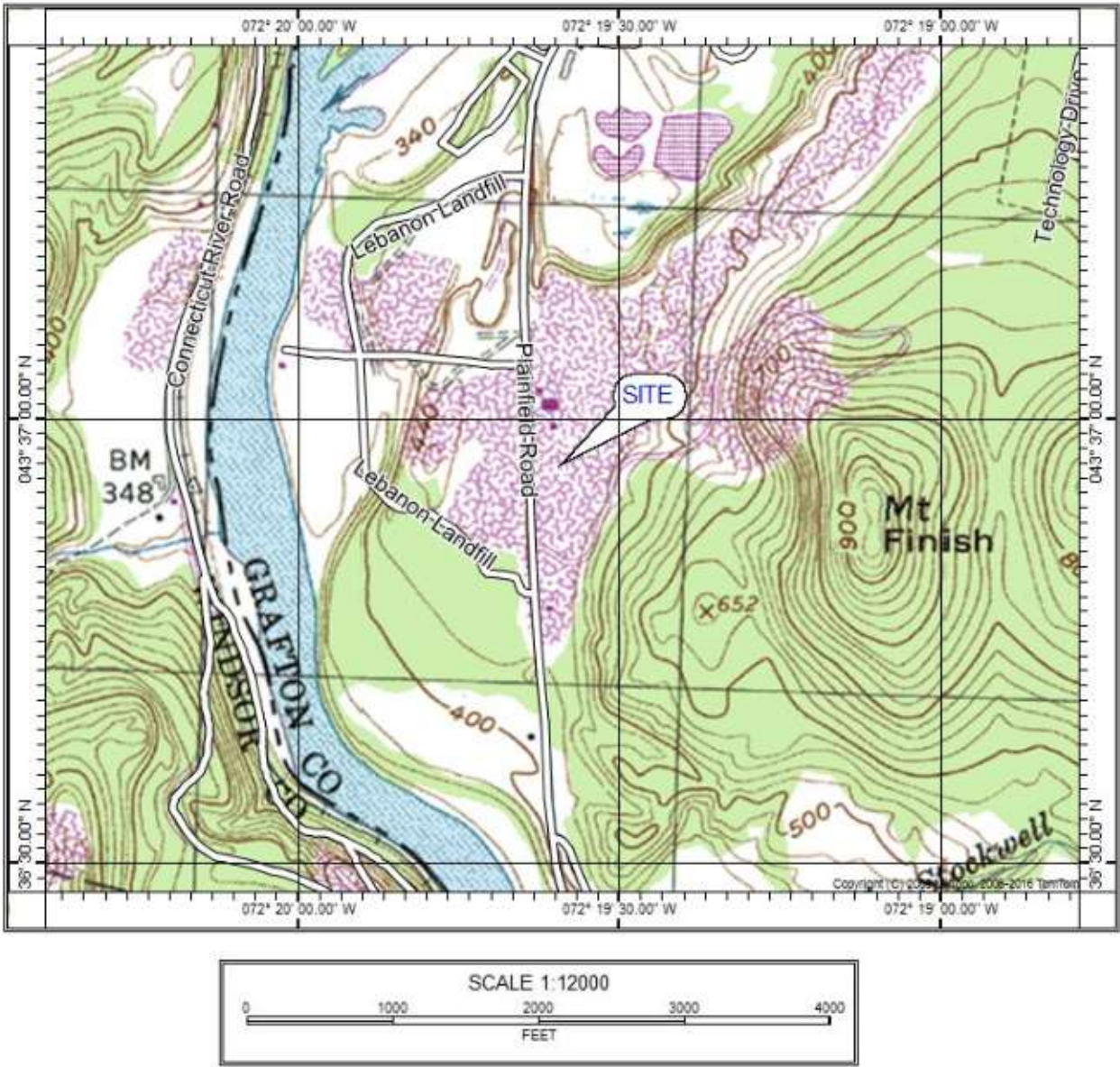
NOTE: THE APPLICANT IS RESPONSIBLE FOR PROVIDING THE REQUIRED INFORMATION PURSUANT TO ARTICLE VI OF THE SITE PLAN REVIEW REGULATIONS. PLEASE BE AWARE THAT THIS CHECKLIST IS FOR INFORMATION AND GUIDANCE ONLY AND DOES NOT REPRESENT THE LAW DICTATING SUBMITTAL REQUIREMENTS NOR IS IT COMPLETE AND INCLUSIVE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

Completed By: Cory Gucwa 

(Last Revised 9/20/2021)

Planning office Use Only:

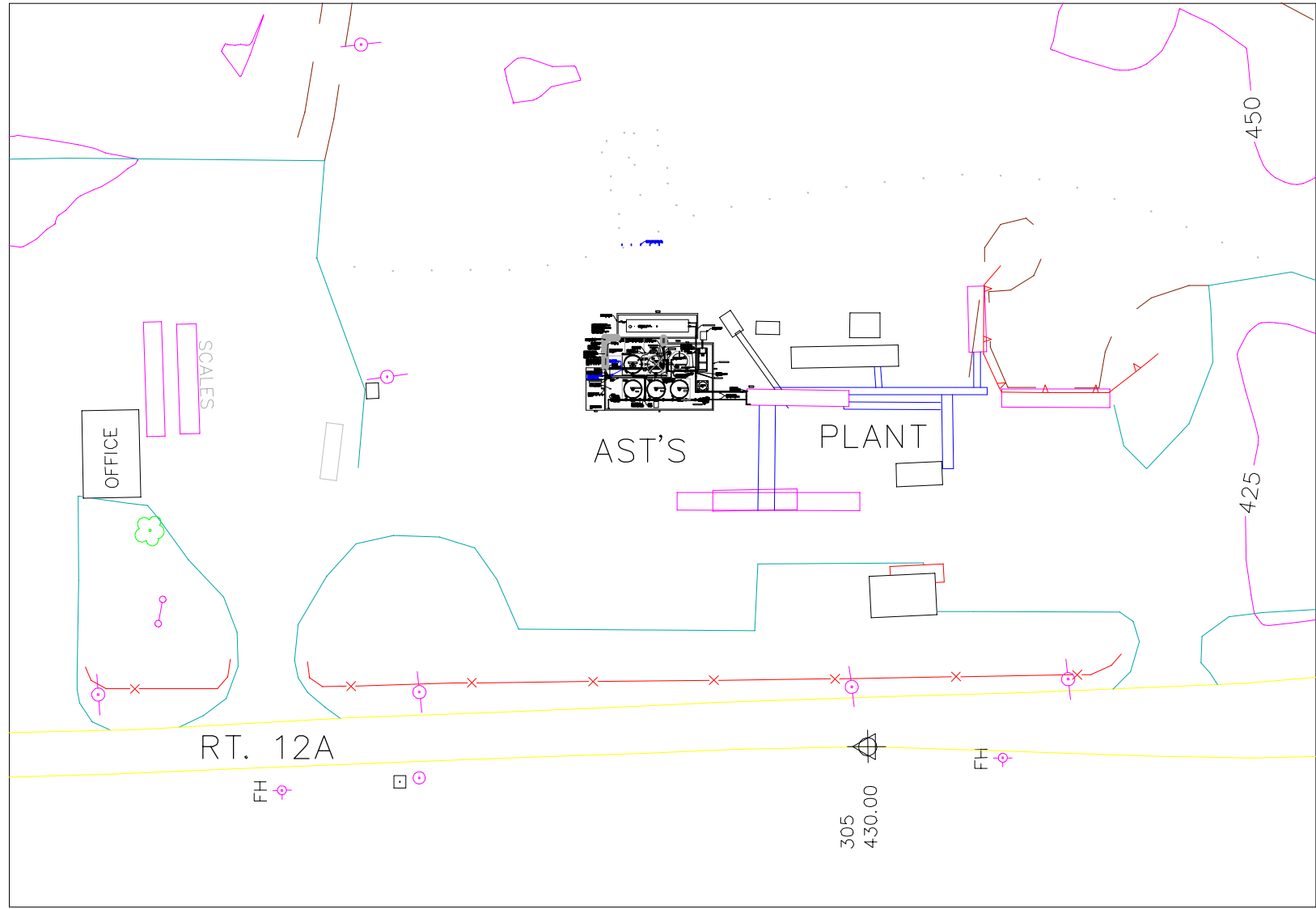
Date Received ___/___/___ Checklist Complete YES or NO Checked by: _____



LOCATION MAP

NOTES:

NO WATER SUPPLY WELLS WERE IDENTIFIED WITHIN 500- FEET OF THE AST SYSTEM.



AST SYSTEM OVER VIEW

1" = 100'

GENERAL NOTES

THE PURPOSE OF THIS PLAN IS TO SHOW THE INSTALLATION OF A NEW ASPHALT TANK AND A NEW USED OIL FOR RECYCLE TANK AT AN EXISTING AST FACILITY. THE INFORMATION CONTAINED WITHIN WAS OBTAINED FROM THE EXISTING AST SYSTEM PLANS. THIS PLAN SHALL ONLY SERVE TO OBTAIN THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) AST CONSTRUCTION APPROVAL AND AS GUIDANCE IN COMPLETING THE AST INSTALLATION. THIS PLAN SHALL NOT BE CONSTRUED AS A COMPLETE SITE PLAN REPRESENTING ALL UTILITY LOCATIONS AND FIELD CONDITIONS.

UTILITY INFORMATION SHALL BE VERIFIED BY BOTH THE OWNER AND CONTRACTOR PRIOR TO COMMENCING THE AST INSTALLATION.

THE FACILITY OWNER IS RESPONSIBLE FOR OBTAINING APPLICABLE APPROVALS AND OR PERMITS FROM THE AUTHORITY(IES) ENFORCING THE STATE FIRE CODE AND LOCAL BUILDING CODES.

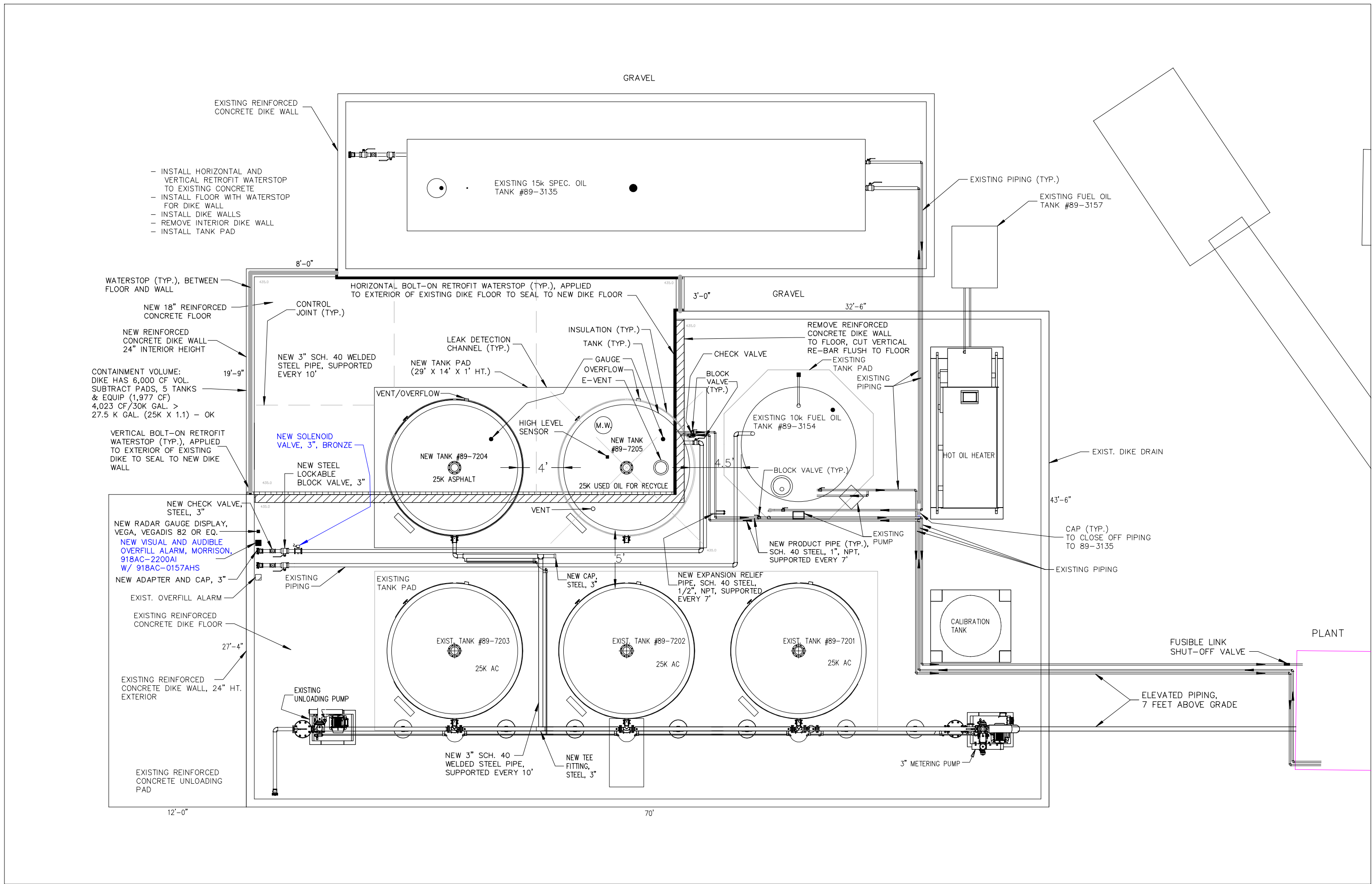
THE CONTRACTOR SHALL PRE-MARK THE WORK AREA AND NOTIFY DIG SAFE 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY ALL OTHER UTILITIES NOT NOTIFIED BY DIG SAFE AND HAVE ANY ON-SITE UTILITIES LOCATED/MARKED.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE LOCAL FIRE DEPARTMENT AND BUILDING DEPARTMENT TO PROVIDE NOTIFICATIONS AND OBTAIN PERMITS, SUCH AS ELECTRICAL PERMITS, ETC.

PER ENV-OR 306.02, ALL AST FACILITIES SHALL PREPARE AND IMPLEMENT A SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN IN ACCORDANCE WITH 40 CFR 112. THE NHDES WILL NOT GRANT OPERATIONAL APPROVAL OF THE SUBJECT TANK(S) UNTIL A NHPE HAS SIGNED THE CERTIFICATION PAGE OF THE PLAN AND SUBMITTED IT TO THE NHDES.

AST SYSTEM NOTES

1. PER ENV-OR 307.09, THE WORK SHALL BE SUPERVISED BY A CONTRACTOR ICC-CERTIFIED FOR AST INSTALLATION – U5.
2. THE REMOVAL OR REPLACEMENT OF TANKS OR PIPING SHALL CONFORM WITH THE CLOSURE AND SITE ASSESSMENT REQUIREMENTS OF ENV-OR 308 AS APPLICABLE.
3. PER ENV-OR 307.10(b), AST SYSTEMS SHALL NOT BE CONSTRUCTED WITHIN THE FLOODWAY PORTION OF THE SPECIAL FLOOD HAZARD AREA. THE AST'S ARE NOT INSTALLED WITHIN A FLOODWAY.
4. THIS EXISTING FACILITY HAS NO PUBLIC WATER SUPPLY WELLS LOCATED WITHIN 400- FEET OF THE AST SYSTEM. NO NON-PUBLIC WATER SUPPLY WELLS ARE LOCATED WITHIN 75- FEET OF THE AST SYSTEM; NO SURFACE WATERS ARE LOCATED WITHIN 75- FEET OF THE AST SYSTEM; NO DESIGNATED RIVERS ARE LOCATED WITHIN 1/4 MILE OF THE AST SYSTEM.
5. TEST ABOVEGROUND PIPNG AT 75 PSI FOR 1 HOUR WITH NO LOSS. TEST AST'S PER TANK MANUFACTURER'S INSTRUCTIONS AT 4 PSI FOR 1 HOUR.
6. HANDLE TANKS AND EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
7. OVERFILL PROTECTION SETTING CALCULATIONS: THE OVERFILL PROTECTION WILL CONSIST OF AN AUDIBLE AND VISIBLE ALARM FOR THE OIL DELIVERY OPERATOR SET AT 90% AND A SOLENOID VALVE TO CLOSE AT 95%. THE DEPTH OF THE 25K TANK IS 36.96'. 90% IS AT A DEPTH OF 33.25' FROM THE BOTTOM. 95% IS AT A DEPTH OF 35' FROM THE BOTTOM.
8. AN UPDATED REGISTRATION FORM IS TO BE SUBMITTED TO THE NHDES PRIOR TO AUTHORIZATION TO OPERATE.
9. GROUNDING AND BONDING EQUIPMENT SHALL BE INSTALLED ON THE AST SYSTEMS TO PROTECT FROM STATIC DISCHARGE DURING UNLOADING.
10. ALL ELECTRICAL AND CONDUIT INSTALLATIONS/MATERIALS/OFFSETS SHALL MEET NFPA 70 – 2020 EDITION REQUIREMENTS.
11. A WRITTEN ICC AST INSTALLER REPORT SHALL BE SUBMITTED TO NHDES PER ENV-OR 307.09(B).
12. TANK TOP EQUIPMENT SHALL BE REMOVED DURING DES OPERATION INSPECTION WITH FUNCTIONALITY DEMONSTRATED AND MEASUREMENTS DOCUMENTED TO MEET COMPLIANCE W/ ENV-OR 300.
13. ALL TANKS AND PIPING SHALL BE PAINTED OR COATED PER ENV-OR 305.06(C).
14. THE AST SYSTEM FOR TANK #89-7205 FUELS A HEATING DEIVCE AND THE SYSTEMS SHALL BE REGULATED UNDER NFPA 31 – 2011.



AST SYSTEM PLAN

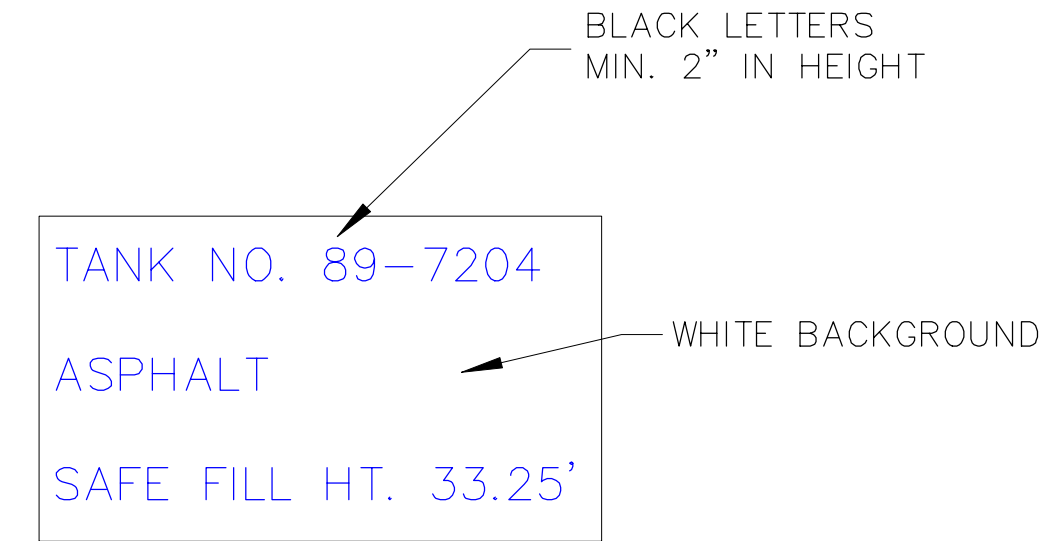
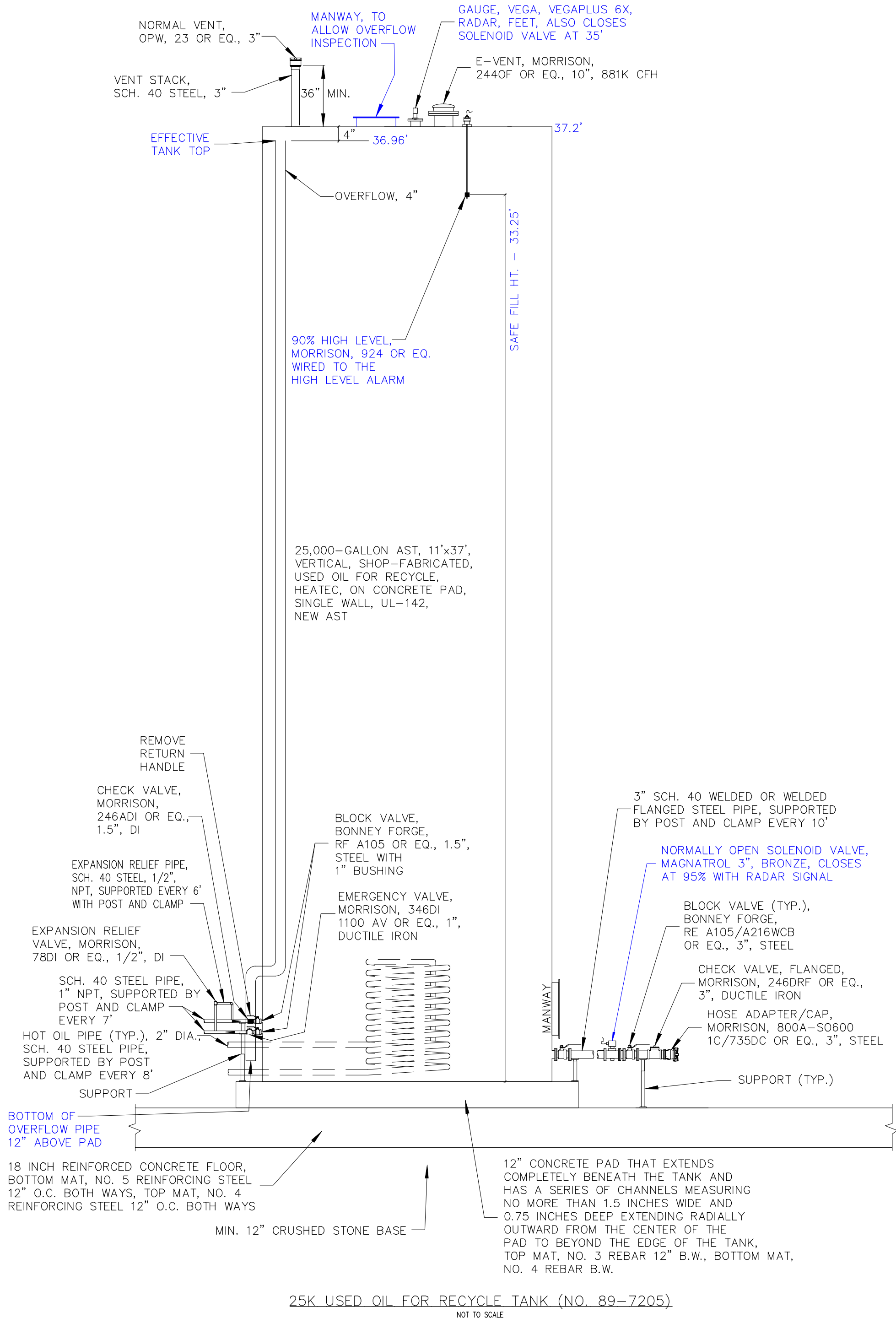
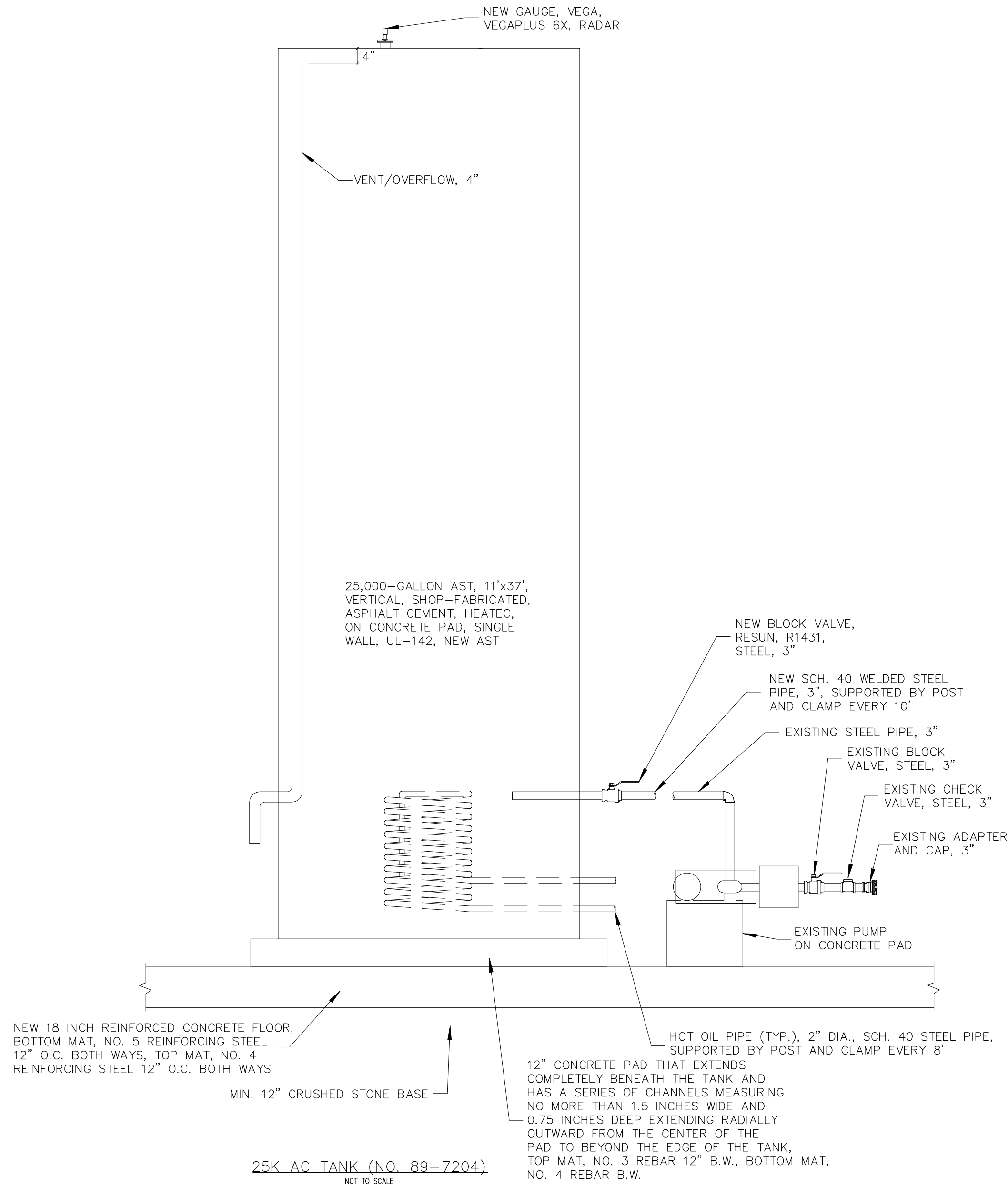
1" = 7.5'

AST PLAN
PIKE INDUSTRIES INC 804
335 PLAINFIELD ROAD
LEBANON, NEW HAMPSHIRE 03766
AST FACILITY NO. 920125A

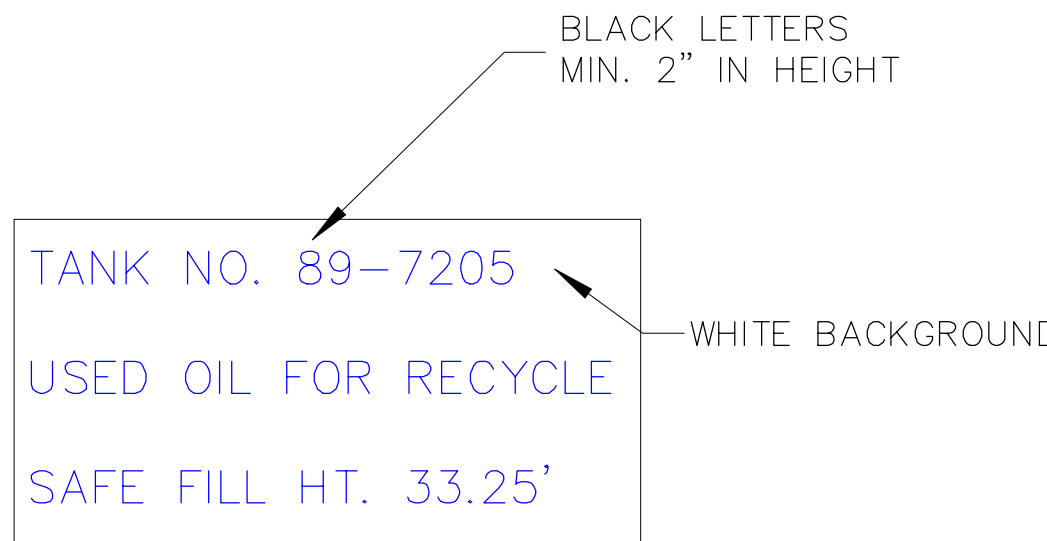
Antonia Design LLC
51 Rangeway Road
Dundwich, NH 03846
603-774-2207



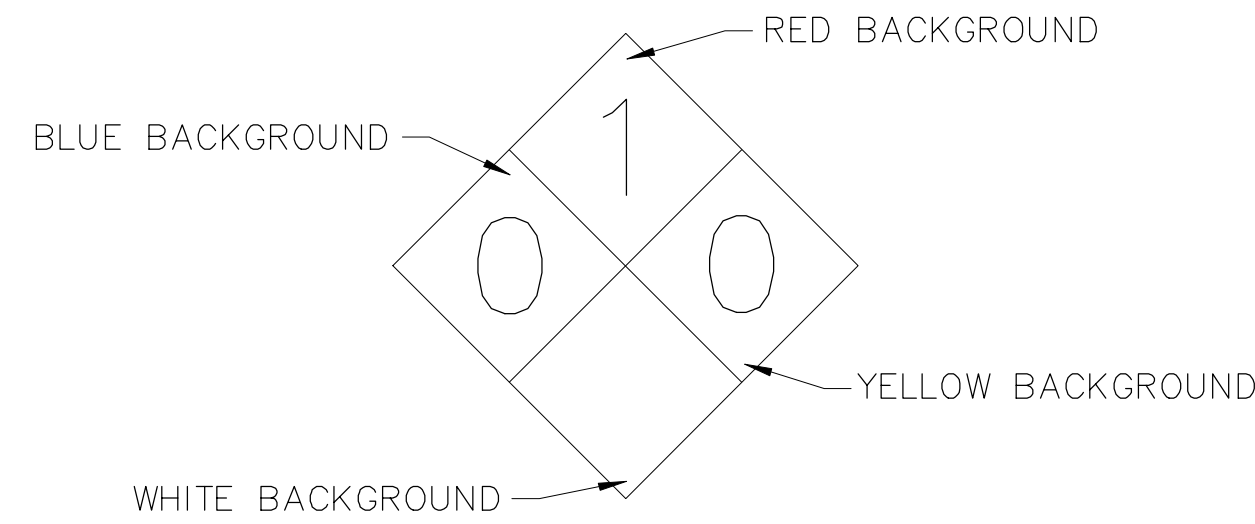
PROJECT NO.: 22302
DATE: 2/1/23
SHEET NO.: 1 OF 3



AST MARKING DETAIL
FOR TANK NO. 89-7204



AST MARKING DETAIL
FOR TANK NO. 89-7205



NFPA SYMBOL FOR ASPHALT
& USED OIL FOR RECYCLE

FACILITY OWNER TO VERIFY NFPA
HAZARD SYMBOL NUMBERING PER
PRODUCT SUPPLIER GUIDANCE

NOTE:
THIS DRAWING CONTAINS INSTRUMENTS OF SERVICE
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REV.	DATE	DESCRIPTION	DESCRIPTION
1	4/3/23	NHDES COMMENTS	REV. TANK 89-7205 EQUIPMENT
2	4/13/23	NHDES COMMENTS	NHDES COMMENTS
3	6/9/23	INCREASE VOLUME FOR 89-7205	
4	11/9/23		
5	11/29/23		

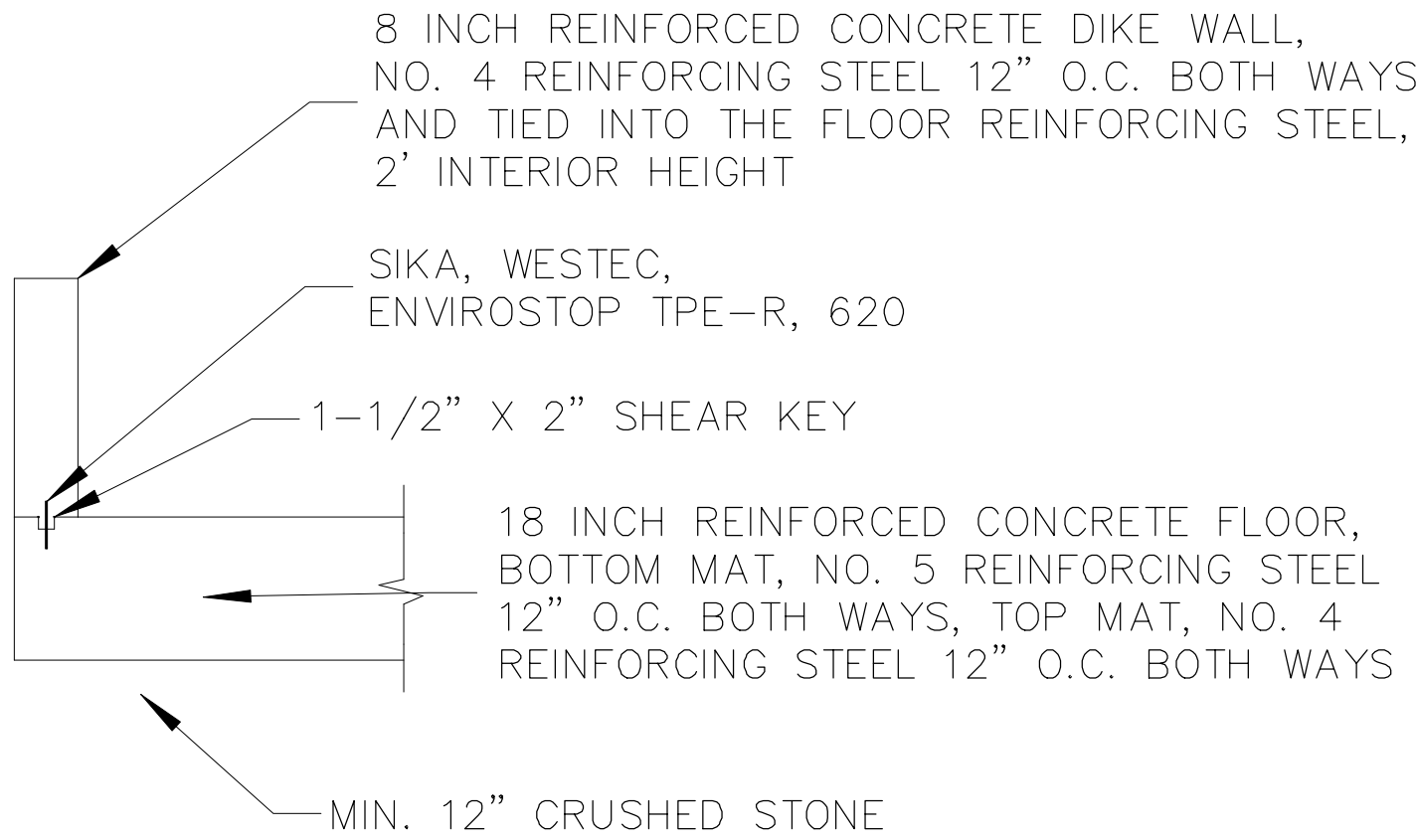
AST DETAILS

PIKE INDUSTRIES INC 804
335 PLAINFIELD ROAD
LEBANON, NEW HAMPSHIRE 03766
AST FACILITY NO. 920125A

Antonia Design LLC
51 Rangeway Road
Dundon, VT 05346
603-774-2207

STATE OF NEW HAMPSHIRE
MARK
ANTONIA
9170
LICENSED
PROFESSIONAL ENGINEER

PROJECT NO.: 22302
DATE: 2/1/23
SHEET NO.: 2 OF 3

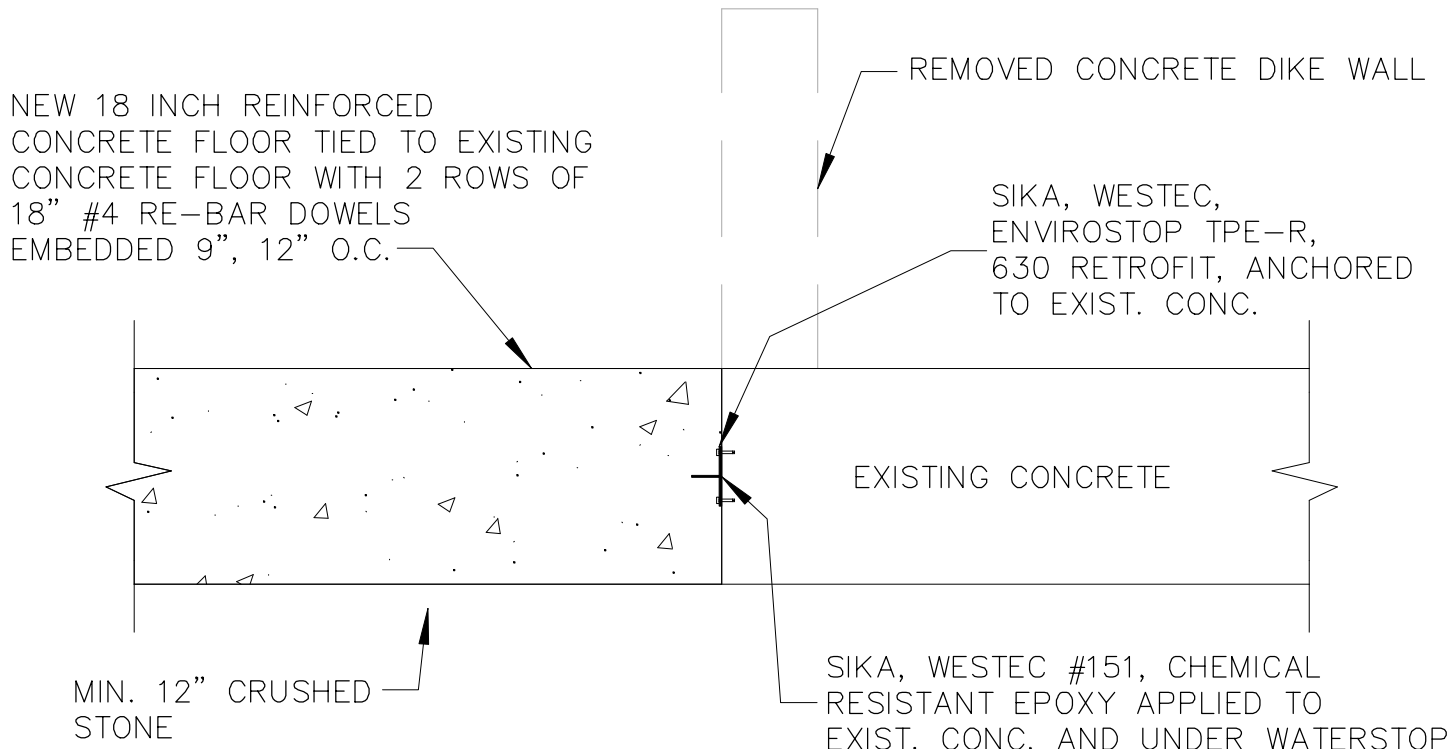


NEW CONCRETE WATERSTOP DETAIL (PROFILE)
NOT TO SCALE

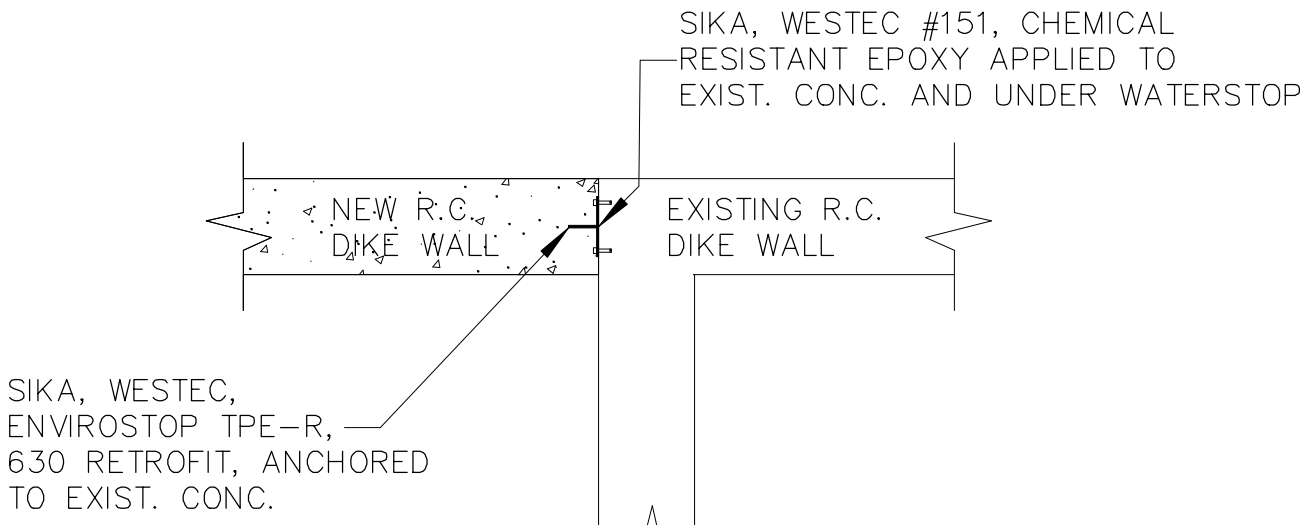
NOTE:

THERE SHALL BE NO COLD JOINTS IN FLOOR OR DIKE.

PROVIDE CONTROL JOINTS IN FLOOR EVERY 12' BOTH WAYS.

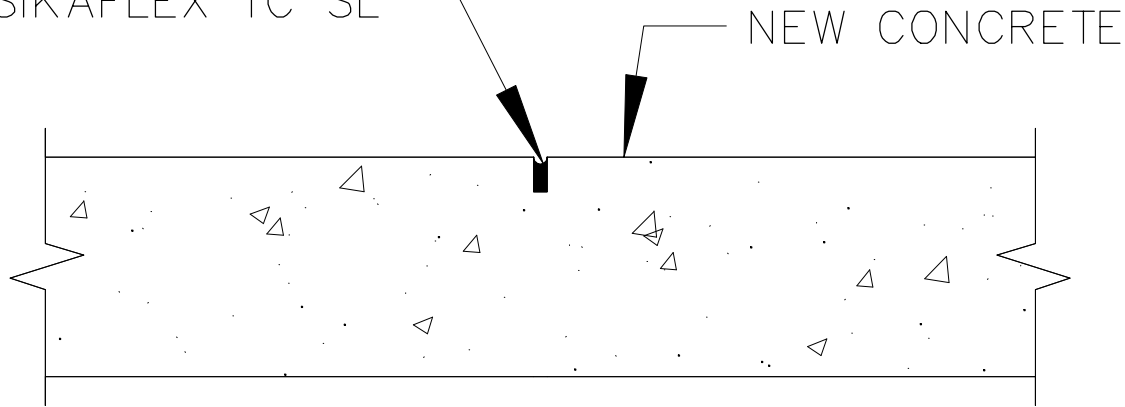


NEW FLOOR WATERSTOP DETAIL (PROFILE)
NOT TO SCALE



NEW WALL WATERSTOP DETAIL (TOP VIEW)
NOT TO SCALE

TOOLED OR CUT JOINT, 1/4" WIDE,
2" DEEP, COMPLETELY FILLED
W/ SELF LEVELING JOINT
SEALANT, SIKAFLEX 1C SL



CONTROL JOINT DETAIL
NOT TO SCALE

NOTE:

HORIZONTAL AND VERTICAL RETROFIT WATERSTOP
SHALL BE HEAT WELDED IN PLACE WITH A SPLICING
IRON AT THEIR INTERSECTIONS.

THE WATERSTOP FOR THE NEW CONCRETE SHALL
BE HEAT WELDED TO THE RETROFIT WATERSTOP WITH
A SPLICING IRON AT THE INTERSECTIONS.

NOTE:
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AST DETAILS

PIKE INDUSTRIES INC 804
335 PLAINFIELD ROAD
LEBANON, NEW HAMPSHIRE 03766
AST FACILITY NO. 920125A

Antonia Design LLC
51 Rangeway Road
Dundon, VT 05446
803-774-2207



PROJECT NO.: 22302
DATE: 2/1/23
SHEET NO.: 3 OF 3

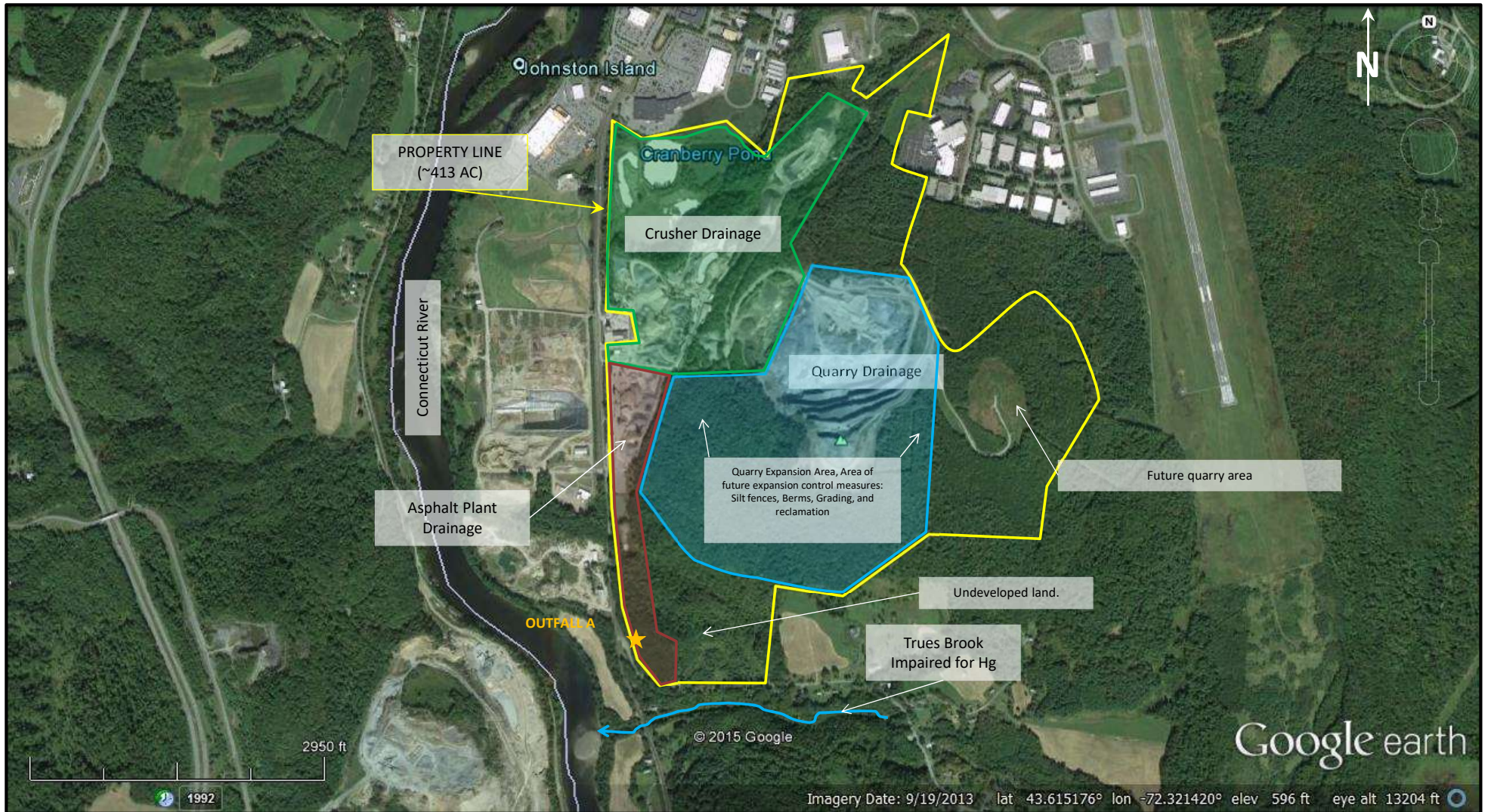


FIGURE 2 – Facility detail. Edited from: Google Earth imagery

★ Discharge monitoring point



FIGURE 3 – Quarry Drainage Area. Edited from: Google Earth.

-  Storm water flow direction.
-  Infiltration area
-  Berm
-  Asphalt pavement
-  Transfer/Fill area



FIGURE 4 – Crusher Drainage Area. North is up. Edited from: Google Earth.

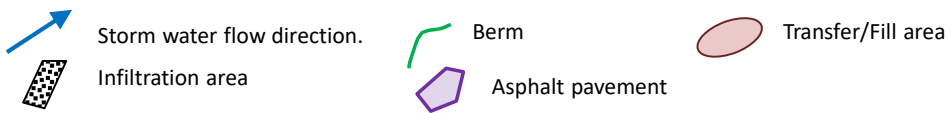
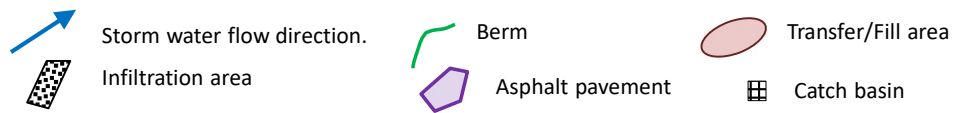




FIGURE 5 – Closer view of Crusher Drainage Area. North is up. Edited from: Google Earth.



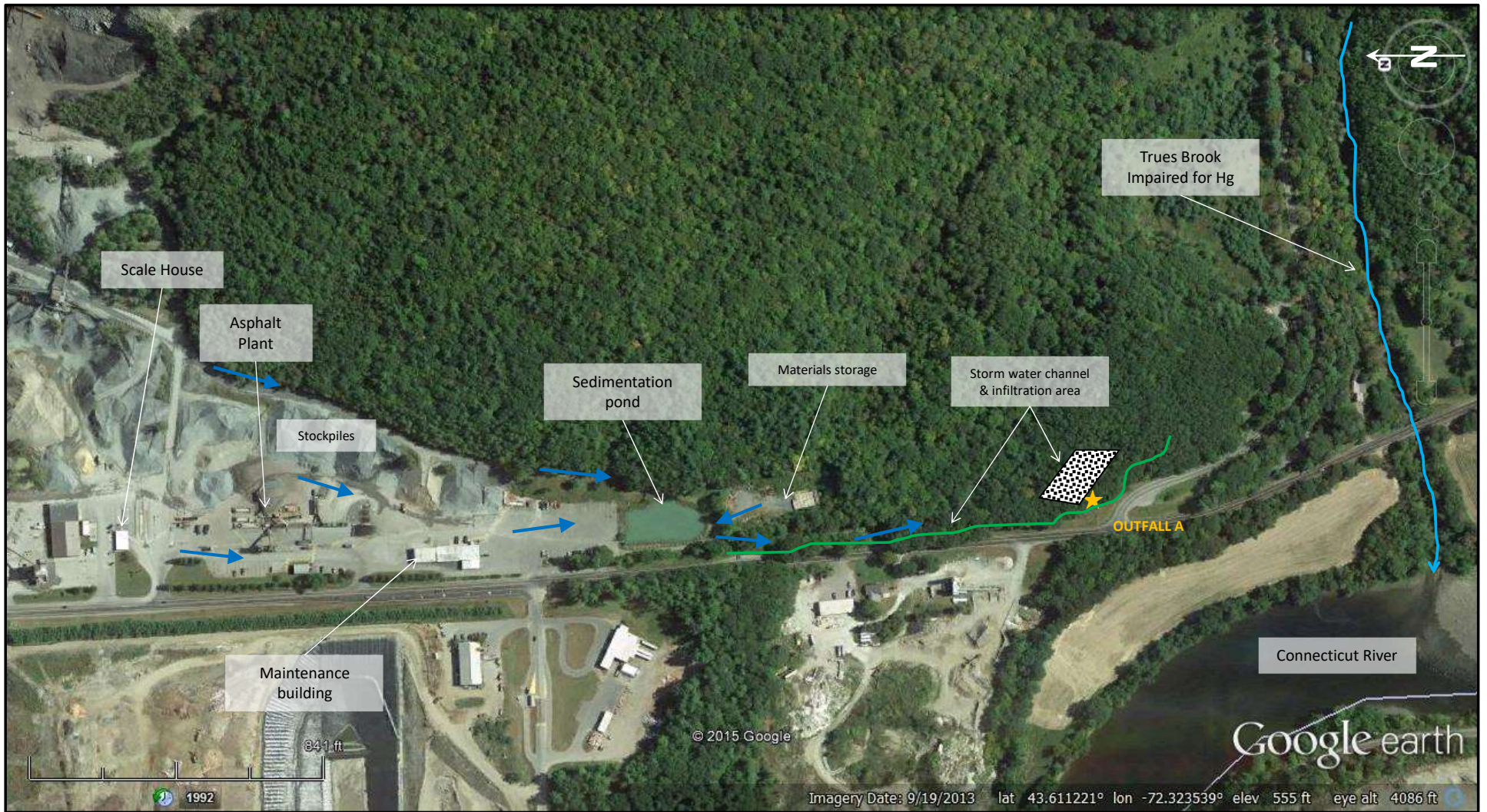
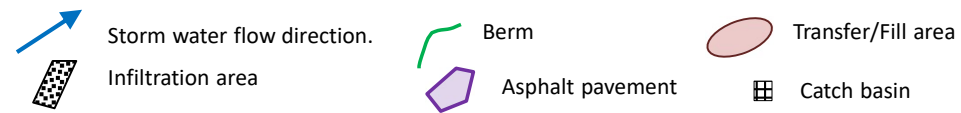


FIGURE 6 – Asphalt Plant Drainage Area. Edited from: Google Earth.



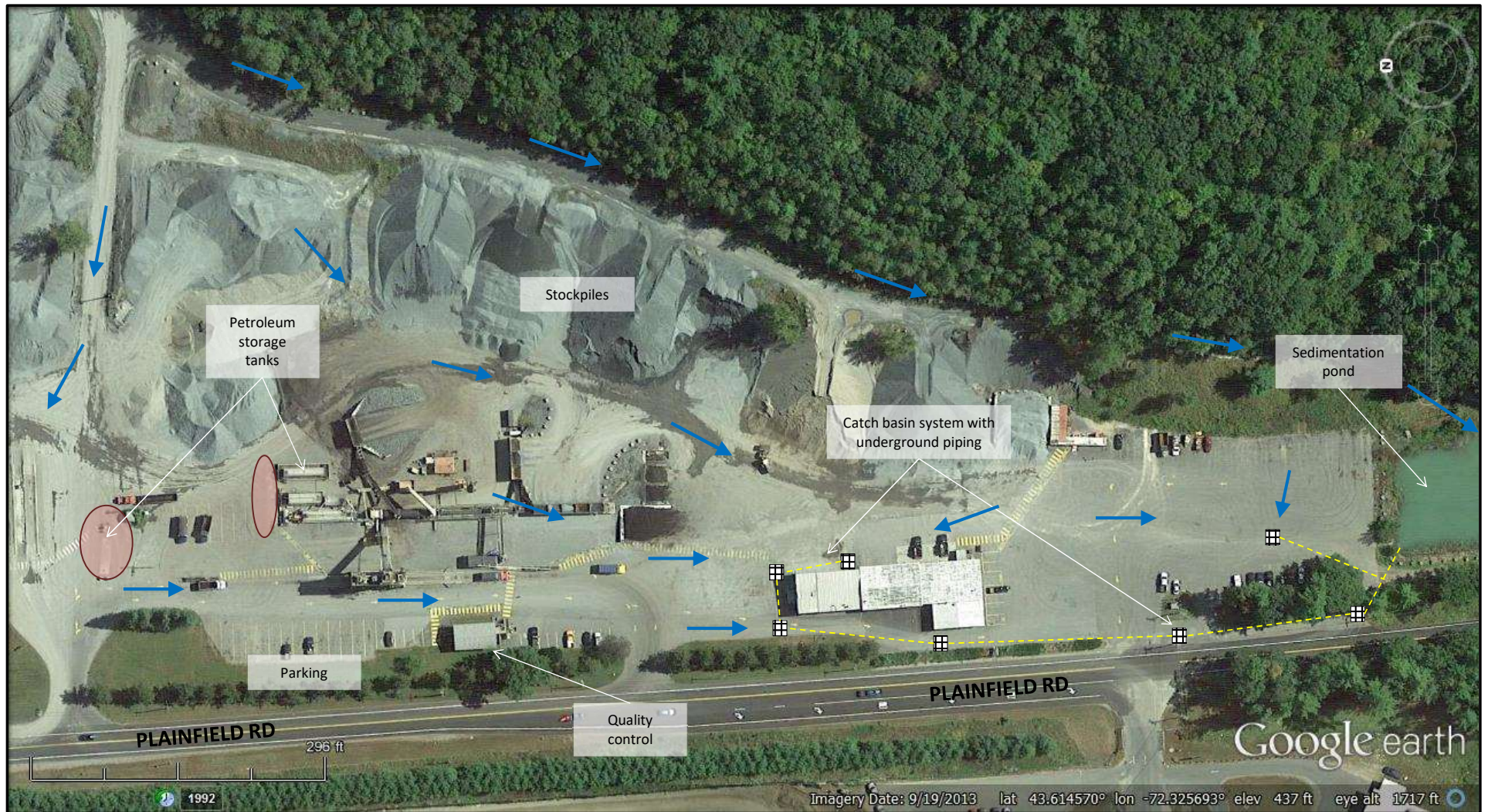
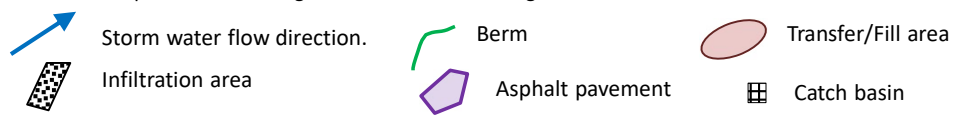


FIGURE 7 – Asphalt Plant Drainage Area. Edited from: Google Earth.



PROPOSED ABOVEGROUND OIL STORAGE TANK SITE REVIEW PLANS

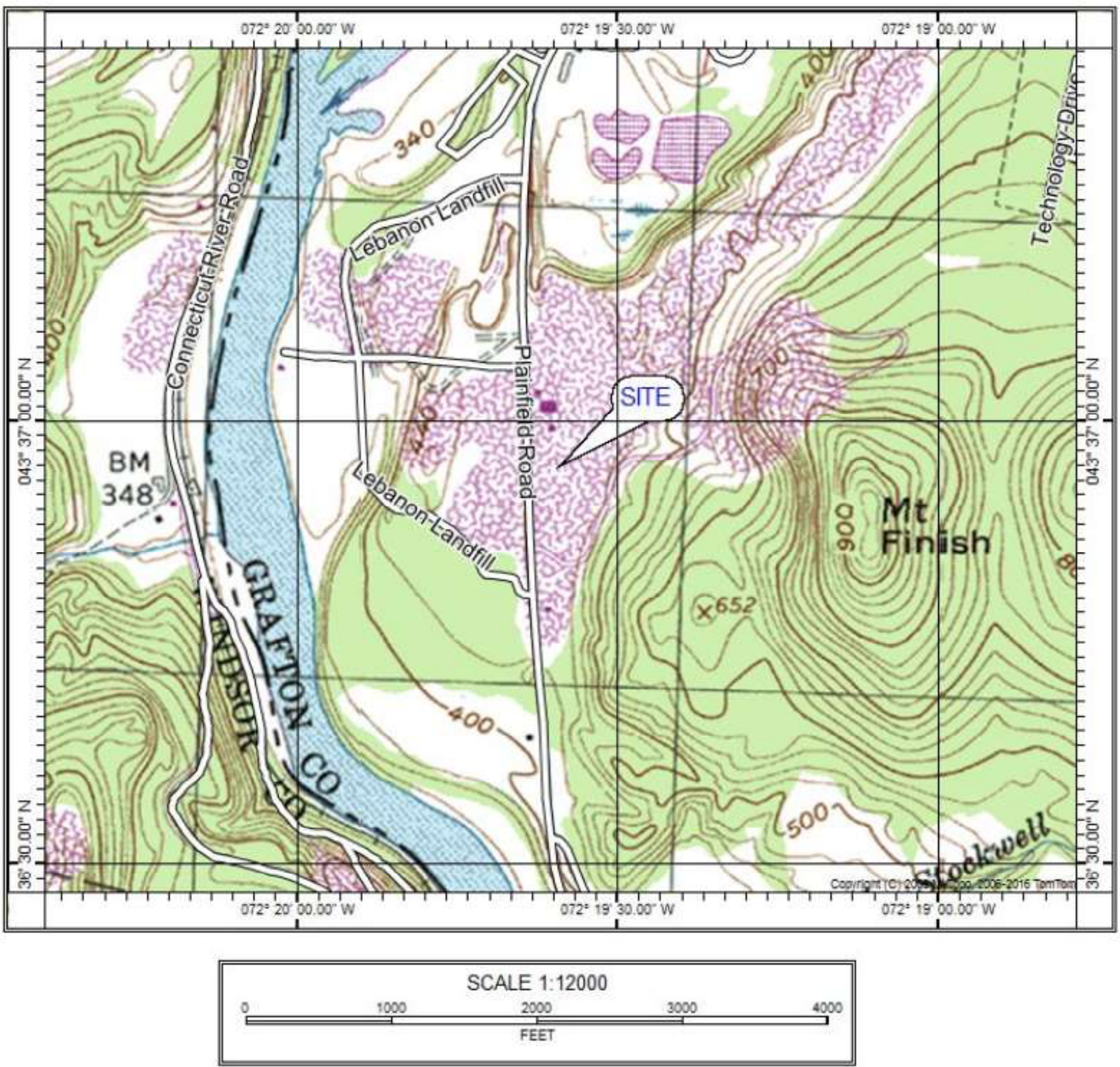
335 PLAINFIELD ROAD, CITY OF LEBANON, GRAFTON COUNTY

Applicant and Owner:
PIKE INDUSTRIES, INC
3 EASTGATE PARD ROAD
BELMONT, NEW HAMPSHIRE
MAP #157 LOT #5
335 PLAINFIELD ROAD

Prepared by:
ANTONIA DESIGN LLC
51 RANGEWAY ROAD
DUNBARTON NH 03036
MARK R. ANTONIA, P.E., NH-9170

SITE INFORMATION

ZONE	IND-H, INDUSTRIAL HEAVY
MAP/LOT	157 / 5
AREA	323 AC
EX. GROSS FL. AREA	~12,000 SF
PROP. GROSS FL AREA	NONE
EX. PARKING SPACES	47
PROP. PARKING SPACES	NONE
BIKE STORAGE SPACES	NONE
LOADING SPACES	NONE
HEIGHT OF BLDGS.	<30'
NO. OF BLDG. STORIES	1
PROPOSED USE	IND-H, INDUSTRIAL HEAVY
F/S/R SETBACKS	40' / 20' / 20'
MAX. ALL. COVERAGE	IND-H, INDUSTRIAL HEAVY
OVERLAYS	IND-H, INDUSTRIAL HEAVY



INDEX TO DRAWINGS

- 1 - COVER SHEET
- 2 - OVERVIEW MAP
- 3 - EXISTING CONDITIONS
- 4 - PROPOSED IMPROVEMENTS
- 5 - NHDES AST PLAN
- 6 - NHDES AST DETAILS -1
- 7 - NHDES AST DETAILS - 2

COVER SHEET

PIKE INDUSTRIES, INC
336 PLAINFIELD ROAD
LEBANON, NH 03766

Antonia Design LLC
51 Rangeway Road
Dunbarton, NH 03046
603-774-2207



PROJECT NO.: 22336
DATE: 12/29/23
SHEET NO.: 1 OF 7

MAP 128 / LOT 11
PIKE INDUSTRIES INC
3 EASTGATE PARK ROAD
BELMONT, NH 03220

MAP 131 / LOT 4
PIKE INDUSTRIES INC
3 EASTGATE PARK ROAD
BELMONT, NH 03220

MAP 131 / LOT 3
UPPER VALLEY TECH PARK LLC
277 BLAIR PARK ROAD, STE 130
WILLISTON, VT 05495

MAP 159 / LOT 4
CITY OF LEBANON
51 NORTH PARK ST
LEBANON, NH 03766

MAP 159 / LOT 6
MARGERY H REED
71 BUTTONWOOD LN
CHARLESTOWN, NH 03603

MAP 159 / LOT 3
MARGERY H REED
71 BUTTONWOOD LN
CHARLESTOWN, NH 03603

MAP 159 / LOT 1
SANDRA J GUARALDI TTEE
53 TRUES BROOK RD WEST
LEBANON, NH 03784

MAP 159 / LOT 9
DAVID D & PATRICIA A STOCKWELL
48 TRUES BROOK RD WEST
LEBANON, NH 03784

MAP 159 / LOT 10
ROBERT E STEBBINS
44 TRUES BROOK RD WEST
LEBANON, NH 03784

MAP 157 / LOT 10
THOMAS A & SANDRA L DEROUIN
40 TRUES BROOK RD WEST
LEBANON, NH 03784

MAP 157 / LOT 11
NAN V REED
34 TRUES BROOK RD WEST
LEBANON, NH 03784

MAP 157 / LOT 13
ROBERTA NELSON
133 DOGWOOD RD SPRUCE
PINE, NC 28777

MAP 157 / LOT 9
JOHN D HEBERT
66 HARDY HILL RD
LEBANON, NH 03766

MAP 157 / LOT 12
TODD LIQUE
409 PLAINFIELD RD WEST
LEBANON, NH 03784

MAP 157 / LOT 8
RACHEL MICHELLE GIFFIN
11 TRUES BROOK RD WEST
LEBANON, NH 03784

MAP 157 / LOT 2
LIBERTY ENERGY UTILITIES
15 BUTTRICK RD
LONDONDERRY, NH 03053

MAP 157 / LOT 6
PIKE INDUSTRIES INC
3 EASTGATE PARK ROAD
BELMONT, NH 03220

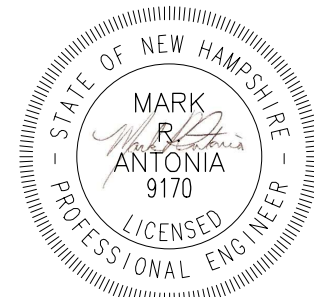
MAP 157 / LOT 3
CITY OF LEBANON
51 NORTH PARK ST
LEBANON, NH 03766

MAP 157 / LOT 4
CARROLL CONCRETE CO INC
PO BOX 1000
NEWPORT, NH 03773

MAP 157 / LOT 3-100
CITY OF LEBANON
298 PLAINFIELD RD
LEBANON, NH 03784



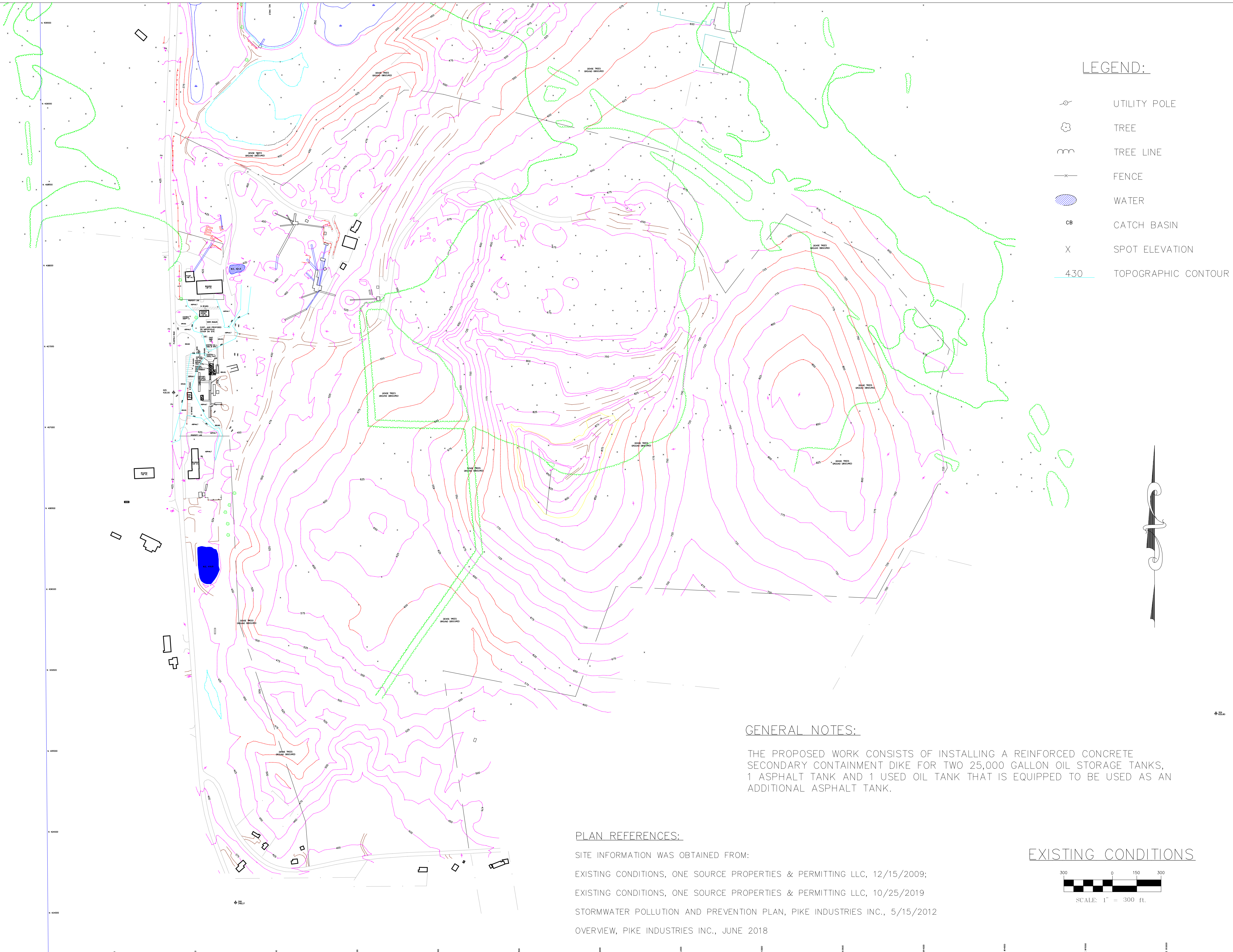
Antonia *Design* LLC
51 Rangeway Road
Dunbarton, NH 03046
603-774-2707



PROJECT NO.: 22336

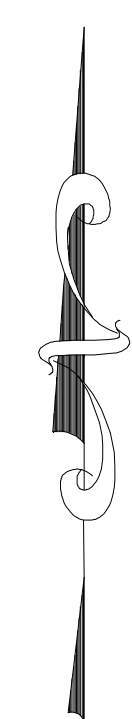
DATE: 12/29/23

SHEET NO.: 2 OF 7

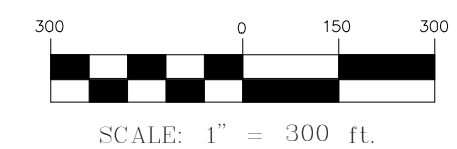


LEGEND:

- UTILITY POLE
- TREE
- TREE LINE
- FENCE
- WATER
- CATCH BASIN
- SPOT ELEVATION
- 430 TOPOGRAPHIC CONTOUR



EXISTING CONDITIONS



GENERAL NOTES:

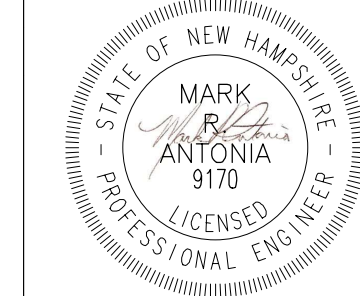
THE PROPOSED WORK CONSISTS OF INSTALLING A REINFORCED CONCRETE SECONDARY CONTAINMENT DIKE FOR TWO 25,000 GALLON OIL STORAGE TANKS, 1 ASPHALT TANK AND 1 USED OIL TANK THAT IS EQUIPPED TO BE USED AS AN ADDITIONAL ASPHALT TANK.

PLAN REFERENCES:

- SITE INFORMATION WAS OBTAINED FROM:
- EXISTING CONDITIONS, ONE SOURCE PROPERTIES & PERMITTING LLC, 12/15/2009;
- EXISTING CONDITIONS, ONE SOURCE PROPERTIES & PERMITTING LLC, 10/25/2019
- STORMWATER POLLUTION AND PREVENTION PLAN, PIKE INDUSTRIES INC., 5/15/2012
- OVERVIEW, PIKE INDUSTRIES INC., JUNE 2018

EXISTING CONDITIONS
PIKE INDUSTRIES, INC
336 PLAINFIELD ROAD
LEBANON, NH 03766

Antonia Design LLC
51 Rangeway Road
Dundon, VT 05446
803-774-2207

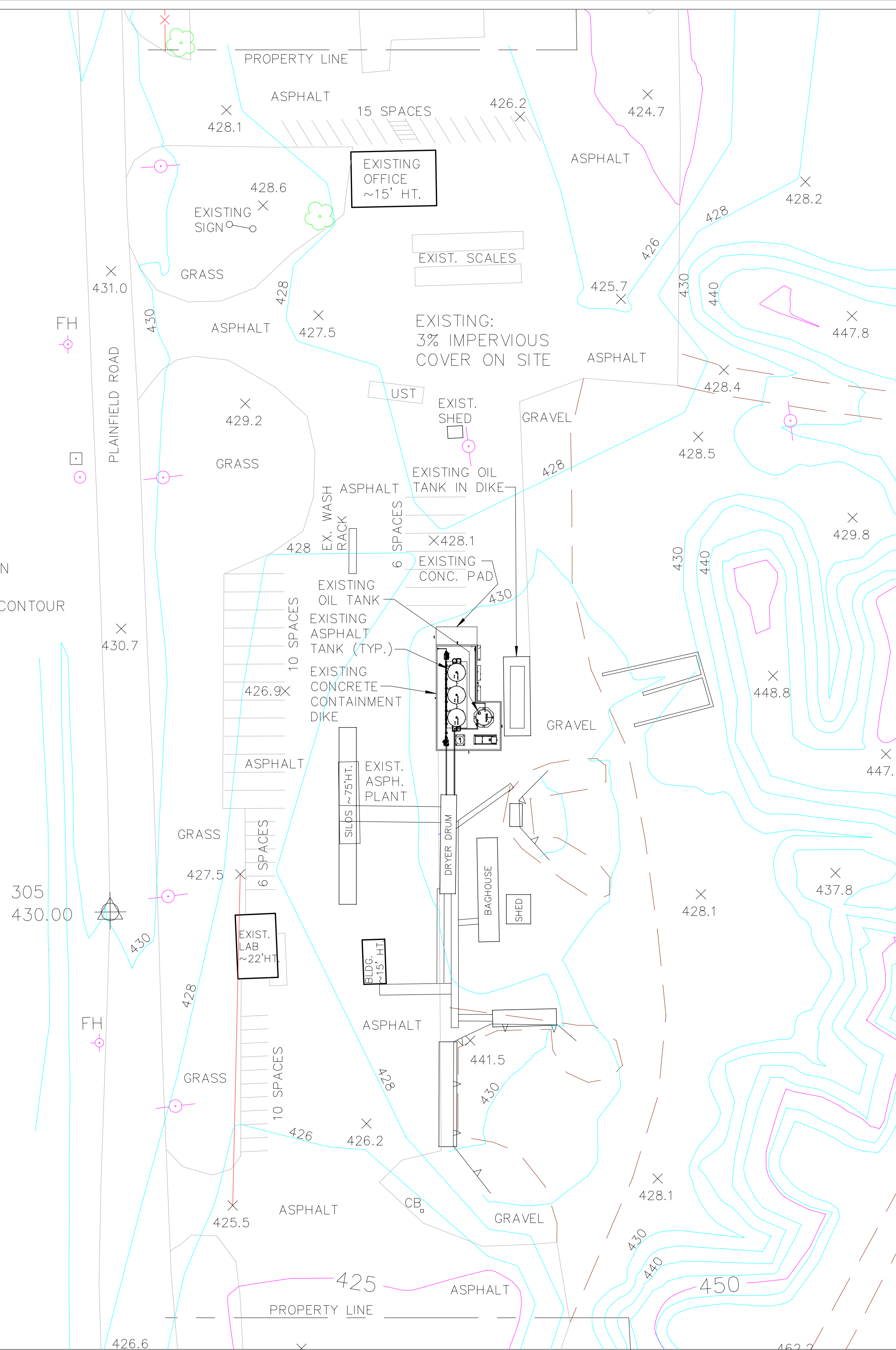


PROJECT NO.: 22336
DATE: 12/29/23
SHEET NO.: 3 OF 7

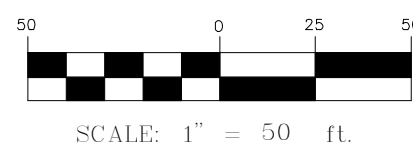
REV. DATE	DESCRIPTION	REV. DATE	DESCRIPTION

LEGEND:

- UTILITY POLE
- TREE
- TREE LINE
- FENCE
- SPOT ELEVATION
- TOPOGRAPHIC CONTOUR

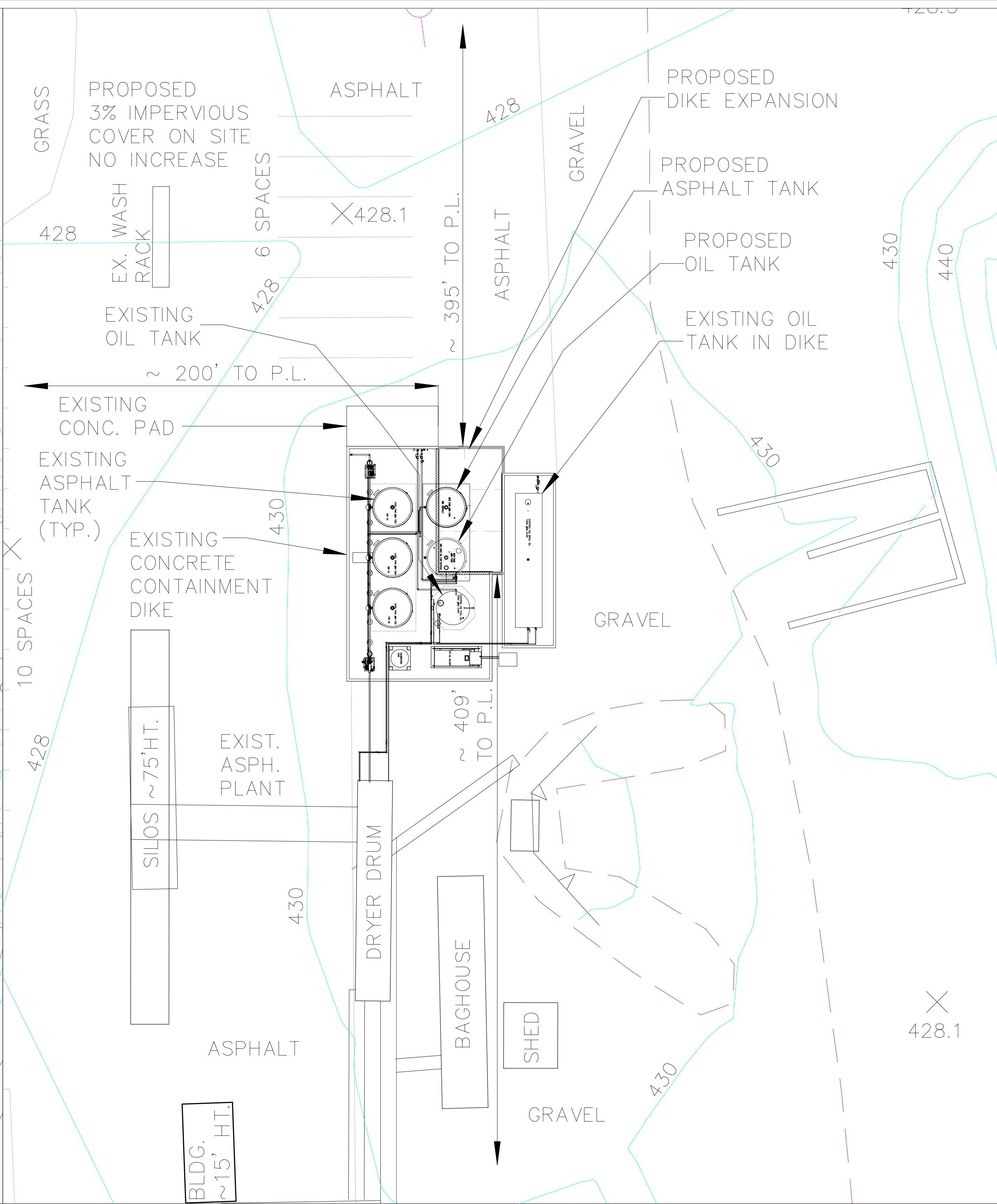


EXISTING CONDITIONS

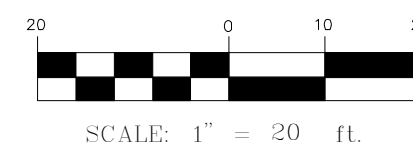


GENERAL NOTES:

THE PROPOSED WORK CONSISTS OF INSTALLING A REINFORCED CONCRETE SECONDARY CONTAINMENT DIKE FOR TWO 25,000 GALLON OIL STORAGE TANKS, 1 ASPHALT TANK AND 1 USED OIL TANK THAT IS EQUIPPED TO BE USED AS AN ADDITIONAL ASPHALT TANK.



PROPOSED IMPROVEMENTS



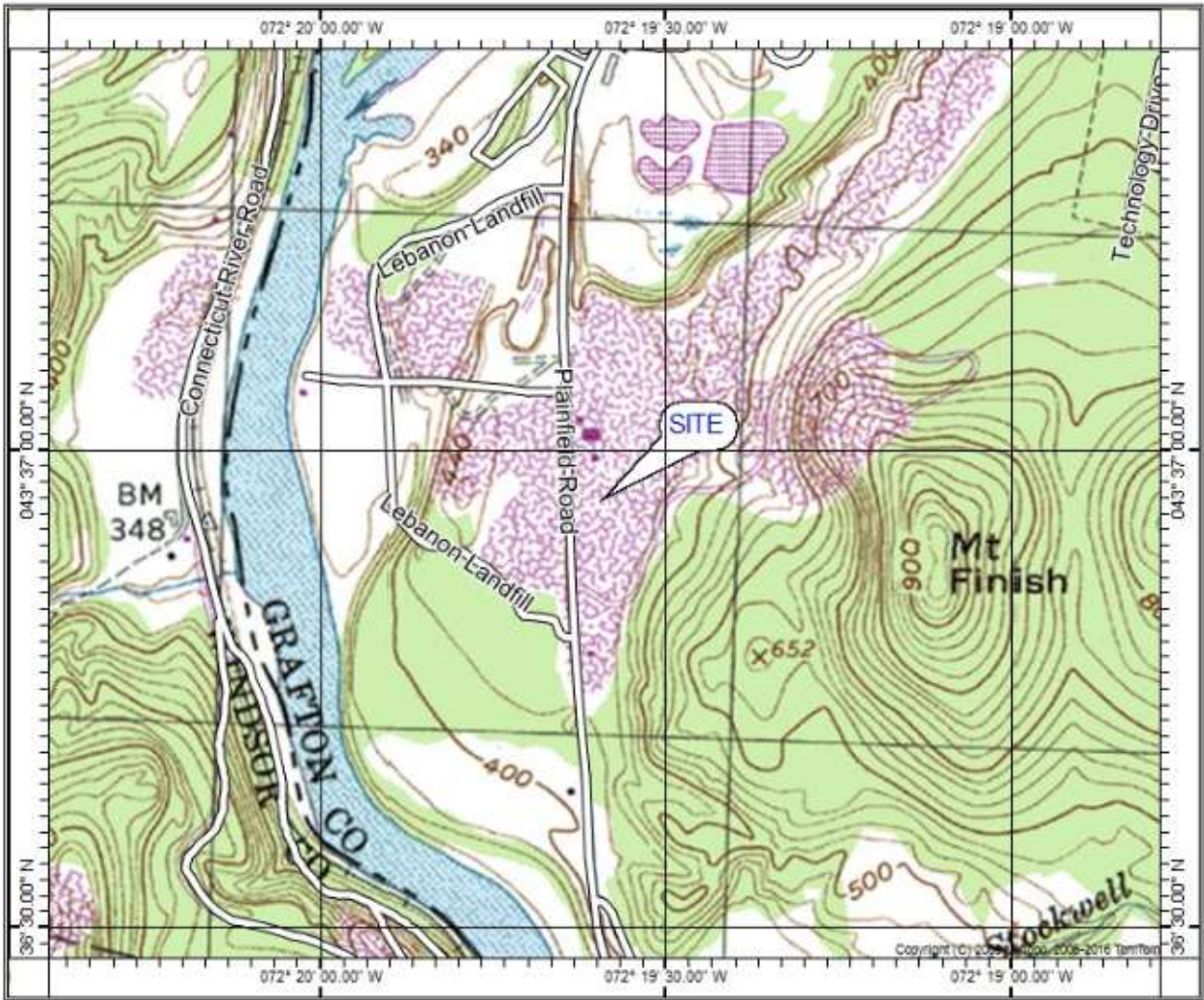
PROPOSED IMPROVEMENTS

PIKE INDUSTRIES, INC
336 PLAINFIELD ROAD
LEBANON, NH 03766

Antonia Design, LLC
51 Rangeway Road
Dundwich, VT 05446
803-774-2207



PROJECT NO.: 22336
DATE: 12/29/23
SHEET NO.: 4 OF 7



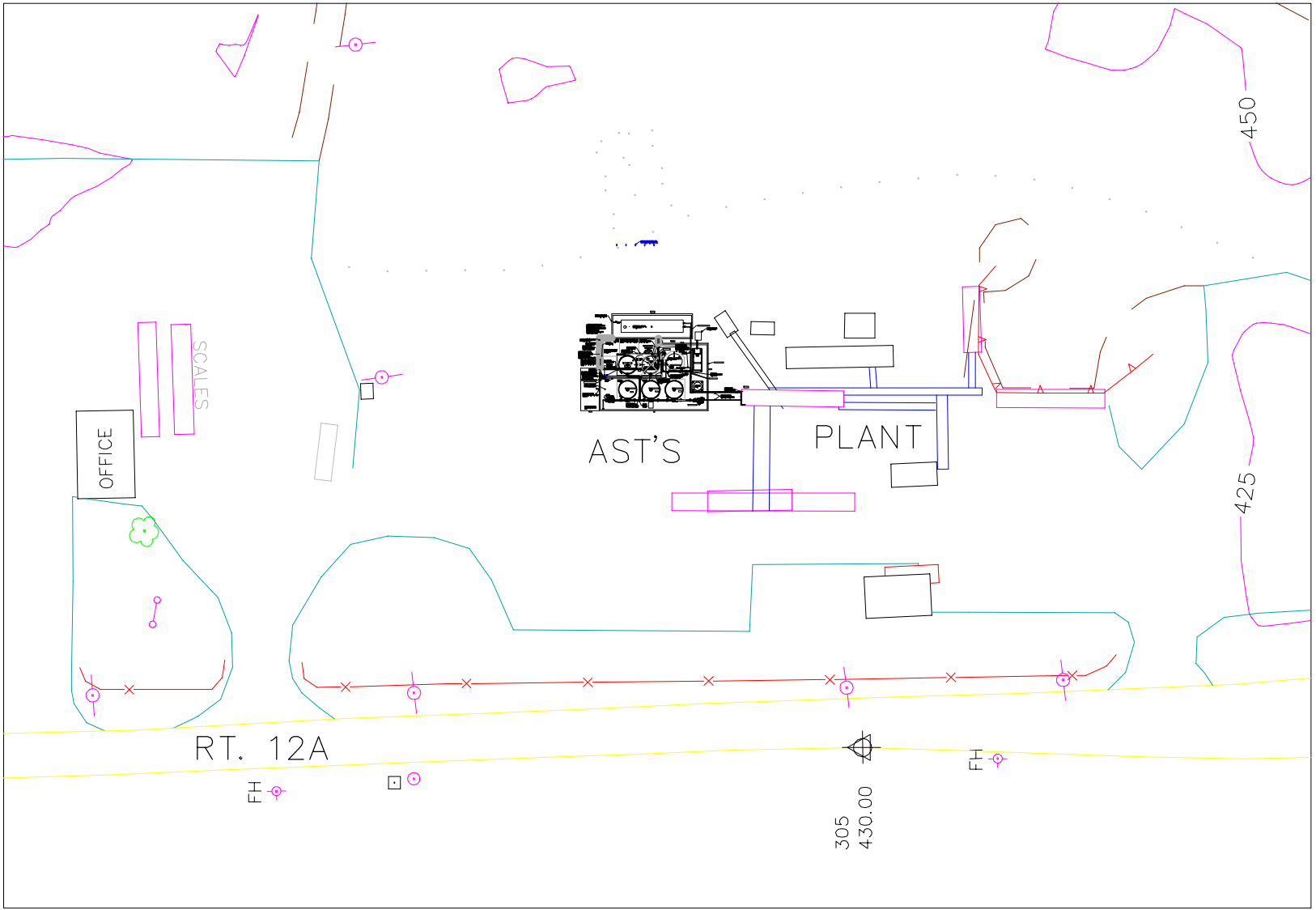
LOCATION MAP

NOTES:

NO WATER SUPPLY WELLS WERE IDENTIFIED WITHIN 500- FEET OF THE AST SYSTEM.

AST SYSTEM NOTES

1. PER ENV-OR 307.09, THE WORK SHALL BE SUPERVISED BY A CONTRACTOR ICC-CERTIFIED FOR AST INSTALLATION – U5.
2. THE REMOVAL OR REPLACEMENT OF TANKS OR PIPING SHALL CONFORM WITH THE CLOSURE AND SITE ASSESSMENT REQUIREMENTS OF ENV-OR 308 AS APPLICABLE.
3. PER ENV-OR 307.10(b), AST SYSTEMS SHALL NOT BE CONSTRUCTED WITHIN THE FLOODWAY PORTION OF THE SPECIAL FLOOD HAZARD AREA. THE AST'S ARE NOT INSTALLED WITHIN A FLOODWAY.
4. THIS EXISTING FACILITY HAS NO PUBLIC WATER SUPPLY WELLS LOCATED WITHIN 400- FEET OF THE AST SYSTEM. NO NON-PUBLIC WATER SUPPLY WELLS ARE LOCATED WITHIN 75- FEET OF THE AST SYSTEM; NO SURFACE WATERS ARE LOCATED WITHIN 75- FEET OF THE AST SYSTEM; NO DESIGNATED RIVERS ARE LOCATED WITHIN 1/4 MILE OF THE AST SYSTEM.
5. TEST ABOVEGROUND PIPNG AT 75 PSI FOR 1 HOUR WITH NO LOSS. TEST AST'S PER TANK MANUFACTURER'S INSTRUCTIONS AT 4 PSI FOR 1 HOUR.
6. HANDLE TANKS AND EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
7. OVERFILL PROTECTION SETTING CALCULATIONS; THE OVERFILL PROTECTION WILL CONSIST OF AN AUDIBLE AND VISIBLE ALARM FOR THE OIL DELIVERY OPERATOR SET AT 90% AND A SOLENOID VALVE TO CLOSE AT 95%. THE DEPTH OF THE 25K TANK IS 36.96'. 90% IS AT A DEPTH OF 33.25' FROM THE BOTTOM. 95% IS AT A DEPTH OF 35' FROM THE BOTTOM.
8. AN UPDATED REGISTRATION FORM IS TO BE SUBMITTED TO THE NHDES PRIOR TO AUTHORIZATION TO OPERATE.
9. GROUNDING AND BONDING EQUIPMENT SHALL BE INSTALLED ON THE AST SYSTEMS TO PROTECT FROM STATIC DISCHARGE DURING UNLOADING.
10. ALL ELECTRICAL AND CONDUIT INSTALLATIONS/MATERIALS/OFFSETS SHALL MEET NFPA 70 – 2020 EDITION REQUIREMENTS.
11. A WRITTEN ICC AST INSTALLER REPORT SHALL BE SUBMITTED TO NHDES PER ENV-OR 307.09(B).
12. TANK TOP EQUIPMENT SHALL BE REMOVED DURING DES OPERATION INSPECTION WITH FUNCTIONALITY DEMONSTRATED AND MEASUREMENTS DOCUMENTED TO MEET COMPLIANCE W/ ENV-OR 300.
13. ALL TANKS AND PIPING SHALL BE PAINTED OR COATED PER ENV-OR 305.06(C).
14. THE AST SYSTEM FOR TANK #89-7205 FUELS A HEATING DEIVCE AND THE SYSTEMS SHALL BE REGULATED UNDER NFPA 31 – 2011.



AST SYSTEM OVER VIEW

1" = 100'

GENERAL NOTES

THE PURPOSE OF THIS PLAN IS TO SHOW THE INSTALLATION OF A NEW ASPHALT TANK AND A NEW USED OIL FOR RECYCLE TANK AT AN EXISTING AST FACILITY. THE INFORMATION CONTAINED WITHIN WAS OBTAINED FROM THE EXISTING AST SYSTEM PLANS. THIS PLAN SHALL ONLY SERVE TO OBTAIN THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) AST CONSTRUCTION APPROVAL AND AS GUIDANCE IN COMPLETING THE AST INSTALLATION. THIS PLAN SHALL NOT BE CONSTRUED AS A COMPLETE SITE PLAN REPRESENTING ALL UTILITY LOCATIONS AND FIELD CONDITIONS.

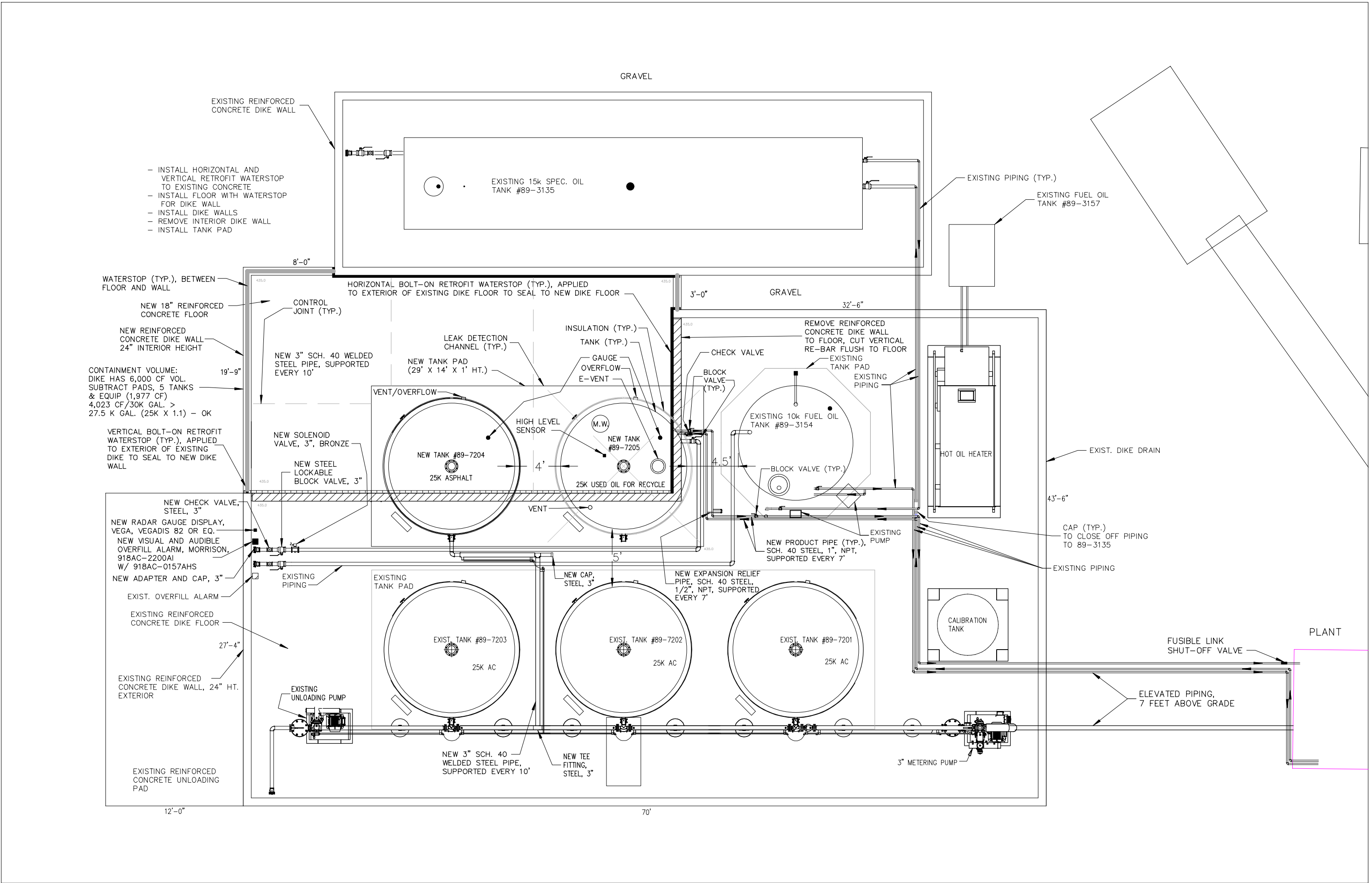
UTILITY INFORMATION SHALL BE VERIFIED BY BOTH THE OWNER AND CONTRACTOR PRIOR TO COMMENCING THE AST INSTALLATION.

THE FACILITY OWNER IS RESPONSIBLE FOR OBTAINING APPLICABLE APPROVALS AND OR PERMITS FROM THE AUTHORITY(IES) ENFORCING THE STATE FIRE CODE AND LOCAL BUILDING CODES.

THE CONTRACTOR SHALL PRE-MARK THE WORK AREA AND NOTIFY DIG SAFE 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY ALL OTHER UTILITIES NOT NOTIFIED BY DIG SAFE AND HAVE ANY ON-SITE UTILITIES LOCATED/MARKED.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE LOCAL FIRE DEPARTMENT AND BUILDING DEPARTMENT TO PROVIDE NOTIFICATIONS AND OBTAIN PERMITS, SUCH AS ELECTRICAL PERMITS, ETC.

PER ENV-OR 306.02, ALL AST FACILITIES SHALL PREPARE AND IMPLEMENT A SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN IN ACCORDANCE WITH 40 CFR 112. THE NHDES WILL NOT GRANT OPERATIONAL APPROVAL OF THE SUBJECT TANK(S) UNTIL A NHPE HAS SIGNED THE CERTIFICATION PAGE OF THE PLAN AND SUBMITTED IT TO THE NHDES.



AST SYSTEM PLAN

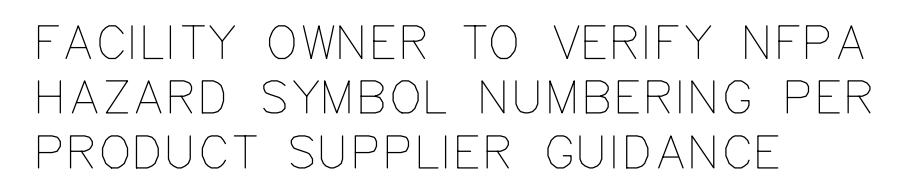
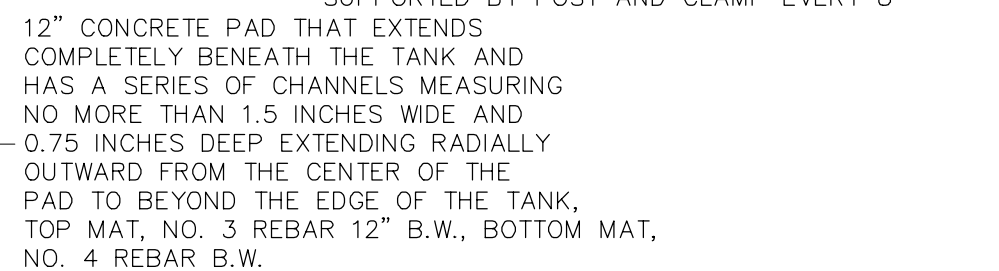
1" = 7.5'

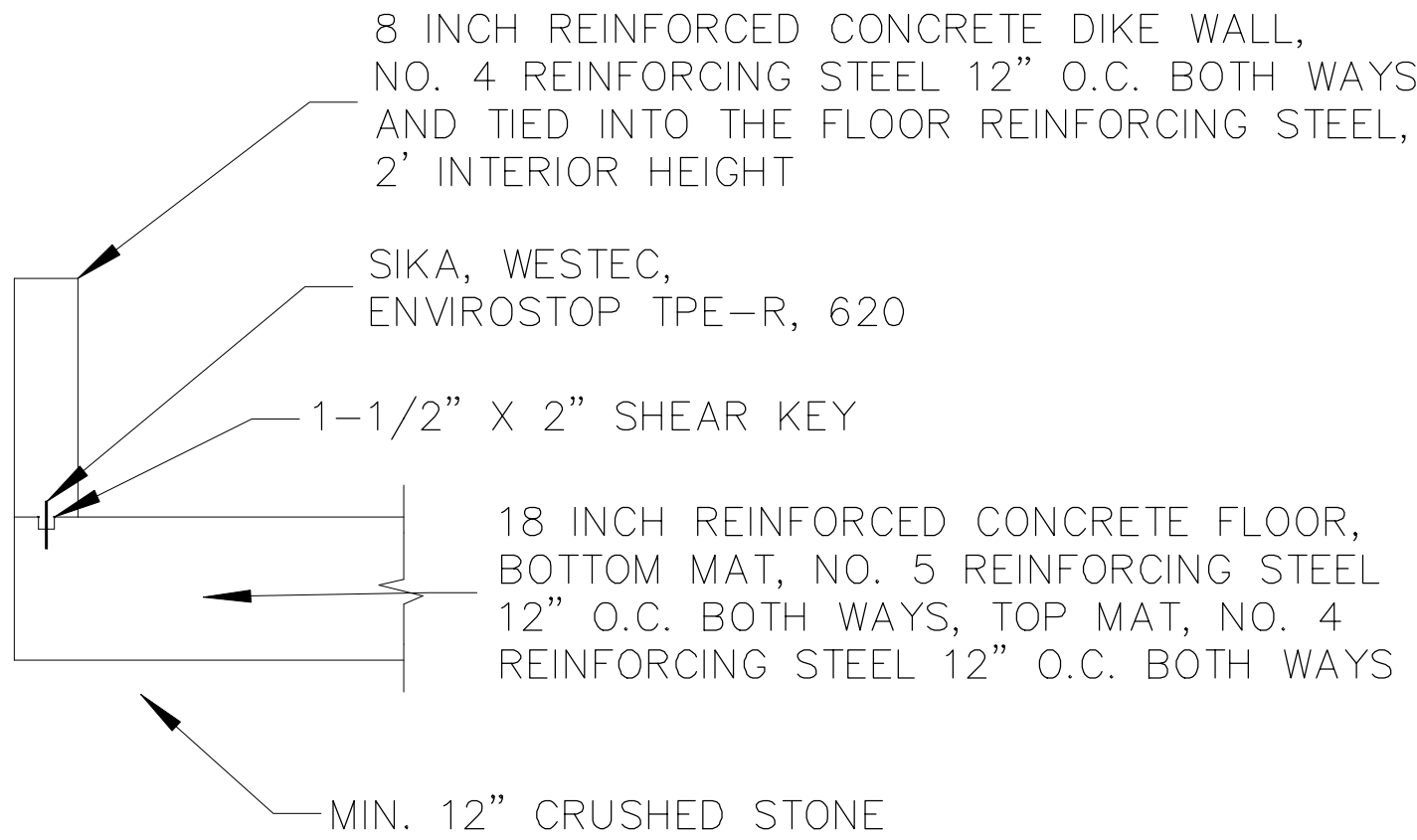
NHDES AST PLAN
PIKE INDUSTRIES INC 804
335 PLAINFIELD ROAD
LEBANON, NEW HAMPSHIRE 03766
AST FACILITY NO. 920125A

Antonia Design LLC
51 Rangeway Road
Dundwich, NH 03846
603-774-2207



PROJECT NO.: 22302
DATE: 2/1/23
SHEET NO.: 5 OF 7



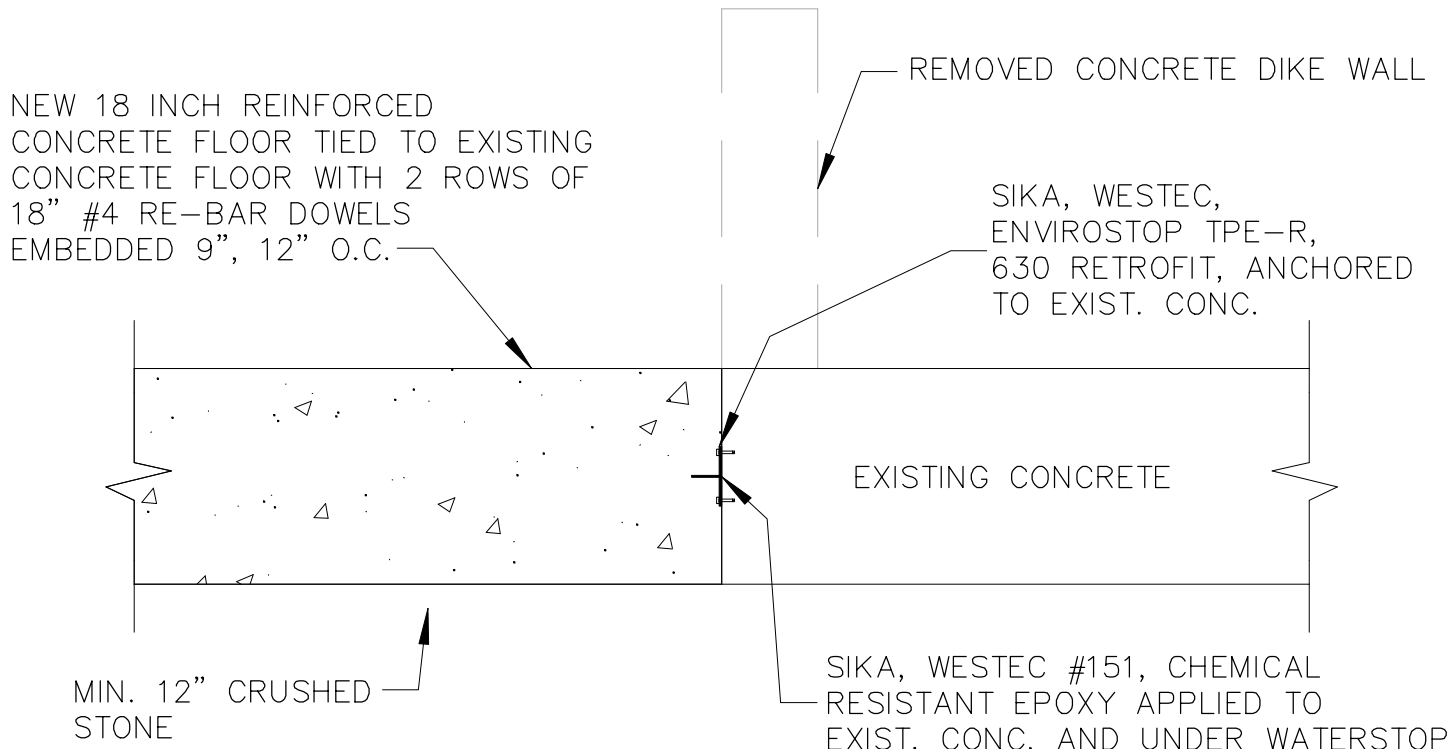


NEW CONCRETE WATERSTOP DETAIL (PROFILE)
NOT TO SCALE

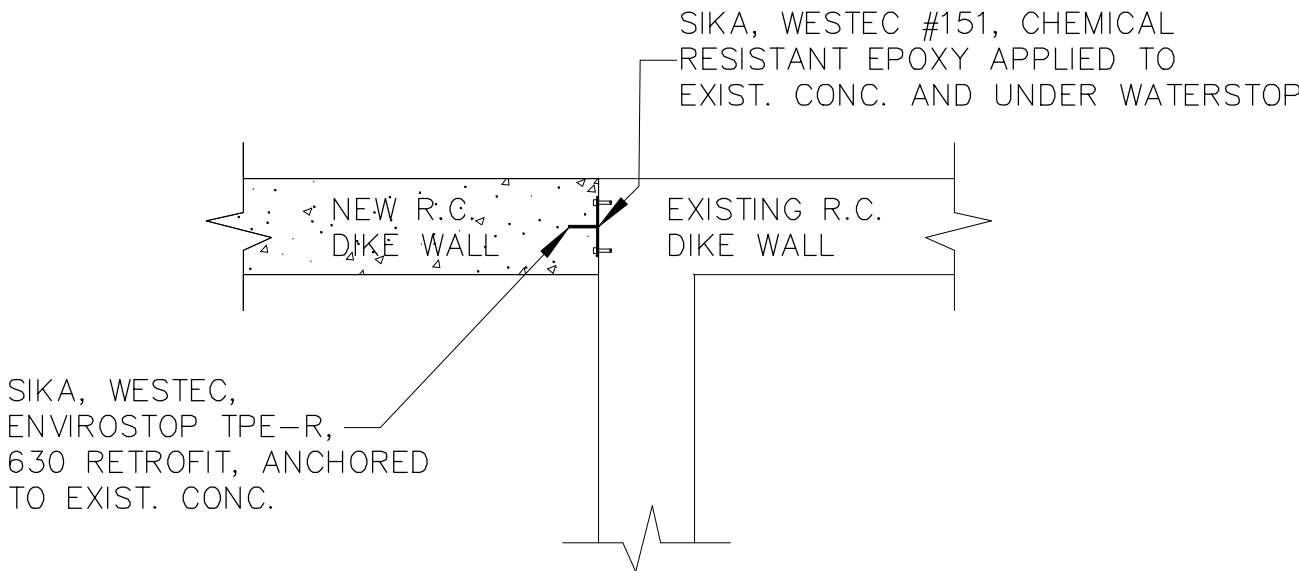
NOTE:

THERE SHALL BE NO COLD JOINTS IN FLOOR OR DIKE.

PROVIDE CONTROL JOINTS IN FLOOR EVERY 12' BOTH WAYS.

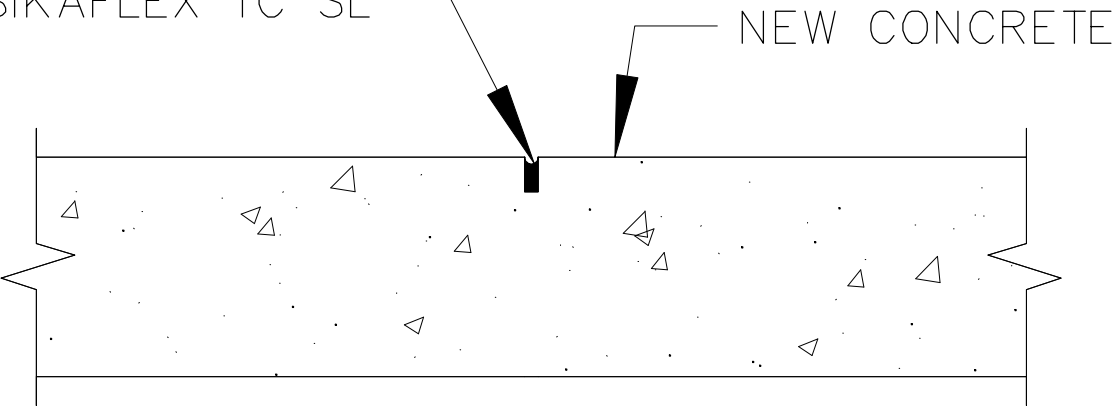


NEW FLOOR WATERSTOP DETAIL (PROFILE)
NOT TO SCALE



NEW WALL WATERSTOP DETAIL (TOP VIEW)
NOT TO SCALE

TOOLED OR CUT JOINT, 1/4" WIDE,
2" DEEP, COMPLETELY FILLED
W/ SELF LEVELING JOINT
SEALANT, SIKAFLEX 1C SL



CONTROL JOINT DETAIL
NOT TO SCALE

NOTE:

HORIZONTAL AND VERTICAL RETROFIT WATERSTOP
SHALL BE HEAT WELDED IN PLACE WITH A SPLICING
IRON AT THEIR INTERSECTIONS.

THE WATERSTOP FOR THE NEW CONCRETE SHALL
BE HEAT WELDED TO THE RETROFIT WATERSTOP WITH
A SPLICING IRON AT THE INTERSECTIONS.

NOTE:
THIS DRAWING CONTAINS INSTRUMENTS OF SERVICE
FOR USE SOLELY WITH RESPECT TO THIS PROJECT.
ANTONIA DESIGN LLC SHALL BE DEEMED THE AUTHOR
AND OWNER OF THESE RESPECTIVE INSTRUMENTS OF
SERVICE AND SHALL RETAIN ALL COMMON LAW, STATUTORY
AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.

THIS DRAWING SHALL NOT BE MODIFIED FOR THE USE OF ANOTHER.

NHDES AST DETAILS - 2

PIKE INDUSTRIES INC 804
335 PLAINFIELD ROAD
LEBANON, NEW HAMPSHIRE 03766
AST FACILITY NO. 920125A

Antonia Design LLC
51 Rangeway Road
Dundon, VT 03046
603-774-2207



PROJECT NO.: 22302
DATE: 2/1/23
SHEET NO.: 7 OF 7

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: City of Lebanon

TEL.#: 603-369-2027 (Phil Harrison)

MAILING ADDRESS: 51 North Park Street, Lebanon, NH 03766

E-MAIL ADDRESS: pdharrison@icloud.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Lebanon Opera House

TEL.#: 603-369-2027 (Phil Harrison)

MAILING ADDRESS: 51 North Park Street, Lebanon, NH 03766

E-MAIL ADDRESS: pdharrison@icloud.com

PROJECT LOCATION:

TAX MAP #: 91

LOT#: 246

PLOT #:

ZONE: LD

STREET ADDRESS OF PROJECT: 51 North Park Street, Lebanon, NH 03766

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

SCOPE OF PROJECT:

Exterior lighting for City Hall

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: _____

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: Shaun Mulholland

DATE: 12/8/23

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: Shaun Mulholland DATE: 12/8/23

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #		
12-11-2023	91-246	PB2024-04		

City Hall Exterior Lighting Project

Introduction - Lebanon Opera House (LOH) in conjunction with the City of Lebanon as owner of the City Hall building is seeking Site Plan Review approval to expand and improve the exterior lighting for City Hall as described below. LOH's rationale for expanding the exterior lighting is to provide the public and theatergoers with a better sense that City Hall is open during evenings when LOH hosts performances. At present, there is minimal exterior lighting for City Hall and as a result, the building appears closed and semi-dark from the exterior at night.

The proposed exterior lighting would accentuate the existing historic architecture of City Hall. The lighting would seek to wash the exterior walls and illuminate the clock tower with low energy LED lights, which can be programmed to display different colors. Areas proposed for this expanded lighting, as better viewed on the attached elevation plans and renderings include: a) the front façade; b) the clock tower; c) the office sides; and d) the rear wall or fly tower.

In addition to LOH's desire to better illuminate the building exterior on evenings when LOH is hosting performances, the City Manager has indicated the City's interest in utilizing the proposed lights for City uses. For example, during the holiday season the proposed lights could be colored in red and green to complement the large holiday wreaths hung above the main entrance. Likewise, to draw attention to the fight against cancer, the building could be washed in pink colors during Breast Cancer Awareness Month (October).

As part of its exterior lighting application, LOH is also proposing to replace 5 existing exterior safety floodlights and 2 existing flagpole floodlights with new LED safety and flagpole lights which better focus light downward or on the flags and reduce glare and light trespass onto adjacent properties.

City Hall is located in Lebanon's Historic District, and accordingly, any changes to the exterior of City Hall are subject to review and approval by Lebanon's Heritage Commission. The proposed lighting is currently under review by the Heritage Commission. As part of that hearing process, LOH produced a Supplemental Narrative with additional information on the existing lighting conditions around City Hall and on the proposed new lights. This Supplemental Narrative is included in the application materials for Site Plan Review.

Below is a brief description of the lighting proposed for each exterior area of the building. There is also a section which analyzes the proposed lighting with respect to the City's lighting regulations as set forth in the Site Plan Review regulations.

Front Façade - The front side of the building is the area that LOH and the City are most interested in improving the lighting of, due to its visibility from Park Street and from Colburn Park. For evenings when LOH is hosting a performance in the theater, the

desire is to improve the lighting such that it is clear that the building is open and that access to the main entrance to the theater is visibly illuminated. Lighting fixtures proposed for the front include: 1) four LED sconces which will provide both down and uplighting of the façade on each side of the three main entry doors; 2) LED strip lights located on the interior of the arched windows above the three entry doors, which will provide some colorful illumination of the entry vestibule from the exterior; 3) LED lights positioned at the base of the three large arched windows on the Planning Department level. These fixtures will wash the front façade to accentuate the windows and architecture; and 4) LED fixtures intended to wash the classical pediment above the front façade and the frieze above the office areas which face Colburn Park. It is important to note that in some cases, the type of proposed lighting includes washing walls of the building with fixtures that illuminate upwards. An example includes the fixture which would wash color on the triangular pediment above the main façade. However these fixtures are intended solely to wash the vertical surface of the building, not to direct light either skyward nor towards neighboring properties, and will be provided with shielding if necessary to control any unwanted light.

After the initial hearing with the Heritage Commission on November 8, 2023, the Commission raised questions about whether the two large existing sconces on the front of the building should be maintained. To address this concern, LOH has proposed a revised lighting plan which would maintain the existing sconces while adding small, discretely positioned uplights to achieve some of the same effects as would be provided by the four replacement sconces. The Heritage Commission will be meeting on December 13, 2023 to further consider the proposed exterior lighting. LOH expects that the Commission will determine whether or not to permit the replacement of the two existing sconces with four new fixtures, or whether it will determine to allow two new sconces in addition to retrofitting the two existing sconces with new bulbs and with additional uplights. For the Site Plan Review application, LOH will propose lighting for the front façade consistent with any approval provided by the Heritage Commission.

Clock Tower - LOH and the City would also like to improve the lighting of the clock tower so that it is illuminated during evenings when LOH is hosting performances and at other times. The lights proposed for the clock tower are intended for direct view applications to accentuate the existing tower architecture by lighting the horizontal planes above and below the clocks and above and below the windows which are positioned above the clock faces (see attached elevations and renderings). Please note that the existing clock faces are already illuminated throughout the night. The lighting proposed for the clock tower would accentuate the tower architecture above and below these clock faces. Please see the Supplemental Narrative prepared for the Heritage Commission with additional information on the clock tower lighting. It is important to note that unlike some of the fixtures proposed for the front façade which wash walls with light, the clock tower lights would be visible from beyond the property boundary, but only in a limited manner which outlines the existing building architecture. Furthermore, these lights are highly programmable and can be dimmed in a manner to limit any light trespass on neighboring properties. In addition, these programmable

lights can be configured with timers so that any external visibility is limited to hours when LOH is operating or other times when the City wants to illuminate the clock tower.

Office Sides - The office sides of the building, the sides closest to the main entrance where the Planning Department and LOH offices are located would be illuminated with two types of lights which a) wash color on the walls above the top level (Planning Department) windows; and b) illuminate the frieze above the side walls.

Rear Façade or Fly Tower - Presently, from the parking lots located behind City Hall, the large, approximately 70 foot high brick wall at the back of the theater has no exterior lighting other than two safety floodlights. LOH proposes to wash this wall in color from the top of the wall. In the future, LOH is considering installing a form of line art using a fixture similar to the ones used for the clock tower, but which would be positioned against the large rear brick wall, using that surface as a sort of “canvas” washed in color. Because LOH does not have a design fully developed for this proposed line art, LOH has determined it will seek future approval from the Heritage Commission and Site Plan Review approval when the design is further developed.

Site Plan Review Lighting Regulations - LOH has reviewed the proposed exterior lighting in the context of the City’s Site Plan Review regulations for exterior lighting. In general, the proposed lighting conforms with these standards. In certain cases, there is ambiguity between the General Requirements set forth in Section 6.7 B and Lighting of Building Façades and Landscaping set forth in Section 6.7 E. These instances of ambiguity, and other instances where the proposed lights do not conform with the Site Plan Regulations are explained below:

- Fixture Height - Section 6.7 B 5 limits the height of light fixtures to 20 feet in commercial, institutional and mixed zoning districts. As noted above, lights proposed for the rear fly wall would be positioned above the 20 foot height limit. However, Section 6.7 E 4 requires that “to the extent possible, light fixtures shall be directed downward, below the horizontal plane.” Because of the height of the wall, it is not possible to meet both the height limit in the General Requirements and the downlight requirement established for building façades. The alternative would be to uplight the rear wall, which would conform with the height limit but would not meet the intent to downlight where possible.
- Fixture Type - Section 6.7 B 6 of the General Requirements states: “Technological advances in outdoor lighting may allow for options not otherwise considered in these Regulations. The use of new technologies, especially those that have energy-saving properties is encouraged.” All the proposed fixtures for the exterior lighting incorporate low-energy LED type lights. Furthermore, LOH believes the fixture type proposed for the clock tower and at the bases of the front façade triangular pediment and office friezes represent newer, technologically advanced types of lighting which merit special consideration. While the clock tower lights are not intended to wash the clock tower faces, neither are these lights “directed towards

adjacent properties, streets or roads, nor skyward” [6.7.E.2]. Rather, these fixtures are intended to glow dimly with warm colors, which outline the existing building architecture but do not provide glare or create light trespass onto neighboring properties. LOH believes the types of proposed lights are different than the type of lighting which the Site Plan regulations seek to regulate. Accordingly, LOH expressly hopes that the planning regulatory bodies consider the specific type and use of the proposed fixtures, and the intended impact of such lights on City Hall as well as to the surrounding area when these lights are being utilized.

Existing Area In Context - Please see the attached Supplemental Narrative, which provides additional information and photographs of the exterior area around City Hall at night currently, and additional information on the proposed new lighting fixtures. There is significant existing nighttime manmade light in the vicinity of City Hall produced by streetlights around the perimeter of City Hall and by existing floodlights on City Hall. LOH believes the proposed exterior lighting will be less intense and will create less glare and light trespass than the conditions that exist currently. The attached Supplemental Narrative provides additional information to support this point.

Conclusion - LOH and the City look forward to discussing the exterior lighting proposal with the Planning Board. The intent of these new lights is to accentuate the existing architectural elements of City Hall during evening hours, through the use of modern, technologically advanced, low-energy, colored LED light fixtures. While these lights are intended to draw attention to City Hall when in use, these fixtures do not produce glare, light pollution, or adversely impact dark skies. Furthermore, these lights are programmable in many ways. Foot-candles can be controlled in part by the color selected. Traditional bright white light colors produce the highest foot-candles, while darker hues such as blues, purples, reds and greens generate lower foot-candles. Finally, use of these exterior lights can be programmed to turn off after established times, or when LOH is not hosting evening performances. Thank you for your consideration.

Schedule of Light Fixtures

<u>Type</u>	<u>Location</u>	<u>Use</u>
A	Main Entry	Wash walls up and down by main entry doors
A2	Main Entry	Wash walls up; used if existing sconces are retained
L5	Front Façade	Wash large windows and walls upwards
L2	Front Façade, Pediment	Wash pediment wall
L3	Front Façade, Top of Roofline	Wash frieze
L3	Front Façade, Arched Windows above 3 entry doors	Illuminate Vestibule
FL1	Front Façade	Replacement flagpole light
L1	Office Front and Side	Wash walls above upper windows
L4	Clock Tower	Direct view, similar to neon, see Supplemental Narrative for photos
WW1	Rear Façade	Wash tall rear wall downwards from top
B	Rear and West Side	Replacement safety light



City of Lebanon, New Hampshire APPLICATION FOR WAIVERS

Office Use Only

Date Received: _____

File No.: _____

PROJECT INFORMATION

Name of Applicant: City of Lebanon / Lebanon Opera House
Project Name: City Hall Exterior Lighting
Project Address: 51 North Park Street, Lebanon NH 03766

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: 5.1.E and 6.7.B.2, B.5, and 6.7.E.1

[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).]

1. Section 5.1.E of the (circle one) Site Plan Review Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because No changes to the lot or building proposed other than exterior lighting. No changes to parking, traffic, building size, uses, or other conditions. The information requested in Section 5.1.E. is not relevant to this application.
2. Section 6.7.B.2 of the (circle one) Site Plan Review Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because Please see narrative attached to application for discussion of why a photometric plan pursuant to Section 6.7.B.2 is difficult to produce.

- 6.7.B.5
3. Section ___ of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because Section 6.7.E.4 which requires downlighting when practicable is inconsistent with Section 6.7.B.5 which limits the height of exterior fixtures to 20 feet. The rear wall of City Hall and clock tower are more than 20' high.
- 6.7.E.1
4. Section ___ of the (circle one) Site Plan Review / Subdivision Regulations. A Waiver of this Section meets (circle one) Criteria A / Criteria B because Please see narrative attached to application for discussion of why the maximum illumination required in Section 6.7.E.1 is difficult to measure.
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: Mark D. [Signature] Date: December 8, 2023

Heritage Commission - Supplemental Information

Introduction - This document provides additional information as requested in order to supplement the application for new exterior lighting on the City Hall building in Lebanon, NH. The exterior lighting application was submitted to the Heritage Commission by Lebanon Opera House and the City of Lebanon in conjunction with the renovations currently taking place at Lebanon Opera House (LOH).

Safety Lighting - Presently, the safety lighting on and around the exterior of City Hall includes the following:

- Main Entrance/South Façade - 2 large sconces, 2 street lights
- East Side - 3 street lights, 1 light under the City Hall level entrance
- West Side - 3 exterior floodlights, 1 exterior fixture above a basement level exit stair
- Rear Façade/North Side - 2 exterior floodlights

As part of its exterior lighting proposal, LOH is proposing to replace the 5 existing safety lights mounted on the west and north sides of City Hall with new LED fixtures. In addition to being energy saving fixtures, the additional benefit of these fixtures is that they better direct light downward and limit light spilling over onto adjacent properties. The existing wall packs or flood lights have an outward portion as well as a down illumination. The proposed fixtures are only down facing with lensing to push the light out. This design keeps the light closer to the building but directed to where it is needed. The proposed safety lighting is shown on the elevation plans as B fixtures. There is a 5th B fixture on the west side located above the exit door from the theater stair tower below the roof for the tower. A cut sheet for the proposed B fixture is attached.



Existing Safety Floodlight



Proposed Safety Light

On the front façade, LOH is proposing to replace the existing 2 large sconces with 4 new sconces which will direct light up and down against the building façade. The lighting designer believes the 4 sconces will provide greater safety lighting than what is currently provided by the two large sconces. However it should be noted that the main source of safety lighting for both the main façade and east side of City Hall is provided by large existing street lights. See [Appendix](#) for photos of existing exterior lighting.

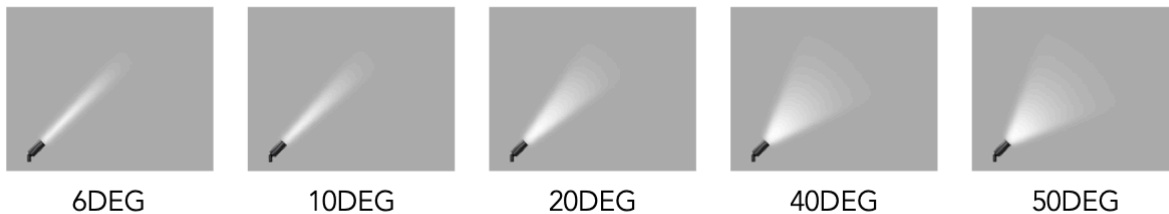
Flagpole Lighting - Presently, the two flagpoles on the front side of City Hall are illuminated with large floodlights which direct light outward and upward towards the street, sky and flags. A photo of the existing floodlights is shown below. LOH is proposing to replace these floodlights with new, energy efficient LED fixtures which have the additional benefit of having an adjustable focus or light beam. These fixtures can have a tight, directed focus of a little as 6 degrees or can be adjusted to a wider array of as much as 50 degrees. The ability to focus the fixture on the flags can help to minimize the spillover of light onto adjacent properties and upwards towards the night sky. The focusing aspect will also minimize the impact of the flag lights on the other proposed lights for City Hall.



Existing Flag Floodlight



Proposed Flag Light



Focus Distribution

View From Rogers House - LOH believes the new proposed exterior lights for City Hall will have minimal impact on Rogers House and for its residents. This perspective is based on several factors including the following:

1. There are 3 existing large street lights between City Hall and Rogers House which generate much greater direct light and light intrusion than the proposed lights which are largely pointed to wash the brick walls of City Hall. See Appendix.
2. There are minimal new lights proposed for the east side of City Hall, the only side visible from Rogers House. Lights proposed for the office east side are primarily fixtures which wash the brick walls of City Hall.

-
- This aerial map of downtown San Francisco displays building footprints, lot numbers, and street names. The map includes Court St, N Park St, and a green line representing a park or path. Buildings are labeled with addresses and names: 91-246-1, 91-246 CITY HALL, 91-247, 91-248, 92-12 ROGERS HOUSE, 92-13 G.A.R. HALL, and 92-4. Lot numbers are shown in red. A blue 'K' marker is visible on N Park St.

Clock Tower - Understandably, questions have arisen about how the City Hall clock tower will look with the proposed new exterior lights. Perhaps the closest similar and familiar type of illumination is neon light. The floppy flex LED lighting material proposed for the clock tower provides programmable, dimmable direct lighting in a full spectrum of colors. These lights will accentuate the existing architecture of the clock tower. The lights, while visible from beyond the property boundary, neither focus light outward nor upward. Rather, these lights are intended to provide a warm glow which highlights City Hall's historic clock tower but do not create either light distraction or excessive spillover. Please note that the clock faces on the clock tower are currently illuminated. The new fixtures will simply frame the lighted clock faces within the surrounding architecture. For images of this type of fixture used on other buildings, consider the following images of Dartmouth Hall in Hanover. The proposed floppy flex fixture in these photos is the white, framing light at the base of Dartmouth Hall's bell tower.



Floppy flex lighting on bell tower base



Floppy flex lighting on bell tower base

Speaking of Dartmouth Hall, it is worth noting that visible green lights washing the wall of Dartmouth Hall in the photos above are similar to the fixtures proposed for washing the front wall of City Hall. However, unlike Dartmouth Hall, which is painted white, City Hall comprises unpainted brick. As such, any color of light washing the plain brick façade will tend to be much less visible and illuminated than Dartmouth Hall.

Below are additional images of the floppy flex product used on other buildings:



Existing Sconces - Presently, there are two large sconces on the front side of the building, each of which contains a single, white bulb which directs light outward more so than than up or down. This orientation of the light distribution is based in part

because the sconces have covered bases and tops which limit light distribution upward or downward. Here is a photo of an existing sconce:



Existing sconce

The 4 replacement sconces proposed for the front façade are specifically designed to direct light upward and downward against the walls of the building, rather than outward towards Park Street and Colburn Park. Below is an image of the proposed replacement fixture:



Replacement sconce for front entry

If the Heritage Commission determines that the 2 existing sconces should be retained, LOH would then request approval for the following combination of lighting on the front façade:

- The 2 existing sconces would be retained, but the bulbs would be replaced with dimmable, color programmable bulbs which can be coordinated with the other lighting colors for the main entry.
- Small, discreet uplights, shown as A2 fixtures would be placed above each existing sconce to light the columns and “City Hall” sign above.
- 2 new sconces would be added to the outside of each end of the main entry consistent with the proposed plans.

It should be noted that if this approach is taken, the sconces on the outside of the entry will not match the existing ones. Likewise the retrofitted existing sconces will not

be able to provide downlighting while the new fixtures will provide both up and down lighting.

Foot-candles and Potential for Light Spillover - Calculating the foot-candles or other measurements of light intensity for the proposed City Hall exterior lighting is a difficult task for several reasons, including:

1. Most of the proposed fixtures focus the light output on the walls of City Hall, and accordingly, the actual bulbs or sources of light are not visible to the eye. Measuring the intensity of light reflected off a dark, brick wall is more difficult than measuring the intensity of directly viewing an illuminated bulb.
2. The measured intensity of the various proposed exterior fixtures depends on the programmed color or colors utilized. White lights produce the highest light intensity while colors like blue and red generate much lower light intensity.
3. LOH and its lighting designer believe the proposed exterior lighting system will generate less spillover than the existing lighting around City Hall (see Appendix for photos of current exterior lighting), some of which is proposed to be replaced. Existing fixtures with direct illumination include: a) 5 street lights along the south and east sides of City Hall; b) 2 flagpole floodlights pointed outwards towards Park Street and upwards towards the sky; c) 2 sconces on the main façade which direct light out towards Park Street and Colburn Park; d) 5 safety floodlights on the west and north sides of City Hall which direct light both down and out towards abutting properties; and e) parking lot lights on the north end of City Hall.
4. The intensity of the proposed lighting is programmable. In other words, not only can the colors schemes be modified to adjust the light intensity, but these fixtures are also dimmable. The existing street lights, sconces, flagpole and safety floodlights are neither dimmable nor can their intensity be adjusted by modifying the color of output.

Based on all of these factors, any foot-candle measurements are unlikely to be reliable and will vary depending on the the intensity and colors programmed into the system. It is important to understand that significant light spillover and ambient light already exists in the area around City Hall. Most of this light is created by street lights, parking lot lights, and flood lights on City Hall. Please refer to the attached Appendix which provides photos around City Hall at night and documents the significant existing ambient light created by street lights, flood lights, and other existing lighting. LOH believes it is unlikely the proposed exterior lighting system will significantly increase the intensity of light and light spillover in the area around City Hall.

More importantly, these lighting systems are highly programmable. Time of use, colors, and the intensity of the lights can all be easily programmed and controlled by City and LOH staff. LOH primarily plans to use the lighting systems during evenings when there is a performance taking place in the theater. The use of lights can be coordinated with the LOH schedule, and turned off following the conclusion of a performance. For the City, except during specific holidays or seasons when a particular color scheme may be utilized (breast cancer awareness month, holiday season, 4th of July), the City may elect to use a simple base case lighting scheme. For the clock tower, the City can determine when to illuminate the clock tower (although the clock faces are currently illuminated throughout the night). If community members or neighbors object to the intensity of particular lighting schemes, the City and LOH can modify the programming to address these concerns.

Updated Elevations and Renderings - LOH and its lighting designer have updated the elevations and renderings which were submitted with the original application to the Heritage Commission. There are a few points to note on these updated plans:

1. Safety Lights - The 5 replacement safety lights, 2 on the north or rear side and 3 on the west are shown as type B fixtures on the updated elevations.

2. Existing Sconces - The updated elevations and renderings show a scenario where the large existing sconces on the front façade are maintained, with replacement bulbs which can be incorporated into the color programming. In order to wash light upwards towards the columns above, small, discreet type A2 fixtures would be mounted above/behind each sconce. An image of an A2 fixture is shown below. Please note that if the Heritage Commission determines to keep the existing sconces, there would be no ability to downlight below each fixture.



A2 Fixture

3. Renderings - There is a computer glitch on one of the updated renderings which is important to note: on the first nighttime image, or page 3 of the updated plans, one can see horizontal lights running along the top of the roof above the City Hall side entrance and above the east side of the LOH theater. There are no plans to introduce lights along the top of the roof in these locations, and the suggestion of lighting here is simply a computer error which the lighting designer has been unable to eliminate. The subsequent pages show different views of City Hall including the front façade with the retention of the existing sconces shown. The holiday wreaths

have been added to the front façade as requested by the Heritage Commission. The final two pages show the front and rear façades with a holiday color scheme.

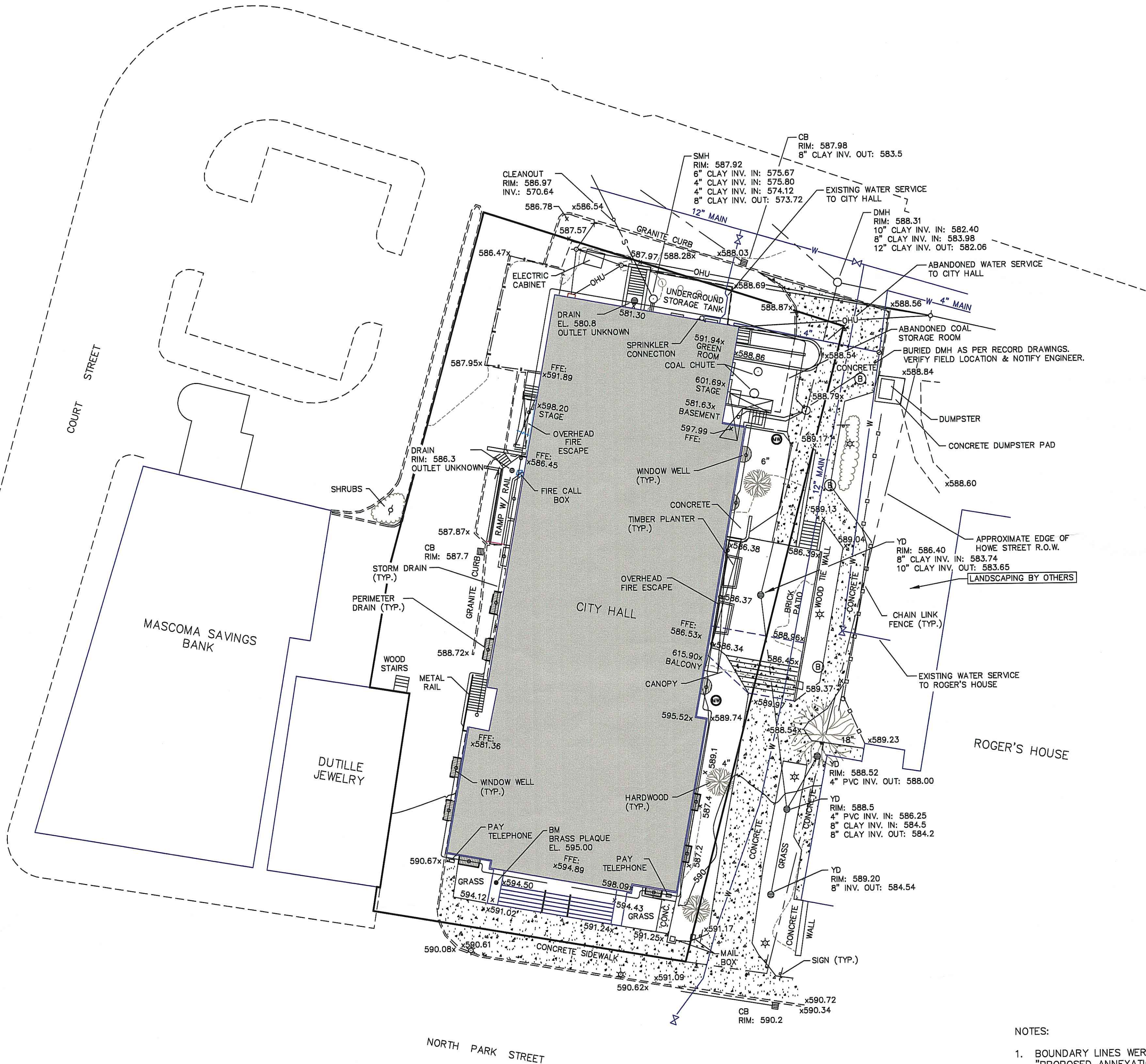
Rear Façade Line Art - At this time, LOH does not have a concept, shape, or image sufficiently developed for the proposed line art on the rear façade to present a concept to the Heritage Commission. Accordingly, LOH would accept as a condition for approval of the exterior lighting system that it come back to the Heritage Commission for formal review and approval of a specific design for the line art. However LOH is hopeful that the Heritage Commission will provide approval for LOH/the City to install the power system for the rear façade line art, so that installation can be greatly simplified once final approval is granted. Until the final form or shape of the line art is approved, the rear façade lighting will be limited to the wall washing WW1 fixtures shown on the plans and renderings.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF LEBANON CONSTRUCTION STANDARDS AND SPECIFICATIONS.
2. LOCATION AND SIZE OF EXISTING PIPES AND OTHER UNDERGROUND UTILITIES ARE NOT WARRANTED TO BE EXACT OR COMPLETE.
3. EXPLORATORY EXCAVATION SHALL BE REQUIRED TO VERIFY LOCATION AND SIZE OF EXISTING UTILITIES AND APPURTENANCES.
4. TOPOGRAPHY WAS COMPILED BY T & M ASSOCIATES, INC., PROJECT NO. 558399. BASE DATUM IS USGS.
5. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING ELECTRIC, CABLE TELEVISION AND TELEPHONE UTILITIES PRIOR TO COMMENCEMENT OF WORK. DIG SAFE SHALL BE NOTIFIED AT LEAST 3 WORKING DAYS PRIOR TO ANY WORK.
6. CITY OF LEBANON PUBLIC WORKS PERSONNEL SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO ANY UTILITY CONSTRUCTION. UTILITY CONSTRUCTION MAY ONLY BEGIN AFTER AUTHORIZATION FROM PUBLIC WORKS PERSONNEL.
7. THE CITY OF LEBANON (PUBLIC WORKS/ENGINEERING) SHALL BE NOTIFIED PRIOR TO ANY WORK REQUIRING TRAFFIC IMPEDANCE, ROADWAY OR DRAINAGE STRUCTURE DISTURBANCE. CONSTRUCTION MAY ONLY BEGIN AFTER AUTHORIZATION FROM CITY PERSONNEL.
8. THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION IF THERE ARE ANY DISCREPANCIES IN PLANS OR EXISTING DATA. CONSTRUCTION SHALL NOT PROCEED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
9. ELECTRICAL, CABLE TELEVISION AND TELEPHONE SERVICE CONNECTIONS ARE SHOWN ON THESE PLANS. DISCREPANCIES OR CHANGES AS A RESULT OF THESE SERVICES MUST BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
10. ALL EROSION CONTROL FACILITIES SHALL BE MAINTAINED AS OFTEN AS REQUIRED BY WEATHER CONDITIONS.
11. DITCHES AND OTHER RUNOFF COLLECTION AREAS SHALL BE MAINTAINED BOTH DURING AND AFTER CONSTRUCTION TO ENSURE THE PROPER REMOVAL OF SEDIMENT.
12. ALL SLOPES GREATER THAN 3:1 (3 HORIZONTAL TO 1 VERTICAL) SHALL BE STABILIZED USING MULCH NETTING. ADDITIONAL STABILIZATION MEASURES NECESSARY SHALL BE IMPLEMENTED AS REQUIRED.
13. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5' - 6" COVER OVER TOP OF WATER MAIN TO PROPOSED GRADE.
14. ALL WATER MAIN MECHANICAL JOINTS SHALL BE INSTALLED USING RETAINER GLANDS. ALL WATER MAIN FITTINGS SHALL BE RESTRAINED BY CONCRETE THRUST BLOCKS.
15. VERTICAL BENDS SHALL BE RESTRAINED USING RETAINER GLANDS, RODS AND THRUST BLOCKS AS DIRECTED BY THE ENGINEER.
16. PRESSURE TESTING AND CHLORINATION TAPS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER.
17. ALL WATER VALVES SHALL OPEN LEFT.
18. HORIZONTAL SEPARATION OF WATER AND SEWER SHALL BE AT LEAST 10' OR AS SHOWN ON THE SEWER DETAIL SHEET. WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER AND THE WATER MAIN SHALL HAVE AT LEAST 18" VERTICAL SEPARATION AND THE SEWER PIPE SHALL BE CL. 52 DUCTILE IRON FOR A MINIMUM OF 9' EACH SIDE OF THE CROSSING.
19. MAINTAIN MINIMUM HORIZONTAL SEPARATION OF 5' FROM WATER MAIN TO CATCH BASINS.
20. CATCH BASINS SHALL HAVE 2' SUMPS IN ACCORDANCE WITH CITY OF LEBANON STANDARDS, EXCEPT AS NOTED OTHERWISE.
21. GRADING SHALL BE DIRECTED TOWARD CATCH BASINS UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY THE ENGINEER IN WRITING.
22. ALL DRAINAGE FACILITIES SHALL BE INSTALLED IN EXISTING GROUND UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY THE ENGINEER IN WRITING. A POSITIVE SLOPE SHALL BE MAINTAINED FOR ALL DRAINAGE FACILITIES UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY THE ENGINEER IN WRITING.
23. ALL PROPOSED CURBING SHALL BE VERTICAL OR SLOPED GRANITE, AS SHOWN ON THE PLANS.
24. SNOW REMOVAL WILL BE PERFORMED IN ACCORDANCE WITH THE CURRENT PRACTICE OF STORING THE SNOW ON-SITE.
25. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION ON THIS SITE UNLESS RETAINED FOR CONSTRUCTION OBSERVATION SERVICES.
26. LIGHTING DETAILS ARE INTENDED TO CONVEY GENERAL CONSTRUCTION COMPONENTS. SHOP DRAWINGS WILL BE REVIEWED PRIOR TO CONSTRUCTION TO VERIFY THAT AT LEAST THE MINIMUM LIGHTING CRITERIA ARE MET.
27. ALL HANDICAP PARKING SPACES SHALL HAVE A HANDICAP SYMBOL SIGN INSTALLED AT THE PROPER HEIGHT. ALL HANDICAP PARKING SPACE STRIPING SHALL BE PAINTED HANDICAP BLUE.
28. CONTRACTOR SHALL ERECT AND MAINTAIN CONSTRUCTION FENCING TO PROTECT VEGETATED AREAS TO REMAIN UNDISTURBED.
29. DETAILS FOR ROOF DRAINS AND FOUNDATION UNDERDRAINS AND THEIR ASSOCIATED CONNECTIONS TO THE STORM DRAIN SYSTEM WILL BE PROVIDED BY OTHERS.
30. NEW WORK IDENTIFIED BY .

LEGEND:

EXISTING UTILITY POLE	
EXISTING LIGHT POLE	
EXISTING SIGN	
EXISTING CONTOUR	
EXISTING SPOT ELEVATION	
EXISTING WATER MAIN & GATE VALVE	
EXISTING DRAIN LINE	
YARD DRAIN	
CATCH BASIN	
MANHOLE	
OVERHEAD UTILITIES	
APPROXIMATE PROPERTY LINE	
EXISTING SEWER LINE	
GROUNDWATER MONITORING WELL	



NOTES:

1. BOUNDARY LINES WERE TAKEN FROM A PLAN PREPARED BY HATHORN SURVEYS' ENTITLED: "PROPOSED ANNEXATION FOR MASCOMA SAVINGS BANK - NORTH PARK ST., COURT ST. & FLYNN ST. LEBANON, NEW HAMPSHIRE." DATED: 07/16/93 PROJECT NO. 83393.
2. TOPOGRAPHY WAS COMPILED FROM FIELD SURVEY BY T&M ASSOCIATES, INC. ON FEBRUARY 25, 2000 & MARCH 10, 2000, PROJECT NO. 558399 AND THE PLAN REFERENCED.
3. THE UNDERGROUND UTILITIES SHOWN ARE AS MARKED IN THE FIELD BY THE CITY OF LEBANON OR TAKEN FROM RECORD DRAWINGS PROVIDED BY THE CITY OF LEBANON.

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

EXISTING CONDITIONS PLAN FOR
CITY HALL & OPERA HOUSE - CITY OF LEBANON
PARK STREET - LEBANON, NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

12 GREAT HOLLOW ROAD
HANOVER, NEW HAMPSHIRE 03755
(603) 643-3511

SCALE: 1"= 20'

DESIGNED BY: SAH

DRAWN BY: JSH

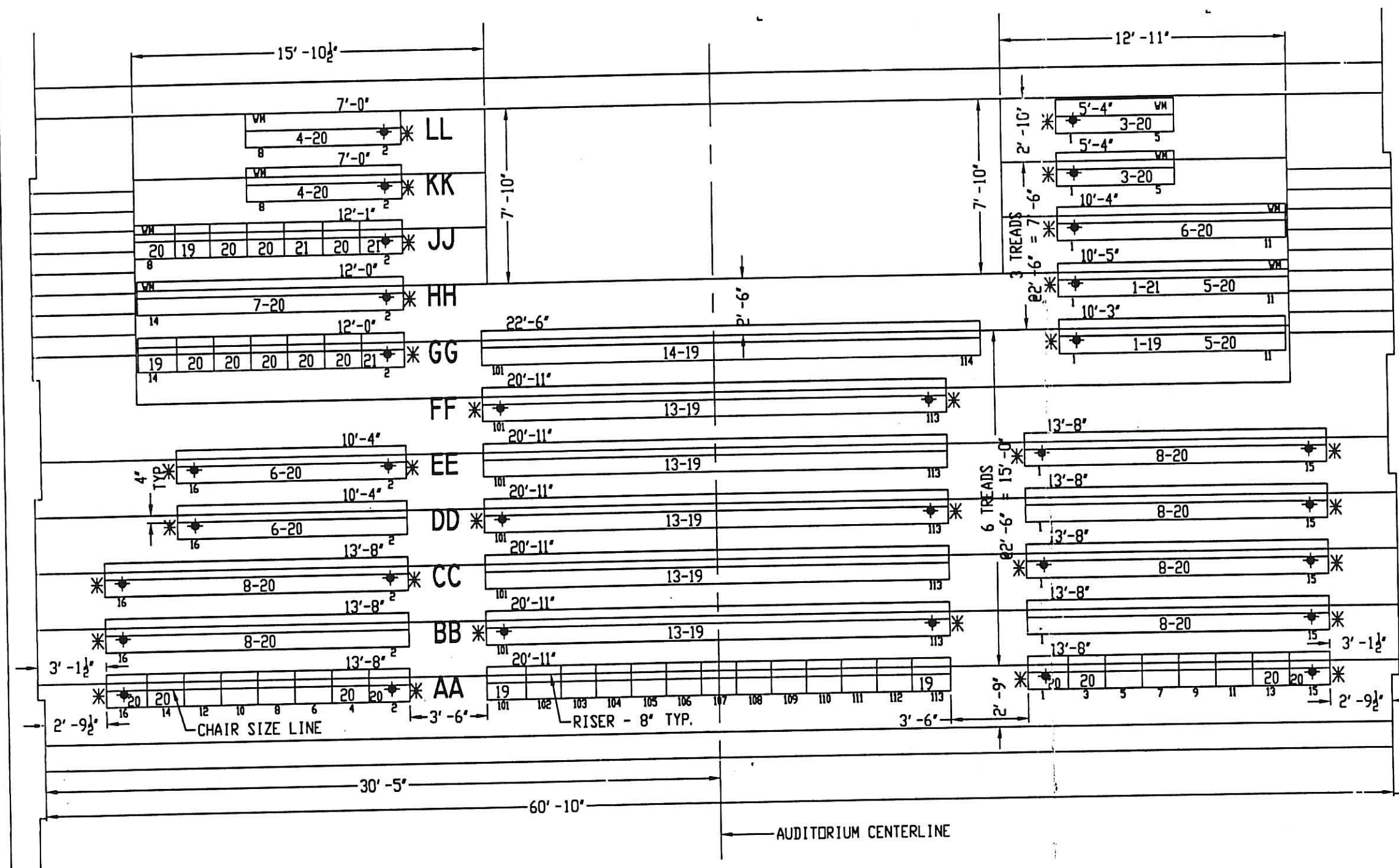
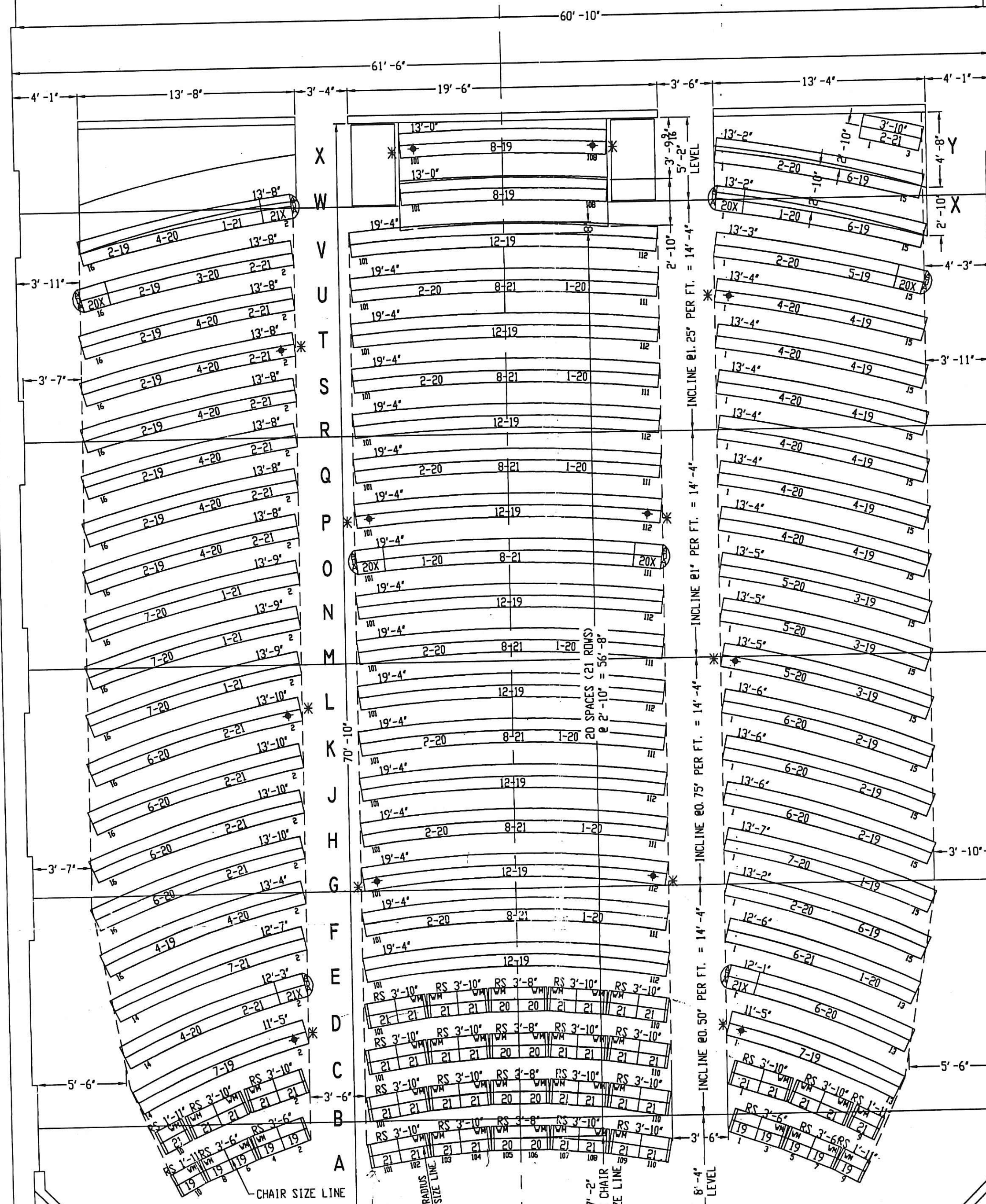
CHECKED BY:

DATE: 01/30/01

PROJ. NO. 10051

C1

SHEET C1 OF C4



RIGHT BANK
ROWS "AA" - "CC"
USE LEVEL STANDARDS.
ROWS "DD" - "LL"
USE #2 INCLINE STD'S WITH SHIMS.

CENTER BANK
ROWS "AA", "BB", "DD", "EE", & "GG"
USE LEVEL STANDARDS.
ROWS "CC" & "FF"
USE #2 INCLINE STD'S WITH SHIMS.

LEFT BANK
ROWS "AA", "BB", "GG", & "HH"
USE LEVEL STANDARDS.
ROWS "CC" - "EE" & "JJ" - "LL"
USE #2 INCLINE STD'S WITH SHIMS.

AISE ENDS
EXISTING COMMONWEALTH AISE ENDS

NOTES:

THIS PLAN ALLOWS 2' FOR THE OVERHANG OF EACH END STANDARD.
ALL REMOVABLE CHAIRS WILL BE ASSEMBLED IN STRAIGHT SECTIONS AND INSTALLED ANGULARLY TO FIT THE ROW ARC.

BUILDING CONFIGURATION FOR THIS SEATING PLAN WAS OBTAINED FROM ARCHITECTURAL DRAWINGS AND OR CAD FILES SUBMITTED TO COUNTRY ROADS, INC. COUNTRY ROADS, INC. CAN IN NO WAY GUARANTEE CHAIR SIZES, QUANTITIES OR THE LAYOUT UNTIL AFTER THE SEATING AREAS HAVE BEEN COMPLETELY FIELD MEASURED AND THE FIELD DATA INCORPORATED IN TO THIS SEATING PLAN. THE SEATING AREA CANNOT BE FIELD MEASURED UNTIL AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, AND ALL SCAFFOLDING, MATERIALS AND DEBRIS HAVE BEEN REMOVED.

THIS SEATING PLAN IS FOR ESTIMATING CHAIRS SIZES AND QUANTITIES ONLY.

INSTALL WALL MIDDLE STANDARDS IN PLACE OF END STANDARDS AT ROW ENDS AS SHOWN IN THE DRAWING.

THE NUMBERING AND LETTERING SCHEME SHOWN IS SUGGESTED ONLY. PLEASE DETERMINE THE DESIRED SCHEME AND ADVISE.

THE LOCATIONS SHOWN FOR ADA EQUAL ACCESS END STANDARDS ARE SUGGESTED ONLY. PLEASE DETERMINE THE DESIRED LOCATIONS AND ADVISE.

LEGEND

A = ROW IDENTIFICATION

2 = SEAT IDENTIFICATION

WM = WALL MIDDLE STANDARD LOCATIONS

◆ = LOCATION OF AISLE LIGHT ELECTRICAL BOX.

* = LOCATION OF AISLE LIGHT END STANDARD.

20X = ADA EQUAL ACCESS CHAIR LOCATIONS.
1" SEAT AND BACK REDUCTION REQUIRED.
(8 LOCATIONS SHOWN)

RS = REMOVABLE CHAIR LOCATIONS
(27 LOCATIONS SHOWN)

20" = SIDE ACCESS WHEELCHAIR POSITIONS
33" X 60"
(2 POSITIONS SHOWN)

NOTE:
WOOD FLOOR REQUIREMENTS VERIFY!

FLOORING SPECIFICATIONS

The following are the industry accepted flooring requirements for seating installation. In no case will Country Roads, Inc. be responsible for anchoring problems due to the anchoring surface.

1) Wood Flooring

Admin. 1 1/2" thickness

Bplywoodmin. req 3 CDX Under layments

plug and touch sand, tongue and grooved

C/Flooring-subfloors plus hardwoodtounge and groovefinish flooring

Country Roads, Inc. does not recommend riser mounting on wood construction

2) Concrete flooring on risers

Abnormal weight concrete, min. compression strength 3000 PSI

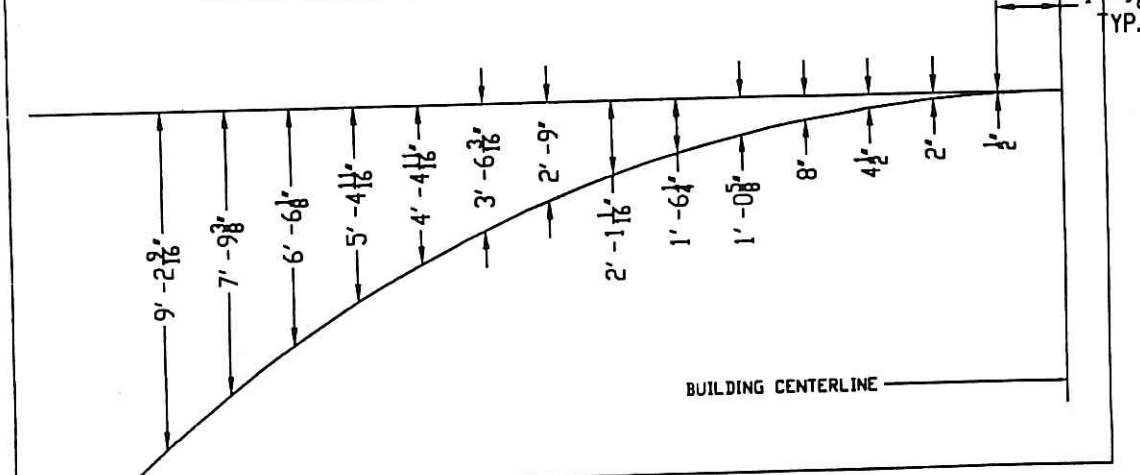
B/Floor mounted chairs-3" thick, free from obstruction for top 1 1/2"

D/Riser mounted chairs-4" thick, free from obstruction for 2 1/2" from riser face.

Riser to be plumb 1/8"

CHAIR SIZE LINE RADIUS TEMPLATE

ONE HALF TEMPLATE FOR THE CHAIR SIZE LINE OF ROW A, RADIUS = 42'-0".



NOTE:

WE MUST HAVE A SUMMARY OF THE EXISTING PRODUCT BEFORE WE CAN PROVIDE A FINAL CHAIR SUMMARY FOR THE MAIN FLOOR.

CHAIR SUMMARY											
REGULAR CHAIR SIZES				ADA CHAIRS				SEAT SIZES			
19"	20"	21"	22"	19X	20X	21X	22X	16"	17"	18"	18"x
TOTAL				TOTAL				TOTAL			
231	192	149	0	572	0	5	3	0	231	197	152
MAIN FLOOR (EXISTING H2O)											
BALCONY (EXISTING ANSECO)											
67	50	1	0	118	0	0	0	0	67	50	1
28	72	3	0	103	0	0	0	0	28	72	3
BALCONY TOTALS											
95	122	4	0	221	0	0	0	0	95	124	4
GRAND TOTALS											
326	314	153	0	793	0	5	3	0	326	319	156
TOTALS											
326	314	153	0	793	0	5	3	0	326	319	156

THIS SEATING PLAN INCORPORATES THE BEST ARRANGEMENT POSSIBLE FOR THE EXISTING BUILDING DIMENSIONS AND THE REQUIREMENTS OF THE CUSTOMER. BUILDING CODES HAVE BEEN CONSIDERED IN DEVELOPING THIS PLAN INsofar AS SUCH CODES ARE KNOWN TO COUNTRY ROADS, INC. HOWEVER, THE COMPANY DOES NOT ASSUME RESPONSIBILITY FOR COMPLIANCE WITH ALL BUILDING CODES. VERIFICATION OF COMPLIANCE WITH CODES, INCLUDING LOCAL CODES AND THE AMERICAN DISABILITIES ACT, IS THE EXCLUSIVE RESPONSIBILITY OF THE CUSTOMER AND OR ARCHITECT.

THIS SEATING PLAN IS HEREBY APPROVED FOR QUANTITY AND ARRANGEMENT OF SEATING, WIDTH OF AISLES AND BUILDING MEASUREMENTS. COUNTRY ROADS, INC. WILL MANUFACTURE THE SEATING ACCORDINGLY AND MUST BE NOTIFIED IMMEDIATELY OF ANY CHANGE IN BUILDING DIMENSIONS OR SEATING LAYOUT.

Signed: _____

Date: _____

D REV. BALCONY REAR SIDE BANKS. J.T.W.

C ADDED AISLE LIGHTS. J.T.W.

B MODIFIED LAYOUT PER MARK UP JCS

A MODIFIED LAYOUT PER MARK UP JLM

OPERA HOUSE

LEBANON, N.H.

Scale: 3/16"=1'-0"

Date: 5/10/00

Drawn by: JLM

Checked by: JCS

Plot number: 2114

Plot name: OPERA HOUSE

Plot number: 2114

Plot name: OPERA HOUSE

Plot number: 2114

Plot name: OPERA HOUSE

Plot number: 2114

Plot name: OPERA HOUSE

Plot number: 2114

Plot name: OPERA HOUSE

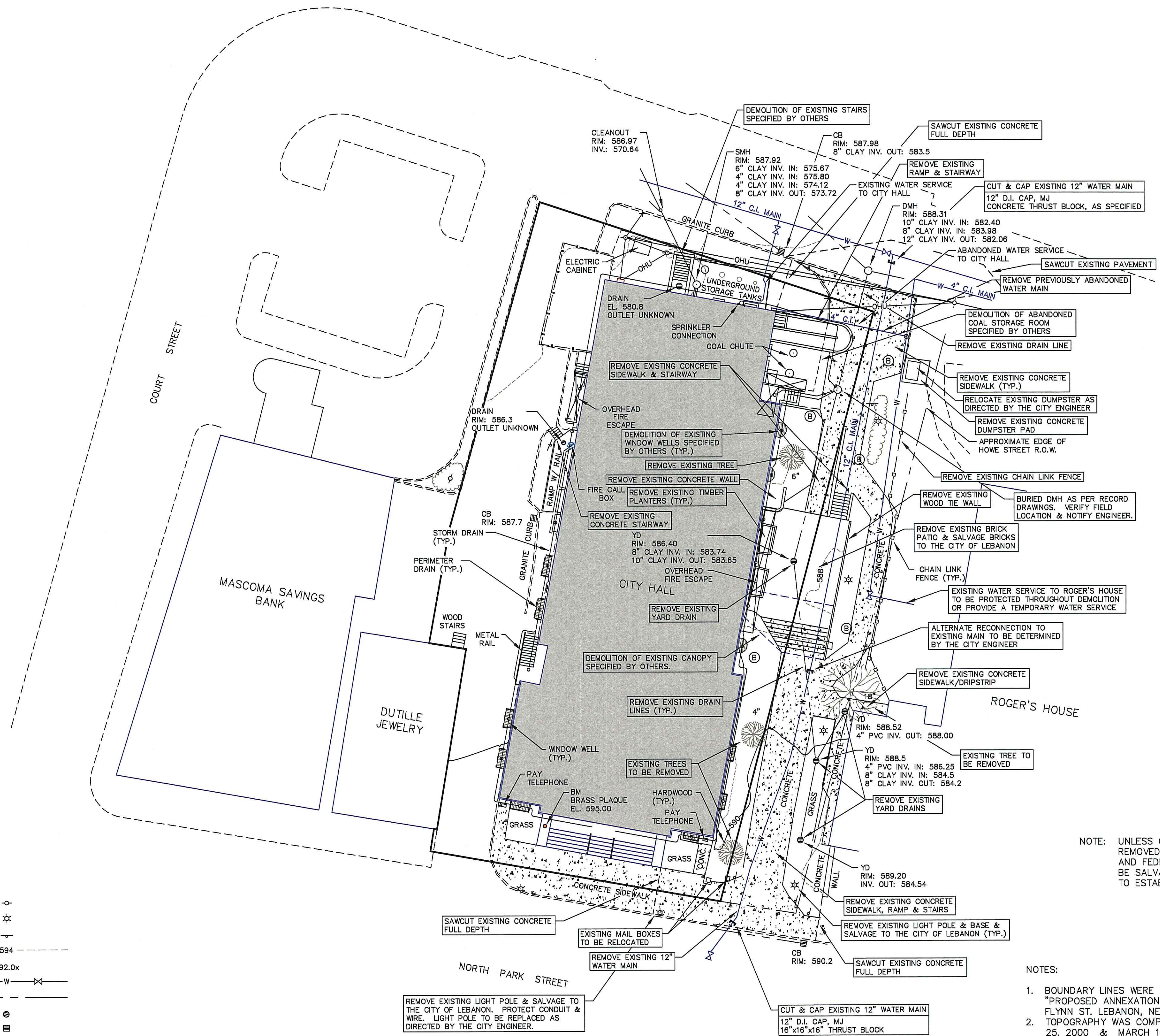
Plot number: 2114

Plot name: OPERA HOUSE



LEGEND:

EXISTING UTILITY POLE	-o-
EXISTING LIGHT POLE	*--
EXISTING SIGN	-T-
EXISTING CONTOUR	----- 594
EXISTING SPOT ELEVATION	592.0x
EXISTING WATER MAIN & GATE VALVE	----- W -----
EXISTING DRAIN LINE	----- D -----
YARD DRAIN	o
CATCH BASIN	■
MANHOLE	○
OVERHEAD UTILITIES	OHU
APPROXIMATE PROPERTY LINE	-----
EXISTING SEWER LINE	----- S -----
GROUNDWATER MONITORING WELL	⊙



NOTE: UNLESS OTHERWISE SPECIFIED, ALL EXISTING STRUCTURES AND MATERIALS TO BE REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE STATE AND FEDERAL REGULATIONS. ALL EXISTING GRAVEL SUBGRADE MATERIAL SHALL BE SALVAGED AND REUSED AS COMMON FILL AREAS TO BE LOAMED, SEEDDED OR TO ESTABLISH SUBGRADE OF LANDSCAPED AREAS.

NOTES:

- BOUNDARY LINES WERE TAKEN FROM A PLAN PREPARED BY HATHORN SURVEYS' ENTITLED: "PROPOSED ANNEXATION FOR MASCOMA SAVINGS BANK - NORTH PARK ST., COURT ST. & FLYNN ST. LEBANON, NEW HAMPSHIRE." DATED: 07/16/93 PROJECT NO. 83393.
- TOPOGRAPHY WAS COMPILED FROM FIELD SURVEY BY T&M ASSOCIATES, INC. ON FEBRUARY 25, 2000 & MARCH 10, 2000, PROJECT NO. 558399 AND THE PLAN REFERENCED.
- THE UNDERGROUND UTILITIES SHOWN ARE AS MARKED IN THE FIELD BY THE CITY OF LEBANON, OR TAKEN FROM RECORD DRAWINGS PROVIDED BY THE CITY OF LEBANON.

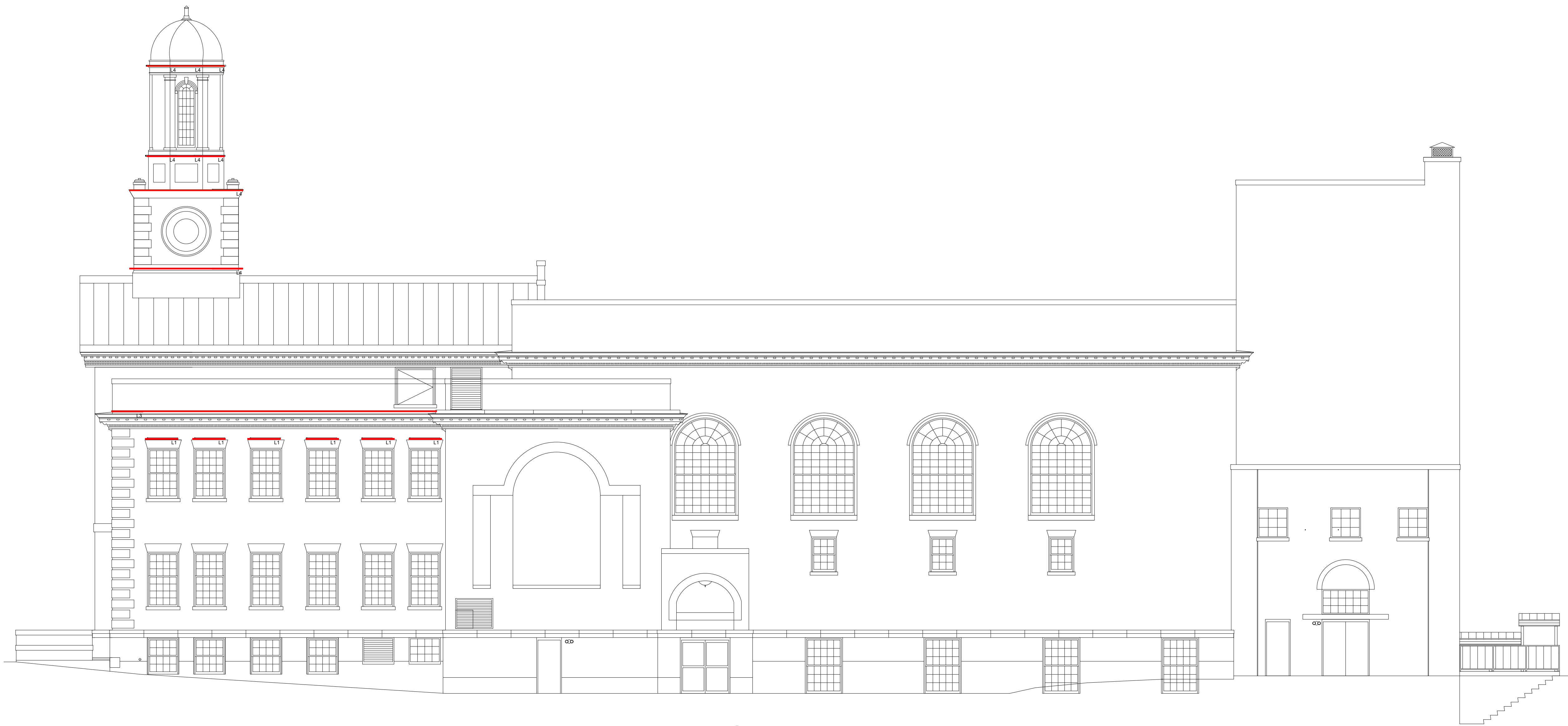
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

DEMOLITION PLAN FOR
CITY HALL & OPERA HOUSE - CITY OF LEBANON
PARK STREET - LEBANON, NEW HAMPSHIRE

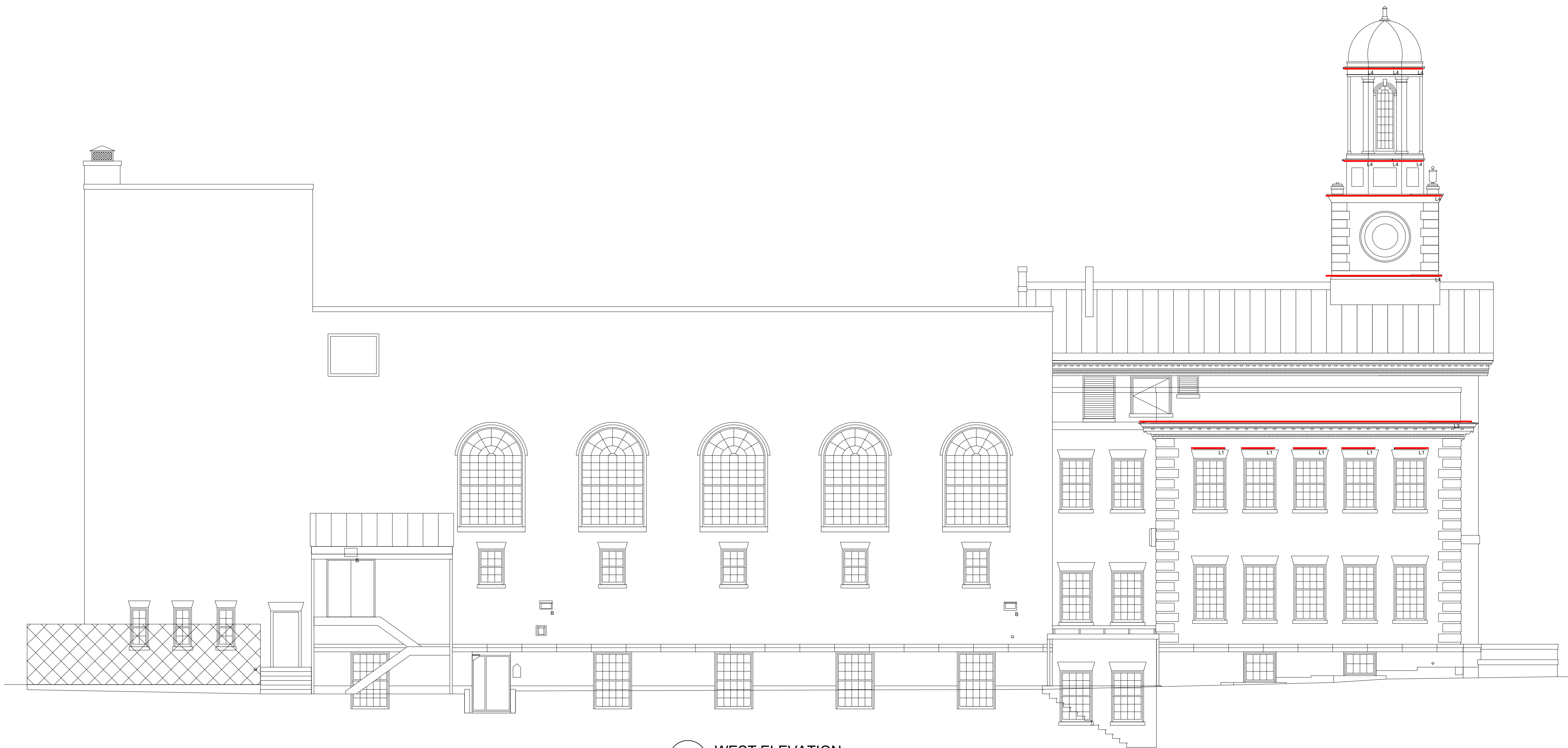
PATHWAYS CONSULTING, LLC
12 GREAT HOLLOW ROAD
HANOVER, NEW HAMPSHIRE 03755
(603) 643-3511

SCALE: 1"= 20'
DESIGNED BY: SAH
DRAWN BY: JSH
CHECKED BY:
DATE: 01/30/01
PROJ. NO. 10051





1 EAST ELEVATION
Scale: 1/8" = 1'-0"



2 WEST ELEVATION
Scale: 1/8" = 1'-0"

Swaney Lighting
Associates
15 Pleasant Hill Rd
Scarborough, ME 04070
(207) 883-7100



PROJECT: LEBANON OPERA HOUSE/CITY HALL
LOCATION: LEBANON, NH

SYSTEM #:
REP: SWANEY LIGHTING ASSOCIATES

NOTICE: THIS DRAWING IS THE SOLE PROPERTY OF SWANEY LIGHTING ASSOCIATES. THE ACCEPTANCE OF THIS DRAWING BY THE CLIENT DOES NOT CONSTITUTE AN AGREEMENT THAT THE DRAWING WILL BE TREATED AS CONFIDENTIAL. THIS DRAWING IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, DISCLOSED OR COPIED, EXCEPT AS EXPRESSLY AUTHORIZED BY SWANEY LIGHTING ASSOCIATES. ANY REUSE OF THIS DRAWING FOR ANY OTHER PURPOSES IS NOT AUTHORIZED BY SWANEY LIGHTING ASSOCIATES.

REVISIONS

SCALE:
As Noted

DRAWN BY:
Jay Lehrhaupt

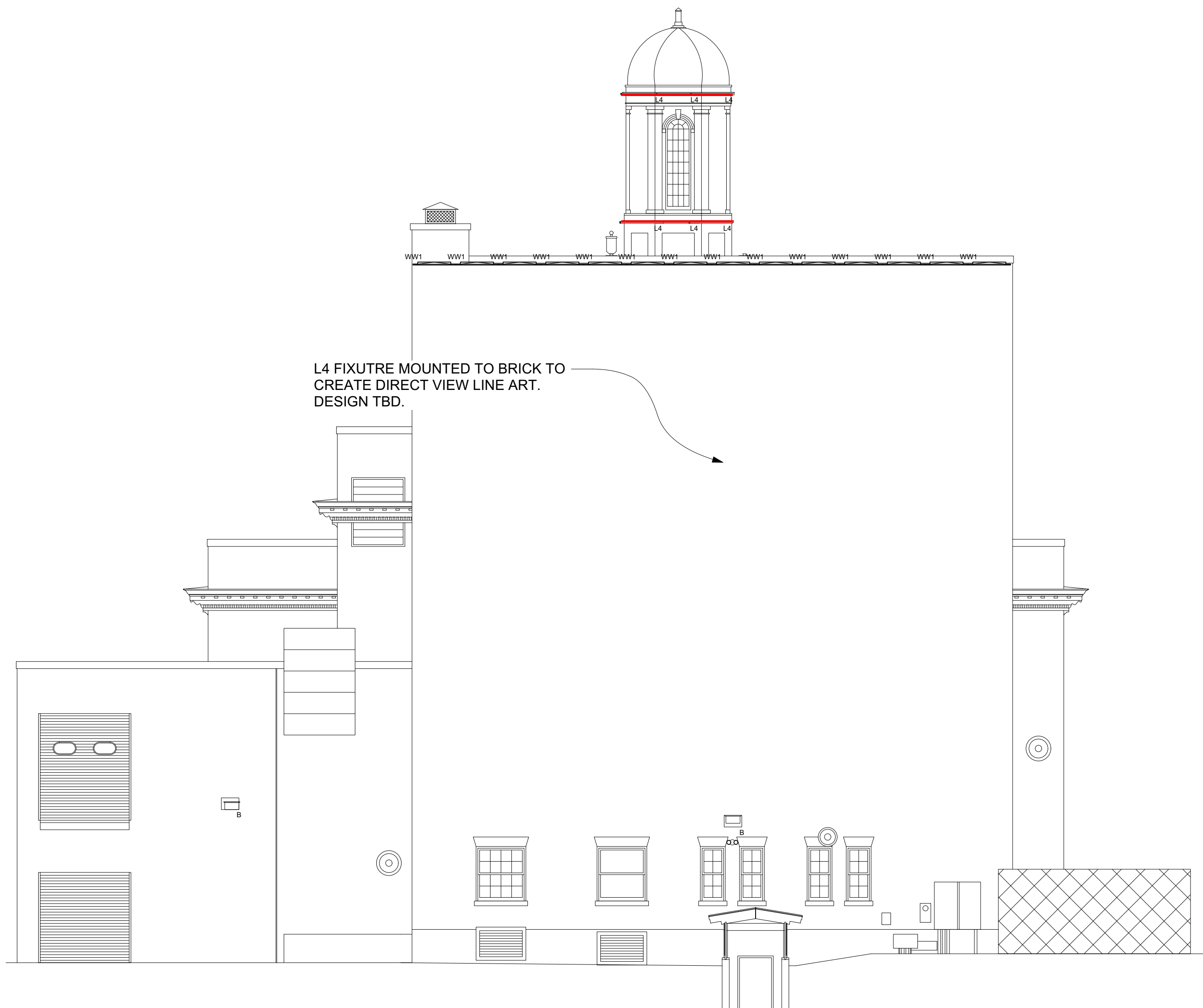
DATE:
Nov 28, 2023

DRAWING:

EXL-1



1 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



2 NORTH ELEVATION
Scale: 1/8" = 1'-0"

FIXTURE SCHEDULE				
TYPE	DESCRIPTION	MFCTR	MODEL	NOTES
A	COLOR CHANGING CYLINDER SCONE WITH 16" UP AND 41" DOWN LIGHT	BK	MA-LED-C26-SP/FL-***-12-B-DMX	PROVIDE WITH DMX INTERFACE
A1	COLOR CHANGING CYLINDER SCONE WITH 16" UP LIGHT	BK	AP-LED-C26-SP-***-12-B-DMX	PROVIDE WITH DMX INTERFACE
B	WALL MOUNT SCONE 3500 LUMENS 3000K WITH INTEGRATED SENSOR	CURRENT	LNC248L-25-3K7-FT-UNV--BLT-BTS012F	
FL1	3000K FLOOD LIGHT FOR FLAG	CURRENT		
L1	4' LINEAR RGBW FIXTURE 6W/FT WITH PER FOOT CONTROL; 10"X80" OPTICS	TRAXON	PP.L5.944452	
L2	4' LINEAR 3000K FIXTURE 6W/FT WITH PER FOOT CONTROL; 10"X80" OPTICS	TRAXON	XB.N7.8374110	
L3	IP67 DIGITAL RGBW TAPE WITH MOUNTING CHANNEL	TMB	FFLCDRGBWWB/FFALCH13PC12M	
L4	DIRECT VIEW LINEAR RGBW STRIP WITH PER FT RESOLUTION AND MOUNTING CHANNEL	TMB	FFFSDRGBWWB	
L5	4' LINEAR RGBW FIXTURE 12W/FT WITH PER FOOT CONTROL; 15" OPTICS	TRAXON	PP.L1.944423	
WW1	4' LINEAR RGBW WALL WASH 8000 LUMEN OUTPUT WITH PER FOOT CONTROL 9" OPTICS	TMB	SURGBW1161BBC00	

PROJECT: LEBANON OPERA HOUSCITY HALL
LOCATION: LEBANON, NH

SYSTEM #:
REP: SWANEY LIGHTING ASSOCIATES

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REVISIONS

SCALE:
As Noted

DRAWN BY:
Jay Lehrhaupt

DATE:
Nov 28, 2023

DRAWING:

EXL-2

Swaney Lighting
Associates
15 Pleasant Hill Rd
Scarborough, ME 04070
(207) 883-7100



