

NONRESIDENTIAL SITE PLAN APPLICATION
City of Rochester, New Hampshire

City of Rochester, New Hampshire

Date: 4/23/2020 Is a conditional use needed? Yes: No: x Unclear:
(If so, we encourage you to submit an application as soon as possible.)

Property information

Tax map #: 216 & 221; Lot #(s): 32, 186 & 187; Zoning district: Industrial

Property address/location: 134 Chestnut Hill Road

Name of project (if applicable): Lydall Performance Materials, Inc.

Size of site: 36.46 acres; overlay zoning district(s)? Aquifer Protection overlay

Property owner

Name (include name of individual): Lydall Eastern, Inc. & Lydall Eastern Inc. Technical Papers Division, Inc. c.o Tony Eldridge

Mailing address: 134 Chestnut Hill Road, Rochester, NH 03867

Telephone #: 603-332-4600 Email: _____

Applicant/developer (if different from property owner)

Name (include name of individual): Budel Construction Corp. c/o Leon B. Meader

Mailing address: 23 Meaderboro Road, Rochester NH 03867

Telephone #: 603 332-1282 Email: info@budelconstruction.com

Engineer/designer

Name (include name of individual): Norway Plains Associates, Inc., c/o Scott A. Lawler, PE

Mailing address: PO Box 249, Rochester, NH 03866-0249

Telephone #: 603-335-3948 Fax #:

Email address: slawler@norwayplains.com Professional license #: 10026

Proposed activity (check all that apply)

New building(s): _____ Site development (other structures, parking, utilities, etc.): ☒ _____

Addition(s) onto existing building(s): x Demolition: Change of use:

Describe proposed activity/use: To expand the existing manufacturing facility with an overall 148,850 sf building addition

in which Phase 1 will be a 46,800 sf addition. Furthermore, the parking, loading area and driveway will be constructed..

Describe existing conditions/use (vacant land?): There is an manufacturing existing building and paved area for parking

Utility information

City water? yes ☒ no ☐; How far is City water from the site? less than 50 feet

City sewer? yes ☒ no ☐; How far is City sewer from the site? less than 50 feet

If City water, what are the estimated total daily needs? less than 500 gallons per day

If City water, is it proposed for anything other than domestic purposes? yes ☐ no ☒

If City sewer, do you plan to discharge anything other than domestic waste? yes ☐ no ☒

Where will stormwater be discharged? Infiltration Basin

Building information

Type of building(s): Steel building addition to match existing building

Building height: 35' Finished floor elevation: 234.5'

Other information

parking spaces: existing: 108 total proposed: 166; Are there pertinent covenants? No

Number of cubic yards of earth being removed from the site N/A

Number of existing employees: 125+/-; number of proposed employees total: 140+/-

Check any that are proposed: variance ☐; special exception ☐; conditional use ☐

Wetlands: Is any fill proposed? No; area to be filled: ; buffer impact?

Proposed <u>post-development</u> disposition of site (should total 100%)		
	Square footage	% overall site
Manufacturing Building	317,337	20.85
Pump House	1,906	0.13
Parking and vehicle circulation 32, 186 & 187	218,749	14.37
Planted/landscaped areas (excluding drainage)	24,028	1.58
Natural/undisturbed areas (excluding wetlands)	792,680	52.08
Wetlands	78,282	5.14
Other – drainage structures, outside storage, etc.	89,004	5.85

Comments

Please feel free to add any comments, additional information, or requests for waivers here:

A waiver is required for the overall number of parking spaces.

Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), and/or the agent.

I (we) hereby submit this Site Plan application to the City of Rochester Planning Board pursuant to the City of Rochester Site Plan Regulations and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.

Signature of property owner: _____

Date: _____

Signature of applicant/developer: _____

Date: _____

Signature of agent: _____

Date: _____

Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner: _____

Date: _____

Site Plan Checklist (residential and nonresidential)

**To be filled out by applicant/agent (with notes to be inserted by staff)*

See regulations for other specific requirements
City of Rochester Planning & Development Department

Project Name: Lydall Building Expansion Map: 216 & 221 Lot: 32, 186 & 187 Date: 4/23/2020

Applicant/agent: Norway Plains Associates, Inc. Signature: _____

(Staff review by: _____ Date: _____)

General items

	Yes	No	N/A	Waiver Requested	Comments
<u>4</u> sets completed application	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Total application fee	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<u>4</u> copies of narrative	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<u>3</u> sets of full-size plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<u>2</u> sets of 11 X 17 reductions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Completed abutters list	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Copy of existing covenants, easements, deed restrictions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Plan Information

Basic information including:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
• Title sheet					
• Name of Project					
• Date					
• North arrow					
• Scale					
• Legend					
• Revision block					
• Vicinity sketch -not less than 1" = 1,000'					
Name and address of developer/applicant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Name, stamp, and NH license # of land survey, engineer, and/or architect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
City tax map & lot #'s	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Notation on plans: "For more information about this site plan contact...."	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

General items Continued

	Yes	No	N/A	Waiver Requested	Comments
Approval block (for signature by staff attesting to Planning Board approval)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
References to neighboring plans and subdivisions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Surveyed property lines including: <ul style="list-style-type: none">• existing and proposed bearings• existing and proposed distances• pins, stakes, bounds• monuments• benchmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Include error of closure statement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Information on abutting properties: <ul style="list-style-type: none">• owner name• owner address• tax map and lot #• square footage of lots• approximate building footprints• use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Zoning

Zoning designations of subject tract and in vicinity of tract	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Zoning requirements for district: <ul style="list-style-type: none">• frontage• lot dimensions/density• all setbacks• lot coverage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Zoning overlay districts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Existing Topographic Features:

Contour lines a (not to exceed two-foot Intervals, except on steep slopes) and spot elevations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Soil types and boundaries	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Soil test pit locations, profiles, and Depth to water table and ledge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Percolation test locations and results	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Existing Topographic Features Continued:

	Yes	No	N/A	Waiver Requested	Comments
Water features (ponds, streams)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Wetlands including name of certified Wetlands scientist who delineated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Statement whether located in flood area, And if so, 100 year flood elevation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Delineation of trees and open areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Overview of types of trees and vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Stone walls and archaeological features	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Locations of trails and paths	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Other natural/cultural resources (productive farmland, habitats, scenic views, historic structures, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Building Information

Existing buildings/structures including square footage and use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Proposed building/structures including <ul style="list-style-type: none">• square footage• first floor elevation• use• # bedrooms per unit if residential	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Elevation drawing of proposed buildings and structures as follows: <ul style="list-style-type: none">• Showing all four sides• Drawn to scale with dimensions• Showing exterior materials• Showing exterior colors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Circulation and Parking Plans

Existing and proposed driveways and access points including: <ul style="list-style-type: none">• Width of opening• Turning radii• Cross section of driveway	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Curbing & edge treatment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Traffic control devices, if appropriate:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Circulation and Parking Plans Continued:

	Yes	No	N/A	Waiver Requested	Comments
Number of parking spaces • required by ordinance • proposed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>For reduction of spaces</u>
Parking layout and dimensions of spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Handicap spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Loading area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pedestrian circulation plan (including existing sidewalks in vicinity, if any)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Bicycle rack, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Buffers, landscaping & screening	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Snow storage areas/plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Utilities

Show all pertinent existing and proposed profiles, elevations, materials, sizes, and details

Water lines/well (with protective radius)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sewer lines/septic and leaching areas	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Pump stations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Stormwater management system: pipes, culverts,, catch basins detention/ retention basins, swales, rip rap, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fire hydrant location(s) and details	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Electric, telephone, cable TV (underground or overhead)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gas lines	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Fire alarm connections	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Treatment of solid waste (dumpsters?)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Handling of oil, grease, chemicals hazardous materials/waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Landscaping Plan

	Yes	No	N/A	Waiver Requested	Comments
Demarcation of limits of construction, clear delineation of vegetation to be saved, and strategy for protecting vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Proposed ground cover, shrubbery, and trees including: <ul style="list-style-type: none">• botanical and common names• locations and spacing• total number of each species• size at installation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Planting plan (size of holes, depth of planting, soil amendments, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Irrigation: system? soaker hose? Manual? underground, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Protection of landscaping from vehicles (Curb stops, berm, railroad ties, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Specification all finished ground surfaces and edges (greenspace, mulch, asphalt, concrete, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fencing/screening	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<u>Signage</u>					
Location and type of signs: <ul style="list-style-type: none">• Attached to building• Freestanding• Directional, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Dimensions of signs: <ul style="list-style-type: none">• Height• Area• Setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Elevation drawings with colors & materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Type of Illumination, if proposed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Outdoor Lighting

	Yes	No	N/A	Waiver Requested	Comments
Locations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Height of fixtures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Wattage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Type of light (high pressure sodium, etc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Design/cut sheets of fixtures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Illumination study, if appropriate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Other Elements

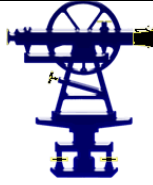
Traffic study, if appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Drainage study with calculations, storm Water impact analysis, and mitigation plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Grading plan (including finish grades)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Earth being removed from site(in cubic yards)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Erosion and sedimentation plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Proposed covenants, easements, And deed restrictions, if any	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Fiscal impact study, if requested	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Additional Comments:

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

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rtetreault@norwayplains.com

May 4, 2020

Seth Creighton, Chief Planner
Planning Department
City of Rochester
33 Wakefield Street
Rochester, NH 03867

Re: Non- Residential Site Plan Application; Lydall Performance Materials, Inc.; 134 Chestnut Hill Road, Map 216, Lot 32 and Map 221, Lots 186 and 187.

Dear Mr. Creighton:

On behalf of Lydall Performance Materials, Inc and Budel Construction Corp., we hereby submit plans and nonresidential site plan application for a proposed phased industrial expansion their facility at 134 Chestnut Hill Road. Lydall Performance Materials, Inc has over 13 national and 8 international facilities which manufactures filtration and insulation products. Lydall Performance Materials, Inc. is proposing a sizable building addition to their existing facility, with a portion being constructed this summer. The overall addition would be about 148,850 square feet, whereas the initial addition will be 46,800 square feet.

Lydall Eastern, Inc. and Lydall Eastern, Inc.; Technical Papers Division owns multiple lots located on Chestnut Hill Road and off Lydall Way (Private). These parcels are all located within the Industrial (GI) zoning district. The parcels are located on the south side of Chestnut Hill Road with the Spaulding Turnpike to the east, the Cocheco River to the south with the NH DOT Rails to Trails and a couple residential properties to the north. Overall, the three parcels being developed consist of approximately 36.48 acres. Ultimately, these lots will be merged into a single lot to allow for the proposed expansion and site work. Map 216, Lot 32 is the only developed lot, whereas the other two lots are currently vacant. Jurisdictional wetlands were delineated by B.H. Keith Associates in July 2018 and the site-specific soils were evaluated on the vacant lot by Round Pond Soil Survey in May 2019.

Lydall Performance Materials, Inc. is proposing to construct the first 180' x 260' (46,800 square feet) industrial building addition this year. This building addition will be used to expand their facility by adding a new production line. This line will produce much needed filter materials necessary for the product of Personal Protective Equipment (PPE). As such, the US Government and State of New Hampshire has been working with the company to expediate the construction of this facility.

The future building addition, totaling about 148,850 square feet (260' x 572.5') will provide expansion abilities as the need arises to add new production lines. The company anticipates that a full build-out will occur within the next 5 years. Thus, the applicant is requesting approval for the entire development and

not limiting it to the first phase. This would be consistent with the State environmental permits and with RSA 674.39 with regards to a vested project.

The steel framed and metal sided addition will be same beige color as the existing building and will have a flat roof. The new production line will generally operate the same hours of operation as the main facility; which is 7 days a week on a 24-hour, three shifts depending on the workload.

During the first phase, access to this addition will be through the existing site off Lydall Way. In addition to the paved areas for the large trucks and equipment, paved parking area will accommodate 30 vehicles at which two spaces are designated as accessible. In the full build-out, a new parking lot will be constructed which will add approximately 64 more spaces bring the overall site to a total of 167 spaces (6 of which will be ADA accessible). Based on the existing office and existing and proposed manufacturing spaces, the City of Rochester Site Plan Regulations would indicate the required number of spaces for the total build-out to be 332. The totaled required number is very high due to the overall number of employees and the sizes of the production lines. The facility currently employs about 125 employees, with an increase number proposed at this time at about 15. As such, a waiver is being requested to allow for 166 total spaces. If a need for additional parking arises, there is ample space to the northwest of the proposed addition to construct more.

The business expects one additional delivery of raw materials and shipping of finish goods a day. Thus, there will not be much increased in truck traffic or employee vehicles associated with the first phase. As future phases come on board, there is likely going to be a couple more trucks added to the traffic patterns. But given the limited number of loading docks, it is not anticipated to be substantially more than occurs under the current operations.

The stormwater from the new impervious surfaces and portions of the old roof will be directed towards treatment swales and infiltration basin. The basin has been designed for the all phases to limit any impact to the stormwater management system when the future phases are constructed. Prior to discharging into the infiltration basin, the stormwater will be directed into sediment forebays. The infiltration basin is designed to provide the groundwater recharge to offset the impervious coverage for the project. Therefore, a vast amount of the stormwater will be infiltrated back into the ground. Emergency stone lined spillway will be installed on the berm of the basin. The result of the proposed project and stormwater management system will balance the pre-development and post-development flow rates and volumes. In the future phases, some of the stormwater will be harvest from the roof runoff and directed towards the large stormwater ponds located at the southern end of the existing facility. These ponds hold the stormwater and is used for the manufacturing process.

The new building addition will be serviced by City water via connections within the old facility. There will not be any non-domestic sewage generated by the first phase. The site will continue to be serviced by overhead utility lines that feed the existing facility. The applicant is proposing wall mounted lighting fixtures to limit the lighting to around the building.

Snow storage will be located on the end and southerly side of the main parking / unloading area and at the end of the building addition. The gravel access to the northern egress door is wide enough to accommodate the facility's snow plows.

With the phased project as designed, the development triggered the need for an Alteration of Terrain Permit from the NH Department of Environmental Services. This permit (AoT-1733) was approved on January 17, 2020. Furthermore, the proposed development requires approval from NHDES for a Shoreland Permit due to some of the work being proposed within 250 feet from the Cocheco River. This permit (Shoreland Permit 2019-03443) was approved on December 23, 2019. Copies of both permits are attached.

We look forward to discussing this project with staff and the Planning Board. Thank you for your consideration Sincerely,

NORWAY PLAINS ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Scott A. Lawler". The signature is fluid and cursive, with a large initial "S" and "L".

By:

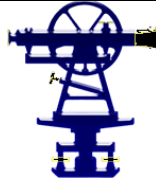
Scott A. Lawler, PE, Project Engineer

cc: Tony Eldridge – Lydall Eastern Inc. Technical
Leon Meader – Budel Construction Corp.

NORWAY PLAINS ASSOCIATES, INC.

LAND SURVEYORS • SEPTIC SYSTEM DESIGNERS • CIVIL ENGINEERS

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rtetreault@norwayplains.com

May 5, 2020

Seth Creighton, Chief Planner
Planning Department
City of Rochester
33 Wakefield Street
Rochester, NH 03867

Re: Waiver Request: Section 10(A); Number of Parking Spaces, Lydall Performance Materials, Inc., 134 Chestnut Hill Road; Rochester, NH, Tax Map 216, Lot 32 and Tax Map 221, Lots 186 & 187.

Dear Seth:

On behalf of Lydall Performance Materials, Inc., Norway Plains Associates respectfully requests waivers to the following Site Plan Regulation:

Waiver Request Section 10 (A):

Section 10(A) of the Rochester Site Plan Review Regulations requires that the minimum number of designated off street parking shall be provided on each site based upon the type of use, as shown in the Table of Parking Requirements. For Industrial use, the requirement is 1 space per 1000 square feet of gross floor area plus 3 spaces per 1,000 gross square feet for area designated for offices or retail sales.

Under the Site Review Regulations, the existing and proposed industrial use, the total number of parking spaces based on the total gross floor area of the industrial use and the office use is 330:

<u>158,808 sf existing Industrial + 148,850 sf proposed Industrial</u>	Plus	<u>7,370 sf existing office</u>
1 space per 1,000 sf Industrial Use		3 spaces per 1,000 sf Office

There are a total of 103 existing and 64 proposed parking spaces delineated on the site plans for a total of 167 spaces.

The facility currently employs about 125 which is disbursed over three shifts working 24-hour a day, 7-days a week. At this point, the facility has not had any parking conflicts due to the number of parking spaces. Even though the first phase of the expansion will add about 15 new employees and 5 new parking spaces, it should not pose a parking problem given how the shifts are broken up over the course of the day.

Under future phases, a new parking lot will be constructed to add additional 62 parking spaces bring the overall total to 167. The large expansion will be primarily used for large production lines which typically have very few employees. Thus, the owners do not forecast a parking problem once the expansion is completed. There is however, a large area westerly of the building that could be constructed to provide more

parking if necessary.

Therefore, we respectfully request a waiver to allow for less than amount of required parking set forth within the Rochester Site Review Regulations.

Thank you for your consideration.

Sincerely,

NORWAY PLAINS ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Scott A. Lawler", written over a horizontal line.

By: _____
Scott A. Lawler, P.E., Project Engineer

Cc: Tony Eldridge, Lydall Performance Materials, Inc.
Budel Construction Corp.

ABUTTER LIST
City of Rochester, NH
Please Print or Type

Applicant Lydall Performance Materials, Inc. **Phone:** 603-332-4600
Project Address: 134 Lydall Way

List the names and addresses of all parties below. For abutting lot owners, list each owner whose lot adjoins or is directly across the street or a body of water from the subject property. This form may not be completed more than five (5) days prior to the application deadline.

LEGAL OWNER OF SUBJECT LOT

Map	Lot	Owner Name	Mailing Address
216	32	Lydall Performance Materials, Inc	134 Chestnut Hill Road, Rochester, NH 03867
221	186	Same as 216-32	
221	187	Same as 216-32	


ABUTTING LOT OWNERS

Map	Lot	Owner Name	Owner Mailing Address (NOT property location)
216	17	State of New Hampshire Department of Transportation	1 Hazen Drive, Concord, NH 03305
216	26	Toys Manufactured Housing Inc., Donald & Bonnie J. Toy	15 Nashua Drive, Rochester, NH 03867
216	30	Same as applicant	
216	31	Same as 216-17	
216	34	Same as applicant	
216	35	Henry III Cowles Trustee, Three Fifty Six Trust	6 Old Rochester Road Suite 101, Dover, NH 03820
216	36	Robert Forcier Jr.	148 Chestnut Hill Road, Rochester, NH 03867
216	37	Martin & Gail Gilman	158 Chestnut Hill Road, Rochester, NH 03867
216	38	James & Donna Nickless	36 Flat Rock Bridge Road, Rochester, NH 03867
216	39	City of Rochester	31 Wakefield Street, Rochester, NH 03867
221	168	Charles Karacas	3 Farmington Road, Rochester, NH 03867
221	169	State of New Hampshire Bureau of Turnpike	PO Box 2950, Concord, NH 03302-2950
221	184	Same as applicant	
221	185	Same as applicant	
221	188	Same as applicant	

PROFESSIONALS AND EASEMENT HOLDERS. *Engineers, Surveyors, Soil Scientists, and Architects whose seal appears or will appear on the plans (other than any agent submitting this application); holders of conservation, preservation, or agricultural easements; and upstream dam owners/NHDES.*

Name of Professional or Easement Holder	Mailing Address
Scott A. Lawler, PE; Norway Plains Associates, Inc.	PO Box 249; Rochester, NH 03866-0249
Barry H. Keith, CWS; B.H. Keith Associates	PO Box 326; Freedom, NH 03836
David Allain, CSS; Round Pond Soil Survey	374 Pond Hill Road; Barrington, NH 03825

I, the undersigned, acknowledge that it is the responsibility of the applicant or his/her agent to fill out this form and mail certified notices to abutters and other parties in a complete, accurate, and timely manner, in accordance with applicable law. I understand that any error or omission could affect the validity of any approval. The names and address listed on this form were obtained from the City of Rochester Assessing Office computer AxisGIS system on this date: 5/5/2020, This is page 1 of 1 pages.

Applicant or Agent: 

Staff Verification: _____



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner



January 17, 2020

Tony Eldridge
Lydall Eastern Inc. Technical
134 Chestnut Hill Road
Rochester, NH 03867

Permit: AoT-1733

RE: Lydall Building Expansion
Tax Map 221, Lot 186
Rochester, NH

Dear Applicant:

Based upon the plans and application, approved on January 17, 2020, we are hereby issuing RSA 485-A:17 Alteration of Terrain Permit AoT-1733. The permit is subject to the following conditions:

PROJECT SPECIFIC CONDITIONS:

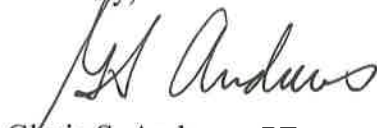
1. The approved plans, latest revision dated December 26, 2019, and supporting documentation in the permit file are a part of this approval.
2. **This permit expires on January 17, 2025.** No earth moving activities shall occur on the project after this expiration date unless the permit has been extended by the Department. If requesting an extension, the request must be received by the department before the permit expires. The Amendment Request form is available at:
<http://des.nh.gov/organization/divisions/water/aot/categories/forms.htm>

GENERAL CONDITIONS:

1. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700.
2. You must submit revised plans for permit amendment prior to any changes in construction details or sequences. You must notify the Department in writing within ten days of a change in ownership.
3. You must notify the Department in writing prior to the start of construction and upon completion of construction. Forms can be submitted electronically at:
<https://forms.nh.gov/onlineforms/> . Paper forms are available at that same web page.
4. **All stormwater practices shall be inspected and maintained in accordance with Env-Wq 1507.07 and the project Inspection and Maintenance (I&M) Manual.** All record keeping required by the I&M Manual shall be maintained by the identified responsible party, and be made available to the department upon request. Photographs of the site and BMPs must accompany the I&M submittals.

5. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). Projects disturbing over 1 acre may require a federal stormwater permit from EPA. Information regarding this permitting process can be obtained at: <http://des.nh.gov/organization/divisions/water/stormwater/construction.htm>.
6. In accordance with Env-Wq 1503.21 (c)(1), a written notice signed by the permit holder and a qualified engineer shall be submitted to DES stating that the project was completed in accordance with the approved plans and specifications. If deviations were made, the permit holder shall review the requirements in Env-Wq 1503.21(c)(2).
7. If applicable, no activity shall occur in wetland areas until a Wetlands Permit is obtained from the Department. Issuance of this permit does not obligate the Department to approve a Wetlands Permit for this project.
8. This project has been screened for potential impact to known occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or have not been surveyed in detail, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3.

Sincerely,



Gloria S. Andrews, PE
Alteration of Terrain Bureau

cc: Rochester Planning Board

ec: Scott Lawler, PE; (slawler@norwayplains.com)
Jay Aube, Cocheco River Advisory Committee (aubejay@gmail.com)



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner



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SHORELAND IMPACT PERMIT 2019-03443

NOTE CONDITIONS

PERMITTEE: LYDALL EASTERN INC
134 CHESTNUT HILL RD
ROCHESTER NH 03867

REC'D DEC 30 2019

PROJECT LOCATION: 134 CHESTNUT HILL RD, ROCHESTER
TAX MAP #221, LOT #186

WATERBODY: COCHECO RIVER

APPROVAL DATE: DECEMBER 23, 2019

EXPIRATION DATE: DECEMBER 23, 2024

=====

Based upon review of the above referenced application, in accordance with RSA 483-B, a Shoreland Impact Permit was issued by the New Hampshire Department of Environmental Services (NHDES). This permit shall not be considered valid unless signed as specified below.

PERMIT DESCRIPTION: Impact 87,220 square feet of protected shoreland in order to construct additional commercial facilities and stormwater management structures.

THIS APPROVAL IS SUBJECT TO THE FOLLOWING PROJECT SPECIFIC CONDITIONS:

1. All work shall be in accordance with plans by Norway Plains Associates, Inc. dated October 2019 and received by the NH Department of Environmental Services (NHDES) on October 29, 2019.
2. Orange construction fencing shall be installed at the limits of the temporary impact area as shown on the approved plans prior to the start of work and shall be maintained throughout the project in order to prevent accidental encroachment into areas in which impacts have not been approved.
3. No more than 6% of the area of the lot within the protected shoreland shall be covered by impervious surfaces unless additional approval is obtained from NHDES.
4. Native vegetation within an area of at least 84,831 square feet within the Woodland Buffer located between 50 and 150 feet landward of the reference line shall be retained in an unaltered state in order to comply with RSA 483-B:9, V, (b), (2).
5. Erosion and siltation control measures shall be installed prior to the start of work, be maintained throughout the project, and remain in place until all disturbed surfaces are stabilized.
6. Erosion and siltation controls shall be appropriate to the size and nature of the project and to the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to wetlands or surface waters.
7. No person undertaking any activity in the protected shoreland shall cause or contribute to, or allow the activity to cause or contribute to, any violations of the surface water quality standards established in Env-Wq 1700.
8. Any fill used shall be clean sand, gravel, rock, or other suitable material.
9. The proposed stormwater management structures shall be installed and maintained to effectively absorb and infiltrate stormwater.

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
NHDES Main Line: (603) 271-3503 • Subsurface Fax: (603) 271-6683 • Wetlands Fax: (603) 271-6588
TDD Access: Relay NH 1 (800) 735-2964

10. Within three days of final grading or temporary suspension of work in an area that is in or adjacent to wetlands or surface waters, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack or netting and pinning on slopes steeper than 3:1.
11. The individual responsible for completion of the work shall utilize techniques described in the New Hampshire Stormwater Manual, Volume 3, Erosion and Sediment Controls During Construction (December 2008).
12. This permit shall not be interpreted as acceptance or approval of any impact that will occur within wetlands jurisdiction regulated under RSA 482-A including all wetlands, surface waters and their banks, the tidal-buffer zone, and sand dunes. The owner is responsible for maintaining compliance with RSA 482-A and Administrative Rules Env-Wt 100 - 900 and obtaining any Wetland Impact Permit that may be required prior to construction, excavation or fill that will occur within Wetlands jurisdiction.

GENERAL CONDITIONS THAT APPLY TO ALL NHDES SHORELAND IMPACT PERMITS:

1. A copy of this permit shall be posted on site during construction in a prominent location visible to inspecting personnel;
2. This permit does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others;
3. The NHDES Wetlands Bureau shall be notified upon completion of work;
4. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits, and/or consult with other agencies as may be required (including US EPA, US Army Corps of Engineers, NH Department of Transportation, NH Division of Historical Resources (NH Department of Cultural Resources), NHDES Alteration of Terrain, etc.);
5. Transfer of this permit to a new owner shall require notification to and approval by NHDES;
6. This permit shall not be extended beyond the current expiration date;
7. This project has been screened for potential impacts to **known** occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or have only received cursory inventories, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species.

APPROVED:

DF

Darlene Forst
Shoreland Program
Land Resources Management

=====

BY SIGNING BELOW I HEREBY CERTIFY THAT I HAVE FULLY READ THIS PERMIT AND AGREE TO ABIDE BY ALL PERMIT CONDITIONS.

OWNER'S SIGNATURE (required)

CONTRACTOR'S SIGNATURE (required)

DESCRIPTION

The Lumark Axcent LED wall mount luminaire provides a flush-mounted, architectural design with high performing, energy-efficient illumination resulting in up to 95% energy and maintenance savings over traditional sources. The die-cast aluminum construction along with stainless steel hardware, gasketed housing, and sealed optical compartment make the Axcent impervious to contaminants. The Axcent replaces 70W to 450W metal halide equivalents making it ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways, loading docks and floodlighting applications.

SPECIFICATION FEATURES

Construction

Low-profile LED design with rugged die-cast aluminum housing. Matching housing styles incorporate both a full cutoff and refractive lens design. External fin design on the back of the fixture extracts heat from the surface resulting in a thermally optimize design for longer luminaire life. One-piece silicone gasket seals the fixture, keeping out moisture and dusts in compliance with IP66 rating. The fixture is 3G vibration rated (ANSI C136.31) and UL/cUL listed ensuring reliability and durability in wall mount applications.

Optical

Silicone-sealed optical LED chamber incorporates a custom engineered reflector providing high-efficiency illumination. Refractive lens models incorporate a molded lens assembly designed for maximum forward throw. Optional glare free lens is available for visual comfort at reduced lumen values. Available in Type IV distribution with lumen packages ranging from 1,800 to 17,300 nominal lumens. Light engine configurations consist of high-efficiency, discrete LEDs mounted to metal-core circuit boards to maximize heat

dissipation and promote long life. Offered in standard 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 5000K CCT / 70CRI min and 3000K / 80CRI min are available.

Electrical

LED driver is mounted to the die-cast aluminum housing for optimal heat sinking. Integral LED electronic driver incorporates 6kV surge protection. Class 1 electronic drivers have a power factor >90% and THD<20%. 120-277V 50/60Hz standard operation with optional 347V 60Hz or 480V 60Hz options available. 480V is compatible for use with 480V Wye systems only. 0-10V dimming driver is standard with leads external to the fixture to accommodate controls capability such a dimming and occupancy. 10kV/10kA surge protection option is available.

Mounting

Steel wedge mounting plate fits directly to 4" standard j-box or directly to wall with the "Hook-N-Lock" mechanism for quick installation. Secure with two captive, corrosion resistant, stainless steel set screws, which are concealed but accessible from bottom of fixture. Optional floodlight kits available in slipfitter,

knuckle and trunnion mount configurations. Optional pole mount configuration provides a quick-mount solution to round and square poles. The easy installation arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8".

Emergency Egress

Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium, maintenance-free battery pack. The separate emergency lighting LEDs are wired to provided redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting.

Finish

The Axcent is protected with five state super TGIC polyester powder coat paint in carbon bronze and five other color finishes. Super TGIC power coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

Five-year warranty.



AXCS / AXCL AXCENT

14-123W
LED

APPLICATIONS:
WALL / SURFACE / INVERTED
FLOODLIGHTING / PATHWAY /
SITE LIGHTING



CERTIFICATION DATA

3G Vibration Rated
DesignLights Consortium® Qualified*
FCC Class A
IP66 Rated
ISO9001, UL/cUL Wet Location Listed
LM79/LM80 Compliant
ROHS Compliant
Title 24 Compliant
UL924 Listed (CBP Models)

TECHNICAL DATA

-40°C Minimum Ambient Temperature
+40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

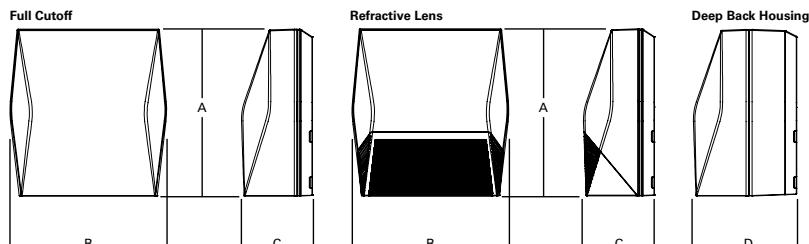
SHIPPING DATA:

Approximate Net Weight:
Small fixture=5 lbs. [2.36 kgs.]
Small with sensor or CBP=10 lbs. [4.40 kgs.]
Large fixture=12 lbs. [5.45 kgs.]
Large with sensor or CBP=17 lbs. [7.73 kgs.]
Large with sensor & CBP=21 lbs. [9.54 kgs.]



TD514036EN
March 4, 2020 3:46 PM

DIMENSIONS



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

Project		Catalog #		Type	
Prepared by		Notes		Date	



Lumark

PRV / PRV-XL Prevail LED

Area / Site Luminaire

Typical Applications

Outdoor • Parking Lots • Walkways • Roadways • Building Areas

Interactive Menu

- Ordering Information [page 2](#)
- Mounting Details [page 3](#)
- Optical Configurations [page 3](#)
- Product Specifications [page 3](#)
- Energy and Performance Data [page 4](#)
- Control Options [page 5](#)

Product Certifications



Product Features

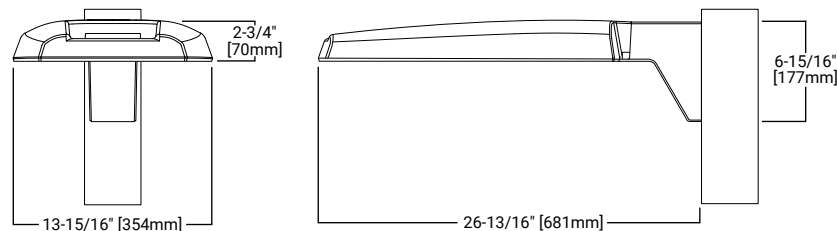


Quick Facts

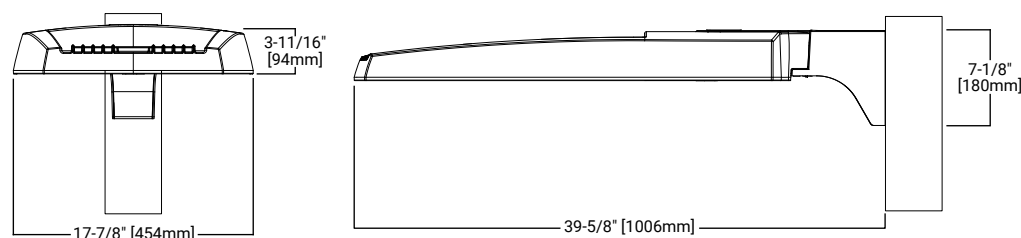
- Lumen packages range from 7,100 - 48,600 lumens (50W - 350W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 148 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

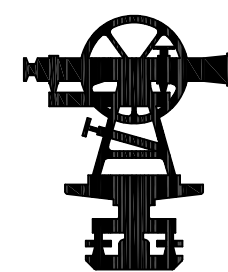
Dimensional Details

Prevail



Prevail XL





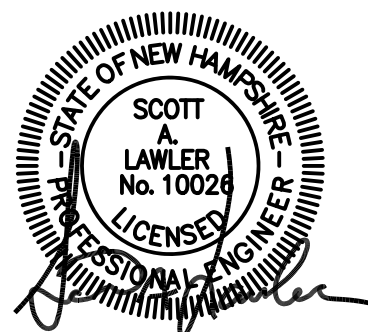
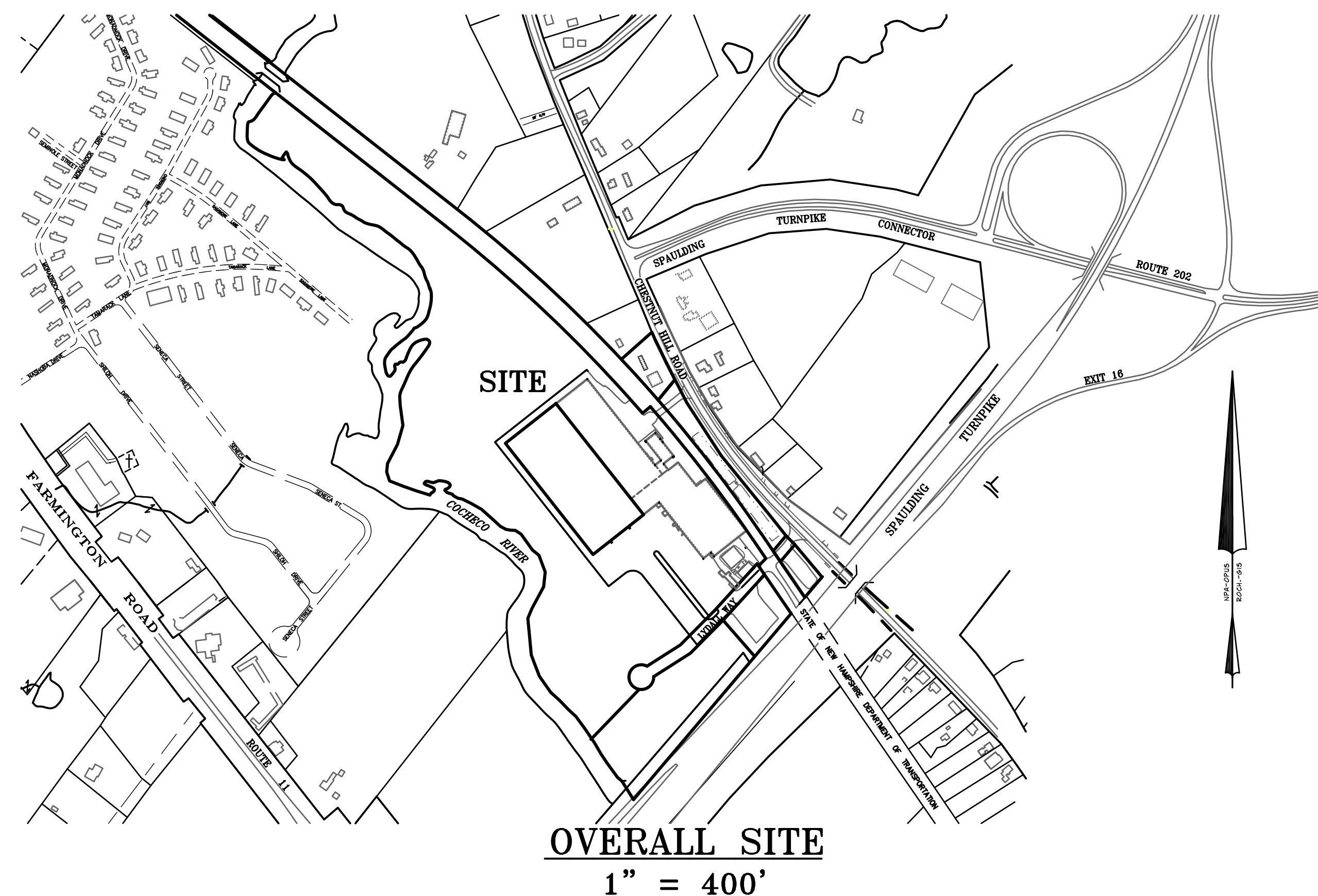
LYDALL BUILDING EXPANSION

134 CHESTNUT HILL ROAD, ROCHESTER, NH 03867

PREPARED FOR

LYDALL PERFORMANCE MATERIALS, INC.

MAY 2020



CIVIL ENGINEERS

NORWAY PLAINS ASSOCIATES, INC.
2 CONTINENTAL BOULEVARD
ROCHESTER, NEW HAMPSHIRE 03867
(603) 335-3948

OWNER OF RECORD

TAX MAP 216, LOT 32
OWNER OF RECORD:
LYDALL EASTERN, INC.
134 CHESTNUT HILL ROAD
ROCHESTER, NH 03867
SCRD BOOK 1769, PAGE 359

TAX MAP 221, LOT 186 & 187
OWNER OF RECORD:
LYDALL EASTERN, INC.
TECHNICAL PAPERS DIVISION
134 CHESTNUT HILL ROAD
ROCHESTER, NH 03867
SCRD BOOK 2141, PAGE 753

APPLICANT

LYDALL EASTERN INC.
134 CHESTNUT HILL ROAD
ROCHESTER, NH 03867
(603) 332-4600

STATE AND FEDERAL PERMITS:

STATE OF NEW HAMPSHIRE PERMIT NUMBERS:
NHDES ALTERATION OF TERRAIN: AOT-1733
NHDES WETLANDS PERMIT: NOT REQUIRED
NHDES DAM PERMIT: NOT REQUIRED
NHDES SHORELAND PERMIT: 2019-03443
NHDES SUBSURFACE SYSTEMS PERMIT: NOT REQUIRED
NHDES WASTEWATER PERMIT: NOT REQUIRED
NHDOT DRIVEWAY/ENTRANCE PERMIT: NOT REQUIRED

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES):
NPDES PERMITS ARE ONLY REQUIRED FOR PROJECTS MEETING THE DISTURBED AREA CRITERIA BELOW AND HAVING A POINT SOURCE STORMWATER DISCHARGE FROM THE SITE TO AN ADJACENT WETLAND OR WATER BODY (I.E. CULVERT, SWALE, ETC. OUTLETING TO A WETLAND, CREEK, STREAM OR RIVER).

NPDES PERMIT: REQUIRED

NPDES PERMITS CONSIST OF A NOTICE OF INTENT (NOI) FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY AT LEAST 14 DAYS PRIOR TO CONSTRUCTION COMMENCING AND A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) BEING PREPARED, KEPT ON SITE AND FOLLOWED BY THE CONTRACTOR.

FOR STATUS OF THIS PERMIT, CONTACT THE PROJECT GENERAL CONTRACTOR.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

SHEET INDEX

	COVER	
SHEET E-1	EXISTING FEATURES	1" = 60'
SHEET C-1	OVERALL SITE PLAN	1" = 100'
SHEET C-2	SITE LAYOUT PLAN	1" = 60'
SHEET C-3	GRADING AND DRAINAGE PLAN	1" = 60'
SHEET C-4	EROSION AND SEDIMENTATION CONTROL PLAN	1" = 40'
SHEET C-5	UTILITY PLAN	1" = 40'
SHEET C-6	CONSTRUCTION DETAILS	AS SHOWN
SHEET C-7	DRAINAGE DETAILS	AS SHOWN
SHEET C-8	INFILTRATION BASIN DETAILS	AS SHOWN
SHEET C-9	TEMPORARY EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
SHEET C-10	PERMANENT EROSION AND SEDIMENTATION CONTROL DETAILS	AS SHOWN
SHEET C-11	SITE PHASING PLAN	1" = 60'
SHEET L-1	LIGHTING PLAN AND DETAILS	1" = 40'

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2

CIVIL ENGINEERS

NOTES

6. U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE. 2010. 'FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0.' L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). USDA, NRCS, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.

(IN FEET)

1 INCH = 60 FEET

E-1

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

STATE OF NH
BUREAU OF TURNPIKE
PO BOX 2950
CONCORD, NH 03302-2950
TAX MAP 221 LOT 169

DONALD & BONNIE TOY
MANUFACTURE HOUSING INC
15 NASHOBA DRIVE
ROCHESTER, NH 03867
TAX MAP 216 LOT 26

FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

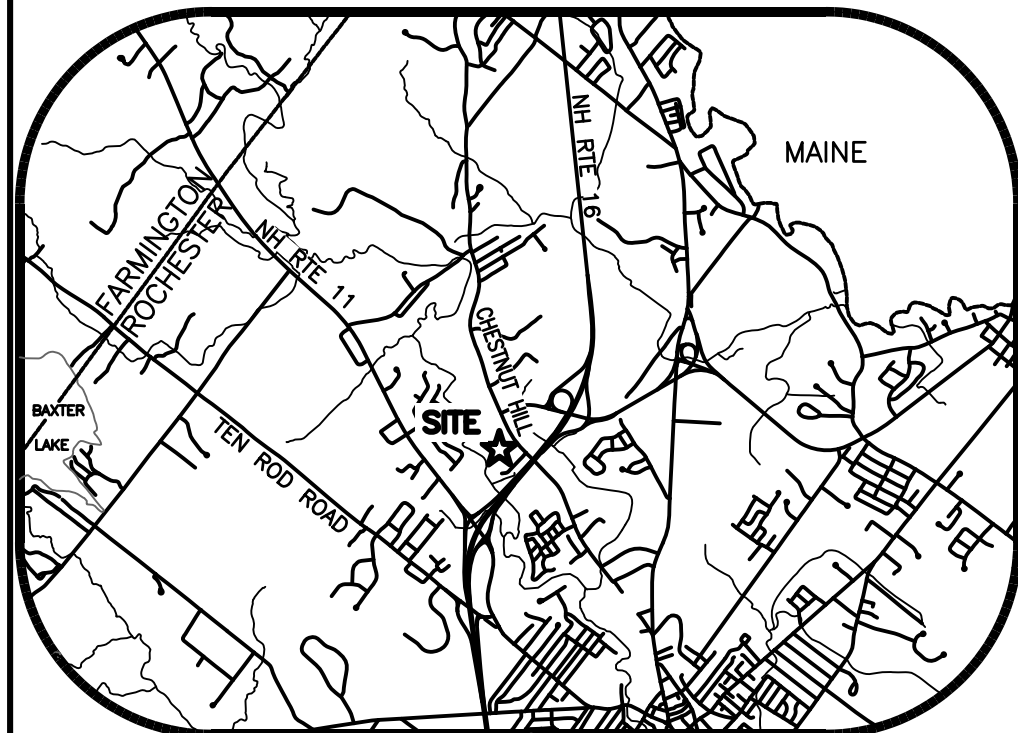
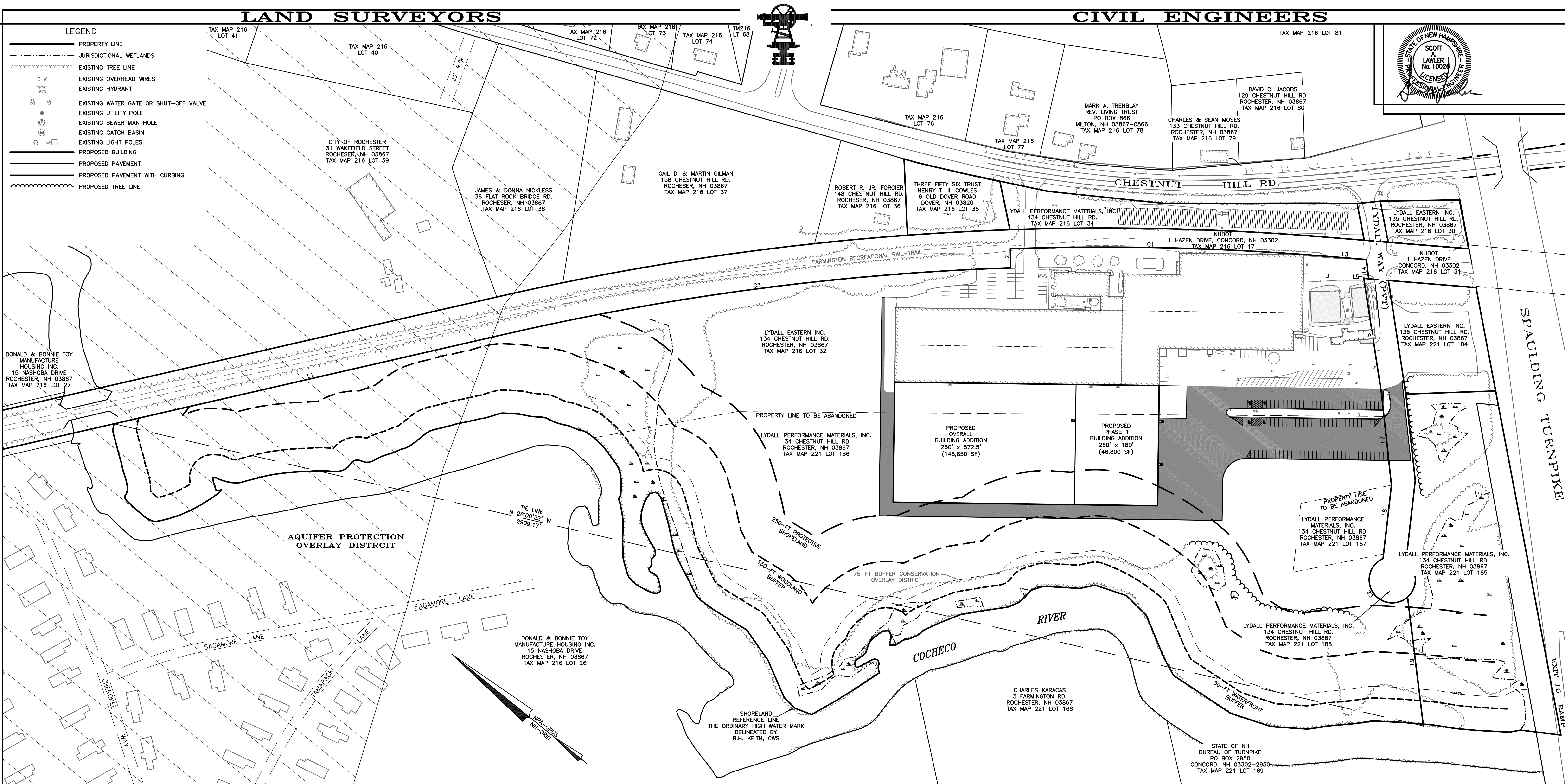
2 Continental Blvd., Rochester, N.H. 603-335-3948

LAND SURVEYORS

CIVIL ENGINEERS

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING OVERHEAD WIRES
- EXISTING HYDRANT
- EXISTING WATER GATE OR SHUT-OFF VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MAN HOLE
- EXISTING CATCH BASIN
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURBING
- PROPOSED TREE LINE



LINE	BEARING	DISTANCE
L1	N 51°54'13" W	874.03
L2	S 49°59'32" W	41.26
L3	S 34°20'13" E	93.93
L4	N 44°34'24" E	42.03
L5	S 34°20'13" E	10.39
L6	S 42°16'37" W	251.62
L7	S 44°46'37" W	200.00
L8	N 57°31'37" E	160.00
L9	N 43°59'08" E	281.06

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	677.92	5827.17	6°39'56"	N 37°40'11" W	677.54
C2	172.74	50.00	1°57'56"55"	N 18°33'10" E	98.78
C3	1100.11	5785.92	10°53'38"	N 46°27'24" W	1098.45

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2

OWNER OF RECORD

TAX MAP 216, LOT 32
OWNER OF RECORD:
LYDALL EASTERN, INC.
134 CHESTNUT HILL ROAD
ROCHESTER, NH 03867
SCRD BOOK 1769, PAGE 359

TAX MAP 221, LOT 186 & 187
OWNER OF RECORD:
LYDALL EASTERN, INC.
TECHNICAL PAPERS DIVISION
134 CHESTNUT HILL ROAD
ROCHESTER, NH 03867
SCRD BOOK 2141, PAGE 753

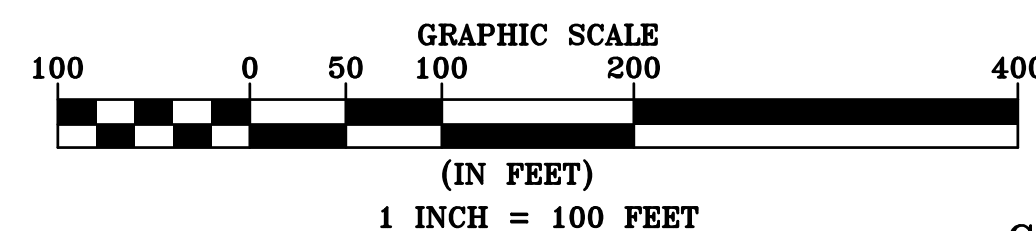
SITE REVIEW APPROVAL
WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SITE REVIEW PLAN, THE SITE REVIEW APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/DEVELOPER TO ALL WRITTEN AND VERBAL REPRESENTATIONS MADE REGARDING SUCH MATTERS AS USE, NUMBER OF EMPLOYEES, DRAINAGE, CONSTRUCTION, ETC. AS WELL AS ALL OTHER TERMS, CONDITIONS, PROVISIONS, REQUIREMENTS AND SPECIFICATIONS OF THE SITE PLAN REVIEW REGULATIONS OF THE CITY OF ROCHESTER, N.H., AS AMENDED, IN EFFECT ON THE DATE OF APPROVAL. ANY VARIATION FROM THE PROPOSAL AS APPROVED MAY ALSO REQUIRE THE SUBMISSION AND APPROVAL OF A NEW SITE REVIEW APPLICATION.

FINAL APPROVAL BY
ROCHESTER PLANNING BOARD

CERTIFIED BY: _____ DATE: _____

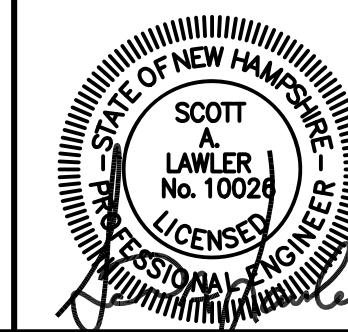
OVERALL SITE PLAN
TAX MAP 216, LOT 32
TAX MAP 221, LOT 186
TAX MAP 221, LOT 187
134 CHESTNUT HILL ROAD
ROCHESTER, NH

PREPARED FOR:
LYDALL PERFORMANCE
MATERIALS, INC.
MAY 2020



LEGEND

- PROPERTY LINE
- - - JURISDICTIONAL WETLANDS
- EXISTING TREE LINE
- EXISTING DRAIN LINE
- EXISTING CONTOUR LINE
- EXISTING TEST PIT
- E234.1' or • E234.1' EXISTING SPOT GRADE
- P234.25' PROPOSED SPOT GRADE
- PROPOSED TREE LINE
- PROPOSED DRAIN LINE
- PROPOSED CONTOUR LINE EVEN
- PROPOSED CONTOUR LINE ODD
- PROPOSED CATCH BASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED FLARED END SECTION (FES)
- CORRUGATED POLYETHYLENE PIPE
- CATCH BASIN
- PROPOSED OUTLET PROTECTION



NOTE:

1. NHDES AOT SHALL BE NOTIFIED SEVEN DAYS PRIOR TO CONSTRUCTION.
2. EPA CONSTRUCTION GENERAL PERMIT MUST BE ISSUED PRIOR TO CONSTRUCTION. A STORMWATER POLLUTION PREVENTION PLAN MUST BE ONSITE DURING CONSTRUCTION.
3. TEMPORARY WATER DIVERSION (SWALE AND BASINS) MUST BE USED AS NECESSARY UNTIL AREA ARE STABILIZED.
4. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.
5. STORMWATER PONDS, INFILTRATION BASIN AND SWALE MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
6. LIMIT THE LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.
7. BASINS AND SWALE SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
8. ROOF RUN OFF SHALL BE DIRECTED TO THE PROPOSED CLOSED DRAINAGE SYSTEM LOCATED ON THE WEST SIDE OF THE BUILDING.

PROPOSED DRAINAGE STRUCTURES

1. PROP. CB#1 48" Ø
RIM = 230.44'
INV. IN = 227.5' (FROM EXISTING CPP)
INV. OUT = 227.5' (15" CPP) (ELIMINATOR)
SUMP = 223.5'
2. PROP. DMH#2 30" Ø
RIM = 234.1'
INV. IN = 231.50' (ROOF DRAIN)
INV. OUT = 231.00' (12" CPP)
3. PROP. DMH#3 48" Ø
RIM = 234.7'
INV. IN = 231.50' (ROOF DRAIN)
INV. IN = 231.00' (DMH. 4)
INV. OUT = 230.50' (12" CPP)
4. PROP. DMH#4 60" Ø
RIM = 234.6'
INV. IN = 230.50' (DMH. 3)
INV. OUT = 230.50' (STORAGE TANK)
WIER ELEV. 231.00'
INV. OUT = 230.50' (12" CPP)
5. PROP. DMH#5 30" Ø
RIM = 235.7'
INV. IN = 232.20' (ROOF DRAIN)
INV. OUT = 231.80' (12" CPP)

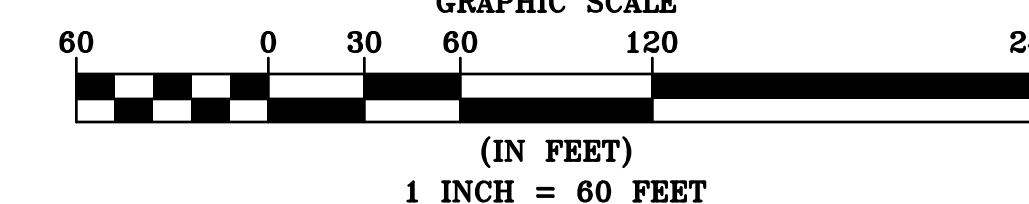
PROPOSED DRAINAGE PIPES

- | | |
|---|---|
| (A) PROP. PIPE A
15" CPP
L = 270'
F.E.S. INV. = 226.5' | (F) PROP. PIPE F
15" CPP
L = 5' |
| (B) PROP. PIPE B
8" CPP
L = 5'
ROOF DRAIN PIPE | (G) PROP. PIPE G
15" CPP
L = 210'
F.E.S. INV. = 230.0' |
| (C) PROP. PIPE C
12" CPP
L = 50' | (H) PROP. PIPE H
4" HDPE
L = 840'
FORCE MAIN |
| (D) PROP. PIPE D
12" CPP
L = 280' | |
| (E) PROP. PIPE D
15" CPP
L = 5' | |

GRADING & DRAINAGE PLAN TAX MAP 216, LOT 32 AND TAX MAP 221, LOTS 186 & 187 134 CHESTNUT HILL ROAD ROCHESTER, NH

PREPARED FOR:
**LYDALL PERFORMANCE
MATERIALS, INC.**

MAY 2020
GRAPHIC SCALE



FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2

CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



-4 |

LAND SURVEYORS

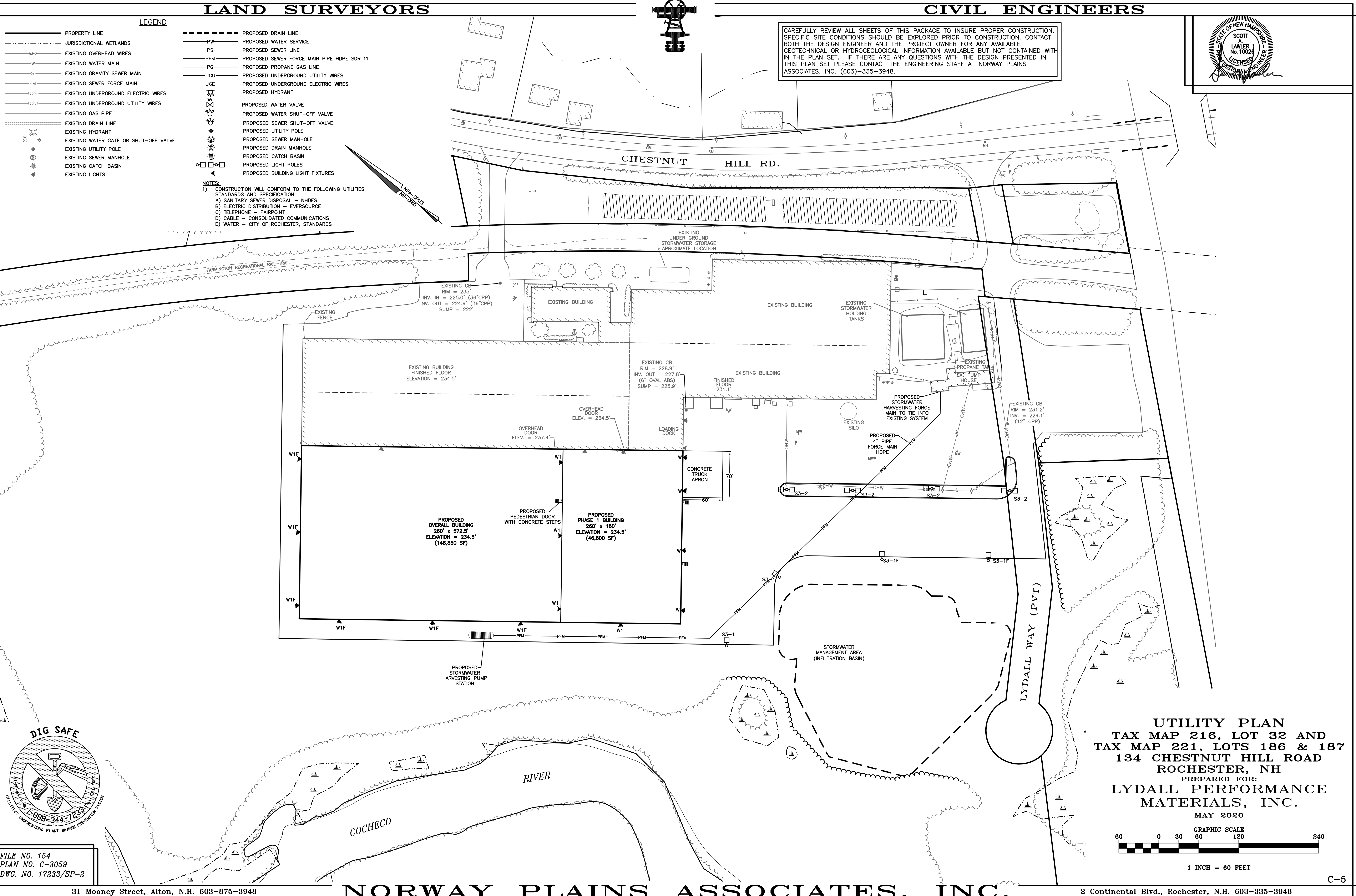
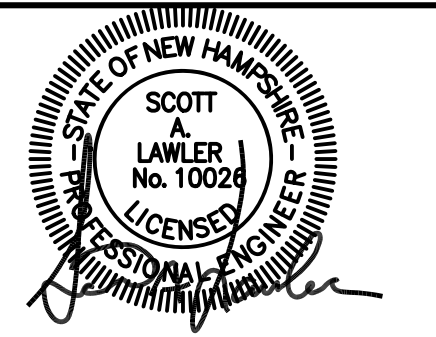
CIVIL ENGINEERS

LEGEND

—	PROPERTY LINE	-----	PROPOSED DRAIN LINE
----	JURISDICTIONAL WETLANDS	—PW—	PROPOSED WATER SERVICE
—WHD—	EXISTING OVERHEAD WIRES	—PS—	PROPOSED SEWER LINE
—W—	EXISTING WATER MAIN	—PFM—	PROPOSED SEWER FORCE MAIN PIPE HDPE SDR 11
—S—	EXISTING GRAVITY SEWER MAIN	—PG—	PROPOSED PROPANE GAS LINE
—FM—	EXISTING SEWER FORCE MAIN	—UGU—	PROPOSED UNDERGROUND UTILITY WIRES
—UGE—	EXISTING UNDERGROUND ELECTRIC WIRES	—UGE—	PROPOSED UNDERGROUND ELECTRIC WIRES
—UGU—	EXISTING UNDERGROUND UTILITY WIRES	—	PROPOSED HYDRANT
—	EXISTING GAS PIPE	—	PROPOSED WATER VALVE
-----	EXISTING DRAIN LINE	—	PROPOSED WATER SHUT-OFF VALVE
—	EXISTING HYDRANT	—	PROPOSED SEWER SHUT-OFF VALVE
—	EXISTING WATER GATE OR SHUT-OFF VALVE	—	PROPOSED UTILITY POLE
—	EXISTING UTILITY POLE	—	PROPOSED SEWER MANHOLE
—	EXISTING SEWER MANHOLE	—	PROPOSED DRAIN MANHOLE
—	EXISTING CATCH BASIN	—	PROPOSED CATCH BASIN
—	EXISTING LIGHTS	—	PROPOSED LIGHT POLES
		—	PROPOSED BUILDING LIGHT FIXTURES

NOTES:
1) CONSTRUCTION WILL CONFORM TO THE FOLLOWING UTILITIES STANDARDS AND SPECIFICATION:
A) SANITARY SEWER DISPOSAL — NHDES
B) ELECTRIC DISTRIBUTION — EVERSOURCE
C) TELEPHONE — FAIRPOINT
D) CABLE — CONSOLIDATED COMMUNICATIONS
E) WATER — CITY OF ROCHESTER, STANDARDS

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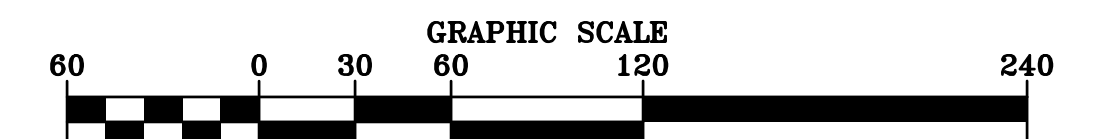
FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2

31 Mooney Street, Alton, N.H. 603-875-3948

NORWAY PLAINS ASSOCIATES, INC.

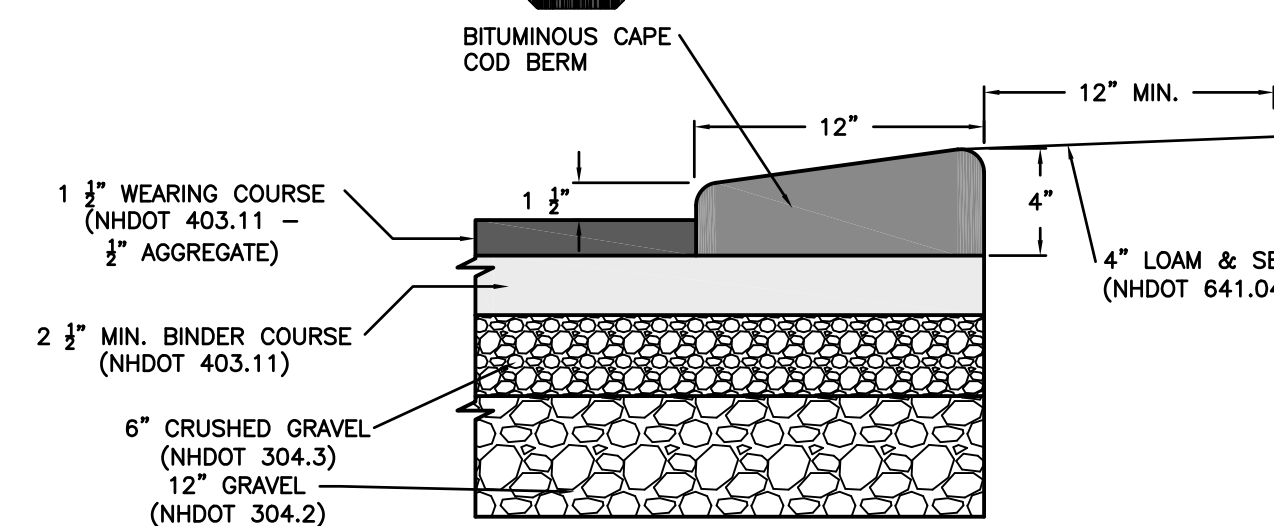
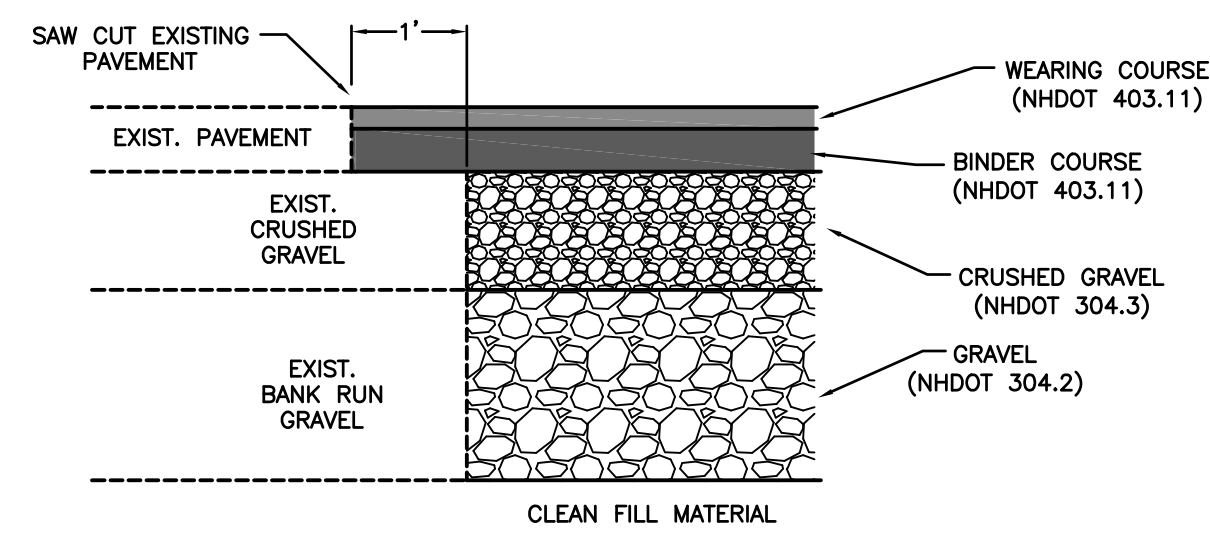
2 Continental Blvd., Rochester, N.H. 603-335-3948

UTILITY PLAN
TAX MAP 216, LOT 32 AND
TAX MAP 221, LOTS 186 & 187
134 CHESTNUT HILL ROAD
ROCHESTER, NH
PREPARED FOR:
LYDALL PERFORMANCE
MATERIALS, INC.
MAY 2020



1 INCH = 60 FEET

C-5






A cross-sectional diagram of a road construction project. The diagram shows a central vertical section with a circular 'UTILITY' pipe at the bottom. The layers from top to bottom are:

- EXISTING PAVEMENT**: The top layer on both sides of the central section.
- MIN. 1.5" WEARING COURSE**: A thin layer below the existing pavement.
- MIN. 2.5" BINDER COURSE**: A layer below the wearing course.
- 6" CRUSHED GRAVEL (NHDOT 304.3) UNDISTURBED BASE AND SUBBASE**: A thick layer below the binder course.
- 12" GRAVEL (NHDOT 304.2) UNDISTURBED BASE AND SJBASE**: A layer below the 6" gravel.
- UNDISTURBED NATIVE MATERIAL**: The natural ground on both sides of the central section.
- COMPACTED GRANULAR FILL**: A layer below the native material.

Dimensions are indicated for the gravel layers: 18" for the 6" gravel and 12" for the 12" gravel.

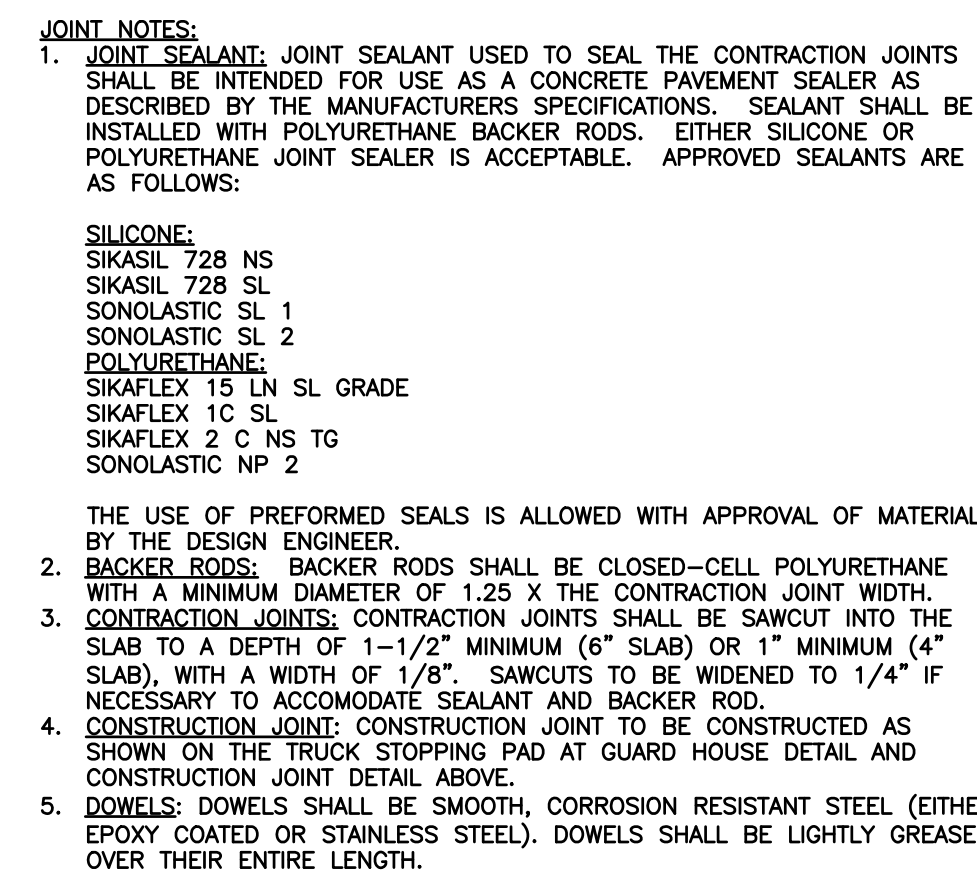
NOTES:

1. PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH GRANULAR FILL AND COMPACTED TO 95% OF ITS DRY DENSITY.
3. TOP 18" OF BACKFILL SHALL BE 6" OF COMPACTED 3/4" CRUSHED GRAVEL (NDHOT 304.3) SUPPORTED BY 12" OF COMPACTED GRAVEL (NDHOT 304.2).
4. ALL VERTICAL AND HORIZONTAL JOINTS BETWEEN PAVEMENTS SHALL BE TACK COATED.
5. PAVEMENT THICKNESS SHALL MATCH EXISTING BUT IN NOT CASE SHALL BE LESS THAN 3" THICK TOTAL.
6. PAVEMENT SHALL BE PLACED IN TWO PLACES:
 - 6.1 THE FIRST PHASE SHALL CONSIST OF CUTTING BACK THE FULL DEPTH OF PAVEMENT 12" BEYOND THE EDGES OF THE DISTURBED TRENCH AND PAVING A BINDER COURSE THE FULL DEPTH OF THE PAVEMENT AS TO BRING THE PATCH FLUSH WITH THE EXISTING ROAD SURFACE.
 - 6.2 THE SECOND PHASE SHALL BE CONDUCTED THE FOLLOWING YEAR AND SHALL CONSIST OF MILLING OVER THE EDGES OF THE PREVIOUS PATCH BY A MINIMUM OF 18" IN ALL DIRECTIONS TO A DEPTH OF 1.5". WEARING COURSE PAVEMENT SHALL BE USED TO CREATE A SMOOTH SURFACE WITH THE ROADWAY OVER THE EXTENTS OF THE MILLED AREA.
7. ANY TRENCH PATCH SHALL BE REPAIRED WITHIN 90 DAYS AND IS SUBJECT TO INSPECTION TO ENSURE COMPLIANCE WITH CITY STANDARDS.

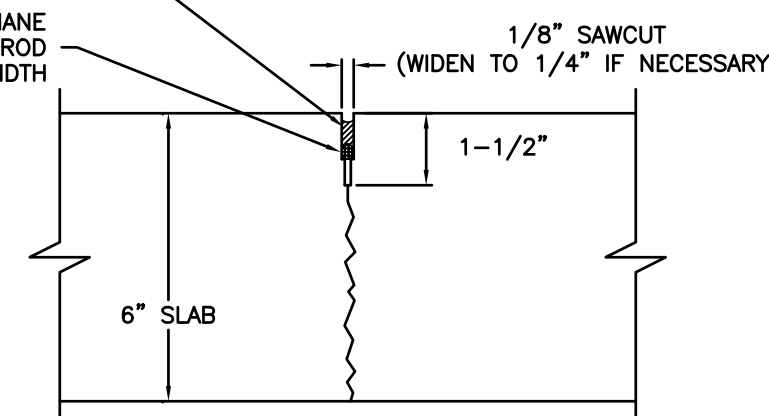
ITEM NO.	SIGN SIZE		TEXT	NO. SIGNS REQ'D
	HEIGHT	WIDTH		
R7-8a	18"	12"		4
R7-8b	6"	12"		
R7-1	18"	12"		1

NOTES:
1. ALL SIGNS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.

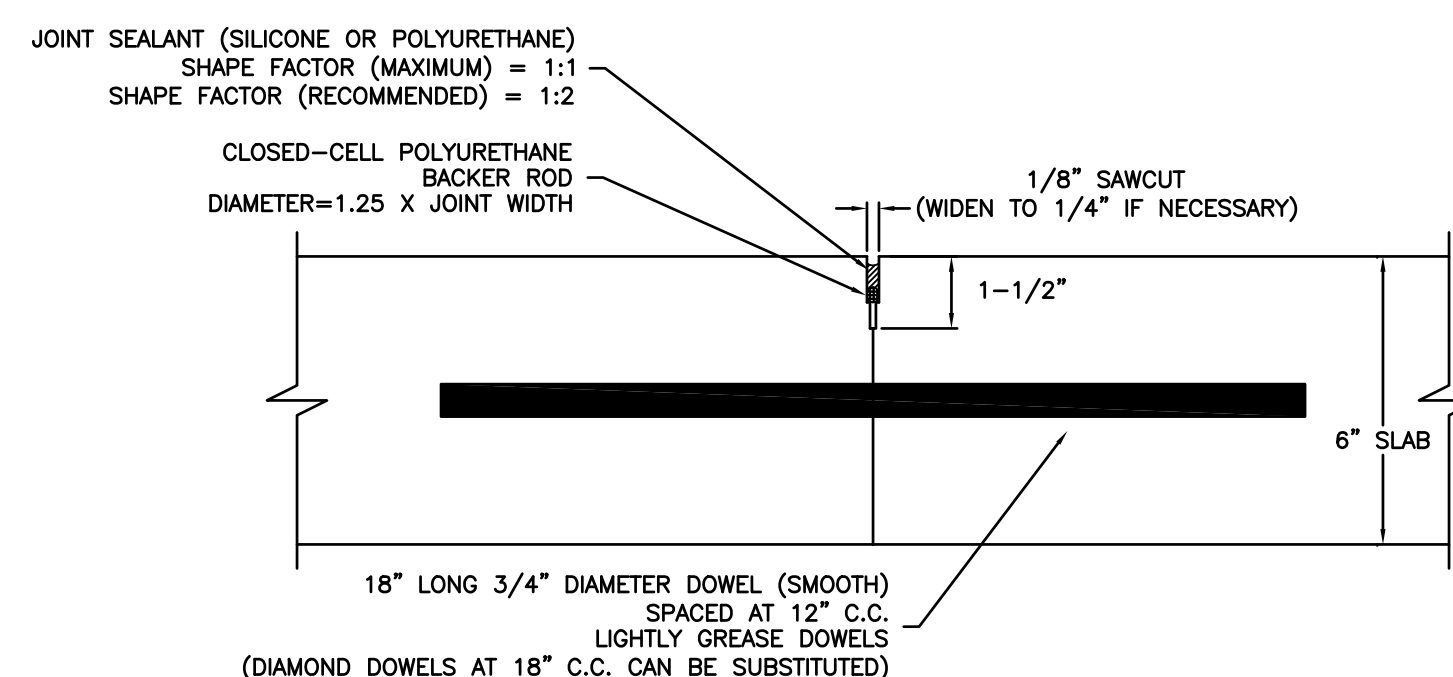
NOT TO SCALE


$$1'' = 5' \text{ (HORIZ.) } \& \text{ } 1'' = 5' \text{ (VERT.)}$$


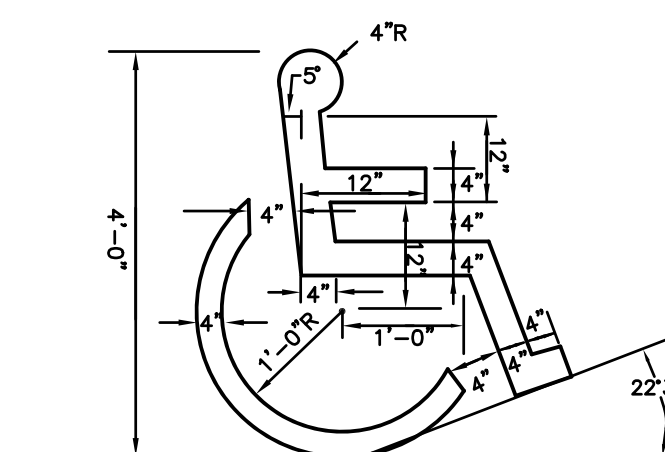
JOINT SEALANT (SILICONE OR POLYURETHANE)
SHAPE FACTOR (MAXIMUM) = 1:1
SHAPE FACTOR (RECOMMENDED) = 1:2



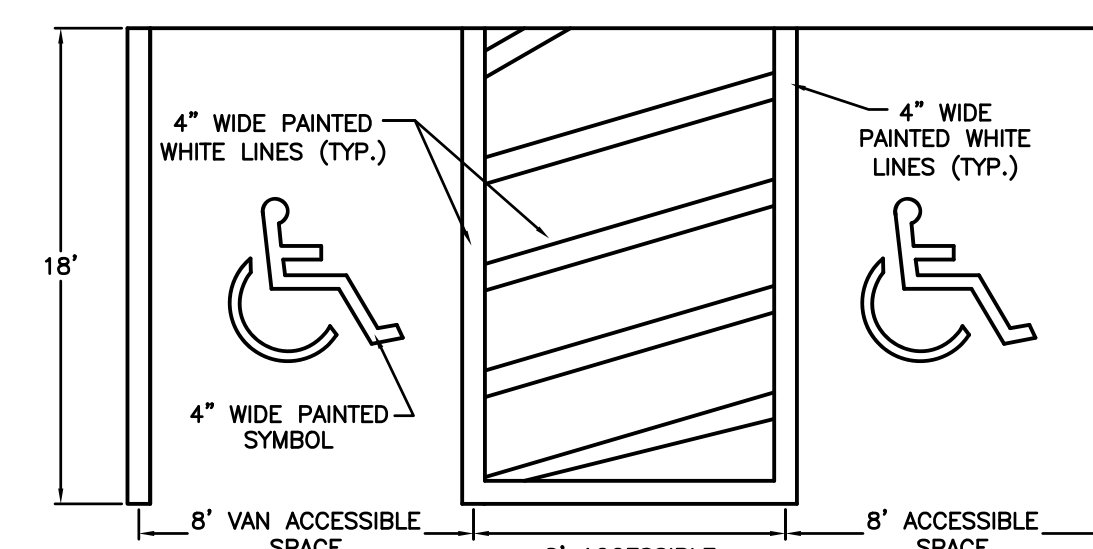
NOT TO SCALE



NOT TO SCALE

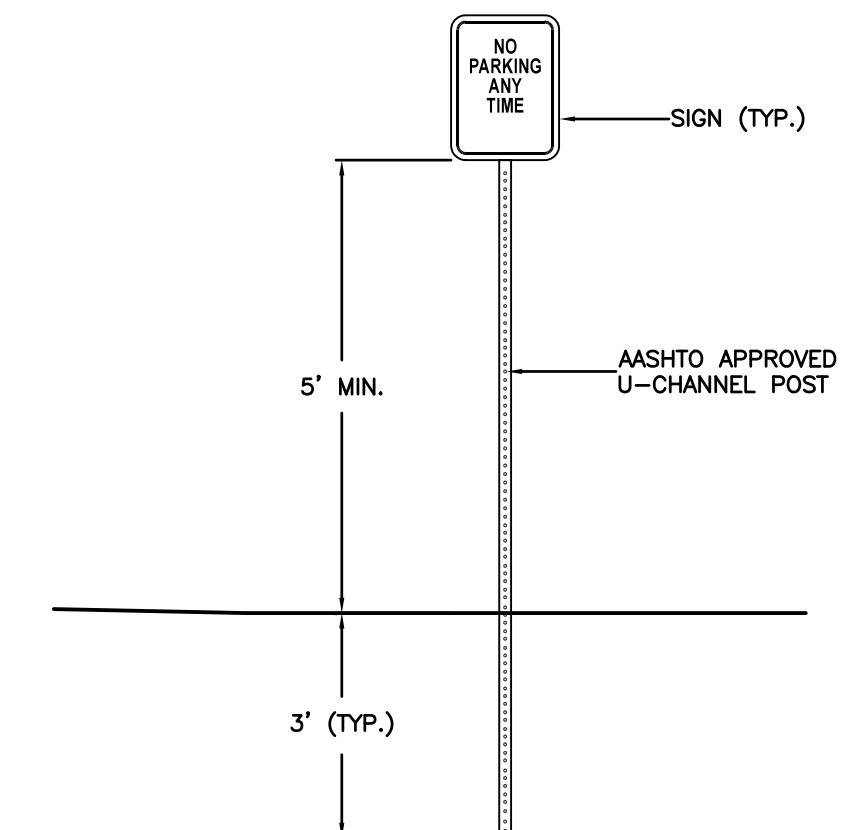


R7-8a R7-1 R7-8a



NOTE: 1. HANDICAP GRAPHIC SYMBOL (PAINTED WHITE) TO BE CENTERED IN SPACE. SYMBOL TO BE PAINTED ON ASPHALT AS PER DETAIL

NOT TO SCALE



NOTES:

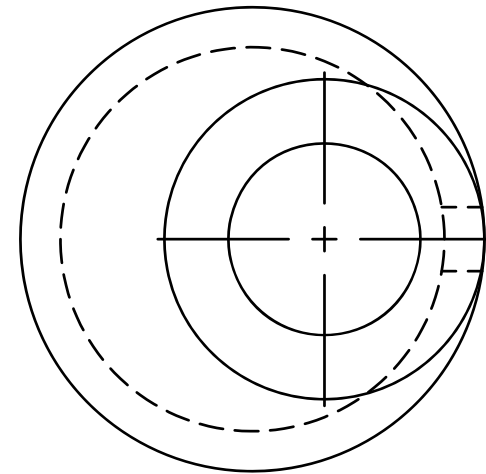
1. SIGN POST SHALL BE ASHTO APPROVED U-CHANNEL OR OTHER PER ASHTO "SPECIFICATIONS FOR STRUCTURAL SUPPORT OF HIGHWAY SIGNS, LUMINAIRES AND SIGNALS", LATEST EDITION.
2. SIGNS SHALL BE MOUNTED 5 FT FROM GROUND TO BOTTOM EDGE WHERE PARKING AND PARKING LOT MOVEMENTS TAKE PLACE.
3. SIGNS SHALL BE PLACED SO THAT NEAREST EDGE IS 2 FT. FROM EDGE OF PAVEMENT UNLESS CURBED.

NOT TO SCALE

PREPARED FOR:

MAY 2020

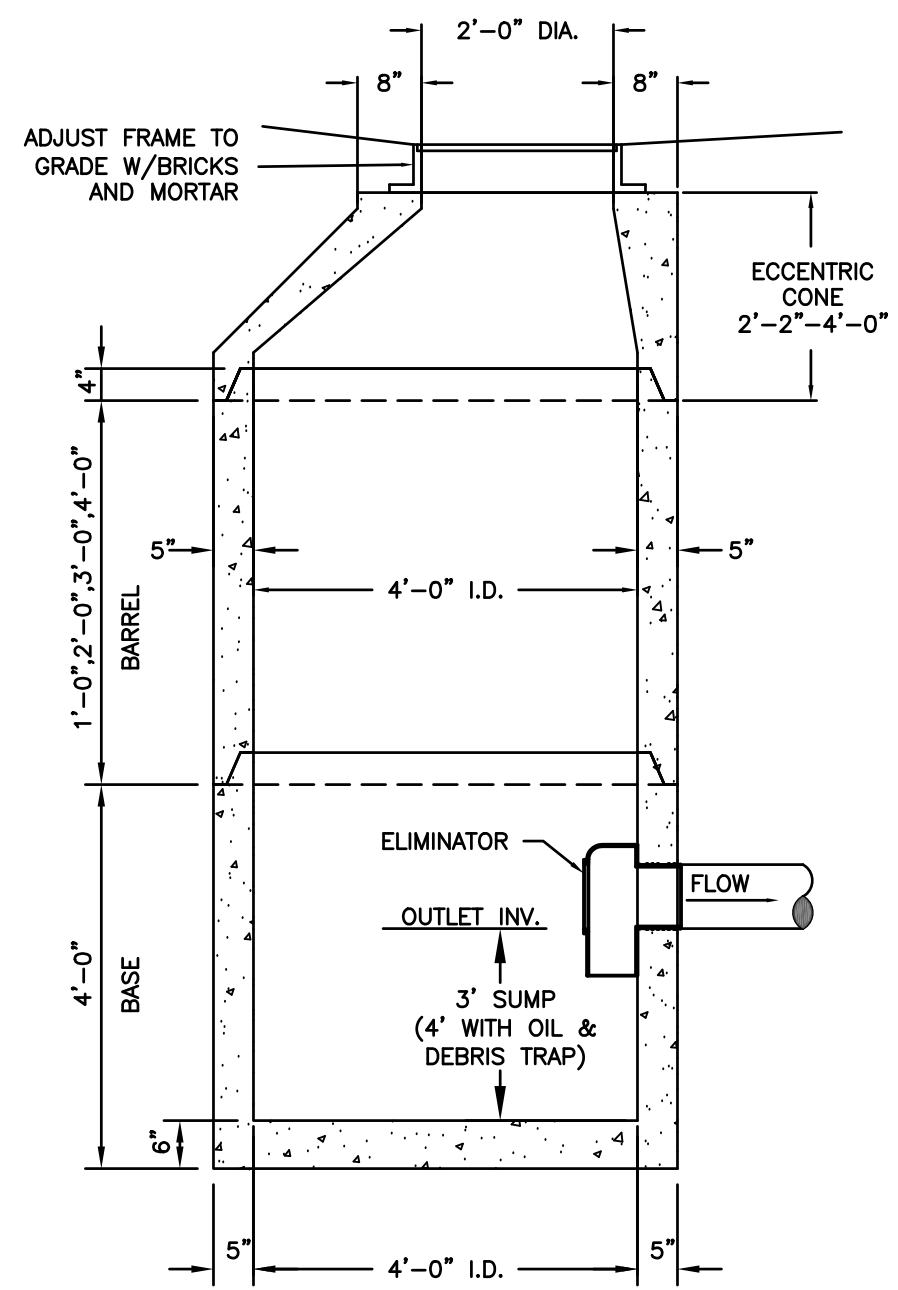
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PLAN VIEW

DRAIN LINE DIAMETER	SUM OF DRAIN LINE DIAMETER	CATCH BASIN DIAMETER
15" TO 18"	LESS THAN 54"	4'
21" TO 27"	LESS THAN 72"	5'
30" TO 33"	LESS THAN 90"	6'
36" & LARGER	GREATER THAN 90"	REFER TO THE STANDARD

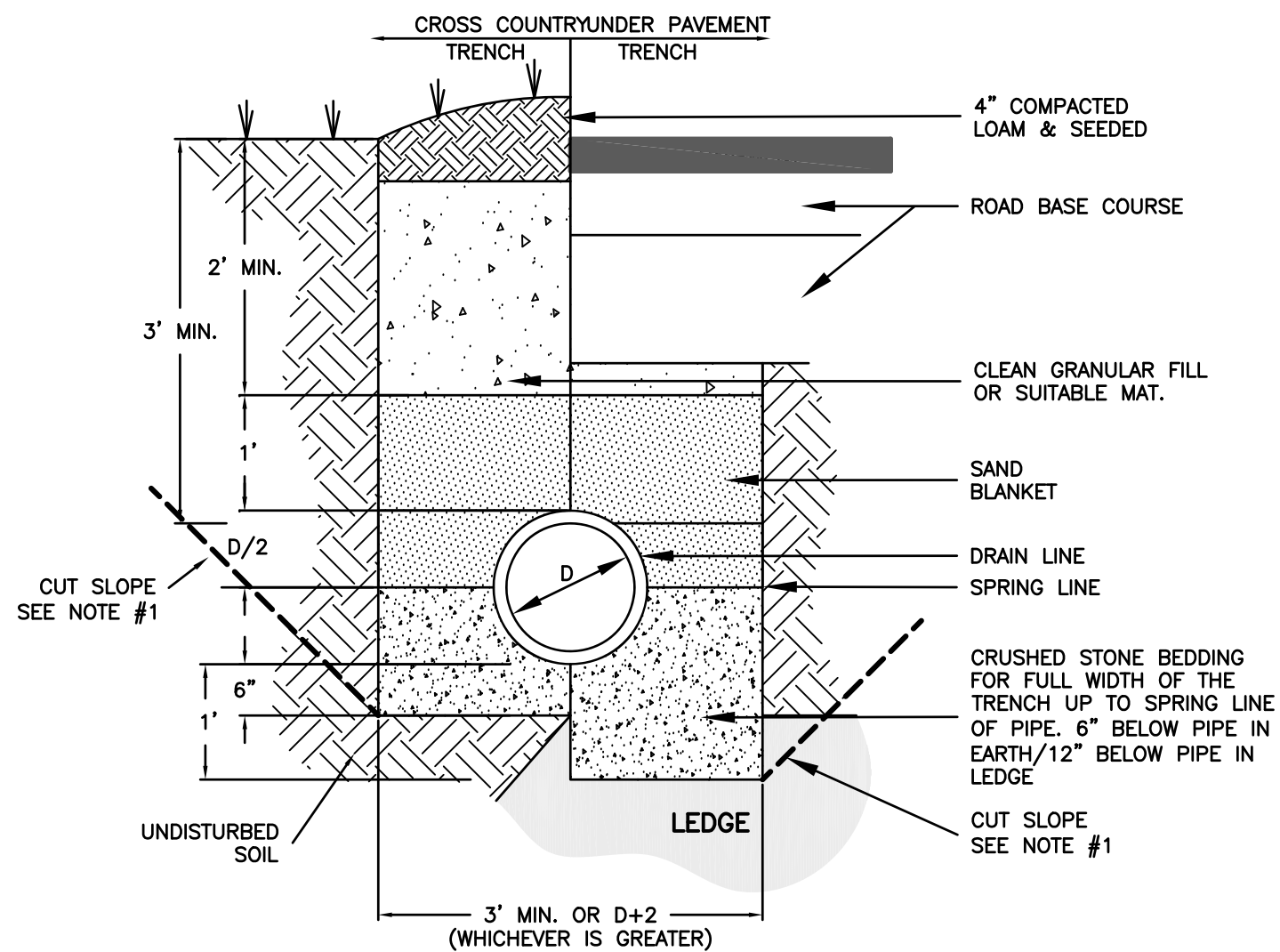
- NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
 2. REINFORCING: SHALL BE PROVIDED FOR H-20 LOADING.
 3. SHUPLAP JOINTS SEALED WITH 1 STRIP OF BUTYL RUBBER SEALANT.
 4. PIPE OPENINGS CAST IN AS REQUIRED.
 5. RISER HEIGHT VARIES 1', 2', 3' OR 4' TO REACH DESIRED DEPTH.
 6. PIPE CONNECTIONS SHALL BE MORTARED.
 7. PRECAST SECTIONS SHALL CONFORM TO ASTM C-478.
 8. SEE SLAB TOP DETAIL FOR STRUCTURES REQUIRING SLAB TOPS, I.E. DOUBLE GRATE AND FRAME STRUCTURES.



SECTION VIEW

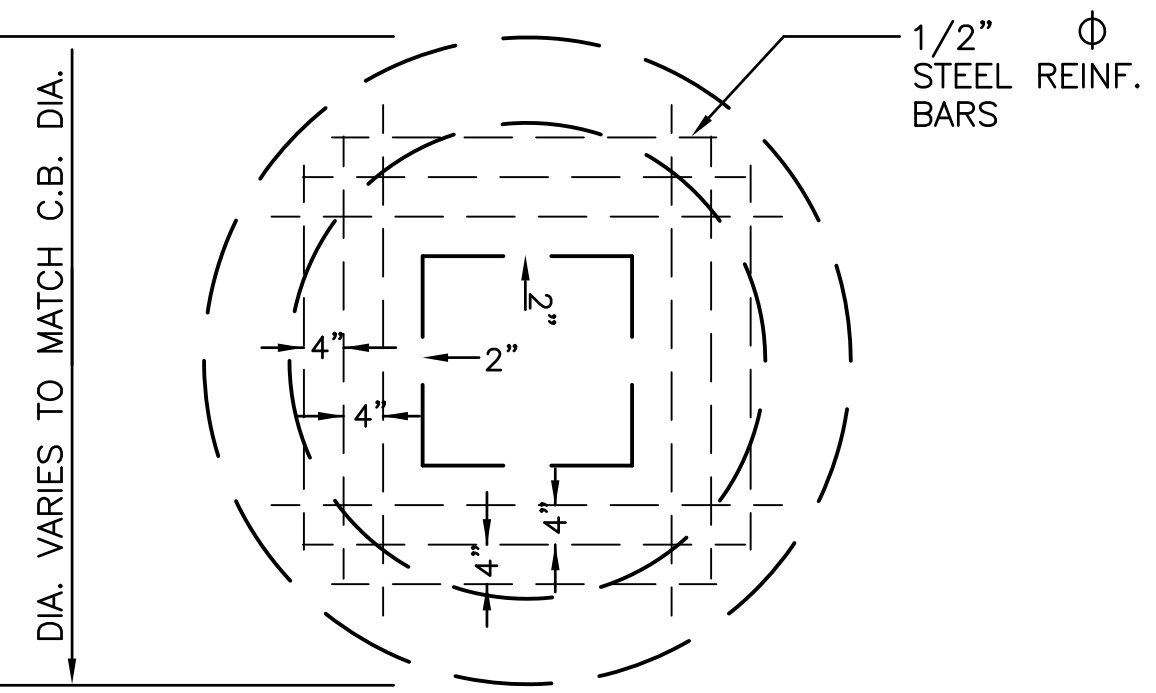
PRE-CAST REINFORCED CATCH BASIN
NOT TO SCALE

REINFORCED CONCRETE SLAB COVER
NOT TO SCALE

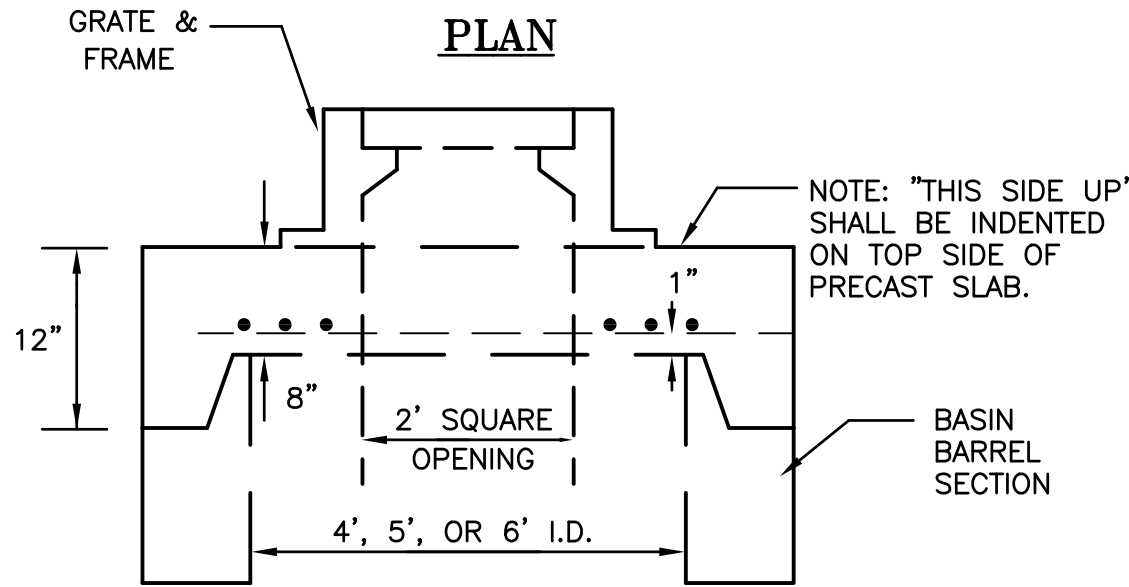


- NOTES:
1. PIPES MAY BE INSTALLED BY EXCAVATING AN OPEN TRENCH WITH SIDE SLOPES OF 1:1 MAXIMUM TO A DEPTH OF 4'-FT. INSTALLATIONS DEEPER THAN 4'-FT REQUIRE THE USE OF A TRENCH BOX.
 2. PIPE MATERIALS SHALL BE AS SPECIFIED ON THE DESIGN PLAN.
 3. SAND BLANKET MAY BE OMITTED FOR REINFORCED CONCRETE PIPE.

DRAINAGE PIPE
TRENCH INSTALLATION DETAIL
NOT TO SCALE

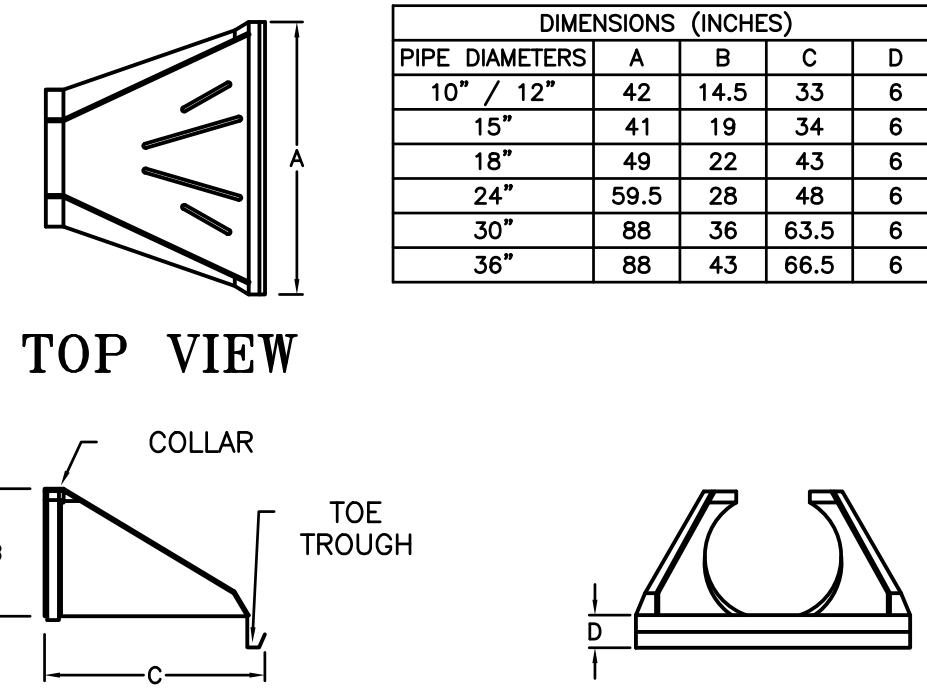


PLAN

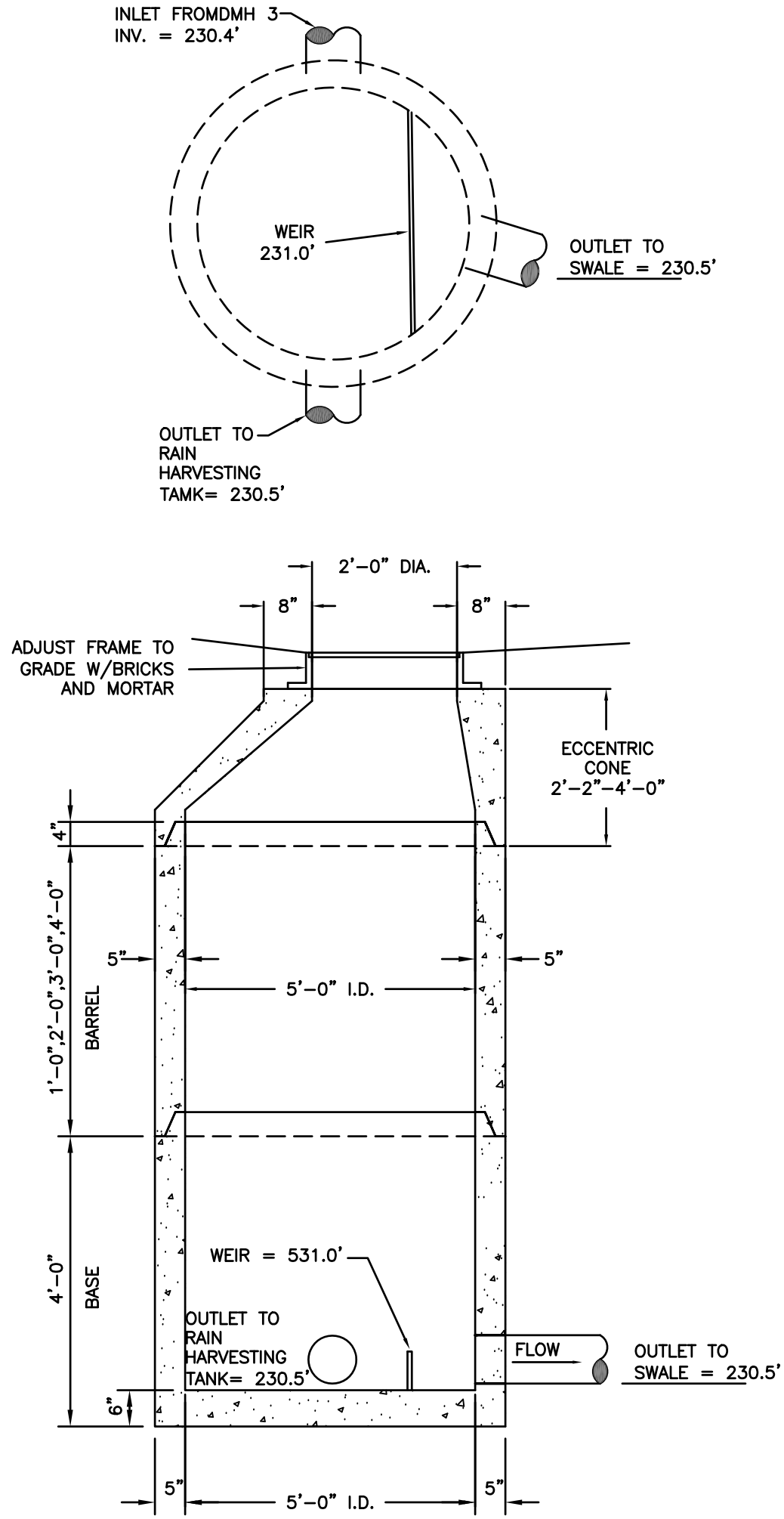
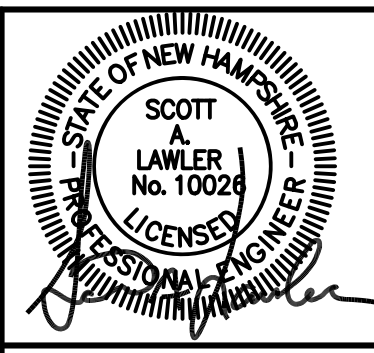
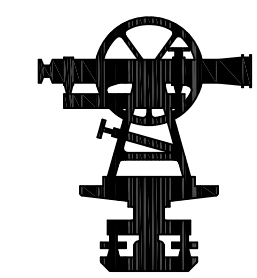


ELEVATION

- NOTE:
1. SLAB TO BE PLACED IN LIEU OF TAPERED SECTION WHERE PIPE WOULD OTHERWISE ENTER INTO TAPERED SECTION OF THE STRUCTURE AND WHERE PERMITTED.
 2. SLAB TOP MAY BE CASTED WITH MINIMUM OR NO INTERLOCKING CHANNEL. HOWEVER, THE CONTRACTOR MUST ENSURE THE SLAB TOP IS FIRMLY ATTACHED TO THE STRUCTURE.

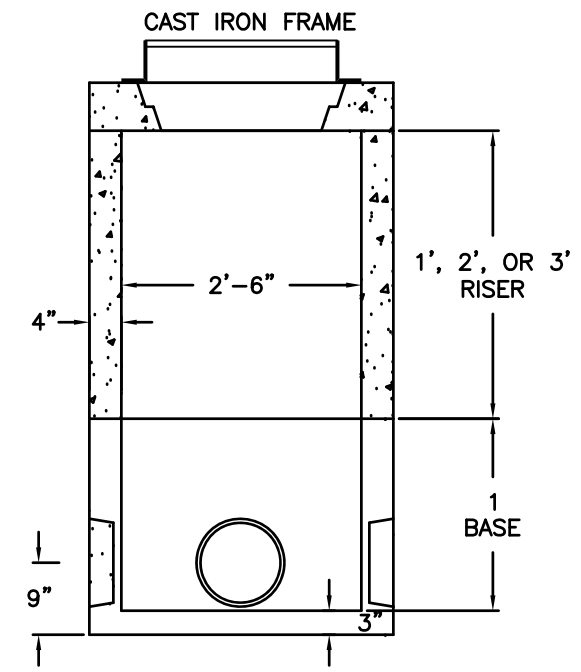


FLAIRED END
SECTION DETAIL
NOT TO SCALE



SECTION VIEW

DRAIN MANHOLE
NOT TO SCALE



WITHOUT SUMP
SECTION VIEW

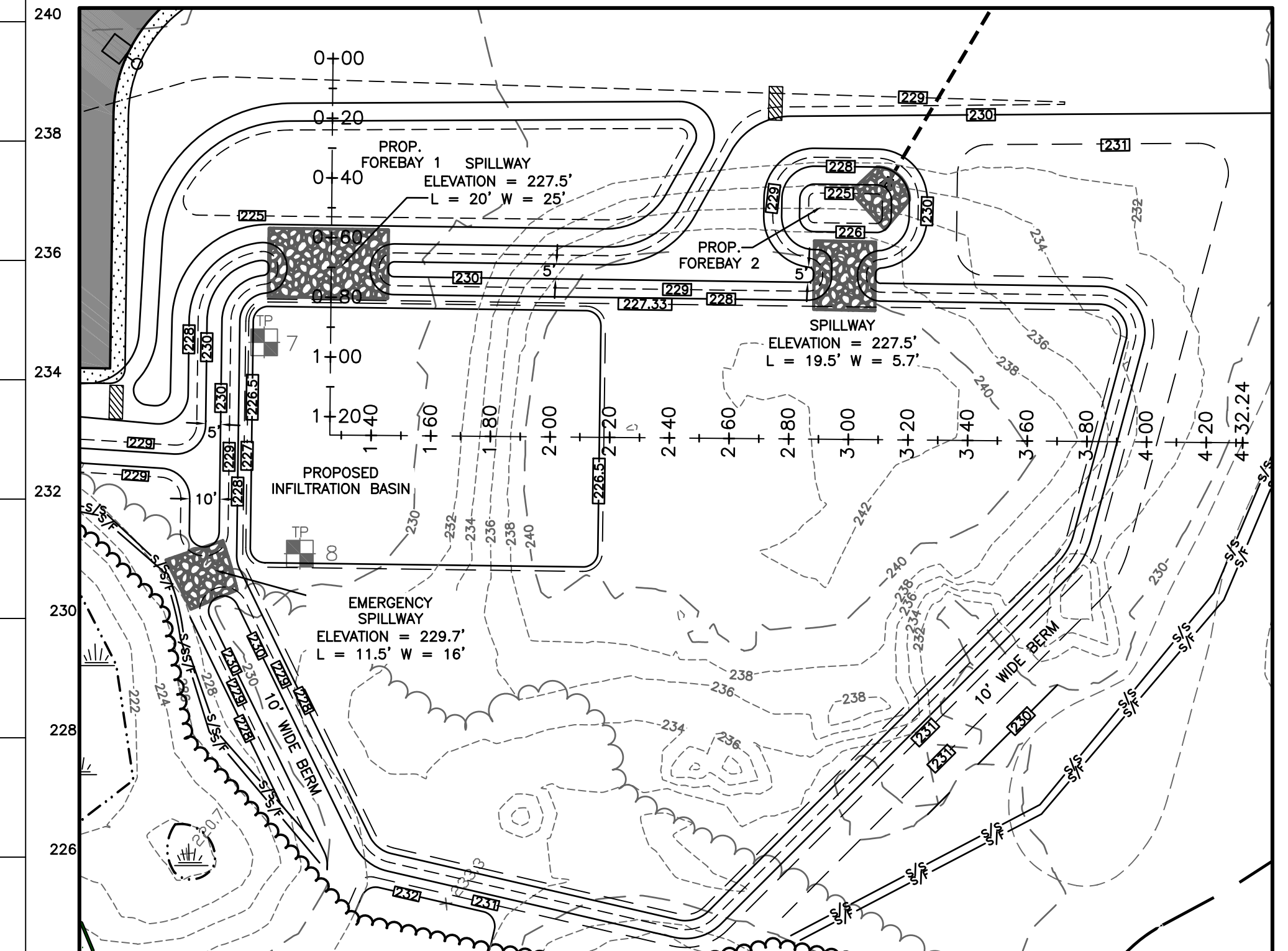
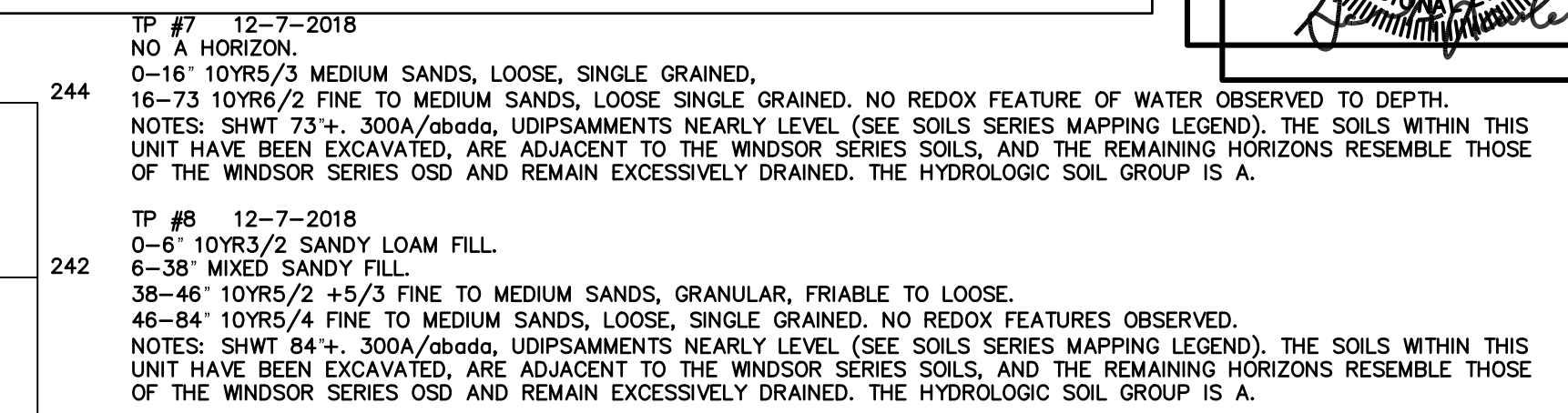
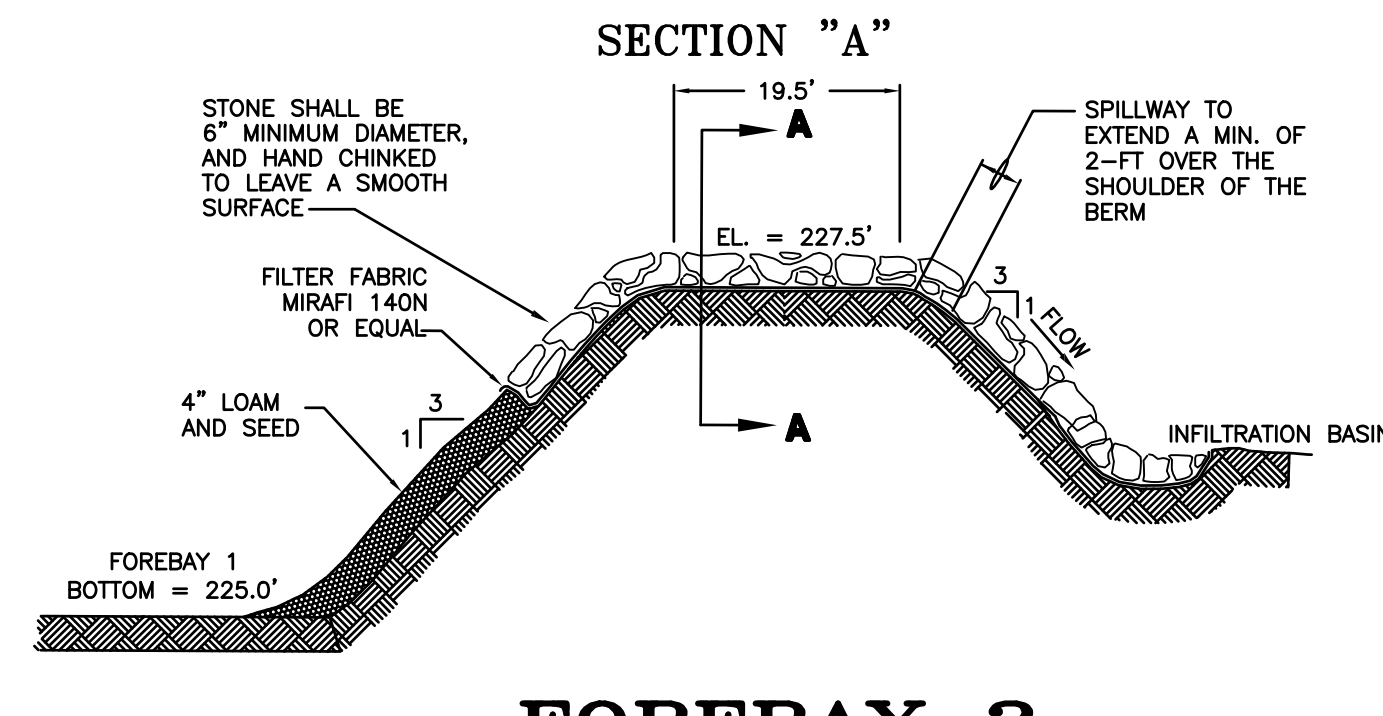
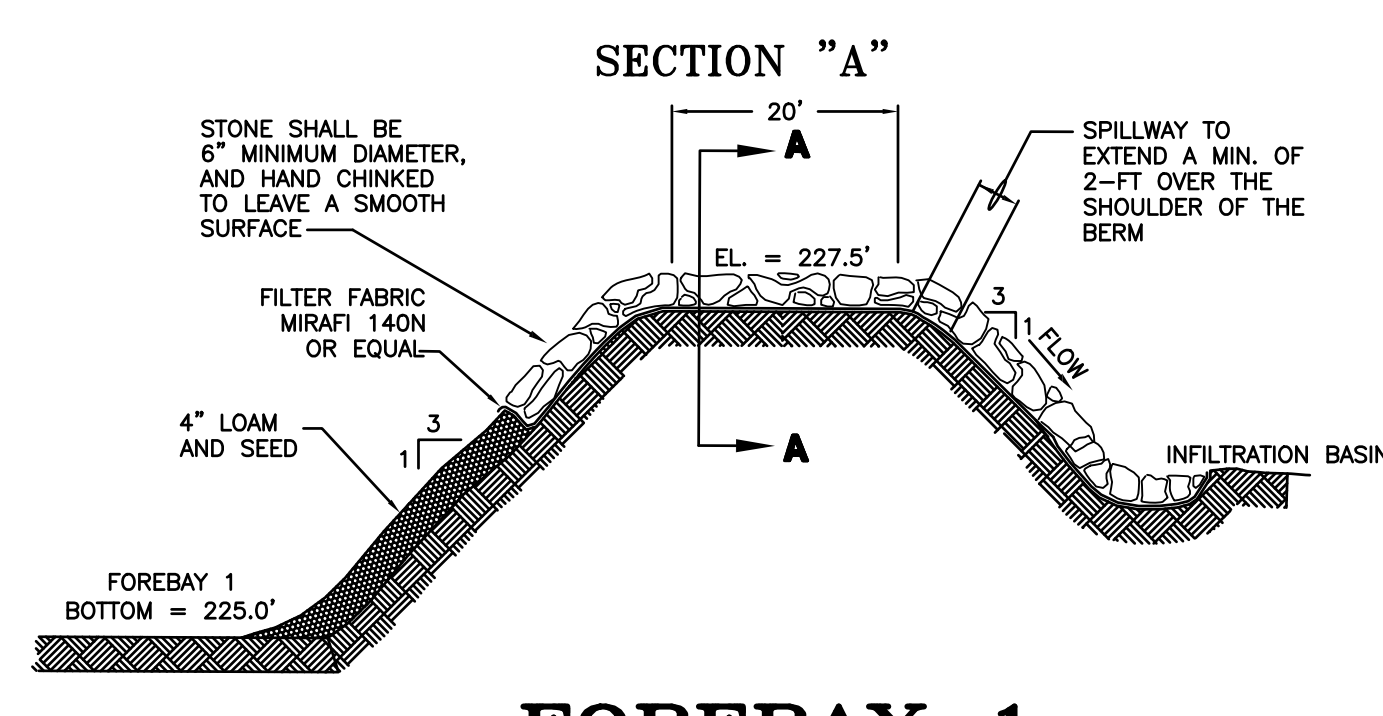
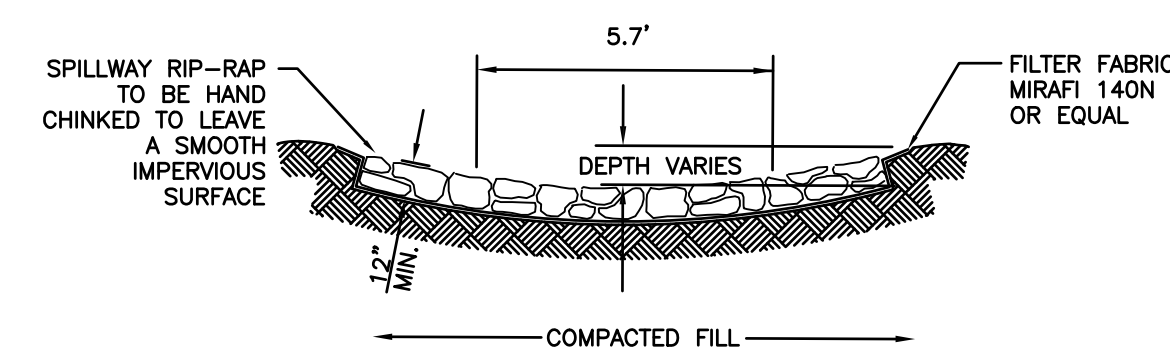
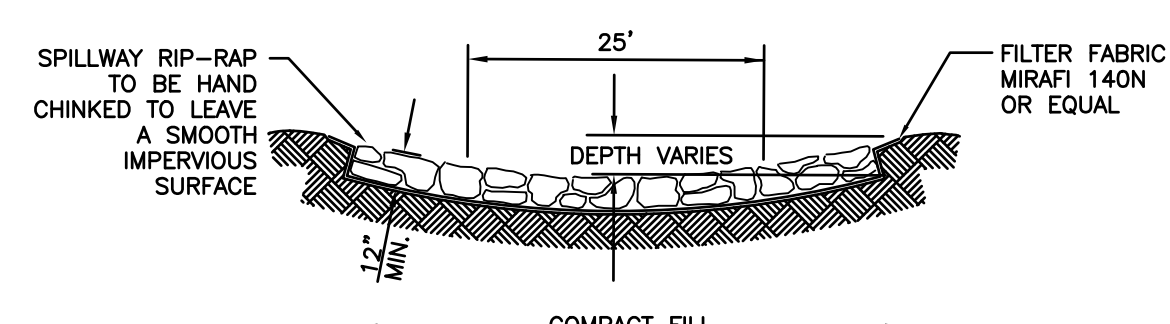
SECTIONS	ITEM NO	WEIGHT
1'-0" RISER	MC-MCB12RH	440#
2'-0" RISER	MC-MCB24RH	880#
3'-0" RISER	MC-MCB36RH	1320#
2'-0" BASE	MC-MCB24SH	1175#
2'-0" BARREL	MC-MCB24BSH	880#
38" COVER	MC-MCB38CH	585#

- NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
 2. DESIGNED FOR AASHTO HS-20 LOADING, 1-5 FEET COVER.

MANHOLE 30" DIA H-20
NOT TO SCALE

DRAINAGE DETAILS
TAX MAP 216, LOT 32 AND
TAX MAP 221, LOTS 186 & 187
134 CHESTNUT HILL ROAD
ROCHESTER, NH
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MAY 2020

FILE NO. 154
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$$1'' = 20' \text{ (HORIZ.) } \& \ 1'' = 2' \text{ (VERT.)}$$


SPECIFICATIONS:

1. CONSTRUCT THE SEDIMENT FOREBAY TO THE GRADES DEPICTED ON THE PLAN AND CROSS-SECTION.
2. LOAD AND SEED THE SLOPES AND BOTTOM OF THE SEDIMENT FOREBAY AS PRESCRIBED IN THE "PERMANENT VEGETATION" NOTES FOUND ON SHEET C-11.

SEED MIXTURE = A

MAINTENANCE REQUIREMENTS:

1. INSPECT SEDIMENT FOREBAY BI-ANNUALLY, ONCE IN THE SPRING PRIOR TO MAY 15 AND ONCE IN THE FALL PRIOR TO OCTOBER 15.
2. CONDUCT PERIODIC MOWING OF THE SEDIMENT FOREBAY SLOPES AND EMBANKMENTS (MINIMUM TWICE A YEAR) TO ELIMINATE WOODY GROWTH FROM THE EMBANKMENTS AND BOTTOM. MOWING THE SEDIMENT FOREBAY EMBANKMENTS WHEN MOWING THE REST OF THE SITE SHALL BE FROM BOTTOM OF BASIN.

NOTES:

1. STAFF GAGE TO BE SCHEDULE 40 WHITE PVC DRIVEN OR PLACED IN GROUND MINIMUM 1'-FT.
2. CLEANTOWN MARK ON STAFF TO BE GRAY PVC COUPLING SET 6-INCHES FROM BOTTOM OF BASIN.

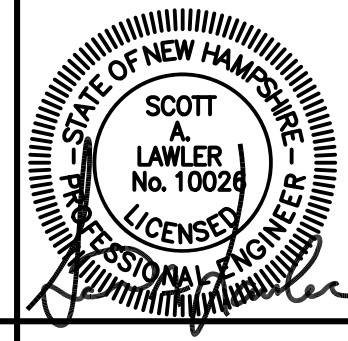
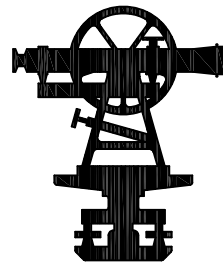
1 1/2" DIA. WHITE SCH 40 PVC STAFF GAGE
CLEANTOWN EL. MARK
GRAY PVC COUPLING EL.=225.5'

3'

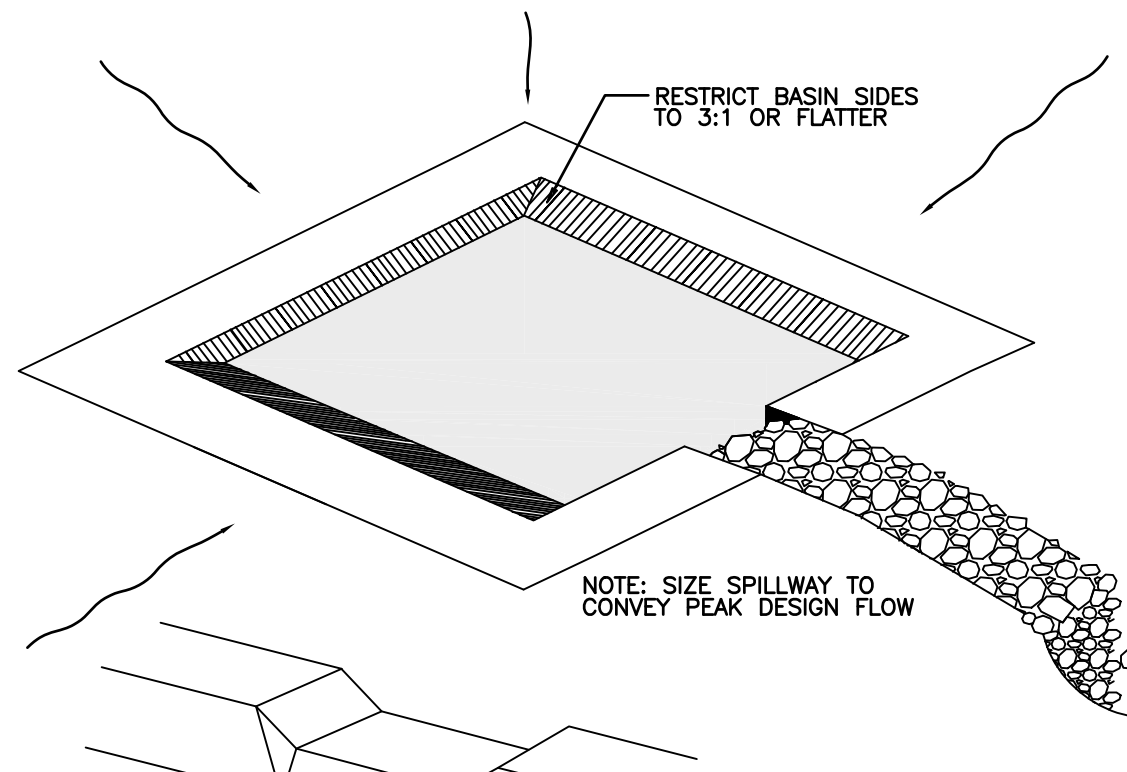
3' min.

NOT TO SCALE

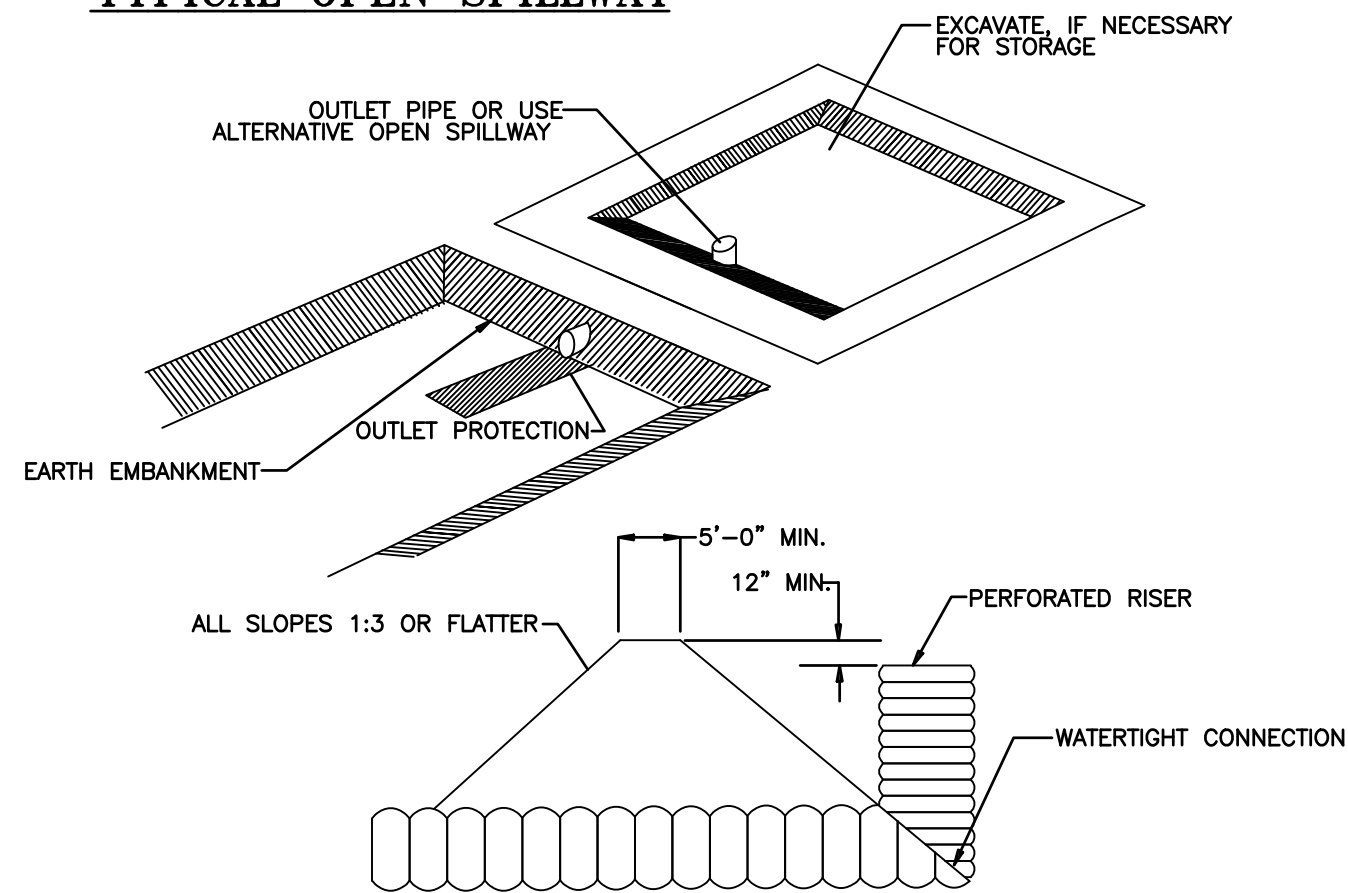
3-8



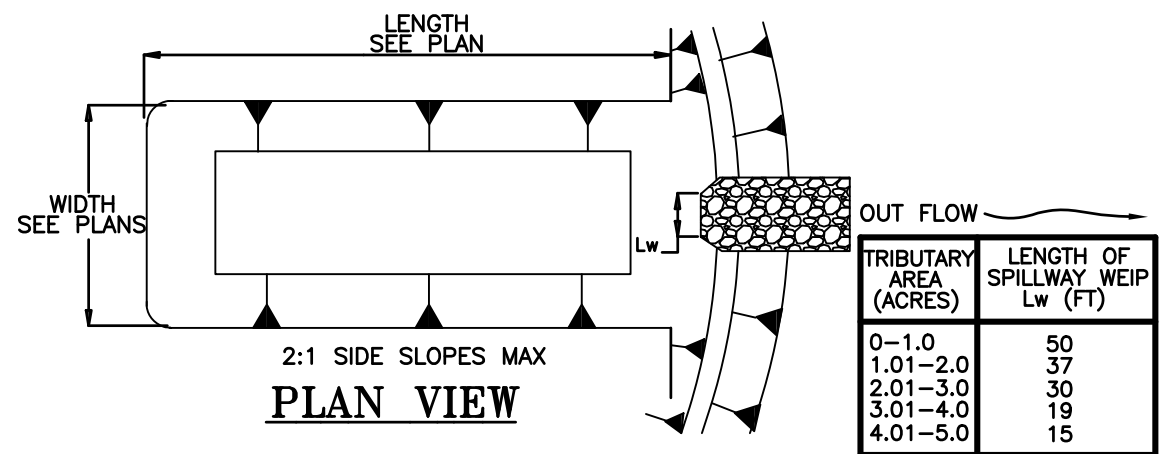
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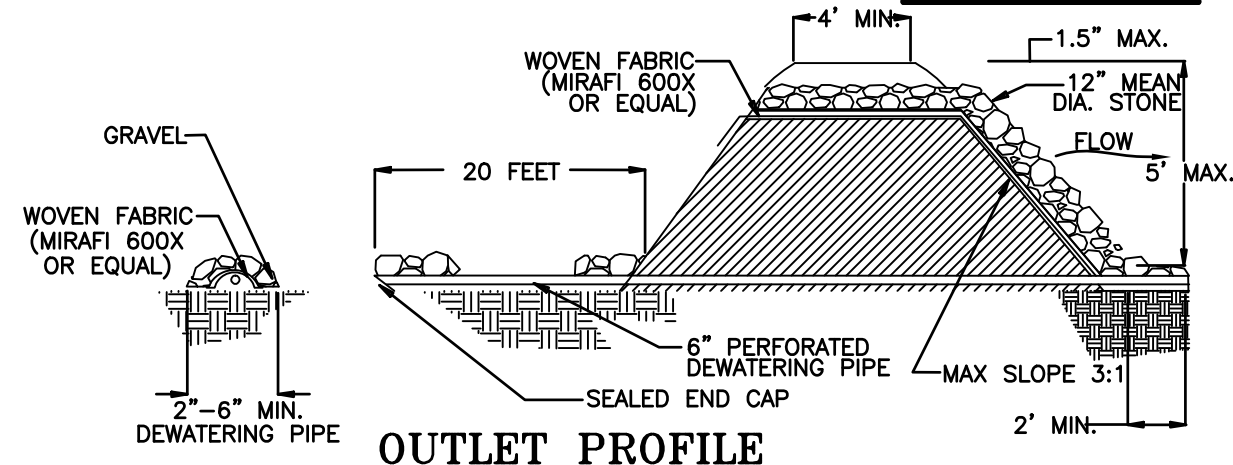
TYPICAL OPEN SPILLWAY



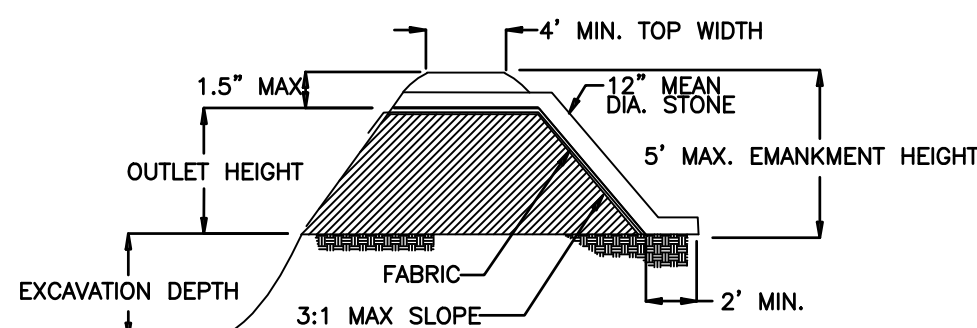
EMBANKMENT SECTION THRU RISER



PLAN VIEW

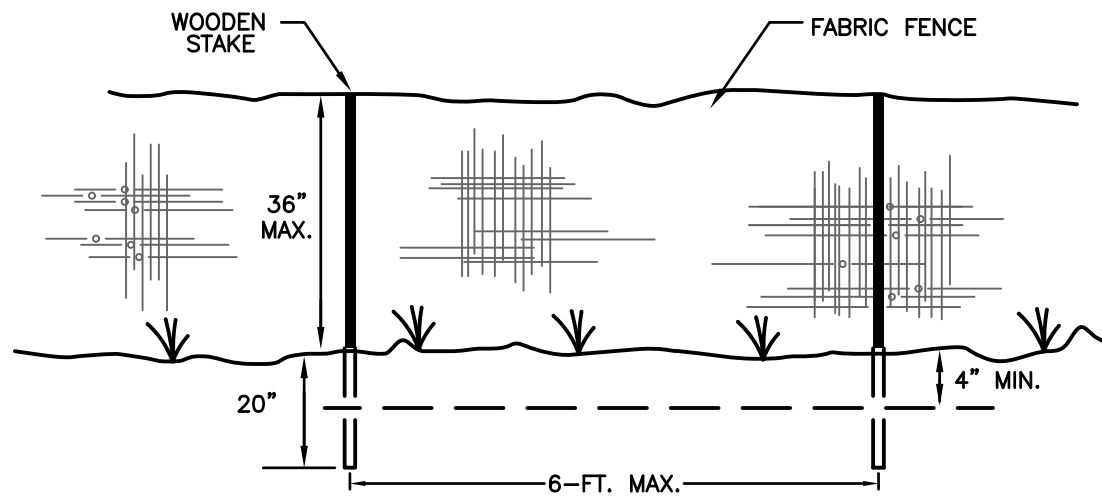


OUTLET PROFILE

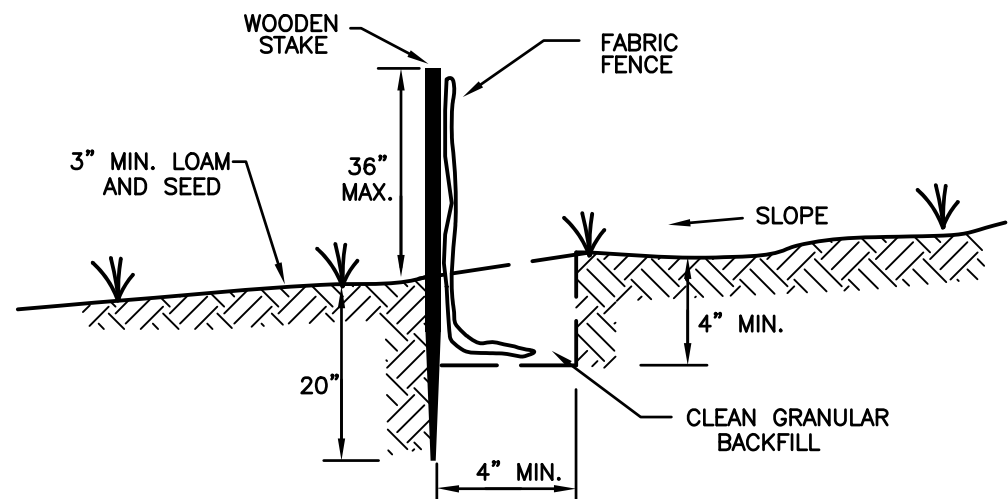


ALTERNATE OUTLET PROFILE

SEDIMENT TRAP



PROFILE



CROSS-SECTION

- MAINTENANCE REQUIREMENTS:**
- FENCES SHALL BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALLS.
 - SEDIMENT DEPOSITION SHALL BE REMOVED, AT A MINIMUM, WHEN DEPOSITION ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FENCE, AND MOVED TO AN APPROPRIATE LOCATION SO THE SEDIMENT IS NOT READILY TRANSPORTED BACK TOWARD THE SILT FENCE.
 - SILT FENCES SHALL BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
 - SHALL THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY; THE FABRIC SHALL BE REPLACED PROMPTLY.
 - ANY SEDIMENT DEPOSITS REMAINING IN THE TRENCH AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
 - IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
 - SILT FENCES HAVE A USEFUL LIFE OF ONE SEASON. ON LONGER CONSTRUCTION PROJECTS, SILT FENCE SHALL BE REPAIRED PERIODICALLY AS REQUIRED TO MAINTAIN EFFECTIVENESS.

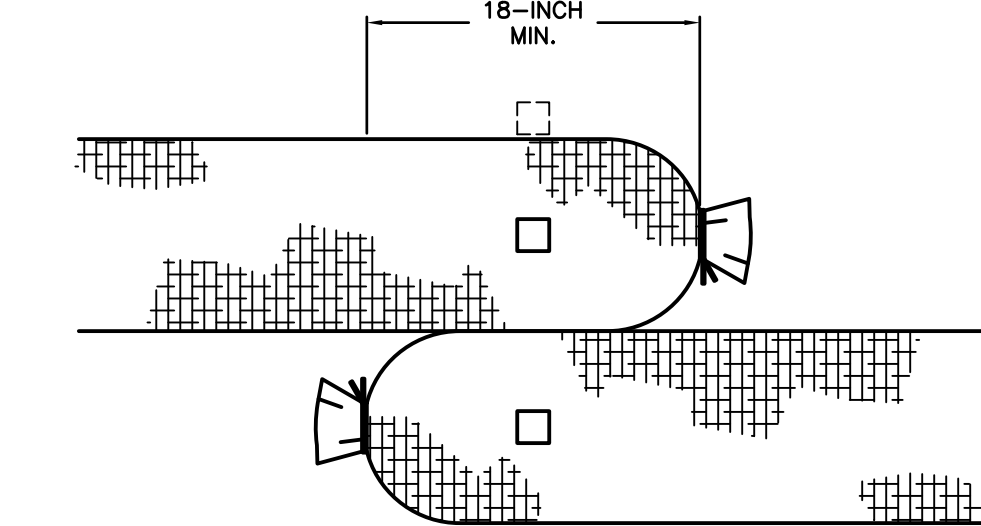
- CONSTRUCTION SPECIFICATIONS:**
- FENCES SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE FENCE. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
 - THE MAXIMUM CONTRIBUTING DRAINAGE AREA ABOVE THE FENCE SHALL BE LESS THAN 1 ACRE PER 100 LINEAR FEET OF FENCE.
 - THE MAXIMUM LENGTH OF SLOPE ABOVE THE FENCE SHALL BE 100 FEET.
 - THE MAXIMUM SLOPE ABOVE THE FENCE SHALL BE 2:1.
 - FENCES SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSELY AS POSSIBLE, AND
 - THE ENDS OF THE FENCE SHALL BE FLARED UPSLOPE.
 - THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 4 INCHES IN DEPTH AND INCHES IN WIDTH IN A TRENCH EXCAVATED INTO THE GROUND, OR IF SITE CONDITIONS INCLUDE FROZEN GROUND, LEDGE, OR THE PRESENCE OF HEAVY ROOTS, THE BASE OF THE FABRIC SHALL BE EMBEDDED WITH A MINIMUM THICKNESS OF 6 INCHES OF 3/4-INCH STONE.
 - THE SOIL SHALL BE COMPACTED OVER THE EMBEDDED FABRIC.
 - SUPPORT POSTS SHALL BE SIZED AND ANCHORED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS WITH MAXIMUM POST SPACING OF 6 FEET.
 - ADJOINING SECTIONS OF THE FENCE SHALL BE OVERLAPPED BY A MINIMUM OF 6 INCHES (24 INCHES IS PREFERRED), FOLDED AND STAPLED TO A SUPPORT POST. IF METAL POSTS ARE USED, FABRIC SHALL BE WIRE-TIED DIRECTLY TO THE POSTS WITH THREE DIAGONAL TIES.
 - SILT FENCING SHALL NOT BE STAPLED OR NAILED TO TREES.
 - THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.
 - THE FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
 - POSTS FOR SILT FENCES SHALL BE EITHER 4-INCH DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. POSTS SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE FABRIC.
 - THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES AS HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
 - THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY SEALED.
 - A MANUFACTURED SILT FENCE SYSTEM WITH INTEGRAL POSTS MAY BE USED.
 - POST SPACING SHALL NOT EXCEED 6 FEET.
 - A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UP GRADIENT FROM THE BARRIER.
 - THE STANDARD STRENGTH OF FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE POST, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
 - THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
 - SILT FENCE MAY BE INSTALLED BY "SLICING" USING MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR THIS PROCEDURE. THE SLICING METHOD USES AN IMPLEMENT TOWED BEHIND A TRACTOR TO "PLOW" OR SLICE THE SILT FENCE MATERIAL INTO THE SOIL. THE SLICING METHOD MINIMALLY DISRUPTS THE SOIL UPWARD AND SLIGHTLY DISPLACES THE SOIL, MAINTAINING THE SOIL'S PROFILE AND CREATING AN OPTIMAL CONDITION FOR SUBSEQUENT MECHANICAL COMPACTION.
 - SILT FENCES SHALL BE INSTALLED WITH "SMILES" OR "J-HOOKS" TO REDUCE THE DRAINAGE AREA THAT ANY SEGMENT WILL IMPOUND.
 - THE ENDS OF THE FENCE SHALL BE TURNED UPHILL.
 - SILT FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 6 FEET FROM THE TOE TO ALLOW SPACE FOR SHALLOW PONDING AND TO ALLOW FOR MAINTENANCE ACCESS WITHOUT DISTURBING THE SLOPE.
 - SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILTATION CONTROL FENCE DETAIL

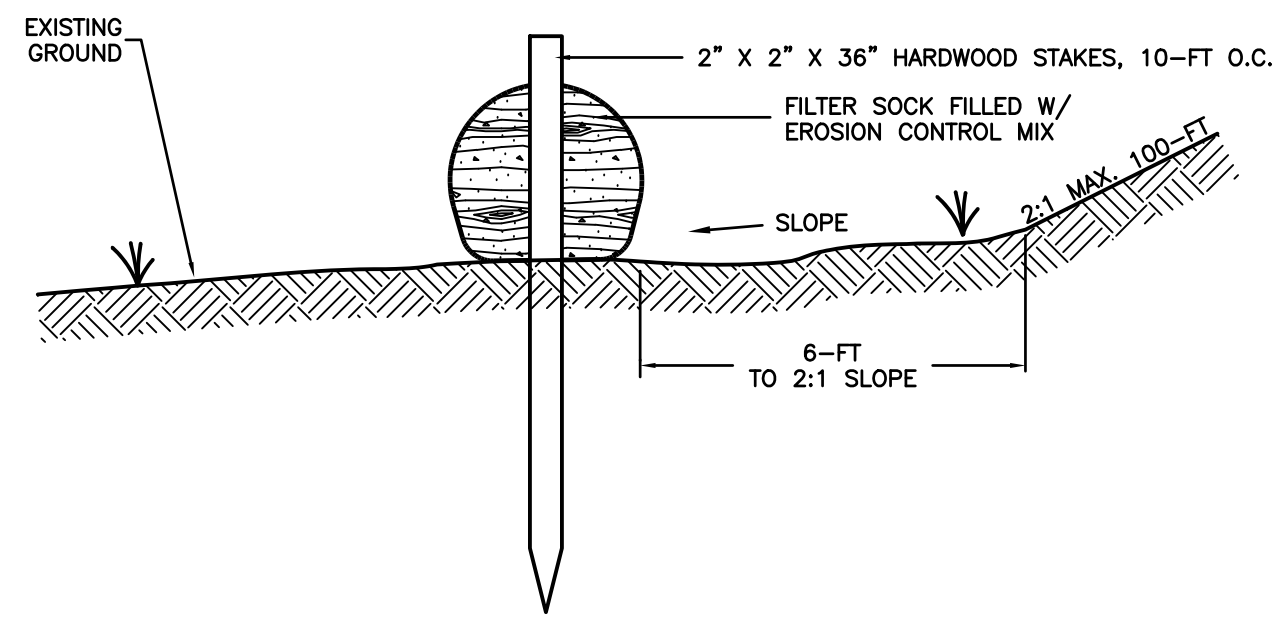
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TEMPORARY VEGETATION SEEDING RECOMMENDATIONS

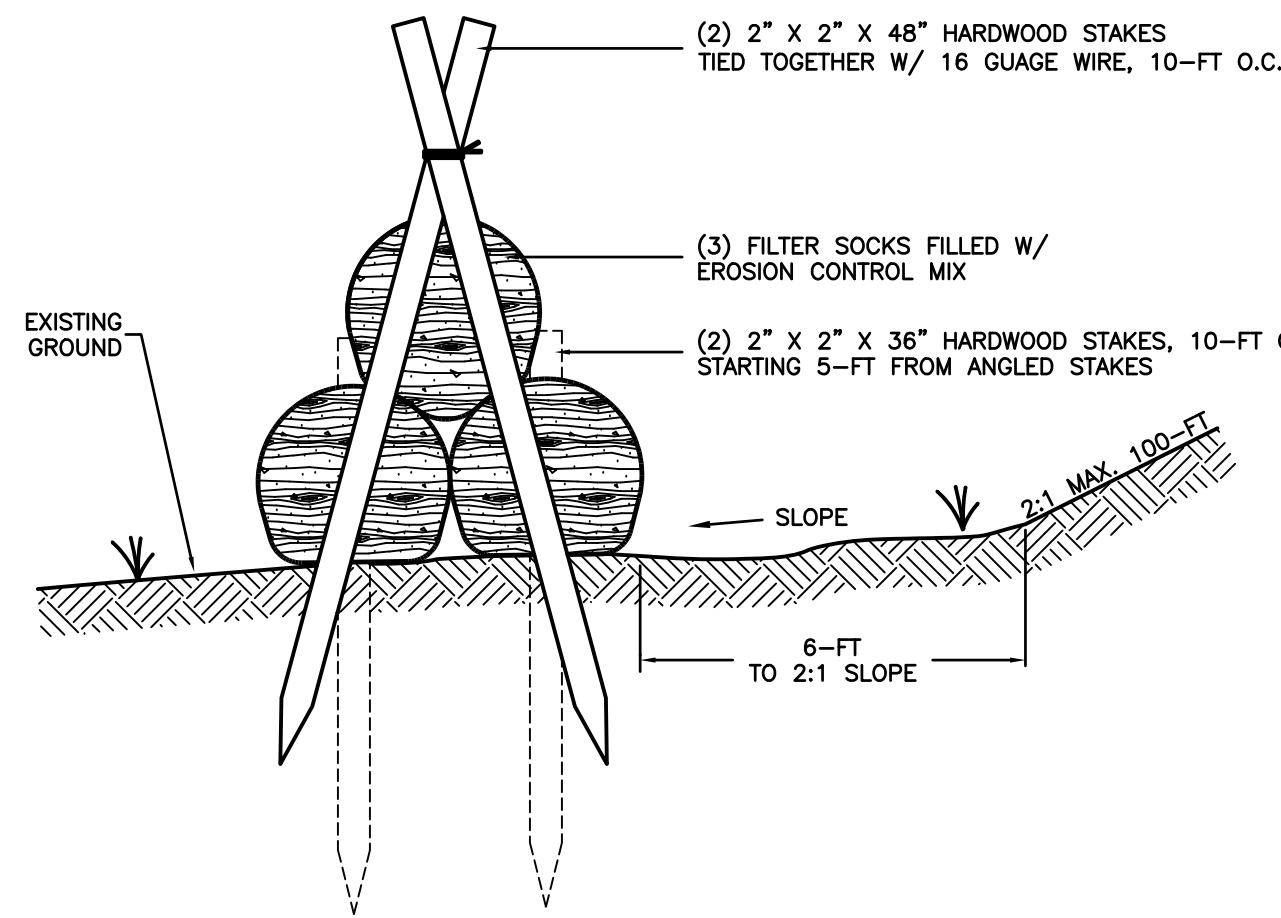
SPECIES	PER ACRE BUSHELS (BU) OR POUNDS (LBS.)	PER 1,000-SF	REMARKS
WINTER RYE	2.5 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
OATS	2.5 BU OR 80 LBS.	2.0 LBS.	BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH.
ANNUAL RYE GRASS	40 LBS.	1.0 LB.	GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15 AND SEPTEMBER 15. COVER THE SEED WITH NO MORE THAN 0.25 INCH OF SOIL.
PERENNIAL RYE GRASS	30 LBS.	0.7 LBS.	BEST FOR FALL SEEDING. SEED FROM AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH.
SOURCES: 1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLE 4-1 2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)			



FILTER SOCK CONNECTION PLAN VIEW



FILTER SOCK CROSS-SECTION



HEAVY DUTY PYRAMID FILTER SOCK CROSS-SECTION

- CONTINUOUS CONTAINED BERM (FILTER SOCK ALTERNATIVE):**
- AN ALTERNATIVE PRODUCT, THE CONTINUOUS CONTAINED BERM (OR "FILTER SOCK") CAN BE AN EFFECTIVE SEDIMENT BARRIER AS IT ADDS CONTAINMENT AND STABILITY TO A BERM OF EROSION CONTROL MIX.
 - IN THE EVENT THAT USE OF CONTINUOUS CONTAINED BERM IS DESIRED, THE PRODUCT SELECTED SHOULD BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.
 - INSTALLATION OF CONTINUOUS CONTAINED BERMS SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE MANUFACTURER.

- MAINTENANCE REQUIREMENTS:**
- FILTER SOCK MAINTENANCE SHALL FOLLOW THE SAME SCHEDULE AS EROSION CONTROL MIX BERMS.
- CONSTRUCTION SPECIFICATIONS:**
- COMPOSITION OF THE EROSION CONTROL MIX SHALL EITHER BE THE SAME AS EROSION CONTROL MIX BERM MATERIAL OR AS SPECIFIED BY THE FILTER SOCK MANUFACTURER.
 - THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR.
 - IT MAY BE NECESSARY TO CUT TALL GRASSES AND WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES IN THE BARRIER THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
 - FILTER SOCK DIAMETER (HEIGHT) SHALL BE PER THE MANUFACTURER RECOMMENDATION FOR THE AREA OF INSTALLATION.

CONTINUOUS CONTAINED BERM "FILTER SOCK" DETAIL

NOT TO SCALE

TEMPORARY VEGETATION:

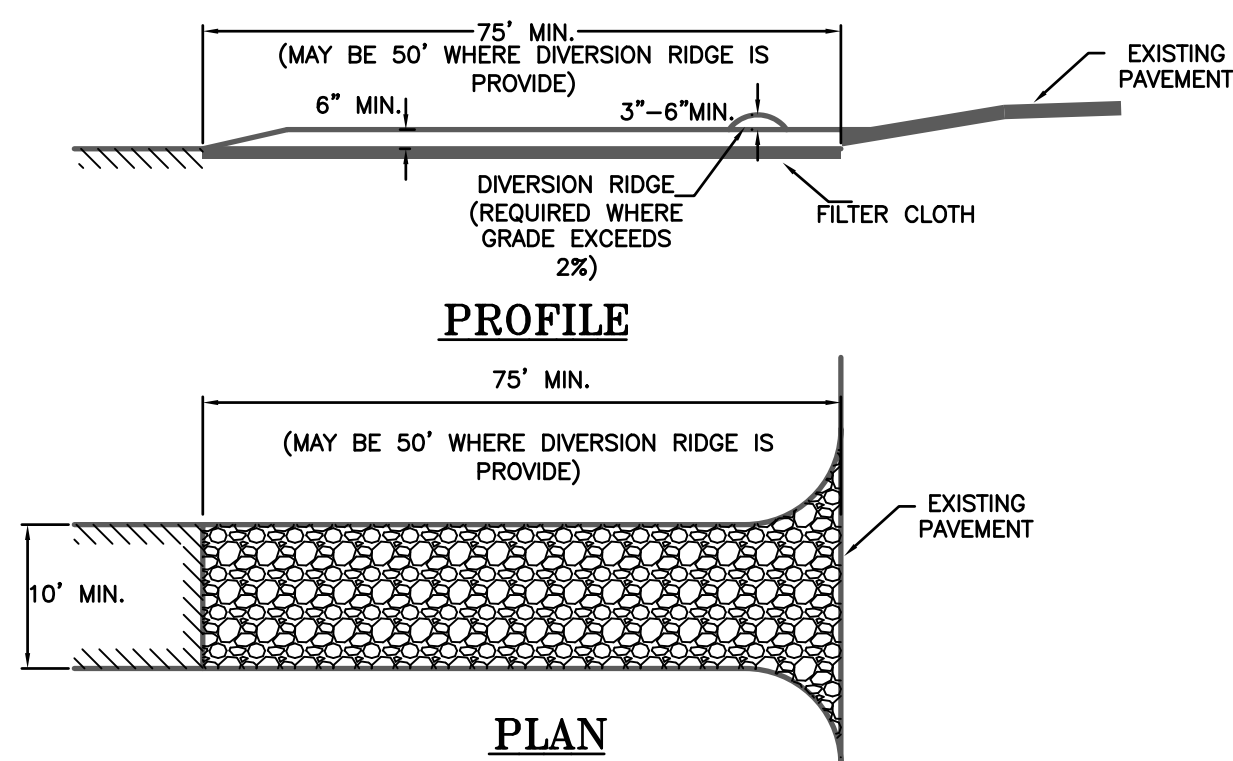
- SPECIFICATIONS:**
- SITE PREPARATION:**
- INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
 - GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
 - RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
 - ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.
- SEEDBED PREPARATION:**
- STONES AND TRASH SHALL BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
 - WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
 - IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
 - APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIME/STONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*
*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)*
*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

- SEEDING:**
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDRO SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
 - TEMPORARY SEED SHALL TYPICALLY OCCUR PRIOR TO SEPTEMBER 15.
 - AREAS SEED BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH.
 - ACCORDING TO THE "NATIONAL BEST MANAGEMENT PRACTICE" DESCRIBED IN THE NHSSM, VOL. 3.
 - VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

- MAINTENANCE REQUIREMENTS:**
- TEMPORARY SEEDING SHALL BE INSPECTED WEEKLY AFTER ANY RAINFALL EXCEEDING 1/2 INCH IN 24 HOURS ON ACTIVE CONSTRUCTION SITES. TEMPORARY SEEDING SHALL BE INSPECTED JUST PRIOR TO SEPTEMBER 15, TO ASCERTAIN WHETHER ADDITIONAL SEEDING IS REQUIRED TO PROVIDE STABILIZATION OVER THE WINTER PERIOD.
 - BASED ON INSPECTION, AREAS SHALL BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS. IF IT IS TOO LATE IN THE PLANTING SEASON TO APPLY ADDITIONAL SEED, THEN OTHER TEMPORARY STABILIZATION MEASURES SHALL BE IMPLEMENTED.
 - IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEED, WITH OTHER TEMPORARY MEASURES (I.E. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.



PROFILE

PLAN

TEMPORARY CONSTRUCTION EXIT

NOT TO SCALE

- MAINTENANCE REQUIREMENTS:**
- WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL, REGRADED ON SITE, AND STABILIZED. THE ENTRANCE SHALL THEN BE RECONSTRUCTED.
 - THE CONTRACTOR SHALL SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY.
 - WHEN WHEEL WASHING IS REQUIRED, IT SHALL BE CONDUCTED ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

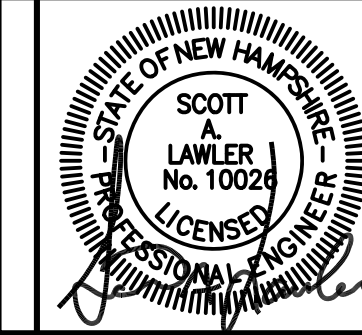
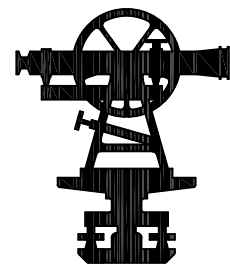
- CONSTRUCTION SPECIFICATIONS:**
- THE MINIMUM STONE USED SHALL BE 3-INCH CRUSHED STONE.
 - THE MINIMUM LENGTH OF THE PAD SHALL BE 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
 - THE PAD SHALL BE THE FULL WIDTH OF CONSTRUCTION ACCESS ROAD OR 10 FEET, WHICHEVER IS GREATER.
 - THE PAD SHALL SLOPE AWAY FROM THE EXISTING ROADWAY.
 - THE PAD SHALL BE AT LEAST 6 INCHES THICK.
 - THE GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE STONE PAD AND THE EARTH SURFACE BELOW THE PAD.
 - THE PAD SHALL BE MAINTAINED OR REPLACED WHEN MUD AND SOIL PARTICLES CLOG THE VOIDS IN THE STONE. WHEN THE MUD AND SOIL PARTICLES ARE TRACKED OFF-SITE.
 - NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHALL BE INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE OUTLET PROTECTION.

TEMPORARY EROSION & SEDIMENTATION CONTROL DETAILS

TAX MAP 216, LOT 32 AND
TAX MAP 221, LOTS 186 & 187
134 CHESTNUT HILL ROAD
ROCHESTER, NH

PREPARED FOR:
LYDALL PERFORMANCE
MATERIALS, INC.
MAY 2020

FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2



CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE. GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BEING NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.

PERMANENT VEGETATION:

SPECIFICATIONS:

SITE PREPARATION:

1. INSTALL NEEDED EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILTATION BARRIERS, DIVERSIONS, AND SEDIMENT TRAPS.
2. GRADE AS NEEDED FOR THE ACCESS OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
3. RUNOFF SHALL BE DIVERTED FROM THE SEEDBED AREA.
4. ON SLOPES 4:1 OR STEEPER, THE FINAL PREPARATION SHALL INCLUDE CREATING HORIZONTAL GROOVES PERPENDICULAR TO THE DIRECTION OF THE SLOPE TO CATCH SEED AND REDUCE RUNOFF.

SEEDBED PREPARATION:

1. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY AND SILT SOILS SHALL BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
2. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, CONCRETE CLODS, LUMPS, TRASH OR OTHER UNSUITABLE MATERIAL.
3. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE TILLED AND FIRMED AS ABOVE.
4. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 4 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
5. IF APPLICABLE, FERTILIZER AND ORGANIC SOIL AMENDMENTS SHALL BE APPLIED DURING THE GROWING SEASON.
6. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. FERTILIZER SHALL BE RESTRICTED TO LIME, WOOD ASH OR LOW PHOSPHATE AND SLOW RELEASE NITROGEN VARIETIES, UNLESS A SOIL TEST WARRANTS OTHERWISE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL FERTILIZER AND LIMESTONE MAY BE APPLIED AT THE FOLLOWING RATES:

LIMESTONE APPLICATION RATE = 3 TONS/ACRE (138 LB./1,000-SF)*

*EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE

FERTILIZER APPLICATION RATE = 870 LB./ACRE (20 LB./1,000-SF)*

*LOW PHOSPHATE FERTILIZER (6-0-4) OR EQUIVALENT

SEEDING:

1. INOCULATE ALL LEGUME SEED WITH THE CORRECT TYPE OF INOCULANT.
2. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). NORMAL SEEDING DEPTH IS FROM 1/4 TO 1/2 INCH. HYDROSEEDING THAT INCLUDES MULCH MAY BE LEFT ON SOIL SURFACE.
3. WHERE FEASIBLE EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG.
4. SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHALL BE COMPLETED 45 DAYS PRIOR TO FIRST KILLING FROST. WHEN CROWN VETCH IS SEEDING IN LATE SUMMER AT LEAST 35% OF THE SEED SHALL BE HARD SEED (UNSCARIFIED). IF SEEDING CANNOT BE DONE WITHIN THE SPECIFIED SEEDING DATES, MULCH ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3, AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD. AREAS SEEDING BETWEEN MAY 15 AND AUGUST 15 SHALL BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE DESCRIBED IN THE NHSSM, VOL. 3.
5. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED AREA SHALL BE ACHIEVED PRIOR TO OCTOBER 15. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT OTHER TEMPORARY STABILIZATION MEASURES FOR OVER WINTER PROTECTION.

HYDROSEEDING:

1. WHEN HYDROSEEDING (HYDRAULIC APPLICATION), PREPARE THE SEEDBED AS SPECIFIED ABOVE OR BY HAND RAKING TO LOOSEN AND SMOOTH THE SOIL AND REMOVE SURFACE STONES LARGER THAN 2 INCHES IN DIAMETER.
2. SLOPES MUST BE NO STEEPER THAN 2:1 (2 FEET HORIZONTALLY BY 1 FOOT VERTICALLY).
3. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF FIBER MULCH ON CRITICAL AREAS IS NOT RECOMMENDED (UNLESS IT IS USED TO HOLD STRAW OR HAY). BETTER PROTECTION IS GAINED BY USING STRAW MULCH AND HOLDING IT WITH ADHESIVE MATERIALS OR 500 POUNDS PER ACRE OF WOOD FIBER MULCH.
4. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

MAINTENANCE REQUIREMENTS:

1. PERMANENT SEEDING AREAS SHALL BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTION, MAINTENANCE AND CORRECTIVE ACTIONS SHALL CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
2. SEEDING AREAS SHALL BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION. MOWING HEIGHT AND FREQUENCY DEPEND OF TYPE OF GRASS COVER.
3. BASED ON INSPECTION, AREAS SHALL BE RESEED TO ACHIEVE FULL STABILIZATION OF EXPOSED SOILS.
4. AT A MINIMUM 85% OF THE SOIL SURFACE SHALL BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND AREAS SHALL BE RESEED, WITH OTHER TEMPORARY MEASURES (E.G. MULCH, ETC.) USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.

PERMANENT VEGETATION SEEDING RECOMMENDATIONS

USE	MIXTURE	SPECIES	LBS./ACRE	LBS./1,000-SF
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	2	0.05
		TOTAL	42	0.95
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	2	0.05
		TOTAL	42	0.95
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY RECREATION SITES	A	TALL FESCUE	20	0.45
		CREeping RED FESCUE	20	0.45
		REDTOP	2	0.05
		TOTAL	42	0.95
PLAY AREAS AND ATHLETIC FIELDS (TOPSOIL ESSENTIAL FOR GOOD TURF)	F	CREeping RED FESCUE	50	1.15
		KENTUCKY BLUEGRASS	50	1.15
		TOTAL	100	2.30
SOURCES:				
1. NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3, TABLES 4-2 AND 4-3				
2. MINNICK, E.L. AND H.T. MARSHALL, (AUGUST 1992)				

GENERAL CONSTRUCTION PHASING:

1. STABILIZATION:
A SITE IS DEEMED STABILIZED WHEN IT IS IN A CONDITION IN WHICH THE SOIL ON SITE WILL NOT EXPERIENCE ACCELERATED OR UNNATURAL EROSION UNDER THE CONDITIONS OF A 10-YEAR STORM EVENT, SUCH AS BUT NOT LIMITED TO:
A) IN AREAS THAT WILL NOT BE PAVED:
a) A MINIMUM OF 85% VEGETATIVE COVER HAS BEEN ESTABLISHED;
b) A MINIMUM OF 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR A CERTIFIED COMPOST BLANKET HAS BEEN INSTALLED; OR
c) EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
B) IN AREAS TO BE PAVED:
a) BASE COURSE GRAVELS HAVE BEEN INSTALLED.
2. TEMPORARY STABILIZATION:
AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 45 DAYS FROM THE TIME OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES. THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT OR AN INDEPENDENT MONITOR.
3. PERMANENT STABILIZATION:
ALL AREAS OF EXPOSED OR DISTURBED SOIL SHALL BE PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT NO LATER THAN 3 DAYS FOLLOWING FINAL GRADING.
4. MAXIMUM AREA OF DISTURBANCE:
THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE NO MORE THAN 5 ACRES SHALL BE DISTURBED (NOT STABILIZED) AT ANY TIME.
ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.
A) FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED.
B) EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
5. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED GRADING AND DRAINAGE PLAN DEPICTED ON SHEET C-3.
6. ALL EROSION AND SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN DEPICTED ON SHEET C-4.
7. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
8. STOCKPILES, BORROW AREAS AND SPOILS SHALL BE STABILIZED AS DESCRIBED UNDER "SOIL STOCKPILE PRACTICES".
9. SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLURPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGE.
10. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND/OR OTHER OBJECTIONABLE MATERIALS.
11. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3-INCHES PRIOR TO PLACEMENT OF TOPSOIL. TOPSOIL SHALL BE PLACED WITHOUT SIGNIFICANT COMPACTION TO PROVIDE A LOOSE BEDDING FOR PLACEMENT OF SEED.
12. ALL FILLS SHALL BE COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS TO REDUCE EROSION, SLURPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, SITE UTILITIES, CONDUITS AND OTHER FACILITIES, SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
13. IN GENERAL, FILLS SHALL BE COMPACTED IN LAYERS RANGING FROM 6 TO 24 INCHES IN THICKNESS. THE CONTRACTOR SHALL REVIEW THE PROJECT GEOTECHNICAL REPORT AND/OR THE "PROJECT SPECIFIC PHASING NOTES" FOR SPECIFIC GUIDANCE.
14. ANY AND ALL FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS (LARGER THAN 3/4 THE DEPTH OF THE LIFT BEING INSTALLED), LOGS, STUMPS, BUILDING DEBRIS, FROZEN MATERIAL AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS.
15. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE (E.G. CLAY, SILT) MATERIALS ARE SUSCEPTIBLE TO ACCELERATED SETTLEMENT AND POTENTIAL ACCELERATED EROSION. WORK IN AREAS OF THESE MATERIALS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL ENGINEER.
16. THE OUTER FACE OF THE FILL SLOPE SHALL BE ALLOWED TO STAY LOOSE, NOT ROLLED OR COMPACTED, OR BLADE SMOOTHED. A BULLDOZER MAY RUN UP AND DOWN THE FILL SLOPE SO THE DOZER TREADS (CLEAT TRACKS) CREATE GROOVES PERPENDICULAR TO THE SLOPE. IF THE SOIL IS NOT TOO MOIST, EXCESSIVE COMPACTION WILL NOT OCCUR. SEE "SURFACE ROUGHENING" IN THE NHSSM, VOL.3.
17. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION AND FACILITATE VEGETATION ESTABLISHMENT.
18. USE SLOPE BREAKS, SUCH AS DIVERSIONS, BENCHES, OR CONTOUR FURROWS AS APPROPRIATE TO REDUCE THE LENGTH OF CUT-FILL SLOPES TO LIMIT SHEET AND RILL EROSION AND PREVENT GULLY EROSION. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF CONSTRUCTION.
19. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE EVALUATED BY A PROFESSIONAL ENGINEER (PREFERABLY THE DESIGN ENGINEER) TO DETERMINE IF THE PROPOSED DESIGN SHALL BE REVISED TO PROPERLY MANAGE THE CONDITION.
20. STABILIZE ALL GRADED AREAS (AS ABOVE) WITH VEGETATION, CRUSHED STONE, COMPOST BLANKET, OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETE OR IF WORK IS INTERRUPTED FOR 21 WORKING DAYS OR MORE. USE MULCH OR OTHER APPROVED METHODS TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED.
21. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
22. THE PROJECT SHALL BE CONSTRUCTED TO MEET ALL REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO INVASIVE SPECIES.

ABOVE NOTES EXCERPTED, ADAPTED AND REFERENCED FROM "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" (NHSSM, VOL. 3)

PROJECT SPECIFIC CONSTRUCTION PHASING:

1. REFER TO THE "GENERAL CONSTRUCTION PHASING" NOTES PRIOR TO COMMENCING CONSTRUCTION IN ACCORDANCE WITH THE FOLLOWING PHASING. THE "GENERAL CONSTRUCTION PHASING" NOTES APPLY TO THE OVERALL CONSTRUCTION AND SHALL BE ADHERED TO.
 2. INSTALL ALL TEMPORARY SEDIMENT CONTROL BARRIERS (I.E. SILT FENCE, EROSION CONTROL MIX BERM, STONE CHECK DAMS, ETC.) AROUND THE OUTER PERIMETER OF THE CONSTRUCTION SITE AS DEPICTED ON SHEET C-4 PRIOR TO EARTH MOVING OPERATIONS.
 3. INSTALL ORANGE CONSTRUCTION FENCING AT THE LIMITS OF IMPACT AREA AS DEPICTED ON SEE SHEET C-4. INSTALL ORANGE CONSTRUCTION AROUND THE PERIMETER OF THE INFILTRATION BASINS AND THE FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE BASINS HAS STARTED.
 4. CLEAR, GRUB AND STRIP THE SITE. STUMPS, BRUSH AND OTHER ORGANIC WASTE SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
 5. INSTALL A TEMPORARY CONSTRUCTION EXIT AT THE LOCATION OF THE PROPOSED PARKING AREA. MAINTAIN AS DIRECTED BY THE TEMPORARY CONSTRUCTION EXIT DETAIL.
 6. STOCKPILE STRIPPED TOPSOIL AND CUT MATERIAL TO BE REUSED ON SITE IN AN APPROPRIATE LOCATION IN ACCORDANCE WITH THE "SOIL STOCKPILES PRACTICES". MAINTAIN THE STOCKPILES AS DIRECTED IN THE "SOIL STOCKPILE PRACTICES".
 7. PERFORM THE NECESSARY CUTS AND FILLS TO CONSTRUCT THE INFILTRATION BASIN AS DEPICTED ON SHEET C-3 AND IN ACCORDANCE WITH THE INFILTRATION BASIN DETAILS SHOWN ON SHEET C-9.
 8. CONSTRUCT THE INFILTRATION BASIN, SEDIMENT FOREBAY AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS.
 9. ALL DITCHES/SWALES AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
 10. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND BE PROTECTED FROM EROSION.
A) INSTALL REQUIRED FILLS IN MAXIMUM 8-INCH LIFTS AND COMPACT EACH LIFT TO 95% MAXIMUM PROCTOR DENSITY.
 11. AS SUBGRADE IS ACHIEVED INSTALL REMAINING SEDIMENT CONTROL BARRIERS WITHIN THE SITE (I.E. ADDITIONAL SILT FENCE, CHECK DAMS AND SEDIMENT CONTROLS AND CATCH BASINS, ETC.).
 12. INSTALL ALL UTILITIES AND CLOSED DRAINAGE SYSTEM COMPONENTS (I.E. PIPE, SEWERS, CATCH BASINS AND REMAINING WATER MAIN) PER THE CORRESPONDING DETAILS AND AS SHOWN ON SHEET C-3 AND C-5. AS EACH STRUCTURE IS COMPLETED INSTALL THE CORRESPONDING INFILTRATION BASIN AND OUTLET PROTECTION. LOAM SEED AND MULCH THE SIDE SLOPES OF THE BASIN AS DIRECTED IN THE INFILTRATION BASIN DETAILS AND TEMPORARY SEDIMENT CONTROL BARRIER DEPICTED ON SHEET C-11.
 14. ALL CUT AND FILL SLOPES AND LAWN AREAS NOT TO BE PAVED SHALL BE LOAMED AND SEED FOR PERMANENT VEGETATION AND STABILIZATION AS DESCRIBED UNDER THE "PERMANENT VEGETATION PRACTICES" WITHIN 3 DAYS OF ACHIEVING FINAL GRADE.
 15. INSTALL ALL GRAVEL BASE AND CRUSHED GRAVEL MATERIALS FOR THE PARKING AREA AS SPECIFIED IN THE CORRESPONDING DETAILS.
 16. THE PARKING AREAS SHALL BE STABILIZED (CONSTRUCTED TO GRAVEL BASE COURSE) WITHIN 3 DAYS OF ACHIEVING FINISHED SUBGRADE ELEVATIONS.
 17. INSTALL PAVEMENT SURFACES AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE GRAVEL BASE AND CRUSHED GRAVEL, IN ORDER TO LIMIT THE SOIL EROSION AND POLLUTION OF THE GRAVEL MATERIALS WITH ORGANIC MATERIALS. IN NO CASE SHALL AREAS TO BE PAVED BE LEFT UNPROTECTED THROUGHOUT THE WINTER MONTHS.
 18. ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE. IN NO CASE SHALL ANY DISTURBED AREA BE LEFT UN-STABILIZED FOR LONGER THAN 21 DAYS. IF NECESSARY TEMPORARY STABILIZATION MEASURES AS DISCUSSED IN THE "GENERAL CONSTRUCTION PHASING NOTES" AND NHSSM, VOL. 3 SHOULD BE EMPLOYED.
- MAINTENANCE AND INSPECTION:**
1. DURING CONSTRUCTION ALL TEMPORARY AND PERMANENT SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES SHOULD BE INSPECTED WEEKLY, AFTER EVERY 1/2 INCH OF RAINFALL, AND ANNUALLY. EXCESS SEDIMENT SHOULD BE REMOVED FROM TEMPORARY SEDIMENT, EROSION CONTROL AND STORMWATER MANAGEMENT PRACTICES WHEN IT REACHES PRESCRIBED THRESHOLDS DISCUSSED IN THE DETAILS FOR EACH PRACTICE.
 2. SEDIMENT SHALL BE DISPOSED OF PROPERLY EITHER ON SITE OR OFF SITE.
- PROJECT COMPLETION AND STABILIZATION:**
1. UPON PROJECT COMPLETION, ONCE THE SITE IS DEEMED STABILIZED (VEGETATION IS GERMINATED), THE TEMPORARY SEDIMENT CONTROL BARRIERS AND EROSION CONTROL PRACTICES SHALL BE REMOVED. ANY DISTURBANCE CREATED DURING REMOVAL SHALL BE REPAIRED IN AN APPROPRIATE MANNER.
 2. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM ALL ON SITE CATCH BASINS AND THE SEDIMENT FOREBAYS TO THE INFILTRATION BASIN.

WINTER STABILIZATION & CONSTRUCTION PRACTICES:

MAINTENANCE REQUIREMENTS:

1. MAINTENANCE MEASURES SHALL BE PERFORMED THROUGHOUT CONSTRUCTION, INCLUDING OVER THE WINTER PERIOD. AFTER EACH RAINFALL, SNOWSTORM, OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL CONDUCT INSPECTION OF ALL INSTALLED EROSION CONTROL PRACTICES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUED FUNCTIONING.
2. FOR ANY AREA STABILIZED BY TEMPORARY OR PERMANENT SEEDING PRIOR TO THE ONSET OF THE WINTER SEASON, THE CONTRACTOR SHALL CONDUCT AN INSPECTION IN THE SPRING TO ASCERTAIN THE CONDITION OF THE VEGETATION AND REPAIR ANY DAMAGED AREAS OR BARE SPOTS AND RESEED AS REQUIRED TO ACHIEVE AN ESTABLISHED VEGETATIVE COVER (AT LEAST 85% OF AREA VEGETATED WITH HEALTHY, VIGOROUS GROWTH.)

SPECIFICATIONS:

1. THE FOLLOWING STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 15.
A. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1-ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DISCUSSED IN NHSSM, VOL. 3 AND ELSEWHERE IN THIS PLAN SET, PRIOR TO ANY THAW OR SPRING MELT EVENT.
2. STABILIZATION AS FOLLOWS SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
A. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX (REFER TO NHSSM, VOL. 3 FOR SPECIFICATION).
- B. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15 SHALL BE SEEDING AND COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET OR MULCH WITH A MINIMUM OF 4 INCHES OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHALL NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
3. ALL STONE COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
4. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH.
5. ALL MULCH APPLIED DURING WINTER SHALL BE ANCHORED (I.E. BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
6. WITHIN 24 HOURS OF STOCKPILING SOIL MATERIALS SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A 4 INCH LAYER OF EROSION CONTROL MIX. MULCH SHALL BE REESTABLISHED PRIOR TO ANY RAIN OR SNOWFALL. NO SOIL STOCKPILE SHALL BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100-FT OF ANY WETLAND OR OTHER WATER RESOURCE AREA.
7. FROZEN MATERIAL (I.E. FROST LAYER REMOVED DURING WINTER CONSTRUCTION) SHALL BE STOCKPILED SEPARATELY AND IN A LOCATION AWAY FROM ANY AREA NEEDING PROTECTION. FROZEN MATERIAL STOCKPILES CAN MELT IN SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO HIGH SOIL MOISTURE CONTENT.
8. INSTALLATION OF EROSION CONTROL BLANKETS SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
9. ALL GRASS-LINED DITCHES AND CHANNELS SHALL BE CONSTRUCTED BY SEPTEMBER 1. ALL DITCHES AND SWALES WHICH DO NOT EXHIBIT 85% VEGETATIVE GROWTH BY OR ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS AS DETERMINED BY A PROFESSIONAL ENGINEER. IF STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
10. ALL STONE LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY OCTOBER 15.
11. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION HAS STOPPED FOR THE WINTER SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF SAND OR GRAVEL WITH A GRADATION THAT IS LESS THAN 12% OF THE SAND PORTION, OR MATERIAL PASSING THE NUMBER 4 SIEVE, BY WEIGHT, PASSES THE NUMBER 200 SIEVE.
12. SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHALL CONSIST OF EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES AND HAY BALES SHALL NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDMENT OF THESE BARRIERS.

PERMANENT EROSION & SEDIMENTATION CONTROL DETAILS

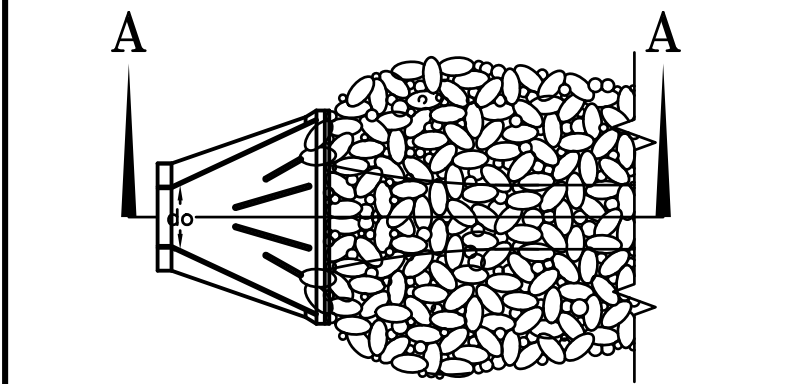
TAX MAP 216, LOT 32 AND
TAX MAP 221, LOTS 186 & 187
134 CHESTNUT HILL ROAD
ROCHESTER, NH

PREPARED FOR:

LYDALL PERFORMANCE
MATERIALS, INC.

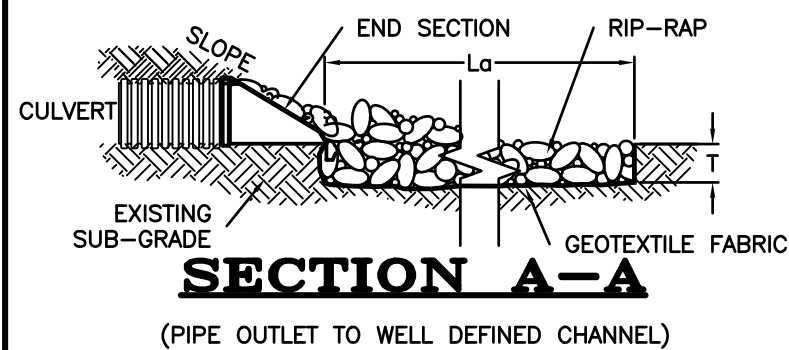
MAY 2020

C-10



RIP-RAP GRADATION

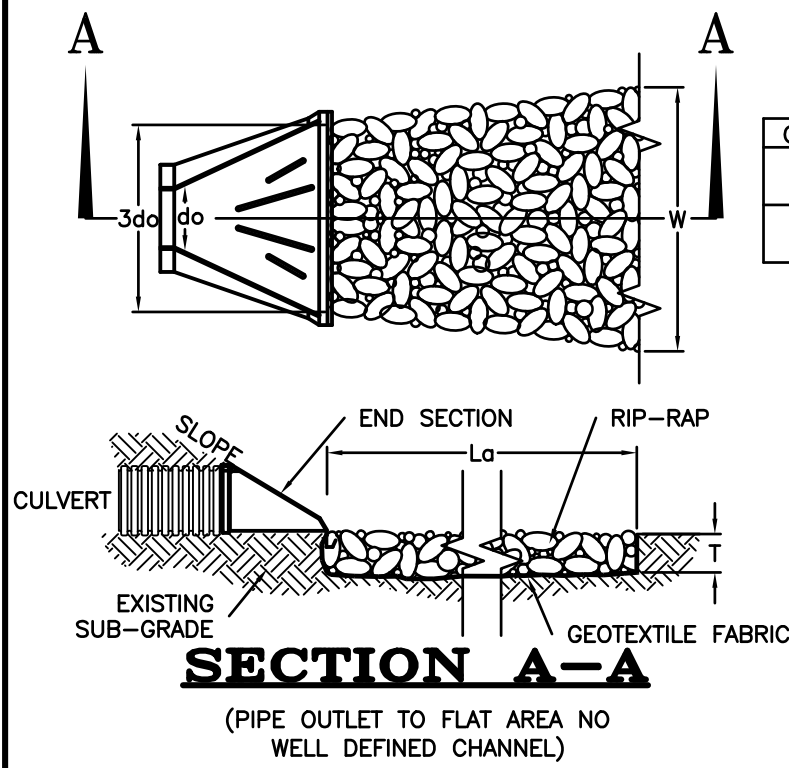
d50 = 9"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)	
100	13.5	TO 18
85	11.7	TO 16.2
50	9	TO 13.5
15	2.7	TO 4.5



d50 = 3"		
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (INCHES)	
100	5	TO 6
85	4	TO 5
50	3	TO 5
15	1	TO 2

APRON DIMENSION TABLE

OUTLET PROT. #	PIPE OUTLET	W _o	W	L _g	T	d50
PIPE A	15" CPP	4'	17'	13'	9"	3"
PIPE G	15" CPP	4'	17'	14'	9"	3"



NOTES:

1. ALL PIPE CULVERTS SHALL HAVE END SECTIONS OR HEADWALLS. END SECTION MATERIAL AND MANUFACTURER SHALL MATCH THAT OF THE PIPE CULVERT.
2. THE LARGEST RIP-RAP SIZE DETERMINED DURING HYDROLOGIC ANALYSIS HAS BEEN USED FOR ALL OUTLETS FOR ECONOMY AND SIMPLICITY.
3. APRON LENGTHS, WIDTHS AND THICKNESSES HAVE BEEN ROUNDED UP TO WHOLE NUMBERS FOR EASE OF CONSTRUCTION.

CONSTRUCTION SPECIFICATIONS:

1. PREPARE THE SUB-GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP-RAP TO THE GRADES SHOWN ON THE PLANS.
2. MINIMUM 6" SAND/GRAVEL BEDDING OR GEOTEXTILE FABRIC REQUIRED UNDER ALL ROCK RIP-RAP.
3. THE ROCK OR GRAVEL USED FOR FILTER OR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM TEARING DURING THE PLACEMENT OF ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO (2) PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
5. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
6. RIP-RAP SIZE CHOSEN FOR THE WORST CASE OF ALL OUTLETS. ALL RIP-RAP USED FOR PIPE OUTLET PROTECTION WILL HAVE THE SAME GRADATION AND THICKNESS.

MAINTENANCE NOTES:

1. OUTLETS SHALL BE INSPECTED AND CLEANED ANNUALLY AND AFTER ANY MAJOR STORM EVENT. ANY EROSION OR DAMAGE TO THE RIP-RAP SHALL BE REPAIRED IMMEDIATELY.
2. THE CHANNEL IMMEDIATELY DOWNSTREAM FROM THE OUTLET SHOULD BE CHECKED TO SEE THAT NO EROSION IS OCCURRING.
3. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TALLER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

PIPE OUTLET PROTECTION DETAIL

DUST CONTROL PRACTICES:

1. APPLY DUST CONTROL MEASURES AS NECESSARY TO MAINTAIN CONTROL OF DUST ON SITE.
2. WATER APPLICATION:
A) MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.
3. STONE APPLICATION:
A) COVER SURFACE WITH CRUSHED OR COARSE GRAVEL.
4. REFER TO "NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, VOLUME 3 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS, DECEMBER 2008" FOR OTHER ALLOWABLE DUST CONTROL PRACTICES (I.E. COMMERCIAL TACKIFIERS OR CHEMICAL TREATMENTS SUCH AS CALCIUM CHLORIDE, ETC.)

STOCKPILE PRACTICES:

1. LOCATE STOCKPILES A MINIMUM OF 50-FT. AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES OR INLETS.
2. PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
3. STOCKPILES SHALL BE SURROUNDED BY SEDIMENT BARRIERS AS DESCRIBED ON THE PLANS AND IN NHSSM VOL. 3. TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILE.
4. IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
5. PLACE BAGGED MATERIALS ON PALLETS OR UNDERCOVER.

PROTECTION OF INACTIVE STOCKPILES:

1. INACTIVE SOIL STOCKPILES SHALL BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY STABILIZATION PRACTICES) AND TEMPORARY PERIMETER SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES.
2. INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS, AND SIMILAR MATERIALS SHALL BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS (I.E. SILT FENCE, ETC.) AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHALL ALSO BE COVERED.

PROTECTION OF ACTIVE STOCKPILES:

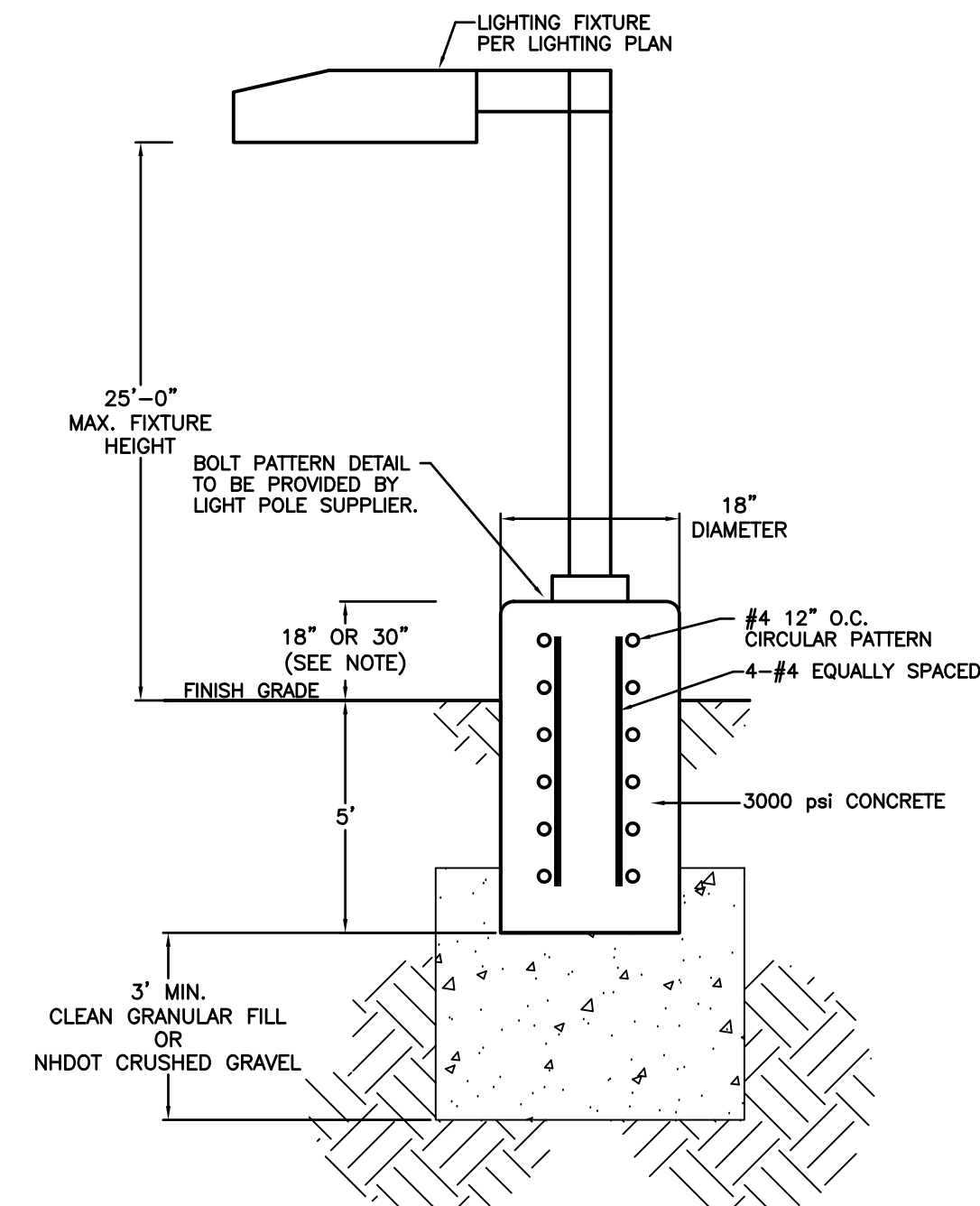
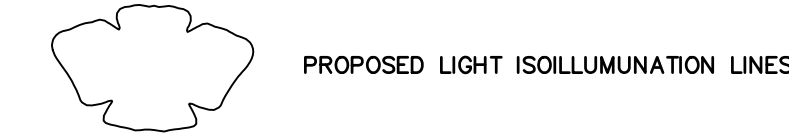
1. ALL STOCKPILES SHALL BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS (I.E. SILT FENCE, ETC.) PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHALL BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIAL FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHALL BE INSPECTED AT THE END OF EACH WORKING DAY.
2. WHEN A STORM IS PREDICTED, STOCKPILES SHALL BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

FILE NO. 154
PLAN NO. C-3059
DWG. NO. 17233/SP-2

LEGEND

- PROPERTY LINE
- JURISDICTIONAL WETLANDS
- EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLES
- PROPOSED BUILDING
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT WITH CURBING
- PROPOSED LIGHT POLES
- PROPOSED BUILDING LIGHT FIXTURES

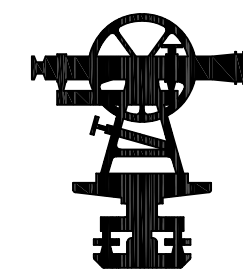
Luminaire Schedule					
Symbol	Label	Qty	PHASE	Arrangement	Description
◐	S3-1	2	FIRST	SINGLE	PRV-C60-D-UNV-T3-BZ/ SSS4A20SFN1 (MTD ON 2.5' PED BY OTHERS) 22.5' AFG
◐	S3-2	4	FIRST	BACK-BACK	PRV-C60-D-UNV-T3-BZ/ SSS4A20SFN2 (MTD ON 2.5' PED BY OTHERS) 22.5' AFG
◐	S3-1F	2	FUTURE	SINGLE	PRV-C60-D-UNV-T3-BZ/ SSS4A20SFN1 (MTD ON 2.5' PED BY OTHERS) 22.5' AFG
◐	W	4	FIRST	SINGLE	AXCL12A/ WALL MTD 20' AFG
◐	W1	4	FIRST	SINGLE	AXCSSA/ WALL MTD 20' AFG
◐	W1F	6	FUTURE	SINGLE	AXCSSA/ WALL MTD 20' AFG



POLE MOUNTED LIGHT DETAIL

NOT TO SCALE

- NOTE:
- LIGHT POLE BASE SHALL BE 18" ABOVE FINISH GRADE FOR NON VEHICLE IMPACT AREAS AND 30" FOR VEHICLE IMPACT AREAS.
 - THE LIGHT POLE BASES CAN BE PRECAST, WITH COORDINATION WITH THE LIGHTING FIXTURE MANUFACTURE FOR BOLT PATTERN.



CHESTNUT HILL RD.

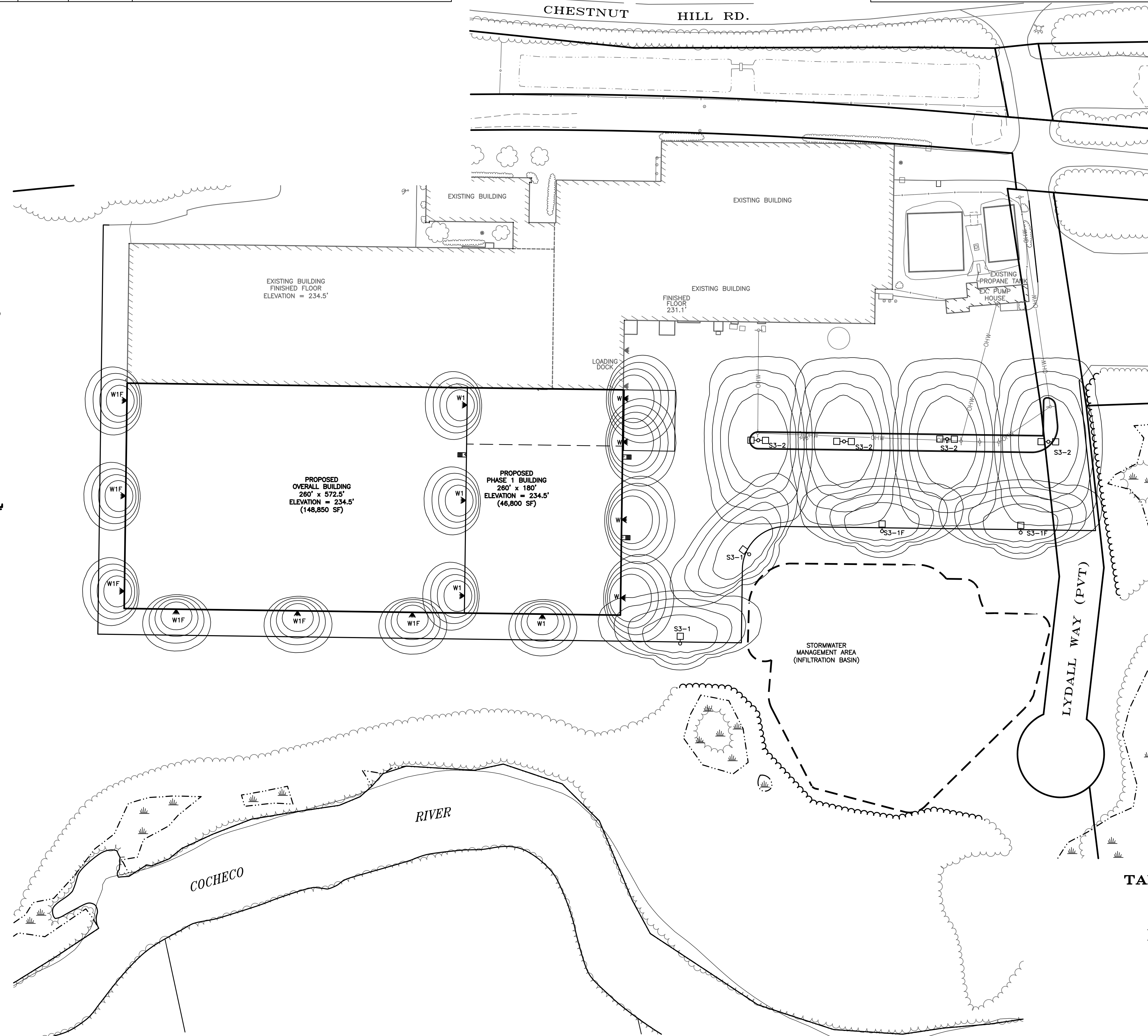
CAREFULLY REVIEW ALL SHEETS OF THIS PACKAGE TO INSURE PROPER CONSTRUCTION. SPECIFIC SITE CONDITIONS SHOULD BE EXPLORED PRIOR TO CONSTRUCTION. CONTACT BOTH THE DESIGN ENGINEER AND THE PROJECT OWNER FOR ANY AVAILABLE GEOTECHNICAL OR HYDROGEOLOGICAL INFORMATION AVAILABLE BUT NOT CONTAINED WITHIN THE PLAN SET. IF THERE ARE ANY QUESTIONS WITH THE DESIGN PRESENTED IN THIS PLAN SET PLEASE CONTACT THE ENGINEERING STAFF AT NORWAY PLAINS ASSOCIATES, INC. (603)-335-3948.



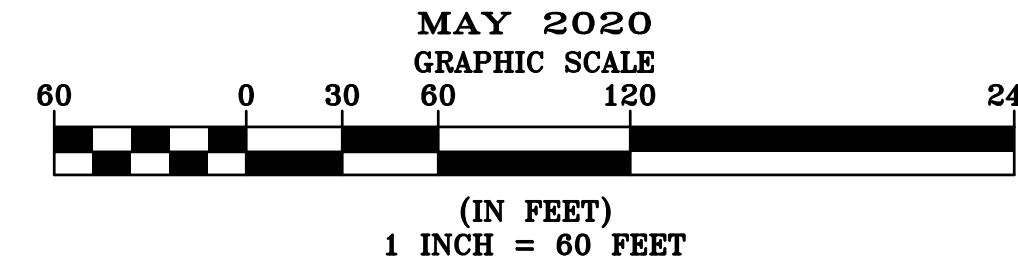
LUMARK
AXCL AXCENT



LUMARK
PRV PREVAIL LED



LIGHTING PLAN
TAX MAP 216, LOT 32 AND
TAX MAP 221, LOTS 186 & 187
134 CHESTNUT HILL ROAD
ROCHESTER, NH
PREPARED FOR:
LYDALL PERFORMANCE
MATERIALS, INC.



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