



TOWN OF GRAY
PLANNING BOARD
AGENDA • MAY 10, 2022

**Planning Board
Regular Meeting**

Henry Pennell Municipal Complex, 24 Main Street, Gray

7:00 PM

I. MEETING COMMENCES

Roll Call

II. MINUTES APPROVAL

Minutes of April 14, 2022 Regular Planning Board Meeting

III. INFORMATION EXCHANGE

1. LD 2003 Update
2. Staff Review Committee Meeting of May 10, 2022

V. NEW BUSINESS

A. Remote Meeting Policy

Board consideration to set public hearing/adoption of policy at next regular meeting

B. Self-Storage Development at 100 and 104 Lewiston Road

A request by Scott Liberty, dba as Odessa Properties LLC, represented by JP Connolly of DM ROMA Consulting Engineers, for PB review of a proposal to create two additional lots on his property at 100 and 104 Lewiston Road, Map 28, Lots 26-02 and 26-02-01 in the Commercial Zoning District and Light Manufacturing Overlay District. One lot is proposed for commercial development of self-storage units, while a second would be for a single-family residential use. This proposal is subject to conditional use, minor subdivision and site plan amendment reviews.

VI. PUBLIC HEARINGS

A. Gracewoods Subdivision Amendment

A request by Robert Thayer Jr., represented by Wayne Wood, for Planning Board review of an amendment to a minor subdivision. This proposal is to create two additional lots on Mr. Thayer's property in the Gracewoods subdivision, on Gracewoods Road, Map 62, Lots 027-112 and 027-113, in the Rural Residential and Agricultural zoning district and partly in the Limited Residential Shoreland Zoning District. Both lots are proposed for residential use. This proposal is subject to

minor subdivision amendment review.

VII. ADJOURNMENT

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**TOWN OF GRAY
GRAY PLANNING BOARD
MINUTES – APRIL 14, 2022**

Gray Planning Board	Henry Pennell Municipal Complex	7:00 PM
Regular Meeting	24 Main Street, Gray, ME 04039	

I. MEETING COMMENCED AT 7:00 PM

This meeting took place, in-person, at the Town Office.

Roll Call:

Attendee Name	Title	Status
Dan Cobb	Chair	Present
Tamara Lee Pinard	Regular Board Member	Present
Keary Sibole	Regular Board Member	Present
Doug Webster	Community Development Director	Present
Kristen Muszynski	Community Planner	Present
Dan Maguire	Council Liaison	Present

II. MINUTES APPROVAL: The following motion was made.

MOTION: *by Keary Sibole, seconded by Tamara Lee Pinard, to approve the Planning Board meeting minutes of March 10, 2022, as presented.*

VOTED: *3-0 (Passed).*

III. INFORMATION EXCHANGE: MMA Planning Board Training: May 10, 2022 in Bangor/Online Video Training Option. Kristen Muszynski said this is to make sure the Board Members are aware that there is training available in-person in Bangor or online and if they are interested in attending to let her know. The election of the Vice Chair will need to be placed on a future Agenda. The Board discussed altering the May 12, 2022 meeting date. The preference was for Tuesday, May 10, 2022. Kristen said she is waiting on a response on the availability of a room. It was decided that Tuesday, May 10, 2022, was a good date.

IV. PUBLIC HEARINGS:

a. Multi-Family Ordinance Change. The Town of Gray, Maine is proposing amendments to the Zoning Ordinance (Chapter 402). The Town Council will hold a public hearing/first reading on April 5, 2022 and public hearing/second reading/adoption on April 19, 2022. The Planning Board will hold a public hearing at its April 14, 2022 meeting. Proposed amendments to Section 402.10.14.E of the Zoning Ordinance to include increasing the maximum number of attached dwelling units per multi-family structure from 6 to 30 only in the VC Zoning District on lots larger than 14 acres, provided that the footprint of the multi-family development structure is less than 15,000 square feet.

The Public Hearing was opened for Public Comment. There were none. Included in Board Member packets was one public comment letter, from Rick Licht. The Public Hearing was closed.

Board comments included the following. Dan Cobb said that this was appropriately addressed through the Contract Zone. The road discontinuance was wrapped into that. The Ordinances should be thorough and permanent to stop doubts. He said this was in alignment with comments made by Councilor Dan Maguire at the council meeting. He said the Ordinance Advisory Committee (OAC), once consulted, had brought forth some good valuable information. He said he appreciated the input on that.

b. Self-Storage Development at 100 and 104 Lewiston Road. A request by Scott Liberty, dba Odessa Properties LLC, represented by JP Connolly of DM ROMA Consulting Engineers, for PB review of a proposal to create two additional lots on his property at 100 and 104 Lewiston Road, Map 28, Lots 26-02 and 26-02-01 in the Commercial Zoning District and Light Manufacturing Overlay District. One lot is proposed for commercial development of self-storage units, while a second would be for a single-family residential use.

J.P. Connolly from DM ROMA Consulting Engineers, representing Odessa Properties LLC and Gray Landholdings, who are both owners of the project site. J.P. Connolly presented and provided the following. This

development site is located on Lewiston Road and is a 4.34-acre parcel. This site includes two parcels (Lots 26-2 and 26-02-01). Lot 26-2 contains an existing commercial building that is currently owned by Gray Landholdings. The remaining parcel (Lot 26-02-01) is owned by Odessa Properties LLC. The proposal is for three applications - Site Plan, Subdivision, and Conditional Use Permit reviews. The project itself is related to the self-storage use. He provided the history of this project. He stated that they have been in front of this Board a couple of times now, as a Sketch Plan Workshop in August of 2021 and for a Sketch Plan review in December 2021, but heard in January 2022. There was an issue in the definition of self-storage. At this point he thanked Town Staff, the Town Council, and everybody involved in this project in supporting the changes to the Ordinance to allow this project to move forward. He made reference to his memo. He then addressed comments. He said the peer review comments, they were in agreement with them all. He said the driveway site distance should be shown on both plans for the driveways. The site distance was shown on the residential lot. The site distances for the existing driveway were not shown. They previously discussed relocating the driveway to the north. Those distances had been verified at that location, but are not shown on the plan this evening. They will be shown on the next plan. He showed the existing septic field. The slope will be reshaped and reformed slightly. They are evaluating drainage changes to match at the pavement line, rather than having to rebuild the slope going down into that. The soil report shows the test pits labeled as 1 and 4. The plan shows them as 1 and 2. This will be corrected. There was a subsequent test pit located on this site in the vicinity of the proposed bio-retention area on Lot 1, the proposed residential site. He mentioned concerns with parking spaces. He said these will be addressed. He said the remainder of the comments were related to stormwater. He said he is capable of addressing to the satisfaction of the peer review. He said in regards to construction storage of Buildings 3 and 4 over the existing sewer pipe for the existing building that is to remain. He said this was a concern of theirs from the beginning. They are addressing this by proposing an easement to be placed over the existing sewer lateral. The easement will follow the existing sewer lateral or the new installed sewer lateral. To minimize impacts, there is 1-1/2 to two feet of fill for those buildings over that existing line that will be moved and relocated.

He then reviewed comments by the Town Staff. The site distance will be shown on the next submission plan. Fire protection for Lot 1 will be noted on the plan. Their intent is to use a sprinkler system in that house. The parking concern is mostly related with the existing facility. He said he has no problem with the parking allotment. The existing site is viable with the parking standards. The well is located on Lot 1 and is too close to the road. This needs to be located 100 feet from the road shoulder. As shown on the plan, it is less than 60 feet away. He said these can be addressed. He said the location of the well is upgradient of the road. There is a concern for making sure that there is no saltwater or stormwater intrusion into the well. They are proposing or stating that this well will be constructed with a pit less structure or a sealed well or extended casing. All these methods would effectively prevent that from happening.

Septic, Utility Access, and Stormwater Easements: Since this is an existing site and they are using existing improvements on the site, there is a set of easements that will be required. One, a shared access and maintenance easement for access to this site for Lots 2 and 3. Both will use the existing driveway location as it is to access the site. He mentioned the sewer easement over the existing sewer lateral for the benefit of Lot 3 over Lot 2. In addition to that is a drainage easement. All three of these lots will utilize the existing detention basin that is on Lot 1 now to address the flooding standard that needs to be met. Dan Cobb said in regards to septic/stormwater, to mark on the plan were the alternate will be. J.P. Connolly said the cost is prohibitive. To relocate the lateral, it would be as expensive to construct a whole new system. At this time, the system is viable and working. It is not a failed system. They do not expect the building load will have any impact on the sewer lateral. Dan Cobb said it is advisable to put on the plan. If during construction, there is a problem, this would need to come back to the Planning Board. J.P. Connolly said, regardless, this would need to come back to the Planning Board for a new septic location. In regards to drainage, there is an existing set of catch basins, a culvert, and outfall. There was a concern, by removing those and not utilizing it, would create an erosion issue. He said, in reality, this benefits the site with less erosion. He said the hardest part of this project was balancing drainage on the buildings. He explained that the buildings are typically long. For drainage to work you need things to fall. He said he needs to balance between a 1" gap from the finished floor elevation to pavement to a 4-6." The optimum design is to allow the water to flow to the center aisle and then drain away from the buildings. The alternative design is to create a lot of peaks and valleys amongst the buildings and then insert catch basins at the sumps of those valleys, so it collects all the runoff. He does not want the water to pond up and get into the storage units. He said that is his primary concern when designing these. The existing locations where drainage is flowing off the site are being maintained. He showed the existing drainage swale on the plan that is constructed. At the outfall of the existing culvert, there is an existing swale that is ripped. He showed, on his plan, the two locations that the site is being drained to. He is trying to mimic the existing conditions that are out there. He prefers keeping the drainage on the surface, if he can.

Screening. They are proposing to supplement some of the existing tree line along Lewiston Road. They are

proposing to install 12 new trees. The species are Wichita Blue Junipers or an appropriate equivalent conifer tree. These provide for better saltwater tolerance and are less likely to be eaten by deer. Also, there is less maintenance and they do not grow as tall. The mature height is 10-20 feet.

Subdivision Good Neighbor Standards. Between Lots 2 and 3, it has been pointed out that they do not have an adequate buffer. They would like to pave from building to building. They will request a waiver from that standard, if necessary. He would like a condition that if the ownership or the use were to change, that the applicant and owner would be back in front of this Board to address that one issue.

Rear Buffering. He said they need a fast track for the project, due to construction and building costs. They have discovered that there is a stream behind the lot. For this project to go forward, he will be filing for a NRPA Permit-By-Rule for impact within 75 feet of that stream. That permit would negate the ability of the neighbor to get into that area to do any future development. For the neighbor to do that they would need to do a stream crossing and he technically cannot disturb any of that land within 75 feet of that stream either without a permit. That stream is a protection layer of development for them in terms of where that development will go. At this time, they are not proposing any additional plantings for a buffer.

The Public Hearing was opened for Public Comment. Lynn Gallager – 9 Foster Hill Road said she had a couple clarifying questions. She asked if there would be final approval this evening and Dan Cobb responded that there would not be a final approval granted. She said she is in favor of this project moving forward. She had a couple of questions on details she wanted brought to the Boards attention. She said she attended a site walk that was done in March 2022. One of her questions was in regards to the curb cut as it relates to the residential property. She said this road has seen an increase in traffic. She mentioned Dean & Allyn. She said traffic is a safety concern for her. One curb cut would be awesome, not two even though it meets the guidelines in the Ordinance. Second, is the Landscaping Plan. She said the circles for the entry for the self-storage facilities are the trees that are proposed. She mentioned the buffering not being adequate. She is asking for more buffering. She said that Dean & Allyn has security lighting. She wants more buffering down towards the north side. In regards to maintenance and landscaping for one year, she would like for this to remain for the duration of the project. Her last question was in relation to security and gate access. She said prior the meeting minutes spoke about the gate and access and she read directly from the minutes. She encourages the Planning Board to consider some sort of physical security and a gate. There being no further public comment, the public comment portion of the Public Hearing was then closed.

J.P. Connolly responded to questions. He said the site distances are adequate for the driveway locations. There will only be one driveway located and that will be for the proposed residential lot. He said as far as screening and buffering, the maintenance of one year is pretty typical. However, he stated that his client would not be opposed, as a condition, that those be maintained indefinitely. He said as far as extending the plantings, the only place they are proposing any tree cutting is along the residential lot and a small corner to allow the grading to be uniform across the whole building. Other than that, they are not proposing any tree cutting. They want to maintain all the trees out there as best they can. The Junipers would be a real improvement to the site. The detention basin will be reshaped and maintained. The lighting proposed is security lighting and there will be four lights. They are low-emitting lights. They will be wall-pacs, mounted to the buildings, and are dark-sky compliant. In regards to a gate, their client would really not like to have any restriction of access around the site. The gate can be relocated further into the site. J.P. Connolly's concern is stacking/parking of cars lining up to get into it. He said to consider the ramifications of security and whether or not the gate would be negated or needed.

Board deliberation. Dan Cobb asked if he had wrote a formal response to the seven items for the Conditional Use Criteria. J.P. Connolly said he re-wrote a narrative for the minor subdivision and the major site plan. This will be brought back the next time. This is in the Light Manufacturing Overlay District, which has its own standards. He will write a written response on these standards as well. Dan Cobb then asked the following questions of which J.P. Connolly responded. Does the Board endorse the comments of the consulting engineer? The consensus of the Board was yes. Dan Cobb asked does the Board wish to require test pits and/or a high intensity soil data for the portion of the property utilized for stormwater treatment? Keary Sibole felt that the applicant has addressed these concerns regarding stormwater. Dan Cobb felt this should be done. J.P. Connolly said they have provided a couple of test pits. This is included in the application materials. Doug Webster said the Town's Consulting Engineer has been looking for soils information verifying the existing soil conditions for the portions of the project that involves stormwater. He said this is merely to ensure that the stormwater infrastructure on that portion of the site will work. J.P. Connolly concurred this statement was accurate. Dan Cobb asked does the Planning Board endorse the staff position that a hydrogeologic consultant specify the location of the well and septic field for Lot 1? The consensus of the Board was yes. J.P. Connolly said that they will specify that the well be sealed. They will need to provide an HHE-200. Is the proposed buffering plan adequate along the front and rear of Lot 2, and between Lots 2 and 3. If no additional buffering is to be required, is the Board willing to grant buffering waivers related to the requirements of Ref: 402.10.13A and

I; 402.10.12 B *Good Neighbor Standards*? The Board is not willing to grant a waiver. The Board is not going to go to waivers. Buffering will be done in the front, back, and rear. The front is adequate. Keary Sibole said she agreed that the choice of trees was thoughtful. Tamara Lee Pinard said she liked the selection of the Junipers. Dan Cobb said he would like to hear from Staff on buffering. Doug Webster mentioned that if it is a NRPA stream, then whatever standards are applicable for the MDEP, will need to be respected. There are three different issues – the stream, the buffering, and turn radii. Doug Webster asked if the MDEP standards are such that that section of pavement needs to be removed, does this adversely affect the turning template? Dan Cobb said that they will need to come back and demonstrate they met what the Ordinance is. J.P. Connolly said that he is looking for a minimum drive aisle width of 30 feet. In regards to buffering between the two properties, Dan Cobb said each lot needs to stand on their own. J.P. Connolly said that they would be happy to add shared parking locations. He would like to have the three lots. He is not opposed to getting Staff's support for a buffer. J.P. Connolly said he will approach Staff to see if they can come to terms for an acceptable buffer. Dan Cobb mentioned a series of raised, solid-type structures, railroad ties, etc. to get the plowing out through. Keary Sibole said she agreed to combining to one lot to match the criteria to the Ordinance. Doug Webster said a stronger suit would be a Change-Of-Use. This is owned by two LLC's. The owner could condominimize the ownership. Doug Webster said he would need to get legal input for a Change-Of-Use. J.P. Connolly asked what are adverse impacts to address. Tamara Lee Pinard said this needs to be looked at as two separate lots. Dan Cobb said it needs to stand on its own. Dan Cobb said two lots needs to be distinguished. There are two different uses. Should relocation of the septic pipes or requirement of conduit installation from Lot 2 to Lot 3 be required as a condition of approval? Dan Cobb said it would be nice if it was on the plan. Does the Board want to require parking spaces to be delineated on either Lot 2 or 3; or instead include a condition of approval that any future use changes will require Planning Board/SRC review and approval? J.P. Connolly said in regards to parking spaces, he will delineate the spaces. For shared parking, Lot 3 can park on Lot 2. The parking spaces, the allotment of parking, and shared parking will be shown. Does the Board want to require relocation of the well on Lot 1, per the exclusion zone guidelines of 401.13.2 B 3? J.P. Connolly said the buildings need to be ordered soon. He said that they are requesting preliminary subdivision approval. They do meet the dimensional standards. Kristen said this can be done with conditions. The Board Members were not comfortable with a preliminary subdivision approval.

V. NEW BUSINESS:

a. ***Cambell Acres/Jenny Drive Subdivision.*** *A request by Kristin Stanley, represented by Tom Noonan, for an amendment to an approved subdivision, to divide an existing 12-acre lot at 55 Cambell Shore Road, Tax Map 56, Lot 017 and 028-000 in the Cambell Acres/Cambell Shore Road/Jenny Drive subdivision, into three lots. The parcel is located in the Rural Residential & Agriculture Zoning District. The proposal is subject to minor subdivision plan review.* Tom Noonan was present on behalf of Kristin Stanley and provided a short introduction. This is an amended subdivision. He showed on his drawing the location of this three-lot amended subdivision. One lot will be seven acres, another 80,000 square feet, and the house lot is almost 3-3/4 acres. All the lots comply with space and frontage requirements. They have been soil tested for septic, etc. There are some updates since the preliminary review. Planning and Public Works Staff met on site to review the curb cuts on Jenny Drive. They were placed for site distance and at the request of Public Works. They do meet site distances and will be added to the plan. Updates to the plan, as recommended by Staff include: monuments, rather than iron pins, at the street and at the interior intersection of the three newly created lots and the replacement of a note on the plan referencing the 1998 plan of the subdivision. He said that they are requesting open space waivers. There are no common areas in the subdivision. The roads are all town roads. There is no need for a Homeowners Association. There are no interior roads or utilities being constructed as part of this subdivision. The Stormwater Management Plan, again there are no interior roads. In regards to the field verification of the soils, there is a letter confirming that there are no wetlands on the entire parcel. Due to ledge at the northern property line, there needs to be an adequate culvert and possibly retention for pooling of rainwater. This will be done in conjunction with the Road Commissioner. They are fine with the Deed restrictions. Any new construction will require sprinkler systems. The owner plans to build their house on the large lot. The owner is fine with no additional curb cuts in the future. There is only one curb cut on Jenny Drive.

Discussion Points. There are two recommendations made by staff. Monuments, instead of a stone wall, be added to the plan and a clear note on the plan stating no sprinkler system is required for the existing single-family lot; however, the two proposed lots will be required. The Board was okay with the waivers spoken about and feels them to be appropriate. The Board was in agreement with the recommended conditions listed in the memo to be added to the plan. The Board was in agreement with a notation restricting additional curb cuts on Jenny Drive. One curb cut is recommended by the Planning Director. The two driveways are fine. There is no plan to further subdivide. Doug Webster said the current application is for two additional lots, two curb cuts, and self-town protection mechanism here that if there are any further divisions, this would need to come back to the Planning Board as an amended subdivision.

This honoring the intentions and wishes of the Public Works Director with this approval and if it ever comes back for subsequent divisions, it would be looked at, at that time. The Board was satisfied with the revised language.

The following motions were made.

MOTION: *by Tamara Lee Pinard, seconded by Kearny Sibole, that given the nature of the application and the site features, as there are only two lots created and there is no internal subdivision road proposed, considering the COA requiring amendments to Note # 11 on the draft subdivision plan (as submitted for the April 14, 2022 PB meeting and titled, "Amended Subdivision Plan: Cambell Acres" created by Survey Inc. and dated December 2021); and the input of the Public Works Director, hereby move to waive the following subdivision requirements, as not applicable, per the waiver authority granted in 401.12.01:*

- 401.13.6 open space,
- 401.13.6 I homeowner's association,
- 401.13.8 financial and technical capacity,
- 401.13.12 stormwater management (related to major subdivisions, interior roads), and
- 401.13.18 C.3.c field verification of soils (consultant has confirmed that no wetlands are present on site).

VOTED: 3-0 (Passed).

And

MOTION: *by Tamara Lee Pinard, seconded by Keary Sibole, to move to approve the application by Kristin Stanley for an amendment to an approved subdivision, to divide an existing 12-acre lot at 55 Cambell Shore Road, Tax Map 56, Lot 017-028-000 in the Cambell Acres/Cambell Shore Road/Jenny Drive subdivision, within the Rural Residential & Agriculture Zoning District, into three lots, subject to the following conditions:*

1. *The project shall be constructed, operated, and maintained in accordance with the plans, submissions and testimony presented to the Planning Board by the applicant and its representatives.*
2. *All prior applicable standards and conditions of approval affecting the parcel that were part of prior Planning Board approved subdivisions remain in effect.*
3. *No additional curb cuts on Jenny Drive or lot divisions will be permitted without Planning Board approval and this provision will be memorialized on the face of the final plan, as filed with the Cumberland County Registry of Deeds.*
4. *Driveway entrance permits need to meet the requirements of the Street Ordinance, Chapter 400 and may require engineering review.*
5. *Maine Department of Environmental Protection best management practices are applicable per the zoning ordinance.*
6. *The final plan will be amended to reflect the items listed in the planner's memo for the April 14, 2022 meeting and to include a note detailing the applicability of the sprinkler requirements (Sprinklers are not required for the existing house with frontage on Cambell Shore).*

VOTED: 3-0 (Passed).

b. Sketch Plan Review: Gracewoods Subdivision. A request by Robert Thayer Jr., represented by Wayne Wood, for Planning Board sketch plan review of an amendment to a minor subdivision. This proposal is to create two additional lots on Mr. Thayer's property in the Gracewoods subdivision, on Gracewoods Road, Map 62, Lots 027-112 and 027-113, in the Rural Residential and Agricultural zoning districts and partly in the Limited Residential Shoreland Zoning District. Both lots are proposed for residential use. This proposal is subject to minor subdivision amendment review and Shoreland Zoning review. Wayne Wood, on behalf of Robert Thayer Jr. gave an overview. In 2005 they went through the whole process once before for the review of the split into two lots and a duplex on each side. They have decided to put up two more additional duplexes for rental purposes. He said back down towards Lawrence Road, along the existing gravel road that is there, add two additional duplexes, one on each side of the road, to meet the needs of what he is proposing to do. On this project, there is a Resource Protection Zone on the lot to the northwest that extends out on to this property. There is a proposed lot of 95,000 square feet. They will be extending the lot line further to the northeasterly side of the property, along the roadside, to add the necessary square footage. This will provide enough SF for the lot split with a bigger lot size. On the other side the lot is big enough. Soil tests have been done and have verified that it is doable. The wetlands become a NRPA stream and will be noted on the plan. Nothing is proposed within the 75'. The proposed duplexes are 150+ feet beyond the NRPA stream. The lot sizes are of different sizes. Doug Webster said they pro-rated the lots to determine lot size. Wayne Wood said the NRD calculations were done in 2005 and this was not an issue with the Resource Protection in the Limited Residential Zone. They can look at altering the calculation, per Shoreland Zoning. Dan Cobb mentioned buffering in two spots. He asked the Board if they were okay with the proposed buffering plan adequate along the property lines with the Grover and Foye properties and along the Gracewoods Road frontage. Wayne Wood said that there is a 50-foot setback there for the structure. They can redesign the septic system further

around the corner. To schedule a Site Walk, they would need to notify the abutters. An e-mail will be sent to Board Members on their availability for a Site Walk.

c. **Pre-Application Conference: Caswell Farm.** A request by Catherine Caswell, seeking a Planning Board pre-application conference on a proposal to construction a 24' x 40' building for use as a commercial kitchen and expand the existing 60 square foot farmstand to 200 square feet, on her property at 120 Whitney Road, Map 69, Lot 41-33, in the Rural Agricultural Zoning District. This proposal is subject to conditional use, similar use, and site plan review. Catherine Caswell presented. She said she is coming back again. She said both Kristen and Doug have helped her how to lay this out. She is looking to incorporate the aspects of what she is doing on the property and culminate them into this space, which is a kitchen-type workshop that will be available on site. She already has a farmstand. There is a public community element on the property. She is looking to expand upon that. This is just a pre-application to construct a 24' x 40' building for use as a commercial kitchen and expand the existing 60 SF farmstand to 200 SF, on her property at 120 Whitney Road. She is in front of this Board to request a conditional approval for a similar use to what is happening already on her property. This is her vision of the property. She said that there are a number of different Ordinances that can be referred to when finding similar use. She said the general purpose and definition of the Rural Residential Agricultural (RRA) Zoning District just fits it. She read from her letter. She said general agriculture already exists in that zoning area. She said she has been doing small-scale agriculture in this area for over 20 years now and supplying local restaurants. She has already met with Staff.

Doug Webster said Kristen's memo outlines a similar use. He asked if the Board had an understanding of what a similar use is and what the Planning Board's role is with that zoning use classification. Dan Cobb said, by definition, the use is not allowed. Kristen said that this is a conditional use. She said the Board would be putting conditions around the use. This is all part of the process. Doug Webster said that a similar use is a use that is similar to other uses that are allowed in the respective district. He explained putting parameters around. He said Catherine could be approved for a similar use of other uses allowed and other associated uses that might not be allowed. He explained the process. This comes before the Code Officer and it gets streamlined. Dan Cobb asked what guidance is the applicant and Staff looking for? Doug Webster responded that the Board can provide input on what uses it may feel are the most appropriate to classify it as similar use, as well as any parameters that might need to be put around it to keep the use of the property consistent with RRA Zoning District. Kristen said the uses are listed in the RRA, such as school, general agriculture, agritourism facility, commercial recreation-indoor, and accessory use/structure. These are conditional/permitted uses. Catherine said the kitchen just needs to be built to a standard to prepare food to serve to people. The intent is to have an educational platform and space for cooking and food security/food integrity, what they are doing, or how to grow food workshops two-three times per month. She understands that parameters will need to be place. She feels school is part of this and also general agriculture. Doug Webster said the similar use is a conditional permitted use. The purpose of any use that is listed in the Zoning Ordinance as a conditional use is to give the Planning Board a little bit of autonomy to look at a scale and nature of a particular use and to try to limit the potential adverse impacts of that use on neighboring properties. These can be blended together to give an applicant what they are looking for.

Board discussion and comments. Keary Sibole said this is a great and exciting project. Both Tamara Lee Pinard and Dan Cobb agreed this is a great add. This is a pre-application; therefore, no motion is necessary. Catherine Caswell's next step is to come in with a formal application. Doug Webster stated that the objective is a need for the Town.

Public Comment: Jean Tarsetti – 54 Mercante Road. Jean Tarsetti brought up a concern of his regarding the area known as "Clay Flats." In response to his concern, the Town will stay abreast to this. It was stated that, in the future, he should have gone before a Town Code Officer.

VI. ADJOURNMENT: The following motion was made to adjourn the meeting.

MOTION: *by Kearny Sibole, seconded by Tamara Lee Pinard, to adjourn the meeting at 10:00 p.m.*

VOTED: *3-0 (Passed).*

Respectfully submitted,

Doreen M. Christ
Transcriptionist/Minute Taker - Town of Gray

STATE OF MAINE

—
IN THE YEAR OF OUR LORD
TWO THOUSAND TWENTY-TWO

—
H.P. 1489 - L.D. 2003

**An Act To Implement the Recommendations of the Commission To Increase
Housing Opportunities in Maine by Studying Zoning and Land Use
Restrictions**

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 5 MRSA §13056, sub-§7, as amended by PL 2003, c. 159, §3, is further amended to read:

7. Contract for services. When contracting for services, to the maximum extent feasible, seek to use the State's private sector resources in conducting studies, providing services and preparing publications; ~~and~~

Sec. 2. 5 MRSA §13056, sub-§8, as enacted by PL 2003, c. 159, §4, is amended to read:

8. Lead agency for business assistance in response to certain events. Be the lead agency for the State to provide information and business assistance to employers and businesses as part of the State's response to an event that causes the Department of Labor to carry out rapid-response activities as described in 29 United States Code, Sections 2801 to 2872 (2002); ~~and~~

Sec. 3. 5 MRSA §13056, sub-§9 is enacted to read:

9. Establish statewide housing production goals. Establish, in coordination with the Maine State Housing Authority, a statewide housing production goal that increases the availability and affordability of all types of housing in all parts of the State. The department shall establish regional housing production goals based on the statewide housing production goal. In establishing these goals, the department shall:

- A. Establish measurable standards and benchmarks for success of the goals;
- B. Consider information submitted to the department from municipalities about current or prospective housing developments and permits issued for the construction of housing; and
- C. Consider any other information as necessary to meet the goals pursuant to this subsection.

Sec. 4. 30-A MRSA §4364 is enacted to read:

§4364. Affordable housing density

For an affordable housing development approved on or after July 1, 2023, a municipality with density requirements shall apply density requirements in accordance with this section.

1. Definition. For the purposes of this section, "affordable housing development" means:

A. For rental housing, a development in which a household whose income does not exceed 80% of the median income for the area as defined by the United States Department of Housing and Urban Development under the United States Housing Act of 1937, Public Law 75-412, 50 Stat. 888, Section 8, as amended, can afford a majority of the units that the developer designates as affordable without spending more than 30% of the household's monthly income on housing costs; and

B. For owned housing, a development in which a household whose income does not exceed 120% of the median income for the area as defined by the United States Department of Housing and Urban Development under the United States Housing Act of 1937, Public Law 75-412, 50 Stat. 888, Section 8, as amended, can afford a majority of the units that the developer designates as affordable without spending more than 30% of the household's monthly income on housing costs.

2. Density requirements. A municipality shall allow an affordable housing development where multifamily dwellings are allowed to have a dwelling unit density of at least 2 1/2 times the base density that is otherwise allowed in that location and may not require more than 2 off-street parking spaces for every 3 units. The development must be in a designated growth area of a municipality consistent with section 4349-A, subsection 1, paragraph A or B or the development must be served by a public, special district or other centrally managed water system and a public, special district or other comparable sewer system. The development must comply with minimum lot size requirements in accordance with Title 12, chapter 423- A, as applicable.

3. Long-term affordability. Before approving an affordable housing development, a municipality shall require that the owner of the affordable housing development have executed a restrictive covenant, recorded in the appropriate registry of deeds, for the benefit of and enforceable by a party acceptable to the municipality, to ensure that for at least 30 years after completion of construction:

A. For rental housing, occupancy of all of the units designated affordable in the development will remain limited to households at or below 80% of the local area median income at the time of initial occupancy; and

B. For owned housing, occupancy of all of the units designated affordable in the development will remain limited to households at or below 120% of the local area median income at the time of initial occupancy.

4. Shoreland zoning. An affordable housing development must comply with shoreland zoning requirements established by the Department of Environmental Protection under Title 38, chapter 3 and municipal shoreland zoning ordinances.

5. Water and wastewater. The owner of an affordable housing development shall provide written verification to the municipality that each unit of the housing development is connected to adequate water and wastewater services before the municipality may certify the development for occupancy. Written verification under this subsection must include:

A. If a housing unit is connected to a public, special district or other comparable sewer system, proof of adequate service to support any additional flow created by the unit and proof of payment for the connection to the sewer system;

B. If a housing unit is connected to a septic system, proof of adequate sewage disposal for subsurface wastewater. The septic system must be verified as adequate by a local plumbing inspector under section 4221. Plans for subsurface wastewater disposal must be prepared by a licensed site evaluator in accordance with subsurface wastewater disposal rules adopted under Title 22, section 42;

C. If a housing unit is connected to a public, special district or other centrally managed water system, proof of adequate service to support any additional flow created by the unit, proof of payment for the connection and the volume and supply of water required for the unit; and

D. If a housing unit is connected to a well, proof of access to potable water. Any tests of an existing well or proposed well must indicate that the water supply is potable and acceptable for domestic use.

6. Subdivision requirements. This section may not be construed to exempt a subdivider from the requirements for division of a tract or parcel of land in accordance with subchapter 4.

7. Restrictive covenants. This section may not be construed to interfere with, abrogate or annul the validity or enforceability of any valid and enforceable easement, covenant, deed restriction or other agreement or instrument between private parties that imposes greater restrictions than those provided in this section, as long as the agreement does not abrogate rights under the United States Constitution or the Constitution of Maine.

8. Rules. The Department of Economic and Community Development shall adopt rules to administer and enforce this section. The department shall consult with the Department of Agriculture, Conservation and Forestry in adopting rules pursuant to this subsection. The rules must include criteria for a municipality to use in calculating housing costs. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

Sec. 5. 30-A MRSA §4364-A is enacted to read:

§4364-A. Residential areas, generally; up to 4 dwelling units allowed

1. Use allowed. Notwithstanding any provision of law to the contrary, except as provided in Title 12, chapter 423-A, for any area in which housing is allowed, a municipality shall allow structures with up to 2 dwelling units per lot if that lot does not contain an existing dwelling unit, except that a municipality shall allow up to 4 dwelling units per lot if that lot does not contain an existing dwelling unit and the lot is located in a designated growth area within a municipality consistent with section 4349-A, subsection 1, paragraph A or B or if the lot is served by a public, special district or other centrally managed water system and a public, special district or other comparable sewer system in a municipality without a comprehensive plan.

A municipality shall allow on a lot with one existing dwelling unit the addition of up to 2 dwelling units: one additional dwelling unit within or attached to an existing structure or one additional detached dwelling unit, or one of each.

A municipality may allow more units than the number required to be allowed by this subsection.

2. Zoning requirements. With respect to dwelling units allowed under this section, municipal zoning ordinances must comply with the following conditions.

A. If more than one dwelling unit has been constructed on a lot as a result of the allowance under this section or section 4364-B, the lot is not eligible for any additional increases in density except as allowed by the municipality.

B. A municipal zoning ordinance may establish a prohibition or an allowance for lots where a dwelling unit in existence after July 1, 2023 is torn down and an empty lot results.

3. General requirements. A municipal ordinance may not establish dimensional requirements or setback requirements for dwelling units allowed under this section that are greater than dimensional requirements or setback requirements for single-family housing units, except that a municipal ordinance may establish requirements for a lot area per dwelling unit as long as the required lot area for subsequent units on a lot is not greater than the required lot area for the first unit.

4. Water and wastewater. The owner of a housing structure must provide written verification to the municipality that the structure is connected to adequate water and wastewater services before the municipality may certify the structure for occupancy. Written verification under this subsection must include:

A. If a housing structure is connected to a public, special district or other comparable sewer system, proof of adequate service to support any additional flow created by the structure and proof of payment for the connection to the sewer system;

B. If a housing structure is connected to a septic system, proof of adequate sewage disposal for subsurface wastewater. The septic system must be verified as adequate by a local plumbing inspector under section 4221. Plans for subsurface wastewater disposal must be prepared by a licensed site evaluator in accordance with subsurface wastewater disposal rules adopted under Title 22, section 42;

C. If a housing structure is connected to a public, special district or other centrally managed water system, proof of adequate service to support any additional flow created by the structure, proof of payment for the connection and the volume and supply of water required for the structure; and

D. If a housing structure is connected to a well, proof of access to potable water. Any tests of an existing well or proposed well must indicate that the water supply is potable and acceptable for domestic use.

5. Municipal implementation. In adopting an ordinance, a municipality may:

A. Establish an application and permitting process for housing structures;

B. Impose fines for violations of building, zoning and utility requirements for housing structures; and

C. Establish alternative criteria that are less restrictive than the requirements of subsection 4 for the approval of a housing structure only in circumstances in which the municipality would be able to provide a variance under section 4353, subsection 4, 4-A, 4-B or 4-C.

6. Shoreland zoning. A housing structure must comply with shoreland zoning requirements established by the Department of Environmental Protection under Title 38, chapter 3 and municipal shoreland zoning ordinances.

7. Subdivision requirements. This section may not be construed to exempt a subdivider from the requirements for division of a tract or parcel of land in accordance with subchapter 4.

8. Restrictive covenants. This section may not be construed to interfere with, abrogate or annul the validity or enforceability of any valid and enforceable easement, covenant, deed restriction or other agreement or instrument between private parties that imposes greater restrictions than those provided in this section, as long as the agreement does not abrogate rights under the United States Constitution or the Constitution of Maine.

9. Rules. The Department of Economic and Community Development may adopt rules to administer and enforce this section. The department shall consult with the Department of Agriculture, Conservation and Forestry in adopting rules pursuant to this subsection. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

10. Implementation. A municipality is not required to implement the requirements of this section until July 1, 2023.

Sec. 6. 30-A MRSA §4364-B is enacted to read:

§4364-B. Accessory dwelling units

1. Use permitted. Except as provided in Title 12, chapter 423-A, a municipality shall allow an accessory dwelling unit to be located on the same lot as a single-family dwelling unit in any area in which housing is permitted.

2. Restrictions. An accessory dwelling unit may be constructed only:

A. Within an existing dwelling unit on the lot;

B. Attached to or sharing a wall with a single-family dwelling unit; or

C. As a new structure on the lot for the primary purpose of creating an accessory dwelling unit.

This subsection does not restrict the construction or permitting of accessory dwelling units constructed and certified for occupancy prior to July 1, 2023.

3. Zoning requirements. With respect to accessory dwelling units, municipal zoning ordinances must comply with the following conditions:

A. At least one accessory dwelling unit must be allowed on any lot where a single-family dwelling unit is the principal structure; and

B. If more than one accessory dwelling unit has been constructed on a lot as a result of the allowance under this section or section 4364-A, the lot is not eligible for any additional increases in density except as allowed by the municipality.

4. General requirements. With respect to accessory dwelling units, municipalities shall comply with the following conditions.

A. A municipality shall exempt an accessory dwelling unit from any density requirements or calculations related to the area in which the accessory dwelling unit is constructed.

B. For an accessory dwelling unit located within the same structure as a single-family dwelling unit or attached to or sharing a wall with a single-family dwelling unit, the setback requirements and dimensional requirements must be the same as the setback requirements and dimensional requirements of the single-family dwelling unit, except for an accessory dwelling unit permitted in an existing accessory building or secondary building or garage as of July 1, 2023, in which case the requisite setback requirements for such a structure apply. A municipality may establish more permissive dimensional and set back requirements for an accessory dwelling unit.

C. An accessory dwelling unit may not be subject to any additional parking requirements beyond the parking requirements of the single-family dwelling unit on the lot where the accessory dwelling unit is located.

5. Shoreland zoning. An accessory dwelling unit must comply with shoreland zoning requirements established by the Department of Environmental Protection under Title 38, chapter 3 and municipal shoreland zoning ordinances.

6. Size requirements. An accessory dwelling unit must meet a minimum size of 190 square feet. If the Technical Building Codes and Standards Board under Title 10, section 9722 adopts a different minimum size, that standard applies. A municipality may impose a maximum size for an accessory dwelling unit.

7. Water and wastewater. The owner of an accessory dwelling unit must provide written verification to the municipality that the accessory dwelling unit is connected to adequate water and wastewater services before the municipality may certify the accessory dwelling unit for occupancy. Written verification under this subsection must include:

A. If an accessory dwelling unit is connected to a public, special district or other comparable sewer system, proof of adequate service to support any additional flow created by the accessory dwelling unit and proof of payment for the connection to the sewer system;

B. If an accessory dwelling unit is connected to a septic system, proof of adequate sewage disposal for subsurface wastewater. The septic system must be verified as adequate by a local plumbing inspector under section 4221. Plans for subsurface wastewater disposal must be prepared by a licensed site evaluator in accordance with subsurface wastewater disposal rules adopted under Title 22, section 42;

C. If an accessory dwelling unit is connected to a public, special district or other centrally managed water system, proof of adequate service to support any additional flow created by the accessory dwelling unit, proof of payment for the connection and the volume and supply of water required for the accessory dwelling unit; and

D. If an accessory dwelling unit is connected to a well, proof of access to potable water. Any tests of an existing well or proposed well must indicate that the water supply is potable and acceptable for domestic use.

8. Municipal implementation. In adopting an ordinance under this section, a municipality may:

- A. Establish an application and permitting process for accessory dwelling units;
- B. Impose fines for violations of building, zoning and utility requirements for accessory dwelling units; and
- C. Establish alternative criteria that are less restrictive than the requirements of subsections 4, 5, 6 and 7 for the approval of an accessory dwelling unit only in circumstances in which the municipality would be able to provide a variance under section 4353, subsection 4, 4-A, 4-B or 4-C.

9. Rate of growth ordinance. A permit issued by a municipality for an accessory dwelling unit does not count as a permit issued toward a municipality's rate of growth ordinance as described in section 4360.

10. Subdivision requirements. This section may not be construed to exempt a subdivider from the requirements for division of a tract or parcel of land in accordance with subchapter 4.

11. Restrictive covenants. This section may not be construed to interfere with, abrogate or annul the validity or enforceability of any valid or enforceable easement, covenant, deed restriction or other agreement or instrument between private parties that imposes greater restrictions than those provided in this section, as long as the agreement does not abrogate rights under the United States Constitution or the Constitution of Maine.

12. Rules. The Department of Economic and Community Development may adopt rules to administer and enforce this section. The department shall consult with the Department of Agriculture, Conservation and Forestry in adopting rules pursuant to this subsection. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

13. Implementation. A municipality is not required to implement the requirements of this section until July 1, 2023.

Sec. 7. 30-A MRSA §4364-C is enacted to read:

§4364-C. Municipal role in statewide housing production goals

This section governs the responsibilities and roles of municipalities in achieving the statewide and regional housing production goals set by the Department of Economic and Community Development in Title 5, section 13056, subsection 9.

1. Fair housing and nondiscrimination. A municipality shall ensure that ordinances and regulations are designed to affirmatively further the purposes of the federal Fair Housing Act, 42 United States Code, Chapter 45, as amended, and the Maine Human Rights Act to achieve the statewide or regional housing production goal.

2. Municipalities may regulate short-term rentals. A municipality may establish and enforce regulations regarding short-term rental units in order to achieve the statewide or regional housing production goal. For the purposes of this subsection, "short-term rental unit" means living quarters offered for rental through a transient rental platform as defined by Title 36, section 1752, subsection 20-C.

TOWN OF GRAY TOWN COUNCIL REMOTE AND HYBRID MEETING POLICY

Pursuant to 1 M.R.S § 403-B

PURPOSE

The Town of Gray strives to provide an open and transparent government that maximizes the ability of its residents to participate in the public process. This Policy sets forth the conditions upon which the Gray Town Council may conduct a remote meeting, as that term is defined in this Policy. In addition, this Policy sets forth the conditions upon which the Gray Town Council may conduct a hybrid meeting, as that term is defined in this Policy.

DEFINITIONS

A. Hybrid Meeting

A public proceeding, as defined in 1 M.R.S. § 402(2), as may be amended, conducted with some meeting attendees in person/face-to-face at a designated physical location while connecting with other meeting attendees by remote means.

B. Public Meeting

A “public proceeding,” as that term is defined in 1 M.R.S. § 402(2), as may be amended.

C. Remote Means

Means “remote methods” as that term is defined in 1 M.R.S. § 403-B(1), as may be amended. For purposes of this Policy, “remote means” may include, but is not necessarily limited to: Zoom, Go-To-Meeting, Skype, Google Meet, or other comparable internet-based telephonic or videoconferencing platform. Remote means does not include text-only means such as e-mail, text messages, or chat functions.

D. Remote Meeting

A public proceeding, as defined in 1 M.R.S. § 402(2), as may be amended, conducted solely by remote means.

REMOTE MEETINGS OF THE TOWN COUNCIL

The Town Council shall conduct its meetings in person unless the Chair (or in his/her absence, the Vice Chair), in consultation with the Town Manager, makes a determination that an emergency or urgent issue exists that requires the Town Council to conduct a remote meeting, including, but not limited to, inclement weather and/or disasters or catastrophes caused by either natural or man-made causes. The determination of such an emergency or urgent issue shall be made as soon as practicable, and notice of a meeting being conducted solely by remote means shall be disseminated consistent with 1 M.R.S. § 406, as may be amended, and this Policy.

HYBRID MEETINGS WITH REMOTE PARTICIPATION BY INDIVIDUAL TOWN COUNCILORS

Except for a remote meeting being conducted consistent with Section III of this Policy, members of the Town Council are expected to be physically present for all public meetings except when being physically present is not practicable for one or more members. Circumstances under which physical presence for one or more members is not practicable are limited to:

- A. Illness or other physical condition, or temporary absence from the Town of Gray, that causes the member to face significant difficulties travelling to and attending the public meeting in person; or
- B. To provide a reasonable accommodation to a member with a disability.

A Town Councilor who believes it is not practicable, as set forth above, for him/her to attend a meeting in person shall notify the Chair (or in his/her absence, the Vice Chair), as well as the Town Manager, of the existence of such circumstances as far in advance as is possible. The Chair (or in his/her absence, the Vice Chair), shall, in consultation with the Councilor, then make a determination whether being physically present is not practicable for that Councilor and, if such a determination of impracticability is made, so notify the Town Manager that a hybrid meeting will be conducted. If the agenda has already been posted at the time the determination is made to authorize a hybrid meeting with the Town Councilor's remote participation, an amended meeting agenda containing the information set forth in Section VI(a) of this Policy shall be posted on the Town's website and be distributed to all Town Councilors, relevant Town staff, and local representatives of the media by the same or faster means used to notify Town Councilors at least four (4) hours prior to the originally noticed meeting start time.

HYBRID MEETING WITH NO REMOTE PARTICIPATION BY INDIVIDUAL TOWN COUNCILORS

The Town Council is not required by law to offer this type of meeting format and will only conduct a hybrid meeting with no remote participation by individual Town Councilors when it is determined by the Town Manager, in consultation with the Chair (or in his/her absence, the Vice Chair), that such a hybrid meeting is necessary for some special reason, such as the need for the Town Council to communicate with Town staff, an outside attorney, professional or consultant without incurring the costs associated with that person's travel to/from Gray.

PUBLIC NOTICE OF REMOTE MEETINGS OR HYBRID MEETINGS

- When the Town Council conducts a remote meeting or a hybrid meeting, the following shall occur:
- A. Notice of the public meeting shall be provided in a manner that provides ample time to allow public attendance. Such notice shall be disseminated in a manner that is reasonably calculated to notify the general public of the time, date, location, and method to be used to conduct the meeting. Such notice shall provide information regarding how members of the public may attend the public meeting remotely and shall provide the physical location where members of the public may participate in person, if applicable.
 - B. Members of the public shall be provided with a reasonable opportunity to participate in the public meeting by remote means, which shall at a minimum include an effective means of communication between such members of the public and the Town Council. Reasonable accommodations may be provided when necessary to provide access to individuals with disabilities.
 - C. Unless the entire Town Council is conducting a remote meeting as provided in Section III of this Policy, members of the public must be provided the option to attend the meeting in person or by remote means.
 - D. Unless the entire Town Council is conducting a remote meeting as provided in Section III of this Policy, the Chair (or in his/her absence, the Vice Chair), at the start of the meeting, shall announce the name of any Town Councilor(s) participating by remote means and state the reason therefor, which reason must be consistent with Section IV.
 - E. All public documents and other materials considered by the Town Council shall be made available to members of the public by the same or more efficient means as they are provided to individual Town Councilors. This requirement may be met by: (i) posting all public documents and materials to be considered by the Town Council on the Town's website at least one (1) business day prior to the meeting; (ii) making physical copies of all documents and materials to be considered by the Town Council available for in person pick-up at the

Town Office at least one (1) business day prior to the meeting; or (iii) enabling the “screen-sharing” function of the remote means utilized for the meeting in such a way that members of the public are able to view all relevant documents and materials while the Town Council is reviewing and discussing the same.

QUORUM

A Town Councilor who participates in a remote meeting or a hybrid meeting is considered present for purposes of determining the presence of a quorum and voting.

ROLL CALL VOTE REQUIRED

All votes taken during a remote meeting or a hybrid meeting must be taken by roll call vote that can be seen and heard if using video technology, and heard if using only audio technology, by all Town Councilors and the public.

ZOOM PREFERRED

The preferred remote means for all Town boards and committees shall be Zoom Webinar. The platform shall be set up and hosted by a Town official and a digital recording shall be preserved. The use of private accounts to host a remote meeting or a hybrid meeting is prohibited.

DISRUPTIONS AND ADJOURNMENT

If during the conduct of a remote meeting or a hybrid meeting, the meeting is interrupted through disruptions or glitches in the technology, the meeting shall be automatically recessed for up to 15 minutes to restore communication when audio-visual communication cannot be maintained with a quorum of Town Councilors. If the interruption cannot be resolved within 15 minutes, and the Town Council has not provided reasonable notice to the public as to how the meeting will be continued at an alternative date and time, then the meeting shall be automatically adjourned. If the meeting being conducted is a hybrid meeting with no remote participation by individual Town Councilors and a remote connection to the public location identified in the Town Council’s notice pursuant to Section VI(a) of this Policy is interrupted or lost, the meeting shall continue at the public location without the need for a recess or adjournment.

EXECUTIVE SESSIONS

To preserve the executive session privilege of any portion of a meeting closed to the public, the Chair should confirm with each attendee that no unauthorized person is present or has access to any executive session being conducted via remote means. There shall be no audio or visual recording of an executive session.

OTHER TOWN BOARDS AND COMMITTEES

Any public body organized under the auspices of the Town may adopt this Policy in order to comply with 1 M.R.S. § 403-B. Any public body adopting such a remote and hybrid meeting policy under this section must, after hearing on the same, file written notice of the vote with the Town Clerk upon adoption. Any such public body may also choose to set more stringent regulations for use of remote means, provided that said policy is at least as stringent as this Policy and complies with 1 M.R.S. § 403-B. Such enhanced policy must also, after hearing on the same, be approved by a vote of a majority of the members of said body, and a copy of said enhanced policy must be filed with the Town Clerk upon adoption.

APPLICABILITY

This Policy does not apply to Town Meetings.

AMENDMENT; SEVERABILITY; EFFECTIVE DATE

This Policy may be amended as needed by a majority vote of the Town Council. The provisions of this Policy are severable, and if any provision shall be declared to be invalid or void, the remaining provisions shall not be affected and shall remain in full force and effect. This Policy shall take effect immediately upon adoption by the Town Council.

Date Adopted: September 8, 2021



April 28, 2022

Town of Gray Planning Board
c/o Kristen Muszynski Town Planner
Henry Pennell Municipal Complex
24 Main St, Gray, ME 04039

**Re: Major Site Plan, Minor Subdivision, and Conditional Use Permit application update
Lewiston Road Subdivision, Gray, Maine
Odessa Properties, LLC – Applicants**

Dear Ms. Muszynski:

On behalf of the applicant Odessa Properties, LLC, DM Roma Consulting Engineers has prepared revised project plans and supplemental documents for the Planning Board to consider as part of the submission of the Major Site Plan, Minor Subdivision and Conditional Use permit application for the proposed mixed-use subdivision off Lewiston Road in Gray. The 4.34-acre parcel consists of Lots 26-2 and 26-2-1 on the Town of Gray Assessor's Map 28, is located in the Commercial Zoning District and the Light Manufacturing Overlay District is currently contains a commercial building with associated paved and gravel parking.

Based on discussions with Town Staff and the Town Planning Board, as well as the memo from Doug Webster dated March 22, 2022, comments from the consulting review engineer Will Haskell received on April 6, 2022 and the memo from Kristen Muszynski dated April 12, 2022, DM Roma has made revisions to the project plans and supporting documents. Included as attachments with this letter are the following items:

- Revised project plan set dated 4-27-2022
- Revised stormwater management report
- Conditional Use standards narrative
- Responses to the comments received during discussions and in written comments

Upon your review of the submission, please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,

DM ROMA CONSULTING ENGINEERS

J.P. Connolly
Project Manager

Cc: Odessa Properties, LLC, Applicant

ATTACHMENT

Conditional Use Narrative

Town of Gray

Conditional Use Permit Narrative

Project Description

The applicant, Odessa Properties, LLC, is proposing to construct a self-storage facility on property located off Lewiston Road. The 4.34-acre parcel consist of Lots 26-2 and 26-2-1 on the Town of Gray Assessor's Map 28, is in the Commercial Zoning District and the Light Manufacturing Overlay District is currently contains a commercial building with associated paved and gravel parking.

The applicant is proposing a three-lot mixed use subdivision. The proposed Lot 1 will consist of a single-family residential lot. Lot 2 will contain the proposed self-storage facility which is intended to be owned and maintained by the applicant. Lot 3, which is intended to be owned and maintained by the applicant, will contain the existing commercial building that is leased to and operated as a permitted marijuana cultivation facility.

The project includes construction of a single-family residence on lot 1 and erecting four (4) pre-manufactured buildings containing 18,300 square feet of self-storage space with associated paved driveways on lot 2, and associated improvements to Lot 3. The self-storage facility is anticipated to be unattended.

Compatibility with general character of the neighborhood:

The neighborhood in the vicinity of the project site consists of vacant woodland to the north, south and east. The neighboring property to the north and east of proposed Lot 1 and 2 is a commercial site occupied by Dean and Allyn, Inc., with a significant natural woodland separating the current existing commercial building from the proposed project. To the West, neighbors include a residential duplex, a residential building, and a commercial/industrial building occupied by Miller Refrigeration Company. Directly to the south the neighbor to the proposed project is a multi-family residential property occupied by three (3) multi-unit buildings. Further from the project site along Lewiston Road the neighborhood continues to be a mix of single family, duplex and multi-family residential, commercial and light industrial uses, including a gravel extraction operation, agricultural uses, and a golf course. Lewiston Road

Existing Site

The project site consists of an existing paved driveway entrance and paved parking area, an existing commercial building, an existing large gravel unmaintained surface extending to the easterly property limits, and vacant areas. The northerly portion of the site, extending from constructed slopes the edge of the gravel surface leads to an unmaintained vacant area. The vacant area consists of natural woodland, constructed drainage channels, and an existing detention basin. The property was first developed in or about 1990 for Cyr Auction Company, which operated from approximately 1990 to approximately 1995 when it then operated as a used auto sales dealership. The site is now commercial rental property leased and operated by marijuana cultivation facility.

Lot 1

Lot one is intended to serve as a single-family residence, with consisting of a 1,972 square foot building. This size building is typical of a two-to three-bedroom residential structure. The lot will be served by a new private gravel driveway with access from Lewiston Road, a private septic system, private well and overhead electric and data services. A bio-retention cell, "rain garden", is intended to treat stormwater generated from a portion of the driveway and yard. An existing stormwater management facility is also located on the site. The lot and building meet all dimensional standards, and the proposed structure is located within any existing our proposed easements.

Lot 2

Lot 2 is proposed to be a self-storage facility and will constructed entirely within the existing gravel area. Lot 2 is intended to consist of four buildings, with a total of 18,300 square feet of total building space, paved access aisles and landscaping trees to extend the existing treeline along Lewiston Road as well as along the easterly property limit. Lot 2 will share access from Lewiston Road, with Lot 3 using a proposed divided driveway in the same location as the existing paved driveway.

Lot 3

Lot 3 is intended to remain as a commercial site associated with the existing structure. The lot will be improved to pave the remaining existing gravel surface to the north of the existing commercial building. Lot 3 will share access from Lewiston Road with Lot 2 using the existing access location to the site. In addition, a landscape tree buffer planted in two (2), measuring a minimum of ten feet (10') wide that are located along the Lot 3 northerly property limit, abutting Lot 2. The planter areas are intended to provide a densely vegetated with buffer between the existing commercial building on Lot 3 and the self-storage facility on Lot 2. To allow for continuous access around both sites the planters have paved openings at both the westerly and easterly end, as well as an opening measuring twenty feet (20') that starts at the projection of the easterly building wall of the existing commercial building.

There are similar examples of the project site's proposed and existing structures in both overall size, dimension, and style of building within a mile radius of the project property. The existing treeline in front of both of the commercial uses of Lot 2 and Lot 3 will be extended and supplemented with additional trees. Alternate proposed uses of Lot 2 as a multi-unit retail/commercial building which potentially included a take-out/drive thru restaurant where ultimately abandoned due to several reasons including concerns for traffic and headlight shine on abutting properties from queuing customers. The self-storage facility is not expected to be incompatible with the neighborhood as a result of integrating into the project design rock wall veneer to the end walls of the self-storage building visible from Lewiston road, dark sky complaint lighting that is not expected to project light over 1-foot candle beyond the property limits toward Lewiston Road, video security system capable of identifying and capturing images of license plates of all vehicles entering the facility, tree planting along the existing openings of the tree line north and south of the existing driveway, and maintaining the existing driveway location for access should improve the site's compatibility with the neighborhood.

As the property was previously developed and operated as a commercial site since 1990, the site and the existing building on Lot 3 is an element of the neighborhood. The site is and has not been utilized to its complete capacity for more than two decades and was not being well maintained, prior to

Odessa Properties, LLC. and Grayland Holdings, LLC. purchase of the site. The additional landscaping to provide a better ground level visual break to the site except for the proposed driveway opening in Lot 1 and the shared driveway location on Lot 2 and 3 will provide a better visual appearance to the site than exists today. The site lighting will be less intensive than other potential commercial uses, even less intense than the existing pole mounted overhead street lights that were previously used in the 1990's.

Significant detrimental effect on abutting properties:

The current tenant of the commercial building on Lot 3 operates the building as a marijuana cultivation facility which was permitted and approved by the Town Planning Board. The proposed self-storage facility is intended for storage of non-flammable, non-hazards items only, and tenants will not be permitted to produce or manufacture any products on site, or repair or service any stored items on site. As such the proposed commercial uses on Lot 2 and 3 and the proposed residential use on Lot 1 are not expected to be a significant source of noise, vibration, fumes, odor or dust. All lots are expected to include outdoor lighting, however the existing lighting on Lot 3, the proposed dark sky wall-mounted building lights on Lot 2 and the exterior lighting on the residential building on Lot 1 will all be limited from view by neighbors and vehicle traffic due to light selection and additional landscaping.

Impact to adjacent and nearby property values:

Since the site was previously developed and has existed in its current layout since 1990, the proposed project is not expected to have a detrimental impact to neighboring property values. The existing site will benefit from the driveway improvements and proposed landscaping, the existing entrance consists of stone wall remnants, poorly graded and rutted unvegetated areas, with a gap between the existing tree line at the existing driveway that is much larger than needed for vehicle clearance and visibility. Upon completion of construction, the site will be maintained by as property owner who by example of past projects in Gray will put significant effort into ensuring the property is visually appealing.

Hazards to pedestrians, vehicular traffic or significant traffic congestion

The project is not expected to be or create any additional potential hazards to pedestrian or vehicle traffic safety. According to the Institute of Transportation Engineers Trip Generation Manual, 10th Edition, for mini warehousing (Land Use Code 151), the 18,300 square feet of self-storage will generate 2 additional weekday PM peak hour trip ends and 19 total average weekday trips. With the addition of the self-storage and the limited vehicle access required for the existing commercial site's use as a marijuana cultivation facility we expect the three-lane divided driveway to provide safe access into and out of the site. The proposed residential driveway on Lot 1 and the proposed shared driveway on Lot 2 and 3 both have measured sight distances exceeding the minimum requirements. As such we don't anticipate the added vehicle trips to cause significant traffic congestion in Lewiston Road.

Fire Danger

Neither of the project site uses are expected to be a potential fire hazard. The existing Lot 3 commercial structure is operated as a Town permitted marijuana cultivation facility. The proposed Lot 2 self-storage facility contract with tenant's conditions that no hazards or flammable items can be stored within any of the units. Additionally, the self-storage buildings are inherently fire resistant due to the primary building material being metal. Lastly, residential structure on Lot 1 is conditioned to be constructed with a sprinkler system or the installation of a fire cistern, and well as be constructed under current building code including the use of fire rated building materials.

Flood hazards, drainage problems, ground or surface water contamination, or soil erosion

The project design is not expected to increase the potential impacts for any issue related to flooding, drainage, ground- or surface-water quality. The project design has been evaluated to compare stormwater discharge characteristics of the site both before and after the proposed project design is constructed, and analysis presented in the stormwater management plan indicate that runoff from discharged the project site is reduced to rates less than currently discharged from the site in the 2-year, 10-year, and 25-year 24-hour storm events that were modeled.

The project is subject to Maine DEP Natural Resources Protection Act Permit by Rule due to proximity of a proposed site improvements namely paving within 75' of an existing stream, and a Stormwater Permit by Rule for site disturbance over more than an acre of area. The Maine DEP review of the project in association of the issuance of the two permits, will include requirements for standard erosion control measures. The project design includes the integration of edge treatment to protect the areas down gradient of areas of the site that are being improved or disturbed, in the form of either silt fence or erosion control mix berm, and the access to the site will be installed with a stabilized construction entrance. With the integration of the project design including the erosion and sediment control measures, the project is expected to effectively limit erosion and sediment transport on the site.

Impact on existing public services and facilities (fire protection services, roads, water and storm drain systems)

Neither the entire project as a whole, or any individual Lot specific use are expected to overburden existing public facilities or services. Lot 1 and Lot 3 will be serviced by private well and septic systems located on the project property and there are no proposed service connections to public water service or sewer service. Lot 2 does not propose any water related utility service or restrooms/bathrooms. Lot 1 will be conditioned to be built with a fire sprinkler system or fire cistern, Lot 2 consists of metal buildings, and Lot 3 is an existing commercial building that was recently improved and approved by the Town Planning Board for use as a marijuana cultivation facility. Traffic from the site after project completion is expected to be relatively low in volume due to the nature of the uses proposed. According to the Institute of Transportation Engineers Trip Generation Manual, 10th Edition, for mini warehousing (Land Use Code 151), the 18,300 square feet of self-storage will generate 2 additional weekday PM peak hour trip ends and 19 total average weekday trips. With the addition of the self-storage and the limited vehicle access required for the existing commercial site's use as a marijuana cultivation facility we expect the three-lane divided driveway to provide safe

access into and out of the site. With Lewiston Road (Rt. 100) classification a major collector road, it is expected that the additional vehicle trips resulting from the project will not have a significant impact to the service level for Lewiston Road, and is not expected to create a significant impact on current traffic volumes or traffic congestion.

ATTACHMENT

Response to the Town's Review Engineer comments

Town of Gray

Response to Peer Review Consulting Engineers Comments

The following response has been prepared based on the comments provided by Will Haskell from Gorrill Palmer in his review of the project materials in an email dated April 6, 2022. It should be noted that the review engineer was not in receipt of the stormwater plans during his initial review. While these plans were included in the initial submittal, as a separate additional file along with the project design plans, we did experience technical issues when sharing digital plans attached to emails with Town and take full responsibility for the review engineer not being able to have the stormwater plans during his review.

The review comments were thorough, and specific. In general, DM Roma Consulting Engineers do not disagree with any of the issues raised in the review comments. The following lists each comment from the Town's consulting engineer's review followed by DM Roma's response including any action taken to revise the plans or supporting documents in effort to resolve the comment.

1. The driveway sight distances should be shown on the plans for both driveways.

The Subdivision Plan was previously revised to include a site distance for the residential use on Lot 1. The sight distance for the shared driveway in the location was not included on the Subdivision Plan due to the fact that the driveway location is the same as the existing driveway location, however on the Site and Landscaping Plan sight distances are included for both the proposed Lot 1 driveway, and the proposed shared driveway access for Lot 2 and Lot 3.

2. The soil scientist/soil evaluator should verify that the proposed fill over the existing subsurface system is acceptable. Grading should minimize drainage flow over the existing septic disposal field.

The project was reviewed by the soil evaluator for the project and the proposed fill slope at the southeasterly corner of the existing septic was considered a minor change as the corner of the septic field had been constructed with fill over the same corner. However, the project pavement limits adjacent to Buildings 1 and 2 in the vicinity of the existing septic field were revised with the decision to not include an office space to manage the self-storage facility in Building 1. As a result of reducing the paving area, grading around the pavement near the existing septic field was able to be re-designed to more closely match the existing grade in this area, and ultimately reducing the amount of additional fill needed and the impact to the existing slope to insignificant reshaping of the existing slope. Please see the revised Grading and Utility plan illustrating the reduced slope grading in comparison to the initial submitted design.

3. Will the distribution box for the existing septic system be readily accessible after the proposed fills?

Based on the HHE-200 provided for the existing septic system, the existing septic disposal area consisted of a chamber system in trenches that are sloped/stepped in descending elevation for the south to the north that are connected in series. Effluent is introduced to the highest chamber row directly without the inclusion of distribution box. Therefore, there is no access to an existing distribution box, however all existing cleanout locations (and proposed cleanouts related to improvements installed for the intention of providing continuous sewer service to Lot 3's existing building) will all be raised or installed with cleanout box assemblies that are at finished grade upon completion of construction.

4. The soil report shows test pits labelled #1 and #4. The plan shows test pits #1 and #2. Revise the test pit labels.

Plans have been revised to identify the test pit locations with the labels that correspond to the test pit logs that were provided by Mainely Soils, LLC.

5. There is no test pit shown at the location of the proposed bioretention pond. The bottom of the pond may not have the required separation to seasonal high ground water as required by MDEP. The pond should be lined with an impermeable liner if separation to seasonal high groundwater cannot be met.

Prior to the first public Planning Board hearing Mainely Soils, LLC was on site to provide additional soil testing as well as stream determination and delineation for an un mapped, unnamed stream to the east of the project property. The additional test pit is shown on the revised plans.

6. Show proposed parking including accessible spaces in the parking lot that remains for the existing building. What is the use and are there enough parking spaces to meet town requirements for the use?

See combined response included under review comment #8.

7. Add spot grades to show that slopes of the accessible parking meet ADA standards.

See combined response included under review comment #8.

8. Identify the main entrance of the existing building and show an accessible route from ADA parking spaces to the building entrance.

The Site and Landscaping Plan has been revised to illustrate the area in which at least fifteen (15) parking spaces can be designated. Striping of these parking spaces is not proposed as part of the improvements for this project as the existing commercial building currently is operated as a marijuana cultivation facility that has no customer/retail sales. As such the current parking need is significantly less the 15 spaces the area can accommodate. The north side of the existing commercial building was improved with a concrete ramp to the entrance as well as concrete pad area that was constructed with surface slopes that would allow for this

area to provide three (3) ADA complaint parking stalls that would have access to the building ramp. Existing grade callouts at the corners of the existing concrete area (as well as other at other critical locations along the existing building) have been added to the revised Grading and Utility Plan to demonstrate the slopes are acceptable.

9. Show foundation drain and drip strip outlet piping.

Revised Grading and Utility Plan has included a drip edge, and foundation drain leader to drain Building #1 on Lot 2 and for the residential building on Lot 1.

10. Show spot grades around residential building to direct runoff away from foundation.

Revised Grading and Utility Plan has included additional proposed spot grades to show the direction of slope and drainage flow away from the residential building on Lot 1.

11. Show proposed finished floor of residential building.

Revised Grading and Utility Plan now includes a proposed finished floor elevation for the proposed residential building on Lot 1.

12. The residential building doesn't have much of a flat area for a yard. Consider providing more of a yard area around the house.

It is agreed that additional yard areas would benefit Lot 1, however based on site existing constraints opportunities for yard spaces provided are limited, and the grading design for Lot 1 remains the same as the last plan submitted to the Town on April 5, 2022 and prior to the receipt of the peer review consulting engineer's comments.

To the south (back) of the residence it was necessary to grant a grading easement on Lot 2 to provide a continuous 15' deep rear yard at the back of the building. At a minimum, the portion of the slope on Lot 2 will be stabilized with permanent vegetation and required to remain natural and not cleared or maintained as yard area. Between the proposed garage and driveway, there is a 2' tall 3:1 slope leading up to the proposed septic field that will provide an opportunity for triangular yard area measuring approximately 1000 square feet in area. Lastly, the grading to maintain and improve the existing detention basin will provide a flat level area measuring about approximately 90 and 100 feet in length, and about 45 feet in width. The basin is intended to be maintained with a grass height maximum of 12 inches with mowing required to not occur more than twice a year, and will essentially be a meadow. The gravel driveway will also provide a 50 foot by 20 foot relatively flat usable outdoor area as well.

The residence is located on the site within all setbacks and dimensional standards for zoning district, and located outside of all existing and proposed property encumbrances and easements on the proposed lot. The applicant/owner understands the constraints and any perspective future homeowner will be responsible for ensuring that the house and property meets their needs, with the yard space not easily disguised upon inspection of the property.

13. Provide watershed maps.

Three stormwater plans have been included in the pdf along with the revised project design plans and turning template plan.

14. The existing detention basin is modified in the post development condition, but the pond dimensions in HydroCAD are the same in the pre and post condition, Revise the HydroCad model.

HydroCAD models have been revised accordingly. For additional clarity a more detailed response to comment 14 is combined with the response to the following comment, please see response to comment 15 as well.

15. What is the condition of the existing detention pond and outlet control structure? If maintenance is required, we recommend it be completed as part of this project.

Maintenance is required to the existing basin. Prior to the Planning Board's site walk in March, clearing of the existing basin as well as other areas of overgrown vegetation was removed to the north of the existing gravel surface on the property. An invasive bamboo species which is prevalent on the site, and several existing trees around the site are not viable and are either unhealthy or significantly leaning, both are planned for removal and on-going maintenance.

Specifically in regard to the existing basin repair and maintenance are proposed as part of this project. The existing outlet structure needs to be inspected and maintained an or repaired to ensure that it continues to function as designed. Although some clearing was done within the basin prior to the site walk, due to the years of no maintenance the basin needs to be fully cleared of all vegetation and re-graded as proposed to reform the embankments and create a more uniform flat bottom then the current condition. The rip rap for the spillway also needs to have all vegetation, debris and accumulated soils and sediment removed, and will most likely be re-constructed because maintenance and repair of the existing spillway may be more labor intensive than re-construction. Existing rip rap drainage channel extending from the outlet of the culvert discharging stormwater collected in the existing catch basins will also be required to be recovered or constructed, as the existing flow paths are intended to continue to convey stormwater runoff from the site. A portion of the swale, located within the proposed slopes of the improved basin will be removed as part of this project as well.

The project plans submitted to the Town on April 5, included this design however the peer review engineer was not aware of this at the time the comments were prepared and reflect the design shown on the initial project plans submitted to the Town. As such the revised plans and stormwater management design, have been analyzed with revised HydroCAD models reflecting the design for each condition.

16. The bioretention basin calculations say that WS-21 is tributary to a roof dripedge and is not included in the basin sizing calcs. As noted in previous comments, a watershed map was not

provided, and outlet piping from the dripedge should be shown. WS-21 is not designated in the HydroCad report. Label all watersheds with the same names between the HydroCAD calcs, watershed maps, and other stormwater calculations. Route the dripedge outflow around the Bioretention basin if it is not being treated by the basin.

The submitted stormwater plans show the areas within each watershed sub-basin. Outlet piping from the dripedge and foundation drain, is proposed to extend from the northeasterly corner of the proposed building and discharge on the discharge side of the spillway for the proposed bio-retention area ensuring that foundation drain and dripedge do not discharge into the proposed bio-retention basin.

17. The drainage from the existing building and a portion of the existing gravel area is collected in several catch basins. This existing drainage system is being eliminated. We have concerns with the relatively large impervious area essentially sheet flowing off the steep slope at the downstream edge of the storage buildings/paved area. Is there a need for additional permanent erosion control protection where the drainage will flow off the downgradient edge of pavement?

The concern the comment addresses exists today as much of the existing surface is not captured in the existing catch basins. Runoff generated from the existing gravel surface that slopes at approximately 5-8% from the north to south, follows on of three existing flow patterns as it leaves the gravel; areas along the westerly side (nearest Lewiston Road) drain in a northwesterly direction into a drainage channel that also receives runoff from Lewiston Road that flows in a northerly direction along the westerly property limit before coming onto the project property and is captured in the existing detention basin. The easterly portion of the site is either captured by the existing catch basins and discharged into an existing rip rap drainage channel or continues to drain overland towards and then along the easterly property limit in an existing drainage channel. Both existing conveyances for the easterly portion of the site ultimately discharge into the existing detention basin. Based on site observations, the site has not been maintained and primarily needs clearing of overgrown vegetation; however, the site has existed with the described flow patterns and more or less surface conditions since 1990 and neither the existing detention basin outlet, basin inlet or existing drainage channels show signs of concern for erosion, or sediment deposit or accumulation.

The proposed project design intended to continue to maintain the same existing flow patterns. While the project does eliminate the existing catch basins and storm drain outlet, the stormwater that is generated from the existing commercial site and proposed self-storage site will not be as concentrated as being discharged via a catch basin collection and storm drain system, and with the multi decade existing of the current slopes it is expected that runoff flowing over the slopes in the proposed condition will not be significantly different from the current condition and we do not expect there to be a need to provide more slope stabilization, aside from ensuring that the slopes are maintained with a healthy vegetated cover and not overgrown or barren.

18. We have concerns about the proposed bioretention basin, and the existing detention basin being located on the residential lot. We are also not entirely clear of the tributary area to the

new bioretention basin and whether it collects drainage from the upgradient lots. We recommend that a maintenance easement be provided for the existing detention pond given that this pond collects drainage all three lots. Similarly, if the new bioretention basin collects runoff from multiple lots, it should also have a maintenance easement established. Who will be responsible for the maintenance of the existing detention pond and new bioretention basin? We recommend that deed language be provided relative to the drainage system maintenance for all three lots.

We concur with the concern, and a stormwater easement is shown on the revised subdivision plan on Lot 1 and Lot 2. The easement will require a binding agreement between all three properties to allow continued perpetual unobstructed use of the existing stormwater facilities including the drainage conveyance, basin and outlet spillway and structure by requiring maintenance and inspection of the stormwater facilities outlined in the Maintenance, Inspection and Housekeeping Plan included with the project Stormwater Management Report. The agreement will outline who is responsible for maintenance and inspection work, and provide allowances for each individual property party to the agreement to provide any and all maintenance work that needs or is recommended, by providing rights to access, maintain and continually use to all three properties.

19. The total areas of the redevelopment calculations should be the same for the existing and proposed conditions. Provide a plan depicting the redevelopment areas used in the calculations.

Three stormwater plans have been included in the pdf along with the revised project design including the revised redevelopment plan. The revised redevelopment calculations show the same pre- and post-developed redevelopment area and are included on the Redevelopment Pollutant Ranking plan, sheet RPR-1.

20. While there is no ordinance standard, we will express our concern for constructing storage buildings 3 and 4 over the existing sewer pipe for the existing building that is to remain. This may cause issues with future maintenance and repair of this pipe.

This concern was re-iterated by the Town and was a concern of the project proponents. As such the grading design has been prepared to limit the potential conflict with the proposed building footings and the existing building sewer. As a preventative measure the applicant has agreed to install an alternate four-inch sewer pipe that is located further east than the existing building sewer and will not be under any proposed building structure. This sewer line will be installed so that it can be connected either during construction or in the future after construction is complete without disrupting the entire site with a trench across the Lot 2 and Lot 3 to install a new building sewer connection to the existing septic field. Please see the easement shown on the Subdivision Plan and the alternate sewer location and design proposed on the Grading and Utility Plan, and all associated plan notes.

21. Silt fence/erosion control berm on Lot 2 should be extended towards Lewiston Road so it protects the entire area of construction for the storage buildings.

The revised Grading and Utility Plan has been revised accordingly.

ATTACHMENT

Response to the Town Staff and Planning Board comments

Town of Gray

Response to Town Staff comments and Town Staff and Planning Board discussions

The following response has been prepared based on the comments provided from Town Staff as well as comments presented to the project proponents in project related discussions at meeting with Staff and at Planning Board hearings and site walks.

The following summary of comments and response is not inclusive of all relevant comments but is a comprehensive list of comments and responses that DM Roma Consulting Engineers feels would best be addressed by illustrating the project designs means of addressing the concern through a written response. Comments not provided with a response are believed to be clearly addressed on the project plans and did not warrant a written summary.

- Sight distance – both the shared driveway and proposed residential lot 1 driveway sight distances are labeled on the Site and Landscaping Plan.
- Fire protection – note added to the Subdivision Plan requiring installation of fire sprinklers or fire cistern.
- Parking and security gate – as indicated by the Town Planner’s memo the Staff Review Committee granted a change of use for Lot 3 in October 2020, approving use for a registered caregiver cultivation area. No existing parking stalls are delineated at this time or are proposed to be marked. The project plans have been revised to show that the existing commercial building could support at least fifteen (15) parking spaces including three (3) that are in proximity to the pedestrian ramp leading to the existing building entrance that would meet minimum ADA dimensions and slope requirements. No parking spaces are intended to be created for the self-storage facility on Lot 2, as the tenants of the self-storage facility will likely park in very close proximity to their individual unit and at this time no overflow parking from Lot 3 will be proposed or allowed.

Town staff have reviewed the approval of the marijuana cultivation facility on proposed Lot 3 and have concluded that the decision does not have any conditions related to requiring a security gate. Based on State and Local rule and regulations on marijuana cultivation facilities, there is no requirement for a security gate, and the proposed plan design proposes removal of the existing gate to ensure that vehicles entering the shared driveway access to Lot 2 and Lot 3 will not create a scenario vehicle cueing obstructs traffic flow in Lewiston Road, and will allow for continuous access to and around the site for emergency and life safety services.

- Hydrogeologic consultant – the owner has agreed to consult a geologist to provide the location and design of the proposed Lot 1 private well to ensure that it will be constructed in a manner and location that will prevent salt intrusion. Additionally, the geologist will also provide suggest location for the proposed private septic system. Notes to this effect have been added to the Subdivision and Grading and Utility plans as well.
- Existing building sewer – the owner has agreed to install an alternate building sewer pipe that will be capped in place so that in the event of any construction conflict and/or future building sewer issue can be easily resolved by making a connection from the existing septic tank to

the proposed alternate sewer line, and connecting the new sewer line to the existing septic field consisting of a sloping chambered system that is connected in series.

- Easements – Lot 2 and Lot 3 will access the site through a shared driveway, and access and maintenance easement is shown on the Subdivision Plan to ensure both Lots continuous use of the shared portions of the driveway. All utility easements including a proposed alternate easement location over the proposed capped building sewer are shown on the Subdivision Plan as well. All three lots will be part and party to a stormwater easement to allow each proposed lot to continue to use and be allowed to access and maintain the existing stormwater facilities.
- Buffering/screening – revised project design proposes widening the previously proposed planter area between Lot 2 and Lot 3 to a minimum of 10-feet wide based on conversations with Staff. The revised proposed planter areas will be extended and will reduce the number and space between openings. The planter is intended to be planted with a combination of ornamental ground cover and “Blue Point Juniper” trees that will be 3-4’ tall at time of planting. Additional juniper trees are proposed to be planted along a portion of the easterly property limit as well. Along the project frontage, twelve (12) 4-5’ white spruce will be planted to extend and supplement the existing tree line along the property frontage with Lewiston Road and are intended to serve as an improved visual break to the site. Previously Wichita Blue juniper trees had been proposed, but due to availability issues obtaining large juniper trees, the white spruce species is now proposed as the primary alternative.

LEWISTON ROAD SUBDIVISION

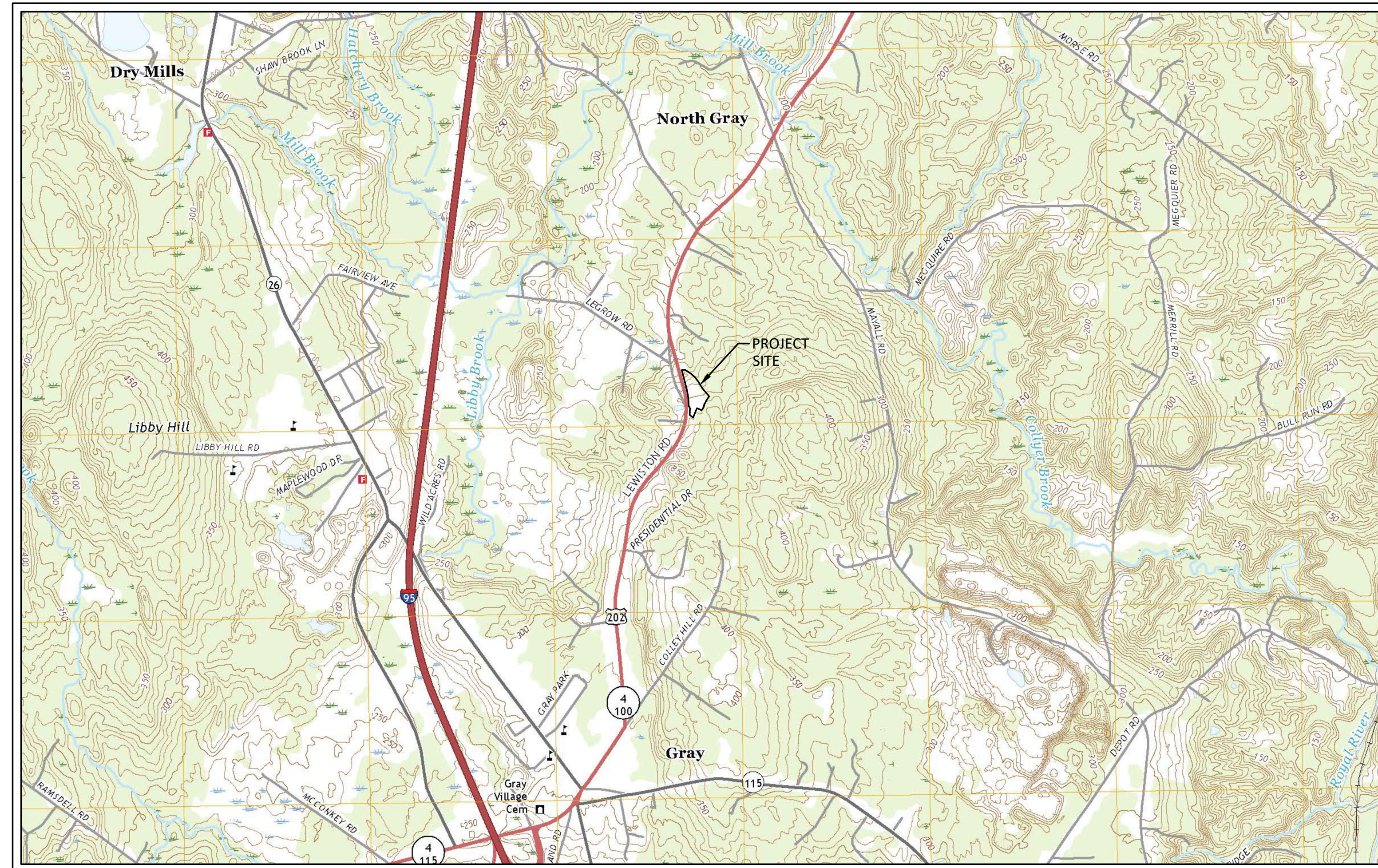
100 & 104 LEWISTON ROAD
GRAY, MAINE

CONSULTANTS

CIVIL ENGINEER DM ROMA CONSULTING ENGINEERS

LAND SURVEYOR JOHN PALMITER, PLS

SITE EVALUATOR & WETLAND SCIENTIST MAINLY SOILS, LLC



PROJECT VICINITY MAP

ISSUED FOR TOWN REVIEW - NOT FOR CONSTRUCTION
APRIL 27, 2022

PREPARED BY:
DM ROMA
CONSULTING ENGINEERS
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WINDHAM, ME 04062
(207) 591-5055

APPLICANT:
ODESSA PROPERTIES, LLC
P.O. BOX 963
GRAY, MAINE 04039

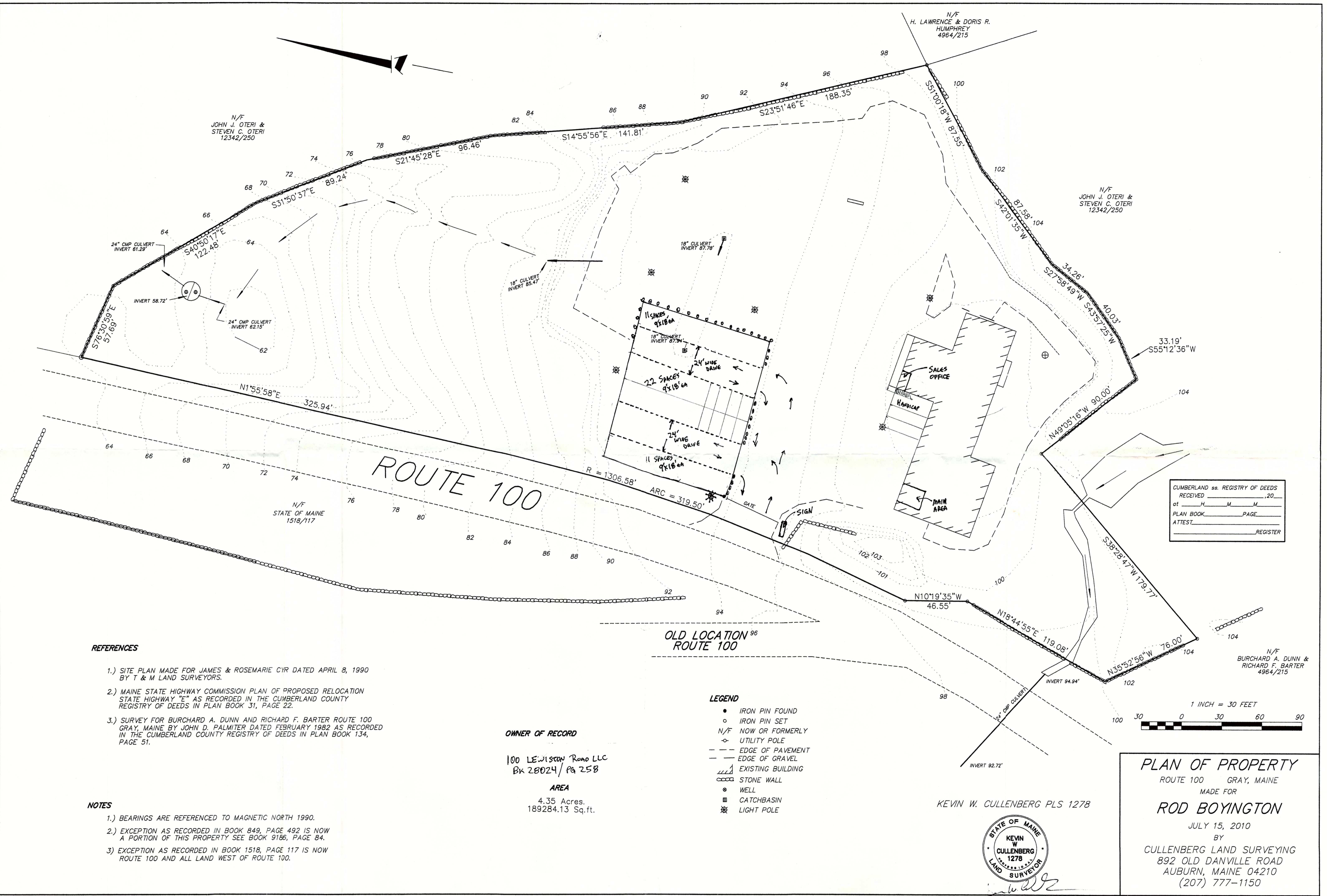
LEWISTON ROAD SUBDIVISION

DRAWING SHEET INDEX

PAGE NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN OF PROPERTY
3	SUBDIVISION PLAN
4	SITE & LANDSCAPING PLAN
5	GRADING AND UTILITY PLAN
6	DETAILS
7	DETAILS

PLAN ATTACHMENTS

WATERSHED MAPS
TURNING TEMPLATE PLAN



N/F
JOHN J. OTERI &
STEVEN C. OTERI
12342/250

N/F
JOHN J. OTERI &
STEVEN C. OTERI
12342/250

N/F
H. LAWRENCE & DORIS R.
HUMPHREY
4964/215

N/F
BURCHARD A. DUNN &
RICHARD F. BARTER
4964/215

N/F
STATE OF MAINE
1518/117

CUMBERLAND ss. REGISTRY OF DEEDS
RECEIVED _____, 20____
at _____ H _____ M _____
PLAN BOOK _____ PAGE _____
ATTEST _____ REGISTER

REFERENCES

- 1.) SITE PLAN MADE FOR JAMES & ROSEMARIE CYR DATED APRIL 8, 1990 BY T & M LAND SURVEYORS.
- 2.) MAINE STATE HIGHWAY COMMISSION PLAN OF PROPOSED RELOCATION STATE HIGHWAY "E" AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 31, PAGE 22.
- 3.) SURVEY FOR BURCHARD A. DUNN AND RICHARD F. BARTER ROUTE 100 GRAY, MAINE BY JOHN D. PALMITER DATED FEBRUARY 1982 AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 134, PAGE 51.

NOTES

- 1.) BEARINGS ARE REFERENCED TO MAGNETIC NORTH 1990.
- 2.) EXCEPTION AS RECORDED IN BOOK 849, PAGE 492 IS NOW A PORTION OF THIS PROPERTY SEE BOOK 9186, PAGE 84.
- 3.) EXCEPTION AS RECORDED IN BOOK 1518, PAGE 117 IS NOW ROUTE 100 AND ALL LAND WEST OF ROUTE 100.

OWNER OF RECORD

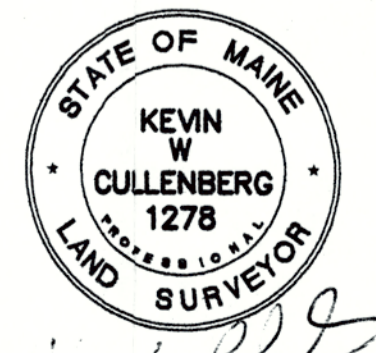
100 LEWISTON ROAD LLC
Bk 28024 / Pg 258

AREA
4.35 Acres.
189284.13 Sq.ft.

LEGEND

- IRON PIN FOUND
- IRON PIN SET
- N/F NOW OR FORMERLY
- UTILITY POLE
- EDGE OF PAVEMENT
- - - EDGE OF GRAVEL
- ▤ EXISTING BUILDING
- ⊘ STONE WALL
- ⊙ WELL
- ▣ CATCHBASIN
- ⊛ LIGHT POLE

1 INCH = 30 FEET
30 0 30 60 90



KEVIN W. CULLENBERG PLS 1278

PLAN OF PROPERTY

ROUTE 100 GRAY, MAINE
MADE FOR
ROD BOYINGTON
JULY 15, 2010
BY
CULLENBERG LAND SURVEYING
892 OLD DANVILLE ROAD
AUBURN, MAINE 04210
(207) 777-1150

EROSION AND SEDIMENTATION CONTROL NOTES:

EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY.

IN ORDER TO EFFECTIVELY PREVENT AND CONTROL EROSION RELATED TO SOIL DISTURBANCE, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPs) SHALL BE EMPLOYED:

1. POLLUTION PREVENTION

MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADED BUFFER AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION. MINIMIZE THE DISTURBANCE OF STEEP SLOPES. CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOW RATES AND VOLUME, TO MINIMIZE EROSION AT OUTLETS. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY DRAINAGE CHANNELS, SWALES, STREAM CHANNELS OR STREAM BANKS, UPLAND, OR COASTAL OR FRESHWATER WETLANDS OFF THE PROJECT SITE.

WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

2. TEMPORARY SOIL STABILIZATION BMPs

TEMPORARY MULCHING SHALL BE APPLIED IMMEDIATELY TO ANY AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED. ANY DISTURBED SOIL WITHIN 75' OF A STREAM, WATER BODY OR WETLAND MUST RECEIVE TEMPORARY MULCH WITHIN 48 HOURS FOLLOWING DISTURBANCE AND BEFORE ANY STORM EVENT. ALL OTHER AREAS SHALL RECEIVE TEMPORARY MULCH WITHIN 7 DAYS OF DISTURBANCE. AREAS WHICH CANNOT BE SEEDED DURING THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION. THE FOLLOWING ARE ACCEPTABLE TEMPORARY MULCHING METHODS:

HAY OR STRAW MULCHES NEED TO BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75-90% OF THE GROUND SURFACE. HAY OR STRAW CAN BE DRIVEN INTO THE GROUND WITH TRACKED EQUIPMENT IF SLOPES ARE LESS THAN 3%, OR CAN BE ANCHORED WITH JUTE, WOOD FIBER OR PLASTIC NETTING ON STEEPER SLOPES.

EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND WILL INCLUDE ANY OF THE FOLLOWING: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK OR OTHER ACCEPTABLE PRODUCTS BASED ON A SIMILAR RAW SOURCE. WOOD OR BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR COMPOSTED WOOD PRODUCTS ARE NOT ACCEPTABLE. EROSION CONTROL MIX CAN BE USED AS A STAND-ALONE REINFORCEMENT ON SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR LESS AND DRAINING IN SHEET FLOW. IT CAN BE PLACED WITH A HYDRAULIC BUCKET, WITH A PNEUMATIC BLOWER OR BY HAND, AND MUST PROVIDE 100% SOIL COVERAGE.

- EROSION CONTROL MIX SHALL MEET THE FOLLOWING SPECIFICATIONS:
-ORGANIC MATTER CONTENT SHALL BE BETWEEN 80-100%, DRY WEIGHT BASIS.
-PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6 IN. SCREEN AND BETWEEN 70-85% PASSING 0.75 IN. SCREEN
-ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
-LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX

WHEN USED AS MULCH, THE THICKNESS OF THE ERISION CONTROL MIX IS BASED UPON THE FOLLOWING:

Table with 3 columns: LENGTH OF SLOPE, 3:1 SLOPE OR LESS, BETWEEN 2:1 AND 3:1 SLOPE. Rows include slope lengths like LESS THAN 20 FT, BETWEEN 20 - 60 FT, BETWEEN 60 - 100 FT and corresponding thicknesses in inches.

CHEMICAL MULCHES AND SOIL BINDERS MAY BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER TO DETERMINE ADEQUATE APPLICATION RATES AND METHODS.

TEMPORARY MULCH SHALL BE INSPECTED FOLLOWING ANY SIGNIFICANT RAINFALL EVENT. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. EROSION CONTROL MATS AND MULCH ANCHORING MUST BE INSPECTED AFTER RAINFALL EVENTS FOR DISLOCATION OR FAILURE, AND REPAIRED IMMEDIATELY. INSPECTIONS SHALL TAKE PLACE UNTIL 95% OF THE SOIL SURFACE IS COVERED WITH PERMANENT VEGETATION. WHERE MULCH IS USED WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, AND REPAIR AS NEEDED.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON SOILS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS. IF TEMPORARY VEGETATION IS ESTABLISHED PRIOR TO OCTOBER 15, TEMPORARY MULCH SHALL BE APPLIED THROUGH THE WINTER AND TEMPORARY VEGETATION SHALL BE PLANTED AT THE BEGINNING OF THE GROWING SEASON THE FOLLOWING YEAR. TO PREPARE THE SEEDED, THE CONTRACTOR SHALL APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OF 10-10-10 (N-P205-K20) OR EQUIVALENT AND LIMESTONE AT A RATE OF 3 TONS PER ACRE, IF NECESSARY. LOOSEN SOIL TO A DEPTH OF 2 INCHES IN AREAS THAT HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITIES. GRASS SEED SHALL BE SELECTED BASED UPON THE TIME OF YEAR THE PLANTING WILL TAKE PLACE AS SUMMARIZED IN THE FOLLOWING TABLE:

Table with 3 columns: SEED, LB. PER ACRE, RECOMMENDED SEEDING DATES. Rows include WINTER RYE, OATS, ANNUAL RYEGRASS.

TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED TO MAINTAIN AT LEAST 95% VEGETATIVE COVER OF SOIL SURFACE. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES SHALL BE USED IN THE INTERIM SUCH AS TEMPORARY MULCH, FILTER BARRIERS, ETC.

3. SEDIMENT BARRIER BMPs

PRIOR TO CONSTRUCTION TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED AT THE DOWNGRADED EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. SEDIMENT BARRIERS INCLUDE ANY OF THE FOLLOWING:

FILTER BARRIER FENCE, ALSO CALLED SILT FENCE, SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE FILTER FABRIC SHALL BE A PEROUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL PROVIDE A MINIMUM OF 6 MONTHS USABLE CONSTRUCTION LIFE INCLUDING PROTECTION AGAINST ULTRA-VIOLET LIGHT. THE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES INSTALLED AND POST SPACING SHALL NOT EXCEED 6 FEET. JOINTS IN THE FENCE SHALL BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NECESSARY SHALL BE SPLICED TOGETHER AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP, AND THE BOTTOM 6-8 INCHES OF FABRIC SHALL BE "TOED-IN" TO THE TRENCH AND COMPACTED. THE TRENCH SHOULD BE UPHILL OF THE FABRIC PRIOR TO BURIAL.

EROSION CONTROL MIX BERMS ARE LINEAR BARRIERS COMPOSED OF EROSION CONTROL MIX AS SPECIFIED ABOVE. THE BERM MUST BE A MINIMUM OF 12 INCHES TALL AND 24 INCHES WIDE AT THE BASE IF UPHILL SLOPES ARE LESS THAN 5%. STEEPER SLOPES OR SLOPES GREATER THAN 20 FEET LONG MAY REQUIRE A LARGER WIDTH BERM. EROSION CONTROL MIX BERMS ARE PROHIBITED AT THE BASE OF A LONG OR STEEP SLOPE (8% OR GREATER) WITHOUT THE ADDITIONAL SUPPORT OF A FILTER FENCE INSTALLED ON THE DOWNHILL SIDE OF THE BERM.

SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADED OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED RUNNING ONTO THE STOCKPILE. SEDIMENT BARRIERS SHALL BE INSPECTED AFTER ANY SIGNIFICANT RAINFALL EVENT AND REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIERS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR EDGES OF THE BARRIER, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED BEHIND THE BARRIER, IT MAY BE NECESSARY TO REPLACE THE BARRIER WITH A TEMPORARY STONE CHECK DAM. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF THE BARRIER HEIGHT. AFTER THE BARRIER IS REMOVED, ANY REMAINING SILT SHALL EITHER BE REMOVED OR GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

4. STORM DRAIN INLET PROTECTION

STORM DRAIN INLETS THAT ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED SHALL BE PROTECTED WITH A FILTER UNTIL THE DRAINAGE AREA IS EITHER OPERATIONAL OR STABILIZED WITH 95% VEGETATIVE GROWTH. THE FOLLOWING ARE ACCEPTABLE BMPs ASSOCIATED WITH STORM DRAIN INLET PROTECTION:

MANUFACTURED SEDIMENT FILTERS ARE THE PREFERRED METHOD FOR PROTECTING CATCH BASIN INLETS IN PAVED OR GRAVEL ROADWAYS. THE FILTERS TYPICALLY CONSIST OF A FABRIC OR OTHER PERVIOUS MATERIAL THAT IS PLACED ABOVE OR BELOW THE GRATE THAT TRAPS SEDIMENT ON THE SURFACE AND ALLOWS WATER TO FLOW THROUGH THE GRATE. CONSIDERATIONS SUCH AS WEATHER CONDITIONS, SLOPES, TRIBUTARY WATERSHED AREA AND EXPECTED SEDIMENT ACCUMULATION SHOULD BE FACTORED INTO MAKING A DECISION ON ANY PARTICULAR PRODUCT, AND THE MANUFACTURER'S RECOMMENDATIONS ON INSTALLATION AND MAINTENANCE SHALL BE STRICTLY ADHERED TO.

5. STABILIZED CONSTRUCTION ENTRANCE/EXIT

TO REDUCE THE TRACKING OF SEDIMENT ONTO ROADWAYS, A STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED AT ALL POINTS OF EGRESS WHERE VEHICLES MAY TRAVEL FROM THE PROJECT SITE TO A PUBLIC ROAD OR OTHER PAVED AREA. THE STONE PAD SHALL CONSIST OF A MINIMUM 6-INCH DEPTH OF 2-3 INCH CRUSHED STONE, AND SHALL BE PLACED ON A GEOTEXTILE FABRIC. THE PAD SHALL EXTEND AT LEAST 50 FEET INTO THE PROJECT SITE AND BE A MINIMUM OF 10 FEET WIDE. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, AND THE CONTRACTOR SHALL SWEEP PAVEMENT AT EXITS THAT HAVE EXPERIENCED ANY MUD-TRACKING PRIOR TO THE NEXT STORM EVENT. MAINTAIN THE PAD UNTIL ALL DISTURBED AREAS ARE STABILIZED.

INSPECTION & MAINTENANCE NOTES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE ALL CONSTRUCTION OPERATIONS COMPLY WITH THE INSPECTION AND MAINTENANCE PROCEDURES FOR THE PROJECT, INCLUDING, BUT NOT LIMITED TO THOSE INCLUDED IN THIS PLAN SET, THE "INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN," AND THE "MAINTENANCE AND SEDIMENTATION CONTROL PRACTICE FIELD GUIDE FOR CONTRACTORS". INSPECTION SHALL OCCUR ON ALL DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIAL STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. THESE AREAS SHALL BE INSPECTED AT LEAST ONCE A WEEK AS WELL AS 24 HOURS BEFORE AND AFTER A STORM EVENT GENERATING MORE THAN 0.5 INCH OF RAINFALL OVER A 24-HOUR PERIOD AND PRIOR TO CONDUCTING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.
2. EROSION CONTROLS SHALL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED. IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE REPAIRED, THE REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF BMPs NEED TO BE MAINTAINED OR MODIFIED, ADDITIONAL BMPs ARE NECESSARY, OR OTHER CORRECTIVE ACTION IS NEEDED, IMPLEMENTATION MUST BE COMPLETED WITHIN SEVEN CALENDAR DAYS AND PRIOR TO ANY RAINFALL EVENT.
3. A REPORT SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN MUST BE MAINTAINED ON SITE. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS; THE DATE(S) OF THE INSPECTIONS; AND THE MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF SEDIMENTATION CONTROLS, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPs THAT NEED MAINTENANCE, BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPs, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN. THE LOG MUST BE MADE ACCESSIBLE TO MDEP AND TOWN STAFF, AND A COPY MUST BE PROVIDED UPON REQUEST. THE OWNER SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

6. DUST CONTROL

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THE PROJECT SITE AND ON ADJACENT ROADWAYS. EXPOSED SOIL SURFACES SHALL BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. GRAVEL SURFACES SHALL EITHER BE TREATED WITH AN APPLICATION OF CALCIUM CHLORIDE OR COVERED WITH CRUSHED STONE IF DUST CONTROL BECOMES DIFFICULT WITH NORMAL WATER APPLICATIONS.

7. LAND GRADING AND SOLE PREPARATION

GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE NEXT PHASE. ANY EXPOSED AREA THAT WILL NOT BE FINISH GRADED WITHIN 7 DAYS SHALL BE TREATED WITH MULCH OR PLANTED WITH TEMPORARY VEGETATION. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASS SHALL NOT BE STEEPER THAN 2:1. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLUMPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS. FILL MATERIAL SHALL BE FREE OF STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

8. TOPSOIL

IF POSSIBLE, TOPSOIL SHALL BE STOCKPILED ON THE PROJECT SITE AND REUSED. HIGH QUALITY TOPSOIL SHALL BE FRIABLE AND LOAMY (LOAM, SANDY LOAM, SILT LOAM, SANDY CLAY LOAM, CLAY LOAM), AND SHALL BE FREE OF DEBRIS, TRASH, STUMPS, ROCKS, ROOTS AND NOXIOUS WEEDS. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENEED BY SCARIFYING TO A DEPTH OF AT LEAST 2 INCHES TO ENSURE BONDING WITH SUBSOIL. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 4 INCHES. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. IT IS NECESSARY TO COMPACT THE TOPSOIL ENOUGH TO ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL, BUT UNDUCE COMPACTION IS TO BE AVOIDED.

9. PERMANENT SOIL STABILIZATION

IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS NOT BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, VEHICULAR EROSION IS EVIDENT, ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE:

SEEDER AREAS: TO PREPARE THE SEEDED, APPLY 10-20 TONS FERTILIZER AT A RATE OF 800 POUNDS PER ACRE AND GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE. WORK THE FERTILIZER AND LIMESTONE INTO THE TOPSOIL TO A DEPTH OF 4 INCHES AND REMOVE ANY STONES, ROOTS OR OTHER VISIBLE DEBRIS. SELECT A SEED MIXTURE THAT IS APPROPRIATE FOR THE SOIL TYPE AND MOISTURE CONTENT AS FOUND AT THE SITE, AND FOR THE AMOUNT OF SUN EXPOSURE AND FOR THE TYPE OF TRAFFIC. REFER TO THE LOCAL SOIL AND WATER CONSERVATION DISTRICT FOR APPROPRIATE SEED MIXTURES. APPLY SEED UNIFORMLY IN ACCORDANCE WITH SUPPLIER RECOMMENDATIONS AND IMMEDIATELY COVER WITH MULCH AS DESCRIBED IN THE TEMPORARY MULCHING SECTION OF THIS PLAN.

HYDROSEEDING SHALL BE DONE IN ACCORDANCE WITH SUPPLIER'S RECOMMENDATIONS. FOR SEEDED AREAS TO BE PERMANENTLY STABILIZED, 90% OF THE DISTURBED SOIL SHALL BE COVERED WITH MATURE HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

SOD STRIPS SHALL BE LAID AT RIGHT ANGLES TO DIRECTION OF SLOPE OR FLOW OF WATER STARTING AT LOWEST ELEVATION. JOINTS SHALL BE STAGGERED, AND ALL STRIPS SHALL BE ROLLED OR TAMPED INTO PLACE. ON SLOPES, SOD SHALL BE ANCHORED WITH STAPLES, WIRE OR PINS. IRRIGATE SODDED AREA IMMEDIATELY AFTER INSTALLATION. FOR SODDED AREAS TO BE PERMANENTLY STABILIZED, THE ROOTS OF THE SOD MUST BE COMPLETELY BOUND INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

PERMANENT MULCH IS A LONG TERM COVER THAT PROVIDES A GOOD BUFFER AROUND DISTURBED AREAS. THE EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS OR COMPOSTED BARK. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, RECYCLED WOOD PRODUCTS OR BARK CHIPS ARE NOT ACCEPTABLE. THE EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH.

RIPRAP STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNEVEN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE DEPTH OF STONE SHALL BE A MINIMUM OF 2.2 TIMES THE MAXIMUM STONE DIAMETER. A GRAVEL OR GEOTEXTILE FILTER BLANKET SHALL BE PLACED BETWEEN THE RIPRAP AND UNDERLYING SOIL SURFACE. GRAVEL FILTER BLANKETS SHALL MEET MOTT TYPE-C UNDERDRAIN MATERIAL SPECIFICATIONS AND BE AT LEAST 6 INCHES THICK. GEOTEXTILE FILTER BLANKETS SHALL BE SPECIFIED BASED ON SITE CONDITIONS. RIPRAP SLOPES SHALL BE TOED INTO TO THE BASE OF THE EMBANKMENT BY EXCAVATING A TRENCH AT THE BOTTOM OF THE SLOPE AND INSTALLING A STABLE BASE OF RIPRAP TO GRADE.

DITCHES, CHANNELS AND SWALES ARE CONSIDERED PERMANENTLY STABILIZED WHEN THE CHANNEL HAS 90% COVER OF HEALTHY VEGETATION WITH A WELL GRADED RIPRAP LINING, EROSION CONTROL BLANKET, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE BANKS, OR DOWNCUTTING OF THE CHANNEL.

10. STORMWATER CHANNELS

EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTION'S GRADING, SHAPING, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL. CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.

WINTER EROSION AND SEDIMENTATION CONTROL NOTES:

THE WINTER CONSTRUCTION PERIOD TYPICALLY BEGINS IN EARLY NOVEMBER AND ENDS IN MID APRIL. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AN AREA SHALL BE CONSIDERED DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN THE ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. A COVER OR EROSION CONTROL MIX IS THE PREFERRED TEMPORARY MULCH DURING WINTER CONDITIONS.

1. NATURAL RESOURCE PROTECTION

ANY AREAS WITHIN 75 FEET FROM ANY REGULATED NATURAL RESOURCES SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER. DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (FOR EXAMPLE, SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY REGULATED NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE REGULATED NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

2. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

3. MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE (TWICE THE NORMAL ACCEPTED RATE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCHES THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. SNOW MUST BE REMOVED DOWN TO A ONE-INCH DEPTH PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERTY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WITH THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 15T, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4. SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE FOR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STACKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED WITHIN 100 FEET FROM ANY REGULATED NATURAL RESOURCE.

5. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF DORMANT SEEDING IS USED, ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS PER 1,000 S.F. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75%) IN THE SPRING SHALL BE REVEGETATED.

6. OVER-WINTER STABILIZATION OF DITCHES AND CHANNELS

ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED BY NOVEMBER 1. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A GRASS-LINED DITCH OR CHANNEL IS STABILIZED BY SEPTEMBER 1, THEN EITHER A SOIL LINING SHALL BE INSTALLED PRIOR TO OCTOBER 1 OR THE DITCH MUST BE LINED WITH STONE RIPRAP BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE PRIOR TO NOVEMBER 1.

7. OVER-WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. ALL AREAS HAVING A GRADE STEEPER THAN 8% SHALL BE CONSIDERED A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN THE SLOPE SHALL EITHER BE STABILIZED WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS BY OCTOBER 1, SOD BY OCTOBER 1, EROSION CONTROL MIX BY NOVEMBER 1 OR STONE RIPRAP BY NOVEMBER 15. SEE APPLICABLE SECTIONS UNDER EROSION AND SEDIMENTATION CONTROL NOTES FOR PROPER INSTALLATION METHODS.

8. OVER-WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN THE AREA SHALL EITHER BE STABILIZED WITH TEMPORARY VEGETATION BY OCTOBER 1, SOD BY OCTOBER 1, OR MULCH BY NOVEMBER 15. SEE APPLICABLE SECTIONS UNDER EROSION AND SEDIMENTATION CONTROL NOTES FOR PROPER INSTALLATION METHODS.

9. MAINTENANCE

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM, PERIOD OF THAWING AND RUNOFF AND AT LAST ONCE A WEEK, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

HOUSEKEEPING NOTES

1. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

2. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER OR AFTER CONSTRUCTION, OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSED INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EXCESSIVE GROUNDWATER OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEEP IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS: MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING: EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDINGS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN, AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

- (a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
(b) FIRE HYDRANT FLUSHINGS;
(c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
(d) ROUTINE CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
(e) DUST EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
(f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) IF DETERGENTS ARE NOT USED;
(g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
(h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
(i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
(j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX (C)(5));
(k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
(l) LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES: APPROVAL FROM THE MDEP DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOLUTION OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH SECTION 6 ABOVE. SPECIFICALLY, THE MDEP'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

- (a) WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
(b) FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
(c) SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
(d) TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

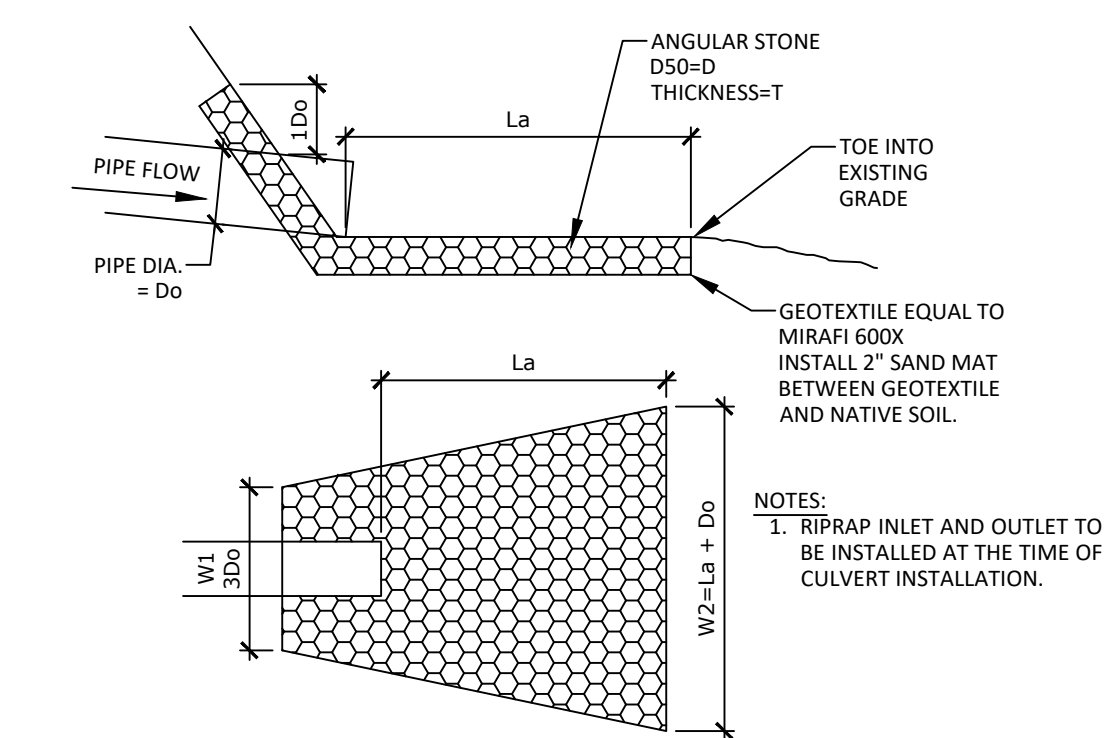
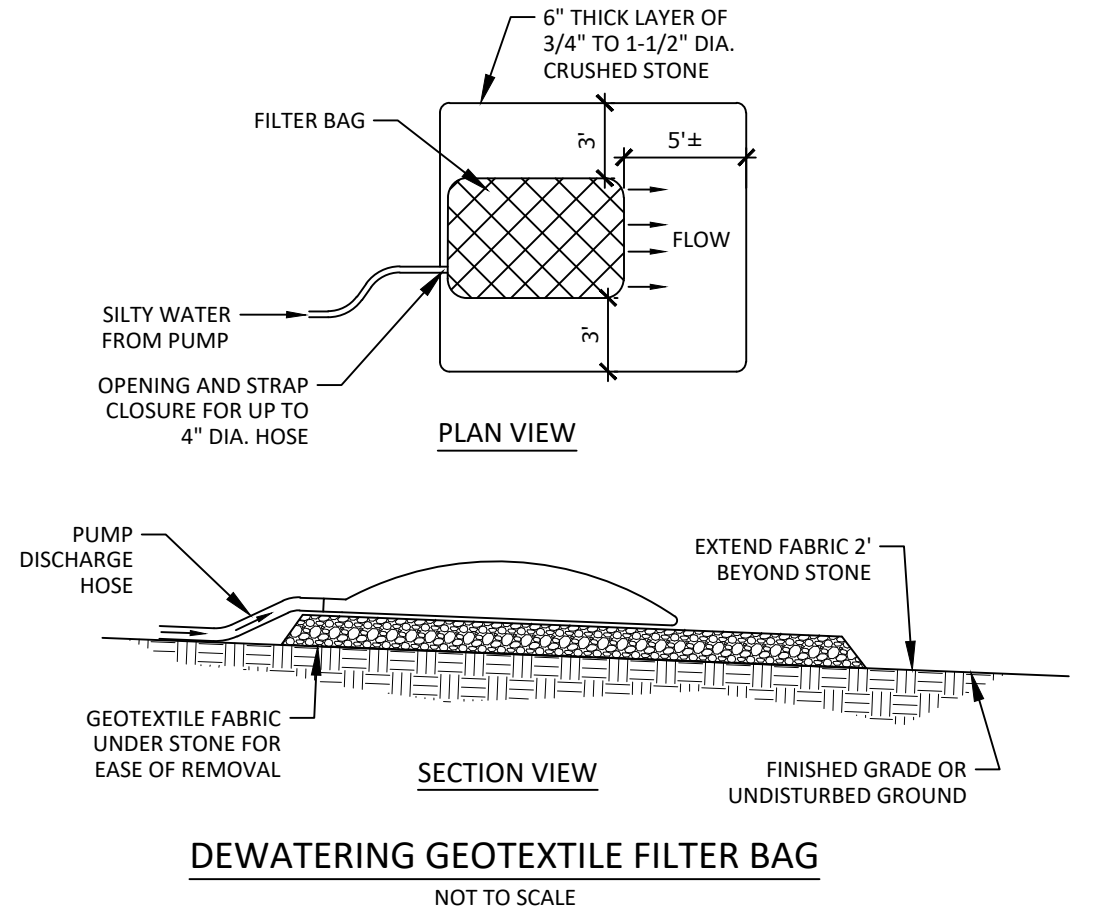
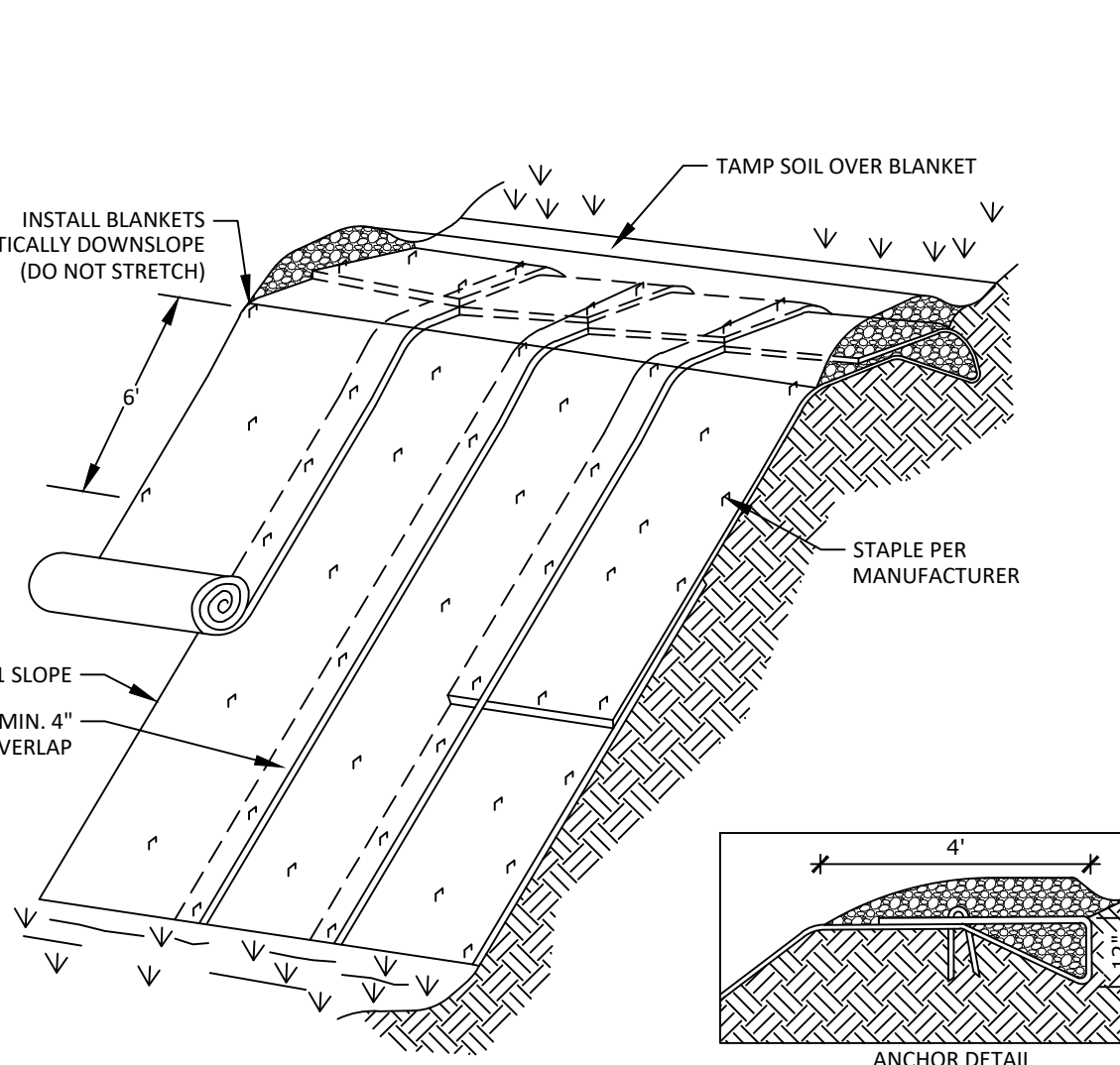
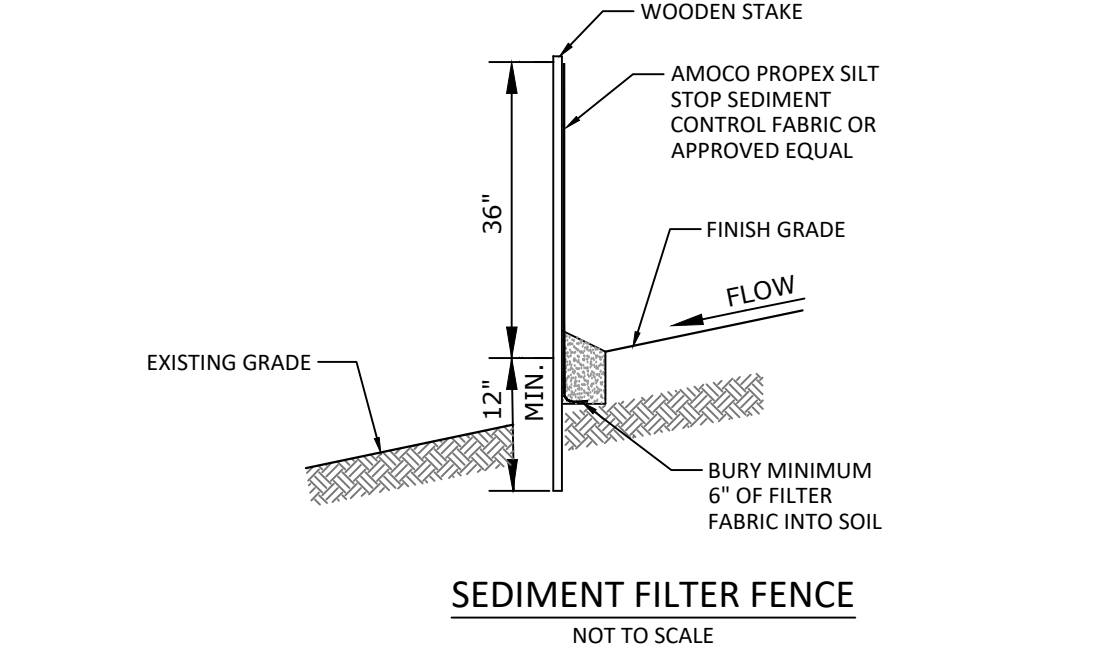
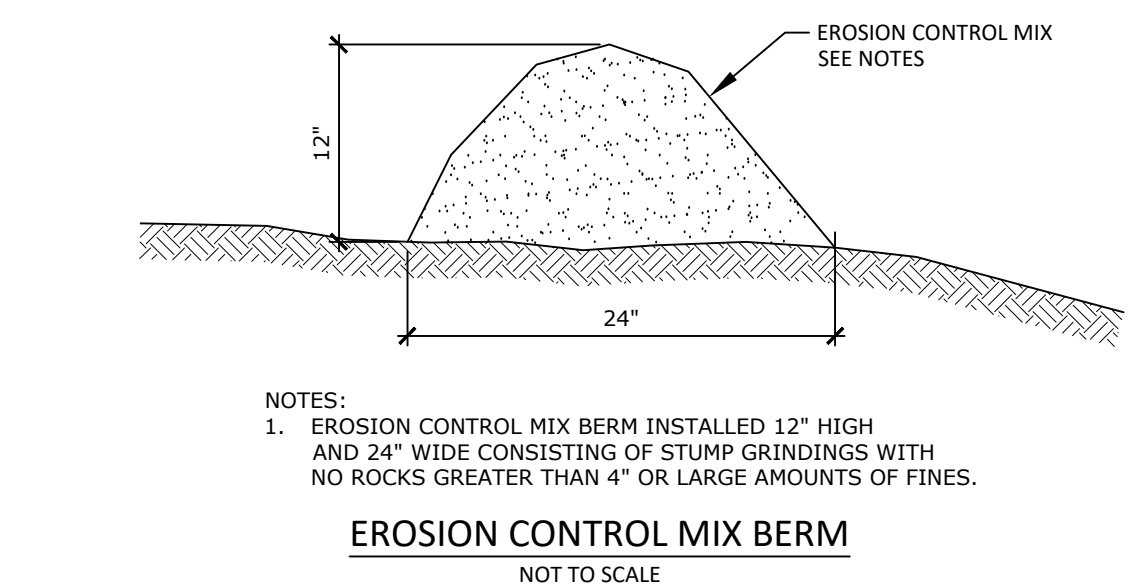
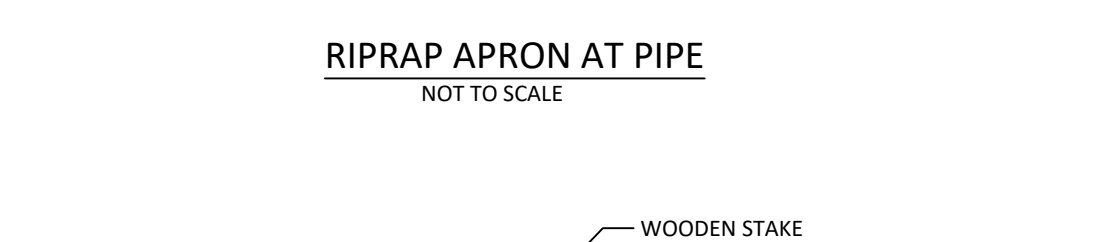
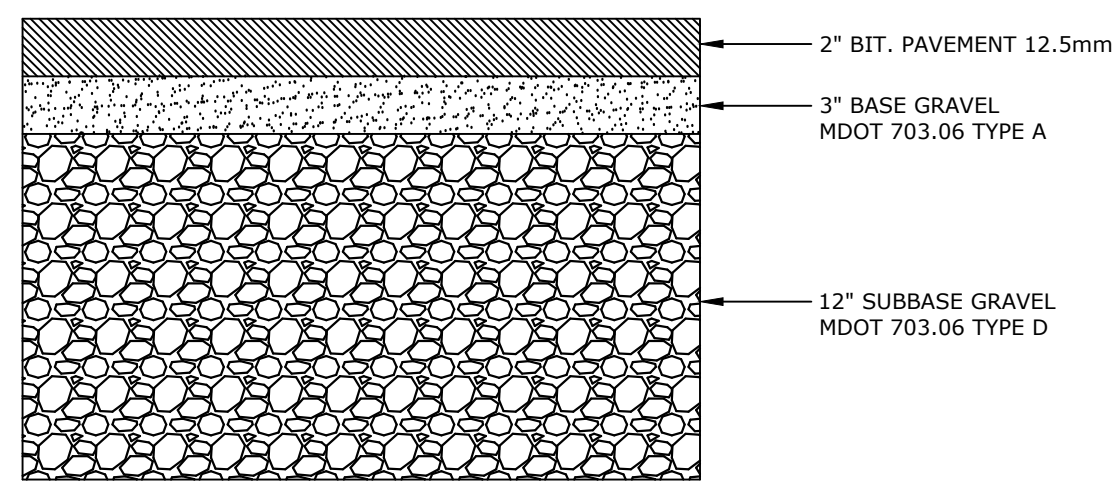
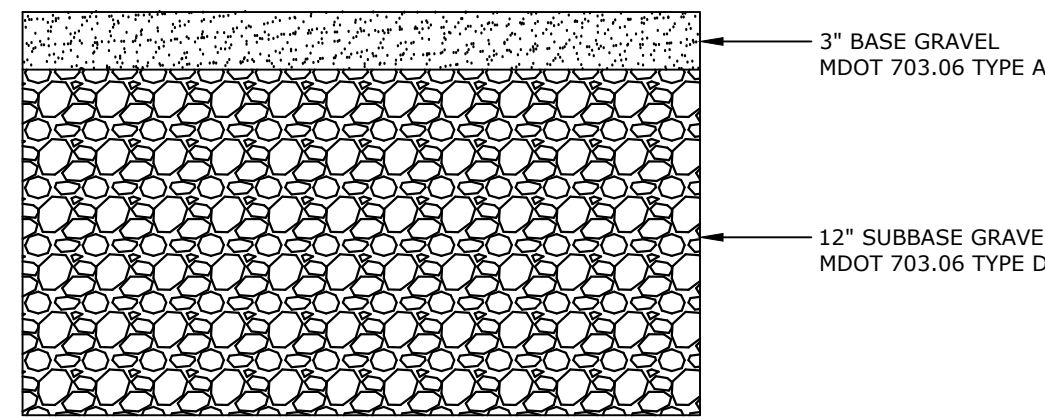


Table titled 'RIPRAP APRON DATA' with columns for Pipe Dia, W1, W2, La, D, and T. Rows show data for pipe diameters 12", 15", and 18".

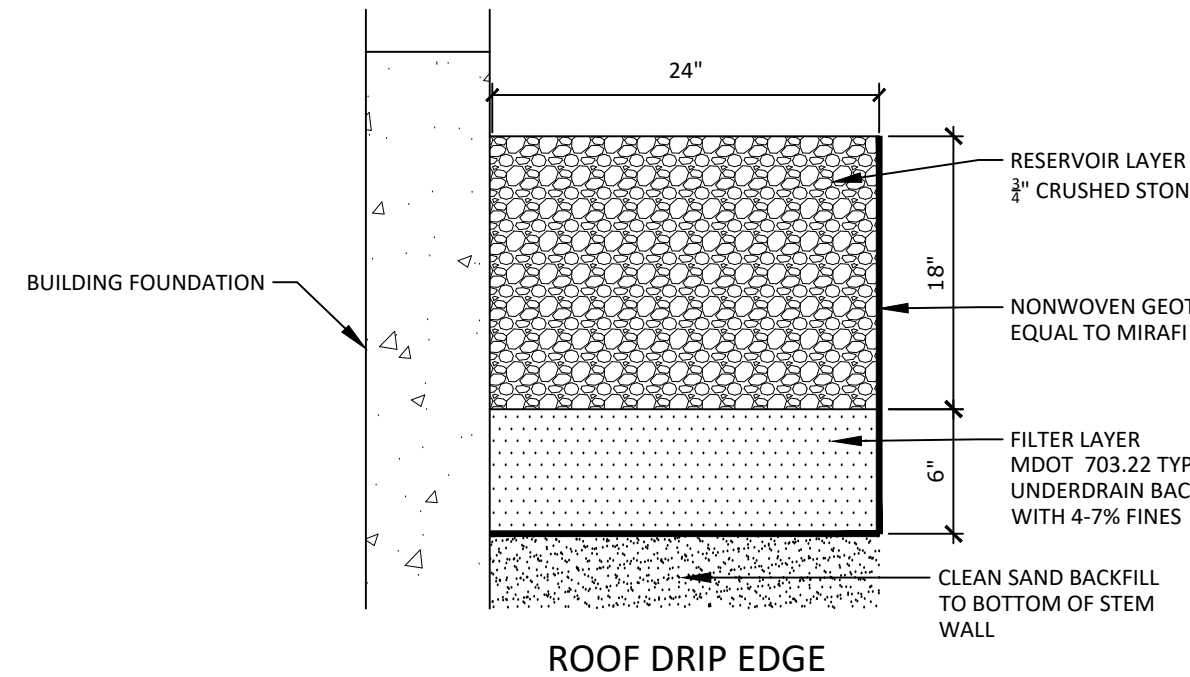




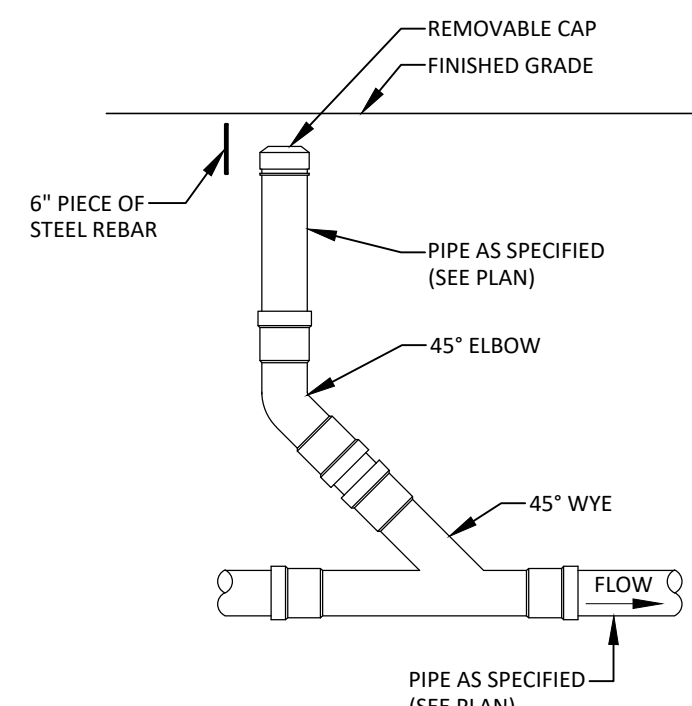
TYPICAL PAVEMENT SECTION
NOT TO SCALE



TYPICAL GRAVEL DRIVEWAY SECTION
NOT TO SCALE

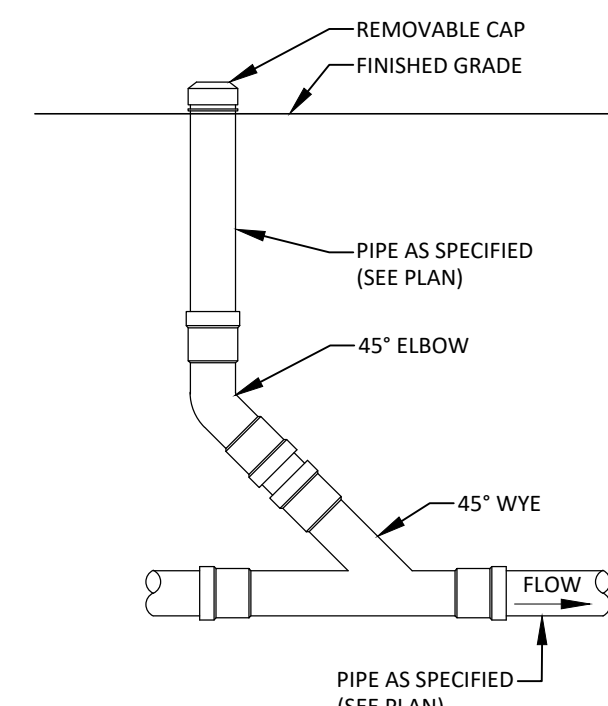


ROOF DRIP EDGE
NOT TO SCALE



NOTES:
1. IF CLEANOUT IS LOCATED IN PAVEMENT, INSTALL CLEANOUT BOX ASSEMBLY OVER CLEANOUT AND SET AT FINISHED PAVEMENT GRADE. BOX ASSEMBLY TO BE PRODUCT NO. 00156452W01 AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC. OR APPROVED EQUAL.

SANITARY CLEANOUT DETAIL
NOT TO SCALE

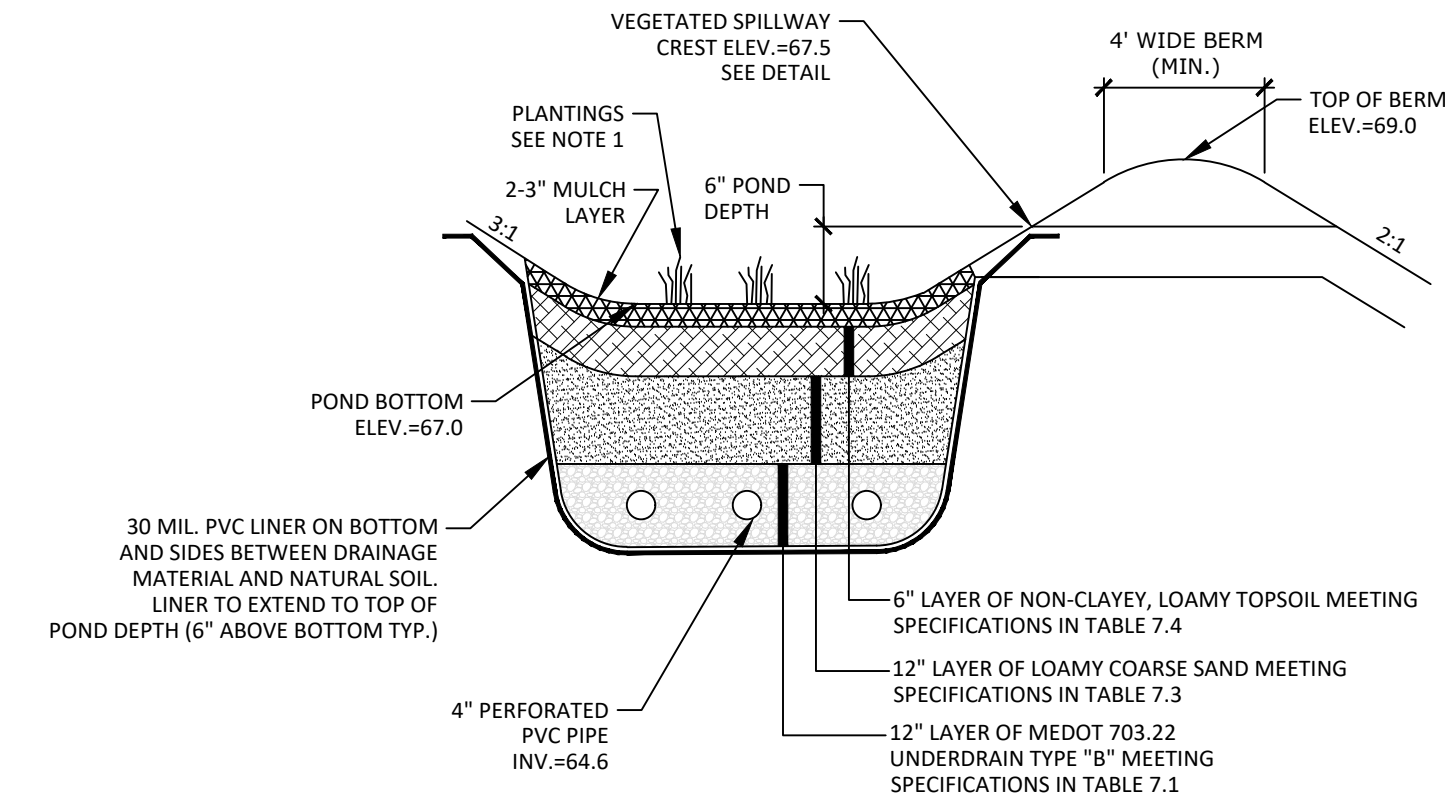


UNDERDRAIN CLEANOUT DETAIL
NOT TO SCALE

SIEVE SIZE	% PASSING BY WEIGHT
1"	90-100
1/2"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

SIEVE SIZE	% PASSING BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
200 CLAY	<2.0

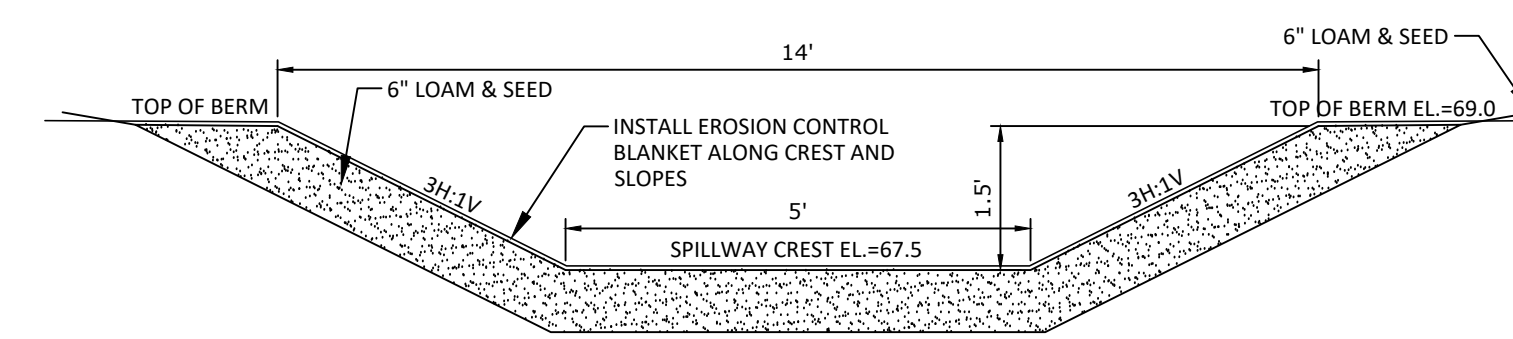
SIEVE SIZE	% PASSING BY WEIGHT
#4	75-95
#10	60-90
#40	35-85
#200	20-70
200 CLAY	<2.0



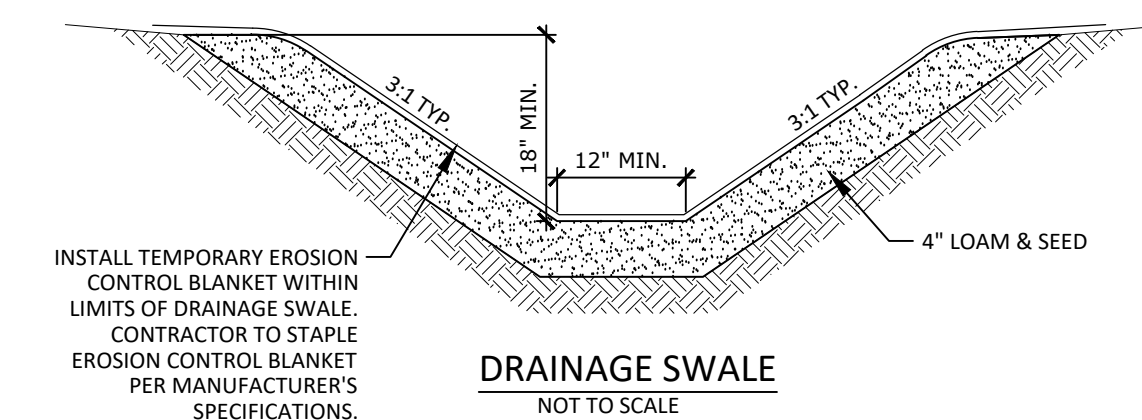
GENERAL NOTES:

- PLANTINGS WITHIN BIORETENTION CELLS SHALL BE TOLERANT OF WELL DRAINED SOILS AND FREQUENT INUNDATION. SEE MAINE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME 1 - APPENDIX A LANDSCAPE DESIGNS TO ENHANCE STORMWATER TREATMENT FOR PLANTING RECOMMENDATIONS.
- CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.
- COMPACTION OF SOIL FILTER: FILTER MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST TWO LIFTS TO PREVENT POCKETS OF LOOSE MEDIA.
- CONSTRUCTION OVERSIGHT: INSPECTION BY THE DESIGN ENGINEER OR SUITABLE THIRD PARTY WILL OCCUR AT A MINIMUM:
 - AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
 - AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
 - AFTER THE FILTER MEDIA HAS BEEN INSTALLED, MULCHED AND PLANTED.
 - AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.

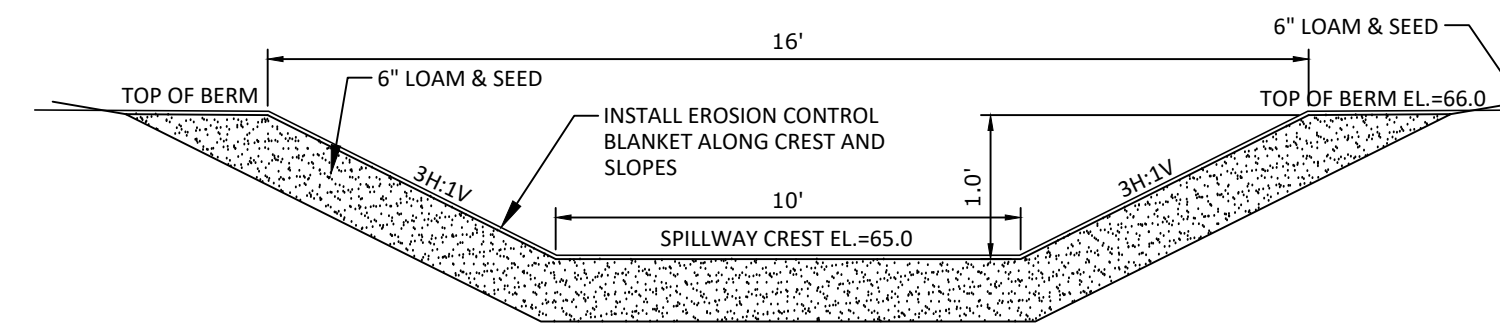
BIORETENTION BASIN DETAIL
NOT TO SCALE



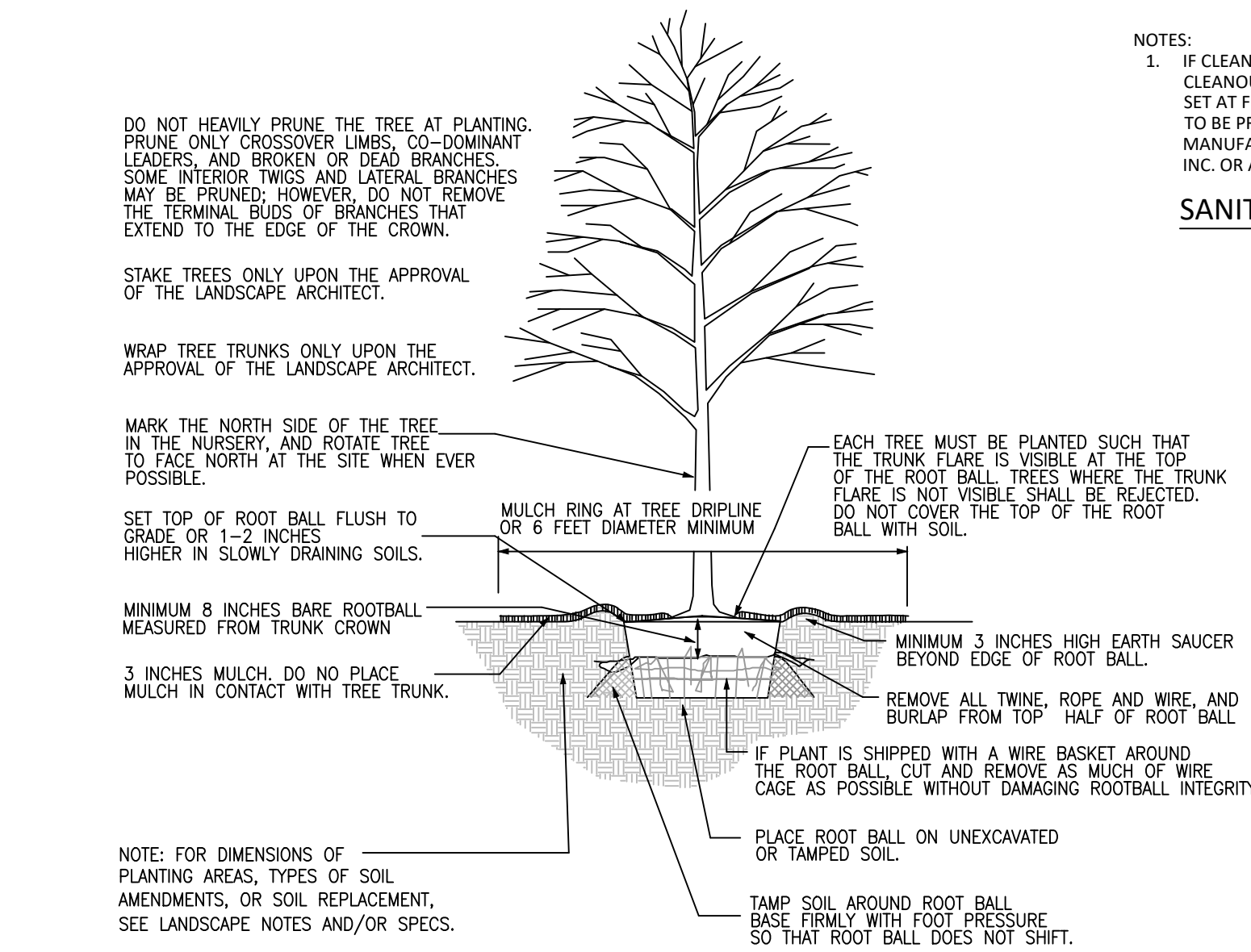
BIORETENTION BASIN SPILLWAY DETAIL
NOT TO SCALE



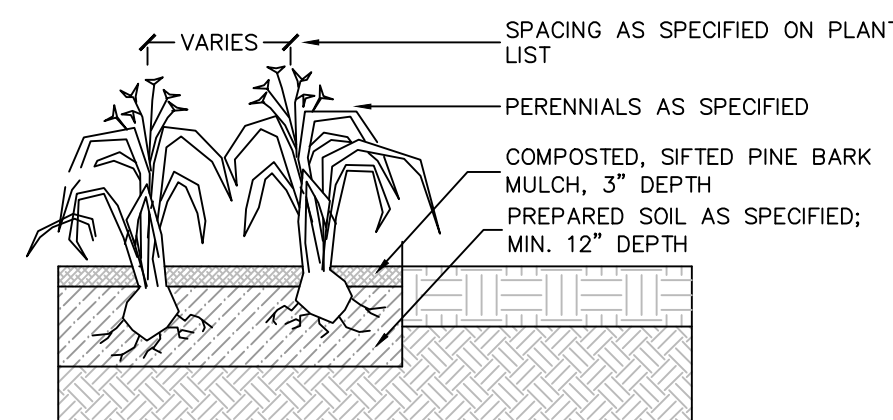
DRAINAGE SWALE
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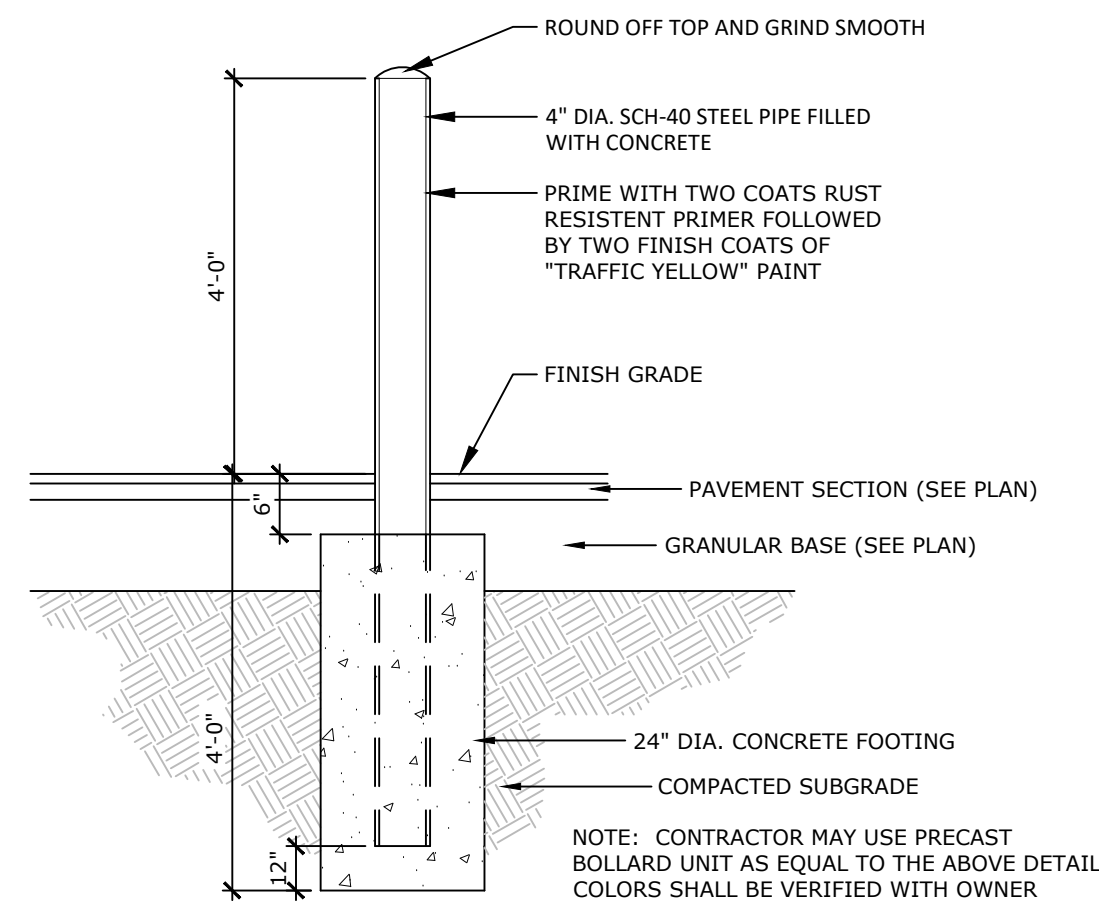
EXISTING DETENTION BASIN SPILLWAY DETAIL
NOT TO SCALE



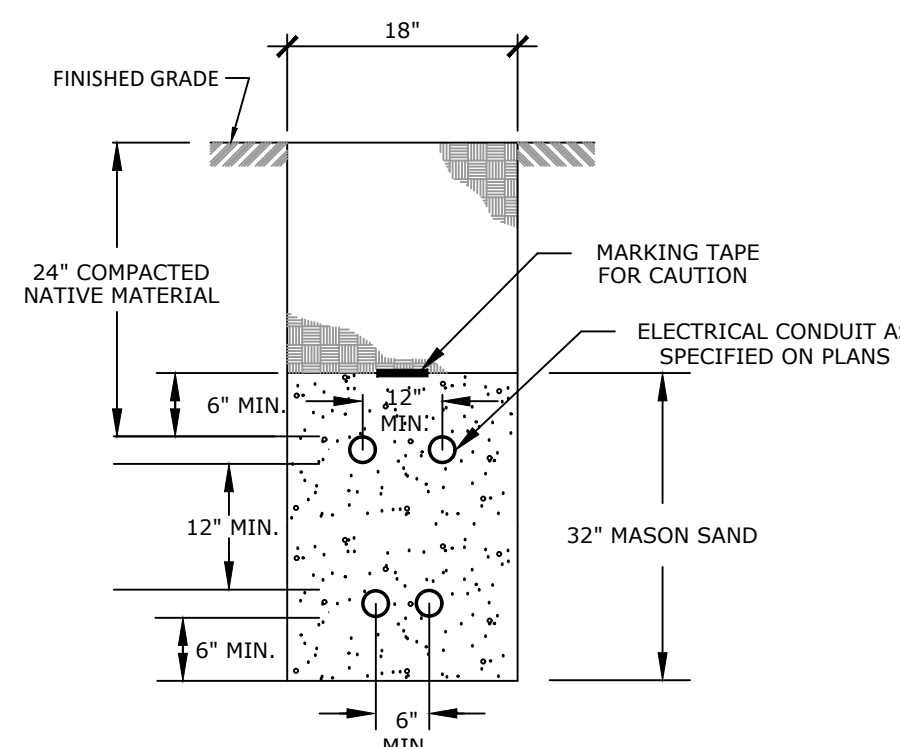
TREE INSTALLATION DETAIL - BALL & BURLAP
NOT TO SCALE



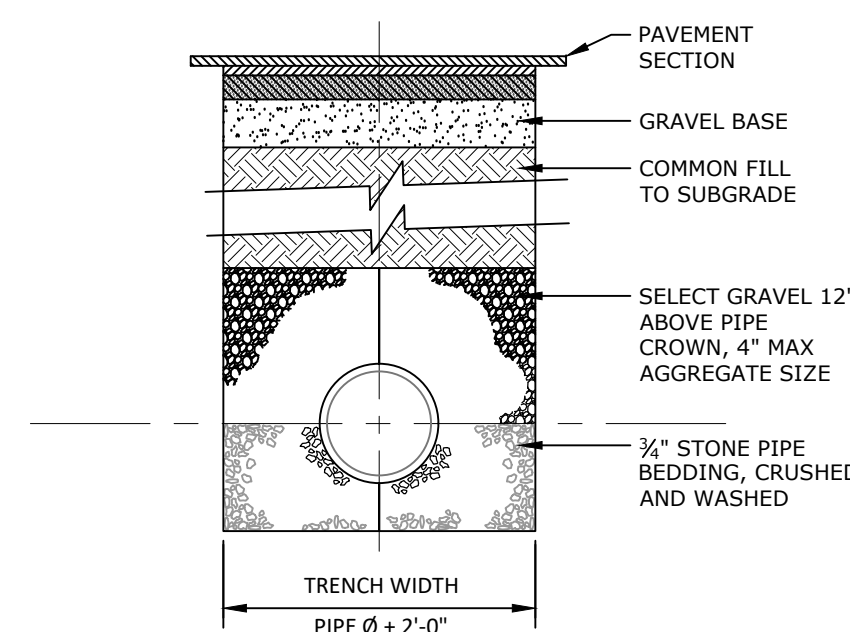
PERENNIALS INSTALLATION DETAIL
NOT TO SCALE



4" DIA. PIPE BOLLARD
NOT TO SCALE

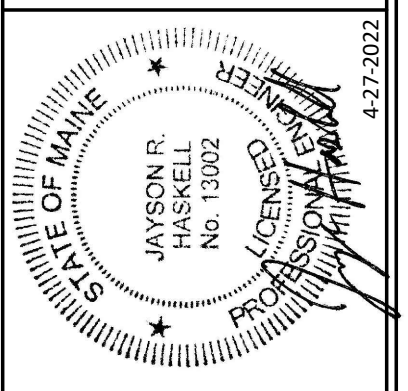


TRENCH DETAIL - ELECTRICAL CONDUIT
NOT TO SCALE



TYPICAL TRENCH SECTION
NOT TO SCALE

- NOTES:
- ALL CONDUITS SHALL BE 2-1/4" DIA. PVC SCH 40 EXCEPT FOR ROAD CROSSINGS SHALL BE PVC SCH 80
 - INSTALLATION SHOULD NOT ALLOW THE INTER-TWINGING OF CABLES.
 - BEDDING AND BACKFILL SHALL BE FREE OF ROOTS, STUMPS AND OTHER DEBRIS.
 - COMMUNICATION CABLE AND POWER CABLE SHALL HAVE NO LESS THAN 12 INCHES OF RADIAL SEPARATION.

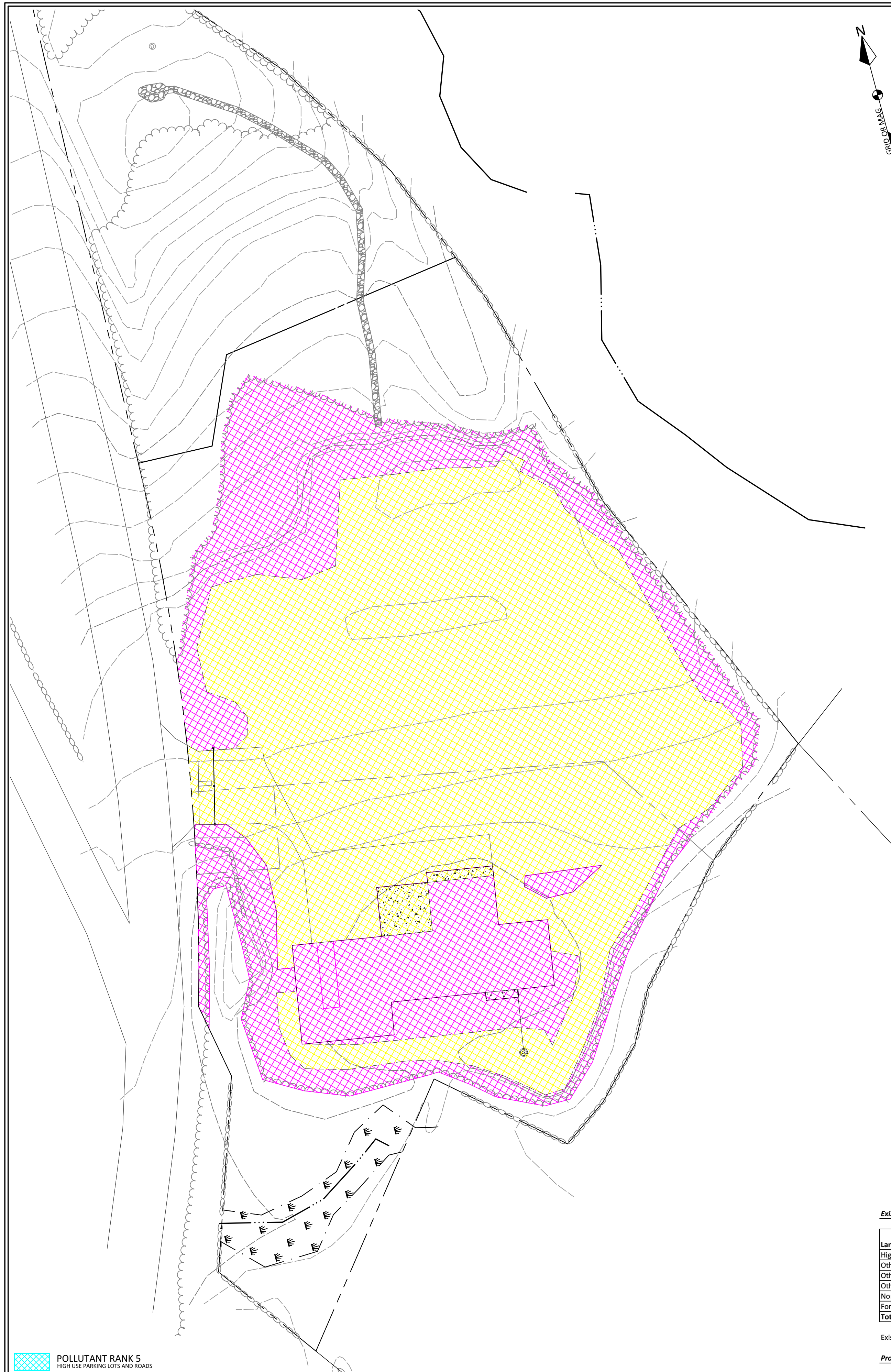


DM ROMA
CONSULTING ENGINEERS
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WINDHAM, ME 04062
(207) 591-5055

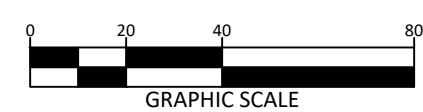
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A	3-29-22	JPC	ISSUED FOR PERMIT REVIEW
B	4-5-22	JPC	ISSUED FOR PERMIT REVIEW
C	4-27-22	JPC	ISSUED FOR PERMIT REVIEW

DETAILS
LEWISTON ROAD SUBDIVISION
100 & 104 LEWISTON ROAD
GRAY, MAINE
FOR: **ODESSA PROPERTIES LLC**
PO BOX 963
GRAY, ME, 04039

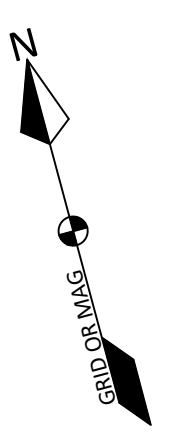
21062
JOB NUMBER:
AS NOTED
SCALE:
4-27-2022
DATE:
SHEET 7 OF 7
D-2



PRE-DEVELOPMENT CONDITION



- POLLUTANT RANK 5
HIGH USE PARKING LOTS AND ROADS
- POLLUTANT RANK 4
OTHER ROAD & MEDIUM USE PARKING LOTS
- POLLUTANT RANK 3
OTHER PARKING LOTS, DRIVEWAYS & FLAT ROOFS
- POLLUTANT RANK 2
OTHER ROOF, BIKEWAYS, WALKWAYS, LAWN
- POLLUTANT RANK 1
NON-GRASS LANDSCAPE & STORMWATER SYSTEM
- POLLUTANT RANK 0
UNDEVELOPED FOREST OR MEADOW



REDEVELOPMENT STORMWATER TREATMENT CALCULATIONS
LEWISTON ROAD SUBDIVISION - 100 & 104 LEWISTON ROAD, GRAY

Existing Conditions

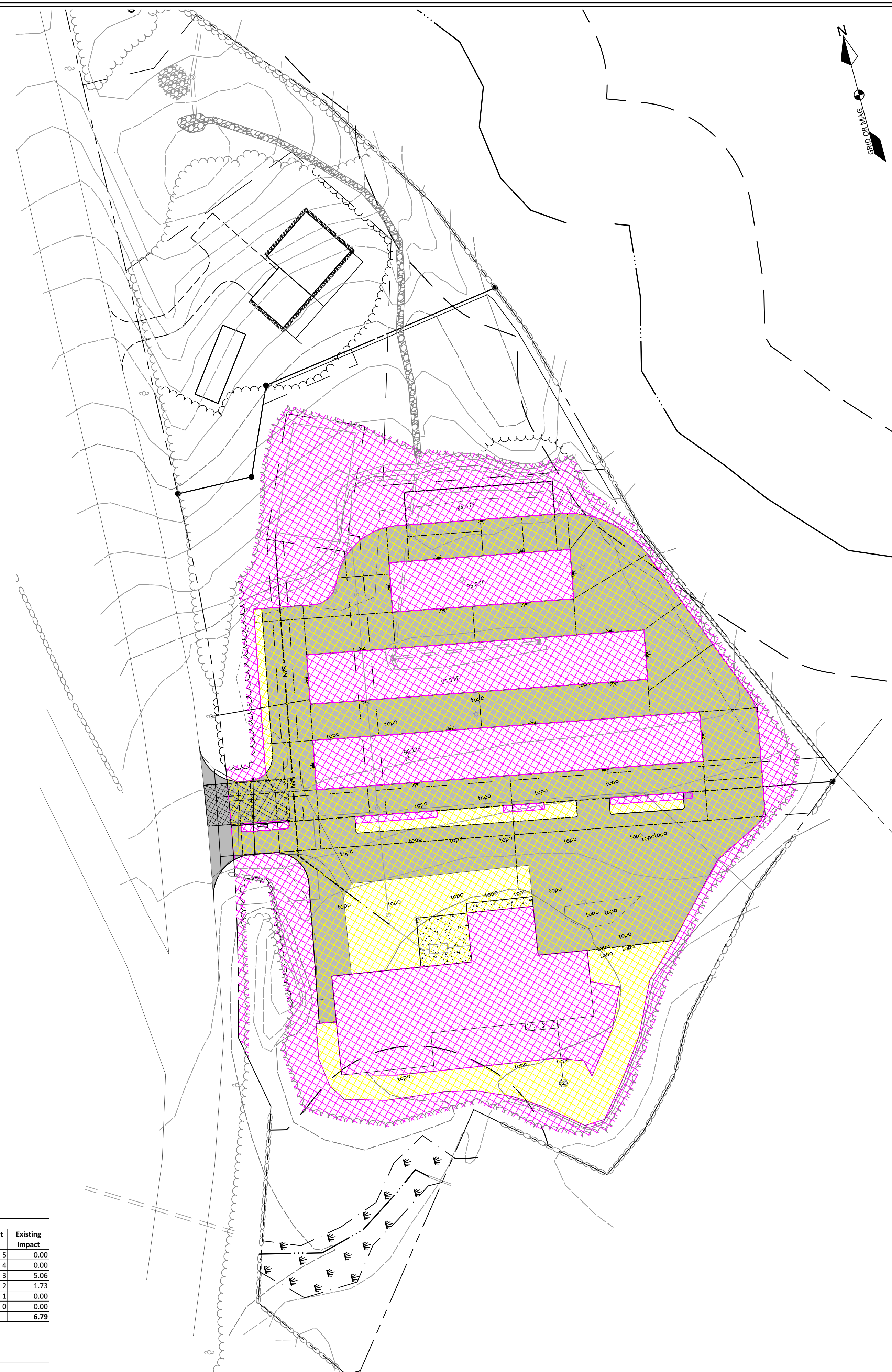
Land Use	Area (SF)	Area (Ac.)	Pollutant Rank	Existing Impact
High Use Parking Lots and Roads	0	0.00	5	0.00
Other Road and Medium Use Parking Lots	0	0.00	4	0.00
Other parking lots & driveways/Flat Roof	73,417	1.69	3	5.06
Other roof, bikeways, grass, walkways	37,782	0.87	2	1.73
Non-grass landscape/stormwater system	0	0.00	1	0.00
Forest/Meadow	0	0.00	0	0.00
Totals	111,199	2.55		6.79

Existing Impact Rating / Redevelopment Area = 2.66

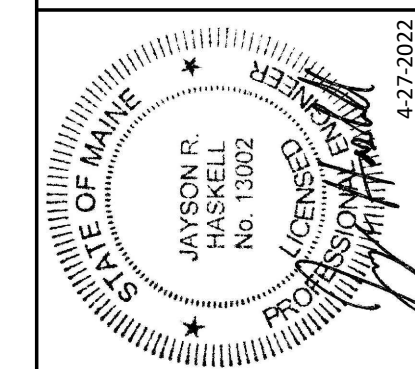
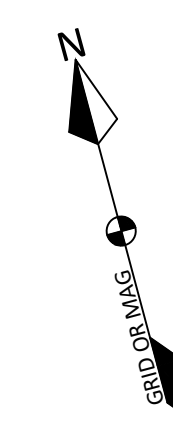
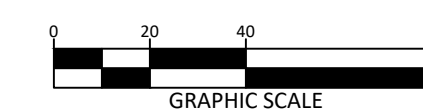
Proposed Conditions

Land Use	Area (SF)	Area (Ac.)	Pollutant Rank	Proposed Impact
High Use Parking Lots and Roads	0	0.00	5	0.00
Other Road and Medium Use Parking Lots	0	0.00	4	0.00
Other parking lots & driveways/Flat Roof	56,722	1.30	3	3.91
Other roof, bikeways, grass, walkways	54,476	1.25	2	2.50
Non-grass landscape/stormwater system	0	0.00	1	0.00
Forest/Meadow	0	0.00	0	0.00
Totals	111,199	2.55		6.41

Proposed Impact Rating / Redevelopment Area = 2.51



POST-DEVELOPMENT CONDITION



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REV	DATE	BY	DESCRIPTION
A	3-29-22	JPC	ISSUED FOR PERMIT REVIEW
B	4-27-22	JPC	ISSUED FOR PERMIT REVIEW

REDEVELOPMENT POLLUTANT RANKING
LEWISTON ROAD SUBDIVISION
100 & 104 LEWISTON ROAD
GRAY, MAINE
FOR: **ODESSA PROPERTIES LLC**
PO BOX 963
GRAY, ME, 04039

21062
JOB NUMBER:
1" = 40'
SCALE:
4-27-2022
DATE:
SHEET 3 OF 3
RPR-1

STORMWATER MANAGEMENT REPORT

**LEWISTON ROAD SUBDIVISION
LEWISTON ROAD
GRAY, MAINE**

A. Narrative

The applicant, Odessa Properties, LLC, is proposing to construct a self-storage facility on property located off Lewiston Road. The 4.34-acre parcel consist of Lots 26-2 and 26-2-1 on the Town of Gray Assessor's Map 28, is located in the Commercial Zoning District and the Light Manufacturing Overlay District is currently contains a commercial building with associated paved and gravel parking.

The applicant is proposing a three-lot mixed use subdivision. The proposed Lot 1 will consist of a single-family residential lot intending to be permitted and sold by the applicant. Lot 2 will contain the proposed self-storage facility which is intended to be maintained by the applicant. Lot 3 will contain the existing commercial building, also maintained by the applicant.

The project construction includes four (4) buildings containing 18,300 square feet of self-storage space with associated paved driveways. The facility is anticipated to be unattended. The project also proposes the development of a single-family residence, and will also include an existing commercial building.

In general, the property drains to the north toward an existing detention, which discharges overland into a drainage channel that extend off the property to the east and ultimately into Collyer Brook.

B. Alterations to Land Cover

The proposed development after construction will include approximately 88,724 square feet (2.04± acres) of impervious surface consisting of the proposed & existing buildings, gravel driveway, paved drive aisles and parking areas. The project will also contain approximately 52,950 square feet (1.21± acres) of lawn and landscaping resulting in a total site developed area of approximately 141,674 square feet (3.25± acres).

Since the project will result in over one (1) acre of impervious surface, a Stormwater Permit will need to be obtained from the MDEP. The stormwater design will be required to meet the Basic and General Standards of the Chapter 500 Stormwater Management rules.

The 4.34-acre parcel currently contains a paved driveway apron, large gravel surface with catch basins and street lights, and an existing building, as well as areas of vegetation and poor quality ground cover. The 2.55± acres of developed area were created prior to 1997 and pre-dates the enactment of the Stormwater Management Law. The project site will redevelop this land as part of the project. As a result, the required treatment for this area of the site will be calculated utilizing Section 4C(2)(d)

Redevelopment Standard of Chapter 500. The remaining development of the property will be required to meet the typical General Standard.

The majority of site is moderately sloped (3-8%) with steeper slopes along the northerly portion of the site. Soils on the property were determined utilizing the Medium Intensity Soil Maps for York County, Maine published by the Natural Resources Conservation Service, included with this report. Test pits were also excavated in the location of the proposed BMPs. The test pit logs and soil map are included as Attachment 1 of this report.

C. Methodology and Modeling Assumptions

The proposed stormwater management system has been designed utilizing Best Management Practices to maintain existing drainage patterns while providing stormwater quality improvement measures. The goal of the storm drainage system design is to remove potential stormwater pollutants from runoff generated by the development while providing attenuation of the peak rates of runoff leaving the site. The method utilized to predict the surface water runoff rates in this analysis is a computer program entitled HydroCAD, which is based on the same methods that were originally developed by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, and utilized in the TR-20 modeling program. Peak rates of runoff are forecasted based upon land use, hydrologic soil conditions, vegetative cover, contributing watershed area, time of concentration, rainfall data, storage volumes of detention basins and the hydraulic capacity of structures. The computer model predicts the amount of runoff as a function of time, with the ability to include the attenuation effect due to dams, lakes, large wetlands, floodplains and constructed stormwater management basins. The input data for rainfalls with statistical recurrence frequencies of 2-, 10- and 25 years was obtained from Appendix H of the MDEP, Chapter 500 Stormwater Management, last revised in 2015. The National Weather Service developed four synthetic storm types to simulate rainfall patterns around the country. For analysis in Cumberland County, Maine, the type III rainfall pattern with a 24-hour duration is appropriate.

D. Basic Standards

The project is required by the MDEP to provide permanent and temporary Erosion Control Best Management Practices. These methods are outlined in detail in the plan set.

E. General Standard

The MDEP requires the project to meet the General Standards outlined in the MDEP Chapter 500. As indicated previously in this report, the treatment requirements for the area of the existing development on the project site will be determined utilizing the Redevelopment standards.

The required treatment for the existing portion of the development was reviewed as a Redevelopment Project. The pollutant rankings for the pre- and post-developed condition of the project site were calculated and the maps have been included with this submission. As a result of the redevelopment of the property, there is a pollutant ranking decrease of approximately 0.13 Based on Table 3 – Treatment Levels for Redevelopment Projects, the redevelopment portion of

the project will require 0% treatment of the developed area. In addition, the project will include a bio-retention area and roofline drip edges along the proposed residential building and self-storage building 1.

To demonstrate that the design of the bio retention and drip edges have been sized appropriately sizing calculations are included attachment 3.

F. Flooding

The Town of Gray requires the project to detain, retain or result in the infiltration of stormwater from the 24-hour storms of the 2-year, 10-year and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project.

The proposed project design has been modeled to evaluate and analyze the stormwater runoff characteristics of the site, prior to construction and upon completion of all proposed construction activities.

With regards to the flooding analysis of the impact from the proposed development, DM Roma has evaluated the project at one locations at point where stormwater is discharged from the project site. Study point 1 (SP-1) is located along the northerly property line. The sub-basin watersheds tributary to SP-1 consists of the existing natural woodlands, area associated with existing commercial development and gravel surface, and area of proposed project site associated with the lot development. Stormwater runoff tributary to SP-1 is conveyed overland to the east into the existing un-named stream shown on the plans, which ultimately discharges into Thayer Brook.

The following table summarizes the analysis prepared for this stormwater management report:

Table 1 – Peak Rates of Stormwater Runoff						
Study Point	2-Year (cfs)		10-Year (cfs)		25-Year (cfs)	
	Pre	Post	Pre	Post	Pre	Post
SP-1	3.16	2.43	9.27	8.96	13.47	13.43

As illustrated by the table above, the proposed project design effectively reduces the peak at all study points.

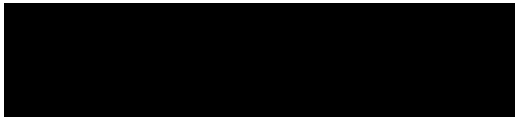
The watershed maps showing pre-development and post-development drainage patterns are included in the plan set and the computations performed with the HydroCAD software program, including sizing of the driveway culvert for Lot 1 are included as Attachment 4 of this report.

G. Maintenance of common facilities or property

The applicant will be responsible for the maintenance of the stormwater facilities. An Inspection, Maintenance and Housekeeping Plan for the project has been created and has been included in Attachment 5.

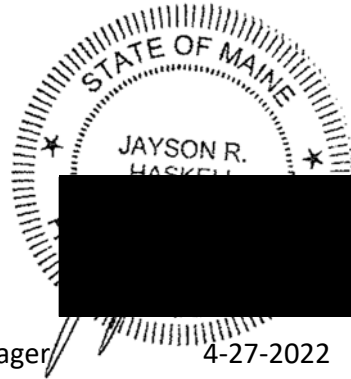
Prepared by:

DM ROMA CONSULTING ENGINEERS



J.P. Connolly
Senior Project Engineer

Jayson R. Haskell P.E.
Southern Maine Regional Manager



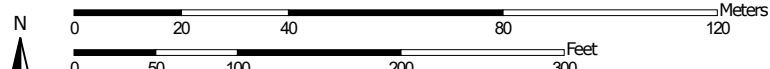
ATTACHMENT 1

MEDIUM INTENSITY SOIL MAP & BMP TEST PIT LOGS

Hydrologic Soil Group—Cumberland County and Part of Oxford County, Maine



Map Scale: 1:1,410 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
 Survey Area Data: Version 18, Aug 31, 2021

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

Date(s) aerial images were photographed: Jun 7, 2019—Jul 2, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HgC	Hermon sandy loam, 8 to 15 percent slopes	A	0.2	2.7%
PbB	Paxton fine sandy loam, 3 to 8 percent slopes	C	3.9	54.0%
PbC	Paxton fine sandy loam, 8 to 15 percent slopes	C	0.2	2.3%
PfC	Paxton very stony fine sandy loam, 8 to 15 percent slopes	C	3.0	40.8%
WsB	Woodbridge very stony fine sandy loam, 0 to 8 percent slopes	C	0.0	0.1%
Totals for Area of Interest			7.3	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

SOIL PROFILE/CLASSIFICATION INFORMATION

Detailed Description of Subsurface Conditions at Project Sites


Project Name: Lewiston Road Subdivision	Applicant Name: Odessa Properties, LLC	Project Location (municipality): Gray
---	--	---

SOIL DESCRIPTION AND CLASSIFICATION			
Exploration Symbol: TP-3 <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring			
0" Depth of Organic Horizon Above Mineral Soil			
Texture	Consistency	Color	Mottling
SANDY LOAM	FRIABLE	DARK BROWN	NONE OBSERVED
FINE SANDY LOAM		YELLOWISH BROWN	
SILT LOAM	FIRM	LIGHT OLIVE BROWN	FEW FINE & FAINT
			COMMON, MEDIUM & DISTINCT
LIMIT OF EXCAVATION = 44"			
<input checked="" type="checkbox"/> hydric <input type="checkbox"/> non-hydric	Slope % 0-3	Limiting factor 20"	<input type="checkbox"/> ground water restrictive layer <input type="checkbox"/> bedrock
c.s.s. Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E. Soil Classification:		Profile 8	Soil Condition C

SOIL DESCRIPTION AND CLASSIFICATION			
Exploration Symbol: <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring			
0" Depth of Organic Horizon Above Mineral Soil			
Texture	Consistency	Color	Mottling
(This profile is crossed out with a diagonal line)			
<input type="checkbox"/> hydric <input type="checkbox"/> non-hydric	Slope %	Limiting factor	<input type="checkbox"/> ground water restrictive layer <input type="checkbox"/> bedrock
c.s.s. Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E. Soil Classification:		Profile	Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION			
Exploration Symbol: <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring			
0" Depth of Organic Horizon Above Mineral Soil			
Texture	Consistency	Color	Mottling
(This profile is crossed out with a diagonal line)			
<input checked="" type="checkbox"/> hydric <input type="checkbox"/> non-hydric	Slope %	Limiting factor	<input type="checkbox"/> ground water restrictive layer <input type="checkbox"/> bedrock
c.s.s. Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E. Soil Classification:		Profile	Soil Condition

SOIL DESCRIPTION AND CLASSIFICATION			
Exploration Symbol: <input checked="" type="checkbox"/> Test Pit <input type="checkbox"/> Boring			
0" Depth of Organic Horizon Above Mineral Soil			
Texture	Consistency	Color	Mottling
(This profile is crossed out with a diagonal line)			
<input type="checkbox"/> hydric <input type="checkbox"/> non-hydric	Slope %	Limiting factor	<input type="checkbox"/> ground water restrictive layer <input type="checkbox"/> bedrock
c.s.s. Soil Series / phase name:		Drainage Class	Hydrologic Group
L.S.E. Soil Classification:		Profile	Soil Condition

Professional Endorsements (as applicable)	
c.s.s. signature:	Date:
name printed/typed:	Lic.#:
L.S.E. signature: 	Date: 4/1/22
name printed/typed: Alexander A. Finamore	Lic.#: 391

ATTACHMENT 2

STORMWATER TREATMENT CALCULATIONS

REDEVELOPMENT STORMWATER TREATMENT CALCULATIONS
LEWISTON ROAD SUBDIVISION - 100 & 104 LEWISTON ROAD, GRAY

Existing Conditions

Land Use	Area (SF)	Area (Ac.)	Pollutant Rank	Existing Impact
High Use Parking Lots and Roads	0	0.00	5	0.00
Other Road and Medium Use Parking Lots	0	0.00	4	0.00
Other parking lots & driveways/Flat Roof	73,417	1.69	3	5.06
Other roof, bikeways, grass, walkways	37,782	0.87	2	1.73
Non-grass landscape/stormwater system	0	0.00	1	0.00
Forest/Meadow	0	0.00	0	0.00
Totals	111,199	2.55		6.79

Existing Impact Rating / Redevelopment Area = 2.66

Proposed Conditions

Land Use	Area (SF)		Pollutant Rank	Proposed Impact
High Use Parking Lots and Roads	0	0.00	5	0.00
Other Road and Medium Use Parking Lots	0	0.00	4	0.00
Other parking lots & driveways/Flat Roof	56,722	1.30	3	3.91
Other roof, bikeways, grass, walkways	54,476	1.25	2	2.50
Non-grass landscape/stormwater system	0	0.00	1	0.00
Forest/Meadow	0	0.00	0	0.00
Totals	111,199	2.55		6.41

Proposed Impact Rating / Redevelopment Area = 2.51

Treatment Requirements

Ranked Impact Change Due to Redevelopment = -0.15
Percentage of Developed Area to be treated (Table 3) = 0%

Drip Edge Sizing Calculations

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

Void Ratio of Reservoir Layer 40%

Void Ratio of Filter Layer 30%

Building No.	Rooftop Flow Length to Dripedge (ft)	WQV (Required) (cf per 1' of roof length)	Dripedge Width (ft)	Reservoir Layer Depth (ft)	Filter Layer Depth (ft)	WQV (Provided) (cf per 1' of roof width)
Residential	18	1.50	2.00	1.50	0.50	1.50
Self-storage	10	0.83	2.00	1.50	0.50	1.50

ATTACHMENT 3

BIO RETENTION SIZING CALCULATIONS

Bioretention Basin

Tributary Impervious Area= 1,493 sf (WS-21 Impervious Area)*
Tributary Landscaped Area= 7,505 sf (WS-21 Landscaped Area)

Water Quality Volume (WQV) Calculation

WQV (Required) = 1.0"xImpervious Area + 0.4"xLandscaped Area

WQV (Required) = 375 cf

Stage Storage Volume

Elevation	Area (sf)	Storage (cf)
67	345	0
68	615	480

Storage From Filter Media (1/3 Filter Volume)= 173 cf
Outlet Elevation = 67.50
Storage Volume Above Media= 240 cf
Total Storage Volume Provided= 413 cf > Required

Filter Bottom Calculation

Filter Area (Required) = 7% \times Impervious Area + 3% \times Landscaped Area

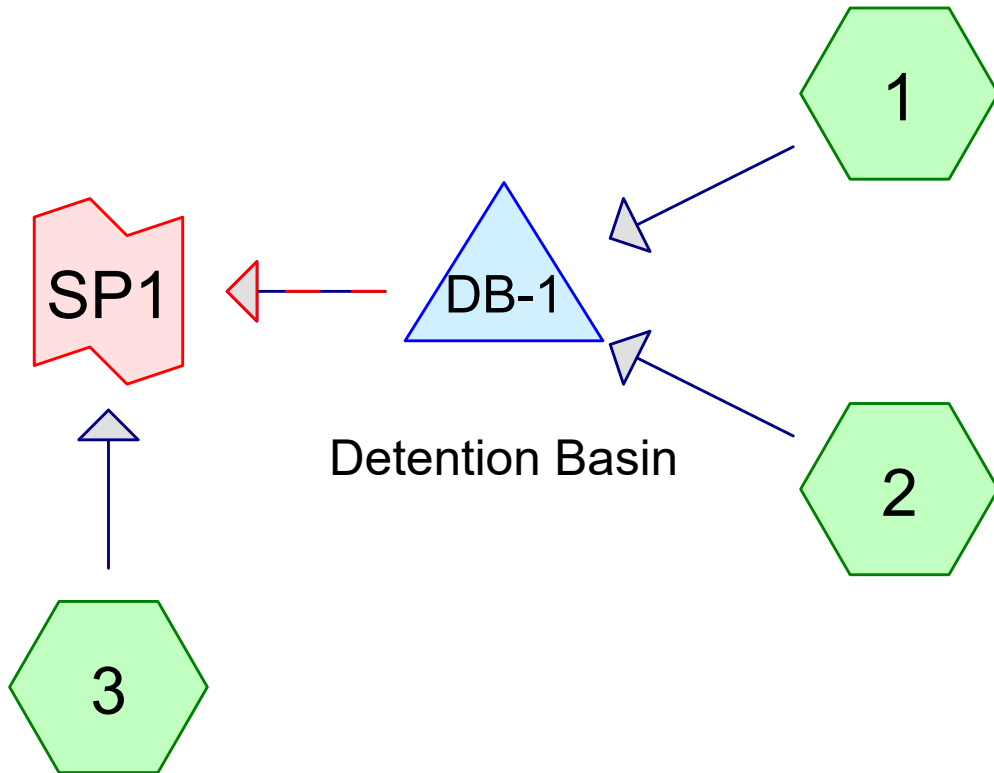
Filter Area Required = 330 sf

Filter Area Provided = 345 sf > Required

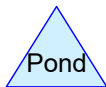
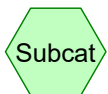
***Building area from WS-21 is tributary to a roofline dripedge and not included in the sizing calculations for basin**

ATTACHMENT 4

HYDROCAD MODELING OUTPUT



Detention Basin



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21062 - PRE

Type III 24-hr 2-Year Rainfall=3.09"

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Page 2

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Runoff Area=143,434 sf 3.50% Impervious Runoff Depth=1.45"
Flow Length=700' Tc=17.9 min CN=82 Runoff=3.91 cfs 17,334 cf

Subcatchment 2: Runoff Area=63,534 sf 18.36% Impervious Runoff Depth=1.59"
Flow Length=631' Tc=24.0 min CN=84 Runoff=1.69 cfs 8,422 cf

Subcatchment 3: Runoff Area=6,718 sf 5.46% Impervious Runoff Depth=1.02"
Flow Length=92' Tc=15.0 min CN=75 Runoff=0.13 cfs 571 cf

Pond DB-1: Detention Basin Peak Elev=64.30' Storage=8,197 cf Inflow=5.50 cfs 25,755 cf
Primary=3.10 cfs 25,750 cf Secondary=0.00 cfs 0 cf Outflow=3.10 cfs 25,750 cf

Link SP1: Inflow=3.16 cfs 26,321 cf
Primary=3.16 cfs 26,321 cf

21062 - PRE

Type III 24-hr 10-Year Rainfall=4.57"

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Page 6

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Runoff Area=143,434 sf 3.50% Impervious Runoff Depth=2.70"
Flow Length=700' Tc=17.9 min CN=82 Runoff=7.32 cfs 32,243 cf

Subcatchment 2: Runoff Area=63,534 sf 18.36% Impervious Runoff Depth=2.88"
Flow Length=631' Tc=24.0 min CN=84 Runoff=3.06 cfs 15,246 cf

Subcatchment 3: Runoff Area=6,718 sf 5.46% Impervious Runoff Depth=2.11"
Flow Length=92' Tc=15.0 min CN=75 Runoff=0.28 cfs 1,179 cf

Pond DB-1: Detention Basin Peak Elev=64.60' Storage=10,014 cf Inflow=10.21 cfs 47,490 cf
Primary=9.02 cfs 47,484 cf Secondary=0.00 cfs 0 cf Outflow=9.02 cfs 47,484 cf

Link SP1: Inflow=9.27 cfs 48,663 cf
Primary=9.27 cfs 48,663 cf

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Runoff Area=143,434 sf 3.50% Impervious Runoff Depth=3.73"
Flow Length=700' Tc=17.9 min CN=82 Runoff=10.08 cfs 44,589 cf

Subcatchment 2: Runoff Area=63,534 sf 18.36% Impervious Runoff Depth=3.94"
Flow Length=631' Tc=24.0 min CN=84 Runoff=4.16 cfs 20,835 cf

Subcatchment 3: Runoff Area=6,718 sf 5.46% Impervious Runoff Depth=3.04"
Flow Length=92' Tc=15.0 min CN=75 Runoff=0.41 cfs 1,705 cf

Pond DB-1: Detention Basin Peak Elev=64.76' Storage=11,019 cf Inflow=14.01 cfs 65,423 cf
Primary=13.15 cfs 65,417 cf Secondary=0.00 cfs 0 cf Outflow=13.15 cfs 65,417 cf

Link SP1: Inflow=13.47 cfs 67,122 cf
Primary=13.47 cfs 67,122 cf

Summary for Subcatchment 1:

Runoff = 10.08 cfs @ 12.24 hrs, Volume= 44,589 cf, Depth= 3.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

Area (sf)	CN	Description
21,280	74	>75% Grass cover, Good, HSG C
* 756	98	Exist. conc.
* 55,415	96	Existing gravel surface, HSG C
* 4,265	98	Existing roofs
* 0	98	New roofs
61,718	72	Woods/grass comb., Good, HSG C
143,434	82	Weighted Average
138,413		96.50% Pervious Area
5,021		3.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	150	0.0936	0.15		Sheet Flow, Seg A to B Woods: Light underbrush n= 0.400 P2= 3.09"
0.2	19	0.1703	2.06		Shallow Concentrated Flow, Seg B to C Woodland Kv= 5.0 fps
0.0	6	0.0539	3.74		Shallow Concentrated Flow, Seg C to D Unpaved Kv= 16.1 fps
0.5	126	0.0612	3.98		Shallow Concentrated Flow, Seg D to E Unpaved Kv= 16.1 fps
0.9	399	0.0765	7.38	250.04	Channel Flow, Seg E to F Area= 33.9 sf Perim= 68.1' r= 0.50' n= 0.035 Earth, dense weeds
17.9	700	Total			

Summary for Subcatchment 2:

Runoff = 4.16 cfs @ 12.32 hrs, Volume= 20,835 cf, Depth= 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

Area (sf)	CN	Description
22,090	74	>75% Grass cover, Good, HSG C
1,122	98	Paved parking, HSG C
* 501	98	Exist. conc., HSG C
* 6,134	98	Exist. road (RT. 100) HSG C
* 17,533	96	Existing gravel surface, HSG C
* 3,909	98	Existing roofs
12,245	72	Woods/grass comb., Good, HSG C
63,534	84	Weighted Average
51,868		81.64% Pervious Area
11,666		18.36% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.72"

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Page 12

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	150	0.0153	0.11		Sheet Flow, Seg A to B Grass: Dense n= 0.240 P2= 3.09"
1.2	222	0.0363	3.07		Shallow Concentrated Flow, Seg B to C Unpaved Kv= 16.1 fps
0.0	15	0.1667	6.57		Shallow Concentrated Flow, Seg C to D Unpaved Kv= 16.1 fps
0.1	15	0.0193	2.24		Shallow Concentrated Flow, Seg D to E Unpaved Kv= 16.1 fps
0.3	229	0.1048	13.70	519.09	Channel Flow, Seg F to G Area= 37.9 sf Perim= 38.1' r= 0.99' n= 0.035 Earth, dense weeds
24.0	631	Total			

Summary for Subcatchment 3:

Runoff = 0.41 cfs @ 12.21 hrs, Volume= 1,705 cf, Depth= 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

Area (sf)	CN	Description
4,196	74	>75% Grass cover, Good, HSG C
* 367	98	Exist. road (RT 100)
* 0	96	Existing gravel surface, HSG C
* 0	98	Existing roofs
* 0	98	New roofs
2,155	72	Woods/grass comb., Good, HSG C
6,718	75	Weighted Average
6,351		94.54% Pervious Area
367		5.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6	45	0.0111	0.05		Sheet Flow, Seg A to B Woods: Light underbrush n= 0.400 P2= 3.09"
0.4	47	0.0133	1.86		Shallow Concentrated Flow, Seg B C Unpaved Kv= 16.1 fps
15.0	92	Total			

Summary for Pond DB-1: Detention Basin

Inflow Area = 206,968 sf, 8.06% Impervious, Inflow Depth = 3.79" for 25-Year event
 Inflow = 14.01 cfs @ 12.26 hrs, Volume= 65,423 cf
 Outflow = 13.15 cfs @ 12.34 hrs, Volume= 65,417 cf, Atten= 6%, Lag= 4.5 min
 Primary = 13.15 cfs @ 12.34 hrs, Volume= 65,417 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

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Type III 24-hr 25-Year Rainfall=5.72"

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Page 13

Peak Elev= 64.76' @ 12.34 hrs Surf.Area= 6,434 sf Storage= 11,019 cf

Plug-Flow detention time= 72.4 min calculated for 65,349 cf (100% of inflow)

Center-of-Mass det. time= 72.7 min (894.6 - 821.9)

Volume	Invert	Avail.Storage	Storage Description
#1	61.80'	12,602 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.80	1,105	132.5	0	0	1,105
62.00	1,319	136.5	242	242	1,195
64.00	5,421	284.2	6,276	6,518	6,157
65.00	6,771	315.1	6,084	12,602	7,661

Device	Routing	Invert	Outlet Devices
#1	Primary	61.70'	24.0" Round Culvert L= 20.2' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.29' S= 0.0203 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Device 1	61.80'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	64.38'	8.5" Vert. Orifice/Grate C= 0.600
#4	Device 1	64.05'	6.0' long x 1.30' rise Sharp-Crested Rectangular Weir 2 End Contraction(s) 1.9' Crest Height
#5	Secondary	64.80'	10.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=13.08 cfs @ 12.34 hrs HW=64.76' TW=0.00' (Dynamic Tailwater)

- ← 1=Culvert (Passes 13.08 cfs of 17.13 cfs potential flow)
- ← 2=Orifice/Grate (Orifice Controls 0.70 cfs @ 8.04 fps)
- ← 3=Orifice/Grate (Orifice Controls 0.45 cfs @ 2.09 fps)
- ← 4=Sharp-Crested Rectangular Weir (Weir Controls 11.93 cfs @ 2.88 fps)

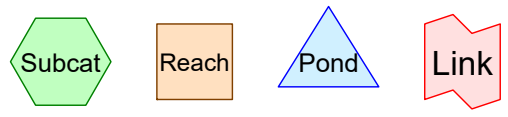
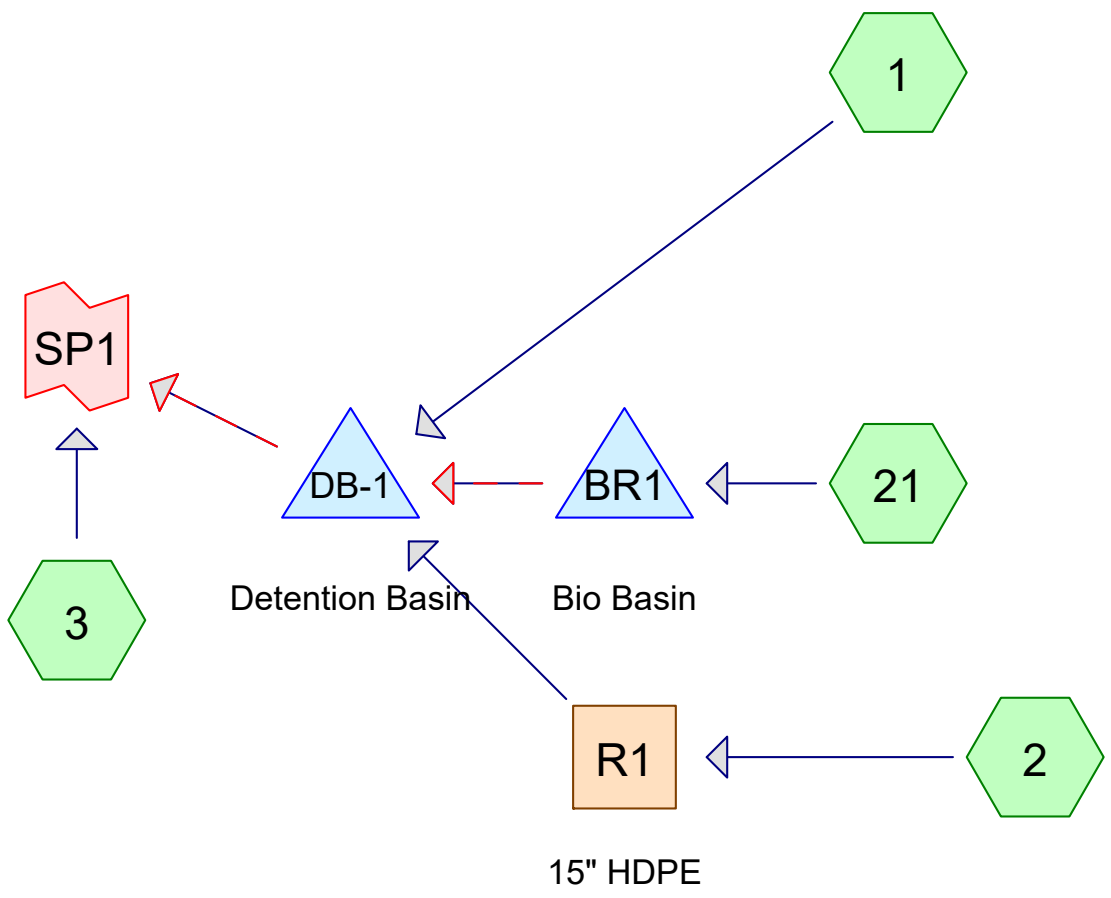
Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=61.80' TW=0.00' (Dynamic Tailwater)

- ← 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link SP1:

Inflow Area = 213,686 sf, 7.98% Impervious, Inflow Depth = 3.77" for 25-Year event
 Inflow = 13.47 cfs @ 12.33 hrs, Volume= 67,122 cf
 Primary = 13.47 cfs @ 12.33 hrs, Volume= 67,122 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs



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21062 - POST

Type III 24-hr 2-Year Rainfall=3.09"

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Runoff Area=104,345 sf 37.80% Impervious Runoff Depth=1.52"
Flow Length=709' Tc=18.0 min CN=83 Runoff=2.98 cfs 13,211 cf

Subcatchment 2: Runoff Area=88,905 sf 50.53% Impervious Runoff Depth=1.82"
Flow Length=585' Tc=25.3 min CN=87 Runoff=2.65 cfs 13,469 cf

Subcatchment 3: Runoff Area=6,718 sf 5.46% Impervious Runoff Depth=1.02"
Flow Length=92' Tc=15.0 min CN=75 Runoff=0.13 cfs 571 cf

Subcatchment 21: Runoff Area=13,729 sf 14.36% Impervious Runoff Depth=1.32"
Flow Length=204' Tc=19.0 min CN=80 Runoff=0.33 cfs 1,508 cf

Reach R1: 15" HDPE Avg. Flow Depth=0.34' Max Vel=9.74 fps Inflow=2.65 cfs 13,469 cf
15.0" Round Pipe n=0.013 L=47.6' S=0.0630 '/' Capacity=16.22 cfs Outflow=2.65 cfs 13,469 cf

Pond BR1: Bio Basin Peak Elev=67.58' Storage=243 cf Inflow=0.33 cfs 1,508 cf
Primary=0.03 cfs 979 cf Secondary=0.29 cfs 529 cf Outflow=0.32 cfs 1,508 cf

Pond DB-1: Detention Basin Peak Elev=64.25' Storage=11,021 cf Inflow=5.77 cfs 28,188 cf
Primary=2.39 cfs 28,180 cf Secondary=0.00 cfs 0 cf Outflow=2.39 cfs 28,180 cf

Link SP1: Inflow=2.43 cfs 28,751 cf
Primary=2.43 cfs 28,751 cf

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Type III 24-hr 10-Year Rainfall=4.57"

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Page 9

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Runoff Area=104,345 sf 37.80% Impervious Runoff Depth=2.79"
Flow Length=709' Tc=18.0 min CN=83 Runoff=5.49 cfs 24,242 cf

Subcatchment 2: Runoff Area=88,905 sf 50.53% Impervious Runoff Depth=3.16"
Flow Length=585' Tc=25.3 min CN=87 Runoff=4.57 cfs 23,443 cf

Subcatchment 3: Runoff Area=6,718 sf 5.46% Impervious Runoff Depth=2.11"
Flow Length=92' Tc=15.0 min CN=75 Runoff=0.28 cfs 1,179 cf

Subcatchment 21: Runoff Area=13,729 sf 14.36% Impervious Runoff Depth=2.52"
Flow Length=204' Tc=19.0 min CN=80 Runoff=0.64 cfs 2,885 cf

Reach R1: 15" HDPE Avg. Flow Depth=0.45' Max Vel=11.35 fps Inflow=4.57 cfs 23,443 cf
15.0" Round Pipe n=0.013 L=47.6' S=0.0630 '/ Capacity=16.22 cfs Outflow=4.57 cfs 23,443 cf

Pond BR1: Bio Basin Peak Elev=67.63' Storage=269 cf Inflow=0.64 cfs 2,885 cf
Primary=0.03 cfs 1,301 cf Secondary=0.61 cfs 1,585 cf Outflow=0.63 cfs 2,886 cf

Pond DB-1: Detention Basin Peak Elev=64.59' Storage=13,185 cf Inflow=10.40 cfs 50,570 cf
Primary=8.77 cfs 50,562 cf Secondary=0.00 cfs 0 cf Outflow=8.77 cfs 50,562 cf

Link SP1: Inflow=8.96 cfs 51,741 cf
Primary=8.96 cfs 51,741 cf

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Type III 24-hr 25-Year Rainfall=5.72"

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Page 16

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Runoff Area=104,345 sf 37.80% Impervious Runoff Depth=3.83"
Flow Length=709' Tc=18.0 min CN=83 Runoff=7.50 cfs 33,323 cf

Subcatchment 2: Runoff Area=88,905 sf 50.53% Impervious Runoff Depth=4.25"
Flow Length=585' Tc=25.3 min CN=87 Runoff=6.07 cfs 31,485 cf

Subcatchment 3: Runoff Area=6,718 sf 5.46% Impervious Runoff Depth=3.04"
Flow Length=92' Tc=15.0 min CN=75 Runoff=0.41 cfs 1,705 cf

Subcatchment 21: Runoff Area=13,729 sf 14.36% Impervious Runoff Depth=3.53"
Flow Length=204' Tc=19.0 min CN=80 Runoff=0.90 cfs 4,038 cf

Reach R1: 15" HDPE Avg. Flow Depth=0.53' Max Vel=12.26 fps Inflow=6.07 cfs 31,485 cf
15.0" Round Pipe n=0.013 L=47.6' S=0.0630 '/ Capacity=16.22 cfs Outflow=6.07 cfs 31,485 cf

Pond BR1: Bio Basin Peak Elev=67.66' Storage=286 cf Inflow=0.90 cfs 4,038 cf
Primary=0.03 cfs 1,491 cf Secondary=0.86 cfs 2,547 cf Outflow=0.89 cfs 4,038 cf

Pond DB-1: Detention Basin Peak Elev=64.76' Storage=14,346 cf Inflow=14.07 cfs 68,847 cf
Primary=13.12 cfs 68,838 cf Secondary=0.00 cfs 0 cf Outflow=13.12 cfs 68,838 cf

Link SP1: Inflow=13.43 cfs 70,543 cf
Primary=13.43 cfs 70,543 cf

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Type III 24-hr 25-Year Rainfall=5.72"

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Page 17

Summary for Subcatchment 1:

Runoff = 7.50 cfs @ 12.25 hrs, Volume= 33,323 cf, Depth= 3.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

Area (sf)	CN	Description
12,596	74	>75% Grass cover, Good, HSG C
25,819	98	Paved parking, HSG C
* 4,236	96	Existing gravel surface, HSG C
* 3,284	98	Existing roofs
* 10,338	98	New roofs
48,072	72	Woods/grass comb., Good, HSG C
104,345	83	Weighted Average
64,904		62.20% Pervious Area
39,441		37.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	150	0.0936	0.15		Sheet Flow, Seg A to B Woods: Light underbrush n= 0.400 P2= 3.09"
0.2	19	0.1703	2.06		Shallow Concentrated Flow, Seg B to C Woodland Kv= 5.0 fps
0.0	7	0.0539	3.74		Shallow Concentrated Flow, Seg C to D Unpaved Kv= 16.1 fps
0.4	94	0.0320	3.63		Shallow Concentrated Flow, Seg D to E Paved Kv= 20.3 fps
0.3	99	0.0426	5.50	13.54	Trap/Vee/Rect Channel Flow, Seg E to F Bot.W=0.00' D=0.50' Z= 3.0 & 16.7 '/' Top.W=9.85' n= 0.022 Earth, clean & straight
0.8	340	0.0705	7.08	240.04	Channel Flow, Seg F to G Area= 33.9 sf Perim= 68.1' r= 0.50' n= 0.035 Earth, dense weeds
18.0	709	Total			

Summary for Subcatchment 2:

Runoff = 6.07 cfs @ 12.34 hrs, Volume= 31,485 cf, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

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Type III 24-hr 25-Year Rainfall=5.72"

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Page 18

Area (sf)	CN	Description
31,666	74	>75% Grass cover, Good, HSG C
24,283	98	Paved parking, HSG C
* 1,109	98	Exist. conc., HSG C
* 6,134	98	Exist. road (RT. 100) HSG C
* 1,179	96	Driveway gravel surface, HSG C
* 1,609	96	Existing gravel surface, HSG C
* 5,439	98	Existing roofs
* 7,962	98	New roofs
9,524	72	Woods/grass comb., Good, HSG C
88,905	87	Weighted Average
43,978		49.47% Pervious Area
44,927		50.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	150	0.0153	0.11		Sheet Flow, Seg A to B Grass: Dense n= 0.240 P2= 3.09"
0.6	112	0.0331	2.93		Shallow Concentrated Flow, Seg B to C Unpaved Kv= 16.1 fps
0.3	60	0.0384	3.98		Shallow Concentrated Flow, Seg C to D Paved Kv= 20.3 fps
0.1	15	0.0193	2.24		Shallow Concentrated Flow, Seg D to E Unpaved Kv= 16.1 fps
1.7	67	0.0179	0.67		Shallow Concentrated Flow, Seg E to F Woodland Kv= 5.0 fps
0.2	181	0.1188	14.58	552.68	Channel Flow, Seg F to G Area= 37.9 sf Perim= 38.1' r= 0.99' n= 0.035 Earth, dense weeds
25.3	585	Total			

Summary for Subcatchment 3:

Runoff = 0.41 cfs @ 12.21 hrs, Volume= 1,705 cf, Depth= 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

Area (sf)	CN	Description
4,196	74	>75% Grass cover, Good, HSG C
* 367	98	Exist. road (RT 100)
* 0	96	Existing gravel surface, HSG C
* 0	98	Existing roofs
* 0	98	New roofs
2,155	72	Woods/grass comb., Good, HSG C
6,718	75	Weighted Average
6,351		94.54% Pervious Area
367		5.46% Impervious Area

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Type III 24-hr 25-Year Rainfall=5.72"

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Page 19

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6	45	0.0111	0.05		Sheet Flow, Seg A to B Woods: Light underbrush n= 0.400 P2= 3.09"
0.4	47	0.0133	1.86		Shallow Concentrated Flow, Seg B C Unpaved Kv= 16.1 fps
15.0	92	Total			

Summary for Subcatchment 21:

Runoff = 0.90 cfs @ 12.26 hrs, Volume= 4,038 cf, Depth= 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.72"

Area (sf)	CN	Description
8,688	74	>75% Grass cover, Good, HSG C
* 1,494	96	Res. driveway gravel surface, HSG C
* 1,972	98	New roofs
1,575	72	Woods/grass comb., Good, HSG C
13,729	80	Weighted Average
11,757		85.64% Pervious Area
1,972		14.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	35	0.0833	0.16		Sheet Flow, Seg A to B Grass: Dense n= 0.240 P2= 3.09"
12.6	44	0.0614	0.06		Sheet Flow, Seg B to C Woods: Dense underbrush n= 0.800 P2= 3.09"
2.7	37	0.1807	0.23		Sheet Flow, Seg C to D Grass: Dense n= 0.240 P2= 3.09"
0.2	88	0.0433	7.08	51.35	Trap/Vee/Rect Channel Flow, Seg D to E Bot.W=2.00' D=1.00' Z= 3.0 & 7.5 ' Top.W=12.50' n= 0.030 Earth, grassed & winding
19.0	204	Total			

Summary for Reach R1: 15" HDPE

Inflow Area = 88,905 sf, 50.53% Impervious, Inflow Depth = 4.25" for 25-Year event
Inflow = 6.07 cfs @ 12.34 hrs, Volume= 31,485 cf
Outflow = 6.07 cfs @ 12.34 hrs, Volume= 31,485 cf, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 12.26 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.64 fps, Avg. Travel Time= 0.2 min

Peak Storage= 24 cf @ 12.34 hrs
Average Depth at Peak Storage= 0.53'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 16.22 cfs

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Type III 24-hr 25-Year Rainfall=5.72"

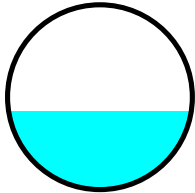
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Page 20

15.0" Round Pipe
 n= 0.013 Corrugated PE, smooth interior
 Length= 47.6' Slope= 0.0630 '/'
 Inlet Invert= 70.50', Outlet Invert= 67.50'



Summary for Pond BR1: Bio Basin

Inflow Area = 13,729 sf, 14.36% Impervious, Inflow Depth = 3.53" for 25-Year event
 Inflow = 0.90 cfs @ 12.26 hrs, Volume= 4,038 cf
 Outflow = 0.89 cfs @ 12.28 hrs, Volume= 4,038 cf, Atten= 1%, Lag= 1.2 min
 Primary = 0.03 cfs @ 12.28 hrs, Volume= 1,491 cf
 Secondary = 0.86 cfs @ 12.28 hrs, Volume= 2,547 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 67.66' @ 12.28 hrs Surf.Area= 526 sf Storage= 286 cf

Plug-Flow detention time= 37.8 min calculated for 4,034 cf (100% of inflow)
 Center-of-Mass det. time= 37.9 min (866.0 - 828.2)

Volume	Invert	Avail.Storage	Storage Description			
#1	67.00'	1,342 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
67.00	342	81.5	0	0	342	
68.00	634	103.6	481	481	680	
69.00	1,110	136.8	861	1,342	1,327	

Device	Routing	Invert	Outlet Devices
#1	Primary	64.60'	4.0" Round 4" HDPE L= 27.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 64.60' / 63.50' S= 0.0400 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf
#2	Device 1	67.00'	2.410 in/hr Exfiltration over Surface area
#3	Secondary	67.50'	5.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=0.03 cfs @ 12.28 hrs HW=67.66' TW=64.71' (Dynamic Tailwater)
 ↑1=4" HDPE (Passes 0.03 cfs of 0.53 cfs potential flow)
 ↑2=Exfiltration (Exfiltration Controls 0.03 cfs)

Secondary OutFlow Max=0.85 cfs @ 12.28 hrs HW=67.66' TW=64.71' (Dynamic Tailwater)
 ↑3=Broad-Crested Rectangular Weir (Weir Controls 0.85 cfs @ 1.04 fps)

Summary for Pond DB-1: Detention Basin

Inflow Area = 206,979 sf, 41.71% Impervious, Inflow Depth = 3.99" for 25-Year event
 Inflow = 14.07 cfs @ 12.28 hrs, Volume= 68,847 cf
 Outflow = 13.12 cfs @ 12.37 hrs, Volume= 68,838 cf, Atten= 7%, Lag= 5.4 min
 Primary = 13.12 cfs @ 12.37 hrs, Volume= 68,838 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 64.76' @ 12.37 hrs Surf.Area= 7,098 sf Storage= 14,346 cf

Plug-Flow detention time= 113.1 min calculated for 68,766 cf (100% of inflow)
 Center-of-Mass det. time= 113.6 min (933.3 - 819.7)

Volume	Invert	Avail.Storage	Storage Description		
#1	61.80'	25,074 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.80	1,105	132.5	0	0	1,105
62.00	3,761	283.7	460	460	6,113
64.00	5,432	332.3	9,142	9,602	8,574
66.00	10,297	475.2	15,472	25,074	17,792

Device	Routing	Invert	Outlet Devices
#1	Primary	61.70'	24.0" Round Culvert L= 20.2' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.70' / 61.29' S= 0.0203 ' S= 0.0203 ' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Device 1	61.80'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	64.38'	8.5" Vert. Orifice/Grate C= 0.600
#4	Device 1	64.05'	6.0' long x 1.30' rise Sharp-Crested Rectangular Weir 2 End Contraction(s) 1.9' Crest Height
#5	Secondary	64.80'	10.0' long x 12.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Primary OutFlow Max=13.04 cfs @ 12.37 hrs HW=64.76' TW=0.00' (Dynamic Tailwater)

- ↑ 1=Culvert (Passes 13.04 cfs of 17.12 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.70 cfs @ 8.04 fps)
- ↑ 3=Orifice/Grate (Orifice Controls 0.44 cfs @ 2.09 fps)
- ↑ 4=Sharp-Crested Rectangular Weir (Weir Controls 11.89 cfs @ 2.87 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=61.80' TW=0.00' (Dynamic Tailwater)

- ↑ 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link SP1:

Inflow Area = 213,697 sf, 40.57% Impervious, Inflow Depth = 3.96" for 25-Year event
Inflow = 13.43 cfs @ 12.37 hrs, Volume= 70,543 cf
Primary = 13.43 cfs @ 12.37 hrs, Volume= 70,543 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

ATTACHMENT 5

INSPECTION, MAINTENANCE & HOUSEKEEPING PLAN



INSPECTION, MAINTENANCE, AND HOUSEKEEPING PLAN
(Prepared by Jayson Haskell, PE #13002)

LEWISTON ROAD SUBDIVISION
GRAY, MAINE

Responsible Party

Owner: Odessa Properties, LLC
P.O. Box 963
Gray, Maine 04039

The owner/applicant is responsible for the maintenance of all stormwater management structures and related site components and the keeping of a maintenance log book with service records. Once the residential lot is conveyed, Lot 1 as identified on the approved Subdivision Plan, the maintenance responsibilities of the stormwater infrastructure is intended to be shared between the applicant and the new homeowners.

Records of all inspections and maintenance work performed must be kept on file with the owner and retained for a minimum of five years. The maintenance log will be made available to the Town upon request. At a minimum, the maintenance of stormwater management systems will be performed on the prescribed schedule.

The procedures outlined in this plan are provided as a general overview of the anticipated practices to be utilized on this site. In some instances, additional measures may be required due to unexpected conditions. *The Maine Erosion and Sedimentation Control BMP and Stormwater Management for Maine: Best Management Practices* Manuals published by the Maine Department of Environmental Protection (MDEP) should be referenced for additional information.

During Construction

- 1. Inspection and Corrective Action:** It is the contractor's responsibility to comply with the inspection and maintenance procedures outlined in this section. Inspection shall occur on all disturbed and impervious areas, erosion control measures, material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. These areas shall be inspected at least once a week as well as 24 hours before and after a storm event generating more than 0.5 inch of rainfall over a 24-hour period and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

2. **Maintenance:** Erosion controls shall be maintained in effective operating condition until areas are permanently stabilized. If best management practices (BMPs) need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If BMPs need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within seven calendar days and prior to any rainfall event.
3. **Construction vehicles and equipment:** Construction vehicles and equipment shall not be driven or stored within any existing or proposed stormwater detention facilities. To ensure the basins function as designed, prohibiting vehicles and equipment from these areas will limit the risk of inhibiting the function of the BMPs due to compaction or vegetation impact.
4. **Snow Storage:** The proposed bioretention basin shall not be utilized for snow storage. Snow storage areas shall be located away from the basin, and in areas that will direct snow melt runoff into the basin on site.
5. **Documentation:** A report summarizing the inspections and any corrective action taken must be maintained on site. The log must include the name(s) and qualifications of the person making the inspections; the date(s) of the inspections; and the major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to MDEP and Town staff, and a copy must be provided upon request. The owner shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

Housekeeping

1. **Spill prevention:** Controls must be used to prevent pollutants from construction and waste materials on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop, and implement as necessary, appropriate spill prevention, containment, and response planning measures.
2. **Groundwater protection:** During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate

portions of the site for the purposes of storage and handling of these materials. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

- 3. Fugitive sediment and dust:** Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.
- 4. Debris and other materials:** Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.
- 5. Excavation de-watering:** Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the Department.
- 6. Authorized Non-stormwater discharges:** Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:
 - (a) Discharges from firefighting activity;
 - (b) Fire hydrant flushings;
 - (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
 - (d) Dust control runoff in accordance with permit conditions and MDEP Chapter 500 Appendix (C)(3);
 - (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;

- (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
- (g) Uncontaminated air conditioning or compressor condensate;
- (h) Uncontaminated groundwater or spring water;
- (i) Foundation or footer drain-water where flows are not contaminated;
- (j) Uncontaminated excavation dewatering (see requirements in MDEP Chapter 500 Appendix C(5));
- (k) Potable water sources including waterline flushings; and
- (l) Landscape irrigation.

- 7. Unauthorized non-stormwater discharges:** Approval from the Town does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with Section 6 above. Specifically, the Town’s approval does not authorize discharges of the following:
- (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
 - (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
 - (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
 - (d) Toxic or hazardous substances from a spill or other release.

Post Construction

- 1. Inspection and Corrective Action:** All stormwater measures must be maintained by the owners within the subdivision in effective operating condition. A qualified third-party inspector hired by the owner is recommended to at least annually inspect the stormwater management facilities. This person should have knowledge of erosion and stormwater control including the standards and conditions of the site’s approvals. The following areas, facilities, and measures must be inspected, and identified deficiencies must be corrected. Areas, facilities, and measures other than those listed below may also require inspection on a specific site.
- A. Vegetated Areas:** Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows.
 - B. Ditches, Swales, and Open Channels:** Inspect ditches, swales, and other open channels in the spring, late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, control vegetative growth that could obstruct flow, and repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Repair any slumping side slopes as soon as

practicable. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or side slopes.

- C. Storm Drains:** Inspect storm drains in the spring, late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the storm drain's outlet.
- D. Bioretention Basin:** The Bioretention basin is not intended to function as snow storage area. Inspector to verify that winter plowing operations are not dumping or pushing snow into the basin. The basin shall also not be used for vehicle or heavy equipment storage. Basin should be inspected after several major storm events (0.5 inches rainfall over 24 hours) to determine drawdown time during the first year. Basins to be inspected every six months thereafter with at least one inspection after a major storm event.

Maintaining a healthy vegetative cover will minimize clogging with fine sediments. The basin should drain dry within 24 to 48 hours following a one-inch storm. If ponding exceeds 48 hours, the top of the filter bed must be rototilled to reestablish the soil's filtration capacity. If water ponds on the surface of the bed for more than 72 hours, the top several inches of the filter shall be replaced with fresh material. Inspect for plant debris and sediment build up in the basin and remove material as least annually. The organic mulch should be removed and replaced with a 2–3-inch layer of fresh mulch at least annually or as needed. Harvesting and pruning of excessive growth should be done occasionally. Any bare areas or erosion rills shall be repaired with new filter media or sandy loam then seeded and mulched. The basin should also be inspected annually for destabilization of side slopes, embankment settling and other signs of structural failure.

- E. Spillway:** Spillways should be inspected semi-annually and following major storm events for the first year and every six months thereafter to remove any obstructions to flow. Any woody vegetation growing within the spillway must be removed.
- F. Detention Basin:** The detention basin should be inspected annually for erosion, destabilization of side slopes, embankment settling and other signs of structural failure, and loss of storage volume due to sediment accumulation. Corrective action should be taken immediately upon identification of problems. The inlet and outlet of the basin should be checked periodically to ensure that flow structures are not blocked by debris. Inspections should be conducted monthly during wet weather conditions (March to November). Flow structures should be easily accessible for inspection and the removal of debris blockage during storm conditions.

Embankments should be maintained to preserve their integrity as impoundment structures, including: mowing, control of woody vegetation, rodent, and outlet

maintenance and repair. Basins should be mowed no more than twice a year during the growing season to maintain maximum grass heights less than 12 inches. All accumulated trash and debris should be removed.

- G. Outlet Control Structure:** Inspect and, if required, clean out structure at least once a year, preferably in early spring. Clean out must include the removal and legal disposal of any accumulated sediments and debris at the bottom of the structure and inlet grate.

- H. Roofline Drip edges:** The drip edges should be inspected semi-annually and following major storm events for the first year and every six months thereafter. The reservoir crushed stone should drain within 24 to 48 hours following a major storm event. If ponding exceeds 48 hours, the stone reservoir course shall be removed and the filter bed be rototilled to reestablish the soil's filtration capacity. If water ponds in the reservoir course for more than 72 hours, the top several inches of the filter shall be replaced with fresh material. Inspect for debris and sediment build up at surface and remove as needed. The drip edges are part of the stormwater management plan and cannot be paved over or altered in anyway.

- I. Regular Maintenance:** Clear accumulations of winter sand along parking areas once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along pavement shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader.

- J. Documentation:** Keep a log (report) summarizing inspections, maintenance, and any corrective actions taken. The log must include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal. The log must be made accessible to Town staff upon request. The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization. Attached are sample logs.

Duration of Maintenance

Perform maintenance as described.

INSPECTION AND MAINTENANCE LOG – GENERAL INSPECTION

LEWISTON ROAD SUBDIVISION GRAY, MAINE

The following stormwater management and erosion control items shall be inspected and maintained as prescribed in the Maintenance Plan with recommended frequencies as identified below. The owner is responsible for keeping this maintenance log on file for a minimum of five years and shall provide a copy to the Town upon request. Inspections are to be performed by a qualified third-party inspector and all corrective actions shall be performed by personnel familiar with stormwater management systems and erosion controls.

Maintenance Item	Maintenance Event	Date Performed	Responsible Personnel	Comments
Vegetated Areas	Inspect slopes and embankments early in Spring.			
Ditches, swales and other open channels	Inspect after major rainfall event.			
	Inspect for erosion or slumping and repair			
	Mowed at least annually			
Storm Drains	Inspect semiannually and after major rainfall.			
	Repair erosion at inlet or outlet of pipe.			
	Repair displaced riprap.			
	Clean accumulated sediment in culverts when >20% full.			
Roofline Dripedges	Check after each rainfall event to ensure that the stone reservoir drains within 24-48 hours.			
	Replace top several inches of filter if reservoir does not drain within 72 hours.			
	Inspect and remove sediment or debris build up on the surface of the stone			
	Inspect semi-annually for erosion or sediment accumulation and repair as necessary.			
Regular Maintenance	Clear accumulation of winter sand in paved areas annually.			

INSPECTION AND MAINTENANCE LOG – BIORETENTION BASIN

LEWISTON ROAD SUBDIVISION GRAY, MAINE

Maintenance Item	Maintenance Event	Date Performed	Responsible Personnel	Comments
Bioretention Basin	Check after each rainfall event to ensure that pond drains within 24-48 hours.			
	Replace top several inches of filter if pond does not drain within 72 hours.			
	Inspect for and remove sediment and plan debris annually			
	Replace mulch annually			
	Harvest and prune plants semi-annually			
	Inspect side slopes and embankments for signs of settling or structural failure annually.			
	Inspector to verify basin not utilized for snow storage			
	Inspector to verify basin not utilized for vehicle or heavy equipment storage.			
Spillway	Inspect and remove obstructions as necessary.			
	Remove woody vegetation.			
Outlet Pipe	Inspect semiannually and after major rainfall.			
	Repair erosion at outlet of pipe.			
	Repair displaced riprap.			
	Clean accumulated sediment in culverts when >20% full.			

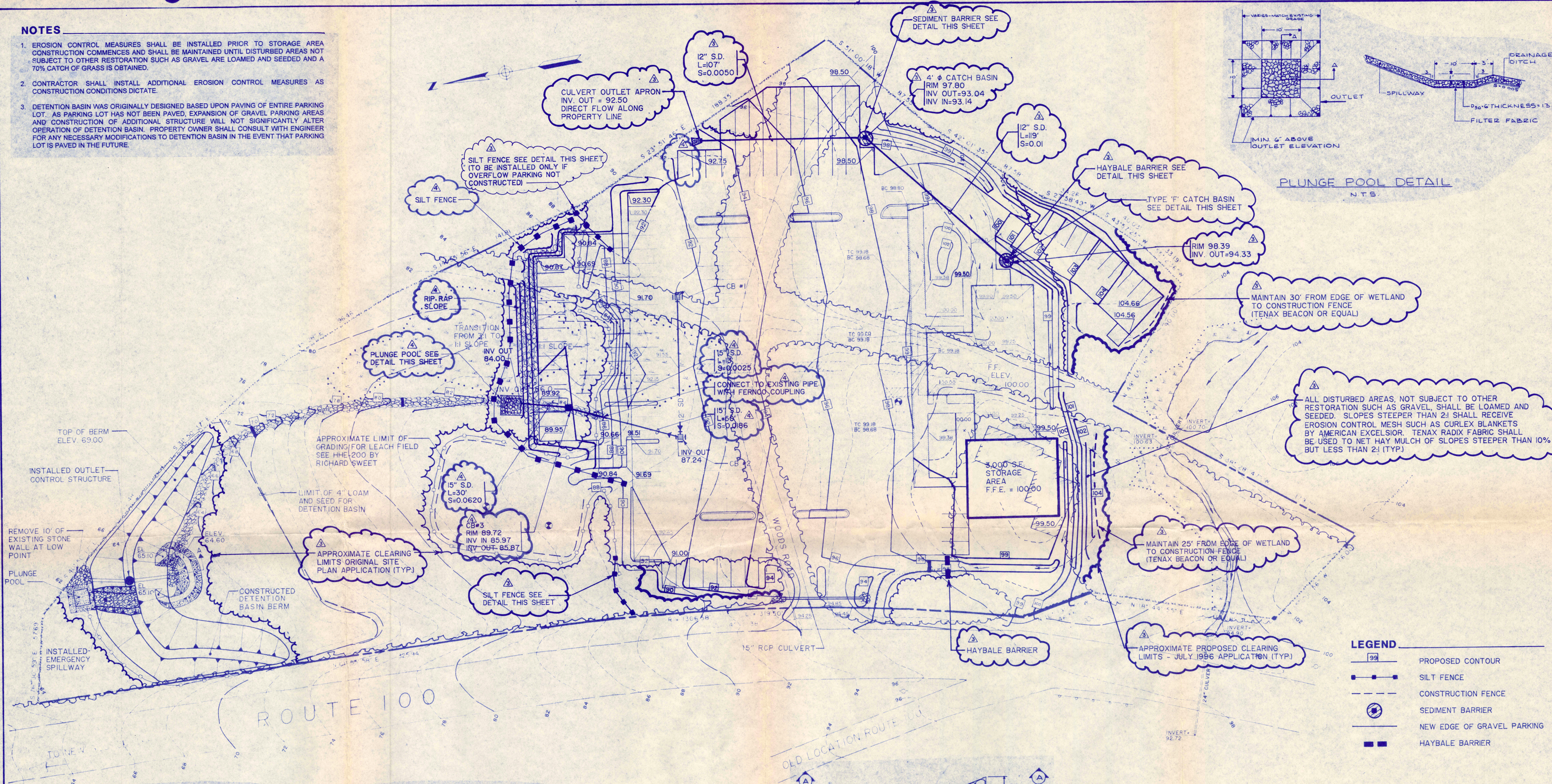
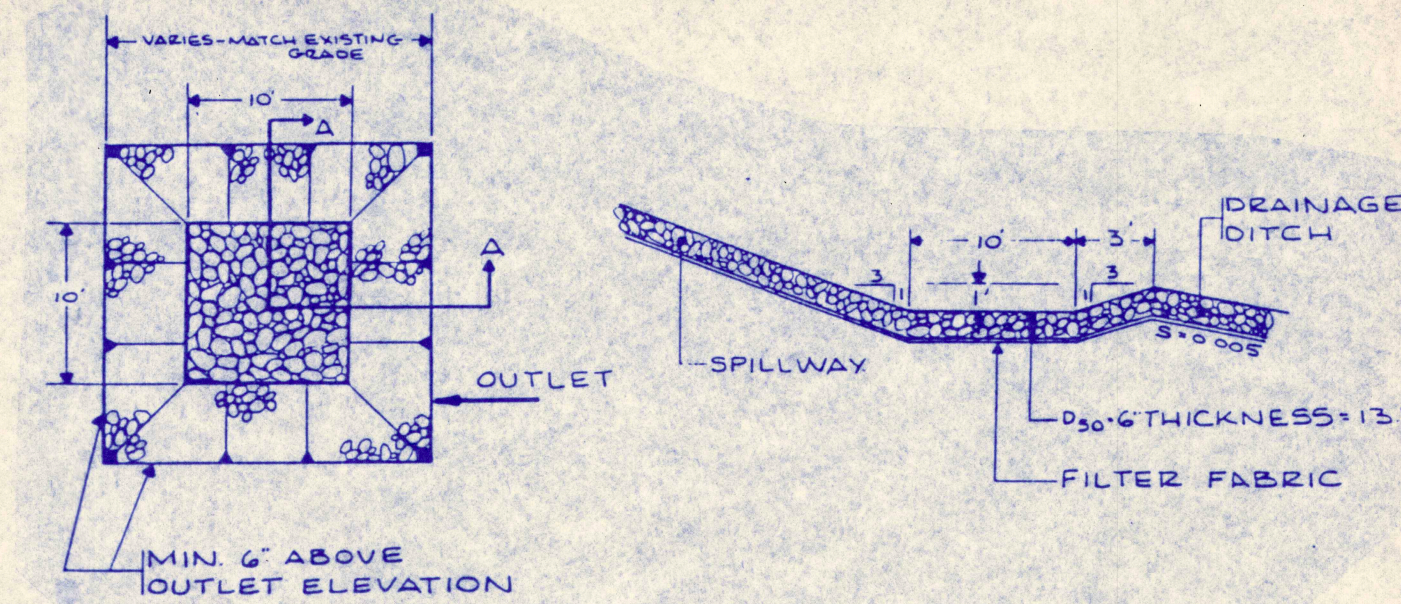
INSPECTION AND MAINTENANCE LOG – DETENTION BASIN

LEWISTON ROAD SUBDIVISION GRAY, MAINE

Maintenance Item	Maintenance Event	Date Performed	Responsible Personnel	Comments
Detention Basin	Inspect semi-annually for erosion or sediment accumulation and repair as necessary.			
	Inspect side slopes and embankments for signs of settling or structural failure annually			
	Mow grass no more than twice a year to no more than 12 inches.			
	Inspect and remove trash and debris as annually.			
Spillway	Inspect and remove obstructions as necessary.			
	Remove woody vegetation.			
	Replace riprap as necessary.			
Outlet Control Structure	Inspect to ensure that structure is properly draining.			
	Remove accumulated sediment semiannually.			
	Inspect grates/inlets and remove debris as needed.			
Outlet Pipe	Inspect semiannually and after major rainfall.			
	Repair erosion at outlet of pipe.			
	Repair displaced riprap.			
	Clean accumulated sediment in culverts when >20% full.			

NOTES

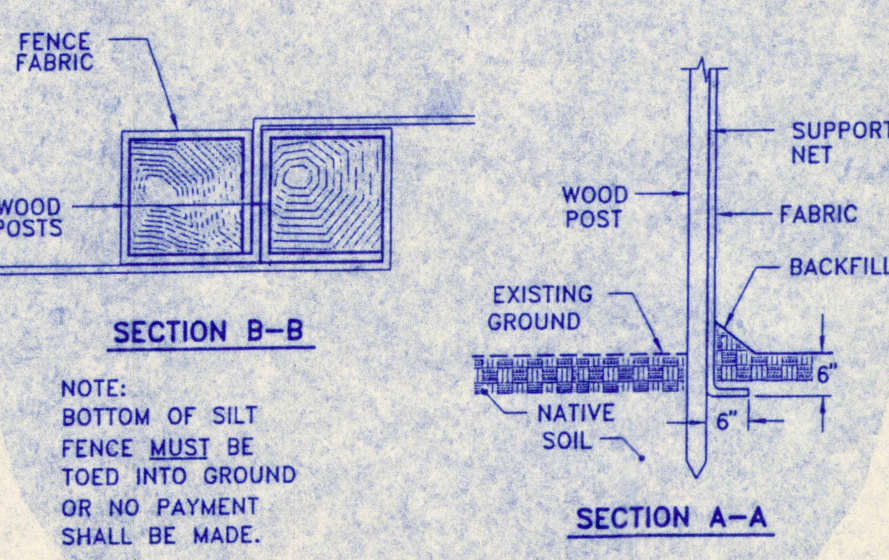
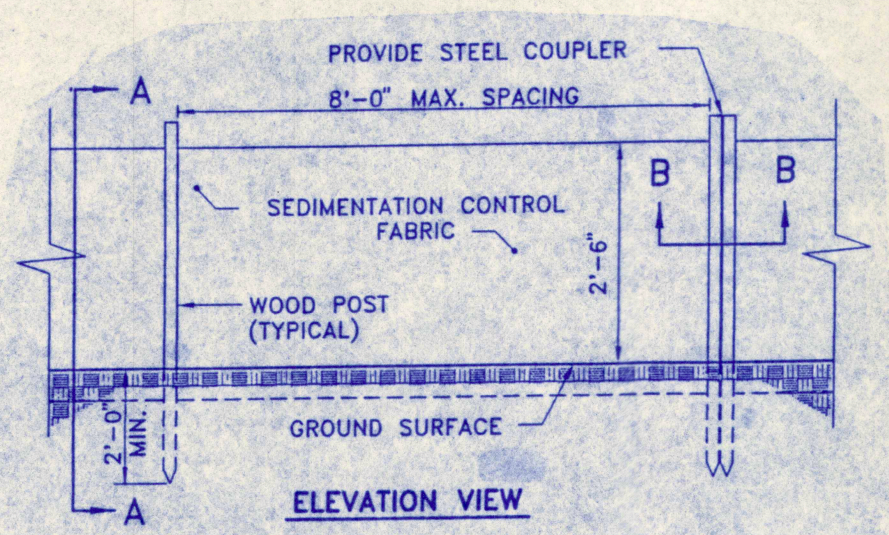
1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO STORAGE AREA CONSTRUCTION COMMENCES AND SHALL BE MAINTAINED UNTIL DISTURBED AREAS NOT SUBJECT TO OTHER RESTORATION SUCH AS GRAVEL ARE LOAMED AND SEEDED AND A 70% CATCH OF GRASS IS OBTAINED.
2. CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS CONSTRUCTION CONDITIONS DICTATE.
3. DETENTION BASIN WAS ORIGINALLY DESIGNED BASED UPON PAVING OF ENTIRE PARKING LOT. AS PARKING LOT HAS NOT BEEN PAVED, EXPANSION OF GRAVEL PARKING AREAS AND CONSTRUCTION OF ADDITIONAL STRUCTURE WILL NOT SIGNIFICANTLY ALTER OPERATION OF DETENTION BASIN. PROPERTY OWNER SHALL CONSULT WITH ENGINEER FOR ANY NECESSARY MODIFICATIONS TO DETENTION BASIN IN THE EVENT THAT PARKING LOT IS PAVED IN THE FUTURE.



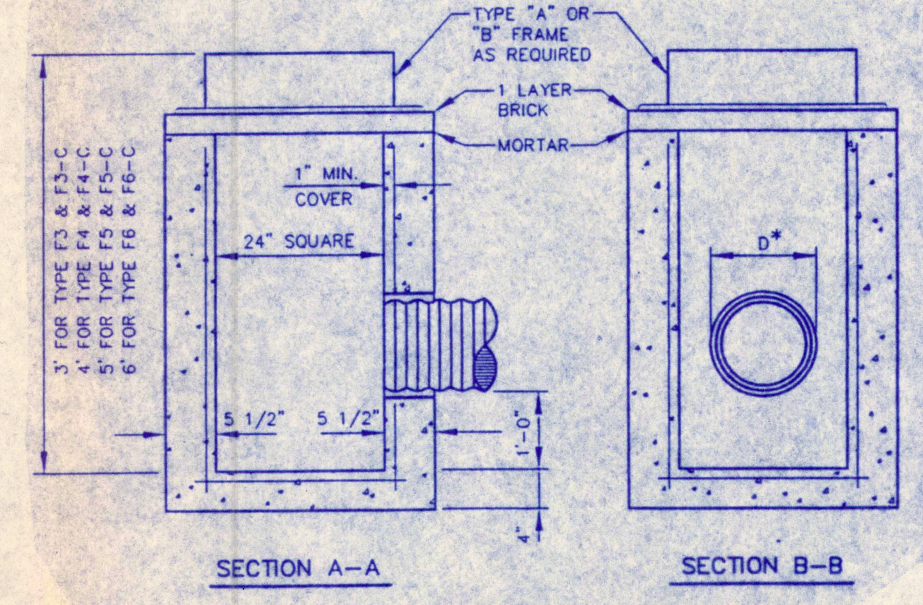
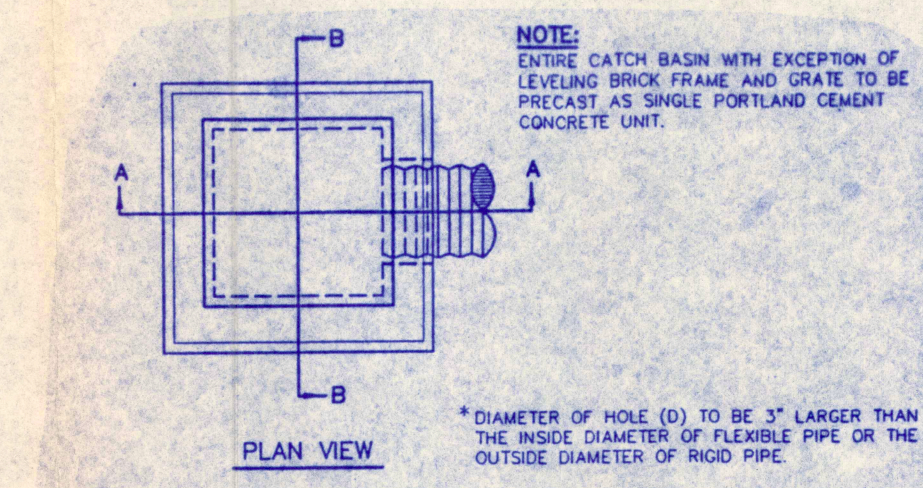
PLUNGE POOL DETAIL
N.T.S.

LEGEND

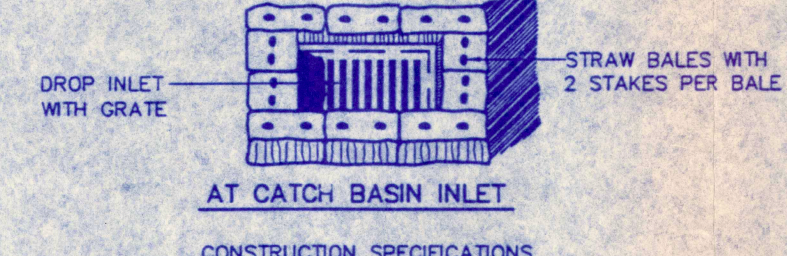
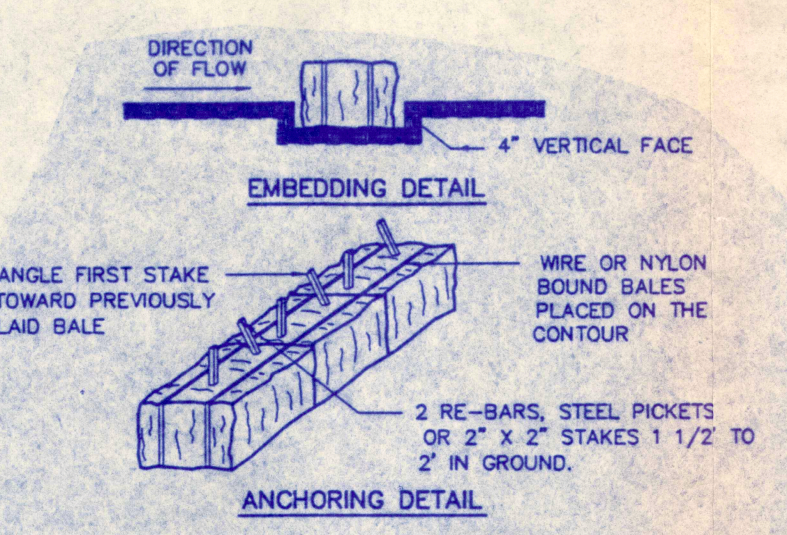
	PROPOSED CONTOUR
	SILT FENCE
	CONSTRUCTION FENCE
	SEDIMENT BARRIER
	NEW EDGE OF GRAVEL PARKING
	HAYBALE BARRIER



SILTATION FENCE DETAIL
N.T.S.



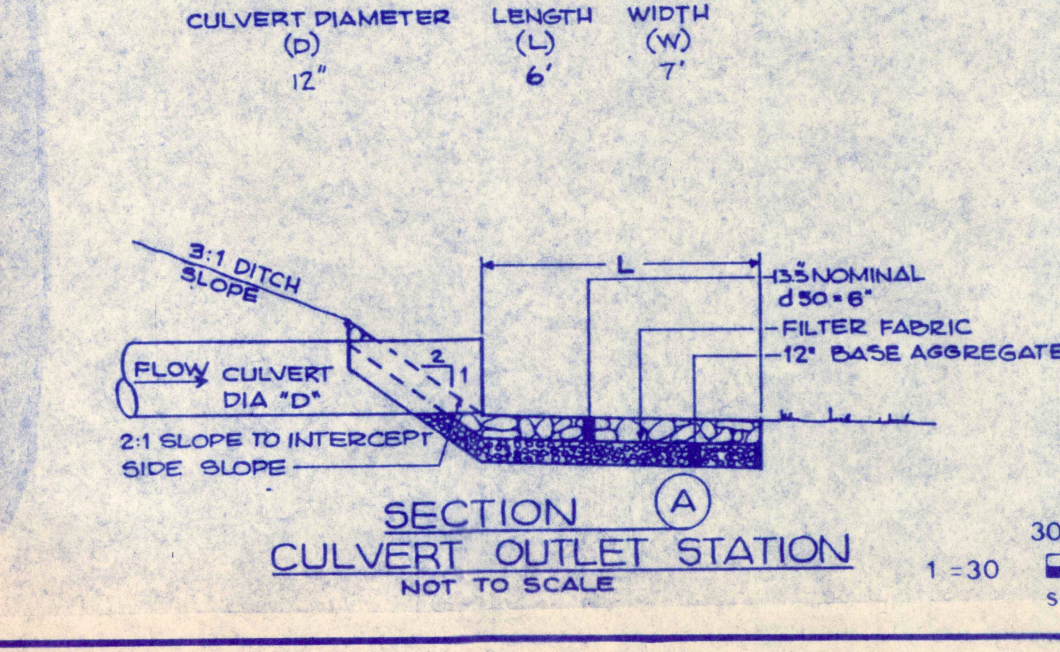
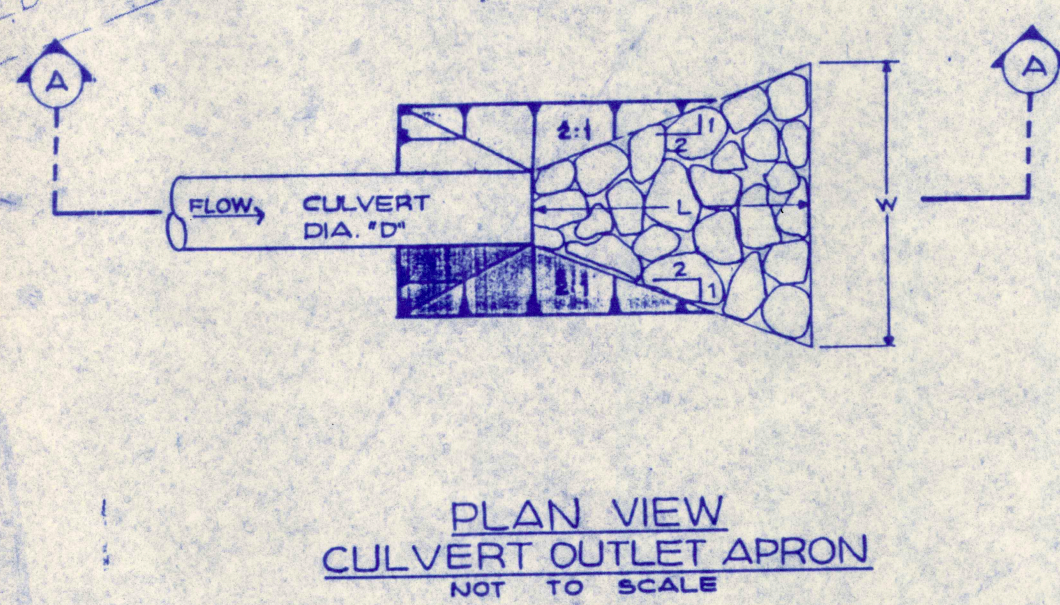
CATCH BASIN TYPE 'F'
N.T.S.



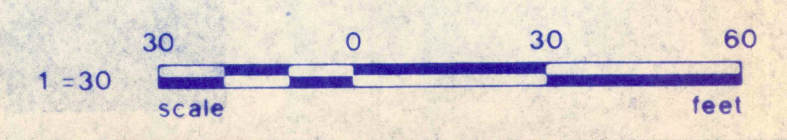
CONSTRUCTION SPECIFICATIONS

1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of 4\"/>

STRAW OR HAY BALE BARRIER
N.T.S.



SECTION A-A
CULVERT OUTLET STATION
NOT TO SCALE



8/2/96	ADDED OVERFLOW PARKING
7/23/96	SUBMITTED FOR SITE PLAN APPLICATION AMENDMENT
12/7/90	RELOCATED ENTRANCE 30.5' NORTH AND REVISED GRADING AROUND ENTRANCE AND BUILDING PER OWNERS REQUEST

REV #	DATE	REVISION
1	6/7/90	MINOR GRADING REVISIONS, NOTE FOR PIPE MATERIAL

PREPARED FOR **JAMES AND ROSEMARIE CYR**
P.O. BOX 1238
GRAY, MAINE 04039

CYR AUCTION GALLERY

GRADING, DRAINAGE AND EROSION CONTROL

DeLuca-Hoffman Associates, Inc.
Consulting Engineers
778 Main Street
South Portland, Maine 04106
207 775 1121

Designed AMP	Date 4/24/90	Sheet No.
Drawn GEC	Scale 1"=30'	4
Checked TLG	Job No. 336	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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MEMO Addendum for May 10, 2022 Planning Board Meeting:

Monday, May 9, 2022

TO: Town of Gray Planning Board

FROM: Kristen Muszynski, community planner

CC: JP Connolly, DM Roma engineers
Scott Liberty, property owner

RE: Liberty Self-Storage Subdivision development application, 100 and 104 Lewiston Road

The applicant has provided three additional and/or updated submittals since I sent out the Planning Board packets and emailed the memo to you on Friday, May 6. Those submittals are listed and described below:

1. An updated waiver request, which includes the three waivers noted in the 5-6-22 memo as well as one additional request regarding property marker monumentation.
2. A draft of the stormwater agreement language
3. A new subdivision plan, showing the net residential area/density and updated well location for Lot 1

As the board has not yet had a chance to review these materials, you will need to consider whether or not to consider them at the May 10, 2022 meeting.

Additional notes:

The following items are outstanding. If submitted prior to the meeting or at the meeting, the board can determine whether or not to consider it at the May 10 meeting.

- The town's consulting engineer, Will Haskell of Gorrill-Palmer, has not yet had the opportunity to provide a full review of the applicant's May 5 responses to the initial engineering comments.
- The photometrics plan for the lighting considerations is not yet complete/submitted.
- The letter from a hydrogeological engineer regarding siting of Lot 1 well is not yet complete/submitted.



May 9, 2022

Town of Gray Planning Board
c/o Kristen Muszynski Town Planner
Henry Pennell Municipal Complex
24 Main St, Gray, ME 04039

**Re: Major Site Plan, Minor Subdivision, and Conditional Use Permit application update
Lewiston Road Subdivision, Gray, Maine
Odessa Properties, LLC – Applicants**

Dear Ms. Muszynski:

On behalf of the applicant Odessa Properties, LLC, DM Roma Consulting Engineers has prepared a revised Subdivision plan and supplemental documents for the Planning Board to consider as part of the submission of the Major Site Plan, Minor Subdivision and Conditional Use permit application for the proposed mixed-use subdivision off Lewiston Road in Gray.

Based on discussions with Town Staff comments DM Roma has revised the project plans and supporting documents. Included as attachments with this letter are the following items:

- Revised project plan sheets SB-1 the Subdivision Plan
- Waiver Request Letters, outlining all waivers being requested
- Draft of Stormwater Management Agreement

Upon your review of the submission, please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,

DM ROMA CONSULTING ENGINEERS

J.P. Connolly
Project Manager

Cc: Odessa Properties, LLC, Applicant

ATTACHMENT

Waiver Request Letter

WAIVER REQUESTS

The applicant would like the Planning Board to consider granting waivers to the following requirements:

High Intensity Soil Survey
Hydrogeologic Assessment
Septic access on an Abutting Lot
Stone or Concrete Property Monuments

The applicant is requesting the Planning Board consider granting a waiver from the requirement of having a high-intensity soil survey performed for the project site. The project will require the installation of a private well and a private septic system for the proposed residential lot, Lot 1. The self-storage site will not require and is not proposing to include provisions for water service, and therefore no private septic system or private well has been proposed for Lot 2. Lot 3 has an existing private septic and private well.

The proposed well and septic locations are located such that nitrogen plumes from the proposed septic systems will not likely extend beyond the overall property limits.

Additionally, soil test pits conducted on the project site confirm that the medium intensity soil mapping is accurate in the vicinity of the test pits. With the project not proposing improvements such as engineered waste water system(s), it is the opinion of the applicant that the high-intensity soil survey will not provide any significant additional information as to the suitability of the site's soil conditions for the improvements proposed.

The applicant is requesting the Planning Board consider granting a waiver from the requirement of having a hydrogeologic assessment of the site. The project site is not located within a sand and gravel aquifer. As such the impact of the proposed project on the hydrogeology of the site is not expected to be significant.

The applicant is requesting the Planning Board consider granting a waiver from the requirement of having the septic system located on the same property. In this case the existing septic system has been in place for more than 20 years, and as it exists currently resides on an abutting property. Since the proposed self-storage facility on proposed Lot 2, it is not anticipated that the septic system will impact the use of Lot 2 as intended.

The applicant is requesting the Planning Board consider granting a waiver from the requirement of installing concrete or stone monuments at all property corners. Due to the existing conditions, many of the property corners will be located within an existing stonewall and in areas that will likely remain un-maintained natural areas after construction. While concrete and stone monuments do work as property monuments especially along roadsides, they are very difficult to install with accuracy along or adjacent to stone walls. In unmaintained or natural areas, stone or concrete monuments are difficult to locate and since these locations are rarely disturbed iron pins or capped rebar are more preferred monuments due to their ease of locating in the future. With this in mind,

we propose installing a concrete or stone monument at the proposed property corner along Lewiston Road, and iron pins or capped rebar at all other proposed property corners.

Lewiston Road Subdivision, Gray, Maine

**Maintenance Agreement for a
Storm Water Management System**

This Agreement is made this _____ day of May, 2022 by and between Odessa Properties, LLC and the Town of Gray, Maine.

The project name is “Lewiston Road Subdivision”.

The location is: 100 & 104 Lewiston Road, Gray, Maine.

The project’s Tax Map and Lot Numbers are Tax Map 28 Lots 26-2 & 26-2-1.

The project is shown on a plan entitled “Lewiston Road Subdivision” dated 4-27-2022 and approved by the Town of Gray Planning Board on _____, 2022, and recorded in the Cumberland County Registry of Deeds in Plan Book _____, Page _____.

WHEREAS, the approval of the project includes a stormwater management system, shown on the Grading and Utility Plan prepared by DM Roma dated 4-27-2022, a copy of which is attached hereto as Exhibit A, which requires periodic maintenance; and

WHEREAS, in consideration of the approval of the project the Town of Gray requires that periodic maintenance be performed on the stormwater management system pursuant to the Inspection, Maintenance, and Housekeeping Plan prepared by DM Roma, a copy of which is attached hereto as Exhibit B;

NOW, THEREFORE, in consideration of the mutual benefits accruing from the approval of the project by the Town and the agreement of Odessa Properties, LLC to maintain the stormwater management system, the parties hereby agree as follows:

1. The owner(s) of Lot 1 as identified on the approved Subdivision shall be responsible for maintenance of the stormwater bio-retention facility for Lot 1;
2. All other maintenance of the existing stormwater detention basin and associated drainage channels shall be the responsibility of Odessa Properties, LLC, and its successors or assigns, including responsibilities:
 - a. To inspect, maintain, and clean the storm water management system, including, to the extent they exist, parking areas, catch basins, drainage swales, pipes and related structures, at least annually, to prevent the build up and storage of sediment in the system;
 - b. To repair any deficiencies noted during the annual inspection;

- c. To provide a summary report on the inspection, maintenance, and repair activities performed annually to the Gray Town Engineer;
 - d. To allow access by Town personnel for inspecting the storm water management system for conformance with these requirements;
 - e. To include deed covenants reflecting these obligations in any conveyance of lots shown on the approved Subdivision Plan
3. This agreement shall constitute a covenant running with the land, and Odessa Properties, LLC shall reference this agreement in all deeds to lots and/or units within the development.

WITNESS:

ODESSA PROPERTIES, LLC

By: _____
 Scott A. Liberty, Manager

TOWN OF GRAY, MAINE

By: _____

 Its _____

STATE OF MAINE
 CUMBERLAND COUNTY, ss:

May ____, 2022

Personally appeared the above-named Scott A. Liberty, the Manager of Odessa Properties, LLC, and acknowledged the foregoing Agreement to be his free act and deed in his said capacity and the free act and deed of said Odessa Properties, LLC.

Before me,

 Notary Public / Attorney at Law

 Print Name

Kristen Muszynski

From: Robert Thayer <rthayerjr@maine.rr.com>
Sent: Monday, April 4, 2022 6:05 PM
To: Kristen Muszynski
Subject: Re: Gracewoods- paperwork

Follow Up Flag: Follow up
Flag Status: Completed

1. I am the sole owner of Thayer Gracewoods LLC.
2. I have hired Wayne Wood to represent me at the planning board meetings for the Gracewoods subdivision amendment.



**PLANNING BOARD/STAFF REVIEW COMMITTEE APPLICATION
TOWN OF GRAY MAINE**

PROPERTY TO BE DEVELOPED			
Property Location/Address	GRACEWOODS LANE	Property Map/Lot	62 - 27 - 112
Zoning District	RRA + LR	Lot Acreage	8 62 - 27 - 113
Owner Name	THAYER GRACEWOODS LLC	Tax Sheet	062
Owner Address	116 HAWTHORNE LN SUPO	Owner Phone	749 0798

APPLICANT			
Name (IF different than owner)	Robert Thayer Jr	Contact Phone Number	749-0798
Mailing Address	116 Hawthorne Rd	Alternate Phone Number	
Mailing City/State/Zip	S Portland	Fax Number	
Email Address			

AGENT/CONSULTANT			
Name	WAYNE T WOOD CO	Contact Phone Number	657-3330
Mailing Address	30 WOOD DRIVE	Alternate Phone Number	
Mailing City/State/Zip	GRAY ME 04039	Fax Number	
Email Address	WTWCO5328@gmail.com		

PROJECT

The undersigned requests that the Town of Gray Planning Board consider the following application for:

<input checked="" type="checkbox"/> Subdivision Sketch Plan Review Preliminary Plan Review (Major) Final Plan Review (Major) <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Site Plan Review Pre-Application Conference Minor Major <input type="checkbox"/> Shoreland Zoning Permit	<input type="checkbox"/> Other (specify) Conditional Use Amendment Extension Workshop Contract Zone Request
--	---

Project Description / Comments:
 Amend subdivision to add 2 more lots.

Applicant Signature 	Date 5/3/22
---	-------------

Approved by the Town of
Freeport Planning Board:

Conditions:

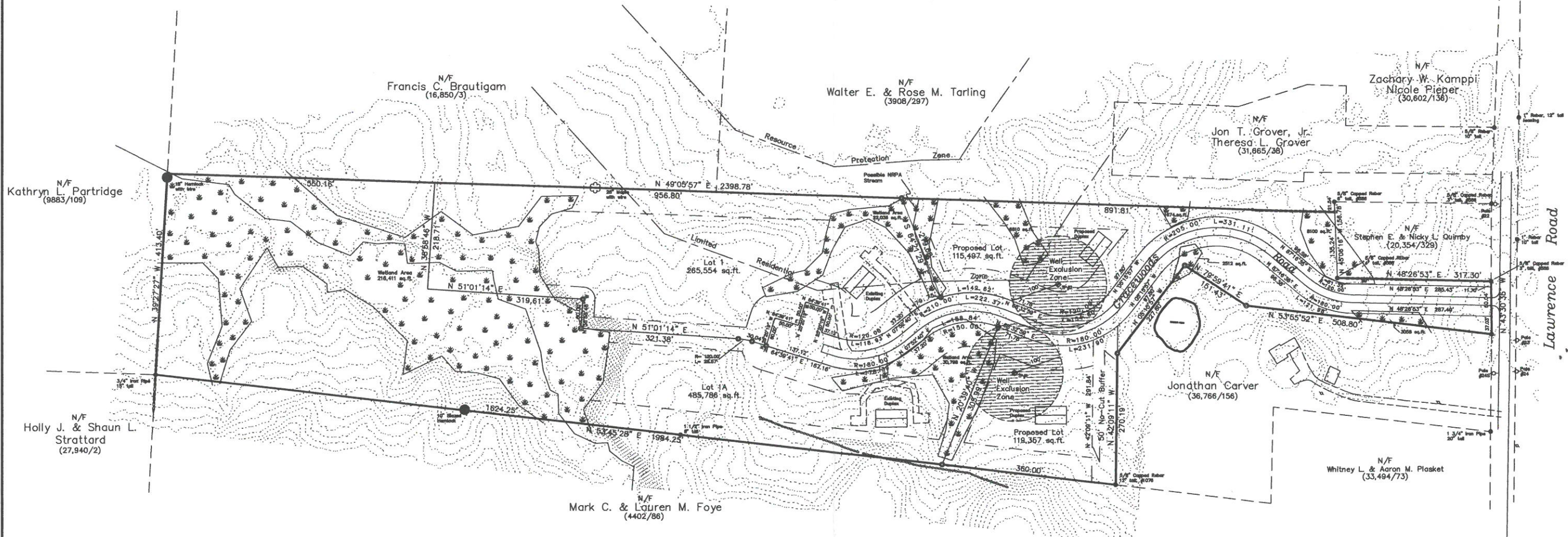
Signed:

Date:



LEGEND

- Iron Pipe or Pin Found
- ⊙ 5/8" Capped Rebar Set (#1328)
- Utility Pole
- Stone Wall
- ◆ Soils Test
- ⋆ Wetlands
- N/F Now or Formerly of
- (3908/297) CCRD Deed Reference
- Zoning Boundary



NOTES

1. Owner of record is Thayer Gracwoods, LLC by deeds recorded in the Cumberland county Registry of Deeds in book 37,410 pages 298 and 299.
2. This property is shown as Lots 27-112 and Lot 27-113 on Town of Gray Tax Sheet 62 and is in the Rural Residential and Agricultural (RRA) and the Limited Residential Shoreland Zoning Districts.
3. Soils information for the additional soils tests was supplied by Mark Hampton Associates, Inc.
4. Elevations contours shown on this plan were taken from the MEGIS Data Library of LIDAR.
5. These two new lots will be served by individual drilled wells and on-site septic systems.
6. Wetlands information shown on this plan is from the previously approved plans of the Gracewood Subdivision.
7. These two new lots will be serviced by underground utilities.
8. The Town of Gray shall not be responsible for the maintenance, repair, plowing, or similar services for the private way (Gracewood Road) shown on this plan.
9. See MDEP approval ~ permit L-22627-TB-A-N for a stream crossing and the Tier 1 wetland impact.
10. Gracewood Road shall be maintained year round for emergency vehicle access.
11. This plan is an amendment to the "Amended Gracewood Subdivision Plan" as approved by the Town of Gray Planning Board and recorded in the Registry of Deeds in plan book 208 page 263.

NET RESIDENTIAL ACERAGE CALCULATIONS

Total Lot Area	24.97 acres	
Area in RRA	21.96 acres	Area in LR 3.01 acres
Wetlands	6.79 acres	0.47 acres
Steep Slopes	0.20 acres	0.00 acres
Flood Zone	0.00 acres	0.00 acres
Roads(10% of total)	2.50 acres	0.00 acres
12.47 acres/ 80,000 sq.ft.		2.54 acres/ 80,000 sq.ft.
6.79 lots or 13.6 dwelling units		1.38 lots or dwelling units
Total lots allowed is 8 or 15 dwelling units		



State of Maine, Cumberland ss.
Registry of Deeds
Received _____ 19____
at _____ and recorded in
Plan Book _____ Page _____
Attest: _____
Register

2nd Amended Gracewood Subdivision
On
Lawrence Road
Gray, Maine
For Record Owner
Thayer Gracwoods, LLC
116 Hawthorne Lane, South Portland, ME 04106

WAYNE WOOD & CO.
Gray, Maine 04039
Drawn By: WRW
Scale: 1" = 100'
Date: April 2022
Job No. 25038A

30 Wood Dr
(207) 657-3330

SOIL PROFILE / CLASSIFICATION INFORMATION

DETAILED DESCRIPTION OF SUBSURFACE CONDITIONS AT PROJECT SITES

Project Name: Gracewoods	Applicant Name: Robert Thayer Jr.	Project Location (municipality): Gray
------------------------------------	---	---

Exploration Symbol # TP-1 Test Pit Boring Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

0	Texture	Consistency	Color	Redox Features
	Sandy Loam	Friable	Dark Brown	
10		Friable		
20	Sandy Loam		Red Brown	
30				
40	Sandy Loam	Firm	Olive	Common and Distinct
50				
60				

Depth below mineral soil surface (inches)

Soil Classification 3 C Profile Condition	Slope 2 Percent	Limiting Factor 22 Depth	<input checked="" type="checkbox"/> Groundwater <input checked="" type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock
Soil Series/Phase Name: Dixfield MWD		Hydrologic <input type="checkbox"/> Hydric <input checked="" type="checkbox"/> Non-hydric Soil Group	

Exploration Symbol # TP-2 Test Pit Boring Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

0	Texture	Consistency	Color	Redox Features
	Sandy Loam	Friable	Dark Brown	
10		Friable	Red Brown	
20	Sandy Loam			
30	Sandy Loam	Firm	Olive	Common and Distinct
40				
50				
60				

Depth below mineral soil surface (inches)

Soil Classification 3 C Profile Condition	Slope 2 Percent	Limiting Factor 20 Depth	<input checked="" type="checkbox"/> Groundwater <input checked="" type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock
Soil Series/Phase Name: Dixfield MWD		Hydrologic <input type="checkbox"/> Hydric <input type="checkbox"/> Non-hydric Soil Group	

Exploration Symbol # TP-3 Test Pit Boring Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

0	Texture	Consistency	Color	Redox Features
	Sandy Loam	Friable	Dark Brown	
10		Friable	Red Brown	
20	Sandy Loam			
30	Sandy Loam	Firm	Olive	Common and Distinct
40				
50				
60				

Depth below mineral soil surface (inches)

Soil Classification 3 C Profile Condition	Slope 2 Percent	Limiting Factor 20 Depth	<input type="checkbox"/> Groundwater <input checked="" type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock
Soil Series/Phase Name: Dixfield MWD		Hydrologic <input type="checkbox"/> Hydric <input checked="" type="checkbox"/> Non-hydric Soil Group	

Exploration Symbol # TP-4 Test Pit Boring Probe
 _____ " Organic horizon thickness Ground surface elev. _____
 _____ " Depth of exploration or to refusal

0	Texture	Consistency	Color	Redox Features
	Sandy Loam	Friable	Dark Brown	
10		Friable	Red Brown	
20	Sandy Loam			
30	Sandy Loam	Firm	Olive	Common and Distinct
40				
50				
60				

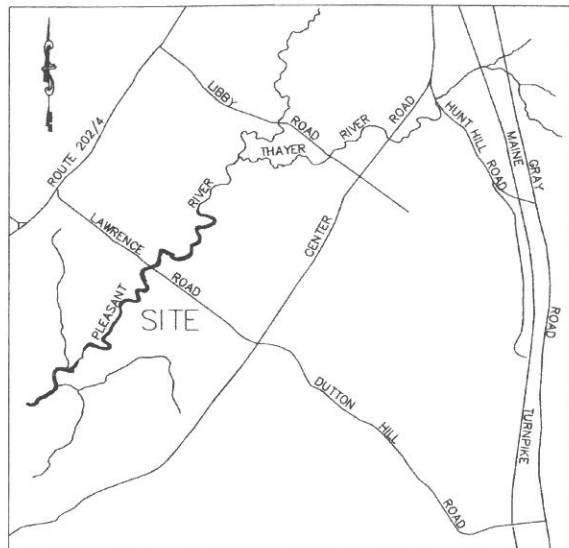
Depth below mineral soil surface (inches)

Soil Classification 3 C Profile Condition	Slope 2 Percent	Limiting Factor 18 Depth	<input checked="" type="checkbox"/> Groundwater <input checked="" type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock
Soil Series/Phase Name: Dixfield MWD		Hydrologic <input type="checkbox"/> Hydric <input checked="" type="checkbox"/> Non-hydric Soil Group	

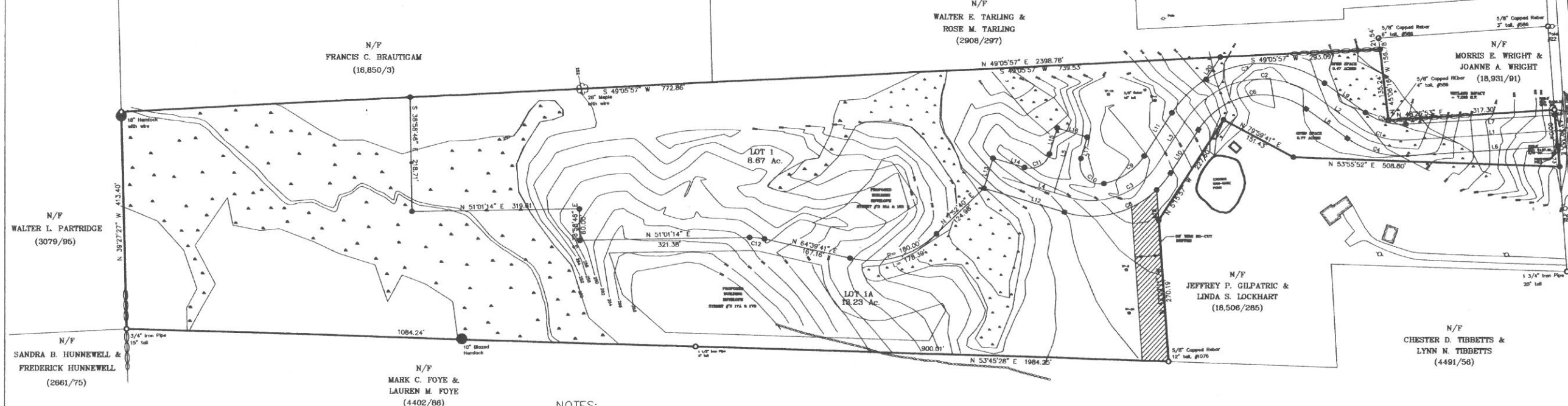
INVESTIGATOR INFORMATION AND SIGNATURE

Signature:	Date: 2/24/22
Name Printed: Mark J. Hampton	Cert/Lic/Reg. #: 263/216
Title: <input checked="" type="checkbox"/> Licensed Site Evaluator <input checked="" type="checkbox"/> Certified Soil Scientist <input type="checkbox"/> Certified Geologist <input type="checkbox"/> Professional Engineer	

affix professional seal



LOCATION MAP
NOT TO SCALE



CENTERLINE CURVE DATA

CURVE	LENGTH	RADIUS	CRD BEARING	CRD DIST.
C1	101.65	150.00	S67°51'44"W	99.72
C2	282.65	175.00	S41°00'19"W	252.92
C3	193.25	150.00	S31°38'31"W	180.16

PROPERTY LINE DATA

LINE	DIRECTION	DISTANCE
L6	N48°26'53"E	287.49
L7	S48°26'53"W	285.44
L8	N87°16'35"E	96.38'
L9	S87°16'35"W	96.38'
L10	N05°15'57"W	97.80'
L11	S05°15'57"E	97.80'
L12	N68°32'59"E	159.56'
L13	S21°27'01"E	60.00'
L14	S68°32'59"W	62.36'
L15	S21°27'01"E	52.00'
L16	S68°32'59"W	60.00'
L17	N21°27'01"W	42.24'
L18	N43°30'35"W	108.77'
L19	N42°09'11"W	58.03'
L20	S05°15'57"E	50.28'

PROPERTY LINE CURVE DATA

CURVE	LENGTH	RADIUS	CRD BEARING	CRD DIST.
C4	121.98	180.00	N67°51'44"E	119.66
C5	81.32	120.00	S67°51'44"W	79.77
C6	234.20	145.00	N41°00'19"E	209.56'
C7	331.11	205.00	S41°00'19"W	296.27'
C8	231.90	180.00	N31°38'31"E	216.19
C9	95.45	120.00	S17°31'16"W	92.95'
C10	78.42	38.00	S80°34'15"E	65.23'
C11	59.69	38.00	S23°32'59"W	53.74'
C12	28.57	120.00	S57°50'28"W	28.50'

CENTERLINE DATA

LINE	DIRECTION	DISTANCE
L1	S48°26'53"W	314.47'
L2	S87°16'35"W	96.38'
L3	S05°15'57"E	97.80'
L4	S68°32'59"W	131.20'
L5	N21°27'01"W	100.00'

LEGEND

EXISTING	DESCRIPTION	PROPOSED
---	PROPERTY/ROW	---
---	LOT LINES	---
---	SETBACK	---
---	EASEMENT	---
---	CENTERLINE	---
---	MONUMENT	---
---	IRON PIPE/ROD	---
---	DRILLHOLE	---
---	CURVE/LINE NO.	C1 / L1
---	BUILDING	---
---	WETLANDS	---
---	EDGE WETLAND SIGN	---
---	STREAM	---
---	ROCK OUTCROP	---
---	EDGE PAVEMENT	---
---	GRAVEL ROAD	---
---	CURBLINE	---
---	EDGE WATER	---
---	TREELINE	---
---	TEST PIT	TP-7
---	MONITORING WELL	MW-8
---	BORING	B-9
---	CONTOURS	124
---	WATER	8"W
---	STORM DRAIN	12"SD
---	UNDERGROUND ELEC. & TEL.	UGE&T
---	GATE VALVE	---
---	UTILITY POLE	---
---	HYDRANT	---
---	SILT FENCE	---
---	BENCHMARK	---
---	RIPRAP	---

RESIDUAL AREA SPACE, BULK & BUILDING REQUIREMENTS:

ZONING DISTRICT: GRAY (Rural Residential & Agriculture)

MIN. LOT SIZE: 80,000 S.F.

MIN. LAND PER DWELLING UNIT: 40,000 S.F.

MIN. STREET FRONTAGE: 200 FT.

FRONT SETBACK: 50 FT.

REAR SETBACK: 50 FT.

SIDE SETBACK: 25 FT.

MAX. BUILDING HEIGHT: 35 FT.

NET AREA CALCULATIONS:

TOTAL LAND AREA: 24.97 ACRES

LESS WETLANDS: -7.26 AC.

LESS ROADWAY (15% of Parcel): -3.76 AC.

LESS UNSUITABLE SOILS: -0.00 AC.

LESS SLOPES > 33%: -0.20 AC.

NET LAND AREA: 13.75 AC. 598,950 S.F.

MINIMUM LOT SIZE: 80,000 S.F.

ALLOWABLE LOTS: 7 LOTS

TOTAL WETLAND IMPACT APPROX. 7,250 S.F. (N.R.P.A. TIER 1)

ONE STREAM CROSSING (PERMIT-BY-RULE)

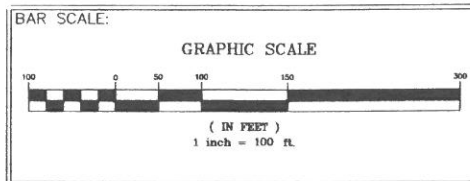
NOTES:

- OWNER: PAUL H. CORMIER & MICHELLE H. CORMIER
P.O. BOX 63
GORHAM, NEW HAMPSHIRE 03581
- APPLICANT: ROBERT THAYER JR.
36 KATANA DRIVE
S. PORTLAND, MAINE 04106
- ENGINEER: LAWRENCE HUMBLE, PE#10000
TOOTH & ASSOCIATES, L.L.C.
23 DAVIS ANNEX
GORHAM, MAINE 04038
- SURVEYOR: WAYNE WOOD, PLS#1328
WAYNE T. WOOD & COMPANY
30 WOOD DRIVE
GRAY, MAINE 04039
- TAX MAP REFERENCE: MAP 62, LOT 27-11B
- DEED REFERENCES: BOOK 4857, PG. 157
- ZONING: RURAL RESIDENTIAL & AGRICULTURAL
- ROAD CLASSIFICATION: 2 LOT / 4 DWELLING UNITS, PRIVATE WAY
- THE TOWN OF GRAY SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR, PLOWING, OR SIMILAR SERVICES FOR THE PRIVATE WAY SHOWN ON THIS PLAN, AND IF THE PRIVATE WAY HAS NOT BEEN BUILT TO PUBLIC WAY STANDARDS, THE TOWN OF GRAY WILL NOT ACCEPT IT AS A PUBLIC WAY.
- THE PRIVATE WAY SHALL BE MAINTAINED YEAR ROUND FOR EMERGENCY VEHICLE ACCESS.
- THE PROJECT IS TO BE SERVICED BY INDIVIDUAL SUBSURFACE DISPOSAL SYSTEMS MEETING THE REQUIREMENTS OF THE MAINE STATE PLUMBING CODE.
- THE PROJECT IS TO BE SERVICED BY INDIVIDUAL DRILLED WELL SYSTEMS MEETING THE REQUIREMENTS OF THE MAINE STATE PLUMBING CODE.
- WETLAND INFORMATION PERFORMED BY TOOTH AND ASSOCIATES IN JUNE 2005.
- NAME OF SUBDIVISION TO BE GRACEWOODS SUBDIVISION, LOCATED WITHIN THE TOWN OF GRAY.
- UNDERGROUND ELECTRICITY, CABLE T.V. & TELEPHONE ARE TO BE SUPPLIED TO THE PROPERTY LINE OF EACH LOT.
- THERE IS A LIST OF COVENANTS FOR GRACEWOODS SUBDIVISION. REFER TO THE ATTACHED COVENANTS.
- ROBERT THAYER JR. AND ROBERT THAYER SR. WILL BE RESPONSIBLE FOR ROAD AND DRAINAGE MAINTENANCE, SNOW REMOVAL, AND MAINTAINING PLANTED TREE BUFFER.
- FULL OWNERSHIP OF "GRACEWOODS LANE" SHALL RESIDE WITH ROBERT THAYER JR.
- M.D.E.P. APPROVAL - PERMIT L-22627-TB-A-N IS FOR N.R.P.A. PERMIT-BY-RULE FOR THE STREAM CROSSING NEAR STATION 6+75 AND THE TIER 1 WETLAND IMPACT.
- THIS PLAN IS AN AMENDMENT TO THE PLAN OF "GRACEWOOD SUBDIVISION" AS APPROVED 08/24/06 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN PLAN BOOK 206 PAGE 571.

APPROVAL-
TOWN OF GRAY
PLANNING BOARD

Peter B. Gillen DATE
Robert Thayer Jr. CHAIRPERSON
Robert Thayer Jr.
W. H. Hutchings

STATE OF MAINE
Cumberland COUNTY SS REGISTRY OF DEEDS
RECEIVED June 11, 2008
AT 12:21 P.M. AND RECORDED IN
PLAN BOOK 208 PAGE 563
ATTEST *Amelia E. Loring* REGISTER



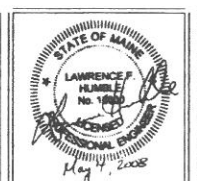
OWNER/CLIENT:
ROBERT THAYER JR.
36 KATANA DRIVE
SOUTH PORTLAND, ME 04106
PAUL H. CORMIER & MICHELLE H. CORMIER

PROJECT:
AMENDED GRACEWOOD SUBDIVISION
LAWRENCE ROAD
GRAY, ME

DESIGN CONSULTANT:
Tooth & Associates L.L.C.
Soils - Septics Designs - Engineering
Subdivision Planning - Soil Surveys
23 Davis Annex, Gorham, ME 04038
Ph: 207-839-5746 Fax: 207-839-5746

SUBMITTALS & REVISIONS:

REV.	BY:	DATE:	STATUS:
G	JMT	4-7-08	REVISED BUILDING ENVELOPES & ROAD CL AND R.O.W.
F	LFH	11-23-05	RE-SUBMITTAL FOR FINAL APPROVAL
E	LFH	11-4-05	M.D.E.P. RE-SUBMITTAL PER SITE WALK
D	LFH	9-29-05	FINAL APPROVAL SUBMITTAL
C	LFH	7-7-05	SKETCH PLAN RE-SUBMITTAL
B	LFH	5-12-05	SKETCH PLAN SUBMITTAL
A	LFH	4-23-05	FOR CLIENT REVIEW



FLD BK	DATE	SHEET NAME:
	4-7-08	AMENDED SUBDIVISION PLAN
DESIGNER	CHECKED	
LFH	LFH	
PROJECT		SHEET 3 OF 5
THAYER-SUB		

Received
Recorded Register of Deeds
Nov 09, 2020 02:30:06P
Cumberland County
Nancy A. Lane

WARRANTY DEED
Statutory Short Form

DLN:

KNOW ALL BY THESE PRESENTS That, I, **Robert T. Thayer, Jr.** of 116 Hawthorne Lane, South Portland, ME 04106 for consideration paid, grant to **Thayer Gracewoods LLC**, a Maine Limited Liability Company with a principal place of business in South Portland, County of Cumberland and State of Maine, with Warranty Covenants, the real property in the Town of Gray, County of Cumberland and State of Maine, more particularly described as follows:

A certain Lot or parcel of land with any and all improvements thereon being more particularly described as **Lot 1A** on an approved Amended Subdivision Plan entitled "Amended Gracewood Subdivision", prepared by Tooth and Associates, L.L.C. dated and recorded in the Cumberland County Registry of Deeds in Plan Book 208, Page 263.

Subject to and benefited by all notes, rights of way, rights, reservations, easements, restrictions, covenants, conditions and other matters referred to or depicted on said Plan and the initial Plan recorded in Book 206, Page 571.

Benefited by a certain Easement dated December 9, 2005 and recorded in the Cumberland County Registry of Deeds in Book 23492, Page 217 as amended in Book 30328, Page 187.

The purpose of this deed is to vest title in said Limited Liability Company and clarify the description of said parcel as the Lot on said Plan set forth above.

WITNESS my hand and seal this October 17, 2020.

Witness:
witness:

[Redacted witness signature]

[Redacted signature]

Robert T. Thayer, Jr.

STATE OF Maine
COUNTY OF Cumberland, ss.

October 17, 2020

Personally appeared on the above-date the above-named Robert T. Thayer, Jr. and acknowledged the foregoing to be his free act and deed.

Before me,

SEAL

[Redacted notary signature]

Print:

Exp:

HEIDI E. VICKERY
Notary Public, Maine
My Commission Expires February 16, 2023

Received
Recorded Register of Deeds
Nov 09, 2020 02:28:54P
Cumberland County
Nancy A. Lane

WARRANTY DEED
Statutory Short Form

DLN:

KNOW ALL BY THESE PRESENTS That, I, **Robert T. Thayer, Jr.** of 116 Hawthorne Lane, South Portland, ME 04106 for consideration paid, grant to **Thayer Gracewoods LLC**, a Maine Limited Liability Company with a principal place of business in South Portland, County of Cumberland and State of Maine, with Warranty Covenants, the real property in the Town of Gray, County of Cumberland and State of Maine, more particularly described as follows:

A certain Lot or parcel of land with any and all improvements thereon being more particularly described as **Lot 1** on an approved Amended Subdivision Plan entitled "Amended Gracewood Subdivision", prepared by Tooth and Associates, L.L.C. dated and recorded in the Cumberland County Registry of Deeds in Plan Book 208, Page 263.

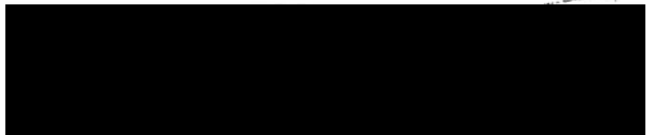
Subject to and benefited by all notes, rights of way, rights, reservations, easements, restrictions, covenants, conditions and other matters referred to or depicted on said Plan and the initial Plan recorded in Book 206, Page 571.

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The purpose of this deed is to vest title in said Limited Liability Company and clarify the description of said parcel as the Lot on said Plan set forth above.

WITNESS my hand and seal this October 17, 2020.

witness:



Robert T. Thayer, Jr.

STATE OF Maine
COUNTY OF Cumberland, ss.

October 17, 2020

Personally appeared on the above-date the above-named Robert T. Thayer, Jr. and acknowledged the foregoing to be his free act and deed.

Before me,

SEAL



Notary Public/Attorney at Law)

Print: _____

Exp: _____

HEIDI E. VICKERY
Notary Public, Maine
My Commission Expires February 16, 2023



MARK HAMPTON ASSOCIATES, INC.

SOIL EVALUATION • WETLAND DELINEATIONS • SOIL SURVEYS • WETLAND PERMITTING

6976

February 24, 2022

Mr. Robert Thayer Jr.
116 Hawthorne Lane
South Portland, ME 04106

Re: Preliminary Soil Evaluation, 2 lots Gracewoods Lane Gray, ME


Dear BJ,

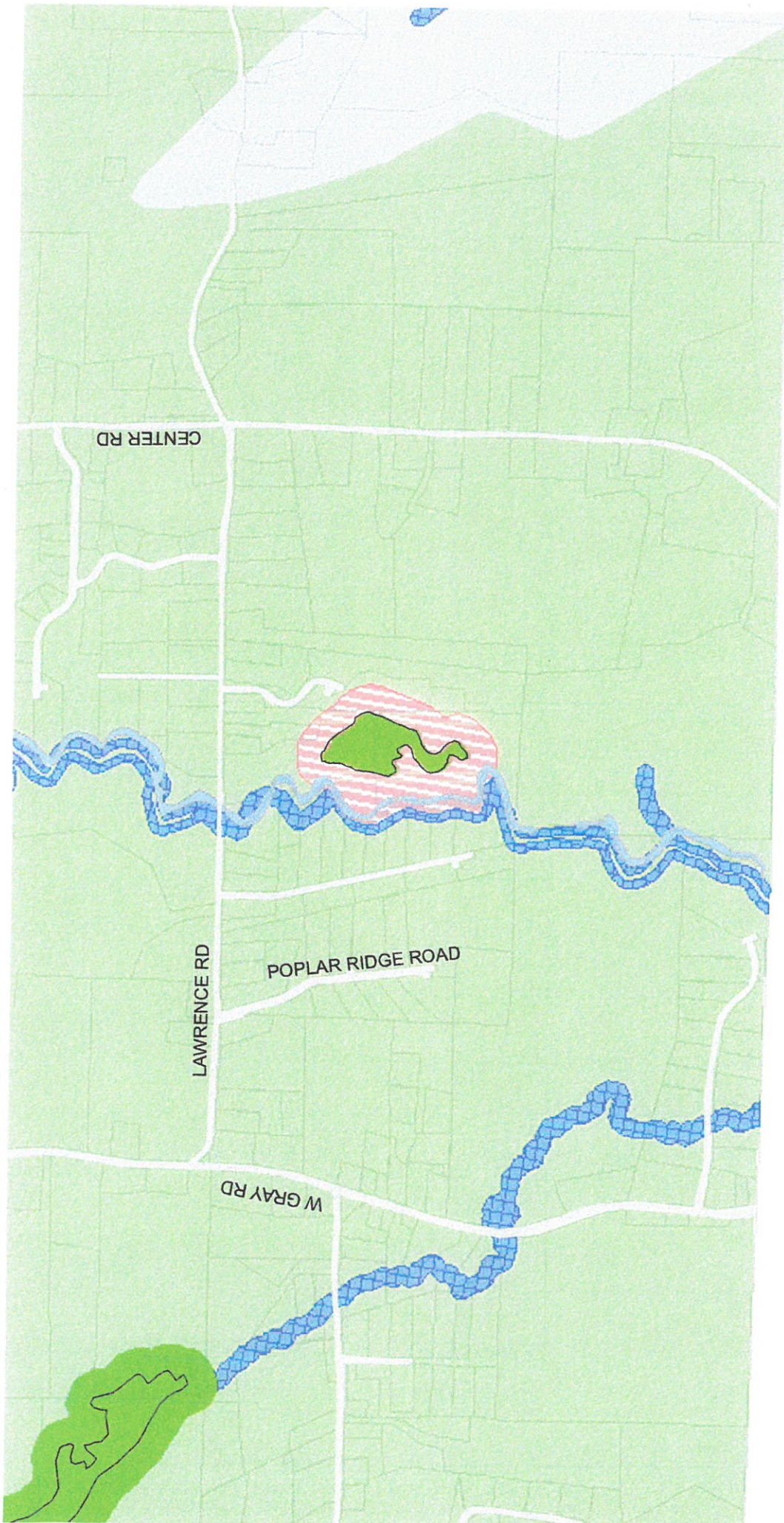
I have completed a preliminary soil evaluation on two proposed lots on Gracewood Lane Gray, ME. The soil evaluation was conducted in accordance with the Maine Subsurface Wastewater Disposal Rules dated August 2015, as amended. I evaluated two hand excavated soil test pits on each proposed lot. The soils found on the parcel are glacial till soils. I was able to find suitable soils and area for a septic system on each proposed lot.

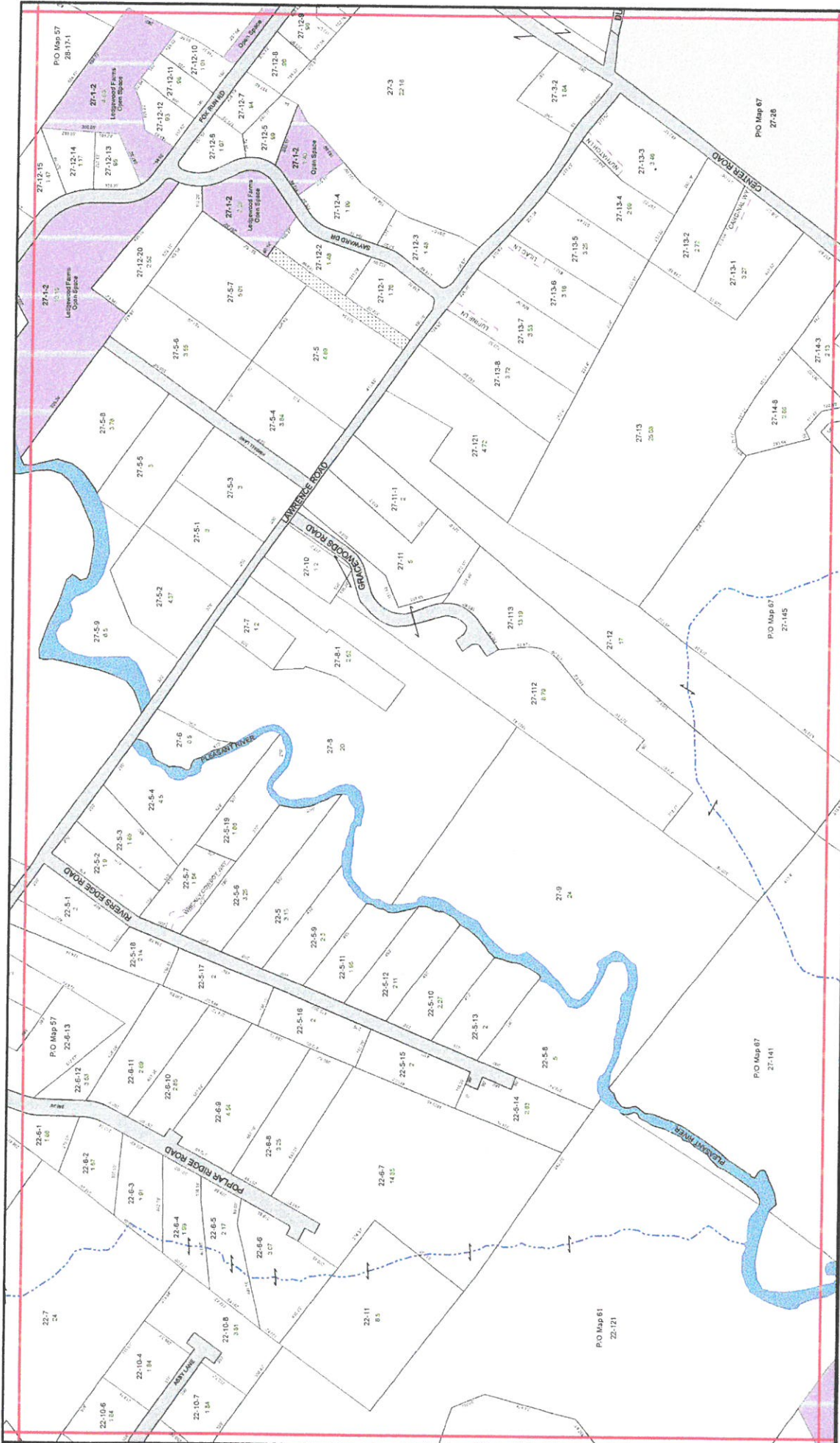
The soils as evaluated meet the minimum requirements of the state rules. In my opinion, there are suitable soils and area on each proposed lot for a septic system. A subsurface wastewater disposal design can be prepared at a future date.

If you have any questions or require additional information, please contact me.

Sincerely,


Mark J. Hampton C.S.S., L.S.E.
Certified Soil Scientist #216
Licensed Site Evaluator #263





Gray Tax Sheet
62
 Map updated to: April 1, 2021



Index Map

Town of Gray, Maine

Misc Lines

Lease	Partial	Subsided Open Space	ROW
POW	Tree Growth	Road	Road
State	Open Space Classified	Condominium Home	Water

Maps Prepared by
 Spatial Information Systems
 www.spatialinfo.com
 207.422.2200

Tax Sheets are intended for assessing purposes only. Boundary locations are approximate and should not be used for encroachment of property.