



December 30, 2022

New Bedford Conservation Commission
133 William Street, Room 304
New Bedford, MA 02740

Subject: Notice of Intent – Supplemental Materials for Runway 5 Perimeter Road Paving Project, New Bedford Regional Airport, New Bedford, Massachusetts – DEP File No. SE 049-0911.

Dear Commissioners:

On behalf of the New Bedford Regional Airport Commission (the “Applicant”), Epsilon Associates, Inc. (“Epsilon”) is pleased to submit the following supplemental materials to the New Bedford Conservation Commission (the “Commission”) for the proposed Runway 5 perimeter road paving project (DEP File No. SE 049-0911) (the “Project”). As described in the Notice of Intent (“NOI”) submitted to the Commission on November 23, 2022, the Project proposes to pave an existing gravel access road and conduct associated stormwater management improvements in the southwest portion of the Airport, in the vicinity of the Runway 5 safety area. Portions of the work will occur within Bordering Land Subject to Flooding (“BLSF”), the Commission’s suggested 25-foot buffer zone, and the 100-foot buffer zone. The Project does not propose any alterations to Bordering Vegetated Wetlands (“BVW”).

Based on discussions with the Commission at the December 6, 2022 public hearing, the Applicant is submitting the following supplemental materials for the Commission’s review:

- An alternatives analysis for the Project,
- Project need statement from the Federal Aviation Administration (“FAA”),
- Revised permit drawings depicting and quantifying the proposed temporary and permanent impacts to the 25-foot buffer zone,
- A copy of the Airport’s “Snow and Ice Control Plan” and deicing procedures, which have been approved by MassDEP, and
- A copy of the Airport’s vehicle operation plan and information related to airport vehicle movement on the proposed perimeter road.

Alternatives Analysis

The Commission requested additional information on the other alternatives that were considered during the planning phase of the Project that might further avoid or minimize impacts to jurisdictional resource areas. The Applicant has included an alternatives analysis in Attachment 1 to this submittal. As described therein, the Alternatives that were considered included restricting fuel trucks to existing public roadways instead of traveling on the perimeter road; using porous pavement for the perimeter road; maintaining the existing gravel access road; and a no action alternative (i.e., no maintenance to the existing gravel access road, and continuing to have fuel trucks cross the active runway). As described in the attached alternatives analysis, the proposed Project (paving the existing gravel access road) was selected because it creates a safer crossing for Airport fuel trucks, improves the quality of stormwater runoff discharging to the adjacent wetlands, reduces the overall surface area of the existing perimeter road, limits the amount of manpower and cost needed for maintenance, and avoids encroachment into the runway safety area.

Project Need

The Federal Aviation Administration (“FAA”) has written in support of the Project, and its need from a compliance and safety perspective, citing the Part 139 regulations, the FAA’s Advisory Circular 150/5210-20A, and the “FAA Guide to Ground Vehicle Operations. A Comprehensive Guide to Safe Driving on the Airport Surface. TC11-0020.” A copy of this correspondence is provided in Attachment 2.

Proposed Impacts to the 25-foot Buffer Zone

As described above and in the attached alternatives analysis and FAA statement, the Project is critical to create a safer access point for fuel trucks, which currently cross the active airfield multiple times a day. Impacts to the 25-foot buffer zone are unavoidable due to the proximity of BVW to the existing gravel road, and the fact that the perimeter road cannot be relocated any farther infield, as it demarcates the boundaries of the runway safety area, which cannot be altered or encroached upon.

That being said, much of the proposed work within the 25-foot buffer zone will consist of temporary alterations which will be restored in situ (i.e., either gravel being removed and converted to grass, or grassed areas being temporarily disturbed but then restored to pre-existing conditions following construction). The Applicant is submitting revised permit drawings (see Attachment 3) which include additional plan sheets (Sheets NOI.10 and NOI.11) which depict the proposed impacts to the 25-foot buffer zone at a 1” = 20’ scale and in color for ease of review between temporary and permanent alterations.

The Project proposes 21,602 square feet (s.f.) of temporary impacts to the 25-foot buffer zone, which will be restored in situ (loamed and seeded), and 21,966 s.f. of permanent impacts to the 25-foot buffer zone, which consist of the conversion of gravel to pavement. This information is included in the table on Sheet NOI.3 of the revised plan set, provided in Attachment 3.

The Project will increase paved surface over existing gravel surface by 695 SF (21,966 – 21,271). However project wide gravel surface will be decreased by 9,660 SF.

Additionally, the perimeter road will be reconstructed such that the road will be superelevated toward the infield and away from the wetlands. This will result in an improvement over existing conditions where stormwater runoff currently discharges directly into the wetlands.

Sediment controls will be installed between the limits of grading and the adjacent wetlands to protect them during construction.

At the December 6, 2022 public hearing, the Commission suggested replicating the proposed impacts to the 25-foot buffer zone. While it is not practicable to replicate (create) new 25-foot buffer zone, the Applicant has examined potential opportunities to restore or enhance the existing buffer zone within the vicinity of the impact area based on the Commission's request. Because the Project area is actively managed in accordance with the Airport's approved Vegetation Management Plan ("VMP"), supplemental woody plantings are not possible between the limits of the access road and the adjacent BVW, as this area needs to be maintained as a low growing grass cover type for safety reasons. Additionally, planting shrubs in the vicinity of the Project area could attract wildlife to this portion of the Airport, which is a significant safety hazard to aircraft, especially in the vicinity of the active runway. The Airport's top priority is to minimize the risk of wildlife collisions with aircraft. Therefore, it is infeasible to propose buffer zone enhancement plantings inside the Airport's perimeter fence line, due to its potential to attract hazardous wildlife and other safety considerations. For these reasons, the Airport is not able to provide buffer zone enhancement plantings within the vicinity of the impact area, nor within the limits of the Airport perimeter fence. The Applicant is, however, as a condition of approval willing to work with the Commission and/or its Agent to identify a buffer zone enhancement planting area outside the Airport's perimeter fence line, but within the Airport property.

Snow Management

The Airport proposes to plow snow from the perimeter access road infield into the runway safety area, away from the wetlands. The Airport has an active Snow and Ice Control Plan, which is provided in Attachment 4. The plan depicts designated snow stockpile areas for when large quantities of snow are disposed of at the Airport. It also allows for the use of sand and Sodium Acetate based Cryotech NAAC® deicer on the Airport as needed for deicing. These deicing agents

are used only as needed to provide for safe traveling conditions across the Airport. The use of these deicing agents was reviewed and approved by MassDEP in 2018 as part of the Variance proceedings for the Airport's Runway 5/23 Safety Improvements Project (MassDEP File No. SE 049-0635). Although approved, the Airport does not generally use any deicing agents on its runways or apron areas. If deicing is needed on the perimeter road, the Airport proposes to use sand only.

Ground Vehicle Movement on the Airfield and Perimeter Road

The Commission requested additional information about how vehicles will travel along the perimeter road. The Applicant has included a copy of the section of their Airport Certification Manual (§139.329) on ground vehicles (see Attachment 5). Part 139 [Title 14, Code of Federal Regulations ("CFR"), Part 139 (14 CFR Part 139)] requires each certificated airport to be operated according to its Airport Certification Manual. Applicable sections have been highlighted in yellow in the attachment. This includes the requirement that all effort shall be made to limit the number of runway crossings at the midpoint of the runway. Additionally, the Airport Certification Manual specifies that the Runway Safety Area ("RSA") must normally be clear at all times during aircraft landing and departing operations. Currently, fuel trucks must cross Runway 5-23 to access tenants located north of Runway 5-23. Drivers of the fuel trucks are required to complete and pass the movement area access driver training program.

Relative to the proposed paved perimeter road, a protocol will need to be developed in conjunction with the FAA and air traffic control for their approval. Generally speaking, the Airport will require that each vehicle using the perimeter road will need to request permission from the Air Traffic Control Tower ("ATCT") prior to use. Only one vehicle will be allowed to use the road at a time, as the road will be only one lane wide. Because the perimeter road passes through the Instrument Landing System ("ILS") critical area, no vehicles will be permitted to use the road when an aircraft is on the instrument approach. While the protocol will need to be finalized and approved by the FAA and ATCT, each vehicle would likely stage at either the "A3 Hold Position Marking" or at the T-Hangars and request permission from the ATCT to access the perimeter road. The ATCT will approve access or have the operator hold depending on situational needs. When the operator is cleared by the ATCT they will traverse the perimeter road without delay. Use of the perimeter road will be limited to Airport maintenance vehicles that have received clearance from the ATCT.

These revised materials are being submitted for the Commission's review at the **January 3, 2023** public hearing. If the Commission has any questions regarding this supplemental information, please do not hesitate to contact me at (978) 461-6225 or via email at rsommers@epsilonassociates.com.

Thank you.

Sincerely,

EPSILON ASSOCIATES, INC.



Rhianna Sommers, PWS
Senior Scientist

CC: DEP Southeast Regional Office
Amy Hoenig, Natural Heritage and Endangered Species Program
Scot Servis, New Bedford Regional Airport Manager
Steve Riesland, Airport Solutions Group, Inc.

Attachments:

Attachment 1 – Alternatives Analysis
Attachment 2 – Project Need Statement from the FAA
Attachment 3 – Revised Permit Drawings, prepared by ASG
Attachment 4 – Snow and Ice Control Plan
Attachment 5 – Ground Vehicle Movement on the Airfield excerpt from Airport Certification Manual

Attachment 1

Alternatives Analysis, prepared by Airport Solutions Group

New Bedford Regional Airport
Permit RW 5 Access Road

Alternatives Analysis

Introduction:

The existing perimeter road consists of a combination of gravel and millings as described in the Notice of Intent (NOI) application, is not suitable for Airport maintenance vehicles or Fixed Base Operator (FBO) fueling trucks. Maintenance personnel are required to cross Runway 5-23 at Taxiway B to access the Southwest Quadrant of the Airport when conducting maintenance activities in that section of the Airport. In addition, FBO fueling trucks are also required to cross Runway 5-23 at Taxiway B to fuel aircraft at the Bridgewater flight school and private aircraft.

Air Traffic Control recently held a Runway Safety Action Teams (RSAT) meeting with the Airport to discuss runway safety. As a result of this meeting a Runway Safety Action Plan (RSAP) was developed. At this meeting, it was identified that the lack of a paved perimeter road around the RW 5 end requires personnel to cross Runway 5-23 at Taxiway B. The runway/taxiway intersection is identified as a “Hot Spot” by the FAA, which is considered a hazardous condition for air traffic. The paving of the existing perimeter road has been on the Airport’s Capital Improvement Plan (CIP) since 2021.

The purpose of this project is to eliminate an unsafe practice of frequent runway crossings by providing a safer crossing for Airport fuel trucks and maintenance personnel.

The following is an analysis of alternatives to paving the existing perimeter road.

No Build Alternative

The No Build Alternative would result in no changes or improvements to the existing gravel perimeter road, and Airport fuel trucks and maintenance vehicles would continue to cross the active runway to access the Southwest Quadrant of the Airport. This alternative would result in an ongoing hazard to aircraft, Airport maintenance vehicles, and fuel trucks by continuing the practice of crossing Runway 5-23 at Taxiway B.

This alternative would not meet the project’s purpose and need.

Utilize Existing Public Roads Alternative

This alternative would involve allowing Airport maintenance vehicles and Airport fuel trucks to utilize City streets to access the Southwest Quadrant of the Airport. The shortest route would be via Airport Road/Downey Street to Mt. Pleasant Street, New Plainville Road, and Shawmut Avenue to the Airport Gate south of Bridgewater College Flight School. This route is approximately 6.5 miles round trip partially through residential neighborhoods. Round trip travel time is estimated to be approximately 20 to 30 minutes (assumed average speed of 20 mph @ 3.25 miles each way).

In addition to increasing commercial truck traffic through residential neighborhoods, Airport fuel trucks are manufactured in accordance with National Fire Protection Association (NFPA) 407 Standards and are not designed to meet Massachusetts Department of Transportation (MassDOT) standards, and thus

cannot be certified or licensed to operate on public roadways. Therefore, the fuel trucks are only permitted to operate within the Airport Operations Area (AOA).

Similarly, Airport maintenance equipment includes dump trucks, snowplows, backhoes, front end loaders and mowing equipment which are not licensed to travel on public roads. Therefore, these vehicles can only operate within the Airport Operations Area (AOA).

This is not a viable alternative since fuel trucks and the majority of the Airport maintenance vehicles cannot operate on public roadways.

Porous Pavement Alternative

This alternative would involve utilizing porous pavement for the perimeter road instead of hot mix asphalt. Porous pavement is generally used for pedestrian-only areas and for low-volume, low-speed areas such as overflow parking, residential driveways, alleys, parking stalls, bike paths, walkways, and patios (reference Massachusetts Stormwater Handbook, Volume 2, Chapter 2, Structural BMPs). It is also not advisable to use porous paving in an active Airport environment because porous pavement is prone to clogging and requires aggressive maintenance such as jet washing and vacuum street sweeping on a regular basis. New Bedford Airport has a small maintenance crew (4 people) with a limited annual budget. Any additional infrastructure which requires maintenance puts an additional burden and costs on the already limited Airport maintenance staff.

For these reasons, this alternative was determined to be impracticable.

Maintenance of Existing Gravel Road Alternative

This alternative would involve maintaining the existing road as gravel. The current perimeter road was constructed during the construction of the extended Runway 5-23 safety area project in 2011. That project was reviewed and approved by MassDEP and the New Bedford Conservation Commission (DEP File No. SE 049-0635).

To improve the existing gravel road in order to make it suitable for regular Airport fuel truck and maintenance vehicle travel, the road would need to be graded, compacted, and topped with additional gravel to fill in potholes. This maintenance work would need to occur at least on an annual basis. The Airport does not have the maintenance staff or budget to maintain the road as a gravel road. Furthermore, the Airport does not have the equipment (grading, compaction equipment) required for this type of maintenance. Additionally, snow plowing is a concern. To properly plow a gravel road, the plow blade needs to make contact with the top of the gravel road. The plow blade would inevitably remove portions of the gravel during plowing operations, which could be inadvertently discarded into the adjacent wetlands.

Although this alternative would keep traffic off the runway it is not considered a viable alternative since the Airport does not have the equipment, manpower, or budget to maintain a gravel road.

Preferred Alternative: Paving of the Existing Gravel Road

This alternative involves reconstructing the existing perimeter road by excavating, disposal of existing materials and paving with a minimum of three (3) inches of hot mix asphalt. The finished grade of the

paved roadway will be at or below existing roadway grades, therefore, there will be no net fill within the 100-year floodplain. Snow removal operations can be easily accomplished on a paved surface versus a gravel surface. In addition, paving the gravel road will eliminate the migration of fine particles towards the adjacent buffer zone and wetland resource areas thus improving water quality in conjunction with the added stormwater BMPs. It would also eliminate potential air quality concerns as it would better control dust generated by vehicle use.

This alternative meets the objectives of the project while providing a near maintenance free roadway for many years. Specifically, this alternative creates a safer crossing for Airport fuel trucks and maintenance vehicles, improves the quality of stormwater runoff discharging to the adjacent wetlands, reduces the overall surface area of the existing perimeter road, limits the amount of manpower and cost needed for maintenance, and avoids encroachment into the runway safety area.

Attachment 2

Project Statement from the FAA

From: Dragonas, Laurie J (FAA) <laurie.j.dragonas@faa.gov>
Sent: Wednesday, December 21, 2022 9:06 AM
To: Scot Servis <Scot.Servis@newbedford-ma.gov>; Mailloux, Colleen P (FAA) <Colleen.P.Mailloux@faa.gov>; Hammer, Barry (FAA) <Barry.Hammer@faa.gov>; Panteli, Jorge (FAA) <Jorge.Panteli@faa.gov>; Garrison, Luke (FAA) <Luke.Garrison@faa.gov>; Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>
Cc: Stephen J. Riesland <sriesland@airportsolutionsgroup.com>
Subject: RE: EWB Perimeter road permitting

Good morning Scot,

The FAA fully supports the construction of a perimeter road around the Runway 5 end to eliminate runway crossings on Taxiway Bravo across Runway 5-23 by multiple ground vehicles, including fuel service vehicles.

As you may recall when the FAA granted certification under 14 CFR part 139 to EWB in 2017, it was with the understanding that the City of New Bedford would pursue construction of a vehicle service road around the Runway 5 end, so that airport vehicles and fuel service vehicles would no longer have to cross an active runway in order to gain access to the south west quadrant of the airport where Bridgewater State University Flight Training Center is located. From a compliance and safety perspective, we site the following guidance and information in response to your request:

1. Part 139, Section 139.329 (a) states “The certificate holder must limit access to movement areas and safety areas only to those pedestrians and ground vehicles necessary for airport operations.”
2. The airport’s approved Airport Certification Manual (ACM), Chapter 15 incorporates by reference the FAA’s Advisory Circular 150/5210-20A, Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports, which states that:
 - Para 1.1 - “Airport operators are ultimately responsible for establishing procedures and policies for vehicle access and operation on the movement and safety areas of the airport”.
 - Para 1.2 - “Establishing procedures for the safe and orderly access to the movement and safety areas, as well as procedures to operate in those areas, are required at all certificated airports under 14 CFR §139.329(b).”.
 - Para 3.1 - “Airport operators should keep vehicular and pedestrian activity on the movement and safety areas on the airport to the minimum required for operations. Vehicles on the movement area should be limited to those necessary to inspect and maintain the movement areas, as well as emergency vehicles responding to an aircraft emergency. Vehicles should use service roads or public roads in lieu of crossing movement areas whenever possible. When activities need to take place in the RSA, they should occur either between aircraft operations or when a runway is closed via NOTAM.”

- Para 3.1.1 - “When necessary, runway crossing should occur at the departure runway end rather than the midpoint. An aircraft has more time and runway length to react if the vehicle incursion is at the opposite end of the runway from the aircraft.”
 - Para 3.3 - “...An airport operator should limit vehicle operations on the movement areas of the airport to only those vehicles necessary to support the operational activity of the airport.”
 - Para 3.4 – “Airport operators should consider using dedicated vehicle lanes and perimeter roads whenever possible.”
 - Para 5.2 - “Airport operators may also be able to increase situational awareness for vehicle operators with enhancements on the movement and safety areas.” Such enhancements may include establishing dedicated marked routes for vehicles that avoid high activity, congested areas, or blind spots.”
3. The “FAA Guide to Ground Vehicle Operations. A Comprehensive Guide to Safe Driving on the Airport Surface. TC11-0020” includes the following recommendation as one of the basic things to remember and practice before operating a vehicle on the airport:
- “Use service roads whenever possible to minimize time spent on taxiways and runways.”
4. The airport’s air traffic control tower (ATCT) does not operate 24 hours a day, thus requiring vehicle operators to announce their intentions on the Common Traffic Advisory Frequency (CTAF). Aircraft pilots are not required to communicate on CTAF when the ATCT is not operating, thus vehicle operators may be unaware of landing or departing aircraft on the active runway. The construction of a perimeter road would remove this potential conflict between vehicles and aircraft when the ATCT is closed.

Please let us know if there is any further assistance we may offer you on this matter.

Kind regards,

Laurie Jane Dragonas
Lead Airport Certification Safety Inspector
Federal Aviation Administration
New England Region
781.238.7630 Office
781.608.3360 mobile



Attachment 4

Snow and Ice Control Plan

Snow and Ice Control Plan

New Bedford Regional Airport

FAA Approval _____

EWB-ACM Revision Date 11/30/17

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Phase #1

Pre- and Post-Winter Season Topics

FAA Approval _____

EWB-ACM Revision Date 11/30/17

Chapter 1. Pre-Season Actions

1.1 Airport Preparation

a) Airport Management Meetings

The Director of Aviation or designee will typically initiate an internal airport staff meeting to discuss equipment and material inventory, repair needs, staffing, training, previous years' issues, and any other topics associate with snow and ice control / operations.

b) Personnel Training

All Maintenance Department personnel receive both initial and recurrent snow removal training. Recurrent training is conducted at least one every 12 consecutive calendar months, and is typically held in early October. All training for airport personnel is provided by the Director of Aviation or designee. Supplemental training may be provided through the use of outside training resources from time to time. Training topics include, but are not limited to:

- a) Airport Management / Maintenance Departments:
 - i) Review of snow and ice removal procedures and techniques
 - ii) Airport condition reporting
 - iii) Changes to the SICP from the previous season
 - iv) Tenant notifications
 - v) Areas of responsibility
 - vi) Stockpile areas

Practical, hands-on equipment training is conducted throughout the year, not less than every 12 consecutive calendar months. Ideally, each member of the snow and ice control team will be trained on each piece of equipment to achieve maximum operational efficiency. Training records are maintained by the Director of Aviation or designee.

c) Equipment Preparation

Approximately 60 – 90 days prior to snow season, the Director of Aviation or designee is responsible for coordinating efforts with the New Bedford Department of Facilities and Fleet Management (DFFM) to inspect and make any necessary repairs or enhancements to each piece of snow removal equipment. Required fluids, replacement parts, and snow removal equipment components will be inventoried and stockpiled.

1.2 Snow and Ice Control Tenant Meetings.

The Director of Aviation or designee meets with tenants to review the Airport's Snow and Ice Control Plan (SICP) in order to obtain feedback and recommendations prior to the beginning of the winter season which typically is October 15 – March 15. The Airport will begin notifying primary tenants and airport users of the agenda to be discussed at the season kick-off meeting and ask for additional areas for discussion several weeks prior to the meeting. Participants in the meeting include key personnel from the following:

- Airport staff
 - Director of Aviation
 - Assistant Airport Manager
 - Airport Maintenance Department Staff
- Airfield Tenants
 - New Bedford Regional Airport (EWB) Airport Traffic Control Tower (ATCT)
 - Federal Aviation Administration (FAA) – Technical Operations
 - Air Service Providers: Cape Air, Others
 - Bridgewater State University
 - Fixed Base Operators (FBOs): Nor East Aviation, Colonial Air, and Sandpiper Air
 - Hangar Tenants
 - Car Rental Companies
 - Terminal Tenants

Tenants and airport users not able to participate in the SICP meetings are kept informed via an airport email distribution list of all changes and provided the opportunity to comment.

The following topics are typically discussed at the SICP meetings:

- Discussion Topics
 - Areas designated as priority areas
 - Clearing operations and follow-up airfield assessments
 - Potential for pilot or vehicular runway incursions or incidents
 - Snow report dissemination
 - Response time to keep runways, taxiways and ramp areas operational
 - Monitoring and updating of runway surface conditions
 - Issuance of NOTAMS and dissemination to ensure timely notification
 - Validation of deicer certification letters from vendors, if applicable
 - Snow hauling/disposing
 - Changes to contract service for snow clearing, if any
 - Communications, frequencies, technology (ATCT and EWB personnel)
 - Storm water runoff concerns

The Director of Aviation or designee will also make a good faith effort to meet and/or talk with each airline, Bridgewater State University, and the three FBO's individually, prior to any large scale snow event. The purpose of these meetings will be for the Airport to provide a high level plan of action based on the weather forecast information at that point in time.

Chapter 2. Post-Event/Season Actions

2.1 Post Season.

The Airport management may choose to meet annually with tenants regarding Snow and Ice Control to provide feedback to airport management following the snow season. After a significant event or a challenging operation, a separate meeting will be held.

The Airport holds monthly tenant meetings to discuss ongoing airport business and operational items. During the snow season, all air carriers, tenants and their contactors will have an opportunity to discuss winter operations, post event, and post season feedback. This will be a standing agenda item at these meetings. All air carriers, tenants and their contactors are encouraged to provide feedback.

Phase #2

Winter Storm Actions and Procedures

FAA Approval _____

EWB-ACM Revision Date 11/30/17

Chapter 3. Snow Removal Action Criteria

3.1 Activating Snow Removal Personnel.

The Director of Aviation or designee will be responsible for activating the snow removal plan and will:

- 1) Notify the Airport Maintenance staff when snow begins to fall.
- 2) Airport management will issue NOTAMs as described in section 5.4 of this plan.
- 3) When the ATCT is closed, maintenance personnel on duty will manually turn on all airfield lighting as required.

a) Weather Forecasting

During the snow season, the Director of Aviation or designate will check the National Weather Service on a daily basis for the regional and local forecasts and will inform all necessary airport personnel if snow, ice, or freezing precipitation is anticipated in the next 72 hours. Primary airport tenants will also be advised via email any time the airport anticipates activating the SICP, typically when total storm accumulations are expected to exceed 2 inches, or icing conditions are forecasted. Snow and ice control operations will be ready to be mobilized within 24 hours' notice.

b) Triggers for Initiating Snow Removal Operations

Snow removal operations will normally begin prior to the accumulation of 1/2 inch slush, or 1/2 inch wet snow or 2 inch dry snow. Accumulations greater than 1/2 inch slush, or 1 inch wet snow or 2 inches of dry snow will require closure of the affected runway or taxiway. Movement areas exceeding these conditions will be closed via NOTAM.

Precipitation	Depth in Inches
Slush	½
Wet Snow	½
Dry Snow	2
Ice or Freezing Rain	Any

c) Chain of Command/Personnel Responsibilities

If the decision is made to activate the SICP, the Director of Aviation will notify the following:

- 1) Assistant Airport Manager
- 2) Maintenance personnel
- 3) City of New Bedford Officials, as necessary for landside snow removal assistance

The Director of Aviation or designee is responsible for:

- 1) Continuously monitoring runway conditions during snow and ice storms to determine the presence of snow, ice, or slush (i.e. contaminants) and depth, and to estimate braking action. The Runway Condition Assessment Matrix (RCAM) shall be the primary means by which runway condition assessments will be obtained by the airport.
- 2) Identifying deteriorating conditions, which include but are not limited to: frozen or freezing precipitation, falling air, removal of chemical or abrasive material previously applied to the runway due to wind or airplane affects, and frozen contaminants blown onto the runway by wind.
- 3) Coordinating snow removal requirements for NAVAID critical areas with the local FAA Technical Operations office.
- 4) Disseminating airport information through the Notice to Airman (NOTAM) system by calling Lockheed or using NOTAM Manager when commencing snow removal or ice control operations, when less than good braking action conditions are observed, when ridges or windrows of snow remain on or adjacent to movement areas, when adjacent to movement areas, when any hazard to aircraft operation exist or when conditions change from those reported by a previous NOTAM.
- 5) Informing the ATCT and other airport users of the current airport surface conditions based on the Runway Condition Assessment Matrix (RCAM).
- 6) The runway shall remain closed for a NIL pilot braking action report (PIREP), or NIL braking action assessment until the Director of Aviation or designee is satisfied that the NIL condition no longer exists.
- 7) Following a POOR PIREP, the Director of Aviation will require airport personnel to conduct a runway assessment.
- 8) The Director of Aviation will continuously monitor the runway to ensure braking action does not become NIL utilizing existing Snow and Ice Control removal equipment/supplies.

It should be noted that the Director of Aviation or designee is the ultimate authority on opening and closing any airport pavement surface.

Maintenance Staff is responsible for:

- 1) Assisting the Director of Aviation or designee in monitoring runway conditions during snow and ice storms to determine the presence of snow, ice, or slush (i.e. contaminants) and depth, and to estimate braking action.
- 2) Assisting the Director of Aviation or designee in continuously monitor the runway to ensure braking action does not become NIL utilizing existing Snow and Ice Control removal equipment/supplies.
- 3) Operate snow removal equipment.

All personnel involved in the snow removal and ice control program are responsible for the efficient operation of snow and ice removal equipment. All equipment shall be inspected by the Director of Aviation or designee to ensure proper operation. Equipment shall be stored in the SRE building and other covered buildings to the extent possible to ensure readiness for use to the greatest extent

practical. An adequate supply of gasoline and diesel fuel is kept on hand in the event that a prolonged storm event occurs.

All fixed base operators and other airport tenants are responsible for snow removal and ice control on their designated ramp areas with the exception of the Bridgewater State University Ramp, as per City of New Bedford lease agreement. Airport personnel are responsible for snow removal operations on the Bridgewater State University Ramp.

All airport management and maintenance personnel will:

- Update surface condition reports
- Monitor pavement conditions
- Monitor PIREPS including braking action reports
- Conduct braking action test using either vehicle #1 or #2
- Monitor weather patterns and forecasts

3.2 Airport Advisory Notice.

The Director of Aviation or designee will be responsible for all record-keeping during snow and ice events, ensuring advisories are issued to all tenants and City Officials in a timely fashion.

NOTE: As per FAA Cert-Alert 17-02, *Announcement of Change 1 to AC150/5200-30D, Airport Field Condition Assessments and Winter Operations Safety*, the Airport will use the NOTAM System as the primary means to disseminate airfield conditions. While emails sent via distribution lists and social media updates will be helpful to keep tenants informed of landside conditions, this method will be avoided when issuing official airfield conditions and will refer all airport users to the disseminated NOTAMS found on PILOT WEB or by posting the confirmed NOTAM.

3.3 Airfield Clearing Priorities.

The following are the snow removal priority areas (1-3) for New Bedford Regional Airport:

a) Priority 1

- Runway 5/23
- Taxiway A
- Main Terminal Ramp
- Taxiway B, South of Taxiway Alpha
- Emergency Response Access Gate and ARFF Facilities

b) Priority 2

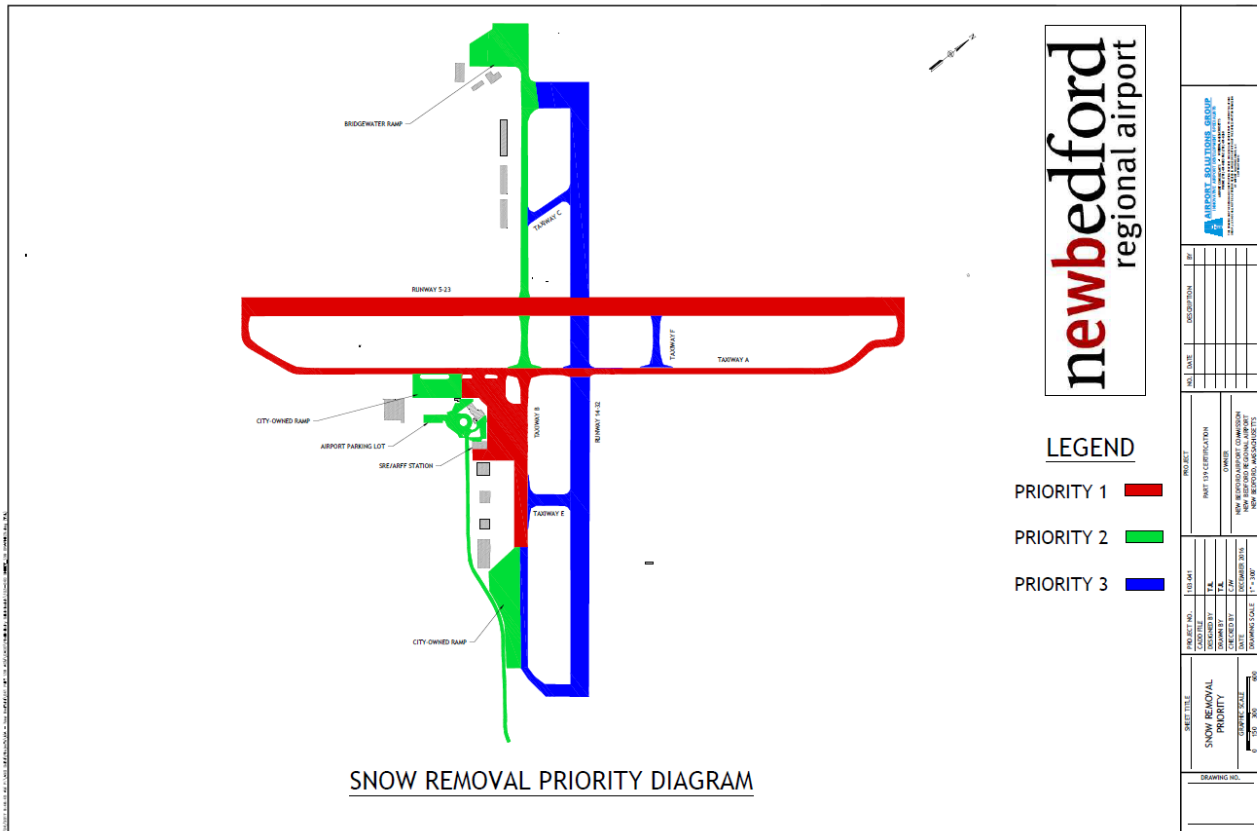
- South Ramp (City Ramp)
- Taxiway B, North of Taxiway Alpha
- North Ramp (Bridgewater State University)

c) Priority 3

- Runway 14/32
- Taxiways C, E, and F
- Taxiway B Southeast of Taxiway Echo to the approach end of Runway 32

Several of these tasks are accomplished simultaneously depending on personnel staffing and equipment available. In addition, landside snow removal operations will be conducted simultaneously during airside snow removal operations. Any alteration of priorities based on weather conditions and/or operational need will be made by the Director of Aviation or designee. See to Exhibit 7-3 for a color coded map.

Exhibit 7-3 Priority Areas



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3.4 Clearance Times

The Airport will work to adhere to the recommended clearance times to the degree practical for Priority 1 (½ hour).

Table 1-1. Clearance Times for Commercial Service Airports

<i>Annual Airplane Operations</i> (includes cargo operations)	<i>Clearance Time¹</i> (hour)
<i>40,000 or more</i>	<i>½</i>
<i>10,000 – but less than 40,000</i>	<i>1</i>
<i>6,000 – but less than 10,000</i>	<i>1½</i>
<i>Less than 6,000</i>	<i>2</i>
<i>General: Commercial Service Airport means a public-use airport that the U.S. Secretary of Transportation determines has at least 2,500 passenger boardings each year and that receives scheduled passenger airplane service [reference Title 49 United States Code, Section 47102(7)].</i> <i>Footnote 1: These airports should have sufficient equipment to clear 1 inch (2.54 cm) of falling snow weighing up to 25 lb/ft³ (400 kg/m³) from Priority 1 areas within the recommended clearance times.</i>	

3.5 Snow Equipment List.

The Director of Aviation or designee will ensure that all snow removal equipment is regularly inspected and ready for use prior to any forecasted snow event.

All snow removal vehicles operating on aircraft movement areas are equipped with a two-way radio. Radios are capable of monitoring the ground control frequency assigned by the ATCT and/or CTAF when the ATCT is closed.

All vehicles operating in a movement area must be equipped with the necessary lights and warning signals for night operation. A current list of airport owned equipment utilized for snow removal and ice control on movement areas are listed below.

#	Make/Model	YOM	Capabilities	Condition
1	Chevy 2500	2008	8' blade	Fair
2	Chevy 2500	2008	8' blade; 100 gallon diesel transport tank	Fair
4	Chevy 2500	1993	50 gallon diesel transport tank	Poor
5	Clark, Michigan 75C	1982	10' bucket; 20' box pusher	Fair
7	Oshkosh	1998	Snow blower	Fair
10	International 700 series	2006	14' blade; dump bed	Good
12	International 700 series	2006	14' blade; dump bed	Good
13	CAT	2005	10' blade; 10' bucket; 14' box pusher	Good
14	International 700 series	1984	10' blade	Fair
15	Bowmonk ARM2 Airfield Friction Meter MK3	2015	Measure runway surface friction	New

3.6 Storage of Snow and Ice Control Equipment.

The Airport attempts to store as many pieces of snow removal equipment as possible in the heated maintenance facility adjacent to the airport terminal building and the buildings located adjacent to Bridgewater State University, although several vehicles are forced to remain outdoors. Procedures are in place to ensure all equipment is ready for operations and well maintained. Bowmonk Friction Meter is kept in the office of the maintenance facility. It is calibrated at the end of each summer, yearly according to manufacturer's specifications.

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All equipment is serviced and maintained by the New Bedford Department of Facilities and Fleet Management (DFFM) unless specialized tools or services are needed. Additionally, the Airport has a list of on-call vendors to service equipment.

3.7 Definitions.

Airside Urea. The approved specifications are the latest edition of SAE AMS 1431, Compound, Solid Runway and Taxiway Deicing/Anti-icing, and MIL SPEC DOD-U10866D, Urea-Technical. Agricultural grade urea that meets any of these specifications, called airside urea, is acceptable. This nontoxic solid white chemical comes in either powder or “shotted” (“prilled”) form. The latter form’s shape is small spheres of about 1/16 inch (1.5 mm) in diameter. Both forms are primarily for deicing, where powdered urea is frequently mixed with sand. Hot mixtures of powder or “shotted” urea and sand are used by airport operators for two purposes: (1) immediate increase in braking action and (2) retention of chemical over the pavement area until it initially dissolves some of the ice and then melts the remainder. Table 4-1 provides guidance on application rates in relation to pavement temperature and ice thickness.

Approved Chemical.

A chemical, either solid or liquid, that meets a generic SAE or MIL specification.

Ash. Ash is a grayish-white to black solid residue of combustion normally originating from pulverized particulate matter ejected by volcanic eruption.

Compacted Snow.

Snow that has been compressed and consolidated into a solid form that resists further compression such that an airplane will remain on its surface without displacing any of it. If a chunk of compressed snow can be picked up by hand, it will hold together or can be broken into smaller chunks rather than falling away as individual snow particles.

Note: A layer of compacted snow over ice must be reported as compacted snow only.

Example: When operating on the surface, significant rutting or compaction will not occur. Compacted snow may include a mixture of snow and embedded ice; if it is more ice than compacted snow, then it should be reported as either ice or wet ice, as applicable.

Contaminant.

A deposit such as frost, any snow, slush, ice, or water on an aerodrome pavement where the effects could be detrimental to the friction characteristics of the pavement surface.

Contaminated Runway.

For purposes of generating a runway condition code and airplane performance, a runway is considered contaminated when more than 25 percent of the runway surface area (within the reported length and the width being used) is covered by frost, ice, and any depth of snow, slush, or water.

When runway contaminants exist, but overall coverage is 25 percent or less, the contaminants will still be reported. However, a runway condition code will not be generated.

While mud, ash, sand, oil, and rubber are reportable contaminants, there is no associated airplane performance data available and no depth or Runway Condition Code will be reported.

Exception: Rubber is not subject to the 25 percent rule, and will be reported as Slippery When Wet when the pavement evaluation/friction deterioration indicates the averaged Mu value on the wet pavement surface is below the Minimum Friction Level classification specified in Table 3-2 of FAA Advisory Circular 150/5320-12.

Dry (Pavement).

Describes a surface that is neither wet nor contaminated.

Dry Runway.

A runway is dry when it is neither wet, nor contaminated. For purposes of condition reporting and airplane performance, a runway can be considered dry when no more than 25 percent of the runway surface area within the reported length and the width being used is covered by:

Visible moisture or dampness, or

Frost, slush, snow (any type), or ice.

A FICON NOTAM must not be originated for the sole purpose of reporting a dry runway. A dry surface must be reported only when there is need to report conditions on the remainder of the surface.

Dry Snow.

Snow that has insufficient free water to cause it to stick together. This generally occurs at temperatures well below 32° F (0° C). If when making a snowball, it falls apart, the snow is considered dry.

Eutectic Temperature/Composition.

A deicing chemical melts ice by lowering the freezing point. The extent of this freezing point depression depends on the chemical and water in the system. The limit of freezing point depression, equivalent to the lowest temperature that the chemical will melt ice, occurs with a specific amount of chemical. This temperature is called the eutectic temperature, and the amount of chemical is the eutectic composition. Collectively, they are referred to as the eutectic point.

FICON (Field Condition Report).

A Notice to Airmen (NOTAM) generated to reflect Runway Condition Codes, vehicle braking action, and pavement surface conditions on runways, taxiways, and aprons.

Fluid Deicer/Anti-Icers. The approved specification is SAE AMS 1435, Fluid, Generic Deicing/Anti-icing, Runways and Taxiways.

Frost.

Frost consists of ice crystals formed from airborne moisture that condenses on a surface whose temperature is below freezing. Frost differs from ice in that the frost crystals grow independently and therefore have a more granular texture.

Note: Heavy frost that has noticeable depth may have friction qualities similar to ice and downgrading the runway condition code accordingly should be considered. If driving a vehicle over the frost does not result in tire tracks down to bare pavement, the frost should be considered to have sufficient depth to consider a downgrade of the runway condition code.

Generic Solids. The approved specification is SAE AMS 1431, Compound, Solid Runway and Taxiway Deicing/Anti-Icing.

Ice.

The solid form of frozen water to include ice that is textured (i.e., rough or scarified ice).

A layer of ice over compacted snow must be reported as ice only.

Layered Contaminant.

A contaminant consisting of two overlapping contaminants. The list of layered contaminants has been identified in the RCAM and include:

- Dry Snow over Compacted Snow
- Wet Snow over Compacted Snow
- Slush over Ice
- Water over Compacted Snow
- Dry Snow over Ice
- Wet Snow over Ice

Mud.

Wet, sticky, soft earth material.

Multiple Contaminants.

A combination of contaminants (as identified in the RCAM) observed on paved surfaces. When reporting multiple contaminants, only the two most prevalent / hazardous contaminants are reported. When reporting on runways, up to two contaminant types may be reported for each runway third. The reported contaminants may consist of a single and layered contaminant, two single contaminants, or two layered contaminants. The reporting of “multiple contaminants” represent contaminants which are located adjacent to each other, not to be confused with a “layered contaminant” which is overlapping. For example:

- Single contaminant and Layered contaminant.
‘Wet’ and ‘Wet Snow over Compacted Snow’
- Single contaminant and Single contaminant.

‘Wet Snow’ and ‘Slush’

- Layered contaminant and Layered contaminant.

‘Dry Snow over Compacted Snow’ and ‘Dry Snow over Ice’

Oil.

A viscous liquid, derived from petroleum or synthetic material, especially for use as a fuel or lubricant.

Runway (Primary and Secondary).

Primary.

Runway(s) being actively used or expected to be used under the existing or anticipated adverse meteorological conditions, where the majority of the takeoff and landing operations will take place.

Secondary.

Runway(s) that supports a primary runway and is less operationally critical. Takeoff and landing operations on such a runway are generally less frequent than on a primary runway. Snow removal operations on these secondary runways should not occur until Priority 1 surfaces are satisfactorily cleared and serviceable.

Runway Condition Assessment Matrix (RCAM).

The tool by which an airport operator will assess a runway surface when contaminants are present.

Runway Condition Code (RwyCC).

Runway Condition Codes describe runway conditions based on defined contaminants for each runway third. Use of RwyCCs harmonizes with ICAO Annex 14, providing a standardized “shorthand” format (4/3/2) for reporting. RwyCC (which replaced Mu values) are used by pilots to determine landing performance calculations.

Sand.

A sedimentary material, finer than a granule and coarser than silt.

Slush.

Snow that has water content exceeding a freely drained condition such that it takes on fluid properties (e.g., flowing and splashing). Water will drain from slush when a handful is picked up. This type of water-saturated snow will be displaced with a splatter by a heel and toe slap-down motion against the ground.

Slush over Ice.

See individual definitions for each contaminant.

Slippery When Wet Runway.

A wet runway where the surface friction characteristics would indicate diminished braking action as compared to a normal wet runway.

Slippery When Wet is only reported when a pavement maintenance evaluation indicates the averaged Mu value on the wet pavement surface is below the Minimum Friction Level classification specified in

Table 3-2 of FAA Advisory Circular 150/5320-12. Some contributing factors that can create this condition include: Rubber buildup, groove failures/wear, pavement macro/micro textures.

Water.

The liquid state of water. For purposes of condition reporting and airplane performance, water is greater than 1/8-inch (3mm) in depth.

Wet Runway.

A runway is wet when it is neither dry nor contaminated. For purposes of condition reporting and aircraft performance, a runway can be considered wet when more than 25 percent of the runway surface area within the reported length and the width being used is covered by any visible dampness or water that is 1/8-inch or less in depth.

Wet Ice.

Ice that is melting, or ice with a layer of water (any depth) on top.

Wet Snow.

Snow that has grains coated with liquid water, which bonds the mass together, but that has no excess water in the pore spaces. A well-compacted, solid snowball can be made, but water will not squeeze out.

Chapter 4. Snow Clearing Operations and Ice Prevention

4.1 Snow Clearing Principals.

The following principles regarding snow and ice control shall be adhered to in maintaining safe operating conditions on the airfield.

- Snow removal operations will begin prior to accumulation of ½ inch slush, or ½ inch wet snow or 2 inches of dry snow.
- Drifted or windrowed snow will be removed promptly from runway, taxiway, and ramp surfaces.
- In the event of heavy snow accumulation, the height of snow banks alongside usable runway, taxiway, and ramp surfaces must be such that all aircraft propellers, engine pods, rotors and wing tips will clear each snowdrift and snow bank when the aircraft's landing gear traverses any full strength portion of the movement area, if those requirements cannot be met, a NOTAM will be issued to give current conditions.
 - The Airport has pre-designated areas to stock pile snow. During a snow event, these areas are continuously monitored to ensure they do not become a hazard to operating aircraft.

During snow removal operations, the Director of Aviation or designee will be responsible for the assignment of all airport personnel assigned to snow removal functions. No changes shall be made in assignment without prior approval from the Director of Aviation or designee. The Airport does not currently engage any outside contracts to perform any snow removal functions.

The following sections identify typical snow clearing operations and local procedures at the Airport; however, operations may be modified operations as necessary. The Airport may also use the various pieces of equipment available to optimize snow clearing operations. The equipment used is based on many factors including, but not limited to: available manpower, weather forecasts, and anticipated aircraft operations.

a) Ramp, Terminal, Airport Access, Emergency Roads and Gates

The Airport typically utilizes a variety of equipment to clear snow from the ramps, terminal, airport access, emergency roads and gates.

Likewise, equipment will work the snow with the plows towards the edge of pavement on ramps and roadways and stockpile snow in designated areas to avoid heavy snow accumulation that could cause visual or height impacts or snow banks alongside usable paved surfaces for aircraft parking on ramps or vehicle passage on roadways.

Airport tenants are responsible for snow removal on their leaseholds with the exception of Bridgewater State University. Airport personnel are responsible for snow removal operations on the Bridgewater State University Ramp. Typically, tenants will use their own resources or contracted crews for snow removal. All contractors are badged through the Airport's security plan airport and are required to successfully complete driver training to operate vehicles in non-movement areas only.

Tenants may displace snow off their leasehold only with prior permission and coordination with the Director of Aviation. In the event of a severe snow storm, the Airport will assist the FBO's and other tenants, when practical.

b) Runway and Taxiways

The Airport will utilize a variety of equipment to clear snow from the runways and taxiways.

At the direction of the Director of Aviation, the typical snow removal crew will use a combination of multi-purpose snow removal equipment to optimize snow clearing operations on the runways and taxiways. Existing and forecasted airport conditions dictate which pieces of equipment will be used, and in what combination they will be deployed. Focus will be given to clearing operations that adhere to the priorities outlined in Chapter 3.

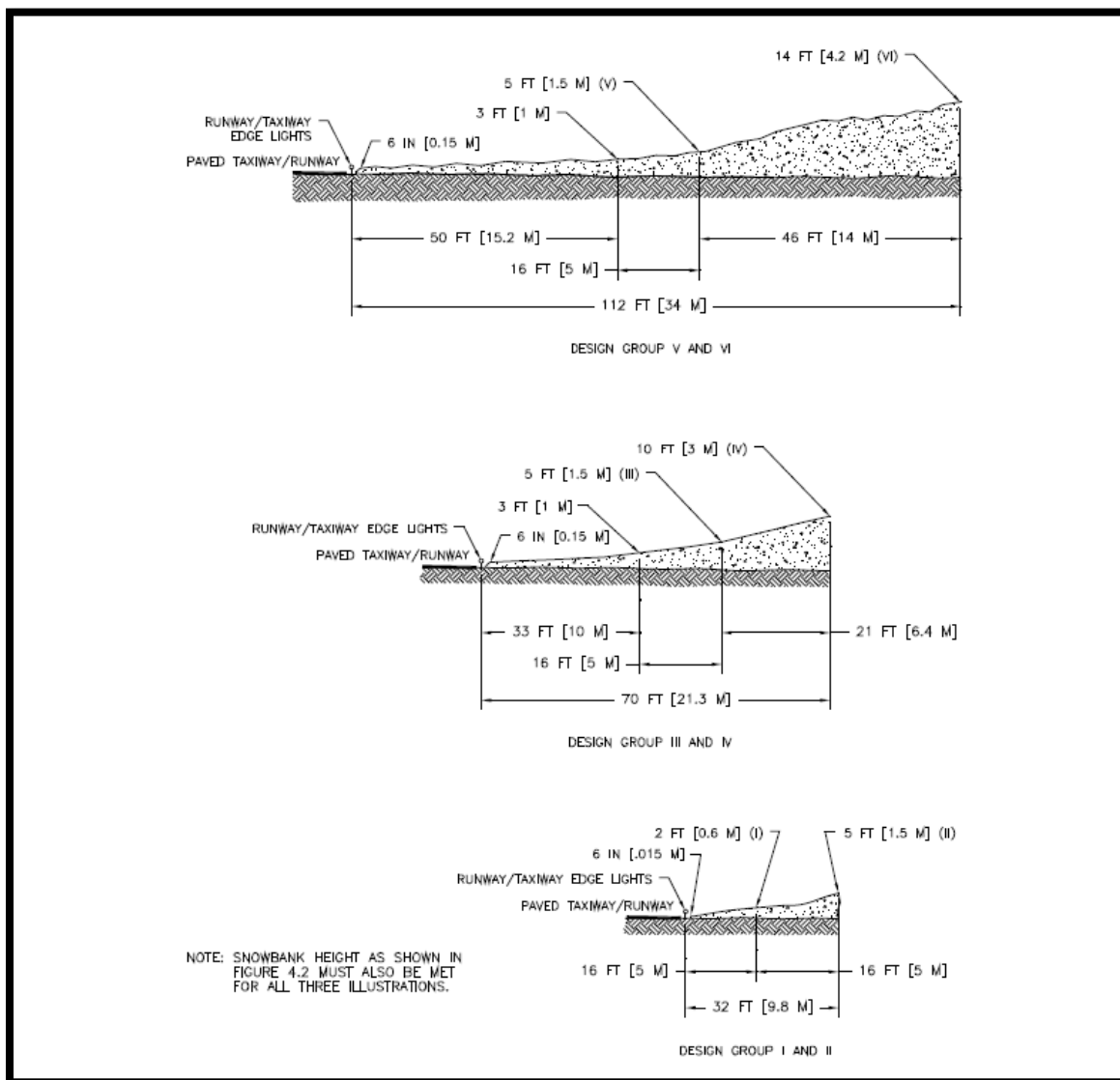
The intent and standard clearing operation is to maintain and clear the primary runway as near as possible to bare pavement (full length and full width). Depending on precipitation rates, the Maintenance Department may initially clear the critical center (60 feet each side of the centerline) of the runway rather than full width keeping in mind the aircraft design categories operating on the field. NOTAMS will be issued if full-width snow removal cannot be achieved.

Airport snow removal personnel operate the equipment in echelon formation with the plows to move snow towards the edge of pavement, blow snow off the edges of pavement beyond the runway/taxiway signs, runway/taxiway edge lights, and runway threshold/end lights to avoid damage to airfield NAVAIDS, lighting and signage.

c) Snowbanks

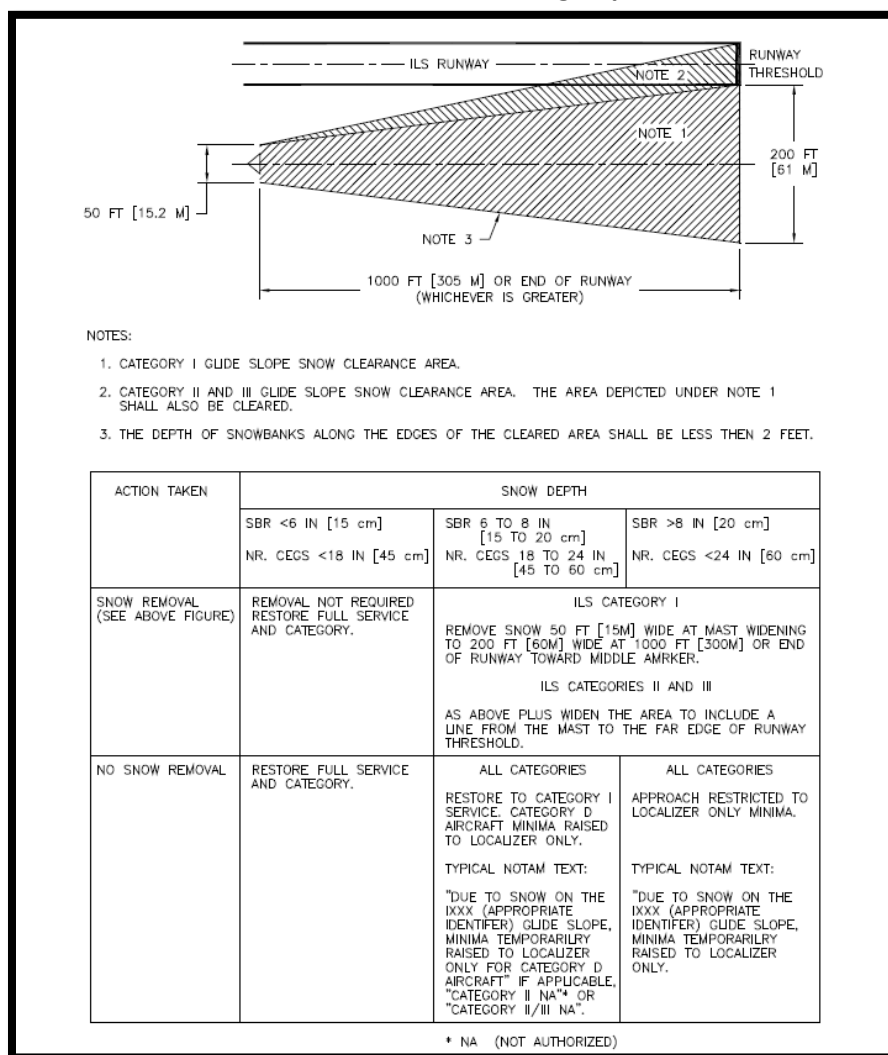
Snow banks at New Bedford Regional Airport will be maintained so that the heights do not exceed the heights depicted for Airport Design Group II depicted in Exhibit 7-4. In the event these snow removal criteria cannot be obtained, all deficiencies that cannot be immediately corrected will be brought to the attention of the Director of Aviation or designee for appropriate action and issuance of NOTAMS.

Exhibit 7-4 Snow Bank Profile Limits Along Edges of Runways and Taxiways with the Airplane Wheels on Full Strength Pavement



d) NAVAIDs

All NAVAIDs on the airfield are owned and maintained by the FAA. FAA personnel are responsible for the inspection of the NAVAID equipment to determine if any of the equipment is being affected by snow accumulation. All necessary NOTAMs shall be issued by FAA personnel. When contacted by FAA, the Director of Aviation will initial clearing around NAVAIDS and NAVAID critical areas. The following equipment will be used: Clark, Michigan 75C loader and CAT loader.

Exhibit 7-5 ILS CAT I and CAT II/II Clearing Depth Limitations

4.2 Controlling Snow Drifts.

Drifted snow at the Airport will be regulated so that the runways, taxiways and threshold lights and signs are clearly visible and no depth of snow will exceed the maximum allowable heights depicted in Exhibit 7-4. In the event these snow removal criteria cannot be obtained, all deficiencies that cannot be immediately corrected will be brought to the attention of the Director of Aviation or designee for appropriate action and issuance of NOTAMs.

4.3 Snow Disposal.

Exhibit 7-6 identifies where large quantities of snow are disposed of at the Airport. As with any locations, the heights of snow disposal areas are monitored throughout any storm and NOTAMs will be issued as necessary.

4.4 Methods for Ice Control and Removal–Chemicals.

The Airport has a waiver from the Department of Environment Protection (DEP) to utilize Sodium Acetate (NAAC) on pavement surfaces to help improve aircraft braking action when braking action is NIL. The Airport will continue to work diligently to expose as much pavement as possible after snow and ice events to allow for thermal induced melting.

4.5 Sand (for the purposes of treating a winter surface).

The Airport has a waiver from the Department of Environment Protection (DEP) to utilize sand meeting the FAA gradation standards (ASTME E 11-81) on pavement surfaces to help improve aircraft braking action as necessary. The Airport will continue to work diligently to expose as much pavement as possible after snow and ice events to allow for thermal induced melting.

Expanded Sand Gradation Standard

Sieve Designation	Percent by Weight Passing
8	100
30	20-50
80	0-2

Exhibit 7-6 Typical Snow Disposal Locations



4.6 Surface Incident/Runway Incursion Mitigation Procedures.

Prior to any snow removal operations, the Director of Aviation or designee will coordinate the operation with ATCT when open. The Director of Aviation or his/her designee will inform the runway snow removal team of status (open or closed) prior to commencing snow removal operations. If braking action is NIL on the runway, the Director of Aviation or his/her designee will issue NOTAM closing the runway.

SRE equipment are marked with the appropriate vehicle number and yellow rotating beacons.

When snow removal operations have been temporarily suspended, the Director of Aviation or designee will ensure that all vehicles are clear of the taxiways and runways by making a visual inspection of the taxiways and runways.

When snow removal operations have reached the point that surfaces can be opened, the Director of Aviation or designee will complete a runway check and notify the ATCT of runway conditions. A NOTAM will be issued through the Federal NOTAM System via the Digital NOTAM web portal with the most current field conditions. The ATCT will be notified by telephone as to the content of the NOTAM.

Between 2200L and 0630L when the ATCT is closed, the Director of Aviation or designee will monitor for air traffic, make blind announcements of snow removal and equipment on all surfaces on the Common

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Traffic Advisory Frequency (CTAF) 118.1 Mhz, and advise the snow removal equipment of any airport traffic and coordinate any exit from the movement area to accommodate aircraft operations. A PPR NOTAM will be issued as necessary to help accommodate aircraft when the ATCT is closed.

In the event a surface incident or runway incursion occurs at the Airport, the incident is documented and investigated by the Director of Aviation or designee, including those that may involve snow removal vehicles. All persons operating snow removal equipment on movement areas and non-movement areas attend initial and annual recurrent driver training in accordance with the Airport Ground Vehicle Operator/Driver Training course. Airport personnel are also subject to disciplinary action if a ground vehicle procedure has been violated.

All airfield vehicles are marked and lighted in accordance with FAA Advisory Circular 150/2510- Current Edition, Painting, Marking and Lighting of Vehicles Used on an Airport.

a) Radio Communication

All snow removal vehicles operating on aircraft movement areas are equipped with a two-way radio capable of direct radio communication with the EWB ATCT. Radios are capable of monitoring ground or tower control frequencies at all times.

Initial contact with EWB ATCT is made by contacting EWB Ground Control on frequency 121.9 MHz. The standard operating procedure for EWB snow removal operations is for all radio-equipped vehicles to handle communications with EWB ATCT. If multiple vehicles are clearing the same area the lead vehicle will be designated to handle all communications with EWB ATCT for the snow removal crew.

When the ATCT is closed, the CTAF is used for air-to-air communication and ground to air communication. The CTAF frequency for EWB is 118.1 MHz.

b) Failed Radio Communication

In addition to snow removal vehicles being capable of direct radio communication with EWB ATCT, each vehicle also has an on board company radio used to contact the Director of Aviation or designee in the event of a radio failure. Any such vehicle will be removed from any movement area until the radio can be repaired unless working in a group with other vehicles that remain in radio contact with the ATCT or CTAF. The Director of Aviation or designee will provide instructions to the operator of the vehicle through the company radio.

c) Low Visibility and Whiteout Conditions

When the ATCT is open, all of the EWB snow removal equipment operating in the movement area is under direct control of the ATCT. If visibility is limited, snow removal crews will temporarily suspend operations and assess the forecasted weather prior to continuing operations.

In the instance when the ATCT is closed, snow removal crews will utilize the CTAF frequency on 118.1 MHz to announce intentions to suspend operations and return to a safe location.

d) Driver Fatigue

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In an effort to maintain the highest level of vehicle operator safety, the Airport has instituted a six (6) hour limit for operators regarding the continuous operation of any given piece of snow removal equipment, after which a mandatory 15 minute break will be required. Vehicle operators will be removed from duty for rest following 18 hours of shift work, regardless of status.

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Chapter 5. Surface Assessment and Reporting

5.1 Conducting Surface Assessments.

The Director of Aviation or designee will monitor all surface conditions and make adjustments to the execution of the SICP as necessary.

The Director of Aviation or designee in complying with Part 139.339, at a minimum, will utilize the NOTAM system for collection, dissemination and logging of airport information to air carriers, and other airport users. The Director of Aviation or designee will issue appropriate NOTAMs via FAA Digital NOTAM Manager if contaminants accumulate on paved surfaces.

The Director of Aviation or designee will conduct continuous visual assessments and use of decelerometer (Bowmonk ARM2 Airfield Friction Meter MK3) of runway, taxiway, and apron conditions to determine the presence of pavement contaminants (i.e. frost, snow, ice, or slush) and their depth, and to assess changes in overall conditions throughout a storm. The airport strives to maintain a 'no worse than wet' surface condition. Pilot reports will also be used as another means to assess braking performance.

5.2 Applying the Runway Condition Assessment Matrix (RCAM).

The Director of Aviation or designee will conduct surface assessments by visual inspections, braking action data, and pilot reports to assess braking performance. The Director of Aviation will use the RCAM procedures to report runway conditions via NOTAM and will monitor the runway surface at least hourly as long as the higher code is in effect to ensure that the runway surface condition does not deteriorate below the assigned code.

a) Determining Runway Conditions

A runway condition report is provided whenever the pavement condition is worse than bare and wet. A conditions report will typically include the following:

- The type of contamination
 - Water
 - Ice
 - Frost
 - Snow
 - Slush
- Depth of Precipitation
 - In reporting depth of precipitation, depths will be expressed in terms of thin (less than one quarter inch), one quarter inch, one half inch, and one inch. For depths over one and one half inch, accumulations will be reported in terms of whole inches without fractions.
- Pilot reports

Once a runway assessment has been performed, the RCAM is the method by which the Airport will report a runway surface assessment when contaminants are present (use of the RCAM is only applicable to paved runway surfaces). The matrix below (Exhibit 7-7) identifies a given assessment criteria and the resulting runway condition “Code”.

Exhibit 7-7 Runway Condition Assessment Matrix (RCAM)

Assessment Criteria		Downgrade Assessment Criteria		
Runway Condition Description	Code	Mu (μ) ¹	Vehicle Deceleration or Directional Control Observation	Pilot Reported Braking Action
• Dry	6	40 or Higher	---	---
• Frost • Wet (Includes Damp and 1/8 inch depth or less of water) 1/8 inch (3mm) depth or less of: • Slush • Dry Snow • Wet Snow	5		Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	Good
5° F (-15°C) and Colder outside air temperature: • Compacted Snow	4		Braking deceleration OR directional control is between Good and Medium.	Good to Medium
• Slippery When Wet (wet runway) • Dry Snow or Wet Snow (Any depth) over Compacted Snow Greater than 1/8 inch (3mm) depth of: • Dry Snow • Wet Snow Warmer than 5° F (-15°C) outside air temperature: • Compacted Snow	3	39 to 30	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	Medium
Greater than 1/8 (3mm) inch depth of: • Water • Slush	2	29 to 21	Braking deceleration OR directional control is between Medium and Poor.	Medium to Poor
• Ice ²	1		Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	Poor
• Wet Ice ² • Slush over Ice • Water over Compacted Snow ² • Dry Snow or Wet Snow over Ice ²	0	20 or Lower	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	Nil

¹ The correlation of the Mu (μ) values with runway conditions and condition codes in the Matrix are only approximate ranges for a generic friction measuring device and are intended to be used only to downgrade a runway condition code; with the exception of circumstances identified in Note 2. Airport operators should use their best judgment when using friction measuring devices for downgrade assessments, including their experience with the specific measuring devices used.

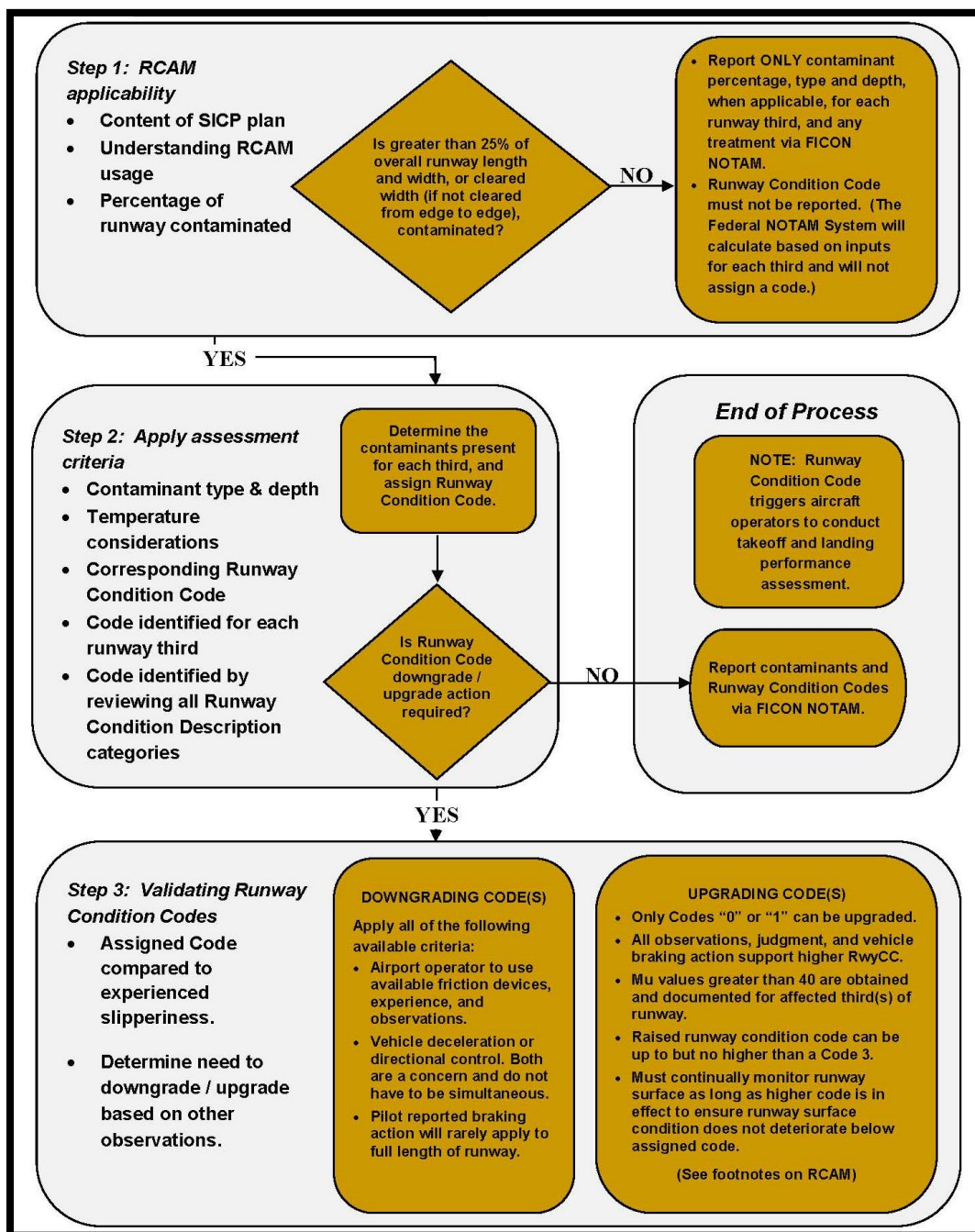
² In some circumstances, these runway surface conditions may not be as slippery as the runway condition code assigned by the Matrix. The airport operator may issue a higher runway condition code (but no higher than code 3) for each third of the runway if the Mu value for that third of the runway is 40 or greater obtained by a properly operated and calibrated friction measuring device, and all other observations, judgment, and vehicle braking action support the higher runway condition code. The decision to issue a higher runway condition code than would be called for by the Matrix cannot be based on Mu values alone; all available means of assessing runway slipperiness must be used and must support the higher runway condition code. This ability to raise the reported runway condition code to a code 1, 2, or 3 can only be applied to those runway conditions listed under codes 0 and 1 in the Matrix.

The airport operator must also continually monitor the runway surface as long as the higher code is in effect to ensure that the runway surface condition does not deteriorate below the assigned code. The extent of monitoring must consider all variables that may affect the runway surface condition, including any precipitation conditions, changing temperatures, effects of wind, frequency of runway use, and type of aircraft using the runway. If sand or other approved runway treatments are used to satisfy the requirements for issuing this higher runway condition code, the continued monitoring program must confirm continued effectiveness of the treatment.

Caution: Temperatures near and above freezing (e.g., at 26.6° F (-3°C) and warmer) may cause contaminants to behave more slippery than indicated by the runway condition code given in the Matrix. At these temperatures, airport operators should exercise a heightened level of runway assessment, and should downgrade the runway condition code if appropriate.

Once that the runway condition is assessed, the following steps/process is taken to publicize the results and report on airport conditions via the RCAM is the method (see Exhibit 7-8 for the RCAM process).

Exhibit 7-8 Runway Condition Assessment Process



Step 1: Runway Condition Code (RwyCC) Applicability:

If 25 percent or less of the overall runway length and width or cleared width is covered with contaminants, RwyCCs will not be applied, or reported. The Director of Aviation or designee will report the contaminant percentage, type and depth for each third of the runway, to include any associated treatments or improvements.

If the overall runway length and width coverage or cleared width is greater than 25 percent, RwyCCs must be assigned, and reported, informing airplane operators of the contaminant present, and associated codes for each third of the runway. (The reported codes, will serve as a trigger for all aircraft operators to conduct a takeoff or landing performance assessment).

Step 2: Apply Assessment Criteria

Based on the contaminants observed, the associated RwyCC from the RCAM for each third of the runway will be assigned.

Step 3: Validating Runway Condition Codes

If the observations by the Director of Aviation or designee determine that RwyCCs assigned accurately reflect the runway conditions and performance, no further action is necessary, and the RwyCCs generated may be disseminated.

b) Downgrade Assessment Criteria

When observations indicate a more slippery condition than generated by the RCAM, the Director of Aviation or designee may downgrade the RwyCC(s). When applicable, the downgrade of RwyCCs may be based on vehicle control, pilot reported braking action, or temperature.

NOTE: Temperatures near and above freezing (e.g., at negative 26.6° F (-3° C) and warmer) may cause contaminants to behave more slippery than indicated by the runway condition code given in the RCAM. At these temperatures, the Director of Aviation or designee will exercise a heightened awareness of airfield conditions, and may downgrade the RwyCC if appropriate.

c) Upgrade Assessment Criteria Based on Friction Assessments.

RwyCCs of 0 or 1 may only be upgraded by the Director of Aviation or designee when the following requirements are met.

1. All observations, judgment, and vehicle braking action support the higher RwyCC.
2. This ability to raise the reported RwyCC to no higher than a code 3 can only be applied to those runway conditions listed under code 0 and 1 in the RCAM. (See footnote 2 on the RCAM.)
3. The Director of Aviation or designee will continually monitor the runway surface as long as the higher code is in effect to ensure that the runway surface condition does not deteriorate below the assigned code.

- a. The extent of monitoring must consider all variables that may affect the runway surface condition, including any precipitation conditions, changing temperatures, effects of wind, frequency of runway use, and type of aircraft using the runway.
- b. If sand is used to satisfy the requirements for issuing the higher runway condition code, the monitoring program must confirm continued effectiveness of the treatment.

5.3 Taxiway, Apron, and Holding Bay Assessments.

Assessments to these surfaces will occur when contaminants are present, and whenever a contaminant is present on the surface. Assessments will occur anytime the pavement is worse than wet. Surfaces will be monitored on a regular basis.

5.4 Surface Condition Reporting.

The Director of Aviation or designee is responsible for:

- 1) Continuously monitoring runway conditions during snow and ice storms to determine the presence of snow, ice, or slush (i.e. contaminates) and depth, and to estimate braking action. The Runway Condition Assessment Matrix (RCAM) shall be the primary means by which runway condition assessments will be obtained by the airport.
- 2) Identifying deteriorating conditions, which include but are not limited to: frozen or freezing precipitation, falling air, removal of chemical or abrasive material previously applied to the runway due to wind or airplane affects, and frozen contaminants blown onto the runway by wind.
- 3) Coordinating snow removal requirements for NAVAID critical areas with the local FAA Technical Operations office.
- 4) Disseminating airport information through the Notice to Airman (NOTAM) system by calling Lockheed or using NOTAM Manager when commencing snow removal or ice control operations, when less than good braking action conditions are observed, when ridges or windrows of snow remain on or adjacent to movement areas, when adjacent to movement areas, when any hazard to aircraft operation exist or when conditions change from those reported by a previous NOTAM.
- 5) Informing the ATCT and other airport users of the current airport surface conditions based on the Runway Condition Assessment Matrix (RCAM).
- 6) The runway shall remain closed for a NIL pilot braking action report (PIREP), or NIL braking action assessment until the Director of Aviation or designee is satisfied that the NIL condition no longer exists.
- 7) Following a POOR PIREP, the Director of Aviation will require airport personnel to conduct a runway assessment.
- 8) The Director of Aviation will continuously monitor the runway to ensure braking action does not become NIL utilizing existing Snow and Ice Control removal equipment/supplies.

The Director of Aviation or designee will continue to monitor conditions and make an assessment any time a change to the surface conditions occurs, which could be any of the following:

- active snow event

FAA Approval _____

EWB-ACM Revision Date 11/30/17

- snow removal operations
- rapidly changing weather conditions / temperature

5.5 Requirements for Closures.

Runways receiving a NIL braking (either pilot reported or by assessment by the airport) are unsafe for aircraft operations and will be closed via NOTAM immediately when this condition exists.

During the course of the storm, the Director of Aviation or designee will do the following to help determine the necessity of a closure:

- Conditions assessment. If NIL braking action then the surfaces are closed;
- When previous PIREPs have indicated GOOD or MEDIUM braking action, two consecutive POOR PIREPS are typically taken as evidence that surface conditions may be deteriorating. In this instance, the Director of Aviation or designee will take steps necessary to assess surface conditions and report any changes in conditions as necessary;
- Accumulation of contamination (greater than 2 inches of dry snow, ½ inches of wet snow, or ½ inches of slush;
- Continuous monitoring of conditions to determine any improvement or deterioration in surface conditions;
- Monitoring anticipated changes in weather conditions.

The Director of Aviation or designee will ensure airport surfaces are maintained in a safe operating condition at all times and provide prompt notifications when areas normally available are less than satisfactorily cleared for safe operations. If a pavement surface becomes unsafe due to a NIL condition or otherwise unsafe hazard or condition, the surface will be closed until the condition no longer exists and is deemed safe by the Director of Aviation or designee. Please see attached LOA between New Bedford ATCT and New Bedford Regional Airport.

5.6 Continuous Monitoring and Deteriorating Conditions.

Continuous condition monitoring is especially crucial during winter weather operations as conditions on runways, taxiways, and ramps can deteriorate rapidly. The Director of Aviation or designee shall initiate a program of Continuous Monitoring procedures during the following deteriorating conditions:

- Frozen or freezing precipitation is occurring
- PIREPs indicate braking action is deteriorating
- Falling air or pavement temperatures that may cause a wet runway to freeze
- Rising air or pavement temperatures that may cause frozen contaminants to melt
- Removal of abrasives previously applied to the runway due to wind or airplane effects
- Frozen contaminants blown onto the runway by wind

The process of “Continuous Monitoring” shall consist of any, or all, of the following actions:

- Observing which exit taxiways are being used by landing aircraft. This activity is performed by Operations personnel on the airfield.
- Pilot braking action reports indicate that runway friction is changing. Friction Surveys are further outlined in the *“Runway Friction Surveys, Equipment and Procedures”*, Section 4.5, of this Plan.
- Monitoring contaminant types and depths.
- Monitoring of pilot communications with the ATCT or on CTAF.
- Monitoring weather patterns via the National Weather Service.
- Increased self-inspection intervals.

Under deteriorating conditions, the Director of Aviation or designee will take all reasonable steps using available equipment and materials that are appropriate for the condition to improve the braking action. If braking action cannot be improved, and the surface is not NIL, the airport will continually monitor the runways, taxiways, aprons and holding bays to ensure braking does not become NIL.

5.7 Reportable Contaminants without Performance Data.

If present, unable to be removed, and posing no hazard, mud will be reports with a measured depth. Ash, oil, sand, rubber and slippery when wet contaminants will be reported without a measured depth. These contaminants will not generate a RwyCC.

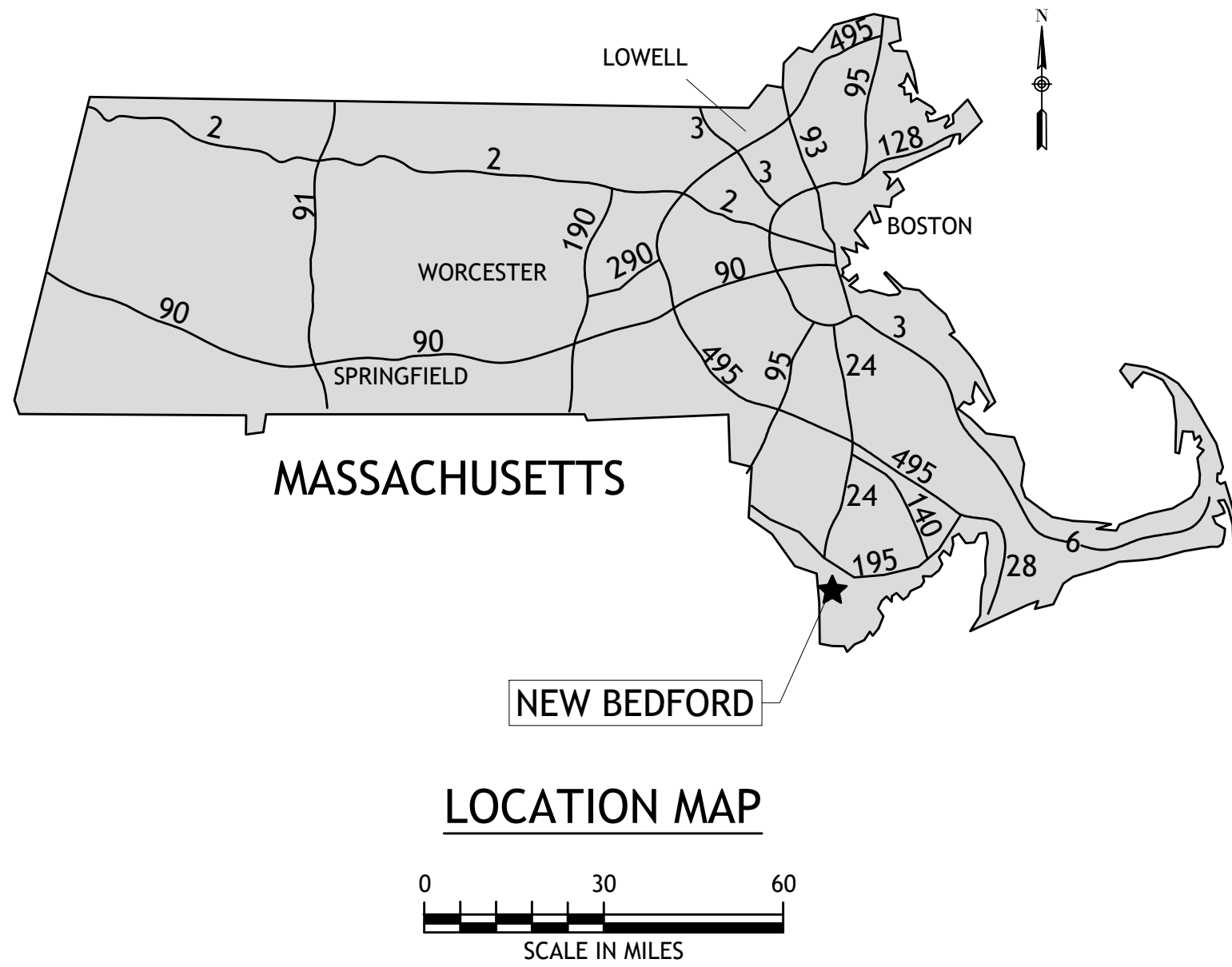
5.8 Surface Conditions Not Being Monitored/Reported.

When surface conditions are not being monitored or reported, the Director of Aviation or designee will issue the appropriate NOTAM through Lockheed or eNOTAM manager.

Attachment 3

Revised Permit Drawings, prepared by Airport Solutions Group

12/30/2022 9:12:34 AM P:\ASG_Data\Projects\MA - New Bedford\054 Permit RW5 Access Route\054 NOI Plans\010 103-054 NOI COVER SHEET.dwg (50)



NOI PLANS FOR

newbedford regional airport

CITY OF NEW BEDFORD
NEW BEDFORD REGIONAL AIRPORT
1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

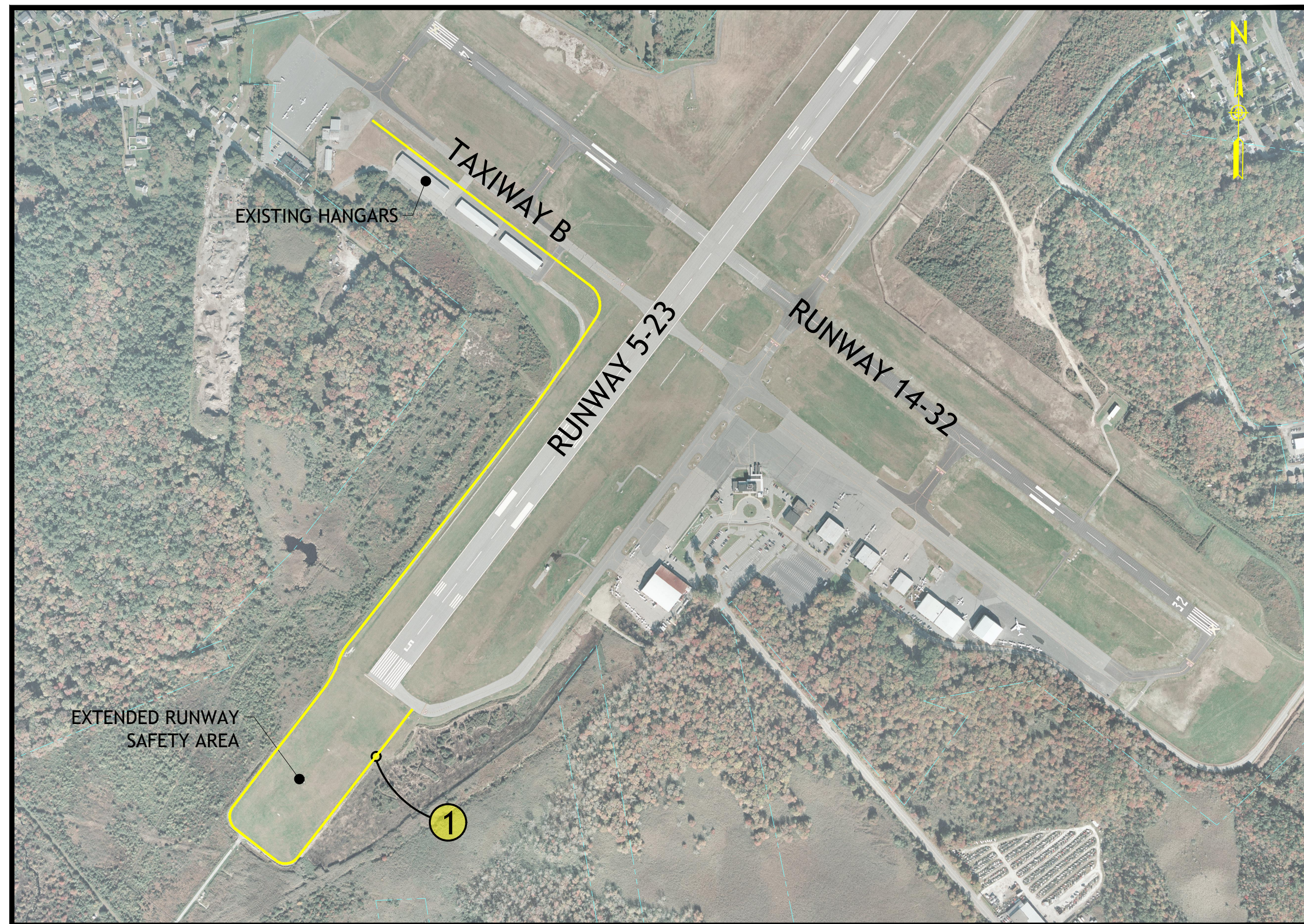
PERMIT RW5 PERIMETER ROAD

DECEMBER 2022

AIP NO. 3-25-0052-OXX-2022

GENERAL NOTES

1. THE INFORMATION INCLUDED IN THIS NOI PLAN SET IS CONSIDERED PRELIMINARY AND IS INTENDED FOR PERMITTING PURPOSES ONLY; IT IS NOT INTENDED FOR FINAL LAYOUT OR CONSTRUCTION. THE CONSTRUCTION BID SET WILL INCLUDE THE ORDER OF CONDITIONS ISSUED BY THE NEW BEDFORD CONSERVATION COMMISSION (NBCC). THE ORDER OF CONDITIONS WILL TAKE PRECEDENCE OVER ANY CONFLICTING INFORMATION INCLUDED IN THIS NOI PLAN SET OR CONSTRUCTION BID SET.
2. EROSION CONTROL MATTING SHALL BE USED FOR SLOPE STABILIZATION ON ALL PROPOSED GRADING EXCEEDING A SLOPE OF 4:1 (H:V).

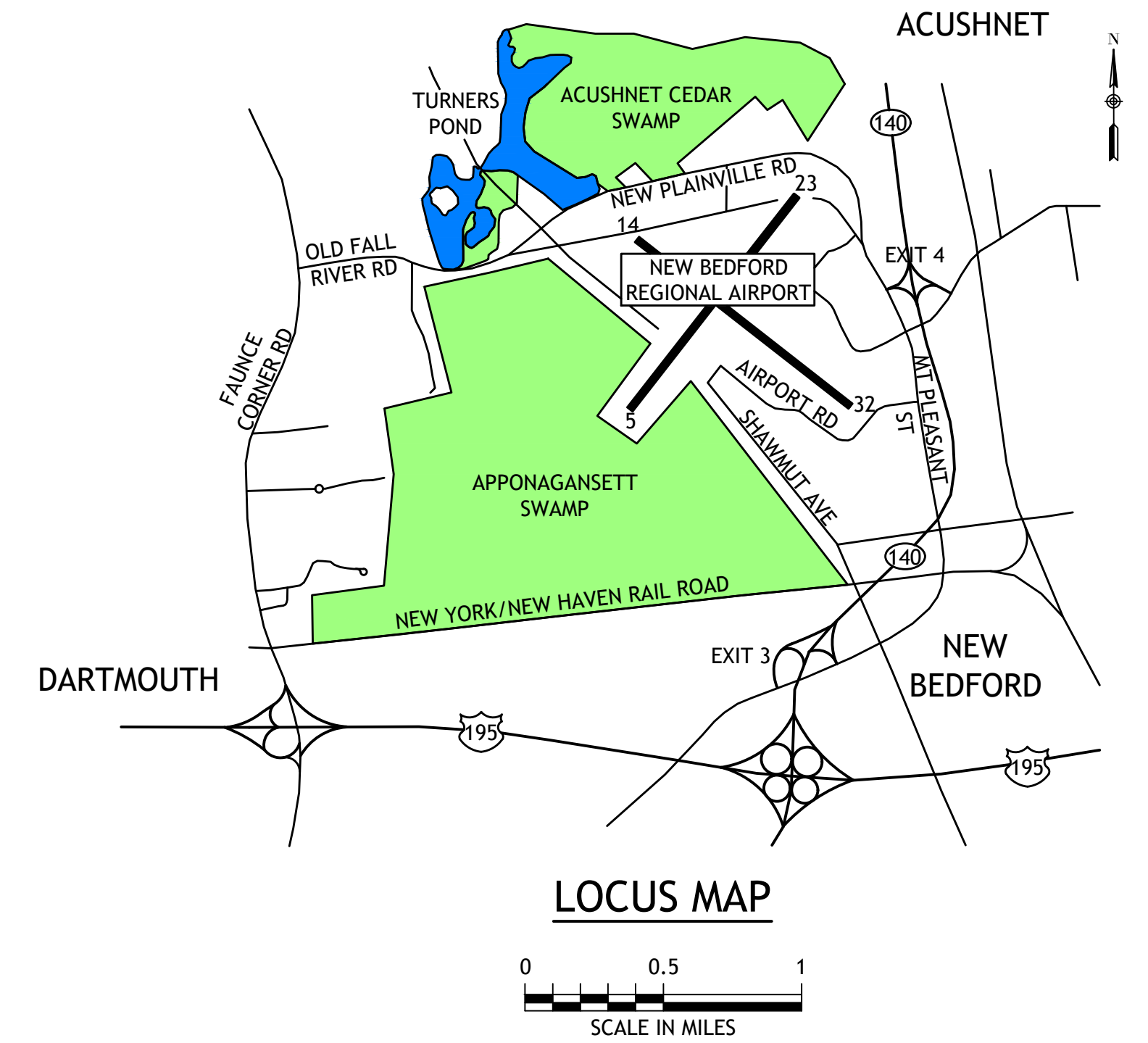


PREPARED BY



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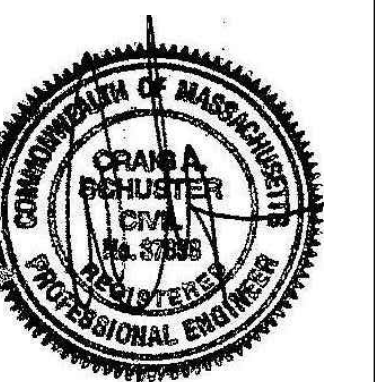


PROPOSED CONSTRUCTION

- ① - PAVE RW5 PERIMETER ROAD

NOI PERMIT DRAWINGS
NOT FOR CONSTRUCTION
REVISED DECEMBER 30, 2022

REVISED DECEMBER 30, 2022



DRAWING NO.

NOI.1

1 OF 13

NOI SUBMISSION

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INDEX TO DRAWINGS		
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1	NOI.1	COVER SHEET
2	NOI.2	INDEX TO DRAWINGS
3	NOI.3	EXISTING CONDITIONS, CATCHMENT AREAS AND ANALYSIS POINTS
4	NOI.4	GRADING AND PROFILE PLAN (1 OF 8)
5	NOI.5	GRADING AND PROFILE PLAN (2 OF 8)
6	NOI.6	GRADING AND PROFILE PLAN (3 OF 8)
7	NOI.7	GRADING AND PROFILE PLAN (4 OF 8)
8	NOI.8	GRADING AND PROFILE PLAN (5 OF 8)
9	NOI.9	GRADING AND PROFILE PLAN (6 OF 8)
10	NOI.10	GRADING PLAN (7 OF 8)
11	NOI.11	GRADING PLAN (8 OF 8)
12	NOI.12	TYPICAL SECTIONS AND DRAINAGE DETAILS
13	NOI.13	DRAINAGE AND EROSION CONTROL DETAILS

PROJECT

PERMIT RW5 PERIMETER ROAD

OWNER

CITY OF NEW BEDFORD
NEW BEDFORD REGIONAL AIRPORT
1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

PROJECT NO.

103-054

CADD FILE

003 103-054 NOI GENERAL PLANS

DESIGNED BY

SG

DRAWN BY

SG

CHECKED BY

SJR

DATE

DECEMBER 2022

DRAWING SCALE

NTS

SHEET TITLE

INDEX TO DRAWINGS

GRAPHIC SCALE

NTS

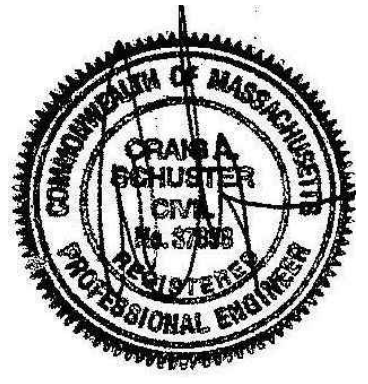
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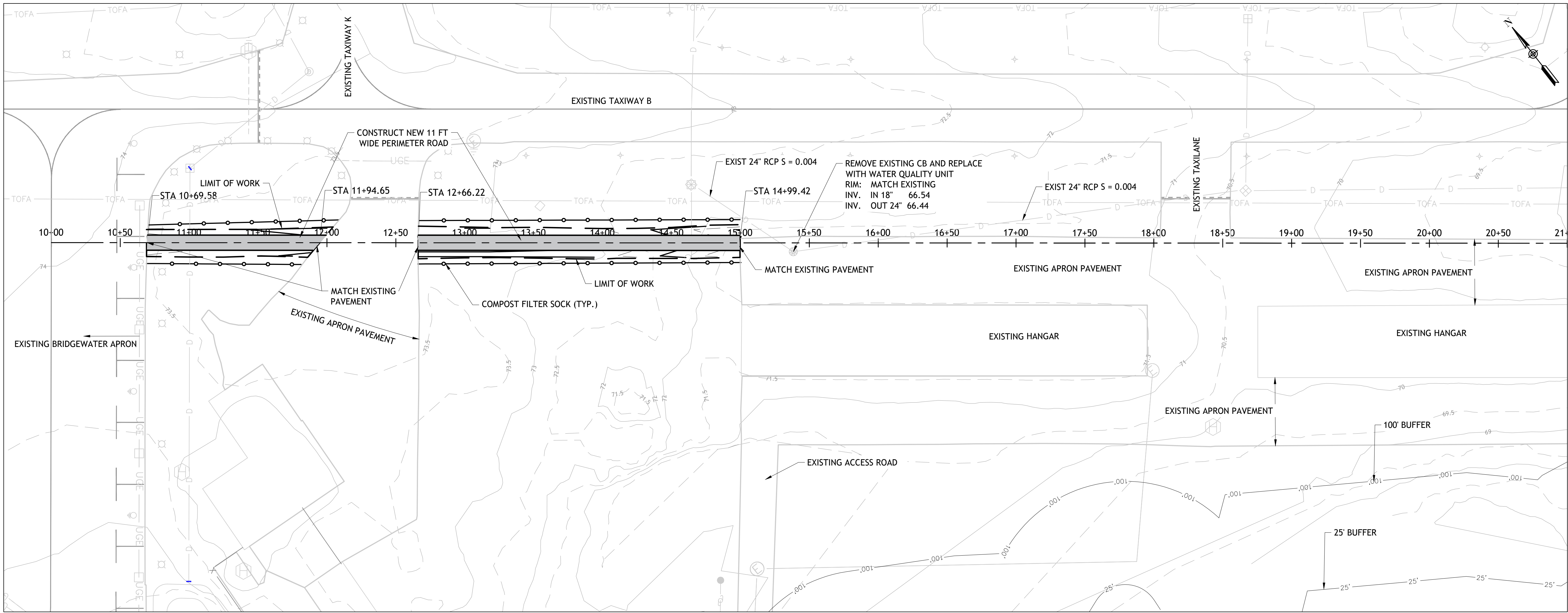


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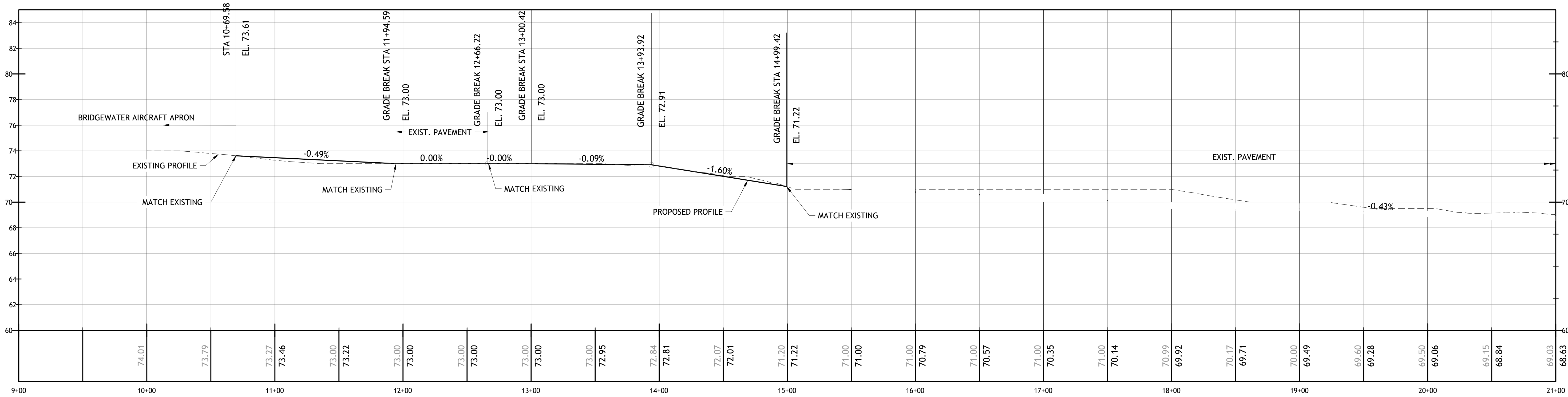
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GRADING PLAN PERIMETER ROAD
SCALE: 1" = 40'

NOTES:
1. SEE NOI.3 FOR LEGEND.



PROFILE PERIMETER ROAD
SCALE: 1" = 40' (H)
1" = 4' (V)



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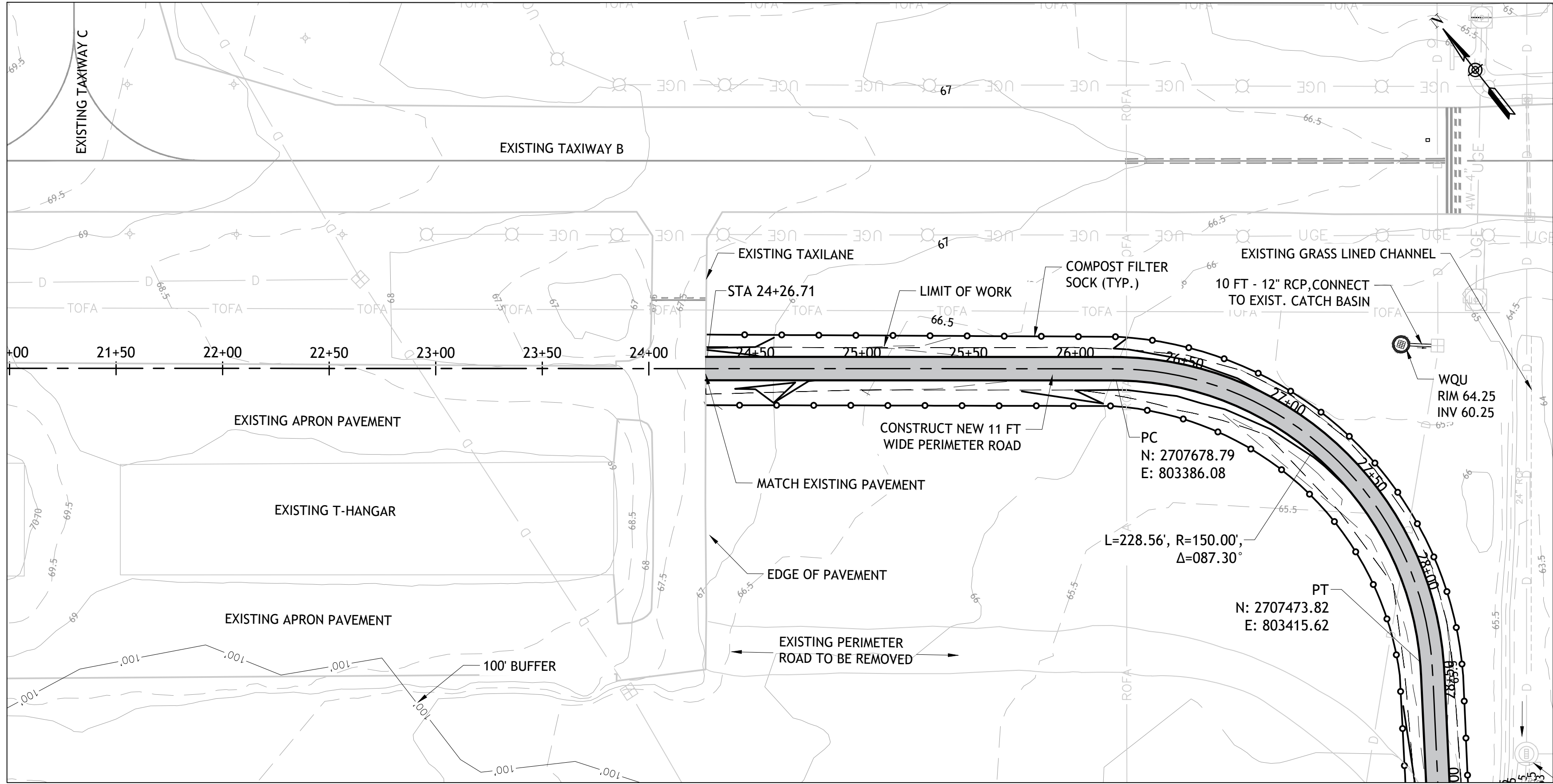
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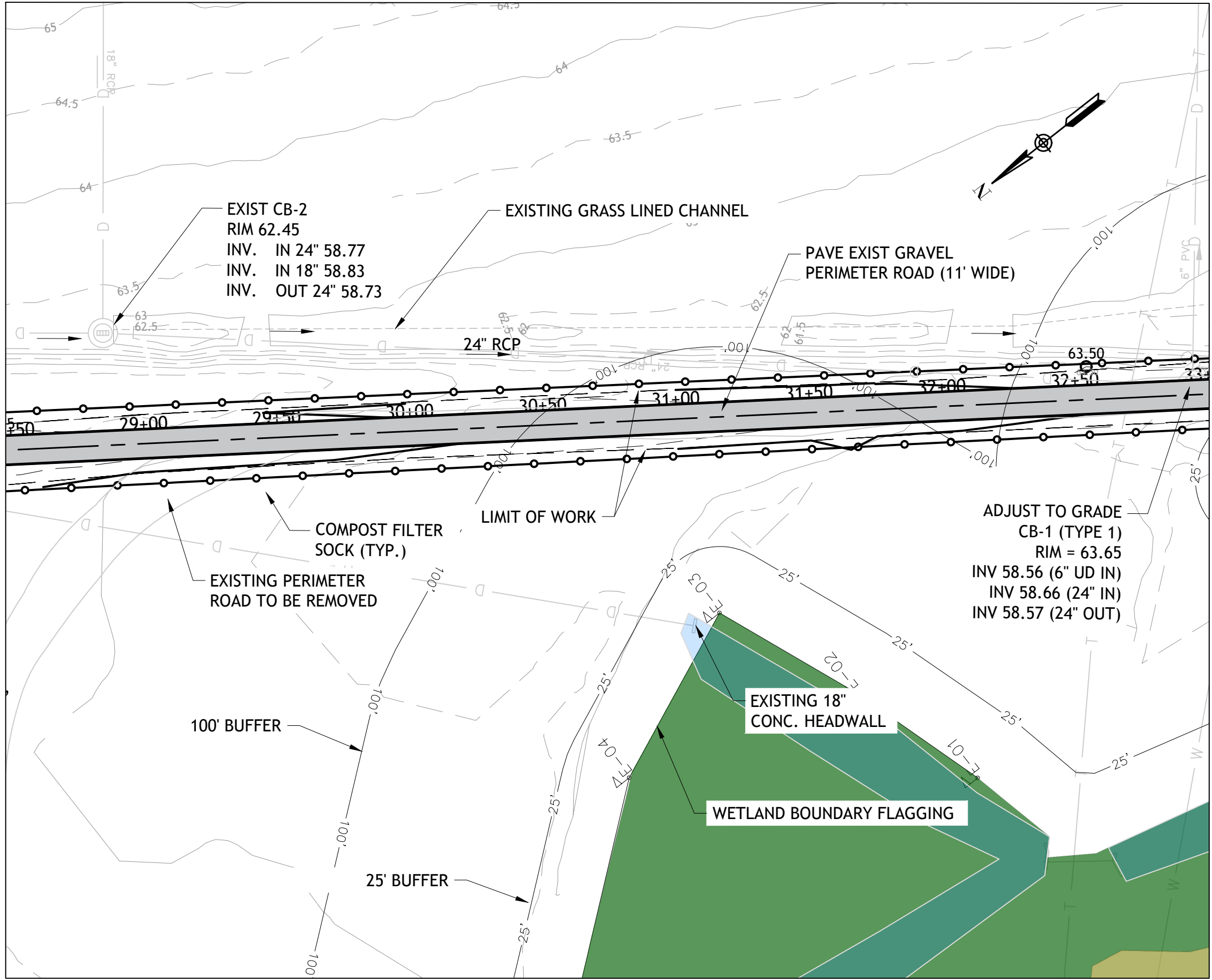
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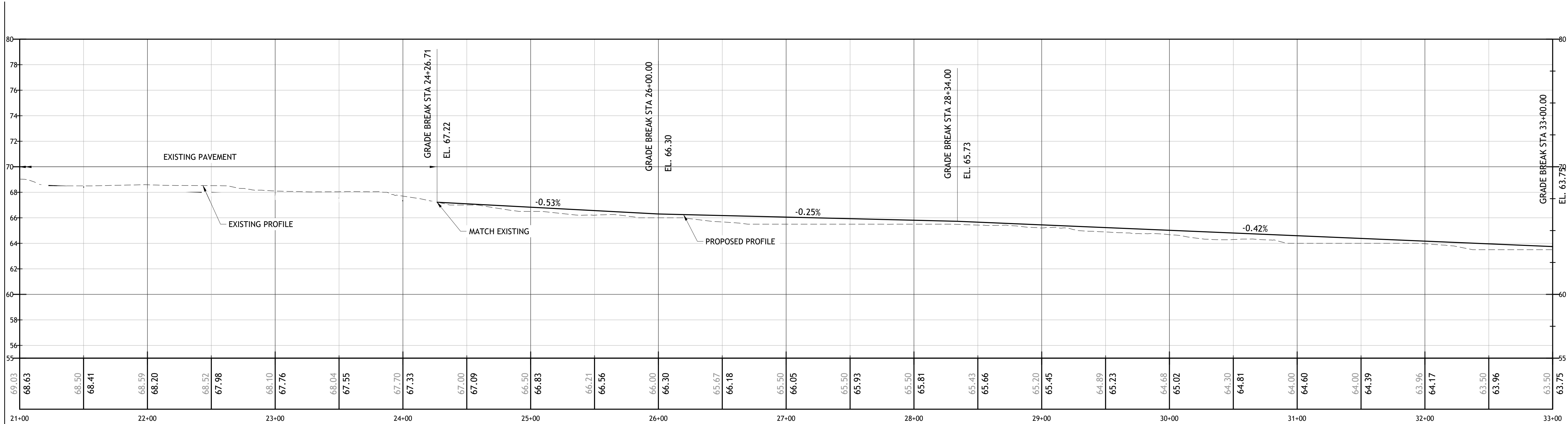
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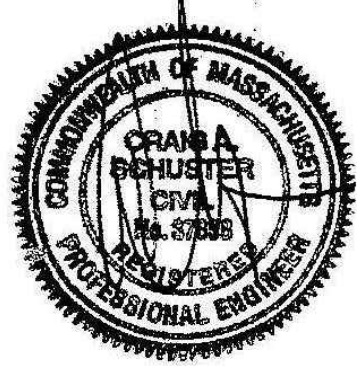
NOTES:

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PROFILE PERIMETER ROAD

SCALE: 1" = 40' (H)
1" = 4' (V)



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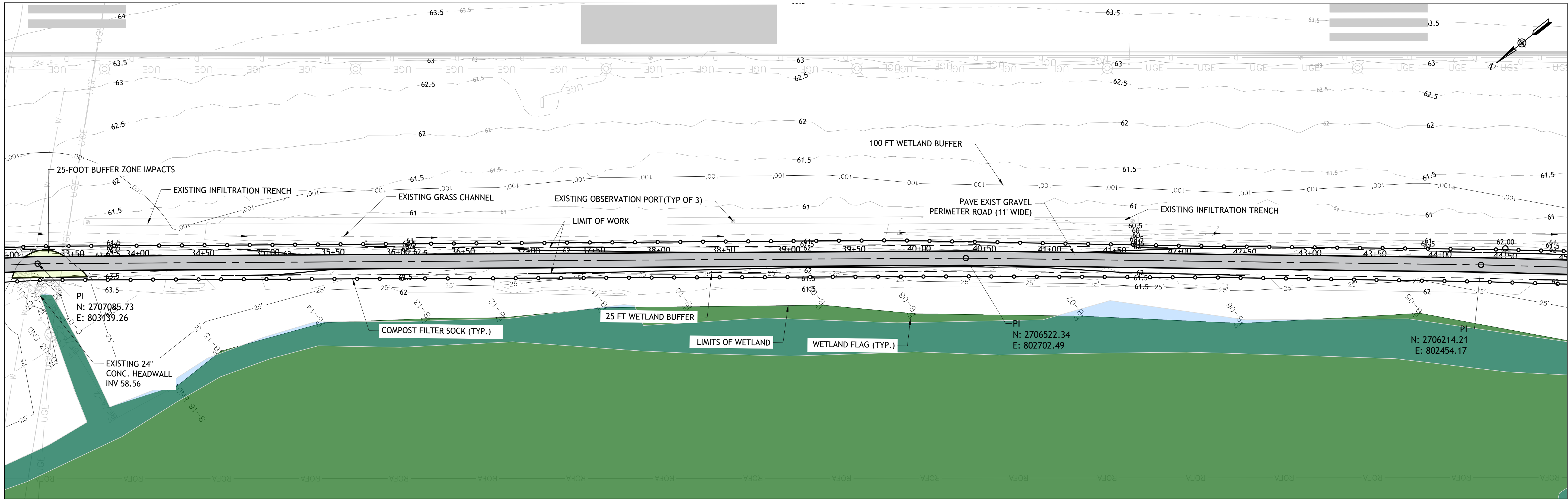
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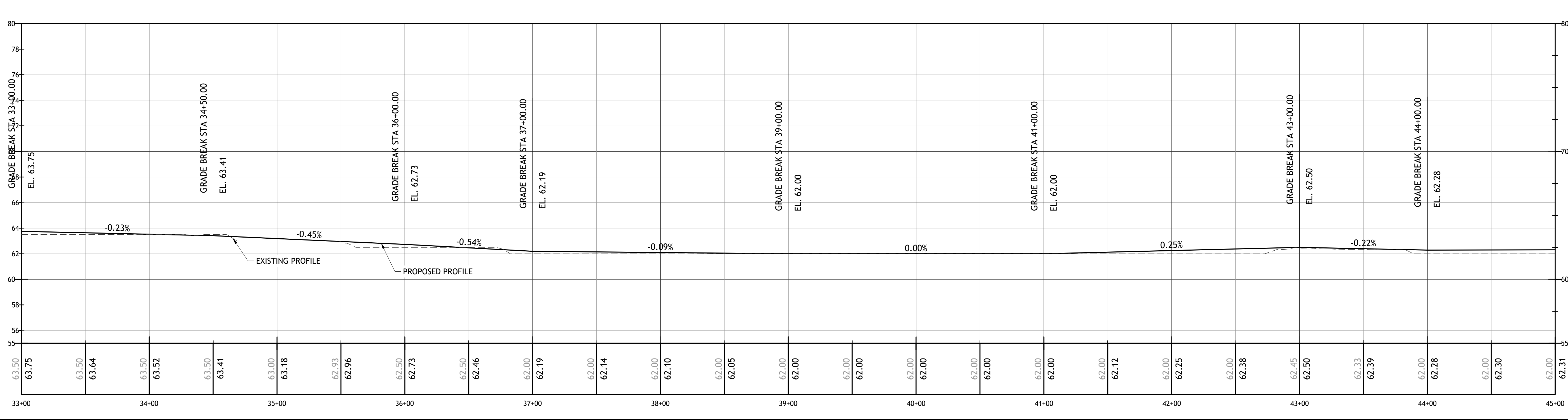
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25-FOOT BUFFER ZONE IMPACTS

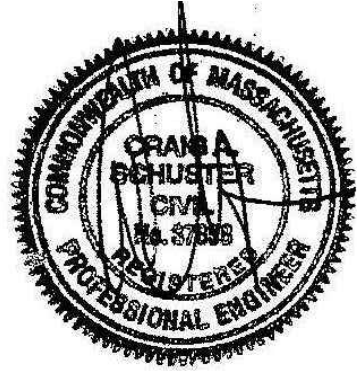
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PROFILE PERIMETER ROAD

SCALE: 1" = 40' (H)
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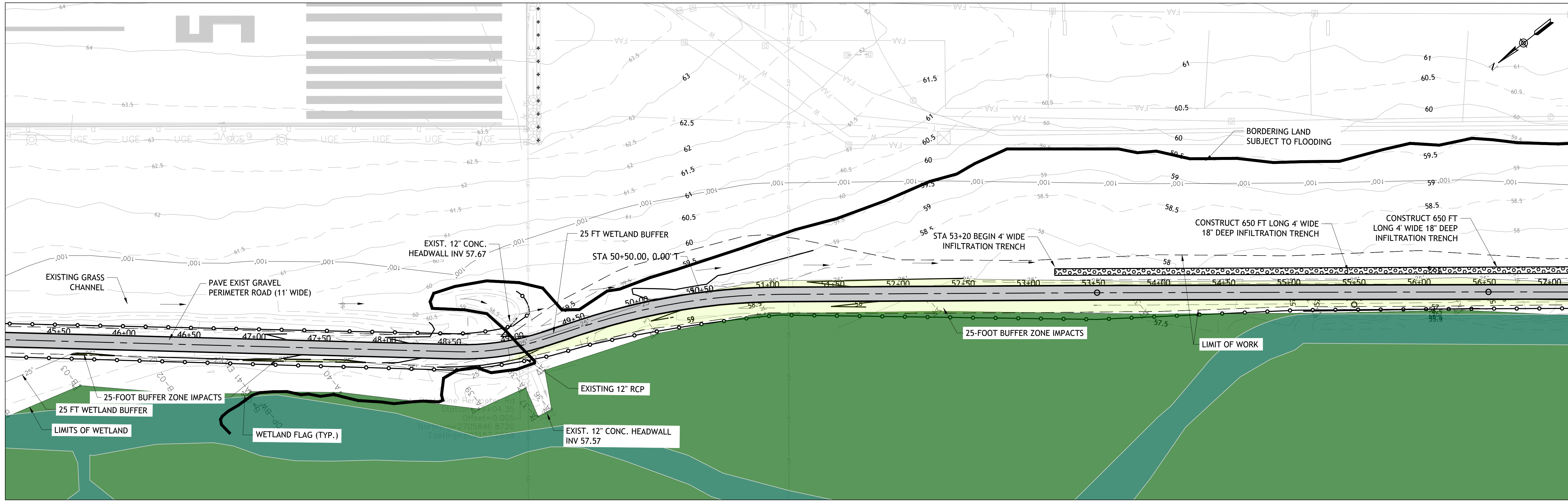
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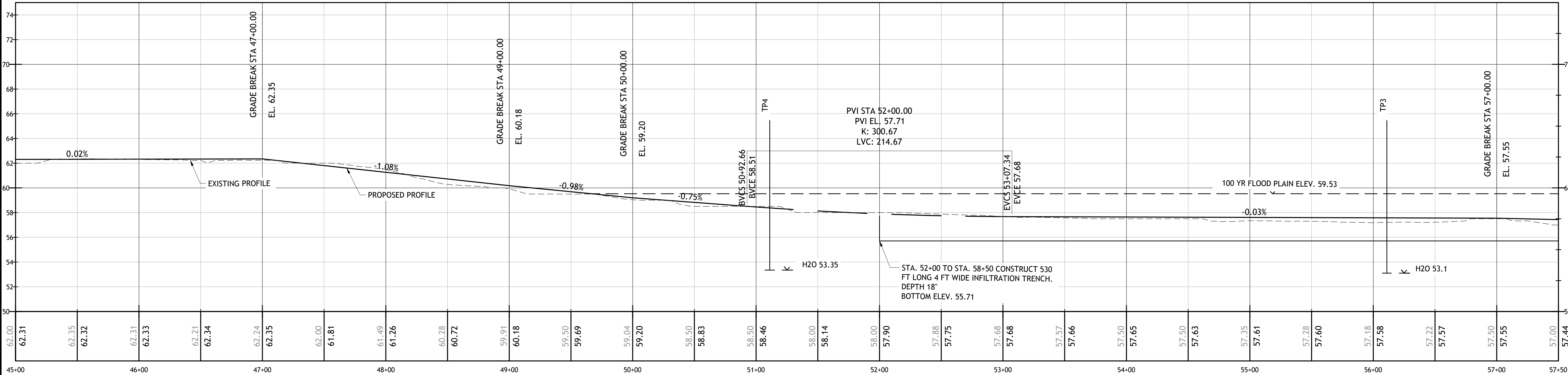
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SCALE: 1" = 40'

25-FOOT BUFFER ZONE IMPACTS

NOTES:

1. SEE NOI.3 FOR LEGEND.



PROFILE PERIMETER ROAD

SCALE: 1" = 40' (H)
1" = 4' (V)



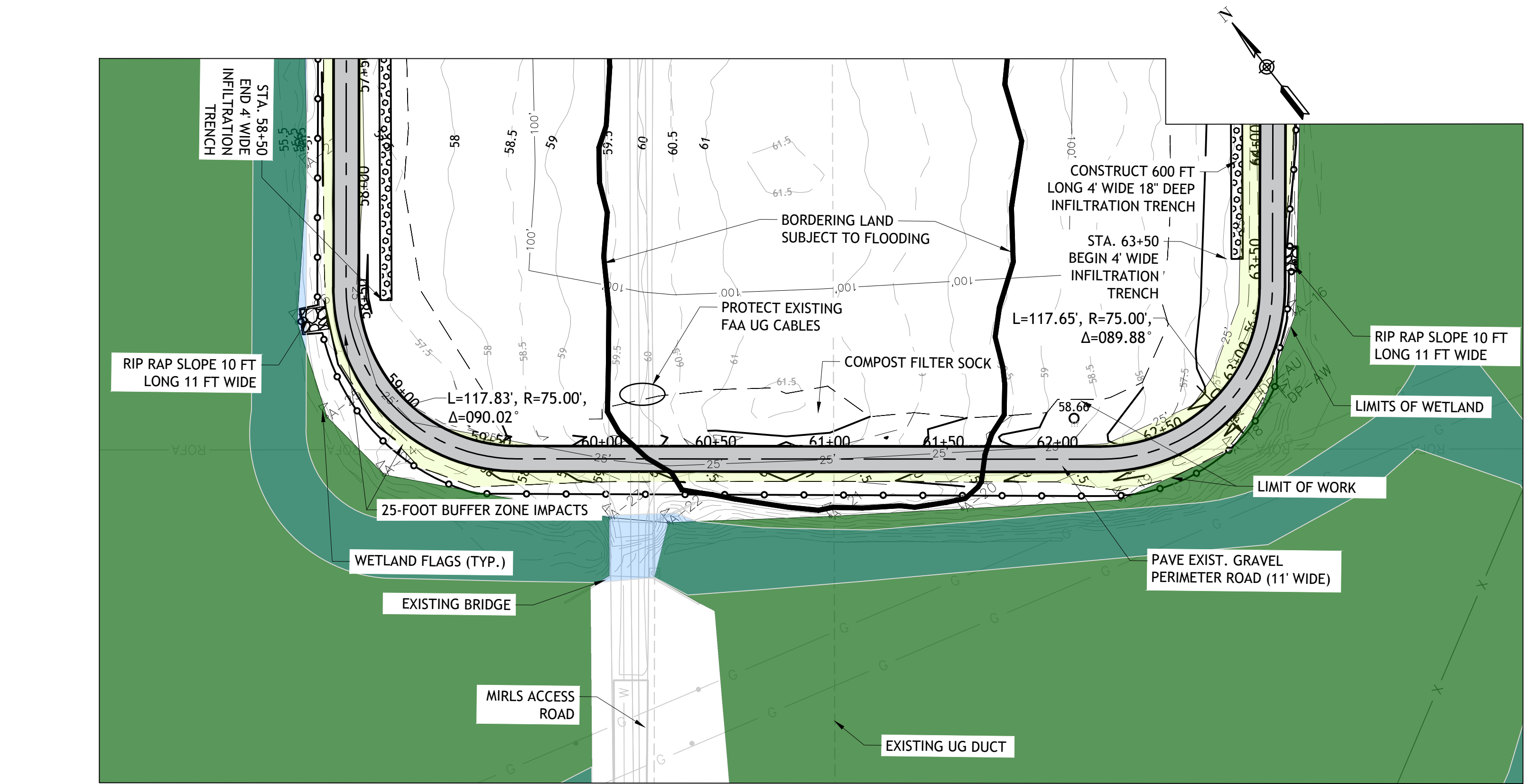
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DATE	DECEMBER 2022
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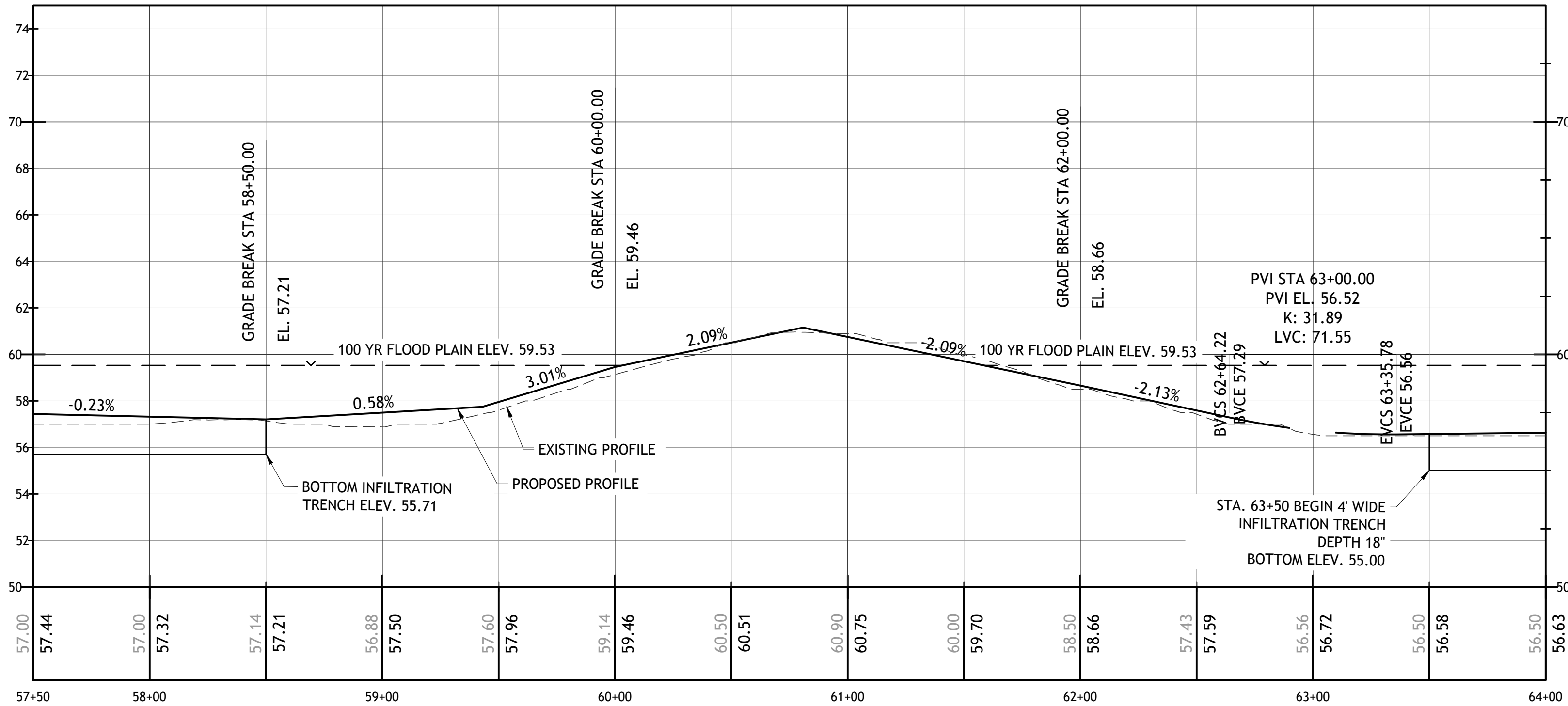


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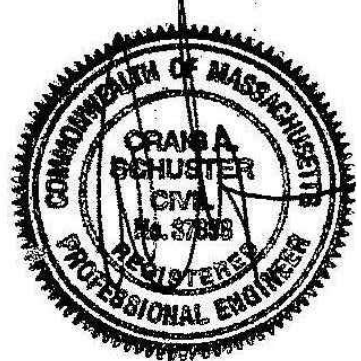
LOAM AND SEED IN 25-FOOT BUFFER

NOTES:

1. SEE NOI.3 FOR LEGEND.



PROFILE PERIMETER ROAD
SCALE: 1" = 40' (H)
1" = 4' (V)



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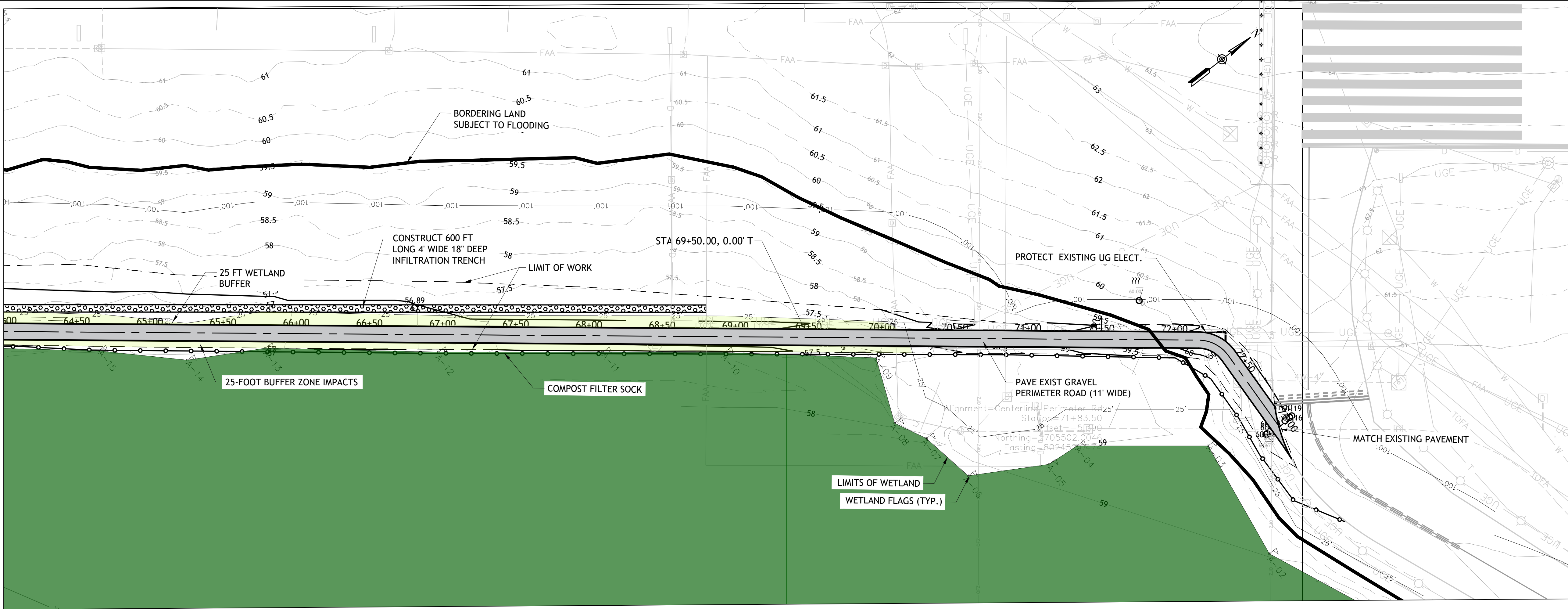
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CITY OF NEW BEDFORD NEW BEDFORD REGIONAL AIRPORT 1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

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DESIGNED BY	SE
DRAWN BY	SE
CHECKED BY	SJR
DATE	DECEMBER 2022
DRAWING SCALE	1" = 40'

SHEET TITLE
GRADING & PROFILE PLANS (5 of 8)
GRAPHIC SCALE
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DRAWING NO.
NOI.8
8 OF 13

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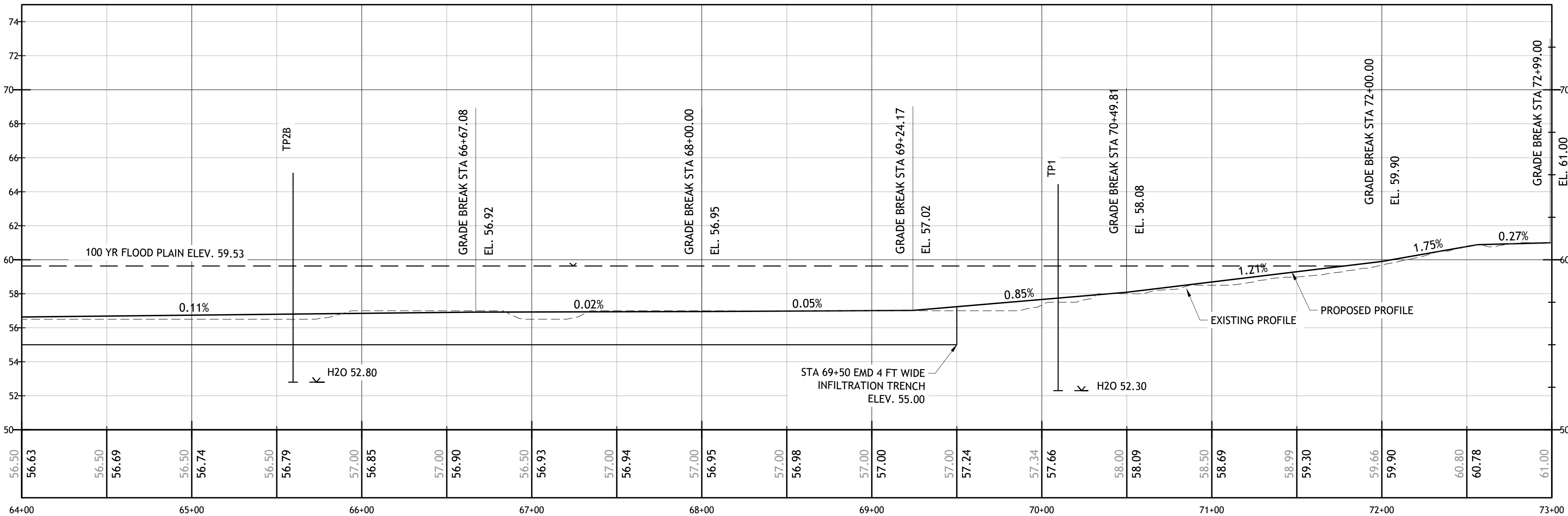
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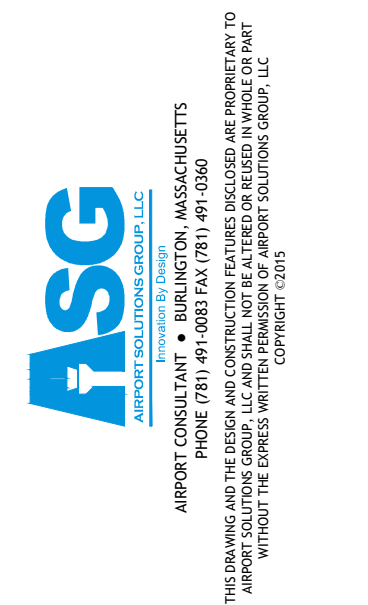
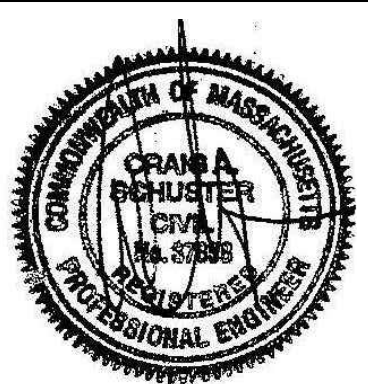
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PROFILE PERIMETER ROAD

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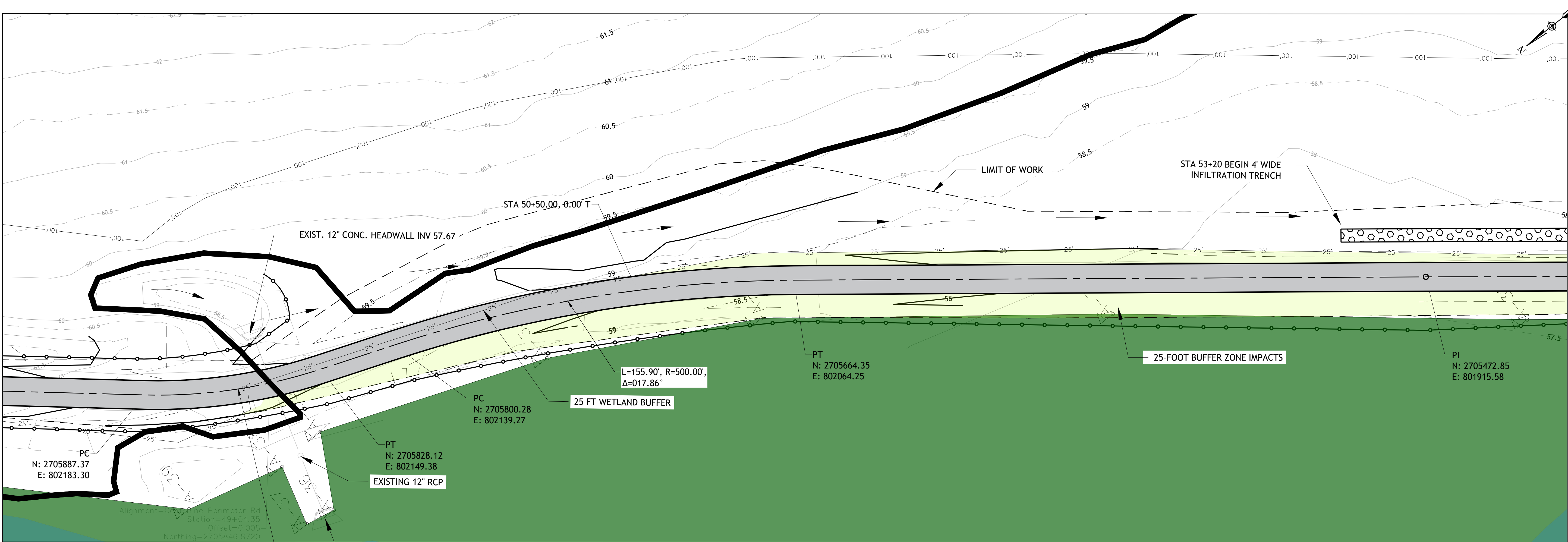
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PERMIT RW5 PERIMETER ROAD	CITY OF NEW BEDFORD NEW BEDFORD REGIONAL AIRPORT 1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

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SHEET TITLE	GRAPHIC SCALE
GRADING & PROFILE PLANS (6 of 8)	0 20' 40' 80'

DRAWING NO.
NOI.9
9 OF 13

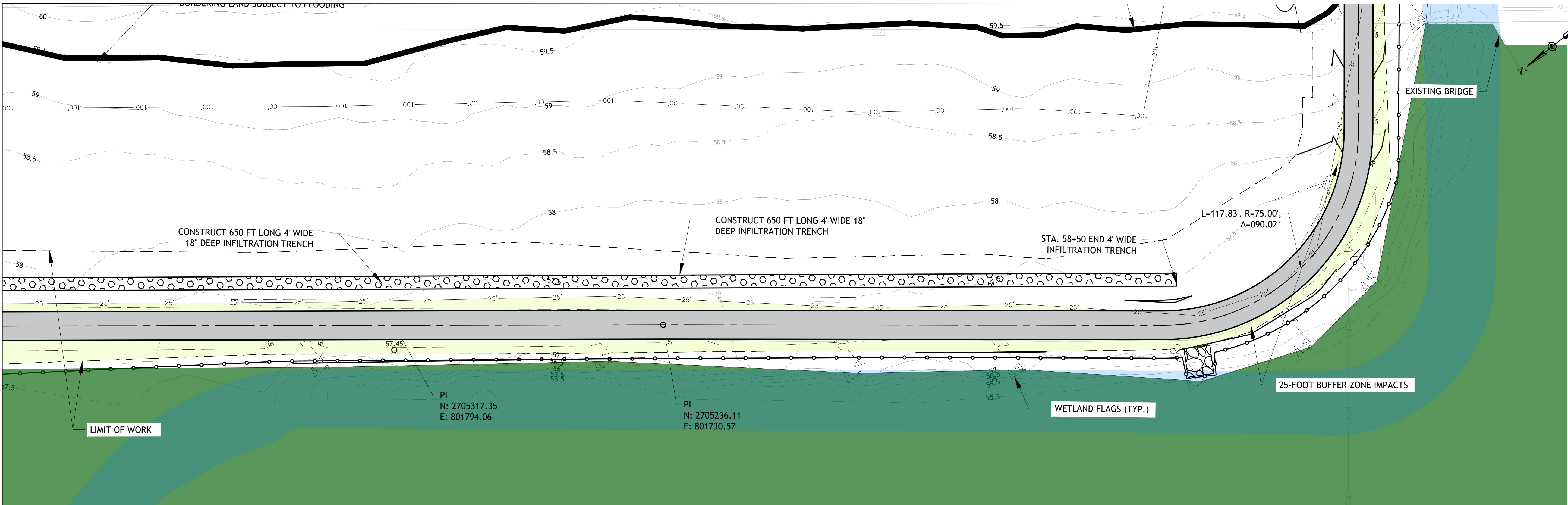
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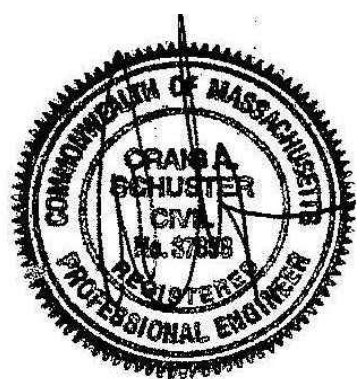
GRADING PLAN PERIMETER ROAD
SCALE: 1" = 20'

LOAM AND SEED IN 25-FOOT BUFFER

NOTES:
1. SEE NOI.3 FOR LEGEND.



GRADING PLAN PERIMETER ROAD
SCALE: 1" = 20'



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PROJECT NO.	103-054
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DRAWN BY	NAP
CHECKED BY	SJR
DATE	DECEMBER 2022
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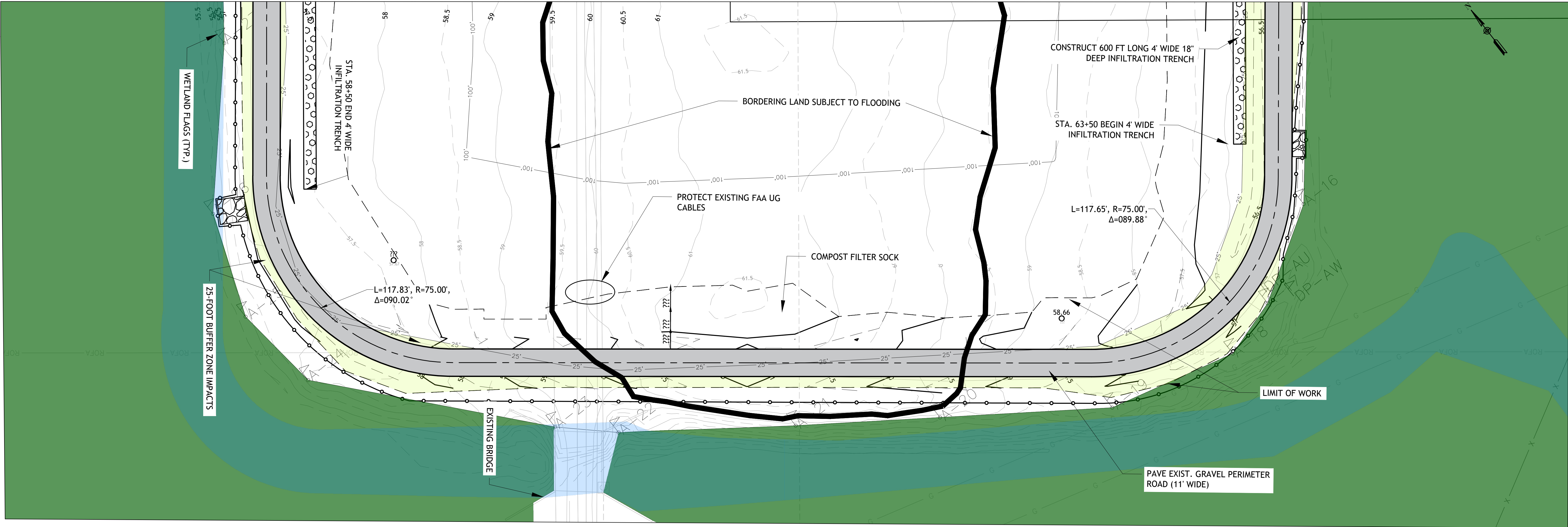
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GRAPHIC SCALE 0 20' 40' 80'

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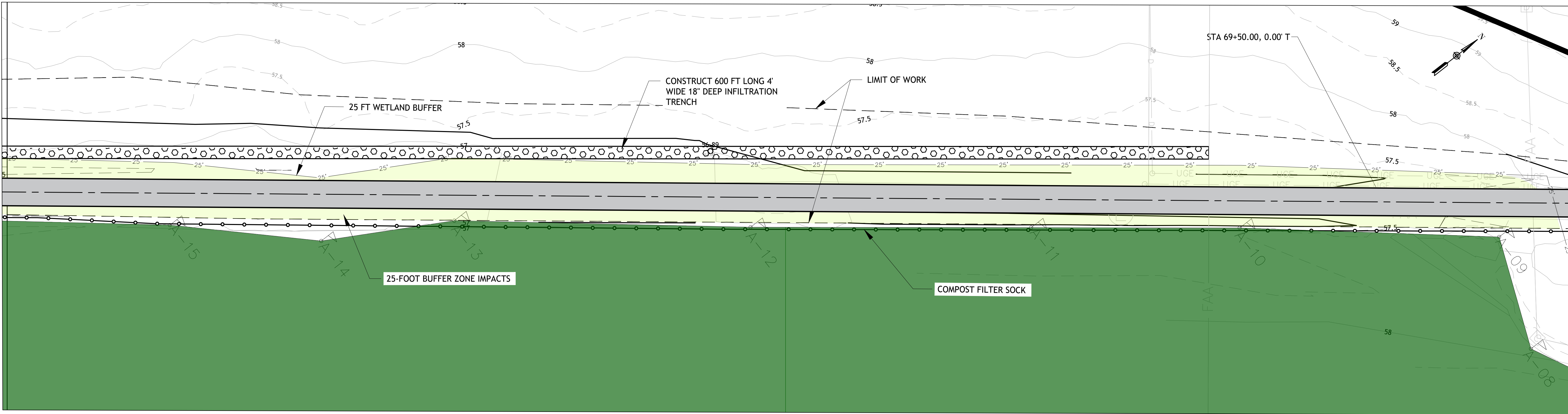
NOI.10

10 OF 13

12/30/2022 9:36:40 AM P:\ASG Data\Projects\MA - New Bedford\034\Projects\MA - New Bedford\034\Permit RW5 Access Road\CADD\NOI Plans\035-103-034 GRADING PLAN.dwg (SG)



GRADING PLAN PERIMETER ROAD
SCALE: 1" = 20'



GRADING PLAN PERIMETER ROAD
SCALE: 1" = 20'

LOAM AND SEED IN 25-FOOT BUFFER

NOTES:

1. SEE NOI.3 FOR LEGEND.



ASG
ASG CONSULTANTS, LLC
1000 ROUTE 1A, SUITE 200
BEDFORD, MA 01730
PH: 508.675.1234
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NO.	DATE	DESCRIPTION	BY
1	12/30/2022	Revised per ConCom comments	SG

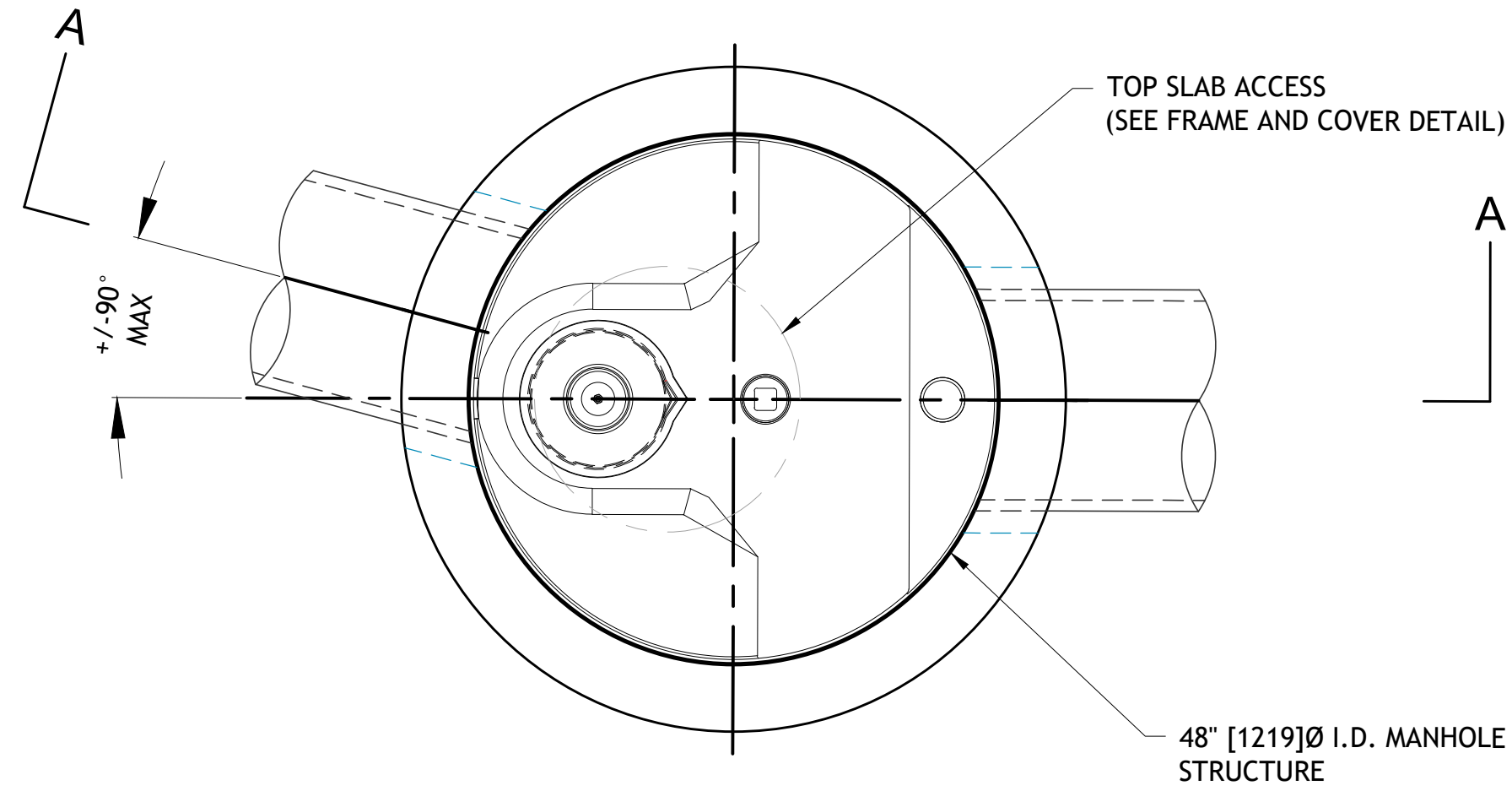
PROJECT	OWNER
PERMIT RW5 PERIMETER ROAD	CITY OF NEW BEDFORD NEW BEDFORD REGIONAL AIRPORT 1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE
103-054	035-103-034 GRADING PLAN	NAP	NAP	DECEMBER 2022

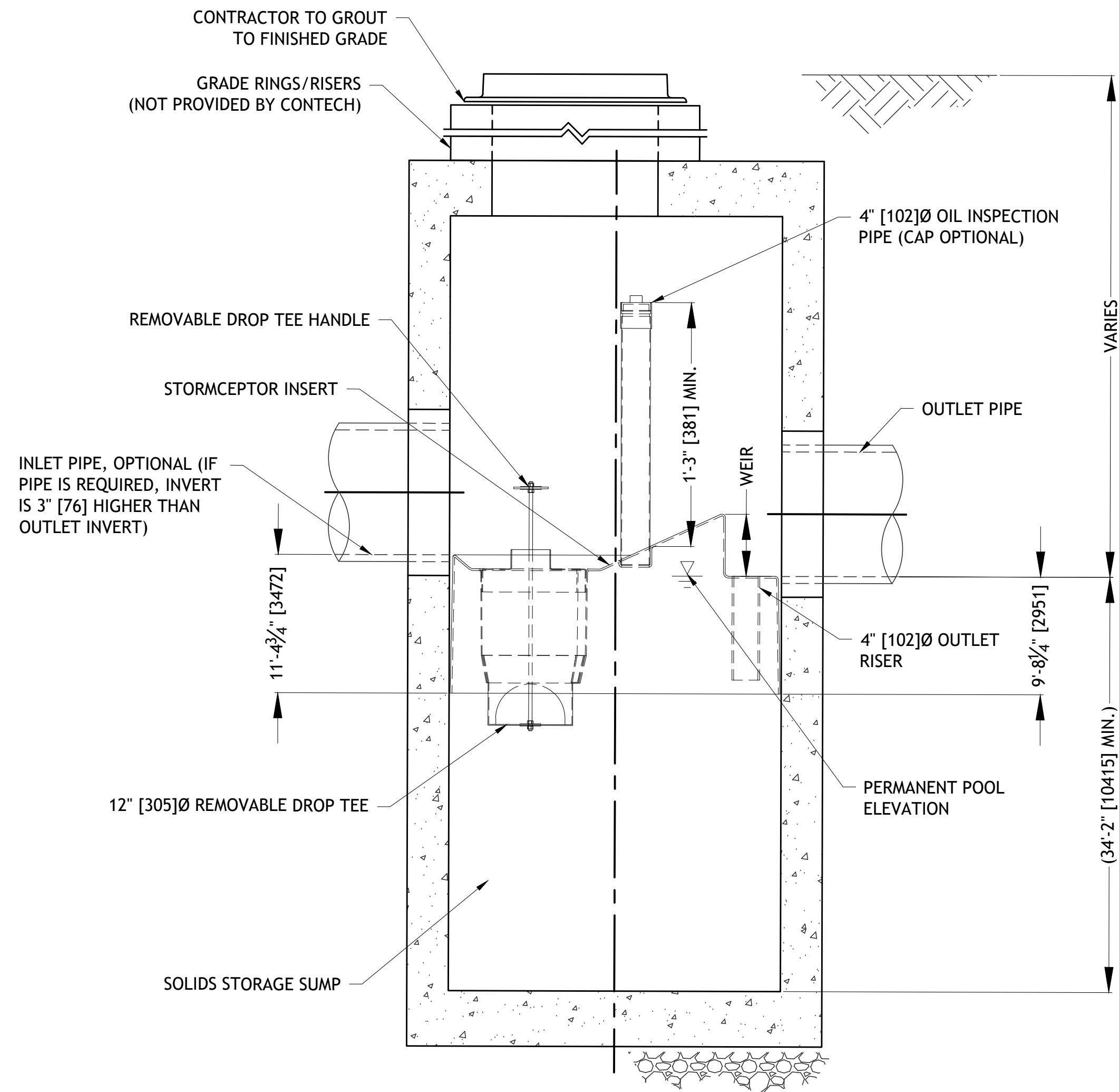
SHEET TITLE	DRAWING SCALE
GRADING PLANS (8 of 8)	1" = 40'

DRAWING NO.

NOI.11

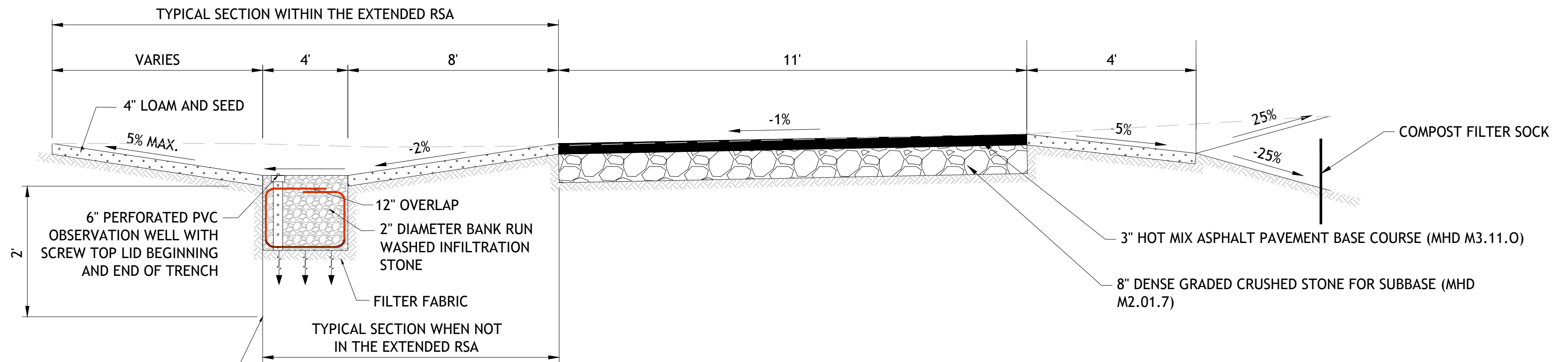


PLAN VIEW
TOP SLAB NOT SHOWN



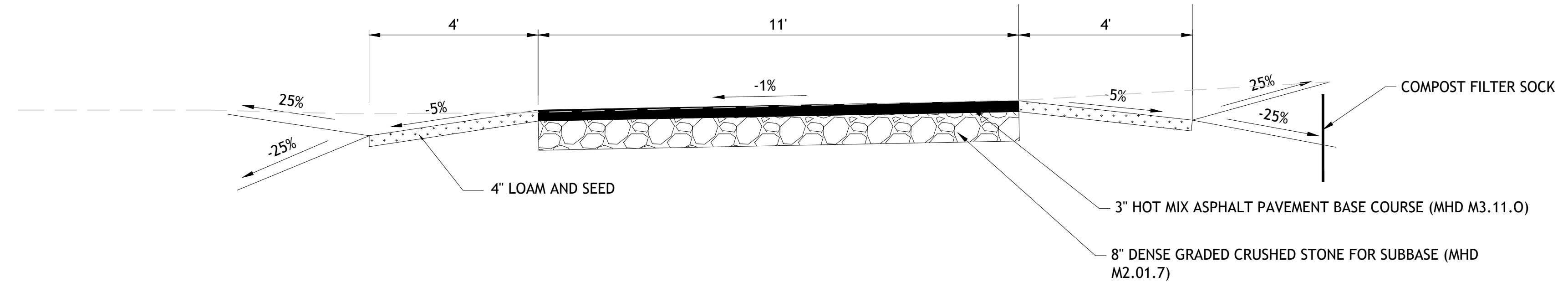
SECTION
A-A

WATER QUALITY UNIT DETAIL (WQU)
SCALE: N.T.S.

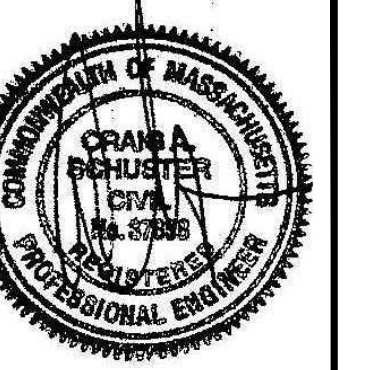


INFILTRATION TRENCH DETAIL
STA. 53+20 TO 58+50 BOTTOM ELEV. 55.71. DEPTH 18"
STA. 63+50 TO 68+80 BOTTOM ELEV. 55.00. DEPTH 18"
SCALE: NTS

TYPICAL SECTION WITHIN THE
EXTENDED RSA
SCALE: NTS



TYPICAL SECTION OUTSIDE OF
EXTENDED RSA
SCALE: NTS



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NO.	DATE	DESCRIPTION	BY

PROJECT	OWNER
PERMIT RW5 PERIMETER ROAD	CITY OF NEW BEDFORD NEW BEDFORD REGIONAL AIRPORT 1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

PROJECT NO.	103-054
CADD FILE	046 103-054 NOI DETAILS
DESIGNED BY	SG
DRAWN BY	SG
CHECKED BY	SJR
DATE	DECEMBER 2022
DRAWING SCALE	NTS

SHEET TITLE	GRAPHIC SCALE
TYPICAL SECTIONS AND DRAINAGE DETAILS	NTS

DRAWING NO.
NOI.12
12 OF 13

12/29/2022 2:58:15 PM P:\ASG Data\Projects\MA - New Bedford\054 Permit - RW5 Airport Road\CASTD\NOI_Plane\040 103-054 NOI DETAILS.dwg (50)

NEW ENGLAND WETLAND PLANTS, INC
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000 FAX 413-549-4000
EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM
New England Conservation/Wildlife Mix

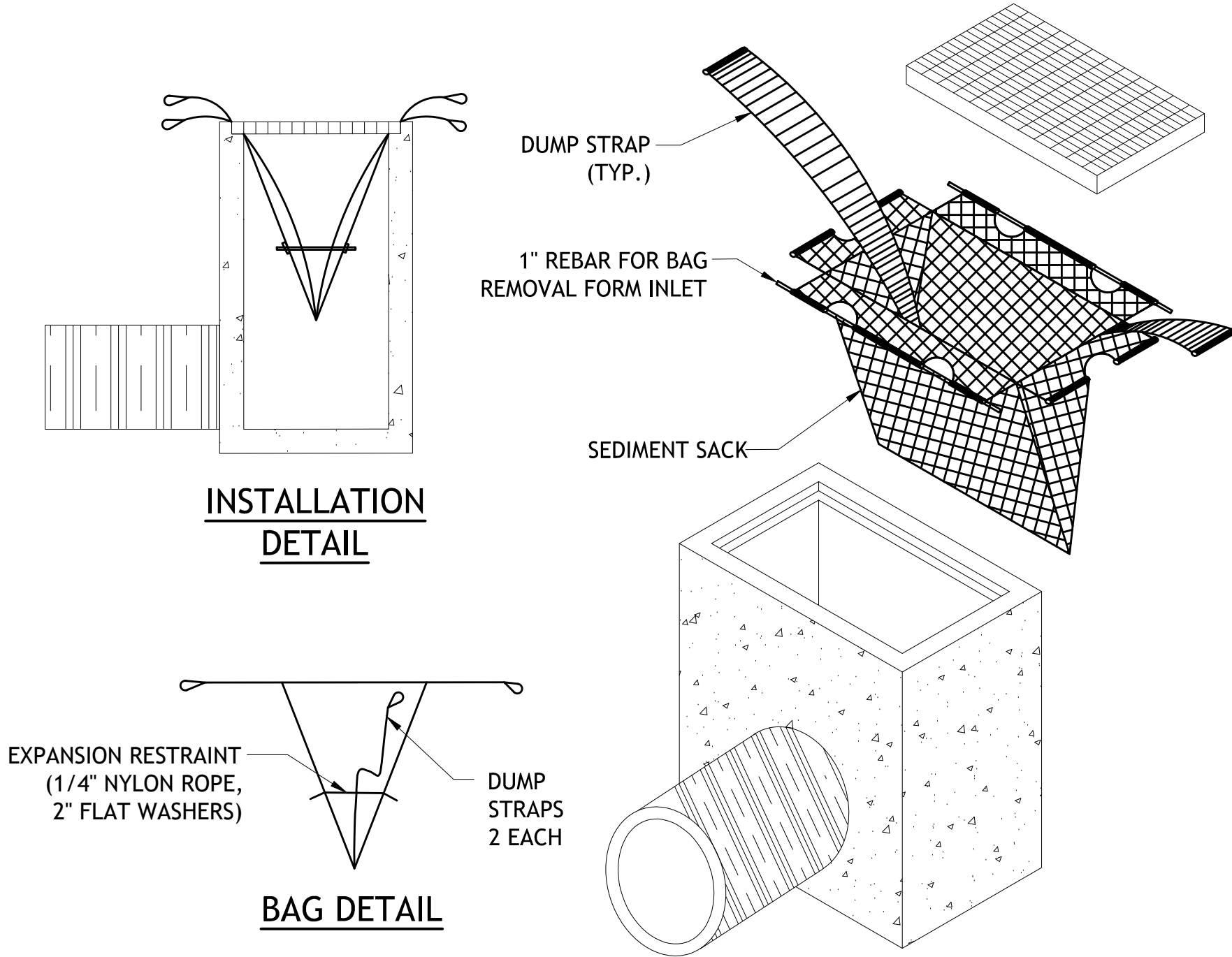
Botanical Name	Common Name	Indicator
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Desmodium canadense</i>	Showy Tick Trefoil	FAC
<i>Asclepias tuberosa</i>	Butterfly Milkweed	NI
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Eupatorium purpureum (Eutrochium maculatum)</i>	Purple Joe Pye Weed	FAC
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Aster pilosus (Symphyotrichum pilosum)</i>	Heath (or Hairy) Aster	UPL
<i>Solidago juncea</i>	Early Goldenrod	

PRICE PER LB. \$39.50 MIN. QUANTITY 2 LBS. TOTAL: \$79.00 APPLY: 25 LBS/ACRE :1750 sq ft/lb
The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.
New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

NEW ENGLAND WETLAND PLANTS, INC
820 WEST STREET, AMHERST, MA 01002
PHONE: 413-548-8000 FAX 413-549-4000
EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM
New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites

Botanical Name	Common Name	Indicator
<i>Elymus riparius</i>	Riverbank Wild Rye	FACW
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Vernonia noveboracensis</i>	New York Ironweed	FACW+
<i>Agrostis perennans</i>	Upland Bentgrass	FACU
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Eupatorium maculatum (Eutrochium maculatum)</i>	Spotted Joe Pye Weed	OBL
<i>Eupatorium perfoliatum</i>	Boneset	FACW
<i>Aster novae-angliae (Symphyotrichum novae-angliae)</i>	New England Aster	FACW-
<i>Scirpus cyperinus</i>	Wool Grass	FACW
<i>Juncus effusus</i>	Soft Rush	FACW+

PRICE PER LB. \$37.00 MIN. QUANTITY 3 LBS. TOTAL: \$111.00 APPLY: 35 LBS/ACRE :1250 sq ft/lb
The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation. This mix is particularly appropriate for detention basins that do not hold standing water. Many of the plants in this mix can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed-to-soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended
New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.

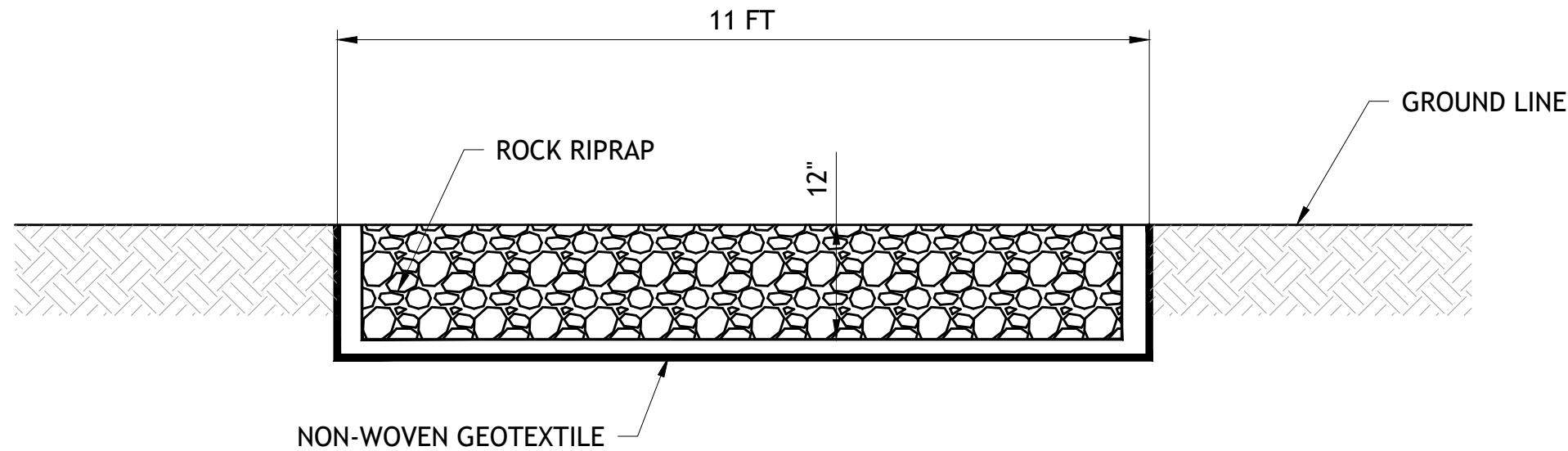


CATCH BASIN INLET NOTES:

1. CONTRACTOR SHALL REMOVE SEDIMENT AS NECESSARY TO MAINTAIN LEVEL BELOW OVERFLOW HOLES IN SEDIMENT SACK.
2. SEDIMENT SACK SHALL BE USED ON ALL CATCH BASINS WITHIN THE CONSTRUCTION ZONE, INCLUDING NEW STRUCTURES, OR AS DIRECTED BY THE ENGINEER.
3. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SEDIMENTATION SACKS THROUGHOUT THE DURATION OF THE PROJECT.
4. CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF SEDIMENT AS REQUIRED.
5. CONTRACTOR SHALL REMOVE SEDIMENT SACKS AND LEGALLY DISPOSE OF THEM OFF-SITE, UPON COMPLETION OF THE PROJECT AND AS REQUIRED.
6. 1" REBAR FOR BAG REMOVAL SHALL BE REMOVED DURING WINTER MONTHS AT LOCATIONS WHERE THERE IS PLOW ACTIVITY. BARS SHALL BE REINSTALLED AFTER SNOW SEASON IS COMPLETE.

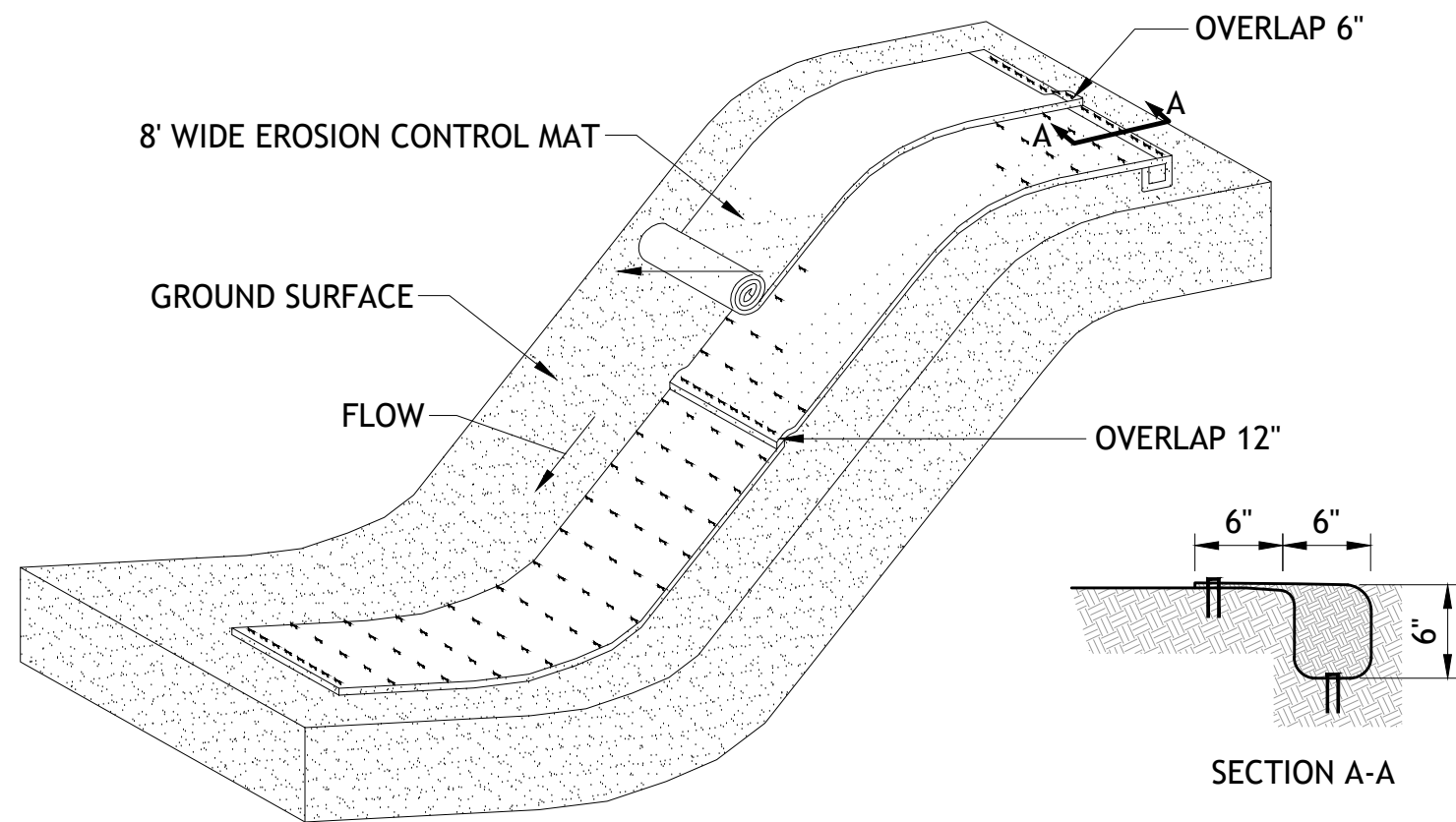
CATCH BASIN INLET PROTECTION

SCALE: N.T.S.



RIPRAP DETAILS

SCALE: N.T.S.

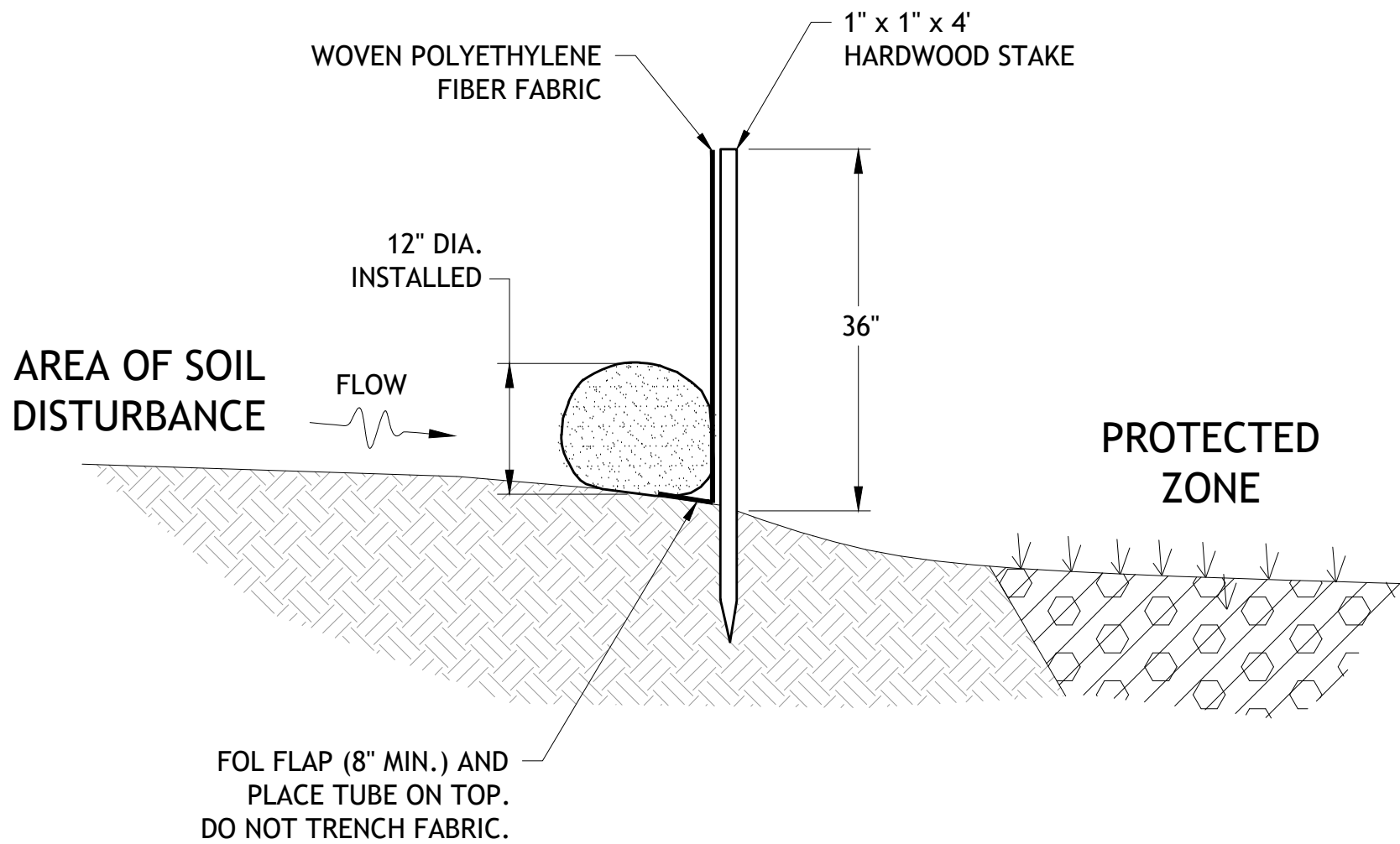


EROSION CONTROL MATTING NOTES:

1. PRIOR TO PLACING EROSION CONTROL MATTING, PREPARE THE SOIL BY RAKING AREA FREE OF CLODS AND LARGE STONES.
2. SEED, MULCH AND FERTILIZER SHALL BE DISTRIBUTED AS SPECIFIED OVER THE PREPARED SOIL PRIOR TO PLACING THE EROSION CONTROL MATTING.
3. ALL SEAMS SHALL BE OVERLAPPED A MINIMUM OF 6" AND SECURED WITH STAPLES 18" ON CENTER.
4. TO SECURE MAT TO GROUND, STAPLE RANDOMLY AT 24" INTERVALS THROUGHOUT
5. APPROXIMATELY 200 STAPLES PER ROLL
6. PLACE EROSION CONTROL MATTING AS DIRECTED BY THE ENGINEER AND ON SLOPES GREATER THAN 5:1.

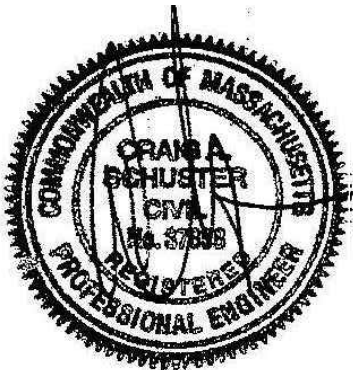
EROSION CONTROL MATTING

SCALE: N.T.S.



COMPOST FILTER TUBE AND SILT FENCE

SCALE: N.T.S.



NO.	DATE	DESCRIPTION	BY

PROJECT	OWNER
PERMIT RW5 PERIMETER ROAD	CITY OF NEW BEDFORD NEW BEDFORD REGIONAL AIRPORT 1569 AIRPORT ROAD, NEW BEDFORD, MA 02746

PROJECT NO.	103-054
CADD FILE	046 103-054-NOI DETAILS
DESIGNED BY	SG
DRAWN BY	SG
CHECKED BY	SJR
DATE	DECEMBER 2022
DRAWING SCALE	NTS

SHEET TITLE	GRAPHIC SCALE
DRAINAGE AND EROSION CONTROL DETAILS	NTS

DRAWING NO.

NOI.13

13 OF 13

Attachment 5

Ground Vehicle Movement on the Airfield excerpt from Airport
Certification Manual

PEDESTRIANS AND GROUND VEHICLES

§139.329

LIMITED ACCESS TO MOVEMENT & SAFETY AREAS

15.1 Definitions.

- 15.1.1 Accident** – A collision between one aircraft or vehicle and another aircraft, vehicle, person, or object that results in property damage, personal injury, or death.
- 15.1.2 Air Operation Area (AOA)** – the portion of airport which encompasses the landing, take off, taxing and parking areas for aircraft.
- 15.1.3 Airside** – Those areas of an airport that support aircraft activities.
- 15.1.4 Airport Traffic Control Tower (ATCT)** – A service operated by an appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
- 15.1.5 Aircraft** – A device that is used or intended to be used for flight in the air.
- 15.1.6 Airport** – New Bedford Regional Airport (EWB) owned and operated by the City of New Bedford.
- 15.1.7 Airport Operations Representative** – any person(s) authorized by the airport commission or its representative to direct or coordinate driver safety at the airport, including (Airport Operations Supervisor, Airport Operation Specialist, Airport Manager)
- 15.1.8 Apron or Ramp** – A defined area on the airport intended to accommodate aircraft for the purpose of parking, loading and unloading passengers or cargo, refueling, or maintenance.
- 15.1.9 Aircraft Rescue and Fire Fighting (ARFF)** – airport based rescue and fire fighting service provided by the fire department to be the first responders to all emergencies such as aircraft fire, hazard mitigation, evacuations, and possible rescue of passengers and crew of an aircraft involved in an airport ground emergency.
- 15.1.10 Authorized Emergency Vehicle** – Any of the following vehicles when equipped and identified according to law: (1) a vehicle of a fire department; (2) a vehicle used by a police officer / deputy used for police work (3) a vehicle of a licensed land emergency ambulance service
- 15.1.11 Driver Training Program (DTP)** – The program for issuing driving privileges at EWB.
- 15.1.12 Escort** – To accompany or maintain constant visual contact with the activities of an individual or group that does not have unescorted access authority into or within a secured area.
- 15.1.13 Fixed Base Operator (FBO)** – A person, firm, or organization engaged in a business that provides a range of basic services to general aviation. Services may include the sale and dispensing of fuel, line services, aircraft parking and tie-down, pilot and passenger facilities, airframe and power plant maintenance, aircraft sales and rental, and pilot instruction.

- 15.1.14 Foreign Object Debris (FOD)** – Debris that can cause damage to aircraft engines, tires, or skin from rocks, trash, or the actual debris found on runways, taxiways, and aprons.
- 15.1.15 General Aviation (GA)** – That portion of civil aviation that encompasses all facets of aviation except air carriers holding a certificate of public convenience and necessity.
- 15.1.16 Ground Service Equipment (GSE)** – Equipment used on the ground to support aircraft operations that is not subject to Massachusetts Motor Vehicle Regulations.
- 15.1.17 Instrument Landing Systems (ILS) Critical Area** – An area provided to protect the signals of the localizer and glideslope.
- 15.1.18 Incursion** – Any occurrence at an airport involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing, takeoff, and taxing of aircraft.
- 15.1.19 Jet Blast** – Jet engine exhaust or propeller wash (Thrust stream turbulence).
- 15.1.20 Law Enforcement Officer (LEO)** – Any officer of the New Bedford Police Department or any other person designated by the Chief of Police, or any other officer of the Police Department the City or any other person designated by the Director or authorized by applicable law with jurisdiction and authority to enforce applicable laws and Rules and Regulations on the airport.
- 15.1.21 Light Gun** – A hand-held, directional light-signaling device that emits a bright narrow beam of white, green, or red, as selected by the tower controller. The color and type of light transmitted can be used to approve or disapprove anticipated pilot or vehicle actions where radio communication is not available. The light gun is used for controlling traffic operating in the vicinity of the airport and on the airport movement area.
- 15.1.22 Marshall** – A person who directs an aircraft as it moves to or from a gate.
- 15.1.23 Mobile Fueler** – Vehicle / GSE owned and/or operated by authorized agents to pump and dispense fuel at New Bedford Regional Airport. This may included fuel tankers, in-to-plane fueling pumps, and hydrant carts.
- 15.1.24 Movement Area** – The runways, taxiways, and other areas of an airport that aircraft use for taxing, takeoff, and landing, exclusive of loading ramps and parking areas, and that are under the control of an air traffic control tower.
- 15.1.25 Non-movement Areas** – Taxiways, aprons, and other areas not under the control of air traffic or at airports without an operating airport traffic control tower.
- 15.1.26 Operator** – Any person who is in actual physical control of an aircraft or vehicle / GSE.
- 15.1.27 Owner** – A person who holds the legal title of an aircraft or motor vehicle.
- 15.1.28 Pushback** – Anytime a vehicle / GSE operator maneuvers an aircraft backwards.
- 15.1.29 Runway** – A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length.

-
- 15.1.30 Runway Safety Area (RSA)** – A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.
 - 15.1.31 Taxiways** – Parts of the airside designated for the surface maneuvering of aircraft to and from the runways and aircraft parking areas.
 - 15.1.32 Tie Down Area** – An area used for securing aircraft to the ground.
 - 15.1.33 Vehicle** – A device in, upon or by which a person or property may be transported, carried or otherwise moved from point to point, including a motor vehicle or a device moved by human or animal power, except aircraft or devices moved exclusively upon stationary rails or tracks.
 - 15.1.34 Vehicle Service Road (VSR)** – a designated roadway for vehicles in a non-movement area.

15.2 VEHICLE ACCESS PROCEDURES AND REGULATORY REQUIREMENTS

a. Regulations

1. Ground vehicles are required to operate under the procedures established by the Director of Aviation.
2. A Letter of Agreement with Midwest ATCT services, which contains procedures for the airport movement area, is referenced at the end of the chapter.
3. Pedestrians and ground vehicles, authorized by the Airport to operate on the movement area of the airport are limited only to those pedestrians and vehicles necessary for airport operations.

b. Construction

1. Authorized construction vehicles will be equipped with a flag and/ or rotating beacon during the day, and must have a rotating beacon at night. Construction vehicles must be radio equipped if operating on movement areas, unless escorted by an airport vehicle or vehicle with similar capabilities;
2. Operators of construction equipment shall be trained prior to operating in these areas and briefed on his//her responsibility for operating in or near movement areas and safety areas on the airport.

15.3 Training

a. Vehicle Operator Requirements

1. Vehicle operators must possess a current driver's license before applying for an airport ID and maintain a valid driver license in good standing that permits driving at work in compliance with local and state laws, while operating a vehicle on the airport.
2. Display upon request. Each driver shall carry his / her state issue driver's license at all times while operating on the Airport Operation Area and display the state driver's license upon demand to any Airport Operation Representative or Law Enforcement Officer.
3. Display AOA Driving Endorsement. All drivers shall wear their airport issued ID badge with the applicable driving endorsement on their outer most garment at or above the waist. Drivers shall present, and if instructed, surrender their airport ID badge upon demand by Airport Operations Representative
4. Vehicle operators must demonstrate a functional knowledge of the English language and be provided, by the airport, with at least the minimal amount of training needed to safely access the non-movement area and be able to recognize the boundary between the movement and non-movement areas prior to being granted an airport ID and driving privileges on the airport.
5. Operators of any radio equipped vehicle must receive driver training and be familiar with the airport policies and procedures, prior to operating on movement areas. Airport based vehicles must have an operating beacon while operating on the AOA.
6. All personnel must review of pedestrian and ground vehicles airport policies and procedures for operating in the movement and non-movement areas before taking the driver exam.
7. All personnel must review of FAA ground operations movement area driving training video and/or PowerPoint presentation found at the Director of Aviation's office.
8. All personnel must take the New Bedford Regional Airport driver training exam and pass with an 80% score or better.

b. Training Requirements

1. Airfield access is tiered into the following three access categories:

Tier 1: Pedestrian access to nonmovement areas 

Tier 2: Vehicular access and pedestrian access to nonmovement areas 

Tier 3: Vehicular access to movement areas 

2. Electronic actuated gates activated by airport issued identification cards control vehicular access to the movement and non-movement areas. All personnel who have access to the Airport Operations Area (AOA) are issued

ID cards and are required to complete the online driver training certification program prior to being granted access to the airport operation area and or movement area. The controlled movement area training certification program can be found at the office of the Director of Aviation. Cipher or padlocks are used to control access through walk-through and perimeter gates. Only persons authorized by the Director of Aviation have permission to access walk-through and perimeter gates. AC 150/5210-20A

3. All personnel who have access to the airport operations area (Inside the fence) shall be trained in accordance with the following procedures: including consequences of noncompliance in section 15.7 prior to operating on foot or in a vehicle on the airport. One of the purposes of the AOA certification driver training program is to prevent runway incursions. Runway incursions are defined as any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft. The AOA certification driver training program highlights the procedures for preventing runway incursions. Unless specifically authorized by Airport management, no vehicles shall have access to the runways, taxiway, or safety areas. All vehicles entering these areas shall be equipped with a yellow beacon light and/ or checkered flag during the day and a yellow beacon light at night, and equipped with an aviation band radio capable of communicating with ATC or on UNICOM when the tower is closed.
 - a. All persons including Airport maintenance personnel, ARFF personnel, FBO employees, and personnel authorized by the Director of Aviation who have access to the movement area, either by vehicle or as a pedestrian, must receive initial driver training when hired prior to initial performance of duties and receive recurrent driver training at least once every 12 consecutive calendar months. Badges allowing access to the movement and non-movement area will expire 12 months from the date it was issued. The training will include consequences of non-compliance, prior to moving on foot, or operating a ground vehicle in movement and safety areas.
 - b. Airport tenants and all other persons having authorized access to the airport shall confine their operations to the non-movement areas in their places of business as designated by Airport Management. Under no circumstances shall pedestrians or ground vehicles be permitted on the runways or taxiways until granted access by airport management. These tenants should receive initial driver training as part of their lease agreement and receive additional driver training before each badge renewal. Airport tenant's badges with airfield driving privileges (movement and non-movement) expire annually and all other airport

tenant badges (no airfield driving privileges) expires every two (2) years.

c. All personnel granted access to the movement area including FAA employees, contractors, and other temporary workers shall receive initial driver training prior to initial performance of duties and receive recurrent driver training will occur at least every 12 consecutive calendar months, or before each badge renewal, whichever occurs first, including consequences of non-compliance, prior to moving on foot, or operating a ground vehicle in movement and safety areas.

4 Recurrent Training

- a. All airport employees and tenants will have recurrent training based on their level of access.
- b. Non-movement endorsements will be renewed every 24 months, and will expire on the date it was issued.
- c. Movement area endorsements will be renewed every 12 months, and will expire on the date it was issued.

5 Remedial Training

- a. Remedial training is required when a violation of the rules and regulations is committed. Section 5.7

5.4 Vehicles

a. Vehicles on the airport

- 1 Vehicles in the movement /nonmovement and safety areas on the airport should be limited to those vehicles necessary to support the operation of aircraft services, cargo and passenger services, emergency services, and maintenance of the airport.
- 2 Vehicles should use service roads or public roads in lieu of crossing movement areas whenever possible.
- 3 When activities need to take place in the RSA, they should occur either between aircraft operations or when a runway is closed via NOTAM.

b. Runway Crossings

- 1 Vehicle Operators must be aware of where they are on the airfield at all times to ensure runway incursions do not happen.
- 2 Runway incursions can occur on taxiways crossing the 'Runway Hold Position' marking or entering the runway safety area without permission.
- 3 All effort should be made to limit the number of runway crossings at the midpoint of the runway.

c. Aircraft Operations

- 1 Aircraft ALWAYS have the right-of-way over vehicles when maneuvering on non-movement areas. Aircraft also have the right-of-way on the

movement areas, except when the Airport Traffic Control Tower (ATCT) has specifically instructed an aircraft to hold or give way to vehicle(s) on a runway or taxiway.

d. Vehicle Marking and Lighting

- 1 Vehicles that routinely operate on the movement and safety areas will be marked or flagged for high daytime visibility and, if appropriate, lighted for nighttime operations. Vehicles that are equipped with marking and lighting devices can escort vehicles that are not marked and lighted. AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport*
- 2 All vehicles operating in the movement area will be equipped with a rotating beacon and /or flag during the day, rotating beacon at night.

e. Runway Safety Areas

- 1 The Runway Safety Area (RSA) must normally be clear at all times during aircraft landing and departing operations.
- 2 However, there may be situations and/or circumstances where airport vehicles or equipment to be in the RSA for a limited amount of time.
- 3 These Vehicles must be in contact with the ATCT and abide by all terms of the LOA with the ATCT, see appendix A.
- 4 No construction will occur in the safety area of a runway while the runway is open.
- 5 All aircraft transitioning through a runway safety area must be in contact with ATCT.

f. Vehicular Access Control

- 1 Vehicle access to the movement area and safety areas will be limited to an as needed basis.
- 2 All equipment operators will be trained how to operate in the movement and/ or safety areas so as to limit their impact on operating a safe airport.
- 3 Electronic actuated gates activated by airport issued identification cards control vehicular access to the movement and non-movement areas. All personnel who have access to the Airport Operations Area (AOA) are issued ID cards and are required to complete the online driver training certification program prior to being granted access to the airport operation area and or movement area. The controlled movement area training certification program can be found at the office of the Director of Aviation. Cipher or padlocks are used to control access through walk-through and perimeter gates. Only persons authorized by the Director of Aviation have permission to access walk-through and perimeter gates. AC 150/5210-20A
- 4 All private and commercial vehicles not authorized by the airport manager and not operated by a badged individual per section 15.3 must be under escort at all times while on the AOA.

g. Vehicle Requirements

-
- 1 All vehicles will be maintained in a ‘good’ mechanical condition.
 - 2 Have the necessary equipment to allow them to safely function in the capacity and area they are operating in.
 - a. Rotating Beacon
 - b. Two way Radio
 - c. Head lights
 - d. Seat belts
 - e. Fire extinguishers
 - f. Etc.

h. Vehicle Operations

- 1 Speed limits at the airport are 15 mph max. and 5 mph when in the vicinity of an aircraft.
- 2 Stay a minimum of 75’ away from the back of an aircraft.
- 3 The Airport employs a NO CELL PHONE use policy while operating a vehicle, unless the vehicle is OFF of the runway and is stationary.
- 4 No fuel truck will be parked with in 50’ of any building. nor with in 50’ of any aircraft unless servicing that aircraft.
- 5 No fuel trucks will be left running an unattended.
- 6 All vehicles on the movement area must be equipped with ATCT radio capabilities; unless under escort by a properly equipped vehicle.
- 7 FBO fuel trucks must be equipped with ATCT radio capabilities and a rotating beacon. Fuel trucks are limited only to taxiways, aprons, and ramp areas as necessary to fuel aircraft. Due to a lack of a complete airport perimeter roadway, FBO fuel trucks have to cross runway 5-23 in order to access tenants located north of runway 5-23. Drivers of the FBO fuel trucks are required to complete and pass the movement area access driver training program.
- 8 All tenants with movement area access will only be allowed access to taxiway B and taxiway A between Colonial and taxiway B. If access is needed to any other part of the field they must be escorted by Airport Maintenance.
- 9 All other vehicles needing access to movement areas must be escorted by qualified trained personnel in a radio equipped vehicle with a rotating beacon.
- 10 Pedestrian(s) working in movement areas on the airfield must have two-way radio capabilities to communicate with ATCT on frequency **121.9 and 118.1** at all times.
- 11 Aircraft have the right of way at all times. All vehicle operators/pedestrians are required to yield to all moving aircraft if an aircraft is in motion, the beacon light is flashing, or if engine(s) are running.
- 12 Vehicle Operators/Pedestrians must use the correct verbiage when obtaining and repeating ground control (ATCT) instructions using frequency **121.9 or 118.1** before operating on movement areas.

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- 13 During tower hours (**0630 – 2200**) each pedestrian and ground vehicle in movement areas shall be controlled by at least one of the following:
 - a. Two-way radio communications must be maintained between each pedestrian and/or ground vehicle and the tower at all times using frequency **121.90, during normal tower hours.**
 - b. An escort vehicle with two-way radio communications must be in contact with the tower while accompanying a pedestrian or vehicle without a radio communication.
 - 14 When the tower is closed (2200-0630) each pedestrian and ground vehicle on the movement areas shall Self-announce on the Common Traffic Advisory Frequency **118.10** and use the following:
 - a. Two-way radio communication between each pedestrian or vehicle and the Common Traffic Advisory Frequency **118.10.**
 - b. An escort vehicle with two-way radio communication must remain in constant contact with the Common Traffic Advisory Frequency **118.10** when accompanying pedestrian(s) or vehicle(s) without two-way radio communication.
 - 15 When the tower is closed, a vehicle or pedestrian located within the movement areas of the airport will periodically announce on the Common Traffic Advisory Frequency their specific intentions and location on the Airport and shall yield to aircraft operating on runways, taxiways and aprons.
 - 16 In the event of **radio communication failure** with ground control (ATCT) using Frequency 121.9, obtain clearance within the movement area will be via alternate tower frequency **118.10.**
 - 17 During a **complete radio communication failure** other communication methods may be used including calling the Tower at (508) 993-3186 and as a last resort; Tower gun signals may be used. The vehicle operator will ensure the vehicle is not blocking any moving traffic by repositioning to the side of the surface area facing the tower. The operator will then flash headlights and look for light signals from the Control Tower. ATCT Light Gun Signals:

Steady Green Light

Cleared to cross

Flashing Green Light	Not applicable to vehicles
Steady Red Light	STOP
Flashing Red Light	Clear the Taxiway/Runway
Flashing White Light	Return to starting point on airport
Alternating Green/Red	Exercise extreme caution

15.5 Emergency Operations and Non-Routine Operations

- a. Emergency response vehicles containing ARFF equipment, medical equipment, and personnel must be escorted on the airfield, unless the drivers have received airport driver training. Medical transport vehicles must always be escorted on the airfield. Emergency vehicles must be radio equipped with a flashing or rotating beacon;
- b. Vehicle operations during low visibility should be kept to a minimum to help prevent accidents and runway/ taxiway incursions.
- c. Any work involving the movement area no matter how minor needs to have a planning meeting, explaining activities to be accomplished, driving rules, regulations, communications as well as Navaid protection.

15.6 Situational Awareness

- a. The Airport employs a NO CELL PHONE use policy while operating a vehicle, unless the vehicle is OFF of the runway /taxiway and is stationary. This applies to the non-movement areas as well, the vehicle must be out of the way and stationary.
- b. Vehicles operating in the movement area must have a map of the airport available.
- c. Monitor the ground control frequency at all times.

15.7 Enforcement and Control

- a. Any vehicle on the AOA found to not be in “good” working order will be repaired in a timely fashion or removed from the airfield.
- b. All fuel trucks will be kept at a minimum to NFPA 407 standards. Any vehicle found not meeting those standards will be taken out of service till the needed repairs can be completed and the vehicle is re-inspected by airport management.
- c. The New Bedford Regional Airport Commission enforces the pedestrian and ground vehicle regulations applicable to airport employees, tenants and contractors. The New Bedford Regional Airport Commission address consequences of non-compliance by retraining individuals, requiring

modifications to airport tenant procedures/equipment, issuing a citation and/or fine, or by denying driving privileges and airfield access after a complete review of the situation and circumstances. Airport personnel are required to report any witnessed violations to the Director of Aviation or designee. The Director of Aviation or designee takes appropriate enforcement action depending on the nature and severity of the offense by assessing the following penalties after an investigation is complete:

1. **First Violation** – a copy of the written warning is issued to the pedestrian/vehicle operator within two (2) business days notifying the employer / sponsor of the warning. AOA access will be suspended until a time can be scheduled for the Director of Aviation to sit down with the individual to discuss the violation and address corrective action. The vehicle driver will have to take the recurrent driver training again and a driver training exam within 15 days of receipt of notification. Pedestrians will be retrained on movement and nonmovement area access. If the infraction occurred in the movement area, a driver's test will be administered prior to operating vehicles. The pedestrian/ vehicle operator must be escorted to access the airfield until retraining has occurred. Depending on the type of violation committed this step maybe be bypassed to a more serve penalty leading up to and including revocation of one's badge permanently. **No fine**
2. **Second Violation** – a copy of the written warning is issued to the pedestrian/vehicle operator within two (2) business days notifying the employer / sponsor of the warning. The Director of Aviation will sit down with the individual to discuss the violation and address corrective action. The vehicle driver will lose driving privileges and AOA access for period of fifteen (15) days. Pedestrians will lose access to the airfield, without an escort, for a period of (15) days. Before his / her return to airfield driving operations, the vehicle operator must receive recurrent driver training, take the driver training exam, and pass a driver's test administered by the Director of Aviation or his/her designee. A pedestrian violator must receive retraining on movement and nonmovement area access before being allowed to enter the airfield without an escort. *** Fine is \$50.00**
3. **Third Violation** – The pedestrian/vehicle operator will have their unescorted airfield access/driving privileges suspended for a period of 1 to 6 months depending on the severity of the violation. If the Director of Aviation deems the violation severe enough, unescorted airfield access/driver privileges can be revoked permanently. AOA access will only be granted upon recurrent training on movement and nonmovement area access before being allowed to enter the airfield. ***Fine is \$50.00**

15.8 Retention of the Movement Area and Safety Area Training records

- a. All training records will be kept and maintained by the Airport and stored in the Director of Aviation's office.
- b. The description and date of training completed by each individual shall be documented in compliance with this section.
- c. A record of training for each individual shall be maintained for 24 consecutive months after termination of an individual's access to movement areas and safety areas.
- d. A description and date of any accidents or incidents in the Movement Areas and Safety Areas involving a carrier aircraft, a ground vehicle, or a pedestrian.
- e. Records of each accident or incident shall be maintained for (12) consecutive calendar months from the date of the accident or incident.
- f. All accident reports shall be made available to FAA on request.

15.9 Advisory Circulars

More information can be obtained by referencing the following FAA Advisory Circulars:

- a. AC 150/5210-20A, "Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports"
- b. AC 150/5210-5D, "Painting, Marking, and Lighting of Vehicles Used on an Airport"