

TOWN OF HOLLISTON
PLANNING BOARD
TOWN HALL
HOLLISTON, MASSACHUSETTS 01746

**APPLICATION FOR GRANT OF SITE PLAN
REVIEW AND SPECIAL PERMIT**

Date Filed: _____

Applicant's Name: Master Paving Corporation and Middlesex Asphalt Services Inc.

Applicant's Address: 18 Hayes Street, Framingham, Massachusetts 01702

Applicant's Phone Number: (508) 816-9098

Owner's Name: M & M Estates, LLC

Owner's Address: 6 Oregon Road, Southborough, MA 01772

The Owner hereby appoints _____ to act as his/her/its agent for the purposes of submitting and processing this application for a special permit.

The Owner's title to the land that is the subject matter of this application is derived

under deed from Michael Brumber, Trustee of DCA Realty Trust, dated 3/31/2022

And recorded in Southern Middlesex Registry of Deeds, Book 799917, Page 173

Or Land Court Certificate of Title No. _____, registered in

District Book _____, Page _____.

The land is shown in the Assessor's records as Lot 16.1 on Map 9, Block 3

And has an address of or is located at 157-165 Lowland Street.

Nature and subject matter of Special Permit:

Wholesale recycling, now limited to asphalt (A) and concrete (C) (no brick) rubble for construction aggregates.

Section of Zoning Bylaw that permits this use by grant of Special Permit:

III G Industrial and Outdoor Uses 6. Outdoor storage of building or other materials or equipment not covered elsewhere in this by-law.

The Applicant presents the following evidence that supports the grant the Special Permit:

a. The use is in harmony with the general purpose and intent of the bylaw because:

Current use will be upgraded facilities, smaller operation (A and C only) and include significant mitigation. See also narrative attached.

b. The general or specific provisions of a grant of a special permit, as set forth in the zoning bylaw are satisfied because:

The attached narrative describes fully the compliance. The site/operation is similar to that existing, and in use in the area, is scaled down, has provided mitigation for noise, and is an industrial use allowable in the area.

c. The following evidence is offered in support of the petition's compliance with the provisions of Rules and Regulations Section 7.4 Performance Standards for Non-Residential Development with regard to Aesthetics, Lighting, Landscaping and Screening, Stormwater Management Site Development Standards, Traffic Management, utilities, Security and Emergency systems and Fiscal Impact:

See attached detailed narrative.

Designer's Certificate

I hereby certify that the plan entitled Proposed Site Plan, 157-165 Lowland Street, Holliston
And accompanying data is true and correct to the accuracy required by the Rules and
Regulations of the Holliston Planning Board, and my source of information about the
location of boundaries shown on said plan were one or more of the following:

- a. Deed dated 4/1/2022 and recorded at the Registry of Deeds
in Book 79917 Page 173 ;
- b. Other plans, as follows: Plan 1029 of 1971
- c. Detail and topography has been established by X aerial survey,
X on-ground survey, other _____,
- d. Other sources, including: _____


Signed: 

(Registered Professional Engineer or Land Surveyor)

Address: Connorstone Engineering, Inc., 10 Southwest Cutoff, Northborough, MA 01532

Signatures

 Agent for Owner: George F. Connors 4/8/2022
Signature of Owner date

 Agent for Owner: George F. Connors 4/8/2022
Signature of Applicant date

**HOLLISTON PLANNING BOARD
SITE PLAN REVIEW
DEVELOPMENT IMPACT STATEMENT (DIS)**

Please type or print information in blanks below.

1. Name of Proposed Development Proposed Site Plan 157-165 Lowland Street
2. Location 157-165 Lowland Street, Holliston, MA 01746
3. Name of Applicant(s) Master Paving Corporation and Middlesex Asphalt Services Inc.
4. Brief Description of the Proposed Project Contractors Yard/Materials Recycling for
construction aggregates
5. Name of Individual Preparing this DIS George Connors, Connorstone Engineering
Address 10 Southwest Cutoff, Northborough, MA 01532
Business Phone 508-393-9727

A. Site Description

7. Present permitted and actual land uses by percentage of the site.

<i>Uses</i>	<i>Percentage</i>
Industrial	100
Commercial	
Residential	
Forest	
Agricultural	
Other (specify)	

8. Total acreage on the site: 7 acres.

Approximate Acreage	At Present	After Completion
Meadow or Brushland (non agriculture)		
Forested		
Agricultural (includes orchards, cropland, pasture)		
Wetland	1	1
Water Surface Area		
Flood Plain		
Unvegetated (rock, earth, or fill)		
Roads, buildings and other impervious surfaces	1/2	1/2
Other (indicate type)	5	5

Development Impact Statement (Continued)

9. List the zoning districts in which the site is located and indicate the percentage of the site in each district. *Note: be sure to include overlay zoning districts.*

<i>District</i>	<i>Percentage</i>
INDUSTRIAL	100

10. Predominant soil type(s) on the site: UDORTHANTS

Soil drainage (Use the US Soil Conservation Service's definition)

<i>Soil Type</i>	<i>% of the Site</i>
Well drained	90
Moderately well drained	
Poorly drained	10

11. Are there bedrock outcroppings on the site? yes Xno

12. Approximate percentage of proposed site with slopes between:

<i>Slope</i>	<i>% of the Site</i>
0 - 10%	82
10 - 15%	10
greater than 15%	8

13. What percentage of the site is located in the Groundwater Protection District?
100 %

How close is the site to a public well? 5600 feet

To a surface water body? 25 feet

14. Does the project site contain any species of plant or animal life that is identified as rare or endangered? (Consult with the Massachusetts National Heritage Program and the Holliston Conservation Commission).

 yes Xno

If yes, specify:

Development Impact Statement (Continued)

15. Are there any unusual or unique features on the site such as trees larger than 30 inches D.B.H., bogs, kettle ponds, eskers, drumlins, quarries, distinctive rock formations?

____yes X____no

If yes, specify: _____

16. Are there any established foot paths running through the site or railroad right of ways?

____yes X____no

If yes, specify: _____

17. Is the site presently used by the community or neighborhood as an open space or recreation area? ____yes X____no

Is the site adjacent to conservation land or a recreation area? ____yes X____no

If yes, specify: _____

18. Does the site include scenic views or will the proposed development cause any scenic vistas to be obstructed from view? ____yes X____no

If yes, specify: _____

19. Are there wetlands, lakes, ponds, streams, or rivers within or contiguous to the site?
X____yes ____no

If yes, specify resources found on site or contiguous to site: BOGASTOW BROOK AND WE

If yes, have the required permits been granted or applied for? Please list permits and status. FORMER NOI FOR EXISTING LAND DISTURBANCE AREA/USE

20. Is there any farmland or forest land on the site protected under Chapter 61A or 61B of the Massachusetts General Laws? ____yes X____no

If yes, specify: _____

21. Has the site ever been used for the disposal of hazardous waste? Has a 21E Study been conducted for the site? ____yes X____no

If yes, specify results: _____

Development Impact Statement (Continued)

22. Will the proposed activity require use and/or storage of hazardous materials, or generation of hazardous waste? ☒ yes ☐ no

If yes, specify FUEL AND OILS FOR MACHINERY-STORED IN LOCKERS (DEP APPROVED)

23. Does the project contain any buildings or sites of historic or archaeological significance? (Consult with the Holliston Historic Commission or the Holliston Historical Society.)

☐ yes ☒ no

If yes, please describe _____

24. Is the project contiguous to or does it contain a building in a national register district?

☐ yes ☒ no

B. Circulation System

(Is a Traffic Impact Report required -- > or = 100 vehicle trips per day? See s.7.3.4)

25. What is the average weekday traffic and peak hour traffic volumes generated by the proposal?

Average weekday traffic	
Average peak hour volumes morning	
Average peak hour volumes evening	

26. Existing intersection(s): list intersections located within 1000 feet of any access to the proposed development (Any within 20 feet? See s. V-C(3)(f) of Zoning):

Name of ways RAIL TRAIL 1200 FT NORTH OF SITE

27. Location of existing sidewalks within 1000 feet of the proposed site? NONE

28. Are there parcels of undeveloped land adjacent to the site? ☐ yes ☒ no

Will access to these undeveloped parcels be provided within the proposed site?

☐ yes ☐ no

If yes, please describe _____

If no, please explain why BROOK --WETLANDS

Development Impact Statement (Continued)

C. Utilities

29. Storm Drainage

- a. Describe nature, location and surface water body receiving current surface water of the site: GROUNDWATER INFILTRATION IN EXISTING GRAVEL PIT

- b. Describe the proposed storm drainage system and how it will be altered by the proposed development: MORE FORMAL SEDIMENT REMOVAL PROCESS + NEW FLOOR DRAIN

- c. Will a NPDES Permit be required? yes X no

30. Sewage Disposal - Describe nature of sewage disposal service proposed for the site. NEW SEPTIC SYSTEM

If a tertiary treatment facility is proposed, will it have any excess capacity?
 yes X no



Master Paving Corporation

18 Hayes St
Framingham, MA 01702
508-202-7670

Bank of America



5-13/110

3/30/2022

1218

PAY TO THE
ORDER OF

Town of Holliston

one thousand five hundred ⁰⁰/₁₀₀

\$ 1,500.00

DOLLARS

MEMO

Holliston Asphalt
Review Fee



[Signature]
AUTHORIZED SIGNATURE

⑈001218⑈ ⑆011000138⑆ 004661167278⑈



Master Paving Corporation

18 Hayes St
Framingham, MA 01702
508-202-7670

Bank of America



5-13/110

3/30/2022

1219

PAY TO THE
ORDER OF

Town of Holliston

Five thousand ⁰⁰/₁₀₀

\$ 5,000.00

DOLLARS

MEMO

Holliston Asphalt
town filing fee



[Signature]
AUTHORIZED SIGNATURE

⑈001219⑈ ⑆011000138⑆ 004661167278⑈

Site Plan Narrative/Introduction

157-165 Lowland Street

Holliston, MA

Master Paving Corporation and Middlesex Asphalt Services Inc., seek permits to utilize the existing site at 157-165 Lowland Street, in a slightly altered manner, consisting of a somewhat reduces and streamlined recycling facility as approved by the DEP, and to house their paving operations fleet in a new building.

After careful analysis of the current operations the applicants have determined the recycling process can be streamlined. Due to the newer equipment they will crush/process up to 10 per month.

They will also limit the processing to cleaner concrete (C) and asphalt pavement (A), eliminating other associated debris generally accompanying the A and C, eliminating loam (except small portions accompanying Asphalt and Concrete), wood chips and other earth materials, and will also eliminate processing bricks (B).

The project now seeks to install a new building to house and repair the equipment. This location is in the current area of equipment storage and smaller repair shelter. Structures in this area will be razed for the new garage. Additionally an extension of the berm is proposed to 'wall off' sound transmission to the west-southwest and fencing on top. Additional fencing for the noise barrier along the southeasterly property line/ditch section of the site (abutting property at 175 Lowland Street) similar to the wall at the trailer is proposed for noise mitigation to the southwest. All materials processing will take place with machinery on the lower floor of the site. Delivery/dumping of the incoming material will continue as is currently the operation. This limits the time loaded trucks are on site.

PARKING - CIRCULATION

This operation has no "customers" per se, so formal parking areas are irregular at each building (garage and trailer). Employees for the paving operation will park in the vicinity of the garage building as shown, a small visitor parking area is shown near the trailer and future scale location. Virtually all traffic is construction trucks utilizing the site.

Loaded trucks entering the site will ascend the dumping ramp located on the north side of the site and exit the dumping ramp on the south side of the site, and leave through the 'yard area' (denoted on the plan). Trucks picking up material will be loaded in the yard area, as currently takes place.

The garage will have doors on each side. Trucks typically will enter from the southeast and exit. Outdoor storage of equipment will be predominantly northwest of the garage, at the processing location (crushers, loaders etc) and at various "work" locations.

V-N PERFORMANCE STANDARDS CONTINUED

4. Noise. *“No use shall be permitted within the Town of Holliston which, by reason of excessive noise generated therefrom, would cause nuisance or hazard to persons or property. Exempt from the provisions of this subsection are (a) vehicles not controlled by an owner or occupant of a lot within the town, (b) temporary construction activities occurring during the hours of 7 a.m. to 6 p.m. on weekdays and 8 a.m. to 6 p.m. on Saturday, (c) occasionally used safety signals, warning devices, emergency pressure relief valves, or other such temporary activity, (d) use of power tools and equipment such as lawn mowers, snow blowers, chainsaws, tractors, and similar equipment for the maintenance of property between the hours of 7 a.m. and 8 p.m. on weekdays and 8 a.m. and 6 p.m. on weekends. For the purposes of this by-law the standards in the following shall apply: Ambient Noise Level. No person shall operate or cause to be operated any source sound in a manner that creates a sound level of 10 dBA above ambient, as set forth in 310 CMR 7.10, measured at the property boundary of the receiving land use nor shall any source produce a puretone condition at the property line (or at the nearest inhabited buildings). A pure tone condition exists if the sound pressure level, at any given octave band center frequency, exceeds the levels of the two adjacent octave bands by three (3) or more decibels. See <http://www.airandnoise.com/MA310CMR710.html> as may be updated by the Mass. DEP. (Amended May 2019 – ATM, Art. 31)”*

RESPONSE- Prior noise studies of the facility are attached detailing the sites operational characteristics in furtherance of noise mitigation measures which were implemented. The further addition of various noise berms and fences will reduce noise transmission off site. In addition the newer equipment will be quieter.

VI-E SPECIAL PERMIT GRANTING AUTHORITY CONTINUED

4. In the case of a designated Priority Development Site, the 180-day review period specified under MGL, c. 43D shall apply. (Amended May 2010 – ATM, Art. 36)

5. Before granting a Special Permit, the SPGA shall consider the proposed use in relation to the site as well as the adjacent uses and structures and shall find that there will be no significant adverse effects to the neighborhood or the town, considering the following criteria:

- a. The degree to which the proposed use complies with the dimensional requirements of the bylaw, is in an appropriate location and does not significantly alter the character of the neighborhood; the project is compatible with existing uses and other uses allowed by-right in the district and is designed to be compatible with the character and the scale of neighboring properties.*

RESPONSE- The proposed use is consistent with (1) the zoning, (2) the surrounding uses, and (3) this historical use of this site. However the noise mitigation is being improved with (i) extending the noise berm relating to Noel Road area abutters and will have a fence installed on top, (ii) a fence will be installed along the existing block walls at the entrance area of the site to mitigate noise towards the southeast, (iii) the crushing operation will be dramatically changed to fewer days due to (a) no brick and other debris except concrete and asphalt pavement, and (b) and newer modern-quieter equipment, and (iv) the new operator having the crushing as an adjunct to their paving concern will contribute to a quieter site.

- b. *To the extent feasible, the proposal has been integrated into the existing terrain and surrounding landscape, minimizing the impacts to the aquifer and/or recharge area, wetlands, steep slopes, and floodplains.*

RESPONSE- the site has been an earth product and pavement materials manufacturing site for decades, is in an Industrially Zoned area, is bordered to the south by two pavement and materials related uses. Stormwater is recharged as a natural function of the underlying soils (gravel), the existing piles of product delaying runoff, and by berms surrounding the low areas of the site serving to capture runoff. The materials process do not have industrial classification code number as they are simply recycled already manufactured products.

- c. *Adequate and appropriate facilities shall be provided for the proper operation of the proposed use, including screening and provisions for convenient and safe vehicular and pedestrian circulation within the site and in relation to adjacent streets and properties.*

RESPONSE- the screening has been shown to mitigate noise (see attached noise report form 2017). There will be an extension of the berm towards the south to help attenuate noise toward Noel Road area, and fencing atop select sections of the berm and existing block walls. The site driveway provides adequate and safe access with sufficient sight distances in both directions.

- d. *The proposed project shall not create any significant emission of noise, dust, fumes, noxious gases or any other adverse environmental impact including stormwater, erosion and sedimentation.*

RESPONSE- Noise is addressed in previous responses herein. The operation relies on an on-site water supply previously a sediment basin, now equipped with a pump to provide for dust control. Stormwater controls have been effective as a wholly controlled collection section of the site at the lower end, encircled by small containment berms. Stormwater collects at this southerly location and infiltrates into the ground. The low open area allows for sediment to fall out and be collected by the on-site equipment periodically. These sediments are reused in the operation.

- e. *There shall be no unreasonable glare from lighting, whether direct or reflected, onto ways, the night sky or onto adjacent properties. (Amended May 2012 – ATM, Art. 33)*

RESPONSE - The site has minimal security lighting all directed inward. The new building will have some additional wall mounted lighting for security.

Special Permit and Site Plan Regulations, Section 7.4
157-165 Lowland Street
Holliston, MA

In fulfillment of the Special Permit and Site Plan Regulations, Section 7.4 Performance standards for nonresidential development.

The project proponent notes this site and related activities have been in existence well prior to 1960's, and have undergone the removal of an asphalt batching facility.

As proposed the site will remain in its existing condition as of minor relocations implemented a few years ago principally to eliminate noise transmission. Since that time it is known to the DEP noise complaints have diminished.

A. Aesthetics

Response- the site, located in an industrial district, surrounded by another materials processing facility in front of the 165 portion of the locus, an asphalt storage facility to the south, an industrial manufacturing facility to the north, and open gravel pit area to the east, is similar to these operations.

An array of Google Earth Pro Imagery is provided showing the site in 1993, 2003, 2013, and 2020 demonstrating the past on-going operations and overall use of the site. (It should be noted the original site of Simeone and predecessors included a larger land area.)

B. Lighting

Response- There is only minimal security lighting for the facility, all set as down lit. Photographs by the project proponent show no impact to the surrounding abutters and street.

C. Landscaping and Screening

Response- Landscaping does not exist as the pre-existing site never required this amenity. Screening is in evidence along the west to eliminate noise to later to come to the area abutters. Screening along the street for access to the dumping areas is provided adjacent to the entrance.

D. Stormwater Management

Response- Stormwater is contained totally on site. Underlying soils, sands and gravel, allow for rapid infiltration. This is improved by a deep rock cairn filled (oil tank removal site) with crushed stone, located at the far back southern side of the site, where a berm separating the site from adjacent wetland resources contains the heaviest of rainfall events, and quickly infiltrated into the underlying soil. Regular sediment removal takes place in concert with overall operations of the site.

E. Site Development Standards

Response- The site has been renovated so as to mitigate fugitive noise. Piles, access routes, and berms are strategically located based upon noise studies. Internal site layout is generally similar to the original asphalt production plant layout. However various internal ramps, partly in existence since the introduction of recycled asphalt product (RAP) became a requirement by MassHighway several years ago. Improvements to the internal dumping and storage have eliminated a lot of 'loader-handling' in favor of dumping from an elevated platform.

F. Traffic Management

Response- The site operator will adhere to the requirements of time limits, and travel routes currently required of the present operator. New traffic projection numbers are being provided showing a reduction in site use.

On-site parking for employees and equipment are: trucks at and around the new garage, employees at each building (note some additional visitor parking is located at the entrance trailer). Most employee parking is at the garage area.

Dumping is on the north side of the site where trucks ascend a ramp heading west and dump from an elevated position to stock pile areas. Loading takes place to the south of the piles of stockpiled dumped material. This stockpiled dumped material is crushed/processed and removed to the west side of the site from the end of the conveyors. However sometimes loaded out from the conveyor pile. All this within the front section of the site about 200 feet in from Lowland Street. Trucks typically run a counter clockwise circuit to dump up the gravel access driveway and out between the piles. Trucks picking up material typically confine their movements to the area between the piles.

G. Utilities

Response- The site proposes a new on-site sanitary sewage disposal system; The site has municipal water which will service the garage building. Private utilities are overhead electric, telephone, and cable.

H. Fiscal Impact

Response- A new building projected to be \$700,000.

Various trucks and equipment 15 pieces projected to be \$2,000,000.

Current assessment for 2022 was \$281,460.

5. Before granting a Special Permit, the SPGA shall consider the proposed use in relation to the site as well as the adjacent uses and structures and shall find that there will be no significant adverse effects to the neighborhood or the town, considering the following criteria:

- a. *The degree to which the proposed use complies with the dimensional requirements of the bylaw, is in an appropriate location and does not significantly alter the character of the neighborhood; the project is compatible with existing uses and other uses allowed by-right in the district and is designed to be compatible with the character and the scale of neighboring properties.*

RESPONSE-the site exceeds frontage and area requirements. The new garage will replace old buildings and be within the setback requirements. A “temporary” trailer exists at the front of the site adjacent to a lot line (20 foot side yard required) but (a) has been in existence for many years and (2) is adjacent to a similar site/operation.

- b. *To the extent feasible, the proposal has been integrated into the existing terrain and surrounding landscape, minimizing the impacts to the aquifer and/or recharge area, wetlands, steep slopes, and floodplains.*

RESPONSE- The site’s operation areas are placed as low on the landscape as possible, surrounded by noise barriers. The wetlands are protected by stormwater containment berms, and a large noise berm. Stormwater is being collected on site and infiltrated and has no hazardous components.

- c. *Adequate and appropriate facilities shall be provided for the proper operation of the proposed use, including screening and provisions for convenient and safe vehicular and pedestrian circulation within the site and in relation to adjacent streets and properties.*

RESPONSE-the site is operationally safe from historic of on-going activities.

- d. *The proposed project shall not create any significant emission of noise, dust, fumes, noxious gases or any other adverse environmental impact including stormwater, erosion and sedimentation.*

RESPONSE- The site is being modified to further mitigate noise. On site erosion and sedimentation controls including dust control are being mimicked.

- e. *There shall be no unreasonable glare from lighting, whether direct or reflected, onto ways, the night sky or onto adjacent properties. (Amended May 2012 – ATM, Art. 33)*

RESPONSE- minimal lighting is proposed. New lighting is security lighting on the new building.

GROUNDWATER SPECIAL PERMIT

The existing site has been a contractors operation beginning with gravel removal and equipment storage, emulsion asphalt contractors, a division of land followed by a bituminous concrete batching plant later incorporating recycling of pavement, and presently an ABC recycling facility incorporating other earth products. The new use is proposed to be just asphalt and concrete recycling and the paving operations truck storage.

The foot print of the current operation will change slightly by extending the noise berm located on the west side of the site more southerly. Land to the east and south host contractor operations, not unlike this site where the various abutting lots were later carved out for individual users.

Impacts to the Groundwater are being mitigated by a new formal parking area for the trucks and new garage facility with gas trap drains, and can be found to not be more substantially detrimental to the water supply. A storage building for the various equipment lubricants is provided on site and has been inspected (yearly) by the DEP in conjunction with the Recycling permit.

Stormwater runoff has typically infiltrated into the underlying soils as the area is in a gravel outwash and the earlier removal of an underground oil storage tank being refilled with 3 inch stone (to depths of 16 feet) provide drainage retention-infiltration versus a point source discharge. The low are of the site in the southerly end is ringed by berms to collect the site drainage allowing it to infiltrate, historically a 4 inch rainfall would infiltrate in about 2 days. Due to the nature of processing materials that have silty fractions of soils this low area has typically collected the sediments and is easily cleaned as needed by the on-site equipment.

Accordingly the changes to the site will enhance the protection of the water supply in the Groundwater zone.

3) Zone III: Special Permits

a. Expansion of pre-existing non-conforming uses to the extent allowed in the underlying district. The Special Permit Granting Authority shall grant such approval so long as such expansion program conforms to underlying intensity and parking regulations unless it shall find that such expansion is substantially more detrimental to the water supply than the presently existing use with reference to factors other than mere change in size or intensity of use.

b. Any commercial and industrial use which involves as a principal activity the manufacture, storage, transportation or disposal of toxic or hazardous materials but does not include any underground storage.

4) Review Criteria. The SPGA shall not grant a Special Permit under this section unless the petitioner's application materials include, in the SPGA's opinion, sufficiently detailed, definite, and credible information to support positive findings in relation to the standards given in this section. The proposed use must:

1. In no way, during construction or thereafter, adversely affect the existing or potential quality or quantity of water that is available in the Groundwater Protection District and
2. Be designed to avoid substantial disturbance of the soils, topography, drainage, vegetation and other water-related natural characteristics of the site to be developed. The SPGA may adopt regulations to govern design features of projects

RESPONSE- The above criteria can be found to (1) have no construction related impacts due to the existing site's high infiltrative capacity and there being just the replacement of a new modern garage. It can also be found that the disturbances to the site, presently mostly open gravel pit floor, will remain, albeit with a slightly lesser open pit floor by virtue of an extension on the berm in the southwest. Old structures are being removed for new modern facilities (including floor drain gas-traps).

Repressing the aggregate is chemically inert; there is no Standard Industrial Classification (SIC) code associated with the concrete and pavement.

Traffic Synopsis
157-165 Lowland Street
Holliston, MA

Dump Truck traffic constitutes the bulk of trips the facility generates, in terms of ten-wheelers, tri-axles, and trailer dumps. Historically under the current user those trips are non-owned trucks for nearly all this category. Trips per day are tabulated based upon tonnage and constitute 133 trucks or 266 trip ends. Some relatively small number of employee and non-production trips occurs, typically small vehicles, except for an regular fuel deliveries for on-site equipment.

Proposed use will change the overall operation in two ways: (1) by streamlining the processing of Asphalt and Concrete processing eliminating Bricks, and eliminating other earth product processing currently in place (ie wood chips, loam etc) and (2) introducing a contractor's garage occupying a significant portion of the site.

Trip generation is now projected to be about 80 trucks resulting in 160 trip ends per day maximum. The Special Permit provides for 1000 tons per day max at 300 tons per day average. Thus 300 tons per day average with an average ton/truck load = 15 trucks or 30 trip ends. Employees, and paving trucks will make up another 30-40 trip ends for a total of 70 trip ends per day.

A recent Traffic Impact Study by Howard Stein Hudson, dated October 2021, for 194 Lowland Street, Holliston, MA., provided to the applicant, and on record with the Town, analyzed various intersections germane to the industrial area and in particular has the historical trips accounted for from the 157-165 Lowland Street facility during operations. Stein on pages 18-22 summarizes these conditions concluding (with the addition of the traffic generated from the 194 site) it *"...is not expected to impact the nearby neighborhood streets. The Project (194) is expected to have a minimal impact on traffic operations in the study area."*

Following the currently approved west-north-east bound traffic from this site to the Jeffery, Whitney, Washington Street intersection (to minimize impact to residents) the traffic at that intersection the operational characteristics have been analyzed.

194 Lowland Street seeks to add traffic to the intersection, 157-165 does not. Therefore the traffic analysis provides for the impact of this existing facility.

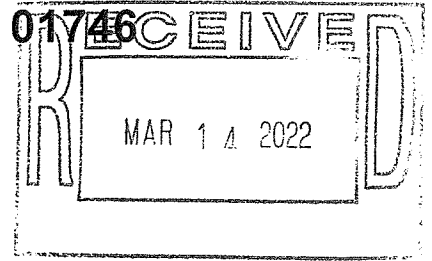
Certified List of Abutters

CERTIFIED ABUTTERS
SUBJ PROP: 157-165 LOWLAND ST
RADIUS: 300FT

PARCELID	OWNER 1	OWNER 2	ADDRESS	CITY/TOWN	STATE	ZIPCODE
136/009.0-0003-0015.0	HOLLISTON, TOWN OF	CONSERVATION	703 WASHINGTON ST	HOLLISTON	MA	01746-
136/009.0-0003-0017.0	COAN, PAUL E		205 LOWLAND ST	HOLLISTON	MA	01746-
136/009.0-0003-0003.3	SZABATURA, MICHAEL B	SZABATURA, AUDREA H	31 NOEL DR	HOLLISTON	MA	01746-
136/009.0-0003-0016.1	BRUMBER, MICHAEL TRUSTEE	DCA TRUST	34 PROSPECT ST	HOLLISTON	MA	01746-
136/008.A-0005-0012.0	BOSTON UNIVERSITY	ATTN: VICE PRES FINANCIAL	P.O.BOX 5972	HOLLISTON	MA	01746-
136/009.0-0003-0007.0	MANN, BARRY, TRUSTEE	R & R TRUST	180 HURRICANE RD	KEENE	NH	03431-
136/012.0-0004-0037.0	BIG 3, LLC		7 JEFFREY AVE	HOLLISTON	MA	01746-
136/012.0-0004-0044.1	SIA ASSETS, LLC		PO BOX 1029	DUBLIN	PA	18917-1029
136/012.0-0004-0064.2	CENTURY-TYWOOD MANUFACTURING INC		79 LOWLAND ST	HOLLISTON	MA	01746-2076
136/009.0-0002-0057.1	DCAB LLC		157 LOWLAND ST	HOLLISTON	MA	01746-
136/012.0-0004-0048.0	HEB LAND DEVELOPMENT CORP		760 CENTRAL ST.	HOLLISTON	MA	01746-
136/009.0-0003-0003.0	ROMAN CATHOLIC ARCHBISHOP OF BOSTON		8 CHURCH ST	HOLLISTON	MA	01746-
136/009.0-0003-0005.0	NEW ENGLAND EMULSIONS CORP		P.O.BOX 91	SUNDERLAND	MA	01375-
136/009.0-0003-0003.2	PORFIRIO, ANA C		34 NOEL DR	HOLLISTON	MA	01746-

HOLLISTON, MASSACHUSETTS 01746
BOARD OF ASSESSORS

COPY



ABUTTER CERTIFICATION REQUEST

DATE: 03/08/2022

APPLICANT'S NAME: Connorstone Engineering, Inc.

APPLICANT'S ADDRESS: 10 Southwest Cutoff Suite 7 Northboro MA 01532

APPLICANT'S PHONE: (508)393-9727

SUBJECT PROPERTY ADDRESS: 157-165 Lowland Street

MAP 9 BLOCK 3 LOT 161

ASSOCIATED PERMIT/APPROVAL (i.e. Special Permit):

Special Permit

PERMIT GRANTING AUTHORITY (i.e. Planning Board)

Planning Board

RADIUS FOR NOTICE (i.e. 300 feet): 300'

FEE (made payable to the Town of Holliston): \$50.00

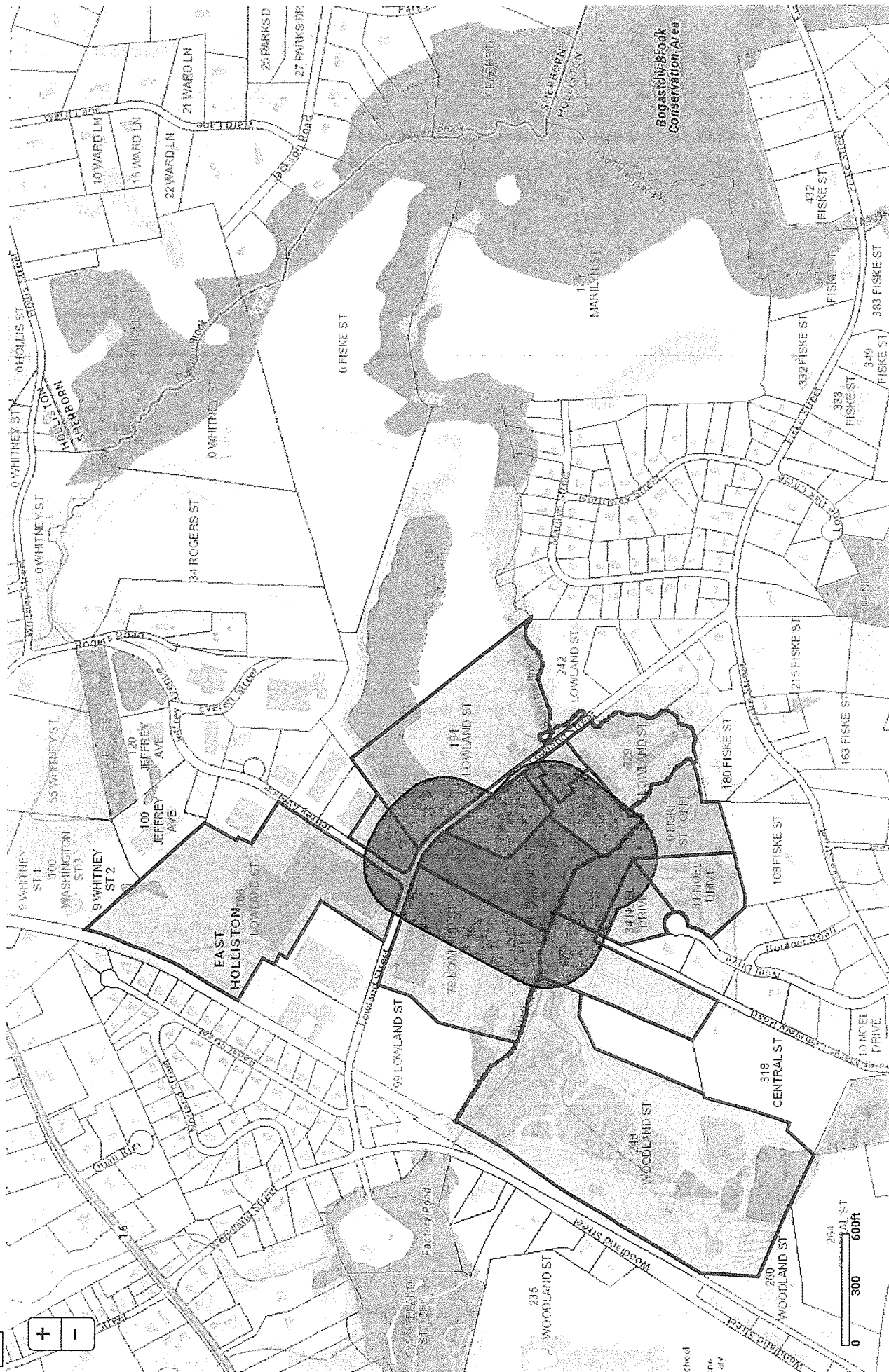
Signed under the pains and penalties of perjury:

Rylee M. F. CSI, Inc. Agent for Owner
Applicant's Signature Rylee M. F.
CSI, Inc.

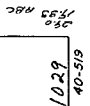
✓ Parcel
Check dated: 3/9
Check # 8921



- enter a parcel id -



Plans and Deeds of Record



LOT D
20.8 ± ACRES

Attest John F. Zaywalli.

Henry M. Douthett, Jr.
Mary E. W. Douthett
Michael E. Collette
Donald J. Douthett

PLAN NUMBER 1029(C of 3) OF 1971
RECORDED, BOOK 12073 - PAGE 218

FEEL 5.00
BY NL

1029
40-51

1029

Middlesex South Registry of Deeds
Electronically Recorded Document

This is the first page of the document - Do not remove

Recording Information

Document Number	: 49352
Document Type	: DEED
Recorded Date	: April 01, 2022
Recorded Time	: 11:29:20 AM
Recorded Book and Page	: 79917 / 173
Number of Pages(including cover sheet)	: 6
Receipt Number	: 2800247
Recording Fee (including excise)	: \$2,982.20

MASSACHUSETTS EXCISE TAX
Southern Middlesex District ROD # 001
Date: 04/01/2022 11:29 AM
Ctrl# 356060 08003 Doc# 00049352
Fee: \$2,827.20 Cons: \$620,000.00

Middlesex South Registry of Deeds
Maria C. Curtatone, Register
208 Cambridge Street
Cambridge, MA 02141
617-679-6300
www.middlesexsouthregistry.com

Property Address: 157 and 165 Lowland Street (n/k/a 165 Lowland Street), Holliston, MA 01746

QUITCLAIM DEED

I, Michael L. Brumber, in my capacity as the sole Trustee of DCA Realty Trust established u/d/t dated February 26, 2015 with an address of 815 Highland Street, Holliston, MA 01746 ("**Grantor**") and recorded at the Middlesex County South District Registry of Deeds (the "Registry") in Book 64979, at Page 83 for consideration paid and in full consideration of **SIX HUNDRED TWENTY THOUSAND AND 00/100 (\$620,000.00) Dollars**, grants to **M & M Estates LLC**, a Massachusetts limited liability company with a principal place of business at 6 Oregon Street, Southborough, Massachusetts 01772 ("**Grantee**"), with QUITCLAIM COVENANTS, the below described parcels of land, together with any buildings and improvements thereon (collectively, the "Parcels"), situated in Holliston, Massachusetts, commonly known as 157 and 165 Lowland Street, Holliston, MA, and more fully described within the attached Exhibit A.

Grantee does hereby release in perpetuity and covenants not to seek indemnification from Grantor, its affiliates, and Grantor's and its affiliates' respective trustees, employees, and/or agents of, from and against any and all losses, claims, demands, damages, liabilities, and other obligations incurred by Grantee and/or Grantee's successors and assigns arising from, out of, or in connection with or otherwise relating to the physical condition and/or environmental condition of the herein described Parcels, including without limitation, the compliance or non-compliance of the Parcels with any legal requirement, the presence of oil, hazardous materials or toxic or dangerous substances in, on, under, or about all or any part of the herein described Parcels, or migrating to the herein described Parcels from one or more adjoining parcels whether or not previously owned, leased or utilized by Grantor or its affiliates or predecessors in interest. The provisions of this paragraph shall run with the herein described Parcels and bind Grantee's successors and assigns.

Grantee covenants and acknowledges that the Parcels hereby conveyed shall not be used by Grantee or anyone claiming by or through Grantee or Grantee's successors and assigns, for a period of twenty-three (23) years as a liquid asphalt batch plant or a cement ready-mix plant, and the foregoing covenants shall run with the Parcels hereby conveyed to Grantee for the benefit of Grantor and its successors and assigns.

Grantee acknowledges that (a) Grantee accepts conveyance of the Parcels strictly as is, where is, with all faults, and without any representations or warranties whatsoever, express or implied, or arising by operation of law, by Grantor or Grantor's agents relating to the Parcels or this

conveyance, (b) except for the quitclaim covenants of this Deed, the conveyance of the Parcels by Grantor to Grantee is without any other statutory, express, or implied warranty, representation, agreement, statement, or expression of opinion of or with respect to any aspect of the Parcels, including, without limitation, (i) the soil conditions, drainage, topographical and geologic features, flora, fauna, or other conditions of or which affect the Parcels, (ii) the availability of utility services, including storm drains, sanitary sewers, electricity, gas and water in sufficient quantities, (iii) the current and prior use of the Parcels, (iv) the compliance of the Parcels with any applicable laws, including, without limitation, all environmental laws, zoning, land use, reclamation, public safety, access to public roads, traffic volumes, and the general suitability of the Parcels for any particular use, purpose, development potential, or otherwise, (v) the manner and degree to which the Parcels may have been affected by Grantor's prior use of the Parcels, and (vi) any environmental condition, botanical, zoological, hydrological, geological, meteorological, structural, or other condition or hazard or the absence thereof heretofore, now, or hereafter affecting the Parcels in any manners and the presence, known or unknown of any hazardous materials in, on, under or about or from the Parcels or any adjacent Parcels.

Grantee further covenants that any transfer or conveyance of the Parcels, or any lot subdivided therefrom, shall contain the foregoing covenants, restrictions and acknowledgments.

By accepting and recording of this Deed or subsequent Deeds, the Grantee and its successors and assigns hereby expressly acknowledge and agree to the conditions aforesaid.

Grantor hereby affirms that the conveyance of the Parcels is a sale in the ordinary course of business and the conveyance of the Parcels constitute the sale or transfer of all or substantially all of the Grantor's assets within the Commonwealth of Massachusetts.

For Grantor's title see: quitclaim deed of Aggregate Industries – Northeast Region, Inc., Grantor's predecessor in interest, dated February 25, 2015 and recorded with the Registry in Book 64979, Page 86.

**[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK;
SIGNATURE PAGE FOLLOWS]**

WITNESS my hand and seal on the 31st day of March, 2022.

By: Michael L. Brumber
Michael L. Brumber, Trustee
DCA Realty Trust

COMMONWEALTH OF MASSACHUSETTS

Middlesex ss.

On this 31st day of March, 2022, before me, the undersigned notary public, personally appeared Michael L. Brumber, proved to me through satisfactory evidence of identification, which was ☒ photographic identification with signature issued by a federal or state governmental agency, ☐ oath or affirmation of a credible witness, ☐ personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it free voluntarily for its stated purpose as the Sole Trustee of the DCA REALTY TRUST and attested under oath and under penalty of perjury that the foregoing is true, correct and complete to the best of his knowledge, information and belief.

Donna M. Jackson
Notary Public
My Commission Expires 8-26-22

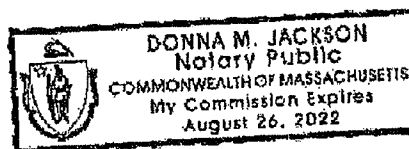


Exhibit A - Property Description

**Property Address: 157 and 165 Lowland Street, (n/k/a 165 Lowland Street), Holliston,
MA 01746**

Parcel One:

The land in Holliston, Middlesex County, Massachusetts, shown as Lot "C" containing more or less 3.64 acres on a plan titled "Plan of Land, Holliston, Mass., Scale 1"=60', July 30, 1971, Survey by: Clyde R. Wheeler", recorded with the Middlesex County Registry of Deeds South District (the "Registry"), as Plan 1029 of 1971, Book 12073, Page 218, which plan may be referenced for a more particular description of said Lot C.

Parcel Two:

The land in Holliston, Middlesex County, Massachusetts, shown as Lot "B" containing more or less 3.43 acres on a plan title "Plan of Land, Holliston, Mass., Scale 1"=60', July 30, 1971, Survey by: Clyde R. Wheeler", recorded with the Registry, as Plan 1029 of 1971, Book 12073, Page 218, bounded and described as follows:

NORTHEASTERLY by Lowland Street, by two courses totaling, fifty and 97/100 (50.97) feet:

NORTHWESTERLY by land now or formerly of B.A. Simeone, Inc., Lot "C", seven hundred forty-nine and 5/10 +/- (749.5 +/-) feet;

SOUTHWESTERLY by Bogastow Brook, three hundred fifty-five and no/100+/- (355.00+/-) feet;

SOUTHEASTERLY by land now or formerly of Independent Bituminous Co., Inc., three hundred sixty-five and no/100+/- (365.00+/-) feet;

NORTHEASTERLY by land now or formerly of Independent Bituminous Co., Inc., three hundred forty and no/100 (340.00) feet;

SOUTHEASTERLY by land now or formerly of Independent Bituminous Co., Inc., three hundred thirty-one and 25/100 (331.25) feet,

Being and hereby conveying the otherwise described but identical parcel of land conveyed to Grantor's predecessor in interest by the above-described deed dated February 26, 2015 and recorded with the Registry at Book 64979, Page 88.

Said premises are conveyed subject to and with the benefit of easements, reservations, restrictions and rights of way of record so far as the same are now in force and applicable.

Meaning and intending to convey the same premises conveyed to the Grantors by Deed from Aggregate Industries - Northeast Region, Inc. recorded at the Registry in Book 64979, at Page 88; and also the deed recorded herewith from the Grantors at the Registry.

PROPERTY ADDRESS: 157 and 165 Lowland Street (n/k/a 165 Lowland Street), Holliston, Massachusetts.

FILE NO.: 2994

Locus Mapping

Town of Holliston Zoning Map May 2011

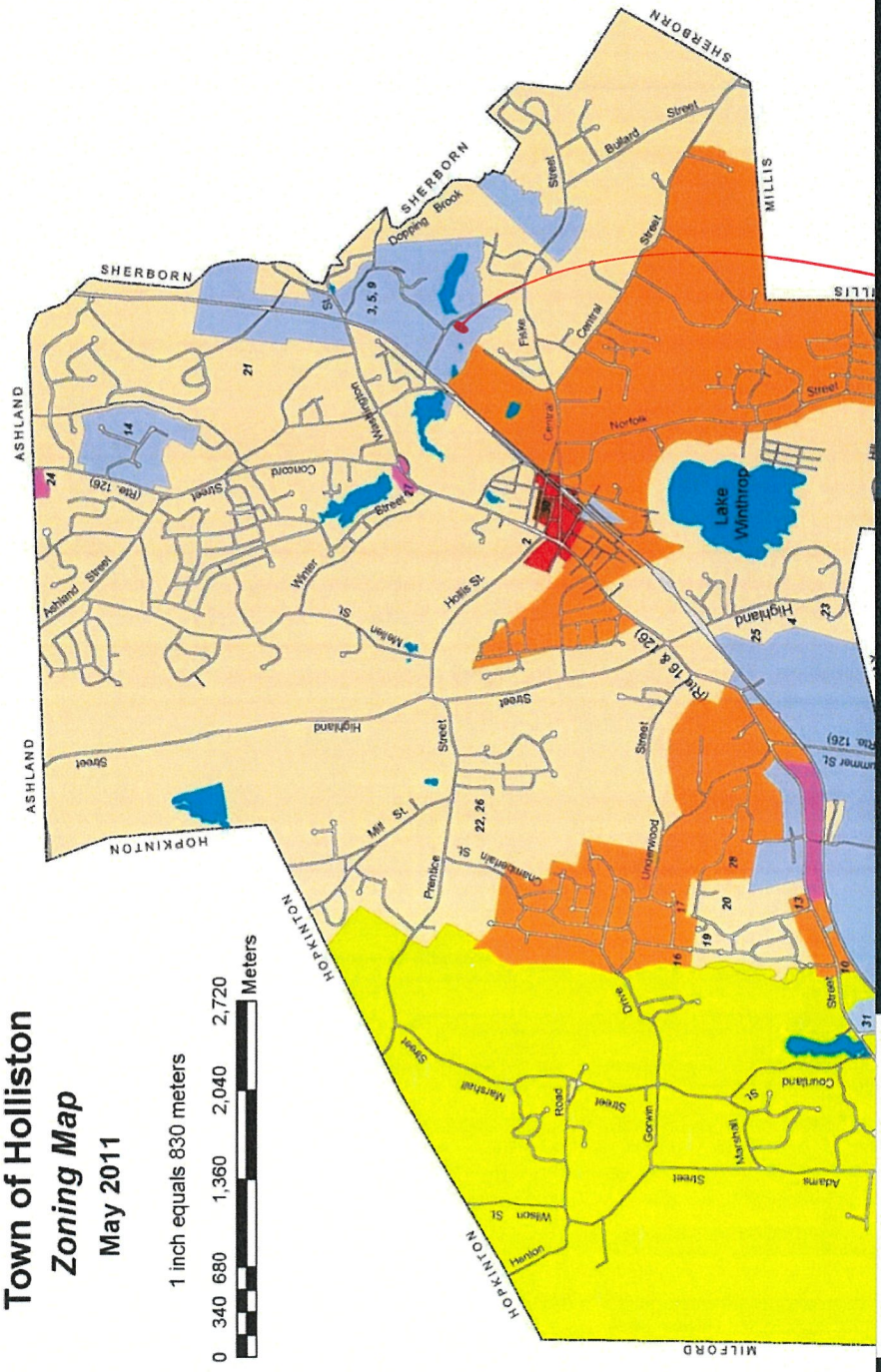
1 inch equals 830 meters



- Village Residential
- Agricultural-Residential Dist. A
- Agricultural-Residential Dist. B
- Residential District
- Village Commercial
- Commercial District
- Industrial District

Map Amendments

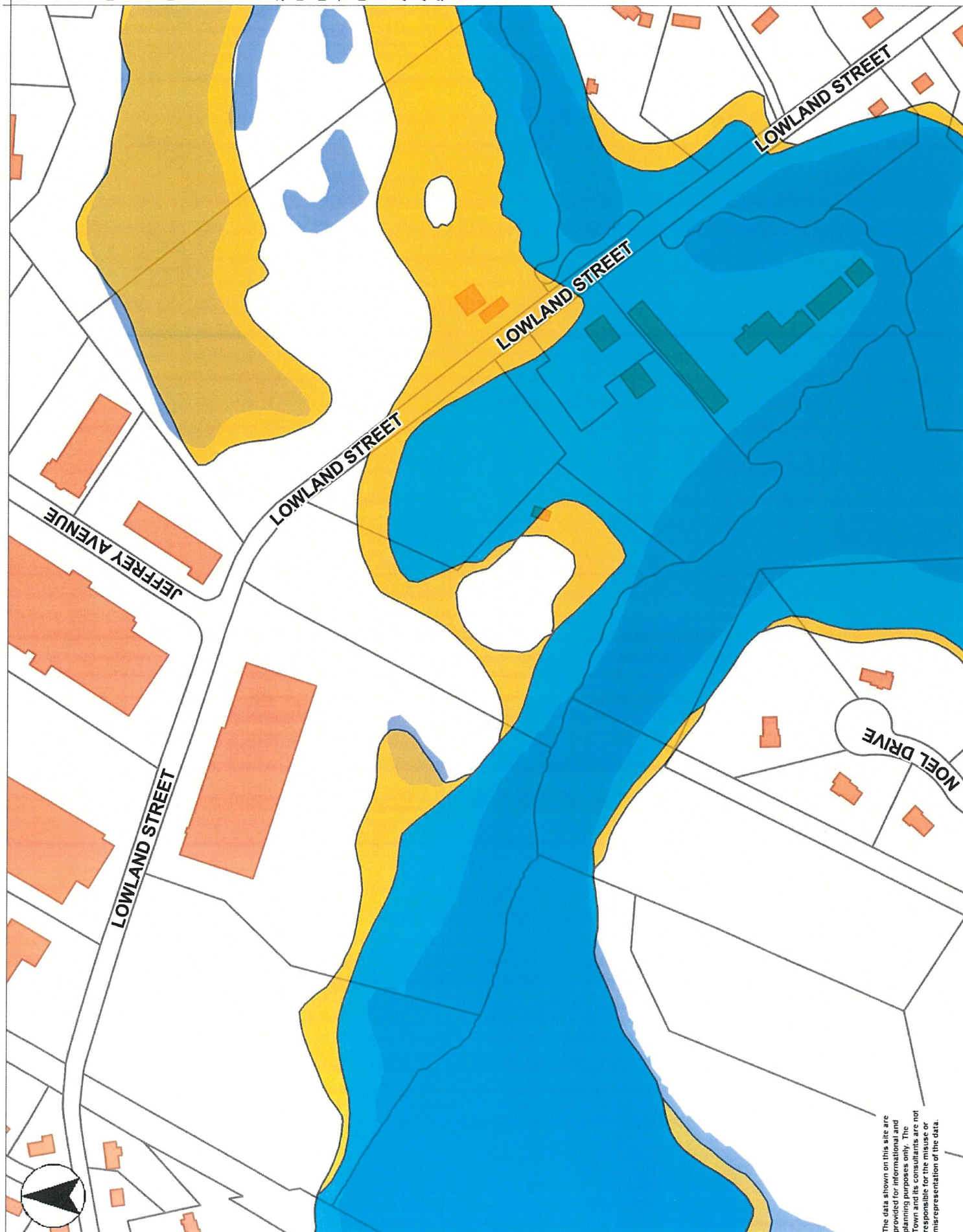
- 1 Art. 10 Warrant of 17-Oct-63
- 2 Art. 31 Warrant of 12-Mar-65
- 3 Art. 7 Warrant of 27-Oct-66
- 4 Art. 3 Warrant of 01-Dec-66
- 5 Art. 28 Warrant of 10-Mar-67
- 6 Art. 27 Warrant of 10-Mar-67
- 7 Art. 9 Warrant of 11-Jul-68
- 8 Art. 10 Warrant of 26-Jun-69
- 9 Art. 5 Warrant of 17-Sep-70
- 10 Art. 12 Warrant of 04-Apr-72
- 11 Art. 7 Warrant of 29-Jun-72
- 12 Art. 21 Warrant of 20-Mar-74
- 13 Art. 13 Warrant of 19-May-75
- 14 Art. 20 Warrant of 14-Jun-82
- 15 Art. 12 Warrant of 06-May-85
- 16 Art. 33 Warrant of 06-May-85
- 17 Art. 13 Warrant of 17-Dec-85
- 18 Art. 12 Warrant of 05-May-86
- 19 Art. 7 Warrant of 04-May-87



Loc 157+145 Lowland



- Places
 - Fire Station
 - Police Station
 - Town Hall
 - Public Library
 - School
- FEMA Q3 Flood Zone
 - A
 - AE
 - AO
 - VE
 - V
 - ANI
 - X500
- UNDES
- Zone 1 Wetland Prote
- Parcels
- Buildings 2018
- Town Boundary
- MA Highways
 - Interstate
 - US Highway
 - Numbered Rout
- Abutting Town Labels
- Abutting Towns
- Streets



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



Printed on 03/07/2022 at 11:14 AM

Maps | NRCS Massachusetts | Web Soil Survey - Home | websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Printable Version | Add to Shopping Cart

Search

Basic Search
Enter keywords: Holliston ma

Advanced Search

"Holliston ma": No match.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
52A	Freetown muck, 0 to 1 percent slopes	4.2	29.9%
602	Urban land	0.5	3.5%
653	Udorthents, sandy	0.9	6.6%
655	Udorthents, wet substratum	8.2	58.7%
656	Udorthents-Urban land complex	0.2	1.3%
Totals for Area of Interest		13.9	100.0%

Soil Map

Scale (not to scale)

10:54 AM 3/7/2022 51°F Cloudy

Freetown muck

(note - overlain by GRAND)

Remaining site = udorthents (map made)
except - soils data = GRAND Removal prior



LOWLAND STREET

LOWLAND STREET

LOWLAND STREET

LOWLAND STREET

NOEL DRIVE

FSKE STREET



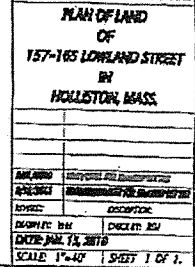
- Places
- Fire Station
 - Police Station
 - Town Hall
 - Public Library
 - School
 - Parcels with Aerials
- Town Boundary
- MA Highways
 - Interstate
 - US Highway
 - Numbered Route
 - Abutting Town Labels
 - Abutting Towns

The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.

400

800 ft


Printed on 03/07/2022 at 11:19 AM



Architectural Renderings

	Unrivaled Metal Buildings 2547 East Main Street Lincolnton Unrivaledmetalbuildings@gmail.com (844) 848-8676 www.unrivaledmetalbuildings.co	Sales: Mackenzie Payne 2547 East Main Street Lincolnton mackenzie.unrivaledbuildings@gmail.com (980) 701-0292	Building Quote QTE-001624 Date 03/25/2022 Total \$181,651.13
---	--	--	--

CUSTOMER DETAILS

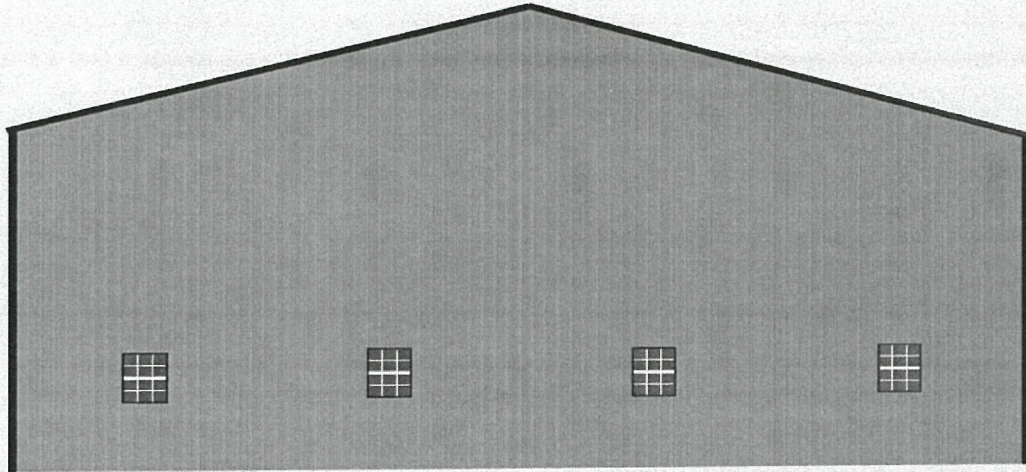
Enrique Billing Address Holliston, MA, 01746, Middlesex Shipping Address Holliston, MA, 01746, Middlesex info@maspaving.com (508) 816-9098	Custom Buildings - 60 x 120 x 20	Roof Color: Clay Trim Color: Black Sides/Ends Color: Clay Wainscot Color: NA	
Ready for Installation? _____ Jobsite Level? _____ Permit Required? _____ Inside City Limit? _____ Electricity Available? _____ Installation Surface? <u>Concrete</u>			
Building Dimension 60'W x 120'L x 20'H	Roof Style Vertical	Gauge 12 Gauge	Wind/Snow Rating Other
		Distance on Center 4 Feet	

60X120' (Roof 121') Vertical Roof	1
20' Height	1
115mph/60psf Certification	1
3/12' Roof Pitch	1
Front Wall Closed Vertical	1
Back Wall Closed Vertical	1
Left Closed Vertical	1
Right Closed Vertical	1
12X14ft Garage Door on Right	1
12X14ft Garage Door on Right	1
12X14ft Garage Door on Right	1
12X14ft Garage Door on Right	1
12X14ft Garage Door on Right	1
12X14ft Garage Door on Right	1
12X14ft Garage Door on Right	1
36x80in Walk-in Door on Right	1
36x80in Walk-in Door on Right	1
30X36in Window on Back	1
30X36in Window on Back	1
30X36in Window on Back	1
30X36in Window on Back	1
30X36in Window on Front	1

Concept
More windows
Solar Panel Ready Roof
Lighting

30X36in Window on Front	1
30X36in Window on Front	1
30X36in Window on Front	1
12X14ft Garage Door on Left	1
12X14ft Garage Door on Left	1
12X14ft Garage Door on Left	1
12X14ft Garage Door on Left	1
12X14ft Garage Door on Left	1
12X14ft Garage Door on Left	1
12X14ft Garage Door on Left	1
36x80in Walk-in Door on Left	1
36x80in Walk-in Door on Left	1
4ft On Center	1
Certification Package	1
Colored Screws	1
Ends Connection Fees	1
Extra Labor Fee : \$1,500.00	
<div><div><div><div>NOTES</div><div>Due to this being commercial sized, you will be required to have a lull lift onsite for the install and the manufacturer will charge a freight fee. Neither of these are part of our quotes, just so you know! The labor fee is for the frost wall install. It doesn't show in our system but it is noted!</div></div><div><div><div>Sub Total:</div><div>\$169,554.00</div></div><div><div>Sales Tax (6.25%)</div><div>\$10,587.13</div></div><div><div>Additional Charges</div><div>\$1,500.00</div></div><div><div>Grand Total</div><div>\$181,651.13</div></div><div><div>Pay Now</div><div></div></div><div><div>Downpayment</div><div>\$28,024.18</div></div><div><div>Balance Due</div><div></div></div><div><div>Upon Installation</div><div>\$152,826.95</div></div></div></div></div>	

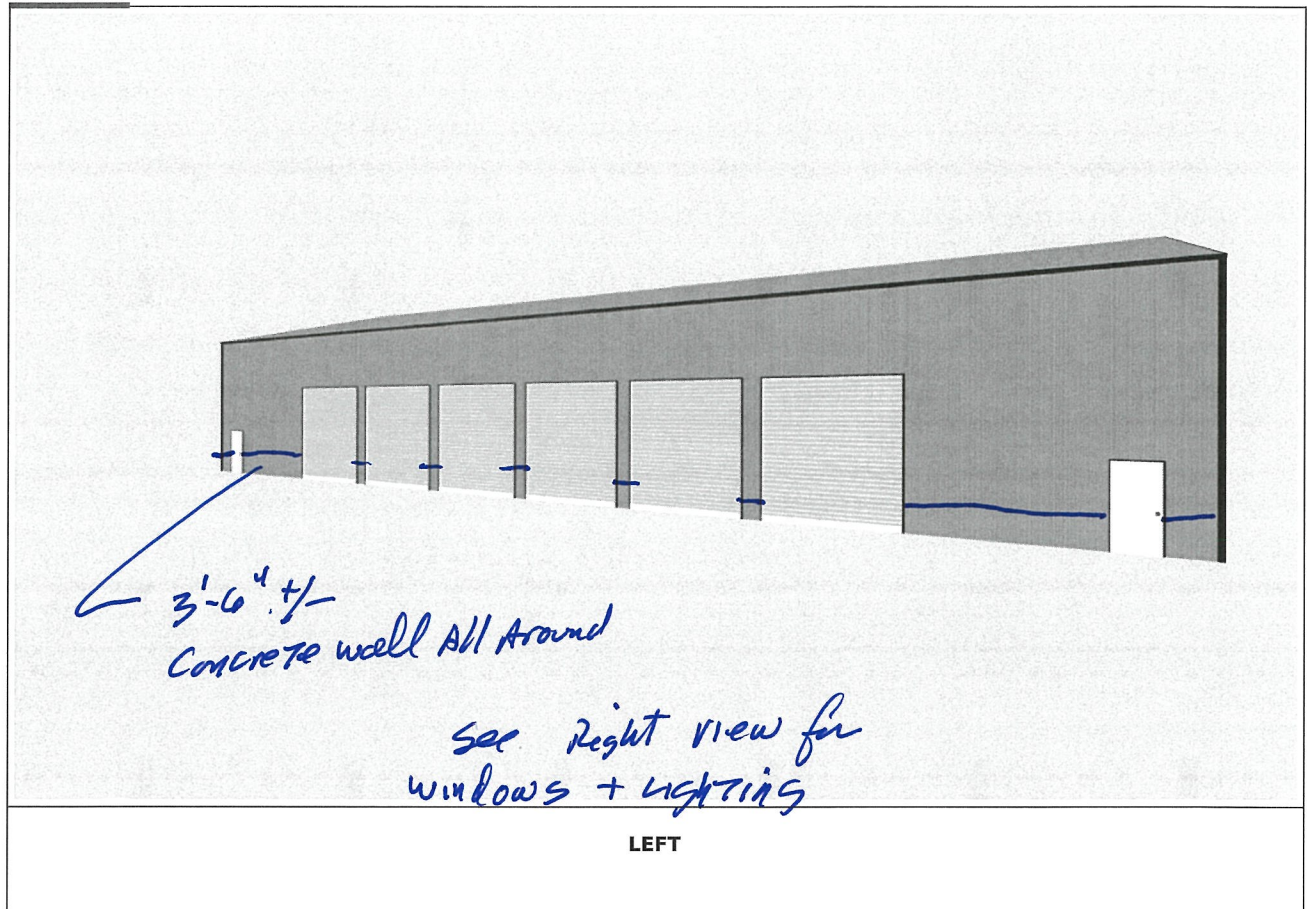
BUILDING VIEW



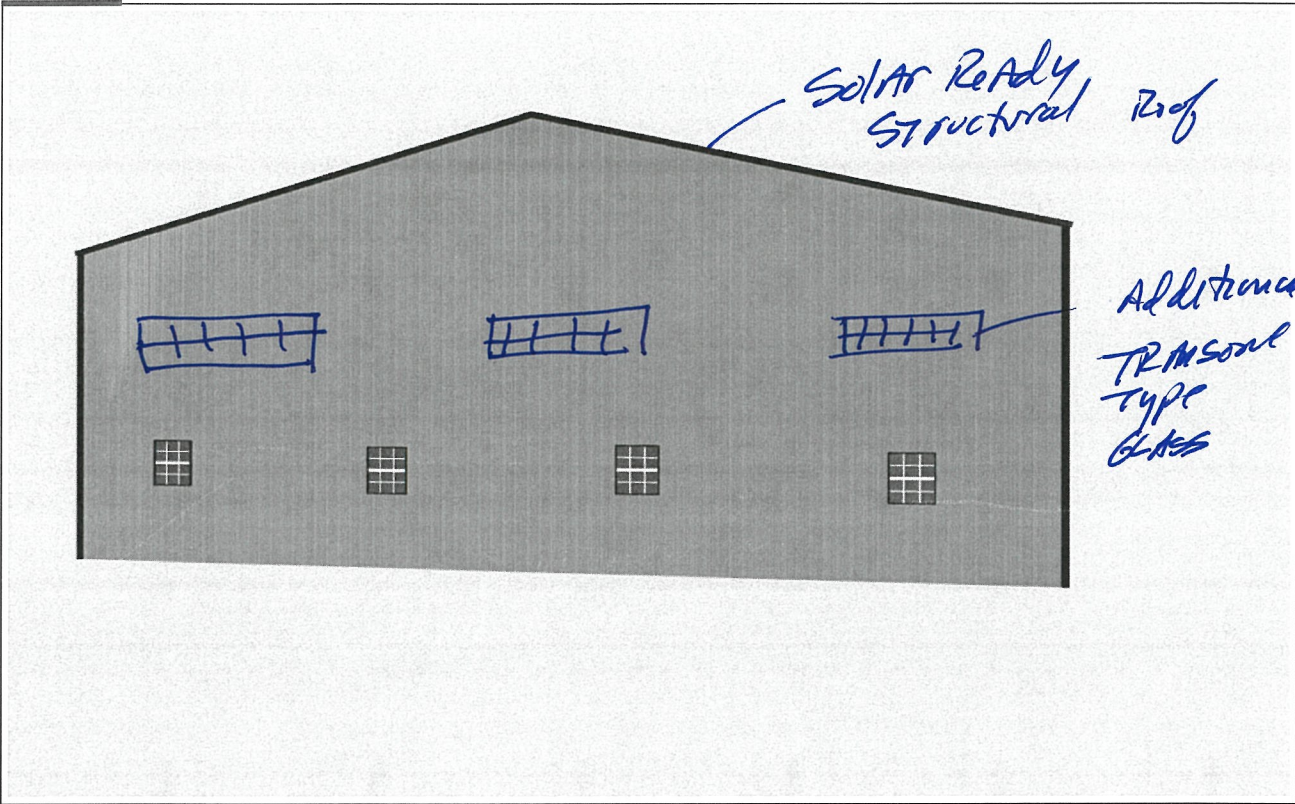
See Back view for additional windows

FRONT

BUILDING VIEW

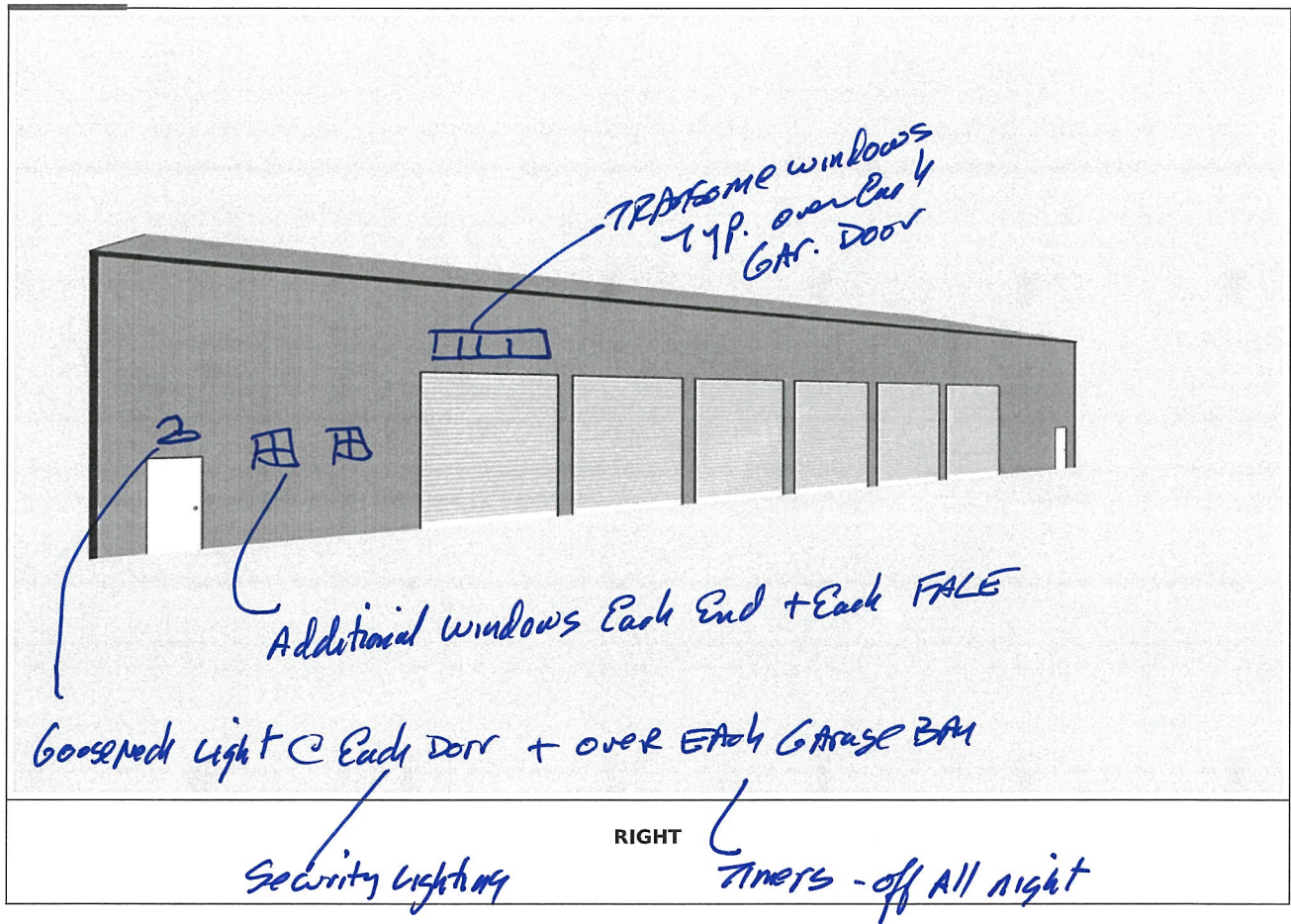


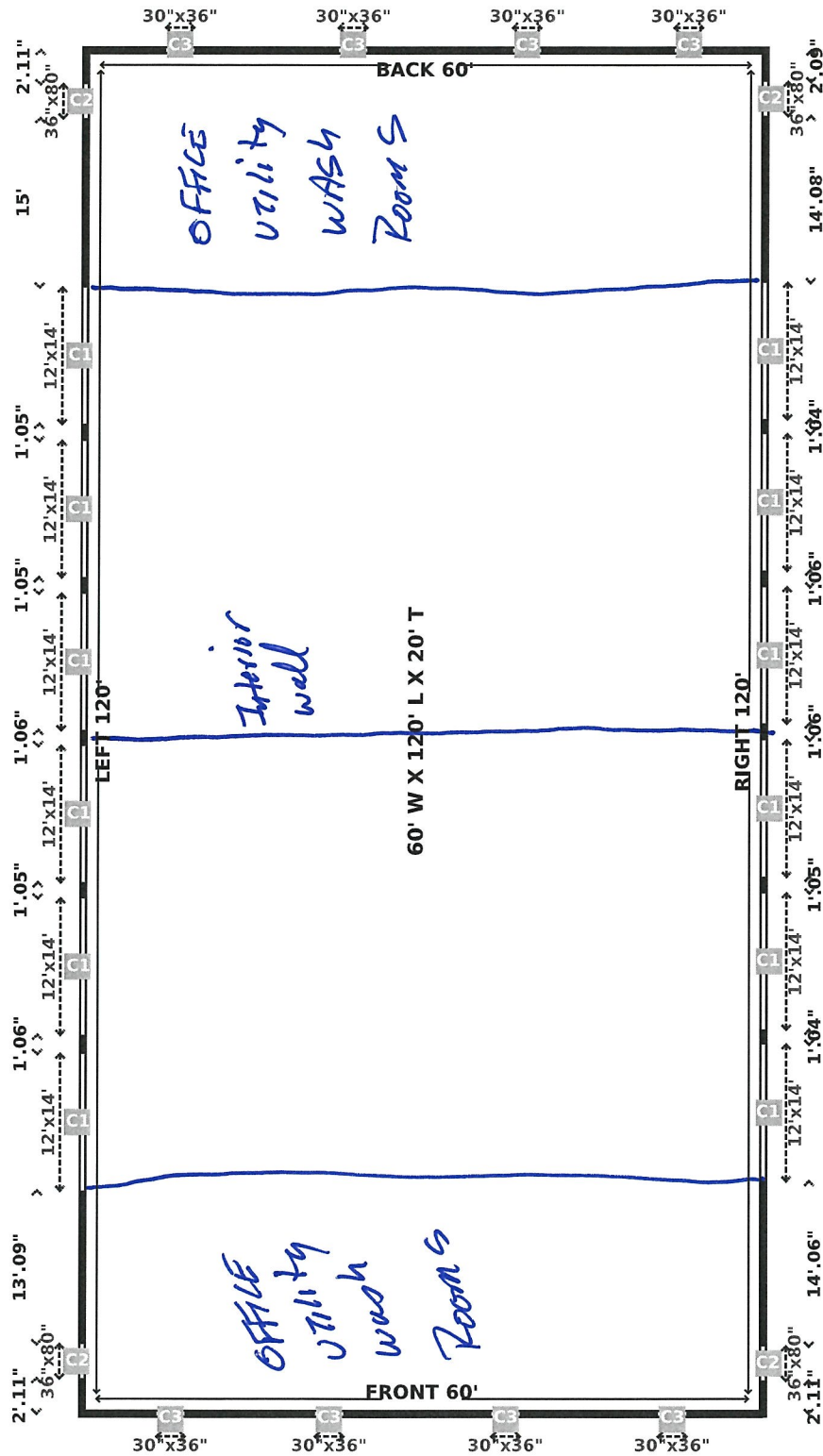
BUILDING VIEW



BACK

BUILDING VIEW





LEGENDS

- C1 Garage Door C4 Garage Door Frameout C2 Walk in Door C5 Walk in Door Frameout C3 Windows C6 Windows Frameout |||| Open Wall
- Closed Wall ← Distance SL Storage Length(Utility) ■ Overlap Components

Stormwater Evaluation

CONNORSTONE ENGINEERING, INC.

10 SOUTHWEST CUTOFF, #7
NORTHBOROUGH, MASSACHUSETTS 01532
TEL: 508-393-9727 FAX: 508-393-5242

157-165 Lowland Street
Holliston, MA

April 7, 2022

STORMWATER EVALUATION

Connorstone Engineering has reviewed the subject site at 157-165 Lowland Street in Holliston, MA to evaluate the current and proposed drainage conditions. More specifically, the site was evaluated to determine the available storage capacity on-site to contain the prescribed design storm without offsite discharge in the post development conditions. The results of the analysis indicate the site could fully contain up to the 100 year storm event. The model utilized a 100 year storm event of 8.2 inches of rainfall over a 24 hour period as specified by the most recent NOAA Atlas 14 data.

The existing site is comprised of a materials recycling yard. Several stockpiles are located throughout the site along with processing machinery, and several small outbuildings. The general underlying topography is essentially flat with an average surface elevation of 157. The surface conditions outside the stockpile areas would include a compacted gravel surface. An earthen berm is located along this downgradient edge of the property to separate the yard from the down gradient wetland area and/or abutting drainage systems. The berm varies from 2 to 3 feet tall and runs the perimeter of the lower yard, and is shown on the existing conditions plan. The site also contains an old sedimentation pond that is currently utilized as water storage for dust suppression. Previous analysis had verified the existing site fully contained runoff from the 10-year storm event.

The proposed conditions would include the construction of a 7,200 sq. ft. building with a 120' by 60' paved pad off the front and back of the building (total 14,400 sq. ft. paved areas). The building would be serviced by a proposed on-site septic system to be located under the paved parking pad along with water service from Lowland Street. Site grading has also been proposed to extend the large earthen berm to the west of the site for noise control, and to extend the existing perimeter berm up to elevation 160.

Our office has evaluated the proposed site conditions to determine the storage capacity as required to retain stormwater on-site. The stormwater runoff has been analyzed using HydroCAD 10.10, a stormwater modeling computer program. HydroCAD is a collection of techniques for the generation and routing of hydrographs, including Soil Conservation Service (SCS) Technical Release No. 20 (TR-20) and SCS Technical Release 55 (TR-55), *Urban Hydrology for Small Watersheds*.

The volume on-site was modeled as a pond with the incremental surface areas based upon the existing conditions survey performed in January of 2022. The lower flat areas of the site were modeled as a gravel surface, and the remaining stockpile areas were modeled as recently graded/disturbed soils. The infiltration capacity of the soil underlying the 'pond' was assumed to be limited at 0.17 inches per hour.

The results of the analysis indicate the site could fully contain the 100 year event (up 8.2 inches of rainfall over a 24 hour period), with a maximum ponding elevation of 158.7. The perimeter grading and berm are extended up to elevation 160.0 to provide additional freeboard and a factor of safety. The only area maintained below this elevation would be the rear access point to the rear sediment pond, which was set at elevation 158.75.

The paved pad has been set with a minimum elevation of 159.5, and the building would have a slab elevation of 160.5. This would leave the building and surrounding pad area above the peak ponding elevation. The work also includes a smaller sediment trap along the southerly limit of work to collect the day-to-day flows and potential sediment accumulation.

The supporting model output and drainage areas maps have been attached for your reference.

Prepared by:
Connorstone Engineering, Inc.

A handwritten signature in black ink, appearing to read 'Vito Colonna', with a stylized, cursive script.

Vito Colonna, P.E.

HydroCAD Model Output (2-, 10-, 100-year storm events)

N/F
TY-WOOD CORPORATION
MAP 12, BLOCK 4, LOT 64.2

EXISTING MATERIAL PROCESSING
STOCK YARD

MAP 4, PARCEL 34
AREA=3.64± ACRES

FUTURE SCALE

ACCESS ROUTE

GATEHOUSE
TRAILER

DRAINAGE AREA

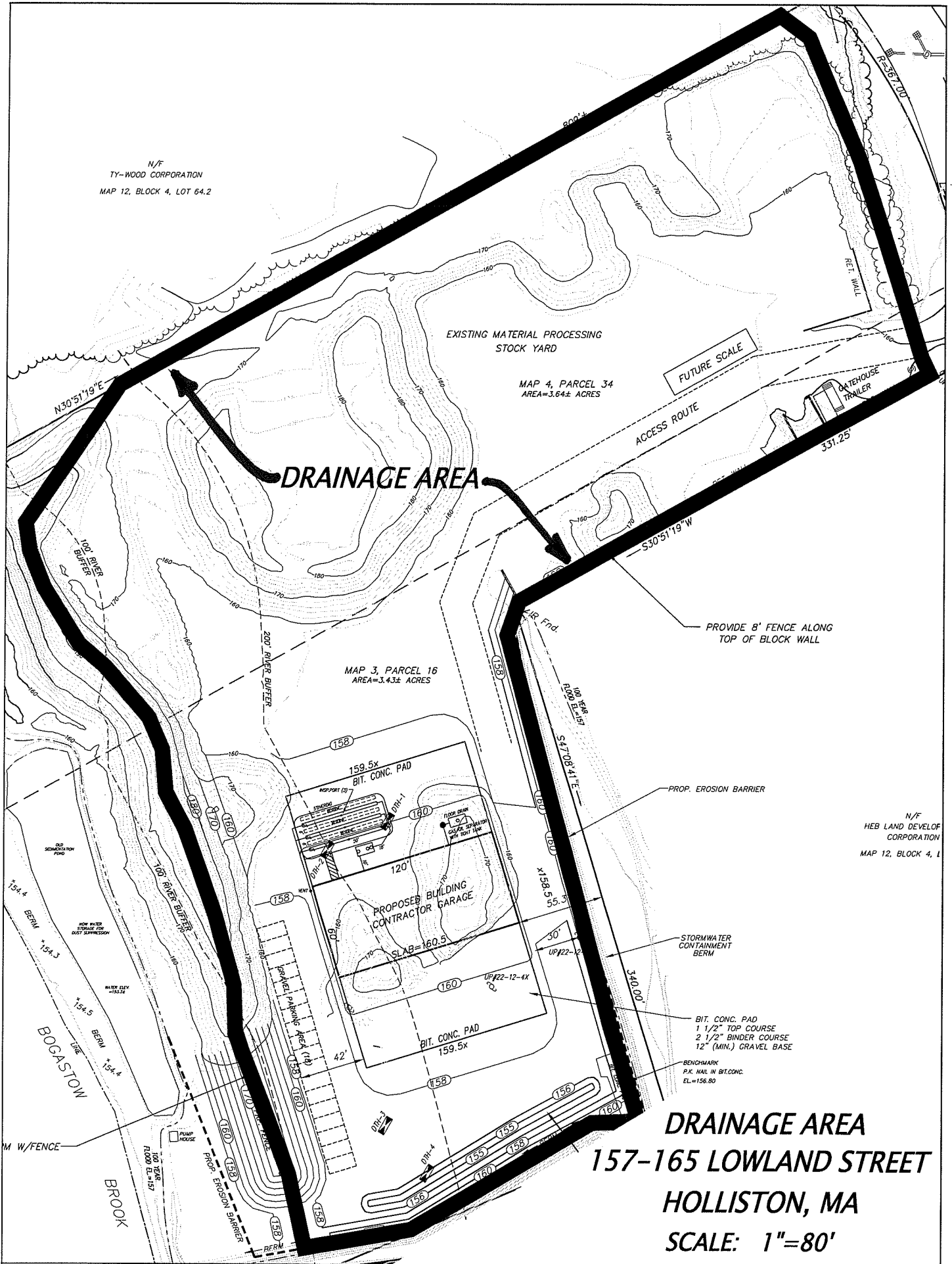
MAP 3, PARCEL 16
AREA=3.43± ACRES

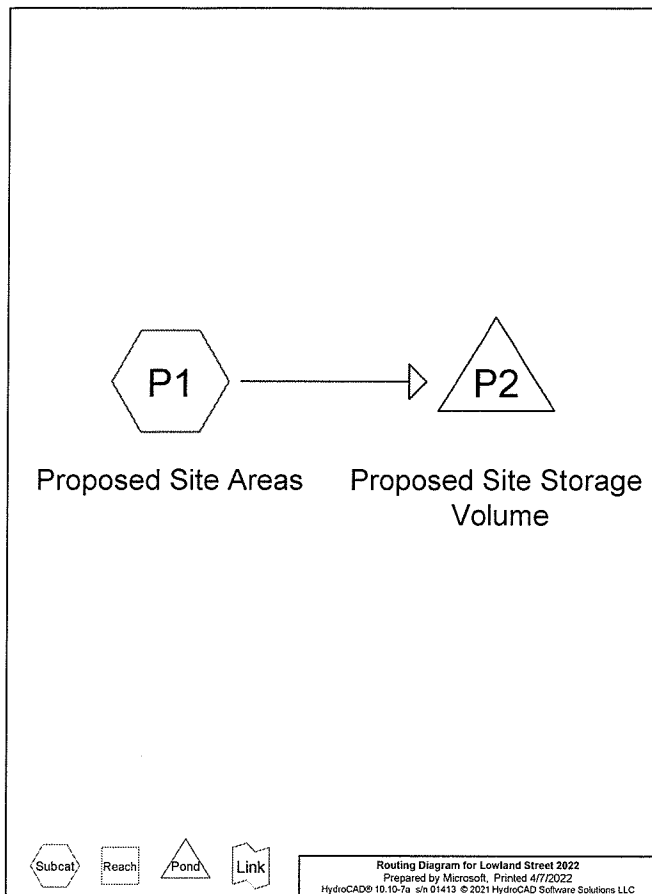
PROVIDE 8' FENCE ALONG
TOP OF BLOCK WALL

PROP. EROSION BARRIER

N/F
HEB LAND DEVELOP
CORPORATION
MAP 12, BLOCK 4, L

DRAINAGE AREA
157-165 LOWLAND STREET
HOLLISTON, MA
SCALE: 1"=80'





Summary for Subcatchment P1: Proposed Site Areas

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

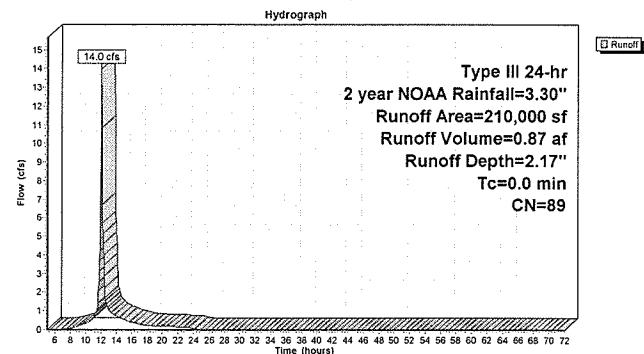
Runoff = 14.0 cfs @ 12.00 hrs, Volume= 0.87 af, Depth= 2.17"
 Routed to Pond P2 : Proposed Site Storage Volume

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2 year NOAA Rainfall=3.30"

Area (sf)	CN	Description
136,400	96	Compacted Gravel
40,000	77	Newly graded area, HSG A
12,000	39	Pasture/grassland/range, Good, HSG A
21,600	98	Paved parking, HSG A
210,000	89	Weighted Average
188,400		89.71% Pervious Area
21,600		10.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0					Direct Entry,

Subcatchment P1: Proposed Site Areas



Summary for Pond P2: Proposed Site Storage Volume

Inflow Area = 4.821 ac, 10.29% Impervious, Inflow Depth = 2.17" for 2 year NOAA event
 Inflow = 14.0 cfs @ 12.00 hrs, Volume= 0.87 af
 Outflow = 0.2 cfs @ 21.44 hrs, Volume= 0.67 af, Atten= 99%, Lag= 566.2 min
 Discarded = 0.2 cfs @ 21.44 hrs, Volume= 0.67 af

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 157.42' @ 21.44 hrs Surf.Area= 42,387 sf Storage= 30,669 cf

Plug-Flow detention time= 1,572.0 min calculated for 0.67 af (77% of inflow)
 Center-of-Mass det. time= 1,488.9 min (2,293.2 - 804.3)

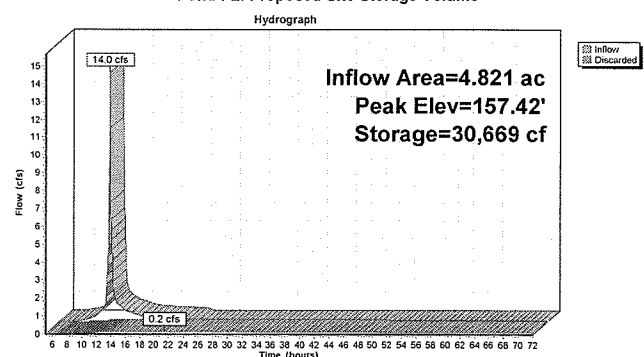
Volume	Invert	Avail.Storage	Storage Description
#1	156.00'	230,750 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

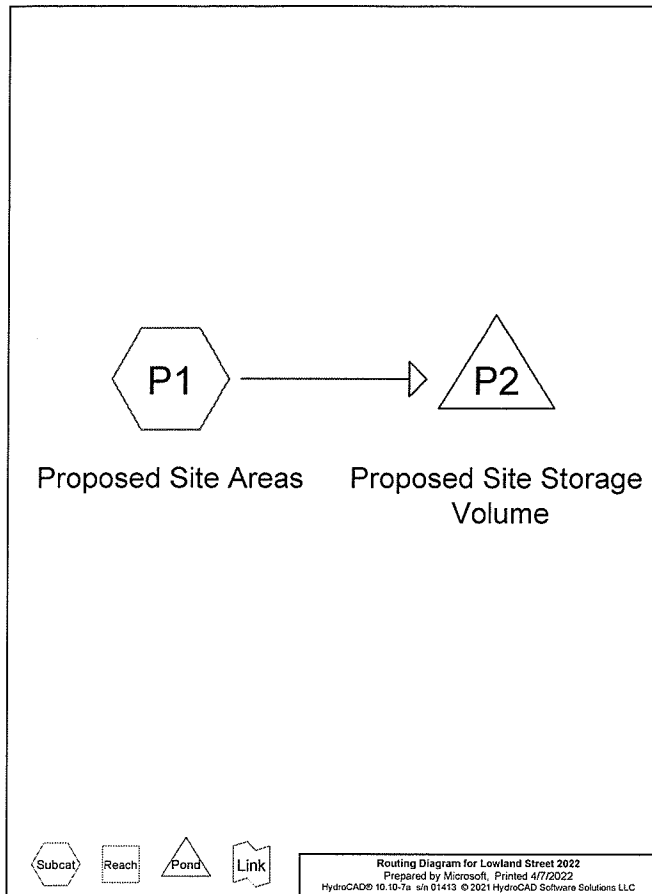
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.00	2,000	0	0
157.00	29,000	15,500	15,500
158.00	60,500	44,750	60,250
160.00	110,000	170,500	230,750

Device	Routing	Invert	Outlet Devices
#1	Discarded	156.00'	0.170 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.2 cfs @ 21.44 hrs HW=157.42' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.2 cfs)

Pond P2: Proposed Site Storage Volume





Summary for Pond P2: Proposed Site Storage Volume

[82] Warning: Early inflow requires earlier time span

Inflow Area = 4.821 ac, 10.29% Impervious, Inflow Depth > 4.01" for 10 year NOAA event
 Inflow = 25.2 cfs @ 12.00 hrs, Volume= 1.61 af
 Outflow = 0.2 cfs @ 22.99 hrs, Volume= 1.02 af, Atten= 99%, Lag= 659.5 min
 Discarded = 0.2 cfs @ 22.99 hrs, Volume= 1.02 af

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 157.98' @ 22.99 hrs Surf.Area= 59,976 sf Storage= 59,248 cf

Plug-Flow detention time= 1,658.5 min calculated for 1.02 af (63% of inflow)
 Center-of-Mass det. time= 1,560.0 min (2,347.4 - 787.4)

Volume	Invert	Avail.Storage	Storage Description
#1	156.00'	230,750 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
156.00	2,000	0	0
157.00	29,000	15,500	15,500
158.00	60,500	44,750	60,250
160.00	110,000	170,500	230,750

Device	Routing	Invert	Outlet Devices
#1	Discarded	156.00'	0.170 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.2 cfs @ 22.99 hrs HW=157.98' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.2 cfs)

Summary for Subcatchment P1: Proposed Site Areas

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

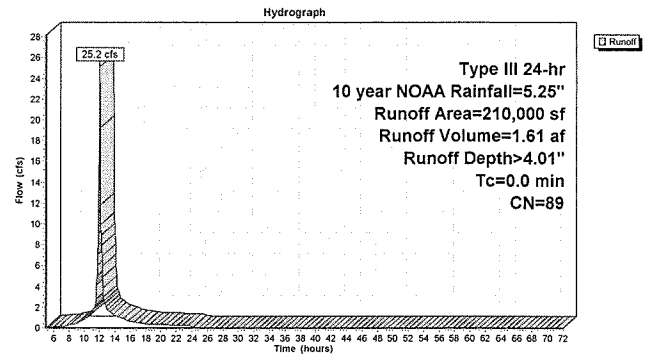
Runoff = 25.2 cfs @ 12.00 hrs, Volume= 1.61 af, Depth> 4.01"
 Routed to Pond P2 : Proposed Site Storage Volume

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10 year NOAA Rainfall=5.25"

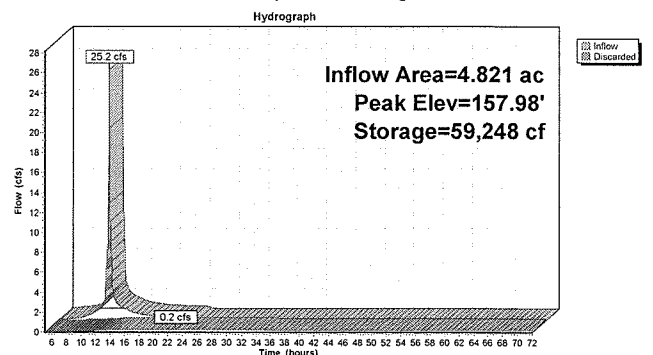
Area (sf)	CN	Description
136,400	96	Compacted Gravel
40,000	77	Newly graded area, HSG A
12,000	39	Pasture/grassland/range, Good, HSG A
21,600	98	Paved parking, HSG A
210,000	89	Weighted Average
188,400		89.71% Pervious Area
21,600		10.29% Impervious Area

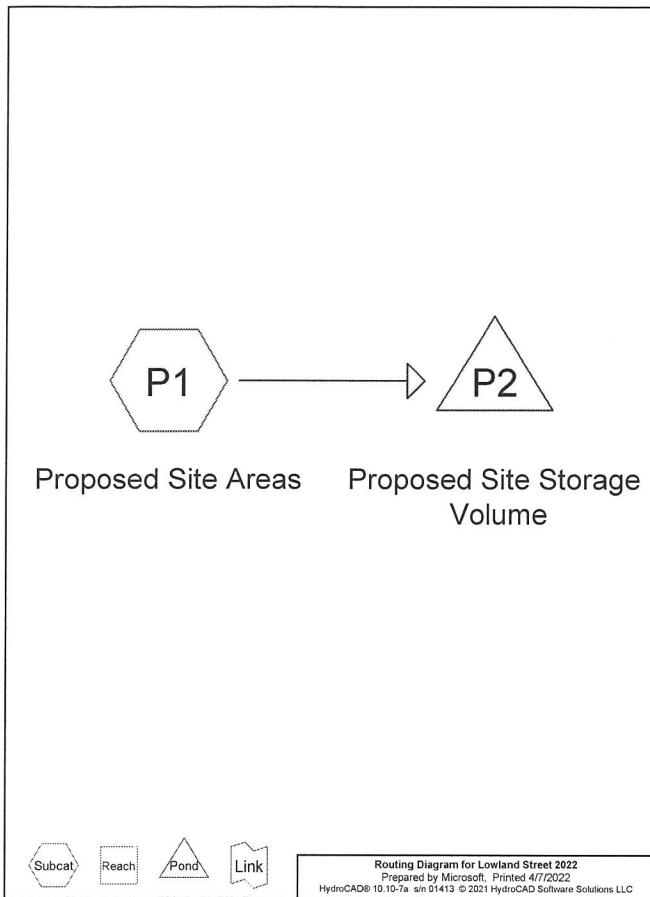
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0					Direct Entry,

Subcatchment P1: Proposed Site Areas



Pond P2: Proposed Site Storage Volume





Summary for Pond P2: Proposed Site Storage Volume

[82] Warning: Early inflow requires earlier time span

Inflow Area = 4.821 ac, 10.29% Impervious, Inflow Depth > 6.85" for 100 year NOAA event
Inflow = 41.9 cfs @ 12.00 hrs, Volume= 2.75 af
Outflow = 0.3 cfs @ 23.94 hrs, Volume= 1.40 af, Atten= 99%, Lag= 716.6 min
Discarded = 0.3 cfs @ 23.94 hrs, Volume= 1.40 af

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 158.66' @ 23.94 hrs Surf.Area= 76,809 sf Storage= 105,490 cf

Plug-Flow detention time= 1,735.8 min calculated for 1.40 af (51% of inflow)
Center-of-Mass det. time= 1,622.0 min (2,397.2 - 775.2)

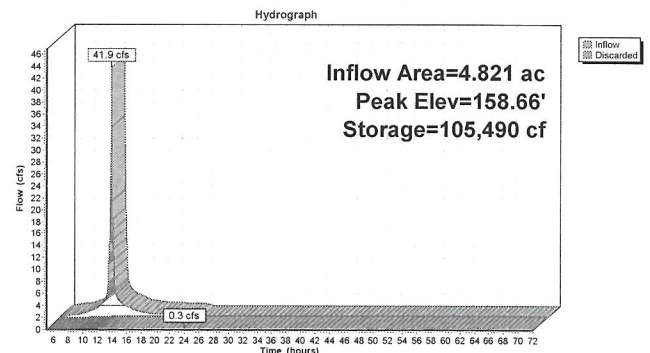
Volume	Invert	Avail. Storage	Storage Description
#1	156.00'	230,750 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
156.00	2,000	0	0
157.00	29,000	15,500	15,500
158.00	60,500	44,750	60,250
160.00	110,000	170,500	230,750

Device	Routing	Invert	Outlet Devices
#1	Discarded	156.00'	0.170 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.3 cfs @ 23.94 hrs HW=158.66' (Free Discharge)

1=Exfiltration (Exfiltration Controls 0.3 cfs)

Pond P2: Proposed Site Storage Volume



All Stormwater Contained
w/in site during 100 yr
Storm Event. Peak Elevation = 158.7'